

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>
164001 2003 <i>UP</i> ₁₇₀	15.5	X	296.76495	328.10974	51.89518	6.91233	0.0659193	0.22432057	2.6826045	20	8 26.7	18.9
164002 2003 <i>UU</i> ₁₇₂	16.4	X	279.36159	225.58129	171.25769	9.41163	0.1894089	0.22347694	2.6893515	20	7 29.7	20.0
164003 2003 <i>UE</i> ₁₇₄	16.1	X	353.61546	311.63802	1.20717	2.13461	0.2027979	0.22649295	2.6654237	20	8 27.1	18.4
164004 2003 <i>UR</i> ₁₇₄	16.2	X	314.64649	106.20967	229.61752	4.17846	0.1277499	0.22209751	2.7004756	20	7 11.3	19.2
164005 2003 <i>US</i> ₁₈₅	15.9	X	110.33308	114.67759	176.80539	3.49360	0.0574468	0.23942121	2.5685871	20	12 25.3	19.6
164006 Thierry	16.8	X	323.35200	163.11194	273.85671	1.32095	0.1779801	0.23987442	2.5653508	20	12 29.1	18.9
164007 2003 <i>UW</i> ₁₈₆	15.6	X	234.98592	78.73373	311.21379	5.42441	0.0656573	0.21533057	2.7567598	20	6 12.1	19.5
164008 2003 <i>UJ</i> ₁₈₉	15.6	X	167.58217	226.55993	25.10349	14.89084	0.0508338	0.24188447	2.5511190	20	—	—
164009 2003 <i>UZ</i> ₁₈₉	15.7	X	305.96908	307.91668	10.40908	2.80043	0.0946846	0.21672990	2.7448808	20	6 6.8	19.2
164010 2003 <i>UV</i> ₁₉₂	15.7	X	136.90678	138.74339	321.87415	4.67860	0.0609309	0.21541000	2.7560821	20	5 19.6	19.8
164011 2003 <i>UX</i> ₁₉₄	15.3	X	244.27366	197.21868	231.16102	8.84006	0.1374402	0.22253418	2.6969417	20	8 1.4	19.3
164012 2003 <i>UL</i> ₁₉₇	16.1	X	7.60333	159.59852	121.01610	2.79193	0.0402206	0.22025345	2.7155277	20	7 24.6	19.4
164013 2003 <i>UT</i> ₁₉₇	16.1	X	140.41944	352.87574	169.82472	1.45153	0.0491650	0.22205352	2.7008322	20	8 14.3	19.9
164014 2003 <i>UO</i> ₂₀₀	15.7	X	342.42767	301.94779	358.41791	3.17891	0.0713570	0.22126246	2.7072658	20	7 14.1	18.9
164015 2003 <i>UC</i> ₂₀₃	15.9	X	206.17758	114.25232	377.08728	2.02761	0.0167108	0.22047318	2.7137232	20	8 2.8	19.5
164016 2003 <i>UK</i> ₂₀₄	15.7	X	242.53131	258.89260	203.57431	10.89197	0.1643462	0.22652868	2.6651434	20	9 10.5	19.5
164017 2003 <i>UL</i> ₂₀₆	15.2	X	282.27005	335.18353	121.01610	15.64746	0.0803745	0.22095418	2.7097833	20	8 14.7	19.0
164018 2003 <i>UP</i> ₂₀₇	15.2	X	241.55609	10.93436	56.26559	14.84396	0.1742784	0.21761720	2.7374146	20	7 29.8	19.6
164019 2003 <i>UR</i> ₂₀₈	15.7	X	336.88661	285.24998	62.08464	4.86963	0.1261422	0.22691870	2.6620887	20	9 12.9	18.5
164020 2003 <i>UC</i> ₂₁₉	15.0	X	286.86416	327.12931	73.46172	13.11173	0.1386516	0.22354679	2.6889713	20	9 2.0	18.5
164021 2003 <i>UQ</i> ₂₂₀	15.3	X	292.89873	73.23548	346.31573	4.68266	0.3174362	0.22411272	2.6842628	20	9 2.4	17.9
164022 2003 <i>UA</i> ₂₂₂	15.8	X	273.32176	101.83847	255.28178	5.20266	0.0393083	0.21754908	2.7379859	20	6 21.9	19.3
164023 2003 <i>UZ</i> ₂₂₂	15.3	X	350.96247	119.62670	253.10996	7.33369	0.2320182	0.23205654	2.6226490	20	11 25.5	17.7
164024 2003 <i>UZ</i> ₂₂₄	16.0	X	270.40349	337.26591	81.48929	6.76578	0.1286815	0.22400753	2.6851031	20	8 31.1	19.5
164025 2003 <i>UH</i> ₂₂₆	15.7	X	154.98919	172.89922	276.81475	3.15759	0.0268033	0.21149520	2.7899883	20	5 25.7	19.6
164026 2003 <i>UT</i> ₂₂₇	15.9	X	271.92015	65.71380	301.69238	2.87216	0.0922381	0.21856369	2.7295059	20	6 25.9	19.5
164027 2003 <i>UY</i> ₂₃₂	16.4	X	355.45392	152.23919	220.40753	2.37006	0.0750165	0.23402420	2.6079276	20	11 15.1	19.5
164028 2003 <i>UA</i> ₂₄₁	15.3	X	276.04663	123.54258	245.79184	8.46184	0.1115870	0.21927667	2.7235860	20	6 30.3	18.9
164029 2003 <i>UA</i> ₂₄₄	15.5	X	216.18034	32.28835	42.06878	8.09791	0.0770717	0.21609774	2.7502314	20	7 18.9	19.6
164030 2003 <i>UJ</i> ₂₄₅	16.2	X	333.89619	263.91605	105.74156	1.64704	0.1260561	0.22887367	2.6469079	20	10 8.3	18.8
164031 2003 <i>UQ</i> ₂₄₇	15.5	X	32.52431	165.39739	232.93732	3.85156	0.2744968	0.23927108	2.5696614	20	—	—
164032 2003 <i>UR</i> ₂₄₉	16.1	X	37.90497	236.03187	105.80117	3.26769	0.2188900	0.23697073	2.5862644	20	12 25.3	19.7
164033 2003 <i>UC</i> ₂₅₁	16.0	X	40.07756	225.22341	108.05574	5.25239	0.2587387	0.23558603	2.5963886	20	12 22.1	19.7
164034 2003 <i>UX</i> ₂₅₂	16.1	X	42.20356	334.97229	43.45695	1.98301	0.2011234	0.24084881	2.5584271	20	—	—
164035 2003 <i>UH</i> ₂₅₄	17.0	X	67.82479	295.43973	14.64590	0.67083	0.1805400	0.23874626	2.5734259	20	12 13.6	20.9
164036 2003 <i>UZ</i> ₂₅₅	16.4	X	346.34511	238.47238	152.87519	3.64237	0.2034895	0.23453573	2.6041342	20	12 10.8	18.8
164037 2003 <i>UP</i> ₂₅₇	15.8	X	246.68327	245.90582	196.53629	7.06325	0.1983132	0.22302554	2.6929791	20	8 15.7	19.9
164038 2003 <i>UJ</i> ₂₆₄	15.5	X	236.97299	299.95517	143.07447	5.32262	0.1081891	0.22181852	2.7027395	20	8 19.2	19.1
164039 2003 <i>UE</i> ₂₆₅	16.0	X	77.99979	147.02852	176.71768	5.30040	0.3137677	0.24167502	2.5525928	20	—	—
164040 2003 <i>UC</i> ₂₆₅	15.6	X	52.14772	1.00259	333.79893	3.61210	0.2028492	0.23802463	2.5786246	20	12 30.5	19.4
164041 2003 <i>UF</i> ₂₆₆	15.9	X	246.91574	174.19528	190.10270	1.81796	0.1129623	0.21462055	2.7628365	20	5 18.7	20.0
164042 2003 <i>UO</i> ₂₆₉	15.7	X	326.88784	81.51603	237.60623	4.87711	0.0759651	0.21944054	2.7222311	20	7 13.2	19.0
164043 2003 <i>UM</i> ₂₇₈	16.5	X	343.90476	221.58069	133.61819	3.29244	0.1165404	0.22847654	2.6499742	20	10 6.2	19.4
164044 2003 <i>US</i> ₂₇₉	16.0	X	335.57028	345.39154	321.84402	8.08756	0.1222030	0.22146132	2.7056449	20	7 10.3	18.9
164045 2003 <i>UC</i> ₂₈₃	15.5	X	298.70601	223.19071	140.03775	6.73459	0.0418253	0.22063249	2.7124167	20	8 4.9	19.0
164046 2003 <i>UW</i> ₂₈₃	14.7	X	351.11363	339.62987	58.87936	14.44729	0.1827774	0.23136411	2.6278791	20	12 24.4	17.6
164047 2003 <i>UL</i> ₂₉₆	16.1	X	289.27478	211.47973	204.18433	2.64311	0.0776890	0.23023067	2.6364969	20	9 28.9	19.1
164048 2003 <i>UO</i> ₂₉₈	15.9	X	130.78491	235.27245	10.03505	4.80914	0.1808977	0.23754877	2.5820671	20	11 20.9	20.2
164049 2003 <i>UC</i> ₃₀₂	16.2	X	89.52208	270.56104	318.45302	4.65342	0.2093360	0.22843752	2.6502759	20	9 25.7	20.4
164050 2003 <i>UO</i> ₃₀₇	15.3	X	41.44589	345.54296	233.01112	6.86365	0.0670407	0.21675857	2.7446388	20	6 21.5	18.7
164051 2003 <i>UL</i> ₃₁₄	16.6	X	334.87909	83.31282	250.24893	1.82210	0.1164993	0.22388928	2.6860485	20	8 15.4	19.5
164052 2003 <i>VC</i> ₅	15.8	X	356.63284	109.06980	189.85217	2.69403	0.1665634	0.22214078	2.7001249	20	8 7.3	18.5
164053 2003 <i>VP</i> ₅	15.9	X	16.12309	61.02412	279.55295	0.32569	0.0655679	0.23028045	2.6361169	20	10 31.4	19.1
164054 2003 <i>WH</i> ₆	15.9	X	219.75228	76.98679	352.13325	5.25210	0.1137326	0.21644591	2.7472812	20	7 11.9	20.0
164055 2003 <i>VL</i> ₈	15.5	X	334.22283	268.22725	58.46257	10.39365	0.1070329	0.22093248	2.7099608	20	8 9.4	18.8
164056 2003 <i>VO</i> ₁₀	15.8	X	233.11247	29.89335	30.64818	2.62047	0.0551030	0.21794183	2.7346956	20	7 22.9	19.5
164057 2003 <i>WR</i> ₁₀	15.8	X	258.19384	10.78977	3.27827	6.84204	0.0475712	0.21508983	2.7588164	20	6 23.3	19.6
164058 2003 <i>WV</i> ₁₁	15.6	X	326.51654	6.56327	350.26290	5.79740	0.1757892	0.22505374	2.6767752	20	9 1.8	18.0
164059 2003 <i>WH</i> ₁₃	15.6	X	339.15640	242.48014	92.23197	13.65276	0.1901028	0.22816999	2.6523472	20	9 2.5	18.3
164060 2003 <i>WV</i> ₁₆	16.1	X	166.39751	36.07603	333.90061	1.68369	0.0805021	0.20132378	2.8831861	20	3 3.2	20.3
164061 2003 <i>WF</i> ₂₉	16.0	X	242.75936	109.85660	323.21928	4.24837	0.1280513	0.22116817	2.7080352	20	8 10.4	19.6
164062 2003 <i>WL</i> ₃₈	15.6	X	351.79774	347.48643	359.63510	5.47380	0.1384705	0.22658841	2.6646750	20	10 7.5	18.5
164063 2003 <i>WP</i> ₄₀	15.9	X	67.72538	348.87693	21.11892	2.94141	0.1297705	0.24269179	2.5454584	20	—	—
164064 2003 <i>WY</i> ₄₆	15.8	X	299.15954	262.81223	43.42366	5.57261	0.1451152	0.21479416	2.7613475	20	5 3.5	19.2
164065 2003 <i>WN</i> ₅₀	15.7	X	227.74475	64.64189	333.74629	5.57157	0.0736059	0.21282606	2.7783451	20	6 13.5	19.8
164066 2003 <i>WY</i> ₅₅	15.8	X	278.41016	319.66023	30.98800	6.48784	0.1909977	0.21636755	2.7479446	20	5 26.5	19.6
164067 2003 <i>WH</i> ₆₅	16.2	X	259.25232	178.29337	216.41391	2.21413	0.0143876	0.21722729	2.7406893	20	7 26.9	19.9
164068 2003 <i>WJ</i> ₆₆	15.2	X	305.11459	42.66101	37.66230	13.82600	0.2257472	0.23008127	2.6376381	20	11 14.9	17.5
164069 2003 <i>WK</i> ₆₉	15.9	X	220.87615	319.21286	80.42252	4.50898	0.0936426	0.21190696	2.7863729	20	6 5.7	20.0
164070 2003 <i>WV</i> ₇₀	15.3	X	29.32083	27.87753	132.02704	14.54685	0.1503033	0.23453191	2.6041625	20	11 29.9	18.9
164071 2003 <i>WT</i> ₈₀	16.1	X	328.12387	219.25986	172.95047							

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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>
164081 2003 <i>WB</i> ₉₇	16.4	X	316.73738	249.94613	143.35752	2.31332	0.0739004	0.22849784	2.6498095	20	10 12.7	19.4
164082 2003 <i>WX</i> ₁₀₂	15.7	X	349.06427	23.56614	2.20652	14.51061	0.2680612	0.23371985	2.6101912	20	12 15.9	18.5
164083 2003 <i>WU</i> ₁₀₃	16.1	X	34.82193	13.14862	359.01062	1.00519	0.2199046	0.23837229	2.5761167	20	—	—
164084 2003 <i>WR</i> ₁₂₁	14.8	X	129.27606	261.75340	61.44478	13.91702	0.1875111	0.24359980	2.5391290	20	—	—
164085 2003 <i>WD</i> ₁₂₂	15.1	X	27.89735	211.47960	264.71054	7.95193	0.0600717	0.19200608	2.9757245	20	1 18.5	19.0
164086 2003 <i>WM</i> ₁₂₂	16.0	X	55.77767	341.21843	4.94619	2.26176	0.1577142	0.23786764	2.5797590	20	—	—
164087 2003 <i>WU</i> ₁₂₂	15.1	X	238.58572	214.76443	32.28847	10.52080	0.0658708	0.18804021	3.0174187	20	—	—
164088 2003 <i>WQ</i> ₁₂₅	15.2	X	15.80123	304.74863	60.14759	5.92388	0.2074603	0.23141468	2.6274963	20	12 23.4	18.4
164089 2003 <i>WV</i> ₁₂₆	16.3	X	16.80557	55.34916	29.99007	4.12396	0.2132803	0.24201964	2.5501691	20	—	—
164090 2003 <i>WF</i> ₁₃₂	16.0	X	258.20887	114.26944	301.09251	0.58621	0.0882927	0.22017870	2.7161423	20	8 11.9	19.5
164091 2003 <i>WY</i> ₁₃₄	15.5	X	160.36530	137.92987	250.47804	9.41773	0.0725654	0.19999393	2.8959530	20	3 14.4	20.0
164092 2003 <i>WX</i> ₁₃₆	15.4	X	105.81160	120.09635	215.25462	2.24912	0.1495819	0.24316538	2.5421523	20	—	—
164093 2003 <i>WF</i> ₁₄₂	15.3	X	259.52728	319.39631	89.95622	9.87792	0.2746787	0.21672583	2.7449152	20	7 10.0	19.3
164094 2003 <i>WT</i> ₁₄₂	16.7	X	140.81003	191.73550	288.88273	1.32945	0.1702463	0.26820719	2.3813457	20	6 29.5	20.5
164095 2003 <i>WS</i> ₁₄₄	16.1	X	137.60324	77.17898	359.87391	1.33863	0.0271090	0.20514412	2.8472789	20	4 17.8	20.1
164096 2003 <i>WZ</i> ₁₅₅	15.4	X	264.43452	127.82390	305.43262	13.87480	0.1230602	0.22543661	2.6737436	20	9 2.9	19.1
164097 2003 <i>WX</i> ₁₅₆	15.8	X	292.41531	269.02531	112.72687	3.56898	0.0595968	0.22293545	2.6937045	20	8 20.4	19.1
164098 2003 <i>WX</i> ₁₆₁	15.7	X	306.03852	202.47792	196.48966	8.72861	0.1197670	0.22564097	2.6721290	20	9 26.9	18.8
164099 2003 <i>WE</i> ₁₆₃	15.7	X	255.58566	129.18090	103.57784	1.52892	0.1090962	0.18909339	3.0062043	20	—	—
164100 2003 <i>WV</i> ₁₆₆	15.9	X	225.49210	204.86425	123.61661	2.87536	0.0670277	0.20469955	2.8513999	20	3 16.2	20.0
164101 2003 <i>WD</i> ₁₆₈	15.8	X	104.78279	194.16716	41.94422	3.26649	0.0321971	0.22803440	2.6533985	20	10 6.6	19.5
164102 2003 <i>WY</i> ₁₇₅	15.7	X	219.94001	242.85666	97.41768	3.32363	0.1196969	0.20475797	2.8508575	20	3 22.6	20.1
164103 2003 <i>XG</i> ₅	15.0	X	49.02732	278.51790	56.83812	12.58985	0.2385724	0.23239898	2.6200721	20	12 30.5	19.0
164104 2003 <i>XF</i> ₉	14.4	X	198.86219	356.99918	9.76771	15.52503	0.1477158	0.20365865	2.8611073	20	4 1.0	18.8
164105 2003 <i>XT</i> ₉	15.2	X	308.87199	46.93520	10.92689	13.39355	0.1432266	0.22850644	2.6497430	20	10 25.1	18.1
164106 2003 <i>XQ</i> ₁₀	14.7	X	265.55671	65.53877	31.04873	28.90814	0.1514708	0.22540375	2.6740034	20	10 13.9	18.2
164107 2003 <i>XU</i> ₁₁	15.7	X	324.91093	241.29015	128.88197	13.76824	0.2745165	0.23013416	2.6372339	20	9 18.9	17.7
164108 2003 <i>WX</i> ₁₁	15.8	X	332.76276	196.83290	130.31445	14.38303	0.1842667	0.22551551	2.6731199	20	7 29.8	18.4
164109 2003 <i>XF</i> ₁₃	15.3	X	238.61506	245.43092	292.89973	3.96339	0.0900134	0.17567543	3.1573934	20	12 12.8	19.8
164110 2003 <i>XM</i> ₁₆	15.2	X	299.02063	189.49082	119.50445	10.30775	0.3014998	0.21409043	2.7673954	20	4 17.5	19.1
164111 2003 <i>XQ</i> ₁₇	15.6	X	357.90812	174.92698	131.51410	4.21193	0.0822841	0.21873705	2.7280635	20	8 17.2	18.8
164112 2003 <i>XJ</i> ₁₉	16.1	X	27.14772	46.65353	356.38912	4.21484	0.3176197	0.23962510	2.5671299	20	—	—
164113 2003 <i>XT</i> ₂₁	15.3	X	293.52081	39.84647	3.61602	15.24442	0.1274370	0.22534590	2.6744611	20	9 14.6	18.4
164114 2003 <i>XR</i> ₂₇	15.5	X	217.78857	359.82268	99.07027	4.68722	0.1601487	0.21712599	2.7415416	20	8 13.1	19.7
164115 2003 <i>XC</i> ₃₃	16.1	X	257.07821	154.18199	156.96974	2.47845	0.0515710	0.20400556	2.8578629	20	3 31.9	20.2
164116 2003 <i>XP</i> ₃₃	16.2	X	236.18159	290.37252	123.50423	3.03331	0.0683191	0.21636185	2.7479928	20	7 15.2	20.0
164117 2003 <i>XL</i> ₃₆	14.9	X	63.67349	163.85881	303.25961	10.27346	0.1231790	0.19324519	2.9629905	20	3 1.8	18.8
164118 2003 <i>XY</i> ₃₇	15.5	X	274.53179	92.72073	299.11168	7.12125	0.1699701	0.21962974	2.7206663	20	7 20.6	18.8
164119 2003 <i>XF</i> ₄₀	16.4	X	226.59650	233.87457	137.62274	2.86657	0.1277807	0.20956265	2.8071145	20	5 5.3	20.7
164120 2003 <i>YK</i>	19.0	X	247.95403	189.58651	345.63500	11.03131	0.4079157	0.53014904	1.5119499	20	—	—
164121 2003 <i>YT</i> ₁	16.2	X	325.99733	91.04464	38.32952	44.06065	0.2920114	0.84323908	1.1096063	20	—	—
164122 2003 <i>YY</i> ₃	15.7	X	7.63181	208.90707	176.03721	4.58476	0.2094635	0.23517422	2.5994187	20	—	—
164123 2003 <i>YG</i> ₅	15.6	X	305.85424	261.04201	91.10926	9.39032	0.1376500	0.21964738	2.7205207	20	7 19.7	18.8
164124 2003 <i>YD</i> ₁₀	15.5	X	85.38017	140.15658	348.24948	8.43538	0.1167716	0.20086346	2.8875893	20	4 28.1	19.6
164125 2003 <i>YZ</i> ₁₀	15.4	X	19.69483	322.54798	43.68297	13.21621	0.2691183	0.23372000	2.6101901	20	—	—
164126 2003 <i>YV</i> ₁₃	14.7	X	358.94761	143.59301	328.89146	9.00044	0.1962624	0.18005750	3.1059555	20	—	—
164127 2003 <i>YO</i> ₁₄	15.2	X	24.99139	120.23102	340.93507	8.69605	0.0185379	0.18522439	3.0479226	20	—	—
164128 2003 <i>YM</i> ₁₆	14.5	X	38.27683	302.47394	93.65361	18.69780	0.1688475	0.17591654	3.1545077	20	—	—
164129 2003 <i>YB</i> ₂₁	15.8	X	337.59226	259.63301	98.32513	8.79774	0.3201151	0.22357760	2.6885443	20	10 8.7	17.5
164130 Jonckheere	15.7	X	180.30611	351.32149	26.57969	1.93845	0.0998769	0.20092938	2.8869577	20	3 28.4	20.2
164131 2003 <i>YL</i> ₄₃	15.2	X	356.37190	328.68283	147.84102	1.60985	0.1494282	0.17989377	3.1078399	20	—	—
164132 2003 <i>YU</i> ₄₅	15.7	X	297.42735	10.40127	356.82140	7.65522	0.1351742	0.21963236	2.7206236	20	7 29.3	19.1
164133 2003 <i>YS</i> ₄₈	15.7	X	307.11430	8.19845	40.00131	1.04709	0.2378741	0.22720353	2.6598634	20	10 1.1	17.8
164134 2003 <i>YV</i> ₄₈	14.7	X	116.79477	152.16274	268.57061	10.85940	0.0404204	0.19527409	2.9424311	20	2 28.9	19.1
164135 2003 <i>YU</i> ₅₈	15.2	X	334.28120	326.49980	126.28664	2.68713	0.1436195	0.17552164	3.1592375	20	—	—
164136 2003 <i>YY</i> ₆₉	15.6	X	359.21240	204.62662	97.03767	6.34695	0.0482567	0.22021860	2.7158142	20	8 12.3	18.9
164137 2003 <i>YS</i> ₇₈	14.4	X	111.68238	17.37861	288.63735	14.98946	0.0704524	0.17306346	3.1890828	20	12 30.6	19.2
164138 2003 <i>YE</i> ₈₁	15.8	X	334.25190	66.37512	73.67770	1.26406	0.1456583	0.18080086	3.0974363	20	—	—
164139 2003 <i>YC</i> ₈₄	15.9	X	28.88886	226.38742	182.34755	3.56338	0.1731881	0.24097904	2.5575053	20	—	—
164140 2003 <i>YM</i> ₈₅	15.2	X	215.00944	285.07447	108.20115	8.85948	0.2405511	0.21037349	2.7998969	20	5 16.5	20.1
164141 2003 <i>YP</i> ₈₇	15.3	X	37.97786	296.83593	168.00014	4.12060	0.1465614	0.18665359	3.0323441	20	1 24.1	18.7
164142 2003 <i>YB</i> ₉₁	14.9	X	315.51593	242.75981	111.35440	16.25746	0.2250140	0.22116951	2.7080242	20	7 28.5	17.5
164143 2003 <i>YG</i> ₉₁	15.2	X	317.63521	264.44982	109.58921	11.04956	0.2549022	0.22496378	2.6774887	20	9 4.1	17.5
164144 2003 <i>YF</i> ₉₆	15.3	X	168.78123	294.98195	97.07243	5.88970	0.1178169	0.20077903	2.8883987	20	4 6.5	19.9
164145 2003 <i>YG</i> ₁₀₄	15.0	X	102.35931	137.98614	259.61371	7.75512	0.1001750	0.18950693	3.0018293	20	1 26.7	19.2
164146 2003 <i>YQ</i> ₁₀₆	15.2	X	16.44576	54.89531	103.28526	10.68821	0.0194765	0.18946186	3.0023053	20	2 29.8	19.4
164147 2003 <i>YR</i> ₁₀₈	15.5	X	275.15087	293.42187	120.44187	10.2014	0.1141911	0.22606576	2.6687805	20	9 2.3	18.9
164148 2003 <i>YZ</i> ₁₁₀	16.4	X	4.02893	152.32492	119.74603	3.28719	0.1799847	0.26571754	2.3961973	20	7 19.4	18.3
164149 2003 <i>YL</i> ₁₁₄	15.0	X	325.08499	74.13663	99.09745	10.81941	0.0306534	0.18458462	3.0549612	20	1 10.2	19.3
164150 2003 <i>YF</i> ₁₁₉	14.7	X	251.59783	180.79229	350.63831	3.88466	0.1182280	0.17101435	3.2145068	20	12 15.1	19.3
164151 2003 <i>YM</i> ₁₂₅	15.3	X	216.70203	145.62695	305.87893	8.88058	0.1959749	0.21686379	2.7437510	20	7 29.4	19.8
164152 2003 <i>YP</i> ₁₂₆	14.9	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>
164161 2003 YW ₁₅₄	15.2	X	12.42734	39.95995	323.15587	14.62400	0.1545730	0.23299235	2.6156218	20	12 7.4	18.6
164162 2003 YY ₁₅₄	15.6	X	21.44112	21.03139	37.70839	16.92007	0.2239810	0.24132493	2.5550609	20	—	—
164163 2003 YS ₁₅₅	15.1	X	154.89742	257.72687	186.76845	7.30756	0.2982784	0.20332453	2.8642408	20	6 1.4	20.3
164164 2003 YK ₁₆₆	16.0	X	204.35111	16.52556	358.01260	0.57917	0.2696270	0.20459058	2.8524122	20	4 12.9	21.0
164165 2004 AC ₄	15.2	X	130.23335	298.55098	108.09067	10.04302	0.0997874	0.19196516	2.9761475	20	3 16.0	19.7
164166 2004 AQ ₅	14.6	X	43.33724	152.05683	309.98171	9.31715	0.0755351	0.18357922	3.0661051	20	1 26.7	18.5
164167 2004 AJ ₇	15.2	X	72.00237	205.56422	227.56746	7.88740	0.0742174	0.19056137	2.9907456	20	1 26.7	19.3
164168 2004 AP ₈	14.9	X	353.69562	284.91881	174.45484	13.50283	0.1557567	0.18149588	3.0895237	20	—	—
164169 2004 AK ₂₅	14.6	X	156.05294	142.64451	93.85393	20.56489	0.1107980	0.17142476	3.2093741	20	11 27.8	19.8
164170 2004 AS ₂₅	15.5	X	168.48343	260.98727	209.53102	11.59147	0.1567004	0.21020092	2.8014291	20	7 8.3	20.3
164171 2004 AP ₂₆	15.6	X	239.59575	259.12725	159.32302	9.51522	0.2012464	0.21313486	2.7756608	20	7 8.6	20.1
164172 2004 BY ₅	15.2	X	133.46523	265.76108	128.56370	9.94559	0.1200529	0.19082611	2.9879788	20	3 4.9	19.7
164173 2004 BM ₁₀	15.6	X	99.22798	213.78759	216.31128	4.42774	0.1153316	0.19068146	2.9894897	20	3 5.0	19.8
164174 2004 BM ₁₇	14.9	X	3.53627	135.31351	341.36009	10.72982	0.1147184	0.18121883	3.0926718	20	—	—
164175 2004 BO ₃₇	15.2	X	118.16561	233.96407	118.62548	6.64659	0.1649074	0.18015708	3.1048109	20	1 3.6	19.6
164176 2004 BE ₄₆	15.3	X	22.39724	192.54481	292.78723	2.33367	0.1015220	0.18612648	3.0380665	20	1 24.4	18.9
164177 2004 BM ₄₆	15.6	X	222.10662	245.06033	224.99583	3.43614	0.0625440	0.21513199	2.7584560	20	9 9.0	19.4
164178 2004 BP ₄₈	15.4	X	51.64631	144.26741	294.56927	2.88592	0.0615592	0.18332941	3.0688898	20	1 8.6	19.4
164179 2004 BA ₄₉	15.7	X	47.86472	9.27328	120.04341	3.98082	0.0849287	0.18997401	2.9969069	20	3 8.5	19.5
164180 2004 BD ₅₂	15.4	X	228.23711	290.43091	135.19904	9.87520	0.1427885	0.20962481	2.8065595	20	7 12.2	19.7
164181 2004 BJ ₅₂	15.9	X	217.33643	194.67226	276.66301	0.84168	0.0990881	0.21410971	2.7672292	20	9 1.8	19.9
164182 2004 BM ₅₂	15.9	X	128.60306	323.51863	133.80904	2.75438	0.0856126	0.19955247	2.9002224	20	5 10.7	20.2
164183 2004 BG ₅₉	15.1	X	45.73277	264.38181	166.53547	7.12771	0.1477882	0.18088680	3.0964552	20	—	—
164184 2004 BF ₆₈	19.3	X	287.14720	2.55778	202.23128	4.60177	0.4533008	0.47486412	1.6271333	20	—	—
164185 2004 BD ₆₉	15.3	X	290.01614	38.40199	351.44467	12.93887	0.1881850	0.21878922	2.7276299	20	8 11.6	18.6
164186 2004 BP ₇₀	15.1	X	113.68334	265.14593	113.70745	10.24250	0.1831793	0.18482927	3.0522648	20	2 1.1	19.5
164187 2004 BR ₇₀	15.3	X	358.85974	147.31317	324.96512	6.55342	0.0678957	0.17784106	3.1317087	20	—	—
164188 2004 BB ₇₄	15.0	X	62.06752	282.99978	136.29014	9.83376	0.1044823	0.18012905	3.1051330	20	1 3.4	18.9
164189 2004 BQ ₇₆	14.3	X	0.50808	250.87709	166.37307	16.22722	0.1498949	0.17146516	3.2088700	20	—	—
164190 2004 BD ₈₀	15.6	X	321.96579	15.40975	165.46513	1.73322	0.1007176	0.18001823	3.1064073	20	—	—
164191 2004 BD ₉₄	14.9	X	7.67155	305.00932	169.30126	18.50751	0.1597379	0.17947947	3.1126207	20	—	—
164192 2004 BP ₁₀₅	14.7	X	254.14452	224.81013	139.08078	15.96856	0.1549129	0.20544526	2.8444958	20	5 25.5	19.2
164193 2004 BM ₁₄₆	15.3	X	65.46266	78.61375	318.04991	13.93451	0.1236507	0.17807430	3.1289735	20	—	—
164194 2004 BM ₁₅₁	15.2	X	279.75283	212.05303	141.80495	16.29639	0.1925995	0.20916339	2.8106856	20	6 5.7	19.4
164195 2004 CT ₁₃	15.6	X	64.75704	305.19797	124.90205	2.14233	0.1702757	0.18241722	3.0791120	20	1 28.5	19.3
164196 2004 CF ₅₂	15.1	X	275.18482	50.92149	35.22452	33.70423	0.3027362	0.22002165	2.7174346	20	10 2.0	18.9
164197 2004 CQ ₆₈	15.9	X	251.87818	40.21621	19.64628	4.89254	0.1539900	0.21248162	2.7813468	20	8 1.4	19.8
164198 2004 CN ₇₄	15.4	X	40.89815	269.81669	157.19125	8.91898	0.1530158	0.17961493	3.1110555	20	—	—
164199 2004 CP ₈₀	14.4	X	62.20460	69.98985	359.33967	9.45018	0.2095369	0.18108162	3.0942338	20	2 1.0	18.1
164200 2004 DK ₂₉	14.8	X	57.23857	257.89488	145.86899	10.42622	0.2248301	0.17689466	3.1428686	20	—	—
164201 2004 EC	15.7	X	284.13467	10.31592	28.83644	34.58713	0.8599893	0.34927268	1.9969153	20	5 7.2	20.3
164202 2004 EW	20.8	X	273.89511	56.16731	342.92090	4.66949	0.2791239	1.00333573	0.9881856	20	—	—
164203 2004 ED ₁₁	15.6	X	77.62206	255.11253	162.33354	22.07940	0.0913596	0.23784671	2.5799104	20	1 9.8	19.2
164204 2004 EK ₄₅	15.5	X	145.92889	84.68068	4.99261	1.97525	0.0917127	0.19476954	2.9475105	20	5 19.5	20.0
164205 2004 EE ₅₁	15.7	X	24.41900	209.23358	215.51775	0.36601	0.1771218	0.17247356	3.1963502	20	—	—
164206 2004 FN ₁₈	17.6	X	180.53315	232.78336	214.47382	18.27644	0.4095838	0.44424810	1.7010575	20	6 21.7	21.0
164207 2004 GU ₉	21.1	X	289.25531	279.85361	38.53253	13.65049	0.1360346	0.98357393	1.0013780	20	2 24.5	20.6
164208 2004 HB ₂₇	12.5	X	14.67420	239.25195	105.28919	7.27951	0.0659238	0.08429654	5.1514506	20	10 10.1	19.1
164209 2004 HD ₅₇	16.5	X	316.24114	254.83611	95.47723	24.52306	0.1101419	0.37911465	1.8906987	20	9 21.7	18.6
164210 2004 JH ₂₁	12.7	X	271.77789	232.58580	203.16933	4.04537	0.0637480	0.08321271	5.1960855	20	9 10.4	19.5
164211 2004 JA ₂₇	19.4	X	115.80665	270.18621	67.77601	2.25806	0.4232168	0.45817679	1.6664054	20	—	—
164212 2004 JB ₄₈	12.7	X	304.00110	195.71323	207.99824	5.96738	0.0490231	0.08117622	5.2826298	20	9 13.2	19.5
164213 2004 LS ₂	16.8	X	357.09843	227.53862	71.47762	21.19573	0.0457592	0.37656840	1.8992121	20	9 8.8	19.2
164214 2004 LZ ₁₁	19.0	X	39.94700	248.81576	72.11325	5.46195	0.3924966	0.31936893	2.1196994	20	—	—
164215 Doloreshill	20.0	X	53.49399	76.56235	236.01843	4.87845	0.3961676	0.32041115	2.1151003	20	—	—
164216 2004 OT ₁₁	17.2	X	27.80568	326.33378	295.09523	19.94603	0.5653846	0.31235847	2.1512978	20	10 23.5	20.9
164217 2004 PT ₄₂	17.2	X	190.42693	179.06001	144.97965	48.92490	0.4162475	0.34518808	2.0126373	20	2 1.3	21.2
164218 2004 PX ₈₄	15.8	X	159.01340	189.36046	166.23711	24.45033	0.2066123	0.27719459	3.2295903	20	2 7.3	19.7
164219 2004 QK ₃	17.1	X	189.73098	53.53943	344.11348	17.72987	0.1011619	0.35569775	1.9727950	20	4 15.6	20.0
164220 2004 QW ₁₆	16.2	X	224.27523	194.77246	191.14017	27.69184	0.2800123	0.35838114	1.9629352	20	5 9.7	19.7
164221 2004 QE ₂₀	20.1	X	188.42524	74.28309	272.59270	6.48284	0.2053402	0.53371964	1.5051990	20	1 24.9	21.0
164222 2004 RN ₉	20.8	X	146.28238	67.19748	0.96427	16.10976	0.2470874	0.66169834	1.3042555	20	4 9.8	21.0
164223 2004 RV ₈₀	16.8	X	67.96851	0.18793	161.73761	6.91845	0.0919742	0.29183360	2.2510192	20	5 18.4	19.3
164224 2004 RY ₁₈₂	17.1	X	6.87799	321.43777	325.41097	6.64189	0.2076166	0.30616407	2.1802179	20	8 31.8	18.4
164225 2004 RV ₁₉₄	16.2	X	337.61684	275.93659	339.77964	8.25158	0.0223868	0.29054871	2.2576507	20	4 30.6	19.0
164226 2004 RD ₁₉₉	16.6	X	299.42842	22.88992	329.49582	7.70360	0.1629112	0.29959130	2.2119905	20	7 11.5	18.6
164227 2004 RE ₂₂₈	17.0	X	7.02488	229.66889	348.45002	4.59799	0.0818156	0.28837763	2.2689678	20	4 21.7	19.1
164228 2004 RC ₂₂₉	16.5	X	314.11076	244.40780	306.26776	1.91846						

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>
164241 2004 <i>TF</i> ₄₆	17.5	X	236.76333	138.89683	297.14827	0.36279	0.1249873	0.30010641	2.2094586	20	8 14.5	20.2
164242 2004 <i>TV</i> ₅₁	16.9	X	77.56233	259.43978	305.08991	1.31872	0.1119476	0.29408457	2.2395180	20	8 6.6	19.6
164243 2004 <i>TX</i> ₁₀₁	16.6	X	284.37984	246.38936	25.28951	7.84315	0.0893471	0.28222738	2.3018126	20	3 4.5	19.5
164244 2004 <i>TC</i> ₁₀₃	17.2	X	295.92184	323.78072	29.16885	3.42840	0.1238243	0.29862788	2.2167454	20	7 11.8	19.2
164245 2004 <i>TV</i> ₁₁₀	17.0	X	310.54234	315.51014	2.62650	4.37109	0.1558866	0.29718036	2.2239378	20	6 5.1	19.0
164246 2004 <i>TV</i> ₁₁₃	17.1	X	279.14759	315.43178	32.46276	5.03226	0.1692055	0.29484478	2.2356668	20	5 26.9	19.7
164247 2004 <i>TP</i> ₁₃₃	16.2	X	325.00109	239.29742	59.22652	6.36489	0.1931642	0.29511665	2.2342936	20	5 27.5	17.8
164248 2004 <i>TS</i> ₁₃₃	16.9	X	18.11883	131.08185	181.58855	4.38442	0.2190403	0.30802006	2.21714511	20	11 8.8	19.0
164249 2004 <i>TK</i> ₁₃₈	16.6	X	325.77171	329.49730	302.55475	7.19296	0.1066722	0.29248845	2.2476580	20	4 25.6	19.0
164250 2004 <i>TW</i> ₁₄₈	17.0	X	283.90129	267.46436	325.82598	2.13532	0.1102911	0.27726820	2.3291780	20	1 7.9	20.1
164251 2004 <i>TT</i> ₁₆₉	16.7	X	225.99972	245.81749	165.92444	6.26622	0.0782347	0.29569880	2.2313602	20	7 1.5	19.6
164252 2004 <i>TQ</i> ₂₁₆	17.2	X	331.67835	302.25790	14.02768	7.37806	0.1671892	0.30035212	2.2082534	20	7 23.2	18.8
164253 2004 <i>TU</i> ₂₃₂	16.7	X	87.78018	337.91075	221.20165	5.97791	0.1570850	0.29624896	2.2285968	20	8 16.0	19.8
164254 2004 <i>TF</i> ₂₃₈	17.7	X	38.47074	195.07072	91.04949	1.48623	0.1033321	0.30704118	2.1760638	20	10 11.0	19.9
164255 2004 <i>TW</i> ₂₆₁	17.0	X	311.61599	270.34089	51.10290	4.16234	0.1301673	0.29777350	2.2209836	20	6 17.8	19.0
164256 2004 <i>TQ</i> ₂₆₂	17.1	X	271.36059	339.80837	31.86497	7.07390	0.2012995	0.29685901	2.2255425	20	6 15.0	19.9
164257 2004 <i>TD</i> ₂₇₇	17.2	X	320.30524	94.68354	200.38330	1.70758	0.1659672	0.29336645	2.2431712	20	5 16.9	19.1
164258 2004 <i>TF</i> ₂₇₈	16.8	X	327.09387	196.52682	79.25713	2.66265	0.1146550	0.28997869	2.2606084	20	5 7.5	18.9
164259 2004 <i>TH</i> ₂₈₃	16.6	X	306.13001	205.37884	194.33170	3.58501	0.1480054	0.30619528	2.1800697	20	10 18.4	17.8
164260 2004 <i>TW</i> ₃₁₆	17.4	X	34.13747	99.93290	173.04095	3.17802	0.1262278	0.30511689	2.1852035	20	9 17.3	19.7
164261 2004 <i>TV</i> ₃₃₀	16.5	X	272.55358	155.22993	214.47362	5.60018	0.1858299	0.29588826	2.2304075	20	6 17.0	19.2
164262 2004 <i>TZ</i> ₃₃₂	16.6	X	294.85607	178.60798	213.44388	6.12482	0.0808327	0.30307861	2.1949899	20	9 15.0	18.8
164263 2004 <i>UW</i> ₄	15.9	X	189.78762	24.84579	13.81035	24.28526	0.1875819	0.28461086	2.2889435	20	4 22.3	19.7
164264 2004 <i>UU</i> ₇	16.9	X	284.53147	338.06985	13.01005	6.60946	0.1452143	0.29590479	2.2303245	20	6 13.5	19.4
164265 2004 <i>VO</i>	16.9	X	318.23118	128.91055	201.81575	5.50847	0.2314064	0.30072857	2.2064102	20	7 1.1	18.3
164266 2004 <i>VK</i> ₅	17.6	X	316.85024	353.18571	354.46986	4.92647	0.2028626	0.30182790	2.2010494	20	8 6.8	18.9
164267 2004 <i>VC</i> ₂₇	16.5	X	91.78080	177.48667	264.03378	5.69806	0.0954174	0.27318659	2.3523204	20	2 24.6	19.3
164268 Hajmási	17.4	X	123.92316	96.10580	4.61956	3.27609	0.1406882	0.28066556	2.3103439	20	5 12.1	20.5
164269 2004 <i>WS</i> ₈	16.6	X	39.35408	344.26841	341.29122	5.64293	0.2766785	0.31168932	2.1543757	20	12 30.2	19.7
164270 2004 <i>XR</i> ₁	17.0	X	261.59421	1.79430	107.73226	6.25119	0.1670971	0.29238106	2.2482084	20	5 24.0	20.0
164271 2004 <i>XG</i> ₄	16.2	X	275.04328	263.94754	69.67025	6.64879	0.2309047	0.29021269	2.2593930	20	4 24.9	19.2
164272 2004 <i>XM</i> ₇	16.6	X	250.05204	333.93641	35.80823	4.03452	0.1800266	0.29019708	2.2594741	20	5 19.8	19.9
164273 2004 <i>XO</i> ₁₆	15.1	X	169.64131	119.02773	307.85675	24.03863	0.2901347	0.27853252	2.3221242	20	5 14.6	19.8
164274 2004 <i>XM</i> ₁₇	16.1	X	298.06670	30.20960	66.92575	2.62159	0.0621515	0.24517768	2.5282233	20	12 13.3	19.0
164275 2004 <i>XJ</i> ₁₉	16.7	X	31.96776	352.34604	120.60313	2.20432	0.1426977	0.26525992	2.3989524	20	1 4.4	18.6
164276 2004 <i>XG</i> ₂₄	16.9	X	26.62368	253.16761	84.02175	5.89442	0.2042206	0.31135774	2.1559049	20	12 22.1	19.4
164277 2004 <i>XK</i> ₃₀	16.4	X	314.82698	165.27787	81.17118	7.42596	0.0619796	0.27917481	2.3185612	20	3 17.5	19.2
164278 2004 <i>XF</i> ₃₃	16.2	X	168.78684	228.19617	82.32533	3.82394	0.1589037	0.26525596	2.3989762	20	—	—
164279 2004 <i>XV</i> ₄₂	16.2	X	107.97830	57.64856	320.06664	5.61119	0.1311338	0.26148726	2.4219715	20	1 3.2	19.0
164280 2004 <i>XX</i> ₅₈	17.5	X	217.75529	47.35476	343.46898	3.59811	0.1988166	0.28529710	2.2852715	20	5 12.9	21.1
164281 2004 <i>XF</i> ₇₁	16.4	X	332.27068	206.35489	177.41266	5.29138	0.1072832	0.30713726	2.1756100	20	11 17.3	18.2
164282 2004 <i>XZ</i> ₇₁	16.3	X	210.04227	322.99636	77.05102	9.40235	0.1186844	0.28369134	2.2938869	20	5 24.1	19.5
164283 2004 <i>XU</i> ₇₄	15.7	X	253.79477	182.67978	289.25775	5.88644	0.0583853	0.24181032	2.5516406	20	10 26.5	19.1
164284 2004 <i>XH</i> ₇₅	15.5	X	131.47928	305.23974	261.01349	11.42246	0.1310961	0.23289967	2.6163156	20	9 29.1	19.8
164285 2004 <i>XF</i> ₈₂	17.2	X	150.49453	323.87367	125.14725	2.82476	0.1370156	0.28297083	2.2977791	20	5 26.9	20.5
164286 2004 <i>XO</i> ₈₆	16.1	X	32.22214	318.71547	114.87724	5.89199	0.0901166	0.25627160	2.4547224	20	—	—
164287 2004 <i>XJ</i> ₈₇	17.5	X	20.59165	266.00133	93.61457	3.59504	0.1659214	0.31361249	2.1455591	20	—	—
164288 2004 <i>XA</i> ₉₃	17.0	X	159.59015	43.38155	4.69310	2.35679	0.1825665	0.27941499	2.3172323	20	4 13.5	20.5
164289 2004 <i>XJ</i> ₉₇	14.3	X	82.88685	6.39046	301.52567	14.46266	0.2546452	0.17995357	3.1071514	20	12 21.5	19.5
164290 2004 <i>XY</i> ₁₀₆	16.7	X	245.84380	345.15244	26.35663	3.83574	0.1991060	0.28951010	2.2630470	20	5 15.4	20.0
164291 2004 <i>XK</i> ₁₀₈	16.1	X	120.32757	107.25460	312.54569	5.85550	0.0847888	0.27116315	2.3640080	20	3 4.9	19.1
164292 2004 <i>XN</i> ₁₂₁	16.7	X	188.66870	289.38741	101.13799	7.08135	0.2457435	0.28090432	2.3090346	20	4 21.6	20.7
164293 2004 <i>XO</i> ₁₂₄	15.2	X	177.55654	79.76777	50.83742	22.20765	0.0757362	0.22570985	2.6715853	20	8 28.8	19.7
164294 2004 <i>XZ</i> ₁₃₀	20.4	X	124.64699	5.31883	211.26071	2.94699	0.4546088	0.203118191	0.6174998	20	—	—
164295 2004 <i>XA</i> ₁₃₁	13.5	X	287.10132	81.35372	145.51285	32.72222	0.2870577	0.12037068	4.0624583	20	1 8.6	19.9
164296 2004 <i>XD</i> ₁₃₁	16.3	X	286.36587	148.67107	239.98880	3.89038	0.1813804	0.29755069	2.2220922	20	8 7.8	18.5
164297 2004 <i>XN</i> ₁₄₀	16.7	X	32.40308	297.08686	151.89193	3.19607	0.1327376	0.25918558	2.4362891	20	—	—
164298 2004 <i>XY</i> ₁₈₁	16.3	X	80.72656	67.97420	35.82797	2.74452	0.1714598	0.26683950	2.3894758	20	3 27.5	18.9
164299 2004 <i>XP</i> ₁₈₆	15.4	X	182.14634	140.46927	62.83085	9.97292	0.1179767	0.23975156	2.5662271	20	11 21.1	19.2
164300 2004 <i>YN</i> ₁₆	16.1	X	335.41934	307.72314	349.76636	2.21960	0.0443434	0.21942646	2.7223464	20	6 29.4	19.6
164301 2004 <i>YY</i> ₂₀	17.0	X	53.01153	233.43095	193.20337	0.49878	0.1685233	0.25880929	2.4386500	20	—	—
164302 2004 <i>YH</i> ₂₁	16.8	X	140.68489	261.62184	123.07925	3.00354	0.1708834	0.26774167	2.3841052	20	2 26.0	20.2
164303 2004 <i>YE</i> ₂₅	16.7	X	161.08685	66.53148	286.04753	1.44258	0.2019646	0.26622668	2.3931413	20	2 7.7	20.5
164304 2005 <i>AR</i> ₄	16.2	X	106.58127	291.32302	59.11410	6.66878	0.0916835	0.25591446	2.4570057	20	—	—
164305 2005 <i>AR</i> ₁₀	16.0	X	125.47354	355.19454	2.29457	5.18839	0.1231030	0.26019740	2.4299691	20	—	—
164306 2005 <i>AC</i> ₁₁	16.5	X	46.34085	186.77756	219.07785	5.62242	0.1263830	0.25467720	2.4649569	20	—	—
164307 2005 <i>AJ</i> ₁₁	15.9	X	170.51089	229.48707	298.87494	10.59442	0.0662685	0.23165726	2.6256617	20	9 21.4	19.9
164308 2005 <i>AE</i> ₁₂	16.0	X	134.41205	353.43614	16.68877	5.16246	0.2047522	0.26431014	2.4046959	20	2 6.3	19.4
164309 2005 <i>AL</i> ₂₀	16.4	X	42.48383	145.09347	258.70654	4.08214	0.0651434	0.25219786	2.4810858	20	—	—
164310 2005 <i>AW</i> ₂₀	16.7	X	112.04651	261.40883	141.96194	4.07274	0.1233139	0.26524727	2.3990286	20	2 9.5	19.7
164311 2005 <i>AC</i> ₂₁	16.4	X	161.87122	67.05714	292.97349	4.46331	0.2173825	0.26786851	2.3833525	20	2 17.5	20.3
164312 2005 <i>AD</i> <												

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>
164321 2005 AH ₄₃	17.1	X	115.80577	78.56033	342.06110	1.10043	0.1690108	0.26867407	2.3785861	20	3 14.5	20.1
164322 2005 AT ₄₃	16.2	X	334.39410	13.23444	60.42323	1.98427	0.0958893	0.24449932	2.5328975	20	—	—
164323 2005 AS ₄₆	16.4	X	193.41953	223.07721	107.95800	3.25406	0.0915918	0.26717666	2.3874652	20	2 6.8	19.8
164324 2005 AU ₄₇	17.2	X	104.63175	239.34463	138.91155	1.95356	0.1901671	0.26154119	2.4216385	20	1 7.7	20.0
164325 2005 AJ ₄₈	15.7	X	71.87528	221.08220	300.45647	3.82360	0.0087951	0.21217949	2.7839864	20	5 9.2	19.6
164326 2005 AJ ₄₉	15.8	X	241.45288	301.60666	128.32603	15.89309	0.1248838	0.22899267	2.6459908	20	8 5.9	19.5
164327 2005 AO ₄₉	15.6	X	45.11811	261.95214	268.09362	4.81818	0.0394715	0.20900319	2.8121217	20	4 17.1	19.4
164328 2005 AH ₅₄	16.1	X	271.99937	117.91683	327.55119	6.85244	0.0893615	0.23361417	2.6109783	20	10 9.8	19.4
164329 2005 AE ₆₉	16.3	X	172.75821	227.61784	159.17901	6.87377	0.1418681	0.27245608	2.3565232	20	3 30.2	19.9
164330 2005 AG ₆₉	16.6	X	85.79872	212.30055	166.04230	2.43318	0.2052033	0.25825015	2.4421687	20	—	—
164331 2005 AV ₇₂	16.2	X	286.48268	245.57619	62.26335	1.22348	0.0898636	0.21176762	2.7875950	20	4 27.1	19.9
164332 2005 AW ₇₉	16.7	X	186.35469	330.98115	24.70988	2.72853	0.2092099	0.26912265	2.3759423	20	3 5.5	20.5
164333 2005 BF	16.8	X	306.68250	175.53831	205.65889	3.74361	0.1299873	0.29724444	2.2236182	20	9 15.2	18.7
164334 2005 BF ₂	15.5	X	36.76225	126.15101	121.41995	13.02958	0.0815032	0.22007837	2.7169677	20	7 27.5	18.9
164335 2005 BR ₂	15.8	X	140.04627	23.52739	14.16663	24.78234	0.2388913	0.27010469	2.3701798	20	3 23.5	19.6
164336 2005 BB ₁₁	16.2	X	293.60760	127.40691	334.26249	4.30550	0.0905521	0.24061892	2.5600564	20	12 9.0	19.1
164337 2005 BO ₁₂	16.6	X	95.82960	81.88035	303.85735	0.46776	0.1872610	0.26100937	2.4249269	20	1 4.5	19.0
164338 2005 BN ₁₆	15.8	X	98.41210	29.57631	354.46494	6.52041	0.1030040	0.26041472	2.4286170	20	—	—
164339 2005 BO ₁₆	16.4	X	168.46362	292.46325	62.12655	2.98369	0.2320141	0.26966206	2.3727728	20	2 19.8	20.3
164340 2005 BF ₄₃	16.2	X	346.35462	254.80555	139.96742	2.56272	0.1606090	0.24142741	2.5543378	20	12 12.5	18.8
164341 2005 CO	20.5	X	110.46632	42.87362	140.67039	13.01272	0.2541800	0.47498836	1.6268496	20	9 17.9	22.6
164342 2005 CP	20.8	X	246.57548	72.95464	138.94462	19.17013	0.3609262	0.50107711	1.5698796	20	—	—
164343 2005 CU ₁₂	15.4	X	70.21431	308.51597	153.10629	12.70819	0.0383468	0.20010542	2.8948772	20	2 25.9	19.2
164344 2005 CJ ₁₄	15.2	X	334.80806	340.75207	329.00164	13.33664	0.1751752	0.21844829	2.7304671	20	7 10.4	18.1
164345 2005 CJ ₁₅	16.9	X	70.40157	348.19592	199.89374	1.58837	0.1509179	0.27729492	2.3290283	20	7 8.2	19.7
164346 2005 CH ₃₁	15.2	X	222.21608	173.40655	105.43580	3.12152	0.1843695	0.18872411	3.0101245	20	1 10.9	20.3
164347 2005 CN ₄₈	16.1	X	157.97982	19.74362	130.05793	5.25611	0.0372463	0.22245766	2.6975650	20	8 19.2	19.7
164348 2005 CP ₄₉	15.8	X	89.00186	1.03570	146.60782	8.16753	0.1414667	0.20912605	2.8110148	20	6 5.3	19.8
164349 2005 CO ₅₁	16.0	X	138.79700	139.52538	63.49466	2.98974	0.0479928	0.22696215	2.6617489	20	10 6.1	19.8
164350 2005 CO ₅₂	15.0	X	154.14948	159.69555	133.61410	7.82873	0.0629059	0.18131942	3.0915278	20	—	—
164351 2005 CA ₅₆	16.6	X	136.37789	26.58120	10.21870	2.70504	0.1846080	0.26631971	2.3925839	20	3 9.3	20.1
164352 2005 CW ₅₇	15.4	X	42.04688	6.89828	323.35536	11.94354	0.1743609	0.23558852	2.5963703	20	12 8.5	19.2
164353 2005 CH ₅₉	15.7	X	21.68906	334.15746	182.35357	6.36593	0.1789020	0.26301423	2.4125883	20	2 16.4	17.7
164354 2005 CG ₆₂	15.9	X	232.56839	306.35753	128.10586	12.14028	0.0467517	0.22411153	2.6842723	20	8 11.3	19.5
164355 2005 CO ₆₅	15.8	X	300.44344	21.49341	330.75753	5.27337	0.0251927	0.21917141	2.7244580	20	7 26.4	19.4
164356 2005 CF ₇₃	16.1	X	242.23439	276.56696	45.20788	2.66242	0.0607061	0.20318346	2.8655664	20	3 27.1	20.2
164357 2005 CN ₇₅	16.1	X	332.50010	229.68978	128.30927	12.93369	0.1571577	0.22888750	2.6468013	20	9 22.5	18.9
164358 2005 DB	14.9	X	174.26285	283.07444	325.41091	10.04440	0.0409481	0.17718352	3.1394518	20	12 30.7	19.6
164359 2005 EC ₁	15.6	X	139.40066	351.45998	348.84295	0.41754	0.0121910	0.18725484	3.0258497	20	—	—
164360 2005 EL ₂	16.0	X	179.28824	66.59349	325.46677	4.47245	0.0510697	0.20393087	2.8585606	20	4 10.1	20.3
164361 2005 EV ₁₁	15.7	X	282.95254	278.25552	124.88881	6.65491	0.0386682	0.22530801	2.6747609	20	9 9.4	19.1
164362 2005 EH ₁₃	16.2	X	338.39521	176.03898	141.75752	2.48075	0.0765090	0.22173664	2.7034048	20	7 31.3	19.2
164363 2005 EN ₁₄	15.2	X	23.54093	22.26293	130.89333	2.93722	0.0233902	0.19578524	2.9373075	20	2 28.9	19.2
164364 2005 EO ₂₃	15.1	X	214.98796	105.51771	164.76673	14.79175	0.0685890	0.18523509	3.0478052	20	—	—
164365 2005 EO ₃₅	15.0	X	190.12972	287.94101	316.11641	3.77940	0.1253310	0.17305481	3.1891890	20	—	—
164366 2005 EV ₄₀	14.7	X	276.81324	177.57437	14.76828	21.00483	0.0463074	0.18724203	3.0259877	20	—	—
164367 2005 EB ₄₆	15.4	X	283.05992	82.14981	333.57102	14.17631	0.0639139	0.22775713	2.6555515	20	9 17.2	18.9
164368 2005 EJ ₄₈	15.5	X	272.05686	31.46021	337.06188	8.19501	0.1914857	0.21721362	2.7408042	20	6 11.7	19.4
164369 2005 ED ₄₉	15.8	X	76.84449	151.70288	338.32059	12.86036	0.0540748	0.20243652	2.8726109	20	4 6.9	19.9
164370 2005 EZ ₄₉	15.3	X	311.41227	23.13481	6.80437	13.91930	0.1002316	0.22623838	2.6674228	20	9 26.8	18.4
164371 2005 ET ₆₅	14.9	X	225.26472	241.08261	349.15225	9.65423	0.0178096	0.18077886	3.0976876	20	—	—
164372 2005 EU ₆₇	15.4	X	255.38752	153.96790	152.79013	2.36053	0.0833835	0.19596198	2.9355412	20	3 21.2	19.8
164373 2005 ED ₆₈	14.7	X	217.50638	274.51718	336.78715	19.63805	0.0840175	0.18075787	3.0979274	20	—	—
164374 2005 EM ₉₇	16.6	X	81.32132	178.69427	237.23046	4.32172	0.0564992	0.26082267	2.4260839	20	2 1.9	18.9
164375 2005 EM ₁₀₇	14.5	X	168.71866	294.36721	304.21253	12.73466	0.0876917	0.17178451	3.2048918	20	12 8.5	19.5
164376 2005 ET ₁₁₃	14.7	X	135.93441	277.65130	106.57643	14.37040	0.1035256	0.19301458	2.9653501	20	2 23.8	19.2
164377 2005 EM ₁₁₈	14.8	X	197.67299	111.63299	214.33647	8.63335	0.0804121	0.19267153	2.9688689	20	2 9.8	19.6
164378 2005 EY ₁₂₄	15.7	X	115.37586	267.32154	172.54662	1.76531	0.0558101	0.19709588	2.9242714	20	3 29.8	19.9
164379 2005 EE ₁₃₄	15.9	X	238.81770	192.93483	173.50527	4.16494	0.1145969	0.21098808	2.7944570	20	5 13.0	20.0
164380 2005 EB ₁₄₈	15.3	X	89.70886	1.02049	135.93615	3.12735	0.0147858	0.20180369	2.8786132	20	5 4.2	19.2
164381 2005 EC ₁₆₈	16.1	X	264.98997	286.28092	181.90785	7.84002	0.1895457	0.23314049	2.6145137	20	10 19.3	19.1
164382 2005 EQ ₁₈₂	14.7	X	131.72082	167.22302	157.16397	16.92965	0.0580216	0.17953604	3.1119668	20	—	—
164383 2005 ES ₂₀₅	16.8	X	96.93640	251.09485	123.21874	5.59900	0.2046231	0.25697347	2.4502507	20	—	—
164384 2005 EJ ₂₁₀	15.8	X	98.87542	146.86402	194.91275	2.90747	0.0923548	0.17593056	3.1543401	20	—	—
164385 2005 EQ ₂₁₇	15.5	X	155.36473	119.12336	168.05666	0.68322	0.0319576	0.17590754	3.1546154	20	—	—
164386 2005 EJ ₂₄₀	15.7	X	68.49828	247.68151	158.54956	1.83906	0.0197248	0.18346206	3.0674103	20	—	—
164387 2005 EY ₂₆₃	15.1	X	134.62329	153.82830	184.65772	5.86753	0.0489782	0.18132100	3.0915099	20	—	—
164388 2005 EG ₂₇₃	16.0	X	316.53445	204.84135	177.27450	6.07653	0.0370942	0.22419685	2.6835913	20	9 27.3	19.5
164389 2005 EL ₂₇₈	15.1	X	238.47552	11.48465	174.07921	6.71098	0.0475431	0.17110638	3.1233541	20	12 25.8	19.8
164390 2005 EO ₂₈₉	15.0	X	166.43090	247.10923	86.06816	9.69348	0.0930291	0.18948343	3.0020774	20	1 22.9	19.6
164391 2005 EG ₃₁₈	15.4	X	10.77820	350.56172	143.93740	1.86224	0.1280738	0.18634152	3.0357287	20	1 16.5	18.9
164392 2005 FG ₅	16.3	X	146.91247	273.03021	164.78182	22.08354	0.2655521	0.27635937	2.3342816	20	5 19.9	20.7
164393 2005 GP ₁	14.6	X	117.72509	217.52329	75.93594	13.75926	0.0418940	0.17340222	3.1849279	20	12 19.8	19.2
164394 2005 GH ₂	15.4	X	288.16972	300.14069	112.39677	16.2979						

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>
164401 2005 GU ₆₉	15.6	X	53.76411	53.76025	301.41228	1.72648	0.2446429	0.23916623	2.5704124	20	—	—
164402 2005 GT ₁₀₄	14.2	X	146.11378	331.89369	30.36784	17.63175	0.2058241	0.18382545	3.0633665	20	2 23.0	19.5
164403 2005 GR ₁₇₀	15.0	X	282.66635	323.28535	225.69002	3.62485	0.0963843	0.17775828	3.1326808	20	—	—
164404 2005 JJ ₁₅₈	15.7	X	0.50263	71.79156	232.38558	5.03711	0.0808014	0.21028193	2.8007096	20	8 14.3	19.2
164405 2005 UK ₅₀₄	15.6	X	118.23313	270.71868	325.65481	13.75506	0.1540897	0.23967291	2.5667885	20	10 24.2	20.0
164406 2005 UV ₅₀₄	16.3	X	43.22415	291.19676	327.10903	6.11551	0.0494531	0.29983806	2.2107767	20	8 25.7	18.7
164407 2005 YB ₂₀₇	16.5	X	47.99886	266.60970	318.45071	3.88891	0.0725755	0.29712214	2.2242283	20	7 17.6	18.8
164408 2005 YA ₂₁₅	16.4	X	306.68700	243.77831	17.10287	19.56389	0.0848960	0.35580802	1.9723874	20	3 16.4	18.5
164409 2005 YZ ₂₃₇	16.2	X	33.94307	270.67817	321.28265	5.91684	0.1083327	0.29543924	2.2326669	20	7 10.2	18.2
164410 2005 YT ₂₄₈	14.8	X	193.14747	155.21716	67.72231	18.04017	0.1547629	0.17891770	3.1191327	20	12 10.2	19.7
164411 2006 AP ₃₅	17.1	X	303.60850	329.99432	275.83089	0.70229	0.1883559	0.28324535	2.2962942	20	2 4.9	20.0
164412 2006 AE ₇₁	16.7	X	234.05006	341.25840	242.82667	1.67459	0.1293548	0.26593456	2.3948935	20	—	—
164413 2006 AW ₇₅	16.2	X	242.92785	263.16148	313.22193	6.91955	0.1458788	0.26495667	2.4007825	20	—	—
164414 2006 BK ₆	17.0	X	21.32203	352.20137	330.20776	19.39820	0.0813762	0.38620309	1.8674926	20	11 14.4	19.4
164415 2006 BC ₃₄	16.7	X	234.57578	280.28010	356.94548	2.10409	0.1825477	0.27098430	2.3650480	20	1 9.9	20.6
164416 2006 BA ₅₁	16.1	X	206.02663	294.33334	316.73475	8.01898	0.2382860	0.26477303	2.4018924	20	—	—
164417 2006 BM ₅₇	17.1	X	0.47144	264.07852	5.39971	3.55583	0.1331704	0.29919892	2.2139240	20	7 7.0	18.8
164418 2006 BU ₉₀	16.3	X	325.05136	57.53652	154.49152	6.46499	0.1483083	0.27873088	2.3210224	20	1 25.1	18.9
164419 2006 BW ₉₄	16.8	X	177.09171	124.77128	173.24789	2.49095	0.1804137	0.26595428	2.3947751	20	—	—
164420 2006 BH ₉₇	16.6	X	68.75757	116.03942	172.14884	3.10605	0.1551433	0.24317328	2.5420972	20	11 16.5	20.3
164421 2006 BJ ₉₈	15.9	X	201.44172	174.01377	63.21056	0.65950	0.2515874	0.18256362	3.0774658	20	12 27.7	20.8
164422 2006 BH ₁₂₃	16.5	X	285.60722	258.97217	328.36000	1.70028	0.1639909	0.27256641	2.3558872	20	—	—
164423 2006 BZ ₁₃₆	16.9	X	353.74826	187.71212	118.03348	6.60772	0.2004280	0.30494770	2.1860117	20	9 4.6	18.1
164424 2006 BP ₁₃₈	16.9	X	254.17182	27.25989	225.32236	0.56514	0.1745799	0.27114179	2.3641321	20	—	—
164425 2006 BH ₁₄₀	17.3	X	319.31778	117.57038	154.82065	1.78972	0.1513359	0.28984989	2.2612780	20	4 12.1	19.3
164426 2006 BF ₁₈₃	16.6	X	171.79360	91.72824	164.06063	7.65279	0.1889835	0.25506914	2.4624312	20	—	—
164427 2006 BZ ₁₉₀	15.3	X	108.79388	95.17646	166.47143	8.85794	0.1380660	0.23634160	2.5908520	20	11 22.5	19.4
164428 2006 BK ₂₄₁	17.1	X	345.81228	164.94352	73.79025	2.25795	0.1569706	0.28805478	2.2706629	20	4 9.8	19.0
164429 2006 BU ₂₆₁	16.4	X	222.98462	156.97797	142.15877	12.38677	0.2225775	0.27458147	2.3443470	20	1 24.7	20.3
164430 2006 BW ₂₆₇	16.0	X	278.58888	254.46897	354.93100	8.57231	0.1912413	0.27566576	2.3381956	20	1 16.2	19.6
164431 2006 BL ₂₇₄	17.5	X	8.56323	175.39439	131.96869	5.84448	0.1312238	0.30795791	2.1717432	20	9 30.8	19.4
164432 2006 CF ₂₃	16.1	X	159.42802	26.48391	177.17841	11.59061	0.1140355	0.23780098	2.5802411	20	10 31.7	20.1
164433 2006 CJ ₄₀	16.9	X	243.55375	170.60827	132.93468	7.22589	0.1180471	0.27920196	2.3184109	20	2 22.8	20.1
164434 2006 CS ₅₈	15.4	X	79.42804	126.71690	171.29436	1.34019	0.0670887	0.18310970	3.0713442	20	11 18.2	19.7
164435 2006 CZ ₆₀	16.4	X	273.37842	252.89785	338.04375	1.80005	0.1672518	0.27063837	2.3670630	20	—	—
164436 2006 CF ₆₂	15.3	X	51.74456	62.14819	146.79138	13.51106	0.1416820	0.22035878	2.7146623	20	7 5.4	18.8
164437 2006 CP ₆₅	17.0	X	322.48562	325.68258	343.60428	6.79638	0.2101677	0.29744422	2.2226224	20	6 5.6	18.8
164438 2006 DS	17.2	X	185.20381	25.68154	335.83202	17.77136	0.0826351	0.35306246	1.9825996	20	2 26.6	19.5
164439 2006 DM ₆	17.3	X	200.96355	35.06096	348.26354	18.36741	0.0804189	0.36048806	1.9552793	20	4 8.9	20.0
164440 2006 DK ₁₄	15.8	X	148.62392	214.51296	87.88060	7.50635	0.1058641	0.25796303	2.4439805	20	—	—
164441 2006 DX ₂₂	17.1	X	205.96816	137.34670	107.24428	2.55088	0.1451715	0.25934892	2.4352661	20	—	—
164442 2006 DR ₃₁	16.9	X	153.17355	129.39361	169.64256	1.42462	0.1779439	0.25877219	2.4388831	20	—	—
164443 2006 DH ₃₅	15.8	X	214.66087	144.73541	174.84515	7.91853	0.2315028	0.20086933	2.8875331	20	2 15.4	21.2
164444 2006 DJ ₃₈	17.0	X	245.36481	189.15494	168.34616	8.79693	0.2231382	0.28886805	2.2663990	20	4 27.1	20.5
164445 2006 DC ₃₉	17.2	X	281.56385	228.17251	339.43760	0.74924	0.1264076	0.26766689	2.3845492	20	—	—
164446 2006 DO ₄₁	16.2	X	313.49577	358.74255	247.53605	8.98882	0.1836231	0.28142724	2.3061734	20	2 15.0	19.2
164447 2006 DD ₄₄	17.0	X	267.02232	116.65054	138.51209	2.14952	0.1155921	0.27632079	2.3344989	20	1 16.4	20.2
164448 2006 DX ₄₆	15.9	X	225.78216	5.52540	188.51571	1.14026	0.2016050	0.18407122	3.0606391	20	12 5.2	20.6
164449 2006 DJ ₅₇	15.8	X	168.45583	130.79479	82.13614	13.95857	0.0966733	0.24591329	2.5231789	20	11 23.3	19.6
164450 2006 DZ ₅₇	16.8	X	176.80154	302.72502	312.26641	1.27061	0.1710587	0.25381753	2.4705196	20	—	—
164451 2006 DW ₆₀	16.1	X	247.71108	302.40968	196.96500	3.58965	0.2611774	0.27684075	2.3315749	20	3 7.7	20.0
164452 2006 DF ₆₂	16.4	X	274.84084	164.98148	81.07271	3.28185	0.1747398	0.27351971	2.3504100	20	1 8.3	19.9
164453 2006 DH ₆₅	16.3	X	29.95777	21.01068	165.46971	5.57096	0.0609558	0.28401789	2.2921283	20	4 17.5	18.7
164454 2006 DM ₆₅	16.0	X	113.55558	219.44638	50.77638	8.76008	0.1997626	0.24578865	2.5240318	20	12 8.2	20.2
164455 2006 DY ₆₆	16.1	X	83.97256	308.40107	306.68202	11.00557	0.1374656	0.23822421	2.5771842	20	10 12.7	20.1
164456 2006 DG ₈₈	17.1	X	352.46150	254.83036	2.71774	1.24987	0.0776629	0.29025627	2.2591669	20	5 29.0	19.3
164457 2006 DN ₈₉	16.6	X	158.09290	145.43900	172.42969	13.39762	0.3157117	0.26092492	2.4254501	20	1 3.3	20.9
164458 2006 DN ₉₁	15.7	X	26.99267	62.75087	169.39974	13.93137	0.1634983	0.22029692	2.7151704	20	6 29.2	19.0
164459 2006 DX ₉₇	16.0	X	349.82640	191.62464	152.99467	13.58143	0.0522579	0.22858408	2.6491429	20	9 29.4	19.3
164460 2006 DS ₁₁₃	16.2	X	256.10723	302.50020	6.57109	6.65991	0.1308420	0.28144886	2.3060553	20	3 13.2	19.3
164461 2006 DR ₁₂₉	16.9	X	335.10286	199.44785	114.91164	5.74606	0.2143956	0.29843632	2.2176939	20	7 22.6	17.7
164462 2006 DW ₁₄₈	17.0	X	219.52860	315.06610	330.68026	1.92288	0.1791481	0.26711609	2.3878261	20	1 7.8	20.8
164463 2006 DE ₁₅₂	16.4	X	256.15992	81.72859	185.17137	4.39797	0.1145482	0.27147134	2.3622185	20	1 19.7	19.9
164464 2006 DE ₁₅₃	16.5	X	245.13826	5.74011	350.94458	6.55450	0.1274712	0.28843038	2.2686912	20	4 30.1	19.8
164465 2006 DX ₁₅₃	15.9	X	314.11099	116.01439	187.15951	13.80636	0.1961377	0.21851528	2.7299090	20	5 16.7	19.2
164466 2006 DS ₁₅₆	16.1	X	203.98022	318.51270	357.00933	7.55265	0.3004032	0.27070162	2.3666942	20	2 2.5	20.4
164467 2006 DN ₁₉₃	14.8	X	110.70613	232.69560	97.72120	18.77136	0.1540721	0.17621483	3.1509469	20	—	—
164468 2006 DS ₁₉₇	16.7	X	30.90116	279.60428	293.87630	5.41441	0.1463430	0.28888853	2.2662396	20	6 7.8	18.7
164469 2006 DC ₁₉₉	16.7	X	355.59007	222.15029	36.43192	5.99481	0.1371307	0.28948808	2.2631617	20	6 4.2	18.4
164470 2006 DM ₂₀₀	16.6	X	356.91404	38.10617	198.60799	6.78686	0.0690176	0.28719569	2.2751888	20	5 5.9	18.8
164471 2006 DP ₂₀₇	17.0	X	100.11410	31.42631	189.65386	4.24582	0.0654736	0.30286593	2.1960174	20	9 23.9	19.7
164472 2006 DE ₂₁₀	17.0	X	325.17315	301.88170	30.92289	1.91759	0.1792317	0.29809392	2.2193918	20	8 2.4	18.2
164473 2006 EV ₁	16.8	X	177.77038	233.90020	83.85145	2.43333	0.1828993	0.26850789	2.3795674	20	1 10.1	20.6
164474 2006 EB ₁₆	16.8	X	156									

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>
164481 2006 FN ₂₃	15.3	X	98.38580	158.51422	134.07907	2.08943	0.1581398	0.17188759	3.2036105	20	12 7.9	20.3
164482 2006 FG ₂₄	16.5	X	69.50494	103.87416	164.70370	3.58713	0.1096678	0.23311999	2.6146669	20	10 16.2	20.1
164483 2006 FV ₂₆	16.7	X	32.69255	179.38675	43.05175	2.91889	0.0327006	0.29171426	2.2516330	20	6 11.3	19.0
164484 2006 FO ₃₁	15.6	X	163.37010	99.27882	141.49197	1.83536	0.1315234	0.17556226	3.1587502	20	12 5.8	20.7
164485 2006 FV ₃₂	16.4	X	269.72945	165.68480	172.30406	4.02411	0.1090706	0.21437204	2.7649713	20	5 13.0	20.2
164486 2006 FR ₃₄	15.9	X	11.87536	320.12018	295.75288	5.36813	0.1990793	0.21808257	2.7335189	20	7 8.5	18.5
164487 2006 FB ₃₅	16.8	X	189.20059	350.85886	107.17227	5.20861	0.0678941	0.29988423	2.2105498	20	7 22.9	19.5
164488 2006 FP ₄₀	16.8	X	339.97725	161.02892	153.33499	6.47028	0.1866877	0.30020071	2.2089959	20	8 6.4	18.6
164489 2006 FR ₄₁	16.6	X	109.55389	185.32909	182.01093	5.09567	0.0914690	0.26060782	2.4274171	20	—	—
164490 2006 FD ₄₅	16.6	X	205.45392	229.68692	33.60021	1.66532	0.1063152	0.26049217	2.4281356	20	—	—
164491 2006 FB ₄₆	15.7	X	1.47378	253.43685	340.18946	6.79980	0.1622231	0.21507679	2.7589279	20	5 6.7	18.6
164492 2006 FS ₄₉	14.3	X	84.24785	202.73848	108.28481	25.26765	0.1410962	0.17092907	3.2155759	20	12 16.8	19.4
164493 2006 FF ₅₀	14.7	X	233.25584	62.48801	138.38071	23.06099	0.0900133	0.18243998	3.0788559	20	—	—
164494 2006 FV ₅₂	16.7	X	102.62221	164.70588	123.14873	1.62035	0.1278658	0.24232267	2.5480426	20	12 16.9	20.7
164495 2006 FG ₅₃	16.3	X	39.17240	156.36869	210.59563	2.14379	0.0834896	0.24696281	2.5160253	20	—	—
164496 2006 GD ₁₄	16.8	X	48.01356	339.01193	160.09447	3.79642	0.1778591	0.27898558	2.3196095	20	3 19.5	18.6
164497 2006 GR ₂₇	15.9	X	241.74918	169.68983	172.42731	4.84356	0.1284378	0.20909762	2.8112750	20	4 14.3	20.1
164498 2006 GP ₂₉	16.7	X	268.35258	184.93794	199.13910	6.80198	0.1890319	0.29411291	2.2393741	20	7 1.0	19.4
164499 2006 GO ₃₄	16.1	X	110.08126	69.85102	171.81987	13.51378	0.1464826	0.23697629	2.5862239	20	10 31.9	20.3
164500 2006 GZ ₃₄	15.3	X	161.57139	239.86265	52.70428	6.20935	0.1683004	0.18293944	3.0732495	20	—	—
164501 2006 GK ₃₅	16.0	X	354.18914	309.08511	24.34214	7.38382	0.1612108	0.30023146	2.2088451	20	10 14.6	17.7
164502 2006 GM ₃₅	16.3	X	350.79530	132.04554	24.71802	7.08908	0.0528951	0.26957134	2.3733051	20	1 4.9	19.2
164503 2006 GY ₃₈	16.8	X	326.38396	5.49906	197.18432	6.28940	0.0417954	0.27307798	2.3529440	20	1 30.7	19.8
164504 2006 GT ₄₁	15.5	X	91.67489	52.08565	157.49568	12.11172	0.1150429	0.22712472	2.6604786	20	8 25.2	19.3
164505 2006 GP ₄₄	15.8	X	158.33194	298.94507	49.84860	10.34203	0.2444240	0.26263102	2.4149346	20	2 8.5	19.9
164506 2006 GO ₄₅	15.3	X	296.73114	94.00068	207.87049	19.81955	0.1574949	0.21097385	2.7945827	20	4 22.9	18.8
164507 2006 GU ₄₅	16.3	X	175.18793	7.50765	138.77508	2.71277	0.0776011	0.23474407	2.6025932	20	9 4.4	20.1
164508 2006 GH ₅₁	14.9	X	192.13558	324.01607	267.26354	15.17896	0.1761904	0.17910393	3.1169702	20	12 18.2	19.8
164509 2006 GH ₅₃	14.8	X	108.42896	195.56885	105.00980	18.56141	0.1998936	0.17538521	3.1608757	20	12 28.7	20.0
164510 2006 GB ₅₄	16.0	X	39.51807	215.63468	85.53308	5.30289	0.1596070	0.22972957	2.6403294	20	10 21.9	19.3
164511 2006 HO ₁	14.9	X	167.34807	192.47927	80.51291	9.26916	0.2433488	0.17951754	3.1121806	20	—	—
164512 2006 HG ₂	15.0	X	142.12264	241.62641	32.41182	19.49481	0.2191435	0.17653559	3.1471289	20	12 23.6	20.7
164513 2006 HT ₇	14.7	X	120.58031	258.46975	45.58513	26.23175	0.1645498	0.17489214	3.1668138	20	—	—
164514 2006 HS ₁₀	15.9	X	358.91249	183.25609	102.58941	6.15550	0.0908002	0.22177683	2.7030782	20	7 20.9	18.8
164515 2006 HR ₁₃	15.9	X	74.54785	257.21698	350.64246	2.17909	0.1179629	0.22964193	2.6410012	20	9 24.7	19.6
164516 2006 HT ₁₃	16.8	X	48.91727	210.03887	333.36008	4.34381	0.0876303	0.28660947	2.2782901	20	5 14.8	19.2
164517 2006 HZ ₁₆	15.9	X	206.67385	205.60008	143.97758	5.88101	0.1234116	0.20342222	2.8633238	20	3 20.9	20.5
164518 Patoche	16.7	X	352.86251	92.91694	202.35879	1.88160	0.1227095	0.22176851	2.7031458	20	7 23.7	19.5
164519 2006 HP ₂₄	16.6	X	76.40431	219.65401	113.03389	3.39590	0.0962361	0.24327146	2.5414131	20	—	—
164520 2006 HX ₂₈	15.5	X	42.95643	14.20173	189.18557	12.94316	0.1309101	0.21414366	2.7669367	20	6 12.1	19.1
164521 2006 HC ₃₆	16.7	X	176.70280	1.27853	293.14938	1.33634	0.0724318	0.26162448	2.4211245	20	—	—
164522 2006 HU ₄₃	16.4	X	38.61166	355.53147	246.40208	1.96103	0.0809881	0.21975768	2.7196103	20	7 21.8	19.6
164523 2006 HF ₄₇	15.0	X	119.28571	223.92886	81.51735	17.49286	0.1813732	0.17506665	3.1647089	20	—	—
164524 2006 HR ₆₀	15.7	X	79.56593	271.35165	42.42019	13.42280	0.2587674	0.23775973	2.5805395	20	—	—
164525 2006 HF ₆₃	15.7	X	229.91941	172.63154	153.36698	2.55284	0.0812994	0.20310772	2.8662788	20	3 16.5	19.9
164526 2006 HA ₆₄	16.8	X	244.06514	267.90896	136.42809	2.71304	0.0729038	0.22212875	2.7002224	20	7 11.9	20.4
164527 2006 HT ₆₅	15.6	X	304.01369	93.55527	200.38796	3.94501	0.0359528	0.21183797	2.7869778	20	5 11.1	19.2
164528 2006 HB ₆₉	16.4	X	192.90784	277.50511	90.14769	2.55914	0.1964556	0.27145689	2.3623023	20	3 25.8	20.2
164529 2006 HS ₈₆	15.5	X	141.67748	98.36724	166.34788	1.66521	0.1614908	0.17360668	3.1824269	20	12 13.6	20.8
164530 2006 HO ₈₉	16.0	X	234.89905	303.25277	21.33639	14.65106	0.1469725	0.27351792	2.3504203	20	3 14.8	19.6
164531 2006 HX ₉₄	17.2	X	345.78836	140.02011	199.24621	5.04868	0.2256766	0.29914983	2.2141661	20	10 14.3	18.3
164532 2006 HD ₉₇	16.7	X	112.64891	358.74814	19.26384	1.38902	0.1939569	0.25869970	2.4393387	20	1 20.0	19.8
164533 2006 HK ₉₉	16.7	X	127.82986	265.50410	122.36836	1.39386	0.2184772	0.26349886	2.4096292	20	2 21.9	19.9
164534 2006 HJ ₁₁₀	15.7	X	356.04999	259.96151	20.89482	6.19810	0.1196269	0.21826134	2.7320261	20	7 9.8	18.8
164535 2006 HA ₁₂₈	16.6	X	178.95450	250.18140	355.49169	4.10172	0.1696867	0.24756749	2.5119268	20	—	—
164536 Davehinson	16.6	X	267.41698	259.60930	48.42958	2.71989	0.0785807	0.20470229	2.8513744	20	4 5.9	20.6
164537 2006 JF ₅	16.8	X	29.14422	52.73195	332.91009	0.85317	0.1069117	0.24690021	2.5164506	20	—	—
164538 2006 JC ₆	16.0	X	260.23559	190.51184	116.13735	3.23317	0.0091160	0.20567766	2.8423527	20	4 5.4	19.9
164539 2006 JQ ₈	16.6	X	204.37891	158.24371	270.57718	1.98522	0.0658447	0.21935550	2.7229335	20	6 27.0	20.6
164540 2006 JR ₈	16.5	X	281.07666	57.44298	284.30613	2.29028	0.1032851	0.21490737	2.7603777	20	6 1.5	20.0
164541 2006 JR ₁₀	16.0	X	68.25395	347.70598	303.10811	1.25125	0.0903885	0.23360628	2.6110371	20	11 8.2	19.5
164542 2006 JO ₁₅	16.9	X	53.30345	64.13181	268.69980	0.39311	0.1585370	0.23877335	2.5732313	20	12 23.9	20.6
164543 2006 JK ₁₉	16.3	X	267.29663	165.19463	138.27233	2.79274	0.0437375	0.20589541	2.8403483	20	4 4.9	20.2
164544 2006 JU ₂₉	15.9	X	304.04048	129.92500	193.98475	5.09393	0.1135260	0.21659221	2.7460441	20	6 9.6	19.4
164545 2006 JU ₃₀	16.7	X	170.26592	341.99099	17.98114	3.26928	0.1727372	0.27003654	2.3705786	20	2 24.3	20.3
164546 2006 JY ₃₉	15.7	X	174.47807	246.95789	122.98136	3.01857	0.0856390	0.19803171	2.9150515	20	3 13.4	20.0
164547 2006 JY ₄₃	16.6	X	233.66834	180.12624	188.91968	4.46537	0.2228185	0.27985984	2.3147761	20	4 29.9	20.3
164548 2006 JC ₄₈	16.3	X	338.69735	268.71657	1.54093	1.83267	0.1866725	0.21250129	2.7811751	20	5 14.4	19.0
164549 2006 JE ₅₈	15.6	X	48.50141	289.68214	326.56895	17.35757	0.1533452	0.22631917	2.6667880	20	9 3.2	19.1
164550 2006 KP	16.4	X	224.67169	359.95374	189.39872	1.99589	0.0695475	0.24613078	2.5216924	20	12 29.9	19.6
164551 2006 KM ₁	15.9	X	51.77141	290.04606	44.18653	5.88115	0.2446937	0.23273882	2.6175209	20	—	—
164552 2006 KJ ₆	16.9	X	77.58270	334.91279	250.77185	0.51340	0.0684281	0.22402867	2.6849342	20	8 22.4	20.4
164553 2006 KW ₇	17.4	X	182.34910	337.82975	190.38521	0.49378	0.0496985	0.23386342	2.6091228	20	10 12.1	21.0
164554 2006 KU ₉	16.0	X	102.76455	5.43944	192.33049							

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>
164561 2006 KZ ₄₇	16.4	X	315.26338	174.09393	178.15552	3.83115	0.0044954	0.22451933	2.6810211	20	8 16.8	20.0
164562 2006 KB ₅₀	16.0	X	70.50539	211.08967	217.45782	6.39406	0.0948820	0.26245587	2.4160088	20	1 8.0	18.7
164563 2006 KO ₅₂	16.6	X	345.65161	313.52613	156.67967	4.11049	0.0714243	0.25413028	2.4684923	20	—	—
164564 2006 KY ₅₂	15.9	X	180.87174	247.98216	128.87263	5.09228	0.0824576	0.20130400	2.8833749	20	3 29.1	20.3
164565 2006 KE ₅₉	16.0	X	52.89649	270.83508	173.46533	6.47382	0.0909088	0.26179803	2.4200544	20	1 1.4	18.7
164566 2006 KL ₆₈	15.7	X	334.36619	316.27606	55.55753	10.87536	0.3041607	0.22559975	2.6724544	20	10 20.4	17.3
164567 2006 KL ₇₃	15.5	X	78.52281	267.25065	142.75590	9.99595	0.0655632	0.18793232	3.0185733	20	1 8.5	19.6
164568 2006 KU ₈₂	17.0	X	160.91464	193.93972	196.66361	4.61232	0.1372627	0.27660232	2.3329146	20	3 20.3	20.5
164569 2006 KX ₈₂	17.0	X	57.44345	77.08834	31.21336	0.77051	0.1729953	0.27033651	2.3688247	20	2 20.5	19.1
164570 2006 KP ₉₁	16.7	X	252.15705	199.14407	166.76815	3.09556	0.0962968	0.21387036	2.7692935	20	5 29.3	20.7
164571 2006 KB ₁₀₈	16.0	X	333.64648	303.19725	334.83374	1.26387	0.0631744	0.21541365	2.7560509	20	5 28.6	19.5
164572 2006 KD ₁₂₂	14.5	X	111.16803	135.70231	240.52869	13.99443	0.3425401	0.18131046	3.0916297	20	2 8.2	19.7
164573 2006 KK ₁₂₂	16.0	X	137.30930	93.60146	138.98230	4.14911	0.1914225	0.23555400	2.5966239	20	11 13.5	20.4
164574 2006 MQ ₄	15.1	X	156.78124	176.72263	151.34955	10.08915	0.2017461	0.18368781	3.0648965	20	1 14.6	20.2
164575 2006 MF ₉	15.2	X	210.75412	85.48798	149.76236	5.99181	0.1133107	0.17185075	3.2040683	20	—	—
164576 2006 SV ₂₈	15.2	X	66.86437	117.09133	320.94742	15.75613	0.1033515	0.17559178	3.1583961	20	2 4.3	19.2
164577 2006 KQ ₁₂₄	14.7	X	114.23494	262.22982	160.41983	22.88965	0.1637579	0.17200934	3.2020985	20	3 25.2	19.6
164578 2006 SW ₁₅₉	16.9	X	302.62148	287.98411	53.28425	2.22893	0.2063114	0.27189983	2.3597360	20	6 18.2	19.3
164579 2006 SW ₃₅₃	17.1	X	334.76559	304.10772	48.93607	7.91849	0.1396998	0.27937824	2.3174356	20	9 30.8	19.1
164580 2006 SN ₃₅₆	17.1	X	215.77152	182.47454	158.53611	2.87522	0.1349927	0.25282368	2.4769898	20	3 14.1	20.8
164581 2006 TF ₄₇	15.3	X	181.20748	324.50673	43.63836	11.13919	0.2337244	0.17726944	3.1384374	20	3 25.7	20.8
164582 2006 WU ₁₉₃	16.1	X	272.74371	1.05605	69.78090	3.25338	0.0821236	0.19728537	2.9223986	20	9 21.2	19.9
164583 2007 BO ₂₇	16.5	X	124.44806	297.18937	104.41984	3.85538	0.1182113	0.23143243	2.6273620	20	2 27.7	20.2
164584 2007 DG ₁₀	16.5	X	188.50194	227.58679	72.45147	1.28750	0.0442382	0.21439868	2.7647422	20	—	—
164585 Oenomaos	12.7	X	302.89534	158.37664	236.13756	13.98797	0.0368214	0.08233993	5.2327386	20	8 29.7	19.7
164586 Arlette	16.3	X	116.70528	28.68071	224.54002	6.90285	0.1289249	0.24539387	2.5267382	20	11 19.2	20.1
164587 Taesch	15.0	X	112.55542	202.82893	134.62083	15.72965	0.2017138	0.18112571	3.0937318	20	—	—
164588 2007 PP	17.1	X	139.52760	203.36936	145.08352	5.27677	0.2824134	0.26594458	2.3948333	20	1 21.3	20.9
164589 La Sagra	16.6	X	144.19151	175.16123	128.29781	1.33944	0.2201270	0.25803546	2.4435231	20	—	—
164590 2007 PF ₂₅	16.4	X	7.54575	236.14869	62.25446	3.15432	0.1942305	0.22882207	2.6473058	20	9 5.9	18.9
164591 2569 P-L	16.3	X	140.06000	8.31744	14.18675	9.59752	0.2095408	0.27124382	2.3635392	20	2 28.9	19.9
164592 2761 P-L	16.2	X	196.92299	180.34364	174.49110	5.33816	0.2442151	0.27302377	2.3532555	20	3 12.1	20.0
164593 4114 P-L	15.2	X	148.70179	5.77501	5.72521	18.20358	0.2374253	0.18900864	3.0071029	20	3 5.1	20.3
164594 4144 P-L	16.1	X	323.03702	253.42906	197.57968	3.04238	0.2747011	0.23210938	2.6222509	20	—	—
164595 4791 P-L	17.4	X	178.99090	326.98773	7.40607	1.17302	0.2051199	0.27157360	2.3616254	20	2 1.5	21.0
164596 4802 P-L	14.9	X	84.97245	353.59917	9.98974	19.35693	0.1118941	0.16969170	3.2311887	20	—	—
164597 6025 P-L	16.6	X	273.18356	31.57829	342.72854	5.52204	0.0448258	0.29370542	2.2414449	20	7 21.0	19.1
164598 6252 P-L	16.7	X	119.71695	349.95764	336.14214	2.60162	0.1730845	0.25211766	2.4816119	20	—	—
164599 6366 P-L	15.8	X	327.55109	279.67084	350.49831	7.28547	0.1936785	0.20991953	2.8039321	20	4 19.2	19.1
164600 1060 T-2	15.8	X	341.34710	184.74116	186.50458	13.48571	0.1784243	0.23154236	2.6265303	20	10 29.9	18.3
164601 1123 T-2	16.3	X	225.48435	53.53481	1.35644	7.82122	0.1116657	0.29006834	2.2601425	20	7 2.6	19.4
164602 1301 T-2	16.6	X	228.42630	24.07382	358.20480	6.22564	0.1455775	0.28873387	2.2671012	20	5 15.1	19.9
164603 1422 T-2	16.5	X	192.29503	73.27797	5.34931	5.45487	0.1092145	0.28937799	2.2637357	20	6 26.4	19.8
164604 2054 T-2	15.4	X	252.42191	326.08957	349.48804	7.88545	0.3148922	0.20405760	2.8573770	20	3 7.8	20.4
164605 4097 T-2	15.6	X	328.15110	18.49415	16.77228	13.22059	0.1175477	0.23191357	2.6237268	20	10 30.8	18.4
164606 3167 T-3	16.5	X	14.26458	327.60112	40.83173	2.12648	0.1380356	0.23155930	2.6240222	20	12 15.1	19.7
164607 3273 T-3	17.0	X	143.33255	95.09020	241.73859	0.54169	0.2039824	0.26163372	2.4210675	20	1 3.2	20.3
164608 3307 T-3	17.0	X	318.73470	158.59618	168.07248	1.88330	0.1262683	0.29561163	2.2317988	20	6 27.9	18.5
164609 3829 T-3	17.1	X	269.80250	334.59595	30.44978	4.32930	0.1222786	0.29394431	2.2402304	20	6 16.5	19.8
164610 3840 T-3	15.5	X	178.14874	335.20919	23.30903	2.37096	0.1066189	0.19543204	2.9408455	20	3 4.1	20.0
164611 4066 T-3	16.0	X	128.59319	326.19456	52.03884	8.69861	0.1230064	0.26263038	2.4149385	20	1 31.9	19.4
164612 5693 T-3	16.2	X	102.11247	196.09595	168.03291	12.92683	0.1942088	0.26007764	2.4307150	20	—	—
164613 1981 EQ ₃₈	16.0	X	221.38082	0.24483	185.21112	13.50299	0.1082026	0.24191292	2.5509190	20	12 14.6	19.7
164614 1981 EJ ₄₁	15.6	X	19.18719	305.30878	179.23792	5.57001	0.1824006	0.17451996	3.1713146	20	1 18.6	19.1
164615 1981 RU ₇	15.8	X	9.89382	226.68851	144.83983	13.17331	0.3018121	0.23064036	2.6333738	20	—	—
164616 1986 WV ₈	15.9	X	28.92327	161.43513	239.40440	3.96243	0.3305702	0.23741477	2.5830386	20	—	—
164617 1990 RP ₇	16.1	X	94.96110	226.02841	131.28691	1.04309	0.4078324	0.17680958	3.1438768	20	1 16.1	20.6
164618 1991 VX ₁₁	15.2	X	18.32479	275.33593	208.91128	10.68731	0.0396400	0.18151252	3.0893349	20	1 16.4	19.5
164619 1992 EF ₄	16.0	X	224.92224	31.54160	117.10478	2.64766	0.1357621	0.23070012	2.6329190	20	10 27.6	19.8
164620 1992 RA ₃	16.6	X	184.59117	93.21841	281.06983	1.16701	0.2185911	0.26912798	2.3759109	20	3 25.5	20.5
164621 1992 SC ₄	17.0	X	147.61106	11.23451	47.33852	2.12136	0.1769530	0.26887809	2.3773827	20	4 16.5	20.6
164622 1993 FN ₅	16.3	X	232.24718	356.62375	161.94674	5.60267	0.0882852	0.23881390	2.5729400	20	11 26.7	19.8
164623 1993 FR ₃₈	15.1	X	0.98869	111.74183	14.20251	18.51618	0.1526265	0.17662611	3.1460536	20	—	—
164624 1993 FK ₄₄	16.6	X	123.12731	61.33288	187.22969	3.54405	0.0904716	0.30780755	2.1724504	20	11 30.8	19.5
164625 1993 TC ₁₅	15.8	X	257.89029	182.49253	178.73924	4.44473	0.0896954	0.21018415	2.8015781	20	5 31.2	19.7
164626 1993 TL ₄₁	16.1	X	277.12481	190.20650	174.64388	5.41122	0.0623985	0.21187114	2.7866869	20	7 3.4	19.8
164627 1993 UT ₇	16.8	X	251.91642	222.01009	139.32947	4.16273	0.1597688	0.28294819	2.2979016	20	5 14.9	20.0
164628 1993 UX ₇	16.6	X	166.00421	274.15415	152.40483	4.94014	0.0783723	0.27938651	2.3173898	20	5 11.7	19.8
164629 1994 AB ₁₃	14.0	X	243.56005	297.45531	68.79311	3.97418	0.1440821	0.12665152	3.9270139	20	5 15.5	19.9
164630 1994 PO ₆	16.1	X	352.68351	160.31319	257.46581	1.34063	0.2078184	0.23542470	2.5975746	20	—	—
164631 1994 RF ₉	15.9	X	57.52654	251.70529	355.86485	10.93433	0.1968606	0.22644609	2.6657914	20	9 14.9	19.5
164632 1994 RM ₁₄	17.2	X	53.40191	332.94894	323.64740	2.98064	0.1614067	0.30898891	2.1669096	20	11 21.9	20.0
164633 1994 SW ₄	16.4	X	324.69406	297.16425	23.01759	2.30225	0.0894665	0.22222851	2.6994142	20	7 11.6	19.4
164634 1994 UB ₆	16.0	X	322.38963	118.96191	264.21385	2.89328	0.2259556	0.22637089	2.6663818	20	9 28.0	18.1
164635 1994 VVW ₈	15.7	X	311.71206	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>
164641 1995 <i>MK</i> ₄	15.2	X	147.25560	181.18355	158.11712	11.72557	0.0997133	0.17792617	3.1307099	20	1 10.9	20.1
164642 1995 <i>SJ</i> ₇	17.0	X	70.10749	148.32857	178.78216	4.00621	0.1617811	0.24524822	2.5277385	20	—	—
164643 1995 <i>SU</i> ₁₂	15.2	X	117.88102	339.29555	349.87661	4.02667	0.1308225	0.17071130	3.2183100	20	—	—
164644 1995 <i>SH</i> ₁₄	15.8	X	233.87979	110.53868	149.01640	0.99615	0.1510958	0.17648681	3.1477088	20	1 1.3	21.0
164645 1995 <i>SS</i> ₆₅	15.7	X	7.44508	246.74925	200.09240	1.59216	0.0972353	0.17120813	3.2120808	20	—	—
164646 1995 <i>SU</i> ₈₆	16.4	X	206.55886	168.58509	30.81221	7.01649	0.0744757	0.24382085	2.5375941	20	12 18.4	19.9
164647 1995 <i>UX</i> ₂₅	15.8	X	289.47604	37.99031	142.56390	3.23587	0.0504078	0.17056518	3.2201477	20	—	—
164648 1995 <i>UG</i> ₃₃	15.2	X	105.69250	105.07810	88.71209	5.66384	0.1697600	0.17470400	3.1690869	20	3 18.4	19.9
164649 1995 <i>VA</i> ₁₈	16.3	X	174.58532	312.15745	237.77210	7.41081	0.1395739	0.23384365	2.6092698	20	10 24.3	20.4
164650 1995 <i>WT</i> ₃₆	16.1	X	148.10145	359.79100	183.49987	5.64726	0.1947423	0.22913543	2.6448916	20	9 21.9	20.5
164651 1996 <i>AM</i> ₇	16.3	X	208.47470	185.71500	20.73996	2.16107	0.0481716	0.23458703	2.6037546	20	12 31.6	19.8
164652 1996 <i>AD</i> ₁₃	16.2	X	23.54961	146.85084	174.98865	9.14980	0.1170021	0.22638973	2.6662338	20	10 25.9	19.5
164653 1996 <i>FS</i> ₁₄	17.3	X	286.75214	186.50120	84.67535	2.74867	0.2343142	0.28369194	2.2938836	20	2 14.2	20.5
164654 1996 <i>GM</i> ₁₆	15.5	X	348.44309	213.72186	98.52301	4.98671	0.0781307	0.21563995	2.7541223	20	8 9.9	18.7
164655 1996 <i>HR</i> ₁	17.0	X	24.44973	74.28156	168.88588	5.02737	0.0857702	0.29212720	2.2945107	20	7 5.7	19.2
164656 1996 <i>RP</i> ₅	16.7	X	178.88339	171.95559	248.87846	6.23807	0.2144606	0.27438257	2.3454798	20	5 18.3	20.6
164657 1996 <i>UX</i> ₆	15.9	X	110.07039	127.18866	351.17914	11.43085	0.0283540	0.27618147	2.3352839	20	4 29.4	19.1
164658 1996 <i>RG</i> ₉	15.3	X	100.65006	177.75106	159.87063	17.05811	0.0847146	0.17723195	3.1388799	20	—	—
164659 1996 <i>RT</i> ₁₃	15.0	X	279.41741	213.39020	349.25492	4.78938	0.1212978	0.18164021	3.0878869	20	—	—
164660 1996 <i>RE</i> ₁₆	16.7	X	44.52117	157.63013	344.18984	2.29858	0.1305520	0.27045530	2.3681310	20	3 11.7	19.0
164661 1996 <i>ST</i> ₇	15.0	X	88.42111	111.30362	282.01502	7.00176	0.0947516	0.17905093	3.1175852	20	1 6.9	19.2
164662 1996 <i>TC</i> ₉	15.4	X	76.87060	32.43548	18.08241	9.50444	0.1062001	0.17961620	3.1110408	20	1 16.3	19.6
164663 1996 <i>TQ</i> ₁₃	17.2	X	148.87838	357.45668	29.52806	1.66740	0.1806819	0.26789555	2.3831921	20	3 8.9	20.8
164664 1996 <i>TH</i> ₁₇	16.7	X	112.04450	149.56943	321.16198	6.55685	0.1591426	0.27334125	2.3514329	20	5 12.9	20.0
164665 1996 <i>TO</i> ₂₀	15.1	X	189.16544	62.32446	210.96845	18.40177	0.3290037	0.17932293	3.1144319	20	—	—
164666 1996 <i>TB</i> ₃₀	16.9	X	223.03996	264.89270	44.72463	1.79201	0.2011151	0.26880415	2.3778187	20	2 8.5	20.9
164667 1996 <i>TA</i> ₃₆	16.4	X	207.54434	4.58648	326.51104	0.68727	0.2031377	0.26930996	2.3748404	20	2 20.9	20.4
164668 1996 <i>TP</i> ₅₆	16.5	X	281.69842	354.50813	290.96012	5.99227	0.1278260	0.27556925	2.3387414	20	3 8.4	19.7
164669 1996 <i>VJ</i> ₂₃	14.8	X	357.80205	86.15901	7.53017	14.39378	0.2113504	0.17227733	3.1987770	20	—	—
164670 1996 <i>XM</i> ₆	16.1	X	210.23265	290.37568	86.62349	6.13025	0.3364214	0.27316798	2.3524272	20	4 18.9	20.5
164671 1996 <i>XC</i> ₁₂	16.2	X	114.28467	101.88664	301.79364	6.05991	0.1229933	0.25952977	2.4341346	20	2 12.5	19.2
164672 1996 <i>XX</i> ₂₉	16.6	X	37.21265	38.67996	72.96927	2.39786	0.1496184	0.26028733	2.4294093	20	1 15.0	18.6
164673 1997 <i>BR</i> ₄	14.9	X	49.78243	225.07243	141.95774	18.52471	0.1612166	0.16152807	3.3391612	20	—	—
164674 1997 <i>EV</i> ₄	16.0	X	33.25118	313.92400	7.91021	6.10791	0.1369579	0.23169421	2.6253825	20	11 9.1	19.3
164675 1997 <i>EK</i> ₅	16.3	X	357.80724	101.15579	174.61290	3.45965	0.0587999	0.22241740	2.6978857	20	7 3.1	19.5
164676 1997 <i>EL</i> ₇	15.6	X	126.83321	13.26860	167.81747	13.88103	0.2000796	0.22803613	2.6533850	20	8 31.7	19.9
164677 1997 <i>GA</i> ₄	15.9	X	124.44357	193.46860	23.90906	5.98537	0.0690431	0.22975651	2.6401230	20	10 8.5	19.5
164678 1997 <i>GR</i> ₄	16.4	X	254.36263	148.55586	25.74965	1.96106	0.1092612	0.24169658	2.5524410	20	—	—
164679 1997 <i>GJ</i> ₁₂	16.5	X	48.37624	61.37843	188.40485	11.48223	0.3242200	0.22176490	2.7031751	20	9 23.5	20.2
164680 1997 <i>GO</i> ₂₀	16.0	X	120.82630	183.81408	30.75205	5.22385	0.0609198	0.22934679	2.6432664	20	9 30.9	19.7
164681 1997 <i>KA</i> ₁	15.2	X	33.08076	271.36331	56.71829	13.07374	0.2062086	0.22741218	2.6582362	20	11 27.4	18.5
164682 1997 <i>LQ</i> ₁	15.4	X	292.75003	319.94848	102.51833	14.73104	0.1638475	0.22759904	2.6567811	20	10 11.7	18.7
164683 1997 <i>LH</i> ₃	16.4	X	77.04432	122.13545	151.37168	3.61618	0.0642734	0.22685812	2.6625626	20	10 24.9	20.1
164684 1997 <i>LS</i> ₄	16.4	X	192.76027	20.40690	165.23484	4.05238	0.1429432	0.23220354	2.6215420	20	11 7.8	20.3
164685 1997 <i>LH</i> ₁₃	17.5	X	67.68965	169.67849	128.12378	2.76005	0.1931972	0.31263455	2.1500311	20	12 13.7	20.6
164686 1997 <i>MW</i> ₅	15.5	X	220.85434	208.16633	207.00706	10.20706	0.1610170	0.20926064	2.8098147	20	6 19.6	20.1
164687 1997 <i>ME</i> ₆	15.6	X	221.36313	228.82316	208.79803	9.86973	0.0857473	0.21264728	2.7799021	20	7 23.6	19.8
164688 1997 <i>SO</i> ₁	16.9	X	335.46324	182.41911	192.23321	4.97843	0.1030726	0.30240817	2.1982329	20	11 6.8	18.9
164689 1997 <i>SC</i> ₇	16.3	X	240.85304	289.75063	10.19045	1.53003	0.1816893	0.19842052	2.9112422	20	2 18.9	21.1
164690 1997 <i>SH</i> ₈	16.6	X	225.44987	89.19543	348.84476	5.79451	0.1339781	0.29385531	2.2406827	20	8 2.8	19.5
164691 1997 <i>SH</i> ₁₄	17.1	X	184.80257	148.74491	324.49346	3.72617	0.1424119	0.29256932	2.2472438	20	8 3.8	20.3
164692 1997 <i>TM</i> ₂₁	16.0	X	126.11513	208.08607	216.42361	1.43824	0.0581684	0.19338603	2.9615516	20	3 23.5	20.1
164693 1997 <i>TC</i> ₂₄	16.8	X	302.17108	236.78198	28.19357	3.51627	0.0458292	0.28324971	2.2962706	20	3 23.8	19.3
164694 1997 <i>UC</i> ₁₆	17.6	X	325.92555	346.46922	355.43115	1.04429	0.0996627	0.29588959	2.2304009	20	8 24.2	19.4
164695 1997 <i>UJ</i> ₁₆	16.4	X	180.27661	266.97913	31.66775	7.87138	0.2334568	0.18741539	3.0241213	20	1 2.4	21.7
164696 1997 <i>WB</i> ₈	14.6	X	121.85200	96.92763	249.35083	9.25007	0.0723761	0.18080433	3.0973967	20	—	—
164697 1997 <i>WS</i> ₂₈	16.6	X	262.07521	30.21995	29.66209	7.19413	0.1226211	0.29599220	2.2298854	20	8 31.2	19.1
164698 1997 <i>WA</i> ₄₇	15.2	X	124.66990	352.32016	75.83755	15.29270	0.2330936	0.19104620	2.9856836	20	4 21.1	20.2
164699 1997 <i>XV</i> ₆	15.6	X	125.12708	42.77089	70.09328	2.52463	0.0969181	0.19648977	2.9302820	20	5 26.9	19.9
164700 1998 <i>AO</i> ₄	16.3	X	219.70462	272.01310	104.83581	7.48443	0.1332245	0.28090495	2.3090311	20	5 4.6	19.7
164701 1998 Horanyi	16.3	X	53.07744	43.63587	120.53378	1.40517	0.1530733	0.27510277	2.3413845	20	5 5.3	18.4
164702 1998 <i>BH</i> ₆	16.8	X	248.07779	191.18114	69.50272	2.11347	0.1640561	0.26638450	2.3921959	20	1 2.8	20.4
164703 1998 <i>BN</i> ₂₀	15.2	X	50.31287	127.14871	299.09453	8.19023	0.0828999	0.17696924	3.1419856	20	—	—
164704 1998 <i>BF</i> ₃₁	16.8	X	198.47769	94.27006	296.86449	1.69489	0.1328805	0.27879914	2.3206435	20	4 27.8	20.3
164705 1998 <i>DE</i> ₂	16.8	X	292.69701	352.80840	189.43268	5.35023	0.1942670	0.26042457	2.4285558	20	—	—
164706 1998 <i>DJ</i> ₁₉	16.8	X	104.01794	81.65736	353.81703	6.40439	0.1052168	0.27005410	2.3704758	20	3 10.1	19.7
164707 1998 <i>DE</i> ₂₇	16.2	X	115.44105	121.96711	320.96527	6.65849	0.0843868	0.27358312	2.3500468	20	3 28.5	19.3
164708 1998 <i>FX</i> ₇	17.3	X	322.44020	81.00621	109.26574	1.31362	0.1333951	0.26400402	2.4065544	20	—	—
164709 1998 <i>FC</i> ₁₀	16.6	X	111.02621	337.92531	257.26887	2.41054	0.1371664	0.24079132	2.5588343	20	10 20.9	20.5
164710 1998 <i>FW</i> ₂₄	16.9	X	97.43300	329.57942	194.58805	5.27805	0.2137927	0.27763327	2.3271357	20	7 16.6	20.3
164711 1998 <i>FD</i> ₄₂	16.3	X	3.72214	228.30406	332.94269	4.22219	0.1869355	0.26883619	2.3776297	20	3 16.4	18.1
164712 1998 <i>FM</i> ₅₈	16.3	X	294.86533	179.65701	11.32966							

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>
164721 1998 QO ₂₄	16.2	X	71.65949	120.67409	195.20160	3.16086	0.2143709	0.23403360	2.6078578	20	12 26.3	20.4
164722 1998 QN ₆₈	15.8	X	345.53057	46.45986	286.34640	11.39274	0.2874867	0.22448879	2.6812642	20	9 3.8	17.9
164723 1998 QW ₇₁	15.7	X	18.66186	54.01182	244.87634	9.41301	0.2366770	0.22584120	2.6705493	20	9 28.4	18.7
164724 1998 QM ₇₈	15.3	X	20.59975	130.50014	223.04652	14.15747	0.1383080	0.22941206	2.6427650	20	12 4.5	18.7
164725 1998 QF ₉₈	15.4	X	340.68986	196.80166	161.40216	11.81086	0.3874964	0.22423735	2.6832682	20	10 28.4	16.7
164726 1998 QE ₁₀₇	15.3	X	349.56110	148.04848	264.30191	11.55459	0.2823890	0.22925694	2.6439570	20	—	—
164727 1998 RH ₅	15.8	X	60.44821	282.44200	24.31807	14.53502	0.0907084	0.22885977	2.6470151	20	11 15.1	19.6
164728 1998 RH ₁₂	16.3	X	311.72984	260.11585	163.69983	13.63428	0.2730048	0.22744854	2.6579529	20	11 7.9	18.5
164729 1998 RT ₄₉	15.5	X	40.40692	304.92510	2.90519	12.21430	0.1701499	0.22797368	2.6538696	20	11 2.1	19.1
164730 1998 RA ₅₅	15.9	X	344.55521	127.55474	200.65542	12.52378	0.2452374	0.22264328	2.6960606	20	8 24.6	18.3
164731 1998 RK ₆₄	16.1	X	318.19989	3.01910	13.18879	1.82816	0.2475211	0.22288857	2.6940822	20	9 5.4	18.3
164732 1998 RE ₆₉	15.8	X	285.67032	141.05644	175.53007	7.12164	0.2016604	0.21404512	2.7677859	20	4 22.1	19.6
164733 1998 RE ₇₀	16.0	X	25.56997	156.71934	149.79797	5.44590	0.3326127	0.22727445	2.6593100	20	11 11.8	19.3
164734 1998 SE ₂₁	16.0	X	162.50933	337.61962	187.25227	3.68047	0.0990390	0.22105805	2.7089345	20	9 11.4	20.1
164735 1998 SY ₂₄	15.3	X	19.84405	178.16226	160.51847	5.98116	0.1571216	0.22647942	2.6655299	20	11 17.5	18.6
164736 1998 SJ ₄₀	16.2	X	165.89430	172.16941	355.49608	3.26572	0.0207135	0.22401074	2.6850774	20	9 21.2	19.8
164737 1998 ST ₄₇	16.0	X	21.92797	53.77741	228.12706	1.55803	0.1644889	0.21963047	2.7206603	20	8 31.6	18.9
164738 1998 SP ₈₄	15.3	X	344.17605	263.47389	15.32957	14.08153	0.2534284	0.21870292	2.7283474	20	5 29.9	17.9
164739 1998 SF ₁₀₃	15.8	X	239.59113	213.04333	177.19305	14.04334	0.1752275	0.21422634	2.7662248	20	6 7.3	20.4
164740 1998 ST ₁₀₆	15.8	X	287.28139	186.24602	181.45380	12.02741	0.2292190	0.21786552	2.7353341	20	6 25.3	19.6
164741 1998 SH ₁₁₃	15.7	X	3.30683	328.71873	84.43950	4.33820	0.2740406	0.23147340	2.6270519	20	—	—
164742 1998 SS ₁₃₈	15.6	X	329.69130	160.73891	201.59460	12.12084	0.2664471	0.22232828	2.6986066	20	9 8.3	17.6
164743 1998 ST ₁₅₆	15.6	X	308.43803	41.80021	15.21353	4.12507	0.0914799	0.22572739	2.6714469	20	10 28.6	18.5
164744 1998 ST ₁₆₂	15.2	X	162.54978	229.37478	236.25219	6.58099	0.2336956	0.20917999	2.8105369	20	6 29.5	20.2
164745 1998 TU ₈	16.3	X	271.53026	245.69451	173.90757	1.20356	0.0815974	0.21968442	2.7202149	20	9 6.1	19.9
164746 1998 TF ₁₁	16.0	X	241.26082	40.91604	19.40864	6.21556	0.0840366	0.21713929	2.7414297	20	7 30.4	19.9
164747 1998 TP ₂₀	15.2	X	78.91751	171.28434	33.68189	7.48687	0.1970290	0.21306971	2.7762266	20	8 17.4	19.3
164748 1998 TC ₂₂	16.1	X	34.82035	98.03845	220.34110	1.67354	0.0471740	0.22371377	2.6874532	20	10 24.1	19.6
164749 1998 TP ₂₂	16.7	X	204.36423	56.08909	21.23403	4.42863	0.0394653	0.21329614	2.7742614	20	7 10.7	20.6
164750 1998 TW ₂₉	15.9	X	308.14208	200.87726	176.35389	8.23997	0.1303072	0.22124681	2.7073934	20	8 28.1	19.1
164751 1998 UW ₃	15.7	X	170.26560	242.66583	233.99299	4.76059	0.0606610	0.21401464	2.7680487	20	7 18.9	19.9
164752 1998 UR ₁₇	15.5	X	236.33072	168.30303	237.92776	12.08420	0.1543636	0.21409243	2.7673782	20	6 24.2	19.8
164753 1998 UJ ₄₁	15.5	X	264.21893	320.41163	49.83320	13.07294	0.1376083	0.21428771	2.7656966	20	6 10.9	19.4
164754 1998 VQ ₁₀	15.8	X	327.18002	137.09682	204.39037	8.01603	0.2953043	0.22035562	2.7146882	20	7 23.4	18.0
164755 1998 VK ₂₇	15.3	X	322.29348	101.80861	246.04399	7.94499	0.1462647	0.21791792	2.7348956	20	8 7.0	18.5
164756 1998 VR ₃₅	15.8	X	275.21659	137.91349	235.52607	6.62344	0.2881154	0.21477222	2.7615356	20	6 8.8	19.9
164757 1998 VY ₃₅	16.0	X	286.56956	270.40212	155.83192	10.17198	0.2752531	0.22034773	2.7147530	20	9 7.9	19.1
164758 1998 VN ₃₇	15.0	X	282.91226	179.10539	248.00330	12.70675	0.1615427	0.22102328	2.7092185	20	9 14.8	18.6
164759 1998 VR ₅₆	16.0	X	225.14196	295.02491	148.51696	3.15290	0.2012572	0.21350839	2.7724225	20	7 26.5	20.4
164760 1998 WX ₂	15.1	X	272.11466	331.04432	55.60097	10.17489	0.1664119	0.21495053	2.7600082	20	7 11.4	18.9
164761 1998 WU ₆	16.1	X	267.39417	218.06248	220.44857	7.95353	0.1918863	0.21892542	2.7264985	20	9 5.1	19.8
164762 1998 WX ₂₇	15.4	X	206.06251	232.09265	233.20898	5.71061	0.0495159	0.21567241	2.7538460	20	8 14.7	19.4
164763 1998 WH ₂₉	16.1	X	189.86893	120.11704	46.13920	3.47672	0.0453985	0.22213947	2.7001355	20	10 17.6	20.0
164764 1998 XK ₁	15.9	X	276.34402	320.52349	82.13337	4.64977	0.1959190	0.21680466	2.7442498	20	8 3.7	19.4
164765 1998 XM ₁	16.5	X	318.17752	122.28155	228.25940	6.01848	0.3073135	0.21876762	2.7278094	20	7 12.6	18.9
164766 1998 XQ ₁₃	16.3	X	288.04721	309.21174	89.02966	2.83994	0.1442262	0.21784891	2.7354732	20	8 24.0	19.5
164767 1998 YK ₄	15.1	X	194.30555	202.72368	261.34264	8.99605	0.1807394	0.21075981	2.7964744	20	7 23.2	19.8
164768 1998 YE ₂₂	16.5	X	98.74882	325.60888	190.93300	0.15559	0.1161928	0.20018849	2.8940763	20	6 23.8	20.6
164769 1999 AG ₃₈	15.0	X	206.32967	277.37999	131.08039	12.70607	0.1987262	0.20479588	2.8505056	20	5 30.0	20.0
164770 1999 BN ₁₈	15.9	X	289.80161	33.07219	46.09457	10.25820	0.2485565	0.21968792	2.7201860	20	10 10.1	18.7
164771 1999 CB ₅	15.4	X	48.23366	145.61798	134.59958	3.52744	0.1765160	0.18842176	3.0133437	20	2 7.9	18.8
164772 1999 CV ₃₃	15.3	X	345.86695	8.86388	149.03600	1.67424	0.1882504	0.18425830	3.0585671	20	—	—
164773 1999 CW ₄₈	16.7	X	53.71815	96.66861	104.89091	3.95031	0.1695022	0.28928796	2.2642053	20	7 6.7	19.0
164774 1999 CA ₉₅	14.9	X	141.07080	310.02706	109.32545	9.23886	0.1747495	0.19510083	2.9441729	20	4 18.3	19.7
164775 1999 CJ ₁₂₄	14.4	X	72.20058	77.52367	22.74898	18.02179	0.1940884	0.19118887	2.9841981	20	3 25.3	18.2
164776 1999 CJ ₁₃₃	14.9	X	243.37865	49.19723	127.41737	2.19878	0.1585479	0.17281730	3.1921104	20	12 6.8	19.6
164777 1999 CD ₁₄₂	15.6	X	304.57006	278.70026	320.75999	2.14887	0.0455878	0.19021669	2.9943574	20	3 1.9	19.8
164778 1999 CD ₁₄₉	15.8	X	197.40367	320.17760	88.51621	3.26500	0.0709607	0.20738374	2.8267425	20	5 23.9	19.9
164779 1999 CN ₁₅₇	15.3	X	54.40143	231.55328	161.72117	14.79741	0.0871639	0.17643519	3.1483227	20	—	—
164780 1999 CH ₁₅₉	16.7	X	31.93588	31.06729	139.65721	6.26926	0.1134105	0.28491849	2.2872956	20	3 31.7	18.8
164781 1999 DA ₄	16.0	X	41.94555	19.03448	123.88561	1.57270	0.2340837	0.18995990	2.9970554	20	4 1.7	18.9
164782 1999 DK ₄	15.8	X	14.56175	358.08514	225.87567	1.35361	0.0863131	0.19622982	2.9328693	20	5 19.5	19.4
164783 1999 EZ ₁	15.7	X	261.38984	80.95694	138.77394	2.09951	0.1207757	0.17969892	3.1100860	20	—	—
164784 1999 EJ ₁₁	16.8	X	225.18762	236.83656	151.03148	6.13921	0.1013881	0.29254471	2.2473698	20	5 26.6	19.9
164785 1999 ES ₁₄	16.8	X	213.61470	77.79936	343.43358	3.36134	0.1369570	0.29573111	2.2311976	20	6 24.5	19.9
164786 1999 FZ ₁	16.5	X	36.37527	7.15146	175.00069	3.29503	0.1067975	0.28469555	2.2884895	20	4 25.2	18.5
164787 1999 FE ₁₁	17.1	X	10.51654	74.11422	167.77077	2.42120	0.1145894	0.28531210	2.2851914	20	6 9.5	19.2
164788 1999 FN ₁₂	15.6	X	13.13525	75.97329	23.69115	1.55693	0.1329719	0.17706270	3.1408798	20	—	—
164789 1999 FV ₁₈	16.3	X	122.65207	176.66261	12.86980	3.84816	0.2179822	0.29546696	2.2325272	20	9 15.9	19.9
164790 1999 FY ₃₅	16.4	X	122.49669	19.36239	148.64783	5.05922	0.0827700	0.29491908	2.2352914	20	8 8.3	19.4
164791 Nicinski	17.2	X	208.20179	115.52847	177.33969	2.41733	0.1840197	0.27159613	2.3614948	20	1 5.7	21.0
164792 Owen	16.7	X	56.56093	170.26227	40.89128	6.46858	0.0893858	0.28888752	2.2662972	20	7 13.1	19.2
164793 1999 GO ₇	16.6	X	336.70171	36.09865	177.49009	3.28553	0.1758791	0.27836564	2.3230522	20	2 9.9	19.1
164794 1999												

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>
164801 1999 JH ₄₂	15.7	X	178.04310	99.89266	225.63680	13.10546	0.2262681	0.26618070	2.3934169	20	1 18.8	19.9
164802 1999 JU ₄₈	16.4	X	71.50411	149.37932	48.93389	6.35413	0.1030782	0.28643987	2.2791893	20	7 19.2	19.2
164803 1999 JH ₆₅	16.0	X	18.45818	17.99970	203.62399	8.80766	0.1761166	0.28389576	2.2927856	20	5 29.2	17.7
164804 1999 JL ₇₅	16.6	X	115.24138	169.67432	348.50399	2.08562	0.1283016	0.28824501	2.2696637	20	7 21.3	19.6
164805 1999 JT ₁₀₉	16.8	X	256.39163	89.74488	171.35170	3.59682	0.2275864	0.27022464	2.3694784	20	1 6.3	20.7
164806 1999 JA ₁₁₀	16.3	X	189.65952	256.91622	38.31341	3.00723	0.1687062	0.26511178	2.3998460	20	—	—
164807 1999 JA ₁₁₄	16.8	X	306.81073	117.04559	127.83381	2.70186	0.1817734	0.27512425	2.3412626	20	2 10.2	19.9
164808 1999 JC ₁₁₆	14.4	X	115.35540	178.16863	81.14694	17.70780	0.0629771	0.15800436	3.3886236	20	11 11.4	19.6
164809 1999 JH ₁₂₁	16.2	X	187.41636	74.17374	204.59314	6.13651	0.1621692	0.26207697	2.4183370	20	—	—
164810 1999 JN ₁₂₄	16.3	X	256.61014	210.43635	32.09817	6.27342	0.1507334	0.26920099	2.3754813	20	—	—
164811 1999 JR ₁₃₅	16.2	X	223.64941	224.01247	53.66877	5.65048	0.2226936	0.26766117	2.3845831	20	1 1.3	20.4
164812 1999 KT ₁₇	17.2	X	319.71305	155.24738	84.63602	3.55505	0.1837246	0.27658116	2.3330336	20	2 22.0	19.7
164813 1999 LC ₈	15.7	X	198.94991	247.52940	86.92859	13.53677	0.2390699	0.26958865	2.3732035	20	2 23.3	20.0
164814 1999 LR ₃₂	16.9	X	236.58331	199.24148	74.07571	2.98738	0.1916667	0.26836883	2.3803893	20	1 6.8	20.7
164815 1999 ND ₆₂	15.8	X	335.53006	327.40545	259.90443	12.15448	0.1554943	0.27272063	2.3549989	20	2 25.8	18.6
164816 1999 PR ₅	16.9	X	33.77686	189.37667	160.09618	5.87215	0.2473872	0.24258028	2.5462383	20	—	—
164817 1999 QW	15.7	X	275.06459	283.48149	161.12332	8.92960	0.1373743	0.23804292	2.5784925	20	10 12.9	18.7
164818 1999 RR ₄₁	16.5	X	116.10886	275.29074	354.51743	12.58221	0.1691325	0.24560062	2.5253200	20	12 7.9	20.8
164819 1999 RL ₈₆	16.3	X	104.37808	256.86165	106.50414	3.67756	0.2139559	0.25240140	2.4797518	20	—	—
164820 1999 RR ₈₉	15.9	X	35.82241	15.28185	23.67295	4.75178	0.1764744	0.24666198	2.5180706	20	—	—
164821 1999 RY ₁₁₂	16.4	X	139.66532	20.06887	317.73390	2.68956	0.1884481	0.25636904	2.4541004	20	—	—
164822 1999 RV ₁₅₇	15.7	X	169.76562	316.90573	33.04854	4.72311	0.2529798	0.26069757	2.4268600	20	2 17.8	19.8
164823 1999 RD ₁₇₁	16.6	X	20.93612	214.10957	142.19977	2.17753	0.2160245	0.24115251	2.5562786	20	12 23.6	19.8
164824 1999 RS ₁₇₆	16.5	X	161.84781	156.83862	193.28348	3.89778	0.1042094	0.25904855	2.4371482	20	1 28.2	20.0
164825 1999 RT ₂₀₃	15.7	X	333.58017	172.29269	255.81870	12.28672	0.1391361	0.24178636	2.5518091	20	—	—
164826 1999 RN ₂₀₈	16.1	X	20.81476	186.85747	236.26938	7.47645	0.2235042	0.24595036	2.5229254	20	—	—
164827 1999 RN ₂₃₆	16.3	X	137.77788	240.46840	98.23594	6.78849	0.1919041	0.25443411	2.4665267	20	—	—
164828 1999 TL ₄₀	16.4	X	57.99202	166.09970	153.55719	5.34738	0.2670299	0.24246689	2.5470321	20	12 25.1	20.5
164829 1999 TE ₄₅	16.6	X	0.24027	109.61797	320.50105	1.90228	0.0730833	0.24423572	2.5347196	20	—	—
164830 1999 TA ₄₉	16.0	X	32.43315	107.86996	177.21831	6.83390	0.0756835	0.23240500	2.6200268	20	9 11.4	19.1
164831 1999 TL ₅₂	16.8	X	194.10136	54.25732	266.19252	1.92001	0.2042022	0.26067166	2.4270209	20	1 28.6	20.8
164832 1999 TL ₅₅	16.0	X	302.89807	294.01419	208.26832	3.17941	0.0858722	0.24553009	2.5258035	20	—	—
164833 1999 TR ₆₂	16.4	X	90.31168	273.65817	33.80354	8.49010	0.1096468	0.24087600	2.5582345	20	12 27.2	20.3
164834 1999 TL ₆₄	17.1	X	188.41634	98.84033	198.54415	2.85748	0.1376429	0.2519494	2.4488439	20	—	—
164835 1999 TS ₆₇	16.5	X	352.45001	192.45682	113.67043	1.57742	0.1164288	0.22649634	2.6653971	20	8 9.4	19.1
164836 1999 TW ₇₅	17.2	X	283.96856	103.28792	14.68894	2.35991	0.0856582	0.23863900	2.5741970	20	12 15.9	20.3
164837 1999 TY ₈₁	16.5	X	23.98016	204.45428	187.29467	5.47751	0.0713916	0.24409487	2.5356946	20	—	—
164838 1999 TH ₈₃	15.9	X	129.85542	7.88418	165.18292	3.73123	0.0901625	0.22844496	2.6502183	20	8 18.4	19.9
164839 1999 TX ₈₆	16.9	X	142.92834	135.28994	204.92619	0.40928	0.1983383	0.25749724	2.4469269	20	1 7.0	20.4
164840 1999 TK ₈₈	16.8	X	31.49067	335.62654	18.45650	6.53509	0.2157534	0.24069782	2.5594969	20	—	—
164841 1999 TV ₁₁₂	16.0	X	174.23151	126.05628	290.84831	4.11458	0.2384303	0.26569746	2.3963180	20	5 9.0	20.2
164842 1999 TV ₁₃₃	17.1	X	97.16975	170.77513	225.35925	1.06573	0.1455596	0.25371722	2.4711707	20	1 15.4	19.9
164843 1999 TH ₁₃₈	14.8	X	238.76908	101.37654	270.95460	1.80290	0.2373635	0.12630101	3.9342762	20	5 9.5	21.1
164844 1999 TV ₁₄₃	14.2	X	196.39880	66.37394	337.67403	8.34498	0.2381633	0.12406824	3.9813374	20	5 11.0	20.9
164845 1999 TT ₁₄₉	16.6	X	94.57384	14.83522	21.64870	3.02603	0.1896323	0.25303521	2.4756091	20	1 20.3	19.4
164846 1999 TT ₁₅₂	15.8	X	358.85981	334.39553	76.90766	5.69464	0.1550111	0.24127953	2.5553814	20	—	—
164847 1999 TC ₁₅₃	16.8	X	245.63347	306.94508	29.51976	21.37959	0.0825514	0.36104428	1.9532706	20	4 9.4	19.0
164848 1999 TM ₁₅₆	16.0	X	21.47934	219.30896	190.48992	13.23334	0.1693889	0.24333370	2.5409798	20	—	—
164849 1999 TV ₁₆₃	16.4	X	163.12683	329.51690	109.01722	3.88313	0.1772435	0.26533167	2.3985199	20	5 27.5	20.2
164850 1999 TF ₁₇₁	15.9	X	325.07381	244.02786	205.40939	5.20143	0.1072515	0.24105700	2.5569538	20	—	—
164851 1999 TK ₁₇₁	17.1	X	345.94066	211.17041	207.53259	4.24862	0.2557293	0.23979516	2.5659160	20	—	—
164852 1999 TT ₁₇₄	15.7	X	168.12450	249.67152	13.99271	9.65624	0.1615765	0.24697762	2.5159248	20	—	—
164853 1999 TQ ₁₉₈	15.6	X	254.63872	85.99399	23.79622	10.01521	0.1818257	0.23100172	2.6306268	20	10 7.4	19.1
164854 1999 TK ₂₀₄	17.1	X	333.58799	286.88758	31.01158	21.20846	0.0568412	0.36806876	1.9283391	20	8 27.1	19.3
164855 1999 TO ₂₀₄	16.3	X	45.45915	342.19700	351.93124	4.02885	0.1509562	0.23934040	2.5691653	20	12 15.6	19.9
164856 1999 TJ ₂₁₀	15.3	X	54.69736	352.31659	355.78722	13.31509	0.1821189	0.24001736	2.5643321	20	—	—
164857 1999 TC ₂₁₅	16.6	X	285.65787	244.73063	179.82740	5.33116	0.2237969	0.23256855	2.6187984	20	9 14.1	19.4
164858 1999 TX ₂₁₅	14.3	X	229.03319	236.94540	148.28480	3.53311	0.2507137	0.12573311	3.9461138	20	5 16.9	20.7
164859 1999 TA ₂₁₈	16.4	X	94.60036	201.38845	217.74494	5.64708	0.1073349	0.25545511	2.4599502	20	2 3.4	19.4
164860 1999 TA ₂₄₁	17.0	X	42.05248	306.07325	62.27726	5.22831	0.2728014	0.24301034	2.5432334	20	—	—
164861 1999 TL ₂₆₀	16.3	X	33.02144	256.09486	68.07848	5.99137	0.2328692	0.23687708	2.5869460	20	11 29.3	19.5
164862 1999 TD ₂₆₂	16.9	X	329.83219	179.99044	260.35618	2.20959	0.0460042	0.24135945	2.5548173	20	—	—
164863 1999 TN ₂₆₉	15.7	X	318.01139	54.64132	326.61600	11.03070	0.1967156	0.23351602	2.6117099	20	9 15.9	18.2
164864 1999 TH ₂₇₂	16.4	X	351.00648	23.82793	348.07857	9.53183	0.2125176	0.23669945	2.5882400	20	11 20.1	19.0
164865 1999 TA ₂₇₃	16.4	X	194.15691	126.40887	222.76526	20.89705	0.0725500	0.35420748	1.9783247	20	2 10.9	19.5
164866 1999 TK ₂₇₈	15.8	X	197.37413	357.24784	240.34789	1.62575	0.0709996	0.24421951	2.5348318	20	—	—
164867 1999 TH ₂₈₇	17.0	X	0.36146	262.95319	9.20842	19.15060	0.0911350	0.36929821	1.9240569	20	7 25.1	19.0
164868 1999 TU ₃₀₉	16.8	X	153.14799	145.84924	161.64081	4.28695	0.2026592	0.25610989	2.4557556	20	—	—
164869 1999 UJ ₁₁	16.2	X	28.60855	331.43514	41.02252	17.65206	0.2768010	0.24053072	2.5606822	20	—	—
164870 1999 UD ₁₄	15.8	X	351.06164	222.04147	198.92348	12.72795	0.1643111	0.24089937	2.5580691	20	—	—
164871 1999 UE ₂₀	16.6	X	274.12148	305.20155	176.71646	3.03180	0.0675042	0.24070217	2.5594661	20	12 9.2	19.6
164872 1999 UJ ₃₁	16.3	X	150.20329	216.80920	28.75282	4.07666	0.0886706	0.24067035	2.5596917	20	12 11.4	20.1
164873 1999 UO ₃₆	16.9	X	3.16328	166.40299	249.49324	1.85502	0.1018674	0.24521714	2.5279520	20	—	—
164874 1999 UL ₃₇	16.2	X	88.72786	137.74650	74.83783	1.53680	0.0780335	0.22942762	2.64264			

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>
164881 1999 VT ₃₀	15.6	X	16.38685	129.78793	242.46382	11.12003	0.2495563	0.23810415	2.5780504	20	—	—
164882 1999 VB ₄₂	16.8	X	278.94870	110.36489	349.17965	3.65958	0.1093500	0.23624250	2.5915765	20	11 8.5	19.7
164883 1999 VQ ₆₅	16.1	X	55.72252	149.77424	217.12146	5.87880	0.1516755	0.24306964	2.5428197	20	—	—
164884 1999 VW ₇₆	16.7	X	207.54581	53.72630	131.44280	1.91337	0.0745504	0.23579027	2.5948891	20	11 30.5	20.2
164885 1999 VU ₇₉	16.4	X	49.58476	111.66271	226.16920	2.89976	0.1750181	0.24027507	2.5624983	20	12 28.3	19.9
164886 1999 VX ₈₁	16.0	X	5.62990	123.77020	216.09487	4.81973	0.2837253	0.23658455	2.5890780	20	11 17.9	18.4
164887 1999 VT ₈₄	17.1	X	342.70135	315.85796	45.64512	2.50475	0.1736699	0.23320862	2.6140044	20	10 16.6	19.6
164888 1999 VK ₈₆	15.8	X	60.15730	241.13284	107.41233	9.26528	0.2100841	0.24214613	2.5492809	20	—	—
164889 1999 VN ₉₃	16.6	X	258.96949	241.85539	197.46957	3.71845	0.2320553	0.23063292	2.6334305	20	8 23.2	20.2
164890 1999 VL ₁₀₁	16.5	X	244.12414	29.79655	67.58669	3.55155	0.0447351	0.23005432	2.6378441	20	9 28.5	19.9
164891 1999 VD ₁₀₄	17.1	X	7.71585	171.02665	211.39263	2.27983	0.2228096	0.23832913	2.5764277	20	—	—
164892 1999 VD ₁₀₆	16.2	X	27.53003	93.10747	238.95662	12.77359	0.1439595	0.23457918	2.6038127	20	11 17.9	19.2
164893 1999 VV ₁₀₆	16.3	X	258.94110	265.19120	216.56888	2.56781	0.0424454	0.23464913	2.6032952	20	11 19.1	19.5
164894 1999 VR ₁₀₇	16.4	X	268.51443	84.46740	63.83237	5.54712	0.1097676	0.23794633	2.5791902	20	12 29.9	19.3
164895 1999 VZ ₁₁₀	16.7	X	348.75567	165.48428	232.44488	4.30238	0.1821378	0.23631355	2.5910570	20	12 21.9	19.3
164896 1999 VE ₁₁₆	16.4	X	310.31886	144.66157	195.94191	3.34270	0.1181513	0.22487387	2.6782023	20	7 12.3	19.4
164897 1999 VV ₁₃₄	16.5	X	66.41191	223.57793	93.91970	1.50743	0.0792875	0.22926034	2.6439309	20	9 22.3	20.0
164898 1999 VM ₁₅₉	15.9	X	115.89207	133.90244	250.98512	3.71013	0.1995460	0.25400427	2.4693086	20	2 1.8	19.1
164899 1999 VR ₁₆₂	16.6	X	63.19542	359.87199	347.62097	2.18333	0.2400730	0.24302697	2.5431174	20	—	—
164900 1999 VE ₁₈₁	17.4	X	189.40011	260.97773	222.86833	19.82235	0.0891720	0.37013806	1.9211453	20	8 26.9	20.3
164901 1999 VK ₁₈₁	16.3	X	0.40328	102.41866	243.20524	1.86793	0.1153033	0.23279962	2.6170652	20	10 20.2	19.1
164902 1999 VT ₁₉₀	16.5	X	7.34888	265.40838	172.59134	3.33300	0.2233171	0.24198214	2.5504325	20	—	—
164903 1999 VP ₂₂₅	14.4	X	231.17335	209.13679	158.76779	7.73097	0.2953050	0.12423056	3.9778685	20	4 27.6	21.1
164904 1999 WP ₂	15.8	X	334.09387	11.04513	74.53245	7.16205	0.2737519	0.23837588	2.5760909	20	—	—
164905 1999 WU ₉	15.1	X	8.46934	144.68928	274.49799	13.95096	0.2235388	0.23942548	2.5685566	20	—	—
164906 1999 WY ₁₅	16.5	X	74.44908	252.50055	98.82994	1.15042	0.1058318	0.24347851	2.5399722	20	—	—
164907 1999 WL ₁₇	16.6	X	331.03672	99.69047	219.62896	21.18453	0.0666041	0.37134820	1.9169693	20	7 28.4	18.9
164908 1999 XC ₃	15.7	X	334.31231	339.54121	104.18310	3.94816	0.2195560	0.23922826	2.5699681	20	—	—
164909 1999 XO ₄	16.6	X	132.49051	351.31377	92.89597	3.36241	0.2018726	0.26015973	2.4302036	20	5 7.8	20.3
164910 1999 XL ₁₀	15.7	X	67.27438	112.64056	263.01062	10.37834	0.2445372	0.24638365	2.5199666	20	—	—
164911 1999 XB ₁₃	15.4	X	293.75903	212.65094	218.34838	11.41696	0.1932930	0.23218854	2.6216549	20	10 12.4	18.1
164912 1999 XP ₁₅	17.0	X	3.83037	296.91224	99.84015	4.26067	0.3277583	0.23873516	2.5735056	20	—	—
164913 1999 XR ₃₂	15.5	X	341.07689	338.75106	113.39802	14.24201	0.1975490	0.23688916	2.5868580	20	—	—
164914 1999 XV ₃₇	16.3	X	19.55548	107.34147	310.27916	9.56406	0.2369824	0.24288805	2.5440869	20	—	—
164915 1999 XC ₃₈	15.8	X	77.98940	301.48206	69.99284	12.79138	0.2861096	0.24580759	2.5239022	20	—	—
164916 1999 XV ₃₈	15.9	X	359.06068	284.81836	158.38154	5.78294	0.2781964	0.24176702	2.5519452	20	—	—
164917 1999 XF ₄₁	16.1	X	337.73017	29.56855	46.59804	7.20680	0.0849838	0.23996080	2.5647351	20	—	—
164918 1999 XR ₄₁	16.0	X	307.52574	310.87789	152.65915	3.40075	0.1863251	0.23700541	2.5860121	20	—	—
164919 1999 XD ₄₄	15.3	X	37.93686	0.02399	40.09718	3.81928	0.1662553	0.24367783	2.5385869	20	—	—
164920 1999 XL ₄₆	16.3	X	0.28489	35.13067	38.82678	1.55724	0.1636307	0.24168000	2.5525577	20	—	—
164921 1999 XV ₅₇	16.1	X	335.89866	13.08422	78.63534	13.31250	0.2025746	0.23941654	2.5686205	20	—	—
164922 1999 XZ ₇₂	15.4	X	343.75790	160.41658	248.77205	6.42372	0.1765065	0.23589702	2.5941062	20	12 27.4	17.9
164923 1999 XC ₇₇	15.3	X	302.63194	170.12732	249.99689	4.86382	0.1506820	0.23073907	2.6326227	20	10 18.4	18.0
164924 1999 XS ₇₇	16.0	X	75.24467	124.60715	238.21519	3.70554	0.2581195	0.24326326	2.5414703	20	—	—
164925 1999 XN ₇₉	16.3	X	344.29059	162.66107	228.92890	2.10301	0.0301649	0.23314888	2.6144509	20	11 19.9	19.5
164926 1999 XL ₈₇	16.1	X	322.18221	181.55576	239.97270	4.06109	0.2528074	0.23408141	2.6075027	20	12 3.9	17.9
164927 1999 XO ₉₂	15.5	X	172.96726	9.52559	97.26458	6.33215	0.1183291	0.21673051	2.7448757	20	7 10.3	19.6
164928 1999 XQ ₉₉	15.5	X	15.49231	176.23316	259.10539	12.62212	0.1473277	0.24295821	2.5435972	20	—	—
164929 1999 XK ₁₀₂	16.3	X	321.07007	2.18943	70.34034	5.98915	0.2338133	0.23512277	2.5997979	20	12 24.1	17.5
164930 1999 XZ ₁₁₁	16.3	X	8.46448	332.07031	54.29062	3.65193	0.1466691	0.23718753	2.5846881	20	—	—
164931 1999 XO ₁₁₃	16.1	X	299.40430	119.62450	357.42083	14.82873	0.1944095	0.23804590	2.5784710	20	—	—
164932 1999 XW ₁₁₅	15.4	X	108.83673	82.50500	309.36410	4.44179	0.1928074	0.25314433	2.4748976	20	2 2.4	18.4
164933 1999 XJ ₁₂₄	16.3	X	34.37359	359.77082	26.03772	8.16158	0.1926476	0.24188181	2.5511378	20	—	—
164934 1999 XV ₁₂₅	15.7	X	341.51129	89.54341	351.91765	3.92719	0.1729272	0.23974579	2.5662683	20	—	—
164935 1999 XR ₁₂₆	16.3	X	293.49533	87.00855	2.85283	4.30043	0.1988571	0.23398940	2.6081862	20	11 8.6	18.7
164936 1999 XX ₁₂₈	15.1	X	240.71319	134.57809	293.58454	7.68056	0.2218535	0.22411519	2.6842431	20	7 20.9	19.0
164937 1999 XW ₁₄₅	16.3	X	99.74719	208.89080	65.98590	5.18712	0.1535865	0.23592547	2.5938976	20	11 28.8	20.2
164938 1999 XU ₁₅₁	15.7	X	323.27747	104.23640	305.00792	4.83887	0.1202442	0.22999060	2.6382666	20	11 11.7	18.6
164939 1999 XT ₁₅₅	15.6	X	18.40128	164.44787	238.81384	7.31973	0.3227470	0.24111695	2.5565300	20	—	—
164940 1999 XZ ₁₅₅	15.9	X	79.29126	271.33193	102.36747	7.33824	0.2689685	0.24595577	2.5228884	20	—	—
164941 1999 XQ ₁₆₈	15.5	X	278.63959	135.44306	346.77490	3.27589	0.2004251	0.23481030	2.6021038	20	11 26.9	18.3
164942 1999 XE ₁₇₀	16.0	X	320.95871	27.70305	45.95570	4.32839	0.2090504	0.23512177	2.5998052	20	12 18.1	18.0
164943 1999 XS ₁₇₆	16.2	X	221.06718	128.21840	8.66112	6.74831	0.3236418	0.22437215	2.6821934	20	9 18.3	20.6
164944 1999 XU ₁₇₇	16.3	X	276.37344	6.07886	77.91990	6.61745	0.2231411	0.22862917	2.6487946	20	9 29.8	19.4
164945 1999 XD ₁₈₃	16.7	X	334.64774	31.99475	10.75899	4.87879	0.2899698	0.23513975	2.5996727	20	12 11.8	18.5
164946 1999 XF ₁₉₂	15.4	X	242.79558	224.45110	290.04048	10.28166	0.2709627	0.23060057	2.6336768	20	11 1.5	19.3
164947 1999 XN ₂₀₁	16.4	X	338.68526	6.75610	37.53830	6.01679	0.2490487	0.23414740	2.6070128	20	12 18.6	18.5
164948 1999 XQ ₂₂₉	16.4	X	6.52447	55.04818	2.06350	7.20344	0.2833585	0.24150406	2.5537973	20	—	—
164949 1999 XF ₂₃₁	15.1	X	280.36850	23.73531	42.66047	14.80150	0.3011199	0.22597913	2.6694625	20	9 2.6	18.6
164950 1999 XC ₂₃₄	16.3	X	18.93645	194.99575	179.62845	5.95381	0.2351253	0.23880517	2.5730027	20	—	—
164951 1999 XM ₂₄₂	15.3	X	188.59500	92.00758	52.66781	14.80512	0.2054531	0.22219590	2.6996783	20	9 16.3	20.0
164952 1999 XM ₂₄₃	14.8	X	205.73807	138.47960	21.04599	13.79726	0.1854673	0.22597861	2.6694666	20	10 13.7	19.0
164953 1999 XP ₂₅₂	17.0	X	40.92650	149.15240	190.06102	2.09468	0.0691999	0.23587855	2.5942416	20	12 4.5	20.4
164954 1999 YW ₃	14.7	X	326.02689	40.74698	35.23538	30.74238	0.2108468	0.23509195	2.6000251	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>
164961 2000 AH ₁₆	16.3	X	277.19562	10.16829	93.18669	3.84041	0.1795008	0.23144255	2.6272853	20	11 2.5	19.2
164962 2000 AO ₂₇	16.1	X	324.10625	55.44845	8.37462	2.97838	0.2467982	0.23371815	2.6102038	20	12 11.8	18.0
164963 2000 AW ₂₉	15.3	X	266.01878	118.43391	307.41984	13.13682	0.0618948	0.22372126	2.6873932	20	9 4.8	19.1
164964 2000 AT ₃₀	16.2	X	3.52807	71.38065	357.09270	3.37922	0.2567093	0.23900403	2.5715752	20	—	—
164965 2000 AZ ₃₉	15.9	X	221.75701	57.19118	92.94272	7.14953	0.1602057	0.22722777	2.6596743	20	10 24.3	19.9
164966 2000 AM ₄₄	16.0	X	1.66999	337.83839	307.71673	5.67185	0.0427270	0.21631652	2.7483767	20	7 22.6	19.3
164967 2000 AO ₅₁	15.5	X	132.41820	109.50024	286.86461	5.68487	0.1271319	0.25741060	2.4474759	20	2 24.7	18.9
164968 2000 AS ₅₂	15.7	X	91.79663	133.82700	283.61790	2.70020	0.1627599	0.25308767	2.4752670	20	2 7.6	18.6
164969 2000 AK ₅₃	15.8	X	282.63182	147.28168	319.55428	6.09583	0.0407760	0.23191999	2.6236783	20	11 30.5	19.2
164970 2000 AV ₅₃	15.6	X	347.43615	284.66682	105.80587	3.20530	0.1300253	0.23070341	2.6328940	20	12 1.5	18.4
164971 2000 AV ₆₁	15.4	X	223.62847	231.57523	308.76677	3.63898	0.2285806	0.22804129	2.6533450	20	11 20.6	19.3
164972 2000 AM ₆₂	15.3	X	241.78301	165.07826	313.60901	12.41377	0.1392572	0.22526787	2.6750786	20	9 30.0	19.2
164973 2000 AU ₆₈	15.4	X	30.89045	289.82084	96.71199	7.35147	0.1608336	0.24034410	2.5620076	20	—	—
164974 2000 AO ₇₈	15.6	X	342.09128	213.29870	206.59337	3.85546	0.2235075	0.23611426	2.5925147	20	—	—
164975 2000 AO ₁₁₇	15.6	X	332.32033	144.66957	276.17628	8.96482	0.1870678	0.23288550	2.6164217	20	12 22.0	18.0
164976 2000 AJ ₁₁₈	16.4	X	316.90756	279.80712	184.53373	5.26291	0.2157585	0.23494907	2.6010791	20	—	—
164977 2000 AA ₁₂₃	14.9	X	24.40554	39.58875	263.91815	10.29735	0.0346347	0.22160539	2.7044720	20	9 12.2	18.7
164978 2000 AH ₁₄₃	15.7	X	295.93523	226.87562	258.47706	3.42089	0.2047872	0.23206988	2.6225485	20	—	—
164979 2000 AK ₁₅₂	16.5	X	146.86331	193.13797	260.99041	17.40247	0.0975711	0.35645178	1.9700119	20	5 25.8	18.9
164980 2000 AW ₁₅₂	14.8	X	177.95525	146.31366	280.39740	24.73513	0.1297207	0.21160624	2.7890121	20	5 24.9	19.5
164981 2000 AT ₁₆₇	15.7	X	292.05714	289.46143	174.75357	13.02155	0.1549387	0.23123676	2.6288439	20	12 3.9	18.7
164982 2000 AL ₁₇₁	16.0	X	47.24450	237.52746	173.91797	6.54117	0.0977003	0.24393936	2.5367722	20	—	—
164983 2000 AE ₁₇₈	15.4	X	329.53352	168.77894	247.35043	11.72830	0.2341839	0.23359382	2.6111299	20	12 12.9	17.4
164984 2000 AF ₁₉₃	15.5	X	228.33125	259.12866	216.70784	11.54190	0.1487156	0.22414013	2.6840440	20	9 12.1	19.6
164985 2000 AN ₂₀₇	15.7	X	104.29357	255.24366	306.17070	5.10238	0.1687704	0.21338548	2.7734870	20	8 31.7	20.0
164986 2000 AE ₂₁₉	16.7	X	325.35614	13.43545	21.99514	1.12974	0.1339905	0.22856992	2.6492524	20	10 28.2	19.1
164987 2000 AE ₂₃₄	16.7	X	339.31462	159.55430	266.44929	4.62734	0.2874405	0.23695430	2.5863839	20	—	—
164988 2000 AK ₂₃₉	15.7	X	339.39642	276.90624	109.10221	8.42331	0.1507191	0.22916292	2.6446801	20	11 14.6	18.5
164989 2000 AE ₂₄₇	15.0	X	249.38797	121.24772	323.04132	21.25496	0.0770907	0.22335798	2.6888619	20	9 3.8	18.8
164990 2000 BB ₂	16.3	X	283.23106	209.19770	139.21869	4.24440	0.1022098	0.21263156	2.7800390	20	6 14.2	20.0
164991 2000 BQ ₈	14.8	X	32.22961	256.92811	73.15811	14.80379	0.1779108	0.22754521	2.6572000	20	11 26.4	18.3
164992 2000 BX ₈	15.2	X	293.09378	357.40311	71.05480	12.82693	0.0947192	0.22699513	2.6614912	20	10 25.6	18.5
164993 2000 BW ₉	16.6	X	186.02391	310.15477	150.16973	0.84981	0.0237747	0.21432267	2.7653959	20	7 18.3	20.5
164994 2000 BK ₁₃	16.4	X	217.86508	164.35835	314.20709	2.18391	0.1097861	0.22172565	2.7034941	20	9 11.1	20.3
164995 2000 BR ₁₆	15.3	X	278.29948	326.44522	114.13501	12.69521	0.1474630	0.22810020	2.6528881	20	10 13.2	18.7
164996 2000 BS ₁₇	16.1	X	305.85379	64.98739	8.37768	4.14491	0.1695942	0.23058569	2.6337900	20	11 11.9	18.6
164997 2000 BW ₂₄	15.5	X	65.52989	6.78665	76.55067	10.13296	0.1115020	0.24572435	2.5244721	20	1 29.5	18.4
164998 2000 BO ₂₅	16.1	X	241.65079	167.79147	305.94880	6.21005	0.1862064	0.22557532	2.6726474	20	9 20.6	19.9
164999 2000 BS ₂₅	15.8	X	196.94772	172.76077	308.80675	7.51110	0.1320645	0.21990382	2.7184053	20	8 20.6	19.9
165000 2000 BS ₃₁	15.7	X	194.24610	107.16960	303.41618	7.79541	0.1595959	0.21219997	2.7838073	20	5 18.4	20.4
165001 2000 BA ₃₈	16.0	X	11.97812	96.71702	126.37998	5.55766	0.1530731	0.25507826	2.4623725	20	5 16.6	18.2
165002 2000 BM ₄₉	16.2	X	202.68032	189.10490	275.85607	1.38465	0.1412060	0.21938707	2.7226723	20	8 5.7	20.5
165003 2000 BT ₄₉	15.2	X	350.98341	97.23585	330.56899	11.06315	0.2655279	0.23814456	2.5777587	20	—	—
165004 2000 CH ₁₅	15.8	X	113.67983	193.05927	11.74613	3.39304	0.1289619	0.21721050	2.7408305	20	9 13.7	20.0
165005 2000 CD ₂₂	15.4	X	333.09214	67.84126	292.17549	4.05989	0.0431408	0.22103652	2.7091103	20	9 18.4	18.8
165006 2000 CC ₃₉	16.3	X	325.85455	72.46649	31.60141	4.84461	0.2531834	0.23475096	2.6025423	20	—	—
165007 2000 CW ₄₄	16.0	X	215.70240	328.98619	186.10379	3.87117	0.2407804	0.22410169	2.6843509	20	10 12.6	20.2
165008 2000 CJ ₄₅	16.3	X	131.65507	342.59006	173.26857	9.69158	0.2359730	0.21245776	2.7815549	20	8 4.4	21.1
165009 2000 CK ₄₆	15.8	X	221.84841	300.34355	158.90856	13.83405	0.1651010	0.21934627	2.7230099	20	8 15.2	20.1
165010 2000 CG ₇₉	15.8	X	1.95570	333.23862	317.16589	4.12413	0.0326337	0.21352611	2.7722691	20	7 29.1	19.4
165011 2000 CA ₈₂	15.6	X	287.13511	300.45649	137.47897	13.42576	0.2349639	0.22718210	2.6600306	20	10 9.1	18.6
165012 2000 CJ ₈₄	15.4	X	252.41586	143.56949	327.62827	12.45354	0.1110875	0.22416785	2.6838228	20	10 8.4	19.1
165013 2000 CO ₉₀	15.4	X	92.44103	139.17874	53.42416	4.37381	0.0909237	0.21090086	2.7952274	20	7 31.9	19.3
165014 2000 CZ ₉₇	15.7	X	217.08985	147.90254	312.01315	8.41341	0.0685864	0.22024927	2.7155621	20	8 20.7	19.5
165015 2000 CS ₉₈	15.4	X	269.55340	84.87689	315.31121	4.40013	0.0541781	0.21751501	2.7382719	20	8 11.9	18.9
165016 2000 CV ₉₈	16.1	X	314.42273	120.74216	275.03597	0.50064	0.1433842	0.22449620	2.6812052	20	10 6.1	18.9
165017 2000 CM ₁₀₈	15.5	X	290.06401	217.55494	253.94476	11.85564	0.2402658	0.23113068	2.6296482	20	11 28.1	17.6
165018 2000 CP ₁₁₃	16.1	X	339.29598	274.14501	124.88796	3.25860	0.1349635	0.23020601	2.6366852	20	11 29.6	18.8
165019 2000 CG ₁₁₅	16.5	X	314.29233	37.50985	64.50136	1.64502	0.1794124	0.23229610	2.6208456	20	—	—
165020 2000 CB ₁₂₆	15.6	X	169.72927	72.21694	93.15382	5.94227	0.0954431	0.21979747	2.7192821	20	9 23.3	19.8
165021 2000 CJ ₁₂₉	15.9	X	300.63975	257.38342	128.07010	15.09422	0.2304751	0.22394045	2.6856393	20	8 14.2	18.6
165022 2000 CN ₁₃₀	16.4	X	244.42715	271.03832	142.43722	5.21202	0.1254691	0.21659829	2.7459926	20	7 16.9	20.4
165023 2000 CD ₁₃₂	15.8	X	274.52264	334.65776	348.08526	1.08399	0.0400618	0.20545099	2.8444429	20	5 8.1	19.7
165024 2000 CG ₁₃₂	16.2	X	131.59051	84.57287	338.05309	5.31254	0.0636656	0.20076496	2.8885337	20	3 26.5	20.4
165025 2000 DT ₇	16.4	X	150.09069	241.29224	302.27102	1.14451	0.0284882	0.22023271	2.7156982	20	9 21.3	20.1
165026 2000 DJ ₉	16.0	X	282.56573	211.11592	153.17274	4.81698	0.0890034	0.21411131	2.7672155	20	7 6.4	19.7
165027 2000 DU ₁₂	16.2	X	173.68127	37.99445	17.58871	3.37441	0.0310505	0.20185511	2.8781244	20	5 4.4	20.2
165028 2000 DA ₁₉	15.9	X	143.64607	167.83864	333.20963	7.32987	0.1572664	0.21325510	2.7746174	20	7 27.1	20.4
165029 2000 DC ₂₁	15.5	X	166.41140	99.64615	333.35344	6.98929	0.2180890	0.21039003	2.7997501	20	5 22.3	20.4
165030 2000 DT ₂₄	15.8	X	239.66876	300.13211	139.87154	5.71786	0.0898038	0.21884442	2.7271712	20	8 20.9	19.4
165031 2000 DB ₂₇	16.3	X	253.63021	179.36430	295.70181	1.16008	0.1634213	0.22547287	2.6734569	20	10 13.1	19.8
165032 2000 DL ₅₄	15.7	X	137.07696	358.17763	165.39871	5.20170	0.0895788	0.21333420	2.7739315	20	8 12.5	19.8
165033 2000 DL ₅₈	15.7	X	306.64263	58.46900	318.32786	4.97311	0.0742191	0.21701138	2.7425068	20	8 30.	

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>		
165041	2000	DG ₁₀₀	15.6	X	180.96914	23.15884	85.90748	5.05159	0.0529801	0.21274591	2.7790428	20	7 23.4	19.6
165042	2000	DE ₁₁₀	15.2	X	258.87167	264.48075	168.83947	25.17575	0.1307542	0.21853683	2.7297296	20	8 29.1	18.9
165043	2000	DM ₁₁₃	15.8	X	220.87015	244.16985	145.67923	13.49603	0.0888176	0.21033390	2.8002483	20	5 27.7	20.2
165044	2000	EO ₈	14.3	X	251.70914	277.59147	182.96589	2.82145	0.0986591	0.12654886	3.9291375	20	9 17.6	20.0
165045	2000	ES ₁₆	15.3	X	265.04103	310.68958	278.27060	2.57002	0.1600515	0.18756138	3.0225519	20	—	—
165046	2000	EG ₁₈	15.5	X	170.12093	95.25183	47.87488	9.53666	0.1141959	0.21605551	2.7505897	20	8 27.5	19.9
165047	2000	EY ₃₂	16.2	X	276.62501	62.63687	44.49695	4.68424	0.1044363	0.22616098	2.6680314	20	11 14.2	19.4
165048	2000	EE ₃₅	15.7	X	215.36840	264.88250	219.97916	6.67917	0.1501749	0.22106785	2.7088544	20	9 10.2	19.9
165049	2000	EO ₄₂	15.4	X	45.88642	43.86080	173.91668	15.35412	0.0815128	0.20524274	2.8463666	20	6 28.5	19.4
165050	2000	EF ₄₈	14.9	X	198.69857	73.85325	187.70643	21.80731	0.1533750	0.18031926	3.1029490	20	—	—
165051	2000	EL ₅₁	16.5	X	250.88620	114.15175	193.85511	1.51884	0.0576401	0.19867811	2.9087253	20	3 19.5	20.7
165052	2000	EE ₅₉	14.8	X	216.70715	62.58917	197.04129	7.40310	0.1562516	0.18281581	3.0746349	20	—	—
165053	2000	EM ₆₁	15.6	X	165.61023	293.09872	185.08896	14.14609	0.0714241	0.20972043	2.8057064	20	7 14.4	20.1
165054	2000	EP ₆₈	15.8	X	262.39373	206.21684	4.13421	4.75254	0.1607162	0.18409486	3.0603771	20	—	—
165055	2000	EP ₇₆	15.9	X	309.32273	14.04886	79.43285	6.53967	0.2136708	0.23062907	2.6334598	20	12 18.5	17.8
165056	2000	ED ₇₉	15.3	X	147.25592	169.61087	353.62746	13.58684	0.1368790	0.21491221	2.7603362	20	8 28.4	19.8
165057	2000	EF ₉₆	15.3	X	237.02354	27.55621	163.75036	8.20553	0.1063815	0.18040399	3.1019773	20	12 25.3	19.9
165058	2000	EW ₁₀₀	15.3	X	199.43308	308.74452	3.76456	7.85920	0.0787735	0.18981261	2.9986055	20	2 1.5	19.9
165059	2000	ET ₁₀₂	16.2	X	329.60131	21.55726	225.46016	1.09407	0.0187159	0.20041284	2.8919161	20	4 15.8	20.1
165060	2000	EW ₁₁₄	15.7	X	234.48814	227.32405	185.57060	4.20922	0.0618952	0.21179042	2.7873949	20	7 11.7	19.6
165061	2000	EF ₁₁₅	15.6	X	288.96687	48.21700	329.03202	2.05391	0.0894498	0.21410344	2.7672833	20	8 3.2	19.0
165062	2000	EO ₁₁₉	15.5	X	285.01612	62.66126	51.26462	7.65095	0.2067279	0.22954285	2.6417611	20	11 24.8	18.2
165063	2000	EM ₁₄₆	16.1	X	125.84130	114.77866	24.90435	4.91446	0.1418692	0.21010982	2.8022389	20	7 5.9	20.5
165064	2000	ED ₁₆₆	15.4	X	191.36605	294.00017	353.03264	9.35000	0.0844230	0.18586761	3.0408867	20	—	—
165065	2000	ES ₁₆₉	15.3	X	232.40574	81.01910	43.46060	12.13560	0.2388625	0.22280177	2.6947819	20	9 25.8	19.6
165066	2000	ES ₁₉₉	15.5	X	239.38236	216.79851	243.16421	7.38334	0.2170680	0.22261853	2.6962604	20	8 26.4	19.8
165067	2000	Pauls	16.3	X	226.17901	279.11991	197.42688	12.32721	0.2219689	0.22239658	2.6980541	20	9 3.3	20.7
165068	2000	FV	15.2	X	214.28965	249.63122	14.75410	11.02184	0.0911645	0.18446100	3.0563260	20	—	—
165069	2000	FH ₇	16.0	X	322.32418	41.27686	177.15625	0.65912	0.0876182	0.19324403	2.9630024	20	2 22.1	19.7
165070	2000	FX ₈	15.2	X	146.86637	6.54493	221.10002	2.62680	0.0779668	0.16935081	3.2355233	20	11 4.3	20.2
165071	2000	FT ₂₄	15.3	X	333.70325	45.40846	76.45473	12.90312	0.2236742	0.23455969	2.6039569	20	—	—
165072	2000	FB ₂₇	14.4	X	231.22500	119.38609	179.52899	10.92760	0.0815595	0.19115490	2.9845516	20	2 13.0	19.0
165073	2000	FE ₂₈	15.7	X	168.83030	309.22692	203.33779	4.75773	0.1057095	0.21391758	2.7688859	20	8 31.6	20.0
165074	2000	FB ₄₀	15.8	X	209.69382	313.74446	162.29662	8.62628	0.1972252	0.21600731	2.7509989	20	8 21.8	20.2
165075	2000	FW ₅₈	15.0	X	213.65711	237.94164	7.30932	16.61038	0.2179315	0.18110136	3.0940090	20	—	—
165076	2000	FX ₆₃	15.7	X	117.01613	157.34626	40.08449	9.64077	0.0838474	0.21271021	2.7793537	20	9 7.9	19.9
165077	2000	FB ₇₂	16.1	X	73.64176	227.65805	351.03516	3.66342	0.0413268	0.21032918	2.8002901	20	8 3.6	19.8
165078	2000	GN ₁₁	15.8	X	159.52958	105.90949	16.34202	9.07328	0.1132419	0.20991413	2.8039801	20	7 18.3	20.3
165079	2000	GG ₁₇	15.4	X	21.94829	318.56151	185.92797	10.27178	0.0380158	0.19269659	2.9686115	20	2 13.5	19.4
165080	2000	GU ₂₁	15.7	X	63.31385	165.54517	16.68885	1.70418	0.0525956	0.20256667	2.8713804	20	6 1.5	19.4
165081	2000	GG ₂₃	15.5	X	151.74299	124.79080	165.91348	2.47239	0.2115104	0.17623786	3.1506723	20	—	—
165082	2000	GJ ₃₄	14.8	X	181.45516	270.28585	17.47577	18.28942	0.1460431	0.18081920	3.0972269	20	—	—
165083	2000	GK ₃₇	15.1	X	104.89619	305.61230	21.07937	6.35678	0.1883446	0.17519406	3.1631743	20	—	—
165084	2000	GG ₃₈	15.2	X	87.18464	313.66995	152.56917	2.44060	0.0197277	0.19536088	2.9415595	20	3 23.1	19.1
165085	2000	GZ ₃₈	14.8	X	178.28422	303.81649	20.72088	22.55411	0.1303022	0.18632719	3.0358844	20	2 3.9	20.1
165086	2000	GN ₄₄	15.5	X	216.61123	238.81431	24.19061	17.38658	0.2125179	0.18148367	3.0896623	20	—	—
165087	2000	GF ₄₅	15.3	X	245.34943	114.90974	147.91693	2.05083	0.0303703	0.18795611	3.0183187	20	1 22.2	19.5
165088	2000	GU ₄₆	15.1	X	266.68135	25.47657	202.69899	7.05472	0.1022948	0.18558039	3.0440234	20	—	—
165089	2000	GT ₆₂	15.5	X	170.01493	207.70325	27.49358	2.20438	0.1371392	0.17811232	3.1285283	20	—	—
165090	2000	GP ₇₂	14.6	X	135.64322	261.67813	38.62687	16.48545	0.2271762	0.17282696	3.1919915	20	—	—
165091	2000	GK ₇₉	15.5	X	206.53606	181.32371	45.58424	1.62968	0.1307274	0.17591780	3.1544927	20	12 30.1	20.2
165092	2000	GM ₈₁	14.8	X	222.21885	184.15114	44.49332	10.75367	0.1359037	0.17833385	3.1259368	20	—	—
165093	2000	GG ₈₉	14.3	X	223.86680	205.55221	34.03595	28.52468	0.0909483	0.18122111	3.0926459	20	—	—
165094	2000	GV ₈₉	15.5	X	208.27834	284.20609	161.27943	11.34749	0.1160979	0.21024715	2.8010184	20	7 17.9	20.0
165095	2000	GR ₁₁₁	16.2	X	256.82818	67.88886	176.58087	0.64748	0.2373391	0.18520726	3.0481105	20	—	—
165096	2000	GX ₁₂₈	15.8	X	188.18906	157.92954	194.89930	13.60680	0.1583901	0.19300390	2.9654595	20	3 4.8	20.8
165097	2000	GB ₁₂₉	15.9	X	209.36996	252.41013	192.61206	3.63887	0.0734645	0.20976958	2.8052681	20	7 22.2	20.0
165098	2000	GG ₁₃₃	15.2	X	161.30798	70.46061	192.11484	32.52703	0.2369437	0.17215082	3.2003439	20	12 22.9	21.3
165099	2000	GJ ₁₅₄	15.1	X	221.40279	45.62077	224.54266	11.54573	0.1074853	0.18547728	3.0451515	20	1 1.0	20.1
165100	2000	HV	15.4	X	186.55501	208.17749	101.35414	3.30331	0.1010001	0.18403690	3.0610196	20	1 15.3	20.1
165101	2000	HY ₃	15.1	X	129.88057	143.48734	199.09142	8.75364	0.1181823	0.18202157	3.0835724	20	—	—
165102	2000	HN ₁₇	15.2	X	264.46380	155.80191	103.36252	2.88886	0.0538908	0.18887899	3.0084788	20	2 6.8	19.5
165103	2000	HJ ₂₆	15.3	X	325.79238	211.78908	46.20639	11.81598	0.0430911	0.19663507	2.9288383	20	4 24.4	19.1
165104	2000	HR ₃₃	14.8	X	166.60136	267.75259	24.79433	15.79857	0.0756838	0.17894091	3.1188629	20	—	—
165105	2000	HG ₄₅	15.5	X	15.39523	173.61411	50.07505	9.05274	0.1423699	0.19956361	2.9001145	20	5 22.4	18.6
165106	2000	HS ₅₉	15.6	X	262.01165	27.79549	209.01333	3.75412	0.1073186	0.18447739	3.0561450	20	1 2.9	20.2
165107	2000	HE ₆₃	14.9	X	353.21122	119.14317	43.87263	10.58299	0.0499794	0.18969755	2.9998180	20	2 3.9	19.0
165108	2000	HN ₆₇	15.0	X	90.41974	154.70218	214.83316	8.34103	0.0957860	0.17914891	3.1164484	20	—	—
165109	2000	HS ₇₁	14.9	X	162.81545	72.68868	229.06650	20.56232	0.1903667	0.17753121	3.1353515	20	—	—
165110	2000	HR ₈₄	15.2	X	144.26752	170.56519	102.02638	6.00179	0.1334146	0.17187764	3.2037341	20	12 24.2	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>
165121 2000 <i>JY</i> ₇₆	16.8 ^m	X	60.06961	230.94169	353.05369	1.83618	0.0899083	0.30207260	2.1998606	20	8 7.9	19.2
165122 2000 <i>JJ</i> ₈₄	13.9	X	110.42048	274.95110	58.98417	26.05683	0.1744395	0.17409995	3.1764129	20	—	—
165123 2000 <i>KP</i> ₆	15.3	X	227.39853	77.10244	165.29540	3.97513	0.1647523	0.17817200	3.1278296	20	—	—
165124 2000 <i>KW</i> ₈	17.7	X	319.07447	44.75341	233.23657	2.94557	0.2240140	0.29390043	2.2404533	20	4 4.8	19.8
165125 2000 <i>KC</i> ₁₁	14.7	X	165.72622	28.80238	238.88582	14.85138	0.0797394	0.17393007	3.1784808	20	—	—
165126 2000 <i>KJ</i> ₃₂	15.1	X	299.28096	116.06396	91.63126	2.99922	0.0931570	0.18371729	3.0645688	20	1 11.7	19.5
165127 2000 <i>KX</i> ₄₀	15.6	X	242.44130	92.80536	186.34078	4.35357	0.1365519	0.18497708	3.0506387	20	1 30.0	20.5
165128 2000 <i>KU</i> ₄₃	16.5	X	258.63706	75.54558	211.29982	5.71325	0.1381590	0.28176108	2.3043514	20	2 12.2	19.8
165129 2000 <i>KU</i> ₄₄	15.3	X	50.40186	247.15262	188.57155	9.47541	0.0674128	0.18199019	3.0839268	20	1 2.7	19.5
165130 2000 <i>KP</i> ₅₄	15.3	X	177.48182	74.03913	171.10171	15.50666	0.0954041	0.17219217	3.1998315	20	12 24.7	20.5
165131 2000 <i>KQ</i> ₅₇	15.5	X	199.92582	53.21307	199.01578	9.73904	0.1880927	0.17649971	3.1475554	20	—	—
165132 2000 <i>KV</i> ₅₈	16.6	X	53.06092	151.43343	148.07836	5.45125	0.1761654	0.30952833	2.1643913	20	11 29.5	19.5
165133 2000 <i>KP</i> ₆₁	14.5	X	140.16347	78.91555	222.31882	13.49940	0.1867477	0.17216096	3.2002182	20	—	—
165134 2000 <i>KT</i> ₆₅	15.2	X	256.57624	81.97601	136.25448	15.99892	0.1645566	0.17982662	3.1086135	20	—	—
165135 2000 <i>KU</i> ₇₀	14.8	X	215.60769	54.25081	192.56526	16.78930	0.1487226	0.17812444	3.1283863	20	—	—
165136 2000 <i>KN</i> ₇₄	15.0	X	228.95130	28.12278	203.48739	6.97440	0.1736848	0.17834664	3.1257874	20	—	—
165137 2000 <i>KM</i> ₇₉	14.1	X	123.44035	123.56643	228.75713	25.42380	0.2444118	0.17495388	3.1660687	20	1 11.9	19.5
165138 2000 <i>NL</i> ₅	16.2	X	301.91629	11.91083	339.44981	4.77114	0.2590324	0.29169382	2.2517382	20	6 23.9	18.2
165139 2000 <i>NJ</i> ₁₀	16.6	X	308.67430	167.06310	166.23544	2.73517	0.3076647	0.29211570	2.2495697	20	5 28.9	18.6
165140 2000 <i>OJ</i> ₁	16.6	X	357.98909	128.84114	215.76685	4.44002	0.1688417	0.30130426	2.2035988	20	11 10.8	18.3
165141 2000 <i>OH</i> ₁₄	16.9	X	334.97811	13.01548	287.01210	4.18757	0.1994477	0.29419247	2.2389704	20	6 24.6	18.1
165142 2000 <i>OM</i> ₄₀	16.6	X	310.49182	180.50752	175.34584	7.63076	0.1591785	0.29493390	2.2352165	20	8 6.5	18.5
165143 2000 <i>PQ</i> ₂	17.0	X	7.77032	113.72097	193.92019	4.09135	0.1813077	0.29941909	2.2128385	20	10 3.0	18.7
165144 2000 <i>QO</i> ₇	16.3	X	301.73148	123.51175	173.01807	23.29607	0.2775257	0.28708617	2.2757674	20	3 30.7	19.2
165145 2000 <i>QJ</i> ₁₀	17.3	X	292.89910	346.04206	376.07306	2.89038	0.2044503	0.28995338	2.2607399	20	5 2.6	19.8
165146 2000 <i>QN</i> ₁₃	16.4	X	296.49207	273.61146	163.99491	1.83460	0.0495492	0.30513501	2.1851170	20	12 2.1	18.5
165147 2000 <i>QD</i> ₁₈	16.9	X	294.38959	213.29996	145.50430	5.64610	0.1830303	0.29255867	2.2472984	20	7 5.9	19.1
165148 2000 <i>QR</i> ₁₈	17.2	X	180.25256	244.32062	145.52803	2.70245	0.2397908	0.27948244	2.3168595	20	4 11.9	21.0
165149 2000 <i>QC</i> ₂₂	15.9	X	100.82848	106.79313	336.82309	5.55933	0.1889722	0.27567272	2.3381562	20	3 27.4	18.8
165150 2000 <i>QU</i> ₂₈	15.4	X	204.63501	306.05834	50.52387	2.16043	0.2002610	0.17944038	3.1130727	20	3 26.5	20.6
165151 2000 <i>QT</i> ₃₃	16.0	X	170.84535	246.29121	328.78292	6.92813	0.1017051	0.30805136	2.1713040	20	12 7.9	18.9
165152 2000 <i>QS</i> ₃₈	16.3	X	24.19896	177.83241	151.14556	4.59247	0.0123214	0.30270504	2.1967954	20	11 6.3	18.9
165153 2000 <i>QR</i> ₃₉	16.5	X	212.68572	176.61921	152.45595	5.98883	0.1474341	0.27885750	2.3203197	20	2 22.5	19.9
165154 2000 <i>QE</i> ₄₀	17.0	X	277.25955	4.07333	339.12522	3.87907	0.1789589	0.28907017	2.2653425	20	5 15.3	19.8
165155 2000 <i>QK</i> ₄₀	16.9	X	16.53299	127.54030	141.78384	3.02149	0.1799315	0.29543361	2.2326953	20	8 17.6	18.6
165156 2000 <i>QJ</i> ₅₀	17.7	X	245.58329	152.09629	150.13067	3.64141	0.2474773	0.28055672	2.3109414	20	2 14.2	21.5
165157 2000 <i>QO</i> ₅₀	17.0	X	243.78948	7.62398	344.55074	4.09614	0.1885870	0.28462013	2.2888938	20	4 17.7	20.5
165158 2000 <i>QE</i> ₅₁	16.9	X	350.88876	282.90058	13.72676	1.85760	0.2350577	0.29441096	2.2378625	20	8 7.9	17.8
165159 2000 <i>QP</i> ₅₅	17.3	X	218.65118	297.94483	33.37777	1.91826	0.2570072	0.27932267	2.3177429	20	2 29.4	21.4
165160 2000 <i>QX</i> ₆₂	16.4	X	291.14118	209.64017	117.74883	8.20794	0.1584779	0.28809710	2.2704405	20	5 19.9	19.1
165161 2000 <i>QP</i> ₆₉	16.4	X	195.03546	78.42890	331.05087	6.77812	0.0815893	0.28380305	2.2932849	20	5 18.4	19.7
165162 2000 <i>QS</i> ₆₉	16.8	X	74.49776	147.72458	331.20342	6.16896	0.0448414	0.27714131	2.3298889	20	3 15.7	19.5
165163 2000 <i>QP</i> ₈₇	17.2	X	284.51315	33.48126	291.23743	3.18687	0.1606893	0.28770941	2.2724797	20	5 1.7	19.8
165164 2000 <i>QT</i> ₈₈	16.5	X	285.00487	85.99323	303.56440	5.33502	0.1540472	0.29408215	2.2395303	20	8 12.3	18.5
165165 2000 <i>QS</i> ₉₈	17.0	X	241.31549	314.72946	51.57440	3.46682	0.1805708	0.28471945	2.2883615	20	5 6.4	20.3
165166 2000 <i>QV</i> ₁₀₂	16.4	X	243.54107	273.64515	43.17477	6.59131	0.2272653	0.28015653	2.3131416	20	3 5.8	20.2
165167 2000 <i>QY</i> ₁₀₉	16.6	X	174.39160	29.10114	48.08737	3.72434	0.1336126	0.28011767	2.3133555	20	6 3.9	20.0
165168 2000 <i>QF</i> ₁₁₀	17.2	X	299.85545	153.58290	203.53260	1.97008	0.1982579	0.29283981	2.2458598	20	7 10.9	19.0
165169 2000 <i>QN</i> ₁₁₀	17.9	X	254.02668	110.59663	300.87225	1.59622	0.2534004	0.28262255	2.2996664	20	3 2.4	21.4
165170 2000 <i>QL</i> ₁₁₃	16.6	X	274.40798	87.55318	159.14430	7.89211	0.1801122	0.27742332	2.3283096	20	1 6.9	20.2
165171 2000 <i>QD</i> ₁₁₉	16.4	X	9.54208	325.33042	320.50062	5.18717	0.1617157	0.29402198	2.2398358	20	8 26.2	18.2
165172 2000 <i>QJ</i> ₁₂₄	15.3	X	227.87971	152.34487	314.40953	21.98930	0.2248076	0.29810222	2.2193505	20	8 26.4	18.7
165173 2000 <i>QJ</i> ₁₄₀	16.9	X	211.81938	155.63676	165.65662	5.75887	0.2450471	0.27621910	2.3350718	20	2 11.1	20.8
165174 2000 <i>QF</i> ₁₅₂	16.7	X	247.39965	278.72636	109.95887	6.39443	0.1698006	0.28825784	2.2695964	20	6 14.4	19.7
165175 2000 <i>QN</i> ₁₅₃	16.7	X	289.46080	156.88390	202.25530	4.30536	0.1673149	0.29255761	2.2473038	20	6 30.4	18.9
165176 2000 <i>QU</i> ₁₅₄	16.5	X	295.68628	44.60902	251.34535	6.23528	0.1288644	0.28671359	2.2777385	20	4 10.2	19.4
165177 2000 <i>QT</i> ₁₅₉	16.9	X	193.95905	148.62064	228.42247	4.48058	0.2070289	0.28005153	2.3137197	20	4 4.4	20.7
165178 2000 <i>QO</i> ₁₆₄	16.8	X	14.01608	51.85567	243.54373	3.63833	0.1214969	0.29649021	2.2273876	20	9 12.5	18.9
165179 2000 <i>QK</i> ₁₆₆	16.4	X	215.50498	97.56899	207.44453	6.59353	0.1361532	0.27545361	2.3393959	20	1 24.6	20.0
165180 2000 <i>QB</i> ₁₇₀	16.5	X	52.55197	47.44046	212.43503	4.28373	0.1809505	0.29766272	2.2215346	20	10 2.1	19.1
165181 2000 <i>QV</i> ₁₇₀	16.4	X	227.22412	188.15475	257.41311	4.09205	0.0944398	0.29311907	2.2444331	20	8 17.4	19.4
165182 2000 <i>QV</i> ₁₇₂	16.5	X	31.89458	62.51900	221.76351	3.58214	0.1783790	0.29916035	2.2141143	20	10 7.9	18.9
165183 2000 <i>QN</i> ₁₈₆	16.5	X	243.22943	0.58576	21.06510	6.41055	0.2404733	0.28745557	2.2738173	20	5 21.5	19.9
165184 2000 <i>QK</i> ₂₀₈	16.3	X	320.54398	295.20151	8.07080	5.99787	0.1401825	0.28841507	2.2687715	20	6 2.5	18.4
165185 2000 <i>QB</i> ₂₁₀	16.7	X	307.89919	101.80649	181.64218	4.28019	0.2377169	0.28722985	2.2750084	20	3 25.4	19.1
165186 2000												

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>
165201 2000 RW ₅₇	16.8	X	122.27234	166.50241	274.51318	2.38847	0.2354628	0.27400009	2.3476620	20	4 24.5	20.3
165202 2000 RV ₆₆	16.2	X	201.77775	307.03913	113.07529	4.73756	0.1947089	0.28240670	2.3008380	20	6 7.6	19.9
165203 2000 RX ₇₂	16.3	X	286.91620	0.31196	354.14877	6.57255	0.1440448	0.28918975	2.2647180	20	6 23.6	18.8
165204 2000 RO ₇₃	16.4	X	176.76667	29.01691	33.36447	6.95051	0.2235176	0.28041562	2.3117166	20	5 17.8	20.3
165205 2000 RL ₇₆	15.8	X	231.76801	110.89422	337.97659	7.13359	0.0967030	0.29391991	2.2403543	20	8 30.1	18.3
165206 2000 RU ₈₅	17.0	X	242.50546	231.78747	170.42117	6.11635	0.1661216	0.28765185	2.2727828	20	6 27.4	20.2
165207 2000 RR ₉₅	16.5	X	9.07350	214.18400	79.59506	3.71887	0.2155408	0.29453956	2.2372111	20	9 20.7	18.1
165208 2000 RB ₉₆	16.7	X	244.93740	1.73163	355.9105	7.40960	0.1774287	0.28370308	2.2938236	20	4 25.9	20.2
165209 2000 RW ₁₀₀	16.5	X	309.00904	117.86895	207.93370	22.40307	0.1990018	0.28939080	2.2636689	20	6 6.7	19.1
165210 2000 SB ₄	16.3	X	199.62332	266.14836	126.01131	7.05519	0.1162639	0.28165152	2.3049490	20	5 4.4	19.7
165211 2000 SP ₇	16.3	X	160.67553	116.05466	250.09066	5.23763	0.1440957	0.27214068	2.3583435	20	2 16.9	19.9
165212 2000 SX ₉	16.4	X	281.29079	144.57602	202.05612	22.34348	0.1948717	0.28761877	2.2729571	20	5 25.6	19.5
165213 2000 SJ ₁₂	16.6	X	356.16380	289.19168	30.08523	3.14384	0.2553232	0.29825087	2.2186131	20	10 10.9	17.7
165214 2000 SR ₂₉	16.7	X	132.86122	78.66888	339.25587	4.63820	0.1363372	0.27576237	2.3376494	20	3 24.9	19.8
165215 2000 SX ₃₁	16.3	X	13.80230	230.35137	354.14916	6.33102	0.0919940	0.28474650	2.2882165	20	5 14.6	18.5
165216 2000 SN ₃₃	16.9	X	146.01364	184.36089	226.87472	2.63045	0.1617666	0.27687167	2.3314013	20	4 2.5	20.2
165217 2000 SX ₃₇	16.5	X	197.55939	335.79911	64.61562	4.13295	0.1769781	0.28144576	2.3060723	20	5 9.4	20.2
165218 2000 SV ₃₇	16.3	X	197.18340	24.54255	51.33109	6.81452	0.1431380	0.28524970	2.2855247	20	6 25.9	19.7
165219 2000 SQ ₃₉	16.4	X	287.61259	228.16211	108.34836	4.98897	0.1797135	0.28722937	2.2750109	20	5 22.9	18.9
165220 2000 SZ ₄₀	16.9	X	189.23186	49.34448	7.63996	3.21987	0.1616461	0.28250652	2.3002961	20	5 22.3	20.4
165221 2000 SP ₄₄	15.6	X	277.90195	284.68384	7.60667	24.87672	0.2604732	0.27994594	2.3143015	20	3 8.4	19.3
165222 2000 SA ₄₅	16.0	X	359.32497	1.17826	254.60070	11.64859	0.3125748	0.28830706	2.2693381	20	6 12.3	15.9
165223 2000 SP ₄₈	16.5	X	255.23377	160.90705	232.15679	5.53639	0.1838203	0.28955616	2.2628070	20	6 27.5	19.5
165224 2000 SE ₅₀	16.6	X	295.44582	52.73627	226.09654	4.61974	0.1592576	0.28291379	2.2980879	20	3 12.6	19.4
165225 2000 SL ₅₇	16.6	X	316.24993	284.73870	347.35919	5.52319	0.1298563	0.28393355	2.2925821	20	4 7.8	19.1
165226 2000 SE ₅₉	16.9	X	125.15675	230.52640	194.18832	5.25848	0.2217984	0.27366504	2.3495778	20	4 5.7	20.3
165227 2000 SP ₆₂	16.7	X	186.73021	145.29912	110.14868	1.41268	0.2503693	0.27572381	2.3378674	20	3 4.6	20.6
165228 2000 SY ₆₉	16.9	X	253.09469	200.19484	284.13590	4.60761	0.1864474	0.28703575	2.2760339	20	6 12.8	20.0
165229 2000 SM ₇₉	16.7	X	296.65079	200.03111	96.20280	2.69732	0.2616489	0.28546758	2.2843616	20	3 25.9	19.5
165230 2000 SH ₈₉	16.3	X	148.93017	50.47884	45.48358	7.63620	0.0690062	0.28164551	2.3049817	20	5 28.6	19.4
165231 2000 SW ₉₄	16.8	X	235.84383	166.15928	233.91986	6.13379	0.2372906	0.28652190	2.2787543	20	6 9.8	20.4
165232 2000 SH ₁₀₂	16.8	X	195.11129	132.05839	268.91718	0.97382	0.1008965	0.28150131	2.3057688	20	5 8.4	20.1
165233 2000 SP ₁₀₂	14.4	X	30.51708	112.73983	200.53487	9.47073	0.0741967	0.14802983	3.5391846	20	10 1.2	19.1
165234 2000 SP ₁₀₈	16.4	X	255.29160	213.52983	188.94245	6.74280	0.1608467	0.28883728	2.2665600	20	7 13.7	19.3
165235 2000 SC ₁₁₀	16.9	X	241.52930	131.93526	226.80098	1.58461	0.1597670	0.28268866	2.2993079	20	4 28.2	20.3
165236 2000 SQ ₁₁₃	16.2	X	273.92763	343.68234	27.60706	7.04243	0.1208024	0.28811970	2.2703218	20	7 3.2	18.9
165237 2000 SQ ₁₁₅	16.5	X	201.72042	298.52630	25.99810	7.42440	0.1254988	0.27273903	2.3548931	20	2 9.8	20.2
165238 2000 SS ₁₁₆	16.2	X	275.76406	296.78602	37.34205	7.29272	0.1448128	0.28438450	2.2901579	20	5 6.6	19.0
165239 2000 SA ₁₁₉	16.8	X	157.56165	198.70714	168.69692	2.39554	0.2013572	0.27148549	2.3621364	20	2 22.2	20.3
165240 2000 SB ₁₂₀	16.1	X	228.24034	349.91556	32.03623	8.51741	0.0744652	0.28239246	2.3009154	20	5 21.5	19.1
165241 2000 SO ₁₃₃	15.7	X	309.06672	66.71123	245.67436	7.27767	0.1851484	0.28849960	2.2683283	20	5 19.2	17.9
165242 2000 SS ₁₄₀	16.1	X	298.43029	67.64173	219.08625	5.29871	0.1642500	0.28257184	2.2999416	20	3 27.5	18.9
165243 2000 ST ₁₄₇	16.8	X	232.55540	327.70484	10.33491	2.96128	0.1756232	0.27902587	2.3193862	20	3 22.6	20.1
165244 2000 SG ₁₄₈	16.7	X	202.44403	98.37719	274.52776	1.57909	0.2176478	0.27850031	2.3223032	20	4 6.7	20.6
165245 2000 SN ₁₄₈	17.0	X	214.23523	122.22454	213.74343	4.86925	0.1907812	0.27628552	2.3346976	20	3 1.3	20.9
165246 2000 SW ₁₄₈	16.1	X	251.29944	358.96226	10.85274	7.01627	0.1257978	0.28445513	2.2897788	20	5 27.1	19.2
165247 2000 SC ₁₅₁	16.5	X	199.50494	6.37381	21.03238	7.00897	0.1232646	0.27905967	2.3191989	20	4 23.9	19.8
165248 2000 SD ₁₅₂	16.9	X	186.82128	194.68304	171.78923	2.41309	0.2232243	0.27548321	2.3392284	20	3 18.2	20.8
165249 2000 SD ₁₅₄	16.5	X	194.87065	181.63965	196.02243	6.34614	0.1154611	0.27706902	2.3302941	20	4 7.4	19.9
165250 2000 SD ₁₅₈	16.6	X	150.65521	352.99508	50.45560	5.63413	0.1319146	0.27428128	2.3460573	20	3 28.9	20.0
165251 2000 SA ₁₇₆	16.3	X	223.00180	20.17186	332.66830	6.59945	0.1537625	0.27858019	2.3218593	20	3 30.8	20.0
165252 2000 ST ₁₈₂	16.7	X	218.09746	257.05069	176.47222	2.06674	0.1408943	0.28762006	2.2729503	20	7 15.5	19.9
165253 2000 ST ₁₉₃	17.6	X	297.15308	125.28913	175.11154	3.31842	0.2324061	0.28680856	2.2727357	20	4 4.8	20.2
165254 2000 SC ₂₀₅	17.2	X	237.85459	218.34920	187.65239	4.94663	0.1101120	0.28693026	2.2765917	20	7 3.9	20.2
165255 2000 SN ₂₀₆	17.2	X	252.42769	199.59095	179.23149	3.13040	0.2279996	0.28561658	2.2835671	20	5 30.4	20.6
165256 2000 SQ ₂₀₆	16.1	X	97.89716	296.25417	204.26677	4.73162	0.0575858	0.27949578	2.3167858	20	5 24.6	18.8
165257 2000 SY ₂₀₆	16.1	X	206.41344	279.16710	28.84013	7.03079	0.1166664	0.27035443	2.3687200	20	1 24.0	19.7
165258 2000 SO ₂₀₈	16.7	X	238.98990	270.83284	18.22383	2.74946	0.1319235	0.27581918	2.3373284	20	1 30.3	20.2
165259 2000 SM ₂₁₈	16.3	X	242.31731	193.02018	135.32153	8.45023	0.1437680	0.27859970	2.3217509	20	3 24.7	19.7
165260 2000 SH ₂₂₀	16.3	X	207.92993	259.32817	107.17803	7.54217	0.1480788	0.27765658	2.3270055	20	4 9.5	20.0
165261 2000 SA ₂₂₆	16.4	X	94.24456	321.61358	145.23416	8.05581	0.2306054	0.27063437	2.3670863	20	5 1.7	19.6
165262 2000 SD ₂₂₈	17.3	X	271.18452	176.86839	204.64097	3.92290	0.1587228	0.28871046	2.2672237	20	7 6.4	20.0
165263 2000 SN ₂₂₈	16.9	X	158.38370	184.57432	206.10965	1.86766	0.1538797	0.27395602	2.3479138	20	3 19.4	20.4
165264 2000 SH ₂₃₆	16.8	X	68.75679	256.34918	180.54929	2.71946	0.1722466	0.26677421	2.3898657	20	1 25.9	18.9
165265 2000 SW ₂₃₆	16.1	X	113.12532	100.60618	27.99994	7.77355	0.1421570	0.27902972	2.3193649	20	6 6.9	19.4
165266 2000 SY ₂₄₀	15.3	X	311.62380	43.57736	226.31977	22.92831	0.1788736	0.28333816	2.2957927	20	3 14.5	18.5
165267 2000 SO ₂₄₃	16.2	X	211.31803	50.25569	41.97001	5.39458	0.0972948	0.29150921	2.2526888	20	8 10.4	19.2
165268 2000 ST ₂₅₀	16.7	X	165.17890	323.95818	99.70867	3.77503	0.1176400	0.27983438	2.3149165	20	5 8.1	20.1
165269 2000 SE ₂₅₁	17.2	X	237.33808	213.40739	95.83883	4.46106	0.2609478	0.27864826	2.3214811	20	2 17.4	21.2
165270 2000 SJ ₂₅₅	16.4	X	231.36459	198.48993	158.56605	5.08205	0.0664971	0.28092359	2.3089290	20	4 24.9	19.4
165271 2000 SQ ₂₅₉	16.0	X	283.25534	68.75948	230.31948	3.93011	0.2052944	0.28147525	2.3059112	20	3 18.9	19.2
165272 2000 SP ₂₆₄	16.9	X	233.87475	219.03866	80.49934	3.18952	0.2274658	0.27660362	2.3329073	20	2 3.9	20.7
165273 2000 SM ₂₆₉	16.4	X	246.09419	255.19412	91.90724	5.21587	0.15					

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>
165281 2000 SS ₃₂₆	16.6	X	192.00490	103.76488	18.97714	4.36676	0.1722914	0.28924800	2.2644139	20	8 23.6	20.0
165282 2000 SW ₃₂₆	16.9	X	213.25741	257.13917	32.01617	2.76421	0.2075296	0.27132181	2.3630863	20	1 6.4	20.8
165283 2000 ST ₃₂₇	16.1	X	136.62600	93.62425	252.30288	6.29607	0.1197290	0.26543699	2.3978854	20	—	—
165284 2000 ST ₃₄₁	16.1	X	263.32223	73.03130	151.82137	6.56009	0.0518020	0.26964967	2.3728454	20	—	—
165285 2000 SX ₃₄₁	17.4	X	205.18340	97.23208	191.17052	0.87745	0.1824357	0.27113078	2.3641961	20	—	—
165286 2000 SS ₃₄₃	16.3	X	294.72110	298.65743	268.49160	3.62268	0.1591118	0.27236839	2.3570289	20	—	—
165287 2000 SK ₃₅₃	16.6	X	157.75762	310.37410	62.46970	6.62962	0.0898121	0.27088915	2.3656018	20	2 23.4	19.9
165288 2000 SA ₃₅₅	16.5	X	190.41716	303.12119	80.92149	7.78007	0.1341647	0.27875614	2.3208821	20	4 14.8	20.0
165289 2000 SA ₃₅₆	16.3	X	147.84631	273.28628	141.07270	10.91260	0.1756779	0.27562317	2.3384364	20	4 14.8	20.0
165290 2000 SV ₃₆₁	16.8	X	186.57330	336.85999	84.29935	3.63688	0.2308143	0.28187086	2.3037531	20	5 25.7	20.6
165291 2000 SB ₃₆₅	17.4	X	260.67530	313.72660	20.20975	5.97640	0.1756654	0.28441693	2.2899838	20	4 13.9	20.5
165292 2000 SZ ₃₆₇	17.3	X	234.62212	204.41741	165.70001	5.70791	0.1834857	0.28458199	2.2890983	20	5 6.0	20.8
165293 2000 TU ₈	16.4	X	97.77350	120.25614	2.60552	2.81327	0.1789985	0.27671312	2.3322918	20	5 16.5	19.4
165294 2000 TR ₁₅	17.2	X	172.77903	248.49073	180.26177	3.45983	0.1579384	0.27971087	2.3155979	20	5 23.4	20.7
165295 2000 TR ₁₅	16.7	X	103.19666	260.50078	217.35471	1.30908	0.1496333	0.27568869	2.3380659	20	5 13.1	19.6
165296 2000 TC ₂₃	16.6	X	110.98056	286.76331	196.54203	4.48377	0.1067478	0.27991246	2.3144860	20	5 25.2	19.6
165297 2000 TA ₃₆	16.4	X	137.31605	252.39999	222.52724	5.48973	0.1040817	0.28123127	2.3072446	20	6 13.9	19.6
165298 2000 TA ₄₀	16.5	X	263.82638	220.70785	103.12140	6.23155	0.1425402	0.28382401	2.2931720	20	4 11.6	19.6
165299 2000 TF ₄₇	16.6	X	207.20462	265.05018	142.76502	6.19696	0.0902161	0.28394241	2.2925344	20	6 2.6	19.8
165300 2000 TY ₆₆	16.8	X	286.10579	134.45528	155.62627	6.22650	0.1869397	0.28241160	2.3008114	20	3 15.3	19.7
165301 2000 US ₃	16.5	X	170.17339	354.51853	47.34828	4.68905	0.0380417	0.27639740	2.3340675	20	4 10.4	19.6
165302 2000 UK ₁₀	15.8	X	299.46686	346.92417	52.26110	6.19248	0.2546659	0.29234983	2.2483685	20	9 16.6	17.2
165303 2000 UO ₂₀	16.7	X	197.40242	267.70693	67.76090	3.51833	0.1870996	0.27318874	2.3523080	20	2 18.9	20.5
165304 2000 UV ₂₀	17.0	X	173.10423	154.95121	182.08941	2.35239	0.1964679	0.27000907	2.3707394	20	1 29.4	20.8
165305 2000 UO ₂₂	16.7	X	197.77197	260.15874	99.17330	3.32470	0.2369690	0.27590359	2.3368517	20	3 19.8	20.7
165306 2000 US ₂₃	14.5	X	159.80406	234.86633	189.16319	9.19916	0.2687805	0.12444327	3.9733342	20	5 12.3	21.2
165307 2000 UO ₂₅	16.7	X	166.02076	268.89454	132.45152	3.47266	0.1710550	0.27504517	2.3417114	20	4 12.6	20.3
165308 2000 UY ₂₆	16.4	X	189.11089	344.08911	101.29084	6.67904	0.1272520	0.28175724	2.3043724	20	6 30.9	19.5
165309 2000 UU ₂₈	16.7	X	179.08423	207.28706	127.13062	5.28910	0.2345075	0.27141878	2.3625234	20	2 2.9	20.5
165310 2000 UP ₃₆	16.8	X	107.57954	356.65929	93.75874	1.74259	0.1593859	0.27200844	2.3591078	20	4 12.9	19.7
165311 2000 UE ₄₆	16.8	X	179.32054	321.40305	19.60474	3.26722	0.2225702	0.27053311	2.3676769	20	2 11.6	20.6
165312 2000 UH ₅₁	17.0	X	169.35447	287.02017	67.21154	4.02742	0.2680339	0.27121878	2.3636847	20	2 22.4	21.0
165313 2000 US ₅₄	16.2	X	177.23448	260.60535	83.66125	6.03847	0.1815272	0.26973208	2.3723621	20	2 12.6	19.9
165314 2000 UC ₅₇	16.7	X	160.62294	65.30797	358.43050	2.69119	0.1466877	0.27708734	2.3301914	20	5 2.7	20.1
165315 2000 UT ₅₇	16.3	X	164.44737	211.65833	271.2024	4.92027	0.1707356	0.28451319	2.2894673	20	7 25.0	19.9
165316 2000 UU ₆₅	16.2	X	29.03556	341.12836	255.06272	4.26057	0.0753342	0.28453743	2.2893373	20	7 1.3	18.4
165317 2000 UT ₇₁	16.5	X	133.27598	107.92905	337.53892	2.37717	0.1510265	0.27465288	2.3439406	20	5 3.2	19.8
165318 2000 UH ₇₂	16.4	X	35.57781	130.41658	320.18497	1.76438	0.1812079	0.26114228	2.4241040	20	—	—
165319 2000 UJ ₇₂	16.0	X	300.51436	85.63851	249.75092	3.92837	0.2327478	0.28718541	2.2752431	20	5 31.3	17.9
165320 2000 UO ₇₂	16.3	X	147.66797	54.63396	27.20582	7.47331	0.1329259	0.27650308	2.3334727	20	5 11.9	19.6
165321 2000 UC ₇₄	16.9	X	167.25351	232.38675	230.73032	1.95836	0.1759465	0.28167116	2.3048418	20	7 2.0	20.4
165322 2000 UN ₇₇	16.7	X	182.12668	269.18188	88.04915	3.41118	0.2112259	0.27305561	2.3530725	20	3 4.4	20.5
165323 2000 UD ₇₈	15.9	X	31.95527	263.78055	237.36197	9.55604	0.1893403	0.26592555	2.3949475	20	2 11.7	18.0
165324 2000 UK ₈₀	16.6	X	96.14753	222.35862	236.17297	5.53778	0.0983030	0.27125591	2.3634690	20	3 27.2	19.5
165325 2000 UK ₈₇	16.6	X	152.83813	15.45560	68.10755	2.89716	0.1933958	0.27755366	2.3275807	20	5 24.5	20.2
165326 2000 UB ₉₁	16.6	X	154.63141	317.89175	68.18181	7.48247	0.1398711	0.27281806	2.3544382	20	3 13.3	20.1
165327 2000 UQ ₉₁	17.2	X	235.36956	2.51298	350.58592	2.94562	0.1565988	0.28032670	2.3122054	20	4 13.9	20.5
165328 2000 UY ₉₂	16.1	X	284.35904	24.74206	259.72169	5.48816	0.1737843	0.27890418	2.3200608	20	3 3.8	19.3
165329 2000 UO ₉₆	16.7	X	129.81171	42.86978	8.32961	5.04155	0.1299754	0.27073765	2.3664842	20	3 14.3	19.7
165330 2000 UM ₁₀₅	16.2	X	271.18023	216.21135	104.68444	7.19649	0.1518994	0.28188104	2.3036976	20	4 15.8	19.3
165331 2000 UX ₁₀₆	16.6	X	191.57204	281.24109	107.49219	6.74300	0.1050446	0.27737230	2.3285951	20	4 21.8	20.0
165332 2000 VS	16.8	X	53.12398	343.38093	200.92770	2.00405	0.1071920	0.27717177	2.3297182	20	5 28.7	19.2
165333 2000 VT ₅	16.7	X	141.64527	199.06269	237.10884	3.06609	0.1532478	0.27545972	2.3393614	20	4 30.6	20.2
165334 2000 VX ₆	16.6	X	124.18015	296.49007	188.62713	3.06682	0.1256345	0.27887422	2.3202270	20	6 14.6	19.8
165335 2000 VZ ₁₁	16.1	X	266.37585	214.50516	103.91435	1.96198	0.2363742	0.28076527	2.3097969	20	3 25.4	19.5
165336 2000 VS ₁₅	16.3	X	287.68270	248.54525	93.91271	4.18852	0.1820765	0.28402206	2.2921059	20	5 16.3	18.9
165337 2000 VX ₁₆	16.5	X	220.25309	174.26001	182.81812	6.24987	0.1507834	0.27812628	2.3243848	20	4 19.0	20.0
165338 2000 VC ₁₇	16.6	X	228.62824	211.35023	136.96077	3.75676	0.1836902	0.27741996	2.3283285	20	4 2.0	20.2
165339 2000 VA ₁₈	16.3	X	44.10356	43.19838	74.73309	7.27163	0.0718734	0.26583353	2.3955002	20	2 4.4	18.9
165340 2000 VC ₂₄	16.5	X	100.56374	233.13777	210.82831	0.38497	0.1605511	0.26954774	2.3734436	20	3 25.4	19.3
165341 2000 VN ₃₀	15.8	X	197.32647	315.44138	76.51641	11.10013	0.0401990	0.27599383	2.3363423	20	5 3.8	18.9
165342 2000 VA ₃₁	16.6	X	123.62339	79.33600	339.96935	0.87234	0.1730058	0.26985733	2.3716280	20	3 22.3	19.6
165343 2000 VJ ₃₇	15.5	X	82.92167	25.61062	76.91578	11.72962	0.1920100	0.26587540	2.3952487	20	4 7.7	18.5
165344 2000 VB ₄₇	17.0	X	197.35787	38.06470	330.01829	4.51525	0.2517850	0.27547281	2.3392873	20	3 26.9	21.1
165345 2000 VF ₅₂	16.1	X	202.48259	63.96738	280.72441	5.64231	0.1283950	0.27329739	2.3516845	20	3 1.1	19.8
165346 2000 VH ₅₃	16.7	X	86.47161	157.78742	285.51780	4.91363	0.0897140	0.26797870	2.3826991	20	2 20.1	19.6
165347 Philplait	16.7	X	32.98259	96.00895	58.43958	3.06512	0.1374208	0.26838072	2.3803191	20	3 11.0	18.8
165348 2000 WO ₁₄	17.0	X	158.83926	28.87049	16.74461	2.39104	0.1808557	0.27302033	2.3532752	20	4 10.2	20.7
165349 2000 WL ₁₆	16.8	X	68.48150	86.96528	42.10929	3.48065	0.2075519	0.26832481	2.3806497	20	4 19.2	19.2
165350 2000 WW ₁₆	16.9	X	126.71210	18.70086	41.89386	1.97664	0.1714223	0.26990192	2.3713668	20	3 28.1	20.2
165351 2000 WY ₂₁	15.7	X	236.99144	295.47267	82.31387	10.26449	0.2461535	0.28298550	2.2976997	20	5 13.9	19.4
165352 2000 WQ ₂₆	17.3	X	87.64790	173.41740	290.83708	1.23419	0.1785223	0.26858409	2.3791173	20	4 7.0	20.1
165353 2000 WR ₄₈	15.5	X	101.73967	171.68412	252.16276	7.47092	0.2008759	0.26414956	2.4056704	20	3 2.3	18.6
165												

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>		
165361	2000	WZ ₈₇	15.2	X	48.94533	160.51881	307.93857	8.01332	0.1836082	0.26024842	2.4296515	20	2 5.0	17.1
165362	2000	WY ₉₀	16.6	X	154.34310	59.25646	44.49117	3.35898	0.2078580	0.27715354	2.3298203	20	6 21.7	20.3
165363	2000	WH ₉₁	16.3	X	218.14284	299.85869	67.18935	7.31043	0.1120546	0.27628682	2.3346902	20	4 20.7	19.8
165364	2000	WM ₉₆	16.8	X	130.42990	44.25076	71.80780	1.55972	0.1561598	0.27490798	2.3424904	20	6 11.8	20.1
165365	2000	WA ₁₀₂	16.2	X	254.13714	198.49024	155.35228	8.91520	0.2534374	0.28276617	2.2988876	20	4 28.7	19.9
165366	2000	WF ₁₀₄	16.7	X	84.71173	265.55594	191.16662	4.14209	0.1935684	0.26743203	2.3859450	20	3 26.1	19.3
165367	2000	WY ₁₀₄	16.7	X	72.78861	220.06338	44.88668	6.12236	0.0333907	0.29639009	2.2278893	20	10 16.5	19.4
165368	2000	WH ₁₀₅	17.3	X	48.98643	257.03712	178.46891	1.25483	0.1670472	0.25818907	2.4425539	20	—	—
165369	2000	WJ ₁₀₆	15.6	X	158.00927	44.63277	71.92588	24.47910	0.2119222	0.28187838	2.3037121	20	7 11.4	19.7
165370	2000	WV ₁₁₀	16.2	X	352.48081	173.88612	327.02914	3.99684	0.1551831	0.25930169	2.4355618	20	—	—
165371	2000	WZ ₁₁₀	16.4	X	85.99805	131.73088	303.68661	5.30242	0.1081651	0.26547476	2.3976579	20	2 12.7	19.0
165372	2000	WT ₁₁₁	16.5	X	92.07661	131.33154	303.39461	5.32517	0.1530624	0.26614978	2.3936022	20	2 27.0	19.3
165373	2000	WV ₁₁₁	16.1	X	196.22373	2.58580	43.14024	8.65765	0.1556187	0.27779055	2.3262573	20	5 14.4	19.6
165374	2000	WB ₁₁₄	16.4	X	29.49345	126.88705	1.44163	2.39820	0.1342865	0.26291121	2.4132185	20	1 24.3	18.5
165375	2000	WL ₁₁₉	16.8	X	131.49479	111.87631	276.06411	6.12669	0.1815824	0.26645115	2.3917970	20	2 18.3	20.3
165376	2000	WD ₁₂₀	16.9	X	168.37278	103.72750	323.34028	2.15368	0.1842328	0.27548869	2.3391974	20	5 16.2	20.6
165377	2000	WR ₁₃₆	16.3	X	205.14642	71.95159	258.10421	5.50248	0.1308661	0.27126959	2.3633895	20	2 14.8	20.0
165378	2000	WN ₁₃₉	16.5	X	78.17699	29.14465	107.77606	3.20802	0.1332746	0.27218596	2.3580820	20	5 4.1	19.1
165379	2000	WA ₁₄₄	16.2	X	57.84813	26.12019	99.17041	4.73987	0.1199875	0.26714526	2.3876522	20	3 13.9	18.6
165380	2000	WF ₁₄₆	15.7	X	212.51974	244.48386	95.41371	24.30169	0.2392873	0.27553316	2.3389457	20	3 16.7	20.2
165381	2000	WD ₁₅₆	16.4	X	214.43490	5.20851	23.30865	7.59055	0.1078348	0.27842173	2.3227401	20	5 11.5	19.6
165382	2000	WN ₁₅₆	16.6	X	216.68229	83.65605	294.33760	6.12059	0.1285194	0.27825217	2.3236837	20	4 27.6	20.2
165383	2000	WA ₁₇₃	15.5	X	329.01727	261.65503	99.05628	22.52395	0.2653566	0.28942578	2.2634865	20	10 23.2	17.5
165384	2000	WU ₁₇₅	17.3	X	71.33776	197.39707	237.51786	0.66556	0.1519873	0.26329870	2.4108503	20	1 26.4	19.6
165385	2000	WY ₁₇₆	16.3	X	120.62816	351.84362	106.39164	3.97365	0.0575290	0.27419271	2.3465624	20	4 26.9	19.3
165386	2000	WC ₁₇₈	16.4	X	253.76397	10.83989	79.73491	6.79000	0.1408187	0.28908791	2.2652498	20	9 29.4	19.0
165387	2000	WF ₁₈₇	16.2	X	107.43890	341.49445	107.73470	5.87030	0.1072900	0.27143996	2.3624005	20	4 5.9	19.2
165388	2000	WV ₁₈₇	16.6	X	218.43632	71.68676	297.89609	6.22996	0.1205933	0.27942247	2.3171910	20	4 18.1	20.2
165389	2000	WC ₁₈₈	16.6	X	212.85980	124.83926	268.41962	6.69589	0.119014	0.28100186	2.3085002	20	5 16.6	19.9
165390	2000	XK ₂	16.2	X	117.48879	116.29044	248.86843	5.15578	0.1217186	0.26102636	2.4248217	20	—	—
165391	2000	XB ₄	16.2	X	174.72835	100.86612	289.01576	11.25857	0.0986817	0.27359987	2.3499509	20	3 26.0	19.9
165392	2000	XT ₅	16.2	X	169.99794	109.74606	292.21732	8.73466	0.1787329	0.27418077	2.3466305	20	4 11.3	20.1
165393	2000	XY ₁₁	16.1	X	173.45395	7.44503	22.03063	7.61959	0.1759144	0.27300401	2.3533690	20	4 3.7	19.7
165394	2000	XC ₁₅	15.0	X	127.96814	97.53114	68.68833	22.19847	0.2952031	0.27624482	2.3349269	20	9 2.5	19.6
165395	2000	XN ₁₆	16.1	X	42.78682	114.94586	342.35901	6.91084	0.0937904	0.26254119	2.4154854	20	1 4.0	18.6
165396	2000	XX ₁₆	15.7	X	23.07445	61.00724	336.22240	5.39381	0.1251420	0.25175460	2.4839972	20	—	—
165397	2000	XN ₁₈	16.8	X	188.01276	89.81894	15.15652	8.39376	0.2611428	0.28185878	2.3038189	20	7 23.8	20.9
165398	2000	XE ₂₃	16.5	X	208.90100	54.76339	336.35334	6.11701	0.1494519	0.27772764	2.3263572	20	5 6.1	20.1
165399	2000	XK ₂₈	16.6	X	89.41589	332.96721	57.05066	14.59984	0.2408947	0.26042439	2.4285568	20	1 10.1	19.3
165400	2000	XK ₃₂	16.4	X	127.09217	48.57368	1.36664	6.04717	0.0994038	0.26654563	2.3912318	20	3 5.9	19.4
165401	2000	XA ₃₃	16.3	X	164.61374	71.31457	15.30114	5.46559	0.1993938	0.27567334	2.3381527	20	6 7.5	20.2
165402	2000	XX ₃₄	16.1	X	79.14050	77.29476	23.62656	11.14748	0.2387546	0.26415394	2.4056438	20	4 2.5	18.6
165403	2000	XM ₄₃	15.8	X	88.99740	332.25405	24.74984	16.33632	0.0481847	0.25424156	2.4677719	20	—	—
165404	2000	XU ₄₄	14.8	X	47.54563	175.75745	308.81770	24.63977	0.2329701	0.26449214	2.4035927	20	2 21.3	16.9
165405	2000	XB ₄₈	16.5	X	163.16087	56.49904	344.28653	6.69595	0.1163737	0.27359530	2.3499771	20	4 2.3	19.9
165406	2000	XT ₅₃	17.1	X	101.64669	251.01231	196.14151	0.78040	0.1498237	0.26826172	2.3810229	20	3 29.7	20.1
165407	2000	YA ₁₀	15.7	X	11.39919	184.06859	336.23912	4.73038	0.1458691	0.26187855	2.4195583	20	2 5.0	17.8
165408	2000	YV ₁₀	16.4	X	130.79990	95.88936	323.34943	3.99671	0.1785412	0.26838363	2.3803019	20	3 29.3	19.9
165409	2000	YF ₁₅	16.7	X	197.95813	271.77800	63.12831	3.20596	0.2246455	0.27034928	2.3687500	20	2 19.4	20.8
165410	2000	YN ₁₉	16.6	X	184.84711	73.19922	316.65395	2.10784	0.1762940	0.27407028	2.3472612	20	4 12.9	20.2
165411	2000	YJ ₂₂	16.3	X	174.98979	42.45787	269.60785	4.63792	0.1411985	0.25748052	2.4470328	20	—	—
165412	2000	YK ₂₄	16.2	X	18.03666	75.92854	106.24270	3.49218	0.1318479	0.26514363	2.3996538	20	3 24.1	18.3
165413	2000	YD ₃₀	15.6	X	20.74650	53.46473	71.21795	7.42744	0.0963481	0.25737248	2.4477176	20	1 5.5	18.2
165414	2000	YV ₃₀	16.1	X	224.95714	182.27477	315.28653	11.44088	0.2117959	0.23669260	2.5882900	20	10 8.8	20.0
165415	2000	YK ₃₅	16.3	X	212.99779	279.46032	137.29571	1.56557	0.2382059	0.28051683	2.3111605	20	6 10.8	19.9
165416	2000	YF ₃₆	16.4	X	357.79750	354.04954	142.15421	2.55509	0.1305360	0.25740899	2.4474862	20	—	—
165417	2000	YK ₃₆	16.9	X	63.01684	265.28500	187.27637	1.30843	0.1785031	0.26204354	2.4185426	20	2 9.4	19.1
165418	2000	YH ₅₁	15.8	X	75.44148	133.93446	284.27810	6.33974	0.1475276	0.25890360	2.4380578	20	1 10.1	18.3
165419	2000	YF ₅₂	15.7	X	93.73774	124.91241	282.76214	4.15074	0.1042859	0.26011447	2.4304856	20	1 18.2	18.5
165420	2000	YH ₅₃	15.5	X	184.48793	97.50624	100.01242	11.42350	0.1418210	0.23943724	2.5684725	20	11 17.4	19.5
165421	2000	YL ₅₃	15.6	X	58.15413	177.27285	291.75658	10.26957	0.1074544	0.26222655	2.4174172	20	2 12.8	18.2
165422	2000	YQ ₅₃	16.1	X	149.70632	111.20779	291.43018	3.81165	0.1554226	0.26801818	2.3824651	20	3 24.9	19.6
165423	2000	YB ₅₄	16.4	X	40.46972	345.72416	98.14945	2.64627	0.1410611	0.25694680	2.4504203	20	—	—
165424	2000	YF ₅₉	16.6	X	112.78927	89.02361	321.90537	1.75702	0.1811947	0.26427244	2.4049246	20	2 29.0	19.8
165425	2000	YK ₆₀	15.7	X	58.66767	175.93167	282.64035	5.74365	0.0982878	0.26068601	2.4269317	20	1 31.4	18.4
165426	2000	YO ₆₀	16.3	X	73.48215	177.78578	281.78862	1.27846	0.1409688	0.26308272	2.4121696	20	3 3.6	18.7
165427	2000	YF ₆₂	15.9	X	55.83369	359.50102	129.30759	7.20406	0.0642017	0.26359675	2.4090326	20	3 9.3	18.6
165428	2000	YR ₆₂	16.0	X	171.88531	108.08823	293.54126	1.27268	0.2057167	0.27102008	2.3648398	20	4 17.5	19.9
165429	2000	YW ₆₆	17.0	X	132.80792	312.11628	55.00558	2.47118	0.1909905	0.26336405	2.4104514	20	1 29.1	20.4
165430	2000	YV ₆₉	16.5											

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>
165441 2000 YY ₉₅	16.2	X	199.47052	125.60336	258.12450	3.92223	0.2111274	0.27476473	2.3433045	20	4 17.5	20.1
165442 2000 YA ₉₉	17.0	X	17.86204	242.40840	217.83698	0.53506	0.1464392	0.25495194	2.4631858	20	—	—
165443 2000 YA ₁₀₂	16.3	X	102.15482	278.99754	155.85102	7.74091	0.2484030	0.26543518	2.3978963	20	3 30.7	19.5
165444 2000 YK ₁₀₄	15.3	X	257.93831	58.81951	75.58679	4.35976	0.2095699	0.23888596	2.5724225	20	11 10.8	18.3
165445 2000 YM ₁₀₆	16.0	X	57.63976	196.16423	287.10685	5.16771	0.1332847	0.26596163	2.3947309	20	3 6.7	18.4
165446 2000 YG ₁₀₈	16.6	X	129.26231	94.51757	344.73937	2.21537	0.1582882	0.26978326	2.3720621	20	4 21.6	19.8
165447 2000 YV ₁₀₈	16.8	X	121.61647	346.05101	57.42993	3.09565	0.2098777	0.26529803	2.3987226	20	3 6.3	20.1
165448 2000 YN ₁₁₁	15.8	X	311.77284	99.71850	68.79157	3.39588	0.1076114	0.25385562	2.4702725	20	—	—
165449 2000 YR ₁₁₁	16.4	X	14.29025	84.30496	16.22100	2.15148	0.1133678	0.25485952	2.4637812	20	—	—
165450 2000 YB ₁₁₄	17.1	X	59.46003	126.01626	339.64933	2.13546	0.1421671	0.26257629	2.4152702	20	2 17.9	19.4
165451 2000 YN ₁₁₅	15.1	X	233.27050	153.08231	39.25176	2.43480	0.0994860	0.24466032	2.5317862	20	—	—
165452 2000 YA ₁₁₆	16.2	X	58.33537	342.41794	103.17586	9.95411	0.2118726	0.25902648	2.4372866	20	1 26.6	18.1
165453 2000 YC ₁₁₈	15.9	X	211.91508	206.56083	327.17321	8.39507	0.0995549	0.23900099	2.5715970	20	11 15.5	19.7
165454 2000 YT ₁₁₉	16.0	X	11.78034	193.97767	288.52602	6.32761	0.0961711	0.25870273	2.4393196	20	—	—
165455 2000 YU ₁₁₉	16.6	X	152.19084	77.57543	350.68255	1.93685	0.1840228	0.27261217	2.3556236	20	5 2.7	20.1
165456 2000 YL ₁₂₅	14.8	X	38.04540	223.55727	354.35359	12.73304	0.1251158	0.22081679	2.7109072	20	6 24.1	18.3
165457 2000 YV ₁₂₇	16.9	X	180.49198	87.78790	294.28049	1.32709	0.2140558	0.27118541	2.3638786	20	3 31.5	20.9
165458 2000 YV ₁₂₉	16.1	X	227.43403	275.42560	77.67742	5.86793	0.2364531	0.27639493	2.3340814	20	4 5.8	20.0
165459 2000 YC ₁₃₁	16.8	X	121.59478	46.05276	50.19333	2.09176	0.1463998	0.26966033	2.3727829	20	5 5.3	20.0
165460 2000 YE ₁₃₄	17.0	X	67.47201	115.23322	350.96942	0.70237	0.1481895	0.26247969	2.4158627	20	3 4.8	19.3
165461 2000 YD ₁₃₇	15.5	X	126.13737	195.41629	238.54938	10.60533	0.2536735	0.26731155	2.3866619	20	4 20.3	19.4
165462 2000 AY ₂	16.4	X	93.87152	279.53979	91.39710	4.11161	0.1814918	0.25403073	2.4691371	20	—	—
165463 2001 AK ₁₁	15.8	X	175.08041	233.99580	274.05451	2.34926	0.0900534	0.23259417	2.6186060	20	9 4.1	19.7
165464 2001 AY ₁₉	16.3	X	147.48323	291.89148	100.73641	6.25168	0.3207268	0.26857421	2.3791745	20	3 27.8	20.5
165465 2001 AS ₂₀	16.2	X	42.61505	274.85156	197.79921	4.39989	0.1561337	0.26152921	2.42717125	20	1 25.7	18.3
165466 2001 AF ₂₈	15.4	X	231.20057	145.60584	343.67933	15.22224	0.0805347	0.23708990	2.5853976	20	10 11.2	19.1
165467 2001 AA ₂₉	16.3	X	158.69127	18.21172	22.82686	3.64725	0.1716509	0.27116948	2.3639712	20	4 4.1	19.8
165468 2001 AC ₂₉	16.6	X	150.38934	9.68212	53.15698	3.15231	0.2019391	0.27236834	2.3570292	20	4 26.3	20.3
165469 2001 AL ₃₂	15.8	X	336.63246	163.72041	352.20650	3.36597	0.1922822	0.25568649	2.4584659	20	—	—
165470 2001 AC ₃₅	15.5	X	338.33032	122.24891	2.43082	5.17318	0.1415465	0.25312300	2.4750367	20	—	—
165471 2001 AP ₃₅	16.2	X	19.94496	94.32955	40.43246	5.78091	0.1432345	0.25942097	2.4348151	20	1 16.2	18.5
165472 2001 AC ₃₆	16.2	X	78.39852	346.53699	50.55930	7.20324	0.1307656	0.25638199	2.4540178	20	—	—
165473 2001 AX ₃₇	16.7	X	159.88093	159.73244	330.56805	18.43433	0.0502509	0.37911206	1.8907074	20	8 11.6	18.5
165474 2001 AR ₃₉	16.4	X	109.22056	46.61646	325.42976	2.21278	0.2140148	0.26108678	2.4244476	20	1 10.2	19.3
165475 2001 AZ ₃₉	16.1	X	76.69452	145.64558	342.25565	4.24120	0.1571159	0.26643068	2.3919195	20	4 19.8	18.9
165476 2001 AQ ₄₀	16.6	X	48.23290	32.96118	83.15927	3.14747	0.1648480	0.26091608	2.4255049	20	2 15.5	18.6
165477 2001 AP ₄₄	16.0	X	336.03987	82.95955	99.25378	3.31295	0.1525654	0.25660993	2.4525644	20	1 10.9	19.0
165478 2001 AQ ₄₆	16.0	X	106.47584	84.21772	1.04915	22.34663	0.2523658	0.26688131	2.3892262	20	4 9.8	19.6
165479 2001 AK ₄₉	15.9	X	73.18006	154.65972	307.20587	7.44903	0.0700565	0.26399747	2.4065943	20	2 23.4	18.6
165480 2001 AJ ₅₀	16.6	X	130.67043	86.46823	116.96805	5.29762	0.1106198	0.26460475	2.4029106	20	3 1.1	19.9
165481 2001 AX ₅₀	16.7	X	126.47955	137.96292	286.91778	2.43036	0.1665653	0.26721880	2.3872141	20	3 31.1	20.2
165482 2001 BC	15.9	X	346.29892	107.28622	24.67723	4.77390	0.1603545	0.25251520	2.4790067	20	—	—
165483 2001 BZ ₁₂	16.3	X	118.63979	211.65507	211.91683	5.46677	0.1785563	0.26642043	2.3919809	20	3 22.0	19.5
165484 2001 BO ₁₉	16.2	X	204.56584	94.24420	51.02161	3.65480	0.0321926	0.23583841	2.5945359	20	10 12.6	19.6
165485 2001 BU ₁₉	17.1	X	84.27569	82.69668	28.18119	1.67574	0.1396474	0.26527285	2.3988744	20	4 6.1	19.8
165486 2001 BR ₂₀	16.2	X	232.19133	83.15100	62.01368	4.75442	0.1730889	0.23826092	2.5769194	20	10 27.9	19.9
165487 2001 BS ₂₀	16.5	X	90.14751	5.38385	86.40078	6.10690	0.1951577	0.26391430	2.4070999	20	3 31.6	19.5
165488 2001 BK ₂₂	16.2	X	121.08420	112.68115	114.89695	3.08563	0.1369445	0.26783856	2.3835301	20	3 24.6	19.3
165489 2001 BQ ₂₃	16.8	X	89.39883	286.59930	116.88819	2.92248	0.2036220	0.25962018	2.4335695	20	1 21.9	19.4
165490 2001 BQ ₂₈	16.5	X	104.11528	147.66851	304.41111	3.34610	0.1609768	0.26537122	2.3982815	20	4 8.8	19.7
165491 2001 BA ₃₁	15.9	X	52.00189	323.18120	123.98752	4.50411	0.0878740	0.25635104	2.4542153	20	1 5.5	18.4
165492 2001 BL ₃₁	16.1	X	98.51537	150.07553	133.08429	1.80560	0.1423249	0.26528957	2.3987736	20	4 14.7	19.1
165493 2001 BP ₃₂	15.7	X	96.55512	308.23448	152.06386	3.36710	0.1508196	0.26433801	2.4045269	20	4 11.8	18.6
165494 2001 BD ₄₂	16.1	X	88.34937	304.11976	166.07712	22.76675	0.3057183	0.26600243	2.3944861	20	5 11.9	19.9
165495 2001 BY ₄₇	16.0	X	88.43535	126.66242	331.37088	2.80835	0.1894724	0.26234151	2.4167109	20	4 1.3	18.7
165496 2001 BH ₄₉	16.6	X	120.72102	206.33932	251.94803	1.62924	0.1869974	0.26737925	2.3862590	20	5 11.5	19.9
165497 2001 BC ₅₃	16.4	X	225.42141	21.22315	109.97178	7.22784	0.1789440	0.28659946	2.2783431	20	10 11.5	19.5
165498 2001 BH ₅₃	16.1	X	173.63541	323.46188	57.17508	2.98971	0.2174516	0.26651799	2.3913971	20	3 26.4	20.0
165499 2001 BN ₅₃	16.5	X	34.11150	110.53397	43.05420	2.66511	0.1300991	0.26153385	2.4216839	20	3 12.2	18.6
165500 2001 BC ₅₇	15.4	X	165.34410	304.55631	262.68693	12.50436	0.2223741	0.23406524	2.6076228	20	11 1.5	20.0
165501 2001 BH ₆₅	15.8	X	227.25594	341.80234	166.87606	13.59836	0.1131654	0.23768251	2.5810984	20	11 6.0	19.5
165502 2001 BY ₆₇	15.0	X	235.67988	22.50351	142.63770	15.10892	0.0218010	0.23924921	2.5698181	20	12 19.8	18.6
165503 2001 BF ₆₉	15.9	X	173.18237	47.05830	46.73361	2.86016	0.1653808	0.27312968	2.3526471	20	6 25.3	19.6
165504 2001 BS ₇₂	16.1	X	36.34034	270.68630	219.27288	5.58120	0.0590500	0.25957583	2.4338467	20	2 4.9	18.9
165505 2001 BV ₇₆	15.8	X	212.85076	148.43575	330.36688	11.07259	0.1330929	0.23034382	2.6356334	20	9 3.5	19.8
165506 2001 BN ₇₉	16.8	X	31.01365	5.60467	139.35764	2.11533	0.1138476	0.26027642	2.4294773	20	2 20.8	19.3
165507 2001 CO ₁	15.4	X	15.87457	49.89887	80.35980	3.27402	0.1479849	0.25598930	2.4565268	20	—	—
165508 2001 CA ₃	16.1	X	286.90400	137.86748	345.05324	8.71543	0.1827672	0.24275681	2.5450038	20	12 20.5	18.6
165509 2001 CO ₄	16.0	X	65.11156	114.11744	357.35815	4.85292	0.1756886	0.26074663	2.4265556	20	3 13.1	18.1
165510 2001 CF ₅	15.7	X	212.69702	101.57059	43.16650	5.19746	0.1059212	0.23366325	2.6106127	20	10 12.8	19.4
165511 2001 CN ₆	16.5	X	91.55827	58.52314	6.69530	2.14840	0.2007084	0.26036412	2.4289317	20	2 24.3	19.2
165512 2001 CQ ₆	15.9	X	124.12898	90.66392	126.69761	4.33801	0.1120527	0.23056670	2.6339346	20	10 11.9	19.9
165513 2001 CT ₈	15.8	X	217.22864	94.43337	51.29531	4.57634	0.1164320	0.23462322	2.6034868	20	10 18.1	19.4
165514 2001 CA ₁₁	16.2	X	358.49									

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>
165521 2001 CC ₁₉	16.3	X	55.82131	352.48235	124.25527	3.01544	0.1575669	0.26037054	2.4288917	20	3 1.6	18.6
165522 2001 CD ₂₀	16.0	X	58.62579	35.26877	35.46482	6.80965	0.1246261	0.25494607	2.4632236	20	—	—
165523 2001 CF ₂₀	15.2	X	170.92073	156.63378	55.17999	11.60383	0.1099291	0.23628530	2.5912635	20	11 19.6	19.0
165524 2001 CM ₂₂	15.7	X	240.15220	153.39359	317.46160	18.08845	0.1924358	0.23637032	2.5906421	20	9 10.9	19.6
165525 2001 CK ₂₃	16.2	X	323.59442	64.90881	91.68296	0.02637	0.1546170	0.25220212	2.4810579	20	—	—
165526 2001 CQ ₂₃	16.7	X	11.49966	340.64505	149.74133	3.11471	0.1511704	0.25604659	2.4561603	20	—	—
165527 2001 CY ₂₃	16.0	X	26.69451	310.73887	146.39079	6.69619	0.1116032	0.25502221	2.4627333	20	—	—
165528 2001 CK ₂₈	16.4	X	218.96198	152.44809	336.26142	13.71043	0.0880664	0.23427463	2.6060688	20	9 25.6	20.3
165529 2001 CE ₃₃	15.2	X	216.85801	153.06107	70.02642	14.62859	0.1191225	0.24534324	2.5270858	20	—	—
165530 2001 CG ₃₃	16.2	X	130.92536	24.66632	52.58586	12.13650	0.1734598	0.26837780	2.3803363	20	4 25.5	19.7
165531 2001 CD ₃₇	12.7	X	254.30315	322.06838	142.72815	10.19918	0.0418646	0.08098271	5.2910415	20	9 29.7	19.7
165532 2001 CG ₄₀	15.9	X	49.07560	353.67158	77.27764	5.91711	0.0888613	0.25305301	2.4754931	20	—	—
165533 2001 CB ₄₇	16.7	X	98.48225	83.11879	329.24733	1.77938	0.2057683	0.26033207	2.4291310	20	2 16.9	19.6
165534 2001 CC ₄₇	15.7	X	116.68355	320.10738	319.01956	3.45087	0.1089657	0.23795307	2.5791416	20	12 10.9	19.6
165535 2001 DZ	16.4	X	354.19395	140.15944	358.32678	4.89491	0.0667133	0.25238098	2.4798855	20	—	—
165536 2001 DC ₆	16.0	X	191.98639	351.75333	70.54167	6.16934	0.2147253	0.27281509	2.3544553	20	5 31.7	19.7
165537 2001 DM ₉	15.6	X	212.17461	108.29369	93.56432	6.86531	0.0524653	0.24197300	2.5504967	20	12 31.3	18.9
165538 2001 DV ₉	16.5	X	112.83941	63.00000	10.08037	9.95715	0.2471003	0.26442980	2.4039704	20	4 6.4	19.9
165539 2001 DQ ₁₄	16.3	X	17.19259	19.03672	31.90759	2.88379	0.1643811	0.24665497	2.5181183	20	—	—
165540 2001 DV ₁₉	15.7	X	225.80403	57.91699	96.32452	8.56710	0.1373606	0.23588422	2.5942000	20	11 7.4	19.4
165541 2001 DS ₂₀	16.4	X	327.96975	133.75291	53.82332	4.61641	0.1536083	0.25394054	2.4697217	20	1 1.2	19.5
165542 2001 DY ₂₂	16.1	X	128.67582	31.34534	20.77791	2.80743	0.1836882	0.26386874	2.4073769	20	3 21.0	19.6
165543 2001 DK ₂₉	16.1	X	229.51461	143.26627	46.86380	3.74543	0.0625301	0.24144968	2.5541808	20	—	—
165544 2001 DE ₃₀	16.6	X	240.00903	138.07152	38.44933	2.08385	0.2037265	0.24032817	2.5621208	20	12 11.6	19.8
165545 2001 DE ₃₆	16.3	X	97.40141	267.71314	180.00489	1.87731	0.1942559	0.26400189	2.4065674	20	4 1.3	19.1
165546 2001 DL ₃₆	15.9	X	87.76123	82.85256	318.25024	9.78255	0.1974305	0.25677959	2.4514839	20	1 16.9	18.5
165547 2001 DM ₃₇	16.3	X	87.68047	281.66928	147.23503	1.51550	0.1726860	0.25984880	2.4321419	20	2 18.4	19.0
165548 2001 DO ₃₇	15.7	X	204.15791	61.36078	133.67026	4.68434	0.0728515	0.23964050	2.5670199	20	12 10.2	19.2
165549 2001 DM ₃₉	16.1	X	321.73530	320.93496	251.80966	2.96350	0.2474210	0.25664882	2.4523166	20	1 10.4	19.3
165550 2001 DH ₄₀	16.6	X	121.77666	209.28202	221.01473	2.34284	0.2206387	0.26600272	2.3944843	20	4 9.3	20.2
165551 2001 DZ ₄₀	12.5	X	318.21215	307.61025	125.80546	6.23676	0.0321300	0.08415988	5.1570258	20	11 7.5	19.2
165552 2001 DS ₄₂	15.8	X	134.10967	211.60690	335.23743	13.34373	0.1073953	0.22764762	2.6564030	20	9 9.1	19.8
165553 2001 DZ ₄₃	16.4	X	67.77713	133.18275	319.82859	2.17620	0.1505668	0.25868199	2.4394500	20	2 16.0	18.8
165554 2001 DA ₄₄	16.1	X	184.32186	79.30473	326.51526	5.21330	0.2742491	0.27103093	2.3647768	20	5 2.3	20.3
165555 2001 DD ₄₄	15.5	X	264.00217	156.86239	334.21256	12.73753	0.1130288	0.23938252	2.5688639	20	11 26.6	19.0
165556 2001 DO ₄₅	16.2	X	128.06528	153.92209	291.01596	1.30239	0.1849814	0.26642516	2.3919526	20	5 1.0	19.6
165557 2001 DR ₄₆	15.7	X	250.60547	347.30841	164.50912	14.67477	0.0424770	0.24048587	2.5610006	20	12 19.1	19.3
165558 2001 DN ₄₇	14.0	X	243.72486	61.31231	308.62252	7.97657	0.1737674	0.12428678	3.9766688	20	5 14.8	20.2
165559 2001 DL ₄₈	16.3	X	91.62383	61.30922	45.35953	5.19547	0.1516792	0.26526251	2.3989367	20	4 13.8	19.1
165560 2001 DJ ₅₁	15.3	X	142.57802	230.86637	25.32478	12.96088	0.1386465	0.23810938	2.5780127	20	12 13.9	19.6
165561 2001 DY ₅₂	16.6	X	125.22297	53.34236	19.89947	4.63349	0.2204432	0.26750290	2.3855236	20	4 16.6	20.1
165562 2001 DD ₅₇	16.6	X	45.54324	313.88228	138.50710	3.73504	0.0935334	0.25468861	2.4648833	20	1 2.5	19.1
165563 2001 DK ₅₇	16.4	X	359.04911	108.84222	128.42385	2.82562	0.1992057	0.21276272	2.7788964	20	5 10.4	19.0
165564 2001 DF ₆₂	16.7	X	35.85370	109.19259	343.03819	2.02153	0.1627259	0.25493692	2.4632825	20	—	—
165565 2001 DL ₆₆	16.0	X	271.82636	337.68348	187.09433	3.32593	0.1467539	0.24406544	2.5358984	20	—	—
165566 2001 DA ₈₁	15.8	X	281.04571	90.65271	48.86452	5.81634	0.1513911	0.24122925	2.5557365	20	—	—
165567 2001 DU ₈₂	17.3	X	55.45242	76.19600	3.30884	2.34781	0.2137122	0.25510705	2.4621872	20	1 11.3	19.2
165568 2001 DG ₈₃	16.7	X	51.92264	128.61340	141.51583	3.55557	0.0475025	0.22597868	2.6694660	20	9 14.9	20.2
165569 2001 DG ₉₁	13.0	X	266.39982	332.80036	136.15200	5.43003	0.0636048	0.08467260	5.1361867	20	10 14.7	19.8
165570 2001 DX ₉₁	16.1	X	92.23409	197.24270	348.72819	4.44099	0.0920756	0.21976287	2.7195675	20	7 23.3	19.8
165571 2001 DE ₉₂	15.8	X	262.24403	325.80402	167.40804	10.31397	0.1082292	0.23776159	2.5805261	20	12 2.1	19.1
165572 2001 DL ₉₇	16.1	X	343.64330	14.82558	70.23480	4.66478	0.0873896	0.24518996	2.5281388	20	—	—
165573 2001 DE ₁₀₂	15.8	X	333.79913	35.49938	51.24873	6.50341	0.1595030	0.24533989	2.5271088	20	—	—
165574 Deidre	15.8	X	208.20116	325.94834	156.28619	10.69685	0.1388982	0.23207718	2.6224935	20	9 5.5	19.7
165575 2001 DR ₁₀₇	16.3	X	309.47990	288.54217	159.55716	5.06193	0.0507138	0.23826069	2.5769211	20	12 16.9	19.6
165576 2001 DC ₁₀₈	16.1	X	275.48872	329.13548	152.46891	8.08559	0.0883609	0.24075533	2.5590893	20	12 9.4	19.2
165577 2001 EA	15.8	X	170.29147	300.01996	129.30093	7.24539	0.2785728	0.26963531	2.3729297	20	5 25.1	20.1
165578 2001 EZ ₂	16.5	X	0.38910	318.01620	113.67791	2.44329	0.0753201	0.24363156	2.5389083	20	—	—
165579 2001 EA ₄	17.0	X	27.12378	113.05045	23.99170	2.44616	0.1565053	0.25711079	2.4493782	20	2 2.9	19.0
165580 2001 ES ₉	15.5	X	209.93528	144.31519	7.35261	7.67872	0.1413065	0.23265439	2.6181542	20	10 12.2	19.4
165581 2001 ER ₁₄	15.1	X	256.00537	1.26993	125.47789	14.10616	0.1138334	0.23572795	2.5953464	20	11 16.4	18.7
165582 2001 EA ₁₇	16.3	X	240.11498	100.98045	7.88610	23.22195	0.0294581	0.38329461	1.8769278	20	10 30.7	18.3
165583 2001 EF ₂₂	15.5	X	160.19716	303.98659	175.98986	8.31687	0.0190251	0.22176771	2.7031522	20	7 10.9	19.3
165584 2001 EX ₂₂	15.0	X	49.93216	327.95482	11.45239	13.32401	0.1455487	0.23392495	2.6086652	20	12 25.9	19.0
165585 2001 EY ₂₂	16.1	X	197.73016	286.69507	157.58802	6.14787	0.0378051	0.21991006	2.7183538	20	7 10.7	19.9
165586 2001 FH ₈	15.7	X	215.44902	344.46858	203.00221	6.33210	0.0877341	0.23688555	2.5868843	20	12 11.4	19.3
165587 2001 FW ₉	16.1	X	226.02062	280.02308	247.64959	4.14248	0.1728565	0.23579313	2.5948681	20	11 16.6	19.9
165588 2001 FG ₁₈	15.8	X	60.64054	236.87836	353.23101	8.52252	0.0586709	0.21924275	2.7238669	20	8 6.5	19.5
165589 2001 FQ ₂₂	16.2	X	228.11297	6.25357	166.60091	5.44591	0.2404500	0.23538221	2.5978872	20	11 18.2	19.9
165590 2001 FY ₂₃	17.4	X	247.82999	305.98844	171.24612	22.32748	0.0892066	0.38743530	1.8635309	20	12 4.9	19.5
165591 2001 FU ₂₈	15.9	X	80.24540	225.83237	24.27941	8.92602	0.2260136	0.22333908	2.6904581	20	10 15.9	20.1
165592 2001 FJ ₃₀	15.5	X	338.84481	42.38593	32.51074	14.74171	0.0012951	0.23940181	2.5687259	20	—	—
165593 2001 FU ₃₁	15.8	X	276.10241	29.99055	49.50273	14.73422	0.0587670	0.22736676	2.6585902	20	10 18.7	19.2
165594 2001 FT ₄₀	15.6	X	122.40919	213.46135	6.23982	12.62728	0.1050					

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>		
165601	2001	FK ₅₁	16.1	X	229.47643	255.86843	268.64186	2.73051	0.1117127	0.23630309	2.5911334	20	11 25.3	19.6
165602	2001	FH ₅₅	15.1	X	28.74489	241.66326	12.22261	8.46339	0.1666305	0.21426714	2.7658736	20	8 7.4	18.3
165603	2001	FM ₅₇	15.7	X	275.17470	21.68095	93.63223	15.65502	0.0426339	0.23535026	2.5981223	20	12 4.9	19.1
165604	2001	FC ₅₉	16.3	X	15.87033	83.32155	30.61678	7.07714	0.1794755	0.25348450	2.4726830	20	—	—
165605	2001	FQ ₆₁	15.9	X	195.86901	176.44727	35.00629	4.63976	0.0675553	0.23828959	2.5767127	20	12 20.8	19.5
165606	2001	FJ ₆₄	15.7	X	133.53410	220.39705	14.91618	13.05614	0.1277312	0.23077700	2.6323343	20	11 7.3	19.9
165607	2001	FS ₆₆	15.4	X	149.54043	135.75786	32.16423	11.76838	0.0199331	0.22471842	2.6794373	20	9 6.9	19.2
165608	2001	FX ₆₇	15.9	X	229.05355	356.15110	123.29637	4.37250	0.1444774	0.23077124	2.6323780	20	9 24.6	19.7
165609	2001	FN ₆₉	15.7	X	209.95988	339.75007	169.36266	13.65345	0.1204710	0.23098576	2.6307479	20	10 14.6	19.6
165610	2001	FU ₈₂	15.7	X	121.34592	347.28664	219.34759	9.89970	0.1566746	0.22500963	2.6771250	20	9 22.8	20.1
165611	2001	FC ₈₄	16.6	X	114.02050	152.15961	131.14149	1.36436	0.1208961	0.23510841	2.5999038	20	12 20.7	20.5
165612	2001	Stackpole	16.4	X	253.35683	311.97635	221.76760	1.70704	0.0424808	0.24006957	2.5639604	20	—	—
165613	2001	FH ₈₉	17.3	X	24.11776	95.34649	7.75716	5.31483	0.1172629	0.25148460	2.4857748	20	—	—
165614	2001	FC ₉₆	15.9	X	161.94974	359.34944	159.48439	13.77673	0.2075832	0.22593763	2.6697894	20	9 3.7	20.4
165615	2001	FD ₉₉	15.4	X	169.26154	181.59243	13.70166	29.47208	0.0492250	0.23121900	2.6289785	20	10 22.4	19.4
165616	2001	FF ₁₀₂	16.1	X	301.83678	269.24953	219.16656	6.53474	0.1556219	0.24364686	2.5388020	20	—	—
165617	2001	FS ₁₀₂	15.6	X	102.55833	145.92543	170.47243	15.15630	0.1285567	0.23972229	2.5664360	20	—	—
165618	2001	FE ₁₀₆	16.3	X	341.61352	317.61094	130.68265	7.60537	0.1570244	0.24496720	2.5296713	20	—	—
165619	2001	FA ₁₀₇	16.4	X	214.92454	2.93662	90.41157	3.31591	0.1548732	0.27810926	2.3244797	20	8 7.6	19.8
165620	2001	FF ₁₀₉	15.6	X	27.68049	264.03889	350.70396	8.81056	0.0881785	0.21780986	2.7358001	20	7 26.6	19.0
165621	2001	FU ₁₀₉	15.9	X	209.34270	235.07127	292.90625	3.81549	0.0881269	0.23379282	2.6096480	20	11 7.1	19.5
165622	2001	FZ ₁₀₉	15.5	X	259.30883	285.28451	188.36703	27.63801	0.1386764	0.23472882	2.6027060	20	10 27.4	18.9
165623	2001	FZ ₁₁₃	16.4	X	241.51305	160.25859	21.27306	1.12162	0.0624176	0.23990882	2.5651055	20	—	—
165624	2001	FQ ₁₂₈	16.4	X	314.60304	153.06822	18.06594	11.29140	0.1117299	0.25039531	2.4929788	20	—	—
165625	2001	FA ₁₃₀	15.9	X	179.43999	190.00033	357.12778	5.74073	0.1427482	0.23204455	2.6227393	20	10 24.6	20.1
165626	2001	FX ₁₃₅	14.5	X	355.17625	286.52270	333.32438	15.47759	0.2084909	0.21119034	2.7926725	20	6 1.1	17.5
165627	2001	FZ ₁₄₂	15.4	X	91.64080	251.90016	42.66744	14.37902	0.1824578	0.23345073	2.6121968	20	12 14.7	19.8
165628	2001	FT ₁₄₆	15.7	X	61.55808	354.69975	227.18555	8.84826	0.1405641	0.21786060	2.7353753	20	8 3.1	19.5
165629	2001	FL ₁₅₁	15.5	X	159.90062	212.27694	37.67106	27.03575	0.0061890	0.23719482	2.5846351	20	12 30.6	19.5
165630	2001	FC ₁₅₆	16.3	X	194.40380	221.17375	324.68686	1.81360	0.1245072	0.23441367	2.6050382	20	11 9.9	20.1
165631	2001	FM ₁₆₀	15.9	X	255.67219	283.53208	182.88030	14.11343	0.1164955	0.23326261	2.6136011	20	10 15.4	19.3
165632	2001	FF ₁₆₃	16.0	X	159.42363	315.40290	159.69336	6.08147	0.0865518	0.22022615	2.7157521	20	7 5.9	20.1
165633	2001	FR ₁₆₇	15.7	X	293.19708	12.03996	120.75353	16.43200	0.2394233	0.24000713	2.5644050	20	—	—
165634	2001	FA ₁₇₁	15.5	X	1.27808	60.78964	224.75851	5.69648	0.2891782	0.21428470	2.7657225	20	8 4.6	17.6
165635	2001	FC ₁₇₆	15.4	X	260.71842	164.93261	38.14471	13.76749	0.0848912	0.24527912	2.5275262	20	—	—
165636	2001	FL ₁₈₀	15.8	X	39.18935	136.21881	177.46497	16.86059	0.1030453	0.22813111	2.6526485	20	11 5.4	19.5
165637	2001	FA ₁₈₈	16.8	X	281.41470	39.38848	65.37214	1.08372	0.0841139	0.23585570	2.5944084	20	11 23.7	19.9
165638	2001	FH ₁₉₂	16.7	X	285.11780	156.53398	330.71960	4.78600	0.1535160	0.24136750	2.5547605	20	12 25.8	19.4
165639	2001	GO ₃	16.7	X	141.21494	118.35682	34.94675	21.43405	0.0767968	0.37476861	1.9052877	20	9 2.6	19.5
165640	2001	GO ₅	15.5	X	22.11050	329.75864	17.39411	15.21072	0.1214079	0.23091307	2.6313001	20	11 21.4	19.0
165641	2001	GG ₁₀	15.7	X	255.81938	325.05942	236.32589	12.47914	0.1083875	0.24256846	2.5463211	20	—	—
165642	2001	GJ ₁₁	15.6	X	166.09065	349.00537	148.17623	13.52832	0.1732209	0.22264957	2.6960099	20	8 10.7	20.0
165643	2001	GK ₁₁	14.8	X	51.64432	64.81361	169.01948	14.31619	0.1482451	0.21544091	2.7558185	20	8 7.7	18.5
165644	2001	HB ₂	15.3	X	24.86797	39.73323	213.75397	13.08667	0.1572469	0.21360491	2.7715873	20	7 21.6	18.7
165645	2001	HX ₁₇	16.0	X	306.07055	202.44027	210.77660	11.47961	0.1784040	0.22805284	2.6532554	20	10 12.3	18.6
165646	2001	HP ₁₉	16.3	X	304.07036	131.48089	215.75741	5.46055	0.0319844	0.21591314	2.7517987	20	7 21.1	19.9
165647	2001	HL ₂₄	16.1	X	310.26353	274.12685	49.34358	4.16707	0.0936264	0.21257610	2.7805226	20	6 21.0	19.4
165648	2001	HM ₂₅	16.1	X	263.07955	2.57296	36.29009	5.43966	0.1167131	0.21902554	2.7256675	20	7 24.4	19.8
165649	2001	HC ₃₃	16.2	X	219.17441	350.67694	206.94694	7.34215	0.1664966	0.23581058	2.5947400	20	12 17.3	19.9
165650	2001	HN ₃₆	14.6	X	75.44520	24.56694	233.42174	31.05714	0.0865196	0.22064188	2.7123397	20	9 26.8	19.0
165651	2001	HG ₄₂	15.7	X	154.21303	74.23401	65.87925	5.57713	0.1001613	0.21997301	2.7178352	20	8 4.3	19.9
165652	2001	HH ₄₄	15.7	X	310.00296	215.25794	58.87437	5.45950	0.1250986	0.20590332	2.8402756	20	4 11.9	19.3
165653	2001	JP ₃	15.0	X	317.77314	115.73044	214.18651	12.55961	0.2294197	0.21115568	2.7929782	20	6 22.9	18.1
165654	2001	JE ₁₁	15.6	X	99.26786	146.05448	166.44502	13.52400	0.2812737	0.17460741	3.1702555	20	—	—
165655	2001	KB ₂	15.5	X	94.64362	209.16496	60.46996	10.16290	0.0520288	0.22595695	2.6696372	20	11 8.3	19.2
165656	2001	KN ₁₆	15.6	X	147.31650	148.64847	148.88465	5.25361	0.2924146	0.18030171	3.1031504	20	—	—
165657	2001	KA ₁₈	15.8	X	243.86883	98.99283	183.46957	8.26012	0.1272237	0.19367843	2.9585702	20	2 3.1	20.5
165658	2001	LX ₅	16.4	X	138.99345	51.90974	189.30767	3.31304	0.1348459	0.23127647	2.6285430	20	11 23.7	20.6
165659	2001	Michaelhicks	14.8	X	135.49319	234.17104	121.56101	27.80606	0.3693775	0.18151686	3.0892857	20	2 12.4	20.3
165660	2001	LE ₁₈	15.0	X	194.42725	106.64779	243.53933	8.51788	0.1477820	0.19124032	2.9836628	20	3 5.7	20.0
165661	2001	MJ ₁	15.4	X	222.06540	282.05009	354.05787	5.95659	0.2599880	0.18672574	3.0315630	20	1 7.2	20.8
165662	2001	MS ₂₉	14.4	X	174.82200	73.93609	287.89721	10.68369	0.0748587	0.18923169	3.0047393	20	2 27.5	19.1
165663	2001	MT ₂₉	14.6	X	144.21638	102.75480	235.44147	12.05826	0.1016251	0.17901957	3.1179492	20	1 5.4	19.4
165664	2001	MO ₃₀	14.9	X	75.06918	95.90311	269.73223	8.17889	0.0782201	0.17445036	3.1721579	20	—	—
165665	2001	MJ ₃₁	15.1	X	164.34390	112.88131	224.97174	9.60962	0.1345122	0.18423001	3.0588801	20	1 25.8	20.1
165666	2001	NF ₁	15.1	X	150.21335	294.51831	86.29594	3.73319	0.1797253	0.18811492	3.0166196	20	3 10.1	20.0
165667	2001	NO ₇	16.0	X	207.79247	266.78683	49.47538	2.51369	0.0724209	0.18892976	3.0079397	20	2 13.4	20.5
165668	2001	NG ₁₂	15.0	X	182.81084	322.29325	321.80343	6.59600	0.1675954	0.18118963	3.0930041	20	—	—
165669	2001	NT ₁₆	15.4	X	97.68300	222.20044	105.60288	10.00690	0.1941264	0.17280735	3.1922329	20	—	—
165670	2001	NH ₂₀	15.1	X	180.73282	30.12370	242.83953	18.365						

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>
165681 2001 OO ₆₄	15.2	X	180.33576	21.40446	249.62198	3.35359	0.2300267	0.17922133	3.1156088	20	—	—
165682 2001 OY ₆₅	14.2	X	116.67754	14.00961	334.30043	14.95602	0.2402953	0.17521413	3.1629328	20	1 10.1	19.1
165683 2001 OK ₆₈	14.5	X	104.81877	240.15441	142.60444	21.96677	0.3097139	0.17783033	3.1318346	20	2 12.1	19.1
165684 2001 OD ₇₁	14.8	X	150.90432	171.49560	160.10504	18.77547	0.1818541	0.17790093	3.1310060	20	1 12.8	20.0
165685 2001 OA ₇₄	15.4	X	215.78959	125.62285	131.88535	4.23219	0.1066511	0.18266173	3.0763636	20	—	—
165686 2001 OY ₇₅	15.3	X	142.87672	232.27730	106.67538	6.09289	0.2668746	0.18170808	3.0871179	20	1 21.6	20.5
165687 2001 OV ₈₁	14.7	X	156.72937	121.08842	259.31201	8.58654	0.1373924	0.18777925	3.0202135	20	3 6.6	19.6
165688 2001 OU ₈₇	14.1	X	198.41703	9.54086	255.94775	16.57627	0.1618052	0.17898282	3.1183760	20	—	—
165689 2001 PY ₁	14.9	X	157.95469	139.80094	124.10987	22.66926	0.1558174	0.17413111	3.1763040	20	12 27.8	20.2
165690 2001 PA ₃	14.1	X	75.49919	46.68587	296.38787	10.86596	0.1363997	0.16851102	3.2462640	20	—	—
165691 2001 PM ₆	15.2	X	135.18912	196.52140	127.12427	1.99787	0.1569780	0.17573865	3.1566362	20	—	—
165692 2001 PS ₁₆	14.7	X	149.99209	68.32667	245.07881	15.03068	0.2053595	0.17749835	3.1357385	20	—	—
165693 2001 PC ₁₈	14.9	X	130.79215	291.61288	73.97776	10.34258	0.1391127	0.18153634	3.0890666	20	1 31.3	19.7
165694 2001 PQ ₂₈	14.5	X	32.89400	117.25173	330.23432	15.06417	0.0788105	0.17819355	3.1275774	20	—	—
165695 2001 PT ₃₂	15.4	X	161.83144	170.78638	177.05101	4.94692	0.1701015	0.18379690	3.0636837	20	2 8.1	20.4
165696 2001 PR ₃₄	14.4	X	10.04847	100.56580	260.69351	11.20080	0.1303041	0.16115110	3.3443666	20	11 8.2	18.7
165697 2001 PR ₃₄	15.0	X	151.99708	126.76655	273.60012	10.34200	0.2356546	0.18530011	3.0470922	20	3 31.2	20.4
165698 2001 PA ₄₄	15.3	X	120.65392	137.26899	206.15755	4.44454	0.1337487	0.17712306	3.1401663	20	—	—
165699 2001 PD ₄₄	15.5	X	158.15351	181.75820	180.97988	2.22611	0.1034677	0.18522027	3.0479678	20	2 17.9	20.2
165700 2001 PQ ₄₄	14.7	X	70.51060	135.32616	271.78281	5.02762	0.2322244	0.17618341	3.1513215	20	1 17.9	18.5
165701 2001 PN ₄₆	15.2	X	192.61377	313.15738	70.84471	13.01377	0.2635437	0.19030469	2.9934342	20	4 21.1	20.7
165702 2001 PA ₅₉	15.2	X	67.64682	201.60293	182.94798	2.20891	0.1108096	0.17285596	3.1916345	20	—	—
165703 2001 PH ₆₀	15.1	X	137.79164	339.25616	111.26126	4.09408	0.1198088	0.17411115	3.1762767	20	—	—
165704 2001 PD ₆₁	15.1	X	130.92350	37.87212	297.02483	4.04143	0.1600385	0.17676758	3.1443748	20	—	—
165705 2001 PP ₆₁	15.3	X	81.74635	353.42453	24.96555	1.20332	0.2184721	0.17456072	3.1708208	20	—	—
165706 2001 PW ₆₄	15.4	X	115.26327	314.85999	63.51949	3.46904	0.1984088	0.17915056	3.1164293	20	2 5.2	20.0
165707 2001 PQ ₆₅	15.2	X	195.67429	4.47149	329.49316	11.24831	0.0822017	0.18610497	3.0383006	20	2 20.7	19.9
165708 2001 PB ₆₆	14.9	X	149.48645	170.32452	141.25067	10.37315	0.0203448	0.17705325	3.1409916	20	—	—
165709 2001 PD ₆₇	14.7	X	140.69084	181.35549	205.22815	24.03764	0.0816954	0.18544075	3.0455514	20	2 21.2	19.6
165710 2001 QC ₁	15.6	X	236.29615	99.96471	163.12345	5.12298	0.0965905	0.18461378	3.0546396	20	1 3.9	20.7
165711 2001 QY ₁₉	15.2	X	169.76226	187.86754	147.48763	9.95133	0.2654322	0.18268234	3.0761323	20	2 5.4	20.6
165712 2001 QV ₃₃	15.7	X	104.65644	140.94738	177.12371	1.28946	0.1417310	0.17018859	3.2248963	20	—	—
165713 2001 QF ₃₅	14.6	X	188.60539	75.40441	296.25881	7.87115	0.1448351	0.19240051	2.9716562	20	3 25.6	19.5
165714 2001 QR ₃₆	15.6	X	249.18322	308.16897	312.03082	7.60089	0.1308750	0.23967545	2.5667703	20	1 9.4	19.6
165715 2001 QP ₃₉	15.2	X	212.57809	197.16947	124.45563	11.27372	0.1242027	0.18991817	2.9974943	20	2 23.8	20.0
165716 2001 QN ₄₂	14.7	X	155.49276	87.68084	328.89350	8.94759	0.1713044	0.19194930	2.9763113	20	4 19.6	19.8
165717 2001 QR ₄₅	14.8	X	156.10381	314.62589	326.13348	16.21390	0.1246638	0.17501674	3.1653105	20	—	—
165718 2001 QF ₅₃	15.3	X	144.53233	349.79389	332.21478	7.78964	0.0622905	0.17779067	3.1323004	20	—	—
165719 2001 QB ₅₆	15.1	X	150.25127	43.91314	337.68767	10.75315	0.1188723	0.18438827	3.0571296	20	3 4.3	19.7
165720 2001 QX ₅₉	14.9	X	173.21549	235.01065	82.11908	2.73981	0.1727116	0.18129577	3.0917967	20	1 15.5	19.9
165721 2001 QF ₆₃	14.7	X	103.07865	256.42476	172.31095	22.88104	0.3159583	0.17925443	3.1152253	20	4 7.2	19.7
165722 2001 QP ₆₈	14.3	X	147.99279	31.21226	289.87623	16.61902	0.2035679	0.17698675	3.1417783	20	1 1.7	19.4
165723 2001 QZ ₈₁	14.7	X	106.32629	129.77994	262.45884	7.09788	0.2515802	0.17591827	3.1544871	20	2 14.9	19.5
165724 2001 QC ₁₀₁	14.9	X	128.32498	320.68112	75.76457	12.25721	0.1662538	0.18278373	3.0749946	20	3 11.7	19.8
165725 2001 QJ ₁₀₁	14.9	X	117.36070	230.32534	149.23794	6.05481	0.1588127	0.17888183	3.1195496	20	2 2.4	19.4
165726 2001 QC ₁₀₆	15.0	X	51.30344	186.12148	194.39392	19.99114	0.1502265	0.17039208	3.2232282	20	—	—
165727 2001 QG ₁₀₆	14.6	X	81.30245	217.08550	203.83164	16.79708	0.2195465	0.17775922	3.1326698	20	2 13.6	19.0
165728 2001 QV ₁₀₆	14.8	X	158.34068	60.92253	259.79258	21.30553	0.2082290	0.17990425	3.1077191	20	1 6.1	20.1
165729 2001 QW ₁₀₆	14.7	X	99.04584	140.55252	246.29103	21.66665	0.0976027	0.17959874	3.1112425	20	1 8.2	19.3
165730 2001 QP ₁₂₄	15.0	X	127.75772	44.80814	351.29836	10.59314	0.1342693	0.18461740	3.0545996	20	3 2.0	19.5
165731 2001 QA ₁₂₅	15.0	X	116.95398	297.11117	98.65340	2.88354	0.1805908	0.18213153	3.0823311	20	2 24.9	19.5
165732 2001 QU ₁₂₆	14.9	X	219.90597	128.95067	172.03992	16.89071	0.1305766	0.18732147	3.0251321	20	2 2.6	19.9
165733 2001 QE ₁₂₇	14.7	X	109.47973	118.63453	273.11779	8.95426	0.0886119	0.18212977	3.0823510	20	1 27.8	19.1
165734 2001 QC ₁₂₈	15.3	X	187.13730	75.07406	203.46912	8.03070	0.2530105	0.17976539	3.1093193	20	—	—
165735 2001 QQ ₁₂₈	15.0	X	140.63360	58.18876	277.04013	8.49966	0.1204666	0.17879838	3.1205202	20	1 2.0	19.5
165736 2001 QQ ₁₃₁	14.5	X	125.05032	205.85926	164.54981	18.51990	0.1328088	0.17806659	3.1290638	20	1 26.7	19.3
165737 2001 QE ₁₃₄	14.7	X	124.06111	72.25311	286.41194	8.04569	0.1235470	0.17813664	3.1282434	20	1 12.2	19.1
165738 2001 QT ₁₅₄	15.4	X	141.00081	148.54147	190.42097	9.63028	0.1055122	0.17915836	3.1163388	20	1 4.2	20.2
165739 2001 QQ ₁₅₈	14.8	X	69.00938	18.83576	325.52492	6.08124	0.1105311	0.16850729	3.2463119	20	—	—
165740 2001 QH ₁₆₁	14.9	X	163.10139	333.39245	339.39711	8.46105	0.0487079	0.17870404	3.1216184	20	—	—
165741 2001 QS ₁₆₁	14.3	X	23.80668	287.85382	143.90693	17.66158	0.1248975	0.17337726	3.1852336	20	—	—
165742 2001 QO ₁₆₂	15.0	X	226.77826	98.22427	162.12621	10.82764	0.0785204	0.18151881	3.0892635	20	—	—
165743 2001 QS ₁₆₄	15.2	X	71.35267	60.58217	344.63719	15.47679	0.2412073	0.17712793	3.1401087	20	1 23.3	19.2
165744 2001 QG ₁₆₇	15.4	X	125.01007	350.26936	24.61319	3.85689	0.1243059	0.18134806	3.0912024	20	2 2.4	19.9
165745 2001 QV ₁₆₈	15.1	X	168.70806	346.03329	339.20272	16.40381	0.0742426	0.18306985	3.0717898	20	1 18.6	19.9
165746 2001 QH ₁₇₁	15.1	X	157.72844	133.54569	235.02216	9.43969	0.1391068	0.18618870	3.0373896	20	2 23.2	20.0
165747 2001 QT ₁₈₄	14.4	X	195.03106	45.08932	252.21083	9.95695	0.1817229	0.18211321	3.0825379	20	1 9.5	19.7
165748 2001 QR ₁₈₆	15.0	X	67.22081	119.57734	339.70856	15.82806	0.1143005	0.18243097	3.0789574	20	3 1.2	19.0
165749 2001 QT ₁₈₇	14.2	X	43.85726	186.12494	254.90721	15.70700	0.1890968	0.17413203	3.1760228	20	1 7.7	17.9
165750 2001 QO ₁₈₉	14.0	X	311.55600	239.09888	267.47043	19.92409	0.1086560	0.17314378	3.1880965	20	—	—
165751 2001 QA ₁₉₁	16.7	X	78.80689	16.97898	291.76857	18.47134	0.0478503	0.37401409	1.9078493	20	—	—
165752 2001 QF ₂₀₂	14.5	X	99.03038	44.22364	306.19918	20.80454	0.0686708	0.17425214	3.1745631	20	—	—
165753 2001 QM ₂₀₂	14.8	X	171.61040	45.60895	334.21654	10.02382	0.1284685	0.19023767	2.9941372	20	3 20.6	19.7
165754 2001 QZ ₂₀₂	15.2	X	105.70403	188.70401	118.44							

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>		
165761	2001	QD ₂₂₈	14.4	X	12.73215	131.32017	295.87785	12.78127	0.1291395	0.17037912	3.2224917	20	—	—
165762	2001	QL ₂₂₈	15.1	X	188.12507	114.62456	202.07696	12.53079	0.1263783	0.18269759	3.0759611	20	1 22.9	20.2
165763	2001	QV ₂₂₉	15.0	X	195.20023	300.01025	320.14728	10.70529	0.0411390	0.17362837	3.1821618	20	—	—
165764	2001	QO ₂₃₂	15.2	X	64.27363	227.67211	186.30466	3.79819	0.1753684	0.17438537	3.1729461	20	1 9.1	19.1
165765	2001	QW ₂₃₆	17.6	X	61.84930	131.81003	171.38610	7.58815	0.2546760	0.32056389	2.1144284	20	12 21.4	21.0
165766	2001	QA ₂₄₁	15.2	X	178.95109	292.42601	345.51031	3.76091	0.2222546	0.17561820	3.1580794	20	—	—
165767	2001	QC ₂₄₁	15.1	X	166.94693	350.42389	345.95749	9.86412	0.0793049	0.18007023	3.1058092	20	1 28.9	19.9
165768	2001	QO ₂₄₃	15.5	X	99.82646	33.07064	348.45926	7.12580	0.1670771	0.17516781	3.1634904	20	1 19.7	20.0
165769	2001	QJ ₂₄₄	14.9	X	166.97179	334.31354	3.21456	9.05898	0.0695201	0.17932827	3.1143700	20	1 30.0	19.7
165770	2001	QC ₂₅₀	14.8	X	74.32656	324.22341	38.75762	8.31508	0.1540790	0.17132990	3.2105587	20	—	—
165771	2001	QS ₂₅₀	14.4	X	90.14580	11.12016	20.16162	18.06609	0.1080657	0.17707425	3.1407433	20	1 12.5	19.0
165772	2001	QL ₂₅₁	15.4	X	182.63541	99.36260	203.68460	5.63756	0.1352559	0.18263156	3.0767024	20	1 4.9	20.4
165773	2001	QC ₂₅₅	14.9	X	138.57390	229.59619	130.54637	23.00429	0.0534321	0.18106596	3.0944123	20	1 21.2	19.5
165774	2001	QE ₂₅₅	15.2	X	209.65205	131.22270	207.56053	9.12996	0.0991641	0.18925838	3.0044568	20	3 8.6	20.0
165775	2001	QE ₂₆₂	15.3	X	136.16682	126.41829	217.49265	11.90433	0.1627785	0.17674679	3.1446213	20	1 10.1	20.3
165776	2001	QD ₂₆₅	14.4	X	301.74732	203.47053	345.16455	11.77866	0.0406897	0.17697816	3.1418800	20	1 1.7	19.1
165777	2001	QC ₂₆₅	14.8	X	90.68693	204.05608	231.94465	15.05436	0.1502820	0.18003574	3.1062058	20	3 3.4	19.4
165778	2001	QN ₂₆₆	14.8	X	124.70287	144.38965	232.71212	10.55876	0.1488046	0.18207868	3.0829276	20	2 2.4	19.6
165779	2001	QB ₂₆₈	15.0	X	186.64114	125.48262	169.27075	11.36204	0.0643500	0.17972856	3.1097441	20	—	—
165780	2001	QP ₂₇₉	14.4	X	135.53092	321.42825	2.88757	16.29325	0.1405962	0.17580756	3.1558112	20	—	—
165781	2001	QE ₂₈₃	14.6	X	116.86638	98.00017	268.56043	14.67317	0.2701815	0.17880518	3.1204410	20	1 27.2	19.6
165782	2001	QO ₃₃₀	15.2	X	111.65299	195.64225	187.47082	9.41910	0.0767682	0.17979304	3.1090006	20	1 19.0	19.8
165783	2001	RQ ₁	15.1	X	149.00610	188.77088	174.16253	9.87465	0.1088877	0.18167728	3.0874668	20	2 8.7	19.9
165784	2001	RN ₅	14.9	X	100.88542	99.14072	291.22768	3.05197	0.0915675	0.17774825	3.1327987	20	1 18.9	19.3
165785	2001	RT ₅	15.3	X	115.08858	97.28109	307.86856	2.51448	0.1441102	0.18082844	3.0971214	20	2 28.0	19.9
165786	2001	RW ₅	14.7	X	153.10568	349.97801	343.31766	8.55248	0.0627570	0.17773712	3.1329295	20	1 8.7	19.4
165787	2001	RU ₉	14.2	X	192.72800	348.35997	275.30038	24.72192	0.2070055	0.17876140	3.1209506	20	—	—
165788	2001	RV ₁₉	15.0	X	128.38789	207.29416	159.76964	6.60140	0.1299729	0.18031620	3.1029841	20	1 26.5	19.6
165789	2001	RZ ₂₀	15.5	X	177.30462	294.30154	339.78591	1.81294	0.2172863	0.17667905	3.1454251	20	—	—
165790	2001	RA ₂₈	15.4	X	131.68118	202.91748	171.00886	9.69990	0.0988188	0.18189971	3.0849494	20	2 2.6	20.0
165791	2001	RN ₂₉	15.5	X	108.77832	344.07152	356.83410	4.28654	0.1563165	0.17357051	3.1828689	20	—	—
165792	2001	RN ₃₃	15.8	X	168.32965	114.30997	176.70715	9.87269	0.1888649	0.17776789	3.1325680	20	—	—
165793	2001	RQ ₃₃	14.5	X	111.17353	80.49362	311.91560	9.17530	0.0884632	0.18193987	3.0844954	20	2 1.6	18.7
165794	2001	RX ₃₄	15.2	X	131.09768	156.28099	237.21330	4.78448	0.0593312	0.18463430	3.0544133	20	2 19.7	19.8
165795	2001	RG ₃₆	15.2	X	135.55944	128.37403	185.92831	8.85305	0.0684861	0.17428432	3.1741723	20	—	—
165796	2001	RL ₃₆	15.5	X	161.22981	81.18405	201.03886	5.47956	0.1660641	0.17451855	3.1713316	20	—	—
165797	2001	RK ₃₇	15.7	X	152.41158	177.09543	184.09297	5.63925	0.1331729	0.18321417	3.0701764	20	2 12.1	20.4
165798	2001	RU ₄₁	15.4	X	85.82069	33.64665	29.60223	8.00253	0.1468743	0.17973178	3.1097069	20	2 16.5	19.5
165799	2001	RJ ₄₈	14.6	X	88.38693	15.25770	26.86985	9.52509	0.0906873	0.17453320	3.1711542	20	1 20.4	19.1
165800	2001	RJ ₅₀	14.8	X	138.45728	105.66867	247.33594	8.87195	0.1101633	0.17925629	3.1152037	20	1 17.4	19.6
165801	2001	RO ₅₂	15.2	X	128.01278	320.36165	59.55249	4.45245	0.0842018	0.18159472	3.0884026	20	2 7.1	19.7
165802	2001	RN ₅₄	14.8	X	163.20058	290.02784	34.57613	3.77793	0.1603226	0.17800022	3.1298416	20	1 15.6	19.8
165803	2001	RN ₅₅	14.9	X	334.92139	111.15620	355.66272	11.92067	0.0958747	0.17060883	3.2195985	20	—	—
165804	2001	RZ ₅₇	14.9	X	92.50299	12.61241	30.88549	10.88660	0.1016124	0.17795311	3.1303939	20	1 29.4	19.4
165805	2001	RB ₅₈	14.8	X	45.93676	20.67451	29.18494	11.48342	0.1703411	0.17131598	3.2107326	20	—	—
165806	2001	RC ₆₀	15.2	X	169.08964	309.70411	35.73433	10.61023	0.0584099	0.18152788	3.0891607	20	2 11.1	20.0
165807	2001	RS ₆₂	15.1	X	133.33874	198.28478	134.25356	9.01892	0.0574591	0.17396900	3.1780067	20	—	—
165808	2001	RO ₆₆	14.7	X	5.25811	260.96941	221.37043	10.19140	0.1227206	0.17342049	3.1847043	20	—	—
165809	2001	RK ₇₈	14.5	X	97.38106	170.12102	207.50078	18.77806	0.2488968	0.17280989	3.1922017	20	1 17.8	19.4
165810	2001	RW ₇₉	15.1	X	71.83936	127.85612	340.39867	4.77626	0.0417986	0.18600251	3.0394163	20	3 8.8	19.3
165811	2001	RH ₈₁	14.6	X	76.41541	234.90803	198.92249	13.14035	0.1504205	0.17696356	3.1420528	20	2 13.8	18.9
165812	2001	RE ₈₄	14.8	X	57.86517	69.70113	343.40706	15.43121	0.0657274	0.17476278	3.1683763	20	—	—
165813	2001	RJ ₈₇	14.9	X	65.94422	204.51188	196.62131	4.95583	0.1568212	0.17193040	3.2030787	20	—	—
165814	2001	RY ₉₆	15.5	X	244.12632	62.68900	174.82922	3.22473	0.0986475	0.17965572	3.1105846	20	—	—
165815	2001	RF ₁₀₀	14.8	X	166.58424	332.44725	8.47672	8.22941	0.1426226	0.18274232	3.0754592	20	2 6.6	19.8
165816	2001	RU ₁₀₀	15.0	X	218.12946	298.51344	1.32102	9.15028	0.0652221	0.18447360	3.0561868	20	2 6.9	19.7
165817	2001	RU ₁₀₁	14.9	X	115.71181	149.74419	151.58396	15.49349	0.1246194	0.16955582	3.2329148	20	12 30.9	20.2
165818	2001	RE ₁₀₂	15.4	X	121.38132	132.17713	163.19161	5.02933	0.1060944	0.17043042	3.2218450	20	12 28.3	20.4
165819	2001	RT ₁₀₈	15.0	X	40.93353	130.62394	353.64570	9.43644	0.1169336	0.18291847	3.0734844	20	2 24.6	18.7
165820	2001	RF ₁₁₁	15.7	X	226.07971	201.55598	123.10523	2.76688	0.0546018	0.18829350	3.0147121	20	3 14.3	20.0
165821	2001	RK ₁₁₂	15.0	X	53.89426	79.78333	354.28175	10.79677	0.0630047	0.17741513	3.1367189	20	1 9.1	19.3
165822	2001	RO ₁₁₂	14.8	X	327.24102	330.90315	165.13699	16.16915	0.0463517	0.17423797	3.1747353	20	—	—
165823	2001	RJ ₁₁₃	15.2	X	84.91215	284.39609	115.33750	2.12229	0.2018312	0.17598555	3.1536830	20	1 25.9	19.3
165824	2001	RY ₁₁₄	14.9	X	113.19808	356.23591	356.70856	13.20449	0.0638102	0.17518036	3.1633393	20	—	—
165825	2001	RS ₁₁₇	15.4	X	325.35756	329.01929	2.79846	1.87828	0.0684318	0.20279958	2.8691815	20	7 29.3	19.0
165826	2001	RU ₁₁₇	16.0	X	225.43791	182.51521	134.31614	1.26872	0.0845445	0.18691411	3.0295258	20	3 1.8	20.7
165827	2001	RX ₁₁₈	15.3	X	192.75537	275.83603	87.56802	2.74464	0.0623570	0.18802167	3.0176170	20	3 25.2	19.7
165828	2001	RK ₁₂₃	14.8	X	133.48309	332.48332	1.00381	5.34602	0.1640572	0.17580008	3.1559008	20	—	—
165829	2001	RO ₁₂₇	15.3	X	46.18440	313.39202	99.00867	3.30335	0.1543680	0.17168754	3.2060985	20	—	—
165830	2001	RV ₁₂₈	15.7	X	106.78281	340.71458	53.35017	3.20549	0.1829516	0.17811123	3.1			

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>		
165841	2001	RC ₁₄₇	14.6	X	158.41565	88.27706	241.26709	14.03943	0.0231779	0.17883438	3.1201014	20	1 2.8	19.2
165842	2001	RE ₁₅₃	15.0	X	109.17160	252.59407	110.55749	6.34911	0.1992336	0.17538231	3.1609105	20	1 11.4	19.6
165843	2001	RB ₁₅₄	14.8	X	151.19273	126.71214	229.67057	9.07375	0.0670996	0.18188390	3.0851282	20	1 29.1	19.6
165844	2001	SB ₆	15.6	X	110.81656	253.51201	148.11376	1.53427	0.1978837	0.18048434	3.1010566	20	2 26.7	20.2
165845	2001	SP ₁₀	15.0	X	228.26983	116.10892	154.91729	19.07985	0.0392998	0.18119886	3.0928990	20	1 12.9	19.8
165846	2001	SE ₁₁	15.0	X	143.58656	168.75236	216.95782	9.79801	0.1107628	0.18336297	3.0685153	20	2 28.2	19.9
165847	2001	SE ₁₂	15.7	X	76.64482	337.46255	51.17524	1.80317	0.2205459	0.17497943	3.1657604	20	1 3.7	19.4
165848	2001	SV ₁₃	14.6	X	108.03174	3.79395	1.92363	10.91872	0.1673152	0.17557874	3.1585525	20	1 11.1	19.3
165849	2001	SD ₁₆	15.0	X	117.89542	170.34879	172.14808	6.16404	0.1256462	0.17378423	3.1802589	20	—	—
165850	2001	SK ₁₆	15.4	X	52.00936	343.84877	42.87035	1.31346	0.1544524	0.16930013	3.2361689	20	—	—
165851	2001	SP ₁₈	15.2	X	182.35642	309.30249	17.55118	4.98821	0.1499568	0.18139778	3.0906376	20	2 3.8	20.2
165852	2001	SG ₁₉	14.6	X	165.52395	340.20013	0.64878	15.81562	0.0497269	0.18042997	3.1016796	20	2 2.7	19.4
165853	2001	SD ₂₀	14.9	X	148.02541	348.25591	17.52027	9.44963	0.0693996	0.18138310	3.0908042	20	2 12.7	19.6
165854	2001	SC ₂₃	15.1	X	207.72642	262.53513	5.82316	4.79631	0.1261871	0.17641196	3.1485991	20	—	—
165855	2001	SH ₂₄	15.2	X	94.45373	32.71207	300.57236	0.84955	0.1397448	0.16871752	3.2436147	20	—	—
165856	2001	SP ₃₀	14.9	X	82.25371	19.61211	15.72683	13.45884	0.0621704	0.17380456	3.1800109	20	—	—
165857	2001	SE ₃₄	14.9	X	59.43949	284.98395	187.89523	14.84234	0.2129428	0.17780369	3.1321475	20	3 20.7	18.7
165858	2001	SX ₃₅	15.1	X	71.28084	12.38895	27.80113	5.97429	0.1682660	0.17196925	3.2025962	20	1 3.6	19.1
165859	2001	SD ₄₀	15.0	X	86.62487	206.94331	169.82743	13.12767	0.1083332	0.17125675	3.2114729	20	—	—
165860	2001	SK ₄₃	15.0	X	136.12026	323.56499	10.18713	18.05092	0.2168792	0.17584346	3.1553817	20	1 9.4	20.3
165861	2001	SM ₄₅	14.8	X	159.89847	135.55513	169.01699	16.38461	0.1244966	0.17412108	3.1761559	20	—	—
165862	2001	SE ₇₈	15.0	X	353.37819	145.25843	0.54748	13.39476	0.1260034	0.17757213	3.1348698	20	1 7.9	19.1
165863	2001	SF ₈₀	15.0	X	68.67488	92.94003	320.84923	12.27686	0.2923663	0.17539638	3.1607414	20	2 3.3	18.6
165864	2001	SW ₈₆	15.0	X	356.74711	291.85061	174.15309	9.66687	0.0679495	0.17472147	3.1688757	20	—	—
165865	2001	SK ₈₈	15.1	X	82.27648	266.03884	173.48875	16.42338	0.2550641	0.17924913	3.1152866	20	3 18.9	19.3
165866	2001	SL ₈₉	15.4	X	182.81732	51.26495	187.50875	13.12473	0.1173269	0.17026580	3.2239214	20	12 20.6	20.6
165867	2001	SO ₉₁	15.5	X	231.70192	50.41555	207.60052	5.02842	0.0905664	0.17937156	3.1138689	20	—	—
165868	2001	SO ₉₅	15.0	X	189.73534	286.64977	335.38114	4.41414	0.1448407	0.17420594	3.1751244	20	—	—
165869	2001	ST ₁₀₁	14.9	X	20.26420	99.42963	343.52179	8.75491	0.0950025	0.17070489	3.2183905	20	—	—
165870	2001	SY ₁₂₁	15.1	X	229.16999	59.75403	200.46669	13.51622	0.1026053	0.17896189	3.1186191	20	—	—
165871	2001	SE ₁₂₄	15.0	X	53.96895	152.52048	227.50407	4.69826	0.1233349	0.17002805	3.2269260	20	—	—
165872	2001	SW ₁₂₅	15.5	X	138.20026	65.00965	322.96921	2.98886	0.1446818	0.18269959	3.0759386	20	3 2.5	20.1
165873	2001	SK ₁₂₆	15.1	X	70.50907	90.72832	324.63671	4.14381	0.1841277	0.17519415	3.1631733	20	1 22.7	18.9
165874	2001	SP ₁₂₈	15.7	X	279.02811	167.66292	274.75260	3.04285	0.0787572	0.21097923	2.7945352	20	10 14.8	19.3
165875	2001	SK ₁₂₉	17.2	X	337.35812	132.38432	248.46354	2.51215	0.1263126	0.31543692	2.1372781	20	11 25.9	18.9
165876	2001	SZ ₁₂₉	15.2	X	120.89344	31.50387	350.68400	11.07722	0.0886632	0.17889771	3.1193650	20	2 4.3	19.8
165877	2001	SH ₁₃₇	14.7	X	162.27341	159.08391	190.85692	13.42143	0.1603455	0.18080485	3.0973907	20	2 8.7	19.9
165878	2001	SS ₁₃₇	15.2	X	112.69729	25.25244	4.28011	10.98852	0.0954842	0.17781699	3.1319913	20	2 5.3	19.8
165879	2001	SQ ₁₄₀	14.9	X	100.40794	17.43701	2.86863	9.11378	0.0870821	0.17450464	3.1715001	20	1 7.8	19.4
165880	2001	SF ₁₄₃	15.4	X	68.35190	198.36705	228.24205	4.50376	0.1900082	0.17539271	3.1607855	20	2 1.0	19.3
165881	2001	SI ₁₅₃	15.0	X	318.76444	158.03710	13.53657	7.86990	0.0928346	0.17418747	3.1753489	20	—	—
165882	2001	SC ₁₅₄	14.8	X	143.37385	315.15717	13.18190	10.22789	0.2007438	0.17519870	3.1631186	20	1 6.5	20.0
165883	2001	ST ₁₆₄	14.7	X	69.03764	44.84295	24.57504	11.92141	0.1854900	0.17309593	3.1886839	20	2 12.3	18.9
165884	2001	SO ₁₆₅	15.3	X	177.40535	55.46505	294.30727	3.00474	0.0746536	0.18423420	3.0588338	20	2 20.2	20.0
165885	2001	SP ₁₆₅	14.9	X	172.54325	74.85765	197.44288	5.50958	0.1269125	0.17328852	3.1863210	20	—	—
165886	2001	SY ₁₈₄	15.9	X	135.13708	312.49474	27.31960	0.48460	0.1600566	0.17769856	3.1333828	20	1 6.3	20.6
165887	2001	SH ₁₈₆	16.1	X	102.16353	315.79791	29.77355	0.78770	0.1590275	0.17331662	3.1859766	20	—	—
165888	2001	SJ ₁₉₆	15.7	X	230.41998	83.30964	164.47195	0.39218	0.1107633	0.17763472	3.1341334	20	—	—
165889	2001	SY ₁₉₇	14.9	X	75.95215	75.46628	4.57465	9.10882	0.0718560	0.18049903	3.1008883	20	2 16.3	19.1
165890	2001	SW ₁₉₈	15.6	X	230.19015	198.81309	84.32397	2.24854	0.1291026	0.18313697	3.0710392	20	1 25.4	20.4
165891	2001	SH ₁₉₉	15.2	X	41.13629	266.59297	146.04789	3.40273	0.1590401	0.17065184	3.2190575	20	—	—
165892	2001	SP ₁₉₉	15.0	X	240.07849	89.43534	152.73121	5.08737	0.0706265	0.17748187	3.1359349	20	—	—
165893	2001	SF ₂₀₁	15.1	X	209.06311	270.75845	12.70749	16.45961	0.1103524	0.18032616	3.1028699	20	1 9.8	20.3
165894	2001	SJ ₂₀₂	15.8	X	143.98112	309.73351	347.77056	0.17791	0.1226334	0.17180073	3.2046901	20	—	—
165895	2001	SU ₂₁₇	15.5	X	339.29935	323.35269	168.66006	9.94538	0.0644517	0.17436403	3.1732049	20	—	—
165896	2001	SZ ₂₂₃	15.2	X	44.56539	63.24393	23.48276	9.36298	0.0746725	0.17499404	3.1655843	20	1 12.6	19.4
165897	2001	SA ₂₃₅	15.0	X	120.39211	318.82171	26.74058	18.52644	0.1505645	0.17372356	3.1809993	20	—	—
165898	2001	ST ₂₅₀	15.3	X	67.66835	240.36089	166.11856	5.84584	0.1221110	0.17091089	3.2158039	20	—	—
165899	2001	SA ₂₉₂	13.9	X	24.01863	157.80203	282.16492	17.96555	0.1331462	0.17093194	3.2155399	20	—	—
165900	2001	SB ₂₉₄	15.3	X	17.48446	75.94416	32.66713	4.81060	0.1338351	0.17366962	3.1816579	20	—	—
165901	2001	SZ ₃₀₃	15.3	X	314.72766	213.33056	347.30369	4.77934	0.0646788	0.17994185	3.1072863	20	1 27.6	19.6
165902	2001	SQ ₃₀₇	14.9	X	180.38525	270.09820	19.40790	16.23975	0.0921662	0.17511046	3.1641810	20	—	—
165903	2001	SS ₃₀₇	15.1	X	102.13698	266.47295	62.74366	5.15343	0.1120895	0.16885963	3.2417946	20	—	—
165904	2001	SJ ₃₁₁	14.8	X	161.86836	278.02722	26.17624	15.88317	0.0573323	0.17425659	3.1745091	20	—	—
165905	2001	ST ₃₁₄	15.0	X	286.69086	190.69077	352.30992	4.97643	0.1104105	0.17254016	3.1955277	20	—	—
165906	2001	SM ₃₂₃	15.1	X	72.33682	241.81459	224.36117	15.23218	0.2100439	0.17948678	3.1125361	20	3 28.3	19.3
165907	2001	SC ₃₂₉	15.1	X	346.28567	327.28414	156.55995	10.11529	0.0469105	0.17640016	3.1487395	20	—	—
165908	2001	SH ₃₃₄	14.7	X	149.10961	72.97355	314.26306	10.72048	0.3173369	0.18055834	3.1002093	20	3 18.9	20.4
165909	2001	SN ₃₄₄	14.7	X	18.20469	196.24819	257.74924	8.48009	0.1078449	0.17361578	3.1823156	20	—	—
165910	2001	TG ₅	14.8	X	159.58397	201.04359	84.09966	6.40914	0.1432931	0.17326684	3.1865867	20	—	—
165911	2001	TD ₇	14.1	X	84									

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>		
165921	2001	TQ ₁₃₂	14.3	X	62.42139	97.48326	219.54253	14.98192	0.0954392	0.16100765	3.3463526	20	11 20.9	19.1
165922	2001	TK ₁₄₄	14.9	X	321.59818	196.57499	49.06556	12.21075	0.1632756	0.18856989	3.0117655	20	3 22.9	18.8
165923	2001	TM ₁₄₄	15.0	X	115.04453	198.89809	119.53486	6.29305	0.1232864	0.16851508	3.2462120	20	—	—
165924	2001	TG ₁₄₇	14.8	X	76.16677	342.47144	55.94349	12.03778	0.0987708	0.17222927	3.1993721	20	—	—
165925	2001	TQ ₁₆₂	15.2	X	57.11434	71.39332	9.50191	10.74022	0.1886930	0.17399864	3.1776458	20	2 6.9	19.1
165926	2001	TG ₁₆₄	15.3	X	126.78361	348.22189	33.10573	3.80526	0.0348776	0.17609609	3.1523632	20	2 1.7	19.7
165927	2001	TA ₁₇₈	15.3	X	170.32217	106.32899	222.16092	8.42886	0.1538071	0.17811008	3.1285544	20	1 22.8	20.4
165928	2001	TS ₁₉₆	14.3	X	358.01921	290.74183	74.20969	16.34729	0.1831750	0.15624499	3.4140142	20	11 4.2	18.4
165929	2001	TC ₂₁₁	14.1	X	18.77668	233.47197	253.61713	12.62195	0.2460707	0.17520423	3.1630520	20	1 17.4	17.3
165930	2001	TV ₂₁₁	15.1	X	97.80485	238.53366	212.44475	6.06769	0.0870547	0.18665962	3.0322788	20	3 25.9	19.3
165931	2001	TF ₂₁₂	14.7	X	18.45764	212.80657	285.79287	9.65239	0.0470953	0.17941731	3.1133395	20	2 3.6	18.9
165932	2001	TB ₂₂₆	14.4	X	94.33626	192.15885	153.35322	23.69712	0.1915834	0.17067066	3.2188209	20	—	—
165933	2001	UJ ₁₄	17.4	X	106.12844	234.22727	61.41381	3.13669	0.0415488	0.31986505	2.1175070	20	—	—
165934	2001	UY ₂₁	14.7	X	76.54125	131.69031	269.35282	8.17299	0.0757251	0.17424643	3.1746325	20	—	—
165935	2001	UU ₂₂	15.2	X	178.40282	88.08138	243.44061	12.41334	0.1794848	0.18081968	3.0972214	20	1 31.8	20.6
165936	2001	UK ₃₀	14.8	X	68.61992	18.00561	48.53861	18.84009	0.1736008	0.17358882	3.1826451	20	2 8.5	19.2
165937	2001	UV ₃₁	14.6	X	210.59627	217.35047	32.94785	27.32271	0.1355588	0.171511176	3.2082888	20	—	—
165938	2001	UP ₄₀	15.2	X	70.73291	35.18291	41.69999	10.04951	0.0747849	0.17511157	3.1641676	20	2 7.8	19.6
165939	2001	UN ₉₈	15.1	X	349.32032	323.12305	50.96640	10.54566	0.1110551	0.15513681	3.4302529	20	10 24.2	19.4
165940	2001	UI ₁₀₃	14.8	X	201.86220	224.77730	31.98208	27.58194	0.1807408	0.17189532	3.2035144	20	—	—
165941	2001	UK ₁₁₀	15.5	X	192.67394	234.37591	50.49464	8.03784	0.1947548	0.17501736	3.1653030	20	—	—
165942	2001	UB ₁₂₅	14.6	X	20.57662	349.74643	116.08632	12.67379	0.0952352	0.17105655	3.2139781	20	—	—
165943	2001	UD ₁₄₇	15.4	X	145.13932	126.19675	176.81031	4.02727	0.0772848	0.16837333	3.2480336	20	—	—
165944	2001	UV ₁₅₅	14.5	X	189.30056	233.93459	50.23993	14.17150	0.0675571	0.16918120	3.2376854	20	—	—
165945	2001	UQ ₁₆₉	14.9	X	359.16499	133.34922	28.68984	18.65920	0.1500757	0.17696538	3.1420313	20	2 11.3	19.0
165946	2001	UL ₁₉₇	15.2	X	168.69811	335.44213	318.44892	4.02505	0.1437324	0.17479019	3.1680450	20	—	—
165947	2001	UV ₁₁₇	16.9	X	212.23670	264.23814	270.01525	5.87586	0.0485565	0.31223091	2.1518337	20	12 14.4	19.3
165948	2001	VG ₁₂₆	17.2	X	352.59624	184.47218	113.17484	1.78073	0.0454374	0.30104920	2.2048433	20	8 2.9	19.3
165949	2001	WY ₁	14.7	X	84.47567	179.62196	201.87117	31.94799	0.2636385	0.17630961	3.1498175	20	1 6.7	19.5
165950	2001	WG ₅	17.7	X	341.96977	118.39917	225.96109	1.97652	0.1138584	0.30758517	2.1734974	20	10 2.3	19.4
165951	2001	WK ₆₉	15.4	X	135.44272	114.59383	213.63025	4.57388	0.1373565	0.17003572	3.2268289	20	—	—
165952	2001	WN ₉₂	15.6	X	131.18083	103.85975	225.49932	4.22892	0.1305549	0.16986505	3.2289900	20	—	—
165953	2001	XT ₁₈	16.5	X	203.10597	154.01484	297.06862	8.31878	0.0572380	0.29721075	2.2237863	20	7 30.6	19.1
165954	2001	XP ₄₆	16.2	X	305.26802	332.69869	41.53129	7.25822	0.1629270	0.30157092	2.2022996	20	9 3.6	17.9
165955	2001	XO ₆₂	16.7	X	193.80788	337.33733	127.72573	4.73651	0.0686919	0.29567360	2.2314870	20	8 7.5	19.6
165956	2001	XM ₆₈	15.9	X	223.42276	14.24364	62.76686	8.34566	0.1473493	0.29595504	2.2300720	20	7 29.1	19.1
165957	2001	XR ₈₇	16.8	X	314.34770	358.21451	35.96215	6.08266	0.1354449	0.30482642	2.1865914	20	10 27.3	18.4
165958	2001	XT ₁₀₃	17.2	X	30.81368	241.35232	112.31178	0.59752	0.1326875	0.31342321	2.1464228	20	—	—
165959	2001	XK ₁₁₁	16.6	X	79.58671	124.00829	114.54790	5.08239	0.0303042	0.30109478	2.2046208	20	9 19.4	19.1
165960	2001	XU ₁₅₇	15.4	X	102.03138	356.41859	116.06022	6.61140	0.1348025	0.17783742	3.1317514	20	5 7.5	20.0
165961	2001	XV ₁₆₄	16.7	X	99.79140	169.16995	87.18325	5.15119	0.1241826	0.30675458	2.1774190	20	11 17.2	19.6
165962	2001	XM ₁₆₈	16.6	X	160.01813	33.54946	176.00830	2.64687	0.1272537	0.30688234	2.1768146	20	11 17.8	19.5
165963	2001	XS ₁₆₈	17.3	X	216.61380	254.96935	241.39992	4.17590	0.0634796	0.30552803	2.1832426	20	10 22.6	19.8
165964	2001	XT ₁₇₃	17.5	X	116.45511	294.28615	212.71762	0.90452	0.1367285	0.29003913	2.2602943	20	7 7.4	20.6
165965	2001	XT ₁₈₄	16.7	X	213.26832	156.25447	284.06611	3.58700	0.0651169	0.29550072	2.2323578	20	7 27.7	19.5
165966	2001	XP ₁₉₀	17.2	X	191.79023	220.48443	244.94571	4.80526	0.0715318	0.29543926	2.2326668	20	8 3.1	20.2
165967	2001	XN ₁₉₉	16.6	X	110.82462	121.80326	56.05469	6.12470	0.1641213	0.29100661	2.2552818	20	8 18.6	20.0
165968	2001	XB ₂₁₀	16.5	X	179.97135	14.54829	145.69769	4.74769	0.0683893	0.30383716	2.1913351	20	10 10.2	19.2
165969	2001	XN ₂₁₃	15.9	X	256.77806	23.94139	146.94026	6.62068	0.2285746	0.25971214	2.4329950	20	12 31.5	18.4
165970	2001	XH ₂₃₂	16.9	X	152.17065	84.54546	51.92184	3.05692	0.0447836	0.29743558	2.2226655	20	7 31.6	19.6
165971	2001	XL ₂₃₇	16.7	X	236.87862	93.68734	295.40076	4.40493	0.0724071	0.29643688	2.2276548	20	6 14.0	19.4
165972	2001	XE ₂₄₂	16.8	X	19.93411	194.75703	80.15774	6.83411	0.1030989	0.29950922	2.2123946	20	8 25.3	19.0
165973	2001	XT ₂₅₁	16.3	X	45.73480	112.84641	94.91705	5.63419	0.0946912	0.29045896	2.2581157	20	6 19.4	18.6
165974	2001	XP ₂₆₀	16.9	X	105.02880	330.16223	358.02970	3.59284	0.1635857	0.32218971	2.1073092	20	—	—
165975	2001	YH ₄	15.8	X	23.72045	147.88334	35.71110	7.14602	0.1224455	0.27308822	2.3528852	20	4 5.4	17.8
165976	2001	YP ₂₇	16.3	X	78.07029	135.98373	75.59057	4.33303	0.0872634	0.29655071	2.2270847	20	8 16.1	19.0
165977	2001	YO ₃₁	17.1	X	261.52972	127.95312	257.79645	2.91925	0.0760931	0.29906036	2.2146077	20	7 13.5	19.5
165978	2001	YL ₈₅	17.2	X	175.44155	104.03445	84.20615	2.28975	0.1247229	0.29074675	2.2566254	20	6 14.9	20.4
165979	2001	YR ₈₈	16.2	X	359.51341	159.80789	32.20438	8.27589	0.0393118	0.28722069	2.2750567	20	5 19.8	18.7
165980	2001	YZ ₈₉	17.6	X	310.42118	69.63194	356.18782	1.89860	0.0994856	0.30847037	2.1693373	20	12 9.6	19.3
165981	2001	YR ₉₀	16.2	X	150.68345	24.64823	81.24195	7.87373	0.0499592	0.28933805	2.2639440	20	6 13.7	19.0
165982	2001	YM ₉₆	16.3	X	149.63521	189.02818	341.03725	5.69890	0.1023341	0.29728676	2.2234072	20	9 12.9	19.3
165983	2001	YY ₉₉	17.1	X	150.40423	86.33581	108.88739	1.80165	0.0676079	0.30440227	2.1886221	20	10 21.5	19.8
165984	2001	YK ₁₀₉	16.5	X	359.98971	18.13677	138.67179	3.89306	0.0927660	0.27558586	2.3386475	20	1 11.7	19.1
165985	2001	YR ₁₁₄	16.7	X	213.61062	74.69045	54.55186	6.77464	0.0733202	0.30221852	2.1991524	20	10 10.1	19.3
165986	2001	YZ ₁₁₆	16.6	X	200.13671	67.35161	40.69434	2.80967	0.0777380	0.29694183	2.2251287	20	8 20.4	19.3
165987	2001	YJ ₁₂₇	16.6	X	262.30020	28.32750	357.66132	3.81158	0.0323478	0.29644505	2.2276139	20	7 24.2	19.1
165988	2001	YQ ₁₃₈	16.6	X	49.81610	98.33731	109.90109	4.69048	0.0619870	0.28790964	2.2714259	20	6 21.7	18.9
165989	2001	YE ₁₃₉	16.7	X	161.63202	348.50985	134.97108	5.84713	0.0803221	0.29265564	2.2468019	20	7 23.7	19.6
165990	2001	YO ₁₄₈	17.7	X	270.45812	162.63476								

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>		
166001	2002	AV ₅₁	16.6	X	169.02622	203.84469	258.81247	0.88253	0.0656075	0.29074252	2.2566473	20	7 3.2	19.4
166002	2002	AW ₅₈	16.4	X	105.71209	325.54541	141.37350	5.85821	0.1439756	0.28180139	2.3041317	20	5 2.4	19.4
166003	2002	AD ₆₄	15.9	X	352.35688	237.45808	323.59806	8.79514	0.1547375	0.27316152	2.3524643	20	2 23.7	18.0
166004	2002	AA ₆₇	14.3	X	285.40331	164.99218	130.77938	22.51429	0.0498913	0.17525523	3.1624382	20	4 26.7	19.2
166005	2002	AL ₇₂	16.8	X	82.17997	229.78919	300.58260	4.12214	0.0700426	0.28919553	2.2646878	20	6 16.2	19.4
166006	2002	AH ₉₁	16.9	X	339.72373	20.56035	165.80758	3.04794	0.1698846	0.27319887	2.3522498	20	1 9.5	19.5
166007	2002	AY ₁₀₈	16.3	X	290.34487	205.68064	328.23601	4.30881	0.1351668	0.26384421	2.4075261	20	—	—
166008	2002	AL ₁₁₂	16.8	X	120.14492	154.33152	310.94518	1.21927	0.1503923	0.28395135	2.2924864	20	5 15.6	19.9
166009	2002	AS ₁₁₄	17.2	X	78.46355	129.69579	67.06206	1.71270	0.1264665	0.28886507	2.2664146	20	7 29.9	20.0
166010	2002	AL ₁₁₅	16.5	X	324.16588	217.01885	325.89877	2.81260	0.1196376	0.26971278	2.3724753	20	—	—
166011	2002	AS ₁₁₉	16.7	X	2.06063	196.37033	350.51966	2.49110	0.1702841	0.27518126	2.3409392	20	2 20.9	18.7
166012	2002	AU ₁₂₅	16.1	X	340.41383	170.05803	322.94873	5.99034	0.0822413	0.26463981	2.4026985	20	—	—
166013	2002	AD ₁₂₈	17.1	X	106.77441	15.05108	130.52646	0.76803	0.1370071	0.28550476	2.2841633	20	6 23.8	20.0
166014	2002	AQ ₁₃₈	16.8	X	24.95499	35.03305	283.55294	1.16693	0.1480396	0.30416394	2.1897653	20	11 12.9	19.1
166015	2002	AD ₁₄₃	16.9	X	316.43591	104.47893	230.76448	3.39339	0.1358206	0.29632426	2.2282192	20	7 19.4	18.9
166016	2002	AO ₁₄₃	17.0	X	260.37883	87.96387	155.46584	2.40643	0.1528543	0.27048773	2.3679417	20	—	—
166017	2002	AI ₁₅₂	16.5	X	299.32501	191.77649	4.69731	2.41174	0.1505813	0.26629285	2.3927448	20	—	—
166018	2002	AN ₁₅₄	16.6	X	105.83452	80.50819	5.84281	3.94845	0.0954078	0.27762051	2.3272070	20	3 25.0	19.3
166019	2002	AN ₁₆₀	16.7	X	77.32632	261.70932	245.85573	2.07382	0.1984283	0.28159068	2.3052809	20	5 28.0	19.4
166020	2002	AZ ₁₆₂	16.4	X	270.06208	150.09626	280.64412	4.01492	0.1157977	0.30110726	2.2045599	20	9 25.7	18.7
166021	2002	AN ₁₆₃	16.6	X	234.70449	283.28495	139.11268	6.74202	0.0673523	0.29357813	2.2420928	20	7 30.4	19.1
166022	2002	AT ₁₆₃	16.9	X	115.63711	270.81830	224.55351	1.01717	0.0424846	0.28565021	2.2833878	20	6 8.2	19.7
166023	2002	AB ₁₇₁	16.8	X	239.67622	267.12088	310.21687	1.04483	0.1542891	0.26215202	2.4178754	20	—	—
166024	2002	AZ ₁₇₆	16.9	X	345.18968	161.68660	119.92061	4.92907	0.0184415	0.28854482	2.2680913	20	6 25.2	19.4
166025	2002	AE ₁₉₂	17.0	X	227.08482	220.92613	177.62470	3.39216	0.0439783	0.28956309	2.2627709	20	6 18.2	19.9
166026	2002	AF ₁₉₂	16.6	X	346.60022	343.80232	202.11934	3.82318	0.1781919	0.27254930	2.3559858	20	1 18.4	19.1
166027	2002	AV ₂₀₂	17.2	X	12.23056	56.78855	163.21451	3.45464	0.1086704	0.28186818	2.3037677	20	5 8.7	19.3
166028	2002	AR ₂₀₄	16.9	X	219.16049	344.26908	286.65285	2.59184	0.1487754	0.26728055	2.3868464	20	—	—
166029	2002	BN ₈	16.4	X	198.57359	148.90442	130.43320	2.99094	0.0971860	0.29368271	2.2415605	20	8 2.6	19.3
166030	2002	BJ ₁₀	16.3	X	267.77397	87.09951	349.67832	5.71194	0.1135065	0.30032907	2.2083664	20	10 2.5	18.5
166031	2002	BP ₁₂	17.2	X	169.51950	351.69635	105.29957	1.18039	0.0331190	0.28968895	2.2621154	20	6 25.5	20.0
166032	2002	BA ₁₄	16.3	X	20.06160	291.36965	308.33131	5.56488	0.1391640	0.28435595	2.2903112	20	6 28.5	18.3
166033	2002	BZ ₁₆	16.2	X	299.57724	246.05792	184.85632	2.90163	0.1174245	0.30419840	2.1895999	20	11 25.8	18.0
166034	2002	BG ₁₇	16.6	X	244.70058	113.34045	309.50709	4.74840	0.0965392	0.29451197	2.2373508	20	8 9.7	19.0
166035	2002	BC ₂₀	16.8	X	148.96616	20.13521	155.40716	0.98682	0.0960357	0.29651423	2.2272674	20	9 20.4	19.7
166036	2002	BH ₂₃	16.7	X	346.71202	136.24870	103.22034	7.28086	0.0643954	0.28322301	2.2964149	20	4 25.6	19.2
166037	2002	BR ₂₅	16.4	X	94.85548	291.18140	269.78855	4.40776	0.1442124	0.28874313	2.2670526	20	8 25.2	19.6
166038	2002	BD ₃₁	17.5	X	219.63401	303.99343	194.35788	2.96438	0.0763339	0.30245688	2.1979969	20	10 28.5	19.8
166039	2002	CZ ₂	16.5	X	184.68290	159.85990	15.63406	5.22074	0.0483526	0.30214663	2.1995013	20	11 5.1	19.3
166040	2002	CE ₁₁	16.7	X	337.18702	172.45041	10.99130	2.27283	0.1399055	0.26955508	2.3734005	20	1 8.1	19.4
166041	2002	CJ ₁₁	16.2	X	67.11894	276.72373	282.06291	5.60834	0.1300459	0.28424668	2.2908981	20	7 16.0	18.8
166042	2002	CC ₁₂	16.4	X	250.16226	7.43732	31.63841	6.22092	0.1721503	0.29473055	2.2362445	20	7 2.5	19.3
166043	2002	CN ₁₃	16.9	X	124.00831	148.33942	316.44298	1.88092	0.0639143	0.28342645	2.2953159	20	5 8.6	19.8
166044	2002	CE ₁₄	16.2	X	318.07930	56.73227	330.20607	25.13490	0.2664135	0.30218987	2.1992914	20	9 29.7	17.9
166045	2002	CJ ₁₇	16.5	X	52.57185	289.72700	48.93391	3.05169	0.2024938	0.31066632	2.1591025	20	—	—
166046	2002	CL ₁₈	15.5	X	3.11072	230.09804	9.24959	12.07403	0.2006729	0.28105478	2.3082104	20	5 14.9	17.2
166047	2002	CC ₂₁	16.2	X	287.96670	22.46748	196.82400	6.87471	0.1739955	0.26579952	2.3957046	20	—	—
166048	2002	CH ₂₁	16.5	X	287.65212	75.96923	152.76355	4.66619	0.1955565	0.26916620	2.3756860	20	—	—
166049	2002	CN ₂₁	17.2	X	167.08827	297.45193	186.10641	0.51502	0.0889552	0.29248243	2.2476889	20	7 30.4	20.0
166050	2002	CJ ₂₇	16.2	X	276.75794	196.08557	12.69518	4.99417	0.1795691	0.26567085	2.3964780	20	—	—
166051	2002	CM ₂₈	16.7	X	319.12613	327.02979	54.51984	4.28547	0.1331394	0.30266603	2.1969842	20	10 17.5	18.4
166052	2002	CW ₃₂	16.7	X	246.25095	319.63879	63.60264	5.42630	0.1257276	0.29067721	2.2569853	20	6 10.4	19.4
166053	2002	CH ₃₉	16.4	X	103.43521	153.78628	326.59624	5.69496	0.0634973	0.28084550	2.3093570	20	4 30.8	19.4
166054	2002	CK ₄₈	16.2	X	174.61419	225.45657	231.88800	4.79276	0.0847213	0.29000000	2.2604976	20	7 1.9	19.2
166055	2002	CL ₄₉	16.3	X	266.85159	8.06024	254.22897	6.15474	0.0782147	0.27269986	2.3551186	20	1 27.8	19.6
166056	2002	CR ₄₉	16.5	X	27.70384	356.33130	257.07331	6.40832	0.0790954	0.28907870	2.2652979	20	7 25.3	18.9
166057	2002	CO ₅₁	16.6	X	300.04444	241.75859	333.18607	1.70098	0.1525949	0.26661593	2.3908114	20	—	—
166058	2002	CK ₅₂	16.8	X	287.76863	229.68467	354.16150	1.56973	0.1712986	0.26593459	2.3948933	20	—	—
166059	2002	CZ ₅₂	17.0	X	282.61391	29.06374	156.91741	5.08483	0.1443691	0.26405874	2.4062220	20	—	—
166060	2002	CE ₅₃	15.8	X	130.23578	83.58190	158.60054	5.77470	0.1125848	0.24709114	2.5151541	20	11 19.9	19.6
166061	2002	CJ ₅₄	16.7	X	0.54893	245.07988	316.96528	2.12736	0.1443397	0.27557932	2.3386845	20	3 13.8	18.6
166062	2002	CF ₆₀	16.5	X	312.03773	221.24933	359.15024	4.03450	0.1280104	0.27389048	2.3482884	20	1 24.5	19.3
166063	2002	CT ₆₀	16.4	X	55.36150	170.41826	72.29012	8.00621	0.0956777	0.29199343	2.2501976	20	9 1.9	19.1
166064	2002	CF ₆₂	16.5	X	246.78701	326.30539	85.92046	8.71447	0.1689730	0.29543060	2.2327104	20	7 17.9	19.4
166065	2002	CU ₆₉	16.9	X	278.34641	120.93778	114.19603	2.07102	0.1445455	0.26924163	2.3752423	20	1 1.5	20.4
166066	2002	CF ₇₅	16.7	X	252.93621	116.60427	115.94680	3.54031	0.1179245	0.26474624	2.4020545	20	—	—
166067	2002	CK ₇₆	17.0	X	264.45133	311.47844	126.48916	4.94457	0.0898146	0.30052270	2.2074177	20	10 6.9	19.3
166068	2002	CW ₇₆	16.5	X	227.47637	216.77032	48.41105	2.16791	0.1469147	0.26553585	2.3972902	20	—	—
166069	2002	CJ ₇₉	16.8	X	304.15943	224.61796	350.16505	1.85314	0.1316659	0.26925563	2.3751599	20	1 6.5	19.8
166070	2002	CC ₈₀	16.7	X	77.79490	95.58690	48.95522	2.65798	0.108036					

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>
166081 2002 CR ₁₀₃	16.9	X	249.10920	105.41016	124.65524	3.49500	0.1676580	0.26063391	2.4272552	20	—	—
166082 2002 CR ₁₀₆	16.5	X	99.37208	332.35556	142.45507	4.06493	0.1346619	0.27860231	2.3217364	20	5 3.1	19.4
166083 2002 CF ₁₁₂	16.3	X	49.27527	106.10158	72.23567	2.31038	0.1207987	0.27724896	2.3292858	20	5 14.8	18.5
166084 2002 CF ₁₁₇	16.5	X	113.40747	114.02354	141.94305	6.55495	0.1973709	0.24631377	2.5204432	20	11 23.6	20.7
166085 2002 CU ₁₁₇	16.9	X	263.33540	61.89302	164.69509	5.15058	0.1790330	0.26233745	2.4167359	20	—	—
166086 2002 CX ₁₁₇	16.6	X	231.80918	273.56511	355.29938	2.09465	0.1597936	0.26345263	2.4099111	20	—	—
166087 2002 CR ₁₂₃	16.8	X	247.79164	81.17053	161.27334	2.96554	0.1281623	0.26531343	2.3986298	20	—	—
166088 2002 CF ₁₂₅	16.3	X	171.62028	210.49426	272.82960	1.61135	0.0581084	0.29172883	2.2515581	20	8 4.9	19.2
166089 2002 CH ₁₂₉	16.7	X	97.59156	357.38346	177.54795	3.87273	0.0854166	0.28744504	2.2738728	20	7 16.5	19.6
166090 2002 CG ₁₃₀	16.5	X	296.47910	344.79617	222.53106	0.63802	0.1194653	0.26682508	2.3895619	20	—	—
166091 2002 CV ₁₃₂	16.6	X	282.49533	274.61774	340.69806	1.66035	0.1829148	0.26949256	2.3737676	20	1 27.5	20.0
166092 2002 CO ₁₃₇	17.1	X	217.08507	204.15664	226.56710	3.87754	0.1444494	0.29397064	2.2400966	20	7 10.1	20.2
166093 2002 CV ₁₃₉	17.6	X	238.57909	168.61196	280.35819	4.49888	0.1533181	0.29894024	2.2152010	20	8 29.0	20.3
166094 2002 CZ ₁₄₀	16.7	X	140.59092	246.25506	272.32307	6.34986	0.0333185	0.29289545	2.2455753	20	8 12.6	19.5
166095 2002 CW ₁₄₂	16.4	X	322.78645	333.59426	267.45604	4.50773	0.0871897	0.27920946	2.3183694	20	3 10.4	19.2
166096 2002 CJ ₁₄₄	16.7	X	306.47349	41.64419	181.59618	2.47639	0.1128871	0.27034778	2.3687588	20	1 22.1	19.5
166097 2002 CO ₁₅₁	16.7	X	202.09513	136.46288	118.18611	3.34125	0.1793037	0.25686421	2.4509455	20	—	—
166098 2002 CT ₁₅₃	17.0	X	306.54815	242.27415	130.61641	5.03669	0.1622383	0.29949429	2.2124681	20	8 31.3	18.4
166099 2002 CJ ₁₅₆	16.7	X	66.55451	140.27424	57.50908	3.90946	0.0495909	0.28788467	2.2175573	20	6 30.4	19.2
166100 2002 CK ₁₅₈	17.1	X	242.40962	316.14254	127.45428	1.98295	0.1020929	0.29819692	2.2188807	20	9 6.7	19.7
166101 2002 CV ₁₅₉	16.4	X	302.54051	287.67899	330.54755	6.25473	0.1190374	0.27959039	2.3162631	20	3 1.7	19.3
166102 2002 CF ₁₆₀	16.5	X	83.48315	209.78895	348.40734	7.78023	0.0584679	0.29176403	2.2513770	20	7 30.4	19.2
166103 2002 CY ₁₆₈	16.3	X	245.85109	305.40130	115.79296	7.98366	0.0745722	0.29355394	2.2422160	20	8 14.2	18.9
166104 2002 CZ ₁₆₈	16.0	X	306.73635	228.51468	14.13198	7.28163	0.0655335	0.27375242	2.3490778	20	2 27.9	18.9
166105 2002 CX ₁₆₉	16.2	X	136.21117	25.41449	119.76021	6.94978	0.0606501	0.28816281	2.2700953	20	7 22.2	19.0
166106 2002 CH ₁₇₀	16.3	X	111.86748	180.10885	24.49507	4.95250	0.0866493	0.29231453	2.2485495	20	9 17.9	19.4
166107 2002 CB ₁₇₁	17.0	X	344.60224	163.66676	37.31928	4.17150	0.1457638	0.27353724	2.3503096	20	2 13.9	19.3
166108 2002 CV ₁₇₄	17.1	X	141.71593	27.33156	72.54054	2.87872	0.1020218	0.28497484	2.2869941	20	5 28.9	20.3
166109 2002 CQ ₁₇₉	16.7	X	292.56534	161.34222	125.81567	4.30330	0.1557582	0.28085935	2.3092811	20	3 25.2	19.5
166110 2002 CQ ₁₈₄	16.7	X	123.32204	282.15492	115.08198	2.79564	0.0409565	0.27315553	2.3524987	20	2 2.9	19.4
166111 2002 CE ₁₈₅	17.2	X	327.28527	226.12963	344.91631	3.66909	0.1836818	0.27231214	2.3573535	20	1 24.2	19.8
166112 2002 CN ₁₉₅	17.2	X	273.49009	269.07293	333.80594	1.16330	0.1649370	0.26851360	2.3795337	20	1 4.6	20.6
166113 2002 CG ₂₀₄	16.6	X	215.05673	100.55264	137.41657	4.83551	0.1415320	0.25874729	2.4390395	20	—	—
166114 2002 CH ₂₀₅	16.5	X	194.52332	331.66707	338.10495	5.22463	0.0780466	0.26816799	2.3815777	20	1 11.6	20.0
166115 2002 CO ₂₀₈	13.8	X	189.83679	35.13256	132.66117	0.76852	0.1216503	0.08374412	5.1740805	20	9 26.6	21.2
166116 2002 CJ ₂₁₄	17.2	X	303.90934	154.76144	52.18817	2.02237	0.1299308	0.26741452	2.3860492	20	—	—
166117 2002 CG ₂₁₅	16.6	X	267.81932	61.08352	340.95191	5.30365	0.1303421	0.29459224	2.2369444	20	8 8.9	19.1
166118 2002 CO ₂₁₆	16.8	X	175.05294	344.26864	71.61002	1.84988	0.1873562	0.28372310	2.2937157	20	5 8.7	20.5
166119 2002 CK ₂₂₀	16.5	X	79.90404	125.95214	136.40132	4.84355	0.1493761	0.24040462	2.5615775	20	10 27.1	20.3
166120 2002 CO ₂₂₀	16.8	X	281.19867	151.16030	71.29081	2.05717	0.1286914	0.26527975	2.3988328	20	—	—
166121 2002 CA ₂₂₁	16.6	X	281.04447	241.15013	338.04760	6.13320	0.0821069	0.26555905	2.3971506	20	—	—
166122 2002 CO ₂₂₁	16.7	X	155.92479	108.66901	357.06354	5.24976	0.1485313	0.28555495	2.2838956	20	6 24.3	20.2
166123 2002 CF ₂₂₃	12.9	X	85.78330	309.75833	325.91924	4.52764	0.0697901	0.08438918	5.1476799	20	10 12.2	19.8
166124 2002 CW ₂₂₆	16.6	X	30.42559	338.30341	282.27105	4.48869	0.1192417	0.29093367	2.2556587	20	8 17.2	18.9
166125 2002 CT ₂₂₇	16.3	X	23.66195	302.48381	263.33795	5.53696	0.0614570	0.28159939	2.3052334	20	5 2.9	18.7
166126 2002 CT ₂₂₈	16.5	X	96.45356	324.12057	203.17183	6.02909	0.0509341	0.28565875	2.2833423	20	6 28.6	19.4
166127 2002 CJ ₂₃₄	16.3	X	248.59311	71.22815	181.63251	6.48432	0.0999769	0.25954047	2.4340677	20	—	—
166128 2002 CP ₂₃₆	15.8	X	42.10076	86.33176	72.54941	5.67216	0.1621357	0.27381420	2.3487245	20	4 8.9	17.8
166129 2002 CR ₂₃₆	15.8	X	3.47748	163.41694	44.26004	7.99024	0.1847462	0.27302090	2.3532719	20	3 31.2	17.6
166130 2002 CP ₂₄₂	16.7	X	349.52415	292.04574	274.19006	4.98694	0.1622049	0.27389042	2.3482887	20	2 23.4	18.9
166131 2002 CS ₂₅₁	16.4	X	155.62113	131.43252	40.56087	6.98148	0.0779889	0.29576517	2.2310264	20	9 26.1	19.4
166132 2002 CD ₂₅₃	16.5	X	258.32952	93.06767	271.54520	3.55623	0.2156557	0.29168687	2.2517740	20	5 17.7	19.7
166133 2002 CO ₂₆₀	16.9	X	154.17478	84.16975	188.32529	1.29621	0.1572349	0.25514456	2.4619459	20	—	—
166134 2002 CR ₂₆₁	16.1	X	308.28416	5.47617	18.46224	6.64844	0.1119213	0.29876107	2.2160865	20	9 27.7	18.0
166135 2002 CJ ₂₈₆	16.9	X	296.73104	248.76043	334.31197	0.30112	0.0989865	0.26893323	2.3770578	20	1 12.5	19.7
166136 2002 CN ₂₉₆	13.2	X	104.53747	152.28749	113.40775	1.25204	0.0302511	0.08399344	5.1638364	20	10 18.8	20.0
166137 2002 CW ₂₉₈	16.5	X	251.26063	77.06504	189.61879	2.12847	0.1666613	0.26796859	2.3827590	20	1 12.2	20.1
166138 2002 CZ ₃₁₁	16.7	X	302.00971	357.65360	203.31592	5.79245	0.0829912	0.26640941	2.3920468	20	—	—
166139 2002 DZ	16.3	X	119.27532	70.21607	185.27708	13.03334	0.2356576	0.23928907	2.5695327	20	11 27.8	20.9
166140 2002 DR ₁₀	16.5	X	301.22936	46.82040	190.87387	0.88167	0.1471509	0.27042269	2.3683213	20	1 29.9	19.7
166141 2002 DF ₁₅	17.2	X	29.40469	353.35709	167.07685	10.24263	0.1426389	0.27521391	2.3407541	20	3 10.3	19.2
166142 2002 EZ	15.7	X	65.45261	150.41746	107.76347	20.61328	0.2967753	0.23728776	2.5839603	20	10 30.8	20.2
166143 2002 EC ₂	16.6	X	105.69892	128.25693	124.39572	0.42481	0.1941131	0.24472416	2.5313458	20	11 11.2	20.6
166144 2002 EO ₃	17.0	X	236.94966	85.20729	166.63443	2.37956	0.1855286	0.26149348	2.4219331	20	—	—
166145 2002 EH ₅	17.2	X	166.44455	281.09574	163.44362	6.44938	0.1646919	0.28529804	2.2852665	20	6 7.5	20.8
166146 2002 EP ₁₂	16.2	X	334.90201	24.39545	191.04261	9.91343	0.0756208	0.27089439	2.3655713	20	2 24.8	19.0
166147 2002 ED ₁₄	16.3	X	38.96489	293.37703	281.26966	3.86724	0.0667243	0.28326249	2.2962016	20	6 13.9	18.6
166148 2002 EU ₁₄	12.8	X	153.83576	41.30392	157.34970	26.37393	0.0797812	0.08270255	5.2174317	20	9 30.6	20.2
166149 2002 EO ₁₅	16.9	X	4.97555	354.11669	162.99157	3.96291	0.0624124	0.27033808	2.3688155	20	1 23.9	19.4
166150 2002 EA ₁₆	16.4	X	124.63288	168.77955	281.42542	4.50247	0.0994573	0.27681159	2.3317386	20	4 22.6	19.5
166151 2002 EM ₂₀	16.2	X	105.38635	72.57406	83.53509	3.38136	0.1665385	0.28255699	2.3000221	20	7 10.6	19.2
166152 2002 EQ ₂₃	16.6	X	253.11700	286.27119	353.88411	5.28652	0.1702795	0.26926762	2.3750894	20	1 31.9	20.4
166153 2002 ET ₂₄	17.1	X	132.15027	252.17987	163.72395	2.79807	0.1854757	0.27596540	2.3365027	20	3 28.9	20.4
166154 2002 EB												

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>		
166161	2002	EH ₃₅	16.7	X	349.74239	56.03513	185.81583	2.51027	0.1357224	0.27699637	2.3307016	20	4 26.1	18.6
166162	2002	EK ₃₉	17.3	X	318.44701	49.44762	169.92859	3.10819	0.1914588	0.26995220	2.3710724	20	1 20.8	20.3
166163	2002	ER ₃₉	16.8	X	127.45309	166.98415	6.03729	0.98558	0.1080459	0.28919053	2.2647139	20	8 23.2	19.9
166164	2002	EV ₄₀	16.4	X	277.07457	26.50382	198.35883	0.90645	0.1315348	0.26331978	2.4107216	20	—	—
166165	2002	EV ₄₁	16.4	X	266.61123	222.32587	221.97938	6.28670	0.0515764	0.30096029	2.2052775	20	10 22.5	18.7
166166	2002	EC ₄₃	16.3	X	279.01355	317.00253	270.02189	1.22608	0.1544224	0.26422616	2.4052054	20	—	—
166167	2002	EY ₄₄	16.9	X	244.42223	98.99268	339.75327	5.38710	0.0472770	0.29427243	2.2385648	20	9 9.9	19.3
166168	2002	EA ₄₇	16.9	X	147.50862	65.03224	13.76045	5.02730	0.1055470	0.28291305	2.2980919	20	5 5.5	20.1
166169	2002	EF ₄₉	17.4	X	101.00850	318.25906	169.09563	2.76304	0.1137369	0.28136471	2.3065151	20	5 18.9	20.3
166170	2002	EP ₅₂	16.3	X	225.07192	294.02792	12.88764	6.14610	0.0825017	0.27016710	2.3698148	20	2 11.5	19.6
166171	2002	ES ₅₃	16.2	X	134.26247	163.67801	176.48192	3.53673	0.1173959	0.26193067	2.4192374	20	—	—
166172	2002	EF ₅₅	16.7	X	331.42674	40.23307	163.43349	1.26926	0.1323658	0.26921849	2.3753783	20	1 27.9	19.4
166173	2002	EO ₅₅	16.6	X	268.82977	27.80108	185.09488	4.62800	0.1312312	0.26357858	2.4091433	20	—	—
166174	2002	EO ₅₇	16.0	X	222.82336	337.94482	320.74269	10.47928	0.1770890	0.26949457	2.3737558	20	1 26.9	19.8
166175	2002	EE ₅₉	16.2	X	274.09120	304.87180	323.86945	4.92903	0.1146252	0.27134384	2.3629584	20	2 11.7	19.2
166176	2002	EC ₆₁	16.6	X	237.74415	219.66233	185.69114	6.26521	0.1742876	0.29035708	2.2586439	20	6 25.3	19.9
166177	2002	EA ₆₄	16.6	X	124.22944	43.18915	208.25526	2.48924	0.1023720	0.24526872	2.5275976	20	11 23.6	20.4
166178	2002	EE ₆₆	16.4	X	175.84363	324.88030	342.44729	5.68423	0.1257246	0.26077137	2.4264021	20	—	—
166179	2002	ED ₆₈	17.0	X	265.91675	57.59127	180.25566	2.24291	0.1687884	0.26323888	2.4112155	20	—	—
166180	2002	EH ₆₈	16.8	X	286.44470	240.80273	353.97352	4.11225	0.0921398	0.26686328	2.3893338	20	1 17.5	20.0
166181	2002	EW ₆₉	16.5	X	291.80127	66.89637	186.08550	6.28266	0.0902972	0.26997711	2.3709265	20	2 14.1	19.6
166182	2002	EN ₇₂	16.3	X	300.22804	282.81286	332.24127	2.63538	0.1547950	0.27025329	2.3693109	20	2 19.8	19.4
166183	2002	EY ₇₂	16.2	X	288.21960	190.55932	3.59261	4.69346	0.0445402	0.26146842	2.4220878	20	—	—
166184	2002	EA ₈₃	17.3	X	265.87182	233.68256	350.26936	1.34729	0.1216479	0.26202875	2.4186336	20	—	—
166185	2002	EE ₈₃	16.1	X	71.56057	9.09926	203.76397	6.63107	0.0756633	0.28560013	2.2836547	20	8 1.3	18.9
166186	2002	EQ ₈₃	17.1	X	332.76536	126.89294	44.51704	2.14619	0.1269220	0.26615694	2.3935593	20	—	—
166187	2002	EY ₈₅	16.4	X	204.67739	167.06227	107.98555	2.58228	0.1292700	0.25912859	2.4366643	20	—	—
166188	2002	EF ₈₆	16.2	X	21.64249	208.99085	13.85538	4.42551	0.0678918	0.27896311	2.3197341	20	5 26.6	18.6
166189	2002	ER ₈₉	16.5	X	335.04587	275.57693	289.45964	4.49990	0.1225162	0.27094727	2.3652636	20	2 4.9	19.1
166190	2002	EL ₉₁	16.3	X	142.87371	14.77676	84.76469	2.90757	0.1380326	0.28205584	2.3027456	20	6 1.6	19.4
166191	2002	EP ₉₁	16.4	X	211.46315	206.81634	18.60550	3.14075	0.1113124	0.25412022	2.4685574	20	—	—
166192	2002	EW ₉₁	16.6	X	256.93361	311.43454	350.47561	3.24204	0.1777928	0.27244697	2.3565757	20	2 29.6	20.2
166193	2002	EO ₉₃	16.8	X	346.34286	184.85844	17.15261	4.13852	0.1280995	0.27307706	2.3529493	20	2 20.8	19.3
166194	2002	EQ ₉₃	16.6	X	214.80691	123.28149	142.34504	7.94276	0.1015223	0.26323495	2.4112395	20	—	—
166195	2002	EM ₉₅	16.6	X	346.75049	192.55860	49.59133	3.17199	0.1266171	0.27813214	2.3243522	20	4 21.2	18.5
166196	2002	EY ₉₆	17.1	X	340.14265	19.37867	162.69528	2.67154	0.1295958	0.26793605	2.3829519	20	1 11.9	19.9
166197	2002	EE ₁₀₃	17.1	X	279.69263	98.87970	140.81480	1.95437	0.1351984	0.26677286	2.3898737	20	1 9.9	20.6
166198	2002	EK ₁₀₉	16.7	X	244.49391	124.38283	143.97621	3.38429	0.1687512	0.26510255	2.3999016	20	1 8.5	20.5
166199	2002	EY ₁₁₁	17.3	X	261.74911	230.01759	34.69685	1.60200	0.1517922	0.26863865	2.3787952	20	1 21.5	21.0
166200	2002	EL ₁₁₈	16.9	X	32.20305	144.40501	33.84783	4.52354	0.1533320	0.27628397	2.3347063	20	4 14.9	18.7
166201	2002	EL ₁₂₁	16.4	X	303.93094	134.64187	3.80194	6.04339	0.0561022	0.25488643	2.4637367	20	—	—
166202	2002	ER ₁₂₃	17.0	X	191.53771	109.75804	156.17891	2.47747	0.1674623	0.25594143	2.4568331	20	—	—
166203	2002	ES ₁₂₃	16.5	X	241.64699	167.52350	134.58794	2.02250	0.1884848	0.26991767	2.3712745	20	2 15.0	20.2
166204	2002	EY ₁₂₄	16.4	X	293.63560	177.28810	147.64598	7.22054	0.1457265	0.28364265	2.2941494	20	5 22.0	19.0
166205	2002	EA ₁₂₆	17.5	X	279.83551	232.18062	356.90778	0.73596	0.1697649	0.26595876	2.3947482	20	—	—
166206	2002	EL ₁₂₆	16.9	X	273.08554	1.83755	226.80541	4.24230	0.1836558	0.26443310	2.4045567	20	—	—
166207	2002	EW ₁₂₆	16.4	X	345.24315	9.50333	219.20479	6.18426	0.0684469	0.27714231	2.3298832	20	4 1.7	18.8
166208	2002	EL ₁₂₈	17.2	X	288.51496	34.36347	11.53623	2.14650	0.1720989	0.29833219	2.2182099	20	9 14.1	18.9
166209	2002	EL ₁₂₉	16.6	X	308.65949	11.95493	204.65164	5.75510	0.0775430	0.26688108	2.3892276	20	1 21.1	19.8
166210	2002	ER ₁₃₃	16.5	X	231.16551	324.58454	328.67609	3.51824	0.1655917	0.26752298	2.3854042	20	1 27.4	20.2
166211	2002	EP ₁₃₅	12.8	X	226.67494	346.82263	160.60464	7.99151	0.0074767	0.08271087	5.2170819	20	10 20.3	19.7
166212	2002	EK ₁₃₉	16.8	X	311.12071	37.85959	357.65419	4.69563	0.1799248	0.30066486	2.2067219	20	10 17.8	18.3
166213	2002	EY ₁₄₁	17.0	X	217.32681	99.15020	168.78030	2.51298	0.1528329	0.26166214	2.4208922	20	—	—
166214	2002	EN ₁₄₄	16.9	X	184.29488	207.25535	26.87814	2.79874	0.1354989	0.25085582	2.4899269	20	—	—
166215	2002	EL ₁₄₆	16.1	X	228.76483	352.81780	279.15097	5.29279	0.0990938	0.26562218	2.3967707	20	—	—
166216	2002	EV ₁₄₆	16.8	X	204.01261	30.75772	208.04254	7.00427	0.1787402	0.25381357	2.4705453	20	—	—
166217	2002	ED ₁₄₈	16.9	X	258.09210	204.04516	57.61272	2.36091	0.1507612	0.26563582	2.3966887	20	1 14.6	20.4
166218	2002	EF ₁₄₉	16.5	X	168.05739	178.86766	138.16748	3.72905	0.1038920	0.26139837	2.4225205	20	—	—
166219	2002	EU ₁₅₀	16.0	X	249.45152	112.63406	166.02087	5.92624	0.1167862	0.26695052	2.3888132	20	1 27.9	19.6
166220	2002	EE ₁₅₃	16.2	X	49.64871	338.66798	246.97153	6.61108	0.0690919	0.28536620	2.2849026	20	7 17.5	18.8
166221	2002	EC ₁₅₅	16.6	X	226.53044	344.58360	1.15929	7.19641	0.1408181	0.27487736	2.3426643	20	3 28.0	20.1
166222	2002	FY ₃	16.2	X	17.08975	105.91235	80.28242	7.15903	0.0543667	0.27457049	2.3444095	20	3 29.8	18.9
166223	2002	FP ₅	16.1	X	218.82347	38.53071	186.11956	4.42698	0.0152499	0.25462895	2.4652683	20	—	—
166224	2002	FH ₉	16.3	X	348.69503	267.06907	263.84712	3.63005	0.1642151	0.26801554	2.3824807	20	1 4.6	18.6
166225	2002	FP ₉	16.2	X	315.72209	157.93858	279.09940	3.60979	0.1226846	0.30658581	2.1782181	20	—	—
166226	2002	FF ₁₁	15.9	X	306.26241	164.96212	44.33692	7.41113	0.0597610	0.26683607	2.3894963	20	1 13.9	19.0
166227	2002	FQ ₁₁	16.3	X	18.89026	196.74255	319.32141	6.04877	0.0675390	0.27050954	2.3678144	20	2 13.8	18.7
166228	2002	FY ₁₂	16.3	X	317.39351	193.15129	47.44312	5.29491	0.1131353	0.27124276	2.3635454	20	3 4.2	19.0
166229	Palanga		16.2	X	231.85478	223.14148	14.44250	6.32752	0.0635896	0.25858215	2.4400779	20	—	—
166230	2002	FB ₁₇	12.9	X	17.54672	359.04508	359.17856	3.77889	0.0959769	0.08221539	5.2380217	20	10 26.5	19.5
166231														

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>
166241 2002 GF ₁₂	16.2	X	124.85005	173.55001	82.48178	4.92933	0.1926313	0.24252234	2.5466438	20	12 1.0	20.4
166242 2002 GL ₁₂	15.7	X	287.76678	198.87926	28.86236	12.25773	0.2109022	0.26235727	2.4166142	20	—	—
166243 2002 GL ₁₃	16.1	X	6.06062	8.40356	199.23905	1.84403	0.1534598	0.27295721	2.3536380	20	4 4.2	17.8
166244 2002 GD ₁₄	16.6	X	275.06371	169.25862	43.07008	2.79731	0.1500355	0.25925899	2.4358292	20	—	—
166245 2002 GG ₁₆	16.8	X	292.41231	81.73843	153.31839	3.32841	0.1447298	0.26667083	2.3904833	20	1 16.8	20.1
166246 2002 GR ₁₆	16.2	X	341.14642	137.53417	62.60576	3.48324	0.1067354	0.26913160	2.3758896	20	2 13.0	18.7
166247 2002 GB ₂₀	16.6	X	352.41498	162.92557	7.89193	2.56395	0.1331533	0.26611940	2.3937843	20	1 16.8	19.0
166248 2002 GZ ₂₀	16.3	X	286.37256	251.77555	331.30711	1.05950	0.1397707	0.26178445	2.4201381	20	—	—
166249 2002 GB ₂₁	16.0	X	282.81362	231.47996	10.74219	2.69044	0.1433656	0.26343331	2.4100289	20	1 16.9	19.4
166250 2002 GG ₂₃	16.2	X	31.91645	326.15467	218.73328	4.88076	0.1380445	0.27482450	2.3429647	20	4 23.1	18.0
166251 2002 GU ₂₃	16.6	X	321.86259	280.87674	308.07010	1.36037	0.1626992	0.26894902	2.3769648	20	2 12.8	19.1
166252 2002 GJ ₂₅	16.7	X	78.02235	118.89322	187.52885	2.96861	0.1765979	0.24026995	2.5625347	20	12 18.9	20.6
166253 2002 GD ₂₇	16.4	X	286.03212	339.56517	212.24653	4.35443	0.0406204	0.25628164	2.4546584	20	—	—
166254 2002 GO ₃₃	16.6	X	107.99993	177.88142	48.50233	6.99558	0.0799169	0.29463491	2.2367284	20	10 13.6	19.5
166255 2002 GF ₄₂	16.9	X	15.92242	166.29072	340.09563	0.83934	0.1280459	0.26823461	2.3811834	20	1 23.2	18.9
166256 2002 GV ₄₄	15.6	X	13.27317	296.81562	9.57830	16.09922	0.2300512	0.23154705	2.6264948	20	10 3.5	18.2
166257 2002 GQ ₅₅	16.9	X	146.45843	121.04788	123.60675	1.36831	0.2497604	0.24314239	2.5423125	20	12 4.2	21.4
166258 2002 GY ₆₀	16.5	X	34.84745	149.25484	77.13488	3.07387	0.0655081	0.28083000	2.3094419	20	6 24.9	18.9
166259 2002 GE ₆₂	16.7	X	155.75652	110.07025	192.59230	8.63638	0.0512324	0.25453823	2.4658541	20	—	—
166260 2002 GF ₆₅	16.2	X	293.84589	268.46007	11.12722	6.50842	0.1128948	0.27353382	2.3503292	20	3 22.5	18.9
166261 2002 GN ₆₅	16.7	X	239.87200	97.55148	186.79416	2.04339	0.1603317	0.26380458	2.4077672	20	1 24.0	20.4
166262 2002 GK ₆₈	15.1	X	32.16578	149.54324	109.78335	15.08466	0.2650138	0.22474348	2.6792382	20	9 10.8	18.4
166263 2002 GQ ₆₉	16.6	X	52.72668	176.46424	122.73587	3.10344	0.2173973	0.23586536	2.5943383	20	11 19.2	20.2
166264 2002 GL ₇₄	15.9	X	336.54663	271.00206	289.37845	4.19605	0.1423687	0.26822175	2.3812595	20	1 29.5	18.6
166265 2002 GM ₈₃	15.2	X	84.49422	160.68388	108.81230	6.86263	0.1371077	0.18357998	3.0660966	20	11 1.4	19.9
166266 2002 GO ₈₄	16.0	X	116.31817	13.58439	160.59210	8.75908	0.1694137	0.28570549	2.2830933	20	8 15.4	19.4
166267 2002 GW ₈₇	16.3	X	45.36209	52.22048	86.32089	4.86807	0.1432138	0.26998372	2.3708878	20	3 12.9	18.5
166268 2002 GQ ₈₉	16.9	X	110.01189	81.27233	137.72889	1.06856	0.1788407	0.27570063	2.3379984	20	4 29.2	20.1
166269 2002 GY ₈₉	16.1	X	173.60686	311.50462	17.27799	5.95483	0.1351322	0.26094130	2.4253486	20	1 18.8	19.8
166270 2002 GJ ₉₀	16.9	X	161.09195	124.37952	198.10998	3.99835	0.1902268	0.25689933	2.4507221	20	1 2.0	20.6
166271 2002 GT ₉₀	16.7	X	215.45295	113.87982	192.75513	1.39476	0.1259685	0.26389147	2.4072387	20	1 29.5	20.4
166272 2002 GB ₉₄	16.5	X	93.76489	254.55808	5.00570	11.40719	0.1635781	0.23803069	2.5785808	20	11 2.1	20.6
166273 2002 GH ₉₄	16.5	X	320.10351	251.38801	272.15225	3.40251	0.0847958	0.26151041	2.4218286	20	—	—
166274 2002 GJ ₉₄	16.3	X	204.60065	277.81140	330.14032	5.28898	0.1186228	0.25451046	2.4660334	20	—	—
166275 2002 GS ₉₄	16.0	X	206.79824	18.08436	338.75675	2.30980	0.1507150	0.27114615	2.3641068	20	3 22.9	19.5
166276 2002 GN ₉₅	16.4	X	242.56617	21.88812	243.21197	5.90890	0.1430888	0.26119726	2.4237639	20	1 3.9	20.1
166277 2002 GM ₉₆	16.7	X	352.30958	220.31373	268.07500	1.56250	0.1438317	0.26118252	2.4238551	20	—	—
166278 2002 GQ ₉₆	15.7	X	246.22278	340.87113	320.14072	6.23202	0.170184	0.26861763	2.3789193	20	2 22.5	19.0
166279 2002 GM ₉₉	16.4	X	206.82709	75.01034	13.75272	4.68122	0.1708010	0.28981675	2.2614504	20	7 23.5	19.7
166280 2002 GE ₁₁₁	16.3	X	281.30240	132.93883	95.19732	7.16206	0.0568627	0.26241845	2.4162385	20	1 6.9	19.4
166281 2002 GQ ₁₁₈	16.7	X	171.88872	28.57073	94.71504	5.00127	0.0816911	0.28858701	2.2678702	20	8 5.9	19.8
166282 2002 GU ₁₂₃	17.0	X	132.67762	34.25513	62.68825	4.57003	0.1078140	0.27886593	2.3202730	20	5 14.9	20.1
166283 2002 GA ₁₂₅	16.8	X	356.80377	330.87970	300.45837	1.64556	0.0772915	0.28174259	2.3044523	20	6 28.6	19.1
166284 2002 GM ₁₂₅	16.7	X	263.78042	93.37420	209.40892	6.13937	0.1208956	0.27246832	2.3564526	20	3 12.6	19.9
166285 2002 GY ₁₂₇	13.1	X	265.05522	264.97721	204.26816	5.12677	0.0625499	0.08237165	5.2313953	20	10 11.0	19.9
166286 2002 GB ₁₅₃	16.6	X	115.94583	279.17046	351.73151	4.71570	0.1474684	0.24316187	2.5421767	20	12 9.3	20.6
166287 2002 GQ ₁₅₃	16.4	X	161.48947	20.53094	65.73083	7.25933	0.0816040	0.28240615	2.3008411	20	5 31.8	19.3
166288 2002 GM ₁₆₀	16.5	X	314.93926	96.53307	105.04022	4.36510	0.0541324	0.26611172	2.3938304	20	1 14.9	19.3
166289 2002 GH ₁₆₃	16.8	X	206.63851	116.31002	150.72188	2.05889	0.0700060	0.25742538	2.4473823	20	—	—
166290 2002 HK ₄	15.8	X	30.94394	86.24485	194.77789	12.44974	0.2100625	0.22947480	2.6422833	20	9 23.3	18.9
166291 2002 HE ₁₀	16.1	X	4.88627	123.05181	37.81195	5.98900	0.1129947	0.26733219	2.3865391	20	1 27.9	18.6
166292 2002 HA ₁₆	16.3	X	77.22095	94.49155	197.31575	8.94226	0.2040849	0.23826003	2.5769259	20	12 3.4	20.4
166293 2002 HB ₁₆	17.0	X	181.11033	100.32577	185.65530	2.45533	0.1906197	0.25500681	2.4628324	20	—	—
166294 2002 HJ ₁₆	16.1	X	227.93160	300.00936	38.55494	4.55590	0.1425905	0.27133496	2.3630099	20	3 22.5	19.6
166295 2002 JL ₁	15.5	X	59.41284	186.91433	117.81369	14.62543	0.2801427	0.23409882	2.6073734	20	12 10.5	19.8
166296 2002 JP ₃	16.2	X	80.63765	227.84733	32.55214	10.72019	0.1958866	0.23513295	2.5997229	20	10 27.2	20.2
166297 2002 JC ₅	16.4	X	239.46714	181.72832	86.40738	2.21702	0.1621797	0.25882223	2.4385687	20	1 5.1	20.2
166298 2002 JL ₆	16.8	X	59.06481	75.12141	211.01168	1.67674	0.1785026	0.23349652	2.6118552	20	11 3.7	20.5
166299 2002 JN ₈	16.8	X	80.44187	80.07848	165.18242	7.41905	0.1671413	0.23263809	2.6182764	20	10 6.4	20.7
166300 2002 JG ₁₂	16.8	X	326.53301	201.48975	22.81716	1.33532	0.1389087	0.26806854	2.3821667	20	2 18.1	19.5
166301 2002 JJ ₁₃	16.7	X	65.36965	321.97906	223.80041	5.23153	0.1649403	0.27795300	2.3253508	20	6 29.4	19.5
166302 2002 JV ₁₄	16.2	X	266.98931	95.03199	93.08215	3.36433	0.1358692	0.25462694	2.4652813	20	—	—
166303 2002 JX ₁₅	16.1	X	305.92569	59.36724	212.72754	5.47625	0.1130412	0.27227797	2.3575507	20	3 27.2	18.9
166304 2002 JU ₁₆	15.9	X	100.08676	187.31086	79.34936	12.15955	0.1563576	0.23855621	2.5747925	20	11 21.5	19.9
166305 2002 JX ₂₂	16.3	X	100.99400	35.48024	213.84220	12.22765	0.2342623	0.23624274	2.5915747	20	11 4.7	20.7
166306 2002 JT ₂₅	16.4	X	90.91654	84.15539	148.98758	3.60226	0.2666252	0.23302320	2.6153909	20	10 10.7	20.6
166307 2002 JA ₂₆	16.4	X	91.86628	182.56258	100.56153	4.71819	0.2023716	0.23810463	2.5780470	20	12 5.5	20.6
166308 2002 JQ ₂₇	16.1	X	256.06843	90.81081	184.92404	2.21314	0.1684125	0.26344507	2.4099572	20	1 28.0	19.8
166309 2002 JQ ₃₃	15.9	X	86.25710	38.30715	201.46614	4.27280	0.1337680	0.23223551	2.6213014	20	9 29.8	19.6
166310 2002 JU ₃₆	16.5	X	64.57695	47.21590	131.23454	6.43447	0.1398557	0.27701036	2.3306231	20	6 13.9	19.1
166311 2002 JX ₃₆	15.7	X	78.93407	188.69079	90.01706	5.85855	0.3004099	0.23527957	2.5986427	20	11 26.5	20.2
166312 2002 JY ₄₃	16.0	X	32.22130	243.57296	312.04749	4.32753	0.1312244	0.27572027	2.3378874	20	5 8.6	18.2
166313 2002 JM ₄₅	16.8	X	118.07854	124.45772	4.01078	2.61972	0.1582253	0.27967507	2.3157955	20	6 15.4	20.1
166314 2002 JW ₄₉	16.6											

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>
166321 2002 JT ₆₆	16.1	X	68.78967	66.26091	189.22856	11.21717	0.2140097	0.23265882	2.6181210	20	10 11.5	19.8
166322 2002 JP ₇₅	15.9	X	45.46861	78.84581	215.23108	12.34382	0.1659755	0.23082001	2.6320072	20	10 25.9	19.4
166323 2002 JZ ₇₆	16.5	X	105.35390	249.07776	25.95710	4.48762	0.2432317	0.24096086	2.5576339	20	12 8.4	20.9
166324 2002 JW ₇₉	17.0	X	314.89805	204.01783	343.57045	0.80333	0.1220444	0.26262738	2.4149569	20	—	—
166325 2002 JO ₈₃	16.6	X	211.99622	263.53260	36.82662	6.21628	0.1148129	0.26046114	2.4283285	20	1 20.8	20.4
166326 2002 JK ₈₇	16.7	X	128.17825	264.05562	26.58451	3.27141	0.0650631	0.24618161	2.5213452	20	—	—
166327 2002 JU ₈₈	16.2	X	101.82572	24.79266	253.09174	4.14552	0.1114618	0.24091005	2.5579935	20	12 2.7	20.0
166328 2002 JX ₈₉	16.4	X	137.81655	246.47928	28.82848	2.90177	0.0531739	0.24589602	2.5232971	20	—	—
166329 2002 JW ₉₀	15.7	X	2.98220	287.07347	44.47486	17.82039	0.2748849	0.22923794	2.6441031	20	10 29.4	18.0
166330 2002 JU ₉₃	16.2	X	327.22674	191.93267	316.20802	0.88017	0.1248869	0.25710928	2.4493878	20	—	—
166331 2002 JF ₉₄	16.5	X	71.16560	126.82068	47.41923	7.00412	0.0699702	0.27567978	2.3381163	20	6 4.3	19.2
166332 2002 JB ₉₅	16.6	X	356.88905	166.07914	36.02325	2.69764	0.1518483	0.26890545	2.3772215	20	3 8.9	18.7
166333 2002 JH ₉₅	16.6	X	263.74558	199.87182	18.53381	3.15915	0.1240459	0.25633094	2.4543436	20	—	—
166334 2002 JN ₁₀₇	16.7	X	136.72511	91.19201	181.24959	14.72534	0.2223689	0.24562199	2.5251735	20	12 29.1	21.3
166335 2002 JR ₁₀₈	16.0	X	69.92346	55.27741	198.48675	31.37738	0.2258615	0.23050734	2.6343868	20	10 10.9	19.8
166336 2002 JN ₁₂₁	16.1	X	36.46799	178.26589	126.07414	13.29033	0.1832076	0.23316883	2.6143018	20	11 5.4	19.7
166337 2002 JZ ₁₂₄	16.1	X	156.17226	41.65435	178.61772	12.20926	0.1287494	0.24061511	2.5600834	20	11 17.8	20.2
166338 2002 JH ₁₂₅	16.8	X	306.20758	138.94246	14.06930	2.51005	0.1184630	0.25634761	2.4542372	20	—	—
166339 2002 JX ₁₂₅	16.5	X	211.03728	188.81213	232.32780	5.37327	0.0841907	0.28050964	2.3112000	20	6 24.8	19.6
166340 2002 JQ ₁₂₉	16.4	X	82.76249	130.06541	151.05036	4.72686	0.1574747	0.23718805	2.5846844	20	11 21.8	20.3
166341 2002 JV ₁₂₉	16.1	X	296.72847	43.79962	115.40124	7.23830	0.0500468	0.25400493	2.4693043	20	—	—
166342 2002 JF ₁₃₂	16.1	X	70.45334	17.07579	271.35101	9.49120	0.2005669	0.23651824	2.5895618	20	11 20.5	20.1
166343 2002 JB ₁₃₅	16.3	X	359.53090	124.52853	17.61699	6.30437	0.1113237	0.26218036	2.4177011	20	—	—
166344 2002 JL ₁₃₉	16.1	X	101.93829	5.07547	270.93021	6.95266	0.1208340	0.24036122	2.5618859	20	11 30.7	19.9
166345 2002 JU ₁₄₄	16.0	X	83.31435	44.43404	163.25992	14.03847	0.1032966	0.22796261	2.6539555	20	8 9.7	19.7
166346 2002 JN ₁₄₅	15.7	X	95.33287	139.16926	143.82570	14.57000	0.1840895	0.23980349	2.5658566	20	12 9.4	20.1
166347 2002 KQ ₁	16.3	X	354.56468	277.81103	20.32671	7.37567	0.2799368	0.22503147	2.6769517	20	8 14.2	18.2
166348 2002 KD ₂	15.8	X	21.61858	291.64523	60.28639	28.92027	0.2067719	0.23600431	2.5933199	20	12 11.5	19.2
166349 2002 KO ₃	16.5	X	342.07615	287.57690	6.81294	2.09647	0.1872528	0.22266115	2.6959164	20	6 29.1	19.1
166350 2002 KH ₅	16.5	X	78.91305	173.51151	124.91683	3.12002	0.2054221	0.23637699	2.5905934	20	12 12.1	20.6
166351 2002 KP ₇	12.4	X	315.81425	292.63003	129.80869	12.41936	0.0498851	0.08120581	5.2813465	20	10 24.4	19.3
166352 2002 KN ₉	15.1	X	21.67194	207.99514	102.60084	16.09330	0.2651909	0.22461085	2.6802928	20	11 5.4	18.5
166353 2002 KB ₁₀	16.6	X	120.89948	98.45202	194.64805	4.43845	0.1930787	0.24435824	2.5338723	20	—	—
166354 2002 KC ₁₀	16.0	X	45.07334	241.85013	57.90393	15.08338	0.2559317	0.23315476	2.6144070	20	11 15.7	19.7
166355 2002 KW ₁₀	16.8	X	193.11180	67.57666	214.95686	3.03180	0.1603662	0.25271924	2.4776722	20	—	—
166356 2002 KD ₁₄	15.7	X	14.22552	145.88935	143.01083	13.81348	0.2644456	0.22460543	2.6803358	20	9 17.2	18.3
166357 2002 LW ₃	16.2	X	63.17495	207.35809	96.84892	5.28838	0.2414081	0.23526757	2.5987310	20	12 7.9	20.1
166358 2002 LZ ₆	15.4	X	175.49369	57.14136	191.98854	14.85433	0.0823245	0.24473039	2.5313029	20	—	—
166359 2002 LJ ₁₅	16.1	X	169.33298	261.72731	323.46804	1.55827	0.2216147	0.24240778	2.5474461	20	11 29.2	20.3
166360 2002 LR ₁₅	16.3	X	85.20421	250.07197	350.06754	1.08567	0.1503071	0.23076266	2.6324433	20	10 1.1	20.1
166361 2002 LO ₁₆	16.5	X	326.32268	303.86222	313.47170	3.67070	0.1960144	0.21467734	2.7623492	20	3 30.2	19.8
166362 2002 LF ₁₇	15.8	X	54.74547	70.65816	241.80915	12.36458	0.1932432	0.23500753	2.6006477	20	12 3.9	19.6
166363 2002 LL ₂₂	16.1	X	69.98146	69.13569	255.76101	3.51963	0.2086031	0.23756751	2.5819313	20	—	—
166364 2002 LY ₂₄	16.4	X	145.08164	125.18685	122.37699	4.24794	0.1149519	0.24138194	2.5546586	20	12 8.9	20.2
166365 2002 LZ ₂₄	16.3	X	26.26815	128.84357	174.57088	3.89562	0.1845031	0.22942680	2.6426518	20	10 14.9	19.4
166366 2002 LH ₂₅	16.0	X	36.20159	118.74534	177.02526	13.93024	0.1882316	0.23075339	2.6325138	20	10 21.7	19.4
166367 2002 LF ₂₆	16.5	X	79.79395	108.22416	125.64710	3.22055	0.1497045	0.22910982	2.6450887	20	9 18.3	20.2
166368 2002 LC ₂₇	16.6	X	348.98961	163.10960	128.00197	11.70265	0.2760722	0.22038913	2.7144131	20	7 8.3	17.5
166369 2002 LM ₂₈	16.3	X	101.57184	41.66532	229.53916	6.07874	0.2459542	0.23627010	2.5913747	20	12 1.3	20.7
166370 2002 LG ₂₉	14.8	X	40.11371	249.28120	85.97539	12.71760	0.2096663	0.23029768	2.6359855	20	12 16.9	18.5
166371 2002 LL ₃₁	15.8	X	287.26117	185.71030	66.81059	7.73095	0.0435255	0.26191125	2.4193570	20	2 21.0	19.0
166372 2002 LO ₃₂	15.8	X	41.25650	139.47915	125.01312	11.74766	0.1756358	0.22769718	2.6560176	20	9 15.7	19.2
166373 2002 LX ₃₂	15.9	X	21.18425	135.44636	156.78881	16.18937	0.1918121	0.22778655	2.6553228	20	9 23.3	18.8
166374 2002 LG ₃₆	16.4	X	291.18486	100.55107	236.10312	8.00396	0.3069339	0.21381022	2.7698128	20	5 7.6	19.2
166375 2002 LS ₃₉	16.2	X	161.65201	49.16699	202.93949	8.45981	0.1601955	0.24382603	2.5375581	20	12 27.6	20.3
166376 2002 LU ₄₂	16.1	X	19.78377	80.17016	219.60067	12.08576	0.1693552	0.22639796	2.6661693	20	9 21.4	19.2
166377 2002 LC ₄₃	15.3	X	57.70256	207.58666	142.70096	14.33205	0.1712161	0.23590376	2.5940567	20	—	—
166378 2002 LX ₄₃	15.2	X	21.36644	43.47817	255.50998	14.52462	0.1274206	0.22316222	2.6918794	20	9 11.6	18.8
166379 2002 LF ₄₆	16.0	X	4.87792	202.69330	117.83161	15.18347	0.2698440	0.22611819	2.6683680	20	10 21.5	17.9
166380 2002 LG ₄₆	16.3	X	336.68942	103.81470	183.02821	8.99925	0.2612632	0.21861489	2.7290797	20	5 28.2	18.8
166381 2002 LT ₄₆	15.2	X	40.99989	181.84793	106.35184	18.77495	0.2152668	0.22977790	2.6399591	20	10 29.4	19.1
166382 2002 LA ₅₀	16.1	X	166.13865	13.45461	163.36357	2.10488	0.1562985	0.23613231	2.5923827	20	10 1.5	20.2
166383 2002 LN ₅₀	15.6	X	14.72668	183.61285	135.31737	5.30809	0.2145944	0.22489452	2.6780384	20	10 22.8	18.5
166384 2002 LS ₅₇	16.0	X	113.89986	59.46566	201.43195	9.23344	0.1768556	0.23791105	2.5794452	20	11 27.1	20.2
166385 2002 MX ₂	15.2	X	306.21862	25.67470	307.71713	15.78866	0.2482612	0.21496698	2.7598674	20	6 3.2	18.7
166386 2002 NO ₄	16.3	X	104.70205	150.83023	160.59886	6.31452	0.1428116	0.24129096	2.5553007	20	—	—
166387 2002 NU ₄	15.8	X	318.28748	80.39182	278.92222	5.22470	0.0390795	0.22307130	2.6926108	20	8 26.7	19.3
166388 2002 NC ₅	16.0	X	45.12626	98.24746	181.56819	1.60917	0.0441687	0.22506857	2.6766576	20	9 16.9	19.6
166389 2002 NK ₈	15.8	X	25.64733	149.22641	141.45876	14.45615	0.1220284	0.22289688	2.6940153	20	9 17.7	19.1
166390 2002 NE ₉	15.5	X	109.49335	316.75560	295.97219	13.20315	0.0855413	0.23261199	2.6184723	20	11 1.7	19.7
166391 2002 NA ₁₀	15.3	X	330.15413	44.86968	265.74012	7.54997	0.2200996	0.21756815	2.7378260	20	6 23.1	17.7
166392 2002 ND ₁₃	15.6	X	323.03794	238.07939	119.86249	10.23855	0.2345357	0.22050966	2.7134239	20	8 21.7	17.9
166393 2002 NM ₁₄	16.3	X	289.92500	177.26321	135.36379	11.92419	0.2858072	0.21137121	2.7910792	20	4 13.6	20.5
166394 2002 NB ₁₅	15											

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>
166401 2002 NG ₂₄	15.7	X	283.28301	98.24525	245.52129	5.22448	0.1767262	0.21251163	2.7810849	20	5 26.9	19.4
166402 2002 NV ₂₉	15.7	X	195.97908	350.45476	332.28036	0.80544	0.1167547	0.19852755	2.9101957	20	2 7.1	20.3
166403 2002 NQ ₃₁	15.9	X	49.99241	122.62958	176.34694	11.36319	0.2067526	0.22839755	2.6505851	20	11 14.6	19.8
166404 2002 NP ₄₁	15.7	X	335.45166	211.89995	109.01923	13.08730	0.1073671	0.21889907	2.7267173	20	7 30.4	18.7
166405 2002 NB ₄₅	16.0	X	359.77618	64.29871	218.74259	4.41242	0.2882928	0.21859225	2.7292681	20	7 28.1	17.9
166406 2002 NZ ₅₁	15.3	X	247.26540	275.38893	128.99841	10.77700	0.2027010	0.21426449	2.7658964	20	6 29.3	19.7
166407 2002 NC ₅₃	15.7	X	338.40914	229.46253	126.20914	8.54692	0.1981557	0.22246607	2.6974922	20	9 29.9	18.2
166408 2002 NU ₆₁	16.4	X	73.39910	125.93951	173.47999	3.00462	0.1663914	0.22746010	2.6578628	20	10 20.6	20.2
166409 2002 OP	15.3	X	26.89377	13.89069	237.61239	9.04233	0.2428418	0.22179057	2.7029665	20	9 25.7	18.6
166410 2002 OT ₁	15.0	X	107.35088	299.70775	274.83227	13.48388	0.0986109	0.22307738	2.6925619	20	9 8.9	19.3
166411 2002 OV ₁	15.5	X	90.43694	37.36421	211.51011	7.28979	0.2012038	0.22756595	2.6570386	20	10 21.9	19.6
166412 2002 OL ₂	15.5	X	34.78916	113.97918	207.34756	13.59490	0.1168121	0.22674116	2.6634782	20	11 9.1	18.9
166413 2002 OG ₆	15.5	X	286.54040	177.54787	243.69530	8.61111	0.0820236	0.22442786	2.6817495	20	9 27.4	19.1
166414 2002 OF ₁₆	15.8	X	118.28652	112.09147	178.34050	7.42515	0.1336939	0.23803681	2.5785366	20	—	—
166415 2002 OQ ₁₆	16.2	X	324.49251	137.05912	164.45328	9.72513	0.2103492	0.21547017	2.7555690	20	5 31.2	19.2
166416 2002 OY ₁₆	15.4	X	235.03170	119.57323	263.05449	10.76616	0.1072567	0.21144638	2.7904177	20	5 28.9	19.6
166417 2002 OL ₁₇	15.5	X	56.24265	131.91929	168.83566	11.93429	0.1583611	0.22781831	2.6550760	20	11 17.7	19.4
166418 2002 OP ₁₈	15.5	X	355.22181	182.97462	160.44648	12.55330	0.1932981	0.22278029	2.6949551	20	10 18.1	18.3
166419 2002 OA ₂₅	16.8	X	5.94206	321.88903	32.34714	1.49068	0.1038786	0.22676464	2.6632943	20	11 7.6	19.7
166420 2002 OH ₂₆	15.5	X	220.79861	276.28407	124.36660	9.94381	0.1630799	0.20886657	2.8133478	20	6 3.3	20.1
166421 2002 OB ₂₇	16.3	X	192.77987	98.99155	244.26311	4.09477	0.0688969	0.19973738	2.8984322	20	2 25.6	20.7
166422 2002 PS ₁	15.3	X	253.58988	343.31677	339.55500	7.67180	0.2046636	0.20446670	2.8535642	20	3 23.7	19.8
166423 2002 PZ ₁	15.3	X	298.34455	343.59772	323.85777	7.34317	0.2134350	0.21128536	2.7918352	20	4 19.7	19.2
166424 2002 PX ₇	16.1	X	149.53235	16.28781	201.80308	3.66276	0.1192737	0.23233830	2.6205283	20	11 5.8	20.2
166425 2002 PE ₈	16.5	X	48.15290	66.90418	191.53744	8.90993	0.1921128	0.22339660	2.6899962	20	9 13.9	20.0
166426 2002 PZ ₉	16.1	X	261.57059	188.76587	178.23993	6.58727	0.0685735	0.21267570	2.7796544	20	6 15.3	20.0
166427 2002 PZ ₁₅	16.2	X	13.96416	137.49480	171.47623	4.54187	0.1270792	0.22366228	2.6878656	20	9 21.9	19.1
166428 2002 PY ₂₂	15.8	X	129.74207	240.36250	294.22720	4.02597	0.0444631	0.22009734	2.7168115	20	8 15.8	19.7
166429 2002 PJ ₂₃	16.0	X	275.12382	187.70686	152.64237	9.80969	0.1731081	0.21093501	2.7949258	20	5 15.6	20.1
166430 2002 PS ₂₃	16.1	X	312.30030	138.03859	244.40574	1.83231	0.2000539	0.22104669	2.7090272	20	9 4.9	18.8
166431 2002 PF ₂₄	16.1	X	358.94357	351.34574	270.24604	2.30921	0.0445205	0.21335258	2.7737722	20	6 14.8	19.5
166432 2002 PG ₂₄	16.5	X	174.12579	77.13357	173.61143	1.68321	0.1278462	0.24008229	2.5638698	20	—	—
166433 2002 PJ ₃₀	16.0	X	296.12210	189.38622	173.13095	6.80931	0.1026806	0.21657078	2.7462252	20	7 21.3	19.4
166434 2002 PD ₃₁	15.4	X	321.06112	14.33064	313.51148	5.89495	0.0910171	0.21614299	2.7498475	20	7 16.1	18.7
166435 2002 PY ₃₂	15.7	X	275.47897	79.58981	313.46473	7.83343	0.1890111	0.21588158	2.7520669	20	7 20.9	19.2
166436 2002 PA ₃₃	15.6	X	5.31813	4.23226	302.08634	6.90865	0.1279294	0.22026131	2.7154631	20	8 30.5	18.6
166437 2002 PE ₃₃	16.1	X	305.12444	86.33469	271.16457	6.62234	0.2331704	0.21770632	2.7366674	20	7 9.5	19.2
166438 2002 PD ₃₄	16.2	X	286.61404	356.97265	332.75580	2.80559	0.0736807	0.21009734	2.8023498	20	5 28.1	20.0
166439 2002 PP ₃₅	15.6	X	239.30902	106.92575	276.65632	2.62149	0.1088309	0.21049738	2.7987982	20	6 3.9	19.7
166440 2002 PH ₄₃	16.1	X	352.76891	335.36661	317.00224	8.79008	0.1926393	0.21815315	2.7329292	20	7 21.9	18.5
166441 2002 PA ₅₁	15.8	X	265.53277	113.98025	265.93930	5.12642	0.0390840	0.21591534	2.7517801	20	7 11.8	19.4
166442 2002 PR ₅₁	16.2	X	346.01558	216.58867	100.88998	3.49657	0.1532243	0.21963647	2.7206108	20	8 14.3	18.9
166443 2002 PE ₅₂	16.3	X	290.69092	317.29503	23.37660	2.39919	0.1005498	0.21388324	2.7691823	20	6 14.1	19.8
166444 2002 PJ ₅₄	15.0	X	212.73942	300.33387	129.51537	26.70996	0.2389130	0.21161490	2.7889361	20	6 28.6	20.1
166445 2002 PR ₅₅	16.0	X	41.04640	12.26954	257.69760	5.19990	0.3281633	0.22408227	2.6845061	20	10 9.9	19.6
166446 2002 PF ₅₈	15.2	X	13.29060	105.76121	315.74029	20.95062	0.1435226	0.23435230	2.6054929	20	—	—
166447 2002 PO ₅₈	15.6	X	289.49965	182.75086	153.55669	9.31540	0.1623612	0.21099678	2.7943802	20	5 29.8	19.5
166448 2002 PU ₆₉	15.3	X	301.76324	85.31005	244.71491	8.46493	0.1867555	0.21184991	2.7868731	20	6 2.5	18.5
166449 2002 PD ₇₀	15.3	X	56.05130	25.59144	201.86656	13.96870	0.0487518	0.21540708	2.7561069	20	7 19.4	19.3
166450 2002 PP ₇₂	16.0	X	271.38398	175.31723	199.47981	9.66228	0.2882383	0.21281407	2.7784494	20	6 6.8	20.3
166451 2002 PT ₇₂	15.9	X	330.77720	188.60665	215.15084	10.82432	0.2138996	0.22640016	2.6661519	20	11 23.3	18.2
166452 2002 PF ₇₄	15.6	X	85.25878	64.96608	191.74423	12.52095	0.1462914	0.22640896	2.6660829	20	10 22.4	19.5
166453 2002 PV ₇₅	15.7	X	102.89849	279.29615	325.88516	14.30523	0.0515147	0.22751440	2.6574399	20	10 9.4	19.7
166454 2002 PC ₇₆	16.2	X	319.70721	284.18279	26.25036	3.24889	0.0847237	0.21452269	2.7636766	20	6 18.9	19.7
166455 2002 PG ₇₇	15.6	X	9.55748	282.87105	336.41451	12.06133	0.2533532	0.21758957	2.7376463	20	7 17.7	18.0
166456 2002 PQ ₇₇	15.5	X	337.10418	290.50574	18.98434	7.66957	0.2962720	0.21694511	2.7430653	20	7 1.1	17.5
166457 2002 PR ₈₀	15.7	X	289.09534	227.10568	104.05378	8.93489	0.2282080	0.21241360	2.7819405	20	5 12.9	19.5
166458 2002 PA ₈₂	15.4	X	339.24727	223.49618	150.54061	13.06789	0.1615870	0.22411007	2.6842840	20	10 29.1	18.4
166459 2002 PL ₈₉	15.4	X	353.62310	67.84335	239.39188	11.27505	0.2079983	0.21855863	2.7295481	20	8 10.2	18.1
166460 2002 PC ₉₀	15.6	X	266.57622	146.50793	214.59738	12.16165	0.1918419	0.21101231	2.7942431	20	5 27.5	19.7
166461 2002 PL ₉₀	15.9	X	36.13259	42.65511	245.00611	10.92052	0.1829248	0.22334794	2.6903870	20	10 1.6	19.4
166462 2002 PX ₉₂	15.3	X	333.99430	133.31256	265.75795	13.75201	0.1526325	0.22502710	2.6769864	20	11 17.1	18.1
166463 2002 PH ₉₃	15.3	X	214.89952	126.81468	273.92225	15.35411	0.1566536	0.20607456	2.8387020	20	5 26.8	20.0
166464 2002 PQ ₉₆	15.7	X	16.88165	281.91874	52.00874	2.02868	0.1069943	0.22492772	2.6777749	20	10 28.4	18.7
166465 2002 PH ₉₈	15.3	X	307.89767	258.89108	114.89788	10.11354	0.1594153	0.21756101	2.7378859	20	8 22.2	18.3
166466 2002 PJ ₉₉	15.6	X	291.89722	297.90217	136.39246	13.61094	0.2470539	0.22271095	2.6955145	20	10 10.2	18.6
166467 2002 PR ₁₀₀	16.1	X	241.45147	88.15932	323.96354	1.26090	0.0693592	0.21551823	2.7551592	20	7 19.5	20.0
166468 2002 PP ₁₀₁	16.2	X	339.86233	72.39978	176.45561	12.35457	0.1842381	0.21109424	2.7935200	20	4 18.8	19.2
166469 2002 PV ₁₀₇	15.6	X	272.97518	177.38434	174.90246	13.34789	0.1451390	0.21309524	2.7760048	20	5 31.6	19.7
166470 2002 PW ₁₀₈	16.5	X	44.01373	279.56708	38.52245	4.80739	0.1949014	0.22848234	2.6499293	20	11 26.9	20.2
166471 2002 PE ₁₀₉	15.8	X	306.51275	277.65195	108.31828	7.11673	0.0573327	0.22283004	2.6945540	20	9 19.4	19.2
166472 2002 PG ₁₁₆	15.1	X	188.30042	124.18370	305.58242	14.21303	0.1219356	0.20518639	2.8468878	20	6 8.1	19.8
166473 2002 PL ₁₁₇	15.1	X	342.23827	28.91222	252.28009	12.11399	0.1965753	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>
166481 2002 PP ₁₃₆	15.8 ^m	X	269.13619	83.70054	261.26310	1.87154	0.1251682	0.21067113	2.7972591	20	5 17.9	19.8
166482 2002 PY ₁₃₇	15.8	X	336.84528	344.72497	332.00653	4.60786	0.0569228	0.21625319	2.7489133	20	7 28.5	19.2
166483 2002 PC ₁₃₈	15.8	X	285.72662	48.85411	314.89256	5.03400	0.0543674	0.21432877	2.7653434	20	7 16.4	19.4
166484 2002 PT ₁₃₈	14.9	X	350.35052	332.86892	347.84129	15.93778	0.1435660	0.21904979	2.7254663	20	8 29.5	17.7
166485 2002 PA ₁₄₁	14.9	X	282.31908	259.95850	82.01459	16.55654	0.2892568	0.21189640	2.7864655	20	5 11.7	19.0
166486 2002 PM ₁₅₀	16.2	X	268.80409	130.48644	250.22164	1.69092	0.0926816	0.21593195	2.7516389	20	7 9.3	20.0
166487 2002 PG ₁₅₇	15.8	X	291.57629	261.73367	137.33634	12.55400	0.2019483	0.21978060	2.7194212	20	8 21.6	18.8
166488 2002 PO ₁₅₈	15.7	X	340.97016	39.37586	332.35235	5.38437	0.0491787	0.22602257	2.6691205	20	10 16.7	19.2
166489 2002 PS ₁₅₈	15.4	X	34.38710	314.93794	315.76226	3.52147	0.0663101	0.22003855	2.7172955	20	8 22.4	18.7
166490 2002 PH ₁₅₉	16.2	X	299.84393	228.15659	102.28928	5.30473	0.1073590	0.21406026	2.7676554	20	6 12.9	19.6
166491 2002 PQ ₁₆₁	16.4	X	286.37444	359.86631	336.45443	3.01962	0.1035068	0.21220939	2.7837249	20	6 1.1	20.0
166492 2002 PX ₁₆₂	16.4	X	310.67993	266.75660	53.05490	0.96816	0.0662789	0.21357938	2.7718081	20	6 20.3	19.7
166493 2002 PV ₁₆₈	16.8	X	28.70688	330.01667	345.87906	2.06030	0.1028561	0.22462166	2.6802068	20	10 20.1	20.0
166494 2002 PT ₁₇₁	15.8	X	231.98768	147.70204	302.20228	7.86986	0.1190418	0.21988209	2.7185843	20	8 18.8	19.9
166495 2002 PH ₁₇₂	16.3	X	229.58295	134.87144	278.96681	5.03738	0.1332778	0.21235461	2.7824557	20	6 29.9	20.6
166496 2002 PV ₁₇₂	16.8	X	322.47434	242.30057	68.64624	1.34993	0.0603120	0.21417136	2.7666982	20	6 26.7	20.3
166497 2002 QB ₅	15.6	X	357.93586	345.49657	276.28691	6.19066	0.0346678	0.21078023	2.7962938	20	6 13.4	19.1
166498 2002 QT ₈	15.2	X	354.46342	320.90727	5.77038	9.86144	0.2122309	0.22122448	2.7075756	20	9 20.2	17.5
166499 2002 QB ₁₃	15.4	X	259.20203	177.30072	234.62532	5.23450	0.0550666	0.21778757	2.7359867	20	8 11.3	19.1
166500 2002 QD ₁₇	14.9	X	31.48013	147.61704	287.84539	8.01131	0.1278094	0.18331180	3.0690863	20	—	—
166501 2002 QM ₁₉	15.5	X	241.19073	270.67123	112.07716	4.89355	0.1089278	0.20935216	2.8089958	20	6 5.7	19.6
166502 2002 QO ₁₉	15.5	X	297.37549	330.72813	19.58471	4.95770	0.0395506	0.21384514	2.7695112	20	7 17.5	19.2
166503 2002 QS ₁₉	15.8	X	320.01682	310.58783	353.14117	2.29463	0.1676664	0.21220265	2.7837839	20	5 29.7	19.0
166504 2002 QY ₂₀	15.6	X	191.29729	265.89860	147.10561	2.60856	0.0770252	0.20570160	2.8421322	20	5 22.7	19.8
166505 2002 QZ ₂₂	15.5	X	332.58028	30.93339	326.17127	4.71481	0.0816301	0.22265253	2.6959860	20	9 14.4	18.7
166506 2002 QD ₃₃	15.6	X	250.91265	290.54811	149.53424	8.48878	0.1953403	0.21645686	2.7471886	20	8 19.4	19.3
166507 2002 QV ₃₃	15.8	X	51.57623	296.71135	27.75711	3.09647	0.0805371	0.22815455	2.6524668	20	11 28.2	19.3
166508 2002 QD ₃₅	15.5	X	13.15367	198.05717	142.16916	6.79942	0.0462561	0.22419350	2.6836180	20	10 25.9	19.0
166509 2002 QO ₃₅	15.5	X	277.99118	271.19715	139.17875	9.88647	0.1596240	0.21740151	2.7392248	20	8 22.1	18.8
166510 2002 QR ₃₅	16.0	X	65.42330	201.09088	27.11205	5.76302	0.0186559	0.21479827	2.7613123	20	8 3.4	19.7
166511 2002 QB ₄₁	16.6	X	102.48858	263.66608	102.29006	5.56298	0.2411318	0.24230983	2.5481326	20	—	—
166512 2002 QL ₄₂	16.0	X	356.33980	283.77210	354.47119	7.90746	0.2135094	0.21755164	2.7379645	20	7 9.0	18.5
166513 2002 QS ₄₅	15.5	X	153.95337	2.40979	332.48675	10.77092	0.1329344	0.18997306	2.9969169	20	1 16.6	20.2
166514 2002 QZ ₅₆	16.1	X	240.24379	256.47854	72.91701	3.10153	0.0684975	0.20295714	2.8676963	20	4 3.1	20.2
166515 2002 QY ₆₁	16.5	X	320.50595	109.98226	212.79138	2.56316	0.1023408	0.21451131	2.7637743	20	7 5.6	19.8
166516 2002 QF ₆₂	16.3	X	242.10169	259.72791	178.82858	3.32580	0.1751159	0.21648746	2.7469297	20	8 9.3	20.2
166517 2002 QO ₆₅	15.2	X	141.81558	2.02828	315.86259	9.79219	0.0978527	0.18586402	3.0409258	20	—	—
166518 2002 QR ₇₂	16.3	X	118.67100	119.67927	306.66772	0.92029	0.0622021	0.19869009	2.9086083	20	3 17.0	20.4
166519 2002 QR ₇₅	15.6	X	235.59893	16.22060	28.04281	4.69654	0.0668473	0.21246769	2.7814684	20	7 2.2	19.5
166520 2002 QY ₇₆	16.1	X	357.75698	107.39010	202.09016	6.84664	0.0806808	0.22113287	2.7083233	20	8 18.5	19.5
166521 2002 QE ₇₇	16.3	X	213.30048	43.62622	36.25164	3.53075	0.0126265	0.21603894	2.7507304	20	7 28.6	20.1
166522 2002 QE ₈₇	15.5	X	64.39444	108.42035	89.80974	8.22067	0.0960708	0.21285194	2.7781199	20	7 1.9	19.0
166523 2002 QG ₁₀₁	16.1	X	27.79549	223.34453	71.90328	3.20549	0.0558972	0.22184354	2.7025363	20	9 16.4	19.6
166524 2002 QJ ₁₀₁	15.6	X	315.76842	215.11472	117.30561	8.41641	0.0935928	0.21567940	2.7537866	20	7 12.7	18.8
166525 2002 QB ₁₀₉	16.2	X	345.66450	319.85621	315.81894	2.72219	0.0582754	0.21295172	2.7772520	20	6 13.6	19.6
166526 2002 RK	16.1	X	172.79044	292.07515	175.82140	3.64380	0.0504648	0.21021338	2.8013185	20	7 10.8	20.1
166527 2002 RN ₃	15.7	X	307.01513	139.93600	195.19702	12.64235	0.2107740	0.21526082	2.7573552	20	6 14.6	19.1
166528 2002 RV ₃	15.7	X	279.09987	230.32650	195.46121	14.57674	0.1564147	0.21951364	2.7212625	20	9 11.6	19.1
166529 2002 RB ₈	15.3	X	288.23018	17.32617	351.18395	8.65399	0.1621311	0.21392005	2.7688646	20	7 11.1	18.9
166530 2002 RY ₈	15.7	X	250.09094	301.91387	74.97648	1.62004	0.0853993	0.21070638	2.7969471	20	6 11.0	19.5
166531 2002 RL ₁₀	16.0	X	243.11587	22.45581	186.44747	0.45835	0.0808591	0.20461368	2.8521976	20	4 15.2	20.1
166532 2002 RN ₁₁	15.6	X	233.55749	212.64424	312.14401	12.89540	0.2432042	0.20581465	2.8410913	20	6 1.4	20.5
166533 2002 RP ₁₆	15.3	X	273.95734	238.13878	167.15843	9.75902	0.2197702	0.21459472	2.7630582	20	7 28.1	19.2
166534 2002 RT ₂₀	15.0	X	81.76412	254.43718	155.84626	11.72975	0.0966403	0.18699023	3.0287036	20	1 16.7	19.1
166535 2002 RU ₂₁	15.1	X	233.82348	264.76708	145.58602	2.90727	0.2001317	0.20929593	2.8094989	20	6 23.3	19.5
166536 2002 RX ₂₃	15.9	X	222.79175	188.81776	176.21176	6.01009	0.0807781	0.20413484	2.8566561	20	4 27.2	20.2
166537 2002 RO ₂₇	16.1	X	217.90028	239.98780	209.36734	2.79075	0.0599682	0.21291442	2.7775763	20	8 8.4	20.2
166538 2002 RU ₃₀	15.3	X	243.98753	76.30707	313.44337	7.92609	0.1653370	0.20902542	2.8119223	20	6 10.7	19.6
166539 2002 RH ₃₂	15.4	X	189.41971	150.02553	329.69014	8.95780	0.1050643	0.21393554	2.7687309	20	8 13.7	19.6
166540 2002 RF ₃₄	15.1	X	189.61146	307.17766	10.03391	9.98732	0.1014645	0.19146182	2.9813612	20	1 29.4	19.9
166541 2002 RM ₃₇	14.9	X	47.11417	103.50335	311.31765	7.77379	0.0741789	0.18431201	3.0579728	20	—	—
166542 2002 RU ₄₀	16.0	X	71.55671	250.96864	47.04208	2.42987	0.1937631	0.22904482	2.6455891	20	12 1.9	20.0
166543 2002 RR ₄₁	15.6	X	277.15133	19.29852	25.91405	5.45299	0.1587114	0.21683539	2.7439905	20	8 15.7	19.1
166544 2002 RL ₄₅	16.3	X	188.13233	302.51329	69.62532	1.82800	0.2561123	0.19875915	2.9079346	20	3 30.9	21.5
166545 2002 RJ ₅₂	15.8	X	223.70586	297.75470	59.64436	2.66127	0.2099707	0.20156165	2.8809172	20	4 10.5	20.7
166546 2002 RJ ₅₆	15.9	X	59.87600	73.18823	220.27359	4.56813	0.1442370	0.22399198	2.6852274	20	11 7.6	19.4
166547 2002 RL ₅₇	15.6	X	323.40450	113.37235	216.08638	4.35568	0.1767334	0.21398417	2.7683115	20	7 11.7	18.4
166548 2002 RF ₅₈	15.5	X	319.61256	134.18337	217.83726	3.44131	0.2701960	0.21603677	2.7507488	20	7 25.1	17.9
166549 2002 RT ₆₀	15.1	X	240.60461	98.70633	327.29305	13.55880	0.1675016	0.21238262	2.7822110	20	7 26.5	19.3
166550 2002 RW ₆₆	15.2	X	346.10808	2.71981	272.55005	7.19929	0.1862856	0.21069114	2.7970820	20	6 7.7	18.0
166551 2002 RH ₆₈	15.3	X	210.66437	166.07740	301.50632	11.19928	0.1157495	0.21661888	2.7458186	20	8 16.9	19.6
166552 2002 RY ₇₃	15.4	X	225.51708	38.05528	296.94839	1.25725	0.0583285	0.20050987	2.8909830	20	3 23.4	19.5
166553 2002 RL ₈₆	17.2	X	41.18300	261.26716	358.87911	20.76423	0.0527048	0.38126				

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>
166561 2002 RY ₁₀₃	14.7	X	66.88299	53.58513	17.32368	13.52127	0.1692968	0.18356426	3.0662716	20	2 7.2	18.7
166562 2002 RL ₁₀₄	14.5	X	74.56975	26.18715	27.06098	16.11669	0.0755851	0.18272800	3.0756198	20	1 12.7	18.9
166563 2002 RS ₁₀₄	15.0	X	93.23053	20.56812	27.35360	15.57486	0.2827886	0.18391597	3.0623612	20	3 3.9	19.6
166564 2002 RB ₁₀₇	14.3	X	8.10800	63.26264	48.89461	22.33338	0.3761402	0.17291333	3.1909285	20	—	—
166565 2002 RE ₁₀₉	15.9	X	246.00399	252.07378	140.96814	2.16959	0.0885828	0.21130935	2.7916239	20	6 26.9	19.9
166566 2002 RQ ₁₁₀	14.8	X	163.47865	59.95096	331.43616	9.85323	0.1506215	0.19542842	2.9408818	20	3 26.8	19.6
166567 2002 RF ₁₁₃	15.7	X	171.22550	242.09775	141.44968	2.97004	0.0783728	0.19920361	2.9036075	20	3 26.0	20.0
166568 2002 RH ₁₁₄	15.4	X	100.70375	205.13217	3.07549	5.21303	0.0106892	0.21705866	2.7421085	20	8 22.2	19.0
166569 2002 RH ₁₁₅	15.3	X	301.28764	119.09786	245.66843	4.08721	0.0782831	0.21585991	2.7522511	20	8 4.5	18.8
166570 Adolfräger	14.7	X	2.15566	89.09686	303.51045	6.54503	0.0920161	0.17007450	3.2263384	20	12 4.7	19.0
166571 2002 RF ₁₂₀	15.8	X	30.73799	189.97158	96.84757	6.26401	0.1376404	0.22097284	2.7096308	20	9 22.7	19.1
166572 2002 RU ₁₂₀	15.6	X	145.33505	102.06915	326.05430	3.28851	0.1210614	0.19923280	2.9033239	20	4 23.1	20.0
166573 2002 RE ₁₂₃	15.4	X	194.15127	331.89542	115.53617	9.37155	0.1146081	0.20812054	2.8200670	20	7 6.8	19.8
166574 2002 RD ₁₂₇	15.5	X	90.56907	7.41113	257.19740	13.22029	0.0070665	0.22545926	2.6735645	20	10 17.2	19.4
166575 2002 RV ₁₂₇	15.3	X	333.19437	46.23192	264.56950	12.76845	0.0451772	0.21393963	2.7686956	20	7 12.1	18.8
166576 2002 RA ₁₂₉	15.4	X	324.76013	166.19154	200.64461	5.53684	0.1019173	0.21890765	2.7266460	20	9 13.5	18.5
166577 2002 RU ₁₃₄	15.0	X	184.96259	230.01561	133.66153	12.91337	0.0731269	0.19636059	2.9315670	20	3 19.0	19.5
166578 2002 RR ₁₃₄	15.1	X	177.95105	224.28272	115.18971	11.92656	0.1039124	0.19220594	2.9736614	20	2 11.3	19.7
166579 2002 RR ₁₃₅	15.6	X	258.87861	331.60056	86.32347	10.58485	0.2689309	0.21165948	2.7885444	20	7 21.6	19.8
166580 2002 RK ₁₃₆	15.5	X	270.79254	225.98250	129.41372	10.45213	0.2085381	0.20942832	2.8083148	20	5 24.9	19.7
166581 2002 RX ₁₄₀	15.6	X	37.54184	265.03627	33.54303	12.90940	0.1959214	0.22251782	2.6970739	20	10 24.7	19.0
166582 2002 RP ₁₄₉	16.0	X	171.71394	56.97901	322.96188	1.23005	0.1160433	0.19709362	2.9242938	20	3 22.4	20.4
166583 2002 RB ₁₅₀	15.5	X	219.65610	117.06177	318.81791	7.11672	0.0637889	0.21163479	2.7887613	20	7 25.1	19.5
166584 2002 RB ₁₅₆	16.2	X	204.07247	152.13355	249.57347	1.28041	0.1616101	0.20435914	2.8545654	20	5 18.2	20.9
166585 2002 RP ₁₅₈	15.7	X	141.46645	220.28608	335.80969	3.88503	0.1274640	0.22058977	2.7127669	20	9 28.9	19.9
166586 2002 RO ₁₆₀	16.3	X	261.26399	156.11648	298.24688	1.00164	0.0433610	0.22308115	2.6925315	20	10 14.0	19.8
166587 2002 RS ₁₆₀	16.1	X	169.25516	244.62947	312.84679	0.50229	0.0722765	0.22612295	2.6683305	20	10 31.4	19.9
166588 2002 RY ₁₆₁	16.2	X	125.68861	167.45039	234.95839	1.34350	0.1191677	0.19334050	2.9620166	20	3 3.0	20.4
166589 2002 RG ₁₆₅	15.6	X	251.54823	178.99901	219.96719	8.52693	0.2840298	0.20972020	2.8057085	20	6 17.3	20.2
166590 2002 RV ₁₆₇	15.9	X	150.32329	191.28742	210.26593	1.28886	0.1117055	0.19647706	2.9304084	20	3 27.2	20.4
166591 2002 RZ ₁₆₇	16.0	X	130.18480	176.28957	163.90615	2.03960	0.1104733	0.18549029	3.0450091	20	—	—
166592 2002 RS ₁₇₁	16.0	X	256.20789	342.79633	29.75505	8.70966	0.2331699	0.20910715	2.8111895	20	5 23.6	20.4
166593 2002 RO ₁₇₃	16.1	X	197.65433	205.32642	206.01761	3.49340	0.0803570	0.20410054	2.8569762	20	5 27.2	20.4
166594 2002 RQ ₁₇₃	15.5	X	189.02354	111.45404	189.72651	10.90451	0.0454679	0.18738541	3.0244439	20	1 4.3	20.1
166595 2002 RE ₁₇₉	15.7	X	258.67303	21.55504	314.85761	1.12513	0.0723131	0.20382800	2.8595223	20	5 1.1	19.6
166596 2002 RG ₁₇₉	16.0	X	207.38667	200.70126	214.10596	1.25619	0.1011429	0.20576139	2.8415815	20	6 9.9	20.4
166597 2002 RA ₁₈₄	15.1	X	316.72643	163.42447	237.44380	9.28915	0.2378572	0.22055818	2.7130259	20	10 7.5	17.6
166598 2002 RW ₁₉₆	15.5	X	347.05476	67.72559	96.56674	10.12120	0.1498923	0.21740760	2.7391737	20	8 29.6	18.5
166599 2002 RY ₁₉₉	15.4	X	327.89622	146.87549	8.17301	5.84905	0.0657174	0.18608291	3.0385407	20	—	—
166600 2002 RZ ₂₀₆	15.9	X	242.97292	250.81981	178.51104	1.71179	0.2133056	0.21171596	2.7880484	20	7 24.9	20.1
166601 2002 RR ₂₀₈	16.6	X	236.05175	187.31370	234.39289	0.20202	0.18616217	0.21113952	2.7931206	20	7 23.4	20.5
166602 2002 RO ₂₀₉	15.4	X	6.42739	289.57347	11.32796	12.53120	0.0849709	0.21494208	2.7600805	20	8 28.1	18.9
166603 2002 RY ₂₁₂	15.4	X	51.28518	46.20062	218.97534	8.83233	0.1488787	0.22067884	2.7120369	20	9 18.5	19.0
166604 2002 RJ ₂₁₇	16.1	X	228.99809	59.27344	289.36302	0.97504	0.1219257	0.20354020	2.8622171	20	4 8.5	20.6
166605 2002 RK ₂₂₀	15.6	X	99.89075	237.62217	138.20500	7.16360	0.0954135	0.18647848	3.0342421	20	—	—
166606 2002 RQ ₂₂₇	16.3	X	260.78867	344.92802	322.08424	4.98891	0.0293781	0.25682234	2.4512118	20	4 2.7	19.5
166607 2002 RF ₂₂₉	14.8	X	216.26145	134.56826	206.34524	11.55469	0.0679327	0.19751896	2.9200942	20	3 18.7	19.3
166608 2002 RS ₂₃₁	15.7	X	56.85994	296.86655	300.71286	3.23111	0.0173495	0.21386473	2.7693421	20	8 1.7	19.3
166609 2002 RF ₂₃₂	15.6	X	63.49849	243.95297	158.36248	9.97923	0.0789069	0.18539129	3.0460930	20	—	—
166610 2002 RC ₂₃₄	16.4	X	314.00102	252.22460	153.30959	2.19679	0.0776248	0.22397544	2.6853596	20	10 23.8	19.5
166611 2002 RT ₂₃₉	16.5	X	199.92658	201.01227	155.45613	3.05946	0.1058006	0.20036252	2.8924003	20	3 22.3	20.9
166612 2002 RJ ₂₄₃	15.4	X	65.13667	299.08289	176.22191	10.43842	0.0540195	0.19791076	2.9162389	20	3 8.8	19.3
166613 2002 RA ₂₄₄	15.7	X	273.10592	233.67541	187.91324	3.79900	0.0855132	0.22058666	2.7127924	20	9 9.9	19.1
166614 Zsazsa	16.2	X	271.44293	76.66558	31.61003	0.85815	0.1030792	0.23032955	2.6357423	20	11 20.6	19.6
166615 2002 RZ ₂₆₈	16.5	X	174.22377	57.37915	316.83463	0.99992	0.0419800	0.19909524	2.9046611	20	3 14.9	20.6
166616 2002 RE ₂₇₅	16.3	X	283.61836	292.04925	92.05582	2.64041	0.0633666	0.218115057	2.7329508	20	8 9.5	19.7
166617 2002 SN ₂	15.6	X	148.58194	246.20268	147.71758	2.77178	0.1001167	0.19393727	2.9559372	20	3 16.4	20.0
166618 2002 SF ₅	15.2	X	129.66733	37.97105	17.80843	10.76984	0.1076665	0.19351038	2.9602828	20	3 24.7	19.5
166619 2002 SA ₇	15.3	X	51.60283	195.22329	42.46518	5.67991	0.1043702	0.21164087	2.7887079	20	8 10.1	18.9
166620 2002 SG ₇	15.7	X	177.37841	282.25714	113.32367	3.21915	0.0646008	0.19842296	2.9112183	20	4 16.6	20.0
166621 2002 SQ ₁₀	15.2	X	129.86837	0.00856	60.24715	4.06680	0.1519435	0.19338039	2.9616093	20	4 3.8	19.7
166622 Sebastien	14.6	X	177.62666	62.58777	283.92737	13.98357	0.0796470	0.19159169	2.9800137	20	2 11.9	19.3
166623 2002 SQ ₁₇	15.1	X	3.81375	227.44728	189.68809	9.63120	0.0621936	0.17502232	3.1652432	20	—	—
166624 2002 SU ₁₇	16.0	X	222.41576	201.63227	186.10612	1.76490	0.0848195	0.20434097	2.8547347	20	5 24.1	20.1
166625 2002 SM ₂₀	15.7	X	215.32425	278.79838	13.45277	6.27314	0.1972964	0.19225956	2.9731085	20	1 21.6	20.9
166626 2002 SL ₂₁	15.2	X	265.31804	259.64376	34.77975	6.37963	0.0601477	0.19841062	2.9113390	20	3 21.6	19.4
166627 2002 SO ₂₁	15.6	X	218.58739	65.08252	17.26580	7.59812	0.2025811	0.20876706	2.8142417	20	7 20.8	20.2
166628 2002 SS ₂₂	15.4	X	231.99181	174.39130	204.90458	8.06163	0.2168684	0.20565961	2.8425190	20	5 13.5	20.0
166629 2002 SN ₂₄	15.3	X	237.75308	264.07336	64.54339	2.99951	0.0507305	0.19840637	2.9113806	20	4 1.1	19.4
166630 2002 SW ₂₅	15.0	X	5.47999	255.77818	162.34438	9.78096	0.0808180	0.17451132	3.1714192	20	—	—
166631 2002 SB ₂₆	15.2	X	290.34194	303.30904	67.22137	4.22899	0.1215102	0.21185762	2.7868055	20	7 22.5	18.6
166632 2002 SP ₃₀	14.4	X	34.09745	63.28948	31.21432	15.48882	0.2579273	0.18191709	3.0847529	20	1 13.0	17.6
166633 2002 SB ₃₂	16.0	X	88.71331	267.41774	145.88698	7.92986	0.3030475	0.18532263	3.0468454	20	3 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>		
166641	2002	SF ₅₅	15.6	X	164.44399	91.57109	325.82928	6.74162	0.1815456	0.19961675	2.8995999	20	4 29.8	20.6
166642	2002	SF ₅₆	15.9	X	299.48074	39.24280	276.11737	3.80890	0.1238722	0.20883420	2.8136385	20	5 19.3	19.6
166643	2002	SN ₅₆	14.9	X	107.18010	272.19154	150.19048	9.34633	0.0833204	0.19026102	2.9938923	20	3 3.2	19.0
166644	2002	SW ₅₈	15.8	X	47.44630	337.29405	68.77177	0.30804	0.1797403	0.17966509	3.1104764	20	—	—
166645	2002	TV ₁	15.0	X	147.90021	317.39524	24.25372	15.95932	0.0973401	0.18532274	3.0468442	20	1 17.4	19.9
166646	2002	TJ ₄	14.7	X	11.68517	56.22503	40.71182	10.41089	0.2112014	0.17764402	3.1340240	20	—	—
166647	2002	TM ₆	15.1	X	265.14562	260.17356	93.94334	3.13527	0.0948705	0.20582760	2.8409721	20	5 29.8	19.1
166648	2002	TQ ₇	15.4	X	32.90503	212.65179	53.96287	4.78514	0.0546366	0.21333417	2.7739317	20	8 14.9	19.0
166649	2002	TB ₁₁	15.7	X	340.15754	345.29165	316.57602	2.87806	0.0800070	0.21250037	2.7811831	20	7 11.2	18.8
166650	2002	TN ₁₄	15.2	X	102.64306	282.69496	173.57989	7.54726	0.1570492	0.19331891	2.9622372	20	4 19.6	19.5
166651	2002	TK ₁₆	15.4	X	229.23979	18.74133	55.15925	5.20479	0.0445156	0.21199668	2.7855866	20	8 6.9	19.3
166652	2002	TX ₁₈	15.4	X	242.11621	73.47502	338.32415	3.68075	0.0641304	0.21033259	2.8002598	20	7 20.9	19.2
166653	2002	TT ₂₀	16.4	X	229.04151	205.84325	173.41215	2.04951	0.0798558	0.20402029	2.8577253	20	5 21.3	20.5
166654	2002	TS ₂₃	15.0	X	40.93174	239.89207	189.89016	15.51745	0.0584850	0.18132797	3.0914307	20	—	—
166655	2002	TS ₂₃	15.5	X	226.67119	230.59128	138.43816	2.74419	0.0783157	0.20169372	2.8796595	20	5 6.3	19.7
166656	2002	TX ₂₃	16.0	X	70.17376	240.97000	134.18678	1.97117	0.1915054	0.17881199	3.1203618	20	—	—
166657	2002	TV ₂₄	15.6	X	101.67883	260.35928	80.37756	0.02163	0.1354082	0.17877375	3.1208069	20	—	—
166658	2002	TG ₂₈	14.8	X	98.92019	57.06318	28.87828	10.68053	0.1419395	0.19053713	2.9909993	20	3 31.9	19.1
166659	2002	TS ₃₃	15.8	X	172.76285	357.11145	60.20212	2.33747	0.0469244	0.20137639	2.8826838	20	5 6.8	20.0
166660	2002	TT ₃₃	16.2	X	137.73696	46.58551	20.62054	1.96323	0.0903271	0.19673082	2.9278880	20	4 12.7	20.4
166661	2002	TX ₃₇	14.9	X	255.72290	316.37050	52.25649	15.92143	0.1534078	0.20395550	2.8583305	20	5 27.5	19.2
166662	2002	TL ₄₄	15.7	X	238.85238	343.41045	102.67252	4.23018	0.2368715	0.21341851	2.7732009	20	8 9.7	19.9
166663	2002	TO ₄₆	15.5	X	187.80968	238.09792	105.19555	1.56932	0.1823200	0.19179593	2.9778978	20	2 25.8	20.4
166664	2002	TH ₄₉	15.0	X	126.53662	336.24188	32.28161	10.97576	0.1208239	0.18379808	3.0636706	20	1 29.1	19.7
166665	2002	TB ₅₆	15.4	X	200.98285	78.37000	359.95090	8.81879	0.1129238	0.20597772	2.8395916	20	7 3.5	19.9
166666	2002	TN ₅₇	15.1	X	143.99618	288.78472	96.70178	4.02593	0.1475052	0.18958767	3.0009769	20	3 7.2	19.8
166667	2002	TU ₅₇	15.6	X	137.69769	118.25612	286.76676	9.42360	0.1447002	0.19502721	2.9449137	20	3 16.9	20.3
166668	2002	TM ₅₈	15.2	X	49.61477	59.45701	18.57689	2.39252	0.0735595	0.18341793	3.0679023	20	1 5.8	19.1
166669	2002	TQ ₆₁	15.3	X	231.29787	123.89902	305.50334	8.23929	0.1340549	0.20994068	2.8037444	20	7 21.9	19.3
166670	2002	TJ ₆₃	15.2	X	164.49829	108.94924	344.04449	7.40040	0.1795029	0.20180981	2.8785543	20	6 14.8	20.1
166671	2002	TP ₇₂	15.1	X	5.83628	122.59484	284.13348	3.81224	0.1491443	0.17205707	3.2015063	20	—	—
166672	2002	TM ₇₇	15.4	X	104.73100	31.19731	356.83279	7.11361	0.2182691	0.18504690	3.0498712	20	2 7.9	19.8
166673	2002	TZ ₇₉	14.5	X	102.74399	297.86609	60.40372	13.25867	0.1298543	0.17948994	3.1124997	20	—	—
166674	2002	TR ₈₄	15.1	X	176.75475	200.80852	151.36533	10.54811	0.0973548	0.19198035	2.9759905	20	2 23.5	19.6
166675	2002	TD ₈₆	15.8	X	82.31844	68.53484	343.08555	4.83736	0.2039147	0.18468365	3.0538691	20	2 5.8	19.7
166676	2002	TO ₉₂	15.6	X	214.40384	256.00805	38.74862	0.51255	0.0975938	0.19040466	2.9923864	20	1 24.0	20.1
166677	2002	TH ₉₉	15.0	X	239.41898	299.75659	291.01875	3.84132	0.1033148	0.18316762	3.0706966	20	—	—
166678	2002	TJ ₁₀₇	15.2	X	149.62346	302.35808	104.06841	8.27567	0.1531456	0.19538468	2.9413207	20	4 8.9	20.0
166679	2002	TS ₁₀₉	15.1	X	322.99618	165.70495	140.93468	14.53518	0.1784644	0.21007006	2.8025924	20	6 10.1	18.5
166680	2002	TN ₁₁₀	15.2	X	95.85688	355.03578	48.37152	19.33970	0.2792742	0.18553322	3.0445393	20	3 4.2	20.0
166681	2002	TZ ₁₁₁	15.4	X	138.49143	200.99679	158.48511	10.68032	0.1114129	0.18944724	3.0024598	20	1 24.6	19.9
166682	2002	TM ₁₁₂	15.0	X	292.10515	158.66691	99.43144	3.29064	0.0398109	0.19566400	2.9385208	20	3 11.6	19.1
166683	2002	TN ₁₁₄	14.5	X	146.33499	145.21625	260.89002	10.89323	0.0577904	0.19485992	2.9465990	20	3 18.8	19.1
166684	2002	TA ₁₁₉	14.5	X	356.03424	126.47348	5.28473	27.52753	0.1311494	0.18162055	3.0881098	20	—	—
166685	2002	TB ₁₁₉	14.8	X	316.23646	66.33224	257.59517	8.15414	0.1302675	0.20976073	2.8053470	20	6 26.3	18.1
166686	2002	TN ₁₂₁	15.2	X	77.58649	37.41648	358.24871	13.74459	0.0681822	0.18100301	3.0951296	20	—	—
166687	2002	TE ₁₃₃	15.2	X	30.95363	193.01669	261.48063	5.82954	0.1414464	0.18252139	3.0779404	20	—	—
166688	2002	TA ₁₃₅	15.0	X	264.07817	268.76870	333.34133	9.81040	0.0614579	0.18867161	3.0106829	20	1 17.6	19.4
166689	2002	TZ ₁₃₈	15.0	X	145.82250	56.54561	348.57441	9.67940	0.1162356	0.19259436	2.9696619	20	3 25.9	19.6
166690	2002	TG ₁₄₃	15.2	X	147.16611	201.80361	146.66639	8.99584	0.1418292	0.18714401	3.0270442	20	1 24.3	19.8
166691	2002	TM ₁₄₄	15.2	X	149.27061	238.54105	105.42716	17.14751	0.2451422	0.18694900	3.0291489	20	1 31.0	20.3
166692	2002	TE ₁₄₈	15.9	X	183.70409	0.51827	228.39025	12.55950	0.1160901	0.23535349	2.5980986	20	12 22.3	19.9
166693	2002	TT ₁₄₉	16.9	X	190.15073	259.27858	141.80705	1.20002	0.1554948	0.20083190	2.8878918	20	5 5.5	21.6
166694	2002	TJ ₁₅₉	14.8	X	64.71001	317.15031	119.24194	12.14974	0.1285706	0.18406612	3.0606956	20	1 31.2	18.7
166695	2002	TL ₁₆₄	16.8	X	219.29774	4.44064	67.08339	23.36392	0.0603552	0.37517220	1.9039211	20	8 7.5	19.4
166696	2002	TG ₁₆₅	15.4	X	283.16522	278.96296	99.30290	8.39020	0.2338707	0.21152981	2.7896839	20	7 3.3	18.9
166697	2002	TU ₁₆₉	14.6	X	292.19932	330.06124	292.08992	13.04317	0.1178793	0.19781334	2.9171964	20	2 26.9	18.9
166698	2002	TE ₁₇₂	15.0	X	128.00861	333.18511	333.04146	16.81945	0.1849954	0.18003566	3.1062068	20	—	—
166699	2002	TA ₁₇₄	15.1	X	177.87628	300.70073	51.76116	11.94434	0.1207385	0.19327985	2.9626362	20	3 2.6	20.0
166700	2002	TN ₁₇₄	15.3	X	123.64192	2.30346	47.94390	11.31375	0.0997920	0.19184266	2.9774143	20	3 14.5	19.8
166701	2002	TJ ₁₇₅	15.5	X	157.19097	285.79521	138.32234	8.67610	0.1704127	0.19791050	2.9162416	20	5 7.1	20.4
166702	2002	TE ₁₇₇	14.8	X	140.87312	128.34449	329.39703	15.36569	0.2723670	0.19572198	2.9379404	20	6 3.4	20.2
166703	2002	TT ₁₇₈	15.0	X	125.05370	47.16554	293.98182	12.83391	0.1545639	0.18095694	3.0956550	20	—	—
166704	2002	TJ ₁₇₉	15.0	X	151.53462	131.17346	287.35557	14.47750	0.1541192	0.19359868	2.9593827	20	4 14.9	20.0
166705	2002	TC ₁₈₂	15.2	X	227.63920	110.24353	232.53009	11.70787	0.1749480	0.19625883	2.9325803	20	3 25.2	20.1
166706	2002	TQ ₁₈₇	14.7	X	210.25876	165.56412	207.92127	7.58751	0.0746212	0.20042136	2.8918341	20	4 23.3	18.9
166707	2002	TS ₁₉₂	15.0	X	161.78319	41.74365	273.86018	13.57007	0.1849687	0.18296068	3.0730116	20	1 3.9	19.9
166708	2002	TD ₁₉₅	15.4	X	131.96336	204.11521	205.96339	7.77196	0.1262078	0.19090163	2.9871908	20	3 19.1	20.0
166709	2002	TM ₁₉₈	15.2	X	206.77262	122.96010	207.02546	16.18659	0.1119647	0.19570993	2.9380610	20	2 21.6	20.1
166710	2002	TA ₁₉₉	15.1	X	205.17951	27.70								

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>		
166721	2002	<i>TQ</i> ₂₂₇	15.2 ^m	X	79.24374	268.56372	133.40318	3.49029	0.1220087	0.18075878	3.0979170	20	1 8.5	19.2
166722	2002	<i>TO</i> ₂₂₈	15.3	X	117.65877	261.71832	192.55471	10.98751	0.0866409	0.19513640	2.9438150	20	4 24.9	19.5
166723	2002	<i>TY</i> ₂₃₈	14.7	X	56.12919	217.82231	231.01635	11.95135	0.2549476	0.17944597	3.1130080	20	2 14.0	18.4
166724	2002	<i>TF</i> ₂₄₂	15.1	X	24.14915	287.31489	162.41023	13.13619	0.1742021	0.17804947	3.1292644	20	—	—
166725	2002	<i>TY</i> ₂₄₄	15.3	X	130.10359	301.33535	168.76813	2.97256	0.1625639	0.19771329	2.9181804	20	6 4.1	19.9
166726	2002	<i>TJ</i> ₂₄₆	15.5	X	111.77635	23.24164	3.17971	8.94755	0.1413420	0.18525921	3.0475407	20	2 4.8	19.9
166727	2002	<i>TQ</i> ₂₄₆	14.6	X	29.94822	262.86382	217.01874	24.95751	0.2289219	0.18241297	3.0791598	20	1 25.8	18.3
166728	2002	<i>TV</i> ₂₄₈	15.4	X	165.08416	276.73475	18.49734	1.01448	0.1584088	0.18302097	3.0723367	20	—	—
166729	2002	<i>TH</i> ₂₅₁	15.0	X	159.90293	329.71377	46.54079	12.57466	0.1606656	0.19220222	2.9736998	20	3 16.1	19.9
166730	2002	<i>TG</i> ₂₅₆	16.1	X	223.46025	344.60053	36.27314	2.50964	0.0991481	0.20200942	2.8766585	20	5 14.8	20.4
166731	2002	<i>TB</i> ₂₅₉	15.1	X	66.85560	261.96229	207.02766	15.88682	0.1976961	0.18500935	3.0502839	20	3 22.5	19.0
166732	2002	<i>TS</i> ₂₆₈	14.6	X	130.03790	148.04862	233.26475	8.76213	0.0876082	0.18926644	3.0043716	20	2 5.5	19.1
166733	2002	<i>TW</i> ₂₆₉	15.1	X	170.14597	11.14353	292.20158	4.72474	0.1875065	0.18552462	3.0446335	20	—	—
166734	2002	<i>TC</i> ₂₇₄	15.9	X	210.38194	131.06079	214.39900	18.33165	0.3237945	0.19788523	2.9164898	20	3 9.8	21.6
166735	2002	<i>TW</i> ₂₇₄	14.9	X	161.46549	198.19480	237.99211	7.37677	0.0260854	0.19947639	2.9009598	20	5 16.5	19.0
166736	2002	<i>TP</i> ₂₇₆	16.4	X	22.01045	136.39688	249.68995	2.07540	0.0991095	0.22719200	2.6599534	20	—	—
166737	2002	<i>TD</i> ₂₈₀	15.3	X	111.76786	40.92443	356.27425	9.30501	0.1031953	0.18608812	3.0384840	20	2 12.2	19.6
166738	2002	<i>TV</i> ₂₉₀	15.0	X	131.41627	39.56572	12.46791	10.36748	0.1054983	0.19009873	2.9955960	20	3 21.7	19.5
166739	2002	<i>TX</i> ₂₉₀	15.2	X	270.74151	130.79231	297.81919	8.30535	0.2097504	0.21289967	2.7777046	20	8 24.3	18.9
166740	2002	<i>TN</i> ₂₉₁	14.7	X	130.81200	47.55488	19.05934	9.74114	0.1054508	0.19043575	2.9920607	20	4 6.6	19.1
166741	2002	<i>TU</i> ₂₉₃	15.3	X	186.83967	330.62596	346.68463	6.13742	0.0987008	0.18736070	3.0247098	20	1 25.4	20.0
166742	2002	<i>TO</i> ₂₉₇	15.3	X	221.96621	283.56878	28.01594	4.39780	0.1380132	0.19202959	2.9754816	20	2 19.9	20.1
166743	2002	<i>TQ</i> ₂₉₇	15.7	X	167.33368	163.54692	247.23849	0.96487	0.0566649	0.19604458	2.9347165	20	4 22.4	19.9
166744	2002	<i>TU</i> ₂₉₈	14.9	X	357.52578	117.28998	29.96533	16.83369	0.0271019	0.18376898	3.0639940	20	1 25.1	19.4
166745	2002	Pindor	15.3	X	93.93706	167.35707	166.19585	12.04626	0.0497527	0.17561915	3.1580679	20	—	—
166746	2002	Marcpostman	15.0	X	269.66742	100.50301	161.97729	11.91756	0.0815885	0.19152195	2.9807371	20	2 11.4	19.3
166747	2002	Gordonrichards	15.5	X	40.98930	257.39008	170.24683	16.63725	0.2447872	0.17728018	3.1383100	20	—	—
166748	2002	Timrayschneider	16.0	X	277.69514	97.89328	217.81975	1.24117	0.0638981	0.20437941	2.8543767	20	4 29.9	20.0
166749	2002	Sesar	15.0	X	48.52884	218.44410	175.54165	13.18810	0.1944172	0.17704444	3.1410911	20	—	—
166750	2002	<i>TF</i> ₃₇₆	16.1	X	193.89172	358.93809	116.54611	1.65875	0.0202728	0.21340182	2.7733489	20	8 18.1	20.0
166751	2002	<i>UZ</i> ₂	15.1	X	282.37186	164.71330	148.10627	13.39620	0.1115747	0.20200238	2.8767253	20	4 29.9	19.3
166752	2002	<i>UC</i> ₆	15.3	X	177.39669	209.27155	161.80234	12.30165	0.1084465	0.19394917	2.9558163	20	3 18.9	19.9
166753	2002	<i>UJ</i> ₆	15.2	X	215.32817	52.14867	58.10029	14.27776	0.1892624	0.21105546	2.7938622	20	8 28.0	19.9
166754	2002	<i>US</i> ₁₃	15.2	X	151.79946	252.72728	180.61880	10.68302	0.1495162	0.19529798	2.9421911	20	5 11.3	20.0
166755	2002	<i>UK</i> ₁₇	15.5	X	75.98788	358.59827	32.41818	5.84603	0.1311086	0.17892281	3.1190733	20	—	—
166756	2002	<i>UB</i> ₂₀	15.0	X	40.77969	76.62093	24.40547	4.91165	0.1424892	0.18267818	3.0761790	20	1 27.1	18.6
166757	2002	<i>UM</i> ₂₃	16.4	X	321.15696	60.41873	251.53983	20.55626	0.0496437	0.37301551	1.9112528	20	7 1.3	18.1
166758	2002	<i>UL</i> ₂₅	14.7	X	193.77930	257.13339	9.47161	15.57279	0.0504447	0.17952889	3.1120494	20	—	—
166759	2002	<i>UN</i> ₂₆	15.0	X	342.09327	314.29260	184.58506	10.54158	0.0308832	0.18078061	3.0976677	20	—	—
166760	2002	<i>UW</i> ₂₆	15.1	X	188.37763	261.19324	115.28790	5.79377	0.1378160	0.19531966	2.9419734	20	4 6.7	19.9
166761	2002	<i>UE</i> ₂₇	14.9	X	230.57240	164.95991	147.49695	9.63744	0.1302735	0.19315651	2.9638973	20	2 27.9	19.6
166762	2002	<i>UE</i> ₃₁	15.6	X	204.49137	139.78079	235.26001	5.17025	0.1010424	0.19639807	2.9311940	20	4 17.1	20.2
166763	2002	<i>UC</i> ₃₃	15.1	X	89.35639	112.50793	20.99095	8.12722	0.2469286	0.19192027	2.9766115	20	5 29.9	19.6
166764	2002	<i>UC</i> ₃₃	14.9	X	128.81728	117.47775	264.54579	6.88843	0.1001642	0.18570098	3.0427055	20	2 7.9	19.5
166765	2002	<i>UN</i> ₃₄	14.6	X	35.32729	14.81514	71.37608	6.29075	0.1385453	0.17724831	3.1386868	20	—	—
166766	2002	<i>UZ</i> ₄₈	15.2	X	124.80602	251.23064	159.62759	12.61580	0.1867083	0.18822845	3.0154066	20	3 22.5	19.9
166767	2002	<i>UW</i> ₄₉	15.2	X	79.15865	359.33280	52.05873	10.08931	0.0742300	0.17969275	3.1101572	20	1 15.6	19.5
166768	2002	<i>VA</i>	15.1	X	68.63917	97.09637	349.97579	6.33814	0.1446578	0.18292185	3.0734465	20	2 22.3	18.9
166769	2002	<i>VQ</i> ₄	15.7	X	118.74310	359.52726	46.33268	12.94802	0.1162018	0.18689337	3.0297500	20	3 7.2	20.3
166770	2002	<i>VE</i> ₉	15.6	X	114.43873	73.70308	12.16519	10.51891	0.1894425	0.19083977	2.9878362	20	4 19.9	20.3
166771	2002	<i>VJ</i> ₁₀	15.1	X	16.45379	151.81592	326.66018	4.39049	0.1250602	0.18005463	3.1059885	20	1 7.7	18.8
166772	2002	<i>VH</i> ₁₇	15.0	X	156.16674	307.93648	75.93606	4.23212	0.1981816	0.18897488	3.0074610	20	3 20.2	20.0
166773	2002	<i>VZ</i> ₁₇	15.3	X	58.03533	267.12638	199.37293	4.48714	0.1541835	0.18518418	3.0483638	20	2 28.2	19.1
166774	2002	<i>VU</i> ₁₈	15.1	X	154.29346	322.95888	34.49406	8.31620	0.0607689	0.18662661	3.0326364	20	2 7.8	19.7
166775	2002	<i>VR</i> ₁₉	15.6	X	141.34195	120.11450	202.70430	2.57507	0.0656023	0.17894197	3.1188507	20	—	—
166776	2002	<i>VZ</i> ₁₉	15.9	X	184.94383	325.85969	58.56162	2.71967	0.1591869	0.19413045	2.9539759	20	4 11.4	20.6
166777	2002	<i>VA</i> ₂₂	15.1	X	116.33195	206.65910	243.06843	9.04015	0.0765200	0.19281905	2.9673544	20	4 12.7	19.4
166778	2002	<i>VU</i> ₂₅	14.9	X	21.79588	200.25427	228.20430	8.65146	0.0691086	0.17435268	3.1733427	20	—	—
166779	2002	<i>VA</i> ₃₀	15.4	X	55.95354	18.26803	90.26227	2.67731	0.1465179	0.18319042	3.0704418	20	3 1.7	19.2
166780	2002	<i>VX</i> ₃₀	15.7	X	37.47463	34.57014	38.67648	1.34205	0.1740699	0.17581166	3.1557621	20	—	—
166781	2002	<i>VE</i> ₃₂	15.2	X	352.05878	58.86602	55.30291	1.70998	0.1316677	0.17347498	3.1840373	20	—	—
166782	2002	<i>VH</i> ₃₃	15.4	X	65.68441	277.67821	134.88231	1.79077	0.1722508	0.17767254	3.1336887	20	1 8.9	19.2
166783	2002	<i>VD</i> ₃₅	15.3	X	346.01511	45.01319	47.29565	4.16975	0.2511976	0.16963585	3.2318978	20	—	—
166784	2002	<i>VD</i> ₃₆	14.7	X	77.47651	27.79762	76.14902	12.02054	0.0946960	0.18510547	3.0492279	20	3 25.3	19.0
166785	2002	<i>VN</i> ₃₆	15.3	X	194.36034	199.45577	158.76498	2.02417	0.0914694	0.19280841	2.9674636	20	3 19.2	19.9
166786	2002	<i>VH</i> ₃₇	15.1	X	91.30723	275.43544	122.10718	6.10186	0.1571157	0.18213889	3.0822481	20	1 24.1	19.1
166787	2002	<i>VE</i> ₄₀	14.4	X	349.63914	119.87208	17.11448	13.95561	0.2567154	0.17557537	3.1585929	20	—	—
166788	2002	<i>VX</i> ₄₁	15.6	X	135.59477	327.69935	65.74860	4.28508	0.1397558	0.18809928	3.0167868	20	3 8.2	20.2
166789	2002	<i>VR</i> ₄₂	15.7	X	220.66320									

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>
166801 2002 VY ₅₇	15.4	X	28.70338	289.34199	167.04138	5.15639	0.1343953	0.17966565	3.1104700	20	—	—
166802 2002 VG ₅₈	15.2	X	56.90078	303.20878	102.18929	6.36367	0.1740238	0.17591440	3.1545333	20	—	—
166803 2002 VJ ₅₈	15.0	X	80.12606	243.13255	219.71570	7.95868	0.1054750	0.18604492	3.0389543	20	3 19.7	19.2
166804 2002 VR ₆₄	16.4	X	228.76913	152.51205	243.44132	19.28639	0.0878338	0.37181303	1.9153713	20	6 11.8	18.4
166805 2002 VZ ₆₄	14.7	X	199.19367	271.89296	67.54350	12.15174	0.1165216	0.19214827	2.9742563	20	3 7.5	19.6
166806 2002 VP ₇₀	15.4	X	203.20151	316.64253	100.25432	3.20892	0.0618470	0.20195448	2.8771802	20	6 10.1	19.5
166807 2002 VU ₇₄	14.8	X	145.24896	140.12753	199.48170	8.97929	0.0788688	0.18199772	3.0838418	20	1 5.9	19.5
166808 2002 VS ₇₅	15.4	X	152.20647	281.14890	116.03082	5.84664	0.0967025	0.19046856	2.9917171	20	3 26.1	20.0
166809 2002 VO ₇₆	15.2	X	193.62539	353.87506	8.49910	11.67667	0.1269505	0.19228030	2.9728947	20	3 23.9	19.8
166810 2002 VT ₇₈	15.2	X	94.74241	286.52482	109.46136	5.91168	0.0729681	0.18049680	3.1009139	20	1 15.2	19.4
166811 2002 VC ₈₁	14.6	X	48.63871	212.75212	217.24285	13.15414	0.1518832	0.17683967	3.1435202	20	—	—
166812 2002 VU ₈₁	14.8	X	98.40532	136.28397	231.72645	12.98073	0.2053224	0.17795113	3.1304172	20	1 3.1	19.2
166813 2002 VK ₈₂	14.7	X	87.77951	210.15838	236.13511	22.70579	0.1417889	0.18373555	3.0643656	20	3 8.5	19.4
166814 2002 VA ₈₅	15.7	X	78.67827	274.61673	206.73041	12.33900	0.1578766	0.19018592	2.9946803	20	4 20.4	19.8
166815 2002 VL ₈₅	14.9	X	340.38653	101.14067	12.11462	5.52585	0.1474658	0.17505242	3.1648804	20	—	—
166816 2002 VO ₈₈	14.7	X	209.26170	66.79703	277.21833	8.34477	0.1425453	0.19306858	2.9647971	20	3 11.1	19.7
166817 2002 VP ₉₁	14.8	X	234.43723	144.32269	60.26033	5.93301	0.1351676	0.17262516	3.1944786	20	—	—
166818 2002 VS ₉₂	15.2	X	13.59560	10.21180	123.84484	2.54946	0.1616784	0.18024436	3.1038086	20	1 20.8	18.7
166819 2002 VK ₉₃	14.7	X	131.93126	121.07889	221.25503	15.50108	0.2361474	0.18104255	3.0946790	20	1 10.2	19.9
166820 2002 VX ₉₃	15.3	X	182.12097	173.50428	194.56675	11.66262	0.1682150	0.19220029	2.9737197	20	3 18.8	20.3
166821 2002 VK ₉₄	14.9	X	60.21235	19.40539	39.08296	10.63394	0.0764630	0.17709783	3.1404646	20	—	—
166822 2002 VV ₉₅	14.9	X	120.54325	144.38757	271.23329	10.46728	0.0764999	0.18805014	3.0173124	20	2 24.1	19.3
166823 2002 VE ₉₆	15.0	X	333.40553	171.02035	6.31578	9.81127	0.0281376	0.18405078	3.0608657	20	1 29.0	19.3
166824 2002 VH ₉₉	14.1	X	15.55973	152.54712	340.99386	30.15191	0.2678342	0.17802675	3.1295307	20	2 2.7	17.4
166825 2002 VN ₁₀₀	14.8	X	163.71489	123.27428	280.41695	8.75208	0.0685729	0.19344174	2.9609830	20	4 6.2	19.4
166826 2002 VV ₁₀₀	14.9	X	49.46171	183.27808	274.46889	8.48417	0.0984287	0.18255105	3.0776070	20	1 29.7	18.9
166827 2002 VJ ₁₀₁	15.3	X	83.55604	199.02082	206.41374	4.63662	0.1519400	0.17952008	3.1121428	20	1 21.9	19.5
166828 2002 VF ₁₀₄	15.0	X	182.73944	96.64305	261.89855	7.51616	0.0344688	0.18870081	3.0103747	20	3 2.6	19.5
166829 2002 VR ₁₀₄	14.8	X	23.58209	149.46606	259.16805	5.62803	0.1227792	0.17139999	3.2096834	20	—	—
166830 2002 VD ₁₀₇	15.0	X	56.21977	221.12957	241.39408	10.63091	0.1246997	0.18380156	3.0636320	20	2 14.5	19.0
166831 2002 VV ₁₁₁	15.2	X	126.08586	348.16268	6.67343	10.80725	0.1190291	0.18160761	3.0882564	20	1 11.2	19.9
166832 2002 VU ₁₁₂	15.6	X	103.87580	71.39961	56.42235	2.32565	0.1709641	0.19294377	2.9660755	20	5 30.6	20.1
166833 2002 VD ₁₁₄	14.9	X	8.09804	295.91149	236.05287	8.41279	0.1241747	0.18476134	3.0530130	20	2 26.1	18.7
166834 2002 VA ₁₁₈	17.1	X	313.70455	69.28235	306.77520	18.69831	0.0679067	0.38052495	1.8860243	20	9 30.7	19.1
166835 2002 VQ ₁₁₈	15.0	X	62.46270	82.91251	344.84588	10.98379	0.1267863	0.18080811	3.0973536	20	1 19.7	19.0
166836 2002 VL ₁₁₉	14.6	X	50.41989	9.69581	53.91630	15.34991	0.1895384	0.17589777	3.1547321	20	—	—
166837 2002 VS ₁₂₀	15.0	X	112.97295	94.99527	301.66151	7.24011	0.1572060	0.18412580	3.0600342	20	2 15.9	19.5
166838 2002 VY ₁₂₀	14.9	X	86.06127	111.57571	287.09339	9.00864	0.1108252	0.17963727	3.1107976	20	1 12.3	18.8
166839 2002 VD ₁₂₂	15.5	X	92.49205	15.67654	20.61736	16.83489	0.1089400	0.18111025	3.0939077	20	1 22.6	20.0
166840 2002 VT ₁₂₂	15.3	X	135.57338	41.79037	21.52599	13.30871	0.0517187	0.19081434	2.9881017	20	4 3.2	19.5
166841 2002 VX ₁₂₂	14.7	X	178.50353	64.21169	306.18557	9.97674	0.1033730	0.19089305	2.9872803	20	3 13.5	19.5
166842 2002 VS ₁₂₄	15.2	X	51.70541	249.93249	181.31521	8.90395	0.1726857	0.17879940	3.1205083	20	1 8.1	18.9
166843 2002 VU ₁₂₄	15.9	X	92.55584	280.69716	137.03762	6.03902	0.2412303	0.18367840	3.0650013	20	3 3.1	20.1
166844 2002 VR ₁₂₅	15.4	X	150.58422	349.43440	23.12516	9.21776	0.0789820	0.18616701	3.0376255	20	2 23.9	20.0
166845 2002 VT ₁₂₅	15.4	X	154.41773	346.65459	19.30684	10.11543	0.1249889	0.18739970	3.0242901	20	2 29.9	20.2
166846 2002 VL ₁₂₇	14.9	X	90.13028	58.42439	22.28335	26.59970	0.2474909	0.18090999	3.0961905	20	3 29.6	19.4
166847 2002 VM ₁₂₇	15.1	X	98.17059	0.16415	51.64337	11.27179	0.1278263	0.18334543	3.0687111	20	2 19.9	19.5
166848 2002 VX ₁₄₀	15.2	X	136.55609	173.49120	285.24578	12.05009	0.1381548	0.18229378	3.0805019	20	1 24.4	20.0
166849 2002 WE ₃	15.2	X	101.79324	31.65007	138.98320	10.56382	0.1166121	0.18075059	3.0980106	20	—	—
166850 2002 WF ₃	14.8	X	16.80735	205.81974	273.51643	11.62284	0.1125988	0.18061320	3.0995814	20	1 8.3	18.6
166851 2002 WJ ₈	14.5	X	123.94986	243.04877	69.12066	15.46967	0.2190488	0.17398085	3.1778624	20	—	—
166852 2002 WE ₉	15.6	X	138.45851	15.94219	0.27400	1.30852	0.1500843	0.18570583	3.0426525	20	2 19.0	20.3
166853 2002 WZ ₁₀	14.9	X	101.87453	264.59239	114.31994	9.94969	0.1237404	0.17923429	3.1154586	20	1 10.6	19.3
166854 2002 WC ₁₁	14.8	X	61.82200	276.01394	111.64570	10.12040	0.0891037	0.17354313	3.1832037	20	—	—
166855 2002 WM ₂₀	15.9	X	113.46216	299.91118	107.52402	4.43442	0.2170795	0.18510769	3.0492034	20	3 10.9	20.6
166856 2002 WC ₂₁	15.5	X	134.11281	124.99394	223.60947	11.04778	0.0813294	0.17980291	3.1088868	20	1 4.5	20.2
166857 2002 XE	15.4	X	13.68111	250.90101	203.65958	4.53688	0.1661275	0.17391399	3.1786767	20	—	—
166858 2002 XL	15.2	X	118.19133	307.09915	105.39805	9.71603	0.1429461	0.18729265	3.0254424	20	3 15.4	19.8
166859 2002 XH ₁	15.0	X	142.03638	280.72797	94.79356	10.73414	0.1379074	0.18671378	3.0316924	20	2 23.8	19.8
166860 2002 XN ₇	14.7	X	70.71774	192.61161	262.04032	13.35886	0.0592291	0.18624858	3.0367386	20	2 15.7	19.1
166861 2002 XB ₁₆	14.9	X	103.14305	321.33301	355.63519	11.74990	0.0473285	0.17035185	3.2228356	20	—	—
166862 2002 XR ₁₉	15.1	X	87.51233	93.91211	287.73490	5.73851	0.0671097	0.17755452	3.1350771	20	—	—
166863 2002 XM ₂₉	14.6	X	2.79292	40.01908	83.49359	23.01991	0.0330786	0.17654031	3.1470728	20	—	—
166864 2002 XP ₂₉	15.0	X	351.45511	314.08519	178.06556	6.21559	0.1460665	0.17429897	3.1739945	20	—	—
166865 2002 XT ₃₄	15.1	X	59.63728	164.52442	268.71960	9.46538	0.0730092	0.17763750	3.1341007	20	1 13.5	19.2
166866 2002 XO ₃₇	15.5	X	194.97113	334.85975	37.38865	9.40928	0.1086347	0.19302929	2.9651994	20	4 7.3	20.1
166867 2002 XH ₃₈	14.7	X	23.73612	69.44733	48.26192	10.99955	0.0980872	0.17873064	3.1213086	20	1 20.9	18.8
166868 2002 XN ₄₃	15.2	X	70.30395	49.28393	79.02545	11.79141	0.0598925	0.18920814	3.0049887	20	4 9.6	19.4
166869 2002 XJ ₄₇	15.4	X	13.91364	29.70667	87.95230	1.69267	0.1130127	0.17581398	3.1557344	20	1 3.5	19.1
166870 2002 XT ₄₇	15.3	X	8.45470	69.97000	9.04064	6.40382	0.1081710	0.17116343	3.2126401	20	—	—
166871 2002 XG ₄₈	14.8	X	102.79057	88.13099	254.62040	8.47264	0.2224471	0.17514096	3.1638137	20	—	—
166872 2002 XP ₅₀	14.1	X	344.48791	222.87407	261.89698	18.59550	0.1315946	0.17262272	3.1945087	20	—	—
166873 2002 XB ₅₁	15.3	X	112.68363	143.77700	264.17957	4.46988	0.0501606	0.18263294	3.0766869	20	2 15.0	19.7
166874 2002 XT ₅₅	16.4	X	287.07878	38.18110	274.07135	17.89224						

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>
166881 2002 XG ₈₈	15.2	X	128.12421	38.37598	8.92103	10.08245	0.1818742	0.18435853	3.0574584	20	3 20.6	20.0
166882 2002 XA ₉₀	14.6	X	0.57940	16.61455	122.21412	16.13152	0.2189594	0.17570178	3.1570777	20	—	—
166883 2002 XJ ₉₀	15.0	X	30.53425	251.74668	206.96130	10.45482	0.2491895	0.17563128	3.1579225	20	1 7.2	18.2
166884 2002 XJ ₁₀₂	15.5	X	87.67725	310.25271	76.88975	3.16431	0.0971129	0.17660461	3.1463089	20	—	—
166885 2002 YS ₂	14.8	X	355.92260	34.44243	69.14972	6.30793	0.0935451	0.16979461	3.2298830	20	—	—
166886 Ybl	15.5	X	37.55222	96.38738	28.89806	14.25035	0.2286852	0.17783711	3.1317551	20	3 6.8	18.9
166887 2002 YN ₃	14.6	X	353.92712	84.67419	21.23992	22.91327	0.1285009	0.17107471	3.2137507	20	—	—
166888 2002 YY ₆	15.6	X	259.60208	162.12672	309.06171	5.54909	0.0341180	0.21041466	2.7995317	20	10 30.5	19.4
166889 2002 YR ₁₆	14.8	X	101.60429	348.05019	88.69448	5.85027	0.1378667	0.18555652	3.0442845	20	3 24.5	19.2
166890 2002 YA ₁₇	15.5	X	69.67704	352.90164	65.20306	6.54304	0.1379283	0.17808693	3.1288256	20	1 18.6	19.5
166891 2002 YS ₂₂	14.9	X	133.47647	283.83062	100.64859	12.87155	0.1373921	0.18163483	3.0879479	20	2 26.7	19.7
166892 2002 YY ₂₃	15.0	X	53.10392	347.37824	92.43363	5.89810	0.1885802	0.17597970	3.1537529	20	1 25.9	18.5
166893 2002 YW ₂₆	14.8	X	69.66836	296.60815	109.42865	6.00647	0.0343076	0.17179606	3.2047482	20	—	—
166894 2002 YO ₃₂	15.3	X	81.25964	58.11243	336.68631	2.53805	0.1536474	0.17875465	3.1210291	20	1 7.7	19.3
166895 2002 YD ₃₅	14.5	X	109.84075	268.19239	104.39608	20.32023	0.1588492	0.17785717	3.1315195	20	1 17.7	19.0
166896 2003 AV ₁	15.1	X	92.75274	245.81788	147.17190	9.86965	0.0819707	0.17749402	3.1357894	20	1 10.2	19.5
166897 2003 AD ₂	15.0	X	20.99833	283.26748	226.13762	12.59463	0.2086896	0.17627022	3.1502868	20	2 19.6	18.6
166898 2003 AQ ₂	16.4	X	236.97200	280.68721	139.84220	23.52960	0.1281425	0.37106012	1.9179614	20	7 27.7	18.6
166899 2003 AT ₄	14.5	X	227.22964	345.20002	332.54057	14.45225	0.1849864	0.19260673	2.9695347	20	2 26.9	19.4
166900 2003 AJ ₇	16.6	X	161.46943	298.01915	119.41023	24.03955	0.0991903	0.36114914	1.9528925	20	5 2.3	19.8
166901 2003 AS ₁₆	17.2	X	136.48881	270.41082	190.81412	20.96554	0.1072882	0.36210491	1.9494545	20	5 26.2	19.9
166902 2003 AQ ₂₂	14.6	X	58.03286	319.14867	107.67092	21.93821	0.0916202	0.17149245	3.2085296	20	1 7.6	18.7
166903 2003 AQ ₅₂	15.4	X	41.93790	66.79340	48.32672	5.97718	0.1493477	0.17651036	3.1474288	20	2 19.2	19.2
166904 2003 AH ₆₇	15.1	X	175.53957	25.41657	93.32643	12.63554	0.2775376	0.19532826	2.9418871	20	7 26.3	20.5
166905 2003 AJ ₇₂	15.2	X	42.85113	57.60219	31.20122	16.26526	0.2461089	0.17471750	3.1689236	20	1 30.1	18.8
166906 2003 AA ₈₁	15.0	X	1.87183	105.26972	39.37625	20.73941	0.1453070	0.17393273	3.1784485	20	1 21.4	19.2
166907 2003 AF ₈₂	17.0	X	318.61849	277.14517	339.19545	18.31694	0.0539668	0.35419322	1.9783777	20	3 19.6	19.1
166908 2003 AH ₈₂	16.9	X	166.59194	96.93171	31.66309	20.69451	0.0859601	0.36571950	1.9365883	20	8 26.5	19.8
166909 2003 AY ₈₇	14.9	X	55.63961	279.14672	136.75320	17.43113	0.1685161	0.17148959	3.2085652	20	—	—
166910 2003 BN ₄₆	16.1	X	320.02269	99.29354	191.85473	22.36178	0.0402236	0.35894167	1.9608910	20	5 29.7	18.4
166911 2003 BW ₄₈	15.6	X	7.94172	126.83103	356.32729	1.29967	0.1497242	0.17187010	3.2038278	20	—	—
166912 2003 BB ₅₅	15.9	X	359.73312	73.29413	52.62199	1.67032	0.1694986	0.17004878	3.2266637	20	—	—
166913 2003 BG ₇₈	17.0	X	219.11410	120.10211	302.36491	18.45114	0.0879404	0.36937017	1.9238070	20	7 13.3	19.0
166914 2003 CE ₄	14.8	X	90.22648	137.11769	279.39881	12.67351	0.2094104	0.18239824	3.0793256	20	2 16.9	19.2
166915 2003 DV ₂₁	16.7	X	138.85083	92.38723	9.78306	19.50359	0.1059415	0.35570701	1.9727608	20	5 20.9	19.6
166916 2003 EL ₁₇	16.0	X	308.98277	67.44198	168.85913	8.00582	0.1911086	0.28498154	2.2869582	20	1 27.9	19.0
166917 2003 EL ₃₄	16.5	X	334.06877	352.30595	241.21354	4.82935	0.1844208	0.28884345	2.2665272	20	2 29.6	18.9
166918 2003 FR ₃₉	17.2	X	54.00848	116.60317	199.62702	2.29613	0.2084115	0.31255794	2.1503824	20	12 25.1	20.3
166919 2003 FT ₄₅	17.8	X	33.84677	10.68496	249.12074	1.26707	0.1391957	0.30168017	2.2017679	20	8 28.2	20.0
166920 2003 FS ₄₇	17.5	X	352.27855	289.34793	342.51081	1.82724	0.2528418	0.29441511	2.2378415	20	6 19.6	18.3
166921 2003 FV ₇₇	16.9	X	48.08913	93.94002	161.09127	3.83937	0.1634692	0.30237777	2.1983802	20	9 18.4	19.1
166922 2003 FR ₉₈	16.9	X	44.83216	43.31627	168.35922	5.87960	0.1078578	0.29612373	2.2292250	20	6 26.2	19.2
166923 2003 FX ₉₂	16.8	X	47.74683	125.15625	134.33495	5.72718	0.1285563	0.30270786	2.1967818	20	9 20.3	19.2
166924 2003 FB ₁₀₄	17.9	X	136.89326	3.42547	197.33797	3.17378	0.1387576	0.30977800	2.1632282	20	10 13.0	21.0
166925 2003 FN ₁₂₇	17.1	X	24.63609	271.39851	9.62063	5.10096	0.2016995	0.30085564	2.2057889	20	9 26.9	19.2
166926 2003 GL ₃	17.3	X	48.68014	215.42594	0.86795	1.84381	0.1161683	0.29850751	2.2173413	20	7 12.6	19.4
166927 2003 GQ ₈	16.6	X	46.39937	245.27047	59.99673	4.76552	0.2186317	0.30576756	2.1821023	20	12 2.7	19.5
166928 2003 GD ₁₃	17.2	X	40.86957	53.69862	185.02036	3.09582	0.1903778	0.29607431	2.2294731	20	8 15.6	19.4
166929 2003 GP ₄₃	15.5	X	300.92356	238.39539	51.89630	24.98371	0.2659685	0.28708596	2.2757683	20	4 4.7	18.8
166930 2003 GA ₄₈	16.3	X	7.24666	193.42304	96.04143	7.27184	0.1118855	0.29931150	2.2133688	20	8 25.7	18.3
166931 2003 HQ ₄	17.1	X	39.27347	87.96971	176.78057	3.67365	0.1214686	0.30226929	2.1989062	20	9 11.3	19.3
166932 2003 HT ₁₀	17.2	X	70.53097	84.72883	187.01294	4.68815	0.1234940	0.30555048	2.1831357	20	11 5.0	20.0
166933 2003 HN ₁₁	16.5	X	348.43168	155.60071	142.43182	6.62066	0.1916053	0.29633837	2.2281485	20	7 29.9	17.8
166934 2003 HB ₁₆	16.9	X	29.99245	67.50287	186.45316	6.33195	0.1550236	0.29638330	2.2279233	20	8 20.3	18.9
166935 2003 HF ₂₈	16.8	X	91.47925	265.41619	330.78500	2.24416	0.1328437	0.30551049	2.1833262	20	10 10.8	19.7
166936 2003 HP ₂₈	16.4	X	222.59420	24.31847	226.00270	1.74828	0.1742728	0.26897085	2.3768361	20	—	—
166937 2003 HF ₃₉	16.8	X	30.73188	211.83198	41.38598	4.70628	0.1649686	0.29700632	2.2248066	20	8 19.7	18.9
166938 2003 HC ₄₀	17.0	X	337.27148	3.41870	257.59662	3.24214	0.1744832	0.28889639	2.2662508	20	4 23.2	18.7
166939 2003 HD ₄₁	16.6	X	266.81063	357.90531	258.54488	1.93622	0.1525411	0.27662181	2.3328050	20	1 14.4	19.9
166940 2003 HU ₄₄	16.1	X	1.44420	98.92874	220.36145	5.58840	0.1760368	0.30101896	2.2049910	20	10 7.4	17.9
166941 2003 HQ ₄₆	16.1	X	37.46641	137.22134	163.07713	4.27013	0.1689249	0.30408037	2.1901665	20	11 9.7	18.6
166942 2003 HP ₄₈	16.4	X	19.25648	196.68273	93.83523	3.85529	0.1087497	0.29929754	2.2134376	20	9 17.6	18.6
166943 2003 HL ₅₀	17.6	X	11.94094	77.27207	189.76007	2.13817	0.2248963	0.29499179	2.2349240	20	8 9.6	18.8
166944 Seton	16.2	X	347.66085	205.34441	98.69634	8.62639	0.1820971	0.29784879	2.2206093	20	8 11.6	17.6
166945 2003 HS ₅₄	17.1	X	7.56352	34.48033	229.46099	5.30701	0.1773404	0.29568425	2.2314334	20	7 15.5	18.7
166946 2003 JD ₈	17.1	X	59.99029	225.80409	275.80551	2.28084	0.1112338	0.28736424	2.2742990	20	4 3.4	19.2
166947 2003 JS ₈	16.4	X	24.53539	170.58779	105.53687	5.89942	0.1333709	0.29748110	2.2224387	20	9 8.8	18.6
166948 2003 JL ₉	17.3	X	330.84267	142.50063	106.50291	3.13350	0.1516176	0.28693181	2.2765835	20	3 29.2	19.5
166949 2003 JU ₁₀	17.2	X	81.99496	38.30991	266.52100	2.45291	0.2088335	0.31179994	2.1538661	20	—	—
166950 2003 JJ ₁₄	16.8	X	284.14402	125.44852	146.91379	6.34127	0.2466137	0.28020026	2.3129009	20	2 10.9	20.4
166951 2003 KB ₄	17.1	X	267.27730	335.00748	290.83776	3.53486	0.2116824	0.27721514	2.3294751	20	1 21.7	20.9
166952 2003 KE ₁₇	17.0	X	303.34872	105.49303	146.17543	2.54982	0.1735201	0.28148501	2.3058579	20	2 14.9	19.8
166953 2003 KE ₃₀	16.5	X	339.23624	187.42598	81.69162	7.33725	0.1201357	0.28993913	2.2608139	20	5 20.5	18.6
166954 2003 LY ₁	15.5	X	150.50935	142.97577	225.44945	23.						

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>
166961 2003 NZ ₁	16.6	X	216.74073	336.60040	324.95212	3.76482	0.1795879	0.26930185	2.3748881	20	1 24.4	20.3
166962 2003 NB ₂	17.2	X	203.33368	133.79032	171.76162	7.10650	0.2612419	0.26735748	2.3863886	20	1 17.9	21.5
166963 2003 NN ₂	17.1	X	342.47737	224.36092	40.38853	2.88556	0.2063994	0.28642467	2.2792700	20	5 8.8	18.6
166964 2003 NK ₃	16.4	X	259.42801	195.86326	121.00305	7.62726	0.1286483	0.27715969	2.3297859	20	3 30.5	19.7
166965 2003 NZ ₇	16.3	X	190.30114	247.31888	104.64481	4.48982	0.2312764	0.26951981	2.3736076	20	3 5.5	20.3
166966 2003 OT ₁	16.7	X	164.55619	192.13546	122.31026	3.25213	0.2075849	0.26153623	2.4216691	20	—	—
166967 2003 OH ₂	16.1	X	190.67155	231.76976	103.23214	6.81838	0.1468758	0.26790172	2.3831555	20	2 11.8	19.7
166968 2003 OQ ₂	16.4	X	236.07070	232.31407	85.70163	7.84575	0.1549263	0.27308538	2.3529015	20	3 5.9	20.1
166969 2003 OR ₃	17.0	X	233.90668	73.31718	253.90377	2.16197	0.2031758	0.27339760	2.3511098	20	3 7.8	20.8
166970 2003 OV ₃	16.7	X	172.95293	154.36592	197.50011	1.15967	0.1890349	0.26624009	2.3930609	20	2 16.5	20.5
166971 2003 OD ₄	16.5	X	175.53449	119.62671	259.26448	4.10176	0.2437084	0.27033622	2.3688264	20	3 23.1	20.5
166972 2003 OJ ₄	16.8	X	211.81478	34.91979	319.66868	3.17982	0.1432514	0.27343466	2.3508974	20	3 24.1	20.3
166973 2003 OV ₅	16.2	X	202.73168	316.25822	6.04951	3.95155	0.2116671	0.26867293	2.3785928	20	2 7.8	20.2
166974 2003 OZ ₅	16.3	X	321.26979	6.97951	280.66507	6.30647	0.1113787	0.28348499	2.2949999	20	5 13.9	18.6
166975 2003 OE ₁₀	16.5	X	180.38834	199.43545	100.32336	2.49028	0.1886994	0.26126540	2.4233424	20	—	—
166976 2003 OW ₁₀	16.4	X	193.59311	220.46774	88.12427	6.68924	0.2147137	0.26583561	2.3954877	20	1 14.7	20.3
166977 2003 OK ₁₂	16.2	X	95.32856	132.05552	283.80372	11.88563	0.2323654	0.25187761	2.4831884	20	—	—
166978 2003 OJ ₁₃	16.5	X	211.16751	193.81550	113.00365	2.97846	0.1868582	0.26883229	2.3776527	20	1 25.8	20.3
166979 2003 OP ₁₄	16.3	X	98.40970	164.68799	203.60127	14.40521	0.1276155	0.25658546	2.4527203	20	—	—
166980 2003 OH ₁₅	16.6	X	255.97138	155.56812	122.79299	1.06404	0.1966999	0.27277023	2.3547135	20	1 28.8	20.3
166981 2003 OC ₁₉	16.5	X	146.00618	165.51687	198.74189	8.87928	0.1602223	0.26472155	2.4022038	20	2 1.5	20.1
166982 2003 OT ₂₁	17.5	X	19.16360	83.11156	157.09192	2.29909	0.1634440	0.28759604	2.2730768	20	6 30.1	19.1
166983 2003 OT ₂₃	16.3	X	324.09460	88.66618	163.62373	7.83363	0.1648892	0.27925187	2.3181346	20	3 20.1	18.7
166984 2003 OX ₂₅	16.8	X	157.32617	142.71198	232.64249	1.70485	0.1791141	0.26768164	2.3844616	20	2 29.9	20.5
166985 2003 OQ ₂₇	16.5	X	245.36636	169.51212	110.51103	4.52066	0.1622626	0.26937905	2.3744344	20	1 23.8	20.0
166986 2003 OO ₂₈	16.6	X	212.41182	283.67888	36.21480	1.81530	0.1921018	0.26849436	2.3796474	20	2 12.3	20.4
166987 2003 OW ₂₈	16.4	X	220.84845	307.45846	7.19679	2.78398	0.1445815	0.26923607	2.3752750	20	2 13.9	20.0
166988 2003 OC ₃₀	17.0	X	195.03801	247.08352	40.68924	2.03356	0.2120328	0.26185592	2.4196977	20	—	—
166989 2003 OL ₃₀	16.8	X	207.76561	170.58436	98.59547	3.24103	0.1559300	0.26087939	2.4257323	20	—	—
166990 2003 OR ₃₂	16.2	X	21.54847	261.84949	64.79678	0.98870	0.0938087	0.23853677	2.5749323	20	10 26.7	19.4
166991 2003 PY	16.0	X	151.59008	214.61166	143.71207	5.53708	0.2230285	0.26127247	2.4232987	20	2 8.5	19.8
166992 2003 PX ₁	16.9	X	166.39166	197.99871	137.77290	3.07528	0.2188716	0.26289337	2.4133277	20	1 24.6	20.7
166993 2003 PY ₁	16.1	X	260.05883	6.16486	308.34400	5.86852	0.2091335	0.27606792	2.3359242	20	3 13.7	19.7
166994 2003 PZ ₂	16.1	X	1.03969	256.48274	143.71018	6.08159	0.2602116	0.24455981	2.5324798	20	—	—
166995 2003 PQ ₃	15.9	X	110.77674	347.85769	328.97630	8.38917	0.0730177	0.25103432	2.4887465	20	—	—
166996 2003 PC ₄	15.3	X	313.42018	234.69984	325.56907	22.50486	0.1319890	0.26616144	2.3935323	20	1 4.4	18.8
166997 2003 PA ₅	16.8	X	123.36660	78.96924	269.89664	1.32330	0.1409857	0.25909718	2.4368432	20	—	—
166998 2003 PE ₅	16.0	X	150.03460	26.84696	325.09961	3.82376	0.1228925	0.26398574	2.4066655	20	1 20.4	19.4
166999 2003 PR ₅	16.9	X	183.44586	149.77824	198.53521	4.93460	0.2145632	0.26703585	2.3883044	20	2 21.0	20.8
167000 2003 PE ₆	17.1	X	249.27263	105.76399	209.67588	3.75890	0.1768843	0.27374557	2.3491170	20	3 8.7	20.7
167001 2003 PO ₆	15.8	X	224.15505	12.61426	311.01900	6.54455	0.1284044	0.27009147	2.3702572	20	2 26.2	19.4
167002 2003 PD ₇	16.7	X	231.84475	137.22995	195.23825	4.48815	0.2386941	0.27469696	2.3436899	20	3 11.1	20.8
167003 2003 PD ₈	16.4	X	184.47221	205.19491	165.07657	6.79333	0.1379978	0.26999914	2.3707975	20	3 19.8	20.0
167004 2003 PV ₈	17.2	X	270.37003	92.16307	197.62865	1.59470	0.2191679	0.27577071	2.3376023	20	2 22.5	20.6
167005 2003 PY ₈	16.7	X	262.01237	20.60214	288.18713	1.65140	0.2111726	0.27627268	2.3347699	20	3 9.8	20.3
167006 2003 PY ₁₁	15.8	X	142.51025	159.55455	186.89971	9.29972	0.2328886	0.26029284	2.4293750	20	1 16.0	19.6
167007 2003 PZ ₁₁	17.0	X	5.63214	139.73220	163.36761	2.51644	0.0549737	0.29267827	2.2466861	20	9 2.2	19.2
167008 2003 PT ₁₂	16.0	X	96.39136	95.10914	325.73434	21.32974	0.2643371	0.25953571	2.4340975	20	2 27.5	19.1
167009 2003 QV ₁₃	17.0	X	175.74873	100.23244	277.34855	0.40771	0.1972862	0.26951351	2.3736446	20	3 21.9	20.9
167010 2003 QZ ₄	16.6	X	189.29739	99.96706	184.74167	6.03178	0.1296612	0.26041413	2.4286207	20	—	—
167011 2003 QP ₆	15.9	X	233.06667	339.77452	348.25363	6.43526	0.1582615	0.27045785	2.3681161	20	3 11.5	19.6
167012 2003 QF ₉	16.7	X	99.66523	53.09463	209.51851	3.45030	0.1506418	0.24241973	2.5473624	20	11 15.1	20.7
167013 2003 QV ₁₁	16.2	X	105.29772	46.58050	351.41260	6.14534	0.1134473	0.26067830	2.4269796	20	1 25.2	19.1
167014 2003 QZ ₂₁	16.0	X	134.27344	258.01719	115.08141	5.31325	0.1914693	0.26010352	2.4305538	20	2 7.7	19.5
167015 2003 QF ₂₁	17.0	X	228.82283	265.69487	30.91690	3.41606	0.2943318	0.26810773	2.3819345	20	1 27.0	21.3
167016 2003 QZ ₂₂	16.3	X	218.85107	75.72369	272.95096	2.77577	0.1691606	0.27192441	2.3595938	20	3 22.3	19.9
167017 2003 QE ₂₃	16.8	X	263.54966	81.51884	197.67009	4.41141	0.1612330	0.27047103	2.3680392	20	2 7.5	20.4
167018 Csonatoscsaba	17.1	X	169.13058	251.58484	39.01886	1.76295	0.1809377	0.25821023	2.4424204	20	—	—
167019 2003 QU ₃₁	17.0	X	256.89764	54.28406	260.14088	1.88868	0.1751627	0.27525898	2.3404986	20	3 15.2	20.4
167020 2003 QH ₃₂	16.5	X	175.71719	47.66445	345.59274	5.10155	0.1330016	0.27148247	2.3621539	20	4 6.9	20.1
167021 2003 QL ₃₂	16.7	X	154.45829	239.08743	157.51856	6.80189	0.1241901	0.26844476	2.3799405	20	3 22.9	20.0
167022 2003 QL ₃₃	16.4	X	181.63399	102.30350	212.07832	1.95174	0.1697268	0.26245346	2.4160237	20	1 9.0	20.2
167023 2003 QZ ₃₄	16.3	X	124.50765	312.53151	359.82040	2.80818	0.1637516	0.25265647	2.4780825	20	—	—
167024 2003 QU ₃₅	16.6	X	155.52876	222.18608	135.57460	2.90955	0.1940880	0.26343569	2.4100144	20	2 8.9	20.3
167025 2003 QM ₃₆	16.8	X	64.83534	236.69727	96.39754	2.15689	0.1117533	0.24584096	2.5236738	20	—	—
167026 2003 QA ₃₈	16.9	X	229.23487	127.96699	161.28099	2.51055	0.2032906	0.26806277	2.3822009	20	1 19.1	20.9
167027 2003 QB ₃₈	16.9	X	187.55820	195.15706	145.96654	3.30324	0.2269495	0.26688523	2.3892028	20	2 17.6	20.9
167028 2003 QM ₃₈	16.6	X	141.16335	168.83572	154.56451	3.24908	0.0970214	0.25683450	2.4511345	20	—	—
167029 2003 QJ ₃₉	16.2	X	213.36325	163.76980	154.04373	7.99200	0.1450398	0.26761972	2.3848294	20	2 9.6	20.0
167030 2003 QN ₃₉	16.3	X	119.15082	83.63151	245.61332	0.98246	0.1536560	0.25340598	2.4731937	20	—	—
167031 2003 QD ₄₀	16.8	X	165.52960	5.78234	23.30962	0.22614	0.2197578	0.26750996	2.3854816	20	3 28.8	20.7
167032 2003 QM ₄₁	16.6	X	150.27434	203.18813	162.46764	12.18518	0.2197062	0.26178733	2.4201204	20	2 15.0	20.4
167033 2003 QJ ₄₂	16.6	X	168.27492	196.64194	158.13972	2.33765	0.1234886	0.26467187	2.4025044	20	2 11.7	19.9
167034 2003 QA ₄₃	16.5	X	147.12403	32.70081	6.27222	6.61732	0.1193					

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>
167041 2003 QB ₅₁	16.2	X	144.63453	332.75195	62.26756	2.84163	0.2414611	0.26393091	2.4069988	20	3 21.2	20.1
167042 2003 QR ₅₁	16.7	X	136.79955	262.19824	91.17555	2.50127	0.1914180	0.26024186	2.4296923	20	1 16.0	20.0
167043 2003 QD ₅₂	16.1	X	91.02236	284.74849	134.01150	15.21365	0.1271641	0.26143854	2.4222724	20	2 1.8	18.6
167044 2003 QG ₅₃	16.2	X	230.20265	288.90927	350.07907	12.60525	0.2173213	0.26653113	2.3913185	20	1 10.5	20.5
167045 2003 QK ₅₃	16.4	X	194.30495	264.69756	135.26252	6.94893	0.1273936	0.27527374	2.3404149	20	5 8.8	20.0
167046 2003 QK ₅₄	16.1	X	156.51570	357.57175	31.62004	5.22227	0.2239374	0.26648190	2.3916130	20	3 23.0	19.9
167047 2003 QA ₅₆	16.2	X	209.82147	340.26383	54.52030	3.06174	0.2255972	0.27533644	2.3400596	20	5 11.3	19.8
167048 2003 QV ₅₆	16.0	X	117.12426	326.28064	41.23815	5.32171	0.1930488	0.25698360	2.4501863	20	1 12.7	19.2
167049 2003 QG ₅₇	16.6	X	192.45833	318.89339	355.95618	4.74377	0.2419453	0.26528092	2.3988258	20	1 22.9	20.7
167050 2003 QY ₅₇	16.5	X	51.31921	4.99472	38.16821	3.20371	0.2130754	0.25125777	2.4872706	20	—	—
167051 2003 QC ₆₃	16.2	X	71.97479	23.25604	34.84641	7.36790	0.1638182	0.25551321	2.4595773	20	1 8.0	18.7
167052 2003 QB ₆₇	17.0	X	126.84037	250.60237	119.53961	3.94083	0.1947462	0.25942219	2.4348075	20	1 26.7	20.3
167053 2003 QJ ₆₇	16.3	X	109.67832	316.35888	80.89461	6.35899	0.1991797	0.25677951	2.4514844	20	2 13.4	19.5
167054 2003 QM ₇₇	16.5	X	209.19858	132.46023	204.37397	5.67932	0.1460392	0.26759069	2.3850018	20	2 28.0	20.3
167055 2003 QF ₈₀	16.7	X	128.74859	31.28034	349.69144	4.54797	0.2025686	0.26175171	2.4203399	20	2 13.1	20.0
167056 2003 QB ₈₂	16.2	X	344.05598	316.95096	76.60588	3.01248	0.0805884	0.24050666	2.5608530	20	11 28.0	18.9
167057 2003 QA ₈₅	16.4	X	157.70429	90.04814	261.72250	4.27942	0.1766684	0.26164276	2.4210118	20	2 1.0	20.0
167058 2003 QT ₈₆	17.1	X	179.75978	128.62665	173.10089	2.91882	0.2384636	0.26198656	2.4188933	20	—	—
167059 2003 QN ₈₇	16.7	X	129.29677	145.99430	216.66056	1.61825	0.2216705	0.25879449	2.4387430	20	1 22.9	20.0
167060 2003 QZ ₈₇	16.2	X	47.06539	289.35344	167.57388	2.56383	0.1814709	0.26072170	2.4267103	20	1 13.7	18.0
167061 2003 QB ₈₈	16.4	X	338.34085	94.97610	251.27359	1.07339	0.1171246	0.23283534	2.6167975	20	9 11.5	19.1
167062 2003 QC ₈₈	16.3	X	98.34888	239.39468	165.61674	4.50259	0.1750380	0.25920509	2.4361669	20	2 1.2	19.0
167063 2003 QR ₉₃	16.7	X	169.71897	331.51655	32.20089	2.99119	0.1959140	0.26704118	2.3882726	20	3 1.1	20.6
167064 2003 QN ₉₄	16.4	X	152.04812	305.06011	66.57478	5.63554	0.1679711	0.26417712	2.4055031	20	2 23.1	20.0
167065 2003 QF ₁₀₂	16.9	X	215.26372	101.11722	197.31829	4.28848	0.2039053	0.26750171	2.3855307	20	1 18.2	20.9
167066 2003 QT ₁₀₅	16.7	X	324.40450	69.39648	357.60018	12.46568	0.3345110	0.23626044	2.5914453	20	12 30.4	18.4
167067 2003 QL ₁₀₈	16.2	X	215.56330	239.98513	215.64938	2.54284	0.0655300	0.22985917	2.6393369	20	8 14.7	19.9
167068 2003 QY ₁₀₉	15.5	X	283.75849	108.78955	310.48007	7.81557	0.3816630	0.22384041	2.6864394	20	8 5.5	18.9
167069 2003 RL ₁	15.8	X	66.07999	260.81647	181.38681	22.14998	0.1224956	0.26009665	2.4305966	20	1 21.4	19.0
167070 2003 RQ ₂	16.0	X	294.24392	248.75227	167.14623	5.37956	0.0897966	0.23571680	2.5954282	20	10 8.5	18.9
167071 2003 RR ₅	15.8	X	339.94225	359.77438	3.11397	12.95014	0.2635267	0.23111157	2.6297931	20	10 13.8	17.7
167072 2003 RS ₁₀	15.6	X	176.62922	1.07197	28.75463	8.71118	0.1770911	0.26816935	2.3815697	20	4 7.7	19.4
167073 2003 RG ₁₄	16.6	X	35.26761	239.90940	184.11837	3.15073	0.1701954	0.25135617	2.4866215	20	—	—
167074 2003 RN ₁₄	16.5	X	161.71486	107.55861	273.93726	5.34239	0.1330264	0.26609427	2.3939351	20	3 7.7	20.1
167075 2003 RY ₁₄	17.0	X	261.31408	297.22354	17.88499	2.73254	0.1895010	0.27538645	2.3397763	20	3 20.7	20.5
167076 2003 RG ₁₈	16.2	X	61.60092	352.76496	325.64479	13.00544	0.1477738	0.24073477	2.5592350	20	12 14.2	20.2
167077 2003 RZ ₁₉	16.4	X	129.35856	226.67092	172.83493	4.16934	0.0439964	0.26439052	2.4042085	20	2 14.5	19.4
167078 2003 RC ₂₀	16.5	X	215.48167	161.47911	177.14794	2.89923	0.1482714	0.26955831	2.3733816	20	3 8.6	20.2
167079 2003 RN ₂₁	16.1	X	106.10231	98.03484	325.29459	7.45385	0.0921550	0.26450113	2.4035382	20	2 22.9	18.9
167080 2003 RX ₂₁	16.5	X	144.67206	226.66704	187.03600	6.48477	0.1993065	0.26733578	2.3865177	20	4 9.4	20.2
167081 2003 RD ₂₂	16.2	X	151.85059	115.97331	281.26911	5.39314	0.2537689	0.26562979	2.3967250	20	3 26.6	20.3
167082 2003 RX ₂₂	15.5	X	290.34059	352.35731	59.41723	15.39837	0.2341228	0.22699559	2.6614876	20	9 11.8	18.8
167083 2003 RR ₂₅	16.2	X	125.82659	227.66562	195.25980	23.64914	0.2166424	0.26409332	2.4060119	20	4 3.9	19.7
167084 2003 SF ₆	16.2	X	171.51666	315.83200	29.21730	6.62684	0.1513900	0.26117034	2.4239304	20	2 8.7	20.0
167085 2003 SC ₈	16.2	X	278.08226	260.56151	188.60447	5.69342	0.1568863	0.23419363	2.6066697	20	10 18.6	19.0
167086 2003 ST ₁₃	16.9	X	182.11984	168.98575	130.29706	2.18848	0.1862309	0.25962607	2.4335327	20	—	—
167087 2003 SD ₁₄	16.7	X	136.75405	185.87394	169.71013	2.78161	0.1966435	0.25843858	2.4409815	20	1 18.9	20.2
167088 2003 SX ₁₅	16.8	X	158.23704	147.73766	166.89731	2.46585	0.2055888	0.25777532	2.4451668	20	—	—
167089 2003 SA ₁₆	17.2	X	114.90127	78.51899	193.03800	10.06913	0.0258065	0.24021131	2.5629517	20	12 5.4	20.9
167090 2003 SK ₂₂	17.1	X	141.02888	38.13872	317.14732	1.81363	0.2109191	0.25757934	2.4464069	20	1 25.3	20.6
167091 2003 SN ₂₂	16.2	X	308.73837	287.31008	358.67146	4.55535	0.0361281	0.21365832	2.7711254	20	5 4.7	19.9
167092 2003 ST ₂₄	16.0	X	100.62433	153.07111	249.06897	7.08864	0.1565692	0.25960932	2.4336373	20	1 27.0	19.0
167093 2003 SS ₂₉	15.5	X	121.12273	224.12841	340.15276	6.90632	0.1444680	0.23415217	2.6069774	20	9 21.3	19.5
167094 2003 SQ ₃₁	17.0	X	174.88329	106.13049	215.14722	1.77677	0.2049784	0.25884198	2.4384447	20	1 13.9	20.8
167095 2003 SH ₃₂	15.9	X	341.72729	131.76302	314.93876	13.32589	0.1502270	0.24170419	2.5523874	20	—	—
167096 2003 SX ₃₂	16.5	X	157.02883	196.38982	124.75544	3.33174	0.1660394	0.25680913	2.4512959	20	—	—
167097 2003 SL ₃₃	16.4	X	129.44637	310.56767	72.84425	2.61325	0.1949204	0.26019344	2.4299937	20	2 16.4	19.8
167098 2003 SF ₃₇	16.2	X	26.62387	231.36208	218.56571	5.40990	0.0736455	0.25490850	2.4634656	20	—	—
167099 2003 ST ₄₀	16.1	X	79.89922	167.16719	260.08824	5.57892	0.0948577	0.25738306	2.4476505	20	1 22.2	18.8
167100 2003 ST ₄₃	16.1	X	260.70641	304.27570	165.91639	8.92584	0.1193829	0.23813745	2.5778101	20	10 29.2	19.3
167101 2003 ST ₄₆	16.6	X	166.99915	178.36565	210.12256	2.08604	0.1022411	0.26733259	2.3865367	20	3 22.5	19.8
167102 2003 SB ₄₇	16.2	X	158.75955	133.10158	199.00350	6.89578	0.2366671	0.25942424	2.4347947	20	1 14.2	20.2
167103 2003 SL ₅₀	16.1	X	50.09219	280.26213	198.77653	6.08191	0.1007980	0.26366707	2.4086043	20	2 13.6	18.6
167104 2003 SB ₅₁	16.3	X	200.16832	128.83030	232.06178	1.56753	0.1414331	0.26916164	2.3757128	20	3 21.8	20.1
167105 2003 SD ₅₂	16.1	X	43.51250	287.69085	40.86416	5.19439	0.1642533	0.23896579	2.5718496	20	12 7.7	19.5
167106 2003 SS ₆₀	15.9	X	7.66846	16.24187	344.61307	10.64095	0.0881896	0.23777595	2.5804222	20	11 16.1	19.3
167107 2003 SK ₆₁	16.8	X	129.54205	321.89536	84.81044	3.80997	0.1738921	0.26415415	2.4056425	20	3 15.3	20.2
167108 2003 SX ₆₁	16.4	X	303.38959	248.91545	155.14089	10.14998	0.1869419	0.23243751	2.6197825	20	9 26.7	19.0
167109 2003 SK ₇₄	16.2	X	206.05202	323.19744	338.03066	5.79057	0.1191368	0.26167200	2.4208314	20	1 15.4	19.8
167110 2003 SG ₇₆	17.5	X	102.79589	173.24742	188.29658	6.20015	0.2571548	0.25239667	2.4797827	20	—	—
167111 2003 SU ₇₇	16.1	X	130.76806	36.92086	225.24647	7.14905	0.1953210	0.24560076	2.5253190	20	12 13.4	20.4
167112 2003 SH ₇₈	16.9	X	356.60935	28.14577	225.73946	5.58617	0.1826437	0.28101669	2.3084190	20	5 29.9	18.5
167113 Robertwick	16.4	X	69.99337	290.42477	7.06071	13.08438	0.2445540	0.24024367	2.5627215	20	12 4.3	20.7
16711												

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>
167121 2003 SZ ₁₂₂	16.5	X	326.83461	254.53267	168.94333	12.42515	0.1775797	0.23871212	2.5736712	20	12 16.9	19.2
167122 2003 SL ₁₂₃	16.3	X	227.80908	240.79827	56.95890	2.87390	0.1797062	0.26579022	2.3957604	20	1 30.1	20.2
167123 2003 SU ₁₂₄	16.5	X	230.03826	283.15819	31.68230	4.39720	0.2217233	0.26834313	2.3805414	20	2 21.1	20.4
167124 2003 SB ₁₃₄	16.6	X	37.41910	290.34754	96.89900	4.32612	0.1293070	0.24571770	2.5245177	20	—	—
167125 2003 SZ ₁₃₇	17.5	X	52.93373	340.30533	30.28029	7.76661	0.2737888	0.24552980	2.5258055	20	—	—
167126 2003 SS ₁₄₁	15.4	X	199.56265	90.90742	14.75709	15.30039	0.1066624	0.22091512	2.7101027	20	8 13.1	19.7
167127 2003 SX ₁₄₃	16.4	X	315.77043	73.47609	337.40323	4.14299	0.2434691	0.23294126	2.6160042	20	10 26.6	18.5
167128 2003 SK ₁₄₈	16.1	X	110.04352	272.28623	107.04518	10.18724	0.2332916	0.25643556	2.4536760	20	1 24.9	19.1
167129 2003 SO ₁₅₅	16.8	X	173.60816	115.30356	202.86807	8.32895	0.2429021	0.25924328	2.4359276	20	1 10.3	21.0
167130 2003 SL ₁₅₆	16.8	X	101.10737	169.68260	246.99771	0.47830	0.1616496	0.25881965	2.4385849	20	2 19.3	19.8
167131 2003 SR ₁₅₉	16.6	X	30.43555	190.28816	249.65847	6.08848	0.1391373	0.25324303	2.4742546	20	—	—
167132 2003 SX ₁₆₂	16.7	X	189.67647	166.39646	144.64436	1.50462	0.1954317	0.25969700	2.4330896	20	1 13.8	20.5
167133 2003 SS ₁₆₄	15.6	X	211.11597	257.94787	185.31173	13.46840	0.0731765	0.22067984	2.7120286	20	7 20.9	19.8
167134 2003 SP ₁₆₇	15.6	X	243.19262	120.41433	346.20347	11.34893	0.1504383	0.22834888	2.6509617	20	9 19.9	19.2
167135 2003 SE ₁₇₈	15.6	X	179.12464	122.10068	302.95840	4.64316	0.0427010	0.21502623	2.7593604	20	5 22.8	19.5
167136 2003 SG ₁₇₈	16.5	X	338.81386	80.87419	315.19268	5.91859	0.0699451	0.23660077	2.5889596	20	11 19.5	19.6
167137 2003 SX ₁₈₄	16.5	X	232.40111	269.27797	15.08561	11.07534	0.1909533	0.26431552	2.4046633	20	1 19.9	20.6
167138 2003 SP ₁₉₅	16.1	X	241.97339	174.04394	253.34645	6.01722	0.0953459	0.28282630	2.2985618	20	8 9.2	19.0
167139 2003 SU ₁₉₅	15.7	X	347.84040	41.53994	325.11148	3.31549	0.2313477	0.23192138	2.6236679	20	11 8.1	17.9
167140 2003 SP ₁₉₆	16.2	X	298.34358	274.19741	227.76735	14.16886	0.1205026	0.24323927	2.5416374	20	—	—
167141 2003 SZ ₁₉₆	15.9	X	151.82266	119.03957	231.20068	10.88430	0.2202821	0.25979596	2.4324716	20	1 26.3	19.9
167142 2003 SV ₁₉₉	15.9	X	335.21466	28.27051	10.76139	10.29167	0.1283641	0.23337226	2.6127824	20	11 18.8	18.8
167143 2003 SD ₂₀₀	15.6	X	356.23801	4.41621	15.28880	11.08262	0.1651690	0.23422884	2.6064084	20	12 4.4	18.6
167144 2003 SG ₂₀₀	16.3	X	177.56538	299.52218	53.29711	5.91593	0.2428483	0.26645704	2.3917618	20	2 27.2	20.4
167145 2003 SS ₂₀₅	16.6	X	207.45496	96.72664	193.46215	4.75107	0.1971799	0.26123022	2.4235600	20	1 3.1	20.6
167146 2003 ST ₂₀₇	16.3	X	342.62653	234.88084	183.16957	4.84336	0.2041984	0.23793834	2.5792480	20	—	—
167147 2003 SZ ₂₀₇	16.4	X	306.87160	15.79465	49.53369	3.51208	0.2501526	0.23254101	2.6190051	20	10 28.2	18.1
167148 2003 SO ₂₀₈	17.0	X	99.83936	75.93648	307.48462	3.80388	0.1715433	0.25683020	2.4511619	20	1 6.1	19.7
167149 2003 SR ₂₁₀	16.4	X	204.32663	117.09008	235.03716	5.57824	0.1289565	0.27116211	2.3640140	20	3 12.8	20.0
167150 2003 SR ₂₁₁	16.2	X	187.59997	193.95377	114.92158	7.70449	0.1680860	0.26201213	2.4187359	20	1 7.9	20.0
167151 2003 SH ₂₁₂	16.2	X	121.48220	201.78466	115.50224	8.12357	0.1284509	0.25135795	2.4866098	20	—	—
167152 2003 SM ₂₁₃	15.8	X	330.57057	10.87748	29.05011	12.37302	0.1721330	0.23344626	2.6122301	20	11 13.9	18.4
167153 2003 SA ₂₁₈	16.6	X	6.57126	114.34159	188.34007	4.09105	0.0902545	0.22591167	2.6699939	20	8 26.3	19.8
167154 2003 SC ₂₁₈	15.6	X	92.08261	77.40017	204.76765	13.79814	0.1183154	0.23512684	2.5997679	20	11 28.4	19.6
167155 2003 SU ₂₁₈	15.5	X	260.87440	12.79223	42.28672	6.90662	0.0488915	0.22196949	2.7015139	20	8 25.2	19.2
167156 2003 SA ₂₂₈	15.6	X	220.70989	52.45459	353.68399	5.83402	0.0144602	0.21770502	2.7366783	20	6 21.7	19.4
167157 2003 SA ₂₃₄	16.2	X	54.00791	104.09198	44.84047	6.53751	0.0752472	0.26727755	2.3868643	20	4 4.9	18.8
167158 2003 SH ₂₃₅	16.5	X	81.57182	153.80232	202.64099	11.88352	0.2175931	0.24582779	2.5237640	20	—	—
167159 2003 SH ₂₃₅	17.1	X	158.63637	134.11325	213.16204	5.84130	0.1606729	0.26033025	2.4291423	20	1 25.6	20.8
167160 2003 SY ₂₃₈	16.5	X	106.49541	178.87846	171.50500	2.66179	0.1126901	0.27355511	2.3502073	20	6 6.7	19.6
167161 2003 SU ₂₄₄	16.4	X	137.52013	242.97185	198.33495	5.46213	0.1573246	0.26917622	2.3756270	20	5 4.8	19.8
167162 2003 SW ₂₄₆	16.3	X	330.35528	194.28367	183.01155	11.03190	0.1166022	0.23244785	2.6197049	20	10 13.9	19.0
167163 2003 SG ₂₄₇	16.6	X	68.49979	134.98265	193.76633	12.60271	0.1904870	0.24272409	2.5452325	20	—	—
167164 2003 ST ₂₄₇	17.0	X	168.77486	300.03633	23.32112	2.98735	0.1816107	0.24534218	2.4415887	20	1 10.3	20.8
167165 2003 SY ₂₄₇	16.4	X	83.55181	84.50185	5.08647	6.78156	0.0784956	0.26315241	2.4117437	20	2 27.5	19.2
167166 2003 SR ₂₄₈	15.6	X	48.45092	39.38969	173.44673	10.33550	0.1217260	0.22053490	2.7132168	20	7 2.0	19.1
167167 2003 SZ ₂₄₉	15.4	X	293.04502	144.86294	207.82654	13.60303	0.1240883	0.22095889	2.7097448	20	6 29.2	19.1
167168 2003 SP ₂₅₀	16.4	X	42.13753	169.85362	196.27392	6.04460	0.2413423	0.24117847	2.5560952	20	—	—
167169 2003 SH ₂₅₁	15.3	X	178.24352	285.45003	201.67540	11.76874	0.0993901	0.22109706	2.7086158	20	8 7.8	19.7
167170 2003 SC ₂₅₂	15.4	X	337.60554	150.42548	229.92180	11.86791	0.1290596	0.22942278	2.6426827	20	10 28.8	18.1
167171 2003 SP ₂₅₇	16.7	X	335.36606	305.30908	110.02655	1.97971	0.1364337	0.23846761	2.5754302	20	12 17.6	19.1
167172 2003 SY ₂₅₇	16.5	X	176.98503	215.87298	92.02334	3.63481	0.2017562	0.25823491	2.4422648	20	—	—
167173 2003 SN ₂₅₈	15.9	X	112.70686	61.06598	187.44958	7.39660	0.1644315	0.23610607	2.5925747	20	11 10.9	20.0
167174 2003 SL ₂₆₀	16.6	X	52.77621	279.12449	327.41907	6.35782	0.1823226	0.23012641	2.6372932	20	9 3.9	20.0
167175 2003 SO ₂₆₆	16.3	X	45.56990	270.35118	16.65555	4.03228	0.2663872	0.23487979	2.6015906	20	10 31.6	19.8
167176 2003 SO ₂₆₉	16.3	X	116.48102	268.31325	124.36490	2.91077	0.1895871	0.25814713	2.4428184	20	2 12.3	19.3
167177 2003 SD ₂₇₁	16.6	X	129.53717	221.02184	121.33240	7.38434	0.1650232	0.25338054	2.4733593	20	—	—
167178 2003 SF ₂₇₂	16.1	X	110.22729	292.90701	334.22760	14.21434	0.0955812	0.24168896	2.5524947	20	11 23.7	20.2
167179 2003 SK ₂₇₃	15.6	X	303.33877	83.79078	342.47738	10.52892	0.2666071	0.22967108	2.6407777	20	10 11.6	17.9
167180 2003 SR ₂₇₃	15.9	X	107.99708	124.73061	230.51276	12.50160	0.1254753	0.25460195	2.4654426	20	—	—
167181 2003 SH ₂₇₇	15.8	X	239.67686	100.18429	351.47148	14.07889	0.0611960	0.22867402	2.6484483	20	9 11.0	19.2
167182 2003 SK ₂₈₁	16.5	X	303.44461	11.57181	230.25797	9.08370	0.1862507	0.27001642	2.3706963	20	1 29.5	19.9
167183 2003 SU ₂₈₄	15.6	X	88.85560	352.77873	293.51549	8.47499	0.0204304	0.23672147	2.5880795	20	11 18.2	19.2
167184 2003 SO ₂₈₆	15.5	X	297.91919	345.08169	319.51020	11.92927	0.1362152	0.21668644	2.7452478	20	4 24.9	19.4
167185 2003 SZ ₂₈₇	15.9	X	332.90935	119.55617	334.85588	9.10421	0.1686440	0.24093151	2.5578416	20	—	—
167186 2003 SO ₂₈₈	16.1	X	95.58956	348.13007	74.09304	3.08910	0.1895368	0.25845925	2.4408514	20	2 25.4	18.9
167187 2003 SX ₂₉₄	15.5	X	332.11320	335.87210	64.24219	10.78712	0.1942924	0.23173078	2.6251064	20	11 21.4	17.7
167188 2003 SA ₂₉₅	15.1	X	13.63225	312.66336	54.11468	14.46912	0.1965155	0.23475698	2.6024978	20	12 20.9	18.3
167189 2003 SS ₂₉₉	15.4	X	342.81695	343.97826	17.90543	14.14888	0.2032715	0.22803625	2.6533841	20	10 16.3	17.8
167190 2003 SR ₃₀₂	15.8	X	214.79345	303.46561	248.53654	5.21469	0.1281054	0.24370713	2.5383834	20	12 12.2	19.3
167191 2003 SQ ₃₀₆	15.4	X	174.59032	246.77197	277.40038	10.74875	0.2092921	0.22473348	2.6793176	20	9 14.5	20.2
167192 2003 SO ₃₀₉	17.3	X	179.21421	127.47548	200.81232	5.42967	0.1393578	0.26124298	2.4234811	20	1 21.0	21.1
167193 2003 SD ₃₂₂	16.1	X	29.52524	35.03586	335.36043	14.38415	0.1858339	0.2393123				

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>
167201 2003 TE ₂₀	16.0	X	9.65428	80.48389	228.39383	13.02568	0.1484558	0.23115779	2.6294426	20	9 12.5	19.1
167202 2003 TO ₂₀	15.7	X	283.85547	108.10234	358.99978	28.06478	0.1831668	0.23540691	2.5977055	20	11 2.8	19.2
167203 2003 TW ₂₀	15.9	X	332.99088	10.30923	48.15596	8.49211	0.0581883	0.23889448	2.5723613	20	12 11.6	19.0
167204 2003 TO ₃₃	17.2	X	345.55196	205.56040	150.68086	2.79974	0.1000482	0.23163028	2.6258656	20	10 9.9	20.0
167205 2003 TR ₄₃	16.1	X	329.49116	95.73780	202.77278	4.42690	0.0985743	0.21813444	2.7330855	20	6 17.1	19.3
167206 2003 TP ₅₂	16.9	X	59.95605	9.12496	105.84784	3.43917	0.1320049	0.25973774	2.4328351	20	3 4.1	19.3
167207 2003 UH ₁	16.3	X	348.49562	46.73942	355.19023	11.17054	0.1514492	0.23774144	2.5806719	20	12 23.9	19.3
167208 Lelekovice	16.4	X	294.61820	326.90485	78.26705	4.76399	0.1825203	0.22888991	2.6467827	20	9 11.6	19.2
167209 2003 UX ₁₃	16.1	X	146.92092	124.56433	316.98714	2.66759	0.0532559	0.21094702	2.7948196	20	5 6.4	20.1
167210 2003 UN ₁₄	15.9	X	279.41692	35.12294	37.61270	5.97338	0.1083710	0.22901799	2.6457957	20	10 5.0	19.1
167211 2003 UO ₁₆	17.0	X	7.03954	214.27143	186.10932	4.59732	0.2263309	0.23900216	2.5715887	20	—	—
167212 2003 UQ ₁₈	15.6	X	240.28312	209.66261	205.00084	9.12394	0.1991860	0.21773077	2.7364626	20	7 4.3	20.0
167213 2003 UC ₁₉	16.4	X	265.45154	113.18076	336.51277	2.60123	0.1039049	0.22957021	2.6415512	20	10 5.4	19.8
167214 2003 UA ₂₂	15.6	X	341.15088	132.87438	291.19308	11.49730	0.1457440	0.23809147	2.5781419	20	—	—
167215 2003 UC ₂₃	16.6	X	351.61575	27.26993	3.41331	3.60317	0.2514138	0.23597803	2.5935124	20	12 27.9	19.0
167216 2003 UH ₂₆	16.0	X	291.89385	74.17261	28.53602	12.06643	0.1593675	0.23501016	2.6006283	20	11 27.5	18.7
167217 2003 UQ ₂₈	16.6	X	49.52050	34.96926	68.02718	2.81525	0.1699172	0.25525295	2.4612489	20	1 30.6	18.8
167218 2003 UY ₃₀	16.9	X	186.88295	323.50612	301.26285	1.37268	0.1975583	0.25215002	2.4813996	20	—	—
167219 2003 UH ₃₁	16.7	X	6.74000	335.41730	204.62691	2.00422	0.1267957	0.26344197	2.4099761	20	2 24.9	18.9
167220 2003 UQ ₃₂	16.0	X	97.90111	65.19795	197.68490	1.39837	0.1422067	0.23539278	2.5978094	20	11 11.9	19.9
167221 2003 UA ₃₃	15.9	X	227.00307	18.10950	189.68744	6.17981	0.1585343	0.24519214	2.5281239	20	—	—
167222 2003 UT ₃₉	16.1	X	319.73895	315.38040	56.11030	3.98535	0.1439162	0.22724203	2.6595629	20	9 14.1	18.8
167223 2003 UE ₄₀	16.1	X	106.91206	300.73720	193.35441	3.27841	0.0380011	0.21003101	2.8029398	20	5 25.4	19.9
167224 2003 UD ₄₁	16.0	X	61.84339	111.09629	211.35859	10.86595	0.2093944	0.23857201	2.5746788	20	12 24.8	20.1
167225 2003 UJ ₄₅	16.3	X	66.01218	312.24047	334.54355	7.58614	0.2402482	0.23646995	2.5899144	20	11 16.9	20.5
167226 2003 UP ₄₅	16.2	X	316.09590	116.00113	203.44341	5.49530	0.1415563	0.21811072	2.7332837	20	6 18.8	19.4
167227 2003 UT ₄₇	15.3	X	324.61287	244.20473	225.82126	21.38312	0.1184387	0.23948453	2.5681344	20	—	—
167228 2003 UF ₅₃	15.6	X	51.56529	315.70238	311.17586	8.78893	0.0919081	0.22617283	2.6679381	20	9 12.2	19.2
167229 2003 UJ ₅₆	16.5	X	349.04533	339.96138	14.24052	1.96094	0.2181667	0.23088299	2.6315286	20	10 22.1	18.7
167230 2003 UJ ₅₇	15.6	X	319.54927	146.07844	227.97096	5.53796	0.0074657	0.22644423	2.6658060	20	9 19.8	19.1
167231 2003 UE ₅₈	16.4	X	302.86450	123.95294	352.83584	12.93789	0.1195335	0.24136972	2.5547448	20	—	—
167232 2003 UC ₅₉	15.7	X	75.45239	24.28116	277.60610	12.53954	0.1504880	0.23757199	2.5818988	20	12 8.0	19.5
167233 2003 UH ₆₁	16.4	X	198.30222	303.14511	154.51466	9.64386	0.1745556	0.21986500	2.7187252	20	7 20.7	19.8
167234 2003 UB ₆₃	16.5	X	359.62629	271.84579	138.27135	7.20843	0.1634917	0.24074257	2.5591797	20	—	—
167235 2003 UJ ₆₄	15.8	X	329.41030	170.01651	183.61860	18.57486	0.1659225	0.22698102	2.6616014	20	8 31.4	18.5
167236 2003 UO ₆₄	15.9	X	176.41705	276.87467	155.55187	9.49217	0.2128764	0.21213045	2.7844155	20	6 2.0	20.8
167237 2003 UJ ₇₀	16.7	X	358.39857	357.83825	359.85965	1.96619	0.1805432	0.23379643	2.6096212	20	11 11.2	19.3
167238 2003 UJ ₇₃	16.2	X	50.07757	354.84337	337.92936	4.62896	0.0941565	0.23868799	2.5738447	20	12 11.3	19.7
167239 2003 UZ ₇₅	16.3	X	268.00261	168.94495	299.90523	3.00270	0.2227449	0.23242065	2.6199092	20	10 16.1	19.5
167240 2003 UO ₈₁	17.3	X	104.69499	260.93410	178.85943	2.04552	0.1894188	0.26135256	2.4228036	20	3 30.4	20.5
167241 2003 UC ₉₁	16.1	X	194.28484	272.59833	153.05096	6.61234	0.1515458	0.21434341	2.7625175	20	6 9.1	20.7
167242 2003 US ₉₁	16.1	X	53.78159	108.80863	144.52340	3.31420	0.1364965	0.22583769	2.6705770	20	9 8.4	19.4
167243 2003 UQ ₉₄	15.7	X	99.16081	239.09239	20.44110	13.17197	0.1610801	0.23547161	2.5972296	20	11 7.1	19.8
167244 2003 UB ₉₅	16.2	X	22.44755	95.43788	27.41185	9.62516	0.1831556	0.25344267	2.4729551	20	1 1.7	18.6
167245 2003 UR ₉₆	16.3	X	254.64435	110.75636	309.20567	1.72285	0.0540325	0.22596210	2.6695966	20	8 19.1	19.6
167246 2003 UJ ₉₆	16.0	X	250.11058	218.85646	203.92334	2.37164	0.0908963	0.22424575	2.6832012	20	8 10.4	19.6
167247 2003 UU ₉₇	16.3	X	22.62991	274.97376	41.06135	2.99928	0.0877331	0.23043897	2.6349078	20	10 11.8	19.4
167248 2003 UL ₉₉	15.5	X	37.38324	147.29487	197.82899	16.67591	0.2365467	0.23661861	2.5888295	20	12 29.4	19.5
167249 2003 UP ₉₉	15.9	X	184.56970	253.49403	195.50558	14.94128	0.2156682	0.21193638	2.7861150	20	6 26.2	21.0
167250 2003 UQ ₉₉	15.4	X	258.52918	197.42599	198.14000	14.46035	0.1305369	0.21809180	2.7334418	20	7 7.9	19.6
167251 2003 UJ ₁₀₄	16.8	X	322.69496	228.28502	246.25354	0.87656	0.0793036	0.24482957	2.5306192	20	—	—
167252 2003 UP ₁₀₉	15.5	X	171.82556	248.19645	245.00903	4.13088	0.0604455	0.22015625	2.7163269	20	8 11.2	19.4
167253 2003 UY ₁₀₉	15.9	X	97.14868	246.80886	33.98494	5.98491	0.1964310	0.23715173	2.5849483	20	12 5.6	20.2
167254 2003 UJ ₁₁₃	15.3	X	304.56724	289.80016	67.80444	15.35053	0.1246872	0.22319110	2.6916472	20	7 30.4	18.7
167255 2003 UT ₁₁₅	15.5	X	295.33146	1.32210	17.31531	9.08053	0.1575651	0.22457597	2.6805703	20	8 9.8	18.7
167256 2003 UE ₁₁₇	16.5	X	45.76061	150.49669	206.35417	7.29276	0.2042190	0.24056185	2.5604613	20	—	—
167257 2003 UG ₁₁₈	15.6	X	104.45502	216.01934	316.05299	4.32456	0.0498449	0.21906461	2.7253434	20	7 13.8	19.3
167258 2003 UH ₁₂₀	15.9	X	356.35789	248.85555	26.28289	5.15376	0.0752970	0.21936272	2.7228737	20	6 30.6	19.1
167259 2003 UF ₁₂₁	15.8	X	276.71934	80.90954	356.59578	14.37975	0.1042479	0.22867936	2.6484071	20	10 3.3	19.1
167260 2003 UM ₁₂₂	16.8	X	43.33502	52.32262	260.60065	0.96310	0.1345627	0.23415087	2.6069870	20	11 12.6	20.2
167261 2003 UT ₁₂₂	15.8	X	309.61356	265.35015	120.23661	14.34072	0.1760150	0.22645743	2.6657024	20	9 14.8	18.7
167262 2003 UN ₁₂₃	16.0	X	30.48980	264.20433	41.31459	14.00340	0.2082519	0.23065567	2.6332572	20	10 28.4	19.1
167263 2003 UC ₁₂₇	16.8	X	33.07557	305.50625	43.83506	4.56523	0.1947398	0.23785796	2.5798290	20	12 26.0	20.3
167264 2003 UH ₁₂₇	16.5	X	226.90449	8.54115	147.58307	1.16150	0.1414621	0.23301657	2.6154405	20	11 7.3	19.9
167265 2003 UH ₁₂₉	15.7	X	83.30258	1.57534	269.02387	13.96865	0.1576380	0.23481277	2.6020856	20	11 5.0	19.9
167266 2003 UN ₁₂₉	15.8	X	276.73288	179.52530	264.18497	9.50564	0.0683885	0.23101908	2.6304950	20	10 16.2	19.4
167267 2003 UW ₁₃₁	15.2	X	118.98980	287.16964	18.04866	14.96692	0.1338388	0.24299500	2.5433404	20	—	—
167268 2003 UN ₁₃₇	16.7	X	56.03648	265.65277	25.50063	1.95546	0.3038908	0.23660173	2.5889526	20	11 21.7	20.7
167269 2003 UP ₁₄₂	16.0	X	291.95189	106.15421	359.23058	7.44824	0.1539674	0.23466914	2.6031472	20	12 3.1	18.8
167270 2003 UQ ₁₄₆	16.3	X	234.83987	277.16197	189.96954	8.46402	0.2657904	0.22334648	2.6903987	20	8 27.1	20.7
167271 2003 UY ₁₄₆	16.0	X	250.36493	271.34622	190.97713	11.15217	0.1553030	0.22640700	2.6660982	20	9 23.2	19.6
167272 2003 UP ₁₄₇	16.4	X	13.11794	94.55508	336.56149	2.64480	0.2071237	0.24235379	2.5478245	20	—	—
167273 2003 UK ₁₄₈	15.9	X	311.41453	239.50058	173.10074	9.24777	0.0607204	0.23072846	2.6327034	20	11 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>
167281 2003 UB ₁₆₉	16.0	X	304.37830	216.88128	234.61134	12.12071	0.1301749	0.23448421	2.6045157	20	12 9.7	18.7
167282 2003 UT ₁₆₉	16.1	X	337.99912	173.20615	238.58196	1.57288	0.1058954	0.23507777	2.6001297	20	12 13.5	19.0
167283 2003 UH ₁₇₀	15.4	X	160.86132	124.01773	30.84817	11.96441	0.1144558	0.22135688	2.7064959	20	9 3.4	19.7
167284 2003 UR ₁₇₅	16.3	X	285.58697	176.09272	319.60903	1.10698	0.0931371	0.24313878	2.5423376	20	—	—
167285 2003 UP ₁₈₀	15.6	X	60.59495	241.15866	56.92305	12.77613	0.0948969	0.23256964	2.6187902	20	11 10.2	19.1
167286 2003 UZ ₁₈₀	15.9	X	332.34016	10.36829	339.75927	6.22961	0.0799929	0.22663116	2.6643399	20	9 5.9	19.0
167287 2003 UF ₁₈₁	15.9	X	245.35605	4.08881	98.63767	5.52047	0.1606586	0.22696141	2.6617547	20	9 20.5	19.6
167288 2003 US ₁₈₉	15.6	X	270.97572	308.53940	103.80746	3.28089	0.0645998	0.22444463	2.6816159	20	8 31.2	19.0
167289 2003 UX ₁₉₅	15.9	X	222.08774	279.62342	145.15285	2.55537	0.0956938	0.21694631	2.7430551	20	7 9.4	20.0
167290 2003 UU ₁₉₆	16.1	X	205.42399	175.21995	286.47989	0.69803	0.0256613	0.22243116	2.6977744	20	8 14.5	19.8
167291 2003 UX ₁₉₉	16.6	X	72.36389	357.56956	86.77371	2.52488	0.1481471	0.25647418	2.4534297	20	2 12.8	19.0
167292 2003 UD ₂₀₀	16.9	X	73.04057	147.85103	185.24991	1.90035	0.1257376	0.24201342	2.5502127	20	—	—
167293 2003 UN ₂₀₅	15.9	X	51.02687	301.73013	31.83618	7.99681	0.2021427	0.23669663	2.5882606	20	12 27.3	19.8
167294 2003 UB ₂₀₆	16.0	X	308.21966	207.01514	237.30875	4.65797	0.1609927	0.23445303	2.6047466	20	12 5.9	18.5
167295 2003 UC ₂₀₉	15.9	X	350.07289	265.41410	2.14388	4.16536	0.0290368	0.21439019	2.7648152	20	6 9.5	19.6
167296 2003 UF ₂₁₀	16.6	X	332.58477	50.20219	31.78884	4.59253	0.2344654	0.23729651	2.5838967	20	—	—
167297 2003 UD ₂₁₁	15.8	X	334.89251	268.71332	40.46509	13.19117	0.1183283	0.21934674	2.7230060	20	7 12.7	19.1
167298 2003 UA ₂₁₃	15.5	X	218.20858	32.16900	43.08101	8.31941	0.0623993	0.21691560	2.7433140	20	7 24.5	19.5
167299 2003 UR ₂₁₅	16.4	X	298.07232	249.61002	170.98080	5.28899	0.1579777	0.23091287	2.6313015	20	10 12.8	19.1
167300 2003 UV ₂₁₆	16.7	X	132.25464	24.71885	346.37740	5.03843	0.0587924	0.25779446	2.4450458	20	1 16.9	19.9
167301 2003 UB ₂₁₇	16.7	X	69.96643	269.40418	223.73532	11.06127	0.1949719	0.26267955	2.4146371	20	4 24.7	19.3
167302 2003 UG ₂₁₈	15.9	X	153.27828	289.09510	183.63287	5.62859	0.0226241	0.21502856	2.7593404	20	6 23.1	19.8
167303 2003 UJ ₂₂₂	15.4	X	216.15420	65.60438	35.15309	14.07437	0.0128262	0.22208235	2.7005985	20	9 5.5	19.3
167304 2003 UE ₂₂₃	15.8	X	15.27808	19.56567	348.95058	4.72175	0.1784498	0.23465462	2.6032546	20	12 24.1	19.0
167305 2003 UO ₂₂₇	15.6	X	176.72435	340.27487	287.12200	3.83805	0.0658471	0.24593627	2.5230217	20	—	—
167306 2003 UU ₂₂₈	15.7	X	347.18201	286.09347	3.10320	5.65359	0.0325505	0.21619282	2.7494249	20	7 6.5	19.3
167307 2003 UZ ₂₃₂	17.1	X	12.02476	47.23130	24.55290	3.06074	0.0924590	0.24490751	2.5300823	20	—	—
167308 2003 UD ₂₃₃	15.9	X	234.19846	105.57808	24.66312	12.23695	0.0430466	0.23044494	2.6348624	20	10 25.9	19.5
167309 2003 UO ₂₃₇	16.1	X	333.49610	74.73281	246.79370	4.01572	0.2179665	0.22210740	2.7003955	20	7 18.5	18.5
167310 2003 UP ₂₃₈	15.7	X	192.85188	308.63422	234.98411	4.89280	0.1051963	0.23547827	2.5971806	20	11 7.8	19.3
167311 2003 UE ₂₄₀	16.1	X	117.98982	268.08796	23.44958	3.11442	0.0330256	0.24068079	2.5596177	20	—	—
167312 2003 UG ₂₄₀	16.5	X	96.03046	54.06622	221.40214	4.90503	0.0649408	0.23492422	2.6012625	20	11 19.2	20.0
167313 2003 UV ₂₄₃	16.8	X	66.93342	91.12907	255.29896	3.71855	0.2918551	0.24229428	2.5482416	20	—	—
167314 2003 UU ₂₄₆	15.8	X	304.29926	241.62480	221.14973	12.29974	0.2398791	0.23390744	2.6087954	20	12 20.3	18.0
167315 2003 UA ₂₄₇	16.0	X	39.38339	117.69112	211.60759	8.61002	0.1420144	0.23396757	2.6083484	20	11 30.4	19.5
167316 2003 UH ₂₄₇	16.4	X	38.04639	271.95920	89.79696	2.94530	0.2032692	0.23835815	2.5762186	20	—	—
167317 2003 UD ₂₅₀	15.3	X	47.75679	230.98978	59.49417	14.71047	0.1821076	0.22988951	2.6391047	20	10 30.2	18.9
167318 2003 UO ₂₅₂	15.5	X	173.23217	63.96226	48.52647	6.26869	0.0213715	0.21507401	2.7589516	20	7 19.8	19.5
167319 2003 UH ₂₅₆	16.0	X	209.55419	271.35098	183.14883	5.91667	0.0857551	0.21971265	2.7199818	20	8 2.8	20.0
167320 2003 UV ₂₅₇	15.8	X	83.84515	158.07658	166.44494	4.49857	0.0824069	0.23931952	2.5693147	20	—	—
167321 2003 UO ₂₅₉	15.5	X	113.13911	23.62386	257.33639	5.35834	0.1473644	0.23777581	2.5804232	20	12 18.4	19.4
167322 2003 UO ₂₅₉	15.9	X	31.26126	191.37044	211.93978	5.87693	0.2051165	0.24095603	2.5576681	20	—	—
167323 2003 UE ₂₆₃	15.6	X	213.30123	281.14807	174.78579	11.90387	0.1392425	0.22209148	2.7005245	20	8 3.6	19.9
167324 2003 UE ₂₆₃	15.4	X	326.41220	232.31322	63.54775	13.37650	0.1205107	0.21921961	2.7240586	20	6 4.7	18.5
167325 2003 UM ₂₆₄	16.3	X	52.97462	205.86572	159.46041	4.65378	0.1924783	0.24182988	2.5515030	20	—	—
167326 2003 UV ₂₆₇	15.0	X	270.63634	282.34425	49.87236	12.94387	0.1772124	0.21318152	2.7752558	20	4 27.9	19.1
167327 2003 UU ₂₆₈	15.6	X	280.12414	145.01478	233.70336	8.34465	0.0981500	0.21965432	2.7204633	20	7 19.6	19.3
167328 2003 UU ₂₇₀	15.6	X	146.12404	67.94141	158.64541	9.10023	0.1371052	0.23682461	2.5873280	20	11 15.5	19.8
167329 2003 UC ₂₇₅	16.0	X	281.62341	259.27149	250.14379	3.27490	0.0368591	0.24237879	2.5476493	20	—	—
167330 2003 UT ₂₇₆	15.5	X	50.75876	306.97902	280.89709	4.81029	0.0284944	0.21737689	2.7394317	20	7 12.9	19.0
167331 2003 UX ₂₇₆	15.7	X	232.82826	105.97854	30.20548	13.56277	0.1131063	0.22950042	2.6420867	20	10 22.9	19.3
167332 2003 UY ₂₈₀	16.7	X	13.92914	333.62586	99.29524	6.07525	0.2629817	0.24251181	2.5467176	20	—	—
167333 2003 UM ₂₈₀	15.8	X	237.63728	307.04038	90.91391	7.90020	0.2061406	0.27535192	2.3399719	20	6 11.8	19.1
167334 2003 UF ₂₈₁	15.7	X	17.88168	261.49779	49.48599	9.07330	0.1232845	0.22661031	2.6645034	20	10 4.9	18.9
167335 2003 UH ₂₈₃	16.4	X	351.26158	246.57208	158.10307	6.23092	0.1604147	0.23630313	2.5911331	20	—	—
167336 2003 UA ₂₈₉	16.9	X	59.50573	281.73454	37.39472	1.93901	0.2024862	0.23879539	2.5730729	20	12 18.6	20.6
167337 2003 UY ₂₈₉	16.7	X	90.53822	286.63606	328.94711	2.52327	0.0545382	0.22842103	2.6504035	20	10 14.8	20.4
167338 2003 UR ₂₉₉	17.0	X	343.99935	140.43883	178.88383	2.13242	0.2074065	0.22673626	2.6635166	20	8 12.5	19.1
167339 2003 UN ₃₀₈	16.1	X	219.21458	149.79167	359.77265	2.12039	0.0337406	0.23307487	2.6150044	20	11 3.3	19.6
167340 2003 UT ₃₁₄	16.0	X	35.81475	252.72422	87.50692	13.74677	0.1691938	0.23730878	2.5838077	20	12 14.3	19.4
167341 Börzsöny	16.0	X	298.05747	11.93344	337.68776	5.18451	0.0241097	0.21574323	2.7532433	20	7 19.4	19.7
167342 2003 VS ₁	16.0	X	14.36289	268.34114	39.43445	12.84644	0.1261206	0.22745139	2.6579307	20	9 27.2	19.2
167343 2003 VN ₇	16.3	X	69.86209	109.50636	255.80539	1.41167	0.0751503	0.24279344	2.5447478	20	—	—
167344 2003 VX ₇	15.2	X	258.89256	195.97091	209.50089	14.78663	0.2024734	0.21868526	2.7284943	20	7 10.6	19.4
167345 2003 VG ₈	15.5	X	307.10668	148.30981	351.83876	7.57256	0.1407214	0.24048358	2.5610168	20	—	—
167346 2003 VU ₈	16.4	X	255.12755	32.25002	221.12342	1.98587	0.1634505	0.25802456	2.4435920	20	1 1.3	20.3
167347 2003 WZ ₅	15.7	X	27.83325	286.61765	77.61765	5.66082	0.2270030	0.23660040	2.5889624	20	—	—
167348 2003 WV ₈	15.5	X	48.95835	271.48234	21.63436	11.51352	0.1956336	0.23021290	2.6366326	20	10 31.4	19.1
167349 2003 WA ₉	15.7	X	83.80697	206.90804	7.20210	8.99712	0.0420374	0.21866934	2.7286267	20	8 14.3	19.5
167350 2003 WL ₉	15.1	X	84.05706	1.68785	284.86150	11.19928	0.2258910	0.23506084	2.6002545	20	12 3.2	19.4
167351 2003 WY ₁₆	16.6	X	66.46811	260.94166	57.17364	4.04733	0.2394182	0.23911288	2.5707948	20	12 27.7	20.6
167352 2003 WJ ₂₆	15.8	X	281.81237	227.32335	205.82144	13.23049	0.2468657	0.22604730	2.6689258	20	9 11.4	19.0
167353 2003 WR ₂₇	16.3	X	5.21096	27.96366	340.33664	3.45276	0.0708757	0.23297731	2.6157343	20	11 21.8	19.5
167354 2003 WE ₂₈												

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>
167361 2003 WK ₄₂	16.1	X	327.17165	123.61309	233.07989	3.89801	0.1291425	0.22444278	2.6816306	20	9 2.3	19.0
167362 2003 WD ₄₅	15.8	X	267.92403	115.45056	346.42296	3.26788	0.0403456	0.22948685	2.6421908	20	11 2.9	19.2
167363 2003 WH ₄₆	15.5	X	205.25087	358.82871	81.00758	6.42136	0.0210785	0.21680039	2.7442858	20	7 16.7	19.3
167364 2003 WJ ₄₇	15.1	X	12.20714	135.35041	300.78023	8.42763	0.0104757	0.18300868	3.0724743	20	—	—
167365 2003 WS ₄₈	16.4	X	63.77219	9.35033	290.76853	1.48401	0.0760371	0.23320833	2.6140066	20	11 12.7	20.0
167366 2003 WL ₄₉	15.7	X	87.85361	357.98739	264.12736	11.72927	0.1069685	0.23141235	2.6275139	20	10 23.9	19.7
167367 2003 WQ ₅₄	16.1	X	359.78406	267.80598	342.02145	4.98522	0.0303803	0.21215615	2.7841907	20	5 29.7	19.8
167368 2003 WG ₅₈	16.1	X	319.94270	123.39762	246.24399	2.43795	0.0673941	0.22481348	2.6786819	20	9 12.2	19.3
167369 2003 WE ₆₀	16.4	X	194.65841	346.97168	217.99510	1.79760	0.0086099	0.23544930	2.5973937	20	12 17.8	19.7
167370 2003 WB ₆₁	16.1	X	55.13062	349.92318	8.75046	0.77821	0.1535610	0.24002098	2.5643064	20	—	—
167371 2003 WC ₆₁	16.1	X	355.92854	44.82241	279.59711	0.91316	0.1333397	0.22465134	2.6799706	20	9 11.9	18.9
167372 2003 WD ₆₂	15.9	X	137.56134	223.84571	178.16608	1.98652	0.0834917	0.19959712	2.8997900	20	3 11.5	20.2
167373 2003 WM ₆₄	15.6	X	68.94312	322.02396	150.65597	0.16813	0.0903941	0.19735973	2.9216646	20	3 15.9	19.3
167374 2003 WM ₆₅	15.6	X	355.45139	322.15668	70.35495	7.85856	0.1881455	0.23468425	2.6030355	20	12 26.5	18.5
167375 2003 WF ₆₆	16.0	X	292.51648	25.69572	341.96993	9.13091	0.1730043	0.21975141	2.7196620	20	7 15.5	19.4
167376 2003 WH ₆₇	16.1	X	329.17099	333.98316	42.86603	4.03932	0.1374884	0.22755978	2.6570866	20	10 9.6	18.7
167377 2003 WJ ₆₇	16.3	X	335.22249	357.18386	45.79641	3.20881	0.1735086	0.23199276	2.6231296	20	11 27.4	18.8
167378 2003 WM ₆₇	15.4	X	206.04796	350.43457	54.00372	5.96922	0.0240173	0.20971830	2.8057254	20	5 30.0	19.4
167379 2003 WV ₆₇	15.7	X	316.50719	159.74889	246.63072	7.93750	0.0890240	0.22905881	2.6454814	20	10 27.2	18.9
167380 2003 WX ₆₈	16.6	X	240.77498	46.60513	61.72551	3.83654	0.1424495	0.22444942	2.6815778	20	9 23.5	20.3
167381 2003 WL ₇₂	16.1	X	87.57651	297.11353	13.53386	4.62110	0.1621878	0.23714904	2.5849678	20	12 31.6	20.2
167382 2003 WM ₇₂	16.3	X	25.43112	290.23491	50.69457	12.55838	0.2684616	0.23385258	2.6092034	20	12 14.4	19.8
167383 2003 WY ₇₃	15.3	X	41.88188	6.17681	346.68146	5.00957	0.2174144	0.23582658	2.5946227	20	—	—
167384 2003 WC ₇₅	15.6	X	39.11349	255.21456	43.95828	11.89081	0.2035623	0.22821948	2.6519637	20	10 30.5	18.9
167385 2003 WJ ₇₈	16.7	X	310.74132	37.44979	18.34165	4.10206	0.2255555	0.23043364	2.6349485	20	10 23.4	18.8
167386 2003 WB ₇₉	16.2	X	40.03334	2.37024	325.20474	2.32045	0.2151900	0.23465219	2.6032726	20	12 8.7	19.7
167387 2003 WN ₈₀	15.1	X	241.44655	269.55904	291.69105	3.85428	0.0470143	0.18242052	3.0790749	20	—	—
167388 2003 WM ₈₄	15.1	X	195.72347	49.58759	85.88380	16.32518	0.1132383	0.22142452	2.7059446	20	9 17.5	19.5
167389 2003 WN ₈₈	15.8	X	231.12820	242.53645	230.97880	13.29594	0.0301465	0.22456953	2.6806215	20	9 28.1	19.6
167390 2003 WT ₈₈	16.3	X	337.46953	321.55668	39.89259	0.86075	0.1132700	0.22818028	2.6522674	20	10 1.9	19.0
167391 2003 WN ₉₁	16.0	X	253.49409	357.40569	147.17037	4.68835	0.1881749	0.23202347	2.6228982	20	11 20.2	19.2
167392 2003 WV ₉₃	16.8	X	300.80283	14.63899	13.87369	3.20525	0.1402584	0.22553986	2.6729275	20	9 2.3	19.7
167393 2003 WK ₉₅	15.9	X	326.27836	324.88664	74.38601	3.46207	0.0765482	0.22967287	2.6407640	20	11 5.2	19.0
167394 2003 WU ₉₅	15.8	X	40.33015	72.36987	215.26053	3.77505	0.1856716	0.22755184	2.6571484	20	10 12.6	19.1
167395 2003 WX ₉₆	15.0	X	86.55028	197.05766	63.87079	13.07691	0.1586048	0.22927310	2.6438327	20	11 1.6	19.1
167396 2003 WZ ₉₈	15.2	X	34.30671	128.01922	327.50426	5.07654	0.0949120	0.18929062	3.0041157	20	1 5.1	18.8
167397 2003 WL ₁₀₀	15.1	X	253.26873	302.67165	271.66091	6.52533	0.1089490	0.18365773	3.0652312	20	—	—
167398 2003 WN ₁₀₁	15.7	X	66.35983	162.13456	174.04280	13.07427	0.1224333	0.23922672	2.5699791	20	—	—
167399 2003 WX ₁₀₁	16.0	X	22.35255	226.25698	79.47707	2.32413	0.0694519	0.22570818	2.6715985	20	9 24.6	19.3
167400 2003 WZ ₁₀₁	16.0	X	180.74087	247.42119	201.41050	3.38654	0.0674203	0.21344089	2.7730070	20	6 25.5	20.1
167401 2003 WS ₁₁₂	16.1	X	257.30939	317.52563	36.69440	4.43956	0.1156251	0.21244488	2.7816674	20	5 16.6	20.1
167402 2003 WB ₁₁₃	15.0	X	106.84305	40.50688	264.48251	12.23038	0.1721892	0.23991587	2.5650553	20	—	—
167403 2003 WK ₁₁₆	16.2	X	13.78292	60.98533	283.57548	3.39089	0.1808126	0.23078104	2.6323035	20	11 18.4	19.1
167404 2003 WL ₁₁₆	16.2	X	19.75479	306.60561	32.62253	4.70385	0.2520782	0.23219750	2.6215875	20	12 2.2	19.3
167405 2003 WP ₁₁₈	15.9	X	291.27037	18.68402	17.82059	4.17225	0.1923237	0.22325277	2.6911515	20	8 20.4	18.9
167406 2003 WU ₁₁₈	15.9	X	29.82333	25.81583	336.79228	0.40003	0.2096721	0.23574603	2.5952137	20	—	—
167407 2003 WH ₁₂₀	15.1	X	196.97681	113.22038	51.19792	7.91478	0.1625029	0.22341964	2.6898113	20	10 15.1	19.3
167408 2003 WH ₁₂₄	15.6	X	323.39499	107.28795	289.46208	10.98035	0.0634687	0.22631472	2.6668230	20	10 21.3	19.1
167409 2003 WO ₁₂₅	16.4	X	5.07577	19.19438	34.74168	6.51938	0.2521600	0.23685240	2.5871257	20	—	—
167410 2003 WB ₁₂₇	15.5	X	280.23005	314.45326	70.48241	10.24236	0.1892386	0.21795395	2.7345942	20	7 17.0	19.1
167411 2003 WW ₁₃₀	15.7	X	297.62054	328.28716	34.46515	6.78145	0.0511243	0.21951205	2.7216387	20	8 4.4	19.3
167412 2003 WQ ₁₃₁	16.4	X	213.97718	64.05579	3.35834	2.23318	0.1622897	0.21406212	2.7676394	20	6 28.9	20.9
167413 2003 WJ ₁₃₂	16.1	X	69.06298	97.97487	236.26768	2.73766	0.2217457	0.23929025	2.5695242	20	—	—
167414 2003 WA ₁₃₄	15.7	X	252.39746	1.69638	59.16072	10.36883	0.1360291	0.22012114	2.7166158	20	8 8.6	19.7
167415 2003 WZ ₁₃₄	16.1	X	8.88185	119.71367	239.54025	2.01354	0.1761877	0.23183166	2.6243447	20	11 30.8	19.0
167416 2003 WY ₁₃₅	16.0	X	320.45262	109.48538	284.21859	1.74003	0.1694969	0.22799057	2.6537385	20	10 14.0	18.5
167417 2003 WP ₁₃₉	15.0	X	315.14013	317.96147	70.99090	14.69167	0.1713826	0.22549662	2.6732692	20	10 5.6	18.0
167418 2003 WF ₁₄₁	14.9	X	14.62081	282.34737	76.60716	14.14380	0.1961217	0.23093134	2.6311613	20	12 11.9	17.9
167419 2003 WP ₁₄₁	16.2	X	48.26627	144.97979	232.96415	1.96759	0.2103515	0.23906769	2.5711187	20	—	—
167420 2003 WT ₁₄₃	16.5	X	15.60145	12.02343	347.49886	2.16551	0.0935022	0.23455002	2.6040285	20	11 29.2	19.6
167421 2003 WV ₁₄₃	16.1	X	5.03733	341.81790	350.31736	3.48434	0.0889139	0.22701493	2.6613364	20	10 4.6	19.3
167422 2003 WS ₁₄₈	15.8	X	66.89455	272.57103	94.41248	15.82301	0.1721681	0.24424458	2.5346583	20	—	—
167423 2003 WH ₁₄₉	16.2	X	244.41046	263.44038	156.95873	12.61433	0.1435118	0.22008312	2.7169286	20	7 23.1	20.2
167424 2003 WK ₁₅₀	16.0	X	294.34991	207.01877	161.87756	5.62651	0.1351715	0.22055031	2.7130904	20	7 23.2	19.3
167425 2003 WQ ₁₅₃	15.9	X	14.14829	162.37885	170.05666	13.24355	0.1965203	0.23088152	2.6315398	20	11 9.1	19.1
167426 2003 WQ ₁₅₄	16.4	X	21.00934	135.87839	204.15950	11.45222	0.2138927	0.23280616	2.6170161	20	11 30.7	19.7
167427 2003 WP ₁₅₅	16.3	X	303.51028	281.58250	200.78404	10.32167	0.0805825	0.23795447	2.5791314	20	—	—
167428 2003 WQ ₁₅₅	16.0	X	5.05792	196.19558	179.47961	8.40732	0.0762473	0.23292019	2.6161619	20	12 4.2	19.4
167429 2003 WX ₁₅₇	15.6	X	323.49472	279.77129	86.34302	13.97836	0.1688340	0.22751812	2.6574110	20	9 18.7	18.6
167430 2003 WW ₁₅₉	16.1	X	123.42556	131.34399	73.31243	2.81291	0.1605496	0.22059663	2.7127106	20	9 26.2	20.5
167431 2003 WM ₁₆₂	16.3	X	255.28837	209.79263	171.76058	2.12804	0.0620526	0.21573925	2.7532772	20	6 27.2	20.1
167432 2003 WD ₁₆₅	16.7	X	258.60943	226.73402	84.05444	3.01870	0.0610400	0.20366545	2.8610436	20	4 1.9	20.7
167433 2003 WV ₁₆₉	15.7	X	307.52050	260.63056	175.45972	14.78267	0.1200732	0.23119488	2.6291614	20	11 25.9	18.9

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>
167441 2003 XC ₆	15.2	X	259.23958	337.34965	42.18905	15.21582	0.1278047	0.21477636	2.7615001	20	6 18.4	19.4
167442 2003 XG ₆	15.1	X	276.58812	82.15086	284.15772	13.52045	0.0124034	0.21323906	2.7747565	20	7 12.3	18.7
167443 2003 XX ₆	15.5	X	268.51072	54.68235	2.58455	14.66623	0.1302378	0.21896437	2.7261751	20	8 27.3	19.2
167444 2003 XK ₇	15.3	X	344.08905	206.13636	244.87934	21.60373	0.0834915	0.23877237	2.5732383	20	—	—
167445 2003 XL ₇	16.2	X	265.28688	232.07048	198.96263	5.26799	0.1548593	0.22286407	2.6942797	20	8 31.1	19.7
167446 2003 XH ₈	15.6	X	324.45325	335.77576	49.90932	12.90968	0.0617818	0.22538323	2.6741657	20	10 17.3	18.9
167447 2003 XQ ₈	15.1	X	26.85407	49.01867	316.88390	12.65822	0.1619968	0.23567101	2.5957644	20	—	—
167448 2003 XS ₈	16.1	X	320.15617	67.34691	354.20873	11.98761	0.1228401	0.23136591	2.6278655	20	11 21.4	19.2
167449 2003 XP ₉	15.4	X	322.85989	45.96331	22.83194	12.23289	0.2437089	0.23213017	2.6220944	20	12 13.9	17.7
167450 2003 XU ₉	16.0	X	322.00558	96.26892	342.41799	11.19772	0.1596480	0.23307972	2.6149681	20	12 25.9	18.8
167451 2003 XA ₁₀	16.3	X	287.10846	113.80087	323.42845	13.20692	0.2891668	0.22674923	2.6634150	20	9 16.9	19.4
167452 2003 XG ₁₇	15.3	X	318.65091	97.37054	42.41434	1.28599	0.1061603	0.17763611	3.1341171	20	—	—
167453 2003 XB ₂₅	16.2	X	310.95769	294.52429	225.12656	13.25228	0.1587177	0.24337604	2.5406851	20	—	—
167454 2003 XC ₃₇	15.3	X	134.64263	33.67798	52.79649	12.74466	0.1909153	0.19989143	2.8969429	20	5 12.2	19.8
167455 2003 XQ ₃₇	16.1	X	349.60481	53.46650	36.92260	13.07213	0.1253509	0.23922154	2.5700162	20	—	—
167456 2003 YP	14.5	X	25.05642	253.96205	292.91108	13.90753	0.1392981	0.19192339	2.9765792	20	4 11.8	18.2
167457 2003 YD ₃	14.9	X	336.43958	129.05174	341.46107	15.85169	0.0753124	0.17746088	3.1361799	20	—	—
167458 2003 YE ₃	14.9	X	201.94099	116.12036	75.06603	13.09439	0.1488990	0.22942193	2.6426893	20	11 22.9	18.9
167459 2003 YY ₆	15.1	X	327.96249	48.66108	313.82889	12.79408	0.0964240	0.22023396	2.7156879	20	9 9.2	18.4
167460 2003 YO ₇	14.5	X	212.00292	9.75404	81.83665	32.04338	0.1990292	0.21515028	2.7582997	20	7 25.3	19.4
167461 2003 YX ₁₅	15.2	X	148.39146	8.20102	72.79515	11.70440	0.1100975	0.20044885	2.8915698	20	5 14.6	19.6
167462 2003 YP ₁₆	15.9	X	223.19045	97.68641	306.86261	3.44006	0.1132021	0.20885546	2.8134476	20	6 12.7	20.1
167463 2003 YU ₂₀	16.1	X	222.75437	353.70144	48.10210	2.27043	0.2369197	0.20984958	2.8045551	20	5 30.7	20.9
167464 2003 YF ₂₁	16.5	X	203.80290	284.25609	85.07901	5.68617	0.1197522	0.25964248	2.4334301	20	4 9.5	20.2
167465 2003 YP ₂₁	15.6	X	196.92778	340.08123	0.30728	2.54012	0.0356768	0.19143542	2.9816353	20	2 29.7	20.0
167466 2003 YA ₂₄	15.5	X	302.42796	139.42605	293.61901	11.80817	0.1472923	0.22820957	2.6520405	20	11 2.1	18.6
167467 2003 YB ₂₇	15.0	X	94.14286	211.78825	275.96180	8.27429	0.0714969	0.19879824	2.9075533	20	5 2.9	19.1
167468 2003 YR ₂₈	15.1	X	356.20116	229.12720	79.59045	15.70917	0.0829623	0.21866003	2.7287041	20	8 23.9	18.7
167469 2003 YW ₃₃	16.0	X	22.06318	185.38616	193.98158	8.13284	0.2367503	0.23755565	2.5820173	20	—	—
167470 2003 YK ₃₅	15.9	X	334.81937	330.60352	25.21232	3.59766	0.1203296	0.22305144	2.6927707	20	9 18.8	18.7
167471 2003 YH ₄₀	15.7	X	343.89132	112.32437	90.25841	1.22772	0.0502220	0.19163287	2.9795868	20	3 8.0	19.6
167472 2003 YU ₄₁	16.4	X	304.74124	43.43474	324.51961	1.05940	0.2412547	0.21800201	2.7341922	20	7 23.6	19.1
167473 2003 YE ₄₂	15.3	X	250.43918	289.84668	108.33112	15.88815	0.2840341	0.21466393	2.7624643	20	6 16.8	19.8
167474 2003 YM ₄₂	15.4	X	282.76447	95.72568	272.86446	3.52695	0.1670961	0.21332304	2.7740282	20	6 30.4	18.7
167475 2003 YW ₄₄	14.7	X	185.38909	79.75018	288.86446	10.66833	0.0067230	0.19379232	2.9574110	20	3 14.9	19.1
167476 2003 YB ₅₁	16.1	X	252.92968	27.91296	41.69708	4.12708	0.1676268	0.21884114	2.7271984	20	8 14.2	19.9
167477 2003 YV ₅₁	15.3	X	89.05738	356.53628	79.89397	3.06362	0.1424518	0.19174613	2.9784134	20	3 7.1	19.3
167478 2003 YH ₅₂	15.3	X	106.27408	316.94852	117.80032	11.17026	0.0674766	0.19079377	2.9883165	20	3 18.7	19.6
167479 2003 YT ₅₃	15.9	X	286.24819	110.55917	254.78522	3.83907	0.1280404	0.21780280	2.7358592	20	7 7.2	19.4
167480 2003 YZ ₅₄	16.6	X	280.66245	198.80132	241.99501	3.02110	0.2023352	0.22691036	2.6621540	20	9 30.1	19.5
167481 2003 YF ₅₇	15.6	X	332.79256	76.71186	264.24199	13.75853	0.1954665	0.22126470	2.7072475	20	8 12.1	18.4
167482 2003 YH ₅₇	15.0	X	90.24307	128.52213	88.96257	13.71963	0.1035476	0.21478578	2.7614194	20	9 6.9	19.2
167483 2003 YR ₅₈	15.9	X	261.65518	191.72592	238.54870	3.11984	0.1843459	0.22071475	2.7117427	20	8 20.5	19.5
167484 2003 YJ ₆₃	15.2	X	256.89533	275.81806	113.42561	12.89225	0.1360034	0.21290574	2.7776518	20	6 29.1	19.3
167485 2003 YS ₆₃	15.4	X	259.40900	272.44508	101.44588	13.74054	0.2343335	0.21343675	2.7730428	20	6 1.3	19.7
167486 2003 YT ₆₄	15.6	X	167.40508	241.19931	271.33128	6.36495	0.1201654	0.21409854	2.7673255	20	8 28.4	20.1
167487 2003 YE ₆₅	15.4	X	251.41575	142.38943	291.21421	7.27628	0.1252900	0.21631479	2.7483914	20	8 19.2	19.2
167488 2003 YN ₆₆	14.9	X	232.72017	319.45380	116.60653	15.52355	0.2310232	0.21482116	2.7611162	20	7 21.9	19.2
167489 2003 YK ₇₀	15.9	X	317.96641	16.39797	3.98741	1.85619	0.2165378	0.22627002	2.6671741	20	9 15.4	18.2
167490 2003 YU ₇₁	15.8	X	13.98709	313.10742	59.29249	2.52120	0.1127153	0.23249677	2.6193373	20	12 16.5	19.1
167491 2003 YJ ₇₆	15.4	X	250.96723	87.64497	288.63785	12.29397	0.1747030	0.21225231	2.7833496	20	5 30.5	19.8
167492 2003 YP ₈₀	15.3	X	219.64027	183.69743	293.15462	11.20207	0.1152214	0.21811683	2.7332326	20	9 5.0	19.6
167493 2003 YJ ₈₃	16.0	X	326.02582	277.58835	211.30410	3.64849	0.2160541	0.23676561	2.5877579	20	—	—
167494 2003 YO ₈₃	16.0	X	179.78510	250.86203	279.47983	2.57083	0.1318318	0.22433095	2.6825217	20	10 4.2	20.2
167495 2003 YT ₈₃	15.5	X	247.18865	12.29762	65.34018	8.71349	0.1104725	0.22144089	2.7058113	20	8 28.8	19.4
167496 2003 YE ₈₄	15.2	X	305.33671	96.38400	262.36200	16.01545	0.1734530	0.21938448	2.7226937	20	7 18.1	18.5
167497 2003 YT ₈₄	15.5	X	69.66911	172.75668	168.36422	3.49410	0.1550633	0.23791439	2.5794210	20	—	—
167498 2003 YV ₈₅	15.4	X	355.28348	278.43399	99.19034	17.60835	0.2207557	0.23123136	2.6288848	20	12 11.3	18.1
167499 2003 YR ₈₇	15.1	X	286.60354	281.24180	98.79808	10.11158	0.1773210	0.21494915	2.7600200	20	7 20.9	18.4
167500 2003 YX ₈₈	14.9	X	295.72244	232.14738	104.16664	15.54408	0.2019189	0.21020349	2.8014063	20	6 2.3	18.6
167501 2003 YV ₈₉	15.5	X	192.82106	154.67984	322.22819	4.14356	0.1147577	0.21254230	2.7808174	20	8 12.4	19.7
167502 2003 YQ ₉₀	15.9	X	284.03134	271.87584	90.19797	15.92502	0.2508996	0.21995530	2.7179811	20	6 10.9	19.4
167503 2003 YF ₉₃	15.7	X	37.63720	278.07784	349.61735	1.36647	0.0350088	0.21662674	2.7457522	20	8 19.0	19.1
167504 2003 YW ₉₄	16.0	X	47.24068	225.78459	122.93561	2.24492	0.1825264	0.23602689	2.5931545	20	—	—
167505 2003 YM ₁₀₃	14.3	X	286.42225	269.29480	297.00058	20.58408	0.1267806	0.17845567	3.1245141	20	—	—
167506 2003 YB ₁₀₅	15.4	X	272.84674	156.27342	295.93537	7.55667	0.3475536	0.22229816	2.6988504	20	9 6.2	19.1
167507 2003 YY ₁₀₅	16.1	X	264.79021	223.80555	223.09727	6.21330	0.2651581	0.22416707	2.6838290	20	9 2.6	19.8
167508 2003 YO ₁₀₇	15.9	X	231.12681	20.32125	22.64912	6.37498	0.0697319	0.21162288	2.7888659	20	6 24.3	20.0
167509 2003 YS ₁₁₃	15.4	X	83.39955	332.74897	109.67539	15.73040	0.0687799	0.24572774	2.5244489	20	2 20.2	18.7
167510 2003 YE ₁₁₄	15.6	X	205.29646	264.39445	199.20926	13.88618	0.1725761	0.21710989	2.7416771	20	7 31.9	20.3
167511 2003 YW ₁₁₅	14.8	X	42.95656	132.15600	323.89927	13.25267	0.0296930	0.18542317	3.0457439	20	1 18.1	19.0
167512 2003 YN ₁₂₂	15.7	X	264.33659	57.96882	303.29549	4.48786	0.1331720	0.21362227	2.7714371	20	5 31.9	19.5
167513 2003 YK ₁₂₈	15.0	X	93.97304	87.59680	339.87985	10.80780	0.0424193	0.18800104	3.0178377	20	2 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>
167521 2003 YC ₁₄₇	15.7	X	187.43748	186.80792	310.86005	13.79495	0.1276560	0.21921150	2.7241258	20	8 28.9	20.2
167522 2003 YQ ₁₄₇	15.4	X	70.00324	193.65176	27.01078	14.89988	0.0982133	0.21374377	2.7703868	20	8 16.9	19.5
167523 2003 YX ₁₄₇	15.5	X	282.00015	284.02282	62.61734	8.18284	0.2222768	0.21212079	2.7845000	20	5 22.3	19.1
167524 2003 YZ ₁₄₇	15.7	X	220.98374	106.85673	43.78263	13.88317	0.0910392	0.22504158	2.6768716	20	10 30.2	19.3
167525 2003 YJ ₁₄₈	15.1	X	210.45219	331.71152	70.77054	17.67296	0.0555616	0.20475215	2.8509115	20	5 31.3	19.0
167526 2003 YF ₁₅₀	15.7	X	163.45860	126.28707	46.53292	8.57814	0.0231107	0.21909138	2.7251214	20	9 28.0	19.5
167527 2003 YF ₁₅₁	15.4	X	349.68308	329.31292	51.31449	14.19485	0.1904548	0.22593517	2.6698088	20	11 25.3	18.1
167528 2003 YO ₁₅₁	15.2	X	13.71935	17.36180	38.30571	13.90994	0.1436658	0.23510498	2.5999291	20	—	—
167529 2003 YA ₁₅₃	14.6	X	83.42415	17.79214	354.60602	17.67478	0.1517059	0.17899680	3.1182137	20	—	—
167530 2003 YV ₁₅₃	15.0	X	136.76042	5.38097	13.07339	12.56907	0.0500833	0.18767918	3.0212870	20	2 13.8	19.5
167531 2003 YQ ₁₅₅	15.6	X	6.80457	135.75992	14.15627	1.07994	0.1614598	0.18558061	3.0440211	20	1 28.5	19.0
167532 2003 YX ₁₅₅	15.4	X	327.14984	358.02142	356.13136	13.95770	0.2002340	0.22047738	2.7136887	20	8 30.7	17.9
167533 2003 YB ₁₅₉	16.0	X	245.20591	62.59365	25.86065	7.09765	0.1501122	0.22152260	2.7051459	20	9 2.6	19.8
167534 2003 YF ₁₆₁	15.4	X	247.12508	219.06808	121.47224	9.18851	0.2437056	0.21007289	2.8025673	20	4 10.7	20.2
167535 2003 YO ₁₆₁	15.0	X	131.08178	161.19730	64.03232	16.54484	0.1292346	0.22286154	2.6943001	20	10 30.8	19.3
167536 2003 YE ₁₆₉	15.8	X	180.39431	77.67275	333.75011	6.33966	0.1596554	0.20394728	2.8584072	20	5 6.5	20.6
167537 2003 YX ₁₇₅	15.8	X	243.41872	251.38757	220.46036	8.36376	0.1623038	0.22016418	2.7162617	20	9 23.4	19.7
167538 2004 AM ₁	15.2	X	351.93060	51.15528	103.25830	1.82494	0.1535616	0.18286796	3.0740503	20	1 9.8	18.9
167539 2004 AJ ₂	15.3	X	321.33633	80.32720	122.52607	6.16861	0.1623391	0.18472449	3.0534190	20	1 23.4	19.1
167540 2004 AJ ₄	15.5	X	217.86730	358.92170	325.56639	3.32649	0.0552878	0.19205655	2.9752033	20	3 3.1	19.8
167541 2004 AP ₅	15.2	X	346.53125	317.19279	174.62112	6.18096	0.1340271	0.17943029	3.1131894	20	—	—
167542 2004 AQ ₆	15.9	X	180.58593	262.71212	106.73957	4.25059	0.0813235	0.19454845	2.9497431	20	3 20.2	20.4
167543 2004 AV ₁₀	15.1	X	6.50006	257.17948	182.54995	21.20053	0.1968480	0.23793203	2.5792936	20	—	—
167544 2004 AH ₁₁	15.2	X	27.01694	117.69931	335.56534	10.46799	0.1192968	0.18136318	3.0910306	20	—	—
167545 2004 AR ₁₂	15.6	X	272.51334	212.53472	0.58800	2.13427	0.0779120	0.18083915	3.0969991	20	—	—
167546 2004 AG ₁₃	15.6	X	356.54178	64.14078	93.81909	2.95115	0.0826845	0.18629066	3.0362812	20	1 27.9	19.4
167547 2004 AG ₁₆	15.3	X	196.81065	22.96073	294.57829	8.60323	0.1838491	0.18760641	3.0220682	20	2 1.5	19.9
167548 2004 AR ₂₆	14.9	X	133.34973	92.63979	272.17825	11.79780	0.1004365	0.18566514	3.0430970	20	1 23.5	19.4
167549 2004 BR ₁	15.2	X	19.23113	184.30299	274.27428	4.44713	0.1223416	0.18084134	3.0969741	20	—	—
167550 2004 BK ₃	15.9	X	16.60973	183.37493	293.50324	0.87752	0.1886126	0.18244468	3.0788031	20	1 2.2	18.9
167551 2004 BF ₉	15.6	X	91.10041	55.60341	19.13524	9.34211	0.1039730	0.18942209	3.0027255	20	3 4.2	19.7
167552 2004 BU ₉	15.2	X	86.22589	334.89400	126.33809	11.21808	0.0861213	0.19095537	2.9866303	20	3 29.4	19.4
167553 2004 BO ₁₃	16.4	X	300.27892	65.99994	347.58102	3.11046	0.0533377	0.22323818	2.6912688	20	9 19.6	18.7
167554 2004 BJ ₁₆	15.0	X	6.43831	43.02979	79.23172	5.25917	0.1566856	0.17948595	3.1125457	20	—	—
167555 2004 BL ₁₈	14.7	X	163.46143	5.40462	28.26805	24.94118	0.0140840	0.19055949	2.9007652	20	4 1.8	19.1
167556 2004 BZ ₂₃	15.4	X	101.13206	302.11512	111.80162	4.11222	0.1112111	0.18871971	3.0101713	20	2 18.9	19.6
167557 2004 BR ₃₂	16.1	X	271.18741	354.84714	49.20039	2.88876	0.0383125	0.21323235	2.7748147	20	8 22.9	19.7
167558 2004 BX ₃₅	15.5	X	66.03444	46.71729	325.64941	7.97938	0.0760040	0.17370770	3.1811929	20	—	—
167559 2004 BL ₃₇	15.0	X	308.30168	60.62074	121.32861	10.41995	0.0349566	0.18029670	3.1032078	20	—	—
167560 2004 BR ₃₇	14.9	X	133.57860	213.82657	125.95759	17.84442	0.0648644	0.17878281	3.1207013	20	—	—
167561 2004 BX ₃₉	15.1	X	235.48863	9.50763	298.61614	10.07180	0.1134627	0.19233756	2.9723046	20	2 24.5	19.8
167562 2004 BY ₄₀	16.7	X	273.57729	20.16961	35.05640	9.02701	0.1267175	0.21837295	2.7310951	20	8 31.7	20.3
167563 2004 BT ₄₁	15.3	X	334.48788	28.56121	37.57648	14.48402	0.2754163	0.23019040	2.6368044	20	—	—
167564 2004 BY ₄₁	15.0	X	88.54757	75.51506	341.38194	15.05795	0.0737363	0.18312814	3.0711379	20	2 4.9	19.3
167565 2004 BQ ₄₃	15.6	X	52.43269	56.45798	57.78407	0.93740	0.1222668	0.18601955	3.0392307	20	2 28.4	19.3
167566 2004 BU ₄₅	15.8	X	134.25491	214.94129	296.55415	3.28836	0.0088322	0.20952207	2.8074770	20	7 19.1	19.7
167567 2004 BA ₄₆	15.3	X	332.34349	235.70717	283.96207	3.02443	0.1216808	0.18259490	3.0771143	20	—	—
167568 2004 BR ₄₈	15.5	X	300.38271	64.58296	293.64130	3.40666	0.1384699	0.21281223	2.7784654	20	7 18.2	18.9
167569 2004 BG ₅₁	15.0	X	283.16369	218.32453	295.61479	4.93527	0.0643954	0.17108920	3.2135692	20	—	—
167570 2004 BG ₅₂	15.5	X	317.20725	9.52483	148.70781	1.77264	0.1306629	0.17652093	3.1473032	20	—	—
167571 2004 BQ ₅₂	16.1	X	301.92121	335.91918	164.02618	1.81064	0.0741523	0.17357633	3.1827978	20	—	—
167572 2004 BD ₆₁	15.4	X	358.33928	258.55632	133.07163	1.30046	0.1127931	0.16850360	3.2463594	20	12 1.1	19.4
167573 2004 BR ₆₁	15.8	X	82.57745	10.01554	80.20491	1.92196	0.1254646	0.19224214	2.9732881	20	3 12.8	19.6
167574 2004 BW ₆₁	15.6	X	178.86127	291.08294	59.70289	2.29018	0.0726844	0.19102516	2.9859028	20	2 24.0	20.0
167575 2004 BR ₆₂	16.2	X	152.35203	22.48089	41.21758	2.39421	0.0773608	0.19831190	2.9123051	20	4 23.4	20.4
167576 2004 BQ ₆₉	14.8	X	294.91477	130.92342	4.90482	4.86294	0.1283766	0.17191680	3.2032476	20	12 31.4	18.8
167577 2004 BK ₇₁	15.5	X	82.24957	38.37357	71.60182	2.48179	0.1354257	0.19126675	2.9833880	20	4 7.9	19.5
167578 2004 BM ₇₂	15.3	X	234.05458	338.45779	143.37770	16.89758	0.1946504	0.21909338	2.7251048	20	9 27.7	19.5
167579 2004 BF ₇₃	14.2	X	274.18443	225.55754	138.16342	18.76739	0.0520535	0.14575381	3.5759335	20	6 28.5	19.5
167580 2004 BP ₇₆	15.5	X	107.54288	260.71044	224.85963	9.80124	0.0886883	0.19796227	2.9157331	20	5 22.0	19.6
167581 2004 BV ₇₆	15.5	X	7.03132	151.23171	264.96949	13.98603	0.2295171	0.23350052	2.6118254	20	—	—
167582 2004 BG ₈₂	15.0	X	347.48273	219.67652	262.94805	9.50633	0.0435911	0.17689030	3.1429203	20	—	—
167583 2004 BY ₈₉	14.9	X	175.52536	72.44325	273.97024	10.32525	0.0679716	0.18580304	3.0415912	20	2 10.9	19.7
167584 2004 BK ₉₀	15.3	X	183.43407	353.90585	143.14163	7.98394	0.1455261	0.21211263	2.7845714	20	8 27.4	19.8
167585 2004 BY ₉₂	15.5	X	41.98518	335.78979	185.38902	10.46764	0.1339703	0.19166849	2.9792176	20	4 14.8	19.0
167586 2004 BK ₉₄	15.1	X	345.40819	322.29923	182.80528	17.38547	0.1384858	0.17926925	3.1150535	20	—	—
167587 2004 BF ₉₅	15.4	X	20.72932	269.88973	232.96724	6.40035	0.2206858	0.18343031	3.0677642	20	2 11.2	18.5
167588 2004 BX ₁₀₀	15.7	X	103.39387	153.74812	315.88445	0.87102	0.0559648	0.19539215	2.9412458	20	4 21.2	19.6
167589 2004 BQ ₁₀₄	15.0	X	307.25812	273.59768	271.79548	8.94603	0.0554779	0.18087102	3.0966353	20	—	—
167590 2004 BR ₁₀₅	15.1	X	98.44139	111.09907	324.70778	9.23152	0.1152064	0.19111125	2.9850061	20	3 10.1	19.4
167591 2004 BS ₁₀₅	14.9	X	163.15013	240.17232	108.14903	9.74493	0.1288858	0.18786831	3.0192590	20	2 9.4	19.7
167592 2004 BR ₁₀₆	15.2	X	357.83604	62.39274	118.56714	6.20193	0.0935076	0.18687163	3.0299849	20	2 28.3	19.0
167593 2004 BJ ₁₀₇	15.0	X	8.82593	51.86235	101.23614	10.98015	0.0247012	0.18487198	3.0517948	20	2 12.8	19.2
167594 2004 BD ₁₁₁	15.0	X	24.04337	302.32592	160.96902	9.09862</						

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>	
167601	2004 BJ ₁₂₄	15.1	X	320.17795	166.66839	33.82467	6.90667	0.0898273	0.18332120	3.0689814	20	1 31.8	19.4
167602	2004 BW ₁₃₇	16.7	X	292.73300	308.87701	16.78428	2.03162	0.0662309	0.20337918	2.8637277	20	6 1.6	20.4
167603	2004 BZ ₁₃₈	16.2	X	144.78877	140.22974	313.64704	1.13606	0.0187052	0.19994376	2.8964374	20	5 17.8	20.3
167604	2004 BN ₁₄₆	15.6	X	98.97779	65.27354	15.03177	1.36769	0.0560695	0.18934649	3.0035247	20	3 11.0	19.8
167605	2004 BA ₁₅₁	16.0	X	7.33150	326.76867	197.18622	8.40423	0.1751504	0.18615304	3.0377775	20	2 13.1	19.4
167606	2004 BZ ₁₅₁	15.1	X	101.61313	273.55670	121.67231	12.12127	0.0263574	0.18041357	3.1018676	20	1 16.2	19.4
167607	2004 BF ₁₅₇	15.5	X	232.63689	120.11476	132.37739	1.65654	0.0133635	0.17950304	3.1123481	20	—	—
167608	2004 CB ₁	15.0	X	210.34706	354.36498	92.86063	28.52474	0.1803687	0.20979432	2.8050476	20	7 18.3	19.7
167609	2004 CD ₁	14.6	X	69.99898	13.92306	86.17353	23.39835	0.1108253	0.18649533	3.0340594	20	3 17.9	19.1
167610	2004 CS ₁	14.9	X	50.88073	300.13388	146.51654	11.18028	0.0826369	0.18165152	3.0877587	20	1 18.2	19.0
167611	2004 CN ₇	14.9	X	174.63161	221.51201	136.30140	11.56584	0.1370703	0.18884612	3.0088279	20	3 2.6	19.7
167612	2004 CF ₉	16.0	X	87.90166	22.43498	86.00309	3.69638	0.0375482	0.19225904	2.9731138	20	3 30.9	20.1
167613	2004 CW ₉	15.4	X	268.71659	312.97781	238.21899	1.86529	0.0656077	0.17484152	3.1674249	20	—	—
167614	2004 CJ ₁₂	15.5	X	28.88470	321.13581	158.37034	6.56432	0.1215266	0.18232215	3.0801824	20	1 27.5	19.2
167615	2004 CK ₁₃	15.2	X	342.02061	116.43212	346.20600	3.32660	0.0717898	0.17182651	3.2043696	20	—	—
167616	2004 CH ₁₅	15.9	X	180.94945	281.77103	133.42360	0.96912	0.0938484	0.19846128	2.9108435	20	5 14.0	20.3
167617	2004 CJ ₂₁	15.4	X	59.05697	44.05710	17.32506	1.72578	0.0481346	0.17854639	3.1234556	20	—	—
167618	2004 CV ₂₄	15.5	X	68.44738	243.41968	238.42759	4.43844	0.0685230	0.18865379	3.0108724	20	3 23.0	19.5
167619	2004 CW ₃₄	15.1	X	193.37598	31.43675	329.79647	10.68796	0.1429874	0.19456931	2.9495323	20	3 18.1	20.0
167620	2004 CM ₃₅	15.1	X	179.74293	244.80530	153.73705	12.57937	0.0594964	0.19558231	2.9393390	20	4 25.3	19.6
167621	2004 CU ₃₅	14.9	X	21.19363	119.78565	346.03181	11.82319	0.1212676	0.17831463	3.1261614	20	—	—
167622	2004 CA ₄₄	15.2	X	164.88269	42.07213	337.57523	14.17601	0.2173397	0.19160250	2.9799017	20	3 17.5	20.4
167623	2004 CC ₅₀	15.1	X	72.13665	283.45933	225.10484	8.09303	0.1720626	0.19192396	2.9765733	20	5 19.1	19.1
167624	2004 CP ₅₁	16.8	X	139.70118	74.71135	169.40110	26.42326	0.0742709	0.40161774	1.8193969	20	—	—
167625	2004 CJ ₅₇	14.7	X	58.89522	268.29031	55.75499	10.76391	0.0370207	0.16181478	3.3352157	20	11 16.9	19.5
167626	2004 CX ₆₀	14.9	X	101.75924	255.85582	116.19084	16.05990	0.0456747	0.17682311	3.1437165	20	—	—
167627	2004 CD ₇₁	15.2	X	117.08909	69.43120	336.33940	14.61360	0.1133036	0.18662253	3.0326806	20	2 26.9	19.6
167628	2004 CS ₇₆	15.2	X	30.04935	124.69347	320.41726	8.53940	0.0797679	0.17779486	3.1322511	20	—	—
167629	2004 CZ ₇₆	15.5	X	57.69699	98.56165	342.47215	9.86650	0.1453982	0.18205190	3.0832299	20	1 30.6	19.3
167630	2004 CC ₇₉	15.7	X	257.91467	171.73064	39.11943	0.75600	0.1385529	0.17164013	3.2066889	20	—	—
167631	2004 CE ₈₇	15.1	X	163.53907	209.19360	170.16005	11.22197	0.1195521	0.18973625	2.9994101	20	3 15.3	19.7
167632	2004 CO ₉₄	15.2	X	130.93346	106.05509	311.34071	9.48637	0.0936530	0.19039574	2.9924798	20	3 20.5	19.8
167633	2004 CA ₁₀₇	14.6	X	261.82479	274.20063	299.56652	9.64814	0.0597527	0.17197655	3.2025056	20	—	—
167634	2004 CQ ₁₁₁	15.4	X	75.81903	40.27197	21.43765	9.70429	0.1132584	0.17914039	3.1165471	20	1 30.8	19.6
167635	2004 CM ₁₁₃	15.2	X	50.60220	257.47593	168.52526	10.27500	0.1099750	0.17922015	3.1156224	20	—	—
167636	2004 CX ₁₁₃	15.2	X	337.68718	238.22771	247.63723	7.32725	0.0468729	0.17486995	3.1670817	20	—	—
167637	2004 CD ₁₁₄	15.3	X	49.00774	255.01091	241.47781	8.83829	0.0602525	0.18823922	3.0152915	20	3 11.6	19.5
167638	2004 CX ₁₁₉	15.7	X	206.54028	287.83829	90.65833	3.27565	0.0937997	0.19814785	2.9139123	20	4 25.9	20.1
167639	2004 CX ₁₂₆	15.5	X	46.82317	89.37178	331.94397	11.64147	0.1151873	0.17768366	3.1335579	20	—	—
167640	2004 DU	15.2	X	313.43469	89.24480	62.97802	3.97519	0.1106231	0.17368400	3.1814823	20	—	—
167641	2004 DH ₄	15.9	X	324.49308	43.53926	100.57127	13.47310	0.1213047	0.23267205	2.6180217	20	—	—
167642	2004 DK ₁₀	15.5	X	171.23152	260.16233	172.53600	9.10890	0.0928176	0.19909748	2.9046392	20	5 27.2	20.1
167643	2004 DP ₁₄	16.2	X	35.74656	113.83600	302.65388	3.93832	0.3317030	0.23783270	2.5800117	20	—	—
167644	2004 DW ₁₈	15.2	X	176.05327	74.13500	311.85612	9.41043	0.0324594	0.19387709	2.9565488	20	3 27.2	19.6
167645	2004 DU ₂₉	15.4	X	194.91563	248.97114	142.27849	10.38875	0.0871246	0.19646885	2.9304901	20	5 2.4	20.0
167646	2004 DS ₃₁	15.2	X	92.43831	251.87688	181.19442	11.84321	0.1502146	0.18785317	3.0194212	20	3 6.0	19.3
167647	2004 DW ₃₇	15.8	X	88.02573	36.75671	78.07677	1.57899	0.1776476	0.18985306	2.9981797	20	4 27.3	20.0
167648	2004 DG ₄₁	14.6	X	352.10756	300.19906	183.99274	15.84223	0.2000574	0.17448008	3.1717978	20	—	—
167649	2004 DK ₄₃	15.2	X	242.82866	29.40342	217.61246	4.62659	0.1446297	0.17215867	3.2002466	20	—	—
167650	2004 DE ₄₈	15.0	X	35.09613	113.98713	351.77203	9.44447	0.0628510	0.17812317	3.1284011	20	1 22.3	19.2
167651	2004 DG ₄₉	15.2	X	29.85478	304.44284	170.43419	10.53120	0.1385401	0.18030101	3.1031584	20	1 23.3	18.9
167652	2004 DK ₅₀	15.4	X	337.18236	225.98649	154.90334	14.34454	0.2649393	0.22481724	2.6786521	20	11 11.4	17.8
167653	2004 DK ₅₇	15.6	X	305.95112	74.84744	64.64444	2.87203	0.1488372	0.17248190	3.1962472	20	—	—
167654	2004 EU ₃	14.9	X	179.10035	21.76390	47.92205	17.20424	0.0810570	0.19685297	2.9266766	20	5 27.6	19.4
167655	2004 ED ₄	15.0	X	349.10211	136.62916	24.94761	17.57830	0.1609100	0.17920661	3.1157793	20	1 18.9	19.1
167656	2004 EC ₇	15.3	X	46.97165	61.40365	5.65326	9.60262	0.2342266	0.17642024	3.1485006	20	1 2.6	18.7
167657	2004 EY ₁₂	14.7	X	109.50808	60.04687	355.86752	11.20574	0.1521250	0.18418634	3.0593637	20	3 8.2	19.1
167658	2004 EA ₁₅	15.0	X	128.37418	47.30531	42.32667	10.02940	0.0573050	0.19105463	2.9859575	20	4 27.4	19.3
167659	2004 EO ₁₈	14.4	X	8.72768	90.19440	42.99955	26.51486	0.1761662	0.17693368	3.1424066	20	1 13.5	18.5
167660	2004 EQ ₁₈	15.0	X	93.62627	294.62047	109.80632	12.59541	0.0991036	0.18013504	3.1050642	20	1 28.2	19.2
167661	2004 ED ₂₁	15.2	X	124.01394	61.53750	359.25182	12.57697	0.1062080	0.18583620	3.0412293	20	3 22.7	19.5
167662	2004 EG ₃₆	15.0	X	337.39939	297.39148	182.69141	18.87477	0.1456424	0.17124249	3.2116512	20	—	—
167663	2004 EO ₄₀	15.5	X	342.50451	0.14607	154.00623	1.60776	0.1175240	0.17626890	3.1503025	20	—	—
167664	2004 EC ₅₉	15.1	X	245.94631	210.57725	17.82939	6.27737	0.0874600	0.16961751	3.2321308	20	—	—
167665	2004 EL ₆₅	14.3	X	269.87503	144.54526	58.91266	19.52799	0.0897914	0.17095909	3.2151995	20	—	—
167666	2004 EM ₇₀	15.6	X	48.29042	110.19289	336.99310	3.93880	0.0576523	0.17658765	3.1465103	20	1 15.9	19.7
167667	2004 EK ₇₅	15.6	X	316.08659	125.39004	82.05099	2.64285	0.1314076	0.17735910	3.1373796	20	1 28.2	19.8
167668	2004 EQ ₇₇	15.0	X	283.27325	171.90543	36.92128	5.30785	0.1117126	0.17332469	3.1858776	20	—	—
167669	2004 EU ₈₄	14.6	X	13.70804	85.84263	1.10462	21.64787	0.1239470	0.17349165	3.1838334	20	—	—
167670	2004 EM ₈₅	15.0	X	88.59210	259.22661	164.77221	16.76081	0.1570106	0.18081441	3.0972816	20	2 20.9	19.3
167671	2004 FR ₄	17.5	X	209.98710	108.02787	330.01421	24.41669	0.1479300	0.44623229	1.6960112	20	7 30.2	19.4
167672	2004 FM ₂₉	16.1	X	251.54343	114.18409	27.93284	4.11439	0.1658343	0.22353246	2.6889062	20	—	—
167673	2004 FX ₃₂	14.8											

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>		
167681	2004	<i>GS</i> ₃₂	15.8 ^m	X	2.40586	135.22869	15.88060	10.49635	0.1750995	0.17681931	3.1437614	20	1 26.4	19.5
167682	2004	<i>HC</i> ₄	14.8	X	323.66112	313.86676	204.41376	14.27254	0.1336904	0.17418080	3.1754298	20	—	—
167683	2004	<i>HK</i> ₂₀	15.6	X	305.42114	308.51970	191.64916	0.76487	0.0600460	0.16791650	3.2539220	20	—	—
167684	2004	<i>HY</i> ₅₀	15.3	X	12.82623	189.07807	285.87267	14.77230	0.2290764	0.23670863	2.5881731	20	—	—
167685	2004	<i>JQ</i>	14.5	X	26.06641	277.77402	219.75232	22.31165	0.2157144	0.17975903	3.1093927	20	2 10.8	18.3
167686	2004	<i>JX</i> ₂₃	12.2	X	208.55373	288.13795	237.69305	28.12026	0.0305228	0.08443547	5.1457982	20	10 13.7	19.4
167687	2004	<i>LX</i>	17.4	X	62.90029	89.42385	216.60481	20.81133	0.1097939	0.38841134	1.8604077	20	12 26.0	20.1
167688	2004	<i>LZ</i> ₁₀	14.5	X	67.09511	225.07195	248.24849	23.23624	0.2202407	0.17788057	3.1312450	20	3 27.0	18.9
167689	2004	<i>OL</i>	16.7	X	79.25812	187.11661	299.94158	17.61902	0.0638292	0.35553040	1.9734141	20	3 18.5	19.1
167690	2004	<i>PT</i> ₆₅	16.9	X	27.16151	242.79183	342.91574	18.54094	0.0530841	0.36098573	1.9534817	20	6 8.3	19.2
167691	2004	<i>QG</i> ₉	16.7	X	241.19684	302.99543	357.61429	19.17048	0.0456476	0.35201079	1.9865465	20	2 18.6	19.2
167692	2004	<i>QJ</i> ₁₇	17.1	X	47.46583	100.20816	223.21191	20.98448	0.0857274	0.38260304	1.8791889	20	12 27.6	19.6
167693	2004	<i>QJ</i> ₂₀	16.8	X	196.32145	171.02182	188.35551	22.33406	0.0870223	0.35204760	1.9864080	20	3 6.2	19.4
167694	2004	<i>QZ</i> ₂₀	16.6	X	219.91831	345.28746	2.84929	1.44565	0.1185522	0.28447490	2.2896727	20	3 25.3	19.8
167695	2004	<i>RH</i> ₁₃₇	17.0	X	285.83611	184.44074	172.52437	23.16249	0.0756160	0.36761470	1.9299267	20	7 11.3	19.4
167696	2004	<i>RF</i> ₁₉₄	16.7	X	241.83781	64.32977	319.95604	7.35124	0.1207248	0.29465092	2.2366474	20	6 6.5	19.8
167697	2004	<i>RO</i> ₂₅₅	17.2	X	215.28997	347.70284	31.69838	21.47193	0.0851467	0.35417466	1.9784469	20	4 28.1	19.6
167698	2004	<i>SR</i> ₄	17.0	X	304.15874	177.06186	177.12705	6.33517	0.2078076	0.30032368	2.2083928	20	7 13.2	18.8
167699	2004	<i>SV</i> ₄₉	17.0	X	352.32485	319.41062	300.83223	4.48143	0.1402086	0.29787100	2.2204989	20	5 30.6	18.8
167700	2004	<i>SQ</i> ₅₇	15.8	X	104.85361	146.74619	16.49174	24.64365	0.0924570	0.29210039	2.2496483	20	7 19.3	19.4
167701	2004	<i>TM</i> ₁₃	16.4	X	352.44051	26.25220	275.52414	7.56344	0.2560111	0.30298519	2.1954411	20	8 22.5	17.4
167702	2004	<i>TO</i> ₃₄	17.2	X	344.54415	315.07944	239.58935	0.99355	0.0997279	0.27926274	2.3180745	20	2 7.8	19.7
167703	2004	<i>TJ</i> ₃₈	16.4	X	357.93506	335.84641	191.00132	5.48936	0.0808170	0.27625021	2.3348965	20	1 22.7	18.9
167704	2004	<i>TE</i> ₈₆	17.1	X	12.76894	347.99699	192.86195	1.65409	0.0919398	0.28299627	2.2976414	20	3 7.5	19.3
167705	2004	<i>TF</i> ₁₃₂	17.0	X	186.05821	257.16401	141.52548	2.93344	0.1477438	0.28598714	2.2815941	20	4 26.9	20.4
167706	2004	<i>TS</i> ₁₃₅	17.0	X	284.78101	38.77589	323.47664	4.31507	0.1138671	0.29847349	2.2175097	20	7 8.6	19.4
167707	2004	<i>TE</i> ₁₄₈	17.1	X	86.15564	186.65721	1.32458	7.26571	0.0838648	0.29599804	2.2298561	20	7 23.4	19.8
167708	2004	<i>TL</i> ₁₅₃	17.5	X	324.61286	272.91494	18.91617	1.15616	0.1700720	0.29704210	2.2246279	20	5 19.0	19.3
167709	2004	<i>TJ</i> ₁₆₀	17.3	X	60.96482	312.42813	171.68447	1.58509	0.0929675	0.30555371	2.1831203	20	10 15.9	20.0
167710	2004	<i>TH</i> ₁₇₁	17.2	X	176.46750	273.48715	176.07994	3.53381	0.0805100	0.29470235	2.2363871	20	6 23.8	20.2
167711	2004	<i>TT</i> ₁₈₃	17.4	X	78.00764	219.23131	320.21973	2.68656	0.0847678	0.29300760	2.2450023	20	6 26.5	20.0
167712	2004	<i>TB</i> ₂₀₅	16.8	X	222.45025	337.15147	39.19832	4.64657	0.0432788	0.28685879	2.2769698	20	5 10.2	19.8
167713	2004	<i>TX</i> ₂₀₆	17.4	X	325.47081	297.36497	45.82359	3.51464	0.0687577	0.29989410	2.2105013	20	8 29.0	19.4
167714	2004	<i>TF</i> ₂₀₈	16.7	X	343.93995	316.41511	148.61124	1.94158	0.1378920	0.25811258	2.4430364	20	—	—
167715	2004	<i>TY</i> ₂₁₁	16.8	X	239.87022	206.31597	356.01637	2.08760	0.1209996	0.26078156	2.2463389	20	—	—
167716	2004	<i>TM</i> ₂₁₃	16.9	X	252.68455	215.97108	164.07705	1.44197	0.0158301	0.29367536	2.2415979	20	7 1.9	19.3
167717	2004	<i>TM</i> ₂₆₀	17.0	X	82.67728	177.72735	39.06439	4.19501	0.0423755	0.30033467	2.2083389	20	8 24.1	19.5
167718	2004	<i>TA</i> ₂₇₄	17.8	X	58.15976	338.27560	337.32467	1.03996	0.1904818	0.31479877	2.1401655	20	12 27.3	20.6
167719	2004	<i>TO</i> ₂₇₅	17.5	X	144.55100	95.80384	30.60684	3.47581	0.0789730	0.29105572	2.2550281	20	7 7.7	20.5
167720	2004	<i>TT</i> ₃₂₃	16.7	X	312.22895	143.60971	105.53079	1.56137	0.1787919	0.28115011	2.3076886	20	2 23.2	19.2
167721	2004	<i>TY</i> ₃₄₄	16.3	X	236.72660	131.68685	222.87015	5.17432	0.1794825	0.28792659	2.2713368	20	4 15.3	19.7
167722	2004	<i>TR</i> ₃₅₁	17.6	X	98.25962	21.70109	186.22015	4.53129	0.1001457	0.29792851	2.2202132	20	9 5.4	20.5
167723	2004	<i>VE</i> ₁₉	17.3	X	345.14713	271.47771	101.97598	1.10709	0.1888185	0.30980533	2.1631010	20	12 7.4	18.7
167724	2004	<i>VG</i> ₂₈	16.9	X	128.95023	235.09837	255.21469	3.15764	0.0466167	0.28906600	2.2653642	20	6 19.7	19.8
167725	2004	<i>VT</i> ₃₁	17.3	X	2.44139	120.85464	146.29386	2.05975	0.0340894	0.29205984	2.2498565	20	7 1.0	19.5
167726	2004	<i>VQ</i> ₄₄	16.3	X	357.48313	35.89980	208.85260	6.38409	0.0709776	0.28685302	2.2770004	20	5 19.3	18.6
167727	2004	<i>VH</i> ₇₉	17.6	X	244.64241	155.01831	205.87129	4.86335	0.1358933	0.29030945	2.2588909	20	5 7.6	20.7
167728	2004	<i>VD</i> ₈₆	17.5	X	62.29601	156.15531	88.89515	1.30159	0.0638050	0.29660469	2.2268145	20	9 6.9	20.1
167729	2004	<i>VC</i> ₉₁	16.9	X	315.28053	58.25349	259.44947	4.68094	0.2025858	0.29691397	2.2252679	20	6 6.4	18.6
167730	2004	<i>WU</i> ₅	17.1	X	354.18367	68.23881	184.59154	2.17062	0.1657373	0.28844859	2.2685957	20	5 22.4	18.5
167731	2004	<i>XV</i> ₁	16.3	X	13.91570	118.58132	322.41736	5.72098	0.0952764	0.25871758	2.4392262	20	—	—
167732	2004	<i>XW</i> ₁	16.4	X	216.43142	340.06376	30.16661	9.27777	0.1361656	0.28458771	2.2890676	20	4 19.1	19.8
167733	2004	<i>XX</i> ₁₂	16.9	X	125.65082	40.47584	45.92182	3.57033	0.1355755	0.27829014	2.3234723	20	4 25.3	20.0
167734	2004	<i>XR</i> ₁₃	16.8	X	181.91073	353.14984	79.38150	0.17687	0.1755909	0.28399999	2.2922246	20	6 5.5	20.4
167735	2004	<i>XS</i> ₁₃	15.8	X	98.31457	173.65988	287.93843	10.61398	0.0718698	0.27271218	2.3550476	20	3 25.8	19.0
167736	2004	<i>XB</i> ₂₂	16.9	X	325.52161	332.24224	67.47330	6.20190	0.1205203	0.30639645	2.1791154	20	11 28.8	18.4
167737	2004	<i>XZ</i> ₂₃	16.5	X	151.76380	71.48504	35.72259	6.26662	0.1069679	0.28592256	2.2819376	20	6 19.7	19.8
167738	2004	<i>XD</i> ₂₅	16.5	X	173.41110	331.01581	102.05413	7.70206	0.1772585	0.28243359	2.3006920	20	5 30.4	20.2
167739	2004	<i>XL</i> ₂₅	17.3	X	171.69234	350.32397	69.81095	5.16102	0.1450818	0.28015640	2.3131423	20	5 10.6	20.9
167740	2004	<i>XQ</i> ₂₅	16.7	X	112.23233	78.05846	35.98611	2.76326	0.1872411	0.27710033	2.3301186	20	5 23.1	19.8
167741	2004	<i>XY</i> ₂₉	17.0	X	294.16281	345.67300	25.47722	0.80906	0.0939239	0.29732417	2.2232207	20	8 11.4	18.9
167742	2004	<i>XL</i> ₃₁	16.4	X	77.18134	227.17847	268.91693	4.64356	0.1758318	0.27344428	2.3508423	20	5 5.9	19.1
167743	2004	<i>XL</i> ₃₂	17.1	X	168.72345	258.10546	202.76192	0.70884	0.0358113	0.28860268	2.2677881	20	6 29.9	20.0
167744	2004	<i>XM</i> ₃₄	16.0	X	330.84904	106.69080	1.01055	16.81451	0.0102436	0.24389895	2.5370524	20	—	—
167745	2004	<i>XU</i> ₃₄	15.9	X	89.92554	344.93384	291.76045	13.65098	0.1840565	0.23717989	2.5847436	20	11 22.5	20.2
167746	2004	<i>XQ</i> ₃₅	17.1	X	96.12974	121.36449	358.13025	2.22372	0.1664337	0.27695620	2.3309269	20	5 7.8	20.1
167747	2004	<i>XF</i> ₃₆	15.8	X	278.84944	213.27505	205.80258	3.86736	0.0360316	0.24711102	2.5150192	20	12 4.9	18.9
167748	2004	Markkelly	16.8	X	102.89559	298.79735	103.40567	2.47111	0.1831058	0.26520979	2.3			

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>
167761 2004 XD ₁₃₂	16.5	X	186.55467	90.93164	39.91451	6.74347	0.1269952	0.29334778	2.2432663	20	9 2.9	19.7
167762 2004 XX ₁₃₉	16.7	X	38.85681	339.04685	130.78206	3.56929	0.0626263	0.26357597	2.4091592	20	1 13.3	19.2
167763 2004 XM ₁₄₁	16.2	X	33.58234	0.55631	117.91311	3.63410	0.1259081	0.26339752	2.4102473	20	1 16.8	18.4
167764 2004 XS ₁₄₅	17.0	X	52.38074	304.37537	40.54555	1.65842	0.1611124	0.31627897	2.1334829	20	—	—
167765 2004 XS ₁₇₆	17.0	X	224.29419	29.78292	22.28981	3.85764	0.1362019	0.28900346	2.2656910	20	6 23.6	20.1
167766 2004 XS ₁₈₆	17.2	X	209.09195	242.34358	136.58431	3.56270	0.1824894	0.28266882	2.2994155	20	4 23.1	20.8
167767 2004 YF ₁₉	16.8	X	232.79970	55.04016	282.67043	1.83552	0.1706481	0.27570623	2.3379667	20	3 21.7	20.5
167768 2004 YL ₂₁	17.4	X	183.58630	144.84087	291.87591	2.86310	0.2097087	0.28368929	2.2938979	20	6 12.1	21.0
167769 2004 YW ₂₂	16.3	X	173.76028	271.00450	118.14241	8.11901	0.0977236	0.27247380	2.3564210	20	4 3.7	19.8
167770 2004 YM ₃₃	16.2	X	39.73049	136.48796	1.28422	6.81489	0.0579613	0.26762055	2.3848244	20	2 24.1	18.8
167771 2005 AF ₁	16.6	X	134.46878	121.43845	303.77459	6.45937	0.1031223	0.27279295	2.3545827	20	3 30.6	20.0
167772 2005 AM ₂	16.1	X	200.53384	170.46384	41.15024	7.10109	0.1281507	0.24117438	2.5561241	20	12 19.5	19.8
167773 2005 AP ₇	16.5	X	5.56151	121.27331	349.47277	2.65515	0.1649988	0.25615433	2.4554716	20	—	—
167774 2005 AH ₈	17.1	X	95.88608	341.89039	89.51968	3.74888	0.1656116	0.26639973	2.3921048	20	3 4.9	19.9
167775 2005 AM ₁₁	16.5	X	175.31754	171.21420	284.41390	6.55825	0.0429395	0.28280454	2.2986797	20	7 1.1	19.2
167776 2005 AR ₁₅	16.1	X	223.21011	203.60157	113.57093	7.31905	0.0933941	0.23666785	2.5884704	20	11 8.3	19.7
167777 2005 AC ₁₆	15.4	X	168.45283	103.05567	321.14498	15.84694	0.0819967	0.23901795	2.5714754	20	12 7.7	19.4
167778 2005 AG ₁₆	15.1	X	64.89753	294.07596	303.16350	26.98168	0.0953372	0.22217229	2.6998696	20	8 16.1	19.0
167779 2005 AT ₁₆	16.7	X	359.52826	229.92283	301.71944	0.37225	0.1121453	0.26527885	2.3988382	20	2 1.4	18.8
167780 2005 AN ₁₇	16.5	X	339.02970	285.12136	230.83230	1.72869	0.1384391	0.25782037	2.4448819	20	—	—
167781 2005 AY ₁₈	16.6	X	38.66827	112.68666	43.45171	3.90109	0.1329283	0.26912520	2.3759273	20	3 24.6	18.7
167782 2005 AF ₂₁	15.7	X	52.59970	331.40380	330.97012	12.97303	0.2110313	0.23280525	2.6170230	20	11 16.5	19.8
167783 2005 AC ₂₂	16.6	X	76.00080	278.58995	150.45238	6.68393	0.1315178	0.26106239	2.4245986	20	1 23.2	19.1
167784 2005 AE ₃₁	16.8	X	356.65143	116.99191	250.29490	2.11408	0.1971466	0.30603539	2.1808290	20	12 19.1	18.6
167785 2005 AT ₃₁	16.6	X	290.84630	222.67144	116.71341	12.19736	0.2693127	0.28892505	2.2661009	20	5 19.6	19.5
167786 2005 AO ₃₂	15.9	X	113.53606	248.48253	108.16156	3.45562	0.2137775	0.25909422	2.4368618	20	—	—
167787 2005 AT ₃₃	15.9	X	117.33749	338.34843	139.52427	4.71547	0.0485405	0.21387776	2.7692296	20	5 19.6	19.8
167788 2005 AL ₃₆	16.6	X	106.70303	235.88073	185.11914	5.37986	0.2019400	0.26806523	2.3821863	20	3 7.9	19.6
167789 2005 AC ₃₉	16.6	X	126.70553	44.35459	67.58275	3.44292	0.1273769	0.27754234	2.3276440	20	5 30.3	19.9
167790 2005 AU ₃₉	16.9	X	78.28358	7.72662	30.93997	1.74019	0.1780764	0.25737055	2.4477298	20	—	—
167791 2005 AM ₄₁	15.7	X	291.15445	45.58248	217.65234	1.49908	0.0201345	0.20604931	2.8389339	20	3 16.5	19.5
167792 2005 AK ₄₃	16.7	X	355.21412	14.15341	158.89814	1.14825	0.1281892	0.26209149	2.4182476	20	1 25.5	19.1
167793 2005 AO ₄₅	16.2	X	254.20751	226.20777	136.97600	6.34604	0.0578747	0.21677370	2.7445111	20	6 3.1	20.0
167794 2005 AM ₄₈	15.6	X	140.86953	312.21188	136.57031	5.22872	0.0359888	0.21198192	2.7857160	20	5 9.9	19.6
167795 2005 AU ₅₃	16.9	X	15.57975	269.13129	233.74003	1.72679	0.1302995	0.26074177	2.4265857	20	1 18.4	19.3
167796 2005 AP ₆₈	16.0	X	8.32644	305.58333	164.20745	9.67818	0.1670070	0.25459176	2.4655084	20	—	—
167797 2005 AS ₇₂	16.0	X	22.76462	310.55471	329.36551	3.64936	0.0767247	0.22259933	2.6964155	20	8 19.7	19.0
167798 2005 AF ₈₁	16.0	X	54.40840	161.97093	58.06335	3.20022	0.1083430	0.21521539	2.7577433	20	7 20.1	19.4
167799 2005 AQ ₈₁	16.2	X	269.90930	250.51002	164.79076	1.55682	0.0597081	0.23106788	2.6301246	20	9 2.9	19.5
167800 2005 BT ₅	16.7	X	64.85016	354.68694	43.53447	2.83160	0.1716511	0.25744746	2.4472423	20	—	—
167801 2005 BG ₈	16.7	X	105.50553	57.93466	21.56878	3.69900	0.1090303	0.26956728	2.3733289	20	3 18.9	19.6
167802 2005 BB ₉	15.9	X	293.99704	207.89435	345.15933	6.25007	0.1252020	0.25437083	2.4669358	20	—	—
167803 2005 BH ₁₀	16.5	X	46.83882	255.56228	295.59952	5.79857	0.0776766	0.27511853	2.3412951	20	5 22.4	19.0
167804 2005 BC ₁₁	17.1	X	72.47681	314.38489	86.60764	2.56360	0.1914615	0.25746342	2.4471412	20	—	—
167805 2005 BK ₁₁	16.6	X	58.35094	43.69804	62.28857	2.02182	0.1452702	0.26369047	2.4084618	20	2 17.3	18.8
167806 2005 BK ₁₈	17.0	X	251.85643	327.59495	64.02985	5.57214	0.1672765	0.28912221	2.2650706	20	6 23.9	19.9
167807 2005 BD ₁₉	16.3	X	298.35163	132.48889	328.92525	11.84347	0.0807865	0.24280976	2.5446338	20	12 18.4	19.4
167808 2005 BE ₂₁	15.8	X	50.97552	217.08957	344.90554	3.78891	0.1364169	0.21243402	2.7817622	20	6 23.5	19.2
167809 2005 BK ₂₁	16.4	X	92.39292	149.92082	359.69186	5.41651	0.0577367	0.27649862	2.3334978	20	5 27.9	19.3
167810 2005 BN ₂₁	16.1	X	96.38752	8.26451	157.98273	2.72855	0.0117821	0.21689958	2.7434491	20	6 19.3	19.9
167811 2005 BX ₂₅	16.4	X	31.23636	340.85275	164.04772	2.43145	0.1269890	0.26361644	2.4089127	20	2 20.3	18.7
167812 2005 CG	15.4	X	130.61326	335.68996	168.86765	9.98593	0.1041714	0.21479294	2.7613580	20	7 12.6	19.7
167813 2005 CP ₂	16.2	X	329.42051	128.82490	101.35437	2.32402	0.1412294	0.26573585	2.3960872	20	3 2.5	18.6
167814 2005 CF ₅	16.0	X	207.25902	327.06390	139.55580	3.93338	0.182189	0.22230870	2.6987651	20	8 24.6	19.6
167815 2005 CQ ₅	16.2	X	290.76398	53.49302	34.12057	3.51852	0.0995415	0.23726853	2.5840998	20	11 13.4	19.1
167816 2005 CW ₅	15.5	X	144.73574	175.58922	335.31245	6.70466	0.1143725	0.21840602	2.7308194	20	8 7.9	19.8
167817 2005 CY ₅	15.9	X	223.14512	184.87424	327.59007	7.04912	0.1325007	0.23321507	2.6139562	20	10 26.9	19.8
167818 2005 CH ₈	16.0	X	103.48841	219.29992	21.25692	2.00305	0.1489937	0.22887232	2.6469183	20	10 20.1	20.0
167819 2005 CQ ₈	17.2	X	197.11656	34.58113	65.40790	1.38114	0.1409120	0.28759125	2.2731021	20	7 29.6	20.6
167820 2005 CW ₈	15.8	X	237.32945	347.34275	11.31336	4.74153	0.0114864	0.21178564	2.7874369	20	5 10.0	19.7
167821 2005 CS ₁₁	17.0	X	17.46493	128.57735	84.56708	2.27453	0.1307309	0.27199303	2.3591970	20	5 9.0	19.1
167822 2005 CV ₁₁	16.7	X	69.83307	125.76209	4.84144	4.85942	0.1715216	0.26886082	2.3774846	20	4 15.7	19.2
167823 2005 CK ₁₆	16.6	X	223.22373	9.31563	134.38364	1.80576	0.1347671	0.23410441	2.6073319	20	10 19.7	20.1
167824 2005 CJ ₁₇	16.8	X	200.17765	86.73174	281.46710	2.79695	0.1898567	0.27390745	2.3481913	20	3 29.7	20.7
167825 2005 CL ₁₈	15.4	X	263.67626	263.97154	313.44563	8.25350	0.0652659	0.18888652	3.0083988	20	—	—
167826 2005 CV ₂₀	17.1	X	76.31471	340.33056	200.38252	1.57016	0.1121909	0.27646653	2.3336784	20	6 29.5	20.0
167827 2005 CA ₂₇	16.7	X	286.04917	80.12648	74.74300	1.48520	0.0606942	0.24474435	2.5312066	20	—	—
167828 2005 CC ₂₇	16.1	X	14.14612	39.06067	45.46014	7.30463	0.1297606	0.25233103	2.4802128	20	—	—
167829 2005 CH ₂₇	16.2	X	148.53589	109.91652	160.68936	2.48516	0.0601247	0.24401947	2.5362169	20	—	—
167830 2005 CA ₂₈	16.1	X	351.38631	346.09234	212.70207	9.46030	0.2274115	0.26262561	2.4149677	20	2 6.7	18.6
167831 2005 CY ₄₂	16.9	X	29.43867	272.11987	275.82584	2.37518	0.1060044	0.27011663	2.3701100	20	4 19.7	19.3
167832 2005 CJ ₄₃	16.0	X	109.53213	235.80112	315.40084	5.04798	0.0826514	0.22080852	2.7109749	20	8 17.6	20.0
167833 2005 CB ₄₄	15.2	X	177.34714	150.10440	128.83094	6.22997	0.1340791	0.18105779	3.0945053	20	—	—
167834 2005 CJ ₄₇	15.7	X	96.29991	169.56851	327.11901	8.88658	0.0					

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>		
167841	2005	CP ₆₃	15.9 ^m	X	110.23454	46.68535	127.47813	4.07513	0.0292092	0.21735894	2.7395825	20	7 20.7	19.5
167842	2005	CV ₆₃	15.4	X	184.10413	101.91206	173.35168	5.12017	0.1464410	0.18171218	3.0870715	20	—	—
167843	2005	CT ₆₄	16.1	X	164.12206	159.54355	95.00973	3.86110	0.1366503	0.24010883	2.5636809	20	—	—
167844	2005	CC ₆₈	15.4	X	87.65607	334.20822	153.86407	20.46167	0.0879093	0.20600494	2.8393415	20	5 5.4	19.7
167845	2005	CE ₆₈	16.3	X	57.50765	287.71820	167.28800	4.20315	0.0685314	0.26127649	2.4232738	20	1 22.3	18.9
167846	2005	CH ₆₈	16.7	X	143.81935	239.05226	162.42818	8.25579	0.2129225	0.27057127	2.3674543	20	3 25.8	20.3
167847	2005	CM ₇₄	16.3	X	0.51869	300.15819	217.53540	9.46579	0.0912492	0.26206584	2.4184054	20	1 14.8	19.2
167848	2005	CR ₇₅	16.2	X	198.24195	165.18712	323.41061	2.89215	0.0727079	0.22710757	2.6606126	20	9 6.0	20.1
167849	2005	CS ₇₅	15.7	X	51.75839	36.14867	169.52253	8.27843	0.1530288	0.21212122	2.7844963	20	7 1.9	19.2
167850	2005	CC ₇₆	16.1	X	25.44606	338.21366	333.98066	2.17043	0.0877559	0.22679583	2.6630502	20	10 8.5	19.2
167851	2005	CJ ₇₆	16.1	X	106.40207	264.44242	280.29399	3.93646	0.0499519	0.21823201	2.7322708	20	7 31.9	19.8
167852	2005	Maturana	15.1	X	231.17850	261.25730	335.29376	8.82893	0.0454161	0.18297882	3.0728085	20	—	—
167853	2005	DN	16.1	X	49.99080	148.62798	134.17280	4.24191	0.0449678	0.22608952	2.6685935	20	9 29.7	19.5
167854	2005	ES	15.3	X	268.44645	300.50402	8.24925	6.04586	0.0544881	0.20397242	2.8581723	20	4 9.8	19.4
167855	2005	ET	15.3	X	170.40687	60.36940	165.98364	5.50583	0.0761467	0.17289007	3.1912146	20	11 28.1	20.2
167856	2005	ED ₉	16.4	X	102.87402	295.69585	322.90599	3.23771	0.2080755	0.22996402	2.6385346	20	11 13.4	20.8
167857	2005	EE ₁₀	15.4	X	26.17257	264.04115	345.76144	6.87615	0.1779041	0.20946672	2.8079715	20	7 27.2	18.5
167858	2005	EN ₁₀	16.7	X	99.37885	186.43786	312.90808	3.04749	0.1713334	0.27279515	2.3545700	20	6 10.1	19.8
167859	2005	EV ₁₂	16.5	X	35.59938	94.93875	122.34676	3.59261	0.1681112	0.25933263	2.4353680	20	1 21.4	18.6
167860	2005	EG ₁₈	16.7	X	268.66144	303.02278	145.01340	1.26224	0.1571919	0.23272903	2.6175943	20	10 1.5	19.8
167861	2005	EV ₁₉	16.7	X	307.24080	102.07929	344.00511	3.03963	0.1592204	0.23913970	2.5706025	20	12 7.7	19.0
167862	2005	EB ₂₀	17.3	X	40.03472	91.00621	12.36663	1.23895	0.1289175	0.25764822	2.4459709	20	1 8.7	19.6
167863	2005	EW ₂₁	17.0	X	342.02303	95.55163	351.17795	3.38930	0.1430528	0.24474171	2.5312248	20	—	—
167864	2005	ED ₂₂	15.6	X	161.31949	341.49043	323.87067	0.80673	0.0915517	0.18244381	3.0788129	20	—	—
167865	2005	EV ₂₂	16.9	X	31.34010	307.65021	179.50357	5.57295	0.0661505	0.25944360	2.4346736	20	1 24.6	19.0
167866	2005	EX ₂₂	17.0	X	7.92276	286.96433	182.37987	3.48371	0.1746331	0.25285618	2.4767775	20	—	—
167867	2005	EC ₂₃	15.3	X	197.81894	312.67955	334.44948	5.81134	0.1275762	0.18402378	3.0611651	20	1 1.1	20.3
167868	2005	EE ₂₇	17.2	X	322.18857	31.46659	87.22040	0.32511	0.1365676	0.24482719	2.5306356	20	—	—
167869	2005	EC ₂₇	14.6	X	323.91495	274.33182	161.80559	10.61220	0.0628860	0.17149166	3.2085394	20	12 5.1	19.0
167870	2005	EP ₂₇	15.9	X	318.08538	157.02213	162.57368	4.66860	0.0863280	0.21375791	2.7702646	20	6 28.9	19.4
167871	2005	ER ₂₇	16.8	X	349.16947	19.00327	152.58403	1.65765	0.1260499	0.25788194	2.4444928	20	1 14.5	19.3
167872	2005	ED ₂₈	14.7	X	229.10827	70.87330	156.78533	16.32911	0.1379188	0.17764601	3.1340006	20	—	—
167873	2005	EJ ₂₈	15.2	X	243.35205	108.15651	159.30479	10.72275	0.0628658	0.18796052	3.0182714	20	1 22.0	19.7
167874	2005	ED ₂₉	15.2	X	232.62545	227.53968	7.53988	15.24473	0.1167693	0.17909682	3.1170526	20	—	—
167875	2005	Kromminga	16.5	X	209.25657	14.66354	26.74583	5.00278	0.1298784	0.27904573	2.3192762	20	5 22.7	19.8
167876	2005	EA ₃₃	15.7	X	247.46350	133.46577	166.79252	2.09975	0.0100878	0.19917897	2.9038470	20	3 11.2	19.8
167877	2005	EH ₃₅	16.3	X	249.26522	337.40834	194.33510	4.16468	0.1210235	0.23671851	2.5881011	20	12 29.7	19.4
167878	2005	EA ₃₆	15.2	X	24.10178	153.78860	326.83822	10.21098	0.0915003	0.19037087	2.9927405	20	1 22.2	18.9
167879	2005	EJ ₃₆	15.9	X	342.69669	129.44794	315.35475	14.54119	0.0799563	0.24265263	2.5457322	20	—	—
167880	2005	EW ₃₇	17.3	X	60.75231	212.94297	277.43672	2.01112	0.1793236	0.26459385	2.4029767	20	3 31.9	19.7
167881	2005	ET ₃₉	16.9	X	148.48249	175.52721	149.45228	2.60849	0.0930443	0.25404924	2.4690172	20	—	—
167882	2005	EG ₄₄	17.2	X	82.93921	156.86770	288.11906	0.34234	0.2189730	0.26266415	2.4147315	20	3 11.7	19.9
167883	2005	EQ ₄₅	15.0	X	249.74475	218.17007	359.19181	9.03339	0.0573343	0.18115529	3.0933950	20	—	—
167884	2005	ES ₄₅	17.2	X	339.11525	82.66345	354.34037	8.40994	0.1947854	0.24193675	2.5507515	20	—	—
167885	2005	EA ₄₇	15.7	X	205.53006	274.51974	175.63898	5.99077	0.0321603	0.21619289	2.7494243	20	7 27.9	19.7
167886	2005	EK ₄₈	17.0	X	82.79253	254.58978	172.99377	3.33445	0.1962986	0.26059423	2.4275016	20	2 11.8	19.4
167887	2005	EP ₄₉	15.4	X	347.33608	294.61714	232.87000	1.98346	0.0326510	0.19191593	2.9766564	20	1 29.2	19.5
167888	2005	EQ ₆₁	15.6	X	241.92906	66.95200	134.80939	5.22185	0.1375774	0.17947611	3.1126596	20	—	—
167889	2005	EY ₆₄	15.1	X	165.67552	125.60482	154.93337	11.83210	0.0425272	0.17830777	3.1262416	20	—	—
167890	2005	EO ₆₇	15.0	X	264.92136	173.36741	29.95537	7.23612	0.1502324	0.17932369	3.1144230	20	—	—
167891	2005	ET ₆₈	15.1	X	260.52033	261.54151	292.20013	4.33061	0.0956892	0.17861126	3.1226992	20	—	—
167892	2005	ED ₆₉	14.9	X	299.33055	139.80456	24.93655	1.64525	0.1233257	0.17972902	3.1097388	20	—	—
167893	2005	EK ₆₉	14.8	X	159.62442	338.98096	348.10749	15.29663	0.0558707	0.18386367	3.0629420	20	1 9.3	19.6
167894	2005	EU ₇₀	15.9	X	122.39242	276.41412	176.72451	21.58006	0.2862873	0.26978693	2.3720406	20	5 18.7	20.1
167895	2005	EB ₇₃	15.5	X	339.75635	210.13424	79.28930	4.67412	0.0658157	0.21231424	2.7828084	20	6 23.2	18.8
167896	2005	EO ₇₆	16.0	X	321.06605	205.21153	178.89325	8.07258	0.0901367	0.22600631	2.6692485	20	10 5.7	19.1
167897	2005	EM ₇₇	16.2	X	33.34670	241.80128	350.43581	8.92898	0.0520236	0.21159683	2.7890948	20	6 27.4	19.9
167898	2005	EP ₇₈	15.2	X	253.29772	171.28812	114.38904	4.90937	0.1273635	0.19273167	2.9682512	20	2 19.1	19.8
167899	2005	ED ₇₉	14.9	X	151.97702	164.93882	142.68751	12.20155	0.0668470	0.17921064	3.1157327	20	—	—
167900	2005	EO ₈₀	16.2	X	78.00027	56.32843	260.78008	1.55583	0.0616855	0.23904832	2.5712576	20	12 20.9	19.7
167901	2005	EZ ₈₃	16.0	X	245.44735	281.12858	193.84157	7.77556	0.1662550	0.23161074	2.6260133	20	10 3.4	19.5
167902	2005	ET ₈₉	15.9	X	204.97652	313.52041	173.75229	3.37346	0.0382597	0.22571571	2.6715391	20	9 16.1	19.6
167903	2005	EU ₈₉	16.6	X	162.53128	158.46633	95.14458	1.78951	0.1276658	0.23640090	2.5904187	20	12 31.3	20.5
167904	2005	EP ₉₁	15.6	X	283.29576	65.10622	332.51320	12.01752	0.2715475	0.22382120	2.6865931	20	7 27.5	19.0
167905	2005	EZ ₉₅	16.3	X	100.78333	280.18881	219.63904	8.23184	0.0500370	0.27599973	2.3363090	20	5 26.4	19.1
167906	2005	EG ₉₆	15.5	X	79.96748	2.72036	175.25566	11.45023	0.0801788	0.21297879	2.7770166	20	6 23.4	19.5
167907	2005	EB ₉₇	15.2	X	59.51198	89.95868	310.65334	9.97095	0.0300364	0.18457710	3.0550442	20	—	—
167908	2005	EJ ₉₇	16.5	X	120.29617	286.68977	197.31499	6.10277	0.1417517	0.27589192	2.3369176	20	6 10.5	19.8
167909	2005	EP ₉₈	15.9	X	338.86440	178.05185	121.97957	2.66085	0.0361794	0.21467270	2.7623890	20	7 7.9	19.5
167910	2005	EU ₉₉	15.8	X	76.11816	34.95689	255.95844	4.76791	0.0779138	0.22986330	2.6393053	20	11 15.3	19.6

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>		
167921	2005	ET ₁₁₈	15.7	X	236.17418	161.52624	322.38782	12.70398	0.1166756	0.22977036	2.6400169	20	10 3.9	19.6
167922	2005	EE ₁₂₀	15.3	X	218.99396	59.88990	195.60353	9.21161	0.0588945	0.18258771	3.0771950	20	—	—
167923	2005	EO ₁₂₈	15.6	X	120.33353	353.18451	186.54054	6.35550	0.0557202	0.21692705	2.7432175	20	8 11.1	19.5
167924	2005	EN ₁₃₁	16.3	X	309.66143	127.47435	209.09278	2.01964	0.1848293	0.21912923	2.7248076	20	6 25.7	19.3
167925	2005	ED ₁₃₄	17.0	X	222.21668	338.35045	179.69994	2.56500	0.1028440	0.23386333	2.6091235	20	11 9.8	20.5
167926	2005	EB ₁₄₂	15.4	X	147.00011	81.76766	305.68720	8.33095	0.0419021	0.19643391	2.9308375	20	2 26.9	19.7
167927	2005	EG ₁₄₃	16.1	X	211.36631	114.93061	64.09010	3.57290	0.1344905	0.23161787	2.6259594	20	11 18.8	19.7
167928	2005	EF ₁₅₇	15.5	X	104.33810	165.09589	179.31111	9.27602	0.1611204	0.17742223	3.1366353	20	—	—
167929	2005	EF ₁₆₀	15.2	X	234.38260	85.70082	179.54713	9.81671	0.1069766	0.18272980	3.0755996	20	1 8.4	20.2
167930	2005	ET ₁₆₀	15.4	X	254.47828	76.84477	180.66228	10.87120	0.0963125	0.18524625	3.0476828	20	1 18.9	20.2
167931	2005	ER ₁₆₈	15.6	X	137.80024	101.52720	224.92458	1.95658	0.0393620	0.17839685	3.1252008	20	—	—
167932	2005	EH ₁₇₁	15.6	X	256.47126	254.38438	192.47043	21.58809	0.0727185	0.22706384	2.6609542	20	9 23.0	19.2
167933	2005	EF ₁₇₂	15.7	X	285.82481	133.84650	357.63850	12.25013	0.2478237	0.23971990	2.5664531	20	12 21.7	18.2
167934	2005	EC ₁₇₃	16.1	X	325.95350	312.01438	90.91440	1.94927	0.0846219	0.23215185	2.6219311	20	11 10.1	19.0
167935	2005	EJ ₁₇₄	15.6	X	133.03064	178.31193	196.36367	9.61844	0.1141850	0.18961868	3.0006497	20	2 4.6	20.2
167936	2005	EX ₁₇₆	15.0	X	245.14290	186.85138	12.66711	9.10790	0.0459036	0.17431563	3.1737922	20	—	—
167937	2005	EH ₁₇₇	15.0	X	155.65880	332.92703	16.43283	16.10290	0.1068147	0.18417162	3.0595267	20	2 7.3	19.9
167938	2005	EQ ₁₇₇	16.2	X	294.23664	328.69299	181.75524	4.50404	0.1662610	0.24164479	2.5528057	20	—	—
167939	2005	EV ₁₇₈	15.1	X	254.25690	200.82078	358.83666	11.75348	0.0782347	0.18082487	3.0971621	20	—	—
167940	2005	EJ ₁₈₄	15.6	X	163.72734	311.55131	181.53359	9.59829	0.1016246	0.21498085	2.7597486	20	8 1.1	19.9
167941	2005	EP ₁₈₅	16.2	X	147.88646	332.82680	298.48340	4.42688	0.0900389	0.23992317	2.5650033	20	—	—
167942	2005	EQ ₁₈₅	16.6	X	242.25060	279.46437	197.81691	4.11200	0.0575215	0.23146782	2.6270941	20	10 18.9	19.8
167943	2005	EZ ₁₈₆	14.5	X	261.90141	345.58219	187.51807	17.27970	0.1134530	0.17262075	3.1945331	20	12 30.1	19.1
167944	2005	EY ₁₈₉	16.1	X	344.19597	82.53285	185.77781	4.01675	0.0609278	0.21293840	2.7077367	20	6 1.6	19.5
167945	2005	EC ₁₉₄	16.0	X	11.15657	36.77902	337.00430	4.66553	0.2233192	0.23374766	2.6099841	20	—	—
167946	2005	EC ₂₀₂	15.7	X	181.41375	95.06232	92.48428	13.18177	0.0984374	0.23173090	2.6251055	20	11 5.7	19.8
167947	2005	EC ₂₀₆	15.7	X	172.44921	297.62802	192.07223	8.80960	0.0965184	0.21652751	2.7465910	20	8 5.8	20.1
167948	2005	ER ₂₁₀	15.6	X	297.39842	40.13830	186.74371	9.97391	0.0496268	0.19075255	2.9887470	20	2 4.0	19.9
167949	2005	EX ₂₁₂	16.1	X	286.56143	321.44439	142.91565	1.03959	0.0363998	0.23349666	2.6118542	20	12 4.7	19.4
167950	2005	EX ₂₁₈	16.1	X	99.97559	203.11717	47.97668	3.49885	0.0616973	0.22626692	2.6671985	20	10 22.4	19.8
167951	2005	EK ₂₁₉	14.6	X	328.00401	160.92450	7.39795	17.05542	0.1296141	0.18551182	3.0447735	20	—	—
167952	2005	EY ₂₁₉	15.7	X	188.55734	2.53486	227.14392	13.10433	0.1269293	0.23621145	2.5918036	20	12 26.9	19.8
167953	2005	EC ₂₂₃	15.1	X	179.71435	268.35605	134.77705	17.60097	0.0978311	0.20275222	2.8696283	20	5 4.0	19.9
167954	2005	EX ₂₂₃	15.2	X	257.88427	212.85800	9.11410	16.74069	0.0349936	0.18011560	3.1052877	20	—	—
167955	2005	EZ ₂₄₀	15.8	X	112.69023	76.73362	65.91494	5.26338	0.1234690	0.21170841	2.7881147	20	6 23.1	19.8
167956	2005	EV ₂₄₂	15.0	X	98.67193	333.27027	107.59972	13.13847	0.0101542	0.19586988	2.9364613	20	3 8.8	19.2
167957	2005	EC ₂₄₅	15.1	X	175.90106	163.59542	182.77626	9.44234	0.0806591	0.18668588	3.0319944	20	2 13.6	19.8
167958	2005	EX ₂₄₈	15.5	X	346.91479	270.33038	43.81318	6.07767	0.0643437	0.21783809	2.7355637	20	8 11.9	18.9
167959	2005	EK ₂₄₉	16.6	X	316.13711	271.74889	174.98597	5.38863	0.1407041	0.23843341	2.5756765	20	12 26.3	19.3
167960		Rudzikas	15.0	X	174.26885	215.78401	119.19008	9.76018	0.0813069	0.18995797	2.9970756	20	1 31.5	19.6
167961	2005	EM ₂₅₇	16.0	X	32.61962	78.62168	210.00134	3.45425	0.0762989	0.21752256	2.7382085	20	9 13.6	19.5
167962	2005	EQ ₂₆₇	15.6	X	338.94720	125.33413	358.75275	11.37589	0.0684095	0.17942481	3.1132528	20	—	—
167963	2005	EM ₂₆₈	16.4	X	283.73004	214.62968	222.62614	3.70804	0.1791291	0.22887662	2.6468851	20	10 4.9	19.4
167964	2005	EY ₂₇₅	15.3	X	246.45344	146.73174	104.50065	5.94661	0.1136613	0.18368058	3.0649770	20	1 4.3	19.9
167965	2005	EZ ₂₇₅	16.1	X	143.99430	296.92062	127.62449	2.62402	0.0606164	0.21653583	2.7465207	20	8 7.2	20.2
167966	2005	EE ₂₇₇	15.5	X	212.21046	207.80001	122.40652	7.26815	0.1212624	0.19719435	2.9232978	20	3 4.1	20.1
167967	2005	EX ₂₇₇	15.6	X	200.17603	126.31052	176.48882	10.59976	0.0937369	0.18915661	3.0055344	20	1 18.1	20.4
167968	2005	EY ₂₇₈	14.9	X	322.48237	306.80926	192.32970	11.88507	0.0704537	0.17790360	3.1309160	20	—	—
167969	2005	ED ₂₈₇	15.9	X	263.95584	304.42902	142.06427	9.76616	0.1221516	0.22734603	2.6587518	20	9 29.9	19.3
167970	2005	EL ₂₉₁	14.9	X	223.38216	89.08694	162.56895	10.84670	0.0251978	0.18027075	3.1035056	20	—	—
167971		Carlyhowett	15.3	X	70.86151	228.66035	160.29571	5.06256	0.0651879	0.17843151	3.1247961	20	—	—
167972	2005	FB ₁	15.0	X	237.58350	194.65841	91.15029	11.86698	0.0539352	0.19216272	2.9741072	20	2 10.6	19.5
167973	2005	FB ₄	14.8	X	302.85772	53.05522	129.26124	10.82907	0.0456812	0.18283262	3.0744464	20	—	—
167974	2005	FN ₁₀	16.6	X	309.18630	257.09975	190.36400	4.45200	0.1463167	0.24064647	2.5598610	20	12 15.2	19.2
167975	2005	GY ₆	16.2	X	261.10278	304.08595	167.47460	5.50405	0.2843138	0.23166106	2.6256330	20	10 2.4	19.5
167976		Ormsbymitchel	15.0	X	233.74881	142.62428	103.26650	5.90653	0.1006591	0.17959366	3.1113011	20	—	—
167977	2005	GC ₁₀	15.7	X	280.75317	351.37400	97.75064	5.41144	0.0596968	0.22660782	2.6645229	20	11 4.4	19.1
167978	2005	GE ₁₀	15.1	X	165.17224	323.81728	9.37901	10.27681	0.1674649	0.18550929	3.0448012	20	1 29.2	20.2
167979	2005	GH ₁₆	16.6	X	256.26623	153.01957	315.06499	0.84732	0.0752202	0.23157663	2.6262711	20	10 22.4	19.9
167980	2005	GL ₁₆	16.4	X	269.27567	202.72547	171.23776	6.11752	0.0585168	0.21601108	2.7509669	20	7 5.6	20.2
167981	2005	GU ₂₂	14.8	X	251.33075	15.90837	181.87548	11.58878	0.1213074	0.17590197	3.1546819	20	—	—
167982	2005	GO ₂₉	15.2	X	164.96549	269.67610	23.77939	10.79561	0.1434274	0.17538788	3.1608436	20	—	—
167983	2005	GT ₃₂	15.3	X	277.48149	171.34384	29.86428	1.85341	0.1154077	0.17925103	3.1152646	20	—	—
167984	2005	GT ₃₇	15.7	X	272.34866	192.71567	314.43506	6.48135	0.1345549	0.23610479	2.5925841	20	12 31.4	18.6
167985	2005	GK ₅₀	15.7	X	99.02726	336.96957	149.28052	2.55800	0.1234739	0.19983391	2.8974987	20	5 17.6	19.8
167986	2005	GX ₆₆	16.0	X	348.11347	113.38007	194.53101	1.39956	0.0748150	0.21060389	2.7978545	20	7 31.9	19.2
167987	2005	GQ ₆₉	15.8	X	300.10289	265.06383	202.53517	12.69210	0.1256674	0.23519147	2.5992916	20	12 24.1	18.9
167988	2005	GQ ₇₆	15.0	X	276.85626	302.72767	194.89151	9.22625	0.0518034	0.16936429	3.2353516	20	12 15.3	19.6
167989	2005	GZ ₈₅	16.1	X	98.62321	21.87515	162.65104	4.38353	0.0380587	0.21153685	2.7896220	20	7 19.7	20.1
167990	2005	GW ₈₉	15.6	X	20.55878	33.96406	44.31297	14.514						