

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
396001 2013 <i>BL</i> ₅₆	16.6	X	35.07383	245.66400	135.07663	6.92859	0.0436663	0.21389914	2.7690451	21	12 30.6	20.4
396002 2013 <i>BA</i> ₅₈	17.4	X	104.63208	129.47945	270.16164	1.67014	0.0911061	0.24392496	2.5368720	21	1 11.6	20.5
396003 2013 <i>BQ</i> ₅₈	17.9	X	242.55976	220.62410	141.92790	5.85163	0.1710827	0.27909632	2.3189959	21	4 26.3	21.4
396004 2013 <i>BW</i> ₅₉	15.8	X	289.87531	270.80491	105.15873	14.42904	0.1758107	0.17822064	3.1272605	21	7 8.7	19.9
396005 2013 <i>BE</i> ₆₀	16.3	X	276.89020	294.62964	104.31128	10.85498	0.1096681	0.17944951	3.1129671	21	8 1.3	20.6
396006 2013 <i>BW</i> ₆₀	16.2	X	167.76909	209.83142	331.61662	8.22039	0.0721852	0.18454779	3.0553677	21	9 24.9	20.8
396007 2013 <i>BC</i> ₆₂	16.9	X	259.93034	351.90030	107.77353	3.01327	0.1031432	0.19151712	2.9807873	21	9 28.6	21.0
396008 2013 <i>BD</i> ₆₄	15.8	X	40.61843	160.06121	139.71394	11.68662	0.0537393	0.18012867	3.1051374	21	9 26.7	20.1
396009 2013 <i>BJ</i> ₆₅	16.8	X	159.83661	333.92165	257.23191	1.03536	0.0255776	0.19961876	2.8995803	21	11 20.6	21.0
396010 2013 <i>BO</i> ₆₆	17.1	X	76.52183	279.35411	120.86488	4.51425	0.0080253	0.23229616	2.6208452	21	—	—
396011 2013 <i>BZ</i> ₆₆	16.9	X	337.68676	128.81788	15.42499	9.96535	0.0582575	0.23472689	2.6027202	21	—	—
396012 2013 <i>BE</i> ₆₇	17.2	X	304.65823	137.04285	356.16405	4.48053	0.0694692	0.21903389	2.7255982	21	—	—
396013 2013 <i>BK</i> ₆₉	17.5	X	143.38645	6.22125	8.36300	3.42624	0.0855869	0.24609209	2.5219566	21	1 29.5	20.9
396014 2013 <i>BK</i> ₇₂	16.9	X	13.66658	277.49743	131.90377	0.97011	0.0690189	0.21349962	2.7724984	21	—	—
396015 2013 <i>BY</i> ₇₆	17.2	X	191.80036	245.55638	93.64417	7.63472	0.1278913	0.25394439	2.4696968	21	2 10.0	21.0
396016 2013 <i>BA</i> ₇₇	16.3	X	108.45923	158.66030	77.69362	4.72247	0.1532547	0.18006651	3.1058520	21	10 10.2	21.2
396017 2013 <i>BT</i> ₇₈	16.2	X	190.74242	58.35534	63.75725	10.72166	0.1755037	0.17614135	3.1518231	21	8 9.9	21.5
396018 2013 <i>BH</i> ₈₀	15.6	X	65.85191	136.20613	89.43409	17.47232	0.0424137	0.16878003	3.2428138	21	7 22.7	20.2
396019 2013 <i>BP</i> ₈₀	15.6	X	146.10350	126.37078	88.93734	16.56995	0.1108034	0.18676256	3.0311645	21	10 24.9	20.6
396020 2013 <i>BU</i> ₈₀	16.4	X	7.16645	353.29540	88.20552	15.54914	0.1767648	0.22357522	2.6885633	21	—	—
396021 2013 <i>BY</i> ₈₀	15.9	X	167.96565	102.19051	87.47954	9.87970	0.0516810	0.18822952	3.0153951	21	10 13.4	20.5
396022 2013 <i>BF</i> ₈₁	17.2	X	272.65593	169.48258	144.14776	8.33699	0.1156312	0.26880044	2.7378406	21	4 1.4	—
396023 2013 <i>CF</i> ₂	16.6	X	146.44386	84.11229	215.68070	5.55136	0.0393205	0.21872678	2.7281490	21	—	—
396024 2013 <i>CK</i> ₄	16.6	X	142.85116	139.49703	169.32603	4.80850	0.0212594	0.22077220	2.7112723	21	—	—
396025 2013 <i>CJ</i> ₅	17.3	X	183.70409	56.22951	238.62570	4.72553	0.1171640	0.22748005	2.6577704	21	—	—
396026 2013 <i>CG</i> ₇	16.3	X	322.74967	245.02878	216.89901	3.21652	0.0634747	0.21355882	2.7719861	21	—	—
396027 2013 <i>CP</i> ₈	15.9	X	185.22745	115.81488	136.75534	14.31277	0.1349803	0.21197286	2.7857954	21	—	—
396028 2013 <i>CS</i> ₈	16.3	X	286.97177	243.56664	155.06164	10.76339	0.1733161	0.18477119	3.0529045	21	8 2.9	20.5
396029 2013 <i>CF</i> ₁₀	17.0	X	103.96632	215.72957	110.27895	2.92649	0.0716327	0.21567830	2.7537959	21	—	—
396030 2013 <i>CH</i> ₁₁	16.7	X	0.14118	330.84145	97.78793	4.81708	0.0795339	0.21433527	2.7652875	21	—	—
396031 2013 <i>CW</i> ₁₂	16.3	X	211.00764	1.98923	121.84491	7.40949	0.0129770	0.18109175	3.0941185	21	9 10.9	20.7
396032 2013 <i>CQ</i> ₁₃	16.5	X	244.00705	30.83356	52.18137	2.68454	0.0778922	0.17991117	3.1076395	21	8 21.4	21.0
396033 2013 <i>CW</i> ₁₃	16.9	X	314.84643	354.22196	65.15423	2.93925	0.0524866	0.19529470	2.9422241	21	10 28.4	20.7
396034 2013 <i>CW</i> ₁₅	16.8	X	61.18061	1.08254	15.94980	2.61922	0.0426546	0.21407704	2.7675108	21	—	—
396035 2013 <i>CE</i> ₁₆	16.5	X	22.14158	30.16088	4.61428	4.26574	0.1117901	0.20917727	2.8105612	21	—	—
396036 2013 <i>CV</i> ₁₆	16.0	X	218.43929	304.78034	155.10646	17.41620	0.1545057	0.17493855	3.1662536	21	8 4.5	21.1
396037 2013 <i>CP</i> ₂₁	16.5	X	184.37877	13.51401	110.80523	6.29192	0.0913258	0.17221345	3.1995679	21	8 5.6	21.3
396038 2013 <i>CH</i> ₂₃	17.1	X	184.17008	111.11061	137.63091	9.74797	0.1071604	0.21545734	2.7556783	21	—	—
396039 2013 <i>CP</i> ₂₃	16.0	X	264.12575	121.31744	306.65657	7.02105	0.0856852	0.18230731	3.0803495	21	8 23.2	20.4
396040 2013 <i>CW</i> ₂₉	15.0	X	303.17388	156.67837	84.46085	3.97592	0.1577603	0.12518902	3.9575392	21	2 19.3	20.5
396041 2013 <i>CK</i> ₃₁	15.9	X	48.24552	285.16837	20.52534	10.07209	0.0872424	0.18174845	3.0866608	21	10 15.4	20.0
396042 2013 <i>CM</i> ₃₁	16.5	X	227.31282	334.94632	107.60986	7.36465	0.2469793	0.18124320	3.0923946	21	7 17.2	21.6
396043 2013 <i>CN</i> ₃₃	15.4	X	259.15651	252.24398	153.38092	26.84247	0.2084672	0.17939339	3.1136163	21	7 6.3	20.5
396044 2013 <i>CH</i> ₃₅	16.6	X	18.75573	274.41396	171.08733	8.32327	0.0682593	0.22050521	2.7134603	21	—	—
396045 2013 <i>CH</i> ₃₇	15.7	X	147.36662	258.76474	260.17575	7.37558	0.1608816	0.16973367	3.2306591	21	8 9.8	21.0
396046 2013 <i>CK</i> ₃₇	15.4	X	128.61859	156.36627	101.29198	16.14209	0.0948740	0.19172849	2.9785659	21	11 23.3	20.2
396047 2013 <i>CH</i> ₃₈	15.9	X	210.07542	18.80167	98.36522	7.78189	0.1500144	0.17818295	3.1277014	21	8 21.4	20.9
396048 2013 <i>CD</i> ₃₉	17.2	X	137.94929	238.57574	328.48998	0.42714	0.1279952	0.18538987	3.0461086	21	9 29.8	22.0
396049 2013 <i>CF</i> ₄₀	15.3	X	65.78041	174.51596	93.08315	17.47741	0.0655552	0.18100064	3.0951567	21	9 26.6	20.0
396050 2013 <i>CA</i> ₄₁	16.3	X	101.30980	82.90931	143.74906	6.74416	0.0922916	0.17788861	3.1311506	21	9 13.7	20.8
396051 2013 <i>CL</i> ₄₁	16.7	X	355.62079	285.58807	147.73957	5.01717	0.0518831	0.21561984	2.7542936	21	—	—
396052 2013 <i>CY</i> ₄₁	16.1	X	54.92466	94.24006	173.53108	16.39243	0.1152466	0.17088812	3.2160896	21	9 8.9	20.5
396053 2013 <i>CR</i> ₄₃	16.9	X	226.37393	56.65793	107.68859	3.28475	0.0217990	0.19935974	2.9020913	21	11 18.7	21.0
396054 2013 <i>CD</i> ₄₄	16.7	X	28.13227	274.87226	109.91189	4.80155	0.1022266	0.20959556	2.8068206	21	—	—
396055 2013 <i>CJ</i> ₄₅	16.9	X	70.78126	235.66938	127.55285	5.57588	0.0829571	0.21363435	2.7713327	21	—	—
396056 2013 <i>CH</i> ₄₉	16.2	X	291.50276	272.03524	112.39364	11.58597	0.0156711	0.18055206	3.1002812	21	8 16.4	20.5
396057 2013 <i>CM</i> ₄₉	16.1	X	111.82546	112.66701	143.18692	16.96988	0.0634476	0.18945821	3.0023438	21	11 2.7	20.8
396058 2013 <i>CY</i> ₄₉	16.9	X	253.36715	314.32822	168.28750	8.27276	0.1641577	0.19571978	2.9379625	21	10 11.4	21.1
396059 2013 <i>CH</i> ₅₁	16.6	X	358.06694	292.75412	147.19905	4.77558	0.0483473	0.21508503	2.7588574	21	—	—
396060 2013 <i>CA</i> ₅₂	17.1	X	305.05947	344.87957	106.23120	3.08478	0.0833812	0.20278309	2.8693370	21	11 23.0	20.5
396061 2013 <i>CL</i> ₅₅	16.2	X	231.39263	321.62081	123.60921	10.68374	0.0564859	0.17527945	3.1621469	21	8 11.2	20.8
396062 2013 <i>CM</i> ₆₃	16.5	X	16.75192	262.55959	164.58235	14.75914	0.1149870	0.21990865	2.7183654	21	—	—
396063 2013 <i>CB</i> ₆₆	16.3	X	147.77085	26.46936	162.23013	6.50625	0.0910008	0.17691807	3.1425914	21	9 15.8	21.0
396064 2013 <i>CP</i> ₆₉	16.7	X	35.70023	241.14577	163.99633	16.92575	0.1181875	0.21759183	2.7376273	21	—	—
396065 2013 <i>CD</i> ₇₀	16.0	X	227.38465	339.68838	131.48323	10.20288	0.0268045	0.18006726	3.1058433	21	9 13.8	20.5
396066 2013 <i>CD</i> ₇₁	15.7	X	125.48022	108.36523	108.86930	10.10357	0.0422938	0.18086995	3.0966475	21	9 28.2	20.3
396067 2013 <i>CV</i> ₇₁	16.9	X	93.35512	180.99832	138.97304	2.99503	0.0306573	0.20723540	2.8280913	21	12 18.7	20.9
396068 2013 <i>CU</i> ₇₂	15.8	X	47.76915	133.07770	138.57378	16.07851	0.1521469	0.17515453	3.1636502	21	9 13.5	20.1
396069 2013 <i>CA</i> ₇₃	17.5	X	42.17428	86.13121	151.63520	6.57514	0.0867490	0.27804477	3.3248391	21	7 10.9	20.0
396070 2013 <i>CB</i> ₇₃	16.6	X	181.89983	95.74961	140.35134	15.09055	0.1227109	0.20451474	2.8531173	21	12 18.0	21.3
396071 2013 <i>CE</i> ₇₄	16.8	X	37.81856	300.64481	103.75122	3.57661	0.1020046	0.21781394	2.7357659	21	—	—
396072 2013 <i>CJ</i> ₇₄	16.1	X	151.92587	46.19832	145.85705	12.31097	0.07					

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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>
396081 2013 CC ₈₆	16.7	X	206.22440	145.43103	110.64007	10.01904	0.1294983	0.22452768	2.6809546	21	—	—
396082 2013 CR ₈₉	15.8	X	233.48997	318.44119	135.52436	14.58317	0.0314631	0.17229530	3.1985546	21	8 28.3	20.4
396083 2013 CT ₈₉	15.9	X	174.17229	61.84043	128.86173	11.98183	0.0356482	0.18359389	3.0659418	21	10 21.5	20.6
396084 2013 CH ₉₁	15.2	X	349.90880	118.84076	89.31501	3.03439	0.1638140	0.12632684	3.9337397	21	3 16.8	20.0
396085 2013 CJ ₉₂	16.8	X	120.14154	78.40370	310.49703	5.66713	0.2637718	0.24602598	2.5224084	21	2 11.7	20.3
396086 2013 CO ₁₀₀	16.5	X	130.98525	67.93308	158.76038	5.21092	0.1237943	0.18253758	3.0777584	21	10 17.8	21.3
396087 2013 CW ₁₀₁	15.4	X	16.90560	199.07109	141.50321	12.22412	0.0734240	0.18398134	3.0616358	21	10 19.6	19.6
396088 2013 CD ₁₁₀	16.8	X	29.41765	303.65044	93.51602	5.79363	0.0977228	0.21244275	2.7816860	21	—	—
396089 2013 CJ ₁₁₀	14.9	X	15.52262	194.28438	132.97784	20.62222	0.1302360	0.180900000	3.0963046	21	10 8.3	19.1
396090 2013 CG ₁₁₂	16.4	X	104.94729	247.72982	139.65745	30.87964	0.2146568	0.23558238	2.5964154	21	1 17.9	19.8
396091 2013 CV ₁₁₂	16.2	X	356.04275	204.34989	141.80799	10.52740	0.0225127	0.18191821	3.0847403	21	9 22.4	20.5
396092 2013 CB ₁₁₅	16.8	X	123.90388	209.84234	132.44505	6.53013	0.0477881	0.21938465	2.7226922	21	—	—
396093 2013 CJ ₁₁₅	16.0	X	262.63333	294.63983	145.21639	18.13190	0.0844087	0.18031539	3.1029935	21	9 9.1	20.4
396094 2013 CB ₁₁₅	16.9	X	2.26402	318.11775	92.66551	4.38766	0.1471985	0.21470167	2.7621405	21	12 28.4	20.4
396095 2013 CY ₁₁₇	15.7	X	19.40120	223.48703	106.89217	16.61652	0.0695489	0.18413366	3.0599472	21	10 13.8	20.1
396096 2013 CZ ₁₂₀	16.2	X	341.74552	267.10007	148.57168	5.11636	0.0538865	0.19618895	2.9332766	21	12 1.1	20.1
396097 2013 CB ₁₂₂	15.7	X	172.30678	355.11768	134.38888	11.54574	0.1195457	0.17391344	3.1786835	21	7 29.8	20.7
396098 2013 CF ₁₂₃	16.1	X	194.92184	315.20676	194.40388	10.89314	0.1172342	0.17689667	3.1428448	21	9 12.9	21.2
396099 2013 CA ₁₃₀	15.8	X	15.21890	169.02500	166.86567	14.13007	0.0928842	0.18188789	3.0850830	21	10 10.7	19.8
396100 2013 CQ ₁₃₇	15.5	X	79.16752	118.14264	157.78706	11.86201	0.1175540	0.17674371	3.1446579	21	10 23.9	20.2
396101 2013 CD ₁₃₉	16.7	X	126.38737	170.26254	19.82597	5.61797	0.0703406	0.17846850	3.1243642	21	8 26.1	21.3
396102 2013 CJ ₁₃₉	16.6	X	72.33620	219.87518	128.72710	7.04213	0.0131043	0.21564098	2.7541136	21	—	—
396103 2013 CE ₁₄₁	15.3	X	321.47076	151.62099	70.28948	3.76928	0.1343996	0.12517620	3.9578093	21	2 23.2	20.6
396104 2013 CJ ₁₄₃	16.9	X	130.68900	167.34769	168.25449	5.91633	0.0549121	0.21990048	2.7184327	21	—	—
396105 2013 CB ₁₄₆	16.1	X	81.78242	146.42594	136.92746	4.07869	0.1240799	0.18552236	3.0446581	21	11 4.9	20.5
396106 2013 CF ₁₄₇	15.8	X	109.13646	95.00047	89.08119	5.77401	0.0444164	0.16065418	3.3512592	21	7 24.5	20.7
396107 2013 CT ₁₄₇	16.3	X	288.92017	21.53064	41.49824	2.98146	0.0759831	0.18475730	3.0530575	21	9 23.2	20.2
396108 2013 CM ₁₄₉	13.7	X	346.40877	282.06034	142.25258	10.67699	0.0574908	0.08272516	5.2164812	21	11 27.0	20.4
396109 2013 CK ₁₅₀	16.2	X	258.27441	25.54861	6.68312	5.04744	0.1198743	0.16371370	3.3093754	21	6 28.7	21.1
396110 2013 CF ₁₅₈	16.0	X	314.20969	241.09034	164.15190	6.83459	0.1292150	0.18570503	3.0426612	21	10 1.8	19.7
396111 2013 CN ₁₅₉	16.1	X	336.90082	223.80040	149.44655	10.19577	0.0316602	0.18072812	3.0982674	21	9 30.9	20.3
396112 2013 CN ₁₆₀	16.3	X	294.73420	239.36289	154.40951	9.90980	0.0885385	0.17459597	3.1703940	21	8 20.3	20.5
396113 2013 CZ ₁₆₁	15.4	X	53.19947	127.46652	156.33981	11.48551	0.0477946	0.17276816	3.1927156	21	9 19.7	19.8
396114 2013 CD ₁₆₄	16.3	X	287.72415	285.82610	166.81964	10.99543	0.0323727	0.18960888	3.0007532	21	11 5.8	20.5
396115 2013 CG ₁₇₀	15.7	X	318.83412	225.79251	162.64809	10.17936	0.0444140	0.18167294	3.0875160	21	9 23.7	19.7
396116 2013 CZ ₁₇₄	16.2	X	128.84237	58.42502	164.12112	10.91620	0.0334737	0.17868156	3.1218801	21	10 4.8	20.7
396117 2013 CH ₁₇₇	16.7	X	341.21506	160.01270	258.04857	5.20665	0.0521118	0.20363225	2.8613545	21	12 3.7	20.2
396118 2013 CM ₁₇₇	16.5	X	292.28730	279.30211	141.57926	6.07597	0.1118719	0.19025721	2.9939322	21	9 21.5	20.4
396119 2013 CH ₁₇₈	15.9	X	223.35982	296.85484	168.43779	16.36622	0.0823041	0.17583505	3.1554823	21	8 22.1	20.7
396120 2013 CQ ₁₇₈	15.9	X	316.21933	254.55471	112.28362	11.47354	0.1276577	0.17776523	3.1325992	21	8 14.6	19.8
396121 2013 CV ₁₈₁	15.7	X	77.01608	130.12429	123.53921	10.53448	0.0542109	0.17303476	3.1894354	21	9 15.0	20.3
396122 2013 CL ₁₈₃	16.7	X	96.12819	210.06679	136.71669	6.71327	0.0371225	0.21700235	2.7425829	21	—	—
396123 2013 CJ ₁₈₈	15.4	X	341.55421	233.87555	130.19544	17.01306	0.1395645	0.18331500	3.0690505	21	9 27.8	19.2
396124 2013 CT ₁₈₉	16.6	X	317.50232	302.58556	161.60621	5.35633	0.0085935	0.21286068	2.7780437	21	12 31.3	20.5
396125 2013 CF ₁₉₀	16.5	X	226.87340	170.91769	282.82146	5.71480	0.1086924	0.17605106	3.1529007	21	8 9.1	21.3
396126 2013 CJ ₁₉₁	16.0	X	118.15003	129.14394	304.70343	10.96122	0.0150183	0.24488111	2.5302642	21	2 28.1	19.4
396127 2013 CD ₁₉₂	15.7	X	161.35051	193.38272	123.78396	23.96231	0.0316985	0.22670946	2.6637265	21	—	—
396128 2013 CS ₁₉₈	15.2	X	328.26366	345.30440	252.55202	6.97195	0.2168979	0.12418514	3.9788383	21	3 7.4	20.2
396129 2013 CX ₂₀₁	16.4	X	125.62077	62.79159	120.74597	6.68244	0.0861584	0.16812754	3.2511985	21	8 16.8	21.2
396130 2013 CS ₂₀₃	16.2	X	292.20827	274.33786	113.44243	9.24193	0.0972760	0.17684313	3.1434792	21	8 9.4	20.4
396131 2013 CT ₂₀₃	16.8	X	114.28570	236.79850	106.66880	6.07595	0.1232755	0.22017569	2.7161670	21	—	—
396132 2013 CH ₂₁₁	17.1	X	58.47948	291.16541	70.80956	1.44453	0.0875292	0.21450113	2.7638618	21	—	—
396133 2013 CE ₂₁₄	13.9	X	348.20653	99.24847	310.31745	9.09520	0.0647905	0.08383002	5.1705453	21	11 7.9	20.6
396134 2013 CW ₂₁₄	14.2	X	350.62558	107.84782	304.13456	8.49805	0.0445472	0.08370332	5.1757615	21	11 14.4	20.9
396135 2013 CJ ₂₁₆	17.1	X	137.90503	127.14193	173.15530	4.41291	0.0456434	0.21041795	2.7995025	21	—	—
396136 2013 CJ ₂₂₂	15.5	X	282.46011	279.59700	353.91746	2.35451	0.1341799	0.12422990	3.9778826	21	3 6.8	21.3
396137 2013 DD ₂	16.5	X	183.14281	112.94252	138.38664	12.05802	0.1304167	0.21231776	2.7827776	21	—	—
396138 2013 DZ ₃	16.8	X	5.22989	230.91242	164.82168	1.97770	0.0214998	0.20045969	2.8914655	21	12 5.7	20.6
396139 2013 DC ₅	16.7	X	235.15269	358.63751	115.34545	2.54952	0.0877146	0.18497069	3.0507090	21	9 17.9	21.1
396140 2013 DU ₅	14.3	X	196.17829	51.19118	158.79746	7.65162	0.0152373	0.08237658	5.2311865	21	11 20.8	21.4
396141 2013 DW ₇	15.6	X	161.00678	50.04034	91.43893	10.75152	0.0518550	0.17012480	3.2257024	21	8 2.4	20.5
396142 2013 DH ₈	15.9	X	319.18069	240.30092	96.93789	8.36255	0.1045220	0.16877856	3.2428326	21	7 11.6	20.1
396143 2013 DA ₉	15.2	X	314.05038	193.80009	120.92265	10.95606	0.0692504	0.15741968	3.3970090	21	6 10.6	19.9
396144 2013 DJ ₉	16.5	X	43.15119	246.02089	146.87900	5.57415	0.0660737	0.21255638	2.7806945	21	—	—
396145 2013 DV ₉	16.1	X	142.98477	22.30015	144.72109	8.19334	0.0936475	0.17372512	3.1809802	21	8 14.7	20.8
396146 2013 DN ₁₀	17.2	X	73.91690	34.12536	17.17948	4.54752	0.2455570	0.23968545	2.5666989	21	—	—
396147 2013 DS ₁₀	16.6	X	67.14059	218.40411	154.61194	5.07089	0.1145702	0.21533831	2.7566937	21	—	—
396148 2013 DU ₁₀	16.3	X	190.42603	64.89164	48.57823	17.08634	0.0962905	0.17002903	3.2269135	21	8 2.9	21.6
396149 2013 EE	16.6	X	23.62486	221.08697	204.74122	7.65428	0.1508805	0.22041218	2.7142238	21	—	—
396150 2013 EX ₂	16.3	X	98.60972	200.40637	137.28720	6.49761	0.0195682	0.21332245	2.7740333	21	—	—
396151 2013 EK ₅	16.5	X	58.32569	212.35274	163.44497	5.71175	0.0546338	0.20967141	2.8061437	21	—	—
396152 2013 EL ₅	16.6	X	273.66665	282.11087	167.83696	2.64980	0.1609331	0.19072952	2.9889875	21	9 24.1	20.4
396153 2013 EO ₁₂	16.2	X	297.36423	262.71250	150.25057	9.58736	0.1341089	0.18343719	3.0676875	21	9 14.5	20.0
396154 2013												

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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>
396161 2013 <i>EY</i> ₄₃	16.4	X	63.94357	183.30153	171.72349	6.50093	0.1000521	0.20068353	2.8893150	21	—	—
396162 2013 <i>EF</i> ₄₈	16.2	X	68.20189	144.34062	174.97706	14.49332	0.1523018	0.18591381	3.0403829	21	12 6.5	20.9
396163 2013 <i>EJ</i> ₄₈	16.2	X	57.31907	150.67540	172.39132	17.07300	0.0895929	0.18539202	3.0460851	21	11 21.4	20.7
396164 2013 <i>ES</i> ₅₇	16.5	X	231.76347	321.99628	149.61901	4.01812	0.1274257	0.17879019	3.1206155	21	9 5.5	21.1
396165 2013 <i>EL</i> ₇₀	16.8	X	146.67752	217.31904	163.30326	11.70977	0.1417989	0.24071904	2.5593465	21	2 15.5	20.4
396166 2013 <i>EK</i> ₈₀	15.6	X	283.23630	258.83321	135.99010	6.86942	0.1815576	0.17155162	3.2077918	21	7 22.9	20.1
396167 2013 <i>EB</i> ₉₂	15.6	X	193.13956	291.88430	204.13751	25.19522	0.1498183	0.17202459	3.2019094	21	8 20.3	21.2
396168 2013 <i>ER</i> ₉₂	16.5	X	337.41937	277.73119	259.06283	11.48361	0.1147005	0.23288697	2.6164107	21	—	—
396169 2013 <i>EN</i> ₁₀₂	16.1	X	306.38893	282.55890	150.76966	9.72606	0.1517241	0.18813974	3.0163543	21	10 26.3	19.8
396170 2013 <i>EJ</i> ₁₁₂	15.0	X	275.21564	286.26365	82.47156	13.77772	0.1108465	0.15269065	3.4667918	21	6 20.2	19.9
396171 2013 <i>ED</i> ₁₁₉	16.1	X	319.65203	244.79136	172.21895	11.38715	0.0387039	0.18908707	3.0062712	21	11 2.8	20.2
396172 2013 <i>EC</i> ₁₂₆	16.8	X	249.35819	216.95980	136.83185	5.01178	0.1864415	0.25232369	2.4802609	21	4 22.2	20.7
396173 2013 <i>FL</i> ₂₅	15.6	X	227.51309	291.97639	177.70260	18.78979	0.1154151	0.17366365	3.1817308	21	8 28.1	20.5
396174 2013 <i>GE</i> ₁	16.7	X	114.95102	250.37329	121.22592	7.38523	0.0391902	0.21576172	2.7530860	21	—	—
396175 2013 <i>GL</i> ₁₄	15.6	X	314.66848	255.07824	134.50935	17.59363	0.1368381	0.17480776	3.1678327	21	9 11.9	19.6
396176 2013 <i>GV</i> ₂₀	16.4	X	263.67362	93.87945	179.17050	17.10914	0.0811772	0.22984877	2.6394165	21	2 1.7	20.5
396177 2013 <i>GU</i> ₂₃	16.8	X	159.00774	167.56031	222.41159	4.44655	0.0401554	0.23707233	2.5855253	21	3 1.9	20.4
396178 2013 <i>GY</i> ₂₄	15.4	X	114.97001	22.00767	262.32164	6.06690	0.1600555	0.18237462	3.0795915	21	12 9.5	20.4
396179 2013 <i>GR</i> ₃₀	15.9	X	97.36827	62.73128	214.26973	4.53892	0.1618064	0.17299355	3.1899419	21	11 14.4	20.8
396180 2013 <i>GC</i> ₃₈	16.3	X	125.86909	92.42992	184.16770	12.48105	0.0279043	0.18604660	3.0389360	21	12 5.6	20.9
396181 2013 <i>GY</i> ₆₁	16.2	X	137.19237	210.93223	34.38710	5.63036	0.0832727	0.17890221	3.1193127	21	11 10.5	21.0
396182 2013 <i>GW</i> ₈₀	14.8	X	27.14017	27.02078	179.49028	11.03726	0.1442405	0.12417497	3.9790556	21	5 17.4	19.8
396183 2013 <i>GU</i> ₈₈	15.3	X	122.24499	101.44143	176.57643	9.21627	0.0398699	0.17726805	3.1384538	21	12 2.6	20.0
396184 2013 <i>GQ</i> ₈₉	16.4	X	265.45687	92.35873	207.38242	12.45154	0.0844789	0.24005151	2.5640889	21	3 6.8	20.3
396185 2013 <i>GX</i> ₉₀	15.7	X	113.64024	207.33140	83.82914	14.20665	0.1862121	0.18628588	3.0363332	21	12 18.0	20.7
396186 2013 <i>GQ</i> ₉₂	15.5	X	272.35617	266.47387	258.86928	16.12313	0.1781823	0.20179292	2.8787156	21	12 25.5	19.0
396187 2013 <i>GL</i> ₉₉	16.2	X	239.87301	74.16456	213.20180	16.72903	0.1532214	0.21764583	2.7371745	21	1 21.7	21.0
396188 2013 <i>GD</i> ₁₃₅	15.7	X	75.63537	229.89359	61.14602	6.91961	0.0683930	0.16894177	3.2407438	21	10 28.8	20.3
396189 2013 <i>HY</i> ₁₃	16.0	X	200.04422	347.76932	208.56641	10.39416	0.0694528	0.18423209	3.0588572	21	11 19.6	20.6
396190 2013 <i>HO</i> ₄₂	16.3	X	140.12885	35.24838	234.89903	8.92300	0.0460806	0.18591191	3.0400436	21	12 13.2	20.7
396191 2013 <i>HX</i> ₄₉	15.6	X	240.34722	256.88890	233.18143	9.60623	0.0354546	0.17496601	3.1659223	21	10 16.6	20.1
396192 2013 <i>JN</i> ₂₅	16.3	X	128.02803	227.87906	133.74514	6.85502	0.0485113	0.21350224	2.7724758	21	—	—
396193 2013 <i>JA</i> ₂₆	15.6	X	146.05100	180.18844	126.26510	11.61386	0.1308050	0.19057430	2.9906103	21	—	—
396194 2013 <i>JX</i> ₄₄	15.6	X	299.00727	236.22834	221.30856	7.58965	0.1032787	0.17815396	3.1280407	21	11 15.0	19.5
396195 2013 <i>JW</i> ₅₇	16.6	X	105.27024	204.94443	197.73275	9.18169	0.1120200	0.21241262	2.7819490	21	1 24.4	20.5
396196 2013 <i>PV</i> ₉	16.4	X	303.13807	32.74607	180.40802	3.09223	0.0873958	0.18820823	3.0156225	21	1 13.7	20.7
396197 2013 <i>PU</i> ₄₀	17.1	X	271.86987	175.38924	251.95112	4.33602	0.1927629	0.24386130	2.5373135	21	8 18.9	20.4
396198 2013 <i>PK</i> ₅₂	18.7	X	125.63323	76.13509	192.07454	5.11811	0.2222605	0.27660992	2.3328718	21	12 14.3	22.6
396199 2013 <i>PA</i> ₅₉	15.8	X	183.38264	150.49401	169.20831	10.90084	0.1041589	0.18940510	3.0029051	21	1 15.0	20.7
396200 2013 <i>PC</i> ₇₀	16.8	X	343.79515	216.88906	139.15233	4.39221	0.1960850	0.25312557	2.4750200	21	9 28.9	18.6
396201 2013 <i>QT</i> ₁₈	17.4	X	281.52248	231.10263	142.60572	4.10236	0.0506816	0.23635384	2.5907625	21	7 13.8	20.8
396202 2013 <i>RD</i> ₂₂	15.7	X	99.84129	237.49223	185.71923	16.47237	0.2297825	0.17641980	3.1485058	21	3 7.7	20.2
396203 2013 <i>RK</i> ₂₉	17.2	X	50.61397	204.14681	124.87635	2.68871	0.2198485	0.26141765	2.4224014	21	12 19.4	20.6
396204 2013 <i>RC</i> ₉₀	16.4	X	73.49809	18.38534	200.29631	12.65258	0.0999192	0.22888745	2.6468016	21	7 29.8	20.2
396205 2013 <i>RX</i> ₉₃	18.1	X	152.76849	97.41509	197.67680	5.83897	0.1597871	0.28678592	2.2773555	21	—	—
396206 2013 <i>SK</i> ₂₁	16.6	X	243.17533	23.50862	328.49629	2.91545	0.1059899	0.20999148	2.8032915	21	4 20.3	20.8
396207 2013 <i>TL</i> ₉₃	15.8	X	50.67411	86.98002	38.50341	11.34764	0.1011273	0.17404370	3.1770973	21	3 6.9	20.0
396208 2013 <i>WP</i> ₁₆	16.8	X	222.01643	263.55466	253.87859	3.71771	0.0642370	0.23821885	2.5772228	21	11 3.6	20.2
396209 2013 <i>XK</i> ₂₄	16.7	X	275.97087	79.87263	32.14211	26.38601	0.2729891	0.23435684	2.6054593	21	10 18.0	19.8
396210 2013 <i>YQ</i> ₁₀	17.8	X	18.31998	314.64278	158.76227	2.58223	0.1357310	0.26788506	2.3832543	21	—	—
396211 2013 <i>YV</i> ₁₈	16.8	X	27.72335	274.67025	80.29534	3.44164	0.2342083	0.24553625	2.5257613	21	12 23.7	19.7
396212 2013 <i>YH</i> ₄₂	16.0	X	172.81760	274.39773	298.27612	10.37378	0.1546613	0.22388589	2.6860756	21	11 8.2	20.5
396213 2013 <i>YJ</i> ₄₅	17.7	X	349.21137	258.10899	292.10767	5.45601	0.0433761	0.28344814	2.2951988	21	1 30.6	20.3
396214 2013 <i>YK</i> ₄₇	16.6	X	355.93577	248.47088	50.20788	5.10753	0.0490783	0.21474500	2.7617690	21	7 22.0	20.1
396215 2013 <i>YR</i> ₅₈	17.2	X	251.41278	26.70714	136.37194	7.84394	0.1266729	0.23561420	2.5961817	21	12 10.5	20.7
396216 2013 <i>YK</i> ₁₂₄	15.7	X	237.04481	280.39059	112.71123	11.73767	0.0775842	0.18584921	3.0410874	21	6 11.1	20.3
396217 2013 <i>YX</i> ₁₂₅	16.8	X	285.61978	42.37108	101.84260	6.07435	0.0406100	0.24140837	2.5544721	21	—	—
396218 2013 <i>YZ</i> ₁₂₅	15.5	X	179.81374	340.53928	119.09324	14.99596	0.0816259	0.18749374	3.0232788	21	7 1.0	20.2
396219 2013 <i>YA</i> ₁₄₀	15.7	X	88.55871	215.20799	323.51832	13.76314	0.1291282	0.17404230	3.1771143	21	7 6.1	20.3
396220 2014 <i>AH</i>	16.7	X	355.42934	86.05030	237.40887	6.55061	0.0851568	0.22135271	2.7065299	21	8 21.2	20.0
396221 2014 <i>AB</i> ₁₂	16.8	X	271.22186	113.35699	348.51050	12.46909	0.1539069	0.21991340	2.7183263	21	10 6.7	20.4
396222 2014 <i>AB</i> ₁₅	17.0	X	342.47431	219.99329	195.63698	8.39753	0.1518199	0.23937682	2.5689047	21	12 17.8	19.7
396223 2014 <i>AJ</i> ₂₇	17.1	X	263.84394	342.81641	146.18889	11.45057	0.1777757	0.23013863	2.6371998	21	11 7.2	20.6
396224 2014 <i>AH</i> ₄₃	15.9	X	246.63087	272.64934	130.06772	11.40241	0.1456197	0.20026082	2.8933794	21	6 25.6	20.3
396225 2014 <i>AP</i> ₄₉	17.3	X	295.31189	76.86573	105.74416	7.47138	0.0736290	0.25700513	2.4500495	21		

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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>
396241 2014 BJ ₃₇	15.7	X	237.98347	237.55141	157.40861	11.97333	0.1330643	0.18385319	3.0630584	21	6 9.3	20.6
396242 2014 BR ₃₇	17.8	X	20.85949	189.27918	289.76344	2.02897	0.1379486	0.26430170	2.4047471	21	—	—
396243 2014 BL ₃₈	17.4	X	325.89570	49.71988	141.23944	2.36287	0.1111932	0.26528564	2.3987973	21	—	—
396244 2014 BU ₄₂	15.7	X	330.50573	347.58738	303.07999	7.73922	0.0206905	0.17695004	3.1422129	21	6 4.7	20.2
396245 2014 BV ₄₄	16.7	X	175.66858	318.28103	141.33224	1.82402	0.1358400	0.18578155	3.0418257	21	6 26.8	21.5
396246 2014 BH ₄₅	15.6	X	93.11261	35.97734	141.73738	11.34829	0.0734861	0.17787432	3.1313183	21	6 30.3	20.1
396247 2014 BJ ₄₇	16.5	X	26.12019	282.72881	336.32753	1.30414	0.0588001	0.18396805	3.0617833	21	7 12.4	20.5
396248 2014 BN ₄₇	17.3	X	323.75044	207.44191	316.69070	2.25188	0.0622843	0.26043359	2.4284997	21	—	—
396249 2014 BU ₄₈	16.1	X	109.90499	28.85133	161.96612	9.74852	0.0548553	0.18418022	3.0594315	21	8 2.9	20.6
396250 2014 BF ₅₆	17.1	X	304.14776	105.00087	92.08360	3.08604	0.1271600	0.26091861	2.4254892	21	—	—
396251 2014 BV ₆₀	16.3	X	262.91377	129.01665	333.02612	13.25383	0.1468325	0.22222912	2.6994093	21	9 25.8	20.0
396252 2014 BH ₆₃	17.7	X	342.26490	172.64385	331.68545	4.69531	0.1781239	0.26078557	2.4263140	21	—	—
396253 2014 BO ₆₃	16.0	X	123.48120	313.65329	148.58552	14.38999	0.1032766	0.17083429	3.2167652	21	5 10.8	21.0
396254 2014 CP ₂	15.8	X	127.09294	151.13208	351.35345	15.78041	0.0993240	0.17914745	3.1164653	21	6 30.9	20.8
396255 2014 CX ₂	15.8	X	104.29178	302.63865	25.10203	6.77132	0.1747296	0.23839027	2.5759872	21	—	—
396256 2014 CD ₄	16.5	X	19.21712	24.71703	336.11155	5.26083	0.0334018	0.22363063	2.6881192	21	11 13.4	20.0
396257 2014 CB ₅	15.8	X	197.34339	286.03710	138.80236	10.05697	0.0694602	0.18045426	3.1014012	21	6 7.8	20.6
396258 2014 CO ₇	16.4	X	179.68857	275.42784	330.44784	11.48787	0.2123826	0.23082929	2.6319367	21	12 25.5	20.9
396259 2014 CN ₁₁	16.0	X	21.57178	177.17905	92.60392	2.34101	0.0759496	0.18483111	3.0522446	21	7 21.4	19.9
396260 2014 CK ₁₂	17.8	X	57.97467	136.96043	21.73948	2.22636	0.0951848	0.29250935	2.2475510	21	4 7.0	19.6
396261 2014 CK ₁₃	17.3	X	160.16977	118.30705	156.86536	22.36781	0.0373955	0.37287866	1.9117203	21	—	—
396262 2014 CY ₁₄	16.1	X	252.78696	152.35774	293.31675	7.41147	0.0526174	0.20405517	2.8573996	21	9 5.2	20.1
396263 2014 CG ₁₅	15.5	X	150.90510	357.53117	132.50308	11.76176	0.0422658	0.18283588	3.0744098	21	7 5.3	20.0
396264 2014 CO ₁₅	16.0	X	349.48224	357.79328	322.76501	8.65858	0.0557061	0.19107684	2.9853644	21	8 9.4	19.8
396265 2014 CK ₁₅	16.2	X	158.49022	311.05439	159.30892	19.17323	0.1872911	0.18244255	3.0788270	21	6 26.5	21.6
396266 2014 CF ₁₆	16.0	X	128.77172	155.95549	330.72811	6.71453	0.2044680	0.17563095	3.1579265	21	6 20.7	21.2
396267 2014 CK ₁₆	17.7	X	16.63511	298.65435	264.06226	2.20990	0.1191255	0.28947161	2.3623476	21	3 26.7	19.8
396268 2014 CT ₁₆	15.9	X	197.10748	118.42900	324.71146	11.01601	0.0836450	0.18439215	3.0570867	21	6 29.7	20.7
396269 2014 CP ₁₇	15.6	X	110.26192	176.46551	346.00085	10.07393	0.0203352	0.17735255	3.1374568	21	6 25.4	20.2
396270 2014 CJ ₁₈	15.8	X	109.12353	188.45707	3.64003	8.99615	0.0737004	0.18321618	3.0701541	21	8 10.4	20.3
396271 2014 CL ₁₈	17.9	X	141.94482	95.73258	352.07790	5.15895	0.1085304	0.29588538	2.2304220	21	4 28.5	20.8
396272 2014 CY ₁₈	15.7	X	68.59654	241.79934	0.24708	15.27542	0.1696086	0.18051707	3.1006818	21	9 6.9	20.0
396273 2014 CV ₁₉	17.7	X	328.59351	34.47312	140.07385	2.20599	0.1482176	0.26306101	2.4123023	21	—	—
396274 2014 CS ₂₀	17.3	X	288.68605	139.09801	309.71491	6.87539	0.2854277	0.22748135	2.6576973	21	9 25.4	20.3
396275 2014 CD ₂₁	16.9	X	41.36925	115.78333	341.41927	6.71480	0.0799268	0.26590939	2.3950446	21	—	—
396276 2014 CO ₂₁	16.8	X	297.16983	160.08709	326.14272	4.02158	0.1892078	0.23666974	2.5884567	21	12 26.7	19.2
396277 2014 CF ₂₂	16.4	X	315.43657	197.85194	283.10918	3.38528	0.2134051	0.24203877	2.5500347	21	—	—
396278 2014 CJ ₂₂	17.5	X	16.14738	240.52507	254.58209	4.03947	0.1362083	0.26929947	2.3749021	21	—	—
396279 2014 CD ₂₃	17.2	X	252.13204	166.53307	357.93480	6.25070	0.1974965	0.22941792	2.6427200	21	11 28.7	20.8
396280 2014 DK ₁	15.8	X	72.95645	42.59844	150.43685	9.12815	0.0832489	0.17542648	3.1603799	21	6 25.4	20.2
396281 2014 DT ₁	16.0	X	200.20216	258.71275	326.05658	10.44418	0.1452524	0.22888156	2.6468471	21	12 23.8	20.1
396282 2014 DE ₂	17.2	X	214.99772	183.81628	327.04700	3.34556	0.1454786	0.21228124	2.7830968	21	10 5.6	21.4
396283 2014 DP ₄	17.5	X	341.31400	10.17828	226.44093	5.73689	0.2175075	0.28318091	2.2963625	21	2 23.9	20.0
396284 2014 DD ₅	17.1	X	289.85368	12.66339	181.55449	10.27063	0.1453763	0.25328604	2.4739745	21	—	—
396285 2014 DC ₇	17.2	X	294.94888	352.06974	209.22647	8.48050	0.1591543	0.25643445	2.4536831	21	—	—
396286 2014 DX ₇	16.5	X	193.38937	188.25660	342.03303	8.58737	0.1218461	0.21119960	2.7925909	21	10 7.9	20.9
396287 2014 DL ₁₄	17.0	X	246.06494	128.75102	61.04947	10.99712	0.2024226	0.23221329	2.6214686	21	12 24.1	20.4
396288 2014 DM ₁₈	16.9	X	248.18200	120.43395	336.49740	12.56712	0.1642409	0.21056508	2.7981983	21	9 2.0	21.1
396289 2014 DR ₁₈	15.8	X	219.72865	242.06745	153.34936	13.77761	0.1228535	0.17832646	3.1260231	21	5 25.1	21.0
396290 2014 DA ₁₉	16.8	X	326.44065	232.01411	220.75272	3.78810	0.2001743	0.24055120	2.5605368	21	—	—
396291 2014 DH ₁₉	17.2	X	341.85672	215.21337	346.58266	6.61329	0.0637604	0.27566545	2.3381973	21	2 6.2	19.8
396292 2014 DR ₁₉	16.4	X	106.23442	52.52224	122.69858	1.95201	0.1157561	0.17887322	3.1196498	21	7 18.5	20.9
396293 2014 DD ₂₀	15.8	X	116.52961	188.96689	0.74852	11.32017	0.0655566	0.18201858	3.0836061	21	8 15.8	20.4
396294 2014 DK ₂₀	13.9	X	288.03616	273.35782	183.93534	6.30377	0.1420936	0.08358482	5.1806521	21	10 11.9	20.6
396295 2014 DP ₂₀	17.7	X	10.30975	229.35333	338.09412	3.10561	0.1453723	0.28012596	2.3133099	21	3 21.9	19.6
396296 2014 DY ₂₀	16.7	X	170.73630	158.31823	343.16080	3.90475	0.1346254	0.19078974	2.9883586	21	8 13.6	21.6
396297 2014 DZ ₂₀	16.7	X	262.24333	87.34370	69.35791	8.30669	0.1260179	0.22782816	2.6549996	21	12 14.2	19.9
396298 2014 DB ₂₁	18.1	X	15.00275	116.15650	123.21932	1.55341	0.1194046	0.29750955	2.2222970	21	5 24.2	19.9
396299 2014 DK ₂₁	16.7	X	241.75171	325.42906	180.79408	9.30086	0.1555475	0.21688979	2.7435317	21	10 31.3	20.7
396300 2014 DT ₂₃	17.1	X	256.71094	201.89888	333.08699	3.28960	0.0985420	0.23405260	2.6077167	21	—	—
396301 2014 DZ ₂₃	16.4	X	108.06375	2.11413	180.41993	7.40389	0.0601181	0.18033228	3.1027996	21	7 21.5	21.0
396302 2014 DA ₂₄	15.7	X	57.41857	59.91530	176.80035	9.57656	0.0433506	0.18028842	3.1033028	21	7 23.5	20.1
396303 2014 DV ₂₅	17.5	X	3.76422	78.14775	99.14409	5.22220	0.1038700	0.27305380	2.3530829	21	1 31.2	19.9
396304 2014 DZ ₂₅	16.3	X	93.77144	216.04741	75.62719	6.63862	0.0223563	0.21409760	2.7673336	21	11 20.2	20.2
396305 2014 DQ ₂₇	16.5	X	197.56084	15.59328	160.09919	5.29871	0.0611500	0.21863067	2.7289484	21	10 29.0	20.4
396306 2014 DS ₂₇	18.2	X	22.50545	261.56299	272.68944	1.34482	0.1801763	0.28366840	2.2940105	21	2 19.4	19.8
396307 2014 DU ₂₈	17.1	X	305.08381	44.69114	78.10320	4.82044	0.1213074	0.23468088	2.6030604	21	—	—
396308 2014 DM ₃₀	17.3	X	221.68177	119.73231	152.04593	5.07853	0.1345770	0.25659407	2.4526654	21	—	—
396309 2014 DH ₃₁	16.5	X	189.39196	26.60295	172.02984	13.89987	0.0657416	0.21656317	2.7462895	21	11 17.7	20.7
396310 2014 DX ₃₁	17.4	X	358.72122	156.21148	5.24347	6.58869	0.0733563	0.26912885	2.3759058	21	1 6.2	20.2
396311 2014 DZ ₃₃	16.5	X	122.97049	172.53007	355.27218	16.30010	0.0460474	0.18236395	3.0797116	21	7 26.1	21.2
396312 2014 DD ₃₄	16.3	X	70.58243	152.60628	70.43457	2.01890	0.1196253	0.17973786	3.1096369	21	8 6.1	20.4
396313 2014 DG ₃₄	15.9	X	182.79430	93.31348	346.37404	15.15619	0.0681967	0.17567007	3.1574576	21	6 7.1	20.9
396314 2014 DH ₃₄	17.1	X	268.20592	35.87322	108.6580							

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
396321 2014 DK ₄₃	16.8	X	147.91474	123.46345	172.23315	3.70960	0.1038406	0.23104747	2.6302795	21	—	—
396322 2014 DU ₄₅	16.2	X	53.66923	224.69023	1.72864	10.05486	0.1702100	0.17353329	3.1833240	21	7 28.0	20.4
396323 2014 DX ₄₅	16.6	X	159.68756	113.67876	155.36199	16.81916	0.0948920	0.23379811	2.6096087	21	—	—
396324 2014 DO ₄₆	15.8	X	146.90031	330.10079	184.16256	11.14529	0.1485640	0.18312272	3.0711985	21	8 3.9	21.0
396325 2014 DB ₄₇	17.7	X	344.45158	350.53978	247.63209	1.92058	0.1159279	0.28216008	2.3021786	21	3 22.8	20.0
396326 2014 DE ₄₇	15.9	X	88.59645	239.93830	350.71294	9.64085	0.1183605	0.18330375	3.0691761	21	9 7.2	20.3
396327 2014 DD ₄₈	17.3	X	202.12286	141.41463	176.63712	6.28807	0.0886789	0.25983369	2.4322361	21	1 19.4	20.9
396328 2014 DF ₄₈	17.8	X	318.32322	245.37789	347.11614	0.89546	0.1454261	0.26929117	2.3749510	21	2 2.0	20.8
396329 2014 DT ₄₈	17.6	X	276.61603	57.86138	205.13399	4.87523	0.1980505	0.26238322	2.4164548	21	1 19.5	21.4
396330 2014 DY ₄₈	17.8	X	76.25156	260.52356	195.41748	3.48242	0.1967953	0.27520727	2.3407918	21	2 20.3	19.8
396331 2014 DF ₄₉	15.7	X	65.10333	73.85032	178.67322	12.37046	0.0279810	0.18349578	3.0670345	21	8 20.8	20.1
396332 2014 DA ₅₅	16.8	X	212.66220	132.06042	97.93513	2.22007	0.0737928	0.23204049	2.6227700	21	—	—
396333 2014 DL ₅₅	16.2	X	67.43049	96.68018	153.83583	4.18104	0.0724221	0.18418563	3.0593716	21	8 30.0	20.4
396334 2014 DJ ₅₇	18.0	X	88.99072	128.68016	16.56573	6.17286	0.0982912	0.29368638	2.2415418	21	5 7.7	20.4
396335 2014 DW ₆₀	15.8	X	294.78985	359.31170	12.00506	11.80172	0.0735827	0.18358562	3.0660338	21	7 29.4	20.1
396336 2014 DF ₆₂	16.5	X	158.00647	232.04131	23.60059	7.85988	0.1538879	0.21675745	2.7446483	21	12 17.5	21.1
396337 2014 DA ₆₄	17.5	X	286.46790	172.02832	114.12312	3.33807	0.2098393	0.27332376	2.3515333	21	2 26.5	20.8
396338 2014 DU ₆₄	18.0	X	52.67927	189.14373	45.26935	3.64218	0.0964708	0.30695354	2.1764780	21	7 28.4	20.1
396339 2014 DE ₆₅	17.5	X	186.59033	148.37700	119.02923	4.64560	0.1939045	0.22915445	2.6447453	21	—	—
396340 2014 DB ₆₆	16.5	X	174.62317	56.24205	61.90469	5.65267	0.0950044	0.18051595	3.1006947	21	7 19.3	21.3
396341 2014 DX ₆₇	17.1	X	243.59870	54.71026	149.67354	11.24078	0.0603947	0.23414602	2.6070230	21	—	—
396342 2014 DY ₆₇	16.4	X	236.97094	333.56843	115.80708	5.07617	0.0691159	0.19180696	2.9777836	21	8 22.8	20.7
396343 2014 DH ₆₉	17.6	X	92.02054	315.22279	133.39706	4.30288	0.1970724	0.27853183	2.3221280	21	3 12.1	19.9
396344 2014 DQ ₆₉	16.2	X	84.35811	89.87876	153.25326	9.89593	0.1067805	0.18554664	3.0443925	21	9 17.2	20.5
396345 2014 DX ₇₀	17.2	X	112.87843	290.08612	130.63407	5.00394	0.0900608	0.27004072	2.3705541	21	2 15.3	19.8
396346 2014 DD ₇₁	16.4	X	188.00242	51.91739	29.94081	10.28575	0.2274370	0.17758264	3.1347462	21	6 15.1	21.9
396347 2014 DH ₇₂	16.6	X	202.73683	139.83362	52.48514	6.10541	0.0849200	0.21416993	2.7667105	21	11 19.6	20.7
396348 2014 DA ₇₉	16.4	X	128.03371	142.35257	115.77810	5.76873	0.0663047	0.20886454	2.8133660	21	11 21.7	20.7
396349 2014 DB ₇₉	16.9	X	54.30693	309.47234	82.66898	3.40207	0.0672479	0.23568889	2.5956331	21	—	—
396350 2014 DQ ₇₉	13.9	X	32.09711	277.18537	105.00731	6.81084	0.0123563	0.08506111	5.1205353	21	12 1.1	20.7
396351 2014 DK ₇₉	17.1	X	325.75908	118.28606	82.53683	6.15244	0.0560878	0.26314242	2.4118047	21	1 16.2	20.0
396352 2014 DV ₇₉	16.1	X	115.91786	28.81621	130.58299	6.06337	0.0702612	0.17185816	3.2039762	21	7 4.0	20.9
396353 2014 DN ₈₁	16.4	X	117.94692	355.98794	354.18205	6.86121	0.1907222	0.24560696	2.5252765	21	—	—
396354 2014 DJ ₈₂	16.6	X	112.15485	33.20905	158.22812	1.68903	0.0916552	0.18236780	3.0796682	21	8 11.7	21.2
396355 2014 DS ₈₂	17.6	X	2.24801	208.90889	330.81411	2.74432	0.1669167	0.27515399	2.3410939	21	1 22.2	19.8
396356 2014 DZ ₈₃	17.6	X	335.79139	121.99289	53.48717	2.27239	0.1155169	0.26211545	2.4181003	21	—	—
396357 2014 DJ ₈₄	16.5	X	151.42962	292.42900	0.68350	14.66658	0.1020292	0.23329126	2.6133871	21	—	—
396358 2014 DZ ₈₄	16.4	X	315.71237	242.76859	116.05564	3.03840	0.0968675	0.18851061	3.0123968	21	8 5.7	20.0
396359 2014 DC ₈₇	15.7	X	341.53422	137.71387	163.78337	9.20309	0.0437776	0.17757452	3.1348417	21	7 2.5	20.0
396360 2014 DL ₈₈	16.4	X	126.70492	67.31195	132.19806	2.83754	0.0186359	0.19825479	2.9128643	21	9 2.4	20.5
396361 2014 DT ₈₉	16.2	X	157.39853	260.10081	24.03273	11.75618	0.1643585	0.22235182	2.6984161	21	—	—
396362 2014 DF ₈₉	16.1	X	356.59584	262.09282	169.60422	16.60826	0.1699162	0.23136168	2.6278976	21	—	—
396363 2014 DL ₈₉	17.7	X	145.05012	330.87186	107.89108	3.93501	0.1378007	0.28971146	2.2619982	21	4 27.2	20.8
396364 2014 DN ₈₉	16.4	X	311.01627	296.92101	167.40989	14.08795	0.2555933	0.23117326	2.6293253	21	12 18.9	18.8
396365 2014 DL ₉₀	17.5	X	71.20227	345.95793	146.42638	6.87770	0.0487223	0.27681485	2.3317203	21	3 19.9	20.0
396366 2014 DT ₉₀	17.3	X	57.54708	90.01841	24.45519	12.07305	0.1713995	0.27056254	2.3675052	21	2 15.9	19.6
396367 2014 DF ₉₃	17.7	X	4.90553	319.47827	154.87551	1.67811	0.1478508	0.25677220	2.4515310	21	—	—
396368 2014 DL ₉₅	16.9	X	272.92272	255.26386	232.98149	3.90066	0.0638333	0.22113797	2.7082817	21	11 30.2	20.4
396369 2014 DP ₉₈	17.3	X	60.58832	68.28039	61.10508	5.77580	0.0518166	0.27837395	2.3230059	21	2 28.5	19.9
396370 2014 DQ ₁₀₄	16.5	X	320.67444	126.34837	300.00341	3.21662	0.0416274	0.21537776	2.7563571	21	11 16.9	20.0
396371 2014 DV ₁₀₅	16.7	X	80.41333	204.25633	152.70882	4.13551	0.0680418	0.23570879	2.5954870	21	—	—
396372 2014 DU ₁₀₆	17.2	X	288.60016	51.51862	168.15071	6.52863	0.0854021	0.25896130	2.4376956	21	—	—
396373 2014 DX ₁₀₆	17.2	X	247.52499	188.49371	344.19200	2.93341	0.1852645	0.22852333	2.6496125	21	12 5.9	20.7
396374 2014 DT ₁₀₉	16.0	X	94.37224	201.94896	21.49579	17.90206	0.1586068	0.17737632	3.1371765	21	9 15.2	20.9
396375 2014 DL ₁₀₉	17.0	X	61.82115	265.72140	157.67527	9.80051	0.0350560	0.24456229	2.5324626	21	—	—
396376 2014 DZ ₁₁₁	15.6	X	55.42591	146.68699	117.19613	5.97537	0.0951370	0.17926926	3.1150534	21	9 5.1	19.8
396377 2014 DW ₁₁₃	15.8	X	169.01528	119.73870	341.85057	26.73692	0.1863703	0.18250384	3.0781378	21	6 28.5	21.4
396378 2014 DX ₁₁₃	15.6	X	158.87588	145.54580	342.86165	15.21489	0.1616558	0.18497412	3.0506712	21	7 21.3	20.8
396379 2014 DA ₁₁₅	18.0	X	323.26898	356.61912	212.56189	0.82907	0.1371094	0.26865261	2.3787128	21	1 9.6	20.9
396380 2014 DC ₁₁₅	17.4	X	34.63663	125.80675	337.89978	4.76439	0.1411695	0.26456739	2.4031369	21	—	—
396381 2014 DS ₁₁₅	16.3	X	298.30943	221.01778	187.71432	1.99217	0.0983020	0.19937700	2.9019239	21	9 15.1	19.8
396382 2014 DP ₁₁₇	16.6	X	143.38329	170.49257	62.61533	6.78347	0.0117103	0.21148419	2.7900851	21	11 6.4	20.4
396383 2014 DT ₁₁₇	16.2	X	25.04174	252.31982	3.83530	10.62085	0.0379852	0.17563064	3.1579301	21	7 7.0	20.6
396384 2014 DK ₁₁₈	16.4	X	319.99920	257.69286	120.69137	5.90591	0.1203933	0.19991286	2.8967359	21	9 8.6	19.8
396385 2014 DS ₁₁₈	16.9	X	229.35077	232.62847	50.30337	5.72146	0.1205268	0.25730272	2.4481600	21	1 6.2	20.6
396386 2014 DG ₁₁₉	17.5	X	291.23188	71.94182	150.54479	1.67380	0.1373000	0.25935484	2.4352290	21	—	—
396387 2014 DK ₁₁₉	17.6	X	2.74778	281.07894	236.77579	0.47501	0.1214266	0.26737621	2.3862771	21	—	—
396388 2014 DX ₁₁₉	16.1	X	38.07991	281.03108	7.72286	10.63988	0.0480476	0.18876833	3.0096544	21	9 8.5	20.1
396389 2014 DZ ₁₂₀	16.8	X	311.16506	286.35461	169.29954	12.09182	0.2465234	0.23455073	2.6040233	21	12 8.5	19.1
396390 2014 DF ₁₂₁	17.6	X	341.25870	60.77850	169.99386	6.88975	0.0742770	0.28380577	2.2932703	21	3 13.6	20.1
396391 2014 DN ₁₂₁	16.9	X	217.30664	354.19041	215.47264	1.07861	0.0780501	0.23002148	2.6380951	21	12 31.4	20.6
396392 2014 DW ₁₂₁	17.2	X	301.32808	311.58888	168.33565	8.13276	0.1015415	0.23315784	2.6143839	21	12 30.5	20.3
396393 2014 DJ ₁₂₂	14.8	X	321.46843	147.98764	170.52616	30.26446	0.1932862	0.17183641	3.2042465	21	6 11.0	19.4
396394 2014 DF ₁₂₆	16.4	X	57.11543	73.20680</								

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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>
396401 2014 ED ₁	17.5	X	15.12755	296.75432	167.31646	1.52207	0.1342212	0.25862070	2.4398354	21	—	—
396402 2014 EL ₁	17.1	X	13.72529	72.95097	342.65772	4.05762	0.0307436	0.22971357	2.6404520	21	—	—
396403 2014 EX ₁	17.5	X	263.47825	24.28515	215.20131	1.74251	0.1375317	0.25590440	2.4570701	21	—	—
396404 2014 EP ₄	17.3	X	107.58507	302.98083	131.02489	4.26522	0.0489083	0.27226557	2.3576223	21	2 19.2	20.0
396405 2014 EW ₄	13.6	X	296.24172	92.60803	10.79940	7.16632	0.0724317	0.08321549	5.1959695	21	11 3.8	20.3
396406 2014 EY ₄	17.5	X	338.47898	237.77777	344.83259	4.21762	0.1544859	0.27155774	2.3617174	21	2 15.9	19.9
396407 2014 EJ ₇	17.1	X	267.95188	156.89838	356.72128	13.29424	0.1657769	0.22999573	2.6382920	21	12 11.9	20.6
396408 2014 ER ₇	16.5	X	161.52668	89.49440	163.97281	14.07623	0.1986576	0.21744647	2.7388472	21	12 18.3	21.4
396409 2014 EG ₈	13.6	X	204.68941	32.25021	145.49203	20.05269	0.0562839	0.08431844	5.1505589	21	10 27.3	20.9
396410 2014 EZ ₁₁	16.6	X	187.04510	188.25407	57.52764	9.12599	0.1333822	0.22457190	2.6806026	21	—	—
396411 2014 ER ₁₂	16.9	X	240.91426	173.05285	26.26394	4.29325	0.1098347	0.23078714	2.6322571	21	—	—
396412 2014 EC ₁₉	13.8	X	338.47929	259.90449	144.15055	9.70978	0.1711417	0.08193175	5.2501039	21	10 26.4	20.5
396413 2014 ED ₂₃	14.4	X	292.93484	139.83962	325.62014	1.16776	0.0183196	0.08564330	5.0973031	21	11 9.7	21.2
396414 2014 EQ ₂₃	17.9	X	337.03053	103.57190	111.60149	3.10280	0.1383245	0.27041196	2.3683840	21	2 6.0	20.4
396415 2014 ER ₂₃	16.1	X	175.79306	90.69324	18.47757	14.17662	0.1090312	0.17689605	3.1428522	21	7 10.9	21.3
396416 2014 ET ₂₃	17.6	X	79.92762	45.36738	96.26055	3.84380	0.1015342	0.28662157	2.2782260	21	4 22.7	20.0
396417 2014 EY ₂₃	17.8	X	65.87644	339.47454	145.03579	5.93320	0.1177110	0.27553192	2.3389527	21	3 7.1	19.9
396418 2014 EQ ₂₅	16.7	X	307.27472	99.21868	356.48391	14.51338	0.1004061	0.22770331	2.6559700	21	12 3.1	20.1
396419 2014 ES ₂₅	16.3	X	286.18752	161.05101	337.85154	5.79463	0.2508352	0.23525687	2.5988099	21	12 12.7	18.7
396420 2014 ES ₂₉	17.2	X	284.32784	205.82771	20.22814	3.91305	0.1752019	0.25755485	2.4465620	21	—	—
396421 2014 EH ₃₁	16.6	X	233.11355	132.58539	44.07663	7.60042	0.0781801	0.22069997	2.7118638	21	12 6.6	20.3
396422 2014 EL ₃₁	16.4	X	133.70583	264.79818	20.56699	13.01251	0.2030689	0.21492149	2.7602568	21	—	—
396423 2014 EK ₃₂	17.8	X	18.94689	80.75626	152.85266	3.21104	0.1113859	0.29068063	2.2569676	21	5 23.9	19.8
396424 2014 EN ₃₂	16.4	X	137.16376	132.50772	74.10886	2.52382	0.0365584	0.19790213	2.9163238	21	9 26.3	20.5
396425 2014 EL ₃₅	17.1	X	337.27704	109.91248	70.50996	5.65011	0.1548781	0.26233678	2.4167400	21	—	—
396426 2014 EL ₃₆	17.0	X	198.86255	178.26833	124.93372	7.14129	0.1373582	0.25262520	2.4782870	21	1 2.4	20.8
396427 2014 EY ₃₇	17.4	X	333.26970	193.87159	17.16368	1.24417	0.1341859	0.26881773	2.3777386	21	1 26.7	20.0
396428 2014 ED ₃₉	15.7	X	204.86941	278.71731	176.43134	9.52348	0.0360308	0.18055634	3.1002371	21	7 22.9	20.4
396429 2014 EP ₄₁	16.5	X	84.87691	204.59365	113.82110	3.89660	0.0928753	0.21408383	2.7674522	21	12 19.9	20.6
396430 2014 ET ₄₁	17.5	X	251.83741	164.11447	74.13554	3.63447	0.0943750	0.24619636	2.5212455	21	—	—
396431 2014 EV ₄₂	17.6	X	289.46896	9.93890	130.36588	4.21927	0.2330522	0.23324385	2.6137412	21	12 24.2	19.9
396432 2014 EG ₄₃	17.9	X	334.44825	84.66256	149.36499	7.57395	0.0751758	0.28206422	2.3027001	21	3 8.9	20.3
396433 2014 EB ₄₄	16.1	X	73.42627	221.67519	41.50530	17.79737	0.2592477	0.18164101	3.0878778	21	10 20.4	20.8
396434 2014 EL ₄₄	15.8	X	154.38801	77.33192	30.76561	10.53263	0.0586003	0.17195725	3.2027452	21	6 11.5	20.7
396435 2014 EV ₄₄	16.8	X	160.09737	172.61889	79.16144	4.62357	0.1166779	0.21704311	2.7422395	21	12 16.4	21.0
396436 2014 EO ₄₅	17.6	X	336.95938	217.99268	17.45410	7.03244	0.3327137	0.26821425	2.3813039	21	2 4.5	20.5
396437 2014 EK ₄₇	17.3	X	295.52913	183.17192	30.85973	10.38516	0.1745927	0.25707060	2.4496335	21	—	—
396438 2014 EW ₄₇	16.9	X	159.75482	331.03773	33.02873	7.37900	0.0275977	0.26633876	2.3924698	21	1 25.9	20.1
396439 2014 EU ₄₉	16.4	X	292.39287	186.70666	315.23784	13.07971	0.2273885	0.23547378	2.5972137	21	—	—
396440 2014 EY ₄₉	16.1	X	290.89885	161.03149	25.55371	8.38274	0.1005046	0.23902088	2.5714544	21	—	—
396441 2014 EC ₅₀	16.4	X	223.94339	249.30640	349.18871	7.26657	0.1539359	0.23308009	2.6149653	21	—	—
396442 2014 EX ₅₀	15.8	X	159.14680	143.31611	77.25791	16.32187	0.0929109	0.20635471	2.8361321	21	11 11.4	20.3
396443 2014 EN ₅₁	16.0	X	74.60459	101.57645	141.68726	11.67508	0.2188016	0.17782801	3.1318619	21	9 21.7	20.6
396444 2014 FL ₁	17.6	X	30.04614	260.50992	175.69705	4.78441	0.0998675	0.24707501	2.5152636	21	—	—
396445 2014 FM ₁	16.2	X	198.24629	87.21229	17.06328	3.81549	0.0804598	0.18337817	3.0683458	21	7 27.5	20.8
396446 2014 FT ₂	17.6	X	298.63054	249.31209	0.37751	2.38955	0.1577108	0.26687035	2.3892917	21	1 30.8	20.8
396447 2014 FA ₆	16.9	X	315.95673	223.38222	11.10463	22.52922	0.2063112	0.27007670	2.3703436	21	2 3.1	20.6
396448 2014 FE ₆	16.6	X	251.65780	281.02430	175.47721	8.77003	0.2450265	0.21175698	2.7876883	21	8 25.4	20.8
396449 2014 FO ₈	17.6	X	224.75350	268.25328	47.12124	1.26734	0.2252890	0.26256260	2.4153541	21	2 8.8	21.6
396450 2014 FT ₉	16.5	X	359.07232	244.00107	178.19012	11.47284	0.1957245	0.23364672	2.6107358	21	—	—
396451 2014 FB ₁₀	16.8	X	289.58496	68.20413	9.70755	2.08767	0.0311694	0.20725252	2.8279355	21	10 20.2	20.6
396452 2014 FL ₁₄	16.5	X	61.52338	183.28962	64.25949	6.64915	0.0691245	0.18417237	3.0595183	21	8 20.8	20.7
396453 2014 FU ₁₄	16.7	X	228.08808	126.93224	34.04331	9.74091	0.1786087	0.21766904	2.7369799	21	10 29.7	20.8
396454 2014 FE ₁₅	17.5	X	341.80046	352.12707	220.59933	3.96586	0.1682810	0.27220366	2.3579798	21	2 2.5	20.2
396455 2014 FY ₁₅	17.7	X	327.62307	230.33550	353.79634	1.08563	0.1409014	0.27099846	2.3649656	21	2 3.8	20.6
396456 2014 FF ₁₆	16.5	X	61.23810	45.22644	190.03899	0.65905	0.1184055	0.17496792	3.1658993	21	8 8.1	20.7
396457 2014 FS ₁₇	16.3	X	53.34360	261.51945	343.41160	5.01103	0.1186546	0.17486520	3.1671390	21	8 10.8	20.5
396458 2014 FL ₁₈	17.8	X	61.81916	355.93514	193.46164	5.90856	0.0625719	0.29009346	2.2600121	21	5 28.1	20.2
396459 2014 FR ₁₉	15.3	X	91.80370	193.23912	95.55406	17.52087	0.2626544	0.19784223	2.9169123	21	12 6.3	20.2
396460 2014 FW ₁₉	16.1	X	83.99225	155.72018	189.67906	7.96142	0.1525265	0.23725351	2.5842089	21	—	—
396461 2014 FT ₂₀	17.6	X	329.06342	199.43793	76.50033	4.63033	0.2372963	0.28133274	2.3066898	21	4 4.9	20.0
396462 2014 FZ ₂₀	17.0	X	84.43321	345.06364	138.14114	6.31860	0.1094124	0.28086024	2.3092762	21	4 5.6	19.6
396463 2014 FU ₂₃	16.9	X	334.66917	131.09132	327.15762	12.26413	0.2015211	0.24032859	2.5621178	21	—	—
396464 2014 FE ₃₂	15.7	X	47.05800	260.29037	0.59947	9.44599	0.1840310	0.17548127	3.1597219	21	9 2.6	19.8
396465 2014 FZ ₃₄	16.8	X	188.16293	58.85514	178.03149	12.90744	0.0073977	0.22601515	2.6691789	21	—	—
396466 2014 FB ₃₅	18.1	X	358.70832	100.20689	57.28286	1.89437	0.1326324	0.26267673	2.4146544	21	—	—
396467 2014 FG ₃₅	15.7	X	140.90557	336.05300	168.01368	10.62338	0.10715914	0.17221591	3.1995375	21	7 12.5	20.7
396468 2014 FP ₃₅	16.8	X	300.46072	27.28772	115.17291	6.03098	0.1657840	0.23590027	2.5940823	21	—	—
396469 2014 FQ ₃₅	16.5	X	265.58451	140.96760	136.16878	7.17413	0.0943007	0.26434936	2.4044581	21	2 4.7	20.0
396470 2014 FV ₃₅	16.7	X	189.09905	143.32728	165.01638	11.15284	0.2453138	0.23898078	2.5717420	21	1 6.7	21.2
396471 2014 FA ₃₆	16.4	X	258.20165	129.35210	30.29499	13.66786	0.1404801	0.22587898	2.6702515	21	12 7.6	20.0
396472 2014 FF ₃₆	17.7	X	342.74969	138.49143	62.03203	3.47553	0.1316424	0.26457302	2.4031028	21	1 28.4	20.3
396473 2014 FH ₃₆	17.0	X	272.49081	102.88439	88.39633	3.28341	0.0604247	0.23368492	2.6104512	21	—	—
396474 2014 FJ ₃₆	16.9	X	177.19100	99.55146	159.42430	5.58710	0.0732591	0.21965664	2.7			

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
396481 2014 <i>FL</i> ₄₂	16.7	X	237.59262	10.37293	90.71032	2.76856	0.0549367	0.19486211	2.9465769	21	9 9.8	20.9
396482 2014 <i>FQ</i> ₄₂	15.9	X	83.70146	64.39335	170.93779	16.47982	0.1755642	0.18045755	3.1013635	21	9 13.8	20.3
396483 2014 <i>FE</i> ₄₇	17.7	X	47.52728	326.99205	153.38819	4.36146	0.1000090	0.26784808	2.3834737	21	1 25.6	20.2
396484 2014 <i>FH</i> ₄₇	17.3	X	302.10842	329.85810	151.99239	6.75604	0.1694474	0.23153809	2.6265626	21	12 29.8	20.0
396485 2014 <i>FK</i> ₄₇	16.9	X	317.02120	334.39348	152.60725	6.98881	0.1073558	0.23683273	2.5872689	21	—	—
396486 2014 <i>FT</i> ₄₇	17.8	X	100.58037	326.97898	187.91062	7.69344	0.1545370	0.30094357	2.2053592	21	6 19.1	20.6
396487 2014 <i>FA</i> ₄₈	16.2	X	265.39246	126.78216	41.58189	15.62871	0.0890880	0.22926929	2.6438620	21	—	—
396488 2014 <i>FJ</i> ₄₈	16.3	X	235.57060	179.56991	56.19027	15.75674	0.0935762	0.24375408	2.5380575	21	—	—
396489 2014 <i>FM</i> ₄₈	15.5	X	108.85551	224.75366	355.55381	11.22870	0.1307610	0.18444594	3.0564924	21	9 17.5	20.1
396490 2014 <i>FN</i> ₄₈	15.7	X	105.80826	105.66299	70.10130	15.55272	0.1770102	0.17313866	3.1881593	21	7 28.3	20.8
396491 2014 <i>FK</i> ₄₉	16.7	X	221.57973	172.97116	42.67986	9.89319	0.2772295	0.22372133	2.6873927	21	12 17.7	21.0
396492 2014 <i>FL</i> ₄₉	16.8	X	327.68708	129.74649	103.84317	7.23859	0.1078792	0.27137141	2.3627983	21	2 24.6	19.7
396493 2014 <i>FM</i> ₄₉	16.2	X	179.28791	220.77466	42.14744	15.50378	0.1615060	0.22272825	2.6953749	21	—	—
396494 2014 <i>FG</i> ₅₀	17.2	X	346.92940	200.00613	7.05583	2.23545	0.1622880	0.26995899	2.3710326	21	2 6.7	19.5
396495 2014 <i>FH</i> ₅₀	17.6	X	354.33599	130.78536	65.61362	6.25080	0.1964561	0.26850605	2.3795783	21	1 31.2	20.0
396496 2014 <i>FR</i> ₅₀	17.5	X	33.58549	26.15349	163.96796	4.62083	0.0604042	0.29132060	2.2536610	21	4 11.1	19.7
396497 2014 <i>FL</i> ₅₁	17.6	X	308.80431	120.27575	128.19844	1.91942	0.1457688	0.26901632	2.3765683	21	2 11.0	20.7
396498 2014 <i>FD</i> ₅₃	16.4	X	160.73457	305.47422	178.64301	16.46109	0.1974553	0.17900646	3.1181015	21	7 12.9	21.9
396499 2014 <i>FF</i> ₅₃	17.3	X	198.46564	81.99602	163.85184	2.79420	0.1608737	0.22695661	2.6617923	21	—	—
396500 2014 <i>FA</i> ₅₄	16.8	X	285.60357	4.08482	186.76442	12.76462	0.0734592	0.24261328	2.5460075	21	—	—
396501 2014 <i>FG</i> ₅₄	17.3	X	250.06157	115.33724	120.23405	5.18785	0.1432205	0.24156017	2.5534018	21	—	—
396502 2014 <i>FE</i> ₅₆	17.7	X	85.30318	24.62692	144.04646	6.56882	0.0968462	0.29569070	2.2314009	21	6 8.9	20.2
396503 2014 <i>FP</i> ₅₇	16.9	X	277.52350	37.77603	209.78271	9.18695	0.1960791	0.25375836	2.4709037	21	1 3.1	21.0
396504 2014 <i>GB</i> ₂	17.9	X	336.93807	250.63591	7.39277	4.06279	0.1445460	0.28865840	2.2674963	21	4 3.8	20.1
396505 2014 <i>GM</i> ₂	16.2	X	90.05404	46.05809	186.54915	16.40553	0.1624236	0.17891381	3.1191797	21	9 14.3	20.9
396506 2014 <i>GU</i> ₅	16.1	X	45.13697	307.84649	29.80250	17.10807	0.1170989	0.19877372	2.9077925	21	11 23.3	20.2
396507 2014 <i>GA</i> ₆	16.3	X	264.25821	317.51964	193.43195	16.52054	0.1325663	0.22400595	2.6851157	21	12 8.8	20.0
396508 2014 <i>GH</i> ₆	15.9	X	111.26487	24.79112	200.20166	7.17835	0.0726809	0.18435058	3.0575463	21	9 18.6	20.4
396509 2014 <i>GO</i> ₈	16.6	X	133.22811	80.64568	166.00968	9.27329	0.0654052	0.21344150	2.7730017	21	11 14.8	20.8
396510 2014 <i>GW</i> ₈	17.5	X	274.34708	302.15504	310.89686	1.44751	0.1805229	0.26235132	2.4155459	21	1 7.9	21.1
396511 2014 <i>GO</i> ₉	16.4	X	325.51867	107.30948	348.83457	5.66952	0.0764593	0.22826556	2.6516068	21	—	—
396512 2014 <i>GL</i> ₁₁	17.4	X	7.87093	152.72323	30.96146	9.91330	0.1289249	0.27181145	2.3602475	21	2 18.6	19.9
396513 2014 <i>GX</i> ₁₁	17.7	X	282.05381	160.10815	106.68950	3.69528	0.1964279	0.26307434	2.4122208	21	1 31.0	21.3
396514 2014 <i>GU</i> ₁₂	16.3	X	339.92212	255.37466	182.14396	12.84311	0.1598691	0.22796877	2.6539077	21	—	—
396515 2014 <i>GE</i> ₁₃	17.0	X	268.56291	183.66283	10.31089	3.85962	0.1571294	0.23718067	2.5847379	21	—	—
396516 2014 <i>GN</i> ₁₃	16.9	X	279.86365	268.29629	198.38061	5.57994	0.1295161	0.21454978	2.7634440	21	11 2.2	20.2
396517 2014 <i>GB</i> ₁₆	17.3	X	60.62494	2.37409	110.88370	4.95275	0.1706238	0.26679888	2.3897183	21	2 16.2	19.2
396518 2014 <i>GN</i> ₁₆	17.1	X	321.26467	352.05991	146.29340	5.10929	0.1866443	0.23953944	2.5677419	21	—	—
396519 2014 <i>GD</i> ₁₈	16.4	X	82.82917	262.51930	16.19499	8.89572	0.0668180	0.19146060	2.9813738	21	10 22.3	20.7
396520 2014 <i>GJ</i> ₁₈	16.9	X	255.60732	89.17180	112.36703	12.37215	0.1424243	0.23268889	2.6178953	21	—	—
396521 2014 <i>GM</i> ₂₆	17.4	X	35.08721	217.64895	311.38467	1.61430	0.1561690	0.27466394	2.3438777	21	3 15.3	19.3
396522 2014 <i>GP</i> ₂₇	17.6	X	189.53314	111.66934	169.90303	2.29045	0.1765059	0.22716358	2.6601752	21	—	—
396523 2014 <i>GB</i> ₂₈	16.8	X	23.80787	226.35297	213.17285	8.59378	0.1122721	0.23395787	2.6082050	21	—	—
396524 2014 <i>GK</i> ₂₈	17.9	X	79.36721	1.60463	188.48387	5.84155	0.1210214	0.29635107	2.2280848	21	7 4.8	20.6
396525 2014 <i>GN</i> ₂₈	17.8	X	301.02114	103.98416	143.42825	2.61990	0.1419317	0.26033625	2.4291050	21	2 1.9	21.1
396526 2014 <i>GO</i> ₂₈	16.4	X	265.66749	175.20758	36.49075	13.97330	0.1136216	0.23653485	2.5894406	21	—	—
396527 2014 <i>GR</i> ₂₈	18.2	X	24.81458	176.49295	73.75965	2.29454	0.1175371	0.29379685	2.2409799	21	7 2.8	20.1
396528 2014 <i>GQ</i> ₃₀	16.1	X	276.80893	184.57239	25.36030	13.30049	0.0749206	0.24209169	2.5496631	21	—	—
396529 2014 <i>GQ</i> ₃₀	17.7	X	332.25872	183.30922	39.81539	2.87987	0.1600207	0.26673656	2.3909095	21	2 7.9	20.4
396530 2014 <i>GS</i> ₃₁	17.7	X	354.07691	184.71656	75.95754	4.25015	0.1373963	0.28653303	2.2786953	21	5 14.9	19.6
396531 2014 <i>GM</i> ₃₆	15.9	X	129.81076	344.25119	197.20750	15.28252	0.1698265	0.18116417	3.0932938	21	8 20.9	21.1
396532 2014 <i>GZ</i> ₃₆	17.9	X	23.56296	122.27369	127.09919	4.91240	0.1295111	0.29825980	2.2185688	21	6 29.6	19.6
396533 2014 <i>GB</i> ₃₇	16.2	X	8.83001	261.83104	177.65807	21.65939	0.1053802	0.23728244	2.3839988	21	—	—
396534 2014 <i>GK</i> ₃₈	15.5	X	50.32234	100.75590	180.16046	14.10482	0.2435412	0.17516050	3.1635784	21	10 10.9	19.7
396535 2014 <i>GP</i> ₃₈	16.8	X	230.63636	99.63218	96.10086	12.64271	0.2201610	0.22435870	2.6823005	21	12 10.9	20.8
396536 2014 <i>GO</i> ₄₀	17.9	X	357.28208	195.61723	54.78300	2.40174	0.1886774	0.28533156	2.2850875	21	4 28.9	19.3
396537 2014 <i>GM</i> ₄₃	16.7	X	290.42329	304.83839	327.40508	10.11365	0.1658395	0.26643243	2.3919091	21	2 17.7	19.9
396538 2014 <i>GN</i> ₄₄	16.3	X	145.57762	307.07157	53.18489	13.51250	0.1318622	0.25062227	2.4914735	21	1 20.6	20.0
396539 2014 <i>P-L</i>	17.6	X	226.79153	9.79253	340.93172	2.21582	0.2106477	0.26943888	2.3740829	21	3 23.8	21.6
396540 1986 <i>JJ</i>	17.7	X	349.50773	318.03441	230.33365	18.66920	0.0481999	0.38877550	1.8592457	21	—	—
396541 1994 <i>SU</i> ₇	16.3	X	60.59377	246.48803	12.54513	13.70207	0.2268849	0.18236143	3.0797401	21	9 25.5	20.5
396542 1994 <i>UR</i> ₅	16.0	X	5.31104	23.55465	19.67324	9.65554	0.0889039	0.18603183	3.0390968	21	12 17.3	20.0
396543 1996 <i>AD</i> ₁₁	17.1	X	267.34686	45.63821	156.32942	3.65872	0.1525143	0.22890414	2.6466730	21	—	—
396544 1996 <i>BJ</i> ₉	17.0	X	146.40318	4.92160	145.73973	5.81805	0.1386821	0.17141301	3.2095208	21	7 31.1	22.1
396545 1996 <i>JY</i> ₃	17.7	X	359.97895	89.91676	143.86356	2.77928	0.1631435	0.27508588	2.3414803	21	4 12.9	19.6
396546 1996 <i>VZ</i> ₂₄	18.4	X	344.40689	314.74605	50.86812	2.85329	0.1466093	0.31457680	2.1411722	21	10 26.5	19.7
396547 1997 <i>JQ</i> ₂	17.9	X	352.51633	131.93147	156.98780	6.30244	0.1892005	0.29036810	2.2585868	21	6 25.1	19.4
396548 1997 <i>RJ</i> ₁₂	17.7	X	262.71958	148.72837	180.54781	6.02860	0.1089837	0.27696116	2.3308991	21	4 8.4	20.7
396549 1998 <i>MD</i> ₁	16.9	X	258.49155	231.39237	107.01966	5.14057	0.2013473	0.25280578	2.4771067	21	4 10.6	20.8
396550 1998 <i>GK</i> ₃₀	17.0	X	165.73941	116.30117	232.09282	4.11810	0.2791579	0.23624299	2.5915729	21	2 5.9	21.4
396551 1998 <i>QT</i> ₇₃	16.0	X	76.98979	172.57425	193.10807	15.61795	0.2833873	0.18230928	3.0803273	21	—	—
396552 1998 <i>RS</i> ₄	16.5	X	155.46576	211.67012	160.64742	14.51915	0.2717965	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>		
396561	1999	TQ ₃₀₆	16.3	X	29.78479	296.48729	350.16049	20.69617	0.0828776	0.17712236	3.1401746	21	8 29.8	20.4
396562	1999	TQ ₃₁₄	18.3	X	15.04116	338.26811	353.70937	3.32358	0.1287745	0.31415220	2.1431010	21	10 28.8	20.2
396563	1999	UV ₃₄	16.6	X	1.11014	134.44740	212.52383	7.64542	0.2126248	0.17761323	3.1343863	21	10 7.2	19.8
396564	1999	VS ₉₅	17.7	X	191.43952	121.15044	216.05273	21.51201	0.0725622	0.38171443	1.8821042	21	1 2.6	20.3
396565	1999	VH ₁₄₃	17.8	X	101.50186	137.15400	231.48107	20.33762	0.0802742	0.37216092	1.9141775	21	—	—
396566	1999	VV ₁₉₁	17.5	X	261.24379	7.92969	59.39116	4.46368	0.1079197	0.30879846	2.1678004	21	8 27.9	19.9
396567	1999	YH ₁₅	15.2	X	319.00662	128.81028	219.21958	5.15021	0.2263380	0.12499693	3.9615926	21	7 8.0	20.0
396568	2000	AZ ₁₀₁	16.8	X	303.49820	325.53213	113.47297	4.09445	0.3934284	0.22137159	2.7063760	21	9 24.1	19.1
396569	2000	DF ₁₄	16.5	X	321.83179	292.99234	160.00077	12.60812	0.1741269	0.21981138	2.7191673	21	12 24.9	19.4
396570	2000	DX ₁₁₃	18.1	X	17.14697	73.84182	142.53863	3.09601	0.1645903	0.28556098	2.2838635	21	4 21.9	19.7
396571	2000	EJ ₃₆	17.1	X	20.75515	131.80188	76.30751	6.86777	0.1787629	0.28330876	2.2959515	21	4 18.8	18.7
396572	2000	GV ₁₃₀	18.4	X	62.89317	6.66985	191.45139	3.34614	0.1083344	0.28659378	2.2783733	21	6 19.1	20.7
396573	2000	HF ₂	17.2	X	307.51091	300.86298	201.51521	13.47039	0.1586526	0.21902657	2.7256589	21	—	—
396574	2000	HK ₈₉	17.8	X	324.05119	243.82326	48.19713	3.95120	0.2334838	0.28071811	2.3100556	21	4 19.5	20.0
396575	2000	JO ₇	16.6	X	152.16882	160.72058	164.71120	13.34187	0.1959272	0.21526746	2.7572986	21	—	—
396576	2000	JW ₄₂	15.9	X	105.11315	215.84468	51.03839	17.23563	0.2137682	0.20396958	2.8581989	21	11 16.6	20.6
396577	2000	KH ₃₈	17.6	X	302.83137	178.54552	130.92404	3.48184	0.1484916	0.27972481	2.3155210	21	4 27.7	20.2
396578	2000	QG ₁₀₂	17.3	X	235.40536	235.45687	131.87036	7.74342	0.3072074	0.26847996	2.3797325	21	4 20.0	21.6
396579	2000	QC ₁₆₉	17.2	X	211.96783	185.30737	185.42728	4.86332	0.2156333	0.26661629	2.3908092	21	4 6.3	21.0
396580	2000	QO ₂₃₀	17.5	X	199.52708	202.72401	153.74324	5.55023	0.2314402	0.26346377	2.4098432	21	3 10.5	21.5
396581	2000	RL ₃₆	16.7	X	148.23502	165.93643	217.66137	10.54483	0.2945969	0.25856886	2.4401615	21	3 2.6	20.9
396582	2000	RM ₇₈	16.1	X	105.20476	190.30167	179.64470	13.04113	0.1249084	0.20484215	2.8500764	21	—	—
396583	2000	SS	18.0	X	324.63074	320.40050	1.63085	4.44733	0.1546753	0.27567154	2.3381629	21	6 21.3	20.2
396584	2000	SZ ₁₃	17.1	X	262.25208	105.44759	253.79715	8.90492	0.2259891	0.27255660	2.3559437	21	5 3.2	20.8
396585	2000	SG ₇₂	17.2	X	283.47198	218.72137	171.89308	10.02940	0.2403672	0.27610305	2.3357261	21	7 8.9	20.2
396586	2000	UO	16.6	X	252.11890	136.43441	225.21027	14.00569	0.2723169	0.26830367	2.3807747	21	4 23.8	20.6
396587	2000	UC ₆	16.1	X	13.49570	172.94036	516.05255	7.26709	0.2957472	0.19142498	2.9817437	21	—	—
396588	2001	BT ₂₀	16.9	X	15.41951	56.21664	28.07629	1.79199	0.1968071	0.24160456	2.5530891	21	—	—
396589	2001	CW ₃₁	15.6	X	297.11809	101.39323	104.39527	29.61384	0.3207555	0.23650245	2.5896771	21	—	—
396590	2001	FS ₁₁₂	16.8	X	285.55904	122.81000	52.62451	5.26659	0.1613891	0.23300269	2.6155444	21	—	—
396591	2001	FD ₁₃₀	17.1	X	262.76527	170.44728	14.09039	7.51645	0.2513793	0.22961735	2.6411896	21	—	—
396592	2001	FZ ₁₄₁	17.1	X	270.71765	205.89754	4.73925	3.29705	0.1961882	0.23303232	2.6153227	21	—	—
396593	2001	HC	19.0	X	4.93049	28.18194	32.59442	23.73637	0.4993117	1.20503698	0.8745859	21	—	—
396594	2001	MZ ₁	16.1	X	243.05906	166.59775	99.53407	14.96991	0.2178912	0.22763924	2.6564683	21	—	—
396595	2001	OL ₃₅	17.5	X	287.88127	302.85356	73.86514	7.38559	0.1908021	0.29309028	2.2445801	21	7 4.9	20.1
396596	2001	OP ₈₉	15.8	X	227.27452	37.67582	312.67953	32.17320	0.2828082	0.23185219	2.6241898	21	3 6.9	21.1
396597	2001	PQ ₄	16.4	X	191.13452	58.02933	271.50250	11.37607	0.1651355	0.22334544	2.6904070	21	1 29.5	20.9
396598	2001	PJ ₁₉	17.3	X	309.66385	250.61501	63.19684	6.12894	0.1590209	0.29009914	2.2599826	21	5 10.9	19.6
396599	2001	PN ₄₁	15.7	X	89.61172	61.47821	275.90840	13.64188	0.0756569	0.20951127	2.8075735	21	—	—
396600	2001	PG ₅₇	17.7	X	354.76090	152.37226	160.99256	6.00106	0.1437005	0.29562837	2.2317146	21	8 14.9	19.2
396601	2001	QF ₈₅	16.9	X	113.52181	229.69653	123.82601	11.13940	0.2822164	0.21643646	2.7473613	21	—	—
396602	2001	QU ₁₆₄	17.7	X	3.52030	221.86322	88.49170	4.63786	0.1876219	0.29690299	2.2253227	21	9 8.5	19.1
396603	2001	QP ₁₉₂	16.6	X	178.92445	84.77999	274.69793	11.21763	0.2862187	0.22381964	2.6866057	21	2 26.0	21.6
396604	2001	QO ₂₂₉	16.8	X	92.85816	137.68537	194.07558	7.78832	0.2393589	0.21044815	2.7992347	21	—	—
396605	2001	RC ₁₈	16.6	X	276.83372	299.04544	24.17519	30.15525	0.3843641	0.23463915	2.6033690	21	3 30.4	21.2
396606	2001	RD ₃₈	17.0	X	176.69597	143.34611	167.82933	9.24843	0.2649435	0.22033370	2.7148683	21	1 4.3	21.8
396607	2001	RB ₁₄₇	16.3	X	138.14180	87.68335	252.00040	11.99618	0.2141913	0.21699024	2.7426849	21	—	—
396608	2001	RY ₁₅₁	16.4	X	156.41026	261.14093	127.52328	9.48665	0.2842017	0.22321721	2.6914373	21	3 24.5	21.1
396609	2001	SW ₁₁	17.2	X	85.33628	185.11650	180.26475	2.62012	0.1926465	0.21239058	2.7821415	21	—	—
396610	2001	SF ₂₃	18.2	X	315.70801	161.32835	178.55410	6.46709	0.1716971	0.29065517	2.2570994	21	6 28.9	20.3
396611	2001	SG ₉₈	17.3	X	184.37557	238.59851	201.46608	6.24376	0.0660420	0.28483122	2.2877628	21	6 8.5	20.4
396612	2001	SS ₉₉	16.4	X	82.51129	179.81506	184.73473	6.00654	0.1616387	0.21120224	2.7925676	21	—	—
396613	2001	SV ₁₀₃	17.1	X	66.30779	186.40267	187.72288	5.03000	0.1749873	0.20947741	2.8087859	21	—	—
396614	2001	SR ₁₁₅	18.4	X	66.38556	88.29351	203.21642	7.40210	0.3824255	0.30511222	2.1852258	21	12 10.2	22.2
396615	2001	SB ₁₂₆	18.2	X	349.56406	149.69334	176.82128	5.89329	0.2279246	0.29494073	2.2351820	21	8 28.2	19.1
396616	2001	SL ₁₃₆	18.5	X	342.16969	82.17894	231.60600	2.19931	0.2331457	0.29214200	2.2494347	21	7 8.3	19.5
396617	2001	SK ₂₀₃	16.7	X	149.42035	138.40717	172.43785	13.57393	0.1898052	0.21525399	2.7574136	21	—	—
396618	2001	SW ₃₂₅	18.1	X	311.22754	223.51472	136.40605	3.96342	0.2786710	0.29126475	2.2539490	21	7 2.4	20.0
396619	2001	TU ₂₆	17.4	X	233.80055	156.61498	226.84344	7.18506	0.1808616	0.28222968	2.3018000	21	5 12.0	20.9
396620	2001	TX ₂₇	17.0	X	201.03544	82.94033	278.08191	3.83736	0.2808836	0.22565105	2.6720494	21	3 17.9	21.8
396621	2001	TY ₃₁	17.2	X	246.10343	15.34278	2.78882	8.72022	0.2272004	0.28230856	2.3013713	21	5 10.3	20.9
396622	2001	TU ₈₅	17.2	X	231.29202	345.34090	344.40141	6.36560	0.1670467	0.27703870	2.3304641	21	3 2.8	20.8
396623	2001	TP ₁₂₄	16.2	X	212.40029	141.52054	237.56165	10.60748	0.1712415	0.22970965	2.6404821	21	4 18.1	20.5
396624	2001	TE ₁₆₀	17.7	X	289.57456	313.21090	30.48947	7.60963	0.1351490	0.28679430	2.2773111	21	5 26.8	20.4
396625	2001	TK ₂₃₂	17.3	X	284.01789	288.86468	76.50469	8.00598	0.1605991	0.28790802	2.2714345	21	6 16.8	19.8
396626	2001	TX ₂₃₆	18.4	X	338.64482	254.00688	86.50380	3.00247	0.2662172	0.29428755	2.2384881	21	8 21.3	19.0
396627	2001	UB ₁₅	17.3	X	43.79239	146.57550	225.84297	19.01612	0.1183621	0.35257399	1.9844304	21	—	—
396628	2001	UK ₅₆	18.5	X	291.72606	8.57868	0.97717	0.76754	0.2346832	0.28949260	2.2631382	21	6 21.9	21.1
396629	2001	UU ₁₁₃	16.7	X	126.61154	306.94010	36.66762	8.75848	0.2520424	0.21313754	2.7756375	21	—	—
396630	2001	UF ₁₁₇	18.0	X	265.95129	317.32283	50.40333	2.13082	0.2446914	0.28447638	2.2896648	21	5 16.5</	

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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>
396641 2001 WK ₈₇	17.8	X	252.28787	343.50796	27.25576	5.66507	0.2041383	0.28259349	2.2998240	21	5 10.5	21.2
396642 2001 XF ₃₁	17.4	X	50.25435	238.09155	239.65173	18.84384	0.0895275	0.36467727	1.9402763	21	—	—
396643 2001 XS ₁₀₄	16.4	X	170.54002	63.87839	66.26482	19.82289	0.3195392	0.17861840	3.1226160	21	8 4.0	22.4
396644 2001 XQ ₂₃₆	17.6	X	162.45757	17.95030	28.44250	2.64222	0.2071395	0.27173632	2.3606826	21	4 8.1	21.2
396645 2002 AD ₂₁	17.7	X	133.97357	270.92765	297.45867	19.36552	0.0638496	0.38552018	1.8696973	21	10 2.4	20.5
396646 2002 AT ₁₉₃	17.0	X	323.45980	236.02267	298.53310	17.61614	0.0587690	0.35381723	1.9797791	21	—	—
396647 2002 BY ₁₇	15.9	X	199.80340	17.69882	128.97330	16.86742	0.1836725	0.18196877	3.0841688	21	9 16.8	21.1
396648 2002 CH ₃₂	17.7	X	107.64998	24.76834	61.11851	5.54428	0.1841578	0.26417628	2.4055082	21	4 1.4	20.7
396649 2002 CU ₁₈₆	15.8	X	94.59421	291.48278	322.89698	12.02455	0.1726873	0.17992910	3.1074330	21	10 11.9	20.8
396650 2002 EE ₅₁	13.4	X	289.92258	282.28415	151.26605	4.03535	0.0906908	0.08183258	5.2543445	21	9 24.3	20.1
396651 2002 EH ₉₃	16.8	X	43.44894	12.09578	146.95238	8.36887	0.0616299	0.26100951	2.4249260	21	3 18.3	19.5
396652 2002 GU ₁₈₉	16.4	X	122.58852	350.01082	183.17188	10.81523	0.0317634	0.16781934	3.2551778	21	7 22.9	21.3
396653 2002 HO ₁₇	16.4	X	27.85654	130.50352	68.99926	23.63010	0.1068116	0.25964683	2.4334029	21	4 30.4	19.2
396654 2002 JT ₆₀	15.7	X	179.20661	136.12856	41.83630	7.21319	0.0700114	0.17404556	3.1770746	21	10 6.6	20.5
396655 2002 JL ₁₂₂	15.5	X	168.89057	110.83691	80.11561	27.19036	0.1975762	0.17708202	3.1406515	21	10 22.7	21.2
396656 2002 MZ ₃	16.6	X	197.29834	108.38840	233.68337	10.11644	0.3697226	0.23833371	2.5763948	21	2 19.7	21.8
396657 2002 NW ₇	15.9	X	214.69428	127.76224	203.23861	16.19884	0.2614079	0.24274372	2.4055082	21	2 16.9	20.7
396658 2002 NE ₂₃	16.0	X	146.50122	237.21680	126.37951	31.99645	0.2341592	0.23506896	2.6001946	21	2 6.2	20.1
396659 2002 NO ₆₃	17.2	X	230.84097	154.18161	103.54317	10.83467	0.1719776	0.23714657	2.5849858	21	—	—
396660 2002 NC ₇₁	17.4	X	211.68017	174.71028	146.28384	10.42746	0.1383636	0.24076182	2.5590433	21	2 6.4	21.3
396661 2002 OS ₃₃	19.2	X	97.76797	95.82879	187.22244	3.90866	0.2488987	0.32409919	2.0990241	21	12 17.2	22.6
396662 2002 PY ₁₉	17.4	X	244.06046	37.51105	248.65173	3.26242	0.2255883	0.24136157	2.5548023	21	1 21.6	21.8
396663 2002 PH ₂₅	18.1	X	324.60374	215.76361	166.55764	2.35746	0.167124	0.31485759	2.1398990	21	10 8.8	19.2
396664 2002 PX ₃₁	17.5	X	167.16486	56.04383	282.41434	4.04669	0.2490056	0.23407014	2.6075864	21	1 25.7	21.9
396665 2002 PK ₉₃	17.0	X	137.76594	129.33155	222.31683	12.50890	0.2803491	0.22965288	2.6409172	21	1 16.9	21.3
396666 2002 PQ ₁₁₆	16.5	X	123.09522	64.80313	311.80434	10.43259	0.3159891	0.22921982	2.6442424	21	2 8.5	20.4
396667 2002 PS ₁₂₁	17.3	X	269.95168	96.96967	196.25247	6.39197	0.2326634	0.24465695	2.5318094	21	2 18.1	21.4
396668 2002 PZ ₁₅₅	17.3	X	191.97872	352.17474	329.65723	2.58419	0.1721272	0.23679910	2.5875139	21	1 22.9	21.5
396669 2002 QZ ₃₄	16.9	X	165.57520	321.08448	10.70102	5.24782	0.1533688	0.23235686	2.6203887	21	1 10.6	20.9
396670 2002 QN ₇₀	18.5	X	24.78023	221.47930	103.52008	0.36365	0.1559254	0.31652157	2.1323926	21	11 10.4	20.6
396671 2002 RQ ₁	16.7	X	123.13934	178.45628	204.57555	12.81998	0.2642164	0.23096890	2.6308760	21	2 6.8	20.8
396672 2002 RW ₅₀	17.2	X	218.82706	325.97083	14.83116	7.38828	0.2866951	0.24005657	2.5640529	21	3 9.2	21.8
396673 2002 RR ₈₄	17.1	X	155.88538	190.56348	178.30206	7.72529	0.3594459	0.23288171	2.6164502	21	2 28.5	21.8
396674 2002 RM ₉₈	16.3	X	170.19463	303.81796	11.22612	12.94446	0.2711995	0.22980471	2.6397538	21	1 5.3	21.0
396675 2002 RH ₁₇₆	19.1	X	48.41839	141.73008	195.52452	4.55024	0.2735630	0.32046837	2.1148485	21	—	—
396676 2002 RF ₁₈₄	15.7	X	175.37694	354.09443	325.62568	16.99461	0.1881491	0.17879082	3.1206082	21	1 18.3	20.9
396677 2002 RQ ₁₈₄	16.2	X	209.48530	116.36106	208.73661	12.86930	0.2329655	0.23742950	2.5829318	21	2 6.9	20.9
396678 2002 RP ₁₉₂	18.4	X	353.39093	204.90661	143.45619	3.44447	0.1213245	0.31340906	2.1464874	21	10 15.3	19.9
396679 2002 RL ₂₂₉	16.9	X	212.62449	290.86164	40.53931	12.14540	0.1876901	0.23793133	2.5792986	21	2 26.5	21.4
396680 2002 ST	16.7	X	180.03301	91.40078	291.40392	26.86128	0.3780498	0.23561732	2.5961577	21	3 17.1	22.2
396681 2002 SK ₅	17.8	X	188.82068	150.44976	186.30441	4.92317	0.3246191	0.23510382	2.5999362	21	2 10.9	22.7
396682 2002 SW ₆₂	16.9	X	130.66803	201.13827	157.91871	7.30754	0.2126247	0.22996086	2.6385587	21	1 13.2	20.8
396683 2002 TJ ₁	17.2	X	166.74781	301.31751	56.19904	4.37910	0.2818118	0.23370201	2.6103240	21	2 21.2	21.7
396684 2002 TM ₁₄	18.2	X	293.17070	312.13372	68.71201	2.96456	0.1741976	0.30632850	2.1794376	21	7 24.2	20.4
396685 2002 TQ ₁₄	16.7	X	190.80363	335.81549	7.09232	13.24533	0.2942843	0.23706938	2.5855468	21	2 23.7	21.5
396686 2002 TJ ₅₁	17.4	X	151.20167	337.53931	22.94098	5.00550	0.3949570	0.23006991	2.6377249	21	2 21.1	22.2
396687 2002 TJ ₆₃	16.5	X	174.48380	305.72812	6.07431	13.42005	0.1717244	0.22868142	2.6483912	21	—	—
396688 2002 TL ₇₈	17.1	X	118.39604	215.25108	153.84314	6.28453	0.2730735	0.22644472	2.6658022	21	1 20.6	20.8
396689 2002 TA ₉₈	18.2	X	56.76870	191.97297	101.20589	1.80770	0.1195178	0.31451153	2.1414684	21	11 4.9	20.5
396690 2002 TC ₁₀₆	18.2	X	269.80739	192.51618	202.29986	2.83202	0.1466680	0.30489826	2.1862480	21	7 12.1	20.8
396691 2002 TL ₁₂₅	16.6	X	206.28022	81.35090	227.37585	12.67984	0.1936150	0.23426503	2.6061400	21	1 16.9	21.2
396692 2002 TE ₁₄₂	17.4	X	186.50046	299.49316	36.88046	4.65338	0.2621259	0.23489547	2.6014748	21	2 9.9	22.0
396693 2002 TN ₁₄₆	18.2	X	1.67536	86.65940	246.77291	3.01648	0.1572934	0.31140080	2.1557062	21	10 8.5	19.7
396694 2002 TJ ₁₅₆	17.3	X	179.65802	46.16721	277.06669	4.60517	0.2328821	0.23311509	2.6147035	21	1 17.1	21.6
396695 2002 TS ₁₇₅	16.3	X	145.75685	131.88202	238.51996	12.17746	0.2003395	0.23273116	2.6175783	21	2 5.5	20.5
396696 2002 TZ ₂₂₀	16.2	X	134.12761	116.60227	250.00111	11.30880	0.1844230	0.22939508	2.6428954	21	1 20.5	20.2
396697 2002 TM ₂₃₅	15.6	X	243.19205	59.08635	251.75625	12.54387	0.1846542	0.23830431	2.5766066	21	2 16.1	20.1
396698 2002 TR ₂₅₄	16.7	X	94.36572	192.04496	195.67520	13.75646	0.2396585	0.22394971	2.6855653	21	1 6.7	20.1
396699 2002 TG ₂₆₂	16.7	X	54.22764	217.86494	183.89396	8.26726	0.2072058	0.22017400	2.7161809	21	—	—
396700 2002 TY ₂₇₁	16.7	X	196.01274	48.78205	267.69738	3.35550	0.2472085	0.23305438	2.6151577	21	1 22.2	21.3
396701 2002 TV ₂₉₇	15.6	X	326.91635	202.38623	225.21682	9.35156	0.0904926	0.15770490	3.3929120	21	11 15.9	19.9
396702 2002 TJ ₃₅₂	18.0	X	197.96144	17.77418	293.96192	3.83794	0.2309411	0.23498459	2.6008170	21	1 17.9	22.3
396703 2002 TU ₃₅₃	16.7	X	154.40988	136.78182	195.31116	11.51383	0.0569853	0.22942041	2.6427009	21	—	—
396704 2002 TJ ₃₆₆	17.4	X	150.45469	179.67783	138.40511	7.00195	0.0389900	0.22344101	2.6896398	21	—	—
396705 2002 TG ₃₇₅	16.8	X	113.83140	183.07907	174.37478	14.82869	0.1797427	0.22315901	2.6919052	21	—	—
396706 2002 UG ₁₂	15.6	X	200.36002	55.94581	266.36926	17.49686	0.3494718	0.23368973	2.6104155	21	1 28.9	20.8
396707 2002 UU ₃₆	19.7	X	144.73026	211.38323	31.18749	4.03622	0.0304347	0.47405828	1.6289768	21	—	—
396708 2002 UM ₇₄	18.4	X	357.49535	275.62636	65.55907	4.69746	0.2466637	0.31078925	2.1585332	21	10 30.1	19.5
396709 2002 VZ ₃₉	16.7	X	31.34036	130.65860	282.73185	3.22839	0.3359763	0.21775441	2.7362645	21	—	—
396710 2002 VC ₆₄	16.2	X	153.81905	97.43246	249.44693	10.89169	0.2353652	0.22819371	2.6521633	21	1 21.7	20.6
396711 2002 VF ₇₁	16.7	X	139.23145	148.56861	215.32771	17.04582	0.2238790	0.22781468	2.6551042	21	1 25.3	21.1
396712 2002 VZ ₈₆	15.9	X	291.59810	234.54422	243.99598	9.84581	0.1117289	0.20967645	2.8060987	21	12 6.3	19.2
396713 2002 VK ₉₈	17.6	X	343.25698	270.94861	239.24708	19.28193	0.0925327	0.37991937	1.8880280	21	—	

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
396721	2002	XG ₅₀	17.4	X	293.65602	120.83641	249.02118	6.25153	0.1208676	0.30108942	2.2046470	21	7 15.0	19.6
396722	2002	XV ₁₁₇	16.8	X	330.58568	0.87541	83.04577	8.20802	0.1387907	0.21054880	2.7983425	21	12 25.1	19.7
396723	2003	AE ₂₃	18.7	X	316.56228	230.94803	253.44405	2.51514	0.3269645	0.36700281	1.9320712	21	—	—
396724	2003	DT ₂₄	16.2	X	138.74355	99.59181	119.45914	12.71520	0.3382784	0.18625806	3.0366355	21	10 26.6	22.0
396725	2003	EZ ₁₀	17.0	X	11.80323	304.36000	303.36758	4.67434	0.0891202	0.28346895	2.2950864	21	5 31.0	19.2
396726	2003	FS ₂₁	17.0	X	236.79216	144.14513	135.27794	11.99583	0.1412144	0.26438375	2.4042495	21	1 6.8	20.7
396727	2003	FA ₄₈	18.0	X	55.14544	312.33436	214.43146	1.65573	0.1576212	0.27544362	2.3394526	21	4 25.0	20.1
396728	2003	HZ ₂₅	18.1	X	19.76191	282.32257	265.34343	1.34110	0.1622762	0.27141184	2.3625637	21	3 11.5	19.9
396729	2003	KG ₂	15.7	X	98.73837	150.26947	102.51603	15.27560	0.0419269	0.17987401	3.1080675	21	10 13.7	20.5
396730	2003	KX ₁₆	18.5	X	322.80677	28.33157	94.28892	23.62133	0.5790724	0.63944585	1.3343411	21	—	—
396731	2003	MV ₁₂	15.3	X	73.77194	34.37134	294.10474	13.82834	0.2738481	0.17607620	3.1526005	21	—	—
396732	2003	OA ₁₆	15.5	X	66.34516	57.98973	285.46649	10.12112	0.2907979	0.17566728	3.1574911	21	—	—
396733	2003	PK ₈	17.8	X	261.14105	143.70733	174.56598	4.45926	0.2165247	0.26012432	2.4304242	21	3 14.2	21.7
396734	2003	PK ₉	17.5	X	276.96592	192.94164	167.66631	5.59219	0.2457800	0.26604803	2.3942125	21	5 21.5	20.9
396735	2003	QD ₁₁	17.1	X	343.59078	178.78761	142.73172	6.49118	0.2449102	0.27207716	2.3587106	21	7 26.2	18.2
396736	2003	QQ ₅₇	16.0	X	23.70775	29.76892	347.36514	14.61540	0.1210933	0.22928024	2.6437779	21	12 27.2	19.6
396737	2003	QV ₁₀₀	17.9	X	297.56584	339.11233	357.17782	3.50400	0.2666764	0.26636272	2.3923263	21	5 7.5	20.9
396738	2003	RF ₈	15.0	X	96.84775	40.89746	291.00107	17.50460	0.3089489	0.17753930	3.1352563	21	—	—
396739	2003	RV ₁₉	16.2	X	341.03086	41.21788	309.91058	0.72068	0.2561289	0.16245445	3.3264549	21	8 26.1	19.2
396740	2003	SD ₉	18.2	X	280.05419	108.56470	188.60758	10.59793	0.2682558	0.25839184	2.4412758	21	2 26.9	22.1
396741	2003	SE ₁₀	17.2	X	290.45485	110.12449	231.65925	1.50642	0.2255150	0.26428838	2.4048279	21	5 13.6	20.4
396742	2003	SQ ₃₃	16.9	X	78.33960	245.60534	167.43609	14.61403	0.1641946	0.23979602	2.5659099	21	—	—
396743	2003	SC ₈₅	17.3	X	116.87679	176.82115	220.01803	19.90803	0.0871587	0.35716166	1.9674007	21	—	—
396744	2003	SF ₈₇	15.5	X	78.72625	172.72340	155.55750	17.17042	0.2225443	0.17472966	3.1687766	21	12 31.7	20.8
396745	2003	SH ₉₇	15.9	X	25.90989	160.66106	246.64294	9.61620	0.0960890	0.17569511	3.1571577	21	—	—
396746	2003	SP ₁₄₀	16.8	X	240.58729	128.85049	252.37847	11.96192	0.0712812	0.25985255	2.4321185	21	5 26.9	19.9
396747	2003	SQ ₂₁₉	16.7	X	111.03172	300.57621	15.11786	6.16960	0.0902600	0.23248841	2.6194001	21	—	—
396748	2003	SJ ₂₈₁	15.7	X	122.64875	61.92118	247.48158	8.27655	0.0819710	0.17836564	3.1255654	21	—	—
396749	2003	SV ₃₀₄	18.2	X	229.08347	78.65672	255.93000	2.68832	0.2956119	0.25386302	2.4702245	21	3 4.4	22.8
396750	2003	SM ₃₂₇	16.1	X	69.63189	124.63780	216.34716	25.23895	0.2555802	0.17467459	3.1694426	21	—	—
396751	2003	SZ ₃₉₅	17.1	X	58.34994	230.41818	180.13224	21.88488	0.0751703	0.23487170	2.6016503	21	—	—
396752	2003	TC ₅	17.5	X	101.22529	30.44124	359.26175	9.09719	0.1702221	0.23880919	2.5729738	21	1 8.8	20.7
396753	2003	UZ ₃₁	17.0	X	96.86906	333.19154	22.39741	15.47566	0.1237787	0.23364970	2.6107136	21	—	—
396754	2003	UJ ₅₅	15.0	X	57.68926	97.64461	275.06798	11.71101	0.2882342	0.17283428	3.1919013	21	—	—
396755	2003	UJ ₅₆	17.4	X	201.65376	254.40640	120.18336	5.77603	0.2960722	0.25265025	2.4781232	21	4 6.1	22.0
396756	2003	UV ₆₂	16.9	X	161.51376	280.94114	68.49812	10.60581	0.2451178	0.24450928	2.5328287	21	2 5.1	21.2
396757	2003	UR ₁₂₆	17.5	X	283.36589	93.14189	252.13389	5.45958	0.2448010	0.26214598	2.4179125	21	5 6.3	20.8
396758	2003	UN ₂₄₅	16.6	X	254.61610	25.43145	62.05811	8.76279	0.1938870	0.21049341	2.7988334	21	8 29.4	20.8
396759	2003	UC ₂₅₆	17.1	X	192.69162	177.18675	243.81184	5.29542	0.0952293	0.25571146	2.4583059	21	5 23.8	20.7
396760	2003	UF ₃₃₀	16.9	X	53.16308	211.69822	221.84272	12.33270	0.1118243	0.23646371	3.1589959	21	—	—
396761	2003	UD ₃₄₁	16.3	X	52.74757	131.29812	238.16825	10.14873	0.1473349	0.17858167	3.1230442	21	—	—
396762	2003	UQ ₃₅₂	17.4	X	138.91106	290.51036	80.76830	4.72675	0.0814627	0.24297021	2.5435134	21	1 19.5	20.7
396763	2003	UB ₃₇₅	17.1	X	29.62811	258.58404	192.15496	21.23328	0.1156666	0.23908354	2.5710050	21	—	—
396764	2003	UQ ₃₇₅	17.1	X	232.97088	12.95142	192.54559	15.13337	0.0763173	0.23521775	2.5990980	21	—	—
396765	2003	WN ₃₆	17.3	X	52.89678	150.59103	257.07100	5.80867	0.1729541	0.28625350	2.2801785	21	—	—
396766	2003	WD ₆₈	17.1	X	82.23258	162.40200	247.46404	3.26236	0.1548713	0.23492814	2.6012366	21	1 2.2	19.9
396767	2003	WV ₉₄	16.9	X	62.46724	172.10923	240.19069	9.95066	0.1152413	0.23302708	2.6153619	21	—	—
396768	2003	WF ₁₀₄	17.2	X	160.83390	121.63551	240.73705	10.87209	0.2110440	0.24191041	2.5509367	21	2 9.9	21.5
396769	2003	WW ₁₃₄	16.8	X	66.78726	188.74353	240.29905	10.50912	0.2170409	0.23464491	2.6033264	21	1 6.2	19.2
396770	2003	WY ₁₄₁	16.4	X	14.33989	328.40336	84.14305	10.84829	0.2797958	0.22301720	2.6930462	21	—	—
396771	2003	WP ₁₄₈	16.6	X	273.22322	45.32156	279.88052	7.41474	0.2288155	0.25593774	2.4568567	21	3 29.6	20.5
396772	2003	WT ₁₆₂	16.2	X	345.68703	319.95073	73.98766	12.79527	0.0954431	0.21847276	2.7302633	21	11 16.3	19.4
396773	2003	YB ₁₇	16.9	X	311.54930	6.29165	87.32467	8.67712	0.2693289	0.21664337	2.7456116	21	11 26.6	19.0
396774	2003	YH ₂₄	16.0	X	9.12679	18.33784	85.36414	15.23484	0.0767519	0.22958026	2.6414741	21	—	—
396775	2003	YU ₁₁₉	16.3	X	61.05982	112.01297	304.11511	12.07858	0.2622583	0.22907213	2.6453789	21	—	—
396776	2003	YA ₁₄₇	16.0	X	182.87825	322.09036	21.39479	13.61237	0.1900579	0.24240409	2.5474720	21	2 15.6	20.4
396777	2004	BZ ₄₂	16.3	X	240.00696	17.41392	163.87279	9.68466	0.2088748	0.21187342	2.7866670	21	12 3.5	20.4
396778	2004	BQ ₁₁₂	16.1	X	187.14450	236.99804	114.02040	15.12353	0.2083833	0.23897651	2.5717727	21	2 26.9	20.6
396779	2004	CO ₈₈	16.8	X	127.01865	329.84768	59.50797	4.95488	0.2550676	0.23450561	2.6043573	21	2 23.2	20.7
396780	2004	CO ₁₂₂	16.7	X	144.79075	176.69761	142.38406	7.09066	0.0342479	0.21947629	2.7219344	21	—	—
396781	2004	DQ ₅₇	16.7	X	352.12757	310.79765	146.64766	12.03085	0.1462422	0.21964587	2.7205331	21	—	—
396782	2004	DZ ₅₉	16.8	X	154.45287	87.34165	323.25326	10.96503	0.2826589	0.24223722	2.5486418	21	4 7.9	21.4
396783	2004	EH ₆₇	16.5	X	296.30615	62.06116	168.61892	14.56624	0.0422198	0.22612904	2.6682826	21	1 24.3	20.4
396784	2004	EG ₇₀	17.5	X	356.75175	319.74478	1.10055	8.72822	0.0934256	0.30605244	2.1807480	21	9 3.4	19.3
396785	2004	FS ₄₃	17.8	X	33.24004	256.69385	33.25796	6.51036	0.1825841	0.30226385	2.1989326	21	10 5.9	19.8
396786	2004	FV ₈₁	17.9	X	30.49145	244.75594	332.41728	4.43811	0.1251484	0.29446606	2.2375834	21	5 18.4	19.7
396787	2004	FH ₁₁₇	16.7	X	204.39688	343.78175	219.22427	7.34573	0.2221913	0.20609597	2.8385054	21	11 21.8	21.5
396788	2004	GU	16.8	X	279.46669	275.62336	23.34440	26.44489	0.1975133	0.28543633	2.2845284	21	3 18.7	20.4
396789	2004	GH ₆₀	17.9	X	112.56119	347.95992	177.80445	5.25076	0.1342060	0.29919066	2.2139647	21	7 16.4	20.8
396790	2004	HD ₃	17.8	X	9.81781	115.72090	104.29305	3.73136	0.1711882	0.28888293	2.2663212			

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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>
396801 2004 <i>PM</i> ₆	17.4	X	246.96860	208.99724	176.01948	5.98553	0.2713976	0.27971015	2.3156019	21	5 20.9	21.2
396802 2004 <i>PX</i> ₁₃	18.2	X	323.53674	186.65498	123.48252	3.63041	0.2502415	0.28449028	2.2895902	21	5 13.9	20.3
396803 2004 <i>PS</i> ₄₆	17.2	X	264.26933	182.42388	168.56814	6.35784	0.1850267	0.27887561	2.3202192	21	5 1.8	20.6
396804 2004 <i>PS</i> ₄₈	17.7	X	241.98294	344.79328	17.65580	2.40839	0.2418734	0.27682491	2.3316638	21	4 18.4	21.4
396805 2004 <i>PM</i> ₅₄	17.9	X	286.18558	23.92773	312.15667	6.99813	0.2067604	0.28080832	2.3095608	21	4 28.5	21.1
396806 2004 <i>PW</i> ₆₂	15.7	X	4.98335	217.16819	128.60860	11.26353	0.1419300	0.17879596	3.1205483	21	10 13.6	19.6
396807 2004 <i>PX</i> ₆₉	16.9	X	189.04827	224.71962	163.77806	23.81238	0.2633736	0.26912082	2.3759530	21	4 13.9	21.3
396808 2004 <i>PW</i> ₈₇	16.4	X	11.49680	262.71512	84.27164	5.79292	0.1777713	0.17924659	3.1153161	21	10 27.5	20.0
396809 2004 <i>PV</i> ₈₉	17.6	X	276.03831	11.65723	340.86834	6.27757	0.2604133	0.27928473	2.3179528	21	5 3.1	21.1
396810 2004 <i>PS</i> ₁₀₀	17.6	X	346.57771	44.16550	315.81969	7.38524	0.3275631	0.29113491	2.2546191	21	11 4.1	18.5
396811 2004 <i>PJ</i> ₁₀₂	17.8	X	249.41417	192.66825	185.10588	5.72578	0.2127520	0.27885970	2.3203075	21	5 18.5	21.3
396812 2004 <i>PT</i> ₁₀₂	16.1	X	25.79072	167.07021	176.91665	18.53449	0.2541237	0.17898462	3.1183552	21	11 27.5	20.2
396813 2004 <i>PS</i> ₁₁₂	15.2	X	349.94179	244.31643	140.34216	27.71405	0.2113714	0.17905095	3.1175849	21	11 16.1	19.2
396814 2004 <i>QX</i> ₁₁	17.2	X	205.18631	311.77098	83.93519	8.02276	0.2087838	0.27392199	2.3481083	21	5 3.7	21.1
396815 2004 <i>QG</i> ₂₄	16.1	X	258.99408	135.15275	247.21289	22.53720	0.3062841	0.27761092	2.3272606	21	5 23.7	19.9
396816 2004 <i>QU</i> ₂₈	14.1	X	9.54627	256.48275	126.39977	8.40206	0.1774755	0.08319489	5.1968272	21	11 17.4	20.2
396817 2004 <i>RJ</i> ₂	16.2	X	101.79748	192.33794	260.13336	23.26089	0.2350300	0.26224180	2.4172325	21	3 28.9	19.9
396818 2004 <i>RJ</i> ₃	17.9	X	83.31153	194.89753	220.15713	19.87784	0.1622063	0.37249204	1.9130429	21	—	—
396819 2004 <i>RH</i> ₅₀	16.7	X	19.50343	320.97440	17.79767	2.18624	0.2727721	0.17768113	3.1335877	21	11 10.1	20.2
396820 2004 <i>RS</i> ₅₀	16.5	X	350.44820	271.60391	91.87830	2.82835	0.2268751	0.17502085	3.1652610	21	10 10.1	19.6
396821 2004 <i>RP</i> ₅₁	17.2	X	245.55106	176.51409	156.71561	7.27785	0.1416351	0.27232294	2.3572912	21	3 23.9	20.7
396822 2004 <i>RH</i> ₅₆	17.1	X	186.43739	352.45438	23.97712	6.43332	0.2496767	0.26719235	2.3873717	21	3 25.3	21.2
396823 2004 <i>RJ</i> ₅₈	16.1	X	46.75840	158.41255	167.15968	16.69478	0.2234432	0.18013278	3.1050902	21	11 29.2	20.7
396824 2004 <i>RR</i> ₈₇	16.7	X	34.03159	157.89376	159.56843	1.26966	0.1760916	0.17821484	3.1273283	21	10 23.4	20.5
396825 2004 <i>RD</i> ₉₁	16.2	X	31.42695	115.25861	235.11176	8.38154	0.2387322	0.18180847	3.0859814	21	12 9.5	20.2
396826 2004 <i>RN</i> ₉₃	17.8	X	321.50747	102.95864	220.54733	5.49897	0.1801125	0.28468293	2.2885572	21	6 12.8	19.9
396827 2004 <i>RA</i> ₁₁₂	15.4	X	325.79289	139.09657	246.65991	14.59790	0.0991954	0.17484406	3.1673942	21	9 17.8	19.7
396828 2004 <i>RE</i> ₁₁₉	16.8	X	39.32582	183.47394	140.92571	1.64964	0.1446463	0.17971464	3.1099046	21	11 4.5	20.8
396829 2004 <i>RY</i> ₁₄₃	16.4	X	40.24817	196.83497	159.53356	7.68023	0.2951153	0.18096981	3.0955082	21	—	—
396830 2004 <i>RV</i> ₁₄₆	16.5	X	37.57599	148.23985	189.63761	6.32627	0.1637246	0.18016192	3.1047553	21	11 22.1	20.6
396831 2004 <i>RJ</i> ₁₅₄	17.6	X	310.66840	90.76651	251.79961	4.96318	0.2372152	0.28418222	2.2912446	21	6 11.6	19.8
396832 2004 <i>RS</i> ₁₅₄	16.2	X	34.41084	196.74223	204.05817	8.23827	0.1084520	0.18827246	3.0149366	21	—	—
396833 2004 <i>RG</i> ₁₅₅	17.9	X	184.09546	152.73062	243.95861	1.80194	0.1938013	0.26997095	2.3709626	21	4 13.7	21.8
396834 2004 <i>RA</i> ₁₅₈	17.4	X	284.22708	11.41726	259.19956	4.03936	0.0890959	0.26959176	2.3731852	21	2 15.7	20.5
396835 2004 <i>RO</i> ₁₆₁	16.4	X	65.42096	25.42518	333.74727	10.63560	0.1067959	0.19003650	2.9962500	21	—	—
396836 2004 <i>RS</i> ₁₆₃	17.5	X	211.01938	187.24337	193.91557	5.78383	0.2426951	0.27062632	2.3671332	21	4 17.9	21.4
396837 2004 <i>RN</i> ₁₆₈	16.1	X	348.68289	186.67893	189.79172	10.79333	0.2175839	0.17761448	3.1343715	21	10 24.5	19.2
396838 2004 <i>RG</i> ₁₈₃	17.8	X	301.98835	70.11286	270.28860	1.22957	0.2473049	0.28233592	2.3012226	21	5 22.7	20.4
396839 2004 <i>RV</i> ₁₈₆	17.6	X	276.66822	31.35019	305.54371	5.99366	0.1751972	0.27731858	2.3288959	21	4 23.1	21.0
396840 2004 <i>RP</i> ₁₉₇	16.0	X	8.21373	146.77073	206.31472	4.67927	0.1731611	0.17568853	3.1572365	21	10 26.3	19.5
396841 2004 <i>RV</i> ₁₉₈	15.7	X	24.57786	161.29193	178.79999	18.57093	0.1365274	0.17814787	3.1281120	21	11 4.0	19.9
396842 2004 <i>RE</i> ₂₀₅	16.5	X	25.81302	128.57333	232.20666	12.38851	0.3560467	0.18190677	3.0848696	21	12 30.8	20.6
396843 2004 <i>RL</i> ₂₁₄	15.3	X	29.27290	89.36822	252.92863	10.97136	0.1579392	0.17850485	3.1239402	21	11 12.7	19.2
396844 2004 <i>RA</i> ₂₂₉	16.4	X	70.25601	300.51234	358.69867	4.57364	0.2337396	0.17882134	3.1202531	21	11 20.9	21.2
396845 2004 <i>RW</i> ₂₃₅	17.6	X	338.27251	17.07560	282.63064	4.61515	0.2115210	0.28332881	2.2958432	21	6 3.9	19.4
396846 2004 <i>RN</i> ₂₃₉	17.7	X	125.56678	140.52701	301.15998	1.06991	0.0613228	0.26832978	2.3806203	21	3 27.8	20.5
396847 2004 <i>RG</i> ₂₅₂	17.5	X	298.95835	245.48479	216.17525	19.87513	0.1002481	0.35728458	1.9669495	21	—	—
396848 2004 <i>RH</i> ₂₆₇	17.9	X	225.23773	192.86170	182.82583	5.85843	0.1250560	0.27443687	2.3451704	21	4 27.9	21.3
396849 2004 <i>RP</i> ₂₈₄	16.2	X	37.52496	243.53689	118.17103	1.02964	0.3588914	0.18191574	3.0847682	21	—	—
396850 2004 <i>RF</i> ₃₀₃	16.4	X	139.79123	272.71217	288.79658	8.09837	0.0316197	0.17451246	3.1714054	21	9 14.9	21.1
396851 2004 <i>RO</i> ₃₃₆	17.8	X	188.44976	216.02499	241.05264	2.53087	0.1265512	0.27658832	2.3329933	21	7 5.8	21.1
396852 2004 <i>RS</i> ₃₃₉	17.6	X	178.19699	98.74087	241.87593	17.01458	0.1157109	0.37827736	1.8934877	21	—	—
396853 2004 <i>SG</i> ₉	17.7	X	268.80373	124.01557	226.41337	23.31224	0.3052439	0.27784936	2.3259290	21	4 19.9	21.5
396854 2004 <i>SR</i> ₉	16.2	X	44.20747	128.54629	207.63609	13.47936	0.2607532	0.17943130	3.1131777	21	12 11.3	20.7
396855 2004 <i>SW</i> ₁₅	18.1	X	310.64939	189.91800	128.91937	5.46409	0.2529755	0.28159958	2.3052324	21	5 5.7	20.8
396856 2004 <i>SM</i> ₂₂	15.4	X	354.61025	330.65789	20.88470	15.20704	0.1442980	0.17149794	3.2084610	21	9 30.0	19.1
396857 2004 <i>SM</i> ₅₆	16.4	X	58.98382	118.13185	188.83585	16.27802	0.2269120	0.18029923	3.1031788	21	11 20.7	21.1
396858 2004 <i>TC</i> ₁	17.6	X	339.56252	221.16369	93.22041	7.03751	0.2679600	0.28498628	2.2869329	21	6 26.2	18.3
396859 2004 <i>TG</i> ₅	16.4	X	85.32586	122.97215	214.83127	9.84990	0.2417056	0.18423531	3.0588215	21	—	—
396860 2004 <i>TH</i> ₁₁	17.1	X	192.39327	39.71865	237.34410	19.29522	0.0273107	0.36803911	1.9284427	21	—	—
396861 2004 <i>TT</i> ₁₆	16.8	X	186.95402	8.07693	13.00922	14.73561	0.1949731	0.26416472	2.4055783	21	3 29.6	20.6
396862 2004 <i>TK</i> ₁₇	16.7	X	256.99153	120.57733	244.73513	7.56765	0.2338657	0.21638075	2.7478328	21	5 9.2	21.0
396863 2004 <i>TR</i> ₂₀	17.9	X	168.52817	189.38568	220.27981	3.58593	0.1949797	0.26603371	2.3942984	21	4 16.8	21.5
396864 2004 <i>TO</i> ₂₅	16.2	X	33.38737	90.15725	199.38457	12.45090	0.1177561	0.17043575	3.2217778	21	9 3.9	20.4
396865 2004 <i>TU</i> ₃₁	17.5	X	285.87381	77.14627	216.16663	9.77048	0.2420546	0.27233509	2.3572210	21	2 26.9	21.2
396866 2004 <i>TN</i> ₃₂	16.3	X	32.73668	159.09004	223.23870	8.71355	0.0564978	0.18183181	3.0857174	21	12 23.8	20.6
396867 2004 <i>TM</i> ₃₆	18.0	X	226.38781	160.12665	198.73555	6.65106	0.1416796	0.27003713	2.3705751	21	4 5.3	21.7
396868 2004 <i>TA</i> ₄₄	18.2	X	203.09371	49.20063	344.46254	1.85121	0.2269164	0.26973761	2.3723297	21	4 26.2	22.1
396869 2004 <i>TX</i> ₄₅	17.5	X	265.92831	289.41130	23.75941	6.89226	0.1455809	0.26941227	2.3742392	21	3 19.7	20.8
396870 2004 <i>TL</i> ₆₁	17.0	X	297.53587	306.23757	23.38287	7.43144	0.1512716	0.27916003	2.3186430	21	5 15.3	19.9
396871 2004 <i>TQ</i> ₆₁	15.6	X	85.78903	293.99983	19.84966	8.98634	0.12673					

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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>
396881 2004 TW ₁₅₈	17.7	X	132.81301	94.69677	326.24927	1.25086	0.1355749	0.26100022	2.4249836	21	3 20.6	20.9
396882 2004 TR ₁₉₂	17.0	X	209.31994	266.54651	24.05351	9.28043	0.1350358	0.25804350	2.4434724	21	—	—
396883 2004 TN ₂₆₂	16.1	X	19.52692	278.78451	78.45319	10.71323	0.2349251	0.17843263	3.1247830	21	11 29.5	19.8
396884 2004 TW ₂₆₄	17.0	X	121.34664	224.07515	219.47220	5.65422	0.0962250	0.26268086	2.4146291	21	3 29.9	20.1
396885 2004 TL ₂₇₆	17.9	X	299.61602	272.32395	52.49222	2.58945	0.1995238	0.27637689	2.3341830	21	5 5.4	20.8
396886 2004 TR ₃₀₇	15.0	X	3.50822	114.35860	237.15689	12.37259	0.0864656	0.17247702	3.1963075	21	10 4.9	19.2
396887 2004 TV ₃₁₀	17.1	X	178.88826	123.99599	254.09726	4.05958	0.2322973	0.26382052	2.4076702	21	3 17.7	21.1
396888 2004 VZ ₁₇	15.5	X	353.62098	138.22775	226.54124	21.89201	0.0932762	0.17098690	3.2148508	21	10 7.1	19.8
396889 2004 XH ₄₁	15.6	X	85.30421	89.56219	226.06578	21.17384	0.0272808	0.17651197	3.1474096	21	12 2.4	20.2
396890 2004 VT ₆₃	15.2	X	2.48057	297.75741	62.87177	27.48431	0.2645266	0.17233576	3.1980539	21	11 10.1	18.6
396891 2004 VF ₇₉	18.0	X	143.08225	298.19953	46.93597	22.49175	0.0618188	0.36946829	1.9234664	21	—	—
396892 2004 WR ₈	17.2	X	18.30835	335.97813	56.16459	22.92943	0.0954896	0.35439994	1.9776084	21	—	—
396893 2004 XL ₁₆	17.7	X	147.42857	112.83690	274.50278	18.87391	0.1027818	0.37304530	1.9111510	21	1 21.8	19.7
396894 2004 XQ ₃₀	17.8	X	92.92495	345.53846	93.68615	24.02270	0.1180577	0.37362729	1.9091658	21	1 16.8	19.1
396895 2004 XJ ₃₃	16.7	X	8.90506	21.61539	76.45922	15.81718	0.0691699	0.24253525	2.5465535	21	—	—
396896 2004 XO ₅₆	17.2	X	297.33392	227.28333	319.06111	3.70898	0.1292327	0.24113987	2.5563679	21	—	—
396897 2004 XJ ₇₇	15.5	X	91.73671	94.14081	261.54029	8.73132	0.1005270	0.18124553	3.0923681	21	—	—
396898 2004 XK ₈₂	17.4	X	171.10726	7.39302	23.83061	6.72679	0.2451126	0.26271232	2.4144363	21	3 31.2	21.4
396899 2004 XV ₉₁	18.1	X	323.88542	52.78395	286.00348	1.71476	0.2214376	0.27887583	2.3202180	21	7 6.6	19.6
396900 2004 XH ₁₅₉	18.2	X	199.25518	207.43129	176.50431	0.87987	0.1828818	0.26286141	2.4135233	21	4 12.1	22.1
396901 2004 XV ₁₆₁	15.2	X	28.86772	289.91659	86.00928	27.57434	0.2220624	0.17423259	3.1748006	21	12 31.5	19.4
396902 2004 YE ₁₀	17.4	X	80.04457	215.53889	250.04813	7.92238	0.1713501	0.25579857	2.4577478	21	3 10.5	20.2
396903 2004 YD ₂₁	17.3	X	35.29766	323.69431	121.04364	2.92570	0.1511151	0.24073254	2.5592508	21	—	—
396904 2004 YR ₂₁	17.4	X	295.52946	236.64008	171.45538	7.57766	0.1462263	0.26932328	2.3747621	21	6 21.1	20.2
396905 2005 AG ₂₇	17.1	X	332.15735	87.97272	289.91900	22.04869	0.2444086	0.28363596	2.2941854	21	9 19.9	19.4
396906 2005 AT ₄₉	17.1	X	340.71898	247.57550	246.73884	3.40129	0.1865626	0.23759376	2.5817411	21	—	—
396907 2005 AJ ₅₁	17.6	X	327.75548	236.94197	247.01953	4.98448	0.3098253	0.23482347	2.6020065	21	—	—
396908 2005 AO ₈₂	17.5	X	326.89361	41.54766	109.08356	5.66995	0.1643955	0.23711738	2.5851979	21	—	—
396909 2005 BO ₁₀	17.5	X	50.84974	160.26431	277.83890	3.30649	0.2336785	0.24356369	2.5393800	21	—	—
396910 2005 BV ₁₃	16.8	X	314.20596	359.11786	133.85179	8.74802	0.1448183	0.23257364	2.6187602	21	—	—
396911 2005 BH ₂₀	17.8	X	293.68862	21.97255	117.97475	4.09062	0.1918641	0.23024147	2.6364144	21	—	—
396912 2005 CX ₄₁	17.3	X	323.25537	47.71468	97.80479	4.65378	0.2017624	0.23465744	2.6032337	21	—	—
396913 2005 ED ₃₆	16.5	X	275.53631	219.16061	322.24413	14.06624	0.1289812	0.22907409	2.6453638	21	—	—
396914 2005 EG ₄₃	17.0	X	271.34047	196.47761	356.11340	6.12101	0.1644299	0.22966766	2.6408039	21	—	—
396915 2005 EK ₆₀	16.9	X	262.67354	6.76373	191.44451	6.16715	0.1749257	0.22852843	2.6495730	21	—	—
396916 2005 ES ₆₄	17.3	X	354.08947	268.19061	202.90333	4.70583	0.2053168	0.23427669	2.6060535	21	—	—
396917 2005 EA ₈₁	17.0	X	341.34764	326.42620	126.53336	13.99511	0.1972606	0.23395111	2.6084708	21	—	—
396918 2005 EF ₉₅	17.3	X	311.49710	26.02125	163.97156	7.54038	0.2571832	0.23163157	2.6258558	21	—	—
396919 2005 EJ ₁₀₈	16.2	X	249.89293	251.28045	317.92861	11.61648	0.2102100	0.22805336	2.6532514	21	—	—
396920 2005 EZ ₁₁₈	16.3	X	264.31326	316.95646	195.33024	12.98623	0.1928638	0.22295950	2.6935109	21	12 1.6	19.9
396921 2005 EG ₁₄₁	16.3	X	264.70152	256.14849	307.85687	14.07945	0.1310020	0.23183823	2.6242952	21	—	—
396922 2005 EG ₁₅₇	17.0	X	338.14213	323.95470	173.70375	12.59401	0.1101155	0.23274279	2.6174912	21	—	—
396923 2005 EU ₁₉₆	16.7	X	357.08083	274.93015	185.06105	28.11248	0.3307419	0.23441607	2.6050204	21	—	—
396924 2005 ED ₂₄₅	16.9	X	208.92332	91.81427	188.04600	16.25492	0.3292374	0.22445566	2.6815280	21	—	—
396925 2005 EY ₂₅₆	17.5	X	244.51502	354.81802	238.54387	1.18509	0.0563316	0.22996474	2.6385191	21	—	—
396926 2005 EE ₂₆₉	16.8	X	336.79974	40.23464	85.38611	9.33681	0.2269029	0.23200809	2.6230121	21	—	—
396927 2005 EH ₂₈₃	16.9	X	346.49118	4.20250	113.08672	6.31106	0.2533798	0.23499392	2.6007481	21	—	—
396928 2005 EE ₃₁₁	17.0	X	263.12895	102.10541	153.00801	13.34258	0.1437541	0.23889674	2.5723451	21	1 6.0	21.1
396929 2005 FQ ₇	16.7	X	257.56882	15.05431	156.94728	14.37585	0.1800913	0.22326630	2.6910428	21	12 19.6	20.4
396930 2005 GW ₂₉	16.4	X	266.28118	233.18442	25.77769	13.98796	0.1561999	0.23537975	2.5979053	21	1 17.0	20.7
396931 Nerliluca	17.2	X	305.91562	38.77474	118.47554	3.24263	0.1389649	0.22952709	2.6418820	21	—	—
396932 2005 GM ₆₅	16.7	X	187.49178	287.26286	19.67814	12.39706	0.3025764	0.22568144	2.6718094	21	1 10.9	21.7
396933 2005 GU ₉₅	16.7	X	238.43827	189.03927	34.98436	14.57112	0.0510651	0.22489286	2.6780516	21	—	—
396934 2005 GK ₁₂₄	17.0	X	313.34737	155.17071	343.79764	7.95131	0.0990057	0.22954591	2.6417376	21	—	—
396935 2005 GN ₁₂₈	16.6	X	237.07115	83.26187	154.02360	13.12468	0.2262133	0.22683731	2.6627254	21	—	—
396936 2005 GB ₁₃₉	16.8	X	304.35371	9.15286	221.03068	13.97907	0.2076532	0.23546835	2.5972536	21	1 8.5	20.9
396937 2005 GN ₁₆₇	16.7	X	148.76138	256.18057	40.82720	6.02438	0.0426687	0.21915220	2.7246172	21	—	—
396938 2005 GE ₁₇₂	17.3	X	217.18384	158.72487	74.66548	3.04312	0.1603933	0.22254614	2.6968451	21	—	—
396939 2005 JW ₂₃	17.6	X	241.42351	77.91487	207.28254	4.14112	0.1693884	0.23127714	2.6285379	21	1 21.3	21.9
396940 2005 JB ₂₅	16.6	X	198.88668	323.79718	218.98791	8.13597	0.0515529	0.21015616	2.8018269	21	11 6.5	20.6
396941 2005 JF ₂₅	17.2	X	121.24385	103.82548	209.92439	4.41112	0.1585426	0.21531365	2.7569042	21	—	—
396942 2005 JQ ₆₇	16.4	X	263.34789	184.45389	43.51140	14.64476	0.1324056	0.22753588	2.6572726	21	—	—
396943 2005 JD ₇₃	17.0	X	108.81338	295.87960	69.32639	7.33034	0.0423990	0.22403220	2.6849060	21	—	—
396944 2005 JF ₈₆	16.9	X	291.03465	23.51241	222.66754	14.75066	0.1257674	0.23462171	2.6034980	21	1 22.2	21.0
396945 2005 JS ₉₀	17.2	X	145.87931	229.04875	55.52702	8.60185	0.1974053	0.21488816	2.7605422	21	—	—
396946 2005 JF ₁₁₈	16.2	X	221.89389	212.37286	80.07287	15.65253	0.1237845	0.22832953	2.6511115	21	1 15.7	20.5
396947 2005 JK ₁₄₅	16.5	X	179.73583	218.30469	66.38152	14.48007	0.1047439	0.22017009	2.7162131	21	—	—
396948 2005 JQ ₁₇₆	18.3	X	172.68551	196.67051	111.02288	13.88244	0.4173240	0.21699875	2.7426132	21	1 6.5	23.4
396949 2005 JN ₁₇₈	16.3	X	200.06131	91.98627	218.58329	15.12963	0.2580664	0.22716620	2.6601548	21	1 16.2	21.3
396950 2005 JC ₁₈₅	17.2	X	181.18219	134.68872	149.90395	9.22891	0.1261350	0.21956532	2.7211985	21	—	—
396951 2005 LA ₂₆	16.6	X	116.86813	189.38405	138.47448	9.32029	0.1656030	0.21423678	2.7661350	21	—	—
396952 2005 LC ₂₆	16.5	X	202.07490	116.82337	132.78530	9.97165	0.0436452	0.21855675	2.7295637	21	—	—
396953 2005 LX ₂₇	16.6	X	145.56918	222.31750	83.36079	14.41892	0.1385788	0.21783808	2.7355638	21	—	—
396954 2005 LO ₂₉	18.0	X	104.26636	38.78456	249.86520	2.81975	0.1471569	0.32949899	2.0760285	21	12 26.8	20.9
396955 2005 LV ₂₉	16.1	X	145.49828	108.77601	20							

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
396961	2005	<i>QF</i> ₁₁₁	16.3	X	324.66790	6.59738	348.15242	8.06169	0.0999346	0.18051359	3.1007216	21	8 15.3	20.1
396962	2005	<i>QJ</i> ₁₃₆	16.5	X	15.76871	330.06487	44.51683	2.52510	0.1237072	0.19203362	2.9754401	21	12 2.5	20.0
396963	2005	<i>QO</i> ₁₅₇	17.6	X	332.10782	17.44458	290.33849	2.06509	0.2072399	0.30208699	2.1997907	21	6 2.7	19.2
396964	2005	<i>QJ</i> ₁₅₉	17.5	X	264.27688	341.74331	69.41644	5.60144	0.1060020	0.30450114	2.1881484	21	8 7.5	20.0
396965	2005	<i>RV</i> ₃₁	17.1	X	70.72757	144.49269	173.43219	3.03750	0.0811204	0.19447723	2.9504633	21	11 29.0	21.3
396966	2005	<i>RX</i> ₄₆	16.7	X	55.73976	265.15228	80.38367	10.29987	0.1436818	0.19225940	2.9731101	21	12 22.1	20.8
396967	2005	<i>RZ</i> ₅₁	19.1	X	57.28745	29.18170	274.61082	2.08868	0.3432906	0.31792365	2.1261186	21	12 16.2	22.3
396968	2005	<i>SB</i> ₂₀	17.7	X	333.63487	284.60286	48.56469	6.34656	0.1753671	0.30257311	2.1974339	21	8 1.1	19.2
396969	2005	<i>SB</i> ₃₄	16.4	X	11.65171	279.59753	92.70793	3.77037	0.1201120	0.18842143	3.0133472	21	11 23.0	20.0
396970	2005	<i>SE</i> ₅₄	17.5	X	178.66315	77.27455	19.09538	4.94533	0.0599100	0.29370559	2.2414441	21	6 23.9	20.5
396971	2005	<i>SM</i> ₅₄	16.1	X	330.47039	355.49154	20.40265	5.59877	0.1936340	0.18146353	3.0898909	21	9 15.7	19.3
396972	2005	<i>SC</i> ₅₅	16.0	X	315.40862	335.52720	23.96785	11.86336	0.0971446	0.17631503	3.1497530	21	8 10.5	20.2
396973	2005	<i>SF</i> ₅₉	16.7	X	26.30632	76.81418	268.23993	0.64861	0.0968847	0.18723516	3.0260617	21	11 6.1	20.5
396974	2005	<i>ST</i> ₇₇	16.8	X	307.65610	251.76197	152.95203	1.76791	0.1450217	0.18222495	3.0812776	21	9 17.1	20.5
396975	2005	<i>SB</i> ₈₉	18.0	X	218.13999	200.95791	128.15853	1.59704	0.1682305	0.29322658	2.2438845	21	6 13.5	21.4
396976	2005	<i>SX</i> ₉₇	16.1	X	350.90114	153.48736	223.85147	12.08760	0.0474541	0.18592819	3.0402262	21	10 22.4	20.2
396977	2005	<i>SK</i> ₁₀₀	15.9	X	311.37669	160.08070	225.92068	6.68736	0.1666914	0.17904319	3.1176750	21	8 22.5	19.9
396978	2005	<i>SV</i> ₁₀₃	15.7	X	41.44671	102.83447	237.65387	9.76078	0.0980822	0.18790492	3.0188668	21	11 21.4	19.8
396979	2005	<i>SF</i> ₁₁₁	16.3	X	92.40116	284.40560	15.27501	13.73300	0.1006362	0.19227654	2.9729335	21	11 29.3	21.0
396980	2005	<i>SC</i> ₁₁₃	16.1	X	26.89565	19.36527	324.09144	9.09475	0.1554155	0.18839632	3.0136150	21	11 9.7	20.1
396981	2005	<i>SG</i> ₁₁₉	16.4	X	148.01199	304.35295	42.90832	9.15622	0.2649214	0.21062059	2.7977066	21	1 27.9	21.1
396982	2005	<i>SR</i> ₁₂₉	16.6	X	105.59263	119.43749	201.64264	18.93794	0.1635122	0.19779826	2.9173447	21	—	—
396983	2005	<i>SK</i> ₁₃₀	16.5	X	322.96097	122.12514	61.36824	1.33783	0.2049959	0.18152126	3.0892357	21	9 8.9	19.8
396984	2005	<i>SX</i> ₁₃₀	19.2	X	38.39075	294.56252	15.46780	1.68062	0.2160705	0.31106550	2.1572550	21	11 17.5	21.6
396985	2005	<i>SC</i> ₁₃₅	16.7	X	68.68502	252.35799	58.16478	1.54836	0.1017072	0.19095631	2.9866205	21	11 19.3	21.0
396986	2005	<i>SF</i> ₁₄₉	16.5	X	54.58994	228.18083	90.30839	3.31250	0.0831875	0.18741213	3.0241565	21	11 9.7	20.7
396987	2005	<i>SZ</i> ₁₄₉	16.0	X	47.69867	292.68817	31.61568	10.74214	0.1134664	0.18779904	3.0200013	21	11 10.2	20.2
396988	2005	<i>SG</i> ₁₅₆	16.5	X	49.50788	106.88117	201.83701	6.50637	0.1132152	0.18599142	3.0395370	21	10 25.8	20.5
396989	2005	<i>SB</i> ₁₇₃	16.7	X	302.16151	185.00165	209.30369	9.22265	0.1030093	0.18047583	3.1011541	21	8 27.4	20.8
396990	2005	<i>SK</i> ₁₇₇	17.0	X	180.83552	111.77417	203.73902	13.09009	0.2013738	0.21180195	2.7872938	21	1 8.6	21.9
396991	2005	<i>SB</i> ₁₈₁	17.0	X	125.49416	49.89946	231.20740	5.60956	0.1949741	0.19678670	2.9273337	21	12 18.0	21.9
396992	2005	<i>SO</i> ₁₈₃	16.1	X	285.61310	237.37122	204.36440	10.25170	0.1017106	0.18363576	3.0654757	21	10 6.9	20.1
396993	2005	<i>SG</i> ₁₉₄	16.4	X	353.93572	136.79575	223.65221	4.08308	0.2052308	0.18336429	3.0685006	21	10 11.8	19.6
396994	2005	<i>ST</i> ₂₁₂	16.0	X	338.65997	170.95292	207.04598	10.70599	0.1429399	0.18259454	3.0771183	21	10 3.9	19.4
396995	2005	<i>SL</i> ₂₁₃	16.5	X	0.48485	344.79686	19.19595	10.71376	0.1125626	0.18472871	3.0533725	21	10 22.5	20.3
396996	2005	<i>SP</i> ₂₁₅	16.3	X	29.16361	69.02844	276.62897	7.20284	0.1929440	0.18952837	3.0016029	21	11 24.3	20.0
396997	2005	<i>SC</i> ₂₂₆	18.3	X	187.62747	250.19709	194.69575	3.70996	0.0904358	0.29383654	2.2404608	21	6 18.6	21.3
396998	2005	<i>SZ</i> ₂₃₆	16.6	X	357.96017	355.16451	3.17160	3.64025	0.2072416	0.18375380	3.0641628	21	10 17.7	19.7
396999	2005	<i>SK</i> ₂₈₀	15.9	X	238.04145	262.56095	196.34698	17.23063	0.1269697	0.17466021	3.1696165	21	8 23.1	21.0
397000	2005	<i>SC</i> ₂₈₃	16.6	X	127.10301	90.87623	139.03379	10.31901	0.1151862	0.18435611	3.0574852	21	10 19.9	21.5
397001	2005	<i>SW</i> ₂₈₄	16.4	X	244.27032	346.68554	115.44446	10.43834	0.0570315	0.17890880	3.1192361	21	9 20.5	21.0
397002	2005	<i>SA</i> ₂₈₉	16.5	X	121.08336	93.85378	89.74475	16.80166	0.1796027	0.16879636	3.2426047	21	8 24.5	21.9
397003	2005	<i>SU</i> ₂₉₁	17.2	X	352.85933	34.23414	225.84815	6.86654	0.0724216	0.29161369	2.2521507	21	5 16.2	19.2
397004	2005	<i>SA</i> ₂₉₂	16.0	X	293.28948	196.12878	177.29444	4.78742	0.0976671	0.17502747	3.1651812	21	7 21.0	20.3
397005	2005	<i>TB</i> ₃	16.8	X	32.46301	153.15500	215.41793	6.76554	0.1974556	0.19266043	2.9689830	21	12 28.9	20.8
397006	2005	<i>TM</i> ₆	15.7	X	24.43586	98.74227	250.84632	9.76837	0.1420293	0.18793579	3.0185361	21	11 14.7	19.4
397007	2005	<i>TT</i> ₆	16.3	X	158.80510	123.81363	255.23729	8.06712	0.1546934	0.21522696	2.7576444	21	2 27.5	20.7
397008	2005	<i>TI</i> ₁₂	18.0	X	215.42684	274.26647	149.48208	1.83736	0.1041115	0.29368004	2.2415741	21	6 20.9	21.1
397009	2005	<i>TQ</i> ₂₇	15.6	X	1.12822	147.10530	194.22132	12.31827	0.2090060	0.18261528	3.0768853	21	9 30.6	18.8
397010	2005	<i>TR</i> ₃₆	16.5	X	154.57920	222.96790	175.87327	8.68695	0.2086460	0.21747924	2.7385721	21	3 27.8	20.8
397011	2005	<i>TV</i> ₃₇	16.4	X	69.77106	318.56448	1.34919	8.99509	0.0626485	0.19224151	2.9732945	21	11 24.6	20.7
397012	2005	<i>TD</i> ₅₁	15.2	X	274.80038	6.51936	100.49838	28.60432	0.1126450	0.17549344	3.1595759	21	11 5.5	20.1
397013	2005	<i>TG</i> ₅₃	16.3	X	18.96617	151.51385	217.94477	10.10103	0.1213509	0.18939750	3.0029854	21	11 30.6	20.2
397014	2005	<i>TS</i> ₅₈	16.2	X	196.01288	269.02033	203.50368	16.10557	0.0788631	0.17151067	3.2083024	21	7 29.7	21.4
397015	2005	<i>TR</i> ₇₂	15.7	X	7.10986	303.05971	63.05863	11.91461	0.0793802	0.18601128	3.0393207	21	11 5.5	19.6
397016	2005	<i>TV</i> ₇₂	15.2	X	328.85044	297.63095	65.98154	12.35232	0.2281209	0.17948637	3.1125408	21	8 27.1	18.7
397017	2005	<i>TN</i> ₁₂₄	16.4	X	71.73440	96.47677	208.71964	9.95098	0.0905225	0.18853091	3.0121806	21	11 15.4	20.7
397018	2005	<i>TR</i> ₁₂₄	16.2	X	207.84914	241.40813	211.52348	10.08625	0.0670527	0.17150521	3.2083704	21	7 20.5	21.2
397019	2005	<i>TW</i> ₁₂₄	16.3	X	24.14422	151.40757	211.00133	8.59289	0.1602221	0.18919198	3.0051598	21	12 4.5	20.1
397020	2005	<i>TW</i> ₁₃₄	16.0	X	117.47665	234.14875	19.04086	13.19077	0.1585708	0.19056519	2.9907057	21	11 3.9	20.8
397021	2005	<i>TD</i> ₁₃₇	16.9	X	66.11334	205.56270	107.06107	2.31734	0.1228870	0.19130865	2.9829523	21	11 22.2	21.0
397022	2005	<i>TB</i> ₁₄₆	16.7	X	121.15933	175.95464	101.12548	4.57300	0.1366665	0.19316055	2.9638560	21	12 7.3	21.4
397023	2005	<i>TN</i> ₁₆₃	16.3	X	305.08119	205.23394	214.99274	10.72567	0.0798931	0.18331832	3.0690135	21	10 9.2	20.3
397024	2005	<i>TQ</i> ₁₉₁	17.6	X	319.67510	249.38901	107.62588	5.41642	0.1522314	0.30182387	2.2010690	21	8 11.4	19.3
397025	2005	<i>TH</i> ₁₉₄	16.9	X	21.17295	171.82289	191.64537	1.99465	0.1957399	0.18500919	3.0502857	21	12 5.3	20.5
397026	2005	<i>UB</i> ₄	16.7	X	40.76162	105.77688	236.62376	6.74360	0.1592273	0.18791382	3.0187714	21	12 1.8	20.8
397027	2005	<i>UM</i> ₈	15.9	X	13.26187	294.98159	68.31708	9.99346	0.2806044	0.18551342	3.0447560	21	12 4.6	19.1
397028														

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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>		
397041	2005	UL ₆₈	16.2	X	284.65322	227.11419	175.88165	16.59484	0.2175775	0.17515845	3.1636031	21	7 27.8	20.8
397042	2005	UG ₆₉	15.7	X	24.85257	120.88375	232.21350	8.18368	0.1014123	0.18632443	3.0359144	21	11 14.7	19.5
397043	2005	UY ₇₀	17.2	X	166.99720	137.84572	260.58390	5.77829	0.1022958	0.28140893	2.3062734	21	3 21.2	20.5
397044	2005	UB ₈₀	17.7	X	318.61960	286.81455	72.61325	7.80370	0.2171901	0.30158371	2.2022374	21	8 4.5	19.2
397045	2005	UL ₈₂	16.5	X	254.01429	28.31512	35.80057	10.61101	0.0899652	0.17339386	3.1850304	21	8 10.9	21.3
397046	2005	US ₈₃	16.5	X	36.82129	277.79337	39.75929	9.49319	0.1090378	0.18324679	3.0698122	21	10 19.7	20.5
397047	2005	UU ₉₁	15.9	X	24.42977	69.17720	254.50609	9.16983	0.1070038	0.18075567	3.0979526	21	10 3.5	20.0
397048	2005	UQ ₉₂	16.4	X	356.45941	132.98994	242.00647	9.60100	0.1473756	0.18392987	3.0622070	21	11 1.4	20.1
397049	2005	UU ₉₃	15.8	X	75.70954	231.05070	30.70865	17.36463	0.1888890	0.17978492	3.1090942	21	10 11.9	20.4
397050	2005	UL ₉₈	15.9	X	92.61706	195.38092	63.57990	10.46068	0.0818505	0.17994642	3.1072336	21	10 15.3	20.5
397051	2005	UV ₉₉	17.3	X	118.07951	35.43194	82.65240	6.05885	0.0858593	0.28342762	2.2955096	21	5 12.0	20.1
397052	2005	UP ₁₀₁	16.3	X	342.78954	252.89537	116.26477	4.20267	0.0751415	0.18006644	3.1058528	21	10 2.9	20.3
397053	2005	UW ₁₀₃	16.8	X	32.79798	221.47627	97.55146	2.53918	0.1644802	0.18139136	3.0907104	21	10 23.1	20.6
397054	2005	UB ₁₀₇	16.0	X	315.20873	185.43877	214.48869	9.95764	0.1673624	0.17896008	3.1186402	21	9 27.1	20.1
397055	2005	UG ₁₀₉	17.7	X	342.65226	245.17638	110.28940	6.85880	0.0699043	0.30633516	2.1794061	21	10 8.5	19.2
397056	2005	UQ ₁₀₉	16.0	X	165.61140	39.59841	246.61276	17.11237	0.1840670	0.19784043	2.9169301	21	—	—
397057	2005	UQ ₁₂₁	16.0	X	45.46473	29.88808	221.84918	17.20644	0.0627801	0.17103884	3.2141999	21	7 24.9	20.7
397058	2005	UD ₁₂₆	15.3	X	15.08843	114.73417	229.41873	8.38299	0.0150009	0.18012798	3.1051453	21	10 9.3	19.7
397059	2005	UB ₁₃₂	17.7	X	271.44568	318.50728	49.34256	5.07109	0.1132035	0.29270330	2.2465580	21	6 9.9	20.4
397060	2005	UJ ₁₃₉	15.5	X	5.42595	99.03606	250.45713	9.77481	0.2125998	0.18294108	3.0732311	21	10 18.8	18.9
397061	2005	UY ₁₄₈	17.4	X	48.38764	65.57817	32.68210	7.20532	0.1388341	0.26749948	2.3855439	21	—	—
397062	2005	UJ ₁₄₉	15.9	X	32.61813	129.71009	226.51139	10.29049	0.0978500	0.18720397	3.0263978	21	11 29.3	19.9
397063	2005	UA ₁₅₁	15.4	X	64.07026	53.90807	231.10707	16.67527	0.1714155	0.18107569	3.0943015	21	10 19.9	19.9
397064	2005	UU ₁₅₂	16.8	X	5.61757	98.44843	238.42324	1.98119	0.0944632	0.17814858	3.1281037	21	9 23.3	20.6
397065	2005	UQ ₁₅₆	16.2	X	8.64166	154.77499	199.57521	4.89944	0.1665959	0.18299158	3.0726657	21	10 27.2	19.6
397066	2005	UE ₁₅₈	16.0	X	254.78901	219.12482	210.56168	15.40220	0.1171868	0.17340780	3.1848597	21	8 5.8	20.9
397067	2005	UK ₁₆₀	17.5	X	293.66085	300.28774	80.44369	6.82854	0.1738828	0.30108022	2.2506919	21	7 25.4	19.6
397068	2005	UU ₁₆₁	17.4	X	242.70544	326.47324	49.62000	6.51925	0.1906672	0.29085362	2.2060726	21	5 9.7	20.7
397069	2005	UF ₁₆₃	17.9	X	89.64647	214.93348	238.28036	3.32805	0.2092075	0.27376945	2.3498904	21	3 14.6	20.4
397070	2005	UA ₁₆₇	17.7	X	324.87196	243.88905	36.73141	7.92374	0.1338502	0.29028708	2.5590070	21	4 19.9	19.9
397071	2005	UR ₁₆₇	18.0	X	43.65496	283.01205	230.21882	4.72201	0.1341032	0.27702602	2.3305352	21	3 5.3	20.2
397072	2005	UC ₁₇₈	15.8	X	354.16886	62.66831	240.37809	9.47039	0.0990164	0.17061885	3.2194724	21	7 19.8	19.9
397073	2005	UT ₁₇₉	16.1	X	81.51419	93.88531	214.64562	7.03852	0.2615603	0.18953037	3.0015818	21	12 17.2	21.0
397074	2005	UF ₁₈₃	16.3	X	70.71700	72.29997	232.25477	8.44975	0.0417519	0.18549970	3.0449061	21	11 5.0	20.5
397075	2005	UR ₁₈₄	18.1	X	138.47036	30.07691	62.02611	5.00164	0.1145795	0.28167097	2.3048429	21	5 4.8	21.2
397076	2005	UH ₂₃₁	16.3	X	24.78238	124.72139	222.16895	1.41962	0.2061687	0.18584605	3.0411219	21	11 21.4	20.0
397077	2005	UM ₂₄₀	17.5	X	178.27277	4.66102	88.70203	6.22291	0.0804489	0.28972767	2.2619139	21	6 19.4	20.5
397078	2005	UG ₂₄₉	16.0	X	344.77682	292.05512	57.31069	8.92404	0.2276471	0.17890005	3.1193378	21	9 11.0	19.2
397079	2005	UX ₂₄₉	16.3	X	316.40410	156.59301	248.67853	8.60291	0.2073495	0.17921134	3.1157246	21	9 20.3	20.0
397080	2005	UQ ₂₅₂	16.0	X	318.40308	151.68572	246.14406	11.90809	0.1504155	0.18156411	3.0887496	21	9 19.3	19.9
397081	2005	UG ₂₆₀	16.1	X	69.18566	234.46078	54.74357	10.69233	0.0768387	0.18129382	3.0918190	21	10 22.9	20.5
397082	2005	US ₂₇₅	15.1	X	356.94278	123.94620	237.28589	21.05717	0.0802910	0.18155048	3.0889043	21	10 7.4	19.4
397083	2005	UU ₂₈₂	16.2	X	345.89394	304.24605	51.09533	8.41772	0.0771741	0.17950151	3.1123659	21	9 21.8	20.2
397084	2005	UT ₂₈₇	16.9	X	78.59478	120.11497	191.67890	9.06467	0.0794558	0.18908124	3.0063330	21	11 30.0	21.4
397085	2005	UU ₂₉₂	16.1	X	147.22077	295.62337	245.32606	8.10656	0.0272473	0.17384276	3.1795450	21	8 29.2	20.9
397086	2005	UX ₂₉₂	15.8	X	36.52179	66.77702	247.91203	6.86213	0.0387860	0.17951797	3.1121757	21	10 1.8	20.2
397087	2005	UG ₃₀₈	16.2	X	54.12469	53.36763	236.77610	8.56107	0.0510362	0.17758542	3.1347134	21	9 24.9	20.6
397088	2005	US ₃₀₈	16.5	X	54.15509	235.41818	123.87674	7.05651	0.2459185	0.19185643	2.9727717	21	—	—
397089	2005	UG ₃₄₀	16.4	X	18.08822	128.26165	209.86581	12.17147	0.0772338	0.18123965	3.0924349	21	10 12.7	20.5
397090	2005	UA ₃₅₀	16.2	X	55.62358	4.66284	29.99021	11.82939	0.2368413	0.19620993	2.9330676	21	—	—
397091	2005	UB ₃₅₀	17.3	X	239.54761	97.56538	279.46271	6.31690	0.1543334	0.28905122	2.2654415	21	5 9.1	20.6
397092	2005	UH ₃₅₇	15.7	X	81.27387	213.33751	79.41524	12.19540	0.0992499	0.18583830	3.0411204	21	11 13.7	20.2
397093	2005	UR ₃₆₉	16.2	X	11.68276	121.13668	210.38267	9.01388	0.1885641	0.18028344	3.1033600	21	10 4.9	19.6
397094	2005	UP ₄₀₇	16.6	X	122.92240	199.94777	59.93712	5.39732	0.1103718	0.18926714	3.0043641	21	11 16.8	21.2
397095	2005	UP ₄₃₆	16.7	X	332.64334	150.32082	218.58050	8.70934	0.1128678	0.18045332	3.1014120	21	9 10.0	20.6
397096	2005	UL ₄₃₉	15.6	X	232.08894	48.11393	33.58631	20.62979	0.0654569	0.17169009	3.2060668	21	8 15.8	20.7
397097	2005	UJ ₄₅₉	16.5	X	337.56378	198.94194	202.25244	11.02260	0.0552908	0.18427393	3.0583942	21	11 4.7	20.4
397098	2005	UO ₄₅₉	18.2	X	297.29872	135.67236	246.19718	1.91329	0.2652382	0.29937257	2.2130678	21	8 2.3	20.3
397099	2005	US ₄₆₂	18.1	X	71.30687	115.94696	94.19677	3.52426	0.0997125	0.29370055	2.2414697	21	7 20.3	20.5
397100	2005	UD ₄₆₇	15.6	X	332.94607	96.23323	246.40414	14.75633	0.0967500	0.17359423	3.1825790	21	8 3.9	20.0
397101	2005	UO ₄₉₂	16.0	X	358.28194	284.54928	58.74510	15.55780	0.3459552	0.18516508	3.0485734	21	10 19.5	18.5
397102	2005	UX ₅₁₁	16.1	X	188.43188	256.96632	235.51211	8.77760	0.0543090	0.17000103	3.2272678	21	8 16.4	21.0
397103	2005	UF ₅₁₅	16.0	X	26.98666	226.15777	107.83017	12.89215	0.0425539	0.18243047	3.0789629	21	10 23.4	20.4
397104	2005	UV ₅₁₅	16.2	X	277.41051	262.30180	171.53244	15.65472	0.0866943	0.17842376	3.1248865	21	9 18.4	20.4
397105	2005	UU ₅₁₆	16.3	X	2.90370	206.40790	174.75908	8.75023	0.0261651	0.18927733	3.0042563	21	11 14.7	20.4
397106	2005	UJ ₅₂₀	16.8	X	41.81371	217.85443	87.96359	10.00831	0.0026755	0.18104169	3.0946888	21	10 1.6	21.3
397107	2005	UE ₅₂₂	15.9	X	277.27097	293.32619	77.00050	11.36390	0.0784421	0.17063085	3.2193215	21	6 29.3	20.4
397108	2005	UD ₅₂₄	18.6	X	10.29154	158.46995	172.62339	7.33425	0.1949810	0.30874069	2.1680709	21	11 1.6	20.4
397109	2005	VM ₉	15.7	X	68.27342	70.47186	220.85251	9.29331	0.0393583	0.17974974	3.10			

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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>
397121 2005 VS ₁₂₆	16.4	X	75.69149	271.44537	20.44652	9.38027	0.0993916	0.18945941	3.0023311	21	11 2.6	20.7
397122 2005 WA ₆	15.5	X	111.57810	280.12278	253.96551	15.10738	0.0576543	0.16216281	3.3304420	21	7 12.9	20.5
397123 2005 WN ₁₆	16.1	X	35.39616	107.07378	248.11767	9.20867	0.2124406	0.18629577	3.0362257	21	12 17.5	20.1
397124 2005 WR ₃₀	17.9	X	11.31323	274.54668	53.95562	4.93617	0.2267702	0.30440637	2.1886025	21	11 2.6	19.4
397125 2005 WK ₃₁	15.4	X	345.61909	67.92733	260.37930	13.50779	0.0280482	0.16836416	3.2481515	21	8 7.3	20.1
397126 2005 WV ₃₁	17.7	X	323.90807	296.02796	53.76869	5.23076	0.1784103	0.29835657	2.2180890	21	8 5.9	19.3
397127 2005 WY ₃₇	16.0	X	338.77332	304.73002	79.83637	12.62644	0.1685763	0.17841776	3.1249567	21	10 19.8	19.6
397128 2005 WF ₄₂	16.5	X	190.29250	159.67077	242.34243	11.78603	0.0747289	0.22050863	2.7134323	21	4 26.8	20.5
397129 2005 WS ₄₂	17.3	X	26.47511	351.91351	254.83058	8.52803	0.1421738	0.28826015	2.2695842	21	7 2.2	19.2
397130 2005 WL ₄₆	16.7	X	125.58375	340.45498	93.62670	22.29760	0.1338238	0.27559749	2.3385817	21	4 10.4	20.4
397131 2005 WS ₅₆	16.7	X	345.58282	92.63953	261.20397	5.46578	0.2645273	0.30372417	2.1918785	21	10 13.9	17.5
397132 2005 WM ₈₀	15.5	X	59.50502	212.49277	78.24703	13.58166	0.1045291	0.17524864	3.1625176	21	10 19.6	20.1
397133 2005 WW ₈₇	17.2	X	166.29689	354.30555	88.73637	7.06802	0.1398443	0.28145028	2.3060476	21	5 25.9	20.7
397134 2005 WO ₉₂	18.2	X	355.66083	256.59669	65.64027	2.57820	0.1651776	0.29953796	2.2122531	21	9 6.8	19.5
397135 2005 WW ₁₀₃	17.6	X	183.09203	305.15569	120.58607	5.22741	0.2016726	0.28506077	2.2865344	21	5 21.4	21.3
397136 2005 WR ₁₀₅	17.4	X	105.33698	0.39883	76.17228	6.17956	0.1755740	0.27246246	2.3564864	21	3 14.9	20.2
397137 2005 WD ₁₀₇	17.4	X	235.35940	305.87678	70.34716	7.19375	0.1261834	0.28805306	2.2706719	21	5 8.7	20.5
397138 2005 WZ ₁₁₁	15.5	X	95.27134	39.36038	235.47006	16.40413	0.1782937	0.18267146	3.0762544	21	11 12.0	20.2
397139 2005 WH ₁₁₈	17.2	X	200.29619	123.98506	302.46936	6.10388	0.0963307	0.28812279	2.2703055	21	6 7.2	20.3
397140 2005 WL ₁₃₀	18.0	X	145.10632	20.13945	69.41584	3.06048	0.1780143	0.28122463	3.072810	21	5 14.7	21.5
397141 2005 WS ₁₃₁	16.1	X	59.03398	252.20597	68.83256	9.97794	0.1419607	0.18388185	3.0627401	21	11 25.3	20.3
397142 2005 WX ₁₃₅	16.1	X	130.36388	23.47851	252.79209	7.04746	0.0992677	0.18639103	3.0351911	21	12 12.1	20.6
397143 2005 WR ₁₄₀	15.3	X	220.32194	302.45765	282.79989	21.66763	0.1665212	0.18388272	3.0627304	21	—	—
397144 2005 WO ₁₅₃	17.9	X	347.31342	277.94697	48.00222	3.61392	0.2104244	0.29918741	2.2139808	21	8 24.2	18.9
397145 2005 WP ₁₆₁	17.2	X	43.14020	256.71859	92.21979	1.73786	0.2053378	0.18744118	3.0238440	21	12 19.1	21.4
397146 2005 WM ₁₆₂	15.9	X	357.09606	290.96853	89.45134	17.14203	0.2644134	0.18083363	3.0970621	21	11 25.2	19.0
397147 2005 WJ ₁₇₁	16.8	X	28.72783	207.26962	156.20980	2.13500	0.2535541	0.18548340	3.0450845	21	12 24.8	20.6
397148 2005 WK ₁₈₁	15.8	X	342.31745	276.42253	104.85628	11.54914	0.2072296	0.17974481	3.1095566	21	10 22.4	19.2
397149 2005 WV ₁₈₇	17.4	X	222.10191	187.61699	232.29432	25.33753	0.1663630	0.29000589	2.2604670	21	6 15.9	21.1
397150 2005 WA ₂₁₁	18.6	X	129.22142	47.70566	55.35005	2.05755	0.1436694	0.28004642	2.3137479	21	5 11.8	21.7
397151 2005 WG ₂₁₁	15.4	X	329.93434	125.68720	253.88283	14.00937	0.0434729	0.17731404	3.1379110	21	9 19.1	19.9
397152 2005 XL	16.4	X	334.12945	123.79349	228.86099	9.19502	0.1322949	0.17451834	3.1713341	21	8 18.9	20.4
397153 2005 XS ₂	17.0	X	146.51787	130.47547	283.58102	6.13759	0.2107691	0.27676226	2.3320157	21	3 30.1	20.6
397154 2005 XK ₄₀	17.2	X	241.66528	306.79150	83.21007	6.33610	0.1634059	0.28736561	2.2742918	21	5 30.4	20.4
397155 2005 XG ₄₁	17.4	X	148.29230	32.81072	62.14726	6.91353	0.1287179	0.28047961	2.3113649	21	5 21.0	20.6
397156 2005 XS ₄₃	18.3	X	303.15805	55.16638	281.43620	2.27532	0.1240187	0.29181793	2.2510997	21	6 9.6	20.6
397157 2005 XD ₅₄	14.8	X	254.92487	202.88897	290.59166	29.54951	0.2517534	0.17649173	3.1476503	21	9 23.1	20.2
397158 2005 XP ₆₉	17.4	X	17.99499	191.04160	51.46417	6.86464	0.0597102	0.28480540	2.2879011	21	6 2.5	19.8
397159 2005 XR ₇₁	17.5	X	295.71632	318.57968	64.35575	6.60355	0.1710735	0.29687528	2.2254612	21	8 3.2	19.8
397160 2005 XA ₁₀₁	18.1	X	128.63455	141.75469	297.90456	1.68187	0.0668917	0.27074579	2.3664368	21	3 29.2	21.0
397161 2005 XD ₁₁₅	16.1	X	225.34924	9.53599	79.94935	7.56926	0.0756383	0.16867791	3.2441225	21	8 8.6	21.0
397162 2005 YE ₆	17.9	X	65.16487	88.22437	87.09107	7.29060	0.1572084	0.27815539	2.3242227	21	5 28.3	20.1
397163 2005 YS ₂₂	17.8	X	19.97050	179.14017	9.54043	1.19587	0.1256838	0.26929860	2.3749072	21	3 16.9	20.1
397164 2005 YQ ₃₀	17.5	X	54.92864	337.21263	115.36441	23.96940	0.1148974	0.38856377	1.8599211	21	—	—
397165 2005 YX ₅₇	18.5	X	95.80205	132.63593	347.72097	1.40873	0.20217977	0.27282805	2.3543808	21	4 18.7	21.1
397166 2005 YW ₇₀	17.5	X	112.72393	351.59073	94.73174	5.94092	0.1411137	0.27192019	2.3596182	21	4 11.2	20.6
397167 2005 YY ₇₈	18.2	X	76.57344	22.85030	99.55427	3.59107	0.1374705	0.27013489	2.3700032	21	3 27.9	20.6
397168 2005 YA ₈₆	18.1	X	298.66810	276.61675	82.44481	1.86903	0.2547174	0.29328667	2.2435780	21	6 13.0	20.6
397169 2005 YC ₁₀₂	18.3	X	50.89420	260.56367	225.89278	1.45009	0.1471019	0.26654904	2.3912114	21	2 12.1	20.4
397170 2005 YD ₁₀₅	18.2	X	68.19316	213.61956	278.97457	0.52058	0.1305550	0.27020345	2.3696023	21	3 24.7	20.6
397171 2005 YD ₁₀₇	17.7	X	94.83493	216.50815	272.87001	1.75115	0.1337709	0.27463062	2.3440673	21	5 2.0	20.4
397172 2005 YS ₁₂₁	15.8	X	21.74417	346.44281	87.27352	2.89885	0.1374056	0.12609626	3.9385338	21	—	—
397173 2005 YC ₁₄₂	17.5	X	62.90697	150.30968	306.61576	5.69442	0.0747568	0.26360163	2.4090029	21	1 19.3	20.0
397174 2005 YF ₁₄₈	17.9	X	24.49373	186.72325	7.96777	2.77999	0.1220918	0.27115265	2.3640690	21	4 3.7	20.1
397175 2005 YR ₁₅₃	17.2	X	124.73157	13.49322	75.74996	7.59883	0.1192055	0.27419266	2.3465627	21	4 17.9	20.3
397176 2005 YG ₂₀₀	17.9	X	70.49982	353.21833	119.40447	7.09829	0.1936687	0.26671431	2.3902234	21	3 12.6	20.1
397177 2005 YS ₂₅₃	18.3	X	3.46667	130.39008	59.12530	2.24781	0.1197353	0.26565325	2.3965838	21	2 17.5	20.6
397178 2005 YV ₂₅₄	17.5	X	338.45670	245.73920	37.31401	5.03007	0.1438310	0.28121284	2.3073454	21	5 17.2	19.4
397179 2006 AR ₁₆	15.3	X	333.74125	291.82427	85.35174	17.13174	0.1192561	0.17622241	3.1508566	21	10 5.6	19.5
397180 2006 AB ₁₇	18.6	X	28.01876	342.41576	191.55192	0.87381	0.1309947	0.26872849	2.3782650	21	3 9.9	20.6
397181 2006 AJ ₄₀	17.7	X	347.71909	213.08793	314.68623	2.36768	0.0789276	0.25916196	2.4364371	21	—	—
397182 2006 AZ ₄₀	15.9	X	75.42737	31.75678	301.94491	27.37382	0.1846756	0.18084677	3.0969120	21	—	—
397183 2006 AL ₅₁	17.9	X	260.87493	220.20792	120.71112	5.57888	0.0368528	0.27795625	2.3253326	21	5 2.9	20.9
397184 2006 AS ₅₄	16.8	X	320.23910	218.05692	182.72790	2.31391	0.2045658	0.23746066	2.5827058	21	10 8.1	18.9
397185 2006 BN ₁₇	17.3	X	355.83822	267.58075	301.48158	2.19294	0.1211490	0.26689415	2.3891496	21	3 2.1	19.7
397186 2006 BU ₂₁	17.5	X	317.99255	242.87730	136.81940	7.30647	0.0786716	0.29361474	2.2419064	21	9 22.9	19.7
397187 2006 BO ₂₂	17.7	X	45.14557	124.96129	129.29159	7.80405	0.0776630	0.28345650	2.2951537	21	8 10.5	20.1
397188 2006 BM ₃₂	15.7	X	343.51899	293.24728	92.87648	16.01264	0.1991093	0.17946884	3.1127436	21	11 2.0	19.3
397189 2006 BA ₄₇	17.9	X	82.43936	301.19142	135.98100	22.54924	0.0829447	0.38866172	1.8596086	21	—	—
397190 2006 BQ ₆₁	15.6	X	47.41658	9.62719	32.41510	12.14481	0.2685573	0.18996463	2.9970056	21	—	—
397191 2006 BR ₈₉	18.1	X	64.18197	52.29293	88.30676	1.82446	0.1536325	0.26738367	2.3862327	21	4 3.7	20.4
397192 2006 BZ ₁₁₄	17.9	X	326.83237	69.41566	176.76056	2.75001	0.1633624	0.26453844	2.4033122	21	3 1.9	20.6
397193 2006 BL ₁₁₅	17.7	X	30.41674	309.77898	209.90202	1.65201	0.1399478	0.26308225	2.4121725	21	2 21.6</	

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
397201 2006 BR ₂₂₃	17.6	X	207.20995	262.52781	144.22529	6.21201	0.1658134	0.27894905	2.3198120	21	5 19.6	21.3
397202 2006 BS ₂₅₈	18.1	X	25.69657	300.13793	222.64721	1.37074	0.1737726	0.26228365	2.4170663	21	2 15.4	19.9
397203 2006 BO ₂₇₉	18.2	X	312.43943	85.51859	151.20066	1.78357	0.1472261	0.26006398	2.4308001	21	2 1.2	21.4
397204 2006 BE ₂₈₃	17.8	X	12.20510	220.05070	48.23910	2.47848	0.1846837	0.27922232	2.3182982	21	7 11.6	19.3
397205 2006 CO ₁₈	17.9	X	329.93238	203.80543	28.80575	2.15535	0.1628850	0.26233839	2.4167301	21	2 17.7	20.6
397206 2006 DK ₂₁	17.4	X	300.02303	237.46090	317.29805	5.85534	0.0636504	0.25385335	2.4702872	21	—	—
397207 2006 DW ₁₂₁	17.3	X	90.60841	343.43932	126.51425	10.58661	0.1828174	0.26779680	2.3837780	21	4 12.9	20.2
397208 2006 DW ₁₉₀	17.6	X	73.76699	46.02026	62.53441	3.45720	0.1442003	0.26010922	2.4305182	21	3 5.5	20.1
397209 2006 DX ₂₁₅	17.6	X	12.40320	166.23858	18.91673	1.09089	0.1101106	0.26088988	2.4256673	21	2 28.4	19.9
397210 2006 EX ₂	17.2	X	240.34224	204.95533	152.53193	10.49820	0.0998435	0.27129814	2.3632237	21	4 24.7	20.7
397211 2006 FP ₂₇	17.0	X	295.52912	270.32393	27.63012	11.37497	0.2754133	0.25807664	2.4432632	21	3 19.8	20.6
397212 2006 FG ₄₆	17.4	X	29.25151	125.72222	83.76114	3.90142	0.1385494	0.26621784	2.3931942	21	5 9.9	19.4
397213 2006 FF ₅₄	18.0	X	354.17112	130.69698	43.52311	3.13713	0.1410018	0.25419326	2.4680845	21	1 10.7	20.7
397214 2006 GU ₃₇	17.6	X	136.35641	200.13361	99.97572	24.20085	0.0618173	0.36734998	1.9308537	21	—	—
397215 2006 HV ₃₃	15.4	X	337.44692	175.68246	41.80772	8.13180	0.1782493	0.12592862	3.9420284	21	3 9.0	20.3
397216 2006 HT ₄₇	17.0	X	289.86007	73.43828	52.48804	12.27983	0.1549993	0.23444226	2.6048264	21	12 13.6	19.8
397217 2006 HU ₄₈	16.8	X	329.67387	128.33517	86.40351	4.67963	0.1233958	0.25620480	2.4551491	21	1 31.8	19.8
397218 2006 HH ₇₀	17.4	X	80.69349	337.76112	124.90213	3.16244	0.1182313	0.25885679	2.4383517	21	3 4.2	20.1
397219 2006 HY ₇₂	16.6	X	149.65323	235.02148	73.16599	10.66455	0.0375219	0.23544787	2.5974042	21	—	—
397220 2006 HJ ₇₃	17.4	X	215.78563	191.79951	88.94512	5.70465	0.2015653	0.24054457	2.5605839	21	—	—
397221 2006 HH ₈₂	17.9	X	70.46475	208.29773	53.94690	2.86759	0.1869145	0.27674152	2.3321322	21	10 15.1	20.9
397222 2006 HB ₉₁	17.8	X	241.33649	45.98023	201.82784	11.41528	0.1421225	0.24123761	2.5556774	21	—	—
397223 2006 HF ₁₁₆	17.5	X	10.58663	167.18048	48.33078	7.45512	0.0733749	0.26005680	2.4308448	21	4 14.7	20.2
397224 2006 JZ ₂₁	17.0	X	165.55153	116.09372	198.92364	14.18162	0.1274133	0.23729127	2.5839348	21	—	—
397225 2006 JY ₃₆	17.5	X	226.54350	167.16835	119.63185	11.69388	0.0988991	0.24435354	2.5339048	21	1 9.9	21.3
397226 2006 KO ₂₄	16.0	X	100.38990	357.75758	56.78187	13.18907	0.2257471	0.24591927	2.5231380	21	2 22.1	19.3
397227 2006 KA ₄₂	17.3	X	252.33538	12.38438	231.32958	13.16868	0.1153763	0.24235181	2.5478383	21	—	—
397228 2006 KN ₄₂	16.9	X	205.11024	53.89688	242.35937	13.59303	0.2334709	0.23912427	2.5707131	21	1 3.1	21.5
397229 2006 KH ₅₂	16.6	X	110.55370	317.04599	78.39915	13.66079	0.1078458	0.24282222	2.5454567	21	1 18.6	19.9
397230 2006 KK ₅₇	17.6	X	284.58354	110.78624	84.86315	11.08619	0.1444390	0.24089744	2.5580828	21	—	—
397231 2006 KN ₇₀	17.8	X	211.23663	165.80562	135.23146	4.09327	0.2038760	0.24147036	2.5540349	21	1 14.1	22.2
397232 2006 KV ₈₂	17.3	X	216.18645	55.90780	238.12880	11.71694	0.0637405	0.24356907	2.5393426	21	1 6.1	21.1
397233 2006 KR ₈₉	16.4	X	191.84426	217.43324	101.45523	14.12539	0.2967424	0.23760867	2.5816332	21	1 24.4	21.1
397234 2006 KW ₉₇	16.5	X	82.69518	310.06909	87.15963	15.79017	0.1205708	0.23795833	2.5791035	21	—	—
397235 2006 KR ₉₉	17.5	X	190.78348	187.64013	94.89540	24.09333	0.0622540	0.36661730	1.9334254	21	—	—
397236 2006 KS ₁₀₅	16.6	X	69.14211	256.21560	258.78657	19.52403	0.3365436	0.26602861	2.3943289	21	6 6.4	19.0
397237 2006 KZ ₁₁₂	16.7	X	289.92388	358.17611	166.30436	37.82339	0.8871095	0.24580847	2.5238962	21	10 3.2	20.9
397238 2006 KY ₁₁₆	17.2	X	196.65483	153.98706	181.89802	4.59125	0.2078959	0.24383941	2.5374653	21	2 11.4	21.5
397239 2006 KA ₁₁₇	16.9	X	139.33016	96.46514	225.43906	12.52216	0.1303308	0.23264382	2.6182334	21	—	—
397240 2006 OL ₅	16.8	X	128.25996	242.04743	109.11396	14.07913	0.2779757	0.22660560	2.6645403	21	1 10.6	20.6
397241 2006 OE ₁₃	17.1	X	154.90408	201.01064	172.26647	7.69133	0.4189785	0.23092122	2.6312381	21	3 9.1	22.0
397242 2006 PY ₁₆	16.6	X	158.40148	153.90551	173.06206	12.79429	0.2849345	0.22659485	2.6646245	21	1 8.4	21.2
397243 2006 PZ ₂₅	16.8	X	184.01123	7.44001	314.35966	7.86752	0.2504375	0.23157730	2.6262661	21	1 20.9	21.3
397244 2006 PT ₄₃	16.6	X	117.28169	116.17401	253.40179	12.21672	0.1780369	0.22465198	2.6799656	21	1 5.9	20.3
397245 2006 QJ	15.8	X	76.25336	173.42338	134.22994	22.68032	0.1907758	0.21067288	2.7972436	21	12 12.0	20.5
397246 2006 QE ₄	16.9	X	40.53540	251.19189	145.39365	4.93447	0.0749013	0.21349749	2.725169	21	—	—
397247 2006 QQ ₉	16.5	X	57.39088	32.18238	316.48548	5.23510	0.1586213	0.21093698	2.7949084	21	—	—
397248 2006 QD ₂₃	16.1	X	107.95838	221.32881	77.54859	9.49623	0.2636307	0.21410945	2.7672315	21	12 29.8	21.0
397249 2006 QX ₂₅	17.1	X	182.02648	81.64475	229.85625	9.69109	0.2871657	0.23071308	2.6328204	21	1 7.3	21.8
397250 2006 QS ₃₁	16.9	X	115.15840	123.37400	239.40713	2.02525	0.3482601	0.22229814	2.6988505	21	1 20.3	20.7
397251 2006 QS ₈₀	16.6	X	177.00725	184.41544	140.81824	15.92397	0.1387670	0.23026996	2.6361970	21	1 11.7	20.8
397252 2006 QY ₉₅	16.9	X	241.38796	264.22500	28.81241	9.61047	0.1990926	0.23821828	2.5772269	21	2 2.1	21.3
397253 2006 QG ₉₈	17.0	X	125.02950	141.99519	217.81344	7.96192	0.2628544	0.22459833	2.6803923	21	1 14.4	21.0
397254 2006 QG ₉₉	17.5	X	240.55259	134.60127	154.78428	7.33032	0.3645867	0.23863612	2.5742177	21	1 19.3	22.5
397255 2006 QC ₁₁₁	16.8	X	189.37235	250.90553	153.88136	18.28190	0.2986804	0.23944385	2.5684252	21	5 6.9	21.8
397256 2006 QM ₁₂₀	16.2	X	322.20135	149.79952	244.13062	8.55733	0.1762224	0.19986273	2.8972202	21	9 22.8	19.6
397257 2006 QA ₁₃₀	15.9	X	114.88655	56.02696	295.84219	13.56249	0.1012183	0.22221254	2.6995435	21	—	—
397258 2006 QL ₁₄₂	16.8	X	137.14938	203.08640	173.30716	13.05361	0.2604606	0.22685121	2.6626167	21	2 14.7	21.1
397259 2006 QR ₁₅₉	17.1	X	171.50653	120.63362	219.82978	1.29306	0.2175950	0.22998752	2.6383548	21	1 30.2	21.4
397260 2006 RF	16.3	X	142.51767	25.66157	312.77784	11.41792	0.2450053	0.22343119	2.6897186	21	1 7.4	20.4
397261 2006 RZ ₁₅	16.2	X	217.79326	47.26216	281.50887	10.00617	0.0935417	0.23634520	2.5908257	21	2 18.8	20.2
397262 2006 RN ₁₆	14.2	X	219.16445	89.71626	245.69316	12.78816	0.4001850	0.10534702	4.4400502	21	3 3.4	22.0
397263 2006 RG ₁₇	16.7	X	91.92923	195.40238	143.99101	5.89488	0.1747273	0.21469598	2.7621893	21	—	—
397264 2006 RV ₂₃	17.2	X	229.90823	113.43100	219.10710	3.09301	0.1902462	0.23906780	2.5711179	21	3 6.9	21.6
397265 2006 RQ ₃₅	16.1	X	121.45440	308.53090	27.8652	10.49479	0.1543742	0.21929356	2.7234462	21	—	—
397266 2006 RT ₃₇	16.7	X	145.83464	206.49370	143.58088	8.09340	0.2255442	0.22508309	2.6765425	21	1 20.2	20.8
397267 2006 RS ₅₈	17.0	X	327.85522	66.63025	29.27165	1.71298	0.0734271	0.20870706	2.8147811	21	—	—
397268 2006 RB ₆₁	16.9	X	153.85614	81.94644	262.05956	5.03120	0.2195519	0.22666556	2.6640704	21	1 19.2	21.1
397269 2006 RE ₆₁	16.2	X	173.43377	3.20920	297.94837	12.86752	0.1551478	0.22662599	2.6643805	21	—	—
397270 2006 RG ₆₃	17.2	X	221.96769	168.41787	146.24953	7.12804	0.3184902	0.23708581	2.5854274	21	2 7.0	21.9
397271 2006 RT ₆₇	16.0	X	266.47991	210.39184	209.25584	9.96137	0.1112638	0.19470715	2.9481401	21	8 10.5	20.3
397272 2006 RS ₆₉	17.4	X	174.10986	92.24043	187.25791	4.48310	0.0839877	0.21862798	2.7289708	21	—	—
397273 2006 RA ₇₁	17.4	X	88.11452	146.02199	189.34311	3.32866	0.0973624	0.21205179	2.7851040	21	—	—
397274 2006 RL ₇₃	16.9	X	322.88703	67.33192	7.91160	4.37566</						

ELEMENTS AND OPPOSITION DATES IN 2021

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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>
397281 2006 SR ₁₇	16.6	X	41.33321	198.78089	207.37617	7.69855	0.1828854	0.21220104	2.7837979	21	—	—
397282 2006 SF ₃₈	17.1	X	65.20810	116.23443	242.01599	4.98546	0.0412418	0.21057545	2.7981064	21	—	—
397283 2006 SP ₄₀	16.6	X	84.86588	315.67480	45.80319	5.46682	0.1319890	0.21539748	2.7561888	21	—	—
397284 2006 SN ₄₉	16.4	X	81.81920	193.67307	185.12108	9.94005	0.2248993	0.21481725	2.7611496	21	—	—
397285 2006 SZ ₅₀	16.6	X	180.90383	133.53506	190.77031	27.20134	0.1309197	0.22859468	2.6490611	21	1 11.0	21.3
397286 2006 SE ₅₁	16.6	X	24.84452	175.31274	231.68906	6.33673	0.2025764	0.21006186	2.8026653	21	—	—
397287 2006 SG ₅₄	16.7	X	171.53129	80.75719	231.67853	11.80873	0.3806776	0.22755403	2.6571314	21	1 6.3	21.8
397288 2006 SS ₇₉	16.3	X	191.54580	52.40866	250.26158	12.40038	0.2641174	0.22768240	2.6561325	21	1 3.5	21.1
397289 2006 SX ₈₃	17.5	X	70.17922	210.35967	163.86630	4.42529	0.0823976	0.21363609	2.7713177	21	—	—
397290 2006 SQ ₉₅	16.5	X	140.72584	284.07701	22.58582	13.53936	0.2323322	0.21672121	2.7449542	21	—	—
397291 2006 SG ₉₆	16.6	X	1.23839	129.66594	199.64750	11.68788	0.0271405	0.19015799	2.9949736	21	9 2.9	20.9
397292 2006 ST ₁₀₆	17.3	X	243.01257	258.71875	12.90010	12.79930	0.1758304	0.22993410	2.6387635	21	1 10.1	21.9
397293 2006 SX ₁₁₁	16.5	X	153.83988	274.73637	79.93970	13.84815	0.2773686	0.22684204	2.6626884	21	2 10.3	21.1
397294 2006 SK ₁₂₄	16.4	X	104.93184	220.92819	139.44357	14.14136	0.1911745	0.21750475	2.7383579	21	—	—
397295 2006 SO ₁₃₅	16.6	X	153.09282	207.79784	125.08325	9.69947	0.2059378	0.22614120	2.6681870	21	1 4.9	20.8
397296 2006 SH ₁₄₅	17.2	X	36.54353	204.39586	189.74899	5.48344	0.0569550	0.21024707	2.8011092	21	—	—
397297 2006 SG ₁₆₈	16.9	X	139.40854	106.34071	207.09738	5.90328	0.0317379	0.21729634	2.7401086	21	—	—
397298 2006 SH ₁₇₀	15.0	X	311.66094	122.62917	227.48982	1.93679	0.2523553	0.12257614	4.0135816	21	6 25.7	19.9
397299 2006 SP ₁₇₅	17.2	X	98.84676	29.35387	340.91637	2.15375	0.1597077	0.22064551	2.7123100	21	—	—
397300 2006 SH ₂₀₁	16.8	X	15.56371	94.32141	30.02022	9.23063	0.1229877	0.21894052	2.7263731	21	—	—
397301 2006 SS ₂₀₁	18.0	X	180.69864	291.21732	22.31240	2.14911	0.2732054	0.22632061	2.6667767	21	1 10.5	22.6
397302 2006 SD ₂₁₆	17.0	X	137.12802	139.10748	176.36064	9.17647	0.2242811	0.21847949	2.7302071	21	—	—
397303 2006 SL ₂₂₆	16.8	X	174.70559	44.58406	247.76290	5.12824	0.0828267	0.22047422	2.7137146	21	—	—
397304 2006 SM ₂₃₄	17.3	X	193.43563	2.29948	245.09321	3.47089	0.0178822	0.21433968	2.7652496	21	—	—
397305 2006 SU ₂₄₃	17.0	X	142.56548	132.59729	158.27778	6.08100	0.0257307	0.21277551	2.7787851	21	—	—
397306 2006 SW ₂₄₅	17.2	X	173.95880	269.67752	40.06313	0.54987	0.1669911	0.22523326	2.6753526	21	—	—
397307 2006 ST ₂₄₆	16.8	X	234.59147	50.55977	179.48594	11.82503	0.0662635	0.22026923	2.7153980	21	—	—
397308 2006 SS ₂₄₇	16.9	X	8.37655	26.77495	25.35578	3.85211	0.0980412	0.20937121	2.8088254	21	—	—
397309 2006 SX ₂₆₇	17.4	X	190.15167	25.63862	285.97518	3.25871	0.2624537	0.22708003	2.6608277	21	1 14.1	22.1
397310 2006 SO ₂₆₈	16.1	X	84.44890	359.62733	232.12835	9.22916	0.0399027	0.18704898	3.0280693	21	8 18.9	20.5
397311 2006 SM ₂₇₄	16.8	X	205.63284	151.78948	219.62272	3.91777	0.3241804	0.23580617	2.5947724	21	4 2.5	21.7
397312 2006 SL ₂₉₀	16.5	X	167.79894	185.68641	167.88600	14.85074	0.2620853	0.22747499	2.6577469	21	2 13.4	21.2
397313 2006 SV ₃₃₀	17.1	X	244.49672	16.14620	164.74795	4.31430	0.0398180	0.21085038	2.7956736	21	12 30.1	21.0
397314 2006 SE ₃₆₁	16.8	X	184.86890	161.99363	204.58942	13.64765	0.1084822	0.23067462	2.6331131	21	3 5.8	21.1
397315 2006 SV ₃₆₆	16.5	X	177.35684	82.70027	237.79504	11.94177	0.1846995	0.22652323	2.6651861	21	1 8.3	20.9
397316 2006 SW ₃₈₁	17.1	X	206.42487	93.62037	169.58881	13.37866	0.1824397	0.22160984	2.7044359	21	—	—
397317 2006 SO ₃₈₄	16.9	X	177.85984	187.39112	83.78635	9.93055	0.1220502	0.21480455	2.7612585	21	—	—
397318 2006 SK ₃₉₀	16.8	X	221.60685	194.44845	129.27479	12.99023	0.2033408	0.23203354	2.6228223	21	2 20.8	21.2
397319 2006 SO ₃₉₆	17.1	X	166.95731	245.69089	40.68673	5.27989	0.1186805	0.21687814	2.7436299	21	—	—
397320 2006 ST ₄₀₀	17.0	X	299.85695	211.06635	231.92916	6.27601	0.0365860	0.19944454	2.9012687	21	11 7.8	20.8
397321 2006 SC ₄₀₁	17.1	X	95.76009	253.68777	109.19467	3.23219	0.1620571	0.21687347	2.7436693	21	—	—
397322 2006 SU ₄₀₄	16.2	X	172.65499	260.98476	232.71206	7.95767	0.0899453	0.18269364	3.0760054	21	8 1.9	21.1
397323 2006 SQ ₄₁₀	17.2	X	40.64067	120.71304	259.56236	4.42934	0.0290974	0.21004952	2.8027751	21	—	—
397324 2006 SD ₄₁₃	16.5	X	83.45693	220.02480	128.41532	12.19092	0.2362760	0.21149427	2.7899964	21	—	—
397325 2006 TG	16.4	X	91.79730	160.45079	213.75507	7.27499	0.2254038	0.21671519	2.7450051	21	—	—
397326 2006 TC ₁	18.9	X	124.67576	160.83250	326.06913	4.49741	0.3755060	0.43690957	1.7200524	21	6 29.1	21.3
397327 2006 TM ₉	16.1	X	229.18114	19.65240	37.28305	28.20789	0.1567802	0.17938015	3.1137695	21	6 19.5	21.5
397328 2006 TN ₁₈	16.9	X	222.89132	285.41761	30.92938	12.71068	0.2814672	0.23419412	2.6066661	21	2 16.0	21.8
397329 2006 TV ₃₂	17.1	X	101.01035	118.29799	213.58181	5.99140	0.0217270	0.20896366	2.8124763	21	—	—
397330 2006 TZ ₃₂	17.1	X	33.51259	348.93032	32.46726	10.84765	0.0884749	0.20556237	2.8434153	21	—	—
397331 2006 TO ₅₅	16.5	X	167.52521	158.66641	185.41933	13.79734	0.2635068	0.22613328	2.6682492	21	2 1.3	21.3
397332 2006 TA ₆₃	16.7	X	47.37335	131.42778	247.98425	8.17295	0.2301004	0.20924277	2.8099747	21	—	—
397333 2006 TG ₆₄	16.4	X	185.63946	247.35724	84.62450	14.13503	0.2864988	0.22899232	2.6459935	21	2 7.0	21.3
397334 2006 TE ₆₇	15.8	X	225.47377	136.68639	269.99197	8.14900	0.1920514	0.17876209	3.1209425	21	6 5.6	20.8
397335 2006 TN ₆₇	16.7	X	136.60541	127.88154	198.25979	13.33194	0.1461779	0.21681784	2.7441386	21	—	—
397336 2006 TW ₆₇	16.0	X	95.18016	76.31640	276.06802	11.71006	0.1900451	0.21439243	2.7647959	21	—	—
397337 2006 TQ ₇₂	17.1	X	166.99636	57.73310	281.59444	3.60835	0.2418854	0.22590522	2.6700448	21	1 27.2	21.4
397338 2006 TG ₇₅	16.5	X	110.11952	284.25363	66.42826	9.96182	0.2289232	0.21655624	2.7463481	21	—	—
397339 2006 TS ₈₈	17.5	X	255.79903	271.26510	23.87948	11.25380	0.3913315	0.23770585	2.5809294	21	2 7.7	22.6
397340 2006 TH ₉₀	17.1	X	213.75967	47.46963	303.22798	1.78089	0.2308318	0.23463864	2.6033728	21	3 15.6	21.7
397341 2006 TB ₉₆	16.6	X	182.45156	67.75122	241.23477	11.88686	0.2721669	0.22625994	2.6672534	21	1 4.5	21.4
397342 2006 TK ₁₀₉	16.7	X	118.58792	301.39379	13.48608	10.81043	0.2322278	0.21267978	2.7796188	21	—	—
397343 2006 UQ ₁	16.7	X	170.98360	329.24175	46.02568	14.87901	0.2807742	0.23077933	2.6323165	21	3 22.2	21.5
397344 2006 UZ ₁₁	16.4	X	226.26991	223.56555	45.01901	13.71775	0.1520250	0.22204247	2.7009218	21	—	—
397345 2006 UN ₃₇	17.1	X	20.14704	129.86556	259.25216	1.02853	0.0741996	0.20302406	2.8670661	21	12 23.3	20.7
397346 2006 UR ₄₄	16.9	X	140.84654	112.21663	222.43820	8.45578	0.2377378	0.21843716	2.7305599	21	—	—
397347 2006 UQ ₆₃	16.5	X	179.00341	95.13932	235.37718	11.91247	0.3161142	0.22777267	2.6554307	21	1 26.4	21.5
397348 2006 UH ₇₀	15.7	X	248.46518	210.04380	214.58437	19.40966	0.2930368	0.18090337	3.0962661	21	7 5.8	21.1
397349 2006 UD ₇₁	16.5	X	159.92024	256.96367	80.20146	13.42884	0.2811016	0.22288103	2.6941430	21	1 24.4	21.2
397350 2006 UJ ₈₃	17.3	X	165.04282	238.80442	105.02600	2.67559	0.3175837	0.22545613	2.6735892	21	2 5.6	21.9
397351 2006 UK ₈₅	16.3	X	225.00353	60.26344	48.34303	12.65309	0.1774303	0.18212912	3.0823583	21	8 27.3	21.4
397352 2006 UZ ₈₈	16.5	X	244.02863	72.82120	225.29082	26.25489	0.2673748	0.23257028	2.6187854	21	1 27.0	21.7
397353 2006 UW ₉₀	17.1	X	180.89861	92.30360	233.27124	6.10659	0.3074797	0.22535082	2.6744221	21	1 23.9	22.1
397354 2006 UQ ₉₄	17.4	X	153.02037	132.05827	190.14695	7.92502	0.1853111	0.21931979	2.7232290	21	—	—
397355 2006 UT												

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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>
397361 2006 UL ₁₂₉	17.0	X	88.33832	318.36011	22.60598	4.61220	0.0764120	0.20874096	2.8144763	21	—	—
397362 2006 UA ₁₄₁	16.2	X	139.25337	5.83813	243.20792	11.00884	0.0041314	0.19766292	2.9186762	21	11 17.4	20.3
397363 2006 UW ₁₅₆	16.3	X	105.66852	307.38800	42.76031	12.47471	0.1091919	0.21490610	2.7603885	21	—	—
397364 2006 UE ₁₇₆	17.3	X	117.58280	254.09045	107.55410	4.81014	0.2305561	0.22033357	2.7148694	21	1 6.6	20.8
397365 2006 UG ₁₈₂	16.5	X	180.90873	196.71013	196.55598	14.17266	0.2183252	0.23404229	2.6077933	21	4 10.9	20.9
397366 2006 UX ₂₀₁	16.5	X	104.96241	308.51091	61.65382	12.33195	0.2274014	0.22072135	2.7116886	21	—	—
397367 2006 UU ₂₀₄	17.0	X	75.49631	146.36749	241.71385	6.88735	0.2752231	0.21315573	2.7754796	21	—	—
397368 2006 UN ₂₁₀	16.0	X	159.98703	247.14660	267.42797	7.92035	0.0405838	0.18223464	3.0811683	21	8 13.0	20.7
397369 2006 UD ₂₂₄	17.2	X	166.09685	196.04853	139.54415	4.83245	0.2558804	0.22642402	2.6659646	21	1 23.2	21.7
397370 2006 UB ₂₄₂	17.5	X	231.29726	104.15201	214.98454	1.70673	0.2031464	0.23545812	2.5973288	21	2 20.6	21.9
397371 2006 UX ₂₄₇	17.6	X	153.00325	19.49122	299.85332	0.82710	0.2397437	0.22031469	2.7150245	21	—	—
397372 2006 UD ₂₆₃	16.3	X	226.67614	81.65282	270.32181	15.74654	0.3462319	0.23706950	2.5855460	21	3 16.4	21.6
397373 2006 UX ₂₇₀	16.6	X	145.94931	266.11457	49.85818	8.15405	0.1875486	0.21495242	2.7599920	21	—	—
397374 2006 UD ₂₇₆	17.2	X	65.71525	161.86783	196.62143	3.94055	0.0841877	0.20836421	2.8178680	21	—	—
397375 2006 UL ₃₂₈	16.4	X	114.03296	83.09293	241.94161	9.16446	0.2064837	0.20984469	2.8045987	21	—	—
397376 2006 UQ ₃₃₅	16.2	X	321.05737	290.02189	234.85416	13.51136	0.0301925	0.21442250	2.7645374	21	—	—
397377 2006 UQ ₃₃₇	15.8	X	154.08972	251.19472	63.64371	15.76568	0.1787738	0.21736857	2.7395016	21	—	—
397378 2006 UJ ₃₃₈	15.9	X	3.44994	223.36471	56.34358	10.24374	0.0747701	0.17849864	3.1240126	21	7 6.6	20.0
397379 2006 UO ₃₅₈	17.3	X	35.29238	353.46618	26.60548	2.29653	0.0793338	0.20459810	2.8523424	21	—	—
397380 2006 UV ₃₅₉	16.6	X	171.03001	55.07372	205.48483	13.21230	0.1610380	0.21097538	2.7945692	21	—	—
397381 2006 UA ₃₆₁	15.7	X	298.93138	285.18064	66.65765	12.50948	0.1228048	0.18320703	3.0702562	21	6 27.5	19.8
397382 2006 VU ₃	16.9	X	281.54809	225.43932	240.36394	8.43166	0.1090528	0.19134300	2.9825953	21	9 14.4	20.9
397383 2006 VU ₄₄	15.8	X	9.26986	271.62389	55.71280	16.66774	0.1190900	0.19035302	2.9910213	21	9 30.6	19.7
397384 2006 VM ₅₃	16.6	X	64.56755	353.39568	282.77668	6.37787	0.0055777	0.18774314	3.0206008	21	9 15.1	20.9
397385 2006 VC ₅₄	16.6	X	235.56519	80.97405	39.41641	11.82603	0.0555847	0.18932689	3.0037321	21	10 3.7	20.9
397386 2006 VC ₅₆	16.4	X	337.97453	321.10652	66.31257	11.68062	0.0752922	0.19271747	2.9683970	21	10 23.5	20.2
397387 2006 VA ₆₁	16.2	X	279.51641	193.37699	246.16804	9.29951	0.1578006	0.18897051	3.0050733	21	9 14.1	20.3
397388 2006 VE ₆₇	16.2	X	20.46406	113.66090	244.08905	10.85962	0.0741303	0.19466212	2.9485947	21	11 11.9	20.2
397389 2006 VF ₆₇	16.1	X	196.13759	232.02579	245.02115	10.15109	0.0716778	0.17899151	3.1182751	21	8 5.4	20.9
397390 2006 VV ₇₆	16.5	X	37.31009	308.39271	63.73805	15.92933	0.1523584	0.20291849	2.8680605	21	—	—
397391 2006 VA ₉₇	16.9	X	237.45315	56.94010	241.20297	3.79844	0.1409122	0.23207765	2.6224900	21	2 2.9	21.2
397392 2006 VA ₁₀₀	16.3	X	87.27095	312.16382	55.20949	16.55313	0.1409822	0.21276814	2.7788492	21	—	—
397393 2006 VO ₁₀₅	16.5	X	110.91896	294.16586	50.88744	10.85043	0.1455229	0.21247332	2.7814192	21	—	—
397394 2006 VE ₁₀₆	16.3	X	45.84705	306.64542	87.99573	13.46963	0.2128324	0.20905687	2.8116403	21	—	—
397395 2006 VT ₁₁₆	17.4	X	150.78867	86.70906	243.01182	12.71018	0.2360191	0.21866317	2.7286780	21	1 1.7	21.8
397396 2006 VU ₁₃₆	17.1	X	226.84008	182.67663	289.78076	0.26230	0.1193070	0.18367227	3.0650694	21	9 1.9	21.8
397397 2006 WN ₁₆	16.5	X	158.65487	117.95201	262.85972	8.60687	0.1178373	0.22593778	2.6697882	21	2 24.8	20.8
397398 2006 WS ₃₃	16.2	X	194.87671	202.81523	86.81351	7.19857	0.0119928	0.21463855	2.7626820	21	—	—
397399 2006 WV ₆₆	16.6	X	262.43833	248.09599	186.93355	4.49607	0.1074328	0.18399383	3.0614973	21	8 27.6	20.9
397400 2006 WF ₇₂	16.8	X	24.01306	66.40330	303.32085	0.89182	0.0871902	0.19945754	2.9011426	21	12 5.1	20.5
397401 2006 WF ₈₂	17.0	X	26.37989	203.89674	169.90932	2.13115	0.0899981	0.19843271	2.9111229	21	12 13.8	20.7
397402 2006 WY ₁₀₂	16.6	X	62.67541	61.92119	243.55799	8.64270	0.0572340	0.19214929	2.9742458	21	10 29.5	20.8
397403 2006 WL ₁₀₈	16.6	X	284.92294	332.90479	73.28558	10.82802	0.1004969	0.18358929	3.0659930	21	8 27.2	20.9
397404 2006 WL ₁₅₀	15.9	X	239.44071	299.64917	97.40307	13.80427	0.2055872	0.17386797	3.1792377	21	6 7.1	21.0
397405 2006 WS ₁₆₆	16.8	X	94.00022	255.63308	68.17079	11.39341	0.0477807	0.20175463	2.8790799	21	12 29.3	21.0
397406 2006 WK ₁₇₅	16.5	X	75.19089	229.04799	80.58392	10.67058	0.0469005	0.19463247	2.9488942	21	11 20.8	20.7
397407 2006 WC ₁₈₄	15.9	X	81.42401	286.62381	82.50941	19.08495	0.1467981	0.21008221	2.8024843	21	—	—
397408 2006 WL ₁₉₉	16.3	X	158.18701	285.53662	249.03303	13.39950	0.2038490	0.17943748	3.1131062	21	9 4.6	21.8
397409 2006 XB ₂₄	16.2	X	167.66542	265.34527	71.25789	18.30984	0.2905443	0.22501735	2.6770637	21	1 31.9	21.1
397410 2006 XJ ₃₅	15.4	X	265.77593	333.32038	98.02370	23.47403	0.0074836	0.18012457	3.1051845	21	9 22.5	20.2
397411 2006 XV ₅₂	16.1	X	266.41906	351.52762	94.80986	11.72373	0.1902672	0.18338294	3.0682925	21	9 10.3	20.6
397412 2006 YQ ₃	16.0	X	156.57964	55.27052	69.82997	17.70880	0.0916866	0.17370505	3.1812252	21	7 8.0	21.0
397413 2006 YN ₂₅	15.9	X	350.31694	266.91798	90.31131	12.60200	0.1257627	0.18414313	3.0598422	21	10 5.7	19.8
397414 2006 YU ₂₇	15.9	X	119.20189	119.21488	97.24129	18.19057	0.1470763	0.17712198	3.1401790	21	10 3.1	21.2
397415 2006 YA ₃₃	16.2	X	162.76328	80.08849	85.45228	10.72354	0.0304739	0.17585082	3.1552937	21	9 6.6	20.9
397416 2006 YR ₃₆	16.7	X	226.54359	26.84212	71.70225	5.73291	0.1260018	0.17557323	3.1586185	21	8 16.7	21.5
397417 2006 YZ ₃₆	15.8	X	132.61910	255.26678	312.20539	12.08842	0.2430543	0.17902020	3.1788227	21	9 24.6	21.4
397418 2006 YG ₄₀	16.1	X	288.14507	342.21772	100.60874	11.80828	0.0768325	0.18802702	3.0175597	21	10 22.5	20.3
397419 2006 YU ₄₂	15.7	X	111.08822	280.10670	110.67179	25.36422	0.1952347	0.21235009	2.7824951	21	2 1.4	19.6
397420 2006 YC ₅₀	17.9	X	209.62621	310.40517	122.20893	1.37118	0.1619793	0.30554690	2.1831528	21	6 23.3	21.2
397421 2007 AO ₃	15.5	X	198.11459	189.51833	296.96168	10.14653	0.0237475	0.17598820	3.1536514	21	8 22.5	20.2
397422 2007 AB ₁₇	16.0	X	250.68290	359.57541	108.87235	10.98538	0.1110264	0.18258621	3.0772118	21	9 30.1	20.6
397423 2007 AW ₃₀	16.0	X	97.86612	102.98222	116.13569	17.33912	0.1441455	0.17062962	3.2193369	21	9 9.8	21.0
397424 2007 BF ₂	17.5	X	143.63813	196.56007	317.35834	18.36544	0.0944548	0.37215498	1.9141979	21	8 6.9	19.5
397425 2007 BU ₄	16.2	X	236.63530	335.52482	110.15612	18.35722	0.1819563	0.17586325	3.1551450	21	8 4.7	21.2
397426 2007 BB ₁₆	16.2	X	272.43329	100.88487	318.95088	8.91486	0.0493729	0.17567804	3.1573622	21	8 28.4	20.6
397427 2007 BK ₁₆	15.6	X	47.83061	140.78622	121.92266	15.33212	0.1029354	0.16909986	3.2387235	21	8 24.8	20.0
397428 2007 BZ ₄₂	18.1	X	167.48033	180.85969	313.03185	3.16069	0.0622627	0.30578817	2.1820043	21	8 3.1	20.9
397429 2007 BM ₈₀	16.2	X	232.13213	327.13278	122.47040	10.26058	0.0372142	0.17225647	3.1990352	21	8 20.4	20.8
397430 2007 CA ₂₆	15.7	X	284.40712	312.90325	105.67470	10.93885	0.0740106	0.17720479	3.1392007	21	9 14.4	20.1
397431 2007 CB ₂₈	16.4	X	104.34423	205.35523	323.40811	13.23953	0.0176864	0.22993351	2.6387680	21	6 25.6	20.1
397432 2007 CF ₃₉	16.1	X	266.87226	299.33005	145.08574	10.82924	0.0245433	0.17811611	3.1284838	21	9 29.6	20.5
397433 2007 CG ₇₉	15.4	X	169.48234	156.24260	34.94934	15.81911	0.2105234	0.17510068	3.1642988	21	10 11.9	20.9
397434 2007 DE												

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
397441 2007 EH ₁	16.8	X	90.15384	306.95854	229.01294	24.05054	0.2625959	0.29293124	2.2453924	21	7 14.1	20.5
397442 2007 EL ₁	18.2	X	27.23306	22.72099	155.89906	5.89661	0.1748137	0.28365102	2.2941043	21	3 12.1	19.7
397443 2007 EB ₉	17.9	X	342.40290	214.55728	9.29371	4.76695	0.0888008	0.27914209	2.3187424	21	3 5.4	20.5
397444 2007 EB ₂₉	16.3	X	245.96552	306.89897	147.76474	11.03528	0.0441489	0.17413829	3.1759467	21	9 11.8	20.9
397445 2007 ED ₄₇	17.5	X	45.81685	203.82401	8.40222	6.62348	0.0484672	0.28846433	2.2685132	21	6 1.3	20.1
397446 2007 EL ₇₆	15.8	X	296.67699	81.73515	356.96032	9.75213	0.0241442	0.17434590	3.1734249	21	10 23.7	20.2
397447 2007 EC ₉₈	18.0	X	54.48047	169.00735	14.96759	1.80832	0.1150641	0.28744612	2.2738671	21	5 13.1	20.1
397448 2007 EF ₁₂₃	17.7	X	29.24211	204.14540	56.53968	4.28434	0.1485775	0.29464433	2.2366807	21	8 4.9	19.6
397449 2007 EX ₁₄₅	17.9	X	357.90506	213.20611	63.22890	2.56125	0.1891300	0.29044041	2.2582119	21	6 16.5	19.0
397450 2007 ES ₁₄₉	16.2	X	337.78506	27.42446	17.60744	10.70625	0.1132462	0.17934481	3.1141785	21	11 5.5	20.0
397451 2007 EA ₁₈₉	15.8	X	345.69169	172.38595	181.17088	12.33509	0.0835659	0.16975516	3.2038334	21	9 12.8	20.0
397452 2007 EB ₁₉₇	18.2	X	31.35310	48.62356	201.65044	5.02330	0.1836894	0.28958369	2.2626636	21	7 24.4	20.1
397453 2007 FA ₁₂	18.2	X	120.19068	298.99927	208.80698	1.21735	0.1435454	0.29446924	2.2375672	21	7 2.0	21.2
397454 2007 FJ ₁₂	17.3	X	342.86150	197.95962	21.57924	5.53137	0.1758910	0.27673728	2.3321561	21	2 15.8	19.7
397455 2007 FW ₃₁	17.8	X	46.92620	257.20121	12.29129	5.72529	0.1411574	0.29631784	2.2282514	21	9 18.6	20.1
397456 2007 GE ₆	17.7	X	39.36823	26.18725	210.77211	5.40377	0.1634070	0.28892840	2.2660835	21	7 15.8	19.7
397457 2007 GR ₁₁	17.3	X	266.45143	302.44008	88.43119	6.61294	0.1861920	0.29888935	2.2154079	21	7 13.2	19.9
397458 2007 GB ₆₁	18.1	X	48.49599	203.59553	350.25501	2.41475	0.1317318	0.28376928	2.2934668	21	5 19.8	20.1
397459 2007 GS ₆₁	17.5	X	325.19869	152.31504	102.34182	3.18046	0.1952828	0.27757250	2.3274754	21	3 5.7	20.2
397460 2007 HU ₁₂	15.4	X	185.68661	348.30613	199.64055	27.82415	0.1512170	0.17231925	3.1982582	21	10 19.9	20.6
397461 2007 HY ₂₇	18.0	X	277.37761	223.71695	59.89559	4.73736	0.2054681	0.26955553	2.3733979	21	2 16.3	21.6
397462 2007 HY ₃₅	17.3	X	189.24641	15.54890	50.05452	5.99414	0.0597342	0.28409614	2.2917074	21	5 24.2	20.4
397463 2007 HC ₅₀	17.4	X	52.49226	120.62680	89.30081	5.19014	0.1161287	0.28600616	2.2814929	21	6 20.7	19.6
397464 2007 HU ₅₂	17.4	X	292.29334	231.10980	77.61844	8.15699	0.1300845	0.27796068	2.3253079	21	4 17.3	20.4
397465 2007 HW ₆₀	17.9	X	320.98684	232.90470	51.86898	8.00953	0.0753696	0.28184530	2.3038924	21	4 30.9	20.4
397466 2007 HL ₆₆	18.1	X	14.65685	88.82877	171.61675	5.16602	0.2383775	0.28456363	2.2891967	21	7 7.7	19.3
397467 2007 HX ₆₆	17.9	X	332.15991	133.65499	143.89738	5.97490	0.1980707	0.27886440	2.3202815	21	4 20.9	21.0
397468 2007 HS ₇₃	18.1	X	12.86420	259.20772	46.55199	7.19200	0.2147016	0.29217003	2.2929908	21	9 27.6	19.8
397469 2007 HR ₈₃	17.6	X	79.96779	308.70434	218.00529	4.95461	0.1277801	0.28467157	2.2886180	21	6 2.9	20.1
397470 2007 JN ₂₈	17.4	X	6.40245	122.57445	125.30986	8.25583	0.2089833	0.28200058	2.3030449	21	5 21.1	19.0
397471 2007 LV	18.1	X	329.33736	262.08268	70.28807	16.99680	0.2709728	0.42115548	1.7626838	21	6 23.8	18.0
397472 2007 MV ₉	16.9	X	238.91559	178.41174	162.62592	3.40765	0.3189904	0.26608869	2.3393686	21	4 17.7	21.0
397473 2007 OB	17.2	X	218.78105	191.34563	147.43581	3.70493	0.3882634	0.25589066	2.4571581	21	3 3.2	22.0
397474 2007 PP ₆	17.3	X	96.27358	13.00970	77.14458	18.54057	0.8351650	0.30922181	2.1658214	21	6 3.7	21.8
397475 2007 PK ₂₁	17.3	X	217.53296	231.47742	136.53229	2.82616	0.2287437	0.26098299	2.4250903	21	4 8.4	21.3
397476 2007 PP ₂₆	17.4	X	283.53585	25.26368	292.70776	4.14393	0.2458189	0.26779801	2.3837708	21	3 29.4	20.9
397477 2007 PW ₃₄	17.5	X	280.51333	138.83689	172.22966	1.25781	0.1997548	0.26569063	2.3963590	21	3 25.3	21.0
397478 2007 PT ₄₅	17.7	X	289.46267	148.92951	150.55471	1.67358	0.1875266	0.26570351	2.3928216	21	3 21.9	20.9
397479 2007 QC ₂	17.3	X	245.93345	234.10123	118.24197	3.90245	0.2000740	0.26647292	2.3916667	21	4 14.7	21.1
397480 2007 QK ₄	17.5	X	222.93787	200.68034	160.53550	6.18999	0.2221545	0.26038600	2.4287956	21	4 4.9	21.6
397481 2007 QA ₆	18.0	X	253.62801	175.93406	170.70857	2.10533	0.2301052	0.26530788	2.3986633	21	4 10.9	21.8
397482 2007 QD ₁₁	17.7	X	230.67733	341.84692	12.11015	1.72132	0.2137943	0.26035841	2.4289672	21	4 1.1	21.7
397483 2007 RB ₂₀	16.5	X	146.20715	175.43878	145.51352	18.61289	0.3028809	0.23869561	2.5737899	21	—	—
397484 2007 RY ₂₀	17.5	X	274.79423	182.84689	140.17685	3.05540	0.2029702	0.26598587	2.3945855	21	4 4.5	21.1
397485 2007 RT ₃₃	17.4	X	280.02842	177.20755	187.57555	10.80538	0.1858897	0.26876903	2.3780258	21	6 8.0	20.7
397486 2007 RD ₃₇	16.2	X	130.21789	290.93715	4.18470	27.18852	0.2294774	0.23118945	2.6292025	21	—	—
397487 2007 RO ₄₉	17.8	X	311.74499	157.09458	189.46756	1.91633	0.2205962	0.27396493	2.3478629	21	6 23.5	20.1
397488 2007 RF ₈₅	16.9	X	75.80254	258.09556	163.90723	21.51025	0.0754998	0.24251358	2.5467052	21	—	—
397489 2007 RJ ₈₅	16.0	X	140.54236	199.33780	162.32487	6.83502	0.1759440	0.17305106	3.1892351	21	1 31.3	21.0
397490 2007 RH ₁₀₈	17.4	X	234.78215	315.15480	353.28776	6.16126	0.1363637	0.25270333	2.4777762	21	2 13.0	21.3
397491 2007 RS ₁₃₁	17.6	X	87.22297	245.72129	126.40761	2.19983	0.0528029	0.23230769	2.6207584	21	—	—
397492 2007 RS ₁₃₈	17.8	X	300.34328	147.32392	212.99371	2.11040	0.1860304	0.27449235	2.3448544	21	6 30.7	20.3
397493 2007 RE ₁₄₉	17.0	X	298.66985	318.61066	347.56740	10.16669	0.1325097	0.26414071	2.4057241	21	4 15.3	20.3
397494 2007 RJ ₁₆₉	17.5	X	37.69809	265.74168	154.96475	8.42671	0.1021548	0.23275829	2.6173750	21	—	—
397495 2007 RA ₁₇₄	17.3	X	89.14071	281.21170	138.51314	4.96473	0.1777595	0.23958997	2.5673808	21	1 29.3	20.0
397496 2007 RF ₂₇₀	16.8	X	315.95728	166.49223	229.51006	1.20603	0.0719202	0.20232692	2.8736482	21	9 27.9	20.4
397497 2007 RG ₂₈₂	18.0	X	251.89472	120.45808	171.33198	22.26673	0.0528317	0.39345512	1.8444742	21	1 14.8	20.6
397498 2007 RM ₂₈₅	19.0	X	228.54974	153.29184	192.74491	1.18778	0.2108388	0.25731771	2.4480649	21	3 20.9	23.0
397499 2007 RR ₂₉₈	17.0	X	319.41949	230.73553	210.57456	8.60493	0.1958562	0.21259329	2.7803727	21	11 30.5	19.7
397500 2007 RB ₃₁₂	17.0	X	138.93407	197.63791	173.18036	12.13951	0.1607615	0.24029553	2.5623528	21	1 27.2	20.8
397501 2007 RR ₃₁₄	17.1	X	277.80160	245.43767	45.88156	6.36818	0.1302323	0.25986264	2.4320555	21	3 8.7	20.5
397502 2007 RM ₃₁₅	17.6	X	209.78167	226.44236	102.65178	1.24681	0.2250990	0.25197337	2.4825593	21	2 14.5	21.9
397503 2007 RR ₃₁₆	17.6	X	280.82924	266.45040	22.48381	1.66085	0.1728125	0.25803517	2.4435250	21	3 1.7	21.1
397504 2007 RE ₃₁₈	17.2	X	305.06544	64.88086	279.32796	4.64179	0.1908877	0.27336238	2.3513118	21	6 13.3	19.8
397505 2007 RL ₃₂₃	17.5	X	282.91156	181.09431	117.62994	5.05336	0.2218887	0.26369787	2.4084167	21	3 11.6	21.0
397506 2007 RP ₃₂₃	16.7	X	301.32516	197.28898	45.43530	11.13037	0.0610177	0.24389541	2.5370769	21	2 16.2	20.3
397507 2007 SH ₇	17.4	X	270.76526	262.06357	120.35361	1.99742	0.2003918	0.27013309	2.3700137	21	6 17.9	20.5
397508 2007 SM ₇	17.6	X	289.18175	311.88349	39.88566	2.53928	0.2230271	0.26992763	2.3712162	21	5 25.7	20.7
397509 2007 SX ₁₈	17.0	X	242.69534	49.33036	218.05630	14.00600	0.0659979	0.23697842	2.5862084	21	1 2.9	21.0
397510 2007 TB	17.8	X	220.43959	331.30983	1.07116	1.56246	0.1548317	0.25436005	2.4670055	21	2 27.2	21.6
397511 2007 TN ₂₁	18.0	X	127.00227	142.87536	210.29084	20.44808	0.1163878	0.37915062	1.8905792	21	—	—
397512 2007 TB ₂₄	16.8	X	345.41222	69.99687	13.99370	6.29452	0.0960801	0.22402628	2.6849533	21	—	—
397513 2007 TV ₃₅	16.5	X	100.74131	154.37026	206.63824	13.33423	0.2393575	0.23062811	2.6334670	21	—	—
397514 2007 TG ₄₆												

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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>
397521 2007 TQ ₁₀₄	17.5	X	167.30821	177.13593	146.68796	2.62910	0.1805616	0.23738831	2.5832305	21	1 3.1	21.5
397522 2007 TZ ₁₁₆	17.4	X	309.75053	102.25087	234.39215	3.06660	0.0977847	0.27021560	2.3695312	21	6 25.9	19.8
397523 2007 TH ₁₂₄	17.2	X	325.53431	63.18490	41.60955	9.47206	0.1508581	0.22059452	2.7127279	21	—	—
397524 2007 TN ₁₂₇	17.6	X	278.86903	152.76353	196.46678	6.06814	0.1317372	0.26435866	2.4044017	21	5 24.1	20.8
397525 2007 TK ₁₇₄	17.5	X	203.50460	162.34784	196.63387	7.69276	0.1539903	0.25380913	2.4705741	21	3 14.9	21.5
397526 2007 TN ₁₇₄	17.5	X	296.40560	202.03330	157.60987	2.67211	0.2000999	0.27201598	2.3590642	21	6 20.9	20.2
397527 2007 TX ₁₇₄	17.6	X	305.30991	112.10248	225.26263	2.22086	0.2644301	0.27044468	2.3681930	21	5 21.4	20.2
397528 2007 TF ₁₈₇	17.9	X	243.28219	284.51060	47.97610	9.43768	0.2622172	0.25776680	2.4452207	21	3 18.6	22.2
397529 2007 TX ₁₉₃	17.8	X	275.23274	97.82394	228.73441	2.15615	0.2906182	0.26425363	2.4050387	21	3 29.6	21.5
397530 2007 TA ₁₉₇	18.2	X	248.39302	156.15970	160.71238	1.39586	0.1985780	0.25894234	2.4378146	21	3 2.6	22.1
397531 2007 TB ₂₀₄	16.7	X	224.75712	344.75878	215.91981	12.44877	0.1226364	0.21814978	2.7329574	21	12 20.1	20.8
397532 2007 TL ₂₁₂	16.5	X	19.01374	28.45166	337.26829	5.58889	0.0228221	0.21373746	2.7704413	21	11 16.4	20.3
397533 2007 TD ₂₁₇	17.1	X	133.84660	121.64213	240.17677	5.33296	0.1396068	0.23616268	2.5921604	21	1 9.3	20.6
397534 2007 TC ₂₂₃	16.8	X	117.31471	200.16186	195.07573	15.01982	0.1034334	0.23993096	2.5649477	21	1 22.6	20.5
397535 2007 TF ₂₄₆	17.5	X	56.42584	117.35007	300.37876	2.75946	0.0713919	0.23146722	2.6270987	21	—	—
397536 2007 TV ₂₅₅	16.5	X	273.67156	104.17785	4.79056	6.42596	0.0532563	0.21307068	2.7762181	21	11 4.3	20.1
397537 2007 TL ₂₆₁	17.1	X	295.72038	68.64119	55.51288	5.83816	0.1178746	0.21751396	2.7382830	21	12 21.4	20.4
397538 2007 TH ₂₆₆	18.3	X	227.53812	165.67722	162.67073	1.37165	0.2106173	0.25637390	2.4540694	21	2 26.8	22.3
397539 2007 TN ₂₈₆	16.2	X	336.73814	171.54517	343.66415	9.45474	0.1101550	0.24471773	2.5313902	21	—	—
397540 2007 TP ₂₈₈	17.4	X	257.33533	316.56845	47.85942	7.32379	0.1478288	0.26458755	2.4030148	21	5 14.9	20.9
397541 2007 TW ₂₈₈	16.9	X	32.95707	269.34300	148.39762	13.21894	0.2697513	0.22664703	2.6642156	21	—	—
397542 2007 TU ₃₀₀	16.5	X	275.74068	159.59173	358.08045	3.24138	0.1609828	0.21959744	2.7209332	21	12 29.3	19.7
397543 2007 TV ₃₀₂	17.6	X	192.58806	326.86711	15.47289	1.79545	0.1074749	0.24541908	2.5265652	21	2 13.6	21.4
397544 2007 TE ₃₁₂	18.3	X	231.40019	270.94480	73.10996	3.50624	0.2124770	0.25633555	2.4543141	21	3 22.8	22.4
397545 2007 TA ₃₁₈	16.7	X	277.24653	272.57146	222.21454	7.90744	0.1174028	0.21434726	2.7651844	21	12 6.3	20.1
397546 2007 TL ₃₁₉	17.1	X	128.92572	181.03629	207.90893	8.56665	0.1656598	0.23938046	2.5688786	21	2 7.4	20.8
397547 2007 TP ₃₂₇	17.0	X	203.10206	19.08149	253.36008	7.44563	0.1108188	0.23378381	2.6097151	21	—	—
397548 2007 TS ₃₃₃	17.6	X	60.00997	168.80475	236.41998	4.75693	0.1431898	0.22814448	2.6252449	21	—	—
397549 2007 TG ₃₃₄	17.2	X	212.32083	54.71074	237.53139	5.75036	0.0986426	0.23766183	2.5812481	21	1 2.9	21.2
397550 2007 TH ₃₃₄	17.4	X	184.38668	316.04225	358.54721	3.04821	0.1622100	0.23815017	2.5777183	21	1 6.9	21.4
397551 2007 TY ₃₆₀	17.0	X	144.57735	165.87512	184.59815	9.59651	0.1426991	0.23520998	2.5991552	21	1 7.6	20.8
397552 2007 TN ₃₆₇	16.4	X	43.12599	320.86202	80.23843	13.11163	0.1610860	0.22467360	2.6797937	21	—	—
397553 2007 TS ₃₇₃	16.3	X	91.92222	327.64224	79.38065	15.69695	0.0741521	0.23513843	2.5996825	21	1 2.9	19.6
397554 2007 TJ ₃₇₆	17.4	X	162.23085	78.68112	238.83087	19.09404	0.0695103	0.37663697	1.8989816	21	—	—
397555 2007 TH ₃₈₃	16.8	X	141.61368	318.41737	42.03954	12.83720	0.1340150	0.23741519	2.5830355	21	1 19.3	20.7
397556 2007 TL ₃₈₅	16.8	X	279.49944	34.05252	201.63114	12.96064	0.0956004	0.24315584	2.5422187	21	1 1.1	20.7
397557 2007 TG ₃₈₈	17.6	X	146.27933	193.25631	154.79487	3.04786	0.0246557	0.23942816	2.5685374	21	—	—
397558 2007 TP ₃₈₉	16.2	X	352.19955	33.84275	33.54640	15.52041	0.1118627	0.22133679	2.7066596	21	—	—
397559 2007 TT ₄₂₂	16.7	X	178.27174	212.42077	59.03454	12.74932	0.1619744	0.22618302	2.6678580	21	—	—
397560 2007 TU ₄₂₆	16.6	X	107.51161	231.90820	30.53780	16.13109	0.0875205	0.21010267	2.8023024	21	11 3.2	20.7
397561 2007 TN ₄₃₁	17.3	X	190.28637	261.71058	53.40471	15.41310	0.1563913	0.23806881	2.5783056	21	1 13.9	21.6
397562 2007 TV ₄₃₈	17.4	X	119.84979	292.92797	86.03227	6.05926	0.1181128	0.23690584	2.5867366	21	1 11.6	20.7
397563 2007 TB ₄₄₅	16.7	X	199.92458	94.03025	197.13124	21.59077	0.0297314	0.24013595	2.5634878	21	—	—
397564 2007 UJ ₉	17.1	X	319.56879	192.42601	177.94983	9.89728	0.1020952	0.27667291	2.3325177	21	9 2.8	19.5
397565 2007 UM ₁₀	17.0	X	163.25326	278.55086	84.17649	12.22635	0.2265023	0.24607103	2.5221005	21	2 22.3	21.3
397566 2007 UP ₁₃	16.5	X	110.65138	263.21374	129.36429	14.31299	0.1895158	0.23569944	2.5955557	21	1 27.6	19.6
397567 2007 UA ₁₄	17.5	X	160.70668	281.35178	56.43133	3.84987	0.1697789	0.24202921	2.5501019	21	1 12.6	21.4
397568 2007 UT ₃₂	17.9	X	244.37869	261.96792	62.39634	23.25291	0.0357339	0.39235931	1.8479068	21	3 15.8	20.5
397569 2007 UZ ₃₂	16.2	X	123.78500	171.23001	219.98899	13.06729	0.1597466	0.23729122	2.5839351	21	2 2.1	20.1
397570 2007 UN ₅₁	17.7	X	95.95645	347.55035	50.25268	22.91058	0.1052472	0.37939321	1.8897732	21	—	—
397571 2007 UG ₅₃	17.6	X	308.62759	129.97187	161.79363	0.72347	0.1722465	0.25976930	2.4326381	21	4 7.8	20.4
397572 2007 UJ ₆₅	16.6	X	182.85113	253.09382	38.73493	13.61502	0.1603881	0.23249049	2.6193845	21	—	—
397573 2007 UK ₈₆	17.6	X	173.17349	117.77989	222.35068	13.58938	0.1399754	0.23973928	2.5663147	21	1 20.9	21.8
397574 2007 UM ₈₉	18.1	X	220.46242	123.57094	221.15884	1.78049	0.2330992	0.25199933	2.4823887	21	3 12.2	22.4
397575 2007 UX ₁₀₁	17.1	X	339.29000	236.20710	231.20550	7.44247	0.1407874	0.22017514	2.7161716	21	—	—
397576 2007 UO ₁₁₂	17.7	X	260.26594	99.84146	202.20762	1.26168	0.1819020	0.25338134	2.4733541	21	2 24.5	21.7
397577 2007 UZ ₁₁₉	17.6	X	184.25926	74.04221	204.52745	12.86455	0.1809867	0.23525397	2.5988312	21	—	—
397578 2007 UB ₁₂₃	17.5	X	298.50822	197.58255	186.02467	4.30310	0.2736640	0.27972946	2.3154953	21	7 23.2	19.9
397579 2007 UU ₁₂₆	17.2	X	79.09615	174.67418	220.82024	1.37165	0.0763500	0.22898117	2.6460793	21	—	—
397580 2007 UK ₁₂₇	16.9	X	162.55831	181.14820	190.38729	4.88909	0.1547098	0.24142899	2.5543267	21	2 21.5	20.9
397581 2007 US ₁₂₇	17.8	X	335.65209	338.30444	2.51704	1.31934	0.1109795	0.27226431	2.3576296	21	8 18.9	19.9
397582 2007 US ₁₃₁	17.3	X	299.28740	208.83880	160.46305	6.78009	0.1486388	0.26947056	2.3738968	21	7 18.6	19.9
397583 2007 UR ₁₄₀	17.4	X	164.10238	231.99377	154.61949	6.34601	0.2983428	0.24596910	2.5227972	21	3 24.7	21.9
397584 2007 UU ₁₄₁	16.7	X	201.48331	291.98082	21.46972	7.45499	0.1229756	0.23949601	2.5680523	21	1 21.1	20.8
397585 2007 VX ₄	17.3	X	66.05016	334.80229	52.25900	8.05941	0.0123665	0.22713032	2.6604349	21	—	—
397586 2007 VF ₅	16.6	X	355.69654	189.82953	240.75669	9.18994	0.1241229	0.22125380	2.7073364	21	—	—
397587 2007 VB ₇	17.4	X	332.26432	81.87820	288.68649	3.97460	0.2418888	0.27825460	2.3236702	21	9 22.5	18.7
397588 2007 VS ₇	17.5	X	302.40800	181.19690	177.14816	6.48463	0.2367760	0.27148654	2.3621303	21	6 22.0	20.2
397589 2007 VV ₈	17.7	X	60.56318	181.62046	238.52833	16.91078	0.0479059	0.37434268	1.9067327	21	—	—
397590 2007 VU ₂₉	17.2	X	148.30998	293.12080	60.74908	18.35272	0.1965334	0.23774554	2.5806422	21	1 26.4	21.5
397591 2007 VE ₄₅	16.5	X	89.04442	159.37941	244.81902	11.07511	0.0894113	0.23420669	2.6065727	21	—	—
397592 2007 VF ₄₆	16.4	X	291.85159	206.63773	251.88660	8.57827	0.1879718	0.21036946	2.7999327	21	10 29.4	19.7
397593 2007 VG ₄₆	16.9	X	113.35405	63.60398	309.25833	3.89982	0.1592892	0.23420376	2.6065945	21	1 1.9	20.2
397594 2007 VP ₅₂	16.4	X	73.									

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
397601	2007	VP ₉₅	17.4	X	82.66914	291.04653	46.47735	21.26112	0.1046747	0.36312229	1.9458116	21	—	—
397602	2007	VZ ₉₅	17.6	X	178.30551	354.66280	0.47042	2.15526	0.2194875	0.24465579	2.5318174	21	2 21.4	21.8
397603	2007	VN ₁₂₅	16.9	X	96.09697	104.84360	255.85468	4.97041	0.1603948	0.22871296	2.6481477	21	—	—
397604	2007	VC ₁₂₈	17.0	X	232.96806	205.83275	26.87957	7.40800	0.0915595	0.23164108	2.6257840	21	—	—
397605	2007	VD ₁₅₅	17.1	X	216.11440	221.35136	345.77570	4.44562	0.0502244	0.21805788	2.7337252	21	12 28.4	20.9
397606	2007	VQ ₁₅₇	17.4	X	319.99120	350.56762	124.14809	2.86736	0.0186260	0.22027745	2.7153305	21	—	—
397607	2007	VZ ₁₅₉	16.6	X	179.40746	135.07395	87.86712	7.19055	0.0093316	0.21429671	2.7656192	21	12 7.6	20.4
397608	2007	VX ₁₆₅	17.3	X	188.17833	94.35730	190.65968	1.56921	0.0526018	0.22744926	2.6579473	21	—	—
397609	2007	VE ₁₆₉	17.5	X	148.09106	301.30913	77.75889	5.54982	0.2963416	0.24101628	2.5572418	21	3 5.3	21.8
397610	2007	VC ₁₇₃	17.0	X	164.78494	254.59712	122.24160	5.71012	0.1524651	0.24454094	2.5326101	21	3 4.6	20.9
397611	2007	VV ₁₈₈	18.1	X	224.55805	222.18820	71.04399	23.82352	0.0157593	0.38045459	1.8862569	21	—	—
397612	2007	VM ₂₁₂	16.9	X	145.78579	229.65473	93.28213	5.29483	0.0867500	0.22909595	2.6451955	21	—	—
397613	2007	VB ₂₄₁	17.4	X	167.54964	202.11016	145.76507	3.69153	0.2110205	0.23966110	2.5668728	21	2 3.1	21.6
397614	2007	VM ₂₄₄	16.5	X	104.09024	288.63846	79.29471	14.23986	0.2291084	0.23243687	2.7427126	21	—	—
397615	2007	VX ₂₅₅	17.4	X	158.83460	15.83387	344.18581	2.59339	0.2258125	0.24089914	2.6180707	21	2 11.6	21.5
397616	2007	VY ₂₅₆	17.0	X	270.05077	74.33554	82.41423	13.96465	0.1310217	0.21698695	2.7427126	21	12 22.3	20.2
397617	2007	VW ₂₆₀	16.2	X	337.65638	245.39497	253.16878	13.25539	0.0581881	0.22833674	2.6510557	21	—	—
397618	2007	VH ₂₇₈	16.8	X	31.96677	310.93935	67.10135	7.52731	0.0422668	0.21683275	2.7440128	21	12 23.6	20.4
397619	2007	VH ₃₀₇	16.8	X	102.64507	279.85042	77.44904	10.30421	0.0679417	0.22425830	2.6831011	21	—	—
397620	2007	VE ₃₀₉	17.6	X	172.45183	340.36973	21.43456	1.47834	0.2245528	0.24269814	2.5454139	21	2 25.0	21.7
397621	2007	VR ₃₁₆	16.2	X	144.48319	261.76804	93.41580	15.67875	0.1865946	0.23000967	2.6381854	21	1 21.6	20.2
397622	2007	VL ₃₂₁	16.5	X	28.88698	279.43021	123.69628	12.48174	0.0880363	0.22065223	2.7122549	21	—	—
397623	2007	VQ ₃₂₃	16.2	X	314.15622	78.57923	59.74537	13.51400	0.0377211	0.22514852	2.6760239	21	—	—
397624	2007	VL ₃₂₄	16.1	X	230.63829	79.36247	24.90604	11.34315	0.0842035	0.19872230	2.9082940	21	9 5.8	20.4
397625	2007	VZ ₃₂₄	16.8	X	106.33969	279.04493	122.36731	5.03866	0.2252153	0.23571156	2.5954667	21	2 8.4	20.0
397626	2007	VK ₃₂₅	17.3	X	143.42754	346.32713	22.76475	5.06353	0.1832052	0.23859005	2.5745490	21	2 5.7	21.1
397627	2007	VL ₃₂₈	16.5	X	163.88162	269.61046	83.55041	9.64156	0.1826726	0.23844912	2.5755633	21	2 6.8	20.6
397628	2007	VL ₃₂₉	15.9	X	199.46803	62.14518	258.74996	12.28242	0.2031421	0.24003412	2.5642128	21	1 24.9	20.4
397629	2007	VE ₃₃₂	15.9	X	148.45364	311.02241	297.68963	8.31952	0.1347209	0.19776506	2.9176712	21	11 28.2	20.7
397630	2007	WR ₄	18.2	X	258.83861	113.06675	170.54079	18.80725	0.2111501	0.38908211	1.8582688	21	1 9.8	21.3
397631	2007	WO ₂₂	16.8	X	210.73443	30.05162	261.96943	8.14977	0.1501094	0.23865850	2.5740567	21	1 2.2	20.9
397632	2007	WR ₂₂	16.7	X	68.27115	84.74423	281.73680	5.21149	0.0430218	0.22247017	2.6974590	21	—	—
397633	2007	WF ₄₂	17.2	X	284.13353	273.18907	197.26420	1.96230	0.0529140	0.21062202	2.7976939	21	11 22.2	20.7
397634	2007	WW ₆₀	16.3	X	55.78078	327.00764	92.30606	14.14652	0.0614607	0.22675703	2.6633539	21	—	—
397635	2007	WE ₆₃	15.9	X	169.99844	250.29248	297.28735	9.97776	0.0843997	0.19033272	2.9931403	21	10 2.4	20.8
397636	2007	XY	17.7	X	160.79237	135.69328	276.21352	19.73024	0.0964789	0.38788778	1.8620813	21	3 7.3	20.3
397637	2007	XH ₅	16.9	X	144.15570	239.88776	142.07986	13.66605	0.2230105	0.24148626	2.5539228	21	2 25.1	20.8
397638	2007	XH ₆	16.1	X	0.37982	228.58098	229.84600	16.38328	0.1834835	0.22235114	2.6984216	21	—	—
397639	2007	XY ₁₀	16.9	X	349.99382	199.79740	249.81001	4.90447	0.0253724	0.21927628	2.7235893	21	—	—
397640	2007	XH ₁₇	16.4	X	97.73214	317.52898	78.01535	9.17557	0.0754995	0.23085044	2.6317759	21	1 30.5	19.6
397641	2007	XK ₁₈	17.9	X	225.02038	63.13180	249.19824	17.02151	0.0663961	0.38570715	1.8690931	21	1 9.4	20.2
397642	2007	XZ ₂₄	16.5	X	2.61745	331.41798	101.61018	4.63502	0.1788782	0.21734351	2.7397121	21	—	—
397643	2007	XG ₃₆	16.3	X	77.57503	343.38897	67.63328	13.25720	0.1823605	0.22951956	2.6419398	21	1 1.1	19.1
397644	2007	XW ₃₆	16.7	X	335.78582	55.67274	48.11585	9.17048	0.1006197	0.21763107	2.7372982	21	—	—
397645	2007	XH ₄₃	16.6	X	156.13794	227.57369	76.32586	12.30479	0.0697760	0.22292576	2.6937826	21	—	—
397646	2007	XD ₄₈	16.9	X	356.59953	334.75383	83.42073	6.11425	0.1480634	0.21147182	2.7901939	21	—	—
397647	2007	XZ ₄₉	16.8	X	47.13572	297.66522	99.19102	4.92873	0.1034450	0.21638788	2.7477724	21	—	—
397648	2007	XC ₅₅	16.1	X	257.82278	322.64995	292.87627	13.21153	0.1734664	0.22682847	2.6627947	21	1 2.8	20.4
397649	2007	XW ₅₆	16.6	X	347.62227	1.64536	78.08700	6.12061	0.1462647	0.21614469	2.7498331	21	—	—
397650	2007	YK ₅	16.9	X	73.03309	296.52049	64.66912	7.34533	0.1301355	0.22014304	2.7164355	21	—	—
397651	2007	YV ₈	16.2	X	216.67365	212.83194	329.76410	6.88679	0.1267245	0.20364045	2.8612778	21	11 14.8	20.6
397652	2007	YV ₉	16.7	X	2.80410	319.66906	78.26154	11.14177	0.0912610	0.20713732	2.8289839	21	12 12.9	20.0
397653	2007	YJ ₂₆	17.2	X	133.39307	310.25811	73.59532	7.01398	0.2529652	0.23414450	2.6070343	21	2 23.3	21.3
397654	2007	YU ₃₉	16.7	X	39.76926	356.18666	66.86320	7.38296	0.0977842	0.22009045	2.7168683	21	—	—
397655	2007	YN ₄₄	17.1	X	59.80074	289.02553	98.79109	5.13029	0.0813878	0.21383407	2.7696068	21	—	—
397656	2007	YV ₆₂	16.0	X	102.44125	70.24158	121.64637	18.10730	0.1478645	0.17734236	3.1375771	21	8 8.8	20.7
397657	2007	YN ₆₃	16.7	X	315.19721	301.54857	110.41043	9.24671	0.1009231	0.19722358	2.9230091	21	10 20.2	20.4
397658	2007	YJ ₇₁	16.4	X	72.11293	317.14522	81.54639	12.95695	0.1612760	0.22133442	2.7066790	21	—	—
397659	2007	YS ₇₂	16.2	X	25.98463	342.02833	102.92108	15.03733	0.0468597	0.22411843	2.6842173	21	—	—
397660	2008	AM	16.3	X	133.61111	227.46148	87.95458	25.36889	0.0998895	0.22144248	2.7057983	21	—	—
397661	2008	AB ₁₄	16.9	X	317.65903	176.55917	269.31559	4.76358	0.0379228	0.20448351	2.8534078	21	12 6.4	20.6
397662	2008	AJ ₁₄	16.6	X	10.74120	288.87800	139.94893	6.86719	0.0404426	0.21189990	2.7864348	21	—	—
397663	2008	AZ ₁₇	16.6	X	103.63212	253.59804	130.19766	14.60036	0.2129458	0.22427229	2.6829895	21	1 12.8	20.0
397664	2008	AC ₃₂	16.9	X	66.47148	278.02322	122.00950	11.82461	0.1279185	0.21999936	2.7176181	21	—	—
397665	2008	AF ₃₃	17.3	X	312.35130	358.69056	139.85516	23.27932	0.0715690	0.35913375	1.9601918	21	—	—
397666	2008	AS ₃₃	17.9	X	293.10319	335.79114	145.05796	16.21590	0.0790785	0.35221055	1.9857953	21	—	—
397667	2008	AU ₃₅	17.3	X	174.27413	192.65573	119.53052	25.16653	0.0897672	0.36730183	1.9310224	21	—	—
397668	2008	AM ₃₇	16.1	X	121.62194	221.41061	309.20645	8.58954	0.0484719	0.17873941	3.1212065	21	7 23.2	20.6
397669	2008	AB ₅₉	17.1	X	214.02242	353.57911	177.46417	1.81725	0.0333592	0.19944983	2.9012174	21	11 10.3	21.2
397670	2008	AC ₆₃	16.5	X	138.62627	224.27241	290.33055	6.34301	0.0669142	0.17918146	3.1160709	21	7 23.6	21.2
397671	2008	AM ₇₁	16.7	X	226.54104									

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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>
397681 2008 BT ₁₃	16.2	X	95.97991	320.19271	276.49216	6.46039	0.0437564	0.18831187	3.0145160	21	9 9.9	20.6
397682 2008 BB ₂₈	16.7	X	50.51303	272.58580	121.62272	5.60074	0.1300772	0.21412603	2.7670887	21	—	—
397683 2008 BC ₄₅	16.3	X	145.30866	64.72820	80.31665	10.29304	0.1550695	0.17736657	3.1372915	21	7 26.1	21.4
397684 2008 BG ₄₆	16.9	X	139.80691	28.45068	144.28573	1.46075	0.0814012	0.17750318	3.1356816	21	8 17.9	21.6
397685 2008 BQ ₅₀	16.7	X	143.98894	46.42115	144.94719	9.82636	0.0735284	0.18472745	3.0533863	21	9 16.4	21.3
397686 2008 CT	17.7	X	121.56413	273.50454	119.22203	24.04982	0.1477629	0.37433217	1.9067684	21	1 1.6	19.2
397687 2008 CZ ₁₆	16.1	X	56.07014	255.81897	337.03544	14.96895	0.1821139	0.17030828	3.2233852	21	8 10.5	20.4
397688 2008 CS ₃₃	16.7	X	170.81396	43.12617	113.10205	3.28526	0.1420391	0.18259217	3.0771450	21	8 31.6	21.7
397689 2008 CN ₄₃	16.5	X	247.69413	354.73515	124.01438	7.42141	0.1819147	0.19227962	2.9729017	21	9 28.8	20.9
397690 2008 CE ₇₆	16.8	X	194.84894	27.55979	110.09015	3.40921	0.1042993	0.18184542	3.0855634	21	9 2.2	21.6
397691 2008 CX ₁₁₅	16.6	X	195.28176	333.51132	173.85895	11.96827	0.1282431	0.18356689	3.0662423	21	9 11.8	21.5
397692 2008 CH ₁₁₇	16.4	X	141.71698	167.00560	68.80450	6.95732	0.0157911	0.19136635	2.9823526	21	11 5.3	20.6
397693 2008 CR ₁₂₀	17.5	X	106.60342	217.32978	130.19044	23.50515	0.0684555	0.35921260	1.9590949	21	—	—
397694 2008 CC ₁₃₀	16.1	X	67.39358	266.30703	298.06127	3.02635	0.1340278	0.16977821	3.2300909	21	7 10.1	20.4
397695 2008 CM ₁₃₂	16.7	X	189.81979	152.26190	326.92958	7.10705	0.0900637	0.17967609	3.1103495	21	8 5.3	21.4
397696 2008 CK ₁₃₉	16.5	X	21.06207	276.27650	128.44377	7.07631	0.0658633	0.20635732	2.8361082	21	—	—
397697 2008 CD ₁₅₀	16.8	X	118.46990	37.40061	207.43926	3.89456	0.1389425	0.18670523	3.0137850	21	10 27.3	21.5
397698 2008 CB ₁₅₂	16.7	X	107.15577	274.51983	168.41417	16.52501	0.1593886	0.23121784	2.6289873	21	3 27.4	20.2
397699 2008 CH ₁₅₄	16.6	X	142.72619	62.53930	134.40711	9.43705	0.0785959	0.18286676	3.0740637	21	9 22.9	21.3
397700 2008 CL ₁₈₇	16.1	X	133.50134	252.15573	261.16387	8.43730	0.1712796	0.17569344	3.1571776	21	7 22.9	21.3
397701 2008 CS ₁₈₇	17.6	X	17.43668	290.54542	151.56653	23.51657	0.0906564	0.36142038	1.9519152	21	—	—
397702 2008 CF ₁₈₉	15.9	X	134.25037	112.66720	130.86660	13.83869	0.3249554	0.18242465	3.0790284	21	11 18.3	21.8
397703 2008 CG ₁₉₁	16.9	X	123.84133	226.98932	358.98592	1.76426	0.1918579	0.18473660	3.0532855	21	10 12.6	22.0
397704 2008 CF ₁₉₄	16.9	X	129.18758	1.75790	175.99651	12.48291	0.0695362	0.17385470	3.1793994	21	8 9.3	21.8
397705 2008 CC ₁₉₇	16.8	X	151.06382	287.31114	270.54830	1.11988	0.2105361	0.18563782	3.0433956	21	10 2.4	22.1
397706 2008 CK ₁₉₇	16.1	X	52.17337	163.65480	146.51266	10.42125	0.0205542	0.18895394	3.0076831	21	10 21.6	20.4
397707 2008 CC ₂₀₀	16.3	X	131.44838	32.58959	178.10886	12.36980	0.0628434	0.18099412	3.0952310	21	9 23.8	20.7
397708 2008 CG ₂₀₃	16.4	X	20.38762	126.97659	180.39655	11.12162	0.0270011	0.17735911	3.1373794	21	8 31.9	20.8
397709 2008 CW ₂₀₆	16.8	X	174.95841	268.89944	271.06594	2.52327	0.0807418	0.18853788	3.0121064	21	10 2.3	21.5
397710 2008 CT ₂₀₇	16.8	X	218.58580	187.37410	323.66627	0.87906	0.0225976	0.19165149	2.9793939	21	10 21.4	21.1
397711 2008 CN ₂₁₃	16.1	X	26.41303	111.59148	198.15603	5.37861	0.1570533	0.17922930	3.1155164	21	9 27.9	19.9
397712 2008 CA ₂₁₄	16.1	X	87.12965	172.54301	122.83536	6.15406	0.0927447	0.18922847	3.0047734	21	11 22.0	20.5
397713 2008 DF ₈	16.7	X	228.56949	340.89054	160.82167	9.67877	0.0440520	0.19113324	2.9847770	21	10 22.3	21.0
397714 2008 DJ ₂₀	16.8	X	241.60935	351.75979	156.64898	10.83094	0.0256811	0.19508673	2.9443147	21	11 18.5	21.1
397715 2008 DW ₂₅	16.9	X	201.60206	291.77761	199.33183	8.30573	0.2759112	0.18443107	3.0566566	21	8 20.2	22.4
397716 2008 DA ₂₇	16.2	X	157.12620	18.91461	144.27820	18.53643	0.1921164	0.17766463	3.1337817	21	8 28.1	21.4
397717 2008 DA ₄₂	16.7	X	144.37257	69.67794	134.71789	11.03951	0.1271342	0.18788379	3.1019031	21	10 7.0	21.6
397718 2008 DZ ₄₅	15.8	X	126.44354	84.84961	125.75670	22.88815	0.1905805	0.18167411	3.0875027	21	10 4.4	21.3
397719 2008 DY ₅₂	16.3	X	200.20113	320.07808	182.67921	14.65912	0.1090049	0.18336870	3.0684514	21	9 11.2	21.2
397720 2008 DG ₅₄	16.7	X	195.58469	33.80462	129.75502	18.22920	0.2034687	0.19037053	2.9927440	21	10 4.7	22.0
397721 2008 DC ₆₉	16.0	X	109.59513	209.36055	11.05092	7.56390	0.0763335	0.17628460	3.1501155	21	9 13.8	20.6
397722 2008 DH ₈₇	16.3	X	328.63356	186.64196	172.71450	15.02733	0.0411168	0.17894350	3.1188328	21	8 28.1	20.5
397723 2008 EJ ₁₃	16.3	X	87.23995	232.07098	58.34404	5.24964	0.1194251	0.18753869	3.0227957	21	11 17.5	20.8
397724 2008 EL ₁₃	16.4	X	142.26080	84.37731	132.06967	6.99115	0.0754978	0.18536482	3.0463830	21	10 16.3	21.1
397725 2008 ES ₂₄	16.0	X	101.16173	218.89027	54.01698	9.34789	0.0791682	0.18781166	3.0198660	21	11 7.8	20.4
397726 2008 EN ₂₆	16.6	X	152.15282	26.12136	178.73077	11.61067	0.0498018	0.18696388	3.0289882	21	10 10.6	21.1
397727 2008 EG ₃₃	16.8	X	99.25835	93.48670	157.86141	5.36116	0.2495936	0.17790106	3.1310044	21	10 26.9	21.9
397728 2008 ED ₅₄	15.8	X	322.10376	302.50751	54.54915	10.18356	0.0971031	0.17526460	3.1623256	21	8 16.9	20.0
397729 2008 EL ₆₉	16.0	X	165.74533	64.46137	80.57757	14.30536	0.0693337	0.18005684	3.1059631	21	8 15.5	20.9
397730 2008 ES ₇₆	16.7	X	188.50554	21.36533	128.64997	3.59049	0.1130118	0.18130946	3.0916411	21	9 10.4	21.6
397731 2008 EC ₈₆	16.1	X	128.64563	89.26402	149.38465	10.45057	0.1058504	0.18581990	3.0414072	21	10 30.9	20.9
397732 2008 EA ₁₀₀	15.9	X	114.00266	129.26671	125.01961	14.66549	0.1248758	0.18363991	3.0654296	21	11 7.2	20.9
397733 2008 EU ₁₁₀	16.4	X	142.76109	209.08643	150.83512	13.71348	0.0745069	0.21598900	2.7511543	21	1 12.9	20.5
397734 2008 EM ₁₁₇	16.6	X	121.16351	166.19331	61.78750	3.00602	0.1239328	0.17959463	3.1112899	21	10 9.2	21.4
397735 2008 EW ₁₂₀	16.4	X	66.27962	100.20456	173.94436	9.02217	0.0924291	0.17822919	3.1271604	21	9 30.6	20.8
397736 2008 ER ₁₃₄	16.6	X	75.59428	188.36494	100.32739	2.71953	0.2607325	0.17906323	3.1174424	21	11 18.5	21.5
397737 2008 EV ₁₃₄	16.5	X	25.95703	241.58882	93.77725	2.86549	0.1798235	0.18183960	3.0856293	21	11 4.7	20.2
397738 2008 ET ₁₅₆	15.6	X	79.79450	202.33423	22.52314	28.17777	0.1410755	0.16980086	3.2298037	21	9 7.3	20.7
397739 2008 EK ₁₆₁	17.0	X	142.10835	246.82457	281.51664	0.33101	0.1193652	0.17565510	3.1576370	21	8 16.9	21.8
397740 2008 EF ₁₆₆	15.6	X	355.02670	313.51419	26.60108	19.41496	0.0197142	0.17496674	3.1659135	21	9 18.5	20.2
397741 2008 FT ₅	15.7	X	38.85773	256.42067	14.76912	27.23820	0.3915908	0.16795683	3.2534010	21	10 5.4	19.7
397742 2008 FP ₁₄	15.6	X	251.34383	34.42891	11.33905	17.68599	0.2410891	0.17573877	3.1566347	21	6 23.8	21.0
397743 2008 FN ₁₈	16.3	X	194.54709	168.41321	355.06363	9.74981	0.0717523	0.18678374	3.0309353	21	10 2.8	21.0
397744 2008 FQ ₂₂	16.3	X	75.51709	97.83200	178.87080	14.45492	0.2254307	0.17568841	3.1527380	21	11 2.1	21.2
397745 2008 FX ₂₃	16.5	X	92.41114	143.08714	112.81931	6.00445	0.0681253	0.17847150	3.1243293	21	10 8.3	21.0
397746 2008 FL ₅₃	16.2	X	67.11567	110.00907	194.49375	13.01067	0.1252473	0.18095831	3.0956393	21	11 13.4	20.7
397747 2008 FL ₅₄	16.5	X	132.38141	14.05707	174.10785	6.20674	0.1723370	0.17443938	3.1722911	21	9 3.2	21.5
397748 2008 FQ ₅₅	15.7	X	42.72672	136.34759	193.48011	9.05109	0.0892094	0.18243315	3.0789329	21	11 9.1	19.9
397749 2008 FU ₅₉	16.1	X	141.14405	150.69333	112.66214	5.53190	0.1669055	0.18521832	3.0479892	21	12 8.9	21.2
397750 2008 FW ₈₈	15.9	X	58.42605	90.76325	206.72994	15.57591	0.1658197	0.17352380	3.1834401	21	10 29.1	20.3
397751 2008 FB ₉₀	16.3	X	243.71688	317.14027	148.40360	11.52032	0.1090480	0.18967996	3.0000034	21	9 15.7	20.6
397752 2008 FG ₁₀₁	16.2	X	23.23283	193.14867	129.44510	6.81348	0.1903393	0.17230877	3.1983879	21	10 16.8	20.1
397753 2008 FV ₁₀₈	16.5	X	134.60000	228.79022	49.37612	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>
397761 2008 <i>GD</i> ₁₃	15.9 ^m	X	89.35715	262.07895	10.79579	8.27449	0.0668550	0.18434381	3.0576212	21	10 21.6	20.4
397762 2008 <i>GJ</i> ₁₃	16.0	X	63.43675	277.95262	11.52666	11.98824	0.1072744	0.17989072	3.1078750	21	10 15.9	20.3
397763 2008 <i>GA</i> ₁₈	16.5	X	79.03156	143.62880	104.43055	5.68232	0.1256621	0.17319579	3.1874582	21	9 19.8	21.1
397764 2008 <i>GE</i> ₄₀	16.5	X	124.54891	146.76215	99.53441	6.43799	0.2044248	0.18718049	3.0266509	21	11 8.9	21.6
397765 2008 <i>GY</i> ₄₉	16.1	X	63.98730	99.79432	206.53698	17.62730	0.1022335	0.17955868	3.1117052	21	11 7.9	20.5
397766 2008 <i>GX</i> ₇₃	16.2	X	18.07060	277.94033	69.13585	10.92239	0.0757300	0.18047473	3.1011668	21	10 28.2	20.3
397767 2008 <i>GF</i> ₇₇	16.1	X	30.84132	146.31059	170.48821	9.77540	0.0667817	0.17452624	3.1712384	21	10 3.8	20.3
397768 2008 <i>GZ</i> ₈₅	16.0	X	151.10129	22.29937	190.06253	9.32645	0.0504870	0.18382993	3.0633168	21	10 17.8	20.5
397769 2008 <i>GW</i> ₉₁	16.7	X	140.20078	106.81360	57.21571	1.63506	0.0872300	0.17109361	3.2135140	21	8 8.3	21.5
397770 2008 <i>GU</i> ₁₀₀	16.0	X	168.60057	333.48014	202.63388	9.39882	0.0835048	0.17732194	3.1378178	21	9 19.6	20.9
397771 2008 <i>GQ</i> ₁₁₇	16.1	X	152.02360	335.59045	197.38310	17.27094	0.1777893	0.17444735	3.1721944	21	8 30.6	21.6
397772 2008 <i>GC</i> ₁₃₀	15.9	X	31.36322	266.07546	60.15019	21.55646	0.2279933	0.17251145	3.1958823	21	11 9.3	19.9
397773 2008 <i>GF</i> ₁₃₂	15.9	X	36.92148	232.10400	70.67689	10.82516	0.1177635	0.17037221	3.2225788	21	10 4.9	20.3
397774 2008 <i>HP</i> ₅	16.2	X	79.97147	77.14109	204.70127	8.16103	0.1612793	0.17860446	3.1227785	21	11 3.8	20.8
397775 2008 <i>HO</i> ₁₃	15.8	X	154.42919	345.15285	205.64016	27.93729	0.1458936	0.18006339	3.1058879	21	9 23.3	21.0
397776 2008 <i>HY</i> ₁₈	16.1	X	24.84604	102.99016	206.99316	9.90316	0.0317279	0.17583649	3.1554651	21	9 9.3	20.5
397777 2008 <i>HO</i> ₂₁	16.0	X	355.30371	145.87340	197.71753	15.76190	0.0622222	0.17368198	3.1815070	21	9 13.4	20.1
397778 2008 <i>HM</i> ₂₂	15.9	X	140.30828	86.79108	96.68827	19.72971	0.1050680	0.17000994	3.2271551	21	9 9.2	21.2
397779 2008 <i>HV</i> ₂₃	15.8	X	47.32546	185.49181	92.45828	16.23845	0.0683116	0.16999905	3.2272930	21	9 13.1	20.5
397780 2008 <i>HK</i> ₂₆	16.0	X	63.39783	74.38729	204.33136	22.37050	0.0993118	0.17514297	3.1637895	21	9 30.7	20.6
397781 2008 <i>HX</i> ₂₆	16.6	X	94.66987	147.01233	107.37340	2.43296	0.1480723	0.17672628	3.1448647	21	10 16.1	21.3
397782 2008 <i>HN</i> ₃₇	16.1	X	288.21379	284.92440	147.07404	11.68910	0.0201208	0.18354531	3.0664827	21	10 13.2	20.5
397783 2008 <i>HJ</i> ₃₈	16.2	X	67.72171	16.32486	227.00058	3.81748	0.1090190	0.17002865	3.2269183	21	8 23.8	20.8
397784 2008 <i>HT</i> ₄₀	16.4	X	24.88565	141.96355	204.82122	10.64205	0.0383017	0.18297107	3.0728953	21	10 30.5	20.6
397785 2008 <i>HJ</i> ₄₁	15.9	X	108.87443	237.58470	39.60950	12.62608	0.0289899	0.17994055	3.1073012	21	11 28.3	21.2
397786 2008 <i>HE</i> ₆₀	16.2	X	166.40754	304.20353	202.62865	26.22290	0.2190676	0.17221414	3.1995594	21	8 9.7	22.1
397787 2008 <i>JV</i> ₂₀	15.8	X	101.12175	53.48984	238.54040	15.73302	0.1946628	0.17801943	3.1296164	21	12 7.9	20.9
397788 2008 <i>JP</i> ₂₁	15.8	X	1.72921	264.54279	97.85878	11.51560	0.1601268	0.17721759	3.1390495	21	10 31.3	19.6
397789 2008 <i>JP</i> ₂₂	15.2	X	83.83292	37.53205	235.52692	27.53120	0.2746660	0.17520464	3.1630471	21	11 7.8	20.4
397790 2008 <i>JP</i> ₂₉	14.2	X	357.87181	172.87821	97.46373	5.09726	0.0506936	0.08136710	5.2743647	21	6 17.8	20.8
397791 2008 <i>JD</i> ₃₇	15.5	X	166.60327	55.94421	104.20507	14.10672	0.0489364	0.16835167	3.2483122	21	9 3.7	20.5
397792 2008 <i>JY</i> ₄₀	15.9	X	154.66166	123.91709	95.13097	14.79211	0.2822893	0.18176306	3.0864953	21	11 4.7	21.6
397793 2008 <i>KN</i> ₁₅	15.6	X	214.35415	347.47521	127.09788	12.93507	0.0190794	0.16904940	3.2393681	21	9 1.9	20.3
397794 2008 <i>KH</i> ₃₉	15.7	X	47.83320	279.16033	120.29745	13.95342	0.0549775	0.19222726	2.9734416	21	—	—
397795 2008 <i>LZ</i> ₇	16.1	X	185.44649	121.19391	75.37131	17.05497	0.1592454	0.18322742	3.0700285	21	11 4.4	21.2
397796 2008 <i>LS</i> ₁₄	15.3	X	103.80171	350.79885	260.08840	12.86229	0.2805641	0.16838591	3.2478718	21	10 26.9	20.9
397797 2008 <i>MZ</i> ₂	14.9	X	49.69817	108.31991	300.24049	15.88528	0.2768821	0.17733633	3.1376481	21	—	—
397798 2008 <i>PD</i> ₂	18.4	X	30.29778	231.86489	101.23481	2.85888	0.2361321	0.31371976	2.1450700	21	12 13.1	20.6
397799 2008 <i>PE</i> ₅	15.7	X	76.15649	187.93079	167.53004	15.88362	0.2559218	0.17279642	3.1923676	21	—	—
397800 2008 <i>PX</i> ₉	15.7	X	82.68696	50.65953	285.02277	12.72598	0.1757362	0.17217355	3.2000622	21	—	—
397801 2008 <i>QA</i> ₁₉	17.7	X	301.54393	326.41985	31.15455	6.26336	0.2077938	0.29436474	2.2380968	21	6 24.3	20.1
397802 2008 <i>QU</i> ₂₁	17.1	X	307.13896	25.19341	288.35569	6.50682	0.1519112	0.29119542	2.2543068	21	5 4.3	19.8
397803 2008 <i>QQ</i> ₃₈	17.6	X	318.15717	345.11714	320.93239	7.32163	0.1581983	0.29086742	2.2560012	21	5 9.4	20.0
397804 2008 <i>QV</i> ₄₆	17.7	X	286.19937	148.46406	218.88635	5.82258	0.1439811	0.29422553	2.2388026	21	6 25.6	20.2
397805 2008 <i>RJ</i> ₂₅	17.1	X	291.35859	337.07147	25.04393	8.95615	0.2461810	0.29262533	2.2469570	21	6 6.5	19.8
397806 2008 <i>RQ</i> ₃₅	17.8	X	213.48099	237.28515	183.20899	6.13768	0.0879096	0.28800862	2.2709055	21	6 15.5	20.9
397807 2008 <i>RH</i> ₄₅	17.3	X	306.17847	34.42118	1.22673	8.17935	0.1924688	0.30152033	2.2025460	21	9 11.3	18.9
397808 2008 <i>RM</i> ₄₅	17.9	X	166.09051	243.92616	164.12112	5.38315	0.0930530	0.27500279	2.3419520	21	4 6.5	21.0
397809 2008 <i>RS</i> ₆₂	17.9	X	35.36496	258.46493	5.18689	4.13785	0.1061997	0.29840374	2.2178553	21	8 15.0	19.9
397810 2008 <i>RQ</i> ₈₁	18.0	X	101.33454	260.76118	280.95391	3.67097	0.1100992	0.29570998	2.2313039	21	7 22.3	20.8
397811 2008 <i>RG</i> ₈₆	17.6	X	309.93474	7.96420	278.30192	6.16964	0.1121764	0.28326359	2.2961956	21	4 4.9	20.5
397812 2008 <i>RO</i> ₈₆	17.7	X	273.91119	44.23312	290.30787	5.67098	0.1317710	0.28482985	2.2877701	21	4 21.9	20.9
397813 2008 <i>RJ</i> ₉₅	17.9	X	331.30046	164.96130	190.95632	6.52675	0.1302213	0.30354595	2.1927364	21	9 4.1	19.5
397814 2008 <i>RF</i> ₉₆	18.2	X	342.76774	341.34169	347.04118	3.97076	0.2299123	0.30185414	2.2009219	21	8 12.8	19.0
397815 2008 <i>RA</i> ₁₀₇	17.9	X	292.23486	347.90410	6.19523	6.49270	0.1347935	0.29075025	2.2566073	21	6 16.6	20.5
397816 2008 <i>RF</i> ₁₃₁	17.9	X	109.08401	238.89580	213.43566	5.98413	0.1341558	0.26845305	2.3798915	21	3 30.9	20.8
397817 2008 <i>RW</i> ₁₃₄	18.0	X	273.08570	349.47221	17.76953	5.02895	0.1742560	0.29184619	2.2509544	21	6 1.4	21.0
397818 2008 <i>SN</i> ₂	17.8	X	144.54021	157.45857	262.05500	1.58534	0.1920528	0.26962394	2.3729964	21	4 5.7	21.4
397819 2008 <i>SP</i> ₉	17.6	X	229.50699	21.16472	348.87172	5.72327	0.1091962	0.28320364	2.2965197	21	4 21.8	20.9
397820 2008 <i>SX</i> ₅₃	18.2	X	328.17299	143.93328	163.80002	1.51977	0.0970040	0.29026332	2.2591303	21	6 13.2	20.4
397821 2008 <i>SP</i> ₇₂	18.0	X	315.65847	322.32753	7.20139	7.26890	0.1460157	0.29056092	2.2575875	21	6 16.3	20.3
397822 2008 <i>SB</i> ₉₆	18.0	X	345.13187	122.52461	216.01661	3.51746	0.2111852	0.30006225	2.2096754	21	9 6.9	19.0
397823 2008 <i>SD</i> ₁₁₉	17.9	X	304.24093	314.78206	19.23552	5.33887	0.1431119	0.28926900	2.2643043	21	6 3.1	20.4
397824 2008 <i>SO</i> ₁₂₂	17.7	X	79.20169	87.35821	13.06824	4.97850	0.1552579	0.26170131	2.4206507	21	3 4.1	20.2
397825 2008 <i>SF</i> ₁₃₀	17.6	X	266.28589	2.15687	258.29749	2.41160	0.1141850	0.26319107	2.4115075	21	1 13.7	21.2
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ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
397841 2008 SY ₂₇₁	18.2	X	285.89405	46.03347	311.71765	1.85024	0.1576562	0.28544474	2.2844835	21	6 8.9	20.8
397842 2008 SQ ₂₈₁	17.1	X	247.05402	161.51567	49.32454	15.92894	0.1022794	0.24335414	2.5408375	21	—	—
397843 2008 SM ₂₈₂	17.2	X	272.23910	111.63085	244.87039	11.30526	0.1277106	0.28875474	2.2669919	21	5 23.9	20.1
397844 2008 SL ₃₀₂	17.9	X	4.79484	162.74936	40.92306	7.58074	0.0411567	0.27072995	2.3665291	21	3 20.9	20.6
397845 2008 SY ₃₀₉	17.3	X	146.97791	332.04336	81.51320	6.80936	0.1945158	0.26475795	2.4019836	21	4 5.5	21.0
397846 2008 TS	18.0	X	351.40513	242.83541	119.30075	7.26898	0.2310410	0.30535377	2.1840732	21	11 17.8	19.4
397847 2008 TA ₁	18.8	X	143.13855	145.64733	22.02268	14.83108	0.4484232	0.59722726	1.3965065	21	9 18.2	20.9
397848 2008 TV ₂₁	16.8	X	274.28557	97.90344	31.48598	21.77968	0.1330750	0.23079990	2.6321601	21	11 20.1	20.3
397849 2008 TD ₄₀	18.0	X	347.39392	3.23256	304.40051	6.48362	0.1328430	0.29438491	2.2379945	21	7 19.7	19.6
397850 2008 TR ₄₄	18.0	X	47.47565	77.28146	33.66512	2.86982	0.1581400	0.25488635	2.4636083	21	1 18.3	20.1
397851 2008 TB ₄₇	17.1	X	323.45397	145.27671	79.82206	6.06924	0.0950909	0.26516909	2.3995002	21	2 9.7	20.0
397852 2008 TZ ₄₉	17.6	X	60.54564	110.67098	16.96382	7.25544	0.1309850	0.26565670	2.3965631	21	3 7.2	19.9
397853 2008 TG ₅₀	18.2	X	303.80215	158.20957	187.47539	3.14116	0.1149951	0.29197968	2.2502683	21	6 26.5	20.4
397854 2008 TD ₆₉	17.9	X	187.97263	273.29102	123.32436	2.08410	0.1937007	0.27423280	2.3463337	21	4 18.3	21.6
397855 2008 TF ₉₀	17.6	X	191.75074	191.34507	219.02186	6.13986	0.1129794	0.27450412	2.3447874	21	5 7.8	20.8
397856 2008 TZ ₁₀₉	16.7	X	350.54959	340.71480	110.94235	6.12950	0.1338154	0.24249252	2.5468526	21	—	—
397857 2008 TF ₁₁₄	17.4	X	345.59094	24.18322	42.56763	12.56977	0.1788217	0.23495358	2.6010458	21	—	—
397858 2008 TD ₁₁₅	18.0	X	272.29924	61.94947	308.35919	5.17296	0.1923439	0.28939369	2.2636538	21	6 2.6	21.1
397859 2008 TE ₁₃₄	18.4	X	318.91117	73.08534	277.01543	2.71412	0.1971640	0.29570216	2.2313433	21	7 19.1	19.9
397860 2008 TO ₁₃₅	17.5	X	316.92433	234.88092	133.47041	7.90992	0.2118844	0.29813563	2.2191848	21	8 14.7	18.6
397861 2008 TL ₁₄₈	17.7	X	110.99501	71.57426	51.92567	3.78798	0.1428200	0.27596130	2.3365259	21	5 17.7	20.5
397862 2008 TT ₁₆₇	17.5	X	351.44363	204.08342	29.03086	7.19614	0.1435774	0.27650606	2.3334560	21	3 28.2	19.6
397863 2008 TQ ₁₆₉	17.8	X	8.62160	97.30323	73.93081	2.34083	0.1235863	0.26100128	2.4249770	21	1 31.5	20.2
397864 2008 TB ₁₇₅	18.0	X	102.63188	218.27658	241.31407	4.58042	0.0725156	0.26875787	2.3780916	21	3 20.9	20.9
397865 2008 UD ₃	16.8	X	168.84791	324.48991	55.43509	25.09934	0.2208877	0.26560905	2.3968497	21	3 28.1	21.3
397866 2008 UQ ₂₉	17.6	X	14.23333	359.26092	188.22783	3.06712	0.0623052	0.26618937	2.3933649	21	3 7.9	20.0
397867 2008 UP ₃₄	17.3	X	55.90835	350.75483	180.90323	4.71663	0.0400722	0.27199968	2.3591585	21	4 20.8	19.9
397868 2008 UR ₄₀	17.5	X	86.83706	203.33046	245.85230	1.77958	0.1705382	0.25871922	2.4329159	21	3 1.2	20.1
397869 2008 UB ₄₁	17.9	X	97.16386	182.15516	265.54667	0.51394	0.1600772	0.26074391	2.4265725	21	3 13.9	20.7
397870 2008 UH ₄₁	17.1	X	339.15882	28.50804	231.81548	6.86461	0.0897891	0.27580153	2.3374282	21	4 20.7	19.6
397871 2008 UX ₅₁	17.2	X	174.92942	178.33244	238.08139	5.03233	0.0898112	0.27146687	2.3622444	21	4 25.8	20.6
397872 2008 UK ₅₂	18.2	X	48.29950	276.20119	46.98587	4.64869	0.2259109	0.30744193	2.1741724	21	12 18.1	21.1
397873 2008 UQ ₅₉	16.7	X	52.91003	153.23839	303.75227	7.26556	0.2129151	0.25541505	2.4602074	21	1 10.3	18.4
397874 2008 UH ₆₅	17.1	X	43.98341	62.00434	306.31478	3.23613	0.2340081	0.23743864	2.5828655	21	—	—
397875 2008 UR ₇₇	17.2	X	250.38808	125.25317	241.84898	6.39287	0.1303726	0.27927980	2.3179801	21	5 11.7	20.4
397876 2008 UZ ₈₈	17.4	X	1.38368	50.01521	172.25749	7.27498	0.0919463	0.27691198	2.3311751	21	4 4.3	19.7
397877 2008 UV ₈₉	17.5	X	3.67016	18.41576	86.62217	4.21951	0.0751983	0.24722408	2.5142523	21	—	—
397878 2008 US ₉₂	17.1	X	237.02146	206.48088	147.32078	6.88042	0.1393756	0.27808371	2.3246220	21	4 11.7	20.6
397879 2008 UC ₁₀₀	18.2	X	286.53612	335.12337	40.74555	0.30645	0.2030178	0.29166590	2.2518819	21	6 29.1	20.6
397880 2008 UM ₁₁₂	17.1	X	125.32483	220.02437	240.29935	6.55223	0.0745452	0.27194891	2.3594521	21	4 23.2	20.2
397881 2008 UR ₁₁₉	16.7	X	77.53668	184.77604	236.62057	13.78668	0.0798082	0.25280855	2.4770886	21	—	—
397882 2008 UM ₁₂₃	17.7	X	266.21070	40.00115	325.60922	3.90931	0.1824399	0.28433682	2.2904139	21	5 20.7	20.9
397883 2008 UA ₁₃₆	17.8	X	57.93951	96.42922	41.10812	5.69332	0.0719287	0.26438434	2.4042459	21	3 11.9	20.4
397884 2008 UT ₁₄₅	17.3	X	111.69789	238.41013	216.09791	6.72751	0.0924157	0.26594212	2.3948481	21	3 30.9	20.3
397885 2008 UL ₁₄₆	17.8	X	303.09827	282.33226	34.60696	5.70456	0.2177734	0.28430443	2.2905879	21	4 25.1	20.6
397886 2008 UY ₁₆₈	17.4	X	48.72365	55.05598	52.59068	11.39867	0.1966440	0.25375944	2.4708966	21	1 19.3	19.6
397887 2008 UZ ₁₇₃	17.5	X	138.06417	196.64378	232.53985	10.91971	0.2081847	0.26871629	2.3783370	21	4 11.9	21.2
397888 2008 UC ₁₇₅	17.9	X	85.98367	33.23816	38.88421	1.64957	0.1600095	0.25544595	2.4600090	21	2 4.5	20.5
397889 2008 UW ₁₈₇	17.9	X	27.54265	199.53800	124.82264	3.80341	0.1715218	0.30118481	2.2041814	21	11 14.7	20.1
397890 2008 UX ₂₀₂	18.5	X	343.37377	209.13292	103.40412	6.99651	0.2505625	0.29481539	2.2358154	21	7 8.1	19.1
397891 2008 UM ₂₀₃	17.5	X	242.70999	12.66344	356.51269	5.60031	0.1792585	0.28139183	2.3063669	21	4 30.1	21.0
397892 2008 UN ₂₂₆	17.6	X	113.71559	48.72039	65.73242	7.52905	0.0613873	0.27282659	2.3543892	21	4 28.5	20.5
397893 2008 UJ ₂₂₈	15.6	X	122.95689	146.76826	249.05246	7.62165	0.0696190	0.17807191	3.1290015	21	2 6.6	20.2
397894 2008 US ₂₃₀	18.6	X	289.63845	28.32294	313.34193	1.87881	0.1188923	0.28863790	2.2676036	21	5 27.7	21.1
397895 2008 UP ₂₅₇	17.9	X	194.90728	12.51602	23.29275	2.82682	0.1994396	0.27375847	2.3490432	21	4 22.2	21.7
397896 2008 UE ₂₆₁	17.7	X	347.51005	144.24679	92.73787	3.30824	0.0884833	0.27117134	2.3639604	21	4 4.1	20.2
397897 2008 UX ₂₆₂	17.5	X	82.08751	75.33391	10.41557	2.88138	0.1507100	0.25544445	2.4600187	21	2 16.1	19.9
397898 2008 US ₂₆₃	17.7	X	186.86658	149.96736	253.85280	1.83692	0.1747304	0.27166937	2.3610704	21	4 24.8	21.5
397899 2008 UB ₂₆₇	17.6	X	349.06167	327.77803	306.92054	2.51355	0.1100555	0.28319256	2.2965795	21	5 29.2	19.6
397900 2008 UD ₂₇₀	17.8	X	304.12318	187.63304	153.35033	2.23329	0.1394051	0.28834556	2.2691360	21	6 15.7	20.0
397901 2008 UE ₂₇₇	17.8	X	7.72232	211.24708	44.17220	3.61875	0.0858827	0.28307977	2.2971895	21	6 4.9	20.1
397902 2008 UL ₂₈₉	17.7	X	189.34916	322.67595	66.81165	15.45187	0.0736149	0.26868679	2.3785110	21	4 14.2	21.3
397903 2008 UF ₃₂₁	17.6	X	214.49720	11.61412	356.82203	4.83697	0.1539679	0.27584208	2.3371991	21	4 4.4	21.3
397904 2008 UE ₃₂₂	17.3	X	272.15114	44.73022	255.93538	6.14285	0.1300706	0.27546374	2.3393386	21	3 5.9	20.8
397905 2008 UN ₃₂₉	18.1	X	163.01650	154.52259	133.35506	1.53715	0.1886646	0.27100146	2.3649482	21	4 21.3	21.8
397906 2008 UF ₃₃₈	16.7	X	321.84706	1.70483	264.09226	11.58788	0.1856028	0.27341040	2.3510364	21	3 10.1	19.8
397907 2008 UO ₃₃₈	17.0	X	273.21238	56.95296	242.01176	5.56959	0.1302516	0.26900769	2.3766191	21	3 6.2	20.6
397908 2008 UC ₃₃₉	16.6	X	14.35716	143.40047	59.37489	7.74359	0.1029883	0.26863091	2.3788409	21	4 1.9	19.0
397909 2008 UR ₃₄₈	17.4	X	239.24541	21.31323	263.91002	5.94365	0.0911623	0.25943957	2.4346988	21	1 17.6	20.9
397910 2008 UR ₃₆₆	17.3	X	355.85530	126.72080	331.51545	5.05640	0.2395556	0.24170950	2.5523500	21	—	—
397911 2008 VW ₂₂	17.1	X	136.86433	316.65322	83.02821	5.62751	0.1829888	0.26137053	2.4226926	21	3 6.8	20.6
397912 2008 VS ₂₃	17.0	X	206.97884	315.40260	66.09906	10.54415	0.2859408	0.27445861	2.3450466	21	4 17.9	21.3
397913 2008 VD ₂₆	17.2	X	57.13402	309.03476	228.73113	6.47704	0.0480989	0.27659929	2.3329316	21	4	

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
397921 2008 VU ₇₉	16.6	X	322.87103	28.52419	56.61196	13.08732	0.2792835	0.22701687	2.6613212	21	12 16.8	18.4
397922 2008 WL ₁₀	17.1	X	206.74713	116.12642	249.14109	7.97908	0.1859334	0.27129674	2.3632319	21	3 21.8	21.1
397923 2008 WM ₁₄	18.5	X	344.77294	103.20489	229.02127	4.24659	0.1796155	0.29745760	2.2225558	21	8 22.9	20.0
397924 2008 WL ₁₅	16.9	X	293.28329	126.24548	216.12107	3.51925	0.1140271	0.20930672	2.8094023	21	6 8.2	20.5
397925 2008 WA ₂₀	18.0	X	303.65418	95.70126	238.14873	5.82094	0.1396651	0.28513746	2.2861244	21	6 3.9	20.5
397926 2008 WP ₃₀	17.4	X	23.79794	118.69141	350.51271	2.18334	0.1515617	0.24546813	2.5262285	21	—	—
397927 2008 WQ ₃₄	17.9	X	356.03782	205.02358	17.34160	1.80869	0.1303149	0.27088550	2.3656230	21	3 21.5	20.1
397928 2008 WP ₃₇	17.6	X	62.64727	355.60754	233.57585	5.23005	0.1427877	0.28310873	2.2970329	21	8 8.9	20.3
397929 2008 WA ₆₀	16.5	X	39.72688	187.71979	216.00439	7.86249	0.1016289	0.23943167	2.5685123	21	—	—
397930 2008 WF ₆₂	16.9	X	157.84015	1.83388	63.12404	7.42920	0.1192769	0.26835809	2.3804529	21	4 23.3	20.3
397931 2008 WG ₇₀	17.7	X	71.87730	209.61448	246.01507	1.90001	0.1536175	0.25392877	2.4697981	21	2 11.1	20.2
397932 2008 WJ ₇₃	17.3	X	292.21752	359.37670	273.65629	4.90883	0.1252639	0.26428269	2.4048624	21	2 24.1	20.7
397933 2008 WU ₇₇	17.5	X	312.92965	31.39438	221.09313	8.04116	0.0874022	0.26481455	2.4016414	21	2 27.8	20.6
397934 2008 WU ₁₀₆	17.1	X	334.55107	243.55280	259.15724	11.90691	0.1401468	0.24281193	2.5446186	21	—	—
397935 2008 WR ₁₁₃	17.6	X	213.56226	130.44791	251.95975	5.19018	0.1163791	0.27261440	2.3556107	21	4 22.3	21.1
397936 2008 XX ₆	16.7	X	19.80851	354.83873	92.86271	13.52320	0.1789427	0.24125417	2.5555605	21	—	—
397937 2008 XF ₃₇	17.8	X	78.41840	89.72073	2.43468	1.66214	0.1482267	0.25519459	2.4616241	21	2 18.1	20.2
397938 2008 XX ₃₉	18.3	X	5.11891	37.41210	66.71173	5.84325	0.1877072	0.24016707	2.5632664	21	—	—
397939 2008 XF ₄₁	17.3	X	260.45015	267.19418	66.06745	7.38900	0.1300514	0.26914261	2.3758248	21	4 11.9	20.7
397940 2008 XY ₄₁	16.7	X	268.62732	240.95163	298.83677	7.33210	0.0936388	0.23155965	2.6263995	21	—	—
397941 2008 XH ₄₈	17.8	X	226.16343	243.44591	124.26798	3.07370	0.2399485	0.27008656	2.3702859	21	4 14.2	21.9
397942 2008 XG ₅₁	16.2	X	356.66490	324.05194	86.39760	29.52493	0.1531046	0.22686955	2.6624732	21	12 30.5	19.2
397943 2008 XL ₅₁	17.1	X	351.99475	309.44870	235.29361	6.92279	0.1016609	0.25580925	2.4576793	21	1 24.1	20.1
397944 2008 XR ₅₅	16.6	X	315.01631	86.38787	56.58922	14.25146	0.2078633	0.23151462	2.6267401	21	—	—
397945 2008 XY ₁₅	16.6	X	101.97820	250.17170	109.46399	11.00977	0.1461713	0.23685625	2.5870976	21	—	—
397946 2008 YY ₁₇	17.2	X	189.15793	283.42541	114.65680	7.83846	0.1435892	0.26447693	2.4036848	21	4 23.7	21.0
397947 2008 YE ₁₈	17.1	X	268.02047	59.33403	115.19839	9.63867	0.2398248	0.22466219	2.6798844	21	12 28.5	20.2
397948 2008 YQ ₁₉	16.4	X	234.13724	102.85992	116.87431	12.73496	0.0955518	0.22874503	2.6479002	21	—	—
397949 2008 YP ₂₃	17.0	X	67.07827	27.45086	81.35304	4.96078	0.1219843	0.25432125	2.4672564	21	2 20.9	19.6
397950 2008 YA ₅₆	17.7	X	195.57305	290.91717	115.43644	5.53900	0.1953273	0.27393402	2.3480395	21	5 8.5	21.5
397951 2008 YD ₆₃	16.7	X	182.14401	358.37357	277.21111	11.50422	0.1068956	0.23156996	2.6263216	21	—	—
397952 2008 YQ ₆₆	17.2	X	147.79353	10.72277	46.08914	7.15403	0.1237298	0.27060933	2.3672323	21	4 1.9	20.5
397953 2008 YN ₇₄	17.9	X	303.76694	258.39622	86.27956	4.20424	0.2404914	0.28222489	2.3018261	21	6 2.6	20.4
397954 2008 YX ₇₆	16.7	X	207.91716	99.47744	129.76986	9.78412	0.0677059	0.22768642	2.6561012	21	—	—
397955 2008 YX ₈₈	16.7	X	150.59268	61.76840	286.30135	12.65439	0.1290318	0.24677419	2.5173072	21	1 8.5	20.1
397956 2008 YH ₉₃	17.2	X	305.13115	100.85435	105.13196	15.65547	0.0668214	0.24371402	2.5383356	21	—	—
397957 2008 YN ₉₃	16.6	X	299.71743	99.57055	103.53201	13.92676	0.0906214	0.234126290	2.5554989	21	—	—
397958 2008 YQ ₉₃	17.3	X	292.65027	61.35691	110.98797	5.90297	0.0806250	0.23419420	2.6066654	21	—	—
397959 2008 YT ₉₈	17.5	X	230.19042	264.92598	112.51880	5.70943	0.1665454	0.27052619	2.3677173	21	5 4.3	21.2
397960 2008 YV ₁₀₃	17.8	X	218.48647	267.36479	111.30075	3.34776	0.2193641	0.26887124	2.3774231	21	4 22.4	21.8
397961 2008 YR ₁₁₁	17.1	X	330.79641	263.31518	264.66341	1.65921	0.1979621	0.24380507	2.5377036	21	—	—
397962 2008 YR ₁₁₇	17.6	X	201.00926	255.36282	124.26659	6.19562	0.1433743	0.26416842	2.4055559	21	4 10.8	21.4
397963 2008 YI ₁₁₇	17.5	X	199.35178	293.37286	79.89304	2.31024	0.1873347	0.26235753	2.4166126	21	3 30.9	21.4
397964 2008 YT ₁₁₈	16.9	X	303.90763	342.95235	117.41802	7.29681	0.0335522	0.21980922	2.7191852	21	12 10.5	20.5
397965 2008 YK ₁₃₈	17.1	X	171.93497	241.59414	115.54497	6.25102	0.1609549	0.25315983	2.4747966	21	2 14.2	21.0
397966 2008 YT ₁₄₂	17.6	X	248.30609	238.89832	103.29649	4.23050	0.1475158	0.26544597	2.3978313	21	4 8.4	21.1
397967 2008 YE ₁₄₆	17.5	X	129.72072	99.00248	131.16732	6.84804	0.1230951	0.28594779	2.2818034	21	11 2.3	20.9
397968 2008 YQ ₁₆₈	17.6	X	5.25055	265.95168	199.70073	1.23913	0.1614510	0.23833000	2.5764215	21	—	—
397969 2008 YX ₁₇₀	16.2	X	316.26077	270.20002	129.78309	13.75063	0.127318	0.21531193	2.7569189	21	9 28.0	19.1
397970 2009 AV ₁₁	16.5	X	291.11484	237.77179	299.09773	8.91201	0.1066509	0.23275294	2.6174151	21	—	—
397971 2009 AW ₁₇	16.7	X	294.59708	106.29869	92.33335	2.79170	0.1238542	0.23940934	2.5686720	21	—	—
397972 2009 AY ₃₃	17.9	X	213.17287	324.83124	43.37137	3.14533	0.2123756	0.26402760	2.4064112	21	4 4.8	22.0
397973 2009 AO ₄₃	17.5	X	17.92801	325.65920	152.57211	6.02495	0.0863304	0.24025817	2.5626184	21	—	—
397974 2009 AO ₄₄	17.3	X	354.19551	162.92525	306.68345	4.49412	0.0874060	0.23339983	2.6125766	21	—	—
397975 2009 AF ₄₅	18.0	X	187.76379	123.38770	263.89919	1.45231	0.2405063	0.26216111	2.4178195	21	4 6.7	22.0
397976 2009 AN ₄₈	17.1	X	172.62962	63.79220	315.62980	4.58752	0.1930087	0.25814188	2.4428515	21	3 13.0	21.1
397977 2009 AB ₄₉	16.5	X	319.95560	77.34781	61.49030	14.00223	0.2103454	0.23122519	2.6289316	21	—	—
397978 2009 AV ₄₉	17.3	X	1.94465	1.72259	75.76407	5.20004	0.0760802	0.22967524	2.6407458	21	—	—
397979 2009 BQ ₁₆	16.9	X	277.51755	55.93960	152.38450	8.21310	0.0731857	0.23251946	2.6191669	21	—	—
397980 2009 BH ₅₃	17.5	X	31.05633	345.97471	117.59312	5.85652	0.1580602	0.23983188	2.5656541	21	—	—
397981 2009 BC ₆₇	17.6	X	341.70657	286.77093	192.57649	1.92789	0.0343905	0.22882846	2.6472565	21	—	—
397982 2009 BA ₇₇	16.9	X	49.24333	351.85663	91.16169	8.54034	0.2440459	0.24064839	2.5598474	21	—	—
397983 2009 BS ₇₈	17.2	X	268.30321	73.84412	93.22465	5.80480	0.2248252	0.22281407	2.6946827	21	12 20.8	20.4
397984 2009 BS ₈₆	17.5	X	327.48529	40.28792	130.71495	4.52434	0.0519293	0.23801855	2.5786685	21	—	—
397985 2009 BC ₈₈	17.2	X	283.09120	67.43475	116.12629	3.83962	0.0309267	0.23076644	2.6324146	21	—	—
397986 2009 BA ₈₉	17.2	X	35.58319	309.70957	134.70733	5.67553	0.1980208	0.23857089	2.5746869	21	—	—
397987 2009 BC ₉₃	17.2	X	252.46535	42.62894	195.10611	1.63671	0.1318582	0.23294466	2.6159787	21	—	—
397988 2009 BK ₉₉	16.8	X	278.15335	255.36385	282.06484	11.04850	0.1823923	0.22839721	2.6505877	21</		

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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>		
398001	2009	BZ ₁₇₆	17.1	X	348.62517	359.05597	148.93501	6.68301	0.0537392	0.23737051	2.5833597	21	—	—
398002	2009	BE ₁₇₉	16.4	X	1.10419	17.31001	104.45657	14.57029	0.0726241	0.23443871	2.6048527	21	—	—
398003	2009	BY ₁₈₂	16.4	X	277.14482	84.78704	176.20771	14.92786	0.1110224	0.23470769	2.6028621	21	1 29.1	20.4
398004	2009	BU ₁₈₃	16.4	X	1.38233	152.84659	300.71157	11.40313	0.2628843	0.23121080	2.6290407	21	—	—
398005	2009	BY ₁₈₅	16.5	X	298.01454	110.58506	75.64826	9.60374	0.0833415	0.23241154	2.6199777	21	—	—
398006	2009	BO ₁₈₇	16.9	X	12.76793	3.00307	106.90070	8.72750	0.1432222	0.23675566	2.5878303	21	—	—
398007	2009	BE ₁₈₈	16.5	X	242.32118	276.90250	269.07384	6.65353	0.1363007	0.21967930	2.7202571	21	12 21.9	20.3
398008	2009	BA ₁₉₀	16.4	X	326.38127	339.42770	80.54366	10.52835	0.1341323	0.21563041	2.7542036	21	11 18.3	19.4
398009	2009	CT ₆	16.9	X	23.13697	187.74865	267.99569	4.56434	0.2270490	0.23799829	2.5788148	21	—	—
398010	2009	CS ₁₃	16.6	X	252.63213	92.79753	115.88862	15.89996	0.1933876	0.22633479	2.6666653	21	—	—
398011	2009	CU ₂₆	16.5	X	217.58096	257.21957	345.11973	11.24637	0.1238101	0.22458586	2.6804916	21	—	—
398012	2009	CC ₃₂	16.7	X	285.30338	108.99182	341.49704	7.28765	0.1551757	0.21109399	2.7935223	21	10 11.9	20.3
398013	2009	CL ₃₉	17.4	X	278.29609	32.58653	127.46174	11.01973	0.2351870	0.22235543	2.6983869	21	12 26.6	20.3
398014	2009	CN ₅₃	16.5	X	326.58155	297.13539	207.03067	29.77628	0.3188201	0.23384598	2.6092525	21	—	—
398015	2009	CB ₆₄	17.5	X	75.58878	139.27923	78.15806	4.83915	0.1640438	0.26663301	2.3907093	21	8 17.8	20.5
398016	2009	DR ₉	16.9	X	340.50198	2.33880	126.09714	6.95997	0.1912821	0.23138513	2.6277200	21	—	—
398017	2009	DG ₁₂	16.9	X	308.37253	77.34791	89.45476	11.81615	0.0684172	0.23283066	2.6168325	21	—	—
398018	2009	DD ₁₃	16.7	X	44.10652	262.21713	174.22774	21.83285	0.0476213	0.22924939	2.6440150	21	—	—
398019	2009	DM ₁₃	16.4	X	140.95408	104.73417	345.04532	10.71930	0.1859195	0.17688580	3.1429737	21	5 12.8	21.7
398020	2009	DV ₁₉	16.1	X	305.35017	11.90188	97.34138	14.70538	0.1574824	0.21850078	2.7299707	21	12 15.9	18.9
398021	2009	DD ₂₃	17.3	X	109.77449	192.46257	141.50973	5.35977	0.0516480	0.22148594	2.7054444	21	—	—
398022	2009	DN ₂₃	16.7	X	57.63827	36.14897	355.15896	8.49310	0.0755122	0.22396200	2.6854671	21	—	—
398023	2009	DX ₂₇	16.9	X	47.99563	264.27878	152.14169	9.96168	0.0608762	0.22936616	2.6431176	21	—	—
398024	2009	DO ₃₈	16.9	X	133.43403	203.64589	163.06485	12.87639	0.1797612	0.23542846	2.5975469	21	1 19.8	20.7
398025	2009	DF ₄₁	16.1	X	246.39299	26.59700	147.29914	9.60187	0.1017918	0.21796851	2.7344724	21	12 17.4	19.9
398026	2009	DH ₆₄	16.9	X	98.34334	301.70663	49.54208	7.30208	0.0216849	0.22070714	2.7118050	21	—	—
398027	2009	DQ ₈₉	16.4	X	134.79306	234.09147	131.64558	22.45685	0.0299044	0.23916416	2.5704273	21	1 1.3	20.1
398028	2009	DX ₉₀	17.4	X	237.40237	313.73905	220.90400	1.46171	0.1639528	0.21532931	2.7567705	21	11 27.4	21.3
398029	2009	DK ₉₉	16.7	X	88.00723	229.90831	136.75493	6.12662	0.0789989	0.22306599	2.6926535	21	—	—
398030	2009	DB ₁₀₀	16.7	X	26.95311	310.90698	150.58524	12.14391	0.1533108	0.23338973	2.6126519	21	—	—
398031	2009	DU ₁₀₄	17.1	X	249.05798	164.00479	18.45440	5.04152	0.0619267	0.21570222	2.7535923	21	—	—
398032	2009	DM ₁₁₀	16.9	X	248.23132	111.25633	102.94974	13.39692	0.2853558	0.21897208	2.7261111	21	—	—
398033	2009	DU ₁₁₅	17.1	X	238.04951	74.86550	144.96272	5.57778	0.0893153	0.22411159	2.6842719	21	—	—
398034	2009	DH ₁₂₈	17.9	X	271.11720	21.09728	178.04126	6.33648	0.0796546	0.22672574	2.6635989	21	—	—
398035	2009	DY ₁₂₈	15.9	X	57.00326	243.24333	14.04221	18.01978	0.2088913	0.18350082	3.0669784	21	9 19.1	20.1
398036	2009	DJ ₁₃₀	17.0	X	327.70030	357.62095	122.98588	6.00369	0.1293690	0.22260448	2.6963739	21	—	—
398037	2009	DN ₁₃₄	16.6	X	132.40744	316.20410	204.17019	29.21447	0.2290594	0.18211930	3.0824691	21	7 29.8	21.3
398038	2009	DD ₁₃₉	16.9	X	201.46501	119.78844	169.85795	11.77173	0.2126762	0.22593533	2.6680875	21	—	—
398039	2009	EB ₂₅	17.0	X	155.84496	246.19765	288.72972	1.61334	0.0370428	0.19304488	2.9650398	21	9 5.8	21.2
398040	2009	ET ₂₇	17.5	X	325.56861	320.68647	171.64515	5.45113	0.1071738	0.22563153	2.6722035	21	—	—
398041	2009	EN ₃₀	16.9	X	240.49903	314.65463	226.20511	10.58254	0.2400145	0.21419063	2.7665322	21	11 28.7	21.0
398042	2009	FC	16.3	X	277.27609	91.47621	50.85401	9.68433	0.2191134	0.21765950	2.7370599	21	11 30.8	19.6
398043	2009	FF ₁₅	16.9	X	220.21925	298.40539	318.77598	10.79036	0.1571463	0.22996974	2.6384908	21	—	—
398044	2009	FG ₁₅	17.7	X	311.12710	353.12628	141.54622	3.07611	0.1502412	0.22434745	2.6823902	21	—	—
398045	2009	Viturdurum	16.4	X	193.86327	58.57338	153.92268	14.90713	0.1223664	0.20928316	2.8096131	21	12 3.6	21.0
398046	2009	FB ₂₈	15.8	X	164.34879	56.63779	102.55538	11.38329	0.0412469	0.19288109	2.9667181	21	8 31.6	20.2
398047	2009	FH ₃₇	17.1	X	330.80082	41.05989	80.80565	3.98959	0.1219625	0.22242341	2.6978371	21	—	—
398048	2009	FM ₄₀	17.2	X	276.30520	82.32726	59.17422	8.07439	0.2352831	0.21847859	2.7302147	21	11 26.5	20.3
398049	2009	FL ₆₅	16.7	X	30.44134	186.81425	183.45185	6.20540	0.1943039	0.20927208	2.8097123	21	12 10.9	20.6
398050	2009	FU ₆₈	15.7	X	37.48516	64.98276	221.78565	25.56371	0.1165187	0.17990286	3.1077352	21	9 2.2	20.3
398051	2009	FK ₇₀	16.5	X	204.01997	295.91172	42.11592	15.38488	0.1196851	0.23404647	2.6077622	21	3 1.1	20.8
398052	2009	GS ₃	17.1	X	232.24383	52.75559	199.31295	9.50791	0.1889092	0.22036130	2.7146416	21	—	—
398053	2009	HB ₆	16.7	X	51.43139	232.56447	150.76099	6.71591	0.0214147	0.21150626	2.7898910	21	—	—
398054	2009	HO ₁₅	17.0	X	144.63946	254.60084	33.06675	5.06902	0.1380923	0.21085791	2.7956070	21	—	—
398055	2009	HF ₁₇	17.0	X	257.66460	325.87238	204.15975	4.10914	0.0599788	0.21206619	2.7849779	21	12 30.7	20.8
398056	2009	HA ₂₀	16.3	X	269.74873	151.74323	57.57285	9.12029	0.1717071	0.22242896	2.6977922	21	—	—
398057	2009	HP ₂₅	16.2	X	220.99936	268.54760	41.00975	13.64849	0.0756721	0.23463096	2.6034296	21	2 8.9	20.3
398058	2009	HR ₂₅	16.1	X	190.35107	242.58487	204.00289	10.60461	0.1622257	0.18058248	3.0999330	21	6 23.7	21.4
398059	2009	HV ₃₅	16.5	X	319.48050	288.84214	78.90992	12.27286	0.0752497	0.18237927	3.0795391	21	8 30.8	20.7
398060	2009	HG ₃₈	17.0	X	328.12613	339.20807	114.95086	6.11249	0.1246535	0.21557403	2.7546838	21	—	—
398061	2009	HF ₄₆	16.2	X	92.91927	75.37822	169.90703	11.14961	0.1315023	0.18598461	3.0396112	21	10 2.7	20.8
398062	2009	HF ₄₇	16.7	X	168.46842	99.27241	189.60479	12.76309	0.1972440	0.21463608	2.7627032	21	—	—
398063	2009	HQ ₅₂	16.6	X	225.64948	67.27354	57.10205	4.03189	0.0855475	0.19622865	2.9328809	21	9 22.1	21.0
398064	2009	HT ₆₂	16.9	X	146.76758	223.80418	76.74195	5.43331	0.0850184	0.21564655	2.7540662	21	—	—
398065	2009	HH ₆₅	16.2	X	287.42679	38.31168	79.91712	16.22777	0.0982394	0.20629030	2.8367225	21	12 1.5	19.8
398066	2009	HR ₆₆	16.9	X	149.80817	119.62151	59.89738	6.25237	0.1036001	0.19170359	2.9788540	21	9 10.9	21.6
398067	2009	HK ₈₁	15.7	X	34.78058	88.53628	98.88216	15.80174	0.2344465	0.18116236	3.0933144	21	10 2.3	19.6
398068	2009	HW ₉₆	16.7	X	146.70016	114.70524	98.26679	14.24816	0.0959263	0.19203365	2.9754398	21	10 22.0	21.5
398069	2009	HC ₉₇	17.7	X	254.69459	94.08807	177.17279	23.46510	0.0924450	0.38673032	1.8657949	21	—	—
398070	2009	HO ₉₉	16.8	X	136.44091	46.02012	221.10549	9.94187	0.1027288	0.19973374	2.8984674	21	12 9.5	21.4
398071	2009	HT ₉₉	16.8	X	135.74513	16.27595	221.							

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
398081 2009 JB ₁₇	16.6 ^m	X	259.01270	22.34558	231.87865	8.86620	0.1757817	0.22498360	2.6773315	21	—	—
398082 2009 KR ₂	16.7	X	148.85831	200.48087	51.63097	8.97859	0.1692291	0.20136464	2.8827960	21	12 3.2	21.4
398083 2009 KJ ₅	16.2	X	243.35133	318.66858	138.56540	10.97165	0.0710414	0.18778019	3.0202035	21	9 9.9	20.5
398084 2009 KU ₅	16.8	X	202.04189	198.39584	144.51554	12.14052	0.0515600	0.23122866	2.6289053	21	2 25.0	20.4
398085 2009 KP ₁₃	16.1	X	42.68651	221.40931	103.98486	11.21759	0.1207818	0.19074292	2.9888476	21	11 11.9	20.3
398086 2009 KY ₁₃	15.9	X	329.79387	243.83265	90.27668	12.81326	0.1264883	0.17436748	3.1731631	21	7 23.1	19.8
398087 2009 LC ₃	16.3	X	104.95552	203.62621	216.95742	29.16302	0.1655140	0.22701235	2.6613565	21	2 14.4	20.5
398088 2009 MB ₃	15.7	X	67.79280	149.48144	121.22443	11.93798	0.1486308	0.17472367	3.1688490	21	10 10.2	20.4
398089 2009 MB ₁₀	16.0	X	353.96022	235.06280	132.23104	11.21490	0.3583543	0.16948100	3.2338661	21	11 6.4	18.7
398090 2009 OM ₁₅	15.3	X	77.96530	163.72527	119.70188	28.52107	0.1605604	0.17643600	3.1483131	21	11 14.1	20.6
398091 2009 OM ₂₁	13.7	X	352.77469	10.15061	36.54668	24.05344	0.0912311	0.08219321	5.2389641	21	11 10.3	20.3
398092 2009 OR ₂₅	15.7	X	77.70073	291.11362	33.85141	9.36624	0.1415908	0.18399012	3.0615385	21	12 19.4	20.4
398093 2009 QE ₅	15.7	X	32.06628	204.07121	150.42210	11.34939	0.3095404	0.17490256	3.1666880	21	12 24.7	20.0
398094 2009 QJ ₁₅	17.1	X	288.83489	194.62592	160.15755	8.60537	0.2082351	0.23378820	2.6096824	21	6 4.3	20.8
398095 2009 QJ ₆₅	13.2	X	255.86936	61.84162	72.23486	20.28675	0.0507269	0.08497239	5.1240986	21	11 2.8	20.2
398096 2009 RD ₅₅	15.7	X	60.20445	206.69054	191.75291	10.00337	0.0972224	0.18456130	3.0552186	21	—	—
398097 2009 RV ₇₅	15.5	X	61.15493	47.35144	285.11749	9.16887	0.0857427	0.17587259	3.1550333	21	12 1.6	20.1
398098 2009 SX ₅	16.6	X	81.65525	195.47834	148.61491	1.47950	0.1706336	0.18183446	3.0856874	21	—	—
398099 2009 SM ₂₂	15.9	X	103.42366	62.07572	173.88397	19.89429	0.1296471	0.17182646	3.2043702	21	9 30.9	20.8
398100 2009 ST ₂₅	15.6	X	299.74371	271.34067	200.26336	9.87506	0.0585112	0.17579997	3.1559020	21	12 7.5	19.9
398101 2009 SN ₄₇	15.9	X	14.28138	181.39927	209.71320	17.22988	0.1190817	0.17209709	3.2010100	21	12 15.3	20.3
398102 2009 SR ₁₃₁	16.2	X	71.57195	219.51274	120.38149	2.43525	0.1706132	0.17722162	3.1390919	21	—	—
398103 2009 SB ₁₅₇	18.0	X	110.15178	139.52210	356.69975	5.52641	0.1873875	0.30000753	2.2099441	21	6 8.3	20.9
398104 2009 SQ ₁₈₃	13.6	X	31.85548	336.74382	5.89533	18.64338	0.0232911	0.08167422	5.2611341	21	10 14.7	20.5
398105 2009 SA ₂₀₁	15.5	X	357.32641	213.85000	203.07831	16.33431	0.1722909	0.17220970	3.1996145	21	12 25.6	19.6
398106 2009 SE ₂₄₀	15.3	X	39.15214	316.08047	29.82917	23.61705	0.1633674	0.17335837	3.1854651	21	11 25.1	19.8
398107 2009 SL ₂₄₁	15.5	X	84.45430	62.86273	249.37921	14.68520	0.2216762	0.17631475	3.1497563	21	12 18.1	20.6
398108 2009 SF ₂₄₃	15.4	X	60.85627	32.83425	298.40511	16.40085	0.2354274	0.17722419	3.1389716	21	12 20.9	20.2
398109 2009 SD ₂₄₈	14.4	X	276.79082	319.82352	143.39256	4.00910	0.1066150	0.08054715	5.3100987	21	10 10.3	21.3
398110 2009 SJ ₂₈₄	17.6	X	199.07619	152.20543	218.38465	20.74135	0.0862853	0.38046295	1.8862292	21	3 2.1	20.3
398111 2009 SB ₃₀₄	17.6	X	184.34284	201.29917	199.50471	21.64774	0.0278600	0.38274447	1.8787259	21	3 29.3	19.3
398112 2009 TR ₃₁	15.2	X	79.43855	97.71055	240.62937	20.49766	0.2777128	0.17949861	3.1123994	21	—	—
398113 2009 UD ₉₀	16.5	X	356.93343	277.48317	79.36242	4.51305	0.3451930	0.16261709	3.3242366	21	10 23.5	19.1
398114 2009 UB ₁₃₄	18.4	X	86.70620	322.41822	36.38090	21.04376	0.1053705	0.35104654	1.9901826	21	—	—
398115 2009 UM ₁₄₁	18.4	X	197.81337	43.19119	59.39408	2.85715	0.1276578	0.30879706	2.1678070	21	7 24.9	21.5
398116 2009 VM ₅₆	16.3	X	121.41031	348.49481	305.52591	0.19687	0.1645323	0.17669061	3.1452879	21	12 25.4	21.4
398117 2009 VP ₈₀	15.3	X	355.63982	265.38264	155.21998	26.01685	0.2567786	0.17017276	3.2250963	21	—	—
398118 2009 WZ ₁₀₇	13.9	X	207.29932	145.19775	56.56344	16.52709	0.0096966	0.08467702	5.1360079	21	11 22.3	20.6
398119 2009 XL ₁₁	17.3	X	52.63690	257.36256	286.40866	5.49636	0.1688715	0.28374441	2.2936009	21	5 16.8	19.3
398120 2010 AM ₆₁	18.3	X	189.82518	339.21945	95.97237	3.82114	0.1626070	0.29570115	2.2313484	21	6 7.4	21.6
398121 2010 AF ₇₀	16.8	X	48.22667	83.90308	359.29317	5.97271	0.1212936	0.26200248	2.4187953	21	—	—
398122 2010 AX ₈₇	13.9	X	13.85718	252.42392	112.70513	8.44087	0.0943677	0.08402157	5.1626839	21	10 30.2	20.4
398123 2010 BF ₅₉	17.4	X	279.06184	325.06870	244.43219	11.56462	0.1269705	0.24370188	2.5384199	21	—	—
398124 2010 BE ₇₂	16.7	X	131.89988	137.75677	231.75601	11.41225	0.0696284	0.24652798	2.5189830	21	1 3.4	20.2
398125 2010 CN ₁₈	16.4	X	62.43945	14.46705	152.44348	25.38181	0.1764763	0.27540903	2.3396484	21	5 20.8	19.5
398126 2010 CO ₅₂	17.2	X	193.03389	245.42078	54.37776	12.74573	0.2713953	0.23363872	2.6107954	21	1 2.4	22.0
398127 2010 CF ₆₄	17.9	X	332.60299	254.43609	302.86724	2.65182	0.0756779	0.26610401	2.3938766	21	1 16.6	20.5
398128 2010 CE ₆₅	18.0	X	64.48764	126.95028	6.49695	2.74854	0.1237669	0.27023789	2.3694010	21	3 18.9	20.1
398129 2010 CJ ₆₅	18.1	X	70.91914	113.32622	1.49380	4.65648	0.1598142	0.26875390	2.3781151	21	3 8.6	20.1
398130 2010 CH ₉₇	18.0	X	143.77482	106.89238	328.20818	2.44169	0.0718944	0.27940136	2.3173077	21	4 11.1	21.0
398131 2010 CF ₁₀₄	18.1	X	323.51952	160.53544	65.14221	1.70238	0.1959485	0.26097339	2.4251497	21	1 25.1	21.3
398132 2010 CM ₁₂₀	17.2	X	349.42467	232.18222	343.34678	11.15845	0.2019084	0.26854625	2.3793408	21	2 18.3	19.4
398133 2010 CR ₁₂₀	17.6	X	167.92023	1.36814	104.51986	3.64099	0.0909634	0.29217742	2.2492529	21	6 24.9	20.8
398134 2010 CK ₁₂₃	17.7	X	132.76374	307.66948	163.77426	6.82701	0.0471591	0.28365513	2.2940821	21	5 17.4	20.6
398135 2010 CO ₁₃₄	17.7	X	262.98072	149.20747	141.90064	5.47107	0.1048078	0.25260509	2.4784186	21	2 20.9	21.2
398136 2010 CO ₁₃₇	18.3	X	62.17575	185.15966	331.01149	2.12068	0.1048836	0.27707631	2.3302532	21	4 13.1	20.7
398137 2010 CX ₁₄₀	17.6	X	34.42035	133.66655	51.78961	3.04198	0.1656483	0.27423796	2.3463043	21	4 12.3	19.3
398138 2010 CG ₁₄₂	17.2	X	119.83270	212.42014	290.34195	4.32535	0.0809944	0.29005142	2.2602304	21	6 16.5	19.9
398139 2010 CO ₁₄₆	17.1	X	50.18714	354.81335	156.73538	6.34851	0.1428429	0.27117283	2.3639517	21	3 22.3	19.1
398140 2010 CR ₁₅₂	17.9	X	8.07530	81.15011	154.00124	1.42408	0.1214705	0.27999497	2.3140313	21	5 4.3	19.9
398141 2010 CY ₁₅₈	17.6	X	12.50889	270.44445	351.64692	8.40611	0.1872289	0.28054191	2.3110227	21	7 2.2	19.4
398142 2010 CF ₁₈₃	17.7	X	328.65285	117.60131	135.41930	2.15174	0.1529458	0.26866197	2.3786576	21	3 16.6	20.4
398143 2010 CK ₂₀₃	15.9	X	10.91709	139.16048	42.70461	16.75126	0.0639953	0.17002085	3.2270171	21	3 21.3	20.4
398144 2010 DE ₄₁	17.2	X	326.37911	271.69604	320.82597	9.91853	0.2143625	0.26479395	2.4017659	21	2 3.4	20.2
398145 2010 DH ₇₅	18.7	X	21.96693	19.60321	152.48295	1.72351	0.1144085	0.26679487	2.3897423	21	2 24.6	21.1
398146 2010 ED ₃₆	17.0	X	18.90524	184.46340	7.96207	5.67072	0.1394869	0.26700831	2.3884686	21	3 20.9	19.0
398147 2010 EF ₃₆	17.3	X	37.55310	337.10992	187.20326	10.93070	0.1526308	0.26638648	2.3921841	21	3 14.7	19.4
398148 2010 EB ₃₈	16.8	X	267.34391	276.63041	31.24350	6.85208	0.1086122	0.26280019	2.4138981	21	3 19.6	20.1
398149 2010 EM ₆₈	17.2	X	250.78169	130.31172	100.78363	3.69576	0.0860292	0.24474100	2.5312297	21	—	—
398150 2010 ES ₇₀	17.9	X	347.39225	345.96344	213.43026	2.00685	0.1585200	0.26051270	2.4280080	21	1 29.0	20.5
398151 2010 EA ₇₁	18.0	X	337.76581	231.64061	3.65557	1.14817	0.1270498	0.26476571	2.4019367	21	3 10.1	20.5
398152 2010 EP ₇₄	17.1	X	158.65407	45.99135	33.57623	6.37265	0.1284490	0.28125363	2.3071223	21	5 10.6	20.4
398153 2010 EO ₁₀₂	17.8	X	350.43892	16.53854	209.44080	2.11767	0.1165206	0.26636209	3.3923301	21	3 18.4	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>
398161 2010 FX ₂₄	16.6	X	204.75598	202.20171	4.42184	12.84934	0.1292441	0.22579384	2.6709227	21	12 4.2	20.8
398162 2010 FU ₂₆	17.1	X	92.90018	67.17193	65.46277	7.25052	0.0731563	0.27377241	2.3489635	21	4 26.6	19.8
398163 2010 FS ₄₇	17.4	X	356.08478	186.81071	14.09882	5.23557	0.1320011	0.26354779	2.4093310	21	2 20.9	19.9
398164 2010 FD ₉₅	18.0	X	280.10089	70.91854	200.97096	1.99191	0.1965083	0.25666685	2.4522017	21	2 4.2	21.9
398165 2010 FM ₉₉	17.9	X	329.95759	263.35471	9.04052	1.35552	0.1761479	0.27233449	2.3572245	21	4 10.7	20.2
398166 2010 GG ₃₂	17.2	X	343.99025	189.27645	85.45150	6.15828	0.2156600	0.27189446	2.3597671	21	5 8.5	19.0
398167 2010 GQ ₈₁	16.9	X	153.07104	1.66079	265.97196	7.04865	0.1856583	0.21346187	2.7728253	21	12 26.6	21.5
398168 2010 GY ₁₀₄	17.1	X	237.27740	313.03565	204.24439	4.07574	0.0693464	0.22326983	2.6910134	21	11 20.4	20.8
398169 2010 GZ ₁₂₇	17.1	X	296.06135	234.52611	27.66571	4.31021	0.1291291	0.25710837	2.4493962	21	2 19.5	20.4
398170 2010 GO ₁₃₃	17.4	X	295.48615	75.32060	57.25346	12.41143	0.1453345	0.23141696	2.6274791	21	—	—
398171 2010 GF ₁₅₉	17.5	X	339.26663	236.43266	9.19658	3.34736	0.1721805	0.26891765	2.3771496	21	3 19.9	19.7
398172 2010 HN ₂₃	17.4	X	263.11973	134.27097	72.70371	12.51007	0.1164907	0.23902554	2.5714209	21	—	—
398173 2010 HZ ₂₄	17.7	X	212.39337	80.10784	205.30197	3.78644	0.2154711	0.22997668	2.6384378	21	—	—
398174 2010 HT ₃₇	16.9	X	159.20015	146.21235	154.48571	8.74968	0.1964302	0.21901286	2.7257727	21	—	—
398175 2010 HW ₉₇	16.6	X	141.30347	181.09787	168.78814	14.14013	0.1554917	0.22272272	2.6954195	21	1 7.5	20.7
398176 2010 JW ₃₁	17.1	X	186.09239	112.01960	181.94893	13.57082	0.1371508	0.23363552	2.6108192	21	—	—
398177 2010 JE ₃₈	16.5	X	83.21193	260.48569	35.94698	9.31949	0.2129434	0.21096239	2.7946839	21	12 1.9	21.0
398178 2010 JS ₇₄	16.2	X	259.43751	100.94177	59.16926	15.92315	0.0469921	0.22410252	2.6843443	21	12 24.3	19.8
398179 2010 JD ₇₈	17.4	X	287.29275	351.96615	209.55808	5.98940	0.0938637	0.24123528	2.5556939	21	—	—
398180 2010 JI ₁₀₅	16.6	X	172.45032	148.96053	185.88682	11.97599	0.2705328	0.22511874	2.6762599	21	1 26.2	21.4
398181 2010 JC ₁₁₃	16.8	X	189.12379	203.71609	103.42705	14.79858	0.1773971	0.23679083	2.5875741	21	1 3.0	21.0
398182 2010 JF ₁₇₄	17.6	X	259.10395	235.13404	67.25247	7.74936	0.1099562	0.25584517	2.4574493	21	3 5.9	21.3
398183 2010 JG ₁₇₈	16.6	X	244.57850	311.90906	249.17953	9.66361	0.0897949	0.23376945	2.6098219	21	—	—
398184 2010 KX ₆₀	16.6	X	185.72568	169.65064	170.70268	13.31973	0.3463735	0.22750096	2.6575466	21	2 14.0	21.8
398185 2010 KT ₆₁	15.3	X	302.45468	316.56595	278.41514	29.09915	0.1539731	0.23596753	2.5935894	21	1 16.2	19.1
398186 2010 KY ₁₁₉	16.4	X	79.63942	322.06982	331.15042	9.89303	0.0783331	0.19192589	2.9765534	21	11 3.9	20.8
398187 2010 KK ₁₂₈	16.8	X	316.48259	330.98331	209.98578	15.42505	0.1441802	0.24209647	2.5496295	21	—	—
398188 2010 Agni	19.4	X	90.80442	328.63573	134.21631	13.24940	0.2734228	1.22656008	0.8643245	21	—	—
398189 2010 LY ₆₅	16.6	X	146.34515	154.43581	165.89350	9.90060	0.2012501	0.21519462	2.7579208	21	—	—
398190 2010 LW ₈₂	15.6	X	346.41349	120.27840	200.99075	25.52705	0.1838873	0.17444460	3.1722277	21	7 24.9	19.8
398191 2010 LO ₁₁₀	17.7	X	327.51675	192.31809	89.76741	2.67787	0.1679607	0.26474063	2.4020884	21	4 24.8	20.3
398192 2010 MM ₆	16.8	X	223.34180	73.25682	248.30060	10.69442	0.2131682	0.23299729	2.6155848	21	2 13.3	21.5
398193 2010 MR ₈	15.4	X	332.81172	200.67091	174.00284	28.00765	0.1257202	0.17966208	3.1105112	21	9 21.0	19.1
398194 2010 ME ₂₀	15.7	X	304.66691	249.98561	164.09125	18.47904	0.0871981	0.18122874	3.0925590	21	10 3.7	19.8
398195 2010 MZ ₂₅	15.8	X	281.78196	236.46690	180.83089	15.48289	0.1017080	0.17524008	3.1626205	21	8 29.2	20.2
398196 2010 MJ ₃₀	15.6	X	29.68414	68.31648	257.56875	13.21180	0.1340870	0.18374397	3.0642721	21	10 17.9	19.7
398197 2010 MR ₃₁	16.8	X	39.23372	104.58147	226.87885	8.33942	0.1412766	0.18729341	3.0254342	21	11 13.5	20.6
398198 2010 MN ₆₄	16.4	X	311.69981	231.37427	156.11688	2.29498	0.1902454	0.17381154	3.1799257	21	8 24.4	19.9
398199 2010 MF ₇₂	16.4	X	48.78854	27.68694	249.76661	7.45878	0.1199283	0.17690701	3.1427224	21	9 10.9	20.8
398200 2010 MR ₇₄	16.4	X	27.12893	343.97117	2.49344	9.45822	0.1518689	0.18620992	3.0371589	21	11 13.4	20.3
398201 2010 MQ ₉₆	16.8	X	160.48373	272.99928	24.09351	14.90107	0.3228263	0.21376252	2.7702248	21	—	—
398202 2010 MC ₁₀₀	16.5	X	352.47684	288.25135	80.39742	2.42745	0.1687916	0.18075551	3.0979544	21	10 19.6	19.9
398203 2010 MX ₁₀₅	16.3	X	356.31114	203.19676	125.80758	3.14223	0.1602319	0.17436380	3.1732077	21	9 1.2	19.9
398204 2010 MU ₁₀₈	17.0	X	148.39984	192.46975	209.53533	1.57100	0.2057715	0.22610634	2.6684612	21	3 24.1	21.3
398205 2010 MO ₁₁₅	16.8	X	14.20131	162.10510	184.03763	3.38367	0.1706116	0.18218551	3.0817223	21	10 29.1	20.4
398206 2010 NP ₆	16.0	X	113.68628	177.49547	138.43005	14.17120	0.1470263	0.20910970	2.8111667	21	—	—
398207 2010 ND ₂₈	15.6	X	24.93318	55.63548	267.01292	8.10104	0.1094503	0.17916731	3.1162350	21	10 2.9	19.8
398208 2010 NX ₃₁	16.2	X	79.95053	20.58704	280.29412	5.56465	0.0955402	0.18815769	3.0161625	21	11 18.3	20.6
398209 2010 ND ₈₁	16.2	X	44.42701	309.54102	20.53261	11.06919	0.1955979	0.18583179	3.0412774	21	11 23.5	20.4
398210 2010 NQ ₈₇	16.4	X	52.07415	121.45784	196.55476	15.74371	0.0797312	0.18531179	3.0469641	21	11 5.9	20.6
398211 2010 NC ₉₉	16.5	X	23.03818	224.62949	113.57329	2.47690	0.1770045	0.18207975	3.0829155	21	11 3.4	20.1
398212 2010 NF ₁₀₅	15.9	X	253.42453	297.69353	53.09579	10.67739	0.0450142	0.15057607	3.4991729	21	5 12.5	21.0
398213 2010 NV ₁₀₅	15.8	X	340.78360	162.41514	191.62788	27.49779	0.1715047	0.17410507	3.1763506	21	8 31.7	19.8
398214 2010 NY ₁₀₆	16.4	X	78.37287	147.74979	176.26948	9.85501	0.1030593	0.19205499	2.9752193	21	12 17.1	20.9
398215 2010 NX ₁₀₇	16.0	X	2.60370	165.48037	210.63222	23.34456	0.1771990	0.18376720	3.0640138	21	11 18.4	19.6
398216 2010 NP ₁₁₇	16.8	X	199.85090	160.45663	155.08209	13.47151	0.2904741	0.22908238	2.6452999	21	1 24.8	21.8
398217 2010 OD ₁₆	15.8	X	315.09235	281.21626	123.64399	9.83051	0.1740536	0.17529875	3.1619149	21	9 29.6	19.6
398218 2010 OZ ₃₂	16.5	X	41.18867	113.11230	232.36905	8.23137	0.1587791	0.18665013	3.0323816	21	12 5.8	20.5
398219 2010 OM ₆₃	16.6	X	335.10091	162.01293	200.66332	10.03714	0.2334502	0.17257977	3.1950387	21	8 28.5	20.0
398220 2010 OZ ₇₁	16.8	X	235.33151	45.46636	303.30908	11.29257	0.2063941	0.23667226	2.5884382	21	3 25.9	21.4
398221 2010 OW ₇₆	15.7	X	348.31991	343.57433	16.54324	15.50904	0.2719313	0.17586604	3.1551116	21	10 1.9	18.5
398222 2010 OR ₈₉	16.2	X	11.53832	179.83307	181.46606	5.66785	0.1512859	0.18085133	3.0968601	21	11 11.4	20.0
398223 2010 OW ₁₁₉	16.0	X	29.88910	51.91415	276.09820	9.76881	0.1531860	0.17851446	3.1238280	21	10 23.1	20.1
398224 2010 OH ₁₂₅	16.5	X	185.57746	193.82377	186.44292	13.21953	0.2702120	0.22889905	2.6467122	21	3 31.6	21.2
398225 2010 PR ₂₇	15.5	X	159.12807	235.03762	327.73007	14.01012	0.0380561	0.17530774	3.1618068	21	10 6.5	20.4
398226 2010 PU ₃₀	16.1	X	5.73880	288.34030	61.25060	10.34353	0.0930791	0.17531689	3.1616968	21	10 14.7	20.2
398227 2010 PV ₆₈	15.7	X	2.61303	67.50104	270.02017	18.56157	0.1118706	0.17162217	3.2069126	21	9 9.5	20.1
398228 2010 PE ₇₃	16.9	X	186.75139	160.01866	144.62883	5.00719	0.3066067	0.22424871	2.6831775	21	1 5.7	21.9
398229 2010 PJ ₇₈	15.9	X	20.09323	305.93392	69.67983	9.13235	0.2737339	0.18458882	3.0549150	21	12 30.4	19.7
398230 2010 QO ₁	15.7	X	42.27460	292.45347	64.11195	13.77204	0.2278363	0.18663488	3.0325468	21	12 29.8	20.0
398231 2010 QS ₁	16.2	X	232.15366	255.17954	68.95449	17.77024	0.3462716	0.23236480	2.6203290	21	3 4.7	21.5
398232 2010 QH ₄	15.9	X	67.30353	38.54473	223.34959	9.56284	0.1177102	0.17951704	3.1121864	21	9 16.1	20.3
398233 2010 RK ₁₀	16.4	X	300.05143	53.61164	349.01493	9.67851	0.0625321	0.17522716	3.1627759	21	9 1	

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
398241 2010 <i>RL</i> ₉₆	16.7	X	229.82752	31.63677	211.57329	8.17180	0.1474008	0.21377089	2.7701525	21	—	—
398242 2010 <i>RC</i> ₁₀₂	16.2	X	67.02528	103.54279	200.29004	11.39791	0.0804149	0.18415438	3.0597176	21	11 6.4	20.5
398243 2010 <i>RH</i> ₁₀₃	17.0	X	164.27747	166.73594	202.30526	4.19305	0.1108109	0.22423690	2.6832718	21	2 18.7	21.0
398244 2010 <i>RO</i> ₁₀₇	16.4	X	17.39788	328.22247	18.21448	11.48155	0.0919734	0.18078458	3.0976223	21	10 23.1	20.3
398245 2010 <i>RX</i> ₁₁₂	16.2	X	352.77770	150.34513	222.64010	10.01050	0.0795827	0.18129416	3.0918150	21	10 19.9	20.2
398246 2010 <i>RA</i> ₁₁₃	17.0	X	183.97836	43.42745	297.61944	4.90483	0.1690130	0.22429692	2.6827931	21	2 8.1	21.3
398247 2010 <i>RK</i> ₁₁₅	16.5	X	91.48390	48.26032	223.76249	7.41284	0.0392880	0.18110949	3.0939164	21	10 19.8	21.0
398248 2010 <i>RA</i> ₁₁₇	16.7	X	54.81467	227.64446	121.87178	4.58593	0.1693695	0.19176303	2.9782384	21	12 29.2	21.0
398249 2010 <i>RA</i> ₁₃₈	16.1	X	109.65586	308.73258	318.26597	9.10042	0.0771252	0.18882674	3.0090337	21	11 5.6	20.7
398250 2010 <i>RD</i> ₁₄₃	16.6	X	101.41005	25.83728	258.15051	3.14818	0.1516116	0.19197660	2.9760292	21	11 27.5	21.2
398251 2010 <i>RA</i> ₁₄₉	16.5	X	96.83250	95.84130	219.62244	4.02345	0.0918827	0.19754131	2.9198739	21	12 25.7	20.8
398252 2010 <i>RC</i> ₁₆₈	16.7	X	333.85629	228.28986	164.59091	1.78857	0.0856219	0.18395820	3.0618926	21	10 18.8	20.5
398253 2010 <i>RC</i> ₁₇₀	16.7	X	33.72170	154.86435	204.55189	10.46258	0.1085051	0.18973390	2.9994348	21	12 6.9	20.8
398254 2010 <i>RU</i> ₁₇₃	16.6	X	342.75525	19.20178	351.03537	1.56075	0.1364796	0.17737343	3.1372106	21	10 1.2	20.3
398255 2010 <i>RN</i> ₁₇₄	16.1	X	307.41952	181.49014	215.48350	7.89445	0.0712612	0.17337290	3.1852871	21	9 11.2	20.5
398256 2010 <i>RN</i> ₁₇₉	17.4	X	211.36856	347.49662	339.09634	3.54079	0.2494293	0.23038299	2.6353447	21	2 15.1	21.9
398257 2010 <i>RN</i> ₁₈₀	17.3	X	340.53268	241.71697	80.88390	3.04695	0.2122838	0.26026565	2.4295442	21	7 22.7	19.0
398258 2010 <i>SL</i> ₂₅	16.5	X	34.36405	167.69926	179.80740	9.99948	0.0566412	0.18765529	3.0215435	21	11 17.1	20.7
398259 2010 <i>TA</i> ₅	16.0	X	313.78319	201.43947	187.84687	9.35240	0.0876558	0.17428940	3.1741107	21	9 10.3	20.2
398260 2010 <i>TT</i> ₁₀	16.2	X	47.42705	32.99747	292.70940	7.91331	0.1143870	0.18709072	3.0276190	21	11 10.8	20.5
398261 2010 <i>TK</i> ₁₃	17.7	X	341.76038	239.15292	223.28939	6.05198	0.1183389	0.29024874	2.2592059	21	—	—
398262 2010 <i>TA</i> ₃₁	16.9	X	43.52032	93.27084	221.34747	2.34024	0.1109150	0.18184544	3.0855632	21	10 23.6	20.8
398263 2010 <i>TC</i> ₄₀	16.0	X	121.25660	279.58550	227.30137	5.95436	0.0774315	0.15369900	3.4516124	21	6 25.3	21.1
398264 2010 <i>TQ</i> ₄₂	16.4	X	114.18695	42.33694	211.14731	8.54509	0.0293177	0.17944817	3.1129826	21	10 10.3	20.9
398265 2010 <i>TT</i> ₄₅	16.6	X	94.03342	48.12322	205.03144	11.72631	0.1052437	0.17648412	3.1477408	21	10 7.2	21.2
398266 2010 <i>TU</i> ₄₉	16.6	X	42.88698	151.68553	173.31224	6.00787	0.1680107	0.18355396	3.0663864	21	11 14.9	20.7
398267 2010 <i>TU</i> ₉₀	16.2	X	47.82558	114.52759	184.96457	11.13163	0.0805097	0.17884724	3.1199518	21	10 6.5	20.3
398268 2010 <i>TV</i> ₉₈	16.8	X	84.87174	115.18254	183.98087	10.22130	0.0932089	0.18923244	3.0047314	21	11 24.1	21.3
398269 2010 <i>TH</i> ₁₀₄	16.6	X	299.65241	286.06284	104.94635	2.29884	0.1246186	0.17051979	3.2207192	21	8 19.6	20.8
398270 2010 <i>TC</i> ₁₀₉	16.1	X	341.32434	327.65243	29.27411	11.39361	0.1175425	0.17467362	3.1694543	21	9 16.0	20.0
398271 2010 <i>TV</i> ₁₁₃	16.8	X	327.52869	7.44656	14.01455	0.47393	0.1875967	0.17448673	3.1717171	21	9 15.3	20.1
398272 2010 <i>TC</i> ₁₁₉	16.2	X	77.22154	277.86204	12.40805	6.15918	0.2152745	0.18549573	3.0449496	21	11 15.8	20.9
398273 2010 <i>TG</i> ₁₁₉	16.3	X	21.09020	129.48120	217.44132	4.76141	0.1152011	0.18113803	3.0935914	21	11 1.9	20.3
398274 2010 <i>TT</i> ₁₁₉	16.4	X	347.98105	160.19704	209.14557	8.60183	0.1253855	0.17731361	3.1379161	21	10 8.4	20.1
398275 2010 <i>TB</i> ₁₇₀	16.0	X	347.31872	146.75428	228.57441	9.09695	0.1294333	0.17852085	3.1237535	21	10 14.6	19.7
398276 2010 <i>TZ</i> ₁₇₄	15.8	X	36.63105	338.05548	314.82474	9.35802	0.0950195	0.17604138	3.1530162	21	9 10.3	20.1
398277 2010 <i>TD</i> ₁₈₆	16.7	X	63.20306	130.33207	184.07188	9.77321	0.0910502	0.18556886	3.0441496	21	11 16.9	21.1
398278 2010 <i>TM</i> ₁₈₆	16.0	X	39.89966	304.73651	4.61110	16.22547	0.2571118	0.18086036	3.0967570	21	10 28.4	20.2
398279 2010 <i>UK</i> ₂	16.5	X	35.70686	91.43505	245.10082	4.69653	0.1535485	0.18096775	3.0955317	21	11 15.2	20.4
398280 2010 <i>UB</i> ₁₀	16.9	X	115.20800	186.61532	210.73055	4.55442	0.1080004	0.21357052	2.7718848	21	1 30.5	20.7
398281 2010 <i>UA</i> ₂₀	16.1	X	71.83995	241.09478	32.50417	18.96494	0.1164915	0.17502681	3.1651892	21	10 12.5	20.7
398282 2010 <i>UQ</i> ₃₅	15.8	X	26.22842	293.41013	68.27249	12.02787	0.2736218	0.18254033	3.0777274	21	12 20.9	19.7
398283 2010 <i>UP</i> ₆₁	16.7	X	349.09462	290.31885	90.60846	2.38272	0.1729802	0.17908003	3.1172475	21	10 29.4	20.1
398284 2010 <i>UJ</i> ₆₉	15.8	X	24.77047	289.59639	53.64674	12.01333	0.1400604	0.17826416	3.1267514	21	11 6.9	19.7
398285 2010 <i>UL</i> ₇₁	16.7	X	57.32533	94.78883	220.86920	2.82864	0.0822805	0.18576012	3.0420597	21	11 8.5	20.9
398286 2010 <i>UV</i> ₇₄	13.7	X	281.26069	74.53216	115.97553	21.51754	0.0977830	0.08255985	5.2234420	21	10 3.3	20.4
398287 2010 <i>UA</i> ₉₇	16.2	X	327.97669	158.74143	216.30104	9.46166	0.1134876	0.17301908	3.1896281	21	9 9.5	20.3
398288 2010 <i>VP</i> ₁₄	15.9	X	60.23929	127.41914	220.17472	14.49372	0.2221595	0.18929689	3.0040494	21	—	—
398289 2010 <i>VU</i> ₁₆	16.5	X	89.34394	48.52351	263.27608	5.79609	0.1807526	0.19224874	3.9732200	21	12 21.1	21.3
398290 2010 <i>VT</i> ₃₁	15.7	X	355.67705	157.24723	215.33514	17.16579	0.2132532	0.17765703	3.1338710	21	11 1.7	19.0
398291 2010 <i>VV</i> ₇₃	15.9	X	349.90326	212.38791	137.15458	2.81695	0.0970561	0.16904641	3.2394062	21	9 15.8	19.8
398292 2010 <i>VO</i> ₉₀	16.0	X	124.43325	32.04105	256.50757	10.08533	0.0749757	0.18374629	3.0642463	21	12 18.9	20.7
398293 2010 <i>VZ</i> ₁₂₅	15.4	X	38.28853	248.79339	77.27756	17.38097	0.2481788	0.17630140	3.1499153	21	11 21.8	19.6
398294 2010 <i>VO</i> ₁₅₃	16.0	X	124.73420	128.09592	245.69504	12.89793	0.1153036	0.20940768	2.8084992	21	1 13.4	20.1
398295 2010 <i>VY</i> ₁₅₉	16.0	X	233.61861	8.12716	212.51754	9.00433	0.0219017	0.19127715	2.9832798	21	—	—
398296 2010 <i>VD</i> ₁₆₈	16.0	X	42.31035	77.41129	234.62788	8.34094	0.1106956	0.17337670	3.1852405	21	10 15.9	20.3
398297 2010 <i>VF</i> ₁₇₈	13.9	X	354.52013	334.52120	55.57362	12.04416	0.0259984	0.08488147	5.1277572	21	10 30.2	20.6
398298 2010 <i>VH</i> ₂₀₀	17.3	X	124.44663	114.04312	249.69154	19.59477	0.0557017	0.38795948	1.8618519	21	—	—
398299 2010 <i>VO</i> ₂₀₃	15.9	X	77.92155	308.89294	15.19340	10.43568	0.0270562	0.18733820	3.0249520	21	12 4.1	20.3
398300 2010 <i>VN</i> ₂₀₇	15.5	X	58.25752	31.83163	260.96899	9.38042	0.1040845	0.17764187	3.1340493	21	10 10.6	20.0
398301 2010 <i>VL</i> ₂₁₁	16.2	X	82.77066	344.56104	335.19119	8.95864	0.0440504	0.18739757	3.0243131	21	12 7.6	20.7
398302 2010 <i>WR</i> ₃₂	16.2	X	16.01709	247.38536	93.55426	2.46325	0.1816642	0.17284076	3.1918216	21	10 25.3	19.8
398303 2010 <i>WQ</i> ₅₇	15.8	X	7.89533	288.21008	56.50413	26.75282	0.2276706	0.17196503	3.2026486	21	10 29.0	19.5
398304 2010 <i>WF</i> ₆₂	16.1	X	350.91207	300.19010	72.38160	13.05259	0.2832068	0.17419362	3.1752741	21	10 30.7	19.0
398305 2010 <i>XZ</i> ₃₀	16.6	X	39.17685	234.59662	93.64937	2.34787	0.2348232	0.17795193	3.13040			

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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>
398321 2011 <i>KV</i> ₃₆	16.0	X	205.31631	303.50554	69.79854	11.89474	0.1157836	0.18736858	3.0246251	21	4 15.7	20.9
398322 2011 <i>NP</i> ₂	18.2	X	359.35137	116.95102	156.71621	3.79546	0.0993307	0.29085019	2.2560903	21	6 18.4	20.2
398323 2011 <i>OP</i> ₁₀	17.9	X	288.87722	92.80615	205.01224	4.15510	0.0672378	0.27633200	2.3344358	21	4 2.9	20.8
398324 2011 <i>OX</i> ₄₅	16.3	X	175.05901	153.79684	109.91166	11.02485	0.0422904	0.23790677	2.5794761	21	—	—
398325 2011 <i>OT</i> ₅₃	17.6	X	300.32325	344.93527	277.49717	8.16935	0.1010907	0.27174541	2.3606299	21	2 20.8	20.8
398326 2011 <i>OX</i> ₅₄	16.5	X	186.25777	114.83187	120.99978	15.33097	0.0864517	0.23116228	2.6294085	21	12 28.4	20.5
398327 2011 <i>PL</i> ₁	18.0	X	313.16515	146.61395	143.80569	3.58557	0.2138736	0.27933193	2.3176917	21	4 4.3	20.7
398328 2011 <i>PC</i> ₁₀	17.9	X	352.06197	131.48398	148.14358	7.00983	0.1197560	0.28931832	2.2640469	21	6 12.9	20.0
398329 2011 <i>QA</i> ₁	16.9	X	0.45236	301.33195	275.55384	6.81710	0.0639392	0.26964068	2.3728982	21	3 23.6	19.7
398330 2011 <i>QH</i> ₁	16.8	X	335.46884	186.12601	271.39191	7.50004	0.0455841	0.22635606	2.6664983	21	—	—
398331 2011 <i>QL</i> ₉	17.5	X	27.39086	60.41480	179.70415	4.86470	0.1487956	0.28352142	2.2948033	21	6 24.5	19.5
398332 2011 <i>QE</i> ₁₇	17.5	X	248.61277	12.86663	310.13277	5.26645	0.1285181	0.26519529	2.3993421	21	3 12.1	21.1
398333 2011 <i>QA</i> ₁₉	17.9	X	277.36573	201.64127	152.05611	5.73663	0.1896560	0.27988963	2.3146119	21	5 19.8	21.0
398334 2011 <i>QP</i> ₂₉	16.3	X	116.84027	0.53373	324.06679	13.29596	0.1522235	0.23010817	2.6374325	21	—	—
398335 2011 <i>QD</i> ₃₁	16.3	X	334.88735	175.53598	274.06515	12.30644	0.1220568	0.22274811	2.6952147	21	—	—
398336 2011 <i>QB</i> ₃₆	17.3	X	233.24170	187.27891	146.72380	5.87855	0.2051719	0.26273286	2.4143105	21	3 10.9	21.2
398337 2011 <i>QZ</i> ₃₆	17.8	X	315.72966	309.82524	41.06381	5.28792	0.2055933	0.28911538	2.2651063	21	7 12.9	19.8
398338 2011 <i>QV</i> ₃₈	17.2	X	263.34009	293.83393	77.85412	5.90046	0.2558526	0.27752972	2.3277145	21	5 19.5	20.6
398339 2011 <i>QR</i> ₅₂	17.3	X	189.71081	206.74789	154.45743	5.04317	0.1987719	0.25831526	2.4417583	21	3 7.8	21.1
398340 2011 <i>QJ</i> ₅₇	17.9	X	230.73096	158.81370	199.58025	3.03013	0.2530774	0.26782221	2.3836271	21	4 4.4	22.1
398341 2011 <i>QN</i> ₆₅	17.4	X	233.64365	264.81022	91.13571	3.05899	0.1970601	0.26660308	2.3908882	21	4 7.9	21.2
398342 2011 <i>QP</i> ₇₀	18.1	X	290.26479	125.50318	212.48866	4.76117	0.1886390	0.28189396	2.3036272	21	5 13.0	21.0
398343 2011 <i>QF</i> ₇₂	17.9	X	283.92651	347.09053	341.60616	6.03797	0.1371300	0.27798147	2.3251920	21	4 26.5	20.9
398344 2011 <i>QE</i> ₇₃	18.0	X	319.84920	189.43470	78.27300	2.12769	0.1705714	0.27476321	2.3433131	21	3 20.5	20.6
398345 2011 <i>QM</i> ₈₁	17.9	X	190.11675	2.89068	173.31442	1.59568	0.1579794	0.26133778	2.4228950	21	3 23.5	21.7
398346 2011 <i>QY</i> ₈₇	18.3	X	270.84794	341.38108	3.44753	2.16630	0.2137101	0.27496790	2.3421501	21	4 25.1	21.8
398347 2011 <i>QC</i> ₉₃	17.7	X	357.75038	62.86832	210.98048	5.64253	0.1653362	0.28341385	2.2953839	21	6 13.1	19.4
398348 2011 <i>QM</i> ₉₇	17.4	X	83.77697	189.04233	193.99025	13.23580	0.0895811	0.23190092	2.6238222	21	—	—
398349 2011 <i>RS</i> ₁₃	17.5	X	259.63714	74.84262	272.45456	3.77091	0.2245276	0.27230249	2.3574092	21	4 15.1	21.3
398350 2011 <i>RL</i> ₁₇	17.1	X	270.03531	350.71243	183.19296	14.40902	0.1202758	0.22631572	2.6668151	21	—	—
398351 2011 <i>RB</i> ₁₉	17.8	X	286.52940	77.31468	199.17348	7.44933	0.1756958	0.26429164	2.4048081	21	2 15.9	21.3
398352 2011 <i>ST</i> ₃	16.9	X	278.64888	14.65259	280.70095	5.33282	0.1243129	0.26619127	2.3933534	21	3 8.7	20.2
398353 2011 <i>SO</i> ₁₀	17.8	X	305.98438	62.28240	215.46854	4.54360	0.2221083	0.27212091	2.3584578	21	3 4.8	21.1
398354 2011 <i>SP</i> ₂₇	17.7	X	244.83502	195.51697	147.03386	2.84856	0.1989144	0.26717655	2.3874658	21	3 31.4	21.4
398355 2011 <i>SF</i> ₃₂	16.8	X	97.22620	177.21892	211.77813	10.34218	0.2550850	0.23064540	2.6333354	21	1 13.2	20.1
398356 2011 <i>SN</i> ₃₅	17.7	X	268.23830	208.20076	139.59599	1.96282	0.2068524	0.27197157	2.3593211	21	4 28.7	21.0
398357 2011 <i>SC</i> ₄₉	18.1	X	329.38137	50.38779	206.49250	2.53011	0.1492324	0.27005647	2.3704619	21	3 22.3	20.7
398358 2011 <i>SO</i> ₄₉	18.1	X	334.40752	23.53274	227.30129	1.84833	0.1695228	0.27025934	2.3692755	21	3 18.1	20.4
398359 2011 <i>SA</i> ₆₀	18.2	X	243.29102	350.64358	332.30975	2.44713	0.1799811	0.26305585	2.4123338	21	3 5.8	22.1
398360 2011 <i>SS</i> ₆₁	18.1	X	287.89728	129.75454	211.62894	2.09233	0.2432959	0.27844146	2.3226305	21	5 6.4	20.9
398361 2011 <i>SD</i> ₆₇	17.1	X	254.85134	5.85731	8.06653	7.91561	0.1372474	0.27161504	2.3613852	21	5 24.1	20.6
398362 2011 <i>SX</i> ₆₈	16.5	X	234.65056	134.86053	93.07887	12.74285	0.0972231	0.22612486	2.6683155	21	—	—
398363 2011 <i>SX</i> ₆₉	16.4	X	238.08339	132.70305	90.12798	12.37148	0.0243990	0.22474383	2.6792354	21	—	—
398364 2011 <i>SG</i> ₇₆	16.7	X	307.23517	281.70413	266.70178	3.57760	0.1469936	0.24008272	2.5638668	21	—	—
398365 2011 <i>SL</i> ₈₄	17.7	X	305.64490	68.22547	241.51896	1.48368	0.2022044	0.27273402	2.3549129	21	4 21.8	20.5
398366 2011 <i>ST</i> ₈₈	16.4	X	314.31836	26.90976	9.06833	10.87879	0.0999779	0.19196142	2.9761861	21	9 23.3	19.9
398367 2011 <i>SB</i> ₉₁	15.9	X	228.90163	248.39696	202.86045	25.41394	0.2236937	0.17784639	3.1316462	21	7 24.9	21.6
398368 2011 <i>SB</i> ₉₆	17.5	X	182.43269	325.33238	4.18319	4.05200	0.0190167	0.24370750	2.5383809	21	1 11.8	20.9
398369 2011 <i>SL</i> ₉₇	17.3	X	212.35637	245.00437	90.65900	8.48832	0.2822708	0.25752270	2.4467656	21	2 26.8	21.8
398370 2011 <i>SW</i> ₉₈	16.5	X	155.59181	96.50797	9.03349	8.71043	0.2441569	0.16355133	3.3115654	21	6 19.7	22.3
398371 2011 <i>SL</i> ₉₉	17.4	X	32.22286	132.74016	224.05553	6.43103	0.1893166	0.30724840	2.1750853	21	—	—
398372 2011 <i>SE</i> ₁₀₂	17.2	X	112.09041	209.09676	182.09830	16.86417	0.1236550	0.23759540	2.5817293	21	1 14.9	20.9
398373 2011 <i>SK</i> ₁₀₂	16.5	X	130.89842	143.69328	192.75347	30.94170	0.2863021	0.22995724	2.6385865	21	—	—
398374 2011 <i>SE</i> ₁₀₃	16.7	X	29.04276	260.72847	159.16591	6.50068	0.0701127	0.21359762	2.7716503	21	—	—
398375 2011 <i>SK</i> ₁₀₄	16.9	X	109.38976	23.86629	286.77683	5.77989	0.0740764	0.21381875	2.7697390	21	—	—
398376 2011 <i>SD</i> ₁₀₅	16.4	X	78.75598	61.06214	304.34648	5.34057	0.0427278	0.21812461	2.7331676	21	—	—
398377 2011 <i>SS</i> ₁₁₃	18.4	X	280.44620	115.03973	219.00434	2.78467	0.2490289	0.27510488	2.3413725	21	4 17.2	21.6
398378 2011 <i>SY</i> ₁₁₄	17.5	X	194.61187	187.38822	163.12922	5.65400	0.2074717	0.25560321	2.4589999	21	2 26.8	21.5
398379 2011 <i>SW</i> ₁₁₇	17.8	X	231.25766	190.00194	165.32620	2.69559	0.2179588	0.26436110	2.4043869	21	4 3.5	21.8
398380 2011 <i>SC</i> ₁₁₉	17.4	X	265.46052	352.31903	356.21845	3.24646	0.1683234	0.27118889	2.3638584	21	4 29.2	20.7
398381 2011 <i>SV</i> ₁₄₃	16.6	X	156.06761	104.88281	195.29301	16.64976	0.0905011	0.22627072	2.6671687	21	—	—
398382 2011 <i>ST</i> ₁₄₄	17.6	X	302.84080	128.65096	190.82048	5.97397	0.2250064	0.27717995	2.3296723	21	4 28.9	20.3
398383 2011 <i>SW</i> ₁₄₉	17.6	X	296.64957	143.47117	171.55869	4.92518	0.1529314	0.27433490	2.3457516	21	4 26.5	20.4
398384 2011 <i>SX</i> ₁₅₂	17.3	X	3.43292	277.94708	188.17512	9.91999	0.0822875	0.22772988	2.6557633	21	—	—
398385 2011 <i>SR</i> ₁₅₇	17.2	X	26.59222	48.45568	11.28421	4.30974	0.0834376	0.21971858	2.7199329	21	—	—
398386 2011 <i>SJ</i> ₁₅₈	17.7	X	230.11342	85.99548	249.39929	2.03730	0.2191642	0.26057561	2.4276172	21	3 7.8	21.7
398387 2011 <i>ST</i> ₁₆₇	18.3	X	246.91992	307.13942	14.66996	2.94029	0.1872611	0.26047597	2.4282362	21	3 8.6	22.0
398388 2011 <i>SU</i> ₁₆₈	17.5	X	346.48611	49.50171	213.54842	1.85294	0.1603264	0.27155730	2.3617199	21	5 1.0	19.5
398389 2011 <i>SF</i> ₁₆₉	17.6	X	227.21281	296.08124	348.13073	1.36116	0.0621951	0.24113971	2.5563691	21	1 8.7	21.1
398390 2011 <i>SQ</i> ₁₇₂	17.0	X	163.76149	139.91101	215.12439	11.03076	0.0837596	0.23957790	2.5674670	21	1 24.9	21.0
398391 2011 <i>SP</i> ₁₇₃	18.0	X	289.70464	117.89885	177.68337	2.26641	0.1187529	0.26554461	2.3972374	21	3 26.2	21.2
398392 2011 <i>SR</i> ₁₇₃	17.2	X										

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
398401	2011	SO ₂₁₁	16.3	X	95.49487	113.73314	197.69177	12.64733	0.2164282	0.21605459	2.7505975	21	12 31.1	21.1
398402	2011	SM ₂₁₄	17.0	X	134.48735	161.36007	204.66786	12.49002	0.2021066	0.23615076	2.5922476	21	1 21.1	21.0
398403	2011	SK ₂₁₅	17.2	X	265.30444	312.12357	342.61809	5.98021	0.0999335	0.26438616	2.4042349	21	2 26.8	20.4
398404	2011	SH ₂₁₇	17.6	X	290.82786	305.41479	355.60043	7.36540	0.1154916	0.26966697	2.3727440	21	4 2.4	20.7
398405	2011	SM ₂₁₈	15.9	X	293.83894	243.61880	92.71356	10.24044	0.0974296	0.17466551	3.1695525	21	6 5.5	20.2
398406	2011	SO ₂₁₉	16.4	X	42.93068	115.19204	198.46716	7.96549	0.0904229	0.20231576	2.8737539	21	10 22.5	20.2
398407	2011	SC ₂₂₉	17.1	X	85.52524	33.63567	328.75735	2.69145	0.1023638	0.22107216	2.7088192	21	—	—
398408	2011	SR ₂₃₀	17.0	X	42.15637	195.34241	185.94192	5.84036	0.0327016	0.21738096	2.7393975	21	—	—
398409	2011	SJ ₂₃₁	16.1	X	31.79237	224.52939	216.31817	14.14321	0.0498423	0.22346195	2.6894718	21	—	—
398410	2011	SE ₂₃₃	16.3	X	94.00474	207.39869	210.32317	33.52152	0.2223529	0.23285415	2.6166566	21	2 3.0	20.3
398411	2011	SN ₂₃₅	17.5	X	252.05176	70.61155	230.58006	5.58881	0.1219446	0.25372739	2.4711047	21	2 17.6	21.2
398412	2011	SY ₂₄₅	17.0	X	11.55163	196.49454	213.55669	5.15317	0.0571610	0.21476876	2.7615652	21	—	—
398413	2011	SC ₂₄₈	17.3	X	267.28754	354.19450	340.41938	2.26356	0.2051760	0.27019386	2.3696583	21	4 9.1	20.8
398414	2011	SY ₂₅₂	16.7	X	124.21000	110.58090	173.32807	13.30618	0.2033259	0.21912857	2.7248131	21	12 23.5	21.5
398415	2011	SR ₂₅₃	17.5	X	158.92093	314.57747	48.74155	9.57385	0.1267305	0.24478518	2.5309251	21	2 9.9	21.3
398416	2011	SQ ₂₅₈	16.2	X	2.61727	338.95963	33.58359	18.39513	0.1294849	0.20096352	2.8866308	21	11 9.2	19.7
398417	2011	SR ₂₆₄	16.7	X	140.33075	129.21775	199.55046	14.75876	0.1922607	0.23266107	2.6181040	21	—	—
398418	2011	SR ₂₆₆	16.9	X	21.11574	231.64019	173.72602	4.80686	0.0517024	0.22183306	2.7026214	21	—	—
398419	2011	SY ₂₆₇	17.2	X	313.89753	161.44520	124.75999	11.23546	0.1727750	0.26931169	2.3748303	21	4 11.9	20.2
398420	2011	TW ₂	16.3	X	175.69819	33.09232	273.55994	12.43241	0.1828417	0.23483758	2.6019023	21	—	—
398421	2011	TN ₄	16.2	X	29.69082	223.09933	101.39196	11.23537	0.0907326	0.19598298	2.9353314	21	10 22.2	20.2
398422	2011	TR ₄	16.5	X	299.85879	84.05141	71.74433	9.39356	0.0358224	0.22651617	2.6652415	21	—	—
398423	2011	UF ₂	17.2	X	186.92902	252.16188	30.46433	7.74794	0.1373314	0.23139193	2.6276685	21	—	—
398424	2011	UC ₇	17.2	X	144.47992	258.51416	47.21648	5.65804	0.1528117	0.22110882	2.7085198	21	—	—
398425	2011	UD ₈	17.0	X	215.13494	58.62330	226.86496	10.06606	0.1157299	0.23363266	2.6108405	21	—	—
398426	2011	UT ₈	15.9	X	326.61119	144.35386	226.77640	21.97667	0.1079867	0.18498022	3.0506042	21	8 29.5	20.2
398427	2011	UC ₉	16.4	X	202.87637	27.75015	221.46501	8.28266	0.0816820	0.21672115	2.7449547	21	—	—
398428	2011	UZ ₁₄	16.5	X	71.49801	86.16047	304.77301	5.12467	0.0268655	0.22012116	2.7166156	21	—	—
398429	2011	UL ₁₆	15.7	X	179.93323	292.83144	230.59531	9.72670	0.0490829	0.18393524	3.0621474	21	9 15.3	20.4
398430	2011	UL ₁₈	17.2	X	106.14303	130.71506	217.46176	5.33056	0.0367443	0.22178308	2.7030274	21	—	—
398431	2011	UL ₂₂	16.6	X	40.42647	69.95892	270.94003	5.67884	0.0698112	0.20247226	2.8722729	21	11 18.4	20.5
398432	2011	UK ₂₅	16.7	X	353.47064	205.46156	215.68364	5.88048	0.0856600	0.20704602	2.8298155	21	12 27.9	20.3
398433	2011	UA ₂₇	17.1	X	41.00917	268.99715	87.45348	3.17139	0.0499086	0.20388934	2.8589488	21	12 6.9	20.9
398434	2011	UO ₂₈	16.4	X	218.84553	227.12062	261.46188	7.97182	0.0467546	0.18504848	3.0498539	21	9 16.5	21.0
398435	2011	US ₂₉	16.5	X	198.36312	43.86469	220.93692	11.53432	0.1259940	0.22132761	2.7067345	21	—	—
398436	2011	UR ₃₀	16.3	X	247.82890	202.00984	225.02311	8.94735	0.0936205	0.17481490	3.1677465	21	7 30.3	21.1
398437	2011	UC ₃₁	16.4	X	278.50010	3.67826	63.23857	5.81102	0.1577270	0.18334152	3.0687547	21	9 3.6	20.6
398438	2011	UA ₃₆	16.9	X	222.51642	222.73403	63.52181	6.18646	0.1664897	0.23524263	2.5989147	21	1 7.4	21.1
398439	2011	UZ ₃₇	16.5	X	178.25988	270.53296	32.76728	13.04824	0.1588761	0.22956824	2.6415663	21	—	—
398440	2011	UZ ₃₈	16.7	X	142.52892	246.23194	91.39356	2.57648	0.0644713	0.22561145	2.6723620	21	—	—
398441	2011	UD ₃₉	16.3	X	91.27468	337.97057	338.90630	6.70037	0.0563662	0.21033805	3.8002114	21	12 20.6	20.5
398442	2011	UZ ₄₇	17.0	X	45.11701	149.75603	232.13059	3.11028	0.1935083	0.21253651	2.7808679	21	—	—
398443	2011	UB ₄₈	16.6	X	296.97338	24.08981	35.81534	10.92172	0.1105560	0.18937238	3.0032510	21	9 29.4	20.5
398444	2011	UJ ₅₀	16.7	X	73.57569	328.25997	59.29946	5.81773	0.0842061	0.22048964	2.7135881	21	—	—
398445	2011	UQ ₅₀	16.4	X	241.86248	57.86391	54.07540	9.74737	0.1040667	0.18606953	3.0386863	21	9 24.9	20.9
398446	2011	UF ₅₁	16.4	X	277.05115	229.29300	209.82150	8.74394	0.0752907	0.18793889	3.0185030	21	9 25.1	20.5
398447	2011	UO ₅₂	17.1	X	89.31441	270.31354	86.97490	4.38089	0.1207419	0.21801483	2.7340851	21	—	—
398448	2011	UD ₅₄	15.7	X	34.39207	41.40170	232.75441	20.99084	0.0974236	0.17593461	3.1542917	21	8 8.3	20.3
398449	2011	UK ₅₅	16.3	X	229.79563	33.21403	50.68832	8.24057	0.1752287	0.17176834	3.2050930	21	7 28.5	21.5
398450	2011	UN ₅₉	17.7	X	221.20136	176.71617	163.45869	1.53103	0.1998438	0.25611828	2.4557020	21	3 8.2	21.6
398451	2011	UC ₆₂	15.9	X	329.85355	153.56971	222.95697	10.63916	0.0692003	0.18398012	3.0616494	21	9 17.9	20.0
398452	2011	UM ₆₆	16.9	X	168.67433	130.77186	116.68762	5.56466	0.0690560	0.21167076	2.7884453	21	12 20.9	21.1
398453	2011	UL ₇₂	17.1	X	345.56896	272.22275	52.97335	7.84348	0.1934790	0.28480137	2.2879226	21	8 18.3	18.7
398454	2011	UV ₇₂	16.8	X	92.88994	138.88825	222.14803	5.62297	0.0349510	0.21799684	2.7342355	21	—	—
398455	2011	UP ₇₆	16.3	X	257.88484	123.55941	297.07276	4.04124	0.1438024	0.17804400	3.1293285	21	7 30.3	20.9
398456	2011	UT ₇₇	16.3	X	285.60627	51.77534	14.55644	6.33986	0.1026714	0.18750450	3.0231632	21	9 19.5	20.3
398457	2011	UT ₇₉	16.9	X	56.91860	34.92149	17.07205	4.97358	0.0499224	0.22215364	2.7000207	21	—	—
398458	2011	UC ₈₃	15.6	X	131.96635	294.10483	240.26020	18.42868	0.1654241	0.16886770	3.2416913	21	8 9.6	21.2
398459	2011	UJ ₈₆	15.9	X	276.96785	161.18720	253.38897	5.98023	0.1593714	0.18063280	3.0993573	21	8 10.7	20.3
398460	2011	UW ₈₈	16.0	X	291.11160	148.82837	242.46206	7.96058	0.0795610	0.17669897	3.1451887	21	8 10.5	20.4
398461	2011	UU ₉₈	16.6	X	67.99055	44.51969	304.28624	5.27692	0.0352943	0.20892966	2.8127814	21	12 29.9	20.6
398462	2011	UT ₁₀₁	17.1	X	169.05843	205.23989	109.99803	4.30819	0.0542572	0.22648187	2.6655107	21	—	—
398463	2011	UX ₁₀₁	17.0	X	162.50247	256.29537	109.63102	4.07618	0.1867103	0.24093961	2.5577843	21	2 19.6	21.0
398464	2011	UX ₁₀₄	16.3	X	349.36918	183.64963	243.73350	5.67916	0.0601663	0.21012246	2.8021265	21	12 28.7	19.9
398465	2011	UP ₁₀₈	17.4	X	303.32420	175.20958	143.25246	8.18513	0.3540845	0.27739192	2.3284854	21	4 10.8	20.7
398466	2011	US ₁₁₂	16.8	X	106.14469	152.21623	223.88193	5.34118	0.1419865	0.22633308	2.6666787	21	—	—
398467	2011	UM ₁₁₃	17.1	X	159.67920	288.09601	74.82115	4.62009	0.2093066	0.23962481	2.5671319	21	2 16.1	21.2
398468	2011	UA ₁₂₀	17.4	X	108.33402	107.40596	226.86743	3.40436	0.1044834	0.21612846	2.7499708	21	—	—
398469	2011	UJ ₁₂₀	15.6	X	241.49587	351.90972	231.31815	31.37724	0.0659930	0.21842554	2.7306567	21	—	—
398470	2011	UO ₁₂₀	16.5	X	21.62783	9.29964	44.31588	9.93729	0.3225376	0.21366691	2.7710511	21	—	—

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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>
398481 2011 UZ ₁₄₀	15.8	X	280.24943	317.94661	62.16646	11.18248	0.0249213	0.17609633	3.1523603	21	7 26.2	20.3
398482 2011 UN ₁₄₂	16.3	X	198.43181	274.70161	255.73110	8.95651	0.0646925	0.18903893	3.0067816	21	10 14.8	20.9
398483 2011 UQ ₁₄₆	16.6	X	312.42183	15.46146	33.13382	2.25812	0.1474534	0.18737353	3.0245717	21	9 30.9	20.2
398484 2011 UY ₁₄₈	18.0	X	268.40494	284.60167	26.57705	2.73898	0.1958296	0.26075502	2.4265035	21	3 14.8	21.7
398485 2011 UW ₁₅₀	17.0	X	202.98402	160.11821	207.98396	6.18934	0.1646001	0.25870860	2.4392827	21	3 25.6	21.0
398486 2011 UH ₁₅₂	17.0	X	135.64809	283.46548	93.90722	12.25799	0.1988436	0.23710112	2.5853161	21	2 10.8	20.9
398487 2011 UJ ₁₅₃	15.7	X	7.12018	265.48658	59.83703	14.82463	0.1914147	0.18557995	3.0440283	21	9 29.1	19.3
398488 2011 UP ₁₅₇	15.8	X	292.77263	206.95778	219.91799	14.32115	0.1960124	0.18636180	3.0355085	21	9 10.5	19.9
398489 2011 UQ ₁₅₇	16.6	X	317.60104	326.48743	71.44342	9.66935	0.1434700	0.18770551	3.0210045	21	9 30.9	20.3
398490 2011 UU ₁₅₇	16.9	X	354.98177	174.49738	231.35852	3.55582	0.0656344	0.21186998	2.7866971	21	12 10.6	20.4
398491 2011 UF ₁₆₂	16.7	X	54.36902	313.42798	65.70604	4.79455	0.1854281	0.21154373	2.7895615	21	—	—
398492 2011 UH ₁₆₄	17.6	X	215.38893	269.82269	95.13736	8.19746	0.2412526	0.25750087	2.4469039	21	4 6.0	21.9
398493 2011 UP ₁₇₆	16.6	X	243.89593	183.84637	268.05525	3.63168	0.0992728	0.18044636	3.1014917	21	8 26.9	21.1
398494 2011 UQ ₁₇₆	16.8	X	72.73165	16.14944	359.20436	2.58694	0.0771190	0.21658217	2.7461289	21	—	—
398495 2011 UT ₁₇₇	16.8	X	125.36744	215.20412	170.45184	2.85378	0.1930905	0.23526220	2.5987706	21	2 5.9	20.3
398496 2011 UF ₁₇₉	15.6	X	50.20308	182.72299	74.29888	12.18295	0.0262749	0.17390539	3.1787816	21	8 12.3	20.2
398497 2011 UH ₁₈₀	16.8	X	69.61040	112.04824	275.99839	5.95403	0.0402922	0.21959436	2.7209586	21	—	—
398498 2011 UX ₁₈₀	17.2	X	186.91529	15.85501	271.59889	3.08953	0.0882708	0.22582757	2.6706568	21	—	—
398499 2011 UK ₁₈₇	16.9	X	39.02679	146.01614	252.95435	8.29948	0.1658345	0.21457453	2.7632315	21	—	—
398500 2011 UN ₁₈₇	15.9	X	292.84632	153.13595	225.60393	15.89512	0.0907254	0.17939832	3.1135592	21	7 24.2	20.5
398501 2011 UR ₁₉₁	16.6	X	43.24619	142.86540	235.83753	7.18451	0.1776309	0.21181086	2.7872156	21	—	—
398502 2011 UQ ₁₉₆	15.8	X	144.43260	332.61605	249.93504	11.16815	0.0573607	0.19197939	2.9760003	21	10 20.4	20.4
398503 2011 UQ ₂₀₁	17.4	X	163.75820	163.04806	149.59696	2.47991	0.2123661	0.22823638	2.6518328	21	—	—
398504 2011 UK ₂₀₂	17.1	X	142.12240	231.10111	99.57623	3.70256	0.0660149	0.22231120	2.6987448	21	—	—
398505 2011 UR ₂₃₁	16.3	X	225.10144	263.28239	205.47189	13.74133	0.0165051	0.18664333	3.0324552	21	9 3.2	20.7
398506 2011 US ₂₃₃	17.4	X	191.26070	261.64936	26.20292	11.51172	0.1709810	0.23457400	2.6038510	21	—	—
398507 2011 UF ₂₄₀	17.3	X	118.77331	8.96986	5.00184	2.33839	0.2370695	0.23233954	2.6205189	21	1 22.4	20.8
398508 2011 UF ₂₄₂	16.2	X	314.41172	140.03700	233.96482	15.37104	0.1063958	0.18109081	3.0941292	21	8 15.1	20.5
398509 2011 UV ₂₄₃	17.0	X	358.05599	127.60583	244.34347	0.85417	0.1024329	0.19316030	2.9638585	21	10 30.9	20.6
398510 2011 UF ₂₄₅	16.9	X	28.50604	328.03335	88.74335	5.21550	0.0919393	0.21444530	2.7643415	21	—	—
398511 2011 UF ₂₄₈	16.4	X	157.28323	321.90115	237.62582	9.17364	0.0189550	0.18656041	3.0333538	21	10 5.2	20.8
398512 2011 UD ₂₅₁	16.1	X	267.97200	243.40350	218.22703	9.75676	0.0892779	0.18797882	3.0180755	21	10 9.9	20.3
398513 2011 UD ₂₅₃	16.6	X	115.91548	240.32487	59.63051	10.21348	0.0272557	0.20457341	2.8525719	21	12 24.1	20.7
398514 2011 UN ₂₅₇	16.2	X	240.86875	213.94472	220.70869	9.75617	0.0675190	0.17653609	3.1471230	21	8 3.6	21.0
398515 2011 UN ₂₅₉	16.4	X	345.87133	2.18287	27.74427	9.40337	0.1061953	0.19497389	2.9454507	21	11 3.4	19.8
398516 2011 UO ₂₆₃	16.5	X	24.66528	76.15773	255.84447	9.66826	0.1187544	0.19037991	2.9926457	21	10 18.4	20.4
398517 2011 UQ ₂₆₄	17.9	X	202.18055	246.00531	70.94401	4.49910	0.2025585	0.24521753	2.5279494	21	1 26.3	22.1
398518 2011 UE ₂₆₅	17.1	X	205.38706	40.20907	241.56876	12.26360	0.1271294	0.23293572	2.6160457	21	—	—
398519 2011 UF ₂₆₈	16.3	X	272.25141	346.47766	77.92803	8.80032	0.1514802	0.18186483	3.0853438	21	8 24.7	20.7
398520 2011 UD ₂₇₁	16.2	X	19.03056	308.98478	69.65859	16.03040	0.1511894	0.20536765	2.8452124	21	12 18.6	19.8
398521 2011 UU ₂₇₈	16.7	X	226.38170	13.31027	272.40627	3.50309	0.0888986	0.23159491	2.6261330	21	1 10.7	20.6
398522 2011 UZ ₂₈₆	17.0	X	55.21529	76.32239	305.63222	4.02471	0.1185757	0.21589001	2.7519953	21	—	—
398523 2011 UD ₂₈₈	16.2	X	85.03881	143.59006	254.48407	5.00506	0.0602691	0.22676035	2.6633279	21	—	—
398524 2011 UF ₂₉₂	16.8	X	333.65178	21.56343	110.62298	5.67835	0.0453356	0.22341028	2.6898864	21	—	—
398525 2011 UA ₂₉₄	17.1	X	308.91997	246.70104	66.58036	7.14233	0.1330548	0.26683089	2.3895272	21	5 15.4	19.9
398526 2011 UC ₂₉₄	17.1	X	139.63162	266.98176	75.41892	7.34531	0.0783952	0.22464390	2.6800299	21	—	—
398527 2011 UM ₂₉₆	16.8	X	34.03987	356.08787	47.93677	6.87815	0.0304385	0.21416887	2.7667197	21	—	—
398528 2011 UN ₂₉₆	18.2	X	226.03197	177.28107	172.13169	1.27354	0.1966936	0.25732089	2.4480448	21	3 23.6	22.2
398529 2011 UO ₂₉₉	17.0	X	359.51501	308.34951	65.81570	6.63553	0.0745450	0.19512087	2.9439713	21	11 4.9	20.6
398530 2011 UQ ₂₉₉	16.6	X	123.65073	291.39736	64.62898	5.06519	0.0611660	0.22528952	2.6749072	21	—	—
398531 2011 UB ₃₀₂	16.6	X	91.99675	287.10158	67.88015	13.74304	0.1298902	0.21572310	2.7534146	21	—	—
398532 2011 UN ₃₀₆	16.2	X	245.37917	20.84043	63.66096	8.79989	0.1477029	0.18042141	3.1017777	21	8 18.8	21.0
398533 2011 UG ₃₀₇	16.3	X	122.51740	306.52130	61.18588	10.13506	0.1832479	0.23131721	2.6282344	21	1 12.1	19.9
398534 2011 UP ₃₀₉	16.8	X	159.85421	230.42989	102.51966	14.11384	0.1812600	0.23583362	2.9545711	21	1 7.5	20.6
398535 2011 UV ₃₀₉	17.0	X	118.28226	242.77218	74.81868	1.33668	0.0932386	0.21732460	2.7398711	21	—	—
398536 2011 UJ ₃₁₄	16.8	X	196.53001	54.58084	63.93906	10.23136	0.0890383	0.17467072	3.1694895	21	8 14.4	21.8
398537 2011 UY ₃₁₆	17.0	X	59.39938	330.29152	47.11409	5.04790	0.0809971	0.21226451	2.7832430	21	—	—
398538 2011 UA ₃₁₈	16.9	X	104.31927	308.00376	58.85363	3.37374	0.0897821	0.22181185	2.7027936	21	—	—
398539 2011 UL ₃₁₉	15.6	X	89.22143	334.12620	240.46283	18.35085	0.0903706	0.17000711	3.2271910	21	8 5.8	20.6
398540 2011 UE ₃₂₂	16.9	X	327.27869	239.56767	75.74283	7.82861	0.1498743	0.27753567	2.3276813	21	6 16.2	18.8
398541 2011 US ₃₂₂	15.5	X	109.71621	140.00717	246.10686	25.94914	0.1322315	0.22947975	2.6422453	21	1 4.5	19.3
398542 2011 UR ₃₂₃	17.2	X	83.58734	3.12177	358.77890	2.04113	0.0808764	0.22122838	2.7075438	21	—	—
398543 2011 UY ₃₂₆	15.8	X	268.54568	199.19139	235.27439	9.08360	0.0810112	0.18121824	3.0926785	21	9 4.1	20.2
398544 2011 UB ₃₃₇	17.8	X	218.43922	223.14967	137.38314	5.28795	0.2030402	0.26011758	2.4304662	21	4 1.4	21.8
398545 2011 US ₃₃₇	16.6	X	1.13308	236.24141	164.33807	10.57807	0.0895492	0.20902075	2.8119642	21	12 15.1	20.3
398546 2011 UA ₃₃₈	16.1	X	298.80533	186.02940	207.11931	16.25442	0.1332318	0.18495624	3.0508678	21	8 14.9	20.3
398547 2011 UQ ₃₃₈	17.3	X	236.16151	272.73780	59.00093	8.82413	0.2462854	0.26074565	2.4265617	21	3 12.8	21.6
398548 2011 UQ ₃₄₂	16.3	X	248.97657	266.20504	203.20926	9.38609	0.0346371	0.18947662	3.0021494	21	10 4.4	20.4
398549 2011 UO ₃₄₇	17.5	X	187.05718	160.55978	170.18182	1.40642	0.1875315	0.24123750	2.5556782	21	1 28.8	21.6
398550 2011 UP ₃₆₄	16.7	X	65.48001	322.43841	5.73991	5.89347	0.1301622	0.21827755	2.7318908	21	—	—
398551 2011 US ₃₇₅	16.1	X	3.71286	189.61598	246.13447	12.04700	0.0145679	0.21527170	2.7572624	21	—	—
398552 2011 US ₃₇₇	17.1	X	45.43067	283.65407	123.12262	4.34691	0.1008098	0.21890220	2.7266913	21	—	—
398553 2011 US ₃₈₆	16.7	X	106.06527	216.10511	94.37976	9.74965	0.1950032	0.21399357	2.7682304	21	—	—
398554 2011 UQ ₃₈₈	15.7	X	227.31841	31.6241								

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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>
398561 2011 VC ₁₁	17.2	X	77.57938	132.52413	244.68090	4.01371	0.0747438	0.22050487	2.7134631	21	—	—
398562 2011 VE ₁₄	16.7	X	48.36947	79.85378	224.19543	9.45209	0.0556054	0.18945291	3.0023998	21	10 8.3	20.9
398563 2011 VQ ₁₄	17.4	X	238.56953	116.05098	216.34086	0.18151	0.1874187	0.25741025	2.4474782	21	3 13.7	21.4
398564 2011 VT ₁₅	17.1	X	127.34594	217.59677	89.57678	0.86969	0.0539314	0.21473310	2.7618709	21	—	—
398565 2011 VL ₂₁	16.2	X	56.90226	212.02771	60.36320	13.30809	0.0362269	0.18105537	3.0945330	21	9 15.3	20.7
398566 2011 WV ₅	16.6	X	268.79262	201.75244	59.53681	15.51211	0.0342404	0.23728330	2.5839926	21	2 4.1	20.5
398567 2011 WT ₈	17.0	X	201.88631	72.07163	241.01624	11.28766	0.1654646	0.23758403	2.5818117	21	1 17.6	21.3
398568 2011 WR ₁₂	16.2	X	4.98205	67.37618	242.39845	7.44947	0.0623842	0.17623888	3.1506602	21	8 13.6	20.5
398569 2011 WW ₁₄	17.0	X	129.68216	167.95552	216.49001	12.70020	0.2372225	0.23510908	2.5998988	21	2 10.7	21.1
398570 2011 WZ ₁₅	15.8	X	259.92439	359.31479	75.51932	17.93728	0.1897169	0.17657075	3.1467111	21	8 19.9	20.7
398571 2011 WN ₁₇	17.5	X	338.96712	262.53097	67.42560	10.74068	0.2692255	0.28226868	2.3015880	21	7 30.6	18.7
398572 2011 WW ₃₄	16.8	X	79.30724	297.10861	66.29017	6.08736	0.0428759	0.21266421	2.7797546	21	—	—
398573 2011 WP ₃₅	17.2	X	267.18434	295.92419	64.20678	7.40625	0.1216506	0.26631920	2.3925869	21	5 24.6	20.5
398574 2011 WZ ₃₈	16.8	X	152.07327	305.86513	0.33304	1.41309	0.0612914	0.21835058	2.7312816	21	—	—
398575 2011 WP ₄₃	16.6	X	142.93765	248.78070	84.63841	10.51372	0.0846709	0.22153792	2.7050211	21	—	—
398576 2011 WT ₄₄	17.1	X	267.98720	158.51608	246.13451	5.87139	0.1325842	0.27625226	2.3348850	21	7 24.7	20.2
398577 2011 WX ₄₅	17.8	X	76.41527	113.75024	230.66716	4.02162	0.2951771	0.31274986	2.1495025	21	—	—
398578 2011 WX ₄₇	15.4	X	181.46781	229.32937	268.55210	11.73096	0.1171265	0.17069845	3.2184715	21	8 13.4	20.7
398579 2011 WJ ₄₉	16.6	X	267.58415	22.97294	56.14759	13.27245	0.2234394	0.18351451	3.0668258	21	8 30.6	21.2
398580 2011 WQ ₅₃	16.3	X	334.03580	137.57837	263.30028	9.44713	0.1113038	0.19198811	2.9759102	21	10 27.2	20.0
398581 2011 WM ₅₆	16.9	X	36.31662	292.64263	88.10704	6.02209	0.1251455	0.20636942	2.8359973	21	—	—
398582 2011 WM ₅₆	16.2	X	291.40920	300.58835	76.57277	11.56844	0.1061080	0.17460911	3.1702350	21	7 24.6	20.6
398583 2011 WX ₆₂	15.8	X	259.99034	218.80814	217.33557	16.96930	0.2413944	0.17817473	3.1277976	21	8 3.2	21.0
398584 2011 WF ₆₄	15.8	X	190.06275	228.89605	268.00970	7.95092	0.0407183	0.17329556	3.1862346	21	8 24.6	20.6
398585 2011 WM ₆₄	16.3	X	97.52732	163.25988	43.69730	5.13714	0.0366015	0.16686170	3.2676205	21	8 8.5	21.0
398586 2011 WU ₆₄	15.7	X	235.33724	38.09096	65.22124	10.39712	0.0774603	0.17627314	3.1502520	21	9 9.9	20.5
398587 2011 WR ₆₆	16.5	X	107.65083	299.26182	75.67023	9.76475	0.1115638	0.22548759	2.6733406	21	—	—
398588 2011 WQ ₇₀	17.4	X	211.18136	256.07820	64.44106	8.87703	0.2520556	0.24288162	2.5441319	21	2 9.5	22.0
398589 2011 WR ₇₀	15.6	X	330.85078	90.55394	250.81535	9.42325	0.0933395	0.17466036	3.1696148	21	8 1.9	19.8
398590 2011 WS ₇₁	16.4	X	67.10330	308.58560	73.61564	8.26221	0.2317941	0.21588098	2.7520720	21	—	—
398591 2011 WM ₈₁	17.1	X	44.70536	180.26758	221.69251	2.95069	0.0960659	0.21310521	2.7759182	21	—	—
398592 2011 WG ₈₂	17.0	X	39.01208	309.36706	86.00650	5.14932	0.0767525	0.20953262	2.8073827	21	—	—
398593 2011 WS ₈₆	16.9	X	172.71270	65.18290	228.63775	4.39686	0.0974614	0.22063535	2.7123933	21	—	—
398594 2011 WQ ₉₀	16.1	X	42.56916	243.20286	80.34441	11.70038	0.1139593	0.19021878	2.9943354	21	11 7.9	20.2
398595 2011 WY ₉₁	15.7	X	257.37130	314.04665	99.32198	17.18169	0.1837498	0.17250265	3.1959909	21	7 15.8	20.5
398596 2011 WM ₉₅	15.9	X	18.30969	259.25505	48.72765	13.46007	0.1113238	0.18052247	3.1006199	21	9 15.7	20.0
398597 2011 WD ₉₇	16.7	X	294.68918	176.39911	239.69821	1.95260	0.0750920	0.18477228	3.0528924	21	9 20.3	20.8
398598 2011 WG ₉₈	15.8	X	206.39959	85.65509	79.97585	11.44464	0.0485027	0.18740984	3.0241811	21	10 26.7	20.3
398599 2011 WC ₁₀₂	16.8	X	150.62419	4.23812	5.50253	8.53835	0.1871182	0.23877187	2.5732419	21	2 15.1	20.8
398600 2011 WK ₁₀₄	16.8	X	200.31441	350.45238	274.28646	12.33802	0.1907183	0.22186442	2.7023667	21	—	—
398601 2011 WR ₁₀₆	16.6	X	280.80270	19.18716	237.77196	5.30173	0.0841609	0.23624462	2.5915610	21	1 31.4	20.3
398602 2011 WJ ₁₀₈	15.8	X	230.84203	49.38365	80.95008	11.32447	0.0533095	0.18409235	3.0604050	21	10 11.9	20.4
398603 2011 WD ₁₁₂	16.9	X	39.68277	43.29650	329.92007	1.21040	0.0792849	0.20315805	2.8658054	21	12 29.9	20.8
398604 2011 WH ₁₁₆	16.6	X	43.89344	145.16630	254.82013	3.10052	0.1061662	0.21226029	2.7832799	21	—	—
398605 2011 WQ ₁₁₇	14.7	X	145.22903	274.99756	258.29189	23.43150	0.1893350	0.17383518	3.1796375	21	8 17.5	20.4
398606 2011 WO ₁₁₈	16.1	X	123.48654	141.86841	264.38812	9.41391	0.0101260	0.22997144	2.6384778	21	2 2.1	19.8
398607 2011 WL ₁₃₀	16.5	X	257.44412	203.18510	69.06430	7.51351	0.1588370	0.24432413	2.5341081	21	1 21.2	20.5
398608 2011 WJ ₁₃₁	16.1	X	246.68301	104.45170	336.29545	8.35084	0.1071560	0.17818943	3.1276256	21	8 17.6	20.6
398609 2011 WK ₁₄₃	16.6	X	121.36088	45.70874	257.31458	5.31898	0.0410937	0.20536002	2.8452829	21	—	—
398610 2011 WF ₁₄₆	17.0	X	134.33383	274.87567	81.80469	5.34002	0.1475233	0.22697494	2.6616489	21	1 7.5	20.6
398611 2011 WK ₁₄₉	16.7	X	309.53778	73.04406	341.31473	8.26981	0.0366806	0.19001126	2.9965152	21	10 11.2	20.9
398612 2011 WB ₁₅₀	16.2	X	245.30264	276.93210	178.77726	9.23037	0.1290149	0.17882960	3.1051637	21	8 29.7	20.9
398613 2011 XU ₃	16.0	X	261.60816	283.38549	131.58615	9.85167	0.0865926	0.17324578	3.1868449	21	8 4.6	20.3
398614 2011 XD ₄	16.3	X	48.42505	330.95738	24.61418	2.38424	0.0377441	0.19724897	2.9227582	21	12 16.9	20.3
398615 2011 YZ ₂	15.8	X	288.95443	319.33208	95.92962	17.96182	0.1206930	0.17503645	3.1650729	21	9 12.9	20.3
398616 2011 YB ₃	13.6	X	344.07233	321.02362	78.43723	8.63564	0.0854839	0.08551683	5.1023273	21	10 28.3	20.0
398617 2011 YB ₂₀	17.3	X	242.20249	200.83793	170.82103	1.10811	0.1936387	0.25483551	2.4639360	21	5 5.6	21.3
398618 2011 YW ₂₃	15.8	X	346.82969	330.75937	64.34626	13.66803	0.2996840	0.19104600	2.9856856	21	11 24.6	18.0
398619 2011 YC ₃₈	15.8	X	321.97231	271.88499	126.99299	18.77936	0.1627144	0.17697014	3.1419750	21	10 8.8	19.8
398620 2011 YW ₄₂	15.8	X	57.91046	205.79411	81.17765	9.75768	0.0601252	0.17487884	3.1669743	21	10 5.3	20.3
398621 2011 YW ₄₅	15.7	X	351.85828	254.95959	97.38582	16.75591	0.1183367	0.17236026	3.1977509	21	10 1.9	19.9
398622 2011 YE ₄₈	16.1	X	26.25516	232.38799	87.99915	10.45005	0.0890818	0.18520746	3.0481084	21	10 10.2	20.2
398623 2011 YC ₄₉	15.6	X	294.14998	293.62988	105.43257	15.16899	0.0530134	0.17030058	3.2234824	21	9 5.4	20.2
398624 2011 YP ₅₉	15.5	X	29.26494	209.58046	121.27797	16.41639	0.0609939	0.17502172	3.1652505	21	10 24.7	20.1
398625 2011 YZ ₇₀	15.4	X	290.31536	301.37267	102.82422	17.26364	0.0669340	0.17228154	3.1987248	21	9 5.9	20.0
398626 2011 YB ₇₈	15.8	X	65.08729	161.20761	121.70338	11.35336	0.0315678	0.18328596	3.0693748	21	10 6.0	20.2
398627 2012 BZ ₈	16.0	X	319.98345	240.05167	128.24203	7.35316	0.1691220	0.17113959	3.2129383	21	8 16.4	19.7
398628 2012 BH ₅₇	16.3	X	349.73249	241.52900	125.30066	6.42614	0.1506795	0.17885576	3.1198527	21	10 13.1	19.9
398629 2012 BX ₁₁₇	15.7	X	326.18111	247.27420	131.44656	9.57612	0.1531579	0.17146957	3.2088150	21	9 14.4	19.5
398630 2012 BP ₁₄₄	16.0	X	324.97578	264.88409	133.80355	20.40003	0.2418219	0.17795838	3.1303322	21	10 7.1	19.5
398631 2012 BH ₁₄₉	16.4	X	250.50607	16.41763	319.94522	8.28933	0.1274367	0.23703840	2.5857721	21	4 1.3	20.4
398632 2012 CL ₂₅	15.9	X	156.76889	351.37410	309.00180	9.06943	0.2035753	0.19100228	2.9861413	21	—	—
398633 2012 CH ₂₆	16.2	X	25.08636	15.17488	12.95785	1.49164	0.0219478	0.18837406	3.0138524	21	12 18.7	20.4
398634 2012 DO ₇₇	17.1	X										

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
398641	2012	RP ₃₁	17.9	X	334.73031	201.32377	228.47725	9.95975	0.2644534	0.34175723	2.0260846	21	—	—
398642	2012	RX ₃₃	18.5	X	200.35368	91.83870	355.54419	4.92410	0.1452328	0.30555191	2.1831289	21	7 5.6	21.6
398643	2012	SH ₁₅	17.9	X	178.30820	197.02056	238.34218	6.30271	0.0881256	0.29608537	2.2294175	21	5 25.1	21.0
398644	2012	SU ₆₂	17.5	X	98.21441	199.64926	257.18283	4.37574	0.1108864	0.27926337	2.3180710	21	3 14.8	20.3
398645	2012	TT ₁₃	16.6	X	2.80114	227.79990	205.25572	32.03386	0.2980192	0.23526306	2.5987643	21	—	—
398646	2012	TA ₁₅	18.0	X	167.91691	150.35989	233.28470	20.85249	0.0958156	0.39417961	1.8422134	21	2 4.2	20.6
398647	2012	TD ₂₆	16.1	X	5.14971	38.85916	3.46890	32.29962	0.1831317	0.23228160	2.6209547	21	—	—
398648	2012	TE ₅₂	17.4	X	126.04494	177.89086	178.71423	21.65081	0.1059800	0.37012725	1.9211828	21	—	—
398649	2012	TH ₅₈	18.2	X	131.94109	56.40880	59.44137	4.80476	0.1255305	0.28815466	2.2701381	21	5 29.9	21.2
398650	2012	TR ₆₇	16.5	X	281.28366	261.46978	222.25646	13.01637	0.1989584	0.22353253	2.6889056	21	11 18.4	19.5
398651	2012	TL ₇₁	16.8	X	253.34519	62.27711	1.93182	12.09529	0.0519658	0.20415537	2.8564646	21	8 16.9	20.9
398652	2012	TH ₁₆₂	18.1	X	104.69054	87.36716	38.52828	3.77452	0.1150777	0.28437938	2.2901854	21	5 16.9	20.8
398653	2012	TX ₂₄₆	17.3	X	52.23118	243.80443	276.93085	4.64538	0.0907326	0.28182940	2.3039790	21	3 28.9	19.6
398654	2012	TV ₂₅₂	17.8	X	95.20494	205.48764	333.15055	6.65147	0.0691783	0.30151235	2.2025848	21	7 4.1	20.5
398655	2012	TT ₂₉₄	17.3	X	339.26032	94.19455	22.81353	3.27864	0.0870340	0.24048463	2.5610094	21	—	—
398656	2012	UQ ₂₅	16.9	X	93.41394	159.03794	292.11410	6.38382	0.0596759	0.27384182	2.3485665	21	2 20.6	19.7
398657	2012	UL ₄₂	17.9	X	189.65036	268.05991	28.84205	21.64003	0.0508292	0.37156279	1.9162312	21	—	—
398658	2012	UA ₄₄	16.7	X	3.44633	4.17409	57.62821	16.51653	0.1555647	0.23082933	2.6319364	21	—	—
398659	2012	UM ₄₅	16.6	X	309.62831	17.16260	41.91468	11.66807	0.1533917	0.21661565	2.7458459	21	10 16.8	19.5
398660	2012	UQ ₄₈	17.6	X	64.82055	5.13156	207.91292	8.12340	0.0870894	0.30328035	2.1940164	21	7 10.1	20.1
398661	2012	UL ₅₂	17.0	X	282.69009	261.22044	210.47971	5.79325	0.1169952	0.22262078	2.6962423	21	11 16.3	20.2
398662	2012	UJ ₇₉	16.2	X	174.98800	72.81588	35.57483	25.41108	0.1223282	0.18198769	3.0839551	21	7 9.0	21.9
398663	2012	UY ₈₆	17.2	X	357.23043	146.85685	298.43704	1.76294	0.2235692	0.23491537	2.6013279	21	—	—
398664	2012	UF ₉₀	17.3	X	339.06329	295.03897	207.05216	1.35658	0.2116369	0.24087822	2.5582188	21	—	—
398665	2012	US ₁₃₈	17.4	X	257.67858	345.28757	225.75914	20.15396	0.0462837	0.36294105	1.9464593	21	—	—
398666	2012	UC ₁₄₁	17.3	X	80.59218	84.16660	46.63459	6.08607	0.1134579	0.27878867	2.3207016	21	4 10.5	19.7
398667	2012	UB ₁₄₆	16.7	X	312.00771	242.51419	229.81017	12.42602	0.1127269	0.23168381	2.6254611	21	—	—
398668	2012	UO ₁₇₃	15.7	X	219.07591	1.37659	34.98600	15.50633	0.2478530	0.17878033	3.1207302	21	5 13.9	21.2
398669	2012	UH ₁₇₄	17.4	X	119.53668	312.22261	88.83362	23.77564	0.0665331	0.38088665	1.8848301	21	—	—
398670	2012	VP ₅	17.5	X	140.93089	64.54029	237.68113	19.35412	0.0820549	0.35558446	1.9732141	21	—	—
398671	2012	VA ₂₄	17.3	X	282.71545	211.02554	58.15007	5.36311	0.1369369	0.27773683	2.3265572	21	2 9.2	20.6
398672	2012	VK ₂₈	18.3	X	157.95688	242.59308	232.69257	2.71954	0.1093508	0.29825368	2.2185992	21	6 27.1	21.2
398673	2012	VA ₃₆	16.7	X	241.78607	77.98630	76.66915	7.36897	0.0335915	0.22242342	2.6992935	21	11 27.7	20.3
398674	2012	VW ₄₁	17.2	X	85.51123	29.90168	47.62541	7.97086	0.0916399	0.26541726	2.3980042	21	2 1.5	20.0
398675	2012	VD ₄₆	17.9	X	204.92689	215.93441	236.86549	2.45215	0.1272994	0.29888659	2.2154661	21	7 17.6	20.9
398676	2012	VY ₅₁	17.1	X	59.23078	355.73956	104.16579	5.67219	0.1489244	0.25521702	2.4614799	21	1 24.9	19.4
398677	2012	VE ₆₀	17.3	X	89.48377	60.60246	62.53837	6.88658	0.0354523	0.27788279	2.3257424	21	4 2.8	20.1
398678	2012	VS ₆₅	15.9	X	101.75502	73.96670	73.90288	8.70035	0.1198526	0.17099714	3.2147224	21	6 9.3	20.5
398679	2012	VZ ₆₆	17.7	X	49.44553	105.51195	44.57528	6.73458	0.0694378	0.27382197	2.3486800	21	3 14.8	20.3
398680	2012	VW ₇₁	16.9	X	314.70395	57.52885	62.14109	8.25490	0.1201088	0.23018003	2.6368836	21	—	—
398681	2012	VK ₇₈	17.0	X	29.49421	288.32838	138.93654	6.80841	0.1225512	0.24174413	2.5521063	21	—	—
398682	2012	VQ ₈₅	18.2	X	95.08149	54.26587	51.06017	2.09380	0.1412802	0.27315985	2.3524739	21	3 31.7	20.8
398683	2012	VM ₈₈	16.5	X	193.20761	30.84182	56.81627	6.10838	0.1417104	0.17974303	3.1095772	21	6 28.7	21.5
398684	2012	VS ₉₀	18.7	X	169.32836	267.99781	205.87449	2.28569	0.0661676	0.29707823	2.2244475	21	7 6.9	21.5
398685	2012	VW ₉₀	17.7	X	3.87949	252.16306	218.36441	3.52966	0.1974331	0.24053964	2.5606189	21	—	—
398686	2012	VK ₁₀₀	17.8	X	205.46076	152.13692	290.73580	2.28406	0.1423864	0.29945185	2.2126771	21	7 4.2	21.1
398687	2012	WB	18.3	X	171.45114	237.80672	62.88873	15.98786	0.1774011	0.36510489	1.9387610	21	—	—
398688	2012	VW ₆	17.7	X	41.15368	256.55778	242.66661	3.83700	0.1736447	0.26171558	2.4205626	21	2 12.1	19.8
398689	2012	VJ ₁₁	17.9	X	123.29431	111.65070	76.17906	2.93850	0.0940538	0.30623764	2.1798687	21	8 28.7	20.7
398690	2012	VW ₁₁	17.0	X	346.91928	308.37401	235.83295	14.48027	0.0234461	0.26288517	2.4133779	21	1 22.1	20.4
398691	2012	WF ₁₄	17.3	X	355.96874	122.82907	77.61845	9.91594	0.1546676	0.26714216	2.3876707	21	2 18.6	19.9
398692	2012	WF ₂₁	16.2	X	56.15329	274.39981	51.52922	7.36103	0.0795968	0.21882257	2.7273527	21	11 24.4	19.8
398693	2012	VW ₂₅	18.0	X	155.30429	294.34327	155.89005	2.61062	0.1733333	0.28506375	2.2865185	21	5 25.8	21.5
398694	2012	WZ ₂₈	16.2	X	266.16744	153.82016	276.41677	8.46378	0.0699347	0.19812687	2.9141180	21	8 29.6	20.4
398695	2012	WS ₃₄	16.6	X	3.22124	223.09952	268.45626	7.67768	0.1051837	0.24502568	2.5292688	21	—	—
398696	2012	WD ₃₅	17.7	X	168.14937	182.73714	240.16582	5.03827	0.1861261	0.27965653	2.3158979	21	5 1.9	21.3
398697	2012	XF ₁₀	17.3	X	102.21218	88.66409	40.81960	2.75270	0.1616847	0.27630751	2.3345737	21	5 17.3	20.0
398698	2012	XW ₁₉	17.3	X	346.72222	53.87245	61.65922	3.48731	0.1014847	0.23833713	2.5763701	21	—	—
398699	2012	XQ ₂₄	16.4	X	179.41292	242.09009	242.63925	5.35966	0.1336272	0.18684444	3.0302789	21	7 29.7	21.3
398700	2012	XU ₂₇	16.5	X	359.28017	20.13751	69.46709	14.28065	0.1470127	0.23385987	2.6091492	21	—	—
398701	2012	XX ₂₉	18.0	X	13.10212	27.81790	288.42002	1.78188	0.0044435	0.31240726	2.1510738	21	9 14.0	20.2
398702	2012	XN ₃₁	17.6	X	187.77981	356.82997	91.55127	6.20277	0.1246121	0.29341065	2.2429459	21	6 23.3	20.9
398703	2012	XM ₄₁	17.4	X	131.73676	228.65791	250.16382	4.62824	0.1051177	0.28312814	2.2969279	21	5 31.9	20.4
398704	2012	XX ₄₄	17.5	X	331.74479	105.85447	42.77358	1.30188	0.1572245	0.23911698	2.5707654	21	—	—
398705	2012	XM ₄₆	16.2	X	89.66717	287.90228	88.10760	10.15121	0.1513514	0.24371617	2.5383207	21	—	—
398706	2012	XP ₄₆	17.0	X	21.04125	112.53096	85.78798	13.79383	0.1444170	0.27125077	2.3634989	21	4 11.7	19.4
398707	2012	XF ₅₀	16.0	X	37.09628	191.23318	73.72670	11.48781	0.0312543	0.18917972	3.0052896	21	8 5.3	20.2
398708	2012	XD ₅₃	15.8	X	342.25605	70.51147	280.76845	8.63844	0.0137712	0.18855882	3.0118834	21	9 3.9	20.0
398709	2012	XL ₅₃	17.2	X	0.63074	1.68128	98.24455	6.51809	0.1402514	0.23171548	2.6252219	21	—	—
398710	2012	XA ₅₇	17.9	X	352.53607	9.84829	118.59311	1.29555	0.1514464	0.24326330	2.5414700	21	—	—
398711	2012	XB ₅₇	18.											

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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>		
398721	2012	<i>XM</i> ₁₀₆	16.3	X	267.14399	52.88148	101.07222	11.25382	0.1141893	0.21281210	2.7784665	21	12 16.8	19.8
398722	2012	<i>XQ</i> ₁₀₇	17.4	X	97.02618	29.75752	77.50809	7.94490	0.0648897	0.26903477	2.3764596	21	3 29.4	20.4
398723	2012	<i>XT</i> ₁₁₄	16.9	X	15.57226	11.77303	74.70385	5.06075	0.2395229	0.23280709	2.6170092	21	—	—
398724	2012	<i>XX</i> ₁₁₄	17.7	X	310.07639	275.66696	82.81334	5.93284	0.0577732	0.30413632	2.1898979	21	8 8.6	19.9
398725	2012	<i>XG</i> ₁₁₆	17.1	X	208.81282	38.36491	28.28817	6.56653	0.0650031	0.29112358	2.2546777	21	6 19.1	20.1
398726	2012	<i>XF</i> ₁₁₇	17.1	X	335.86701	30.87553	61.96833	3.16149	0.1862062	0.22714627	2.6603104	21	—	—
398727	2012	<i>XM</i> ₁₁₉	17.0	X	109.46976	7.84182	65.51057	7.78489	0.0857232	0.25849109	2.4406509	21	3 5.0	20.1
398728	2012	<i>XW</i> ₁₁₉	16.5	X	195.75135	346.72688	120.45863	9.32104	0.1096440	0.24266077	2.5456752	21	1 5.9	20.5
398729	2012	<i>XL</i> ₁₂₄	16.2	X	171.10833	61.72101	305.52741	15.34384	0.2014296	0.19142420	2.9817518	21	9 19.6	21.5
398730	2012	<i>XH</i> ₁₃₀	17.7	X	166.77261	122.41566	317.75898	3.14733	0.1643142	0.28489415	2.2874259	21	5 21.8	21.2
398731	2012	<i>XR</i> ₁₃₆	17.3	X	131.11002	358.36961	78.82645	13.68827	0.1233440	0.27382300	2.3486742	21	4 14.0	20.7
398732	2012	<i>XG</i> ₁₃₇	15.9	X	260.45814	195.93762	217.45543	9.75401	0.1667636	0.19239088	2.9717554	21	7 19.1	20.4
398733	2012	<i>XT</i> ₁₃₈	16.4	X	290.16331	277.06322	231.45173	14.19104	0.0581498	0.22837208	2.6507822	21	—	—
398734	2012	<i>XS</i> ₁₄₂	16.3	X	358.08818	217.38911	209.37726	14.03621	0.0490542	0.22488211	2.6781369	21	—	—
398735	2012	<i>XS</i> ₁₄₄	16.8	X	283.31703	343.05073	95.39043	4.29154	0.2012397	0.20023078	2.8936688	21	9 19.5	20.5
398736	2012	<i>XC</i> ₁₄₅	17.0	X	196.94295	26.43110	287.29769	17.61516	0.0614596	0.36233489	1.9486295	21	—	—
398737	2012	<i>XG</i> ₁₅₁	17.6	X	190.12395	283.87570	154.59842	3.96377	0.1431167	0.28555116	2.4809158	21	6 12.6	21.1
398738	2012	<i>YA</i> ₂	16.2	X	281.27888	314.24051	102.15570	13.46976	0.0479302	0.19118171	2.9842726	21	9 13.5	20.5
398739	2012	<i>YM</i> ₄	16.9	X	168.29502	149.89553	98.74291	4.59635	0.0416466	0.21466328	2.7624698	21	12 23.8	20.7
398740	2012	<i>YN</i> ₈	13.8	X	224.62405	115.47798	40.52989	13.51210	0.0856925	0.08394214	5.1659398	21	10 17.7	20.9
398741	2013	<i>AD</i> ₆	17.4	X	64.54053	336.12451	248.81007	4.50799	0.1063910	0.29509052	2.2344255	21	7 31.5	19.9
398742	2013	<i>AN</i> ₈	16.4	X	34.64137	310.69138	123.92429	22.62373	0.0334094	0.22825246	2.6517082	21	—	—
398743	2013	<i>AC</i> ₁₁	17.0	X	106.22341	316.92568	130.29766	7.43798	0.1520092	0.25695166	2.4503893	21	3 28.9	20.1
398744	2013	<i>AA</i> ₁₂	17.6	X	211.57600	84.24918	60.79233	5.20952	0.0676759	0.30944136	2.1647968	21	10 16.3	20.1
398745	2013	<i>AX</i> ₂₀	16.7	X	338.22901	16.05410	100.93842	10.71296	0.2010300	0.22514216	2.6760743	21	—	—
398746	2013	<i>AE</i> ₂₄	17.8	X	73.80361	48.76729	99.27761	2.21508	0.1223196	0.27171572	2.3608019	21	4 26.4	20.2
398747	2013	<i>AO</i> ₂₄	16.8	X	106.44866	92.46889	282.61027	4.20253	0.1200886	0.24607075	2.5221024	21	—	—
398748	2013	<i>AW</i> ₂₄	17.0	X	50.48937	222.57616	259.90999	0.48432	0.1428856	0.25614169	2.4555524	21	2 8.6	19.2
398749	2013	<i>AX</i> ₂₉	16.1	X	311.43116	294.60993	108.67363	11.04154	0.0326790	0.18653364	3.0336439	21	10 8.4	20.4
398750	2013	<i>AP</i> ₃₁	16.2	X	204.65360	121.13316	332.13566	8.54192	0.1457138	0.17774739	3.1328088	21	7 17.6	21.2
398751	2013	<i>AY</i> ₃₅	16.7	X	323.18936	216.14980	308.72710	12.84813	0.1936785	0.23172398	2.6251577	21	—	—
398752	2013	<i>AC</i> ₃₈	17.1	X	338.36162	7.06650	115.64971	3.08452	0.0769984	0.22628828	2.6670307	21	—	—
398753	2013	<i>AG</i> ₃₉	13.9	X	222.97151	43.36089	126.10197	8.61523	0.0563818	0.08445119	5.1451597	21	11 3.1	21.0
398754	2013	<i>AH</i> ₃₉	17.4	X	274.41772	251.67974	120.88182	7.18893	0.1221602	0.29034595	2.2587016	21	6 20.6	20.1
398755	2013	<i>AT</i> ₃₉	17.0	X	13.06440	132.01798	293.05788	5.07035	0.0253996	0.21837762	2.7310561	21	—	—
398756	2013	<i>AX</i> ₃₉	16.5	X	359.19257	349.11115	126.26439	14.29762	0.1175516	0.23011004	2.6374183	21	—	—
398757	2013	<i>AW</i> ₄₀	17.7	X	235.24485	270.18202	132.41878	6.74707	0.1045321	0.28610209	2.2809829	21	6 15.5	20.8
398758	2013	<i>AW</i> ₄₁	17.2	X	279.63654	118.09485	58.60683	5.15090	0.0290141	0.22155629	2.7048716	21	—	—
398759	2013	<i>AG</i> ₄₂	16.9	X	279.66739	163.85383	84.68048	7.86910	0.1935302	0.23767410	2.5811593	21	1 10.7	20.9
398760	2013	<i>AC</i> ₄₃	17.5	X	88.35243	347.17902	58.39782	3.79596	0.1554243	0.24024749	2.5626943	21	1 5.7	20.4
398761	2013	<i>AC</i> ₅₅	16.6	X	186.11494	17.78625	103.65170	5.43255	0.1434427	0.17298925	3.1899948	21	8 2.8	21.8
398762	2013	<i>AB</i> ₅₈	16.8	X	125.03899	19.46049	312.41295	5.59850	0.0159451	0.22402982	2.6849250	21	—	—
398763	2013	<i>AE</i> ₇₁	16.1	X	126.42893	5.68202	307.88416	4.93601	0.0199553	0.21765384	2.7371073	21	—	—
398764	2013	<i>AF</i> ₇₃	16.8	X	136.69259	15.66769	43.82856	2.96965	0.1098986	0.25948633	2.4344063	21	3 21.8	20.0
398765	2013	<i>AZ</i> ₇₃	16.6	X	244.60413	168.62239	43.29889	10.93240	0.0926978	0.22356375	2.6886553	21	—	—
398766	2013	<i>AS</i> ₇₄	16.5	X	23.61597	15.10351	85.78076	5.81056	0.1288019	0.23451352	2.6042987	21	—	—
398767	2013	<i>AO</i> ₈₀	16.5	X	266.19333	307.58980	165.30142	8.25620	0.1111840	0.20224497	2.8744245	21	10 24.4	20.4
398768	2013	<i>AT</i> ₈₀	17.3	X	130.85962	332.49962	94.40891	7.01550	0.1172968	0.26166253	2.4208898	21	3 28.1	20.7
398769	2013	<i>AN</i> ₈₃	17.6	X	168.33106	261.72314	179.18934	6.36025	0.0676097	0.27707559	2.3302572	21	5 22.2	20.8
398770	2013	<i>AC</i> ₈₈	17.0	X	345.15251	128.03260	320.34181	5.40612	0.1544196	0.22244914	2.6976291	21	—	—
398771	2013	<i>AO</i> ₈₈	16.8	X	23.25992	20.60979	56.07516	7.89616	0.2909562	0.23184320	2.6242577	21	—	—
398772	2013	<i>AR</i> ₉₂	16.3	X	181.14291	52.75850	92.15967	12.06240	0.0569457	0.18284721	3.0742828	21	9 2.1	21.0
398773	2013	<i>AU</i> ₉₅	16.3	X	299.82523	27.19197	108.33203	5.92859	0.0638681	0.21505246	2.7591360	21	—	—
398774	2013	<i>AD</i> ₉₆	16.5	X	93.11185	242.84700	91.46899	12.35193	0.1833811	0.22225478	2.6992015	21	—	—
398775	2013	<i>AR</i> ₉₆	17.2	X	39.45784	351.00025	79.92322	5.02713	0.0655361	0.23252000	2.6191629	21	—	—
398776	2013	<i>AZ</i> ₁₀₁	16.5	X	248.12535	14.90767	87.12982	12.81529	0.2052978	0.19175489	2.9783227	21	9 8.6	21.2
398777	2013	<i>AX</i> ₁₀₄	17.4	X	103.67225	51.75570	149.59124	6.47210	0.0809113	0.28275809	2.2989314	21	8 18.4	20.3
398778	2013	<i>AY</i> ₁₀₈	17.4	X	128.28803	38.29333	272.99850	1.41577	0.0081522	0.21957584	2.7211115	21	—	—
398779	2013	<i>AN</i> ₁₁₁	17.4	X	313.72576	9.42465	151.14079	10.20794	0.0488628	0.22945377	2.6424447	21	—	—
398780	2013	<i>AO</i> ₁₁₁	16.7	X	307.62555	24.00237	130.44559	9.82094	0.0815547	0.22387343	2.6861753	21	—	—
398781	2013	<i>AR</i> ₁₁₇	16.7	X	306.88461	34.43536	75.69919	5.46085	0.0282281	0.21128220	2.7918631	21	12 24.3	20.3
398782	2013	<i>AX</i> ₁₁₇	17.2	X	142.86928	297.50910	98.29296	9.47647	0.2307817	0.25904104	2.4371953	21	3 15.3	21.1
398783	2013	<i>AG</i> ₁₁₈	17.3	X	318.12238	73.56147	15.47928	5.80562	0.1059568	0.21016848	2.8017174	21	12 9.8	20.7
398784	2013	<i>AF</i> ₁₂₂	17.6	X	186.18498	298.18359	108.35880	8.17503	0.1009537	0.27140171	2.3626225	21	4 30.1	21.1
398785	2013	<i>AH</i> ₁₂₂	17.0	X	230.15147	299.35129	63.68928	3.61992	0.0417349	0.26914275	2.3758240	21	4 21.9	20.1
398786	2013	<i>AB</i> ₁₂₄	16.6	X	234.67532	112.02894	75.86412	4.93300	0.0356008	0.21168940	2.7882817	21	12 27.5	20.4
398787	2013	<i>AJ</i> ₁₂₅	17.3	X	11.64759	16.60126	86.12073	10.11794	0.1129691	0.22966728	2.6408068	21	—	—
398788	2013	<i>AU</i> ₁₂₆	17.4	X	314.18986	284.97545	230.04451	2.56510	0.1024208	0.22879883	2.6474851	21	—	—
398789	2013	<i>AX</i> ₁₂₆	15.8	X	303.52534	81.52381	264.18365	9.						

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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>
398801 2013 BP ₁₁	17.2	X	282.36194	187.40584	113.65621	6.02150	0.1104932	0.26564545	2.3966308	21	3 28.6	20.4
398802 2013 BK ₂₀	16.7	X	273.13878	299.49937	179.60644	8.21168	0.1126265	0.20417078	2.8563208	21	11 10.4	20.5
398803 2013 BB ₂₂	16.7	X	94.47415	183.08989	68.13033	2.81291	0.0229726	0.18826251	3.0150428	21	9 28.6	20.9
398804 2013 BB ₂₉	16.8	X	342.19379	237.38598	249.07700	4.67679	0.1066451	0.22804783	2.6532942	21	—	—
398805 2013 BN ₃₁	17.1	X	63.54715	39.65763	351.71611	5.99321	0.0303085	0.22540058	2.6740285	21	—	—
398806 2013 BO ₃₇	17.3	X	68.46900	340.46398	126.39795	9.36014	0.1247557	0.25176741	2.4839130	21	2 20.7	19.9
398807 2013 BR ₃₇	16.8	X	46.88832	294.21858	123.35233	13.89850	0.1100840	0.23121596	2.6290016	21	—	—
398808 2013 BT ₃₇	17.2	X	218.80098	343.49102	143.30203	1.72516	0.1100651	0.18877068	3.0096294	21	9 12.8	21.8
398809 2013 BC ₃₈	17.0	X	328.85871	349.13892	122.14838	4.33878	0.0937323	0.22142047	2.7059776	21	—	—
398810 2013 BQ ₃₉	15.7	X	354.21923	37.27576	305.41590	10.14865	0.1107087	0.18529736	3.0471224	21	9 10.4	19.5
398811 2013 BS ₃₉	17.0	X	160.20258	143.77518	146.55504	3.81425	0.0810246	0.21905261	2.7254429	21	—	—
398812 2013 BD ₄₀	16.3	X	100.81412	295.13453	307.18525	8.71525	0.0785602	0.18287921	3.0739243	21	9 25.6	20.9
398813 2013 BJ ₄₀	17.2	X	354.58854	129.82723	145.92994	3.64298	0.2287552	0.27313392	2.3526228	21	6 4.7	18.7
398814 2013 BN ₄₃	15.7	X	132.22109	73.84026	119.45362	24.13330	0.0665773	0.17877165	3.1208312	21	9 8.4	20.6
398815 2013 BZ ₄₃	17.7	X	120.00343	337.92393	78.43910	2.57037	0.1710210	0.25552767	2.4594845	21	3 6.6	21.0
398816 2013 BZ ₅₃	17.6	X	354.83279	317.30482	150.42351	3.61615	0.0619405	0.22749124	2.6576203	21	—	—
398817 2013 BN ₅₅	16.3	X	285.59540	237.95897	133.18999	9.89202	0.0692882	0.17607947	3.1525615	21	7 12.5	20.7
398818 2013 BX ₅₆	17.5	X	310.31925	0.65602	119.23961	4.39709	0.0651610	0.21723037	2.7406633	21	—	—
398819 2013 BC ₆₁	16.7	X	219.87774	80.91526	130.81360	8.05121	0.0329386	0.21165428	2.7885901	21	—	—
398820 2013 BY ₆₃	16.1	X	203.22295	330.67085	312.16115	14.80763	0.0919280	0.17145495	3.2089974	21	7 29.9	21.0
398821 2013 BZ ₆₃	17.1	X	190.18280	244.96202	149.01724	3.32597	0.1565935	0.26706842	2.3881102	21	4 17.0	20.7
398822 2013 BV ₆₅	16.9	X	177.90740	219.95391	156.27947	4.83705	0.0875714	0.25643070	2.4537070	21	3 10.1	20.3
398823 2013 BX ₆₅	16.6	X	128.68907	97.72142	104.80800	4.56865	0.0593010	0.17996409	3.1070303	21	9 12.2	21.2
398824 2013 BY ₆₅	17.3	X	196.10371	53.40254	320.58692	5.90848	0.1268607	0.26461859	2.4028269	21	3 24.0	21.1
398825 2013 BE ₆₉	15.9	X	229.88300	333.90988	111.01904	12.21580	0.0380616	0.17765980	3.1338384	21	8 12.1	20.5
398826 2013 BG ₇₄	16.3	X	313.94358	120.26250	24.42748	14.83393	0.0620136	0.22391755	2.6858224	21	—	—
398827 2013 BG ₇₈	16.9	X	91.86947	297.72844	113.62535	13.67259	0.1217679	0.24068211	2.5596083	21	1 13.9	19.9
398828 2013 BV ₈₀	15.4	X	159.17027	260.96145	276.58619	8.77157	0.0394365	0.18552758	3.0446011	21	9 8.5	20.0
398829 2013 CJ ₃	16.0	X	159.85057	25.82371	148.68126	11.56945	0.0269313	0.18015060	3.1048854	21	9 11.0	20.5
398830 2013 CQ ₃	16.8	X	325.88434	267.03595	199.78135	2.94310	0.0396140	0.21389959	2.7690412	21	—	—
398831 2013 CN ₄	17.2	X	62.58976	350.73727	260.81307	3.75129	0.1179676	0.28884762	2.2665059	21	9 7.4	19.9
398832 2013 CS ₄	17.0	X	185.35671	355.09312	241.29522	2.50241	0.0399923	0.20988694	2.8042223	21	12 27.4	21.0
398833 2013 CH ₁₀	16.6	X	261.53774	197.87153	318.92448	8.93045	0.0369031	0.21077601	2.7963311	21	12 22.9	20.4
398834 2013 CP ₁₀	16.7	X	332.65652	69.71723	63.67950	4.80650	0.0474396	0.22359141	2.6884335	21	—	—
398835 2013 CZ ₁₃	17.7	X	135.63919	356.03434	58.32142	3.52008	0.1474139	0.25565727	2.4586532	21	3 19.6	21.1
398836 2013 CV ₁₄	16.4	X	136.73784	108.81517	128.70897	10.28730	0.0670227	0.18942709	3.0026727	21	11 5.9	21.1
398837 2013 CE ₁₇	16.6	X	309.03352	238.03328	196.58290	5.26916	0.0483448	0.19489709	2.9462244	21	11 8.9	20.5
398838 2013 CE ₁₇	17.5	X	299.83015	245.37764	68.97159	3.75378	0.0286329	0.26762550	2.3847950	21	5 19.9	20.3
398839 2013 CV ₂₂	16.4	X	359.35627	254.58218	131.57659	11.98073	0.1077769	0.19848681	2.9105939	21	11 25.5	20.1
398840 2013 CP ₃₀	17.1	X	340.39632	161.55973	95.71611	6.64762	0.0910669	0.26307050	2.4122443	21	4 24.3	19.8
398841 2013 CL ₃₁	16.2	X	288.24355	301.74200	94.68133	9.49282	0.0809131	0.17527055	3.1568529	21	8 19.2	20.5
398842 2013 CT ₃₃	16.3	X	275.92434	294.77208	163.42552	10.79534	0.0429686	0.18797048	3.0181648	21	10 26.9	20.5
398843 2013 CD ₃₄	16.5	X	261.15103	322.25400	165.81449	6.60522	0.2193755	0.20250789	3.8719360	21	10 20.7	20.5
398844 2013 CY ₃₆	16.4	X	174.03068	285.10552	211.50855	13.10655	0.2457654	0.17197134	2.2025703	21	8 5.3	22.2
398845 2013 CY ₃₉	16.7	X	80.23478	289.54790	98.93866	5.17716	0.0485560	0.22532824	2.6746008	21	—	—
398846 2013 CA ₄₀	14.8	X	339.67009	220.34418	103.91297	29.60586	0.2399493	0.17656344	3.1467979	21	7 16.1	17.9
398847 2013 CD ₄₂	16.8	X	28.04333	136.44939	199.75234	8.38172	0.0449952	0.18851865	3.0123112	21	10 22.9	20.9
398848 2013 CV ₄₂	16.1	X	274.63972	33.95880	18.63028	9.19496	0.0988260	0.17750690	3.1356378	21	8 20.4	20.5
398849 2013 CM ₄₄	16.5	X	183.74550	311.23727	174.87311	8.35251	0.2182612	0.17261275	3.1946317	21	8 2.9	22.1
398850 2013 CE ₄₅	16.7	X	117.44886	350.33627	335.98642	7.16707	0.1153989	0.21509152	2.7588019	21	—	—
398851 2013 CQ ₄₆	15.9	X	17.87336	196.37078	70.53370	10.66404	0.0745024	0.17457064	3.1707007	21	9 1.7	20.1
398852 2013 CH ₄₇	16.4	X	126.62013	243.72608	107.44789	5.96302	0.0366131	0.21488440	2.7605744	21	—	—
398853 2013 CC ₄₉	16.6	X	177.49336	7.31055	110.78617	11.37138	0.0719415	0.17380214	3.1800404	21	7 21.4	21.4
398854 2013 CA ₅₀	16.5	X	228.36438	204.01558	238.41220	3.47440	0.1389904	0.17536876	3.1610733	21	7 25.4	21.3
398855 2013 CL ₅₀	17.2	X	164.29358	243.56106	147.02515	6.77031	0.1350010	0.26322775	2.4112835	21	3 17.6	20.7
398856 2013 CT ₅₀	17.2	X	16.00983	285.19002	168.22598	6.46073	0.0657847	0.22828795	2.6514334	21	—	—
398857 2013 CV ₅₀	16.7	X	205.98707	62.18963	147.94889	10.06613	0.0782904	0.20720060	2.8284079	21	12 15.5	20.9
398858 2013 CL ₅₁	17.1	X	325.03436	318.42633	150.05552	4.98941	0.0400067	0.21280652	2.7785151	21	—	—
398859 2013 CY ₅₁	17.1	X	257.21353	33.62852	69.55840	1.24147	0.1572114	0.19187223	2.9771083	21	9 21.1	21.4
398860 2013 CF ₅₂	16.5	X	348.16031	328.47043	126.43252	6.10499	0.0802299	0.21753930	2.7380680	21	—	—
398861 2013 CQ ₅₂	16.9	X	13.94916	112.94793	78.06250	11.50448	0.1378031	0.25342181	2.4730908	21	3 19.0	19.6
398862 2013 CY ₅₃	15.4	X	71.87884	100.76893	152.94317	21.95105	0.0952043	0.17075441	3.2177682	21	9 12.6	20.0
398863 2013 CB ₅₅	15.5	X	280.63558	33.21473	18.90203	9.38731	0.0700333	0.17369157	3.1813898	21	8 31.5	19.9
398864 2013 CN ₅₆	16.8	X	100.45252	107.37908	307.95909	11.39518	0.1583196	0.24384468	2.5374288	21	2 4.9	19.9
398865 2013 CA ₅₈	16.3	X	136.48141	265.92998	293.46511	5.81294	0.1012182	0.17467065	3.1694903	21	9 14.3	21.2
398866 2013 CR ₅₈	16.3	X	132.44294	114.52313	73.61886	3.09624	0.1567362	0.17028390	3.2236928	21	9 4.2	21.4
398867 2013 CV ₅₈	15.8	X	185.97172	203.61875	323.76613	9.79702	0.0630727	0.18427233	3.0584118	21	9 26.1	20.5
398868 2013 CW ₅₈	16.7	X	267.2906									

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
398881 2013 CT ₈₁	17.2	X	90.52688	169.07396	209.20469	6.13693	0.0591318	0.22379785	2.6867800	21	—	—
398882 2013 CU ₈₁	16.5	X	128.51718	64.29758	188.62956	9.73269	0.0542599	0.19177938	2.9780692	21	11 12.9	20.9
398883 2013 CQ ₈₄	16.0	X	232.22206	316.29626	156.28338	11.59645	0.0397550	0.17722017	3.1390190	21	9 18.3	20.5
398884 2013 CJ ₈₅	17.6	X	48.99324	171.23267	117.74018	3.87445	0.1655314	0.30105808	2.2048000	21	10 25.8	20.1
398885 2013 CV ₈₆	16.7	X	135.40173	359.10199	223.40930	7.21592	0.1059217	0.18256448	3.0774560	21	10 13.5	21.4
398886 2013 CA ₉₁	16.2	X	197.70630	93.41270	33.44127	12.03019	0.1070168	0.18009764	3.1054940	21	8 27.2	21.2
398887 2013 CP ₉₁	16.8	X	352.88437	312.30416	134.68992	4.92633	0.0282232	0.21592205	2.7517231	21	—	—
398888 2013 CD ₉₄	17.1	X	54.34026	287.83156	148.87111	8.17896	0.0865438	0.23301106	2.6154818	21	—	—
398889 2013 CW ₉₅	17.3	X	14.05681	129.99447	305.03503	1.91521	0.1390544	0.22158579	2.7046316	21	—	—
398890 2013 CU ₉₉	16.8	X	131.60090	41.90056	275.76342	3.25922	0.0641429	0.21399534	2.7682151	21	—	—
398891 2013 CR ₁₀₂	16.6	X	324.74788	52.80112	57.17926	4.53971	0.0546551	0.21359070	2.7717102	21	—	—
398892 2013 CV ₁₀₃	16.3	X	194.21934	107.67386	355.80593	8.30486	0.0635644	0.16862113	3.2448508	21	7 23.6	21.3
398893 2013 CT ₁₁₀	16.2	X	100.59035	129.63406	128.37812	15.22650	0.2159248	0.17848158	3.1242116	21	11 6.0	21.5
398894 2013 CO ₁₁₆	16.0	X	196.89991	357.05721	111.86603	6.33936	0.1141723	0.16838573	3.2478742	21	7 29.3	21.0
398895 2013 CQ ₁₁₆	15.7	X	233.84637	84.54059	356.19513	11.88712	0.0301379	0.16997017	3.2276585	21	8 14.4	20.4
398896 2013 CG ₁₁₇	16.5	X	280.97719	342.81863	103.67222	6.20816	0.0932519	0.18917748	3.0053134	21	10 12.5	20.6
398897 2013 CL ₁₂₁	16.2	X	155.12755	82.60399	96.35691	17.70202	0.1632257	0.17865306	3.1222121	21	9 20.9	21.6
398898 2013 CO ₁₂₁	16.7	X	15.40308	117.78060	312.02007	3.27792	0.0513651	0.21569326	2.7536686	21	—	—
398899 2013 CA ₁₂₄	16.9	X	109.14864	259.77546	146.39368	12.91761	0.1681233	0.24142983	2.5543208	21	2 7.5	20.0
398900 2013 CN ₁₂₄	17.4	X	329.21839	199.05803	27.89608	4.05956	0.1414827	0.25103432	2.4887464	21	2 15.6	20.3
398901 2013 CL ₁₂₇	15.8	X	349.95118	313.88305	72.24405	10.18735	0.0655557	0.18815148	3.0162288	21	11 5.8	19.7
398902 2013 CM ₁₃₀	16.4	X	195.26231	326.03768	164.62919	4.78963	0.0838558	0.17328910	3.1863138	21	8 23.9	21.4
398903 2013 CJ ₁₃₁	16.6	X	250.23114	309.12784	161.55325	9.32608	0.1838484	0.18983295	2.9983913	21	9 19.0	21.0
398904 2013 CN ₁₃₂	15.7	X	14.92378	34.17310	309.77713	10.43432	0.1501630	0.18122229	3.0926325	21	10 18.5	19.7
398905 2013 CZ ₁₃₄	16.2	X	298.99221	243.34420	105.50032	9.54443	0.0895165	0.17476926	3.1682980	21	8 20.4	20.4
398906 2013 CL ₁₃₇	15.7	X	73.10341	176.88507	105.40945	6.05826	0.1111730	0.17641896	3.1485158	21	10 23.2	20.2
398907 2013 CE ₁₃₈	17.1	X	313.41398	296.53341	348.71782	5.03378	0.1281592	0.26504474	2.4002506	21	4 10.4	19.9
398908 2013 CK ₁₄₃	16.8	X	31.84853	232.01800	181.17034	3.13178	0.0887392	0.21627854	2.7486985	21	—	—
398909 2013 CB ₁₄₄	16.2	X	118.67643	129.59051	134.95467	10.76040	0.1670507	0.19257053	2.9699068	21	11 24.5	21.2
398910 2013 CO ₁₄₅	15.9	X	87.22471	157.50502	140.02651	12.84686	0.0686461	0.19136932	2.9823218	21	11 24.2	20.4
398911 2013 CW ₁₄₈	16.8	X	174.74945	50.51309	121.52122	3.92511	0.0428457	0.17893500	3.1189316	21	9 25.3	21.3
398912 2013 CN ₁₅₀	17.0	X	231.39769	162.55530	140.57347	4.99666	0.2532004	0.23293694	2.6160365	21	2 1.6	21.6
398913 2013 CJ ₁₅₅	16.3	X	178.70513	336.28923	150.30638	4.82914	0.1611928	0.16630969	3.2748469	21	8 1.5	21.3
398914 2013 CK ₁₅₆	16.1	X	105.49077	83.95572	145.52311	9.89648	0.0366127	0.17396564	3.1780476	21	9 15.7	20.6
398915 2013 CX ₁₅₆	16.8	X	12.62487	324.94832	125.59617	3.22913	0.0793588	0.22159335	2.7045701	21	—	—
398916 2013 CY ₁₅₆	17.1	X	29.84748	297.76924	100.57518	5.46129	0.0754488	0.20915627	2.8107494	21	—	—
398917 2013 CZ ₁₅₆	15.8	X	63.09804	268.96315	20.34177	7.26477	0.1469115	0.17737976	3.1371360	21	10 21.5	20.3
398918 2013 CD ₁₅₇	16.4	X	314.12072	274.72109	139.71801	16.03172	0.0949677	0.19007697	2.9958246	21	10 22.4	20.4
398919 2013 CW ₁₆₅	15.9	X	328.11908	216.16858	152.88690	10.53184	0.0353677	0.17617200	3.1514576	21	9 11.5	20.2
398920 2013 CP ₁₆₈	15.8	X	223.28897	95.66814	12.52186	9.37616	0.0543475	0.17504934	3.1649175	21	9 2.1	20.5
398921 2013 CL ₁₇₁	17.2	X	24.46157	259.56968	165.85637	11.69514	0.0720878	0.21586839	2.7521790	21	—	—
398922 2013 CO ₁₇₃	16.8	X	77.01885	220.00934	159.76117	5.84008	0.0781306	0.21674429	2.7447593	21	—	—
398923 2013 CY ₁₇₄	16.0	X	76.31810	295.30652	343.16865	4.30274	0.1130225	0.17686608	3.1432072	21	10 18.3	20.6
398924 2013 CB ₁₇₅	16.9	X	106.95683	198.92659	174.91336	5.36866	0.0824376	0.22332306	2.6905868	21	—	—
398925 2013 CP ₁₇₆	17.1	X	276.55550	9.63384	225.62911	2.44874	0.1478760	0.22830937	2.6512676	21	—	—
398926 2013 CY ₁₇₇	16.8	X	153.34750	196.85509	159.39979	10.46298	0.0344793	0.23644941	2.5900644	21	1 11.5	20.5
398927 2013 CQ ₁₇₈	16.0	X	139.88232	48.82833	132.42956	28.11621	0.1664339	0.17126786	3.2113340	21	9 4.7	21.4
398928 2013 CE ₁₇₉	16.0	X	229.42906	3.85657	136.35485	11.55975	0.0577337	0.19033179	2.9931501	21	10 21.4	20.5
398929 2013 CT ₁₈₁	15.8	X	173.03560	118.66881	30.87175	16.13193	0.1420889	0.17548008	3.1597362	21	9 1.2	21.1
398930 2013 CS ₁₈₅	17.9	X	52.27363	64.23688	187.17153	1.99725	0.0546734	0.28366269	2.2940413	21	8 12.8	20.5
398931 2013 CP ₁₈₈	16.3	X	243.82319	243.97812	358.87969	11.26233	0.1514097	0.22278709	2.6949003	21	—	—
398932 2013 CB ₁₈₉	15.2	X	214.86605	284.97653	176.53609	26.14419	0.1909887	0.17329103	3.1862902	21	7 30.4	20.8
398933 2013 CE ₁₉₀	16.5	X	241.64668	221.23369	225.56953	4.03716	0.1092935	0.17902495	3.1178868	21	8 16.5	21.1
398934 2013 CT ₁₉₀	17.3	X	19.85261	175.30342	253.66117	3.95646	0.0995226	0.22002760	2.7173857	21	—	—
398935 2013 CJ ₁₉₂	16.4	X	171.15264	21.31233	106.72803	6.29662	0.1443206	0.17025572	3.2240486	21	7 27.8	21.5
398936 2013 CL ₁₉₃	16.0	X	204.43592	282.60606	228.84623	9.35172	0.0827515	0.18536190	3.0464151	21	9 26.5	20.7
398937 2013 CP ₁₉₃	16.2	X	198.18080	352.83436	165.58152	17.18390	0.0238397	0.18411433	3.0601613	21	10 8.1	20.7
398938 2013 CQ ₁₉₄	17.3	X	28.61707	355.27575	86.34508	3.19441	0.0607482	0.22573784	2.6713644	21	—	—
398939 2013 CA ₁₉₇	17.6	X	173.03414	291.07059	92.91567	2.46267	0.1920693	0.25810467	2.4430863	21	3 21.9	21.5
398940 2013 CM ₁₉₇	17.3	X	333.88603	23.14024	232.92005	1.43171	0.1860274	0.26080945	2.4261659	21	3 23.9	19.9
398941 2013 CU ₁₉₇	17.0	X	206.08539	3.10301	168.89458	10.35655	0.0476756	0.19204091	2.9753647	21	11 1.8	21.4
398942 2013 CQ ₂₀₀	16.9	X	191.20998	269.19367	36.72175	6.47845	0.1036318	0.23056310	2.6339620	21	—	—
398943 2013 CD ₂₀₁	17.2	X	63.75302	336.34022	25.90810	3.22267	0.0385371	0.21014176	2.8019549	21	—	—
398944 2013 CE ₂₀₆	16.7	X	95.53022	206.64022	153.79477	4.08370	0.1574149	0.22846005	2.6501017	21	—	—
398945 2013 CJ ₂₁₁	17.4	X	259.96870	216.30068	104.82813	5.95295	0.0805446	0.26453464	2.4033352	21	4 1.2	20.7
398946 2013 CS ₂₁₃	16.8	X	163.63434	14.18606	217.78787	1.29831	0.0612881	0.19791898	2.9161582	21	11 25.0	21.0
398947 2013 DS ₂	17.2	X	96.86898	245.51559	99.92372	1.92179	0.0821517	0.21491941	2.7602746	21	—	—
398948 2013 DK ₅	15.6	X	312.89601	33.32990	329.04652	12.77636	0.0265014	0.17168248	3.2061615	21	8 13.8	20.1
398949 2013 DZ ₅	15.9	X	136.80465	87.18095	140.46666	13.29494	0.0367501	0.18118145	3.0930972	21	10 23.6	20.6
398950 2013 DJ ₆	16.0	X	272.08635	292.25869	133.41539	10.28762	0.0592496	0.17457315	3.1706703	21	9 6.5	20.4
398951 2013 DK ₇	16.3	X	42.22442	204.31872	134.66353	10.83444	0.0944274	0.18697606	3.0288566	21	11 22.9	20.6
398952 2013 DT ₁₀	16.8	X	23.31693	49.95785	325.80494	5.42380	0.0698333	0.20091516	2.8870940	21	12 9.4	20.7
398953 2013 DJ ₁₃	17.3	X	171.45582	155.06556	241.94659	4.28498	0.1962675	0.26099094	2.4250411	21	4 2.8	21.3
398954 2013 DL ₁₃	15.9	X</										

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
398961 2013 EM ₁₀	15.8	X	65.65489	199.67836	115.18897	11.81217	0.2075944	0.17855816	3.1233183	21	12 4.6	20.5
398962 2013 EP ₁₂	16.9	X	272.35358	130.85988	103.33503	2.68363	0.1467599	0.22521753	2.6754772	21	—	—
398963 2013 EF ₁₃	16.4	X	326.40238	14.30241	23.22095	2.04457	0.0955853	0.18762305	3.0218896	21	10 12.9	20.2
398964 2013 EX ₁₃	16.7	X	122.15955	350.52971	320.01359	1.22286	0.0818999	0.20594863	2.8398590	21	—	—
398965 2013 ED ₁₄	16.5	X	251.60799	325.40073	158.37581	9.49704	0.0700890	0.19080776	2.9881704	21	10 24.5	20.7
398966 2013 ES ₁₄	16.4	X	256.29155	305.05830	155.47705	4.80482	0.0257988	0.18287221	3.0740026	21	10 5.1	20.6
398967 2013 EJ ₂₁	16.6	X	68.16515	94.06980	206.56226	8.99802	0.0731481	0.18701064	3.0284833	21	11 2.8	20.7
398968 2013 EU ₂₉	16.1	X	63.48031	256.28542	168.43691	21.87906	0.0771679	0.22623494	2.6674498	21	—	—
398969 2013 EE ₃₄	16.2	X	350.11741	114.65288	19.94671	28.63335	0.1436418	0.22636307	2.6664432	21	—	—
398970 2013 EY ₃₅	17.3	X	223.70505	250.36022	156.25191	7.08606	0.1083477	0.28049424	2.3112846	21	6 7.7	20.6
398971 2013 EE ₄₂	16.0	X	15.44898	6.70882	304.75727	2.60756	0.0335360	0.16858802	3.2452756	21	8 31.1	20.5
398972 2013 EF ₄₉	15.7	X	334.48476	275.01494	309.94886	1.80563	0.1085227	0.12413449	3.9799207	21	3 17.2	20.8
398973 2013 EJ ₅₀	17.4	X	41.22455	6.65464	130.88155	1.38097	0.1851903	0.29346359	2.2426762	21	11 23.6	19.9
398974 2013 EM ₅₀	16.8	X	348.74612	239.06848	174.71406	12.10278	0.0467784	0.19553079	2.9398552	21	12 8.2	20.9
398975 2013 EE ₅₄	16.3	X	66.18103	161.72155	137.75059	1.68958	0.1318803	0.17865216	3.1222227	21	11 5.8	20.7
398976 2013 EY ₅₇	16.2	X	20.11357	228.60441	159.44462	9.54958	0.0877507	0.19838040	2.9116346	21	12 22.9	20.1
398977 2013 EJ ₆₀	16.1	X	78.39898	112.75332	166.76853	9.66102	0.0920319	0.17632025	3.1496908	21	10 23.0	20.7
398978 2013 EE ₆₆	15.7	X	120.47439	310.01745	272.66237	10.66733	0.0774432	0.17839820	3.1251850	21	9 21.5	20.6
398979 2013 EF ₆₆	16.1	X	181.93837	289.06264	193.53624	13.59247	0.0845331	0.16956913	3.2327455	21	7 28.2	21.3
398980 2013 EM ₇₂	17.5	X	136.80773	264.41575	126.89248	4.37733	0.1821737	0.24222741	2.5487106	21	2 24.7	21.3
398981 2013 EH ₇₉	16.0	X	31.05223	161.86043	155.99333	9.82069	0.0925626	0.17470950	3.1690204	21	10 9.8	20.2
398982 2013 EC ₈₀	15.4	X	11.80685	124.34360	58.87795	3.64712	0.1253820	0.12562056	3.9484705	21	3 23.8	20.3
398983 2013 EU ₈₁	15.9	X	214.37193	298.85750	171.96332	26.36179	0.1168202	0.17146041	3.2089293	21	8 15.6	21.1
398984 2013 EA ₈₂	16.2	X	293.82447	248.08118	166.09207	10.05320	0.0639885	0.17736336	3.1373294	21	9 18.9	20.4
398985 2013 EK ₈₈	17.6	X	83.86838	211.38112	272.69934	1.62525	0.1517881	0.25474757	2.4645030	21	4 12.8	20.4
398986 2013 EB ₉₀	15.3	X	173.27353	282.50538	274.59008	15.54126	0.2203739	0.17932262	3.1144355	21	10 12.3	21.0
398987 2013 ES ₉₂	16.2	X	263.82800	325.21380	275.37345	11.86889	0.1409849	0.22499363	2.6772519	21	—	—
398988 2013 EF ₉₉	16.1	X	13.22261	190.44352	171.77709	10.51404	0.1687503	0.18289979	3.0726858	21	11 18.9	19.9
398989 2013 EA ₁₀₁	15.6	X	197.41052	56.29259	125.79553	12.19997	0.0389585	0.18621635	3.0370890	21	11 6.3	20.2
398990 2013 EL ₁₀₇	16.0	X	338.98368	287.48588	126.50848	5.27388	0.1201642	0.19179214	2.9779370	21	11 25.8	19.5
398991 2013 ET ₁₀₉	15.5	X	95.01091	150.39705	105.56346	12.64871	0.0846328	0.17893321	3.1189524	21	10 16.7	20.3
398992 2013 EJ ₁₁₁	15.8	X	12.47593	216.95090	129.82877	6.63346	0.1537507	0.17254534	3.1954637	21	10 25.6	19.7
398993 2013 EB ₁₁₂	16.7	X	220.66936	318.58951	175.94233	9.15059	0.1384451	0.18311371	3.0712993	21	9 20.9	21.5
398994 2013 EM ₁₁₂	15.4	X	81.87780	182.77210	103.09407	11.97714	0.0116568	0.18161768	3.0881423	21	10 27.9	19.9
398995 2013 EN ₁₂₀	15.8	X	129.83345	287.14015	5.26468	10.90675	0.0760197	0.19321310	2.9633185	21	12 31.8	20.5
398996 2013 EM ₁₂₁	16.2	X	40.93371	163.71260	188.88446	10.78711	0.1302458	0.18690828	3.0295888	21	12 10.6	20.5
398997 2013 EQ ₁₂₈	15.7	X	193.79768	27.69746	85.70406	28.27574	0.1633272	0.17081076	3.2170605	21	7 31.6	21.3
398998 2013 EB ₁₄₇	16.8	X	43.44692	281.19090	29.23099	6.49549	0.1406625	0.17907908	3.1172585	21	10 22.4	21.0
398999 2013 FS ₁	15.8	X	7.54485	273.81550	101.06091	12.49776	0.1022421	0.19012389	2.9953317	21	11 21.3	19.7
399000 2013 FV ₁₄	16.0	X	155.66562	169.52902	119.99433	14.01441	0.0983936	0.19949743	2.9007559	21	—	—
399001 2013 FE ₁₉	16.9	X	306.69875	33.27485	173.47916	2.36859	0.0828757	0.22592823	2.6698634	21	1 3.0	20.6
399002 2013 FC ₂₃	16.4	X	148.27238	351.72921	0.59626	9.91374	0.0618262	0.22117080	2.7080137	21	1 10.2	20.3
399003 2013 FM ₂₆	16.9	X	61.46896	96.02152	116.55201	7.50362	0.0692089	0.27215711	2.3582486	21	7 2.5	19.6
399004 2013 GW ₃	16.0	X	328.53743	200.90988	181.55792	9.62092	0.0433180	0.17518617	3.1632694	21	9 27.7	20.2
399005 2013 GZ ₈	16.1	X	20.72341	169.28576	181.18157	14.17711	0.0538483	0.18068987	3.0987046	21	11 1.7	20.4
399006 2013 GX ₉	15.5	X	249.46060	296.58150	176.89228	17.91172	0.0933730	0.18060023	3.0997299	21	10 2.9	20.0
399007 2013 GV ₁₀	15.2	X	58.03779	285.82210	23.98521	9.82936	0.1049771	0.17156059	3.2076800	21	11 1.8	19.8
399008 2013 GH ₁₁	15.9	X	179.43961	136.06742	36.46998	8.14519	0.0986000	0.17342305	3.1846730	21	9 29.9	20.9
399009 2013 GT ₁₂	16.3	X	232.60059	117.92428	123.61984	14.24257	0.0790760	0.21078390	2.7962613	21	—	—
399010 2013 GJ ₁₆	15.9	X	333.62090	12.33390	35.62018	9.24633	0.0825958	0.18959542	3.0008951	21	11 6.6	19.6
399011 2013 GF ₁₉	15.6	X	66.26793	174.41143	138.98841	12.49150	0.1124790	0.18104264	3.0946780	21	11 23.2	20.2
399012 2013 GM ₂₂	16.7	X	182.36842	117.71770	195.65413	2.23045	0.0988195	0.21413780	2.7669872	21	1 2.9	20.9
399013 2013 GE ₂₇	15.8	X	158.09764	171.67588	42.49821	11.01013	0.0653326	0.17802804	3.1295155	21	10 27.1	20.5
399014 2013 GU ₂₇	16.3	X	208.66388	173.95625	142.22542	15.18189	0.1465669	0.22685374	2.6625969	21	1 30.8	20.6
399015 2013 GA ₃₃	16.9	X	93.13877	254.14813	214.25660	8.26619	0.0722626	0.24266224	2.5456650	21	3 23.5	20.2
399016 2013 GM ₃₅	15.1	X	112.65611	169.45568	85.12955	19.59979	0.1083046	0.17153179	3.2003090	21	11 5.5	20.3
399017 2013 GH ₃₈	16.2	X	81.85588	299.27896	29.28892	12.14483	0.0286228	0.18960696	3.0007733	21	12 15.3	20.6
399018 2013 GO ₄₈	16.4	X	200.42766	195.06939	114.72863	4.77781	0.1206993	0.21904338	2.7255195	21	1 16.9	20.5
399019 2013 GT ₅₅	17.0	X	128.85252	37.62503	59.97952	7.10485	0.0930140	0.25437755	2.4668923	21	4 30.6	20.3
399020 2013 GZ ₅₅	16.0	X	81.89985	281.44365	14.32571	10.62624	0.1767538	0.17472801	3.1687966	21	11 19.9	21.0
399021 2013 GH ₅₉	16.9	X	344.23525	98.69171	187.12800	4.85523	0.0982779	0.26013306	2.4303698	21	6 10.0	19.4
399022 2013 GT ₇₁	16.7	X	101.94734	278.67958	9.89819	0.48185	0.1595059	0.17455204	3.1709259	21	12 1.6	21.8
399023 2013 GB ₈₃	16.6	X	201.57612	85.05802	202.44202	3.81835	0.0394833	0.21171529	2.7880543	21	—	—
399024 2013 GG ₈₅	16.2	X	144.74684	184.36390	131.89544	13.55489	0.1680190	0.19726882	2.9225622	21	—	—
399025 2013 GV ₉₁	15.7	X	163.76692	351.10494	120.41739	9.79163	0.1679596	0.17354149	3.1832238	21	10 15.7	20.9
399026 2013 GD ₉₂	15.6	X	162.15239	320.50555	246.72351	13.91559	0.2071408	0.17424148	3.1746926	21	10 18.4	21.2
399027 2013 GG ₁₁₉	16.2	X	254.72689	309.53625	187.86304	11.54057	0.0318226	0.18030733	3.1030859	21	11 16.7	20.6
399028 2013 GX ₁₂₅	16.0	X	108.79448	141.74640	176.30144	12.59355	0.0398118	0.18870873	3.10102880	21	—	—
399029 2013 GT ₁₃₄	16.0	X	80.00228	168.13702	135.36615	6.87695	0.1664122	0.17180764	3.2046042	21	11 29.6	20.9
399030 2013 HK ₄	16.2	X	194.02091	285.89212	72.16297	10.79405	0.0431434	0.23932262	2.5692925	21	3 10.7	20.0
399031 2013 HM ₁₃	16.6	X	259.91491	140.63979	163.39387	17.81331	0.2209216	0.23529524	2.5985273	21	2 25.7	20.7
399032 2013 HK ₁₈	16.5	X	110.54905	232.69409	64.08765	1.04351	0.1611601	0.18005628	3.1059696	21	12 19.6	21.5
399033 2013 HT ₂₂	16.4	X	354.53646	277.13572	316.96595	9.96230	0.1548994	0.24345289	2.5401504			

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
399041 2013 JA ₄	15.7 ^m	X	211.65996	350.23026	198.71493	17.19415	0.1741079	0.18237049	3.0796380	21	11 13.9	20.7
399042 2013 JL ₅	15.7	X	110.89989	201.88322	87.30515	13.87155	0.1197528	0.18572400	3.0424541	21	12 9.9	20.5
399043 2013 JZ ₁₇	18.3	X	201.17963	230.09054	210.23503	21.83449	0.0822162	0.38028448	1.8868193	21	6 24.4	21.1
399044 2013 JF ₃₃	15.1	X	112.24650	152.17106	122.67459	15.66874	0.2598806	0.17618555	3.1512959	21	12 4.4	20.7
399045 2013 JJ ₄₅	16.1	X	253.60201	190.02354	105.72010	15.45424	0.1352756	0.21932831	2.7231585	21	2 22.6	20.5
399046 2013 JU ₆₁	15.9	X	101.04045	114.05741	214.44008	9.15138	0.0704237	0.18204496	3.0833082	21	—	—
399047 2013 KZ ₃	15.9	X	86.56033	84.78569	219.25121	11.95161	0.0653693	0.17027284	3.2238324	21	11 24.5	20.6
399048 2013 KB ₄	16.7	X	253.66974	46.78157	198.51089	9.12135	0.0567281	0.21944683	2.7221779	21	—	—
399049 2013 KS ₁₇	16.0	X	104.32485	127.31660	176.63245	19.91320	0.1741006	0.17160309	3.2071503	21	12 22.1	21.5
399050 2013 LF	17.2	X	326.48148	159.35197	88.43172	3.75939	0.1625285	0.23557657	2.5964581	21	3 11.6	20.3
399051 2013 LA ₂₈	16.5	X	174.44216	260.26946	172.68855	14.03540	0.0346620	0.24418984	2.5350371	21	5 20.7	20.2
399052 2013 LV ₃₄	15.3	X	127.29711	152.93112	147.53924	11.92845	0.0564361	0.17842532	3.1248683	21	—	—
399053 2013 PD ₅₄	16.6	X	155.35916	34.50260	343.27379	8.54098	0.0674183	0.18970399	2.9997500	21	2 23.0	21.0
399054 2013 QP ₅₉	17.0	X	223.77864	29.30252	11.41921	3.28701	0.1881191	0.21962011	2.7207458	21	5 26.2	21.3
399055 2013 TL ₄₅	17.1	X	12.72270	91.95012	245.27964	1.07490	0.1092613	0.23372871	2.6101252	21	8 18.7	19.9
399056 2013 WN ₆₉	16.9	X	274.69142	12.68979	30.98211	3.48933	0.0784260	0.22579725	2.6708958	21	8 11.9	20.4
399057 2013 YX ₁₅	16.0	X	340.77851	269.21423	108.36151	17.58798	0.2092523	0.22745678	2.6578887	21	10 29.1	18.8
399058 2013 YH ₁₉	16.9	X	123.71174	232.09448	312.35581	3.55372	0.0550116	0.21210876	2.7846053	21	8 13.7	21.0
399059 2013 YF ₂₈	17.7	X	334.58150	152.41900	339.67722	0.65412	0.1260588	0.26024671	2.4296621	21	—	—
399060 2013 YV ₂₉	17.0	X	229.97695	272.57106	268.95266	3.74228	0.2414410	0.23121737	2.6289908	21	11 20.0	21.0
399061 2013 YF ₃₁	16.4	X	293.92311	225.26450	235.38921	8.87759	0.0978416	0.23428069	2.6060238	21	11 23.4	19.2
399062 2013 YW ₈₀	16.5	X	300.25446	349.83234	103.64247	12.66763	0.1378874	0.23680907	2.5874413	21	11 24.1	19.4
399063 2013 YA ₈₅	17.0	X	280.37977	64.60384	71.81921	6.16609	0.1833274	0.23928813	2.5695394	21	12 10.1	19.8
399064 2013 YQ ₁₃₉	16.4	X	220.81129	183.98438	304.77083	6.95216	0.1506954	0.21559436	2.7545106	21	9 12.1	20.8
399065 2014 BQ ₂	16.5	X	298.90731	140.30307	308.07445	9.47033	0.0684283	0.23082410	2.6319761	21	11 13.5	19.9
399066 2014 BK ₂₃	16.0	X	257.82108	127.55125	332.91680	10.89149	0.1627515	0.22176208	2.7031980	21	9 16.9	19.8
399067 2014 BG ₃₇	18.0	X	69.78253	4.67526	143.5132	6.30250	0.1631709	0.29180199	2.2511817	21	4 25.4	20.1
399068 2014 BQ ₄₆	17.1	X	314.88574	78.46149	136.25634	6.59590	0.1064239	0.27075849	2.3663628	21	1 9.9	20.1
399069 2014 BL ₅₉	17.0	X	39.13652	206.00977	144.71113	1.66485	0.0372974	0.22459200	2.6804427	21	11 29.8	20.6
399070 2014 CW ₁₁	16.7	X	258.62815	327.19922	131.32392	10.29026	0.0741068	0.21356678	2.7719172	21	10 4.9	20.6
399071 2014 CX ₁₉	16.3	X	298.27767	287.61884	161.36819	15.42751	0.0632143	0.22963635	2.6410440	21	11 20.5	19.9
399072 2014 CZ ₂₀	16.4	X	232.01882	101.66494	33.25456	9.37383	0.1735515	0.21662822	2.7457397	21	10 4.5	20.5
399073 2014 CX ₂₁	17.3	X	293.49556	274.59926	299.43102	1.16867	0.1400932	0.26197627	2.4189566	21	—	—
399074 2014 CX ₂₂	16.3	X	261.51857	22.47494	142.12716	15.91647	0.1377512	0.23250651	2.6192642	21	12 24.4	19.8
399075 2014 CJ ₂₃	15.4	X	168.01622	3.99334	132.18139	16.84150	0.0364305	0.18719993	3.0264414	21	8 2.2	19.8
399076 2014 DC ₅	16.6	X	276.21639	130.52331	11.45967	5.98419	0.0623502	0.22802308	2.6534863	21	12 24.1	20.0
399077 2014 DB ₉	17.2	X	319.75553	18.80375	147.67300	5.80966	0.1354415	0.25659399	2.4526659	21	—	—
399078 2014 DS ₁₂	15.4	X	0.94298	221.75335	63.18837	11.09982	0.1457616	0.17728831	3.1382146	21	7 10.3	19.1
399079 2014 DV ₁₂	15.9	X	253.88547	274.68502	92.38311	9.56347	0.0173552	0.17311068	3.1885029	21	6 5.3	20.3
399080 2014 DO ₁₃	16.2	X	105.34396	90.28875	100.17535	8.46554	0.1315708	0.18191249	3.0848049	21	8 9.2	20.8
399081 2014 DQ ₁₃	17.2	X	44.04110	144.66906	21.36028	10.18412	0.0901041	0.28693624	2.2765600	21	3 26.6	19.4
399082 2014 DZ ₁₃	15.7	X	132.90738	51.69068	93.64018	12.63817	0.1517106	0.17953628	3.1119640	21	7 13.3	20.7
399083 2014 DM ₁₄	16.5	X	227.69911	110.32362	94.59255	11.88868	0.1677486	0.23050376	2.6344141	21	12 25.9	20.1
399084 2014 DS ₁₄	16.8	X	242.91991	77.09670	73.35958	5.88667	0.1292924	0.22254166	2.6968813	21	11 10.6	20.6
399085 2014 DU ₁₄	15.6	X	38.89127	123.34551	123.09647	16.88716	0.1880272	0.17219663	3.1997763	21	7 30.7	19.4
399086 2014 DZ ₁₄	16.1	X	151.47622	247.05719	34.76219	14.78670	0.1002068	0.23040413	2.6351735	21	—	—
399087 2014 DE ₂₀	17.2	X	340.37493	321.00204	156.13775	4.61252	0.0325817	0.24091502	2.5579583	21	—	—
399088 2014 DC ₂₁	17.4	X	242.89258	223.48520	43.83063	1.85067	0.1521314	0.25688175	2.4508339	21	—	—
399089 2014 DT ₂₈	16.6	X	202.77567	189.59188	8.63321	12.62086	0.0853576	0.21952616	2.7215221	21	11 24.4	20.8
399090 2014 DU ₃₁	16.7	X	287.73153	117.98855	101.94927	6.88456	0.0853844	0.25381288	2.4705498	21	—	—
399091 2014 DG ₃₂	13.8	X	13.38676	264.49676	102.57536	6.19416	0.0594551	0.08304426	5.2031096	21	10 28.6	20.4
399092 2014 DA ₃₃	15.9	X	41.27236	169.55952	88.41686	5.73600	0.0942227	0.18148117	3.0896906	21	8 7.7	19.9
399093 2014 DL ₃₄	17.5	X	217.45571	99.14408	137.87030	6.54163	0.2685478	0.23308246	2.6149476	21	—	—
399094 2014 DM ₃₅	16.3	X	296.79252	287.71876	150.84139	13.77618	0.1391488	0.21973775	2.7197747	21	10 25.8	19.7
399095 2014 DR ₃₇	16.6	X	145.71437	89.98937	144.07891	9.67666	0.1040053	0.21200541	2.7855102	21	11 13.9	21.0
399096 2014 DZ ₃₇	16.9	X	161.23612	27.43431	156.39885	17.61092	0.0733321	0.20172310	2.8793798	21	9 27.9	21.3
399097 2014 DS ₃₈	16.6	X	200.56513	70.55506	153.66685	13.60505	0.1172606	0.22953242	2.6418411	21	12 26.1	20.7
399098 2014 DY ₄₁	16.9	X	332.51142	340.23568	114.33456	7.54500	0.1782073	0.23970004	2.5665948	21	—	—
399099 2014 DR ₄₆	17.7	X	13.62003	321.57952	249.74104	1.98460	0.1142989	0.28507400	2.8646637	21	4 4.9	19.8
399100 2014 DF ₄₇	16.4	X	155.35445	165.97331	344.72856	8.54478	0.0727971	0.18310793	3.0713640	21	8 9.2	21.0
399101 2014 DJ ₄₈	18.3	X	75.45408	218.47842	20.54396	0.91655	0.1745921	0.31436868	2.1421171	21	9 20.8	20.9
399102 2014 DG ₅₃	18.0	X	1.49002	102.98978	148.88322	2.56990	0.1623943	0.29244342	2.2478887	21	5 14.3	19.6
399103 2014 DC ₅₆	16.4	X	170.63528	57.42471	67.85047	2.45212	0.1345877	0.18300778	3.0724844	21	7 24.1	21.4
399104 2014 DE ₅₈	16.3	X	57.03808	230.98238	14.42237	14.41008	0.1374234	0.17749662	3.1357589	21	8 25.1	20.7
399105 2014 DM ₆₁	16.8	X	139.01023	237.04279	87.32661	4.57318	0.0771557	0.23996416	2.5647111	21	—	—
399106 2014 DU ₆₂	18.1	X	350.07449	96.63329	62.96685	2.30200	0.1356489	0.26086046	2.4258496	21	—	—
399107 2014 DU ₇₂	16.7	X	295.93245	145.42098	84.48049	6.08125	0.1709473	0.25913818	2.4365862	21	1 2.1	20.2
399108 2014 DH ₇₅												

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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>
399121 2014 DG ₁₂₄	17.2	X	324.38861	59.32863	143.96411	3.01924	0.1193661	0.26563275	2.3967071	21	1 6.5	20.0
399122 2014 DY ₁₃₁	16.3	X	334.48503	223.77539	142.60543	2.91642	0.0764583	0.19926936	2.9029687	21	9 17.5	19.8
399123 2014 DU ₁₃₂	16.3	X	37.23647	318.51718	345.96589	9.64711	0.0836728	0.19575766	2.9375834	21	9 28.1	20.2
399124 2014 DL ₁₃₃	17.9	X	6.51386	24.15357	164.57166	2.58386	0.1243007	0.27654029	2.3332634	21	2 17.0	19.9
399125 2014 DH ₁₃₄	17.8	X	48.59184	4.60887	114.19213	2.28094	0.1415399	0.27214808	2.3583008	21	1 25.6	19.9
399126 2014 DY ₁₃₉	17.4	X	254.39597	210.84686	42.95681	0.70331	0.1732247	0.25336261	2.4734760	21	—	—
399127 2014 DS ₁₄₀	17.1	X	79.41911	91.04784	232.16248	3.72649	0.0275307	0.22052872	2.7132675	21	12 13.2	20.7
399128 2014 DL ₁₄₁	17.8	X	351.35950	216.98312	54.78596	5.33673	0.2136634	0.28963161	2.2623903	21	5 17.7	18.9
399129 2014 EB	16.2	X	265.68880	163.90221	88.74029	27.57897	0.1883625	0.24271181	2.5453183	21	1 1.1	20.3
399130 2014 EW ₁	17.1	X	257.23005	263.01773	256.24370	2.98164	0.1535085	0.23077520	2.6323479	21	12 7.3	20.4
399131 2014 EB ₅	17.1	X	332.26744	148.18451	55.51242	7.19694	0.0793257	0.27268460	2.3552064	21	1 24.6	20.0
399132 2014 EK ₇	16.6	X	43.91038	355.72762	7.25599	6.38639	0.0354483	0.22233979	2.6985135	21	12 20.2	20.4
399133 2014 ES ₁₀	16.7	X	153.47220	104.74406	12.67095	16.47935	0.2036666	0.17732442	3.1377886	21	7 2.1	22.2
399134 2014 ES ₁₅	16.6	X	40.04082	132.48752	176.24756	5.81176	0.0242028	0.20057595	2.8903481	21	10 3.0	20.3
399135 2014 EK ₁₇	17.8	X	355.52504	213.48586	30.89657	7.11329	0.0968241	0.29340341	2.2429828	21	4 23.3	19.9
399136 2014 EX ₁₇	17.2	X	249.19589	191.38643	84.49398	5.86220	0.1891617	0.26074306	2.4265778	21	1 13.4	21.2
399137 2014 EG ₁₈	16.6	X	6.05448	340.48403	83.23397	7.14548	0.0342151	0.21739993	2.7392381	21	11 18.6	20.2
399138 2014 EH ₁₈	16.3	X	215.36767	64.94157	141.61288	12.71686	0.1296532	0.22678236	2.6631556	21	12 19.3	20.4
399139 2014 EK ₂₀	17.8	X	348.14288	103.17871	43.33587	1.97156	0.1406321	0.25811791	2.4430027	21	—	—
399140 2014 ES ₂₀	13.6	X	311.00638	42.50121	21.87028	7.40719	0.0729041	0.08491024	5.1265988	21	10 11.6	20.2
399141 2014 ES ₂₁	16.1	X	57.24304	93.33693	145.89254	10.83904	0.0661969	0.18018920	3.1044420	21	7 30.7	20.3
399142 2014 EF ₃₁	15.6	X	160.37648	328.11136	138.73766	8.04804	0.0387182	0.16850720	2.2463131	21	6 17.7	20.4
399143 2014 ED ₃₄	16.4	X	172.14428	291.01393	15.68026	15.13003	0.1350579	0.24372840	2.5382358	21	—	—
399144 2014 EP ₃₇	15.7	X	176.64249	6.66960	129.33910	9.96216	0.0707664	0.18706404	3.0279068	21	8 12.6	20.3
399145 2014 ET ₃₈	16.9	X	313.68023	111.07239	118.17512	6.87396	0.1277151	0.26849910	2.3796193	21	1 25.6	20.1
399146 2014 EQ ₃₉	16.5	X	160.80418	151.84166	79.29513	9.32340	0.1557748	0.20884478	2.8135435	21	11 21.9	21.2
399147 2014 ET ₃₉	17.9	X	44.81568	137.86665	75.55342	8.23752	0.0811419	0.29669287	2.2263733	21	6 6.6	19.8
399148 2014 EP ₄₅	15.8	X	122.14037	147.08806	9.58490	11.36993	0.0438991	0.17800885	3.1297404	21	7 6.7	20.5
399149 2014 EE ₄₅	16.9	X	163.38337	165.13410	58.60308	4.90379	0.1251586	0.21333936	2.7738867	21	11 15.7	21.2
399150 2014 ES ₅₀	17.8	X	308.54832	74.04709	134.31537	3.53480	0.1843952	0.26185247	2.4197190	21	—	—
399151 2014 EQ ₅₀	15.2	X	24.50995	357.62867	271.11588	3.74558	0.0809564	0.17634990	3.1493377	21	7 23.8	19.3
399152 2014 ET ₅₁	16.5	X	35.65833	269.17962	271.08104	7.91326	0.0992530	0.28172555	2.3045452	21	3 26.8	19.0
399153 2014 FL ₄	13.4	X	345.58433	333.03838	67.61789	9.94821	0.0708168	0.08175505	5.2576662	21	10 30.9	20.0
399154 2014 FB ₆	16.2	X	154.35284	61.12269	180.73341	14.20074	0.1378210	0.21226996	2.7831954	21	11 30.1	20.9
399155 2014 FC ₆	18.1	X	342.99383	29.68674	168.55606	1.53744	0.1239684	0.26980601	2.3719287	21	1 24.1	20.8
399156 2014 FB ₁₁	16.5	X	248.52142	189.11399	358.94093	5.41438	0.0767261	0.23110540	2.6298400	21	—	—
399157 2014 FE ₁₁	16.1	X	112.20168	264.22065	343.23756	13.44952	0.1381222	0.20531802	2.8456709	21	10 20.6	20.8
399158 2014 FG ₁₇	16.0	X	55.15645	292.74761	351.93439	13.21284	0.1774905	0.18838961	3.0136865	21	10 8.5	20.2
399159 2014 FH ₁₇	15.9	X	205.55576	233.25852	180.65478	27.40265	0.2235456	0.17463585	3.1699113	21	5 29.6	21.8
399160 2014 FG ₁₈	17.1	X	263.70554	271.71998	325.93451	2.81489	0.1641049	0.22532353	2.6746380	21	11 23.4	20.2
399161 2014 FO ₂₅	16.7	X	259.63408	300.51640	325.06060	7.91536	0.0909268	0.26174501	2.4203812	21	1 17.0	20.1
399162 2014 FM ₂₉	15.5	X	31.08094	241.31551	19.76460	17.59596	0.1494781	0.17314024	3.1881400	21	8 9.2	19.7
399163 2014 FF ₃₄	17.8	X	2.74475	108.24516	72.67203	2.00420	0.1627807	0.27163835	2.3612501	21	1 26.6	19.8
399164 2014 FR ₃₅	16.5	X	333.55456	17.52450	112.07321	8.22535	0.1496830	0.24342088	2.5403731	21	—	—
399165 2014 FS ₃₅	17.3	X	347.58806	83.94463	102.00154	5.32801	0.1546145	0.26496149	2.4007533	21	1 10.9	19.9
399166 2014 FT ₃₅	16.9	X	237.77766	244.51411	20.80749	27.35363	0.2528893	0.24299119	2.5437670	21	—	—
399167 2014 FG ₃₆	16.2	X	225.45912	273.24824	184.31405	9.38431	0.0539292	0.18166934	3.0875568	21	8 17.5	20.8
399168 2014 FL ₃₆	17.6	X	347.07671	61.36839	93.49980	3.56947	0.1722177	0.25262247	2.4783049	21	—	—
399169 2014 FA ₃₇	17.9	X	63.71595	183.02300	27.38818	5.07094	0.0772166	0.29872173	2.2162811	21	7 4.8	20.3
399170 2014 FJ ₃₇	18.0	X	331.93624	168.85474	51.83786	2.01113	0.1343998	0.26499174	2.4005706	21	2 8.3	20.7
399171 2014 FN ₃₇	17.6	X	62.06418	142.72795	351.41948	2.10914	0.0911656	0.27213969	2.3583493	21	3 11.3	19.9
399172 2014 FK ₃₉	15.2	X	24.72624	204.14837	86.90958	10.19780	0.0748893	0.17825609	2.1268457	21	8 27.1	19.4
399173 2014 FR ₄₁	17.2	X	213.70966	148.27433	106.53534	8.37236	0.2691768	0.22559886	2.6724614	21	—	—
399174 2014 FW ₄₇	15.7	X	94.30997	91.44306	105.49572	10.89190	0.1592564	0.17338872	3.1850933	21	8 8.0	20.4
399175 2014 FX ₄₇	17.2	X	330.89800	284.85382	248.01780	7.72952	0.1453901	0.25677124	2.4515371	21	—	—
399176 2014 FR ₄₈	17.2	X	12.77977	12.60865	264.76490	4.33230	0.1893504	0.30080080	2.2060570	21	7 29.4	18.5
399177 2014 FS ₄₈	17.5	X	342.06290	295.77709	278.68663	4.11606	0.1657420	0.27077636	2.3662587	21	2 6.4	20.0
399178 2014 FZ ₄₈	16.1	X	110.72723	12.03903	196.26121	19.09970	0.1687046	0.18283761	3.0743905	21	9 4.9	21.1
399179 2014 FE ₄₉	16.6	X	228.37272	347.11720	225.49953	9.42190	0.2072450	0.22689689	2.6622593	21	12 29.3	20.6
399180 2014 FY ₄₉	15.9	X	188.34255	231.71159	288.21942	8.27693	0.1165291	0.19736175	2.9216446	21	9 17.8	20.6
399181 2014 FE ₅₀	17.8	X	35.56729	185.60524	53.54513	6.85170	0.1490389	0.30045842	2.2077326	21	7 11.9	19.7
399182 2014 FP ₅₂	16.1	X	110.20789	125.79708	212.25310	14.32463	0.0628076	0.22230268	2.6988138	21	—	—
399183 2014 FC ₅₅	16.5	X	60.91846	81.62882	192.17845	16.41815	0.1115517	0.17931808	3.1144880	21	9 24.3	20.7
399184 2014 FG ₅₅	17.7	X	342.43075	127.48049	142.25860	4.44625	0.1241351	0.29076088	2.2565523	21	5 8.1	19.7
399185 2014 FK ₅₇	15.9	X	152.74873	116.80031	63.51854	10.00294	0.0843648	0.18831440	3.0144890	21	9 16.3	20.6
399186 2014 GS ₂	17.5	X	294.13481	140.26867	129.91314	3.61054	0.0831992	0.27014736	2.3699303	21	3 3.0	20.5
399187 2014 GP ₅	17.2	X	234.86704	125.21832	186.65851	3.37929	0.1536838	0.25969990	2.4330714	21	2 13.4	21.1
399188 2014 GR ₅	16.5	X	62.56296	240.32689	39.59084	3.92728	0.0716540	0.18538306	3.0461832	21	10 1.2	20.7
399189 2014 GS ₅	16.9	X	201.54126	183.03154	32.36684	10.22180	0.0162909	0.21622603	2.7491434	21	12 24.3	20.8
399190 2014 GU ₆	18.2	X	330.80585	83.57547	152.94524	1.65449	0.1430808	0.27345468	2.3507827	21	2 24.5	21.0
399191 2014 GE ₇	17.9	X	37.85615	352.04800	211.13790	3.58616	0.0689575	0.28942578	2.2634865	21	5 8.4	20.0
399192 2014 GG ₈	16.1	X	287.28336	229.22602	78.63112	14.62536	0.2839152	0.27149540	2.3620789	21	3 26.3	20.0
399193 2014 GS ₈	17.2	X	261.06035	87.47280	172.86828	5.77531	0.1407446	0.26177635	2.4201881	21	1 6.4	20.9
399194 2014 GZ ₈	17.5	X	282.75469	12								

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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>
399201 2014 <i>GL</i> ₂₅	16.6	X	201.02478	300.74448	352.00597	13.03538	0.2271012	0.23922392	2.5699992	21	—	—
399202 2014 <i>GG</i> ₂₆	17.4	X	113.08023	199.93252	228.61053	5.78936	0.0912927	0.26465073	2.4026323	21	2 24.0	20.5
399203 2014 <i>GN</i> ₂₆	17.1	X	185.03261	250.16015	0.26949	2.32311	0.0250711	0.22047751	2.7136876	21	—	—
399204 2014 <i>GO</i> ₂₇	16.3	X	30.44317	179.98373	142.21815	1.75762	0.1766001	0.18101219	3.0950250	21	10 24.9	20.0
399205 2014 <i>GS</i> ₂₇	16.6	X	197.78076	54.37596	204.19589	13.31352	0.1653466	0.22340863	2.6898997	21	—	—
399206 2014 <i>GX</i> ₂₇	17.9	X	2.73285	42.91703	126.90497	2.31074	0.1371357	0.26055556	2.4277418	21	1 16.8	20.2
399207 2014 <i>GZ</i> ₂₇	17.3	X	353.75323	113.26400	28.39258	1.29587	0.0314577	0.24429503	2.5343093	21	—	—
399208 2014 <i>GL</i> ₂₈	16.2	X	98.22154	24.05244	203.18211	17.39933	0.1457547	0.17715633	3.1397731	21	9 12.5	21.2
399209 2014 <i>GT</i> ₂₈	17.2	X	245.92402	276.14368	46.12145	3.83744	0.1375860	0.26481363	2.4016469	21	3 11.8	20.8
399210 2014 <i>GE</i> ₂₉	15.8	X	11.49128	275.57200	44.67502	10.78233	0.0916117	0.17711720	3.1402355	21	9 16.9	19.9
399211 2014 <i>GF</i> ₂₉	16.4	X	255.19939	28.69736	44.83994	10.94869	0.0550185	0.18117164	3.0932089	21	8 30.8	20.9
399212 2014 <i>GE</i> ₃₀	17.6	X	323.63936	283.69139	32.60587	6.39517	0.1385194	0.29492184	2.2352774	21	6 10.9	19.7
399213 2014 <i>GH</i> ₃₁	15.9	X	182.68803	198.15949	29.90205	13.54027	0.0798399	0.21229357	2.7829890	21	12 9.6	20.3
399214 2014 <i>GS</i> ₃₃	18.0	X	95.20707	357.71420	168.20162	4.25990	0.1104452	0.29584429	2.2306285	21	6 20.9	20.7
399215 2014 <i>GT</i> ₃₃	15.4	X	79.78925	233.81735	46.31057	10.93021	0.1650775	0.18703373	3.0282340	21	11 2.9	19.8
399216 2014 <i>GT</i> ₃₆	15.5	X	103.41096	143.40383	54.18878	20.67757	0.0393468	0.17463634	3.1699054	21	8 10.0	20.4
399217 2014 <i>GZ</i> ₃₈	15.8	X	52.84994	148.70800	95.43396	6.00716	0.0850482	0.17273891	3.1930760	21	8 4.3	20.0
399218 2014 <i>GF</i> ₄₁	17.5	X	294.61156	311.13491	4.27409	6.92237	0.1955242	0.28059774	2.3107162	21	4 13.9	20.6
399219 2014 <i>GK</i> ₄₁	16.5	X	80.20463	19.81004	278.04637	2.16350	0.1340595	0.19352864	2.9600966	21	11 20.9	21.0
399220 2014 <i>GA</i> ₄₂	16.8	X	7.28927	238.09102	213.30468	8.15365	0.1365664	0.23378009	2.6097428	21	—	—
399221 2014 <i>GF</i> ₄₂	15.7	X	189.64712	98.90972	24.15667	17.00325	0.0459918	0.17738159	3.1371144	21	8 18.9	20.6
399222 2014 <i>GJ</i> ₄₂	17.5	X	45.49061	257.03579	267.79881	1.41286	0.1025946	0.27656641	2.3331165	21	3 26.9	19.9
399223 2014 <i>GK</i> ₄₂	17.8	X	211.56707	35.63585	17.51731	5.73650	0.0380854	0.29490674	2.2353537	21	6 3.9	20.7
399224 2014 <i>GP</i> ₄₂	17.9	X	24.94502	224.40071	28.84953	6.15226	0.0766509	0.29707235	2.2244769	21	7 4.7	20.2
399225 2014 <i>GQ</i> ₄₂	17.5	X	270.42792	247.13978	28.21868	6.84647	0.1675519	0.25766786	2.4458466	21	2 4.9	21.4
399226 2014 <i>GE</i> ₄₃	16.5	X	163.34611	194.20006	36.86952	2.43818	0.0162602	0.20421624	2.8558969	21	11 25.4	20.4
399227 2014 <i>GN</i> ₄₅	15.3	X	112.27191	144.24939	37.08237	17.13507	0.1591271	0.17533085	3.1615289	21	8 14.1	20.5
399228 2014 <i>GH</i> ₄₆	16.5	X	126.14894	153.26785	43.35331	18.89560	0.0821769	0.18013490	3.1050657	21	9 12.6	21.5
399229 2014 <i>GT</i> ₄₇	17.4	X	341.56239	185.45125	74.29393	6.54502	0.1399839	0.28153381	2.3055914	21	4 20.4	19.6
399230 2014 <i>GV</i> ₄₇	17.3	X	107.22164	53.67425	54.16947	2.08515	0.1235857	0.27993722	2.3143495	21	4 17.8	19.9
399231 2014 <i>HA</i>	15.7	X	78.56698	186.24457	41.07284	18.05777	0.1294405	0.17412942	3.1760545	21	9 1.3	20.5
399232 2014 <i>HQ</i>	16.6	X	105.35097	133.69073	123.28781	5.37146	0.1470633	0.19007093	2.9958881	21	11 1.2	21.3
399233 2014 <i>HT</i>	15.8	X	70.43899	241.82169	54.13817	20.28673	0.1786766	0.18233273	3.0800631	21	11 13.1	20.2
399234 2014 <i>HV</i>	16.8	X	309.81111	229.73219	51.38144	6.64888	0.0734014	0.27306802	2.3530012	21	4 11.0	19.6
399235 2014 <i>HY</i> ₁	16.1	X	122.07635	114.11197	132.24859	12.76158	0.1713638	0.18865001	3.0109127	21	11 7.9	21.2
399236 2014 <i>HW</i> ₃	17.1	X	148.02340	334.63545	20.93714	6.08822	0.1494542	0.24582615	2.5237751	21	1 19.5	20.7
399237 2014 <i>HU</i> ₈	17.3	X	346.18913	26.72745	90.14812	3.85317	0.1676398	0.24008150	2.5638754	21	—	—
399238 2014 <i>HA</i> ₉	17.3	X	271.68411	105.79167	185.90707	6.25126	0.092312	0.26560508	2.3968736	21	2 28.5	20.6
399239 2014 <i>HH</i> ₉	17.8	X	347.39507	101.09534	172.77662	4.11671	0.1417281	0.28730959	2.2745874	21	5 22.5	19.7
399240 2014 <i>HO</i> ₁₀	17.4	X	185.37067	113.96332	191.32644	5.59080	0.1174265	0.23747979	2.5825671	21	—	—
399241 2014 <i>HL</i> ₁₂	17.0	X	226.84169	199.37210	83.92221	3.12248	0.0732605	0.24585679	2.5235655	21	1 6.1	20.5
399242 2014 <i>HH</i> ₁₃	16.7	X	266.82919	236.75604	49.03898	5.84106	0.0959833	0.26081928	2.4261050	21	2 20.5	20.1
399243 2014 <i>HR</i> ₁₃	17.7	X	10.41226	6.39869	173.19733	2.53348	0.1353530	0.26672605	2.3901533	21	2 11.7	20.0
399244 2014 <i>HG</i> ₁₉	17.5	X	266.27138	269.88442	26.24243	2.09858	0.1765411	0.26280303	2.4138807	21	2 23.3	21.2
399245 2014 <i>HA</i> ₂₃	16.6	X	152.29539	56.73012	85.58870	22.32144	0.1319583	0.17532302	3.1616230	21	8 4.8	22.6
399246 2014 <i>HJ</i> ₂₅	17.9	X	39.93042	334.47111	193.35799	2.16386	0.1043434	0.27474604	2.3434108	21	3 22.1	20.1
399247 2014 <i>HW</i> ₂₅	18.1	X	41.82407	95.14297	107.28893	1.76935	0.0375372	0.28590420	2.2820353	21	5 12.0	20.5
399248 2014 <i>HB</i> ₂₆	16.7	X	116.50665	150.70803	69.49147	2.26918	0.0907966	0.18360837	3.0657805	21	9 22.6	21.4
399249 2014 <i>HC</i> ₂₆	18.1	X	314.49332	79.18178	183.62287	2.32382	0.1779564	0.27034444	2.3687783	21	3 3.9	21.1
399250 2014 <i>HN</i> ₂₆	16.1	X	133.99166	359.71130	193.16845	17.85978	0.1526639	0.17721556	3.1390735	21	9 7.3	21.3
399251 2014 <i>HL</i> ₂₇	17.7	X	333.39270	143.52611	69.09670	2.18775	0.1244071	0.26450433	2.4035188	21	1 31.9	20.5
399252 2014 <i>HT</i> ₂₈	16.7	X	143.88182	143.94577	155.28513	3.82762	0.1809598	0.21739056	2.7393168	21	—	—
399253 2014 <i>HF</i> ₃₀	17.0	X	13.44617	26.65019	74.21272	5.42922	0.1111347	0.24185978	2.5512926	21	—	—
399254 2014 <i>HA</i> ₃₁	18.0	X	333.46556	242.77224	98.32597	5.07307	0.10107471	0.31163746	2.1546147	21	8 24.9	20.2
399255 2014 <i>HM</i> ₃₁	17.4	X	98.15082	310.62668	130.21429	5.67827	0.2042998	0.26750045	2.3855382	21	3 14.3	20.1
399256 2014 <i>HM</i> ₃₂	17.8	X	210.30174	226.77926	76.40417	3.00311	0.1636455	0.24238456	2.5476088	21	1 15.7	22.0
399257 2014 <i>HK</i> ₃₃	16.2	X	57.00208	274.57042	62.95140	10.40055	0.1783608	0.19770435	2.9182684	21	12 19.2	20.5
399258 2014 <i>HX</i> ₃₅	15.7	X	62.67455	239.51656	55.40549	17.29560	0.2231328	0.18196942	3.0841615	21	11 9.8	20.2
399259 2014 <i>HL</i> ₃₆	16.7	X	109.56008	198.45797	119.95295	5.28318	0.0650551	0.21512738	2.7584954	21	—	—
399260 2014 <i>HO</i> ₄₁	17.7	X	327.10748	73.04900	121.09584	2.34078	0.1262775	0.25905790	2.4370896	21	—	—
399261 2014 <i>HJ</i> ₄₂	16.0	X	145.32062	345.09929	202.38514	10.30409	0.0388262	0.18169822	3.0872296	21	9 6.6	20.6
399262 2014 <i>HN</i> ₄₃	17.2	X	258.99055	250.01777	86.07031	7.02131	0.1362463	0.27593751	2.3366602	21	4 13.2	20.6
399263 2014 <i>HY</i> ₄₆	17.3	X	349.52495	89.35329	166.56821	6.24031	0.0954785	0.28352634	2.2947768	21	5 4.2	19.6
399264 2014 <i>HZ</i> ₄₆	16.7	X	87.69240	114.31825	138.81369	5.37339	0.1471365	0.18201086	3.0836933	21	10 8.7	21.3
399265 2014 <i>HT</i> ₄₇	16.2	X	119.32909	178.10356	46.60448	10.88846	0.2099077	0.18593953	3.0401025	21	10 12.0	21.3
399266 2014 <i>HX</i> ₄₇	17.0	X	280.55329	297.12989	194.47902	9.43997	0.1450799	0.21900652	2.7258253	21	12 5.1	20.3
399267 2014 <i>HH</i> ₄₈	17.1	X	224.17349	152.26462	98.46847	5.11032	0.1714363	0.23259189	2.6186232	21	—	—
399268 2014 <i>HL</i> ₆₀	16.4	X	330.81977	256.15427	99.84789	3.94384	0.1056748	0.17860438	3.1227795	21	8 25.8	20.2
399269 2014 <i>HC</i> ₆₁	16.8	X	298.77077	253.49658	189.46313	10.32810	0.0674406	0.20456510	2.8526491	21	11 6.1	20.5
399270 2014 <i>HQ</i> ₆₉	16.8	X	112.66530	328.55845	67.63895	3.39882	0.0945709	0.25097939	2.4891095	21	1 17.9	19.8
399271 2014 <i>HK</i> ₇₃	15.9	X	88.60405	341.04217	187.33191	6.58777	0.0641096	0.15613800	3.4155736	21	6 12.1	20.8
399272 2014 <i>HE</i> ₇₄	17.5	X	300.48897	319.10113								

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
399281 2014 <i>HK</i> ₁₁₆	16.1	X	49.90923	227.44977	86.49415	9.86405	0.1264120	0.18706963	3.0278466	21	11 6.7	20.3
399282 2014 <i>HV</i> ₁₂₃	18.0	X	136.21739	297.17527	29.83972	20.46346	0.0847345	0.36771853	1.9295633	21	—	—
399283 2014 <i>HU</i> ₁₂₄	15.5	X	64.47892	136.12893	137.13853	12.49643	0.2148871	0.17635968	3.1492213	21	10 18.2	20.2
399284 2014 <i>HD</i> ₁₂₅	16.4	X	177.52995	146.81809	19.14794	6.78467	0.1183327	0.19106443	2.9854937	21	9 20.1	21.1
399285 2014 <i>HB</i> ₁₃₀	17.4	X	327.99889	139.02299	80.87359	6.30025	0.1475174	0.26727038	2.3869070	21	1 30.7	20.3
399286 2014 <i>HD</i> ₁₃₁	18.0	X	308.86545	327.99966	304.26645	0.76069	0.1688287	0.26897289	2.3768241	21	3 10.9	20.9
399287 2014 <i>HY</i> ₁₃₁	16.2	X	28.84303	128.40140	161.42565	3.22204	0.1616910	0.16873011	3.2434534	21	8 22.9	20.7
399288 2014 <i>HZ</i> ₁₃₁	18.0	X	343.43254	151.84874	137.01499	2.45158	0.2643933	0.28247692	2.3004568	21	5 20.9	19.3
399289 2014 <i>HR</i> ₁₄₃	17.5	X	39.33032	102.53246	52.67819	5.34411	0.0861593	0.27632620	2.3344684	21	3 4.6	19.9
399290 2014 <i>HS</i> ₁₄₃	17.0	X	39.66257	30.62149	52.54413	6.07470	0.1474674	0.25397041	2.4695281	21	—	—
399291 2014 <i>HB</i> ₁₄₆	17.8	X	8.49366	165.19876	43.75540	6.06090	0.1204841	0.27937647	2.3174454	21	3 26.6	20.0
399292 2014 <i>HW</i> ₁₄₆	18.4	X	354.23694	88.24410	153.90487	4.08175	0.1420548	0.27874466	2.3209459	21	4 16.5	20.4
399293 2014 <i>HF</i> ₁₅₁	15.8	X	215.78201	241.82528	205.39071	14.72109	0.0592905	0.17960911	3.1111227	21	7 21.9	20.7
399294 2014 <i>HS</i> ₁₅₃	18.2	X	70.85653	89.74282	58.63492	3.56808	0.1289538	0.28123717	2.3072124	21	4 21.7	20.4
399295 2014 <i>HX</i> ₁₅₅	18.4	X	9.39514	155.20266	123.50895	0.81633	0.1370747	0.29705645	2.2245563	21	7 19.7	19.9
399296 2014 <i>HE</i> ₁₆₀	18.0	X	347.89382	124.68216	154.53230	6.88940	0.2505084	0.28547663	2.2843133	21	5 19.7	19.4
399297 2014 <i>HL</i> ₁₆₈	17.8	X	28.74196	198.62387	68.04444	4.89826	0.1756032	0.29579645	2.2308691	21	8 19.5	19.6
399298 2014 <i>HZ</i> ₁₇₂	15.4	X	359.46933	264.60607	90.80405	10.35164	0.2028761	0.18010587	3.1053995	21	10 21.9	18.8
399299 2014 <i>HW</i> ₁₈₁	16.7	X	348.04382	62.18019	68.23000	9.07394	0.1335885	0.23904612	2.5712733	21	—	—
399300 2014 <i>HC</i> ₁₈₃	17.1	X	109.07734	169.49056	169.79256	3.71310	0.0429863	0.21844036	2.7305332	21	—	—
399301 2014 <i>HB</i> ₁₈₅	17.9	X	70.41506	84.22441	136.82837	3.25296	0.1209330	0.29980282	2.2109499	21	8 8.2	20.2
399302 2014 <i>HZ</i> ₁₈₅	16.7	X	337.72336	19.91655	108.02136	4.46641	0.0309503	0.22829397	2.6513868	21	—	—
399303 2014 <i>HG</i> ₁₈₆	17.9	X	18.77622	135.06448	152.75945	9.05628	0.2010682	0.29981560	2.2108871	21	9 5.9	19.3
399304 2014 <i>HX</i> ₁₈₆	16.5	X	334.26921	0.68817	150.18659	5.15968	0.1254082	0.24080370	2.5587466	21	—	—
399305 2014 <i>JR</i>	17.4	X	340.34295	119.69587	124.17748	3.50366	0.1814156	0.27112790	2.3642129	21	3 18.5	19.6
399306 5400 <i>T-3</i>	18.0	X	304.22768	275.07467	87.47517	4.67642	0.2404587	0.28895766	2.2659304	21	6 30.9	20.1
399307 1991 <i>RJ</i> ₂	18.9	X	37.20402	150.94521	171.77329	8.94749	0.4276972	0.30018311	2.2090822	21	12 28.7	22.4
399308 1993 <i>GD</i>	20.7	X	278.97845	202.07664	201.43421	15.46261	0.2380591	0.85148763	1.1024286	21	—	—
399309 1994 <i>UX</i> ₈	17.0	X	112.69189	313.91527	12.70117	5.07590	0.2712206	0.19164038	2.9795096	21	—	—
399310 1999 <i>QB</i>	18.1	X	324.47590	145.75237	235.15735	4.54732	0.2100034	0.29110682	2.2547639	21	9 23.9	19.3
399311 1994 <i>XR</i> ₃	18.1	X	315.44013	158.31013	183.09744	2.82873	0.2028548	0.28589582	2.2820799	21	6 25.6	20.0
399312 1995 <i>UA</i> ₅₈	17.4	X	109.30699	42.93232	287.62841	0.71068	0.0540300	0.19824428	2.9129673	21	—	—
399313 1995 <i>UR</i> ₇₃	17.2	X	184.28974	259.15894	81.70201	6.32702	0.0039800	0.24433946	2.5340021	21	1 27.8	20.5
399314 1996 <i>RG</i> ₄	16.7	X	210.85672	352.50134	334.06795	11.47119	0.2031697	0.22034070	2.7148108	21	2 16.2	21.2
399315 1996 <i>TP</i> ₂₅	17.5	X	272.75034	337.17477	36.96555	3.30278	0.1956504	0.26812741	2.3818180	21	6 9.2	20.7
399316 1996 <i>XV</i> ₁₇	17.5	X	258.67187	40.37327	337.03821	0.92658	0.2025466	0.26607619	2.3940435	21	5 27.7	20.8
399317 1997 <i>EB</i> ₃₀	17.5	X	290.70258	235.87097	14.72609	3.45801	0.1893133	0.24136158	2.5548022	21	1 24.4	21.4
399318 1997 <i>XJ</i> ₁	16.5	X	257.22064	160.99995	259.32360	23.72351	0.1751854	0.27940166	2.3173060	21	7 19.8	20.0
399319 1997 <i>YA</i> ₁₄	16.5	X	240.57043	148.41396	287.94212	22.51213	0.2351841	0.27675969	2.3320301	21	7 21.1	20.1
399320 1998 <i>ML</i> ₁₇	16.1	X	155.96088	310.24589	306.63814	16.16264	0.1366570	0.18592932	3.0402138	21	12 14.1	21.2
399321 1998 <i>QL</i> ₅₂	17.1	X	194.57975	201.35922	160.63821	13.28120	0.3281674	0.24004945	2.5641036	21	3 17.5	21.9
399322 1998 <i>QW</i> ₆₃	15.3	X	80.05736	16.63617	7.33511	20.35138	0.2849430	0.18292774	3.0733805	21	1 3.1	19.3
399323 1998 <i>SD</i> ₁₇₇	16.1	X	24.23511	212.91773	182.07643	18.25843	0.1771972	0.17864079	3.1223551	21	—	—
399324 1998 <i>VO</i> ₄₆	16.1	X	64.27272	288.64280	44.11548	6.10912	0.1940764	0.17569890	3.1571122	21	12 19.6	20.8
399325 1999 <i>GY</i> ₅	19.9	X	92.91070	232.22325	203.38345	24.42987	0.6146150	0.80300006	1.1463723	21	—	—
399326 1999 <i>RA</i> ₁₁₄	17.1	X	272.91062	147.11090	196.38246	10.92869	0.1672487	0.26020693	2.4299098	21	5 4.5	20.6
399327 1999 <i>TV</i> ₅₆	16.4	X	55.97319	356.98771	30.81547	5.73109	0.1376220	0.18833865	3.0142301	21	—	—
399328 1999 <i>TJ</i> ₁₈₃	17.2	X	235.49203	272.18431	90.50288	3.15422	0.2153526	0.25491780	2.4634057	21	4 17.8	21.2
399329 1999 <i>TF</i> ₂₃₂	15.8	X	85.11920	271.25335	81.46817	11.96859	0.2718795	0.18969417	2.9998536	21	—	—
399330 1999 <i>TV</i> ₂₄₁	15.4	X	270.12538	326.61389	71.14136	8.09274	0.3506040	0.12473953	3.9670405	21	6 20.3	21.5
399331 1999 <i>TW</i> ₂₄₃	15.9	X	47.57799	221.55745	203.51538	10.08944	0.2690717	0.19070895	2.9892025	21	—	—
399332 1999 <i>UC</i> ₂₈	16.5	X	81.67438	132.86015	195.28272	11.03211	0.2280021	0.18861116	3.0113262	21	—	—
399333 1999 <i>VT</i> ₈₃	16.1	X	0.40392	152.19130	223.11014	8.24551	0.2090681	0.17992139	3.1075218	21	11 15.2	19.3
399334 1999 <i>XS</i> ₅₅	16.7	X	240.85857	312.42358	64.55695	9.23035	0.2038122	0.25462308	2.4653062	21	5 11.1	20.6
399335 1999 <i>XA</i> ₂₄₁	16.9	X	241.54373	118.02717	253.90894	12.41900	0.2498631	0.25522259	2.4614441	21	4 28.8	21.1
399336 1999 <i>YY</i> ₂₈	15.6	X	309.62780	183.81170	290.42074	15.80304	0.1546045	0.17833284	3.1259487	21	12 18.7	19.4
399337 2000 <i>CN</i> ₃₉	17.5	X	15.61424	358.05289	139.48980	23.55505	0.0712181	0.36991622	1.9219133	21	—	—
399338 2000 <i>CA</i> ₁₀₉	17.1	X	341.19986	151.88511	336.78043	2.37672	0.0658565	0.22680054	2.6630132	21	—	—
399339 2000 <i>JR</i> ₈	17.6	X	349.86724	341.06548	228.60814	20.29965	0.1297384	0.36939903	1.9237068	21	1 17.8	20.0
399340 2000 <i>LM</i> ₃₆	17.3	X	178.31871	103.22643	196.60138	8.36352	0.4944607	0.21215939	2.7841623	21	1 3.3	23.1
399341 2000 <i>QX</i> ₄₃	17.3	X	294.90544	185.02270	156.94891	9.12291	0.2366997	0.27579112	2.3374870	21	5 19.9	20.4
399342 2000 <i>QY</i> ₂₂₀	17.7	X	340.01989	218.42665	137.34640	5.42224	0.2398642	0.28293247	2.2979868	21	9 26.7	18.7
399343 2000 <i>RF</i> ₈₉	17.2	X	321.89247	81.48033	277.32039	6.14266	0.1481459	0.27972385	2.3155263	21	8 13.9	19.4
399344 2000 <i>SV</i> ₁₉	16.3	X	166.68610	132.72027	252.08527	8.88293	0.2442795	0.21296737	2.7771159	21	3 18.9	21.2
399345 2000 <i>SU</i> ₇₅	17.0	X	322.75570	315.33999	30.55326	11.51638	0.2514088	0.27759938	2.3273251	21	7 13.5	19.1
399346 2000 <i>SK</i> ₉₆	17.2	X	267.37169	176.44184	233.41161	8.72657	0.2248240	0.27694423	2.3309941	21	7 16.3	20.4
399347 2000 <i>SN</i> ₁₂₆	17.3	X	323.78974	226.26980	157.92987	6.80487	0.2711397	0.27990840	2.3145084	21	9 24.2	18.1
399348 2000 <i>SA</i> ₁₈₁	18.1	X	301.08053	41.73800	336.31390	0.92658	0.1989894	0.27792456	2.3255094	21	7 27.9	20.2
399349 2000 <i>SK</i> ₂₆₇	17.9	X	297.58350	195.16328	184.35303	7.59573	0.2695019	0.27713611	2.3299180	21	7 8.9	20.5
399350 2000 <i>SE</i> ₂₉₇	17.3	X	259.39966	155.40334	279.34282	4.21464	0.2076966	0.27739053	2.3284931	21	8 13.8	20.5
399351 2000 <i>SK</i> ₂₉₇	17.4	X	263.83926	158.54303	236.11643	4.63524	0.2089570	0.27448565	2.3448926	21	6 25.0	20.5
399352 2000 <i>SN</i> ₃₂₀	16.8	X										

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
399361 2001 BG ₈₁	16.4	X	343.50861	229.51623	281.84528	11.80118	0.0888256	0.24073158	2.5592576	21	—	—
399362 2001 HE ₁₈	15.9	X	272.38550	114.92988	100.28227	29.06495	0.1861835	0.23230445	2.6207828	21	—	—
399363 2001 HL ₆₀	16.4	X	271.91393	74.67543	133.63488	13.35024	0.2064394	0.23063078	2.6334467	21	—	—
399364 2001 KD ₁	16.2	X	246.67649	26.85534	232.41288	30.71864	0.2153574	0.23182248	2.6244141	21	—	—
399365 2001 NM ₁₁	16.2	X	188.81561	83.09205	282.92241	27.47488	0.3395977	0.22756602	2.6570381	21	3 2.7	21.8
399366 2001 OS ₆₂	16.7	X	173.07820	190.20920	134.67324	19.34224	0.2785091	0.22211520	2.7003322	21	1 18.2	21.4
399367 2001 OE ₇₄	16.4	X	225.05650	42.95733	313.36084	12.01318	0.2819866	0.23174092	2.6250298	21	3 24.7	21.4
399368 2001 PF ₃₆	17.0	X	205.13929	65.66173	260.24286	11.22054	0.1935439	0.22584351	2.6705311	21	2 5.3	21.6
399369 2001 PB ₅₉	17.0	X	217.60695	146.83197	158.89704	13.48324	0.2689425	0.22565000	2.6720576	21	1 25.5	22.0
399370 2001 QL ₉₁	16.6	X	172.10172	244.75236	140.81881	13.69957	0.2789883	0.22690065	2.6622299	21	4 1.4	21.5
399371 2001 QF ₁₁₅	16.5	X	161.23248	62.91248	311.08983	9.54785	0.2604632	0.22308500	2.6925006	21	3 3.1	21.2
399372 2001 QE ₁₅₈	17.0	X	184.52583	177.75978	161.66649	4.28091	0.2397444	0.22415507	2.6839248	21	2 9.9	21.6
399373 2001 QT ₁₈₉	17.3	X	185.19520	85.49677	236.15508	11.48275	0.2829565	0.22251523	2.6970948	21	1 20.3	22.3
399374 2001 QA ₁₉₀	16.1	X	208.95077	22.12198	271.54514	12.79937	0.2373632	0.22296074	2.6935009	21	1 6.3	20.7
399375 2001 QL ₁₉₀	16.1	X	162.15982	121.83609	259.74265	11.84935	0.2811034	0.22401293	2.6850600	21	3 10.9	21.0
399376 2001 QW ₁₉₀	17.1	X	207.41538	102.65866	227.83831	10.44294	0.3132829	0.22605544	2.6688617	21	2 13.2	22.3
399377 2001 QO ₁₉₃	16.6	X	204.99323	91.70450	242.20016	11.13145	0.2852846	0.22526442	2.6751059	21	2 14.8	21.8
399378 2001 QK ₂₄₂	16.8	X	186.34608	181.94632	171.58707	14.38431	0.2562399	0.22424163	2.6832340	21	2 27.7	21.5
399379 2001 RQ ₁₃	18.2	X	26.42306	50.33355	304.30529	2.41129	0.1819395	0.30242225	2.1981647	21	12 26.8	20.6
399380 2001 RC ₁₆	17.3	X	70.61198	158.95493	254.38654	18.09847	0.0955885	0.36440689	1.9412360	21	—	—
399381 2001 RZ ₂₅	16.7	X	189.34582	342.07767	348.11674	13.84187	0.2554260	0.22374198	2.6872273	21	2 7.6	21.5
399382 2001 RK ₃₃	18.2	X	32.11317	54.18309	275.55287	5.36780	0.2175163	0.30221878	2.1991512	21	12 5.2	20.6
399383 2001 RP ₃₇	17.2	X	212.56803	92.71231	233.13310	2.35273	0.2200633	0.22681401	2.6629078	21	2 14.2	21.9
399384 2001 RW ₅₃	17.3	X	158.93634	356.23535	8.95896	7.76336	0.2683466	0.22248510	2.6973383	21	2 24.9	22.0
399385 2001 SH ₁₂₃	17.9	X	0.17729	83.57579	289.57555	2.54042	0.2071807	0.30095166	2.2053197	21	12 15.8	19.6
399386 2001 SZ ₁₂₃	16.2	X	119.68794	66.77090	330.96220	10.99426	0.2163747	0.21999160	2.7176820	21	2 20.5	20.1
399387 2001 ST ₁₄₄	16.7	X	111.46270	118.67277	230.85382	2.72041	0.1061347	0.21340061	2.7733560	21	—	—
399388 2001 SL ₁₆₉	17.8	X	46.36636	22.95094	288.28108	4.52366	0.2094329	0.30078781	2.2061205	21	11 26.2	20.5
399389 2001 SA ₁₇₇	15.8	X	152.00519	323.27186	45.52795	15.71970	0.3087291	0.21913717	2.7247418	21	3 4.7	20.8
399390 2001 SH ₁₉₄	16.8	X	150.26757	7.36220	355.09343	7.78186	0.1937184	0.22056478	2.7129718	21	2 8.4	21.0
399391 2001 SF ₁₉₆	18.0	X	218.83155	146.14454	170.55194	2.02859	0.2577306	0.22617230	2.6679424	21	2 8.7	22.7
399392 2001 SK ₁₉₇	18.5	X	308.88637	176.73258	180.40134	3.79255	0.2018564	0.29178438	2.2512723	21	7 8.0	20.5
399393 2001 SE ₂₁₄	18.6	X	3.75945	165.24988	158.86171	7.53892	0.2427676	0.29613188	2.2291841	21	10 12.2	19.9
399394 2001 SL ₂₈₇	16.8	X	114.57512	196.98387	160.76666	8.89236	0.2307253	0.21298216	2.7769873	21	—	—
399395 2001 SM ₂₉₀	16.1	X	98.23351	119.39125	254.25597	12.99981	0.2339485	0.21290928	2.7776210	21	—	—
399396 2001 SY ₃₀₅	17.7	X	34.08316	39.03904	298.06330	3.92474	0.2305276	0.30113623	2.2044185	21	12 19.9	20.4
399397 2001 SB ₃₀₆	16.8	X	113.35184	341.04131	349.01655	6.06582	0.1002847	0.21073137	2.7967260	21	—	—
399398 2001 SV ₃₁₂	18.2	X	33.70526	272.84383	48.93793	3.86055	0.2274967	0.30028210	2.2085967	21	11 27.4	20.7
399399 2001 SO ₃₂₂	16.4	X	105.25100	86.11121	316.65420	8.05878	0.1713860	0.21758242	2.7377063	21	2 3.7	20.0
399400 2001 SL ₃₃₉	16.5	X	213.59260	54.70410	262.44555	11.49465	0.2079642	0.22519030	2.6756929	21	2 2.2	21.3
399401 2001 ST ₃₄₂	16.3	X	220.21268	298.32678	33.87514	14.97295	0.3732849	0.22732469	2.6589182	21	3 5.2	21.7
399402 2001 SM ₃₄₅	17.4	X	77.80223	30.72844	261.39922	7.85369	0.2383865	0.30385635	2.1912428	21	12 8.3	20.7
399403 2001 TS	16.4	X	123.27512	328.68173	20.94462	17.63685	0.2752848	0.21539810	2.7561835	21	1 7.8	20.8
399404 2001 TL ₅₄	18.1	X	340.94115	147.40749	241.55196	4.10864	0.2823092	0.29855323	2.2171149	21	12 11.3	19.1
399405 2001 TB ₅₇	17.2	X	45.18089	308.40083	4.21335	5.27609	0.2083133	0.29998456	2.2100568	21	11 25.6	20.0
399406 2001 TA ₉₀	17.5	X	336.34650	67.83027	311.34507	3.68362	0.1009001	0.29625798	2.2855515	21	10 21.8	19.6
399407 2001 TV ₁₃₃	16.9	X	142.12106	255.34043	95.23375	7.80668	0.3174455	0.21660768	2.7459132	21	1 29.0	21.4
399408 2001 TB ₁₄₃	18.1	X	294.59590	293.17150	70.83271	4.63671	0.2617274	0.28964732	2.2623322	21	6 11.8	20.7
399409 2001 TZ ₁₇₅	17.2	X	213.87960	109.51089	206.88955	11.21820	0.2520078	0.22521672	2.6754836	21	2 2.2	22.2
399410 2001 TP ₁₉₉	16.8	X	179.57694	216.45227	161.93581	8.27671	0.2450014	0.22530524	2.6747828	21	3 25.6	21.5
399411 2001 TV ₂₅₇	18.1	X	31.53645	163.86025	142.98449	5.04053	0.1928184	0.29718509	2.2239143	21	10 30.2	20.4
399412 2001 TX ₂₅₈	18.0	X	359.43839	271.85136	91.25080	5.33647	0.1747701	0.29791370	2.2202867	21	11 23.4	19.7
399413 2001 UW ₃₉	17.6	X	256.60818	253.29912	139.15278	0.69024	0.2106026	0.28615343	2.2801101	21	6 13.6	20.9
399414 2001 UP ₁₇₆	18.3	X	9.38204	271.51784	50.10474	4.19432	0.1681250	0.29428384	2.2385069	21	10 6.9	20.0
399415 2001 UU ₁₉₆	16.6	X	156.16199	313.67405	43.71959	12.97184	0.1871047	0.21993778	2.7181254	21	2 10.6	21.1
399416 2001 UW ₂₂₀	16.8	X	176.30267	101.86436	235.62411	14.11724	0.2557445	0.21851916	2.7298767	21	1 29.5	21.8
399417 2001 VE ₂₅	17.0	X	122.20268	3.12501	51.90398	8.59202	0.2690369	0.21775953	2.7362216	21	3 26.8	21.3
399418 2001 VD ₇₇	16.3	X	178.83405	291.93389	76.15982	10.10129	0.3801147	0.22341450	2.6898526	21	3 21.1	21.6
399419 2001 VL ₁₀₄	16.9	X	195.70640	78.44806	289.82640	2.76551	0.3147911	0.22470696	2.6795284	21	3 23.7	22.0
399420 2001 WY ₅₄	17.1	X	183.47805	134.81469	266.03160	1.47194	0.1612089	0.22568223	2.6718033	21	4 20.6	21.4
399421 2001 WO ₉₂	18.2	X	0.52478	107.32448	258.57264	0.87529	0.1726809	0.29703938	2.2246415	21	11 28.2	20.0
399422 2001 WH ₉₃	16.5	X	118.68911	286.58135	92.38702	13.76018	0.2014258	0.21361734	2.7714798	21	1 28.1	20.5
399423 2001 XA ₃₁	17.5	X	19.49714	175.42207	288.82608	19.78833	0.1100102	0.35724183	1.9671064	21	—	—
399424 2001 XD ₅₀	16.1	X	134.81044	95.43537	247.64554	18.40883	0.2765219	0.21256614	2.7806094	21	1 6.2	20.6
399425 2001 XY ₅₇	17.3	X	358.89716	205.58218	245.71673	19.32195	0.0972237	0.35354954	1.9807783	21	—	—
399426 2001 XW ₁₀₂	17.7	X	217.40936	1.26799	77.54115	7.87486	0.0690023	0.28284158	2.2984790	21	7 18.5	20.7
399427 2001 XM ₁₆₉	17.2	X	286.84923	148.58709	266.18810	23.14221	0.1897678	0.28874199	2.2670586	21	8 16.3	20.3
399428 2001 XB ₁₈₃	16.4	X	103.17282	293.87675	116.01863	7.08734	0.3186898	0.21248394	2.7813266	21	3 6.5	20.4
399429 2001 XP ₂₀₅	16.6	X	84.37813	301.22610	118.82778	8.67248	0.3067539	0.21206640	2.7849761	21	2 20.8	19.8
399430 2001 XB ₂₂₆	17.7	X	349.30976	198.19079	257.94612	17.38918	0.0909776	0.35381014	1.9798055	21	—	—
399431 2001 XM ₂₂₈	16.6	X	104.51222	145.52760	267.31092	7.94198	0.1506342	0.21396374	2.7684877	21	2 9.8	20.4
399432 2001 YZ ₂	17.3	X	94.14732	241.98487	253.09097	19.01273	0.0703590	0.37263030	1.9125697	21	4 10.5	19.4
399433 2001 YK ₄	18.6	X	199.45311	210.79216	155.70125	4.38019	0.7768983	0.22777019	2.6554500	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>
399441 2002 AR ₂₀₈	17.2	X	15.81476	64.97317	280.66848	7.24593	0.2629435	0.29194930	2.2504244	21	12 9.4	19.5
399442 2002 CB ₁	16.0	X	337.36171	234.11735	178.48823	9.82120	0.0556590	0.18961748	3.0006624	21	11 20.6	20.0
399443 2002 ER ₁₀₈	17.5	X	359.37390	106.34824	144.44784	3.49506	0.1572080	0.26438958	2.4042142	21	5 11.9	19.5
399444 2002 EO ₁₅₈	16.5	X	134.84479	33.86775	160.11243	11.05126	0.0426028	0.17603185	3.1531300	21	9 5.2	21.0
399445 2002 FE ₂₃	17.4	X	183.33224	126.93934	2.52225	8.53413	0.0273271	0.27385404	2.3484966	21	8 19.8	20.4
399446 2002 GF ₁	20.5	X	158.75642	154.63666	66.75339	1.82160	0.4017392	0.33159330	2.0672780	21	11 14.7	24.3
399447 2002 GR ₉₇	16.7	X	292.88286	351.89874	200.21928	14.11970	0.0330030	0.24582057	2.5238134	21	—	—
399448 2002 GJ ₁₅₀	18.0	X	350.41009	27.79744	197.83391	2.83771	0.1795554	0.25778690	2.4450936	21	3 10.5	20.3
399449 2002 GS ₁₇₈	17.7	X	304.55116	117.83129	157.83966	1.42397	0.1695647	0.25582605	2.4557181	21	3 12.3	20.9
399450 2002 JD ₄	15.7	X	114.51497	89.65019	144.34858	26.08798	0.2610594	0.17235533	3.1978118	21	10 24.8	21.6
399451 2002 JU ₁₀₈	15.6	X	143.73783	71.09996	142.12227	22.81207	0.2978624	0.17369949	3.1812932	21	10 22.8	21.6
399452 2002 JC ₁₁₄	16.7	X	64.25852	314.94998	226.80011	12.23216	0.1335957	0.26153986	2.4216468	21	6 1.9	19.4
399453 2002 NQ ₆₁	16.9	X	229.05020	307.89588	35.14076	5.96771	0.2340170	0.24492778	2.5299427	21	3 20.1	21.2
399454 2002 OH ₁₄	16.8	X	197.29280	124.80665	208.72141	8.06518	0.1277179	0.23869044	2.5738271	21	2 5.9	20.9
399455 2002 OZ ₂₈	17.0	X	184.55402	257.61546	98.07273	5.82137	0.2370401	0.24025218	2.5626610	21	3 2.0	21.4
399456 2002 PN ₂₇	17.1	X	200.17864	176.11738	150.37872	4.40493	0.2304426	0.23817136	2.5775654	21	2 5.1	21.4
399457 2002 PD ₄₃	19.1	X	286.03588	210.84629	315.14065	26.03609	0.9562222	0.24812257	2.5081791	21	9 10.3	24.3
399458 2002 PC ₈₀	16.8	X	206.57772	119.97871	253.91445	12.59611	0.2105382	0.24277462	2.5448793	21	4 2.4	21.4
399459 2002 PZ ₁₀₅	17.1	X	256.10984	345.87490	288.56286	11.75748	0.2365674	0.24125690	2.5555412	21	1 16.9	21.3
399460 2002 PK ₁₆₉	16.2	X	321.27822	78.18678	332.06981	9.21361	0.1079211	0.16075364	3.3498768	21	10 12.2	20.6
399461 2002 PL ₁₇₂	16.8	X	129.18563	55.39917	21.07718	3.02494	0.1617618	0.24205946	2.5498894	21	4 11.4	20.4
399462 2002 PQ ₁₈₁	17.0	X	137.59935	149.88609	285.81460	12.36999	0.2691012	0.23914889	2.5705367	21	4 25.1	21.5
399463 2002 PB ₁₈₄	15.9	X	32.05707	254.90985	147.00771	10.86360	0.1799746	0.17172163	3.2056742	21	—	—
399464 2002 QZ ₄₆	17.7	X	218.86755	134.26167	210.48246	11.00923	0.3694499	0.24040741	2.5615577	21	3 7.9	22.7
399465 2002 QY ₇₄	17.7	X	234.68851	208.36584	137.72706	13.58419	0.1916972	0.24432156	2.5341259	21	4 1.7	22.0
399466 2002 QW ₈₅	17.1	X	213.64682	103.70295	236.77961	1.45241	0.2458526	0.24091089	2.5579876	21	3 2.9	21.6
399467 2002 QG ₁₂₅	16.6	X	130.33139	160.52795	221.06637	8.63091	0.1369910	0.23249138	2.6193778	21	1 28.2	20.4
399468 2002 QC ₁₃₇	17.1	X	148.49689	187.47325	235.03917	4.29482	0.2488239	0.23913878	2.5760901	21	4 20.2	21.3
399469 2002 QG ₁₄₀	17.3	X	223.66465	277.05307	82.92997	7.78620	0.2484285	0.24362504	2.5389536	21	4 6.8	21.8
399470 2002 RR ₄	17.1	X	237.00103	116.89986	217.35684	12.40707	0.2110241	0.24293289	2.5437739	21	3 11.4	21.5
399471 2002 RN ₅	16.4	X	133.08402	179.25465	208.23492	13.05119	0.1825548	0.23203705	2.6227958	21	2 12.3	20.5
399472 2002 RR ₁₃₆	17.5	X	240.50994	228.08775	131.46139	9.70706	0.2864028	0.24545184	2.5263403	21	4 17.4	22.0
399473 2002 RR ₁₆₇	17.3	X	218.15290	165.93245	167.93954	2.88390	0.2154416	0.23921456	2.5700662	21	2 28.6	21.2
399474 2002 RY ₁₆₈	17.6	X	235.77297	161.40289	166.38905	2.61244	0.2328431	0.24156796	2.5533469	21	3 5.5	22.0
399475 2002 RZ ₂₄₄	17.6	X	231.02147	221.17057	149.01996	15.14168	0.2273565	0.24628329	2.5206512	21	4 26.8	22.1
399476 2002 RP ₂₆₁	17.3	X	203.38340	96.27181	217.80517	6.17055	0.1856770	0.23528847	2.5985772	21	1 22.1	21.7
399477 2002 RF ₂₆₆	17.6	X	186.09592	256.33150	133.04171	6.73443	0.2051930	0.24162885	2.5529180	21	4 12.1	21.9
399478 2002 RS ₂₆₇	17.2	X	222.73281	258.89135	117.70181	8.86593	0.2818730	0.24417249	2.5351572	21	4 25.1	21.9
399479 2002 RP ₂₇₃	16.7	X	270.31098	70.15718	153.13807	11.07892	0.1783369	0.23467538	2.6031011	21	—	—
399480 2002 RB ₂₇₇	17.5	X	225.26660	324.70265	300.66308	1.99518	0.1275789	0.23219249	2.6216252	21	—	—
399481 2002 SW ₉	16.9	X	134.27989	173.66795	199.80308	2.01540	0.1943230	0.22978123	2.6399337	21	2 1.6	20.8
399482 2002 SK ₁₅	16.3	X	166.64061	132.91423	277.09640	13.06101	0.1813965	0.23853354	2.5749556	21	4 11.5	20.8
399483 2002 SN ₂₉	17.7	X	227.93844	174.67032	187.10415	5.77568	0.3159475	0.24288125	2.5441345	21	4 6.5	22.2
399484 2002 SA ₆₂	18.1	X	251.52565	3.54850	328.56233	2.48880	0.3229221	0.24444491	2.5332733	21	3 22.4	22.3
399485 2002 TD ₁₁	16.7	X	224.92035	109.04374	185.61834	15.24075	0.1739429	0.23574702	2.5952065	21	1 16.4	21.2
399486 2002 TQ ₃₄	17.6	X	185.30232	16.75972	4.90598	2.74448	0.2392229	0.23811144	2.5779978	21	3 31.2	22.0
399487 2002 TS ₃₆	17.4	X	231.37903	317.42341	28.84370	5.58209	0.2635695	0.24104567	2.5570339	21	3 24.4	21.9
399488 2002 TA ₄₆	17.2	X	201.17231	356.30417	24.02498	8.94309	0.3852792	0.23984289	2.5655756	21	4 10.9	22.2
399489 2002 TO ₅₅	17.0	X	204.62480	197.44327	172.75333	10.57985	0.2005486	0.23984239	2.5655792	21	4 2.7	21.3
399490 2002 TR ₁₃₃	17.4	X	231.99592	148.70149	218.97677	7.34118	0.2915550	0.24479224	2.5308765	21	4 16.1	21.8
399491 2002 TN ₁₃₆	16.5	X	177.66553	331.48168	347.89546	13.61798	0.2570084	0.23037653	2.6353840	21	1 16.6	21.2
399492 2002 TB ₁₄₃	17.6	X	198.04747	232.45353	152.40979	6.78387	0.3214426	0.24026817	2.5625473	21	4 16.2	22.4
399493 2002 TA ₁₅₉	16.7	X	176.85065	265.67050	94.44205	9.91918	0.1529581	0.23390616	2.6088049	21	2 27.1	20.9
399494 2002 TA ₁₆₅	17.1	X	179.61428	304.81403	95.35703	6.95692	0.3326466	0.23886164	2.5725971	21	4 23.4	22.0
399495 2002 TA ₁₇₃	16.7	X	143.80104	271.04996	105.60335	4.60166	0.2126838	0.23213320	2.6220716	21	2 18.7	20.7
399496 2002 TH ₁₈₁	16.0	X	175.60602	119.17267	234.84085	29.80754	0.2581548	0.23331920	2.6131784	21	2 8.8	21.2
399497 2002 TV ₁₉₀	16.2	X	199.23405	82.66046	271.89629	13.55139	0.1794112	0.23622187	2.5917273	21	3 2.1	20.8
399498 2002 TN ₂₀₃	18.0	X	242.66585	188.53355	158.89794	8.71191	0.3118040	0.24372295	2.5382736	21	4 1.2	22.5
399499 2002 TA ₂₃₂	16.2	X	164.92672	115.44427	246.07318	13.16902	0.2138777	0.23348257	2.6119593	21	2 12.5	20.8
399500 2002 TX ₂₇₇	16.1	X	144.67889	101.57682	241.76627	11.76414	0.2082738	0.22790047	2.6544379	21	1 7.3	20.2
399501 2002 TN ₃₀₇	16.8	X	150.07438	260.62658	133.77850	6.97052	0.0422422	0.23438792	2.6052289	21	2 28.6	20.3
399502 2002 TJ ₃₅₃	17.8	X	212.33632	67.40515	294.79847	3.25974	0.2655987	0.24159038	2.5531890	21	3 26.4	22.5
399503 2002 TO ₃₇₇	17.8	X	359.44903	120.84461	196.36625	2.67913	0.1905656	0.30792264	2.1719090	21	9 8.3	18.9
399504 2002 UA ₁	17.6	X	109.58554	178.20534	251.95230	22.40505	0.2301418	0.38769770	1.8626899	21	2 7.3	19.6
399505 2002 UW ₇	17.4	X	170.64648	237.64100	128.42159	7.27434	0.3163520	0.23382480	2.6094101	21	3 7.5	22.1
399506 2002 UN ₇₀	16.8	X	112.18738	300.32403	81.61601	9.66067	0.1101446	0.22713846	2.6603713	21	1 6.3	20.2
399507 2002 VL ₃	17.3	X	214.96022	42.87555	334.44594	3.65214	0.2638769	0.24062116	2.5600405	21	4 15.7	22.0
399508 2002 VX ₃	16.0	X	220.72062	89.30769	243.56416	13.68109	0.1339456	0.23482911	2.6019649	21	2 23.9	20.5
399509 2002 VT ₆	17.1	X	222.66928	88.89446	279.67347	3.57911	0.2662108	0.24081689	2.5586531	21	4 10.5	21.7
399510 2002 VU ₆	16.6	X	206.19502	120.98391	241.52810	12.34134	0.1818115	0.23688719	2.5868723	21	3 19.7	21.1
399511 2002 VL ₂₇	17.3	X	197.12600	141.32128	234.61516	11.58540	0.2944186	0.23748716	2.5825137	21	3 30.7	22.2
399512 2002 VQ ₄₂	17.7	X	177.07226	167.88557	227.81481	2.73426	0.2498563	0.23684155	2.5872046	21	4 10.8	22.1
399513 2002 VJ ₅₄	16.5	X	182.67216	114.4433								

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
399521 2002 WR ₁₈	16.5	X	211.12986	269.32219	96.88346	15.96878	0.2465685	0.23866455	2.5740132	21	4 9.6	21.3
399522 2002 XD ₄₄	16.3	X	331.93153	30.74626	63.40754	11.33110	0.0917317	0.21061744	2.7977345	21	—	—
399523 2002 XH ₇₃	16.1	X	237.58302	92.70280	267.33892	10.81913	0.2070276	0.23966842	2.5668205	21	4 12.2	20.6
399524 2002 XV ₉₇	16.1	X	127.63680	115.77540	252.88594	10.40036	0.1773374	0.22411876	2.6842147	21	1 16.6	20.0
399525 2002 YU ₂₇	16.4	X	159.57516	133.83659	282.85874	12.46230	0.2447606	0.23220030	2.6215664	21	4 18.1	21.1
399526 2003 AA ₁₇	17.7	X	310.17322	201.15900	285.02286	17.12462	0.2902898	0.36783456	1.9291575	21	—	—
399527 2003 BT ₂₃	16.4	X	138.73157	168.11078	248.81075	11.62879	0.2632146	0.22764391	2.6564319	21	4 3.8	21.0
399528 2003 CE ₁₅	17.4	X	79.62065	109.91020	109.54790	5.59850	0.2227674	0.28785724	2.2717016	21	9 4.9	20.4
399529 2003 EJ ₃₁	17.4	X	67.95893	89.41102	120.36252	6.31622	0.0892004	0.28521971	2.2856849	21	7 11.9	19.9
399530 2003 GT ₃₄	17.7	X	47.02561	82.48690	133.24802	5.87935	0.1885543	0.27887206	2.3202389	21	7 2.1	19.8
399531 2003 HH ₃₉	17.4	X	42.28229	20.03920	225.97731	9.76875	0.1818264	0.27993413	2.3143666	21	8 5.1	19.9
399532 2003 HB ₅₅	17.9	X	2.88924	5.55051	217.60697	0.77599	0.1288040	0.27306279	2.3530313	21	4 4.2	20.1
399533 2003 KG ₆	17.9	X	16.32570	199.85629	56.54247	2.66282	0.2095230	0.27725748	2.3293800	21	7 2.9	19.3
399534 2003 KR ₁₉	17.2	X	284.06194	2.49403	244.05436	18.99548	0.0653626	0.36955637	1.9231607	21	—	—
399535 2003 KR ₂₈	16.8	X	135.36044	132.80831	151.87139	9.37917	0.3264259	0.18672918	3.0315257	21	12 30.3	22.6
399536 2003 MV ₂	18.4	X	329.20795	72.15501	233.42361	1.59703	0.2191244	0.27063121	2.3671047	21	5 24.1	20.5
399537 2003 NB ₉	14.9	X	88.57934	357.25007	290.65800	29.38778	0.2640049	0.17492636	3.1664007	21	11 28.2	20.5
399538 2003 NK ₁₁	16.2	X	49.93078	59.85214	297.28766	25.68193	0.1663141	0.17710831	3.1403407	21	—	—
399539 2003 OP ₃₃	17.1	X	340.55526	354.28954	296.21449	13.71906	0.2492873	0.26904932	2.3763740	21	5 15.7	19.4
399540 2003 PT ₆	15.9	X	66.79941	177.09872	160.32994	16.44914	0.2716533	0.17507103	3.1646562	21	—	—
399541 2003 PO ₇	15.8	X	108.48893	7.63688	290.99392	11.71583	0.2132414	0.18062997	3.0993897	21	12 23.5	20.9
399542 2003 PF ₉	17.5	X	279.67786	15.87113	317.41819	7.68030	0.2867196	0.26398816	2.4066508	21	4 8.4	21.3
399543 2003 QU ₁	15.8	X	83.33663	76.11626	330.49035	11.66100	0.2827948	0.18471484	3.0535253	21	2 3.9	19.6
399544 2003 QH ₂	14.9	X	68.92933	67.95866	285.26208	24.24264	0.3044296	0.17502320	3.1652326	21	—	—
399545 2003 QA ₁₄	17.3	X	269.89774	80.59003	299.70777	11.04408	0.2041926	0.26720073	2.3873218	21	6 13.6	20.8
399546 2003 QW ₁₄	16.7	X	39.43293	96.28796	277.46214	7.32103	0.2976629	0.17347714	3.1840109	21	—	—
399547 2003 QT ₂₄	16.0	X	48.88160	175.82259	201.93248	6.44347	0.2564875	0.17482544	3.1676191	21	—	—
399548 2003 QY ₂₇	15.5	X	94.99127	53.92324	291.65910	15.39519	0.2540023	0.18100496	3.0951074	21	—	—
399549 2003 QO ₄₅	17.7	X	272.81296	26.05417	324.96529	1.89890	0.2192774	0.26423829	2.4051318	21	5 5.4	21.3
399550 2003 QC ₁₁₁	15.8	X	79.08148	229.93246	111.02844	11.39462	0.2206522	0.17735272	3.1374549	21	—	—
399551 2003 RN ₉	16.4	X	78.31385	31.56316	312.53261	12.43604	0.2647142	0.17681522	3.1438100	21	—	—
399552 2003 RM ₂₃	16.7	X	320.54569	65.39277	263.53383	10.79001	0.1726506	0.26910923	3.2760213	21	6 21.3	18.9
399553 2003 RG ₂₇	16.0	X	21.50635	257.16612	135.82626	14.07108	0.2842746	0.17139663	3.2097253	21	—	—
399554 2003 SB	16.9	X	241.95373	123.68202	242.37638	14.35348	0.2968383	0.26051594	2.4279879	21	4 18.4	21.3
399555 2003 SA ₂₇	15.6	X	32.22114	52.40891	321.17003	14.48231	0.1260827	0.17477576	3.1682194	21	12 22.0	20.0
399556 2003 ST ₃₂	17.1	X	270.88991	76.62671	317.39488	11.84991	0.2471079	0.26633383	2.3924993	21	6 28.9	20.5
399557 2003 SX ₄₄	17.1	X	250.59505	80.83430	284.04163	1.38369	0.2040283	0.26063629	2.4272404	21	5 2.9	20.9
399558 2003 SR ₆₆	17.5	X	285.34504	101.11803	239.65821	3.69820	0.2020128	0.26384778	2.4075044	21	5 9.0	20.6
399559 2003 SS ₇₀	15.6	X	60.33612	39.86143	324.26755	18.52174	0.1198934	0.17727854	3.1383300	21	—	—
399560 2003 SC ₈₈	17.9	X	201.07779	302.80415	68.07019	1.79365	0.2639127	0.25332836	2.2736989	21	3 30.3	22.2
399561 2003 SQ ₉₇	15.7	X	8.05958	126.85300	269.49689	12.78927	0.1953774	0.17020441	3.2246965	21	12 21.7	19.6
399562 2003 SA ₁₀₂	15.3	X	42.86453	48.66109	330.35081	25.84554	0.1644723	0.17474303	3.1686150	21	—	—
399563 2003 SH ₁₀₃	17.5	X	294.23669	117.77926	222.89600	1.83685	0.2367397	0.26462422	2.4027928	21	5 15.3	20.7
399564 2003 SA ₁₁₇	15.9	X	77.12050	129.65997	212.66909	13.68788	0.2927897	0.17616008	3.1515997	21	—	—
399565 2003 SZ ₁₂₈	17.3	X	274.56956	24.90938	317.58217	6.39218	0.1419712	0.26284803	2.4136052	21	5 4.1	20.8
399566 2003 SD ₁₄₅	15.7	X	41.44308	125.50191	242.92443	12.61971	0.2910953	0.17256065	3.1952747	21	—	—
399567 2003 SG ₁₆₇	17.0	X	113.81879	346.11401	67.61858	7.46561	0.2652689	0.24404030	2.5360726	21	3 13.4	20.6
399568 2003 SO ₁₇₂	17.9	X	275.02993	180.19848	162.17913	1.44843	0.1973962	0.26259361	2.4151639	21	4 30.4	21.2
399569 2003 SO ₁₉₁	17.2	X	74.03947	86.12486	208.18836	12.78011	0.4084636	0.17333675	3.1857299	21	12 6.5	22.7
399570 2003 SF ₁₉₆	17.8	X	282.72919	28.07050	307.98386	3.85454	0.2672526	0.26172245	2.4205203	21	4 19.4	21.4
399571 2003 SY ₂₀₅	17.5	X	288.87823	45.25714	305.23575	6.35073	0.2099159	0.26647292	2.3916667	21	5 24.7	20.8
399572 2003 SP ₂₁₀	16.2	X	109.50068	134.95058	188.90493	15.42504	0.3211355	0.18138947	3.0907319	21	—	—
399573 2003 SP ₂₂₁	17.3	X	265.79775	294.71986	80.79652	5.48346	0.1596374	0.26568799	2.3963749	21	6 8.1	20.4
399574 2003 SC ₂₄₆	17.4	X	256.04259	344.05046	9.99437	6.81770	0.1953940	0.26042332	2.4285635	21	4 23.9	21.2
399575 2003 ST ₂₅₈	17.6	X	306.09135	221.17042	110.36822	1.85089	0.3092800	0.26568354	2.3964017	21	5 7.4	20.3
399576 2003 SA ₂₆₁	17.4	X	237.06467	187.09358	216.53471	6.72782	0.2198871	0.26309862	2.4120724	21	6 8.6	21.2
399577 2003 SP ₂₇₃	15.7	X	63.25973	51.11370	282.27906	12.73522	0.2915252	0.17427923	3.1742342	21	12 30.6	20.7
399578 2003 SZ ₂₇₇	16.4	X	28.47737	146.03145	227.89732	10.68636	0.1639114	0.17089921	3.2159504	21	12 20.2	20.7
399579 2003 SC ₂₉₈	16.0	X	37.81367	111.16732	247.15688	12.81921	0.2307248	0.17113340	3.2130158	21	12 23.2	20.3
399580 2003 SL ₃₁₅	15.7	X	32.50837	273.89338	98.00229	16.40928	0.2084981	0.17183139	3.2043089	21	12 30.3	20.0
399581 2003 SQ ₃₁₈	17.8	X	296.58360	252.80834	110.33358	3.12158	0.2237963	0.26769040	2.3844095	21	6 22.2	20.5
399582 2003 ST ₃₂₂	15.5	X	59.60253	83.86850	274.21907	10.71374	0.0765618	0.17787484	3.1313121	21	12 29.7	20.0
399583 2003 SG ₃₂₆	17.9	X	303.36893	43.23815	266.53198	0.36503	0.1845994	0.26298247	2.4127826	21	4 22.7	20.9
399584 2003 SX ₃₃₀	17.3	X	262.72008	225.14108	135.26729	4.49749	0.2046201	0.26136099	2.4227515	21	5 11.3	20.9
399585 2003 SH ₃₃₂	17.6	X	239.32540	254.14315	138.96491	3.83568	0.1929211	0.26099093	2.4250411	21	5 30.8	21.3
399586 2003 TQ ₇	16.8	X	235.16278	308.33479	80.72389	7.83428	0.1983378	0.26072184	2.4265709	21	5 21.4	20.6
399587 2003 TW ₉	16.8	X	259.81772	105.46275	293.40820	20.73890	0.3535134	0.26417417	2.4055210	21	6 11.8	21.0
399588 2003 TE ₁₃	17.3	X	269.57576	348.10430	19.24573	9.96662	0.2332569	0.26210016	2.4181943	21	5 20.2	20.9
399589 2003 TR ₄₄	16.0	X	73.30611	50.03474	289.84629	6.27733	0.1798770	0.17316471	3.1878396	21	—	—
399590 2003 UK ₆	15.9	X	18.96209	99.35858	275.27452	19.04145	0.1339787	0.16901970	3.2397475	21	12 3.8	20.1
399591 2003 UY ₆₇	17.5	X	235.68853	282.56028	94.46512	5.79657	0.1908412	0.25859747	2.4399815	21	5 7.8	21.3
399592 2003 UM ₁₀₇	14.9	X	65.85619	117.30878	243.04274	14.58256	0.0935961	0.17656169	3.1468187	21	—	—
399593 2003 UL ₁₂₁	17.6	X	235.84562	358.12838	21.93356	1.23203	0.1990150	0.25924662	2.4359067	21	5 9.2	21.4
399594 2003 UH ₁₆₂	17.3	X	249.29776	160.09738	225.44652							

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
399601	2003	WL ₂₁	16.5	X	256.16855	222.54782	137.00589	8.03355	0.1455715	0.25687888	2.4508522	21	5 11.2	20.2
399602	2003	WJ ₃₃	16.8	X	71.36043	186.24288	242.67414	7.45192	0.1401149	0.23671355	2.5881373	21	1 6.4	19.5
399603	2003	WZ ₅₉	16.2	X	318.93393	49.58304	55.81689	22.49026	0.0495049	0.22390583	2.6859161	21	—	—
399604	2003	WL ₆₁	17.1	X	243.83563	321.71268	57.92151	7.45343	0.1634345	0.25721276	2.4487308	21	5 19.6	20.7
399605	2003	WO ₁₀₃	15.6	X	266.01498	208.29085	256.56047	12.01058	0.1151076	0.15886940	3.3763118	21	9 30.6	20.6
399606	2003	WL ₁₀₈	16.0	X	40.16140	244.58895	259.41724	27.67844	0.1721489	0.24083583	2.5585190	21	2 8.3	19.3
399607	2003	WD ₁₅₆	16.8	X	255.99957	265.07164	94.52643	16.35992	0.2014322	0.25774924	2.4453318	21	5 8.7	20.8
399608	2003	YC ₃₁	16.6	X	225.77075	259.68020	83.69496	14.54731	0.1161747	0.24635507	2.5201616	21	3 27.8	20.8
399609	2003	YT ₁₄₀	16.4	X	42.06317	144.43418	9.41187	9.18424	0.1360656	0.23925502	2.5697765	21	3 16.3	19.0
399610	2003	YD ₁₄₈	16.1	X	145.61428	76.51481	346.05711	10.72385	0.2098483	0.24310628	2.5425642	21	4 11.2	20.3
399611	2004	BE ₁₁	19.2	X	111.47470	37.94013	138.27373	15.24911	0.1657994	0.70360484	1.2519400	21	8 28.7	18.7
399612	2004	BB ₅₁	16.7	X	31.83226	206.41427	304.13793	14.50114	0.0719790	0.23368228	2.6104709	21	2 15.4	19.8
399613	2004	BQ ₆₅	16.9	X	182.58810	267.50600	113.52657	6.15732	0.3469402	0.24519632	2.5280952	21	4 2.8	21.7
399614	2004	CH ₂₁	16.4	X	89.82518	338.10629	133.15563	14.36601	0.1115647	0.23691482	2.5866712	21	4 6.6	19.9
399615	2004	CC ₃₇	16.3	X	31.84825	195.29842	301.17699	14.78410	0.0459965	0.22968891	2.6406410	21	1 31.9	19.6
399616	2004	DZ ₁₉	16.8	X	151.80681	309.07450	126.87289	4.72049	0.2302788	0.24293010	2.5437934	21	5 10.7	21.0
399617	2004	DL ₆₁	16.5	X	4.77966	151.13846	340.49094	10.83809	0.1333359	0.22454739	2.6807977	21	—	—
399618	2004	DU ₇₆	17.0	X	334.97194	197.79750	308.88471	2.02583	0.1847355	0.22227254	2.6990577	21	—	—
399619	2004	EG ₇₆	16.5	X	50.76333	142.63759	339.13958	8.69106	0.0216330	0.22951269	2.6419925	21	2 10.0	19.9
399620	2004	FM ₁₁₅	16.3	X	242.58793	189.35470	268.83799	14.22136	0.1175952	0.21432866	2.7653443	21	—	—
399621	2004	GC ₂₆	18.1	X	83.47577	176.51056	69.71190	2.91152	0.2676153	0.30320289	2.1943901	21	10 19.8	21.4
399622	2004	GG ₃₂	16.9	X	285.37518	311.17114	195.02578	7.50462	0.1605659	0.21296415	2.7771439	21	12 27.2	20.2
399623	2004	GJ ₈₅	16.9	X	227.25819	205.14119	60.02010	10.61593	0.1342092	0.21523662	2.755619	21	—	—
399624	2004	HM ₅₈	18.0	X	26.06871	79.99527	218.82932	5.50130	0.2265795	0.29942078	2.2128302	21	10 11.9	20.0
399625	2004	MK ₄	17.6	X	166.51058	233.08000	97.09005	23.12442	0.0690988	0.38079716	1.8851254	21	—	—
399626	2004	NX ₆	15.9	X	14.03063	226.37178	137.65637	19.13684	0.3174139	0.17841463	3.1249932	21	12 14.3	19.7
399627	2004	NG ₁₈	16.5	X	89.61551	61.55720	264.77010	7.19960	0.3062456	0.19118737	2.9842137	21	—	—
399628	2004	NM ₂₃	17.9	X	335.64258	91.42676	247.77271	4.17970	0.2773597	0.28967859	2.6221694	21	7 31.2	18.8
399629	2004	NY ₂₆	17.0	X	143.78345	187.24081	137.30054	10.18645	0.3265322	0.19856984	2.9097913	21	1 2.7	21.9
399630	2004	OH ₃	17.6	X	42.71997	34.96165	302.33836	7.64404	0.2711585	0.30070944	2.2065038	21	—	—
399631	2004	OH ₁₅	15.4	X	58.72415	281.66065	41.86007	22.56573	0.2249319	0.18180889	3.0859766	21	12 3.7	20.1
399632	2004	PL ₂	18.5	X	324.86957	280.03057	74.32437	6.55136	0.3591900	0.28814832	2.2701714	21	7 8.9	19.5
399633	2004	PZ ₂₁	15.5	X	354.73316	250.10142	135.63434	16.91869	0.2437976	0.18131803	3.0915437	21	11 26.6	19.0
399634	2004	PS ₃₁	17.3	X	329.69680	194.19345	134.25044	7.63435	0.1631437	0.28712198	2.2755781	21	7 11.3	19.2
399635	2004	PY ₄₆	17.5	X	10.86473	22.43063	300.38902	4.52135	0.1678191	0.29288644	2.2456214	21	10 6.7	19.4
399636	2004	PD ₄₉	16.1	X	25.55357	248.05199	127.94233	17.20720	0.2886417	0.18377210	3.0639594	21	—	—
399637	2004	PQ ₆₈	17.8	X	299.17073	201.38757	167.82087	9.27708	0.2872500	0.28590163	2.2820490	21	6 23.6	20.5
399638	2004	PV ₁₁₁	17.7	X	160.45982	176.11503	173.79709	21.98644	0.0893449	0.37714867	1.8972636	21	—	—
399639	2004	QK ₄	16.3	X	87.55418	233.71528	88.60265	15.67862	0.2637883	0.18986299	2.9980750	21	—	—
399640	2004	QL ₁₀	18.1	X	310.67657	251.91848	104.44318	7.08225	0.2755141	0.28594816	2.2818014	21	6 26.3	19.9
399641	2004	QU ₁₁	17.7	X	333.21591	233.74899	82.98152	6.16740	0.2169897	0.28638369	2.2794874	21	6 21.0	19.2
399642	2004	QP ₁₉	15.6	X	22.17203	228.43869	90.03819	25.61394	0.2341268	0.17720919	3.1391487	21	10 28.1	19.8
399643	2004	RC ₃	15.8	X	51.45067	124.56585	236.35705	21.23054	0.1767085	0.18477095	3.0529071	21	—	—
399644	2004	RJ ₁₆	17.4	X	335.24362	340.56126	7.77767	7.04127	0.1638579	0.28938717	2.2636878	21	9 1.5	19.0
399645	2004	RS ₂₂	16.2	X	52.70251	229.15997	160.40645	7.87249	0.1797631	0.18914505	3.0056569	21	—	—
399646	2004	RB ₇₂	17.8	X	340.17660	126.02518	199.42484	2.26064	0.2611058	0.28756615	2.2732343	21	7 21.6	18.7
399647	2004	RC ₇₄	18.1	X	273.38305	195.79323	170.80854	5.71620	0.1648379	0.28076417	2.3098029	21	6 4.7	21.3
399648	2004	RN ₈₆	17.6	X	271.54263	358.64967	2.84149	2.55857	0.2367088	0.28119822	2.3074252	21	5 14.9	21.0
399649	2004	RO ₁₀₀	17.5	X	262.66579	194.47421	187.15658	6.27547	0.1794410	0.28089690	2.3090754	21	6 10.1	20.7
399650	2004	RJ ₁₂₇	17.0	X	57.38285	182.87947	193.07640	2.71674	0.1906620	0.18791387	3.0187709	21	—	—
399651	2004	RG ₁₅₂	15.9	X	27.13041	66.18998	288.88575	15.33378	0.2452013	0.18142337	3.0903469	21	12 10.3	19.9
399652	2004	RW ₁₅₃	16.0	X	56.74990	144.24213	191.59183	14.23565	0.3290403	0.18355851	3.0663357	21	12 31.6	21.1
399653	2004	RI ₁₆₇	16.6	X	78.53828	246.53094	128.92946	9.29677	0.2521748	0.19056415	2.9907165	21	—	—
399654	2004	RS ₁₇₂	17.4	X	268.59093	131.61243	285.18241	6.00776	0.0631306	0.28834390	2.2621448	21	8 24.1	20.0
399655	2004	RR ₁₇₅	18.1	X	354.92729	151.11202	204.99577	6.63879	0.2990082	0.29310823	2.2444884	21	11 23.1	19.3
399656	2004	RR ₁₇₇	16.1	X	8.02046	164.81057	198.41182	10.53816	0.2266173	0.17801784	3.1296350	21	11 16.4	19.5
399657	2004	RJ ₁₈₃	17.6	X	309.39639	7.96344	329.77033	3.78714	0.2289246	0.28307855	2.2971961	21	6 2.5	20.0
399658	2004	RC ₁₈₅	17.6	X	288.28586	146.03840	261.82453	4.91798	0.1494797	0.28781451	2.2719264	21	8 27.2	19.9
399659	2004	RG ₁₈₈	15.9	X	85.83068	120.05188	232.72080	8.09973	0.1451572	0.18840773	3.0134933	21	—	—
399660	2004	RU ₁₈₈	17.5	X	312.67794	126.40621	242.66063	6.36391	0.1260644	0.28632974	2.2797737	21	8 14.3	19.7
399661	2004	RL ₁₉₈	16.6	X	67.14453	114.75723	261.59162	7.24570	0.2543193	0.18773707	3.0206658	21	—	—
399662	2004	RB ₂₀₅	16.5	X	110.21293	358.34790	310.57015	10.61526	0.2787030	0.18907087	3.0064430	21	—	—
399663	2004	RU ₂₀₈	15.6	X	322.28292	165.19623	232.64904	15.88527	0.1334981	0.17461700	3.1701395	21	9 27.2	19.7
399664	2004	RC ₂₃₆	17.7	X	5.92253	118.72487	226.50399	1.83748	0.1882246	0.29217248	2.2492782	21	11 7.7	19.5
399665	2004	RQ ₂₄₅	16.9	X	354.48507	281.15096	85.95080	2.04411	0.1819782	0.17608235	3.1525271	21	10 20.9	20.3
399666	2004	RT ₂₅₂	18.1	X	196.32551	122.64011	194.59332	22.64299	0.1061853	0.37840803	1.8930517	21	—	—
399667	2004	RV ₂₆₆	18.1	X	17.61946	325.27410	334.81414	4.77779	0.0595244	0.28842753	2.2687061	21	8 31.9	20.5
399668	2004	RH ₃₃₆	16.1	X	303.84447	259.96758	210.60817	10.43130	0.0762371	0.18073927	3.0981400	21	12 11.1	20.3
399669	2004	RE ₃₃₈	16.2	X	119.00109	83.34507	193.83996	11.49906	0.2405775	0.18359685	3.0659088	21	12 9.4	21.6
399670	2004	RR ₃₄₃	15.6	X	38.09693	296.82423	100.28636	12.95271	0.1403599					

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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>
399681 2004 TR ₂₄	18.3	X	311.25487	104.54922	207.86980	3.64521	0.1668101	0.27923047	2.3182531	21	5 10.7	20.7
399682 2004 TJ ₄₃	17.5	X	287.34055	106.14371	221.95392	7.21619	0.1543196	0.27528008	2.3403790	21	4 30.4	20.4
399683 2004 TU ₄₈	17.8	X	233.56425	312.60616	61.13718	1.53592	0.2244390	0.27276733	2.3547302	21	4 27.3	21.5
399684 2004 TE ₅₇	16.6	X	6.34863	150.09755	199.76781	9.98156	0.0930937	0.17421040	3.1750702	21	10 11.4	20.7
399685 2004 TH ₇₁	15.9	X	71.49480	151.65188	211.84574	13.16433	0.1305035	0.18593072	3.0401985	21	—	—
399686 2004 TS ₇₂	17.3	X	301.58549	324.93789	59.93895	8.19810	0.2320147	0.28527181	2.2854066	21	8 6.4	19.5
399687 2004 TY ₇₄	15.5	X	32.25307	172.32026	216.63575	9.52647	0.1993349	0.18109529	3.0940781	21	—	—
399688 2004 TM ₇₆	18.0	X	291.89730	254.75433	143.91282	1.99319	0.1593787	0.28624798	2.2802078	21	8 20.4	20.2
399689 2004 TT ₈₇	17.9	X	355.87833	113.72426	179.38181	1.60619	0.0900500	0.28195393	2.3033006	21	7 13.2	20.1
399690 2004 TN ₉₈	16.5	X	50.88639	331.42543	47.46463	2.36575	0.2345908	0.18413550	3.0599268	21	—	—
399691 2004 TT ₉₈	16.3	X	108.55658	254.62483	31.75003	11.49425	0.2285302	0.18281058	3.0746935	21	12 8.9	21.6
399692 2004 TW ₁₀₁	16.2	X	35.28285	321.24505	56.20916	1.67730	0.1770715	0.18064200	3.0992520	21	—	—
399693 2004 TT ₁₀₂	17.9	X	276.76000	177.42755	223.15366	4.14372	0.1939588	0.28211821	2.3024063	21	7 21.7	20.7
399694 2004 TL ₁₁₈	16.0	X	19.23201	203.72262	201.60703	10.17057	0.1358460	0.18502280	3.0501361	21	—	—
399695 2004 TP ₁₄₄	16.0	X	16.11552	129.63273	228.90478	13.17110	0.2340063	0.17506442	3.1647358	21	11 24.1	19.5
399696 2004 TM ₁₄₈	16.5	X	99.70923	68.99526	248.10027	3.30819	0.1703304	0.18513450	3.0489091	21	—	—
399697 2004 TZ ₁₄₈	16.6	X	99.47267	22.77482	344.10161	2.50839	0.0885111	0.19100739	2.9860880	21	—	—
399698 2004 TG ₁₆₁	16.1	X	75.68534	290.39985	32.16327	11.64920	0.1820769	0.18000862	3.1065178	21	12 17.9	21.0
399699 2004 TH ₁₈₃	16.1	X	84.47233	100.13932	216.47158	7.53186	0.0425094	0.18111058	3.0939041	21	12 5.9	20.5
399700 2004 TG ₂₀₇	17.3	X	313.39285	148.90450	214.09280	6.42801	0.1258938	0.28192007	2.3034850	21	8 6.2	19.6
399701 2004 TH ₂₃₆	16.0	X	330.80293	250.20267	196.03182	8.28752	0.1278681	0.17967352	3.1103791	21	12 19.4	19.8
399702 2004 TQ ₂₅₃	18.6	X	350.94330	98.90071	193.77618	3.13233	0.2270347	0.28364684	2.2941268	21	6 24.9	19.9
399703 2004 TQ ₂₇₇	16.4	X	77.08549	146.30343	210.30214	4.59863	0.1975580	0.18403282	3.0610648	21	—	—
399704 2004 TP ₂₈₂	17.9	X	0.11550	167.04611	164.37923	4.28388	0.2036578	0.28897253	2.2658527	21	10 6.1	19.2
399705 2004 TJ ₃₀₀	15.6	X	25.54686	96.93115	284.81877	8.93094	0.1257000	0.17914043	3.1165467	21	12 23.1	19.6
399706 2004 TE ₃₀₂	15.8	X	16.73360	118.18195	226.98646	12.00461	0.0988770	0.17500912	3.1654025	21	10 20.3	19.9
399707 2004 TR ₃₃₇	16.6	X	34.90563	160.27899	191.44873	10.20696	0.1047431	0.17941913	3.1133185	21	11 27.2	20.9
399708 2004 TV ₃₆₀	18.7	X	350.12777	231.03771	68.59436	2.51599	0.2409121	0.28528241	2.2853500	21	7 5.6	19.5
399709 2004 TJ ₃₆₇	17.5	X	171.37338	42.37913	1.31064	2.15396	0.1813363	0.26487552	2.4012728	21	4 11.2	21.3
399710 2004 TL ₃₇₀	17.8	X	330.79114	296.96860	57.63554	3.08671	0.1842557	0.28598360	2.2816129	21	8 29.8	19.3
399711 2004 UH ₇	15.4	X	35.21036	135.95257	216.70869	27.20274	0.2099276	0.17851550	3.1238159	21	12 10.3	19.9
399712 2004 VS ₄	15.5	X	16.49212	180.79497	263.44312	14.38554	0.1842311	0.18533884	3.0466677	21	—	—
399713 2004 VN ₁₈	17.2	X	259.06841	129.80644	233.60022	5.91425	0.1534337	0.27411934	2.3469812	21	5 14.7	20.6
399714 2004 VK ₂₇	17.1	X	49.44174	43.40514	258.06880	4.75824	0.2928106	0.29269340	2.2466087	21	11 27.0	20.1
399715 2004 VE ₃₆	17.9	X	335.58246	68.14435	243.51567	2.06975	0.2328401	0.28037563	2.3119364	21	6 15.6	19.1
399716 2004 VY ₅₀	17.7	X	257.64913	315.03888	101.12087	4.71024	0.1587259	0.27940808	2.3172705	21	7 25.5	20.5
399717 2004 VK ₆₀	15.8	X	3.25029	165.95675	236.03301	7.84591	0.0656317	0.17689052	3.1429177	21	12 9.5	20.0
399718 2004 VD ₇₀	16.9	X	94.20174	98.85718	59.27920	7.01421	0.0544262	0.27000395	2.3707694	21	5 30.1	19.7
399719 2004 VM ₇₅	17.9	X	215.22818	104.45819	246.20137	19.55305	0.0578657	0.38162675	1.8823925	21	2 15.9	20.6
399720 2004 WU ₄	16.7	X	349.86082	152.95332	265.62855	10.24445	0.1681483	0.17551386	3.1593309	21	12 17.2	20.2
399721 2004 WY ₇	17.4	X	300.59206	299.23022	60.86497	7.13989	0.1521322	0.27971872	2.3155546	21	7 7.7	19.8
399722 2004 WH ₈	16.2	X	72.73689	131.46357	226.30549	6.23728	0.1735153	0.18248133	3.0783909	21	—	—
399723 2004 XH ₇	17.0	X	219.25562	155.80601	283.01799	6.40081	0.1436925	0.27448554	2.3448932	21	7 12.9	20.5
399724 2004 XS ₅₆	16.3	X	62.57098	76.93982	283.09352	12.33836	0.3197713	0.17958794	3.1113672	21	—	—
399725 2004 XX ₆₄	16.1	X	58.89257	90.46523	282.66757	10.72352	0.2494530	0.18161941	3.0881226	21	—	—
399726 2004 XL ₈₃	16.1	X	343.23481	171.59561	254.09743	7.47343	0.2323060	0.17681036	3.1438676	21	12 18.4	19.2
399727 2004 XA ₁₀₉	15.5	X	292.23216	207.05552	271.80235	28.59744	0.1975321	0.17233738	3.1980339	21	11 17.2	19.8
399728 2004 XT ₁₂₄	16.9	X	50.32199	343.34176	43.57709	2.80165	0.2846153	0.18109180	3.0941179	21	—	—
399729 2004 YH ₂₀	15.6	X	6.41776	295.41261	113.42073	27.52209	0.2337912	0.17349935	3.1837392	21	—	—
399730 2005 AB ₃	17.4	X	67.09825	175.85559	302.47779	17.88112	0.0767496	0.37111972	1.9177560	21	1 27.2	18.4
399731 2005 AC ₂₇	17.5	X	250.00749	96.56542	120.37413	24.75070	0.0938206	0.35492856	1.9756443	21	—	—
399732 2005 AM ₃₆	17.0	X	177.67740	174.99911	273.25727	8.75564	0.1773857	0.26491479	2.4010355	21	6 13.7	20.9
399733 2005 BJ ₁₀	17.2	X	120.55921	27.01119	128.57162	5.61882	0.1667993	0.26306569	2.4122737	21	7 15.5	20.6
399734 2005 BM ₂₈	17.3	X	313.59760	242.73509	280.95228	5.51021	0.1692670	0.23566886	2.5957802	21	—	—
399735 2005 DD ₁	16.7	X	320.93686	84.90323	93.46325	28.41300	0.3748185	0.23543691	2.5974848	21	—	—
399736 2005 DA ₂	16.2	X	295.37798	199.51094	323.93941	12.86523	0.1082195	0.23075699	2.6324864	21	—	—
399737 2005 EL ₂₂	17.1	X	274.75143	35.41179	162.93627	7.86142	0.1580931	0.23128690	2.6284639	21	—	—
399738 2005 EH ₁₆₆	17.4	X	340.60139	336.17282	178.41365	8.90741	0.1021359	0.23547692	2.5971906	21	—	—
399739 2005 EV ₁₈₇	16.2	X	193.69400	294.28710	11.23915	12.90310	0.2114555	0.22850585	2.6497476	21	1 10.1	20.9
399740 2005 EM ₂₁₁	17.0	X	306.47040	182.10621	344.66965	13.23881	0.1017146	0.23394047	2.6085499	21	—	—
399741 2005 EB ₂₂₇	17.3	X	253.23660	246.35484	343.51153	1.89423	0.0852870	0.23150740	2.6267947	21	—	—
399742 2005 EV ₂₂₇	17.0	X	323.02669	10.86077	143.01893	13.93008	0.1949809	0.23251079	2.6192320	21	—	—
399743 2005 ET ₂₄₁	16.9	X	332.48702	140.23358	92.90892	6.68739	0.1537401	0.24598361	2.5226980	21	3 1.3	19.9
399744 2005 EJ ₃₂₅	17.4	X	243.29903	90.53944	190.86875	12.09573	0.2415142	0.23263611	2.6182913	21	1 14.7	22.2
399745 Ouchou	16.8	X	194.15605	224.64493	24.60796	8.20610	0.2140278	0.22084955	2.7106391	21	—	—
399746 2005 GM ₃₀	16.3	X	174.43414	81.91147	176.97556	11.52385	0.0952848	0.22134475	2.7065948	21	—	—
399747 2005 GN ₄₈	17.2	X	249.25210	217.46261	47.90792	3.25349	0.1978136	0.23160002	2.6260943	21	1 4.9	21.7
399748 2005 GH ₇₄	16.5	X	340.22837	357.70562	127.46382	6.62282	0.2732391	0.23289034	2.6163855	21	—	—
399749 2005 GG ₁₃₂	17.3	X	255.67865	114.42135	93.07598	2.98374	0.0656878	0.22578631	2.6709821	21	—	—
399750 2005 GX ₁₃₃	17.8	X	244.45808	112.23065	197.79929	11.41050	0.1783992	0.23743842	2.5828670	21	2 19.4	22.1
399751 2005 GR ₁₄₈	17.5	X	226.47103	64.48034	173.49245	6.28288	0.2288390	0.22322016	2.6914136	21	—	—
399752 2005 GH ₁₉₃	18.2	X	239.49075	192.55025	184.67655	0.87781	0.1803301	0.26095485	2.4522647	21	5 10.7	21.9
399753 2005 GM ₂₂₀	17.2	X	290.25352	49.37416	131.03630	7.90631	0.1836134	0.22934543	2.6432769	21	—	—
399754 2005 HH ₂	17.0	X	293.78940	340.27060	192.69918	12.84533	0.1858508	0.22743721	2.6580412	21		

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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>		
399761	2005	JW ₁₁₇	16.9	X	203.99512	190.20605	96.32974	8.36354	0.1027525	0.22472863	2.6793561	21	—	—
399762	2005	JZ ₁₄₂	17.1	X	307.77760	125.12854	81.79458	13.10606	0.1077569	0.23347300	2.6120307	21	—	—
399763	2005	JS ₁₅₇	17.1	X	216.28061	49.23697	221.08027	11.73206	0.2503052	0.22318606	2.6916877	21	—	—
399764	2005	JS ₁₆₇	17.8	X	260.59931	97.06300	172.96095	6.57801	0.2595614	0.23087507	2.6315887	21	1 15.0	22.5
399765	2005	JL ₁₇₅	16.7	X	300.05102	84.55087	169.29718	13.20632	0.1407579	0.23641172	2.5903396	21	2 11.8	20.4
399766	2005	LF ₁₈	17.3	X	252.98903	37.93553	231.50850	12.14042	0.1535603	0.22936281	2.6431433	21	1 12.3	21.7
399767	2005	MT ₄	16.1	X	183.36305	75.30851	301.10898	11.27816	0.2874205	0.22290524	2.6939480	21	3 20.4	21.2
399768	2005	ML ₅	16.6	X	203.86795	219.85606	103.77969	14.82740	0.2626696	0.22607034	2.6687444	21	2 8.8	21.5
399769	2005	MA ₉	16.2	X	247.47800	320.70012	284.80581	14.96081	0.1475309	0.22048171	2.7136532	21	—	—
399770	2005	MU ₂₇	16.1	X	141.53309	355.17669	277.70632	16.11118	0.0804236	0.20485413	2.8499653	21	12 22.0	20.3
399771	2005	ML ₅₀	16.7	X	120.09789	213.92536	136.07966	4.95952	0.1105397	0.21165584	2.7885764	21	—	—
399772	2005	ME ₅₄	16.3	X	250.41492	122.67611	156.89451	14.83282	0.2222566	0.22541103	2.6739458	21	1 20.7	21.0
399773	2005	NV ₄	17.4	X	210.17806	169.17007	122.10550	3.72537	0.3010130	0.22019398	2.7160166	21	1 6.3	22.3
399774	2005	NB ₇	18.7	X	192.69593	348.18145	199.15568	12.70395	0.5177055	0.33736702	2.0436239	21	10 20.1	22.8
399775	2005	NS ₈	16.8	X	111.27436	90.77377	293.00470	4.40538	0.1269471	0.21435985	2.7650761	21	1 12.7	20.5
399776	2005	NM ₂₆	16.8	X	223.57046	137.86460	131.90606	8.13840	0.1384288	0.22020038	2.7159640	21	—	—
399777	2005	NZ ₂₈	16.5	X	225.79625	327.33339	288.47310	7.53111	0.1167418	0.21640344	2.7476408	21	—	—
399778	2005	NL ₃₂	16.0	X	203.42946	46.52324	262.43382	10.65178	0.0928561	0.22110112	2.7085827	21	1 15.7	20.3
399779	2005	NM ₃₃	16.9	X	159.20778	65.00191	299.23763	9.28311	0.2407838	0.21903275	2.7256077	21	2 17.6	21.5
399780	2005	NJ ₃₄	16.4	X	192.70389	14.85093	304.96263	7.20767	0.0936131	0.22010781	2.7167255	21	1 20.3	20.4
399781	2005	ND ₄₇	16.9	X	161.09956	284.98086	112.66237	13.73800	0.2802477	0.22437040	2.6822073	21	4 10.2	21.8
399782	2005	NZ ₅₄	17.3	X	163.35886	147.51416	204.79111	2.71207	0.1988568	0.21847677	2.7302298	21	2 5.9	21.6
399783	2005	NO ₅₅	16.2	X	208.75046	216.48971	87.39780	15.95450	0.1559153	0.22194552	2.7017083	21	1 18.5	20.7
399784	2005	NG ₆₀	16.7	X	176.09192	189.89243	117.05249	9.36236	0.0264516	0.21588181	2.7520649	21	—	—
399785	2005	NM ₆₃	16.9	X	227.91065	153.72522	118.82069	7.45186	0.1668136	0.22152291	2.7051434	21	—	—
399786	2005	OT ₈	17.1	X	185.49046	40.65222	287.58281	8.68059	0.1226020	0.21949086	2.7218139	21	1 23.6	21.4
399787	2005	OZ ₁₆	15.7	X	7.78851	88.89336	291.32632	15.21447	0.1097597	0.19522991	2.9428750	21	11 25.4	19.6
399788	2005	OE ₂₃	16.5	X	111.00688	179.42363	147.26528	16.24364	0.1518974	0.20669769	2.8329939	21	—	—
399789	2005	PK ₇	16.9	X	193.96004	200.71427	128.76408	11.26883	0.2864831	0.21953903	2.7214157	21	2 8.1	21.8
399790	2005	PE ₁₀	16.8	X	185.26973	12.64059	352.76273	7.30607	0.1576699	0.22304661	2.6928095	21	3 10.9	21.1
399791	2005	QJ ₄₁	16.4	X	146.60346	174.51240	175.94734	13.85008	0.1967666	0.21216263	2.7841339	21	1 19.2	20.9
399792	2005	QE ₅₀	16.5	X	131.32114	336.84087	17.81963	4.65731	0.2130856	0.20935095	2.8090066	21	1 14.2	20.7
399793	2005	QK ₇₁	16.4	X	146.66947	196.69355	171.31872	9.03305	0.2122645	0.21302834	2.7765859	21	2 10.9	20.9
399794	2005	QG ₇₈	16.9	X	151.49113	15.25923	308.17363	1.76430	0.1640336	0.20892789	2.8127973	21	—	—
399795	2005	QY ₉₁	16.4	X	130.30525	90.60098	262.75091	3.25962	0.2148978	0.20992453	2.8038875	21	1 10.4	20.5
399796	2005	QV ₁₀₇	17.0	X	138.43828	62.05600	289.32827	3.32114	0.0819466	0.21096476	2.7946630	21	—	—
399797	2005	QJ ₁₁₀	17.0	X	126.52175	163.39038	173.94087	2.11077	0.0722046	0.20663374	2.8335783	21	—	—
399798	2005	QS ₁₃₀	16.2	X	323.07720	229.92588	147.70054	12.04343	0.1237476	0.18373485	3.0643735	21	9 10.2	19.9
399799	2005	QV ₁₇₇	16.2	X	346.06788	246.33252	147.49924	9.11631	0.1693394	0.18871134	3.0102603	21	11 14.3	19.6
399800	2005	RQ ₄	16.9	X	158.26908	351.50672	337.80445	7.56171	0.2260470	0.21288309	2.7778488	21	1 10.7	21.4
399801	2005	RH ₄₅	16.2	X	139.29866	239.98276	137.81737	13.64873	0.1806759	0.21248356	2.7813299	21	2 14.2	20.5
399802	2005	RJ ₄₅	16.2	X	129.85979	251.92730	106.69676	10.15568	0.1883718	0.20899456	2.8121991	21	1 13.5	20.3
399803	2005	SZ ₃	17.0	X	89.24147	355.46926	37.76242	2.47406	0.0960554	0.20618846	2.8376565	21	—	—
399804	2005	SR ₁₂	16.0	X	206.57264	82.03902	223.26986	12.00251	0.2714515	0.21639623	2.7477017	21	1 16.9	21.1
399805	2005	SG ₄₈	16.9	X	43.68285	92.50465	308.53915	2.28834	0.0963821	0.19863989	2.9090984	21	—	—
399806	2005	SC ₅₄	16.6	X	352.76019	12.20637	22.31587	0.69005	0.0735154	0.18855289	3.0119465	21	11 18.2	20.4
399807	2005	SM ₇₄	18.3	X	56.24183	264.94995	4.64508	2.14426	0.1766286	0.30914542	2.1661781	21	10 8.7	20.7
399808	2005	ST ₇₈	16.7	X	56.28805	326.83984	21.23107	5.38575	0.1283831	0.19450718	2.9501603	21	12 24.4	20.9
399809	2005	SN ₇₉	16.8	X	357.96506	288.44952	182.79533	19.58943	0.0818403	0.20371862	2.8605457	21	—	—
399810	2005	SY ₈₁	16.0	X	249.30179	283.31711	182.10291	21.18727	0.2020773	0.18083472	3.0970497	21	9 5.8	20.8
399811	2005	SZ ₈₆	16.5	X	231.42730	88.45888	26.04901	4.92104	0.0965549	0.18045132	3.1014349	21	9 13.5	21.0
399812	2005	SB ₁₀₈	18.0	X	233.09827	202.78246	206.64357	2.64633	0.1431931	0.29533738	2.2331802	21	6 17.9	21.0
399813	2005	SK ₁₁₈	16.6	X	167.12899	191.59611	165.74429	14.22543	0.2022162	0.21516064	2.7582110	21	2 15.3	21.1
399814	2005	SE ₁₃₃	18.7	X	66.34729	122.24710	209.13155	2.32986	0.2195026	0.31863358	2.1229594	21	—	—
399815	2005	SF ₁₇₀	16.4	X	123.51118	186.63893	197.25078	13.40900	0.1879897	0.21200987	2.7854711	21	2 2.0	20.7
399816	2005	SN ₁₈₀	16.7	X	107.32097	208.14496	178.99791	5.13720	0.1674541	0.20928030	2.8096388	21	1 17.8	20.4
399817	2005	SF ₂₀₂	15.9	X	19.45307	114.91355	259.11267	8.77483	0.1152550	0.19288342	2.9666942	21	12 6.4	19.6
399818	2005	SR ₂₀₄	16.6	X	110.37737	146.92088	266.46765	8.00517	0.2879434	0.21208686	2.7847970	21	3 7.8	20.8
399819	2005	SW ₂₅₃	16.8	X	157.98881	134.39146	171.88609	8.66946	0.2790780	0.21074675	2.7965899	21	—	—
399820	2005	SV ₂₇₅	17.9	X	115.59615	240.93591	3.24086	6.95349	0.1831628	0.31268484	2.1498005	21	11 7.1	21.2
399821	2005	ST ₂₇₈	17.2	X	207.39845	93.17275	212.84180	16.41151	0.3601235	0.21680565	2.7442414	21	1 18.2	22.8
399822	2005	SV ₂₈₈	16.2	X	166.90539	122.45985	150.06726	13.47116	0.0730857	0.19726539	2.9225960	21	—	—
399823	2005	SR ₂₉₂	16.4	X	344.47339	8.50645	18.15869	2.75788	0.1065134	0.18447996	3.0561166	21	10 26.7	20.0
399824	2005	TR ₇	17.0	X	268.25861	280.98600	168.10460	2.70298	0.0561482	0.18200830	3.0837223	21	9 30.6	21.3
399825	2005	TJ ₈	16.6	X	48.89289	134.69565	188.61936	9.55738	0.0476722	0.18673742	3.0314365	21	11 4.1	20.8
399826	2005	TN ₃₄	16.4	X	317.50946	248.20170	176.86499	9.77389	0.1188913	0.18791300	3.0187803	21	11 4.6	20.1
399827	2005	TV ₈₃	16.8	X	355.38341	84.21145	358.21045	8.79813	0.0905742	0.19656624	2.9295219	21	—	—
399828	2005	TE ₉₄	16.2	X	277.50612	247.88839	214.34448	14.61543	0.0578377	0.18681545	3.0305923	21	10 28.9	20.3
399829	2005	TN ₉₆	16.8	X	51.68776	355.88112	348.89525	2.89920	0.1725637	0.19128684	2.9831791	21	12 20.4	21.1
399830	2005	TV ₁₀₆	17.0	X	167.77976	99.80086	184.94085							

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
399841	2005	UK ₇₁	16.8	X	120.36842	100.93883	288.65954	7.10934	0.2190657	0.20940854	2.8084916	21	2 11.4	21.0
399842	2005	UT ₈₂	17.1	X	137.78909	281.91701	35.53090	2.46507	0.0634484	0.20008683	2.8950565	21	—	—
399843	2005	UG ₈₅	16.7	X	8.28396	315.52348	58.64235	4.75990	0.1415214	0.18649099	3.0341065	21	11 21.5	20.4
399844	2005	UD ₉₃	17.3	X	350.36786	33.89164	258.49634	4.50278	0.1931997	0.29701827	2.2247469	21	6 25.1	18.3
399845	2005	UW ₁₀₀	17.7	X	118.90224	139.05051	69.88892	8.81396	0.1136751	0.30030835	2.2084680	21	9 26.9	20.9
399846	2005	UL ₁₁₄	15.8	X	278.80668	4.23026	61.27964	16.61761	0.2465876	0.17583113	3.1555292	21	8 24.0	20.5
399847	2005	UV ₁₂₁	16.9	X	108.81853	148.91272	223.70688	11.18665	0.1232726	0.20366482	2.8610495	21	—	—
399848	2005	UH ₁₂₇	15.9	X	339.70743	162.77915	229.26147	9.35001	0.0855445	0.18258686	3.0772045	21	10 24.9	19.7
399849	2005	UB ₁₄₂	16.5	X	133.39727	280.85009	102.92295	8.63884	0.2354506	0.20961733	2.8066263	21	2 24.1	20.9
399850	2005	UO ₁₆₈	18.3	X	199.99875	127.56465	26.19449	2.56755	0.0824184	0.30518104	2.1848972	21	10 10.3	21.1
399851	2005	UD ₁₇₅	16.2	X	237.03766	208.40292	250.84717	7.67987	0.0534202	0.17370703	3.1812011	21	8 31.1	21.0
399852	2005	UL ₁₈₃	17.8	X	120.08717	288.35899	276.82645	3.13854	0.0836594	0.29852312	2.2172640	21	9 13.4	20.6
399853	2005	UA ₂₆₉	16.0	X	339.33652	352.18075	36.35323	9.01433	0.1087683	0.18447720	3.0561471	21	10 21.9	19.7
399854	2005	UJ ₂₆₉	18.3	X	342.66946	269.35694	99.80555	1.00152	0.0724366	0.30783237	2.1723336	21	10 21.7	20.3
399855	2005	UQ ₂₈₇	18.0	X	57.78795	261.67152	64.14013	4.70542	0.0997970	0.31418932	2.1429322	21	12 17.9	20.6
399856	2005	UZ ₂₈₉	17.7	X	158.90679	187.68561	266.03091	4.13109	0.1200544	0.28609370	2.2810275	21	5 29.9	20.9
399857	2005	UC ₂₉₂	16.2	X	320.92207	63.64163	34.07301	11.99855	0.0439394	0.19011039	2.9954735	21	12 21.6	20.4
399858	2005	UC ₂₉₄	16.3	X	98.90595	101.58339	240.05077	11.25630	0.0090112	0.19453838	2.9498449	21	—	—
399859	2005	UY ₃₀₀	16.1	X	21.67448	219.85526	200.76572	10.21160	0.1113360	0.19363945	2.9589672	21	—	—
399860	2005	UO ₃₂₅	16.8	X	119.26121	288.32442	45.33260	5.74048	0.1236987	0.20124668	2.8839224	21	—	—
399861	2005	UB ₃₆₃	16.3	X	74.86745	121.07350	217.14911	14.54066	0.0306154	0.19210537	2.9746991	21	12 19.9	20.7
399862	2005	UZ ₃₈₅	16.3	X	223.45120	40.88449	64.62515	10.50986	0.0413030	0.17304137	3.1893542	21	9 2.4	21.1
399863	2005	UL ₃₉₇	16.3	X	175.21654	180.07548	199.71631	9.45403	0.1476303	0.21652252	2.7466332	21	3 17.7	20.6
399864	2005	UH ₄₁₃	16.7	X	96.99740	205.94849	168.15766	2.24533	0.1145725	0.19933654	2.9023166	21	—	—
399865	2005	UV ₄₁₃	16.0	X	92.72133	228.43295	56.02832	9.75160	0.0645544	0.18575381	3.0421285	21	11 10.4	20.5
399866	2005	UR ₄₂₄	18.4	X	33.90889	164.40957	166.45386	0.11750	0.2089529	0.31219638	2.1520423	21	12 10.1	20.9
399867	2005	UA ₄₂₆	16.4	X	128.09024	273.82464	41.20338	4.96649	0.1986986	0.19837169	2.9117198	21	—	—
399868	2005	UG ₄₂₈	15.6	X	174.53616	317.65273	242.00581	15.54658	0.1836749	0.17983846	3.1084771	21	10 20.6	21.0
399869	2005	UQ ₄₆₃	16.3	X	30.86070	298.00942	55.17039	11.04645	0.1156275	0.18755496	3.0226209	21	11 24.8	20.2
399870	2005	UN ₄₉₈	16.7	X	125.62389	266.15471	114.29506	10.06773	0.2027082	0.20895117	2.8125884	21	2 7.1	20.8
399871	2005	UZ ₄₉₉	16.7	X	137.64236	266.90191	109.56176	6.17445	0.1793381	0.21100998	2.7942637	21	2 11.7	20.9
399872	2005	UL ₅₀₁	15.9	X	289.92064	226.83616	199.12676	26.71902	0.1990599	0.17707943	3.1406821	21	9 4.2	20.3
399873	2005	UL ₅₂₀	16.6	X	184.02189	321.83255	185.77561	12.64679	0.1121642	0.17880969	3.1203886	21	8 30.8	21.6
399874	2005	VH ₂₈	16.1	X	0.57076	159.43694	232.95101	9.50103	0.2268579	0.18695430	3.0290916	21	12 12.2	19.3
399875	2005	VM ₄₃	15.7	X	280.02650	195.42392	62.47719	10.45855	0.1033782	0.17536141	3.1611616	21	9 9.2	20.2
399876	2005	VC ₄₆	16.8	X	120.43625	252.09570	234.30946	2.59393	0.1499024	0.19635715	2.9316012	21	—	—
399877	2005	VD ₁₀₂	15.6	X	304.30486	122.92583	285.53669	9.67522	0.1013303	0.17922078	3.1156151	21	9 15.9	19.8
399878	2005	VV ₁₀₆	16.0	X	76.02773	56.15338	248.27533	8.94313	0.0726598	0.18662882	3.0326124	21	11 15.4	20.3
399879	2005	VD ₁₀₈	18.2	X	68.57486	264.86146	46.42628	3.72859	0.1867073	0.31390482	2.1442268	21	12 20.8	21.3
399880	2005	VT ₁₁₅	17.6	X	190.37130	175.65822	271.07098	4.07548	0.1211711	0.29003782	2.2603011	21	6 23.9	20.9
399881	2005	VY ₁₃₃	16.3	X	305.86947	294.24518	120.16651	12.40413	0.1630463	0.17961984	3.1109989	21	9 29.6	20.2
399882	2005	WR ₄	16.0	X	28.41723	71.79853	299.19524	11.40575	0.3061755	0.18879694	3.0093503	21	—	—
399883	2005	WJ ₁₈	15.9	X	72.84249	329.34898	73.55835	15.83939	0.0972408	0.19807886	2.9145888	21	—	—
399884	2005	WN ₂₁	16.0	X	87.41726	199.60130	53.63194	10.07800	0.0461857	0.17455163	3.1709309	21	9 27.7	20.6
399885	2005	WY ₂₁	16.6	X	119.17829	237.88383	55.50175	9.78172	0.0851887	0.18860309	3.0114121	21	12 21.4	21.3
399886	2005	WK ₂₄	15.7	X	171.38585	316.19065	258.79692	15.70008	0.2044236	0.18039448	3.1020864	21	11 4.8	21.1
399887	2005	WB ₃₈	16.9	X	134.70120	117.86118	237.52864	6.35737	0.3221137	0.20445976	2.8536288	21	1 27.6	21.6
399888	2005	WQ ₄₀	17.6	X	79.43088	243.20618	255.16207	8.46138	0.1458173	0.27526234	2.3404796	21	4 21.1	20.2
399889	2005	WR ₄₈	15.8	X	127.29815	4.62604	262.12383	8.84039	0.0575137	0.18263281	3.0766884	21	11 24.9	20.3
399890	2005	WN ₅₁	16.0	X	352.32349	170.00056	259.31945	9.11479	0.0917791	0.18747376	3.0234936	21	12 31.8	19.9
399891	2005	WX ₅₅	17.3	X	327.84627	290.85844	81.57360	23.85421	0.3774649	0.30371683	2.1919138	21	10 12.8	18.6
399892	2005	WS ₇₅	15.7	X	126.96523	44.12674	266.76539	10.35647	0.0976414	0.19267603	2.9688227	21	—	—
399893	2005	WB ₇₈	16.7	X	129.78184	281.33059	57.08381	3.97156	0.2537998	0.20015789	2.8943713	21	—	—
399894	2005	WA ₈₃	16.8	X	228.39003	95.02716	71.07369	3.60797	0.0668106	0.18347158	3.0673042	21	11 14.5	21.1
399895	2005	WH ₈₆	17.8	X	179.36492	203.05189	240.56672	6.53765	0.0625728	0.28706524	2.2758780	21	6 6.8	20.6
399896	2005	WH ₁₀₃	16.2	X	96.48211	292.06008	87.73628	13.08495	0.2230151	0.20217825	2.8750568	21	1 4.9	19.8
399897	2005	WL ₁₃₆	17.6	X	149.41133	249.55604	218.65506	5.16610	0.1272477	0.28890299	2.2662163	21	6 9.2	20.8
399898	2005	WA ₁₄₁	15.7	X	333.78904	155.10737	290.73782	7.85298	0.1303882	0.18280790	3.0747236	21	12 25.1	19.2
399899	2005	WH ₁₄₇	15.9	X	348.30675	320.90961	108.03716	11.05562	0.0761167	0.18900142	3.0071794	21	12 25.6	19.7
399900	2005	WV ₁₅₂	16.1	X	36.33173	70.81241	261.39163	9.26308	0.0944382	0.18059028	3.0998438	21	10 31.4	20.4
399901	2005	WT ₁₆₂	16.2	X	223.56204	226.12165	273.58381	4.06630	0.0957831	0.17230516	3.1984326	21	10 1.2	21.1
399902	2005	WP ₁₈₂	15.4	X	236.03810	139.30128	297.70119	15.56333	0.1326831	0.17069260	3.2185450	21	7 27.2	20.2
399903	2005	WH ₁₈₅	17.4	X	359.02953	8.02540	87.64232	24.61197	0.0399512	0.38046765	1.8862137	21	—	—
399904	2005	WH ₂₀₂	16.1	X	42.71853	221.91761	84.61327	11.38326	0.0784396	0.17589370	3.1547808	21	10 13.3	20.6
399905	2005	XA ₁	18.4	X	44.41130	211.95165	148.23177	6.50294	0.3842021	0.31812156	2.1252367	21	—	—
399906	2005	XR ₅	17.7	X	12.94589	288.14092	75.69926	4.87410	0.1673910	0.30991916	2.1625713	21	12 19.3	19.8
399907	2005	XY ₂₄	15.1	X	192.02538	240.50178	292.81772	17.57072	0.1158301	0.17036586	3.2226589	21	9 29.9	20.6
399908	2005	XL ₂₅	16.5	X	20.43648	9.43717	357.34812	1.47716	0.2001691	0.18561226	3.0436750	21	12 8.7	20.2
399909	2005	XR ₃₂	15.9	X	283.91593	321.67085	90.58440	7.95479	0.1326319	0.17199862	3.2022316	21	8 26.0	20.3
399910	2005	XL ₃₇	17.8	X										

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
399921 2005 YN ₄₇	16.1	X	24.55870	107.23078	322.98219	7.93044	0.2106311	0.19116266	2.9844708	21	—	—
399922 2005 YE ₆₀	18.2	X	285.30868	322.91424	89.33288	4.79687	0.1221789	0.29620274	2.2288286	21	9 9.5	20.4
399923 2005 YU ₇₅	15.5	X	104.82531	2.52023	300.06811	8.00044	0.0782269	0.18148777	3.0896157	21	12 15.1	20.1
399924 2005 YO ₇₇	16.0	X	255.39075	207.03800	293.72727	9.30683	0.0918485	0.17825246	3.1268883	21	11 8.4	20.6
399925 2005 YR ₈₇	17.4	X	317.91854	172.83952	105.10288	10.77182	0.1189165	0.27669446	2.3323967	21	4 14.8	20.3
399926 2005 YJ ₁₁₀	15.4	X	82.38981	41.05925	279.68521	15.16857	0.1229472	0.17998442	3.1067963	21	12 17.6	20.1
399927 2005 YP ₁₃₁	18.1	X	87.07482	176.28007	302.20443	1.94870	0.1363529	0.26968208	2.3726554	21	4 4.9	20.8
399928 2005 YU ₁₃₁	15.8	X	219.51737	217.71664	300.35094	15.25286	0.0819998	0.17216877	3.2001215	21	10 14.7	20.9
399929 2005 YW ₁₄₁	16.0	X	49.85502	68.32141	306.04056	9.15235	0.0460770	0.18360907	3.0657728	21	—	—
399930 2005 YQ ₁₄₄	16.3	X	92.79110	303.72487	101.84554	4.72787	0.2248502	0.19820275	2.9133741	21	2 3.3	20.0
399931 2005 YU ₁₆₁	18.2	X	293.57811	155.11135	257.95388	5.44818	0.0943610	0.29765709	2.2215626	21	9 23.5	20.4
399932 2005 YA ₁₆₈	15.6	X	79.56254	20.11484	282.09409	10.18991	0.0592914	0.17491856	3.1664949	21	11 11.6	20.4
399933 2005 YP ₁₇₇	15.3	X	112.24066	317.33952	216.63572	7.87994	0.0409770	0.17404951	3.1770266	21	11 12.5	20.0
399934 2005 YY ₁₇₈	15.9	X	22.73106	77.36098	397.82763	7.26616	0.0637750	0.17749779	3.1357451	21	12 2.1	20.1
399935 2005 YG ₁₈₉	17.8	X	54.53212	62.02647	103.88884	3.19770	0.1511889	0.27217407	2.3581507	21	4 23.8	20.0
399936 2005 YU ₂₀₂	17.0	X	17.60137	326.42215	94.38766	1.02508	0.2553548	0.18963375	3.0004908	21	—	—
399937 2005 YD ₂₅₁	16.7	X	325.21174	258.06737	175.28091	1.99182	0.1066170	0.17888700	3.1194895	21	11 24.5	20.4
399938 2005 YL ₂₅₃	16.4	X	215.29934	59.08795	86.68741	3.86128	0.0986345	0.17013360	3.2255911	21	10 3.3	21.2
399939 2005 YR ₂₇₀	17.0	X	7.59365	327.75653	298.36228	25.45809	0.1246764	0.27907329	3.2191235	21	6 27.7	19.3
399940 2005 YH ₂₇₂	16.4	X	354.18823	303.83603	70.18683	3.03814	0.2253514	0.17524154	3.1626030	21	11 1.4	19.6
399941 2005 YG ₂₇₅	16.3	X	111.35076	318.96286	68.65970	3.75408	0.2963494	0.20158271	2.8807166	21	2 13.9	20.5
399942 2005 YZ ₂₇₈	16.1	X	141.45918	102.09546	263.42702	13.48531	0.1646756	0.20457649	2.8525432	21	1 27.6	20.6
399943 2006 AP ₁₂	15.9	X	131.53237	323.14910	282.29738	8.40415	0.0565988	0.17412703	3.1760835	21	10 31.7	20.8
399944 2006 AS ₁₆	16.1	X	327.60807	123.28786	266.21065	9.20769	0.2306400	0.17766392	3.1337900	21	9 17.6	19.5
399945 2006 AS ₂₃	18.1	X	216.23043	96.78246	307.67697	4.92175	0.1141035	0.28120412	2.3783931	21	5 24.8	21.6
399946 2006 AT ₂₅	16.6	X	88.48911	90.09028	296.75882	4.25264	0.2661243	0.19715917	2.9236456	21	1 10.3	20.0
399947 2006 AT ₃₄	16.1	X	153.46095	108.13788	103.57842	9.39811	0.0208329	0.17161630	3.2069857	21	10 21.3	20.9
399948 2006 AD ₃₆	17.6	X	15.60918	207.42507	343.64427	1.60005	0.1473124	0.26709727	3.2879382	21	3 10.8	19.6
399949 2006 AM ₃₉	16.0	X	280.97156	13.58094	110.89427	10.81921	0.0412315	0.17894488	3.1188168	21	12 2.4	20.3
399950 2006 AA ₄₃	17.7	X	78.62591	17.36097	133.06142	7.08499	0.1065418	0.27239770	2.3568599	21	5 7.3	20.4
399951 2006 AB ₄₆	15.5	X	157.64724	275.72905	287.89281	17.16763	0.0718882	0.17019369	3.2248319	21	10 3.2	20.7
399952 2006 AR ₅₈	17.8	X	6.76979	131.25005	88.33534	4.59212	0.1170370	0.27205150	2.3588589	21	4 10.4	20.0
399953 2006 AT ₆₉	18.0	X	128.07104	95.25893	82.71520	4.81614	0.0744293	0.28703636	2.2760306	21	8 18.2	21.0
399954 2006 AT ₇₈	17.5	X	28.17733	225.75646	7.25267	1.91307	0.1795076	0.27561834	2.3384638	21	6 17.9	19.1
399955 2006 AU ₉₄	15.9	X	31.11356	34.62709	319.53779	8.25162	0.0918936	0.17510813	3.1642091	21	11 19.0	20.3
399956 2006 AZ ₉₅	17.1	X	26.28398	74.64879	129.24128	7.60530	0.0569537	0.27207767	2.3587076	21	4 24.5	19.8
399957 2006 AQ ₁₀₄	17.7	X	204.74353	280.70162	141.00360	6.65861	0.1062938	0.28262393	2.2996589	21	6 6.9	21.0
399958 2006 BR ₄	17.6	X	35.44660	317.42080	296.04899	3.68024	0.2556004	0.28058894	2.3107645	21	8 21.3	19.6
399959 2006 BK ₂₁	15.7	X	52.79262	285.58628	131.38956	13.16623	0.1091568	0.18985604	2.9981482	21	—	—
399960 2006 BZ ₃₅	16.7	X	36.01901	326.60911	69.64194	2.99586	0.1571921	0.18461859	3.0545865	21	—	—
399961 2006 BR ₄₇	15.5	X	91.28262	77.67017	278.90264	9.66563	0.0270502	0.19208196	2.9749408	21	—	—
399962 2006 BZ ₅₂	17.4	X	43.01251	202.30319	353.79740	3.32597	0.1599041	0.27093983	2.3653068	21	5 16.9	19.4
399963 2006 BG ₆₃	15.4	X	272.42961	63.97325	82.30643	10.40689	0.0381758	0.17939944	3.1135463	21	12 16.4	19.6
399964 2006 BW ₇₀	16.1	X	50.87869	39.70659	345.59402	10.39419	0.1566591	0.18379985	3.0636510	21	—	—
399965 2006 BD ₈₁	15.9	X	53.39091	268.39115	137.63982	10.15232	0.1144508	0.18372808	3.0644487	21	—	—
399966 2006 BZ ₈₁	17.4	X	6.40768	105.46399	126.0618	6.99640	0.0891844	0.26914928	2.3757855	21	4 30.9	19.9
399967 2006 BJ ₈₉	15.7	X	73.65004	197.84010	128.27635	10.18923	0.0811264	0.17497478	3.1658166	21	12 9.6	20.4
399968 2006 BT ₉₄	17.8	X	26.09042	236.75792	300.98166	1.63706	0.1267146	0.26434927	2.4044586	21	3 12.4	20.0
399969 2006 BV ₁₀₇	16.0	X	41.84970	49.16234	331.59151	5.38065	0.1416222	0.18177984	3.0863054	21	—	—
399970 2006 BS ₁₁₆	18.1	X	22.64566	44.52679	182.73556	0.91393	0.1409072	0.27131800	2.3631084	21	5 23.5	20.1
399971 2006 BU ₁₂₁	17.6	X	330.26004	141.82918	129.92765	6.60613	0.1557952	0.27208833	2.3586460	21	4 17.5	20.1
399972 2006 BU ₁₂₄	17.2	X	29.23020	323.62544	339.21833	6.33606	0.1418289	0.28621868	2.2803634	21	10 4.7	19.5
399973 2006 BU ₁₃₀	18.1	X	88.03535	333.51405	153.95133	3.94113	0.1316190	0.26791546	3.2830740	21	4 21.7	20.8
399974 2006 BS ₁₅₁	15.0	X	284.59151	122.52318	331.74191	10.04427	0.0382804	0.17140604	2.3060708	21	10 23.9	19.6
399975 2006 BO ₁₅₈	17.6	X	106.46243	317.27102	147.49526	1.66762	0.1377890	0.26836088	2.3804363	21	4 16.2	20.4
399976 2006 BM ₁₇₄	17.5	X	345.94858	251.87198	66.61004	4.41041	0.1735472	0.28557077	2.2838113	21	8 4.2	19.0
399977 2006 BA ₁₈₀	17.3	X	279.98270	151.23770	103.90871	2.24321	0.1655981	0.25871650	2.4392330	21	1 17.9	20.8
399978 2006 BG ₁₈₀	17.8	X	10.31682	233.54083	10.12878	1.25798	0.1516608	0.27296013	2.3536212	21	5 22.5	19.7
399979 2006 Lewseaman	17.0	X	42.58064	107.68573	142.50537	23.31948	0.2187236	0.27683313	2.3316177	21	8 24.4	19.2
399980 2006 BC ₂₁₃	17.4	X	316.90458	161.52634	115.65289	3.53579	0.1677797	0.26769616	2.3843753	21	3 31.8	20.1
399981 2006 BC ₂₃₃	17.5	X	322.96623	207.58779	89.69808	3.41032	0.1142849	0.27755363	2.3275809	21	5 17.1	19.7
399982 2006 BW ₂₃₅	15.7	X	242.38728	311.79119	112.34858	11.18938	0.0217677	0.15789953	3.3901233	21	8 1.5	20.6
399983 2006 BP ₂₃₇	17.5	X	6.07462	103.24049	96.09962	3.64372	0.1383660	0.26572440	2.3961560	21	3 7.7	19.7
399984 2006 BU ₂₆₃	15.7	X	21.66754	200.93492	145.36585	11.16839	0.0722597	0.16537519	3.2871723	21	10 29.9	20.2
399985 2006 BW ₂₆₅	17.7	X	345.36648	261.66931	320.86060	1.28346	0.1272843	0.26325738	2.4111025	21	3 4.1	20.3
399986 2006 BY ₂₇₆	15.7	X	140.02352	353.57324	327.20830	14.18678	0.0735996	0.18278495	3.0749809	21	—	—
399987 2006 BE ₂₇₈	17.4	X	351.89755	352.56860	167.68652	4.28201	0.0561987	0.25499979	2.4628776	21	—	—
399988 2006 CK ₁₃	15.9	X	34.65624	81.60967	315.53138	9.48257	0.1016321	0.18188762	3.0850861	21	—	—
399989 2006 CN ₂₇	18.0	X	7.07106	60.68356	141.13620	2.10264	0.1355687	0.26645117	2.3917969	21	3 12.0	20.1
399990 2006 CJ ₃₅	17.2	X	39.90904	56.96370	156.52364	6.89482	0.1937113	0.27316391	2.3524505	21	6 14.9	19.3
399991 2006 CY ₅₀	18.2	X	41.88608	4.31621	162.48120	1.36410	0.1269540	0.26759911	2.3849518	21	3 27.6	20.1
399992 2006 DG ₁₂	15.8	X	36.64399	238.19455	146.97560	10.27119	0.0680285	0.17751486	3.1355441	21	—	—
399993 2006 DV ₁₄	15.1	X	318.83445	95.53999	322.89830	17.25282	0.1318735	0.16918275	2.3276656	21	10 12.7	19.5
399994 200												