

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>		
384001	2008	UP ₂₄	17.0	X	112.12619	186.12724	54.07611	4.01358	0.0887318	0.24559996	2.5253245	20	10 27.7	20.7
384002	2008	UB ₃₄	16.4	X	301.31584	225.99868	60.04681	9.99943	0.1119136	0.21631042	2.7484284	20	4 18.0	20.0
384003	2008	UA ₃₇	15.8	X	344.98148	102.03254	39.16610	15.96749	0.0343141	0.18740232	3.0242620	20	—	—
384004	2008	UW ₃₇	17.0	X	62.72325	318.69437	256.20657	3.90838	0.0605816	0.22339175	2.6900352	20	7 16.7	20.5
384005	2008	UT ₄₅	16.5	X	136.93230	305.60315	205.37829	12.92733	0.2164195	0.22514247	2.6760718	20	7 31.5	21.2
384006	2008	UA ₅₁	17.5	X	150.77115	290.17810	200.60414	1.59439	0.0599151	0.22644597	2.6657923	20	7 16.1	21.3
384007	2008	UX ₅₂	16.9	X	204.07710	156.94077	237.04231	4.02017	0.0476501	0.21320820	2.7750242	20	5 12.9	20.7
384008	2008	UZ ₅₅	16.5	X	35.24804	37.41904	208.68928	12.20869	0.1181411	0.23383077	2.6093656	20	7 25.5	19.9
384009	2008	UV ₆₄	16.7	X	62.24590	304.06497	281.82535	6.06662	0.0392237	0.22644077	2.6658332	20	7 27.8	20.2
384010	2008	UZ ₆₄	16.2	X	85.12966	260.66632	261.89041	7.97505	0.0902427	0.21461946	2.7628458	20	6 11.1	19.7
384011	2008	UG ₆₅	17.0	X	257.40275	10.13577	333.08375	3.60323	0.1962458	0.22033191	2.7148829	20	4 21.8	21.1
384012	2008	UA ₆₇	17.2	X	178.38588	116.26347	319.20572	2.50196	0.1776202	0.21670066	2.7451278	20	6 5.4	21.7
384013	2008	UG ₆₇	16.9	X	211.50004	334.55418	20.69224	5.50041	0.2810654	0.21349684	2.7725226	20	3 26.7	21.9
384014	2008	UL ₆₇	16.9	X	159.81745	171.25752	278.25476	3.40900	0.0711289	0.21606274	2.7505284	20	6 2.6	20.9
384015	2008	UL ₇₃	16.8	X	296.88387	47.06273	261.21666	9.18880	0.1895878	0.22079944	2.7110492	20	4 22.9	20.4
384016	2008	UO ₇₃	16.8	X	177.40994	11.33372	356.48078	5.65928	0.0836899	0.20288857	2.8683424	20	3 12.5	20.9
384017	2008	UN ₈₄	17.6	X	153.87362	72.00813	353.58043	3.60130	0.0931568	0.21186822	2.7867126	20	4 26.7	21.8
384018	2008	UH ₈₈	17.5	X	204.92698	309.51716	126.46545	4.00827	0.0773479	0.22878699	2.6475764	20	7 6.6	21.4
384019	2008	UL ₉₂	16.5	X	221.54296	313.09396	74.02286	12.39406	0.1806524	0.22164300	2.7041662	20	5 16.8	20.9
384020	2008	UO ₉₅	16.4	X	177.30309	7.65588	82.55954	9.62010	0.1031295	0.22017609	2.7161637	20	6 23.4	20.5
384021	2008	UF ₉₇	16.9	X	218.50547	289.94309	136.21027	4.26197	0.2000456	0.22536728	2.6742919	20	6 29.0	21.3
384022	2008	UN ₉₉	16.8	X	260.93930	255.54191	83.34108	7.46940	0.2796339	0.22409899	2.6843725	20	4 16.1	21.2
384023	2008	UE ₁₀₀	16.9	X	198.27363	13.48792	39.14546	14.29953	0.1946168	0.21892910	2.7264679	20	5 23.1	21.5
384024	2008	UJ ₁₀₂	16.9	X	221.08653	132.91666	220.66692	6.03834	0.0950831	0.21505809	2.7590878	20	4 6.9	21.1
384025	2008	UE ₁₁₀	16.2	X	291.15977	346.51082	291.71986	4.73640	0.0909040	0.21264760	2.7798993	20	3 21.5	20.2
384026	2008	UT ₁₁₃	16.8	X	144.43137	218.07983	277.72645	3.49146	0.0151893	0.22575501	2.6712290	20	7 12.7	20.3
384027	2008	UA ₁₁₆	16.7	X	20.95624	14.01944	251.49186	10.80069	0.0362455	0.22720201	2.6598752	20	7 20.7	20.2
384028	2008	UE ₁₁₉	16.5	X	271.10358	16.58605	357.42833	4.74292	0.1714906	0.22874733	2.6478824	20	6 21.7	20.1
384029	2008	UO ₁₂₂	17.0	X	174.55906	60.48928	342.83175	5.20587	0.0557035	0.21017744	2.8016378	20	4 18.8	21.2
384030	2008	UK ₁₂₈	16.1	X	345.90872	130.53298	72.35498	12.20517	0.1370605	0.19626201	2.9325486	20	3 8.9	19.8
384031	2008	UC ₁₄₂	16.1	X	332.86365	298.22216	224.65211	9.47320	0.0514793	0.18896032	3.0076154	20	1 2.7	20.3
384032	2008	UF ₁₄₈	16.7	X	104.32497	113.19022	50.70961	9.97098	0.1933257	0.21517457	2.7580920	20	7 21.3	21.1
384033	2008	UJ ₁₅₄	17.2	X	139.15537	231.22592	198.05265	3.61906	0.0867053	0.20982821	2.8047455	20	4 16.1	21.3
384034	2008	UM ₁₅₅	17.0	X	103.64789	138.66252	53.81132	4.63095	0.1166935	0.22995365	2.6386139	20	8 19.6	20.8
384035	2008	UW ₁₅₆	16.9	X	149.02820	348.10567	62.19841	2.92899	0.0720495	0.20503318	2.8483058	20	4 3.3	21.0
384036	2008	UL ₁₆₆	17.0	X	295.46736	101.11629	188.05322	3.05986	0.0599742	0.21463267	2.7627325	20	4 19.2	20.7
384037	2008	UV ₁₇₀	17.1	X	37.12831	197.38191	352.62996	2.47672	0.0432830	0.21186096	2.7867762	20	5 3.7	20.6
384038	2008	UP ₁₇₂	17.1	X	172.41804	224.85087	271.51270	1.02444	0.267968	0.22549355	2.6732935	20	8 14.6	21.8
384039	2008	UE ₁₇₈	16.8	X	293.84123	90.66117	238.04901	5.37966	0.0391133	0.22443845	2.6816651	20	6 11.9	20.2
384040	2008	UF ₁₈₂	17.3	X	197.52722	294.03885	90.41860	1.97815	0.0856774	0.21453431	2.7635768	20	4 22.9	21.3
384041	2008	UO ₁₈₉	17.1	X	176.92221	123.59152	16.61427	14.74026	0.1912268	0.23695213	2.5863997	20	8 31.6	21.5
384042	2008	UU ₁₉₃	17.0	X	135.03396	45.59766	79.04312	8.97618	0.1261593	0.21421615	2.7663125	20	6 24.3	21.2
384043	2008	UT ₁₉₄	16.9	X	250.89326	308.41861	45.37180	3.68971	0.0746921	0.21757326	2.7377831	20	5 13.8	20.6
384044	2008	UD ₂₀₃	16.8	X	255.52641	47.12941	325.79791	5.40239	0.1846835	0.22680820	2.6629533	20	5 29.6	20.9
384045	2008	UY ₂₀₄	17.1	X	139.18043	111.02114	43.98708	14.82779	0.1609218	0.22591815	2.6699429	20	8 15.8	21.7
384046	2008	UH ₂₀₅	16.1	X	275.31264	220.99455	129.09744	17.41466	0.2526627	0.22940973	2.6427830	20	5 20.1	20.3
384047	2008	UR ₂₀₇	16.8	X	176.73618	57.20214	22.37876	6.54342	0.0302163	0.22062894	2.7124458	20	6 8.1	20.7
384048	2008	UR ₂₁₅	16.1	X	225.29253	122.67353	282.84535	4.84074	0.2927115	0.22357598	2.6885572	20	6 2.7	20.8
384049	2008	UW ₂₁₇	16.7	X	251.74606	147.00815	236.29638	10.71865	0.2002853	0.22653153	2.6651211	20	6 7.2	20.8
384050	2008	UE ₂₃₄	17.3	X	245.32400	77.11781	287.60109	3.58631	0.1950855	0.22472887	2.6793542	20	5 7.2	21.5
384051	2008	UX ₂₄₁	16.0	X	207.60645	309.83214	105.30583	12.49074	0.1152188	0.22376672	2.6870292	20	6 11.0	20.1
384052	2008	UD ₂₄₈	17.0	X	102.45505	281.52002	222.13484	4.36807	0.0914793	0.21128225	2.7918626	20	6 8.5	21.0
384053	2008	UK ₂₅₆	17.1	X	149.66878	43.95716	63.57210	6.00205	0.1254186	0.21677303	2.7445167	20	6 17.5	21.4
384054	2008	UJ ₂₆₅	16.6	X	208.20606	112.47438	245.45221	7.55432	0.1654292	0.21264413	2.7799295	20	3 26.2	21.3
384055	2008	UZ ₂₇₁	17.0	X	205.36762	20.11065	25.93311	4.02206	0.1979777	0.21853403	2.7297529	20	5 22.6	21.5
384056	2008	UU ₂₇₄	16.7	X	248.49609	281.22262	38.48223	4.23620	0.0915753	0.21019919	2.8014445	20	3 28.3	20.8
384057	2008	UA ₂₇₆	16.9	X	126.37120	293.20464	223.63672	3.63514	0.0333529	0.22677714	2.6631964	20	7 18.5	20.7
384058	2008	UH ₂₈₀	16.5	X	287.79747	232.28003	123.78143	11.02521	0.1883281	0.23018868	2.6368175	20	6 18.4	20.0
384059	2008	UE ₂₈₈	16.8	X	28.82658	121.79297	72.33212	4.78460	0.0543479	0.21272836	2.7791957	20	4 29.9	20.3
384060	2008	UB ₂₈₉	17.2	X	148.21082	348.06645	59.03651	7.12942	0.0590197	0.20708830	2.8294303	20	3 30.2	21.4
384061	2008	UK ₃₀₁	16.6	X	110.03396	309.61876	302.98497	10.17371	0.2151140	0.25469688	2.4648299	20	11 14.3	20.9
384062	2008	UD ₃₀₄	17.1	X	171.90058	305.83286	149.12320	2.58349	0.0421212	0.22156636	2.7047897	20	6 23.6	20.9
384063	2008	UA ₃₁₇	15.9	X	103.66526	307.68293	117.99438	10.43754	0.1391097	0.18668992	3.0319508	20	3 14.1	20.3
384064	2008	UV ₃₁₇	17.0	X	202.24370	55.20680	313.72977	5.62727	0.0719506	0.21218685	2.7839221	20	4 5.4	21.2
384065	2008	UL ₃₃₆	16.4	X	173.35668	31.02040	16.49860	9.16331	0.1137922	0.21073894	2.7966590	20	4 24.8	20.7
384066	2008	UA ₃₃₇	16.6	X	337.17433	348.64616	267.22810	5.99383	0.0709257	0.21324103	2.7747394	20	5 1.4	20.0
384067	2008	UG ₃₃₇	17.4	X	165.01123	45.60071	59.09040	2.33460	0.1096935	0.21818585	2.7326562	20	6 29.4	21.7
384068	2008	UC ₃₃₈	16.6	X	253.65677	125.81519	242.37522	4.34957	0.0577949	0.21925372	2.7237761	20	6 7.9	20.4
384069	2008	UQ ₃₄₀	16.4	X	324.58471	66.33300	280.50071	7.56607	0.1800620	0.2386				

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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>
384081 2008 <i>VD</i> ₅₀	17.3	X	183.48695	152.13705	295.32199	1.91726	0.2166200	0.22245801	2.6975574	20	6 24.8	21.9
384082 2008 <i>VF</i> ₅₀	17.2	X	191.42293	80.08595	347.07028	2.26266	0.1832889	0.22067061	2.7121042	20	6 6.5	21.7
384083 2008 <i>VJ</i> ₅₃	16.0	X	229.87436	5.20810	43.95565	15.70478	0.0684565	0.22490547	2.6779515	20	7 1.5	20.0
384084 2008 <i>VV</i> ₅₄	17.0	X	233.15161	151.51933	255.83107	4.65889	0.0523839	0.22740148	2.6583196	20	7 4.9	20.6
384085 2008 <i>VR</i> ₆₀	16.8	X	245.68798	94.90279	216.03331	3.67732	0.0537441	0.20846999	2.8169146	20	3 15.7	20.8
384086 2008 <i>VF</i> ₆₃	16.7	X	153.67858	283.01810	225.35185	11.90906	0.2106915	0.22470648	2.6795322	20	8 10.2	21.5
384087 2008 <i>VZ</i> ₆₇	16.9	X	129.85845	36.11124	79.48118	4.70858	0.0472391	0.21404154	2.7678168	20	5 30.8	20.9
384088 2008 <i>VV</i> ₆₉	16.9	X	81.08270	87.11369	31.28132	2.35469	0.1227823	0.20053657	2.8907265	20	4 13.8	20.6
384089 2008 <i>VZ</i> ₇₄	16.6	X	197.51789	237.46056	123.43668	13.00882	0.3199858	0.21132335	2.7915006	20	3 27.8	22.0
384090 2008 <i>VF</i> ₇₆	16.7	X	225.33045	304.57664	89.13644	5.22505	0.1292155	0.21974756	2.7196938	20	5 31.3	20.7
384091 2008 <i>VQ</i> ₇₆	17.0	X	237.01302	243.34544	127.76499	4.19369	0.1009880	0.21789042	2.7351257	20	5 18.4	21.1
384092 2008 <i>VW</i> ₇₆	16.5	X	193.97111	255.98704	92.54635	6.72010	0.0916713	0.20332447	2.8642414	20	3 9.2	21.0
384093 2008 <i>VD</i> ₇₈	16.1	X	156.87897	22.72253	83.82608	9.94384	0.0580772	0.21604603	2.7506702	20	6 21.1	19.9
384094 2008 <i>WE</i> ₅	17.2	X	213.77418	153.69582	209.33154	4.21311	0.0876681	0.21347705	2.7726939	20	4 12.4	21.2
384095 2008 <i>WR</i> ₁₇	16.9	X	256.18860	287.52877	84.39194	3.62017	0.0927879	0.22546070	2.6735531	20	6 11.3	20.4
384096 2008 <i>WL</i> ₃₀	16.6	X	203.91620	107.47914	266.65883	7.70777	0.2394872	0.21091233	2.7951261	20	4 9.4	21.7
384097 2008 <i>WC</i> ₃₅	16.4	X	47.82430	39.07945	52.49078	19.99336	0.1008597	0.19148505	2.9811201	20	1 24.2	20.5
384098 2008 <i>WU</i> ₃₉	16.3	X	124.08303	46.29684	66.75842	9.86758	0.1489125	0.20980999	2.8049079	20	5 30.9	20.7
384099 2008 <i>WV</i> ₄₁	17.0	X	268.77303	92.68745	265.62141	4.68420	0.0333498	0.21996074	2.7179363	20	6 18.4	20.7
384100 2008 <i>WD</i> ₄₂	16.6	X	340.26025	222.06968	55.84011	9.81442	0.1294240	0.21895615	2.7262434	20	6 2.8	19.5
384101 2008 <i>WW</i> ₄₅	17.1	X	154.19442	31.48671	11.44373	1.87330	0.0735537	0.20261833	2.8708922	20	3 29.9	21.4
384102 2008 <i>WT</i> ₄₇	16.2	X	32.44365	37.28862	70.19057	10.58429	0.1298063	0.18570516	3.0426599	20	1 19.9	19.9
384103 2008 <i>WO</i> ₄₉	16.2	X	188.34206	229.48869	216.76991	13.56216	0.1620817	0.22024352	2.7156093	20	6 26.9	20.8
384104 2008 <i>WR</i> ₇₀	16.0	X	108.64304	325.25995	73.45723	12.15265	0.2356502	0.19215424	2.9741948	20	3 3.4	20.7
384105 2008 <i>WR</i> ₈₂	16.3	X	290.84993	195.30830	122.51959	6.58973	0.0844568	0.21584751	2.7523565	20	5 18.9	20.0
384106 2008 <i>WY</i> ₈₂	16.8	X	179.55755	233.69767	183.40212	4.81592	0.1544156	0.21162336	2.7888617	20	5 15.9	21.3
384107 2008 <i>WE</i> ₉₀	16.0	X	126.28975	5.06617	78.40150	8.48184	0.0679790	0.19943260	2.9013845	20	4 21.0	20.2
384108 2008 <i>WV</i> ₉₁	15.9	X	164.57410	87.51311	296.40382	7.80168	0.0814316	0.18999197	2.9967181	20	3 15.4	20.5
384109 2008 <i>WS</i> ₉₃	16.2	X	225.92853	133.46898	115.75207	11.93207	0.1650073	0.23191940	2.6236828	20	8 8.6	20.2
384110 2008 <i>WF</i> ₉₄	17.1	X	152.98964	340.90328	317.33648	1.82984	0.0292842	0.21493691	2.7601247	20	6 4.2	20.9
384111 2008 <i>WJ</i> ₉₅	16.7	X	172.20183	206.72856	211.68619	5.63087	0.2397657	0.21150491	2.7899028	20	5 11.9	21.5
384112 2008 <i>WV</i> ₉₇	16.4	X	141.80685	335.45687	124.31993	10.06522	0.2403042	0.21132231	2.7915097	20	6 8.1	21.3
384113 2008 <i>WK</i> ₁₂₇	16.6	X	89.40542	115.06014	334.15840	4.32311	0.1153685	0.19142988	2.9819282	20	3 17.0	20.6
384114 2008 <i>WK</i> ₁₂₉	17.3	X	65.11595	241.29911	269.56903	4.92241	0.1748381	0.19519656	2.9432102	20	5 11.1	21.0
384115 2008 <i>WR</i> ₁₃₃	15.6	X	107.17157	171.10447	280.05979	14.21304	0.1062537	0.20276349	2.8695219	20	4 1.9	20.0
384116 2008 <i>WD</i> ₁₃₄	15.9	X	169.41575	138.17929	262.76233	11.68340	0.1513817	0.20238577	2.8730911	20	4 11.9	20.7
384117 2008 <i>WK</i> ₁₃₇	15.9	X	18.40046	232.20786	254.02003	5.57864	0.0458016	0.18470779	3.0536030	20	1 19.5	20.0
384118 2008 <i>WP</i> ₁₃₉	15.6	X	68.41340	295.14136	116.94138	11.02848	0.0689050	0.17297594	3.1901585	20	1 1.4	20.0
384119 2008 <i>WV</i> ₁₄₀	16.7	X	166.62135	329.74435	114.05083	9.08082	0.1957686	0.21440414	2.7646953	20	6 7.1	21.4
384120 2008 <i>WR</i> ₁₄₁	16.5	X	212.08214	38.19403	316.93026	4.44553	0.1983712	0.20950024	2.8076720	20	3 26.6	21.3
384121 2008 <i>XP</i> ₁	16.1	X	79.72288	3.07012	64.93765	18.67650	0.2035208	0.18968744	2.9999245	20	3 1.7	20.4
384122 2008 <i>XL</i> ₃₂	17.5	X	204.77548	84.43770	307.53050	2.90514	0.1091986	0.21323820	2.7747639	20	5 7.6	21.8
384123 2008 <i>XC</i> ₄₂	16.0	X	322.18005	221.80961	59.21637	7.12050	0.0464574	0.20667874	2.8331670	20	5 17.7	19.7
384124 2008 <i>XH</i> ₄₇	16.8	X	90.94592	350.38063	102.05767	3.59078	0.1112457	0.19347541	2.9606396	20	3 25.2	20.8
384125 2008 <i>XF</i> ₄₉	16.1	X	111.51668	120.87481	285.31732	7.10521	0.1455050	0.18778773	3.0201226	20	2 22.6	20.5
384126 2008 <i>YN</i> ₁₁	16.1	X	62.70284	13.60074	92.72906	7.96951	0.1416051	0.19261360	2.9694641	20	3 10.2	19.9
384127 2008 <i>YG</i> ₄₉	16.0	X	105.86520	282.73315	99.59091	6.00851	0.1668894	0.17870699	3.1215839	20	1 26.1	20.4
384128 2008 <i>YZ</i> ₅₈	16.7	X	153.26169	104.25488	95.53556	8.92374	0.2428039	0.22543184	2.6737813	20	10 19.8	21.5
384129 2008 <i>YR</i> ₆₅	16.0	X	18.48164	34.27024	106.55760	8.93174	0.1482692	0.18090505	3.0962470	20	2 9.3	19.6
384130 2008 <i>YW</i> ₆₉	16.1	X	349.09191	155.76248	332.34783	4.34999	0.1017461	0.17296927	3.1902405	20	—	—
384131 2008 <i>YJ</i> ₇₅	15.4	X	303.89773	131.38655	103.11637	18.86775	0.1788810	0.18288168	3.0738965	20	2 8.9	19.9
384132 2008 <i>YF</i> ₈₃	16.1	X	95.24161	59.38992	97.58551	10.25744	0.0684081	0.20570579	2.8420936	20	6 13.9	20.0
384133 2008 <i>YA</i> ₈₆	16.3	X	295.47124	202.10836	99.22445	6.89516	0.0585120	0.20615241	2.8379872	20	5 7.8	20.2
384134 2008 <i>YS</i> ₈₇	15.6	X	124.53673	103.09739	275.83530	8.72430	0.1621437	0.18692329	3.0294266	20	2 6.5	20.2
384135 2008 <i>YC</i> ₉₁	16.3	X	101.49992	246.31875	284.53952	11.93988	0.1039609	0.20970797	2.8058175	20	7 14.0	20.3
384136 2008 <i>YR</i> ₉₇	16.0	X	27.37268	44.10644	112.37455	13.59167	0.0893585	0.18606112	3.0387779	20	3 17.6	20.0
384137 2008 <i>YU</i> ₉₉	16.5	X	0.69005	34.82752	115.47641	3.47637	0.1134513	0.17957446	3.1115229	20	3 23.1	20.1
384138 2008 <i>YY</i> ₁₀₃	16.6	X	101.92208	321.58415	118.19805	2.99322	0.1256843	0.19033856	2.9930791	20	3 24.8	20.7
384139 2008 <i>YM</i> ₁₀₆	16.8	X	40.03113	181.15895	329.41605	4.19165	0.0872699	0.18798712	3.0179867	20	3 21.8	20.7
384140 2008 <i>YU</i> ₁₁₇	16.6	X	4.99061	54.73072	107.17424	2.27096	0.1182173	0.18062204	3.0994803	20	2 13.5	20.2
384141 2008 <i>YA</i> ₁₁₈	16.3	X	157.61779	134.97002	308.52740	8.30937	0.1060513	0.20402241	2.8577055	20	5 23.7	20.8
384142 2008 <i>YQ</i> ₁₂₉	15.7	X	193.44735	171.00261	95.96090	7.13930	0.1032919	0.17017984	3.2250069	20	—	—
384143 2008 <i>YV</i> ₁₃₄	16.5	X	155.21123	196.56659	178.22094	2.01876	0.1093062	0.19737413	2.9215225	20	2 28.7	21.0
384144 2008 <i>YJ</i> ₁₃₇	15.7	X	31.86646	358.20218	116.80581	11.99215	0.0622393	0.18156004	3.0887958	20	1 26.3	19.6
384145 2008 <i>YR</i> ₁₃₈	15.7	X	302.17351	64.65877	127.34562	16.50219	0.0556859	0.17460136	3.1703287	20	1 3.3	20.2
384146 2008 <i>YX</i> ₁₅₁	16.3	X	187.88972	235.90680	128.64181	11.23691	0.1292673	0.19307589	2.9647223	20	3 24.3	21.1
384147 2008 <i>YG</i> ₁₅₂	16.7	X	97.70866	317.44595	167.09862	2.16543	0.0254819	0.19666437	2.9285474	20	4 29.7	20.8
384148 2008 <i>YD</i> ₁₅₄	16.0	X	73.84299	306.53625	120.16114	12.75471	0.1150493	0.17932344	3.1144259	20	1 31.3	20.1
384149 2008 <i>YK</i> ₁₆₅	15.9	X	17.83432	68.40298	92.12288	15.99207	0.1890570	0.18261763	3.0768590	20	3 11.8	19.5
384150 2008 <i>YF</i> ₁₇₁	15.2	X	355.59215	237.28332	274.40582	18.09358	0.1959483	0.17602620	3.1531975	20	1 7.9	18.8
384151 2009 <i>AO</i> ₁₃	15.7	X	214.53579	158.28448	122.94150	10.70						

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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>
384161 2009 AO ₃₅	15.8	X	162.49285	24.31332	286.37306	12.12015	0.0907744	0.17214981	3.2003565	20	—	—
384162 2009 AP ₄₃	16.1	X	313.30595	62.49321	133.21641	17.12870	0.0825794	0.17695264	3.1421821	20	1 16.6	20.5
384163 2009 AH ₄₇	16.4	X	99.83487	275.85033	96.29116	3.40352	0.0866728	0.17364378	3.1819735	20	—	—
384164 2009 AH ₄₉	15.8	X	317.42240	283.26724	272.90687	8.07559	0.1193353	0.17694123	3.1423172	20	1 16.6	20.1
384165 2009 BB ₁₀	16.6	X	167.10575	280.46648	122.87761	4.08841	0.1737909	0.20018402	2.8941194	20	4 19.5	21.4
384166 2009 BR ₂₀	16.2	X	339.61294	272.66197	303.20525	9.17574	0.0906688	0.18934515	3.0035389	20	3 10.4	20.2
384167 2009 BO ₂₅	15.7	X	19.09215	74.57632	111.39845	6.94098	0.1183451	0.18629614	3.0362217	20	4 10.9	19.4
384168 2009 BR ₂₉	16.2	X	121.41447	278.44832	113.79066	9.52145	0.1936123	0.18563593	3.0434162	20	2 27.9	20.9
384169 2009 BW ₃₀	16.5	X	160.50043	312.39295	91.42771	3.00976	0.0989453	0.19447848	2.9504506	20	4 10.4	21.1
384170 2009 BK ₃₁	16.0	X	175.07144	235.59790	119.04776	10.85246	0.0941239	0.18507939	3.0495143	20	2 27.7	20.8
384171 2009 BC ₃₅	16.5	X	52.79890	7.18920	83.55453	3.69517	0.1365157	0.17850516	3.1239366	20	2 2.3	20.2
384172 2009 BH ₃₅	16.1	X	282.39825	281.25629	331.12532	8.96127	0.1105847	0.18065157	3.0991426	20	2 13.1	20.5
384173 2009 BL ₄₁	15.9	X	146.14289	280.21089	124.99286	11.13970	0.1803383	0.19107925	2.9853393	20	4 6.9	20.9
384174 2009 BK ₄₄	16.2	X	74.84320	119.67225	117.48638	8.55757	0.1042488	0.17793192	3.1306424	20	2 12.4	20.2
384175 2009 BN ₄₄	15.8	X	348.23868	225.25076	322.17246	15.47024	0.0525874	0.18012007	3.1052363	20	2 22.5	19.9
384176 2009 BM ₄₉	16.1	X	79.96538	342.99626	126.83481	10.01751	0.0850104	0.18877063	3.0096299	20	3 31.7	20.3
384177 2009 BQ ₅₁	16.9	X	32.68814	86.15342	99.73830	2.92592	0.2533946	0.18958699	3.0009841	20	5 16.6	19.8
384178 2009 BK ₅₂	15.6	X	14.00158	164.09656	333.04211	19.18682	0.1171852	0.17458304	3.1705505	20	2 1.6	19.5
384179 2009 BK ₅₆	16.0	X	132.96531	51.54655	323.40041	8.41832	0.0841693	0.17616851	3.1514992	20	2 6.2	20.6
384180 2009 BS ₆₇	15.8	X	263.79695	140.22380	143.30133	8.99738	0.0726713	0.18178780	3.0862153	20	3 5.7	20.2
384181 2009 BH ₇₀	15.6	X	103.60825	102.34284	332.40413	9.03864	0.0686406	0.18857944	3.0116638	20	3 9.7	19.9
384182 2009 BK ₇₅	16.3	X	351.15134	57.47146	101.94071	11.52486	0.0594378	0.17914402	3.1165051	20	1 25.6	20.4
384183 2009 BC ₇₆	15.9	X	24.95428	155.76969	330.65263	14.42796	0.2278382	0.17592797	3.1543712	20	2 5.4	19.0
384184 2009 BN ₈₃	16.0	X	350.66646	74.14336	89.91076	17.17587	0.1837747	0.17895460	3.1187038	20	1 18.0	19.7
384185 2009 BX ₈₅	15.9	X	242.19269	201.42866	141.06090	10.67238	0.0665425	0.19723709	2.9228756	20	4 24.9	20.3
384186 2009 BT ₉₀	15.7	X	137.69512	241.69800	135.92346	12.42193	0.1413945	0.18225563	3.0809318	20	2 20.1	20.5
384187 2009 BR ₉₄	17.0	X	95.78338	241.74919	200.73589	0.42186	0.2234826	0.18766862	3.0214004	20	4 2.1	21.2
384188 2009 BS ₁₀₁	16.1	X	75.94396	13.39253	119.37400	12.53732	0.0811957	0.18986310	2.9980739	20	4 25.5	20.4
384189 2009 BJ ₁₀₃	16.0	X	82.64714	138.98676	312.79265	10.05495	0.1107850	0.18513432	3.0489111	20	3 8.6	20.2
384190 2009 BT ₁₀₆	16.3	X	38.62383	190.34455	283.68646	3.14279	0.1079898	0.17916552	3.1162557	20	2 5.4	20.1
384191 2009 BG ₁₀₇	17.6	X	193.12039	108.45461	330.22761	18.98192	0.0823395	0.38083964	1.8849852	20	7 7.2	20.1
384192 2009 BH ₁₁₃	16.1	X	128.35279	108.19291	313.32056	10.49291	0.0936709	0.18459962	3.0547958	20	3 22.6	20.7
384193 2009 BH ₁₁₇	16.3	X	316.94034	243.25642	339.40481	14.15623	0.1179457	0.17964267	3.1107352	20	2 19.5	20.5
384194 2009 BO ₁₁₈	16.6	X	265.54245	332.48281	307.48688	10.05117	0.0447613	0.18697685	3.0288480	20	3 1.4	21.1
384195 2009 BA ₁₃₁	16.6	X	22.39968	124.71665	34.40235	5.44835	0.1088459	0.18011670	3.1052749	20	3 11.1	20.4
384196 2009 BZ ₁₃₂	15.7	X	307.67447	247.84480	311.60907	19.62248	0.1470776	0.16997439	3.2276051	20	1 9.6	20.4
384197 2009 BP ₁₃₇	16.4	X	80.03261	134.78339	320.79493	9.78064	0.0894435	0.18522329	3.0479346	20	3 7.7	20.6
384198 2009 BP ₁₄₆	16.7	X	62.79759	264.69910	235.11912	2.54393	0.1401752	0.18622114	3.0370368	20	4 18.6	20.6
384199 2009 BK ₁₅₀	16.4	X	21.59060	221.49018	316.95880	3.06659	0.0939463	0.18393777	3.0621193	20	3 30.3	20.3
384200 2009 BZ ₁₅₃	16.3	X	123.35539	69.25778	331.18584	8.16567	0.0806600	0.18384018	3.0632029	20	2 23.8	20.6
384201 2009 BW ₁₅₅	16.6	X	156.40080	79.23811	325.08646	10.60883	0.0683548	0.19186622	2.9771704	20	3 29.7	21.2
384202 2009 BK ₁₅₆	16.1	X	50.05946	146.94419	329.31948	9.19106	0.0614076	0.17807126	3.1290092	20	2 21.9	20.1
384203 2009 BN ₁₆₈	16.0	X	38.95218	180.28826	292.04401	8.47248	0.0486915	0.17566389	3.1575317	20	1 31.6	20.3
384204 2009 BS ₁₇₂	15.7	X	266.65229	293.78611	327.91263	7.91328	0.0598378	0.17599014	3.1536283	20	2 12.9	20.1
384205 2009 BE ₁₈₃	16.9	X	104.27188	297.59884	133.12689	1.93025	0.1825058	0.18516646	3.0485582	20	3 23.8	21.2
384206 2009 BB ₁₈₆	15.7	X	32.09460	30.24865	81.64309	19.73774	0.1893279	0.17563369	3.1578936	20	1 31.1	19.4
384207 2009 BT ₁₈₆	16.9	X	4.89508	46.87071	92.90836	0.19786	0.1276589	0.17437150	3.1731143	20	1 16.5	20.7
384208 2009 BU ₁₈₆	16.7	X	18.33592	235.77805	276.03102	1.26199	0.0384454	0.17957119	3.1115606	20	2 21.3	20.7
384209 2009 BQ ₁₈₈	15.8	X	61.74175	317.37849	153.97412	17.44328	0.1592244	0.17923244	3.1154800	20	3 17.5	19.7
384210 2009 CS ₆	16.0	X	0.67219	235.28622	336.85603	9.49118	0.0508960	0.18932950	3.0037044	20	4 8.3	20.1
384211 2009 CF ₂₉	16.6	X	45.96305	152.43191	347.16386	5.60839	0.0873145	0.18325103	3.0697648	20	3 17.8	20.5
384212 2009 CN ₃₀	16.2	X	131.32160	259.10281	136.23618	12.85249	0.1264596	0.18105292	3.0945608	20	3 5.3	20.9
384213 2009 CY ₃₁	17.0	X	85.78905	333.46365	142.28093	5.44489	0.1108554	0.18734681	3.0248593	20	4 17.7	21.2
384214 2009 CJ ₃₂	16.4	X	7.15149	53.77516	105.20475	2.25244	0.1185794	0.17635556	3.1492703	20	2 14.1	20.1
384215 2009 CX ₃₈	15.8	X	121.52500	93.76658	324.83425	8.63759	0.1144650	0.18418492	3.0593794	20	3 16.1	20.4
384216 2009 CT ₄₉	15.6	X	313.67195	89.49665	137.23166	10.38848	0.0562964	0.17784791	3.1316283	20	2 28.7	19.9
384217 2009 CN ₅₉	16.2	X	312.60002	208.27882	356.06661	9.29778	0.0348797	0.17203081	3.2018322	20	2 5.3	20.7
384218 2009 CX ₆₀	16.4	X	343.91984	202.61646	342.36143	13.18067	0.1688962	0.17364703	3.1819339	20	2 7.9	20.3
384219 2009 CM ₆₃	15.2	X	11.11920	182.95774	312.08334	11.98674	0.1128179	0.17161814	3.2069628	20	1 22.7	19.0
384220 2009 DK ₄	17.4	X	207.68600	38.92353	0.05597	18.94488	0.0938958	0.37468613	1.9055674	20	5 10.0	20.2
384221 2009 DN ₉	15.6	X	23.64503	154.49609	349.86669	13.05341	0.2746426	0.17891619	3.1191502	20	2 28.0	18.3
384222 2009 DP ₉	16.2	X	66.07806	126.71819	343.11240	17.18235	0.2061408	0.18358512	3.0660394	20	3 21.6	20.2
384223 2009 DG ₁₇	15.4	X	273.28880	307.34804	323.17538	9.13034	0.0496648	0.17958294	3.1114250	20	2 29.9	20.0
384224 2009 DV ₂₂	16.5	X	34.02767	151.85163	353.67742	9.08731	0.0295224	0.18486147	3.0519104	20	3 5.8	20.5
384225 2009 DP ₂₆	17.1	X	142.98095	88.04682	320.43277	1.44577	0.0880561	0.19066165	2.9896968	20	3 26.1	21.5
384226 2009 DA ₃₁	16.6	X	12.76044	52.11840	144.54949	6.04649	0.0946513	0.18777448	3.0202647	20	4 12.8	20.3
384227 2009 DZ ₃₂	16.0	X	63.47210	98.56645	6.26527	15.76900	0.2070185	0.17755877	3.1350270	20	3 18.5	19.8
384228 2009 DN ₃₅	16.8	X	73.58250	309.72275	175.56570	4.00750	0.2510703	0.18455246	3.0553162	20	5 3.9	20.8
384229 2009 DQ ₄₀	16.4	X	44.90981	152.12433	344.65818	5.26710	0.2070999	0.18303553	3.0721739	20	3 25.1	19.7
384230 2009 DT ₄₇	16.1	X	69.41417	341.18968	138.99256	4.30381	0.2584496	0.18526564	3.0474701	20	4 23.6	20.0
384231 2009 DP ₅₃	15.7	X	138.53898	13.01416	353.57316	9.29827	0.0879474	0.17402462	3.1773294	20	2 5.2	20.4
384232 2009 DR ₅₄	16.1	X	31.60701	145.73692	344.70370	8.24899	0.0485278	0.17717636	3.1395365	20	2 15.5	20.2
384233 2009 DU ₅₅	16.2	X	107.41115	319.01607	104.64868	3.23593	0.0651653	0.17848715</				

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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>
384241 2009 <i>DG</i> ₇₆	16.7	X	6.59434	49.55754	129.41206	5.80929	0.1004132	0.18374822	3.0642248	20	3 10.5	20.5
384242 2009 <i>DN</i> ₇₇	15.6	X	358.66764	251.96623	314.70851	8.98955	0.0242454	0.18705967	3.0279540	20	3 30.0	19.9
384243 2009 <i>DA</i> ₉₄	16.3	X	11.20058	37.52007	162.57302	16.32205	0.0994474	0.18196305	3.0842334	20	4 16.8	20.3
384244 2009 <i>DP</i> ₁₀₇	16.4	X	40.20145	70.82715	45.08735	3.40030	0.2060608	0.17382407	3.1797730	20	2 21.5	19.8
384245 2009 <i>DF</i> ₁₁₆	15.9	X	88.38328	83.49597	336.51080	8.95958	0.1107660	0.17579844	3.1559204	20	2 12.1	20.1
384246 2009 <i>DJ</i> ₁₂₃	16.7	X	24.93118	109.36306	98.88538	7.97284	0.2299073	0.18818059	3.0159177	20	5 29.7	19.8
384247 2009 <i>DW</i> ₁₂₃	17.6	X	174.69847	210.62259	172.79270	23.07658	0.1098044	0.35955439	1.9586627	20	3 18.4	19.9
384248 2009 <i>DG</i> ₁₃₅	16.7	X	23.90872	96.48219	70.84972	4.41527	0.1459836	0.17997081	3.1069528	20	3 25.9	20.2
384249 2009 <i>DH</i> ₁₃₇	16.9	X	58.57349	188.22477	295.11060	3.59420	0.0961441	0.18010409	3.1054199	20	3 15.6	20.9
384250 2009 <i>DZ</i> ₁₃₈	16.5	X	75.78032	134.39808	334.13221	4.43448	0.1050113	0.18025854	3.1036458	20	3 22.6	20.5
384251 2009 <i>DT</i> ₁₄₁	16.6	X	46.09273	201.42192	323.19595	7.76756	0.0692650	0.18809526	3.0168298	20	4 13.7	20.6
384252 2009 <i>ES</i> ₃	15.7	X	74.24417	134.53943	334.64730	12.92754	0.2534131	0.18507234	3.0495918	20	4 7.4	19.9
384253 2009 <i>EU</i> ₁₄	16.2	X	339.78848	75.53920	145.93994	6.38798	0.1063878	0.18224811	3.0810165	20	3 23.2	20.0
384254 2009 <i>EY</i> ₁₄	16.6	X	59.69364	54.76855	31.96842	1.10325	0.1687364	0.17546500	3.1599173	20	2 11.9	20.2
384255 2009 <i>EL</i> ₁₆	16.7	X	57.81577	284.23260	202.94823	2.74058	0.1143355	0.18171021	3.0870939	20	3 22.8	20.5
384256 2009 <i>EJ</i> ₁₈	16.1	X	271.84541	77.63105	174.48110	5.86268	0.0898243	0.16982839	3.2294547	20	2 3.2	20.8
384257 2009 <i>ER</i> ₁₈	16.5	X	0.90379	70.45133	110.80293	2.05936	0.1056745	0.18313827	3.0710247	20	3 14.9	20.1
384258 2009 <i>EG</i> ₂₀	15.7	X	59.61019	317.00854	158.58784	28.29086	0.1317594	0.17950359	3.1123419	20	3 15.3	19.7
384259 2009 <i>EB</i> ₂₈	15.6	X	319.83967	2.18256	257.34425	5.43823	0.0691360	0.18699795	3.0286203	20	4 11.9	19.6
384260 2009 <i>EY</i> ₂₈	15.3	X	309.51784	2.51106	250.92183	14.00634	0.1386931	0.17875438	3.1210323	20	3 7.2	19.8
384261 2009 <i>FF</i> ₃	16.1	X	56.41307	102.13065	4.29222	16.41846	0.2251703	0.17801815	3.1296314	20	3 12.8	19.7
384262 2009 <i>FD</i> ₂₅	15.9	X	47.33165	352.02441	123.92570	17.52389	0.0284562	0.17807351	3.1289827	20	2 17.5	20.2
384263 2009 <i>FE</i> ₂₆	15.6	X	59.85765	338.41331	136.38915	18.90334	0.2375695	0.18000528	3.1065563	20	4 3.6	19.7
384264 2009 <i>FW</i> ₃₂	16.3	X	27.66223	103.43236	60.27026	25.93467	0.3154510	0.18044738	3.1014800	20	4 22.4	19.4
384265 2009 <i>FJ</i> ₃₃	15.6	X	351.96661	172.45940	359.57755	22.52378	0.1785410	0.17464680	3.1697789	20	2 9.6	19.6
384266 2009 <i>FO</i> ₄₃	15.4	X	26.01623	100.31361	74.10757	18.64856	0.2159431	0.17949992	3.1123842	20	4 20.6	18.9
384267 2009 <i>FA</i> ₅₁	17.3	X	222.87726	40.17213	8.66931	20.22938	0.0769553	0.37755308	1.8959085	20	6 27.9	20.0
384268 2009 <i>FM</i> ₅₂	15.6	X	15.57086	120.84341	41.40817	27.77562	0.1913239	0.17483887	3.1674569	20	3 21.0	19.6
384269 2009 <i>FR</i> ₇₄	17.5	X	126.53535	99.08627	45.64439	23.19000	0.0648613	0.37247564	1.9130991	20	7 18.2	20.2
384270 2009 <i>HQ</i> ₅	16.1	X	336.19831	100.27432	179.33231	9.81382	0.0424386	0.19049228	2.9914687	20	6 6.4	20.2
384271 2009 <i>HU</i> ₇₄	17.6	X	102.26070	278.10445	210.00143	20.78614	0.0680864	0.36197771	1.9499112	20	5 12.7	19.6
384272 2009 <i>HR</i> ₉₄	17.0	X	74.15452	342.17481	56.24578	26.84331	0.1556964	0.32349047	2.1016564	20	—	—
384273 2009 <i>KK</i> ₉	17.9	X	52.13203	73.88933	236.03518	5.93169	0.2897841	0.29146328	2.2529254	20	12 19.1	21.3
384274 2009 <i>PD</i> ₂	17.7	X	12.42928	75.70123	279.90725	4.09070	0.1654896	0.28022201	2.3127812	20	12 13.6	20.2
384275 2009 <i>PO</i> ₃	18.4	X	131.84960	116.48777	198.81422	2.82164	0.2169930	0.30581980	2.1818538	20	—	—
384276 2009 <i>PV</i> ₁₁	17.8	X	337.83547	210.35593	140.59704	2.78144	0.2425137	0.27037945	2.3685738	20	10 5.6	19.0
384277 2009 <i>QR</i> ₅	18.1	X	350.44329	124.46724	285.28189	3.87307	0.1870457	0.28702634	2.2760836	20	—	—
384278 2009 <i>QM</i> ₈	17.3	X	105.53228	14.43615	322.12724	6.97917	0.2053101	0.29979391	2.2109938	20	—	—
384279 2009 <i>QR</i> ₁₀	17.1	X	103.87561	355.72179	291.59036	4.31854	0.1562727	0.29219569	2.2491591	20	12 28.3	20.3
384280 2009 <i>QJ</i> ₁₈	17.5	X	350.97880	107.20548	296.16651	5.78823	0.0891967	0.28699348	2.2762574	20	—	—
384281 2009 <i>QC</i> ₂₀	17.7	X	329.78305	50.81572	327.21885	1.49700	0.2307375	0.27398097	2.3477713	20	10 29.0	18.8
384282 2009 <i>Evgeniyegorov</i>	17.3	X	313.06627	344.50223	32.41352	1.21217	0.2254635	0.26625711	2.3929589	20	9 6.9	19.0
384283 2009 <i>QC</i> ₃₉	17.1	X	331.92028	93.20074	334.70652	6.13532	0.1593514	0.28314914	2.2968143	20	—	—
384284 2009 <i>QE</i> ₄₃	17.7	X	331.89798	304.55983	123.43724	3.80302	0.1345005	0.28663562	2.2781515	20	—	—
384285 2009 <i>QV</i> ₄₇	17.4	X	135.31331	198.57116	108.64687	5.70122	0.2012726	0.30238240	2.1983578	20	—	—
384286 2009 <i>QJ</i> ₅₁	18.0	X	337.47370	156.27029	210.08574	0.69215	0.1974816	0.27244305	2.3565983	20	10 26.6	19.7
384287 2009 <i>RA</i> ₇	17.1	X	88.34058	346.55563	338.91890	7.23104	0.1815157	0.29267161	2.2467202	20	—	—
384288 2009 <i>RA</i> ₁₄	17.5	X	317.42662	34.74145	2.48474	3.87669	0.2771172	0.26968507	2.3726378	20	10 23.7	18.4
384289 2009 <i>RJ</i> ₁₄	17.6	X	288.65687	35.78216	86.51285	0.43590	0.1316783	0.28316417	2.2967330	20	—	—
384290 2009 <i>RL</i> ₁₄	17.3	X	250.80317	220.58926	184.45935	7.96715	0.1470180	0.25492597	2.4633530	20	7 11.6	20.8
384291 2009 <i>RM</i> ₁₅	17.8	X	3.71946	221.85678	169.47355	1.43692	0.1627170	0.28137918	2.3064360	20	—	—
384292 2009 <i>RU</i> ₁₅	17.3	X	296.37493	232.58057	185.95922	5.95940	0.1193067	0.26982726	2.3718042	20	10 20.7	19.4
384293 2009 <i>RM</i> ₂₅	17.1	X	351.89960	16.31112	14.65142	7.08177	0.1230834	0.27793148	2.3254708	20	12 23.8	19.7
384294 2009 <i>RT</i> ₂₆	17.6	X	70.66306	307.32014	47.34621	5.38141	0.1905166	0.29424657	2.2386959	20	—	—
384295 2009 <i>RH</i> ₂₇	17.2	X	345.81041	5.41374	3.79037	8.00686	0.1878563	0.27333760	2.3514539	20	11 15.3	19.4
384296 2009 <i>RM</i> ₄₂	17.8	X	321.02826	199.39816	246.09806	5.08053	0.1323312	0.28262716	2.2996414	20	—	—
384297 2009 <i>RS</i> ₄₄	17.6	X	283.09698	207.13758	222.20823	2.38962	0.1734739	0.26760244	2.3849320	20	10 2.1	19.8
384298 2009 <i>RJ</i> ₅₅	17.7	X	359.63983	170.32470	178.12077	6.89135	0.1317144	0.27071393	2.3666225	20	11 6.3	20.2
384299 2009 <i>RO</i> ₅₈	17.5	X	289.18175	225.64060	180.74961	4.04635	0.2038472	0.26391134	2.4071178	20	9 2.3	19.7
384300 2009 <i>SB</i> ₃	17.4	X	323.96935	15.71671	318.67324	4.38726	0.1939519	0.26238788	2.4164262	20	7 25.7	19.2
384301 2009 <i>SS</i> ₁₉	17.4	X	317.01080	253.38566	189.39519	4.63419	0.0782591	0.28433684	2.2904139	20	—	—
384302 2009 <i>SV</i> ₂₂	18.3	X	298.44939	146.57942	266.83362	4.97978	0.1403798	0.27599325	2.3363456	20	10 12.5	20.5
384303 2009 <i>SM</i> ₃₇	17.8	X	261.45270	169.68032	285.28878	1.64242	0.1493937	0.26746227	2.3857652	20	10 6.7	20.6
384304 2009 <i>SA</i> ₃₉	18.2	X	287.31980	145.89201	280.12252	0.80324	0.1544284	0.26753279	2.3853459	20	10 8.3	20.2
384305 2009 <i>SU</i> ₆₀	17.6	X	127.16323	305.61000	325.69265	4.61994	0.1985234	0.28815406	2.2701413	20	12 28.7	21.2
384306 2009 <i>SJ</i> ₆₇	17.4	X	230.11730	107.09975	69.62582	3.56299	0.0363676	0.28311747	2.2969856	20	—	—
384307 2009 <i>SJ</i> ₈₈	17.2	X	292.90518	296.24534	105.60957	3.38375	0.1701063	0.26380721	2.4077512	20	9 10.9	19.4
384308 2009 <i>SG</i> ₁₀₈	18.2	X	264.33194	224.83304	182.41764	1.71366	0.1770995	0.25493212	2.4633134	20	7 28.8	21.4
384309 2009 <i>SD</i> ₁₁₈	17.8	X	177.85123	286.14857	338.83034	4.55465	0.0636586	0.29695689	2.2250534	20	—	—
384310 2009 <i>SH</i> ₁₁₈	17.4	X	47.63600	3.26421	352.75536	6.89843	0.1284091	0.28623515	2.2802759	20	—	—
384311 2009 <i>SB</i> ₁₂₁	18.0	X	331.53721	226.28914	210.04515	3.72286	0.1107137	0.28376430	2.2934936	20	—	—
384312 2009 <i>SS</i> ₁₃₀	17.7	X	304.62732	336.38605	80.							

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>
384321 2009 <i>ST</i> ₂₂₃	18.4	X	334.28868	204.90593	236.80876	0.62663	0.0613651	0.28834813	2.2691226	20	—	—
384322 2009 <i>SY</i> ₂₂₄	18.6	X	292.16253	358.61201	60.58796	3.62053	0.2009539	0.26647444	2.3916577	20	10 2.7	20.6
384323 2009 <i>SZ</i> ₂₃₉	17.4	X	71.76581	247.03301	90.98528	9.02021	0.1635239	0.29060169	2.2573763	20	—	—
384324 2009 <i>SL</i> ₂₅₁	18.1	X	286.36928	189.18013	213.03189	1.99187	0.1846208	0.26215270	2.4178712	20	8 24.4	20.6
384325 2009 <i>SP</i> ₂₆₈	17.0	X	345.70382	176.03112	195.09866	7.30711	0.1247675	0.27343051	2.3509212	20	11 14.3	19.3
384326 2009 <i>SM</i> ₂₇₁	17.8	X	20.12962	35.30297	284.58814	2.49674	0.2114645	0.27144066	2.3623965	20	11 9.8	20.3
384327 2009 <i>SK</i> ₂₈₉	17.6	X	257.82821	302.75378	141.21906	3.23577	0.2186340	0.26196907	2.4190010	20	9 4.8	20.6
384328 2009 <i>SJ</i> ₃₀₂	17.4	X	42.58875	269.89458	50.23367	5.96563	0.1886321	0.27941000	2.3172600	20	12 8.2	20.4
384329 2009 <i>SQ</i> ₃₀₄	18.1	X	356.28120	177.25143	182.06153	1.52789	0.1285914	0.27538521	2.3397833	20	11 15.9	20.5
384330 2009 <i>SD</i> ₃₃₀	17.1	X	321.96712	110.18123	227.92640	2.14655	0.2132508	0.26305724	2.4123253	20	7 23.4	18.8
384331 2009 <i>SA</i> ₃₃₂	17.5	X	68.24012	221.88658	154.42699	7.49988	0.1443429	0.29794306	2.2201409	20	—	—
384332 2009 <i>SK</i> ₃₃₇	17.5	X	352.65488	261.98053	82.56815	3.69527	0.2283751	0.27127822	2.3633394	20	11 1.2	19.2
384333 2009 <i>SJ</i> ₃₄₃	17.4	X	276.17017	294.44406	160.58206	5.62431	0.1047661	0.27278903	2.3546053	20	11 11.2	19.9
384334 2009 <i>SC</i> ₃₄₇	16.8	X	286.80453	313.47063	90.81507	6.04756	0.1832567	0.26335805	2.4104880	20	9 2.2	19.3
384335 2009 <i>SP</i> ₃₅₀	18.0	X	282.32912	66.81156	63.54693	5.49442	0.1021187	0.28279467	2.2987332	20	—	—
384336 2009 <i>SY</i> ₃₆₂	17.8	X	110.44987	258.12186	52.67503	5.58481	0.1660984	0.29299154	2.2450843	20	—	—
384337 2009 <i>TF</i> ₁	17.5	X	30.82617	287.39877	60.15794	5.64094	0.1544522	0.27914764	2.3187116	20	12 25.7	20.5
384338 2009 <i>TR</i> ₂	17.7	X	328.78758	10.76250	7.84373	2.38773	0.2112829	0.26714092	2.3876781	20	10 23.5	19.2
384339 2009 <i>TM</i> ₃	17.8	X	329.34968	111.43609	291.52530	4.06496	0.2326730	0.27198038	2.3592701	20	12 9.9	19.2
384340 2009 <i>TE</i> ₄	17.2	X	0.70980	186.26813	136.03884	6.95269	0.1621865	0.26613644	2.3936822	20	10 4.3	19.4
384341 2009 <i>TC</i> ₉	17.5	X	320.90787	162.44592	261.84881	4.12061	0.1575669	0.27479632	2.3431249	20	12 18.6	19.2
384342 2009 <i>TW</i> ₁₀	17.6	X	285.57123	47.47271	34.50207	2.42013	0.1832913	0.26870472	2.3784053	20	10 26.1	19.7
384343 2009 <i>TO</i> ₁₂	17.2	X	4.88115	11.69380	317.52578	4.79663	0.2429676	0.27325166	2.3519469	20	11 1.9	19.4
384344 2009 <i>TP</i> ₁₄	17.6	X	342.35756	144.25612	247.30806	5.14386	0.2117709	0.27284138	2.3543041	20	12 19.1	19.4
384345 2009 <i>TV</i> ₂₆	17.4	X	26.48315	230.42063	79.93847	5.63426	0.2392760	0.27298487	2.3534790	20	11 12.9	20.1
384346 2009 <i>TO</i> ₂₇	17.4	X	9.49336	273.31119	87.41981	6.24381	0.2303587	0.27595990	2.3365338	20	12 25.9	20.0
384347 2009 <i>TO</i> ₃₀	16.9	X	69.31829	251.03958	50.08697	6.36326	0.1737481	0.28021682	2.3128098	20	12 10.9	20.3
384348 2009 <i>TZ</i> ₃₅	17.3	X	52.14926	88.69039	210.82409	9.93088	0.1938133	0.27560510	2.3385386	20	11 23.5	20.5
384349 2009 <i>TT</i> ₄₄	17.4	X	279.25751	337.43244	113.20377	3.15103	0.1752742	0.26750219	2.3855278	20	10 29.4	19.5
384350 2009 <i>UQ</i> ₁	17.9	X	294.44446	79.40839	322.93514	6.42626	0.2609682	0.26208151	2.4183090	20	8 26.7	20.1
384351 2009 <i>UC</i> ₂	18.0	X	355.61178	239.29059	89.34261	6.79996	0.2601553	0.26837252	2.3803675	20	10 20.2	19.8
384352 2009 <i>UX</i> ₁₆	17.7	X	325.56030	217.60958	184.26640	2.37186	0.2121533	0.27098159	2.3650638	20	11 26.5	19.3
384353 2009 <i>UV</i> ₁₇	17.3	X	345.74121	347.59477	25.22797	5.55610	0.1876057	0.27064187	2.3670425	20	11 21.5	19.3
384354 2009 <i>UA</i> ₂₈	17.5	X	325.40414	92.70338	331.40389	1.86708	0.1948495	0.27451090	2.3447488	20	12 31.8	19.2
384355 2009 <i>UW</i> ₃₃	17.9	X	308.24606	356.97998	62.78389	3.19302	0.1859019	0.26809003	2.3820394	20	11 10.6	19.5
384356 2009 <i>UA</i> ₇₁	16.9	X	355.80960	3.13634	354.47093	3.97584	0.2559387	0.27134295	2.3629635	20	11 30.6	18.9
384357 2009 <i>UA</i> ₇₂	18.0	X	1.18414	141.95011	229.32208	4.68637	0.1645373	0.27356777	2.3501348	20	12 16.1	20.5
384358 2009 <i>UL</i> ₇₂	17.4	X	298.39935	295.08635	122.45569	1.83938	0.2356895	0.26561804	2.3967956	20	10 7.9	19.2
384359 2009 <i>UM</i> ₇₄	18.0	X	307.89237	15.77494	354.34829	2.23795	0.1785468	0.26163730	2.4210454	20	8 19.3	19.9
384360 2009 <i>UW</i> ₈₀	17.6	X	335.56301	110.18427	278.85306	1.29560	0.2222765	0.27206001	2.3588097	20	12 1.1	19.1
384361 2009 <i>UP</i> ₈₁	18.2	X	299.88076	76.05282	10.55988	2.06065	0.1690658	0.27300163	2.3533827	20	12 6.3	20.1
384362 2009 <i>UV</i> ₈₃	17.9	X	243.00867	269.96510	219.23579	5.45246	0.0859621	0.26675855	2.3899592	20	11 7.8	20.5
384363 2009 <i>US</i> ₈₅	17.7	X	335.78163	329.69978	79.23502	2.45160	0.1741837	0.27296718	2.3535807	20	12 26.8	19.8
384364 2009 <i>UT</i> ₉₃	17.7	X	340.08935	44.66168	8.03289	2.08067	0.1552261	0.27565303	2.3382676	20	—	—
384365 2009 <i>UR</i> ₁₀₂	17.3	X	317.36458	138.59322	247.07909	7.90332	0.2231522	0.26460174	2.4029289	20	9 28.8	19.0
384366 2009 <i>UF</i> ₁₀₈	18.0	X	284.17961	72.57287	47.57363	2.96690	0.1444142	0.27466707	2.3438599	20	12 27.7	19.9
384367 2009 <i>UB</i> ₁₁₀	17.8	X	336.58590	24.58181	10.68990	1.13252	0.1776725	0.27073957	2.3664730	20	12 6.9	19.9
384368 2009 <i>UX</i> ₁₁₆	17.5	X	272.50226	156.34633	290.18631	3.74128	0.1659191	0.26618599	2.3933851	20	10 8.2	20.0
384369 2009 <i>UF</i> ₁₂₅	17.3	X	283.20568	342.21909	123.37045	3.58853	0.1060747	0.27473776	2.3434578	20	12 7.8	19.5
384370 2009 <i>UC</i> ₁₃₁	17.3	X	303.89978	93.97591	322.90739	8.29475	0.2271425	0.26738307	2.3862363	20	10 16.2	19.3
384371 2009 <i>UM</i> ₁₃₆	18.1	X	332.56844	27.29144	348.11347	2.99279	0.2111117	0.26745802	2.3857905	20	10 27.4	19.8
384372 2009 <i>UW</i> ₁₃₈	16.9	X	241.87948	263.33621	10.76705	10.23472	0.1264082	0.24087448	2.5582453	20	5 22.3	20.0
384373 2009 <i>UL</i> ₁₅₀	17.8	X	270.87828	264.17119	198.55856	0.91123	0.1104251	0.26914715	2.3757980	20	11 9.9	20.2
384374 2009 <i>UE</i> ₁₅₂	17.7	X	112.45304	201.28403	72.69530	6.05422	0.0734336	0.27583312	2.3372497	20	12 14.3	21.0
384375 2009 <i>VC</i> ₃	17.3	X	11.92157	270.23276	94.44436	4.33456	0.2110983	0.27522027	2.3407180	20	12 31.4	19.9
384376 2009 <i>VG</i> ₃	17.5	X	276.97745	89.53230	50.77467	3.31286	0.0964985	0.27776451	2.3264026	20	—	—
384377 2009 <i>VR</i> ₅	17.4	X	291.05665	107.26827	339.82306	6.03969	0.0639950	0.27132770	2.3630521	20	11 24.3	20.1
384378 2009 <i>VS</i> ₂₄	17.1	X	323.63669	118.72679	313.15575	5.84788	0.1940308	0.27405171	2.3473673	20	—	—
384379 2009 <i>VX</i> ₂₆	17.4	X	181.47242	207.16502	304.34013	2.52577	0.0454083	0.25889822	2.4380915	20	9 21.8	20.6
384380 2009 <i>VZ</i> ₂₆	17.5	X	333.13304	22.71592	21.95553	3.22494	0.1954195	0.27276528	2.3547420	20	12 17.2	19.3
384381 2009 <i>VQ</i> ₂₈	17.3	X	317.54087	196.20027	232.22020	6.17252	0.0798502	0.27382838	2.3486434	20	12 13.7	19.7
384382 2009 <i>VF</i> ₃₈	17.8	X	284.22466	26.08631	30.13626	1.66131	0.1760526	0.26219987	2.4175812	20	9 14.1	20.2
384383 2009 <i>VD</i> ₄₅	17.8	X	290.47881	93.04744	336.90026	4.11174	0.1778096	0.26533720	2.3984866	20	10 15.2	20.1
384384 2009 <i>VJ</i> ₄₆	17.6	X	290.48493	237.09802	179.32248	3.59244	0.2009371	0.26312396	2.4119175	20	9 21.8	19.7
384385 2009 <i>VK</i> ₆₄	16.7	X	285.29719	8.60474	82.65023	6.55306	0.0828006	0.26524595	2.3990366	20	11 20.5	19.2
384386 2009 <i>VG</i> ₆₉	17.3	X	268.28019	271.66317	72.36713	9.86892	0.0610166	0.23834928	2.5762825	20	5 25.5	20.6
384387 2009 <i>VY</i> ₇₀	17.0	X	98.59790	116.87976	72.09955	11.56332	0.0655701	0.24053569	2.5606469	20	8 4.5	20.7
384388 2009 <i>VE</i> ₇₃	17.4	X	229.74704	10.33376	205.90436	5.94323	0.0524935	0.29462369	2.2367852	20	—	—
384389 2009 <i>VO</i> ₇₆	16.1	X	224.87217	102.43749	302.36806	20.91124	0.0880280	0.22858361	2.6491466	20	6 19.9	20.2
384390 2009 <i>VL</i> ₇₇	17.7	X	269.40009	284.73613	151.14993	5.25742	0.2064528	0.26150378	2.4218695	20	9 12.7	20.3
384391 2009 <i>VT</i> ₇₈	17.7	X	282.61141	322.33817	92.59174	3.48887	0.1838815	0.25958040	2.4338181	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>
384401 2009 WK ₄₃	16.9	X	233.66530	261.20564	129.88263	5.58294	0.2229853	0.24221831	2.5487744	20	5 29.1	21.1
384402 2009 WA ₄₅	18.0	X	287.55449	335.59996	80.58203	2.83871	0.1198125	0.26147902	2.4220224	20	9 29.7	20.4
384403 2009 WU ₆₅	17.9	X	208.15429	54.52804	68.94557	3.35120	0.1261063	0.25654854	2.4529556	20	9 11.4	21.4
384404 2009 WT ₇₀	17.4	X	223.62499	69.03482	75.10478	3.42431	0.1334339	0.26346301	2.4098478	20	10 26.3	20.7
384405 2009 WU ₇₀	17.8	X	250.51748	279.77857	206.67918	1.94911	0.1450774	0.26600979	2.3944419	20	11 5.2	20.6
384406 2009 WZ ₇₀	18.2	X	303.14630	243.53386	193.19945	2.05180	0.1729399	0.26923986	2.3752526	20	11 27.1	19.8
384407 2009 WF ₈₄	17.4	X	349.05894	15.96443	354.42724	3.42744	0.2586176	0.27030697	2.3689972	20	12 6.9	19.4
384408 2009 WH ₉₃	16.6	X	1.73587	227.80985	80.58436	7.07394	0.0987145	0.25550324	2.4596413	20	9 6.2	19.3
384409 2009 WJ ₉₃	16.9	X	355.35232	251.70857	108.67738	7.60974	0.1325505	0.26805054	2.3822733	20	11 16.5	19.4
384410 2009 WM ₁₂₆	17.2	X	234.03392	97.70500	69.03686	3.76392	0.1435331	0.26946110	2.3739523	20	12 7.6	19.8
384411 2009 WK ₁₄₃	17.6	X	255.04206	72.90018	47.15505	6.24827	0.1430943	0.26978292	2.3720641	20	11 4.4	20.3
384412 2009 WJ ₁₆₅	17.8	X	229.61482	314.15293	72.19004	9.83285	0.1711713	0.23841094	2.5758383	20	5 22.9	21.7
384413 2009 WN ₁₆₆	17.1	X	226.92075	141.80347	275.61527	3.59384	0.1950398	0.23742147	2.5829900	20	6 26.7	21.2
384414 2009 WZ ₁₆₇	17.3	X	123.34382	22.13163	76.16633	5.19824	0.0436366	0.22813378	2.6526278	20	4 30.3	21.0
384415 2009 WR ₁₇₆	18.1	X	328.86489	42.34146	350.70297	3.25788	0.1310019	0.26709676	2.3879412	20	11 11.0	20.3
384416 2009 WZ ₁₉₄	15.9	X	270.46980	231.35238	107.05804	10.43995	0.1494346	0.23863316	2.5742389	20	5 10.9	19.7
384417 2009 WJ ₁₉₆	17.2	X	222.76475	90.43299	72.19906	8.86684	0.0780353	0.26933186	2.3747117	20	11 27.8	20.0
384418 2009 WQ ₂₀₄	17.4	X	281.40434	127.86743	271.17771	5.43068	0.1207397	0.25614709	2.4555179	20	8 19.5	20.2
384419 2009 WD ₂₂₅	18.3	X	30.01570	149.39203	212.24620	3.34141	0.2410159	0.28668926	2.2778674	20	—	—
384420 2009 WJ ₂₃₀	17.3	X	44.43958	267.23853	77.50815	3.75290	0.1959089	0.28018510	2.3129844	20	—	—
384421 2009 WY ₂₃₄	17.4	X	296.77952	97.80938	271.28935	10.52246	0.2734632	0.25674534	2.4517019	20	7 6.5	19.9
384422 2009 WQ ₂₆₂	16.7	X	125.18154	155.21412	317.97831	4.67843	0.0759922	0.22249708	2.6972416	20	5 23.8	20.6
384423 2009 WE ₂₆₃	17.0	X	69.20498	84.52155	71.37339	5.42568	0.0957847	0.22365148	2.6879521	20	5 12.5	20.3
384424 2009 XX ₁	17.3	X	338.95822	302.46761	119.30620	6.00394	0.1275981	0.27880109	2.3206327	20	—	—
384425 2009 XY ₈	16.7	X	214.72276	114.29845	236.13015	5.47401	0.0508704	0.22475120	2.6791767	20	3 27.7	20.6
384426 2009 XL ₁₃	17.5	X	334.08018	208.14467	224.14201	4.57060	0.1348440	0.28316854	2.2967094	20	—	—
384427 2009 XM ₁₆	16.5	X	323.16370	272.23756	110.55698	7.68423	0.0609025	0.25335120	2.4735502	20	10 17.3	19.5
384428 2009 XR ₁₇	16.6	X	159.43880	111.63706	94.12452	6.78350	0.1007458	0.25305910	2.4754533	20	11 6.1	20.4
384429 2009 XY ₂₀	17.4	X	237.40517	138.32564	338.58531	1.24482	0.1317558	0.25322668	2.4743611	20	10 4.1	20.7
384430 2009 XM ₂₂	16.6	X	232.56203	269.44579	97.00162	13.51160	0.2756148	0.23140297	2.6275849	20	4 28.8	21.4
384431 2009 XX ₂₂	16.9	X	184.67222	319.72681	125.89584	2.68803	0.1583691	0.23191176	2.6237404	20	6 24.6	21.1
384432 2009 YQ ₂	17.2	X	175.19782	43.99298	152.27359	3.24080	0.1267453	0.25530237	2.4609313	20	11 8.2	20.8
384433 2009 YN ₁₄	17.7	X	237.85131	336.71728	82.33130	4.93916	0.2437160	0.24353776	2.5395602	20	7 5.2	21.7
384434 2009 YS ₁₄	17.6	X	212.64516	147.28646	50.81210	2.87886	0.1409832	0.26450360	2.4035232	20	12 20.5	20.7
384435 2009 YZ ₂₀	16.9	X	267.71581	6.94739	33.14945	3.66574	0.1688816	0.24582829	2.5237605	20	7 25.8	20.1
384436 2009 YC ₂₃	16.7	X	268.73285	32.21490	39.96108	5.91411	0.0519369	0.25199888	2.4823917	20	10 1.2	19.7
384437 2009 YU ₂₃	17.5	X	190.83169	319.40700	130.90388	5.80790	0.2588544	0.23542077	2.5976035	20	7 3.4	22.0
384438 2010 AU ₅	15.8	X	133.20160	197.55945	305.28156	12.56782	0.1176063	0.22778389	2.6553435	20	7 16.9	19.8
384439 2010 AG ₁₂	16.9	X	167.00452	341.45518	121.96491	5.74830	0.2269239	0.23092768	2.6311890	20	7 1.3	21.3
384440 2010 AD ₂₁	17.1	X	215.92600	168.85641	293.18510	2.15328	0.1224404	0.24118554	2.5560453	20	8 19.1	20.6
384441 2010 AX ₂₄	16.1	X	186.02845	344.37750	121.34573	31.12130	0.1592483	0.23432728	2.6056784	20	7 21.8	20.1
384442 2010 AL ₂₅	16.9	X	160.61866	351.07175	112.63828	2.96276	0.0999339	0.22713303	2.6604137	20	6 23.4	20.8
384443 2010 AQ ₂₅	16.2	X	91.55418	179.95665	314.39346	8.95156	0.0930982	0.21570441	2.7535737	20	5 10.1	20.2
384444 2010 AV ₃₀	16.3	X	189.34007	271.89397	115.83113	13.13760	0.1700056	0.21786804	2.7353130	20	4 23.4	21.0
384445 2010 AW ₃₀	16.5	X	170.44033	19.50482	122.88641	23.27618	0.1229505	0.23776914	2.5804715	20	8 26.6	20.7
384446 2010 AD ₅₉	16.0	X	178.62924	307.67999	120.05644	22.69101	0.0375318	0.22529103	2.6748952	20	6 2.0	20.2
384447 2010 AA ₆₄	17.4	X	304.16701	6.51432	1.36019	3.48278	0.1182643	0.24541885	2.5265667	20	8 14.9	20.1
384448 2010 AU ₆₅	17.7	X	189.50148	99.22627	346.45494	2.88832	0.2531100	0.23283482	2.6168014	20	6 27.1	22.3
384449 2010 AL ₆₆	16.8	X	170.28315	8.61862	124.29592	4.79704	0.1274707	0.23414733	2.6070133	20	8 11.4	20.7
384450 2010 AX ₆₈	17.1	X	219.43916	38.73532	68.28694	6.75868	0.1227541	0.24586836	2.5234863	20	9 3.4	20.8
384451 2010 AC ₇₁	16.3	X	155.42501	189.74026	268.44369	5.54837	0.0891341	0.22640883	2.6660839	20	6 10.1	20.1
384452 2010 AB ₇₃	16.3	X	271.35371	50.69467	302.46780	13.45513	0.0369105	0.22403375	2.6848936	20	6 14.9	20.0
384453 2010 AG ₈₆	16.5	X	152.27541	203.61309	255.38776	11.88164	0.2535002	0.21790324	2.7350184	20	6 14.6	21.2
384454 2010 AS ₉₉	15.8	X	69.87285	324.87549	72.14799	27.75156	0.1504164	0.17399494	3.1776908	20	—	—
384455 2010 AY ₁₁₇	16.0	X	133.33440	209.70689	136.89149	18.40056	0.0829394	0.17189148	3.2035621	20	1 4.9	20.8
384456 2010 BW ₁	15.8	X	291.87782	300.03486	286.03985	7.10851	0.0327738	0.19640263	2.9311486	20	1 30.0	20.0
384457 2010 BY ₁	16.5	X	230.45704	90.79232	274.69176	4.89823	0.0292435	0.21892881	2.7264703	20	5 8.1	20.4
384458 2010 BM ₂	17.0	X	252.55050	341.82620	66.44735	4.09678	0.2705180	0.24271784	2.5452762	20	7 2.8	20.8
384459 2010 BM ₄	17.0	X	167.12115	197.28242	308.54798	6.12742	0.3116696	0.23657613	2.5891394	20	8 21.5	21.7
384460 2010 BC ₅	16.9	X	242.36806	293.78499	107.75519	7.50577	0.3085621	0.23956276	2.5675753	20	6 11.2	21.1
384461 2010 BS ₇	16.3	X	70.51293	109.80876	76.69577	8.74631	0.1591458	0.20989234	2.8041742	20	7 4.4	20.0
384462 2010 BX ₂₀	14.9	X	216.50930	17.63895	260.62262	26.08483	0.0315793	0.17608304	3.1525189	20	1 5.8	19.7
384463 2010 BM ₅₇	16.2	X	103.71054	258.35660	231.03610	10.17572	0.0267176	0.20275004	2.8696488	20	5 13.1	20.0
384464 2010 BO ₅₇	16.0	X	28.70662	265.37666	235.89251	14.47514	0.0897021	0.18733586	3.0249772	20	2 16.6	20.1
384465 2010 BQ ₆₅	16.7	X	67.72734	120.40964	93.22910	6.41845	0.1559536	0.21340974	2.7732768	20	8 7.3	20.5
384466 2010 BK ₇₁	15.6	X	4.90674	227.55448	236.62243	16.91199	0.1166913	0.17171608	3.2057432	20	—	—
384467 2010 BL ₇₄	16.9	X	91.85453	312.81641	273.01910	2.84061	0.1269705	0.22254528	2.6968521	20	9 15.2	20.9
384468 2010 BU ₇₅	15.8	X	5.41015	296.28217	315.69947	9.45611	0.1064578	0.20515024	2.8472222	20	6 12.7	19.2
384469 2010 CV ₂	16.9	X	105.82454	67.15877	134.66278	5.37661	0.0619478	0.23219985	2.6215698	20	8 27.3	20.6
384470 2010 CO ₃	16.7	X	267.17664	238.22086	129.80562	7.37126	0.0887796	0.22588533	2.6702014	20	6 21.3	20.3
384471 2010 CU ₃	16.3	X	59.05050	231.33807	342.76992	12.73985	0.1479295	0.21981388	2.7191467	20	7 28.6	19.9
384472 2010 CY ₂₄	17.0	X	246.71785	244.59903	137.01612	5.28456	0.0496669	0.22800125	2.6536556	20	6 18.6	20.7
384473 2010 CE ₂₆	17.2	X	129.54775	173.32915	296.08575	2.50688	0.0462971	0.21927855	2.7235705	20		

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
384481 2010 CR ₄₂	16.1	X	247.82304	86.65519	320.73576	21.28906	0.0247764	0.23160228	2.6260773	20	8 1.2	19.6
384482 2010 CH ₄₃	17.4	X	165.92250	185.14992	340.05071	5.30800	0.2335157	0.23797154	2.5790081	20	9 14.5	21.9
384483 2010 CU ₄₄	16.1	X	139.86407	195.25856	342.54684	12.89604	0.1014897	0.23361001	2.6110093	20	9 5.9	20.1
384484 2010 CZ ₅₆	16.5	X	153.77532	148.19719	338.17192	16.89821	0.1365457	0.22678281	2.6631520	20	7 21.5	20.9
384485 2010 CA ₅₇	16.7	X	129.08646	181.41116	352.57774	8.89906	0.1416274	0.22985861	2.6393412	20	8 24.6	20.8
384486 2010 CP ₅₉	16.1	X	150.73473	175.56908	314.45344	14.73166	0.0466659	0.22705720	2.6610061	20	7 17.1	19.9
384487 2010 CW ₆₂	16.4	X	225.67325	255.03266	130.71499	5.36895	0.0120871	0.22048271	2.7136450	20	6 1.9	20.1
384488 2010 CG ₆₅	17.0	X	162.67619	350.75699	129.24016	3.75281	0.1285908	0.22583055	2.6706333	20	7 17.0	21.2
384489 2010 CH ₆₅	17.1	X	116.51061	116.71648	49.88312	2.04620	0.0975876	0.22328466	2.6908952	20	7 27.2	21.0
384490 2010 CS ₆₅	16.6	X	193.38825	292.17556	158.08543	11.89748	0.0896494	0.22596921	2.6695406	20	7 10.8	20.7
384491 2010 CS ₆₆	16.7	X	243.77756	250.52361	117.48854	6.44348	0.1060131	0.22248806	2.6973145	20	5 21.9	20.6
384492 2010 CT ₇₄	17.1	X	88.36583	73.58169	137.51422	2.86504	0.1364293	0.22847347	2.6499979	20	8 26.8	20.9
384493 2010 CC ₇₆	16.5	X	108.89786	317.23916	172.56067	7.98589	0.1669367	0.21388399	2.7691759	20	6 8.2	20.8
384494 2010 CB ₇₉	16.3	X	181.59318	29.52604	102.38605	9.47466	0.0714213	0.23689337	2.5868273	20	8 26.9	20.1
384495 2010 CQ ₈₀	16.5	X	241.42087	328.71461	345.32998	1.50781	0.0344247	0.19972254	2.8985758	20	3 18.2	20.6
384496 2010 CE ₈₂	16.6	X	29.31884	235.35318	1.76295	6.89609	0.2540090	0.21031067	2.8004544	20	7 27.4	19.5
384497 2010 CM ₈₅	16.8	X	228.13828	229.16636	154.78220	5.31043	0.1225650	0.21983377	2.7189827	20	5 23.2	20.9
384498 2010 CM ₉₁	17.0	X	83.90249	325.64808	173.24891	4.38673	0.0096919	0.21209929	2.7846882	20	4 27.9	20.8
384499 2010 CV ₉₃	17.6	X	179.62795	89.88655	15.02993	5.72405	0.2064546	0.22823424	2.6518494	20	7 14.8	22.1
384500 2010 CL ₉₅	16.1	X	280.29992	292.85752	353.57871	11.60639	0.1081672	0.19950023	2.9007287	20	3 19.9	20.3
384501 2010 CJ ₁₀₈	16.9	X	178.89487	166.68104	322.59605	5.62241	0.0486243	0.23548203	2.5971530	20	8 17.8	20.6
384502 2010 CF ₁₀₉	17.3	X	184.60446	159.39203	328.58226	6.14884	0.0618017	0.23624247	2.5915767	20	8 22.5	20.9
384503 2010 CN ₁₀₉	16.7	X	138.51948	156.27020	330.97987	6.77240	0.1579983	0.22444111	2.6816439	20	7 4.6	21.0
384504 2010 CR ₁₁₄	17.5	X	219.24173	73.16941	0.06486	3.75128	0.2249318	0.23575896	2.5951188	20	7 7.9	21.8
384505 2010 CY ₁₁₇	17.2	X	255.21365	29.44450	16.49858	1.73668	0.1695738	0.24237529	2.5476738	20	7 16.2	20.7
384506 2010 CJ ₁₂₀	16.9	X	187.38934	128.66114	340.42892	11.29011	0.1307471	0.23321368	2.6139666	20	7 31.2	21.0
384507 2010 CL ₁₂₀	16.7	X	149.83227	46.34466	124.88442	7.85639	0.0799939	0.23672861	2.5880275	20	9 10.7	20.5
384508 2010 CU ₁₂₃	17.2	X	212.19646	153.20080	285.41929	4.16867	0.2385681	0.23510448	2.5999327	20	7 7.0	21.6
384509 2010 CR ₁₃₈	17.6	X	279.72219	291.48281	120.11933	2.60493	0.1577782	0.24563468	2.5250865	20	8 30.9	20.3
384510 2010 CS ₁₃₉	16.3	X	145.13397	81.28721	79.01223	14.26152	0.0574653	0.22867814	2.6484165	20	8 23.9	20.4
384511 2010 CU ₁₄₃	16.6	X	144.38370	243.03623	281.12409	13.38069	0.1387210	0.23440933	2.6050704	20	8 19.6	20.9
384512 2010 CE ₁₄₆	15.8	X	175.97000	91.39744	0.78141	21.89666	0.0637323	0.22575505	2.6712286	20	6 26.4	20.2
384513 2010 CA ₁₅₇	16.9	X	170.26153	311.74391	162.00381	15.53091	0.1326765	0.23034470	2.6356267	20	7 15.8	21.3
384514 2010 CW ₁₅₈	17.0	X	161.50927	24.80961	142.08887	4.62899	0.1098112	0.23458714	2.6037538	20	9 16.1	21.0
384515 2010 CY ₁₈₀	17.7	X	147.70761	102.78917	50.68377	2.91656	0.1420047	0.23053495	2.6341765	20	8 16.2	21.9
384516 2010 CP ₁₈₂	17.5	X	148.37862	57.21995	80.87776	5.02814	0.2489311	0.22907397	2.6453647	20	7 30.9	22.1
384517 2010 CQ ₁₈₂	16.1	X	158.08251	343.13449	87.58858	5.71139	0.0532101	0.21396491	2.7684776	20	5 8.2	20.1
384518 2010 CG ₂₁₈	16.0	X	127.41905	150.80991	265.72517	15.74205	0.0245112	0.18551122	3.0447800	20	3 3.7	20.7
384519 2010 CA ₂₄₉	16.1	X	4.23479	147.09530	141.80301	14.94821	0.0859168	0.22528927	2.6749092	20	8 2.7	19.2
384520 2010 DR ₁	16.2	X	129.20697	232.98866	306.46463	9.06460	0.1306911	0.23177025	2.6248083	20	8 26.7	20.4
384521 2010 DT ₆	17.0	X	200.59947	262.19085	168.60477	6.26737	0.2659978	0.22815679	2.6524495	20	6 16.9	21.8
384522 2010 DE ₁₁	16.6	X	102.24303	49.05228	123.47536	6.04454	0.0968008	0.22375919	2.6870895	20	7 17.4	20.4
384523 2010 DE ₂₂	15.4	X	25.54948	4.64514	116.98699	16.72573	0.0905985	0.17516942	3.1634710	20	1 27.1	19.3
384524 2010 DF ₂₂	15.9	X	273.94584	152.71099	117.43211	10.91288	0.0942547	0.18082737	3.0971335	20	2 28.9	20.5
384525 2010 DB ₃₆	17.3	X	100.75370	227.06314	325.96792	6.73366	0.0657257	0.22979066	2.6398615	20	8 9.2	20.8
384526 2010 DC ₃₆	16.7	X	23.88793	278.77184	346.49389	10.14259	0.0460162	0.22328092	2.6909253	20	7 1.8	20.2
384527 2010 DD ₃₆	16.9	X	210.36041	284.68965	145.85727	5.90371	0.1381696	0.23138297	2.6277364	20	7 1.2	20.9
384528 2010 DV ₃₈	15.8	X	338.12795	290.19964	331.30133	9.35967	0.2351394	0.20563144	2.8427786	20	4 19.7	18.9
384529 2010 DK ₄₀	16.7	X	313.54012	286.59584	14.75285	3.95750	0.0830003	0.21257578	2.7805254	20	5 27.0	20.2
384530 2010 DQ ₄₅	16.9	X	140.65049	358.35446	180.01103	8.45252	0.1256306	0.23191944	2.6236825	20	9 7.3	21.1
384531 2010 DG ₅₃	16.3	X	35.01568	34.02201	102.57230	11.92393	0.0319548	0.17893231	3.1189628	20	2 29.1	20.7
384532 2010 DO ₅₄	16.9	X	28.78063	144.29208	98.78818	4.92394	0.0552761	0.22216478	2.6999304	20	7 5.7	20.2
384533 Tenerelli	16.1	X	298.49285	355.84545	259.74856	6.74965	0.1145748	0.18283728	3.0743941	20	3 2.1	20.4
384534 2010 DG ₇₃	15.5	X	290.97005	168.49767	112.17833	13.80053	0.0802369	0.18635183	3.0356168	20	4 7.6	20.0
384535 2010 DN ₇₆	16.4	X	152.01779	324.96771	169.18438	11.66712	0.1054875	0.22545314	2.6736129	20	7 22.3	20.6
384536 2010 DE ₇₇	16.3	X	153.78902	323.28657	179.98956	12.85193	0.0988354	0.22891799	2.6465662	20	8 4.2	20.5
384537 2010 DU ₇₇	15.9	X	96.66472	19.48962	96.61210	16.25697	0.0931203	0.20599582	2.8394253	20	5 3.5	20.1
384538 2010 EH ₁	16.5	X	341.34206	309.82023	219.63173	9.32241	0.1845028	0.17534921	3.1613082	20	1 8.0	20.5
384539 2010 EA ₂₁	16.1	X	203.04061	238.01282	95.68264	4.09398	0.0156010	0.19397058	2.9555987	20	2 29.7	20.3
384540 2010 ED ₃₃	16.7	X	261.31367	230.42234	156.98683	5.03352	0.0946693	0.22590437	2.6700514	20	7 8.2	20.4
384541 2010 EU ₃₄	16.3	X	37.69400	98.40126	130.78567	4.22646	0.0347494	0.21378615	2.7700207	20	6 26.9	19.9
384542 2010 EW ₃₆	15.9	X	115.27548	248.29035	169.65647	11.28556	0.0256348	0.19051250	2.9912571	20	2 26.9	20.1
384543 2010 EM ₃₉	16.1	X	184.96974	332.49574	156.46231	19.03107	0.1284078	0.23572625	2.5953589	20	8 20.1	20.0
384544 2010 ER ₃₉	16.9	X	184.79646	104.71355	6.63877	11.63863	0.2410452	0.23117232	2.6293324	20	7 29.2	21.7
384545 2010 EP ₇₅	17.3	X	181.25806	273.37140	310.33548	10.01237	0.2395531	0.25802734	2.4435744	20	12 8.3	21.4
384546 2010 EZ ₇₈	17.0	X	153.75474	67.32071	31.55806	4.04012	0.0607047	0.21535451	2.7565554	20	6 7.1	21.0
384547 2010 EH ₇₉	16.5	X	65.85410	96.58140	159.84857	9.61655	0.0550772	0.23060051	2.6336771	20	9 17.3	20.0
384548 2010 EY ₁₁₀	16.6	X	72.03750	132.46889	23.54625	12.46374	0.1136219	0.20286966	2.8685207	20	5 16.0	20.5
384549 2010 EX ₁₁₁	15.9	X	109.89073	346.91029	15.44550	11.78995	0.0171205	0.17104667	3.2141019	20	—	—
384550 2010 ET ₁₁₃	16.3	X	136.15953	80.47822	64.10932	12.59798	0.1237916	0.22313167	2.6921251	20	7 23.7	20.6
384551 2010 EP ₁₂₁	16.9	X	190.50807	268.08632	168.88248	7.45482	0.0802043	0.21976899	2.7195170	20	6 21.2	21.0
384552 2010 EK ₁₂₃	16.6	X	27.55435	19.86268	167.72297	8.81706	0.2032185	0.19824389	2.9129711	20	5 3.1	19.6
384553 2010 ES ₁₅₇	15.5	X	264.53661	175.07844	96.49990	6.65285	0.0892151	0.				

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
384561 2010 FH ₅₅	16.0	X	292.17211	133.92753	129.77382	11.02591	0.2441724	0.19001739	2.9964507	20	2 19.9	20.5
384562 2010 FM ₉₀	17.0	X	92.24661	35.44083	126.49814	2.21895	0.1234669	0.21294956	2.7772707	20	6 24.3	20.8
384563 2010 FN ₁₀₀	16.3	X	262.98886	248.26026	27.84006	10.96425	0.0650925	0.18607290	3.0386497	20	2 28.8	20.8
384564 2010 GX ₉₆	16.8	X	351.27907	107.77781	69.18955	3.32273	0.0654749	0.18650642	3.0339391	20	2 15.3	20.7
384565 2010 GA ₉₇	16.2	X	130.16874	56.12083	64.26263	13.84168	0.1738132	0.20918307	2.8105093	20	6 16.7	20.7
384566 2010 GV ₉₉	16.4	X	344.11066	78.71426	119.63354	4.05761	0.1745440	0.18728278	3.0255487	20	2 19.9	20.0
384567 2010 GE ₁₀₅	17.2	X	199.12526	180.46053	315.66311	2.13707	0.1687101	0.23614733	2.5922727	20	9 9.9	21.2
384568 2010 GL ₁₀₅	16.0	X	296.74058	41.58994	158.40486	7.35592	0.0947924	0.17314505	3.1880808	20	—	—
384569 2010 GA ₁₂₂	16.5	X	38.60777	66.69188	154.21092	6.04901	0.0280146	0.20881511	2.8138100	20	6 16.4	20.3
384570 2010 GA ₁₂₇	16.2	X	69.81969	74.04104	146.41250	9.12494	0.0940291	0.21372606	2.7705398	20	8 7.7	20.0
384571 2010 GB ₁₃₄	16.2	X	170.79765	13.93906	76.17958	4.97013	0.0661918	0.21199854	2.7855703	20	6 15.9	20.3
384572 2010 GO ₁₅₇	16.7	X	100.01050	341.97256	170.73176	8.42387	0.1154734	0.21065013	2.7974450	20	6 20.6	20.8
384573 2010 GQ ₁₇₁	16.1	X	64.70844	74.03299	118.47759	24.80589	0.1777041	0.21274353	2.7790636	20	7 8.2	19.9
384574 2010 GJ ₁₇₂	16.6	X	162.02807	213.27906	62.96991	7.49685	0.0939926	0.25821173	2.4424109	20	—	—
384575 2010 GS ₁₇₂	15.8	X	273.04105	141.30170	68.31734	10.95153	0.0351759	0.17680281	3.1439571	20	—	—
384576 2010 GW ₁₇₃	16.5	X	100.46649	220.15475	306.68657	14.18989	0.1438397	0.22278255	2.6949369	20	7 28.3	20.5
384577 2010 GX ₁₇₃	17.0	X	124.93778	238.31039	314.91997	6.59413	0.1568176	0.23034527	2.6356223	20	8 29.2	21.1
384578 2010 HL ₁₄	16.9	X	228.11892	100.22003	275.48459	4.01716	0.0610498	0.22304085	2.6928559	20	5 15.9	20.7
384579 2010 HO ₁₅	16.4	X	182.25357	359.24735	81.97891	9.66017	0.1275684	0.22918066	2.6445436	20	6 16.9	20.5
384580 2010 HU ₁₀₈	15.6	X	207.24482	235.94892	97.21332	11.93327	0.0467628	0.18071589	3.0984072	20	3 9.0	20.3
384581 2010 HA ₁₁₄	16.0	X	345.60555	170.14439	104.06977	10.22842	0.1081295	0.20949436	2.8077245	20	6 10.4	19.2
384582 2010 JS ₁₄	17.4	X	228.43638	19.10285	177.60131	5.27696	0.1693408	0.26346229	2.4098522	20	—	—
384583 2010 JC ₄₄	15.9	X	188.90689	137.34148	45.96952	14.36768	0.1035785	0.23647262	2.5898949	20	11 4.3	19.7
384584 2010 JL ₈₅	15.8	X	72.59383	324.66858	245.83685	14.84401	0.2118437	0.21487756	2.7606330	20	8 9.3	20.0
384585 2010 JM ₁₁₀	15.8	X	293.33268	96.66088	164.51475	11.78890	0.0757450	0.18476430	3.0529804	20	3 11.9	20.1
384586 2010 JJ ₁₁₇	16.1	X	332.47874	123.74496	124.12604	7.93780	0.0743078	0.19095870	2.9865955	20	4 20.0	20.1
384587 2010 JJ ₁₂₂	16.0	X	48.57827	357.71297	150.37567	9.37893	0.0298166	0.19069213	2.9893783	20	3 29.4	20.1
384588 2010 JS ₁₅₁	15.5	X	204.11700	243.09721	65.54704	11.19694	0.0714506	0.17417488	3.1755018	20	2 4.3	20.5
384589 2010 JD ₁₇₈	16.1	X	65.03412	44.43490	178.29253	14.39293	0.0633319	0.21878656	2.7276519	20	7 28.8	20.0
384590 2010 KK ₃₂	17.2	X	151.21198	62.37149	74.03715	1.92555	0.0878481	0.22768661	2.6560998	20	7 26.0	21.1
384591 2010 LR ₁₄	15.5	X	258.49080	190.54263	99.95053	11.31084	0.1201259	0.18014684	3.1049286	20	3 6.3	20.3
384592 2010 LX ₃₀	16.2	X	205.43201	18.99423	76.95133	12.15997	0.2055741	0.23308248	2.6149474	20	7 26.7	20.6
384593 2010 LV ₈₇	15.2	X	146.40971	246.80523	88.57062	14.87243	0.0897244	0.17584166	3.1554032	20	1 5.5	19.9
384594 2010 LM ₁₂₅	16.6	X	138.62727	235.65817	311.18041	10.91641	0.1356518	0.23193360	2.6235757	20	9 12.6	20.9
384595 2010 OV ₁₃	15.6	X	226.86576	342.25511	294.67294	17.68251	0.0373779	0.17499630	3.1655570	20	1 19.4	20.3
384596 2010 OL ₁₇	15.7	X	27.17436	325.97541	132.93614	11.92466	0.0604888	0.17243210	3.1968626	20	1 1.6	20.1
384597 2010 OE ₃₆	15.2	X	36.57801	32.28414	77.88100	28.67945	0.1339723	0.18116501	3.0932843	20	2 3.2	19.4
384598 2010 OY ₆₃	15.6	X	314.86842	146.97633	71.46794	13.69750	0.0729185	0.18330249	3.0691902	20	2 21.6	20.0
384599 2010 OA ₆₄	16.3	X	247.19608	207.42883	86.58828	11.09124	0.0421814	0.18418409	3.0593886	20	3 6.5	20.9
384600 2010 OV ₉₇	15.8	X	243.90596	9.53775	271.37561	9.50187	0.1733731	0.17633764	3.1494838	20	1 30.5	21.1
384601 2010 OW ₁₀₁	17.0	X	95.94120	46.95166	142.32597	9.90633	0.1043437	0.21437206	2.7649711	20	7 31.9	20.9
384602 2010 RM ₁₆₇	17.0	X	178.52826	92.62599	274.31266	17.38620	0.0880494	0.35634413	1.9704087	20	2 16.9	19.8
384603 2010 TM ₂₀	17.6	X	217.06199	30.92827	347.02604	19.34582	0.0932732	0.36881404	1.9257405	20	4 18.4	20.4
384604 2010 TJ ₁₇₇	17.7	X	302.63847	246.41720	53.93775	22.54056	0.0625820	0.36812108	1.9281564	20	5 10.0	19.3
384605 2010 UC ₇₆	18.8	X	335.08398	66.81204	312.19047	3.70897	0.1954122	0.29476584	2.2360660	20	11 18.1	20.3
384606 2010 XA ₃₅	17.5	X	119.55912	60.63371	50.62924	22.17706	0.0753601	0.36050612	1.9552140	20	5 11.9	19.2
384607 2011 AJ ₁₀	17.8	X	105.93049	36.81470	287.70112	5.14232	0.0734306	0.30442667	1.1885052	20	—	—
384608 2011 AW ₄₀	18.2	X	1.30738	318.39512	88.32574	5.39312	0.1288398	0.29927338	2.2135567	20	—	—
384609 2011 BJ ₂₉	18.6	X	21.23684	284.32239	87.63905	6.16421	0.1705099	0.29539465	2.2328916	20	—	—
384610 2011 BU ₄₀	17.8	X	341.22029	190.19295	249.81150	4.96483	0.1434137	0.30006600	2.2096569	20	—	—
384611 2011 BN ₇₂	17.9	X	356.93535	92.89653	235.52779	5.19383	0.1008444	0.26433809	2.4045264	20	9 22.8	20.4
384612 2011 BQ ₈₁	17.3	X	217.66289	256.56613	270.58500	6.19478	0.0451343	0.28429817	2.2906216	20	12 4.9	20.1
384613 2011 BB ₁₀₁	17.6	X	219.93138	54.33360	75.17149	7.15922	0.0327896	0.27731854	2.3288961	20	10 20.9	20.5
384614 2011 BP ₁₁₅	17.8	X	195.95622	275.87073	281.31843	3.25776	0.1148280	0.28623887	2.2802562	20	12 7.8	20.6
384615 2011 CC ₆	18.1	X	323.66161	163.66024	256.94105	2.44415	0.2085161	0.29084798	2.2561018	20	12 31.7	19.5
384616 2011 CH ₈	17.5	X	4.86966	306.57981	129.22988	6.23662	0.1090018	0.30245934	2.1979849	20	—	—
384617 2011 CG ₁₇	17.9	X	247.32487	65.00789	109.63157	3.46556	0.0915520	0.29290992	2.2455014	20	—	—
384618 2011 CM ₂₉	18.0	X	56.25341	48.53934	319.83620	8.64331	0.0906578	0.30069316	2.2065834	20	—	—
384619 2011 CV ₇₃	17.7	X	260.44171	48.61713	133.43840	7.13045	0.1231161	0.29732589	2.2232121	20	—	—
384620 2011 CJ ₈₂	18.0	X	212.26593	311.54233	247.25798	1.95451	0.1553333	0.28562072	2.2835450	20	12 24.3	20.9
384621 2011 CW ₈₇	17.3	X	167.91497	291.52335	290.71963	5.88524	0.0767595	0.28010690	2.3134148	20	12 10.7	20.4
384622 2011 CD ₉₀	17.9	X	169.00623	326.68623	297.94333	3.66749	0.0861860	0.29419519	2.2389566	20	—	—
384623 2011 CE ₁₀₂	18.4	X	229.21889	15.62768	214.45364	2.77029	0.0799559	0.30051853	2.2074382	20	—	—
384624 2011 CY ₁₀₆	18.8	X	38.53079	98.30863	331.95392	3.06574	0.0833198	0.30849087	2.1692412	20	—	—
384625 2011 CJ ₁₁₇	17.1	X	107.23603	337.14476	296.17317	5.97299	0.1020686	0.27895450	2.3197818	20	12 9.3	20.4
384626 2011 CR ₁₁₇	16.6	X	129.63798	157.73331	107.68518	7.52913	0.1860567	0.27576623	2.3376276	20	12 21.5	20.3
384627 2011 DE	17.2	X	126.34971	64.93009	161.63152	6.68999	0.0946546	0.26623555	2.3930881	20	10 30.7	20.7
384628 2011 DA ₄	17.2	X	283.70722	188.78057	340.68095	6.52278	0.0620999	0.29995083	2.2102225	20	—	—
384629 2011 DJ ₁₈	17.5	X	353.17708	17.11042	36.89749	1.91506	0.1170435	0.28585494	2.2822975	20	—	—
384630 2011 DV ₁₈	17.7	X	235.34392	213.39090	0.77015	2.98052	0.0856395	0.29627612	2.2284605	20	—	—
384631 2011 DS ₂₄	17.2	X	221.21108	86.24419	110.44925	5.99580	0.1551922	0.28643290	2.2792263	20	—	—
384632 2011 DM ₂₅	18.0	X	43.23492	88.64439	303.13741	5.28993	0.0867214	0.30342283	2.1933295	20	—	—
384633 2011 DU ₄₁	17.4	X	217.67756	318.81988	160.92877	2.63131	0.1698454	0.26770451	2.3843258	20	9 11.9	20.7
384634 2011 EL ₆	17.7	X	277.29267	128.95182	5.41366	4.94839						

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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>		
384641	2011	EF ₄₅	17.4	X	259.32485	45.64466	111.66153	5.79190	0.1351388	0.28581984	2.2824843	20	—	—
384642	2011	ED ₅₂	18.0	X	146.14862	56.41069	135.26151	2.02110	0.0988848	0.25998367	2.4313006	20	10 4.7	21.5
384643	2011	EU ₆₂	16.6	X	262.16861	216.24062	144.04487	18.64725	0.2226730	0.24223011	2.5486916	20	5 22.1	20.8
384644	2011	ES ₆₉	17.3	X	162.52301	218.82826	63.89336	6.07187	0.1515038	0.28666416	2.2780003	20	—	—
384645	2011	EN ₇₁	17.4	X	272.02761	26.11392	89.67483	4.21351	0.1805317	0.27832659	2.3232694	20	11 24.3	19.5
384646	2011	EV ₇₆	17.6	X	279.18432	66.47704	124.36044	6.82202	0.1421903	0.29958127	2.2120398	20	—	—
384647	2011	EJ ₇₉	17.8	X	5.47857	70.42686	352.11710	7.82143	0.1976079	0.29257937	2.2471923	20	—	—
384648	2011	EA ₈₆	17.3	X	141.90530	205.07086	31.92502	11.30207	0.1315589	0.26967238	2.3727123	20	11 25.1	21.1
384649	2011	FK ₂	17.0	X	150.53983	136.76181	113.42995	6.07442	0.1858131	0.27095568	2.3652145	20	12 20.1	20.7
384650	2011	FN ₃	17.8	X	206.28834	54.77054	121.84660	2.92985	0.1625875	0.27503982	2.3417418	20	11 15.7	21.1
384651	2011	FR ₃	18.1	X	307.02990	10.82268	147.47816	5.35624	0.1319175	0.30075514	2.2062802	20	—	—
384652	2011	FY ₆	17.5	X	82.06587	319.78723	355.49807	8.10159	0.0751770	0.27959577	2.3162334	20	—	—
384653	2011	FQ ₉	18.0	X	278.52477	91.65043	86.70660	5.17956	0.0408032	0.29700087	2.2248338	20	—	—
384654	2011	FD ₁₁	18.2	X	332.57567	130.41271	340.07947	4.04883	0.0693914	0.29378659	2.2410320	20	—	—
384655	2011	FG ₁₁	17.9	X	302.24839	194.75669	326.18598	2.01074	0.0876993	0.29865183	2.2166269	20	—	—
384656	2011	FK ₁₃	17.5	X	256.99458	81.52502	62.02156	3.02080	0.1634994	0.28086378	2.3092568	20	12 10.7	19.6
384657	2011	FJ ₁₅	16.9	X	140.54806	3.65336	149.43616	7.19506	0.0419920	0.24429183	2.5343315	20	8 2.7	20.3
384658	2011	FB ₁₆	16.8	X	254.46778	232.11560	96.68003	6.97803	0.0519852	0.21662082	2.7458022	20	4 21.9	20.7
384659	2011	FI ₁₇	17.1	X	229.87867	46.27947	139.75884	5.03553	0.0682050	0.28174626	2.3044322	20	—	—
384660	2011	FF ₁₈	15.7	X	140.88955	53.83037	220.29718	4.01111	0.1258050	0.17027010	3.2238670	20	12 22.5	20.9
384661	2011	FZ ₁₈	16.7	X	295.15005	258.54573	88.84825	9.45352	0.2271125	0.23260987	2.6184882	20	6 10.2	19.6
384662	2011	FF ₂₃	17.4	X	227.09731	338.71132	240.97448	5.44504	0.1351255	0.28832342	2.2692522	20	—	—
384663	2011	FP ₂₈	15.9	X	281.82479	4.31632	2.76389	27.33001	0.1435029	0.24355216	2.5394601	20	7 9.2	19.8
384664	2011	FD ₃₃	18.0	X	185.00012	157.38968	57.04338	5.40193	0.1550352	0.27159197	2.3615190	20	12 10.1	21.4
384665	2011	FF ₃₃	17.6	X	247.37997	73.39808	119.54665	3.84764	0.0997377	0.28753318	2.2734081	20	—	—
384666	2011	FE ₃₅	17.5	X	322.24944	287.47238	143.34984	4.77793	0.1154936	0.27962459	2.3160742	20	12 29.6	19.6
384667	2011	FU ₃₇	17.2	X	216.87332	321.86698	275.21925	4.62033	0.1635016	0.29061961	2.2572826	20	—	—
384668	2011	FX ₄₈	16.9	X	163.62063	154.80322	179.16779	7.37470	0.0793179	0.27397079	2.3478305	20	12 19.4	20.0
384669	2011	FL ₄₉	17.1	X	323.77861	104.03090	340.58736	7.08808	0.0616921	0.28230800	2.3013743	20	—	—
384670	2011	FM ₅₅	17.3	X	172.07631	160.13792	63.81419	7.98853	0.1177113	0.27422041	2.3464044	20	12 12.5	20.6
384671	2011	FF ₆₁	17.9	X	258.50460	99.86438	352.50451	3.45306	0.1184455	0.26646492	2.3917146	20	10 3.7	20.7
384672	2011	FX ₆₃	18.0	X	257.40850	189.39295	341.45141	2.96508	0.0914504	0.29025250	2.2591864	20	—	—
384673	2011	FN ₇₀	18.4	X	265.67447	275.45102	181.57464	1.12759	0.1458619	0.27418795	2.3465896	20	10 19.8	20.6
384674	2011	FX ₇₈	17.5	X	344.90555	22.32913	39.38468	7.97308	0.1780733	0.28702593	2.2760858	20	—	—
384675	2011	FT ₈₃	17.7	X	191.94343	27.43430	163.04126	2.48364	0.1418865	0.27256665	2.3558858	20	11 19.5	20.9
384676	2011	FC ₈₆	17.3	X	175.78313	345.54969	289.36742	6.00065	0.0973382	0.29089957	2.2558350	20	—	—
384677	2011	FT ₁₃₃	16.9	X	278.48193	328.90271	344.80043	4.66845	0.0974754	0.23040566	2.6351618	20	4 20.3	20.6
384678	2011	FM ₁₅₂	17.4	X	184.41219	8.40749	245.12577	3.67141	0.1888340	0.28536960	2.2848845	20	—	—
384679	2011	GR ₃	17.9	X	205.44512	161.34131	71.87603	5.26694	0.1246375	0.28437100	2.2902304	20	—	—
384680	2011	GJ ₁₁	17.7	X	249.52453	310.07051	230.60819	4.55574	0.0853683	0.28604566	2.2812829	20	—	—
384681	2011	GJ ₃₀	18.2	X	214.25258	85.10585	76.61821	3.00385	0.1301672	0.27279457	2.3545734	20	11 8.9	21.2
384682	2011	GX ₃₀	18.3	X	242.80547	293.54819	204.79612	1.70912	0.1492616	0.27316103	2.3524671	20	11 11.5	21.0
384683	2011	GD ₃₁	17.4	X	348.81005	48.93447	203.17621	4.38008	0.0599698	0.22475352	2.6791583	20	5 17.2	20.6
384684	2011	GO ₃₂	16.6	X	316.09347	181.24500	80.28762	5.53121	0.1182967	0.21357356	2.7718585	20	4 5.5	20.1
384685	2011	GV ₃₂	17.1	X	234.57696	132.98039	41.83222	7.20125	0.1504711	0.27689713	2.3312584	20	12 20.0	19.8
384686	2011	GS ₃₅	17.6	X	271.20249	101.90615	329.59496	4.84342	0.2168829	0.26743120	2.3859500	20	9 6.5	20.3
384687	2011	GX ₅₇	17.7	X	293.22687	68.51964	74.76088	5.61475	0.1353261	0.28811403	2.2703515	20	—	—
384688	2011	GF ₅₈	17.5	X	26.44735	216.76070	66.65200	6.04119	0.0789009	0.24354908	2.5394815	20	9 6.1	20.6
384689	2011	GJ ₅₉	18.1	X	216.02848	86.32208	121.25146	5.38339	0.1784326	0.28279048	2.2987559	20	—	—
384690	2011	GE ₆₁	17.2	X	188.83271	102.25771	122.46429	7.35701	0.0998818	0.27585332	2.3371356	20	—	—
384691	2011	GM ₇₄	17.0	X	37.27299	128.59608	90.41125	3.69626	0.0613609	0.22852091	2.6496312	20	6 15.7	20.2
384692	2011	GN ₇₄	17.8	X	176.89326	82.73055	74.53189	4.29131	0.1540736	0.25643557	2.4536760	20	9 21.3	21.6
384693	2011	GN ₈₄	17.4	X	274.84279	326.07001	132.92720	7.11691	0.0626606	0.26831641	2.3806994	20	11 19.1	20.2
384694	2011	HR ₁	15.9	X	329.68802	188.21312	83.44613	13.58273	0.1334190	0.22256226	2.6967149	20	5 10.2	19.1
384695	2011	HG ₆	17.0	X	133.86474	147.68933	115.82571	7.92488	0.1023910	0.26950076	2.3737195	20	12 23.1	20.5
384696	2011	HN ₆	16.0	X	65.08694	302.22397	261.71772	13.36472	0.1298446	0.23030516	2.6359284	20	7 14.5	19.5
384697	2011	HJ ₉	16.8	X	63.88218	211.18514	89.27043	6.86358	0.1090966	0.25884154	2.4384474	20	11 24.4	20.2
384698	2011	HH ₁₁	17.3	X	26.04882	187.40784	91.06902	11.99372	0.0603018	0.23972421	2.5664223	20	8 27.9	20.6
384699	2011	HQ ₁₁	16.1	X	154.77134	256.33863	63.01158	15.74071	0.0960287	0.17896225	3.1186149	20	—	—
384700	2011	HV ₁₁	17.7	X	182.22953	115.77397	105.84902	2.23276	0.1378675	0.27050228	2.3678568	20	12 18.1	20.9
384701	2011	HL ₁₂	15.6	X	143.49259	232.29378	78.97195	10.18513	0.0621093	0.17383059	3.1796934	20	—	—
384702	2011	HE ₂₇	17.5	X	216.98894	83.43560	126.49211	5.83070	0.0952031	0.28133529	2.3066759	20	—	—
384703	2011	HP ₂₇	17.6	X	237.49577	153.20303	35.53193	4.76055	0.1778686	0.28338252	2.2955531	20	—	—
384704	2011	HW ₂₉	17.6	X	151.80696	172.16052	68.69493	3.59333	0.1379523	0.26786302	2.3833850	20	12 10.9	21.1
384705	2011	HQ ₃₀	18.1	X	220.85466	102.92710	56.30784	2.16228	0.1898002	0.27093958	2.3653083	20	11 4.6	21.4
384706	2011	HB ₃₃	16.4	X	233.79228	304.94657	57.01746	6.40192	0.0708611	0.22170189	2.7036872	20	5 5.2	20.2
384707	2011	HS ₃₃	16.3	X	289.10802	232.14659	117.91995	8.69737	0.1236991	0.22996284	2.6385436	20	6 22.1	19.6
384708	2011	HK ₄₁	16.6	X	194.14411	286.37341	125.22798	13.09282	0.1880222	0.22953079	2.6418536	20	5 24.3	21.2
384709	2011	HR ₄₁	16.8	X	211.25974	15.26028	115.32460	7.37191	0.1263182	0.25836801	2.4414259	20	9 26.3	20.4
384710	2011	HV ₄₄	16.2	X	239.06272	242.97463	109.51174	7.03134	0.0472538	0.21730659	2.7400224	20	5 3.9	20.1
384711	2011	HH ₅₁												

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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>
384721 2011 HC ₁₀₁	15.9	X	96.16704	110.54597	90.66114	18.35554	0.1376212	0.23729647	2.5838970	20	8 30.4	20.1
384722 2011 HN ₁₀₂	16.0	X	357.60541	197.73193	110.37668	14.05188	0.2641765	0.24295898	2.5435918	20	9 16.4	18.2
384723 2011 JG ₅	15.6	X	358.15373	177.59230	83.15132	14.12499	0.1302454	0.22654667	2.6650023	20	6 13.1	18.2
384724 2011 JU ₈	16.0	X	207.70933	169.02852	132.79890	10.99859	0.1451885	0.18974588	2.9993086	20	1 25.2	20.8
384725 2011 JZ ₁₆	17.3	X	116.94160	147.96936	96.05944	7.00088	0.1298397	0.25562525	2.4588586	20	11 11.6	21.1
384726 2011 JC ₂₇	17.0	X	70.75083	160.75494	109.82588	13.65155	0.2659546	0.24450859	2.5328335	20	11 12.7	21.2
384727 2011 JN ₂₉	16.2	X	353.01685	90.31447	135.01176	10.16674	0.1509513	0.21112141	2.7932804	20	4 16.1	19.4
384728 2011 KT	16.8	X	351.61598	122.31856	114.61092	3.98934	0.1170743	0.21561977	2.7542942	20	4 29.0	19.9
384729 2011 KE ₂	17.6	X	176.67811	142.20305	81.96812	3.27456	0.1851961	0.26926872	2.3750829	20	12 11.3	21.2
384730 2011 KR ₃	16.5	X	57.74100	161.23195	96.21232	14.15542	0.2037075	0.23824702	2.5770197	20	10 8.3	20.4
384731 2011 KZ ₉	16.2	X	253.76166	244.45991	78.03984	15.92101	0.1650593	0.20673554	2.8326481	20	4 6.5	20.8
384732 2011 KN ₁₉	17.6	X	207.68217	120.01864	102.22121	3.07164	0.1614982	0.27624152	2.3349455	20	—	—
384733 2011 KS ₂₆	16.0	X	337.99442	336.71037	270.50491	12.97465	0.1541979	0.21460269	2.7629898	20	4 7.2	19.5
384734 2011 KT ₃₂	16.4	X	147.14480	235.02606	236.92212	9.05949	0.1534609	0.22694032	2.6619197	20	6 21.9	20.6
384735 2011 KZ ₃₂	15.9	X	209.82407	228.33403	78.03910	12.23763	0.0223193	0.19152018	2.9807555	20	2 6.1	20.3
384736 2011 KM ₃₃	17.6	X	215.11520	44.70237	156.72501	4.69349	0.1139429	0.27368557	2.3494603	20	—	—
384737 2011 LK ₅	16.5	X	13.75076	174.81912	128.55015	6.44889	0.1285860	0.23626937	2.5913800	20	9 18.5	19.4
384738 2011 LZ ₆	16.4	X	224.54155	264.04780	100.80309	4.83594	0.1119105	0.20944359	2.8081782	20	4 26.9	20.7
384739 2011 LU ₁₂	16.1	X	146.63128	230.71308	256.65854	16.52354	0.0949867	0.23069817	2.6329339	20	7 6.5	20.2
384740 2011 LX ₁₂	15.6	X	162.55213	261.12487	53.09427	12.05224	0.0535238	0.17830730	3.1262471	20	—	—
384741 2011 LX ₁₄	16.7	X	139.59111	47.09769	103.96094	7.64218	0.0812716	0.23631044	2.5910797	20	8 2.0	20.4
384742 2011 LR ₂₆	17.8	X	98.84753	103.57365	126.23046	4.18140	0.1145418	0.24460506	2.5321674	20	10 3.0	21.4
384743 2011 MY ₄	16.7	X	169.55629	103.26099	125.23875	8.31874	0.1261689	0.26615878	2.3935482	20	12 14.4	20.3
384744 2011 OY ₂₃	15.2	X	251.87836	348.84236	305.66953	15.94109	0.0654673	0.18153473	3.0890829	20	2 28.0	20.0
384745 2011 OX ₂₉	15.8	X	309.44697	308.93957	286.30805	10.33794	0.1032892	0.18295899	3.0730305	20	2 20.9	20.2
384746 2011 OH ₃₃	16.0	X	222.61372	224.65652	106.14407	11.62086	0.1411968	0.18887766	3.0084929	20	3 17.3	21.0
384747 2011 OB ₄₉	16.8	X	139.41231	348.47334	321.20038	4.16086	0.1099762	0.26400977	2.4065195	20	—	—
384748 2011 ON ₅₆	16.5	X	83.97297	257.98986	335.80195	12.99250	0.1375527	0.22800184	2.6536510	20	9 16.8	20.5
384749 2011 PL ₄	16.0	X	194.74132	59.38382	274.28734	9.28965	0.1388886	0.17828964	3.1264536	20	2 17.1	21.2
384750 2011 QK ₂₆	16.9	X	89.66153	287.63785	322.99819	10.74122	0.2657099	0.23716275	2.5848682	20	10 24.9	21.4
384751 2011 QW ₄₁	15.5	X	209.05824	312.43045	346.30615	14.01560	0.2571677	0.17333940	3.1856974	20	1 27.4	21.2
384752 2011 QD ₅₂	16.6	X	146.04195	284.38022	287.26166	3.22366	0.0422092	0.23459823	2.6036717	20	10 24.0	20.3
384753 2011 QM ₅₄	16.2	X	93.27854	294.89518	315.01449	10.87648	0.1641309	0.23073871	2.6326255	20	10 17.7	20.6
384754 2011 QD ₅₈	15.7	X	21.83603	213.35031	318.47442	8.01185	0.0280910	0.17481723	3.1677184	20	3 19.2	20.2
384755 2011 QT ₆₃	16.3	X	78.40658	327.55485	322.39055	14.51275	0.1031090	0.23578875	2.5949002	20	11 16.8	20.4
384756 2011 QD ₇₅	15.9	X	266.67521	289.40522	302.54190	13.82963	0.0502511	0.16862616	3.2447861	20	1 11.9	20.7
384757 2011 SR ₁₄	15.9	X	283.93284	77.29383	211.65907	9.10893	0.0908524	0.18676545	3.0311332	20	3 30.4	20.3
384758 2011 ST ₂₆₃	16.1	X	250.30577	203.81674	76.39728	2.36980	0.0977386	0.17273390	3.1931378	20	2 14.2	20.9
384759 2011 WL ₉₀	15.7	X	278.86048	248.72596	80.61009	10.62318	0.0920703	0.17607969	3.1525588	20	5 17.4	20.2
384760 2012 FV ₄₄	17.4	X	226.05595	216.81712	110.02197	24.17517	0.0683559	0.35343271	1.9812148	20	3 6.6	20.3
384761 2012 HM ₄₃	17.9	X	115.29805	272.95392	62.04018	3.76564	0.1560555	0.31680187	2.1311347	20	—	—
384762 2012 HM ₆₃	17.8	X	153.03494	189.26575	86.37976	4.01784	0.1458335	0.30851130	2.1691454	20	—	—
384763 2012 JA ₂₈	16.2	X	271.63765	283.28962	67.67343	17.09100	0.2849858	0.24390699	2.5369966	20	5 10.1	20.1
384764 2012 KK	17.3	X	314.80003	221.97627	116.09483	23.19734	0.1137854	0.38255139	1.8793580	20	8 7.1	18.2
384765 2012 KO ₂₄	17.4	X	108.59961	100.22332	217.78510	5.73366	0.1928840	0.28897711	2.2658287	20	—	—
384766 2012 KE ₄₂	17.3	X	27.82231	182.88190	141.67445	4.88482	0.1881490	0.27602104	2.3361887	20	11 26.6	20.2
384767 2012 LN	17.2	X	21.53283	213.31308	119.70423	7.42831	0.1349531	0.27677861	2.3319239	20	11 21.9	19.9
384768 2012 LE ₆	17.8	X	33.46814	232.61298	130.69676	7.12683	0.1274295	0.29254669	2.2473597	20	—	—
384769 2012 LT ₂₃	16.4	X	199.00778	273.28068	98.32136	11.96618	0.3554221	0.21961519	2.7207865	20	4 10.4	21.8
384770 2012 ML ₄	16.5	X	243.16810	153.33401	185.26578	8.80150	0.1685182	0.21751675	2.7382572	20	4 7.0	20.8
384771 2012 MH ₁₆	17.2	X	79.07835	171.56421	142.08268	7.15048	0.2200210	0.28182236	2.3040174	20	—	—
384772 2012 OE	16.5	X	267.50295	210.47616	125.40455	15.03902	0.2654070	0.22544217	2.6736996	20	4 23.0	20.9
384773 2012 ON ₅	15.3	X	139.95857	199.13246	156.97934	18.53515	0.3127228	0.1747812	3.1359767	20	2 10.1	20.8
384774 2012 PF	17.2	X	22.65914	287.70946	267.28118	16.44931	0.0888568	0.34892352	1.9982472	20	3 31.3	19.4
384775 2012 PV	16.5	X	84.71704	342.46709	277.39697	6.24138	0.0448354	0.26114778	2.4240700	20	10 15.7	19.9
384776 2012 PY ₁	17.3	X	235.29076	132.89291	306.62997	3.13581	0.1607615	0.23727842	2.5840281	20	8 6.9	21.1
384777 2012 PT ₂	16.2	X	110.15039	286.58942	196.56593	4.49139	0.1108009	0.21155615	2.7894523	20	5 25.0	20.2
384778 2012 PM ₁₀	17.3	X	236.86254	116.67547	309.33847	4.72496	0.0764104	0.23633331	2.5909126	20	8 1.8	20.7
384779 2012 PP ₁₀	16.8	X	197.09593	85.34480	322.68088	7.91474	0.1386853	0.21411746	2.7671625	20	5 17.9	21.4
384780 2012 PC ₁₂	16.6	X	146.00509	93.02476	306.55837	7.42567	0.1981191	0.19127918	2.9832587	20	3 24.1	21.5
384781 2012 PY ₁₃	16.8	X	60.15251	344.62616	316.78806	6.34235	0.1041456	0.26253221	2.4155405	20	11 18.4	20.1
384782 2012 PN ₂₁	17.6	X	93.27025	96.63333	274.10781	4.36042	0.0784840	0.30000903	2.2099367	20	—	—
384783 2012 PE ₂₃	17.0	X	249.85654	97.39164	224.27672	3.51950	0.0630275	0.21264721	2.7799027	20	4 1.9	20.9
384784 2012 PL ₂₆	17.5	X	282.54830	239.95867	281.49586	7.76407	0.0842887	0.29571669	2.2312701	20	—	—
384785 2012 PG ₃₁	17.2	X	18.53419	13.83651	330.85695	3.58516	0.2202219	0.26253262	2.4155380	20	12 11.1	20.0
384786 2012 PB ₃₅	16.9	X	73.01324	328.18898	342.49342	7.18510	0.1086775	0.27268546	2.3552014	20	12 19.7	20.3
384787 2012 PG ₃₇	17.4	X	15.85798	330.57002	16.80900	2.59925	0.2064731	0.26150887	2.4218381	20	12 8.4	20.1
384788 2012 PH ₃₇	17.0	X	19.60354	326.87206	6.35796	1.94901	0.1317545	0.25911194	2.4367507	20	11 11.6	19.7
384789 2012 PU ₄₃	16.1	X	124.28972	38.78667	341.21374	9.89478	0.1604609	0.18148745	3.0896194	20	2 12.2	20.7
384790 2012 PY ₄₃	16.7	X	245.39327	342.58086	9.45405	4.22600	0.1315622	0.21677140	2.7445305	20	4 27.9	20.9
384791 2012 QV ₁₃	15.8	X	160.53311	250.29747	122.45991	14.34301	0.1902849	0.18372803	3.0644493	20	3 12.9	21.0
384792 2012 QK ₁₅	17.0	X	353.70149	81.39336	256.77400	5.62633	0.1634520	0.25423386	2.4678217	20	10 5.3	19.4
384793 2012 QD ₂₀	17.6	X	169.16365	21.71855	223.85773	1.58977	0.1110165	0.28374947	2.2935736	20	—	—
384794 2012 QD ₂₁	15.8	X	73.2255									

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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>
384801 2012 QJ ₃₀	16.7	X	229.93198	71.44211	288.87029	7.52750	0.1704827	0.21195790	2.7859264	20	4 17.1	21.3
384802 2012 QN ₃₃	17.5	X	74.32719	329.19390	312.72036	6.07523	0.1081334	0.26001902	2.4310803	20	11 9.3	20.9
384803 2012 QT ₃₃	17.5	X	171.84168	27.13809	215.27972	4.92388	0.1266947	0.28132572	2.3067282	20	—	—
384804 2012 QL ₃₄	17.2	X	274.06900	116.70499	236.20828	5.37776	0.0891111	0.22531029	2.6747428	20	6 9.7	20.8
384805 2012 QU ₃₄	16.6	X	192.66752	109.04495	276.42383	5.54717	0.0786070	0.20635178	2.8361590	20	4 16.3	21.0
384806 2012 QD ₃₆	15.5	X	57.64204	108.72036	345.03318	21.95356	0.0651820	0.17981307	3.1087696	20	2 11.5	19.8
384807 2012 QL ₃₆	17.2	X	344.88360	337.63341	330.91933	8.44209	0.1824154	0.23837438	2.5761016	20	8 1.4	19.3
384808 2012 QX ₃₆	15.9	X	216.29383	104.80866	319.26886	21.66974	0.0310052	0.23306511	2.6150774	20	7 14.1	19.7
384809 2012 QA ₄₁	16.2	X	275.25152	239.21919	118.90523	13.31334	0.1981268	0.22820854	2.6520485	20	6 4.1	20.0
384810 2012 QW ₄₁	16.5	X	240.20551	206.79224	139.19589	9.16129	0.2363625	0.21397321	2.7684060	20	4 11.1	21.2
384811 2012 QQ ₄₄	16.2	X	258.72211	114.85298	235.86664	5.08101	0.0838537	0.22382933	2.6865281	20	5 18.4	20.0
384812 2012 QN ₅₀	16.9	X	250.54037	70.37096	261.29639	10.68333	0.2330804	0.21444365	2.7643557	20	3 25.5	21.6
384813 2012 QD ₅₁	15.7	X	256.51484	43.77938	319.03468	16.40047	0.2067731	0.22313362	2.6921094	20	5 10.3	20.3
384814 2012 RX ₁	16.5	X	249.78551	170.65714	181.57776	3.94823	0.1115462	0.21324297	2.7747226	20	5 7.2	20.6
384815 Zolnowski	16.9	X	255.73173	243.04818	159.36419	5.54184	0.2973592	0.22758897	2.6568594	20	6 24.7	21.1
384816 2012 RW ₃	16.9	X	277.05688	185.15619	173.64317	5.81101	0.1405848	0.22747555	2.6577425	20	6 14.1	20.5
384817 2012 RD ₅	16.2	X	98.44067	196.52238	192.18705	4.50452	0.1732642	0.17225862	3.1990086	20	1 25.1	20.7
384818 2012 RE ₅	17.1	X	102.80227	310.06284	335.05111	5.78678	0.0914493	0.27191092	2.3596719	20	12 17.9	20.5
384819 2012 RE ₇	16.2	X	183.75615	340.75070	359.27851	12.52331	0.2060379	0.18874738	3.0098771	20	2 22.4	21.4
384820 2012 RR ₁₂	16.3	X	284.16914	57.63191	298.13867	7.90342	0.1849986	0.22762753	2.6565594	20	6 12.2	19.7
384821 2012 RT ₁₂	16.9	X	306.76723	30.10434	334.33149	11.80519	0.1240743	0.23756907	2.5819200	20	8 13.3	19.7
384822 2012 RJ ₁₃	16.0	X	137.30160	96.69059	275.50622	12.73233	0.2270824	0.17783378	3.1317942	20	2 15.5	21.3
384823 2012 RO ₁₈	16.9	X	22.85979	31.26490	230.70859	2.37592	0.0419098	0.22756604	2.6570379	20	7 21.5	20.1
384824 2012 RA ₂₁	15.7	X	209.30945	83.27283	223.30670	8.99233	0.0414644	0.18710051	3.0275134	20	1 30.9	20.4
384825 2012 RP ₂₂	16.6	X	66.59128	326.77517	127.37242	2.55741	0.1761057	0.17487493	3.1670215	20	3 4.3	20.4
384826 2012 RM ₂₃	15.8	X	109.38781	242.00807	179.99963	10.03369	0.0920213	0.17835506	3.1256890	20	3 6.1	20.3
384827 2012 RV ₂₅	17.0	X	94.47193	33.73730	275.12199	7.84681	0.1117206	0.28009761	2.3134659	20	—	—
384828 2012 RQ ₂₆	16.6	X	242.00244	242.89192	147.21908	4.78406	0.0953828	0.22470891	2.6795129	20	6 17.9	20.5
384829 2012 RK ₂₈	16.7	X	345.25322	206.34845	146.81594	12.36085	0.2127309	0.24619992	2.5212202	20	10 21.8	19.0
384830 2012 RX ₂₈	16.4	X	295.20453	81.26686	251.24874	3.87823	0.1721197	0.22483092	2.6785434	20	5 29.2	19.8
384831 2012 RR ₃₀	15.4	X	159.94646	257.77464	136.45219	17.33828	0.1294014	0.19678786	2.9273221	20	4 3.9	20.3
384832 2012 RD ₃₁	16.4	X	220.41113	226.15883	148.97762	4.96684	0.0873031	0.20986143	2.8044495	20	5 6.9	20.6
384833 2012 RR ₃₅	16.3	X	74.12481	232.86968	10.32740	12.95114	0.1308276	0.24029714	2.5623414	20	9 23.3	19.8
384834 2012 RR ₃₈	15.7	X	256.67060	112.94740	275.08973	13.11592	0.1091771	0.22200429	2.7012315	20	6 30.9	19.2
384835 2012 RG ₄₀	17.1	X	11.14356	217.16710	121.97744	2.30293	0.2013161	0.25781038	2.4449451	20	11 18.9	19.6
384836 2012 RA ₄₂	15.9	X	221.86581	13.26332	16.29745	5.68000	0.0533551	0.21079159	2.7961933	20	5 26.9	20.0
384837 2012 SA	16.1	X	296.48087	358.09891	323.31802	12.86874	0.1899398	0.22511150	2.6763173	20	5 7.4	19.9
384838 2012 SG	16.9	X	122.24680	307.61566	148.48601	2.39264	0.0329238	0.20408643	2.851078	20	4 25.2	20.8
384839 2012 SB ₁	17.5	X	312.71527	326.44702	26.79688	4.40881	0.1387617	0.23992573	2.5649850	20	8 6.0	20.2
384840 2012 SD ₂	17.5	X	135.34838	63.17625	213.74683	3.92517	0.1287358	0.28213571	2.3023111	20	—	—
384841 2012 SN ₄	16.9	X	278.24447	260.40310	129.92032	3.33261	0.0694687	0.23266095	2.6181049	20	8 10.3	20.0
384842 2012 SD ₅	16.1	X	86.57045	230.03681	189.68087	6.27390	0.1284375	0.17410401	3.1763635	20	2 9.4	20.5
384843 2012 SG ₅	15.7	X	122.40420	0.96106	8.93029	10.07788	0.1567827	0.17273473	3.1931276	20	1 31.8	20.6
384844 2012 SV ₅	16.3	X	274.17165	332.07766	354.85011	5.86357	0.0560102	0.21205676	2.7850605	20	5 8.9	20.2
384845 2012 ST ₇	16.1	X	91.43683	249.21324	167.63757	5.62544	0.1538824	0.17434538	3.1734312	20	2 16.6	20.5
384846 2012 SG ₉	16.7	X	286.95689	151.20205	187.65083	5.07226	0.1632220	0.22063980	2.7123567	20	6 3.0	20.2
384847 2012 SK ₁₀	17.3	X	101.16796	152.51130	147.92133	6.18940	0.1526089	0.27779128	2.1262532	20	—	—
384848 2012 SB ₁₁	16.7	X	280.16592	25.15629	314.10217	4.89575	0.0721648	0.21665695	2.7454969	20	6 1.2	20.3
384849 2012 SO ₁₄	16.1	X	98.81027	252.32886	341.73846	10.31275	0.1411912	0.24415123	2.5353044	20	10 5.3	20.0
384850 2012 SR ₁₄	15.9	X	104.33995	180.38355	242.74844	8.67270	0.1120252	0.17838935	3.1252884	20	3 1.1	20.6
384851 2012 SW ₁₅	16.5	X	254.77946	65.14601	317.84596	5.29566	0.0307186	0.21940632	2.7225130	20	7 3.9	20.1
384852 2012 SU ₁₇	16.4	X	118.10643	213.14632	253.29494	4.92335	0.0335351	0.19876641	2.9078637	20	5 1.7	20.4
384853 2012 SA ₁₉	15.8	X	71.55382	123.56549	15.20971	17.19861	0.2521937	0.18399859	3.0614444	20	5 12.1	20.1
384854 2012 SB ₁₉	16.6	X	193.22113	103.10432	272.16716	3.01412	0.0894026	0.19456381	2.9495879	20	4 4.7	21.1
384855 2012 SN ₂₁	17.0	X	264.25246	200.96701	132.37977	7.13145	0.0695288	0.21560474	2.7544222	20	5 7.3	20.9
384856 2012 SX ₂₂	17.3	X	216.54080	141.14688	258.98708	4.09556	0.1606109	0.21919836	2.7242347	20	5 27.8	21.7
384857 2012 ST ₂₄	15.6	X	299.81510	80.11728	11.23260	7.59092	0.2853457	0.12544873	3.9520753	20	10 11.7	20.3
384858 2012 ST ₂₇	16.4	X	201.94120	216.82296	187.91763	2.66447	0.0784074	0.21217743	2.7840045	20	5 23.6	20.5
384859 2012 SD ₂₈	16.5	X	105.58680	336.24437	70.49568	2.74271	0.1493370	0.17478405	3.1681193	20	2 22.6	21.0
384860 2012 SN ₂₈	17.1	X	129.41712	302.85212	320.30089	6.50112	0.1078712	0.27209817	2.3585892	20	12 18.4	20.6
384861 2012 SP ₂₈	16.5	X	130.35535	163.29535	318.19430	6.83073	0.0311975	0.21612487	2.7500012	20	6 5.7	20.4
384862 2012 SL ₂₉	16.1	X	182.66283	74.92726	265.54530	8.23734	0.0738495	0.18993032	2.9973665	20	2 11.6	20.7
384863 2012 SP ₂₉	16.5	X	142.42224	75.61464	24.75838	4.63555	0.0215924	0.21079439	2.7961686	20	5 22.9	20.3
384864 2012 SR ₃₀	15.7	X	184.46896	19.86290	320.17934	10.88148	0.1491461	0.18793944	3.0184971	20	2 17.5	20.6
384865 2012 SR ₃₁	16.8	X	187.42962	330.83312	106.54711	4.71607	0.0354203	0.21319377	2.7751494	20	6 19.3	20.8
384866 2012 SM ₃₃	16.5	X	294.67091	111.05710	248.69732	5.82316	0.0256338	0.23647838	2.5898529	20	7 27.1	19.9
384867 2012 SE ₃₄	16.9	X	202.54001	201.02925	192.87921	4.14382	0.0824586	0.21003777	2.8028796	20	5 10.6	21.2
384868 2012 SO ₃₄	17.1	X	123.97465	24.23752	351.80059	4.37545	0.1540780	0.17638284	3.1489456	20	2 6.5	21.8
384869 2012 SY ₃₇	17.0	X	156.56441	32.27545	7.12642	1.41067	0.0825181	0.19585199	2.9366400	20	3 29.3	21.4
384870 2012 SW ₄₀	17.5	X	197.77810	339.95397	226.74201	2.86137	0.0956555	0.27331833	2.3515644	20	12 22.0	20.6
384871 2012 SA ₄₁	16.4	X	111.20244	218.42078	348.61981	10.61928	0.0708239	0.24241736	2.5473791	20	9 11.1	19.9
384872 2012 SN ₄₂	16.9	X	171.02326	183.31298	255.33867	2.98754	0.0775320	0.21345004	2.7729278	20	6 1.5	20.9
384873 2012 SP ₄₂	16.4	X	254.81599	72.58887	301.35810	3.65827	0.0902776	0.22246238	2.6975220	20	6 12.4	20.1

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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>		
384881	2012	SL ₆₀	17.4	X	258.46714	54.88776	299.48468	1.19762	0.1001345	0.21860296	2.7291790	20	5 20.4	21.3
384882	2012	SP ₆₀	16.5	X	219.36074	207.79474	179.10713	6.25660	0.0667997	0.21491374	2.7603232	20	5 21.8	20.5
384883	2012	SZ ₆₄	16.2	X	151.64123	187.68413	241.82777	7.83611	0.1769777	0.19826671	2.9127476	20	5 5.2	20.9
384884	2012	SY ₆₅	16.6	X	348.78301	196.47365	88.18623	6.42969	0.0674206	0.22864739	2.6486539	20	7 1.9	19.6
384885	2012	SC ₆₆	16.6	X	307.85244	41.41980	317.52196	11.30678	0.1387446	0.24063264	2.5599591	20	8 4.3	19.3
384886	2012	TN ₃	16.4	X	84.25415	224.62004	224.36249	8.96949	0.0976550	0.19163510	2.9795637	20	3 4.9	20.5
384887	2012	TG ₆	16.5	X	153.63682	257.31676	141.12824	2.76306	0.1469845	0.18650008	3.0340078	20	3 31.1	21.4
384888	2012	TT ₈	16.0	X	274.51636	334.41191	10.80020	6.99695	0.0604776	0.21576952	2.7530197	20	6 2.8	19.8
384889	2012	TB ₉	16.8	X	268.84201	142.97093	223.75700	1.07819	0.1177457	0.22111766	2.7084476	20	6 16.9	20.5
384890	2012	TL ₁₀	16.3	X	337.16295	205.05506	111.09244	6.09821	0.2625744	0.23495386	2.6010438	20	7 18.6	18.0
384891	2012	TJ ₁₆	16.4	X	263.62439	93.69925	202.11091	4.82968	0.0821177	0.19769035	2.9184061	20	3 15.5	20.6
384892	2012	TE ₁₈	16.4	X	144.82221	189.90961	195.72698	4.65600	0.1264781	0.18221175	3.0814263	20	3 4.1	21.1
384893	2012	TQ ₁₈	16.1	X	96.74881	250.17834	197.84280	9.84755	0.1400451	0.18169617	3.0872528	20	3 29.4	20.5
384894	2012	TL ₂₁	16.6	X	303.54502	88.77023	220.28195	3.78740	0.0721562	0.21429450	2.7656382	20	5 25.3	20.1
384895	2012	TT ₂₆	16.2	X	171.38252	123.82197	203.18895	4.04388	0.1464563	0.17604860	3.1529301	20	1 23.2	21.2
384896	2012	TT ₂₇	16.5	X	319.69489	348.17723	317.89525	3.05146	0.0961851	0.22396871	2.6854134	20	6 11.5	19.6
384897	2012	TR ₂₈	16.5	X	172.43583	290.62924	157.83525	4.58019	0.0247250	0.21729335	2.7401337	20	6 15.7	20.3
384898	2012	TR ₂₉	16.8	X	301.86056	247.07346	76.01391	6.35093	0.1672562	0.22454827	2.6807907	20	5 27.4	20.0
384899	2012	TN ₃₁	16.5	X	228.97763	110.82654	250.73332	7.10617	0.1412724	0.20905311	2.8116740	20	4 21.6	20.9
384900	2012	TO ₃₁	16.1	X	242.04591	112.54831	258.59549	5.12518	0.0555860	0.21531848	2.7568629	20	5 28.2	20.0
384901	2012	TV ₃₁	16.7	X	263.30076	144.23448	213.54387	5.39448	0.0574510	0.21528373	2.7571596	20	6 6.9	20.5
384902	2012	TS ₃₂	16.9	X	128.87282	239.28434	21.74954	3.61373	0.0992020	0.26496102	2.4007562	20	12 13.4	20.5
384903	2012	TZ ₃₂	17.1	X	330.23811	328.74283	346.97982	2.88454	0.1837202	0.23190739	2.6237734	20	7 7.3	19.6
384904	2012	TJ ₃₄	16.3	X	241.73029	138.67216	331.32617	4.77136	0.1064594	0.24126424	2.5554894	20	9 30.9	19.7
384905	2012	TF ₃₇	16.7	X	166.73809	239.87410	195.63965	4.41728	0.0449373	0.21358030	2.7718002	20	5 23.4	20.6
384906	2012	TL ₃₈	17.3	X	87.86916	241.27189	337.09401	5.78625	0.0628783	0.23325088	2.6136887	20	8 26.6	20.9
384907	2012	TO ₃₉	16.3	X	92.83028	235.71428	353.17847	12.81039	0.1574786	0.24273507	2.5451557	20	9 25.7	20.2
384908	2012	TV ₃₉	16.9	X	311.91716	79.99818	259.64432	3.88656	0.0632927	0.22825947	2.6516539	20	7 20.5	20.0
384909	2012	TY ₃₉	16.4	X	124.32677	107.56468	333.51080	5.38124	0.0277633	0.19495678	2.9456230	20	4 5.4	20.6
384910	2012	TC ₄₄	16.4	X	62.48374	255.40616	293.60411	6.41841	0.1618668	0.21288829	2.7778035	20	6 27.3	20.0
384911	2012	TM ₅₁	16.6	X	124.03399	245.00135	201.37703	2.48755	0.1115297	0.19352011	2.9601836	20	4 24.1	20.9
384912	2012	TJ ₅₄	15.7	X	174.06039	97.47919	162.04541	8.19490	0.1188105	0.18027900	3.1034109	20	2 27.4	20.8
384913	2012	TP ₅₅	16.5	X	318.35935	101.48952	199.73651	6.05891	0.0732324	0.21608609	2.7503302	20	6 5.9	20.0
384914	2012	TQ ₅₇	16.5	X	219.30262	68.10115	310.81812	0.98332	0.0818603	0.20350751	2.8625236	20	5 8.9	20.8
384915	2012	TY ₅₉	16.7	X	283.56643	147.39348	185.21679	4.80387	0.0980728	0.21637394	2.7478904	20	5 25.5	20.3
384916	2012	TW ₅₉	16.6	X	240.73748	260.77260	52.24483	2.66009	0.0977812	0.19489482	2.9462472	20	3 12.4	20.9
384917	2012	TZ ₆₅	15.6	X	244.20560	337.15119	327.59467	9.74246	0.0833169	0.19150632	2.9808993	20	3 4.5	20.0
384918	2012	TE ₆₆	16.4	X	131.33992	67.21353	359.60177	2.09718	0.0804357	0.18621234	3.0371325	20	4 4.5	20.8
384919	2012	TV ₇₁	16.2	X	285.90405	158.60305	130.00574	3.10021	0.0278645	0.19813745	2.9140143	20	4 12.6	20.1
384920	2012	TV ₇₁	16.2	X	198.40767	202.41836	208.62404	6.07180	0.0294461	0.21056934	2.7981605	20	5 29.9	20.2
384921	2012	TN ₇₃	16.8	X	283.74423	351.29816	323.26827	3.61884	0.0649416	0.21179201	2.7873810	20	5 4.4	20.6
384922	2012	TT ₇₆	16.6	X	116.15416	161.09338	265.79136	3.76318	0.1405182	0.18380872	3.0635524	20	3 24.3	21.1
384923	2012	TX ₈₂	17.1	X	212.53752	285.54624	257.81602	1.18959	0.1314170	0.26065531	2.4271223	20	12 1.7	20.3
384924	2012	TR ₈₄	16.8	X	147.48715	122.98127	9.29307	2.84494	0.0582964	0.21870978	2.7282903	20	7 14.7	20.7
384925	2012	TY ₈₅	16.0	X	44.95233	263.08351	214.24912	3.36217	0.1527246	0.17253411	3.1956024	20	2 23.7	19.8
384926	2012	TL ₈₇	16.2	X	192.62596	323.11927	23.78941	2.42364	0.1025461	0.18711226	3.0273867	20	3 4.9	20.8
384927	2012	TG ₈₈	16.6	X	124.49655	194.59852	254.90418	0.91124	0.0739064	0.19451992	2.9500315	20	4 23.7	20.8
384928	2012	TN ₈₈	15.6	X	122.44931	356.11031	26.51655	8.17233	0.0371198	0.17219893	3.1997478	20	1 31.6	20.3
384929	2012	TR ₈₉	16.1	X	130.27489	122.07032	260.29192	4.05780	0.1784343	0.17490984	3.1666001	20	2 20.1	21.1
384930	2012	TW ₈₉	16.8	X	159.47987	308.73232	146.80201	4.35086	0.0575782	0.21332249	2.7740330	20	6 10.2	20.8
384931	2012	TW ₉₀	15.9	X	318.57505	144.06877	75.85650	2.64514	0.0852034	0.18962736	3.0005581	20	2 21.0	19.8
384932	2012	TF ₉₁	17.4	X	64.86119	117.05533	167.36114	4.42781	0.1172307	0.25374138	2.4710139	20	11 5.1	20.8
384933	2012	TC ₉₂	16.3	X	198.96304	315.68331	91.86100	4.68514	0.0965631	0.21009798	2.8023442	20	5 23.5	20.5
384934	2012	TL ₉₄	16.7	X	261.18981	141.56232	160.41046	5.99279	0.0109700	0.19659363	2.9292499	20	3 31.8	20.8
384935	2012	TD ₉₈	16.8	X	334.82607	61.56315	238.77730	0.23596	0.0467667	0.21950487	2.7216981	20	7 2.1	20.0
384936	2012	TV ₁₀₁	16.7	X	189.23545	217.20673	215.56278	2.92542	0.0769944	0.21300867	2.7767569	20	6 14.3	20.8
384937	2012	TG ₁₀₂	16.8	X	299.83951	273.18113	2.88788	6.90878	0.0903792	0.20249391	2.8720681	20	4 2.9	20.5
384938	2012	TV ₁₀₂	16.0	X	216.91009	314.10127	9.09339	11.12601	0.0546925	0.18800295	3.0178173	20	3 4.6	20.5
384939	2012	TG ₁₀₆	15.7	X	316.44533	53.29932	3.71333	3.24113	0.094268	0.12532470	3.9546824	20	10 18.1	20.7
384940	2012	TO ₁₀₆	16.4	X	67.08652	109.88573	331.50106	1.89460	0.1247537	0.17075673	3.2177392	20	2 11.2	20.3
384941	2012	TR ₁₁₃	15.8	X	301.70654	321.44207	251.04108	8.86244	0.1562066	0.17815795	3.1279941	20	1 11.1	20.4
384942	2012	TJ ₁₁₈	16.6	X	265.78159	63.46209	307.99691	5.14854	0.0127138	0.22053416	2.7132228	20	7 5.9	20.2
384943	2012	TA ₁₁₉	16.4	X	301.11425	64.81615	258.60506	5.80620	0.0258492	0.21693778	2.7431271	20	6 16.6	20.0
384944	2012	TQ ₁₂₃	17.0	X	35.91290	208.94339	80.75486	2.13281	0.0996001	0.24739303	2.5131075	20	9 30.8	19.9
384945	2012	TA ₁₂₅	16.3	X	223.01014	171.91290	103.87943	2.37389	0.1282668	0.17961255	3.1110830	20	1 10.7	21.3
384946	2012	TN ₁₂₆	17.2	X	252.33727	315.99396	31.01416	4.34474	0.1023084	0.21396126	2.7685091	20	5 3.1	21.1
384947	2012	TA ₁₂₇	16.9	X	317.58663	207.30568	154.66443	5.21136	0.0411358	0.23938186	2.5688686	20	9 3.2	20.0
384948	2012	TU ₁₂₇	16.2	X	114.38382	133.95930	248.62222	7.72298	0.127262	0.17477754	3.1681979	20	2 2.8	20.9
384949	2012	TM ₁₂₈	16.2	X	128.14795	256.08561	150.79197	9.63564	0.1597670	0.18110735	3.0939408	20	3 18.9	21.0

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
384961 2012 TA ₁₅₁	16.2	X	242.77509	106.31797	349.16049	14.13290	0.1665388	0.23448371	2.6045194	20	9 6.1	19.9
384962 2012 TT ₁₅₁	16.1	X	147.30085	205.50093	147.03180	1.35584	0.0384857	0.16729621	3.2619601	20	1 22.4	20.6
384963 2012 TH ₁₅₃	16.3	X	57.99085	164.19595	22.79688	9.74271	0.1007066	0.21133270	2.7914183	20	6 6.1	20.0
384964 2012 TB ₁₅₄	16.6	X	114.08823	305.69108	141.78172	2.05001	0.1935840	0.18878181	3.0095111	20	4 24.8	21.1
384965 2012 TE ₁₅₄	17.3	X	4.02637	105.15761	176.48580	1.80490	0.0242742	0.22678156	2.6631618	20	7 20.0	20.5
384966 2012 TQ ₁₅₄	15.7	X	331.94538	9.77174	37.94914	3.00999	0.2711335	0.12638242	3.9325863	20	10 23.8	19.7
384967 2012 TF ₁₅₅	16.0	X	6.46120	122.98469	24.05403	10.93062	0.0387186	0.17713732	3.1399978	20	2 5.0	20.4
384968 2012 TH ₁₅₅	17.2	X	118.84082	33.93301	48.49153	2.56273	0.1519515	0.18984319	2.9982835	20	4 18.5	21.7
384969 2012 TS ₁₅₆	16.8	X	221.44763	219.59935	178.80892	4.37888	0.0795641	0.21470732	2.7620921	20	6 6.4	20.9
384970 2012 TS ₁₅₇	16.5	X	319.47441	281.43934	13.85891	4.49575	0.0462905	0.21518947	2.7579647	20	6 1.1	20.0
384971 2012 TK ₁₅₉	16.2	X	128.81465	36.75316	63.93648	3.07889	0.0165716	0.20421593	2.8558998	20	5 6.8	20.1
384972 2012 TN ₁₆₁	16.8	X	296.46507	118.76429	193.21541	5.48535	0.0309430	0.21213435	2.7843814	20	5 25.8	20.5
384973 2012 TL ₁₆₂	16.6	X	355.62807	36.64949	147.46198	2.27740	0.0067280	0.18424644	3.05866984	20	3 3.9	20.7
384974 2012 TE ₁₆₃	16.3	X	34.67529	107.32278	108.23944	4.87410	0.0368921	0.20972519	2.8056639	20	6 4.7	19.9
384975 2012 TU ₁₆₇	16.5	X	359.01470	172.70605	101.11411	5.92096	0.0737020	0.21837531	2.7310755	20	7 2.7	19.6
384976 2012 TA ₁₆₉	16.0	X	159.67690	237.18754	176.13763	9.39252	0.0669915	0.19283047	2.9672373	20	4 19.9	20.5
384977 2012 TH ₁₆₉	16.6	X	282.59260	225.89968	123.71055	7.17417	0.0451602	0.21643126	2.7474052	20	6 23.8	20.2
384978 2012 TK ₁₇₃	17.3	X	216.77599	49.85802	318.82771	1.08290	0.0834673	0.20352827	2.8623290	20	4 23.1	21.5
384979 2012 TZ ₁₇₃	16.8	X	245.04436	32.50082	323.49644	3.56681	0.0908344	0.21047891	2.7989619	20	5 6.7	20.9
384980 2012 TD ₁₇₄	16.6	X	173.99262	94.04926	333.94834	4.25094	0.0906046	0.20653301	2.8344996	20	5 21.2	20.9
384981 2012 TZ ₁₇₈	16.1	X	23.08720	300.38269	247.85946	7.83646	0.0312116	0.19859618	2.9095252	20	4 9.6	20.1
384982 2012 TR ₁₈₂	16.7	X	315.63183	76.45273	214.89844	3.96155	0.0357053	0.21295255	2.7772447	20	5 23.7	20.2
384983 2012 TT ₁₈₅	15.3	X	271.16294	219.45814	52.19187	20.38958	0.1271373	0.17771954	3.1331361	20	3 3.4	20.4
384984 2012 TC ₁₈₈	15.6	X	164.26755	306.95991	62.59893	9.95725	0.1004018	0.18109514	3.0940798	20	3 8.8	20.5
384985 2012 TE ₁₈₈	16.0	X	184.81266	55.60450	287.10056	8.02034	0.1539816	0.18537329	3.0462902	20	2 19.3	21.1
384986 2012 TM ₁₈₈	16.6	X	68.92380	178.11193	36.62680	5.73541	0.0583957	0.22538377	2.6741615	20	7 27.6	20.2
384987 2012 TO ₁₈₈	15.5	X	149.80741	80.78250	266.41171	9.95347	0.1584209	0.17390865	3.1787418	20	1 26.5	20.6
384988 2012 TU ₁₈₉	16.9	X	257.78002	7.82488	357.53686	5.84011	0.0631175	0.21328988	2.7743157	20	6 7.8	20.9
384989 2012 TE ₁₉₀	15.5	X	168.09392	114.16335	231.76304	9.53243	0.0845664	0.17484087	3.1674328	20	2 5.1	20.5
384990 2012 TH ₁₉₁	16.1	X	206.02631	4.16942	343.54325	11.06041	0.0402358	0.19202555	2.9755234	20	3 17.4	20.5
384991 2012 TE ₁₉₃	15.1	X	30.91982	107.88419	35.24400	27.54594	0.0667021	0.17629603	3.1499792	20	3 16.9	19.7
384992 2012 TG ₁₉₅	16.9	X	64.09493	309.82189	162.88034	2.46991	0.0374244	0.18344201	3.0676339	20	3 4.4	20.9
384993 2012 TS ₂₀₅	16.1	X	160.50757	266.93351	81.44278	3.64920	0.1275152	0.17929084	3.1148035	20	2 7.3	21.0
384994 2012 TO ₂₀₇	15.9	X	234.04181	41.99058	253.15086	8.70003	0.0610272	0.18040627	3.1019512	20	2 12.3	20.6
384995 2012 TK ₂₀₈	16.1	X	202.03183	358.45992	343.70165	5.94303	0.0490477	0.18543092	3.0456590	20	3 8.2	20.6
384996 2012 TW ₂₁₃	16.5	X	270.79365	41.29651	298.75446	4.73404	0.0597014	0.21124805	2.7921639	20	5 22.4	20.3
384997 2012 TG ₂₁₈	17.4	X	230.17955	238.48176	290.19362	8.00059	0.1208241	0.26366173	2.4086368	20	12 6.9	20.5
384998 2012 TJ ₂₁₉	17.0	X	247.47322	176.95858	184.60409	3.64322	0.1110353	0.21471530	2.7620236	20	5 16.5	21.0
384999 2012 TT ₂₂₂	16.5	X	234.67356	299.50385	36.79188	3.29307	0.0946639	0.19155232	2.9804221	20	4 3.2	20.9
385000 2012 TW ₂₂₇	17.3	X	354.06595	166.23190	133.49468	4.28690	0.1822347	0.23451756	2.6042688	20	8 6.6	19.6
385001 2012 TZ ₂₂₉	15.7	X	161.51861	115.70400	235.56416	8.49704	0.0961258	0.17553406	3.1590884	20	2 5.7	20.7
385002 2012 TG ₂₃₀	16.7	X	30.64350	291.67373	305.09885	2.01451	0.0300485	0.21487912	2.7606196	20	6 26.8	20.3
385003 2012 TL ₂₃₁	16.8	X	320.37778	91.78251	246.30246	2.10454	0.0464417	0.22867957	2.6484054	20	8 2.1	20.0
385004 2012 TH ₂₃₁	15.4	X	158.05048	234.68392	141.92695	10.27279	0.0767256	0.18544367	3.0455194	20	3 5.3	19.9
385005 2012 TH ₂₃₄	16.2	X	93.67761	46.29829	70.01435	5.28408	0.0449848	0.19755236	2.9197650	20	4 18.0	20.2
385006 2012 TJ ₂₃₄	16.4	X	225.16312	265.32471	123.19674	4.91201	0.1103420	0.21331826	2.7740697	20	5 26.7	20.6
385007 2012 TZ ₂₃₄	16.3	X	186.91894	343.35993	89.59489	6.27433	0.0356508	0.21502755	2.7593490	20	6 12.9	20.1
385008 2012 TT ₂₃₆	16.1	X	181.55680	316.01275	138.23985	4.85814	0.0640642	0.21707839	2.7419424	20	7 3.7	20.1
385009 2012 TE ₂₃₈	16.8	X	266.77324	272.72014	66.18547	5.41142	0.0784932	0.21264247	2.7799440	20	5 14.3	20.5
385010 2012 TJ ₂₃₉	15.7	X	153.28261	355.36154	345.74609	9.16797	0.0331016	0.17189985	3.2034581	20	1 16.6	20.4
385011 2012 TU ₂₃₉	16.7	X	24.56737	123.18062	76.73746	3.20635	0.0053721	0.20300471	2.8672483	20	4 29.0	20.6
385012 2012 TD ₂₄₄	16.6	X	213.61273	276.79160	42.49861	8.10231	0.0642905	0.18480716	3.0525083	20	2 26.1	21.3
385013 2012 TC ₂₄₆	16.5	X	256.11772	199.68444	164.29815	6.55460	0.0882641	0.21976123	2.7195810	20	6 2.3	20.4
385014 2012 TH ₂₆₆	17.0	X	333.49056	106.67384	185.62796	3.54215	0.0665740	0.21869306	2.7284294	20	6 17.6	20.4
385015 2012 TO ₂₆₆	16.7	X	107.01561	63.31338	89.94512	3.88005	0.0409960	0.21282481	2.7783559	20	6 19.9	20.6
385016 2012 TU ₂₆₆	16.3	X	100.70186	264.25472	179.86625	10.30200	0.0261593	0.18423020	3.0588781	20	3 13.3	20.4
385017 2012 TZ ₂₆₆	16.7	X	220.71537	308.03806	171.18845	8.84539	0.1427735	0.23522208	2.5990661	20	9 13.7	20.5
385018 2012 TX ₂₆₈	17.0	X	51.22194	159.93289	37.33407	9.05957	0.0315998	0.21332970	2.7739705	20	5 31.8	20.7
385019 2012 TG ₂₇₂	17.2	X	180.48345	305.84668	126.84431	1.07184	0.0447857	0.20961332	2.8066621	20	6 4.6	21.2
385020 2012 TV ₂₇₇	16.4	X	54.89285	197.41222	337.23790	5.52136	0.0256013	0.20207124	2.8760717	20	5 5.3	20.3
385021 2012 TQ ₂₈₂	16.4	X	125.64678	208.64033	324.51375	12.86940	0.0141087	0.23139051	2.6276792	20	8 9.3	19.8
385022 2012 TM ₂₈₄	16.7	X	28.04908	158.08552	97.40525	5.98179	0.0677162	0.22127341	2.7071764	20	7 23.9	20.0
385023 2012 TA ₂₈₅	16.0	X	221.32090	264.99056	37.33627	13.63174	0.1159905	0.18164385	3.0878457	20	2 14.6	21.1
385024 2012 TM ₂₈₆	16.2	X	171.92028	143.28311	218.44364	4.21617	0.1556811	0.18212229	3.0824354	20	3 2.7	21.2
385025 2012 TS ₂₈₈	15.9	X	153.22526	46.08775	305.63723	9.76815	0.0884829	0.17368132	3.1815150	20	1 31.3	20.8
385026 2012 TZ ₂₈₈	15.6	X	81.89548	56.83182	300.48866	10.47269	0.1359442	0.15091494	3.4939329	20	—	—
385027 2012 TJ ₂₈₉	16.2	X	97.53657	108.20141	312.13615	8.21363	0.0962993	0.17474668	3.1685709	20	2 19.4	20.7
385028 2012 TJ ₂₉₁	16.6	X	339.35198	223.29808	83.90619	7.47360	0.1419786	0.22648921	2.6654531	20	7 16.4	19.3
385029 2012 TU ₂₉₆	15.9	X	206.54995	96.17150	224.97704	9.87150	0.0642258	0.17769540	3.1334198	20	2 14.1	20.8
385030 2012 TS ₂₉₉	16.8	X	6.04406	241.65277	28.79271	9.58118	0.1359499	0.22426034	2.6830848	20	7 15.9	19.8
385031 2012 TM ₃₀₂	16.2	X	88.10831	4.51215	50.74011	3.66009	0.1077745	0.17072218	3.2181733	20	2 6.6	20.6
385032 2012 TL ₃₀₃	15.5	X	120.22650	100.67107	300.69815	7.87002	0.0807470	0.17678839	3.1441281	20	2 20.2	20.2
385033 2012 TJ ₃₀₅	16.5	X	262.32376	17.23679	336.80110	5.3						

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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>
385041 2012 TZ ₃₁₂	15.9	X	171.57616	241.08933	178.22834	10.06596	0.0410236	0.20023847	2.8935947	20	5 9.8	20.2
385042 2012 TO ₃₁₃	16.1	X	95.54699	51.34761	22.48288	15.05432	0.2076138	0.18060251	3.0997037	20	3 24.4	20.5
385043 2012 TC ₃₂₃	16.9	X	49.13824	175.83311	163.96006	7.10537	0.1204527	0.26555022	2.3972037	20	12 29.3	20.2
385044 2012 UH ₁₀	17.1	X	74.09841	244.06835	50.39885	2.61472	0.2062995	0.26185513	2.4197026	20	12 7.0	20.7
385045 2012 UP ₁₂	17.2	X	343.96633	105.96686	170.88924	6.33962	0.0311380	0.21557532	2.7546728	20	6 14.3	20.8
385046 2012 UX ₁₄	15.8	X	340.79377	159.08971	36.58202	11.58728	0.0685883	0.18343683	3.0676915	20	2 28.6	20.0
385047 2012 UU ₁₇	17.3	X	143.21601	66.60290	114.71957	4.56476	0.0686238	0.23599349	2.5933992	20	9 15.6	21.1
385048 2012 UZ ₂₂	16.0	X	14.59257	223.71706	286.51543	9.50968	0.0692565	0.17593800	3.1542513	20	2 12.1	20.1
385049 2012 UA ₂₆	16.3	X	310.36781	40.58460	264.62872	8.55046	0.1946846	0.21804523	2.7338309	20	5 9.7	19.7
385050 2012 UB ₂₆	16.0	X	220.68105	309.82106	346.85884	10.15124	0.0851030	0.17781464	3.1320189	20	2 5.5	20.8
385051 2012 UT ₂₈	16.4	X	18.36702	4.97376	306.05067	12.06118	0.1332534	0.24182808	2.5515156	20	9 28.9	19.6
385052 2012 UM ₃₅	15.8	X	120.49941	185.29412	223.59844	8.65196	0.0925003	0.17485982	3.1672040	20	3 1.0	20.6
385053 2012 UB ₃₇	16.4	X	90.59286	303.12624	318.62812	5.45766	0.0774253	0.24523636	2.5278200	20	10 26.8	20.1
385054 2012 UM ₄₁	16.8	X	354.54247	232.02916	60.53748	3.07973	0.1896379	0.22984319	2.6394592	20	7 27.8	19.1
385055 2012 UY ₄₂	16.5	X	262.73478	228.61840	32.06285	1.84916	0.0147880	0.17691219	3.1426611	20	2 12.9	20.8
385056 2012 UV ₄₄	16.3	X	240.58847	304.16256	65.80051	2.48230	0.0912669	0.20945155	2.8081071	20	5 20.9	20.5
385057 2012 UR ₄₅	16.0	X	47.63059	283.68883	199.12293	8.24802	0.0922310	0.17470541	3.1690699	20	2 27.9	20.2
385058 2012 US ₄₅	15.7	X	81.41959	244.25809	200.64395	15.34256	0.0747325	0.17517029	3.1634605	20	2 23.6	20.2
385059 2012 UK ₄₇	16.3	X	214.76157	169.92733	161.08704	3.65904	0.0648514	0.18665221	3.0323591	20	3 8.5	20.8
385060 2012 UJ ₄₈	15.5	X	79.06248	308.31781	47.76945	10.60517	0.1167620	0.14688820	3.5574989	20	—	—
385061 2012 UQ ₅₀	16.6	X	182.21583	352.00109	104.44785	3.20878	0.0494780	0.21381418	2.7697785	20	7 7.8	20.6
385062 2012 UP ₅₆	16.7	X	118.29855	162.48868	262.96112	4.17861	0.0367654	0.18028310	3.1033639	20	3 11.9	21.3
385063 2012 UD ₅₇	16.0	X	196.81648	111.75445	234.15373	10.68053	0.1073652	0.18399092	3.0615295	20	3 2.9	21.0
385064 2012 UP ₆₀	15.9	X	84.85014	259.60587	228.20508	8.92412	0.0438911	0.18870269	3.0103523	20	4 18.6	20.1
385065 2012 UY ₆₁	17.0	X	340.08875	88.68905	196.70661	3.04922	0.0563377	0.21113332	2.7931754	20	6 18.6	20.6
385066 2012 UC ₆₃	17.2	X	172.98695	164.72586	103.68778	11.12501	0.1447886	0.28287877	2.2982775	20	—	—
385067 2012 UG ₆₃	15.4	X	181.36281	71.71159	269.84045	11.03752	0.0765107	0.17756790	3.1349197	20	2 11.9	20.3
385068 2012 UW ₆₄	16.9	X	235.16642	157.94718	42.23917	4.09149	0.1102074	0.26787100	2.3833377	20	—	—
385069 2012 UF ₆₇	16.9	X	84.75304	85.50358	157.54246	7.56755	0.0981929	0.23334894	2.6129564	20	9 30.5	20.5
385070 2012 UH ₆₉	16.4	X	335.16716	285.46709	20.00573	6.85020	0.0446354	0.22237818	2.6982029	20	7 11.5	19.8
385071 2012 UN ₇₄	16.2	X	153.32668	62.88959	327.37714	9.02916	0.0738274	0.18556015	3.0442447	20	3 12.4	20.7
385072 2012 UT ₇₇	15.4	X	148.65069	151.43044	233.77702	9.59858	0.0552968	0.18005022	3.1060393	20	2 27.5	20.2
385073 2012 UA ₈₁	17.1	X	105.30910	287.97069	242.26528	1.56040	0.0325489	0.21610176	2.7501973	20	7 9.3	20.9
385074 2012 UM ₈₅	16.2	X	132.22972	24.69369	4.77703	10.63722	0.0687722	0.18087579	3.0965809	20	2 23.1	20.7
385075 2012 UJ ₈₆	16.9	X	68.55024	19.00214	232.86391	3.19551	0.1304584	0.23115290	2.6294797	20	9 23.4	20.5
385076 2012 UV ₉₃	15.7	X	54.06328	176.95366	291.50711	8.14537	0.0832425	0.17236664	3.1976719	20	2 18.3	20.0
385077 2012 UD ₉₇	16.3	X	77.46166	17.17227	249.13847	7.61697	0.0903802	0.24724794	2.5140906	20	10 19.4	19.8
385078 2012 UH ₁₀₁	16.4	X	72.84739	343.73725	133.90081	3.23379	0.1051876	0.17935839	3.1140214	20	4 1.8	20.5
385079 2012 US ₁₀₅	16.4	X	279.51162	347.45123	330.52401	5.35397	0.0585886	0.20506726	2.8479902	20	5 3.8	20.3
385080 2012 UY ₁₁₂	17.2	X	195.26443	296.67829	260.75545	0.78826	0.1235271	0.25951612	2.3442200	20	11 30.7	20.5
385081 2012 UY ₁₁₃	16.4	X	45.26227	111.74951	12.11276	5.39156	0.1210922	0.17527606	3.1621877	20	3 3.1	20.2
385082 2012 UU ₁₁₄	16.7	X	137.07337	284.21190	225.66376	8.88920	0.1786347	0.21642993	2.7474165	20	7 28.9	21.4
385083 2012 UD ₁₁₅	16.5	X	177.62346	36.96617	331.57340	2.03438	0.0698195	0.18745953	3.0236466	20	3 13.7	20.9
385084 2012 UY ₁₅₉	16.2	X	156.36239	282.21567	123.06468	9.80015	0.1227108	0.18907358	3.0064142	20	4 12.6	21.0
385085 2012 UV ₁₆₀	16.2	X	23.86252	269.87065	240.68049	3.53374	0.1273372	0.17466655	3.1695398	20	2 28.6	20.1
385086 2012 UJ ₁₆₂	17.0	X	354.77879	29.99885	325.82842	0.57906	0.0550081	0.23929351	2.5695009	20	10 21.1	20.0
385087 2012 UB ₁₆₃	16.1	X	73.03783	176.72711	79.01755	15.73638	0.1617629	0.24223819	2.5486350	20	10 18.9	20.1
385088 2012 UW ₁₆₆	15.2	X	256.73078	352.12626	271.01460	14.12247	0.1215825	0.18230996	3.0803197	20	1 24.4	20.0
385089 2012 UG ₁₇₁	15.6	X	319.97296	7.13473	279.27847	16.43311	0.1370874	0.21511663	2.7585872	20	5 6.0	19.2
385090 2012 VF	16.5	X	69.16347	123.99926	116.95302	11.64203	0.0940232	0.23150281	2.6268294	20	9 9.9	20.2
385091 2012 VG ₃	15.3	X	311.65330	314.84581	131.92398	3.77566	0.157248	0.12464781	3.9689864	20	11 10.5	20.1
385092 2012 VZ ₃	15.6	X	80.49412	296.31998	136.95092	12.53565	0.0545981	0.17173456	3.2055133	20	2 10.1	20.1
385093 2012 VA ₁₁	16.7	X	135.74624	196.48639	216.09987	1.09235	0.0815483	0.18763757	3.0217337	20	3 23.0	21.0
385094 2012 VS ₂₆	16.6	X	354.86918	203.11824	14.51222	2.17738	0.0361383	0.19582331	2.9369268	20	4 11.2	20.2
385095 2012 VM ₂₇	16.9	X	64.99830	322.93006	262.54659	4.07595	0.1023140	0.22342212	2.6897914	20	8 9.2	20.4
385096 2012 VL ₃₆	16.7	X	270.44848	233.17854	173.59137	5.96513	0.0915159	0.22615590	2.6680713	20	8 16.2	20.2
385097 2012 VX ₄₁	16.7	X	292.39868	119.48963	183.75923	2.71387	0.0407510	0.20411930	2.8568011	20	5 7.2	20.5
385098 2012 VE ₄₇	16.8	X	284.55104	172.20599	183.61254	4.10697	0.1039450	0.22108089	2.7087479	20	6 25.7	20.3
385099 2012 VM ₄₇	16.5	X	207.54072	215.99809	106.07253	2.43793	0.1062100	0.18359605	3.0659177	20	2 19.4	21.4
385100 2012 VG ₄₈	16.7	X	42.70858	123.33441	135.64179	2.88948	0.0744303	0.22828009	2.6514943	20	8 21.4	19.9
385101 2012 VH ₆₆	16.8	X	234.98567	301.10276	52.82536	2.65907	0.0830241	0.19986582	2.8971904	20	4 25.6	21.0
385102 2012 VJ ₆₇	16.7	X	60.76768	102.71365	45.42199	2.99134	0.0031202	0.18944614	3.0024713	20	4 9.7	20.9
385103 2012 VP ₇₈	16.6	X	175.87787	350.07778	10.65668	2.68593	0.0320200	0.17946866	3.1127456	20	3 2.8	21.0
385104 2012 VL ₈₀	16.6	X	307.67625	185.34870	149.31880	10.29455	0.0855277	0.21656504	2.7462737	20	7 3.7	20.1
385105 2012 VT ₈₉	16.6	X	32.95621	91.95531	210.65319	2.97951	0.1344038	0.23780984	2.5801770	20	10 16.5	19.8
385106 2012 VG ₉₂	15.5	X	3.66183	220.38693	182.13738	4.21358	0.1679225	0.12675939	3.9247857	20	12 14.5	20.3
385107 2012 VM ₉₂	15.5	X	350.55497	254.75643	154.26796	3.48455	0.2590653	0.12444471	3.9733037	20	12 5.8	19.7
385108 2012 VL ₉₃	16.6	X	89.34192	87.75526	146.07950	3.46318	0.0196858	0.22502238	2.6770239	20	9 11.7	20.1
385109 2012 VQ ₉₇	15.3	X	191.59081	242.14567	75.61016	12.24373	0.2821192	0.17923452	3.1154559	20	2 4.5	21.0
385110 2012 VE ₉₉	15.9	X	110.53833	262.62850	179.79988	12.74661	0.1020377	0.18191103	3.0848214	20	4 4.4	20.3
385111 2012 VX ₁₀₅	16.1	X	201.00122	270.16696	43.43477	10.26892	0.0817380	0.17611293	3.1521622	20	2 7.4	21.1
385112 2012 VZ ₁₀₇	16.3	X	227.96335	62.63772	256.47044	4.39661	0.1038215	0.18381405	3.0634932	20	3 3.8	21.0
385113 2012 VG ₁₀₇	16.5	X	336.57672	286.58289	36.13125	6.54670	0.0623007	0.22621022</				

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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>
385121 2012 XT ₉₅	15.4	X	220.91946	284.75704	102.08293	12.73105	0.0175679	0.19539610	2.9412061	20	5 29.2	19.7
385122 2012 XQ ₁₁₃	16.7	X	322.76073	263.33665	53.91837	3.29430	0.0783303	0.21997986	2.7177788	20	7 4.9	19.9
385123 2012 XW ₁₂₀	16.6	X	113.80672	119.49371	176.61751	6.74056	0.0588420	0.25776478	2.4452335	20	—	—
385124 2012 XV ₁₅₃	16.4	X	301.90295	302.39923	133.25966	7.11047	0.0889108	0.24150911	2.5537617	20	11 20.0	19.3
385125 2013 AH ₁₂₁	15.7	X	336.62654	177.81076	113.00992	7.01725	0.1398307	0.18041007	3.1019077	20	6 14.6	19.3
385126 2013 AG ₁₅₅	16.0	X	180.60694	259.02560	179.55615	10.22684	0.0857854	0.18824488	3.0152311	20	6 12.4	20.8
385127 2013 BL ₆₀	14.6	X	272.55765	86.13891	126.89545	4.16618	0.1383620	0.12434879	3.9753466	20	—	—
385128 2013 CH ₁₂₁	15.2	X	13.27819	165.80271	87.25658	14.39571	0.1291163	0.17897015	3.1185233	20	6 28.2	18.9
385129 2013 CC ₂₁₅	13.8	X	320.50728	242.35781	168.40922	10.17014	0.0127658	0.08429662	5.1514474	20	10 17.4	20.6
385130 2013 GH ₇₉	14.2	X	242.87722	241.84844	12.06736	12.15931	0.1711134	0.12456304	3.9707870	20	1 10.1	20.6
385131 2013 GH ₁₀₉	15.3	X	140.85849	107.18765	23.83190	32.42763	0.1909857	0.17005386	3.2265994	20	7 17.6	21.2
385132 2013 RO ₃₁	16.0	X	278.66572	299.37948	6.62884	13.49323	0.1790261	0.24017196	2.5632316	20	3 30.4	19.7
385133 2013 RC ₅₃	17.0	X	254.98826	201.08528	140.39489	9.71986	0.2422026	0.24245004	2.5471501	20	4 17.1	21.2
385134 2013 SB ₂₄	16.8	X	296.35822	305.06105	34.11820	8.90795	0.0893639	0.25772131	2.4455084	20	6 23.6	19.8
385135 2013 SC ₃₀	16.5	X	174.04210	313.11859	70.31018	3.97647	0.1422774	0.22015466	2.7163400	20	3 30.4	20.9
385136 2013 SF ₅₁	16.4	X	149.63539	1.70459	42.81560	9.65327	0.1126612	0.21738402	2.7397317	20	4 1.4	20.6
385137 2013 SO ₅₁	15.5	X	93.59828	167.68113	186.10285	14.72902	0.2162092	0.17860327	3.1227924	20	—	—
385138 2013 SA ₆₇	16.2	X	180.70764	287.25289	36.89551	8.00488	0.2211290	0.21257371	2.7805434	20	1 30.6	21.1
385139 2013 SW ₈₆	18.0	X	270.39925	92.73738	328.13394	1.69322	0.2458552	0.27181090	2.3602507	20	8 16.9	20.8
385140 2013 SX ₈₆	15.9	X	255.41144	74.79852	236.02690	13.76571	0.1373205	0.23365103	2.6107037	20	3 11.4	20.2
385141 2013 TG ₃	17.0	X	153.43284	11.28860	24.80296	2.82765	0.1744782	0.21316476	2.7754012	20	3 27.7	21.4
385142 2013 TO ₃	16.5	X	194.40908	333.17504	50.25445	15.21461	0.1574811	0.22849945	2.6497970	20	4 19.9	20.9
385143 2013 TT ₇	15.8	X	293.27843	155.95998	175.83104	15.18262	0.1580785	0.24287284	2.5441931	20	5 29.9	19.3
385144 2013 TY ₁₃	17.6	X	325.18112	350.64748	77.41076	3.02101	0.1250643	0.29909339	2.2144447	20	—	—
385145 2013 TD ₁₉	15.7	X	97.90490	353.34691	338.28343	10.35425	0.1653616	0.17970499	3.1100160	20	—	—
385146 2013 TV ₂₄	16.9	X	124.23968	188.38616	233.96723	4.32546	0.1478114	0.20974674	2.8054717	20	3 26.9	21.1
385147 2013 TP ₂₆	17.1	X	299.34162	328.12663	13.83336	1.72406	0.1794464	0.26187110	2.4196042	20	6 17.9	19.7
385148 2013 TA ₃₂	15.8	X	86.27418	242.78264	96.09409	2.56553	0.1268636	0.17077340	3.2175298	20	—	—
385149 2013 TP ₃₅	16.0	X	111.02704	241.53245	238.16121	10.71098	0.1599457	0.22103774	2.7091003	20	5 26.9	20.0
385150 2013 TS ₃₈	15.8	X	223.84867	79.19806	202.20104	12.88561	0.1937352	0.21720319	2.7408919	20	2 21.3	20.6
385151 2013 TQ ₄₅	16.0	X	105.71006	115.93609	207.09536	9.10138	0.1570701	0.17389609	3.1788949	20	—	—
385152 2013 TF ₄₉	16.0	X	25.20092	248.89913	177.42715	5.16332	0.1504675	0.17145617	3.2089821	20	—	—
385153 2013 TV ₄₉	17.8	X	283.34007	214.07635	147.92756	1.69254	0.1966802	0.25915030	2.4365102	20	6 18.7	20.8
385154 2013 TR ₈₉	18.0	X	349.09366	117.75284	247.52334	2.09511	0.1400206	0.28585671	2.2822880	20	11 15.9	20.1
385155 2013 TE ₉₀	17.0	X	224.20412	37.54130	305.43651	1.22070	0.0899214	0.22431228	2.6826706	20	3 28.2	21.0
385156 2013 TM ₉₂	16.8	X	157.83421	246.05845	199.87802	4.48171	0.2003484	0.22878883	2.6475622	20	6 1.8	21.2
385157 2013 TX ₉₄	16.0	X	69.47634	296.45250	208.63511	8.74086	0.0867423	0.21700942	2.7425233	20	4 26.7	19.5
385158 2013 TR ₁₂₀	16.1	X	178.47727	308.26218	48.59118	6.93800	0.0488178	0.21755461	2.7379395	20	2 29.6	20.1
385159 2013 TR ₁₃₀	15.5	X	356.62368	62.58405	38.48548	17.02767	0.0907471	0.17659517	3.1464211	20	—	—
385160 2013 UW ₄	16.8	X	236.96825	303.93422	31.93916	1.93750	0.2153440	0.23338930	2.6126552	20	3 24.6	21.0
385161 2013 UV ₅	16.2	X	98.69270	219.15561	240.45481	6.92238	0.1866859	0.21062495	2.7976680	20	4 19.2	20.3
385162 2013 UH ₁₁	17.2	X	312.24958	218.33681	143.62505	6.99351	0.1750778	0.26922247	2.3753549	20	8 16.7	19.2
385163 2013 UN ₁₂	15.9	X	132.69292	290.96257	153.79239	13.60224	0.2428471	0.21355117	2.7720523	20	5 15.6	20.7
385164 2013 UT ₁₂	16.1	X	155.56873	317.36857	64.85595	7.14402	0.0722154	0.21272586	2.7792174	20	3 8.8	20.2
385165 2013 VM	16.5	X	232.65703	345.01798	14.37926	6.34349	0.3022656	0.23773253	2.5807364	20	4 12.3	20.9
385166 2013 VA ₁	17.3	X	328.91766	222.28162	104.28687	3.35187	0.2460221	0.26816119	2.3816180	20	7 19.3	18.7
385167 2013 VF ₅	17.7	X	210.53845	274.61308	93.27160	24.60737	0.0741969	0.37200582	1.9147095	20	4 22.7	20.7
385168 2013 VN ₈	17.6	X	350.18825	280.32825	59.07167	8.81684	0.2380782	0.27622008	2.3350663	20	10 22.9	19.2
385169 2013 VR ₈	18.4	X	34.33444	150.32765	215.52153	4.37138	0.1366225	0.29984497	2.2107427	20	—	—
385170 2013 VL ₁₁	15.0	X	137.84932	236.21359	103.35814	23.86480	0.2778618	0.18782764	3.0196948	20	1 18.3	20.0
385171 2013 VD ₁₆	17.7	X	269.73959	7.93789	50.31325	2.09332	0.1669602	0.26582261	2.3955658	20	8 26.2	20.4
385172 2013 VB ₁₈	18.0	X	350.36905	85.94950	306.24182	4.72033	0.1455462	0.29376462	2.2411438	20	—	—
385173 2013 VH ₁₈	17.1	X	178.35159	152.38030	321.60326	1.42152	0.0529874	0.24623649	2.5209706	20	7 28.5	20.7
385174 2013 WL ₂	16.4	X	304.56869	166.01870	94.48328	8.52408	0.0830687	0.21732808	2.7398418	20	3 25.5	20.1
385175 2013 WU ₃	16.4	X	193.77423	229.56257	220.88662	12.19664	0.1368395	0.23873899	2.5734781	20	7 8.2	20.7
385176 2013 WU ₅	15.6	X	133.97466	320.78340	48.34228	12.87402	0.1257663	0.19112642	2.9848481	20	2 7.6	20.3
385177 2013 WB ₁₂	16.8	X	232.87233	166.34517	197.33230	12.12488	0.3149225	0.23655479	2.5892951	20	4 18.2	21.4
385178 2013 WX ₂₈	16.4	X	121.44691	306.15605	59.59717	3.27339	0.1605966	0.18476067	3.0530204	20	1 22.2	20.8
385179 2013 WK ₄₅	17.8	X	177.52836	158.65258	348.29430	12.83856	0.2305183	0.39589673	1.8368828	20	9 15.3	20.3
385180 2013 WH ₅₃	16.0	X	73.91268	229.03047	277.30218	11.79176	0.1110469	0.21226716	2.7832198	20	5 5.3	19.8
385181 2013 WE ₅₆	16.5	X	223.57776	326.73114	53.59483	5.69457	0.2441011	0.23495434	2.6010402	20	5 4.8	20.8
385182 2013 WX ₆₅	16.3	X	181.48680	176.35258	241.26138	14.42265	0.1573559	0.22349015	2.6892455	20	5 16.9	20.7
385183 2013 XH	16.4	X	240.22995	308.53962	48.50275	6.31477	0.2692591	0.23572496	2.5953683	20	4 19.0	20.8
385184 4119 T-3	17.4	X	357.46603	332.01759	43.90030	7.70815	0.2080135	0.27716579	2.3297517	20	12 24.9	19.8
385185 1993 RO	8.4	X	33.72009	187.78632	170.28528	3.71407	0.1988325	0.00401445	39.2089432	20	11 11.4	23.6
385186 1994 AW ₁	17.6	X	37.89883	36.98732	290.36394	24.09728	0.0757683	0.84824266	1.1052384	20	—	—
385187 1995 SL ₁₉	17.9	X	230.41115	37.88526	11.10717	3.14856	0.2058929	0.22760078	2.6567675	20	6 17.9	22.2
385188 1995 ST ₄₉	18.3	X	356.18717	316.13095	63.23039	2.51066	0.2271119	0.28000977	2.3139498	20	—	—
385189 1996 BZ ₁₁	17.5	X	310.08754	334.16916	85.71145	5.49922	0.1338168	0.27030659	2.3689995	20	11 17.9	19.5
385190 1996 XK ₂	15.8	X	45.87842	235.38325	232.06210	15.41230	0.2025112	0.17693650	3.1423731	20	2 11.5	19.6
385191 1997 RT ₅	7.2	X	184.97793	24.68947	163.69505	12.71435	0.0226264	0.00369756	41.4183004	20	10 8.8	23.5
385192 1997 TR ₁₂	16.7	X	225.18352	86.27395	172.16859	1.31894	0.1792495	0.19937069	2.9019851	20	4 13.3	21.4
385193 1998 BT ₃	17.0	X	77.50188	339.26800	222.78447	1.95695	0.2145352	0.18373528	3.0643686	20	4 3.9	20.9
385194 1998 KG ₆₂	6.5	X	245.77224	111.328								

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>
385201 1999 RN ₂₁₅	6.7 ^m	X	142.28889	104.87247	140.49858	12.04005	0.0748317	0.00347250	43.1891655	20	10 30.0	23.3
385202 1999 RJ ₂₄₆	17.6	X	188.06434	254.31083	131.94886	6.70949	0.4067712	0.21737693	2.7394313	20	4 17.9	23.1
385203 1999 SO ₁₅	17.4	X	84.01475	3.52491	343.55528	8.54756	0.2964458	0.29572566	2.2312250	20	—	—
385204 1999 SY ₂₃	17.5	X	96.10358	186.32795	15.98152	19.69268	0.0480449	0.37086392	1.9186378	20	9 8.6	19.8
385205 1999 SU ₂₈	18.0	X	330.36614	109.96214	352.86876	7.83571	0.0620735	0.29495337	2.2351181	20	—	—
385206 1999 TM ₁₀	17.8	X	50.41671	2.82259	40.09152	4.46314	0.1711109	0.29551719	2.2322742	20	—	—
385207 1999 TY ₄₅	18.5	X	359.63456	101.50753	0.83358	3.69879	0.0999868	0.29541598	2.2327841	20	—	—
385208 1999 TS ₁₁₀	16.6	X	234.96658	128.27851	248.17413	12.16837	0.2647245	0.22389369	2.6860132	20	5 6.9	21.2
385209 1999 TN ₁₄₁	17.8	X	5.88351	61.30944	14.26147	4.84944	0.1920776	0.29226548	2.2488010	20	—	—
385210 1999 TD ₁₄₆	18.1	X	72.42577	21.59631	342.06679	2.83526	0.2147689	0.29514716	2.2341396	20	—	—
385211 1999 TG ₂₁₂	17.3	X	182.39985	69.67748	341.24424	3.43312	0.2652709	0.21754003	2.7380619	20	5 8.9	22.3
385212 1999 TA ₂₅₀	17.6	X	216.80326	75.18921	5.63424	19.71603	0.1007440	0.37014505	1.9211211	20	8 15.8	20.1
385213 1999 VN ₁₅₂	17.3	X	45.70843	346.70343	17.24844	6.08543	0.1896426	0.29239523	2.2481357	20	—	—
385214 1999 VW ₁₆₆	17.1	X	358.95680	14.69567	32.50877	4.09247	0.1646489	0.28704846	2.2759667	20	—	—
385215 2000 AR ₉₂	16.4	X	243.54806	223.06944	304.20809	24.38362	0.1745150	0.27979565	2.3151301	20	12 24.3	19.3
385216 2000 DB ₉	18.4	X	336.59451	295.29195	156.03521	4.25127	0.2259519	0.28376887	2.2934690	20	—	—
385217 2000 DF ₁₇	17.2	X	263.12409	26.06134	162.12077	24.99624	0.2554658	0.28098860	2.3085729	20	—	—
385218 2000 DS ₃₂	18.2	X	276.49315	355.16713	168.29778	2.50801	0.1466922	0.28153007	2.3056118	20	—	—
385219 2000 DB ₄₁	16.5	X	78.25626	64.07717	157.58507	11.34551	0.2357088	0.21073243	2.7967166	20	9 8.8	20.6
385220 2000 DM ₅₇	17.9	X	287.42772	314.89611	173.33555	5.58519	0.2094869	0.27952559	2.3166210	20	—	—
385221 2000 DT ₈₈	16.6	X	126.89957	181.77287	339.52144	7.75610	0.0803126	0.21109466	2.7935163	20	7 30.9	20.7
385222 2000 DR ₉₀	16.4	X	103.25994	200.41113	323.64301	7.44375	0.0722128	0.21040954	2.7995771	20	7 4.6	20.4
385223 2000 EJ ₁₇₆	18.4	X	272.72331	306.89998	196.14689	1.13864	0.0851061	0.27784585	2.3259485	20	—	—
385224 2000 FE ₁₀	18.3	X	203.40265	173.31293	28.02703	3.01230	0.1459824	0.27283751	2.3543263	20	12 14.9	21.6
385225 2000 GE ₁₂₁	18.5	X	245.97885	177.06869	15.41754	1.63841	0.1240351	0.27749589	2.3279037	20	—	—
385226 2000 GH ₁₅₃	17.4	X	235.42122	255.96669	339.09265	5.44461	0.1994474	0.27984361	2.3148656	20	—	—
385227 2000 JV ₆₇	17.1	X	17.50229	122.80726	93.86052	10.03909	0.0396847	0.19709033	2.9243263	20	5 14.9	21.0
385228 2000 KV ₃₃	17.4	X	170.42617	86.12439	187.14447	1.20225	0.1768671	0.27194430	2.3594788	20	—	—
385229 2000 PK ₁₈	15.6	X	175.66165	39.12668	306.84345	16.96546	0.2354875	0.17707974	3.1406783	20	2 17.4	21.2
385230 2000 QO ₁₀₉	16.0	X	210.60450	189.99609	152.08376	9.17843	0.18045431	0.18040664	3.1019470	20	3 20.6	20.6
385231 2000 QQ ₁₁₇	17.1	X	258.65388	58.81240	321.02991	17.65653	0.2955636	0.23862945	2.5742656	20	5 27.0	21.6
385232 2000 QQ ₂₂₇	17.0	X	252.20467	216.56574	182.74127	5.40649	0.2811112	0.23817618	2.5775306	20	6 19.4	21.2
385233 2000 SZ ₁₈₃	16.3	X	279.04509	22.67265	352.61111	13.29502	0.1403052	0.24080140	2.5587629	20	7 13.8	19.7
385234 2000 SK ₂₁₃	17.0	X	238.75918	315.77641	103.32738	7.53924	0.3398545	0.23596512	2.5936070	20	6 26.9	21.5
385235 2000 SA ₂₁₆	17.6	X	310.36414	353.12394	15.26811	6.73167	0.2124761	0.24352227	2.5396679	20	8 16.6	20.0
385236 2000 SF ₂₅₈	16.9	X	262.55881	354.51805	38.21444	8.62539	0.1935100	0.23802544	2.5786187	20	7 3.9	20.6
385237 2000 SQ ₂₈₁	16.8	X	256.30052	199.88356	217.64158	4.74352	0.2313488	0.24093879	2.5577901	20	7 22.6	20.4
385238 2000 SX ₂₈₆	16.6	X	303.13116	124.57184	260.59714	6.35504	0.2094854	0.24519247	2.5281216	20	8 21.2	19.1
385239 2000 SG ₂₈₉	17.0	X	253.09723	162.98873	221.32834	4.31410	0.2357450	0.23713740	2.5850524	20	6 6.1	20.9
385240 2000 SW ₃₆₃	17.0	X	286.48260	305.91822	45.06799	6.02827	0.3543158	0.24041765	2.5614850	20	5 13.4	20.5
385241 2000 UE ₆₅	16.8	X	245.85383	139.52798	273.80522	3.66603	0.2134079	0.23709015	2.5853958	20	7 8.7	20.7
385242 2000 UZ ₈₉	16.4	X	274.44849	327.37939	64.03509	14.30628	0.2931403	0.23828699	2.5767315	20	7 1.2	20.0
385243 2000 VW ₄₅	16.7	X	248.82900	142.86692	226.65477	10.87230	0.2087321	0.23293395	2.6160589	20	5 16.7	20.7
385244 2000 WQ	16.5	X	242.50509	105.78391	296.36400	28.22577	0.3313440	0.23480735	2.6021256	20	6 12.4	21.3
385245 2000 WK ₂	16.6	X	220.23714	108.61748	305.07961	28.25823	0.3683577	0.23205153	2.6226868	20	6 6.9	21.9
385246 2000 WS ₁₅₀	15.9	X	250.74871	325.77246	57.10647	33.14974	0.1763926	0.23224727	2.6212130	20	6 2.6	20.0
385247 2000 YD ₆₇	16.7	X	44.93030	147.91669	272.39252	24.80710	0.2645646	0.30561214	2.1828421	20	—	—
385248 2001 BH ₇₉	16.8	X	196.42087	136.33483	313.54501	10.10127	0.2395523	0.22771046	2.6559143	20	7 8.9	21.5
385249 2001 CU ₄₃	17.4	X	304.67209	153.53098	353.11357	24.37389	0.1950650	0.29852481	2.2172556	20	—	—
385250 2001 DH ₄₇	18.8	X	80.79017	17.51156	147.40284	24.40086	0.0346114	0.52396400	1.5238250	20	6 8.6	20.4
385251 2001 DD ₈₂	18.2	X	24.13101	97.97813	336.77113	4.47148	0.0922187	0.30116814	2.2042628	20	—	—
385252 2001 EB ₁₈	19.3	X	212.05144	101.92867	155.47392	50.06337	0.1836909	0.91222428	1.0529352	20	—	—
385253 2001 FM ₁₂₈	15.8	X	178.58331	83.37863	53.70220	25.61545	0.3695681	0.22705806	2.6609993	20	8 31.5	21.4
385254 2001 FO ₁₈₈	16.3	X	175.25270	153.64115	36.26083	14.38565	0.1811778	0.23229007	2.6208910	20	10 24.7	20.6
385255 2001 KC ₇₉	17.6	X	326.36952	293.15696	73.33972	5.21674	0.1976217	0.25885234	2.4383796	20	9 27.6	19.5
385256 2001 OU ₃	17.4	X	223.34540	12.98219	322.99095	13.77096	0.0829110	0.35069563	1.9915099	20	3 4.1	19.9
385257 2001 OS ₃₃	15.7	X	230.03964	206.12176	94.95066	10.08616	0.0856027	0.18908608	3.0062817	20	2 19.3	20.4
385258 2001 ON ₄₃	15.9	X	152.71557	40.01313	332.81315	15.82248	0.2879065	0.18186237	3.0853717	20	3 5.6	21.3
385259 2001 PP ₉	17.9	X	354.84030	97.52875	270.59319	1.14613	0.2134655	0.26447849	2.4036753	20	12 8.5	19.9
385260 2001 QK ₁₁₂	16.0	X	165.26522	78.88812	307.55026	13.25776	0.2708238	0.18653769	3.0336001	20	3 24.7	21.6
385261 2001 QS ₁₅₈	17.1	X	334.88384	219.27030	154.16855	4.81607	0.2650975	0.26200063	2.4188067	20	11 6.1	18.5
385262 2001 QT ₁₆₂	17.2	X	177.78318	88.33783	325.17625	16.06702	0.1196905	0.35104086	1.9902040	20	4 25.8	20.3
385263 2001 QB ₁₉₀	15.2	X	162.08631	35.99564	265.34453	15.79587	0.1879359	0.17654358	3.1470339	20	—	—
385264 2001 QX ₂₀₂	17.1	X	336.67553	250.41309	124.47402	8.72660	0.2584488	0.26326599	2.4110499	20	11 15.4	18.8
385265 2001 QC ₂₀₅	16.4	X	224.93030	28.93071	307.27637	9.68703	0.2190253	0.19101891	2.9859680	20	3 12.8	21.6
385266 2001 QB ₂₉₈	6.8	X	48.24471	3.72492	291.34221	1.79418	0.1010959	0.00351234	42.8619336	20	9 15.1	22.9
385267 2001 QS ₃₃₀	16.1	X	99.48376	246.25543	156.58383	12.16809	0.2926494	0.17604256	3.1530022	20	2 28.5	20.8
385268 2001 RC ₁₂	15.8	X	81.31847	185.49182</								

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>		
385281	2001	SA ₂₄₇	17.2	X	349.17682	226.12918	151.08121	2.90204	0.1781820	0.26223179	2.4173850	20	12 2.4	19.4
385282	2001	SB ₂₅₂	16.0	X	121.02879	129.66137	201.69057	15.80609	0.2152002	0.17117621	3.2124801	20	—	—
385283	2001	SS ₂₆₂	16.3	X	124.11499	350.23158	311.93517	23.99856	0.2042397	0.27526344	2.3404733	20	—	—
385284	2001	SA ₂₇₄	18.2	X	293.13951	229.23388	187.19097	1.06972	0.1692630	0.26088328	2.4257082	20	10 1.7	20.3
385285	2001	SN ₃₅₀	15.9	X	66.83670	86.85121	19.56540	11.92790	0.0407809	0.17954949	3.1118113	20	3 5.6	20.2
385286	2001	SA ₃₅₅	15.8	X	110.18778	73.56439	351.42282	12.50626	0.2325487	0.17922532	3.1155626	20	3 26.5	20.6
385287	2001	TY ₂₆	15.8	X	78.57809	65.77443	16.69213	26.14708	0.2397461	0.17523234	3.1627137	20	3 22.6	20.2
385288	2001	TP ₈₄	15.9	X	137.25002	20.75564	24.83497	8.19764	0.1422252	0.18159410	3.0884096	20	3 24.6	20.6
385289	2001	TH ₉₉	16.1	X	101.22956	48.52560	9.24117	16.05165	0.2654777	0.17705544	3.1409658	20	3 17.9	20.8
385290	2001	TC ₁₃₇	17.4	X	228.32801	301.94338	55.17285	12.76210	0.2933742	0.24403449	2.5361128	20	4 11.7	22.0
385291	2001	TM ₁₅₉	16.3	X	103.33129	211.27710	191.77977	6.39510	0.2149708	0.17582579	3.1555931	20	2 21.3	20.9
385292	2001	TJ ₁₇₀	17.5	X	5.48911	86.75223	272.43859	4.72689	0.2475731	0.26352781	2.4094528	20	12 16.7	20.1
385293	2001	TO ₂₃₅	16.0	X	155.54886	69.82382	304.47314	10.79442	0.2775886	0.18175303	3.0866090	20	3 6.9	21.5
385294	2001	UN ₇₇	16.2	X	92.39232	28.09829	38.36064	15.41795	0.2790166	0.17500871	3.1654074	20	3 24.5	20.9
385295	2001	UY ₈₆	16.4	X	112.88386	345.02494	33.65396	7.90743	0.2161056	0.17409024	3.1765311	20	2 7.7	21.2
385296	2001	UA ₁₂₉	17.3	X	325.31017	289.99037	100.40072	2.41484	0.1869173	0.26107740	2.4245056	20	11 1.9	19.1
385297	2001	UY ₁₃₉	17.9	X	353.77013	314.34823	42.55289	5.39065	0.2484230	0.26094597	2.4253197	20	11 20.6	19.8
385298	2001	UP ₁₇₄	18.0	X	301.61618	348.96830	58.24078	2.33936	0.1797390	0.25672587	2.4518259	20	10 3.6	20.1
385299	2001	UA ₁₈₁	18.0	X	315.69395	225.40556	164.51396	2.08293	0.1850871	0.25760698	2.4462319	20	10 7.2	20.0
385300	2001	UB ₂₂₁	15.8	X	92.23894	40.67519	41.57402	13.41272	0.1412727	0.17596831	3.1538890	20	3 23.9	20.3
385301	2001	UU ₂₂₆	16.7	X	133.91388	256.63184	141.33978	6.26878	0.1573827	0.18071798	3.0983832	20	3 13.4	21.4
385302	2001	UQ ₂₂₈	18.0	X	342.73732	242.51684	140.44507	5.27967	0.1582912	0.26208229	2.4183042	20	11 26.7	20.4
385303	2001	VQ ₄₉	17.5	X	313.99271	75.11961	309.11469	5.06148	0.3110227	0.25730494	2.4481459	20	9 4.7	18.8
385304	2001	VU ₇₁	15.5	X	72.50374	200.30529	242.31854	21.77317	0.1401534	0.17391551	3.1786583	20	2 11.9	20.1
385305	2001	VK ₇₃	16.7	X	92.60200	358.99047	59.27876	0.95696	0.1965016	0.17465110	3.1697268	20	2 26.8	21.1
385306	2001	VJ ₈₉	15.8	X	155.85872	95.91712	318.14733	8.36593	0.0556197	0.18432791	3.0577970	20	4 10.2	20.5
385307	2001	VQ ₁₁₂	17.6	X	318.18172	34.26479	346.95012	2.03226	0.2001058	0.25559452	2.4590556	20	9 26.2	19.5
385308	2001	VO ₁₃₀	16.6	X	332.98604	60.07132	145.86936	12.91136	0.0670528	0.17808146	3.1288896	20	2 26.6	20.7
385309	2001	WF ₁₆	15.9	X	63.42266	73.53169	38.15331	7.76189	0.1409254	0.17573171	3.1567192	20	3 19.2	20.0
385310	2001	XV ₁₂₂	16.3	X	132.77448	202.46553	240.28458	21.31092	0.0423511	0.23563796	2.5960071	20	4 16.3	20.1
385311	2001	XP ₂₀₀	17.2	X	293.22542	121.03196	290.08896	2.96004	0.1639708	0.25455023	2.4657766	20	9 21.1	19.6
385312	2001	XA ₂₃₂	17.7	X	293.52157	16.78834	16.60769	1.40774	0.2840370	0.25303938	2.4755819	20	8 6.0	20.1
385313	2001	XV ₂₄₄	17.5	X	306.07729	78.65162	330.57495	2.25793	0.1764515	0.25700117	2.4500746	20	10 14.7	19.6
385314	2001	YH ₂₈	17.1	X	347.28697	311.55680	49.53168	4.37543	0.1663759	0.25731771	2.4480649	20	11 1.1	19.2
385315	2001	YC ₆₂	16.9	X	292.77307	111.14899	284.66860	7.15420	0.2827183	0.25204111	2.4821144	20	8 5.9	19.5
385316	2001	YY ₆₆	16.9	X	260.94715	2.42254	78.01242	9.74087	0.2087470	0.25116397	2.4878899	20	9 9.4	20.2
385317	2001	YT ₇₆	17.5	X	247.28779	72.78721	40.95491	2.77339	0.1768100	0.25256383	2.4786885	20	10 6.9	20.8
385318	2001	YI ₁₃₈	17.6	X	218.20399	331.56022	107.22722	6.02716	0.2147908	0.24278047	2.5448384	20	7 14.5	21.6
385319	2001	YM ₁₄₉	15.7	X	157.42268	90.09294	290.64837	20.48669	0.1748531	0.17624870	3.1505431	20	3 4.2	21.2
385320	2002	AL ₆₆	17.0	X	167.68535	211.73854	287.65100	7.98345	0.1287725	0.24199692	2.5503287	20	8 14.8	21.0
385321	2002	AX ₁₄₁	16.1	X	199.64501	69.53104	280.17407	11.97391	0.0199315	0.22661578	2.6644605	20	3 4.8	20.0
385322	2002	AE ₁₇₇	17.4	X	195.32965	128.10293	322.31318	4.41841	0.2793843	0.24028563	2.5624232	20	7 7.1	22.0
385323	2002	CH ₄	17.0	X	174.23522	116.38764	46.37774	12.19829	0.1842645	0.24279358	2.5447469	20	9 26.5	21.3
385324	2002	CJ ₅	16.8	X	255.37229	321.21045	103.98779	2.82519	0.2738857	0.24600424	2.5225570	20	7 28.1	20.5
385325	2002	CK ₂₅	20.0	X	52.47280	184.81381	319.76582	26.82556	0.0569323	0.49337562	1.5861744	20	2 11.6	19.7
385326	2002	CK ₄₁	16.0	X	163.20530	359.23382	156.95295	27.65662	0.251984	0.24122855	2.5557414	20	9 2.7	20.3
385327	2002	CK ₅₈	17.5	X	197.74854	168.77340	316.68042	14.33776	0.2190451	0.24394896	2.5367056	20	8 22.1	21.7
385328	2002	CF ₁₈₈	16.8	X	224.38503	331.26477	140.00609	15.59348	0.0588027	0.24508874	2.5288349	20	9 23.7	20.3
385329	2002	CQ ₂₄₅	16.4	X	20.40484	165.61607	165.39036	5.57113	0.1844474	0.24216932	2.5491182	20	11 16.2	19.5
385330	2002	CL ₂₆₉	12.9	X	324.44782	26.36202	348.46713	12.03949	0.0729554	0.08248554	5.2265789	20	9 6.2	19.5
385331	2002	CJ ₃₁₆	16.8	X	171.06696	289.76064	210.55341	7.12886	0.1346646	0.24077285	2.5589652	20	8 18.9	21.0
385332	2002	CA ₂₆	16.4	X	83.25242	113.96013	101.70574	13.75220	0.2238978	0.23251349	2.6192118	20	9 12.5	20.6
385333	2002	GH ₆	16.8	X	87.49676	185.93739	43.77305	14.56685	0.2062520	0.23325808	2.6136349	20	10 2.8	21.0
385334	2002	GA ₁₀₆	16.2	X	91.95865	164.08481	51.89929	14.73437	0.1887681	0.23303516	2.6153014	20	9 20.3	20.5
385335	2002	GS ₁₂₈	17.5	X	166.10995	183.28258	2.63831	7.02262	0.1753676	0.24133768	2.5549709	20	10 11.2	21.6
385336	2002	GX ₁₄₅	16.7	X	118.99404	152.81547	8.36216	13.63729	0.1824846	0.23121376	2.6290182	20	8 4.6	21.1
385337	2002	GH ₁₈₂	16.8	X	155.98348	268.49129	188.68845	14.01755	0.0571984	0.22665844	2.6641262	20	6 8.7	20.9
385338	2002	JJ ₁₀	16.7	X	126.08223	124.38274	84.34598	12.00482	0.2039441	0.23791019	2.5794514	20	10 12.0	21.2
385339	2002	JH ₄₄	16.7	X	150.69989	332.75592	264.84897	12.32295	0.1473742	0.24118334	2.5560608	20	11 8.2	20.7
385340	2002	JZ ₁₁₅	13.5	X	22.16834	178.69686	162.86052	24.56704	0.0628585	0.08326898	5.1937440	20	10 15.9	20.3
385341	2002	JW ₁₂₁	16.6	X	115.53756	120.13834	95.79908	15.45712	0.1244300	0.23464218	2.6033466	20	10 9.1	20.9
385342	2002	LL	16.2	X	111.08809	111.11388	156.30084	28.92516	0.3768713	0.23543935	2.5974668	20	12 11.7	21.7
385343	2002	LV	16.6	X	12.86020	224.17088	132.17838	29.53831	0.6049310	0.27982277	2.3149805	20	—	—
385344	2002	NT ₆₆	16.5	X	47.46988	195.86226	103.64771	4.53138	0.1247131	0.22807639	2.6530728	20	10 30.9	20.0
385345	2002	NW ₇₂	16.6	X	106.67894	307.06396	273.91203	10.67332	0.2441460	0.22906513	2.6454328	20	9 30.4	21.3
385346	2002	OT ₈	18.1	X	155.65636	5.62714	286.17705	4.18500	0.1628283	0.29803952	2.2196618	20	—	—
385347	2002	OA ₂₉	16.5	X	198.41367	86.15208	306.41562	9.31464	0.1517415	0.20559672	2.8430986	20	4 28.3	21.3
385348	2002	OG ₃₃	16.9	X	73.94511	143.67257	127.22259	5.65967	0.1836171	0.22864297	2.6486881	20	11 2.7	20.9
385349	2002	OK ₃₄	18.1	X	34.18444	82.16526	284.86492	4.44312	0.1964782	0.28688975	2.2768060	20	—	—
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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>
385361 2002 <i>PB</i> ₁₆₉	18.0	X	44.66696	66.32443	321.19173	0.85719	0.1066773	0.29146769	2.2529027	20	—	—
385362 2002 <i>PT</i> ₁₇₀	6.4	X	257.87091	132.62504	328.70350	3.68522	0.1396890	0.00311054	46.4777728	20	9 6.5	23.3
385363 2002 <i>PW</i> ₁₇₀	6.2	X	157.39794	206.68151	339.78243	3.91677	0.0678635	0.00325378	45.1034997	20	9 9.2	23.0
385364 2002 <i>PX</i> ₁₇₃	17.9	X	112.67494	32.34574	299.45458	5.02468	0.1330531	0.29508102	2.2344734	20	—	—
385365 2002 <i>PU</i> ₁₇₄	16.3	X	95.21333	109.90135	118.43699	13.55196	0.2164069	0.22570454	2.6716272	20	10 8.5	20.9
385366 2002 <i>PH</i> ₁₇₅	16.5	X	286.16066	239.05063	95.48329	7.42319	0.0486841	0.21220868	2.7837311	20	6 7.9	20.3
385367 2002 <i>PE</i> ₁₇₆	17.4	X	89.48232	85.17864	276.67092	4.87069	0.1438766	0.29576640	2.2310201	20	—	—
385368 2002 <i>PF</i> ₁₇₉	16.9	X	76.12641	289.51789	320.33713	14.41536	0.3913810	0.22696197	2.6617504	20	10 20.2	21.8
385369 2002 <i>PK</i> ₁₇₉	18.1	X	27.53897	77.43129	301.23934	5.16909	0.1874267	0.28709115	2.2757410	20	—	—
385370 2002 <i>QM</i> ₁₃	16.5	X	82.86167	93.65881	163.88324	12.70005	0.1454031	0.22594526	2.6697293	20	10 22.7	20.6
385371 2002 <i>QS</i> ₁₆	18.0	X	9.47255	109.48335	287.44518	6.50831	0.2808379	0.28428934	2.2906690	20	—	—
385372 2002 <i>QJ</i> ₁₉	17.1	X	44.84988	358.20577	355.78104	7.09651	0.1399733	0.28644388	2.2791681	20	—	—
385373 2002 <i>QK</i> ₇₂	18.2	X	80.50522	43.93350	111.89500	2.22286	0.1463409	0.29262436	2.2469620	20	—	—
385374 2002 <i>QI</i> ₁₁₉	16.6	X	281.95531	208.04218	339.53945	14.32613	0.0747804	0.21075779	2.7964923	20	6 16.9	20.6
385375 2002 <i>QT</i> ₁₂₄	16.2	X	96.25249	107.92160	115.64261	10.18523	0.1191506	0.22330118	2.6907625	20	9 22.4	20.3
385376 2002 <i>RE</i> ₈	17.5	X	334.81344	219.37968	167.73476	6.12412	0.2576789	0.27797501	2.3252280	20	12 5.5	19.0
385377 2002 <i>RJ</i> ₈	17.2	X	357.39348	255.40004	165.57611	23.28854	0.2852500	0.28483871	2.2877227	20	—	—
385378 2002 <i>RV</i> ₃₄	16.0	X	224.07559	217.36021	163.15021	15.56200	0.1494611	0.20512918	2.8474171	20	5 15.2	20.8
385379 2002 <i>RN</i> ₅₈	17.3	X	59.72736	40.67096	326.21712	5.51245	0.1915112	0.28870616	2.2672462	20	—	—
385380 2002 <i>RN</i> ₁₁₂	17.5	X	268.62729	329.83830	6.66611	19.76380	0.0686633	0.37180106	1.9154124	20	4 30.6	19.9
385381 2002 <i>RT</i> ₁₂₅	16.8	X	344.37354	87.83355	326.76023	21.74820	0.2792330	0.28115059	2.3076860	20	—	—
385382 2002 <i>RQ</i> ₂₃₆	16.1	X	178.83524	39.78389	162.95138	13.89237	0.1337219	0.22895039	2.6463165	20	11 17.2	20.4
385383 2002 <i>RK</i> ₂₈₃	16.5	X	38.67425	136.42028	134.73496	8.69300	0.2988169	0.22072981	2.7116194	20	10 9.4	20.1
385384 2002 <i>SW</i> ₂	18.1	X	219.86227	98.04944	320.12957	18.71218	0.1309931	0.37530665	1.9034664	20	7 4.8	20.6
385385 2002 <i>ST</i> ₇₂	17.9	X	190.89297	98.78935	356.04476	19.47455	0.1298604	0.37769637	1.8954290	20	7 29.9	20.7
385386 2002 <i>TH</i> ₁₁	17.5	X	69.51429	24.11526	318.00070	1.87318	0.2060574	0.28804581	2.2707100	20	—	—
385387 2002 <i>TJ</i> ₆₆	17.4	X	234.24503	71.52880	325.64922	22.38641	0.1185930	0.37376412	1.9086999	20	6 21.7	20.1
385388 2002 <i>TR</i> ₁₉₄	17.4	X	6.73272	80.95130	345.31611	4.19772	0.2017572	0.28691653	2.2766643	20	—	—
385389 2002 <i>TT</i> ₂₆₃	16.0	X	111.00319	67.99804	15.11184	13.98162	0.2644314	0.19021676	2.9943567	20	4 20.7	20.9
385390 2002 <i>TV</i> ₃₁₉	16.8	X	132.64361	151.51412	244.49204	1.52015	0.2003995	0.19225508	2.9731546	20	3 10.9	21.6
385391 2002 <i>TL</i> ₃₇₈	16.0	X	260.55693	86.14750	229.58044	9.13159	0.1960032	0.19966355	2.8991467	20	3 21.8	20.8
385392 2002 <i>UF</i> ₅₅	18.0	X	60.92381	275.30069	83.50207	6.14353	0.1525810	0.28611133	2.2809338	20	—	—
385393 2002 <i>VZ</i> ₂	16.7	X	165.62240	186.55275	202.68214	5.09943	0.2569877	0.19325185	2.9629224	20	4 2.7	21.8
385394 2002 <i>VZ</i> ₈	17.2	X	334.48049	100.57645	342.03308	5.44636	0.1280900	0.28154957	2.3055053	20	—	—
385395 2002 <i>VO</i> ₁₄	17.0	X	312.73968	163.38778	221.41564	27.83412	0.3501240	0.27184978	2.3600257	20	10 5.9	18.8
385396 2002 <i>VR</i> ₂₄	17.7	X	14.84123	157.30632	249.62460	1.49856	0.2237623	0.28033472	2.3121613	20	—	—
385397 2002 <i>VQ</i> ₂₆	17.3	X	324.60016	29.88256	50.17694	5.92974	0.2065566	0.27801298	2.3250163	20	—	—
385398 2002 <i>VR</i> ₃₀	17.5	X	313.09172	16.92138	50.67178	6.16578	0.2202899	0.27458523	2.3443256	20	12 7.9	18.8
385399 2002 <i>VK</i> ₆₆	17.7	X	358.47340	30.96578	30.26401	3.98330	0.1927644	0.28239480	2.3009027	20	—	—
385400 2002 <i>VF</i> ₁₂₄	17.5	X	30.19493	5.61753	15.18046	3.80578	0.2463244	0.28183834	2.3039303	20	—	—
385401 2002 <i>VF</i> ₁₂₇	16.9	X	12.27443	348.25674	48.55048	7.44937	0.1052833	0.28010657	2.3134166	20	—	—
385402 2002 <i>WZ</i> ₂	17.0	X	205.93549	48.14102	261.36050	51.32982	0.8845759	0.25513081	2.4620344	20	1 10.4	23.9
385403 2002 <i>WE</i> ₁₀	17.9	X	325.78297	9.39399	87.56450	3.34446	0.1697480	0.27978197	2.3152056	20	—	—
385404 2002 <i>WM</i> ₃₀	18.0	X	33.59741	135.93979	237.67603	7.27205	0.1589162	0.28090162	2.3090494	20	—	—
385405 2002 <i>XA</i> ₇	17.2	X	298.20544	246.56288	217.15228	4.28552	0.1636130	0.27656936	2.3330999	20	12 31.3	19.0
385406 2002 <i>XP</i> ₃₄	17.0	X	13.80131	332.87117	10.15213	9.12852	0.2825712	0.27685824	2.3314767	20	12 15.7	19.9
385407 2002 <i>XY</i> ₅₄	17.3	X	335.19106	315.02817	88.48432	11.20660	0.2527999	0.27516608	2.3410254	20	12 30.0	18.8
385408 2002 <i>XW</i> ₆₄	16.8	X	14.58569	288.92113	85.42712	23.31970	0.3113001	0.27659690	2.3330969	20	—	—
385409 2002 <i>XO</i> ₆₆	17.7	X	324.71644	121.92205	258.45243	3.67547	0.2415421	0.27120790	2.3637479	20	10 16.1	19.1
385410 2002 <i>XF</i> ₁₁₉	16.1	X	92.34642	38.02457	74.09529	11.39234	0.0690536	0.19050777	2.9913066	20	4 17.9	20.4
385411 2002 <i>YH</i> ₁₉	17.3	X	324.16378	342.37990	94.58349	5.07420	0.1875919	0.27590595	2.3368384	20	—	—
385412 2003 <i>AB</i> ₁₆	15.3	X	89.19324	184.44997	283.00889	16.61346	0.2059377	0.18175009	3.0866422	20	4 16.5	20.0
385413 2003 <i>AS</i> ₇₁	16.7	X	164.91470	146.79231	311.00591	18.06466	0.0717093	0.36348327	1.9445231	20	6 26.2	20.2
385414 2003 <i>AE</i> ₇₃	17.2	X	74.33703	19.42249	89.83782	12.51754	0.2539462	0.18119402	3.0929541	20	4 20.1	20.5
385415 2003 <i>AL</i> ₇₉	17.6	X	288.50579	329.59753	151.22828	4.30791	0.1656937	0.27239386	2.3568820	20	—	—
385416 2003 <i>AF</i> ₈₅	15.7	X	80.80448	144.70243	336.21203	16.56966	0.1489199	0.18232436	3.0801575	20	4 13.1	20.2
385417 2003 <i>BB</i> ₄₇	15.3	X	94.93553	99.14577	334.07692	25.13803	0.2351084	0.17971827	3.1098629	20	3 14.4	20.0
385418 2003 <i>BV</i> ₆₃	15.8	X	71.80966	16.48565	116.07855	19.35326	0.1570622	0.18104410	3.0946614	20	5 4.3	20.3
385419 2003 <i>BK</i> ₆₆	17.5	X	140.50223	158.83094	320.67876	17.52542	0.0544258	0.35997289	1.9571443	20	6 25.2	20.0
385420 2003 <i>CT</i> ₂₁	15.5	X	5.22141	89.15871	138.57713	27.07428	0.1593866	0.18374374	3.0642746	20	5 19.9	19.6
385421 2003 <i>CL</i> ₂₆	16.0	X	38.08975	346.90372	156.78552	17.49311	0.1486391	0.17675452	3.1445296	20	3 20.0	19.7
385422 2003 <i>DF</i> ₄	15.7	X	341.28287	51.89459	142.10229	28.33495	0.1990685	0.17254099	3.1955175	20	2 8.0	19.5
385423 2003 <i>DE</i> ₆	19.2	X	241.01591	68.75474	160.11355	23.19484	0.3286808	0.44485578	1.6995080	20	—	—
385424 2003 <i>DU</i> ₆	15.9	X	57.60740	116.87156	19.25131	10.20885	0.1876011	0.17758554	3.1347120	20	4 13.5	19.6
385425 2003 <i>DA</i> ₁₀	15.8	X	11.37680	195.52938	358.52001	35.15566	0.2796119	0.17744421	3.1363763	20	3 27.9	18.7
385426 2003 <i>EV</i> ₆	15.4	X	50.70676	159.92799	332.01831	11.65090	0.1384756	0.17555980	3.1587796	20	3 18.4	19.4
385427 2003 <i>ER</i> ₄₆	15.7	X	357.55672	194.19178	9.14842	16.94587	0.1389682	0.17595402	3.1540598	20	3 25.9	19.3
385428 2003 <i>EU</i> ₄₇	17.4	X	187.68850	190.02541	19.05348	1.36708	0.1330196	0.26379259	2.4078402	20	12 6.9	21.0
385429 2003 <i>EP</i> ₅₈	17.1	X	274.84763	164.53551	318.20400	5.36805	0.1666404	0.26669692	2.3903274	20	12 6.8	19.5
385430 2003 <i>EP</i> ₆₂	17.7	X	195.48948	13.55900	181.17959	1.71337	0.1476597	0.26183210	2.4198445	20	11 25.8	21.3
385431 2003 <i>FA</i> ₄	16.0	X	60.60967	191.06031	37.93631	16.16741	0.2632371	0.18526040	3.0475276	20	9 7.6	20.6
385432 2003 <i>FF</i> ₁₃	15.8	X	30.44420	177.75269	353.13555	14.67843	0.1445696	0.17572808				

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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>
385441 2003 OG ₅	16.2	X	346.36803	14.02883	308.66992	13.73427	0.2147463	0.23284590	2.6167184	20	8 22.1	18.4
385442 2003 OM ₆	16.3	X	331.94339	32.29556	275.40752	12.57864	0.2473364	0.22986380	2.6393015	20	6 20.1	18.2
385443 2003 QX ₇	16.4	X	222.45549	12.46579	339.04149	17.04373	0.2727115	0.21443179	2.7644576	20	3 24.0	21.4
385444 2003 QU ₂₆	15.9	X	328.60419	14.99199	340.44664	15.23278	0.1833032	0.23069029	2.6329938	20	9 3.9	18.2
385445 2003 QH ₉₁	6.8	X	126.81251	268.86632	286.55107	3.65016	0.1467774	0.00394496	39.6680799	20	8 26.5	23.2
385446 Manwë	6.5	X	283.55064	17.89882	68.47339	2.66665	0.1108522	0.00338981	43.8887053	20	9 21.6	22.8
385447 2003 QF ₁₁₃	6.6	X	19.84627	203.30902	114.05550	4.45169	0.0352787	0.00336413	44.1117043	20	9 2.5	22.9
385448 2003 QC ₁₁₅	16.7	X	240.49737	241.43071	132.01648	9.18441	0.2684656	0.21831357	2.7315903	20	5 11.8	21.4
385449 2003 SO ₂₃	16.1	X	51.21586	337.86308	301.76570	14.03407	0.1966835	0.23766555	2.5812212	20	10 12.4	19.9
385450 2003 SN ₂₆	16.3	X	17.24695	321.02444	323.82330	12.08887	0.2617355	0.23090189	2.6313849	20	9 10.6	18.9
385451 2003 SD ₅₃	16.6	X	219.13500	134.07961	230.90751	12.12541	0.2558034	0.21255001	2.7807502	20	4 10.5	21.7
385452 2003 ST ₆₄	17.1	X	219.47423	301.46866	81.98167	4.41617	0.2590769	0.21532306	2.7568239	20	5 5.7	21.9
385453 2003 SS ₉₁	15.9	X	275.42515	209.17792	132.50329	10.08111	0.2301394	0.21996373	2.7179116	20	5 10.3	20.0
385454 2003 SP ₁₆₈	16.4	X	204.72450	228.49830	128.09312	10.12300	0.2524082	0.21089676	2.7952636	20	3 27.1	21.4
385455 2003 SW ₂₃₆	16.8	X	203.80779	32.28965	2.99218	5.07038	0.2195454	0.21424299	2.7660815	20	5 6.7	21.6
385456 2003 SC ₂₇₉	16.8	X	233.74934	45.29042	340.62444	8.93855	0.0933046	0.21910527	2.7250062	20	5 31.8	20.9
385457 2003 SD ₂₈₅	16.7	X	107.88395	213.73788	341.57453	12.18349	0.1722929	0.22660855	2.6645172	20	8 27.6	20.7
385458 2003 SP ₃₁₇	7.1	X	307.46800	95.84590	347.02031	5.06758	0.1679194	0.00315387	46.0511319	20	10 5.6	23.4
385459 2003 SG ₃₃₂	18.1	X	29.14571	341.94965	79.65590	4.88948	0.1673904	0.30604137	2.1808006	20	—	—
385460 2003 SR ₃₄₈	17.0	X	15.18256	39.73616	30.79103	1.63887	0.1118496	0.18932286	3.0037746	20	—	—
385461 2003 SY ₃₇₉	17.0	X	139.91601	13.73384	176.38030	14.30639	0.1722521	0.23100916	2.6305703	20	9 23.7	21.3
385462 2003 TY ₃	17.4	X	209.40841	93.49761	313.73641	5.06194	0.0491434	0.21736848	2.7395023	20	6 5.1	21.3
385463 2003 TG ₈	16.0	X	289.74264	87.88128	264.94147	12.87873	0.0520050	0.22092445	2.7100265	20	7 6.0	19.6
385464 2003 TQ ₁₆	16.6	X	187.75972	357.52312	58.46283	11.16748	0.2632341	0.21175974	2.7876641	20	5 20.1	21.7
385465 2003 UF ₃₅	16.7	X	229.89971	134.11479	234.40206	8.71848	0.1755742	0.21479293	2.7613581	20	4 29.4	21.2
385466 2003 UO ₄₀	16.8	X	201.62049	213.81485	224.69716	4.32737	0.0934252	0.21787523	2.7352529	20	7 4.3	20.9
385467 2003 UD ₇₄	16.8	X	186.47660	331.02961	75.28399	7.95984	0.2103535	0.21129935	2.7917120	20	5 9.3	21.6
385468 2003 UF ₁₀₈	16.5	X	203.50009	18.14987	31.04958	5.19559	0.1179613	0.21305431	2.7763603	20	5 27.9	20.9
385469 2003 UE ₁₃₀	15.8	X	149.08319	165.26930	254.94420	14.18911	0.1213878	0.20493037	2.8492584	20	4 14.3	20.4
385470 2003 UT ₁₄₀	16.8	X	302.21399	202.68183	140.41127	7.85487	0.1788473	0.22335406	2.6903378	20	6 23.6	20.0
385471 2003 UD ₁₈₈	16.3	X	245.05169	333.34084	9.06799	7.00793	0.2579923	0.21312800	2.7757203	20	4 5.3	20.9
385472 2003 UP ₁₉₃	16.3	X	236.66446	226.94153	199.34018	13.76383	0.0803552	0.22510934	2.6763344	20	7 27.7	20.4
385473 2003 UJ ₂₃₀	16.6	X	254.63628	193.61943	183.28539	7.32324	0.1433691	0.21781534	2.7357542	20	6 9.6	20.7
385474 2003 UC ₂₈₁	16.6	X	160.13534	42.56909	50.62513	14.23807	0.1906641	0.20957385	2.8070145	20	6 10.3	21.3
385475 2003 UL ₂₈₈	15.9	X	137.00652	123.91668	29.94664	16.21658	0.0523814	0.21943375	2.7222861	20	8 5.7	20.1
385476 2003 UC ₃₃₁	16.3	X	180.92166	242.67271	237.41675	11.83685	0.1237617	0.22903377	2.6456743	20	7 31.5	20.6
385477 2003 VH ₃	18.4	X	9.75188	57.80463	42.53719	3.27925	0.0990257	0.30616955	2.1801919	20	—	—
385478 2003 WS ₈	16.3	X	170.09980	143.53113	282.50832	7.25435	0.1324653	0.20887238	2.8132956	20	5 15.4	20.8
385479 2003 WE ₁₀	16.7	X	235.30902	96.28684	280.10035	8.35168	0.1466609	0.21299728	2.7768559	20	5 16.3	21.1
385480 2003 WF ₁₆	16.9	X	185.84922	193.25984	221.05113	2.18998	0.2057022	0.21015660	2.8018230	20	5 17.1	21.7
385481 2003 WL ₄₅	18.1	X	60.84940	339.05547	37.47096	5.45893	0.1968226	0.30307161	2.1950237	20	—	—
385482 2003 WK ₈₁	16.5	X	199.59169	141.62218	263.17872	8.32870	0.2220717	0.21053154	2.7984955	20	5 15.4	21.3
385483 2003 WF ₈₄	18.0	X	6.40275	123.57274	260.83727	6.88264	0.1160565	0.29589479	2.2303747	20	—	—
385484 2003 WB ₁₂₂	15.9	X	141.81619	194.96754	273.49197	6.86252	0.0769888	0.20860435	2.8157049	20	6 7.1	20.1
385485 2003 WJ ₁₂₂	16.4	X	163.90480	44.88024	43.25450	9.72836	0.1351713	0.20943112	2.8082897	20	6 6.3	20.9
385486 2003 WP ₁₇₈	18.8	X	64.87279	216.76947	189.42270	0.45289	0.1682949	0.30905483	2.1666015	20	—	—
385487 2003 YJ ₄₄	18.0	X	338.83209	343.84529	93.08619	2.62722	0.1493966	0.29251830	2.2475051	20	—	—
385488 2003 YK ₁₀₄	16.0	X	28.14657	322.24247	117.26795	8.94862	0.2332333	0.18196173	3.0842484	20	—	—
385489 2004 BE ₃₄	18.5	X	305.57368	53.50810	101.73239	2.17235	0.1215311	0.29622694	2.2287072	20	—	—
385490 2004 BY ₉₇	16.0	X	322.73581	240.84654	341.90276	16.44914	0.2135662	0.18141066	3.0904912	20	2 15.2	19.9
385491 2004 BD ₁₀₂	16.4	X	119.65748	323.36967	164.71331	16.63329	0.2206195	0.19765244	2.9187793	20	6 21.7	21.4
385492 2004 CU ₃₉	18.4	X	139.30492	248.47216	330.58769	19.57623	0.0875986	0.39757276	1.8317167	20	11 20.9	21.1
385493 2004 CN ₄₉	18.0	X	145.30168	60.76356	144.26846	18.05020	0.0429604	0.08364201	5.1782906	20	9 28.8	20.9
385494 2004 CO ₅₁	13.7	X	93.29571	212.56060	315.28082	18.94030	0.0585850	0.38195227	1.8813228	20	7 5.3	20.0
385495 2004 CX ₉₅	15.5	X	351.40333	64.81260	147.76253	16.62436	0.1743794	0.18562733	3.0435103	20	3 26.4	19.0
385496 2004 CF ₉₉	17.2	X	300.30400	135.27480	32.11038	8.08672	0.1038541	0.29537519	2.2329896	20	—	—
385497 2004 DD	18.8	X	140.72834	8.56099	3.69383	11.58295	0.4591916	0.49209673	1.5889213	20	2 23.2	20.5
385498 2004 DP ₂₇	15.6	X	338.79272	334.60442	165.17173	17.18506	0.1705659	0.17430234	3.1739536	20	—	—
385499 2004 DJ ₆₃	17.7	X	221.08465	251.94296	354.60906	7.64029	0.1486589	0.29211473	2.2495746	20	—	—
385500 2004 DA ₇₃	16.0	X	300.02547	299.48962	345.93829	8.33140	0.0706888	0.19275416	2.9680204	20	4 16.4	20.1
385501 2004 EZ ₂₄	17.5	X	223.17027	227.68911	168.24550	23.05645	0.1040294	0.38129393	1.8834877	20	6 6.5	20.4
385502 2004 EG ₄₆	17.6	X	257.59005	72.86843	144.31929	8.43559	0.2360443	0.29124101	2.2540716	20	—	—
385503 2004 EL ₄₇	17.6	X	216.03107	88.87389	150.37108	7.61856	0.0728694	0.28953871	2.2628979	20	—	—
385504 2004 ED ₄₈	16.0	X	329.56008	245.41050	357.15795	13.32951	0.0325282	0.18768224	3.0212541	20	4 6.4	20.2
385505 2004 EX ₄₈	17.8	X	284.30252	353.93219	191.38301	6.98948	0.1287262	0.29194727	2.2504348	20	—	—
385506 2004 EO ₁₁₂	15.7	X	5.66168	165.80345	57.95234	11.80532	0.0649342	0.18898917	3.0073093	20	5 6.3	19.5
385507 2004 FZ ₃₁	17.8	X	92.70083	223.56810	355.52008	19.87086	0.0725286	0.38565587	1.8692587	20	9 23.1	19.6
385508 2004 FT ₅₃	16.1	X	285.47209	299.99550	16.02107	6.91239	0.0351532	0.19406472	2.9546429	20	5 13.4	20.2
385509 2004 FC ₈₁	17.1	X	238.75008	130.48430	120.96857	6.41266	0.2080927	0.29040151	2.2584135	20	—	—
385510 2004 FB ₁₀₅	16.4	X	271.39394	230.97644	21.01315	10.83307	0.0366507	0.17653911	3.1470870	20	2 13.8	21.0
385511 2004 FU ₁₂₄	16.2	X	341.11718	263.80683	355.81699	7.32579	0.2629687	0.18884801	3.0088077	20	4 23.4	19.1
385512 2004 FP ₁₅₃	16.1	X	93.64969	40.95946	41.46330	8.37774	0.1102604	0.18540537	3.0459389	20	3 18.6	20.4
385513 2004 GE ₅₄	16.4	X	288.02399	249.78828	24.72517	10.77984	0.0580785	0.18239284	3.0793865	20	3 26.4	20.7
385514 2004 GY ₅₉	16.6	X	3.25									

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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>
385601 2005 ES ₁₁₆	17.0	X	15.59640	54.03631	155.20676	2.51119	0.0132255	0.20246015	2.8723874	20	4 29.6	20.9
385602 2005 EK ₁₃₀	17.0	X	148.64170	184.32361	304.77663	4.36616	0.0678008	0.21796675	2.7344872	20	7 11.9	20.9
385603 2005 ED ₁₈₄	17.0	X	132.04007	315.81694	180.20483	15.48570	0.2294354	0.21247469	2.7814073	20	7 10.9	22.0
385604 2005 EV ₂₀₅	16.3	X	73.36087	79.97603	151.70401	25.19429	0.1245936	0.22056752	2.7129493	20	9 2.9	20.0
385605 2005 EJ ₂₂₅	19.0	X	243.63301	290.58941	342.10638	8.85989	0.5731224	0.44210392	1.7065531	20	—	—
385606 2005 EV ₂₅₀	15.8	X	123.04219	47.11076	150.29779	13.45442	0.1292641	0.21966631	2.7203643	20	9 15.4	20.0
385607 2005 EO ₂₉₇	7.2	X	17.48945	349.23489	144.11149	25.09066	0.3401048	0.00199956	62.3993924	20	3 12.3	23.6
385608 2005 GM ₁₀	16.3	X	121.96132	124.41650	21.15304	13.26661	0.1032143	0.20965274	2.8063102	20	7 6.8	20.7
385609 2005 GS ₃₄	15.7	X	131.33229	72.74720	111.80103	10.23222	0.1680248	0.21665316	2.7455290	20	9 10.9	20.2
385610 2005 GV ₅₆	18.5	X	279.16781	92.51842	121.61406	1.49890	0.0890231	0.31227365	2.1516873	20	—	—
385611 2005 GC ₆₅	16.6	X	95.49045	42.39333	138.98723	14.19171	0.1449672	0.21098435	2.7944900	20	7 25.9	20.7
385612 2005 GO ₇₉	16.4	X	68.05862	191.40378	45.22850	4.48602	0.0438834	0.21289414	2.7775272	20	8 21.9	20.1
385613 2005 GP ₉₁	15.8	X	267.07123	355.76662	351.22306	8.17511	0.2158009	0.20212216	2.8755887	20	5 3.5	20.2
385614 2005 GA ₁₄₂	16.6	X	103.20760	205.92592	353.70973	4.93737	0.0994864	0.21358222	2.7717836	20	8 23.9	20.6
385615 2005 GF ₂₁₀	16.6	X	109.18874	98.18717	83.64292	16.41960	0.2043930	0.21286789	2.7779811	20	8 22.1	21.3
385616 2005 JP ₁₂₈	17.5	X	152.20374	247.80854	75.65384	6.89858	0.0886299	0.30477220	2.1868508	20	—	—
385617 2005 ML ₂₁	17.8	X	104.72094	213.49904	141.83433	9.83002	0.1750807	0.28822830	2.2697515	20	—	—
385618 2005 MW ₂₁	16.1	X	178.87552	214.66804	129.48193	16.79130	0.0563049	0.17127377	3.2112600	20	2 17.9	20.9
385619 2005 MB ₂₂	17.9	X	158.33030	155.46133	120.34923	5.41576	0.1592837	0.29032823	2.2587936	20	—	—
385620 2005 MA ₂₆	16.0	X	194.97349	212.10691	107.09836	12.08372	0.2169817	0.17701412	3.1414545	20	2 6.6	21.4
385621 2005 MS ₃₁	17.2	X	283.91858	191.92881	213.07712	3.39938	0.0693737	0.26917518	2.3756332	20	9 12.5	19.9
385622 2005 NR ₄	17.6	X	340.25207	124.14775	243.90029	0.36928	0.1916393	0.27025023	2.3693288	20	11 3.5	19.4
385623 2005 NT ₅	15.8	X	317.69179	295.97126	303.70521	9.15063	0.0669625	0.17981695	3.1087249	20	3 13.4	20.1
385624 2005 ND ₂₂	15.9	X	347.64433	89.41382	137.49433	11.83194	0.1611243	0.18560453	3.0437596	20	4 10.0	19.5
385625 2005 NS ₃₀	17.7	X	346.03611	249.41102	118.86110	2.95412	0.2475492	0.27076855	2.3663041	20	11 26.5	19.5
385626 2005 NO ₃₁	15.8	X	211.63557	206.54571	119.22474	17.80089	0.1095361	0.17539608	3.1607450	20	3 2.4	20.9
385627 2005 NZ ₄₃	16.1	X	176.48685	34.83395	290.03567	8.28946	0.1138109	0.16979992	3.2298156	20	1 24.8	19.8
385628 2005 NG ₈₄	17.4	X	6.16719	249.71836	98.80643	3.56945	0.1772167	0.27278712	2.3546163	20	11 24.3	19.8
385629 2005 OU ₁₈	15.6	X	321.53084	282.72152	333.01642	16.64703	0.2048736	0.18164553	3.0878266	20	3 18.4	19.6
385630 2005 OP ₂₁	17.0	X	5.63962	25.70483	334.76859	4.00305	0.2458111	0.27114796	2.3640962	20	12 20.9	19.5
385631 2005 QK ₅₂	18.3	X	342.80789	111.23586	290.21165	1.49123	0.2037028	0.27215774	2.3582450	20	—	—
385632 2005 QQ ₅₂	17.0	X	5.67785	17.13651	339.43397	2.81968	0.2841382	0.26919963	2.3754893	20	12 21.5	19.5
385633 2005 QL ₅₇	15.4	X	218.39088	344.61217	328.72197	22.09847	0.0926999	0.17109227	3.2135308	20	2 19.9	20.4
385634 2005 QW ₆₅	15.2	X	249.65657	332.57136	322.44842	23.70358	0.2092163	0.17577048	3.1562550	20	2 18.2	20.5
385635 2005 QX ₇₃	17.0	X	2.59591	11.83064	338.19685	5.98614	0.2030106	0.26713167	2.3877332	20	11 20.2	19.4
385636 2005 QS ₇₅	16.9	X	348.91933	288.92577	79.14322	6.68446	0.3229676	0.26583490	2.3954920	20	12 13.9	18.7
385637 2005 QR ₈₈	17.5	X	314.98956	316.53930	108.26734	2.37392	0.1654969	0.27073888	2.3666477	20	12 5.5	19.4
385638 2005 QY ₁₁₀	17.5	X	351.22343	85.64513	287.82596	1.13827	0.2126689	0.268873719	2.3782137	20	12 7.9	19.4
385639 2005 QB ₁₁₆	16.0	X	262.93872	305.96311	339.46803	8.60693	0.0554927	0.17350650	3.1836517	20	3 7.8	20.6
385640 2005 QV ₁₁₆	17.6	X	333.09798	252.14407	154.19555	2.78623	0.1933863	0.27107846	2.3645003	20	12 19.1	19.4
385641 2005 QT ₁₂₀	18.1	X	353.68437	265.49051	148.62552	0.84710	0.2122879	0.27614472	2.3354911	20	—	—
385642 2005 QX ₁₃₁	17.5	X	309.11450	36.33434	62.73199	3.55249	0.1806649	0.27536855	2.3398777	20	—	—
385643 2005 QR ₁₃₃	17.7	X	206.91643	230.67973	356.05687	6.33273	0.0416981	0.28343174	2.2952873	20	—	—
385644 2005 QH ₁₃₈	17.9	X	308.76571	347.83507	66.92108	2.18781	0.1651519	0.26673968	2.3900719	20	11 4.2	19.8
385645 2005 QS ₁₇₄	17.7	X	32.56616	17.18789	330.26953	6.27171	0.1551282	0.27390278	2.3482180	20	12 27.0	20.7
385646 2005 QN ₁₇₅	17.8	X	347.63900	16.05555	346.04883	1.39215	0.2272120	0.26624731	2.3930177	20	11 13.9	19.6
385647 2005 QR ₁₇₈	15.9	X	91.99150	272.44636	167.22379	21.28643	0.0108573	0.16933473	3.2357281	20	2 25.3	20.5
385648 2005 QU ₁₈₁	17.4	X	96.29276	129.30608	208.80142	6.80367	0.1483715	0.28417682	2.2912736	20	—	—
385649 2005 QG ₁₉₀	17.8	X	358.37331	72.34459	329.84614	6.74978	0.1102416	0.27612827	2.3355839	20	—	—
385650 2005 RW ₁₁	17.8	X	350.86570	65.81940	293.90564	0.39581	0.1814991	0.26530279	2.3986940	20	11 10.2	19.8
385651 2005 RZ ₁₄	18.0	X	340.88465	215.53743	166.19163	4.34546	0.1568539	0.26891218	2.3771818	20	11 23.2	20.1
385652 2005 SQ ₂₁	15.9	X	269.12528	112.37160	169.25238	12.40753	0.0943064	0.17394103	3.1783473	20	3 5.9	20.5
385653 2005 RL ₂₃	17.4	X	6.98064	79.18325	321.52871	7.86166	0.2112932	0.27568673	2.3380770	20	—	—
385654 2005 RY ₂₃	16.8	X	316.62675	66.12415	333.11235	8.79347	0.1514619	0.26339495	2.4106229	20	10 21.7	19.1
385655 2005 RW ₄₀	17.4	X	229.24695	299.78328	331.61086	6.15245	0.1568081	0.29862023	2.2167833	20	—	—
385656 2005 RK ₅₁	16.0	X	304.09609	326.00672	333.94387	12.36845	0.2644942	0.18349159	3.0670812	20	4 9.2	20.4
385657 2005 SQ ₁₄	16.8	X	77.00036	281.75949	59.16943	8.28299	0.1231978	0.28084209	2.3093756	20	—	—
385658 2005 SS ₂₁	17.8	X	212.34724	218.31198	202.32469	22.24615	0.1199778	0.38217075	1.8806057	20	6 23.4	20.7
385659 2005 SZ ₃₅	17.8	X	352.27963	192.72681	210.14458	4.74324	0.1602788	0.27021678	2.3695243	20	—	—
385660 2005 SM ₄₇	17.5	X	316.28590	156.14443	270.89393	1.68782	0.1624723	0.26803360	2.3823737	20	12 10.3	19.3
385661 2005 SZ ₅₁	17.3	X	103.78096	269.50155	27.06693	5.05959	0.2434943	0.27691467	2.3311600	20	—	—
385662 2005 SH ₉₂	18.0	X	315.87171	171.52010	210.30718	2.15611	0.1947738	0.26111428	2.4242773	20	9 23.1	19.8
385663 2005 SH ₉₅	17.6	X	328.67421	5.34615	28.41385	3.84789	0.1296960	0.26638863	2.3921712	20	11 12.0	19.8
385664 2005 SG ₉₉	17.6	X	47.60952	89.43315	242.39699	5.39380	0.1149726	0.27087175	2.3657031	20	12 18.0	20.6
385665 2005 SR ₉₉	15.7	X	268.38440	311.97670	341.54117	6.55210	0.1332385	0.17120268	3.2121490	20	3 14.3	20.4
385666 2005 SH ₁₀₀	17.5	X	73.81864	312.68687	354.28654	6.38937	0.1256858	0.27163735	2.3612559	20	12 16.9	21.0
385667 2005 ST ₁₁₃	17.7	X	329.30433	143.26255	236.88382	0.43507	0.2017643	0.26451688	2.4034428	20	10 26.5	19.4
385668 2005												

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>		
385761	2005	<i>YK</i> ₇₄	17.7	X	213.59951	227.66149	293.38192	2.66761	0.0959916	0.25587099	2.4572840	20	11 6.8	21.2
385762	2005	<i>YN</i> ₇₅	17.6	X	223.53032	200.02772	350.80007	1.70717	0.1696878	0.26063168	2.4272690	20	12 19.4	20.6
385763	2005	<i>YF</i> ₇₆	17.6	X	266.95147	354.94742	79.29465	4.62040	0.1648547	0.25199550	2.4824139	20	9 14.0	20.6
385764	2005	<i>YN</i> ₇₉	16.8	X	356.05675	213.00135	105.61520	16.43195	0.1500877	0.24624136	2.5209373	20	9 18.4	19.7
385765	2005	<i>YC</i> ₁₁₄	16.8	X	42.69542	145.83530	78.40967	5.60640	0.1142201	0.23193170	2.6235900	20	7 9.6	20.0
385766	2005	<i>YP</i> ₁₂₁	17.0	X	179.15169	8.70001	89.44217	6.23337	0.1799625	0.23689481	2.5868169	20	7 5.4	21.2
385767	2005	<i>YD</i> ₁₂₈	16.8	X	305.13873	334.92257	69.01254	3.37056	0.1870193	0.25438888	2.4668191	20	10 5.5	18.9
385768	2005	<i>YU</i> ₁₄₄	18.1	X	256.51778	30.55461	77.48707	2.33393	0.1875839	0.25289968	2.4764935	20	10 10.7	21.0
385769	2005	<i>YV</i> ₁₄₄	17.3	X	261.93347	93.53799	301.48113	11.94959	0.1718444	0.24231603	2.5480891	20	7 9.9	20.9
385770	2005	<i>YQ</i> ₁₉₁	16.9	X	272.04496	269.29330	108.54220	8.41625	0.2687652	0.24307170	2.5428053	20	6 14.5	20.4
385771	2005	<i>YE</i> ₂₁₂	17.9	X	173.05096	118.46627	310.79694	19.39699	0.1010453	0.36755395	1.9301393	20	5 16.0	20.9
385772	2005	<i>YO</i> ₂₅₈	16.7	X	176.69708	92.31799	134.15609	3.80656	0.2537259	0.18549881	3.0449159	20	11 28.1	22.0
385773	2005	<i>YB</i> ₂₉₁	16.8	X	165.20635	134.62670	96.75476	5.95115	0.0963477	0.25805227	2.4434170	20	12 13.4	20.3
385774	2006	<i>AA</i> ₁₄	17.4	X	343.04243	215.47700	349.41623	2.96209	0.1481935	0.25343621	2.4729971	20	10 27.2	19.8
385775	2006	<i>AE</i> ₂₂	17.5	X	136.92071	201.50259	129.25442	16.59598	0.0536356	0.37663710	1.8989811	20	9 4.7	19.5
385776	2006	<i>AD</i> ₂₃	18.0	X	202.87790	238.08949	286.86389	4.04518	0.0711417	0.25317646	2.4746883	20	10 31.9	21.4
385777	2006	<i>AY</i> ₅₃	17.5	X	202.32103	354.89360	188.00669	4.72552	0.0414193	0.24656536	2.5187284	20	9 24.6	20.9
385778	2006	<i>AE</i> ₇₄	17.5	X	250.50429	68.78239	315.02261	19.62461	0.1462787	0.37406602	1.9076728	20	6 17.8	20.0
385779	2006	<i>AJ</i> ₇₉	17.7	X	21.92375	152.16102	124.48474	23.70942	0.0613854	0.37543077	1.9030468	20	9 9.2	19.7
385780	2006	<i>AO</i> ₉₅	15.8	X	336.87400	257.49130	156.43520	3.53799	0.2586259	0.12508431	3.9597475	20	11 12.9	19.9
385781	2006	<i>BR</i>	17.6	X	147.96160	54.63083	80.49305	23.42956	0.0861478	0.37390309	1.9082269	20	8 2.9	20.3
385782	2006	<i>BG</i> ₄₂	16.0	X	351.08250	312.10720	95.70757	2.44392	0.2470725	0.12638956	3.9324382	20	12 4.9	20.2
385783	2006	<i>BV</i> ₅₀	15.8	X	356.65487	10.99655	33.65702	3.25778	0.2336500	0.12558140	3.9492913	20	12 10.2	20.1
385784	2006	<i>BK</i> ₆₅	17.6	X	60.13165	132.96867	59.13471	1.57462	0.1928825	0.22668942	2.6638834	20	7 3.7	20.8
385785	2006	<i>BA</i> ₇₅	17.5	X	178.33820	80.04763	79.17326	2.97732	0.0769577	0.24454684	2.5325693	20	9 27.9	21.2
385786	2006	<i>BC</i> ₇₅	17.6	X	333.73088	269.04205	96.11210	4.12980	0.0557174	0.24622795	2.5210289	20	10 5.8	20.6
385787	2006	<i>BM</i> ₇₆	17.3	X	18.67765	339.25397	337.37150	9.71466	0.1126639	0.24456033	2.5324762	20	10 8.0	20.3
385788	2006	<i>BY</i> ₈₆	17.3	X	135.59734	242.34848	334.36600	5.52980	0.0777869	0.24600122	2.5225777	20	10 19.9	21.0
385789	2006	<i>BT</i> ₁₀₀	17.5	X	258.81699	346.57250	59.13298	2.37515	0.1769539	0.24301262	2.5432175	20	7 19.5	21.0
385790	2006	<i>BG</i> ₁₀₈	17.0	X	300.94608	276.75688	79.44788	2.02747	0.1654119	0.23985589	2.5654829	20	7 13.9	19.7
385791	2006	<i>BN</i> ₁₁₄	16.3	X	223.74999	103.30918	331.00910	22.05944	0.0940351	0.23594089	2.5937846	20	7 31.4	20.2
385792	2006	<i>BV</i> ₁₂₇	17.0	X	121.64637	57.09374	153.30387	14.51218	0.1260668	0.23918195	2.5702998	20	10 3.9	21.0
385793	2006	<i>BV</i> ₁₇₈	16.9	X	236.18956	357.04050	142.77447	7.07329	0.0687422	0.25453887	2.4658499	20	11 14.9	20.1
385794	2006	<i>BY</i> ₁₈₁	17.5	X	218.31411	307.04836	136.71427	5.77686	0.0913167	0.23789390	2.5795692	20	7 31.9	21.0
385795	2006	<i>BJ</i> ₂₆₅	18.0	X	243.56979	116.33409	337.65314	6.41979	0.2335313	0.24608409	2.5220113	20	8 27.4	21.7
385796	2006	<i>BF</i> ₂₇₇	17.1	X	237.04672	250.35018	156.80526	5.68745	0.2853830	0.23712273	2.5851590	20	6 15.5	21.5
385797	2006	<i>BV</i> ₂₇₇	17.3	X	252.72877	181.02961	351.49728	2.25388	0.1300922	0.18821206	3.0155816	20	12 20.7	21.3
385798	2006	<i>BF</i> ₂₈₁	17.4	X	247.52627	78.01561	338.64150	9.12492	0.1642310	0.23806006	2.5783687	20	7 23.7	21.1
385799	2006	<i>CZ</i>	17.5	X	355.25535	118.83679	137.13950	24.52031	0.0303274	0.36678276	1.9328439	20	6 9.5	20.0
385800	2006	<i>CA</i> ₁	17.6	X	14.19306	257.57935	331.25307	17.25951	0.0715116	0.36171726	1.9508471	20	5 13.9	19.7
385801	2006	<i>CS</i> ₁₈	17.9	X	193.04998	64.87663	1.76889	2.65929	0.1795165	0.23186813	2.6240696	20	6 7.4	22.3
385802	2006	<i>DO</i> ₁₁	16.5	X	219.58134	6.64399	127.08308	14.95075	0.1211867	0.24502038	2.5293053	20	10 11.7	20.3
385803	2006	<i>DL</i> ₂₃	16.8	X	141.53675	179.61508	347.41986	11.41348	0.1201944	0.23520110	2.5992207	20	8 27.5	20.8
385804	2006	<i>DS</i> ₂₃	17.2	X	140.97516	33.25288	114.54393	2.16999	0.0914525	0.23174346	2.6250106	20	7 29.7	21.2
385805	2006	<i>DO</i> ₃₇	17.0	X	123.55114	223.07501	352.46604	11.93184	0.2309606	0.23630037	2.5911533	20	10 9.5	21.5
385806	2006	<i>DT</i> ₅₂	17.6	X	260.53554	287.21206	154.04555	3.09430	0.0483129	0.24322497	2.5417370	20	9 29.8	20.6
385807	2006	<i>DH</i> ₅₇	16.1	X	36.91889	101.65779	84.27910	13.55590	0.1198785	0.21617592	2.7495683	20	5 10.4	19.4
385808	2006	<i>DO</i> ₆₇	17.3	X	90.22577	136.15719	5.27485	20.61505	0.0545977	0.35718716	1.9673071	20	4 30.9	19.7
385809	2006	<i>DV</i> ₉₁	17.8	X	217.00841	298.76278	171.68874	2.92149	0.1302066	0.24058276	2.5603129	20	8 30.8	21.4
385810	2006	<i>DB</i> ₁₂₀	15.4	X	46.90358	305.07461	6.48906	13.59521	0.2088145	0.24453910	2.5326228	20	11 24.0	19.2
385811	2006	<i>DL</i> ₁₂₁	15.8	X	76.52396	51.74022	140.74087	31.78610	0.0734717	0.22801942	2.6535147	20	7 10.5	19.7
385812	2006	<i>DC</i> ₁₅₆	17.2	X	208.62423	307.81221	155.82903	9.13378	0.1227603	0.23769753	2.5809897	20	8 12.6	21.0
385813	2006	<i>DX</i> ₁₆₁	17.6	X	201.33758	350.23875	153.85700	18.64126	0.1335743	0.24413394	2.5354241	20	9 30.3	21.5
385814	2006	<i>DK</i> ₁₉₈	16.9	X	199.78307	62.54171	92.18100	13.11672	0.1941368	0.24456001	2.5324784	20	10 10.7	21.1
385815	2006	<i>EP</i> ₁₆	17.7	X	213.91272	301.35386	148.81853	4.00142	0.0606322	0.23278842	2.6171492	20	8 6.9	21.4
385816	2006	<i>EN</i> ₂₈	17.5	X	160.30801	52.03885	164.24782	4.50156	0.1799974	0.24507108	2.5289564	20	11 14.7	21.7
385817	2006	<i>EW</i> ₆₉	17.0	X	142.07915	149.83905	8.96912	13.12464	0.1635667	0.23174541	2.6249958	20	8 22.3	21.4
385818	2006	<i>FK</i> ₇	17.2	X	158.97469	106.15500	31.63990	6.79047	0.1539379	0.22941713	2.6427261	20	8 8.6	21.6
385819	2006	<i>FE</i> ₁₄	17.4	X	135.32585	20.10882	168.16946	3.86761	0.1137835	0.23342818	2.6123650	20	9 15.3	21.4
385820	2006	<i>FH</i> ₂₈	17.4	X	174.94930	137.24028	26.72021	11.55457	0.2218377	0.23753185	2.5821897	20	9 24.5	21.8
385821	2006	<i>FZ</i> ₅₀	16.4	X	134.92579	85.81520	137.31482	17.46731	0.2448739	0.23520624	2.5991828	20	11 5.7	21.3
385822	2006	<i>FW</i> ₅₃	16.9	X	164.47711	161.52883	22.62087	12.51868	0.1022713	0.23902020	2.5714592	20	10 11.3	20.7
385823	2006	<i>GN</i> ₂	16.9	X	121.41902	258.26791	311.87956	3.57816	0.1156375	0.23548270	2.5971480	20	9 27.3	21.0
385824	2006	<i>GW</i> ₆	17.1	X	133.45745	59.57240	139.32467	5.57623	0.1611271	0.23533830	2.5982104	20	9 30.5	21.2
385825	2006	<i>GG</i> ₁₂	17.2	X	89.13207	185.73959	62.41808	3.68789	0.1710445	0.23307918	2.6149721	20	10 19.1	21.1
385826	2006	<i>GW</i> ₂₈	17.8	X	129.83022	139.95472	46.57182	2.68983	0.0751793	0.23022867	2.6365122	20	9 6.1	21.7
385827	2006	<i>GB</i> ₃₂	15.9	X	46.13436	210.21449	48.83145	14.48031	0.2206516	0.22429968	2.6827711	20	9 25.8	19.6
385828	2006	<i>GJ</i> 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>
385921 2006 TC ₇₄	16.0	X	180.16330	305.02436	85.49010	5.88727	0.1527316	0.18119930	3.0928940	20	4 16.6	21.1
385922 2006 TG ₁₀₁	18.0	X	34.69448	156.79774	225.79195	7.12403	0.1999483	0.29514445	2.2341533	20	—	—
385923 2006 TB ₁₀₃	16.2	X	278.17533	264.77011	15.14434	5.10388	0.1120761	0.18027658	3.1034387	20	3 12.7	20.6
385924 2006 TS ₁₁₃	16.3	X	303.55944	112.19557	140.68295	11.45302	0.0419214	0.17900468	3.1181221	20	3 22.4	20.7
385925 2006 TG ₁₁₅	15.9	X	14.92248	94.07886	131.62990	12.13508	0.1651827	0.18626707	3.0365376	20	5 29.9	19.5
385926 2006 TE ₁₁₆	16.2	X	232.43805	160.61284	122.57481	8.49668	0.0963825	0.17302435	3.1895634	20	1 30.3	21.2
385927 2006 TM ₁₁₆	16.1	X	331.40095	90.78124	125.48020	10.76745	0.1604889	0.17592380	3.1544210	20	2 27.4	20.1
385928 2006 UK ₄	15.8	X	68.27679	78.45040	18.87710	12.01852	0.0432796	0.17140546	3.2096151	20	2 27.0	20.3
385929 2006 UC ₁₁	18.9	X	35.99733	216.53981	174.35565	1.67276	0.1207443	0.29671429	2.2626661	20	—	—
385930 2006 UD ₆₂	18.2	X	78.85489	110.48657	271.74313	3.53069	0.1488471	0.30453412	2.1879904	20	—	—
385931 2006 UR ₆₃	15.8	X	19.74339	141.49322	118.32637	7.98825	0.0764338	0.19742784	2.9209925	20	7 15.3	19.4
385932 2006 UX ₇₂	16.2	X	103.44636	79.89217	351.83965	8.55286	0.0336837	0.17355938	3.1830050	20	3 4.9	20.6
385933 2006 UJ ₈₂	17.5	X	70.46211	312.10052	63.40643	2.04000	0.2323844	0.30119251	2.2041439	20	—	—
385934 2006 UU ₈₈	17.0	X	55.55230	170.54416	229.09972	5.89185	0.1531998	0.29990718	2.2104370	20	—	—
385935 2006 UB ₉₄	15.8	X	26.94098	93.58537	49.76386	11.30885	0.0128139	0.17112819	3.2130810	20	2 29.0	20.4
385936 2006 UF ₁₀₄	18.3	X	71.26219	276.50168	108.95733	2.05977	0.0620361	0.30113083	2.2044448	20	—	—
385937 2006 UM ₁₁₀	16.3	X	126.37114	211.80073	201.41741	12.62077	0.1182485	0.17817612	3.1277814	20	3 16.6	21.1
385938 2006 UP ₁₁₃	18.0	X	306.51271	312.48341	216.10109	5.53701	0.0990553	0.30587180	2.1816065	20	—	—
385939 2006 UR ₁₁₈	18.5	X	152.77264	140.68292	198.66195	1.77043	0.0632878	0.31129527	2.1561933	20	—	—
385940 2006 UW ₁₂₉	18.6	X	336.80609	123.17984	21.11087	4.76159	0.0556256	0.30591275	2.1814118	20	—	—
385941 2006 UN ₁₃₃	18.3	X	39.66724	7.85455	52.43484	4.01202	0.1209629	0.30144992	2.2028889	20	—	—
385942 2006 UA ₁₇₄	17.8	X	6.50053	173.21612	246.24728	7.88083	0.1476779	0.29565462	2.2315824	20	—	—
385943 2006 UK ₁₈₇	15.3	X	80.42451	191.85365	250.73810	15.98367	0.0971055	0.17165459	3.2065088	20	2 19.1	20.0
385944 2006 UW ₁₈₇	16.0	X	188.85809	43.93188	300.70588	10.17739	0.1486175	0.17742187	3.1366395	20	2 25.0	21.2
385945 2006 UQ ₁₉₆	18.4	X	338.64055	241.42480	224.21038	1.82592	0.1026528	0.29683526	2.2256612	20	—	—
385946 2006 UD ₁₉₉	16.4	X	39.65718	86.89994	53.61181	2.93172	0.0828632	0.16919548	3.2375033	20	3 12.9	20.5
385947 2006 UD ₂₁₇	17.3	X	119.58398	115.37362	233.87725	3.39362	0.2029968	0.30579092	2.1819912	20	—	—
385948 2006 UN ₂₂₂	17.5	X	48.35249	30.13970	5.41997	6.95185	0.1105688	0.30130857	2.2035778	20	—	—
385949 2006 UO ₂₆₆	17.2	X	63.55746	68.78310	312.15113	5.53429	0.1733804	0.29956881	2.2121012	20	—	—
385950 2006 UY ₂₉₆	15.8	X	221.12673	24.57987	323.22953	9.12912	0.0969356	0.18809531	3.0168293	20	3 29.4	20.6
385951 2006 VD ₄	18.3	X	57.87407	136.75095	244.50100	1.80442	0.2352283	0.29880702	2.2158593	20	—	—
385952 2006 VV ₇	17.6	X	36.44018	357.30464	58.39374	8.25225	0.0666385	0.29820953	2.2188181	20	—	—
385953 2006 VQ ₂₆	17.2	X	111.27517	260.04982	59.59213	6.17032	0.1722687	0.29738579	2.2229135	20	—	—
385954 2006 VO ₂₇	17.6	X	157.33522	67.44355	238.94226	5.58906	0.1827399	0.30481868	2.1866285	20	—	—
385955 2006 VV ₄₂	17.7	X	88.54670	68.60912	286.22881	4.07669	0.2103566	0.29903679	2.2147241	20	—	—
385956 2006 VX ₅₃	16.2	X	97.28489	82.86609	303.46309	4.93435	0.0546268	0.15946526	3.3678960	20	1 8.2	20.9
385957 2006 VK ₆₀	16.1	X	64.44913	193.93204	223.79481	9.32739	0.0693689	0.15822602	3.3854582	20	1 4.5	20.7
385958 2006 VX ₆₃	17.6	X	74.39769	279.90562	68.80989	7.45129	0.1332336	0.29419071	2.2389793	20	—	—
385959 2006 VX ₇₁	15.8	X	160.03384	233.18726	105.35927	4.32761	0.2684668	0.16994712	3.2279504	20	2 4.4	21.3
385960 2006 VC ₈₇	17.9	X	105.18160	35.90085	322.82405	3.82773	0.2148512	0.30515947	2.1850002	20	—	—
385961 2006 VL ₁₂₆	16.5	X	73.02837	219.38202	230.72845	7.15641	0.0234292	0.17067504	3.2187658	20	2 14.2	21.1
385962 2006 VK ₁₄₁	15.7	X	269.43710	32.07147	240.43874	9.64854	0.1663559	0.17409915	3.1764227	20	2 12.6	20.7
385963 2006 WM ₃₇	16.2	X	141.07314	190.67943	205.31777	8.83832	0.0214052	0.16967580	3.2313906	20	3 2.1	20.9
385964 2006 WM ₁₅₇	17.5	X	39.02721	7.31716	5.29345	5.89224	0.1967424	0.29406451	2.2396199	20	—	—
385965 2006 WU ₁₆₃	17.7	X	330.98604	56.59521	76.83402	7.74270	0.0617750	0.29920007	2.2139183	20	—	—
385966 2006 WX ₁₆₆	18.3	X	72.30023	146.82371	230.63013	1.27830	0.1658537	0.29924826	2.2136806	20	—	—
385967 2006 WE ₁₇₀	17.9	X	54.32961	222.30729	128.99629	1.37590	0.2443299	0.29243349	2.2479396	20	—	—
385968 2006 WF ₁₇₄	17.7	X	241.28723	91.84071	83.84026	5.85082	0.0983176	0.28674499	2.2775722	20	—	—
385969 2006 WE ₁₈₄	17.6	X	5.52732	225.23165	237.89829	4.30308	0.1161710	0.29757298	2.2219812	20	—	—
385970 2006 WJ ₁₈₄	17.3	X	257.15747	164.11379	344.16793	3.20539	0.2150626	0.27523724	2.3406219	20	12 7.0	19.4
385971 2006 WL ₁₈₅	17.6	X	18.72839	185.59475	268.18248	3.93907	0.1000101	0.29883416	2.2157252	20	—	—
385972 2006 WG ₁₉₅	17.6	X	16.98585	203.40862	236.39748	5.86909	0.1413546	0.29611856	2.2292510	20	—	—
385973 2006 XW ₅	17.9	X	4.25431	338.72406	89.65353	5.74263	0.1901595	0.29278410	2.2461446	20	—	—
385974 2006 XK ₁₇	17.5	X	352.06120	103.76572	346.13300	2.62709	0.1805759	0.29014187	2.2597606	20	—	—
385975 2006 XV ₅₉	18.8	X	21.26572	356.67022	72.03329	4.44033	0.1495934	0.29249114	2.2476443	20	—	—
385976 2006 YM ₈	17.4	X	324.18180	176.31993	294.53299	5.67193	0.0873307	0.28600462	2.2815011	20	—	—
385977 2006 YJ ₃₇	17.8	X	290.64381	54.89865	82.30593	4.71251	0.0907240	0.28361791	2.2942828	20	—	—
385978 2006 YO ₄₀	17.8	X	357.65276	226.05196	235.19690	2.21161	0.1387279	0.29416664	2.2391014	20	—	—
385979 2006 YO ₄₁	16.7	X	352.98625	115.04250	275.52856	7.55751	0.1287853	0.28173590	2.3044887	20	12 27.2	18.7
385980 2007 AA ₈	18.3	X	2.24149	340.73538	44.52201	3.00821	0.1654280	0.27983107	2.3149348	20	—	—
385981 2007 AH ₂₇	18.0	X	16.37737	103.89103	302.93034	4.92955	0.1967307	0.28544096	2.2845036	20	—	—
385982 2007 AE ₂₉	17.3	X	167.14106	120.91269	141.50573	6.62475	0.1006103	0.28044854	2.3115356	20	—	—
385983 2007 AU ₂₉	17.0	X	127.31317	156.55345	138.52177	8.75154	0.1696443	0.28019196	2.3129466	20	—	—
385984 2007 BE ₂₄	17.4	X	209.77801	108.52412	123.14235	7.24198	0.1443292	0.28329592	2.2962029	20	—	—
385985 2007 BP ₄₁	17.6	X	30.61812	277.29198	133.40864	3.52079	0.1393606	0.28942653	2.2634826	20	—	—
385986 2007 BL ₄₆	18.1	X	211.01932	146.60544	64.38666	2.11457	0.1345913	0.27647195	2.3336479	20	—	—
385987 2007 BL ₆₀	17.1	X	218.19217	238.19958	346.43567	7.68682	0.1415533	0.28097048	2.3086721	20	—	—
385988 2007 BM ₆₁	17.6	X	315.54073	163.47617	305.06568	8.06066	0.1044274	0.28503708	2.2866611	20	—	—
385989 2007 BN ₇₄	18.2	X	358.56885	116.53491	343.84479	2.56191	0.1453503	0.29022794	2.2593139	20	—	—
385990 2007 BQ ₇₅	17.4	X	278.08780	238.91660	313.31775	7.44738	0.0561418	0.29066906	2.2570274	20	—	—
385991 2007 BR ₇₉	17.8	X	223.72987	284.25099	287.04285	2.44061	0.1679992	0.27862907	2.3215877	20	—	—
385992 2007 BG ₈₁	18.0	X	252.86385	183.01051	330.74912	5.31373	0.1056028	0.27625818	2.3348516	20	12 26.4	20.7
385993 2007 BA ₁₀₂	17.8	X	276.88756	12.19375	115.49659	3.14783	0.1538420	0.27527444	2.3404110	20	12 23.9	19.9
385994 2007 CQ ₉	17.1	X	258.87206	213.32515	265.93908	6.27330	0.0602945	0.27309495	2.3528465	20	11 21.7	19.8
385995 2007 CW ₁₂	17.9	X	268.96352	214.44331	350.19625	2.03139	0.1483530	0.28834897	2.2691182	20	—	

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386001	2007 CG ₅₆	17.8	X	299.79314	293.29191	184.04555	3.49380	0.1459145	0.28055001	2.3109783	20	—	—
386002	2007 CA ₆₀	17.6	X	312.79528	284.14928	181.06746	6.45800	0.1997937	0.28045321	2.3115100	20	—	—
386003	2007 CU ₇₀	18.0	X	297.59176	350.05169	129.89308	5.40782	0.1730215	0.28076682	2.3097884	20	—	—
386004	2007 DM ₄	16.8	X	252.24497	195.45435	339.37831	8.06271	0.1012678	0.27618323	2.3352740	20	—	—
386005	2007 DT ₅	17.8	X	335.96893	286.50589	141.03805	5.21065	0.1160901	0.28082138	2.3094892	20	—	—
386006	2007 DQ ₁₄	18.1	X	274.00458	117.03242	357.88942	7.07180	0.0724839	0.27335800	2.3513369	20	12 6.9	20.9
386007	2007 DN ₂₂	18.0	X	245.47216	11.10424	154.92930	4.16569	0.1687074	0.27461210	2.3441727	20	12 21.2	20.5
386008	2007 DL ₂₄	18.1	X	353.73021	237.53376	164.78737	5.14024	0.2244702	0.27740938	2.3283877	20	—	—
386009	2007 DQ ₂₆	17.9	X	338.17556	308.86467	114.57517	3.21536	0.0740547	0.27427040	2.3461193	20	—	—
386010	2007 DN ₃₀	18.1	X	277.02300	141.66027	353.60078	2.33194	0.1249442	0.27598506	2.3363918	20	—	—
386011	2007 DZ ₃₀	18.4	X	301.56509	137.04748	341.10929	2.24824	0.1740598	0.27921020	2.3183653	20	—	—
386012	2007 DB ₃₁	17.8	X	284.24337	103.13876	354.93469	1.44723	0.1405875	0.27176515	2.3605156	20	11 23.2	20.0
386013	2007 DY ₃₄	18.1	X	208.11051	45.21519	153.92346	1.50962	0.1228056	0.27143975	2.3624017	20	12 20.7	21.1
386014	2007 DR ₄₇	17.4	X	199.85846	211.59221	341.33518	7.45310	0.0620295	0.26998176	2.3708992	20	12 9.7	20.6
386015	2007 DY ₅₁	17.9	X	247.74133	275.83575	252.51514	3.35674	0.0965112	0.27548843	2.3391988	20	—	—
386016	2007 DV ₅₂	17.8	X	288.86477	305.68332	199.55733	3.05937	0.1601398	0.27950391	2.3167408	20	—	—
386017	2007 DV ₆₆	18.0	X	279.89209	61.06733	49.66989	2.45873	0.1902836	0.27342126	2.3509742	20	11 28.4	19.7
386018	2007 DE ₈₅	16.5	X	189.62536	138.38886	110.27006	23.21851	0.1208583	0.27633353	2.3344272	20	—	—
386019	2007 DA ₈₈	18.0	X	235.05308	87.47762	105.91971	2.71149	0.1362048	0.27673828	2.3321504	20	—	—
386020	2007 DH ₉₂	17.4	X	335.99951	265.83090	132.19198	2.65442	0.2011396	0.27216317	2.3582137	20	12 14.0	19.3
386021	2007 DJ ₉₇	17.9	X	250.18354	14.93326	174.42949	3.72722	0.1982875	0.27708130	2.3302253	20	—	—
386022	2007 DJ ₁₀₉	18.1	X	290.28946	131.45992	350.24881	1.43406	0.1253888	0.27569799	2.3380133	20	—	—
386023	2007 DX ₁₁₂	18.0	X	321.96347	284.32889	132.51708	1.52938	0.2094908	0.27358313	2.3500468	20	12 12.9	19.5
386024	2007 DU ₁₁₃	18.2	X	303.23639	311.35506	167.12090	1.12397	0.1386183	0.27811648	2.3244394	20	—	—
386025	2007 EV ₆	17.7	X	241.29136	182.26675	147.61969	5.40766	0.0684971	0.27410269	2.3470761	20	—	—
386026	2007 EB ₁₁	18.5	X	233.02909	350.15308	187.10618	1.95326	0.1370767	0.27444044	2.3451501	20	12 22.9	21.2
386027	2007 ED ₂₃	17.5	X	293.31854	296.24118	152.75502	5.59503	0.2003800	0.26977356	2.3721190	20	11 23.5	19.4
386028	2007 EG ₂₃	17.6	X	301.59180	325.39579	153.09302	5.58790	0.0942083	0.27463886	2.3440204	20	—	—
386029	2007 EK ₂₃	13.8	X	346.08243	230.89436	21.43084	20.39084	0.0809263	0.08304374	5.2031311	20	5 9.6	20.5
386030	2007 EO ₂₅	17.6	X	229.24086	200.86258	6.83999	2.33191	0.1515229	0.27385021	2.3485186	20	—	—
386031	2007 EY ₂₆	17.3	X	254.27891	140.57270	16.94035	9.19308	0.1661132	0.27283512	2.3543401	20	12 23.1	19.9
386032	2007 EH ₂₇	17.6	X	262.76494	350.31472	180.25624	1.84058	0.1626510	0.27451987	2.3446977	20	—	—
386033	2007 ES ₃₁	17.8	X	224.04070	106.95236	105.36443	3.15175	0.1505951	0.27836308	2.3230664	20	—	—
386034	2007 EM ₃₉	17.6	X	208.83693	278.56919	320.30604	6.90196	0.1429751	0.28021059	2.3128441	20	—	—
386035	2007 ER ₄₁	18.3	X	299.48347	138.99685	315.92383	4.39240	0.1358165	0.27736147	2.3286558	20	12 21.8	20.3
386036	2007 EF ₄₆	17.6	X	137.15508	87.70962	179.06559	3.63887	0.1618203	0.26605931	2.3941448	20	12 27.9	21.3
386037	2007 ED ₅₉	17.9	X	230.18708	9.98212	160.30358	5.11424	0.1027342	0.27331731	2.3515702	20	12 15.0	20.8
386038	2007 EH ₇₁	18.0	X	170.02464	149.58455	68.81882	2.41093	0.1436037	0.26436664	2.4043533	20	11 29.9	21.5
386039	2007 EX ₇₄	17.4	X	211.04739	253.82544	238.01945	1.33689	0.1598320	0.25959087	2.4337527	20	9 19.9	20.8
386040	2007 EZ ₉₆	17.6	X	201.72242	8.98095	199.79864	2.32131	0.1469337	0.26805304	2.3822585	20	12 21.5	20.8
386041	2007 EP ₉₆	17.9	X	199.93327	8.39252	196.96352	5.59629	0.1584854	0.26735969	2.3863754	20	12 13.8	21.3
386042	2007 EB ₉₇	17.8	X	179.45414	253.62890	342.00678	0.85680	0.1441366	0.26787535	2.3833119	20	12 31.7	21.2
386043	2007 ED ₁₁₁	17.3	X	185.17327	140.85348	103.05190	2.24687	0.1445713	0.27075018	2.3664112	20	—	—
386044	2007 EW ₁₂₉	17.7	X	122.74603	290.67864	354.92161	5.41500	0.2065955	0.26776970	2.3839387	20	—	—
386045	2007 ET ₁₆₂	17.5	X	329.26777	245.85285	178.39863	4.64166	0.2109912	0.27778174	2.3263064	20	—	—
386046	2007 EP ₁₈₀	17.5	X	189.87895	240.49691	352.00183	2.25413	0.1547797	0.26885756	2.3791671	20	—	—
386047	2007 EO ₁₉₇	17.7	X	143.18227	250.86553	340.15190	1.59015	0.1472606	0.25963593	2.4334711	20	11 18.6	21.4
386048	2007 EQ ₂₁₇	17.7	X	188.81654	192.20946	13.45711	3.57516	0.0746728	0.26691738	2.3890110	20	12 10.6	20.9
386049	2007 ET ₂₂₀	17.6	X	170.54111	204.97463	22.45378	2.58971	0.1762734	0.26315534	2.4117258	20	12 8.9	21.3
386050	2007 EV ₂₂₂	16.7	X	226.01490	222.16485	332.19633	6.40366	0.0899503	0.27260124	2.3556865	20	—	—
386051	2007 FV ₇	18.0	X	306.24428	237.39183	212.77065	0.79008	0.1477751	0.27377415	2.3489535	20	12 26.7	20.0
386052	2007 FY ₂₃	17.8	X	234.39772	116.76057	51.53541	2.00351	0.1307318	0.26953822	2.3734995	20	12 12.2	20.6
386053	2007 FL ₃₀	17.7	X	175.90640	61.14679	201.79615	0.97840	0.1571700	0.27228642	2.3575020	20	—	—
386054	2007 FE ₃₂	16.6	X	158.47739	276.57580	0.50908	6.38428	0.1165519	0.27165022	2.3611812	20	—	—
386055	2007 FQ ₃₅	16.9	X	221.31711	270.77347	322.93789	10.01018	0.2158083	0.27724344	2.3293166	20	—	—
386056	2007 FV ₃₅	17.5	X	187.39721	75.97129	169.85325	2.37633	0.1901064	0.27172721	2.3607353	20	—	—
386057	2007 FH ₃₇	17.6	X	222.96200	113.25594	71.57351	2.93426	0.1634769	0.26787312	2.3833251	20	12 13.6	20.6
386058	2007 FF ₄₇	17.5	X	201.66346	212.04496	25.35806	2.53445	0.1755272	0.27247232	2.3564295	20	—	—
386059	2007 FP ₄₇	17.5	X	152.11242	142.06398	91.65782	1.63618	0.1615252	0.26094149	2.4253474	20	11 30.6	21.2
386060	2007 GD ₈	17.7	X	269.84409	284.68410	194.70953	4.61233	0.0604194	0.26674361	2.3900484	20	12 7.8	20.4
386061	2007 GP ₃₆	17.1	X	280.02355	46.64200	61.30234	5.16354	0.1638739	0.26642942	2.3919271	20	11 25.5	19.4
386062	2007 GF ₃₇	17.7	X	191.46875	103.59089	109.55044	2.99601	0.1210355	0.26567352	2.3964619	20	12 18.2	20.8
386063	2007 GK ₃₇	17.4	X	234.70304	36.91714	148.12990	2.65580	0.1584179	0.27059638	2.3673078	20	12 31.3	20.1
386064	2007 GA ₅₀	17.6	X	162.38190	189.69864	57.34677	4.51800	0.1570840	0.26622353	2.3931601	20	12 27.4	21.2
386065	2007 GW ₅₀	17.1	X	205.02248	68.34466	126.62852	5.48671	0.1417425	0.26509834	2.3999270	20	12 8.3	20.4
386066	2007 HJ ₆	17.3	X	205.76706	155.65164	43.22041	3.17613	0.1339037	0.26754750	2.3852585	20	12 14.8	20.6
386067	2007 HX ₂₃	17.7	X	264.73014	56.10437	118.20712	1.20628	0.1514435	0.27388579	2.3483152	20	—	—
386068	2007 HO ₃₀	17.9	X	167.41736	150.43554	56.00663	2.32154	0.1287963	0.26076396	2.4264481	20	11 12.8	21.5
386069	2007 HD ₃₃	17.8	X	241.54660	210.22172	327.47217	1.40168	0.1514263	0.27031507	2.3689499	20	—	—
386070	2007 HQ ₃₅	16.1	X	148.29135	239.87987	44.01662	11.04879	0.0887518	0.19217526	2.9739779	20	—	—
386071	2007 HS ₃₅	16.3	X	218.67228	319.72360	43.40558	14.58783	0.1013234	0.22395995	2.6854834	20	4 19.2	20.4
386072	2007 HW ₃₉	16.6	X	252.44413	260.71841	138.49366	5.33941	0.1465336	0.24401305	2.5362614	20	7 6.2	20.1
386073	2007 HK ₅₀	17.8	X	165.									

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
386081	2007	KH ₁	17.4	X	231.96720	37.02621	117.17102	3.60479	0.1305354	0.26073931	2.4266010	20	11 19.0	20.4
386082	2007	LR ₈	17.2	X	252.20758	331.44304	173.33597	5.28271	0.0571458	0.26092202	2.4254680	20	12 15.1	20.2
386083	2007	LL ₁₂	17.4	X	222.38866	46.31041	95.41251	4.02149	0.1409330	0.25704172	2.4498170	20	10 20.3	20.7
386084	2007	LK ₂₄	17.7	X	180.93969	154.07822	100.46103	2.17350	0.1553463	0.26702075	2.3883944	20	—	—
386085	2007	LY ₃₇	16.5	X	102.31359	201.27184	67.72454	10.74071	0.2400877	0.24770432	2.5110016	20	11 30.4	20.7
386086	2007	OL ₁	16.5	X	29.06314	137.63526	150.38678	17.55989	0.2116040	0.23618967	2.5919629	20	10 7.8	19.7
386087	2007	OD ₃	15.9	X	8.59351	197.33465	127.14805	14.05972	0.1371709	0.23460938	2.6035893	20	10 14.9	19.1
386088	2007	OD ₇	16.6	X	347.26426	338.43391	134.66122	13.17352	0.2531823	0.22635477	2.6665083	20	7 10.4	18.6
386089	2007	OT ₈	16.5	X	26.81823	159.18213	130.65898	13.36358	0.2211126	0.23115740	2.6294456	20	10 8.4	19.8
386090	2007	OU ₁₀	15.7	X	31.85997	169.70980	114.15706	19.25944	0.2261723	0.23376718	2.6098389	20	10 13.6	19.3
386091	2007	PV ₂	16.4	X	20.36370	336.60646	319.90282	13.26006	0.2478000	0.23312695	2.6146149	20	9 28.4	19.4
386092	2007	PO ₉	16.7	X	44.16399	145.14872	149.67971	9.24563	0.1117022	0.23576602	2.5950670	20	10 21.4	20.1
386093	2007	PG ₁₃	16.2	X	343.56102	178.18539	128.44542	20.36728	0.2985745	0.22665201	2.6641766	20	7 18.5	17.9
386094	2007	PN ₂₆	17.3	X	190.25696	251.91167	160.48942	23.32805	0.1133658	0.36030946	1.9595253	20	5 23.1	20.5
386095	2007	PJ ₃₃	16.9	X	292.46965	1.90055	324.14121	4.21107	0.1591934	0.21555683	2.7548303	20	5 17.1	20.6
386096	2007	PR ₄₄	16.8	X	116.72155	13.03809	27.83099	0.94939	0.3568732	0.18563373	3.0434403	20	3 18.7	21.9
386097	2007	PV ₄₉	17.1	X	329.57404	150.64737	157.61195	3.67243	0.0876448	0.219093070	2.7251074	20	7 2.1	20.2
386098	2007	PY ₄₉	17.2	X	205.42080	270.88310	147.33624	4.38183	0.0911402	0.21266663	2.7797334	20	6 13.1	21.4
386099	2007	QC ₁	16.2	X	236.21421	116.88268	243.40865	6.37214	0.2449857	0.21006993	2.8025936	20	4 19.7	21.1
386100	2007	QT ₁₀	16.4	X	312.78638	23.95542	331.06840	5.40324	0.0459296	0.22350577	2.6891203	20	8 14.9	19.7
386101	2007	RP ₃₀	15.3	X	122.85834	20.34519	302.36416	15.23027	0.2401076	0.17700560	3.1415553	20	—	—
386102	2007	RL ₃₉	16.8	X	338.73489	324.73339	8.39922	4.02674	0.1381494	0.22517966	2.6757771	20	8 24.4	19.5
386103	2007	RZ ₄₀	17.2	X	338.26793	290.03079	7.46826	20.24897	0.0606813	0.37313540	1.9108433	20	7 24.1	19.3
386104	2007	RF ₅₉	16.5	X	310.58411	193.04290	134.68804	5.25226	0.2011599	0.21945620	2.7221004	20	6 12.4	19.5
386105	2007	RF ₁₀₂	16.7	X	235.31815	104.93156	268.48649	4.63788	0.1548385	0.20887251	2.8132944	20	5 12.5	21.0
386106	2007	RF ₁₀₉	16.6	X	146.00733	84.27457	358.74684	11.01846	0.1159196	0.20101822	2.8861071	20	5 9.5	21.3
386107	2007	RF ₁₁₇	16.6	X	240.61867	69.15280	339.68891	6.15841	0.0559146	0.21549720	2.7553385	20	7 17.1	20.5
386108	2007	RV ₁₂₃	15.7	X	62.24481	230.62573	201.82624	15.95057	0.1943585	0.17887195	3.1196644	20	1 27.1	19.7
386109	2007	RO ₁₂₈	16.8	X	70.72689	65.72847	171.66369	5.13752	0.0557632	0.22037414	2.7145362	20	8 26.2	20.5
386110	2007	RY ₁₃₀	16.8	X	254.33785	293.75123	18.71464	5.94112	0.0238719	0.19909577	2.9046595	20	4 15.2	20.8
386111	2007	RS ₁₃₅	16.2	X	166.80546	274.29924	357.32162	9.27124	0.2093768	0.17516446	3.1635307	20	—	—
386112	2007	RQ ₁₃₉	17.1	X	352.20597	46.63725	256.60134	1.82341	0.2337011	0.22456987	2.6806188	20	8 7.7	19.2
386113	2007	RJ ₁₄₈	17.6	X	170.75188	228.61284	159.58300	23.08364	0.0878600	0.35279351	1.9836071	20	3 21.5	20.0
386114	2007	RA ₁₆₉	16.8	X	204.26216	327.30163	54.30612	2.80366	0.0823072	0.20429263	2.8551849	20	4 26.7	21.1
386115	2007	RO ₁₇₀	17.0	X	206.22380	266.96311	144.60268	5.85340	0.0584439	0.21125085	2.7921393	20	6 7.7	21.1
386116	2007	RH ₁₇₂	17.1	X	237.82327	239.40921	131.98056	3.24984	0.0783170	0.20742437	2.8263733	20	5 21.9	21.1
386117	2007	RX ₁₇₈	16.6	X	35.62352	137.00249	96.56734	4.94996	0.0414586	0.21188427	2.7865718	20	6 30.6	20.0
386118	2007	RB ₂₂₀	16.8	X	67.11766	254.59038	353.67022	5.87220	0.0912060	0.22279326	2.6948505	20	9 11.7	20.3
386119	2007	RU ₂₂₇	15.8	X	229.37237	262.04606	44.09928	15.41581	0.0180786	0.18335600	3.0685931	20	3 5.8	20.4
386120	2007	RO ₂₃₈	16.8	X	92.99565	271.66194	338.46980	7.18823	0.1492743	0.23466780	2.6031571	20	10 19.5	20.8
386121	2007	RC ₂₆₂	17.0	X	236.90490	335.79563	33.79638	10.02923	0.0250262	0.20660856	2.8338085	20	5 21.8	20.9
386122	2007	RD ₂₈₅	17.3	X	339.63394	116.17575	169.84964	3.65185	0.0617499	0.20927359	2.8096988	20	6 18.5	20.9
386123	2007	RD ₂₈₆	17.7	X	3.30119	352.37608	301.98143	17.21621	0.0824945	0.37789695	1.8947582	20	8 23.8	19.2
386124	2007	RV ₂₉₄	16.9	X	312.91975	296.19315	16.26562	6.81314	0.0693284	0.21256218	2.7806439	20	6 12.3	20.5
386125	2007	RV ₂₉₉	16.8	X	150.16016	86.51811	314.11014	8.44529	0.2531718	0.19289708	2.9665541	20	3 31.6	22.1
386126	2007	RV ₃₀₇	16.6	X	253.29106	27.00788	331.69450	4.99752	0.0501182	0.20833894	2.8180958	20	5 25.7	20.6
386127	2007	RQ ₃₂₂	15.9	X	55.47438	280.19082	358.90497	13.80982	0.0704192	0.22987689	2.6392012	20	10 2.7	19.4
386128	2007	RM ₃₂₅	16.2	X	207.81226	341.61758	54.99334	8.86206	0.0870311	0.19715083	2.9237281	20	5 18.8	20.7
386129	2007	SG ₂₄	16.1	X	187.96465	137.06107	239.53704	8.88404	0.0845104	0.18859539	3.0114940	20	3 31.9	20.9
386130	2007	TO ₁₀	16.2	X	119.74024	172.75692	194.77654	16.78001	0.1825114	0.18039649	3.1020634	20	1 21.7	21.2
386131	2007	TJ ₂₁	17.0	X	162.56389	162.93214	206.56635	0.40124	0.1915263	0.19003789	2.9962353	20	3 6.1	21.9
386132	2007	TQ ₃₉	16.8	X	95.49966	3.57795	78.00031	1.90924	0.1591713	0.18430826	3.0580143	20	3 24.1	21.0
386133	2007	TF ₄₁	16.7	X	185.90254	156.20408	214.30230	10.18549	0.0994863	0.19107144	2.9854206	20	3 23.2	21.4
386134	2007	TL ₆₁	16.6	X	2.26038	150.60014	36.54012	10.76270	0.0361865	0.18957055	3.0011576	20	3 18.7	20.7
386135	2007	TC ₈₁	16.9	X	121.41584	243.48657	169.28481	1.01615	0.1461208	0.18709650	3.0275566	20	3 15.3	21.3
386136	2007	TH ₉₁	15.6	X	120.69744	44.47950	24.75689	17.74569	0.2079472	0.18629896	3.0361910	20	4 10.9	20.4
386137	2007	TV ₉₂	16.6	X	92.51240	239.67994	193.44600	9.83057	0.2690375	0.18174144	3.0867402	20	3 23.8	21.0
386138	2007	TU ₉₃	16.4	X	116.21794	322.78516	92.48899	3.04514	0.1241372	0.18447802	3.0561380	20	3 11.7	20.9
386139	2007	TV ₁₀₆	16.8	X	225.80409	85.92676	284.84432	1.01923	0.0845636	0.20326786	2.8647732	20	5 5.7	21.0
386140	2007	TC ₁₁₅	15.6	X	114.19059	12.44040	55.99671	17.25158	0.2506397	0.18524650	3.0476801	20	4 13.8	20.6
386141	2007	TV ₁₃₂	17.1	X	158.89602	239.50853	164.43158	1.67560	0.1439121	0.19182281	2.9776196	20	4 10.5	21.9
386142	2007	TC ₁₅₈	16.2	X	144.95110	171.06636	220.76224	10.59187	0.1491533	0.18891715	3.0080736	20	3 10.6	21.1
386143	2007	TH ₁₅₉	16.4	X	176.21596	98.99567	310.31451	3.73931	0.1831018	0.19742320	2.9210383	20	5 1.6	21.2
386144	2007	TT ₁₆₁	16.7	X	37.34630	164.17691	133.57326	2.57773	0.2236029	0.23016296	2.6370140	20	10 29.9	20.0
386145	2007	TU ₁₆₈	16.0	X	105.62040	34.60557	22.89943	11.82917	0.1685401	0.18259739	3.0770863	20	3 11.2	20.5
386146	2007	TM ₁₈₈	17.1	X	130.89218	262.67135	160.62892	0.76654	0.2450636	0.19037763	2.9926696	20	4 15.5	22.0
386147	2007	TM ₁₉₁	16.2	X	32.51774	256.04845	348.42093	12.67023	0.0681266	0.21861030	2.7291179	20	7 18.3	19.8
386148	2007	TE ₁₉₆	16.5	X	66.72026	16.57328	88.77066	2.58454	0.1456107	0.18151739	3.0892797	20	3 14.2	20.3
386149	2007	TD ₂₄₅	16.0	X	184.03201	117.24634	249.39118	13.39112	0.1453662	0.19318593	2.9635964	20	3 13.6	21.0

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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>
386321 2008 SC ₁₀₀	17.3	X	215.96236	320.32525	106.32179	3.30315	0.1995923	0.22645774	2.6657000	20	6 27.5	21.7
386322 2008 SG ₁₁₆	17.0	X	245.99746	284.13222	162.75469	4.13154	0.1401811	0.23858586	2.5745791	20	9 1.6	20.4
386323 2008 SL ₁₂₇	16.6	X	35.67649	201.17410	36.10964	15.94006	0.0377956	0.22356466	2.6886480	20	7 7.3	20.4
386324 2008 SQ ₁₃₀	17.3	X	182.79942	115.13527	356.68886	3.71615	0.1949940	0.22621590	2.6675995	20	7 26.1	21.8
386325 2008 SC ₁₅₁	16.2	X	275.88325	64.26490	294.25655	11.77152	0.2856437	0.22907493	2.6453573	20	5 19.3	20.3
386326 2008 SQ ₁₅₁	17.6	X	299.16641	261.68085	107.35257	3.23398	0.0923261	0.24016945	2.5632495	20	8 10.3	20.4
386327 2008 ST ₁₅₅	16.7	X	253.31721	238.84366	170.01053	7.54099	0.1885973	0.23292447	2.6161299	20	7 13.2	20.5
386328 2008 SX ₁₅₉	17.0	X	247.65555	196.57547	201.21519	4.05059	0.2027944	0.23065285	2.6332788	20	6 21.3	20.9
386329 2008 SL ₁₆₇	16.2	X	282.36576	343.98981	34.90778	11.43666	0.1739340	0.23468136	2.6030568	20	7 16.8	19.7
386330 2008 SR ₁₇₀	17.6	X	249.58355	179.78766	215.45419	4.42631	0.2221543	0.23233133	2.6205806	20	6 17.9	21.7
386331 2008 SS ₁₉₂	16.9	X	267.93248	269.27888	87.47870	4.02303	0.1831878	0.22817291	2.6523245	20	5 24.3	20.6
386332 2008 SJ ₁₉₃	17.4	X	289.14940	279.95330	74.23160	4.35247	0.2821646	0.23365062	2.6107067	20	6 1.4	20.5
386333 2008 SB ₂₀₁	17.2	X	280.93414	94.14723	298.05893	1.77901	0.1294488	0.23589720	2.5941048	20	8 7.3	20.4
386334 2008 SV ₂₀₇	16.3	X	322.90805	235.25617	92.51806	14.95321	0.2201786	0.23601229	2.5932615	20	7 4.9	18.5
386335 2008 SE ₂₂₃	17.7	X	232.21906	82.53820	307.10676	2.86651	0.1894834	0.22703853	2.6611519	20	5 27.1	21.9
386336 2008 SP ₂₄₂	16.9	X	194.46190	198.14796	195.24474	1.77018	0.2459663	0.21581244	2.7526546	20	4 28.4	21.8
386337 2008 ST ₂₄₃	17.3	X	249.72223	59.04407	325.20358	3.91328	0.1371419	0.23042749	2.6349954	20	6 13.7	21.1
386338 2008 SB ₂₄₆	16.4	X	265.51782	70.26863	318.54742	12.12086	0.1702177	0.23272597	2.6176173	20	7 6.8	20.1
386339 2008 SG ₂₅₀	16.2	X	264.84997	93.32074	337.27845	10.51431	0.1480352	0.23876660	2.5732797	20	9 3.3	19.4
386340 2008 SG ₂₅₉	17.3	X	274.23070	64.59346	342.32356	4.05627	0.2029669	0.23691492	2.5866705	20	8 6.9	20.6
386341 2008 SJ ₂₆₅	17.0	X	191.55671	99.90559	23.55343	13.17259	0.2139689	0.23474402	2.6025936	20	8 22.2	21.5
386342 2008 SG ₂₆₉	16.4	X	245.50550	84.02510	330.97753	12.48422	0.1809561	0.22980858	2.6384079	20	7 16.9	20.4
386343 2008 SG ₂₇₁	16.4	X	262.83456	305.60790	59.84634	15.44323	0.1193214	0.22763895	2.6564705	20	6 5.8	20.1
386344 2008 SL ₂₇₁	16.6	X	260.34862	137.12397	246.20931	7.35742	0.1377713	0.22944116	2.6425416	20	6 25.2	20.3
386345 2008 SW ₂₇₁	16.8	X	339.34235	294.42997	38.70327	9.93454	0.0673269	0.23303840	2.6152771	20	8 31.3	20.0
386346 2008 SL ₂₈₄	16.6	X	142.70432	281.46239	248.34586	7.61089	0.0382517	0.23438600	2.6052432	20	8 23.7	20.4
386347 2008 ST ₂₈₇	17.3	X	258.80268	46.80369	342.62370	5.78984	0.2368518	0.23159938	2.6260991	20	6 18.3	21.3
386348 2008 SG ₂₈₈	16.8	X	26.90186	59.10403	58.83977	6.34454	0.0991395	0.19338561	2.9615560	20	1 22.1	20.4
386349 2008 ST ₂₉₆	16.9	X	281.82216	242.92377	123.96474	12.93443	0.3338806	0.23471115	2.6028366	20	6 4.0	20.7
386350 2008 SR ₂₉₉	17.0	X	199.11161	299.50922	135.55542	2.40304	0.1022850	0.22637961	2.6663133	20	6 27.3	21.0
386351 2008 SY ₂₉₉	16.7	X	187.23553	100.97043	8.88648	9.55024	0.1775333	0.22808766	2.6529854	20	7 30.4	21.2
386352 2008 SA ₃₀₃	16.8	X	217.51724	73.67372	8.84188	11.63660	0.1601245	0.23187149	2.6240442	20	7 26.5	21.0
386353 2008 SF ₃₀₈	17.1	X	339.34059	183.53716	146.02750	5.04611	0.1311007	0.23296221	2.6158474	20	8 20.1	19.5
386354 2008 TM ₅	17.1	X	208.66603	238.42409	187.91125	7.35347	0.1715014	0.22637940	2.6663150	20	6 21.9	21.5
386355 2008 TU ₈	16.9	X	240.41547	336.79541	33.80731	2.40979	0.0975549	0.21976175	2.7195767	20	5 20.4	20.9
386356 2008 TS ₂₃	16.8	X	203.77089	266.48171	186.29129	3.71398	0.1926072	0.23277644	2.6172389	20	7 19.3	21.2
386357 2008 TL ₄₅	17.6	X	36.67062	253.06516	15.22943	1.48388	0.0416693	0.23351917	2.6116864	20	8 21.6	20.7
386358 2008 TX ₄₅	17.3	X	224.94303	239.03442	172.54144	4.54060	0.3045896	0.22456773	2.6806358	20	6 9.9	22.1
386359 2008 TW ₄₉	17.5	X	145.93113	246.64267	21.27129	2.74057	0.1780571	0.26722020	2.3872058	20	—	—
386360 2008 TW ₆₇	17.3	X	189.27487	55.18981	60.81299	4.58675	0.1588116	0.22940329	2.6428324	20	8 8.3	21.6
386361 2008 TT ₈₅	16.5	X	167.30948	231.51425	349.86629	6.45958	0.1075597	0.25687529	2.4508750	20	11 30.5	20.2
386362 2008 TY ₉₁	16.8	X	261.70156	247.71321	150.70326	13.65360	0.2795028	0.23306534	2.6150757	20	6 28.2	21.0
386363 2008 TQ ₉₅	16.5	X	226.98660	201.79025	264.32111	6.52881	0.0823602	0.24228027	2.5483398	20	9 8.5	20.1
386364 2008 TP ₁₁₃	17.2	X	199.42790	24.44262	66.23356	4.53794	0.1621856	0.22689310	2.6622890	20	7 15.4	21.4
386365 2008 TG ₁₂₄	17.0	X	240.92589	98.99138	329.73116	4.78650	0.1340977	0.23521813	2.5990952	20	8 3.2	20.6
386366 2008 TN ₁₂₇	17.2	X	245.86435	71.75193	318.96082	4.70703	0.1187998	0.22922888	2.6441728	20	6 20.3	20.9
386367 2008 TS ₁₂₇	16.6	X	189.38929	260.54353	245.82391	6.01608	0.1025774	0.24169366	2.5524616	20	9 16.1	20.6
386368 2008 TU ₁₂₈	16.8	X	206.21976	47.65381	25.85461	11.94079	0.1616596	0.22806311	2.6531758	20	6 29.9	21.3
386369 2008 TN ₁₃₁	17.1	X	108.66515	285.39458	348.64989	5.37999	0.0976795	0.25547328	2.4598336	20	12 6.3	20.9
386370 2008 TO ₁₃₉	17.3	X	235.13146	197.80714	228.15980	5.15901	0.0603131	0.23233257	2.6205713	20	7 30.5	20.9
386371 2008 TJ ₁₄₅	17.7	X	281.44261	226.62651	141.56135	1.52471	0.0559352	0.23416452	2.6068857	20	7 16.8	21.0
386372 2008 TT ₁₄₉	17.1	X	267.87110	18.26060	30.69999	5.81415	0.1286678	0.23860022	2.5744759	20	8 14.9	20.4
386373 2008 TV ₁₆₄	16.8	X	238.86196	211.03830	239.87759	10.83574	0.0958828	0.23998982	2.5645284	20	8 30.2	20.5
386374 2008 TO ₁₆₆	16.9	X	246.76170	278.43118	120.46332	6.91369	0.1866416	0.22955578	2.6416618	20	6 23.9	20.8
386375 2008 TN ₁₇₃	16.9	X	158.73439	41.81645	5.99622	4.12108	0.0713514	0.21240787	2.7819905	20	4 8.8	21.0
386376 2008 TQ ₁₇₇	16.8	X	290.79188	359.97029	346.96794	14.78807	0.1257954	0.23123869	2.6288293	20	6 19.9	20.5
386377 2008 UV ₁₁	17.0	X	170.06756	143.14698	356.53478	10.77010	0.2791922	0.23028598	2.6360747	20	8 20.2	21.8
386378 2008 UH ₂₈	16.6	X	81.69016	27.89541	217.08550	16.26337	0.0775998	0.23788813	2.5796109	20	9 21.7	20.4
386379 2008 UJ ₄₁	17.9	X	222.70373	148.24303	275.76792	1.19848	0.1206502	0.22530443	2.6747892	20	7 7.2	21.9
386380 2008 UB ₅₄	17.1	X	201.13608	200.61026	230.16421	6.90904	0.1263216	0.22000222	2.7175946	20	6 22.3	21.3
386381 2008 UR ₆₀	16.9	X	305.52722	17.90568	335.35607	2.81036	0.2198171	0.23459665	2.6036834	20	7 8.5	19.7
386382 2008 UZ ₇₀	17.4	X	219.34593	84.37683	314.58267	5.58132	0.0523308	0.21882095	2.7273662	20	6 6.0	21.3
386383 2008 UF ₇₃	16.8	X	10.77908	10.42305	270.25410	7.69347	0.0952618	0.22831687	2.6512095	20	8 1.3	19.9
386384 2008 UJ ₇₉	17.7	X	201.38318	121.24403	349.51977	5.20236	0.2392599	0.23213542	2.6220549	20	8 8.3	22.2
386385 2008 UX ₈₆	16.8	X	295.29142	301.97248	36.01396	14.74413	0.1475885	0.22948009	2.6422427	20	6 7.4	20.3
386386 2008 UZ ₁₀₇	17.2	X	206.11818	284.43270	165.45644	11.78263	0.0590454	0.23222939	2.6213475	20	7 26.7	21.1
386387 2008 UB ₁₁₅	16.9	X	116.11643	266.49885	256.91405	9.93572	0.1566694	0.22133191	2.7066994	20	7 24.8	21.2
386388 2008 UN ₁₂₇	16.8	X	350.50524	250.82845	70.67541	5.44445	0.1182574	0.23213166	2.6220832	20	9 1.5	19.6
386389 2008 UH ₁₃₈	16.4	X	333.47642	247.87117	46.08496	13.64577	0.1332453	0.22605145	2.6688932	20	6 12.6	19.4
386390 2008 US ₁₄₇	17.2	X	228.44515	47.69673	12.85696	1.52314	0.0691733	0.22554919	2.6728538	20	7 15.3	20.9
386391 2008 UO ₁₄₈	16.7	X	355.93523	96.71706	243.85395	3.42902	0.1030412	0.23977205	2.5660809	20	10 4.8	19.6
386392 2008 UO ₁₄₈	17.0	X	281.54549	345.10059	28.27301	2.47453	0.1210339	0.22898721	2.6460328	20	7 14.2	20.3
386393 2008 US ₁₅₈	16.6	X	155.99002	222.41279								

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>
386401 2008 <i>UE</i> ₁₉₈	17.1	X	233.53944	257.55560	159.04471	2.49188	0.1960946	0.22880113	2.6474673	20	7 1.7	21.1
386402 2008 <i>UL</i> ₂₀₀	17.1	X	255.39630	156.74601	206.39767	1.53339	0.1571130	0.22455593	2.6807297	20	5 21.3	20.8
386403 2008 <i>UL</i> ₂₁₄	17.0	X	236.09150	132.65608	242.62314	9.75960	0.2766948	0.22354809	2.6887809	20	5 5.8	21.6
386404 2008 <i>UX</i> ₂₁₄	16.8	X	315.27816	54.82742	293.94405	4.82543	0.2946950	0.23857345	2.5746684	20	7 8.6	19.0
386405 2008 <i>UL</i> ₂₂₂	16.4	X	188.18291	295.94899	339.05705	3.99136	0.0313645	0.18362601	3.0655842	20	—	—
386406 2008 <i>UO</i> ₂₂₇	17.1	X	276.36201	6.20713	347.43843	2.41404	0.0967078	0.22242676	2.6978100	20	6 12.3	20.6
386407 2008 <i>UT</i> ₂₃₇	17.0	X	240.81919	138.13989	278.78139	4.39920	0.0477884	0.22924478	2.6440505	20	7 28.2	20.6
386408 2008 <i>UT</i> ₂₃₉	16.8	X	22.77106	19.12045	261.89881	10.92265	0.0478578	0.23145608	2.6271830	20	8 13.6	20.3
386409 2008 <i>UQ</i> ₂₄₄	16.1	X	234.32968	135.28512	289.70963	11.80662	0.1369639	0.22975384	2.6401435	20	7 19.5	20.1
386410 2008 <i>UB</i> ₂₅₀	17.6	X	257.48539	297.03559	101.75050	3.30613	0.0875189	0.23477457	2.6023678	20	7 21.0	20.9
386411 2008 <i>UU</i> ₂₆₂	16.1	X	224.34686	331.60066	93.24862	14.60452	0.1416815	0.22389189	2.6860276	20	7 8.1	20.2
386412 2008 <i>US</i> ₂₈₄	17.4	X	242.90983	327.76200	63.12432	2.77202	0.0858509	0.22552480	2.6730465	20	6 20.9	21.0
386413 2008 <i>UT</i> ₂₈₆	17.0	X	186.24211	275.82634	203.86808	11.50684	0.1385803	0.22913921	2.6448625	20	8 5.7	21.4
386414 2008 <i>UZ</i> ₃₀₃	16.8	X	203.73039	164.98541	268.52753	6.94052	0.1929715	0.22431234	2.6826701	20	6 25.3	21.2
386415 2008 <i>UD</i> ₃₀₆	16.4	X	152.55137	299.56362	249.09276	11.71854	0.0800220	0.23831731	2.5765129	20	9 28.9	20.4
386416 2008 <i>UM</i> ₃₃₇	16.6	X	324.70519	289.95799	210.86831	4.14508	0.1144557	0.17920163	3.1158371	20	—	—
386417 2008 <i>UC</i> ₃₄₅	17.1	X	70.05410	318.21617	264.23874	3.49810	0.0490161	0.22683029	2.6627804	20	8 3.1	20.6
386418 2008 <i>UD</i> ₃₄₅	17.3	X	232.35578	124.56734	291.22161	1.83524	0.0732984	0.22565310	2.6720332	20	7 12.9	20.9
386419 2008 <i>UA</i> ₃₄₈	17.5	X	169.74950	274.20179	205.58124	3.04438	0.1216221	0.22423648	2.6832751	20	7 23.1	21.6
386420 2008 <i>UV</i> ₃₅₂	16.9	X	154.01833	163.75221	279.63295	3.78232	0.1357939	0.21014497	2.8019263	20	5 22.4	21.2
386421 2008 <i>UT</i> ₃₅₄	16.7	X	135.91285	102.03956	79.60827	5.62635	0.1875634	0.22791064	2.6543589	20	9 12.5	21.1
386422 2008 <i>UY</i> ₃₅₈	17.3	X	65.28719	357.33659	223.15838	5.12888	0.0270908	0.22568607	2.6717730	20	7 22.1	20.8
386423 2008 <i>VJ</i> ₁	16.6	X	313.23313	2.06217	353.29532	12.41686	0.1598605	0.23697038	2.5862669	20	8 10.1	19.3
386424 2008 <i>VX</i> ₃	17.0	X	258.20727	79.07686	307.73445	5.84084	0.2176943	0.22803903	2.6533625	20	6 16.7	21.0
386425 2008 <i>VT</i> ₁₂	17.3	X	233.32582	44.22090	350.89635	4.58899	0.1659385	0.22558676	2.6725570	20	6 6.1	21.5
386426 2008 <i>VC</i> ₁₄	16.2	X	272.12138	312.93147	78.92162	12.13461	0.1073169	0.23067690	2.6330957	20	7 30.4	19.7
386427 2008 <i>VJ</i> ₁₈	17.3	X	194.23115	25.47873	74.56924	3.85369	0.0731031	0.22768635	2.6561018	20	7 27.3	21.2
386428 2008 <i>VW</i> ₁₈	17.2	X	270.29858	277.68130	84.39071	3.47357	0.0878095	0.22565101	2.6720497	20	6 17.2	20.8
386429 2008 <i>VU</i> ₂₁	17.3	X	272.55117	249.59702	151.84130	3.00158	0.1306411	0.23321286	2.6139727	20	8 7.2	20.7
386430 2008 <i>VY</i> ₂₁	17.6	X	188.61889	322.93215	153.08447	3.19283	0.1024966	0.22793780	2.6541481	20	8 8.2	21.7
386431 2008 <i>VM</i> ₃₄	16.5	X	143.24366	130.07075	79.73943	9.07114	0.0886065	0.24072491	2.5593049	20	10 24.8	20.4
386432 2008 <i>VO</i> ₃₈	17.7	X	230.64313	19.24769	38.47426	6.60020	0.0447302	0.22418962	2.6836490	20	7 18.4	21.5
386433 2008 <i>VX</i> ₅₉	16.0	X	235.59604	339.35842	58.89588	12.66718	0.0526236	0.22343806	2.6896635	20	6 25.3	19.8
386434 2008 <i>VF</i> ₆₈	16.1	X	186.67988	336.01886	93.63634	14.65799	0.1388029	0.21782070	2.7357093	20	6 7.6	20.5
386435 2008 <i>VT</i> ₇₆	16.6	X	148.85003	177.17046	90.61040	8.00935	0.0701368	0.21180449	2.7872715	20	6 28.8	20.8
386436 2008 <i>VW</i> ₈	17.5	X	156.26750	14.18106	95.37717	2.95535	0.1786033	0.21839114	2.7309435	20	6 28.7	22.0
386437 2008 <i>WS</i> ₂₂	17.0	X	191.32573	12.91386	45.47408	5.54365	0.1540122	0.21774496	2.7363437	20	5 26.8	21.4
386438 2008 <i>WD</i> ₃₉	16.8	X	249.35831	323.60611	70.73307	6.38890	0.0650425	0.22460369	2.6804397	20	7 7.1	20.5
386439 2008 <i>VW</i> ₄₃	17.0	X	19.53169	268.40263	48.13317	2.74197	0.2256300	0.24109373	2.5566941	20	10 31.1	19.7
386440 2008 <i>WD</i> ₆₂	15.9	X	10.88581	197.79178	236.12277	5.70378	0.1931947	0.17488753	3.1668694	20	—	—
386441 2008 <i>WF</i> ₆₈	16.8	X	248.80746	299.69251	80.96937	5.98468	0.1252488	0.22082938	2.7108042	20	6 9.5	20.8
386442 2008 <i>WL</i> ₈₅	16.8	X	180.85998	352.70528	96.62597	5.31701	0.1727391	0.21442707	2.7644982	20	6 25.2	21.3
386443 2008 <i>WQ</i> ₉₀	16.7	X	102.82174	207.90569	286.98912	6.58017	0.2640755	0.20583126	2.8409385	20	6 18.2	21.2
386444 2008 <i>WQ</i> ₉₂	17.1	X	203.66311	189.05619	300.71080	1.47478	0.0559780	0.23449599	2.6044285	20	9 16.4	20.8
386445 2008 <i>WB</i> ₉₅	16.5	X	349.47963	181.12270	163.30627	14.93039	0.1301756	0.23607214	2.5928252	20	10 4.8	19.2
386446 2008 <i>WQ</i> ₉₅	16.7	X	206.18111	221.14855	192.85628	4.75178	0.0659298	0.21865368	2.7287569	20	6 9.9	20.8
386447 2008 <i>WR</i> ₉₈	16.0	X	15.71228	246.66875	309.00176	10.72048	0.1765649	0.18515755	3.0486560	20	4 9.9	19.6
386448 2008 <i>WM</i> ₉₉	16.4	X	293.69902	270.47806	82.68610	6.88143	0.0410202	0.22435364	2.6823409	20	7 15.9	19.9
386449 2008 <i>WR</i> ₁₀₁	16.7	X	284.12918	220.07888	143.65177	3.57070	0.1414899	0.22753913	2.6572474	20	6 30.3	19.9
386450 2008 <i>WH</i> ₁₀₉	16.8	X	95.49986	297.92971	296.69714	2.59765	0.0615631	0.23352109	2.6116721	20	9 24.9	20.5
386451 2008 <i>VW</i> ₁₁₄	17.3	X	44.97379	338.06693	273.47443	1.90198	0.0732893	0.22413254	2.6841046	20	8 12.8	20.6
386452 2008 <i>WQ</i> ₁₃₇	16.5	X	36.99955	120.52736	105.53245	6.51858	0.0493325	0.20990624	2.8040522	20	6 23.2	20.0
386453 2008 <i>WT</i> ₁₃₇	17.1	X	186.05476	211.46527	204.11259	4.23620	0.1207410	0.21377719	2.7700980	20	5 19.7	21.5
386454 2008 <i>XM</i>	20.0	X	214.03066	27.37411	240.62590	5.44665	0.9091728	0.72938068	1.2222683	20	—	—
386455 2008 <i>XZ</i> ₅	15.9	X	148.12337	224.79105	281.05430	15.18963	0.1993150	0.21981324	2.7191520	20	8 2.5	20.6
386456 2008 <i>XV</i> ₁₁	16.7	X	50.80784	3.07729	297.63137	4.76985	0.1285834	0.24167347	2.5526037	20	11 5.2	20.2
386457 2008 <i>XO</i> ₁₄	17.0	X	272.51988	122.66067	276.41605	2.74989	0.0928598	0.23152565	2.6266567	20	8 9.3	20.2
386458 2008 <i>XW</i> ₁₇	17.7	X	133.97890	30.18935	152.87497	2.67140	0.1323473	0.22522721	2.6754005	20	9 7.4	21.9
386459 2008 <i>XO</i> ₂₇	16.5	X	184.32071	41.78449	51.34673	15.04623	0.1633473	0.21906799	2.7253154	20	7 3.4	21.1
386460 2008 <i>XK</i> ₃₀	16.5	X	305.89849	77.71156	271.20784	13.21070	0.0858954	0.22696081	2.6617594	20	7 19.5	19.9
386461 2008 <i>XQ</i> ₃₉	16.3	X	249.53561	149.73345	265.13585	11.91086	0.0774830	0.22615345	2.6680906	20	7 29.3	20.2
386462 2008 <i>XZ</i> ₄₃	16.1	X	48.02923	75.11176	104.87235	3.06167	0.0539939	0.19087492	2.9874695	20	5 9.7	20.1
386463 2008 <i>YA</i> ₉	17.3	X	204.47066	348.17340	74.56441	3.63054	0.0782579	0.21574195	2.7532542	20	6 18.2	21.4
386464 2008 <i>YW</i> ₉	16.0	X	164.63560	54.47958	102.43885	10.61301	0.0604954	0.22275415	2.6951660	20	9 9.4	20.1
386465 2008 <i>YS</i> ₁₁	16.3	X	137.64356	89.83760	62.88353	13.69485	0.0621423	0.22504319	2.6768588	20	8 2.9	20.4
386466 2008 <i>YP</i> ₂₂	16.7	X	139.63752	256.71882	130.81224	6.68277	0.2246921	0.18940501	3.0029060	20	3 12.0	21.6
386467 2008 <i>YG</i> ₂₃	16.1	X	193.92896	312.75205	109.49346	14.82963	0.1832579	0.21111230	2.7933608	20	6 5.2	20.9
386468 2008 <i>YU</i> ₃₈	16.2	X	115.92022	260.83491	259.64224	12.41071	0.0774929	0.21764490	2.7371823	20	7 13.2	20.2
386469 2008 <i>YN</i> ₄₀	16.3	X	141.02752	351.73623	98.72026	9.77746	0.0659727	0.19922291	2.9034200	20	5 16.1	20.6
386470 2008 <i>YS</i> ₅₀	16.8	X	72.40990	52.29069	72.49036	4.15848	0.1017416	0.19001553	2.9964703	20	4 9.4	20.8
386471 2008 <i>YK</i> ₇₉	16.5	X	184.65748	270.71717	138.94655	9.68468	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>
386561 2009 <i>DD</i> ₇₉	15.9	X	59.38205	331.35264	163.13151	18.44980	0.0453395	0.18209797	3.0827099	20	3 28.9	20.1
386562 2009 <i>DU</i> ₈₅	16.5	X	311.05161	277.38358	29.68446	2.15550	0.1062877	0.19770044	2.9183068	20	5 28.5	20.2
386563 2009 <i>DL</i> ₈₆	15.7	X	248.62457	309.13256	346.06407	21.82030	0.0470207	0.17742741	3.1365742	20	3 5.0	20.2
386564 2009 <i>DK</i> ₉₁	16.4	X	348.23854	39.24119	170.34422	8.32473	0.1094875	0.18237192	3.0796219	20	3 19.4	20.2
386565 2009 <i>DT</i> ₉₈	15.9	X	223.52696	206.55040	131.12369	8.47792	0.1006229	0.18172695	3.0869042	20	3 27.0	20.7
386566 2009 <i>DN</i> ₁₀₁	15.9	X	41.55062	348.12548	151.37941	15.26954	0.1238799	0.17860511	3.1227709	20	3 17.9	19.7
386567 2009 <i>DW</i> ₁₁₁	16.3	X	104.96103	241.58231	172.07944	13.99690	0.1598757	0.17550756	3.1594065	20	2 29.2	20.9
386568 2009 <i>DO</i> ₁₁₇	16.0	X	27.94271	226.25888	332.04927	9.60008	0.0408364	0.18976943	2.9990604	20	4 28.7	20.2
386569 2009 <i>DX</i> ₁₁₈	16.2	X	124.07124	249.11372	171.09474	7.12338	0.1857218	0.18442121	3.0567656	20	4 1.4	20.9
386570 2009 <i>DG</i> ₁₂₉	16.3	X	344.84761	251.42167	357.32385	4.45009	0.1024930	0.18581988	3.0414074	20	5 2.8	20.0
386571 2009 <i>DS</i> ₁₂₉	16.6	X	47.18619	298.06595	193.49469	10.75065	0.1018620	0.17673623	3.1447466	20	3 10.4	20.7
386572 2009 <i>DW</i> ₁₂₉	16.4	X	293.29073	280.28897	341.36652	2.52324	0.1582073	0.17501338	3.1653511	20	3 1.4	21.0
386573 2009 <i>DD</i> ₁₃₂	16.3	X	18.68397	111.40152	30.74630	4.97219	0.1493554	0.17196281	3.2026762	20	2 13.7	20.0
386574 2009 <i>DO</i> ₁₃₂	16.4	X	340.14168	138.01378	93.20521	2.33348	0.1037195	0.18044124	3.1015505	20	4 5.2	20.2
386575 2009 <i>DA</i> ₁₄₀	16.4	X	279.42379	91.06029	162.50917	8.10919	0.0983335	0.17500869	3.1654075	20	2 11.9	20.9
386576 2009 <i>DJ</i> ₁₄₂	16.7	X	343.70728	88.00266	134.18601	2.80442	0.1324203	0.18033148	3.1028088	20	3 27.4	20.4
386577 2009 <i>DK</i> ₁₄₂	16.1	X	266.79699	162.04559	163.31448	9.06200	0.1268338	0.18649839	3.0340262	20	4 18.8	20.7
386578 2009 <i>EY</i> ₁	16.0	X	277.76622	164.74875	142.76577	10.08816	0.1265840	0.18693360	3.0293152	20	4 15.2	20.4
386579 2009 <i>EA</i> ₁₄	15.7	X	336.95597	125.72592	94.26679	10.84095	0.0404623	0.18169261	3.0872932	20	3 27.7	20.0
386580 2009 <i>EF</i> ₁₄	16.3	X	220.37102	192.05664	137.49709	4.95878	0.0760600	0.18119802	3.0929086	20	3 13.7	20.9
386581 2009 <i>EJ</i> ₁₄	16.6	X	125.19020	293.91476	155.87431	10.64067	0.0605865	0.18984820	2.9982308	20	4 27.2	21.1
386582 2009 <i>FV</i> ₁₈	16.7	X	37.84862	338.98605	191.97635	5.88385	0.2949869	0.18279705	3.0748453	20	5 13.4	19.7
386583 2009 <i>FM</i> ₂₂	16.1	X	17.78013	83.09447	92.60702	16.24202	0.2037515	0.17777293	3.1325087	20	4 4.4	19.7
386584 2009 <i>FC</i> ₂₇	15.9	X	261.31725	299.76061	359.98873	9.42331	0.0895772	0.18193130	3.0845922	20	3 19.2	20.5
386585 2009 <i>FM</i> ₃₀	16.3	X	332.25670	200.83017	24.39970	11.25437	0.0601264	0.17959983	3.1112299	20	3 23.3	20.4
386586 2009 <i>FQ</i> ₃₀	16.2	X	44.67908	359.03678	103.19117	5.15996	0.1577591	0.17220195	3.1997104	20	2 6.9	19.9
386587 2009 <i>FT</i> ₃₀	17.3	X	167.32968	319.51426	177.54273	23.01037	0.0701027	0.38002178	1.8876888	20	8 26.3	19.7
386588 2009 <i>FP</i> ₃₃	16.4	X	74.01810	281.79147	191.58532	8.66627	0.0855795	0.18233492	3.0800385	20	3 24.1	20.4
386589 2009 <i>FH</i> ₃₉	16.4	X	102.59942	90.45467	348.15202	25.71094	0.2316271	0.18625688	3.0366484	20	3 28.2	21.2
386590 2009 <i>FZ</i> ₄₉	15.4	X	334.74004	206.57432	35.24427	17.38265	0.2366384	0.17936252	3.1139735	20	3 30.4	19.0
386591 2009 <i>FN</i> ₅₂	15.6	X	340.71708	61.11394	151.21762	14.82824	0.1865698	0.17295560	3.1904085	20	3 4.4	19.2
386592 2009 <i>FS</i> ₅₄	17.6	X	128.38762	59.47155	86.35293	24.57241	0.0707273	0.37228858	1.9137399	20	7 19.3	19.9
386593 2009 <i>FN</i> ₅₆	15.9	X	6.29269	73.88322	129.25906	26.06963	0.2367521	0.17710686	3.1403577	20	4 19.3	19.6
386594 2009 <i>FS</i> ₅₆	17.3	X	118.60975	255.54579	287.33130	18.06524	0.0553730	0.38215770	1.8806485	20	8 22.7	19.7
386595 2009 <i>FY</i> ₅₆	15.6	X	341.08234	249.52900	302.02759	24.60451	0.2198146	0.17196695	3.2026248	20	1 30.5	19.5
386596 2009 <i>FD</i> ₅₈	15.5	X	187.16486	337.58686	6.55390	15.45065	0.0368203	0.17250460	3.1959668	20	2 29.7	20.3
386597 2009 <i>FR</i> ₅₉	15.6	X	355.98585	261.19374	130.55717	14.79195	0.1026300	0.17924360	3.1153070	20	3 23.6	19.5
386598 2009 <i>FO</i> ₆₅	15.9	X	4.02696	49.75919	146.85331	11.78692	0.0491952	0.17956367	3.1116476	20	4 1.6	20.1
386599 2009 <i>FK</i> ₆₇	16.2	X	42.21251	153.78511	349.64601	11.10605	0.1028395	0.17891232	3.1191952	20	3 18.4	20.1
386600 2009 <i>FX</i> ₆₈	16.0	X	39.69161	281.88113	191.08073	24.15996	0.2310962	0.17460609	3.1702715	20	2 12.6	19.7
386601 2009 <i>FP</i> ₆₉	15.7	X	46.60146	101.75036	35.33173	14.67537	0.0204471	0.17349356	3.1838100	20	3 17.9	20.3
386602 2009 <i>FZ</i> ₇₆	16.8	X	75.50374	53.86410	70.54093	2.05836	0.1029976	0.17942521	3.1132482	20	4 13.0	20.9
386603 2009 <i>FG</i> ₇₇	16.5	X	54.43416	290.37405	220.87141	4.60444	0.0820020	0.18337451	3.0683866	20	4 13.5	20.4
386604 2009 <i>GO</i> ₅	16.1	X	8.94468	86.61642	161.59786	10.92773	0.1848350	0.18472589	3.0534035	20	6 17.8	19.6
386605 2009 <i>HW</i> ₅	15.9	X	254.64431	170.01001	179.31588	10.42484	0.0877422	0.18750740	3.0231320	20	5 13.9	20.4
386606 2009 <i>HM</i> ₁₁	15.7	X	321.76718	105.27391	165.55646	10.42021	0.1848765	0.17912535	3.1167216	20	4 19.4	19.6
386607 2009 <i>HQ</i> ₂₉	16.2	X	351.13409	76.45710	139.71558	9.60934	0.0862504	0.17940180	3.1135190	20	4 6.5	20.2
386608 2009 <i>HR</i> ₃₆	15.8	X	317.59395	222.81116	23.91424	17.20567	0.1723911	0.17408471	3.1765983	20	3 18.7	20.0
386609 2009 <i>HF</i> ₇₃	17.5	X	0.59123	274.07617	358.00639	19.96859	0.0588545	0.36967329	1.9227552	20	7 22.8	19.6
386610 2009 <i>HW</i> ₉₅	16.5	X	53.20847	94.34757	35.19250	10.06241	0.2117701	0.17699540	3.1416760	20	4 4.3	20.1
386611 2009 <i>HF</i> ₉₇	15.7	X	109.11671	272.05799	176.33973	13.16660	0.0326719	0.17341605	3.1847586	20	4 1.4	20.1
386612 2009 <i>HB</i> ₁₀₀	16.0	X	5.22559	5.32537	173.70834	5.48193	0.1016169	0.16961374	3.2321787	20	3 8.1	20.0
386613 2009 <i>JN</i> ₁₈	17.6	X	42.94260	99.07552	102.71846	6.73497	0.1634868	0.27132170	2.3630869	20	6 15.9	19.9
386614 2009 <i>OW</i> ₁₅	18.2	X	91.05072	62.49945	286.75310	5.26779	0.2078864	0.30137581	2.2035000	20	—	—
386615 2009 <i>QP</i> ₆	18.0	X	62.15390	76.65175	297.17495	1.63918	0.1864316	0.29638567	2.2279114	20	—	—
386616 2009 <i>QC</i> ₂₆	17.8	X	57.35959	65.40606	292.94832	3.93257	0.1910120	0.29261779	2.2469957	20	—	—
386617 2009 <i>QV</i> ₅₃	17.7	X	24.01677	215.20325	182.92264	7.10989	0.1163923	0.29040150	2.2584136	20	—	—
386618 2009 <i>RD</i> ₂₆	18.0	X	37.66783	36.96572	346.62698	3.60436	0.1563408	0.28810629	2.2703922	20	—	—
386619 2009 <i>RP</i> ₅₁	17.9	X	331.00822	30.68535	15.90130	1.72327	0.1820105	0.27504830	2.3416936	20	12 14.9	19.8
386620 2009 <i>RX</i> ₅₄	13.8	X	322.69772	341.03906	43.91342	6.50270	0.0466764	0.08217500	5.2397380	20	9 19.2	20.5
386621 2009 <i>RL</i> ₅₉	17.6	X	313.56679	281.14214	86.37834	0.62670	0.3106548	0.26386556	2.4073963	20	8 6.6	19.0
386622 New Zealand	18.0	X	4.43516	293.54929	87.68939	7.07249	0.1924733	0.28240143	2.3008667	20	—	—
386623 2009 <i>SY</i> ₂₇	18.3	X	347.69302	57.11153	14.08969	3.53685	0.1843863	0.28503141	2.2866914	20	—	—
386624 2009 <i>SU</i> ₂₈	18.0	X	44.96215	207.76159	193.41716	3.84481	0.1092516	0.29467645	2.2365182	20	—	—
386625 2009 <i>SH</i> ₂₉	18.1	X	134.30439	253.25480	154.30168	1.34567	0.1502221	0.22567033	2.6718972	20	3 20.1	22.1
386626 2009 <i>SS</i> ₃₀	17.7	X	5.07449	203.23401	175.03567	4.70267	0.1597721	0.27933458	2.3176770	20	—	—
386627 2009 <i>SY</i> ₅₉	13.5	X	293.43566	177.46553	233.91687	11.17432	0.0299007	0.08246003	5.2276566	20	9 9.9	20.5
386628 2009 <i>SP</i> ₇₅	17.7	X	313.25644	259.03878	173.56270	10.00642	0.1614092	0.27494149	2.3423001	20	12 16.0	19.9
386629 2009 <i>SM</i> ₈₆	16.8	X	106.53970	72.94732	346.60390	7.56314	0.1260957	0.22060039	2.7126798	20	3 1.3	20.6
386630 2009 <i>SR</i> ₉₅	17.8	X	314.87686	172.47729	266.50920	4.05121	0.1943810	0.27947040	2.3169260	20	—	—
386631 2009 <i>SX</i> ₁₀₄	18.0	X	353.80590	14.50986	78.05303	4.84065	0.0835902	0.29314763	2.2442873	20	—	—
386632 2009 <												

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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>
386641 2009 SF ₂₅₀	17.3	X	10.17170	43.08553	10.43887	11.79682	0.1549098	0.28664809	2.2780854	20	—	—
386642 2009 SS ₂₅₄	17.4	X	2.15507	161.61906	262.08383	3.56774	0.2057904	0.28568777	2.2831877	20	—	—
386643 2009 SQ ₂₅₈	18.3	X	78.02892	124.67094	284.42970	3.01878	0.0717093	0.30398448	2.1906270	20	—	—
386644 2009 SE ₂₆₂	17.4	X	254.18694	150.26065	264.15112	4.02616	0.0967811	0.25864606	2.4396759	20	8 6.2	20.6
386645 2009 SW ₂₆₂	13.9	X	250.09143	70.69065	26.60532	12.26690	0.0791823	0.08423167	5.1540955	20	9 14.2	20.9
386646 2009 SY ₂₇₁	17.3	X	287.35683	112.91642	358.27391	6.40496	0.1602582	0.27708689	2.3301939	20	12 20.1	19.3
386647 2009 SJ ₃₀₈	18.1	X	344.00988	258.80241	122.14108	2.98187	0.2156190	0.27296283	2.3536057	20	12 7.3	19.9
386648 2009 SP ₃₁₄	17.4	X	131.26257	50.86623	197.85279	3.59474	0.2076982	0.28652338	2.2787465	20	12 4.4	21.2
386649 2009 SK ₃₁₉	13.7	X	339.18332	130.61313	228.33234	4.04923	0.0246645	0.08087504	5.2957365	20	9 6.4	20.6
386650 2009 SF ₃₂₁	17.5	X	316.77078	116.26124	342.26500	6.36350	0.0641892	0.28440616	2.2900417	20	—	—
386651 2009 SM ₃₄₉	18.0	X	267.67588	292.26996	215.84751	1.59935	0.1623541	0.27970571	2.3156264	20	—	—
386652 2009 SN ₃₅₂	17.7	X	337.26137	348.23594	60.87203	4.78855	0.1373431	0.27169180	2.3609404	20	12 24.4	20.0
386653 2009 SP ₃₆₁	17.5	X	1.60765	236.31078	141.71347	6.91659	0.2281195	0.27421565	2.3464316	20	—	—
386654 2009 TH ₃	16.6	X	282.54071	216.12604	217.59950	22.53720	0.2316140	0.26538184	2.3982176	20	9 22.7	19.4
386655 2009 TA ₇	17.0	X	88.40183	1.34655	340.60266	6.70048	0.2657636	0.29357578	2.2421048	20	—	—
386656 2009 TV ₁₀	18.1	X	320.25425	25.90629	24.30624	2.77183	0.2059249	0.27145341	2.3623225	20	11 25.4	19.7
386657 2009 TV ₄₅	17.3	X	358.45829	38.05023	35.00562	5.76045	0.2258444	0.27657960	2.3330423	20	—	—
386658 2009 UF ₁₂	16.8	X	318.52008	190.53026	217.22465	8.41172	0.1772642	0.26893106	2.3770706	20	11 16.3	18.6
386659 2009 UQ ₂₈	17.2	X	295.94748	99.13550	45.05464	6.46233	0.0337248	0.28814889	2.2701684	20	—	—
386660 2009 UY ₂₉	17.4	X	34.50898	136.48675	205.54319	1.74016	0.2179829	0.27773332	2.3265768	20	12 31.2	20.5
386661 2009 UE ₄₇	18.2	X	300.32355	52.60013	47.07008	1.98063	0.1372371	0.27417269	2.3466766	20	12 29.4	20.1
386662 2009 UQ ₅₀	17.9	X	333.56232	52.39590	44.20189	5.08983	0.1092628	0.28633612	2.2797398	20	—	—
386663 2009 UD ₅₈	17.6	X	311.54218	229.43443	233.07250	5.36181	0.0978590	0.28025303	2.3126106	20	—	—
386664 2009 UO ₇₅	18.0	X	332.51710	236.81891	254.84720	2.62807	0.0863414	0.29517442	2.2340021	20	—	—
386665 2009 UG ₇₉	18.4	X	326.85882	295.41066	139.45604	1.17190	0.1927205	0.27496133	2.3421874	20	—	—
386666 2009 UR ₉₃	17.8	X	312.65654	45.20706	33.34186	3.69290	0.1374217	0.27372087	2.3492583	20	12 21.8	19.8
386667 2009 UO ₁₀₁	17.8	X	278.01624	311.54302	104.17679	3.38185	0.2105190	0.25985473	2.4321049	20	8 27.6	20.5
386668 2009 UL ₁₁₈	18.1	X	300.04232	242.36682	190.27131	2.03440	0.1892907	0.27211074	2.3585166	20	11 13.5	19.8
386669 2009 UJ ₁₂₀	18.1	X	290.33938	299.01384	178.40861	1.94957	0.1616131	0.27992444	2.3144200	20	—	—
386670 2009 UD ₁₂₁	17.5	X	315.50005	193.09760	235.8106	1.30871	0.1892172	0.27279212	2.3549501	20	12 13.8	19.2
386671 2009 UX ₁₂₈	18.0	X	293.47714	143.87584	290.72524	0.94774	0.1948916	0.26706839	2.3881103	20	10 28.8	19.7
386672 2009 UA ₁₂₉	17.8	X	0.44897	352.10401	30.65139	2.99446	0.1392121	0.27472495	2.3435307	20	12 27.5	20.2
386673 2009 UJ ₁₄₁	17.0	X	294.60173	216.13335	261.84180	10.88180	0.1483301	0.27687999	2.3313546	20	—	—
386674 2009 UU ₁₄₈	13.7	X	330.62963	196.77959	174.89099	13.21661	0.0283514	0.08218966	5.2391148	20	9 11.9	20.5
386675 2009 UQ ₄₃	17.3	X	359.76311	292.77510	97.18697	6.04615	0.2435267	0.27626752	2.3347990	20	—	—
386676 2009 VT ₄₃	17.6	X	318.49853	176.36605	234.60529	2.19082	0.1890932	0.26960327	2.3731177	20	11 21.4	19.2
386677 2009 VW ₄₃	16.9	X	343.93977	150.87083	261.29148	4.75795	0.1821072	0.27589303	2.3364032	20	—	—
386678 2009 VA ₅₁	18.2	X	346.42210	224.95419	169.71516	1.21989	0.1727134	0.27352411	2.3503848	20	12 25.7	20.5
386679 2009 VR ₅₁	17.6	X	351.23455	88.36711	296.70294	1.43222	0.2390252	0.27216474	2.3582045	20	12 31.1	19.7
386680 2009 VS ₅₇	17.9	X	294.77261	312.56491	104.65123	3.09770	0.1734373	0.26426966	2.4049415	20	10 8.5	19.9
386681 2009 VE ₆₄	18.0	X	333.70414	211.78220	185.92328	1.17875	0.1730277	0.26848106	2.3797260	20	12 3.5	19.9
386682 2009 VS ₆₄	17.7	X	301.94149	152.09288	288.51171	1.62553	0.1582054	0.27060445	2.3672607	20	11 30.9	19.5
386683 2009 VE ₆₆	17.9	X	7.78427	131.31418	263.03003	4.13257	0.1308977	0.27807503	2.3246704	20	—	—
386684 2009 VZ ₆₆	18.0	X	354.43546	25.09287	352.52363	2.17288	0.2105279	0.27186825	2.3599187	20	12 20.8	20.2
386685 2009 VM ₇₅	17.7	X	342.62159	123.52161	289.03968	4.68812	0.2672470	0.27517620	2.3409680	20	—	—
386686 2009 VY ₈₀	17.7	X	283.00628	26.10123	50.81251	3.28284	0.1581681	0.26566026	2.3965417	20	10 17.1	20.1
386687 2009 VX ₈₄	17.3	X	67.00709	216.87811	126.10830	8.12055	0.3198455	0.29093320	2.2556612	20	—	—
386688 2009 VB ₉₄	17.4	X	11.75562	299.85325	102.58324	6.84422	0.1231125	0.28060349	2.3106846	20	—	—
386689 2009 WB ₇	17.1	X	352.21306	8.39949	52.84538	6.07047	0.1519556	0.27834337	2.3231761	20	—	—
386690 2009 WQ ₉	17.9	X	338.01811	262.61937	112.21167	4.48314	0.2653542	0.26860713	2.3789813	20	11 20.1	19.3
386691 2009 WT ₉	17.6	X	312.31188	303.40418	133.26226	4.32210	0.2025071	0.27138834	2.3627001	20	12 19.8	19.1
386692 2009 WH ₁₇	18.5	X	273.29636	189.98120	302.83620	0.60685	0.1225816	0.27769587	2.3267860	20	12 29.0	20.5
386693 2009 WV ₃₂	16.3	X	63.41616	162.91621	241.87060	4.76281	0.0646487	0.19799053	2.9154557	20	—	—
386694 2009 WZ ₃₄	16.4	X	216.46137	165.76840	283.80523	14.24492	0.0556973	0.23981048	2.5658067	20	8 6.5	20.1
386695 2009 WT ₃₈	18.5	X	295.72333	211.30165	276.38452	1.32342	0.1588637	0.27653877	2.3332720	20	—	—
386696 2009 WY ₃₈	17.5	X	314.62810	155.32276	253.35546	4.48856	0.0961922	0.26558629	2.3969866	20	11 6.8	20.0
386697 2009 WZ ₃₈	17.8	X	36.04568	101.28443	259.19422	1.94840	0.2290416	0.27918338	2.3185137	20	—	—
386698 2009 WE ₃₉	18.3	X	305.71963	110.48854	321.49025	0.75700	0.1654427	0.26817633	2.3815283	20	11 24.5	20.2
386699 2009 WF ₄₀	17.8	X	260.69548	109.80754	33.82899	2.11642	0.1279318	0.27034251	2.3687896	20	12 19.1	20.1
386700 2009 WD ₄₅	18.0	X	325.09559	242.57180	223.92495	3.05892	0.0886537	0.28224091	2.3017390	20	—	—
386701 2009 WH ₇₂	17.6	X	297.04316	317.77496	106.52978	2.24657	0.1740612	0.26559527	2.3969326	20	10 24.1	19.6
386702 2009 WN ₇₃	17.2	X	287.12172	68.96904	29.19938	7.33446	0.0594470	0.27128080	2.3633244	20	12 4.5	19.9
386703 2009 WV ₈₈	17.0	X	6.54069	159.20012	233.15396	6.98087	0.1020346	0.27503041	2.3417952	20	—	—
386704 2009 WW ₁₀₁	17.3	X	23.40310	258.93349	99.76221	2.88086	0.2314581	0.27688882	2.3313050	20	—	—
386705 2009 WG ₁₀₃	18.1	X	29.19694	152.67917	210.98244	4.47230	0.1901108	0.27624841	2.3349067	20	—	—
386706 2009 WN ₁₁₇	18.3	X	290.54618	153.07255	299.78965	0.90709	0.1480836	0.26948448	2.3738151	20	11 26.3	20.5
386707 2009 WK ₁₂₃	17.0	X	79.37349	118.84200	66.60633	15.19785	0.0320197	0.23856618	2.5747208	20	6 25.3	20.4
386708 2009 WX ₁₄₄	17.7	X	293.83275	252.73897	236.00416	1.75548	0.0950539	0.28311138	2.2970185	20	—	—
386709 2009 WM ₁₆₃	18.0	X	354.71953	108.85325	282.93498	1.20217	0.2103535	0.27382134	2.3486836	20	—	—
386710 2009 WL ₁₆₇	17.5	X	338.71945	143.74478	270.48324	6.17584	0.2093040	0.27566324	2.3382098	20	—	—
386711 2009 WW ₁₇₇	16.9	X	120.23007	224.62647	303.13287	5.48810	0.0542638	0.24336198	2.5407829	20	7 29.5	20.5
386712 2009 WB ₁₈₃	17.6	X	193.28548	14.66306	203.29137	7.34288	0.0484924	0.27820909	2.3239236	20	—	—
386713 2009 WX ₁₈₈	17.8	X	194.55809	164.97670	289.62565	2.38462	0.1086415	0.24595455	2.5228967	20	7 18.6	21.6
386714 2009 WK ₁₉₃	17.8	X	26.99256	308.17725	44.31327	3.35441	0.1967068	0.27655796	2.3331640	20	—	

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
386721 2009 XN ₁₂	17.5	X	301.56619	120.02499	298.10388	1.85104	0.1607397	0.26582198	2.3955696	20	10 23.2	19.5
386722 2009 YC ₅	17.5	X	219.65179	149.98000	295.60338	12.01374	0.2121573	0.24227906	2.5483484	20	7 24.2	21.5
386723 2009 YE ₇	4.5	X	183.90618	101.12429	141.38155	29.11432	0.1466001	0.00335354	44.2045538	20	12 4.0	21.6
386724 2009 YN ₂₀	17.5	X	309.40615	89.20299	317.35508	4.51222	0.1049807	0.25787454	2.4445395	20	10 21.2	20.0
386725 2009 YB ₂₄	16.2	X	208.82546	283.92586	89.46690	16.20746	0.1918351	0.22696755	2.6617067	20	4 23.8	20.9
386726 2010 AF ₁	17.5	X	288.25173	104.72125	295.59946	3.29847	0.2120205	0.25145659	2.4859594	20	8 18.5	20.2
386727 2010 AP ₁	16.7	X	240.61425	254.08266	129.80859	13.84249	0.1883112	0.23204474	2.6227379	20	5 31.8	21.0
386728 2010 AY ₈	17.2	X	263.34767	304.72591	139.27577	5.27613	0.1736618	0.25251629	2.4789995	20	9 19.9	20.1
386729 2010 AJ ₁₇	16.5	X	119.45391	141.39969	299.37832	6.14527	0.0643066	0.20980261	2.8049737	20	4 1.6	20.5
386730 2010 AA ₃₀	16.8	X	168.27637	121.96312	32.46718	31.81819	0.2967784	0.23375026	2.6099648	20	9 21.2	22.1
386731 2010 AT ₃₅	16.8	X	182.20187	124.92307	139.60466	8.08349	0.0893867	0.27159903	2.3614780	20	—	—
386732 2010 AU ₄₁	17.0	X	342.55370	323.72920	131.33544	6.84626	0.0719974	0.27570503	2.3379735	20	—	—
386733 2010 AK ₄₄	17.2	X	161.16639	204.05484	319.45421	7.24112	0.1230297	0.24080719	2.5587219	20	9 8.6	21.1
386734 2010 AM ₄₅	17.1	X	272.31729	120.37478	309.73286	4.08991	0.1583181	0.25443300	2.4665339	20	9 13.3	20.0
386735 2010 AQ ₄₅	17.1	X	197.26095	216.41772	354.60893	2.18356	0.1569981	0.26434547	2.4044817	20	12 17.3	20.4
386736 2010 AZ ₄₅	17.5	X	240.71249	351.17121	139.61647	1.41064	0.1279683	0.25679312	2.4513978	20	10 29.5	20.4
386737 2010 AU ₅₀	16.5	X	189.75832	33.10143	170.61826	6.19153	0.0682451	0.25779177	2.4450628	20	12 9.1	19.9
386738 2010 AV ₅₈	15.7	X	43.58229	144.18846	350.92050	17.37623	0.1440194	0.19236820	2.9719890	20	3 12.8	18.9
386739 2010 AH ₆₅	16.6	X	95.75136	273.82458	281.55339	7.01565	0.1008687	0.23048989	2.6345198	20	8 8.2	20.4
386740 2010 AX ₆₆	16.5	X	356.77266	54.35008	145.94033	12.53807	0.1170712	0.20126645	2.8837336	20	3 20.7	19.9
386741 2010 AO ₆₇	17.2	X	160.01460	270.26420	305.06267	6.03973	0.0837738	0.26133332	2.4229225	20	11 17.0	20.7
386742 2010 AO ₈₀	16.6	X	129.39190	359.27078	191.06125	13.84367	0.2246708	0.22691486	2.6621188	20	9 14.3	21.2
386743 2010 AP ₁₁₆	15.6	X	191.05609	213.68569	92.42461	27.96016	0.0642520	0.17712775	3.1401108	20	1 14.3	20.4
386744 2010 BH ₃	17.0	X	63.12926	290.96300	311.88684	11.60821	0.1470961	0.23238125	2.6202053	20	9 4.4	20.7
386745 2010 BC ₁₀	15.8	X	86.09130	329.99700	92.30862	23.07643	0.0553747	0.18202755	3.0835048	20	2 5.3	20.3
386746 2010 BU ₁₁	17.0	X	93.41603	306.13253	229.56571	8.05143	0.1021240	0.21343376	2.7730687	20	7 9.5	21.1
386747 2010 BC ₂₅	15.7	X	194.63143	244.43057	85.21703	27.87750	0.1960816	0.18071588	3.0984073	20	2 24.5	21.4
386748 2010 BS ₃₉	16.8	X	144.89604	65.33088	9.74830	17.35451	0.0857198	0.20125290	2.8838629	20	4 24.7	21.3
386749 2010 BZ ₆₀	16.1	X	118.99003	111.69594	65.69623	16.46689	0.1086157	0.22016169	2.7162822	20	8 20.3	20.5
386750 2010 BB ₉₄	15.4	X	78.50906	75.27951	176.15746	2.78764	0.1671483	0.12553644	3.9502341	20	9 26.4	21.2
386751 2010 CR ₁₀	15.7	X	343.23435	55.57585	101.43391	10.05346	0.0510587	0.17383191	3.1796773	20	1 13.3	19.9
386752 2010 CW ₁₂	17.0	X	104.79083	60.03241	137.05602	7.96871	0.1997667	0.21813717	2.7330627	20	9 1.7	21.3
386753 2010 CV ₃₂	16.6	X	58.98903	122.43915	108.94925	5.94610	0.0820141	0.22833664	2.6510565	20	8 8.7	20.1
386754 2010 CB ₄₀	17.5	X	226.38619	130.38267	336.57798	10.44671	0.0825460	0.24065047	2.5598327	20	9 10.8	21.0
386755 2010 CZ ₄₀	16.8	X	249.62007	279.62392	162.93170	12.11124	0.1597168	0.23883672	2.5727761	20	8 28.1	20.4
386756 2010 CT ₅₉	16.8	X	182.53569	55.86763	158.02181	8.31065	0.0723018	0.25611283	2.4557369	20	12 12.9	20.3
386757 2010 CL ₆₃	16.5	X	191.24286	94.65496	346.81858	13.51887	0.0783333	0.22375611	2.6871141	20	6 29.8	20.8
386758 2010 CJ ₆₈	17.1	X	73.75728	111.08925	164.27846	8.06426	0.1479790	0.24050932	2.5608341	20	11 6.1	20.9
386759 2010 CW ₈₉	16.9	X	130.05693	107.15412	159.72613	12.31837	0.0858531	0.25641460	2.4538097	20	12 21.1	20.7
386760 2010 CK ₉₃	17.1	X	134.68531	64.13658	136.93047	4.71541	0.0591783	0.23637596	2.5906009	20	10 1.1	20.7
386761 2010 CJ ₉₈	17.1	X	240.13406	308.63060	141.00795	11.38392	0.1296093	0.24197094	2.5505112	20	9 1.4	20.5
386762 2010 CE ₁₀₂	17.8	X	219.69572	125.92493	346.72671	3.45252	0.0455581	0.24251214	2.5467153	20	9 16.5	21.3
386763 2010 CO ₁₁₄	17.1	X	147.19790	198.80825	73.70052	2.19144	0.1661456	0.25927028	2.4357585	20	—	—
386764 2010 CM ₁₂₈	16.1	X	219.11062	300.60475	107.56005	8.49607	0.0172571	0.22337134	2.6901991	20	6 22.3	19.7
386765 2010 CC ₁₄₄	16.6	X	242.68057	151.21356	290.31317	11.08103	0.1069754	0.24206814	2.5498284	20	8 22.0	20.2
386766 2010 CB ₁₄₈	16.2	X	106.41550	240.97491	0.88878	12.91281	0.2527907	0.23140978	2.6275333	20	10 27.1	20.9
386767 2010 CR ₁₆₀	16.5	X	133.29649	12.06299	144.91919	11.42496	0.0367223	0.22853776	2.6495009	20	7 28.1	20.3
386768 2010 CJ ₁₆₉	17.4	X	185.38821	2.50488	145.90113	9.40167	0.1010697	0.23887267	2.5725179	20	9 19.2	21.2
386769 2010 CB ₁₈₀	16.2	X	235.31138	33.67384	43.21315	12.52528	0.2561815	0.24087040	2.5582742	20	7 27.9	20.5
386770 2010 CS ₁₈₀	17.3	X	153.73644	39.31341	98.58925	3.43103	0.1437544	0.22951984	2.6419376	20	8 1.4	21.4
386771 2010 CJ ₁₈₅	15.6	X	38.00220	143.56226	89.68056	14.77670	0.1470058	0.21037551	2.7998790	20	7 18.6	19.0
386772 2010 CA ₂₂₃	16.2	X	93.72394	269.72828	180.80378	15.77153	0.0644389	0.18594833	3.0400066	20	3 18.0	20.4
386773 2010 CB ₂₂₃	16.4	X	66.67627	10.89857	176.82435	12.11243	0.0227281	0.20371152	2.8606122	20	6 10.5	20.5
386774 2010 CK ₂₂₅	15.9	X	77.82377	172.92933	264.14340	14.16337	0.0791724	0.17836522	3.1255703	20	2 7.6	20.4
386775 2010 CJ ₂₃₁	16.3	X	123.22799	289.32424	123.22826	12.05784	0.1062280	0.18467653	3.0539476	20	3 16.6	20.9
386776 2010 DQ ₆	17.5	X	213.28093	152.18474	334.04452	3.34798	0.1396672	0.24133316	2.5550028	20	9 15.0	21.3
386777 2010 DZ ₂₁	16.8	X	87.03151	109.43771	136.11499	14.61468	0.1149974	0.23970185	2.5665819	20	10 13.2	20.7
386778 2010 DF ₂₄	16.2	X	141.63442	9.77171	74.14982	12.18708	0.0696792	0.19470477	2.9481641	20	5 8.9	20.6
386779 2010 DS ₄₂	16.7	X	85.15932	271.26381	339.40366	12.12167	0.2418455	0.23011367	2.6373905	20	10 18.1	21.1
386780 2010 DR ₄₅	17.6	X	174.10826	261.17671	209.81499	3.23987	0.1427075	0.22637354	2.6663609	20	7 16.2	21.9
386781 2010 DN ₄₈	17.1	X	177.28519	195.16032	312.71064	4.48931	0.0995386	0.23440920	2.6050713	20	9 5.9	21.1
386782 2010 DG ₄₉	16.8	X	172.40108	314.43463	157.88042	11.77530	0.1269195	0.22809131	2.6529571	20	7 16.1	21.1
386783 2010 DK ₇₄	16.2	X	215.04439	255.30724	174.75395	22.02095	0.0454074	0.22389513	2.6860017	20	7 11.9	20.4
386784 2010 EY ₁₈	15.7	X	282.87726	163.88954	112.46072	15.11524	0.0512022	0.18231174	3.0802996	20	3 27.7	20.3
386785 2010 EM ₂₁	17.2	X	101.46569	267.64686	343.86991	3.05322	0.2123936	0.23613644	2.5923524	20	11 4.9	21.5
386786 2010 ER ₂₁	16.6	X	159.43847	123.67340	10.85543	12.22656	0.2143669	0.22672024	2.6636420	20	8 7.4	21.3
386787 2010 ES ₃₅	16.7	X	151.16877	126.44876	1.32123	11.57532	0.1360595	0.22372987	2.6873242	20	7 19.0	21.1
386788 2010 EA ₃₈	16.6	X	100.71035	41.75497	186.98589	10.15273	0.2414364	0.22575113	2.6712596	20	10 10.3	20.9
386789 2010 EZ ₃₈	16.5	X	95.42609	139.89258	47.02713	13.62833	0.1708771	0.22068604	2.7119779	20	8 12.2	20.8
386790 2010 EW ₆₉	16.8	X	113.34338	243.75945	311.18811	8.76974	0.2320321	0.22870326	2.6482226	20	9 5.9	21.3
386791 2010 EB ₇₀	16.6	X	157.00830	46.19127	149.52873	15.45777	0.1490690	0.23757397	2.5818845	20	10 21.1	20.9
386792 2010 EP ₉₀	17.5	X	156.42926	326.37099	166.21077	2.99996	0.0879992	0.22810254	2.6528700	20	7 25.8	21.5
386793 2010 EG ₁₀₄	16.1	X	152.10664	196.85474	312.67989	12.15						

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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>
386801 2010 ER ₁₃₀	16.8	X	153.27501	76.71616	26.02968	5.24597	0.1222667	0.21223407	2.7835091	20	6 14.6	21.2
386802 2010 EA ₁₃₉	17.3	X	181.52621	72.68170	96.76337	12.55081	0.2128729	0.24210516	2.5495685	20	10 10.6	21.8
386803 2010 EV ₁₄₀	16.7	X	319.67723	248.61305	123.55888	2.90201	0.1261644	0.23278478	2.6171764	20	9 16.2	19.5
386804 2010 EL ₁₄₇	16.1	X	0.44080	100.08786	97.31642	10.07623	0.0746823	0.18398890	3.0615520	20	3 29.3	20.2
386805 2010 FX ₂	17.0	X	249.98542	273.07220	127.87496	5.99648	0.0268947	0.22550921	2.6731697	20	7 22.1	20.4
386806 2010 FY ₄	16.9	X	172.18376	116.04703	12.77392	12.91527	0.1294730	0.22796192	2.6539608	20	8 12.7	21.2
386807 2010 FL ₅	17.1	X	277.34529	326.07326	31.32000	5.64670	0.0396854	0.21703940	2.7422707	20	6 27.9	20.8
386808 2010 FU ₂₀	17.0	X	115.05755	83.02827	85.61683	3.27728	0.0216232	0.22099349	2.7094620	20	7 19.4	20.8
386809 2010 FE ₂₁	17.0	X	280.84699	249.18021	136.43534	4.99916	0.1031184	0.22813653	2.6526065	20	8 1.4	20.2
386810 2010 FK ₂₄	16.9	X	156.96178	325.56071	127.78484	5.34464	0.0284164	0.21221529	2.7836733	20	6 3.3	20.8
386811 2010 FX ₂₆	17.3	X	114.09626	34.57979	189.62216	3.23925	0.1302502	0.23211267	2.6222262	20	10 9.8	21.2
386812 2010 FZ ₂₈	16.8	X	183.65967	330.44396	161.02969	13.69326	0.0497897	0.22970663	2.6405052	20	8 25.3	20.6
386813 2010 FG ₅₇	17.5	X	156.05437	255.20357	253.10916	1.18798	0.1382124	0.22656307	2.6648737	20	8 15.5	21.7
386814 2010 FH ₈₇	16.8	X	351.84918	79.78662	197.30506	4.82149	0.0066223	0.21317837	2.7752831	20	6 25.6	20.6
386815 2010 FN ₉₄	17.0	X	68.07076	80.43278	130.07208	4.53420	0.1131022	0.21464620	2.7626164	20	7 26.4	20.7
386816 2010 GP ₂₃	16.7	X	91.64778	38.11127	133.81426	8.93590	0.1575426	0.21293762	2.7773745	20	7 11.1	20.7
386817 2010 GN ₂₄	16.0	X	328.00815	161.38457	1.44715	9.66275	0.0586655	0.17995132	3.1071773	20	1 6.5	20.5
386818 2010 GB ₂₇	16.7	X	25.61587	41.58657	173.22809	10.66383	0.1187867	0.20179389	2.8787064	20	5 29.4	20.3
386819 2010 GR ₂₉	16.4	X	158.20929	37.23341	147.81912	9.30016	0.1442838	0.23281124	2.6169781	20	10 6.6	20.6
386820 2010 GJ ₃₃	17.5	X	160.55324	34.10417	160.81027	8.58778	0.1650470	0.23659656	2.5889904	20	10 20.5	21.7
386821 2010 GS ₆₂	16.5	X	102.51409	4.82212	208.01319	12.94208	0.1807270	0.22521009	2.6755361	20	9 13.9	20.9
386822 2010 GY ₉₉	17.0	X	66.56354	36.25038	178.10060	8.74655	0.1724827	0.21595915	2.7514079	20	8 6.1	20.8
386823 2010 GX ₁₀₆	17.0	X	149.04051	146.83190	14.69669	5.79651	0.0776213	0.22456807	2.6806331	20	8 26.6	21.0
386824 2010 GS ₁₂₀	16.5	X	181.65099	29.17098	82.38504	6.23681	0.0729004	0.21835288	2.7312624	20	7 27.6	20.6
386825 2010 GJ ₁₂₄	16.7	X	303.75098	170.71472	89.39814	3.90798	0.1069172	0.19034488	2.9930129	20	3 21.1	20.8
386826 2010 GL ₁₂₆	17.3	X	137.49237	167.60032	15.95777	3.11464	0.1658090	0.22654796	2.6649922	20	9 13.2	21.6
386827 2010 GQ ₁₄₀	16.9	X	352.06218	63.03880	216.24039	4.16948	0.0231736	0.21113058	2.7931995	20	6 28.6	20.6
386828 2010 GY ₁₄₃	16.1	X	117.18110	339.10144	93.84981	11.23758	0.0928587	0.18804015	3.0174192	20	4 3.6	20.7
386829 2010 GG ₁₆₁	16.0	X	101.95835	85.80337	96.59310	8.20569	0.0987098	0.21543725	2.7558496	20	7 31.1	19.9
386830 2010 GV ₁₇₂	16.1	X	263.33569	253.49060	144.17044	13.60336	0.0919700	0.22744426	2.6579863	20	7 25.2	19.7
386831 2010 HX ₅₆	16.1	X	325.20334	28.89771	197.22576	11.01628	0.1631896	0.17447457	3.1718645	20	2 25.3	20.3
386832 2010 HU ₅₈	13.5	X	288.63875	189.52702	130.68741	19.61203	0.1548342	0.08340324	5.1881690	20	5 16.1	20.5
386833 2010 HE ₁₀₃	15.8	X	271.59207	153.77794	93.88549	10.78626	0.0489865	0.17916738	3.1162342	20	2 4.4	20.3
386834 2010 JM ₃₁	16.1	X	285.54081	196.61721	48.41281	16.04287	0.1005383	0.18012964	3.1051262	20	2 15.8	20.9
386835 2010 JG ₃₄	16.6	X	134.01576	52.16047	134.09561	13.97816	0.1947816	0.22446603	2.6814454	20	9 16.9	21.2
386836 2010 JO ₃₉	15.6	X	109.08364	304.86606	118.76714	19.26757	0.0837003	0.17869644	3.1217068	20	3 13.2	20.3
386837 2010 JT ₇₂	16.2	X	205.39609	170.20644	156.87532	11.72406	0.0522986	0.17801049	3.1297212	20	2 23.7	20.8
386838 2010 JJ ₇₃	16.8	X	82.29070	185.26757	93.73389	4.13092	0.1343311	0.21776975	2.7361360	20	9 7.0	20.8
386839 2010 JK ₈₅	16.2	X	270.96958	168.73071	104.22899	10.29872	0.0934542	0.18051309	3.1007274	20	2 29.9	20.8
386840 2010 JI ₁₀₆	15.5	X	285.58455	331.34654	310.11830	13.92035	0.2431113	0.17396041	3.1781113	20	2 29.8	20.5
386841 2010 JW ₁₁₀	16.8	X	128.14161	133.79688	43.96068	13.81013	0.1832134	0.22212369	2.7002634	20	9 4.5	21.4
386842 2010 JQ ₁₁₇	15.9	X	218.18246	203.32297	96.32275	6.37845	0.1274508	0.17194351	3.2029158	20	2 4.5	21.0
386843 2010 JB ₁₇₀	16.3	X	303.58340	149.60781	132.91558	10.25938	0.1931686	0.19053741	2.9909963	20	4 6.9	20.4
386844 2010 JL ₁₇₇	15.9	X	60.49437	24.64759	132.52502	15.99026	0.0818401	0.20354556	2.8621670	20	5 5.9	20.0
386845 2010 JZ ₁₇₇	16.2	X	196.19680	16.77674	77.13666	14.46649	0.1646911	0.22518899	2.6757033	20	7 16.5	20.6
386846 2010 KS ₁₄	15.5	X	307.27482	93.61600	145.87246	25.88170	0.2562721	0.17196268	3.2026778	20	2 6.8	20.0
386847 2010 LR ₃₃	18.0	X	172.61069	333.17618	352.09960	5.83358	0.4624926	0.44773856	1.6922053	20	1 17.0	20.5
386848 2010 LG ₁₁₀	16.4	X	287.19048	198.45275	63.43833	2.05120	0.1209206	0.18097782	3.0954169	20	2 28.9	20.9
386849 2010 LC ₁₂₈	16.9	X	98.77870	151.74771	48.86767	12.24342	0.1257318	0.22403037	2.6849207	20	8 29.6	21.1
386850 2010 MM	15.7	X	284.25127	207.71709	57.90413	12.63649	0.0194231	0.18154015	3.0890214	20	3 20.7	20.2
386851 2010 ME ₇₅	17.0	X	54.76431	17.88974	120.67281	7.75753	0.1681380	0.21613371	2.7499263	20	8 7.4	20.7
386852 2010 PQ ₆₆	17.6	X	225.11900	78.82482	314.64433	24.85590	0.1155231	0.37812802	1.8939862	20	5 28.9	20.6
386853 2010 UM ₇₉	14.2	X	232.68941	141.82560	328.42330	6.92560	0.0371299	0.08201424	5.2465830	20	9 9.0	21.1
386854 2010 UT ₇₉	13.8	X	222.28760	182.59925	302.97092	7.75303	0.0451653	0.08319976	5.1966246	20	9 12.5	20.9
386855 2010 UT ₉₆	17.8	X	121.97446	23.90557	32.90882	22.10734	0.1089377	0.34578071	2.0103371	20	3 13.9	20.5
386856 2010 XZ ₇	13.5	X	306.44100	272.75324	140.81404	8.75850	0.0366529	0.08378241	5.1725040	20	10 2.9	20.3
386857 2010 XR ₃₉	17.6	X	89.85500	90.42878	82.23697	23.64962	0.0548474	0.36587836	1.9360277	20	6 30.4	19.5
386858 2010 XS ₆₃	16.1	X	69.92214	229.36674	67.18905	4.23527	0.1414625	0.18909486	3.0061887	20	11 16.1	20.6
386859 2011 AB ₂₃	17.2	X	124.95512	353.27599	104.66427	24.57836	0.0395735	0.34846726	1.9999911	20	5 8.3	20.1
386860 2011 BD ₁₃	18.3	X	247.95968	35.32813	319.40276	16.81604	0.0836581	0.35373821	1.9800739	20	4 27.0	21.1
386861 2011 DX ₅	17.6	X	309.86328	195.40546	311.56682	6.18946	0.0429859	0.30153233	2.2024876	20	—	—
386862 2011 DR ₈	17.0	X	241.66743	149.65657	53.08701	6.55739	0.0438506	0.29123778	2.2540882	20	—	—
386863 2011 DB ₁₃	17.4	X	247.25672	152.64290	326.47472	6.40634	0.0785090	0.27769014	2.3268180	20	10 31.3	20.2
386864 2011 DQ ₁₉	18.2	X	325.35234	175.03150	340.93571	5.33975	0.0380863	0.30907726	2.1664966	20	—	—
386865 2011 DE ₂₀	16.5	X	168.62913	106.83320	47.46168	12.69181	0.1662366	0.26050094	2.4280811	20	9 14.2	20.6
386866 2011 EX ₉	18.1	X	193.81958	284.26408	346.79911	6.53241	0.1883966	0.29273998	2.2463703	20	—	—
386867 2011 EB ₃₉	18.3	X	264.70676	9.68488	173.39132	6.32122	0.0982471	0.29227932	2.2487301	20	—	—
386868 2011 EF ₄₂	17.8	X	285.98260	155.25366	19.94073	5.47565	0.0808342	0.29942924	2.2127885	20	—	—
386869 2011 EC ₄₅	18.4	X	341.75363	87.82189	27.42778	5.84911	0.1234308	0.30152057	2.2025448	20	—	—
386870 2011 EE ₅₃	17.5	X	173.34519	136.11479	131.02594	7.47194	0.1110086	0.28455907	2.2892212	20	—	—
386871 2011 EJ ₇₀	17.8	X	352.63556	287.04880	169.61847	5.12969	0.1016355	0.29585333	2.2305831	20	—	—
386872 2011 FK ₄	17.8	X	193.12601	316.22938	293.65811	2.59344	0.2061186	0.28577345	2.2827313	20	—	—
386873 2011 FR ₅	16.8	X	127.53820	134.19699	95.07084	7.42567	0.0807669	0.26462080	2.4028135	20	11 4.5	20.3
386874 2011 FT ₅												

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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>
386881 2011 FW ₄₆	17.3	X	275.43142	145.02843	22.89351	9.19924	0.0463505	0.28680763	2.2772406	20	—	—
386882 2011 FV ₆₅	16.6	X	79.66888	23.12667	263.09160	4.34567	0.1989954	0.26247015	2.4159212	20	12 1.6	20.3
386883 2011 FM ₈₆	17.6	X	282.08928	90.29374	112.79440	8.17529	0.0182755	0.30403178	2.1903998	20	—	—
386884 2011 FS ₁₃₁	17.6	X	127.30788	343.48383	344.61787	7.43484	0.1849005	0.29392169	2.2403453	20	—	—
386885 2011 FJ ₁₄₄	17.2	X	227.49032	149.01171	93.84764	7.82352	0.1413777	0.29600338	2.2298292	20	—	—
386886 2011 FC ₁₄₉	17.2	X	223.12244	281.16665	338.75940	6.52651	0.2051006	0.29513683	2.2341918	20	—	—
386887 2011 GG ₂₂	17.1	X	318.20395	100.57305	314.56559	5.92648	0.0828366	0.27005438	2.3704742	20	11 22.9	19.7
386888 2011 GX ₂₅	18.1	X	227.72603	214.02822	270.33185	2.63552	0.0797266	0.28981008	2.2614851	20	—	—
386889 2011 GK ₃₁	18.0	X	313.68394	293.70718	198.18501	7.55199	0.1789235	0.29288570	2.2456252	20	—	—
386890 2011 GP ₅₆	15.5	X	149.90523	232.31315	84.90982	13.97333	0.1686388	0.18062636	3.0994310	20	—	—
386891 2011 GD ₅₈	17.4	X	17.91629	7.39585	47.71846	8.94131	0.0602764	0.28422155	2.2910332	20	—	—
386892 2011 GA ₇₂	17.9	X	246.36537	163.65457	70.80342	2.62894	0.1894579	0.29487675	2.2355052	20	—	—
386893 2011 GJ ₇₃	18.0	X	219.08116	237.83789	328.08101	5.54201	0.1035215	0.28169501	2.3047117	20	—	—
386894 2011 GK ₇₃	18.2	X	289.05297	249.04053	303.53653	5.36566	0.0536590	0.29926147	2.2136155	20	—	—
386895 2011 GZ ₇₅	16.6	X	359.37399	163.80149	101.37590	7.37008	0.1326081	0.22914036	2.6448537	20	6 22.4	19.2
386896 2011 GW ₇₉	17.9	X	162.88967	145.09328	131.40572	1.05978	0.1241739	0.28152595	2.3056343	20	—	—
386897 2011 GW ₈₄	18.2	X	303.18604	153.51060	30.73227	2.93032	0.0491448	0.30083021	2.2059132	20	—	—
386898 2011 HZ ₄	16.4	X	343.17154	202.91733	124.30923	13.68782	0.1757285	0.23584665	2.5944755	20	8 28.5	18.8
386899 2011 HP ₁₂	17.5	X	124.60526	159.88878	103.91168	4.95995	0.1918446	0.26187725	2.4195663	20	12 13.1	21.5
386900 2011 HF ₂₉	17.3	X	171.55179	166.86862	86.76439	6.35879	0.0801908	0.27794252	2.3254092	20	—	—
386901 2011 HS ₂₉	17.8	X	159.27622	73.58885	161.48028	2.53140	0.1677812	0.26823352	2.3811898	20	12 9.9	21.4
386902 2011 HH ₃₃	17.5	X	159.90139	347.56961	184.50412	11.38662	0.1295436	0.25401260	2.4692546	20	9 21.3	21.2
386903 2011 HA ₄₁	17.1	X	341.91795	214.79991	128.66278	11.67350	0.1203219	0.24163467	2.5528770	20	9 21.3	19.9
386904 2011 HF ₄₄	17.5	X	114.19354	63.45434	183.06651	6.59404	0.0584804	0.25860654	2.4399244	20	11 8.4	20.8
386905 2011 HT ₅₀	16.7	X	267.80891	346.16416	84.02591	15.30999	0.0758062	0.25260801	2.4783994	20	10 1.1	20.1
386906 2011 HY ₅₁	15.8	X	127.24046	240.38593	100.28540	17.33770	0.2205323	0.17398697	3.1777878	20	1 6.5	20.7
386907 2011 HQ ₅₇	17.9	X	262.22029	359.23427	145.71276	6.22265	0.0588317	0.27645853	2.3337234	20	—	—
386908 2011 HU ₆₃	15.5	X	167.07446	224.38627	66.11152	14.67422	0.0985628	0.17395677	3.1781556	20	—	—
386909 2011 HG ₇₃	15.7	X	149.14679	224.36096	121.28084	9.74597	0.1056294	0.18452188	3.0556537	20	1 10.1	20.4
386910 2011 HV ₇₄	16.3	X	283.17363	221.07244	121.01166	15.36111	0.1410677	0.22110757	2.7085299	20	6 2.7	20.1
386911 2011 HY ₇₄	17.4	X	232.00727	23.51010	114.74299	7.01382	0.1730320	0.26727346	2.3868886	20	10 26.2	20.6
386912 2011 HD ₈₁	17.6	X	315.83208	64.38065	104.60332	5.98682	0.0704162	0.30098849	2.2051398	20	—	—
386913 2011 HU ₈₃	18.1	X	281.15118	127.46435	43.72653	7.69190	0.1269356	0.29204528	2.2499313	20	—	—
386914 2011 JY ₂	16.1	X	332.40156	253.39945	82.14484	17.65037	0.2904342	0.23004639	2.6379047	20	8 9.9	18.2
386915 2011 JK ₅	16.7	X	116.36823	196.44350	102.81283	14.15371	0.2302986	0.26925222	2.3751800	20	—	—
386916 2011 JX ₁₅	17.3	X	257.45235	74.97054	92.35297	9.05393	0.1206920	0.27950466	2.3167367	20	—	—
386917 2011 JX ₂₆	16.6	X	98.08914	69.60164	141.11654	11.07850	0.0606607	0.24251660	2.5466841	20	8 31.0	20.0
386918 2011 JK ₂₈	17.8	X	172.14349	153.04179	74.01627	2.37004	0.1361662	0.26858845	2.3790916	20	12 14.1	21.3
386919 2011 KB ₃	17.5	X	167.39817	335.23243	285.70177	4.89944	0.1731422	0.27417026	2.3466905	20	—	—
386920 2011 KB ₄	16.8	X	79.19828	136.49550	128.10481	15.20556	0.2662211	0.24566215	2.5248983	20	11 13.5	21.2
386921 2011 KX ₇	17.7	X	274.66481	106.40192	77.10372	7.54103	0.1551524	0.28914656	2.2649435	20	—	—
386922 2011 KC ₁₀	16.5	X	294.02501	257.88079	76.20867	12.78175	0.0873730	0.22614630	2.6681468	20	6 12.1	19.7
386923 2011 KC ₁₃	16.4	X	30.09790	210.13125	86.69904	14.80480	0.1856380	0.23828797	2.5767244	20	10 21.0	19.8
386924 2011 KV ₂₈	17.5	X	207.82789	92.83339	151.95680	7.45393	0.1727849	0.28232581	2.3012775	20	—	—
386925 2011 KV ₃₁	15.3	X	172.80085	235.43267	81.76844	13.96526	0.1090445	0.17991103	3.1076410	20	1 12.2	20.2
386926 2011 KL ₃₄	17.8	X	211.93911	249.53306	3.69008	3.82033	0.1513501	0.28491101	2.2873356	20	—	—
386927 2011 LG ₂	17.7	X	196.38642	29.03292	198.93952	5.75842	0.1588626	0.27570927	2.3379495	20	—	—
386928 2011 LJ ₂₄	17.7	X	178.08809	76.44555	126.50331	5.13051	0.1426587	0.26329605	2.4108665	20	11 19.9	21.3
386929 2011 LN ₂₆	15.5	X	286.68382	349.64351	308.08271	16.80852	0.2251187	0.19142668	2.9817260	20	3 18.1	20.2
386930 2011 LV ₂₆	15.9	X	304.18222	15.09406	278.16503	14.34687	0.1275978	0.20484885	2.8500142	20	4 21.2	19.9
386931 2011 LW ₂₆	17.3	X	260.60686	57.54630	128.07671	9.61778	0.1239415	0.28090190	2.3090478	20	—	—
386932 2011 LJ ₂₈	16.7	X	26.52902	306.53294	358.96339	3.32893	0.2344619	0.23971366	2.5664976	20	10 26.7	19.8
386933 2011 NL ₃	15.9	X	29.99530	188.01773	107.49152	30.69061	0.1370908	0.23104531	2.6302959	20	10 18.9	20.0
386934 2011 OU	15.8	X	129.18065	261.64123	131.26719	17.34062	0.1492861	0.17662419	3.1460763	20	3 3.8	20.7
386935 2011 OE ₃	16.4	X	49.19905	334.13025	313.84700	11.84198	0.1613996	0.23258711	2.6186590	20	10 16.1	20.2
386936 2011 OC ₇	16.6	X	136.77006	111.41419	107.50108	10.70005	0.1816953	0.24461893	2.5320718	20	11 1.0	20.9
386937 2011 OM ₂₃	16.4	X	29.52374	159.13916	121.99649	12.77290	0.1688691	0.22820355	2.6520871	20	9 20.6	19.7
386938 2011 OX ₄₃	17.5	X	185.94314	255.69669	329.35535	1.40830	0.1634306	0.26128156	2.4232425	20	12 21.7	21.0
386939 2011 OA ₄₉	16.2	X	347.72986	324.37725	313.12848	7.22976	0.1420517	0.20946308	2.8080040	20	6 16.8	19.3
386940 2011 OZ ₅₈	16.4	X	344.27996	176.29245	89.94164	6.46611	0.1356134	0.21079291	2.7961817	20	5 25.8	19.4
386941 2011 PJ ₁₀	15.9	X	178.38249	214.84268	140.32448	10.39658	0.1232390	0.17845775	3.1244898	20	3 2.9	20.8
386942 2011 QT ₁₇	16.1	X	223.51749	35.41554	325.11686	6.51833	0.0433835	0.18673577	3.0314544	20	4 21.4	20.6
386943 2011 QJ ₃₆	15.9	X	240.65293	346.41236	358.21073	9.75443	0.0490152	0.18761870	3.0219363	20	4 20.8	20.5
386944 2011 QO ₄₃	15.7	X	237.37470	44.92052	265.16816	7.47874	0.0610374	0.18139199	3.0907033	20	3 4.4	20.4
386945 2011 QR ₅₇	16.9	X	101.27354	293.70083	303.59445	10.12298	0.1519951	0.23144491	2.6272675	20	10 9.2	21.1
386946 2011 QD ₉₂	16.8	X	3.86306	12.33042	275.51004	3.93301	0.1384188	0.21221178	2.7836568	20	8 2.1	19.7
386947 2011 QC ₉₅	16.1	X	309.23097	173.84153	135.75781	8.98381	0.1945697	0.20369127	2.8608018	20	5 18.9	19.7
386948 2011 QT ₉₆	16.3	X	83.35306	122.32079	339.47228	8.64039	0.0637682	0.17469017	3.1692542	20	3 18.3	20.7
386949 2011 ST ₂₇	15.7	X	333.21819	299.33502	328.71985	9.42635	0.0879927	0.19125226	2.9835386	20	5 8.9	19.7
386950 2011 SO ₆₅	15.6	X	172.03684	40.98472	151.49065	10.25862	0.1015256	0.17632700	3.1496104	20	4 8.8	20.6
386951 2011 SL ₇₄	15.8	X	248.14351	73.37499	234.93071	9.72074	0.1167115	0.17752214	3.1354583	20	3 8.9	20.8
386952 2011 SN ₁₂₇	15.4	X	137.45030	66.57682	27.08864	18.61403	0.0531361	0.17848797	3.1241370	20	5 8.4	20.1
386953 2011 SM ₁₃₀	16.1	X	83.57243	319.38199	185.62367	9.75502	0.0373190	0.17716594	3.1396596	20	5 11.3	20.5
386954 2011 SG ₁₆₄	15.6	X	282.96439	91.41691	191.47555	7.47295	0.1247288	0.17678341	3.1441871	20		

ELEMENTS AND OPPOSITION DATES IN 2020
ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
386961	2011	SN ₂₃₇	16.2	X	274.55325	277.78387	3.77094	1.40024	0.1491382	0.17975102	3.1094851	20	3 5.1	20.7
386962	2011	SD ₂₃₉	16.1	X	286.06469	93.19597	185.90308	8.59883	0.0202309	0.17772786	3.1330383	20	4 2.3	20.3
386963	2011	UF ₃₄	16.0	X	315.75851	292.84056	315.48135	0.95911	0.1328281	0.17614882	3.1517341	20	3 17.1	20.1
386964	2011	UN ₁₀₅	16.1	X	298.93445	104.27482	165.41520	3.11986	0.0652910	0.17841655	3.1249707	20	3 31.7	20.5
386965	2011	UP ₂₁₁	16.2	X	284.43164	333.78687	343.57315	4.68624	0.0950681	0.18497922	3.0506151	20	5 5.0	20.5
386966	2011	WC ₅₁	14.2	X	234.07502	17.82047	76.85130	5.67097	0.0350579	0.08347718	5.1851049	20	8 27.9	21.2
386967	2011	YS ₃₄	14.1	X	249.01509	162.82665	322.62985	6.39634	0.0686873	0.08399116	5.1639296	20	10 8.6	21.0
386968	2012	BR ₆₁	9.3	X	13.14656	158.61711	24.44710	2.03785	0.4598267	0.00979923	21.6275849	20	4 30.4	20.2
386969	2012	GJ	17.9	X	208.07313	334.57078	67.97140	22.54079	0.0803694	0.38223692	1.8803887	20	5 26.7	19.8
386970	2012	HN ₁₅	18.5	X	286.01454	323.15927	55.88201	21.85814	0.0377699	0.39270991	1.8468068	20	9 20.5	20.7
386971	2012	JU ₂₅	17.8	X	270.53037	250.56907	64.60968	22.87173	0.0942208	0.35972511	1.9580430	20	4 18.8	20.4
386972	2012	JD ₆₅	15.9	X	119.82340	160.27387	122.30908	6.68481	0.1749368	0.17455729	3.1708623	20	12 16.5	21.2
386973	2012	KR ₄₁	17.2	X	298.13247	145.52380	215.23994	8.77199	0.1151679	0.25991558	2.4317253	20	7 22.4	20.0
386974	2012	LX ₆	15.9	X	88.69426	223.78248	100.91594	13.09804	0.0668774	0.17673971	3.1447054	20	12 28.3	20.4
386975	2012	LQ ₁₈	17.5	X	71.70783	51.49771	76.13739	23.18702	0.0773560	0.35631952	1.9704994	20	4 8.9	20.0
386976	2012	LY ₂₅	18.0	X	99.40123	239.14685	117.86256	7.93347	0.1792806	0.30045582	2.2077453	20	—	—
386977	2012	MK ₄	16.7	X	252.77917	262.82016	170.99137	9.91811	0.1394494	0.25062411	2.4914614	20	8 23.9	20.0
386978	2012	MA ₁₀	16.6	X	275.82518	244.78433	102.30543	5.00191	0.2592570	0.23241880	2.6199231	20	5 11.4	20.3
386979	2012	OW ₄	17.6	X	63.56366	192.33677	180.01362	8.22944	0.1295450	0.28782421	2.2718754	20	—	—
386980	2012	PG ₁₇	17.6	X	350.33717	255.71705	107.38407	3.53412	0.2002572	0.25936824	2.4351452	20	11 16.4	19.8
386981	2012	PK ₁₇	16.6	X	258.88091	11.92647	36.26545	5.00857	0.0987679	0.24355412	2.5394465	20	8 5.8	19.9
386982	2012	PW ₁₉	17.3	X	87.19548	174.81086	151.69824	8.20715	0.1540993	0.27782607	2.3260590	20	—	—
386983	2012	PB ₃₀	16.5	X	350.44212	140.42343	189.00847	6.37989	0.1589203	0.25231395	2.4803247	20	9 15.9	18.8
386984	2012	PR ₃₂	16.9	X	91.81895	355.46976	341.51790	24.74409	0.1845579	0.28637759	2.2795198	20	—	—
386985	2012	PC ₃₃	17.5	X	87.73881	240.31706	147.84699	4.77320	0.1466591	0.29992213	2.2103636	20	—	—
386986	2012	PR ₃₄	16.6	X	359.29161	201.83453	178.40732	6.69293	0.1476564	0.26236894	2.4165425	20	12 19.4	19.3
386987	2012	QK ₁₉	17.0	X	356.38842	97.04208	170.17378	12.56609	0.1462695	0.23636589	2.5906745	20	6 20.3	19.8
386988	2012	QR ₂₀	17.7	X	331.07506	69.40479	310.23138	4.86004	0.1528604	0.25336493	2.4734609	20	10 21.1	20.0
386989	2012	QC ₂₁	16.8	X	240.22187	41.55733	295.23896	6.53447	0.3226118	0.21132649	2.7914729	20	3 19.5	22.0
386990	2012	QC ₂₆	16.7	X	348.67202	208.61382	175.11686	13.32388	0.1134525	0.25952500	2.4341645	20	12 2.9	19.6
386991	2012	QA ₂₇	16.6	X	162.93102	225.34268	181.31849	9.52355	0.1571216	0.19966028	2.8991784	20	4 18.9	21.3
386992	2012	QE ₂₉	16.3	X	243.04603	252.94132	130.13664	13.90100	0.0858602	0.21590197	2.7518936	20	6 12.6	20.4
386993	2012	QJ ₃₄	17.1	X	190.82546	120.18203	322.71343	12.31304	0.1775811	0.21995897	2.7179508	20	6 27.5	21.7
386994	2012	QB ₃₈	16.9	X	347.79805	16.77831	8.05086	6.84327	0.1489349	0.25960469	2.4336663	20	12 3.9	19.5
386995	2012	QC ₃₈	17.4	X	284.58595	243.46914	114.59556	2.28872	0.0998518	0.22972591	2.6403575	20	6 30.0	20.5
386996	2012	QN ₄₀	16.6	X	323.82700	182.36532	199.57859	4.63000	0.2168770	0.25415096	2.4683584	20	10 11.5	18.1
386997	2012	QN ₄₁	16.6	X	289.50042	35.95115	324.22432	13.13495	0.2671163	0.23340093	2.6125684	20	6 12.4	20.1
386998	2012	QY ₄₄	16.4	X	342.24898	351.15291	293.18297	7.81528	0.0903118	0.23028164	2.6361078	20	6 19.8	19.5
386999	2012	QY ₅₀	16.9	X	37.26553	257.96026	41.88882	4.94122	0.1950812	0.25708543	2.4495393	20	11 1.7	19.9
387000	2012	RZ ₂	16.1	X	103.05812	57.30937	334.60027	8.60578	0.2387805	0.17459245	3.1704366	20	2 13.5	20.6
387001	2012	RJ ₃	17.1	X	256.49249	230.70033	157.72910	3.57095	0.2025601	0.22860146	2.6490087	20	6 18.9	21.1
387002	2012	RY ₅	15.9	X	122.92990	97.48342	267.70816	11.67684	0.3151608	0.17446981	3.1719222	20	2 4.9	21.2
387003	2012	RL ₆	16.0	X	258.92553	5.83756	354.55880	15.26077	0.1204020	0.22243656	2.6977308	20	5 21.4	20.1
387004	2012	RD ₇	16.8	X	45.86610	359.27120	320.32091	1.86993	0.1991666	0.26213007	2.4180103	20	12 9.2	20.0
387005	2012	RY ₇	16.7	X	313.14713	248.76685	163.57721	10.10351	0.2157167	0.25610677	2.4557756	20	11 7.9	18.7
387006	2012	RH ₁₂	15.2	X	128.90920	20.56196	352.59184	26.75322	0.2884035	0.17508432	3.1644960	20	2 26.8	20.5
387007	2012	RK ₁₂	17.2	X	38.18707	49.40505	294.00827	3.74945	0.2521313	0.26512299	2.3997783	20	—	—
387008	2012	RW ₁₂	15.8	X	3.94043	286.31310	15.02630	14.77363	0.1146935	0.23431050	2.6058028	20	8 31.7	18.9
387009	2012	RX ₁₃	15.9	X	248.00355	33.42562	315.45283	12.07722	0.1996347	0.21165271	2.7886039	20	4 15.0	20.6
387010	2012	RP ₁₆	15.9	X	335.96139	334.06569	355.19698	27.30039	0.1357710	0.23340306	2.6125525	20	8 25.5	18.9
387011	2012	RS ₁₇	17.5	X	270.17311	287.51624	176.48513	4.94998	0.0657783	0.26050341	2.4280657	20	11 15.5	20.4
387012	2012	RR ₁₈	16.5	X	264.46463	221.58414	176.68794	14.59917	0.1102434	0.23144257	2.6272852	20	7 23.4	20.3
387013	2012	RB ₂₃	17.0	X	309.44161	276.69278	62.18394	3.26039	0.2053374	0.22896676	2.6461904	20	6 25.9	19.8
387014	2012	RH ₂₃	16.6	X	178.29700	335.55676	78.52066	3.67806	0.0993731	0.20108799	2.8854395	20	5 10.3	21.1
387015	2012	RW ₂₄	16.2	X	108.39689	76.73781	333.70889	8.16343	0.2972141	0.17758720	3.1346925	20	3 15.4	21.1
387016	2012	RB ₂₈	16.5	X	255.27861	183.62695	171.09228	8.69866	0.1745093	0.21869409	2.7284208	20	5 10.4	20.7
387017	2012	RM ₃₃	16.7	X	188.12122	205.97273	187.57743	4.23436	0.0824160	0.21233483	2.7826285	20	4 24.5	20.8
387018	2012	RR ₃₃	17.0	X	44.57012	200.37946	126.97842	3.54739	0.1672636	0.26198220	2.4189201	20	12 13.9	20.3
387019	2012	RO ₃₄	16.6	X	203.42227	146.84221	220.79254	3.97966	0.1182371	0.19915454	2.9040845	20	4 6.7	21.2
387020	2012	RZ ₃₈	16.7	X	26.91683	72.26144	269.01642	10.13839	0.1910638	0.26151250	2.4218156	20	12 13.4	19.7
387021	2012	RM ₄₁	15.6	X	216.98996	273.09777	125.02169	13.16246	0.1519505	0.21282712	2.7783358	20	5 29.5	20.2
387022	2012	SS	15.9	X	308.10289	54.09529	327.09667	11.23938	0.1761270	0.23796707	2.5790403	20	8 30.9	18.3
387023	2012	SM ₃	16.3	X	119.71302	234.77885	137.41084	2.11460	0.1841151	0.17101940	3.2144435	20	1 31.7	21.2
387024	2012	SG ₇	17.0	X	185.80701	89.39711	358.16225	4.62003	0.0862098	0.21322569	2.7748725	20	6 29.7	21.3
387025	2012	SY ₇	16.7	X	182.17649	101.36892	290.86873	0.97040	0.0778555	0.20321911	2.8652313	20	4 15.6	21.0
387026	2012	SW ₉	16.0	X	299.98801	48.26840	340.98501	10.67660	0.2351875	0.23701424	2.5859478	20	8 20.7	18.4
387027	2012	SA ₁₀	17.0	X	256.27847	107.98180	250.54905	4.04143	0.1693114	0.22237482	2.6982301	20	5 14.3	20.9
387028	2012	SP ₁₀	13.3	X	256.04431	96.88462	344.30632	21.53012	0.0872663	0.08323827	5.1950217	20	8 30.2	20.2
387029	2012	SN ₁₅	16.6	X	184.53060	307.18855	257.35836	5.39610	0.1005866	0.26045035	2.4283955	20	11 30.3	19.9
387030	2012	SS ₁₅	16.6	X	237.83884	75.								

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>		
387041	2012	TF ₆	16.6	X	347.47774	298.42638	39.42032	6.00337	0.1889352	0.24093710	2.5578021	20	9 26.1	18.8
387042	2012	TK ₇	16.4	X	99.62198	156.47955	276.98263	4.74099	0.2234732	0.17864439	3.1223131	20	3 24.5	21.0
387043	2012	TS ₇	16.3	X	139.95117	72.06631	341.30218	9.58696	0.1087521	0.19369548	2.9583966	20	3 28.2	20.9
387044	2012	TV ₈	16.5	X	205.19811	52.41089	5.03448	3.94877	0.0953598	0.21304792	2.7764159	20	6 10.8	20.6
387045	2012	TO ₁₀	16.8	X	162.74358	14.25051	23.21568	2.14715	0.1027005	0.18873276	3.0100326	20	4 4.2	21.3
387046	2012	TO ₁₁	16.5	X	29.78155	49.78511	210.40925	7.12229	0.0296161	0.22203556	2.7009779	20	7 25.9	20.1
387047	2012	TD ₁₆	17.2	X	277.36164	172.50624	195.30212	5.99126	0.0605669	0.22476858	2.6790387	20	7 8.2	20.9
387048	2012	TH ₁₇	17.0	X	185.69531	345.09324	196.64076	5.87504	0.0798074	0.25384967	2.4703111	20	11 4.2	20.5
387049	2012	TD ₁₈	17.6	X	176.19472	232.29268	27.02277	3.63930	0.1292628	0.28204190	2.3028216	20	—	—
387050	2012	TO ₁₉	16.4	X	280.61120	274.03291	31.81588	12.19754	0.1709725	0.21061817	2.7977280	20	4 7.3	20.4
387051	2012	TU ₂₀	16.9	X	282.63106	334.86202	1.17022	4.84433	0.1256838	0.21946221	2.7220508	20	5 22.3	20.5
387052	2012	TC ₂₃	16.9	X	220.10232	112.53231	276.84277	2.70187	0.1086186	0.21192596	2.7862064	20	5 21.0	21.0
387053	2012	TL ₂₃	16.6	X	174.30026	163.63149	322.92174	5.17472	0.0879985	0.22754726	2.6571840	20	8 7.5	20.6
387054	2012	TL ₂₉	16.9	X	314.03314	160.96753	135.45555	0.97503	0.0474892	0.21414690	2.7669088	20	5 26.6	20.4
387055	2012	TA ₃₁	16.6	X	144.63185	271.27144	92.32334	2.31514	0.1968704	0.17934170	3.1142145	20	2 15.2	21.6
387056	2012	TU ₃₁	16.6	X	250.11437	11.64841	8.26218	6.30053	0.0468378	0.21744572	2.7388536	20	6 20.5	20.4
387057	2012	TH ₃₂	16.8	X	178.23189	101.71920	310.10570	1.09161	0.0648148	0.20260523	2.8710160	20	5 5.8	21.0
387058	2012	TB ₃₇	16.4	X	330.99810	16.11260	185.91747	10.60575	0.0331690	0.19179755	2.9778810	20	2 18.0	20.6
387059	2012	TX ₄₈	17.5	X	236.24791	141.25843	261.64204	1.59766	0.0798028	0.22120413	2.7077416	20	6 29.5	21.4
387060	2012	TH ₄₉	18.1	X	239.99336	15.29216	206.00113	6.00514	0.0627517	0.28913892	2.2649834	20	—	—
387061	2012	TN ₅₀	16.6	X	111.78108	268.57780	204.63971	8.58002	0.1341308	0.19721756	2.9230685	20	5 17.5	20.9
387062	2012	TQ ₅₄	16.4	X	348.38787	14.35900	318.16786	5.14534	0.1207361	0.23465221	2.6032724	20	9 9.5	19.0
387063	2012	TV ₅₄	16.3	X	155.13541	298.23087	258.43928	9.29715	0.1228946	0.23837195	2.5761192	20	10 12.7	20.5
387064	2012	TE ₅₅	16.9	X	185.30217	241.96121	14.60494	9.30586	0.1684444	0.27815993	3.3241974	20	—	—
387065	2012	TZ ₅₅	16.5	X	214.08240	222.16237	171.61193	4.31420	0.2110423	0.20954464	2.8072753	20	5 16.2	21.2
387066	2012	TO ₅₉	17.0	X	128.73611	240.05069	27.77848	7.03352	0.1041777	0.26810495	2.3819510	20	12 22.5	20.6
387067	2012	TC ₇₁	16.7	X	89.01918	198.67724	328.40980	8.22668	0.0987107	0.21141244	2.7907163	20	6 24.0	20.6
387068	2012	TT ₇₁	16.9	X	305.33207	319.63810	343.88131	4.36767	0.0528244	0.21294964	2.7772700	20	5 21.5	20.5
387069	2012	TO ₇₃	17.2	X	311.06768	27.84587	299.55797	2.73369	0.1184134	0.22700870	2.6613850	20	6 25.3	20.2
387070	2012	TZ ₈₁	17.3	X	174.39474	133.40712	311.81091	2.74920	0.1378293	0.21419741	2.7664739	20	6 14.0	21.7
387071	2012	TA ₈₅	17.2	X	329.96299	35.81691	265.28584	1.35198	0.0572004	0.22059379	2.7127339	20	6 25.0	20.5
387072	2012	TL ₈₆	17.0	X	252.95603	353.38508	348.49782	1.43337	0.0804237	0.20644522	2.8353031	20	4 30.1	21.2
387073	2012	TY ₈₇	17.5	X	310.58168	343.94554	8.27245	1.51546	0.0531548	0.22985629	2.6393590	20	8 7.8	20.8
387074	2012	TF ₉₀	17.5	X	341.11280	203.64504	146.08515	3.67325	0.0954171	0.24410990	2.5355905	20	9 25.4	20.2
387075	2012	TX ₉₀	17.5	X	285.90207	195.14893	164.07950	4.42280	0.1681941	0.22733966	2.6588015	20	6 22.4	20.8
387076	2012	TX ₉₁	16.7	X	143.25245	357.46580	89.45925	3.13354	0.0312350	0.20484728	2.8500288	20	5 9.1	20.8
387077	2012	TU ₉₂	17.4	X	106.25314	224.56585	90.59969	4.00026	0.1854342	0.28072134	2.3100378	20	—	—
387078	2012	TZ ₉₄	16.9	X	221.17575	47.81136	7.34823	6.30873	0.0373591	0.21783979	2.7355495	20	7 2.6	20.8
387079	2012	TM ₉₅	16.6	X	209.02385	310.16680	226.82154	5.51945	0.0863105	0.25638793	2.4539799	20	11 24.7	19.9
387080	2012	TA ₉₆	16.8	X	157.15035	110.00112	349.95249	3.14385	0.0416587	0.20945547	2.8080721	20	6 11.7	20.8
387081	2012	TD ₉₆	16.9	X	222.51919	127.54241	286.03104	2.05407	0.0623377	0.21670301	2.7451079	20	6 28.8	20.9
387082	2012	TJ ₉₇	16.6	X	126.83718	32.92629	17.24109	9.39920	0.1173026	0.18125166	3.0922983	20	3 17.3	21.2
387083	2012	TL ₉₇	16.6	X	230.32741	46.96742	9.72937	5.36066	0.0641838	0.22087303	2.7104470	20	7 13.7	20.4
387084	2012	TJ ₉₈	16.8	X	254.92765	149.35284	214.71968	5.70851	0.0604231	0.21269374	2.7794972	20	6 4.0	20.6
387085	2012	TN ₉₉	15.3	X	114.84777	2.93460	23.74871	27.58357	0.1527705	0.17167484	3.2062566	20	2 24.0	20.5
387086	2012	TP ₁₀₁	16.8	X	176.96619	219.61159	231.14014	3.98410	0.0858623	0.21345545	2.7728809	20	6 23.6	20.9
387087	2012	TL ₁₀₃	17.0	X	151.27958	156.98724	339.18769	4.10312	0.1033400	0.22042887	2.7140868	20	7 26.3	21.1
387088	2012	TB ₁₀₅	16.7	X	172.52349	89.49448	349.37725	3.35728	0.0743588	0.20903839	2.8118060	20	6 2.9	20.9
387089	2012	TF ₁₀₈	17.1	X	324.73735	44.89783	257.83201	2.99427	0.0453838	0.21599494	2.7511040	20	6 20.1	20.4
387090	2012	TZ ₁₀₉	15.8	X	90.98574	90.48960	358.87973	15.42990	0.2378875	0.17715470	3.1397924	20	4 4.4	20.3
387091	2012	TS ₁₁₀	16.7	X	129.19494	287.21989	233.82827	10.63128	0.0750844	0.22313426	2.6921043	20	7 28.2	20.9
387092	2012	TM ₁₁₅	17.0	X	217.64858	103.07968	307.37914	5.63064	0.0989451	0.21501499	2.7594565	20	6 15.6	21.2
387093	2012	TR ₁₂₃	16.7	X	157.47304	298.53197	171.27185	8.78665	0.1463339	0.21639077	2.7477479	20	6 28.8	21.3
387094	2012	TF ₁₂₆	16.8	X	249.93524	134.46576	263.36320	2.99955	0.1169875	0.22437992	2.6821315	20	7 4.6	20.5
387095	2012	TZ ₁₂₆	16.6	X	232.85296	296.84268	156.49602	7.44579	0.1696688	0.23474201	2.6026085	20	8 20.8	20.3
387096	2012	TE ₁₂₇	17.2	X	265.59898	72.74742	303.57302	1.49106	0.0798945	0.22198282	2.7014057	20	7 1.5	20.6
387097	2012	TH ₁₂₈	16.4	X	276.60558	220.50572	146.74297	6.68524	0.0506114	0.22522690	2.6754030	20	7 8.5	20.0
387098	2012	TX ₁₂₈	16.9	X	258.22803	85.99340	258.76388	4.03786	0.0877269	0.21179022	2.7873967	20	5 8.9	20.9
387099	2012	TM ₁₃₁	15.7	X	135.17143	28.99249	18.19237	11.90446	0.1039375	0.17892561	3.1190407	20	3 21.6	20.5
387100	2012	TN ₁₃₃	17.0	X	127.26451	187.13688	88.94013	3.57210	0.1993550	0.27759436	2.3273531	20	—	—
387101	2012	TE ₁₃₄	17.5	X	20.14491	167.86229	132.10849	3.81612	0.0973573	0.24317594	2.5420786	20	9 20.2	20.3
387102	2012	TR ₁₃₅	16.9	X	235.51007	218.29993	132.50504	4.78652	0.0718853	0.20687756	2.8313515	20	4 24.7	21.0
387103	2012	TS ₁₃₈	16.8	X	295.05460	113.20917	216.70688	5.02136	0.0351450	0.21841745	2.7307242	20	6 15.8	20.4
387104	2012	TW ₁₃₈	16.0	X	117.35712	38.47216	9.28866	10.56747	0.0490532	0.18072742	3.0982754	20	2 25.7	20.4
387105	2012	TQ ₁₄₂	16.5	X	320.60843	195.27224	152.68980	11.45780	0.1580674	0.23375541	2.6099264	20	8 7.5	19.2
387106	2012	TW ₁₄₃	17.5	X	195.73850	249.17156	294.64649	1.75560	0.1364689	0.25771644	2.4455392	20	11 11.7	21.0
387107	2012	TC ₁₅₀	16.5	X	206.61634	177.18193	251.19430	3.10391	0.0471556	0.21438853	2.7648295	20	6 30.1	20.3
387108	2012	TE ₁₅₀	16.5	X	153.70138	36.54279	328.29999	1.63555	0.0953522	0.17555988	3.1587787	20	2 16.8	21.3
387109	2012	TM ₁₅₁	16.9	X	177.48139	12.31985	10.09459	1.51239	0.1418668	0.18957889	3.0010696	20	4 1.4	21.5
387110														

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>
387121 2012 <i>TN</i> ₁₇₅	16.6	X	296.24081	318.57565	319.33335	1.08827	0.0336933	0.20351928	2.8624133	20	4 9.1	20.6
387122 2012 <i>TG</i> ₁₇₉	16.5	X	57.53327	320.23353	328.23118	7.63053	0.1282541	0.25195203	2.4826994	20	10 28.8	19.9
387123 2012 <i>TK</i> ₁₈₃	16.4	X	69.85897	262.01214	205.12280	4.66796	0.1156521	0.18108105	3.0942404	20	3 14.2	20.4
387124 2012 <i>TC</i> ₁₈₄	16.0	X	26.63339	178.67180	6.68480	13.25006	0.0888394	0.19735380	2.9217231	20	4 13.6	19.6
387125 2012 <i>TK</i> ₁₈₄	16.8	X	214.67197	140.86722	247.51961	5.92556	0.1396236	0.21042355	2.7994528	20	5 12.2	21.1
387126 2012 <i>TQ</i> ₁₈₄	17.2	X	87.18602	244.25737	196.39134	6.27213	0.1305428	0.17953079	3.1120274	20	3 6.6	21.5
387127 2012 <i>TQ</i> ₁₈₆	16.4	X	197.43582	356.38837	19.02283	2.54953	0.1010327	0.19002054	2.9964177	20	4 11.7	20.9
387128 2012 <i>TA</i> ₁₉₀	15.6	X	116.99895	169.02869	235.44407	8.78697	0.0939800	0.17474742	3.1685619	20	2 20.5	20.4
387129 2012 <i>TF</i> ₁₉₀	16.9	X	198.62671	115.53235	338.81434	3.64942	0.0533983	0.22004038	2.7172804	20	7 25.6	20.8
387130 2012 <i>TT</i> ₁₉₀	16.8	X	222.16224	145.09211	247.75151	2.84108	0.1068158	0.20941674	2.8084183	20	5 28.2	21.1
387131 2012 <i>TX</i> ₁₉₁	16.8	X	81.22405	330.94018	325.51391	7.62882	0.1121426	0.26204504	2.4185334	20	12 7.9	20.3
387132 2012 <i>TB</i> ₁₉₄	17.1	X	195.02257	55.86066	147.00991	1.89321	0.1320584	0.25849864	2.4406034	20	12 6.5	20.7
387133 2012 <i>TV</i> ₁₉₄	16.4	X	52.90172	75.51722	69.54127	3.53702	0.0690422	0.18376390	3.0640505	20	4 4.1	20.3
387134 2012 <i>TE</i> ₁₉₅	17.4	X	192.14975	95.30046	42.98697	2.99890	0.1254524	0.23566426	2.5958140	20	9 10.8	21.2
387135 2012 <i>TC</i> ₁₉₆	16.4	X	158.82234	254.83630	340.23659	5.77260	0.0814818	0.25784577	2.4447214	20	12 11.3	20.0
387136 2012 <i>TF</i> ₁₉₈	17.1	X	259.42516	38.99710	338.44541	5.17199	0.0394917	0.22010701	2.7167320	20	7 1.4	20.7
387137 2012 <i>TB</i> ₁₉₉	17.5	X	188.44951	346.99386	263.10659	3.16385	0.0684964	0.28033213	2.3121755	20	—	—
387138 2012 <i>TM</i> ₁₉₉	16.9	X	144.15830	353.71520	51.59737	4.45697	0.1250505	0.19167673	2.9791323	20	3 28.9	21.5
387139 2012 <i>TS</i> ₁₉₉	16.8	X	236.47703	57.57543	327.89186	4.91546	0.0663293	0.21268622	2.7795627	20	6 7.6	20.9
387140 2012 <i>TZ</i> ₁₉₉	15.8	X	160.11507	120.52959	233.07304	8.28381	0.0865874	0.17516746	3.1634946	20	2 6.5	20.8
387141 2012 <i>TD</i> ₂₀₁	16.6	X	163.15627	45.97112	38.63923	5.73116	0.0274031	0.21165359	2.7885961	20	5 28.8	20.6
387142 2012 <i>TJ</i> ₂₀₅	16.1	X	161.29782	118.30679	316.84853	5.61194	0.0401739	0.20177668	2.8788701	20	5 13.8	20.3
387143 2012 <i>TG</i> ₂₀₇	16.6	X	190.18700	141.14548	329.94498	5.87313	0.0325228	0.22416689	2.6838304	20	8 8.1	20.4
387144 2012 <i>TZ</i> ₂₀₉	16.7	X	210.91566	288.54922	171.01774	14.49271	0.2398065	0.22584787	2.6704967	20	7 29.7	21.5
387145 2012 <i>TD</i> ₂₁₄	16.9	X	203.83331	1.01272	224.94082	4.24623	0.0829685	0.27410387	2.3470695	20	—	—
387146 2012 <i>TL</i> ₂₁₆	16.5	X	328.26284	285.25114	78.97682	3.40850	0.0426031	0.23849949	2.5752007	20	9 24.2	19.6
387147 2012 <i>TP</i> ₂₂₀	16.3	X	311.86303	223.13416	50.66263	6.89443	0.0227782	0.20148387	2.8816586	20	4 27.5	20.2
387148 2012 <i>TK</i> ₂₂₃	16.8	X	275.34311	228.27245	180.18362	9.30676	0.0439958	0.23310912	2.6147482	20	9 2.6	20.2
387149 2012 <i>TV</i> ₂₂₅	16.7	X	12.35928	218.48332	56.16069	2.54527	0.0630125	0.22672651	2.6635929	20	7 26.5	20.4
387150 2012 <i>TA</i> ₂₃₂	17.2	X	302.35133	343.79740	113.58251	7.15467	0.0565330	0.26349086	2.4096780	20	12 26.2	19.5
387151 2012 <i>TS</i> ₂₃₂	16.3	X	278.99906	250.77329	74.24152	10.11767	0.2853051	0.21856551	2.7294908	20	4 16.7	20.5
387152 2012 <i>TF</i> ₂₃₃	17.0	X	240.56201	193.80485	189.78478	6.28933	0.0132831	0.21761585	2.7374259	20	6 17.8	20.8
387153 2012 <i>TP</i> ₂₃₃	17.5	X	241.28747	1.19277	102.42493	2.14032	0.0621438	0.24567754	2.5247928	20	10 2.3	20.7
387154 2012 <i>TS</i> ₂₃₄	17.0	X	277.71773	240.00918	109.97917	5.49582	0.1670288	0.22228596	2.6989491	20	5 30.3	20.8
387155 2012 <i>TC</i> ₂₃₅	16.7	X	268.57178	221.60844	141.50706	7.56995	0.0601003	0.22075227	2.7114354	20	6 20.8	20.4
387156 2012 <i>TR</i> ₂₄₀	17.6	X	238.89611	23.04077	133.42817	3.13102	0.1113960	0.26020323	2.4299328	20	12 3.8	20.6
387157 2012 <i>TS</i> ₂₄₀	16.8	X	293.39063	227.61799	87.39384	3.23278	0.0378243	0.21209169	2.7847547	20	5 24.1	20.4
387158 2012 <i>TB</i> ₂₄₂	17.0	X	3.90066	118.68005	137.00167	1.45819	0.0163643	0.21458162	2.7631706	20	6 13.7	20.5
387159 2012 <i>TJ</i> ₂₄₂	17.4	X	5.84865	265.29386	57.95679	2.72881	0.1133067	0.24248501	2.5469052	20	10 1.5	20.1
387160 2012 <i>TD</i> ₂₄₂	17.2	X	179.77775	282.37656	168.48988	6.38809	0.0775934	0.21426065	2.7659295	20	6 26.9	21.4
387161 2012 <i>TY</i> ₂₄₃	16.5	X	94.28176	1.84932	70.65897	5.96785	0.1622382	0.17627469	3.1502335	20	3 14.8	20.9
387162 2012 <i>TN</i> ₂₄₄	17.1	X	197.79246	67.50937	169.09458	6.80698	0.0825658	0.27446150	2.3450301	20	—	—
387163 2012 <i>TE</i> ₂₄₅	16.5	X	242.90122	272.72103	95.03936	5.19263	0.0902612	0.21473110	2.7618881	20	5 21.8	20.4
387164 2012 <i>TR</i> ₂₄₅	15.9	X	132.95051	47.85380	10.71415	15.80538	0.0932341	0.18750180	3.0231922	20	3 29.2	20.4
387165 2012 <i>TN</i> ₂₄₇	16.0	X	236.50148	312.85146	339.97801	8.64878	0.0324846	0.18001069	3.1064940	20	2 18.9	20.5
387166 2012 <i>TZ</i> ₂₄₉	16.8	X	140.80647	170.35093	322.83008	7.12684	0.1588530	0.21052707	2.7985351	20	7 14.0	21.3
387167 2012 <i>TD</i> ₂₅₁	15.9	X	179.86373	68.61444	247.77245	8.75381	0.2049809	0.17613446	3.1519053	20	1 19.6	21.4
387168 2012 <i>TL</i> ₂₅₄	16.1	X	92.42728	136.75572	312.90383	8.45115	0.0363236	0.18246765	3.0785447	20	3 8.9	20.5
387169 2012 <i>TO</i> ₂₅₅	16.2	X	183.06935	214.69867	278.68394	9.18777	0.0756181	0.22993296	2.6387721	20	8 22.4	20.2
387170 2012 <i>TW</i> ₂₅₆	17.7	X	252.20630	164.12630	4.36478	0.73143	0.1546572	0.26812506	2.3818319	20	—	—
387171 2012 <i>TZ</i> ₂₅₆	17.5	X	190.75876	27.21133	212.47573	1.96608	0.1319811	0.27891798	2.3199843	20	—	—
387172 2012 <i>TE</i> ₂₅₇	16.3	X	33.51704	58.27228	79.64461	15.10471	0.0178110	0.18031264	3.1030249	20	3 1.9	20.9
387173 2012 <i>TG</i> ₂₅₇	16.1	X	190.28139	206.05758	128.95810	11.20480	0.0727140	0.18074508	3.0980736	20	2 18.3	20.8
387174 2012 <i>TU</i> ₂₅₇	16.0	X	110.24732	293.52080	123.98630	5.17896	0.1513120	0.17717968	3.1394972	20	3 12.1	20.6
387175 2012 <i>TV</i> ₂₅₉	16.9	X	263.28093	315.74310	21.47217	5.69042	0.0990559	0.21334632	2.7738264	20	5 3.3	20.7
387176 2012 <i>TX</i> ₂₆₀	16.7	X	292.16690	257.19363	125.00476	4.88429	0.0675185	0.23317608	2.6142476	20	8 20.7	19.7
387177 2012 <i>TY</i> ₂₆₂	17.0	X	146.75783	328.42056	99.22463	2.75261	0.0134198	0.19785498	2.9167871	20	4 17.7	21.1
387178 2012 <i>TJ</i> ₂₆₄	16.7	X	200.21075	300.55935	34.28808	6.11243	0.0773267	0.18579472	3.0416819	20	2 29.2	21.4
387179 2012 <i>TU</i> ₂₆₄	16.8	X	122.84447	325.99412	176.60614	5.04255	0.1027272	0.21106381	2.7937885	20	7 1.9	20.9
387180 2012 <i>TD</i> ₂₆₇	16.9	X	193.35800	263.59258	127.32237	2.99603	0.0794585	0.19945320	2.9011847	20	4 27.8	21.3
387181 2012 <i>TJ</i> ₂₇₂	17.4	X	280.55708	179.38699	182.21730	3.06438	0.0713403	0.22231685	2.6986991	20	7 3.0	20.9
387182 2012 <i>TH</i> ₂₇₄	17.4	X	81.66035	120.77930	183.30578	2.96282	0.0954388	0.26201003	2.4187489	20	12 17.3	20.7
387183 2012 <i>TJ</i> ₂₇₄	16.5	X	174.26817	276.43252	173.59924	2.86883	0.0602032	0.21157291	2.7893050	20	6 19.8	20.7
387184 2012 <i>TN</i> ₂₇₅	16.1	X	132.09790	36.49446	351.54625	9.50176	0.1451293	0.17741300	3.1367441	20	2 27.9	20.9
387185 2012 <i>TD</i> ₂₇₈	16.2	X	59.25640	115.72315	350.97666	5.17041	0.1806205	0.17315142	3.1880027	20	3 9.2	20.1
387186 2012 <i>TD</i> ₂₈₁	17.2	X	198.24694	119.02985	297.29626	3.20957	0.0972574	0.20993259	2.8038158	20	6 1.8	21.4
387187 2012 <i>TD</i> ₂₈₅	16.5	X	295.13030	216.06631	91.65256	3.44727	0.0374392	0.20678837	2.8321656	20	5 17.2	20.3
387188 2012 <i>TJ</i> ₂₈₅	16.4	X	212.87129	274.25548	43.64945	10.30940	0.1116297	0.18262327	3.0767956	20	2 23.7	21.4
387189 2012 <i>TV</i> ₂₈₅	16.2	X	134.39661	310.06531	101.17261	3.58673	0.1095390	0.18059507	3.0997889	20	3 25.4	20.8
387190 2012 <i>TF</i> ₂₈₆	17.5	X	113.48091	163.50943	137.72973	3.06073	0.2118384	0.27532587	2.3401195	20	—	—
387191 2012 <i>TK</i> ₂₈₆	16.6	X	93.82726	214.60249	231.88208	0.23886	0.					

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Planet			H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
387201	2012	TL ₃₀₇	15.8	X	59.71589	258.66750	229.78791	15.04482	0.0836455	0.18515565	3.0486769	20	3 18.5	20.1
387202	2012	TV ₃₀₇	16.1	X	111.48347	132.11923	306.46062	8.00128	0.1211241	0.18442052	3.0567732	20	3 28.8	20.7
387203	2012	TP ₃₀₉	16.4	X	178.98119	155.38868	314.88883	4.55730	0.1399169	0.21815234	2.7329360	20	7 20.9	20.6
387204	2012	TO ₃₁₁	17.2	X	119.33693	7.52633	315.59798	6.24590	0.1282785	0.28151093	2.3057163	20	—	—
387205	2012	TX ₃₁₁	16.9	X	346.88642	181.29167	152.36594	4.95825	0.2322793	0.23900620	2.5715597	20	9 19.2	18.6
387206	2012	TM ₃₁₃	15.9	X	166.72408	207.58092	159.79554	9.57182	0.1479321	0.18912154	3.0059059	20	3 5.6	20.6
387207	2012	TP ₃₁₃	16.5	X	274.06034	351.79873	10.16778	1.93970	0.0947765	0.21755825	2.7379090	20	6 20.9	20.0
387208	2012	TV ₃₁₃	15.9	X	282.67508	250.18021	101.67781	13.35023	0.1572226	0.22149919	2.7053365	20	6 10.5	19.4
387209	2012	TR ₃₁₇	16.2	X	196.67541	16.28855	50.26915	10.43277	0.0811382	0.21057155	2.7981410	20	6 13.3	20.4
387210	2012	TU ₃₁₇	15.5	X	123.03685	82.37988	342.71050	15.84894	0.0916277	0.18166229	3.0876367	20	3 21.9	20.2
387211	2012	TV ₃₁₇	15.9	X	146.22071	63.85203	318.44280	10.56659	0.1298382	0.17805601	3.1291877	20	2 29.8	20.9
387212	2012	TX ₃₁₇	15.8	X	122.03106	96.67617	323.34604	9.34755	0.1062329	0.17765776	3.1338624	20	3 17.4	20.5
387213	2012	TD ₃₁₈	15.9	X	133.64319	244.36389	123.45017	8.87172	0.1783396	0.17390526	3.1787831	20	2 9.0	20.9
387214	2012	TX ₃₂₁	15.9	X	121.72353	283.54877	120.76121	12.33954	0.1528548	0.17494302	3.1661996	20	3 11.1	20.8
387215	2012	UK ₁	17.5	X	155.31894	68.18909	144.39060	1.86152	0.1360578	0.25424273	2.4677644	20	11 7.9	21.2
387216	2012	UQ ₃	17.4	X	287.17393	358.15691	160.84862	7.03032	0.0604084	0.27934601	2.3176138	20	—	—
387217	2012	TX ₃	16.7	X	190.48663	323.13381	110.68297	5.50146	0.0547633	0.21436431	2.7650377	20	6 18.2	20.7
387218	2012	UX ₃	16.5	X	262.69463	283.01441	59.53303	3.92960	0.1191026	0.21203071	2.7852886	20	5 8.3	20.5
387219	2012	UD ₉	16.7	X	167.99867	307.69254	82.33836	6.10988	0.0467869	0.19165292	2.9793790	20	3 31.6	21.1
387220	2012	UN ₁₄	17.5	X	113.56783	45.59977	63.60081	2.22370	0.1787175	0.268897102	2.3768351	20	12 23.1	21.3
387221	2012	UU ₁₈	16.9	X	287.91975	135.44219	208.70954	4.59875	0.0798818	0.21784317	2.7355212	20	6 18.3	20.5
387222	2012	UO ₃₀	16.5	X	238.86276	296.19698	114.03332	2.98289	0.0622712	0.21869869	2.7283826	20	7 14.7	20.2
387223	2012	UQ ₃₀	16.6	X	282.14444	266.48842	75.86765	4.86072	0.0538830	0.21382277	2.7697043	20	6 11.6	20.1
387224	2012	UP ₃₀	16.6	X	166.35037	71.25879	24.62503	5.52934	0.0752478	0.21216827	2.7840846	20	6 18.3	20.8
387225	2012	UV ₃₁	15.8	X	337.63993	45.34931	306.38531	7.94348	0.1224159	0.23798146	2.5789364	20	9 15.8	18.7
387226	2012	UD ₃₃	15.7	X	44.88470	91.15488	51.99721	10.34159	0.0718129	0.18182540	3.0857899	20	3 25.1	19.8
387227	2012	UU ₃₃	16.5	X	132.69981	295.24666	271.03905	13.43450	0.0841148	0.24002464	2.5642803	20	9 27.9	20.7
387228	2012	UU ₃₅	16.7	X	157.37693	343.04011	42.45438	1.85200	0.0394552	0.18149353	3.0895504	20	3 12.0	21.0
387229	2012	UU ₃₈	17.0	X	239.96063	45.28605	336.79404	4.00802	0.0523944	0.21144886	2.7903958	20	6 9.2	21.0
387230	2012	UL ₃₉	17.0	X	60.25258	48.15240	251.28771	4.68348	0.137592	0.25210158	2.4817175	20	11 20.5	20.4
387231	2012	UM ₃₉	16.8	X	248.81089	80.00470	329.42436	3.41857	0.0153993	0.22331814	2.6906263	20	8 3.4	20.3
387232	2012	UL ₄₀	17.1	X	236.77703	310.78254	76.10697	3.37131	0.0709507	0.21331194	2.7741244	20	6 9.8	21.2
387233	2012	US ₄₁	17.4	X	123.21227	232.44251	46.83811	3.04794	0.1740607	0.26756043	2.3851817	20	12 31.4	20.9
387234	2012	UX ₄₄	16.9	X	249.95152	174.89640	194.04474	5.80681	0.0646738	0.21201854	2.7853952	20	6 3.8	20.8
387235	2012	UJ ₄₅	17.0	X	240.45804	222.30334	190.24381	4.75499	0.0256602	0.22248307	2.6973548	20	7 24.0	20.7
387236	2012	UU ₄₅	16.9	X	350.85391	249.78566	89.20442	2.96422	0.0985897	0.23960282	2.5672890	20	9 26.5	19.7
387237	2012	UY ₄₅	17.0	X	225.92210	271.85362	149.89768	3.19199	0.1077364	0.21884970	2.7271273	20	7 8.7	21.1
387238	2012	UU ₄₇	16.5	X	268.12481	301.76640	66.50837	6.15313	0.0088923	0.21644703	2.7472718	20	7 4.9	20.2
387239	2012	UE ₄₈	16.6	X	357.77234	199.28321	65.14789	5.41676	0.0172346	0.21162618	2.7888369	20	6 16.6	20.3
387240	2012	UD ₅₁	16.4	X	50.54616	289.70572	211.32259	4.84862	0.0890963	0.17946672	3.1127681	20	3 26.5	20.4
387241	2012	UU ₅₆	16.9	X	315.51167	358.50084	350.76130	2.72765	0.1090367	0.22798421	2.6537878	20	8 5.9	19.9
387242	2012	UU ₅₆	16.4	X	243.41589	86.86280	232.10564	8.60794	0.0825782	0.19117220	2.9843715	20	3 19.7	21.0
387243	2012	UK ₅₈	16.5	X	165.39387	353.17333	16.47806	3.12288	0.1840322	0.18103504	3.0947646	20	3 9.8	21.6
387244	2012	UF ₆₁	15.7	X	136.49338	329.30800	89.66945	10.62156	0.0812833	0.18139089	3.0907158	20	4 6.9	20.4
387245	2012	UF ₆₃	16.2	X	27.70213	223.39583	91.69128	7.80450	0.1539520	0.24229475	2.5482383	20	11 2.2	19.3
387246	2012	UG ₆₉	16.2	X	97.91707	53.42161	12.57144	10.70064	0.1182508	0.17593508	3.1542862	20	3 5.3	20.6
387247	2012	UN ₇₀	16.5	X	244.79710	90.38342	286.02762	3.56198	0.0882259	0.21403064	2.7679108	20	6 3.4	20.4
387248	2012	UE ₇₆	16.9	X	286.72188	139.18830	196.45544	5.74417	0.0717096	0.21256900	2.7805845	20	6 6.7	20.6
387249	2012	UY ₇₉	17.4	X	140.41416	45.34215	260.83729	5.68138	0.1286052	0.28107402	2.3081051	20	—	—
387250	2012	UJ ₈₄	16.3	X	309.67373	218.86722	131.30769	6.27820	0.0829995	0.22240437	2.6979910	20	7 29.8	19.6
387251	2012	UU ₈₇	15.7	X	335.59312	191.99979	46.52169	10.63366	0.0458832	0.1886990	3.0104776	20	4 14.1	19.7
387252	2012	UY ₈₇	16.4	X	283.10797	121.66114	235.63362	5.04448	0.0765420	0.21499675	2.7596126	20	6 29.5	20.1
387253	2012	UZ ₈₇	16.1	X	45.72467	278.49856	239.7954	3.86509	0.1088409	0.18012498	3.1051798	20	4 11.9	19.9
387254	2012	UD ₈₈	16.4	X	158.52659	179.30619	232.07440	0.91960	0.0749241	0.18718882	3.0265611	20	4 14.9	20.9
387255	2012	UM ₉₅	16.4	X	327.82554	104.87925	215.20742	3.58663	0.0736389	0.22437817	2.6821453	20	7 16.7	19.7
387256	2012	US ₉₅	16.7	X	105.20261	353.78646	213.76457	4.33090	0.0192231	0.23058025	2.6338314	20	8 26.4	20.3
387257	2012	UJ ₉₆	16.4	X	81.91957	231.45834	213.96107	8.48637	0.0924840	0.17517546	3.1633983	20	2 28.1	20.9
387258	2012	UN ₉₈	17.0	X	260.73450	209.20251	314.56113	6.34473	0.0441614	0.27131596	2.3631202	20	—	—
387259	2012	UZ ₉₈	17.1	X	119.76911	159.63539	20.04346	2.46443	0.0713823	0.22161303	2.7044100	20	8 14.9	21.0
387260	2012	UM ₉₉	16.7	X	63.98236	20.33455	196.68003	7.68282	0.0675155	0.21552164	2.7551302	20	7 20.7	20.4
387261	2012	US ₁₀₀	17.3	X	160.91239	116.68962	55.63833	6.46964	0.0952719	0.23255627	2.6188905	20	9 24.3	21.3
387262	2012	UC ₁₀₂	16.5	X	85.79997	153.06984	47.85781	10.04532	0.0809900	0.21672434	2.7449278	20	8 5.1	20.5
387263	2012	UA ₁₀₄	17.1	X	210.52384	227.91702	202.76203	3.88528	0.0369103	0.21525433	2.7574107	20	7 8.4	21.1
387264	2012	UD ₁₀₆	17.0	X	320.09337	346.60319	1.87486	2.73858	0.1650959	0.232121				

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
387281	2012	<i>UX</i> ₁₃₉	16.4	X	116.77581	117.74949	319.80764	9.11898	0.1201316	0.18590985	3.0404261	20	4 1.9	21.0
387282	2012	<i>UU</i> ₁₄₀	16.9	X	243.23103	129.72740	347.34633	12.85726	0.1356609	0.24445761	2.5331856	20	10 5.9	20.4
387283	2012	<i>UM</i> ₁₅₁	16.3	X	281.66852	122.03556	159.20443	2.12316	0.1116988	0.18843850	3.0131653	20	3 16.8	20.5
387284	2012	<i>UY</i> ₁₅₁	16.5	X	221.83841	316.06412	142.37666	2.58992	0.0523301	0.22563072	2.6722099	20	8 28.8	20.3
387285	2012	<i>UB</i> ₁₅₃	16.3	X	183.33171	278.86405	92.74455	4.56556	0.1139316	0.18428197	3.0583052	20	3 27.2	21.1
387286	2012	<i>UX</i> ₁₅₃	16.2	X	111.05381	9.00514	63.25405	12.01821	0.0207890	0.17620105	3.1511112	20	3 18.5	20.8
387287	2012	<i>UM</i> ₁₅₉	16.8	X	258.38039	351.78007	23.00940	7.47539	0.0413028	0.21620264	2.7493417	20	6 25.5	20.6
387288	2012	<i>US</i> ₁₆₀	16.6	X	194.90000	55.75922	9.46126	4.26506	0.0501340	0.20982922	2.8047365	20	6 11.3	20.6
387289	2012	<i>UP</i> ₁₆₂	16.8	X	87.64886	244.42701	34.40303	3.64479	0.1078140	0.24714818	2.5147671	20	11 19.5	20.3
387290	2012	<i>UR</i> ₁₆₆	17.1	X	92.25681	28.65374	318.95285	5.93467	0.1379382	0.27996135	2.3142166	20	—	—
387291	2012	<i>UT</i> ₁₆₇	16.3	X	11.86196	203.91936	101.06825	8.94244	0.0517453	0.23509165	2.6000273	20	9 10.2	19.6
387292	2012	<i>UY</i> ₁₆₇	16.5	X	259.42712	65.06782	329.90016	12.48392	0.0723021	0.22342125	2.6897984	20	7 22.6	20.2
387293	2012	<i>UY</i> ₁₇₁	17.2	X	110.82511	294.49972	345.49493	5.78693	0.1523014	0.26001560	2.4311016	20	12 19.3	21.0
387294	2012	<i>UL</i> ₁₇₅	15.9	X	186.91937	95.68013	266.18050	14.57856	0.0752163	0.18874430	3.0099098	20	3 8.2	20.8
387295	2012	<i>UG</i> ₁₇₆	17.3	X	29.25695	332.96309	6.20031	6.68076	0.1291692	0.26173576	2.4204382	20	12 2.9	20.4
387296	2012	<i>VX</i> ₂	16.1	X	157.01289	249.13684	128.74601	11.05445	0.1058454	0.18170385	3.0871659	20	3 9.4	20.9
387297	2012	<i>VY</i> ₃	16.8	X	271.58942	200.31245	129.94355	10.31300	0.1980168	0.21192264	2.7862355	20	4 26.6	21.1
387298	2012	<i>VC</i> ₄	16.4	X	346.64396	187.87447	116.86941	10.33898	0.0970259	0.22649848	2.6653803	20	7 27.4	19.4
387299	2012	<i>VX</i> ₇	16.7	X	169.84152	241.43904	208.30373	3.61000	0.0686583	0.20885456	2.8134557	20	6 14.5	20.8
387300	2012	<i>VH</i> ₈	16.9	X	166.83857	261.51397	188.70479	3.46087	0.0625866	0.20844408	2.8171481	20	6 11.7	21.0
387301	2012	<i>VW</i> ₁₅	15.6	X	199.66589	53.48730	267.23411	8.67634	0.1181029	0.17416003	3.1756824	20	2 7.7	20.8
387302	2012	<i>VK</i> ₂₀	15.9	X	41.87960	132.59000	29.61462	11.35690	0.1343608	0.18766673	3.0214206	20	4 15.5	19.4
387303	2012	<i>VP</i> ₂₈	17.3	X	184.20003	201.58755	268.61832	3.88953	0.1717510	0.22014824	2.7163928	20	7 26.9	21.3
387304	2012	<i>VF</i> ₃₄	16.8	X	37.07124	194.15924	107.74340	8.03029	0.0668012	0.23515181	2.5995839	20	10 14.9	20.2
387305	2012	<i>VS</i> ₃₇	16.2	X	161.09612	320.65861	58.72436	1.66594	0.1767428	0.18159273	3.0884252	20	3 17.1	21.2
387306	2012	<i>VX</i> ₄₀	16.5	X	77.09358	66.22904	44.23196	3.52888	0.1770820	0.17830410	3.1262845	20	4 8.6	20.7
387307	2012	<i>VG</i> ₄₇	15.7	X	324.96698	156.67861	51.02689	10.54150	0.0407635	0.18009945	3.1054732	20	2 25.4	20.1
387308	2012	<i>VK</i> ₅₂	17.4	X	93.92862	173.44276	35.59878	3.22795	0.1203873	0.22088404	2.7103569	20	8 28.9	21.4
387309	2012	<i>VG</i> ₅₇	16.4	X	279.94523	68.55865	225.02851	9.46436	0.0852773	0.19315361	2.9639270	20	3 30.7	20.8
387310	2012	<i>VO</i> ₅₇	17.0	X	251.44588	340.63944	77.27108	3.25020	0.0651149	0.22410347	2.6843367	20	8 11.6	20.5
387311	2012	<i>VV</i> ₅₇	16.9	X	33.94893	79.73578	174.46118	1.57378	0.0091443	0.21656960	2.7462351	20	7 22.7	20.5
387312	2012	<i>VD</i> ₅₈	15.4	X	131.93579	328.38806	59.10978	12.12577	0.0578208	0.17101102	3.2145485	20	2 22.6	20.3
387313	2012	<i>VC</i> ₆₁	16.1	X	259.68762	323.03635	60.93938	6.82591	0.0453208	0.21485059	2.7608640	20	7 9.4	20.0
387314	2012	<i>VY</i> ₆₁	16.4	X	356.84092	186.94034	59.71474	7.33731	0.0383925	0.20166623	2.8799211	20	5 22.2	19.9
387315	2012	<i>VB</i> ₆₂	17.0	X	329.74719	258.95999	69.86033	3.05807	0.2133403	0.22921391	2.6422879	20	7 24.3	19.2
387316	2012	<i>VG</i> ₆₇	17.4	X	165.85133	100.26915	36.99762	1.21745	0.0354923	0.22205822	2.7007941	20	8 12.1	21.1
387317	2012	<i>VM</i> ₆₈	17.7	X	292.03084	169.78790	174.49040	1.42874	0.1007605	0.21736703	2.7395145	20	6 21.3	21.0
387318	2012	<i>VH</i> ₆₉	16.5	X	34.92742	160.99237	78.66148	5.92914	0.0679437	0.21189903	2.7864348	20	7 11.5	19.9
387319	2012	<i>VX</i> ₇₁	16.6	X	113.40838	349.25913	101.47465	2.35413	0.1524484	0.18066040	3.0990415	20	4 23.9	21.2
387320	2012	<i>VG</i> ₇₂	16.1	X	211.21401	280.16043	65.61341	9.91498	0.0460533	0.18260739	3.0769740	20	3 28.3	20.7
387321	2012	<i>VQ</i> ₇₂	16.2	X	147.37168	334.21531	97.61074	4.01608	0.0696489	0.18812571	3.0165043	20	4 29.2	20.7
387322	2012	<i>VH</i> ₇₃	16.4	X	15.13750	168.00269	88.62833	6.26250	0.1081651	0.21249313	2.7812464	20	7 7.3	19.6
387323	2012	<i>VG</i> ₇₄	16.4	X	268.35860	153.06828	159.10909	2.30100	0.0970385	0.19665080	2.9286822	20	4 10.3	20.7
387324	2012	<i>VT</i> ₇₄	15.6	X	259.80593	180.66301	108.32469	12.69759	0.0750122	0.1774905	3.1327893	20	3 11.4	20.4
387325	2012	<i>VA</i> ₇₉	15.8	X	2.80752	218.20814	61.50503	20.44591	0.1073070	0.21497105	2.7598326	20	7 21.4	19.4
387326	2012	<i>VJ</i> ₇₉	17.5	X	95.72285	252.27930	59.99069	3.09134	0.2162168	0.27245777	2.3565134	20	—	—
387327	2012	<i>VB</i> ₈₁	17.0	X	114.53027	86.47704	165.78388	7.87226	0.0387492	0.24549964	2.5260124	20	11 13.3	20.6
387328	2012	<i>VS</i> ₈₂	16.1	X	232.88493	69.61587	240.47226	8.90283	0.0199932	0.17539487	3.1607595	20	3 3.0	20.8
387329	2012	<i>VU</i> ₈₄	15.9	X	91.76341	232.31840	238.69390	9.17380	0.0419765	0.18263348	3.0766809	20	4 4.7	20.3
387330	2012	<i>VO</i> ₈₉	15.8	X	73.42150	79.81466	64.75301	11.30630	0.0163898	0.18782885	3.0196818	20	4 25.7	20.0
387331	2012	<i>VV</i> ₈₉	16.5	X	95.59255	8.03828	86.58030	2.71444	0.1089380	0.17673513	3.1447597	20	4 3.2	20.8
387332	2012	<i>VA</i> ₉₂	15.7	X	5.99185	133.26372	75.69430	13.21951	0.0513652	0.18537955	3.0462217	20	4 21.9	19.8
387333	2012	<i>VK</i> ₉₆	16.9	X	258.49538	295.32227	64.75175	0.75167	0.0881150	0.21173501	2.7878812	20	5 29.9	20.9
387334	2012	<i>VL</i> ₉₇	17.1	X	116.74064	51.68291	272.33698	1.32479	0.2431483	0.28118413	2.3075025	20	—	—
387335	2012	<i>VY</i> ₉₈	16.3	X	290.70338	112.89694	257.17958	5.62183	0.0400187	0.22170222	2.7036845	20	8 1.4	19.8
387336	2012	<i>VY</i> ₁₀₀	15.9	X	101.99764	39.64219	66.08442	12.71883	0.0679754	0.18627961	3.0364014	20	4 21.6	20.3
387337	2012	<i>VG</i> ₁₀₃	15.7	X	276.04519	226.57597	53.35288	12.45426	0.0359990	0.17812807	3.1283438	20	3 25.5	20.3
387338	2012	<i>VN</i> ₁₀₅	16.1	X	69.60855	200.24335	81.82268	16.09672	0.1033327	0.24314154	2.5423184	20	11 8.1	19.8
387339	2012	<i>VS</i> ₁₀₈	16.2	X	174.01545	39.27628	337.39203	4.20601	0.1437959	0.18236418	3.0797090	20	3 22.1	21.1
387340	2012	<i>WV</i> ₅	16.9	X	234.96761	154.81884	58.05702	7.67873	0.0561911	0.27015181	2.3699042	20	—	—
387341	2012	<i>WO</i> ₆	16.0	X	346.75283	204.92447	211.40886	2.20253	0.1902505	0.12405811	3.9815539	20	12 3.2	20.6
387342	2012	<i>WX</i> ₇	15.8	X	158.49280	118.12078	273.70700	9.51960	0.0328031	0.17698019	3.1418560	20	3 14.9	20.5
387343	2012	<i>WU</i> ₁₀	16.0	X	124.97951	53.18671	15.58376	9.31247	0.0107062	0.18213905	3.0822463	20	3 24.0	20.2
387344	2012	<i>WB</i> ₁₁	16.5	X	11.25123	159.76514	80.87254	5.31587	0.0527090	0.20217796	2.8750596	20	6 4.8	20.1
387345	2012	<i>WG</i> ₁₁	17.1	X	238.35942	343.06294	99.58414	3.30264	0.0465176	0.22630138	2.6669277	20	8 30.9	20.6
387346	2012	<i>WX</i> ₁₂	16.1	X	187.29079	286.01134	81.64608	6.03567	0.1450325	0.18462999	3.0544608	20	3 27.2	21.1
387347	2012	<i>WH</i> ₁₃	17.4	X	134.85749	92.57376	175.33540	2.55630	0.1656544	0.25898977	2.4375169	20	12 25.9	21.4
387348	2012	<i>WY</i> ₂₀	16.7	X	226.71759	76.87578	355.63478	2.48019	0.0587890	0.2162				

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>		
387361	2012	<i>XO</i> ₅₃	16.1	X	197.81838	79.36843	281.53104	4.90003	0.1171318	0.18461347	3.0546430	20	3 23.3	21.0
387362	2012	<i>XZ</i> ₆₂	16.5	X	312.95903	172.96885	160.42577	6.97022	0.0574354	0.21299009	2.7769184	20	7 12.8	20.1
387363	2012	<i>XE</i> ₆₃	16.5	X	244.24962	207.12178	169.66554	7.53633	0.0824945	0.20426843	2.8554105	20	6 5.2	20.7
387364	2012	<i>XG</i> ₆₄	16.4	X	218.16891	232.31743	174.98035	6.24125	0.0595171	0.20328885	2.8645760	20	6 15.6	20.6
387365	2012	<i>XK</i> ₆₄	15.3	X	248.39225	216.47904	113.63025	10.13312	0.0271542	0.18670616	3.0317749	20	4 22.4	19.8
387366	2012	<i>XG</i> ₆₈	17.1	X	114.12716	131.45902	143.29466	5.21346	0.1456501	0.25182453	2.4835374	20	12 14.8	21.1
387367	2012	<i>XK</i> ₈₄	15.8	X	38.13854	191.73606	115.88395	15.62115	0.1173672	0.23349558	2.6118623	20	11 3.4	19.5
387368	2012	<i>XL</i> ₈₄	16.4	X	175.23047	149.24685	257.02756	1.71323	0.0930301	0.19002311	2.9963907	20	4 26.5	21.0
387369	2012	<i>XC</i> ₉₄	16.2	X	265.05704	262.94272	127.80066	6.69376	0.0267005	0.21389027	2.7691216	20	7 27.9	20.0
387370	2012	<i>XC</i> ₁₀₀	15.6	X	210.39072	293.86153	51.25518	10.89510	0.0773293	0.17976236	3.1093543	20	3 25.6	20.4
387371	2012	<i>XP</i> ₁₁₀	16.7	X	17.48766	336.54625	119.31466	7.85911	0.0668244	0.27915965	2.3186451	20	—	—
387372	2012	<i>XX</i> ₁₁₃	16.0	X	178.52688	88.19568	271.76240	15.17657	0.2408680	0.18197748	3.0840704	20	3 2.4	21.6
387373	2012	<i>XO</i> ₁₂₄	15.4	X	331.73829	145.94379	121.44507	10.82876	0.0305055	0.19115113	2.9845909	20	5 18.3	19.6
387374	2012	<i>XA</i> ₁₂₉	16.6	X	269.53879	55.32973	286.60941	4.99050	0.0881099	0.20637760	2.8359224	20	5 19.1	20.7
387375	2012	<i>XJ</i> ₁₃₁	16.6	X	2.19408	185.15074	155.40719	5.06720	0.1222212	0.23665404	2.5885711	20	10 20.4	19.4
387376	2012	<i>XB</i> ₁₃₇	15.3	X	236.67198	211.74335	99.70105	12.56612	0.0634766	0.17590078	3.1546961	20	3 15.0	20.2
387377	2012	<i>XJ</i> ₁₄₃	16.6	X	339.02967	234.43279	93.85093	5.02966	0.1154791	0.22403517	2.6848823	20	8 18.3	19.6
387378	2012	<i>XP</i> ₁₄₉	16.0	X	171.91489	130.43842	251.55150	6.89499	0.0852509	0.18064503	3.0992174	20	3 22.3	20.8
387379	2012	<i>XE</i> ₁₅₃	16.4	X	31.55970	218.58050	68.44612	12.07775	0.0613878	0.22889444	2.6467478	20	9 18.1	20.0
387380	2012	<i>XE</i> ₁₅₅	16.2	X	165.56858	6.19971	84.59130	3.37155	0.10101822	0.19939071	2.9017908	20	6 9.1	20.3
387381	2013	<i>AJ</i> ₈	13.6	X	183.06666	33.91556	138.18136	7.70946	0.0534717	0.08178211	5.2565060	20	9 28.8	20.8
387382	2013	<i>AB</i> ₄₁	13.7	X	268.00873	278.67714	158.17218	4.56844	0.0498561	0.08103333	5.2888381	20	9 10.3	20.6
387383	2013	<i>AQ</i> ₄₁	14.2	X	202.46707	24.87028	119.65512	1.95191	0.0875830	0.08225488	5.2363452	20	9 14.3	21.5
387384	2013	<i>AW</i> ₅₇	13.3	X	267.93554	122.97619	313.37161	9.96612	0.0941610	0.08361607	5.1793614	20	9 1.3	20.2
387385	2013	<i>AJ</i> ₉₈	13.5	X	215.58759	175.17030	114.14217	9.04075	0.1092409	0.08189735	5.2515738	20	9 5.2	20.9
387386	2013	<i>AZ</i> ₁₀₇	14.0	X	263.12378	279.88091	169.93747	4.42197	0.0525100	0.08569715	5.0951676	20	9 19.4	20.7
387387	2013	<i>AJ</i> ₁₂₅	16.3	X	274.05844	194.49728	250.92837	11.02611	0.1446747	0.23163027	2.6258657	20	10 2.6	19.7
387388	2013	<i>AQ</i> ₁₃₀	13.2	X	352.11764	248.59297	109.53739	18.03181	0.0566208	0.08186185	5.2530922	20	9 30.2	20.6
387389	2013	<i>AV</i> ₁₃₀	13.0	X	81.31450	150.49598	130.28611	9.45099	0.0404386	0.08359058	5.1804144	20	10 14.6	19.9
387390	2013	<i>AG</i> ₁₃₃	13.7	X	298.86081	290.94130	118.03181	8.79047	0.0965183	0.08498781	5.1234790	20	9 12.4	20.3
387391	2013	<i>AZ</i> ₁₅₆	13.7	X	42.95726	121.54620	182.70663	12.01940	0.0177177	0.08441736	5.1465341	20	9 20.9	20.4
387392	2013	<i>BB</i>	14.3	X	229.08026	29.28804	72.11485	3.91348	0.0721630	0.08124754	5.2795379	20	8 25.5	21.5
387393	2013	<i>BF</i> ₇₁	13.5	X	223.53596	329.77883	157.17400	11.91648	0.1136600	0.08487577	5.1279867	20	9 13.5	20.6
387394	2013	<i>BX</i> ₇₈	17.4	X	124.31421	263.16314	132.55668	7.24464	0.1117863	0.28215508	2.3022057	20	2 11.6	20.1
387395	2013	<i>CC</i> ₂₀₂	18.0	X	124.70669	272.91614	132.45196	5.23366	0.1271981	0.28440435	2.2900514	20	2 27.7	20.9
387396	2013	<i>GX</i> ₄₂	15.8	X	197.29296	57.02622	32.57355	16.49044	0.0487821	0.17200282	3.2021795	20	7 18.0	20.8
387397	2013	<i>NZ</i> ₁₈	17.0	X	287.50238	327.32365	113.56800	7.73428	0.0647102	0.28155079	2.3054987	20	11 17.0	19.5
387398	2013	<i>NP</i> ₂₂	16.1	X	51.65420	245.24702	253.13854	8.11827	0.0814896	0.20648145	2.8349714	20	3 17.9	19.9
387399	2013	<i>PR</i> ₁₀	16.5	X	241.74556	66.89394	258.46226	7.07395	0.1293346	0.23786006	2.5798138	20	3 17.7	20.6
387400	2013	<i>QZ</i> ₂	17.4	X	178.53105	241.06676	159.85341	11.22467	0.2308873	0.23778157	2.5803815	20	4 27.6	22.0
387401	2013	<i>QC</i> ₄₈	17.3	X	318.69869	284.45997	3.32288	5.88764	0.1814551	0.26066723	2.4270483	20	4 23.9	19.8
387402	2013	<i>RU</i> ₃₂	16.4	X	132.23105	267.49328	150.09319	14.30350	0.1155339	0.22390013	2.6859617	20	3 30.1	20.4
387403	2013	<i>RQ</i> ₄₄	16.5	X	174.18594	262.39536	106.83523	4.87459	0.1130451	0.21582260	2.7525683	20	3 13.0	20.7
387404	2013	<i>RU</i> ₈₅	17.4	X	237.99146	161.90378	336.65960	6.53713	0.0482925	0.29481717	2.2358064	20	11 24.3	20.1
387405	2013	<i>SJ</i> ₂₅	16.5	X	258.77827	339.12335	50.17136	24.55614	0.0984615	0.25498902	2.4629470	20	7 9.0	20.2
387406	2013	<i>SH</i> ₃₃	16.5	X	172.24810	313.29060	43.54211	10.27754	0.2095145	0.21590076	2.7519039	20	3 3.3	21.3
387407	2013	<i>SP</i> ₅₂	14.9	X	221.90582	316.27907	257.63510	14.99723	0.0580555	0.17479547	3.1679812	20	—	—
387408	2013	<i>SH</i> ₆₂	17.1	X	253.22763	334.07914	50.89145	3.45957	0.1903981	0.25729911	2.4481829	20	6 12.3	20.5
387409	2013	<i>TM</i> ₃	16.4	X	187.13441	244.10288	112.89668	6.90023	0.0625032	0.21632771	2.7482819	20	3 10.3	20.5
387410	2013	<i>TE</i> ₁₂	16.8	X	166.08095	332.96491	41.26851	2.90971	0.1545193	0.21608641	2.7503275	20	3 12.3	21.1
387411	2013	<i>TN</i> ₁₈	16.2	X	129.59836	73.50502	3.25117	6.91365	0.0880867	0.21916058	2.7245478	20	4 12.7	20.0
387412	2013	<i>TU</i> ₃₉	16.3	X	158.51857	202.80714	193.57005	4.41050	0.0951568	0.21733807	2.7397579	20	3 26.8	20.4
387413	2013	<i>TA</i> ₄₁	17.8	X	214.19887	113.79039	1.73000	1.21403	0.1242731	0.26739176	2.3861846	20	9 5.4	21.2
387414	2013	<i>TB</i> ₁₂₃	15.9	X	231.93337	348.68451	190.31413	18.24033	0.0306300	0.17527644	3.1621831	20	12 13.9	20.7
387415	2013	<i>TY</i> ₁₃₁	16.2	X	62.99621	354.52202	17.91420	0.59039	0.1929782	0.17408007	3.1766547	20	—	—
387416	2013	<i>TR</i> ₁₃₈	16.4	X	283.02211	186.35512	8.45729	2.51418	0.0812272	0.17848706	3.1241477	20	—	—
387417	2013	<i>TQ</i> ₁₃₉	16.8	X	199.01668	263.99521	95.84069	4.68582	0.2244124	0.21951078	2.7216492	20	3 25.1	21.5
387418	2013	<i>UN</i> ₁₁	15.7	X	71.35886	239.77948	184.42774	10.51832	0.0858187	0.18701929	3.0283899	20	1 17.5	19.8
387419	2013	<i>UD</i> ₁₂	16.2	X	241.86516	357.39293	345.13512	4.65089	0.3355912	0.23511688	2.5998413	20	3 27.7	20.9
387420	2013	<i>UF</i> ₁₂	15.1	X	135.92155	354.97483	23.72872	18.40120	0.2206104	0.19524252	2.9427483	20	3 4.3	20.1
387421	2013	<i>VP</i> ₁	16.9	X	158.84840	348.23883	131.32544	7.24268	0.0703496	0.24099923	2.5573624	20	7 11.8	20.5
387422	2013	<i>VL</i> ₁₆	15.7	X	327.83912	300.34893	245.60585	7.63107	0.0280726	0.18993308	2.9973374	20	1 26.0	19.9
387423	2013	<i>VT</i> ₁₆	17.7	X	351.85493	335.79255	77.33014	8.06809	0.1694784	0.29975699	2.2111753	20	—	—
387424	2013	<i>VS</i> ₁₇	17.5	X	276.08231	122.83477	280.74711	3.58055	0.2438512	0.26254715	2.4154488	20	7 29.8	20.5
387425	2013	<i>VU</i> ₁₇	16.3	X	254.11402	315.44508	73.07099	6.17686	0.2978078	0.24080580	2.5587318	20	6 5.5	20.3
387426	2013	<i>VJ</i> ₂₀	16.2	X	236.11077	316.47538	51.30563	14.19842	0.1914171	0.23501681	2.6005793	20	5 4.4	20.2
387427	2013	<i>VV</i> ₂₀	16.5	X	161.59073	40.89988	80.68190	32.81434	0.1808121	0.23575092	2.5951778	20	7 18.0	20.1
387428	2013	<i>VD</i> ₂₁	16.0	X	91.89756	251.95151	155.0							

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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>
387441 2013 WU ₅₇	16.3	X	73.64788	297.68832	241.14141	11.86682	0.2020987	0.22359983	2.6883660	20	7 3.6	20.0
387442 2013 WJ ₅₉	16.0	X	346.17109	197.83396	71.38604	15.89893	0.0684882	0.23278232	2.6171948	20	6 4.9	19.0
387443 2013 WP ₆₀	16.4	X	76.32229	37.96516	4.43306	4.53974	0.1622556	0.17741395	3.1367329	20	1 12.1	20.3
387444 2013 WU ₆₀	17.8	X	216.25407	46.29789	83.90531	2.76356	0.1267865	0.26396336	2.4068015	20	9 30.2	21.0
387445 2013 WV ₆₀	16.3	X	293.58495	225.63366	69.92986	4.07692	0.0988858	0.22575644	2.6712177	20	4 19.5	19.8
387446 2013 WP ₆₁	15.8	X	109.14918	196.95063	281.86252	10.14113	0.1358950	0.21437283	2.7649644	20	5 19.2	20.0
387447 2013 WA ₆₅	17.0	X	304.25417	349.38167	20.50616	6.75782	0.2461964	0.26673826	2.3900804	20	8 2.7	19.0
387448 2013 WZ ₆₅	15.7	X	47.07555	268.51521	228.78175	11.97699	0.1636974	0.19272277	2.9683427	20	3 20.1	19.4
387449 2013 WB ₆₆	16.8	X	229.94010	278.20408	94.20374	6.97037	0.2800229	0.23445106	2.6047612	20	4 30.4	21.4
387450 2013 WQ ₆₆	18.5	X	26.93242	122.17638	277.83426	1.63432	0.1375539	0.30837439	2.1697874	20	—	—
387451 2013 WS ₇₂	15.7	X	53.69880	30.56227	76.48885	10.03301	0.0684602	0.18922839	3.0047743	20	2 18.9	19.8
387452 2013 WN ₇₄	16.4	X	251.62155	276.26466	85.47287	12.14901	0.0598490	0.23270064	2.6178072	20	5 28.7	20.0
387453 2013 WX ₈₁	17.1	X	207.98931	252.54427	179.78295	2.50823	0.0861685	0.23840489	2.5758819	20	7 4.9	20.8
387454 2013 WS ₈₃	17.4	X	259.34550	210.61396	239.58280	2.63475	0.1830666	0.26651042	2.3914424	20	9 20.4	20.1
387455 2013 WF ₈₅	16.1	X	127.50328	11.59259	102.56026	9.41939	0.0982222	0.21904607	2.7254972	20	6 1.6	20.1
387456 2013 WY ₈₅	17.5	X	167.99428	213.13416	237.92368	0.83431	0.2252570	0.22722307	2.6597109	20	6 16.7	22.1
387457 2013 WK ₉₇	15.9	X	80.48889	167.93702	261.05529	10.21710	0.1903010	0.18486762	3.0518428	20	2 6.2	20.1
387458 2013 WQ ₁₀₃	16.4	X	109.45318	225.19628	262.13270	8.51040	0.2398713	0.21537980	2.7563397	20	6 12.6	20.6
387459 2013 WF ₁₀₆	17.2	X	41.03855	276.66353	80.83891	4.52255	0.2114341	0.30162439	2.2020394	20	—	—
387460 2013 WQ ₁₀₇	15.1	X	356.56307	240.23026	245.55692	8.58620	0.0359396	0.14635326	3.5661625	20	—	—
387461 2013 WM ₁₀₉	16.3	X	144.23511	222.38175	288.89079	15.98978	0.1158276	0.22832767	2.6511259	20	8 3.8	20.5
387462 2013 XU	16.2	X	94.71006	55.97407	79.87810	15.12670	0.0751193	0.21620821	2.7492945	20	5 19.5	20.1
387463 2013 XH ₁	15.4	X	111.05406	162.57797	300.19155	10.12228	0.1026840	0.20106777	2.8856329	20	4 23.8	19.7
387464 2013 XV ₄	16.2	X	248.35688	291.46670	103.04322	14.14067	0.1887838	0.23593951	2.5937947	20	6 20.2	20.0
387465 2013 XX ₁₀	16.9	X	65.06608	44.11067	12.65086	1.74405	0.1696150	0.17719464	3.1393206	20	1 13.4	20.6
387466 2013 XQ ₁₁	16.6	X	218.50231	282.68955	83.89172	5.15536	0.2234689	0.22868017	2.6484008	20	4 16.9	21.1
387467 2013 XE ₁₂	16.2	X	26.18152	221.56947	257.27271	3.92101	0.1335252	0.17850078	3.1239876	20	1 23.2	19.8
387468 2013 XL ₁₃	17.2	X	197.06832	324.79835	67.32480	4.06496	0.1576264	0.22144241	2.7057989	20	4 30.6	21.7
387469 2013 XB ₂₃	15.8	X	171.98126	33.68364	73.76410	10.16165	0.0537221	0.22427195	2.6829922	20	7 11.0	19.7
387470 2013 XF ₂₃	17.6	X	285.95683	68.92772	20.46105	1.62450	0.1481270	0.27051601	2.3677766	20	11 12.2	19.7
387471 2013 XL ₂₃	15.9	X	284.48966	228.76923	105.13393	16.78540	0.2083632	0.22279034	2.6948741	20	5 16.5	19.8
387472 2013 XQ ₂₃	17.0	X	341.29768	301.77512	51.10119	2.26542	0.0141484	0.25023274	2.4940584	20	9 28.3	19.9
387473 2013 XR ₂₃	15.8	X	35.84979	211.01668	296.40492	14.13896	0.1130117	0.18170899	3.0871077	20	3 7.7	19.9
387474 2013 YP ₄	17.6	X	231.02370	45.85580	108.11154	2.24645	0.1186958	0.26892092	2.3771303	20	11 20.6	20.4
387475 2013 YF ₁₀	16.3	X	218.73660	192.17446	254.46725	8.21821	0.1555769	0.24000120	2.5644472	20	7 27.6	20.4
387476 2013 YS ₁₀	16.9	X	264.59754	257.21742	278.59214	7.49179	0.0591465	0.28851404	2.2682526	20	—	—
387477 2013 YG ₁₁	15.8	X	66.45402	210.82326	282.10041	11.22329	0.1920703	0.18491928	3.0512744	20	4 18.7	20.0
387478 2013 YD ₁₂	17.2	X	214.51507	121.94942	280.35196	3.73981	0.1032278	0.23158626	2.6261983	20	6 1.1	21.0
387479 2013 YU ₁₄	17.5	X	308.99243	333.35709	112.57914	7.85160	0.0739581	0.27591219	2.3368031	20	12 25.1	20.0
387480 2013 YC ₁₆	17.8	X	307.13119	218.07796	277.99587	2.47402	0.0951523	0.29315830	2.2442329	20	—	—
387481 2013 YK ₁₆	15.9	X	21.69555	338.92348	289.89098	14.30053	0.1449618	0.22512429	2.6762159	20	8 6.9	19.0
387482 2013 YF ₁₈	15.7	X	93.72257	135.31413	283.53247	6.69323	0.0427384	0.18467140	3.0540041	20	2 4.1	19.9
387483 2013 YR ₅₂	17.2	X	218.17214	228.18211	271.87239	10.41215	0.1588122	0.26549557	2.3975327	20	10 4.8	20.9
387484 2013 YH ₆₂	17.1	X	219.36921	79.80629	114.73705	9.92317	0.1642813	0.27461178	2.3441745	20	12 23.8	20.1
387485 2013 YS ₁₀₂	15.5	X	133.15490	273.36984	287.19320	28.13818	0.0885601	0.23634933	2.5907955	20	9 9.4	20.1
387486 2013 YO ₁₀₆	17.3	X	285.53466	222.01186	145.11432	4.34927	0.2133657	0.24269099	2.5454639	20	6 25.9	20.4
387487 4169 T-3	17.6	X	18.40386	294.26767	85.94825	3.55345	0.3010591	0.27861290	2.3216775	20	—	—
387488 1994 AY ₁₃	16.8	X	149.46989	48.55040	107.83985	5.88585	0.1367245	0.24177971	2.5518559	20	8 22.7	20.7
387489 1994 TC ₇	17.0	X	227.95394	65.77133	17.77391	10.91413	0.0923847	0.22285894	2.6943210	20	8 15.9	21.0
387490 1995 BG ₈	16.7	X	218.13480	304.17028	113.64463	5.04667	0.1926604	0.21198260	2.7857100	20	6 18.7	21.3
387491 1995 QK ₅	17.6	X	320.18882	181.72503	258.40047	5.13060	0.0602850	0.28644206	2.2791777	20	—	—
387492 1995 SF ₂₆	16.6	X	58.01854	274.40644	9.47779	11.82864	0.0614801	0.23689669	2.5868032	20	10 12.9	20.0
387493 1995 SU ₄₂	16.0	X	160.50925	15.43892	20.40167	9.85153	0.0185384	0.18066365	3.0990045	20	3 27.5	20.4
387494 1995 SP ₅₈	16.6	X	76.23938	74.39825	351.05817	16.39081	0.2406894	0.17372910	3.1809316	20	2 24.1	20.7
387495 1995 SJ ₈₄	16.9	X	250.76399	2.49330	13.04062	12.24128	0.2394725	0.22821129	2.6520272	20	5 19.4	21.3
387496 1995 TJ ₄	16.7	X	312.93947	262.26989	19.16973	10.57774	0.0447129	0.18434588	3.0575982	20	5 3.6	20.9
387497 1995 UJ ₆₁	17.5	X	162.31426	313.47784	23.15486	8.68952	0.1755427	0.29447703	2.2375278	20	1 16.7	20.8
387498 1995 VV ₂	17.1	X	297.98528	352.60176	39.30945	6.04382	0.1428561	0.23359337	2.6111333	20	9 5.4	20.0
387499 1996 VF ₂₈	16.2	X	161.37180	298.61542	95.77680	11.47191	0.1239820	0.18461642	3.0546104	20	4 6.2	21.2
387500 1996 XY ₃	16.1	X	143.21195	0.93864	47.54604	2.91974	0.2352195	0.18393145	3.0621894	20	4 8.3	21.2
387501 1996 XC ₁₇	15.6	X	275.66557	272.68603	103.52288	10.79895	0.0828019	0.15291006	3.4634746	20	7 10.8	20.3
387502 1997 CP ₂₂	18.4	X	308.91991	149.07434	308.95023	2.38240	0.1384147	0.28729925	2.2746420	20	—	—
387503 1997 SC ₆	16.4	X	69.86315	285.96703	357.13066	12.76710	0.1893730	0.21984592	2.7188825	20	11 5.7	20.7
387504 1998 DE ₇	17.6	X	193.67562	180.52328	294.03886	8.05493	0.2083468	0.24277391	2.5448843	20	8 6.1	21.9
387505 1998 KN ₃	18.4	X	145.29838	71.09241	313.38036	2.29083	0.8732874	0.51479235	1.5418708	20	4 3.7	21.8
387506 1998 KQ ₅	16.4	X	6.48999	129.79060	92.91752	13.80931	0.1290613	0.17928607	3.1148587	20	5 10.5	20.3
387507 1998 RF ₈	17.6	X	297.80618	85.77423	9.30327	8.49716	0.1372868	0.27408518	2.3471762	20	12 16.3	19.9
387508 1998 TD ₁	18.6	X	202.38372	18.73412	32.15757	8.40815	0.1088864	0.30125455	2.2038412	20	5 28.5	21.8
387509 1998 TC ₂₆	17.8	X	138.10664	302.51483	34.65364	7.10664	0.1458172	0.28523717	2.2855917	20	—	—
387510 1998 XW ₅	17.1	X	221.94501	348.91889	73.82548	7.40872	0.1478974	0.21150100	2.7899372	20	7 1.9	21.4
387511 1999 AB ₂₀	17.8	X	358.35831	297.88359	127.62097	4.49947	0.2364645	0.27100029	2.3649550	20	—	—
387512 1999 NR ₅₄	15.9	X	8.33835	200.41152	148.64794	27.18085	0.2043410	0.24062973	2.5599797	20	11 30.2	19.5
387513 1999 RV ₃₇	16.5	X	144.07415	5.20346	350.69952	28.14691	0.2049647	0.30625984	2.1797634	20	2 3.9	20.1
387514 1999 RM ₁₉₀	18.0	X	232.86861	252.49656	74.07923	1.57940	0.2444865	0.31469540	2.1406342			

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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>
387521 1999 <i>UT</i> ₃₀	18.0	X	353.55971	276.72756	189.40965	6.00972	0.1409123	0.29528682	2.2334351	20	—	—
387522 1999 <i>VL</i> ₁₃₂	17.2	X	320.79199	213.31350	123.06933	2.26830	0.1284655	0.22595815	2.6696277	20	7 24.5	20.0
387523 1999 <i>VH</i> ₁₇₅	17.1	X	9.26076	9.85819	333.16394	2.10188	0.2536601	0.23850731	2.5751444	20	11 23.1	19.8
387524 1999 <i>VF</i> ₁₉₆	16.1	X	222.38376	305.35189	104.99616	12.26411	0.3214387	0.22164703	2.7041334	20	6 6.5	21.0
387525 1999 <i>XA</i> ₁₆₄	16.8	X	224.96682	342.88713	98.21955	5.46330	0.3149966	0.22221577	2.6995174	20	7 15.1	21.5
387526 2000 <i>AO</i> ₁₆₂	17.2	X	54.44898	231.73848	306.03128	17.55326	0.0524803	0.35283635	1.9834466	20	4 30.6	19.7
387527 2000 <i>CF</i> ₁₃₉	16.9	X	63.21824	72.94474	148.17395	3.67934	0.1254260	0.20983541	2.8046814	20	8 4.4	20.6
387528 2000 <i>CF</i> ₁₄₉	17.3	X	121.51008	13.92141	177.54049	11.91737	0.2927214	0.21303113	2.7765617	20	9 9.1	21.9
387529 2000 <i>DN</i> ₁₇	17.2	X	221.14385	269.65134	341.33567	22.30365	0.2713258	0.28102795	2.3083574	20	—	—
387530 2000 <i>DZ</i> ₇₂	16.8	X	127.06887	182.00864	348.41034	8.01744	0.2325440	0.21187010	2.7866960	20	8 21.5	21.5
387531 2000 <i>FA</i> ₁₄	18.1	X	177.96141	85.65289	180.76361	2.49141	0.2078833	0.27554268	2.3388918	20	—	—
387532 2000 <i>FS</i> ₁₄	16.9	X	294.13206	359.20697	167.65841	24.88367	0.1543567	0.28237769	2.3009957	20	—	—
387533 2000 <i>FE</i> ₇₄	16.5	X	233.64729	240.26518	148.23874	10.59530	0.1381666	0.21293798	2.7773714	20	6 3.2	20.9
387534 2000 <i>GX</i> ₁₁₈	17.9	X	319.79632	291.06286	192.45482	4.51317	0.2015349	0.28230300	2.3014015	20	—	—
387535 2000 <i>QJ</i> ₁₂₉	17.0	X	123.00895	6.16199	299.89236	4.74723	0.2180606	0.26372982	2.4082222	20	—	—
387536 2000 <i>QP</i> ₁₅₄	16.4	X	338.75939	108.40538	194.95032	12.90685	0.1774893	0.24379247	2.5377910	20	7 5.7	19.0
387537 2000 <i>QG</i> ₁₉₇	17.4	X	90.25144	291.93094	49.04987	1.01283	0.2549372	0.26231277	2.4168875	20	—	—
387538 2000 <i>SP</i> ₂₀₈	17.3	X	268.76510	34.14669	12.65863	5.56592	0.2763640	0.24089955	2.5580679	20	7 19.6	20.9
387539 2000 <i>SO</i> ₃₄₈	16.3	X	329.64483	253.39125	83.29290	13.57269	0.2194581	0.24365354	2.5387556	20	8 12.2	18.5
387540 2000 <i>UV</i> ₆₃	17.2	X	270.08135	134.46090	286.18734	3.72876	0.2712560	0.24048344	2.56210178	20	8 7.7	20.6
387541 2000 <i>VN</i> ₆₁	16.6	X	229.79390	64.29244	16.75090	28.99516	0.3640976	0.23433563	2.6056165	20	7 25.8	21.8
387542 2000 <i>WA</i> ₂₄	16.7	X	222.37887	137.79033	254.28500	11.70119	0.1851400	0.22993273	2.6387740	20	5 21.2	20.8
387543 2000 <i>WL</i> ₃₂	16.9	X	244.66183	326.41248	95.92869	7.74608	0.2933160	0.23559377	2.5963317	20	7 10.5	20.9
387544 2000 <i>YV</i>	15.9	X	271.54148	95.51262	319.49573	20.79056	0.1664536	0.23731517	2.5837613	20	8 17.8	19.2
387545 2001 <i>AP</i> ₄₆	15.8	X	169.38436	115.83584	72.15040	31.03934	0.3432346	0.23217199	2.6217795	20	10 27.7	21.2
387546 2001 <i>BZ</i> ₃	16.6	X	162.77549	169.99156	333.55790	12.29032	0.2194016	0.22885324	2.6470654	20	8 17.8	21.2
387547 2001 <i>BE</i> ₅	16.7	X	162.07640	103.72970	38.17257	25.53096	0.3129172	0.22769244	2.6560545	20	8 28.3	22.1
387548 2001 <i>BK</i> ₆	16.2	X	146.06069	116.69691	305.78003	12.09701	0.1977667	0.22891828	2.6465640	20	8 22.8	20.7
387549 2001 <i>BT</i> ₁₈	16.4	X	270.25927	94.25605	305.84301	13.75812	0.1682356	0.23301310	2.6154665	20	7 27.4	19.8
387550 2001 <i>FT</i> ₁₂₈	16.6	X	197.95436	134.07185	12.18052	13.57474	0.1913085	0.23160238	2.6260765	20	9 22.4	20.8
387551 2001 <i>FR</i> ₁₈₂	17.4	X	184.36099	91.86586	8.10019	2.35934	0.0545907	0.22053501	2.7132159	20	7 15.7	21.3
387552 2001 <i>FS</i> ₁₈₂	16.6	X	191.65526	77.23021	3.75443	13.23992	0.1900028	0.22115025	2.7081815	20	6 24.5	21.4
387553 2001 <i>PY</i> ₆₅	17.8	X	67.95581	178.74111	156.35260	3.95221	0.1722442	0.27319559	2.3522687	20	—	—
387554 2001 <i>QT</i> ₆₉	17.8	X	197.62089	48.09785	247.88894	3.41190	0.3375474	0.28827398	2.2695117	20	1 3.6	21.9
387555 2001 <i>QH</i> ₈₅	16.1	X	50.91125	273.56907	359.21121	14.00848	0.2703660	0.21272012	2.7792674	20	10 13.6	20.1
387556 2001 <i>QW</i> ₉₉	15.2	X	109.50436	126.93238	259.88322	25.39530	0.1685515	0.17969582	3.1101218	20	1 25.6	20.1
387557 2001 <i>RE</i> ₁₄	15.1	X	165.26067	354.29432	318.11766	1.37027	0.2228937	0.12675725	3.9248299	20	1 12.1	21.4
387558 2001 <i>RQ</i> ₄₂	16.8	X	5.67759	120.62369	183.86970	14.92234	0.1576632	0.20633058	2.8363532	20	8 29.1	20.0
387559 2001 <i>RQ</i> ₅₂	17.5	X	51.78856	287.93503	86.59832	2.66106	0.1959041	0.27375200	2.3490802	20	—	—
387560 2001 <i>RW</i> ₁₂₃	16.3	X	4.56136	298.50487	1.17774	8.00739	0.1940586	0.20602229	2.8391820	20	8 28.6	19.2
387561 2001 <i>SP</i> ₇	17.7	X	166.16643	311.62587	353.20516	8.03682	0.1709137	0.28344793	2.2951999	20	—	—
387562 2001 <i>SL</i> ₁₅	17.5	X	172.73930	283.66574	25.83887	3.08273	0.1653879	0.28363930	2.2941675	20	—	—
387563 2001 <i>SE</i> ₆₀	16.9	X	195.46364	322.73018	330.46182	7.72408	0.1242097	0.28411831	2.2915882	20	—	—
387564 2001 <i>SB</i> ₁₂₉	17.0	X	155.32442	339.12905	342.65987	5.13375	0.1848606	0.28249855	2.3003393	20	—	—
387565 2001 <i>SL</i> ₁₆₇	17.5	X	137.68903	312.95515	14.27679	9.76431	0.1713304	0.27982009	2.3149954	20	—	—
387566 2001 <i>SY</i> ₁₈₆	17.9	X	11.45823	202.15655	187.48318	0.75487	0.1766650	0.26928430	2.3749913	20	—	—
387567 2001 <i>SJ</i> ₂₅₂	15.6	X	114.24580	42.64896	25.36434	27.44813	0.2122493	0.17915482	3.1163798	20	4 7.2	20.4
387568 2001 <i>SC</i> ₂₆₃	15.8	X	102.63362	74.03401	315.89502	24.64798	0.2315779	0.17545972	3.1598807	20	2 7.9	20.4
387569 2001 <i>SX</i> ₂₈₅	17.5	X	306.60788	230.39500	190.03747	6.21712	0.1377504	0.26198414	2.4189082	20	11 9.1	19.6
387570 2001 <i>SY</i> ₂₉₂	14.6	X	198.18281	278.04357	11.66289	9.68156	0.2262581	0.12570828	3.9466335	20	1 12.9	21.2
387571 2001 <i>SN</i> ₃₃₂	17.1	X	242.95017	57.31308	308.78988	0.97947	0.1010947	0.19471070	2.9481043	20	5 17.5	21.5
387572 2001 <i>SP</i> ₃₄₄	15.7	X	119.81303	139.58242	306.80848	11.49548	0.2460683	0.18339507	3.0681573	20	4 29.0	20.9
387573 2001 <i>TW</i> ₄	17.5	X	331.98253	12.24208	332.99219	0.61565	0.1912003	0.25734183	2.4479119	20	9 1.6	19.2
387574 2001 <i>TN</i> ₂₁	15.9	X	165.58686	340.11959	58.66661	10.90540	0.1874352	0.18554013	3.0444638	20	4 15.3	21.0
387575 2001 <i>TP</i> ₉₅	17.2	X	164.38048	299.34966	12.27057	9.08695	0.2417315	0.28145458	2.3060241	20	—	—
387576 2001 <i>TT</i> ₉₈	16.3	X	151.79766	163.77580	202.03428	2.99201	0.2153169	0.17957376	3.1115310	20	2 23.4	21.4
387577 2001 <i>TU</i> ₁₄₂	16.0	X	138.49429	242.27993	177.22985	15.89157	0.1428085	0.18392827	3.0622247	20	4 11.6	20.8
387578 2001 <i>TE</i> ₁₇₇	17.5	X	182.19974	292.66705	2.52609	5.45845	0.1703019	0.28165940	2.3049060	20	—	—
387579 2001 <i>TV</i> ₁₈₈	17.4	X	334.73287	45.04782	29.20516	9.80508	0.1679364	0.26488937	2.4011891	20	—	—
387580 2001 <i>TB</i> ₂₀₀	17.3	X	341.07117	316.89481	76.04070	7.63085	0.2800521	0.26307252	2.4122319	20	12 25.7	19.1
387581 2001 <i>TV</i> ₂₁₃	16.2	X	215.66242	45.74036	313.34904	8.93621	0.1333541	0.18808703	3.0169178	20	4 4.4	21.1
387582 2001 <i>TM</i> ₂₁₅	16.8	X	164.64325	320.47767	345.46059	8.24952	0.2313194	0.28000283	2.3139880	20	—	—
387583 2001 <i>TV</i> ₂₃₆	17.6	X	59.42296	294.82404	71.77942	5.73614	0.2260124	0.27284624	2.3542762	20	—	—
387584 2001 <i>UM</i> ₇₁	17.7	X	165.99689	225.33974	84.08651	0.98879	0.2091019	0.27940216	2.3173033	20	—	—
387585 2001 <i>UX</i> ₈₁	17.2	X	294.47030	10.31437	47.45223	3.09095	0.1767707	0.25716291	2.4490473	20	10 5.7	19.5
387586 2001 <i>UF</i> ₁₆₆	16.4	X	123.33566	124.86679	343.31239	5.15562	0.1066774	0.18731928	3.0251557	20	5 17.8	21.0
387587 2001 <i>UV</i> ₁₇₂	17.6	X	10.52769	183.97486	206.25312	4.33868	0.1345703	0.26599366	2.3945387	20	—	—
387588 2001 <i>UO</i> ₂₀₉	15.8	X	172.69950	324.86077	349.33306	9.06701	0.0509027	0.17511412	3.1641369	20	1 6.9	20.6
387589 2001 <i>UJ</i> ₂₁₅	17.5	X	320.46498	348.60707	72.45745	3.04566	0.1576808	0.26227342	2.4171292	20	12 7.4	19.3
387590 2001 <i>VV</i> ₁₀	17.2	X	15.07770	111.43987	249.15776	9.12657	0.1851162	0.26414921	2.4056725	20	12 22.5	20.0
387591 2001 <i>VP</i> ₁₂₇	17.3	X	315.02152	204.27223	160.61361	6.33367	0.1346063	0.25545960	2.4599214	20	8 29.1	19.4
387592 2001 <i>WV</i> ₂₁	15.7	X	121.30038	304.059								

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
387601	2001 YB ₁₀₆	17.2	X	205.98707	352.57191	110.62205	6.20801	0.1868780	0.24448172	2.5330191	20 8 6.3	21.2
387602	2002 AK ₁₉₅	15.4	X	50.51965	223.80131	293.58981	13.13224	0.0808680	0.17202239	3.2019366	20 4 10.1	20.0
387603	2002 CJ ₁₁₀	17.3	X	142.81949	48.80279	132.93999	6.61489	0.2575572	0.23905857	2.5711841	20 9 19.9	21.8
387604	2002 CX ₁₈₁	16.2	X	133.22465	289.31287	131.86956	5.64217	0.1723303	0.17317233	3.1877460	20 4 11.9	21.2
387605	2002 CS ₂₀₇	13.8	X	241.25397	331.35402	139.45510	12.44714	0.1022303	0.08509765	5.1190692	20 9 15.5	20.8
387606	2002 CT ₂₈₇	16.4	X	24.24906	218.24756	328.87923	3.29019	0.1228109	0.17082500	3.2168818	20 4 17.4	20.3
387607	2002 DD ₄	17.7	X	323.62250	251.73435	149.12312	25.67202	0.2317485	0.41201357	1.7886624	20 —	—
387608	2002 EZ ₂₂	12.9	X	95.69953	101.19680	152.85210	26.54498	0.0123904	0.08117142	5.2828379	20 9 26.4	20.0
387609	2002 EW ₃₂	15.9	X	25.21874	169.46103	2.85736	14.59487	0.1354940	0.16742284	3.2603151	20 3 31.5	19.9
387610	2002 EM ₇₆	17.0	X	222.48880	237.87436	177.78991	5.45932	0.1259867	0.23508163	2.6001012	20 6 25.7	20.9
387611	2002 EO ₇₆	17.4	X	154.69217	265.48938	319.97096	1.93691	0.1035225	0.24700633	2.5157298	20 11 21.8	21.1
387612	2002 EP ₇₇	18.2	X	140.75087	229.23182	345.65495	3.03250	0.1788427	0.24242579	2.5473200	20 10 24.7	22.4
387613	2002 EU ₈₂	17.2	X	159.68485	223.91521	355.85013	13.11296	0.1156223	0.24570166	2.5246276	20 11 15.1	21.3
387614	2002 EC ₁₁₈	17.3	X	122.28159	269.55517	331.76185	6.26009	0.0750512	0.24415268	2.5352943	20 11 5.0	21.1
387615	2002 EY ₁₁₈	17.9	X	141.92661	225.30905	338.72906	6.59830	0.1975952	0.24078105	2.5589071	20 10 11.1	22.2
387616	2002 FS ₂₃	16.2	X	50.37664	74.60971	178.42931	8.44475	0.0185331	0.18043551	3.1016160	20 8 8.9	20.7
387617	2002 GU ₂₄	17.3	X	153.58207	214.95310	19.20648	6.44462	0.1029505	0.24616853	2.5214345	20 11 30.6	21.1
387618	2002 GJ ₄₈	17.5	X	130.87085	186.75518	348.72009	0.48969	0.2066952	0.23488030	2.6015868	20 8 29.9	21.6
387619	2002 GD ₅₁	17.4	X	164.91496	133.82315	42.95491	5.62367	0.1863940	0.23979670	2.5659051	20 10 1.5	21.6
387620	2002 GC ₁₄₁	17.5	X	185.51472	346.45831	203.94243	4.69293	0.1759503	0.24321543	2.5418034	20 11 5.0	21.5
387621	2002 GD ₁₇₉	16.9	X	224.04572	57.77522	62.66361	8.20510	0.1226970	0.24231528	2.5480944	20 9 26.9	20.6
387622	2002 GR ₁₈₂	16.7	X	75.69704	260.69553	7.92930	12.66034	0.1627827	0.23715709	2.5849093	20 10 26.0	20.6
387623	2002 HA ₁₈	16.6	X	87.46629	241.37960	32.55655	10.27762	0.1058546	0.23766950	2.5811926	20 11 10.1	20.3
387624	2002 JR ₂₁	16.6	X	99.80979	167.08687	103.25251	6.81405	0.2748515	0.23751115	2.5823397	20 12 1.2	21.1
387625	2002 JD ₆₃	16.7	X	70.45238	184.51679	70.19802	15.09546	0.2430755	0.23120865	2.6290569	20 10 21.3	20.9
387626	2002 JJ ₁₂₁	16.7	X	123.36433	123.64834	123.00538	12.09983	0.1264494	0.23978202	2.5660098	20 11 20.0	20.9
387627	2002 JN ₁₂₈	17.3	X	152.66153	108.72979	151.90783	5.10969	0.2423842	0.24470073	2.5315074	20 12 27.4	21.6
387628	2002 NM ₈	16.1	X	107.29007	133.22935	140.91732	30.68046	0.3290580	0.23329993	2.6133223	20 12 16.7	21.5
387629	2002 NP ₆₄	16.0	X	125.51313	116.79938	101.34239	14.32123	0.1027908	0.23009943	2.6374993	20 10 19.2	20.3
387630	2002 OL ₁₇	16.6	X	88.19491	143.36192	153.76542	13.76536	0.2857860	0.23318395	2.6141888	20 12 23.3	21.4
387631	2002 PB ₁₁	17.7	X	79.40252	336.87709	10.53419	1.43452	0.2033645	0.29234555	2.2483904	20 —	—
387632	2002 PD ₄₀	15.5	X	135.61738	79.61350	169.56591	26.72185	0.4662851	0.23594536	2.5937518	20 12 3.7	21.3
387633	2002 PV ₆₄	18.6	X	265.69889	236.33195	143.64157	23.27287	0.1294046	0.38016869	1.8872024	20 7 7.8	20.8
387634	2002 PR ₆₈	16.9	X	348.14599	28.52814	310.40815	5.25156	0.2109516	0.22130871	2.7068886	20 9 20.1	19.3
387635	2002 PA ₁₃₆	16.3	X	283.69122	18.27150	343.38800	9.72056	0.1906712	0.21328988	2.7743157	20 6 18.5	20.2
387636	2002 PR ₁₈₂	17.5	X	337.97545	80.24457	253.01513	4.53218	0.0787220	0.22030766	2.7150822	20 8 19.4	20.7
387637	2002 PJ ₁₈₃	16.7	X	1.92622	223.93702	115.08494	5.05933	0.2353578	0.22405839	2.6846968	20 10 30.4	19.3
387638	2002 PK ₁₉₃	17.2	X	103.16639	169.45110	97.71710	3.64246	0.1690491	0.23173968	2.6250391	20 11 23.5	21.4
387639	2002 QL ₈	17.4	X	190.72853	193.50705	103.64568	7.03889	0.1728791	0.30235817	2.1984752	20 —	—
387640	2002 QK ₃₇	16.8	X	264.17889	280.43456	98.63738	1.75654	0.0831609	0.21102879	2.7940976	20 7 2.3	20.5
387641	2002 QS ₆₇	16.6	X	132.27754	228.69910	356.56781	8.53706	0.1163585	0.22826698	2.6515958	20 10 24.9	20.8
387642	2002 QJ ₇₉	17.3	X	326.12881	174.62800	183.95090	4.88201	0.0761773	0.22121783	2.7076299	20 9 6.2	20.6
387643	2002 QC ₉₈	16.9	X	43.92206	145.26060	119.47518	6.42281	0.0590445	0.22040349	2.7142952	20 8 29.3	20.4
387644	2002 QR ₁₀₆	16.4	X	234.08857	326.96440	37.74897	6.69782	0.1049825	0.20657413	2.8341234	20 5 5.2	20.6
387645	2002 QY ₁₃₅	16.5	X	295.61589	297.90214	74.97412	6.14954	0.1282090	0.21830605	2.7316530	20 8 3.6	19.8
387646	2002 QE ₁₃₈	17.1	X	329.95607	205.31505	135.69348	6.85914	0.0777089	0.21964757	2.7205191	20 8 19.9	20.1
387647	2002 QN ₁₄₀	16.4	X	339.76795	144.60585	175.10300	10.03627	0.1489068	0.21698283	2.7427473	20 8 1.1	19.3
387648	2002 RT ₂₅	19.4	X	175.48181	258.94933	165.28191	28.87281	0.4379243	0.36668855	1.9331749	20 5 26.3	23.9
387649	2002 RW ₂₉	17.7	X	45.00573	111.42479	267.22475	3.71396	0.2598713	0.28792727	2.2713332	20 —	—
387650	2002 RN ₃₄	17.9	X	143.98023	321.44645	33.50463	4.90881	0.1883654	0.30062962	2.2068943	20 1 20.8	20.9
387651	2002 RG ₅₈	17.6	X	52.36229	312.84223	343.40510	20.04862	0.0815315	0.38982081	1.8559205	20 11 21.1	20.2
387652	2002 RH ₁₂₀	16.6	X	54.27108	280.95551	31.01143	6.83652	0.1701881	0.22789825	2.6544552	20 11 27.2	20.3
387653	2002 RO ₁₃₅	16.1	X	92.63510	275.27894	11.31433	28.18798	0.3546474	0.23187382	2.6240266	20 12 12.2	21.5
387654	2002 RV ₁₄₇	16.6	X	128.72693	248.11970	140.57824	0.70376	0.2167323	0.19077225	2.9885412	20 3 1.2	21.4
387655	2002 RS ₁₅₉	17.8	X	14.06115	217.08623	191.29158	2.32671	0.2015798	0.28690404	2.2767304	20 —	—
387656	2002 RZ ₁₈₉	16.9	X	306.79039	349.50808	337.88538	7.67327	0.2272982	0.21232509	2.7827135	20 5 29.4	20.4
387657	2002 RG ₂₀₇	17.5	X	44.12472	9.07386	356.91171	6.63387	0.1150633	0.28631114	2.2798724	20 —	—
387658	2002 RX ₂₂₀	16.1	X	93.71769	92.08518	154.86469	14.06076	0.1172396	0.22357178	2.6885909	20 10 18.6	20.3
387659	2002 RD ₂₃₃	16.4	X	148.14855	298.77446	90.28926	3.14671	0.1216694	0.19528028	2.9423690	20 3 12.7	20.8
387660	2002 RF ₂₃₆	17.8	X	125.10813	317.01584	47.83386	5.75483	0.1752780	0.29922624	2.2137892	20 1 8.8	20.4
387661	2002 RS ₂₄₀	18.0	X	221.61172	287.29696	178.66517	22.40469	0.1103864	0.38396020	1.8747581	20 9 21.7	19.5
387662	2002 RK ₂₅₄	17.0	X	319.25897	6.52115	336.80147	5.84462	0.0470957	0.21546750	2.7555917	20 8 8.1	20.5
387663	2002 RV ₂₅₉	17.3	X	41.65744	305.24613	355.95249	0.55255	0.1264990	0.22354397	2.6888139	20 10 22.7	20.7
387664	2002 RW ₂₆₇	18.1	X	237.35809	29.44091	246.61883	5.47528	0.2071830	0.30664661	2.1779301	20 1 5.0	21.6
387665	2002 RG ₂₇₀	17.3	X	18.34732	317.45938	337.05157	13.90085	0.2398385	0.22121293	2.7076699	20 9 20.9	20.2
387666	2002 RK ₂₇₁	16.6	X	323.99685	8.44487	333.54703	13.10053	0.0521839	0.21700486	2.7425617	20 8 14.1	20.0
387667	2002 RB ₂₈₂	18.1	X	48.59787	269.28462	139.87124	2.67609	0.2369248	0.29208093	2.2497482	20 —	—
387668	2002 SZ	20.4	X	35.52521	276.55581	346.86050	22.89413	0.4334615	0.66711097	1.2971912	20 12 2.6	22.8
387669	2002 SZ ₂₆	16.7	X	45.23898	130.76665	188.53727	12.77926	0.2739520	0.22612149	2.6683420	20 12 10.9	20.8
387670	2002 SL ₂₈	17.7	X	1.53044	325.69433	110.94617	3.10027	0.1737919	0.28602267	2.2814051	20 —	—
387671	2002 SU ₃₃	14.6	X	106.89317	342.97319	356.21656	8.47023	0.2511024	0.12436373	3.9750282	20 —	—
387672	2002 SC ₄₃	16.2	X	354.18906	230.61637	88.93814	4.53237	0.1928951	0.21687965	2.7436172	20 9 7.2	18.8
387673	2002 SB ₄₄	15.7	X	340.26343	314.75201	10.57184	16.71177	0.2807144	0.21678047	2.7444539	20 8 20.0	

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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>	
387681	2002 TP ₁₃₅	16.0	X	267.19395	345.32929	0.68983	12.79592	0.2454716	0.20593306	2.8400021	20	4 27.3	20.6
387682	2002 TY ₁₆₁	17.5	X	184.78394	268.18193	174.96012	22.05445	0.1115288	0.37096519	1.9182886	20	6 26.2	20.6
387683	2002 TH ₁₇₈	17.4	X	286.25842	341.60625	331.74164	18.53698	0.0683547	0.36949524	1.9233729	20	4 17.9	19.9
387684	2002 TO ₂₇₀	17.7	X	195.08948	320.01893	0.28536	7.99637	0.2136977	0.30358090	2.1925681	20	1 28.0	21.3
387685	2002 TU ₃₀₃	17.0	X	72.41774	229.88767	36.57206	12.80577	0.1422422	0.22023697	2.7156631	20	10 19.6	20.8
387686	2002 TK ₃₀₈	16.6	X	341.71704	258.91362	61.63653	8.52017	0.1321979	0.21326283	2.7745503	20	8 12.1	19.7
387687	2002 TW ₃₀₉	16.2	X	246.52496	290.26319	52.75115	13.52574	0.1002093	0.20131919	2.8832298	20	4 25.2	20.5
387688	2002 TP ₃₃₉	18.3	X	6.93800	320.74930	153.30815	6.17409	0.1196130	0.29349595	2.2425113	20	—	—
387689	2002 TB ₃₇₉	16.9	X	207.70805	65.10635	358.95334	2.97120	0.1430453	0.20517107	2.8470295	20	6 19.4	21.5
387690	2002 UD	17.7	X	18.08390	228.02696	202.84913	3.66093	0.1993278	0.28634880	2.2796726	20	—	—
387691	2002 UV ₁	18.2	X	317.57869	54.07160	16.91844	4.46932	0.2219795	0.27651693	2.3333948	20	12 28.2	19.6
387692	2002 UK ₁₆	17.6	X	23.36261	291.23253	115.71899	4.83140	0.1831480	0.28475491	2.2881715	20	—	—
387693	2002 UT ₂₁	17.6	X	2.50434	350.23592	53.53126	10.24343	0.1955437	0.28109313	2.3080005	20	—	—
387694	2002 UL ₃₀	16.6	X	216.64051	154.28850	248.99052	1.00710	0.0691926	0.20301856	2.8671179	20	6 7.4	20.8
387695	2002 UE ₇₄	17.8	X	20.79737	350.20177	77.63717	4.98200	0.1384639	0.28678363	2.2773676	20	—	—
387696	2002 VU ₉	16.8	X	331.87980	154.82935	246.93131	9.35187	0.0960462	0.27604801	2.3360366	20	12 1.4	19.0
387697	2002 VG ₅₃	18.0	X	28.05942	294.95309	82.93163	2.41678	0.2379306	0.28203745	2.3028458	20	—	—
387698	2002 VG ₁₀₀	17.1	X	13.94889	101.88590	252.65453	6.17358	0.1433531	0.27736396	2.3286419	20	12 10.0	19.6
387699	2002 VA ₁₂₈	17.0	X	215.43805	51.41442	7.62007	19.90735	0.1033609	0.37014429	1.9211238	20	7 1.3	19.8
387700	2002 VE ₁₂₉	16.4	X	248.28934	172.20759	210.29433	1.40485	0.0795831	0.20320273	2.8653853	20	6 16.9	20.5
387701	2002 VB ₁₃₄	17.3	X	355.53041	16.83185	19.95370	7.13511	0.1174325	0.27884848	2.3203698	20	—	—
387702	2002 WH ₄	17.7	X	39.31650	3.72576	67.06338	4.51189	0.1562682	0.28805612	2.2706559	20	—	—
387703	2002 WG ₂₇	17.5	X	346.53326	0.71162	86.03826	7.40034	0.1387716	0.28252836	2.3001775	20	—	—
387704	2002 XZ ₆₁	17.1	X	315.22376	68.78989	262.88406	19.63014	0.0590991	0.37336744	1.9100516	20	7 21.1	18.9
387705	2002 XM ₁₁₉	17.7	X	334.83760	221.84740	224.88661	5.21930	0.1585828	0.28093968	2.3008408	20	—	—
387706	2002 YY ₂₅	17.0	X	10.47751	321.60763	103.70528	6.88415	0.1863670	0.28075373	2.3098602	20	—	—
387707	2003 AB ₁₇	17.1	X	92.41991	105.95751	93.74647	24.26600	0.0474703	0.36930080	1.9240479	20	8 28.0	19.7
387708	2003 AW ₁₉	16.1	X	68.96646	133.16539	296.08315	15.35457	0.2144434	0.17786733	3.1314004	20	2 6.6	20.0
387709	2003 AJ ₇₁	16.3	X	80.84291	48.94825	69.58095	20.60214	0.3132506	0.18356611	3.0662511	20	5 15.5	20.8
387710	2003 BY ₃₅	15.8	X	45.22466	55.24573	131.23752	10.62965	0.0371553	0.18601391	3.0392920	20	5 15.2	20.1
387711	2003 BF ₅₄	17.3	X	266.32521	274.13442	256.18742	3.38317	0.1755744	0.27386701	2.3484225	20	—	—
387712	2003 BZ ₅₇	16.8	X	321.57231	326.20191	138.53441	10.74719	0.1745948	0.27536919	2.3398741	20	—	—
387713	2003 BN ₅₉	15.7	X	118.91473	280.38121	138.98464	17.16319	0.2379535	0.18156376	3.0887536	20	4 5.1	20.8
387714	2003 BL ₈₄	17.6	X	270.94107	146.91727	22.50947	3.13532	0.1653913	0.27441708	2.3452832	20	—	—
387715	2003 BG ₉₂	16.0	X	65.92023	77.46172	76.55970	9.04942	0.2052420	0.18187162	3.0852670	20	5 23.3	19.9
387716	2003 CC ₁₄	17.3	X	264.55837	34.83242	124.95330	2.86479	0.1485180	0.27167195	2.3610554	20	—	—
387717	2003 DN ₄	19.3	X	295.55719	141.60352	157.79556	36.31695	0.4770901	0.80432132	1.1451165	20	1 26.6*	21.2
387718	2003 DX ₅	17.3	X	270.85435	159.48850	348.72853	4.84652	0.1363332	0.27121785	2.3636901	20	—	—
387719	2003 DN ₂₀	15.7	X	330.28604	274.67809	335.78771	25.31587	0.1677876	0.17843889	3.1247099	20	3 24.7	19.9
387720	2003 DW ₂₄	17.9	X	348.40412	13.96758	53.08331	3.26880	0.1993023	0.27512469	2.3412601	20	—	—
387721	2003 EP ₁	16.1	X	78.17000	142.89929	350.77710	16.59939	0.2373138	0.18126524	3.0921439	20	5 10.9	20.7
387722	2003 EL ₂	16.1	X	66.40264	14.47849	152.32607	11.84751	0.2074047	0.18255179	3.0775987	20	6 10.8	20.4
387723	2003 ES ₆	15.5	X	34.19299	337.16201	173.28760	18.79452	0.0944355	0.17520010	3.1631016	20	3 16.3	19.4
387724	2003 FC ₈	17.3	X	149.51461	73.50741	156.47690	20.11640	0.1021339	0.35390325	1.9794583	20	5 15.6	20.1
387725	2003 FM ₁₀	18.0	X	212.83756	78.92068	144.49324	1.76265	0.1368227	0.26766889	2.3845373	20	—	—
387726	2003 FP ₁₉	16.2	X	48.56957	37.07982	138.58250	11.67738	0.2237705	0.17929012	3.1148118	20	5 30.3	20.1
387727	2003 GQ ₂₃	16.0	X	15.13058	230.56729	359.15192	17.55847	0.1726052	0.18093252	3.0959336	20	5 27.9	19.8
387728	2003 FB ₂₆	16.0	X	72.05711	345.50795	173.88649	12.21306	0.1631564	0.18122531	3.0925980	20	6 2.2	20.4
387729	2003 FS ₄₀	15.5	X	0.05346	25.13257	154.40574	17.21046	0.0684261	0.17337916	3.1852103	20	3 2.8	19.5
387730	2003 FF ₄₂	17.0	X	39.01824	75.97184	115.65636	0.52976	0.1158366	0.17956223	3.1116642	20	5 18.1	20.9
387731	2003 FT ₇₆	16.8	X	199.80034	205.84039	34.73081	7.81822	0.1683931	0.26790699	2.3831242	20	—	—
387732	2003 FJ ₁₂₃	16.0	X	83.86424	155.81400	350.16053	11.70175	0.1118231	0.18226120	3.0808690	20	5 18.1	20.5
387733	2003 GS ₅	18.9	X	285.06385	181.83550	196.22960	12.03243	0.2183451	1.16834523	0.8928022	20	—	—
387734	2003 GV ₄	16.0	X	18.58022	79.57221	193.88006	20.98725	0.2782673	0.18334850	3.0686767	20	8 20.3	19.5
387735	2003 GZ ₈	17.1	X	240.16236	207.34838	34.10642	5.76546	0.2588510	0.27183696	2.3600999	20	—	—
387736	2003 GR ₁₁	18.3	X	218.24189	79.47208	159.86089	2.52268	0.1694245	0.27245789	2.3565127	20	—	—
387737	2003 GP ₂₆	17.6	X	235.39646	246.82345	269.29800	1.44632	0.1404142	0.26297481	2.4128294	20	11 23.9	20.6
387738	2003 GW ₂₈	16.6	X	158.93268	213.40946	72.44801	7.12118	0.2385738	0.26430191	2.4047458	20	—	—
387739	2003 GJ ₅₆	15.7	X	60.89374	119.08387	131.61268	18.92787	0.1063472	0.17409960	3.1764172	20	4 3.3	19.7
387740	2003 GK ₅₇	17.5	X	280.11037	282.71911	162.83646	6.77469	0.1036013	0.25620950	2.4551191	20	10 31.4	20.2
387741	2003 HU ₅	15.6	X	329.26720	277.55888	24.73214	23.80883	0.4187331	0.17632263	3.1496624	20	4 28.7	18.9
387742	2003 HT ₁₆	15.8	X	31.86412	318.91157	212.45387	15.07897	0.1949040	0.17322799	3.1870632	20	4 16.7	19.3
387743	2003 HV ₃₅	16.8	X	249.29704	79.06019	84.80381	9.68096	0.1480401	0.26379049	2.4078530	20	12 23.8	19.5
387744	2003 HW ₅₇	16.9	X	145.43221	172.81129	123.92011	8.53980	0.3002389	0.26145984	2.4221408	20	—	—
387745	2003 JS ₆	17.4	X	196.40502	151.36821	69.68314	4.24532	0.1682098	0.26198790	2.4188850	20	12 27.3	20.7
387746	2003 MH ₄	20.0	X	75.00195	323.04866	259.81783	3.88415	0.5138292	0.35825481	1.9633966	20	10 12.3	23.7
387747	2003 NF ₁₁	17.3	X	150.83362	23.57697	228.91270	4.19424	0.2042573	0.25223208	2.4808614	20	12 19.0	21.3
387748	2003 ON ₁₈	16.2	X	40.28161	35.01486	293.36140	14.44605	0.1389731	0.24379330	2.5377853	20	11 30.7	19.8
387749	2003 OF ₂₆	16.3	X	7.96880	29.40059	300.15018	11.35937	0.1723329	0.23762260	2.5815322	20	10 12.9	19.4
387750	2003 QC ₄₄	16.3	X	7.89921	269.40533	59.05139	8.81192	0.2423426	0.23514220	2.5996547	20	10 30.8	18.8
387751	2003 QK ₆₁	16.4	X	78.23159	181.91698	136.43167	8.35028	0.2190870	0.24424537	2.5346529	20	—	—
387752	2003 SE ₂₂	16.1	X	339.75593	43.16934	323.75661	11.38720	0.0966331	0.23318727	2.6141640	20	10 7.7	19.4
387753	2003 SF ₃₂												

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
387761 2003 SH ₁₃₀	16.6	X	295.22626	20.77056	337.48114	13.28251	0.2097414	0.22383166	2.6865095	20	6 30.3	20.0
387762 2003 SQ ₁₇₇	16.9	X	348.88132	178.95903	167.88721	3.56632	0.2264740	0.23241625	2.6199423	20	10 13.1	19.0
387763 2003 SH ₁₈₁	16.9	X	6.06509	174.10967	175.90460	2.64995	0.2358595	0.23561201	2.5961978	20	11 24.7	19.6
387764 2003 SF ₂₄₂	16.7	X	193.87011	261.17128	207.43005	8.61307	0.1464397	0.22028972	2.7152296	20	7 30.0	21.1
387765 2003 SO ₃₂₁	17.3	X	72.14740	239.10651	52.90199	3.63183	0.0994745	0.23759442	2.5817364	20	11 16.6	21.0
387766 2003 SL ₃₂₉	16.7	X	284.40485	336.30901	17.38650	11.91862	0.1842847	0.22282329	2.6946084	20	6 7.7	20.5
387767 2003 SM ₃₃₀	16.4	X	138.13998	205.31940	18.29127	14.96887	0.0489837	0.23630509	2.5911188	20	10 28.8	20.1
387768 2003 SJ ₃₈₆	17.1	X	223.38314	335.40207	96.92239	3.73386	0.1541834	0.22157906	2.7046863	20	7 15.7	21.2
387769 2003 SK ₃₉₄	17.5	X	235.76049	328.53001	102.66078	6.38504	0.1296863	0.22290991	2.6939103	20	7 31.1	21.3
387770 2003 SC ₄₃₃	16.4	X	141.68599	148.45165	27.08316	18.65800	0.1983974	0.22263826	2.6961012	20	9 15.2	21.1
387771 2003 TJ ₂₇	17.1	X	298.73339	122.64645	251.02949	4.53262	0.0730587	0.22626680	2.6671995	20	8 14.3	20.4
387772 2003 TU ₃₈	17.0	X	284.37045	83.11500	288.53313	5.33030	0.0537094	0.22334601	2.6904024	20	7 25.1	20.4
387773 2003 TF ₅₁	16.3	X	200.99680	185.21946	253.49233	12.72418	0.1782067	0.21698494	2.7427296	20	6 28.9	20.9
387774 2003 TM ₅₇	16.6	X	237.57398	0.56699	55.16722	9.50276	0.3064443	0.22056183	2.7129959	20	6 23.9	21.2
387775 2003 UJ ₂₈	17.1	X	337.75063	21.02179	330.04313	4.60271	0.1907867	0.22927315	2.6438324	20	9 16.9	19.5
387776 2003 UM ₂₉	17.0	X	253.86236	21.42094	32.71356	11.92590	0.1771559	0.22297190	2.6934110	20	7 26.8	21.1
387777 2003 UK ₄₄	16.8	X	265.14792	186.26856	199.38760	11.48379	0.1005877	0.22217888	2.6998162	20	7 8.3	20.7
387778 2003 UG ₅₂	16.3	X	346.42155	347.79048	344.82582	11.74870	0.1099684	0.22724743	2.6595208	20	9 6.1	19.2
387779 2003 UA ₉₁	16.5	X	213.46698	352.10712	57.36298	9.14147	0.2183423	0.21534215	2.7566609	20	6 1.9	21.1
387780 2003 UR ₉₃	16.6	X	286.29833	156.79387	207.46874	13.69965	0.0997117	0.22253828	2.6969086	20	7 8.2	20.4
387781 2003 UH ₁₁₈	16.7	X	296.61868	79.80166	276.01858	4.18427	0.1167532	0.22316271	2.6918754	20	7 12.1	19.8
387782 2003 UU ₂₀₂	16.5	X	242.55740	188.22056	200.77554	9.02838	0.2066236	0.21802356	2.7340121	20	6 4.9	20.9
387783 2003 UY ₂₄₉	17.0	X	17.45005	330.36809	3.72886	4.53743	0.1282144	0.23272787	2.6176031	20	11 1.8	20.1
387784 2003 UE ₂₉₇	17.2	X	16.95416	347.40348	357.57413	4.28812	0.1906693	0.23529787	2.5985080	20	11 26.3	20.4
387785 2003 UJ ₂₉₈	16.4	X	322.48360	283.50585	78.20974	10.54638	0.1577854	0.22816160	2.6524122	20	9 8.3	19.3
387786 2003 UZ ₃₀₆	16.5	X	132.32551	190.23366	4.63970	9.84081	0.1119233	0.22754734	2.6571835	20	9 20.5	20.4
387787 2003 UA ₃₁₅	16.6	X	248.61100	300.58375	69.57292	6.89923	0.0336909	0.21358716	2.7717409	20	6 7.1	20.4
387788 2003 UV ₃₄₇	17.4	X	63.41518	131.61694	149.49613	3.58831	0.1096731	0.23448900	2.6044802	20	10 25.6	21.0
387789 2003 UA ₃₅₁	17.1	X	255.74913	301.11658	78.23294	4.23841	0.0406956	0.22010107	2.7167809	20	6 28.3	20.8
387790 2003 UY ₃₆₂	16.5	X	33.47254	161.54826	118.83810	5.98994	0.0729379	0.22711720	2.6600689	20	9 7.9	19.9
387791 2003 UW ₃₇₇	16.9	X	210.63795	270.45493	190.75246	11.15326	0.1635101	0.22444969	2.6815756	20	8 5.1	21.3
387792 2003 WP ₁₅	16.8	X	194.63211	341.18695	56.62719	5.13788	0.1089196	0.21012861	2.8020718	20	5 8.6	21.2
387793 2003 WL ₂₅	16.5	X	204.08284	24.99759	267.12793	23.77187	0.7419085	0.26578449	2.3957949	20	1 7.3	22.4
387794 2003 WB ₉₄	17.2	X	205.96130	59.33054	23.34212	7.63696	0.1976379	0.21592082	2.7517334	20	7 9.6	21.9
387795 2003 WW ₉₅	16.4	X	248.91482	147.57709	225.45246	7.57789	0.2048571	0.21571908	2.7534488	20	5 21.9	20.5
387796 2003 WT ₁₂₉	17.1	X	338.38856	22.26778	341.32682	3.35900	0.1424886	0.22835064	2.6509481	20	10 6.2	19.9
387797 2003 WY ₁₃₀	16.2	X	163.36253	22.37512	22.14795	6.01264	0.0776384	0.20349238	2.8626656	20	4 11.2	20.2
387798 2003 WZ ₁₉₄	16.3	X	345.85143	214.41099	76.91661	10.06534	0.0530129	0.21439822	2.7647461	20	7 6.3	19.8
387799 2003 YK ₁₅	15.8	X	120.46141	239.62157	301.12074	10.86316	0.2052038	0.21015472	2.8018397	20	8 22.2	20.5
387800 2003 YA ₁₈₂	16.8	X	272.69983	263.29474	126.77991	4.36860	0.1007102	0.21381038	2.7698113	20	7 26.1	20.4
387801 2004 BQ ₅₈	15.7	X	328.89929	221.47084	288.04291	15.31222	0.1855031	0.17755513	3.1350699	20	—	—
387802 2004 BO ₁₂₇	16.7	X	296.81942	43.95334	323.69003	3.23098	0.1166143	0.21303480	2.7765298	20	7 28.9	20.2
387803 2004 CV ₂₅	16.3	X	73.24100	95.43311	317.97621	7.41995	0.2690652	0.18533788	3.0466782	20	2 3.9	19.8
387804 2004 CA ₅₄	18.7	X	37.44643	86.59741	359.99363	2.10801	0.1545174	0.30033537	2.2083356	20	—	—
387805 2004 DY ₅₈	17.5	X	306.33919	114.40163	127.57878	3.95266	0.1399285	0.30587050	2.1816127	20	2 7.5	20.1
387806 2004 DN ₆₅	16.5	X	123.73970	334.75001	158.92196	16.99492	0.1426316	0.19857183	3.0907631	20	6 25.8	21.3
387807 2004 EM ₉	15.4	X	299.69303	161.31041	82.63819	21.57129	0.1021969	0.18102546	3.0948738	20	3 4.4	20.1
387808 2004 EX ₁₀	17.5	X	261.35408	232.89772	23.41639	3.82262	0.1086948	0.29873058	2.2162373	20	1 9.7	20.6
387809 2004 EB ₁₂	17.4	X	269.70911	251.02167	349.57700	6.26504	0.1422277	0.29900221	2.2148949	20	—	—
387810 2004 EW ₁₆	17.5	X	270.86172	199.99307	34.15737	7.97498	0.1403381	0.29577422	2.2309808	20	—	—
387811 2004 EH ₄₆	15.8	X	356.03933	176.85963	32.63102	11.20727	0.1833119	0.18592622	3.0402476	20	3 29.8	19.1
387812 2004 EE ₄₉	16.3	X	16.58241	79.28283	130.66219	11.07521	0.0466406	0.19105041	2.9856397	20	5 6.8	20.4
387813 2004 EL ₁₁₃	18.2	X	319.92135	155.70131	20.51534	5.28087	0.0902389	0.29751395	2.2222751	20	—	—
387814 2004 FK ₁	16.5	X	194.24173	96.19311	166.28156	21.52496	0.3147748	0.27958934	2.3162689	20	—	—
387815 2004 FR ₅	17.2	X	236.77680	211.46055	49.28193	8.55393	0.2355770	0.29321148	2.2439615	20	—	—
387816 2004 FM ₁₇	19.5	X	349.45613	196.50092	169.78396	6.76309	0.2498386	1.18342361	0.8852024	20	—	—
387817 2004 FK ₂₂	16.6	X	30.42524	248.46056	283.31176	9.92323	0.3006226	0.18606031	3.0387868	20	4 21.7	19.5
387818 2004 FA ₂₇	17.8	X	294.57376	179.33402	0.19591	4.80276	0.1000126	0.29294736	2.2453100	20	—	—
387819 2004 FH ₆₉	17.0	X	330.05616	98.84952	119.92697	2.61947	0.1156428	0.18058120	3.0999477	20	3 3.4	20.8
387820 2004 FC ₇₇	18.0	X	292.96619	10.83093	186.07988	5.20207	0.1474235	0.29514262	2.2341625	20	—	—
387821 2004 FM ₈₄	15.5	X	69.14239	164.41634	45.08676	11.34585	0.1062697	0.19968991	2.8988916	20	7 27.8	19.6
387822 2004 FH ₁₁₉	16.6	X	233.58472	320.70713	9.16903	2.36579	0.0911786	0.18704975	3.0280611	20	3 25.2	21.1
387823 2004 GU ₇	16.2	X	335.22066	199.05796	21.93151	17.06265	0.1491154	0.18093271	3.0959314	20	3 15.4	20.1
387824 2004 GZ ₁₃	17.1	X	289.09127	66.52858	137.74577	6.93137	0.0812241	0.29244203	2.2478959	20	—	—
387825 2004 GY ₁₆	16.0	X	339.04524	117.33596	130.47272	13.28011	0.3385413	0.18417679	3.0594695	20	3 29.3	19.1
387826 2004 GD ₃₉	17.6	X	280.66721	201.56033	65.98242	7.12816	0.2522860	0.29900217	2.2148951	20	2 1.3	21.0
387827 2004 GA ₄₀	17.4	X	263.59830	18.24633	24.15289	21.42755	0.0982223	0.38350369	1.8762456	20	9 3.9	19.4
387828 2004 GH ₄₉	18.0	X	341.02781	128.21757	5.31893	3.95823	0.1011466	0.29209056	2.2496988	20	—	—
387829 2004 GE ₅₀	17.9	X	74.23602	30.51746	218.20044	7.99486	0.1967327	0.26206823	2.4183907	20	10 8.8	21.3
387830 2004 GA ₈₅	16.1	X	315.68327	91.81959	142.96277	7.94863	0.0440991	0.18030969	3.1030588	20	3 13.8	20.3
387831 2004 HR ₈	17.7	X	225.44682	138.63571	135.93041	3.76967	0.2133026	0.29040931	2.2583731	20	—	—
387832 2004 HN ₁₁	17.3	X	235.78405	211.34783	50.56805	6.47106	0.1262179	0.29159771	2.2522329	20	—	—
387833 2004 HE ₁₃	16.2	X	65.23597	88.45517	29.33077	15.00586	0.1131568	0.18469199	3.0537772	20	3 26.4	20.2
387834 2004 HJ ₂₄	17.0	X	204.80758	18.98671	73.49130	24.80089	0.0580296	0.37974532	1.8886048	20	8 25.7	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>
387841 2004 <i>LD</i> _{17.5}	X	65.32000	129.13656	161.12411	24.17455	0.1586914	0.38550311	1.8697525	20	12 15.8	20.6	
387842 2004 <i>LP</i> ₂₁	X	265.05718	143.61810	145.09179	12.65587	0.2468388	0.17272597	3.1932355	20	2 24.0	20.9	
387843 2004 <i>ND</i>	X	106.51818	32.33617	304.80874	1.66690	0.2793545	0.27087881	2.3656620	20	—	—	
387844 2004 <i>NU</i> ₁₉	X	80.42129	175.88497	186.38531	4.75307	0.2061050	0.26987605	2.3715183	20	—	—	
387845 2004 <i>NE</i> ₂₅	X	132.48651	357.30657	327.45672	4.15858	0.3044042	0.27081440	2.3660371	20	—	—	
387846 2004 <i>OG</i> ₃	X	139.02969	131.01030	152.92812	3.55592	0.2113510	0.27034838	2.3687553	20	—	—	
387847 2004 <i>OT</i> ₈	X	55.14243	207.13165	109.98543	3.72676	0.1812799	0.26025681	2.4295993	20	12 13.9	20.8	
387848 2004 <i>OR</i> ₁₀	X	198.67285	302.02515	355.11662	24.25345	0.3437148	0.28030658	2.3123160	20	1 13.4	21.2	
387849 2004 <i>PS</i> ₁	X	177.76740	211.09461	88.29678	3.42071	0.2107666	0.27848321	2.3223983	20	—	—	
387850 2004 <i>PS</i> ₁₀	X	266.28244	56.22939	304.75877	12.13212	0.2116874	0.23872737	2.5735616	20	5 21.1	20.5	
387851 2004 <i>PS</i> ₂₈	X	138.12352	352.07064	325.52324	9.36042	0.2061388	0.27224312	2.3577519	20	—	—	
387852 2004 <i>PN</i> ₅₅	X	193.35520	193.91058	112.67814	4.05500	0.2706216	0.28081178	2.3095419	20	1 12.0	21.7	
387853 2004 <i>PR</i> ₅₆	X	154.21720	43.64364	246.62129	3.05691	0.1781383	0.27290592	2.3539329	20	—	—	
387854 2004 <i>PH</i> ₇₆	X	125.77687	193.49809	115.05934	3.06745	0.2028739	0.26985129	2.3716634	20	—	—	
387855 2004 <i>PW</i> ₇₆	X	169.01310	144.71574	154.48155	8.69872	0.2682842	0.27711826	2.3300181	20	—	—	
387856 2004 <i>PU</i> ₉₇	X	156.49917	273.22351	31.07849	5.61792	0.2266168	0.27540655	2.3396625	20	—	—	
387857 2004 <i>QA</i> ₁₀	X	355.73179	276.31985	2.32809	15.85824	0.3036489	0.18146520	3.0898720	20	7 8.3	18.5	
387858 2004 <i>QX</i> ₁₃	X	161.27691	135.07585	187.91656	22.77732	0.2471113	0.27780292	2.3261882	20	1 3.3	20.9	
387859 2004 <i>QX</i> ₁₆	X	223.54720	194.10926	211.03442	13.93487	0.3406145	0.22762761	2.6565587	20	5 30.2	21.3	
387860 2004 <i>RH</i> ₅	X	54.02488	326.62032	19.60389	10.29565	0.1525065	0.25943727	2.4347132	20	—	—	
387861 2004 <i>RJ</i> ₂₄	X	174.05820	246.19521	167.73644	22.47246	0.0968721	0.35341848	1.9812679	20	5 5.3	20.5	
387862 2004 <i>RC</i> ₆₆	X	123.62711	346.32906	326.59468	2.00348	0.2166406	0.26748388	2.3856367	20	—	—	
387863 2004 <i>RW</i> ₇₄	X	232.55798	305.49580	10.56459	12.88318	0.2724753	0.22436098	2.6822824	20	2 28.3	21.6	
387864 2004 <i>RK</i> ₈₂	X	190.73514	284.02341	339.20194	6.52505	0.0991285	0.27051449	2.3677855	20	—	—	
387865 2004 <i>RE</i> ₉₁	X	306.97820	322.62033	171.03087	26.22787	0.2534208	0.17483442	3.1675107	20	4 17.6	20.1	
387866 2004 <i>RH</i> ₁₀₆	X	331.23330	104.10765	196.85134	13.11597	0.3324987	0.17714294	3.1399313	20	5 25.2	19.4	
387867 2004 <i>RY</i> ₁₂₈	X	133.64610	95.21941	172.02059	5.83098	0.0729179	0.26144100	2.4222572	20	12 25.9	21.3	
387868 2004 <i>RA</i> ₁₆₆	X	122.78170	9.56733	301.08118	1.34382	0.1979043	0.26845992	2.3798509	20	—	—	
387869 2004 <i>RK</i> ₁₇₄	X	108.68249	32.65768	288.31829	4.19476	0.1692595	0.26707958	2.3880436	20	—	—	
387870 2004 <i>RA</i> ₁₉₇	X	252.52733	4.86811	10.68384	14.82957	0.3008686	0.23218448	2.6216855	20	5 13.7	21.1	
387871 2004 <i>RD</i> ₂₅₂	X	28.93359	174.71454	288.10347	10.40787	0.6009682	0.32388324	2.0999570	20	—	—	
387872 2004 <i>RF</i> ₃₀₉	X	133.78287	237.20386	69.04467	3.29442	0.1918985	0.26877839	2.3779706	20	—	—	
387873 2004 <i>RC</i> ₃₂₅	X	287.89002	28.51692	343.43625	4.99066	0.2977335	0.23801575	2.5786887	20	6 21.9	20.4	
387874 2004 <i>RR</i> ₃₂₅	X	218.38776	131.58602	241.49253	12.60104	0.2757476	0.22577731	2.6710531	20	4 18.2	21.8	
387875 2004 <i>RO</i> ₃₂₉	X	291.18536	335.37525	11.00556	20.31644	0.0950510	0.35963912	1.9583550	20	7 3.5	19.8	
387876 2004 <i>RX</i> ₃₃₆	X	181.04310	234.39458	203.67195	11.72891	0.1542784	0.22807795	2.6530607	20	6 11.7	21.5	
387877 2004 <i>RZ</i> ₃₃₇	X	156.84528	270.77077	14.52722	2.50314	0.1774716	0.26615831	2.3935511	20	—	—	
387878 2004 <i>RB</i> ₃₄₇	X	262.62235	59.15884	325.95609	12.31443	0.2855920	0.23534929	2.5981295	20	6 10.3	21.6	
387879 2004 <i>SL</i> ₁₀	X	135.97476	292.26405	10.20679	13.16042	0.2268966	0.27046396	2.3680804	20	—	—	
387880 2004 <i>TA</i> ₄	X	96.20102	286.71522	32.06445	6.36648	0.1438996	0.25925659	2.4358442	20	—	—	
387881 2004 <i>TA</i> ₇	X	91.84535	287.15494	48.36348	6.40622	0.2391946	0.26452142	2.4034153	20	—	—	
387882 2004 <i>TO</i> ₁₃	X	358.96893	60.85129	198.65044	21.67094	0.0410422	0.35658161	1.9695337	20	6 14.1	19.9	
387883 2004 <i>TG</i> ₁₅	X	271.18828	157.30933	277.67877	2.70308	0.1792351	0.24136078	2.5548079	20	9 13.0	20.2	
387884 2004 <i>TR</i> ₄₃	X	237.76671	70.57605	358.68026	3.84784	0.1983768	0.23518098	2.5993689	20	7 23.8	21.6	
387885 2004 <i>TJ</i> ₆₇	X	226.34124	230.55288	119.45728	6.90610	0.3598838	0.22624446	2.6673750	20	3 29.6	21.8	
387886 2004 <i>TZ</i> ₆₈	X	88.81779	184.81156	148.83358	5.97900	0.2222835	0.26257199	2.4152965	20	—	—	
387887 2004 <i>TK</i> ₈₀	X	235.65091	230.15243	213.26619	5.16801	0.2363706	0.23789886	2.5795333	20	8 2.1	21.4	
387888 2004 <i>TK</i> ₈₃	X	233.96122	92.54554	359.92541	4.93890	0.2181929	0.23933164	2.5692280	20	8 17.5	21.3	
387889 2004 <i>TT</i> ₁₀₇	X	131.65447	247.93968	35.06170	1.76881	0.1627273	0.26206510	2.4184100	20	—	—	
387890 2004 <i>TJ</i> ₁₁₅	X	267.21871	91.80903	341.07330	3.02237	0.1932230	0.24047341	2.5610890	20	9 3.2	20.6	
387891 2004 <i>TO</i> ₁₂₄	X	109.04406	316.31427	355.42496	6.81093	0.0957358	0.26243207	2.4161549	20	—	—	
387892 2004 <i>TV</i> ₁₄₉	X	103.40649	21.22523	290.95377	1.56205	0.1897974	0.26148322	2.4219964	20	—	—	
387893 2004 <i>TN</i> ₁₈₀	X	124.46747	161.14169	130.33195	1.67404	0.1964957	0.26673701	2.3900878	20	—	—	
387894 2004 <i>TA</i> ₁₉₄	X	273.58804	78.35840	353.70928	3.16587	0.2366672	0.23970335	2.5665712	20	8 10.3	21.0	
387895 2004 <i>TU</i> ₁₉₈	X	118.81644	233.49466	42.38553	2.62966	0.1674687	0.25660860	2.4525728	20	12 21.2	21.1	
387896 2004 <i>TK</i> ₂₄₅	X	138.05804	106.28216	190.25054	2.40316	0.1817456	0.26570628	2.3962649	20	—	—	
387897 2004 <i>TR</i> ₂₇₂	X	184.18265	174.63176	263.88341	3.39987	0.0861199	0.22679375	2.6630664	20	6 16.1	21.0	
387898 2004 <i>TM</i> ₃₃₆	X	230.29096	56.77669	48.65013	8.57135	0.1408750	0.23845820	2.5754979	20	9 11.8	21.0	
387899 2004 <i>VB</i> ₅₉	X	286.32408	148.78413	241.83117	2.94311	0.2238642	0.23745271	2.5827634	20	7 27.9	20.1	
387900 2004 <i>VB</i> ₇₄	X	285.14271	264.28373	163.99165	3.65190	0.1754891	0.24273695	2.5451426	20	9 29.9	19.9	
387901 2004 <i>VA</i> ₇₉	X	332.10267	23.23862	50.73082	6.69560	0.2674533	0.12436455	3.9750108	20	11 25.9	19.2	
387902 2004 <i>VZ</i> ₈₂	X	261.37523	16.92434	53.69703	1.99926	0.1678422	0.23858841	2.5745608	20	8 27.8	21.5	
387903 2004 <i>VJ</i> ₈₈	X	272.93374	100.30295	328.84276	2.82868	0.1437091	0.24043161	2.5613859	20	9 14.1	20.5	
387904 2004 <i>VW</i> ₉₃	X	293.39522	208.47752	209.66672	5.38448	0.1708694	0.24254947	2.5464540	20	9 28.9	19.6	
387905 2004 <i>WY</i> ₁	X	244.40006	35.59074	59.20687	15.90139	0.0808082	0.23890166	2.5723098	20	9 28.8	20.1	
387906 2004 <i>XQ</i>	X	298.83461	98.74046	285.96347	12.24920	0.1985917	0.23807766	2.5782416	20	8 11.5	18.7	
387907 2004 <i>XP</i> ₂₆	X	257.68301	348.37355	61.32337	6.46960	0.2449912	0.23348006	2.6119780	20	7 13.7	20.9	
387908 2004 <i>XE</i> ₄₉	X	160.48333	324.66028	71.06547	9.40651	0.3299783	0.21457327	2.7632423	20	4 12.6	21.7	
387909 2004 <i>XK</i> ₄₉	X	322.61276	286.01998	110.69009	7.68154	0.2026588	0.24331233	2.5411285	20	11 2.1	18.7	
387910 2004 <i>XE</i> ₅₄	X	64.88907	90.05222	99.60167	5.96115	0.0433860	0.22056099	2.7130028	20	6 13.2	20.0	
387911 2004 <i>XN</i> ₈₅	X	242.74472	160.21258	265.08494	3.29350	0.1818602	0.22969642	2.6405834	20	7 23.9	20.7	
387912 2004 <i>XX</i> ₁₀₅	X	232.03394	55.23674	10.68528	3.64862	0.2597472	0.23080574	2.6321157	20	7 7.0	21.5	
387913 2004 <i>XL</i> ₁₂₂	X	139.26258	325.36024	94.60368	11.28615	0.2173689	0.21511172	2.7586292	20	4 20.7	21.1	
387914 2004 <i>XV</i> ₁₂₈	X	294.20491	322.48413	81.75572	3.77495	0.2168001	0.23845172	2.5755446	20	9 4.9	19.6	
387915 2004 <i>XS</i> ₁₆₂	X	233.48698	118.18241	317.30321	10.89290	0.2765461	0.22930966	2.6435517	20	7 19.7	20.9	
387916 2004 <i>YU</i> ₁₇	X	203.58153	350.50534	114.12790	6.45352	0.1221461						

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>		
387921	2005	AU ₅₁	16.7	X	227.38182	284.99856	137.70896	13.68129	0.2849898	0.22671655	2.6636709	20	6 26.9	21.4
387922	2005	AO ₈₁	16.7	X	234.25826	67.02068	24.80612	11.48286	0.1691136	0.23077105	2.6323795	20	8 26.1	20.7
387923	2005	BQ ₁₆	16.0	X	158.76716	234.17099	305.80574	13.83213	0.0735620	0.23086366	2.6316754	20	9 21.1	20.1
387924	2005	BD ₂₂	16.4	X	213.65065	322.70544	123.11167	14.41593	0.1169595	0.22407606	2.6845557	20	7 26.1	20.4
387925	2005	BU ₂₇	16.1	X	111.31017	25.34198	116.35047	9.08155	0.1484430	0.21379059	2.7699823	20	6 23.5	20.2
387926	2005	CQ ₂	16.7	X	245.35568	289.85977	128.17693	13.59476	0.2478911	0.22705228	2.6610445	20	7 9.9	21.0
387927	2005	CU ₂	16.7	X	183.94630	6.18423	120.82308	6.98360	0.2139517	0.22390879	2.6858925	20	8 14.1	21.2
387928	2005	CM ₁₈	16.8	X	140.21289	50.92977	137.85783	13.50536	0.1347477	0.22553601	2.6729579	20	9 24.2	21.1
387929	2005	CE ₂₉	17.2	X	156.64628	144.06203	336.93087	8.95513	0.1372539	0.21767606	2.7369211	20	7 14.1	21.6
387930	2005	CN ₂₉	17.3	X	206.57467	71.81632	349.56258	5.81541	0.0308050	0.21568924	2.7537027	20	6 22.3	21.2
387931	2005	CX ₃₀	16.6	X	247.40090	267.35314	128.25785	9.52675	0.0630501	0.21849251	2.7300987	20	7 5.8	20.4
387932	2005	CQ ₃₂	16.8	X	65.13984	217.55376	74.08650	2.93073	0.0782502	0.23177132	2.6248002	20	11 4.7	20.4
387933	2005	CD ₃₄	16.6	X	214.67603	344.02580	123.66119	7.85056	0.1091897	0.22684495	2.6626656	20	8 27.4	20.5
387934	2005	CV ₃₇	16.8	X	133.39067	62.18836	142.95680	13.75201	0.2040865	0.22452905	2.6809437	20	10 10.5	21.5
387935	2005	CG ₇₁	16.7	X	161.17434	44.33465	131.84441	12.95258	0.0909935	0.22671332	2.6636962	20	9 30.3	20.9
387936	2005	EC ₃₁	16.5	X	197.42462	96.68043	12.33233	10.57876	0.2238142	0.22149889	2.7053389	20	8 5.7	21.2
387937	2005	EP ₄₄	17.2	X	17.93957	288.02177	356.20060	1.96820	0.0681514	0.21609069	2.7502912	20	8 16.9	20.6
387938	2005	EG ₄₇	17.1	X	142.05864	339.35470	175.23326	7.24360	0.2352531	0.21755567	2.7379306	20	8 11.8	21.8
387939	2005	EO ₄₇	16.8	X	114.72487	68.71281	173.86151	11.75747	0.1588870	0.22478669	2.6788947	20	11 4.9	21.2
387940	2005	EL ₅₃	16.6	X	14.26013	313.01136	346.40668	7.28222	0.0449855	0.21979517	2.7193010	20	8 30.7	19.9
387941	2005	EE ₆₆	16.2	X	88.06168	160.02954	46.57958	17.30046	0.1271987	0.21454447	2.7634896	20	8 27.2	20.6
387942	2005	EL ₇₈	16.1	X	136.91828	46.45850	143.86201	10.33326	0.2272950	0.22096595	2.7096871	20	9 24.0	20.8
387943	2005	EM ₁₃₈	16.5	X	96.45613	115.99989	69.81392	8.22555	0.2233770	0.21220019	2.7438054	20	8 14.2	20.9
387944	2005	ER ₁₄₀	17.2	X	72.04236	249.28078	328.75876	13.66493	0.2382628	0.21592176	2.7517255	20	8 27.7	21.3
387945	2005	EU ₁₄₈	16.5	X	52.34529	254.63234	4.50362	13.08534	0.1792414	0.21688725	2.7435531	20	10 14.7	20.2
387946	2005	EU ₁₇₅	16.8	X	179.43297	296.11851	176.09574	15.15328	0.2168719	0.21897872	2.7260560	20	7 19.9	21.8
387947	2005	EO ₁₇₉	16.8	X	117.81727	154.80158	347.68604	7.10645	0.1082559	0.21047924	2.7989591	20	6 27.6	21.1
387948	2005	ED ₁₈₁	16.7	X	99.39627	192.87260	1.26299	7.13645	0.2081679	0.21685259	2.7438455	20	8 25.3	21.0
387949	2005	EN ₂₃₁	17.0	X	176.70509	324.33566	154.43842	5.44008	0.1112380	0.21892021	2.7265417	20	7 28.9	21.3
387950	2005	EL ₂₃₇	16.7	X	60.73427	36.42500	135.5314	2.98508	0.0175758	0.20457512	2.8525560	20	5 11.8	20.5
387951	2005	EF ₂₄₀	16.7	X	95.90753	316.99178	146.76208	2.54670	0.0394438	0.19904651	2.9051351	20	4 2.9	20.6
387952	2005	ER ₂₄₂	16.0	X	102.42840	199.20859	36.00072	11.98166	0.1105596	0.22279994	2.6947967	20	10 11.1	20.0
387953	2005	EP ₃₂₇	16.6	X	107.72237	224.92510	5.22178	12.89495	0.1124127	0.22095459	2.7097800	20	10 6.3	20.8
387954	2005	GE ₁₅	17.1	X	116.13080	132.62765	9.48441	3.72776	0.0403192	0.20863015	2.8154728	20	6 16.4	21.1
387955	2005	GC ₃₀	16.7	X	131.47270	130.54808	52.44773	9.13991	0.1942792	0.21718045	2.7410833	20	9 11.4	21.4
387956	2005	GH ₄₈	16.2	X	295.29698	307.97036	43.87646	5.04133	0.1212205	0.20891289	2.8129320	20	7 3.5	19.7
387957	2005	GI ₅₇	16.8	X	72.56563	199.80186	46.47109	5.30530	0.0686252	0.21517580	2.7580815	20	9 14.1	20.6
387958	2005	GX ₆₃	16.0	X	131.72396	169.15042	34.62452	14.43699	0.2051498	0.22190965	2.7019995	20	10 6.7	20.6
387959	2005	GN ₉₉	16.5	X	81.74712	194.66837	30.41332	8.43527	0.1607938	0.21164221	2.7886961	20	9 10.9	20.6
387960	2005	GV ₁₀₆	17.0	X	129.24151	128.57502	21.89662	4.51390	0.0135007	0.20949388	2.8077288	20	7 12.5	20.8
387961	2005	GB ₁₀₉	16.8	X	100.95296	19.19786	186.34368	4.98018	0.1134472	0.21302249	2.7766368	20	8 28.2	21.0
387962	2005	GQ ₁₃₆	16.7	X	15.10088	154.14478	134.05564	6.22341	0.0491584	0.20998154	2.8033800	20	8 15.3	20.3
387963	2005	GJ ₁₄₁	16.1	X	133.46884	147.29464	79.82339	18.20286	0.2136890	0.22107487	2.7087970	20	11 7.0	20.9
387964	2005	GK ₁₈₀	16.0	X	55.21665	197.48317	38.76361	9.20336	0.0900985	0.21070856	2.7969278	20	8 12.8	19.8
387965	2005	GL ₁₈₂	16.7	X	92.37686	114.51856	139.66202	11.28740	0.3562359	0.21538618	2.7562852	20	11 11.9	21.8
387966	2005	GM ₂₂₂	17.2	X	41.47069	204.38396	62.95287	3.62883	0.0359876	0.21345980	2.7728432	20	8 25.3	20.8
387967	2005	HQ ₁	16.9	X	77.93001	194.07990	38.76507	4.50061	0.0472276	0.21276788	2.7788515	20	8 30.4	20.7
387968	2005	JL ₂₁	16.4	X	84.92774	149.76397	240.63582	3.28095	0.1545547	0.21276649	2.7788636	20	9 14.2	20.5
387969	2005	JT ₂₃	16.8	X	30.62011	172.66569	68.13241	3.04204	0.0087406	0.20448593	2.8533853	20	6 29.8	20.7
387970	2005	JH ₃₃	17.2	X	60.04030	40.39131	225.00442	1.77951	0.2255864	0.21197758	2.7857540	20	10 11.9	21.1
387971	2005	JU ₄₁	17.0	X	165.27388	21.85591	84.23217	3.19945	0.0103339	0.20351951	2.8624112	20	6 29.0	21.0
387972	2005	JP ₅₀	17.0	X	108.11397	30.43059	179.95073	3.31377	0.0484399	0.21369348	2.7708214	20	9 5.5	21.0
387973	2005	JY ₁₅₀	16.5	X	10.81417	157.30679	133.93135	9.21001	0.0906078	0.20655674	2.8342825	20	8 16.3	19.9
387974	2005	JW ₁₇₀	17.3	X	15.06448	244.61993	49.40739	4.50602	0.0786559	0.21234334	2.7825541	20	8 28.5	20.8
387975	2005	LN ₆	17.1	X	17.42534	233.41747	114.10953	13.85924	0.3684840	0.27204004	2.3589252	20	—	—
387976	2005	LM ₈	16.3	X	88.20760	158.10171	72.84894	13.91546	0.2011195	0.21152488	2.7897273	20	10 3.6	20.9
387977	2005	LW ₅₃	16.4	X	326.54716	64.36627	255.62487	4.10231	0.2938466	0.19520289	2.9431465	20	6 17.0	19.1
387978	2005	MW ₄₄	17.0	X	15.60771	132.70001	210.97052	5.99159	0.1345522	0.27317039	2.3524134	20	11 25.4	19.7
387979	2005	NV	15.8	X	338.19413	328.91550	294.90644	12.71447	0.0693156	0.18875812	3.0097629	20	5 13.3	19.9
387980	2005	NZ ₂₆	17.1	X	47.02492	86.88985	134.67918	6.90476	0.2251556	0.19780070	2.9173206	20	7 27.6	20.7
387981	2005	NQ ₃₀	15.6	X	104.61097	331.45766	119.18384	12.99707	0.0717185	0.17850791	3.1239045	20	4 8.5	20.3
387982	2005	NQ ₄₁	16.0	X	196.36861	72.59273	284.68462	9.58072	0.0980177	0.17741261	3.1367487	20	3 15.8	21.1
387983	2005	NG ₄₄	16.2	X	267.57386	25.63041	283.63945	8.51522	0.0621409	0.18283092	3.0744655	20	4 6.1	20.8
387984	2005	ON ₂₉	16.5	X	295.45134	298.41282	35.68957	4.40811	0.1212275	0.18924433	3.0046055	20	6 8.2	20.5
387985	2005	QH ₂	16.9	X	310.65268	120.21690	268.25392	4.04729	0.1719993	0.26657572	2.3910518	20	9 23.0	18.9
387986	2005	QN ₁₅	17.8	X	300.74324	185.40595	205.76297	2.20372	0.1893185	0.26258422	2.4152215	20	9 3.9	19.9
387987	2005	QD ₁₇	17.6	X	60.55772	215.40724	156.09879	5.82814	0.1865080	0.28140393	2.3063008	20	—	—
387988	2005	QM ₄₀	17.2	X	319.27314	122.08449	239.23535	3.65423	0.2414937	0.26230636	2.4169268	20	8 21.1	18.7
387989	2005	QP ₅₅	17.9	X	98.75566	356.62477	1.89182	2.25735	0.1337118	0.28694823	2.2764966	20	—	—
387990	2005													