

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>
380001 2013 <i>EM</i> ₃₂	17.0	X	303.43388	286.60987	162.36131	5.41282	0.2177937	0.22759785	2.6567903	20	11 27.6	19.3
380002 2013 <i>EV</i> ₉₆	16.7	X	147.69544	78.32993	147.85216	3.25097	0.1894158	0.20531827	2.8456686	20	11 10.2	21.4
380003 2013 <i>GD</i> ₄₅	16.8	X	205.02865	309.09213	196.37822	1.56559	0.0422061	0.19407200	2.9545690	20	10 4.5	21.0
380004 2013 <i>GS</i> ₉₅	17.9	X	349.60875	92.12631	190.67758	2.49585	0.2142611	0.29544510	2.2326374	20	7 3.6	18.9
380005 2013 <i>GG</i> ₁₀₃	16.1	X	194.69484	125.78947	344.37122	9.56264	0.0712041	0.18486441	3.0518780	20	8 8.4	20.8
380006 2013 <i>GZ</i> ₁₀₉	17.2	X	322.27532	84.47252	26.28187	5.14747	0.0773784	0.22966026	2.6408606	20	—	—
380007 2013 <i>JE</i> ₄₄	17.6	X	208.31204	246.93639	177.81342	6.27411	0.0738967	0.30417796	2.1896980	20	6 28.2	20.6
380008 2013 <i>NT</i> ₆	16.5	X	338.53568	311.92911	16.97373	12.26662	0.3242314	0.28436032	2.2902878	20	9 10.8	17.0
380009 2013 <i>OS</i> ₆	16.5	X	50.17986	215.31647	205.57632	8.97764	0.0646607	0.19937633	2.9019304	20	—	—
380010 2013 <i>OG</i> ₈	16.3	X	241.29708	40.69162	256.28308	11.06882	0.1825736	0.23145717	2.6271747	20	2 7.9	20.8
380011 2013 <i>PH</i> ₂	16.2	X	184.52494	128.95743	167.60227	9.29648	0.1406099	0.21115411	2.7929920	20	—	—
380012 2013 <i>PN</i> ₁₁	17.4	X	295.58581	160.71906	156.88213	1.79711	0.1801898	0.25985142	2.4321255	20	5 7.3	20.3
380013 2013 <i>PX</i> ₂₈	17.2	X	259.32485	113.98575	187.68118	1.55717	0.1269552	0.24279701	2.5447229	20	3 9.7	21.0
380014 2013 <i>PS</i> ₃₆	16.8	X	208.86503	27.14212	280.92727	3.82175	0.1323583	0.22184042	2.7025615	20	1 29.6	21.2
380015 2013 <i>PA</i> ₄₉	15.9	X	136.72143	309.85022	306.70881	8.22935	0.0995444	0.17527268	3.1622284	20	11 28.1	20.9
380016 2013 <i>PP</i> ₆₀	16.3	X	178.17573	244.24112	116.43482	2.88919	0.2298198	0.21694590	2.7430586	20	3 9.2	21.1
380017 2013 <i>PP</i> ₆₉	17.0	X	190.42779	47.30389	121.73114	12.30756	0.2784543	0.22858477	2.6491377	20	3 11.5	22.0
380018 2013 <i>PB</i> ₇₀	17.4	X	358.68311	291.18522	344.94792	1.54680	0.1937589	0.27558795	2.3386356	20	7 15.6	18.9
380019 2013 <i>PY</i> ₇₃	17.5	X	321.92803	185.68578	134.75856	3.27204	0.1784462	0.26816411	2.3816007	20	6 28.9	19.6
380020 2013 <i>PL</i> ₇₄	16.5	X	183.58940	129.98958	210.86925	14.57839	0.1129970	0.21663301	2.7456992	20	2 10.1	21.1
380021 2013 <i>QD</i> ₂	17.1	X	212.98471	17.68180	342.91555	6.35421	0.1747673	0.23632500	2.5909733	20	4 2.3	21.3
380022 2013 <i>QH</i> ₃	16.9	X	186.58384	163.36726	168.10641	12.80662	0.1505181	0.22153070	2.7050799	20	2 5.4	21.4
380023 2013 <i>QL</i> ₁₆	17.4	X	263.54923	100.02836	211.64873	5.40801	0.1722198	0.24483189	2.5306032	20	3 20.8	21.3
380024 2013 <i>QN</i> ₁₈	15.8	X	352.64607	39.32476	337.07210	11.43067	0.1051114	0.15797629	3.3890251	20	10 25.2	20.3
380025 2013 <i>QQ</i> ₂₁	16.6	X	232.60460	169.92779	97.42060	6.23547	0.1199790	0.21680675	2.7442322	20	1 5.0	20.8
380026 2013 <i>QT</i> ₂₆	17.7	X	348.75600	302.91863	57.55964	4.08823	0.1780011	0.29194405	2.2504514	20	11 15.8	19.5
380027 2013 <i>QZ</i> ₃₃	15.9	X	292.91339	265.00637	215.27713	8.39983	0.0548587	0.17564658	3.1577392	20	12 16.4	20.3
380028 2013 <i>QZ</i> ₄₂	16.4	X	206.82984	6.88887	285.74539	7.65410	0.1762830	0.21460379	2.7629803	20	1 11.2	21.1
380029 2013 <i>QE</i> ₅₀	17.3	X	64.87149	53.49534	286.37893	4.79576	0.2206249	0.31182629	2.1537448	20	—	—
380030 2013 <i>QF</i> ₅₇	17.1	X	292.98010	270.75803	39.73114	2.65996	0.2180987	0.25718027	2.4489370	20	4 17.2	20.2
380031 2013 <i>QK</i> ₆₂	17.0	X	284.78351	206.55839	111.44210	2.36867	0.1908237	0.25790175	2.4443676	20	4 21.8	20.1
380032 2013 <i>QD</i> ₆₉	16.1	X	229.28567	24.13161	337.39063	28.55533	0.1658031	0.23861995	2.5743340	20	4 4.1	20.7
380033 2013 <i>QX</i> ₉₄	15.8	X	37.14258	234.21481	161.47707	8.87519	0.0786492	0.17400189	3.1776062	20	—	—
380034 2013 <i>RE</i> ₂	17.2	X	331.24302	121.50350	169.96208	8.95396	0.1143377	0.26705598	2.3881844	20	6 10.3	19.7
380035 2013 <i>RG</i> ₁₄	17.2	X	231.87806	149.09868	172.93112	9.77129	0.1630634	0.23513106	2.5997368	20	3 5.2	21.3
380036 2013 <i>RF</i> ₂₅	16.1	X	140.81187	101.55813	195.93382	14.01814	0.0433557	0.17687847	3.1430604	20	—	—
380037 2013 <i>RW</i> ₂₅	16.7	X	295.08603	177.67248	162.67749	6.52878	0.1769233	0.26256047	2.4153672	20	6 9.6	19.6
380038 2013 <i>RF</i> ₂₆	16.1	X	196.06166	191.87740	181.26274	29.04605	0.1040291	0.23315843	2.6143795	20	4 6.7	20.1
380039 2013 <i>RE</i> ₂₇	17.6	X	331.71276	62.64442	5.69802	5.79807	0.1336459	0.30174841	2.2014360	20	—	—
380040 2013 <i>RC</i> ₃₅	16.1	X	136.30763	104.15332	241.89290	9.68893	0.1613054	0.20123559	2.8840283	20	1 9.8	20.6
380041 2013 <i>RH</i> ₃₅	16.8	X	5.56430	120.63475	151.57866	6.81357	0.1147206	0.26333995	2.4105985	20	7 16.5	19.2
380042 2013 <i>RL</i> ₃₆	17.1	X	306.03655	147.28344	180.40402	2.42358	0.2057987	0.26427111	2.4049327	20	6 3.7	19.5
380043 2013 <i>RK</i> ₃₇	18.0	X	164.52695	12.77573	357.79721	18.24601	0.0837813	0.36473273	1.9400796	20	2 19.8	20.4
380044 2013 <i>RD</i> ₃₉	16.6	X	154.40466	4.36652	1.84125	4.46388	0.0901967	0.21233490	2.7826278	20	2 15.9	20.7
380045 2013 <i>RH</i> ₄₇	18.0	X	6.28268	147.47497	184.39626	5.82974	0.1359702	0.28750614	2.2735506	20	10 28.9	20.1
380046 2013 <i>RH</i> ₅₈	16.6	X	109.30842	216.37897	286.50097	3.89523	0.0464134	0.25070095	2.4905922	20	6 10.2	19.7
380047 2013 <i>RU</i> ₆₀	17.7	X	40.42362	358.24982	347.01415	5.19224	0.1956700	0.30352043	2.1928593	20	—	—
380048 2013 <i>RN</i> ₆₈	16.8	X	138.08902	19.60161	10.18424	4.89406	0.1715884	0.21159982	2.7890685	20	3 6.3	21.0
380049 2013 <i>QY</i> ₆₈	17.5	X	213.73452	11.73484	32.46289	2.31640	0.1219257	0.24779945	2.5103589	20	6 1.5	21.1
380050 2013 <i>RM</i> ₆₉	15.6	X	43.73878	353.77677	67.36035	10.77166	0.0585809	0.18420606	3.0591453	20	—	—
380051 2013 <i>RC</i> ₇₂	17.4	X	236.00815	110.34702	223.05364	3.02311	0.0934456	0.23621044	2.5918110	20	3 27.6	21.2
380052 2013 <i>RF</i> ₇₂	16.3	X	0.81289	11.10539	195.04382	13.92053	0.0472813	0.22918569	2.6445049	20	4 1.3	19.3
380053 2013 <i>RU</i> ₇₂	15.1	X	190.75018	328.35160	304.36386	10.44119	0.0566992	0.18020649	3.1042434	20	—	—
380054 2013 <i>RN</i> ₇₃	16.4	X	274.40499	310.16553	328.44099	12.66763	0.3197989	0.23599234	2.5934076	20	2 8.8	20.8
380055 2013 <i>RV</i> ₇₄	16.5	X	102.50605	202.88624	201.91662	8.23327	0.2174152	0.20048892	2.8911844	20	2 19.1	20.7
380056 2013 <i>RW</i> ₇₄	17.2	X	146.55036	25.72137	343.52353	3.83405	0.0805122	0.21154199	2.7895769	20	2 9.7	21.3
380057 2013 <i>RF</i> ₈₁	16.5	X	136.12071	143.51379	229.44576	0.98383	0.0949268	0.20697975	2.8304195	20	2 3.8	20.5
380058 2013 <i>RB</i> ₈₂	17.1	X	194.20936	176.99607	193.91901	15.69578	0.2089034	0.23058060	2.6338288	20	3 31.4	21.7
380059 2013 <i>RU</i> ₈₃	17.8	X	196.90576	241.50527	320.80387	6.16061	0.0334104	0.30814750	2.1708523	20	—	—
380060 2013 <i>RG</i> ₉₂	16.3	X	97.71643	352.27351	357.52040	6.92271	0.1125686	0.18001232	3.1064752	20	—	—
380061 2013 <i>RE</i> ₉₄	15.3	X	59.64288	185.15816	192.64223	17.72596	0.2235179	0.17408589	3.1765840	20	—	—
380062 2013 <i>SC</i> ₁₀	16.6	X	164.36170	206.55687	185.40867	10.77713	0.2039012	0.22379718	2.6867854	20	4 2.3	20.9
380063 2013 <i>SO</i> ₁₅	16.6	X	41.69141	271.42909	187.92391	1.77592	0.0466655	0.20081603	2.8880439	20	1 15.8	20.3
380064 2013 <i>SS</i> ₁₈	16.1	X	95.38799	187.52492	144.89944	4.44108	0.1653930	0.17858114	3.1230504	20	—	—
380065 2013 <i>SE</i> ₂₂	17.0	X	232.82045	96.86817	198.78314	3.43600	0.0652283	0.21843529	2.7305754	20	2 9.4	21.1
380066 2013 <i>SQ</i> ₂₂	16.6	X	201.75982	126.48589	270.55545	4.21546	0.0779397	0.23522739	2.5990270	20	5 11.7	20.3
380067 2013 <i>ST</i> ₂₅	16.5	X	179.87278	139.91390	242.60158	5.01260	0.0475681	0.22173708	2.7034012	20	3 28.4	20.5
380068 2013 <i>SK</i> ₂₆	15.4	X	52.55042	348.49988	53.01613	16.31413	0.0445539	0.17664846	3.1457882	20	—	—
380069 2013 <i>SK</i> ₂₇	16.1	X	13.21478	8.46924	214.36091	14.22915	0.0456525	0.24254746	2.5464681	20	5 14.0	19.1
380070 2013 <i>SG</i> ₂₈	16.7	X	173.61165	66.60306	10.06814	11.50070	0.1725160	0.23505744	2.6002796	20	5 31.5	21.1
380071 2013 <i>ST</i> ₂₉	16.5	X	160.49007	309.43426	79.13459	3.13262	0.0930300	0.21718581	2.7410382	20	3 20.9	20.7
380072 2013 <i>SV</i> ₂₉	17.0	X										

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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>
380081 2013 SQ ₄₀	17.6	X	279.37352	101.21922	209.01832	19.60564	0.0766616	0.38031882	1.8867057	20	4 11.5	19.1
380082 2013 SS ₄₀	16.4	X	298.73883	99.39935	200.51140	8.15957	0.1581972	0.23839218	2.5759735	20	4 21.7	19.4
380083 2013 SA ₄₄	15.8	X	127.28683	311.84272	329.24791	8.22384	0.0648894	0.17288699	3.1912525	20	12 16.8	20.8
380084 2013 SK ₄₈	16.3	X	138.22506	289.91248	107.74005	6.06507	0.0577185	0.21252011	2.7810109	20	3 5.3	20.2
380085 2013 SA ₅₁	16.3	X	138.59789	335.85784	49.92207	2.76752	0.0966146	0.20715606	2.8288133	20	2 23.9	20.4
380086 2013 SE ₅₁	16.5	X	187.42961	178.98556	178.49828	9.54345	0.1453918	0.21815380	2.7329238	20	3 9.4	20.9
380087 2013 SJ ₅₁	16.2	X	187.59001	25.58356	27.35155	32.89675	0.1738641	0.23441017	2.6050641	20	5 6.4	20.8
380088 2013 SU ₅₁	17.9	X	50.73743	193.26407	171.75164	4.53649	0.0755523	0.313335913	2.1467155	20	—	—
380089 2013 SG ₅₂	16.6	X	188.95099	309.41262	74.19176	12.42548	0.1047526	0.22642348	2.6659689	20	4 17.1	20.8
380090 2013 SW ₅₄	18.3	X	85.43908	273.25455	4.29402	4.18864	0.1696083	0.30366474	2.1921645	20	11 30.5	21.5
380091 2013 SH ₅₇	18.0	X	27.94594	90.22103	252.85897	6.40725	0.2540388	0.30098496	2.2051570	20	—	—
380092 2013 SG ₅₉	17.2	X	267.76233	331.01750	67.21359	7.95902	0.2230644	0.26380050	2.4077920	20	7 15.4	20.3
380093 2013 TS	16.4	X	125.51636	167.58087	205.60529	15.33502	0.1707625	0.20319106	2.8654950	20	1 29.2	21.0
380094 2013 TB ₁	16.1	X	252.49158	334.79125	282.45011	6.66737	0.1370409	0.21210338	2.7846524	20	1 11.4	20.5
380095 2013 TK ₃	16.4	X	191.61846	223.51806	159.49919	10.21996	0.1343034	0.22807560	2.6530789	20	4 16.3	20.7
380096 2013 TR ₆	17.3	X	268.48259	84.62249	291.60461	2.38252	0.0839560	0.26196189	2.4190451	20	7 6.6	20.3
380097 2013 TW ₆	15.8	X	71.12735	149.24919	205.57201	13.45362	0.1056206	0.17414430	3.1758736	20	—	—
380098 2013 TW ₇	15.6	X	148.41995	203.76758	97.98932	3.37774	0.0527799	0.17930018	3.1146953	20	—	—
380099 2013 TT ₈	17.4	X	212.03545	135.07679	190.51974	0.61831	0.2866444	0.22710036	2.6606689	20	2 20.2	22.3
380100 2013 TP ₁₀	17.5	X	312.29816	3.87376	331.79237	2.09682	0.2021307	0.26414220	2.4057151	20	6 29.3	19.8
380101 2013 TP ₁₁	16.0	X	164.78610	259.05249	116.60868	5.06101	0.0866385	0.21439475	2.7647760	20	3 9.7	20.2
380102 2013 TX ₁₁	16.4	X	157.10713	187.31278	202.69188	10.87825	0.1524063	0.22003384	2.7173343	20	3 19.7	20.8
380103 2013 TD ₁₄	17.7	X	225.25623	280.81926	21.82126	21.27717	0.0268969	0.36012470	1.9565943	20	2 1.7	20.5
380104 2013 TV ₁₈	16.1	X	73.95572	118.94972	228.54522	7.71286	0.2143840	0.17311810	3.1884117	20	—	—
380105 2013 TS ₂₃	16.5	X	230.17074	16.78545	304.30435	3.31831	0.1064082	0.21980482	2.7192214	20	3 6.1	20.6
380106 2013 TB ₂₅	17.1	X	340.15041	285.91996	19.14400	7.05908	0.1791913	0.26210846	2.4181432	20	7 18.5	19.2
380107 2013 TD ₃₀	16.2	X	92.85975	268.14276	204.10892	7.55653	0.0808509	0.21359064	2.7717107	20	4 14.2	19.8
380108 2013 TR ₃₀	16.9	X	232.57643	190.20755	177.79993	4.23107	0.1848619	0.23702689	2.5858558	20	5 1.8	20.9
380109 2013 TS ₃₂	17.4	X	196.91707	159.22380	171.99827	4.82875	0.2838880	0.22595551	2.6696485	20	2 16.1	22.3
380110 2013 TF ₃₆	16.7	X	142.73083	202.20515	178.69077	6.05281	0.0718976	0.21067872	2.7971920	20	2 16.9	20.8
380111 2013 TO ₄₃	17.4	X	24.78887	154.04869	205.47233	7.11656	0.1593165	0.29974326	2.2112428	20	—	—
380112 2013 TR ₄₆	16.8	X	96.64028	68.79316	342.95469	1.24289	0.0661496	0.19950909	2.9006429	20	2 1.9	20.5
380113 2013 TH ₅₁	17.8	X	93.97833	267.61795	24.12481	7.19055	0.1503528	0.30953808	2.1643459	20	12 27.9	21.0
380114 2013 TN ₆₅	16.1	X	20.27832	251.36649	192.59031	9.95289	0.0918809	0.18763582	3.0217524	20	—	—
380115 1994 UJ ₈	16.6	X	157.78249	36.91783	13.96573	5.98234	0.0220808	0.21128767	2.7918149	20	4 8.3	20.5
380116 1995 OH ₅	18.0	X	316.90974	256.49621	140.41572	3.30260	0.2101781	0.27875636	2.3208809	20	10 30.2	19.3
380117 1995 SJ ₄₀	17.0	X	193.81320	36.12942	352.99490	10.14157	0.2246822	0.22421115	2.6834772	20	4 18.9	21.8
380118 1995 UJ ₁₂	16.9	X	323.09930	102.57477	210.90670	4.82926	0.1058707	0.22951001	2.6420130	20	6 27.0	20.0
380119 1995 VS ₁₇	16.9	X	119.46102	212.08734	268.01947	0.82404	0.1731538	0.21943037	2.7223141	20	6 6.7	21.1
380120 1995 YQ ₄	15.9	X	254.79902	278.65327	67.25816	13.44716	0.2872089	0.22512538	2.6762073	20	4 20.3	20.5
380121 1996 AH ₁₂	18.3	X	238.60647	277.60806	181.66635	5.92402	0.1718651	0.26728899	2.3867962	20	9 7.4	21.6
380122 1996 AZ ₁₅	17.3	X	41.08844	181.74577	107.94879	9.12537	0.1189975	0.26581797	2.3955936	20	10 18.7	20.4
380123 1996 RL ₇	18.0	X	30.48927	34.23951	355.64404	2.88416	0.1610941	0.29747175	2.2224853	20	—	—
380124 1996 RW ₁₀	17.5	X	311.56487	271.88816	26.77061	1.56370	0.1399715	0.23976699	2.5661170	20	5 11.8	20.2
380125 1996 UC ₁	18.2	X	258.74434	341.72655	26.31258	6.78026	0.3686527	0.27955108	2.3164802	20	5 6.2	22.1
380126 1996 XU ₄	16.3	X	38.38263	132.58767	138.61514	5.65261	0.1917600	0.17511623	3.1641115	20	1 13.9	19.6
380127 1997 WW ₉	17.6	X	335.10354	20.59241	85.28338	4.20572	0.0797583	0.30857903	2.1688280	20	—	—
380128 1997 WB ₂₁	20.1	X	300.25685	81.84034	281.03754	3.39134	0.3173527	0.55834434	1.4606112	20	12 30.2	18.8
380129 1998 HB ₇	16.3	X	173.11059	93.41602	45.71113	28.68189	0.2130173	0.23897592	2.5717769	20	9 7.5	21.3
380130 1998 RS ₅₃	17.0	X	326.87369	75.62164	298.03540	4.02644	0.2551328	0.26943380	2.3741127	20	10 8.8	18.1
380131 1998 SZ ₇₇	16.7	X	147.18582	195.08384	185.09873	7.85747	0.3290693	0.20217224	2.8751138	20	3 12.9	21.7
380132 1998 TL ₃	16.8	X	313.76596	180.34003	188.85142	11.96345	0.2612014	0.26653038	2.3913230	20	8 15.9	18.7
380133 1998 UX ₂₄	20.0	X	235.52569	16.52640	25.52955	14.11184	0.2858976	0.39624376	1.8358101	20	6 5.5	22.8
380134 1999 JX ₁₁	16.5	X	111.59942	199.49517	73.87894	25.51402	0.2482553	0.29811104	2.1293068	20	12 18.4	20.3
380135 1999 RL ₇	16.7	X	188.49755	26.87291	5.03924	9.41563	0.2144165	0.21805039	2.7337879	20	4 19.6	21.5
380136 1999 RQ ₅₈	16.1	X	209.87552	62.70354	322.79051	12.24243	0.2332573	0.22201513	2.7011436	20	4 24.9	21.0
380137 1999 RK ₂₀₇	16.0	X	215.89641	5.44528	331.68979	13.96549	0.2119671	0.21668595	2.7452520	20	3 7.0	20.7
380138 1999 TO ₃₀	17.9	X	340.08290	213.43259	201.76550	5.73409	0.2684594	0.28702888	2.2760702	20	—	—
380139 1999 TS ₇₈	17.3	X	176.58534	202.80438	171.88393	2.23081	0.2601246	0.21483084	2.7610332	20	3 24.4	22.1
380140 1999 TH ₁₁₉	16.4	X	163.73221	221.94192	191.32924	7.91943	0.2898437	0.21577136	2.7530040	20	5 1.3	21.3
380141 1999 TO ₂₃₉	16.1	X	213.81555	333.26243	46.73378	13.53147	0.1880833	0.21925016	2.7238056	20	4 29.9	20.7
380142 1999 TT ₃₂₁	17.2	X	153.82763	26.20039	32.87537	3.35913	0.1041441	0.21508618	2.7588476	20	4 20.3	21.4
380143 1999 UH ₃	16.0	X	128.78778	109.66145	41.92383	22.25831	0.3570600	0.21650446	2.7467859	20	8 14.3	21.5
380144 1999 UX ₉	16.1	X	343.49946	141.19346	263.08970	22.26022	0.2660386	0.28549888	2.2841947	20	—	—
380145 1999 UH ₃₁	17.5	X	159.62228	12.68423	77.57398	2.61094	0.2784871	0.21800044	2.7342054	20	6 10.2	22.2
380146 1999 UD ₄₈	16.6	X	182.21606	21.77451	0.48999	8.12428	0.2399681	0.21536699	2.7564490	20	4 4.5	21.4
380147 1999 UR ₆₀	16.5	X	187.07668	68.52473	309.17374	13.75979	0.3643723	0.21535755	2.7565295	20	3 28.9	22.1
380148 1999 VD ₁₈	16.2	X	139.27054	77.94159	23.05031	9.31887	0.0906155	0.21783514	2.7355884	20	5 24.7	20.3
380149 1999 VK ₇₉	16.6	X	187.49641	203.99689	201.48906	2.94839	0.1802652	0.21736063	2.7395682	20	5 8.0	21.2
380150 1999 VG ₁₂₅	16.4	X	117.12304	71.12591	40.10063	9.86538	0.1286027	0.21489516	2.7604823	20	5 21.7	20.4
380151 1999 VN ₂₀₂	16.7	X	194.71062	206.90618	201.34411	2.77020	0.1545172	0.21871120	2.7282785	20	5 18.2	21.1
380152 1999 YO ₄	16.5	X	326.54820	66.09842	343.01384	23.13429	0.3037464	0.28253757	2.3001275	20	—	—
380153 2000 AV ₃₉	17.3	X	278.48471	35.29758	91.18731	6.79293	0.1078757	0.28128937	2.3069269	20	12 31.9	19.4
380154 2000 AO ₄₉	16.3	X	260.20281	186.25301</								

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>		
380161	2000	LD ₁₆	16.8	X	255.04671	59.94191	255.62480	5.95059	0.4694789	0.23403594	2.6078404	20	2 25.1	22.0
380162	2000	PB ₉	15.9	X	305.02013	304.77343	32.02128	12.73493	0.3061180	0.24322039	2.5417689	20	5 24.6	18.8
380163	2000	QG ₅₉	16.9	X	242.34269	357.19476	7.86920	6.50075	0.3694666	0.23538975	2.5978317	20	4 21.2	21.5
380164	2000	QF ₇₃	16.2	X	273.00484	22.31299	332.91421	12.77651	0.1790737	0.23910894	2.5708230	20	5 25.4	20.0
380165	2000	QK ₈₂	17.1	X	283.34658	172.86122	182.20990	3.54863	0.2523650	0.24022019	2.5628885	20	5 31.1	20.4
380166	2000	QM ₁₁₅	16.8	X	286.10299	76.48832	270.98702	4.03538	0.3064483	0.24011057	2.5636685	20	5 14.8	20.3
380167	2000	QF ₁₃₇	16.0	X	333.58603	94.55875	203.53159	12.24141	0.1865716	0.24312785	2.5424138	20	6 16.0	18.6
380168	2000	QQ ₁₆₈	15.8	X	266.65066	29.63803	331.03038	14.43436	0.2082191	0.23814539	2.5777528	20	5 19.7	19.9
380169	2000	QD ₁₉₅	17.1	X	281.86264	269.45885	83.20887	4.09245	0.2335700	0.24063073	2.5599727	20	5 28.5	20.5
380170	2000	QJ ₂₁₀	17.0	X	270.75275	13.52859	323.58601	2.46966	0.2298072	0.23700745	2.5859972	20	4 23.9	20.8
380171	2000	RK ₂₀	16.9	X	270.31697	125.73133	187.40477	12.78041	0.2873568	0.23464248	2.6033444	20	3 18.6	21.1
380172	2000	RF ₉₆	16.0	X	310.02928	65.57313	244.65537	13.65544	0.2198845	0.23958978	2.5673822	20	5 12.2	18.8
380173	2000	SB ₁₁	16.6	X	227.72349	208.55621	188.46457	17.90055	0.1900857	0.23621464	2.5917802	20	6 2.8	21.0
380174	2000	SD ₁₇	16.8	X	236.97374	145.77148	222.88385	4.85857	0.2562338	0.23390209	2.6088352	20	4 30.3	21.3
380175	2000	SY ₂₉	16.9	X	240.30102	181.82993	181.40210	6.90534	0.2215021	0.23447258	2.6046018	20	4 30.6	21.2
380176	2000	SC ₃₀	17.6	X	39.88691	47.73716	347.37404	3.93137	0.1488012	0.30984959	2.1628950	20	—	—
380177	2000	SO ₅₁	16.5	X	222.53443	157.18122	275.85494	3.60131	0.2668031	0.23755459	2.5820249	20	7 6.8	20.9
380178	2000	SO ₉₁	16.4	X	265.87066	135.67079	213.89036	12.92569	0.2100897	0.23729532	2.5839054	20	5 8.9	20.2
380179	2000	SL ₁₁₄	17.0	X	239.95101	329.79457	30.20240	4.94546	0.2670117	0.23283703	2.6167848	20	4 21.4	21.2
380180	2000	SQ ₁₃₈	16.5	X	250.51759	141.94073	199.91322	12.48724	0.3131769	0.23360237	2.6110662	20	4 4.2	20.9
380181	2000	SJ ₁₄₉	16.9	X	234.85573	339.94784	20.59965	3.64816	0.3063693	0.23219192	2.6216295	20	4 15.6	21.5
380182	2000	SN ₁₅₇	16.7	X	214.60947	64.88050	344.45470	10.09197	0.2623634	0.23355682	2.6114057	20	5 30.1	21.5
380183	2000	SH ₂₈₄	17.2	X	251.18698	116.69996	224.68526	11.62473	0.2842898	0.23360439	2.6110511	20	4 4.5	21.7
380184	2000	SE ₂₉₁	16.9	X	224.32570	150.02312	274.91756	2.45255	0.2913973	0.23545746	2.5973336	20	6 26.4	21.4
380185	2000	SD ₂₉₅	16.0	X	234.98428	145.97412	241.81744	13.03206	0.2906659	0.23223083	2.6213367	20	5 19.8	20.6
380186	2000	ST ₃₁₁	16.5	X	208.00850	87.20259	304.69795	16.02784	0.3115851	0.23111369	2.6297771	20	4 28.1	21.7
380187	2000	WH ₂	16.5	X	224.81588	65.31363	319.59668	28.40574	0.3768545	0.23155272	2.6264519	20	4 19.8	22.1
380188	2000	WC ₆₇	18.6	X	131.20491	249.43939	251.62112	9.97331	0.5757737	0.22325900	2.6911014	20	7 29.5	24.5
380189	2000	WA ₇₀	16.5	X	215.81307	149.76892	261.11254	13.01463	0.2924583	0.23206994	2.6225481	20	6 2.4	21.1
380190	2000	WL ₈₀	17.2	X	185.04401	41.23087	37.91525	5.79237	0.2713799	0.22909490	2.6452036	20	6 14.7	22.0
380191	2000	WK ₉₃	16.9	X	207.09164	130.17361	257.25641	5.42404	0.3022064	0.22804327	2.6533297	20	4 27.5	21.8
380192	2000	WM ₁₃₄	16.4	X	206.58132	39.58430	33.03915	13.44957	0.1333303	0.23247617	2.6194921	20	6 30.9	20.7
380193	2000	WC ₁₇₂	16.4	X	162.83626	7.39545	33.73581	16.97375	0.2661407	0.22871310	2.6481466	20	6 25.4	21.0
380194	2000	WJ ₁₇₂	16.7	X	201.55118	281.73602	122.94695	12.29233	0.3038690	0.22939755	2.6428765	20	5 19.2	21.7
380195	2000	XE ₁₆	16.2	X	214.80554	24.46314	13.82486	14.16774	0.2563331	0.23076771	2.6324049	20	5 14.8	21.0
380196	2000	XH ₂₀	15.3	X	204.84460	75.37406	300.62805	11.65598	0.3242089	0.22702883	2.6612277	20	4 7.5	20.5
380197	2000	YD ₂₇	15.7	X	140.69546	230.74802	283.54591	25.70013	0.0785913	0.22811065	2.6528071	20	7 29.5	19.9
380198	2000	YZ ₂₇	16.5	X	160.66321	93.76804	52.08689	27.39902	0.4245857	0.23014021	2.6371877	20	9 1.9	22.3
380199	2000	YQ ₂₉	15.9	X	125.67065	106.74519	116.46957	13.88732	0.5079395	0.22414562	2.6840002	20	11 2.9	21.3
380200	2000	YL ₅₆	16.5	X	188.59306	139.89880	280.89620	12.38924	0.2398273	0.22649510	2.6654068	20	5 25.9	21.3
380201	2000	YH ₁₁₁	16.5	X	192.63820	340.80444	91.88426	5.78035	0.2589961	0.22713624	2.6603887	20	6 13.2	21.1
380202	2001	AL ₁₂	16.7	X	131.23441	17.66732	116.51145	17.15562	0.1912529	0.22367933	2.6877291	20	7 7.8	21.1
380203	2001	BE ₇	16.3	X	132.71230	345.37455	137.78274	15.71774	0.1406971	0.22244579	2.6976561	20	6 22.7	20.7
380204	2001	CS ₂₅	15.9	X	37.09621	52.43603	129.25712	12.14416	0.2260218	0.21281851	2.7784108	20	5 18.7	19.0
380205	2001	CA ₃₂	19.5	X	305.43146	124.75223	353.30817	21.41346	0.4679215	0.29772100	2.2212447	20	—	—
380206	2001	DK ₈	17.0	X	75.50438	266.13647	300.00625	18.63614	0.0768559	0.37603010	1.9010242	20	8 5.1	18.8
380207	2001	EV ₂₂	16.0	X	152.89229	99.45677	8.13880	15.10838	0.1498855	0.21872122	2.7281951	20	6 21.9	20.6
380208	2001	FH ₃₀	16.6	X	117.26031	70.19885	94.42051	7.31723	0.1758847	0.22055983	2.7130124	20	8 1.9	20.8
380209	2001	FZ ₄₃	16.5	X	98.31307	185.01086	346.58155	13.73164	0.2138991	0.21832284	2.7315130	20	7 29.5	20.9
380210	2001	HP ₄	16.3	X	166.99191	2.92083	217.88491	24.59613	0.2278838	0.28250106	2.3003257	20	11 27.8	20.2
380211	2001	HT ₄₅	16.1	X	107.36046	83.45072	68.66883	12.05715	0.2399012	0.21618005	2.7495332	20	7 12.7	20.6
380212	2001	OA ₃₀	16.1	X	138.48988	229.60109	84.08128	14.33821	0.1982966	0.17810210	3.1286479	20	—	—
380213	2001	OX ₆₆	16.4	X	349.14739	30.11873	314.75691	14.15622	0.1614500	0.26304882	2.4123768	20	10 1.9	19.0
380214	2001	PW ₃₂	15.9	X	108.25294	295.36267	67.04453	12.86994	0.3250618	0.17727883	3.1383265	20	1 15.0	20.6
380215	2001	QP ₄₇	15.8	X	133.42489	37.18519	322.92526	16.60455	0.2199228	0.18080959	3.0973366	20	2 3.9	20.7
380216	2001	QQ ₁₈₈	17.4	X	350.08948	239.41350	122.76149	2.09373	0.2000808	0.26443896	2.4039149	20	11 15.8	19.5
380217	2001	QP ₁₉₅	16.6	X	334.01312	44.69716	301.70427	13.94834	0.1692731	0.25805744	2.4433844	20	9 1.3	18.9
380218	2001	QM ₂₆₆	16.7	X	6.47609	19.34091	293.92052	14.06970	0.1913957	0.26225787	2.4172247	20	9 21.8	19.4
380219	2001	QN ₃₃₀	15.8	X	108.49806	94.11773	269.05503	7.96293	0.3252583	0.17388752	3.1789994	20	1 24.7	20.7
380220	2001	QT ₃₃₀	17.6	X	269.44956	295.88741	97.29698	4.21869	0.2921457	0.25222828	2.4808863	20	6 28.5	21.1
380221	2001	RQ ₃₈	15.6	X	208.60384	103.61398	173.63516	13.02633	0.0814219	0.17919730	3.1158873	20	—	—
380222	2001	RJ ₅₄	15.4	X	107.88780	341.91513	6.31437	28.19224	0.1813039	0.17296454	3.1902986	20	—	—
380223	2001	RZ ₆₃	18.1	X	293.54570	109.28408	235.00303	5.98304	0.3289104	0.25305819	2.4754593	20	5 16.9	21.2
380224	2001	RY ₁₁₇	17.5	X	309.96922	4.04066	4.68888	1.00694	0.2000979	0.25748535	2.4470022	20	8 17.5	19.6
380225	2001	RB ₁₄₁	16.8	X	348.95160	299.54426	43.62506	6.67548	0.1677474	0.26003104	2.4310054	20	10 10.6	18.8
380226	2001	RB ₁₄₅	16.7	X	309.82237	328.74448	32.18005	7.68984	0.1848301	0.25732750	2.4480028	20	8 10.4	19.0
380227	2001	SN ₂₄	15.7	X	73.48433	192.36284	186.04257	28.01308	0.1763400	0.17106240	3.2139048	20	—	—
380228	2001	SU ₁₂₅	15.8	X	81.90431	60.73852	330.94186	6.46284	0.1228137	0.17496076	3.1659857	20	1 1.7	20.1
380229	2001	SO ₁₃₂	16.9	X	317.09144	354.37647	343.98781	5.29196	0.1966291	0.25506765	2.4624408	20	7 15.7	19.1

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>		
380241	2001	UW ₁₁	15.8 ^m	X	77.82535	298.68572	69.21530	9.86242	0.4092569	0.16943590	3.2344400	20	1 10.9	19.9
380242	2001	UR ₃₁	17.6	X	256.50886	12.79563	45.51622	6.41208	0.2213444	0.25213371	2.4815066	20	7 29.6	21.1
380243	2001	UX ₃₂	16.5	X	302.42182	268.25551	89.32668	7.40914	0.1206325	0.25219963	2.4810742	20	7 27.7	19.2
380244	2001	UA ₇₃	16.6	X	328.56093	281.84741	64.16595	6.82982	0.2092493	0.25610777	2.4557692	20	8 28.6	18.5
380245	2001	UO ₁₂₅	15.5	X	76.71502	328.16073	115.06937	12.61292	0.1945944	0.17483478	3.1675064	20	3 11.7	19.8
380246	2001	UD ₁₇₅	17.0	X	273.75451	299.08563	104.06314	3.45742	0.1881559	0.25301347	2.4757510	20	8 4.7	19.9
380247	2001	UT ₁₇₈	15.6	X	95.13341	340.62585	98.92736	12.01934	0.2053693	0.17779196	3.1322853	20	4 2.3	20.3
380248	2001	UC ₁₉₀	17.9	X	300.46979	128.60579	215.98696	5.94583	0.1657045	0.25273569	2.4775647	20	6 25.6	20.7
380249	2001	US ₂₀₉	15.5	X	102.90315	319.30984	88.63194	17.78253	0.2216300	0.17567729	3.1573711	20	3 7.8	20.4
380250	2001	VF ₈₁	17.1	X	251.99233	50.49015	36.19910	10.30739	0.2249244	0.25307265	2.4753650	20	9 3.8	20.6
380251	2001	WV ₄₅	17.1	X	326.27053	314.32621	24.89372	2.64699	0.2077094	0.25269144	2.4778539	20	8 6.7	19.0
380252	2001	WL ₆₀	15.7	X	105.29889	337.18853	47.74492	5.61681	0.1526861	0.17216442	3.2001754	20	1 28.6	20.3
380253	2001	WU ₇₀	17.1	X	332.83845	214.05533	118.05367	2.21732	0.1858693	0.25308800	2.4752649	20	8 12.1	18.9
380254	2001	WB ₈₇	16.9	X	262.78758	134.41496	319.23608	3.94456	0.1268662	0.25677060	2.4515412	20	10 7.4	20.0
380255	2001	XJ ₂₆	15.5	X	166.53079	48.88926	96.38879	16.52228	0.2153403	0.24146226	2.5540921	20	8 27.9	20.1
380256	2001	XL ₄₃	16.8	X	215.44764	38.51402	57.98101	12.65211	0.2097919	0.24622261	2.5210653	20	8 8.8	21.1
380257	2001	XN ₁₁₅	17.3	X	221.04318	16.52316	77.46062	11.68966	0.2507514	0.24600750	2.5225347	20	8 5.7	21.6
380258	2001	XU ₁₂₉	17.2	X	249.78279	316.77108	73.78163	6.17891	0.1623789	0.24581647	2.5238414	20	6 19.3	20.9
380259	2001	XN ₁₆₀	17.1	X	241.16307	295.13919	107.86648	2.96454	0.1491454	0.24487120	2.5303324	20	6 27.8	20.8
380260	2001	XB ₂₂₉	16.4	X	286.46934	66.37497	284.79822	3.53652	0.2144641	0.24709889	2.5151015	20	6 4.3	19.5
380261	2001	XU ₂₄₁	15.4	X	97.47587	350.21368	70.82998	9.20702	0.0586400	0.17320973	3.1872872	20	2 20.5	20.0
380262	2001	XV ₂₆₂	17.7	X	216.93134	196.15725	227.04841	1.54171	0.1867428	0.24486187	2.5303967	20	6 25.3	21.7
380263	2001	YZ ₁₀	16.7	X	227.48003	103.10307	289.95219	12.05909	0.1793612	0.23891759	2.5721954	20	5 27.1	20.9
380264	2001	YA ₃₀	17.3	X	250.10668	313.69344	71.26362	14.23144	0.2462412	0.24588876	2.5233467	20	6 2.5	21.1
380265	2001	YR ₃₁	17.0	X	274.59613	286.43908	78.12319	4.55765	0.1898325	0.24648340	2.5192867	20	6 10.8	20.6
380266	2001	YU ₄₇	16.2	X	313.52563	253.31041	82.09737	14.49251	0.1488291	0.24614861	2.5215706	20	7 8.5	18.9
380267	2001	YM ₆₈	16.7	X	201.05907	178.62094	284.44188	12.46947	0.2294568	0.24408429	2.5357679	20	7 27.3	21.1
380268	2001	YQ ₇₁	16.8	X	219.48241	132.53782	324.57708	3.36662	0.1934295	0.24613193	2.5216845	20	8 10.6	20.5
380269	2001	YE ₁₁₃	17.0	X	289.61936	282.68112	58.46893	2.40339	0.1658684	0.24531278	2.5272950	20	6 2.9	19.9
380270	2001	YX ₁₃₈	16.7	X	113.86892	241.41904	281.24940	14.05110	0.0744380	0.23739636	2.5831721	20	7 15.4	20.3
380271	2001	YH ₁₃₉	16.8	X	207.98956	250.27103	217.51100	5.43003	0.2065942	0.24539817	2.5267087	20	8 9.8	20.9
380272	2002	AC ₁₁	16.1	X	194.13009	18.24751	110.80481	9.30771	0.1802466	0.24364780	2.5387955	20	8 30.6	20.2
380273	2002	AB ₄₄	16.2	X	126.02042	57.88360	115.92531	5.43796	0.1566206	0.24038527	2.5617150	20	8 22.3	20.1
380274	2002	AE ₄₆	16.9	X	252.21251	123.23064	279.73910	9.46446	0.2292176	0.24463437	2.5319652	20	6 30.4	20.4
380275	2002	AL ₆₅	16.4	X	69.21362	239.40885	304.84145	11.15708	0.2008200	0.22926765	2.6438746	20	7 8.1	19.9
380276	2002	AD ₆₈	16.2	X	176.78239	138.85587	307.23248	12.04053	0.0874872	0.23588786	2.5941733	20	6 18.6	20.2
380277	2002	AO ₆₉	15.9	X	244.69749	122.32709	272.14788	13.61178	0.1644267	0.24634785	2.5202108	20	6 18.8	19.6
380278	2002	AP ₁₀₂	16.8	X	182.09032	353.49777	103.85785	12.36375	0.1452596	0.23926966	2.5696716	20	7 7.7	20.9
380279	2002	AR ₁₀₂	16.8	X	185.78635	355.48266	108.57500	14.35931	0.1318647	0.24047673	2.5610655	20	7 20.8	20.6
380280	2002	AX ₁₃₁	16.5	X	180.95459	197.95741	284.61976	11.72208	0.1467039	0.24371033	2.5383612	20	8 5.5	20.6
380281	2002	AW ₁₄₂	17.0	X	164.17091	212.09640	277.15512	1.57891	0.0774148	0.24090975	2.5579956	20	7 31.1	20.5
380282	2002	AO ₁₄₈	12.9	X	113.66858	208.52705	328.55724	19.16794	0.2662668	0.07232377	5.7053466	20	8 12.7	20.9
380283	2002	AM ₁₅₆	17.2	X	183.30729	312.79998	120.27450	7.24846	0.3129931	0.23909313	2.5709363	20	6 7.1	22.0
380284	2002	AJ ₁₆₇	16.1	X	90.54238	203.34071	312.48079	12.90287	0.1889606	0.22917092	2.6446186	20	6 24.9	20.0
380285	2002	AQ ₁₆₉	16.8	X	201.11055	161.10789	303.57617	11.34346	0.1405266	0.24371762	2.5383106	20	8 4.8	20.7
380286	2002	BG ₂₃	16.5	X	190.86118	165.62783	327.09440	18.79460	0.1243843	0.24602799	2.5223946	20	8 30.1	20.3
380287	2002	BF ₃₀	17.5	X	216.03713	128.74817	304.42821	3.85000	0.2317816	0.24183998	2.5514319	20	7 4.3	21.7
380288	2002	BC ₃₁	16.9	X	168.01370	313.30946	159.69711	7.78458	0.1481780	0.23690879	2.5867151	20	7 13.3	21.1
380289	2002	CQ ₄	16.9	X	207.73571	320.95280	119.21283	13.03927	0.1467209	0.24015705	2.5633377	20	7 10.9	20.7
380290	2002	CF ₃₄	16.2	X	218.92013	83.31944	330.26116	11.79962	0.1643261	0.23921301	2.5700773	20	6 16.5	20.4
380291	2002	CO ₆₆	16.5	X	147.92262	9.05692	119.83002	12.52777	0.1265501	0.23724035	2.5843045	20	7 14.1	20.4
380292	2002	CD ₈₄	17.2	X	152.88735	326.08728	145.02320	6.95940	0.2377030	0.23449454	2.6044392	20	6 29.8	21.8
380293	2002	CK ₁₄₃	16.5	X	239.89149	208.68338	180.84124	4.17079	0.2498237	0.24145818	2.5541208	20	5 30.1	20.7
380294	2002	CJ ₁₇₂	17.3	X	152.81201	70.17137	108.58244	5.86882	0.2265485	0.24124239	2.5556436	20	9 24.6	21.7
380295	2002	CS ₁₈₆	17.5	X	142.98066	8.03265	135.29290	3.22201	0.0864144	0.23692685	2.5865837	20	7 25.8	21.3
380296	2002	CU ₁₉₉	17.3	X	126.18992	179.80254	334.64718	6.39879	0.0768364	0.23525945	2.5987909	20	7 21.9	21.0
380297	2002	CD ₂₀₅	17.4	X	172.35748	338.24473	137.20849	2.78961	0.1574001	0.23741532	2.5830346	20	7 21.2	21.4
380298	2002	CS ₂₀₈	17.5	X	117.56148	78.71434	99.31651	2.86092	0.2184038	0.23572496	2.5953683	20	8 23.1	21.7
380299	2002	CB ₂₄₇	16.4	X	220.36117	202.97444	225.73567	3.58448	0.2791648	0.23964693	2.5669740	20	6 28.6	20.9
380300	2002	CY ₂₅₂	17.3	X	176.25686	261.29960	253.03776	4.32767	0.2002069	0.24321806	2.5417852	20	9 9.3	21.5
380301	2002	CV ₂₅₄	16.2	X	96.34198	287.60341	279.41228	10.95290	0.1047818	0.23787977	2.5796713	20	8 22.4	20.0
380302	2002	CT ₂₆₉	16.8	X	201.86810	85.52331	321.63586	7.17329	0.1632880	0.23406826	2.6076004	20	5 20.8	21.2
380303	2002	CO ₂₈₈	16.9	X	265.90904	257.97595	130.25952	6.54331	0.1289798	0.24073184	2.5592558	20	7 11.2	20.1
380304	2002	CJ ₂₉₀	16.7	X	211.86283	82.89466	4.09628	10.69819	0.2459840	0.24211840	2.5494756	20	7 20.0	21.1
380305	2002	DL ₆	17.3	X	161.91643	35.58862	156.84895	15.27108	0.0528467	0.24557772	2.5254770	20	10 25.5	21.1
380306	2002	EM ₁₈	16.1	X	268.94854	311.33600	340.64419	12.65553	0.1610747	0.21940500	2.7225239	20	3 5.8	20.1
380307	2002	EL ₂₃	13.4	X	272.29647	272.24305	156.64996	22.50934	0.0878728	0.08299990	5.2049633	20	9 1.3	20.2
380308	2002	ED ₉₃	17.2	X	201.97735	102.58776	346.28119	13.74679	0.2294670	0.23920859	2.5701090	20	7 15.3	21.7
380309	2002	ED ₁₀₄	16.8	X	95.27674	51.30540	125.39145	7.45149	0.2901					

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>
380321 2002 HF ₈	18.3	X	6.15351	261.67193	48.69822	4.77101	0.4908140	0.27934210	2.3176354	20	11 26.4	20.8
380322 2002 HR ₁₁	15.8	X	124.84940	104.23872	80.68780	29.38195	0.3435613	0.23427166	2.6060908	20	9 27.7	21.3
380323 2002 JN ₆	16.5	X	335.52631	152.00004	98.85678	10.79377	0.1280669	0.21607127	2.7504560	20	4 23.1	19.9
380324 2002 JV ₆	16.2	X	35.26650	145.60069	86.94172	15.39733	0.0670060	0.22264505	2.6960464	20	7 1.9	19.5
380325 2002 JT ₄₁	17.2	X	161.15832	212.03897	36.68453	26.86264	0.1792581	0.30086380	2.2057490	20	—	—
380326 2002 JC ₁₂₅	16.1	X	71.12051	136.00450	67.77331	12.73705	0.1326435	0.22797327	2.6538728	20	7 28.3	19.8
380327 2002 LO ₅	16.1	X	98.48111	310.17191	244.11694	30.81768	0.2289011	0.22910702	2.6451103	20	8 10.7	21.0
380328 2002 NK ₅₈	16.3	X	195.67293	90.16110	233.64649	11.63215	0.1969668	0.19719014	2.9233395	20	2 4.8	21.5
380329 2002 OR ₈	18.0	X	48.16149	47.71105	272.25853	4.68224	0.1861967	0.28465130	2.2887267	20	12 15.6	21.2
380330 2002 OF ₁₂	15.4	X	334.50638	334.66043	286.72786	31.88751	0.1046426	0.21035669	2.8000460	20	4 22.1	19.6
380331 2002 OA ₁₇	16.6	X	342.94493	91.55466	273.80033	11.45714	0.2412817	0.27913681	2.3187716	20	11 13.6	18.4
380332 2002 ON ₃₀	18.2	X	355.62354	239.60673	107.32224	4.67553	0.2475666	0.27918235	2.3185194	20	11 17.6	20.0
380333 2002 PX ₂₃	18.4	X	25.81913	82.64576	238.11873	2.08107	0.2433027	0.28117952	2.3075277	20	11 27.5	20.9
380334 2002 PZ ₈₇	16.3	X	142.70520	199.75351	159.94150	7.90654	0.2413095	0.19147258	2.9812595	20	2 10.0	21.3
380335 2002 PB ₁₁₃	18.1	X	294.36837	345.65638	319.05602	18.11128	0.0745733	0.37439146	1.9065671	20	4 15.5	20.5
380336 2002 PN ₁₄₁	17.1	X	228.72397	95.52976	308.16227	17.48289	0.2132878	0.37419282	1.9072418	20	6 11.2	19.9
380337 2002 PY ₁₈₄	18.1	X	95.62749	93.48525	168.58780	3.98099	0.1503266	0.28511705	2.2862335	20	11 18.2	21.4
380338 2002 PT ₁₉₀	18.1	X	43.03811	212.76226	89.33148	5.61808	0.2253998	0.28207845	2.3026227	20	11 22.1	21.1
380339 2002 PT ₂₀₁	15.9	X	180.36026	122.19931	234.62150	9.78399	0.1442477	0.19852382	2.9102321	20	2 29.1	20.8
380340 2002 QG ₆₅	17.1	X	26.92629	284.80606	144.28254	5.80891	0.1586026	0.29406042	2.2396406	20	—	—
380341 2002 QN ₈₁	16.1	X	96.79507	269.03180	139.62413	13.48523	0.1838192	0.18960914	3.0007504	20	2 16.7	20.2
380342 2002 QN ₉₆	17.4	X	333.05319	353.09063	30.60674	3.29450	0.2259035	0.27920388	2.3184003	20	11 19.1	18.7
380343 2002 QO ₁₀₂	18.1	X	7.09026	85.91964	259.05241	2.43454	0.2408746	0.27876295	2.3208444	20	12 2.7	20.4
380344 2002 QY ₁₀₄	16.4	X	89.28229	259.06834	178.23770	10.24241	0.1014335	0.19534781	2.9416907	20	2 28.3	20.4
380345 2002 QK ₁₁₂	16.0	X	110.06669	117.51212	136.50453	11.02330	0.10281978	0.19906682	2.9049375	20	3 7.8	20.2
380346 2002 QH ₁₁₇	16.5	X	220.49696	44.75132	272.58627	5.85826	0.1038220	0.19951571	2.9005786	20	2 21.6	21.0
380347 2002 QZ ₁₃₇	18.4	X	355.87893	223.23767	141.46253	2.12466	0.1773978	0.28116950	2.3075826	20	12 2.5	20.5
380348 2002 RB ₄₃	17.1	X	20.27368	239.53693	132.28591	6.11259	0.1408589	0.28432522	2.2904762	20	—	—
380349 2002 RH ₁₅₁	15.9	X	148.36132	42.60275	312.80655	11.01958	0.1496570	0.19096552	2.9865244	20	2 3.3	20.4
380350 2002 RP ₁₉₃	16.1	X	138.76691	36.18931	356.63924	7.37164	0.2074337	0.19337233	2.9616915	20	3 14.2	20.7
380351 2002 RD ₂₁₇	17.6	X	52.12144	10.42067	312.40045	1.94062	0.1651613	0.28405093	2.2919505	20	12 20.9	20.7
380352 2002 RS ₂₂₇	16.1	X	80.11066	245.43046	192.00063	10.46263	0.1339761	0.19009724	2.9956117	20	2 20.3	20.2
380353 2002 RJ ₂₄₇	16.1	X	142.64485	294.45711	101.27048	3.16692	0.1148453	0.19672384	2.9279571	20	3 14.3	20.5
380354 2002 RG ₂₅₆	17.3	X	213.14722	286.39355	266.85023	7.14214	0.0484744	0.28916471	2.2648487	20	—	—
380355 2002 RH ₂₈₂	18.2	X	14.64149	178.95717	152.07280	2.44228	0.2163210	0.28060550	2.3106736	20	11 21.9	20.6
380356 2002 SE ₁₃	17.3	X	203.25227	87.42190	319.35457	17.77503	0.1260955	0.37123602	1.9173555	20	5 18.7	20.3
380357 2002 TD ₁₇	16.9	X	5.54806	1.95931	1.89412	8.45734	0.1365195	0.27950324	2.3167445	20	12 8.4	19.5
380358 2002 TB ₂₄	17.6	X	317.72691	241.98925	173.89187	2.06622	0.1960024	0.27674340	2.3321217	20	12 1.5	19.1
380359 2002 TN ₃₀	17.0	X	300.54386	91.79893	20.57851	19.84454	0.4474854	0.27651963	2.3333797	20	—	—
380360 2002 TM ₆₂	16.2	X	130.49313	338.89484	356.01921	10.84387	0.2537860	0.18416071	3.0596475	20	1 6.7	21.2
380361 2002 TV ₈₅	15.8	X	171.36433	139.73919	208.19635	9.96413	0.1000276	0.19128392	2.9832094	20	2 10.1	20.6
380362 2002 TD ₁₀₆	17.0	X	242.69307	145.03624	359.11036	4.15290	0.0872549	0.28068615	2.3102310	20	11 30.1	19.6
380363 2002 TJ ₁₁₈	17.6	X	320.00576	108.71580	296.94264	4.28639	0.3097266	0.27515724	2.3410755	20	11 24.9	18.3
380364 2002 TJ ₁₂₅	15.9	X	112.73757	79.72520	303.88627	8.02416	0.1200918	0.18722574	3.0261632	20	1 27.3	20.2
380365 2002 TB ₁₃₄	15.9	X	337.95847	323.82342	136.38550	7.98846	0.2397683	0.21003764	2.8028808	20	5 19.6	18.8
380366 2002 TR ₁₆₁	15.3	X	59.08325	323.97482	62.41910	30.25998	0.2960729	0.17739674	3.1369358	20	—	—
380367 2002 TY ₁₈₅	17.6	X	1.68203	19.28882	320.98387	4.76053	0.1724028	0.27615028	2.3354598	20	11 1.3	19.9
380368 2002 TJ ₁₈₈	17.3	X	2.72292	101.23505	293.66348	4.45158	0.1635760	0.28208617	2.3025806	20	—	—
380369 2002 TJ ₂₀₉	16.0	X	135.60189	317.38260	69.76409	11.29509	0.2214666	0.19031611	2.9933145	20	3 11.7	21.0
380370 2002 TF ₂₁₆	15.5	X	67.81797	344.62379	99.44062	16.12339	0.2934622	0.18260358	3.0770168	20	3 17.5	19.6
380371 2002 TM ₂₁₇	15.8	X	189.88340	317.20950	24.18819	10.83156	0.0848462	0.19172536	2.9786285	20	2 27.9	20.5
380372 2002 TZ ₂₂₂	16.9	X	316.09277	276.78017	120.93295	7.19928	0.1378256	0.27390261	2.3482190	20	10 30.7	19.0
380373 2002 TS ₂₂₅	15.8	X	96.27488	23.45559	48.54353	19.39923	0.2841704	0.18549375	3.0449712	20	4 6.0	20.5
380374 2002 TE ₃₁₀	17.2	X	271.57932	31.21824	65.54732	7.99366	0.1126802	0.27561971	2.3384560	20	11 5.4	19.7
380375 2002 TQ ₃₃₃	16.5	X	114.32795	218.93403	165.96080	6.42636	0.0793132	0.18721119	3.0263200	20	1 24.3	20.8
380376 2002 TW ₃₄₆	16.9	X	112.53592	270.84314	103.24909	7.01853	0.2205282	0.18486467	3.0518752	20	1 29.9	21.4
380377 2002 TM ₃₄₈	16.3	X	98.16612	302.25532	81.07053	11.63275	0.1842757	0.18288699	3.0738370	20	1 20.4	20.6
380378 2002 UC ₁₃	17.2	X	327.72490	172.39123	223.71692	4.60040	0.2279066	0.27667742	2.3324924	20	11 26.4	18.6
380379 2002 UN ₆₂	18.1	X	310.89152	167.35728	235.76942	3.91592	0.2184967	0.27574132	2.3377684	20	10 19.7	19.4
380380 2002 UP ₇₃	18.1	X	296.85920	220.07092	233.88288	0.52253	0.1453110	0.27750753	2.3278386	20	12 14.5	20.0
380381 2002 VZ ₉	17.4	X	343.64314	16.54536	339.29132	4.11579	0.2247591	0.27313275	2.3526295	20	10 25.6	19.1
380382 2002 VS ₂₀	16.2	X	72.19187	133.01479	251.01837	11.14456	0.2746485	0.17882826	3.1201726	20	—	—
380383 2002 VA ₂₄	17.5	X	299.60773	161.94336	243.82404	4.64734	0.2498639	0.27037407	2.3686053	20	9 15.5	19.4
380384 2002 VE ₆₄	16.9	X	4.96052	344.16897	10.05009	7.01445	0.1292545	0.27527303	2.3404190	20	11 20.7	19.4
380385 2002 VU ₆₈	15.4	X	65.90978	314.82820	113.39755	14.07049	0.2115053	0.17998951	3.1067377	20	2 4.2	19.1
380386 2002 VO ₇₄	15.8	X	55.53222	321.43236	57.55194	15.56170	0.2061209	0.17517766	3.1633717	20	—	—
380387 2002 VK ₁₂₃	17.6	X	302.91589	36.01313	48.64763	2.82385	0.1711570	0.27549739	2.3391481	20	12 11.3	19.3
380388 2002 VX ₁₃₈	16.2	X	86.16200	20.41210	23.99687	16.53930	0.1716960	0.18158678	3.0884926	20	2 3.7	20.6
380389 2002 WB ₂₆	17.6	X	309.60088	345.32674	81.06289	7.00497	0.0945018	0.27458488	2.3443276	20	11 28.1	19.7
380390 2002 WJ ₃₀	18.1	X	299.54598	188.76017	211.12301	0.97596	0.1879070	0.26926476	2.3751062	20	9 17.8	20.2
380391 2002 XC ₂₄	17.3	X	282.39175	347.40635	77.49148	5.70568	0.1680567	0.26870121	2.3784260	20	9 29.6	19.7
380392 2002 XS ₄₉	17.4	X	307.25277	349.38034	85.92200	5.39153	0.1453247	0.27373993	2.3491493	20	12 6.1	19.4
380393 2002 XL ₆₃	17.7	X	301.87067	233.28361	164.34545	3.39086	0.3476345	0.26936688	2.37450			

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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>
380401 2002 XQ ₁₁₉	15.8	X	48.31779	34.13060	71.28629	14.75410	0.1837931	0.18137790	3.0908633	20	2 24.3	19.6
380402 2002 XB ₁₂₀	17.6	X	306.87698	266.77042	84.76819	3.42569	0.2415785	0.26568368	2.3964008	20	7 6.5	19.7
380403 2002 YD ₇	14.8	X	10.50680	205.89058	311.90304	15.67309	0.1630086	0.17562512	3.1579964	20	2 13.8	18.3
380404 2002 YM ₇	15.4	X	68.13831	188.33733	261.19392	21.63459	0.1681417	0.18148552	3.0896413	20	2 15.7	19.8
380405 2002 YZ ₁₇	17.3	X	303.22532	177.79954	250.82001	4.96172	0.2107704	0.27212922	2.3584098	20	11 11.8	18.8
380406 2002 YG ₁₉	17.3	X	310.94340	164.78870	288.73845	1.76461	0.1733859	0.27558663	2.3386431	20	—	—
380407 2003 AL ₉	16.2	X	99.49548	313.44740	107.84005	5.09141	0.2079373	0.18043408	3.1016325	20	3 12.2	20.7
380408 2003 AU ₂₂	15.5	X	347.50774	221.69399	294.95260	11.07188	0.3060009	0.16982348	3.2295169	20	—	—
380409 2003 AA ₃₄	16.2	X	279.66109	211.52539	303.71576	24.55383	0.1870079	0.27436721	2.3455674	20	—	—
380410 2003 AD ₅₄	15.5	X	339.14646	268.77730	302.63247	25.99375	0.3723359	0.23183265	2.6243373	20	1 19.3	18.4
380411 2003 AM ₅₆	17.3	X	217.28847	175.76829	322.91140	5.33915	0.1497898	0.26410887	2.4059175	20	10 5.8	20.8
380412 2003 AW ₇₁	16.6	X	279.37262	219.56529	257.23661	21.88487	0.2394278	0.27311946	2.3527058	20	11 29.8	18.3
380413 2003 AS ₇₆	15.8	X	56.21015	85.50811	21.98812	10.25209	0.2234495	0.17783324	3.1318005	20	3 14.1	19.4
380414 2003 AK ₉₁	15.9	X	16.33844	8.71487	138.06087	18.20905	0.1599432	0.17598459	3.1536946	20	2 12.8	19.3
380415 2003 AL ₉₂	14.9	X	13.83316	77.34780	98.00635	14.36732	0.2336595	0.17340476	3.1848968	20	3 25.7	18.3
380416 2003 BT ₄	16.6	X	72.05366	128.64716	287.11016	12.86331	0.2913415	0.17453861	3.1710886	20	2 6.6	20.6
380417 2003 BN ₆	17.3	X	253.96962	340.01828	133.43095	11.07069	0.1699777	0.26717655	2.3874658	20	10 24.3	20.3
380418 2003 BN ₇	15.7	X	82.19869	310.64474	146.00420	17.94533	0.3610849	0.18392269	3.0622867	20	4 28.9	20.5
380419 2003 BZ ₅₅	16.9	X	230.57913	183.86054	320.05124	21.06687	0.2045030	0.26526442	2.3989252	20	10 10.7	20.8
380420 2003 BE ₆₈	15.4	X	2.10140	188.24222	315.85943	18.88019	0.1519537	0.17234532	3.1979357	20	1 19.0	19.3
380421 2003 DE ₁₄	15.6	X	14.02807	55.96624	101.80685	22.22147	0.2210359	0.17276887	3.1927069	20	2 29.7	19.2
380422 2003 EQ ₄	17.5	X	21.04290	54.34744	60.43121	4.69832	0.3947564	0.17215599	3.2002799	20	1 5.9	19.2
380423 2003 FM ₃₈	16.9	X	291.08417	71.41556	193.64582	16.41226	0.1923010	0.22754339	2.6572142	20	2 17.9	21.0
380424 2003 FO ₇₅	16.8	X	264.95411	240.80805	241.64667	5.88216	0.2129353	0.26643792	2.3918762	20	11 10.7	19.1
380425 2003 FG ₇₆	16.9	X	159.09452	196.89200	337.15762	6.72263	0.1279390	0.25332276	2.4737354	20	9 21.8	20.7
380426 2003 HY ₂	16.7	X	196.35205	73.78191	22.37362	14.26179	0.0464096	0.24509749	2.5287747	20	8 1.6	20.5
380427 2003 HB ₄₄	16.7	X	59.65415	175.02515	62.60059	10.23321	0.0955959	0.24329334	2.5412608	20	8 26.6	20.1
380428 2003 JQ ₅	16.3	X	28.86867	204.05929	50.80644	18.91868	0.1872248	0.23859415	2.5745195	20	8 22.9	19.6
380429 2003 PX ₁₁	15.6	X	198.49938	54.18036	290.26354	19.51643	0.2337913	0.21090275	2.7952107	20	2 24.8	20.8
380430 2003 QX ₄₄	16.5	X	199.89213	355.45624	1.48873	4.03953	0.2390116	0.21330756	2.7741624	20	4 6.8	21.4
380431 2003 QC ₅₇	18.0	X	66.79822	164.29100	146.17882	4.97586	0.2830458	0.30208760	2.1997878	20	—	—
380432 2003 QP ₇₉	18.0	X	54.49480	57.30292	314.35844	5.93933	0.1989263	0.30734674	2.1746213	20	—	—
380433 2003 QK ₉₇	16.6	X	50.91524	344.36859	156.10923	5.74516	0.0604936	0.21179913	2.7873185	20	3 22.4	20.0
380434 2003 QV ₁₁₄	18.1	X	312.44094	237.57575	85.17795	7.06125	0.3409384	0.28442823	2.2899232	20	5 13.6	20.1
380435 2003 SR ₈₆	15.9	X	219.90631	334.76300	21.29539	11.95516	0.1164142	0.21348653	2.7726118	20	4 9.1	20.2
380436 2003 SR ₈₇	17.6	X	73.91780	351.86849	359.06340	6.88164	0.1698904	0.30492912	2.1861005	20	—	—
380437 2003 SP ₁₀₇	18.1	X	51.05413	20.98994	341.44149	5.26735	0.1764028	0.30280964	2.1962895	20	—	—
380438 2003 SQ ₂₁₀	16.4	X	174.37138	142.07555	264.70927	8.83687	0.2543378	0.21245666	2.7815646	20	4 27.1	21.4
380439 2003 SG ₂₂₈	16.2	X	169.67288	216.02967	203.97327	15.17631	0.1356921	0.20964147	2.8064108	20	5 10.2	20.8
380440 2003 ST ₂₅₆	17.9	X	30.51804	200.25403	185.15305	4.93228	0.2036688	0.30281897	2.1962444	20	—	—
380441 2003 SG ₂₅₇	18.0	X	65.46447	322.82374	23.59839	7.57257	0.2068789	0.30466864	2.1873463	20	—	—
380442 2003 SY ₂₅₉	17.1	X	131.84297	290.21438	32.63769	7.21660	0.1370248	0.30972871	2.1634577	20	—	—
380443 2003 SK ₂₆₅	17.1	X	219.10144	171.79342	211.99487	5.74887	0.0708615	0.21667926	2.7453085	20	5 16.4	21.1
380444 2003 SF ₂₈₁	16.0	X	227.78692	279.52452	43.96618	9.63060	0.1572153	0.20907713	2.8114586	20	3 10.7	20.6
380445 2003 SH ₂₈₃	15.9	X	243.28381	25.46204	296.87576	12.43086	0.1523669	0.21364323	2.7712558	20	3 12.7	20.4
380446 2003 SN ₂₈₇	16.8	X	191.74115	159.36845	221.40357	3.84206	0.0810515	0.21359239	2.7716956	20	4 10.9	21.1
380447 2003 SO ₃₁₂	16.2	X	222.35885	0.68619	314.92038	11.47704	0.1962293	0.20980042	2.8049932	20	2 18.0	21.0
380448 2003 SA ₃₃₀	17.2	X	179.81632	52.35227	326.85914	2.81924	0.1083622	0.20989656	2.8041366	20	3 27.8	21.6
380449 2003 SF ₃₃₂	16.5	X	145.04661	19.11377	37.60134	9.03026	0.3361772	0.20556347	2.8434052	20	4 23.9	21.6
380450 2003 SM ₃₃₃	17.1	X	180.77832	5.26454	349.45636	9.37934	0.1519659	0.20682537	2.8318278	20	3 2.5	21.5
380451 2003 SQ ₃₅₀	16.4	X	90.04351	225.21365	276.09482	3.37540	0.0635855	0.21457237	2.7632500	20	5 15.5	20.1
380452 2003 SP ₃₇₀	16.9	X	163.61024	204.47704	183.85589	4.59872	0.1119929	0.20838646	2.8176674	20	3 24.0	21.1
380453 2003 TX ₁₈	17.6	X	128.82880	302.14857	357.43114	3.68701	0.1653787	0.30757942	2.1735245	20	—	—
380454 2003 TC ₃₅	17.2	X	173.67278	145.71145	224.85935	11.36790	0.1446662	0.20504037	2.8482392	20	3 10.1	22.0
380455 2003 UL ₃	17.9	X	304.29503	13.01503	153.13531	14.64509	0.7980082	0.29335315	2.2432390	20	—	—
380456 2003 UZ ₂₁	16.3	X	143.98628	106.07605	304.05677	12.20606	0.3027556	0.20476579	2.8507849	20	4 7.2	21.6
380457 2003 UO ₄₉	17.2	X	84.27360	69.23729	274.78987	8.70183	0.2017257	0.30521069	2.1847557	20	—	—
380458 2003 UQ ₅₆	16.3	X	166.56379	356.74723	21.39359	2.89118	0.1871994	0.20358721	2.8617766	20	3 19.2	21.1
380459 2003 UU ₁₅₅	17.0	X	202.45895	246.39103	75.10550	6.09555	0.1050621	0.20293344	2.8679196	20	2 13.4	21.5
380460 2003 UQ ₁₇₁	18.0	X	192.56367	275.50510	346.93633	3.12364	0.1691754	0.31286204	2.1489887	20	—	—
380461 2003 UD ₁₇₆	18.2	X	9.03326	53.33321	1.04836	1.07527	0.1185942	0.30171527	2.2015971	20	—	—
380462 2003 UJ ₂₅₂	15.9	X	124.45583	36.67744	47.57426	13.91664	0.1718175	0.20227370	2.8741522	20	4 29.0	20.4
380463 2003 UZ ₂₇₁	16.9	X	137.79269	26.96728	46.03396	8.36917	0.2907210	0.20480134	2.8504549	20	5 5.2	21.8
380464 2003 UB ₂₉₅	16.7	X	212.51244	28.55725	321.52408	3.15548	0.0764065	0.20900600	2.8120965	20	3 25.6	20.9
380465 2003 UM ₃₁₄	17.9	X	112.66983	173.11402	142.54326	5.59541	0.0820201	0.30510264	2.1852715	20	—	—
380466 2003 UV ₃₁₅	16.4	X	127.39278	249.42550	185.75032	15.15900	0.2345592	0.20381353	2.8596576	20	4 27.2	21.1
380467 2003 UG ₃₂₂	17.1	X	148.39828	43.33303	23.90406	2.34376	0.0176327	0.20965382	2.8063007	20	4 17.6	21.0
380468 2003 UG ₃₂₆	16.7	X	143.38757	183.75929	259.33150	7.33087	0.1174188	0.21465423	2.7625474	20	5 9.4	21.0
380469 2003 UK ₃₄₃	16.7	X	114.81511	273.33724	198.56191	12.09709	0.1183221	0.21325315	2.7746343	20	5 17.5	20.8
380470 2003 UT ₃₆₇	16.9	X	135.14161	273.32800	139.85542	2.81351	0.0624568	0.20372692	2.8604681	20	3 20.9	21.1
380471 2003 UG ₄₀₈	18.4	X	69.65476	190.52312	125.25538	5.29004	0.1907262	0.29971846	2.2113648	20	—	—
380472 2003 WR ₂₄	16.7	X	86.94529	48.54825	259.03513	7.92259	0.3218360	0.29937938	2.2130342	20	—	—
380473 2003 WB ₉₀	16.7	X	115.15117	43.25828	57.05058	7.20528	0.1885581	0.20360090	2.8616483	20	5 10.1	21.1
380474 2003 WX ₉₂	17.4	X	53.46012									

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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>
380481 2003 YF ₁₈₁	16.0	X	1.07860	44.32049	116.04838	6.78666	0.0815781	0.18628947	3.0362942	20	2 6.9	19.8
380482 2004 AG ₄	16.6	X	54.30154	59.31418	76.59701	2.09205	0.1948395	0.19169881	2.9789035	20	4 9.2	20.1
380483 2004 AV ₆	18.1	X	53.75016	60.68059	309.97877	3.42598	0.1757006	0.29562501	2.2317315	20	—	—
380484 2004 AS ₂₃	16.2	X	322.76403	62.97602	128.08240	7.11812	0.0767290	0.18474326	3.0532121	20	1 22.6	20.1
380485 2004 BS ₂₉	15.6	X	5.77602	164.99724	329.73840	9.65944	0.0670126	0.18173493	3.0868138	20	1 15.4	19.6
380486 2004 BB ₅₀	15.9	X	82.21898	120.31076	302.97080	8.35418	0.0771071	0.18568010	3.0429336	20	1 31.4	20.1
380487 2004 BC ₇₅	17.6	X	81.35881	217.34990	296.83626	16.54361	0.0712251	0.38075514	1.8852641	20	5 16.2	19.7
380488 2004 BX ₉₈	15.9	X	41.52530	93.42823	357.68732	17.00343	0.1280876	0.17819915	3.1275118	20	1 19.5	20.0
380489 2004 BS ₉₉	16.5	X	32.86004	12.88924	123.36089	6.73574	0.2178274	0.18372556	3.0644768	20	3 4.7	19.5
380490 2004 BV ₁₄₀	18.4	X	340.15165	261.72976	143.35768	2.42628	0.1395759	0.28722203	2.2750497	20	12 29.9	20.4
380491 2004 CM ₁₄	15.9	X	289.60686	223.64855	334.09600	8.84630	0.0213506	0.17929662	3.1147365	20	—	—
380492 2004 CK ₂₁	15.6	X	35.39082	313.78805	134.15830	11.41799	0.0762419	0.17925403	3.1152299	20	—	—
380493 2004 CY ₂₂	18.3	X	317.38715	47.22038	41.81913	2.52162	0.1795533	0.28981585	2.2614550	20	—	—
380494 2004 CX ₄₉	17.5	X	199.59874	245.16776	150.27468	22.77268	0.0953673	0.37908795	1.8907875	20	5 11.2	20.4
380495 2004 CL ₈₉	17.8	X	354.78726	332.82479	77.92009	3.65188	0.1430419	0.28971306	2.2619899	20	—	—
380496 2004 CV ₁₁₀	16.1	X	50.59065	322.37287	135.32793	8.37159	0.1460095	0.18430183	3.0580854	20	2 6.6	19.7
380497 2004 CB ₁₁₉	16.9	X	76.71014	327.70358	112.52695	2.56841	0.1787479	0.18601714	3.0392569	20	3 1.9	20.9
380498 2004 DT	16.1	X	98.38233	328.30120	105.67320	4.57014	0.2430309	0.18969486	2.9998463	20	3 30.3	20.5
380499 2004 DC ₃₄	17.2	X	231.16147	2.39441	163.58204	7.10403	0.1848659	0.28071221	2.3100880	20	11 30.5	20.1
380500 2004 DQ ₄₄	17.3	X	115.86105	44.52189	164.12119	5.56807	0.1197756	0.26902141	2.3765383	20	9 26.5	20.8
380501 2004 DZ ₅₇	18.5	X	293.94366	115.80319	358.50165	1.66317	0.1509267	0.28741120	2.2740513	20	—	—
380502 2004 DZ ₆₉	15.9	X	44.37222	325.87281	139.76166	13.32229	0.1676899	0.18464668	3.0542767	20	2 8.1	19.3
380503 2004 EY ₂	15.1	X	254.53807	88.87092	123.59434	21.35592	0.1200211	0.16970579	3.2310098	20	—	—
380504 2004 EP ₂₁	17.9	X	220.29520	342.21679	179.35675	4.83406	0.1588779	0.27880440	2.3206143	20	11 13.8	20.9
380505 2004 EF ₄₄	16.7	X	15.84179	324.92182	134.06049	5.12961	0.1140274	0.17461740	3.1701347	20	—	—
380506 2004 EM ₆₅	15.7	X	8.83077	83.42876	74.56995	16.36651	0.1727476	0.18160479	3.0882884	20	2 18.5	19.4
380507 2004 EL ₈₂	16.4	X	72.15978	53.86077	86.83896	16.20289	0.3344951	0.19013315	2.9952345	20	6 3.6	20.6
380508 2004 EU ₁₁₁	17.5	X	266.01203	346.92154	134.51433	7.57060	0.1967429	0.28159170	2.3052754	20	11 21.7	19.7
380509 2004 FY ₅	17.6	X	288.08562	14.24409	119.36136	12.54279	0.3516678	0.29151818	2.2526426	20	—	—
380510 2004 FF ₈	17.3	X	305.57252	32.74474	59.18969	3.97308	0.0896959	0.28294974	2.2978933	20	12 30.9	19.4
380511 2004 FO ₉	18.2	X	274.65082	297.24574	189.99163	5.19914	0.1775376	0.28400634	2.2921904	20	12 19.5	20.0
380512 2004 FX ₄₄	16.5	X	175.71552	169.67282	17.21480	24.19733	0.1457532	0.27299384	2.3534275	20	10 23.2	20.2
380513 2004 FL ₄₇	16.9	X	266.96360	74.56494	33.73342	6.40957	0.0535299	0.27792618	2.3255004	20	11 20.3	19.5
380514 2004 FF ₇₁	18.3	X	283.33258	61.27172	28.46567	2.44788	0.1683272	0.27972100	2.3155420	20	11 9.9	20.0
380515 2004 FQ ₉₃	17.3	X	114.13435	158.50909	39.69743	2.94331	0.1411206	0.26432491	2.4046063	20	9 12.3	20.8
380516 2004 FX ₉₅	16.7	X	206.82435	114.96486	84.98143	6.14467	0.0872468	0.28224055	2.3017409	20	12 28.1	19.3
380517 2004 FR ₁₀₃	15.6	X	301.25794	58.47714	144.52636	14.44390	0.1854191	0.17611075	3.1521882	20	—	—
380518 2004 FC ₁₂₂	17.3	X	190.05744	4.63857	162.95739	5.61651	0.2001016	0.27290996	2.3539097	20	10 15.2	21.0
380519 2004 FW ₁₂₄	17.8	X	210.12388	283.22029	263.05378	1.20964	0.1427059	0.27894041	2.3198599	20	12 5.2	20.9
380520 2004 FV ₁₂₅	16.5	X	50.60103	277.67746	186.87591	13.16179	0.2732281	0.18202626	3.0835194	20	2 29.9	19.9
380521 2004 FX ₁₆₀	15.7	X	318.83612	58.26215	104.81366	17.67320	0.1142893	0.17274015	3.1930607	20	—	—
380522 2004 GK	17.2	X	235.17737	310.33907	202.67557	6.70805	0.1468810	0.27785032	2.3259236	20	11 23.1	20.0
380523 2004 GQ	17.4	X	183.66651	175.10309	23.71889	6.25282	0.1474318	0.27515257	2.3411020	20	11 19.4	20.8
380524 2004 GY	20.1	X	76.17827	182.89166	50.87304	23.43604	0.2180508	0.56559091	1.4481085	20	11 8.9	21.1
380525 2004 GE ₄	17.3	X	266.25982	326.19239	181.86521	4.92573	0.1372943	0.28295137	2.2978844	20	—	—
380526 2004 GN ₄	17.9	X	211.64145	126.78533	64.61098	2.87953	0.1390886	0.27793077	2.3254748	20	11 30.7	20.8
380527 2004 GQ ₁₁	15.6	X	36.93406	87.30531	63.75671	22.29880	0.1943881	0.18620796	3.0371802	20	4 10.8	19.3
380528 2004 GU ₁₂	16.7	X	47.28659	182.53027	61.40478	11.94581	0.2033849	0.25581201	2.4576616	20	9 7.3	19.9
380529 2004 GJ ₅₃	16.1	X	19.62111	297.58616	200.04879	9.95867	0.1877997	0.17870946	3.1215552	20	2 3.2	19.6
380530 2004 GL ₅₈	18.0	X	4.39563	270.84890	24.45242	5.05067	0.1115788	0.25797952	2.4438763	20	8 22.1	20.4
380531 2004 GE ₅₉	16.7	X	159.24856	167.82681	44.79847	7.32013	0.0927679	0.27176772	2.3605007	20	11 15.4	20.1
380532 2004 GT ₇₅	15.4	X	340.25494	284.99015	296.67305	14.00843	0.1766910	0.18182218	3.0858263	20	3 7.1	19.3
380533 2004 GH ₇₇	15.3	X	327.54719	258.92909	251.10801	24.19087	0.2281032	0.17272974	3.1931891	20	—	—
380534 2004 HG ₃₅	17.2	X	105.57224	6.92715	188.78406	8.67565	0.1512809	0.25935448	2.4352313	20	8 27.9	21.0
380535 2004 HL ₄₄	17.3	X	112.19862	97.10632	138.31202	5.35806	0.1566276	0.26695861	2.3887650	20	10 30.2	21.0
380536 2004 HB ₄₉	17.7	X	145.63988	167.05587	51.30801	2.08284	0.1307053	0.27099803	2.3649681	20	11 7.8	21.0
380537 2004 HS ₅₅	15.5	X	345.61376	113.47496	59.55403	27.16509	0.1966804	0.17624480	3.1505896	20	1 22.7	19.7
380538 2004 JY ₅	17.5	X	21.98448	131.64223	86.18377	23.31832	0.0638223	0.37117629	1.9175612	20	5 25.1	19.1
380539 2004 JG ₅₆	17.5	X	281.69888	243.22378	97.00173	23.29165	0.0959691	0.37638677	1.8998230	20	6 6.8	19.4
380540 2004 KQ ₁₀	17.5	X	98.64175	15.99796	70.56503	22.94848	0.0938486	0.36122004	1.9526369	20	3 22.3	20.2
380541 2004 KB ₁₃	17.6	X	25.88085	102.42451	78.82054	23.66549	0.0656699	0.36353555	1.9443366	20	4 10.8	20.0
380542 2004 LA ₇	17.0	X	285.06803	246.83881	62.59883	5.64498	0.3450473	0.23855026	2.5748353	20	3 24.5	21.0
380543 2004 NH ₁₀	16.1	X	320.31086	2.73682	308.91318	7.54542	0.1973055	0.24246192	2.5470669	20	6 6.8	18.7
380544 2004 NV ₁₈	17.3	X	294.06835	118.81078	190.46002	2.79439	0.2680037	0.23861643	2.5743592	20	4 10.4	20.9
380545 2004 NL ₂₂	16.5	X	328.95900	274.54820	36.48141	4.50550	0.1728599	0.24517271	2.5282575	20	6 28.8	18.9
380546 2004 NB ₂₅	17.1	X	229.16644	194.36234	147.61877	7.34803	0.3891646	0.22773709	2.6557073	20	3 19.7	22.2
380547 2004 NR ₃₀	16.6	X	273.96679	2.86699	296.36171	10.93015	0.2218383	0.23365957	2.6106401	20	3 7.3	20.8
380548 2004 NR ₃₃	17.1	X	251.00569	266.51423	71.53136	13.67000	0.3023864	0.23248865	2.6193983	20	4 7.9	21.8
380549 2004 OJ ₄	16.9	X	290.90449	241.57359	76.27452	5.95389	0.3281463	0.23875264	2.5733800	20	4 11.9	20.5
380550 2004 OT ₅	16.3	X	328.80694	355.10070	304.64030	16.99581	0.1235536	0.24400673	2.5363052	20	6 17.3	19.3
380551 2004 OO ₉	16.7	X	296.29630	321.70426	2.38110	3.36721	0.2255762	0.24044938	2.5612596	20	5 8.8	20.0
380552 2004 PA	17.3	X	245.72430	146.13449	180.78182	12.26717	0.3196334	0.23073564	2.6326488	20	3 13.6	21.9
380553 2004 PX ₁₀	17.1	X	294.06297	106.99066	223.85641	2.26872	0.1661841	0.24023333	2.5627950	20	5 26.2	20.2
380554 2004 PC ₁₆	17.1	X	215.22013	86.57989	292.39971	5.70						

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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>
380561 2004 QQ ₅	17.3	X	291.06843	321.66151	347.26248	2.03182	0.2046916	0.23491093	2.6013607	20	4 14.9	20.7
380562 2004 QF ₉	16.1	X	292.78337	280.52268	71.25182	13.40170	0.2473287	0.24194061	2.5507244	20	6 8.6	19.2
380563 2004 QB ₁₈	16.3	X	206.52866	60.08575	302.07975	11.77864	0.2933186	0.22252020	2.6970547	20	3 23.9	21.4
380564 2004 QK ₁₈	16.4	X	225.35583	172.93632	179.42157	14.09252	0.2753548	0.22558962	2.6725344	20	4 2.0	21.0
380565 2004 QO ₁₉	17.1	X	225.36826	233.62316	90.85335	16.25057	0.3476258	0.22647956	2.6655288	20	3 3.6	22.4
380566 2004 QW ₂₄	16.0	X	308.04122	232.97793	81.92010	34.51724	0.2560589	0.23811583	2.5779661	20	5 21.5	19.3
380567 2004 RD ₁₃	16.8	X	243.20466	186.09191	165.16292	14.58362	0.2674700	0.23056765	2.6339274	20	4 16.8	21.4
380568 2004 RW ₂₂	17.3	X	231.31683	337.53132	39.99742	1.36249	0.1953084	0.23215524	2.6219057	20	5 10.8	21.6
380569 2004 RR ₂₅	15.9	X	216.38778	5.73499	3.54155	13.48028	0.1714575	0.22634417	2.6665916	20	4 15.1	20.3
380570 2004 RD ₄₀	16.5	X	225.61329	277.64647	121.69215	14.61495	0.2218096	0.23319535	2.6141036	20	6 3.2	21.0
380571 2004 RF ₅₆	17.5	X	303.47284	8.10658	298.04683	2.73814	0.2255303	0.23661690	2.5888420	20	4 24.3	20.6
380572 2004 RW ₉₃	17.5	X	251.03570	136.61133	184.56105	13.26937	0.2813940	0.22983931	2.6394889	20	3 12.9	21.9
380573 2004 RL ₁₁₀	16.1	X	184.14714	117.78063	322.28079	29.92298	0.3293781	0.23054722	2.6340830	20	6 19.2	21.6
380574 2004 RL ₁₁₄	16.7	X	146.56313	256.74111	270.74603	2.29688	0.1161980	0.24554576	2.5256961	20	8 31.2	20.5
380575 2004 RT ₁₆₂	15.7	X	247.04713	35.19628	286.89332	12.77644	0.2640226	0.22744453	2.6579841	20	3 6.6	20.5
380576 2004 RE ₁₆₃	17.0	X	230.35030	172.11722	165.79411	5.94575	0.0984022	0.22685268	2.6626052	20	3 29.4	21.0
380577 2004 RJ ₁₆₉	16.7	X	303.36203	320.23186	1.92880	11.53002	0.0714833	0.23661639	2.5888457	20	6 10.7	20.1
380578 2004 RR ₁₈₀	17.1	X	242.47741	111.09625	277.84188	4.40558	0.2349281	0.23412009	2.6072155	20	6 1.1	21.1
380579 2004 RP ₁₈₃	16.2	X	162.04968	105.89070	303.73153	12.56707	0.1327867	0.22557735	2.6726314	20	4 11.4	20.6
380580 2004 RZ ₁₈₇	16.5	X	187.25624	229.01509	207.05820	13.47108	0.2462593	0.22928033	2.6437772	20	6 13.2	21.3
380581 2004 RS ₁₉₅	16.7	X	198.76470	50.55068	314.22280	9.97548	0.1845924	0.22325508	2.6911329	20	3 23.8	21.3
380582 2004 RD ₂₀₆	16.6	X	250.77765	38.93584	315.15403	8.87806	0.0702496	0.23105287	2.6302386	20	5 11.4	20.4
380583 2004 RK ₂₀₉	16.7	X	271.31817	112.97431	216.76789	10.67515	0.2654159	0.23422428	2.6064423	20	4 11.0	20.6
380584 2004 RG ₂₁₆	16.5	X	250.11996	50.26887	306.22571	10.24341	0.1822272	0.23110722	2.6298262	20	4 29.6	20.8
380585 2004 RP ₂₁₇	16.1	X	273.51163	114.74193	251.47730	10.28170	0.1451649	0.23527837	2.5986516	20	6 18.2	19.6
380586 2004 RJ ₂₃₄	17.1	X	191.93311	18.34322	36.51523	3.34830	0.1263449	0.22730711	2.6590553	20	5 23.5	21.2
380587 2004 RP ₂₄₃	17.3	X	345.21479	229.66609	34.24866	1.09704	0.1204602	0.23514334	2.5996463	20	5 23.7	19.9
380588 2004 RY ₂₅₀	16.1	X	190.89910	160.46752	248.86239	13.55650	0.1142343	0.22896511	2.6462031	20	5 15.4	20.7
380589 2004 RZ ₂₅₂	16.2	X	219.77738	108.23058	300.29093	21.34036	0.1212800	0.23303765	2.6152828	20	6 15.8	20.4
380590 2004 RP ₂₈₈	16.4	X	280.27780	187.87031	142.59853	14.86544	0.1992043	0.23411236	2.6072729	20	5 6.9	20.3
380591 2004 RP ₃₁₂	16.3	X	238.09453	311.25888	7.70694	14.26933	0.1962836	0.22645089	2.6657537	20	3 9.7	20.7
380592 2004 RE ₃₂₃	16.3	X	250.31488	1.39715	329.46415	12.36666	0.1758315	0.22738670	2.6584347	20	3 28.2	20.7
380593 2004 RJ ₃₂₃	16.6	X	237.31531	41.29723	341.25517	10.51521	0.1901771	0.23068617	2.6330251	20	5 20.3	21.0
380594 2004 RA ₃₄₁	16.5	X	227.06401	289.16287	88.45340	13.58801	0.1745263	0.22978889	2.6398750	20	5 12.5	20.8
380595 2004 RU ₃₄₁	17.1	X	61.43221	281.10478	311.50037	2.71162	0.1236788	0.24249985	2.5468013	20	8 20.6	20.2
380596 2004 SX ₃	17.1	X	242.68273	5.43458	6.51463	5.38194	0.2116275	0.23226275	2.6210965	20	5 11.7	21.2
380597 2004 SB ₄	16.0	X	270.05626	262.71067	81.00388	15.67705	0.1632692	0.23532142	2.5983346	20	5 15.5	19.7
380598 2004 SE ₂₂	16.7	X	262.13724	213.44036	154.00819	14.14595	0.1725354	0.23756869	2.5819228	20	6 4.2	20.7
380599 2004 SW ₂₈	16.7	X	251.26891	344.87501	357.23833	11.59244	0.1447330	0.22971593	2.6404340	20	4 16.9	20.8
380600 2004 SV ₄₀	16.4	X	228.72781	154.40671	199.07380	13.92564	0.2636506	0.22508217	2.6765497	20	4 5.1	21.0
380601 2004 SD ₅₄	16.2	X	219.06091	185.79885	186.07030	18.37675	0.0854159	0.22767216	2.6562121	20	5 1.6	20.3
380602 2004 TE ₁₄	16.3	X	188.46829	351.46296	39.02436	17.88523	0.3036445	0.22303098	2.6929353	20	4 21.6	21.2
380603 2004 TO ₄₇	17.0	X	276.58569	110.37463	204.00779	5.33913	0.1435354	0.22728470	2.6592301	20	4 14.1	20.6
380604 2004 TN ₅₆	17.0	X	247.03246	141.69472	207.17946	7.69098	0.1097810	0.22885712	2.6470355	20	4 29.0	20.9
380605 2004 TO ₆₂	16.7	X	218.54591	167.97383	213.83902	11.64794	0.1971992	0.22729341	2.6591622	20	5 5.2	21.0
380606 2004 TC ₆₈	16.6	X	217.46490	298.68518	66.81264	8.64676	0.2346636	0.22570132	2.6716526	20	4 15.4	21.2
380607 Sharma	16.6	X	273.60196	306.11387	14.02629	10.54901	0.1593522	0.22969208	2.6406167	20	4 14.4	20.3
380608 2004 TA ₇₀	16.5	X	230.78735	238.58802	114.33886	5.25374	0.2598471	0.22620091	2.6677174	20	4 8.9	21.2
380609 2004 TP ₇₅	17.1	X	226.94922	31.21455	335.05999	3.27384	0.1718592	0.22602284	2.6691184	20	4 23.2	21.3
380610 2004 TE ₉₆	16.4	X	133.73500	93.11921	26.77602	8.17368	0.0598401	0.22765156	2.6563725	20	6 10.4	20.2
380611 2004 TD ₁₀₂	17.2	X	166.79115	240.75550	200.40365	3.43993	0.1097739	0.22515785	2.6759499	20	6 1.4	21.2
380612 2004 TK ₁₂₃	16.2	X	239.95785	191.32186	185.50304	13.71774	0.1626850	0.22959990	2.6413234	20	5 23.4	20.4
380613 2004 TE ₁₂₆	17.0	X	206.84827	347.74709	72.33397	3.60527	0.2043102	0.23056167	2.6339729	20	6 10.8	21.2
380614 2004 TJ ₁₃₉	16.9	X	237.53546	176.32088	220.13773	5.90746	0.1677617	0.23302755	2.6153584	20	6 12.9	20.8
380615 2004 TQ ₁₆₁	17.2	X	198.38777	357.62672	32.66409	2.36504	0.1546364	0.22352804	2.6889417	20	4 28.6	21.6
380616 2004 TW ₂₀₄	17.0	X	182.47368	19.18212	38.11022	3.56295	0.1016020	0.22301961	2.6930268	20	5 17.2	21.1
380617 2004 TT ₂₂₀	16.0	X	207.01358	355.71105	15.47378	13.89713	0.1118774	0.22076619	2.7113214	20	4 13.1	20.1
380618 2004 TS ₂₂₈	16.5	X	200.57645	71.37296	18.09018	6.97863	0.1175615	0.23336242	2.6128557	20	7 19.0	20.6
380619 2004 TX ₂₄₉	16.4	X	229.44219	238.61762	145.13918	13.88109	0.2775172	0.22839616	2.6505959	20	5 15.7	21.2
380620 2004 TS ₂₇₄	17.1	X	173.21029	17.63978	26.03431	4.99055	0.1276331	0.22008546	2.7169093	20	4 21.3	21.2
380621 2004 TU ₂₇₈	16.4	X	239.96345	355.41514	58.84613	5.94239	0.2150601	0.23269287	2.6178655	20	7 3.8	20.4
380622 2004 TV ₂₈₇	15.7	X	202.52899	16.14009	38.47752	22.61106	0.0410995	0.22713230	2.6604194	20	6 2.2	19.7
380623 2004 TM ₂₉₄	16.4	X	215.43781	182.97509	237.77473	12.98890	0.2086862	0.23076080	2.6324574	20	6 18.4	20.9
380624 2004 TU ₂₉₈	17.3	X	196.63837	92.70989	307.05216	0.91663	0.2088057	0.22536585	2.6743032	20	5 7.5	21.9
380625 2004 TQ ₃₀₂	16.2	X	220.32112	323.24076	42.70656	12.60606	0.1981119	0.22548316	2.6733755	20	4 18.7	20.7
380626 2004 TZ ₃₃₆	16.4	X	254.48733	297.68045	71.17115	11.04439	0.1580966	0.23198363	2.6231985	20	5 27.7	20.2
380627 2004 TM ₃₄₉	17.2	X	112.76702	246.83990	214.54574	1.73202	0.0614744	0.21904680	2.7254911	20	4 22.3	20.8
380628 2004 TO ₃₄₉	16.8	X	199.58641	188.03546	191.42175	4.24432	0.2184498	0.22252709	2.6969990	20	4 15.9	21.4
380629 2004 TP ₃₅₆	16.3	X	208.04693	24.33553	63.36931	12.34951	0.2237554	0.23304431	2.6152329	20	7 17.0	20.8
380630 2004 UM ₁	16.2	X	127.76608	211.20589	241.99904	12.82516	0.1676674	0.22088159	2.7103770	20	5 10.9	20.5
380631 2004 VT ₁₉	16.8	X	125.73146	216.14205	222.93471	13.17986	0.1738743	0.21566397	2.7539179	20	4 21.5	20.9
380632 2004 VH ₂₂	16.3	X	196.07988	13.72649	46.42900	6.65498	0.2074505	0.22445019	2.6815716	20	5 31.9	20.8
380633 2004 VP ₈₁	16.1	X	220.01416	268.013								

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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>		
380641	2004	<i>XN</i> ₁₀₇	15.8 ^m	X	223.37935	105.06891	282.29493	11.46035	0.2751354	0.22472066	2.6794195	20	5 8.9	20.7
380642	2004	<i>XD</i> ₁₂₁	16.7	X	164.59201	322.15007	119.49552	2.80563	0.2046786	0.21860033	2.7292009	20	6 2.2	21.2
380643	2004	<i>XS</i> ₁₂₄	16.4	X	212.60657	95.84138	308.39668	10.31295	0.2061624	0.22783015	2.6549841	20	5 25.2	21.0
380644	2004	<i>XG</i> ₁₂₅	16.4	X	132.32816	115.93787	342.46258	11.45389	0.2619249	0.21482017	2.7611247	20	5 26.9	21.3
380645	2004	<i>XA</i> ₁₃₈	16.5	X	208.87947	242.86786	97.39910	6.54075	0.2387991	0.21411861	2.7671526	20	3 10.4	21.4
380646	2004	<i>XL</i> ₁₄₀	17.1	X	156.17458	323.98380	120.28346	5.03647	0.1318248	0.21640632	2.7476164	20	5 26.9	21.4
380647	2004	<i>XC</i> ₁₆₃	15.9	X	218.18308	320.25467	71.18521	13.21789	0.3263029	0.22310251	2.6923597	20	5 12.4	20.8
380648	2004	<i>XH</i> ₁₉₂	16.7	X	143.51094	201.40021	238.29190	6.41789	0.0912657	0.21539613	2.7562003	20	5 3.6	20.7
380649	2004	<i>YU</i> ₄	16.2	X	170.47270	353.84411	97.39439	14.28116	0.1794648	0.22328033	2.6909301	20	6 18.9	20.7
380650	2004	<i>YM</i> ₂₇	16.2	X	239.58471	277.35840	77.32477	10.58655	0.2376250	0.22248696	2.6973233	20	4 21.4	20.8
380651	2004	<i>YS</i> ₂₇	16.2	X	227.95472	114.64393	279.01005	11.89807	0.1595641	0.22372366	2.6873740	20	5 30.5	20.6
380652	2005	<i>AL</i> ₆	15.8	X	117.42382	357.69737	122.59070	16.05030	0.1204258	0.21384811	2.7694855	20	6 2.8	20.1
380653	2005	<i>AR</i> ₃₈	15.9	X	172.77679	318.09493	132.77117	14.65081	0.1632448	0.21912773	2.7248201	20	6 21.1	20.5
380654	2005	<i>BV</i> ₂₈	16.1	X	109.21581	98.93187	115.83658	14.64701	0.1493620	0.22426854	2.6830194	20	9 29.7	20.5
380655	2005	<i>CZ</i> ₂	16.5	X	140.03609	147.53777	315.74638	11.68327	0.1612567	0.21404739	2.7677663	20	6 3.8	21.1
380656	2005	<i>CQ</i> ₅₂	16.0	X	175.92260	344.47907	129.33219	15.14603	0.0349672	0.21930460	2.7233548	20	7 23.4	19.8
380657	2005	<i>DN</i> ₁	16.5	X	271.66808	318.91656	215.76028	0.51756	0.1390557	0.17951809	3.1121742	20	—	—
380658	2005	<i>EM</i> ₁₂	18.1	X	310.79120	33.82736	101.01816	3.96843	0.2196548	0.31132505	2.1560559	20	—	—
380659	2005	<i>EL</i> ₁₉	16.2	X	233.83674	268.70843	4.15327	4.08503	0.1281397	0.18586004	3.0409693	20	1 17.2	21.0
380660	2005	<i>EV</i> ₅₄	16.5	X	79.83473	87.82604	349.02868	10.16081	0.0504589	0.19291421	2.9663786	20	2 12.4	20.5
380661	2005	<i>EF</i> ₁₃₇	17.9	X	199.05515	198.02388	17.05729	4.12848	0.1202755	0.29858311	2.2169670	20	—	—
380662	2005	<i>EM</i> ₁₅₂	16.0	X	270.66882	110.90420	121.40961	2.27624	0.1380926	0.18392174	3.0622972	20	1 3.9	20.5
380663	2005	<i>EF</i> ₁₈₇	15.9	X	236.29336	255.14500	8.63164	9.79411	0.0574014	0.18349188	3.0670780	20	1 14.5	20.6
380664	2005	<i>EE</i> ₂₁₇	16.0	X	315.11490	84.09568	106.91760	6.74403	0.1556916	0.19073791	2.9888999	20	—	—
380665	2005	<i>EF</i> ₂₂₄	16.1	X	270.85328	45.05388	12.47751	23.20804	0.3743311	0.29513922	2.2341797	20	7 31.5	19.5
380666	2005	<i>EV</i> ₂₄₈	16.3	X	278.25639	163.22313	36.69838	3.04204	0.1341611	0.18302708	3.0722683	20	—	—
380667	2005	<i>EV</i> ₂₅₇	16.2	X	104.26559	193.58707	193.50365	11.29692	0.1029479	0.18529688	3.0471276	20	1 17.3	20.6
380668	2005	<i>EA</i> ₂₇₉	16.3	X	45.24022	287.77412	185.35156	9.35028	0.1063065	0.18949477	3.0019577	20	2 11.1	20.0
380669	2005	<i>EV</i> ₂₈₁	15.7	X	251.17677	130.62448	116.00163	10.13486	0.0900355	0.18313326	3.0710807	20	1 5.4	20.3
380670	2005	<i>EO</i> ₂₈₂	15.5	X	134.56570	327.98879	9.11870	11.24845	0.0872344	0.17815065	3.1280795	20	—	—
380671	2005	<i>GZ</i> ₁₉	16.2	X	293.58165	9.43040	204.48409	7.94341	0.0249996	0.18380832	3.0635568	20	1 19.6	20.7
380672	2005	<i>GL</i> ₂₃	18.1	X	135.06460	217.56379	57.69792	2.31817	0.1568996	0.29501347	2.2348145	20	—	—
380673	2005	<i>GN</i> ₂₅	16.7	X	277.61311	339.71624	222.76516	0.15662	0.1274437	0.18003543	3.1062094	20	—	—
380674	2005	<i>GF</i> ₃₉	16.3	X	141.59778	354.73581	16.73419	9.35468	0.0933599	0.18847843	3.0127397	20	2 14.1	20.9
380675	2005	<i>GH</i> ₄₅	17.4	X	184.90639	104.86253	121.55056	7.41721	0.1204234	0.29838745	2.2179360	20	—	—
380676	2005	<i>GN</i> ₅₁	16.4	X	31.93853	258.76636	199.39015	10.05618	0.0232496	0.18223504	3.0811639	20	1 3.4	20.8
380677	2005	<i>GX</i> ₅₂	16.0	X	104.46906	321.05985	40.26727	9.70984	0.0772412	0.17383583	3.1796295	20	—	—
380678	2005	<i>GO</i> ₇₆	16.0	X	120.73251	43.12262	26.51665	20.20201	0.2046923	0.19651594	2.9300218	20	4 11.2	20.5
380679	2005	<i>GS</i> ₇₉	15.2	X	245.10990	152.17560	78.54539	18.17569	0.1440769	0.17740833	3.1367992	20	—	—
380680	2005	<i>GK</i> ₈₀	15.7	X	232.25860	159.47056	79.92001	6.78411	0.0753125	0.17634550	3.1493902	20	—	—
380681	2005	<i>GN</i> ₉₅	18.1	X	292.42322	301.77446	183.56329	6.62529	0.0386229	0.29943761	2.2127473	20	—	—
380682	2005	<i>GK</i> ₉₈	15.6	X	79.20632	204.16497	303.21999	8.51181	0.1913092	0.20137218	2.8827240	20	5 28.3	19.7
380683	2005	<i>GY</i> ₁₀₃	15.3	X	246.56318	189.73813	57.45594	19.54604	0.1975008	0.17833254	3.1259521	20	—	—
380684	2005	<i>GZ</i> ₁₀₆	17.6	X	336.72502	61.10913	37.75462	7.66123	0.0350673	0.30299788	2.1953798	20	—	—
380685	2005	<i>GE</i> ₁₀₉	17.7	X	154.90809	168.93590	73.36630	2.53226	0.1218506	0.29332377	2.2433888	20	12 21.9	20.8
380686	2005	<i>GR</i> ₁₁₁	18.0	X	179.05076	46.37538	201.47575	3.80471	0.1070347	0.29893289	2.2152373	20	—	—
380687	2005	<i>JG</i> ₅	15.4	X	121.28449	284.04780	117.74339	16.22746	0.0803619	0.18223166	3.0812019	20	2 26.8	20.0
380688	2005	<i>JA</i> ₁₃	16.3	X	321.99076	151.13203	39.13354	11.03384	0.0281115	0.18519487	3.0482464	20	1 30.7	20.7
380689	2005	<i>JB</i> ₁₇	17.0	X	124.29333	310.42371	317.65027	6.66053	0.1288506	0.29148452	2.2528160	20	12 23.5	20.4
380690	2005	<i>JW</i> ₂₄	16.6	X	294.71799	4.18797	172.93522	1.61180	0.0494660	0.17610279	3.1522832	20	—	—
380691	2005	<i>JW</i> ₂₇	15.4	X	229.60428	139.76676	107.03926	17.92168	0.1946100	0.17495506	3.1660544	20	—	—
380692	2005	<i>JJ</i> ₃₂	18.0	X	133.31709	22.57869	224.54468	7.75350	0.0769173	0.28910998	2.2651345	20	12 6.2	21.2
380693	2005	<i>JY</i> ₃₅	15.7	X	340.01893	81.72766	88.95782	10.44326	0.0336560	0.18114758	3.0934827	20	1 27.4	20.0
380694	2005	<i>JU</i> ₅₉	17.4	X	173.63109	71.31496	124.83803	4.73239	0.0383921	0.28782815	2.2718546	20	11 19.9	20.2
380695	2005	<i>JP</i> ₆₀	15.1	X	220.20002	186.91480	66.20301	30.36527	0.1637694	0.17296352	3.1903111	20	—	—
380696	2005	<i>JB</i> ₈₂	15.8	X	228.89933	165.78002	100.06368	11.51813	0.1074674	0.17710159	3.1404201	20	1 5.7	20.6
380697	2005	<i>JV</i> ₈₃	16.2	X	253.27395	8.60971	211.64362	3.16990	0.1520128	0.17539826	3.1607188	20	—	—
380698	2005	<i>JK</i> ₈₅	15.4	X	243.24816	166.93216	60.61447	30.11197	0.1993078	0.17404157	3.1771232	20	—	—
380699	2005	<i>JE</i> ₈₈	16.7	X	343.22983	326.32084	221.15384	4.23561	0.1482659	0.19124548	2.9836092	20	2 4.4	20.3
380700	2005	<i>JM</i> ₁₁₁	15.2	X	209.14980	237.07492	47.08773	16.41969	0.0445376	0.17935215	3.1140936	20	1 9.5	20.1
380701	2005	<i>JK</i> ₁₁₇	15.7	X	72.64896	336.36791	86.03561	12.52651	0.1319255	0.17843250	3.1247846	20	1 28.0	19.8
380702	2005	<i>JE</i> ₁₃₃	16.1	X	0.83645	337.79206	193.65289	7.65124	0.2030683	0.18787784	3.0191569	20	2 8.5	19.5
380703	2005	<i>JS</i> ₁₄₁	15.7	X	290.18084	157.39744	69.54878	10.36934	0.1348047	0.18218922	3.0816804	20	1 20.1	20.3
380704	2005	<i>JR</i> ₁₅₇	15.3	X	232.17234	174.51113	50.35997	28.12957	0.1218977	0.17147327	3.2087689	20	—	—
380705	2005	<i>KT</i> ₃	15.6	X	191.26220	256.79497	59.28914	11.67130	0.1020385	0.18204189	3.0833429	20	1 28.2	20.1
380706	2005	<i>KH</i> ₆	17.2	X	17.34945	222.34749	69.76583	11.41882	0.2647217	0.27052602	2.3677182	20	10 12.4	19.7
380707	2005	<i>LE</i> ₃₉	15.3	X	264.61992	121.67600	91.57719	25.77922	0.1152746	0.17425429	3.1745371	20	—	—
380708	2005	<i>LG</i> ₅₃	18.0	X	317.89141	44.61800	290.69575	3.16037	0.2156355	0.26003954	2.4309524	20	7 8.6	20.1
380709	2005	<i>MK</i> ₁₉												

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>		
380721	2005	QL ₁₃₁	17.1	X	288.97639	353.36319	47.73767	3.10409	0.2177072	0.26085584	2.4258783	20	8 24.2	19.4
380722	2005	QY ₁₃₃	17.9	X	15.56801	301.42233	353.11278	1.83829	0.1827332	0.26281146	2.4138291	20	9 19.4	20.0
380723	2005	QO ₁₃₉	17.4	X	308.30670	3.89397	18.01421	3.16147	0.0911312	0.26258553	2.4152134	20	9 17.8	20.0
380724	2005	QD ₁₄₁	17.2	X	27.10646	150.55696	145.66487	5.24270	0.1507292	0.26531277	2.3986338	20	10 9.3	19.8
380725	2005	QN ₁₅₈	17.8	X	18.03531	199.90619	107.87746	3.59916	0.1826397	0.26486664	2.4013265	20	10 16.4	20.3
380726	2005	QZ ₁₇₇	17.4	X	291.19256	104.39029	310.30391	1.82342	0.2126575	0.26211344	2.4181126	20	9 17.5	19.7
380727	2005	QE ₁₈₃	17.3	X	339.85723	99.99535	272.55891	4.50975	0.1712100	0.26700874	2.3884660	20	11 4.9	19.4
380728	2005	RM ₁₃	17.3	X	230.69963	356.22913	354.34585	16.52309	0.2594394	0.24595874	2.5228681	20	3 30.2	21.8
380729	2005	RX ₃₀	16.6	X	305.38346	110.38499	284.50125	7.91908	0.3246635	0.26012559	2.4304163	20	8 24.1	18.4
380730	2005	RH ₃₂	17.8	X	199.00746	75.60032	2.30716	18.88660	0.0815028	0.38495538	1.8715257	20	7 15.9	20.4
380731	2005	RU ₄₇	17.2	X	287.01058	10.86092	49.96300	8.37736	0.1294200	0.26211280	2.4181166	20	10 6.5	19.8
380732	2005	SB ₇	17.5	X	277.62293	194.89570	203.26431	3.73675	0.2009479	0.25665003	2.4523089	20	7 30.5	20.3
380733	2005	SY ₇	16.8	X	313.06098	263.73902	111.92852	6.83733	0.1081765	0.26257396	2.4152844	20	9 18.6	19.3
380734	2005	SW ₂₂	17.4	X	284.33333	338.31810	33.63904	5.73586	0.2019424	0.25518110	2.4617109	20	7 1.0	20.3
380735	2005	SP ₂₆	17.3	X	268.09808	3.90974	49.50048	2.78862	0.1654606	0.25787072	2.4445637	20	8 16.2	20.3
380736	2005	SJ ₂₇	17.7	X	9.96794	337.44341	310.29398	4.55824	0.2264004	0.25946727	2.4345255	20	9 2.1	19.6
380737	2005	SE ₃₉	17.9	X	287.19862	188.72101	185.75556	2.16848	0.2065436	0.25541135	2.4602312	20	7 10.8	20.5
380738	2005	SM ₄₉	17.3	X	314.58865	337.82867	39.27965	2.04751	0.1919880	0.25985614	2.4320961	20	9 13.8	19.1
380739	2005	SA ₇₂	17.1	X	289.19840	43.69284	359.92619	3.50825	0.2414111	0.25917531	2.4363535	20	8 23.2	19.4
380740	2005	SK ₈₇	17.3	X	84.92795	233.11660	36.41314	1.91863	0.1656575	0.26903601	2.3764523	20	11 14.3	20.9
380741	2005	SM ₈₉	16.9	X	228.68698	355.10272	15.87175	15.27736	0.1319628	0.24302230	2.5431499	20	4 30.4	21.0
380742	2005	SW ₉₇	17.2	X	335.21772	67.79802	256.89309	5.56837	0.1417496	0.25669797	2.4520035	20	8 4.8	19.5
380743	2005	SR ₁₀₂	17.3	X	245.12895	197.75259	272.79821	4.13628	0.1785517	0.26134069	2.4228770	20	9 27.7	20.6
380744	2005	SU ₁₁₀	18.0	X	272.88582	152.03150	244.51106	0.54940	0.1917092	0.25509401	2.4622712	20	7 23.7	20.9
380745	2005	SW ₁₁₄	17.9	X	319.73421	0.69512	337.72585	1.59747	0.2201018	0.25706666	2.4496585	20	7 17.6	19.8
380746	2005	SF ₁₁₆	17.9	X	328.09918	46.76908	294.65548	0.56984	0.1883600	0.25879031	2.4387692	20	8 16.4	19.8
380747	2005	SJ ₁₂₃	17.7	X	298.30601	8.86828	32.45488	2.51525	0.1802440	0.26135617	2.4227813	20	9 18.2	19.7
380748	2005	SH ₁₃₉	17.6	X	267.54332	23.48722	69.30433	2.20980	0.1505927	0.26396886	2.4067681	20	10 14.4	20.2
380749	2005	SE ₁₄₃	16.8	X	69.69138	230.16255	24.41341	9.55210	0.0943829	0.26201174	2.4187383	20	10 1.3	19.9
380750	2005	SA ₁₄₄	17.2	X	129.02203	15.19632	165.80736	6.63425	0.0222439	0.25710824	2.4493944	20	8 26.3	20.4
380751	2005	SF ₁₄₅	18.2	X	315.09671	210.17282	124.40096	2.43737	0.1946376	0.25592876	2.4569142	20	7 3.9	20.3
380752	2005	SO ₁₅₉	17.1	X	335.65212	42.46503	283.76220	7.09430	0.1855233	0.25846079	2.4408416	20	8 7.3	19.1
380753	2005	SC ₁₆₀	17.5	X	324.39029	336.64522	6.86515	2.57014	0.2038462	0.26091959	2.4254831	20	8 10.9	19.1
380754	2005	SS ₁₉₀	17.5	X	277.32387	322.32044	61.56303	3.09007	0.2174185	0.25407652	2.4688405	20	7 8.0	20.6
380755	2005	SG ₂₀₀	17.7	X	195.42571	95.74508	37.29056	2.03755	0.1262548	0.25799183	2.4437986	20	9 9.2	21.1
380756	2005	SU ₂₅₃	17.6	X	333.88237	84.50036	255.19974	0.46223	0.2005319	0.26285018	2.4135920	20	8 28.8	19.4
380757	2005	ST ₂₆₁	17.9	X	303.48277	232.31007	198.96814	7.10357	0.2314161	0.26717575	2.3874705	20	11 15.5	19.4
380758	2005	SG ₂₆₈	17.3	X	287.05554	29.50644	326.98145	6.04754	0.1331369	0.25337286	2.4734093	20	6 27.6	20.3
380759	2005	TL ₅	16.9	X	336.56231	114.47020	289.91176	5.11386	0.1124236	0.26840495	2.3801758	20	12 12.2	19.3
380760	2005	TK ₄₃	17.4	X	353.61120	172.75267	168.72485	1.15945	0.2019933	0.26423735	2.4051375	20	10 21.8	19.2
380761	2005	TN ₆₃	17.7	X	44.37205	118.45809	201.19359	4.42911	0.2458144	0.27371551	2.3492890	20	12 16.1	21.1
380762	2005	TW ₇₁	16.7	X	302.62390	8.75927	9.35438	16.10093	0.1899570	0.26082400	2.4260757	20	8 26.9	19.2
380763	2005	TQ ₈₇	17.8	X	259.23952	25.27890	45.06775	3.13052	0.1677982	0.25785452	2.4446661	20	8 27.4	20.9
380764	2005	TM ₁₁₆	17.8	X	357.28833	110.40894	209.46202	6.50618	0.1116798	0.26046103	2.4283291	20	9 10.9	20.3
380765	2005	TM ₁₂₇	17.7	X	242.53385	277.23212	209.68356	5.09428	0.0544935	0.26613337	2.3937006	20	11 9.1	20.4
380766	2005	TZ ₁₃₈	17.7	X	353.13984	271.32937	48.58861	4.21489	0.2037959	0.26019547	2.4299811	20	9 16.7	19.6
380767	2005	TA ₁₅₃	17.3	X	251.57727	310.39491	127.85052	2.05348	0.1604524	0.25944789	2.4346467	20	8 28.1	20.5
380768	2005	TU ₁₈₈	17.5	X	199.70313	210.51877	327.64151	3.43104	0.0810970	0.26706210	2.3881479	20	11 16.4	20.8
380769	2005	UZ ₆₅	16.6	X	245.23029	213.65063	234.58385	5.30191	0.0952835	0.25729235	2.4482258	20	9 9.2	19.8
380770	2005	US ₉₀	17.1	X	292.96780	105.91083	270.14455	5.14737	0.1263612	0.25380488	2.4706017	20	8 4.4	19.9
380771	2005	UV ₂₀₉	17.5	X	283.52206	107.64637	341.52954	1.70725	0.1773942	0.26369495	2.4084345	20	10 31.6	19.6
380772	2005	UZ ₂₁₅	17.8	X	251.09800	13.33907	56.08687	6.12436	0.2697623	0.25264582	2.4781522	20	7 31.6	21.4
380773	2005	UF ₂₂₃	17.1	X	99.51604	213.92312	14.25633	6.32936	0.0913831	0.25755206	2.4465797	20	9 29.8	20.3
380774	2005	UX ₂₄₂	16.5	X	299.37139	91.08398	274.81898	5.12186	0.1688266	0.25209225	2.4817787	20	7 25.0	19.1
380775	2005	UV ₃₁₅	17.9	X	281.61405	338.27698	103.90941	2.27372	0.1501231	0.26115378	2.4240329	20	10 22.8	20.3
380776	2005	UV ₃₂₈	17.2	X	124.74732	197.62296	48.65731	6.90762	0.0969846	0.26643661	2.3918840	20	11 20.7	20.6
380777	2005	UZ ₃₄₉	16.9	X	283.80543	308.75307	92.57515	9.66915	0.2069803	0.25533957	2.4606923	20	8 17.9	19.7
380778	2005	UF ₃₅₃	16.9	X	197.97170	16.13105	23.67008	11.48217	0.1164336	0.23938816	2.5688236	20	5 8.3	20.9
380779	2005	UO ₄₀₃	15.7	X	281.12090	349.99075	103.40663	3.77541	0.2049250	0.12530913	3.9550098	20	10 1.6	21.0
380780	2005	UT ₅₁₀	16.5	X	344.31069	193.37957	67.02066	16.04686	0.1406849	0.23822296	2.5771932	20	5 17.1	19.1
380781	2005	UN ₅₁₃	16.1	X	248.67103	162.61058	324.40092	2.05981	0.1703055	0.12476974	3.9664002	20	10 5.3	21.9
380782	2005	UN ₅₁₃	16.6	X	265.85644	100.25239	3.02196	1.30176	0.2634635	0.12523704	3.9565274	20	9 15.3	22.3
380783	2005	UD ₅₂₁	17.2	X	125.75118	180.70975	34.16776	7.49647	0.0424804	0.26383062	2.4076088	20	10 11.6	20.3
380784	2005	UO ₅₃₁	17.6	X	244.74874	276.72815	29.92805	21.12477	0.0673028	0.36606426	1.9353722	20	3 5.5	20.3
380785	2005	VW ₅	18.5	X	288.26819	140.05459	176.92336	3.70376	0.3289817	0.31371748	2.1450804	20	4 1.2	21.2
380786	2005	VF ₈₈	15.1	X	277.15723	19.28835	74.11044	11.96368	0.1484864	0.12590775	3.9424640	20	10 8.5	20.6
380787	2005	VH ₁₁₉	18.4	X	89.06951	75.76408	67.78656	23.13211	0.0586193	0.36975017	1.9224887	20	5 17.3	20.2
380788	2005	VD ₁₃₅	15.7	X	267.49333	358.67407	119.54905	3.89895	0.1764684	0.12548897	3.9512303	20	10 17.7	21.3
380789	2005	WT ₄	16.3	X	264.25729	110.47174	333.97683	10.04978	0.1417878	0.25685218	2.			

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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>		
380801	2005	WA ₁₆₄	17.4	X	231.64900	153.25405	272.10465	3.96541	0.1994515	0.24602157	2.5224385	20	7 11.4	21.1
380802	2005	WC ₁₆₆	18.0	X	218.86753	161.46390	260.61368	2.48444	0.2369361	0.24304740	2.5429748	20	6 22.1	22.1
380803	2005	WK ₁₇₇	17.1	X	268.62516	276.11555	55.49639	4.03510	0.1031581	0.23362308	2.6109119	20	5 2.8	20.5
380804	2005	XC ₄₃	17.2	X	219.09512	330.23283	66.23547	16.02781	0.0615626	0.23931494	2.5693475	20	6 1.6	20.7
380805	2005	XF ₈₁	17.2	X	73.42700	308.28273	274.93883	4.29642	0.0857417	0.24392069	2.5369016	20	8 16.8	20.6
380806	2005	YW ₆	18.1	X	157.64433	30.24852	87.00327	5.05275	0.1733224	0.23770864	2.5809093	20	7 10.4	22.2
380807	2005	YJ ₂₃	16.7	X	310.50815	173.49289	105.13038	5.81343	0.0691835	0.22752672	2.6573440	20	4 26.3	20.1
380808	2005	YN ₂₉	16.9	X	245.55715	304.31185	81.06427	2.56516	0.1576416	0.23905067	2.5712407	20	6 8.2	20.7
380809	2005	YB ₃₈	16.8	X	216.70918	49.22394	27.75563	12.67182	0.2020910	0.24199952	2.5503104	20	7 14.1	21.1
380810	2005	YL ₅₀	17.4	X	197.54755	127.27611	275.39300	17.79733	0.0644637	0.36805185	1.9283982	20	5 9.4	20.0
380811	2005	YS ₅₃	16.8	X	123.36688	88.12177	106.69316	4.30318	0.0961064	0.24156842	2.5533437	20	9 12.9	20.5
380812	2005	YS ₅₆	17.1	X	296.52712	58.48907	287.03999	6.72882	0.0251321	0.24286068	2.5442781	20	7 11.9	20.1
380813	2005	YU ₆₀	17.1	X	199.31835	342.77822	102.08312	7.10757	0.1085413	0.23896807	2.5718332	20	7 10.7	20.7
380814	2005	YQ ₈₆	16.5	X	271.06528	264.36523	99.52127	4.63756	0.2449488	0.24256333	2.5463570	20	5 29.0	20.2
380815	2005	YW ₉₈	17.5	X	171.55708	81.52696	299.33329	17.11858	0.0991611	0.36010349	1.9566711	20	2 29.2	20.3
380816	2005	YZ ₉₉	17.1	X	105.46595	239.30063	306.86328	5.46627	0.1047376	0.23845736	2.5755040	20	8 10.1	20.6
380817	2005	YI ₁₂₆	18.1	X	190.06965	111.55855	12.85270	2.68443	0.0476326	0.24417657	2.5351290	20	8 27.1	21.6
380818	2005	YV ₁₂₈	20.6	X	172.00897	191.79661	127.72412	14.14056	0.5123665	1.11138878	0.9230503	20	—	—
380819	2005	YV ₁₃₄	16.7	X	214.07701	12.13180	70.13696	7.43450	0.1499611	0.24199222	2.5503617	20	7 21.3	20.6
380820	2005	YB ₁₃₈	16.8	X	220.52786	115.72794	304.83542	4.47287	0.1426629	0.23977297	2.5660743	20	6 29.1	20.8
380821	2005	YQ ₁₄₃	17.3	X	144.10231	357.63492	94.69435	4.50679	0.1512336	0.22869292	2.6483024	20	5 25.8	21.4
380822	2005	YD ₁₆₈	17.5	X	212.44359	203.62484	208.07801	2.17514	0.1449485	0.23672979	2.5880189	20	6 8.8	21.6
380823	2005	YT ₁₈₅	17.1	X	121.73022	42.48354	105.05046	6.63266	0.1755632	0.23352360	2.6116533	20	7 15.0	21.1
380824	2005	YL ₂₀₇	17.1	X	58.15058	93.29737	94.25557	3.32044	0.0178254	0.22840523	2.6505257	20	5 28.3	20.6
380825	2005	YC ₂₀₈	17.3	X	207.46701	28.37612	83.81574	8.03255	0.2037459	0.24509640	2.5287822	20	8 20.3	21.4
380826	2005	YP ₂₁₉	16.9	X	205.97601	106.51240	9.37774	11.10225	0.1715460	0.24537055	2.5268983	20	8 27.3	20.9
380827	2005	YE ₂₂₁	16.0	X	127.74754	233.69645	286.49126	12.20746	0.2015376	0.23123533	2.6288547	20	8 4.6	20.4
380828	2005	YV ₂₂₈	16.3	X	249.38016	207.23094	125.52621	13.28793	0.1980767	0.22619488	2.6677648	20	4 7.7	20.7
380829	2005	YD ₂₃₈	17.4	X	128.04818	27.20563	104.49320	6.10350	0.1643247	0.23374065	2.6100363	20	6 29.8	21.5
380830	2005	YE ₂₈₈	16.2	X	197.53564	109.37723	3.01780	15.31941	0.1593201	0.24242860	2.5473003	20	8 17.0	20.4
380831	2005	YY ₂₉₀	17.2	X	66.73778	232.99008	338.72521	2.67647	0.0345472	0.23475477	2.6025142	20	7 15.8	20.5
380832	2006	AC	16.5	X	242.23341	221.39545	169.92092	5.33608	0.2831092	0.24192836	2.5508105	20	5 31.8	20.7
380833	2006	AN ₂₁	17.1	X	204.25247	49.24003	54.21223	6.11465	0.1915114	0.24194285	2.5507087	20	8 5.9	21.3
380834	2006	AO ₂₂	15.8	X	155.52896	107.59085	61.91721	13.93096	0.1035877	0.24000854	2.5643950	20	9 20.8	19.9
380835	2006	AE ₃₂	17.2	X	198.91665	18.61181	79.80983	12.65771	0.2267325	0.24063630	2.5599331	20	7 22.9	21.6
380836	2006	AL ₃₇	16.3	X	256.13659	199.47554	111.02494	6.04342	0.1155402	0.22106700	2.7088613	20	3 23.6	20.3
380837	2006	AY ₃₈	17.4	X	207.68756	115.75677	310.37282	1.50934	0.1415002	0.23717237	2.5847962	20	6 22.8	21.3
380838	2006	AD ₅₆	16.7	X	124.30591	290.49601	282.53251	12.24011	0.1121053	0.24493879	2.5298689	20	9 29.7	20.8
380839	2006	AP ₅₇	16.2	X	195.39597	80.18971	64.94404	14.97796	0.1005276	0.24623312	2.5209936	20	10 3.3	20.1
380840	2006	AK ₆₇	15.8	X	290.29762	25.33679	287.31788	14.17702	0.1159324	0.22958062	2.6414713	20	4 28.6	19.6
380841	2006	AG ₆₈	16.5	X	205.49110	105.09555	300.67335	16.08103	0.2589530	0.23488303	2.6015667	20	5 17.9	21.4
380842	2006	AA ₇₉	16.1	X	31.82982	300.71988	298.11162	12.17613	0.1287579	0.23071401	2.6328133	20	7 14.8	19.0
380843	2006	AY ₉₆	15.8	X	44.82775	279.68678	288.41974	14.10018	0.1605371	0.22588631	2.6701937	20	6 27.2	18.9
380844	2006	AG ₁₀₄	17.8	X	220.10266	121.62886	294.63901	1.74498	0.2121091	0.23854947	2.5748410	20	6 17.4	22.0
380845	2006	BC ₃	17.0	X	143.05347	260.51193	267.61571	7.20213	0.1573727	0.24448542	2.5329935	20	8 27.0	21.2
380846	2006	BN ₇	16.7	X	159.08011	60.77118	85.83554	30.04453	0.3739686	0.23629317	2.5912060	20	8 26.8	22.2
380847	2006	BX ₂₂	16.8	X	185.42273	116.61035	337.09827	14.96005	0.1451781	0.23217979	2.6217208	20	7 9.2	21.2
380848	2006	BO ₂₅	16.4	X	156.08533	328.41521	144.37010	8.46450	0.0584132	0.23176244	2.6248672	20	6 28.9	20.3
380849	2006	BY ₂₅	16.6	X	71.58654	24.85284	136.18707	12.70830	0.1454025	0.22450269	2.6811535	20	6 2.1	20.3
380850	2006	BW ₅₄	16.1	X	73.55430	290.31826	302.49140	16.18802	0.1634295	0.23396333	2.6083799	20	9 3.1	20.0
380851	2006	BQ ₇₅	17.4	X	144.62149	45.91051	91.26758	3.58448	0.1573587	0.23392680	2.6086515	20	7 23.2	21.5
380852	2006	BZ ₇₈	16.6	X	156.84906	353.10903	136.76617	16.76845	0.1422528	0.23288489	2.6164263	20	7 24.3	20.8
380853	2006	BT ₁₀₇	17.4	X	164.48332	217.18362	265.07732	4.12543	0.1794343	0.23610406	2.5925894	20	7 22.0	21.6
380854	2006	BN ₁₀₁	17.5	X	118.55996	88.14666	55.70077	1.62935	0.0363552	0.23130520	2.6283253	20	6 22.1	20.9
380855	2006	BZ ₁₂₀	17.5	X	179.50908	168.21279	288.32218	3.98902	0.1264177	0.23298326	2.6156898	20	7 4.2	21.5
380856	2006	BZ ₁₂₁	17.0	X	325.13404	84.52872	157.22612	3.81947	0.1438750	0.21404133	2.7678186	20	3 17.7	20.3
380857	2006	BG ₁₂₄	17.0	X	204.52467	59.31180	353.68782	2.37742	0.1071287	0.22894777	2.6463367	20	6 3.8	21.0
380858	2006	BY ₁₃₀	17.3	X	162.89083	301.63672	163.75207	2.76661	0.1246627	0.22975203	2.6401573	20	6 28.5	21.5
380859	2006	BN ₁₃₉	17.1	X	182.56861	146.41578	312.70600	0.78822	0.2122942	0.23370436	2.6103065	20	7 8.9	21.6
380860	2006	BL ₁₄₀	16.8	X	320.14202	151.75550	130.56717	4.03155	0.0683938	0.23027318	2.6361724	20	5 14.6	20.0
380861	2006	BR ₁₅₀	17.5	X	151.34566	26.12898	87.38864	8.43553	0.1595999	0.23601159	2.5932666	20	6 28.9	21.7
380862	2006	BZ ₁₅₄	17.0	X	143.30476	347.52083	105.28846	3.83120	0.1431462	0.22558301	2.6725866	20	5 25.2	21.1
380863	2006	BJ ₁₅₈	16.8	X	166.73264	306.88188	151.17428	9.62958	0.1979357	0.23104808	2.6302749	20	6 24.3	21.3
380864	2006	BE ₁₈₂	17.2	X	205.26168	17.67662	5.08620	1.84108	0.0985642	0.22402220	2.6849859	20	4 27.1	21.3
380865	2006	BF ₂₁₇	17.2	X	123.46778	153.63165	331.28259	3.70938	0.1978869	0.22874714	2.6478839	20	6 19.2	21.5
380866	2006	BP ₂₁₇	16.1	X	144.75368	240.19512	265.68341	16.02479	0.1583700	0.23442496	2.6049546	20	7 28.9	20.5
380867	2006	BV ₂₂₁	16.9	X	284.57996	157.14128	152.55455	6.33281	0.0276165	0.22409573	2.6843985	20	5 8.1	20.5
380868	2006	BC ₂₄₁	16.7	X	233.68371	267.14590	120.41170	6.12419	0.2921899	0.23596437	2.5936125	20	5 20.1	21.3
380869	2006	BF ₂₅₃	17.3	X	156.18546	224.08780	230.42084	0.49023	0.0292496	0.22700082	2.6			

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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>		
380881	2006	DA ₁₉	16.7	X	27.17977	237.66541	351.81614	8.23177	0.0934801	0.22489619	2.6780251	20	6 17.6	20.0
380882	2006	DY ₁₉	17.3	X	307.32067	133.63323	101.03580	2.00183	0.0193461	0.21273093	2.7791733	20	3 1.8	21.1
380883	2006	DO ₂₂	16.7	X	59.30494	64.92629	123.99293	3.47658	0.0872806	0.22269126	2.6956734	20	6 10.8	20.0
380884	2006	DB ₃₉	17.4	X	124.31445	246.75779	254.94266	0.43498	0.1405987	0.22733244	2.6588578	20	7 6.8	21.4
380885	2006	DD ₄₀	16.5	X	181.20330	201.66305	279.91829	11.57729	0.1919429	0.23693477	2.5865260	20	8 2.7	20.9
380886	2006	DE ₄₁	16.0	X	123.12479	207.14707	303.03160	12.58186	0.1301667	0.23127775	2.6285333	20	7 16.7	20.0
380887	2006	DZ ₄₁	16.5	X	180.91208	88.74121	3.21255	28.91269	0.2945876	0.23428053	2.6060251	20	6 30.9	21.8
380888	2006	DS ₄₂	17.1	X	209.91679	45.86524	340.18277	7.49884	0.1242561	0.22485758	2.6783317	20	5 2.4	21.3
380889	2006	DV ₄₈	16.1	X	46.88279	25.75713	153.41496	6.28797	0.0153088	0.21901566	2.7257494	20	5 3.1	19.7
380890	2006	DT ₄₉	16.1	X	39.83204	177.12884	356.05617	13.28621	0.1066491	0.21758036	2.7377235	20	4 16.4	19.5
380891	2006	DT ₅₄	16.5	X	5.18324	262.27865	353.87371	15.11534	0.0258289	0.22385357	2.6863341	20	6 15.7	20.3
380892	2006	DA ₆₈	16.5	X	105.26910	257.28647	274.23257	11.66242	0.2049898	0.22823671	2.6518302	20	7 29.0	20.8
380893	2006	DB ₈₉	13.6	X	196.70796	222.64271	171.91151	7.16974	0.0250599	0.08028453	5.3216722	20	5 10.9	20.8
380894	2006	DE ₉₀	16.7	X	206.37987	234.93521	163.57069	2.19911	0.1031482	0.22240731	2.6979673	20	5 19.3	20.8
380895	2006	DT ₉₉	17.1	X	14.14209	62.78865	123.39988	4.66975	0.0296859	0.21439550	2.7647696	20	3 29.0	20.7
380896	2006	DE ₁₁₁	15.7	X	1.13520	201.93745	25.47048	17.84832	0.1123536	0.21790880	2.7349719	20	4 27.6	18.8
380897	2006	DZ ₁₁₁	15.9	X	196.00473	27.28791	327.93310	7.70590	0.2349979	0.21490200	2.7604237	20	3 13.4	20.7
380898	2006	DX ₁₁₂	16.3	X	56.12916	185.54419	359.90640	14.60680	0.1182374	0.22047186	2.7137340	20	6 2.2	20.0
380899	2006	DS ₁₁₅	17.1	X	187.63054	276.93373	170.71154	12.96559	0.2357009	0.23061018	2.6336035	20	6 27.9	21.9
380900	2006	DB ₁₂₁	16.4	X	128.03604	150.42287	353.38145	15.09287	0.0936192	0.23033667	2.6356880	20	7 13.7	20.5
380901	2006	DX ₁₂₆	16.7	X	242.98119	143.75814	163.92644	13.11112	0.0879148	0.21318101	2.7752602	20	3 6.4	20.7
380902	2006	DM ₁₃₃	16.5	X	328.36359	123.94065	141.11140	10.12219	0.0875581	0.21897795	2.7260624	20	5 4.1	20.0
380903	2006	DN ₁₄₅	17.0	X	220.68881	151.05075	5.34712	5.12813	0.1269120	0.21781917	2.7357221	20	4 8.5	21.3
380904	2006	DF ₁₅₆	16.1	X	230.33339	24.25080	353.79536	14.62955	0.1821656	0.22565462	2.6720212	20	5 5.9	20.6
380905	2006	DT ₁₇₃	16.4	X	183.50005	302.90247	1.20746	11.19384	0.1597163	0.21921487	2.7240979	20	4 16.9	20.9
380906	2006	DB ₁₇₉	16.6	X	38.01741	44.72053	167.34715	7.08941	0.1767553	0.22134296	2.7066093	20	6 22.6	19.7
380907	2006	DC ₁₈₈	16.1	X	353.89805	204.63187	12.34399	10.20653	0.0615524	0.21304940	2.7764030	20	4 6.1	19.5
380908	2006	DO ₁₉₃	17.8	X	76.84311	113.82803	10.48837	19.93754	0.0780408	0.35494511	1.9755829	20	3 27.3	19.3
380909	2006	DO ₁₉₅	16.7	X	150.86412	167.14230	315.83002	4.11269	0.1184598	0.23111648	2.6297559	20	7 9.4	20.8
380910	2006	DO ₂₁₃	16.5	X	225.84800	7.10612	340.91851	2.14343	0.0498470	0.21873702	2.7280638	20	4 8.4	20.4
380911	2006	DA ₂₁₇	16.4	X	190.85236	312.14903	93.74816	4.36399	0.1743973	0.22445273	2.6815514	20	5 12.0	20.7
380912	2006	EY ₇	17.3	X	108.57921	310.41694	133.71268	0.97064	0.0448904	0.21277217	2.7788142	20	3 24.2	20.9
380913	2006	ED ₂₅	17.2	X	182.18132	56.22642	342.64646	5.83333	0.0780958	0.22089652	2.7102549	20	4 21.3	21.2
380914	2006	EE ₃₀	17.6	X	176.76826	55.32877	35.19837	2.76992	0.2091648	0.23088044	2.6315480	20	6 23.2	22.0
380915	2006	EW ₄₀	16.8	X	215.32129	271.22793	64.08702	1.40216	0.0752621	0.20927677	2.8096703	20	3 12.4	20.8
380916	2006	EL ₇₃	17.2	X	91.71621	96.83001	22.49067	4.55830	0.0197077	0.21489955	2.7604447	20	4 12.6	20.7
380917	2006	EU ₇₃	16.4	X	239.15234	244.46638	11.86694	11.03511	0.2075027	0.12550071	3.9509839	20	1 6.9	21.1
380918	2006	FM ₂₀	14.6	X	297.90397	227.62305	32.47592	12.34790	0.0494271	0.20526692	2.8461432	20	3 22.2	20.3
380919	2006	FF ₂₇	16.2	X	238.12074	282.57039	33.64972	6.21569	0.0773099	0.20526185	2.8461900	20	3 15.4	20.4
380920	2006	FO ₅₁	15.3	X	134.10140	229.40960	30.20767	28.13579	0.2175309	0.17278557	3.1925012	20	11 24.6	21.1
380921	2006	GP ₂	15.8	X	155.09839	61.83573	87.89405	31.07438	0.2949566	0.23202688	2.6228725	20	8 27.5	21.1
380922	2006	GG ₇	17.0	X	111.33402	59.92220	137.01062	5.53465	0.2131789	0.23061870	2.6335387	20	9 9.7	21.2
380923	2006	GL ₂₀	16.9	X	106.22372	287.55815	187.04388	9.89952	0.1143598	0.21428636	2.7657082	20	5 10.8	20.9
380924	2006	GT ₃₅	16.4	X	43.36333	173.80926	28.27191	7.25522	0.1409588	0.21815797	2.7328890	20	6 11.0	19.6
380925	2006	GO ₄₃	16.8	X	350.99938	190.42604	39.06492	5.32356	0.0654000	0.21215312	2.7842171	20	4 19.5	20.3
380926	2006	HA	15.4	X	12.83295	154.25773	63.96611	26.66939	0.0916013	0.21550383	2.7552820	20	5 12.9	18.7
380927	2006	HA ₂	16.1	X	99.98839	144.28466	51.04365	14.47029	0.1903580	0.22641723	2.6660179	20	9 1.4	20.5
380928	2006	HJ ₃	18.0	X	126.07902	256.65032	54.52200	6.64708	0.2812772	0.31685722	2.1308865	20	—	—
380929	2006	HU ₃₀	19.6	X	308.65359	274.26280	44.64989	24.00654	0.4199171	0.56173862	1.4547215	20	4 9.5*	20.9
380930	2006	HA ₃₁	16.2	X	263.12115	185.06026	43.91360	13.68441	0.1229073	0.19224644	2.9732437	20	—	—
380931	2006	HE ₆₁	15.4	X	164.93882	12.54583	284.36266	10.40045	0.3241401	0.18046733	3.1012515	20	—	—
380932	2006	HQ ₇₃	16.1	X	216.69364	107.14537	204.62600	11.49916	0.0357749	0.19770082	2.9183032	20	2 12.6	20.5
380933	2006	HD ₇₄	16.5	X	317.23494	110.23973	91.74618	6.75662	0.0048404	0.19666822	2.9285092	20	2 7.3	20.6
380934	2006	HX ₇₅	16.2	X	146.79001	214.96909	111.87854	11.63496	0.1487752	0.18394760	3.0620102	20	—	—
380935	2006	HM ₈₂	16.8	X	196.06157	216.95179	58.29378	0.65259	0.0962193	0.18538008	3.0462158	20	—	—
380936	2006	HY ₈₇	16.3	X	37.94945	183.54584	22.48053	9.85566	0.1142126	0.21758443	2.7376894	20	6 2.6	19.6
380937	2006	JR ₉	16.5	X	129.25692	33.25998	42.69362	6.17499	0.0472963	0.20602773	2.8391321	20	4 10.2	20.6
380938	2006	JZ ₃₁	16.5	X	46.66147	55.54594	66.07901	13.40906	0.0174909	0.19891661	2.9063998	20	2 24.7	20.7
380939	2006	JV ₃₆	16.4	X	165.10835	205.95719	145.83444	12.89726	0.1041317	0.19290982	2.9664236	20	2 11.5	20.8
380940	2006	JX ₄₃	16.9	X	96.16258	314.38459	148.65189	2.58917	0.0191620	0.20520441	2.8467211	20	3 29.8	20.8
380941	2006	JR ₄₆	15.2	X	187.18916	40.82958	244.41477	15.44798	0.0479431	0.17470206	3.1691103	20	—	—
380942	2006	KP ₂	16.5	X	114.65622	101.57286	104.13729	13.79467	0.2155726	0.23087233	2.6316096	20	9 29.0	21.1
380943	2006	KG ₁₂	15.6	X	123.32921	206.82014	94.31494	15.81908	0.2629960	0.17363031	3.1821381	20	—	—
380944	2006	KD ₁₆	16.0	X	332.10221	147.64975	79.52971	16.10150	0.0879374	0.20365395	2.8611513	20	3 26.7	20.0
380945	2006	KS ₂₂	15.6	X	193.29750	195.97909	84.41516	14.36706	0.1409870	0.18400257	3.0614004	20	—	—
380946	2006	KX ₂₆	16.6	X	103.01087	324.35607	168.23806	11.84629	0.1093965	0.21477867	2.7614803	20	5 30.0	20.7
380947	2006	KL ₃₃	16.2	X	170.36845	15.93948	68.03342	10.18016	0.1410515	0.21543027	2.7559092	20	6 8.3	20.7
380948	2006	KR ₄₁	15.9	X	167.05609	228.10325	70.35266	28.66668	0.1505798	0.18161398	3.0881843	20	—	—
380949	2006	KL ₅₇	16.7	X	195.17063	156.67470	176.77858	5.74116	0.0687062	0.19534243	2.9417448	20	2 17.7	21.2
380950	2006	KB ₆₇	16.6	X	97.96823	291.729								

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>		
380961	2006	<i>QX</i> ₃₅	17.6	X	81.74904	297.14525	21.54594	5.77853	0.2098181	0.29942814	2.2127939	20	—	—
380962	2006	<i>QW</i> ₄₂	17.5	X	86.11572	185.38501	127.71314	7.02612	0.2137782	0.29999898	2.2099860	20	—	—
380963	2006	<i>QV</i> ₅₉	17.8	X	93.31727	86.51624	203.32026	6.48801	0.2705674	0.29950528	2.2124140	20	12 26.8	21.8
380964	2006	<i>QQ</i> ₇₅	16.0	X	26.95519	144.66089	343.23846	12.32197	0.0853365	0.17747604	3.1360012	20	2 8.1	20.0
380965	2006	<i>QS</i> ₁₁₇	17.9	X	12.80925	38.81263	334.16420	6.69057	0.2260849	0.29316462	2.2442006	20	—	—
380966	2006	<i>QZ</i> ₁₄₁	17.7	X	83.94967	10.53914	291.88454	6.24048	0.1977688	0.29769726	2.2213628	20	12 31.9	21.1
380967	2006	<i>QT</i> ₁₆₁	18.0	X	24.57151	355.28929	338.35988	4.43415	0.2563432	0.29005386	2.2602178	20	12 16.9	20.9
380968	2006	<i>RQ</i> ₃₉	17.5	X	111.56473	166.30727	131.61016	3.15171	0.2049438	0.30184755	2.2009539	20	—	—
380969	2006	<i>RW</i> ₆₂	17.7	X	15.29147	257.14048	116.82642	2.98550	0.1964930	0.29351660	2.2424061	20	—	—
380970	2006	<i>RF</i> ₇₀	18.4	X	312.87482	92.57565	356.78372	3.38976	0.1058066	0.29371910	2.2413753	20	—	—
380971	2006	<i>RG</i> ₇₂	17.9	X	145.94115	272.43541	4.09848	2.98197	0.1284222	0.30274087	2.1966221	20	—	—
380972	2006	<i>RK</i> ₉₃	16.2	X	102.73281	219.86573	210.66071	8.83772	0.1014613	0.17350282	3.1836967	20	3 8.7	20.9
380973	2006	<i>SC</i> ₂₀	17.6	X	331.54888	44.73490	11.70632	5.16560	0.1751192	0.28807145	2.2705753	20	—	—
380974	2006	<i>SC</i> ₂₄	16.9	X	56.23843	278.37685	83.78327	6.98953	0.2114883	0.29593646	2.2301653	20	—	—
380975	2006	<i>SA</i> ₂₉	18.4	X	21.24709	113.73971	245.00894	3.11742	0.1764048	0.29439689	2.2379338	20	—	—
380976	2006	<i>SW</i> ₃₃	17.7	X	18.16511	150.25901	260.62219	2.82424	0.2113670	0.29832665	2.2182374	20	—	—
380977	2006	<i>SD</i> ₄₆	17.6	X	347.96998	5.39580	35.49118	5.11109	0.2212857	0.29037439	2.2585542	20	—	—
380978	2006	<i>SY</i> ₄₉	18.2	X	25.01695	152.17057	182.35704	2.98622	0.2558590	0.28941786	2.2635278	20	12 18.7	21.0
380979	2006	<i>SG</i> ₅₆	17.5	X	308.82432	32.88525	30.31559	22.40368	0.2588636	0.28423972	2.2909355	20	11 14.6	18.9
380980	2006	<i>SN</i> ₁₁₀	17.6	X	152.15637	331.78236	90.86727	7.41766	0.4178145	0.25131884	2.4868677	20	5 9.5	22.5
380981	2006	<i>SU</i> ₁₃₁	18.7	X	66.13664	167.72680	107.39729	9.65999	0.3953786	0.43434148	1.7268257	20	12 14.0	21.7
380982	2006	<i>SU</i> ₁₃₃	18.0	X	2.47489	31.06385	343.06767	3.67063	0.2101244	0.28988439	2.2610986	20	—	—
380983	2006	<i>SE</i> ₁₃₆	17.4	X	29.38526	271.85085	110.03317	6.74158	0.2482820	0.29731517	2.2232655	20	—	—
380984	2006	<i>SR</i> ₁₆₀	18.0	X	349.96531	342.98254	74.46630	3.21824	0.1090573	0.29261767	2.2469963	20	—	—
380985	2006	<i>SN</i> ₂₀₉	18.0	X	37.41474	308.54106	41.62164	3.86581	0.1974141	0.29348747	2.2425545	20	—	—
380986	2006	<i>SO</i> ₂₂₂	18.5	X	349.05703	64.87110	20.40298	2.64741	0.1399424	0.29870042	2.2163865	20	—	—
380987	2006	<i>SS</i> ₂₈₅	17.2	X	16.66840	350.00548	36.24273	5.11034	0.1490195	0.29025704	2.2591629	20	—	—
380988	2006	<i>SY</i> ₃₂₀	17.5	X	145.30737	212.90304	37.52930	7.77334	0.0659350	0.29375730	2.2411810	20	12 25.4	20.6
380989	2006	<i>SZ</i> ₃₂₁	18.5	X	307.62937	28.53282	77.32551	2.44847	0.0905578	0.29430211	2.2384142	20	—	—
380990	2006	<i>SO</i> ₃₂₅	17.1	X	160.83095	224.08376	30.73919	7.50873	0.1514885	0.29865717	2.2166004	20	—	—
380991	2006	<i>SO</i> ₃₂₇	18.6	X	320.21039	20.13632	68.33834	2.60256	0.1463618	0.29113197	2.2546344	20	—	—
380992	2006	<i>SJ</i> ₃₃₂	17.8	X	172.65866	218.33846	13.19655	4.97309	0.0252646	0.29156153	2.2524193	20	—	—
380993	2006	<i>SZ</i> ₃₆₅	18.1	X	30.11338	294.37870	48.01608	2.81554	0.1573605	0.28777576	2.2721304	20	12 20.6	20.8
380994	2006	<i>SJ</i> ₄₀₀	17.2	X	254.71973	26.47782	43.90374	24.80008	0.2099897	0.27428179	2.3460543	20	8 31.1	20.9
380995	2006	<i>TT</i> ₁₉	17.8	X	9.02015	63.31525	257.41994	1.61746	0.1696134	0.28042885	2.3116438	20	10 18.6	19.8
380996	2006	<i>TK</i> ₂₀	17.1	X	128.65628	60.67322	217.77853	7.03857	0.1548600	0.29574728	2.2311163	20	—	—
380997	2006	<i>TG</i> ₄₂	17.8	X	45.47640	112.03264	222.44367	6.67635	0.1321477	0.28829406	2.2694063	20	12 25.1	20.9
380998	2006	<i>TO</i> ₄₂	18.2	X	7.78666	97.62542	235.95977	1.74401	0.2372485	0.28262216	2.2996685	20	11 17.9	20.1
380999	2006	<i>TE</i> ₄₃	17.8	X	11.02086	316.12506	38.82591	6.88950	0.1620903	0.28525435	2.2854999	20	12 10.7	20.3
381000	2006	<i>TV</i> ₅₇	17.4	X	356.08771	214.20549	192.36318	4.34642	0.1308108	0.29250348	2.2475810	20	—	—
381001	2006	<i>TZ</i> ₆₄	17.4	X	199.33752	223.72645	329.50484	6.53548	0.0202160	0.29461598	2.2368242	20	12 22.8	20.1
381002	2006	<i>TG</i> ₇₈	17.1	X	252.10082	145.06425	345.97178	7.27908	0.0587883	0.28817446	2.2700341	20	12 1.4	19.8
381003	2006	<i>TK</i> ₈₃	18.0	X	295.92587	80.96301	359.49105	6.22421	0.1518363	0.28392148	2.2926471	20	11 21.3	19.9
381004	2006	<i>TR</i> ₉₄	17.6	X	331.13642	299.89510	52.47874	6.83307	0.2747584	0.27842833	2.3227035	20	9 24.2	18.5
381005	2006	<i>TX</i> ₁₂₉	17.9	X	300.01316	253.28417	172.82012	5.10927	0.1893118	0.28073385	2.3099692	20	11 7.2	19.5
381006	2006	<i>UG</i> ₅	17.7	X	12.68305	136.73574	237.17552	6.29762	0.1500803	0.29150923	2.2526887	20	—	—
381007	2006	<i>UU</i> ₇	17.5	X	42.75274	314.69776	49.87557	6.66669	0.1204207	0.29281595	2.2459818	20	—	—
381008	2006	<i>UV</i> ₁₄	17.7	X	1.28212	303.49774	53.37992	6.46251	0.1681507	0.28357492	2.2945147	20	11 28.5	19.8
381009	2006	<i>UR</i> ₄₆	17.2	X	220.37660	167.82805	56.71116	9.06403	0.1183747	0.29729279	2.2233771	20	—	—
381010	2006	<i>UJ</i> ₇₃	17.9	X	37.78874	347.42374	340.70283	4.39854	0.2153009	0.28898269	2.2657996	20	12 19.3	20.9
381011	2006	<i>UG</i> ₉₄	17.9	X	201.17558	345.75742	183.76566	6.22588	0.0848104	0.28410691	2.2916494	20	11 17.2	20.7
381012	2006	<i>UH</i> ₉₄	18.2	X	46.22424	209.91338	112.80759	7.73414	0.1601709	0.28800624	2.2709180	20	12 14.6	21.2
381013	2006	<i>UX</i> ₁₀₂	17.4	X	161.96253	21.74436	181.96306	7.26046	0.1143491	0.28273901	2.2990349	20	11 9.7	20.7
381014	2006	<i>UJ</i> ₁₃₈	17.7	X	336.18767	82.86315	276.10664	3.84134	0.2479024	0.27975753	2.3153404	20	10 15.5	19.0
381015	2006	<i>UA</i> ₁₅₂	17.6	X	123.11498	182.81598	79.96301	6.94162	0.1406045	0.28703268	2.2760501	20	12 14.4	21.1
381016	2006	<i>UZ</i> ₁₆₆	17.7	X	112.34332	195.71563	74.03778	4.38370	0.1473718	0.29116141	2.2544823	20	12 13.7	21.1
381017	2006	<i>UZ</i> ₁₈₀	17.5	X	35.86155	286.78654	90.60836	7.05041	0.1434159	0.29431570	2.2383454	20	—	—
381018	2006	<i>UF</i> ₁₉₁	18.0	X	58.02903	49.46627	312.19511	4.56514	0.1936064	0.29734718	2.2231060	20	—	—
381019	2006	<i>UQ</i> ₁₉₃	18.3	X	347.63211	55.06592	25.60795	4.35705	0.0904576	0.29542013	2.2327632	20	—	—
381020	2006	<i>UE</i> ₂₀₄	18.1	X	351.44649	63.64734	320.51273	5.65408	0.1868197	0.28657524	2.2784715	20	12 26.9	20.4
381021	2006	<i>UA</i> ₂₁₀	17.7	X	15.07254	15.38626	327.47988	4.15959	0.1717838	0.28403804	2.2920199	20	12 1.1	20.2
381022	2006	<i>UV</i> ₂₁₂	17.3	X	294.99614	183.10525	237.78257	10.97591	0.2152739	0.27855024	2.3220257	20	10 6.9	19.4
381023	2006	<i>UB</i> ₂₂₅	17.1	X	324.50903	210.67709	260.10638	6.06796	0.0909604	0.29614556	2.2291155	20	—	—
381024	2006	<i>UE</i> ₂₂₈	17.6	X	359.86753	30.12242	351.18911	6.39326	0.1298684	0.28816467	2.2700856	20	12 27.9	20.1
381025	2006	<i>UN</i> ₂₂₈	18.0	X	33.94162	141.08903	240.11321	4.21359	0.1607511	0.29485518	2.2356143	20	—	—
381026	2006	<i>UQ</i> ₂₃₃	17.7	X	306.92797	355.08147	47.51729	8.97162	0.1185694	0.28082293	2.3094807	20	10 20.8	19.7
381027	2006	<i>UV</i> ₂₃₈	17.6	X	36.18814	60.95909	281.37107	1.96377	0.1814469	0.28975720	2.2617602	20	12 31.8	20.5
381028	2006	<i>UB</i> ₂₅₉	17.8	X	185.80441	188.78575	27.27962	6.57803	0.0935379	0.29225557	2.2488519	20	12 24.9	20.8
381029	2006	<i>UO</i> ₃₂₉	17.9	X	311.37819	0.04705	81.58264	3.86910	0.1925478	0.2780				

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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>
381041 2006 VE ₁₀₉	18.8 ^m	X	284.78062	88.77777	16.88548	2.96332	0.1814710	0.28311347	2.2970072	20	12 5.9	20.6
381042 2006 VP ₁₁₈	17.8	X	286.55476	221.44048	241.90764	5.20032	0.2053385	0.28269873	2.2992532	20	12 4.1	19.3
381043 2006 VL ₁₁₉	18.3	X	42.61181	45.47638	278.01134	2.27016	0.1425258	0.28589125	2.2821042	20	12 8.3	21.0
381044 2006 VP ₁₄₄	17.6	X	211.72266	301.02206	243.75017	3.60478	0.1215344	0.28737713	2.2742310	20	12 10.3	20.3
381045 2006 VJ ₁₄₈	17.4	X	283.77510	315.75566	88.95357	8.33102	0.1107984	0.26758943	2.3850093	20	9 11.8	20.1
381046 2006 VO ₁₄₈	17.3	X	305.27845	325.21451	115.25675	5.05802	0.1103427	0.27612904	2.3355795	20	12 11.4	19.4
381047 2006 VD ₁₅₁	18.3	X	311.41614	329.77580	85.78407	2.63543	0.1750339	0.28218095	2.3020650	20	11 17.4	19.7
381048 2006 WA ₁	18.0	X	327.50714	86.58526	336.78423	0.38409	0.1528693	0.28575732	2.2828172	20	—	—
381049 2006 WE ₃	18.1	X	256.80366	83.17860	54.69493	22.26810	0.2562479	0.28187668	2.3037214	20	11 16.5	20.5
381050 2006 WR ₃	15.8	X	352.02357	154.80661	275.15359	48.78172	0.4375599	0.14330410	3.6165708	20	—	—
381051 2006 WW ₁₈	17.5	X	22.51361	82.82711	329.59350	2.21824	0.1449430	0.29399170	2.2399896	20	—	—
381052 2006 WW ₂₂	17.2	X	257.58565	46.11822	74.78010	24.21235	0.1677965	0.27850952	2.3222520	20	11 14.7	19.9
381053 2006 WA ₂₃	17.1	X	312.13497	337.17297	87.28568	7.78204	0.0750798	0.28080841	2.3095603	20	12 1.7	19.4
381054 2006 WQ ₅₆	17.2	X	337.57728	340.11213	69.89167	6.29277	0.1010168	0.28307292	2.2972266	20	12 25.9	19.6
381055 2006 WR ₁₁₉	17.7	X	305.85699	161.17358	312.50855	4.07477	0.1479601	0.28906963	2.2653453	20	—	—
381056 2006 WC ₁₇₀	17.9	X	9.53685	96.91218	248.24584	4.93698	0.2009801	0.28101492	2.3084287	20	11 30.7	20.2
381057 2006 WD ₁₇₀	17.9	X	277.27917	5.23726	83.88378	2.82773	0.1743465	0.27891025	2.3020272	20	10 30.3	19.9
381058 2006 WQ ₁₉₅	17.2	X	12.53737	347.32917	65.69532	6.13211	0.1216722	0.29183843	2.2509943	20	—	—
381059 2006 WP ₂₀₂	17.6	X	249.03532	168.13177	278.83412	5.85264	0.0913813	0.27102513	2.3648105	20	9 14.5	20.7
381060 2006 XP ₉	17.1	X	348.41430	358.16072	80.00012	7.34711	0.0636431	0.28810560	2.2703958	20	—	—
381061 2006 XO ₁₅	17.3	X	342.11313	189.72493	252.04342	7.05775	0.1596037	0.28884187	2.2665360	20	—	—
381062 2006 XH ₅₃	17.6	X	276.96243	141.74355	331.01757	3.31273	0.1889843	0.27838345	2.3229531	20	11 26.7	19.7
381063 2006 XF ₅₈	15.9	X	219.59833	97.18283	53.08267	3.98585	0.2042036	0.12430148	3.9763552	20	10 3.2	22.1
381064 2006 XX ₅₉	17.2	X	223.34936	37.40869	87.12154	7.33545	0.0683519	0.26905398	2.3763465	20	10 12.7	20.3
381065 2006 XQ ₆₀	17.5	X	334.81941	53.88853	299.94264	6.33574	0.1373281	0.26885407	2.3775243	20	9 21.0	19.7
381066 2006 YQ ₄	17.4	X	280.51890	212.59489	265.35328	4.85549	0.1824708	0.27904332	2.3192895	20	12 14.7	19.2
381067 2006 YH ₁₀	17.1	X	304.25566	322.36006	88.61013	8.06031	0.0960863	0.27399927	2.3476667	20	10 29.5	19.5
381068 2006 YP ₂₃	17.9	X	207.36361	188.97251	318.28787	2.72762	0.1172525	0.27047586	2.3680110	20	10 11.7	21.1
381069 2006 YT ₄₃	17.1	X	327.37742	358.07609	70.46762	6.95636	0.1720930	0.28219329	2.3019979	20	—	—
381070 2006 YV ₅₁	17.5	X	316.54487	149.03846	253.18340	1.54634	0.1876235	0.27585687	2.3371155	20	11 4.0	19.1
381071 2006 YQ ₅₃	17.3	X	338.43771	267.53113	83.07572	5.59716	0.1670464	0.26694140	2.3888677	20	10 2.6	19.3
381072 2006 AZ ₃	16.8	X	299.06204	128.22525	305.86969	23.84980	0.2008049	0.27642508	2.3339117	20	10 30.9	19.5
381073 2007 AB ₁₁	16.9	X	290.09457	295.35609	119.55990	12.27553	0.1447048	0.27029516	2.3690662	20	10 5.9	19.5
381074 2007 AX ₁₂	16.9	X	188.86876	265.94621	267.97798	9.58402	0.2092171	0.27152564	2.3619035	20	10 15.8	20.9
381075 2007 AC ₁₄	18.0	X	201.24253	251.89870	262.68755	1.90282	0.1677712	0.26832364	2.3806566	20	10 9.3	21.4
381076 2007 AH ₂₄	17.5	X	200.04036	252.09802	268.24724	2.17244	0.1351501	0.26763790	2.3847214	20	10 18.6	20.8
381077 2007 BR ₁₈	14.9	X	270.32430	128.88743	342.87546	8.46382	0.2339107	0.12516230	3.9581024	20	10 1.7	20.5
381078 2007 BQ ₂₀	17.3	X	197.08789	358.22661	164.14004	5.31139	0.1794554	0.26556824	2.3970953	20	10 15.9	21.0
381079 2007 BB ₃₀	17.4	X	217.15327	188.85534	325.46322	7.62282	0.1683443	0.26965304	2.3728257	20	10 23.5	20.9
381080 2007 BS ₃₅	17.0	X	328.17263	51.22668	331.63179	7.97730	0.2330743	0.27276303	2.3547549	20	10 28.5	18.5
381081 2007 BV ₃₅	18.0	X	212.92630	207.41871	313.01773	2.10262	0.1190981	0.27176231	2.3605320	20	11 5.3	21.2
381082 2007 BV ₃₆	18.1	X	264.64800	77.28461	11.22571	1.12447	0.1450611	0.27086780	2.3657261	20	10 4.9	20.7
381083 2007 BG ₄₁	17.7	X	304.62791	269.69594	127.87398	4.48173	0.1861537	0.27037728	2.3685865	20	9 29.1	19.5
381084 2007 BD ₄₃	18.1	X	170.92183	232.13156	300.43241	0.63307	0.1287720	0.26411272	2.4058941	20	10 4.4	21.7
381085 2007 BJ ₄₈	17.9	X	174.51739	133.17047	37.85469	2.95956	0.1425101	0.26203879	2.4185719	20	10 6.1	21.6
381086 2007 BT ₅₄	17.0	X	303.07540	6.39215	90.95260	7.97133	0.0680487	0.27970817	2.3156128	20	—	—
381087 2007 BO ₅₆	17.4	X	316.70402	19.10365	1.18444	4.10840	0.0713053	0.26773979	2.3841163	20	10 1.1	19.8
381088 2007 BY ₅₆	17.8	X	178.53300	76.31244	76.51456	4.56411	0.2032504	0.26204758	2.4185178	20	9 15.7	21.8
381089 2007 BD ₅₇	17.5	X	241.17832	139.08978	18.37509	2.81770	0.1644689	0.27503816	2.3417512	20	12 2.8	20.2
381090 2007 BP ₆₅	17.0	X	167.88832	233.07870	317.11749	4.55668	0.1282993	0.26376724	2.4079944	20	10 21.9	20.7
381091 2007 BB ₇₀	17.1	X	272.29195	297.57845	137.25988	5.87037	0.1768624	0.26663495	2.3906977	20	9 23.3	19.6
381092 2007 BL ₇₇	17.3	X	277.47388	99.57708	321.36025	6.24780	0.0987146	0.26607070	2.3940764	20	9 19.3	19.9
381093 2007 BB ₇₉	18.0	X	237.65361	214.63293	272.14352	0.77155	0.1293021	0.26856504	2.3792299	20	10 20.9	20.8
381094 2007 BN ₇₉	17.7	X	263.72019	355.29226	127.64142	2.05754	0.1354526	0.27207993	2.3586946	20	11 24.6	20.2
381095 2007 CT ₃	17.5	X	147.63382	146.17779	56.86479	3.42594	0.1335755	0.26474369	2.4020699	20	10 21.3	21.1
381096 2007 CS ₆	17.2	X	247.53723	276.52044	110.49701	8.06663	0.1218596	0.25604358	2.4561796	20	6 17.9	20.6
381097 2007 CP ₁₇	17.9	X	184.07989	100.94466	68.09570	2.32784	0.1185391	0.26445883	2.4037945	20	10 15.5	21.4
381098 2007 CB ₂₂	17.6	X	220.28351	339.35960	133.56449	4.43363	0.0895346	0.26361396	2.4089278	20	9 16.5	20.8
381099 2007 CD ₂₃	18.0	X	124.84517	22.35125	158.51430	4.27792	0.1231900	0.25465045	2.4651295	20	8 28.1	21.7
381100 2007 CS ₂₅	17.8	X	211.92780	220.35296	293.47949	5.69394	0.0779118	0.27186242	2.3599525	20	10 30.3	20.9
381101 2007 CX ₃₄	17.3	X	259.10843	218.82262	244.83024	4.12071	0.1869157	0.27064652	2.3670154	20	10 9.1	19.9
381102 2007 CA ₄₄	16.6	X	239.89071	170.17153	306.82840	5.37674	0.0751718	0.26680386	2.3896886	20	10 16.2	19.7
381103 2007 CQ ₅₂	16.9	X	171.68627	22.78867	151.94048	11.94663	0.0832896	0.26436270	2.4043772	20	10 14.5	20.4
381104 2007 CU ₅₆	17.6	X	236.66490	164.67087	313.39985	5.65623	0.1924330	0.26707147	2.3880920	20	9 25.7	21.0
381105 2007 CN ₆₅	17.8	X	259.46164	288.22433	180.47385	7.32931	0.2592032	0.27120845	2.3637447	20	10 7.1	20.5
381106 2007 CH ₇₉	16.8	X	205.06824	86.63106	101.60377	6.21748	0.1319307	0.26981028	2.3719037	20	12 2.0	20.0
381107 2007 DR ₅	17.5	X	265.25266	88.62060	343.04679	6.89337	0.0844262	0.26676862	2.3898991			

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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>
381121 2007 DP ₆₀	17.6	X	152.07310	358.20892	191.91918	1.85053	0.1262459	0.25990339	2.4318013	20	10 7.8	21.4
381122 2007 DL ₆₇	17.5	X	328.80792	297.73694	116.36418	3.29595	0.1802269	0.27236663	2.3570391	20	12 20.8	19.3
381123 2007 DJ ₈₄	16.7	X	220.68296	84.70751	41.23157	14.77266	0.1416924	0.26343092	2.4100435	20	10 2.5	20.2
381124 2007 DE ₉₁	18.1	X	188.61344	345.14594	143.24737	1.82524	0.1392328	0.25777342	2.4451788	20	8 25.3	21.8
381125 2007 DK ₁₀₆	16.0	X	286.49935	312.22473	358.30268	11.60388	0.2254719	0.23105968	2.6301869	20	4 6.6	19.8
381126 2007 DZ ₁₀₈	17.4	X	242.43171	256.87997	215.68901	1.53572	0.1517766	0.26403536	2.4063640	20	10 3.6	20.4
381127 2007 DQ ₁₁₁	16.3	X	243.99015	344.39814	9.77156	13.35528	0.1809835	0.23567469	2.5957374	20	4 21.4	20.4
381128 2007 EV ₁₃	17.6	X	237.58776	192.76516	341.43838	2.01059	0.1509977	0.27218607	2.3580814	20	12 22.5	20.3
381129 2007 EL ₁₈	17.2	X	136.97066	201.79348	33.89086	2.69854	0.1585395	0.26168715	2.4207380	20	11 19.0	20.9
381130 2007 EN ₂₃	16.7	X	277.49535	255.73976	26.30174	8.85679	0.2469378	0.22059665	2.7127105	20	2 26.3	21.0
381131 2007 EH ₃₂	16.7	X	322.61122	145.99322	157.77135	12.23316	0.0782207	0.24208409	2.5497164	20	6 16.9	20.0
381132 2007 EG ₃₄	17.1	X	340.71244	78.92812	198.22481	7.13689	0.2012226	0.23417709	2.6067924	20	5 29.2	19.5
381133 2007 ER ₄₈	16.7	X	31.54813	207.93615	22.03003	13.17699	0.1204206	0.23610316	2.5925960	20	6 30.7	19.9
381134 2007 EF ₇₂	17.8	X	286.98098	15.61003	58.94095	1.35842	0.1983067	0.26586862	2.3952894	20	10 14.8	19.9
381135 2007 ED ₉₉	17.1	X	197.08941	30.89274	112.81239	2.19381	0.1298427	0.25954849	2.4340176	20	9 25.1	20.7
381136 2007 EW ₁₁₈	16.6	X	253.99128	337.03198	47.07065	4.63939	0.1396672	0.24039841	2.5616216	20	6 18.5	20.3
381137 2007 EQ ₁₂₈	17.4	X	315.96199	84.36371	339.23481	1.72153	0.2089700	0.27185059	2.3600210	20	12 7.4	18.7
381138 2007 EH ₁₄₄	17.0	X	9.11902	144.84189	112.60064	2.53191	0.0728424	0.24108992	2.5567211	20	6 26.9	19.9
381139 2007 EL ₁₅₁	17.3	X	275.46541	204.32053	83.62836	2.91950	0.1274854	0.22680870	2.6629494	20	3 13.6	21.0
381140 2007 EB ₁₈₇	16.6	X	261.39792	231.35345	121.42989	6.06056	0.2359205	0.24154151	2.5353534	20	5 6.9	20.5
381141 2007 EJ ₁₉₁	16.4	X	235.39992	313.32401	17.28238	11.68831	0.2372906	0.22187912	2.7022473	20	3 18.6	21.0
381142 2007 EL ₁₉₅	17.4	X	258.68737	255.44526	171.44736	4.65478	0.1771183	0.25893348	2.4378702	20	8 17.7	20.6
381143 2007 EO ₁₉₈	15.1	X	94.58842	283.32793	357.25701	24.25554	0.4087330	0.17836446	3.1255792	20	12 2.8	21.3
381144 2007 EU ₂₁₉	13.5	X	311.31412	263.62830	31.88349	27.88986	0.0631401	0.08039089	5.3169777	20	5 14.1	20.5
381145 2007 FX ₅	17.9	X	188.07382	4.57530	118.97509	3.35168	0.1511032	0.25464445	2.4651683	20	8 17.9	21.8
381146 2007 FD ₃₃	16.6	X	313.01007	84.47551	163.44354	5.88819	0.1539071	0.22468582	2.6796964	20	3 4.4	19.8
381147 2007 GX ₁	16.8	X	248.06660	121.66192	37.89859	22.32896	0.3164395	0.27264038	2.3554611	20	11 16.0	19.8
381148 2007 GZ ₁	13.6	X	328.14608	204.07103	54.04089	15.50524	0.0392559	0.08309071	5.2011704	20	5 3.1	20.3
381149 2007 GN ₅	16.2	X	212.28201	226.56231	116.89048	10.46849	0.0719982	0.21537272	2.7564001	20	3 22.7	20.4
381150 2007 GU ₁₁	17.3	X	187.57987	358.81000	146.68917	8.24578	0.0819177	0.25660212	2.4526141	20	9 21.4	20.7
381151 2007 GZ ₁₁	16.2	X	268.90426	255.21218	107.09097	6.75973	0.1659135	0.24250188	2.5467871	20	6 4.8	19.6
381152 2007 GC ₂₁	16.9	X	295.26057	259.96098	56.66677	3.89771	0.0939286	0.22981942	2.6396412	20	5 19.7	20.3
381153 2007 GR ₂₁	16.7	X	216.80205	314.80594	46.96258	7.15485	0.0536403	0.22409640	2.6843932	20	4 17.1	20.5
381154 2007 GK ₂₃	17.2	X	202.90365	102.96984	47.86382	3.07560	0.1205316	0.25584405	2.4574565	20	10 10.9	20.6
381155 2007 GN ₂₄	16.4	X	324.47079	197.04933	60.78506	13.27673	0.1768057	0.22258111	2.6965626	20	4 7.7	19.7
381156 2007 GW ₃₀	16.1	X	268.65844	269.44138	31.77605	13.24422	0.2066711	0.22034163	2.7148032	20	3 17.8	20.4
381157 2007 GE ₃₉	17.6	X	175.57502	146.30296	52.39724	1.76198	0.1677961	0.25982965	2.4322614	20	11 8.6	21.2
381158 2007 GP ₄₀	16.6	X	30.41222	158.54921	40.09679	18.75584	0.1879784	0.22909816	2.6451785	20	5 16.4	19.2
381159 2007 GQ ₅₆	17.5	X	51.94738	89.57730	118.03267	4.61034	0.1752266	0.23558810	2.5963734	20	7 10.4	20.3
381160 2007 GH ₇₁	17.3	X	143.22697	82.85588	113.13609	6.51858	0.1692545	0.25680241	2.4513387	20	10 9.6	21.3
381161 2007 GP ₇₃	16.1	X	265.75126	249.28111	63.71435	13.97123	0.1787227	0.22227040	2.6990751	20	4 3.1	20.4
381162 2007 HQ ₁₈	16.8	X	255.05248	230.50554	49.08709	4.79169	0.1751564	0.21352031	2.7723194	20	2 8.1	21.2
381163 2007 HF ₄₀	16.5	X	261.93520	302.37335	37.73260	12.93422	0.3004767	0.22754477	2.6572035	20	4 14.9	20.8
381164 2007 HN ₅₀	17.4	X	335.00627	85.80110	166.78212	6.27808	0.0728074	0.22548191	2.6733854	20	4 26.4	20.6
381165 2007 HH ₆₅	16.1	X	298.58688	200.41101	84.45454	12.18948	0.1570359	0.22326816	2.6910278	20	4 8.7	19.9
381166 2007 HY ₇₂	16.9	X	269.67142	271.18895	64.68018	5.73078	0.1103800	0.22844547	2.6502144	20	5 9.2	20.6
381167 2007 HV ₇₆	16.4	X	134.73630	154.97785	54.46210	15.20678	0.0673662	0.25251936	2.4789795	20	10 18.3	20.1
381168 2007 HC ₈₈	16.7	X	57.96209	88.99572	128.43487	8.55298	0.1121911	0.23863634	2.5742161	20	7 23.2	19.8
381169 2007 HM ₉₀	16.0	X	298.61029	190.99908	87.00196	13.55640	0.1570530	0.22247025	2.6974584	20	3 31.8	19.9
381170 2007 HH ₉₅	15.8	X	215.80905	246.72350	85.32613	12.24490	0.2452895	0.21155826	2.7894338	20	3 8.8	20.9
381171 2007 HY ₉₇	15.9	X	296.09107	201.71557	88.91542	17.57961	0.1490620	0.22181556	2.7027635	20	4 17.2	19.8
381172 2007 JW	16.7	X	46.77827	356.13117	189.65788	13.28741	0.1821271	0.23117485	2.6293132	20	6 2.2	19.8
381173 2007 JU	16.2	X	318.00180	240.22654	63.58772	8.20403	0.0100626	0.23199997	2.6230753	20	6 15.2	19.6
381174 2007 JT ₆	17.0	X	203.98798	114.90509	225.67084	3.22087	0.2144115	0.21264879	2.7798889	20	3 3.2	21.7
381175 2007 JX ₉	16.3	X	171.94651	137.79839	353.82432	8.58446	0.1618525	0.24494304	2.5298376	20	8 13.7	20.4
381176 2007 JG ₁₄	16.8	X	60.62737	323.33376	188.22543	11.08233	0.0204057	0.22233027	2.6985905	20	4 14.3	20.3
381177 2007 JG ₂₀	17.1	X	311.62887	67.30396	218.75519	13.50909	0.0767057	0.22719136	2.6599584	20	5 4.7	20.3
381178 2007 JM ₂₈	16.5	X	61.17731	132.78249	84.66220	14.32307	0.2309145	0.23738010	2.5832901	20	8 21.3	20.2
381179 2007 JU ₃₀	18.1	X	349.58025	60.93815	227.06387	19.66547	0.0420622	0.38491950	1.8716420	20	7 12.6	20.1
381180 2007 LF ₁₃	16.7	X	245.09258	222.55456	121.55080	13.57761	0.0331119	0.22533696	2.6745318	20	5 4.9	20.7
381181 2007 LV ₁₉	19.6	X	118.62827	301.32648	264.06698	14.89004	0.3204680	0.55213610	1.4715396	20	10 27.1	21.9
381182 2007 LX ₂₀	17.8	X	245.72026	320.36854	85.95562	25.03276	0.0897651	0.39016636	1.8548246	20	7 29.2	19.9
381183 2007 LN ₂₁	17.1	X	309.42219	97.65072	180.44863	6.40818	0.0372997	0.22336569	2.6902445	20	4 27.5	20.6
381184 2007 LR ₂₁	16.8	X	120.26638	51.01861	92.67952	15.88571	0.0823439	0.23290740	2.6162577	20	6 29.3	20.6
381185 2007 LQ ₂₈	16.1	X	216.57514	159.51540	216.36884	14.27713	0.0820258	0.22218485	2.6997678	20	5 2.2	19.9
381186 2007 MP ₁₃	16.8	X	49.31830	80.61851	139.44056	8.02349	0.1476552	0.23497927	2.6008563	20	7 18.9	20.0
381187 2007 NN ₆	16.8	X	289.01929	205.69695	65.49341	13.63817	0.2740762	0.21137624	2.7910349	20	2 24.9	21.3
381188 2007 OK ₆	17.6	X	207.21462	166.62204	117.38669	3.23226	0.2058409	0.27168937	2.3609545	20	—	—
381189 2007 OD ₁₁	15.6	X	89.99045	38.80390	21.73717	16.37874	0.0850562	0.17873848	3.1212174	20	2 17.4	20.1
381190 2007 PO ₂₄	15.3	X	77.12754	61.97164	320.34568	15.14717	0.2532616	0.17733448	3.1376700	20	1 3.1	19.3
381191 2007 PN ₄₆	15.9	X	102.41864	277.69750	154.78265	10.56858	0.1155271	0.19343250	2.9610774	20	3 14.7	20.0
381192 2007 PX ₄₉	16.3	X	77.96618	95.51535	337.52083	8.48828	0.0197300	0.19004489	2.9961618	20	2 1.2	20.4
381193 2007 QP ₁₅	16.2	X	126.74792	199.74241	160.23185	11.13304	0.1229271	0.1838				

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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>
381201 2007 <i>RF</i> ₅₇	15.8 ^m	X	132.47247	0.23643	340.24606	9.12454	0.1133357	0.17949875	3.1123978	20	—	—
381202 2007 <i>RL</i> ₅₈	15.8	X	165.20566	312.40312	337.85199	9.22761	0.3024781	0.18064559	3.0992109	20	—	—
381203 2007 <i>RF</i> ₇₀	16.4	X	94.50012	279.38500	105.54733	3.04559	0.1816161	0.18087457	3.0965948	20	1 16.8	20.5
381204 2007 <i>RR</i> ₇₀	17.2	X	83.79640	323.46821	88.22945	2.57742	0.1779037	0.18273241	3.0755703	20	2 4.0	21.1
381205 2007 <i>RK</i> ₉₄	16.3	X	79.64558	313.78031	119.95992	2.41253	0.2500719	0.18102661	3.0948607	20	3 7.9	20.3
381206 2007 <i>RD</i> ₁₀₂	16.2	X	102.96904	37.42043	336.75983	16.75078	0.2237210	0.18037900	3.1022638	20	1 24.2	20.8
381207 2007 <i>RF</i> ₁₁₀	16.7	X	131.05770	29.30198	12.06720	4.96818	0.1475661	0.19067335	2.9895746	20	3 12.4	21.1
381208 2007 <i>RT</i> ₁₂₅	16.1	X	79.26308	341.82854	51.75844	10.04583	0.2076602	0.17693209	3.1424254	20	1 12.4	20.2
381209 2007 <i>RG</i> ₁₃₀	15.9	X	322.98205	142.75967	19.63803	9.95409	0.0240546	0.17833699	3.1259001	20	—	—
381210 2007 <i>RN</i> ₁₄₉	15.9	X	88.33115	190.25337	212.43529	19.43698	0.2090780	0.17902441	3.1178931	20	1 28.8	20.5
381211 2007 <i>RO</i> ₁₆₀	16.4	X	64.67431	28.35804	25.79628	4.84324	0.1743222	0.17626000	3.1504085	20	1 10.9	20.3
381212 2007 <i>RM</i> ₁₆₇	16.2	X	40.32977	297.81355	164.06239	13.77596	0.1444154	0.18398515	3.0615935	20	1 23.9	19.9
381213 2007 <i>RV</i> ₁₇₃	16.1	X	76.16726	12.97098	43.67058	6.59803	0.1929964	0.17902160	3.1179257	20	2 4.1	20.1
381214 2007 <i>RM</i> ₁₉₃	16.2	X	173.99085	144.19592	175.52873	9.69282	0.1219797	0.18526332	3.0474956	20	1 14.6	21.1
381215 2007 <i>RW</i> ₁₉₈	15.6	X	116.61187	63.27073	290.57221	13.72029	0.2642357	0.18044964	3.1014542	20	1 15.2	20.2
381216 2007 <i>RR</i> ₂₀₆	16.5	X	222.24766	258.70638	50.52118	3.51099	0.0586637	0.19224137	2.9732960	20	2 20.5	21.0
381217 2007 <i>RM</i> ₂₁₁	16.6	X	145.23490	338.76981	351.59064	4.37653	0.2403161	0.18378592	3.0638058	20	1 12.0	21.6
381218 2007 <i>RZ</i> ₂₁₂	15.9	X	136.12082	34.79707	343.88470	8.53542	0.0444001	0.18660822	3.0328356	20	2 9.5	20.3
381219 2007 <i>RL</i> ₂₂₂	16.3	X	85.03473	248.91787	206.48088	5.55051	0.1220105	0.18733891	3.0249444	20	3 20.3	20.5
381220 2007 <i>RN</i> ₂₃₂	15.8	X	81.40797	243.27798	172.70393	10.99860	0.1574843	0.18204810	3.0832727	20	1 31.7	20.0
381221 2007 <i>RD</i> ₂₄₇	15.8	X	92.60261	67.29247	323.50645	8.57727	0.0992541	0.17902367	3.1179016	20	1 11.3	20.1
381222 2007 <i>RM</i> ₂₆₈	16.0	X	21.50116	68.17942	21.15932	14.37660	0.1748612	0.17384042	3.1795736	20	—	—
381223 2007 <i>RX</i> ₂₇₁	16.6	X	160.76813	113.22278	206.86069	10.54305	0.1253073	0.18148251	3.0896754	20	1 3.2	21.5
381224 2007 <i>RZ</i> ₂₇₈	15.5	X	126.59109	256.38640	97.24252	19.86564	0.1667223	0.18461580	3.0546173	20	1 13.4	20.1
381225 2007 <i>RO</i> ₂₉₁	16.8	X	86.90844	2.46161	41.14891	1.17472	0.1828118	0.18007805	3.1057192	20	1 30.2	20.9
381226 2007 <i>RV</i> ₂₉₃	16.7	X	79.29766	7.15509	39.32995	3.87510	0.2021179	0.17819976	3.1275047	20	1 27.3	20.7
381227 2007 <i>RY</i> ₂₉₄	17.0	X	84.33926	174.07278	220.06315	0.68636	0.1399478	0.17782720	3.1318714	20	1 8.9	21.1
381228 2007 <i>RX</i> ₃₁₀	15.4	X	104.63469	322.86291	41.31565	16.26650	0.2410199	0.17942903	3.1132039	20	1 14.8	20.1
381229 2007 <i>SM</i> ₃	15.9	X	73.12102	35.51813	13.11829	10.85041	0.2522871	0.17681353	3.1438300	20	1 31.5	19.9
381230 2007 <i>SJ</i> ₁₅	16.0	X	142.30487	354.48503	29.54283	10.16261	0.0961661	0.18631470	3.0360200	20	3 2.1	20.7
381231 2007 <i>ST</i> ₂₃	15.6	X	100.16142	299.19499	89.18875	9.61126	0.0530185	0.17709835	3.1404584	20	1 10.8	20.0
381232 2007 <i>TD</i> ₆	15.7	X	70.21887	58.95014	11.09254	27.14543	0.1016193	0.18075866	3.0979184	20	2 11.1	20.3
381233 2007 <i>TM</i> ₁₀	16.0	X	72.36723	52.87393	21.34201	17.88165	0.2604203	0.17890435	3.1192878	20	3 7.3	20.1
381234 2007 <i>TT</i> ₁₁	15.3	X	58.90738	28.84151	28.99278	27.07442	0.1340318	0.17423687	3.1747486	20	1 1.2	19.8
381235 2007 <i>TJ</i> ₁₄	15.6	X	35.71477	171.56760	327.53617	10.65807	0.0572182	0.19268731	2.9687068	20	2 27.3	19.5
381236 2007 <i>TC</i> ₃₃	16.0	X	13.93104	271.11871	213.42232	8.85589	0.0545089	0.17710822	3.1133122	20	1 11.9	20.4
381237 2007 <i>TJ</i> ₃₇	15.8	X	75.13880	37.20425	17.59112	10.16254	0.1206477	0.17904414	3.1176640	20	1 21.8	20.0
381238 2007 <i>TK</i> ₄₂	16.4	X	84.70903	256.39976	181.67523	6.52530	0.0967012	0.18938854	3.0030801	20	2 23.3	20.4
381239 2007 <i>TJ</i> ₄₃	16.0	X	72.52616	49.99635	52.24012	10.50245	0.0907447	0.18279149	3.0749076	20	3 14.9	20.2
381240 2007 <i>TR</i> ₄₃	15.9	X	61.93570	110.61611	323.15788	6.09345	0.1564306	0.17646803	3.1479321	20	1 28.7	19.7
381241 2007 <i>TE</i> ₄₄	15.6	X	126.17682	347.10674	16.90846	18.05888	0.2048199	0.17941968	3.1133122	20	2 6.4	20.7
381242 2007 <i>TP</i> ₅₆	16.0	X	124.75644	358.75169	31.32602	11.33789	0.0995587	0.18228830	3.0805637	20	2 20.9	20.7
381243 2007 <i>TD</i> ₆₃	16.5	X	206.62184	254.55781	28.49465	4.18930	0.2437050	0.18252197	3.0779339	20	1 4.4	21.9
381244 2007 <i>TQ</i> ₆₅	16.4	X	95.06601	48.32095	333.43640	7.44689	0.1828387	0.17635158	3.1493178	20	1 15.8	20.7
381245 2007 <i>TA</i> ₆₉	16.1	X	60.76497	141.07241	322.03555	16.36546	0.1595898	0.18271876	3.0757234	20	2 27.9	20.0
381246 2007 <i>TV</i> ₇₆	16.7	X	91.66065	357.32372	61.88972	1.38503	0.1975218	0.18601526	3.0392773	20	2 25.9	20.8
381247 2007 <i>TZ</i> ₇₆	15.6	X	83.78925	37.14864	26.44006	10.08513	0.0928124	0.18123880	3.0924446	20	2 10.4	19.9
381248 2007 <i>TF</i> ₉₄	15.7	X	82.25234	122.94565	203.65178	16.78028	0.2040228	0.18048019	3.1011042	20	2 6.8	20.1
381249 2007 <i>TD</i> ₁₀₅	15.8	X	189.94294	198.83899	91.88085	9.90816	0.0994863	0.17626604	3.1503365	20	—	—
381250 2007 <i>TR</i> ₁₀₆	16.1	X	45.39329	86.30255	14.72858	9.97863	0.2760211	0.17743619	3.1364708	20	2 22.1	19.3
381251 2007 <i>TG</i> ₁₂₀	15.5	X	79.75967	14.98061	31.69134	23.59347	0.0727502	0.17747480	3.1360158	20	1 12.7	20.2
381252 2007 <i>TK</i> ₁₂₄	15.3	X	355.55430	131.20133	38.86917	14.54136	0.0789785	0.18388258	3.0627320	20	2 18.0	19.5
381253 2007 <i>TX</i> ₁₂₅	16.6	X	39.05296	353.17348	100.60889	0.39558	0.1747865	0.17391147	3.1787075	20	1 17.1	20.1
381254 2007 <i>TU</i> ₁₂₉	16.1	X	97.90768	321.77601	39.46335	5.67016	0.1163419	0.17088193	3.2161672	20	—	—
381255 2007 <i>TQ</i> ₁₃₈	15.6	X	72.15750	101.80661	344.75681	16.11731	0.2074941	0.18115831	3.0933605	20	3 5.9	19.4
381256 2007 <i>TN</i> ₁₅₃	15.8	X	106.31486	21.37180	4.73979	9.69823	0.0784705	0.18064735	3.0991908	20	1 20.9	20.3
381257 2007 <i>TF</i> ₁₅₆	16.0	X	83.17605	50.03906	0.76242	9.56286	0.2257239	0.17761668	3.1343457	20	2 12.4	20.2
381258 2007 <i>TR</i> ₁₅₉	16.0	X	113.19993	138.75893	222.45343	15.91262	0.2314940	0.17655867	3.1468547	20	1 13.6	20.9
381259 2007 <i>TL</i> ₁₆₂	15.5	X	14.12511	265.99462	206.82960	16.11657	0.1415710	0.17491060	3.1665910	20	—	—
381260 Ouellette	15.8	X	144.37149	287.17533	104.36235	11.38098	0.1361945	0.18827736	3.0148843	20	3 17.1	20.6
381261 2007 <i>TK</i> ₁₇₆	15.5	X	154.00049	289.30326	24.23926	13.99644	0.0930468	0.17459181	3.1704444	20	—	—
381262 2007 <i>TX</i> ₁₇₈	15.5	X	116.12642	11.79531	10.04426	11.59975	0.1167295	0.17912698	3.1167028	20	2 3.1	20.1
381263 2007 <i>TZ</i> ₁₇₈	16.5	X	151.92574	249.09584	81.09861	2.42511	0.1641163	0.18011942	3.1052437	20	1 11.3	21.5
381264 2007 <i>TY</i> ₁₈₉	16.1	X	22.17401	123.45196	350.74675	9.58076	0.0771939	0.18514368	3.0488083	20	1 12.7	20.1
381265 2007 <i>TK</i> ₁₉₄	16.1	X	166.23052	279.35152	30.77529	5.20299	0.1318611	0.17810529	3.1286105	20	—	—
381266 2007 <i>TK</i> ₂₀₃	16.4	X	83.24614	233.43607	205.09111	4.98728	0.1298491	0.18002263	3.1063567	20	2 27.4	20.6
381267 2007 <i>TS</i> ₂₀₄	16.1	X	80.88214	317.32000	76.06089	5.80180	0.1690019	0.17286117	3.1915703	20	1 8.8	20.2
381268 2007 <i>TL</i> ₂₁₃	16.3	X	143.61978	1.04588	11.13906	9.26389	0.1455201	0.18367309	3.0650603	20	2 21.9	21.1
381269 2007 <i>TS</i> ₂₂₆	15.6	X	1.04966	105.20848	37.87754	26.32496	0.2552958	0.17331655	3.1859774	20	1 1.6	19.5
381270 2007 <i>TO</i> ₂₂₈	16.0	X	278.83295	331.18562	224.70248	4.76020	0.0761580	0.17215083	3.2003438	20	—	—
381271 2007 <i>TK</i> ₂₃₁	16.0	X	339.63833	318.23515	194.85255	11.34524	0.1547260	0.17592554	3.1544002	20	—	—
381272 2007 <i>TD</i> ₂₃₆												

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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>		
381281	2007	TS ₃₃₇	16.6 ^m	X	153.79188	318.95457	31.52422	3.18086	0.2095649	0.18777251	3.0202858	20	2 8.6	21.6
381282	2007	TU ₃₅₅	15.9	X	95.88077	238.41591	119.62036	15.18146	0.2849602	0.17336045	3.1854396	20	1 2.4	20.3
381283	2007	TL ₃₈₀	15.9	X	70.68804	297.56297	120.58903	6.59443	0.1997861	0.17675716	3.1444984	20	1 27.9	19.7
381284	2007	TW ₃₉₉	16.2	X	178.99486	106.20082	238.00407	8.49733	0.1077823	0.18511601	3.0491122	20	2 13.8	21.1
381285	2007	TO ₄₁₄	15.7	X	162.73057	272.80907	101.21000	12.26263	0.1628465	0.18898991	3.0073015	20	3 15.6	20.8
381286	2007	TS ₄₂₀	15.4	X	89.75861	316.15724	98.35727	20.34410	0.1355795	0.17697443	3.1419241	20	2 13.0	19.9
381287	2007	TO ₄₂₂	15.9	X	20.27942	39.46967	52.75728	17.69632	0.0608357	0.16905032	3.2393563	20	—	—
381288	2007	TR ₄₂₃	15.8	X	52.15427	46.27196	35.08812	15.30047	0.0596466	0.17631594	3.1497422	20	1 16.5	20.3
381289	2007	TV ₄₂₇	15.3	X	125.45839	285.24439	63.94070	17.08671	0.2426690	0.17785013	3.1316022	20	1 18.0	20.4
381290	2007	TS ₄₄₁	15.9	X	84.82985	95.04459	280.62973	12.07252	0.1508969	0.17568265	3.1573069	20	—	—
381291	2007	TZ ₄₄₁	15.4	X	109.92694	33.58292	313.68334	11.42913	0.0631070	0.17220834	3.1996312	20	—	—
381292	2007	TL ₄₄₈	15.5	X	198.23062	38.32075	258.84622	7.48196	0.1766716	0.18361957	3.0656559	20	1 12.0	20.6
381293	2007	TM ₄₅₀	16.0	X	42.85916	39.67098	40.18905	27.40237	0.1549527	0.17404755	3.1770505	20	1 4.3	20.3
381294	2007	UL ₁	16.0	X	48.60754	63.25742	27.45151	10.08124	0.0794591	0.17837655	3.1254380	20	1 24.2	20.2
381295	2007	UY ₁₇	15.6	X	62.83786	14.27270	73.30359	11.49168	0.0805420	0.18015655	3.1048171	20	2 9.7	19.8
381296	2007	UE ₂₅	15.3	X	9.40005	56.56744	49.81903	23.25913	0.0464139	0.16999375	3.2273600	20	—	—
381297	2007	UE ₃₃	15.4	X	162.57531	72.20583	265.64428	16.31259	0.1753877	0.18516027	3.0486262	20	1 27.2	20.7
381298	2007	UL ₃₃	16.1	X	77.72118	62.22883	324.85253	16.93210	0.2015432	0.17258384	3.1949885	20	1 3.9	20.3
381299	2007	UG ₃₉	15.9	X	73.76979	205.24833	245.48819	4.19515	0.1060124	0.18252846	3.0778609	20	2 25.7	20.0
381300	2007	UK ₄₆	16.2	X	99.59928	137.12208	219.20066	17.43988	0.2368411	0.17279049	3.1924406	20	—	—
381301	2007	UQ ₅₃	15.8	X	42.17919	77.28435	41.78889	17.28074	0.1851072	0.17749513	3.1357764	20	3 6.1	19.7
381302	2007	UX ₈₆	15.9	X	25.80950	24.89995	62.16870	10.29755	0.0410957	0.16907892	3.2389910	20	—	—
381303	2007	UU ₁₀₆	15.9	X	85.47543	346.56043	46.26548	17.41334	0.0591366	0.17188068	3.2036963	20	—	—
381304	2007	VZ ₃	16.4	X	82.66374	118.62610	276.34209	7.77601	0.1730585	0.17711724	3.1402351	20	1 12.1	20.3
381305	2007	VT ₁₇	16.5	X	348.34505	84.12595	44.22035	11.99233	0.0342527	0.17278927	3.1924557	20	—	—
381306	2007	VX ₃₀	16.0	X	79.47643	183.50847	246.27477	9.71686	0.2085697	0.17820313	3.1274653	20	2 20.4	20.3
381307	2007	VB ₃₈	16.0	X	328.18486	133.51437	41.05036	13.97778	0.1008946	0.17752830	3.1353858	20	1 9.2	20.4
381308	2007	VY ₄₃	15.2	X	215.09238	240.26236	34.46747	25.34781	0.0673595	0.17527202	3.1567754	20	1 4.3	20.4
381309	2007	VH ₅₆	15.9	X	87.84057	341.96637	75.25160	10.28686	0.0981900	0.17676015	3.1444629	20	2 8.1	20.3
381310	2007	VJ ₉₀	15.1	X	231.99165	178.05017	70.16717	16.54842	0.0931409	0.17055572	3.2202669	20	—	—
381311	2007	VG ₉₃	15.8	X	71.28805	137.66829	274.77322	10.47227	0.1968691	0.17335273	3.1855341	20	1 20.2	19.8
381312	2007	VW ₁₀₃	15.7	X	91.57971	142.12807	216.59230	10.16155	0.0774836	0.16817556	3.2505795	20	—	—
381313	2007	VO ₁₁₈	15.9	X	48.76071	242.18878	202.55362	10.66359	0.0626932	0.17523371	3.1626971	20	1 11.5	20.3
381314	2007	VP ₁₄₁	16.3	X	93.86615	255.15645	118.62182	3.07529	0.0801205	0.16964327	3.2318035	20	—	—
381315	2007	VH ₁₆₉	16.1	X	161.70952	153.27298	253.44822	9.28864	0.0666492	0.18691196	3.0295490	20	4 9.1	20.8
381316	2007	VU ₁₇₇	16.7	X	106.75475	52.50611	325.27176	1.36743	0.2577221	0.18203515	3.0834190	20	2 1.6	21.0
381317	2007	VE ₂₀₄	15.4	X	352.25041	97.28943	64.05862	26.50266	0.2039573	0.17354380	3.1831956	20	1 16.6	19.5
381318	2007	VY ₂₁₃	15.6	X	153.17067	245.69607	73.32027	13.20713	0.0744962	0.17131590	3.2107335	20	—	—
381319	2007	VM ₂₂₃	15.5	X	36.71065	57.83572	77.43644	19.67421	0.0637297	0.18128200	3.0919533	20	3 8.2	20.0
381320	2007	VQ ₂₂₆	15.7	X	68.68406	104.87210	3.47252	7.45536	0.1202960	0.18304400	3.0720790	20	3 16.3	19.6
381321	2007	VU ₂₂₈	15.9	X	237.23189	220.10466	39.80964	4.42375	0.0552551	0.17532214	3.1616336	20	1 10.8	20.7
381322	2007	VA ₂₅₁	15.3	X	71.30300	143.82639	273.86900	10.93858	0.1010340	0.17466880	3.1695126	20	1 14.2	19.4
381323	2007	VV ₂₅₂	15.3	X	102.00363	303.70453	63.38003	20.10420	0.2132732	0.17383068	3.1796923	20	1 10.4	20.0
381324	2007	VM ₂₆₅	16.4	X	137.62423	296.25770	55.30919	2.53057	0.1174722	0.17326706	3.1865841	20	1 18.9	21.2
381325	2007	VT ₂₇₀	15.8	X	74.80217	195.97348	290.38326	8.09152	0.0904895	0.18657770	3.0331663	20	4 7.2	20.1
381326	2007	VN ₂₇₆	15.8	X	299.46915	278.75152	260.32381	7.98075	0.0625477	0.17255039	3.1954014	20	—	—
381327	2007	VQ ₂₇₉	15.5	X	291.16786	335.20096	236.57156	24.97151	0.0848627	0.17538528	3.1608747	20	1 3.9	20.4
381328	2007	VW ₂₈₇	15.7	X	324.65185	253.98626	274.31926	8.04042	0.0713794	0.17082358	3.2168996	20	—	—
381329	2007	VC ₃₀₃	15.5	X	66.44022	342.88586	91.66437	30.14801	0.2196638	0.17480340	3.1678854	20	2 21.4	20.0
381330	2007	VO ₃₂₃	15.7	X	76.92292	168.03484	290.75083	10.28424	0.0995955	0.18380573	3.0635855	20	3 6.9	20.0
381331	2007	VS ₃₂₇	15.5	X	22.87053	170.94134	293.26322	8.40928	0.0966585	0.17116122	3.2126677	20	1 2.4	19.4
381332	2007	VM ₆₃	15.8	X	79.44141	158.17258	270.88566	20.07354	0.3030466	0.17621801	3.1509090	20	2 27.3	20.4
381333	2007	XK ₁₃	15.6	X	72.26321	189.71640	267.30526	7.79637	0.2309952	0.17632674	3.1496135	20	3 19.3	19.8
381334	2007	XN ₅₆	15.0	X	357.13512	248.59503	300.72850	24.83760	0.2249330	0.17240319	3.1972200	20	2 18.1	18.8
381335	2007	YE ₃₃	16.5	X	15.91946	140.62676	273.21246	2.39877	0.1269801	0.15744970	3.3965771	20	—	—
381336	2008	AN ₆₁	17.6	X	241.17712	52.48985	137.67621	5.43705	0.0921268	0.30533220	2.1841760	20	—	—
381337	2008	AJ ₁₀₆	17.3	X	157.21916	277.50260	30.18336	2.80954	0.0781881	0.31756526	2.1277180	20	—	—
381338	2008	BP ₃₀	17.9	X	100.28582	208.55565	148.02543	4.08504	0.1330625	0.31214014	2.1523008	20	—	—
381339	2008	BQ ₄₆	18.2	X	50.58209	38.24361	330.03408	4.93821	0.1375844	0.30247491	2.1979095	20	—	—
381340	2008	BZ ₄₇	15.3	X	215.67242	167.82036	104.00228	13.27103	0.0587861	0.15833298	3.3839333	20	1 3.9	20.3
381341	2008	CU ₁₃	18.0	X	332.05194	5.58278	113.80665	3.31677	0.1166166	0.30912024	2.1662958	20	—	—
381342	2008	CH ₁₇	17.3	X	50.97104	7.11474	314.45287	6.10941	0.1449203	0.28792500	2.2713451	20	12 16.5	20.5
381343	2008	CG ₂₅	17.8	X	189.78503	69.93385	143.10086	5.69880	0.1319286	0.29299284	2.2450777	20	12 21.2	20.8
381344	2008	CM ₄₉	17.7	X	116.38353	152.98402	108.60993	2.65842	0.1273554	0.29053353	2.2577293	20	12 7.2	20.8
381345	2008	CW ₆₉	17.6	X	279.78294	54.99211	77.06883	6.43527	0.0749940	0.30080540	2.2060345	20	—	—
381346	2008	CY ₁₀₂	18.0	X	39.38744	107.42098	187.78013	5.94974	0.1499638	0.28201577	2.3029638	20	10 28.2	20.6
381347	2008	CH ₁₂₂	17.6	X	228.90112	242.59306	336.83246	5.39774	0.1159483	0.30416108	2.1897790	20	—	—
381348	2008	CC ₁₃₃	17.6	X	354.34956	86.78970	334.72483	5.98030	0.1328334	0.30259508	2.1973276	20	—	—
381349	2008	CK ₁₃₃	18.3	X	358.42476	113.19191	334.32544	2.20449	0.0748954	0.30741241	2.1743116	20	—	—
381350	2008	CV ₁₅₉	17.1	X	183.15138	244.91661	328.61087	6.92807	0.0463697	0.29199253	2.2502023			

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>
381361 2008 <i>DH</i> ₈₈	17.6	X	156.63867	146.24139	65.66579	6.19520	0.1179239	0.28489680	2.2874117	20	11 13.9	20.9
381362 2008 <i>EP</i> ₁₅	18.5	X	309.21960	309.37146	147.67329	2.04890	0.1045448	0.29449037	2.2374602	20	—	—
381363 2008 <i>EZ</i> ₂₁	17.6	X	220.99725	354.91828	192.03979	4.50779	0.1236107	0.29153386	2.2525618	20	12 26.2	20.4
381364 2008 <i>EB</i> ₂₄	17.3	X	124.06240	189.70963	77.97778	6.74199	0.0762090	0.28911134	2.2651274	20	12 22.2	20.4
381365 2008 <i>EA</i> ₃₈	17.5	X	136.63546	200.53807	51.58386	4.81451	0.1441574	0.28700887	2.2761760	20	12 13.6	21.0
381366 2008 <i>EK</i> ₇₁	17.8	X	292.89433	105.83612	20.28201	5.38682	0.0715066	0.29970879	2.2114123	20	—	—
381367 2008 <i>EM</i> ₇₉	18.1	X	264.27341	304.88261	177.04729	3.83630	0.0903464	0.29178291	2.2512798	20	12 6.6	20.5
381368 2008 <i>EZ</i> ₈₈	17.1	X	156.82746	127.37753	90.23782	7.58928	0.0576633	0.28667907	2.2779217	20	11 25.7	20.2
381369 2008 <i>EQ</i> ₁₁₁	18.2	X	36.30665	184.36928	82.74112	3.76206	0.1852102	0.26629057	2.3927584	20	9 17.9	20.9
381370 2008 <i>EY</i> ₁₁₆	18.0	X	239.24902	107.71901	72.00264	2.83490	0.0924492	0.29403596	2.2397648	20	—	—
381371 2008 <i>EF</i> ₁₄₆	17.5	X	151.57936	198.34221	51.74930	7.72030	0.0729765	0.28854860	2.2680715	20	12 30.8	20.6
381372 2008 <i>EZ</i> ₁₅₇	15.7	X	265.38926	314.33975	162.43488	5.94324	0.1137022	0.12706207	3.9185504	20	10 22.2	21.1
381373 2008 <i>FK</i> ₂₃	17.8	X	11.15461	310.25806	110.14582	4.99539	0.1664449	0.29891025	2.2153491	20	—	—
381374 2008 <i>FO</i> ₃₃	17.8	X	144.40591	41.13135	170.81890	4.71328	0.0718680	0.28219296	2.3019997	20	11 2.5	20.9
381375 2008 <i>FE</i> ₃₉	17.0	X	25.59207	254.39857	47.14845	10.00855	0.2113334	0.26625961	2.3929439	20	10 24.7	19.6
381376 2008 <i>FG</i> ₄₀	17.7	X	141.24863	112.76753	89.24099	2.45400	0.1229706	0.27565897	2.3382340	20	10 15.5	21.2
381377 2008 <i>FE</i> ₅₅	18.1	X	168.52975	125.69135	52.03834	2.44223	0.1181696	0.27719630	2.3295807	20	10 11.9	21.4
381378 2008 <i>FC</i> ₇₂	17.8	X	329.60026	270.22845	154.74039	6.51833	0.0868467	0.29382156	2.2408543	20	—	—
381379 2008 <i>FH</i> ₁₀₁	17.8	X	197.25821	76.54983	131.54479	5.40625	0.1232786	0.28808084	2.2705259	20	12 23.4	20.8
381380 2008 <i>FA</i> ₁₀₉	18.3	X	295.21348	315.64073	141.04748	3.41688	0.0514607	0.28954409	2.2628699	20	12 22.6	20.7
381381 2008 <i>FB</i> ₁₁₉	17.7	X	110.25453	237.56165	36.11938	8.55797	0.0979095	0.28382394	2.2931724	20	12 13.2	21.1
381382 2008 <i>FM</i> ₁₂₄	17.6	X	30.55657	48.19225	248.08083	0.83217	0.1824108	0.26598472	2.3945924	20	10 17.7	20.4
381383 2008 <i>FO</i> ₁₃₁	17.8	X	178.33571	11.52758	185.71599	5.33299	0.1400887	0.28471945	2.2883614	20	11 16.6	21.2
381384 2008 <i>FH</i> ₁₃₅	14.2	X	357.67076	193.53770	38.04864	9.63437	0.0518560	0.08361698	5.1793236	20	5 6.5	20.8
381385 2008 <i>GZ</i> ₁	17.4	X	191.53659	347.39779	219.12295	5.12455	0.1210566	0.28739706	2.2742159	20	12 14.6	20.5
381386 2008 <i>GK</i> ₂₈	17.6	X	85.08137	121.85241	125.21600	4.22689	0.1317370	0.27055199	2.3675667	20	10 15.9	21.0
381387 2008 <i>GW</i> ₃₁	17.4	X	279.10191	331.54674	128.79318	7.12141	0.0497314	0.28333677	2.2958002	20	12 2.2	20.0
381388 2008 <i>GR</i> ₃₂	17.3	X	79.48834	202.62187	70.77712	6.36617	0.2120302	0.27184866	2.3600322	20	11 18.9	20.8
381389 2008 <i>GD</i> ₃₄	18.0	X	16.73463	103.67665	185.06161	1.02551	0.1701116	0.26415467	2.4056393	20	9 10.8	20.2
381390 2008 <i>GP</i> ₄₀	17.6	X	236.52195	123.48545	52.66151	8.57076	0.0772005	0.29105449	2.2550344	20	—	—
381391 2008 <i>GW</i> ₄₀	16.6	X	100.55299	179.40792	46.18126	13.57509	0.0301378	0.27009892	2.3702136	20	9 29.3	19.8
381392 2008 <i>GN</i> ₄₂	17.7	X	37.21929	137.14801	151.42752	5.14021	0.0970030	0.26714731	2.3876400	20	10 4.9	20.5
381393 2008 <i>GQ</i> ₅₄	17.8	X	105.80608	158.41266	73.98621	2.49401	0.1448071	0.27305496	2.3530763	20	10 19.1	21.2
381394 2008 <i>GQ</i> ₆₂	17.6	X	95.28592	15.66900	219.94182	3.02905	0.1611848	0.27019455	2.3696543	20	10 11.9	21.1
381395 2008 <i>GC</i> ₆₄	16.6	X	290.62576	237.00540	44.15606	27.37570	0.2688767	0.23676445	2.5877663	20	3 18.8	20.9
381396 2008 <i>GN</i> ₆₈	17.1	X	28.65448	147.56899	99.52839	5.21895	0.1871044	0.25472515	2.4646476	20	8 2.5	19.4
381397 2008 <i>GH</i> ₇₈	17.0	X	126.88742	116.85970	72.83599	8.20318	0.0383416	0.26719408	2.3873614	20	9 12.4	20.3
381398 2008 <i>GM</i> ₉₅	17.9	X	27.05989	192.65244	96.68995	4.89867	0.1932687	0.26408295	2.4060749	20	10 7.1	20.6
381399 2008 <i>GK</i> ₉₈	17.6	X	280.09366	319.95802	155.33550	6.78732	0.0849055	0.28611001	2.2809408	20	12 21.9	20.0
381400 2008 <i>GR</i> ₁₀₅	16.8	X	354.63768	328.93266	12.12478	15.15879	0.1197544	0.27138428	2.3627236	20	10 12.2	19.1
381401 2008 <i>GL</i> ₁₁₂	17.0	X	134.96770	221.83958	18.69882	7.00868	0.0981498	0.28068779	2.3102219	20	11 25.7	20.5
381402 2008 <i>GQ</i> ₁₁₉	17.5	X	133.08829	95.16738	142.89610	3.64543	0.0442376	0.27678896	2.3318657	20	11 22.5	20.6
381403 2008 <i>GN</i> ₁₂₄	17.5	X	192.00546	105.72177	69.93516	6.42458	0.1126163	0.28344101	2.2952373	20	11 6.1	20.7
381404 2008 <i>GO</i> ₁₄₅	17.7	X	135.36110	25.11972	174.84404	4.06945	0.1580853	0.27119809	2.3638049	20	10 6.3	21.4
381405 2008 <i>HJ</i> ₁₄	18.0	X	153.67362	301.34289	306.64144	2.43773	0.0837944	0.28715863	2.2753846	20	12 29.2	20.9
381406 2008 <i>HQ</i> ₃₂	16.8	X	14.04726	135.45021	198.30583	9.65550	0.1439170	0.26976494	2.3721695	20	11 10.4	19.4
381407 2008 <i>HJ</i> ₃₅	17.0	X	31.79872	239.02704	86.20781	10.32437	0.0717708	0.27405716	2.3473361	20	11 15.6	19.9
381408 2008 <i>HU</i> ₄₀	18.0	X	193.34975	318.80752	210.46367	9.14680	0.1563552	0.28149941	2.3057792	20	10 24.0	21.3
381409 2008 <i>HM</i> ₄₇	12.9	X	202.40205	302.17996	95.78379	19.37506	0.1037443	0.08142229	5.2719812	20	5 20.9	20.4
381410 2008 <i>HV</i> ₅₆	17.7	X	352.13118	34.37868	43.08649	3.71918	0.1176531	0.29738314	2.2229268	20	—	—
381411 2008 <i>JE</i> ₇	17.3	X	47.37465	233.49901	53.22644	7.20992	0.1336666	0.26562078	2.3967792	20	10 22.3	20.2
381412 2008 <i>JE</i> ₁₂	17.9	X	346.86893	250.08642	105.21097	2.86731	0.1877235	0.26498793	2.4005936	20	10 28.4	19.8
381413 2008 <i>JM</i> ₃₂	16.8	X	346.90678	300.16513	55.13970	7.10506	0.1782730	0.26642352	2.3919623	20	10 27.9	18.9
381414 2008 <i>JK</i> ₃₇	17.4	X	301.74346	182.09027	104.25102	4.32234	0.1801026	0.23999642	2.5644813	20	4 5.6	20.6
381415 2008 <i>KY</i> ₇	14.3	X	300.39426	168.53653	143.95406	4.42884	0.0569682	0.08371761	5.1751727	20	5 28.8	21.1
381416 2008 <i>KX</i> ₈	17.0	X	300.92433	318.79551	71.03982	6.48263	0.1069829	0.26625792	2.3929540	20	9 19.1	19.5
381417 2008 <i>KJ</i> ₁₁	13.5	X	110.24466	16.95155	121.62711	12.99114	0.0028676	0.08393165	5.1663706	20	6 1.8	20.4
381418 2008 <i>KQ</i> ₂₉	17.2	X	346.82813	233.39920	103.73052	7.97766	0.1070885	0.26308261	2.4121702	20	9 25.2	19.7
381419 2008 <i>KE</i> ₄₃	13.2	X	232.16352	247.02225	122.86897	17.28310	0.0374077	0.08119985	5.2816046	20	5 23.4	20.4
381420 2008 <i>LS</i> ₂	13.3	X	262.96480	220.66194	113.74775	9.62996	0.0943887	0.08228116	5.2352301	20	5 8.4	20.4
381421 2008 <i>LZ</i> ₁₀	17.3	X	46.14582	168.69278	84.04466	11.05023	0.1904121	0.25784112	2.4447508	20	9 16.0	20.5
381422 2008 <i>LN</i> ₁₃	13.1	X	4.07259	132.91411	106.71577	14.58611	0.0631705	0.08368169	5.1766536	20	5 27.7	19.8
381423 2008 <i>MY</i> ₁	17.6	X	321.89108	156.15216	140.95806	4.46418	0.1862933	0.24491075	2.5300600	20	5 22.2	20.1
381424 2008 <i>MC</i> ₅	15.9	X	210.47054	231.46776	115.41698	15.35795	0.2136445	0.21904091	2.7255400	20	3 22.6	20.8
381425 2008 <i>NB</i> ₃	16.6	X	308.91459	184.73880	125.08444	8.90974	0.1502557	0.23772568	2.5807860	20	5 24.9	19.7

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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>
381441 2008 QP ₁₆	16.0	X	230.91009	25.87935	338.31634	14.56655	0.1115306	0.22621410	2.6676137	20	4 23.3	20.3
381442 2008 QH ₃₀	16.2	X	221.10658	90.31549	252.11012	6.92726	0.1397853	0.22022414	2.7157687	20	3 19.4	20.7
381443 2008 QJ ₃₁	16.5	X	200.58051	44.83661	323.63527	14.49711	0.2487078	0.21724942	2.7405031	20	3 27.4	21.6
381444 2008 QV ₃₂	16.5	X	256.07893	126.27995	193.96338	13.91819	0.2086935	0.22300507	2.6931439	20	3 22.2	20.7
381445 2008 QN ₃₃	16.1	X	162.64555	102.00132	2.08463	15.14431	0.0665978	0.22938086	2.6430047	20	6 26.2	20.3
381446 2008 QL ₄₄	16.9	X	215.74615	50.66272	341.61047	11.08769	0.1990004	0.22691743	2.6620987	20	5 11.1	21.5
381447 2008 RH ₁₃	16.8	X	124.14151	207.47702	258.23670	4.43898	0.0293236	0.22187989	2.7022410	20	5 7.3	20.5
381448 2008 RK ₁₆	17.0	X	193.70045	96.13976	289.97394	3.73848	0.1791806	0.21819549	2.7325757	20	4 17.5	21.6
381449 2008 RV ₁₈	17.1	X	167.36245	174.69415	222.84049	3.38149	0.0821301	0.21553351	2.7550291	20	4 5.5	21.2
381450 2008 RV ₁₉	16.9	X	147.50821	136.40856	272.01774	2.55086	0.0901219	0.21277622	2.7787789	20	3 28.8	21.1
381451 2008 RA ₂₃	16.7	X	224.07622	161.23869	171.57628	6.59086	0.0640308	0.21479077	2.7613766	20	3 18.6	20.7
381452 2008 RE ₂₅	16.6	X	181.87668	185.81079	194.68864	8.58212	0.2120192	0.21519462	2.7579207	20	4 2.9	21.2
381453 2008 RO ₂₆	16.5	X	219.62316	185.35019	182.86286	8.65680	0.2466752	0.22334977	2.6903723	20	4 18.1	21.2
381454 2008 RN ₃₅	17.2	X	137.16563	200.44937	256.36011	1.20168	0.0342852	0.22218229	2.6997886	20	5 13.3	20.8
381455 2008 RA ₄₂	17.4	X	257.86608	309.28144	10.22080	3.20552	0.1050781	0.22050122	2.7134931	20	4 3.9	21.2
381456 2008 RB ₄₄	17.0	X	157.87752	271.85124	168.34582	2.28406	0.0690202	0.22198795	2.7013640	20	5 19.9	21.0
381457 2008 RM ₅₃	16.4	X	169.93920	98.55167	306.66528	6.75889	0.2185857	0.21771499	2.7365948	20	4 20.0	21.3
381458 Moiseenko	16.5	X	248.87279	171.08647	172.77117	14.28243	0.0373771	0.22768568	2.6561071	20	5 6.2	20.3
381459 2008 RE ₈₅	17.2	X	263.05939	71.93479	276.42867	3.48606	0.1748755	0.22716142	2.6601921	20	5 7.3	21.1
381460 2008 RJ ₈₆	16.8	X	147.30147	196.46745	247.27640	7.49601	0.1761062	0.21655670	2.7463442	20	5 18.8	21.3
381461 2008 RO ₉₄	17.7	X	353.81859	339.80022	294.12948	0.93380	0.0747717	0.23708431	2.5854383	20	6 25.0	20.6
381462 2008 RC ₁₀₄	17.0	X	208.82722	74.43775	306.68809	4.89040	0.0144550	0.22110698	2.7085348	20	5 1.4	20.7
381463 2008 RH ₁₁₄	17.2	X	152.53888	242.32877	180.84848	4.65433	0.0585717	0.21466223	2.7624788	20	4 21.7	21.1
381464 2008 RC ₁₁₅	16.8	X	176.30889	147.22414	203.92976	14.68761	0.1556889	0.20344192	2.8631389	20	2 19.1	21.7
381465 2008 RS ₁₁₅	16.8	X	251.56822	339.36431	2.50128	6.65451	0.1417498	0.22542368	2.6738458	20	4 19.4	20.9
381466 2008 RA ₁₁₈	17.2	X	189.75296	33.40237	343.00966	3.87997	0.0863427	0.21360635	2.7715749	20	4 2.8	21.3
381467 2008 RJ ₁₁₉	17.2	X	227.55210	309.72861	51.44756	4.34525	0.0630297	0.22117355	2.7079912	20	4 27.4	21.1
381468 2008 RQ ₁₂₀	16.9	X	169.34761	72.14195	6.92478	1.62588	0.1861426	0.22217052	2.6998839	20	6 2.1	21.3
381469 2008 RE ₁₂₉	16.8	X	210.76420	295.68646	40.93358	2.53281	0.0718281	0.20317438	2.8656518	20	3 10.2	21.1
381470 2008 RS ₁₃₀	15.8	X	174.53243	199.23657	145.44976	15.95218	0.1436417	0.20383765	2.8594320	20	2 13.2	20.3
381471 2008 RN ₁₃₇	16.7	X	233.56498	77.59933	280.61749	5.78895	0.1895084	0.22250761	2.6971565	20	4 17.1	21.2
381472 2008 RQ ₁₃₇	16.8	X	192.61564	76.95640	298.67132	5.31222	0.0370194	0.21606644	2.7504970	20	4 3.0	20.8
381473 2008 RV ₁₄₁	17.0	X	215.49116	4.28690	22.56192	3.03280	0.0948275	0.22546636	2.6735084	20	5 13.4	20.9
381474 2008 SQ ₅	16.5	X	203.23524	236.06107	125.21353	5.81485	0.1774283	0.21537681	2.7563652	20	3 31.1	21.1
381475 2008 SM ₆	16.6	X	185.33487	234.41740	133.81802	6.37753	0.1852451	0.21293111	2.7774312	20	3 24.2	21.2
381476 2008 SA ₂₀	17.6	X	206.19389	53.30550	331.40237	7.73659	0.2830485	0.22211779	2.7003113	20	4 22.2	22.5
381477 2008 SK ₃₂	15.7	X	128.78309	105.05631	343.78592	12.35899	0.1299815	0.21412699	2.7670804	20	4 28.0	20.1
381478 2008 SR ₃₂	16.5	X	279.57442	31.39584	262.44770	5.30673	0.0165299	0.21681956	2.7441240	20	4 7.8	20.3
381479 2008 SW ₃₉	16.8	X	214.64205	185.77580	177.75212	5.45130	0.0576851	0.21666982	2.7453882	20	4 16.6	20.7
381480 2008 SV ₄₂	16.7	X	265.46493	316.44929	8.51515	5.27622	0.0238544	0.21901458	2.7257584	20	4 30.1	20.5
381481 2008 SZ ₅₉	15.9	X	204.60602	17.34122	9.42864	12.54856	0.1697461	0.22113201	2.7083304	20	4 26.3	20.4
381482 2008 SL ₆₄	16.8	X	101.39510	116.36725	30.58357	5.27797	0.1165656	0.22076821	2.7113049	20	6 14.5	20.7
381483 2008 SW ₆₇	16.0	X	257.80678	296.40303	35.63077	13.88235	0.1849811	0.22217370	2.6998581	20	4 13.0	20.0
381484 2008 SA ₆₉	17.5	X	281.35255	5.42789	340.60967	1.91739	0.0649562	0.23423629	2.6063532	20	6 14.2	20.8
381485 2008 SM ₇₀	16.7	X	169.86842	268.31485	161.01338	6.13162	0.1890577	0.22160882	2.7044442	20	5 23.2	21.2
381486 2008 SE ₇₁	16.4	X	238.07595	162.56804	188.86986	13.52929	0.1297251	0.22260433	2.6963751	20	4 21.9	20.5
381487 2008 SR ₇₉	17.5	X	233.46683	120.44288	276.27572	1.70653	0.1144897	0.22933460	2.6433601	20	6 14.2	21.3
381488 2008 SO ₈₂	16.2	X	165.33106	313.94163	99.68916	14.32485	0.1674777	0.21748801	2.7384985	20	5 3.7	20.9
381489 2008 SR ₈₄	16.6	X	161.60451	288.12944	177.78882	9.34324	0.0890805	0.22746107	2.6578553	20	6 26.7	20.8
381490 2008 SN ₈₆	16.6	X	132.45485	143.32033	223.36964	11.16562	0.0658383	0.19900511	2.9055380	20	1 18.1	21.0
381491 2008 SA ₈₈	17.1	X	212.19134	49.66275	311.09296	3.59638	0.1890737	0.22032952	2.7149026	20	4 2.4	21.6
381492 2008 SV ₉₀	16.9	X	259.70625	318.84581	347.36891	3.82983	0.0572065	0.21486991	2.7606986	20	3 25.8	20.7
381493 2008 SS ₉₉	16.8	X	153.90925	333.12013	101.67385	4.55861	0.0926839	0.21482219	2.7611073	20	5 10.8	21.0
381494 2008 SK ₁₀₂	16.1	X	183.61021	320.57467	114.62654	5.07354	0.1259774	0.22132429	2.7067615	20	6 10.9	20.3
381495 2008 SG ₁₀₃	16.5	X	315.61852	230.22037	52.68109	3.85320	0.0567645	0.21860982	2.7291219	20	5 9.1	20.0
381496 2008 SP ₁₀₉	17.2	X	152.36907	91.30136	337.73386	7.57947	0.1793233	0.21784785	2.7354820	20	5 2.6	21.7
381497 2008 SK ₁₁₆	17.0	X	142.73146	247.39789	125.87344	3.33189	0.1033342	0.20075208	2.8886572	20	2 13.8	21.2
381498 2008 SU ₁₁₆	16.9	X	189.78770	162.82953	212.15924	3.85670	0.0888698	0.21246201	2.7815179	20	4 1.7	21.0
381499 2008 SJ ₁₁₈	16.7	X	122.22321	92.91069	6.31353	1.44208	0.0365754	0.21431409	2.7654696	20	4 27.9	20.5
381500 2008 SF ₁₂₃	16.1	X	213.90719	148.89272	204.61268	13.41285	0.1618341	0.21421935	2.7662850	20	3 27.6	20.7
381501 2008 SW ₁₂₃	16.9	X	181.28209	183.50274	205.50454	4.79601	0.0736274	0.21221827	2.7836473	20	4 10.4	21.1
381502 2008 SG ₁₂₄	17.2	X	142.96338	177.44825	238.99727	3.33950	0.0603715	0.20944056	2.8082053	20	3 31.3	21.4
381503 2008 SC ₁₂₅	16.3	X	136.07262	81.61767	17.85353	12.11754	0.1219209	0.21513415	2.7584375	20	5 20.8	20.7
381504 2008 SY ₁₂₉	16.8	X	150.38129	213.40577	250.59715	3.67622	0.0855197	0.21921956	2.7240591	20	6 11.8	20.7
381505 2008 SJ ₁₃₂	17.0	X	162.02095	129.14873	218.02302	5.08877	0.0771482	0.19816572	2.9137371	20	1 29.9	21.5
381506 2008 SO ₁₄₃	16.6	X	116.64427	88.76241	44.33254	12.60456	0.2089482	0.21334282	2.7738567	20	6 23.0	21.1
381507 2008 SB ₁₄₄	16.1	X	167.61513	27.99302	53.71212	15.32500	0.2254846	0.21376376	2.7702140	20	6 3.1	20.9
381508 2008 SA ₁₅₂	15.5	X	233.21890	310.29362	55.96359	11.77990	0.1621694	0.22184887	2.7024929	20	5 2.9	19.6
381509 2008 SL ₁₅₅	16.4	X	192.66726	265.20547	157.52096	6.84141	0.1538074	0.22263305	2.6961432	20	6 4.1	20.8
381510 2008 SW ₁₆₂	16.6	X	196.28743	328.55216	20.98622	8.31766	0.2294934	0.21247790	2.7813792	20	3 11.6	21.5
381511 2008 SX ₁₆₆	16.4	X	241.95837	295.32686	29.23800	13.38942	0.1874221	0.21700701	2.7425436	20	3 22.1	20.9
381512 2008 SK ₁₇₂	17.4	X	224.30397	92.26942	228.14362	8.75502	0.3104823	0.21708183	2.7419134	20	2 19.2	22.7
381513 2008 SB ₁₇₃	16.9	X	153.24569	225.62037	196.62382	4.991						

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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>
381521 2008 SO ₂₁₇	16.5	X	297.52500	225.89369	58.54438	15.15140	0.0412431	0.21390303	2.7690115	20	4 22.8	20.3
381522 2008 SV ₂₁₈	16.1	X	171.54582	108.38872	352.83587	11.19067	0.1551751	0.22692207	2.6620623	20	7 3.7	20.6
381523 2008 SB ₂₁₉	16.8	X	208.17999	68.19828	302.93890	4.01709	0.1327479	0.21881216	2.7274392	20	4 12.9	21.1
381524 2008 SY ₂₂₂	16.9	X	171.21035	58.33032	344.48861	8.09045	0.1562023	0.21556604	2.7547518	20	4 16.5	21.5
381525 2008 SE ₂₂₇	16.8	X	218.21979	86.95562	293.72510	5.02730	0.0556737	0.22336239	2.6902709	20	5 10.2	20.8
381526 2008 SV ₂₂₉	16.3	X	245.37956	321.26415	338.25632	7.32908	0.2042987	0.21545727	2.7556789	20	2 19.5	20.9
381527 2008 SC ₂₃₁	17.0	X	333.31257	22.23556	239.60541	3.97081	0.0552482	0.22403619	2.6848742	20	5 6.1	20.3
381528 2008 SV ₂₃₆	17.0	X	166.55833	88.64013	346.31900	2.63592	0.1045264	0.21894549	2.7263318	20	5 22.9	21.1
381529 2008 SP ₂₅₀	16.2	X	154.60693	26.13878	53.83490	9.38491	0.1416162	0.21447525	2.7640842	20	5 19.2	20.6
381530 2008 SU ₂₅₃	16.6	X	86.55361	118.36266	36.95984	9.97342	0.1100548	0.21935192	2.7229631	20	6 4.8	20.4
381531 2008 SL ₂₆₂	17.1	X	118.89299	287.13804	167.95424	4.88857	0.0311848	0.21432950	2.7653371	20	4 19.3	20.9
381532 2008 SL ₂₇₅	16.9	X	186.44347	88.92263	278.66519	3.28842	0.0908220	0.21212760	2.7844404	20	3 19.0	21.2
381533 2008 SS ₂₈₆	15.9	X	207.02313	84.66155	256.27482	10.36216	0.2164763	0.21270667	2.7793846	20	3 2.3	20.9
381534 2008 SV ₂₈₇	16.3	X	198.00520	292.11407	81.73441	5.10636	0.0888742	0.21436466	2.7650347	20	4 11.7	20.5
381535 2008 SL ₂₉₁	16.6	X	187.67544	130.55446	285.23341	9.91903	0.2141640	0.22146732	2.7055960	20	5 18.6	21.4
381536 2008 SG ₂₉₉	15.9	X	174.96063	6.25077	48.25619	12.37072	0.0864075	0.21837444	2.7310827	20	5 6.3	20.0
381537 2008 SO ₃₀₁	16.4	X	138.04906	93.99373	347.07112	8.43423	0.1548036	0.21296018	2.7771784	20	5 1.5	20.8
381538 2008 SS ₃₀₁	16.3	X	163.09791	263.41565	163.72438	11.33372	0.1866595	0.21602602	2.7508400	20	5 15.9	21.0
381539 2008 SG ₃₀₂	17.0	X	220.62403	322.47598	103.74524	5.21491	0.0735672	0.22947125	2.6423106	20	7 12.8	20.6
381540 2008 SC ₃₀₃	16.3	X	319.28324	354.80497	288.07839	9.26741	0.1021035	0.22611528	2.6683908	20	5 5.2	19.7
381541 2008 SB ₃₀₄	16.8	X	206.36974	331.67875	61.90653	8.08685	0.1423404	0.21962088	2.7207395	20	5 11.5	21.0
381542 2008 SO ₃₀₇	16.2	X	156.08987	30.22524	28.13316	9.10583	0.0253322	0.21221510	2.7836750	20	4 16.5	20.1
381543 2008 SV ₃₀₈	16.6	X	233.82221	300.57305	81.86727	4.88197	0.1224495	0.22318951	2.6916600	20	5 26.5	20.6
381544 2008 TN ₁	16.5	X	178.68269	108.97814	284.37857	12.29879	0.2028847	0.21758210	2.7377090	20	4 9.8	21.5
381545 2008 TW ₄	16.1	X	143.94027	72.21759	5.33736	13.04547	0.1676835	0.21434376	2.7622145	20	5 3.4	20.6
381546 2008 TZ ₁₉	16.1	X	45.19981	335.26079	216.82498	16.34452	0.1381191	0.21428148	2.7657502	20	5 31.6	19.5
381547 2008 TC ₂₈	17.0	X	230.27124	129.50299	242.10230	2.18722	0.1540463	0.22590715	2.6700295	20	5 5.4	21.1
381548 2008 TC ₄₀	16.3	X	157.51573	219.14635	274.02156	8.93696	0.0757513	0.23075934	2.6324686	20	7 26.4	20.0
381549 2008 TA ₅₁	16.8	X	82.29351	121.57104	31.10928	3.45460	0.0347087	0.21932447	2.7231903	20	5 15.9	21.4
381550 2008 TA ₅₈	17.2	X	96.50709	296.77897	178.77114	3.44114	0.0460656	0.21285007	2.7781361	20	4 18.8	20.0
381551 2008 TX ₅₉	16.7	X	294.85714	195.92893	193.31687	9.55258	0.1041787	0.23960768	2.5672543	20	8 27.4	19.9
381552 2008 TJ ₆₈	16.5	X	137.23473	36.78835	47.54480	9.35064	0.1148841	0.21178990	2.7873995	20	5 5.6	20.6
381553 2008 TO ₇₆	17.0	X	215.01282	338.29808	14.57486	7.82975	0.0822465	0.21586887	2.7521749	20	4 1.5	20.9
381554 2008 TU ₈₅	16.2	X	178.49735	237.10706	207.55798	21.30017	0.0796850	0.22432506	2.6825687	20	6 16.3	20.6
381555 2008 TB ₉₅	17.2	X	234.36024	191.01904	152.29790	2.55206	0.1021249	0.22348537	2.6892839	20	4 9.3	21.2
381556 2008 TE ₉₈	16.9	X	125.32523	129.61555	305.29649	5.21388	0.0429725	0.21197643	2.7857640	20	3 29.9	20.9
381557 2008 TU ₉₈	17.1	X	295.76706	267.04094	29.13785	2.92245	0.0882178	0.22186907	2.7023289	20	4 23.6	20.5
381558 2008 TE ₁₁₀	15.8	X	209.50019	291.01406	46.19539	13.21584	0.1946279	0.21194950	2.7860001	20	3 11.9	20.7
381559 2008 TG ₁₁₄	16.7	X	228.10842	273.25500	99.71267	3.10398	0.1095027	0.21999252	2.7176745	20	5 9.8	20.8
381560 2008 TT ₁₁₆	16.6	X	240.69910	9.73521	336.42245	10.72193	0.1565474	0.21972988	2.7198397	20	4 9.5	21.1
381561 2008 TV ₁₄₇	16.9	X	227.71184	195.29189	172.14542	4.81996	0.0730777	0.22154237	2.7049849	20	5 5.7	20.8
381562 2008 TG ₁₆₄	17.3	X	129.85903	53.51672	355.90197	1.59724	0.0618311	0.20262677	2.8708126	20	3 9.3	21.4
381563 2008 TO ₁₈₈	17.2	X	192.07821	132.02032	238.64511	4.55399	0.0885397	0.20961404	2.8066557	20	3 28.8	21.6
381564 2008 UW ₅	18.1	X	170.94537	204.41024	297.92004	9.42116	0.3892750	0.39738495	1.8322938	20	8 24.9	21.5
381565 2008 UX ₈	17.0	X	212.36712	9.96562	357.26859	2.30766	0.0927009	0.21883970	2.7272104	20	4 15.3	21.1
381566 2008 UE ₆₅	16.5	X	195.81572	67.72140	326.81136	4.25310	0.1689454	0.21428118	2.7657528	20	4 29.9	21.2
381567 2008 UY ₇₈	16.9	X	294.40902	39.37512	261.82042	3.35907	0.2086063	0.22660019	2.6645827	20	4 8.1	20.6
381568 2008 UD ₇₉	16.6	X	83.20926	298.59715	208.11614	11.99571	0.1024622	0.21775347	2.7362724	20	5 21.2	20.3
381569 2008 UG ₈₀	16.1	X	195.69073	117.30462	259.16003	8.42417	0.0843691	0.21102985	2.7940883	20	4 7.0	20.5
381570 2008 UP ₉₂	15.7	X	165.74925	299.94155	49.65495	17.81630	0.1624159	0.20273330	2.8698068	20	2 20.7	20.7
381571 2008 UB ₁₀₀	17.1	X	190.34753	174.10696	222.93802	2.33438	0.2129792	0.21490379	2.7604084	20	4 29.5	21.9
381572 2008 UU ₁₁₀	17.1	X	252.73397	2.28359	350.85127	4.98748	0.0831737	0.22021331	2.7158577	20	5 12.6	20.9
381573 2008 UY ₁₂₃	16.8	X	250.98140	222.44260	101.33457	7.18340	0.0345697	0.21476329	2.7616122	20	4 13.9	20.7
381574 2008 UZ ₁₂₆	16.8	X	117.06815	305.19754	58.03042	1.98858	0.1882781	0.18875402	3.0098065	20	1 17.2	21.2
381575 2008 UN ₁₄₉	17.1	X	167.23671	210.33417	193.82152	5.69787	0.0745374	0.21193813	2.7860997	20	4 14.8	21.1
381576 2008 UK ₁₅₄	17.0	X	332.69918	214.00007	48.96935	2.75830	0.0334077	0.21824805	2.7321369	20	5 9.3	20.6
381577 2008 UH ₁₈₃	16.7	X	155.22348	38.48039	50.06169	9.13337	0.1789108	0.21563825	2.7541369	20	5 31.5	21.2
381578 2008 UQ ₁₈₉	16.2	X	182.65365	24.96501	20.91894	6.50155	0.0700155	0.21964622	2.7205302	20	5 1.9	20.1
381579 2008 UG ₁₉₉	15.5	X	18.58011	245.10520	255.68696	21.83621	0.4465012	0.17986147	3.1082119	20	1 21.6	17.4
381580 2008 UU ₂₀₆	16.4	X	250.89149	263.74351	88.40175	7.39917	0.0568956	0.21786809	2.7353126	20	5 15.8	20.2
381581 2008 UD ₂₁₂	16.9	X	184.90340	276.05931	123.05080	3.91328	0.1891976	0.21290498	2.7776584	20	4 29.3	21.6
381582 2008 UO ₂₃₁	16.7	X	223.10653	162.52068	246.64874	4.72679	0.2118579	0.22738604	2.6584399	20	6 11.1	20.9
381583 2008 UW ₂₃₉	16.3	X	76.10177	252.30783	302.58131	7.15855	0.0816108	0.22034859	2.7147460	20	7 12.1	19.8
381584 2008 UU ₂₅₄	16.7	X	311.36024	254.43458	47.37641	6.71825	0.0437548	0.21972473	2.7198822	20	5 29.6	20.3
381585 2008 UV ₂₅₅	16.5	X	158.92626	275.66928	51.52098	12.66718	0.0760590	0.19112527	2.9848601	20	1 6.0	21.1
381586 2008 UZ ₃₀₀	17.0	X	152.11279	74.08308	14.94046	6.97284	0.0433539	0.21395141	2.7685940	20	5 20.9	21.1
381587 2008 UP ₃₂₁	17.0	X	249.48561	352.99767	327.12249	4.02694	0.1412481	0.21595436	2.7514486	20	3 22.0	21.1
381588 2008 UY ₃₂₆	16.0	X	104.70554	290.18166	110.97292	24.56353	0.3176220	0.18683372	3.0303948	20	3 11.8	21.0
381589 2008 UC ₃₃₃	17.6	X	265.40414	108.21442	226.85457	20.10983	0.1096857	0.38753988	1.8631956	20	4 24.1	19.4
381590 2008 UO ₃₃₅	16.8	X	244.35593	237.81446	52.83580	2.82412	0.0288657	0.20347384	2.8628394	20	2 23.4	20.8
381591 2008 UW ₃₄₃	16.3	X	171.56116	120.05769	263.59769	7.62478	0.1170521	0.20619481	2.8375982	20	3 22.8	20.8
381592 2008 UP ₃₄₇	16.4	X	288.00705	22.60409	291.81656	6.47816	0.1694072	0.21829574	2.7317390	20	4 22.2	20.2
381593 2008 UN ₃₅₅	16.3	X	234.63544	266.40532	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>
381601 2008 VA ₆₆	16.5	X	257.19276	215.80708	76.57033	6.77589	0.0314334	0.20399798	2.8579336	20	3 13.9	20.6
381602 2008 VH ₆₆	15.1	X	17.76262	199.40244	304.66240	27.21455	0.1466924	0.17845003	3.1245798	20	2 6.1	18.8
381603 2008 VT ₆₈	15.8	X	102.54535	76.71507	289.91145	4.26481	0.0460204	0.17073452	3.2180182	20	—	—
381604 2008 VF ₇₇	16.0	X	74.63827	346.98332	85.82078	11.23024	0.0756256	0.19177228	2.9781427	20	2 3.8	20.0
381605 2008 WT ₅	17.2	X	195.55403	208.98701	134.93920	2.92249	0.0994432	0.20542232	2.8447075	20	3 2.5	21.4
381606 2008 WF ₁₂	16.0	X	78.06846	52.67830	68.78373	7.28047	0.0626309	0.20304565	2.8668629	20	4 7.8	19.9
381607 2008 WX ₁₈	16.5	X	213.37577	107.65900	213.66749	12.36843	0.1381468	0.20589767	2.8403275	20	2 16.4	21.3
381608 2008 WL ₄₈	16.2	X	119.54020	350.19588	73.33137	12.23945	0.0820360	0.19783940	2.9169402	20	3 24.4	20.6
381609 2008 WP ₆₉	16.6	X	51.44896	182.68028	305.38577	0.97272	0.0556228	0.19508273	2.9443550	20	3 6.9	20.4
381610 2008 WF ₇₁	16.8	X	119.01457	139.36640	242.31766	7.62066	0.1414161	0.19527333	2.9424388	20	1 31.3	21.2
381611 2008 WM ₇₄	16.4	X	223.30316	351.82213	351.44603	8.73148	0.1785467	0.22028159	2.7152964	20	3 22.9	20.7
381612 2008 WF ₇₇	16.9	X	233.95986	111.42737	182.01399	3.06731	0.0609845	0.19662082	2.9289798	20	2 11.2	21.1
381613 2008 WJ ₈₀	16.8	X	63.71501	311.83674	153.11826	3.47014	0.0650037	0.19399954	2.9553046	20	2 25.2	20.6
381614 2008 WJ ₈₀	16.4	X	124.98940	290.54930	85.63609	11.12763	0.1902348	0.19068078	2.9894969	20	2 1.6	20.8
381615 2008 WZ ₈₂	16.9	X	242.64711	286.79249	129.74924	4.11934	0.1971217	0.22632457	2.6667455	20	7 10.8	20.8
381616 2008 WH ₈₆	16.9	X	73.64738	45.55613	52.77064	2.78189	0.0327351	0.20067037	2.8894413	20	2 26.7	20.8
381617 2008 WM ₁₀₃	16.2	X	83.31698	207.95772	274.30563	9.78389	0.0930537	0.20072551	2.8889122	20	3 30.5	20.3
381618 2008 WJ ₁₂₀	16.3	X	99.96972	299.89454	84.11284	10.42705	0.0943912	0.18139430	3.0906771	20	1 10.3	20.6
381619 2008 WE ₁₃₀	16.7	X	2.39840	116.37521	77.68914	3.05787	0.1156880	0.19996073	2.8962735	20	3 20.8	20.1
381620 2008 WR ₁₃₆	15.8	X	54.54582	357.88748	95.73423	12.02136	0.1256205	0.18640184	3.0350738	20	2 7.6	19.6
381621 2008 WJ ₁₄₀	16.6	X	261.51888	116.11940	273.29735	11.38605	0.1815533	0.22815942	2.6524291	20	6 28.7	20.4
381622 2008 XJ ₂	16.4	X	94.31769	264.53679	259.93070	6.56635	0.3727403	0.20408358	2.8571345	20	7 26.1	21.3
381623 2008 XN ₂₄	15.9	X	61.12089	39.87076	49.18490	16.68657	0.1208523	0.19025971	2.9939060	20	2 16.3	20.0
381624 2008 XV ₄₉	15.6	X	32.13912	334.28660	128.54678	17.55617	0.1492591	0.17363828	3.1820407	20	1 15.1	19.3
381625 2008 XR ₅₀	15.3	X	63.62248	313.15646	127.34575	19.75590	0.1280938	0.17737622	3.1371777	20	2 4.7	19.2
381626 2008 YB	15.7	X	27.24900	351.58661	77.96658	14.71877	0.1702584	0.17839721	3.1251966	20	—	—
381627 2008 YG ₆	16.2	X	114.52053	85.51109	261.60786	7.34062	0.0667226	0.18124270	3.0924003	20	—	—
381628 2008 YS ₁₆	16.2	X	141.78428	276.38789	113.54757	11.17331	0.1476430	0.19006720	2.9959273	20	3 12.6	21.0
381629 2008 YS ₂₁	15.7	X	35.18406	342.58519	124.32537	12.84333	0.1039760	0.17798312	3.1300420	20	1 22.8	19.4
381630 2008 YJ ₂₄	15.5	X	97.32025	350.33993	75.07121	11.94903	0.0791382	0.18830726	3.0145652	20	2 28.3	19.9
381631 2008 YR ₂₅	16.1	X	62.08741	347.88936	90.37579	9.57299	0.1022960	0.18585649	3.0410080	20	1 27.1	20.0
381632 2008 YQ ₂₉	17.4	X	226.61361	277.17389	84.43230	23.89435	0.1167819	0.37784471	1.8949328	20	4 28.7	20.3
381633 2008 YA ₃₉	17.1	X	69.05814	31.53676	45.62498	1.22591	0.1276618	0.18435614	3.0574848	20	2 13.5	20.7
381634 2008 YL ₄₅	16.9	X	43.40920	37.85021	75.55805	3.28452	0.1093789	0.18378937	3.0637674	20	2 13.3	20.6
381635 2008 YM ₄₇	16.5	X	62.28049	50.97317	56.47049	1.82052	0.1538118	0.18746024	3.0236390	20	3 10.1	20.2
381636 2008 YQ ₆₃	16.3	X	318.97739	34.12000	148.10896	6.21212	0.0991708	0.17582503	3.1556021	20	1 5.4	20.6
381637 2008 YC ₇₆	15.8	X	49.55283	147.86603	321.06653	9.17698	0.1255535	0.18332766	3.0689093	20	2 16.8	19.5
381638 2008 YP ₈₅	16.5	X	183.46017	257.30908	84.00406	8.90085	0.2223211	0.19962125	2.8995563	20	2 23.7	21.6
381639 2008 YS ₉₆	16.9	X	66.34094	347.94297	84.26684	2.08539	0.1616822	0.18045742	3.1013650	20	2 2.3	20.6
381640 2008 YK ₁₀₄	16.5	X	67.00105	124.62705	304.31819	11.73273	0.0847897	0.17841522	3.1249863	20	1 20.9	20.7
381641 2008 YJ ₁₁₃	16.0	X	70.72159	335.81455	102.34679	9.92322	0.0254131	0.18330664	3.0691439	20	1 30.4	20.3
381642 2008 YQ ₁₂₃	16.0	X	95.36550	251.28851	123.70884	11.23441	0.0959071	0.17527246	3.1622310	20	—	—
381643 2008 YR ₁₃₄	16.4	X	175.65594	282.55390	84.25255	11.69549	0.0372663	0.19865982	2.9089038	20	3 13.6	20.8
381644 2008 YD ₁₃₉	16.4	X	14.03795	3.75910	138.24204	1.62227	0.1293078	0.18166699	3.0875834	20	2 1.7	19.8
381645 2008 YA ₁₄₀	15.9	X	83.17440	300.36666	123.06525	12.01403	0.0816422	0.18285372	3.0742099	20	2 3.9	19.9
381646 2008 YR ₁₄₃	15.8	X	0.22218	16.79736	124.61174	13.98672	0.1204404	0.17686738	3.1431918	20	1 10.9	19.8
381647 2008 YX ₁₅₂	16.1	X	115.16035	227.10379	133.12412	14.81524	0.1458290	0.17475003	3.1685304	20	1 7.7	20.8
381648 2008 YL ₁₆₂	15.7	X	113.48129	83.39641	287.69912	10.40048	0.0686840	0.17994026	3.1073046	20	1 7.7	20.1
381649 2008 YP ₁₆₈	15.7	X	83.70179	81.59005	280.81560	11.25055	0.0948971	0.17096699	3.2151004	20	—	—
381650 2008 YH ₁₆₉	15.7	X	302.38628	74.89857	99.49332	11.37248	0.0608180	0.17189760	3.2034861	20	—	—
381651 2008 YP ₁₇₀	15.7	X	173.97900	187.00838	132.90839	16.94647	0.1416580	0.17636839	3.1491176	20	1 17.9	20.8
381652 2009 AA ₁₇	15.5	X	91.85880	314.30052	116.47527	9.08376	0.0785725	0.18547297	3.0451987	20	2 24.9	19.7
381653 2009 AL ₁₉	16.0	X	14.13626	347.63302	117.76508	10.41565	0.0609385	0.17538432	3.1608863	20	—	—
381654 2009 AE ₃₅	16.2	X	324.13788	95.63942	80.23190	6.75733	0.0757632	0.17928563	3.1148638	20	1 7.5	20.4
381655 2009 AF ₃₆	15.8	X	309.69940	270.53249	313.08028	14.05697	0.1336686	0.17844284	3.1246638	20	2 6.9	20.1
381656 2009 AG ₄₉	16.2	X	327.09673	77.29514	97.34555	11.10325	0.1706590	0.17510297	3.1642712	20	—	—
381657 2009 AA ₅₀	15.8	X	232.30011	21.92288	219.02679	5.81573	0.1024648	0.16974067	3.2305672	20	—	—
381658 2009 AF ₅₀	15.8	X	33.51764	310.36786	136.67435	13.69372	0.1159720	0.17397400	3.1779458	20	—	—
381659 2009 BS ₂	15.3	X	327.68331	85.37202	101.62919	18.52989	0.1807306	0.17683568	3.1435674	20	1 11.4	19.5
381660 2009 BV ₅	15.9	X	51.20679	344.40966	113.74475	11.28983	0.1454067	0.18015721	3.1048094	20	2 10.4	19.7
381661 2009 BG ₆	16.2	X	66.01087	317.83618	129.29917	13.39739	0.1627815	0.18435603	3.0574860	20	2 21.3	20.0
381662 2009 BJ ₉	15.4	X	29.63701	330.88660	133.13462	17.56174	0.0774349	0.17683714	3.1435501	20	1 10.5	19.6
381663 2009 BC ₁₂	15.6	X	91.23811	117.89049	302.78607	19.22798	0.3320838	0.18526703	3.0474549	20	3 6.5	20.3
381664 2009 BR ₁₇	16.3	X	123.40991	62.92203	70.43390	10.49804	0.1016968	0.21583233	2.7524856	20	6 20.6	20.3
381665 2009 BV ₁₉	17.1	X	41.99569	335.99323	80.07473	2.12141	0.1751010	0.17240344	3.1972169	20	—	—
381666 2009 BR ₂₁	15.6	X	214.34492	285.73966	108.33623	14.11366	0.0723358	0.21423233	2.7661733	20	5 27.1	19.8
381667 2009 BT ₂₈	15.4	X	276.84858	278.63864	308.41644	20.76444	0.0475405	0.17698625	3.1417843	20	1 17.7	19.9
381668 2009 BC ₃₃	15.9	X	57.99517	144.29847	314.60029	9.62448	0.1623578	0.18218794	3.0816949	20	2 20.6	19.7
381669 2009 BE ₄₅	16.0	X	75.32291	123.47542	326.51395	10.02013	0.0701829	0.17978939	3.1090426	20	2 23.7	20.1
381670 2009 BE ₄₈	16.9	X	56.61495	314.37662	112.74906	2.22399	0.1581878	0.17614347	3.1517978	20	1 11.4	20.7
381671 2009 BJ ₄₈	15.3	X	92.02675	99.51608	308.93675	21.37337	0.0597965	0.17800727	3.1297589	20	1 26.1	19.6
381672 2009 BA ₅₅	16.3	X	47.82415	94.28577	320.32295	16.88072	0.1482669	0.17011963	3.2257678	20	—	—
381673 2009 BB ₇₀	16.1	X	3.39740	50.79580	86.03758	6.34073	0.1171823	0.1771963	3.1398591	20	1 10.8	20.0
381674 2009 BE ₇₉	16.2	X	93.48985	111.066								

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
381681 2009 BF ₁₁₂	15.7	X	350.54529	217.26557	299.44668	8.25440	0.0637986	0.17728448	3.1382599	20	1 20.6	19.9
381682 2009 BL ₁₄₂	15.6	X	359.27229	18.52892	128.94591	9.58762	0.1557558	0.17495735	3.1660268	20	1 14.4	19.2
381683 2009 BT ₁₅₉	15.9	X	21.81884	149.93212	349.98084	17.43294	0.1886566	0.17621659	3.1509259	20	2 18.7	19.4
381684 2009 BV ₁₈₁	15.7	X	39.68444	62.47837	78.15242	17.16594	0.1811522	0.18175359	3.0866026	20	3 29.7	19.6
381685 2009 BS ₁₈₃	15.5	X	119.02147	51.44771	327.09721	15.03996	0.0848323	0.17880025	3.1204984	20	1 27.8	20.0
381686 2009 BF ₁₈₇	16.2	X	43.30879	304.45828	176.57347	10.20291	0.2710576	0.18127274	3.0920586	20	3 9.9	19.3
381687 2009 CY	15.9	X	40.58134	326.91350	159.76408	11.32915	0.2585413	0.18147304	3.0897830	20	3 11.7	19.0
381688 2009 CG ₁	16.3	X	348.41243	1.72940	148.81131	6.37768	0.1400269	0.17359820	3.1825305	20	1 2.8	20.2
381689 2009 CK ₁₄	15.8	X	31.87373	121.66648	342.44301	26.44335	0.2041444	0.17574812	3.1565228	20	1 28.5	19.5
381690 2009 CN ₃₂	16.2	X	297.67531	107.22806	110.39854	2.51099	0.1077948	0.17104182	3.2141626	20	1 21.6	20.9
381691 2009 CF ₃₄	16.5	X	101.92307	67.86024	325.44326	15.40557	0.2339189	0.18149361	3.0895494	20	2 12.1	20.8
381692 2009 CP ₃₉	16.7	X	45.31997	295.64201	204.48295	3.78118	0.1145428	0.18598036	3.0396576	20	3 19.6	20.5
381693 2009 CH ₅₀	16.1	X	42.65979	130.78593	327.45074	9.46297	0.1953501	0.17777814	3.1324476	20	1 31.7	19.6
381694 2009 CS ₅₀	16.4	X	70.15724	34.99076	73.29945	5.65236	0.1433199	0.18445825	3.0563563	20	3 23.9	20.4
381695 2009 CQ ₅₅	16.3	X	23.30758	49.14113	120.30068	18.75325	0.1507922	0.18498116	3.0505938	20	4 2.3	20.2
381696 2009 CO ₆₀	15.9	X	29.35400	136.84277	346.31325	8.00549	0.1232629	0.17857364	3.1231378	20	2 5.6	19.6
381697 2009 DT ₆	15.8	X	8.58961	124.95690	335.77626	16.41716	0.0406139	0.16868794	3.2439939	20	—	—
381698 2009 DD ₇₄	16.3	X	44.06588	281.61332	158.32561	13.62446	0.2962669	0.17457238	3.1706797	20	1 18.6	19.4
381699 2009 DY ₁₂₇	14.9	X	5.59057	271.25695	265.99773	24.95105	0.1396763	0.17880138	3.1204853	20	2 18.8	19.2
381700 2009 EW ₁₂	16.0	X	8.91798	100.54855	49.88511	10.27319	0.1746746	0.17441692	3.1725634	20	2 7.7	19.7
381701 2009 EU ₁₃	16.1	X	19.99174	138.93990	354.24624	11.15440	0.2019877	0.17403591	3.1771920	20	2 5.5	19.5
381702 2009 FP ₇₅	15.8	X	43.75391	62.02645	74.55053	11.68257	0.2157229	0.17832207	3.1260744	20	4 1.5	19.5
381703 2009 HD ₈₄	14.0	X	269.54513	244.36021	79.51955	13.23229	0.1549437	0.08508689	5.1195008	20	4 27.5	21.0
381704 2009 HT ₉₅	16.0	X	9.79598	136.02258	115.11751	11.04073	0.0505107	0.18738092	3.0244923	20	6 17.2	20.0
381705 2009 LH ₆	17.5	X	101.91501	357.87851	280.86400	5.43819	0.1633255	0.29345222	2.2427341	20	12 16.2	21.0
381706 2009 NB ₂	18.0	X	37.50146	178.37088	151.89874	2.80958	0.1992887	0.28522290	2.2856679	20	12 18.9	20.9
381707 2009 PL ₄	17.7	X	284.13014	100.15703	289.40058	3.89546	0.2128587	0.26480823	2.4016796	20	7 27.9	20.4
381708 2009 PM ₁₁	18.0	X	297.27348	202.92742	158.93159	1.57918	0.2206798	0.26217680	2.4177230	20	7 7.2	20.5
381709 2009 PC ₁₅	17.6	X	322.43927	59.74944	316.18562	4.34519	0.2388015	0.27171808	2.3607882	20	9 29.9	18.8
381710 2009 PL ₁₇	17.6	X	331.41509	189.32565	170.18833	3.06114	0.2210644	0.27052498	2.3677243	20	9 29.9	18.7
381711 2009 PA ₁₈	17.8	X	2.27675	333.91592	355.11309	6.19940	0.1268895	0.27224262	2.3577548	20	10 9.2	20.0
381712 2009 QE ₄	17.2	X	346.13232	33.15624	303.59238	5.57930	0.2458547	0.27038012	2.3685699	20	9 28.9	18.7
381713 2009 QG ₆	18.1	X	296.69789	195.71577	197.47168	1.87579	0.2032283	0.26747905	2.3856654	20	8 28.4	20.3
381714 2009 QU ₈	16.8	X	335.02426	41.89263	337.00015	12.09964	0.2314078	0.27478734	2.3431760	20	11 8.7	18.7
381715 2009 QB ₂₇	17.7	X	349.68285	272.02476	55.99200	2.83088	0.2230430	0.26944912	2.3740227	20	9 25.8	19.2
381716 2009 QA ₃₈	17.3	X	347.03078	203.84952	142.73407	5.60721	0.2107273	0.27066429	2.3669118	20	10 20.9	19.1
381717 2009 QP ₄₁	18.0	X	358.76172	239.70879	57.66394	1.61414	0.2067716	0.26728535	2.3868179	20	8 23.6	19.6
381718 2009 QG ₄₆	17.6	X	15.94125	295.96173	16.31157	1.56248	0.2043571	0.27348681	2.3505985	20	10 22.9	19.9
381719 2009 QQ ₄₆	17.9	X	303.58978	41.29565	334.79291	0.78165	0.1988891	0.26565447	2.3965765	20	8 16.7	20.0
381720 2009 QX ₅₂	17.9	X	303.94075	224.30132	169.06635	4.07752	0.1564192	0.26884070	2.3776032	20	9 21.6	19.8
381721 2009 QX ₆₀	17.6	X	81.75785	205.09270	141.14220	7.04124	0.1182363	0.29698058	2.2249351	20	—	—
381722 2009 RG	17.5	X	328.34363	74.37550	340.45605	7.31857	0.1291618	0.28203418	2.3028636	20	12 19.4	19.7
381723 2009 RL ₃	16.8	X	337.88485	99.58741	265.70787	8.70967	0.1245075	0.27181870	2.3602056	20	10 15.3	19.3
381724 2009 RQ ₃	17.1	X	344.77911	41.22724	16.90547	6.78655	0.1572317	0.28637382	2.2795398	20	—	—
381725 2009 RP ₅	17.6	X	25.00983	57.48985	257.70308	1.53294	0.2190420	0.27311883	2.3527094	20	11 12.7	20.3
381726 2009 RW ₁₂	17.6	X	315.36141	342.61209	29.72649	1.43440	0.2282089	0.26572024	2.3961810	20	9 7.0	19.4
381727 2009 RX ₁₆	17.9	X	310.98837	201.30874	154.39361	1.76452	0.2063264	0.26165179	2.4209560	20	7 28.1	20.0
381728 2009 RF ₁₇	17.3	X	300.54821	202.47134	176.38485	7.32563	0.1339283	0.26282435	2.4137502	20	8 22.6	19.7
381729 2009 RW ₁₈	17.7	X	10.35733	41.55644	293.47878	1.79214	0.1758832	0.27546268	2.3393446	20	11 10.9	20.0
381730 2009 RD ₁₉	17.8	X	273.50272	132.86189	276.61642	4.30085	0.2127061	0.26112000	2.4242419	20	8 8.1	20.8
381731 2009 RT ₂₁	17.3	X	332.18663	223.99443	200.14255	6.68424	0.2264620	0.28426342	2.2908082	20	—	—
381732 2009 RQ ₂₆	17.6	X	327.88523	221.19503	121.47474	5.38585	0.2168692	0.26653448	2.3912985	20	8 19.2	19.0
381733 2009 RP ₄₅	18.0	X	9.40655	311.94106	357.83750	3.36011	0.1168604	0.26550917	2.3974508	20	9 21.7	20.3
381734 2009 RH ₄₆	17.9	X	323.73421	339.04295	3.08531	3.19437	0.2009826	0.26190200	2.4194139	20	8 7.5	19.7
381735 2009 RQ ₅₃	17.1	X	212.30059	111.04488	35.05460	6.48220	0.0927831	0.26834665	2.3805205	20	10 20.7	20.1
381736 2009 RS ₅₃	16.8	X	311.81299	10.62960	25.77039	8.87764	0.1444280	0.26755392	2.3852204	20	10 14.1	18.8
381737 2009 RU ₆₁	17.4	X	344.26168	350.77460	11.63715	2.20652	0.2370066	0.27312955	2.3526478	20	11 10.5	18.9
381738 2009 RP ₇₀	17.9	X	148.32590	17.84987	170.76302	3.87830	0.0268680	0.26805533	2.3822449	20	10 4.2	20.9
381739 2009 SG ₁	13.3	X	305.30349	158.54768	120.88887	23.62518	0.0751477	0.08510350	5.1188346	20	5 3.3	20.3
381740 2009 SJ ₂₄	17.2	X	359.54671	56.74457	298.68036	3.75387	0.0687865	0.27493147	2.3423570	20	11 5.4	19.9
381741 2009 SN ₃₄	17.9	X	287.28505	23.64445	355.80150	6.44019	0.1728608	0.25845680	2.4408668	20	7 27.2	20.7
381742 2009 SF ₅₁	17.9	X	306.58848	253.05570	140.71477	1.65135	0.1738582	0.26888409	2.3773474	20	9 26.5	19.9
381743 2009 SE ₆₁	17.4	X	330.71871	136.42036	254.44827	3.66544	0.1921149	0.27201296	2.3590817	20	11 18.7	18.9
381744 2009 SD ₆₇	17.4	X	155.74245	104.95799	299.76859	0.96651	0.0826271	0.22496206	2.6775023	20	4 1.6	21.1
381745 2009 SB ₆₉	17.5	X	130.88318	163.74915	60.60346	5.90405	0.1559084	0.27146845	2.3622352	20	11 2.3	21.1
381746 2009 SW ₆₉	17.5	X	245.18482	170.98980	329.80012	3.04737	0.0773209	0.28131086	2.3068094	20	12 1.1	20.1
381747 2009 SX ₉₉	16.5	X	291.25674	224.96161	200.20634	23.34384	0.1761858	0.26980056	2.3719607	20	10 12.8	18.5
381748 2009 SU ₁₀₁	16.7	X	292.95088	201.72753	208.57775	23.49663	0.2301859	0.26740142	2.3861271	20	9 6.7	19.5
381749 2009 SP ₁₁₄	17.0	X	211.24033	96.96199	353.27707	14.65354	0.0243358	0.25873412	2.4391223	20	8 15.5	20.3
381750 2009 SL ₁₂₅	17.7	X	274.23869	119.90466	310.92288	3.12982	0.1241574	0.26635674	2.3923621	20	9 25.5	20.4
381751 2009 SQ ₁₂₇	17.1	X	84.94195	33.21705	250.40992	2.98073	0.2064601	0.28140417	2.3062995	20	12 7.1	20.5
381752 2009 SG ₁₂₉	17.6	X	269.87399	54.66204	39.70834	3.03128	0.0870314	0.27138630	2.3627119	20	10 31.0	20.0
381753 2009 ST ₁₄₂	17.4	X	356.99129	320.23403	6.83169	9.36546	0.0747778	0.26560130	2.3968963	20	9 22.2	

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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>
381761 2009 <i>SP</i> ₂₃₀	17.2	X	307.87551	74.89994	348.98040	6.04955	0.1014906	0.27757366	2.3274689	20	11 19.2	19.5
381762 2009 <i>SM</i> ₂₃₈	17.1	X	329.98580	317.84786	52.89690	11.27747	0.2250718	0.26928676	2.3749769	20	10 19.7	18.6
381763 2009 <i>SC</i> ₂₆₃	17.1	X	300.83466	6.86445	39.51844	5.37500	0.1868116	0.26852022	2.3794946	20	10 3.8	19.0
381764 2009 <i>SV</i> ₂₆₆	17.6	X	304.54560	170.96609	291.82382	2.41373	0.1713046	0.27813902	2.3243139	20	—	—
381765 2009 <i>SP</i> ₂₇₅	17.7	X	266.41158	288.60847	140.34803	2.59049	0.1914775	0.26317291	2.4116185	20	8 31.3	20.3
381766 2009 <i>SY</i> ₂₇₅	18.4	X	336.24814	220.98959	113.26772	2.21769	0.1907537	0.26426508	2.4049692	20	8 27.2	20.1
381767 2009 <i>SS</i> ₂₈₈	17.2	X	285.08501	268.42512	145.10088	2.92643	0.1754037	0.26543322	2.3979081	20	9 12.3	19.5
381768 2009 <i>SH</i> ₂₉₁	17.5	X	277.75821	321.89121	72.58976	5.03808	0.2146336	0.25798315	2.4438534	20	7 25.6	20.4
381769 2009 <i>SD</i> ₃₁₇	17.5	X	39.25725	306.79981	12.20733	7.50962	0.1736821	0.27863884	2.3215334	20	11 23.9	20.5
381770 2009 <i>SU</i> ₃₂₄	17.8	X	273.83791	302.87839	99.01876	2.31905	0.1883085	0.25960872	2.4336411	20	8 3.5	20.6
381771 2009 <i>SS</i> ₃₂₅	17.4	X	310.47593	182.20405	190.00693	4.93442	0.1257785	0.26261490	2.4150334	20	9 1.6	19.7
381772 2009 <i>SK</i> ₃₂₆	16.3	X	337.12500	344.39077	51.83626	9.48848	0.2328291	0.27379471	2.3488359	20	12 18.1	18.1
381773 2009 <i>SD</i> ₃₃₁	17.4	X	325.84327	296.80902	72.33910	3.29081	0.2146509	0.26925068	2.3751890	20	10 2.5	18.8
381774 2009 <i>SM</i> ₃₃₁	17.1	X	53.19197	267.43421	35.82625	7.37828	0.1362892	0.27966277	2.3158634	20	11 21.0	20.1
381775 2009 <i>SA</i> ₃₃₇	17.1	X	352.01731	246.46140	90.54075	8.07521	0.2088007	0.27163062	2.3612949	20	10 19.0	19.1
381776 2009 <i>SB</i> ₃₄₀	17.9	X	16.00443	269.78354	55.83507	2.78413	0.2093276	0.27395669	2.3479100	20	11 12.7	20.3
381777 2009 <i>SK</i> ₃₄₅	17.2	X	189.91280	107.53632	76.32258	4.70218	0.1067488	0.27429899	2.3459562	20	11 12.8	20.4
381778 2009 <i>SC</i> ₃₄₆	17.6	X	256.92463	306.41031	123.68767	3.35419	0.1762900	0.25990150	2.4318131	20	8 21.7	20.5
381779 2009 <i>SM</i> ₃₄₇	17.7	X	238.73553	298.99089	168.10462	8.31880	0.2402625	0.26197299	2.4189768	20	9 8.8	20.9
381780 2009 <i>TG</i> ₁	18.3	X	336.87036	244.26034	107.77034	3.62676	0.2163720	0.26321514	2.4113605	20	8 25.9	19.8
381781 2009 <i>TW</i> ₁	17.7	X	332.01188	180.79634	157.88860	5.33218	0.2650900	0.26479980	2.4017305	20	8 19.1	18.6
381782 2009 <i>TX</i> ₁	17.2	X	333.96874	328.64424	40.35166	7.47995	0.2545310	0.27018054	2.3697362	20	10 27.1	18.5
381783 2009 <i>TS</i> ₂	17.1	X	303.61732	305.29065	79.73952	4.75681	0.3253242	0.26352651	2.4094607	20	8 8.9	19.0
381784 2009 <i>TZ</i> ₄	17.2	X	334.89792	348.05628	23.64576	6.56907	0.1094709	0.26965320	2.3733529	20	10 21.7	19.4
381785 2009 <i>TF</i> ₁₃	17.9	X	274.41152	270.29846	135.53671	4.09863	0.1038053	0.26598907	2.3945662	20	8 25.6	20.6
381786 2009 <i>TP</i> ₂₀	17.6	X	331.69727	281.19086	68.24460	2.91191	0.1962371	0.26499875	2.4005283	20	9 12.2	19.2
381787 2009 <i>TU</i> ₂₅	17.4	X	314.66266	177.29128	203.48279	14.73877	0.1475632	0.26324511	2.4111775	20	9 20.4	19.7
381788 2009 <i>TG</i> ₃₄	16.9	X	326.27508	291.65293	71.04159	7.02665	0.0870676	0.26526055	2.3989486	20	9 25.6	19.5
381789 2009 <i>TQ</i> ₃₆	17.0	X	270.60667	344.19282	75.55341	11.31599	0.2678005	0.25881891	2.4385896	20	8 14.7	20.2
381790 2009 <i>TF</i> ₃₆	18.2	X	354.48591	121.87641	202.29672	2.57170	0.1325680	0.26523228	2.3991190	20	9 16.8	20.5
381791 2009 <i>TE</i> ₃₉	16.7	X	305.24512	246.18381	105.61876	11.11182	0.2944816	0.25846466	2.4408172	20	6 22.8	18.9
381792 2009 <i>UC</i> ₆	17.7	X	325.41048	142.53113	196.63374	1.63845	0.2619058	0.26842447	2.3800604	20	7 29.4	19.1
381793 2009 <i>UA</i> ₂₀	17.4	X	289.51757	308.17926	61.65859	6.41873	0.2386463	0.25821108	2.4424150	20	7 2.7	20.1
381794 2009 <i>UO</i> ₂₀	16.5	X	349.55920	78.33198	280.29344	5.19891	0.1577013	0.26856579	2.3792254	20	11 1.8	18.7
381795 2009 <i>UH</i> ₂₁	17.0	X	204.84183	91.55197	61.33298	9.75484	0.1391315	0.26342266	2.4100939	20	10 17.8	20.6
381796 2009 <i>UF</i> ₃₄	16.8	X	57.52968	130.81599	42.45117	14.03008	0.1802095	0.22916748	2.6446451	20	5 29.2	20.0
381797 2009 <i>UK</i> ₃₈	17.4	X	238.70281	162.67387	199.91136	2.74566	0.1724739	0.23975556	2.5661986	20	5 1.1	21.2
381798 2009 <i>UJ</i> ₄₁	17.6	X	261.88155	302.78725	205.52101	5.21987	0.1777279	0.27914099	2.3187485	20	12 23.7	19.8
381799 2009 <i>UQ</i> ₄₆	17.1	X	310.80325	334.98061	41.36662	4.01606	0.2373908	0.26164544	2.4209953	20	8 30.0	18.8
381800 2009 <i>UM</i> ₆₁	17.7	X	5.34812	188.80150	126.65944	3.26370	0.2113446	0.26861048	2.3789615	20	10 9.9	19.7
381801 2009 <i>UN</i> ₆₈	17.4	X	312.79594	128.15137	3.00651	2.39984	0.0998354	0.29774330	2.2211338	20	—	—
381802 2009 <i>US</i> ₉₇	17.0	X	90.09676	186.49128	59.86792	7.60873	0.0911460	0.26307036	2.4122451	20	10 15.9	20.4
381803 2009 <i>UM</i> ₁₀₈	18.0	X	195.10384	207.48268	177.89615	4.00213	0.1331259	0.23966321	2.5668577	20	6 9.7	22.1
381804 2009 <i>UG</i> ₁₁₅	17.2	X	267.25723	240.93288	195.13327	4.75338	0.1274275	0.26565580	2.3965685	20	9 22.2	19.9
381805 2009 <i>UH</i> ₁₁₅	18.0	X	88.84190	214.86462	36.36289	3.12098	0.1244915	0.27096647	2.3651518	20	10 22.9	21.3
381806 2009 <i>UP</i> ₁₁₅	17.6	X	165.96612	175.26177	41.64534	4.45472	0.0968037	0.27992856	2.3143973	20	11 29.6	20.7
381807 2009 <i>UD</i> ₁₁₈	18.2	X	258.09142	31.70072	41.77590	1.94901	0.1684654	0.26170039	2.4206564	20	8 29.9	21.0
381808 2009 <i>UT</i> ₁₁₈	18.0	X	249.95927	261.42654	199.91502	1.92773	0.1662443	0.26593836	2.3948707	20	9 26.4	21.0
381809 2009 <i>UC</i> ₁₃₅	17.1	X	294.79859	255.86620	165.55837	12.81235	0.1011676	0.26718133	2.3874373	20	10 25.9	19.7
381810 2009 <i>UH</i> ₁₄₇	16.8	X	72.17986	301.50118	232.76108	11.06742	0.1253565	0.23430225	2.6058640	20	6 14.9	20.2
381811 2009 <i>UE</i> ₁₅₅	17.1	X	234.17887	108.67295	30.25788	5.44555	0.0667537	0.27448461	2.3448985	20	11 12.5	19.9
381812 2009 <i>VQ</i> ₂	15.5	X	264.94609	332.79592	343.26288	12.19858	0.2993350	0.23792631	2.5793349	20	3 15.2	19.7
381813 2009 <i>VC</i> ₂₃	17.1	X	185.61459	325.36967	99.19212	2.51475	0.1463635	0.23581399	2.5947151	20	5 30.1	21.3
381814 2009 <i>VJ</i> ₂₅	17.5	X	253.15007	115.26669	239.33063	13.83264	0.1428766	0.24296918	2.5435206	20	5 8.1	21.2
381815 2009 <i>VT</i> ₄₅	16.7	X	192.13966	199.58898	232.29060	16.04999	0.0878874	0.24009755	2.5637611	20	6 15.5	20.6
381816 2009 <i>VG</i> ₄₆	16.8	X	170.37673	290.16292	248.04399	9.69250	0.2039579	0.25717798	2.4489516	20	10 3.7	21.0
381817 2009 <i>VE</i> ₅₅	18.0	X	227.43332	342.87121	103.81247	2.26344	0.1517343	0.25554739	2.4593580	20	8 10.8	21.4
381818 2009 <i>VV</i> ₅₅	18.2	X	203.90036	292.17344	219.70407	0.66381	0.1267323	0.26711925	2.3878072	20	10 13.5	21.5
381819 2009 <i>VM</i> ₆₀	17.1	X	201.35874	207.90835	168.33547	17.83124	0.2335012	0.23444573	2.6048007	20	4 15.6	21.8
381820 2009 <i>VT</i> ₆₇	17.7	X	168.83450	132.07036	358.38642	2.09847	0.0546252	0.24708377	2.5152041	20	8 8.8	21.3
381821 2009 <i>VE</i> ₇₁	17.4	X	204.43670	192.50237	315.73069	1.89152	0.1343874	0.25666154	2.4522355	20	10 6.2	21.0
381822 2009 <i>VF</i> ₇₆	17.1	X	282.58582	5.34192	88.74874	4.74363	0.0949052	0.26748708	2.3856177	20	11 19.4	19.5
381823 2009 <i>VZ</i> ₈₀	17.0	X	334.63895	294.21660	56.85950	22.70173	0.3187284	0.26760532	2.3849149	20	10 16.1	18.5
381824 2009 <i>VS</i> ₈₃	17.6	X	221.68789	148.65718	275.28950	2.82332	0.1096317	0.24573182	2.5244210	20	7 7.9	21.3
381825 2009 <i>VF</i> ₈₅	17.7	X	190.46458	63.15699	81.72136	3.34118	0.1366971	0.25476368	2.4643991	20	9 19.3	21.3
381826 2009 <i>VX</i> ₈₆	17.5	X	201.37969	331.45624	215.32165	5.55689	0.1750650	0.26720022	2.3873248	20	11 20.1	20.8
381827 2009 <i>VD</i> ₁₀₃	16.9	X	177.74535	44.26680	88.20689	8.65108	0.1470854	0.24077643	2.5589398	20	8 20.9	21.0
381828 2009 <i>VP</i> ₁₀₃	16.2	X	101.85050	214.51261	292.52069	12.74528	0.0980704	0.22365668	2.6879105	20	6 13.5	20.0
381829 2009 <i>VQ</i> ₁₀₃	17.3	X	217.45568	36.71697	8.91913	2.48838	0.1833091	0.23385288	2.6092012	20	6 2.9	21.4
381830 2009 <i>VM</i> ₁₁₆	16.6	X	155.78101	294.73755	93.66665	14.39149	0.2073033	0.21413438	2.7670167	20	3 29.5	21.4
381831 2009 <i>VU</i> ₁₁₆	16.4	X	350.21									

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>
381841 2009 WN ₉₄	17.6	X	131.51184	27.69673	179.10680	7.20147	0.0889028	0.26344180	2.4099771	20	10 8.8	20.9
381842 2009 WA ₁₀₀	17.5	X	129.23579	230.29562	290.32385	2.75139	0.1864905	0.23941083	2.5686614	20	8 8.5	21.7
381843 2009 WQ ₁₂₂	17.2	X	269.16897	237.53761	84.94907	2.84725	0.0996758	0.23436494	2.6053993	20	4 22.5	20.6
381844 2009 WV ₁₆₃	17.5	X	239.80755	309.71932	58.01828	6.53956	0.3479580	0.24180122	2.5517046	20	4 26.4	22.1
381845 2009 WP ₁₆₉	16.9	X	281.25749	80.78592	276.27515	5.22461	0.0586812	0.24630766	2.5204849	20	7 1.1	19.8
381846 2009 WK ₁₈₄	17.2	X	151.80929	76.36918	68.65026	6.71944	0.1080890	0.24362478	2.5389555	20	8 10.7	21.1
381847 2009 WU ₂₂₉	17.0	X	100.01538	108.79071	59.62005	17.36388	0.0672056	0.24175424	2.5520352	20	7 6.1	20.7
381848 2009 WX ₂₃₆	16.6	X	175.02546	29.87779	73.11038	14.97936	0.0298828	0.24090798	2.5580082	20	7 9.5	20.3
381849 2009 WD ₂₃₇	16.3	X	181.22789	343.02949	125.39269	14.78965	0.2390765	0.23180211	2.6245678	20	7 18.7	21.0
381850 2009 WJ ₂₄₀	16.4	X	152.15269	118.51080	287.09551	9.14528	0.1099910	0.21331163	2.7741271	20	3 28.2	20.8
381851 2009 WL ₂₄₇	16.1	X	183.58548	155.75488	290.59534	11.86693	0.0218178	0.24214136	2.5493144	20	6 28.3	19.6
381852 2009 WG ₂₄₉	17.2	X	249.34190	280.30693	71.41512	14.18432	0.2098542	0.23713402	2.5850770	20	4 28.7	21.4
381853 2009 WK ₂₅₉	17.6	X	204.64139	223.18759	225.23523	4.25375	0.2454685	0.23989885	2.5651766	20	7 11.9	21.9
381854 2009 WJ ₂₆₁	17.1	X	266.62045	150.63755	307.51647	5.47709	0.1481059	0.26316851	2.4116453	20	10 16.7	20.0
381855 2009 WD ₂₆₄	16.5	X	78.00043	73.39284	108.85608	12.87078	0.1258995	0.22355868	2.6886959	20	7 4.1	20.0
381856 2009 XP ₁₆	16.3	X	146.20447	348.58144	106.38429	16.07755	0.0962656	0.22432461	2.6825723	20	5 30.6	20.5
381857 2009 XL ₁₇	16.4	X	351.25546	311.34893	292.15391	2.81574	0.0317260	0.22062625	2.7124678	20	5 8.7	19.9
381858 2009 XS ₁₉	17.6	X	256.78867	135.95739	329.65251	0.70217	0.1440253	0.25599353	2.4564998	20	10 13.9	20.5
381859 2009 XC ₂₃	17.0	X	217.58406	197.86928	249.26178	2.96243	0.1013511	0.23982895	2.5656750	20	8 2.8	20.7
381860 2009 XS ₂₄	17.0	X	183.51157	244.37900	198.20857	4.91537	0.2206259	0.23293035	2.6160859	20	6 18.9	21.6
381861 2009 XZ ₂₄	16.2	X	105.60635	303.62757	118.10436	13.72658	0.0140025	0.20334487	2.8640498	20	2 19.7	20.2
381862 2009 YW ₇	17.4	X	248.23852	273.27225	200.24481	1.05933	0.1451007	0.25680191	2.4513419	20	10 12.9	20.4
381863 2009 YQ ₂₁	17.0	X	159.48989	115.35618	312.95213	7.05446	0.1225186	0.22243492	2.6977440	20	5 5.8	21.3
381864 2009 YP ₂₂	16.5	X	140.92748	55.71968	85.00775	14.38241	0.1097845	0.23416152	2.6069079	20	7 22.5	20.5
381865 2009 YW ₂₃	16.0	X	201.19747	255.85110	96.05073	17.90185	0.1687892	0.21647465	2.7470381	20	3 24.6	20.9
381866 2010 AF ₆	16.6	X	269.32506	328.90567	116.33807	10.42744	0.0778600	0.25549806	2.4596746	20	10 20.6	19.7
381867 2010 AP ₈	16.8	X	178.12424	94.31404	295.52305	5.56289	0.2154556	0.22234369	2.6984819	20	4 8.2	21.6
381868 2010 AV ₈	16.7	X	143.67537	289.36482	136.17153	5.25521	0.0595594	0.21452160	2.7636860	20	4 15.8	20.7
381869 2010 AC ₉	17.1	X	63.13926	254.69898	278.96663	4.96993	0.0674111	0.21801097	2.7341174	20	5 22.4	20.5
381870 2010 AC ₁₀	16.8	X	273.45150	325.50328	121.50353	23.96718	0.2138897	0.25674672	2.4516931	20	10 14.4	20.1
381871 2010 AJ ₂₀	17.0	X	198.00862	322.68339	78.77165	3.08945	0.1090540	0.22741172	2.6582398	20	5 13.9	20.9
381872 2010 AJ ₂₁	16.5	X	167.90856	161.27081	272.72821	14.20694	0.0810556	0.22905645	2.6454996	20	5 22.1	20.5
381873 2010 AP ₃₆	16.1	X	153.12963	140.46180	323.42121	12.34522	0.1323552	0.22509434	2.6764533	20	6 17.4	20.5
381874 2010 AS ₃₈	16.4	X	179.68357	139.81734	288.41542	10.37076	0.1437730	0.22556425	2.6727348	20	5 27.9	20.8
381875 2010 AK ₄₀	16.1	X	201.84407	120.34873	284.89797	14.41015	0.0812589	0.22598701	2.6694005	20	5 21.9	20.2
381876 2010 AQ ₅₄	16.3	X	174.89989	1.50546	57.92823	2.83636	0.0712319	0.21820935	2.7324600	20	5 12.0	20.1
381877 2010 AB ₅₆	16.1	X	137.99809	325.62473	124.67597	10.12434	0.0525505	0.21510451	2.7586909	20	5 11.8	20.2
381878 2010 AD ₅₆	16.7	X	158.73469	144.31810	332.00910	5.84832	0.2560362	0.22878612	2.6475831	20	7 12.1	21.3
381879 2010 AJ ₅₉	15.5	X	327.81237	161.24880	313.50261	17.84399	0.2391849	0.18169150	3.0873057	20	—	—
381880 2010 AJ ₆₆	16.4	X	157.53654	307.61780	129.70968	9.53239	0.1290611	0.21917035	2.7244668	20	5 21.1	20.8
381881 2010 AQ ₆₇	16.9	X	219.86719	341.10799	97.07199	4.51697	0.0630983	0.23626650	2.5914009	20	6 18.7	20.6
381882 2010 AR ₆₉	16.5	X	172.19391	47.45484	74.32877	10.46568	0.1561933	0.23619229	2.5919437	20	7 31.6	20.8
381883 2010 AL ₇₂	16.5	X	170.39159	15.81228	70.51722	5.08028	0.0890988	0.22699655	2.6614800	20	6 10.9	20.3
381884 2010 AJ ₇₅	15.3	X	248.13761	171.67224	222.23897	13.24674	0.1699555	0.24373432	2.5381946	20	6 20.1	19.1
381885 2010 AZ ₇₅	16.6	X	174.14622	288.79699	140.55140	13.30605	0.2270150	0.22556052	2.6727643	20	5 28.9	21.5
381886 2010 AL ₈₀	17.1	X	221.90715	175.64325	287.39378	8.94431	0.2051373	0.24534824	2.5270514	20	8 16.4	21.2
381887 2010 AU ₈₀	17.2	X	178.63307	71.29278	341.27414	3.53857	0.1688903	0.22351965	2.6890090	20	5 7.1	21.7
381888 2010 AT ₁₀₅	16.1	X	47.34250	303.31378	151.31656	7.98523	0.1190926	0.18319026	3.0704437	20	1 25.4	19.8
381889 2010 AS ₁₀₇	15.9	X	290.68679	74.55579	145.02376	16.13724	0.0424538	0.18084809	3.0968970	20	1 22.2	20.3
381890 2010 AT ₁₀₇	15.2	X	123.98773	334.30113	18.77641	17.36935	0.1105674	0.17199344	3.2022959	20	1 7.5	20.2
381891 2010 AZ ₁₂₅	16.1	X	204.97578	287.42143	351.96674	4.86023	0.0206454	0.17356511	3.1829350	20	—	—
381892 2010 BR	16.8	X	164.38082	198.73332	266.68644	5.55943	0.2320372	0.22930704	2.6435718	20	7 1.6	21.2
381893 2010 BA ₁	16.4	X	210.44558	351.53989	91.36456	14.20257	0.1352805	0.23636231	2.5907006	20	7 18.6	20.4
381894 2010 BV ₂	15.8	X	283.15939	92.16034	112.53318	10.89553	0.0372196	0.18763329	3.0217796	20	—	—
381895 2010 BF ₄	15.7	X	17.95713	264.35782	336.44721	13.48334	0.0741413	0.22174283	2.7033544	20	6 17.2	19.3
381896 2010 BT ₁₁	15.9	X	45.57183	261.95643	232.71029	7.42784	0.0930879	0.19130316	2.9830094	20	3 7.7	19.8
381897 2010 BW ₄₀	15.6	X	326.81107	352.71161	158.56924	12.33398	0.0761772	0.17262342	3.1945001	20	—	—
381898 2010 BM ₄₆	15.6	X	14.59088	50.95367	73.62554	17.28114	0.0610501	0.17889168	3.1194351	20	1 15.0	19.9
381899 2010 BB ₆₉	15.4	X	184.01572	26.59425	266.57805	12.02031	0.0576413	0.16839777	3.2477193	20	—	—
381900 2010 BU ₇₆	15.3	X	339.43931	80.46113	17.16377	18.84826	0.0686502	0.16064542	3.3513811	20	—	—
381901 2010 CG ₂	16.2	X	181.66246	123.55571	322.65002	27.58172	0.2504888	0.23071992	2.6327684	20	6 26.8	21.3
381902 2010 CV ₄	16.0	X	129.77873	352.14981	152.32688	14.74296	0.1919451	0.22450353	2.6811468	20	7 18.6	20.6
381903 2010 CC ₁₂	16.2	X	183.55651	35.26475	65.54188	12.12867	0.1049607	0.23026475	2.6362368	20	7 15.4	20.3
381904 Beatita	16.8	X	207.28103	357.94903	111.64026	8.72074	0.1308411	0.23969895	2.5666026	20	8 21.2	20.6
381905 2010 CW ₁₇	15.5	X	298.75854	128.70729	77.29810	20.94800	0.1073581	0.17433025	3.1736148	20	1 8.2	20.2
381906 2010 CL ₁₉	17.8	X	168.17349	76.75218	243.83098	7.31303	0.6456931	0.51426596	1.5429228	20	1 14.3	20.2
381907 2010 CB ₂₀	16.4	X	116.79523	10.31252	139.04460	10.31772	0.1140203	0.22607596	2.6687002	20	7 5.8	20.4
381908 2010 CU ₂₄	16.6	X	259.68593	147.97462	136.71319	8.47620	0.0760540	0.20337288	2.8637868	20	2 28.8	20.8
381909 2010 CG ₂₉	16.3	X	60.58016	305.89946	161.37975	9.71415	0.0763768	0.19467474	2.9484673	20	2 24.4	20.0
381910 2010 CJ ₃₂	15.5	X	331.25559	144.46792	95.01281	17.15020	0.1343753	0.17713407	3.1400362	20	—	—
381911 2010 CM ₃₂	16.7	X	129.85175	126.03239	346.50186	9.39633	0.2781826	0.21694202	2.7430913	20	6 14.6	21.6
381912 2010 CG ₄₀	16.4	X	248.10390	172.16762	67.44983	3.20191	0.1177018	0.17625764	3.1504366	20	—	—
381913 2010 CC ₄₁	15.7	X	324.39529	79.99559	123.16208	10.09229	0.057272					

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
381921 2010 CT ₇₉	16.1	X	43.82157	92.98771	342.75722	9.50228	0.0309925	0.18114182	3.0935482	20	—	—
381922 2010 CE ₈₅	16.5	X	119.97884	106.24195	349.99461	8.56126	0.1233354	0.21039293	2.7997245	20	4 29.2	20.8
381923 2010 CE ₈₆	16.4	X	19.42471	263.71857	309.51745	7.06283	0.1709447	0.21286587	2.7779986	20	5 15.1	19.3
381924 2010 CD ₁₀₇	16.2	X	244.31184	124.09931	95.74910	1.96888	0.1391139	0.17572584	3.1567896	20	—	—
381925 2010 CT ₁₂₀	16.1	X	149.43853	315.25763	118.77715	6.92793	0.1691551	0.21698835	2.7427008	20	5 10.9	20.6
381926 2010 CY ₁₃₄	15.7	X	359.45852	55.49248	66.58549	16.77750	0.0912862	0.17007062	3.2263874	20	—	—
381927 2010 CY ₁₃₇	16.6	X	116.03406	149.01776	306.99574	4.36287	0.0485313	0.21461172	2.7629123	20	4 15.6	20.5
381928 2010 CW ₁₄₃	16.9	X	0.60513	115.13920	39.70205	2.73018	0.2223990	0.19019978	2.9945349	20	1 16.9	19.9
381929 2010 CF ₁₄₄	16.4	X	223.97564	354.05409	91.56573	7.65992	0.2213122	0.23815343	2.5776948	20	7 28.9	20.6
381930 2010 CQ ₁₄₆	16.8	X	79.45439	216.45065	313.13189	6.10348	0.2192382	0.21467929	2.7623325	20	7 2.9	20.6
381931 2010 CB ₁₄₇	15.8	X	163.12123	137.42359	158.12367	10.10577	0.1077394	0.17285369	3.1916624	20	—	—
381932 2010 CV ₁₄₈	16.7	X	144.82219	117.32938	327.02320	3.11398	0.0800844	0.21876875	2.7278000	20	5 9.5	20.8
381933 2010 CM ₁₅₀	16.3	X	213.59628	266.16921	8.16597	9.64292	0.0536069	0.18169148	3.0873060	20	1 2.1	21.0
381934 2010 CA ₁₅₆	16.7	X	129.58709	305.71058	124.08973	3.07317	0.0468654	0.20370439	2.8606790	20	4 2.9	20.7
381935 2010 CD ₁₅₇	16.6	X	322.16997	87.64203	80.67668	2.17896	0.1105967	0.18228932	3.0805521	20	—	—
381936 2010 CM ₁₆₅	16.3	X	320.24374	190.14003	16.15619	7.11314	0.0866360	0.19196730	2.9761253	20	2 7.4	20.3
381937 2010 CD ₁₇₃	15.7	X	106.22611	29.99901	340.19727	9.74161	0.0473147	0.17764419	3.1340220	20	—	—
381938 2010 CY ₁₈₁	17.0	X	145.41628	104.52658	310.53199	5.22325	0.0794510	0.20699513	2.8302793	20	4 1.9	21.2
381939 2010 CD ₁₈₂	16.9	X	114.95054	307.22866	157.50936	8.85949	0.1199274	0.21184608	2.7869066	20	5 9.9	21.1
381940 2010 CN ₁₈₄	16.5	X	176.79893	248.75220	150.83205	5.43458	0.0849838	0.21331638	2.7740860	20	4 21.2	20.7
381941 2010 CM ₂₀₃	15.8	X	312.13566	237.37403	343.59966	8.98459	0.1107849	0.18164093	3.0878788	20	2 11.9	19.9
381942 2010 CH ₂₄₅	16.7	X	253.90285	237.75957	101.97462	18.10070	0.2876301	0.24261099	2.5460235	20	4 15.6	21.3
381943 2010 CD ₂₅₀	17.3	X	233.99888	62.04771	114.35638	3.02693	0.0526069	0.26185169	2.4197238	20	12 16.7	20.4
381944 2010 DN ₆	16.5	X	266.76989	68.15243	172.24587	3.65927	0.0125189	0.18663981	3.0324934	20	1 21.9	20.9
381945 2010 DZ ₁₁	15.6	X	101.11820	265.76552	119.76603	16.12615	0.0761157	0.17957598	3.1115054	20	1 11.0	20.0
381946 2010 DP ₂₀	17.7	X	260.30485	168.30756	302.99391	24.62453	0.0688563	0.44083055	1.7098378	20	—	—
381947 2010 DK ₂₃	16.2	X	344.37822	115.06339	55.44793	27.63385	0.1956653	0.17930710	3.1146152	20	1 14.9	20.4
381948 2010 DB ₂₇	16.0	X	10.95394	87.39925	73.61528	16.69062	0.0734482	0.18128561	3.0919122	20	3 1.7	20.3
381949 2010 DS ₄₄	17.1	X	105.83854	180.55227	300.80172	1.67263	0.1363360	0.21029388	2.8006035	20	5 19.8	21.2
381950 2010 DF ₅₆	15.9	X	320.20541	114.90001	75.30613	12.27285	0.2929745	0.17710095	3.1404277	20	—	—
381951 2010 DK ₇₈	15.8	X	47.44289	264.57025	269.26085	11.78991	0.1502242	0.21090380	2.7952014	20	5 8.9	19.3
381952 2010 EQ ₂₁	16.0	X	197.32280	294.77813	349.25938	9.24756	0.0190816	0.17818506	3.1276767	20	—	—
381953 2010 EB ₄₀	16.0	X	79.85292	262.08419	266.07281	7.64449	0.1770567	0.21441880	2.7645692	20	6 24.8	19.7
381954 2010 EK ₄₀	17.1	X	146.52323	320.05295	185.53691	12.12185	0.2241412	0.22827994	2.6514955	20	8 3.4	21.8
381955 2010 EO ₄₅	16.2	X	27.24236	337.58702	151.36295	10.18339	0.1749991	0.19131732	2.9828622	20	2 5.4	19.3
381956 2010 EE ₆₆	16.4	X	104.53764	92.52088	357.66558	10.89286	0.0699007	0.19788612	2.9164811	20	3 29.6	20.5
381957 2010 EH ₆₉	15.8	X	36.03456	290.45040	172.14297	11.93068	0.1145664	0.18170206	3.0871861	20	1 16.8	19.7
381958 2010 EV ₇₀	16.2	X	65.98324	264.99993	201.32857	8.08149	0.1324766	0.19161707	2.9797506	20	3 7.9	20.0
381959 2010 EM ₇₂	16.8	X	314.39037	13.44505	146.24108	1.73534	0.1180494	0.17748236	3.1359268	20	—	—
381960 2010 ER ₈₇	16.8	X	168.29894	273.08115	182.00088	27.33324	0.3932415	0.22984506	2.6394449	20	6 22.9	22.5
381961 2010 EJ ₉₄	17.0	X	16.82697	18.83660	154.84845	7.18431	0.1326433	0.19769030	2.9184066	20	3 17.9	20.2
381962 2010 EA ₉₅	16.2	X	105.28769	304.38948	103.36894	4.01702	0.0756754	0.18941663	3.0027832	20	2 11.3	20.3
381963 2010 EG ₁₀₁	16.0	X	158.78817	328.66954	5.92558	10.49479	0.0642919	0.18056955	3.1000810	20	1 17.2	20.7
381964 2010 EM ₁₀₅	15.9	X	259.19269	309.63331	263.39801	3.41157	0.1216674	0.17347280	3.1840640	20	—	—
381965 2010 ER ₁₀₆	15.7	X	217.26714	261.98494	0.89311	11.14674	0.0462337	0.17520335	3.1630625	20	—	—
381966 2010 EL ₁₁₀	15.9	X	65.60636	260.59009	174.20222	18.94739	0.1179849	0.18573677	3.0423146	20	1 26.0	20.1
381967 2010 EL ₁₁₂	16.6	X	5.62805	116.63409	48.70904	4.86232	0.1343478	0.18795537	3.0183265	20	2 18.7	20.1
381968 2010 EY ₁₁₃	16.6	X	127.90448	92.52719	60.40987	13.48060	0.2072323	0.22286981	2.6942335	20	8 1.9	21.3
381969 2010 EY ₁₄₁	16.4	X	316.98678	16.58412	156.10458	0.48824	0.1140007	0.18096999	3.0955062	20	—	—
381970 2010 EL ₁₄₂	15.7	X	42.23810	189.28179	260.82623	3.95323	0.1110572	0.18202256	3.0835612	20	1 11.7	19.6
381971 2010 EV ₁₆₈	17.6	X	207.79427	356.21016	79.76650	5.36304	0.1889542	0.24169754	2.5524342	20	7 3.0	21.6
381972 2010 EB ₁₇₁	15.6	X	23.73382	20.31401	80.95339	10.33740	0.0484849	0.17974318	3.1095754	20	—	—
381973 2010 EB ₁₇₂	15.9	X	140.71480	302.03653	125.91709	15.90879	0.1305750	0.20544149	2.8445307	20	4 26.9	20.6
381974 2010 FS ₁₈	15.8	X	1.97242	80.38899	14.30005	12.71932	0.0911838	0.17589241	3.1547963	20	—	—
381975 2010 FT ₈₄	16.5	X	349.19272	148.17934	30.03718	5.85936	0.1935462	0.18796277	3.0182474	20	2 1.3	19.9
381976 2010 FA ₈₆	15.8	X	85.63436	34.18443	11.89578	18.30382	0.0940085	0.17899530	3.1182311	20	1 25.2	20.4
381977 2010 FR ₈₉	16.9	X	106.21043	357.77230	153.13669	6.89848	0.2731169	0.21557045	2.7547143	20	7 11.8	21.4
381978 2010 FE ₉₈	16.5	X	355.46887	128.81066	44.30442	8.94005	0.1537149	0.18849292	3.0125853	20	2 11.7	20.1
381979 2010 GY ₄₈	16.5	X	107.24204	341.21383	151.21735	12.64098	0.1342958	0.22174040	2.7033742	20	6 7.1	20.7
381980 2010 GA ₇₅	15.0	X	333.14455	292.95582	271.88173	20.33248	0.1833626	0.18829735	3.0146709	20	1 31.6	19.1
381981 2010 GF ₁₀₃	16.4	X	313.25573	298.67933	252.09458	3.49913	0.1125019	0.18000658	3.1065413	20	1 5.9	20.6
381982 2010 GC ₁₃₆	16.3	X	336.56212	19.32025	172.95550	5.81491	0.1643515	0.18407594	3.0605868	20	1 30.8	20.2
381983 2010 GP ₁₅₉	16.7	X	99.71395	305.99943	183.24608	16.35792	0.2249635	0.21194270	2.7860597	20	6 4.9	21.2
381984 2010 GQ ₁₇₂	15.9	X	333.96744	203.92444	131.52276	15.80953	0.0658041	0.22684616	2.6626562	20	8 20.7	19.0
381985 2010 GF ₁₇₃	15.6	X	315.30711	20.81538	148.96465	10.99820	0.0266198	0.17689139	3.1429074	20	—	—
381986 2010 HZ ₁₉	15.6	X	189.23202	218.51290	105.42611	17.30613	0.0725271	0.17598451	3.1536955	20	2 5.4	20.5
381987 2010 HZ ₂₁	13.5	X	251.39368	127.11184	217.10428	26.51419	0.0876350	0.07989423	5.3389900	20	5 5.1	20.6
381988 2010 HL ₇₈	15.7	X	16.86262	66.55491	53.64242	22.02665	0.1047212	0.17419225	3.1752908	20	1 13.3	20.0
381989 2010 HR ₈₀	19.9	X	111.95745	291.31473	6.23557	26.71452	0.4957794	0.63016087	1.3474162	20	—	—
381990 2010 HS ₁₀₂	16.4	X	217.84650	167.14752	260.81247	12.47001	0.2840535	0.23774152	2.5806713	20	6 25.1	20.9
381991 2010 JZ ₁₅₄	16.4	X	352.66065	313.06750	216.05852	8.30009	0.0908704	0.18295397	3.0730868	20	2 1.7	20.4
381992 2010 JU ₁₇₇	15.3	X	103.23523	278.63326	139.13558	11.80007	0.0754635	0.18801960	3.0176391	20	2 20.9	19.6
381993 2010 KQ ₃₄	16.9	X	98.21861	111.12234	92.79803	13.03203	0.2275409	0.22653514	2.6650927	20	9 12.2	21.4
381994 2010 KD ₉₈	15.7	X										

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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>
382001 2010 <i>OM</i> ₁₅	15.8	X	11.58202	14.47882	89.58380	20.39036	0.1285601	0.17214345	3.2004353	20	—	—
382002 2010 <i>OK</i> ₄₆	16.4	X	9.54410	66.63895	53.71282	10.51978	0.1985460	0.17770134	3.1333500	20	—	—
382003 2010 <i>OZ</i> ₆₀	15.9	X	286.99665	138.10312	64.50964	19.78865	0.0929351	0.17205047	3.2015882	20	—	—
382004 2010 <i>RM</i> ₆₄	11.2	X	31.30346	291.34885	113.95145	27.04061	0.6883629	0.01125825	19.7161463	20	3 3.9	22.8
382005 2010 <i>TO</i> ₆	17.8	X	286.20880	53.66529	217.81702	20.08866	0.0527357	0.35914089	1.9601658	20	2 19.9	20.6
382006 2010 <i>UF</i> ₅₂	17.6	X	27.11885	322.10443	233.31271	19.45827	0.0446429	0.35791371	1.9646438	20	4 14.7	19.5
382007 2010 <i>UD</i> ₁₀₇	17.3	X	343.21028	324.87084	286.78729	18.95090	0.0302203	0.36979285	1.9223408	20	4 24.1	19.6
382008 2010 <i>XE</i> ₈₃	18.1	X	353.36972	163.43948	229.28113	2.93028	0.1577393	0.30087904	2.2056745	20	—	—
382009 2011 <i>AW</i> ₄	17.9	X	0.89197	144.83115	282.86546	3.85173	0.0767166	0.30219932	2.1992456	20	—	—
382010 2011 <i>AN</i> ₂₀	17.2	X	288.04815	4.49821	81.95944	7.71644	0.0579922	0.28553842	2.2839837	20	11 25.7	19.7
382011 2011 <i>AQ</i> ₄₇	18.5	X	4.22773	165.00926	248.41504	2.07883	0.1249928	0.30226353	2.1989341	20	—	—
382012 2011 <i>AC</i> ₅₈	18.1	X	0.23453	279.86115	147.41207	3.20136	0.0341679	0.30193526	2.2005276	20	—	—
382013 2011 <i>AG</i> ₆₅	17.1	X	274.42341	358.26416	112.35491	5.93249	0.0385710	0.28691502	2.2766723	20	12 10.6	19.6
382014 2011 <i>BQ</i> ₁₁	16.0	X	341.20998	175.09255	100.13372	13.30088	0.1954891	0.24324679	2.5415850	20	5 29.8	18.4
382015 2011 <i>BV</i> ₄₆	17.2	X	32.24093	35.26453	267.59509	3.91429	0.1499062	0.26736127	2.3863660	20	10 22.9	20.0
382016 2011 <i>BH</i> ₅₃	17.6	X	315.51380	78.59193	331.63243	4.13686	0.0326411	0.28106244	2.3081685	20	11 13.9	20.3
382017 2011 <i>BK</i> ₅₃	17.7	X	150.58929	73.17608	117.67609	3.53728	0.1188263	0.26941953	2.3741965	20	10 10.4	21.2
382018 2011 <i>BT</i> ₅₃	18.2	X	206.91835	48.02709	109.93232	2.13326	0.1227394	0.27780185	2.3261942	20	10 28.3	21.2
382019 2011 <i>BM</i> ₆₂	17.6	X	149.13877	97.84331	102.84361	3.34518	0.1244889	0.26724214	2.3870751	20	10 20.9	21.1
382020 2011 <i>BR</i> ₆₂	17.1	X	133.85846	77.31350	90.85378	7.21016	0.0707818	0.25882224	2.4385687	20	8 21.4	20.5
382021 2011 <i>BN</i> ₇₀	17.3	X	172.84393	358.17324	151.25915	5.28120	0.0537253	0.26242849	2.4161769	20	9 10.2	20.4
382022 2011 <i>BE</i> ₇₄	17.4	X	44.71357	67.44811	263.72706	3.45791	0.1353092	0.27778996	2.3262605	20	12 18.2	20.2
382023 2011 <i>BX</i> ₉₁	16.1	X	235.03463	325.81849	301.10923	16.86309	0.1353339	0.20971871	2.8057217	20	1 8.5	20.6
382024 2011 <i>BN</i> ₁₀₂	17.7	X	337.18019	301.12493	124.21357	7.26897	0.0820214	0.29478520	2.2359681	20	—	—
382025 2011 <i>BG</i> ₁₀₈	17.2	X	314.80296	109.15059	183.66977	3.94906	0.1612501	0.23830053	2.5766339	20	5 6.7	20.1
382026 2011 <i>BE</i> ₁₂₅	18.0	X	183.65009	278.40280	294.55504	1.34972	0.1625105	0.28698279	2.2763139	20	12 9.4	21.1
382027 2011 <i>BT</i> ₁₆₁	17.7	X	125.38973	338.80014	310.62759	2.89315	0.0369323	0.29525165	2.2336125	20	—	—
382028 2011 <i>CB</i> ₁₁	18.1	X	306.35539	100.68252	281.31010	1.20466	0.2084980	0.27481548	2.3430160	20	9 1.6	19.7
382029 2011 <i>CJ</i> ₁₇	17.0	X	266.26689	82.14503	344.91956	6.85226	0.0896471	0.27094936	2.3652517	20	9 14.8	19.7
382030 2011 <i>CP</i> ₁₈	17.6	X	258.76824	116.16279	357.74705	5.37842	0.1189359	0.28198660	2.3031224	20	11 6.2	20.2
382031 2011 <i>CV</i> ₂₂	18.0	X	242.73369	288.54060	245.23990	3.66641	0.1057839	0.29147275	2.2528766	20	—	—
382032 2011 <i>CR</i> ₂₃	17.9	X	135.55180	288.49541	259.85970	0.16897	0.1633379	0.26247004	2.4159219	20	9 20.1	21.6
382033 2011 <i>CW</i> ₂₄	16.4	X	97.06174	146.66114	72.32316	7.56262	0.1238783	0.25900850	2.4373995	20	9 22.1	20.0
382034 2011 <i>CJ</i> ₂₇	18.1	X	169.48593	21.95860	143.24660	1.59645	0.1292287	0.26694227	2.3888625	20	9 24.6	21.7
382035 2011 <i>CF</i> ₃₅	17.6	X	231.37353	243.14545	286.12257	2.44731	0.0992366	0.28574472	2.2828843	20	12 18.9	20.0
382036 2011 <i>CT</i> ₄₇	17.8	X	256.73990	235.72101	282.02261	5.58142	0.1086924	0.29014729	2.2597325	20	—	—
382037 2011 <i>CD</i> ₄₈	17.9	X	266.62108	134.18022	355.74074	6.19489	0.1519925	0.28978767	2.2616017	20	12 12.4	20.0
382038 2011 <i>CX</i> ₆₀	18.0	X	358.14341	60.69175	313.24897	3.22749	0.1695488	0.28381783	2.2932053	20	12 19.1	20.2
382039 2011 <i>CX</i> ₆₈	17.7	X	257.08251	159.83419	354.01087	4.78842	0.1620140	0.28983049	2.2613789	20	12 30.5	19.7
382040 2011 <i>CX</i> ₈₀	18.3	X	209.71119	264.35999	248.42505	0.59479	0.1303344	0.27413270	2.3469049	20	10 21.9	21.4
382041 2011 <i>CF</i> ₈₆	17.3	X	105.21923	45.27420	173.87303	2.45362	0.1293512	0.26071124	2.4267752	20	9 27.8	20.9
382042 2011 <i>CU</i> ₉₁	17.8	X	320.31830	178.41013	132.66112	3.59623	0.0864976	0.30218352	2.1993222	20	—	—
382043 2011 <i>DU</i> ₂	17.6	X	237.16677	327.27855	131.16294	3.73258	0.1427672	0.27041193	2.3683842	20	9 11.1	20.6
382044 2011 <i>DP</i> ₅	17.7	X	265.57927	300.44082	150.58718	4.72139	0.1734870	0.27597453	2.3364512	20	10 8.1	20.1
382045 2011 <i>DB</i> ₁₀	17.5	X	149.24503	114.16365	59.93786	2.27805	0.1379878	0.25697795	2.4502222	20	9 15.3	21.3
382046 2011 <i>DX</i> ₁₀	17.9	X	204.12658	306.91698	232.86574	1.37736	0.1639850	0.27697328	2.3308311	20	11 16.7	21.3
382047 2011 <i>DB</i> ₁₁	17.5	X	258.65166	343.37512	174.69515	7.64781	0.1653539	0.28734276	2.2744124	20	—	—
382048 2011 <i>DX</i> ₁₁	17.7	X	137.79831	213.09004	4.17446	2.26032	0.1488695	0.26439589	2.4041760	20	10 28.2	21.3
382049 2011 <i>DW</i> ₂₂	16.5	X	276.91742	220.36916	145.37327	4.60409	0.1479668	0.24482533	2.5306484	20	6 22.5	19.7
382050 2011 <i>DK</i> ₂₅	16.9	X	76.21981	327.48926	304.73097	6.45666	0.0965710	0.27318510	2.3523289	20	10 30.3	20.2
382051 2011 <i>DG</i> ₂₉	17.2	X	12.97079	77.45561	161.03567	3.03891	0.1357554	0.23839974	2.5759190	20	6 9.6	19.9
382052 2011 <i>DL</i> ₃₀	17.6	X	196.07287	173.71098	353.83257	1.18459	0.1271816	0.27134347	2.3629605	20	10 25.6	21.0
382053 2011 <i>DW</i> ₃₁	18.3	X	253.48611	125.92439	355.67174	2.21338	0.1471872	0.27958737	2.3162798	20	11 4.8	20.9
382054 2011 <i>EU</i> ₂	17.9	X	323.59544	246.89846	174.11938	8.58117	0.1403492	0.28661197	2.2782768	20	12 22.5	20.1
382055 2011 <i>ES</i> ₁₃	17.8	X	208.08478	256.79075	258.89219	1.43476	0.1681754	0.27093600	2.3653291	20	10 18.6	21.0
382056 2011 <i>ER</i> ₁₅	16.8	X	211.49770	195.68195	175.97675	10.17644	0.1317955	0.23228533	2.6209266	20	4 20.4	21.0
382057 2011 <i>ES</i> ₁₇	17.0	X	213.68175	317.77434	264.99873	6.18836	0.1784766	0.28728288	2.2747284	20	—	—
382058 2011 <i>EC</i> ₁₈	16.9	X	110.49374	213.78125	359.28880	11.30878	0.1116082	0.25675204	2.4516593	20	9 23.3	20.4
382059 2011 <i>EQ</i> ₂₂	17.1	X	229.55623	37.56181	97.32307	4.53083	0.1163872	0.27364636	2.3496848	20	10 26.7	20.1
382060 2011 <i>EJ</i> ₂₄	16.5	X	29.35387	259.17904	35.25297	6.53919	0.1129021	0.25517967	2.4617201	20	10 1.9	19.3
382061 2011 <i>ED</i> ₃₀	17.8	X	271.31281	146.52170	29.84591	1.72567	0.1477397	0.29622463	2.2287188	20	—	—
382062 2011 <i>EY</i> ₃₃	17.8	X	216.77791	199.48474	323.72285	3.12055	0.1028063	0.27722299	2.3294312	20	11 17.1	20.7
382063 2011 <i>ES</i> ₃₉	16.0	X	147.67975	168.66995	117.04237	6.49308	0.1153662	0.17314216	3.1881164	20	—	—
382064 2011 <i>ET</i> ₃₉	17.7	X	346.19062	346.71118	93.27243	3.08806	0.1188010	0.28792685	2.2713354	20	—	—
382065 2011 <i>EG</i> ₄₂	16.7	X	339.12856	96.09368	143.45082	6.18799	0.1173299	0.22379098	2.6868350	20	4 10.9	19.9
382066 2011 <i>EQ</i> ₄₄	15.9	X	268.19298	242.85959	10.20097	9.21878	0.0981339	0.20843197	2.8172572	20	1 29.6	20.2
382067 2011 <i>EU</i> ₅₃	17.2	X	136.16911	153.06488	48.48932	6.23247	0.1594072	0.25745720	2.4471806	20	10 8.8	21.0
382068 2011 <i>ET</i> ₅₄	17.1	X	209.13834	74.23712	84.80730	5.83968	0.1076271	0.27362565	2.3498033	20	11 3.6	20.2
382069 2011 <i>ER</i> ₆₃	17.6	X	151.78830	200.16105	20.32514	3.47252	0.1754562	0.26913469	2.3758714	20	11 14.1	21.4
382070 2011 <i>EL</i> ₇₃	16.6	X	262.62097	173.50318	79.47449	4.08225	0.1266683	0.20030869	2.8929184	20	1 19.4	21.0
382071 2011 <i>EV</i> ₇₅	17.4	X	104.40653	205.33814	29.49085	1.71850	0.1392371	0.26046077	2.4283307	20	10 17.8	21.1
382072 2011 <i>FD</i> ₆	17.3											

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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>		
382081	2011	FV ₅₄	17.5	X	156.33845	92.61315	97.35779	2.22594	0.1207503	0.26352504	2.4094697	20	10 13.6	21.1
382082	2011	FM ₇₉	17.3	X	63.44998	55.80916	114.01027	4.25120	0.0726582	0.23003598	2.6379843	20	5 20.0	20.7
382083	2011	FV ₈₀	18.3	X	156.12514	165.47070	27.40432	1.90283	0.1230568	0.26367860	2.4085341	20	10 15.9	22.0
382084	2011	FA ₈₄	15.9	X	278.86800	101.64865	82.42730	11.62346	0.1309842	0.18500406	3.0503421	20	—	—
382085	2011	FU ₉₆	17.6	X	132.84727	274.91178	231.38795	2.55938	0.0745067	0.24419082	2.5350303	20	7 17.3	21.2
382086	2011	FO ₁₂₇	17.9	X	196.18400	59.51518	104.12670	7.46480	0.1323945	0.27092113	2.3654156	20	10 24.1	21.4
382087	2011	FC ₁₃₀	17.9	X	253.82482	210.05947	280.59095	1.67598	0.1226314	0.27859406	2.3217822	20	11 22.5	20.4
382088	2011	FL ₁₄₂	17.3	X	129.54806	30.60223	114.19726	5.64828	0.2234729	0.23928576	2.5695563	20	7 22.4	21.4
382089	2011	FU ₁₄₂	16.3	X	207.53345	112.73546	171.79082	10.05671	0.0473424	0.19321942	2.9632539	20	1 4.2	20.8
382090	2011	FG ₁₅₁	15.8	X	29.04994	185.28373	58.39531	34.15262	0.1522972	0.23263162	2.6183250	20	7 23.3	19.6
382091	2011	GU ₁	16.6	X	231.31559	44.55676	272.25608	5.22474	0.0259882	0.21265305	2.7798518	20	3 6.6	20.6
382092	2011	GL ₅	15.6	X	242.02725	204.53403	128.84677	15.69998	0.2019100	0.22038021	2.7144863	20	4 1.9	20.3
382093	2011	GE ₃₄	17.2	X	7.79030	27.60215	207.67575	13.64024	0.0712545	0.22727954	2.6592704	20	5 24.3	20.4
382094	2011	GA ₃₇	16.7	X	331.49729	343.60723	279.92384	4.17867	0.1210666	0.22185605	2.7024346	20	4 27.1	19.9
382095	2011	GQ ₄₂	16.7	X	240.67343	214.83096	146.12823	5.13798	0.1928949	0.23721164	2.5845130	20	4 30.9	20.9
382096	2011	GT ₄₉	16.8	X	200.40943	5.57768	22.57151	5.26784	0.0482514	0.22346003	2.6894872	20	4 29.9	20.7
382097	2011	GN ₅₀	15.8	X	31.68489	195.31918	192.22824	27.80928	0.1463722	0.17737671	3.1371720	20	—	—
382098	2011	GT ₅₈	17.0	X	52.37417	207.65325	51.96929	4.87905	0.0545455	0.24563063	2.5251143	20	9 6.9	20.2
382099	2011	GA ₆₃	16.6	X	83.85690	204.28656	10.16228	7.64956	0.1589776	0.24041841	2.5614796	20	9 1.3	20.2
382100	2011	GA ₆₆	16.7	X	26.12471	171.32101	121.95259	4.98583	0.2233262	0.24648262	2.5192921	20	10 12.4	19.5
382101	2011	GY ₆₆	16.7	X	28.80261	185.84360	55.86131	15.36625	0.1971883	0.23256787	2.6188035	20	7 27.9	19.8
382102	2011	GJ ₆₇	17.0	X	88.91516	189.34055	13.03427	6.38344	0.1709825	0.24121620	2.5558287	20	8 23.5	20.7
382103	2011	GQ ₆₉	17.7	X	171.41196	139.48722	39.25145	5.60724	0.1570774	0.26116227	2.4239803	20	10 12.5	21.4
382104	2011	GG ₇₀	16.5	X	1.57036	186.96709	86.13977	16.08253	0.0687506	0.24238631	2.5475966	20	8 27.3	19.8
382105	2011	GO ₇₂	16.4	X	184.97717	113.63032	75.23406	3.61934	0.1608527	0.17314782	3.1880468	20	—	—
382106	2011	GQ ₇₆	15.6	X	145.68796	232.38728	67.12001	13.91603	0.1691304	0.17379946	3.1800731	20	—	—
382107	2011	HA	16.7	X	353.70862	154.16644	70.64770	9.12116	0.1143286	0.22484050	2.6784674	20	4 17.2	19.7
382108	2011	HO ₃	17.2	X	120.79831	89.27822	65.98417	14.86440	0.1037154	0.23876896	2.5732628	20	7 19.8	21.2
382109	2011	HB ₁₅	16.7	X	180.35139	356.14254	54.01934	7.36695	0.0704539	0.22298679	2.6932910	20	5 6.4	20.6
382110	2011	HJ ₁₅	17.1	X	182.61069	59.49087	88.81478	6.08397	0.1268868	0.25569370	2.4584197	20	9 17.8	20.9
382111	2011	HD ₁₇	16.6	X	200.15350	22.24995	45.77716	10.91568	0.0805709	0.23501729	2.6005757	20	6 19.8	20.6
382112	2011	HV ₂₇	16.1	X	349.39000	200.16868	81.95730	10.75146	0.1701491	0.22730908	2.6590399	20	6 27.1	18.6
382113	2011	HQ ₂₈	15.5	X	235.91381	144.46489	89.27939	19.04351	0.1984522	0.18064292	3.0992415	20	—	—
382114	2011	HU ₃₂	16.1	X	150.67812	205.64855	127.86803	6.55808	0.1453540	0.18014829	3.1049120	20	1 12.0	20.8
382115	2011	HG ₃₃	16.0	X	234.70401	351.37855	49.51406	30.13766	0.1422278	0.23512840	2.5997564	20	6 11.5	20.3
382116	2011	HV ₃₆	16.7	X	134.60379	301.26966	129.33731	7.15597	0.1065455	0.21273440	2.7791431	20	4 7.6	20.6
382117	2011	HN ₅₆	17.5	X	123.87705	114.51008	70.36331	15.23345	0.1292857	0.24475884	2.5311067	20	9 9.4	21.7
382118	2011	HX ₅₆	16.2	X	222.60058	305.00308	99.64372	15.47259	0.1260224	0.22910288	2.6451422	20	6 12.7	20.2
382119	2011	HN ₆₉	18.0	X	232.97053	102.23482	26.83039	2.68283	0.1604633	0.26822392	2.3812466	20	10 13.7	21.1
382120	2011	HR ₇₄	15.4	X	206.15172	151.45337	117.96719	14.15217	0.0872260	0.17963865	3.1107817	20	—	—
382121	2011	HG ₇₇	15.3	X	131.67310	265.21029	84.67509	27.38017	0.1580751	0.18092846	3.0959798	20	1 12.9	20.2
382122	2011	HD ₈₀	16.7	X	150.54473	280.57165	173.37392	6.57124	0.0158509	0.22142404	2.7059485	20	5 26.5	20.5
382123	2011	HX ₈₁	16.5	X	92.93386	117.78514	78.99390	9.72455	0.1029595	0.23840276	2.5758972	20	8 12.8	20.2
382124	2011	HO ₈₄	16.5	X	10.44176	145.45896	58.86302	4.57561	0.0336327	0.21496823	2.7598567	20	4 16.0	20.0
382125	2011	HE ₉₁	16.6	X	161.49089	317.96357	107.96957	4.33635	0.0642711	0.21746591	2.7386840	20	5 6.4	20.6
382126	2011	HR ₉₂	17.6	X	102.09229	349.66092	163.94011	2.18202	0.1333030	0.23305246	2.6151720	20	6 27.0	21.3
382127	2011	HP ₉₅	17.1	X	197.53195	275.05554	170.09595	4.64668	0.0762138	0.24351337	2.5397298	20	7 10.4	20.7
382128	2011	HX ₁₀₀	15.6	X	284.17483	144.00392	67.49333	16.17604	0.1894769	0.18963779	3.0004482	20	—	—
382129	2011	JV ₂₄	16.5	X	163.09659	253.09037	211.66568	11.05118	0.1629513	0.23352473	2.6116449	20	6 27.8	20.9
382130	2011	JR ₂₇	15.8	X	237.96836	177.21278	78.42966	12.53272	0.0389890	0.18842249	3.0133360	20	1 4.9	20.2
382131	2011	JS ₃₀	15.9	X	172.06182	267.38943	82.96958	5.08725	0.0645719	0.19188345	2.9769923	20	2 16.7	20.3
382132	2011	KN ₆	17.3	X	57.39572	144.83844	62.23252	3.56450	0.0856190	0.22852077	2.6496323	20	7 3.2	20.5
382133	2011	KP ₇	15.7	X	208.29966	188.13707	63.05419	16.58427	0.2190860	0.17463616	3.1699076	20	—	—
382134	2011	KM ₁₂	16.3	X	120.56251	50.95903	113.11814	22.76856	0.1216125	0.23250679	2.6192620	20	7 31.2	20.2
382135	2011	KJ ₁₄	15.9	X	118.10431	323.06998	73.39743	6.37749	0.0704910	0.19137705	2.9822415	20	2 13.4	20.2
382136	2011	KN ₂₁	15.8	X	115.90756	324.08203	230.94700	16.30272	0.1046527	0.24095630	2.5576662	20	8 27.3	20.0
382137	2011	KY ₂₄	16.9	X	6.57363	125.85954	106.05836	6.07374	0.1033372	0.21874808	2.7279718	20	5 18.7	20.0
382138	2011	KC ₂₅	16.2	X	264.46567	142.45088	69.55474	6.18969	0.0820226	0.18159830	3.0883620	20	—	—
382139	2011	KS ₂₇	16.8	X	96.41597	165.78245	34.52349	6.87201	0.1279124	0.23747877	2.5825745	20	8 24.8	20.6
382140	2011	KS ₂₉	16.0	X	223.28887	156.14876	69.38942	13.36691	0.1195381	0.17262781	3.1944459	20	—	—
382141	2011	KE ₃₀	16.2	X	342.80755	333.08938	251.57829	11.23632	0.1671374	0.20970303	2.8058616	20	3 14.6	19.6
382142	2011	KE ₃₇	16.2	X	16.61672	117.89884	90.72492	6.58967	0.0344567	0.21485636	2.7608146	20	5 1.8	19.8
382143	2011	KS ₄₄	16.3	X	216.50044	22.88633	226.45092	11.48962	0.0888889	0.17744054	3.1364195	20	—	—
382144	2011	KX ₄₄	17.4	X	116.60911	93.79913	79.21275	3.86896	0.1516676	0.23821926	2.5772199	20	8 11.4	21.3
382145	2011	LX ₇	16.2	X	100.51322	31.27602	84.90045	10.43975	0.1156236	0.21543187	2.7558955	20	5 7.4	20.1
382146	2011	LT ₂₁	16.2	X	217.90998	145.09596	80.57015	4.45955	0.1396618	0.17342132	3.1846941	20	—	—
382147	2011	LU ₂₂	16.1	X	187.77248	57.62380	243.60307	9.70766	0.0749541	0.18069763	3.0986159	20	1 5.1	20.9
382148	2011	MC ₃	15.4	X	5.15840	286.94122	289.91915	13.78687	0.1018129	0.20294878	2.8677750	20	4 17.1	19.2
382149	2011	MB ₅	16.4	X	46.67654	60.55185	157.29936	10.48350	0.0834584	0.22491271	2.6778940	20	7 1.2	19.9
382150	2011	QN ₃	14.2	X	281.92957	123.31927	179.08612	10.75065	0.					

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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>
382161 2012 <i>HM</i> ₄₁	16.4	X	228.40651	193.79930	133.81104	13.23762	0.1816012	0.22497744	2.6773803	20	3 12.3	20.9
382162 2012 <i>HP</i> ₄₂	18.1	X	133.58352	107.09725	174.22789	6.48978	0.1226250	0.30809409	2.1711032	20	—	—
382163 2012 <i>HZ</i> ₄₇	17.9	X	122.43597	127.20702	117.01869	4.68939	0.1080211	0.29076660	2.2565227	20	11 21.9	21.1
382164 2012 <i>HX</i> ₄₉	18.0	X	13.87074	354.54061	189.50375	22.21005	0.0429755	0.36177423	1.9506423	20	3 1.7	20.1
382165 2012 <i>HT</i> ₆₃	16.8	X	286.74796	259.46772	70.99954	5.81659	0.3190762	0.24361077	2.5390528	20	4 23.8	20.3
382166 2012 <i>HY</i> ₆₄	17.8	X	132.88540	159.28392	119.09292	3.39350	0.1453632	0.30332758	2.1937886	20	—	—
382167 2012 <i>HQ</i> ₇₃	17.8	X	69.36868	282.81565	213.20095	20.57780	0.0662418	0.35928141	1.9596547	20	3 25.1	19.7
382168 2012 <i>HP</i> ₇₉	15.8	X	87.49325	257.71915	57.15962	26.41996	0.2178276	0.17031040	3.2233584	20	12 24.7	21.3
382169 2012 <i>JU</i> ₁₃	18.2	X	106.64659	247.61001	89.02980	1.62514	0.0996025	0.31447092	2.1416527	20	—	—
382170 2012 <i>JB</i> ₂₀	17.7	X	116.64822	109.98809	163.00468	4.70235	0.1853452	0.29506084	2.2345753	20	12 22.9	21.3
382171 2012 <i>JB</i> ₂₄	18.2	X	227.26962	12.06978	190.15008	6.62793	0.0683197	0.31130412	2.1561525	20	—	—
382172 2012 <i>JX</i> ₂₄	18.0	X	159.25711	232.47018	63.67035	3.18052	0.1302990	0.31865258	2.1228750	20	—	—
382173 2012 <i>JC</i> ₂₅	18.1	X	123.12698	48.56780	201.54018	5.92186	0.1937672	0.29012942	2.2598253	20	11 30.1	21.7
382174 2012 <i>JJ</i> ₂₅	17.4	X	104.68267	150.80938	196.60024	3.91944	0.0696555	0.31630780	2.1333533	20	—	—
382175 2012 <i>JK</i> ₂₅	17.5	X	108.19700	301.67889	48.05768	3.89622	0.0866090	0.31839115	2.1240369	20	—	—
382176 2012 <i>JR</i> ₂₅	17.1	X	321.69121	196.22156	72.68539	6.41994	0.2514198	0.23765716	2.5812820	20	4 1.5	19.9
382177 2012 <i>JH</i> ₃₃	16.2	X	294.73942	208.78024	111.82994	7.36436	0.2647818	0.24165566	2.5527291	20	4 29.9	19.6
382178 2012 <i>JH</i> ₄₃	17.5	X	56.21194	267.94981	28.89878	5.75027	0.2170847	0.27961188	2.3161444	20	11 26.1	20.9
382179 2012 <i>JQ</i> ₄₅	16.6	X	226.59323	278.00010	71.38930	11.25000	0.2995022	0.22513219	2.6761533	20	4 2.9	21.6
382180 2012 <i>JG</i> ₄₈	17.9	X	296.49643	257.76046	55.49190	4.69322	0.2307052	0.24410190	2.5356459	20	4 25.1	21.0
382181 2012 <i>KW</i> ₄	16.6	X	61.03770	192.39459	123.62276	25.10287	0.1973794	0.28738026	2.2742145	20	12 27.8	20.2
382182 2012 <i>KX</i> ₈	17.4	X	338.12088	243.45017	97.39989	6.70104	0.1802712	0.26506424	2.4001329	20	9 16.1	19.3
382183 2012 <i>KG</i> ₁₃	16.9	X	249.60498	234.07474	88.59175	7.52835	0.2375654	0.22769313	2.6560491	20	3 21.7	21.4
382184 2012 <i>KU</i> ₁₇	17.0	X	309.41336	118.79654	184.58807	4.34572	0.2982241	0.24106477	2.5568989	20	4 18.9	20.0
382185 2012 <i>KF</i> ₁₈	17.6	X	181.60140	247.97393	203.45447	22.63509	0.1365335	0.39218138	1.8484657	20	8 4.7	20.7
382186 2012 <i>KX</i> ₂₆	18.1	X	139.90980	107.51232	174.69238	3.24647	0.1299415	0.30688607	2.1767970	20	—	—
382187 2012 <i>KV</i> ₃₁	18.1	X	90.58062	222.16319	101.01880	2.70707	0.0998546	0.30547952	2.1834738	20	—	—
382188 2012 <i>KL</i> ₃₄	17.1	X	181.85860	271.13810	76.59405	8.63299	0.2346953	0.21344397	2.7729803	20	2 29.2	22.0
382189 2012 <i>KA</i> ₄₃	17.3	X	328.68475	247.84084	71.07540	8.96079	0.2362703	0.25218849	2.4811472	20	7 3.9	19.1
382190 2012 <i>KJ</i> ₄₆	16.7	X	253.20444	147.31680	125.59154	5.77841	0.2728965	0.21559631	2.7544940	20	1 21.2	21.6
382191 2012 <i>KS</i> ₅₀	15.9	X	124.74706	71.38919	242.21182	23.93961	0.3465446	0.17650977	3.1474359	20	—	—
382192 2012 <i>LZ</i> ₉	16.2	X	326.56925	157.17116	137.34734	16.68953	0.1606308	0.23716275	2.5848682	20	6 3.3	19.3
382193 2012 <i>LC</i> ₁₅	17.4	X	141.25033	43.91654	57.69773	23.66253	0.0952130	0.37099786	1.9181760	20	5 27.6	19.6
382194 2012 <i>LK</i> ₂₁	17.4	X	0.99094	264.31753	81.66501	7.21169	0.1378716	0.27804015	2.3248648	20	11 8.4	19.7
382195 2012 <i>LY</i> ₂₂	16.5	X	265.85892	224.51100	92.73695	15.63873	0.1883280	0.23303505	2.6153023	20	4 8.3	20.7
382196 2012 <i>MN</i> ₇	15.9	X	298.62297	137.96576	205.86608	14.48820	0.2712501	0.24477909	2.5309671	20	6 3.2	19.0
382197 2012 <i>OO</i> ₂	16.0	X	350.91062	301.80335	137.63331	11.65780	0.1514513	0.23132094	2.6282061	20	5 23.8	18.9
382198 2012 <i>OC</i> ₃	16.8	X	340.95092	356.90916	284.19880	4.99282	0.1028920	0.23911883	2.5707521	20	6 11.9	19.4
382199 2012 <i>OC</i> ₅	16.0	X	147.97469	103.70197	244.81442	7.61275	0.0751916	0.18473282	3.0533272	20	1 18.1	20.6
382200 2012 <i>OO</i> ₅	15.8	X	19.78927	338.69128	268.39337	13.17402	0.1113498	0.23212529	2.6221312	20	7 2.1	18.6
382201 2012 <i>OY</i> ₅	16.4	X	326.58729	279.16339	50.83437	15.17847	0.1413238	0.24577438	2.5241296	20	8 1.8	19.3
382202 2012 <i>PB</i> ₃	16.9	X	258.17546	356.97516	313.86212	3.03710	0.0876507	0.20865057	2.8152891	20	3 26.0	21.0
382203 2012 <i>PC</i> ₈	15.3	X	159.40651	28.19530	264.13241	11.81627	0.1028021	0.16960240	3.2323228	20	—	—
382204 2012 <i>PF</i> ₈	15.7	X	134.87427	73.55419	275.54494	12.73567	0.0678562	0.17951350	3.1122273	20	1 5.6	20.2
382205 2012 <i>PS</i> ₁₁	15.3	X	307.88905	234.50074	308.03413	8.77481	0.0480729	0.17822475	3.1272124	20	—	—
382206 2012 <i>PH</i> ₁₃	16.1	X	176.30180	31.39624	288.86657	4.60527	0.0950607	0.18183030	3.0857344	20	1 17.6	20.8
382207 2012 <i>PY</i> ₁₄	15.5	X	107.14722	226.22129	172.78517	14.56316	0.0931314	0.18201254	3.0836743	20	2 3.3	20.0
382208 2012 <i>PA</i> ₁₆	15.9	X	86.26349	177.46516	291.31030	7.90672	0.1057011	0.20688268	2.8313048	20	3 18.6	20.0
382209 2012 <i>PQ</i> ₂₁	15.9	X	49.36821	120.24408	311.51244	17.56562	0.1940681	0.17366967	3.1816572	20	1 11.8	19.6
382210 2012 <i>PY</i> ₂₂	16.1	X	187.44767	10.03734	311.91240	9.75159	0.0976087	0.19121782	2.9838968	20	1 29.7	20.8
382211 2012 <i>PQ</i> ₂₅	17.2	X	101.37052	308.24545	313.48122	3.33723	0.1490952	0.26671697	2.3902075	20	11 18.2	20.8
382212 2012 <i>PK</i> ₂₆	15.5	X	163.66567	24.46779	272.39113	8.35744	0.0695608	0.17526310	3.1623436	20	—	—
382213 2012 <i>PM</i> ₃₃	16.3	X	310.15619	4.84556	277.90505	5.84271	0.0226400	0.22212270	2.7002714	20	5 3.6	19.9
382214 2012 <i>PE</i> ₃₅	16.7	X	311.12942	273.93172	38.08951	4.76144	0.1583795	0.22997135	2.6384785	20	5 27.3	19.7
382215 2012 <i>PN</i> ₃₆	16.0	X	170.55705	71.66262	222.89219	4.33644	0.1158031	0.17680867	3.1438876	20	—	—
382216 2012 <i>PO</i> ₃₈	16.5	X	331.76689	300.75265	299.36963	7.94956	0.1044344	0.21707765	2.7419486	20	3 25.6	20.0
382217 2012 <i>PC</i> ₄₂	17.1	X	308.90805	320.70594	316.53446	1.77341	0.1249949	0.22053891	2.7131839	20	4 10.5	20.6
382218 2012 <i>QY</i> ₁₉	15.8	X	345.04608	194.36166	339.02879	7.98143	0.0205482	0.18805627	3.0172468	20	2 6.3	19.9
382219 2012 <i>QE</i> ₂₁	15.7	X	307.48718	14.96126	201.55754	10.89309	0.0851142	0.19239524	2.9717105	20	1 28.9	20.0
382220 2012 <i>QE</i> ₃₀	15.9	X	341.92745	252.65902	264.88542	7.30133	0.0119827	0.18076899	3.0978004	20	1 13.8	20.2
382221 2012 <i>QD</i> ₄₄	16.8	X	239.76881	212.10849	123.69608	1.48520	0.0772299	0.21439076	2.7648103	20	4 8.3	20.8
382222 2012 <i>QV</i> ₄₇	17.4	X	322.99943	235.24300	88.08992	1.44092	0.1052001	0.23792260	2.5793617	20	7 12.6	20.1
382223 2012 <i>QV</i> ₅₀	15.7	X	343.70513	317.51089	289.44836	12.27987	0.0664431	0.21746592	2.7386839	20	4 26.2	19.4
382224 2012 <i>QZ</i> ₅₁	13.4	X	252.44533	351.64834	332.33836	24.50246	0.1140371	0.08344797	5.1863145	20	3 29.8	20.8
382225 2012 <i>RN</i> ₅	16.1	X	200.94914	239.99382	170.17525	6.71472	0.0098187	0.21905991	2.7253824	20	6 2.4	19.9
382226 2012 <i>RL</i> ₁₀	16.2	X	316.86857	24.90964	294.57956	11.98697	0.1181349	0.22935046	2.6432382	20	6 24.6	19.2
382227 2012 <i>RA</i> ₁₂	15.8	X	209.29197	2.17701	300.01246	8.36657	0.0946275	0.18532389	3.0468315	20	1 27.8	20.5
382228 2012 <i>RL</i> ₁₃	16.1	X	2.70357	122.09347	123.87682	5.71999	0.0577577	0.21898874	2.7259728	20	5 31.1	19.4
382229 2012 <i>RW</i> ₁₃	15.8	X	189.03362	295.67264	17.82372	18.31141	0.1535778	0.18143863	3.0901736	20	1 30.4	21.2
382230 2012 <i>RN</i> ₁₈	15.9	X	228.19741	17.26290	240.06069	2.74351	0.1636712	0.17561541	3.1581128	20	—	—
382231 2012 <i>RH</i> ₂₆	16.7	X	205.37521	281.85458	91.53163	3.05514	0.1206421	0.20842017	2.8173635	20	4 17.2	21.1
382232 2012 <i>RZ</i> ₂₇	15.3											

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>
382241 2012 SR ₂₈	16.6	X	170.78090	251.77754	184.89978	8.83061	0.1098402	0.20648814	2.8349102	20	5 31.5	21.1
382242 2012 SP ₃₄	16.3	X	170.15025	32.58266	352.21293	4.69301	0.0604740	0.19637623	2.9314114	20	3 24.2	20.5
382243 2012 SV ₃₉	15.9	X	308.08182	235.52383	323.69720	3.88253	0.0853291	0.18071734	3.0983906	20	1 14.1	20.1
382244 2012 SM ₄₀	15.9	X	163.27757	47.72353	222.96654	3.93543	0.0749904	0.15708031	3.4019000	20	—	—
382245 2012 SU ₅₁	16.0	X	111.62652	212.29556	192.33662	16.13401	0.0795358	0.18209716	3.0827189	20	2 12.1	20.6
382246 2012 SZ ₅₉	16.2	X	174.07364	114.33717	171.24530	3.77955	0.1229927	0.16940034	3.2348926	20	—	—
382247 2012 TV ₃	15.8	X	161.03921	133.17085	209.18328	11.36413	0.0365388	0.18479995	3.0525877	20	1 20.3	20.5
382248 2012 TY ₄	14.0	X	271.14302	286.33688	40.08186	4.73311	0.0842505	0.08359091	5.8040006	20	5 6.1	20.9
382249 2012 TO ₆	15.8	X	127.56059	45.21398	75.07320	4.75996	0.0479481	0.21029665	2.8005789	20	6 3.1	19.6
382250 2012 TL ₁₆	15.5	X	46.88955	268.46035	192.11554	8.61898	0.0604914	0.17234794	3.1979033	20	1 28.4	19.9
382251 2012 TJ ₂₅	13.7	X	231.35324	180.03396	183.97459	12.74567	0.1250681	0.08176571	5.2572092	20	5 5.6	21.1
382252 2012 TE ₂₆	15.8	X	153.69234	240.08159	76.57137	6.59589	0.0863919	0.16770034	3.2567175	20	—	—
382253 2012 TK ₂₆	13.7	X	254.64281	286.91291	64.74391	23.69295	0.0933323	0.08045942	5.3139581	20	5 17.8	20.9
382254 2012 TV ₂₆	15.6	X	287.29162	236.20614	54.04654	6.83789	0.0197328	0.20333810	2.8641134	20	4 17.7	19.5
382255 2012 TC ₃₅	13.5	X	285.98401	330.53048	341.40836	14.01003	0.0920129	0.08366431	5.1773704	20	4 30.1	20.5
382256 2012 TU ₅₃	16.6	X	275.95026	319.38956	8.62417	1.22825	0.0259184	0.21153013	2.7896811	20	5 19.0	20.4
382257 2012 TH ₅₉	15.9	X	70.53988	45.14168	340.19540	8.38685	0.0988198	0.15662270	3.4085231	20	—	—
382258 2012 TH ₆₇	15.5	X	282.04793	328.60162	251.18109	5.34379	0.0512990	0.16808055	3.2518043	20	1 13.1	20.1
382259 2012 TR ₇₉	14.1	X	280.66953	14.84312	315.99772	6.42376	0.0738943	0.08220620	5.2384124	20	5 22.0	21.0
382260 2012 TP ₉₁	15.9	X	355.55252	310.66502	70.54215	3.93949	0.0727406	0.13099845	3.8396528	20	11 2.6	20.9
382261 2012 TQ ₉₄	15.5	X	36.19545	210.20717	291.49185	10.65558	0.0298345	0.18098555	3.0953288	20	2 27.8	19.9
382262 2012 TC ₁₁₄	15.2	X	294.85353	344.84504	236.93830	9.99045	0.1685508	0.18073283	3.0982135	20	1 11.7	19.9
382263 2012 TM ₁₁₉	15.8	X	158.99873	358.14345	348.59632	8.84852	0.0764136	0.17510389	3.1642602	20	2 1.9	20.6
382264 2012 TO ₁₂₄	14.4	X	254.35169	63.96555	298.88477	2.52505	0.0610704	0.08342524	5.1872565	20	5 31.7	21.3
382265 2012 TF ₁₃₃	13.6	X	229.30079	188.89408	177.98888	20.02164	0.0959911	0.08220165	5.2386056	20	5 9.7	21.0
382266 2012 TX ₁₃₄	16.3	X	106.84429	165.39854	34.42786	15.03248	0.1244395	0.23600865	2.5932881	20	9 8.9	20.4
382267 2012 TT ₁₃₅	16.6	X	327.72981	156.06536	127.37446	5.20016	0.0318774	0.21563381	2.7541321	20	5 31.2	20.1
382268 2012 TN ₁₄₇	16.0	X	1.83959	21.73086	260.67378	9.83115	0.0792171	0.22908360	2.6452905	20	7 18.6	19.2
382269 2012 TC ₁₆₀	17.2	X	162.89682	17.56322	125.84657	3.22694	0.1415383	0.22714832	2.6602944	20	8 16.9	21.5
382270 2012 TA ₁₇₄	16.0	X	307.31138	214.96409	357.91152	9.90502	0.0555608	0.18066464	3.0989931	20	2 5.3	20.4
382271 2012 TM ₁₈₀	16.2	X	311.47109	309.35108	265.91190	6.94606	0.1709779	0.18433851	3.0576797	20	1 23.1	20.3
382272 2012 TT ₁₈₁	16.4	X	279.57899	357.65280	223.01554	9.76453	0.1550711	0.17526527	3.1623174	20	—	—
382273 2012 TQ ₁₉₇	15.2	X	168.83955	65.38254	258.71991	15.21801	0.2021066	0.17252938	3.1956608	20	1 18.5	20.7
382274 2012 TE ₂₀₂	16.3	X	45.65201	62.71697	44.97491	3.42943	0.0918325	0.17566567	3.1575104	20	2 9.7	20.4
382275 2012 TS ₂₀₄	16.1	X	9.75940	327.53005	166.87551	9.94830	0.0668307	0.17309941	3.1886412	20	1 19.1	20.4
382276 2012 TO ₂₁₁	16.4	X	33.64611	311.84998	282.32106	3.84819	0.1085186	0.21913257	2.7247799	20	7 6.9	19.6
382277 2012 TK ₂₁₈	16.4	X	211.38328	44.61767	221.77720	0.40355	0.1287563	0.17064266	3.2191729	20	—	—
382278 2012 TL ₂₂₁	15.8	X	46.02784	103.16670	15.95457	11.71536	0.0411711	0.18201892	3.0836023	20	2 22.9	20.1
382279 2012 TY ₂₂₅	15.7	X	51.71595	84.09912	32.35435	11.21594	0.0434489	0.18009465	3.1055284	20	2 28.2	20.0
382280 2012 TW ₂₅₅	16.6	X	18.17477	100.74075	157.27134	6.25664	0.0254776	0.22648190	2.6655104	20	7 7.6	20.1
382281 2012 TC ₂₇₇	15.5	X	244.96270	22.55953	231.35801	9.75069	0.1673282	0.17604533	3.1529690	20	1 2.5	20.7
382282 2012 TL ₂₉₁	16.0	X	111.54333	239.01864	185.45205	8.00017	0.0852426	0.19569569	2.9382035	20	3 8.9	20.2
382283 2012 TJ ₂₉₇	16.8	X	211.99572	289.58387	338.18226	6.30868	0.1005571	0.28893616	2.2660428	20	—	—
382284 2012 TN ₂₉₈	16.4	X	4.70104	351.84793	182.24723	3.20187	0.0537897	0.18203424	3.0834293	20	2 29.8	20.5
382285 2012 TU ₃₀₅	16.6	X	277.14398	84.04548	231.40371	6.13911	0.1153826	0.21085150	2.7956637	20	4 20.1	20.6
382286 2012 TE ₃₁₇	14.8	X	161.57226	201.10542	129.06263	13.84139	0.1443253	0.17053766	3.2204942	20	1 19.3	20.0
382287 2012 TD ₃₂₂	15.9	X	310.53356	105.94550	309.37622	12.17549	0.1363198	0.24519006	2.5281382	20	10 26.9	18.9
382288 2012 TN ₃₂₂	15.3	X	160.64892	51.07970	293.67582	15.45925	0.1209535	0.17175026	3.2053179	20	1 31.3	20.4
382289 2012 TO ₃	16.6	X	48.26424	55.19321	86.91419	5.65341	0.0438079	0.18785086	3.0194459	20	3 23.5	20.6
382290 2012 UJ ₃₆	15.8	X	131.84210	190.87674	219.57358	7.14009	0.0914848	0.17736615	3.1372964	20	3 16.1	20.5
382291 2012 UQ ₆₁	13.6	X	284.66674	261.09374	63.79341	27.25087	0.0772005	0.08117187	5.2828185	20	5 21.7	20.4
382292 2012 UO ₁₀₄	14.9	X	248.18663	356.67798	261.57637	16.88443	0.1910841	0.17692624	3.1424947	20	1 7.6	20.2
382293 2012 UB ₁₁₁	16.0	X	281.40035	192.81571	75.05406	5.91132	0.0363426	0.18319018	3.0704445	20	3 13.8	20.3
382294 2012 UN ₁₆₀	15.9	X	311.66623	207.56380	17.90176	8.76456	0.0935243	0.18233741	3.0800105	20	2 20.9	20.2
382295 2012 UW ₁₆₈	15.8	X	167.45459	273.89031	83.53947	11.00126	0.0310055	0.18202982	3.0834792	20	2 21.4	20.4
382296 2012 VD ₃₉	15.7	X	345.66889	50.12239	274.86849	13.02393	0.0889984	0.22773928	2.6556903	20	8 17.5	19.1
382297 2012 VO ₄₃	15.0	X	316.38057	327.32109	226.91141	25.46199	0.0667179	0.17325930	3.1866792	20	1 14.3	19.9
382298 2012 VS ₄₇	15.3	X	217.90119	239.39653	41.63403	16.66866	0.1881917	0.17617299	3.1514457	20	1 13.2	20.8
382299 2012 VJ ₆₅	16.0	X	231.82012	269.59959	16.14120	2.45183	0.0766122	0.17853171	3.1236268	20	2 2.6	20.6
382300 2012 VP ₇₇	16.4	X	239.68309	345.28465	143.77501	6.54499	0.1258991	0.23958832	2.5673926	20	10 24.8	19.9
382301 2012 VH ₉₇	15.3	X	122.43434	89.96092	326.30756	20.95449	0.1170636	0.17757051	3.1348889	20	3 10.6	20.2
382302 2012 VZ ₁₁₂	16.0	X	193.61704	102.57664	262.84764	10.66499	0.1232609	0.18373340	3.0643895	20	3 22.2	21.0
382303 2013 BO ₁	12.8	X	9.87396	220.45129	114.22073	16.39323	0.0198031	0.08356226	5.1815848	20	9 23.1	19.7
382304 2013 OQ ₅	16.6	X	198.86463	32.12717	299.17145	12.59303	0.1850844	0.22909004	2.6452410	20	2 14.2	21.1
382305 2013 PV	16.0	X	156.98216	39.82518	228.73813	7.92537	0.0350250	0.18502286	3.0501354	20	—	—
382306 2013 PL ₁₀	16.6	X	94.35058	128.86464	200.83252	9.43980	0.1433052	0.18489616	3.0515287	20	—	—
382307 2013 PS ₁₀	16.5	X	69.53245	80.37218	260.24744	4.00390	0.1319013	0.17810722	3.1285880	20	—	—
382308 2013 PD ₁₂	16.0	X	121.92927	125.33472	272.82653	7.60222	0.1362005	0.20858027	2.8159217	20	2 20.5	20.3
382309 2013 PA ₃₄	15.3	X	41.93879	154.53457	193.78742	16.00367	0.2013894	0.16671009	3.2696013	20	12 18.5	20.1
382310 2013 PG ₄₉	15.5	X	281.81778	210.43451	289.20488	8.82248	0.0515065	0.18265957	3.0763879	20	12 31.2	19.7
382311 2013 QZ ₇₆	15.8	X	301.56240	177.10308	296.72608	8.35063	0.0608562	0.17700742	3.1415337	20	12 20.5	19.9
382312 2013 RX ₃₂	17.0	X	271.01662	329.65111	19.29483	6.67086	0.2464021	0.25773988	2.4453910	20	5 6.5	20.6
382313 2013 RS ₆₀	16.4	X	254.44596	74.87629	204.61237	13.73399	0.1352295	0.22630590	2.6668922	20	2 3.5	20.7

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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>
382321 2013 TR ₂	16.1	X	131.64006	137.09403	286.23119	4.37857	0.0742271	0.21407862	2.7674971	20	3 26.8	20.1
382322 2013 TT ₂	15.4	X	352.28942	211.29317	248.98588	9.87077	0.0897002	0.17068212	3.2186767	20	—	—
382323 2013 TW ₃	16.3	X	146.51919	257.93859	206.50183	21.53549	0.1563876	0.23311253	2.6147227	20	6 11.5	20.8
382324 2013 TM ₇	16.3	X	141.45973	273.75942	100.70052	8.73818	0.1062583	0.19756053	2.9196845	20	2 16.4	20.7
382325 2013 TH ₉	15.6	X	100.07105	57.22926	304.84421	9.57665	0.0891157	0.17925848	3.1151783	20	—	—
382326 2013 TA ₁₂	16.2	X	181.68911	356.98148	336.09863	9.05926	0.1504389	0.21290788	2.7776332	20	2 6.9	20.7
382327 2013 TH ₂₈	16.7	X	174.17241	338.91449	31.18283	5.91764	0.1052488	0.21320370	2.7750633	20	3 13.9	20.9
382328 2013 TQ ₂₈	15.6	X	67.77884	193.25678	211.38671	15.37707	0.0746098	0.17983880	3.1084732	20	—	—
382329 2013 TX ₂₉	16.1	X	153.31172	358.91089	37.64707	14.54017	0.1783301	0.21220507	2.7837627	20	4 1.6	20.7
382330 2013 TY ₂₉	16.6	X	161.86429	194.70418	198.95214	4.19251	0.0860019	0.21422046	2.7662754	20	3 26.4	20.7
382331 2013 TF ₃₀	17.2	X	261.69095	142.98225	189.16164	4.66188	0.1103064	0.23412305	2.6071935	20	4 24.3	20.8
382332 2013 TP ₃₀	17.1	X	194.28388	225.32592	149.25390	3.16807	0.1330683	0.22219276	2.6997038	20	4 6.9	21.4
382333 2013 TT ₃₀	15.7	X	174.60375	73.37933	208.68037	15.95042	0.1079013	0.17657475	3.1466636	20	—	—
382334 2013 TZ ₃₁	17.5	X	278.97375	39.99661	6.26289	1.36949	0.1722105	0.27094880	2.3652546	20	8 22.5	19.9
382335 2013 TT ₃₂	16.3	X	224.70328	293.49252	19.40793	6.21543	0.0892501	0.21431591	2.7654540	20	2 24.5	20.5
382336 2013 TV ₃₂	17.8	X	288.11454	275.73110	93.65877	0.23412	0.1859690	0.26256955	2.4153114	20	7 9.3	20.6
382337 2013 TC ₃₃	16.7	X	229.39031	131.03921	198.87152	4.94554	0.1708895	0.22556853	2.6727100	20	3 12.3	20.9
382338 2013 TA ₃₉	17.2	X	116.55397	172.19042	215.15915	1.11806	0.1208210	0.19681848	2.9270185	20	2 3.7	21.3
382339 2013 TV ₅₀	16.8	X	198.30079	341.79111	34.89703	4.38401	0.1756801	0.22843357	2.6503065	20	4 11.9	21.0
382340 2013 TB ₅₁	17.0	X	199.77483	181.83304	170.38640	3.39034	0.0942495	0.21767827	2.7369026	20	3 15.3	21.1
382341 2013 TZ ₅₂	17.1	X	131.35343	345.58462	279.04229	5.32940	0.0507762	0.30166802	2.2018270	20	12 30.4	19.8
382342 2013 TH ₅₃	16.3	X	285.29987	289.89091	286.86388	4.88193	0.0296202	0.19477394	2.9474661	20	1 12.6	20.2
382343 2013 TT ₅₃	16.7	X	194.56418	31.07725	339.51346	5.35228	0.0056042	0.22104326	2.7090553	20	3 30.8	20.5
382344 2013 TW ₅₅	15.8	X	352.60987	101.34568	358.36239	11.75547	0.0969265	0.17183383	3.2042786	20	—	—
382345 2013 TH ₆₂	15.9	X	94.19546	101.02885	3.02184	9.90418	0.0925625	0.21410705	2.7672522	20	4 5.4	19.6
382346 2013 TJ ₆₅	16.7	X	247.26617	309.43000	349.96947	4.31815	0.2153812	0.22779309	2.6552720	20	2 19.4	21.1
382347 2013 TN ₇₁	15.9	X	37.30886	212.33698	117.02032	8.47589	0.0844070	0.18028488	3.1033434	20	—	—
382348 2013 TC ₇₃	18.1	X	348.07217	310.79361	56.78391	3.75030	0.2706089	0.28694177	2.2765308	20	11 28.4	19.7
382349 2013 TM ₇₃	16.1	X	131.79187	227.83040	231.07815	12.73811	0.1274489	0.22434347	2.6824219	20	5 19.3	20.2
382350 2013 TM ₇₅	16.4	X	342.47484	37.15714	206.51959	15.68769	0.2396212	0.23767920	2.5811224	20	4 1.7	18.6
382351 2013 TS ₇₅	15.8	X	57.56030	158.16771	261.93321	11.30107	0.1850191	0.18070237	3.0985617	20	1 4.9	19.3
382352 2013 TF ₇₆	16.5	X	138.27415	148.14053	221.24199	5.28850	0.1043798	0.19498679	2.9453207	20	2 2.9	20.9
382353 2013 TQ ₇₆	17.4	X	250.44463	156.87359	289.06026	2.64336	0.1559868	0.27016844	2.3698070	20	9 6.6	20.5
382354 2013 TT ₇₈	16.6	X	214.27649	347.83745	43.65313	8.13139	0.3319824	0.23452284	2.6042297	20	5 7.1	21.4
382355 2013 TJ ₈₄	15.8	X	77.43492	153.03077	218.11627	15.63522	0.0433162	0.17433392	3.1735702	20	—	—
382356 2013 TO ₈₄	16.6	X	217.18742	106.43907	234.04077	5.32726	0.0454353	0.22036573	2.7146052	20	3 18.3	20.6
382357 2013 TP ₈₉	16.6	X	102.97120	195.48438	252.23119	3.16213	0.0310173	0.21385439	2.7694314	20	3 17.4	20.4
382358 2013 TZ ₈₉	15.9	X	49.55219	63.07585	2.71081	4.69810	0.1439469	0.17975770	3.1094080	20	—	—
382359 2013 TO ₉₃	16.7	X	152.52859	257.43555	135.70509	1.07242	0.0801896	0.21201547	2.7854221	20	3 16.2	20.7
382360 2013 TP ₉₃	17.9	X	12.45733	328.71215	50.99640	2.88312	0.2215055	0.29999863	2.2099878	20	—	—
382361 2013 TR ₉₄	17.6	X	292.91088	180.61578	180.17525	1.89607	0.2070511	0.26062061	2.4273377	20	6 30.2	20.0
382362 2013 TS ₉₄	16.1	X	157.74730	113.83147	208.99328	9.83205	0.0675711	0.18593123	3.0401930	20	—	—
382363 2013 TT ₉₄	18.2	X	65.98111	152.31632	164.10163	1.17997	0.2364130	0.30314570	2.1946660	20	—	—
382364 2013 TQ ₉₄	16.2	X	87.85484	356.53171	48.25110	9.69544	0.0256265	0.18697925	3.0288222	20	1 10.8	20.5
382365 2013 TD ₉₈	16.6	X	178.26713	281.75107	74.21356	3.10691	0.0136661	0.20809222	2.8203228	20	2 25.6	20.5
382366 2013 TP ₉₈	16.9	X	279.69557	232.41744	97.15266	3.25249	0.1209751	0.24268974	2.5454727	20	5 12.0	20.1
382367 2013 TT ₉₈	17.3	X	60.37176	155.04257	171.01782	5.04216	0.1283889	0.30122844	2.2039686	20	—	—
382368 2013 TX ₉₈	16.6	X	153.23153	289.78056	96.29003	3.89540	0.1074870	0.21003562	2.8028987	20	3 12.2	20.8
382369 2013 TZ ₉₈	17.5	X	319.83202	238.55809	71.09604	5.58516	0.1891327	0.25571796	2.4582642	20	6 4.6	19.7
382370 2013 TF ₉₉	16.7	X	319.45207	345.74297	296.93315	6.05216	0.1983428	0.24288184	2.5441303	20	4 19.2	19.7
382371 2013 TU ₁₀₁	16.4	X	112.78060	92.95639	13.31954	8.85778	0.1212998	0.21638088	2.7478317	20	5 4.4	20.4
382372 2013 TO ₁₀₂	16.9	X	182.11875	333.20308	24.78835	6.57709	0.0722191	0.21377284	2.7701356	20	3 6.3	21.0
382373 2013 TY ₁₀₃	16.8	X	223.64995	54.04445	254.58774	2.35997	0.1837125	0.21730556	2.7400311	20	2 11.4	21.3
382374 2013 TV ₁₀₇	17.3	X	52.12830	216.29430	44.18731	6.64021	0.0892629	0.26993743	2.3711588	20	9 17.6	20.2
382375 2013 TB ₁₀₈	17.8	X	220.12104	319.92998	129.56239	2.27219	0.1426205	0.25913278	2.4366201	20	8 7.1	21.4
382376 2013 TO ₁₀₉	16.8	X	246.08221	100.24477	229.84277	12.18216	0.1639474	0.23079016	2.6322342	20	3 25.7	21.1
382377 2013 TB ₁₁₀	16.5	X	193.05548	77.16162	289.09765	3.74967	0.1281444	0.22019611	2.7159991	20	3 23.5	20.8
382378 2013 TW ₁₁₃	16.2	X	133.61714	28.76756	29.92589	12.07855	0.0823428	0.20949387	2.8077289	20	3 29.9	20.3
382379 2013 TA ₁₁₅	16.7	X	267.06490	294.80883	33.41722	18.86960	0.2795673	0.24128741	2.5553258	20	4 8.4	20.8
382380 2013 TE ₁₂₀	16.8	X	179.58340	345.47206	24.99879	12.82474	0.1901824	0.22348776	2.6892647	20	3 22.8	21.3
382381 2013 TU ₁₂₁	18.5	X	56.74017	288.34596	32.97913	0.65214	0.2016181	0.29794830	2.2201149	20	12 30.7	21.6
382382 2013 TO ₁₂₂	16.9	X	249.03389	109.43659	221.16852	5.25400	0.0579162	0.22400901	2.6850913	20	4 12.5	20.5
382383 2013 TE ₁₂₂	15.9	X	75.68527	182.22822	220.74323	10.80027	0.0592454	0.17863884	3.1223778	20	—	—
382384 2013 TF ₁₂₂	16.2	X	110.79311	271.53262	61.69166	2.91871	0.0867844	0.16793727	3.2536537	20	—	—
382385 2013 TR ₁₂₂	16.4	X	174.16013	140.47208	212.51984	20.67367	0.1775150	0.21066215	2.7973386	20	2 17.7	21.4
382386 2013 TX ₁₂₄	17.1	X	357.61972	334.59713	303.02757	1.52736	0.1986125	0.25952442	2.4341681	20	7 13.4	18.7
382387 2013 TY ₁₂₆	15.6	X	344.31101	58.47951	52.64118	7.41872	0.0801934	0.17100161	3.2146664	20	—	—
382388 2013 TP ₁₂₇	17.4	X	153.14911	247.55928	200.13138	22.86917	0.4289240	0.21981565	2.7191322	20	6 6.7	23.1
382389 2013 TL ₁₂₉	15.3	X	141.15427	206.75438	83.25887	6.38851	0.1543749	0.17223614	3.1992870	20	—	—
382390 2013 TC ₁₃₀	17.1	X	324.36452	274.89343	44.34572	6.38463	0.2319602	0.26429302	2.4047998	20	6 24.2	18.9
382391 2013 TS ₁₃₆	17.9	X	55.34026	117.14077	213.92913	1.95839	0.1880146	0.30498428	2.1858368	20	—	—
382392 2013 TT ₁₄₄	16.1	X	79.32053	179.41476	205.39356	0.57268	0.1723330	0.17990188	3.1077465	20	—	—
382393 2013 VX ₁₁	17.4	X	150.39021	32.49187	23.03800	21.11546	0.0863362	0.36578806	1.9363463	20	4 4.2	19.4
382394 3549 P-L	16.2	X	263.88202	142.69989	220.17564							

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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>
382401 1994 UK ₃	17.8	X	288.76950	0.36487	45.62419	2.07586	0.1805343	0.26315686	2.4117165	20	9 6.8	20.2
382402 1995 PR	16.6	X	64.11743	304.14913	35.59300	7.76467	0.1612519	0.28622896	2.2803088	20	—	—
382403 1995 SN ₄₃	18.5	X	268.91409	352.69154	100.45354	2.34779	0.1462724	0.27715059	2.3298368	20	10 21.3	20.8
382404 1995 SK ₇₂	16.3	X	66.54093	146.60680	288.41526	13.70490	0.2685731	0.17493734	3.1662682	20	2 16.9	20.3
382405 1995 WQ ₂₄	17.3	X	354.10202	307.05110	341.74098	4.04665	0.1055224	0.22785693	2.6547760	20	7 18.2	20.2
382406 1996 AJ ₁	20.5	X	149.64830	238.26268	90.97886	2.53610	0.7814559	0.65754536	1.3097414	20	1 21.0	20.8
382407 1996 TE ₅	15.7	X	121.72469	352.67745	16.28549	23.87397	0.1657456	0.18082843	3.0971215	20	2 6.4	20.8
382408 1996 TJ ₄₅	16.9	X	202.38355	321.19573	111.53838	4.78057	0.1773552	0.23585620	2.5944054	20	6 24.2	21.0
382409 1996 TJ ₄₆	16.7	X	131.48909	53.39226	323.00549	7.74061	0.2656020	0.18375432	3.0641570	20	2 22.6	21.6
382410 1996 VF ₁₈	16.9	X	136.06753	297.98345	83.52258	2.35599	0.1993014	0.18166092	3.0876523	20	2 28.6	21.8
382411 1997 EP ₈	15.7	X	70.79242	1.34239	151.49448	10.57613	0.0799514	0.17924213	3.1153678	20	5 12.2	20.1
382412 1997 SZ ₃	16.8	X	275.61746	169.02617	227.18037	4.80920	0.2903954	0.25247716	2.4792557	20	7 9.8	20.2
382413 1997 WT ₁₂	17.6	X	291.06099	9.84494	33.24342	1.74295	0.1849651	0.25366918	2.4714827	20	9 3.9	20.0
382414 1998 BC ₃₉	15.9	X	0.41419	277.77564	304.57165	7.79515	0.0743414	0.18781253	3.0198568	20	4 21.1	19.8
382415 1998 FJ ₁₂₄	16.9	X	95.84013	82.37813	108.88073	6.49608	0.2356381	0.23471854	2.6027820	20	8 22.0	21.0
382416 1998 KU ₁₁	16.4	X	109.12740	109.15229	108.30502	12.40394	0.0628910	0.23548671	2.5971186	20	9 26.9	20.3
382417 1998 OF ₉	17.1	X	60.23490	63.15464	238.83528	1.34121	0.2326511	0.27728897	2.3290617	20	12 7.9	20.3
382418 1998 QN	16.6	X	11.90424	45.09357	314.85278	12.19211	0.3137073	0.27518077	2.3409420	20	—	—
382419 1998 RQ ₉	18.0	X	50.38032	189.63947	158.32799	4.42247	0.1097549	0.27902782	2.3193754	20	—	—
382420 1998 RC ₁₃	18.2	X	340.87376	212.32344	172.46756	0.90543	0.2019869	0.27175431	2.3605784	20	12 3.8	20.1
382421 1998 SJ ₃₃	18.1	X	313.62653	20.23400	24.21705	1.75540	0.1890989	0.26895905	2.3769056	20	10 28.9	19.5
382422 1998 TZ ₃	17.9	X	353.40265	33.22673	3.31917	1.06409	0.1904930	0.27493713	2.3423248	20	—	—
382423 1998 TM ₂₇	18.2	X	320.51182	31.86073	21.46875	2.62010	0.1864305	0.27224164	2.3577605	20	11 30.5	19.8
382424 1998 VS ₃	17.7	X	306.13611	349.99620	53.31657	2.23437	0.1812357	0.26687245	2.3892791	20	10 9.9	19.4
382425 1998 YQ ₂₁	17.4	X	279.33468	316.79124	114.19567	5.51379	0.1957762	0.26210325	2.4181753	20	9 26.6	19.9
382426 1999 AO ₁₄	17.7	X	166.58435	65.82275	110.34872	4.87835	0.1066603	0.25807732	2.4432589	20	10 7.6	21.4
382427 1999 CF ₃	17.1	X	84.34872	5.76366	120.43512	16.64845	0.1464559	0.19572264	2.9379338	20	5 8.8	21.5
382428 1999 CR ₁₁	16.0	X	93.87315	177.09676	312.65735	19.27653	0.1973684	0.19548985	2.9402656	20	5 21.8	20.7
382429 1999 FD ₇₃	17.8	X	192.14628	10.75177	154.04034	2.83577	0.1431795	0.25582641	2.4575694	20	10 15.4	21.5
382430 1999 RG ₄₁	16.7	X	336.64664	308.16534	8.91509	24.69912	0.2648137	0.27961404	2.3161325	20	8 17.0	18.7
382431 1999 RO ₁₀₂	16.4	X	210.73846	155.05341	221.37258	7.70353	0.3242406	0.22056157	2.7129980	20	4 17.1	21.5
382432 1999 RY ₁₈₇	16.8	X	186.35621	44.13674	340.15922	3.06774	0.2738120	0.21754317	2.7380355	20	4 10.4	21.8
382433 1999 TZ ₅₁	17.1	X	272.03619	104.46971	240.65536	3.87800	0.0642606	0.22256908	2.6966598	20	5 31.2	20.5
382434 1999 TD ₇₂	17.4	X	189.73330	252.74675	200.02092	2.85398	0.0662045	0.22357147	2.6885934	20	7 11.1	21.2
382435 1999 TW ₁₂₅	17.7	X	61.67753	45.44617	279.28424	3.50435	0.2410889	0.29058348	2.2574706	20	—	—
382436 1999 TA ₁₈₈	16.8	X	247.25025	70.24417	290.82500	6.95165	0.3051207	0.22255173	2.6967999	20	4 23.3	21.5
382437 1999 TF ₂₁₂	16.2	X	250.09586	312.98993	18.05518	15.31066	0.1670014	0.21900963	2.7257995	20	4 4.5	20.3
382438 1999 TK ₂₇₁	17.1	X	52.38913	351.84405	347.57978	4.80424	0.3142703	0.29034691	2.2586967	20	—	—
382439 1999 TA ₃₁₆	17.2	X	177.19844	15.24980	73.97087	4.63527	0.1564706	0.21899378	2.7259311	20	6 21.9	21.5
382440 1999 VV ₁₄	16.6	X	275.62191	84.11526	348.92181	6.65258	0.0780023	0.23595833	2.5936568	20	10 2.1	19.8
382441 1999 VF ₁₈₁	18.2	X	38.30941	188.73086	208.43893	3.14806	0.1500152	0.29231094	2.2485679	20	—	—
382442 1999 VV ₂₁₄	16.3	X	239.70573	294.20215	76.49532	7.34995	0.0603432	0.21837304	2.7310943	20	5 24.8	20.1
382443 1999 XV ₁₁₂	16.3	X	193.91229	67.10287	327.27561	13.99528	0.3112455	0.21725916	2.7404212	20	4 21.8	21.6
382444 1999 YK ₂	17.0	X	172.46659	331.86643	99.91248	6.05522	0.1446857	0.21234134	2.7825716	20	5 27.4	21.5
382445 1999 YB ₁₄	18.0	X	319.08276	333.90515	122.26894	6.81887	0.1635647	0.28233803	2.3012111	20	—	—
382446 2000 BW ₂₇	16.4	X	233.63014	172.77465	325.08289	25.78451	0.1907952	0.27426107	2.3461725	20	10 5.8	20.3
382447 2000 DZ ₃₆	16.5	X	150.45121	133.62525	340.07176	9.04933	0.2384477	0.21097522	2.7945706	20	7 1.7	21.4
382448 2000 KU ₁	17.2	X	311.49911	58.47950	241.00264	14.75191	0.3144051	0.24341148	2.5404385	20	4 8.9	20.6
382449 2000 NH ₁	15.9	X	120.64715	104.18381	275.91427	9.31306	0.0901945	0.17517734	3.1633757	20	1 28.1	20.6
382450 2000 OT ₃₀	15.9	X	273.80983	98.36097	276.07401	10.16612	0.3386688	0.24094667	2.5577343	20	6 1.5	19.6
382451 2000 PJ ₂₇	16.0	X	240.26989	327.13763	324.22929	4.45875	0.1275998	0.17907069	3.1173558	20	2 13.4	20.8
382452 2000 QS ₉	16.6	X	260.09747	172.97937	171.58679	14.06736	0.1838607	0.23494835	2.6010844	20	5 1.9	20.6
382453 2000 QY ₁₅	16.5	X	270.95972	209.76585	141.04428	5.26915	0.2172623	0.23902359	2.5714349	20	5 16.4	20.2
382454 2000 QX ₆₇	16.2	X	252.93378	29.17992	358.57860	19.10054	0.1987761	0.23836102	2.5761979	20	6 12.6	20.4
382455 2000 QD ₆₈	17.0	X	261.84847	254.46659	115.88761	6.38500	0.2774067	0.23768985	2.5810453	20	5 24.4	21.0
382456 2000 QV ₈₄	16.3	X	256.47938	196.82293	175.89817	10.58521	0.3637351	0.23769997	2.5809720	20	5 14.6	20.8
382457 2000 QO ₁₂₂	16.9	X	239.18719	38.98929	317.24051	6.47303	0.3456730	0.23331133	2.6132372	20	4 8.5	21.8
382458 2000 RV ₇₄	17.3	X	266.76297	57.97293	322.04365	9.83258	0.3256967	0.23920525	2.5701329	20	6 2.3	21.4
382459 2000 ST ₂₀	19.3	X	210.84209	72.57155	343.32658	16.83775	0.3103961	0.38391521	1.8749046	20	6 1.4	22.8
382460 2000 SX ₄₇	16.6	X	271.66791	133.05435	207.96337	11.70574	0.2927514	0.23764433	2.5813749	20	4 23.8	20.4
382461 2000 SS ₆₆	16.7	X	289.90930	193.86476	151.27061	4.92604	0.2292308	0.23862959	2.5742646	20	5 30.6	20.1
382462 2000 SM ₈₉	16.9	X	253.69480	321.77880	52.96496	5.54504	0.2493175	0.23592059	2.5939334	20	5 23.3	20.8
382463 2000 SG ₉₀	16.5	X	266.04850	116.91180	231.22778	10.63107	0.2846838	0.23774146	2.5806717	20	4 27.1	20.6
382464 2000 SA ₉₅	17.1	X	281.02238	103.38217	248.81510	3.37116	0.2498789	0.23880076	2.5730343	20	5 23.9	20.5
382465 2000 SX ₁₉₉	17.7	X	109.37114	128.76789	222.93533	1.86804	0.1637089	0.31398256	2.1438729	20	—	—
382466 2000 SW ₂₂₃	16.9	X	254.95837	162.16652	201.16176	2.01250	0.2393069	0.23519490	2.5992664	20	5 11.7	20.7
382467 2000 SF ₂₇₉	16.9	X	221.54299	184.72949	228.19023	6.68965	0.3595247	0.23228313	2.6209431	20	6 5.9	21.8
382468 2000 SW ₃₀₂	16.9	X	277.67302	80.19291	273.27581	3.21711	0.2229131	0.23764826	2.5813464	20	5 25.2	20.4
382469 2000 TQ ₂₃	17.8	X	47.51430	106.76680	275.49278	3.92407	0.1488586	0.30822869	2.1704711	20	—	—
382470 2000 TO ₂₆	16.8	X	249.99676	337.41028	44.20194	6.30957	0.3026753	0.23610092	2.5926124	20	5 22.9	21.0
382471 2000 US ₁₉	16.4	X	256.98340	343.13409	43.22842	8.51733	0.2021431	0.23563589	2.5960223	20	6 16.1	20.3
382472 2000 UY ₂₉	16.8	X	237.47450	335.80103	29.53830	13.91154	0.2487803	0.23177275	2.6247894	20	4 26.3	21.2
382473 2000 UN ₅₂	16.5	X	232.38072	327.84735	46.94757	13.56070	0.2199702	0.23073992	2.6326163	20	5 6.7	20.8
382474 2000 VF ₅₈	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>
382481 2000 YT ₄	16.6 ^m	X	228.61236	123.46533	249.80925	12.28553	0.2235735	0.22969900	2.6405637	20	4 29.5	21.2
382482 2001 AF ₆	16.5	X	120.69892	35.88013	104.30113	12.81894	0.1284650	0.22386065	2.6862775	20	6 29.8	20.6
382483 2001 AK ₁₇	16.4	X	199.20850	310.94532	114.46790	29.23091	0.2130913	0.22663078	2.6643429	20	6 15.7	21.2
382484 2001 AO ₂₅	16.4	X	122.34536	86.46340	88.28543	28.26878	0.3654122	0.22552880	2.6730149	20	9 8.9	22.0
382485 2001 BL ₃	17.8	X	168.08026	21.28101	90.80136	23.77545	0.0582909	0.37881314	1.8917019	20	7 21.9	20.0
382486 2001 CX ₁₉	16.0	X	121.20496	277.00415	323.49278	26.54178	0.3814045	0.22943427	2.6425945	20	11 1.1	21.7
382487 2001 DQ ₅₈	17.5	X	58.73611	275.74839	314.65078	18.36907	0.0599444	0.37633895	1.8999840	20	8 16.0	19.2
382488 2001 DE ₇₉	16.2	X	133.46607	235.23864	301.52353	13.00160	0.2941597	0.22500431	2.6771672	20	8 30.9	21.2
382489 2001 FW ₁₀₈	16.6	X	36.14967	237.34766	350.97771	7.41288	0.1477671	0.21525522	2.7574031	20	7 9.7	19.9
382490 2001 GU ₈	17.0	X	257.76722	84.12201	104.96263	6.21013	0.2147068	0.29408879	2.2394966	20	—	—
382491 2001 NW ₁₇	17.0	X	277.80270	199.31782	109.17546	24.62192	0.0700683	0.35435260	1.9777845	20	4 25.8	19.9
382492 2001 OQ ₁₆	17.0	X	359.53990	252.33519	78.23156	15.45033	0.3622862	0.26201344	2.4187278	20	11 18.7	19.1
382493 2001 PF ₁₀	17.4	X	7.75264	63.02148	280.00647	1.09896	0.2275707	0.26566109	2.3965367	20	11 24.6	19.8
382494 2001 QV ₄₅	17.4	X	321.35130	14.89582	251.16360	18.63794	0.0417638	0.35330440	1.9816944	20	4 11.9	19.7
382495 2001 QH ₁	16.4	X	296.26755	247.96533	152.01791	22.17349	0.2972959	0.25854176	2.4403320	20	8 19.3	18.3
382496 2001 QX ₁₁₀	17.4	X	318.12287	153.76894	212.83067	8.06188	0.1125339	0.25943377	2.4347351	20	9 6.3	20.1
382497 2001 QT ₁₂₉	16.9	X	327.83246	107.46330	259.60878	6.01464	0.1777686	0.26141673	2.4224071	20	9 25.5	19.1
382498 2001 QM ₁₅₀	17.3	X	14.72432	207.38929	132.65517	3.29903	0.2094781	0.26480736	2.4016848	20	11 29.2	19.9
382499 2001 QV ₁₇₅	17.9	X	29.19667	130.61684	165.54618	1.80849	0.1850473	0.26366455	2.4086196	20	10 16.3	20.6
382500 2001 QV ₂₁₄	17.7	X	343.66602	200.08920	154.53379	1.35727	0.2085561	0.26140417	2.4224847	20	10 20.2	19.3
382501 2001 QW ₂₈₀	16.7	X	305.48124	1.86950	23.29840	7.82619	0.2375783	0.25886161	2.4383214	20	9 1.7	18.7
382502 2001 RR ₅	16.1	X	118.59308	178.71814	203.58672	5.02687	0.2544276	0.17860096	3.1228193	20	2 16.6	21.0
382503 2001 RE ₈	18.9	X	351.12048	4.71165	263.80957	14.04137	0.2331769	0.51745414	1.5365787	20	7 2.4	16.6
382504 2001 RP ₁₉	17.7	X	24.43179	308.08555	9.34605	1.69923	0.2717750	0.26510182	2.3999061	20	11 21.3	20.5
382505 2001 RF ₅₆	16.1	X	130.28884	252.38090	115.64673	4.55270	0.2152076	0.17964432	3.1107162	20	2 9.0	21.0
382506 2001 RU ₁₂₇	17.4	X	301.74050	234.21998	123.73235	3.14710	0.1954990	0.25516589	2.4618087	20	7 13.7	19.7
382507 2001 SN ₁	17.2	X	334.99479	128.83379	230.41333	1.09325	0.1993570	0.25937323	2.4351139	20	10 3.5	18.9
382508 2001 SX ₇	16.5	X	87.52930	65.70700	356.69858	3.58144	0.0982913	0.17738675	3.1370535	20	2 11.8	20.6
382509 2001 SC ₁₄	17.7	X	343.20921	318.33704	39.15261	1.26536	0.2245133	0.26115864	2.4240028	20	10 25.1	19.4
382510 2001 SK ₁₈	16.8	X	297.85078	215.37158	170.62942	6.47983	0.1489310	0.25698256	2.4501930	20	8 26.0	19.3
382511 2001 SV ₂₄	17.2	X	350.54482	134.86912	200.66145	5.70499	0.2411357	0.25986214	2.4320586	20	10 8.3	18.6
382512 2001 SL ₃₀	17.6	X	283.29897	340.19900	43.07970	1.82361	0.1951289	0.25370623	2.4712421	20	7 20.3	20.3
382513 2001 SR ₈₉	16.3	X	69.41771	119.53803	306.63001	4.00843	0.1487014	0.17704531	3.1410855	20	1 28.7	20.3
382514 2001 ST ₁₀₂	15.7	X	83.82313	227.30738	191.44809	14.58208	0.2771710	0.17564053	3.1578117	20	2 24.8	20.1
382515 2001 SQ ₁₀₃	17.7	X	281.36600	90.14039	315.13037	1.04992	0.2170874	0.25602704	2.4562854	20	8 14.5	20.4
382516 2001 SE ₁₂₃	17.1	X	337.05380	46.68235	289.01721	3.69088	0.1954852	0.25902188	2.4373155	20	8 27.8	19.0
382517 2001 SY ₁₂₇	17.6	X	327.22505	351.50361	334.28496	2.12711	0.2032368	0.25567150	2.4585620	20	7 16.9	19.5
382518 2001 SJ ₁₅₆	17.2	X	288.59863	184.94607	220.58146	6.75906	0.1975209	0.25743549	2.4473182	20	8 28.2	20.0
382519 2001 SO ₁₇₂	17.2	X	299.47824	24.99731	355.87173	1.18905	0.1953789	0.25602711	2.4562849	20	8 14.9	19.5
382520 2001 SS ₁₇₃	17.2	X	359.42674	218.21457	122.41533	4.05099	0.2101180	0.26062640	2.4273018	20	11 3.4	19.4
382521 2001 SB ₁₉₀	17.6	X	258.30216	73.07865	348.08675	1.68480	0.2036911	0.25559966	2.4590227	20	8 6.0	20.8
382522 2001 SS ₂₁₂	17.2	X	313.35019	292.22067	99.35084	3.43084	0.1926445	0.25957392	2.4338586	20	10 6.1	19.1
382523 2001 SZ ₂₂₇	17.7	X	300.11433	14.91609	20.90650	2.39167	0.1655618	0.25740891	2.4474867	20	9 14.2	19.9
382524 2001 SA ₂₃₀	17.4	X	291.43261	249.38969	169.98013	2.55294	0.1927147	0.25840397	2.4411673	20	9 29.1	19.4
382525 2001 SU ₂₄₇	17.2	X	283.42588	318.62066	84.86613	2.10707	0.1701591	0.25498394	2.4629797	20	8 24.6	19.8
382526 2001 SY ₂₆₄	17.5	X	276.37687	312.59567	321.08420	2.80366	0.2469481	0.25217639	2.4481266	20	7 4.1	20.6
382527 2001 SN ₂₆₉	17.9	X	313.76208	52.84610	321.34263	0.62697	0.1987125	0.25727464	2.4883381	20	9 4.2	19.8
382528 2001 SU ₃₀₃	17.6	X	315.24693	132.17598	264.67923	1.02318	0.2009002	0.26010448	2.4305478	20	10 16.2	19.4
382529 2001 SE ₃₁₃	18.8	X	259.01702	288.13066	113.10933	4.02189	0.3886107	0.25067746	2.4911078	20	6 16.9	22.9
382530 2001 SG ₃₃₂	17.6	X	271.60839	251.86887	165.07034	2.53290	0.2028879	0.25716446	2.4490374	20	8 18.3	20.6
382531 2001 TK ₄₇	17.0	X	286.60730	283.93939	106.08625	6.12510	0.2134496	0.25391361	2.4698964	20	8 1.9	19.6
382532 2001 TA ₅₃	17.5	X	317.31362	208.03203	173.94793	0.99815	0.1952150	0.25837135	2.4414049	20	9 27.0	19.4
382533 2001 TZ ₅₇	17.6	X	292.68746	46.26177	309.51394	0.90359	0.2472929	0.25244889	2.4794408	20	6 14.9	20.4
382534 2001 TM ₁₄₇	17.0	X	338.28615	203.59433	149.51089	5.47231	0.1763740	0.25834170	2.4415917	20	10 2.6	18.9
382535 2001 TM ₁₅₆	17.1	X	300.86203	170.07870	191.33017	2.52503	0.0950658	0.25314488	2.4748941	20	8 1.4	19.8
382536 2001 TR ₁₅₈	17.4	X	305.50830	227.41032	147.43895	1.84063	0.1966219	0.25667761	2.4521332	20	8 17.5	19.6
382537 2001 TF ₁₅₉	17.7	X	0.37540	140.18948	196.96211	1.80342	0.2256634	0.26079448	2.4262588	20	11 1.0	19.7
382538 2001 TP ₁₇₃	16.1	X	99.65654	6.54224	40.51916	5.35617	0.1813301	0.17615873	3.1516158	20	2 21.4	20.6
382539 2001 TM ₁₇₈	17.1	X	310.80593	123.39022	230.53090	5.00379	0.1524924	0.25406398	2.4689217	20	7 30.2	19.5
382540 2001 TS ₂₂₃	15.8	X	124.32846	136.47993	285.53265	4.85134	0.1256496	0.18113527	3.0936229	20	3 25.1	20.5
382541 2001 TG ₂₃₉	17.0	X	340.78080	271.34565	102.86500	7.12374	0.1477226	0.26169295	2.4207022	20	11 9.9	19.3
382542 2001 UJ ₂₈	17.3	X	300.62955	351.07605	51.19054	3.85887	0.1716796	0.25768503	2.4457380	20	9 25.9	19.5
382543 2001 UH ₄₁	17.1	X	311.64355	286.90922	72.53029	3.96064	0.1963520	0.25438265	2.4668593	20	8 7.4	19.3
382544 2001 UY ₇₉	17.3	X	270.54868	342.67953	85.53364	1.74760	0.1973826	0.25480160	2.4641546	20	9 3.9	20.1
382545 2001 UF ₁₀₆	17.8	X	291.00486	199.23103	194.55322	3.67823	0.1751699	0.25426899	2.4675945	20	8 20.1	20.3
382546 2001 UR ₁₂₆	16.3	X	85.81236	331.23144	50.87886	6.25403	0.1998439	0.17131780	3.2107099	20	1 6.8	20.5
382547 2001 UQ ₁₂₉	15.3	X	98.21269	349.28352	33.75336	16.23640	0.09737312	0.17361239	3.1823571	20	1 6.5	20.0
382548 2001 UP ₁₈₂	17.3	X	284.53209	305.45696	71.05252	3.45149	0.2053797	0.25299895	2.4758457	20	7 10.3	20.0
382549 2001 UK ₁₈₆	16.0	X	124.27055	107.50603	226.76462	11.24227	0.2308620	0.17320721	3.1873181	20	—	—
382550 2001 UP ₂₀₉	17.4	X	280.83884	146.22823	235.58383	6.73867	0.1373048	0.25277137	2.4773315	20	7 21.6	20.4
382551 2001 VO ₁	17.3	X	287.72029	3.66791	15.00645	2.67470	0.2689373	0.25210446	2.4816986	20	7 7.3	20.2
382552 2001 VT ₅₁	15.6	X	99.53067	181.94057	236.89788	14.47757	0.2571211	0.17544802	3.1601211	20	3 8.1	20.6
382553 2001 VM ₆₉	15.5	X	99.95605	146.85042	261.15122							

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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>
382561 2001 <i>XL</i> ₂₁₈	17.3	X	270.93554	182.11847	270.99019	1.67122	0.1609009	0.25735194	2.4478478	20	10 15.3	20.0
382562 2001 <i>XE</i> ₂₄₃	16.8	X	172.18421	153.23139	320.28631	12.22372	0.2104890	0.24024299	2.5627264	20	7 20.4	21.1
382563 2001 <i>XQ</i> ₂₆₄	15.7	X	21.63397	266.09551	244.83182	24.37397	0.2024872	0.17161617	3.2069874	20	2 16.9	19.8
382564 2001 <i>YA</i> ₃₇	17.1	X	307.97332	302.76978	61.86709	3.21616	0.2550022	0.25181962	2.4835696	20	7 27.6	19.2
382565 2002 <i>AM</i> ₄₀	16.6	X	227.15113	280.50105	136.52713	6.03233	0.2703437	0.24211718	2.5494841	20	6 20.7	20.8
382566 2002 <i>AK</i> ₅₀	17.0	X	234.12284	279.82028	125.54406	5.25567	0.3058585	0.24277028	2.5449097	20	6 9.5	21.5
382567 2002 <i>AB</i> ₅₃	16.7	X	236.46553	161.05788	253.16790	3.90625	0.1992363	0.24237455	2.5476790	20	7 1.6	20.5
382568 2002 <i>AA</i> ₅₅	18.0	X	225.03406	161.58708	285.33542	4.14988	0.2214932	0.24523178	2.5278514	20	7 30.4	21.8
382569 2002 <i>AX</i> ₆₇	17.7	X	198.95422	1.53310	96.42333	3.44442	0.1713401	0.24253627	2.5465464	20	7 24.3	21.7
382570 2002 <i>AM</i> ₈₆	16.2	X	154.58837	232.89473	284.20059	16.35619	0.1445000	0.24211741	2.5494825	20	8 19.8	20.5
382571 2002 <i>AY</i> ₁₂₆	17.8	X	211.23229	264.69943	148.97041	3.21426	0.2152525	0.23971718	2.5664725	20	6 6.5	22.1
382572 2002 <i>AJ</i> ₁₄₉	18.5	X	207.96366	153.95711	300.26074	5.02640	0.2651159	0.24360125	2.5391189	20	7 21.9	22.7
382573 2002 <i>AK</i> ₁₇₄	17.2	X	240.44132	100.65128	312.08183	14.14288	0.1143380	0.24156190	2.5533897	20	7 16.3	20.8
382574 2002 <i>AK</i> ₁₉₅	16.9	X	158.15453	70.75846	104.51909	7.70352	0.0913067	0.24524193	2.5277817	20	9 27.6	20.8
382575 2002 <i>BT</i> ₁₂	17.5	X	260.08203	99.60229	321.71064	8.68071	0.1682866	0.24517848	2.5282178	20	8 12.9	20.7
382576 2002 <i>BX</i> ₂₆	16.6	X	242.62012	326.66282	78.46581	7.62853	0.2408793	0.24368509	2.5385365	20	6 21.8	20.4
382577 2002 <i>CY</i> ₆₇	16.3	X	83.80722	238.50808	320.41356	14.46614	0.1095216	0.23771185	2.5808861	20	7 21.7	19.7
382578 2002 <i>CJ</i> ₉₇	16.4	X	213.30101	322.65520	141.37831	13.97885	0.1226110	0.24142867	2.5543289	20	8 19.8	20.0
382579 2002 <i>CZ</i> ₁₂₆	16.3	X	89.76650	42.87670	139.67846	15.92215	0.0737599	0.23511448	2.5998590	20	7 12.4	19.9
382580 2002 <i>CR</i> ₁₅₀	17.6	X	134.32793	42.02379	116.26768	1.20501	0.2317849	0.23654242	2.5893854	20	8 12.7	21.9
382581 2002 <i>CS</i> ₁₅₀	17.2	X	215.53791	108.44904	356.83985	4.63201	0.1809315	0.24335443	2.5408355	20	8 19.2	21.0
382582 2002 <i>CX</i> ₁₅₂	17.0	X	228.63592	88.04117	319.03320	25.33765	0.3577895	0.24149190	2.5538831	20	6 2.2	22.1
382583 2002 <i>CC</i> ₁₆₆	17.3	X	174.98398	49.46579	111.57223	7.05057	0.1840876	0.24312638	2.5424241	20	9 22.6	21.5
382584 2002 <i>CP</i> ₁₉₄	17.0	X	201.91944	317.39199	127.58490	5.58705	0.1694064	0.23906099	2.5711668	20	7 9.8	21.2
382585 2002 <i>CM</i> ₂₀₇	17.0	X	223.72743	306.72789	140.39403	5.79587	0.1993694	0.24225997	2.5484823	20	7 31.5	20.8
382586 2002 <i>CC</i> ₂₁₄	18.3	X	242.09222	307.65283	138.29553	5.12292	0.3730973	0.24697435	2.5159470	20	7 30.4	22.3
382587 2002 <i>CL</i> ₂₂₉	17.2	X	242.61429	113.05519	309.36962	5.44484	0.2150832	0.24415970	2.5352457	20	7 17.9	21.0
382588 2002 <i>CE</i> ₂₃₄	16.5	X	217.66964	20.38842	90.42058	15.91095	0.0765222	0.24491602	2.5300237	20	9 16.6	20.3
382589 2002 <i>CW</i> ₂₆₁	17.2	X	225.98838	343.09183	128.29643	4.28895	0.1076604	0.24714898	2.5147617	20	9 16.9	20.7
382590 2002 <i>CJ</i> ₂₈₈	16.9	X	209.23662	321.37535	117.78406	4.90992	0.0952470	0.23995630	2.5647672	20	7 15.0	20.6
382591 2002 <i>CT</i> ₃₀₁	16.5	X	275.55838	38.77335	326.10704	4.10688	0.2539675	0.24195383	2.5506314	20	6 2.1	20.0
382592 2002 <i>CO</i> ₃₀₂	16.7	X	144.74523	279.55497	245.98132	6.88858	0.0795998	0.23944717	2.5684015	20	8 22.9	20.6
382593 2002 <i>CB</i> ₃₀₆	17.2	X	181.25145	35.47719	110.80214	5.02958	0.1899539	0.24275081	2.5450457	20	9 8.2	21.3
382594 2002 <i>DH</i> ₁₇	15.9	X	5.58905	146.66716	71.65666	14.62406	0.1999403	0.22333393	2.6904995	20	4 30.2	18.5
382595 2002 <i>DD</i> ₁₈	17.2	X	141.84504	182.81872	340.72600	2.92206	0.1293868	0.23785502	2.5798503	20	8 22.4	21.1
382596 2002 <i>EY</i> ₁	17.2	X	201.42530	99.21045	38.36022	5.33850	0.2222534	0.24371802	2.5383078	20	9 13.7	21.3
382597 2002 <i>EG</i> ₅₇	16.6	X	166.93127	135.37290	338.02409	12.44184	0.1203345	0.23536384	2.5980224	20	7 16.3	20.8
382598 2002 <i>EL</i> ₉₆	17.5	X	179.55244	359.79558	146.25284	2.57465	0.1396012	0.24075524	2.5590900	20	9 6.7	21.5
382599 2002 <i>EL</i> ₁₁₁	16.6	X	141.41120	88.73778	81.36379	5.10224	0.1117629	0.23682011	2.5873608	20	8 31.9	20.5
382600 2002 <i>EG</i> ₁₂₂	17.6	X	212.17777	89.63024	353.20700	8.04670	0.1633342	0.23741205	2.5830583	20	7 19.7	21.8
382601 2002 <i>EK</i> ₁₂₄	17.7	X	94.41054	8.71249	204.49656	3.03994	0.0907292	0.23556800	2.5965211	20	8 30.4	21.2
382602 2002 <i>GW</i> ₁₁	16.9	X	113.52357	138.37006	79.99288	5.00617	0.2348237	0.23607287	2.5928178	20	10 10.7	21.3
382603 2002 <i>GA</i> ₆₈	17.1	X	141.74832	15.97252	167.15217	4.71201	0.1900541	0.23659478	2.5890033	20	9 17.5	21.5
382604 2002 <i>GC</i> ₇₅	17.4	X	117.81863	349.16567	206.29783	3.59421	0.1679171	0.23420887	2.6065566	20	9 8.7	21.4
382605 2002 <i>GU</i> ₈₅	16.0	X	69.44075	135.91776	86.11440	14.27348	0.1254425	0.23051615	2.6343197	20	8 21.4	19.8
382606 2002 <i>JY</i> ₃	16.8	X	121.58281	99.21180	58.97158	28.85009	0.3368554	0.23290223	2.6162965	20	8 18.9	22.1
382607 2002 <i>JA</i> ₁₀₈	18.1	X	102.88427	136.55793	67.90722	23.45760	0.0402033	0.39674756	1.8342557	20	10 3.9	20.7
382608 2002 <i>LW</i> ₂₂	16.0	X	201.01470	228.50317	70.69776	10.28293	0.2420155	0.19884920	2.9070566	20	1 17.5	21.2
382609 2002 <i>LQ</i> ₂₉	16.8	X	80.97979	125.67959	100.32063	8.45705	0.2277978	0.22941102	2.6427730	20	9 21.8	20.9
382610 2002 <i>LJ</i> ₃₀	16.3	X	179.15755	106.63146	118.22896	10.40229	0.0941872	0.24451201	2.5328099	20	12 18.1	20.0
382611 2002 <i>NA</i> ₁₆	17.3	X	62.03268	63.20872	286.37778	8.21898	0.2147995	0.29114010	2.2545924	20	—	—
382612 2002 <i>NH</i> ₄₈	17.2	X	35.00926	40.52669	309.64336	11.92718	0.2676046	0.28513412	2.2861423	20	—	—
382613 2002 <i>NN</i> ₆₁	17.2	X	259.81631	56.86198	275.95109	18.74808	0.1042222	0.37261763	1.9126131	20	4 4.8	20.0
382614 2002 <i>NW</i> ₇₀	16.0	X	185.61250	106.16069	276.60298	13.53229	0.1602551	0.20382876	2.8595152	20	4 2.3	21.0
382615 2002 <i>NM</i> ₇₁	17.5	X	319.95391	113.23788	283.24627	21.01102	0.3002259	0.27908987	2.3190316	20	10 27.9	19.3
382616 2002 <i>OX</i> ₇	16.1	X	114.33793	282.50324	309.66524	27.24960	0.3536121	0.23083093	2.6319242	20	10 15.2	21.6
382617 2002 <i>OK</i> ₂₀	16.7	X	62.41603	139.02657	152.32028	12.39998	0.1853460	0.22976140	2.6400855	20	11 17.4	20.8
382618 2002 <i>OL</i> ₃₄	16.8	X	178.93278	48.50685	339.40641	1.10133	0.0912396	0.20296479	2.8676243	20	4 7.2	21.2
382619 2002 <i>PB</i> ₃₁	16.3	X	298.76975	334.12167	312.60134	13.00755	0.2071269	0.20871695	2.8146922	20	3 22.2	20.3
382620 2002 <i>PX</i> ₃₂	16.5	X	140.16101	67.79411	169.12236	5.53128	0.3279580	0.23545822	2.5973281	20	11 20.7	21.4
382621 2002 <i>PS</i> ₇₈	17.3	X	19.37841	9.04675	355.93979	4.90412	0.1961643	0.28454539	2.2892946	20	—	—
382622 2002 <i>PF</i> ₈₈	17.9	X	79.74821	242.71977	331.43042	19.59915	0.0504219	0.38259946	1.8792006	20	8 24.9	19.5
382623 2002 <i>PE</i> ₁₁₃	17.9	X	38.73809	45.24756	311.81681	7.67982	0.2468142	0.28552033	2.2840803	20	—	—
382624 2002 <i>PY</i> ₁₂₄	17.8	X	22.34273	108.43624	273.08501	2.28630	0.1825348	0.28629409	2.2799630	20	—	—
382625 2002 <i>PC</i> ₁₃₀	18.4	X	317.68073	80.79472	312.02238	19.50796	0.4811962	0.27453557	2.3446083	20	8 28.2</	

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
382641	2002	RX ₅	16.3	X	309.43270	260.10494	155.00151	22.95788	0.2625521	0.27763847	2.3271066	20	11 15.1	18.3
382642	2002	RP ₅₃	17.0	X	30.82865	346.52033	357.57757	10.64389	0.1626502	0.28247833	2.3004491	20	12 23.5	20.1
382643	2002	RT ₁₂₆	17.9	X	357.74067	307.68770	60.42343	4.96014	0.2472792	0.28045344	2.3115087	20	12 22.1	20.1
382644	2002	RC ₁₃₄	17.7	X	44.48373	211.84858	131.92865	8.61274	0.2427645	0.28413788	2.2914829	20	—	—
382645	2002	RE ₁₄₂	17.6	X	4.31915	75.48470	319.85230	6.28761	0.1262245	0.28422508	2.2910142	20	—	—
382646	2002	RN ₁₇₅	17.4	X	4.83643	165.02196	230.18328	5.23298	0.2394935	0.28313409	2.2968957	20	—	—
382647	2002	RB ₁₇₈	16.5	X	82.96198	57.19323	345.60708	12.77817	0.3364824	0.18400319	3.0613935	20	2 17.3	20.6
382648	2002	RC ₁₈₈	17.5	X	41.50771	355.43522	358.06290	6.77545	0.1425704	0.28499451	2.2868888	20	—	—
382649	2002	RJ ₂₁₅	17.5	X	6.82312	248.73212	127.82839	5.32410	0.2214312	0.28193679	2.3033939	20	—	—
382650	2002	RW ₂₇₁	17.9	X	55.88620	29.24670	333.01121	6.98179	0.1160943	0.28940410	2.2635995	20	—	—
382651	2002	RB ₂₈₀	17.6	X	20.34741	123.21446	291.84629	2.59341	0.1039313	0.29004836	2.2602463	20	—	—
382652	2002	SS ₃	18.1	X	343.47643	7.39786	19.98845	5.53034	0.2148055	0.27854579	2.3220504	20	12 17.5	20.0
382653	2002	SV ₁₁	17.4	X	56.41488	301.77081	42.70841	3.15088	0.1694330	0.28467988	2.2885735	20	—	—
382654	2002	SS ₄₆	17.3	X	329.34315	338.03309	36.42516	8.39050	0.2457839	0.27304990	2.3531054	20	10 23.5	18.4
382655	2002	SY ₆₃	18.0	X	214.82106	88.77566	312.05514	18.40013	0.1178522	0.37252732	1.9129222	20	5 26.7	20.8
382656	2002	SW ₆₇	16.8	X	114.26092	237.80152	158.12169	1.68606	0.2392611	0.18866977	3.0107024	20	2 27.4	21.4
382657	2002	TD ₉	16.1	X	126.46188	51.47885	347.66467	9.71765	0.3956255	0.18936705	3.0033073	20	3 24.6	21.4
382658	2002	TU ₂₄	16.0	X	102.26917	37.65230	18.16523	11.77507	0.2157731	0.18745587	3.0236860	20	3 10.7	20.5
382659	2002	TK ₆₁	15.4	X	173.07798	163.29436	233.05515	11.49894	0.0817916	0.19803481	2.9150210	20	4 9.5	20.0
382660	2002	TK ₈₀	17.6	X	56.48911	95.00804	218.76195	4.23337	0.1638951	0.28096403	2.3087074	20	12 13.4	20.8
382661	2002	TT ₈₈	18.1	X	0.80427	118.73519	263.03387	4.01729	0.2482512	0.27969907	2.3156631	20	—	—
382662	2002	TL ₉₄	18.4	X	355.29973	220.59494	165.75617	2.00941	0.2040440	0.28036735	2.3119819	20	—	—
382663	2002	TB ₉₈	17.7	X	18.93251	234.45238	125.14667	2.21275	0.1196919	0.28093287	2.3088782	20	12 21.4	20.3
382664	2002	TD ₁₀₁	17.8	X	359.74446	92.60942	293.29294	1.62045	0.1551506	0.28081564	2.3095207	20	—	—
382665	2002	TG ₁₀₁	16.1	X	131.31269	21.56029	253.60173	11.45957	0.1558474	0.18875681	3.0097769	20	2 13.8	20.7
382666	2002	TL ₁₀₁	17.3	X	29.68249	143.15930	226.47079	5.13902	0.1833775	0.28360784	2.2943371	20	—	—
382667	2002	TZ ₁₀₇	17.5	X	351.88724	254.33657	105.36712	5.49198	0.2373261	0.27712507	2.3299799	20	11 26.9	19.5
382668	2002	TG ₁₂₁	16.9	X	43.63973	71.29332	282.83806	5.08752	0.1401267	0.28268411	2.2993326	20	—	—
382669	2002	TA ₁₂₆	17.4	X	6.18287	111.55468	211.56966	9.35489	0.3012776	0.27642866	2.3338915	20	11 10.4	19.4
382670	2002	TQ ₁₄₇	18.1	X	359.15111	71.04553	331.09298	2.36927	0.1895204	0.28205786	2.3027347	20	—	—
382671	2002	TQ ₁₅₅	17.9	X	356.75176	90.88530	306.45906	5.14004	0.1635959	0.28299122	2.2976687	20	—	—
382672	2002	TG ₂₀₅	17.7	X	315.93485	331.67847	69.06418	5.63932	0.2170350	0.27471838	2.3435681	20	11 1.5	19.0
382673	2002	TP ₂₁₀	16.2	X	135.75043	195.73306	208.94975	9.40656	0.2251423	0.19088342	2.9873807	20	3 25.3	21.1
382674	2002	TH ₂₂₄	18.4	X	154.55725	228.89500	210.08569	9.70753	0.2280351	0.36460234	1.9405422	20	5 21.7	21.2
382675	2002	TG ₂₈₆	16.9	X	11.03009	107.68920	269.11160	8.51630	0.2067528	0.27942737	2.3171639	20	—	—
382676	2002	TL ₂₈₇	16.2	X	49.44450	321.99456	6.36926	7.60577	0.2325883	0.27993568	2.3143581	20	—	—
382677	2002	TG ₃₁₄	16.5	X	173.60011	260.81297	113.70592	9.91540	0.1115767	0.19307021	2.9647804	20	3 22.6	21.3
382678	2002	TT ₃₄₆	17.2	X	29.17003	289.45958	69.39549	7.43891	0.2374208	0.28182089	2.3040254	20	—	—
382679	2002	TP ₃₇₀	17.5	X	305.57409	311.68894	101.19845	9.52130	0.1171424	0.27370143	2.3493695	20	11 3.5	19.9
382680	2002	TO ₃₈₁	18.5	X	12.12058	176.69459	188.45165	5.49668	0.1972839	0.28063999	2.3104842	20	12 31.2	21.2
382681	2002	UD ₄	16.1	X	70.95710	46.70557	284.74391	24.79863	0.2205028	0.28490418	2.2873722	20	—	—
382682	2002	UK ₅₁	17.4	X	47.86458	65.84866	248.84902	9.05622	0.2622019	0.28385799	2.2929890	20	12 16.9	20.9
382683	2002	UL ₆₀	16.9	X	40.58855	36.97674	87.81180	11.40631	0.0578640	0.18771481	3.0209047	20	2 22.4	21.0
382684	2002	UJ ₇₁	17.6	X	332.13298	95.08860	321.81151	1.29236	0.2085241	0.27803562	2.3248901	20	—	—
382685	2002	UW ₇₅	17.4	X	23.57560	51.47139	264.84756	2.59955	0.2356494	0.27512392	2.3412645	20	11 15.2	20.1
382686	2002	VZ ₁₄	16.2	X	120.19486	122.18120	235.72753	6.89780	0.1569676	0.18182757	3.0857653	20	1 9.8	20.8
382687	2002	VH ₂₅	17.5	X	40.37536	344.77309	15.71744	3.02963	0.1888085	0.28201957	2.3029431	20	—	—
382688	2002	VH ₂₆	17.5	X	306.42898	351.91318	56.74181	5.24178	0.2012390	0.27198910	2.3592197	20	10 20.4	19.0
382689	2002	VJ ₂₇	17.3	X	32.93922	136.99410	223.17951	3.89648	0.2358295	0.28044227	2.3115701	20	—	—
382690	2002	VN ₅₁	17.7	X	345.61762	269.68370	130.58498	3.07214	0.2117663	0.27802901	2.3249269	20	—	—
382691	2002	VS ₆₀	17.5	X	309.19360	223.21679	195.83756	6.09353	0.1930219	0.27379578	2.3488298	20	11 14.7	19.1
382692	2002	VT ₆₀	17.6	X	319.95803	31.76097	6.22763	2.49119	0.1872858	0.27348213	2.3506254	20	11 4.1	19.3
382693	2002	VY ₆₀	16.7	X	25.12717	96.59987	275.96646	4.29165	0.2232317	0.28188769	2.3036614	20	—	—
382694	2002	VM ₆₆	17.3	X	324.44780	155.67714	237.25607	4.20815	0.1826217	0.27376787	2.3489894	20	11 7.1	18.7
382695	2002	VK ₇₁	17.8	X	6.84083	289.77251	77.54117	5.30030	0.2748952	0.27842677	2.3227121	20	—	—
382696	2002	VU ₈₈	17.2	X	334.41589	18.17076	5.48501	4.23367	0.2475142	0.27404298	2.3474171	20	11 22.3	18.6
382697	2002	VR ₉₁	16.1	X	64.58934	74.76655	13.47121	14.49193	0.2693583	0.18209887	3.0826996	20	3 10.7	19.8
382698	2002	VL ₉₂	15.2	X	32.87115	53.56731	98.35918	26.23163	0.4587060	0.17536361	3.1611352	20	5 16.5	18.6
382699	2002	VW ₁₀₀	16.5	X	133.50650	114.29589	245.50001	9.69895	0.2632144	0.18561803	3.0436119	20	2 2.3	21.4
382700	2002	VK ₁₁₄	17.5	X	0.74298	308.28251	68.79415	3.57140	0.2048493	0.27668277	2.3324623	20	12 31.4	19.9
382701	2002	VR ₁₃₅	18.4	X	301.96278	56.45512	34.27444	1.70203	0.1466108	0.27673213	2.3321850	20	12 19.8	20.2
382702	2002	VU ₁₃₇	16.8	X	130.03505	321.17598	79.24941	3.37699	0.1961188	0.18735542	3.0247667	20	3 16.1	21.5
382703	2002	VX ₁₃₉	15.9	X	56.29361	7.67018	146.74045	16.18531	0.1392874	0.18128850	3.0918794	20	5 4.3	20.2
382704	2002	VJ ₁₄₂	16.1	X	129.07215	310.65064	62.82356	10.97274	0.0678988	0.18395108	3.0619716	20	1 30.5	20.7
382705	2002	VR ₁₄₆	16.1	X	161.19336	319.41450	48.72446	13.14925	0.1078515	0.18873122	3.0100489	20	3 5.5	21.0
382706	2002	VE ₁₄₇	18.3	X	340.97489	317.28179	80.88670	2.53362	0.1748169	0.27565200	2.3382734	20	12 21.8	20.3
382707	2002	WD ₁₉	18.1	X	317.93035	289.21238	121.06624	1.97876	0.1738583	0.27364915	2.3496688	20	11 20.7	19.7
382708	2002	WR ₂₁	17.3	X	299.60086	318.80911	97.41581	6.62192	0.1194419	0.27053572	2.3676617	20	10 25.9	19.7
382709	2002	WX ₂₂	15.8	X	48.38819	49.39982	68.35992	17.87860	0.0936144	0.18375492	3.0641503	20	3 4.4	20.1
382710	2002	WP ₂₅	15.8	X	113.05954	161.38428	241.86747	9.71690	0.0545952	0.18421137	3.0590865	20	2 8.0	20.3
382711	2002</													

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
382721 2002 XH ₈₂	15.9	X	55.82401	179.22584	287.48975	17.74305	0.2867225	0.17900669	3.1180988	20	3 7.8	19.8
382722 2002 XR ₉₀	17.6	X	6.10839	145.13779	221.47447	1.62514	0.1865467	0.27569342	2.3380392	20	12 21.6	20.0
382723 2002 XK ₁₁₉	17.6	X	273.05715	233.42472	228.45970	6.53295	0.1459186	0.27333632	2.3514612	20	11 8.2	19.7
382724 2002 YR ₈	17.1	X	340.19521	297.34445	105.66509	9.31597	0.2376561	0.27472918	2.3435066	20	—	—
382725 2002 YT ₂₄	17.3	X	304.32173	297.76055	128.57251	1.92635	0.1654016	0.27047123	2.3680380	20	11 14.4	19.2
382726 2002 YG ₂₆	15.5	X	61.38747	157.73113	282.84332	29.67989	0.2714444	0.17734307	3.1375687	20	2 6.8	19.6
382727 2003 AR ₃	16.9	X	321.75071	325.40938	118.57385	25.39961	0.2521553	0.27609379	2.3357783	20	—	—
382728 2003 AD ₂₁	17.0	X	293.42487	125.90732	295.85211	11.61908	0.1807687	0.26795363	2.3828477	20	10 2.6	19.5
382729 2003 AV ₂₅	15.6	X	357.37595	49.28821	105.30420	20.70298	0.1752132	0.17507318	3.1646303	20	1 18.8	19.3
382730 2003 AG ₃₃	15.0	X	18.82581	177.86661	300.04579	24.21173	0.1851408	0.17290885	3.1909836	20	1 12.7	18.4
382731 2003 AN ₄₂	15.3	X	38.70739	226.12958	302.68871	15.60695	0.2566763	0.17878042	3.1207292	20	4 27.9	19.0
382732 2003 AF ₄₃	15.7	X	88.21274	167.53558	314.61828	9.20371	0.1941583	0.18613667	3.0379556	20	5 5.3	20.2
382733 2003 AN ₅₁	16.1	X	66.30873	155.04983	306.57430	16.70254	0.2688862	0.17945381	3.1129174	20	3 16.9	20.3
382734 2003 AZ ₆₃	15.7	X	72.25578	22.95285	98.96703	19.25599	0.1860369	0.18100490	3.0951081	20	4 26.6	20.2
382735 2003 AJ ₇₀	17.8	X	285.56646	312.92338	131.09048	2.23498	0.1778182	0.26902037	2.3765444	20	10 31.3	19.8
382736 2003 AG ₈₂	15.0	X	7.84479	104.21011	73.47591	27.07516	0.1729461	0.17495096	3.1661040	20	3 26.6	19.2
382737 2003 AM ₉₀	17.2	X	296.27467	157.05150	283.19366	9.16076	0.1429060	0.26886222	2.3774763	20	11 17.0	19.4
382738 2003 BY ₅	17.0	X	192.04517	196.26833	337.66544	14.36932	0.1567340	0.26257357	2.4152868	20	10 18.8	20.9
382739 2003 BW ₁₁	15.6	X	20.70028	18.63788	132.47690	17.35442	0.1981765	0.17488523	3.1668972	20	2 29.8	19.0
382740 2003 BF ₁₄	17.7	X	275.71964	316.59636	132.48084	6.19449	0.1823040	0.26721638	2.3872286	20	10 20.8	20.1
382741 2003 BC ₂₄	15.6	X	51.79265	224.32521	231.89185	10.62445	0.2370965	0.17494709	3.1661506	20	2 14.5	19.3
382742 2003 BK ₄₈	15.7	X	78.88361	135.26890	313.56695	12.45923	0.1892800	0.17740562	3.1368311	20	3 10.8	20.1
382743 2003 BQ ₇₄	17.4	X	249.36782	74.57274	50.26846	8.40151	0.1107559	0.26604067	2.3942566	20	11 7.0	20.0
382744 2003 BD ₉₂	17.1	X	250.95408	238.79265	349.32546	3.75479	0.1977303	0.27698887	2.3307436	20	—	—
382745 2003 CC	20.3	X	87.29813	103.18348	136.32785	2.32419	0.3268728	0.53625805	1.5004453	20	11 23.0	22.2
382746 2003 CH ₇	16.4	X	241.88021	163.26756	332.21594	24.14716	0.2107384	0.26501392	2.4004367	20	10 10.5	20.1
382747 2003 CA ₂₆	15.6	X	6.79982	54.43354	116.50467	12.27117	0.0352957	0.17678022	3.1442249	20	3 5.2	20.0
382748 2003 CM ₂₆	16.4	X	34.18176	82.08907	43.91873	8.10207	0.1466335	0.17476613	3.1683358	20	2 21.2	20.2
382749 2003 DB	15.8	X	347.21997	76.84789	117.81081	27.26364	0.2522387	0.17273606	3.1931112	20	2 14.7	19.4
382750 2003 DK	15.3	X	324.27792	277.67434	307.00908	14.79170	0.1895913	0.17435647	3.1732966	20	2 17.6	19.5
382751 2003 DC ₂₁	17.2	X	154.31085	90.50690	343.36606	18.96766	0.0852030	0.35505772	1.9751651	20	4 22.9	20.0
382752 2003 DY ₂₄	17.3	X	271.94928	117.27732	335.31914	4.51366	0.1963448	0.26458554	2.4030270	20	10 10.9	19.8
382753 2003 EU ₈	16.6	X	83.52426	107.67405	330.26068	22.93427	0.4460993	0.18051660	3.1006872	20	3 31.8	21.7
382754 2003 EW ₃₈	17.7	X	153.13458	108.03786	122.98254	3.78905	0.1347553	0.26133459	2.4229147	20	11 29.8	21.3
382755 2003 ET ₄₄	17.5	X	208.07818	329.68199	207.60303	5.16937	0.2900091	0.26272778	2.4143416	20	11 2.3	21.3
382756 2003 FE ₁₇	17.6	X	248.05141	30.06703	139.25336	3.56390	0.0836641	0.26802418	2.3824296	20	—	—
382757 2003 FS ₃₇	17.0	X	47.69063	25.55321	198.24616	4.36448	0.1453581	0.24126280	2.5554996	20	7 21.2	20.0
382758 2003 GY	20.2	X	142.92299	334.14668	321.80831	4.67435	0.3172009	0.60815369	1.3797291	20	—	—
382759 2003 LT ₃	15.8	X	355.57168	85.55549	133.45431	24.37091	0.3670328	0.17169578	3.2059960	20	4 1.4	18.8
382760 2003 NY	16.6	X	176.90206	283.39528	283.11312	7.14312	0.4326500	0.25475725	2.4644406	20	11 3.4	21.6
382761 2003 OW ₁₅	17.1	X	210.38690	68.76348	279.17563	6.30946	0.2424850	0.21253905	2.7808457	20	3 14.3	22.1
382762 2003 OJ ₁₉	16.2	X	219.83382	94.74820	268.41167	13.17080	0.2161847	0.21680758	2.7442251	20	4 7.0	21.1
382763 2003 OS ₃₀	16.5	X	192.76416	54.00981	321.44534	7.44756	0.2995605	0.21163757	2.7887368	20	4 2.4	21.7
382764 2003 OQ ₁₀	16.0	X	167.55341	153.95166	329.82694	13.94000	0.0479887	0.22738188	2.6584723	20	7 30.0	19.8
382765 2003 QR ₂₃	15.7	X	298.32082	235.36474	177.42741	31.24314	0.2257734	0.23173716	2.6250582	20	9 21.2	18.0
382766 2003 QJ ₁₀₃	16.2	X	183.36197	9.80703	259.51863	8.58160	0.3120599	0.21146848	2.7902233	20	4 26.8	21.4
382767 2003 RO ₁₂	16.9	X	223.91720	101.76612	252.27098	6.11802	0.2366467	0.21434044	2.7952430	20	4 1.6	21.7
382768 2003 SJ ₆	16.2	X	199.42876	345.98958	31.80199	8.76579	0.3007028	0.21228865	2.7830320	20	4 13.4	21.2
382769 2003 SX ₇	16.3	X	210.31099	144.56411	191.51183	8.88873	0.1931408	0.20881964	2.8137693	20	3 3.2	21.0
382770 2003 SG ₂₄	16.6	X	177.17225	211.79602	193.10273	15.40414	0.2998432	0.21035683	2.8000447	20	5 1.4	21.8
382771 2003 SL ₃₇	16.6	X	208.33752	131.03480	248.81708	7.71897	0.2213961	0.21404062	2.7678247	20	4 21.4	21.3
382772 2003 SM ₅₀	16.4	X	183.26135	128.79337	303.26446	6.55337	0.2280215	0.21606298	2.7505263	20	6 4.9	21.2
382773 2003 SC ₇₁	16.4	X	227.05852	71.16676	257.63298	7.51372	0.1564153	0.21114824	2.7930438	20	3 7.8	21.1
382774 2003 SD ₇₇	16.2	X	234.78531	83.31478	319.95273	10.12783	0.1478020	0.22067966	2.7120301	20	6 21.1	20.4
382775 2003 SQ ₉₆	16.6	X	212.68220	74.12531	317.76572	12.46030	0.2275722	0.21528981	2.7571077	20	5 6.3	21.6
382776 2003 SS ₁₀₂	16.7	X	175.49580	66.53217	337.81620	8.52803	0.2471783	0.21069811	2.7970204	20	4 23.7	21.7
382777 2003 SR ₁₁₁	16.4	X	159.51852	357.38042	40.07128	9.16252	0.3317326	0.20552701	2.8437415	20	4 12.1	21.6
382778 2003 SM ₁₁₉	17.9	X	116.70495	246.87276	64.29047	3.48568	0.2331572	0.30965635	2.1637947	20	—	—
382779 2003 SL ₁₂₁	17.0	X	246.20292	85.61808	304.06522	4.64993	0.0497129	0.22257685	2.6965970	20	6 28.7	20.8
382780 2003 SX ₁₈₄	16.7	X	183.90393	26.23980	30.39783	4.54728	0.2058398	0.21305434	2.7763600	20	5 17.5	21.5
382781 2003 SY ₂₄₀	16.0	X	197.02489	17.72028	11.47445	9.23374	0.2187320	0.21095115	2.7947832	20	4 23.6	20.8
382782 2003 SN ₂₆₇	17.0	X	205.84962	17.08583	354.38284	1.40287	0.0921876	0.21211027	2.7845920	20	4 14.3	21.1
382783 2003 SR ₂₇₅	17.3	X	160.64567	192.49919	163.40900	1.74476	0.3787031	0.20346238	2.8629469	20	2 25.9	22.7
382784 2003 SG ₂₉₆	16.4	X	222.54231	75.27299	312.38268	7.80392	0.1686965	0.21477700	2.7614946	20	5 15.3	21.0
382785 2003 SO ₃₂₇	17.3	X	209.40979	170.02950	217.43384	4.60265	0.1732470	0.21508051	2.7588961	20	5 5.1	21.7
382786 2003 SW ₃₃₃	17.1	X	203.29545	46.26072	358.21745	3.31057	0.1717147	0.21589901	2.7519188	20	5 19.6	21.7
382787 2003 SK ₃₄₆	17.3	X	252.83161	357.00839	3.22194	6.01456	0.0707821	0.21861104	2.7291118	20	5 23.8	21.2

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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>
382801 2003 UY ₇₄	18.2	X	38.65023	100.11897	302.08707	5.59415	0.1525310	0.30560918	2.1828561	20	—	—
382802 2003 UT ₁₃₀	16.6	X	233.90696	84.83876	268.47994	12.12484	0.1764340	0.21332154	2.7740413	20	4 10.4	21.4
382803 2003 US ₁₃₆	15.8	X	135.54755	32.52274	29.08852	15.45380	0.1308449	0.20499525	2.8486572	20	4 8.9	20.2
382804 2003 UY ₁₃₆	17.9	X	8.66003	41.19202	43.31564	4.72266	0.1537679	0.30530893	2.1842871	20	—	—
382805 2003 UA ₁₄₄	17.3	X	321.02133	345.58255	24.35057	5.50987	0.2375618	0.28713762	2.2754955	20	9 24.8	18.3
382806 2003 UZ ₁₅₇	18.2	X	30.56592	51.15591	20.49294	4.16914	0.1174567	0.30559637	2.1829172	20	—	—
382807 2003 UB ₁₉₂	16.1	X	184.42593	26.69193	29.74114	9.69720	0.1555369	0.21063462	2.7975824	20	5 16.8	20.7
382808 2003 UF ₂₀₆	16.2	X	215.76693	153.84882	234.67144	12.85004	0.1983834	0.21211347	2.7845641	20	5 10.5	20.9
382809 2003 UN ₂₀₇	18.0	X	51.96761	105.43580	250.99693	2.64955	0.2001588	0.30120775	2.2040695	20	—	—
382810 2003 UX ₂₁₄	16.7	X	277.30201	287.79196	30.13962	8.55469	0.1686630	0.21517543	2.7580847	20	4 16.9	20.6
382811 2003 UM ₂₁₆	15.9	X	176.06261	343.53547	53.06348	7.31006	0.0448991	0.20902747	2.8119039	20	4 15.7	19.9
382812 2003 UD ₂₁₉	18.3	X	146.95147	61.64508	255.67326	3.12175	0.1897094	0.31252813	2.1505191	20	—	—
382813 2003 UA ₂₃₉	16.5	X	110.16066	190.63605	212.31241	9.86353	0.1028570	0.19894503	2.9061230	20	2 9.4	20.8
382814 2003 UD ₃₃₄	17.2	X	241.75553	125.13963	209.82378	4.70576	0.0401168	0.21320163	2.7750812	20	4 12.4	20.9
382815 2003 UG ₃₄₆	17.3	X	191.39386	249.38579	116.12884	0.52183	0.0856860	0.20914089	2.8108872	20	3 23.7	21.4
382816 2003 UO ₃₅₂	16.9	X	227.00431	240.39367	129.67632	4.25476	0.1055358	0.21432280	2.7653947	20	5 6.1	21.1
382817 2003 UX ₃₈₀	18.4	X	345.56370	344.27783	135.94837	2.61242	0.0831047	0.30962146	2.1639573	20	—	—
382818 2003 VD ₆	17.6	X	47.72108	337.72667	58.78530	10.31863	0.1411506	0.30332556	2.1937984	20	—	—
382819 2003 VE ₁₁	15.9	X	131.31225	35.90510	48.24736	15.73030	0.1184803	0.20448008	2.8534398	20	4 30.7	20.3
382820 2003 WB ₉	18.1	X	73.84636	73.33527	271.26408	7.01867	0.2943856	0.30356860	2.1926273	20	—	—
382821 2003 WA ₃₈	16.1	X	193.95390	154.34759	263.36636	12.64566	0.1807082	0.21073123	2.7967273	20	5 28.1	20.8
382822 2003 WQ ₄₆	16.3	X	170.05852	185.93171	239.44799	3.21851	0.0906037	0.20997594	2.8034299	20	5 14.8	20.5
382823 2003 WJ ₇₉	16.6	X	238.65729	83.34584	288.38297	3.81974	0.1753434	0.21320805	2.7750256	20	5 11.6	20.9
382824 2003 WE ₈₆	15.4	X	283.17216	47.32467	289.85419	14.25263	0.3529377	0.22225896	2.6991677	20	4 16.9	19.9
382825 2003 XB ₂₂	19.4	X	228.45260	118.26888	108.79652	29.95393	0.3933816	0.59155271	1.4054231	20	—	—
382826 2003 XL ₂₈	17.1	X	153.61879	68.19411	329.17531	1.71856	0.1287134	0.20116520	2.8847010	20	3 26.1	21.5
382827 2003 XN ₃₀	16.9	X	257.87835	103.82991	128.48411	3.58979	0.0724486	0.21113486	2.7931617	20	5 21.0	20.6
382828 2003 YW ₂	16.3	X	170.68570	242.68671	222.89413	3.11216	0.1038715	0.20019773	2.8939873	20	3 4.8	20.7
382829 2003 YP ₂₂	18.0	X	124.03483	267.30302	290.65805	16.39005	0.1132829	0.39369530	1.8437239	20	9 25.4	20.8
382830 2003 YA ₁₈₁	15.7	X	37.39697	38.87577	100.58233	11.82759	0.1085308	0.18984667	2.9982469	20	3 11.6	19.5
382831 2003 YC ₁₈₁	18.8	X	357.34510	339.74565	93.14301	6.37776	0.1830884	0.29536040	2.2330642	20	—	—
382832 2003 YD ₁₈₁	16.3	X	120.38389	309.78400	115.96645	7.90598	0.2034901	0.19328800	2.9625529	20	4 8.5	21.0
382833 2004 AS ₅	17.7	X	312.44158	276.11697	216.20188	5.00466	0.1225238	0.29462292	2.2367890	20	—	—
382834 2004 AC ₂₁	16.5	X	140.97796	300.17358	105.56723	6.05681	0.1685228	0.19518410	2.9433354	20	3 30.9	21.2
382835 2004 AT ₂₃	18.6	X	271.32955	219.45981	126.89704	2.40723	0.1265000	0.28720506	2.2751393	20	12 17.4	20.3
382836 2004 BQ ₃₀	16.0	X	114.73174	96.92571	265.38889	15.93723	0.2154580	0.21108177	2.7936301	20	10 20.3	21.0
382837 2004 BZ ₃₈	17.6	X	345.33566	350.82845	105.25244	6.82135	0.0998465	0.29577101	2.2309970	20	—	—
382838 2004 BG ₈₃	17.8	X	282.10078	93.28964	104.45140	6.72678	0.3694125	0.29236877	2.2482714	20	—	—
382839 2004 BE ₈₈	16.6	X	288.57685	173.34929	332.55478	28.69271	0.1298676	0.28971063	2.2620026	20	—	—
382840 2004 BR ₁₃₀	17.8	X	71.91885	209.37475	131.93071	6.20372	0.1961755	0.29238439	2.2481913	20	—	—
382841 2004 CN ₁₄	16.0	X	160.61287	60.09694	333.36809	9.13149	0.1140201	0.19338092	2.9616039	20	3 25.3	20.7
382842 2004 CP ₄₃	15.9	X	109.32413	57.35310	338.00593	10.04640	0.0884929	0.18096994	3.0955067	20	2 5.1	20.3
382843 2004 CX ₄₇	17.8	X	293.58490	192.60296	316.82448	3.98201	0.1831189	0.29097939	2.2554224	20	—	—
382844 2004 CB ₅₃	16.7	X	119.45807	133.21990	271.95792	1.50671	0.1959549	0.19047290	2.9916716	20	3 8.8	21.3
382845 2004 CR ₁₀₃	16.7	X	61.98412	236.27992	271.63536	3.78538	0.2320391	0.19104392	2.9857074	20	5 11.9	20.3
382846 2004 DK ₄₇	17.6	X	182.53264	3.09182	196.83522	5.18358	0.1796407	0.27825212	2.3236839	20	11 19.5	21.0
382847 2004 DK ₅₃	18.0	X	329.04368	301.11676	122.29175	2.90647	0.2258151	0.28694002	2.2765401	20	—	—
382848 2004 EF ₁₈	15.2	X	6.01532	89.52210	77.07584	15.31159	0.2220651	0.18097087	3.0954961	20	2 22.0	18.7
382849 2004 EA ₂₃	16.5	X	22.51346	128.39814	62.96070	3.26788	0.2236159	0.18738484	3.0244500	20	4 28.1	19.4
382850 2004 EJ ₃₀	16.5	X	32.83655	114.10044	71.23219	2.67213	0.2005636	0.18883721	3.0089225	20	5 8.6	19.7
382851 2004 EA ₅₄	17.7	X	279.12360	296.63623	204.67978	2.09491	0.1600136	0.28679997	2.2772811	20	—	—
382852 2004 EF ₇₂	17.9	X	263.16424	156.37007	21.33373	1.96484	0.1833920	0.28824139	2.2696827	20	—	—
382853 2004 ER ₈₈	17.7	X	213.96435	140.86292	62.50659	6.51219	0.1080287	0.28199928	2.3030536	20	—	—
382854 2004 EC ₉₆	16.0	X	333.78025	113.81546	55.98918	17.95113	0.2248407	0.17509600	3.1643552	20	—	—
382855 2004 ED ₉₆	17.0	X	235.30008	198.37078	347.45920	23.73553	0.1207082	0.28241337	2.3008018	20	—	—
382856 2004 FK ₂₈	16.2	X	332.02796	190.10194	43.78581	1.43962	0.1831167	0.18334403	3.0687266	20	3 16.3	19.8
382857 2004 FY ₂₈	17.7	X	153.96105	85.79511	33.21825	22.43882	0.0453929	0.38101751	1.8843985	20	7 17.5	20.4
382858 2004 FE ₄₂	17.1	X	222.62286	131.22931	78.02088	6.34926	0.0483390	0.28657428	2.2784766	20	—	—
382859 2004 FE ₈₃	17.8	X	258.25019	310.48590	177.52642	1.36973	0.1036402	0.27952134	2.3166445	20	11 29.6	20.1
382860 2004 FT ₈₄	17.5	X	204.01162	32.55169	168.13524	5.43302	0.0362128	0.28047103	2.3114121	20	—	—
382861 2004 FZ ₉₆	16.2	X	19.45242	63.82381	127.73553	9.60026	0.2045777	0.18711009	3.0274100	20	4 24.2	19.4
382862 2004 FS ₉₇	17.3	X	259.29207	78.41850	134.48493	8.01912	0.2309282	0.29035214	2.2586695	20	—	—
382863 2004 FD ₁₀₉	17.4	X	220.30750	139.13510	47.90068	1.96228	0.0536485	0.28117787	2.3075367	20	—	—
382864 2004 FP ₁₂₅	17.7	X	297.23068	145.59341	1.33390	2.24510	0.1366238	0.28857137	2.2679522	20	—	—
382865 2004 FV ₁₂₇	17.2	X	28.42461	61.13945	120.18926	0.74393	0.2184975	0.18637783	3.0353344	20	4 25.8	20.2
382866 2004 FM ₁₅₅	16.1	X	42.01710	90.58658	13.02359	10.21487	0.1142232	0.17851962	3.1237678	20	2 2.6	20.1
382867 2004 FT ₁₆₆	15.3	X	292.36475	316.14608	290.96789	15.01532	0.1773150	0.17679259	3.1440783	20	2 5.7	20.0
382868 2004 GK ₁₄	17.1	X	151.41750	140.96043	70.33862	7.98392	0.1457564	0.2704				

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>
382881 2004 LV ₁₁	15.8	X	262.91940	234.86820	106.23846	18.57694	0.3236182	0.23548952	2.5970979	20	4 21.7	20.5
382882 2004 LV ₂₆	17.5	X	263.40321	208.20741	119.57773	24.54993	0.0896826	0.36088295	1.9538526	20	4 29.4	20.4
382883 2004 ML ₈	16.4	X	308.38666	177.17514	139.26109	13.53382	0.1410362	0.24085579	2.5583777	20	6 4.6	19.6
382884 2004 NZ ₂₂	15.9	X	232.93015	37.18853	314.63981	12.15258	0.2578966	0.22953631	2.6418112	20	3 31.6	20.8
382885 2004 NY ₂₅	17.2	X	9.86288	181.84600	132.10071	9.10563	0.1910795	0.25213753	2.4814816	20	10 11.6	19.8
382886 2004 PT ₂₆	17.5	X	353.39855	155.55131	144.73809	24.65643	0.0389076	0.37027403	1.9206750	20	8 17.1	18.9
382887 2004 PJ ₂₇	16.9	X	297.84320	271.02381	110.16306	8.04597	0.1472693	0.24729282	2.5137864	20	8 20.6	19.5
382888 2004 PD ₄₀	17.0	X	220.13404	29.37061	332.12060	9.36037	0.3231861	0.22792458	2.6542507	20	4 2.6	22.0
382889 2004 PG ₅₄	16.8	X	254.87849	58.32952	293.12838	3.88551	0.1750219	0.23443425	2.6048857	20	5 1.5	20.6
382890 2004 PW ₅₅	16.8	X	245.41954	8.27718	341.11113	12.82506	0.2999738	0.22988157	2.6391654	20	4 5.9	21.5
382891 2004 PK ₆₃	17.3	X	34.34588	210.82918	126.04343	7.30537	0.1093011	0.25809421	2.4431523	20	12 5.3	20.5
382892 2004 PN ₈₅	16.3	X	200.96702	255.58295	169.70601	17.79880	0.2818413	0.22897763	2.6461066	20	6 11.2	21.4
382893 2004 PC ₈₈	16.3	X	198.28040	109.06067	327.60823	28.18007	0.4315687	0.23112910	2.6296602	20	6 21.4	22.0
382894 2004 PK ₉₅	16.5	X	239.32432	89.81041	273.86136	10.23050	0.2868545	0.23242160	2.6199020	20	4 20.5	21.3
382895 2004 QS ₉	17.3	X	280.84163	226.90483	95.65211	4.94310	0.2865970	0.23556023	2.5965782	20	4 12.6	21.1
382896 2004 QM ₁₇	16.0	X	261.98380	37.27370	311.36229	29.90739	0.2191182	0.23263238	2.6183193	20	4 14.8	20.8
382897 2004 QZ ₁₈	16.5	X	251.12940	72.03557	270.95114	13.89010	0.2987963	0.22968496	2.6406713	20	4 1.3	21.3
382898 2004 QJ ₁₉	16.2	X	266.45123	300.80262	46.46225	14.37138	0.2133377	0.23710088	2.5853178	20	5 5.7	19.9
382899 2004 QM ₂₇	17.4	X	225.08076	219.95120	132.83003	6.39601	0.2809003	0.22650776	2.6653075	20	4 3.5	22.1
382900 2004 RH ₈	17.0	X	221.04730	173.79311	224.26747	8.42547	0.1275791	0.23269216	2.6178708	20	6 1.4	20.9
382901 2004 RY ₆₈	17.3	X	244.70681	181.37913	167.20332	2.03685	0.2284209	0.23102484	2.6304513	20	4 15.1	21.5
382902 2004 RN ₇₁	17.4	X	227.11045	244.91948	95.26464	4.10472	0.3086108	0.22671001	2.6637221	20	3 19.6	22.3
382903 2004 RB ₇₇	16.9	X	288.32361	305.04486	39.96230	6.09104	0.2598824	0.23691047	2.5867029	20	5 21.4	20.8
382904 2004 RT ₈₁	17.4	X	226.11224	225.41802	197.08433	3.64780	0.2343695	0.23496715	2.6009457	20	6 28.1	21.8
382905 2004 RD ₁₀₅	16.7	X	266.62786	11.70657	330.87086	12.82037	0.1953695	0.23266966	2.6180396	20	4 25.8	20.8
382906 2004 RM ₁₂₀	17.3	X	267.36297	3.99032	3.29170	3.35895	0.2079459	0.23725393	2.5842058	20	6 2.1	20.9
382907 2004 RZ ₁₃₉	17.1	X	235.42956	223.27814	164.55829	11.08149	0.3106003	0.23216727	2.6218151	20	5 21.4	21.8
382908 2004 RY ₁₅₈	17.0	X	245.58452	163.03267	207.54091	6.02518	0.2207664	0.23239780	2.6200810	20	5 14.1	21.1
382909 2004 RF ₁₆₈	17.2	X	283.89296	115.71612	207.16118	7.00262	0.2014901	0.23610801	2.5925605	20	4 25.9	20.7
382910 2004 RL ₁₉₀	16.7	X	184.18064	134.97301	217.55867	12.63911	0.2696181	0.21921156	2.7241253	20	2 28.8	21.8
382911 2004 RA ₁₉₁	16.8	X	227.55115	53.28652	330.95276	10.99594	0.3098874	0.22947891	2.6422517	20	5 4.5	21.7
382912 2004 RR ₁₉₄	16.5	X	254.12640	20.63081	347.65075	14.68143	0.2904840	0.23223695	2.6212906	20	5 5.8	21.1
382913 2004 RA ₁₉₆	17.3	X	255.23673	86.94274	297.62198	4.59321	0.3181431	0.23465550	2.6032481	20	5 29.9	21.7
382914 2004 RK ₁₉₉	16.4	X	247.61112	5.18290	354.96353	13.09232	0.2974763	0.22962170	2.6411562	20	4 20.9	21.2
382915 2004 RJ ₂₀₀	16.3	X	232.43176	343.62451	13.38756	13.12792	0.1939355	0.22587163	2.6703094	20	4 14.8	20.6
382916 2004 RX ₂₀₇	16.4	X	233.76595	107.64052	268.32775	14.05701	0.1491689	0.23222676	2.6213673	20	5 13.4	20.5
382917 2004 RP ₂₁₄	16.3	X	244.42816	80.72539	243.90277	11.13062	0.2309519	0.22726125	2.6594130	20	3 11.3	21.1
382918 2004 RU ₂₁₇	16.6	X	219.77274	69.90686	299.99183	10.77260	0.1758604	0.22651408	2.6652580	20	4 16.9	21.2
382919 2004 RS ₂₄₅	16.9	X	146.80865	235.93098	12.07161	5.06639	0.1863558	0.26192844	2.4192511	20	12 11.9	20.9
382920 2004 RO ₂₄₉	17.3	X	243.80664	81.90139	321.92641	6.45574	0.2024618	0.23653520	2.5894381	20	6 25.8	21.3
382921 2004 RE ₂₅₄	16.4	X	215.08600	282.29986	73.51464	12.34241	0.2019727	0.22597972	2.6694579	20	4 6.0	21.1
382922 2004 RW ₃₂₄	17.2	X	219.34337	60.47178	337.59633	11.86485	0.2788550	0.22915384	2.6447500	20	5 17.5	22.1
382923 2004 RZ ₃₃₉	16.8	X	253.40723	138.12479	238.67286	9.16602	0.1440023	0.23709162	2.5853852	20	6 7.6	20.5
382924 2004 RJ ₃₄₁	16.5	X	300.24490	58.10422	271.11467	13.90460	0.1301658	0.23589007	2.5941571	20	6 8.5	19.7
382925 2004 SJ ₅₂	17.2	X	245.73992	78.97144	286.17057	4.26173	0.2132015	0.23232163	2.6206536	20	5 6.0	21.4
382926 2004 SL ₅₃	17.3	X	233.65456	184.37359	203.63116	3.87558	0.2035126	0.23179631	2.6246115	20	5 26.2	21.5
382927 2004 TG ₁₃	16.0	X	209.84965	193.80453	257.28614	21.62362	0.0588606	0.23898888	2.5716839	20	7 26.6	20.1
382928 2004 TA ₅₉	16.9	X	254.86373	157.68099	179.96138	2.14336	0.2224372	0.22981313	2.6396894	20	4 11.2	20.9
382929 2004 TP ₅₉	16.6	X	201.48546	253.13928	185.88007	12.49876	0.1547490	0.23268633	2.6179146	20	7 1.4	21.0
382930 2004 TO ₆₁	16.1	X	106.28961	40.92540	15.28737	29.44092	0.2475577	0.21279564	2.7786098	20	3 21.9	20.4
382931 2004 TD ₇₉	15.8	X	263.78782	85.51863	250.07577	11.88438	0.2138016	0.22940862	2.6427915	20	4 14.7	20.0
382932 2004 TU ₉₅	16.3	X	256.33629	312.33010	24.40441	15.16923	0.1578487	0.22786909	2.6546816	20	4 17.3	20.3
382933 2004 TT ₁₁₉	16.6	X	328.47901	58.19653	243.77883	11.10288	0.1934041	0.23752062	2.5822711	20	6 9.9	19.1
382934 2004 TM ₁₄₄	17.2	X	235.41407	207.30802	173.03925	2.32009	0.2637199	0.22972956	2.6403295	20	5 13.6	21.5
382935 2004 TP ₁₅₅	15.1	X	322.08472	44.93981	28.16873	9.04264	0.1430440	0.12670689	3.9258698	20	11 11.2	19.9
382936 2004 TQ ₁₅₈	16.8	X	170.74746	108.83284	28.86288	15.51603	0.0821439	0.23520688	2.5991781	20	8 26.8	20.9
382937 2004 TK ₁₇₅	16.6	X	240.78866	352.20965	30.67681	14.30649	0.2191219	0.23089254	2.6314560	20	5 21.5	20.9
382938 2004 TK ₁₉₄	16.6	X	175.24784	248.09135	220.78925	10.84522	0.2580564	0.22861567	2.6488989	20	7 12.2	21.5
382939 2004 TS ₂₄₀	16.3	X	214.17000	148.06287	244.64576	11.62680	0.1597176	0.22794078	2.6541250	20	5 15.9	20.5
382940 2004 TM ₂₄₁	16.7	X	204.99070	128.61329	307.67726	7.41538	0.1478819	0.23187354	2.6240288	20	7 3.4	20.8
382941 2004 TV ₂₇₇	17.3	X	227.34837	191.99085	191.16591	3.65142	0.2705001	0.22792303	2.6542627	20	5 10.3	22.0
382942 2004 TD ₂₈₇	16.5	X	219.87449	330.83470	51.47173	4.82806	0.1933765	0.22707232	2.6608879	20	5 6.8	20.8
382943 2004 TU ₃₀₉	16.5	X	250.59463	155.16850	256.95953	8.05449	0.1071430	0.23673581	2.5879750	20	7 24.9	20.1
382944 2004 TA ₃₁₆	16.4	X	3.44520	9.26742	195.39241	15.11868	0.0874870	0.22269596	2.6956354	20	4 2.7	19.4
382945 2004 TM ₃₃₃	17.2	X	212.26986	243.51454	218.37751	9.97048	0.0712333	0.23576966	2.5950403	20	8 15.9	21.1
382946 2004 TW ₃₃₅	16.9	X	167.23373	234.63109	215.78938	4.48385	0.0878822	0.22555755	2.6727877	20	6 13.1	20.8
382947 2004 TQ ₃₄₃	17.0	X	276.11063	234.93227	117.15787	1.24000	0.3454773	0.23459646	2.6036848	20	5 6.1	21.0
382948 2004 TP ₃₅₇	17.0	X	243.82864	121.70577	225.56689	9.20597	0.1636595	0.22587211	2.6703056	20	4 16.7	21.2
382949 2004 UA ₅	16.8	X	231.57639	96.57854	276.42367	13.97960	0.1852924	0.22948693	2.6421902	20	5 2.9	21.2
382950 2004 VP ₁₀	16.5	X	230.86067	16.60580	22.27803	17.60072	0.2206611	0.22963563	2.6410494	20	5 31.2	21.0
382951 2004 VB ₁₁	16.4	X	226.67464	354.40982	3.06160	14.34825	0.2635646	0.22481096	2.6787019	20	4 6.1	21.1
382952 2004 VA ₁₃	16.3	X	267.18113	264.08362	84.95309	13.72915	0.3069696	0.23084043	2.6318520	20	5 2.9	20.6
382953 2004 VH ₁₆	17.3	X	1									

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
382961	2004	XX ₂₃	16.2	X	203.76993	172.30620	279.84625	13.21628	0.2477624	0.22760224	2.6567561	20	7 15.1	20.8
382962	2004	XK ₄₀	16.4	X	172.52263	107.89051	336.96599	13.79968	0.2542000	0.22231534	2.6987113	20	6 12.3	21.4
382963	2004	XS ₄₄	15.8	X	310.17994	69.19648	255.36392	11.97863	0.2904650	0.23310743	2.6147608	20	5 20.9	18.8
382964	2004	XH ₅₈	16.4	X	173.65208	31.52750	17.39100	5.12913	0.1593616	0.21564536	2.7540763	20	4 28.5	20.9
382965	2004	XQ ₉₂	16.7	X	190.44628	174.20256	285.72646	4.50017	0.1778060	0.22777327	2.6554260	20	7 17.3	21.1
382966	2004	XX ₉₆	16.9	X	219.00763	89.26436	291.71408	12.16790	0.2387605	0.22083533	2.7107555	20	4 27.8	21.8
382967	2004	XQ ₁₂₀	16.8	X	201.10167	98.26637	309.31267	2.82964	0.2081699	0.22336579	2.6902436	20	5 20.5	21.5
382968	2004	XH ₁₂₂	17.1	X	255.15115	127.95325	258.09934	5.28010	0.2355201	0.22990815	2.6389620	20	6 10.2	20.8
382969	2004	XH ₁₃₃	16.5	X	139.58228	174.25815	301.85161	4.01826	0.1154959	0.22106717	2.7088599	20	6 17.7	20.7
382970	2004	XE ₁₃₅	16.2	X	140.72782	13.78732	71.73993	11.51196	0.1457325	0.21649740	2.7468457	20	5 14.6	20.4
382971	2005	AX ₁₂	16.2	X	155.80211	201.30931	298.78292	15.59080	0.0926788	0.22354898	2.6887737	20	8 2.4	20.2
382972	2005	AK ₂₆	16.4	X	187.19849	346.21703	99.99725	10.66520	0.2062780	0.22153434	2.7050503	20	6 26.5	21.0
382973	2005	AP ₃₄	16.3	X	130.08354	2.14001	124.14239	10.12828	0.0950216	0.21610570	2.7501638	20	6 19.3	20.5
382974	2005	AN ₄₀	16.5	X	161.04993	165.22989	316.66941	11.13111	0.1619211	0.22113548	2.7083021	20	7 19.7	21.0
382975	2005	AL ₅₉	16.9	X	161.90488	129.56376	316.02856	3.88186	0.1326517	0.21634203	2.7481606	20	6 1.8	21.2
382976	2005	AG ₆₂	16.7	X	111.31305	169.24043	325.21281	7.04475	0.1881220	0.21265906	2.7797994	20	6 18.2	21.1
382977	2005	AY ₇₀	16.7	X	180.78643	319.56141	303.22435	5.99805	0.1247248	0.21543953	2.7558302	20	5 24.2	21.0
382978	2005	BW ₇₂	16.1	X	126.38819	245.75892	315.30526	11.87347	0.2080172	0.22415398	2.6839335	20	9 20.2	20.7
382979	2005	BK ₁₄	17.2	X	107.33789	82.92611	85.47486	8.40000	0.2220394	0.21625319	2.7489133	20	8 1.3	21.6
382980	2005	BD ₄₆	16.9	X	5.44582	287.63385	317.17783	2.40963	0.0385476	0.21391854	2.7688776	20	5 31.9	20.3
382981	2005	CA ₂	16.1	X	187.43729	147.46221	308.98768	11.18822	0.1399124	0.21916125	2.7245422	20	7 12.3	20.4
382982	2005	CR ₁₅	16.7	X	155.34569	10.42891	132.25781	9.69014	0.1439817	0.22189170	2.7021451	20	8 8.1	21.1
382983	2005	CS ₁₉	16.6	X	212.44310	281.20924	141.88116	13.35287	0.2629382	0.22283263	2.6945331	20	6 17.5	21.5
382984	2005	CU ₂₁	17.0	X	175.59652	287.95192	140.96839	9.68133	0.2300849	0.21690517	2.7434020	20	5 28.7	21.9
382985	2005	CV ₂₆	15.9	X	76.84347	90.40422	148.38046	25.24586	0.1190748	0.22009214	2.7168544	20	9 17.8	19.9
382986	2005	CM ₃₇	16.4	X	125.26983	40.42920	132.68277	15.04459	0.1267680	0.22041146	2.7142297	20	8 16.7	20.6
382987	2005	EW ₁₀	16.8	X	99.40667	192.89992	335.91073	8.14258	0.1990767	0.21153732	2.7896179	20	7 22.6	21.1
382988	2005	ED ₄₁	15.9	X	324.16772	20.22114	317.11035	13.22917	0.1280450	0.22399718	2.6851858	20	8 2.1	18.7
382989	2005	EE ₅₀	16.6	X	123.83243	21.18417	155.38418	10.67652	0.1195737	0.21714576	2.7413752	20	8 17.4	20.9
382990	2005	EN ₇₃	16.8	X	80.33655	72.50244	131.74712	3.25799	0.1222027	0.21375636	2.7702780	20	8 4.5	20.6
382991	2005	EJ ₈₈	16.8	X	138.87007	343.72835	134.23125	2.99659	0.2020404	0.21342831	2.7731159	20	6 24.6	21.3
382992	2005	EV ₁₅₇	16.7	X	324.40853	269.62073	298.40839	0.68124	0.0546172	0.19281441	2.9674020	20	2 16.3	20.7
382993	2005	ED ₁₉₀	17.1	X	173.40064	340.36985	172.79540	3.80410	0.1619107	0.22629733	2.6669596	20	9 6.9	21.5
382994	2005	EY ₂₉₁	16.1	X	172.36620	24.43145	123.26151	10.08746	0.1847607	0.22084697	2.7106603	20	8 31.8	20.6
382995	2005	GO ₁₀	16.8	X	112.15683	67.43955	130.47104	2.71268	0.1805279	0.21587532	2.7521201	20	9 7.4	21.2
382996	2005	GR ₂₂₇	17.6	X	179.87197	111.49655	136.45282	6.90789	0.1842409	0.29969168	2.2114965	20	—	—
382997	2005	HY ₃	17.6	X	6.13219	74.22094	61.53139	10.92654	0.2120577	0.31740580	2.1284305	20	—	—
382998	2005	JL ₁₉	16.0	X	281.47053	168.98129	73.07087	15.08041	0.1383928	0.18366026	3.0652031	20	1 29.1	20.7
382999	2005	JS ₈₀	15.5	X	321.30338	127.61524	85.87417	10.43438	0.0597966	0.18935204	3.0034660	20	2 22.9	19.7
383000	2005	JH ₁₀₇	15.8	X	172.43138	85.73004	214.91308	10.58301	0.1070082	0.17404746	3.1770515	20	—	—
383001	2005	JO ₁₃₃	15.6	X	1.39948	69.04543	82.81853	11.70702	0.0315168	0.18205701	3.0831722	20	2 1.9	19.9
383002	2005	JW ₁₃₇	15.7	X	203.36196	184.44362	81.85144	17.92964	0.1593712	0.17179908	3.2047107	20	—	—
383003	2005	JW ₁₄₉	15.8	X	184.61188	206.49542	75.75229	17.29832	0.0391915	0.17265011	3.1941708	20	—	—
383004	2005	LA ₉	16.1	X	188.15649	220.78572	144.52304	9.22588	0.1417361	0.18510157	3.0492707	20	3 24.6	21.0
383005	2005	LR ₁₀	17.1	X	101.77632	147.83158	114.70073	6.57611	0.2438798	0.28267835	2.2993638	20	11 28.6	21.0
383006	2005	LE ₁₉	17.7	X	323.44958	154.50453	181.97297	5.91216	0.3673689	0.26452352	2.4034026	20	6 25.6	19.1
383007	2005	LT ₃₈	16.1	X	217.49860	52.64385	215.69026	10.24502	0.1554511	0.17360263	3.1824763	20	—	—
383008	2005	LU ₄₇	17.7	X	17.03002	122.06172	241.06791	1.42480	0.2439708	0.27647476	2.3336321	20	—	—
383009	2005	ML ₁₁	16.1	X	183.55663	166.18199	168.57093	10.93056	0.1533758	0.17749768	3.1357464	20	2 11.3	21.2
383010	2005	MY ₁₂	16.0	X	29.89384	13.77185	293.63973	24.03443	0.1928455	0.27159855	2.3614808	20	10 24.8	19.5
383011	2005	MS ₁₇	17.1	X	45.22874	176.94587	122.84667	7.46605	0.1342371	0.27288069	2.3540780	20	11 8.9	20.2
383012	2005	MF ₂₇	17.3	X	118.97951	175.41600	123.28999	8.60398	0.1506820	0.28694207	2.2765292	20	—	—
383013	2005	MS ₃₀	17.2	X	352.46917	82.76653	248.89988	4.14978	0.2126840	0.26653681	2.3912845	20	10 2.7	19.0
383014	2005	ML ₃₁	16.6	X	282.73615	101.94449	160.75435	7.28088	0.2311913	0.17981309	3.1087695	20	2 9.7	21.5
383015	2005	MS ₃₅	15.6	X	236.68358	193.80221	117.03183	10.74950	0.0593848	0.17725286	3.1386330	20	3 12.7	20.4
383016	2005	ME ₃₉	17.2	X	7.31255	13.19980	312.69708	4.64041	0.2493751	0.26893259	2.3770616	20	11 1.5	19.5
383017	2005	MW ₄₂	17.2	X	38.56111	199.05096	134.26262	3.01551	0.2215921	0.27528865	2.3403304	20	12 24.5	20.4
383018	2005	MD ₄₃	17.1	X	30.23634	64.33622	303.64312	6.14609	0.1356540	0.27930396	2.3178464	20	—	—
383019	2005	NR ₉	16.1	X	260.07691	147.68115	131.28377	18.12073	0.1907689	0.17739737	3.1369283	20	2 13.3	21.0
383020	2005	NW ₁₄	17.4	X	339.05787	274.72664	96.02904	2.59190	0.1975802	0.27060535	2.3672555	20	11 7.1	19.0
383021	2005	NY ₁₇	16.7	X	36.55479	199.50605	140.44154	9.71573	0.2867419	0.27486310	2.3427454	20	—	—
383022	2005	NC ₂₀	16.9	X	75.31676	37.39321	282.45990	11.08743	0.2346392	0.28194792	2.3033333	20	—	—
383023	2005	NJ ₄₃	17.3	X	61.92467	22.76198	262.55695	5.15737	0.1295055	0.27402861	2.3474991	20	11 5.7	20.5
383024	2005	NQ ₅₀	17.5	X	291.32641	172.39523	280.12274	5.48283	0.0498642	0.27907931	2.3190901	20	12 7.0	19.9
383025	2005	ND ₅₅	16.4	X	344.09385	97.71640	139.95543	11.45340	0.1844236	0.18721705	3.0262569	20	4 15.6	19.9
383026	2005	NV ₆₁	17.5	X	313.43206	267.32884	118.83657	2.95810	0.2848726	0.26506104	2.4001522	20	9 18.1	18.5
383027	2005	NQ ₇₄	17.8	X	7.24891	234.67834	313.09079	1.65610	0.1968071	0.27521435	2.3407516	20	12 23.7	20.3
383028	2005	NK ₇₆	17.4	X	336.06557	92.17945	268.24903	6.00821	0.1340698	0.26889375	2.3772905	20	10 4.3	19.7
383029	2005	NM ₉₈	15.9	X	332.55255	267.19801	306.65588	15.00691	0.1903413	0.18085742	3.0967905	20	2 15.6	19.8
383030	2005	NL ₁₂₃	17.4	X	18.70381	170.64043	184.69920							

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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>	
383041	2005	QQ ₃₂	15.2 ^m	X	226.10889	30.05079	290.73276	26.36278	0.1304746	0.17571332	3.1569395	20 2 21.3	20.6
383042	2005	QZ ₃₉	17.3	X	353.77250	94.67370	272.68045	6.40079	0.2384438	0.26952285	2.3735897	20 12 8.3	19.3
383043	2005	QA ₄₉	17.6	X	334.51193	300.78646	92.54340	3.62246	0.1831340	0.26865048	2.3787254	20 11 29.9	19.4
383044	2005	QY ₅₁	17.0	X	29.59646	24.01481	301.87024	4.94991	0.2362201	0.27210606	2.3585436	20 12 5.4	20.1
383045	2005	QK ₅₅	17.4	X	28.28322	297.27123	40.83668	2.92466	0.2341094	0.27187653	2.3598709	20 12 19.8	20.3
383046	2005	QT ₅₇	16.8	X	324.55724	69.53845	342.00748	5.74691	0.1173044	0.27074492	2.3664418	20 11 30.9	19.1
383047	2005	QA ₆₀	17.6	X	326.12353	213.29138	186.93840	0.80025	0.1838504	0.26708976	2.3879830	20 11 21.0	19.3
383048	2005	QL ₆₂	17.7	X	339.39539	27.69280	354.71526	6.70771	0.1222255	0.26955715	2.3733884	20 11 14.0	20.1
383049	2005	QA ₆₅	17.3	X	285.14918	12.64166	41.34239	4.93890	0.2319425	0.26094176	2.4253457	20 9 4.4	19.7
383050	2005	QO ₆₆	17.4	X	299.80755	337.64819	55.45077	3.03232	0.2014174	0.26132412	2.4229794	20 9 5.8	19.5
383051	2005	QJ ₆₉	16.7	X	8.55951	288.32106	47.52883	5.51045	0.2628029	0.26873348	2.3782355	20 11 22.5	19.0
383052	2005	QA ₉₀	17.5	X	314.68746	254.48560	151.08823	1.64340	0.1850963	0.26852149	2.3794871	20 11 3.4	19.2
383053	2005	QU ₁₀₀	17.2	X	229.87675	313.41608	134.69407	6.95745	0.1056641	0.29832015	2.2182696	20 —	—
383054	2005	QU ₁₀₅	17.7	X	299.37128	256.14240	93.45249	2.59492	0.2024207	0.25714352	2.4491704	20 6 25.4	20.2
383055	2005	QU ₁₂₅	15.7	X	32.02979	30.44286	163.07763	12.12850	0.0546136	0.17894602	3.1188036	20 5 7.5	20.0
383056	2005	QH ₁₂₉	17.1	X	337.97251	279.05306	143.32195	7.02351	0.0854539	0.27561592	2.3384774	20 —	—
383057	2005	QV ₁₃₇	17.8	X	7.36143	210.66910	140.03785	2.90883	0.2383145	0.26894759	2.3769732	20 12 8.3	20.2
383058	2005	QC ₁₄₀	17.7	X	77.12755	309.71236	358.12705	5.33765	0.1301767	0.27576731	2.3376215	20 12 23.2	21.1
383059	2005	QY ₁₄₅	17.0	X	303.43782	312.12942	101.23537	8.81342	0.1878525	0.26504665	2.4002391	20 10 23.5	19.1
383060	2005	QV ₁₄₆	17.2	X	337.79853	311.55603	49.83809	3.06572	0.2180895	0.26657898	2.3910323	20 10 18.1	18.6
383061	2005	QA ₁₅₈	17.2	X	322.72452	220.11022	132.05354	5.23700	0.1508284	0.26042247	2.4285688	20 8 25.8	19.3
383062	2005	QO ₁₆₁	17.5	X	293.19390	0.14685	73.64494	3.05624	0.1815543	0.26629238	2.3927476	20 10 29.9	19.3
383063	2005	QO ₁₇₂	17.3	X	293.27417	128.31471	305.83670	4.38969	0.1947739	0.26559808	2.3969157	20 10 25.0	19.4
383064	2005	QG ₁₇₈	17.7	X	351.21264	202.96841	189.50610	1.58705	0.1433367	0.27148012	2.3621675	20 12 25.6	20.2
383065	2005	QJ ₁₈₁	17.3	X	298.28949	311.36009	107.28073	3.72542	0.1446224	0.26576831	2.3958921	20 10 21.9	19.4
383066	2005	QF ₁₈₃	17.7	X	325.26863	214.88797	174.49409	2.17795	0.2042661	0.26570211	2.3962900	20 11 2.2	19.2
383067	2005	Stoofke	17.2	X	298.31965	92.04615	308.67777	4.82109	0.1778167	0.26152799	2.4217200	20 9 14.1	19.5
383068	2005	RX ₉	16.3	X	297.27739	166.92040	233.45697	6.69347	0.2703490	0.26075088	2.4265292	20 8 24.5	18.6
383069	2005	RH ₁₀	17.3	X	351.73665	349.95901	349.40486	6.37815	0.1521267	0.26540755	2.3980627	20 10 5.9	19.5
383070	2005	RE ₃₀	17.5	X	350.47032	26.91661	328.15309	5.72028	0.1678708	0.26651898	2.3913912	20 10 28.9	19.7
383071	2005	RQ ₄₀	17.1	X	292.11039	148.69788	230.43114	3.97683	0.2039530	0.25784048	2.4447548	20 7 25.9	19.7
383072	2005	RQ ₄₁	17.6	X	326.06856	292.85502	98.05019	2.89326	0.1910773	0.26625695	2.3929599	20 11 6.8	19.4
383073	2005	RJ ₄₄	17.0	X	348.48638	319.17172	45.65250	9.08009	0.1490931	0.26639171	2.3921528	20 11 9.2	19.0
383074	2005	SP ₂	17.4	X	330.93292	36.93915	318.96057	3.96899	0.2388759	0.26385732	2.4074463	20 9 17.0	18.9
383075	2005	SY ₅	17.5	X	329.60937	148.45613	241.18485	1.64434	0.1927455	0.26530704	2.3986683	20 11 11.7	19.2
383076	2005	SE ₂₉	17.3	X	113.08207	259.59449	343.57027	6.09666	0.0676723	0.26678643	2.3897927	20 10 31.8	20.7
383077	2005	SD ₄₁	17.5	X	346.97556	308.35467	15.92197	2.80961	0.2095427	0.26058922	2.4275327	20 9 7.4	19.2
383078	2005	SO ₄₉	17.6	X	232.38593	83.10397	24.63156	3.96109	0.0922384	0.25907542	2.4369797	20 9 23.4	20.7
383079	2005	SR ₅₃	17.1	X	342.01143	162.66419	217.98807	7.35406	0.1578386	0.26623441	2.3930949	20 11 22.3	19.2
383080	2005	ST ₆₅	17.6	X	2.01104	83.34171	261.76968	4.12146	0.2693045	0.26677509	2.3898604	20 11 25.3	19.8
383081	2005	SY ₆₈	17.3	X	261.30711	46.96836	13.99841	4.16528	0.1686738	0.25656612	2.4528435	20 8 16.8	20.4
383082	2005	SM ₇₁	17.3	X	268.79957	67.45215	354.42048	3.20807	0.2108589	0.25987504	2.4319782	20 8 21.3	20.0
383083	2005	SP ₇₉	18.0	X	314.42375	233.53028	153.13277	1.58179	0.1944516	0.26264516	2.4148479	20 9 29.5	19.5
383084	2005	SH ₈₀	17.9	X	321.00563	272.62637	142.05224	1.80468	0.1759068	0.26794330	2.3829089	20 12 2.4	19.7
383085	2005	SR ₈₂	17.7	X	306.90101	172.83042	215.34989	0.80124	0.1922867	0.26103866	2.4247455	20 9 12.7	19.6
383086	2005	SQ ₈₂	17.6	X	277.45378	189.33858	208.06368	2.75111	0.1841838	0.25659194	2.4526790	20 8 1.4	20.4
383087	2005	SV ₈₆	17.8	X	286.43128	243.50423	176.99676	3.22865	0.1107427	0.26259157	2.4151764	20 10 4.3	20.3
383088	2005	SG ₈₈	17.4	X	91.21266	328.10093	333.53919	3.90187	0.1445847	0.27465411	2.3439336	20 12 30.5	20.9
383089	2005	SV ₈₈	17.2	X	353.12622	151.60363	236.89181	1.78385	0.2054480	0.26883249	2.3776516	20 —	—
383090	2005	SJ ₉₀	17.7	X	278.46884	231.12378	216.82519	1.68077	0.1520421	0.26328878	2.4109108	20 10 24.6	20.1
383091	2005	SW ₉₂	17.3	X	291.14348	231.82690	203.32803	5.46706	0.1147300	0.26474079	2.4020874	20 11 3.5	19.7
383092	2005	ST ₁₀₁	17.5	X	235.01702	151.36037	280.24162	3.56446	0.1591782	0.25277322	2.4773194	20 7 27.9	21.1
383093	2005	ST ₁₀₁	17.1	X	326.24988	85.71665	327.47527	4.28127	0.1492815	0.26767700	2.3844891	20 12 8.5	19.2
383094	2005	SS ₁₀₇	17.4	X	331.76252	76.20576	234.77307	9.03907	0.2794276	0.25812826	2.4429374	20 6 21.3	18.9
383095	2005	SA ₁₀₉	17.2	X	273.87392	284.67341	199.98688	7.77452	0.0654402	0.27161333	2.3613951	20 12 21.5	19.9
383096	2005	SY ₁₁₇	17.1	X	1.82584	243.08427	99.90640	6.63823	0.2294946	0.26652561	2.3913515	20 11 16.9	19.4
383097	2005	SS ₁₃₆	17.8	X	306.68199	270.50143	174.89633	3.11311	0.1446958	0.27081107	2.3660565	20 12 19.1	19.7
383098	2005	SC ₁₃₈	16.1	X	325.79941	154.70055	227.38584	12.64489	0.2824666	0.26420333	2.4053440	20 10 20.7	17.2
383099	2005	SX ₁₄₅	17.6	X	281.49272	330.42522	101.72334	2.55542	0.1573135	0.26298778	2.4127501	20 10 7.3	20.1
383100	2005	SY ₁₅₀	17.7	X	77.39264	274.14410	29.57193	6.62700	0.1325278	0.27204593	2.3588911	20 12 17.1	21.1
383101	2005	SJ ₁₅₄	17.6	X	99.68924	46.45432	240.61261	2.15191	0.1017481	0.27430424	2.3459263	20 12 18.1	20.8
383102	2005	SJ ₁₆₅	17.4	X	318.59127	335.33777	36.05734	1.99012	0.2140410	0.26198578	2.4188981	20 9 12.7	19.0
383103	2005	SC ₁₇₀	16.8	X	307.30682	173.90958	217.64679	7.51681	0.2645055	0.26219230	2.4176277	20 9 5.5	18.7
383104	2005	SA ₁₇₀	17.1	X	251.40699	260.94290	247.16007	5.24837	0.0744732	0.27288392	2.3540594	20 12 19.1	19.6
383105	2005	SY ₁₈₈	18.1	X	299.20859	217.45416	182.75672	0.96940	0.1918866	0.26020392	2.4299285	20 9 15.1	20.2
383106	2005	SG ₁₉₀	17.4	X	354.96006	250.11918	120.92906	1.65164	0.2285336	0.26729231	2.3867765	20 12 13.7	19.6
383107	2005	SO ₁₉₂	17.3	X	296.59897	226.20663	186.43550	2.13213	0.1676988	0.26063268	2.4272628	20 10 3.1	19.4
383108	2005	SE ₂₀₀	17.5	X	279.06700	12.97221	24.43721	3.95119	0.2161608	0.25636813	2.4541062	20 7 31.9	20.3
383109	2005	SO ₂₀₃	17.6	X	350.38326	299.13627	62.51296	3.44872	0.2009473	0.26568810	2.3963743	20 11 15.6	19.7
383110	2005	SN ₂₂₁	17.5	X	309.93446	68.57446	7.51485	1.22577	0.1628226	0.26711875	2.3878102	20 12 9.9	19.3
383111	2005	SW ₂₂₄	17.3	X	294.54237	320.26754</							

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>
383121 2005 <i>TP</i> ₁₁	17.9	X	262.36373	265.89740	191.52036	4.45873	0.1970632	0.26078498	2.4263177	20	10 3.2	20.6
383122 2005 <i>TU</i> ₂₃	17.4	X	333.67520	331.70484	55.63932	3.15914	0.2074626	0.26702213	2.3883861	20	11 19.9	18.9
383123 2005 <i>TW</i> ₂₃	17.1	X	17.39642	69.64199	293.26222	5.63369	0.1430971	0.27027550	2.3691811	20	12 24.5	19.9
383124 2005 <i>TA</i> ₄₄	17.5	X	206.52377	213.62883	298.74721	1.76867	0.1159926	0.26582106	2.3955751	20	10 17.3	20.9
383125 2005 <i>TE</i> ₇₁	17.7	X	278.05680	246.40090	189.12161	0.98166	0.1656169	0.26102515	2.4248292	20	10 2.8	20.1
383126 2005 <i>TV</i> ₇₄	16.7	X	12.15998	104.16104	285.82356	6.39911	0.1164006	0.27322084	2.3521237	20	—	—
383127 2005 <i>TH</i> ₁₂₇	17.8	X	303.16530	134.68362	280.60610	0.50859	0.1450108	0.26337425	2.4103892	20	10 23.5	19.9
383128 2005 <i>TP</i> ₁₃₁	17.1	X	359.91380	280.72445	40.23860	4.36401	0.1879818	0.26056503	2.4276829	20	10 1.1	19.1
383129 2005 <i>TZ</i> ₁₅₄	17.2	X	272.68287	91.91565	348.32636	6.46521	0.1351326	0.26244385	2.4160826	20	10 4.0	19.9
383130 2005 <i>TE</i> ₁₇₉	17.9	X	320.94593	98.13807	301.49580	2.54835	0.1198724	0.26633726	2.3924788	20	11 4.9	20.2
383131 2005 <i>UX</i>	17.4	X	344.88783	245.88741	107.36016	3.52732	0.2479336	0.26483691	2.4015062	20	10 28.8	18.9
383132 2005 <i>UY</i> ₉	16.9	X	328.63149	318.08759	65.04498	7.27899	0.1060149	0.26321613	2.4113544	20	10 28.1	19.2
383133 2005 <i>US</i> ₂₇	17.4	X	333.19356	2.77213	29.24614	1.59306	0.1684614	0.26468868	2.4024027	20	11 21.2	19.3
383134 2005 <i>UT</i> ₃₁	17.8	X	220.90598	292.73522	204.31731	2.76675	0.1212534	0.25997001	2.4313858	20	10 13.3	21.1
383135 2005 <i>UJ</i> ₄₄	17.6	X	276.17396	289.14935	137.39410	2.28307	0.1554793	0.25796738	2.4439530	20	9 18.2	20.1
383136 2005 <i>US</i> ₅₂	17.0	X	294.75684	347.77861	45.82529	15.20997	0.1644352	0.25759035	2.4463372	20	9 9.9	19.8
383137 2005 <i>UT</i> ₅₅	17.8	X	193.22333	123.04801	260.99384	2.92999	0.2637651	0.23702322	2.5858825	20	4 14.2	22.4
383138 2005 <i>UT</i> ₉₂	16.8	X	123.69988	338.75888	236.10523	14.18998	0.1125813	0.25771772	2.4455311	20	10 6.2	20.7
383139 2005 <i>UF</i> ₉₆	17.3	X	353.70068	249.06388	105.49817	2.37739	0.1860326	0.26280527	2.4138670	20	11 9.0	19.3
383140 2005 <i>UN</i> ₁₀₃	17.7	X	250.89386	7.09466	86.57363	2.11146	0.1456314	0.25644310	2.4536279	20	9 20.4	20.6
383141 2005 <i>UQ</i> ₁₀₃	17.7	X	226.57337	301.20087	178.53156	2.35709	0.1511087	0.25585068	2.4574140	20	9 22.7	21.1
383142 2005 <i>UC</i> ₁₆₂	17.3	X	277.50157	292.38897	84.31999	7.08313	0.2612093	0.25292942	2.4762994	20	6 20.5	20.3
383143 2005 <i>UB</i> ₁₇₈	17.5	X	352.88643	276.06351	33.51107	6.70305	0.1312511	0.25309856	2.4751960	20	8 23.8	19.9
383144 2005 <i>UB</i> ₁₈₇	17.9	X	245.52972	67.36702	37.48698	1.92029	0.1370371	0.25688305	2.4508257	20	9 29.2	20.8
383145 2005 <i>UC</i> ₂₁₈	16.0	X	167.50602	20.21011	112.98540	12.38915	0.1683900	0.23599007	2.5934242	20	8 9.7	20.2
383146 2005 <i>UH</i> ₂₃₀	17.4	X	316.47249	328.32604	68.92165	3.51507	0.1602233	0.26124012	2.4234987	20	10 23.8	19.4
383147 2005 <i>UJ</i> ₂₃₄	17.5	X	187.31591	62.82039	132.41436	3.83349	0.0311836	0.26530047	2.3987079	20	12 1.1	20.6
383148 2005 <i>UZ</i> ₂₆₅	17.7	X	87.09559	199.38791	86.66683	3.45796	0.1767157	0.26670198	2.3902971	20	12 7.6	21.2
383149 2005 <i>UT</i> ₂₆₇	17.7	X	259.03354	338.81545	143.60473	2.04849	0.1364462	0.26287235	2.4134563	20	11 13.7	20.4
383150 2005 <i>UT</i> ₂₈₅	17.5	X	324.86420	271.21841	71.68438	5.78460	0.1800328	0.25634990	2.4542226	20	8 14.3	19.6
383151 2005 <i>UV</i> ₃₁₁	17.5	X	156.46168	109.67829	115.54747	2.00161	0.1323876	0.26827861	2.3809230	20	11 26.8	21.2
383152 2005 <i>UD</i> ₃₁₆	16.7	X	243.33712	105.25575	42.15605	13.27921	0.1350489	0.26511305	2.3998383	20	11 22.8	19.6
383153 2005 <i>UH</i> ₃₂₁	17.7	X	276.08560	262.67495	164.57433	2.60946	0.1773669	0.25741376	2.4474559	20	9 14.6	20.4
383154 2005 <i>UL</i> ₃₂₃	17.6	X	247.02264	36.25431	66.34262	3.36378	0.1812196	0.25910844	2.4367726	20	9 22.9	20.7
383155 2005 <i>UE</i> ₃₃₄	17.5	X	273.72286	357.82006	83.20925	3.88445	0.1480081	0.25789012	2.4444411	20	10 7.9	20.3
383156 2005 <i>UE</i> ₃₄₃	17.1	X	287.35466	326.21440	74.64490	8.34418	0.2386155	0.25830358	2.4418319	20	8 18.7	19.8
383157 2005 <i>US</i> ₃₈₆	17.6	X	224.17467	148.60999	340.95365	1.71039	0.1610528	0.25630266	2.4545242	20	10 1.2	20.9
383158 2005 <i>UX</i> ₃₈₈	17.3	X	262.79814	216.35241	230.64866	1.60289	0.1574946	0.26179533	2.4200711	20	9 25.2	20.2
383159 2005 <i>UW</i> ₄₃₄	17.6	X	229.96307	316.49534	211.39480	8.65011	0.0723425	0.26852155	2.3794867	20	12 14.6	20.6
383160 2005 <i>UJ</i> ₄₃₆	17.8	X	301.34389	11.33636	33.88513	6.22127	0.0885123	0.26170532	2.4206260	20	10 10.7	20.2
383161 2005 <i>UP</i> ₄₄₀	17.5	X	275.76114	91.61552	340.70584	3.14662	0.2046639	0.25912975	2.4366391	20	9 16.4	20.2
383162 2005 <i>UY</i> ₄₇₂	17.0	X	163.31598	325.26764	263.25450	5.68081	0.1277513	0.26470378	2.4023113	20	12 6.9	20.7
383163 2005 <i>UJ</i> ₄₇₇	17.5	X	314.89086	239.33803	137.51259	2.69675	0.1515392	0.25898972	2.4375173	20	9 17.3	19.7
383164 2005 <i>UD</i> ₄₈₆	17.8	X	269.52159	64.19055	329.71664	4.73032	0.1556699	0.25357316	2.4721066	20	7 12.1	20.9
383165 2005 <i>VJ</i> ₅	18.2	X	82.96029	5.45550	154.05566	2.89608	0.2846126	0.35928419	1.9596446	20	7 7.4	20.6
383166 2005 <i>VC</i> ₇	17.4	X	142.39524	193.54205	279.40121	19.52407	0.0860944	0.37506876	1.9042712	20	6 18.6	19.6
383167 2005 <i>VD</i> ₄₉	17.8	X	221.04968	182.15862	216.31864	2.07317	0.1831806	0.24333296	2.5409849	20	5 28.8	21.9
383168 2005 <i>VL</i> ₇₁	17.6	X	250.44609	349.62404	87.05744	3.33516	0.2122495	0.25252727	2.4789277	20	8 15.8	21.0
383169 2005 <i>VZ</i> ₇₃	17.1	X	278.96407	278.28308	78.07571	9.78304	0.0618729	0.24415191	2.5352996	20	6 26.9	20.3
383170 2005 <i>VG</i> ₈₁	18.0	X	313.00215	146.89350	234.34927	1.89525	0.1834821	0.25661066	2.4525597	20	9 14.6	20.1
383171 2005 <i>VF</i> ₉₈	17.8	X	170.26754	135.13014	259.83258	18.49698	0.1031581	0.36859212	1.9265133	20	3 17.3	20.7
383172 2005 <i>VT</i> ₁₀₈	17.7	X	144.36130	81.51937	51.17041	9.75050	0.2147894	0.24163057	2.5529059	20	7 21.4	22.1
383173 2005 <i>VM</i> ₁₁₈	16.4	X	313.72438	107.06865	296.95338	21.39429	0.2656723	0.26374804	2.4081113	20	10 4.1	18.8
383174 2005 <i>VR</i> ₁₂₄	17.4	X	302.79055	285.74046	193.53400	5.05168	0.1636695	0.26758870	2.3850137	20	12 29.7	19.4
383175 2005 <i>VM</i> ₁₂₉	18.2	X	222.19680	338.37009	123.35118	2.98886	0.1715665	0.25559359	2.4590616	20	8 22.9	21.7
383176 2005 <i>WY</i> ₂₂	17.2	X	173.19611	32.60111	55.64563	7.81912	0.2003320	0.23918710	2.5702629	20	6 17.0	21.6
383177 2005 <i>WU</i> ₄₂	16.7	X	141.60274	75.00228	258.14232	3.95750	0.0413283	0.21342856	2.7731138	20	—	—
383178 2005 <i>WM</i> ₅₆	17.4	X	319.03456	187.37371	78.82435	24.37938	0.0547124	0.37019794	1.9209382	20	4 26.8	19.7
383179 2005 <i>WM</i> ₇₇	16.0	X	286.27380	113.24991	338.47124	2.11128	0.1628924	0.2418054	3.9789367	20	10 9.5	21.2
383180 2005 <i>WP</i> ₁₁₉	17.6	X	240.61235	313.54607	150.43960	1.87094	0.1478905	0.25524041	2.4613295	20	9 19.5	20.6
383181 2005 <i>WM</i> ₁₄₉	17.3	X	216.20126	170.61908	323.10224	2.55892	0.0657392	0.25493235	2.4633120	20	10 8.6	20.4
383182 2005 <i>WF</i> ₁₆₀	15.7	X	120.87082	256.26662	291.77565	26.99366	0.3616993	0.23271653	2.6176881	20	8 29.2	21.1
383183 2005 <i>WE</i> ₁₇₇	17.6	X	174.77752	136.87277	343.49061	2.35727	0.0961354	0.24130753	2.5551838	20	7 31.9	21.2
383184 2005 <i>WA</i> ₁₈₃	17.6	X	241.55712	282.96644	77.04102	23.68980	0.0882218	0.37711691	1.8973701	20	5 12.8	19.9
383185 2005 <i>WZ</i> ₁₈₇	17.5	X	258.53813	339.96544	92.74513	3.54211	0.1722042	0.25516795	2.4617955	20	8 28.7	20.7
383186 2005 <i>WS</i> ₁₉₃	17.6	X	170.42093	29.89069	99.34603	24.73684	0.0351707	0.38246604	1.8796376	20	9 2.0	20.1
383187 2005 <i>XV</i> ₈	17.1	X	50.69098	41.40136	273.36203	5.09109	0.1425494	0.26586107	2.3953347	20	12 1.8	20.3
383188 2005 <i>XS</i> ₄₂	16.9	X	281.42526	44.61545	299.96510	3.93177	0.0240530	0.24110983	2.5565803	20	6 19.1	20.3
383189 2005 <i>XT</i> ₅₇	16.8	X	15.43472	225.17325	96.73816	4.92968	0.1825219	0.25793459	2.4441601	20	10 30.9	19.4
383190 2005 <i>XN</i> ₆₆	17.4	X	133.72790	17.24473	91.81947	24.15955	0.0878632	0.37046092	1.9200290	20	6 4.0	19.7
383191 2005 <i>XG</i> ₁₁₁	16.9	X	256.55201	184.85158	137.47376	2.5						

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
383201	2005	<i>YX</i> ₃₆	15.9 ^m	X	174.58110	127.57129	311.77926	31.45146	0.2994762	0.23425069	2.6062464	20	6 10.9	21.2
383202	2005	<i>YV</i> ₄₄	16.8	X	237.37263	186.55889	219.18029	1.50864	0.1705192	0.24153530	2.5535771	20	6 24.6	20.6
383203	2005	<i>YQ</i> ₄₇	17.0	X	339.60858	316.84624	295.64986	17.55412	0.0757352	0.36475987	1.9399834	20	4 10.0	19.3
383204	2005	<i>YB</i> ₅₇	17.6	X	301.97511	77.79575	326.30680	3.19656	0.1692422	0.25453319	2.4658866	20	9 27.6	20.0
383205	2005	<i>YS</i> ₅₇	15.9	X	317.82803	144.46035	294.78372	9.03248	0.2641905	0.12539135	3.9532808	20	10 29.7	20.3
383206	2005	<i>YZ</i> ₈₇	17.0	X	280.49089	68.83544	290.13331	3.12501	0.3007950	0.24317512	2.5420843	20	5 24.4	20.5
383207	2005	<i>YH</i> ₉₀	17.1	X	246.95699	115.49337	283.72748	11.08563	0.0536513	0.23864193	2.5741759	20	7 12.2	20.4
383208	2005	<i>YG</i> ₁₀₀	17.3	X	199.08262	42.44257	55.49461	2.72567	0.1009561	0.24178653	2.5518079	20	7 29.2	21.1
383209	2005	<i>YR</i> ₁₀₆	17.0	X	205.00999	333.82949	102.08179	20.31131	0.1364406	0.23998563	2.5645582	20	7 3.3	20.8
383210	2005	<i>YS</i> ₁₀₆	17.2	X	138.96175	335.94876	269.90789	4.56162	0.1542633	0.25632412	2.4543871	20	12 2.6	21.1
383211	2005	<i>YV</i> ₁₁₉	17.0	X	227.00777	294.07196	111.38552	13.82326	0.1976370	0.23976379	2.5661399	20	6 12.7	21.1
383212	2005	<i>YV</i> ₁₄₃	18.0	X	223.71946	97.36475	8.64446	1.15373	0.1654032	0.24606936	2.5221119	20	8 29.7	21.5
383213	2005	<i>YP</i> ₁₄₄	16.6	X	221.85087	270.29390	113.87318	13.17126	0.1737748	0.23283919	2.6167687	20	5 16.3	21.0
383214	2005	<i>YQ</i> ₁₄₉	17.0	X	251.28003	0.94919	28.42309	2.97136	0.1352175	0.23987182	2.5653693	20	6 23.1	20.5
383215	2005	<i>YY</i> ₁₆₇	17.1	X	189.51260	28.41278	82.12933	12.64954	0.1909118	0.24078519	2.5588777	20	8 1.6	21.4
383216	2005	<i>YA</i> ₂₀₀	16.6	X	193.95321	157.50735	299.89944	12.64894	0.1281217	0.23913171	2.5706598	20	7 20.5	20.3
383217	2005	<i>YQ</i> ₂₀₆	17.6	X	53.84427	63.52090	113.75459	24.28087	0.0856502	0.36364597	1.9439430	20	5 24.5	19.9
383218	2005	<i>YX</i> ₂₂₀	15.6	X	101.77750	288.31345	309.32505	26.69800	0.3908969	0.23401960	2.6079618	20	10 16.3	21.1
383219	2005	<i>YD</i> ₂₈₇	17.2	X	248.66664	60.84357	50.53940	1.99928	0.1413859	0.25381992	2.4705041	20	10 11.3	20.2
383220	2005	<i>YQ</i> ₂₉₀	17.2	X	245.90395	272.15059	140.00369	7.53310	0.2628984	0.24413264	2.5354331	20	7 1.8	21.1
383221	2006	<i>AY</i> ₄	16.6	X	174.90470	37.90116	84.39946	15.64063	0.1996383	0.23789767	2.5795419	20	8 3.6	21.1
383222	2006	<i>AA</i> ₅₀	16.7	X	37.96746	134.44273	106.40566	12.07639	0.0905771	0.23594008	2.5937905	20	7 22.9	19.7
383223	2006	<i>AW</i> ₅₅	16.7	X	268.34307	93.79059	272.03262	2.31265	0.2083851	0.24024335	2.5627238	20	6 1.7	20.8
383224	2006	<i>AR</i> ₇₄	16.3	X	176.65104	238.55739	361.32813	10.23552	0.1274703	0.24142218	2.5543747	20	8 21.9	20.4
383225	2006	<i>AM</i> ₇₉	17.6	X	262.01600	22.52300	209.05958	19.03600	0.0370333	0.36462453	1.9404634	20	4 14.6	20.3
383226	2006	<i>AJ</i> ₈₄	17.1	X	151.05506	34.89610	67.77202	14.08866	0.2327916	0.23219413	2.6216129	20	6 16.9	21.6
383227	2006	<i>AJ</i> ₈₅	16.6	X	156.74449	243.15553	290.54406	23.20433	0.2817861	0.24015165	2.5633761	20	9 5.2	21.7
383228	2006	<i>AQ</i> ₁₀₀	17.3	X	135.81651	247.80662	303.66100	3.57910	0.1246201	0.24105285	2.5569832	20	9 19.3	21.2
383229	2006	<i>BG</i> ₃	17.0	X	277.44975	71.31994	297.98138	7.75805	0.2702249	0.24316097	2.5421830	20	6 8.5	20.6
383230	2006	<i>BJ</i> ₂₃	16.8	X	248.78047	276.59902	123.70689	12.26398	0.1298111	0.23995834	2.5647527	20	7 5.6	20.4
383231	2006	<i>BL</i> ₂₇	16.4	X	150.93731	227.80808	272.72804	13.05759	0.0767725	0.23759341	2.5817437	20	7 27.6	20.3
383232	2006	<i>BR</i> ₃₅	17.0	X	257.71960	20.67513	22.55708	2.79497	0.1873501	0.24262731	2.5459093	20	7 13.3	20.4
383233	2006	<i>BD</i> ₃₇	18.0	X	168.96111	147.94168	26.36796	0.72535	0.0920983	0.24580215	2.5239395	20	10 4.2	21.7
383234	2006	<i>BR</i> ₃₉	15.9	X	158.38432	117.08213	115.10961	21.54761	0.0520800	0.22715790	2.6602196	20	4 28.3	20.3
383235	2006	<i>BC</i> ₄₀	16.5	X	193.67895	0.67284	118.27414	4.90248	0.1121068	0.24017476	2.5632117	20	8 19.2	20.2
383236	2006	<i>BW</i> ₄₁	17.0	X	194.70307	145.64567	295.61863	0.60716	0.1609367	0.23265978	2.6181137	20	6 28.5	21.3
383237	2006	<i>BW</i> ₇₁	16.9	X	190.01195	72.40087	54.79842	3.20223	0.0972483	0.24110891	2.5565868	20	8 27.7	20.7
383238	2006	<i>BY</i> ₁₁₀	17.4	X	233.03347	10.99262	43.14311	2.91952	0.1631146	0.23823659	2.5770949	20	7 1.9	21.2
383239	2006	<i>BB</i> ₁₂₃	17.2	X	236.59546	69.74966	332.99944	9.14347	0.1129496	0.23330237	2.6133041	20	6 27.0	21.1
383240	2006	<i>BB</i> ₁₂₉	17.1	X	240.39205	312.46203	136.62362	5.97914	0.1524519	0.24460878	2.5321418	20	8 28.5	20.7
383241	2006	<i>BV</i> ₁₃₅	17.8	X	168.75253	6.16356	135.62999	4.78755	0.1827626	0.23771425	2.5808687	20	8 20.7	21.9
383242	2006	<i>BY</i> ₁₄₃	17.3	X	159.15431	259.99361	246.04191	4.21453	0.2211020	0.23779994	2.5802486	20	8 15.5	21.8
383243	2006	<i>BM</i> ₁₅₄	16.7	X	79.73872	62.81078	136.46408	12.50780	0.2151784	0.22804995	2.6532779	20	8 11.3	20.4
383244	2006	<i>BP</i> ₂₁₆	16.9	X	214.82124	294.80612	114.36466	11.93095	0.1405779	0.23452828	2.6041894	20	6 9.6	21.1
383245	2006	<i>BF</i> ₂₁₉	17.3	X	168.62696	219.34159	273.07089	3.89004	0.1961756	0.23897466	2.5717861	20	8 7.3	21.7
383246	2006	<i>BO</i> ₂₂₈	17.3	X	232.99254	54.16020	12.76927	3.09619	0.1656334	0.24134630	2.5549100	20	7 19.3	21.2
383247	2006	<i>BG</i> ₂₃₄	17.3	X	150.92511	89.02697	100.95290	3.94152	0.086913	0.24609018	2.5219697	20	10 7.5	20.7
383248	2006	<i>BU</i> ₂₅₀	17.0	X	230.21257	284.31512	140.98659	9.22504	0.1510467	0.23768846	2.5810554	20	7 14.2	20.9
383249	2006	<i>BD</i> ₂₅₃	17.4	X	132.47200	198.19229	307.18849	3.33909	0.1402761	0.23156323	2.6263725	20	7 20.4	21.2
383250	2006	<i>BA</i> ₂₆₈	16.3	X	169.19754	359.24754	110.69178	11.92866	0.1093432	0.23286510	2.6165746	20	7 11.0	20.1
383251	2006	<i>BX</i> ₂₇₈	16.8	X	115.84797	261.48956	164.32027	5.12365	0.0276584	0.21124902	2.7921553	20	3 7.4	20.6
383252	2006	<i>BW</i> ₂₈₃	16.7	X	297.04013	214.81334	153.52460	22.35295	0.0404721	0.23484070	2.6018793	20	8 10.4	20.0
383253	2006	<i>CJ</i> ₆	16.8	X	219.27927	85.96036	310.66946	11.78953	0.2884363	0.23496792	2.6009400	20	5 15.8	20.3
383254	2006	<i>CJ</i> ₉	17.0	X	133.02181	357.00415	151.45666	4.06429	0.1404849	0.23220902	2.6215007	20	7 24.3	21.0
383255	2006	<i>CV</i> ₂₆	17.5	X	134.44092	241.67194	317.54587	3.36032	0.1739613	0.24110723	2.5565987	20	9 29.4	21.6
383256	2006	<i>CV</i> ₃₃	16.6	X	58.74790	305.87948	299.58677	12.01745	0.1596744	0.23552048	2.5968704	20	9 3.1	20.2
383257	2006	<i>CL</i> ₃₈	17.2	X	156.20325	204.92723	322.79056	8.30423	0.1532522	0.23867340	2.5739496	20	9 8.7	21.3
383258	2006	<i>CC</i> ₆₀	17.6	X	123.32315	125.51204	342.90363	18.81919	0.0845663	0.36049502	1.9552541	20	5 4.0	20.3
383259	2006	<i>CY</i> ₆₂	16.3	X	186.35609	39.62758	60.98339	18.60048	0.1136701	0.23508646	2.6000656	20	7 18.9	20.6
383260	2006	<i>CA</i> ₆₆	16.8	X	113.79565	261.22808	285.80055	3.85681	0.3058804	0.23010643	2.6374459	20	9 2.4	21.5
383261	2006	<i>DE</i> ₂₀	17.4	X	306.10788	201.56727	135.05993	6.06349	0.0249003	0.23220613	2.6215225	20	7 12.5	20.7
383262	2006	<i>DS</i> ₄₅	16.6	X	180.22633	72.98930	307.07494	4.62750	0.2061607	0.23583867	2.5945340	20	7 24.7	21.0
383263	2006	<i>DJ</i> ₅₅	16.3	X	92.35335	301.85704	289.97983	10.47697	0.1463803	0.23493460	2.6011859	20	9 22.6	20.4
383264	2006	<i>DO</i> ₅₆	16.5	X	246.04997	256.97907	118.71544	6.75706	0.1110569	0.22778465	2.6553376	20	6 2.5	20.3
383265	2006	<i>DT</i> ₅₇	17.3	X	178.53092	192.95436	331.48562	3.45549	0.1770023	0.24103618	2.5571010	20	9 25.8	21.5
383266	2006	<i>DK</i> ₆₅	17.6	X	178.47493	47.46094	95.51774	8.48490	0.2685371	0.24007504	2.5639214	20	8 31.3	22.2
383267	2006	<i>DA</i> ₆₆	16.3	X	71.92482	35.01104	113.53268	14.24111	0.1384246	0.21867293	2.7285968	20	5 17.6	20.1
383268	2006	<												

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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>
383281 2006 DZ ₁₇₁	17.8	X	120.59831	176.61269	19.21321	3.94829	0.1093387	0.23450727	2.6043449	20	9 10.5	21.6
383282 2006 DM ₁₇₅	16.5	X	161.11442	233.26952	138.83676	4.86603	0.1154177	0.20992841	2.8038530	20	3 2.8	20.7
383283 2006 DR ₁₇₈	16.9	X	316.22227	275.11301	8.62407	5.87811	0.0046611	0.22121615	2.7076435	20	5 15.6	20.6
383284 2006 DC ₁₈₄	16.3	X	140.62304	100.79677	12.30810	11.46754	0.0594394	0.22322023	2.6914130	20	6 8.9	20.4
383285 2006 DA ₁₉₆	16.8	X	135.35410	154.42221	50.61010	4.87334	0.1428412	0.23911336	2.5707913	20	10 9.4	20.8
383286 2006 DB ₁₉₈	16.1	X	148.07008	244.52975	283.69250	12.24088	0.1204815	0.23621244	2.5917964	20	8 28.1	20.4
383287 2006 DB ₁₉₉	16.0	X	321.32195	153.67538	96.00267	13.93481	0.1609114	0.21229922	2.7829396	20	3 27.3	19.7
383288 2006 DL ₂₀₁	16.7	X	162.78444	33.98414	81.49596	14.27039	0.1264640	0.23084996	2.6317796	20	7 12.0	20.8
383289 2006 DC ₂₀₆	16.8	X	140.95287	129.31154	353.94370	11.69536	0.0462445	0.22688070	2.6623860	20	6 24.3	20.8
383290 2006 DB ₂₁₁	17.4	X	187.03595	291.86403	165.18005	4.86668	0.1871562	0.23215972	2.6218719	20	7 10.1	21.7
383291 2006 ES ₁₇	17.1	X	43.58835	26.63982	179.22621	2.45754	0.0223589	0.22097908	2.7095798	20	6 2.5	20.5
383292 2006 EO ₂₁	17.8	X	207.62801	307.52917	153.89800	5.06930	0.1983443	0.23944190	2.5684391	20	8 3.1	21.9
383293 2006 EV ₂₁	17.2	X	275.77407	301.91699	15.19432	1.65959	0.0431793	0.22112513	2.7083865	20	5 1.3	20.6
383294 2006 EO ₂₂	17.3	X	215.06362	79.54965	346.03814	12.51294	0.2608668	0.23612734	2.5924190	20	6 22.3	22.0
383295 2006 EL ₂₈	17.2	X	219.80765	269.84077	155.22516	4.08299	0.1770114	0.23373748	2.6100599	20	6 30.8	21.2
383296 2006 EL ₄₉	17.3	X	260.03131	351.06942	47.80234	3.61598	0.1253325	0.23517153	2.5994385	20	7 19.4	20.9
383297 2006 EC ₇₂	16.5	X	94.38531	121.49078	76.35052	17.89053	0.195786	0.22338551	2.6900853	20	8 28.3	20.9
383298 2006 FR ₂₃	16.8	X	165.68680	320.49614	189.10962	13.48606	0.1969787	0.23405110	2.6077278	20	8 24.2	21.3
383299 2006 FK ₂₈	16.9	X	92.33482	132.03403	44.12562	4.81700	0.0540438	0.22092808	2.7099968	20	7 4.1	20.6
383300 2006 FM ₅₃	17.0	X	85.89383	140.45738	60.35845	3.24802	0.1391184	0.22452693	2.6809605	20	8 11.3	20.7
383301 2006 GR ₅	16.6	X	204.99952	21.44414	63.18713	6.51128	0.0930327	0.22933003	2.6433952	20	7 18.2	20.6
383302 2006 GA ₈	16.7	X	64.13684	123.04181	52.26266	5.72888	0.0553729	0.21800524	2.7341653	20	5 24.6	20.2
383303 2006 GV ₃₇	15.6	X	165.64507	22.90592	92.11847	27.93935	0.2165342	0.23133314	2.6281137	20	7 13.8	20.2
383304 2006 GN ₃₉	16.6	X	159.18135	70.45970	73.84162	13.74422	0.1722914	0.23237598	2.6202450	20	8 19.9	21.1
383305 2006 GZ ₄₃	17.2	X	45.84988	106.47138	89.75174	2.26988	0.0833876	0.21588598	2.7520295	20	5 30.8	20.7
383306 2006 GU ₄₉	16.2	X	71.75705	143.41864	95.22761	14.75143	0.2164931	0.22706804	2.6609214	20	9 30.3	20.5
383307 2006 HN ₁₁	16.7	X	155.02971	340.77561	126.06052	6.36795	0.0281972	0.21937500	2.7227721	20	6 18.3	20.6
383308 2006 HR ₂₀	16.2	X	46.05208	338.97332	217.99521	12.68226	0.1081622	0.21455278	2.7634183	20	6 4.6	19.7
383309 2006 HW ₂₉	16.1	X	16.59438	154.43694	120.61485	12.47188	0.1739183	0.22379184	2.6868282	20	8 16.1	18.9
383310 2006 HO ₆₀	16.8	X	117.58664	55.05448	162.89595	13.75231	0.2347796	0.23180972	2.6245103	20	10 13.6	21.4
383311 2006 HU ₆₅	17.4	X	21.34182	353.21889	202.22319	4.41310	0.0810355	0.20923409	2.8100524	20	4 20.8	20.9
383312 2006 HN ₆₇	16.3	X	251.10827	268.77890	41.41635	7.26110	0.0380572	0.20468071	2.8515748	20	3 26.9	20.3
383313 2006 HZ ₇₀	16.1	X	355.00228	150.54845	91.82535	9.62769	0.1565679	0.21273246	2.7791599	20	5 12.7	19.0
383314 2006 HT ₇₄	17.2	X	105.44440	6.46510	157.76173	4.27303	0.0726792	0.21949441	2.7217845	20	7 6.7	21.1
383315 2006 HA ₇₇	16.9	X	123.88158	87.58104	105.35007	12.23310	0.1953364	0.22868826	2.6483383	20	9 18.7	21.5
383316 2006 HU ₈₂	16.6	X	308.77488	70.73410	226.73578	6.66419	0.0672463	0.21233067	2.7826648	20	5 17.9	20.2
383317 2006 HC ₉₂	16.6	X	162.44885	287.13857	194.62254	9.85658	0.1784508	0.22390411	2.6859299	20	7 17.7	21.3
383318 2006 HN ₉₃	16.8	X	116.91195	338.35787	144.53501	10.40662	0.1584207	0.21557866	2.7546443	20	6 7.7	21.2
383319 2006 HO ₁₀₂	16.6	X	202.75250	338.33316	77.00058	7.43580	0.0314636	0.21499247	2.7596492	20	6 9.2	20.5
383320 2006 HN ₁₂₀	16.8	X	72.88056	131.15639	62.46304	6.18073	0.1195392	0.21844257	2.7305148	20	7 12.1	20.4
383321 2006 HH ₁₂₁	16.7	X	209.12108	258.05159	133.08913	13.03784	0.0691733	0.21111945	2.7932977	20	5 18.4	21.1
383322 2006 HB ₁₅₁	16.2	X	129.99382	75.78408	40.86005	9.96779	0.0929826	0.21756128	2.7378836	20	6 4.4	20.3
383323 2006 JL ₆	16.5	X	141.36224	79.17718	61.17488	12.34462	0.1444196	0.22313873	2.6920683	20	7 24.9	20.9
383324 2006 JU ₁₈	16.5	X	37.74170	92.14801	63.13814	15.67624	0.0942616	0.20492012	2.8493534	20	4 2.5	20.3
383325 2006 JR ₄₁	16.0	X	18.26897	166.38625	93.26550	15.73079	0.1478805	0.21748104	2.7385570	20	7 22.6	19.0
383326 2006 KF ₁₂	16.4	X	162.28194	316.33463	145.86674	12.25293	0.1430437	0.22116534	2.7080583	20	6 24.4	20.9
383327 2006 KD ₁₇	16.6	X	50.19962	80.78557	125.69824	7.89243	0.2093911	0.21593282	2.7516316	20	7 10.4	19.8
383328 2006 KW ₁₈	16.4	X	359.31893	125.44161	147.45305	13.77038	0.1028622	0.21835203	2.7312695	20	7 2.6	19.7
383329 2006 KG ₃₈	16.7	X	62.26389	118.52170	117.04197	8.01291	0.2043755	0.22365491	2.6879247	20	9 8.1	20.5
383330 2006 KM ₄₁	16.9	X	142.63272	319.28339	234.57152	4.84623	0.2265688	0.23270576	2.6177689	20	9 29.5	21.4
383331 2006 KS ₄₈	16.6	X	16.56584	137.08731	93.10660	4.98518	0.0386342	0.21265324	2.7798501	20	5 29.3	20.2
383332 2006 KY ₅₇	16.9	X	357.54968	136.82510	123.37389	5.04427	0.0547770	0.21398618	2.7682941	20	6 11.3	20.3
383333 2006 KZ ₅₉	16.3	X	260.36890	236.43835	135.08822	6.85953	0.0538786	0.21563419	2.7541714	20	6 21.9	20.1
383334 2006 KB ₆₁	17.0	X	143.73725	62.84040	104.87310	8.25704	0.2672530	0.22959100	2.6413917	20	9 3.9	21.8
383335 2006 KB ₆₆	16.8	X	268.44424	151.27243	138.01631	2.80949	0.0252106	0.20495712	2.8490105	20	3 21.8	20.8
383336 2006 KW ₁₀₅	16.4	X	116.17942	339.74689	123.55401	10.07699	0.1487780	0.21320489	2.7750530	20	5 13.7	20.7
383337 2006 KH ₁₂₀	17.4	X	77.45814	168.02155	80.50889	23.73753	0.0465935	0.36771766	1.9295664	20	10 27.7	20.1
383338 2006 KZ ₁₂₂	16.7	X	107.79155	71.80919	131.70718	12.83893	0.1216526	0.22840539	2.6505245	20	9 8.5	20.7
383339 2006 PX ₁₀	15.5	X	156.13298	40.31179	319.20513	22.11610	0.1051467	0.17922418	3.1155757	20	2 12.3	20.2
383340 2006 PN ₁₉	15.7	X	134.38919	51.29810	325.52469	9.12174	0.1874754	0.17697236	3.1419487	20	2 19.5	20.7
383341 2006 PQ ₃₇	15.6	X	35.54056	109.47442	120.22958	17.65286	0.1336067	0.20879486	2.8133919	20	7 6.9	19.0
383342 2006 QT ₂₂	15.3	X	169.31966	200.94047	155.72079	23.03542	0.0306715	0.18241888	3.0790933	20	2 17.9	19.8
383343 2006 QY ₉₆	17.0	X	305.42217	327.35857	10.40596	10.51533	0.2492014	0.27442929	2.3452136	20	6 7.8	19.6
383344 2006 QS ₁₀₃	18.5	X	53.45020	204.34140	184.50258	1.66422	0.1553567	0.30476917	2.1868653	20	—	—
383345 2006 QV ₁₀₇	16.1	X	139.00889	147.92896	172.81183	15.23212	0.1620946	0.16824515	3.2496832	20	—	—
383346 2006 QE ₁₁₀	16.9	X	267.24612	73.52728	214.65748	2.02650	0.0417686	0.18646991	3.0343352	20	3 16.8	21.2
383347 2006 QF ₁₆₀	16.6	X	120.49599	196.02561	207.18394	1.17021	0.1217137	0.17673310	3.1447838	20	2 29.5	21.3
383348 2006 QJ ₁₇₀	16.7	X	299.31368	346.90317	49.52224	24.33864	0.1941568	0.28211601	3.2024183	20	10 2.7	19.2
383349 2006 RC ₂₃	17.8	X	42.18281	184.38459	175.11778	4.38619	0.1856125	0.29701269	2.2247747	20	—	—
383350 2006 RS ₂₅	16.0	X	121.82409	115.61944	302.00716	7.56331	0.1309606	0.18118266	3.0930833	20	3 16.7	20.7
383351 2006 RK ₂₇	17.7	X	74.23713	12.25607	346.52006	6.94550	0.1750928	0.30148476	2.2027192	20	—	—
383352 2006 RS ₂₈	16.2	X	95.52117	249.53124	190.01189	9.99416	0.0804318	0.18248651	3.0783326	20	3 8.1	20.5
383353 2006 RP ₄₀	15.9	X	179.69154	37.50923	273.52438	9.13440	0.0620232	0.17551359	3.1593341	20</		

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
383361 2006 SL ₂₈	18.3	X	2.01025	151.52233	258.64533	5.41275	0.0998007	0.30015302	2.2092299	20	—	—
383362 2006 SE ₄₁	18.2	X	30.14555	336.10427	28.60655	2.21641	0.1909471	0.29411182	2.2393797	20	—	—
383363 2006 SQ ₄₁	16.0	X	161.63425	235.64186	184.78514	7.26136	0.1623178	0.18448937	3.0560127	20	5 4.9	21.0
383364 2006 SN ₅₉	17.4	X	71.30490	261.89282	106.32327	4.09844	0.1869605	0.30154585	2.2024217	20	—	—
383365 2006 SV ₅₉	17.6	X	347.04000	316.38402	46.09733	7.87609	0.1674651	0.28631611	2.2798461	20	11 11.6	19.4
383366 2006 SO ₇₆	17.7	X	336.22643	83.53379	39.61582	4.98766	0.0709773	0.30294454	2.1956374	20	—	—
383367 2006 SA ₁₁₁	17.2	X	62.07215	300.18302	84.63883	6.51389	0.1745488	0.30220541	2.1992160	20	—	—
383368 2006 SZ ₁₁₄	16.4	X	254.42353	228.50595	12.78493	3.18642	0.0836969	0.17114131	3.2129169	20	1 5.3	21.2
383369 2006 SD ₁₂₁	17.2	X	45.18315	255.95683	123.65219	5.84488	0.2046741	0.29786385	2.2205345	20	—	—
383370 2006 SG ₁₃₃	17.6	X	69.02569	76.99795	260.89660	4.08383	0.1973187	0.29930236	2.2134139	20	—	—
383371 2006 SU ₁₆₃	17.9	X	320.54295	269.25918	189.15928	5.49494	0.1423621	0.29322329	2.2439012	20	—	—
383372 2006 SC ₁₆₇	15.7	X	269.38020	15.87722	204.20334	9.52720	0.0606697	0.16958078	3.2325974	20	—	—
383373 2006 SJ ₁₆₉	16.3	X	135.88878	359.32145	349.87769	9.18653	0.1357542	0.16953218	3.2332152	20	1 18.5	21.3
383374 2006 SH ₂₁₃	16.0	X	145.54754	162.02046	199.92037	8.79934	0.2050810	0.17357501	3.1828140	20	2 12.1	21.2
383375 2006 SZ ₂₁₄	18.1	X	49.07809	75.81448	298.06337	1.75161	0.2027475	0.29843633	2.2176938	20	—	—
383376 2006 SN ₂₂₉	18.1	X	345.31634	148.39264	333.04085	4.47444	0.0848926	0.30620057	2.1800446	20	—	—
383377 2006 SQ ₂₅₂	18.1	X	54.52571	192.63877	200.53439	1.90432	0.1556575	0.30268619	2.1968866	20	—	—
383378 2006 SZ ₂₆₁	18.0	X	89.43271	174.91294	179.46725	2.32243	0.1858401	0.30253726	2.1976076	20	—	—
383379 2006 SL ₂₈₉	15.8	X	169.74737	230.98738	140.08323	11.41872	0.1437342	0.17789167	3.1311147	20	3 15.5	20.9
383380 2006 SB ₃₁₆	16.3	X	185.00674	157.01771	167.19503	5.27169	0.1579973	0.17356980	3.1828776	20	2 1.5	21.4
383381 2006 SY ₃₆₄	17.8	X	25.25948	86.17350	332.24042	5.64103	0.1202329	0.30102105	2.2049808	20	—	—
383382 2006 SG ₃₇₆	16.2	X	14.84987	61.64027	140.03315	8.07412	0.1734184	0.18435587	3.0574878	20	4 26.5	19.6
383383 2006 SW ₃₈₄	16.1	X	114.56330	307.39085	98.76202	10.45386	0.0274916	0.17079621	3.2172432	20	2 18.1	20.8
383384 2006 SG ₃₉₆	16.0	X	70.66672	270.01828	193.74352	14.26262	0.0945263	0.17582026	3.1556593	20	3 7.7	20.3
383385 2006 SB ₄₀₉	17.7	X	33.14543	336.25634	31.97675	3.84911	0.1542500	0.28969432	2.2620875	20	—	—
383386 2006 TR ₈	17.7	X	51.05975	7.22618	34.24409	4.70326	0.1396083	0.30087644	2.2056872	20	—	—
383387 2006 TC ₁₁	16.0	X	193.70798	267.67373	40.01785	11.33114	0.2282886	0.17247930	3.1962793	20	1 26.0	21.7
383388 2006 TK ₁₈	15.6	X	153.10975	226.23971	194.60558	9.76876	0.1187337	0.18028097	3.1033884	20	4 25.0	20.4
383389 2006 TJ ₂₁	17.6	X	343.46695	13.18979	40.37252	3.03094	0.1373249	0.28905789	2.2654066	20	—	—
383390 2006 TA ₂₂	17.7	X	346.25669	345.80226	71.34137	3.82422	0.1232478	0.29008169	2.2600732	20	—	—
383391 2006 TL ₂₃	18.0	X	348.33026	357.24260	54.11907	3.52246	0.1274684	0.29000234	2.2604854	20	—	—
383392 2006 TU ₂₃	17.8	X	174.63379	237.25827	44.76365	7.17430	0.0937516	0.30389507	2.1910567	20	—	—
383393 2006 TE ₃₀	17.9	X	6.27984	21.65621	47.44563	3.84184	0.1512617	0.29631798	2.2282507	20	—	—
383394 2006 TP ₃₃	15.8	X	221.39628	268.44113	33.04440	14.14280	0.1714013	0.17500310	3.1654750	20	2 12.5	21.2
383395 2006 TB ₅₉	17.7	X	349.08721	248.46572	212.41390	5.18361	0.0650953	0.30000799	2.2099418	20	—	—
383396 2006 TB ₆₃	15.5	X	198.70529	358.18305	343.62875	8.82644	0.0749505	0.17777173	3.1325229	20	3 4.9	20.2
383397 2006 TN ₇₁	18.5	X	347.66350	91.46046	91.71476	1.39439	0.1955289	0.29016368	2.2596474	20	—	—
383398 2006 TE ₇₆	17.7	X	107.63450	247.62007	35.67436	3.24457	0.1737977	0.30463795	2.1874932	20	—	—
383399 2006 TM ₈₇	17.6	X	347.31889	191.62976	240.68776	4.37495	0.1243725	0.29258216	2.2471781	20	—	—
383400 2006 TU ₁₁₆	16.3	X	23.82664	3.89210	144.93709	2.55410	0.1698727	0.17445302	3.1721257	20	2 29.8	19.9
383401 2006 UU ₆	17.2	X	341.66510	0.58033	53.90975	5.71378	0.2030860	0.28878697	2.2668232	20	—	—
383402 2006 UD ₁₉	16.0	X	301.51773	39.70149	225.67774	9.49049	0.0460499	0.18165074	3.0877675	20	3 28.9	20.4
383403 2006 UV ₂₃	15.8	X	223.34163	263.27878	20.85661	11.35357	0.1761190	0.17242247	3.1969817	20	1 22.8	21.2
383404 2006 UL ₂₇	15.7	X	190.70365	134.10195	211.06371	14.72357	0.0477668	0.17461419	3.1701735	20	2 25.5	20.6
383405 2006 UG ₅₆	17.5	X	104.69717	41.00522	249.59291	5.17594	0.2002038	0.29976108	2.2111552	20	—	—
383406 2006 US ₆₇	17.5	X	35.70350	7.37233	59.90649	5.51687	0.1067173	0.30288394	2.1959303	20	—	—
383407 2006 UF ₇₀	17.6	X	67.01230	241.14709	134.71263	3.19258	0.1301917	0.29940077	2.2129288	20	—	—
383408 2006 UQ ₁₀₈	17.9	X	30.49593	227.75092	189.79211	6.62840	0.1359536	0.29807988	2.2194615	20	—	—
383409 2006 UM ₁₂₇	18.0	X	135.78243	294.44796	17.96896	5.85292	0.1603669	0.30401031	2.1905029	20	—	—
383410 2006 UQ ₁₃₇	18.0	X	322.54782	73.66804	3.34884	4.49324	0.1040796	0.28786238	2.2716745	20	—	—
383411 2006 UV ₁₈₁	17.5	X	351.53477	308.34600	99.59299	7.61231	0.2637857	0.28928461	2.2642228	20	—	—
383412 2006 UL ₁₉₄	16.1	X	288.24544	30.75450	210.76880	6.62022	0.0979509	0.17253644	3.1955736	20	2 6.7	20.8
383413 2006 UZ ₂₀₁	17.8	X	6.89615	280.55548	93.65377	7.74241	0.2800414	0.29062960	2.2572317	20	—	—
383414 2006 UV ₂₁₁	17.6	X	355.51148	103.87596	257.19391	4.97980	0.1502954	0.28216505	2.3021515	20	11 21.6	19.7
383415 2006 UM ₂₁₃	17.7	X	358.70802	192.35103	257.58872	3.86879	0.0584553	0.29697411	2.2249674	20	—	—
383416 2006 UC ₂₁₅	17.4	X	330.93404	219.70381	245.25459	4.60753	0.1528110	0.29297900	2.2451484	20	—	—
383417 2006 DAO	16.0	X	12.73404	19.50561	141.27117	13.67122	0.0405351	0.18283451	3.0744252	20	2 26.2	20.1
383418 2006 UZ ₂₂₆	17.7	X	329.66628	48.14675	51.32043	4.27976	0.0650900	0.29686738	2.2255007	20	—	—
383419 2006 UM ₂₂₈	17.6	X	98.39067	67.19393	264.50810	5.66353	0.1841870	0.30027882	2.2086128	20	—	—
383420 2006 UG ₂₄₅	17.6	X	281.05186	141.79335	37.56080	8.30750	0.0300714	0.30319612	2.1944227	20	—	—
383421 2006 UV ₂₄₉	18.3	X	276.53347	288.77320	211.21465	1.78004	0.1526534	0.29090707	2.2557962	20	—	—
383422 2006 UM ₂₈₆	17.4	X	205.64142	167.73590	46.91031	7.85606	0.0335128	0.29377143	2.2411091	20	—	—
383423 2006 UR ₃₂₉	17.6	X	342.24826	16.26174	87.71439	5.41662	0.1275182	0.29476083	2.2360913	20	—	—
383424 2006 UD ₃₃₀	16.7	X	271.87361	103.85758	166.87441	5.63637	0.0810642	0.18059069	3.0998390	20	2 25.8	21.2
383425 2006 UL ₃₄₆	17.5	X	264.49901	255.74814	248.07644	4.26220	0.0907434	0.28816687	2.2700740	20	—	—
383426 2006 UO ₃₄₆	17.9	X	295.04389	24.41835	70.88048	7.86186	0.0608519	0.28441614	2.2899881	20	12 18.1	20.1
383427 2006 VE ₂₄	18.5	X	41.48318	151.25276	209.75257	2.80229	0.1800974	0.29181988	2.2510897	20	—	—
383428 2006 VR ₄₉	17.7	X	46.36775	112.39539	262.81354	6.33077	0.1095046	0.29217529	2.2492638	20	—	—
383429 2006 VM ₅₈	17.5	X	136.07257	215.08509	76.01120	7.47561	0.0949503	0.29455781	2.2371187	20	—	—
383430 2006 VC ₆₃	17.8	X	18.33263	344.90908	57.22566	3.74657	0.1491288	0.29201882	2.2500672	20	—	—
383431 2006 VM ₆₄	17.8	X	325.36831	15.48616	66.87564	3.49180	0.1650853	0.28725016	2.2749011	20	—	—
383432 2006 VQ ₉₉	17.3	X	151.79012	174.61701	77.90366	6.87945	0.0730395	0.29084253	2.2561299	20	—	—
383433 2006 VH ₁₀₃	15.8	X	26.59515	1.69880	91.24361	7.10773	0.0644787	0.15491454	3.4335333	20	—	—
383434 2006 VK ₁₁₆	16.8	X	8.21998	303.07112	73.24314	11.88545	0.1930784	0.28765802	2.2727503	20	—	—
383435 2006 VG ₁₂₀	17.8	X	30.01335	64.97306	64.93454	4.11030	0.1461514	0.28634969	2.2796678	20	12 28.3	20.5
383436 2006 VT ₁₃₃												

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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>
383441 2006 <i>WC</i> ₃₃	16.3	X	142.71935	162.66328	197.41442	2.02347	0.0953190	0.16981713	3.2295974	20	1 31.1	21.2
383442 2006 <i>WF</i> ₃₆	17.0	X	164.95513	157.65719	83.73896	10.60255	0.0731041	0.28865518	2.2675131	20	—	—
383443 2006 <i>WE</i> ₃₇	17.6	X	9.67911	317.73979	94.66783	5.61827	0.0662681	0.29246501	2.2477781	20	—	—
383444 2006 <i>WW</i> ₅₂	18.1	X	246.52259	82.64874	58.77725	6.04811	0.1692720	0.28039322	2.3118397	20	11 19.6	20.5
383445 2006 <i>WY</i> ₆₁	17.7	X	8.37121	318.77865	77.32074	7.29760	0.1935307	0.29079047	2.2563992	20	—	—
383446 2006 <i>WC</i> ₈₈	18.0	X	34.86103	221.64417	154.52249	3.63527	0.1872303	0.29206267	2.2498420	20	—	—
383447 2006 <i>WU</i> ₁₀₃	17.8	X	273.83376	344.17994	71.96433	3.10318	0.2098036	0.27255093	2.3559764	20	8 23.5	20.3
383448 2006 <i>WD</i> ₁₀₅	17.2	X	101.77869	263.86930	78.09724	4.84012	0.1929854	0.29939355	2.2129644	20	—	—
383449 2006 <i>WK</i> ₁₂₇	16.2	X	278.38210	349.03705	102.28595	28.31880	0.3082052	0.28157707	2.3053552	20	10 26.8	19.1
383450 2006 <i>WL</i> ₁₂₉	17.9	X	10.98665	172.54432	243.36131	1.98953	0.1043702	0.29215492	2.2493683	20	—	—
383451 2006 <i>WV</i> ₁₅₂	17.7	X	5.84866	128.74056	274.93906	5.25225	0.1922209	0.28890041	2.2662298	20	—	—
383452 2006 <i>WE</i> ₁₅₈	18.1	X	289.39751	123.63828	323.84556	3.79967	0.1076268	0.28141805	2.3062236	20	11 22.5	20.3
383453 2006 <i>WD</i> ₂₀₁	17.6	X	302.99340	342.69846	87.52787	6.76812	0.1115715	0.27557306	2.3387199	20	11 22.3	19.8
383454 2006 <i>WC</i> ₂₀₅	16.1	X	27.08046	15.99944	69.63093	7.15674	0.0833307	0.15440932	3.4410188	20	—	—
383455 2006 <i>XU</i> ₁₇	17.1	X	339.04333	136.50799	315.26009	3.75700	0.1991944	0.28777999	2.2721081	20	—	—
383456 2006 <i>XP</i> ₃₂	17.2	X	338.92276	343.72651	63.74284	4.85307	0.1677846	0.28307783	2.2972000	20	—	—
383457 2006 <i>WK</i> ₄₃	17.4	X	277.98019	218.25987	286.55197	5.65590	0.1510074	0.28216050	2.3021762	20	—	—
383458 2006 <i>XW</i> ₄₃	17.3	X	17.54000	327.51985	70.87428	6.60651	0.1632425	0.28810643	2.2703915	20	—	—
383459 2006 <i>XY</i> ₇₀	17.5	X	272.55054	27.35565	114.82523	7.57710	0.0526706	0.28192830	2.3034401	20	—	—
383460 2006 <i>XC</i> ₇₂	18.0	X	283.00878	57.97068	61.74030	3.94414	0.0793432	0.280900083	2.3090537	20	12 31.8	20.3
383461 2006 <i>YP</i> ₃	17.7	X	353.53559	322.59620	103.54083	6.86912	0.0751803	0.28826467	2.2695605	20	—	—
383462 2006 <i>YD</i> ₄	17.3	X	260.19110	54.89611	68.39487	5.64154	0.0879513	0.27624524	2.3349245	20	11 27.1	19.5
383463 2006 <i>YK</i> ₁₂	16.9	X	189.56009	251.02440	291.33235	9.16211	0.1613983	0.27006232	2.3704277	20	10 31.2	20.6
383464 2006 <i>YH</i> ₁₈	16.7	X	285.74938	111.39346	298.13764	21.31495	0.3005144	0.27025420	2.3693056	20	8 8.9	19.4
383465 2006 <i>YZ</i> ₁₈	17.5	X	282.80159	73.67121	47.92766	3.31070	0.1465888	0.27776776	2.3263845	20	12 28.3	19.3
383466 2006 <i>YJ</i> ₃₅	18.0	X	26.47099	51.58207	333.25289	3.71579	0.2060067	0.28657807	2.2784565	20	—	—
383467 2006 <i>YG</i> ₃₇	17.7	X	29.19145	56.60105	319.85362	5.96104	0.1439070	0.28309909	2.2970850	20	—	—
383468 2006 <i>YH</i> ₃₈	16.7	X	130.48251	230.00300	315.93534	7.12027	0.0664514	0.25952474	2.4341661	20	9 5.4	20.2
383469 2006 <i>YV</i> ₃₉	17.4	X	327.37312	146.31733	267.03343	4.89039	0.1477554	0.28080354	2.3095870	20	12 16.6	19.4
383470 2006 <i>YC</i> ₄₀	16.9	X	207.73268	79.24033	97.96469	6.07049	0.0580292	0.27812482	2.3243929	20	12 2.7	19.8
383471 2006 <i>YU</i> ₅₁	17.1	X	279.39448	327.47914	137.01515	4.97793	0.1466604	0.27237516	2.3569899	20	11 24.9	19.4
383472 2006 <i>YX</i> ₅₂	17.8	X	247.65496	27.48855	139.58681	3.07912	0.0871613	0.28111191	2.3078977	20	—	—
383473 2007 <i>AB</i> ₁	17.6	X	338.24166	306.54579	117.12516	6.45534	0.1462280	0.28187291	2.3037419	20	—	—
383474 2007 <i>AC</i> ₅	17.8	X	29.51123	273.18429	116.04929	0.96778	0.2313449	0.28936066	2.2638261	20	—	—
383475 2007 <i>AU</i> ₈	17.9	X	15.78859	114.57658	298.82799	5.27447	0.0677939	0.29099350	2.2553495	20	—	—
383476 2007 <i>AH</i> ₂₉	17.5	X	343.21197	113.88236	297.32293	4.62103	0.1512109	0.27835631	2.3231041	20	—	—
383477 2007 <i>AA</i> ₃₀	17.9	X	16.56340	272.07872	112.58602	1.44651	0.2248802	0.28407991	2.2917946	20	—	—
383478 2007 <i>AM</i> ₃₀	18.1	X	142.36893	18.82896	175.28354	1.24114	0.1331449	0.26126379	2.4233524	20	10 3.6	21.8
383479 2007 <i>BR</i> ₁	17.1	X	250.06359	162.88928	296.91696	5.79221	0.0735530	0.27006177	2.3704309	20	10 7.1	20.2
383480 2007 <i>BU</i> ₁	17.1	X	180.14500	100.42958	129.17072	7.54787	0.0982786	0.27924010	2.3181998	20	—	—
383481 2007 <i>BZ</i> ₁₃	17.4	X	289.28715	34.30704	111.53099	5.40178	0.0078540	0.28445041	2.2898042	20	—	—
383482 2007 <i>BN</i> ₁₄	15.7	X	241.68520	146.06060	356.50590	2.43107	0.1008150	0.12496800	3.9622040	20	10 24.2	21.4
383483 2007 <i>BX</i> ₁₄	17.6	X	334.64529	85.96357	335.09455	3.01951	0.1528813	0.27967873	2.3157753	20	—	—
383484 2007 <i>BA</i> ₂₂	17.5	X	310.60908	107.68740	333.54159	7.72055	0.1957241	0.27889396	2.3201175	20	12 27.4	19.2
383485 2007 <i>BW</i> ₂₃	17.7	X	138.68421	237.92052	314.08805	4.51348	0.0469131	0.26296474	2.4128910	20	9 23.3	21.0
383486 2007 <i>BL</i> ₂₈	17.7	X	284.53560	74.57151	6.62736	1.17709	0.1548806	0.27314131	2.3525803	20	10 27.9	20.0
383487 2007 <i>BV</i> ₂₈	16.1	X	240.17353	182.14942	311.12132	1.74610	0.1302393	0.12601360	3.9402559	20	10 8.5	21.8
383488 2007 <i>BK</i> ₄₀	17.8	X	310.58087	184.31754	110.52208	5.32382	0.1011088	0.28673296	2.2776359	20	—	—
383489 2007 <i>BH</i> ₄₃	18.2	X	211.10622	198.58140	303.64485	3.63847	0.1311578	0.26743103	2.3859510	20	10 6.6	21.7
383490 2007 <i>BQ</i> ₄₃	17.3	X	218.93347	90.73051	122.41157	7.03651	0.1478992	0.27870227	2.3211812	20	—	—
383491 2007 <i>BF</i> ₄₈	17.4	X	112.71796	110.36042	116.23185	7.28480	0.0872140	0.25982996	2.4322594	20	10 15.9	21.0
383492 2007 <i>BF</i> ₅₀	17.6	X	285.43983	54.26263	41.92342	2.16944	0.1424213	0.27492919	2.3423699	20	11 23.7	19.7
383493 2007 <i>BQ</i> ₅₁	18.3	X	285.69807	41.82537	82.09040	4.41244	0.1416518	0.27935617	2.3175576	20	—	—
383494 2007 <i>BB</i> ₅₆	17.0	X	312.83745	285.85672	100.52797	5.30056	0.0331890	0.26551938	2.3973893	20	10 8.3	19.8
383495 2007 <i>BX</i> ₅₇	16.6	X	296.36324	125.75146	332.27411	23.88193	0.1535089	0.27476237	2.3433179	20	12 21.5	19.3
383496 2007 <i>BP</i> ₆₂	18.4	X	208.35843	6.54354	182.37905	1.86112	0.1162500	0.27424248	2.3462785	20	12 9.3	21.3
383497 2007 <i>BW</i> ₆₂	17.8	X	314.57959	131.96132	302.53865	4.20742	0.1563123	0.27701076	2.3306208	20	12 21.9	19.6
383498 2007 <i>BG</i> ₇₄	18.0	X	293.95743	86.31606	31.11225	2.62336	0.1733594	0.28056851	2.3108767	20	—	—
383499 2007 <i>BD</i> ₇₆	17.6	X	307.26501	283.92996	148.87127	6.81808	0.2048935	0.27460368	2.3442206	20	12 3.4	19.3
383500 2007 <i>BK</i> ₁₀₀	17.8	X	184.51367	107.53016	119.27696	3.24332	0.2065203	0.27373707	2.3491656	20	12 20.9	21.3
383501 2007 <i>CA</i> ₁	17.6	X	280.65681	55.30014	138.46561	5.71644	0.1259272	0.28851118	2.2682676	20	—	—
383502 2007 <i>CY</i> ₁	17.4	X	151.04873	258.94424	312.91733	5.09574	0.1069036	0.26548094	2.3976208	20	11 2.4	21.0
383503 2007 <i>CW</i> ₉	17.7	X	235.90053	44.00511	135.30336	5.44187	0.1612905	0.27821081	2.3239140	20	12 27.2	20.2
383504 2007 <i>CD</i> ₁₁	18.2	X	248.35109	10.16978	140.00360	2.03159	0.1111187	0.27543266	2.3395146	20	12 12.9	20.8
383505 2007 <i>CD</i> ₁₆	17.9	X	179.32584	105.67115	109.89841	2.18523	0.0576895	0.27378041	2.3489177	20	12 16.2	21.1
383506 2007 <i>CU</i> ₁₆	17.2	X	318.24731	359.75867	87.97261	7.35587	0.0957767	0.27840519	2.3228322	20	—	—
383507 2007 <i>CX</i> ₁₇	17.1	X	63.27089	175.23410	118.84700	7.23635	0.1251194	0.26447195	2.4037150	20	11 19.7	20.4
383508 2007 <i>CV</i> ₁₈	17.5	X	352.91312	290.98381	72.36945	2.55083	0.1967677	0.27129430	2.3632460	20	11 24.5	19.6
383509 2007 <i>CC</i> ₂₀	17.7	X	274.03721	329.38358	116.29251	3.13441	0.1716261	0.27181427	2.3602312	20	10 14.2	20.0
383510 2007 <i>CE</i> ₂₁	17.5	X	202.38630	257.62364	314.90830	6.15277	0.1711218	0.27549517	2.3391607	20	12 26.2	20.8
383511 2007 <i>CC</i> ₂₃	17.4	X	151.83720	269.78438	291.44052	3.35193	0.1736875	0.26286732	2.4134871	20	10 19.7	21.2
383512 2007 <i>CU</i> ₂₅	17.7	X	242.17303	32.51929	142.71228	2.62236	0.1706775	0.28001880	2.3139000	20</		

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
383521 2007 CV ₅₅	18.5	X	333.49772	272.21769	142.56699	2.24241	0.1968237	0.27955789	2.3164426	20	—	—
383522 2007 CX ₆₅	17.7	X	291.28460	63.80168	32.23095	4.46170	0.0499392	0.27289477	2.3539970	20	12 9.8	20.3
383523 2007 DE ₂	17.1	X	250.28906	75.67988	87.47540	7.19497	0.1385764	0.27643186	2.3338736	20	12 30.3	19.4
383524 2007 DD ₅	18.0	X	208.03689	69.90578	94.89889	3.67691	0.1207810	0.27115679	2.3640449	20	11 6.9	21.3
383525 2007 DT ₆	16.1	X	341.00683	16.12625	326.23238	14.06654	0.1983289	0.25624447	2.4548957	20	9 13.7	18.2
383526 2007 DB ₁₈	18.1	X	262.55814	286.56312	155.38718	2.77497	0.1355144	0.26469603	2.4023582	20	9 23.2	20.8
383527 2007 DT ₂₁	17.7	X	320.45050	299.77504	138.38019	5.26479	0.2151968	0.27727878	2.3291187	20	—	—
383528 2007 DN ₃₆	16.1	X	301.70609	334.70562	8.81523	5.53049	0.2486830	0.24457272	2.5323907	20	6 10.7	18.9
383529 2007 DG ₄₁	17.8	X	203.72337	254.90826	266.73900	2.06569	0.1329745	0.26406181	2.4062033	20	10 24.2	21.2
383530 2007 DE ₄₅	16.2	X	267.13807	163.24231	311.31768	1.66585	0.1793582	0.12426567	3.9771192	20	10 9.9	21.7
383531 2007 DE ₄₈	17.1	X	254.06563	131.44084	339.49163	7.57335	0.0553364	0.26584472	2.3954330	20	10 30.3	20.1
383532 2007 DY ₄₈	17.6	X	187.44948	11.38064	185.50051	1.19279	0.1209498	0.26717464	2.3874772	20	11 23.5	21.0
383533 2007 DW ₅₂	17.4	X	297.31033	225.10407	272.59698	2.01206	0.1691928	0.28018935	2.3129610	20	—	—
383534 2007 DG ₅₄	17.6	X	225.51302	8.11625	58.30913	3.42849	0.1758964	0.25536270	2.4605436	20	7 9.8	21.4
383535 2007 DS ₅₅	17.6	X	244.26910	15.41152	85.05758	2.95265	0.1283105	0.26315338	2.4117377	20	9 25.0	20.6
383536 2007 DY ₅₅	17.3	X	320.14676	316.93593	91.01600	3.67646	0.1955833	0.26954749	2.3734451	20	11 21.4	18.9
383537 2007 DK ₅₉	17.3	X	273.88288	186.10363	303.23014	2.57516	0.0681883	0.27445944	2.3450419	20	12 29.1	19.7
383538 2007 DT ₆₄	16.8	X	46.92798	325.82868	338.30661	6.47459	0.1465348	0.26019335	2.4299943	20	11 10.5	20.1
383539 2007 DJ ₆₇	17.4	X	353.86231	232.70067	133.77325	4.69341	0.0710432	0.26410529	2.4059392	20	11 13.1	20.1
383540 2007 DL ₇₀	17.8	X	272.77641	25.34309	29.26441	1.34945	0.1995854	0.26091877	2.4254882	20	8 18.8	20.7
383541 2007 DR ₇₆	17.1	X	143.05604	117.07230	96.22431	6.52647	0.2698916	0.25963349	2.4334863	20	10 30.2	21.5
383542 2007 DM ₈₃	17.3	X	323.95984	290.03272	113.30185	2.21748	0.1732719	0.27073681	2.3664891	20	11 22.3	19.1
383543 2007 DN ₈₃	17.8	X	260.75526	13.25927	142.11344	5.93554	0.1622633	0.27683467	2.3316090	20	—	—
383544 2007 DN ₉₀	18.0	X	319.48228	306.01957	146.68464	6.26711	0.1323533	0.27983577	2.3149089	20	—	—
383545 2007 DQ ₉₁	17.6	X	277.85756	70.43240	4.95720	1.30186	0.1544893	0.26730575	2.3866964	20	10 5.4	20.1
383546 2007 DN ₉₂	16.7	X	314.75106	295.82673	25.34863	1.76540	0.2263260	0.24545955	2.5262874	20	6 5.7	19.1
383547 2007 DR ₁₀₆	18.1	X	288.95248	224.77479	257.95352	0.74252	0.1391994	0.27501039	2.3419088	20	—	—
383548 2007 EM ₄	18.4	X	282.07172	300.43339	155.48402	3.07125	0.1315565	0.27284307	2.3542944	20	11 18.7	20.5
383549 2007 ET ₅	17.3	X	359.14476	5.80032	334.02329	6.58046	0.0973249	0.26048093	2.4282055	20	10 11.7	20.0
383550 2007 ET ₈	17.7	X	280.18954	288.01390	166.02106	1.35079	0.1422373	0.26776963	2.3839392	20	11 8.9	19.8
383551 2007 EA ₉	17.4	X	274.69657	354.68959	172.50926	5.60228	0.0146545	0.27786196	2.3258586	20	—	—
383552 2007 EX ₁₀	17.6	X	274.50586	213.59571	263.43279	1.24294	0.1203536	0.27347851	2.3506461	20	12 6.6	20.0
383553 2007 EM ₁₅	17.2	X	196.76714	4.50499	146.68017	2.57519	0.1201262	0.26176328	2.4202686	20	10 5.6	20.7
383554 2007 EN ₁₇	17.9	X	188.93556	58.81585	177.05802	2.35767	0.1359532	0.27298897	2.3534554	20	—	—
383555 2007 EG ₂₂	17.8	X	167.36465	231.93812	318.60673	2.84892	0.1332095	0.26426440	2.4049734	20	10 22.6	21.4
383556 2007 EH ₂₈	18.0	X	327.76475	240.17367	194.71896	1.03344	0.1585953	0.27934874	2.3175987	20	—	—
383557 2007 EC ₃₉	18.0	X	243.84532	39.65329	98.98980	3.15809	0.1504610	0.26858635	2.3791040	20	11 12.8	20.8
383558 2007 EQ ₄₁	17.7	X	284.94175	275.20834	155.23558	2.93934	0.1528308	0.27048127	2.3679794	20	10 13.2	19.9
383559 2007 EV ₅₈	17.2	X	338.13271	220.56484	156.43918	7.62141	0.2414650	0.27036742	2.3686441	20	11 22.3	18.9
383560 2007 EZ ₇₂	17.4	X	255.33906	113.49628	10.60487	4.96153	0.1821760	0.26847238	2.3797773	20	11 2.1	20.1
383561 2007 EV ₁₀₄	18.1	X	204.39592	122.14298	23.28319	2.82899	0.1370656	0.26157670	2.4214194	20	10 4.1	21.6
383562 2007 EW ₁₀₄	18.1	X	305.20890	281.13505	168.09297	3.35305	0.2346268	0.27485928	2.3427671	20	12 24.6	19.4
383563 2007 EV ₁₂₉	18.1	X	266.40889	337.95118	171.73329	2.08526	0.1771214	0.27564679	2.3383028	20	—	—
383564 2007 EP ₁₃₆	18.2	X	303.70508	257.24898	163.49501	1.41368	0.1733744	0.26743040	2.3859547	20	11 2.2	20.0
383565 2007 ES ₁₃₆	17.6	X	245.50132	164.94176	340.38337	4.98408	0.1675031	0.26893265	2.3770612	20	11 19.1	20.4
383566 2007 EQ ₁₅₀	17.4	X	294.95774	327.07431	103.88993	3.13255	0.1650060	0.26735754	2.3863882	20	10 31.9	19.4
383567 2007 EQ ₁₅₆	17.8	X	140.58734	348.82199	260.19938	4.32404	0.1993779	0.26144550	2.4222294	20	12 8.1	21.6
383568 2007 EO ₁₅₈	18.0	X	284.19607	269.25941	160.04542	9.96510	0.2340413	0.27047444	2.3680192	20	9 27.3	20.2
383569 2007 EY ₁₆₁	17.0	X	117.19203	7.74334	312.15402	7.08851	0.1340947	0.28187206	2.3037466	20	—	—
383570 2007 EY ₁₆₉	17.9	X	218.66328	2.86681	128.23293	2.26220	0.1363570	0.26578694	2.3957801	20	10 2.8	21.1
383571 2007 EJ ₁₇₉	17.7	X	229.00085	292.38153	234.26006	1.85808	0.1642572	0.26736013	2.3863728	20	11 27.1	20.4
383572 2007 ES ₁₈₄	16.7	X	264.01930	82.90357	108.61318	21.92638	0.2992162	0.28087802	2.3091787	20	—	—
383573 2007 ER ₁₈₉	17.8	X	245.89699	92.64190	327.06561	3.30467	0.1732033	0.25504414	2.4625921	20	7 23.9	21.1
383574 2007 ER ₁₉₁	17.7	X	211.14311	167.17232	356.78857	0.57854	0.0710379	0.26320276	2.4114361	20	11 13.3	20.8
383575 2007 ED ₁₉₈	17.6	X	255.41688	141.25108	336.85763	2.35664	0.1884362	0.26581048	2.3956387	20	10 23.4	20.3
383576 2007 EA ₂₀₇	18.0	X	191.78629	119.45484	69.75738	2.92611	0.1189802	0.26513653	2.3996966	20	11 18.2	21.2
383577 2007 EK ₂₁₀	17.6	X	265.85903	40.96034	104.55185	3.79497	0.1240400	0.27617314	2.3353309	20	—	—
383578 2007 EA ₂₁₄	17.6	X	222.54227	36.21427	129.69256	2.26593	0.1346880	0.26466739	2.4025315	20	11 22.2	20.7
383579 2007 FU ₁	17.0	X	276.61213	18.15223	141.65317	6.88613	0.1491989	0.27744919	2.3281649	20	—	—
383580 2007 FA ₃	16.9	X	139.65841	214.94096	39.83752	7.35417	0.4453550	0.25907658	2.4369724	20	12 10.2	21.9
383581 2007 FS ₂₂	17.6	X	226.05540	83.93595	81.82678	1.94616	0.1332360	0.26769297	2.3843943	20	11 26.9	20.7
383582 2007 FN ₃₆	17.9	X	295.86475	28.48252	38.72515	0.21964	0.1876223	0.26520879	2.3992607	20	10 22.4	19.8
383583 2007 FP ₄₅	17.9	X	275.76449	224.10905	262.94509	0.68362	0.1301151	0.27210346	2.3585586	20	12 22.1	20.1
383584 2007 GD ₁	16.1	X	352.69719	159.71917	113.54709	16.98888	0.2108272	0.23232028	2.6206638	20	6 21.9	18.3
383585 2007 GP ₈	16.8	X	258.44106	67.88097	27.03368	6.64228	0.0916796	0.25859331	2.4400077	20	10 11.4	19.6
383586 2007 GY ₁₁	17.4	X	245.76885	344.91492	117.78289	6.04845	0.1818494	0.26290495	2.4132568	20	9 22.9	20.5
383587 2007 GF ₁₆	16.2	X	157.62919	90.99375	28.06252	15.31046	0.0393645	0.23911409	2.5707860	20	7 11.5	20.1
383588 2007 GC ₃₃	17.4	X	150.75704	113.13367	127.01859	1.22600	0.1498697	0.26217805	2.4177153	20	12 7.9	21.0
383589 2007 GQ ₃₃	17.7	X	197.31627	95.18542	51.59701	3.09865	0.1639040	0.25575898	2.4580014	20	9 26.2	21.5
383590 2007 GQ ₄₅	16.9	X	299.80243	277.46505	49.63500	15.52483	0.1919549	0.23047741	2.6346149	20	5 23.5	20.0
383591 2007 GU ₄₅	16.3	X	263.06808	197.43593	66.47130	5.89104	0.1096999	0.21219048	2.7838903	20	2 3.2	20.4
383592 2007 GC ₅₂	17.1	X	206.12595	81.64838	143.25000	6.27276	0.1269443	0.27053840	2.3676460	20	—	—
383593 2007 GV ₆₁	17.6	X	126.88489	108.02163	134.71872	2.90850	0.1766831	0.25789759	2.4443939	20	11 19.4	21.5
383594 2007 GO ₇₀	17.7	X	108.									

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
383601	2007	HF ₂₉	17.8	X	234.92283	124.68319	46.72638	2.62501	0.1391933	0.26986450	2.3715860	20	12 15.9	20.7
383602	2007	HU ₃₅	17.2	X	256.56499	92.81843	43.20117	11.53467	0.2371684	0.26685569	2.3893792	20	11 11.7	19.7
383603	2007	HW ₃₆	17.1	X	146.82054	143.38599	10.59602	1.39427	0.0676980	0.24352343	2.5396598	20	8 13.8	20.6
383604	2007	HA ₄₂	18.0	X	204.04723	107.84553	66.29161	3.20219	0.1494301	0.26347028	2.4098035	20	11 8.9	21.3
383605	2007	HW ₇₆	16.3	X	277.67768	184.11418	68.16702	10.40115	0.1275555	0.21405819	2.7676733	20	2 3.8	20.5
383606	2007	HP ₈₃	17.3	X	20.37799	24.73999	236.10818	6.27948	0.1103255	0.23746625	2.5826652	20	7 22.8	20.2
383607	2007	JC ₁₀	17.5	X	202.19937	125.04104	46.05472	7.54322	0.1658274	0.26183421	2.4198315	20	11 1.1	21.0
383608	2007	JX ₁₇	16.3	X	12.56695	98.40954	160.12830	11.89130	0.1590749	0.23167332	2.6255404	20	7 10.1	19.1
383609	2007	JJ ₂₀	17.8	X	247.14719	333.69833	173.91243	2.48471	0.1422095	0.26486924	2.4013108	20	11 29.9	20.5
383610	2007	JJ ₃₅	18.3	X	204.72501	324.12521	230.61254	56.07133	0.3048118	0.41727466	1.7735960	20	12 5.8	20.8
383611	2007	JF ₄₂	17.6	X	313.31313	195.88501	84.35219	23.56983	0.0687218	0.37670037	1.8987685	20	5 5.2	19.7
383612	2007	KD ₃	16.0	X	109.60793	58.35216	107.09733	28.58707	0.1588110	0.23839665	2.5759412	20	7 24.3	19.9
383613	2007	KW ₇	16.3	X	20.07976	186.22023	65.96975	14.26962	0.1306432	0.23495689	2.6010214	20	7 14.7	19.3
383614	2007	LL ₃	17.1	X	352.20130	126.53177	133.34719	4.28753	0.1196218	0.22832204	2.6511695	20	6 1.2	19.9
383615	2007	LQ ₁₂	16.6	X	255.69592	224.68478	72.30357	8.98757	0.2042779	0.21361777	2.7714760	20	2 29.4	21.2
383616	2007	LW ₂₁	16.3	X	44.43258	106.46866	102.28417	10.93946	0.0284250	0.22905466	2.6455134	20	6 9.1	19.8
383617	2007	MS	17.2	X	201.14459	350.64596	162.26233	6.31261	0.1185476	0.25354933	2.4722615	20	10 12.4	20.7
383618	2007	ME ₂₁	16.0	X	2.19899	14.54463	289.32436	13.09503	0.1630503	0.23072998	2.6326919	20	8 22.4	18.8
383619	2007	MP ₂₇	16.1	X	48.82832	343.67722	315.39829	13.85441	0.0902295	0.23941909	2.5686023	20	10 19.7	19.8
383620	2007	NG ₃	16.8	X	21.61258	5.13167	272.52245	11.51006	0.1073582	0.23138347	2.6273326	20	8 14.2	20.1
383621	2007	NQ ₅	14.5	X	94.18644	356.19693	339.54751	29.33974	0.2706351	0.17226316	3.1989524	20	—	—
383622	2007	PJ ₉	16.5	X	175.74670	125.29200	273.41248	11.17673	0.0702243	0.20173220	2.8792933	20	4 12.4	21.0
383623	2007	PF ₁₂	15.9	X	182.49670	253.13852	125.07098	12.85487	0.0751980	0.20066639	2.8894795	20	4 4.6	20.5
383624	2007	PH ₂₁	17.2	X	252.92607	349.16339	335.87056	17.57184	0.0734608	0.35978172	1.9578376	20	3 22.3	19.6
383625	2007	PQ ₃₄	16.2	X	101.38777	273.07145	116.36518	11.97271	0.0415176	0.18390954	3.0624326	20	2 22.0	20.9
383626	2007	QE ₁₅	16.6	X	166.79788	191.62220	155.72162	3.79620	0.0974213	0.19282237	2.9673204	20	2 7.3	21.2
383627	2007	RO ₄₂	16.1	X	289.21869	294.97286	308.31175	6.90646	0.0221616	0.19315433	2.9639196	20	2 18.6	20.3
383628	2007	RF ₆₇	17.1	X	116.90431	80.57166	301.28300	0.84603	0.2161652	0.18613819	3.0379391	20	2 10.9	21.8
383629	2007	RO ₇₇	17.4	X	198.16823	66.90043	165.81421	6.38846	0.2966729	0.25823179	2.4422845	20	12 28.8	21.3
383630	2007	RW ₉₃	16.6	X	87.56214	246.05820	172.64709	9.46973	0.0926127	0.18402302	3.0611735	20	2 10.1	20.9
383631	2007	RD ₉₅	16.8	X	221.74167	193.83145	142.29856	2.88339	0.1122297	0.19711026	2.9241293	20	3 19.4	21.4
383632	2007	RH ₁₆₂	16.1	X	116.27254	222.69731	181.71240	16.04759	0.2931235	0.18399667	3.0614658	20	3 15.7	21.0
383633	2007	RJ ₁₆₂	17.0	X	341.93549	308.60865	333.24076	5.60213	0.0428913	0.21540453	2.7561287	20	6 17.2	20.6
383634	2007	RH ₁₇₀	16.8	X	171.55778	256.50860	154.60269	7.08084	0.1591479	0.20195291	2.8771951	20	5 2.9	21.5
383635	2007	RC ₁₇₃	16.0	X	83.65695	38.32567	19.59789	13.02782	0.1804246	0.18115485	3.0933999	20	2 17.3	20.3
383636	2007	RL ₂₀₈	16.4	X	190.92695	237.99020	99.34123	3.02363	0.0572694	0.19166547	2.9792490	20	2 20.1	20.9
383637	2007	RL ₂₂₆	16.3	X	256.11248	201.83459	165.41768	6.89100	0.0259098	0.21098546	2.7944802	20	6 14.9	20.2
383638	2007	RT ₂₄₇	16.1	X	114.17162	111.69685	240.03682	15.03322	0.2490618	0.17980047	3.1089149	20	1 6.3	20.9
383639	2007	RF ₂₅₁	16.5	X	348.64793	287.20879	327.38908	7.57067	0.0827339	0.20870819	2.8147710	20	5 16.4	20.1
383640	2007	RE ₂₈₈	16.6	X	158.84165	82.36499	245.69482	2.72156	0.2304898	0.18488763	3.0516226	20	1 18.2	21.7
383641	2007	RW ₂₉₁	16.8	X	97.04131	235.85689	149.84133	0.94309	0.1147388	0.17938317	3.1137346	20	1 11.5	21.1
383642	2007	RJ ₂₉₂	17.1	X	164.29175	251.02661	129.76985	1.74298	0.1424755	0.19291115	2.9664099	20	3 18.9	21.8
383643	2007	RN ₂₉₂	16.6	X	80.31387	266.26198	180.09739	8.60881	0.0918698	0.18721370	3.0262929	20	2 27.4	20.7
383644	2007	RD ₂₉₄	17.0	X	113.51260	90.09598	339.09345	0.95951	0.1686072	0.18902578	3.0069210	20	3 26.5	21.4
383645	2007	RA ₂₉₈	16.3	X	133.85699	280.47618	78.78328	5.76765	0.2789304	0.18454844	3.0553606	20	2 8.5	21.4
383646	2007	RJ ₃₁₆	16.3	X	208.73043	114.14371	202.07647	14.47337	0.1784865	0.19445129	2.9507257	20	2 7.2	21.5
383647	2007	RB ₃₂₄	15.9	X	158.23997	39.18585	344.28691	9.72288	0.1139514	0.19140862	2.9819136	20	3 13.2	20.4
383648	2007	SU ₆	16.4	X	280.52303	278.29261	25.77655	11.41662	0.2995018	0.21098098	2.7945197	20	3 21.3	20.9
383649	2007	SL ₉	16.1	X	136.36248	323.92235	62.74232	4.03510	0.2531191	0.18694243	3.0292198	20	3 10.8	21.2
383650	2007	SN ₁₈	17.1	X	176.10641	279.27390	115.58625	24.39273	0.1275880	0.35038285	1.9926950	20	4 19.6	20.5
383651	2007	TD ₁₅	17.6	X	79.06409	240.71143	244.30055	14.15764	0.2923783	0.34627567	2.0084209	20	5 10.9	19.6
383652	2007	TT ₃₇	16.2	X	97.37771	251.76097	148.61133	1.87203	0.1847133	0.18131093	3.0916244	20	2 8.1	20.5
383653	2007	TK ₄₆	15.5	X	187.18615	56.72121	257.65318	9.30940	0.1052825	0.18732508	3.0250932	20	1 19.2	20.3
383654	2007	TD ₅₂	15.9	X	80.73477	37.15123	25.69332	10.32754	0.1136501	0.17901930	3.1179524	20	2 8.7	20.2
383655	2007	TD ₉₉	16.9	X	149.99185	249.31076	156.13588	2.18623	0.0945439	0.19272227	2.9683478	20	3 31.4	21.5
383656	2007	TE ₁₀₁	16.6	X	42.83499	146.95998	84.85646	2.40038	0.0853649	0.21196774	2.7858402	20	7 14.9	20.0
383657	2007	TR ₁₀₂	16.4	X	138.23550	258.12148	110.46079	2.82364	0.1801626	0.18148796	3.0896136	20	2 13.5	21.1
383658	2007	TZ ₁₀₉	16.0	X	135.84684	246.64640	122.10791	4.51118	0.2241483	0.18275430	3.0753247	20	2 15.4	20.9
383659	2007	TB ₁₁₀	15.9	X	122.94012	149.16244	210.19132	16.03498	0.2108246	0.18079932	3.0974539	20	1 18.2	20.9
383660	2007	TS ₁₂₈	15.4	X	32.21445	54.64725	37.35415	19.14415	0.0857531	0.17240213	3.1972331	20	—	—
383661	2007	TL ₁₃₃	16.3	X	104.68708	255.34696	213.83107	9.91383	0.0586731	0.19226321	2.9730708	20	4 23.1	20.3
383662	2007	TG ₁₃₇	15.6	X	92.69996	155.11458	244.91619	9.57294	0.1265064	0.17801844	3.1296280	20	1 22.5	20.0
383663	2007	TX ₁₃₈	15.9	X	82.03919	162.90253	252.33628	16.28540	0.1879624	0.17886277	3.1197712	20	2 1.0	20.3
383664	2007	TB ₁₄₁	15.8	X	116.01205	46.74808	11.56422	9.83401	0.1068791	0.18452475	3.0556220	20	3 13.6	20.2
383665	2007	TG ₁₅₅	15.7	X	99.18449	163.48799	233.77133	8.63916	0.1923786	0.17980381	3.1088764	20	2 4.6	20.2
383666	2007	TK ₁₆₀	16.3	X	105.20833	357.99909	21.16611	9.65307	0.3544029	0.17739840	3.1369161	20	2 17.3	21.3
383667	2007	TY ₁₆₇	16.1	X	95.02127	61.03211	9.39462	10.18148	0.1498501	0.18434393	3.0576198	20	3 9.8	20.4
383668	2007	TB ₁₇₃	17.4	X	85.95102	128.36228	147.29535	5.46152	0.2182079	0.24365103	2.5387731	20	11 24.4	21.6
383669	2007	TJ ₁₇₅	16.0	X	64.76581	58.61970								

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
383681	2007	TV ₂₄₃	15.9	X	126.50370	21.32485	5.26187	13.67119	0.1247683	0.18392722	3.0622364	20	2 20.9	20.6
383682	2007	TC ₂₄₄	15.8	X	130.68695	42.91911	346.16276	9.26572	0.1262713	0.18489587	3.0515319	20	2 24.8	20.3
383683	2007	TO ₂₅₀	16.3	X	76.11640	110.49361	6.33010	9.97517	0.0555543	0.19188339	2.9769929	20	3 26.8	20.3
383684	2007	TU ₂₆₁	15.7	X	55.26815	213.28810	225.63792	8.55519	0.0757987	0.17511519	3.1641241	20	1 14.4	19.9
383685	2007	TX ₂₆₆	15.9	X	41.88035	252.99421	204.69834	11.40424	0.1247687	0.17765293	3.1339192	20	1 20.0	20.0
383686	2007	TR ₂₇₁	16.3	X	113.80429	160.32025	229.12367	2.63538	0.2209647	0.18076598	3.0978348	20	2 16.9	21.0
383687	2007	TU ₃₀₄	16.6	X	148.69194	171.51645	172.64745	1.02718	0.1658521	0.18921089	3.0049596	20	1 23.0	21.2
383688	2007	TX ₃₁₄	16.2	X	141.98046	349.47400	314.19984	0.42387	0.1751193	0.17083243	3.1676884	20	—	—
383689	2007	TD ₃₁₉	16.5	X	146.86835	122.13302	213.02922	8.72373	0.0880335	0.17475116	3.1685167	20	1 4.6	21.3
383690	2007	TT ₃₄₃	16.5	X	65.78660	297.92004	87.24736	6.18373	0.1726281	0.16957931	3.2326161	20	—	—
383691	2007	TY ₃₅₄	16.0	X	116.46157	249.78533	182.76645	10.06419	0.0864544	0.18945268	3.0024022	20	3 26.6	20.3
383692	2007	TW ₃₆₀	16.0	X	329.72996	106.32923	114.55428	7.47101	0.0918418	0.18564787	3.0432857	20	3 9.9	20.0
383693	2007	TG ₃₈₂	16.1	X	139.43542	199.68576	186.83880	9.91159	0.1224454	0.18238364	3.0794900	20	2 27.8	20.9
383694	2007	TS ₃₈₃	16.6	X	69.98698	296.45493	156.87648	0.96550	0.1577916	0.17973323	3.1096903	20	3 4.4	20.4
383695	2007	TZ ₃₈₅	16.5	X	122.36865	257.72386	140.58588	9.83413	0.2833367	0.18435394	3.0575092	20	3 15.7	21.5
383696	2007	TO ₄₀₃	16.0	X	98.50454	159.94573	236.85608	9.03234	0.0868416	0.17652647	3.1472373	20	1 20.8	20.6
383697	2007	TF ₄₀₆	17.0	X	141.95361	2.30670	75.65718	3.03572	0.0828087	0.19622453	2.9329220	20	4 30.9	21.4
383698	2007	TU ₄₀₇	16.4	X	48.67838	274.38023	175.62000	9.46286	0.0798536	0.17531380	3.1617339	20	1 19.4	20.7
383699	2007	TV ₄₀₈	16.2	X	81.15062	149.39176	264.01813	9.49084	0.2842838	0.17709187	3.1405350	20	2 14.5	20.5
383700	2007	TT ₄₂₁	15.9	X	137.21514	126.32154	293.21388	13.71548	0.2520242	0.19193885	2.9764193	20	4 9.9	21.2
383701	2007	TT ₄₂₆	16.5	X	87.16396	157.58919	308.78998	3.90854	0.1465217	0.18572104	3.0424864	20	4 8.8	20.8
383702	2007	TK ₄₃₆	15.8	X	241.07624	321.85243	356.88193	14.99560	0.1506514	0.20359229	2.8617289	20	3 14.1	20.2
383703	2007	TK ₄₄₁	15.8	X	96.48980	254.82533	120.97415	10.81807	0.2405692	0.17471268	3.1689820	20	1 17.4	20.2
383704	2007	TV ₄₄₁	16.3	X	143.93985	114.48336	287.59143	8.28639	0.1333409	0.19000523	2.9965787	20	3 19.5	21.1
383705	2007	TT ₄₄₄	15.9	X	138.03355	191.40776	232.80770	9.83297	0.0810771	0.19244207	2.9712284	20	4 6.4	20.4
383706	2007	TA ₄₄₅	17.5	X	286.77596	100.39056	196.69760	21.81857	0.1137732	0.36170851	1.9508786	20	3 27.7	19.6
383707	2007	TN ₄₄₅	16.2	X	317.79597	112.19200	195.94978	6.46838	0.0328920	0.21097332	2.7945874	20	6 18.5	20.0
383708	2007	TX ₄₄₉	16.0	X	317.81210	162.82774	65.08223	8.60255	0.0568632	0.18630118	3.0361669	20	3 8.6	20.2
383709	2007	TY ₄₅₀	18.0	X	58.05483	73.71328	49.46406	22.42505	0.0705601	0.34221676	2.0242705	20	3 8.0	20.5
383710	2007	UB	15.9	X	113.67760	33.20507	355.58613	15.67597	0.2358694	0.18196761	3.0841819	20	2 22.8	20.6
383711	2007	UG ₅	16.2	X	143.82080	109.87326	230.46063	9.22519	0.1198094	0.17904532	3.1176504	20	1 9.5	21.1
383712	2007	UG ₈	16.5	X	65.67502	86.46117	345.14249	12.39782	0.3005231	0.17499529	3.1655692	20	2 23.3	20.1
383713	2007	UW ₂₄	16.0	X	160.63087	282.67959	73.47681	6.82116	0.1032268	0.18287694	3.0739496	20	2 15.9	20.8
383714	2007	UU ₃₇	16.3	X	130.79363	299.99545	109.67166	6.28921	0.1746229	0.18886209	3.0086582	20	3 26.9	21.0
383715	2007	UL ₄₃	16.3	X	72.52274	314.23738	98.84317	2.38467	0.2038663	0.17506488	3.1647303	20	1 25.5	20.1
383716	2007	UY ₄₅	15.5	X	71.74468	335.19557	67.36445	11.56538	0.1582296	0.17481789	3.1677104	20	1 4.8	19.5
383717	2007	UA ₄₆	16.3	X	159.78455	237.86044	70.52957	2.22307	0.1462460	0.17750228	3.1356922	20	—	—
383718	2007	UD ₄₈	16.4	X	106.64097	281.44806	103.10357	2.63443	0.1868474	0.17558039	3.1585327	20	2 1.5	20.8
383719	2007	UN ₅₉	16.0	X	35.74351	122.14073	41.55424	4.33583	0.0532827	0.18861746	3.0112591	20	4 1.5	19.8
383720	2007	UW ₇₂	16.8	X	8.79754	231.35666	243.49703	1.64074	0.1441911	0.17196779	3.2026144	20	—	—
383721	2007	UD ₇₇	16.1	X	141.96543	81.02844	267.90998	2.67745	0.1105083	0.17718049	3.1394877	20	1 18.3	20.8
383722	2007	UN ₇₉	16.7	X	24.11364	114.39595	6.75346	0.85989	0.1294204	0.17518343	3.1633023	20	1 24.5	20.3
383723	2007	UR ₈₁	16.7	X	194.02876	272.26826	100.85415	3.28117	0.0799649	0.19667584	2.9284336	20	4 7.0	21.1
383724	2007	UJ ₈₇	15.8	X	22.96289	101.66189	45.40854	11.63758	0.1066073	0.17907977	3.1172505	20	2 29.6	19.8
383725	2007	UE ₈₉	16.7	X	105.81187	116.99654	230.37857	3.72631	0.1546184	0.16964022	3.2318423	20	—	—
383726	2007	UD ₉₄	16.4	X	194.63048	321.80806	28.86113	8.99812	0.0602997	0.18903639	3.0068085	20	3 13.7	20.9
383727	2007	UK ₉₉	16.2	X	49.04118	269.69598	233.28661	7.72214	0.1474207	0.18239011	3.0794172	20	3 31.8	20.1
383728	2007	UF ₁₀₀	15.8	X	117.18305	2.41914	56.69839	11.65952	0.0118744	0.18229575	3.0804797	20	3 7.8	20.3
383729	2007	UJ ₁₂₀	16.6	X	111.89704	30.93339	201.29508	5.40679	0.1084735	0.22569418	2.6717089	20	10 15.0	20.6
383730	2007	UW ₁₂₂	16.9	X	104.99077	242.14066	177.29977	0.30557	0.1869477	0.17952835	3.1120556	20	3 11.2	21.5
383731	2007	US ₁₂₈	15.9	X	92.82270	140.19944	175.55345	4.73121	0.1513481	0.17753559	3.1353000	20	2 15.2	20.2
383732	2007	UJ ₁₃₆	15.9	X	85.28492	230.78514	175.91095	12.74915	0.1912563	0.17657607	3.1466480	20	1 31.0	20.3
383733	2007	UC ₁₄₀	15.9	X	120.72086	175.30219	241.30479	9.60630	0.0557845	0.18473499	3.0533033	20	3 3.9	20.4
383734	2007	VS ₄	16.0	X	134.61744	97.14263	316.13370	9.80444	0.2713099	0.18662969	3.0326030	20	4 3.9	21.3
383735	2007	VA ₁₁	15.3	X	78.49078	2.16510	53.84567	29.34157	0.1924093	0.17365206	3.1818724	20	2 18.6	20.1
383736	2007	VR ₁₃	16.7	X	57.18937	48.77254	14.38067	3.38215	0.1465835	0.17149301	3.2085226	20	1 7.7	20.6
383737	2007	VW ₁₄	15.7	X	89.02070	332.68400	71.49379	10.37382	0.0856306	0.17456089	3.1708188	20	1 21.9	20.2
383738	2007	VA ₃₀	15.5	X	249.74896	27.23447	235.15084	5.92758	0.1109361	0.18647029	3.0343310	20	1 18.9	20.3
383739	2007	VD ₃₃	15.8	X	208.16314	18.44963	248.48237	7.13977	0.1249533	0.17439216	3.1728637	20	—	—
383740	2007	VY ₄₇	16.6	X	97.33120	82.54377	288.96578	5.91550	0.1605059	0.17221892	3.1995002	20	1 2.8	20.8
383741	2007	VN ₅₀	15.8	X	66.72509	176.71317	248.12446	12.01802	0.0770171	0.17412593	3.1760969	20	1 12.7	20.1
383742	2007	VM ₅₄	16.2	X	179.01304	261.25756	79.02335	8.29930	0.0999085	0.18185540	3.0854505	20	2 15.7	21.1
383743	2007	VB ₆₁	16.4	X	89.27226	188.74921	251.94815	5.74784	0.0759469	0.18046837	3.1012395	20	2 28.9	20.8
383744	2007	VA ₈₄	15.7	X	112.30907	329.76786	130.52299	10.14241	0.1184966	0.18958244	3.0010322	20	5 3.2	20.3
383745	2007	VL ₉₀	15.5	X	211.64535	254.69227	84.73861	10.71581	0.1093480	0.18823817	3.0153028	20	3 19.1	20.4
383746	2007	VA ₉₃	15.8	X	106.68617	157.12780	252.21920	16.43771	0.2345454	0.18144924	3.0900532	20	2 27.8	20.8
383747	2007	VO ₉₅	15.8	X	108.04555	148.65293	290.45198	9.54043	0.1107858	0.18310042	3.0714479	20	3 23.1	20.4
383748	2007	VO ₉₇	16.5	X	333.30660	350.51033	278.74713	4.61318	0.0879495	0.19970378	2.8987573	20	5 13.2	20.0
383749	2007	VD ₁₁₄	16.7	X	102.15949	285.20653	163.78309	2.68200	0.1105122	0.18369322	3.0648364	20	4 3.1	20.9
383750	2007	VS ₁₁												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	V
383761 2007 VJ ₂₂₇	16.2	X	125.46029	341.24658	72.49904	7.40412	0.1932864	0.18447869	3.0561306	20	3 29.4	21.0
383762 2007 VE ₂₂₈	16.4	X	93.98328	135.17936	270.84244	8.98915	0.2292223	0.17622695	3.1508024	20	2 14.1	20.9
383763 2007 VL ₂₃₂	15.9	X	76.92869	239.02003	238.31310	9.39194	0.0681960	0.18508165	3.0494895	20	3 27.5	20.2
383764 2007 VE ₂₃₃	15.8	X	168.17564	76.06321	251.60022	8.54551	0.0995798	0.17940067	3.1135321	20	1 17.2	20.7
383765 2007 VT ₂₃₃	16.6	X	74.54348	356.52439	86.81810	2.66920	0.1704752	0.17681612	3.1437993	20	3 1.8	20.7
383766 2007 VU ₂₃₇	16.1	X	55.66138	77.33904	29.90679	16.32399	0.1961984	0.17873884	3.1212132	20	3 13.2	20.0
383767 2007 VV ₂₃₉	16.5	X	109.23930	284.78760	130.53433	1.34827	0.2130150	0.17965977	3.1105378	20	3 14.5	21.0
383768 2007 VF ₂₄₁	15.8	X	159.31094	253.62155	103.01407	12.31095	0.1931022	0.18397339	3.0617240	20	2 21.5	21.0
383769 2007 VU ₂₄₂	15.9	X	119.67140	327.87707	103.11642	12.00124	0.1374915	0.18614051	3.0379138	20	4 9.6	20.6
383770 2007 VO ₂₅₀	15.9	X	352.13318	242.26751	291.39105	8.92400	0.1312195	0.17914704	3.1164701	20	2 4.8	19.7
383771 2007 VM ₂₅₅	16.0	X	317.92693	347.28842	268.13428	9.18973	0.0529612	0.19121873	2.9838874	20	4 3.4	20.2
383772 2007 VP ₂₈₇	15.5	X	248.91334	334.69623	256.35804	15.80749	0.0687305	0.16966973	3.2314676	20	—	—
383773 2007 VT ₂₉₈	16.0	X	126.49895	271.44570	118.44322	18.37153	0.2029315	0.18145379	3.0900015	20	3 4.1	21.0
383774 2007 VY ₂₉₉	15.5	X	93.64646	139.39418	263.82506	15.63381	0.2107811	0.17746222	3.1361641	20	2 5.1	20.1
383775 2007 VC ₃₀₁	15.8	X	109.18574	303.75540	108.35599	12.76816	0.1261860	0.17965638	3.1105770	20	3 3.4	20.4
383776 2007 VJ ₃₀₃	16.2	X	76.89828	269.39172	180.58160	21.76468	0.2345584	0.17987644	3.1080395	20	3 21.3	20.3
383777 2007 VK ₃₀₉	15.6	X	207.77287	72.63706	275.27635	9.19580	0.1176944	0.19012426	2.9953278	20	3 14.7	20.5
383778 2007 VX ₃₁₅	15.9	X	131.29506	268.75589	88.07557	17.17760	0.2848931	0.17772149	3.1331132	20	2 6.1	21.2
383779 2007 VP ₃₁₈	16.4	X	353.59284	156.70952	64.49368	6.36317	0.1073120	0.19005982	2.9960048	20	4 13.7	20.0
383780 2007 VB ₃₂₀	16.0	X	110.12790	45.35597	342.87833	10.72640	0.1512986	0.18015517	3.1048329	20	2 6.5	20.5
383781 2007 VV ₃₂₂	15.9	X	101.06192	121.51741	307.75374	6.93095	0.0721574	0.18293170	3.0733361	20	2 29.5	20.3
383782 2007 VH ₃₂₃	15.7	X	127.35909	106.71041	290.97084	7.96118	0.0399392	0.18220064	3.0815517	20	2 17.9	20.2
383783 2007 VH ₃₃₀	15.5	X	50.91578	343.11567	93.35429	13.99473	0.1010710	0.17003909	3.2267863	20	1 10.4	19.7
383784 2007 VP ₃₃₂	16.1	X	153.79370	314.03608	93.71237	10.41152	0.0829109	0.18820087	3.0157011	20	4 11.3	20.8
383785 2007 WQ	16.5	X	22.66823	300.83377	229.63299	5.08141	0.1016679	0.18409548	3.0603702	20	3 21.3	20.4
383786 2007 WX ₆	15.9	X	83.93351	169.66454	258.37178	10.78826	0.1844830	0.17730790	3.1379835	20	2 20.1	20.4
383787 2007 WQ ₁₀	16.2	X	137.34769	122.67096	288.05075	7.50564	0.0977523	0.18789957	3.0189241	20	3 20.4	20.9
383788 2007 WS ₁₃	15.1	X	88.60657	280.67646	87.17096	26.27296	0.2511270	0.17179880	3.2047142	20	—	—
383789 2007 WN ₁₈	16.0	X	219.89101	239.20050	86.22425	9.61743	0.0881442	0.18553706	3.0444973	20	3 10.7	20.8
383790 2007 WX ₁₈	15.9	X	287.42246	151.93963	87.28781	10.98095	0.0205868	0.17781258	3.1320431	20	2 12.9	20.4
383791 2007 WV ₂₂	15.4	X	234.62516	5.64774	255.67879	14.14409	0.0303007	0.17662834	3.1460271	20	1 8.3	20.1
383792 2007 WX ₄₁	17.2	X	98.75802	227.59235	165.42061	1.89679	0.2293493	0.17512415	3.1640162	20	2 7.6	21.7
383793 2007 WH ₄₂	15.7	X	264.15605	193.21755	72.89076	10.32835	0.0474529	0.18101412	3.0950031	20	2 20.2	20.3
383794 2007 WX ₄₄	16.2	X	164.94147	55.63053	334.46262	8.45202	0.1111049	0.18884366	3.0088540	20	3 25.9	20.9
383795 2007 WD ₄₈	15.6	X	15.23719	100.69775	43.76737	19.13255	0.1632243	0.17512884	3.1639596	20	2 17.6	19.6
383796 2007 WO ₄₉	15.9	X	198.24128	242.11096	82.59103	9.33998	0.0536434	0.18066180	3.0990256	20	2 16.3	20.6
383797 2007 XX	16.4	X	72.19651	347.26465	92.32330	8.09144	0.1529168	0.17567918	3.1573485	20	2 22.1	20.5
383798 2007 XK ₅	16.2	X	199.98014	253.54800	68.19843	11.29563	0.0820767	0.17937476	3.1138318	20	2 15.9	21.1
383799 2007 XO ₃₄	15.7	X	76.75239	182.06755	264.25064	15.85955	0.1276512	0.17834369	3.1258218	20	2 21.8	20.2
383800 2007 YO ₂₁	18.4	X	197.53911	340.91284	263.81595	1.56467	0.0642609	0.31182072	2.1537704	20	—	—
383801 2007 YZ ₂₆	15.9	X	60.07835	200.56495	302.67657	11.78460	0.3088388	0.17539690	3.1607352	20	5 13.5	20.1
383802 2007 YQ ₃₀	16.0	X	200.40235	37.59237	282.48354	7.65266	0.0520900	0.17642629	3.1484286	20	2 8.4	20.8
383803 2007 YD ₄₉	16.1	X	102.71172	125.14972	292.96656	8.44936	0.2138757	0.17413260	3.1760158	20	3 7.2	20.9
383804 2007 YQ ₅₂	16.2	X	78.70833	136.03089	317.99089	10.25383	0.2890567	0.17438101	3.1729990	20	4 1.2	20.7
383805 2007 YQ ₆₅	18.2	X	112.87723	105.88998	267.94141	2.31969	0.0896274	0.31982114	2.1177008	20	—	—
383806 2007 YN ₆₉	15.6	X	38.85457	21.65674	119.63617	7.25413	0.0223427	0.17341781	3.1847370	20	3 8.9	20.0
383807 2007 YQ ₆₉	16.5	X	39.73161	273.84094	216.67235	1.13088	0.0809648	0.16979667	3.2298568	20	2 27.5	20.7
383808 2007 YB ₇₂	15.9	X	59.32153	171.52907	315.11607	9.54231	0.0331526	0.17450970	3.1714388	20	3 12.2	20.3
383809 2008 AC ₆	16.0	X	37.84527	16.17810	92.23223	6.48150	0.1619737	0.17217854	3.2000004	20	2 3.8	19.6
383810 2008 AD ₆	16.2	X	323.65638	302.55230	249.27054	9.53859	0.0162132	0.17612649	3.1520004	20	1 30.5	20.8
383811 2008 AE ₃₄	15.8	X	330.61597	202.40554	309.38283	8.20078	0.0742931	0.15797474	3.3890473	20	—	—
383812 2008 AV ₇₁	15.8	X	51.45201	12.03395	128.44875	16.24312	0.2203543	0.17385356	3.1794133	20	4 22.2	19.9
383813 2008 AQ ₉₄	15.2	X	329.68313	253.14969	309.59938	21.25812	0.0568331	0.16847359	3.2467448	20	2 15.2	19.7
383814 2008 BE ₁₉	15.8	X	105.26269	117.13051	321.14335	8.75539	0.0933143	0.17664027	3.1458854	20	3 18.8	20.4
383815 2008 BX ₅₂	15.8	X	291.82401	256.81191	337.98401	15.04283	0.1692308	0.16127755	3.3426182	20	1 31.7	20.8
383816 2008 CP ₃₂	17.9	X	205.66145	84.41054	133.34903	4.89763	0.1022760	0.29947929	2.2125420	20	—	—
383817 2008 CU ₇₂	17.8	X	322.57183	302.84539	151.40266	4.45697	0.0813799	0.30264179	2.1971015	20	—	—
383818 2008 CL ₁₀₆	17.4	X	41.21328	225.45470	90.75006	5.44781	0.0947252	0.28701846	2.2761253	20	11 21.1	20.1
383819 2008 CT ₁₇₄	16.1	X	130.04675	257.45058	177.70856	10.91391	0.0979025	0.17553762	3.1590458	20	4 17.9	20.9
383820 2008 DZ ₁₈	18.2	X	347.61596	203.26272	275.11991	2.17063	0.0631539	0.31296470	2.1485188	20	—	—
383821 2008 DN ₃₂	18.3	X	243.09221	184.14017	14.93193	3.60912	0.1323077	0.30150239	2.2026334	20	—	—
383822 2008 DC ₄₈	17.4	X	47.37830	331.24231	7.96651	7.96952	0.1447919	0.28692614	2.2766135	20	—	—
383823 2008 EE ₁₂	18.5	X	347.38528	20.81203	80.35488	2.88178	0.0690016	0.30550122	2.1833704	20	—	—
383824 2008 EY ₃₈	17.8	X	56.22610	304.51065	106.99593	3.86012	0.1379598	0.31120330	2.1566181	20	—	—
383825 2008 EG ₇₃	17.2	X	164.61631	127.12179	144.60558	5.70318	0.2242304	0.29442605	2.2377860	20	—	—
383826 2008 ES ₈₃	17.8	X	271.99248	282.83975	301.39308	4.94336	0.1288395	0.31290196	2.1488059	20	—	—
383827 2008 EU ₁₄₂	17.9	X	324.04803	348.37853	130.16058	4.99499	0.0726254	0.30277465	2.1964587	20	—	—
383828 2008 FK ₅₀	17.0	X	64.78587	245.89909	50.29497	6.89698	0.1849949	0.27785386	2.3259038	20	11 30.7	20.3
383829 2008 FB ₆₆	17.8	X	226.62306	143.12378	42.20396	3.22424	0.0951387	0.28943588	2.2634338	20	—	—
383830 2008 FN ₆₆	17.5	X	13.72153	242.97904	52.99866	3.54049	0.1883345	0.26057596	2.4276151	20	9 20.7	19.7
383831 2008 FZ ₆₇	18.0	X	226.64813	63.44699	176.48038	3.82848	0.1491590	0.29967058	2.2116003	20	—	—
383832 2008 FR ₆₉	18.1	X	274.22781	142.44234	64.62386	3.52459	0.0985307	0.30434135	2.1889142	20	—	—
383833 2008 FS ₉₉	17.4	X	330.08979	22.04227	72.37993	9.22332	0.0553350	0.29363490	2.2418038	20	—	—
383834 2008 FS ₁₀₂	17.7	X	158.47661	151.03954	87.96471	6.35100</						

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
383841 2008 HP ₁₈	17.7	X	270.52976	58.29594	128.49511	7.65761	0.0477508	0.29856847	2.2170395	20	—	—
383842 2008 JY ₂	16.2	X	109.13172	177.90331	62.96690	25.09253	0.1958717	0.27125321	2.3634847	20	11 8.9	20.1
383843 2008 JA ₁₈	17.3	X	317.56441	45.67829	117.77720	5.47794	0.0657021	0.30291249	2.1957923	20	—	—
383844 2008 JD ₂₀	16.3	X	118.76025	140.98323	77.72073	24.86111	0.2212054	0.27034355	2.3687835	20	10 28.4	20.7
383845 2008 JE ₂₂	17.1	X	28.86519	260.68957	36.16739	3.05626	0.1666475	0.26291231	2.4132118	20	10 13.5	19.8
383846 2008 JN ₂₆	16.4	X	65.31835	202.74630	104.38082	25.05025	0.2370162	0.27212792	2.3584173	20	12 21.0	20.2
383847 2008 JD ₃₈	17.2	X	59.67371	98.41337	113.12926	13.29189	0.0479551	0.25360312	2.4719119	20	7 8.1	20.3
383848 2008 KT ₁₀	17.5	X	75.59489	166.58908	98.64398	6.47737	0.0928764	0.26963334	2.3729412	20	10 25.3	20.7
383849 2008 LM ₄	17.9	X	208.47008	143.90062	95.56683	3.03935	0.1349621	0.29422947	2.2387826	20	—	—
383850 2008 OU ₁	16.4	X	235.86745	208.25793	120.34185	10.37155	0.2787036	0.22315108	2.6919690	20	3 15.3	21.2
383851 2008 OQ ₆	17.0	X	311.07980	6.02940	306.30806	3.49378	0.1722174	0.23951407	2.5679232	20	5 25.2	19.8
383852 2008 OF ₂₂	17.3	X	78.08462	327.85270	324.05864	5.03012	0.2127890	0.26238365	2.4164522	20	12 7.8	21.1
383853 2008 OO ₂₃	16.4	X	262.69163	71.02480	245.78997	10.61076	0.2649594	0.22523904	2.6753068	20	3 15.1	21.0
383854 2008 PA ₂	17.0	X	259.13578	260.54451	91.20076	5.26045	0.2996219	0.23029453	2.6360095	20	4 26.8	21.3
383855 2008 PO ₅	17.0	X	277.24415	71.11709	237.68312	2.91080	0.1261697	0.22997452	2.6384543	20	4 8.9	20.7
383856 2008 PH ₁₂	15.8	X	243.90391	54.24548	317.84152	12.56077	0.3081704	0.22749838	2.6575647	20	5 1.4	20.6
383857 2008 PF ₁₇	16.9	X	180.29294	73.79442	317.07418	7.57866	0.3159165	0.21677374	2.7445107	20	4 11.9	22.1
383858 2008 PD ₂₁	16.7	X	225.13643	230.39364	119.04832	14.15003	0.2801243	0.22262883	2.6961773	20	4 3.3	21.7
383859 2008 QG	17.2	X	291.63170	190.36056	313.07668	3.93345	0.0851369	0.27581119	2.3373735	20	—	—
383860 2008 QB ₄	16.5	X	155.51135	209.01740	279.18663	12.32548	0.0998393	0.23667204	2.5884399	20	7 18.9	20.5
383861 2008 QU ₅	16.1	X	269.21498	236.55896	145.70780	31.65204	0.2578681	0.23337108	2.6127911	20	6 23.1	20.5
383862 2008 OR ₂₄	17.3	X	278.59568	177.01761	197.76304	2.60990	0.1618529	0.23565916	2.5958514	20	7 4.6	20.6
383863 2008 QO ₂₉	17.2	X	271.87015	12.58734	1.31407	2.68721	0.1621736	0.23728348	2.5839913	20	6 24.4	20.6
383864 2008 QU ₄₄	16.4	X	247.96517	333.14155	18.01819	8.85865	0.3383735	0.22753199	2.6573029	20	4 11.9	20.9
383865 2008 QE ₄₅	16.9	X	227.96536	111.32782	232.26875	7.53846	0.1626877	0.22129805	2.7069755	20	3 21.8	21.8
383866 2008 QO ₄₅	16.0	X	223.97455	13.70871	331.35145	13.34870	0.2048519	0.21712738	2.7415299	20	3 21.1	20.8
383867 2008 RZ ₂₃	16.3	X	252.90727	81.09818	279.62030	7.66672	0.1543638	0.22710905	2.6606010	20	5 13.9	20.3
383868 2008 RK ₂₅	17.0	X	295.81944	24.14041	313.86444	16.43221	0.1977599	0.23661004	2.5888920	20	6 1.0	20.5
383869 2008 RA ₂₆	16.8	X	240.91864	120.08180	302.97663	12.44669	0.2570379	0.23625979	2.5914500	20	7 12.5	20.8
383870 2008 RJ ₃₆	16.8	X	257.62358	159.79282	185.49397	5.92657	0.0658739	0.22561344	2.6723463	20	5 13.4	20.4
383871 2008 RF ₃₈	17.0	X	247.54818	32.27719	351.05786	3.93501	0.1332800	0.23057376	2.6338809	20	6 10.2	20.7
383872 2008 RO ₄₉	16.7	X	141.22830	220.41485	268.01572	6.23854	0.1454349	0.23201257	2.6229803	20	7 7.1	20.8
383873 2008 RZ ₅₀	16.9	X	234.68892	71.92618	290.97790	5.14082	0.1324882	0.22625739	2.6672734	20	4 28.9	21.1
383874 2008 RX ₆₂	17.5	X	214.56682	312.29785	152.32131	5.30937	0.1357541	0.24032435	2.5621479	20	8 19.9	21.1
383875 2008 RA ₆₄	16.9	X	255.50147	291.43386	37.50839	2.93292	0.2458568	0.22468452	2.6797068	20	3 30.6	21.3
383876 2008 RF ₇₅	16.4	X	179.95191	46.59804	1.123740	9.80999	0.2444105	0.21970774	2.7200224	20	5 13.8	21.3
383877 2008 RM ₉₆	16.8	X	234.26110	18.77208	0.30511	3.59232	0.2000740	0.22445577	2.6815272	20	5 14.3	21.1
383878 2008 RW ₁₀₀	17.0	X	165.47948	149.18469	255.46099	3.23458	0.0752970	0.22530092	2.7570129	20	4 11.6	21.0
383879 2008 RE ₁₀₈	17.0	X	282.29487	14.41874	279.82749	5.50181	0.0270959	0.21811062	2.7332845	20	4 9.8	20.9
383880 2008 RO ₁₀₈	16.7	X	237.54954	140.99741	190.25377	5.12315	0.0791671	0.21699695	2.7426284	20	3 29.9	20.8
383881 2008 RQ ₁₁₅	17.4	X	209.33332	251.44916	181.82380	2.74575	0.1170786	0.23303078	2.6153342	20	7 5.1	21.3
383882 2008 RJ ₁₂₉	16.6	X	240.75448	287.53215	81.11245	6.70666	0.1034249	0.22003200	2.7173494	20	5 18.9	20.6
383883 2008 RU ₁₃₆	16.4	X	157.28707	295.40118	153.17008	8.76813	0.1623049	0.22054436	2.7131392	20	6 4.2	20.9
383884 2008 RT ₁₃₇	16.9	X	203.29272	104.41420	314.37935	5.19581	0.1019953	0.22608957	2.6685931	20	6 10.4	20.9
383885 2008 RN ₁₃₉	17.2	X	241.23402	152.01926	185.48943	4.48414	0.1706547	0.22291166	2.6938962	20	4 2.9	21.3
383886 2008 RH ₁₄₀	16.7	X	291.58386	64.52995	289.03239	11.06218	0.2246130	0.23589761	2.5941019	20	6 13.9	19.9
383887 2008 RO ₁₄₂	16.1	X	255.18708	48.11334	275.67640	9.75848	0.1650644	0.22302554	2.6929791	20	3 25.7	20.4
383888 2008 RB ₁₄₆	16.9	X	161.16928	153.02461	266.54281	6.97960	0.2132293	0.21501632	2.7594452	20	5 1.6	21.6
383889 2008 SF ₁	16.3	X	233.92806	237.74764	136.50374	9.06993	0.3023790	0.22546530	2.6735168	20	5 5.3	21.1
383890 2008 SM ₄	16.4	X	249.68647	167.43504	168.37263	14.59890	0.2681986	0.22378616	2.6868735	20	4 2.5	20.9
383891 2008 SV ₅	16.6	X	169.49103	220.59483	165.16974	12.17301	0.2442017	0.21087037	2.7954969	20	4 2.7	21.5
383892 2008 SK ₆	16.9	X	331.10980	188.45228	141.06883	4.66587	0.1400478	0.23988706	2.5652607	20	8 3.7	19.3
383893 2008 SR ₂₈	16.9	X	261.76029	9.48072	340.31206	5.75513	0.1882448	0.22734517	2.6587585	20	5 4.8	20.9
383894 2008 ST ₃₀	16.5	X	199.17019	103.04580	211.03448	16.53816	0.1117419	0.20497644	2.8488314	20	1 25.6	21.3
383895 2008 SG ₃₆	16.7	X	241.27223	1.27059	42.99622	3.38606	0.0702173	0.23071715	2.6327894	20	7 9.8	20.4
383896 2008 SA ₄₁	16.6	X	183.72966	258.21135	142.82206	3.28167	0.2128300	0.21875953	2.7278766	20	4 30.2	21.3
383897 2008 ST ₄₄	17.0	X	225.70885	348.31839	16.82765	2.63698	0.0750866	0.21946583	2.7220208	20	4 28.5	21.0
383898 2008 SQ ₄₅	17.0	X	272.06372	286.91200	28.83092	5.94835	0.0426024	0.21889387	2.7267605	20	4 24.8	20.6
383899 2008 SD ₄₇	17.3	X	257.33249	342.59639	34.18082	3.65495	0.1288722	0.22841648	2.6504386	20	6 13.9	21.0
383900 2008 SA ₅₂	17.1	X	206.70533	343.36634	3.32599	2.18677	0.2575358	0.21465435	2.7625464	20	3 13.3	21.9
383901 2008 SN ₅₂	17.0	X	229.00985	203.83065	191.72425	2.80477	0.1672408	0.22656259	2.6648775	20	6 3.2	21.1
383902 2008 SC ₅₈	17.2	X	202.74234	213.20401	171.38424	3.68921	0.2045787	0.21679273	2.7443505	20	4 25.7	21.8
383903 2008 SV ₆₆	17.1	X	260.07146	323.09987	24.20984	7.29471	0.2493263	0.22673351	2.6635380	20	4 24.5	21.2
383904 2008 SD ₆₉	15.8	X	51.13798	59.82780	351.43707	14.90106	0.0708896	0.18919304	3.0051485	20	—	—
383905 2008 SQ ₇₂	17.5	X	238.47633	92.49055	317.49670	2.21229	0.1384933	0.22885704	2.6470361	20	7 4.9	21.3
383906 2008 ST ₇₅	17.0	X	85.90007	336.19880	209.60571	3.80880	0.0837090	0.23142037	2.6274532	20	7 12.6	20.5
383907 2008 SP ₇₉	16.4	X	108.67241	162.07900	357.32287	14.2014	0.0185894	0.23004110	2.6379452	20	6 29.5	20.3
383908 2008 SE ₈₄	17.0	X	208.51126	222.99588	161.03298	3.26483	0.2688454	0.21834019	2.7313683	20	4 27.8	21.9
383909 2008 SC ₈₈	17.0	X	287.67491	62.60526	288.87802	3.66241	0.2288346	0.23608228	2.5927489	20	6 3.9	20.2
383910 2008 SK ₉₁	16.9	X	271.61786	34.19529	212.06419	1.65449	0.1089783	0.22681931	2.6628664	20	5 24.8	20.4
383911 2008 SN ₁₀₁	17.1	X	195.64564	324.93737	132.87387	4.12115	0.1783261	0.22739501	2.6583700	20	7 19.3	21.5
383912 2008 ST ₁₁₄	17.0	X	158.14826	1.08078	51.78094	6.66799	0.0556324	0.21372528	2.7705466	20	4 15.6	21.0
383913 2008 SP ₁₂₁	17.3	X	207.78604	201.66312	216.04222	3.44914	0.1539996	0.22353318	2.6889005	20	6 11.3	21.5
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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>		
383921	2008	SM ₁₅₂	15.7 ^m	X	162.60891	271.00539	209.52633	21.16874	0.1129406	0.22836640	2.6508261	20	7 12.9	20.3
383922	2008	SO ₁₆₂	16.8	X	198.44344	239.47449	182.63517	5.67466	0.1651370	0.22436742	2.6822311	20	6 7.9	21.2
383923	2008	SE ₁₆₆	17.4	X	257.89503	343.92922	25.19450	4.86433	0.2367919	0.22905660	2.6454984	20	5 21.1	21.3
383924	2008	SJ ₁₆₇	16.7	X	226.05646	351.14716	40.41529	3.11059	0.2064922	0.22369785	2.6875806	20	5 22.6	21.0
383925	2008	SK ₁₇₃	17.1	X	297.26351	114.76183	230.18365	8.46407	0.2251774	0.23637117	2.5906359	20	6 10.2	20.1
383926	2008	SC ₁₇₄	16.5	X	216.07856	153.41837	257.57505	12.66685	0.2685074	0.22618608	2.6678340	20	6 3.9	21.1
383927	2008	SM ₁₇₅	16.9	X	206.65513	112.68968	303.42200	4.39761	0.1783461	0.22533519	2.6745458	20	6 6.5	21.3
383928	2008	SR ₁₈₈	17.2	X	295.40470	105.43450	252.49216	2.80601	0.1423666	0.23472192	2.6027570	20	7 9.7	20.4
383929	2008	ST ₁₉₂	17.2	X	188.20908	281.66405	114.00372	3.58948	0.0904425	0.21598905	2.7511539	20	4 27.9	21.4
383930	2008	SB ₁₉₄	16.8	X	245.33336	308.78637	69.00500	6.20709	0.0498731	0.22508042	2.6765636	20	6 11.0	20.3
383931	2008	SM ₁₉₉	17.0	X	128.18859	245.41352	217.18568	8.18461	0.1306168	0.21422679	2.7662209	20	5 20.9	21.2
383932	2008	SE ₂₀₀	16.7	X	235.86358	145.80116	244.41793	4.88845	0.0607109	0.22478455	2.6789118	20	6 14.5	20.4
383933	2008	SU ₂₀₁	16.9	X	250.60530	69.13558	252.19357	2.36660	0.0882642	0.21437432	2.7649517	20	3 30.4	21.0
383934	2008	SJ ₂₀₃	17.2	X	147.77448	294.00445	192.11613	8.83283	0.2364031	0.21891277	2.7266035	20	7 12.4	22.0
383935	2008	SA ₂₁₈	16.9	X	175.72042	87.68516	2.23384	8.25222	0.1122556	0.22609578	2.6685443	20	6 21.6	21.1
383936	2008	SW ₂₁₉	16.6	X	209.90919	176.10223	195.77720	4.04549	0.1267063	0.21873411	2.7280880	20	4 18.1	20.9
383937	2008	SM ₂₂₁	17.7	X	218.46968	237.83920	193.33412	3.00781	0.1153694	0.2395358	2.6084524	20	7 14.9	21.6
383938	2008	SU ₂₂₈	17.0	X	180.62595	108.38700	296.54525	4.22753	0.1245623	0.21848553	2.7301568	20	4 28.6	21.4
383939	2008	SV ₂₃₉	17.0	X	346.65860	257.54237	51.61700	6.81367	0.2626702	0.23973531	2.5663431	20	8 10.5	18.7
383940	2008	SO ₂₄₀	17.0	X	158.68475	47.77877	90.52150	5.61881	0.0454453	0.23128479	2.6284799	20	8 6.4	20.7
383941	2008	SL ₂₄₄	16.3	X	186.76494	331.08110	40.09266	15.58573	0.1623880	0.21001939	2.8030432	20	4 1.1	21.0
383942	2008	SE ₂₅₈	16.5	X	251.54358	93.40804	280.53292	11.40106	0.2418638	0.22799005	2.6537425	20	5 19.9	20.9
383943	2008	SR ₂₆₀	16.2	X	238.72649	94.97782	258.93901	11.15568	0.2023399	0.22051139	2.7134097	20	4 14.6	20.8
383944	2008	ST ₂₆₃	17.0	X	134.75578	267.05621	187.77582	4.27995	0.0394674	0.21431883	2.7654289	20	5 9.5	20.9
383945	2008	SX ₂₆₈	16.6	X	293.21472	218.28969	123.39890	6.26615	0.2217758	0.23207727	2.6224928	20	5 31.9	19.8
383946	2008	SU ₂₆₈	16.4	X	237.83156	223.90961	132.85575	9.40827	0.3176231	0.22118343	2.7079106	20	4 16.9	21.3
383947	2008	SF ₂₇₂	16.5	X	270.91152	241.21506	146.38866	14.75859	0.1948977	0.23226748	2.6210609	20	7 6.4	20.2
383948	2008	SH ₂₇₄	16.7	X	331.25829	325.50796	298.58413	3.29736	0.3020935	0.22172616	2.7034900	20	5 7.5	20.2
383949	2008	SG ₂₈₁	16.9	X	196.60285	317.51949	85.88503	4.58424	0.0936515	0.21358172	2.7717879	20	5 15.9	21.1
383950	2008	SE ₂₈₆	17.1	X	179.68525	41.97184	57.21321	4.46665	0.1819633	0.22447247	2.6813941	20	7 7.0	21.6
383951	2008	SK ₃₀₆	17.0	X	190.13717	121.63356	288.40732	7.06122	0.1427697	0.21823683	2.7322306	20	5 14.3	21.4
383952	2008	SH ₃₀₇	16.6	X	167.77090	117.18147	310.29815	7.76764	0.1570055	0.21835437	2.7312500	20	5 14.6	21.1
383953	2008	TV	17.1	X	213.34036	151.56123	215.23122	3.98720	0.1734264	0.21877232	2.7277703	20	4 12.6	21.4
383954	2008	TG ₁	16.7	X	174.27653	115.67656	354.17035	11.88676	0.1706811	0.22659270	2.6646414	20	7 18.7	21.3
383955	2008	TE ₆	16.4	X	262.96829	214.79049	204.25417	11.47272	0.0330298	0.23844063	2.5756245	20	8 30.8	19.9
383956	2008	TA ₇	17.0	X	199.65994	188.07309	188.37991	3.31535	0.2078545	0.21729006	2.7401614	20	4 12.6	21.5
383957	2008	TE ₈	16.6	X	145.33177	286.69551	176.29561	8.85946	0.1239421	0.21936354	2.7228670	20	6 8.3	21.0
383958	2008	TL ₂₂	17.3	X	216.38945	251.61770	134.64476	3.19206	0.1182197	0.21872083	2.7281984	20	5 13.9	21.4
383959	2008	TP ₃₂	17.3	X	199.90749	307.24968	137.05533	2.12308	0.0854186	0.22803250	2.6534132	20	7 11.2	21.0
383960	2008	TM ₃₄	17.2	X	185.50712	264.67736	172.30178	4.50366	0.1402763	0.22174086	2.7033704	20	6 14.8	21.5
383961	2008	TD ₃₆	17.3	X	190.26372	79.63150	339.95208	3.74892	0.0819668	0.22372878	2.6873330	20	5 28.3	21.4
383962	2008	TH ₃₉	17.2	X	305.88852	64.04894	307.21629	1.29080	0.1197782	0.23783916	2.5799650	20	8 20.3	19.8
383963	2008	TC ₄₁	16.3	X	190.91408	154.59505	235.88171	9.06905	0.2713944	0.21586116	2.7522405	20	4 20.6	21.4
383964	2008	TP ₄₄	17.6	X	253.90289	186.82526	216.39335	3.77209	0.0382099	0.23009581	2.6375270	20	7 28.1	21.2
383965	2008	TE ₄₇	16.5	X	2.98715	211.04799	75.91192	7.17514	0.0116540	0.22892622	2.6465028	20	7 27.4	20.0
383966	2008	TQ ₅₁	17.0	X	330.05406	274.51140	42.91761	2.90440	0.0854778	0.23399777	2.6081240	20	7 18.2	20.0
383967	2008	TZ ₅₅	17.2	X	252.38106	181.37307	194.35679	3.98972	0.0794620	0.22719204	2.6599531	20	6 13.7	20.8
383968	2008	TT ₅₇	17.1	X	267.72692	340.67757	25.95205	6.59320	0.0958060	0.22941460	2.6427455	20	6 18.4	20.8
383969	2008	TU ₅₇	16.5	X	204.82269	351.80499	26.88767	6.59719	0.0629275	0.21714193	2.7414074	20	4 23.0	20.4
383970	2008	TU ₆₃	17.0	X	9.26473	273.54800	25.06001	6.33059	0.1163604	0.23865444	2.5740859	20	9 2.9	19.8
383971	2008	TC ₆₈	17.1	X	229.26185	161.41147	179.08563	5.95382	0.0826349	0.21308992	2.7760510	20	4 2.0	21.1
383972	2008	TF ₈₃	16.8	X	204.19922	131.16836	232.37964	4.86007	0.0749229	0.21467427	2.7623756	20	4 2.5	20.7
383973	2008	TL ₈₈	16.9	X	173.31634	278.13629	129.15502	4.74049	0.0986619	0.21403962	2.7678334	20	4 27.6	21.2
383974	2008	TO ₉₂	16.1	X	248.47339	91.46991	325.92849	21.14609	0.1119542	0.23546945	2.5972455	20	8 3.7	19.7
383975	2008	TM ₉₉	17.0	X	235.37605	330.65213	35.78488	1.33887	0.1117325	0.22295659	2.6935343	20	5 8.0	21.0
383976	2008	TP ₁₀₂	17.5	X	213.43958	256.94241	193.38728	2.49930	0.0475854	0.23431686	2.6057557	20	8 7.6	21.2
383977	2008	TK ₁₀₅	17.3	X	219.41304	71.42263	353.42311	1.97066	0.0928089	0.22801807	2.6535251	20	7 7.7	21.2
383978	2008	TK ₁₀₆	17.5	X	210.74306	80.53214	8.41770	0.83705	0.0846583	0.23138224	2.6277419	20	7 30.6	21.1
383979	2008	TO ₁₀₆	17.4	X	340.81877	279.04418	30.24070	4.95620	0.0690032	0.23302022	2.6154132	20	7 26.3	20.5
383980	2008	TB ₁₁₅	16.5	X	207.61769	234.56684	235.39890	12.79727	0.0595750	0.23756053	2.5819819	20	8 20.5	20.4
383981	2008	TS ₁₁₅	16.7	X	255.95989	143.72151	233.83935	11.42121	0.1684933	0.22847791	2.6499635	20	6 8.2	20.6
383982	2008	TJ ₁₁₆	16.8	X	234.10818	131.30750	283.39128	4.60123	0.0840932	0.22543717	2.6737391	20	6 15.6	20.6
383983	2008	TA ₁₂₂	16.3	X	307.18711	81.49119	262.74561	9.52151	0.1393355	0.23553663	2.5967516	20	7 9.5	19.3
383984	2008	TE ₁₂₂	16.6	X	174.25047	110.79328	243.21665	8.03279	0.1501730	0.20637739	2.8359244	20	2 20.5	21.4
383985	2008	TT ₁₃₀	16.6	X	269.29963	320.79019	1.74467	6.42334	0.0662688	0.21920305	2.7241958	20	4 25.1	20.4
383986	2008	TU ₁₃₂	17.1	X	223.15873	141.03311	275.75797	3.90825	0.1516789	0.22691933	2.6620838	20	6 25.6	21.2
383987	2008	TY ₁₃₉	16.7	X	198.12941	214.92612	218.95849	12.21444	0.0954521	0.22477704	2.6789714	20	6 23.9	20.9
383988	2008	TQ ₁₅₄	16.5	X	192.39697	27.52910	12.18557	9.64038	0.2128483	0.21561579	2.7543281	20	5 2.0	21.2
383989	2008	TX ₁₆₀	16.7	X	67.55759	193.59434	55.47575	8.57810	0.1272926	0.23870453	2.5737258			