Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516001 2015 RE_{242}	16.9	X	94.46640	179.81748	139.02980	11.60282	0.3041776	0.24322876	2.5417106	20	—	—
516002 2015 RJ_{244}	17.2	X	52.03417	314.79973	4.37046	8.80534	0.1651508	0.22209075	2.7005304	20	11 30.9	21.1
516003 2015 RP_{249}	17.0	X	355.90024	156.87828	187.24128	11.93023	0.0668820	0.19692959	2.9259174	20	9 29.8	20.5
516004 2015 RS_{252}	16.8	X	37.70059	317.35145	17.86885	4.82009	0.1035113	0.22415462	2.6839284	20	11 26.3	20.5
516005 2015 RD_{253}	17.0	X	28.18065	282.73051	33.90670	4.09044	0.1100282	0.19611063	2.9340575	20	10 16.7	20.8
516006 2015 RE_{253}	16.9	X	255.00158	265.63206	205.75438	11.53653	0.0061563	0.19816482	2.9137459	20	10 29.5	20.8
516007 2015 RL_{253}	16.7	X	227.65521	249.57649	230.73901	1.74653	0.0728102	0.19109391	2.9851866	20	9 25.1	21.0
516008 2015 RN_{253}	16.7	X	7.48905	281.33654	32.82873	0.42598	0.1634207	0.18662080	3.0326993	20	9 14.8	20.1
516009 2015 RB_{254}	16.7	X	328.24036	201.76093	153.35119	7.42748	0.0081642	0.17790934	3.1309074	20	9 2.5	21.0
516010 2015 RF_{254}	16.4	X	67.19520	247.12927	7.54293	5.16596	0.0854707	0.19921764	2.9034712	20	9 16.6	20.5
516011 2015 RH_{254}	17.1	X	33.74238	120.91668	220.45392	5.09577	0.0357949	0.21614231	2.7498533	20	11 18.6	20.6
516012 2015 RR_{254}	16.5	X	334.92368	186.95446	181.34548	15.61157	0.0151728	0.18260462	3.0770051	20	9 28.4	20.5
516013 2015 RY_{254}	16.1	X	239.37160	254.91433	176.14851	12.31518	0.0489960	0.17825031	3.1269134	20	8 8.2	20.8
516014 2015 RD_{255}	17.3	X	238.32471	322.03009	179.15406	4.29884	0.0128224	0.21541924	2.7560032	20	11 17.8	21.0
516015 2015 RG_{255}	15.8	X	151.45141	6.42868	193.45079	27.56763	0.1039563	0.17889030	3.1194512	20	10 9.0	20.5
516016 2015 RP_{255}	17.3	X	118.41258	36.03126	238.69864	2.53488	0.1191732	0.22790924	2.6543698	20	12 13.2	21.4
516017 2015 RW_{256}	16.6	X	334.12955	358.72002	18.46659	9.83162	0.0657297	0.20400322	2.8578847	20	10 11.9	20.1
516018 2015 RC_{258}	17.1	X	99.48197	185.22348	102.70988	3.25688	0.0590199	0.21883447	2.7272538	20	12 4.8	21.1
516019 2015 SH_{1}	16.5	X	20.00547	32.29282	281.86877	8.21912	0.1671051	0.19769867	2.9183243	20	10 4.4	20.2
516020 2015 SK_{6}	17.0	X	7.59679	333.07438	7.62017	16.70849	0.2392237	0.20361831	2.8614851	20	10 29.8	20.2
516021 2015 SY_{7}	15.6	X	325.35578	0.84001	334.38975	13.44289	0.0975941	0.17332011	3.1859338	20	7 31.6	19.6
516022 2015 SJ_{12}	16.0	X	323.81507	44.31756	290.42775	15.05330	0.1130098	0.17854552	3.1234657	20	7 23.1	19.8
516023 2015 SJ_{13}	16.0	X	312.07149	141.12275	223.72936	9.55985	0.0588088	0.18489899	3.0514975	20	8 16.9	20.3
516024 2015 SS_{16}	15.8	X	322.87074	358.10480	11.20415	27.75204	0.1319306	0.17726149	3.1385312	20	9 16.2	19.8
516025 2015 SH_{23}	17.3	X	54.58670	287.88479	29.26174	12.07988	0.1647077	0.22179266	2.7029496	20	11 30.8	21.3
516026 2015 SQ_{23}	16.9	X	140.86255	209.06275	40.70602	14.70151	0.1160183	0.22777229	2.6554337	20	12 2.3	21.2
516027 2015 SY_{23}	16.8	X	70.01916	94.53352	197.87797	14.52427	0.0848646	0.21476979	2.7615564	20	11 10.0	20.8
516028 2015 SZ_{23}	16.3	X	12.36448	168.44095	164.51821	18.47468	0.2222422	0.18188171	3.0851529	20	10 29.9	20.1
516029 2015 SA_{24}	17.2	X	296.91156	222.77554	205.96148	13.38287	0.0374056	0.21458516	2.7631402	20	10 29.7	20.7
516030 2015 SE_{24}	16.6	X	14.50696	186.83895	119.54558	4.61062	0.1119257	0.18152034	3.0892461	20	9 11.6	20.4
516031 2015 SJ_{24}	16.2	X	147.27892	120.17276	66.94826	12.62249	0.0346115	0.17763841	3.1340901	20	9 24.5	21.0
516032 2015 SP_{24}	16.8	X	11.69230	221.25964	138.75808	7.06311	0.0107167	0.21762439	2.7373543	20	11 12.9	20.6
516033 2015 TV_{1}	16.6	X	85.57244	294.19252	341.07746	4.70158	0.0486238	0.21208478	2.7848152	20	10 29.6	20.5
516034 2015 TQ_{4}	17.3	X	102.96330	183.23143	137.32611	7.46953	0.1863026	0.26802109	2.3824478	20	—	—
516035 2015 TJ_{17}	15.6	X	246.53174	17.10340	68.25230	17.50227	0.1190959	0.18334718	3.0686915	20	9 6.6	20.4
516036 2015 TU_{19}	16.4	X	56.07183	91.46439	244.75695	6.03208	0.0316686	0.22324799	2.6911899	20	12 11.1	20.0
516037 2015 TZ_{50}	17.0	X	7.19145	114.83721	239.17438	5.40389	0.0557559	0.21510201	2.7587122	20	10 31.2	20.5
516038 2015 TK_{62}	16.5	X	113.46054	214.04176	30.65277	10.78405	0.0680235	0.19146488	2.9813294	20	10 23.9	20.9
516039 2015 TF_{75}	17.0	X	8.25142	272.38343	46.21459	1.35426	0.2451698	0.18567222	3.0430197	20	10 2.7	20.0
516040 2015 TS_{106}	16.3	X	71.91469	198.56333	93.04233	7.10722	0.0672564	0.18907392	3.0064106	20	11 5.1	20.7
516041 2015 TQ_{118}	16.2	X	31.40922	151.66019	175.51110	17.48756	0.1541483	0.18422031	3.0589876	20	11 10.3	20.4
516042 2015 TS_{123}	15.8	X	284.28925	263.03966	155.38802	9.75005	0.0578385	0.18015824	3.1047976	20	9 21.6	19.9
516043 2015 TL_{125}	16.4	X	247.80369	331.01935	116.93934	10.46998	0.0643590	0.17412272	3.1761360	20	9 12.1	21.0
516044 2015 TA_{131}	16.1	X	211.79190	31.91291	95.49283	10.45045	0.0451422	0.17504653	3.1649513	20	9 22.5	20.8
516045 2015 TV_{135}	16.2	X	325.45554	243.54641	147.31479	11.16761	0.0594653	0.18662252	3.0326806	20	10 17.5	20.3
516046 2015 TL_{136}	16.4	X	48.50936	151.79031	125.26196	12.24877	0.1632005	0.17544556	3.1601506	20	10 3.2	20.8
516047 2015 TC_{137}	16.1	X	308.18500	277.40792	108.48494	10.66455	0.0701574	0.17440220	3.1727420	20	9 13.9	20.4
516048 2015 TF_{137}	16.1	X	97.17824	142.67543	97.18942	12.64496	0.0323650	0.17507439	3.1646157	20	9 29.9	20.9
516049 2015 TS_{137}	16.4	X	34.94157	178.28501	126.64037	10.13755	0.0833839	0.18115032	3.0934515	20	10 8.8	20.7
516050 2015 TP_{138}	16.3	X	19.24362	159.24466	158.61300	9.84648	0.0718048	0.17734741	3.1375174	20	9 28.7	20.4
516051 2015 TD_{139}	16.1	X	82.13419	119.82022	134.55753	11.82108	0.0866074	0.17502252	3.1652409	20	10 4.5	20.8
516052 2015 TY_{149}	16.4	X	5.60261	327.93019	13.65415	7.54857	0.0722527	0.20141402	2.8823248	20	10 11.8	20.0
516053 2015 TO_{151}	16.7	X	28.01741	317.08463	7.43527	12.85182	0.0612177	0.20605653	2.8388675	20	10 18.7	20.4
516054 2015 TV_{154}	17.3	X	101.28036	4.41420	241.68787	1.10469	0.0288558	0.20047942	2.8912757	20	10 9.0	21.2
516055 2015 TA_{157}	17.1	X	313.37862	220.02403	197.58740	4.03528	0.0598841	0.20860887	2.8156643	20	11 4.9	20.7
516056 2015 TS_{172}	17.6	X	125.75999	246.66747	67.23937	4.98893	0.3010603	0.25915014	2.4365112	20	—	—
516057 2015 TM_{176}	16.1	X	12.31918	175.44020	184.38143	11.99822	0.0693419	0.19732827	2.9219751	20	11 15.2	20.0
516058 2015 TW_{182}	16.1	X	280.49014	196.25489	202.18788	10.19115	0.0852086	0.17392420	3.1785524	20	8 12.4	20.6
516059 2015 TY_{182}	16.3	X	239.11367	268.47219	200.74188	11.12129	0.1145672	0.18591293	3.0403925	20	9 17.3	20.9
516060 2015 TT_{188}	17.5	X	88.46296	130.02096	194.23256	10.23017	0.3040979	0.25396453	2.4695662	20	—	—
516061 2015 TK_{194}	15.8	X	66.15685	348.62510	286.94359	9.71301	0.0706053	0.19644586	2.9307186	20	10 3.2	20.1
516062 2015 TF_{196}	16.6	X	15.30999	128.01628	201.45391	9.56850	0.0902943	0.19952951	2.9004449	20	10 12.1	20.2
516063 2015 TW_{197}	16.2	X	301.03121	197.06995	191.07968	9.40024	0.0935756	0.18225660	3.0809208	20	8 29.2	20.2
516064 2015 TJ_{203}	15.7	X	319.28508	321.39770	40.27676	27.11741	0.2034513	0.17546732	3.1598894	20	8 30.9	19.9
516065 2015 TC_{206}	16.7	X	253.98903	43.49910	44.93947	2.17958	0.1322677	0.18617056	3.0375869	20	9 9.6	20.9
516066 2015 TK_{208}	16.2	X	2.19725	48.27245	274.64140	9.56887	0.1524704	0.18396348	3.0618339	20	9 9.7	19.9
516067 2015 TX_{215}	16.9	X	51.42896	142.72178	188.36885	5.30945	0.0513472	0.22144808	2.7057527	20	12 1.9	20.6
516068 2015 TS_{222}	17.5	X	149.40386	152.02461	127.31724	2.99850	0.2168319	0.25896324	2.4376834	20	—	—
516069 2015 TE_{232}	14.9	X	317.54164	192.58356	142.53375	19.00408	0.0724170	0.14599616	3.5719751	20	7 16.3	19.8
516070 2015 TD_{234}	16.2	X	14.03888	356.33420	315.38980	9.49341	0.1467212	0.18872656	3.0100985	20	9 17.1	20.0
516071 2015 TH_{254}	16.0	X	359.14795	267.35689	50.30040	11.09577	0.1043132	0.17417006	3.1755605	20	9 4.5	20.1
516072 2015 TZ_{258}	16.8	X	88.91222	38.88343	237.02193	4.12946	0.2242615	0.22383625	2.6864728	20	11 23.4	21.2
516073 2015 TR_{282}	16.3	X	71.22267	31.63153	213.79466	9.14466	0.0668709	0.18131225	3.0916094	20	8 31.8	20.8
516074 2015 TB_{283}	16.4	X	253.99705	219.48696	211.71749	10.02932	0.0358068	0.18072215	3.0983356	20	8 27.4	21.0
516075 2015 TU_{294}	16.3	X	342.02341	44.67374	297.68725	13.13891	0.0962757	0.17840994	3.1250479	20	8 28.9	20.4
516076 2015 TQ_{296}	16.2	X	68.06375	36.08075	204.45563	8.74040	0.0421558	0.17533843	3.1614377	20	8 17.6	20.8
516077 2015 TK_{303}	17.1	X	70.52317	170.43522	145.99476	4.88600	0.0568670	0.21556223	2.7547844	20	12 6.2	21.1
516078 2015 TN_{303}	16.1	X	342.19026	190.77233	177.21862	10.47495	0.1032258	0.19245502	2.9710951	20	10 12.3	19.6
516079 2015 TP_{303}	16.4	X	40.15364	115.14292	184.17627	10.97770	0.0297712	0.18501340	3.0502394	20	9 27.7	20.7
516080 2015 TG_{319}	17.1	X	47.44863	274.00146	37.14543	2.49947	0.0549925	0.20332617	2.8642254	20	10 28.8	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516081 2015 TQ_{322}	17.1	X	10.91218	252.35535	79.48504	3.18113	0.0979547	0.19648558	2.9303236	20	10 10.6	20.7
516082 2015 TP_{327}	15.9	X	281.05896	257.05190	145.84911	15.62071	0.0485579	0.17554008	3.1590163	20	8 28.3	20.3
516083 2015 TW_{331}	15.9	X	139.87229	58.65526	128.04697	12.29719	0.0591186	0.17160855	3.2070822	20	9 12.1	20.8
516084 2015 TZ_{333}	15.9	X	7.39513	140.61677	155.37421	17.28610	0.1303377	0.17238663	3.1974247	20	8 14.4	19.8
516085 2015 TP_{344}	16.4	X	29.31914	250.48129	38.06030	9.37674	0.0693280	0.17673458	3.1447662	20	9 7.8	20.7
516086 2015 TV_{345}	17.3	X	98.11145	135.43030	144.94307	2.93998	0.1609131	0.21909359	2.7251031	20	12 2.0	21.6
516087 2015 TZ_{345}	16.0	X	326.84177	159.10438	181.60149	11.26926	0.0922959	0.17455422	3.1708995	20	8 5.1	20.2
516088 2015 TF_{348}	16.0	X	308.05589	323.35301	41.53488	17.34069	0.1212438	0.17199634	3.2022599	20	8 15.3	20.4
516089 2015 TO_{358}	16.4	X	9.55885	299.01068	19.40924	9.58338	0.1115054	0.18698528	3.0287570	20	9 21.3	20.1
516090 2015 TF_{359}	16.3	X	65.55396	224.50652	81.16969	16.77003	0.2224088	0.22299010	2.6932644	20	12 7.9	20.3
516091 2015 TP_{359}	15.9	X	54.21507	220.28638	31.35721	16.25374	0.0477912	0.17965431	3.1106008	20	8 26.7	20.5
516092 2015 TY_{359}	16.5	X	143.92867	32.45797	182.51804	9.00358	0.0529564	0.18797871	3.0180767	20	10 21.1	20.9
516093 2015 TN_{364}	16.4	X	11.84603	178.92893	152.50897	9.80762	0.0844875	0.17701591	3.1414333	20	10 7.6	20.5
516094 2015 TP_{364}	16.3	X	136.98792	111.71029	88.93579	14.35878	0.0803804	0.17538247	3.1609085	20	10 1.8	21.4
516095 2015 TT_{364}	16.2	X	347.82563	291.09589	45.43466	8.55203	0.0294831	0.17111134	3.2132919	20	9 7.7	20.7
516096 2015 TW_{364}	16.1	X	141.63423	96.20873	112.92249	7.19937	0.1273665	0.18107645	3.0942928	20	10 14.5	21.1
516097 2015 TG_{365}	16.2	X	315.64016	163.50675	197.87788	8.82505	0.0939461	0.17558037	3.1585329	20	8 14.7	20.4
516098 2015 TK_{366}	16.6	X	79.08325	77.20394	180.51766	11.51237	0.0788312	0.18441071	3.0568816	20	10 1.8	20.9
516099 2015 TS_{366}	16.4	X	278.59813	0.51873	33.50333	2.55495	0.0621626	0.15720176	3.4001477	20	8 10.2	21.0
516100 2015 UQ	16.9	X	92.62876	110.69825	174.86268	4.53125	0.0791231	0.21564840	2.7540505	20	11 26.0	21.0
516101 2015 UM_{2}	16.2	X	286.76959	206.40228	186.90837	10.61458	0.1471889	0.17453316	3.1711546	20	8 6.0	20.6
516102 2015 UT_{2}	16.6	X	214.41958	262.66415	202.18293	5.19855	0.0693068	0.17222311	3.1994483	20	8 18.8	21.5
516103 2015 UT_{3}	17.2	X	105.34507	236.56446	52.29900	5.80749	0.1601292	0.23124711	2.6287655	20	12 19.9	21.4
516104 2015 UJ_{6}	16.7	X	349.20092	269.91293	101.59595	4.51599	0.0740992	0.20238657	2.8730835	20	10 29.3	20.2
516105 2015 UA_{12}	16.8	X	75.21580	241.59926	16.35068	9.70037	0.0625483	0.18937333	3.0032409	20	9 26.8	21.1
516106 2015 UB_{13}	16.6	X	183.47543	123.68873	24.38811	15.69167	0.1023915	0.17938936	3.1136629	20	9 14.5	21.6
516107 2015 UB_{14}	17.9	X	115.60181	259.28606	35.69081	6.87126	0.1707218	0.24235311	2.5478293	20	—	—
516108 2015 UN_{15}	16.6	X	137.25895	151.10774	35.57369	11.41904	0.0550075	0.17901412	3.1180126	20	9 11.9	21.3
516109 2015 UV_{15}	16.5	X	62.51139	219.49706	35.24023	10.64695	0.0433239	0.17773213	3.1329882	20	9 6.2	21.0
516110 2015 UY_{17}	16.5	X	203.20640	94.07397	32.41686	16.33844	0.0641285	0.17800681	3.1297643	20	9 12.8	21.3
516111 2015 UW_{22}	16.7	X	330.33351	182.32894	175.14203	9.55575	0.1628827	0.18487801	3.0517284	20	9 1.6	20.0
516112 2015 UX_{30}	16.7	X	19.70762	137.39861	156.06705	3.00313	0.1439939	0.17994786	3.1072170	20	9 4.6	20.4
516113 2015 UZ_{33}	16.7	X	36.27049	231.39445	55.06739	5.51573	0.1044630	0.18191799	3.0847427	20	9 18.5	20.8
516114 2015 UF_{41}	17.8	X	131.87001	155.47671	146.52655	1.76297	0.1881136	0.25737272	2.4477161	20	—	—
516115 2015 UE_{48}	16.1	X	65.56435	168.81104	101.63148	11.45905	0.0642802	0.17530353	3.1618574	20	10 3.2	20.7
516116 2015 UH_{53}	16.1	X	274.57433	276.09521	123.95334	4.46994	0.1267858	0.16995304	3.2278754	20	8 3.4	20.5
516117 2015 UD_{54}	16.4	X	354.40213	236.05700	99.55980	2.08586	0.1030439	0.18727482	3.0256344	20	9 17.6	20.1
516118 2015 UY_{54}	16.7	X	202.66301	63.75557	52.29904	2.39738	0.0776285	0.17077296	3.2175352	20	8 21.7	21.5
516119 2015 UC_{55}	16.4	X	254.25293	228.97560	197.84937	8.96665	0.0698891	0.17374233	3.1807701	20	8 17.3	21.1
516120 2015 UB_{56}	16.1	X	303.20980	178.07646	197.46577	15.50124	0.1640493	0.17388020	3.1790886	20	8 3.5	20.4
516121 2015 UN_{56}	17.2	X	31.51647	234.62514	89.79985	3.15360	0.0902369	0.20223690	2.8745009	20	10 30.6	20.9
516122 2015 UP_{58}	16.5	X	76.69587	166.53446	96.51763	10.26571	0.1055894	0.18135845	3.0910844	20	10 13.3	21.1
516123 2015 UA_{59}	16.9	X	92.71657	233.68048	82.40880	15.82877	0.2734272	0.23625490	2.5914858	20	—	—
516124 2015 UC_{59}	16.3	X	57.39215	121.23908	166.44508	11.59762	0.1201036	0.18460218	3.0547675	20	10 20.6	20.6
516125 2015 UA_{60}	16.8	X	126.14456	110.58758	176.20353	10.42957	0.0213140	0.21996681	2.7178863	20	12 31.4	20.8
516126 2015 UO_{62}	16.3	X	331.01750	333.48301	51.91145	10.19596	0.1273546	0.20148274	2.8816694	20	10 20.4	19.5
516127 2015 UC_{73}	16.2	X	339.54403	135.21101	203.51156	12.16224	0.0924658	0.18222041	3.0813288	20	8 22.4	20.2
516128 2015 UJ_{82}	16.7	X	317.44703	320.42714	35.36681	10.53673	0.1311488	0.17773203	3.1329893	20	8 14.6	20.7
516129 2015 UM_{83}	15.8	X	325.50375	292.78333	59.15573	10.96482	0.1500651	0.17688559	3.1429761	20	8 22.0	19.6
516130 2015 UQ_{86}	16.2	X	12.04274	266.86992	75.48207	11.17885	0.0651392	0.18449656	3.0559333	20	10 23.1	20.3
516131 2015 VV_{6}	16.1	X	20.56127	237.34032	90.31363	12.60724	0.2119059	0.19666161	2.9285748	20	11 7.9	19.8
516132 2015 VK_{39}	16.4	X	319.71980	342.48043	25.14845	13.15932	0.1484716	0.17426149	3.1744495	20	9 2.9	20.3
516133 2015 VD_{72}	15.9	X	27.52254	212.35933	93.17319	12.59213	0.0663382	0.17503201	3.1651264	20	9 28.6	20.4
516134 2015 VQ_{90}	16.4	X	319.46821	18.36460	15.32697	9.80641	0.1194582	0.18785601	3.0193907	20	10 5.9	20.0
516135 2015 VD_{91}	15.8	X	355.59571	313.54005	25.30782	13.69393	0.1113048	0.18029224	3.1032590	20	9 26.1	19.6
516136 2015 VU_{96}	16.5	X	123.55901	183.77534	46.53731	11.58358	0.0471064	0.18516568	3.0485668	20	10 17.9	21.1
516137 2015 VX_{107}	16.1	X	297.23775	347.03333	37.02520	11.62295	0.1295480	0.17280892	3.1922136	20	8 20.2	20.4
516138 2015 VJ_{111}	16.2	X	3.20626	348.82013	357.87346	7.45725	0.1490055	0.19184544	2.9773855	20	10 18.6	19.6
516139 2015 VS_{116}	16.0	X	354.03112	251.63529	75.29862	24.50175	0.1915725	0.17967174	3.1103997	20	9 23.6	20.0
516140 2015 VY_{125}	15.7	X	348.84266	181.18290	151.62286	18.18193	0.1869517	0.18115545	3.0933931	20	9 5.8	18.9
516141 2015 VG_{143}	16.2	X	348.16248	263.97261	81.54412	11.42697	0.1216682	0.18534038	3.0466508	20	9 26.6	20.0
516142 2015 WM_{15}	16.7	X	282.31152	262.86864	166.16020	10.00153	0.0511036	0.17856680	3.1232176	20	10 3.0	20.9
516143 2015 WE_{18}	16.4	X	27.34967	271.28931	51.36198	10.82889	0.0824767	0.17980116	3.1089070	20	10 18.9	20.5
516144 2015 XA_{29}	16.0	X	321.57302	304.72194	83.59141	12.15520	0.0574863	0.17968626	3.1102321	20	10 10.2	20.3
516145 2015 XS_{38}	16.7	X	28.62210	134.33470	179.71243	5.61141	0.1459646	0.18147849	3.0897211	20	10 16.8	20.7
516146 2015 XD_{41}	17.2	X	86.39958	161.15326	147.44213	5.39000	0.3503436	0.22594308	2.6697465	20	—	—
516147 2015 XK_{41}	16.2	X	53.05960	212.34509	77.91717	11.10896	0.0942836	0.17699413	3.1416910	20	10 16.0	20.7
516148 2015 XW_{89}	15.6	X	247.83300	286.08645	142.70601	17.94681	0.2009479	0.16792868	3.2537647	20	7 27.8	20.7
516149 2015 XM_{115}	15.9	X	39.48789	191.32269	115.90279	10.62182	0.1170397	0.17896505	3.1185825	20	10 22.8	20.3
516150 2015 XB_{174}	16.2	X	3.71914	148.45626	190.62296	7.93422	0.0427058	0.17249931	3.1960321	20	9 28.4	20.3
516151 2015 XC_{350}	16.2	X	83.14033	35.53225	256.48545	7.04654	0.1081527	0.19516434	2.9435341	20	11 21.3	20.5
516152 2015 XE_{386}	13.4	X	34.39233	305.96207	242.07721	14.83579	0.0867816	0.08288803	5.2096455	20	5 5.8	20.0
516153 2015 XN_{396}	16.3	X	22.77570	260.54198	73.48976	12.37836	0.0689710	0.18486616	3.0518588	20	10 27.9	20.5
516154 2016 CL_{32}	19.3	X	111.68929	292.93572	123.51434	12.21469	0.4601462	0.51419540	1.5430640	20	4 1.1	20.8
516155 2016 DP	20.2	X	307.80269	254.00003	54.39893	13.32290	0.4771827	0.95298121	1.0226958	20	2 12.3	21.0
516156 2016 FP_{29}	16.6	X	60.37339	53.15162	21.35344	12.13406	0.0283566	0.19869240	2.9085858	20	1 11.7	20.8
516157 2016 LT_{8}	18.5	X	76.13611	196.04431	194.07463	24.10905	0.1191284	0.38536888	1.8701867	20	—	—
516158 2016 LN_{9}	18.4	X	63.37644	252.41536	160.56003	20.15514	0.1179391	0.39154366	1.8504723	20	—	—
516159 2016 LP_{9}	18.6	X	61.07685	281.60880	109.65086	22.16254	0.1073643	0.37737522	1.8965041	20	—	—
516160 2016 LQ_{9}	18.7	X	39.49519	245.84015	178.25186	23.56113	0.0946358	0.39184943	1.8495095	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516161 2016 LH_{53}	18.7	X	281.48066	47.74555	165.45761	23.22560	0.0478575	0.38563687	1.8693201	20	—	—
516162 2016 NL_{47}	18.2	X	0.03409	18.89530	345.74922	4.01614	0.1696654	0.27357178	2.3501118	20	12 4.7	20.6
516163 2016 NP_{48}	16.2	X	207.38587	66.23055	316.91838	14.99265	0.2503780	0.17659614	3.1464094	20	4 19.5	22.0
516164 2016 NC_{58}	18.6	X	194.04532	128.85194	195.56587	22.01910	0.0688485	0.38780744	1.8623385	20	1 5.4	21.3
516165 2016 NF_{71}	16.9	X	287.02337	279.85064	111.15665	15.03774	0.1795170	0.23893534	2.5720680	20	8 9.3	19.9
516166 2016 NT_{71}	16.4	X	322.36912	97.96086	287.89098	12.81151	0.0454061	0.24243036	2.5472880	20	10 6.3	19.9
516167 2016 PW_{21}	17.8	X	328.39761	282.33304	98.95380	5.68614	0.2236224	0.26865092	2.3787227	20	11 1.1	19.3
516168 2016 PP_{75}	17.2	X	352.04608	21.46641	354.14279	10.84297	0.2183311	0.26001576	2.4311007	20	12 8.7	19.7
516169 2016 PM_{77}	17.9	X	177.25184	127.87288	197.61393	21.19663	0.0887525	0.37557744	1.9025513	20	—	—
516170 2016 PH_{79}	17.7	X	312.02463	340.27136	177.83013	22.68396	0.0591895	0.35772597	1.9653311	20	—	—
516171 2016 PJ_{79}	18.4	X	21.85759	104.66231	335.43572	18.33871	0.0577193	0.35457109	1.9769719	20	—	—
516172 2016 PO_{79}	18.1	X	73.32836	26.33348	6.96657	21.48729	0.0895986	0.35242282	1.9849978	20	—	—
516173 2016 PA_{80}	18.0	X	194.44933	126.77526	159.38546	22.32701	0.0305540	0.36187011	1.9502977	20	—	—
516174 2016 PY_{82}	17.6	X	293.16785	357.19400	81.95308	6.99984	0.1161316	0.27331897	2.3515607	20	11 16.5	19.9
516175 2016 PP_{87}	17.0	X	238.83524	95.52371	350.44749	12.73742	0.1691821	0.21749235	2.7384620	20	8 20.2	21.0
516176 2016 PW_{87}	17.5	X	307.97361	28.46921	357.81903	4.51665	0.1433853	0.23300448	2.6155310	20	9 12.5	20.1
516177 2016 PQ_{93}	16.8	X	192.89984	21.34667	61.14827	5.61037	0.2591514	0.17127494	3.2112455	20	6 24.2	22.4
516178 2016 PU_{94}	17.3	X	223.78145	123.61817	342.90144	12.87564	0.2171671	0.22531679	2.6746914	20	8 24.6	21.5
516179 2016 PG_{98}	16.7	X	247.59293	109.42985	349.62623	8.26140	0.1387130	0.23587034	2.5943018	20	9 19.3	20.0
516180 2016 QC_{46}	17.7	X	345.46426	220.88986	147.65458	9.95919	0.2295652	0.26751168	2.3854714	20	11 23.9	19.8
516181 2016 QQ_{49}	18.0	X	165.62628	136.47017	161.20165	23.28637	0.0628241	0.35715049	1.9674417	20	—	—
516182 2016 QN_{78}	17.1	X	16.52249	219.70386	154.66145	22.97838	0.2636397	0.28762094	2.2729456	20	—	—
516183 2016 QX_{84}	17.8	X	13.95775	344.83004	33.79224	4.89937	0.1504020	0.28344301	2.2952265	20	—	—
516184 2016 QF_{88}	16.7	X	258.88538	299.53302	93.23662	11.11497	0.0880296	0.19160369	2.9798894	20	7 12.1	20.8
516185 2016 RL_{1}	16.5	X	292.63137	267.96533	114.01070	10.49177	0.3201545	0.21902957	2.7256340	20	7 8.2	19.9
516186 2016 RQ_{16}	17.7	X	9.60007	38.37098	329.72049	9.65104	0.2438173	0.27495548	2.3422206	20	—	—
516187 2016 RO_{29}	18.1	X	26.04326	3.73800	26.39061	6.40315	0.1530148	0.29607819	2.2294536	20	—	—
516188 2016 RA_{38}	18.0	X	51.87202	299.68843	33.27539	3.86131	0.2094747	0.29677100	2.2259825	20	—	—
516189 2016 RJ_{42}	18.7	X	209.03253	113.57470	190.06409	20.15668	0.1326974	0.38017715	1.8871744	20	1 1.4	21.7
516190 2016 RK_{42}	18.1	X	187.06907	120.10541	193.74070	21.54498	0.1098869	0.37245733	1.9131618	20	—	—
516191 2016 RG_{45}	16.8	X	280.79206	343.94679	113.56850	6.79774	0.1802041	0.24322005	2.5417713	20	11 5.2	19.6
516192 2016 RD_{46}	17.7	X	244.38071	201.87449	231.08638	2.35607	0.1985354	0.21627877	2.7486965	20	8 1.6	21.7
516193 2016 SR_{11}	17.8	X	7.46588	20.17179	34.89496	6.65838	0.0803555	0.30369251	2.1920309	20	—	—
516194 2016 SO_{12}	17.4	X	325.89851	218.55181	144.50262	4.40033	0.2473042	0.23733299	2.5836319	20	9 8.9	19.0
516195 2016 SF_{16}	18.0	X	208.93059	72.31136	188.69604	23.70729	0.0929320	0.34971239	1.9952411	20	—	—
516196 2016 SJ_{24}	16.7	X	205.59278	47.38050	18.75144	10.15441	0.2241615	0.17773054	3.1330068	20	6 14.8	22.2
516197 2016 ST_{25}	17.7	X	18.93076	359.40960	13.12388	7.24325	0.1314996	0.28704171	2.2760024	20	—	—
516198 2016 SQ_{34}	17.8	X	24.34994	18.87099	20.31728	7.94352	0.0666255	0.30499800	2.1857713	20	—	—
516199 2016 SV_{35}	16.6	X	243.30321	315.13030	72.49667	17.91012	0.3520549	0.18266964	3.0762748	20	5 23.4	21.9
516200 2016 SM_{36}	17.1	X	281.65393	36.35368	46.99925	13.19033	0.1688321	0.24664373	2.5181949	20	10 20.4	19.7
516201 2016 SX_{36}	17.0	X	304.12712	182.52687	227.15570	2.37593	0.1825873	0.23427386	2.6060745	20	10 4.4	19.5
516202 2016 SK_{38}	17.7	X	357.29706	82.05618	269.64857	0.44600	0.1953591	0.25676444	2.4515803	20	11 10.2	19.8
516203 2016 SF_{45}	17.8	X	43.82785	356.33809	350.06987	7.63625	0.1921732	0.28930417	2.2641207	20	—	—
516204 2016 SO_{49}	17.2	X	283.97884	236.77826	166.97724	6.41292	0.2147047	0.22600654	2.6692467	20	8 12.2	20.3
516205 2016 TC_{8}	17.4	X	344.59788	299.71140	123.37689	7.29491	0.1112219	0.28104357	2.3082718	20	—	—
516206 2016 TO_{8}	16.8	X	236.32478	39.15138	34.43950	15.50574	0.2643934	0.19954393	2.9003053	20	7 22.1	21.8
516207 2016 TQ_{9}	17.8	X	158.34892	168.26863	209.09601	20.76277	0.0830701	0.38501135	1.8713443	20	2 3.7	20.4
516208 2016 TX_{24}	16.6	X	248.00970	352.82549	43.12888	10.61704	0.1228298	0.18260536	3.0769967	20	6 27.6	21.3
516209 2016 TZ_{29}	16.3	X	184.59461	206.76377	272.54872	10.59144	0.1667853	0.19205991	2.9751685	20	8 1.1	21.3
516210 2016 TM_{31}	18.1	X	74.52251	66.93525	267.90241	4.52446	0.0820086	0.29213025	2.2494950	20	—	—
516211 2016 TX_{43}	18.3	X	302.53727	288.60903	200.21070	5.30246	0.0715307	0.30512034	2.1851870	20	—	—
516212 2016 TF_{48}	17.0	X	24.74615	165.98324	140.47468	5.93989	0.0363585	0.22385689	2.6863076	20	9 25.2	20.5
516213 2016 TO_{56}	16.7	X	234.42713	38.56998	12.69003	20.46679	0.3482091	0.18279203	3.0749016	20	6 9.3	22.5
516214 2016 TB_{61}	17.2	X	304.34537	196.49307	186.20336	3.29596	0.2234413	0.23100398	2.6306096	20	8 17.7	19.9
516215 2016 TT_{72}	16.6	X	222.27110	237.47905	171.62277	9.22001	0.2105941	0.18063854	3.0992916	20	6 10.7	21.8
516216 2016 TN_{74}	17.8	X	301.65831	255.70926	204.97008	4.83940	0.1160221	0.28095839	2.3087383	20	—	—
516217 2016 TT_{83}	17.0	X	293.09347	235.33233	178.89271	14.03778	0.1655953	0.23895525	2.5719252	20	9 23.9	19.6
516218 2016 TZ_{85}	17.1	X	336.49925	286.00995	56.23261	5.67846	0.1200940	0.21682281	2.7440966	20	9 3.3	20.1
516219 2016 TP_{96}	16.8	X	301.75073	311.01048	124.72055	13.53465	0.0762244	0.24126073	2.5555142	20	11 22.7	20.0
516220 2016 TQ_{96}	15.7	X	224.53984	157.67602	265.33435	15.94269	0.1614601	0.17750953	3.1356068	20	7 1.5	20.6
516221 2016 TA_{97}	16.5	X	202.03046	80.11865	16.13450	10.27929	0.0700187	0.18953994	3.0014808	20	7 31.9	21.1
516222 2016 UR_{3}	18.3	X	288.61970	234.96357	246.89382	4.42396	0.0306202	0.29216261	2.2493289	20	—	—
516223 2016 UU_{3}	17.4	X	217.52635	109.42704	6.58362	12.93684	0.1188437	0.22632663	2.6667294	20	9 10.8	21.3
516224 2016 UZ_{3}	17.4	X	319.31534	43.24049	9.65197	9.60408	0.2130980	0.25719053	2.4488719	20	11 18.2	19.3
516225 2016 UZ_{13}	16.8	X	237.40016	189.24188	251.54947	8.20281	0.0991398	0.21289276	2.7777647	20	8 13.3	20.9
516226 2016 UL_{14}	17.7	X	271.21934	188.27254	237.20889	1.64698	0.1320778	0.22452610	2.6809671	20	9 5.7	21.2
516227 2016 UL_{17}	17.2	X	240.27363	61.74443	29.10563	12.50858	0.1842400	0.21493218	2.7601653	20	8 28.9	21.5
516228 2016 UF_{24}	17.5	X	271.92037	54.55912	32.68736	17.15195	0.0993898	0.24164033	2.5528371	20	10 17.8	20.6
516229 2016 UG_{24}	18.0	X	87.06937	110.00347	209.40251	2.35297	0.1689485	0.29776218	2.2210399	20	—	—
516230 2016 UX_{26}	17.6	X	353.89538	168.37426	243.58439	4.70074	0.0747550	0.28048885	2.3113142	20	—	—
516231 2016 UE_{30}	17.6	X	312.87645	7.41269	14.10350	5.07778	0.0798685	0.22712182	2.6605013	20	9 19.5	20.6
516232 2016 UU_{33}	16.5	X	346.69608	100.21297	234.60753	10.95840	0.0802459	0.21298289	2.7769810	20	8 31.7	20.1
516233 2016 UC_{34}	16.3	X	257.10391	356.26753	41.07068	10.24828	0.0880856	0.18702945	3.0282801	20	7 17.3	20.8
516234 2016 UW_{34}	16.7	X	251.36231	226.05587	177.69121	1.42875	0.1564507	0.18985733	2.9981347	20	7 7.3	21.2
516235 2016 UH_{37}	17.3	X	343.47663	289.20932	57.31975	2.30271	0.1315281	0.22498673	2.6773067	20	9 22.3	20.0
516236 2016 UO_{39}	17.9	X	283.94954	120.01001	345.65722	4.38839	0.1337565	0.25759481	2.4463090	20	11 29.1	20.3
516237 2016 UF_{41}	17.6	X	107.61929	249.91452	70.63628	6.12996	0.2703739	0.31133374	2.1560157	20	—	—
516238 2016 UA_{43}	16.2	X	186.49131	53.50944	53.90177	8.76448	0.1903091	0.17379615	3.1801135	20	7 22.3	21.6
516239 2016 UO_{60}	16.3	X	177.76276	261.70403	223.79190	24.88967	0.1978090	0.18198086	3.0840323	20	7 27.2	22.0
516240 2016 UX_{64}	17.2	X	249.52191	271.14024	266.78782	6.11399	0.0502011	0.29915645	2.2141335	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516241 2016 US_{66}	17.6	X	278.84092	269.62528	174.20840	8.36932	0.0546914	0.24338498	2.5406229	20	10 29.9	20.7
516242 2016 UM_{72}	17.5	X	286.58684	64.34497	1.16070	1.90903	0.1952567	0.23603313	2.5931088	20	9 23.1	20.2
516243 2016 UN_{74}	16.9	X	251.19760	48.27744	26.23342	9.75566	0.0164875	0.22030860	2.7150745	20	9 12.5	20.6
516244 2016 UH_{77}	16.7	X	305.66816	358.12506	68.96236	19.43988	0.1671590	0.24042442	2.5614369	20	11 11.8	19.2
516245 2016 UL_{80}	16.0	X	248.53096	215.89478	197.55995	8.32363	0.1104905	0.18763656	3.0217445	20	7 20.5	20.5
516246 2016 UA_{82}	16.9	X	249.01971	47.71351	38.98202	12.57909	0.0724624	0.22279395	2.6948450	20	9 19.8	20.7
516247 2016 UQ_{86}	18.0	X	268.32924	103.45771	30.52996	6.35864	0.1306443	0.27139521	2.3626602	20	12 17.9	20.4
516248 2016 UG_{87}	17.4	X	248.36517	62.15236	26.56897	9.72928	0.0618657	0.22752647	2.6573459	20	9 21.0	20.9
516249 2016 UF_{88}	18.1	X	321.51052	53.28602	33.55535	7.50399	0.0492642	0.28075986	2.3098265	20	—	—
516250 2016 UQ_{93}	17.5	X	318.46652	323.70747	45.79468	5.55454	0.0740467	0.22552556	2.6730405	20	9 13.7	20.7
516251 2016 UF_{95}	17.8	X	245.27428	223.23737	214.27843	4.46156	0.1496652	0.21349196	2.7725648	20	8 13.7	21.8
516252 2016 UY_{104}	17.6	X	250.84563	26.39605	29.45618	1.83362	0.1479734	0.20201566	2.8765992	20	7 24.8	21.7
516253 2016 UG_{105}	17.5	X	263.05532	67.92822	27.61927	5.62892	0.0925187	0.23835654	2.5762302	20	10 14.6	20.7
516254 2016 UC_{108}	17.2	X	295.18881	236.80843	175.19982	2.45803	0.1681004	0.23529872	2.5985017	20	9 23.3	19.8
516255 2016 UB_{124}	17.3	X	332.51438	120.87100	290.28621	5.27908	0.1268102	0.26180038	2.4200399	20	12 13.9	19.7
516256 2016 UN_{135}	18.3	X	82.20222	282.26970	74.54324	5.64177	0.1850964	0.31309258	2.1479337	20	—	—
516257 2016 UF_{144}	17.9	X	309.64728	132.98743	343.78574	4.95094	0.0569699	0.30731113	2.1747893	20	—	—
516258 2016 UL_{146}	16.5	X	300.95640	136.29315	250.45984	12.84650	0.0980775	0.22110161	2.7085787	20	8 27.3	20.2
516259 2016 UH_{148}	16.3	X	271.20517	206.29540	159.51199	6.38191	0.1707535	0.18078564	3.0976102	20	6 10.8	20.8
516260 2016 UJ_{148}	16.8	X	127.60278	164.44562	66.28247	13.72746	0.1134836	0.22572750	2.6714460	20	11 1.9	21.0
516261 2016 UM_{148}	16.8	X	59.42544	317.15926	332.72397	14.44230	0.1009031	0.23891731	2.5721975	20	10 22.8	20.6
516262 2016 UN_{148}	16.4	X	119.99128	172.53719	73.62567	14.32812	0.0523590	0.24527088	2.5275828	20	11 13.3	20.0
516263 2016 UO_{148}	17.0	X	260.94387	78.35627	41.93804	14.62943	0.1401250	0.23800729	2.5787498	20	11 5.9	20.2
516264 2016 VC	17.5	X	73.06823	241.97849	93.43436	9.11457	0.2621981	0.29629319	2.2283750	20	—	—
516265 2016 VU_{6}	17.2	X	264.35238	68.22429	68.47668	7.18083	0.0731540	0.26256629	2.4153315	20	12 19.8	19.9
516266 2016 VZ_{9}	17.4	X	343.84044	12.84432	36.55071	12.12869	0.0273613	0.26721020	2.3872654	20	12 20.7	20.5
516267 2016 VG_{13}	17.3	X	212.61482	299.04757	157.01316	2.57450	0.0407207	0.20052131	2.8908731	20	8 12.4	21.3
516268 2016 VN_{13}	17.1	X	222.13941	45.82408	71.19780	8.76111	0.2776502	0.20240673	2.8728928	20	8 31.4	22.0
516269 2016 VM_{15}	16.7	X	5.51576	14.25181	327.51603	12.92366	0.1887133	0.24450806	2.5328371	20	10 30.6	19.7
516270 2016 VP_{18}	17.2	X	331.57380	99.68892	258.17943	11.64915	0.1249194	0.23291615	2.6161922	20	9 9.2	20.3
516271 2016 VL_{19}	17.6	X	321.94352	320.86578	99.42483	4.17248	0.1715794	0.23665302	2.5885786	20	11 30.4	19.9
516272 2016 WW_{5}	16.2	X	238.75058	350.46347	62.31979	10.57157	0.1609652	0.18140441	3.0905622	20	7 4.6	21.0
516273 2016 WO_{12}	17.8	X	298.05903	116.06480	282.61575	0.97832	0.2086018	0.22665546	2.6641495	20	8 31.5	20.4
516274 2016 WX_{13}	18.1	X	303.10171	78.06762	22.64423	4.62096	0.1450451	0.27409950	2.3470944	20	—	—
516275 2016 WP_{15}	16.9	X	126.25792	335.09280	247.47646	10.26377	0.0539195	0.22944870	2.6424837	20	10 12.6	20.8
516276 2016 WY_{16}	17.6	X	147.82928	162.35552	97.98843	4.98136	0.1270088	0.27776171	2.3264183	20	—	—
516277 2016 WK_{17}	17.7	X	41.39973	193.40653	156.42529	8.04110	0.1459625	0.27190194	2.3597238	20	—	—
516278 2016 WQ_{18}	17.3	X	225.50349	233.96382	201.90606	5.42108	0.1641261	0.18974713	2.9992954	20	7 18.4	22.1
516279 2016 WA_{19}	17.4	X	28.25941	290.67267	48.45540	8.32915	0.2224010	0.25711585	2.4493461	20	12 15.2	20.6
516280 2016 WK_{22}	16.1	X	251.98453	159.04264	254.27496	10.19804	0.0936759	0.18733404	3.0249967	20	7 25.8	20.6
516281 2016 WC_{25}	17.3	X	288.75333	324.69318	65.07301	3.00286	0.0762049	0.20198387	2.8769011	20	8 21.7	20.9
516282 2016 WY_{25}	17.5	X	176.05293	200.52172	44.79435	5.60401	0.0461491	0.27613156	2.3355653	20	—	—
516283 2016 WL_{27}	16.8	X	269.23103	192.05080	193.13688	12.30939	0.0441467	0.18309143	3.0715484	20	7 18.8	21.4
516284 2016 WS_{27}	17.0	X	320.94481	275.92612	127.77872	6.58260	0.1696488	0.24068894	2.5595598	20	11 7.3	19.4
516285 2016 WA_{29}	16.7	X	284.80070	280.92867	95.35489	11.04539	0.0573510	0.18929795	3.0040381	20	7 30.5	20.8
516286 2016 WD_{30}	16.5	X	276.08862	296.13388	87.65885	12.72710	0.1248802	0.18983066	2.9984155	20	7 17.6	20.7
516287 2016 WR_{30}	17.1	X	288.62121	228.86263	210.76841	14.14785	0.1105702	0.23299966	2.6155671	20	10 28.4	19.9
516288 2016 WL_{36}	17.4	X	278.80403	198.02708	254.78193	10.81923	0.0311217	0.23829671	2.5766614	20	11 8.9	20.7
516289 2016 WG_{37}	17.0	X	24.41744	259.94160	58.64933	11.82037	0.1404134	0.22960024	2.6413208	20	10 28.0	20.2
516290 2016 WM_{38}	16.2	X	242.50641	175.22770	239.89865	7.85887	0.0969647	0.18323646	3.0699276	20	7 17.2	20.8
516291 2016 WE_{40}	17.1	X	10.65218	270.66565	49.65490	5.47362	0.1175129	0.21994413	2.7180731	20	10 2.4	20.2
516292 2016 WZ_{42}	16.4	X	249.79687	140.75920	268.97290	8.11868	0.1206685	0.18621695	3.0370824	20	7 16.7	20.9
516293 2016 WE_{46}	18.2	X	83.83946	318.26625	33.90957	7.39531	0.1374597	0.30355243	2.1927052	20	—	—
516294 2016 WY_{47}	17.3	X	320.60303	27.10232	7.87313	3.98222	0.0351744	0.23095897	2.6309514	20	10 20.7	20.5
516295 2016 WY_{51}	16.9	X	331.48199	255.65127	127.59668	4.44273	0.1700804	0.23986503	2.5654177	20	10 29.1	19.2
516296 2016 WK_{52}	16.6	X	344.37155	106.78930	270.68225	4.67202	0.2223304	0.24106906	2.5568685	20	11 19.9	18.7
516297 2016 WC_{53}	16.8	X	334.54087	5.60286	21.83867	4.72062	0.1601425	0.23842948	2.5757047	20	11 6.6	19.3
516298 2016 WP_{53}	16.7	X	339.45453	287.31125	60.47482	13.17960	0.1703302	0.21681050	2.7442005	20	9 22.7	19.7
516299 2016 WO_{54}	16.7	X	243.41567	20.00393	82.73602	9.67606	0.1237513	0.21366188	2.7710946	20	9 24.2	20.7
516300 2016 XD_{4}	16.1	X	285.49636	289.80611	70.61867	27.46170	0.2090235	0.18447823	3.0561357	20	6 13.3	20.3
516301 2016 XL_{6}	16.1	X	208.31143	74.88643	38.00506	14.26798	0.2420986	0.18920565	3.0050150	20	8 19.3	21.4
516302 2016 XQ_{6}	16.2	X	273.07567	337.54252	46.37404	13.68808	0.1517566	0.18938119	3.0031578	20	7 10.2	20.6
516303 2016 XQ_{10}	16.9	X	240.82604	358.30358	86.20060	3.80180	0.0826030	0.19547647	2.9403998	20	8 28.2	21.1
516304 2016 XV_{10}	17.0	X	196.55639	57.49707	63.88206	9.83316	0.1707347	0.18809294	3.0168546	20	8 20.9	22.0
516305 2016 XK_{11}	16.9	X	272.32778	247.30790	129.87657	7.29925	0.1626888	0.17823966	3.1270379	20	6 27.2	21.4
516306 2016 XB_{15}	17.1	X	332.27598	292.37719	90.88610	1.52720	0.0546116	0.22059800	2.7126994	20	10 21.4	20.3
516307 2016 XQ_{16}	17.3	X	44.61438	60.39948	286.75448	6.64631	0.1519771	0.26737881	2.3862616	20	—	—
516308 2016 XH_{21}	17.5	X	38.22087	34.85689	1.69410	8.58173	0.0383850	0.30416396	2.1897652	20	—	—
516309 2016 YO_{4}	17.0	X	221.87516	146.71311	342.42613	32.28246	0.1543126	0.23192035	2.6236756	20	9 16.9	21.2
516310 2016 YT_{4}	17.2	X	148.63582	232.52809	359.76886	3.81782	0.0700084	0.24333023	2.5410039	20	11 23.8	20.9
516311 2016 YC_{7}	16.2	X	181.56229	230.56508	251.38089	8.07219	0.0300909	0.18258209	3.0772582	20	8 4.6	20.8
516312 2016 YF_{7}	17.2	X	245.35878	34.04086	95.88946	5.79920	0.1286544	0.23245941	2.6196180	20	10 31.3	20.6
516313 2016 YV_{9}	15.9	X	125.61377	67.16748	156.56155	9.82275	0.0726720	0.18686327	3.0300753	20	10 13.9	20.5
516314 2016 YE_{10}	15.3	X	122.63290	43.88699	137.80365	10.48279	0.1353974	0.14084663	3.6585170	20	8 18.7	21.0
516315 2016 YR_{11}	16.2	X	159.22488	52.85420	15.36412	2.89879	0.1942263	0.12383034	3.9864349	20	5 12.3	22.5
516316 2016 YC_{12}	16.0	X	210.29411	82.17334	21.64952	14.27879	0.1209469	0.17113045	3.2130527	20	8 16.8	21.2
516317 2016 YP_{13}	15.9	X	30.27555	263.32710	38.22502	16.19579	0.0813382	0.17306210	3.1890995	20	9 28.8	20.3
516318 2017 AX_{5}	16.6	X	318.69495	315.57205	85.04321	7.45280	0.0636832	0.20330463	2.8644277	20	10 23.0	20.3
516319 2017 AA_{7}	16.5	X	343.11385	316.16382	89.59577	7.80294	0.0926170	0.22597157	2.6695221	20	12 9.9	19.5
516320 2017 AP_{12}	16.4	X	212.66053	7.26138	118.48289	3.54691	0.0847870	0.18285911	3.0741495	20	9 14.5	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516321 2017 AU_{12}	16.3	X	276.00359	13.89033	100.51074	10.11293	0.0972894	0.21229267	2.7829969	20	11 22.9	19.9
516322 2017 AT_{14}	15.9	X	209.09928	23.62818	109.72800	10.91977	0.1257592	0.18386183	3.0629624	20	9 19.7	20.8
516323 2017 AJ_{20}	15.7	X	239.20008	348.14280	109.10386	14.18732	0.0414108	0.17726510	3.1384886	20	9 19.1	20.4
516324 2017 AZ_{21}	16.0	X	44.59625	244.37503	113.28500	14.14156	0.1068620	0.19710356	2.9241955	20	12 27.9	20.0
516325 2017 BR_{4}	16.8	X	264.41995	279.62732	178.36434	12.86035	0.1262727	0.22105071	2.7089944	20	10 12.7	20.2
516326 2017 BF_{10}	16.5	X	207.82187	7.88825	130.85238	9.88939	0.0804892	0.18243958	3.0788605	20	9 27.7	21.2
516327 2017 BM_{13}	16.8	X	338.58983	253.55736	138.76351	5.40679	0.0500681	0.21361212	2.7715249	20	11 11.2	20.3
516328 2017 BU_{15}	16.8	X	333.89866	222.68704	154.75050	4.80752	0.0276872	0.19180285	2.9778262	20	10 11.2	20.7
516329 2017 BY_{15}	15.8	X	57.70841	359.82345	271.66657	5.86180	0.0364533	0.16910848	3.2386136	20	9 10.7	20.4
516330 2017 BC_{19}	16.9	X	197.34608	342.45298	164.73324	3.82054	0.0580927	0.18053182	3.1005129	20	9 25.1	21.5
516331 2017 BP_{20}	16.3	X	15.10478	108.86880	226.26525	2.58399	0.0679059	0.18254995	3.0776193	20	10 12.9	20.3
516332 2017 BZ_{32}	16.5	X	292.32632	248.57227	132.97723	5.89963	0.1446185	0.17874005	3.1211991	20	8 2.0	20.4
516333 2017 BP_{33}	16.4	X	181.02287	50.74792	124.51092	11.94967	0.1867609	0.17502085	3.1652609	20	10 9.5	21.8
516334 2017 BS_{41}	16.2	X	238.47426	312.11368	142.32630	9.99705	0.0557536	0.17392383	3.1785569	20	9 7.9	20.8
516335 2017 BD_{44}	16.0	X	227.46537	274.62464	187.77550	3.73319	0.1367242	0.17192588	3.2031348	20	8 23.9	20.9
516336 2017 BZ_{45}	16.2	X	347.70190	261.65255	103.46800	10.63318	0.0440119	0.19057506	2.9906024	20	10 18.4	20.3
516337 2017 BV_{51}	16.6	X	222.90336	357.43929	111.60290	3.53303	0.0782077	0.16784516	3.2548439	20	9 4.2	21.4
516338 2017 BO_{52}	16.3	X	15.40886	317.53176	22.01087	5.14452	0.0251278	0.18572124	3.0424842	20	10 15.6	20.5
516339 2017 BL_{63}	16.5	X	305.29588	304.33867	93.18947	12.14631	0.0340366	0.18639918	3.0351026	20	10 2.2	20.8
516340 2017 BH_{64}	16.4	X	329.40507	314.62198	84.40985	9.02615	0.1256071	0.21124225	2.7922151	20	11 7.8	19.5
516341 2017 BZ_{64}	16.1	X	301.43290	341.57870	81.09608	13.06429	0.0351745	0.19780265	2.9173014	20	10 29.6	20.1
516342 2017 BZ_{84}	16.5	X	256.38037	254.87924	192.31918	11.14157	0.0990919	0.17904769	3.1176228	20	9 12.1	20.9
516343 2017 BH_{86}	13.8	X	234.69625	44.05890	314.58134	29.58283	0.0320251	0.08409143	5.1598239	20	4 26.8	21.2
516344 2017 BL_{87}	15.8	X	135.74127	75.71686	162.38851	17.30844	0.2028295	0.17241491	3.1970751	20	11 13.1	21.5
516345 2017 BW_{87}	16.2	X	253.69912	16.12270	42.54710	5.45405	0.1291729	0.16904206	3.2394619	20	8 2.4	20.9
516346 2017 BS_{90}	16.9	X	339.83250	305.08689	89.49264	7.06980	0.0570536	0.21469268	2.7622176	20	11 16.2	20.4
516347 2017 BB_{92}	13.4	X	315.09778	216.71962	67.38280	28.65276	0.0346109	0.08018000	5.3262965	20	5 18.9	20.3
516348 2017 BK_{94}	17.2	X	128.34109	74.79048	159.02041	2.23774	0.0241003	0.19861979	2.9092946	20	10 26.6	21.4
516349 2017 BO_{99}	16.9	X	263.41019	319.69246	132.54366	5.78557	0.0902602	0.19211143	2.9746366	20	10 4.9	21.0
516350 2017 BQ_{99}	16.6	X	341.59739	279.50131	114.75673	7.18236	0.0573942	0.21094957	2.7947971	20	11 17.9	20.2
516351 2017 BV_{99}	16.8	X	155.39843	200.58476	91.65907	6.77439	0.1003704	0.26282830	2.4137260	20	—	—
516352 2017 BA_{105}	16.1	X	146.08664	112.22117	87.57942	7.41363	0.0632984	0.17922851	3.1155256	20	10 6.4	20.9
516353 2017 BG_{106}	16.3	X	2.59813	247.91531	94.87360	11.30264	0.0953111	0.19061619	2.9901721	20	10 15.3	20.2
516354 2017 BJ_{112}	14.0	X	104.83736	51.01805	77.17000	8.75767	0.0691522	0.08231090	5.2339692	20	5 21.4	20.9
516355 2017 BD_{114}	16.0	X	280.23025	11.10426	38.23867	16.00686	0.0980720	0.17584308	3.1553862	20	9 5.5	20.5
516356 2017 BR_{123}	16.1	X	141.34276	122.51653	82.49880	6.45633	0.0798047	0.18487413	3.0517710	20	10 8.3	20.8
516357 2017 BD_{127}	16.1	X	268.73604	134.37136	284.80687	8.51906	0.1346127	0.17870890	3.1215617	20	8 16.8	20.6
516358 2017 BE_{127}	16.7	X	261.41207	267.45266	177.42406	3.61554	0.0180388	0.18375578	3.0641408	20	9 29.9	20.8
516359 2017 BY_{127}	16.3	X	353.77795	197.73041	155.36611	4.37804	0.0967663	0.19065428	2.9897739	20	10 10.4	19.9
516360 2017 BK_{131}	16.9	X	44.66575	323.45518	33.45536	7.39501	0.1100418	0.22492203	2.6778200	20	—	—
516361 2017 CG_{2}	16.1	X	242.03734	312.91621	145.72454	11.43006	0.0746949	0.18039736	3.1020534	20	9 16.3	20.6
516362 2017 CS_{4}	15.6	X	26.98700	29.02219	279.63118	7.22408	0.0738599	0.17482471	3.1676280	20	9 21.7	19.9
516363 2017 CV_{5}	16.4	X	18.01527	274.30364	64.70428	9.59173	0.0738085	0.19120410	2.9840396	20	10 27.6	20.4
516364 2017 CX_{30}	16.3	X	9.31509	220.97841	146.23165	6.83525	0.0517651	0.21195854	2.7859208	20	11 21.7	20.0
516365 2017 CG_{34}	15.4	X	354.38403	332.22135	23.50780	21.91776	0.0309884	0.18194044	3.0844890	20	10 10.3	19.5
516366 2017 DP_{29}	16.3	X	45.42017	174.43685	150.69127	11.45851	0.0967932	0.18810333	3.0167436	20	11 18.7	20.6
516367 2017 DQ_{47}	16.2	X	116.22933	244.95270	21.71190	8.39154	0.1213969	0.18070356	3.0985481	20	11 21.7	21.1
516368 2017 DY_{52}	15.8	X	42.21482	353.59105	319.60806	14.11086	0.1031006	0.17867083	3.1220051	20	10 19.5	20.3
516369 2017 DQ_{88}	15.4	X	123.19885	176.78833	74.85925	15.65824	0.0315565	0.17780536	3.1321279	20	11 10.9	20.0
516370 2017 DE_{112}	16.1	X	268.96039	40.47945	21.12744	17.60271	0.2088629	0.18158725	3.0884873	20	8 21.3	20.7
516371 2017 DG_{116}	13.2	X	261.49388	99.50353	247.82309	17.16239	0.0313943	0.08427280	5.1524181	20	5 25.9	20.0
516372 2017 EK_{5}	15.5	X	109.37596	194.80721	70.69415	19.03456	0.1642694	0.17630768	3.1498405	20	11 19.8	20.6
516373 2017 FA_{42}	18.5	X	333.38840	39.35865	162.75131	4.68387	0.1499931	0.29782783	2.2207135	20	1 19.7	21.0
516374 2017 FQ_{67}	15.8	X	81.15592	192.96319	114.56216	10.79830	0.0732660	0.18056276	3.1001587	20	12 3.2	20.4
516375 2017 FR_{100}	13.8	X	182.34542	64.33468	345.85978	13.91827	0.1114438	0.08258319	5.2224577	20	5 6.3	21.4
516376 2017 FD_{104}	17.3	X	309.64085	265.06392	288.57071	4.72227	0.1078196	0.26056798	2.4276646	20	—	—
516377 2017 HQ_{11}	15.5	X	352.99044	319.41484	110.25100	15.79808	0.0089817	0.18639467	3.0351516	20	—	—
516378 2017 RT_{3}	17.2	X	313.96301	228.48556	70.37495	4.17268	0.1151706	0.26897174	2.3768309	20	5 19.9	19.8
516379 2017 SN_{34}	16.7	X	245.24174	43.59966	281.22993	11.64527	0.1968409	0.23448043	2.6045437	20	3 12.8	21.1
516380 2017 WG_{26}	16.6	X	243.52793	247.61471	111.18422	13.27820	0.1959135	0.22840301	2.6505429	20	5 4.5	21.0
516381 2018 CY_{7}	15.6	X	201.81406	296.55938	132.28155	26.45298	0.1134300	0.17400119	3.1776147	20	6 23.9	20.9
516382 2018 CK_{8}	15.7	X	192.45030	115.20368	335.12099	7.85776	0.0535823	0.17430038	3.1739773	20	7 11.2	20.4
516383 2018 CO_{9}	16.6	X	171.91637	55.75016	101.69292	10.62172	0.1915094	0.21513842	2.7584010	20	9 14.1	21.4
516384 2018 CS_{9}	15.7	X	233.15541	120.91366	337.94977	21.31161	0.0488213	0.23147745	2.6270213	20	9 10.1	19.3
516385 2018 CX_{11}	17.5	X	276.65266	357.96118	84.26842	2.51175	0.1537681	0.27042542	2.3683054	20	10 15.8	19.9
516386 2018 DX	13.3	X	230.71196	43.15990	308.29536	21.07834	0.0529034	0.08497654	5.1239320	20	4 14.8	20.6
516387 1995 UL_{66}	16.1	X	200.91440	160.03615	56.58512	14.25138	0.1323989	0.24156102	2.5533959	20	12 25.4	19.9
516388 1996 AG_{15}	16.8	X	73.51916	217.67210	109.46119	12.84944	0.1267994	0.23423246	2.6063815	20	—	—
516389 1996 BX_{11}	16.4	X	137.34098	108.03483	116.59122	11.15006	0.0261010	0.22681850	2.6628726	20	11 3.9	20.3
516390 1996 TZ_{46}	17.0	X	84.05501	88.55570	224.46594	7.99252	0.1668020	0.21401669	2.7680311	20	12 26.0	21.5
516391 1997 LG_{5}	16.7	X	95.30071	143.60154	117.39605	10.15624	0.2298482	0.18408204	3.0605191	20	11 9.8	21.9
516392 1999 VH_{136}	18.3	X	212.84307	272.54652	50.99573	22.21277	0.0894520	0.40160691	1.8194296	20	2 10.9	21.0
516393 2000 AB_{22}	15.5	X	282.81338	324.19412	85.74218	18.95435	0.1906553	0.17879105	3.1206055	20	8 25.2	19.9
516394 2000 BT_{9}	17.2	X	194.69464	56.39590	133.94153	11.23680	0.1197152	0.22644012	2.6658383	20	11 18.9	21.4
516395 2000 CS_{150}	17.1	X	343.21304	58.30497	311.45247	3.87719	0.0463303	0.22428628	2.6828779	20	10 17.3	20.6
516396 2000 WY_{28}	20.1	X	106.52582	357.40345	63.31684	19.45125	0.2897538	0.47001138	1.6383140	20	3 13.5	21.7
516397 2001 FK_{126}	17.4	X	132.95776	124.12847	144.06703	6.63502	0.2070417	0.23359865	2.6110939	20	12 20.5	21.9
516398 2001 HW_{15}	20.3	X	29.21879	194.83295	56.50537	18.98725	0.2530048	0.52314209	1.5254206	20	10 19.0	21.7
516399 2001 QH_{55}	17.4	X	104.19378	195.57313	140.78826	13.62239	0.2342659	0.27791951	2.3255375	20	—	—
516400 2001 SM_{222}	18.6	X	110.15544	295.79011	35.42497	3.11281	0.2339973	0.27675065	2.3320809	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516401 2001 SN_{284}	17.9	X	316.52262	241.53989	192.32163	6.24904	0.1543833	0.26576942	2.3958854	20	12 20.0	20.0
516402 2001 TJ_{129}	18.6	X	122.16658	189.39560	202.08688	21.64331	0.0345746	0.39276706	1.8466277	20	—	—
516403 2001 UR_{19}	18.5	X	87.34749	224.73698	196.82975	21.21584	0.0832390	0.38904800	1.8583775	20	—	—
516404 2001 US_{229}	18.2	X	125.10341	211.23415	102.59972	3.47074	0.2477756	0.27749820	2.3278908	20	—	—
516405 2002 AC_{33}	18.6	X	234.78169	33.25792	119.23585	7.41888	0.1722122	0.25391990	2.4698555	20	11 14.3	21.9
516406 2002 CZ_{44}	18.4	X	215.33839	163.20747	137.39390	23.22867	0.0793815	0.37907938	1.8908160	20	1 5.2	20.9
516407 2002 GM_{53}	16.6	X	163.27083	228.83942	306.62407	7.59805	0.1756070	0.18647192	3.0343133	20	9 18.1	21.7
516408 2002 GB_{192}	15.2	X	91.05585	38.24827	190.39044	2.49012	0.1142335	0.12535210	3.9541059	20	9 6.2	21.0
516409 2002 JG_{93}	17.3	X	164.09897	182.61154	53.64982	9.58437	0.1744626	0.24367644	2.5385966	20	12 9.9	21.4
516410 2002 MY_{3}	16.1	X	96.05745	131.39618	182.31939	19.75480	0.4324930	0.17975949	3.1093874	20	—	—
516411 2002 OZ_{37}	17.1	X	154.86509	277.60981	336.98820	5.12617	0.2221182	0.23850358	2.5751712	20	12 22.0	21.5
516412 2002 PM_{138}	17.3	X	136.47540	134.49551	168.44678	12.16238	0.2880329	0.24008972	2.5638169	20	—	—
516413 2002 QK_{52}	18.5	X	134.28782	180.14777	138.07276	2.65503	0.1696376	0.29639666	2.2278563	20	—	—
516414 2002 RF_{244}	18.1	X	90.66459	178.89775	169.12325	3.65571	0.1943206	0.29285559	2.2457791	20	—	—
516415 2002 RX_{270}	17.6	X	159.55642	111.66892	161.88310	16.70702	0.2188228	0.24017595	2.5632032	20	—	—
516416 2002 TC_{307}	17.6	X	132.46399	263.44993	51.36100	8.83195	0.1424194	0.29220305	2.2491213	20	—	—
516417 2002 UD_{5}	17.3	X	20.04308	0.75328	32.60826	25.23228	0.2050891	0.28419942	2.2911521	20	—	—
516418 2002 VH_{12}	17.2	X	92.77113	297.03582	32.15433	5.25844	0.3310152	0.23226817	2.6210557	20	—	—
516419 2002 VU_{149}	14.2	X	175.04158	3.32694	50.71022	19.33754	0.1058840	0.08246060	5.2276326	20	5 9.3	21.6
516420 2003 FS_{2}	18.8	X	204.99291	27.80704	191.99958	13.36087	0.5036951	0.26304599	2.4123941	20	12 3.7	23.5
516421 2003 GU_{21}	19.1	X	159.68977	330.96156	29.41233	22.25625	0.0462646	0.39596681	1.8366660	20	1 15.6	21.5
516422 2003 GX_{24}	19.0	X	55.50040	61.44012	26.02989	22.17451	0.0589933	0.39460795	1.8408801	20	—	—
516423 2003 JC_{11}	18.5	X	173.05211	70.88595	74.40663	21.02442	0.5568715	0.19638973	2.9312771	20	8 29.6	25.1
516424 2003 JP_{18}	17.9	X	252.99677	117.56607	15.44244	2.25499	0.1282678	0.26135438	2.4227924	20	11 18.8	20.5
516425 2003 SW_{34}	17.2	X	310.61164	235.95041	165.59483	6.43181	0.2210592	0.23247230	2.6195212	20	10 3.8	19.4
516426 2003 SB_{435}	16.5	X	120.24929	354.43333	281.47895	13.36256	0.1679987	0.24416093	2.5352372	20	12 20.7	20.6
516427 2003 TH_{8}	16.1	X	107.61517	265.17645	26.76842	16.17679	0.3576004	0.18820091	3.0157007	20	12 26.3	22.0
516428 2003 UR_{12}	17.8	X	149.61785	122.24208	193.99879	60.46174	0.5671915	0.25990360	2.4318000	20	1 8.1	23.7
516429 2003 UR_{248}	16.1	X	42.58533	127.84140	204.25509	26.76167	0.1541001	0.17946208	3.1128217	20	11 26.8	20.7
516430 2003 UV_{280}	17.7	X	95.97196	346.07226	48.86201	22.86104	0.0806165	0.37105386	1.9179830	20	—	—
516431 2004 DZ	17.6	X	254.06514	38.20550	135.22365	25.22077	0.2661207	0.28520067	2.2857866	20	—	—
516432 2004 DT_{9}	17.4	X	349.85578	359.72377	42.33919	7.36504	0.0980302	0.28424553	2.2909043	20	—	—
516433 2004 EF_{82}	18.0	X	235.19996	106.91737	100.13214	5.93935	0.2395348	0.28658997	2.2783935	20	—	—
516434 2004 EA_{115}	18.3	X	243.14054	192.33865	347.46433	4.00760	0.1111390	0.28625007	2.2801967	20	—	—
516435 2004 FJ_{29}	21.3	X	301.32885	210.26421	195.43409	33.43951	0.3491132	1.12930998	0.9132590	20	—	—
516436 2004 FK_{38}	16.8	X	189.88976	184.55855	338.59506	7.73132	0.2330410	0.21238015	2.7822326	20	9 27.2	21.7
516437 2004 GN_{15}	17.7	X	307.68551	94.25044	88.31824	24.05582	0.0966064	0.35383165	1.9797253	20	—	—
516438 2004 JA_{8}	18.2	X	119.47029	251.57226	67.57083	3.52563	0.2282163	0.27795885	2.3253181	20	—	—
516439 2004 QY_{27}	17.1	X	53.03474	147.85330	166.63133	2.01536	0.1311041	0.19430797	2.9521765	20	11 18.4	21.1
516440 2004 RZ_{160}	16.9	X	45.70042	2.75839	323.77978	1.55950	0.1364622	0.19259826	2.9696218	20	11 23.8	21.0
516441 2004 SY_{56}	17.7	X	89.94717	286.32036	50.06817	3.58319	0.2132219	0.26440937	2.4040943	20	—	—
516442 2004 TV_{185}	15.9	X	225.72824	268.12480	212.66007	8.20918	0.0701797	0.18238564	3.0794674	20	9 21.2	20.4
516443 2004 TY_{198}	16.3	X	338.81852	304.22119	44.07687	1.82371	0.1880067	0.18011567	3.1052868	20	9 6.2	19.6
516444 2004 TM_{199}	16.2	X	292.99425	197.79228	197.65685	9.76964	0.0386147	0.17867643	3.1219399	20	9 2.1	20.5
516445 2004 WO_{8}	15.9	X	270.52294	336.12670	60.23201	18.15667	0.2005001	0.17088228	3.2161628	20	7 14.8	20.7
516446 2004 XP_{40}	18.2	X	76.90100	357.14371	62.67044	22.77534	0.0895433	0.39423007	1.8420562	20	—	—
516447 2005 AP_{16}	16.8	X	212.74175	52.94950	110.35943	28.59448	0.2452183	0.23612393	2.5924440	20	11 3.4	21.5
516448 2005 AN_{44}	17.3	X	251.06972	152.93033	309.15025	2.63421	0.1967388	0.23500903	2.6006367	20	9 18.5	20.7
516449 2005 CE_{11}	17.5	X	174.50499	90.48382	122.43210	7.66066	0.1849385	0.23291938	2.6161681	20	11 21.8	21.8
516450 2005 CY_{41}	17.6	X	311.75714	313.53323	102.99618	6.60476	0.2198990	0.23831584	2.5765235	20	11 3.4	19.7
516451 2005 EZ_{167}	18.6	X	350.81621	96.27037	354.47286	20.05438	0.1064363	0.37371095	1.9088809	20	—	—
516452 2005 ET_{211}	17.8	X	195.01830	38.23023	159.70645	4.30501	0.1953093	0.23329680	2.6133457	20	11 20.5	21.9
516453 2005 EB_{253}	16.7	X	198.72094	41.74409	157.27136	12.33607	0.2936020	0.23044840	2.6348360	20	11 18.8	21.4
516454 2005 FN_{4}	18.6	X	157.32733	105.64800	190.55007	29.31184	0.7640497	0.22653955	2.6650582	20	1 2.8	25.1
516455 2005 GC_{36}	17.0	X	310.82008	56.81513	359.64435	21.98286	0.0762043	0.23010914	2.6374251	20	10 24.4	20.5
516456 2005 GK_{93}	16.9	X	178.02644	149.90375	69.57492	15.67964	0.2188551	0.23014134	2.6371791	20	11 28.5	21.1
516457 2005 HM_{3}	19.8	X	342.14002	4.22520	209.22053	28.32143	0.3100246	0.45322198	1.6785286	20	—	—
516458 2005 JP_{147}	18.3	X	230.18038	65.53044	216.50273	22.02939	0.1314587	0.37597835	1.9011986	20	—	—
516459 2005 LP_{7}	17.0	X	128.11133	214.44875	67.43189	6.33061	0.2811325	0.22481355	2.6786814	20	12 31.3	21.9
516460 2005 LW_{7}	18.5	X	168.08531	323.83255	345.79209	4.44383	0.3979552	0.29706315	2.2245228	20	1 3.7	22.5
516461 2005 LF_{8}	18.5	X	169.00996	297.24482	21.14846	2.66590	0.3904117	0.29771137	2.2212926	20	1 14.0	22.4
516462 2005 LF_{38}	18.2	X	149.76303	211.67129	107.69235	8.40982	0.2667247	0.29817934	2.2189679	20	—	—
516463 2005 MW_{13}	16.6	X	132.16803	157.35927	102.41359	14.27500	0.1305946	0.22317416	2.6917834	20	12 9.2	20.9
516464 2005 ML_{24}	18.4	X	133.06812	28.32149	294.36328	3.24841	0.1761516	0.29177024	2.2513450	20	—	—
516465 2005 MQ_{41}	18.1	X	162.16900	333.58336	305.53262	5.72244	0.1648698	0.29149029	2.2527862	20	—	—
516466 2005 NV_{81}	16.4	X	265.26762	316.70666	308.43724	7.51069	0.0308958	0.17447964	3.1718031	20	2 17.5	21.0
516467 2005 OM_{20}	18.3	X	150.13856	173.67130	118.73992	6.03022	0.1688951	0.28988245	2.2611087	20	—	—
516468 2005 QY_{12}	16.6	X	64.52312	184.36055	162.76423	13.49714	0.2252124	0.21333353	2.7739373	20	—	—
516469 2005 QU_{55}	18.3	X	129.82307	173.01124	154.92343	3.10527	0.2322228	0.28911204	2.2651237	20	—	—
516470 2005 SV_{14}	17.8	X	140.53017	101.90709	203.38920	4.52807	0.1708889	0.28642240	2.2792820	20	—	—
516471 2005 SV_{71}	18.0	X	68.19167	235.96421	112.28317	2.73774	0.1773629	0.27946965	2.3169302	20	—	—
516472 2005 SF_{140}	17.1	X	19.67461	318.48415	26.70104	8.49335	0.1406475	0.20148116	2.8816845	20	11 13.7	20.8
516473 2005 TY_{12}	17.9	X	96.78625	132.26816	214.14078	4.88005	0.1853613	0.28241651	2.3007848	20	—	—
516474 2005 TF_{31}	17.4	X	70.96692	145.65772	155.13363	2.49678	0.0466044	0.20277774	2.8693874	20	11 13.5	21.4
516475 2005 TS_{51}	17.8	X	74.64957	161.18330	211.21077	23.50740	0.0967670	0.34830283	2.0006205	20	—	—
516476 2005 TS_{86}	19.7	X	74.97301	251.64407	196.01016	8.43866	0.1934979	0.42790198	1.7441073	20	1 7.4	19.8
516477 2005 TH_{113}	17.0	X	264.38525	49.79701	8.54573	11.28132	0.0866322	0.19035489	2.9929079	20	8 25.7	21.2
516478 2005 UP_{4}	16.3	X	198.85340	286.87300	165.29910	23.56166	0.4197810	0.17451126	3.1714199	20	7 5.3	22.7
516479 2005 UX_{31}	16.2	X	147.31851	313.60296	219.20212	14.19555	0.1467876	0.18542325	3.0457430	20	8 29.9	21.3
516480 2005 UK_{36}	17.1	X	226.93333	239.03635	224.33861	4.61528	0.0744481	0.18737379	3.0245689	20	9 1.0	21.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516481 2005 UL_{87}	18.3	X	136.33854	113.13762	197.79632	5.74095	0.1496829	0.28290421	2.2981398	20	—	—
516482 2005 UR_{88}	18.3	X	118.32602	102.80146	195.73218	2.82256	0.1407410	0.27724250	2.3293219	20	—	—
516483 2005 UR_{120}	16.7	X	289.14043	42.17224	13.23838	10.00529	0.0953487	0.19166055	2.9793000	20	9 21.6	20.5
516484 2005 UT_{140}	18.2	X	162.20631	235.67231	41.21745	8.47183	0.1610199	0.28063865	2.3104916	20	—	—
516485 2005 UJ_{160}	17.2	X	124.68432	138.34559	174.00052	6.74007	0.1987904	0.28275961	2.2989232	20	—	—
516486 2005 UZ_{219}	17.7	X	101.20388	327.89119	13.52522	6.11706	0.1004838	0.28015745	2.3131365	20	—	—
516487 2005 UO_{281}	16.8	X	204.70257	265.10831	216.23484	5.97182	0.1024929	0.18663129	3.0325857	20	8 26.6	21.6
516488 2005 UV_{295}	18.3	X	322.32497	27.14942	40.40691	8.18976	0.0666804	0.26658857	2.3909750	20	12 16.6	21.1
516489 2005 UB_{307}	16.5	X	280.50575	343.99364	47.60826	16.33314	0.1644267	0.18476917	3.0529267	20	7 31.9	20.9
516490 2005 UK_{474}	17.7	X	71.46927	282.63187	61.69109	7.52296	0.1517349	0.27606980	2.3359136	20	—	—
516491 2005 VH_{43}	17.9	X	326.78011	257.19192	184.13709	8.41427	0.2086665	0.26922929	2.3753148	20	—	—
516492 2005 VW_{64}	18.0	X	158.60184	235.06408	67.06419	4.67165	0.2354076	0.28699622	2.2762429	20	—	—
516493 2005 WR_{35}	17.8	X	29.78405	125.76115	255.01098	1.51554	0.1882259	0.27065358	2.3669742	20	—	—
516494 2005 WH_{49}	18.3	X	272.33840	114.32246	9.22801	1.19928	0.1427104	0.26288074	2.4134050	20	12 5.7	20.8
516495 2005 WU_{164}	17.8	X	97.05457	268.36174	67.39431	5.64051	0.2008455	0.27829636	2.3234377	20	—	—
516496 2005 WT_{166}	18.3	X	263.79353	309.25164	190.90002	0.89571	0.1238485	0.26517745	2.3994497	20	12 18.3	20.6
516497 2005 WP_{210}	16.8	X	243.92625	351.59216	88.88627	10.18292	0.0696077	0.18272504	3.0756530	20	8 29.8	21.3
516498 2005 YZ_{25}	18.4	X	289.09206	165.95457	293.59818	0.84143	0.1544068	0.25858148	2.4400821	20	11 29.0	20.5
516499 2005 YW_{133}	16.5	X	264.38158	44.58303	33.76025	5.68176	0.1005762	0.18334038	3.0687674	20	9 15.5	20.7
516500 2005 YM_{134}	16.0	X	163.97303	107.32800	81.88866	12.17179	0.1089456	0.18139645	3.0906526	20	10 14.5	21.0
516501 2005 YN_{171}	16.4	X	224.87427	50.61741	54.09422	15.06322	0.2342862	0.18007192	3.1057898	20	8 23.8	21.7
516502 2005 YE_{263}	16.0	X	90.71339	123.95408	117.42284	17.11997	0.0584683	0.17878501	3.1206757	20	9 28.2	20.8
516503 2006 AK_{25}	16.9	X	163.60938	55.58684	102.70847	10.59077	0.0553621	0.17720131	3.1392417	20	9 4.5	21.7
516504 2006 AC_{29}	16.9	X	209.81741	300.01369	170.96333	1.10656	0.1579009	0.17749306	3.1358008	20	8 16.2	21.9
516505 2006 AC_{38}	17.6	X	288.76366	349.17686	119.29467	12.78183	0.2128082	0.25932586	2.4354105	20	12 8.7	19.7
516506 2006 AC_{108}	17.6	X	174.21929	324.00456	269.76970	1.42559	0.1324906	0.25718044	2.4489359	20	12 22.6	21.2
516507 2006 BV_{30}	15.8	X	223.67227	315.40653	130.11516	27.00914	0.1211765	0.17227777	3.1987715	20	8 1.8	20.6
516508 2006 BV_{100}	17.8	X	343.26144	332.50610	73.60820	2.00956	0.2051562	0.26027584	2.4294808	20	—	—
516509 2006 BU_{106}	16.9	X	163.34442	76.18735	106.10118	2.36417	0.1766228	0.17659253	3.1464524	20	9 29.7	22.0
516510 2006 BS_{182}	16.2	X	239.09411	279.02508	145.09865	26.34766	0.1976474	0.17112872	3.2130744	20	7 15.0	21.5
516511 2006 BP_{234}	18.2	X	253.08522	61.20866	68.30757	2.19231	0.1306432	0.25444204	2.4664755	20	11 12.8	21.1
516512 2006 BJ_{249}	16.9	X	217.38552	122.06790	342.44313	5.47650	0.1440580	0.17352890	3.1833777	20	8 17.5	21.9
516513 2006 CX_{68}	16.1	X	114.16471	84.88240	142.68872	19.59213	0.1383662	0.17370313	3.1812486	20	10 12.5	21.4
516514 2006 DE_{17}	16.8	X	187.79940	139.65419	352.67128	9.80878	0.1406201	0.17199239	3.2023090	20	8 24.3	21.9
516515 2006 DP_{173}	16.3	X	118.92356	208.57313	26.22975	3.01659	0.0523768	0.17243860	3.1967823	20	10 13.9	21.0
516516 2006 DQ_{205}	16.6	X	96.65719	253.09579	342.17975	9.79515	0.0666577	0.17038180	3.2224579	20	9 18.9	21.2
516517 2006 ES_{2}	13.3	X	35.89984	213.21236	347.65087	18.48139	0.0914747	0.08234881	5.2323624	20	5 17.9	20.1
516518 2006 HJ_{4}	18.3	X	161.56166	130.09354	108.58050	4.46819	0.2294607	0.24401640	2.5362382	20	12 9.4	22.5
516519 2006 HS_{26}	17.8	X	183.24776	15.47383	191.66971	12.69459	0.1998953	0.24277369	2.5448859	20	11 22.6	22.0
516520 2006 KS_{25}	17.9	X	178.70701	344.46688	235.01382	6.50569	0.1327686	0.24287656	2.5441672	20	12 6.8	21.9
516521 2006 KE_{105}	17.5	X	179.54231	44.44566	190.83293	13.19680	0.1685396	0.24460852	2.5321436	20	12 23.7	21.7
516522 2006 QC_{102}	18.0	X	108.37232	125.07583	174.90797	4.56855	0.1894741	0.23125439	2.6287103	20	—	—
516523 2006 QX_{145}	16.6	X	120.81442	247.03120	348.69298	16.86566	0.0714686	0.21872793	2.7281394	20	10 18.3	20.8
516524 2006 RE_{7}	17.3	X	92.29892	302.52695	14.17720	12.64191	0.2719082	0.22731788	2.6589713	20	—	—
516525 2006 RG_{11}	17.3	X	109.87750	117.57225	195.74115	5.63445	0.2791185	0.23296796	2.6158043	20	—	—
516526 2006 RB_{42}	16.8	X	29.65946	155.76062	191.72241	5.89968	0.0179671	0.21767224	2.7369530	20	11 19.6	20.4
516527 2006 RC_{77}	17.4	X	284.52898	261.93224	166.07712	6.55212	0.0456125	0.21261152	2.7802138	20	10 11.3	21.0
516528 2006 RJ_{93}	16.7	X	88.36444	303.42372	5.72693	15.94365	0.1939160	0.22506749	2.6766662	20	12 31.5	21.4
516529 2006 SK_{4}	17.0	X	135.14399	24.80034	271.12859	3.91828	0.2908463	0.23506016	2.6002595	20	—	—
516530 2006 SZ_{20}	18.4	X	176.28602	141.23600	159.62320	2.03583	0.1631415	0.31508081	2.1388882	20	—	—
516531 2006 SF_{22}	17.8	X	115.42940	217.28383	104.10240	6.71127	0.3382278	0.23476198	2.6024609	20	—	—
516532 2006 SK_{100}	17.3	X	212.18253	6.69153	183.74229	6.15192	0.0756893	0.22418646	2.6836743	20	12 10.1	21.1
516533 2006 SJ_{110}	16.5	X	39.26345	323.41570	35.58980	14.20980	0.2657153	0.22289081	2.6940642	20	—	—
516534 2006 SO_{140}	18.1	X	87.13652	3.65218	31.44304	22.15197	0.0910920	0.38303788	1.8777664	20	—	—
516535 2006 SZ_{155}	17.7	X	143.09974	24.02800	251.17671	5.65174	0.2879146	0.23699152	2.5861131	20	—	—
516536 2006 SF_{220}	18.5	X	48.00080	267.32304	175.69695	20.06829	0.1046103	0.38503155	1.8712788	20	—	—
516537 2006 SN_{227}	17.2	X	113.16367	53.90635	241.63317	4.27204	0.1547750	0.22777654	2.6554006	20	—	—
516538 2006 SV_{237}	17.0	X	227.05618	302.05774	178.06746	9.93831	0.0753233	0.21044590	2.7992546	20	9 27.7	21.0
516539 2006 SN_{246}	18.7	X	159.58548	120.32581	159.88062	2.38320	0.1596289	0.30730117	2.1748363	20	—	—
516540 2006 SL_{269}	16.7	X	145.08057	204.91855	41.85898	9.53902	0.1188662	0.21742186	2.7390539	20	12 1.9	21.0
516541 2006 SX_{294}	18.2	X	130.06275	125.86554	194.26041	5.19693	0.2432564	0.30857546	2.1688447	20	—	—
516542 2006 SF_{312}	17.0	X	244.16356	255.37627	228.50100	4.49046	0.0710926	0.21384060	2.7695504	20	10 23.9	20.8
516543 2006 SH_{367}	17.0	X	358.36886	255.77971	124.75445	5.91977	0.1734633	0.21652464	2.7466153	20	12 7.8	20.0
516544 2006 SW_{374}	17.6	X	146.15837	129.99909	130.85376	9.85946	0.1418822	0.22385031	2.6863603	20	12 22.1	22.0
516545 2006 TY_{13}	16.6	X	88.11358	274.25491	39.15620	26.75623	0.2746646	0.22629719	2.6669607	20	—	—
516546 2006 TK_{89}	18.0	X	72.40130	336.48570	16.12736	5.94637	0.1967156	0.29791102	2.2203001	20	—	—
516547 2006 TG_{106}	18.8	X	187.94297	286.86921	26.52584	22.52406	0.0664936	0.38527224	1.8704994	20	—	—
516548 2006 UO_{76}	17.3	X	43.73502	291.00194	50.35757	5.49604	0.1192642	0.21824419	2.7321692	20	12 13.1	21.0
516549 2006 UL_{122}	17.3	X	93.05013	279.36866	40.92493	7.97708	0.2243834	0.22624466	2.6673734	20	—	—
516550 2006 UG_{286}	18.9	X	300.19592	70.50200	53.01234	1.78700	0.1435567	0.29123672	2.2540937	20	—	—
516551 2006 VR_{11}	17.3	X	27.00822	128.24978	237.13166	4.06267	0.1442850	0.21701354	2.7424886	20	12 25.6	20.9
516552 2006 VT_{46}	17.3	X	332.19074	4.59510	9.53578	2.42266	0.0678400	0.20601341	2.8392637	20	10 5.3	20.8
516553 2006 VT_{66}	16.3	X	302.24663	340.23172	55.79849	16.26387	0.1372062	0.20487560	2.8497662	20	9 21.5	20.0
516554 2006 VH_{136}	18.3	X	135.35856	60.44896	249.73401	2.55898	0.1736808	0.30002187	2.2098736	20	—	—
516555 2006 VZ_{137}	17.0	X	274.07154	7.74638	74.32305	7.17461	0.0665877	0.20433910	2.8547521	20	10 12.7	20.8
516556 2006 WG_{3}	18.3	X	90.81411	315.76917	59.10638	23.14831	0.1248014	0.37571004	1.9021037	20	—	—
516557 2006 WW_{123}	17.3	X	314.81801	69.73087	108.31536	24.34507	0.0663576	0.36010841	1.9566533	20	—	—
516558 2006 WY_{170}	16.9	X	41.11740	275.55036	77.29657	6.87958	0.0317061	0.21261511	2.7801824	20	12 10.6	20.6
516559 2006 XG_{56}	17.8	X	40.71425	11.20956	91.68716	23.49274	0.0938158	0.37832392	1.8933323	20	—	—
516560 Annapolisroyal	16.9	X	206.31614	10.73267	173.85032	17.07180	0.1481889	0.21365873	2.7711218	20	11 18.4	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516561 2006 YZ_{35}	18.3	X	225.53308	168.23281	22.93177	3.29680	0.1430307	0.27948713	2.3168336	20	—	—
516562 2007 BF_{61}	18.2	X	203.16976	198.66888	115.56812	23.34739	0.0645036	0.37776871	1.8951870	20	1 7.9	20.2
516563 2007 BW_{69}	18.5	X	264.17282	32.42588	93.16500	0.49316	0.2547395	0.27424825	2.3462456	20	11 9.4	20.5
516564 2007 CS_{37}	17.5	X	204.18794	354.73822	105.32686	2.49605	0.2920677	0.18561768	3.0436158	20	7 22.6	22.8
516565 2007 DH_{30}	17.9	X	188.66905	92.88954	148.99806	6.80722	0.2029955	0.27377608	2.3489425	20	—	—
516566 2007 DH_{36}	18.2	X	226.17505	42.58435	158.76582	4.31023	0.1397187	0.27462100	2.3441220	20	—	—
516567 2007 DY_{92}	18.5	X	261.81243	9.78838	146.91588	3.27665	0.2065393	0.27747036	2.3280465	20	12 31.1	20.4
516568 2007 DC_{94}	16.8	X	181.30605	20.54261	138.10842	10.47184	0.1443187	0.18591686	3.0403496	20	9 20.6	21.7
516569 2007 DJ_{101}	18.2	X	265.57815	8.29520	119.72918	3.14793	0.1681973	0.27177747	2.3604443	20	11 30.2	20.4
516570 2007 DH_{112}	18.2	X	250.73505	280.72664	223.80891	1.54048	0.1415962	0.27034111	2.3687978	20	12 2.4	20.8
516571 2007 DL_{114}	18.3	X	231.41793	80.21209	89.79958	3.32421	0.1329192	0.27092671	2.3653832	20	12 10.6	21.0
516572 2007 DR_{117}	16.4	X	75.42330	108.60192	185.73825	10.63163	0.0875597	0.18765095	3.0215900	20	11 14.1	20.9
516573 2007 EQ_{8}	16.4	X	189.81005	324.28091	178.46874	17.88219	0.1387717	0.18281389	3.0746564	20	9 5.2	21.4
516574 2007 ES_{17}	18.5	X	205.71227	50.35633	166.29005	1.51914	0.1283703	0.27320070	2.3522394	20	—	—
516575 2007 EC_{40}	18.2	X	220.01478	88.79719	114.06951	3.15683	0.1455468	0.27262207	2.3555665	20	—	—
516576 2007 EP_{58}	16.2	X	35.23462	338.39373	324.58959	16.87689	0.0771961	0.18791088	3.0188029	20	9 24.5	20.5
516577 2007 ER_{73}	18.4	X	273.11895	93.67444	38.15995	1.74521	0.1395895	0.27410720	2.3470504	20	12 23.9	20.6
516578 2007 EG_{103}	18.3	X	289.52353	93.38459	34.33356	1.88299	0.0773799	0.27558567	2.3386485	20	—	—
516579 2007 EZ_{125}	16.9	X	137.42487	31.58074	177.11248	10.84555	0.2050424	0.18266095	3.0763724	20	10 10.6	22.1
516580 2007 EE_{128}	18.2	X	222.64092	7.10818	184.71769	1.34642	0.1274038	0.27307009	2.3529893	20	12 29.3	20.9
516581 2007 ED_{130}	18.1	X	221.56410	23.99475	181.24690	1.04512	0.1311800	0.27433396	2.3457569	20	—	—
516582 2007 EP_{167}	17.9	X	213.76145	342.49256	217.71343	2.02787	0.2329092	0.27161984	2.3613574	20	12 13.9	21.2
516583 2007 EZ_{176}	16.4	X	107.94897	16.95569	195.28292	28.15739	0.1182820	0.17528782	3.1620463	20	9 7.7	21.6
516584 2007 EQ_{177}	16.8	X	143.20072	350.00492	203.47893	17.23891	0.1359713	0.17923660	3.1154318	20	9 21.7	21.9
516585 2007 ES_{219}	16.8	X	132.60078	21.74229	179.18239	4.46752	0.2139902	0.17720366	3.1392140	20	9 26.3	22.2
516586 2007 FE_{25}	18.4	X	240.63169	142.40679	15.57353	1.54865	0.1235849	0.26942199	2.3741821	20	12 8.1	21.0
516587 2007 FX_{36}	16.8	X	147.55947	62.39985	134.87021	6.03292	0.0645062	0.18094220	3.0958231	20	10 3.7	21.5
516588 2007 FY_{45}	18.3	X	270.60760	19.95156	199.44077	21.14180	0.0487644	0.35940591	1.9592021	20	—	—
516589 2007 FZ_{45}	18.6	X	174.01888	9.06073	236.15575	1.47485	0.1782170	0.26777729	2.3838937	20	—	—
516590 2007 GX_{42}	18.1	X	159.48175	227.54507	32.10042	1.75006	0.1630934	0.26561867	2.3967919	20	—	—
516591 2007 GQ_{50}	17.9	X	202.29949	5.85734	217.21517	6.86712	0.0701274	0.26886887	2.3774371	20	—	—
516592 2007 GQ_{66}	16.5	X	116.00434	19.12082	217.04230	10.01007	0.1757929	0.17639245	3.1488312	20	10 20.8	21.6
516593 2007 HA_{36}	16.7	X	81.33954	200.25351	65.86485	2.33662	0.1432022	0.17372833	3.1809410	20	10 20.9	21.4
516594 2007 HU_{66}	17.8	X	200.66981	122.64005	123.24763	5.61027	0.1928037	0.27007234	2.3703691	20	—	—
516595 2007 HC_{73}	18.0	X	213.18336	115.28441	85.70100	2.36073	0.1311647	0.26710015	2.3879210	20	12 27.0	20.8
516596 2007 HQ_{75}	17.9	X	201.88236	14.64749	210.90180	3.51268	0.2071421	0.26810105	2.3819741	20	—	—
516597 2007 HS_{79}	18.1	X	192.72604	30.51377	200.99179	2.47719	0.1605092	0.26743313	2.3859385	20	—	—
516598 2007 HF_{80}	17.7	X	124.14630	209.42443	66.59454	7.10163	0.1722049	0.25908897	2.4368947	20	12 26.4	21.7
516599 2007 HC_{92}	15.6	X	76.88102	66.85228	228.51463	15.42893	0.1998698	0.17704821	3.1410512	20	11 25.9	20.5
516600 2007 JZ_{5}	18.2	X	125.69308	53.83169	225.65690	0.55441	0.1804571	0.26063338	2.4272584	20	—	—
516601 2007 JR_{26}	17.8	X	185.89761	39.85846	200.01451	7.56376	0.1428698	0.26572135	2.3961743	20	—	—
516602 2007 JV_{35}	17.2	X	204.60485	106.06874	126.35168	8.52663	0.0849449	0.27018155	2.3697303	20	—	—
516603 2007 JW_{37}	17.8	X	197.41506	243.96181	37.02452	20.72934	0.0642454	0.35486545	1.9758785	20	—	—
516604 2007 JK_{46}	13.8	X	44.66128	149.96792	51.00769	22.96403	0.0129382	0.08207921	5.2438140	20	5 24.9	20.7
516605 2007 KG_{4}	16.7	X	145.80747	44.17144	161.09765	15.69598	0.2235954	0.17614546	3.1517741	20	10 14.7	22.2
516606 2007 LA_{6}	17.3	X	104.38188	110.46648	159.57798	13.80076	0.2707930	0.17630417	3.1498823	20	11 27.7	22.9
516607 2007 LD_{22}	16.6	X	83.12007	82.14751	207.95263	19.00582	0.3333070	0.17415420	3.1757532	20	12 6.0	22.3
516608 2007 MA_{5}	15.5	X	93.31191	162.87204	93.16160	30.51065	0.1798029	0.17273558	3.1931171	20	11 7.4	21.1
516609 2007 OH_{11}	17.4	X	16.73078	104.26357	283.42892	1.35680	0.0641737	0.24736908	2.5132698	20	—	—
516610 2007 RM_{177}	17.4	X	21.56023	167.72118	178.14455	7.90465	0.1992435	0.23496248	2.6009802	20	12 7.4	20.7
516611 2007 RX_{251}	17.5	X	25.00547	179.86736	200.81761	11.68649	0.0514617	0.24132300	2.5550745	20	—	—
516612 2007 SN_{22}	17.0	X	218.29203	271.26261	216.76269	11.85693	0.1148716	0.21925122	2.7237968	20	9 20.3	21.1
516613 2007 TT_{97}	17.0	X	345.98672	344.34771	33.89827	13.65022	0.2094111	0.23093613	2.6311249	20	11 17.0	19.4
516614 2007 TQ_{362}	17.0	X	248.83080	12.87597	57.02841	8.83917	0.2074991	0.21256352	2.7806323	20	8 5.1	21.2
516615 2007 TM_{370}	17.1	X	291.02778	53.11048	2.35560	10.61666	0.1977819	0.22340290	2.6899457	20	9 15.1	20.0
516616 2007 UF_{26}	17.5	X	2.83788	2.40077	20.46926	8.19451	0.1696193	0.23403881	2.6078191	20	12 22.5	20.6
516617 2007 UN_{47}	16.6	X	352.90603	291.12422	75.59756	15.48469	0.1918418	0.22816248	2.6524054	20	11 17.2	19.3
516618 2007 UJ_{112}	17.4	X	52.69819	280.98530	39.65933	4.89067	0.0513055	0.23110216	2.6298646	20	11 21.1	20.9
516619 2007 UZ_{118}	16.7	X	14.72241	3.81094	5.42056	14.75572	0.1008718	0.23852380	2.5750257	20	12 11.2	20.2
516620 2007 VR_{159}	17.4	X	218.10889	70.15438	76.78317	10.04410	0.1549261	0.22131381	2.7068469	20	10 17.6	21.6
516621 2007 YK_{20}	17.1	X	269.78188	352.82132	102.49904	4.91776	0.0387362	0.21715522	2.7412956	20	10 28.9	20.7
516622 2007 YB_{42}	18.5	X	259.82847	225.70159	305.98782	5.10809	0.0607368	0.30672763	2.1775465	20	—	—
516623 2008 AO_{120}	17.2	X	203.99234	42.90920	118.15357	10.15836	0.0977744	0.21195549	2.7859476	20	10 24.6	21.5
516624 2008 BC_{38}	16.7	X	268.02466	307.02132	145.96945	17.79917	0.1785698	0.21153284	2.7896573	20	10 4.4	20.5
516625 2008 BT_{54}	16.8	X	151.86692	255.89380	313.23677	4.90606	0.1135541	0.20558454	2.8432109	20	10 21.6	21.3
516626 2008 CB_{104}	16.6	X	263.56486	285.35886	131.68596	14.95422	0.1508907	0.20207778	2.8760097	20	8 10.5	20.4
516627 2008 CJ_{126}	18.8	X	288.73858	283.74619	205.06308	1.06042	0.0389449	0.30118066	2.2042017	20	—	—
516628 2008 CM_{153}	17.1	X	273.85371	59.40351	14.03591	6.62928	0.0382250	0.20327500	2.8647061	20	10 1.9	20.8
516629 2008 CZ_{170}	17.2	X	154.74389	54.46652	168.90977	9.49930	0.1042632	0.20895750	2.8125316	20	11 15.6	21.7
516630 2008 DY_{9}	16.9	X	14.39678	62.74874	308.24197	5.31892	0.0382668	0.21641035	2.7475822	20	11 30.1	20.5
516631 2008 DP_{80}	16.9	X	359.54197	256.82573	128.24748	6.93458	0.0960647	0.21673739	2.7448176	20	12 6.3	20.4
516632 2008 EB_{29}	18.1	X	230.44438	36.06061	164.30289	6.03711	0.1247605	0.29493181	2.2352270	20	—	—
516633 2008 EQ_{58}	16.9	X	108.07884	120.53693	153.33090	6.68026	0.0034800	0.21364174	2.7712688	20	11 23.4	20.8
516634 2008 EE_{148}	17.3	X	112.79674	49.93706	186.34856	6.45042	0.1799413	0.19541808	2.9409855	20	10 22.3	22.0
516635 2008 EE_{164}	18.6	X	225.78283	78.22730	176.81607	22.30814	0.0670705	0.39042401	1.8540084	20	—	—
516636 2008 FD_{130}	18.3	X	178.06794	193.71280	63.36382	5.99541	0.0970878	0.29311090	2.2444748	20	—	—
516637 2008 FX_{132}	17.2	X	152.53257	3.24980	207.51637	7.92247	0.1425378	0.19795855	2.9157696	20	10 25.5	21.9
516638 2008 GD_{29}	17.6	X	169.38715	5.79855	198.28773	1.59606	0.0109973	0.20356844	2.8619524	20	11 8.3	21.4
516639 2008 GX_{35}	18.8	X	252.62715	138.57872	17.59582	4.57293	0.1045352	0.29280745	2.2460253	20	—	—
516640 2008 GC_{98}	17.2	X	175.16182	59.58021	117.76034	7.29576	0.1680376	0.19603159	2.9348461	20	10 8.3	22.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516641 2008 GB_{110}	19.7	X	333.42238	315.04226	203.58260	36.11269	0.3262207	0.39556099	1.8379220	20	—	—
516642 2008 GX_{127}	16.8	X	94.64811	98.79951	156.16834	10.54542	0.0624663	0.18954358	3.0014423	20	10 17.7	21.3
516643 2008 GH_{137}	17.5	X	183.06703	201.98355	72.23648	10.12277	0.1617306	0.29625147	2.2285842	20	—	—
516644 2008 GM_{144}	17.8	X	136.00415	258.90165	40.85309	10.86241	0.1472742	0.29125551	2.2539967	20	—	—
516645 2008 HQ_{7}	17.9	X	136.03735	184.49969	114.29792	10.00707	0.1939456	0.28871209	2.2672151	20	—	—
516646 2008 HM_{14}	18.0	X	105.32254	89.22823	234.78803	6.20850	0.0122124	0.29451420	2.2373395	20	—	—
516647 2008 HP_{46}	18.3	X	186.79398	226.25552	63.29936	9.85771	0.2839278	0.29529079	2.2334151	20	—	—
516648 2008 HB_{54}	18.1	X	155.01694	74.34741	201.87038	5.08605	0.1623846	0.28777709	2.2721234	20	—	—
516649 2008 JG_{25}	18.0	X	142.82588	243.63412	48.36854	6.00435	0.2602819	0.28598273	2.2816175	20	—	—
516650 2008 JB_{30}	16.5	X	13.15834	240.71070	72.38293	12.73027	0.0826255	0.18204387	3.0833205	20	9 21.2	20.7
516651 2008 KB_{1}	15.8	X	51.06783	231.79694	93.01764	13.55521	0.1024887	0.19180010	2.9778546	20	11 26.1	20.1
516652 2008 KA_{4}	18.5	X	174.57672	136.07999	147.02654	6.81368	0.1193345	0.29297001	2.2451944	20	—	—
516653 2008 KH_{22}	17.9	X	197.17199	154.96092	90.37029	8.46477	0.1680655	0.29159371	2.2522536	20	—	—
516654 2008 OB	17.7	X	147.64062	191.85431	122.06231	13.39445	0.2305421	0.28570075	2.2831185	20	—	—
516655 2008 OA_{7}	16.7	X	93.53334	152.05867	162.44849	20.79362	0.3949304	0.18643950	3.0346650	20	—	—
516656 2008 ON_{24}	16.2	X	78.53566	317.35393	329.31555	5.83876	0.2210424	0.17696227	3.1420681	20	11 17.7	21.2
516657 2008 OW_{25}	17.3	X	176.74335	160.59895	191.46549	7.44563	0.1590254	0.21300445	2.7767936	20	2 22.0	21.8
516658 2008 RU_{79}	18.3	X	148.01675	351.54033	347.62550	19.53166	0.1025095	0.36995926	1.9217643	20	—	—
516659 2008 RY_{101}	18.0	X	82.41512	151.50594	175.97841	2.94987	0.1955583	0.26605083	2.3941957	20	—	—
516660 2008 RW_{147}	17.9	X	221.87365	31.13063	60.61838	4.43984	0.1695603	0.23059681	2.6337054	20	8 8.8	22.0
516661 2008 SF_{10}	17.5	X	57.24309	139.39650	202.07961	1.81131	0.2101052	0.26396951	2.4067642	20	—	—
516662 2008 SD_{30}	17.1	X	248.29002	240.07225	191.09183	30.31455	0.2739307	0.23497581	2.6008818	20	7 22.9	21.8
516663 2008 SK_{35}	17.5	X	14.49185	203.69902	186.69838	6.62299	0.1474533	0.25948574	2.4344100	20	—	—
516664 2008 SY_{62}	17.4	X	352.17700	230.02955	191.09761	12.26700	0.1638406	0.26112999	2.4241801	20	—	—
516665 2008 ST_{66}	17.6	X	98.54100	259.28322	72.21333	2.16259	0.2630582	0.27096271	2.3651736	20	—	—
516666 2008 SS_{77}	17.0	X	172.73325	237.17388	190.63868	14.67797	0.0836198	0.22204937	2.7008659	20	5 22.3	21.2
516667 2008 SA_{99}	18.3	X	127.26287	156.65182	166.14785	4.81065	0.2735402	0.27528633	2.3403436	20	—	—
516668 2008 SE_{121}	16.1	X	97.96028	258.71281	20.93108	23.91212	0.3149957	0.17550686	3.1594148	20	11 27.0	21.9
516669 2008 SK_{149}	17.4	X	233.30603	145.12964	27.31129	8.43230	0.0051153	0.25865675	2.4396087	20	—	—
516670 2008 SD_{183}	17.7	X	140.97879	252.36809	45.56025	6.17974	0.2558717	0.27161917	2.3613613	20	—	—
516671 2008 SM_{225}	17.3	X	237.36557	41.74701	20.97731	8.02863	0.1729651	0.23090636	2.6313510	20	7 18.5	21.4
516672 2008 ST_{253}	18.2	X	5.92949	302.02334	89.67141	2.55892	0.1834485	0.25760176	2.4462650	20	—	—
516673 2008 SE_{269}	17.4	X	66.41786	323.91414	27.67462	7.29317	0.1246281	0.26241175	2.4162797	20	—	—
516674 2008 SF_{303}	17.9	X	79.35340	328.52065	9.41974	5.49892	0.1306760	0.26757137	2.3851166	20	—	—
516675 2008 SB_{312}	17.5	X	233.22349	292.93173	64.83733	3.78499	0.1270402	0.22105226	2.7089817	20	4 24.4	21.5
516676 2008 SD_{312}	17.5	X	251.97330	286.60229	141.87371	4.10155	0.1991859	0.23662030	2.5888172	20	8 6.5	21.2
516677 2008 SF_{312}	17.0	X	169.55748	269.97225	125.41288	7.08225	0.0477862	0.21095664	2.7947347	20	4 7.9	21.1
516678 2008 SH_{312}	17.0	X	150.29972	55.01482	39.65607	14.06685	0.1511455	0.21291825	2.7775430	20	5 31.9	21.5
516679 2008 SJ_{312}	17.2	X	266.81902	315.29543	45.63320	5.57008	0.1362178	0.22303395	2.6929114	20	6 3.1	20.9
516680 2008 SK_{312}	16.6	X	172.75974	101.13871	300.92244	4.55038	0.0397416	0.21798057	2.7343715	20	4 13.8	20.5
516681 2008 SL_{312}	18.0	X	268.66791	296.74544	87.24436	3.07744	0.2139756	0.22883068	2.6472394	20	6 25.7	21.6
516682 2008 TT_{1}	16.9	X	245.13928	246.46372	197.37333	29.51146	0.3387733	0.23431455	2.6057728	20	7 27.8	21.8
516683 2008 TM_{87}	18.7	X	109.17697	176.02055	194.83591	21.88988	0.0640145	0.36159612	1.9512828	20	—	—
516684 2008 TF_{106}	17.7	X	60.38839	136.59792	215.79785	2.60577	0.1417242	0.26253772	2.4155067	20	—	—
516685 2008 TQ_{149}	16.1	X	357.54835	297.77025	30.34758	10.33701	0.0317240	0.15876914	3.3777330	20	9 8.7	20.8
516686 2008 TU_{191}	17.2	X	297.26008	53.08067	31.61353	14.85610	0.0901325	0.25211829	2.4816078	20	11 22.0	20.1
516687 2008 TY_{191}	17.3	X	291.25593	276.21998	20.57024	13.17972	0.2183419	0.22616540	2.6679966	20	3 31.3	21.1
516688 2008 TA_{192}	17.4	X	180.93877	15.10688	75.86084	6.26043	0.0806139	0.22185154	2.7024712	20	6 28.8	21.5
516689 2008 TD_{192}	16.2	X	81.77358	320.06344	68.59384	10.87224	0.0295484	0.18402459	3.0611561	20	—	—
516690 2008 US_{128}	17.8	X	86.99892	343.50127	0.26453	4.98608	0.1679725	0.26893537	2.3770452	20	—	—
516691 2008 UD_{130}	18.3	X	127.89892	303.01066	7.87228	1.56211	0.1942920	0.26999307	2.3708330	20	—	—
516692 2008 UA_{150}	16.5	X	62.40791	173.91155	121.76926	1.92611	0.1687921	0.16622955	3.2758995	20	11 6.5	21.3
516693 2008 UF_{166}	18.0	X	148.62695	221.40009	71.92462	2.22883	0.1716701	0.26918987	2.3755467	20	—	—
516694 2008 UR_{180}	17.7	X	125.50056	269.74241	30.22334	4.75617	0.1490073	0.26197674	2.4189537	20	—	—
516695 2008 UT_{200}	17.6	X	39.97777	226.57482	218.88461	20.28534	0.0985987	0.36010006	1.9566835	20	—	—
516696 2008 UX_{342}	18.1	X	58.61898	203.85285	222.25943	19.17455	0.1073607	0.35893455	1.9609170	20	—	—
516697 2008 UB_{357}	17.6	X	108.24367	238.99436	53.52539	7.04505	0.0952053	0.25717234	2.4489873	20	12 30.1	21.2
516698 2008 UG_{358}	18.0	X	258.93120	269.86639	200.95187	6.51315	0.1671594	0.24103306	2.5571231	20	10 17.9	21.2
516699 2008 UA_{374}	16.2	X	278.35351	317.59420	37.34738	13.43679	0.1167869	0.22335077	2.6903642	20	6 11.9	19.9
516700 2008 VK_{20}	17.4	X	53.50687	187.71239	157.38867	1.90620	0.1992597	0.25648616	2.4533533	20	—	—
516701 2008 VB_{28}	18.3	X	127.75179	303.00541	41.29304	21.76651	0.0880446	0.35859590	1.9621513	20	—	—
516702 2008 VV_{36}	17.9	X	149.52036	276.43486	56.08502	21.52660	0.0324303	0.35913817	1.9601757	20	—	—
516703 2008 VZ_{81}	16.6	X	39.01060	333.38941	47.09822	5.28966	0.1494481	0.17203416	3.2017906	20	—	—
516704 2008 VA_{82}	16.8	X	109.82653	309.99583	50.87179	3.25682	0.1295093	0.18367536	3.0650351	20	—	—
516705 2008 VC_{82}	16.8	X	121.39068	342.60570	91.79752	6.84874	0.0691532	0.20128137	2.8835910	20	4 4.1	21.0
516706 2008 WA_{137}	16.7	X	250.77543	33.11321	79.06795	34.52266	0.2926408	0.23466728	2.6031610	20	10 12.5	21.2
516707 2008 WN_{140}	17.4	X	274.99426	347.17568	110.47062	7.31607	0.2359091	0.24307483	2.5427835	20	10 17.8	20.3
516708 2008 WZ_{142}	16.6	X	103.39286	123.33698	213.98147	5.10920	0.1417597	0.18031936	3.1029479	20	—	—
516709 2008 YC_{80}	17.1	X	161.67999	106.07713	132.18084	15.79817	0.0823355	0.23650315	2.5896720	20	12 16.3	21.2
516710 2008 YX_{80}	17.3	X	174.60467	125.87445	86.90365	5.93095	0.1120325	0.23522408	2.5990514	20	11 25.2	21.3
516711 2008 YK_{136}	17.3	X	219.28993	94.31662	68.72071	3.16681	0.0794381	0.23806554	2.5783292	20	11 16.3	20.9
516712 2008 YA_{175}	16.4	X	169.68407	238.90594	132.44641	9.55532	0.1279505	0.19061357	2.9901996	20	3 14.3	21.2
516713 2009 AP_{11}	17.7	X	221.61514	41.78369	110.92200	14.47864	0.1959357	0.23243023	2.6198372	20	10 27.7	21.9
516714 2009 AE_{31}	17.3	X	257.29348	327.80170	120.04563	14.36725	0.2175904	0.23083914	2.6318618	20	9 9.4	21.0
516715 2009 AV_{32}	17.5	X	184.19840	80.49401	117.55718	3.29638	0.1408456	0.23095676	2.6309682	20	11 14.3	21.6
516716 2009 BU_{1}	17.3	X	176.70108	104.67332	95.88831	14.24991	0.1153065	0.23302058	2.6154105	20	11 15.4	21.5
516717 2009 BK_{10}	16.7	X	347.28312	65.37406	317.96353	14.32510	0.1491527	0.24333732	2.5409546	20	11 23.4	19.7
516718 2009 BR_{39}	17.6	X	209.13677	78.18596	90.92915	3.37205	0.1335095	0.23034814	2.6356005	20	11 4.8	21.5
516719 2009 BM_{67}	17.4	X	194.36497	11.78835	155.78866	5.10778	0.1812112	0.22488678	2.6780998	20	10 14.6	21.7
516720 2009 BB_{107}	17.3	X	218.30767	10.64086	145.46046	11.98780	0.1606275	0.23008965	2.6375740	20	10 29.6	21.4

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516721 2009 BC_{107}	17.1	X	201.11315	47.27819	134.39164	14.33063	0.1867478	0.22870914	2.6481771	20	11 10.6	21.5
516722 2009 BR_{125}	17.8	X	252.69956	188.88868	285.91387	1.16473	0.1632473	0.23135277	2.6279650	20	10 12.6	21.2
516723 2009 BZ_{142}	17.2	X	221.57694	48.66058	106.44845	4.88794	0.1661477	0.23042125	2.6350429	20	10 29.1	21.0
516724 2009 BU_{182}	17.7	X	253.55778	68.01594	57.82611	4.80177	0.1515265	0.23216009	2.6218691	20	10 31.8	20.9
516725 2009 DK_{12}	15.3	X	59.66968	223.13031	62.57641	45.42677	0.4359427	0.10874973	4.3469429	20	11 19.3	21.8
516726 2009 DM_{15}	17.4	X	199.83665	151.17031	3.49462	3.31545	0.1769913	0.22461349	2.6802717	20	10 2.3	21.6
516727 2009 DV_{87}	17.0	X	112.16943	115.13593	144.34491	13.68770	0.1118193	0.21884286	2.7271842	20	11 20.7	21.4
516728 2009 DQ_{88}	17.2	X	155.69071	115.07937	151.50580	13.48584	0.2564748	0.22997096	2.6384815	20	—	—
516729 2009 DR_{129}	17.2	X	238.44163	279.73436	190.77313	13.80035	0.1606996	0.22069599	2.7118964	20	9 17.1	21.3
516730 2009 DS_{138}	17.3	X	195.49733	117.20333	65.23336	4.42106	0.1611498	0.22548279	2.6733785	20	11 3.6	21.5
516731 2009 DZ_{144}	15.5	X	34.28317	159.42103	116.86793	3.78422	0.0633428	0.12376025	3.9879399	20	8 19.3	20.8
516732 2009 EN_{5}	17.4	X	162.57325	118.44361	101.01945	6.03766	0.1030056	0.22863521	2.6487480	20	11 21.1	21.4
516733 2009 EC_{7}	17.2	X	229.83510	9.98926	129.79794	14.36618	0.1133333	0.22864697	2.6486572	20	10 29.7	21.2
516734 2009 FG_{1}	18.9	X	0.59902	11.63800	5.02957	69.81573	0.2721005	0.75560054	1.1938265	20	—	—
516735 2009 FB_{59}	17.1	X	274.30977	270.95245	185.98518	13.67765	0.0345712	0.22271590	2.6954745	20	11 7.9	20.7
516736 2009 FG_{75}	16.8	X	236.30418	114.97378	25.79994	16.47074	0.0782085	0.21989887	2.7184460	20	11 2.4	20.6
516737 2009 GS_{5}	17.0	X	93.77255	280.75541	36.25457	15.11600	0.1653054	0.22307700	2.6925649	20	—	—
516738 2009 HN_{6}	16.9	X	118.55538	91.89050	173.20046	10.17482	0.0902131	0.21761158	2.7374617	20	11 30.4	21.2
516739 2009 HR_{87}	17.0	X	108.43657	176.24624	105.17069	6.37741	0.1330799	0.21863044	2.7289503	20	12 10.9	21.2
516740 2009 JW_{8}	17.5	X	148.69539	161.92803	90.28625	9.65122	0.2724227	0.21837469	2.7310806	20	12 11.0	22.4
516741 2009 KF_{30}	16.7	X	215.74867	48.91821	117.38271	4.72650	0.1428005	0.21913617	2.7247501	20	11 6.3	20.8
516742 2009 QQ_{51}	16.1	X	337.44489	356.69796	350.32225	15.06128	0.1995267	0.17616130	3.1515852	20	9 1.8	19.3
516743 2009 RP	17.8	X	55.91697	214.07830	154.42011	6.67321	0.1978635	0.29422133	2.2388239	20	—	—
516744 2009 RM_{13}	17.9	X	349.49540	55.27143	17.09275	5.01734	0.1472541	0.28639319	2.2794370	20	—	—
516745 2009 RA_{19}	17.9	X	101.19319	18.17807	315.03541	6.03598	0.2123409	0.29687685	2.2254533	20	—	—
516746 2009 RE_{19}	15.5	X	328.20451	355.09450	2.33567	28.95652	0.1953991	0.17344072	3.1844566	20	9 5.9	19.2
516747 2009 RY_{40}	17.7	X	60.84220	187.41256	210.78834	8.61059	0.1478495	0.29780862	2.2208090	20	—	—
516748 2009 SK_{24}	16.1	X	334.58447	148.16065	204.18940	10.48713	0.0892218	0.17535499	3.1612387	20	9 1.4	20.2
516749 2009 SY_{74}	18.4	X	164.92861	205.39135	92.72914	4.10837	0.1594723	0.30282543	2.1962131	20	—	—
516750 2009 SO_{135}	16.5	X	309.42683	355.44750	17.25392	16.82361	0.0924860	0.16914447	3.2381541	20	8 30.2	20.9
516751 2009 SU_{172}	16.4	X	149.07531	314.97650	223.86144	8.08135	0.0399254	0.17422974	3.1748352	20	9 5.8	21.2
516752 2009 SJ_{242}	18.0	X	88.79856	110.45744	248.50606	5.53805	0.2424226	0.29889264	2.2154361	20	—	—
516753 2009 SW_{255}	18.6	X	183.10191	68.16058	205.72124	3.11175	0.1624477	0.30615141	2.1802780	20	—	—
516754 2009 SR_{256}	18.2	X	341.27922	225.83516	189.17701	6.96599	0.1609365	0.28226754	2.3015942	20	—	—
516755 2009 SO_{267}	18.3	X	300.16361	85.69608	6.85909	5.86251	0.2154515	0.27355175	2.3502265	20	12 15.0	19.9
516756 2009 SZ_{273}	16.8	X	44.29877	281.07626	17.94398	10.08838	0.0559487	0.17915186	3.1164141	20	10 5.9	21.1
516757 2009 SM_{280}	16.8	X	75.15126	257.82214	49.55085	8.21845	0.1444506	0.18972040	2.9995771	20	12 3.7	21.4
516758 2009 SX_{312}	16.6	X	6.30499	297.48967	27.79900	9.51397	0.0940830	0.17457537	3.1706434	20	9 22.1	20.6
516759 2009 SE_{328}	16.4	X	54.59102	290.92317	21.83093	9.80582	0.2167631	0.18590780	3.0404484	20	11 25.2	21.0
516760 2009 SF_{351}	18.4	X	307.59484	278.17876	175.42404	5.22226	0.1464666	0.27884387	2.3203953	20	—	—
516761 2009 SX_{352}	15.7	X	356.92001	317.78535	22.35371	27.27338	0.1283639	0.17844201	3.1246735	20	10 3.3	19.5
516762 2009 SH_{370}	17.3	X	180.01086	24.08595	232.03095	6.32419	0.0916760	0.28731286	2.2745702	20	—	—
516763 2009 TN_{21}	15.5	X	348.24890	300.48279	44.58759	27.27427	0.2874897	0.17469389	3.1692091	20	10 9.5	18.7
516764 2009 TC_{31}	17.8	X	315.36367	150.38114	305.78710	6.18059	0.0494678	0.28397862	2.2923396	20	—	—
516765 2009 TJ_{31}	18.0	X	337.83642	265.85182	173.89106	6.27991	0.1276187	0.28449964	2.2895400	20	—	—
516766 2009 UZ_{62}	16.8	X	61.79428	233.72747	46.51880	12.32901	0.0684962	0.17621738	3.1509165	20	10 9.7	21.3
516767 2009 US_{66}	16.4	X	48.92278	265.75369	45.69808	11.14786	0.0841695	0.18104866	3.0946094	20	10 31.7	20.6
516768 2009 UO_{140}	17.8	X	274.14688	250.70598	222.35509	8.66084	0.1382626	0.26964746	2.3728584	20	11 27.2	20.0
516769 2009 VE_{95}	18.1	X	139.57645	61.39547	257.20084	6.08471	0.1504988	0.29375057	2.2412153	20	—	—
516770 2009 VU_{106}	17.7	X	300.63209	48.05960	37.20710	5.97786	0.2166543	0.27221449	2.3579172	20	12 2.7	19.2
516771 2009 VY_{118}	16.7	X	356.20171	134.05059	306.54070	5.75121	0.1954770	0.18355816	3.0663396	20	—	—
516772 2009 WS_{39}	15.6	X	0.49471	288.95711	65.25086	14.51062	0.1179213	0.17129788	3.2109587	20	10 23.9	19.7
516773 2009 WA_{71}	16.1	X	355.52084	128.81402	232.00007	8.95769	0.0767453	0.17254672	3.1954467	20	10 14.9	20.3
516774 2009 WO_{112}	17.5	X	146.06554	41.07391	253.79543	4.86900	0.2080364	0.28712282	2.2755737	20	—	—
516775 2009 WC_{116}	16.7	X	331.63275	333.83793	34.29218	9.97246	0.0920967	0.17422087	3.1749430	20	9 24.1	20.7
516776 2009 WS_{127}	17.7	X	13.14188	331.13258	75.33140	7.41151	0.1321864	0.27964840	2.3159428	20	—	—
516777 2009 WY_{164}	17.9	X	269.21193	74.13249	64.44590	5.92066	0.1666999	0.27092394	2.3653993	20	12 21.6	20.0
516778 2009 WB_{208}	18.0	X	324.12748	32.12757	54.34949	7.30396	0.1687628	0.27580349	2.3374171	20	—	—
516779 2009 WP_{254}	18.2	X	284.29999	12.02452	98.46925	3.29555	0.1765175	0.27012963	2.3700340	20	12 8.3	19.9
516780 2009 WK_{260}	17.6	X	292.01456	34.78988	77.63517	7.99164	0.0641197	0.27198206	2.3592604	20	—	—
516781 2009 WY_{269}	16.4	X	340.29912	310.81565	172.50543	1.24119	0.0929313	0.17994093	3.1072968	20	—	—
516782 2009 XZ_{5}	17.4	X	291.53336	163.73371	294.04451	4.07329	0.1858081	0.26860887	2.3789710	20	12 1.9	19.3
516783 2009 XD_{8}	17.5	X	143.30947	62.85290	280.65590	22.69098	0.2669149	0.39477468	1.8403617	20	—	—
516784 2010 AL_{5}	17.8	X	296.12828	352.18439	102.81254	5.45642	0.1103697	0.26504481	2.4002502	20	12 11.8	20.1
516785 2010 AG_{33}	18.0	X	271.06092	87.17461	21.45887	2.73728	0.1899488	0.25941383	2.4348599	20	11 3.2	20.5
516786 2010 AO_{123}	16.3	X	12.99459	168.97165	178.75855	16.61510	0.0984390	0.17986017	3.1082269	20	11 1.0	20.4
516787 2010 AQ_{140}	16.2	X	7.38251	129.41852	327.38862	11.11868	0.1597857	0.18589740	3.0405618	20	—	—
516788 2010 BW_{109}	15.5	X	358.94025	150.90452	181.55780	28.28520	0.2075509	0.17156873	3.2075785	20	9 24.4	18.9
516789 2010 BH_{120}	15.9	X	333.16012	251.21669	148.62247	15.08312	0.0788960	0.17824775	3.1269434	20	11 8.2	20.2
516790 2010 CU_{235}	15.6	X	70.80498	238.99336	34.37419	17.91907	0.1497669	0.17208927	3.2011069	20	10 19.9	20.2
516791 2010 EN_{107}	18.5	X	311.47760	357.90392	190.20663	22.02972	0.0614027	0.37265515	1.9124847	20	—	—
516792 2010 EW_{135}	17.6	X	150.41122	58.95440	172.85875	7.63093	0.1268166	0.24015942	2.5633208	20	11 25.5	21.7
516793 2010 FB_{91}	18.4	X	338.13530	304.68668	198.34513	22.08206	0.0444873	0.36505710	1.9389302	20	—	—
516794 2010 GW_{34}	16.2	X	62.56962	121.71030	126.62696	2.43923	0.1912327	0.12696551	3.9205370	20	9 8.8	21.5
516795 2010 GZ_{62}	17.2	X	123.17780	54.82429	222.05801	14.99713	0.3998221	0.23033338	2.6357131	20	12 23.1	22.6
516796 2010 GO_{126}	17.8	X	119.66567	238.21264	23.56467	11.81883	0.1613036	0.23715814	2.5849017	20	11 29.2	22.1
516797 2010 GO_{161}	17.2	X	149.86969	139.71706	129.10333	14.30544	0.0874213	0.24566301	2.5248924	20	—	—
516798 2010 HV_{103}	17.8	X	123.39986	227.13696	40.81523	9.68539	0.1408964	0.23966392	2.5668527	20	12 11.3	21.9
516799 2010 HY_{106}	16.9	X	131.69648	183.96785	54.69526	15.70245	0.0617124	0.23449599	2.6044285	20	11 13.1	20.6
516800 2010 JM_{35}	18.7	X	200.43667	68.80292	207.27308	20.74602	0.0859629	0.36388429	1.9430942	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516801 2010 JL_{36}	17.8	X	166.21034	9.94150	219.15570	11.72055	0.1342417	0.24187330	2.5511976	20	12 6.1	21.9
516802 2010 JA_{82}	18.0	X	256.67162	217.69699	32.98861	21.17630	0.0572592	0.37303394	1.9111898	20	—	—
516803 2010 JG_{88}	19.5	X	40.33080	106.04480	213.36372	30.61071	0.3845001	0.61218468	1.3736658	20	—	—
516804 2010 JN_{176}	17.2	X	133.76807	30.73532	216.13323	13.70655	0.2205190	0.23285390	2.6166585	20	11 26.6	21.8
516805 2010 KU_{20}	17.5	X	153.31122	81.59828	187.49551	11.48858	0.2806982	0.23443468	2.6048825	20	—	—
516806 2010 KN_{35}	16.9	X	135.22503	137.38780	145.22147	14.22912	0.2701041	0.23123471	2.6288595	20	—	—
516807 2010 KK_{98}	17.2	X	93.42965	175.44150	154.36502	9.31603	0.2821600	0.22571625	2.6715348	20	—	—
516808 2010 LW_{60}	17.4	X	170.13342	100.06933	135.60906	15.55955	0.0845809	0.24079645	2.5587980	20	12 22.2	21.3
516809 2010 LC_{119}	16.9	X	102.59736	179.90769	159.89472	7.66453	0.2790540	0.22860703	2.6489657	20	—	—
516810 2010 MR_{12}	17.0	X	125.61620	302.09928	334.66531	8.26148	0.1905218	0.22218467	2.6997693	20	12 22.7	21.6
516811 2010 MQ_{80}	16.3	X	259.42543	226.65516	216.65350	11.39341	0.0176294	0.19745567	2.9207181	20	9 24.5	20.5
516812 2010 NT_{5}	17.3	X	99.08944	318.79760	315.60303	12.52543	0.1805090	0.22070755	2.7118017	20	11 24.5	21.9
516813 2010 NU_{42}	16.6	X	52.54824	297.95246	33.73941	20.89279	0.1610175	0.21046726	2.7990652	20	12 11.9	20.9
516814 2010 OT_{21}	16.4	X	85.76013	314.34965	2.14896	12.77716	0.3257963	0.21801413	2.7340909	20	—	—
516815 2010 OD_{75}	16.8	X	204.65289	72.79577	25.58667	25.31904	0.2965640	0.17171387	3.2057708	20	7 28.5	22.9
516816 2010 OG_{79}	16.5	X	302.34572	328.41252	73.41143	10.53430	0.0933004	0.19133736	2.9826539	20	9 28.1	20.4
516817 2010 OW_{84}	17.6	X	259.69027	348.73155	118.96866	9.80205	0.1171344	0.23885841	2.5726203	20	10 26.9	21.0
516818 2010 OS_{99}	16.5	X	224.44931	68.32891	15.16987	25.48847	0.2609803	0.17418689	3.1753558	20	7 29.2	22.3
516819 2010 RT_{42}	17.1	X	73.19810	70.39721	234.64228	3.43167	0.0546157	0.21036915	2.7999354	20	11 23.2	21.0
516820 2010 RO_{111}	16.4	X	257.22015	250.61654	177.79775	10.07236	0.0965410	0.18921230	3.0049447	20	8 21.8	20.6
516821 2010 RZ_{153}	16.9	X	124.14671	343.34397	222.43226	8.81484	0.0128602	0.19220144	2.9737078	20	9 10.4	21.2
516822 2010 RA_{176}	16.3	X	258.85474	88.56421	338.62027	9.03171	0.0759115	0.18981956	2.9985323	20	8 27.6	20.5
516823 2010 SY_{23}	17.6	X	109.71849	123.60088	177.03508	7.37852	0.1897246	0.22402076	2.6849974	20	—	—
516824 2010 TR_{21}	16.7	X	207.01435	105.52281	19.35837	9.32825	0.0539556	0.18961599	3.0006781	20	9 12.4	21.1
516825 2010 TS_{58}	16.7	X	135.40169	68.22299	221.99732	12.13641	0.2533805	0.22569314	2.6717171	20	—	—
516826 2010 TC_{67}	16.4	X	32.24892	116.21956	193.67221	11.97404	0.0779605	0.19930757	2.9025977	20	10 9.7	20.0
516827 2010 TM_{105}	17.1	X	230.50411	73.17862	2.72043	8.25500	0.1098365	0.18050670	3.1008006	20	8 1.6	21.8
516828 2010 UX_{10}	16.1	X	342.90561	290.10794	53.62122	10.04424	0.1596262	0.18637751	3.0353379	20	9 14.5	19.6
516829 2010 UV_{57}	16.5	X	236.08787	70.06845	47.54592	10.85611	0.0337959	0.18598182	3.0396417	20	10 10.6	20.8
516830 2010 UR_{108}	17.3	X	40.63059	142.02622	186.88420	1.83217	0.0566816	0.20058071	2.8903023	20	11 11.4	21.1
516831 2010 VS_{28}	16.1	X	298.03113	280.34841	62.69511	12.21546	0.0786022	0.17284825	3.1917294	20	6 29.7	20.5
516832 2010 VT_{29}	16.3	X	248.89252	21.12276	35.19405	13.82529	0.1539771	0.17510193	3.1642838	20	7 23.9	21.2
516833 2010 VY_{90}	16.5	X	77.75228	295.16193	12.25721	2.41014	0.1000416	0.19708270	2.9244018	20	12 3.5	20.8
516834 2010 VV_{112}	16.7	X	204.40766	355.06789	116.16922	2.61764	0.2140924	0.17311990	3.1883896	20	8 8.4	22.1
516835 2010 WX_{2}	16.5	X	352.40068	276.61510	70.13486	10.73886	0.1622814	0.18802047	3.0176298	20	10 7.6	20.0
516836 2010 WH_{22}	16.3	X	100.20607	332.20669	248.62901	9.44906	0.0649722	0.17632188	3.1496714	20	9 2.6	21.1
516837 2010 WO_{61}	16.1	X	250.83542	344.36024	69.10339	10.02793	0.0812943	0.17133107	3.2105440	20	7 30.4	20.8
516838 2010 XB_{80}	16.4	X	267.59736	171.92179	248.07099	8.94562	0.0447136	0.17967368	3.1103773	20	8 28.2	21.0
516839 2010 YK_{5}	15.6	X	81.60709	229.42138	78.96130	11.64824	0.0993950	0.18994737	2.9971872	20	12 7.8	19.9
516840 2011 AG_{31}	15.6	X	324.65707	263.84886	127.27760	10.32156	0.0809309	0.17628738	3.1500823	20	10 14.7	19.8
516841 2011 AC_{37}	18.2	X	197.68617	135.66631	127.45628	3.93886	0.1090213	0.30464583	2.1874555	20	—	—
516842 2011 BQ_{17}	18.8	X	304.39677	171.39201	311.72299	2.29093	0.1130163	0.29926279	2.2136090	20	—	—
516843 2011 BA_{103}	17.8	X	152.47872	211.94733	100.81276	6.94745	0.1021819	0.30965425	2.1638045	20	—	—
516844 2011 BN_{112}	18.3	X	219.57070	323.35383	254.63709	4.41021	0.0960314	0.29343244	2.2428349	20	—	—
516845 2011 BZ_{122}	18.6	X	306.85841	13.98119	109.47232	1.82527	0.0989791	0.29831807	2.2182799	20	—	—
516846 2011 BW_{164}	16.3	X	205.58593	222.12633	356.84933	11.08266	0.0437577	0.18091599	3.0961222	20	12 31.5	20.9
516847 2011 BX_{164}	16.9	X	136.71126	91.83808	178.64856	9.91679	0.0103951	0.18260226	3.0770316	20	12 15.8	21.5
516848 2011 BZ_{164}	17.0	X	24.56732	60.42706	323.23496	9.48979	0.0891169	0.18356984	3.0662095	20	12 29.1	21.2
516849 2011 BA_{165}	17.4	X	7.52165	259.77571	330.90840	3.15788	0.1189662	0.23358235	2.6112154	20	5 15.6	20.1
516850 2011 CW_{27}	18.3	X	209.38345	189.22667	32.56370	0.92380	0.1049923	0.29417175	2.2390755	20	—	—
516851 2011 CO_{36}	18.4	X	259.72512	150.34371	22.22966	3.34533	0.0773328	0.29686703	2.2255024	20	—	—
516852 2011 CM_{47}	18.3	X	155.15141	178.54593	118.30803	6.51130	0.1160855	0.30389835	2.1910409	20	—	—
516853 2011 DX_{14}	18.1	X	183.34597	327.48836	283.93022	1.93532	0.1071197	0.29354755	2.2422485	20	—	—
516854 2011 EW_{23}	18.2	X	269.70188	9.55869	152.18625	7.16775	0.1093781	0.29320759	2.2439814	20	—	—
516855 2011 EC_{25}	18.2	X	201.44069	133.94499	85.38136	1.39497	0.1330650	0.28284933	2.2984370	20	—	—
516856 2011 ES_{43}	18.1	X	217.70770	124.81969	82.73096	2.65174	0.1012238	0.28750939	2.2735335	20	—	—
516857 2011 EP_{69}	17.7	X	215.54234	167.97231	32.54384	8.49240	0.0524911	0.28281627	2.2986161	20	—	—
516858 2011 ED_{70}	18.6	X	266.06677	322.09706	167.76859	4.76984	0.1533691	0.28094789	2.3087958	20	12 9.2	20.8
516859 2011 ES_{70}	18.4	X	235.18235	17.86884	172.44300	7.91177	0.1328605	0.28463371	2.2888210	20	—	—
516860 2011 ET_{88}	16.6	X	282.28230	293.10749	19.50141	14.46550	0.1931531	0.22200547	2.7012219	20	4 11.6	20.2
516861 2011 FJ_{11}	18.4	X	209.33200	267.68770	291.68573	1.63247	0.1581968	0.28004571	2.3137518	20	12 19.6	21.3
516862 2011 FA_{19}	18.3	X	263.46988	92.63755	71.17539	3.21605	0.1681061	0.28786693	2.2716506	20	—	—
516863 2011 FS_{32}	18.2	X	254.77963	66.19383	97.70791	3.07223	0.1458204	0.28376900	2.2934684	20	—	—
516864 2011 FF_{78}	17.9	X	210.51483	78.65811	125.33810	2.51930	0.1392869	0.28321952	2.2964338	20	12 30.7	20.7
516865 2011 FK_{134}	18.5	X	192.92978	54.84979	178.39141	3.60783	0.1722573	0.28486051	2.2876060	20	—	—
516866 2011 GF_{32}	18.5	X	239.93179	9.53236	150.41373	3.37481	0.1638402	0.27638236	2.3341522	20	12 5.9	21.3
516867 2011 GB_{60}	17.9	X	161.82970	130.63869	116.25847	3.09289	0.1790233	0.27496589	2.3421615	20	12 26.9	21.7
516868 2011 GC_{60}	19.0	X	282.13440	241.50629	16.40579	44.65962	0.4029384	0.41747520	1.7730280	20	—	—
516869 2011 HD_{8}	18.0	X	273.22721	286.82629	202.37190	21.20837	0.3504582	0.28304977	2.2973518	20	11 19.4	19.8
516870 2011 HC_{13}	18.1	X	166.11048	68.59681	184.77405	8.42403	0.2110647	0.27498793	2.3420364	20	—	—
516871 2011 HA_{17}	18.1	X	262.80027	346.48447	186.06397	3.25406	0.0914817	0.28532495	2.2851228	20	—	—
516872 2011 HU_{17}	18.1	X	237.55078	143.05489	43.26901	7.34501	0.1100003	0.28410307	2.2916701	20	—	—
516873 2011 HT_{28}	18.0	X	191.42270	63.03225	173.90710	6.76104	0.2365199	0.27744281	2.3282006	20	—	—
516874 2011 HZ_{32}	17.8	X	160.14765	196.98081	107.07277	5.38439	0.1916454	0.28141577	2.3062361	20	—	—
516875 2011 HR_{33}	18.4	X	199.76701	119.16107	123.95566	5.44257	0.2088311	0.28138059	2.3064283	20	—	—
516876 2011 HM_{39}	18.1	X	149.19391	75.27658	210.49730	21.46316	0.2729981	0.27204855	2.3588760	20	—	—
516877 2011 HL_{64}	18.5	X	212.96572	24.94022	180.14075	1.34675	0.1428249	0.27968672	2.3157312	20	—	—
516878 2011 HU_{66}	18.2	X	201.50342	119.27259	112.57601	9.50810	0.1670886	0.27810302	2.3245144	20	—	—
516879 2011 HZ_{66}	17.8	X	147.60766	181.08632	125.75584	5.69133	0.2825093	0.27566025	2.3382267	20	—	—
516880 2011 HS_{70}	17.8	X	153.50459	217.01766	68.09072	8.05787	0.1642298	0.27975577	2.3153502	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516881 2011 JK_{32}	16.8	X	300.05648	221.35223	77.02506	7.34484	0.0371369	0.21719695	2.7409444	20	5 12.0	20.3
516882 2011 KU_{13}	18.2	X	18.81596	28.76313	52.92372	19.58971	0.0771038	0.39717841	1.8329289	20	—	—
516883 2011 KP_{28}	17.9	X	173.19276	156.31736	123.06135	3.62832	0.2381128	0.27749449	2.3279115	20	—	—
516884 2011 KJ_{45}	18.5	X	151.63716	321.28724	312.35341	0.47802	0.1695186	0.27126766	2.3634008	20	—	—
516885 2011 KE_{49}	17.7	X	29.06782	99.70051	189.13949	2.81107	0.1782684	0.23857929	2.5746264	20	9 28.9	20.4
516886 2011 LJ_{13}	18.4	X	148.41502	187.38843	88.77169	3.64645	0.1886790	0.27035735	2.3687029	20	—	—
516887 2011 MQ_{5}	17.8	X	138.88852	180.57202	110.21512	14.91315	0.2066751	0.26398941	2.4066433	20	—	—
516888 2011 OD_{12}	17.8	X	117.07988	163.15566	139.00478	6.88433	0.1686306	0.25835001	2.4415393	20	—	—
516889 2011 OC_{19}	17.7	X	136.17769	96.06925	176.39158	1.52983	0.1656721	0.25484001	2.4639070	20	12 31.8	21.6
516890 2011 OZ_{19}	17.8	X	124.71184	150.36202	169.92695	2.20312	0.1337026	0.26287203	2.4134583	20	—	—
516891 2011 OW_{42}	18.0	X	127.08661	187.34959	111.58515	3.61873	0.1948226	0.26165363	2.4209447	20	—	—
516892 2011 OE_{43}	17.2	X	102.60350	192.30651	124.78342	16.90945	0.1016843	0.25802394	2.4435959	20	—	—
516893 2011 QO_{20}	17.9	X	128.39494	50.18837	206.56857	7.72358	0.1160507	0.24488522	2.5302358	20	12 4.7	21.9
516894 2011 RX_{17}	17.7	X	249.17361	280.04440	190.92441	8.65294	0.2026942	0.21944369	2.7222039	20	9 25.3	21.6
516895 2011 RP_{18}	16.9	X	268.61541	85.87697	12.12615	12.23488	0.0919163	0.22491378	2.6778855	20	10 20.6	20.3
516896 2011 RP_{20}	18.2	X	79.67700	123.10071	320.46133	5.04968	0.1235681	0.27221899	2.3578912	20	2 16.1	20.6
516897 2011 SF_{38}	18.5	X	73.25877	19.62910	22.59924	21.45589	0.0696371	0.37032313	1.9205052	20	—	—
516898 2011 SO_{70}	18.5	X	343.65893	257.03114	198.89611	20.78864	0.1315528	0.36445776	1.9410553	20	—	—
516899 2011 SG_{71}	17.2	X	153.29628	13.87261	190.22632	14.52241	0.0170310	0.22611844	2.6683660	20	10 24.9	20.9
516900 2011 ST_{89}	16.4	X	276.63875	256.29639	202.44850	21.59812	0.0595950	0.22448753	2.6812742	20	11 10.0	19.9
516901 2011 SW_{138}	18.2	X	146.54185	112.07946	177.92620	4.91124	0.2322283	0.25672081	2.4518581	20	—	—
516902 2011 SM_{205}	19.2	X	234.62597	92.57913	179.78685	22.13451	0.0309161	0.38927414	1.8576576	20	—	—
516903 2011 ST_{222}	18.1	X	137.86479	244.65050	56.93949	22.42018	0.0832950	0.35684365	1.9685694	20	—	—
516904 2011 SP_{259}	16.6	X	56.32882	247.70372	53.39791	25.70337	0.1277164	0.21664167	2.7456261	20	11 10.9	20.4
516905 2011 SO_{260}	17.4	X	302.96610	207.69437	214.74526	10.88992	0.0654377	0.22016512	2.7162540	20	10 28.6	20.5
516906 2011 SN_{278}	17.2	X	209.76298	139.70240	44.10747	4.77167	0.1036720	0.23417891	2.6067789	20	11 26.5	21.0
516907 2011 UM_{20}	17.8	X	127.46573	323.64068	53.66238	21.92019	0.1073589	0.38142878	1.8830438	20	—	—
516908 2011 UX_{57}	17.2	X	91.53140	154.38846	173.27067	3.67800	0.1324650	0.24119519	2.5559771	20	—	—
516909 2011 UN_{75}	17.1	X	273.73570	358.23308	74.31349	4.74584	0.2259059	0.20936633	2.8088690	20	9 5.2	20.7
516910 2011 UE_{99}	17.4	X	57.62998	320.76109	6.49713	4.15956	0.0831058	0.22628085	2.6670890	20	12 8.9	21.1
516911 2011 UG_{109}	17.6	X	75.38341	265.74050	70.72289	14.88168	0.1238010	0.23932967	2.5692421	20	—	—
516912 2011 UJ_{181}	16.3	X	21.06320	149.56454	230.23372	27.94878	0.0526723	0.22923910	2.6440942	20	12 21.7	20.2
516913 2011 US_{183}	18.1	X	306.14739	150.87330	51.82028	22.69221	0.0599793	0.37210779	1.9143597	20	—	—
516914 2011 UN_{241}	16.8	X	31.97255	101.72648	246.24857	5.39504	0.0340660	0.22045546	2.7138685	20	11 24.9	20.5
516915 2011 UU_{246}	16.8	X	200.52052	240.35732	228.92224	13.51666	0.2638478	0.18990104	2.9976746	20	7 27.8	22.3
516916 2011 UH_{253}	17.3	X	89.21088	252.17317	52.51265	3.08295	0.1254207	0.22660390	2.6645536	20	12 20.8	21.3
516917 2011 UU_{253}	17.0	X	79.46478	150.06219	191.58208	18.77638	0.0379974	0.23762990	2.5814794	20	—	—
516918 2011 UG_{258}	17.4	X	254.72443	58.51278	17.25506	5.25731	0.0892117	0.20354595	2.8621633	20	9 3.5	21.3
516919 2011 UA_{266}	17.4	X	84.76532	268.32791	57.10593	14.23987	0.2017750	0.23473494	2.6026607	20	—	—
516920 2011 UY_{270}	18.2	X	108.88688	159.69011	197.89042	21.87071	0.0431569	0.36730550	1.9310096	20	—	—
516921 2011 UK_{300}	16.9	X	45.95385	125.95075	224.06638	14.30685	0.0507231	0.22537166	2.6742572	20	12 18.2	20.7
516922 2011 UM_{333}	17.3	X	100.64881	256.66067	53.27858	15.55499	0.2171646	0.24447966	2.5330332	20	—	—
516923 2011 UL_{396}	16.3	X	56.17799	154.46488	196.82291	31.98335	0.1667058	0.23514785	2.5996130	20	—	—
516924 2011 UL_{414}	17.3	X	313.74838	189.09438	235.06340	5.11364	0.0272661	0.21813019	2.7331210	20	11 16.6	20.9
516925 2011 UX_{414}	16.2	X	215.70127	121.89577	249.31325	3.97483	0.0563356	0.17056975	3.2200902	20	4 27.6	21.0
516926 2011 UY_{414}	18.0	X	87.06687	35.06058	79.57966	6.04631	0.0807530	0.28104390	2.3082700	20	4 7.8	20.7
516927 2011 WY_{2}	16.8	X	1.71704	312.07333	82.18035	15.76985	0.0749843	0.22222215	2.6994657	20	12 19.0	20.0
516928 2011 WZ_{105}	16.7	X	194.35267	73.23377	61.38562	27.70494	0.2002204	0.18530134	3.0470787	20	9 14.6	22.3
516929 2011 WJ_{128}	18.2	X	351.78241	320.13677	148.34681	24.29748	0.0790450	0.36012895	1.9565789	20	—	—
516930 2011 WQ_{134}	17.4	X	54.96979	338.17248	110.55078	24.72090	0.0572736	0.37092794	1.9184170	20	—	—
516931 2011 WS_{134}	17.8	X	203.68659	201.34585	80.66235	24.02158	0.0421445	0.36040841	1.9555673	20	—	—
516932 2011 YK_{27}	16.5	X	275.76771	279.65868	115.75660	16.25065	0.1026968	0.18437870	3.0572355	20	8 4.6	20.7
516933 2011 YA_{77}	16.9	X	211.60699	61.57954	60.39537	7.59136	0.1737749	0.18767190	3.0213652	20	9 3.9	21.8
516934 2012 AY_{10}	17.6	X	102.22995	265.56806	152.56929	24.35889	0.0669021	0.37112696	1.9177311	20	1 17.5	19.7
516935 2012 AM_{13}	16.5	X	250.78974	308.22272	118.47796	14.31619	0.1634651	0.18697884	3.0288266	20	8 4.7	20.9
516936 2012 AX_{24}	17.0	X	64.48112	245.30657	134.20794	6.29345	0.0907310	0.22529883	2.6748336	20	—	—
516937 2012 BB	15.8	X	315.10587	278.92925	108.47522	25.19543	0.1017797	0.19201563	2.9756259	20	10 4.6	20.0
516938 2012 BE_{3}	15.9	X	198.26619	351.64644	134.45377	28.35603	0.0653699	0.17950493	3.1123264	20	9 1.2	20.7
516939 2012 BS_{57}	17.0	X	226.07622	187.93348	295.93511	7.70852	0.0358697	0.19489240	2.9462717	20	9 29.4	21.3
516940 2012 BX_{69}	16.3	X	248.47397	322.11466	121.97469	14.04261	0.0346350	0.18548734	3.0450414	20	9 14.5	20.7
516941 2012 BO_{70}	16.7	X	137.07614	90.87740	118.17110	10.20051	0.0976456	0.18449461	3.0559548	20	10 10.8	21.6
516942 2012 BE_{71}	16.5	X	193.17670	8.97639	124.40538	10.46469	0.1020698	0.18263884	3.0766207	20	9 2.8	21.3
516943 2012 BB_{81}	16.7	X	239.07054	3.06961	103.56355	6.41515	0.0552952	0.19063459	2.9899798	20	9 27.9	21.0
516944 2012 BD_{94}	16.6	X	231.77229	70.79578	7.69855	10.07483	0.1081242	0.18058716	3.0998795	20	8 7.5	21.3
516945 2012 BA_{101}	16.7	X	138.97426	299.95843	268.18499	5.20049	0.2615278	0.17646474	3.1479712	20	10 8.3	22.3
516946 2012 BH_{111}	17.0	X	245.73418	265.89120	160.29536	2.58891	0.1518968	0.17980030	3.1089168	20	7 29.2	21.7
516947 2012 BK_{112}	16.4	X	152.25379	218.73115	319.98073	7.88071	0.1367363	0.17715774	3.1397564	20	9 12.2	21.5
516948 2012 BK_{142}	16.6	X	158.43296	251.31667	263.09162	14.88825	0.1875178	0.17725023	3.1386641	20	8 16.0	22.1
516949 2012 BZ_{155}	16.9	X	260.87125	319.73537	118.65120	4.70792	0.1140296	0.19142739	2.9817187	20	9 9.5	20.9
516950 2012 BL_{156}	16.4	X	131.08909	270.88430	287.94102	8.09983	0.0521000	0.17517709	3.1633787	20	9 9.9	21.2
516951 2012 BG_{157}	16.6	X	223.50670	100.29003	341.03240	12.73523	0.1550558	0.17688417	3.1429930	20	7 27.9	21.6
516952 2012 CX_{8}	16.6	X	174.68491	28.24918	138.67011	10.63017	0.0359678	0.18521942	3.0479771	20	9 28.4	21.1
516953 2012 CX_{15}	16.8	X	233.33293	331.98852	139.81436	10.57208	0.0153267	0.18615082	3.0378017	20	10 2.5	21.1
516954 2012 CV_{30}	16.9	X	208.99650	13.64502	114.50309	5.11321	0.0876246	0.18588383	3.0407098	20	9 14.2	21.5
516955 2012 CY_{51}	16.7	X	236.02319	275.39421	160.70255	10.92284	0.1125978	0.17632657	3.1496156	20	8 3.4	21.4
516956 2012 DO_{6}	16.5	X	194.68993	76.30017	50.24601	19.89459	0.2293777	0.18137539	3.0908919	20	8 28.4	22.1
516957 2012 DS_{20}	15.9	X	65.38134	311.01887	329.56519	8.59521	0.0603884	0.18028412	3.1033522	20	10 6.1	20.4
516958 2012 DZ_{24}	16.4	X	78.66729	177.13956	96.00963	5.75386	0.1074597	0.17174089	3.2054346	20	10 23.7	21.1
516959 2012 DV_{36}	15.9	X	174.53470	2.57719	160.16474	19.54140	0.1710555	0.17929113	3.1148001	20	9 16.6	21.1
516960 2012 DX_{45}	16.4	X	252.33120	75.46190	3.91702	18.12221	0.0550744	0.17264705	3.1942086	20	9 9.0	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
516961 2012 DE_{48}	16.1	X	295.49267	41.33297	353.66929	12.61284	0.0536344	0.17573540	3.1566751	20	9 6.8	20.4
516962 2012 DL_{71}	16.3	X	134.80220	242.62628	312.80500	13.06501	0.0240635	0.17621554	3.1509383	20	9 7.5	21.1
516963 2012 DE_{90}	16.3	X	193.61580	278.58293	201.97413	24.43704	0.2541588	0.17322879	3.1870534	20	8 3.4	22.3
516964 2012 DS_{90}	17.0	X	184.16829	117.88840	36.88069	1.11296	0.0885325	0.18021837	3.1041069	20	9 18.1	21.6
516965 2012 DR_{94}	16.8	X	182.97882	318.62710	160.26543	4.99590	0.0929452	0.16956801	3.2327598	20	8 1.8	21.7
516966 2012 DO_{101}	16.5	X	218.34788	116.60369	13.27248	10.88484	0.0339334	0.17899701	3.1182112	20	9 30.5	20.8
516967 2012 EL_{2}	16.1	X	163.75695	14.54073	158.91908	17.45833	0.1488608	0.17740446	3.1368447	20	9 20.5	21.2
516968 2012 FO_{38}	15.9	X	178.67313	329.68200	187.69297	13.93118	0.1459135	0.17789863	3.1310330	20	9 11.6	21.0
516969 2012 FN_{65}	15.8	X	251.86315	57.96106	15.56697	16.14071	0.1763016	0.17485678	3.1672406	20	8 18.6	20.7
516970 2012 FU_{65}	16.5	X	209.51684	309.72330	160.72003	13.42268	0.0739433	0.16947520	3.2339398	20	8 20.5	21.3
516971 2012 FQ_{75}	15.8	X	180.54462	115.29363	58.42142	13.11844	0.1350763	0.17902489	3.1178875	20	10 10.3	20.9
516972 2012 FG_{85}	17.3	X	243.65243	237.90596	61.83281	12.14153	0.1727824	0.22520193	2.6756008	20	2 24.6	21.8
516973 2012 FH_{85}	17.3	X	124.63201	306.28176	134.56308	2.14083	0.1022450	0.24216456	2.5491516	20	4 15.1	20.8
516974 2012 GJ_{21}	16.0	X	159.97440	128.80879	64.17671	19.65639	0.2065710	0.17101651	3.2144797	20	10 16.3	21.7
516975 2012 GG_{41}	16.0	X	174.92909	228.46271	86.54113	14.98805	0.1986765	0.20389992	2.8588499	20	1 13.3	20.8
516976 2012 HM_{1}	21.4	X	230.10949	71.93576	211.87620	7.56565	0.4809942	0.33091678	2.0700946	20	1 4.7	25.8
516977 2012 HZ_{84}	8.9	X	323.14696	86.13070	257.03380	5.43418	0.1985587	0.00311800	46.4035904	20	7 11.3	24.9
516978 2012 JL_{6}	18.0	X	164.05868	7.98916	306.45924	1.79712	0.1081144	0.32453354	2.0971508	20	—	—
516979 2012 JH_{37}	19.0	X	175.52629	173.58664	103.69987	1.09782	0.1549431	0.31469725	2.1406258	20	—	—
516980 2012 KJ_{1}	18.0	X	126.94529	26.76407	304.61197	1.82516	0.1612010	0.31844073	2.1238164	20	—	—
516981 2012 KD_{52}	16.9	X	283.24571	78.98457	247.89489	10.36386	0.2131998	0.22623548	2.6674456	20	4 26.9	20.7
516982 2012 OO_{6}	15.6	X	178.42264	185.40099	101.23707	11.91994	0.0943981	0.18087484	3.0965917	20	—	—
516983 2012 PM_{1}	17.6	X	255.11944	261.36624	251.65314	6.28932	0.0992255	0.28078920	2.3096656	20	12 30.5	20.0
516984 2012 PN_{28}	18.1	X	326.48965	174.80663	319.06710	24.50137	0.5323377	0.41507151	1.7798665	20	—	—
516985 2012 PS_{44}	17.3	X	240.77413	127.78261	212.81015	12.00474	0.1947956	0.21507116	2.7589760	20	4 3.1	21.7
516986 2012 QP_{10}	19.4	X	87.31311	271.74089	133.25437	15.66086	0.3545045	0.42443862	1.7535822	20	—	—
516987 2012 QE_{43}	17.9	X	39.60076	158.12362	198.18153	6.04078	0.1316100	0.27530544	2.3402353	20	—	—
516988 2012 QY_{52}	17.8	X	324.33391	104.25391	324.34972	5.08567	0.1257409	0.26562375	2.3967613	20	12 26.1	20.2
516989 2012 QZ_{52}	17.1	X	260.63448	195.74872	168.93200	3.51627	0.1283121	0.22406446	2.6846483	20	6 2.7	20.8
516990 2012 QC_{53}	17.2	X	351.54934	108.79396	201.53197	11.08851	0.2070609	0.23417848	2.6067820	20	8 14.6	19.7
516991 2012 RN_{14}	17.8	X	122.07528	117.49455	231.54009	3.19293	0.2409344	0.29606932	2.2294981	20	—	—
516992 2012 RS_{37}	17.6	X	122.88106	70.57707	246.76071	6.62242	0.1473544	0.28775001	2.2722659	20	—	—
516993 2012 RC_{41}	17.5	X	84.40286	331.34821	33.28377	8.30623	0.2298983	0.28693591	2.2765618	20	—	—
516994 2012 RL_{43}	17.6	X	102.22607	80.65509	274.26852	5.54160	0.2084275	0.29235837	2.2483247	20	—	—
516995 2012 SF_{28}	18.4	X	146.02414	151.04567	156.05950	2.92387	0.2269526	0.29361280	2.2419163	20	—	—
516996 2012 SH_{33}	17.8	X	172.08230	6.81717	259.99039	4.72360	0.1395151	0.29361809	2.2418894	20	—	—
516997 2012 SD_{69}	17.5	X	303.40650	191.09623	144.14368	3.21055	0.0586756	0.22391524	2.6858409	20	7 2.0	20.8
516998 2012 SP_{69}	17.8	X	96.81669	290.42027	16.92444	2.93466	0.0936098	0.26817122	2.3815586	20	—	—
516999 2012 TY_{24}	17.8	X	87.81894	310.73879	14.31490	2.50758	0.1889755	0.27104233	2.3647104	20	—	—
517000 2012 TR_{25}	17.6	X	338.07009	46.06979	24.31915	6.13265	0.0938576	0.26596688	2.3946994	20	—	—
517001 2012 TE_{54}	17.2	X	279.20113	81.52443	358.69538	8.42021	0.1982904	0.24038289	2.5617319	20	9 30.7	19.9
517002 2012 TE_{64}	17.8	X	54.90313	342.85763	9.10872	13.10453	0.2301821	0.27143947	2.3624034	20	—	—
517003 2012 TW_{83}	18.0	X	124.82101	333.82399	315.40816	1.91684	0.1588859	0.27625492	2.3348700	20	—	—
517004 2012 TT_{104}	18.5	X	154.14301	290.23028	4.77621	5.04237	0.1536648	0.28903602	2.2655209	20	—	—
517005 2012 TV_{123}	17.5	X	227.30433	341.61550	111.63248	15.44381	0.4246880	0.21924924	2.7238132	20	7 24.1	22.5
517006 2012 TH_{137}	17.8	X	48.63822	274.87687	101.71379	5.46035	0.1158652	0.27725143	2.3292719	20	—	—
517007 2012 TQ_{212}	18.0	X	310.78910	40.42736	30.77256	3.48656	0.1472865	0.25675058	2.4516686	20	11 29.7	20.1
517008 2012 TA_{261}	17.2	X	318.54364	357.93529	70.76743	7.05526	0.1007913	0.25659319	2.4526710	20	12 10.5	19.6
517009 2012 TY_{295}	18.0	X	134.68755	256.37649	58.40837	5.43790	0.2068364	0.29321353	2.2439510	20	—	—
517010 2012 TN_{299}	17.7	X	340.75813	22.20170	30.25922	6.83561	0.1214230	0.25939019	2.4350078	20	12 29.3	20.3
517011 2012 TZ_{307}	17.2	X	293.02565	26.96552	23.23180	6.05117	0.2500721	0.23559406	2.5963296	20	9 5.7	19.8
517012 2012 TW_{313}	17.6	X	59.32382	330.97769	45.30511	6.69245	0.1194399	0.27423205	2.3463380	20	—	—
517013 2012 TS_{326}	17.3	X	234.30457	329.44530	83.50278	10.59537	0.1684584	0.21832466	2.7314978	20	6 30.3	21.4
517014 2012 TZ_{326}	16.9	X	208.14813	19.72448	66.08365	14.67651	0.1566429	0.21050559	2.7987255	20	7 18.1	21.5
517015 2012 TA_{327}	17.2	X	16.11435	72.95321	224.87458	14.22578	0.1541882	0.23792991	2.5793089	20	9 9.9	20.3
517016 2012 UW_{67}	16.4	X	287.77931	325.19838	65.90719	34.41303	0.2560531	0.23269544	2.6178462	20	7 30.5	20.3
517017 2012 UB_{73}	18.0	X	173.23418	241.11721	50.29911	2.99920	0.1840832	0.29379546	2.2409870	20	—	—
517018 2012 UT_{81}	17.4	X	61.71587	307.43206	37.17473	1.59358	0.2097567	0.26712798	2.3877552	20	—	—
517019 2012 UL_{86}	18.1	X	115.16440	96.68494	228.09865	5.49670	0.1707718	0.27906451	2.3191721	20	—	—
517020 2012 UZ_{89}	17.4	X	230.73806	251.42897	232.52265	12.37451	0.2084122	0.23152857	2.6266346	20	9 17.8	21.7
517021 2012 US_{98}	17.4	X	125.33233	221.57799	35.57124	8.40077	0.0525649	0.25553855	2.4594147	20	12 1.3	20.9
517022 2012 UW_{146}	17.4	X	128.68006	34.03257	260.33457	3.61015	0.1487211	0.27397765	2.3477903	20	—	—
517023 2012 UB_{152}	17.7	X	301.18945	323.29264	90.05017	3.49719	0.2008747	0.23982013	2.5657379	20	10 6.1	20.1
517024 2012 UE_{169}	17.5	X	260.58473	286.71860	144.39027	7.48837	0.2861556	0.23146259	2.6271337	20	8 7.4	21.3
517025 2012 UU_{179}	17.5	X	246.55055	9.00255	83.52549	11.86772	0.0928407	0.23301921	2.6154208	20	9 23.5	21.2
517026 2012 UW_{179}	16.6	X	280.40385	74.74184	197.86384	3.00482	0.0706403	0.18506731	3.0496470	20	3 9.6	21.0
517027 2012 VM_{12}	17.6	X	212.85924	157.91933	56.27331	4.00695	0.1614513	0.27074596	2.3664358	20	—	—
517028 2012 VN_{14}	17.8	X	25.89509	348.78224	18.86410	2.04751	0.1868529	0.26119033	2.4238067	20	—	—
517029 2012 VL_{16}	17.9	X	144.27155	240.40234	45.41420	6.05885	0.1618024	0.28253358	2.3001491	20	—	—
517030 2012 VR_{60}	18.0	X	136.29578	238.86427	66.69075	6.85122	0.1371397	0.27753533	2.3276832	20	—	—
517031 2012 VZ_{91}	18.3	X	252.99370	276.36176	206.55430	4.17051	0.2011828	0.23882303	2.5728743	20	10 19.9	21.4
517032 2012 XB_{47}	16.9	X	326.50937	98.70219	224.29792	5.23042	0.0196115	0.21070618	2.7969489	20	7 20.8	20.6
517033 2012 XZ_{83}	16.5	X	285.46053	345.24474	108.37399	22.87890	0.0519662	0.23259824	2.6185755	20	11 25.1	20.2
517034 2012 XH_{97}	17.5	X	256.84608	141.43907	351.43896	2.85789	0.1359388	0.24291051	2.5439302	20	11 18.1	20.4
517035 2012 XS_{119}	18.7	X	350.76606	77.48144	86.62889	14.82135	0.1133130	0.41227805	1.7878973	20	—	—
517036 2012 XW_{145}	17.4	X	40.20309	182.04047	182.03190	6.11799	0.1413201	0.25748903	2.4469789	20	—	—
517037 2012 XU_{158}	16.5	X	317.91579	2.59325	73.72999	15.91059	0.0529782	0.24050366	2.5608743	20	12 13.5	19.6
517038 2012 YG_{10}	16.3	X	290.84778	297.86278	131.48501	10.19294	0.0255771	0.20145637	2.8819208	20	10 24.5	20.3
517039 2013 AG_{7}	17.1	X	232.21979	342.19309	131.73589	14.65322	0.0742933	0.22006228	2.7171001	20	10 2.6	21.1
517040 2013 AT_{7}	17.2	X	192.11904	218.19637	306.42394	6.65247	0.2055509	0.21446888	2.7641389	20	10 1.3	21.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517041 2013 AQ_{21}	16.7	X	256.14073	12.90889	108.12285	15.01212	0.0460791	0.22796935	2.6539032	20	11 17.4	20.4
517042 2013 AU_{23}	17.1	X	159.04207	116.85555	105.30821	13.36980	0.2115096	0.22084641	2.7106649	20	11 18.9	21.9
517043 2013 AH_{28}	16.5	X	294.50963	275.37112	136.66615	13.34424	0.2654662	0.22406596	2.6846363	20	9 6.3	19.3
517044 2013 AG_{29}	16.7	X	154.29486	277.18547	293.18447	8.06512	0.1220588	0.21501431	2.7594624	20	10 25.6	21.2
517045 2013 AN_{40}	17.7	X	294.88861	181.73423	273.49744	2.89027	0.0515370	0.23340687	2.6125240	20	12 3.1	20.9
517046 2013 AA_{53}	19.4	X	127.16796	195.92260	98.37151	27.87068	0.6672548	0.67863017	1.2824702	20	—	—
517047 2013 AN_{57}	17.7	X	224.50515	26.14878	109.83203	12.79844	0.2020253	0.22133521	2.7066725	20	10 7.1	22.1
517048 2013 AJ_{58}	17.1	X	252.49532	13.99523	114.22535	9.46522	0.1391776	0.22844197	2.6502415	20	11 6.7	20.7
517049 2013 AF_{85}	17.0	X	140.38384	246.82756	325.68164	4.11904	0.0825728	0.21909869	2.7250608	20	10 16.3	21.2
517050 2013 AU_{85}	17.4	X	168.82249	130.87990	103.71265	9.68942	0.1307966	0.23640054	2.5904214	20	12 14.8	21.5
517051 2013 AN_{101}	17.2	X	221.84684	251.19823	249.52614	7.59829	0.1451837	0.22304635	2.6928116	20	10 7.6	21.4
517052 2013 AO_{104}	16.5	X	210.09761	197.34636	314.18045	8.18510	0.0708319	0.21596188	2.7513847	20	10 14.2	20.6
517053 2013 AC_{105}	16.4	X	225.74222	4.53285	140.93695	11.77703	0.0709070	0.21843855	2.7305482	20	11 3.3	20.4
517054 2013 AL_{108}	17.3	X	220.07542	23.88196	148.42617	2.70565	0.0968041	0.23107072	2.6301031	20	11 25.6	21.0
517055 2013 AX_{108}	17.5	X	147.08763	116.74431	128.81953	3.16274	0.0498041	0.23297249	2.6157704	20	12 8.4	21.1
517056 2013 AX_{131}	16.8	X	149.48019	79.98909	148.09603	14.19629	0.1324313	0.21316588	2.7753915	20	11 18.2	21.5
517057 2013 AW_{134}	17.4	X	214.69427	47.27795	116.12322	14.12410	0.2005499	0.23344539	2.6122366	20	11 1.9	21.6
517058 2013 AX_{169}	17.9	X	227.29518	357.03337	151.71413	12.57329	0.1244095	0.22664537	2.6642285	20	11 3.3	21.8
517059 2013 AK_{171}	17.7	X	225.17500	296.28155	218.98976	8.32538	0.0309076	0.23007038	2.6377213	20	11 19.1	21.1
517060 2013 AW_{184}	17.4	X	88.62043	156.76185	156.75383	9.32601	0.0910160	0.23685829	2.5870828	20	12 30.3	21.3
517061 2013 CU_{12}	17.1	X	157.86908	110.48416	89.90079	5.99758	0.0952095	0.21260660	2.7802567	20	10 22.9	21.4
517062 2013 CP_{20}	16.7	X	24.81144	35.12557	309.62632	13.30377	0.0554513	0.22561094	2.6723661	20	11 11.2	20.5
517063 2013 CV_{21}	17.1	X	170.77626	180.45662	26.57308	3.71580	0.1305620	0.21674889	2.7447205	20	11 9.1	21.3
517064 2013 CM_{36}	17.5	X	222.85370	78.17070	28.63918	28.69463	0.4441599	0.21557189	2.7547020	20	8 20.1	23.2
517065 2013 CT_{40}	17.0	X	253.93035	339.44044	139.69736	14.48007	0.1987851	0.22724479	2.6595414	20	10 19.9	20.8
517066 2013 CH_{41}	16.8	X	187.79902	307.28897	250.12624	4.81999	0.1502813	0.22385697	2.6863070	20	11 13.7	21.0
517067 2013 CB_{45}	17.2	X	316.19076	286.30421	118.32892	7.16149	0.0341256	0.21668003	2.7453020	20	10 28.5	20.8
517068 2013 CU_{47}	17.0	X	196.91355	93.15453	75.96779	4.07499	0.0554559	0.21440337	2.7647019	20	10 27.9	21.0
517069 2013 CH_{57}	16.2	X	153.67857	188.43795	290.77371	15.16091	0.1705604	0.18563968	3.0433753	20	7 7.6	21.2
517070 2013 CX_{57}	16.8	X	184.98239	41.43933	171.54257	11.89577	0.1366300	0.22248836	2.6973120	20	12 2.6	21.2
517071 2013 CX_{69}	16.8	X	211.16286	48.65202	117.10804	5.83152	0.0473790	0.22164182	2.7041757	20	11 12.5	20.6
517072 2013 CS_{70}	17.2	X	173.79899	357.97836	208.86086	5.43705	0.0379057	0.22528699	2.6749273	20	11 20.0	20.9
517073 2013 CE_{75}	17.0	X	216.43596	353.13867	160.88894	8.67738	0.1564171	0.21740398	2.7392041	20	10 21.7	21.1
517074 2013 CT_{77}	17.0	X	219.85095	52.04607	96.87815	5.86094	0.0543911	0.21964922	2.7205054	20	10 31.8	20.8
517075 2013 CJ_{90}	17.1	X	223.42042	353.38796	161.40657	8.15062	0.1081072	0.21717161	2.7411577	20	11 5.1	21.1
517076 2013 CT_{90}	17.6	X	242.99225	6.04634	120.26257	3.92472	0.1213908	0.22168637	2.7038134	20	10 22.1	21.2
517077 2013 CK_{93}	17.4	X	111.27995	106.33737	150.66184	3.26314	0.0861639	0.21555690	2.7548297	20	11 11.9	21.5
517078 2013 CD_{95}	17.4	X	84.42753	138.05825	165.78122	4.98752	0.0282852	0.22543739	2.6737374	20	12 5.9	21.2
517079 2013 CZ_{97}	17.3	X	245.22875	348.18894	145.70806	8.70370	0.0654063	0.22314564	2.6920127	20	11 13.3	21.0
517080 2013 CG_{102}	17.1	X	18.66032	245.59331	99.01651	7.32131	0.0342828	0.21723098	2.7406582	20	11 5.3	20.8
517081 2013 CF_{108}	16.8	X	141.65675	262.09705	340.66782	10.77478	0.1440635	0.21688256	2.7435926	20	11 22.2	21.4
517082 2013 CN_{109}	17.2	X	298.43526	53.58350	7.00000	6.35187	0.0199988	0.21623971	2.7490275	20	10 20.9	20.8
517083 2013 CC_{110}	17.2	X	239.52816	62.82248	61.39037	4.22178	0.0374861	0.21747373	2.7386183	20	10 25.6	20.9
517084 2013 CP_{117}	17.1	X	216.76086	25.32958	120.94680	9.17201	0.1632088	0.21406444	2.7676194	20	10 13.1	21.4
517085 2013 CU_{125}	17.3	X	171.22595	258.55841	280.73598	8.64917	0.0585768	0.20959624	2.8068146	20	10 4.6	21.6
517086 2013 CX_{135}	16.2	X	261.08588	21.77734	115.02398	22.86841	0.0677476	0.23040618	2.6351578	20	12 11.4	19.9
517087 2013 CE_{148}	17.3	X	238.52385	134.21753	10.31437	5.19014	0.0583130	0.22150443	2.7052938	20	11 14.7	21.0
517088 2013 CA_{156}	16.9	X	107.77930	133.96848	152.47860	9.74713	0.0818367	0.22107943	2.7087597	20	12 14.6	21.1
517089 2013 CV_{159}	17.7	X	154.54664	173.72301	45.55277	1.82079	0.1800877	0.21006397	2.8026466	20	11 7.3	22.2
517090 2013 CX_{164}	17.3	X	116.86028	228.18878	16.99091	3.87800	0.0481932	0.21007662	2.8025341	20	10 29.3	21.2
517091 2013 CN_{175}	17.1	X	38.95854	156.92566	166.48574	6.72545	0.0521481	0.21290624	2.7776475	20	11 5.8	20.9
517092 2013 CH_{180}	17.3	X	215.50847	350.67324	139.40852	20.94202	0.1661984	0.21564275	2.7540986	20	9 21.6	21.8
517093 2013 CJ_{184}	16.9	X	265.44659	116.08129	342.24622	8.18476	0.0923183	0.22193239	2.7018149	20	10 14.9	20.5
517094 2013 CC_{205}	17.0	X	117.21071	286.50477	335.05517	3.56025	0.1388155	0.21500671	2.7595274	20	11 23.9	21.4
517095 2013 CJ_{214}	17.3	X	234.27337	322.44259	173.78856	4.64572	0.0709060	0.21975488	2.7196334	20	10 30.1	20.9
517096 2013 CT_{214}	17.1	X	178.05758	329.93013	223.32999	2.76206	0.1406043	0.21424638	2.7660523	20	10 29.9	21.3
517097 2013 CP_{222}	16.4	X	129.00529	336.91741	259.29390	12.70793	0.1579088	0.21041365	2.7995406	20	11 3.3	21.1
517098 2013 CP_{224}	16.8	X	157.46750	148.82218	71.23325	10.53874	0.1549331	0.21016579	2.8017413	20	11 12.8	21.4
517099 2013 CQ_{224}	17.2	X	283.37413	225.45393	203.81867	4.51244	0.1417766	0.21414188	2.7669521	20	9 26.1	20.6
517100 2013 DS_{13}	17.6	X	174.44689	347.37059	205.83801	7.58995	0.1487737	0.21287021	2.7779608	20	10 26.4	22.1
517101 2013 EM_{3}	16.9	X	196.06597	148.75704	22.96257	14.59270	0.1450339	0.21101835	2.7941898	20	10 19.8	21.1
517102 2013 ET_{19}	17.0	X	350.21171	204.36905	166.21924	5.66015	0.0354364	0.21184880	2.7868828	20	10 28.9	20.6
517103 2013 EM_{20}	19.9	X	255.16195	350.09325	73.95515	8.35856	0.3181513	0.61330225	1.3719965	20	—	—
517104 2013 EO_{53}	17.4	X	284.27645	93.65235	350.67533	3.80140	0.0378102	0.21316762	2.7753764	20	10 30.2	21.0
517105 2013 EH_{102}	16.4	X	65.14550	141.71116	166.78001	15.36653	0.1514532	0.20282389	2.8689522	20	12 1.1	20.9
517106 2013 EC_{113}	17.3	X	314.96514	272.22587	175.32819	21.06311	0.1209283	0.22991702	2.6388941	20	12 22.3	20.7
517107 2013 EF_{117}	17.1	X	263.28241	272.03921	161.12210	7.45317	0.2419449	0.21234462	2.7825429	20	8 17.6	21.1
517108 2013 EU_{126}	16.9	X	228.50101	321.26058	175.13518	13.57924	0.1487772	0.21191416	2.7863097	20	10 12.3	21.0
517109 2013 EE_{142}	16.9	X	253.95622	354.64401	149.64692	8.36641	0.0930590	0.23090047	2.6313958	20	12 4.8	20.4
517110 2013 FE_{20}	17.2	X	131.65832	118.11632	123.03166	2.91010	0.1619961	0.20253987	2.8716336	20	11 13.4	21.9
517111 2013 FH_{29}	16.8	X	85.38966	121.31711	134.19555	2.07511	0.1554819	0.18434460	3.0576125	20	10 15.6	21.4
517112 2013 GO	17.4	X	162.93232	114.57359	93.95934	6.70742	0.1699959	0.20378899	2.8598872	20	11 3.5	22.2
517113 2013 GL_{17}	18.6	X	267.36036	93.90703	180.66704	22.21329	0.0583895	0.41008487	1.7942662	20	1 24.5	20.9
517114 2013 GK_{42}	16.5	X	225.28757	105.06714	31.31755	15.38708	0.0964086	0.20287679	2.8684534	20	10 14.0	20.6
517115 2013 GG_{45}	16.6	X	81.34866	210.37478	23.31540	15.91546	0.0230256	0.18008877	3.1055960	20	9 3.1	21.2
517116 2013 GJ_{52}	16.5	X	115.76012	4.82181	186.43237	20.54466	0.0975085	0.17424853	3.1746070	20	8 18.9	21.6
517117 2013 GV_{90}	16.6	X	82.25258	75.70822	200.51846	18.24051	0.0725688	0.18709674	3.0275540	20	10 28.2	21.0
517118 2013 GD_{97}	16.8	X	145.39586	154.78740	39.54962	9.19744	0.1562446	0.19138642	2.9821442	20	10 1.8	21.7
517119 2013 GF_{115}	17.2	X	201.31102	346.81132	198.19658	13.40130	0.1287131	0.21700115	2.7425930	20	11 14.7	21.4
517120 2013 GA_{126}	16.5	X	92.84650	212.40479	65.06281	13.79717	0.1257849	0.18949926	3.0019103	20	11 16.4	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517121 2013 GN_{139}	17.6	X	287.62011	326.99929	299.94229	1.47074	0.0570241	0.26630645	2.3926633	20	3 4.9	20.5
517122 2013 GP_{139}	16.7	X	111.60122	133.18338	116.19606	7.20866	0.1099573	0.18813813	3.0163715	20	11 2.0	21.4
517123 2013 GW_{139}	16.5	X	121.31429	30.44991	203.47449	10.44991	0.0802354	0.18632951	3.0358592	20	10 19.5	20.9
517124 2013 HN	18.5	X	261.14416	156.39409	50.90346	22.27536	0.0455337	0.37805584	1.8942272	20	—	—
517125 2013 HG_4	16.9	X	126.17229	100.96254	119.39950	6.94869	0.1149567	0.19146591	2.9813187	20	10 13.9	21.6
517126 2013 HN_{10}	17.0	X	174.46472	71.31538	99.53246	11.47613	0.2038617	0.19878556	2.9076770	20	10 1.6	22.1
517127 2013 HQ_{42}	17.0	X	88.60522	301.95433	330.36686	4.84599	0.0469257	0.19526157	2.9425569	20	10 26.1	21.3
517128 2013 HQ_{65}	17.4	X	85.55890	294.16634	318.25827	3.78217	0.0883220	0.18706008	3.0279496	20	10 2.1	21.8
517129 2013 HE_{88}	17.4	X	93.44452	227.69271	30.09755	1.54623	0.1013128	0.19213619	2.9743810	20	10 21.3	21.7
517130 2013 HJ_{98}	16.9	X	187.86700	301.93922	210.16003	8.49633	0.0738700	0.19299206	2.9655808	20	9 18.5	21.3
517131 2013 HZ_{106}	17.4	X	212.34694	49.10735	51.75456	2.22125	0.1290188	0.18528228	3.0472877	20	8 10.1	22.0
517132 2013 HG_{117}	17.1	X	206.53589	265.05499	198.74918	10.78413	0.1923988	0.18627191	3.0364850	20	7 31.1	22.2
517133 2013 HB_{118}	17.1	X	148.07565	354.37314	193.78827	9.83688	0.0484020	0.18860058	3.0114387	20	9 20.3	21.5
517134 2013 JP_7	18.0	X	51.58578	36.69624	55.23960	22.79897	0.0928591	0.38661026	1.8661812	20	—	—
517135 2013 JJ_8	16.4	X	154.91180	115.42555	61.24842	13.32681	0.1024992	0.18202891	3.0834894	20	9 21.9	21.4
517136 2013 JM_{16}	17.0	X	118.68988	64.86954	176.90296	10.39900	0.0633571	0.19285747	2.9669603	20	10 28.0	21.4
517137 2013 JR_{27}	16.0	X	47.21722	212.75954	117.58112	19.63392	0.1869431	0.18521387	3.0480380	20	12 9.5	20.6
517138 2013 JY_{28}	18.4	X	218.69033	120.16818	194.79503	18.80572	0.1198410	0.39080901	1.8527906	20	1 23.5	21.2
517139 2013 JR_{37}	18.3	X	321.25312	92.72210	98.14751	24.02466	0.0553304	0.38844224	1.8603090	20	—	—
517140 2013 JY_{54}	16.7	X	100.80740	48.65180	213.93220	8.43898	0.0747369	0.18914966	3.0056080	20	11 1.2	21.1
517141 2013 JK_{60}	16.0	X	79.08099	191.35861	91.90898	13.44980	0.1249574	0.18251708	3.0779889	20	11 10.9	20.7
517142 2013 JL_{61}	18.4	X	33.87059	47.21156	56.18328	22.73151	0.0314739	0.38219460	1.8805275	20	—	—
517143 2013 JQ_{62}	16.2	X	57.17956	222.37367	84.65063	8.81479	0.1206449	0.18602584	3.0391621	20	11 12.8	20.5
517144 2013 JQ_{63}	16.2	X	68.84570	80.19055	191.37962	22.06984	0.1942321	0.17750026	3.1357159	20	10 21.6	20.9
517145 2013 KR	16.2	X	94.13386	171.54123	48.05270	26.58854	0.0650758	0.17335231	3.1855393	20	9 15.3	21.3
517146 2013 KZ_2	18.3	X	167.72967	205.39335	96.19119	25.81385	0.0611883	0.36746267	1.9304589	20	—	—
517147 2013 KA_6	17.8	X	181.88156	248.07573	87.44345	24.87630	0.0654653	0.38450843	1.8729757	20	1 8.3	19.8
517148 2013 KF_8	16.9	X	83.89961	302.97136	344.19168	0.56458	0.2231299	0.18390124	3.0625248	20	11 25.8	21.9
517149 2013 KW_8	16.5	X	102.20510	32.06262	205.72843	5.84922	0.1624764	0.17967600	3.1103505	20	10 9.9	21.3
517150 2013 KD_9	16.4	X	72.11704	214.44233	73.56116	16.48016	0.2223385	0.17856416	3.1232484	20	11 17.8	21.2
517151 2013 KG_{11}	16.2	X	52.82452	232.90287	71.44548	17.68616	0.2187825	0.17743496	3.1364853	20	11 16.7	20.8
517152 2013 KE_{16}	15.9	X	72.91103	37.24990	241.85695	9.30833	0.1167844	0.18216091	3.0819997	20	10 23.0	20.4
517153 2013 KP_{16}	16.6	X	130.74506	143.44567	95.95889	12.81537	0.1771287	0.19036284	2.9928246	20	11 12.4	21.7
517154 2013 LY	18.5	X	265.76269	142.26299	97.61081	24.23101	0.1217046	0.38144178	1.8830010	20	—	—
517155 2013 LS_2	17.1	X	109.50342	92.88368	141.12267	1.76966	0.1418710	0.18036421	3.1024335	20	10 11.8	21.9
517156 2013 LK_6	16.8	X	95.45395	197.77474	73.18013	3.52792	0.2784549	0.18464403	3.0543059	20	11 21.4	22.0
517157 2013 LA_{17}	17.0	X	74.50200	227.28467	85.68021	0.69885	0.3025317	0.18604156	3.0389909	20	12 24.5	22.1
517158 2013 LA_{26}	18.5	X	247.66229	49.53504	196.18321	22.12922	0.0608445	0.37568072	1.9022026	20	—	—
517159 2013 LP_{29}	18.1	X	182.39037	210.25850	114.30350	24.18666	0.1351471	0.37657931	1.8991754	20	1 4.2	20.3
517160 2013 MX	18.2	X	224.86035	191.88579	104.37942	23.35461	0.0530477	0.38383817	1.8751555	20	1 7.9	20.0
517161 2013 MW_2	15.9	X	33.39108	191.39144	134.45017	16.83373	0.2614474	0.17528368	3.1620961	20	11 26.6	20.4
517162 2013 MD_9	18.3	X	280.94252	74.68040	143.78338	23.81964	0.0827681	0.36412336	1.9422435	20	—	—
517163 2013 NT_{26}	16.7	X	195.89709	193.93424	192.33623	15.58243	0.2146052	0.22367479	2.6877654	20	4 22.2	21.3
517164 2013 NU_{26}	16.8	X	25.98443	96.88758	286.02850	11.08337	0.1567218	0.17673859	3.1447186	20	—	—
517165 2013 NV_{26}	18.1	X	284.62932	191.62814	176.47390	6.72902	0.1105283	0.27613234	2.3355609	20	7 14.5	20.8
517166 2013 NY_{26}	18.1	X	72.77199	63.77680	194.51959	6.97367	0.0680455	0.29652352	2.2272208	20	10 10.7	20.6
517167 2013 NA_{27}	16.9	X	58.88244	208.49627	155.12262	4.51211	0.1378797	0.18183271	3.0857072	20	—	—
517168 2013 OF_{12}	17.1	X	198.72545	112.06290	231.83180	7.22651	0.1320987	0.21462706	2.7627806	20	3 1.1	21.7
517169 2013 OG_{12}	16.2	X	119.00008	272.48737	60.05414	7.10893	0.2224728	0.18202546	3.0835284	20	—	—
517170 2013 PW_7	16.8	X	111.12962	89.29511	200.52000	10.86969	0.2664473	0.18367603	3.0650276	20	12 22.1	22.3
517171 2013 PY_{74}	18.4	X	137.18002	199.07542	156.59153	23.90946	0.0709566	0.35176099	1.9874869	20	—	—
517172 2013 PG_{77}	16.2	X	55.71392	92.15646	312.48218	7.81628	0.1330401	0.18740965	3.0241831	20	—	—
517173 2013 PL_{77}	16.9	X	101.35066	162.91572	162.43810	1.85749	0.0974800	0.18153369	3.0890947	20	—	—
517174 2013 PQ_{77}	17.5	X	218.72896	144.95723	132.00929	7.66655	0.1648390	0.21508624	2.7588471	20	1 2.9	22.0
517175 2013 PR_{77}	16.9	X	51.21863	304.89191	156.25877	6.60706	0.0173899	0.21239633	2.7820913	20	1 26.7	20.6
517176 2013 PW_{77}	16.3	X	317.02547	148.16852	314.80704	7.93875	0.0559005	0.17546127	3.1599621	20	12 28.5	20.5
517177 2013 PA_{78}	16.7	X	32.55310	126.90008	295.72314	3.71164	0.1708549	0.18221540	3.0813852	20	—	—
517178 2013 QX_{95}	16.1	X	78.35166	275.82336	80.28038	11.21179	0.1167137	0.17854844	3.1234317	20	—	—
517179 2013 RY_3	17.2	X	237.47150	307.31137	181.36193	24.14272	0.2814008	0.28152245	2.3056534	20	10 4.4	20.3
517180 2013 RC_{102}	17.5	X	126.03999	126.70802	238.74694	1.12864	0.0822494	0.20264342	2.8706553	20	1 13.4	21.4
517181 2013 RD_{102}	17.3	X	108.74262	55.45873	311.64180	1.00907	0.0932052	0.19846676	2.9107899	20	—	—
517182 2013 RG_{102}	16.5	X	39.97926	241.01193	186.52914	5.38103	0.1344049	0.18160191	3.0883210	20	—	—
517183 2013 RK_{102}	16.1	X	77.60103	170.74430	194.09555	6.28835	0.1519044	0.18128381	3.0919327	20	—	—
517184 2013 RL_{102}	16.9	X	174.95852	266.57390	9.47948	5.24578	0.2221866	0.19264675	2.9691235	20	—	—
517185 2013 RM_{102}	16.0	X	36.21756	94.53159	311.03220	9.86137	0.0885845	0.17838069	3.1253896	20	—	—
517186 2013 RN_{102}	16.0	X	93.66757	97.20772	228.77663	8.57065	0.1240423	0.17093572	3.2154925	20	—	—
517187 2013 RO_{102}	17.2	X	150.70301	205.14098	204.89426	3.55464	0.1001618	0.21264466	2.7799249	20	4 5.1	21.3
517188 2013 RP_{102}	17.0	X	165.68089	8.26652	30.59169	9.19875	0.1567737	0.21495807	2.7599437	20	4 10.7	21.5
517189 2013 TG_{163}	16.8	X	186.43747	323.89850	359.44805	9.45876	0.2178411	0.20968929	2.8059842	20	2 3.5	21.7
517190 2013 TL_{163}	16.5	X	21.82709	34.02372	52.35741	10.97509	0.1142462	0.17901812	3.1179661	20	—	—
517191 2013 TQ_{163}	17.1	X	161.14373	269.30870	102.31559	3.06340	0.0656948	0.20582590	2.8409878	20	2 28.5	21.3
517192 2013 TU_{163}	16.8	X	218.83901	311.04719	101.47059	13.70159	0.1733551	0.22492377	2.6778062	20	6 14.9	21.1
517193 2013 TW_{163}	17.4	X	164.46947	26.84980	10.66207	6.26892	0.0594976	0.21742567	2.7390219	20	4 1.6	21.1
517194 2013 TX_{163}	16.8	X	173.38274	77.68048	234.96532	4.36861	0.1436884	0.18810554	3.0167199	20	1 7.4	21.6
517195 2013 UQ_{18}	16.8	X	188.46964	274.16130	62.17160	6.97785	0.1027548	0.20680976	2.8319703	20	2 17.8	21.3
517196 2013 US_{18}	16.1	X	50.62899	5.53529	73.96519	12.67937	0.1207003	0.17732237	3.1378128	20	1 14.5	20.0
517197 2013 UT_{18}	15.5	X	252.06237	7.55545	222.45141	16.90649	0.0535168	0.18480092	3.0525770	20	—	—
517198 2013 UU_{18}	16.0	X	9.70912	250.60442	253.25571	9.12292	0.1105041	0.18629780	3.0362037	20	1 25.1	19.8
517199 2013 VA_{26}	17.3	X	190.87507	332.39382	55.16993	3.61978	0.0909310	0.21845300	2.7304278	20	4 19.6	21.5
517200 2013 VB_{26}	17.2	X	143.98733	307.45702	115.37262	5.72069	0.0538581	0.21316980	2.7753575	20	4 12.8	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517201 2013 VC_{26}	16.7	X	97.92596	74.01264	99.93985	15.72652	0.1617757	0.21368337	2.7709088	20	7 22.3	20.8
517202 2013 VE_{26}	16.7	X	211.24535	275.54402	130.44841	5.88554	0.1251549	0.22212377	2.7002628	20	6 2.3	20.9
517203 2013 VF_{26}	17.2	X	175.39129	171.92466	178.52460	2.11210	0.0844746	0.19833532	2.9120758	20	2 18.3	21.7
517204 2013 VH_{26}	17.7	X	169.70937	242.90799	156.93378	4.39502	0.1976151	0.21546586	2.7556057	20	4 17.4	22.3
517205 2013 XR_{26}	17.5	X	262.99610	86.37097	90.28353	6.58712	0.0348269	0.29593440	2.2301757	20	—	—
517206 2013 XT_{26}	17.3	X	216.42405	170.63537	262.89948	8.76812	0.0987044	0.23450207	2.6043834	20	7 13.9	21.1
517207 2013 YQ_{5}	17.9	X	304.38960	174.13798	286.09557	9.21647	0.0674503	0.28008195	2.3135522	20	—	—
517208 2013 YY_{19}	17.6	X	343.42146	310.46610	119.96341	22.78809	0.2491740	0.28987754	2.2611342	20	—	—
517209 2013 YC_{43}	17.9	X	294.73714	30.47629	59.97627	2.92687	0.1556789	0.27299946	2.3533951	20	12 2.1	19.8
517210 2013 YS_{115}	18.2	X	270.76350	11.91563	119.08441	4.22829	0.1853370	0.27395605	2.3479137	20	12 12.4	20.2
517211 2013 YW_{122}	18.0	X	262.43767	255.71581	259.12070	3.68277	0.1494369	0.28130036	2.3068668	20	—	—
517212 2013 YE_{149}	17.4	X	256.42349	20.22984	110.73704	9.30323	0.2280010	0.26521218	2.3992403	20	11 10.1	20.2
517213 2013 YV_{152}	17.7	X	179.33859	336.62796	131.55464	5.95464	0.1441919	0.22766051	2.6563028	20	7 18.2	22.0
517214 2013 YW_{152}	17.2	X	211.65831	269.69564	134.93967	5.46940	0.1134950	0.22042007	2.7141591	20	6 1.6	21.3
517215 2013 YX_{152}	17.2	X	235.08525	242.31036	138.53463	6.52438	0.0970766	0.21906598	2.7253321	20	5 29.4	21.3
517216 2014 AV_{6}	18.1	X	230.61307	74.25460	105.18616	4.57311	0.0862379	0.27737717	2.3285679	20	12 31.4	20.7
517217 2014 AK_{57}	17.1	X	115.41695	145.98160	70.01292	9.46028	0.0854000	0.24366088	2.5387046	20	10 4.1	20.9
517218 2014 AL_{57}	17.7	X	191.96880	227.66646	282.70291	3.08577	0.1752416	0.24007969	2.5638883	20	9 20.0	21.7
517219 2014 AN_{57}	16.8	X	142.12590	12.09875	145.74272	17.30870	0.0948184	0.22509178	2.6764736	20	8 12.3	20.8
517220 2014 BR_{6}	17.8	X	265.93011	19.37261	127.00303	9.45770	0.1468863	0.27435334	2.3456464	20	12 31.3	20.1
517221 2014 BZ_{9}	17.7	X	282.76468	1.25358	101.31033	25.47810	0.1788307	0.27112826	2.3642107	20	11 30.8	20.2
517222 2014 BX_{10}	18.4	X	253.99554	119.29918	43.43213	4.46536	0.1100823	0.28113910	2.3077489	20	—	—
517223 2014 BX_{12}	17.6	X	205.09185	79.70860	124.62368	6.76767	0.0450826	0.27342299	2.3509643	20	—	—
517224 2014 BD_{17}	18.0	X	285.94135	348.32844	108.67608	3.25196	0.1689380	0.27108791	2.3644453	20	11 22.8	20.0
517225 2014 BA_{21}	17.7	X	310.40636	323.55047	136.36360	7.20173	0.2049193	0.27937954	2.3174284	20	—	—
517226 2014 BT_{33}	18.2	X	264.63109	35.99437	94.08738	3.30759	0.1564690	0.26841195	2.3801344	20	12 1.9	20.5
517227 2014 BR_{35}	17.4	X	247.22621	339.45260	98.54593	4.30066	0.1684346	0.24140191	2.5545177	20	8 19.9	20.8
517228 2014 BD_{46}	18.1	X	286.00905	313.77232	137.94336	9.07270	0.1608048	0.26338940	2.4102968	20	11 15.9	20.6
517229 2014 BP_{54}	18.2	X	196.82173	24.32407	189.26737	1.14884	0.1367833	0.26996206	2.3710146	20	12 23.8	21.5
517230 2014 BX_{58}	16.4	X	92.48075	121.25496	313.26396	9.64612	0.2445777	0.17734844	3.1375053	20	3 18.9	21.0
517231 2014 BK_{61}	17.9	X	306.31710	10.84630	96.85108	4.18597	0.1375128	0.27831336	2.3233431	20	—	—
517232 2014 BG_{66}	17.5	X	223.55672	99.79071	325.39046	7.90734	0.1962388	0.22777622	2.6554031	20	7 4.0	21.8
517233 2014 BJ_{66}	16.6	X	236.91042	256.72044	151.26809	15.09320	0.1459950	0.22801366	2.6535593	20	6 29.7	20.9
517234 2014 CE_{2}	18.1	X	209.13301	332.93679	211.91289	1.11547	0.1228934	0.26452363	2.4034019	20	12 1.7	21.3
517235 2014 CR_{14}	17.3	X	229.32688	125.63479	329.17861	28.30536	0.3437331	0.23940056	2.5687348	20	8 8.5	21.9
517236 2014 CR_{24}	17.7	X	233.00075	298.73941	216.36368	2.06635	0.1255652	0.25792068	2.4442480	20	11 20.8	20.7
517237 2014 CS_{24}	16.4	X	145.22716	40.32200	105.05476	13.35210	0.1035783	0.21947264	2.7219645	20	7 31.9	20.5
517238 2014 CT_{24}	17.2	X	263.19861	281.86449	307.24629	6.69178	0.0760589	0.28268029	2.2993533	20	—	—
517239 2014 DY_{19}	18.1	X	263.73760	15.48556	139.96722	1.72466	0.1307303	0.26806221	2.3822042	20	—	—
517240 2014 DG_{24}	18.2	X	266.60244	43.42847	93.00506	1.59837	0.1643871	0.26944597	2.3740412	20	12 13.6	20.5
517241 2014 DB_{26}	18.0	X	187.49620	175.25978	52.30120	2.93906	0.1472808	0.26115989	2.4239950	20	12 28.2	21.4
517242 2014 DE_{26}	18.1	X	244.12509	41.08546	106.98720	3.41606	0.1461036	0.25929299	2.4356163	20	11 24.3	21.1
517243 2014 DN_{26}	17.7	X	177.46206	169.21929	93.42417	3.62714	0.1786391	0.26841001	2.3801459	20	—	—
517244 2014 DC_{27}	18.2	X	224.68247	195.72631	322.07041	1.61199	0.1243968	0.25781211	2.4449342	20	11 13.1	21.4
517245 2014 DA_{29}	18.4	X	275.28034	323.92635	151.73473	2.83988	0.1527812	0.26783878	2.3835288	20	11 30.7	20.6
517246 2014 DG_{31}	17.9	X	229.95783	355.78305	181.17619	2.19544	0.1451682	0.26359548	2.4090404	20	12 14.2	20.9
517247 2014 DV_{32}	18.2	X	220.66551	168.26846	24.38954	5.76757	0.1670276	0.26454958	2.4032447	20	12 19.4	21.3
517248 2014 DK_{35}	18.1	X	202.66986	105.78449	107.04565	3.43598	0.1622977	0.26273258	2.4143122	20	12 24.6	21.5
517249 2014 DH_{40}	18.2	X	278.49431	325.91738	135.45659	1.72756	0.1521131	0.26717843	2.3874546	20	11 15.4	20.5
517250 2014 DU_{50}	18.1	X	218.20761	55.52348	136.76445	6.49721	0.0921737	0.26126948	2.4233172	20	12 26.3	21.3
517251 2014 DV_{60}	17.6	X	161.61491	174.56222	89.32752	2.60761	0.1452395	0.26074055	2.4265933	20	—	—
517252 2014 DD_{67}	17.6	X	321.57176	13.50158	63.41686	7.49341	0.1007541	0.26061543	2.4273699	20	12 29.2	20.1
517253 2014 DG_{75}	17.2	X	198.84174	143.47593	77.80148	6.85796	0.0853437	0.26079633	2.4262473	20	—	—
517254 2014 DL_{76}	17.9	X	171.20387	122.41213	131.47121	2.18933	0.1600146	0.26038564	2.4287978	20	—	—
517255 2014 DF_{115}	18.4	X	237.50110	1.73633	157.14067	1.65215	0.1300044	0.26072168	2.4267104	20	12 2.1	21.3
517256 2014 DO_{121}	17.3	X	101.58258	174.66257	172.77715	19.70105	0.1273308	0.28304638	2.2973702	20	—	—
517257 2014 DP_{124}	17.9	X	267.76888	324.32636	161.19068	2.59554	0.1472545	0.26088563	2.4256936	20	11 30.0	20.3
517258 2014 DX_{135}	18.0	X	233.39680	81.66127	105.87458	3.37272	0.1394076	0.26625723	2.3929582	20	—	—
517259 2014 DV_{137}	17.8	X	162.38447	192.49208	29.10717	3.54280	0.1643640	0.24610670	2.5218568	20	11 21.9	21.8
517260 2014 DQ_{139}	17.4	X	214.90133	44.71850	160.39421	2.67630	0.1533123	0.26418254	2.4054702	20	12 30.4	20.5
517261 2014 DH_{146}	17.9	X	188.02964	66.66838	157.51754	4.94915	0.1459632	0.25521590	2.4614871	20	12 23.3	21.6
517262 2014 DK_{146}	17.3	X	106.11131	241.09821	27.48833	4.45725	0.0757344	0.23852534	2.5750146	20	11 22.3	21.0
517263 2014 EB_{9}	17.8	X	174.43197	213.74605	32.37747	5.69348	0.1901075	0.26063614	2.4272414	20	—	—
517264 2014 EY_{131}	17.6	X	121.33456	101.73957	176.53493	15.76994	0.0926898	0.25666354	2.4522228	20	12 25.4	21.6
517265 2014 EX_{231}	17.7	X	176.13926	41.82669	212.63023	6.11941	0.0826123	0.27012949	2.3700348	20	—	—
517266 2014 FP_{1}	18.0	X	196.46010	268.84267	306.65902	0.55233	0.1339585	0.25794334	2.4441049	20	12 23.4	21.4
517267 2014 FG_{9}	17.6	X	304.25484	273.69229	168.94114	6.95355	0.1988378	0.27019691	2.3696405	20	12 9.5	19.4
517268 2014 FX_{10}	17.8	X	218.24457	13.12799	175.82514	2.68739	0.1454752	0.25826768	2.4420582	20	12 13.6	21.1
517269 2014 FD_{18}	17.5	X	182.19474	248.66778	337.34405	5.61192	0.0996861	0.25735407	2.4478343	20	12 24.8	21.1
517270 2014 FY_{18}	17.1	X	195.89102	341.39388	260.48415	6.09476	0.1001273	0.27917668	2.3185508	20	—	—
517271 2014 FV_{37}	17.6	X	154.01642	48.67591	81.82291	25.10469	0.0605120	0.36900733	1.9250679	20	8 2.9	20.3
517272 2014 FH_{67}	15.7	X	44.07097	38.24731	141.24174	20.11272	0.1022877	0.17137417	3.2100058	20	5 15.2	20.3
517273 2014 FE_{73}	17.5	X	143.89197	194.20025	59.98858	13.02886	0.1381764	0.24074416	2.5591685	20	12 13.8	21.6
517274 2014 FE_{74}	16.3	X	105.55889	286.85070	215.03324	7.96114	0.0213992	0.19088815	2.9873314	20	5 31.6	20.5
517275 2014 FF_{74}	17.3	X	189.45932	104.97303	41.81048	13.44598	0.1928503	0.22971683	2.6404270	20	9 19.4	21.8
517276 2014 FG_{74}	16.1	X	123.01927	9.48141	121.06296	13.62206	0.0978095	0.19425685	2.9526943	20	6 17.3	20.6
517277 2014 FH_{74}	17.2	X	180.67186	272.59303	224.81414	11.23571	0.2131517	0.22673194	2.6635503	20	8 19.1	21.9
517278 2014 FL_{74}	17.2	X	20.71481	307.84614	58.67924	12.71710	0.0491181	0.23719554	2.5846300	20	12 9.2	20.5
517279 2014 GO_{22}	17.7	X	157.16201	344.87442	255.80149	2.14604	0.1701924	0.24159919	2.5531269	20	12 9.8	21.7
517280 2014 GF_{26}	17.2	X	131.91966	269.19789	354.43609	3.69237	0.1703644	0.23727795	2.5840315	20	12 14.4	21.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517281 2014 GJ_{32}	17.7	X	156.31342	117.78585	122.85564	5.98346	0.1042909	0.24045223	2.5612394	20	12 11.9	21.6
517282 2014 GQ_{37}	17.3	X	149.11347	173.88740	106.81408	6.10170	0.1443689	0.25817132	2.4426658	20	—	—
517283 2014 GV_{41}	17.4	X	151.57205	185.51207	18.09625	6.04301	0.1310905	0.22529392	2.6748724	20	10 19.0	21.5
517284 2014 GU_{56}	17.2	X	247.14163	69.51558	56.27183	15.56815	0.0698320	0.23815588	2.5776771	20	11 6.9	20.6
517285 2014 GT_{58}	17.2	X	97.58544	256.77399	2.36034	1.37457	0.0219406	0.22305274	2.6927602	20	10 24.2	20.9
517286 2014 GV_{58}	17.3	X	32.31613	277.56064	78.38505	5.52292	0.0997798	0.23584743	2.5944698	20	12 19.0	20.5
517287 2014 GY_{58}	17.4	X	116.81608	135.39990	159.31553	11.69106	0.1133012	0.23595223	2.5937015	20	—	—
517288 2014 HM	17.4	X	143.87571	216.95032	29.89819	13.92385	0.2245436	0.23641759	2.5902968	20	12 1.5	22.0
517289 2014 HF_{2}	17.5	X	130.31788	205.46815	51.69724	16.42090	0.1147754	0.23066642	2.6331755	20	12 2.0	21.6
517290 2014 HB_{7}	17.4	X	191.29561	129.97850	61.36794	8.57434	0.1003238	0.24006617	2.5639846	20	11 17.7	20.9
517291 2014 HK_{7}	17.6	X	114.76330	137.10317	143.27811	4.90663	0.0991168	0.23851826	2.5750656	20	12 18.1	21.4
517292 2014 HC_{10}	17.8	X	168.34906	161.47004	84.27135	2.76062	0.1110463	0.24930760	2.5002247	20	12 31.4	21.4
517293 2014 HD_{10}	17.5	X	192.10112	348.50780	196.23159	9.45803	0.1373328	0.23857179	2.5746804	20	11 7.6	21.3
517294 2014 HA_{14}	18.1	X	217.77681	328.63603	194.23794	3.39875	0.1602958	0.24314340	2.5423054	20	11 5.0	21.8
517295 2014 HD_{14}	18.1	X	140.65633	230.04436	36.38250	6.00680	0.1668484	0.24297654	2.5434692	20	12 26.5	22.4
517296 2014 HB_{15}	17.9	X	248.08285	285.51817	207.93229	15.59450	0.1472468	0.24583126	2.5237402	20	11 7.1	21.0
517297 2014 HY_{41}	17.8	X	240.19156	246.85343	250.05019	1.50215	0.1533688	0.23882093	2.5728894	20	10 28.4	21.0
517298 2014 HE_{67}	17.0	X	259.11235	252.93538	198.06647	21.59321	0.0584639	0.22690908	2.6621639	20	10 5.0	20.5
517299 2014 HW_{74}	18.0	X	224.01682	96.54789	47.30553	10.06563	0.2259787	0.24148890	2.5539042	20	10 13.1	21.8
517300 2014 HG_{76}	17.9	X	242.16659	310.98613	175.19101	4.67468	0.1733805	0.23997559	2.5646297	20	10 15.5	21.4
517301 2014 HY_{96}	17.9	X	111.21995	128.23225	161.94519	5.07395	0.0852191	0.24122314	2.5557796	20	12 26.2	21.8
517302 2014 HM_{105}	17.8	X	222.89154	71.32638	86.73467	4.66562	0.0741709	0.23878065	2.5731788	20	11 15.9	21.3
517303 2014 HS_{125}	17.3	X	169.55359	105.88360	33.38029	7.92288	0.1661227	0.21356939	2.7718946	20	8 19.9	21.9
517304 2014 HA_{132}	17.4	X	139.28833	125.34504	131.87966	12.30281	0.1456643	0.23273177	2.6175738	20	12 14.2	21.8
517305 2014 HR_{142}	16.1	X	52.17907	324.52323	226.57239	10.31454	0.0612691	0.17402518	3.1773227	20	5 30.5	20.5
517306 2014 HO_{153}	17.8	X	242.41011	292.73596	187.81972	1.99111	0.0865755	0.23349819	2.6118428	20	10 19.5	21.0
517307 2014 HZ_{168}	17.7	X	224.91966	352.12328	199.71748	4.54397	0.1197224	0.26149576	2.4219190	20	12 29.9	20.7
517308 2014 HY_{178}	16.8	X	210.02553	119.31195	61.29450	16.12330	0.0879548	0.24057096	2.5603966	20	11 26.3	20.4
517309 2014 HB_{188}	17.5	X	100.34503	129.26445	154.47894	2.44748	0.1832077	0.23022696	2.6365252	20	12 10.9	21.7
517310 2014 HY_{201}	17.6	X	186.66002	128.03309	51.23042	4.27802	0.1826242	0.22967930	2.6407147	20	10 21.6	21.8
517311 2014 HK_{202}	17.4	X	266.65983	324.34574	142.06492	9.42670	0.1220869	0.23548236	2.5971506	20	11 2.0	20.7
517312 2014 HL_{202}	17.1	X	335.19965	248.22814	174.88847	11.71825	0.0656841	0.23768193	2.5811026	20	12 22.1	20.4
517313 2014 HY_{202}	17.2	X	200.67367	123.63589	69.63416	6.18764	0.0977255	0.23753330	2.5821792	20	11 29.9	20.7
517314 2014 HF_{203}	17.3	X	191.51596	359.11468	192.80948	12.42388	0.0996650	0.23408454	2.6074795	20	11 18.9	21.2
517315 2014 HA_{204}	17.2	X	194.09457	25.39991	131.42231	4.90587	0.0587214	0.22207714	2.7006407	20	10 10.9	21.0
517316 2014 JL_{7}	17.5	X	104.46560	213.67849	83.99094	5.75181	0.1309182	0.23470498	2.6028822	20	12 29.2	21.4
517317 2014 JO_{8}	16.9	X	168.76121	152.93991	71.05114	9.29179	0.1156179	0.23563231	2.5960486	20	12 2.1	20.8
517318 2014 JA_{10}	17.5	X	95.12906	236.85191	74.50949	6.52259	0.1944969	0.23356784	2.6113236	20	—	—
517319 2014 JJ_{12}	17.0	X	126.82477	43.10423	213.99381	13.94279	0.1821122	0.22837030	2.6507960	20	12 1.8	21.5
517320 2014 JL_{13}	17.1	X	20.22160	302.66908	74.57335	11.52741	0.0496914	0.23625769	2.5914654	20	12 22.9	20.4
517321 2014 JT_{13}	17.6	X	107.96185	186.71226	111.69958	5.11187	0.1098752	0.23710537	2.5852852	20	—	—
517322 2014 JV_{15}	17.0	X	135.28481	244.93575	59.58198	15.20545	0.1358186	0.25263790	2.4782039	20	—	—
517323 2014 JR_{16}	17.0	X	101.38633	197.95943	134.04764	9.94593	0.2993410	0.24347854	2.5399720	20	—	—
517324 2014 JK_{17}	17.1	X	100.77991	163.35040	123.88398	12.61435	0.1700775	0.22632248	2.6667620	20	12 15.1	21.6
517325 2014 JW_{18}	17.6	X	93.06534	85.80744	200.55450	7.94901	0.0462787	0.23614981	2.5922545	20	11 28.6	21.2
517326 2014 JJ_{20}	15.9	X	346.16709	93.65589	163.07738	9.66822	0.0294123	0.17579474	3.1559647	20	5 23.3	20.3
517327 2014 JK_{21}	17.3	X	109.44780	173.84784	154.99761	7.80803	0.2767116	0.24036565	2.5618544	20	—	—
517328 2014 JZ_{34}	17.4	X	158.12356	159.98754	90.18783	6.07949	0.2141188	0.23773909	2.5806889	20	12 19.5	21.6
517329 2014 JV_{36}	17.6	X	219.28211	358.56518	174.25473	3.00679	0.0156298	0.23687404	2.5869681	20	12 7.8	20.9
517330 2014 JX_{42}	17.7	X	130.66879	143.36488	139.80798	6.08221	0.2063248	0.23552784	2.5968162	20	—	—
517331 2014 JB_{43}	17.2	X	112.69279	221.19404	72.80389	19.22935	0.2916170	0.22818480	2.6522324	20	—	—
517332 2014 JD_{47}	16.9	X	100.33813	22.92430	243.23570	10.50501	0.0400007	0.22116154	2.7080893	20	11 6.3	20.8
517333 2014 JW_{50}	17.0	X	153.90866	114.66649	125.11075	13.92178	0.1525700	0.23974044	2.5663064	20	12 8.4	21.3
517334 2014 JS_{53}	17.7	X	133.23114	36.86966	221.51336	3.39549	0.1717698	0.23099318	2.6306917	20	12 8.7	21.9
517335 2014 JW_{53}	17.9	X	154.41992	80.15844	148.96821	1.15387	0.1508274	0.23187939	2.6239846	20	11 22.9	22.1
517336 2014 JM_{60}	17.4	X	93.47170	193.36734	104.87151	1.53925	0.1168734	0.23064319	2.6333522	20	12 17.5	21.2
517337 2014 JA_{63}	17.1	X	87.91907	211.49440	94.17918	15.09228	0.1588367	0.23091907	2.6312545	20	12 24.2	21.2
517338 2014 JC_{63}	17.0	X	112.19119	64.93843	169.90641	14.58924	0.0568684	0.21560480	2.7544217	20	10 15.9	21.1
517339 2014 JL_{63}	16.9	X	148.70698	34.05130	212.71475	32.80191	0.1825570	0.23401411	2.6080026	20	12 5.7	21.7
517340 2014 JO_{65}	17.4	X	188.02448	56.29221	157.18970	5.30823	0.1499382	0.24274727	2.5450705	20	12 7.9	21.2
517341 2014 JV_{65}	17.6	X	132.73297	143.54884	125.71058	5.14641	0.1561151	0.23565593	2.5958752	20	12 21.8	21.8
517342 2014 JH_{66}	17.8	X	179.88031	24.98775	204.07161	5.15932	0.1429640	0.24308829	2.5426897	20	12 18.8	21.6
517343 2014 JN_{66}	17.4	X	159.80881	155.40261	103.23742	5.73861	0.1360750	0.24384515	2.5374255	20	—	—
517344 2014 JO_{66}	17.4	X	200.33170	331.58943	193.91962	7.31404	0.1512906	0.22947638	2.6422712	20	10 19.8	21.3
517345 2014 JS_{66}	17.4	X	161.17305	143.82919	83.63753	11.73653	0.0795193	0.23425917	2.6061834	20	12 1.2	21.2
517346 2014 JG_{67}	17.3	X	160.71296	176.37221	63.95161	15.78048	0.0705950	0.23822831	2.5771546	20	12 15.7	21.2
517347 2014 JS_{71}	16.4	X	256.61681	96.40078	47.80336	14.64361	0.0406386	0.24034876	2.5619745	20	12 14.9	19.9
517348 2014 JJ_{72}	17.2	X	111.28996	48.89047	248.65229	3.86409	0.1605907	0.23424075	2.6063201	20	—	—
517349 2014 JQ_{74}	17.3	X	96.00107	242.97829	66.33834	6.88394	0.2906122	0.22744540	2.6579773	20	—	—
517350 2014 JR_{74}	17.4	X	148.53416	135.88474	87.89506	2.72981	0.1326829	0.22742526	2.6581343	20	11 11.1	21.5
517351 2014 JC_{84}	17.3	X	52.83183	220.71714	104.30384	7.08659	0.0457372	0.22119197	2.7078409	20	11 25.9	21.1
517352 2014 JP_{84}	17.3	X	74.36532	209.10466	129.77804	13.26099	0.1166695	0.23265835	2.6181244	20	—	—
517353 2014 JX_{84}	16.9	X	64.03098	192.97579	149.42989	15.04515	0.1863377	0.22471193	2.6794889	20	—	—
517354 2014 JJ_{85}	17.3	X	108.52773	194.45758	100.50781	8.44083	0.0718627	0.23431029	2.6058043	20	12 27.2	20.9
517355 2014 JL_{85}	17.1	X	318.70423	355.33546	67.71573	9.84650	0.0263928	0.22978771	2.6398840	20	11 24.9	20.5
517356 2014 JN_{85}	17.1	X	311.21021	334.84904	101.09198	15.38269	0.0582542	0.23220250	2.6215499	20	12 3.9	20.4
517357 2014 JP_{86}	16.9	X	205.82135	286.95005	203.99095	10.48160	0.1650817	0.21205536	2.7850727	20	9 5.7	21.5
517358 2014 JV_{86}	17.4	X	201.06951	41.59481	120.66189	13.55859	0.2016530	0.22462276	2.6801980	20	10 17.2	22.0
517359 2014 JW_{86}	17.4	X	192.65768	144.51535	52.65185	2.96618	0.1269462	0.23409349	2.6074130	20	11 22.2	21.3
517360 2014 JX_{86}	17.5	X	10.38417	290.01863	86.80798	2.52745	0.0664629	0.23259791	2.6185779	20	12 10.8	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517361 2014 JY_{86}	17.2	X	115.60904	109.31958	143.20260	5.60320	0.1118203	0.22293238	2.6937293	20	11 14.3	21.4
517362 2014 KC_{4}	17.5	X	129.54028	97.34544	199.68074	27.67363	0.3736536	0.23662718	2.5887670	20	—	—
517363 2014 KX_{4}	17.5	X	156.90410	206.89983	45.53424	3.32150	0.1630586	0.23840773	2.5758614	20	12 23.2	21.7
517364 2014 KA_{16}	18.0	X	127.69220	59.71800	198.63783	3.68268	0.1387057	0.22809236	2.6529489	20	12 3.2	22.2
517365 2014 KO_{19}	18.0	X	161.84655	71.80713	148.08951	2.52963	0.1435487	0.23257577	2.6187442	20	11 19.3	22.1
517366 2014 KZ_{25}	17.3	X	211.91812	1.23871	183.75707	5.28523	0.1059605	0.23929968	2.5694567	20	12 2.6	20.9
517367 2014 KC_{29}	17.2	X	202.96794	346.40305	208.99762	8.41000	0.1029134	0.23849699	2.5752187	20	12 5.3	21.0
517368 2014 KE_{33}	17.7	X	130.39229	216.27181	77.73577	13.18412	0.1761847	0.24276685	2.5449336	20	—	—
517369 2014 KL_{43}	17.0	X	96.56585	209.63784	103.71051	17.03228	0.1592270	0.23245777	2.6196303	20	—	—
517370 2014 KP_{43}	17.2	X	87.80842	177.37381	108.85085	12.32850	0.0612638	0.22282973	2.6945565	20	11 23.5	21.2
517371 2014 KS_{43}	17.6	X	109.73825	114.07414	193.46433	13.15296	0.1655600	0.23593732	2.5938107	20	—	—
517372 2014 KV_{43}	17.0	X	35.73581	161.63861	195.47480	15.53494	0.1071984	0.22567362	2.6718712	20	12 22.6	20.9
517373 2014 KR_{52}	17.1	X	345.69125	252.05024	125.73630	7.36587	0.0456188	0.21676058	2.7446218	20	11 4.1	20.7
517374 2014 KD_{53}	16.7	X	358.89543	255.58872	107.15055	7.44004	0.0417836	0.21484429	2.7609180	20	11 2.4	20.3
517375 2014 KS_{56}	17.0	X	186.36803	330.03681	213.42896	13.58170	0.1964026	0.22866864	2.6484898	20	10 24.4	21.3
517376 2014 KV_{57}	17.2	X	191.87327	71.54479	102.21207	12.39634	0.1308477	0.22377306	2.6869785	20	10 27.5	21.5
517377 2014 KY_{57}	18.1	X	124.18417	130.36683	167.03760	5.29354	0.2968269	0.23234714	2.6204618	20	—	—
517378 2014 KZ_{66}	16.8	X	136.81473	176.68854	82.81618	8.84433	0.1602624	0.23132167	2.6282006	20	12 12.9	21.1
517379 2014 KQ_{74}	16.9	X	24.45290	194.83896	150.95185	6.83756	0.0488010	0.21609246	2.7502762	20	11 15.6	20.6
517380 2014 KK_{78}	17.4	X	133.32571	192.61772	54.13020	3.55668	0.1039543	0.22834490	2.6509925	20	11 23.6	21.5
517381 2014 KM_{79}	17.1	X	25.92961	93.68902	260.11235	5.09385	0.0351877	0.22447267	2.6813926	20	11 25.4	20.7
517382 2014 KB_{86}	17.2	X	156.07955	130.53714	90.85840	16.28129	0.2217028	0.22752413	2.6573642	20	11 17.0	21.9
517383 2014 KZ_{86}	16.6	X	97.30695	244.45665	86.79016	13.67111	0.3107722	0.23724819	2.5842475	20	—	—
517384 2014 KV_{87}	17.3	X	143.11920	70.25602	191.78611	11.05356	0.1625398	0.23791115	2.5794445	20	12 22.2	21.7
517385 2014 KE_{93}	17.9	X	149.24552	46.94388	195.42074	7.70216	0.1738297	0.22933056	2.6433911	20	12 3.6	22.3
517386 2014 KL_{95}	16.6	X	45.89725	213.96862	127.24463	16.84457	0.1710597	0.21743503	2.7389433	20	12 23.9	20.7
517387 2014 KT_{100}	17.2	X	129.65480	167.33735	103.21962	15.28755	0.2302328	0.22980846	2.6397252	20	12 20.5	21.8
517388 2014 KZ_{103}	17.5	X	110.37959	82.33233	186.82912	1.88602	0.0566898	0.22314997	2.6919779	20	11 24.7	21.4
517389 2014 KQ_{104}	16.9	X	66.12372	222.30896	77.51879	9.78265	0.1132830	0.21295468	2.7772262	20	11 17.9	20.8
517390 2014 KR_{104}	17.0	X	332.58281	231.49163	154.97754	8.20921	0.0628294	0.21258795	2.7804192	20	10 26.7	20.5
517391 2014 KT_{104}	17.7	X	65.65677	158.63606	161.02950	6.32372	0.1676362	0.21707666	2.7419570	20	12 17.7	21.8
517392 2014 KU_{104}	17.5	X	94.36497	116.52743	169.54764	5.12067	0.1410807	0.21864047	2.7288669	20	12 4.0	21.8
517393 2014 KA_{105}	17.1	X	47.46129	240.35856	105.13898	11.84589	0.0558213	0.22939684	2.6428819	20	12 17.6	20.6
517394 2014 KD_{105}	17.3	X	189.91145	66.53513	101.12608	11.14163	0.0823174	0.22123053	2.7075263	20	10 21.1	21.5
517395 2014 KG_{105}	15.9	X	94.45097	33.80527	183.20204	29.20233	0.1966328	0.17501171	3.1653712	20	9 9.2	20.9
517396 2014 KR_{105}	16.7	X	85.65694	148.75748	148.93520	8.48634	0.1861077	0.21602169	2.7508768	20	12 12.8	21.2
517397 2014 KJ_{106}	17.6	X	163.68490	84.05387	160.51888	4.36646	0.1286929	0.23650980	2.5896235	20	12 21.5	21.6
517398 2014 KL_{106}	17.4	X	200.98183	26.76380	171.83750	4.06384	0.1238687	0.23558711	2.5963807	20	12 4.2	21.2
517399 2014 LQ	17.0	X	97.66942	240.73150	80.38156	9.78796	0.2021871	0.23270084	2.6178058	20	—	—
517400 2014 LL_{4}	17.9	X	120.00419	108.63109	159.01173	2.58222	0.0356166	0.23014038	2.6371864	20	12 4.2	21.6
517401 2014 LP_{5}	17.4	X	54.87225	123.99195	199.45803	4.51349	0.0310664	0.22384964	2.6863656	20	11 24.2	21.0
517402 2014 LN_{10}	17.0	X	177.78145	306.99148	277.49217	7.10520	0.2238676	0.24205688	2.5499075	20	12 5.1	21.3
517403 2014 LY_{13}	17.4	X	73.28423	128.57139	161.52259	3.53073	0.0647939	0.21681043	2.7442011	20	11 8.4	21.2
517404 2014 LB_{14}	17.2	X	192.57082	83.20039	127.35282	6.04932	0.1694528	0.24134507	2.5549188	20	12 6.9	21.2
517405 2014 LP_{15}	16.8	X	97.66059	173.85934	117.08393	10.15344	0.1380500	0.20865721	2.8152294	20	12 11.3	21.3
517406 2014 LA_{18}	17.6	X	120.51740	156.15673	125.05075	3.31469	0.1547072	0.23087107	2.6316191	20	12 24.2	21.9
517407 2014 LG_{21}	16.9	X	132.71155	209.95330	86.50072	19.17286	0.3401368	0.22983329	2.6395350	20	—	—
517408 2014 LE_{23}	17.0	X	145.13590	327.36049	250.51936	12.50564	0.1942985	0.22224949	2.6992444	20	10 28.3	21.6
517409 2014 LT_{24}	17.4	X	165.76829	55.40225	194.07667	12.71003	0.1513929	0.24059342	2.5602373	20	12 27.9	21.6
517410 2014 LT_{29}	16.5	X	104.44303	16.77809	233.37635	7.28961	0.1396615	0.19742072	2.9210628	20	10 26.7	21.1
517411 2014 LV_{29}	17.2	X	117.21971	97.81073	168.20486	9.24395	0.0952129	0.20522921	2.8464918	20	11 28.2	21.7
517412 2014 LA_{30}	16.8	X	59.85924	298.22043	6.71854	12.76967	0.1824639	0.19888789	2.9066796	20	11 17.9	21.2
517413 2014 LD_{30}	15.9	X	24.15610	61.96114	262.35377	9.02848	0.0710516	0.18400559	3.0613668	20	10 9.1	20.1
517414 2014 MB	16.5	X	83.13004	257.40630	93.57835	30.05921	0.3216294	0.23135872	2.6279200	20	—	—
517415 2014 MR_{1}	16.9	X	96.25260	53.82710	244.80610	12.27046	0.2542148	0.22327638	2.6909618	20	12 26.3	21.7
517416 2014 MD_{3}	17.1	X	123.86644	65.05624	224.47735	12.43580	0.2665596	0.22961505	2.6412073	20	—	—
517417 2014 MP_{3}	17.1	X	97.02374	188.50565	101.44018	13.76089	0.0982830	0.22558292	2.6725874	20	12 10.1	21.1
517418 2014 MB_{10}	16.6	X	87.60372	61.52333	220.68092	11.99298	0.1680507	0.21338570	2.7734851	20	11 24.0	21.0
517419 2014 MP_{10}	16.5	X	91.88213	84.98329	230.04869	8.32877	0.2131844	0.21463770	2.7626893	20	—	—
517420 2014 MF_{21}	17.1	X	88.16259	250.91275	85.65123	12.27129	0.2136089	0.23128477	2.6284801	20	—	—
517421 2014 MA_{22}	17.5	X	83.68667	113.19229	184.60521	3.15921	0.1797737	0.21678943	2.7443783	20	12 10.2	21.8
517422 2014 MR_{28}	17.5	X	112.33356	137.34602	127.57069	11.47430	0.2073098	0.22023731	2.7156604	20	11 30.6	22.2
517423 2014 MN_{47}	17.7	X	101.36689	145.19694	160.82805	4.50956	0.2253132	0.22695592	2.6617977	20	—	—
517424 2014 ME_{53}	17.4	X	127.50168	80.69011	206.00498	9.90015	0.2843487	0.22372354	2.6873749	20	—	—
517425 2014 MZ_{56}	16.1	X	220.85906	342.00723	113.19903	19.47656	0.0789824	0.16976636	3.2302413	20	8 17.0	21.0
517426 2014 MM_{67}	16.4	X	139.34586	12.00931	303.79853	32.72381	0.1792534	0.22894953	2.6463232	20	—	—
517427 2014 MR_{72}	15.5	X	313.77702	276.00389	54.60970	14.97162	0.1821140	0.15388322	3.4488571	20	6 21.1	19.9
517428 2014 MB_{73}	16.6	X	70.00658	205.80244	60.67388	8.39080	0.1369461	0.18213438	3.0822990	20	10 12.0	21.1
517429 2014 NQ	17.8	X	144.76403	81.71529	199.83923	4.55944	0.2982179	0.23725602	2.5841906	20	—	—
517430 2014 NZ_{21}	15.9	X	338.29450	105.55412	235.76601	14.46529	0.0665531	0.17061021	3.2195811	20	8 19.9	20.4
517431 2014 NT_{24}	16.3	X	120.55539	326.96080	265.03356	9.44203	0.0855955	0.19655234	2.9296601	20	10 14.4	20.9
517432 2014 NT_{40}	17.3	X	120.97423	101.83910	202.74039	12.44377	0.1531652	0.22250483	2.6971789	20	—	—
517433 2014 NY_{54}	16.6	X	24.14407	260.73061	79.01910	9.67680	0.1072132	0.18779090	3.0200887	20	11 9.4	20.5
517434 2014 NF_{68}	17.3	X	126.23076	66.10610	190.65312	4.34516	0.0677666	0.20874748	2.8144177	20	11 24.9	21.5
517435 2014 OJ_{70}	16.6	X	136.50402	280.80223	302.29820	5.86169	0.1061848	0.19261993	2.9693991	20	10 21.1	21.3
517436 2014 OS_{73}	17.0	X	86.02235	214.97490	124.42798	13.78351	0.3005027	0.22909350	2.6452143	20	—	—
517437 2014 OQ_{100}	16.3	X	63.47125	307.46622	334.50194	11.62634	0.1741876	0.18174408	3.0867103	20	10 19.7	20.9
517438 2014 OU_{100}	16.8	X	105.75414	140.92180	146.82257	15.64592	0.1354825	0.20238268	2.8731203	20	12 14.6	21.6
517439 2014 OT_{106}	16.4	X	7.32647	17.01752	309.80840	9.76008	0.1008756	0.17855740	3.1233272	20	9 18.9	20.4
517440 2014 OP_{111}	17.0	X	109.75070	230.43355	71.85352	6.33222	0.1534292	0.21801711	2.7340660	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517441 2014 OM_{127}	16.3	X	229.17116	46.97941	52.57457	5.77029	0.1196204	0.17329810	3.1862035	20	8 28.0	21.2
517442 2014 OQ_{130}	17.2	X	179.13918	94.37529	126.70749	12.49569	0.2417948	0.22438746	2.6820713	20	12 1.4	21.9
517443 2014 OO_{131}	17.4	X	177.66082	65.45065	186.51135	11.95431	0.2718929	0.24482563	2.5306464	20	—	—
517444 2014 OT_{141}	17.1	X	131.18602	121.65435	83.82011	2.90219	0.0405074	0.18485577	3.0519732	20	9 24.3	21.5
517445 2014 OH_{150}	16.1	X	219.29577	338.57330	126.63279	18.03152	0.1662752	0.17198388	3.2024146	20	8 18.8	21.2
517446 2014 OO_{151}	17.1	X	121.02798	230.96150	37.02476	4.61348	0.1739343	0.21462326	2.7628132	20	12 6.4	21.8
517447 2014 OK_{168}	16.3	X	336.58080	0.09328	358.36363	9.96820	0.0464691	0.18074523	3.0980718	20	9 17.6	20.5
517448 2014 OE_{205}	16.8	X	42.68015	315.15820	352.05215	9.04866	0.0744878	0.18448209	3.0560930	20	10 14.1	21.0
517449 2014 OH_{205}	17.0	X	115.76285	192.42775	85.05583	8.57850	0.1710275	0.21011927	2.8021548	20	12 12.7	21.6
517450 2014 OB_{219}	16.4	X	355.11080	242.06348	97.22761	11.49963	0.0971860	0.17985468	3.1082901	20	9 27.2	20.5
517451 2014 OK_{228}	16.5	X	51.99458	352.04566	305.26409	6.13380	0.2724049	0.17997831	3.1068666	20	11 10.2	21.1
517452 2014 OE_{260}	16.3	X	13.18209	229.42964	80.29578	10.67720	0.0512696	0.17431045	3.1738551	20	9 11.1	20.7
517453 2014 OA_{270}	16.2	X	39.41111	206.18858	70.33160	12.23674	0.0700543	0.17033243	3.2230806	20	9 7.6	20.8
517454 2014 OU_{336}	16.6	X	29.52647	324.36879	7.32995	10.50881	0.0741779	0.18812236	3.0165401	20	10 27.9	20.8
517455 2014 OJ_{342}	17.1	X	54.46169	267.27844	46.19344	3.89981	0.1015559	0.19339003	2.9615109	20	11 13.9	21.2
517456 2014 OB_{346}	16.9	X	51.75572	146.55344	157.28121	10.09754	0.0568913	0.19362431	2.9591214	20	10 26.6	21.1
517457 2014 OY_{346}	16.4	X	5.10266	185.98198	143.56153	12.69197	0.1162296	0.18012902	3.1051333	20	9 29.2	20.3
517458 2014 OO_{354}	16.9	X	34.53612	94.20007	244.68403	6.02645	0.0695595	0.19826209	2.9127928	20	11 16.7	20.9
517459 2014 OV_{358}	16.7	X	126.01671	55.66933	167.72452	13.28320	0.0830273	0.18048357	3.1010654	20	10 13.4	21.5
517460 2014 OC_{369}	16.8	X	94.09342	314.40748	300.51508	4.41754	0.1175776	0.19212806	2.9744649	20	10 18.1	21.3
517461 2014 OZ_{386}	17.3	X	120.84730	115.96696	152.69339	10.61944	0.1588852	0.21132135	2.7915182	20	12 8.0	22.0
517462 2014 OK_{389}	16.1	X	5.46084	275.46013	77.04073	3.73326	0.2601613	0.17206254	3.2014385	20	11 10.9	19.4
517463 2014 OU_{399}	16.9	X	150.37163	93.45631	104.49329	3.34196	0.0373043	0.17915824	3.1163402	20	10 6.3	21.5
517464 2014 OQ_{402}	16.6	X	57.22201	308.94147	4.96555	7.90900	0.0517412	0.18996082	2.9970456	20	11 7.9	20.8
517465 2014 OQ_{403}	16.7	X	99.78179	238.62764	356.87599	8.75668	0.1161219	0.17972830	3.1097471	20	9 29.8	21.3
517466 2014 PH_{13}	16.9	X	47.06130	356.09036	303.41419	5.63399	0.1143206	0.18273926	3.0754935	20	10 15.5	21.2
517467 2014 PY_{17}	16.0	X	41.84300	322.96290	337.26734	9.39476	0.1111955	0.18031758	3.1029682	20	10 7.9	20.4
517468 2014 PG_{26}	16.3	X	101.16319	111.90456	133.77883	16.68832	0.1109783	0.18431270	3.0579653	20	10 20.9	21.2
517469 2014 PB_{29}	17.2	X	102.98435	162.77494	144.08107	7.96934	0.2759363	0.21265245	2.7798570	20	—	—
517470 2014 PR_{30}	16.7	X	16.59196	183.11499	142.52219	7.16786	0.1595121	0.17530235	3.1618715	20	10 15.7	20.6
517471 2014 PW_{39}	16.6	X	19.25242	170.86853	150.16395	10.41961	0.0769368	0.17334766	3.1855962	20	10 3.6	20.8
517472 2014 PO_{52}	16.6	X	54.36115	353.21023	284.82285	3.17900	0.1392570	0.17408038	3.1766510	20	10 1.5	21.0
517473 2014 PD_{72}	17.2	X	66.20876	241.33423	71.40466	2.92795	0.0871559	0.19520651	2.9431102	20	11 25.6	21.5
517474 2014 PV_{72}	16.8	X	64.50994	288.80323	2.07103	5.17790	0.1238801	0.18195796	3.0842910	20	10 28.9	21.2
517475 2014 PH_{73}	16.1	X	30.98301	209.81037	125.68372	12.30487	0.1692593	0.17672760	3.1448490	20	11 21.1	20.4
517476 2014 QQ_{27}	16.3	X	57.34132	307.57972	331.93591	7.50649	0.1362043	0.17270638	3.1934770	20	10 5.1	20.9
517477 2014 QS_{29}	17.2	X	54.54540	140.86994	179.03079	15.63838	0.2098447	0.18914697	3.0056365	20	12 6.8	21.9
517478 2014 QM_{52}	18.1	X	152.47651	105.88804	156.53927	4.63635	0.3172206	0.22888146	2.6468478	20	12 25.1	23.1
517479 2014 QM_{90}	16.6	X	35.44150	133.83775	182.80264	8.99369	0.1342895	0.18371060	3.0646431	20	10 29.1	20.6
517480 2014 QE_{118}	16.3	X	345.37885	204.90441	163.82206	12.13613	0.0778593	0.17620554	3.1510576	20	10 15.4	20.4
517481 2014 QW_{138}	17.3	X	88.95001	105.65885	161.88342	5.73420	0.1737486	0.18367379	3.0650525	20	11 4.9	22.1
517482 2014 QY_{145}	16.8	X	119.62726	65.36319	164.90926	8.60282	0.0568098	0.17779686	3.1322277	20	10 12.2	21.4
517483 2014 QJ_{153}	16.4	X	3.00995	262.88038	62.27472	12.05855	0.0900260	0.17920755	3.1157684	20	9 21.2	20.5
517484 2014 QM_{165}	17.2	X	125.98503	169.90841	112.12255	14.99363	0.1848558	0.21873697	2.7280642	20	12 28.5	21.7
517485 2014 QJ_{166}	15.7	X	27.12180	136.27259	163.57423	28.13694	0.2317434	0.17264116	3.1942813	20	10 9.8	19.9
517486 2014 QE_{175}	16.9	X	40.58129	195.15668	107.32688	3.41457	0.1341773	0.17520721	3.1630161	20	10 16.8	21.2
517487 2014 QG_{176}	17.1	X	94.61379	111.19523	166.96347	2.08322	0.1257027	0.18957677	3.0010920	20	11 18.3	21.6
517488 2014 QE_{225}	16.2	X	6.66452	165.48458	167.41809	16.12975	0.2271476	0.17324900	3.1868054	20	10 16.5	19.8
517489 2014 QQ_{225}	16.7	X	41.40758	130.69904	182.31231	6.68063	0.0997568	0.17965571	3.1105848	20	10 26.4	20.9
517490 2014 QC_{227}	16.5	X	149.30752	71.08191	156.98818	15.39026	0.2162806	0.20005916	2.8953234	20	11 15.6	21.7
517491 2014 QY_{242}	16.3	X	359.70734	315.54308	38.19671	9.54682	0.0428876	0.17403194	3.1772404	20	10 13.0	20.5
517492 2014 QC_{243}	16.8	X	22.12402	315.63796	30.78465	9.08833	0.1462009	0.18162910	3.0880128	20	11 14.8	20.8
517493 2014 QE_{245}	16.2	X	37.07173	275.36939	21.61996	14.68476	0.1562126	0.17117950	3.2124390	20	10 7.3	20.4
517494 2014 QW_{252}	16.6	X	40.10772	279.36204	35.12204	10.52973	0.0866943	0.17495890	3.1660081	20	10 23.1	20.9
517495 2014 QB_{288}	17.2	X	135.21523	215.00328	83.76640	16.02936	0.2156764	0.22255089	2.6968067	20	—	—
517496 2014 QB_{289}	16.4	X	329.38942	319.13762	61.37317	12.41340	0.0118372	0.17777765	3.1324534	20	10 11.0	20.9
517497 2014 QN_{292}	16.5	X	118.21803	205.96180	46.55761	13.67420	0.1448532	0.19019010	2.9946365	20	11 11.2	21.2
517498 2014 QL_{299}	16.3	X	118.00114	250.23774	339.51118	8.34542	0.0938273	0.18513433	3.0489110	20	10 8.6	21.0
517499 2014 QG_{304}	16.7	X	78.31515	110.12660	156.59248	23.10675	0.1305184	0.17836738	3.1255450	20	10 22.0	21.6
517500 2014 QU_{307}	16.7	X	32.95419	257.13437	69.38934	1.90456	0.1635922	0.17576538	3.1563161	20	11 8.2	20.7
517501 2014 QG_{324}	16.1	X	85.50346	264.22223	12.64646	15.80278	0.2077088	0.18212373	3.0824191	20	11 9.3	21.1
517502 2014 QH_{326}	16.4	X	44.86732	148.52174	177.39118	20.04043	0.1493749	0.17821588	3.1273161	20	11 23.8	21.1
517503 2014 QD_{335}	16.8	X	304.83972	5.56421	103.26176	7.09550	0.0950575	0.18755634	3.0226061	20	12 19.9	20.5
517504 2014 QS_{343}	16.2	X	116.54674	114.09434	156.04662	15.37584	0.1312745	0.20596334	2.8397238	20	12 5.0	21.0
517505 2014 QA_{369}	16.5	X	92.09853	255.18732	16.84731	10.97481	0.1767385	0.18587348	3.0408227	20	11 9.5	21.3
517506 2014 QY_{375}	16.5	X	27.96839	138.80444	187.69579	9.50121	0.0727924	0.17309033	3.1887528	20	10 20.2	20.7
517507 2014 QW_{400}	16.6	X	100.54218	79.21331	154.53009	16.81141	0.0793705	0.17213445	3.2005468	20	9 27.5	21.4
517508 2014 QC_{430}	16.8	X	78.07277	334.73069	302.27526	2.61856	0.2177396	0.18578656	3.0417710	20	11 7.8	21.5
517509 2014 QJ_{447}	16.3	X	32.43471	235.01409	98.82645	6.13772	0.1360786	0.17913246	3.1166392	20	11 14.7	20.5
517510 2014 QT_{447}	15.9	X	31.03679	235.11284	119.68075	17.61915	0.2157317	0.17898559	3.1183439	20	12 19.9	20.2
517511 2014 QX_{449}	16.0	X	83.37120	163.78431	135.50837	10.96595	0.0801127	0.18050842	3.1007808	20	11 27.4	20.7
517512 2014 QW_{450}	16.6	X	124.90859	170.84032	49.39052	7.43785	0.1468576	0.17473061	3.1687651	20	10 11.1	21.6
517513 2014 QD_{451}	16.8	X	66.14426	276.26808	21.60636	7.89414	0.1440965	0.18078202	3.0976515	20	11 10.4	21.3
517514 2014 QK_{451}	16.5	X	96.48044	5.88699	239.74874	3.94766	0.1297938	0.17583934	3.1554310	20	10 9.1	21.2
517515 2014 QN_{451}	15.7	X	40.78782	216.23607	121.51578	25.79607	0.1903017	0.17969972	3.1100768	20	12 11.8	20.4
517516 2014 QB_{452}	16.6	X	81.26423	134.69367	163.43907	8.88184	0.1846700	0.18641361	3.0349460	20	12 4.5	21.5
517517 2014 QO_{452}	17.0	X	115.65301	248.04719	15.90550	4.62512	0.0955330	0.19367221	2.9586335	20	11 19.4	21.5
517518 2014 QP_{452}	16.4	X	53.34906	271.37243	88.66456	9.97895	0.1155121	0.19755203	2.9197682	20	—	—
517519 2014 QQ_{452}	16.4	X	267.60767	249.34555	152.60313	5.80106	0.0348895	0.15390140	3.4485855	20	8 8.2	21.3
517520 2014 QV_{452}	16.9	X	331.40611	263.45243	175.92695	16.91216	0.3058324	0.17378867	3.1802047	20	12 25.9	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517521 2014 QY_{452}	16.4	X	235.84963	71.55608	90.02337	10.71272	0.0591641	0.17068867	3.2185944	20	11 24.6	21.1
517522 2014 QZ_{452}	16.8	X	337.12317	307.15223	113.27081	2.31150	0.1481555	0.17347681	3.1840149	20	12 6.1	20.5
517523 2014 QW_{454}	16.5	X	45.93574	114.00046	193.35245	11.06431	0.0667449	0.17512255	3.1640354	20	10 19.3	20.7
517524 2014 QB_{456}	16.0	X	57.15325	269.17902	25.27589	11.86637	0.0692798	0.17207148	3.2013277	20	10 16.8	20.5
517525 2014 RQ_{6}	18.3	X	279.76802	311.62040	18.55963	6.23082	0.1488678	0.29063741	2.2571913	20	5 4.7	21.0
517526 2014 RU_{6}	17.5	X	120.80372	10.91438	14.14067	11.37297	0.1450484	0.23352120	2.6116712	20	2 9.2	21.3
517527 2014 RB_{22}	16.5	X	37.33670	305.30584	21.48995	10.60945	0.1337614	0.18052748	3.1005625	20	11 8.6	20.7
517528 2014 RZ_{41}	16.3	X	72.98466	293.87719	346.50086	9.40538	0.1660871	0.17854252	3.1235007	20	10 28.3	21.0
517529 2014 RF_{44}	16.2	X	29.01482	72.45106	259.75121	6.52354	0.2432855	0.17551388	3.1593306	20	11 20.8	20.2
517530 2014 RJ_{60}	16.4	X	61.09820	286.43258	20.75280	7.25027	0.1578295	0.17540394	3.1606505	20	11 16.7	21.1
517531 2014 RL_{65}	16.2	X	47.42526	154.92066	162.94712	9.39370	0.0628100	0.18014284	3.1049745	20	11 5.4	20.6
517532 2014 SW	16.3	X	105.44877	255.60355	60.65289	30.96637	0.4051466	0.21160210	2.7890485	20	—	—
517533 2014 SF_{59}	16.6	X	74.27673	233.40174	36.84966	10.44133	0.0752106	0.17253399	3.1956039	20	10 10.9	21.1
517534 2014 SY_{98}	16.3	X	86.64350	83.31234	184.95016	10.71232	0.0540795	0.17217468	3.2000483	20	10 19.2	20.9
517535 2014 SP_{133}	16.0	X	39.94558	303.84510	36.43711	17.17320	0.2154267	0.18173911	3.0867665	20	12 9.5	20.5
517536 2014 SZ_{142}	17.0	X	143.71445	122.91233	207.02703	33.89542	0.2778732	0.23022530	2.6365379	20	1 1.2	22.0
517537 2014 SU_{154}	18.0	X	119.64155	137.79756	221.61401	3.41670	0.2493157	0.22783266	2.6549645	20	1 16.1	21.8
517538 2014 SF_{156}	16.7	X	49.95058	301.76676	14.73405	0.82528	0.1709088	0.17646108	3.1480148	20	11 18.4	21.0
517539 2014 SV_{215}	17.2	X	264.01331	192.81456	120.48045	5.54058	0.1982023	0.26586104	2.3953349	20	3 22.9	20.7
517540 2014 SX_{215}	16.7	X	86.79717	246.19976	120.55867	6.94823	0.0922886	0.19707682	2.9244600	20	—	—
517541 2014 SP_{216}	17.8	X	288.66316	259.39944	94.74574	7.67023	0.1378451	0.29347698	2.2426079	20	6 27.1	20.1
517542 2014 SY_{223}	18.8	X	239.26832	100.55131	194.17511	16.50801	0.2058259	0.43522200	1.7244958	20	1 12.6	21.5
517543 2014 SW_{280}	16.9	X	148.55834	270.29486	37.51510	11.80734	0.1366535	0.21619539	2.7494032	20	—	—
517544 2014 SG_{285}	16.0	X	352.03368	169.30641	199.50854	28.38660	0.1745096	0.17094049	3.2154327	20	10 28.2	19.7
517545 2014 SL_{290}	16.6	X	67.19016	107.02100	184.36203	20.45569	0.1727628	0.18446094	3.0563267	20	11 12.1	21.4
517546 2014 SO_{299}	15.7	X	17.17154	140.81850	226.91745	11.40857	0.1369711	0.17460626	3.1702695	20	12 2.9	19.8
517547 2014 SY_{304}	15.7	X	67.33935	81.02418	203.64824	25.24194	0.1963100	0.17379839	3.1800862	20	11 3.8	20.5
517548 2014 SM_{312}	16.1	X	81.02193	137.24010	173.24476	7.44172	0.1378055	0.18677848	3.0309922	20	12 13.3	20.8
517549 2014 SK_{330}	17.9	X	188.97409	73.92469	297.76431	2.35707	0.2310223	0.26160219	2.4212621	20	3 25.8	22.0
517550 2014 SV_{330}	15.8	X	89.93852	264.72826	21.95339	15.76596	0.2239071	0.17885561	3.1198544	20	11 26.1	21.1
517551 2014 SB_{351}	18.3	X	45.19041	234.67609	219.54664	19.94783	0.0742234	0.39135339	1.8510720	20	—	—
517552 2014 SE_{353}	16.1	X	8.96714	240.66688	104.18632	6.89495	0.0782578	0.16925009	3.2368067	20	10 18.9	20.4
517553 2014 SD_{354}	16.4	X	82.78413	128.33327	159.12986	10.31024	0.2002935	0.17707870	3.1406906	20	11 24.4	21.5
517554 2014 SC_{355}	16.8	X	36.81169	97.67837	321.84818	14.33148	0.2195004	0.18629059	3.0362819	20	—	—
517555 2014 SD_{355}	16.6	X	297.41898	186.12829	261.86997	4.45727	0.1424395	0.17054517	3.2203996	20	11 2.1	20.6
517556 2014 TL_{6}	16.4	X	35.40347	134.69630	201.63876	9.14639	0.2276242	0.17413862	3.1759426	20	12 2.8	20.7
517557 2014 TV_{6}	16.5	X	354.65848	250.18220	151.57677	2.51925	0.0871126	0.17775046	3.1327727	20	12 7.8	20.4
517558 2014 TE_{8}	17.9	X	119.08954	249.71753	162.65379	3.43109	0.2057767	0.23980274	2.5658620	20	3 15.4	21.5
517559 2014 TB_{9}	15.6	X	112.90271	273.55832	21.06405	9.11043	0.0747617	0.18850075	3.0125019	20	12 21.2	20.3
517560 2014 TH_{38}	16.6	X	48.14977	142.51706	197.31188	9.39494	0.1260942	0.18366649	3.0651338	20	12 10.2	21.0
517561 2014 TY_{45}	18.9	X	24.48546	251.15750	209.32269	23.49378	0.1751983	0.38756854	1.8631037	20	—	—
517562 2014 TQ_{47}	16.3	X	59.14040	284.02636	28.86020	24.57892	0.2579382	0.17830760	3.1262436	20	11 29.0	21.4
517563 2014 TP_{54}	17.0	X	168.88840	221.78046	127.33577	5.10005	0.1316092	0.23510291	2.5999443	20	2 9.8	21.0
517564 2014 TL_{57}	17.8	X	236.89844	217.59804	146.36137	4.76707	0.1700069	0.27644537	2.3337975	20	5 1.6	21.3
517565 2014 TX_{58}	18.4	X	203.20530	86.34560	344.26422	3.10456	0.2007545	0.28602489	2.2813933	20	6 22.2	21.9
517566 2014 TY_{66}	17.2	X	12.96628	53.82946	344.27344	0.14785	0.1758054	0.18165291	3.0877429	20	—	—
517567 2014 TX_{81}	15.9	X	39.81042	284.88957	29.54598	11.04620	0.1877669	0.17197284	3.2025516	20	11 3.7	20.2
517568 2014 TH_{89}	16.8	X	15.99104	43.52687	349.32944	1.42902	0.0916151	0.18091690	3.0961117	20	12 27.7	20.7
517569 2014 UN_{1}	16.8	X	26.20015	243.95499	212.71037	14.50331	0.1221303	0.20606224	2.8388151	20	—	—
517570 2014 UV_{24}	16.8	X	357.14793	350.41082	79.19945	10.25199	0.1108470	0.18204887	3.0832641	20	—	—
517571 2014 UF_{35}	17.9	X	170.33001	176.94791	241.83394	1.76729	0.1973738	0.26974749	2.3722718	20	5 8.2	21.8
517572 2014 US_{50}	16.3	X	296.52415	242.79941	253.44249	7.07324	0.0477904	0.18020233	3.1042911	20	—	—
517573 2014 UO_{68}	17.6	X	219.99745	87.38038	254.01288	0.46896	0.1511588	0.26441694	2.4040484	20	3 16.6	21.3
517574 2014 UW_{85}	14.3	X	138.81046	52.78635	39.70102	1.60838	0.0742474	0.08295732	5.2067440	20	5 15.9	21.4
517575 2014 UW_{92}	17.1	X	87.79685	35.17264	359.12511	6.50693	0.3216409	0.21768375	2.7368566	20	2 5.4	20.5
517576 2014 UK_{96}	17.8	X	207.47084	204.72122	138.99207	2.10373	0.1982555	0.25894995	2.4377668	20	3 8.5	21.8
517577 2014 UW_{117}	17.4	X	152.64662	259.96447	84.77348	5.89279	0.2856537	0.23831648	2.5765189	20	2 1.7	21.7
517578 2014 UW_{134}	17.2	X	158.86601	71.63100	265.99044	2.78049	0.2982113	0.23522663	2.5990326	20	1 28.4	21.7
517579 2014 UF_{160}	18.2	X	281.08267	92.89249	36.41349	22.08253	0.0509448	0.35423127	1.9782361	20	—	—
517580 2014 UZ_{170}	18.4	X	187.80923	269.36584	200.37080	6.00443	0.1007754	0.29265379	2.2468114	20	8 2.1	21.6
517581 2014 UY_{230}	16.6	X	109.16318	86.83090	206.32775	10.12929	0.0801892	0.18164520	3.0878303	20	12 14.9	21.4
517582 2014 VE_{5}	16.3	X	34.54574	270.85643	50.35951	9.63373	0.1542803	0.17473532	3.1687082	20	11 2.9	20.4
517583 2014 VN_{22}	18.1	X	196.27244	319.73815	79.89228	5.35991	0.1042998	0.26656236	2.3911317	20	5 9.6	21.6
517584 2014 WH_{26}	18.4	X	175.18293	248.09185	200.13339	2.10678	0.1378792	0.27703853	2.3304651	20	6 19.9	22.0
517585 2014 WS_{43}	17.3	X	176.51118	159.09336	177.54210	2.62740	0.1605825	0.23674950	2.5878752	20	2 2.4	21.3
517586 2014 WF_{62}	17.0	X	192.88427	261.55916	43.25093	14.79676	0.0242729	0.22713220	2.6604202	20	1 7.9	21.0
517587 2014 WD_{71}	17.8	X	210.20714	201.02245	157.28008	5.09158	0.1899914	0.26291836	2.4131748	20	3 29.4	21.7
517588 2014 WA_{83}	17.6	X	28.80227	133.62282	71.20478	7.29751	0.0480091	0.26629198	2.3927500	20	5 12.4	20.2
517589 2014 WK_{93}	17.9	X	115.69270	343.41530	200.07455	4.98873	0.1144832	0.29213456	2.2494728	20	8 22.9	21.0
517590 2014 WE_{96}	16.8	X	33.17070	178.61421	207.19532	11.22905	0.0861012	0.18275401	3.0753280	20	—	—
517591 2014 WL_{118}	17.8	X	271.32783	26.01910	52.26953	4.77259	0.0246318	0.30983807	2.1629486	20	10 27.9	20.2
517592 2014 WT_{118}	13.6	X	277.81838	252.87268	57.95779	28.35169	0.0741343	0.08162257	5.2633533	20	5 3.4	20.6
517593 2014 WC_{123}	17.3	X	107.39813	12.50699	16.79360	6.37394	0.0510091	0.21682412	2.7440856	20	1 14.9	21.0
517594 2014 WX_{199}	14.4	X	295.21556	313.08689	30.63338	17.18891	0.1056306	0.09689426	4.6946585	20	6 19.1	20.8
517595 2014 WF_{232}	14.0	X	197.31561	316.57259	71.89089	8.90441	0.0684988	0.08367718	5.1768395	20	5 3.6	21.1
517596 2014 WJ_{276}	16.5	X	337.74403	320.10318	132.47432	8.28661	0.1388686	0.17713646	3.1400079	20	—	—
517597 2014 WB_{356}	18.3	X	58.79211	326.12060	126.69669	24.10133	0.0469637	0.38429084	1.8736826	20	—	—
517598 2014 WA_{360}	16.4	X	29.12452	284.90084	181.30942	21.54197	0.1070199	0.22043047	2.7140737	20	1 1.4	20.1
517599 2014 WY_{364}	18.2	X	15.77056	346.21026	99.84384	22.75709	0.0532773	0.37393032	1.9081343	20	—	—
517600 2014 WU_{366}	17.9	X	265.24499	281.00867	277.88441	18.98921	0.0785977	0.37786972	1.8948492	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517601 2014 WP_{369}	18.3	X	30.29263	240.36058	218.25019	21.68651	0.0678291	0.38570538	1.8690988	20	—	—
517602 2014 WS_{373}	17.9	X	146.64159	105.25463	4.23336	4.78634	0.1092585	0.27020361	2.3696013	20	6 16.9	21.4
517603 2014 WT_{421}	17.5	X	96.82255	263.73201	204.58689	5.49355	0.1933334	0.22888100	2.6468514	20	4 30.3	21.2
517604 2014 WL_{467}	15.8	X	90.28951	81.54167	314.00614	12.17758	0.0318024	0.17695895	3.1421075	20	1 5.7	20.2
517605 2014 WQ_{469}	16.6	X	126.25309	294.89554	166.64811	13.33185	0.1186819	0.22925938	2.6439382	20	5 18.5	20.7
517606 2014 WV_{478}	16.2	X	71.68291	237.22474	167.92651	9.66701	0.1170823	0.18282959	3.0744804	20	—	—
517607 2014 WZ_{479}	17.3	X	239.86869	242.99446	150.90641	8.73980	0.0551986	0.25730360	2.4481544	20	6 26.4	20.7
517608 2014 WY_{494}	16.0	X	31.89258	207.71351	249.02508	8.61072	0.0493050	0.18186817	3.0853061	20	1 2.5	20.1
517609 2014 WF_{504}	15.9	X	62.38926	188.76752	138.07626	13.89745	0.2575868	0.18109809	3.0940462	20	12 25.7	20.9
517610 2014 WU_{518}	15.9	X	121.85507	236.07454	63.21910	13.01038	0.1319882	0.18226502	3.0808259	20	—	—
517611 2014 WG_{519}	16.3	X	121.60869	295.39243	45.42594	11.19913	0.0889479	0.18350951	3.0668815	20	—	—
517612 2014 WH_{519}	16.3	X	63.21625	352.09106	55.24000	11.17807	0.1508379	0.19004365	2.9961748	20	—	—
517613 2014 WJ_{519}	16.5	X	71.15471	352.75818	50.87103	9.50381	0.0890644	0.18475448	3.0530885	20	—	—
517614 2014 WP_{519}	17.3	X	83.03532	327.37258	153.44281	13.58816	0.0804431	0.22673376	2.6635361	20	4 15.6	20.9
517615 2014 WR_{519}	16.5	X	289.37816	137.00611	5.61221	9.95496	0.0842431	0.17457600	3.1706357	20	—	—
517616 2014 WZ_{519}	15.8	X	244.61110	329.24435	260.17295	13.60350	0.0902522	0.17076019	3.2176957	20	—	—
517617 2014 WB_{520}	16.5	X	340.26382	225.06323	286.97507	8.87016	0.0935920	0.18589616	3.0405753	20	—	—
517618 2014 XF	17.4	X	34.50365	152.53794	268.67586	20.41132	0.1092124	0.37198403	1.9147843	20	—	—
517619 2014 XP_{12}	14.1	X	171.44788	354.99174	72.46603	16.44850	0.0801158	0.08412109	5.1586111	20	5 21.7	21.3
517620 2014 XD_{41}	18.1	X	340.37407	98.74795	61.11996	23.81098	0.0594035	0.37761573	1.8956988	20	—	—
517621 2014 YU_{1}	16.8	X	49.69663	132.75529	351.91292	8.88037	0.1447104	0.21661843	2.7458224	20	3 6.9	19.8
517622 2014 YW_{7}	18.0	X	274.56038	112.52396	309.64065	7.67715	0.1299134	0.30130809	2.2035802	20	9 16.4	20.4
517623 2014 YR_{10}	16.7	X	77.79313	217.51822	255.15871	7.45916	0.1323249	0.22337537	2.6901667	20	3 28.6	20.2
517624 2014 YE_{16}	17.7	X	192.71103	323.27089	120.00644	6.66402	0.0952204	0.26660588	2.3908715	20	7 2.8	21.0
517625 2014 YJ_{49}	18.2	X	19.45351	359.83346	123.92721	24.15849	0.0750957	0.38094334	1.8846431	20	—	—
517626 2014 YK_{49}	16.9	X	57.58132	252.26306	281.14411	11.39868	0.1592731	0.23495638	2.6010252	20	5 27.6	20.1
517627 2014 YN_{50}	18.0	X	115.87794	84.77518	246.96768	18.21411	0.0492996	0.34650167	2.0075475	20	—	—
517628 2014 YY_{50}	17.6	X	24.95018	61.98626	32.85524	20.93059	0.1036728	0.36135737	1.9521422	20	—	—
517629 2014 YD_{51}	18.6	X	289.87235	127.50849	65.64485	22.77765	0.0901957	0.36678806	1.9328253	20	—	—
517630 2014 YX_{55}	17.0	X	223.52620	356.40198	318.29096	8.37256	0.1054773	0.21382062	2.7697230	20	2 21.4	21.1
517631 2014 YY_{55}	17.4	X	63.78270	341.33735	113.76951	3.22490	0.0285887	0.20325157	2.8649262	20	2 8.2	21.2
517632 2014 YA_{56}	16.7	X	348.31095	185.86327	64.78342	16.29777	0.0708918	0.21944105	2.7222257	20	5 15.1	19.9
517633 2014 YD_{56}	16.8	X	97.62413	20.07977	5.67504	11.43616	0.0463208	0.18962270	3.0006074	20	1 2.4	21.1
517634 2014 YG_{56}	16.7	X	284.47349	316.93986	11.71019	15.16583	0.1261489	0.22932071	2.6434668	20	5 10.6	20.5
517635 2015 AB_{3}	18.3	X	158.19732	178.51783	170.43629	23.11611	0.0753815	0.38391579	1.8749027	20	—	—
517636 2015 AB_{20}	16.7	X	100.85175	353.52993	106.20115	15.78453	0.0718747	0.24247544	2.5469722	20	4 13.5	20.4
517637 2015 AW_{40}	16.1	X	150.51741	184.64238	118.11823	10.54951	0.0651710	0.17248471	3.1962125	20	—	—
517638 2015 AJ_{197}	17.7	X	129.65629	282.25934	227.22672	0.70873	0.1290746	0.26047357	2.4282512	20	7 23.3	21.2
517639 2015 AL_{255}	15.7	X	41.83729	216.20636	141.68656	16.64272	0.2853483	0.17834852	3.1257653	20	—	—
517640 2015 AX_{283}	17.3	X	254.54248	37.58624	245.32070	3.27023	0.0188707	0.21237869	2.7822454	20	2 23.1	21.1
517641 2015 BL_{4}	18.1	X	273.47720	89.40505	131.19313	23.45044	0.0708608	0.37051034	1.9198582	20	—	—
517642 2015 BL_{24}	18.0	X	124.07829	232.04588	145.61653	23.29784	0.1100935	0.37442274	1.9064609	20	—	—
517643 2015 BQ_{250}	18.7	X	212.85065	162.45741	130.81470	23.12133	0.0411439	0.37303613	1.9111823	20	—	—
517644 2015 BL_{464}	18.4	X	21.16888	285.59224	168.89357	23.34472	0.0685401	0.35911816	1.9602485	20	—	—
517645 2015 BP_{514}	18.0	X	263.40647	148.19735	97.84098	23.54015	0.0642180	0.37573554	1.9020176	20	—	—
517646 2015 BU_{527}	18.9	X	232.09952	95.59713	132.98677	24.47242	0.0593910	0.35347600	1.9810530	20	—	—
517647 2015 BX_{542}	17.4	X	36.54612	330.37783	190.21843	3.46015	0.0289759	0.21166878	2.7884627	20	3 24.5	20.9
517648 2015 BA_{543}	17.0	X	12.60863	201.26160	342.27390	8.09120	0.1275123	0.20993260	2.8038157	20	3 19.3	20.2
517649 2015 BB_{543}	17.3	X	317.54030	181.90616	71.28223	5.26452	0.0978177	0.21660971	2.7458961	20	3 30.0	20.8
517650 2015 BD_{543}	16.7	X	218.37031	260.92712	94.41319	14.40271	0.2190769	0.22180039	2.7028867	20	4 9.0	21.6
517651 2015 BJ_{543}	17.3	X	279.93216	79.40669	194.42957	4.66615	0.0490091	0.21553457	2.7550200	20	3 10.3	21.2
517652 2015 BK_{543}	16.9	X	188.15262	202.21587	161.21245	6.69827	0.0232681	0.21931815	2.7232426	20	3 16.4	20.6
517653 2015 BM_{543}	16.7	X	150.60681	137.93494	228.93986	11.23444	0.0750204	0.19645217	2.9306559	20	2 7.6	21.3
517654 2015 BN_{543}	16.7	X	318.48245	38.39282	250.57558	13.34667	0.1121753	0.23288571	2.6164202	20	5 13.1	19.7
517655 2015 BR_{543}	17.4	X	204.24783	80.91826	285.10004	5.09497	0.0308679	0.22133859	2.7066450	20	4 4.5	21.3
517656 2015 BX_{543}	17.5	X	285.62716	267.44072	32.14775	3.05769	0.0723168	0.21816166	2.7328582	20	4 17.3	21.2
517657 2015 BY_{543}	17.4	X	268.78095	247.41482	42.65840	2.60073	0.0233539	0.20579469	2.8412750	20	3 23.4	21.2
517658 2015 BC_{544}	16.1	X	179.30773	166.06046	177.14934	27.44316	0.0436214	0.18409289	3.0603989	20	2 11.6	20.9
517659 2015 BD_{544}	17.2	X	21.19393	22.30847	177.81789	3.73144	0.0333108	0.20935228	2.8089947	20	4 25.6	20.8
517660 2015 BG_{544}	16.6	X	249.89240	325.12960	36.48856	9.98989	0.1833467	0.21940632	2.7225130	20	5 9.2	20.9
517661 2015 BH_{544}	17.3	X	170.42382	22.46692	53.92401	4.73143	0.0194924	0.22237090	2.6982618	20	5 27.3	21.0
517662 2015 BK_{544}	16.4	X	27.58065	359.68422	100.93536	12.49485	0.0219120	0.18579974	3.0416272	20	1 1.5	20.6
517663 2015 BM_{544}	16.5	X	24.67201	241.43342	210.59972	14.01518	0.1408088	0.18285808	3.0741611	20	—	—
517664 2015 BO_{544}	16.9	X	126.82281	343.44930	72.54727	7.52048	0.0615995	0.20129620	2.8834493	20	3 18.0	21.1
517665 2015 BR_{544}	16.9	X	258.37621	244.06578	89.74597	6.82777	0.0374493	0.21959591	2.7209458	20	5 4.4	20.6
517666 2015 BT_{544}	17.1	X	329.72466	251.73344	17.06269	9.35529	0.0422579	0.22507661	2.6765938	20	5 9.4	20.6
517667 2015 BU_{544}	16.7	X	139.09463	315.13885	94.99248	6.94202	0.0740684	0.20422459	2.8558191	20	3 25.7	20.9
517668 2015 BV_{544}	17.3	X	74.53863	323.32627	249.92627	10.51719	0.1297554	0.23431249	2.6057880	20	8 7.5	21.1
517669 2015 BW_{544}	16.7	X	61.30225	333.39175	261.32473	9.96408	0.0832146	0.23616326	2.5921561	20	8 12.0	20.2
517670 2015 CY_{8}	18.4	X	211.97941	125.35395	145.72703	27.14766	0.0411064	0.35873319	1.9616507	20	—	—
517671 2015 CB_{13}	18.0	X	257.74110	137.77544	124.14324	23.97941	0.0926228	0.38107875	1.8841966	20	1 1.4	20.5
517672 2015 CE_{17}	15.8	X	355.52803	47.15543	67.42939	5.94480	0.1454877	0.17244716	3.1966765	20	—	—
517673 2015 CL_{32}	16.7	X	82.21931	202.13311	345.35512	16.53826	0.0586091	0.24078319	2.5588919	20	7 11.8	20.4
517674 2015 CF_{34}	18.3	X	146.17799	235.31055	121.56381	25.49003	0.0792400	0.38174796	1.8819940	20	—	—
517675 2015 CM_{62}	18.2	X	277.45731	186.85543	30.91944	21.06987	0.0492959	0.36707826	1.9318064	20	—	—
517676 2015 CO_{63}	18.5	X	210.23108	82.60684	22.37194	1.73684	0.1369007	0.27509853	2.3414085	20	8 19.5	21.6
517677 2015 CT_{64}	17.3	X	101.62855	12.57861	72.17934	4.44264	0.0788688	0.21595163	2.7514718	20	3 22.8	21.0
517678 2015 CY_{66}	17.4	X	34.92218	23.98223	168.75131	6.41654	0.0692412	0.22328958	2.6908557	20	5 8.8	20.7
517679 2015 DO_{96}	18.2	X	16.77466	85.70607	347.91338	18.68816	0.0787096	0.33929822	2.0358620	20	—	—
517680 2015 DZ_{110}	16.1	X	342.01593	84.47288	57.64868	11.38663	0.1116100	0.17701939	3.1413921	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517681 2015 DE_{198}	18.7	X	237.97572	218.17871	33.27180	12.24490	0.5828395	0.33264841	2.0629043	20	—	—
517682 2015 DD_{216}	18.1	X	210.07246	191.17195	129.31542	24.30329	0.0810231	0.37904119	1.8909430	20	1 26.2	20.1
517683 2015 DO_{230}	15.5	X	278.94096	304.97440	141.06868	11.25073	0.1192908	0.12524875	3.9562808	20	10 3.6	21.0
517684 2015 DF_{232}	16.6	X	67.88396	333.15047	118.95075	15.77900	0.1806503	0.19063847	2.9899391	20	3 5.9	20.5
517685 2015 DJ_{232}	17.3	X	100.52016	26.76604	89.27134	4.51756	0.1500541	0.21698283	2.7427474	20	5 9.9	21.2
517686 2015 DK_{232}	16.6	X	41.96518	298.48737	279.14334	11.32242	0.1237575	0.22843235	2.6503159	20	6 29.8	19.8
517687 2015 DL_{232}	16.6	X	194.24523	120.53091	306.84190	11.53662	0.0951381	0.22385694	2.6863072	20	6 12.4	20.8
517688 2015 DM_{232}	17.2	X	74.41660	239.64495	251.21577	3.39519	0.0530106	0.20945576	2.8080694	20	4 8.5	21.0
517689 2015 DN_{232}	16.8	X	269.11119	260.66560	103.08384	7.67920	0.0506329	0.22185357	2.7024548	20	6 23.7	20.3
517690 2015 DO_{232}	16.8	X	85.49543	150.78902	64.36567	14.30462	0.1253253	0.23533067	2.5982665	20	9 4.8	20.8
517691 2015 DP_{232}	17.6	X	162.20008	260.78630	174.00479	3.26943	0.1414468	0.22372801	2.6873392	20	5 20.9	21.9
517692 2015 DQ_{232}	16.9	X	150.72011	244.44102	169.39784	6.85742	0.1070867	0.20937113	2.8088261	20	4 12.4	21.1
517693 2015 DR_{232}	17.5	X	265.91976	307.27651	33.62017	1.27544	0.0625672	0.22448643	2.6812830	20	5 17.3	21.1
517694 2015 DS_{232}	16.9	X	38.64940	205.97679	84.51273	8.70461	0.1357011	0.23870510	2.5737217	20	10 13.6	20.2
517695 2015 DT_{232}	16.0	X	353.25274	110.02611	110.55420	8.51132	0.1233668	0.18172580	3.0869173	20	4 14.1	19.8
517696 2015 EM	17.6	X	338.60679	50.60834	118.80091	24.90503	0.0415337	0.36825693	1.9276822	20	—	—
517697 2015 ED_{74}	17.9	X	47.13139	277.81308	177.28738	23.50892	0.0392177	0.36848260	1.9268950	20	—	—
517698 2015 FB_{37}	17.6	X	120.11763	223.98852	171.71933	22.91090	0.1202148	0.36697594	1.9321655	20	1 20.5	20.0
517699 2015 FM_{45}	18.6	X	165.67196	123.80121	150.07051	5.17801	0.1724645	0.30419816	2.1896011	20	—	—
517700 2015 FD_{403}	17.2	X	325.58541	301.60220	40.23133	17.18164	0.1830534	0.23988144	2.5653008	20	8 19.2	20.1
517701 2015 FE_{403}	17.4	X	336.36779	249.93846	74.35782	6.22535	0.0800508	0.23787338	2.5797175	20	8 10.7	20.3
517702 2015 FF_{403}	17.0	X	218.14007	255.68005	150.20624	9.00678	0.0739314	0.22386782	2.6862202	20	6 13.4	21.0
517703 2015 FK_{403}	17.6	X	34.05370	250.38201	355.79258	4.52897	0.0288793	0.23751004	2.5823478	20	7 16.9	20.9
517704 2015 FM_{403}	17.1	X	301.41774	229.11235	100.75436	7.14593	0.0564316	0.22850154	2.6497809	20	6 22.3	20.3
517705 2015 FP_{403}	17.3	X	165.18900	337.54942	137.23767	9.05730	0.0456405	0.22604632	2.6689335	20	7 11.7	21.1
517706 2015 FQ_{403}	17.4	X	16.63139	72.85507	209.95969	13.69320	0.1834439	0.23388436	2.6089671	20	8 23.8	20.4
517707 2015 FS_{403}	16.7	X	47.02138	313.09110	263.32470	11.12953	0.1889119	0.21733553	2.7397792	20	7 14.3	20.0
517708 2015 GA_{52}	17.1	X	312.29704	225.66479	115.20261	9.89180	0.0739088	0.23241209	2.6199736	20	7 22.9	20.1
517709 2015 HM_{7}	18.0	X	136.56901	335.97761	16.43383	21.13776	0.0897906	0.35512634	1.9749107	20	—	—
517710 2015 HV_{30}	17.9	X	147.16698	225.90160	67.54228	6.84193	0.1887393	0.30539742	2.1838651	20	—	—
517711 2015 HL_{91}	18.4	X	160.51401	79.46674	205.38432	3.09082	0.1960895	0.30395077	2.1907890	20	—	—
517712 2015 HO_{155}	16.3	X	40.51518	262.04295	229.18971	11.47939	0.1577519	0.18472901	3.0533692	20	2 29.1	20.1
517713 2015 HX_{172}	18.0	X	0.54233	296.55923	199.96697	21.32130	0.0561236	0.35320451	1.9820680	20	—	—
517714 2015 JF_{3}	17.5	X	168.94484	98.62404	187.24139	20.62632	0.3165072	0.28737793	2.2742268	20	—	—
517715 2015 KH_{36}	17.7	X	147.36639	359.66246	283.73805	4.99451	0.1602051	0.28173219	2.3045090	20	—	—
517716 2015 KS_{36}	18.3	X	164.21465	209.82142	96.74064	3.46687	0.1748238	0.29912332	2.2142970	20	—	—
517717 2015 KZ_{120}	9.9	X	1.38967	66.43034	249.98587	85.54470	0.8208725	0.00308564	46.7274670	20	7 3.3	19.8
517718 2015 KT_{122}	17.8	X	225.89377	189.93137	42.62644	3.96412	0.0341916	0.31456669	2.1412181	20	—	—
517719 2015 KX_{135}	18.0	X	258.02539	280.60592	245.53657	6.36235	0.0771708	0.30340067	2.1934363	20	—	—
517720 2015 KC_{143}	18.2	X	112.32178	270.91814	52.58528	4.28076	0.1789511	0.29112545	2.2546680	20	—	—
517721 2015 KV_{148}	17.5	X	143.31247	197.77915	51.71025	7.21855	0.0730284	0.26323022	2.4112684	20	12 14.1	21.0
517722 2015 KS_{167}	17.2	X	220.09189	355.87413	98.33984	9.29625	0.0845479	0.23501859	2.6005662	20	8 20.6	20.9
517723 2015 LU_{4}	17.9	X	132.94874	322.30706	335.80189	5.04330	0.2155177	0.29175560	2.2514203	20	—	—
517724 2015 LK_{10}	16.8	X	34.21337	291.57523	66.76638	24.50172	0.1378261	0.26964714	2.3728603	20	—	—
517725 2015 LV_{13}	17.9	X	165.08613	270.08532	13.07989	5.78283	0.1647318	0.29342504	2.2428726	20	—	—
517726 2015 LZ_{22}	18.3	X	179.18024	196.20393	94.24178	3.48023	0.2926119	0.30694906	2.1764992	20	—	—
517727 2015 LF_{35}	18.2	X	144.89979	194.89314	96.35996	6.50727	0.1693322	0.27943922	2.3170984	20	—	—
517728 2015 LU_{42}	16.4	X	71.64498	113.11267	85.21125	25.67628	0.2107956	0.21551722	2.7551679	20	8 1.2	20.6
517729 2015 LZ_{42}	18.1	X	74.57789	215.71850	151.11610	1.38925	0.0228216	0.29845919	2.2175806	20	—	—
517730 2015 MN_{6}	18.1	X	172.95922	33.72778	249.70388	3.88612	0.1507338	0.29447939	2.2375158	20	—	—
517731 2015 MQ_{7}	18.2	X	192.69198	334.46546	262.24464	4.98723	0.1184348	0.28200504	2.3030222	20	—	—
517732 2015 MZ_{9}	17.5	X	265.79612	24.66935	133.90183	8.94182	0.0790970	0.27528977	2.3403241	20	—	—
517733 2015 MM_{47}	17.5	X	62.72305	256.49371	75.24090	4.53320	0.1408801	0.24460819	2.5321458	20	—	—
517734 2015 MS_{51}	17.5	X	18.84257	301.10789	52.29812	3.66988	0.1722894	0.22846160	2.6500897	20	12 6.3	20.8
517735 2015 MN_{54}	18.3	X	146.84868	205.09377	95.17799	4.63406	0.2757475	0.28765335	2.2727749	20	—	—
517736 2015 MD_{56}	17.3	X	84.94643	84.23257	248.74245	4.73898	0.1258453	0.26709559	2.3879482	20	—	—
517737 2015 MU_{70}	18.3	X	206.56963	357.99945	201.47679	7.06725	0.0547152	0.26785336	2.3834423	20	12 27.4	21.4
517738 2015 MT_{88}	17.0	X	310.86091	246.32777	153.67254	9.84914	0.1823290	0.21752471	2.7381905	20	10 3.4	19.8
517739 2015 MS_{101}	17.9	X	129.54355	278.55927	37.08733	2.41739	0.3028115	0.27477493	2.3432465	20	—	—
517740 2015 MX_{109}	17.6	X	17.63517	348.01243	14.39982	2.63552	0.0718195	0.24291877	2.5438725	20	12 5.0	20.8
517741 2015 MS_{114}	17.3	X	190.66796	40.14980	239.68152	8.53872	0.1824656	0.30017366	2.2091286	20	—	—
517742 2015 MT_{115}	17.6	X	57.92967	255.65557	102.28764	6.32636	0.1271608	0.25937789	2.4350848	20	—	—
517743 2015 MD_{116}	17.4	X	83.18036	150.84131	181.26473	5.83297	0.1763312	0.25607213	2.4559970	20	—	—
517744 2015 MJ_{117}	17.2	X	143.28230	210.36020	98.46426	7.21011	0.1554550	0.28535304	2.2849728	20	—	—
517745 2015 MV_{123}	18.3	X	177.62446	52.20508	213.15527	5.31075	0.2207858	0.28750144	2.2735754	20	—	—
517746 2015 MZ_{134}	16.5	X	235.34896	192.39079	281.04964	11.62750	0.1040981	0.21511293	2.7586189	20	9 18.8	20.6
517747 2015 MO_{135}	16.4	X	285.23654	242.59283	150.69165	10.13718	0.0973154	0.18083994	3.0969901	20	8 13.9	20.5
517748 2015 MP_{137}	16.8	X	271.36012	147.62008	2.97710	15.32110	0.0581371	0.24513798	2.5284962	20	—	—
517749 2015 MS_{137}	16.3	X	224.83760	234.06672	251.81847	13.08346	0.0516762	0.22865211	2.6486175	20	10 2.5	20.2
517750 2015 NO_{9}	17.4	X	81.08535	79.30938	256.62471	4.91080	0.1474192	0.26142423	2.4223608	20	—	—
517751 2015 NY_{18}	16.8	X	26.47353	230.78080	126.35862	14.76967	0.1604026	0.23314842	2.6144543	20	12 22.5	20.3
517752 2015 NW_{24}	16.6	X	54.91574	79.19774	257.31715	4.56559	0.0577272	0.24644421	2.5195538	20	12 19.3	19.8
517753 2015 OZ_{1}	18.3	X	133.33502	68.63394	229.26462	4.23910	0.2043475	0.27507234	2.3415572	20	—	—
517754 2015 OY_{2}	18.0	X	189.29209	160.53024	120.82394	6.19596	0.2292055	0.29937295	2.2130659	20	—	—
517755 2015 OS_{13}	18.3	X	124.03972	227.14568	67.86331	2.51992	0.1834673	0.26807699	2.3821166	20	—	—
517756 2015 OK_{14}	18.5	X	140.52035	182.83827	110.80844	2.11821	0.1804942	0.27671710	2.3322694	20	—	—
517757 2015 OG_{23}	17.6	X	99.34278	204.22671	135.28031	4.63950	0.2073272	0.26960394	2.3731137	20	—	—
517758 2015 OU_{23}	17.8	X	120.79921	37.71152	270.90013	1.74279	0.1935275	0.27263264	2.3555057	20	—	—
517759 2015 OK_{28}	17.5	X	62.44970	212.29103	120.06098	5.86793	0.2305866	0.23919382	2.5702148	20	—	—
517760 2015 OD_{33}	18.2	X	125.85339	266.26921	50.66134	7.91670	0.2297915	0.27046468	2.3680762	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517761 2015 OC_{42}	18.3	X	145.42910	299.54575	347.33274	0.90399	0.1677304	0.26492194	2.4009923	20	—	—
517762 2015 OA_{44}	18.1	X	135.71522	219.45400	61.56900	6.99779	0.1105129	0.27070375	2.3666818	20	—	—
517763 2015 OX_{65}	17.3	X	115.72977	103.27620	202.94370	2.41635	0.0855427	0.26115383	2.4240325	20	—	—
517764 2015 OX_{73}	17.2	X	73.98026	138.81041	169.52340	13.44610	0.1876535	0.23782292	2.5800824	20	12 18.5	21.5
517765 2015 OD_{77}	16.1	X	9.24110	348.06209	322.02409	9.97788	0.1233364	0.19300622	2.9654357	20	9 6.5	19.7
517766 2015 OG_{85}	17.8	X	206.78222	49.93388	176.35639	6.33317	0.0680716	0.27597327	2.3364583	20	—	—
517767 2015 OQ_{85}	17.7	X	353.41747	265.23109	143.79384	2.87404	0.0806312	0.24324061	2.5416281	20	—	—
517768 2015 OY_{86}	17.2	X	168.52066	312.86255	262.07301	4.86308	0.0058581	0.22582964	2.6706404	20	11 25.3	20.9
517769 2015 OD_{87}	17.6	X	206.07769	52.73031	109.92451	4.38601	0.0882179	0.22470534	2.6795413	20	10 29.2	21.4
517770 2015 OX_{88}	17.9	X	60.45898	303.51447	93.73288	7.62857	0.1059081	0.26705340	2.3881997	20	—	—
517771 2015 OZ_{88}	17.3	X	320.15056	101.89740	336.11663	13.23027	0.0393607	0.23635337	2.5907659	20	12 18.3	20.8
517772 2015 OA_{89}	17.7	X	334.48577	197.19602	312.89648	5.85297	0.0519720	0.28106102	2.3081762	20	—	—
517773 2015 OB_{89}	16.8	X	338.24134	169.06192	170.56882	10.48327	0.1029966	0.18573109	3.0423766	20	8 24.4	20.5
517774 2015 OC_{89}	17.8	X	177.07664	301.96098	348.88779	7.56232	0.0166271	0.28279419	2.2987358	20	—	—
517775 2015 OD_{89}	17.2	X	316.27434	58.43242	17.36120	4.18327	0.1100668	0.24331949	2.5410787	20	12 11.9	19.9
517776 2015 OU_{89}	15.8	X	16.42148	302.31801	38.36882	16.39794	0.0621550	0.18633155	3.0358370	20	10 24.0	19.8
517777 2015 OV_{89}	16.6	X	73.50267	251.81659	62.65281	12.35808	0.1788687	0.21284591	2.7781723	20	12 18.4	20.9
517778 2015 OB_{90}	17.1	X	41.00573	215.31713	147.33823	12.40334	0.1046465	0.24234834	2.5478627	20	—	—
517779 2015 PK_{1}	17.4	X	80.58466	315.00130	9.75318	2.62620	0.1959541	0.25438426	2.4668490	20	—	—
517780 2015 PQ_{2}	17.8	X	143.25611	192.99614	118.02800	7.64973	0.1523518	0.28233616	2.3012213	20	—	—
517781 2015 PM_{6}	18.1	X	138.35856	60.23761	243.55672	2.03805	0.1858407	0.27983354	2.3149211	20	—	—
517782 2015 PB_{11}	17.5	X	139.93840	4.49115	257.38210	6.88287	0.1859144	0.25713982	2.4491939	20	12 22.4	21.5
517783 2015 PQ_{12}	17.9	X	181.22645	237.55936	9.35226	8.43413	0.1176673	0.27330304	2.3516521	20	—	—
517784 2015 PA_{31}	17.2	X	125.58717	350.72314	300.59789	7.56828	0.1929416	0.26169583	2.4206844	20	—	—
517785 2015 PL_{31}	17.5	X	170.42996	121.65231	159.54372	7.03962	0.1203248	0.27911095	2.3189149	20	—	—
517786 2015 PR_{33}	17.4	X	97.43788	127.21019	189.34593	11.91142	0.2020698	0.25502624	2.4627074	20	—	—
517787 2015 PH_{36}	18.0	X	159.31505	275.48577	5.91262	6.83023	0.1835273	0.28023911	2.3126872	20	—	—
517788 2015 PH_{45}	17.5	X	157.66780	161.39019	111.50566	9.96825	0.1606690	0.27138779	2.3627033	20	—	—
517789 2015 PS_{45}	17.8	X	106.92483	272.43618	45.89598	5.74937	0.1505924	0.26141386	2.4224248	20	—	—
517790 2015 PL_{47}	17.9	X	154.27735	142.41354	110.57274	5.72316	0.1514649	0.25961264	2.4336166	20	12 26.1	21.8
517791 2015 PT_{56}	16.5	X	77.78324	300.31148	32.56079	28.39171	0.2391330	0.23541256	2.5976639	20	—	—
517792 2015 PM_{77}	18.1	X	129.35170	24.24479	253.27134	1.51953	0.1440119	0.26440723	2.4041072	20	—	—
517793 2015 PH_{108}	18.2	X	211.48773	104.22310	103.04341	2.29474	0.1262557	0.27575888	2.3376691	20	—	—
517794 2015 PO_{247}	17.4	X	18.77407	284.60220	89.53237	6.65908	0.1519376	0.23705582	2.5856454	20	—	—
517795 2015 PY_{287}	16.7	X	353.28552	20.11958	4.32178	22.22960	0.0361450	0.22845795	2.6501179	20	11 12.9	20.6
517796 2015 PZ_{299}	17.8	X	124.11671	301.21527	2.21793	6.20846	0.1197432	0.26107703	2.4245079	20	—	—
517797 2015 PD_{304}	16.3	X	290.85341	268.84702	130.73757	12.72381	0.0615916	0.19510401	2.9441409	20	9 9.5	20.2
517798 2015 PP_{304}	17.1	X	160.85280	189.45172	76.30130	7.70833	0.0995264	0.26097842	2.4251186	20	—	—
517799 2015 PU_{304}	17.4	X	31.29629	260.50218	84.56471	4.85666	0.1310911	0.22567040	2.6718966	20	12 6.1	20.9
517800 2015 PU_{308}	18.1	X	157.71345	146.32334	154.66253	5.33199	0.1939904	0.28507255	2.2864714	20	—	—
517801 2015 PK_{309}	17.1	X	77.33951	308.18583	46.65175	5.97270	0.1500007	0.25884295	2.4384386	20	—	—
517802 2015 PJ_{310}	17.4	X	156.09566	266.71320	50.94697	8.97866	0.2061718	0.28846904	2.2684885	20	—	—
517803 2015 PG_{314}	16.8	X	17.65625	165.23453	178.05688	14.09037	0.1154723	0.20905088	2.8116940	20	11 10.9	20.5
517804 2015 PX_{315}	17.3	X	227.44682	332.95698	229.58160	8.52792	0.0881227	0.26371000	2.4083429	20	—	—
517805 2015 PE_{316}	17.9	X	259.41837	337.66637	136.30779	2.92527	0.0333695	0.23042113	2.6350439	20	11 10.7	21.3
517806 2015 PK_{316}	16.9	X	113.29658	256.47776	10.11367	13.41107	0.1123856	0.23187784	2.6239963	20	11 25.3	21.2
517807 2015 PL_{316}	16.3	X	268.00080	251.32429	159.88037	13.06714	0.0845756	0.17406197	3.1768749	20	8 14.4	20.8
517808 2015 QU_{5}	17.4	X	101.60803	217.30269	144.98495	7.96692	0.1349280	0.27812331	2.3244014	20	—	—
517809 2015 QX_{12}	16.9	X	20.33638	233.67142	119.79608	6.99505	0.0684871	0.20990822	2.8040328	20	11 20.9	20.6
517810 2015 QA_{13}	16.4	X	350.50566	324.87095	48.97318	11.30344	0.1164929	0.18759308	3.0222114	20	11 1.7	20.0
517811 2015 QK_{14}	18.1	X	250.59306	113.19608	129.53631	6.92667	0.0616355	0.28030829	2.3123066	20	—	—
517812 2015 QO_{14}	17.4	X	86.39230	351.50503	283.35064	2.18416	0.0794427	0.21782556	2.7356686	20	11 4.7	21.4
517813 2015 QR_{14}	16.6	X	276.25435	233.98582	172.69618	14.10872	0.0624588	0.17206377	3.2014233	20	8 21.8	21.1
517814 2015 RG_{11}	17.8	X	42.47193	190.99990	174.04196	3.64550	0.1167480	0.24708024	2.5152281	20	—	—
517815 2015 RX_{18}	17.6	X	118.82798	196.11059	118.13165	1.84819	0.1761809	0.25994077	2.4315681	20	—	—
517816 2015 RH_{20}	17.4	X	131.61978	74.69722	198.58963	6.23638	0.2004353	0.25304718	2.4755311	20	12 27.9	21.6
517817 2015 RP_{22}	17.7	X	129.04624	120.78548	183.57869	4.60167	0.0981747	0.26437943	2.4042757	20	—	—
517818 2015 RH_{29}	16.8	X	122.10176	121.26929	190.35330	7.85979	0.1242287	0.25918356	2.4363018	20	—	—
517819 2015 RN_{29}	17.6	X	153.98647	128.35417	180.20271	8.49038	0.1388640	0.27592907	2.3367078	20	—	—
517820 2015 RX_{31}	16.9	X	122.11834	245.87540	59.51556	16.42602	0.1684646	0.25270199	2.4777849	20	—	—
517821 2015 RC_{38}	17.4	X	142.64752	134.90440	151.55648	5.28866	0.0995047	0.26039012	2.4287699	20	—	—
517822 2015 RD_{39}	16.8	X	22.38762	56.78064	322.41741	3.09803	0.1176192	0.23022904	2.6365094	20	—	—
517823 2015 RC_{46}	17.4	X	6.73394	199.92956	181.49519	5.10166	0.0730441	0.22478920	2.6788748	20	12 10.8	20.8
517824 2015 RL_{46}	16.5	X	232.02720	255.75849	190.43038	12.25769	0.1482049	0.17589041	3.1548202	20	8 5.9	21.6
517825 2015 RX_{53}	17.7	X	181.64976	56.86103	212.25585	4.01781	0.2423408	0.27757062	2.3274859	20	—	—
517826 2015 RY_{72}	17.1	X	237.23585	82.38153	34.67497	2.37886	0.0242988	0.20128519	2.8835545	20	10 11.9	21.0
517827 2015 RB_{76}	16.5	X	244.68557	256.31854	178.98552	3.22251	0.1481922	0.17390572	3.1787775	20	8 8.1	21.3
517828 2015 RY_{77}	17.7	X	145.15538	316.98666	312.71178	4.35553	0.1960103	0.25583522	2.4575130	20	—	—
517829 2015 RL_{82}	18.3	X	230.84177	167.53902	81.05380	8.52150	0.6137492	0.31581292	2.1355814	20	—	—
517830 2015 RF_{89}	16.5	X	38.54629	347.25014	347.89719	15.23517	0.1349016	0.21751502	2.7382717	20	11 27.4	20.5
517831 2015 RB_{97}	18.0	X	123.61854	165.97443	144.71206	1.92055	0.1811336	0.26535445	2.3983826	20	—	—
517832 2015 RY_{97}	16.5	X	320.22306	30.83591	350.56037	1.47475	0.0989613	0.20074227	2.8887514	20	9 24.0	19.9
517833 2015 RP_{101}	17.7	X	110.60146	302.41313	11.49992	2.56660	0.2038255	0.25650902	2.4532075	20	—	—
517834 2015 RY_{101}	16.0	X	260.44894	66.71833	7.12208	18.27313	0.1529209	0.18138420	3.0907917	20	9 1.4	20.5
517835 2015 RE_{106}	18.0	X	109.62486	219.18680	103.32059	2.74031	0.2157835	0.26187057	2.4196075	20	—	—
517836 2015 RN_{106}	17.6	X	151.25505	133.95899	180.02191	6.46268	0.1360850	0.27890152	2.3200755	20	—	—
517837 2015 RO_{116}	17.3	X	137.07555	222.81644	74.07620	7.53385	0.2790291	0.26467521	2.4024842	20	—	—
517838 2015 RQ_{116}	17.2	X	96.69458	275.67483	68.28037	9.47318	0.2236785	0.25749393	2.4469479	20	—	—
517839 2015 RW_{116}	15.8	X	283.31168	301.82682	106.45061	18.35387	0.1979327	0.18020130	3.1043030	20	8 19.4	20.0
517840 2015 RG_{117}	16.4	X	2.59964	286.96349	56.78868	11.72635	0.1734156	0.20146167	2.8818703	20	10 24.4	19.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517841 2015 RR_{117}	17.0	X	56.33342	278.99249	71.14628	16.01887	0.1595251	0.23469754	2.6029372	20	—	—
517842 2015 RO_{118}	17.6	X	109.49887	269.87984	52.55013	5.55372	0.2369711	0.26478163	2.4018404	20	—	—
517843 2015 RJ_{166}	17.7	X	140.03661	254.42634	19.36612	1.54578	0.1639452	0.25636999	2.4540943	20	—	—
517844 2015 RR_{192}	18.0	X	148.12894	237.19345	48.47810	2.19189	0.2087976	0.26215582	2.4178520	20	—	—
517845 2015 RY_{193}	16.8	X	269.41660	259.42162	195.13740	1.63115	0.0424823	0.20354978	2.8621274	20	10 22.4	20.6
517846 2015 RQ_{195}	16.7	X	259.20110	43.99527	19.79034	16.30923	0.0814416	0.17949006	3.1124983	20	8 29.2	21.3
517847 2015 RJ_{197}	18.3	X	119.84669	234.79378	85.99928	3.51974	0.2134977	0.26203692	2.4185833	20	—	—
517848 2015 RD_{198}	18.1	X	107.61567	163.76846	157.15172	6.72716	0.2314274	0.25523908	2.4613380	20	—	—
517849 2015 RO_{200}	17.1	X	34.70433	233.97009	80.65877	3.11853	0.0410444	0.19876250	2.9079019	20	10 15.2	21.0
517850 2015 RN_{208}	17.2	X	2.04420	308.04182	49.83067	2.71058	0.0791329	0.20280696	2.8691118	20	10 29.5	20.6
517851 2015 RV_{209}	16.9	X	131.77925	82.84233	145.08883	2.41053	0.0668533	0.20454490	2.8528369	20	10 26.3	21.2
517852 2015 RD_{218}	16.5	X	143.22558	351.54796	187.03735	10.62776	0.0837973	0.18025021	3.1037414	20	9 2.7	21.3
517853 2015 RT_{218}	17.5	X	119.48238	75.11606	177.96423	2.57575	0.0340486	0.21340036	2.7733581	20	11 12.2	21.4
517854 2015 RW_{218}	17.1	X	41.60718	332.04727	9.38419	10.16892	0.1106771	0.22121485	2.7076542	20	12 8.8	20.9
517855 2015 RK_{221}	17.3	X	15.61817	228.40510	102.66627	2.97872	0.0274646	0.19633534	2.9318184	20	10 8.9	21.2
517856 2015 RM_{221}	17.0	X	20.93426	279.30078	78.64285	3.30917	0.0977908	0.21580604	2.7527091	20	12 1.1	20.4
517857 2015 RT_{224}	16.7	X	285.68068	359.87773	34.35198	9.61047	0.0705386	0.17774736	3.1328092	20	8 24.6	21.0
517858 2015 RS_{234}	17.4	X	104.70605	131.05917	170.49849	14.01852	0.1819912	0.23162617	2.6258967	20	—	—
517859 2015 RO_{236}	16.3	X	317.95415	247.84489	153.45494	10.65704	0.1015907	0.19077377	2.9885253	20	10 18.5	20.0
517860 2015 RN_{238}	16.5	X	56.10814	186.46208	131.93471	12.19174	0.1033759	0.20504023	2.8482405	20	11 27.8	20.7
517861 2015 RO_{239}	16.9	X	60.82348	261.86580	92.68378	13.11784	0.1896428	0.23099215	2.6306995	20	—	—
517862 2015 RT_{240}	16.0	X	295.74389	327.63468	85.07995	14.52107	0.1138127	0.18034839	3.1026149	20	9 30.3	20.3
517863 2015 RX_{240}	16.2	X	239.38102	29.14247	86.14163	13.92056	0.0839022	0.17898690	3.1183286	20	10 7.8	20.9
517864 2015 RZ_{241}	16.7	X	236.92221	318.77909	149.32404	11.83899	0.0454046	0.18042071	3.1017857	20	9 26.5	21.2
517865 2015 RZ_{244}	16.1	X	306.91998	324.28222	49.64073	14.09002	0.1409633	0.17799809	3.1298666	20	8 22.7	20.2
517866 2015 RR_{253}	16.9	X	121.77532	58.80677	176.37259	11.15904	0.0960209	0.20186314	2.8780480	20	10 26.7	21.4
517867 2015 RS_{253}	17.7	X	122.22631	60.98647	217.79707	5.21284	0.1727878	0.24374339	2.5381317	20	12 25.2	21.9
517868 2015 RS_{255}	17.4	X	75.88773	199.43994	99.21414	5.19368	0.0823237	0.21409861	2.7673249	20	11 23.5	21.4
517869 2015 RV_{255}	17.5	X	196.51176	218.97196	339.22903	4.12970	0.0834847	0.24058566	2.5602924	20	12 2.9	21.2
517870 2015 RN_{256}	16.8	X	219.43609	286.46735	182.24263	4.65808	0.0954343	0.17808251	3.1288773	20	8 27.9	21.6
517871 2015 RQ_{256}	16.7	X	129.42132	92.15408	128.66492	9.99334	0.0609648	0.18182581	3.0857852	20	10 14.6	21.4
517872 2015 RU_{257}	16.9	X	130.09640	219.81187	0.18523	14.90703	0.0895935	0.20330947	2.8643823	20	10 11.1	21.3
517873 2015 RZ_{257}	17.3	X	141.08338	275.79831	348.06050	2.84815	0.1277016	0.23446905	2.6046280	20	12 22.9	21.4
517874 2015 RR_{258}	16.3	X	244.61546	53.15251	24.49739	16.40837	0.1138071	0.16988961	3.2286787	20	8 23.8	21.3
517875 2015 RS_{258}	16.5	X	237.74934	57.26303	27.56184	11.24827	0.0714277	0.17162315	3.2069004	20	8 27.5	21.3
517876 2015 RT_{258}	17.3	X	127.20825	71.41969	183.71593	4.10412	0.1284092	0.21666358	2.7454410	20	11 27.1	21.6
517877 2015 RC_{259}	16.2	X	294.21264	163.12567	245.23269	8.86662	0.0575476	0.17544331	3.1601777	20	9 15.8	20.7
517878 2015 RY_{259}	16.3	X	50.34108	135.24833	148.54545	11.75976	0.0833676	0.17828861	3.1264655	20	9 30.8	20.6
517879 2015 RF_{260}	17.0	X	77.32271	331.63892	350.13255	5.99112	0.0831023	0.21800306	2.7341835	20	12 23.5	21.0
517880 2015 RO_{260}	16.8	X	158.03669	29.77373	144.60572	1.35956	0.0859128	0.19219410	2.9737835	20	9 16.4	21.4
517881 2015 SC_{3}	17.8	X	128.89350	96.72711	204.52525	1.96749	0.1834943	0.26179196	2.4200918	20	—	—
517882 2015 SE_{3}	17.0	X	27.07848	178.45392	193.69105	18.81984	0.1891120	0.23151362	2.6267476	20	—	—
517883 2015 SC_{9}	17.1	X	169.58927	44.06034	207.56628	8.50028	0.1803717	0.25939675	2.4349667	20	—	—
517884 2015 SM_{17}	15.0	X	233.38307	50.62587	36.29803	22.81053	0.0817290	0.16988698	3.2287120	20	8 31.4	20.2
517885 2015 SJ_{23}	17.3	X	71.43406	255.31145	61.28269	11.21778	0.1289210	0.22202691	2.7010481	20	12 15.7	21.4
517886 2015 ST_{23}	16.8	X	233.34116	77.07929	54.75785	9.72885	0.0778791	0.20251798	2.8718405	20	10 20.8	20.8
517887 2015 SH_{24}	17.1	X	121.15097	240.47571	49.76048	14.01142	0.1381028	0.23483462	2.6019242	20	—	—
517888 2015 SK_{24}	18.2	X	91.29842	107.63890	212.88502	7.96836	0.1048106	0.24299343	2.5433514	20	—	—
517889 2015 SL_{24}	16.0	X	240.23326	244.39755	209.48029	25.06696	0.1817108	0.17311912	3.1883992	20	8 16.3	21.4
517890 2015 SW_{24}	16.5	X	269.61222	94.22079	325.21997	8.90130	0.0922849	0.16019490	3.3576616	20	8 24.8	21.2
517891 2015 TS_{22}	15.7	X	273.30139	30.96145	31.12759	28.04320	0.1683152	0.17819564	3.1275529	20	9 11.0	20.5
517892 2015 TG_{45}	17.6	X	115.18821	76.96507	191.89209	4.68312	0.1292123	0.23117804	2.6292891	20	12 4.5	21.8
517893 2015 TF_{67}	16.3	X	312.75468	26.93462	12.95700	9.89894	0.0814501	0.18617656	3.0375217	20	10 5.4	20.2
517894 2015 TP_{70}	16.3	X	318.13436	354.98459	24.44785	11.34241	0.0994500	0.17772585	3.1330620	20	9 18.1	20.3
517895 2015 TJ_{71}	16.9	X	31.72291	112.22748	238.31239	3.88992	0.1708072	0.21129683	2.7917342	20	12 15.7	20.7
517896 2015 TU_{74}	15.9	X	7.27740	273.11822	39.39463	17.46509	0.1389529	0.17451332	3.1713949	20	9 17.3	20.0
517897 2015 TY_{75}	17.2	X	125.33077	68.14895	216.65155	10.65789	0.1761710	0.23034426	2.6356300	20	12 31.4	21.7
517898 2015 TX_{77}	16.5	X	326.02090	347.53774	46.76988	11.72866	0.0583973	0.18912710	3.0058470	20	10 21.8	20.4
517899 2015 TB_{85}	16.1	X	2.09577	286.69889	49.16783	18.82018	0.1246459	0.18169156	3.0873051	20	10 8.7	20.1
517900 2015 TQ_{90}	16.1	X	32.38411	290.34728	37.57240	11.34259	0.0943583	0.19131696	2.9828660	20	11 2.1	20.0
517901 2015 TD_{96}	16.3	X	179.50554	132.04262	44.24456	8.32433	0.0675813	0.18286328	3.0741028	20	10 12.4	20.9
517902 2015 TE_{101}	17.1	X	125.57495	109.91156	192.58745	8.07791	0.2107744	0.24055232	2.5605289	20	—	—
517903 2015 TL_{101}	17.5	X	97.16573	172.10539	153.30123	4.22030	0.2814751	0.24188891	2.5510878	20	—	—
517904 2015 TS_{104}	16.0	X	53.06987	78.71877	186.97033	11.98635	0.0259893	0.15873835	3.3781698	20	8 26.7	20.9
517905 2015 TZ_{107}	15.7	X	31.36575	255.60460	68.34459	23.32180	0.0328586	0.18194518	3.0844354	20	10 27.2	20.3
517906 2015 TY_{109}	16.6	X	343.39828	246.97617	123.26142	6.92076	0.1229202	0.18277233	3.0751224	20	10 17.5	20.3
517907 2015 TR_{116}	15.9	X	178.66119	359.63007	194.87815	24.20158	0.0549369	0.18010317	3.1054305	20	11 1.9	20.6
517908 2015 TJ_{118}	16.1	X	332.39619	258.01395	148.07608	15.32341	0.1527726	0.19014909	2.9950670	20	11 18.8	19.8
517909 2015 TM_{119}	16.4	X	83.88759	195.91850	133.77579	15.06981	0.1860010	0.21866119	2.7286945	20	—	—
517910 2015 TE_{123}	17.3	X	152.60156	137.00853	125.00883	7.31441	0.1965643	0.23465086	2.6032824	20	12 28.9	21.6
517911 2015 TK_{130}	16.6	X	358.55588	175.05934	171.98956	11.85001	0.1232381	0.18815613	3.0161791	20	10 12.2	20.2
517912 2015 TZ_{131}	17.5	X	110.20664	227.36152	73.67869	13.64480	0.2565161	0.23824118	2.5770618	20	—	—
517913 2015 TV_{132}	16.5	X	321.85258	310.05821	87.06536	11.16780	0.0894975	0.18949128	3.0019945	20	10 21.5	20.4
517914 2015 TY_{132}	16.2	X	215.01540	312.95068	184.82841	16.27175	0.0755474	0.17857651	3.1231043	20	10 1.2	20.7
517915 2015 TT_{137}	16.3	X	312.69433	318.73940	94.14864	10.94307	0.0684771	0.19095116	2.9866742	20	10 28.8	20.3
517916 2015 TH_{141}	16.3	X	204.53301	63.24476	81.75489	12.43280	0.0938620	0.17910713	3.1169329	20	10 3.3	21.2
517917 2015 TM_{144}	17.2	X	135.15204	164.78126	149.45578	14.60017	0.3113132	0.26046997	2.4282735	20	—	—
517918 2015 TO_{148}	18.0	X	155.18822	274.23800	7.33310	2.13856	0.1752659	0.26426106	2.4049936	20	—	—
517919 2015 TZ_{152}	17.0	X	314.71666	235.25026	174.41231	2.12362	0.0646982	0.20588023	2.8404880	20	10 26.7	20.6
517920 2015 TP_{157}	17.6	X	98.72822	132.55054	182.24462	4.57553	0.0622816	0.23967378	2.5667823	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
517921 2015 TS_{167}	16.4	X	297.82143	230.01934	187.24015	10.34652	0.0976336	0.19105289	2.9856139	20	10 5.1	20.2
517922 2015 TZ_{167}	16.7	X	11.96790	301.05384	76.86660	15.35469	0.1297634	0.21841705	2.7307275	20	12 18.7	20.0
517923 2015 TM_{168}	16.9	X	18.41409	324.11514	4.17497	1.75867	0.0670933	0.20352389	2.8623701	20	10 12.9	20.5
517924 2015 TE_{170}	16.4	X	315.54811	208.86087	177.77419	8.30197	0.0841095	0.18246870	3.0785329	20	9 21.5	20.2
517925 2015 TV_{170}	16.0	X	254.42381	23.18522	53.13489	16.86616	0.0837256	0.17173002	3.2055698	20	9 8.6	20.9
517926 2015 TP_{179}	16.6	X	71.07580	123.96708	219.65133	13.29869	0.0779300	0.22706575	2.6609393	20	—	—
517927 2015 TV_{182}	16.9	X	6.61752	247.83343	134.31837	4.42259	0.1007168	0.21465590	2.7625332	20	12 12.3	20.3
517928 2015 TL_{183}	16.8	X	341.92506	17.06273	23.57831	6.04689	0.0783089	0.21239444	2.7821078	20	11 24.9	20.3
517929 2015 TR_{193}	17.0	X	9.27487	91.49784	268.19735	3.81666	0.1251950	0.21079292	2.7961815	20	11 18.2	20.3
517930 2015 TQ_{197}	16.6	X	273.40322	231.99727	236.84213	4.13534	0.0504587	0.21225535	2.7833230	20	11 15.5	20.3
517931 2015 TX_{210}	16.9	X	17.45014	322.73400	9.98797	1.74677	0.0459426	0.20370783	2.8606468	20	10 15.0	20.7
517932 2015 TP_{214}	17.1	X	55.50365	313.35140	357.96787	3.67669	0.0925607	0.21443698	2.7644130	20	11 14.6	21.0
517933 2015 TV_{232}	16.8	X	4.05773	114.51502	278.50234	2.29848	0.1009587	0.22044123	2.7139853	20	12 23.9	20.1
517934 2015 TD_{240}	16.4	X	339.47664	103.62016	252.77142	13.98881	0.0822130	0.19034024	2.9930615	20	9 12.7	20.5
517935 2015 TT_{242}	17.4	X	65.85416	155.19534	194.42269	12.73141	0.1890910	0.23722772	2.5843962	20	—	—
517936 2015 TY_{242}	16.2	X	298.95428	324.12888	52.43025	6.22328	0.1820386	0.17293699	3.1906375	20	8 1.6	20.2
517937 2015 TS_{243}	15.8	X	260.42777	196.54334	248.68261	9.73903	0.1159022	0.17786293	3.1314520	20	9 8.9	20.3
517938 2015 TM_{259}	15.9	X	291.81155	7.00819	7.23218	27.04230	0.1336315	0.17236176	3.1977323	20	8 6.6	20.6
517939 2015 TG_{260}	16.4	X	30.01970	99.93354	231.19285	10.84635	0.1234615	0.20391635	2.8586963	20	11 9.9	20.0
517940 2015 TZ_{276}	16.4	X	345.34974	19.67547	327.42313	5.80700	0.1175179	0.18997525	2.9968939	20	9 16.0	20.0
517941 2015 TG_{283}	17.4	X	57.36498	131.88059	206.31412	8.46591	0.1520998	0.22979228	2.6398491	20	12 31.2	21.4
517942 2015 TR_{294}	17.4	X	30.65300	340.46638	18.85763	6.07736	0.0425915	0.22248404	2.6973469	20	12 8.6	21.0
517943 2015 TT_{295}	17.6	X	51.97543	172.53489	162.98002	0.98773	0.1143872	0.22408866	2.6844550	20	12 16.8	21.4
517944 2015 TN_{299}	17.4	X	85.16630	165.23671	123.24912	1.46898	0.0396589	0.21368069	2.7709319	20	11 16.1	21.3
517945 2015 TF_{303}	15.8	X	323.10562	337.82292	28.18943	18.24016	0.2262608	0.17719848	3.1392752	20	9 4.3	19.4
517946 2015 TO_{303}	16.4	X	150.09276	150.75866	45.91082	16.73562	0.0920578	0.18639507	3.0351473	20	10 10.4	21.2
517947 2015 TS_{304}	16.7	X	352.38856	287.85325	77.15129	12.87898	0.0505866	0.19502428	2.9449432	20	10 26.0	20.7
517948 2015 TQ_{305}	16.3	X	357.13325	225.89562	102.59768	12.47050	0.0353032	0.17501690	3.1653086	20	9 11.6	20.8
517949 2015 TD_{308}	16.5	X	306.68122	299.23321	92.62805	17.75547	0.1347428	0.18517604	3.0484532	20	9 19.4	20.6
517950 2015 TN_{317}	17.0	X	35.12064	112.17944	189.64131	7.41346	0.0466405	0.19091308	2.9870713	20	9 27.0	21.1
517951 2015 TE_{320}	16.6	X	270.45700	269.63760	146.21613	1.39326	0.1643671	0.17478252	3.1681377	20	8 12.8	20.9
517952 2015 TM_{323}	16.9	X	8.65509	231.24474	139.95787	7.66067	0.1134059	0.21133713	2.7913792	20	12 2.9	20.4
517953 2015 TA_{324}	17.0	X	61.26786	133.47242	195.98712	14.82982	0.1545813	0.22545798	2.6735746	20	12 24.1	21.2
517954 2015 TF_{332}	16.4	X	7.03097	190.50718	138.50224	11.72352	0.0519295	0.18209555	3.0827371	20	9 26.3	20.6
517955 2015 TY_{344}	16.8	X	226.82854	265.87216	194.97474	8.94286	0.0609738	0.17414396	3.1758778	20	8 28.6	21.6
517956 2015 TM_{347}	16.7	X	26.56503	288.35710	78.75114	6.75663	0.0281452	0.21822237	2.7323513	20	12 10.9	20.3
517957 2015 TT_{358}	17.6	X	101.72820	148.24649	164.31157	9.07293	0.1663811	0.23793536	2.5792695	20	—	—
517958 2015 TO_{359}	17.0	X	84.33001	113.06618	182.26832	1.83223	0.0568943	0.20648170	2.8349691	20	11 24.0	21.1
517959 2015 TW_{359}	16.2	X	18.03151	185.51836	130.93052	21.11473	0.1329219	0.17505334	3.1648693	20	10 7.4	20.5
517960 2015 TX_{359}	17.3	X	131.65405	94.61573	177.59136	5.95261	0.1043553	0.22160992	2.7044353	20	12 21.5	21.5
517961 2015 TQ_{360}	16.8	X	136.92657	171.77190	84.74451	14.57767	0.0463886	0.21518338	2.7580167	20	12 7.1	20.7
517962 2015 TK_{364}	15.8	X	182.69180	319.20588	221.33346	22.60451	0.1385879	0.18405863	3.0607786	20	10 13.3	20.8
517963 2015 TM_{364}	16.2	X	141.49080	129.51763	90.08379	12.68131	0.0536799	0.18023698	3.1038932	20	10 27.0	21.0
517964 2015 TS_{364}	16.9	X	189.89225	10.53128	153.75373	9.94221	0.0514023	0.18196106	3.0842560	20	10 10.6	21.5
517965 2015 TY_{364}	16.2	X	144.04976	131.41172	80.66842	7.95399	0.1036972	0.18124907	3.0923278	20	10 19.8	21.1
517966 2015 TC_{365}	16.3	X	237.00133	358.53731	118.83479	9.20735	0.0726634	0.18539529	3.0460492	20	10 6.7	20.8
517967 2015 TY_{365}	15.7	X	81.91571	163.89057	110.47452	24.47044	0.1408567	0.18921559	3.0049098	20	11 12.1	20.7
517968 2015 TT_{366}	18.2	X	62.64114	325.65653	160.07153	5.09470	0.0800184	0.29124642	2.2540436	20	3 12.2	20.2
517969 2015 TW_{366}	16.2	X	139.55630	54.34936	166.39667	16.99992	0.0985985	0.17204432	3.2016645	20	10 24.3	21.3
517970 2015 TX_{366}	17.0	X	326.40416	226.80701	173.44021	11.90460	0.1085590	0.19133917	2.9826351	20	10 29.9	20.7
517971 2015 TZ_{366}	16.1	X	240.21295	255.26706	170.48772	8.07667	0.0951250	0.15528694	3.4280417	20	7 26.8	21.3
517972 2015 TO_{367}	16.5	X	46.12089	137.96081	174.02936	10.92920	0.1280664	0.18544132	3.0455452	20	11 6.6	20.8
517973 2015 TY_{367}	15.8	X	10.00673	270.76699	52.34262	10.00783	0.0794000	0.18158655	3.0884952	20	9 26.7	19.9
517974 2015 TC_{368}	17.0	X	145.56595	204.34210	59.16788	13.89989	0.1346894	0.22569459	2.6717057	20	12 23.9	21.4
517975 2015 TH_{368}	15.8	X	355.66759	282.46269	54.16640	14.88753	0.0739474	0.17657937	3.1466087	20	9 24.9	20.1
517976 2015 TT_{368}	16.2	X	91.55594	56.82207	201.04887	11.06337	0.0336456	0.17248629	3.1961930	20	10 8.1	20.6
517977 2015 UD_{1}	16.3	X	318.02879	172.76291	182.79013	9.43572	0.0878301	0.17431435	3.1738078	20	8 11.6	20.4
517978 2015 UQ_{2}	17.5	X	69.45305	49.05918	268.79920	0.51817	0.1137480	0.22382508	2.6865621	20	12 14.6	21.4
517979 2015 UP_{3}	17.2	X	35.87706	292.27910	65.38964	6.10949	0.0890816	0.22236360	2.6983208	20	12 20.6	20.7
517980 2015 UW_{5}	16.4	X	283.84288	11.60275	42.93852	8.42419	0.1761894	0.18379640	3.0636893	20	9 2.3	20.4
517981 2015 UL_{7}	15.8	X	293.71179	276.73024	124.45507	17.09144	0.2237057	0.17677055	3.1443396	20	8 19.7	19.7
517982 2015 UD_{20}	17.1	X	92.19701	246.37079	40.77585	7.92803	0.1414779	0.22038755	2.7144260	20	12 1.8	21.3
517983 2015 UH_{20}	17.2	X	95.51843	244.43629	46.02211	5.69177	0.0907233	0.22075469	2.7114156	20	12 5.7	21.3
517984 2015 UL_{21}	16.0	X	218.98238	81.71543	33.15157	21.72446	0.0765106	0.17929089	3.1148029	20	9 18.3	20.9
517985 2015 UN_{21}	16.6	X	10.67773	236.25719	120.34469	3.00831	0.0829004	0.20601920	2.8392105	20	11 11.4	20.1
517986 2015 UV_{21}	17.4	X	181.00349	62.44444	194.07871	13.05436	0.2264083	0.25771947	2.4455201	20	—	—
517987 2015 UQ_{24}	16.8	X	62.57596	263.15459	70.87134	7.05373	0.0362906	0.22290359	2.6939613	20	12 16.6	20.6
517988 2015 UD_{31}	16.3	X	284.71239	227.43657	184.88642	4.70110	0.0533985	0.18314777	3.0709185	20	9 13.2	20.4
517989 2015 UY_{32}	16.8	X	218.75748	0.63380	109.94501	2.55677	0.1383114	0.17118401	3.2123825	20	8 26.5	21.8
517990 2015 UB_{36}	17.0	X	144.30922	152.91951	81.49336	6.08535	0.1046069	0.21099238	2.7944191	20	11 17.7	21.2
517991 2015 UE_{39}	17.3	X	145.16438	201.43965	97.09396	3.19992	0.1650690	0.25961131	2.4336249	20	—	—
517992 2015 UX_{44}	16.5	X	244.13501	310.86168	148.62322	11.06644	0.0567475	0.17612372	3.1520334	20	9 21.9	21.0
517993 2015 UQ_{49}	16.3	X	41.17657	148.62707	167.95837	15.37091	0.0252907	0.18625745	3.0366421	20	10 23.5	20.6
517994 2015 UA_{50}	16.7	X	193.10594	51.23244	109.46634	10.31063	0.0509694	0.18293290	3.0733227	20	10 12.3	21.4
517995 2015 UY_{53}	17.0	X	132.81234	208.25244	30.55888	14.21006	0.1500169	0.21429029	2.7656744	20	11 9.9	21.5
517996 2015 UG_{55}	16.6	X	240.07673	68.12610	33.71161	11.16723	0.1201982	0.18129867	3.0917638	20	9 14.9	21.2
517997 2015 UQ_{57}	16.4	X	227.87351	324.73661	141.97208	10.61399	0.0614335	0.17122674	3.2118481	20	9 9.8	21.0
517998 2015 UL_{73}	17.1	X	5.14850	342.56348	26.05418	4.64397	0.0788841	0.21158972	2.7891573	20	11 17.9	20.5
517999 2015 UD_{79}	15.8	X	305.15524	310.65713	81.83771	21.33561	0.1218636	0.18118201	3.0930908	20	9 21.7	20.2
518000 2015 UK_{86}	16.5	X	36.57814	87.95246	218.58384	11.41746	0.0485146	0.19167955	2.9791031	20	10 3.5	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518001 2015 UT_{87}	16.0	X	357.40372	170.30906	166.36679	16.52512	0.1373155	0.17635781	3.1492435	20	9 24.4	19.7
518002 2015 VM_{5}	16.6	X	297.02270	299.91871	123.53566	9.55575	0.1643908	0.19215816	2.9741543	20	10 8.5	20.2
518003 2015 VC_{32}	16.3	X	319.69790	355.73853	24.13822	9.19501	0.1296807	0.18179118	3.0861771	20	9 18.8	19.9
518004 2015 VZ_{35}	17.2	X	29.06830	303.35257	36.20735	12.57669	0.0708472	0.19979602	2.8978651	20	11 9.7	21.0
518005 2015 VA_{37}	17.2	X	47.89075	316.24716	42.65569	14.25630	0.1911820	0.22569160	2.6717293	20	—	—
518006 2015 VU_{39}	16.4	X	311.73007	0.24716	44.31870	9.67323	0.0460053	0.18724457	3.0259603	20	10 14.9	20.4
518007 2015 VQ_{41}	16.9	X	100.87743	200.92345	96.44488	14.76363	0.2449748	0.22692639	2.6620286	20	12 29.3	21.4
518008 2015 VQ_{51}	17.0	X	149.85418	203.81795	98.28148	15.69950	0.1685396	0.26840188	2.3801940	20	—	—
518009 2015 VL_{55}	16.4	X	306.40261	192.46417	202.01710	10.34223	0.1225058	0.18611892	3.0381488	20	9 11.9	20.2
518010 2015 VJ_{61}	16.5	X	37.89465	92.40619	203.50868	15.48932	0.0474602	0.18305430	3.0719638	20	9 19.9	20.8
518011 2015 VF_{81}	16.6	X	246.38175	7.40631	84.70607	5.33493	0.0781314	0.17677434	3.1442946	20	9 13.1	21.1
518012 2015 VY_{83}	16.8	X	38.79143	167.45035	184.00950	12.59834	0.1919192	0.21781885	2.7357248	20	12 29.2	20.9
518013 2015 VN_{93}	16.4	X	302.20536	354.23681	43.78290	20.11052	0.0969858	0.17777743	3.1324559	20	9 25.2	20.7
518014 2015 VR_{94}	15.8	X	11.11956	90.69620	246.69781	8.88193	0.0674259	0.18387584	3.0628068	20	10 7.7	20.0
518015 2015 VK_{110}	17.0	X	9.11840	331.71742	38.04764	5.65824	0.1691176	0.20874779	2.8144150	20	12 6.5	20.4
518016 2015 VQ_{114}	16.1	X	296.91582	207.87813	200.11790	7.70824	0.0822374	0.18413579	3.0599235	20	9 20.5	20.0
518017 2015 VM_{119}	16.4	X	331.93590	335.85890	44.82023	12.14545	0.1431019	0.18610362	3.0383152	20	10 12.7	19.9
518018 2015 VN_{137}	16.3	X	275.37935	209.66503	209.55516	11.70046	0.0619439	0.17014860	3.2254015	20	9 3.6	20.9
518019 2015 VS_{137}	16.2	X	320.10833	356.61742	45.69308	10.46013	0.0791473	0.18624956	3.0367279	20	10 21.7	20.0
518020 2015 VD_{144}	16.9	X	87.33535	162.33810	167.28930	14.73473	0.2697079	0.23651753	2.5895670	20	—	—
518021 2015 VL_{149}	16.2	X	313.56004	234.46122	153.43171	11.68049	0.0710671	0.17483150	3.1675460	20	9 21.8	20.3
518022 2015 VT_{150}	15.9	X	228.96920	15.65063	112.52940	11.68982	0.0508978	0.17819040	3.1276143	20	10 13.7	20.6
518023 2015 VP_{154}	16.2	X	141.22136	148.13832	63.95474	14.00965	0.1335393	0.17869892	3.1216779	20	10 19.4	21.3
518024 2015 VQ_{155}	16.5	X	138.58542	307.78647	269.33719	3.12329	0.0946335	0.18046392	3.1012906	20	10 15.4	21.4
518025 2015 VV_{155}	17.2	X	81.17877	231.75557	89.32339	3.30905	0.1253063	0.22121072	2.7076879	20	12 31.4	21.2
518026 2015 VG_{156}	16.5	X	233.65862	351.10035	127.01636	11.61640	0.0405369	0.17784906	3.1316148	20	10 7.3	21.1
518027 2015 VS_{156}	17.0	X	118.12663	236.44515	52.11771	3.90900	0.1576492	0.22991058	2.6389434	20	12 30.8	21.2
518028 2015 VE_{157}	17.7	X	323.49743	297.04798	279.42332	7.19773	0.0522224	0.28669362	2.2778443	20	2 10.2	20.5
518029 2015 VH_{157}	16.7	X	233.32652	353.73131	142.65292	11.80329	0.0542942	0.18556755	3.0441639	20	10 28.3	21.2
518030 2015 VK_{157}	16.3	X	245.21963	34.43830	70.14924	9.93345	0.0487653	0.17555307	3.1588604	20	10 3.5	20.9
518031 2015 WQ_{18}	18.1	X	35.52430	248.62635	244.38801	4.28594	0.0954063	0.27644822	2.3337814	20	2 5.8	20.4
518032 2015 WX_{18}	16.3	X	16.99864	263.43317	84.51133	13.99834	0.1387969	0.19585748	2.9365852	20	11 16.7	20.1
518033 2015 XE_{7}	16.3	X	247.40598	252.64394	229.36350	14.61416	0.0457953	0.18383743	3.0632334	20	10 22.9	20.7
518034 2015 XL_{12}	16.4	X	236.29376	56.08510	112.66122	15.15275	0.0049812	0.23042725	2.6349972	20	12 24.5	20.0
518035 2015 XP_{14}	16.5	X	73.26607	217.34355	69.34947	10.33010	0.0111495	0.18757878	3.0223650	20	10 24.9	20.8
518036 2015 XF_{41}	16.4	X	311.33571	325.51330	81.51322	9.85823	0.1110428	0.18322544	3.0700506	20	10 14.7	20.3
518037 2015 XA_{57}	16.4	X	348.44623	261.29678	100.98600	13.67859	0.1693455	0.18480884	3.0524898	20	10 22.5	20.0
518038 2015 XF_{58}	16.2	X	42.75512	210.90055	84.34496	13.55460	0.2001522	0.17830033	3.1263285	20	10 25.4	20.6
518039 2015 XB_{60}	16.4	X	259.26772	333.60065	117.86182	9.64175	0.0073173	0.17225042	3.1991101	20	10 9.4	21.0
518040 2015 XL_{63}	16.2	X	131.91226	17.60086	211.00088	11.30102	0.0649107	0.17405399	3.1769721	20	10 21.2	20.9
518041 2015 XQ_{65}	16.5	X	41.35266	259.87615	69.21836	11.06818	0.1016893	0.19205002	2.9752707	20	11 17.9	20.5
518042 2015 XO_{66}	17.1	X	82.08814	245.30574	63.65606	4.22889	0.1858408	0.21798847	2.7343055	20	12 22.2	21.4
518043 2015 XB_{68}	17.3	X	136.19176	75.16236	208.50306	10.93889	0.1891254	0.22619754	2.6677439	20	—	—
518044 2015 XA_{69}	16.6	X	123.61836	76.70333	225.17879	16.43767	0.2321245	0.23259601	2.6185922	20	—	—
518045 2015 XT_{92}	15.7	X	171.73771	81.94440	98.20829	12.17985	0.0384367	0.17399445	3.1776967	20	10 12.5	20.6
518046 2015 XB_{93}	16.6	X	77.21460	77.75435	194.49382	9.41747	0.0473429	0.17561956	3.1580630	20	10 11.5	21.0
518047 2015 XT_{100}	16.6	X	60.93236	91.99847	204.93437	9.16574	0.0983619	0.18168936	3.0873300	20	10 30.6	20.9
518048 2015 XX_{108}	16.2	X	243.77042	298.48801	167.10191	9.21468	0.0370316	0.16969342	3.2311668	20	9 29.9	20.7
518049 2015 XA_{110}	16.4	X	25.37409	207.82457	116.75519	10.30638	0.0738640	0.17482697	3.1676007	20	10 18.6	20.8
518050 2015 XB_{114}	17.3	X	116.08480	208.31525	86.52867	14.75509	0.1946339	0.22046576	2.7137840	20	—	—
518051 2015 XF_{134}	16.3	X	87.89208	263.24366	70.69532	10.83918	0.1237218	0.22545381	2.6736076	20	—	—
518052 2015 XJ_{136}	16.3	X	100.29054	12.95332	238.19625	8.51084	0.0522679	0.17543943	3.1602243	20	10 10.8	21.0
518053 2015 XF_{166}	16.1	X	109.88554	160.30999	84.49713	13.91600	0.0380209	0.17449751	3.1715865	20	10 21.4	20.9
518054 2015 XT_{194}	15.9	X	53.77484	234.46985	79.76122	10.54293	0.1031843	0.18270265	3.0759043	20	11 14.4	20.3
518055 2015 XC_{201}	16.1	X	293.36946	325.43649	51.89261	6.78624	0.1222940	0.15450560	3.4395891	20	8 1.4	20.7
518056 2015 XN_{220}	16.7	X	73.50134	188.48629	110.80243	3.89839	0.0544480	0.18917177	3.0053738	20	11 13.4	21.0
518057 2015 XF_{254}	15.7	X	347.68164	208.86268	150.71234	17.81611	0.1929613	0.18142140	3.0903693	20	10 15.7	19.2
518058 2015 XW_{275}	16.1	X	46.57475	247.15119	74.65454	10.69810	0.0831090	0.18538679	3.0461423	20	11 12.4	20.3
518059 2015 XQ_{279}	16.4	X	349.88775	151.27874	226.46235	8.25195	0.1183260	0.19041298	2.9922992	20	11 5.3	20.0
518060 2015 XT_{292}	16.2	X	73.38508	198.93882	81.10126	16.68710	0.0608132	0.17319619	3.1874532	20	10 25.3	21.0
518061 2015 XZ_{292}	16.6	X	53.56064	69.78341	236.04280	4.90694	0.0958682	0.17993857	3.1073240	20	10 30.6	20.8
518062 2015 XH_{294}	16.2	X	335.53633	331.52967	72.01817	11.20340	0.0845221	0.18910863	3.0060428	20	11 15.9	20.0
518063 2015 XU_{334}	16.2	X	343.19903	137.99046	236.74600	8.69245	0.1377119	0.17874462	3.1211459	20	10 17.2	20.0
518064 2015 XN_{342}	16.3	X	337.01262	283.68625	91.63608	12.48269	0.0820705	0.17418070	3.1754311	20	10 14.8	20.6
518065 2015 XL_{360}	16.3	X	150.29370	98.61177	101.10861	13.72280	0.0499692	0.17472822	3.1687941	20	10 13.2	21.2
518066 2015 XY_{376}	16.2	X	344.58293	317.40705	58.53553	9.62168	0.1123451	0.17892420	3.1190571	20	10 24.9	20.0
518067 2015 XT_{380}	16.0	X	5.62418	304.83438	52.59530	9.38678	0.1171128	0.18850112	3.0124979	20	11 4.5	19.7
518068 2015 XE_{397}	16.5	X	51.69857	225.99700	85.65727	10.46738	0.0756023	0.17441380	3.1726013	20	11 4.6	21.0
518069 2015 XG_{399}	17.7	X	28.26056	71.82758	96.08066	8.63183	0.0412366	0.28572403	2.2829945	20	3 20.4	20.3
518070 2015 XH_{399}	16.8	X	252.17147	271.72065	242.32387	10.15411	0.0700900	0.17308168	3.1888589	20	12 2.5	21.2
518071 2015 XK_{399}	16.5	X	281.70713	326.51603	176.11647	9.61194	0.0300749	0.17861862	3.1226135	20	12 31.4	20.9
518072 2015 XS_{399}	17.5	X	46.94526	132.63308	339.06348	0.86370	0.0747831	0.23567642	2.5957247	20	2 3.9	20.4
518073 2015 XB_{400}	16.3	X	342.64542	254.05456	184.96111	17.99933	0.0842983	0.17839565	3.1252149	20	—	—
518074 2015 XD_{400}	16.6	X	248.27218	10.68254	213.90529	9.35419	0.1761583	0.19071972	2.9890899	20	—	—
518075 2015 YD_{11}	16.1	X	240.24569	231.49094	217.27450	16.43445	0.1090730	0.17664174	3.1458680	20	8 19.9	21.0
518076 2015 YB_{24}	17.1	X	11.05561	179.93203	227.97999	0.88959	0.1213376	0.19808532	2.9145254	20	—	—
518077 2015 YD_{24}	16.4	X	149.03124	321.57326	287.12668	7.95116	0.0532767	0.17473488	3.1687135	20	12 1.4	21.2
518078 2016 AM_{48}	16.9	X	303.24740	161.37269	325.10606	1.16176	0.0091830	0.19917627	2.9038732	20	—	—
518079 2016 AR_{227}	15.9	X	161.00189	183.52913	81.35526	8.84117	0.1331259	0.18136778	3.0909783	20	12 31.9	20.8
518080 2016 AY_{227}	16.8	X	204.35601	194.67337	28.84038	3.72461	0.1369855	0.18004572	3.1060911	20	12 24.2	21.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518081 2016 AA_{228}	16.9	X	319.77776	279.36984	139.22631	6.63811	0.1031917	0.16847679	3.2467038	20	11 6.4	21.1
518082 2016 AB_{228}	16.2	X	298.48135	301.23341	124.83295	11.28122	0.0786503	0.16135582	3.3415372	20	10 18.4	20.8
518083 2016 AJ_{228}	16.6	X	288.04481	302.84525	289.52994	13.02799	0.0176633	0.23590355	2.5940583	20	1 28.4	20.1
518084 2016 AN_{228}	16.3	X	350.47186	124.87989	313.46330	14.82567	0.1050195	0.18560950	3.0437051	20	—	—
518085 2016 AO_{228}	16.6	X	255.30793	231.53309	279.08450	5.72975	0.1100628	0.17675132	3.1445676	20	11 26.9	21.1
518086 2016 AP_{228}	16.0	X	158.84527	291.06064	313.90304	9.89450	0.0607910	0.17506658	3.1647097	20	12 7.1	20.8
518087 2016 AQ_{228}	16.6	X	204.28068	244.20456	318.80026	7.75968	0.0507829	0.17404802	3.1770446	20	12 7.0	21.3
518088 2016 AR_{228}	16.1	X	338.99702	119.08418	290.40229	11.14880	0.1122249	0.17526301	3.1623447	20	11 22.7	20.1
518089 2016 AU_{228}	16.4	X	121.66494	182.31530	103.13851	6.03779	0.0352288	0.16917046	3.2378225	20	12 14.2	21.2
518090 2016 AV_{228}	17.3	X	138.86120	323.58767	353.64826	1.51040	0.0530649	0.20395381	2.8583462	20	—	—
518091 2016 AW_{228}	16.6	X	329.20732	68.68603	13.50834	9.46883	0.0842258	0.17922292	3.1155904	20	12 20.3	20.7
518092 2016 AX_{228}	16.1	X	160.03828	318.87414	312.91760	10.95049	0.0626249	0.18078098	3.0976634	20	—	—
518093 2016 AY_{228}	15.9	X	327.55329	118.10972	321.46542	15.72719	0.1934164	0.17594068	3.1542192	20	12 15.4	19.6
518094 2016 AB_{229}	15.9	X	39.71954	322.86131	84.33588	11.48351	0.1840574	0.18478229	3.0527822	20	—	—
518095 2016 AG_{229}	16.1	X	259.56054	318.87486	224.25096	8.21058	0.0320395	0.17440997	3.1726476	20	—	—
518096 2016 AH_{229}	16.4	X	67.55921	170.95633	208.91353	8.32551	0.0122435	0.17990143	3.1077516	20	—	—
518097 2016 AJ_{229}	15.9	X	28.04458	201.01050	206.53518	7.47359	0.0143958	0.17169091	3.2060565	20	—	—
518098 2016 AM_{229}	15.7	X	334.63077	1.94188	102.82165	12.33734	0.0570997	0.17197598	3.2025126	20	—	—
518099 2016 AQ_{229}	16.4	X	97.47645	119.03608	185.65448	10.59281	0.0311255	0.17867649	3.1219392	20	12 11.9	21.1
518100 2016 AT_{229}	16.4	X	338.38320	271.52256	142.68206	9.85458	0.1130837	0.18222136	3.0813181	20	12 3.3	20.3
518101 2016 AY_{229}	16.1	X	143.89704	257.52546	14.36384	11.57292	0.0672354	0.17625363	3.1504844	20	12 23.8	21.1
518102 2016 AK_{230}	16.8	X	92.70061	183.18005	166.74292	10.70605	0.0514997	0.18698763	3.0287316	20	—	—
518103 2016 AM_{230}	17.0	X	233.51371	110.54770	153.84263	13.64958	0.1448383	0.21064702	2.7974726	20	1 2.2	21.7
518104 2016 AO_{230}	16.5	X	113.35142	161.96672	135.53328	10.36166	0.0673994	0.17435085	3.1733648	20	12 22.5	21.4
518105 2016 AQ_{230}	16.6	X	299.65051	318.65586	154.14331	9.60862	0.0533633	0.17549239	3.1595885	20	12 17.2	20.9
518106 2016 AS_{230}	15.9	X	357.70602	327.31698	135.23914	10.60434	0.0806858	0.17966635	3.1104619	20	—	—
518107 2016 BY_{91}	16.1	X	324.32562	193.30255	290.82430	8.88620	0.0918538	0.17870756	3.1215773	20	—	—
518108 2016 BZ_{91}	16.4	X	290.71565	229.92538	295.82318	8.52350	0.1531729	0.17990363	3.1077263	20	—	—
518109 2016 BG_{92}	16.1	X	338.62023	354.28611	129.56793	12.33456	0.0686432	0.17956391	3.1116448	20	—	—
518110 2016 BJ_{92}	16.6	X	229.00734	50.76012	261.88656	13.10894	0.1635920	0.23292698	2.6161111	20	2 15.1	21.1
518111 2016 CY_{165}	15.9	X	355.02729	89.69827	311.41911	14.47143	0.0683012	0.17576424	3.1563297	20	12 4.2	20.3
518112 2016 CK_{286}	16.2	X	212.92462	293.70333	299.01505	10.04156	0.1414974	0.18492403	3.0512221	20	—	—
518113 2016 CL_{286}	16.5	X	24.38398	29.53499	354.50275	9.13213	0.0922511	0.17425292	3.1745536	20	12 26.8	21.0
518114 2016 CR_{286}	16.3	X	135.77661	290.65787	18.03205	14.56565	0.0470520	0.18120924	3.0927810	20	—	—
518115 2016 CU_{286}	16.4	X	69.16492	226.36167	145.97776	9.94534	0.1019021	0.18350679	3.0669118	20	—	—
518116 2016 CA_{287}	18.5	X	350.35289	329.12227	327.81253	6.74086	0.0013468	0.31337487	2.1466436	20	7 29.8	20.9
518117 2016 CG_{287}	17.0	X	274.97561	63.96642	159.49874	12.44904	0.1288068	0.20676417	2.8323866	20	—	—
518118 2016 CJ_{287}	17.4	X	333.18309	64.55577	147.48790	13.41041	0.2074633	0.23372204	2.6101748	20	2 5.2	20.4
518119 2016 CN_{287}	16.5	X	269.99947	95.46987	136.91071	10.88408	0.1017144	0.19777238	2.9175992	20	1 4.8	20.9
518120 2016 CO_{287}	16.3	X	189.58542	219.46433	133.98935	15.46367	0.1331779	0.22084116	2.7107078	20	3 9.9	20.7
518121 2016 CP_{287}	16.5	X	135.65437	152.05789	160.89284	10.39294	0.1103306	0.18641593	3.0349208	20	—	—
518122 2016 CQ_{287}	17.0	X	312.99957	314.64943	172.14240	8.61753	0.1082323	0.18496263	3.0507976	20	—	—
518123 2016 CR_{287}	16.2	X	134.24256	324.44396	6.80801	8.40667	0.0911873	0.18697540	3.0288638	20	—	—
518124 2016 CW_{287}	16.4	X	165.32455	206.11151	104.78606	3.55831	0.0941662	0.18800841	3.0177589	20	—	—
518125 2016 CZ_{287}	16.6	X	309.93114	324.02207	146.40006	11.46753	0.0523284	0.17677491	3.1442879	20	12 27.9	20.9
518126 2016 CD_{288}	16.8	X	85.47437	201.31452	187.63055	7.53561	0.0822014	0.19876462	2.9078812	20	—	—
518127 2016 CM_{288}	16.5	X	242.65927	156.91243	91.64153	9.77387	0.0696086	0.18813779	3.0163752	20	—	—
518128 2016 CN_{288}	16.4	X	90.65408	330.78714	77.09869	7.01300	0.0855801	0.19763946	2.9189071	20	1 24.4	20.3
518129 2016 CO_{288}	16.7	X	162.86474	238.76477	138.15769	4.21467	0.0879293	0.21880448	2.7275030	20	3 7.9	20.7
518130 2016 CP_{288}	16.4	X	73.80046	317.83258	90.00902	9.92794	0.1188137	0.18811616	3.0166064	20	1 6.4	20.2
518131 2016 CT_{288}	16.5	X	297.55576	326.91701	246.60504	9.04730	0.0252685	0.19943059	2.9014040	20	1 20.9	20.7
518132 2016 CV_{288}	16.0	X	278.91407	260.63832	292.92624	7.64564	0.0476942	0.17372281	3.1810085	20	—	—
518133 2016 CX_{288}	16.1	X	314.06811	208.13144	350.98576	9.85367	0.1464546	0.19768893	2.9184202	20	1 11.4	20.3
518134 2016 CC_{289}	17.0	X	304.90560	338.96550	283.35237	8.68625	0.1741012	0.22710958	2.6605969	20	3 4.1	20.6
518135 2016 DZ_{32}	16.4	X	303.40164	52.65421	83.64504	12.81567	0.0705192	0.17439484	3.1728312	20	—	—
518136 2016 EK_{115}	16.6	X	4.50270	165.62955	353.68849	13.95738	0.1919507	0.23249664	2.6193383	20	1 27.9	19.4
518137 2016 EU_{223}	16.2	X	23.76620	142.99331	286.69736	8.97246	0.0642849	0.18127682	3.0920122	20	—	—
518138 2016 EV_{223}	17.0	X	275.93117	337.44602	284.35025	3.85231	0.1136463	0.22067019	2.7121078	20	2 10.3	21.0
518139 2016 EA_{224}	17.8	X	341.51263	258.27511	318.05030	2.94023	0.0931520	0.23753359	2.5821771	20	3 11.1	20.9
518140 2016 ED_{224}	17.7	X	49.05651	166.57814	331.68778	2.13374	0.0549349	0.23501254	2.6006108	20	3 11.9	21.0
518141 2016 EF_{224}	17.0	X	269.70398	180.28926	26.44898	2.04210	0.1272615	0.18223175	3.0812009	20	—	—
518142 2016 EJ_{224}	17.0	X	246.27109	246.93986	62.45411	10.08791	0.1398318	0.21170416	2.7881521	20	3 12.9	21.5
518143 2016 EK_{224}	17.3	X	300.02787	81.47915	176.79771	9.10389	0.1085967	0.21716051	2.7412511	20	3 7.4	21.0
518144 2016 EN_{224}	16.8	X	81.72144	127.15705	331.75395	8.95905	0.1227242	0.23598287	2.5934770	20	3 14.2	20.0
518145 2016 EU_{224}	17.1	X	290.66954	266.70219	1.54238	13.83112	0.2185234	0.21581635	2.7526215	20	2 26.9	21.2
518146 2016 EV_{224}	15.6	X	35.05893	234.35465	159.58242	16.25298	0.1378225	0.17302639	3.1895383	20	—	—
518147 2016 EW_{224}	17.7	X	221.16827	340.40017	320.20464	4.13919	0.1403061	0.21222157	2.7836184	20	2 2.7	22.0
518148 2016 EZ_{224}	17.2	X	228.73912	79.85770	196.21940	5.74856	0.0148503	0.20539908	2.8449221	20	1 16.3	21.3
518149 2016 ED_{225}	16.4	X	306.40618	116.40238	42.37134	10.16000	0.0473521	0.18091279	3.0961587	20	—	—
518150 2016 EM_{225}	16.9	X	241.65877	190.56494	46.97672	10.56942	0.0436711	0.18666429	3.0322282	20	—	—
518151 2016 FH_{13}	10.1	X	17.96970	306.82069	176.39164	93.59246	0.6143986	0.00811246	24.5302050	20	3 24.7	21.3
518152 2016 FT_{34}	16.5	X	16.06198	111.78375	344.93238	3.32503	0.1354039	0.19240427	2.9716176	20	—	—
518153 2016 FZ_{63}	17.1	X	270.83928	144.59257	68.15896	10.14503	0.0465797	0.19220957	2.9736240	20	—	—
518154 2016 FA_{64}	16.4	X	220.55332	225.65302	119.67231	13.78800	0.1579699	0.21278540	2.7786990	20	3 31.2	21.1
518155 2016 GV_{26}	16.8	X	102.85648	59.29522	330.36669	1.25326	0.0781111	0.20287310	2.8684882	20	1 14.6	20.5
518156 2016 GW_{40}	18.2	X	98.74036	352.72081	166.34985	2.58999	0.0904351	0.28416018	2.2913630	20	6 26.2	21.1
518157 2016 GO_{104}	17.2	X	181.62015	165.33455	193.98916	5.52725	0.0178819	0.22387973	2.6861249	20	2 29.4	21.0
518158 2016 GE_{259}	16.2	X	162.42012	220.82891	101.11315	13.43588	0.1272568	0.17780221	3.1321649	20	1 8.9	21.1
518159 2016 GG_{259}	16.4	X	41.28299	28.27128	67.83989	11.86093	0.0901172	0.18859260	3.0115237	20	1 17.1	20.3
518160 2016 GH_{259}	16.9	X	229.42896	219.93981	101.30009	4.87854	0.1288882	0.20859551	2.8157845	20	3 8.6	21.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518161 2016 GK_{259}	16.8	X	210.43157	262.76985	91.34778	6.02171	0.1372258	0.21238591	2.7821823	20	3 30.6	21.3
518162 2016 GL_{259}	16.9	X	236.41269	209.00346	101.64719	5.22994	0.0936127	0.20840576	2.8174934	20	3 5.1	21.1
518163 2016 GN_{259}	17.0	X	196.99103	274.58110	63.45144	9.91022	0.1251178	0.20219593	2.8748892	20	3 1.6	21.7
518164 2016 GO_{259}	17.5	X	253.62141	120.91757	163.60090	3.73538	0.0604327	0.20982639	2.8047618	20	2 21.1	21.3
518165 2016 GR_{259}	16.7	X	322.43390	309.55407	285.48062	14.20657	0.2266011	0.22430913	2.6826957	20	2 13.1	20.2
518166 2016 GS_{259}	16.2	X	202.09460	258.87193	78.00528	11.17452	0.1127279	0.19234156	2.9722634	20	3 6.4	21.0
518167 2016 HZ_{24}	16.4	X	112.67239	343.12695	64.70423	13.91168	0.1112986	0.19990835	2.8967794	20	3 1.0	20.8
518168 2016 JT_{40}	16.1	X	219.46009	79.87088	309.95394	12.51921	0.0691988	0.20145648	2.8819198	20	5 21.9	20.6
518169 2016 KE_{5}	17.1	X	274.49942	100.91481	209.90587	24.03060	0.1604573	0.21810838	2.7333032	20	4 3.7	21.1
518170 2016 KF_{5}	16.3	X	251.43759	240.18798	92.46086	12.77751	0.1845816	0.21623441	2.7490724	20	4 12.3	20.8
518171 2016 LK_{52}	18.4	X	116.27067	226.56161	165.92076	23.34788	0.0428792	0.38322843	1.8771439	20	—	—
518172 2016 LB_{53}	18.6	X	190.49016	122.66237	184.67563	21.48884	0.0917194	0.38417666	1.8740538	20	—	—
518173 2016 LV_{57}	16.6	X	30.62248	298.83726	254.55984	8.41794	0.1458317	0.23791446	2.5794206	20	5 5.7	19.2
518174 2016 LX_{57}	17.0	X	220.92856	192.29871	165.72055	14.66662	0.0678993	0.22022842	2.7157335	20	4 18.3	21.1
518175 2016 LC_{58}	16.9	X	222.45702	248.04117	172.59897	12.46524	0.0977998	0.22774940	2.6556116	20	7 4.0	21.0
518176 2016 LG_{58}	17.2	X	333.03777	28.46560	256.69360	8.42052	0.0272862	0.22350111	2.6891576	20	6 9.7	20.7
518177 2016 NZ_{3}	16.5	X	285.59991	37.87194	278.98906	6.79573	0.1010516	0.20985838	2.8044767	20	5 3.9	20.3
518178 2016 NW_{57}	18.1	X	315.58654	42.92901	135.39793	24.48491	0.0466211	0.37760864	1.8957225	20	—	—
518179 2016 NW_{70}	17.3	X	294.86041	188.74707	140.58107	6.15823	0.0779929	0.22503337	2.6769367	20	6 9.2	20.8
518180 2016 NA_{71}	17.5	X	318.40963	188.75106	116.58216	2.69055	0.1024022	0.22815549	2.6524596	20	6 8.1	20.6
518181 2016 NG_{71}	17.1	X	258.93965	301.62044	98.64133	11.39897	0.2045451	0.22192722	2.7018568	20	7 6.8	21.0
518182 2016 NK_{71}	16.4	X	248.83483	101.65914	266.11621	12.53340	0.0972982	0.21037891	2.7998488	20	5 26.6	20.5
518183 2016 NR_{71}	17.7	X	294.17412	145.52968	199.50324	14.35037	0.0859584	0.23166941	2.6255699	20	6 26.9	21.3
518184 2016 NW_{71}	17.6	X	32.55864	52.37696	194.59170	3.38916	0.1064187	0.23467692	2.6030897	20	7 23.6	20.6
518185 2016 NX_{71}	17.3	X	270.01644	134.37582	266.09156	6.98941	0.1496368	0.23467308	2.6031180	20	7 28.6	20.8
518186 2016 NF_{72}	16.6	X	264.17940	318.04081	88.23022	22.81679	0.1469913	0.23288608	2.6164174	20	8 2.3	20.4
518187 2016 NH_{72}	17.0	X	17.95767	297.96191	323.56401	9.09040	0.1461299	0.23871505	2.5736502	20	7 27.4	19.7
518188 2016 NK_{72}	17.6	X	256.30384	249.24578	136.66429	2.37619	0.0920029	0.22448484	2.6812957	20	6 30.3	21.1
518189 2016 OT_{6}	16.8	X	214.59339	245.15618	246.90262	12.10267	0.1125554	0.22027042	2.7153882	20	9 19.3	21.0
518190 2016 OW_{6}	16.7	X	11.74029	333.95456	299.08780	12.51446	0.1477337	0.22482218	2.6786128	20	7 28.9	19.6
518191 2016 OZ_{6}	15.9	X	175.57963	17.97577	53.61122	10.57329	0.0618500	0.19038458	2.9925968	20	5 27.6	20.4
518192 2016 PA_{77}	16.4	X	298.75871	58.58501	344.81159	12.49975	0.2641286	0.23526088	2.5987803	20	9 2.6	18.7
518193 2016 PX_{79}	18.1	X	118.93086	232.12495	141.19516	24.39244	0.0852510	0.36391914	1.9429701	20	—	—
518194 2016 PS_{96}	17.5	X	247.85636	269.19565	122.67968	5.93370	0.0764500	0.22777335	2.6554254	20	6 29.9	21.3
518195 2016 PU_{96}	17.8	X	253.55334	308.52706	103.59616	3.87619	0.1636896	0.23511404	2.5998623	20	7 22.8	21.3
518196 2016 PW_{96}	16.9	X	308.95886	301.63327	59.69806	15.69962	0.1274261	0.23107221	2.6300918	20	8 17.1	20.2
518197 2016 PX_{96}	17.1	X	178.73442	310.64186	129.73996	15.18190	0.1295966	0.20233014	2.8736177	20	6 14.1	21.9
518198 2016 PH_{97}	16.9	X	125.53292	204.00498	4.30834	9.52265	0.0843893	0.24315983	2.5421909	20	9 29.9	20.4
518199 2016 PJ_{97}	17.2	X	184.89856	152.91217	16.25996	6.64631	0.0847133	0.25303778	2.4755924	20	10 16.1	20.8
518200 2016 PK_{97}	17.1	X	348.49060	173.99009	161.33343	12.20513	0.0920988	0.23513852	2.5996818	20	9 15.2	20.0
518201 2016 PM_{97}	16.8	X	229.63025	134.32827	282.68306	7.40750	0.0180716	0.23280771	2.6170046	20	7 18.1	20.3
518202 2016 PP_{97}	17.5	X	338.17028	112.01677	192.51528	2.55139	0.1020058	0.23080573	2.6321158	20	7 11.1	20.3
518203 2016 PQ_{97}	17.4	X	279.86306	219.49662	151.70612	6.75361	0.0538654	0.22536263	2.6743287	20	7 17.8	21.0
518204 2016 PD_{98}	17.3	X	354.15869	56.16607	259.19123	4.36964	0.1370839	0.23230827	2.6207541	20	8 25.7	20.1
518205 2016 PE_{98}	17.9	X	254.49333	251.78378	190.08613	8.39450	0.1118520	0.23500599	2.6006591	20	9 8.5	21.2
518206 2016 PQ_{98}	17.0	X	72.07369	199.44772	19.05653	12.02198	0.1210129	0.23126291	2.6286457	20	8 20.1	20.7
518207 2016 PB_{99}	17.8	X	327.13963	252.69312	165.46437	6.76982	0.0875413	0.27250421	2.3562457	20	12 15.6	20.4
518208 2016 QV_{6}	16.9	X	288.35133	150.03734	207.71933	5.64596	0.1919962	0.21881953	2.7273780	20	6 19.7	20.5
518209 2016 QC_{26}	15.8	X	74.74896	240.82376	266.82233	7.92055	0.0294107	0.17584022	3.1554205	20	4 28.2	20.3
518210 2016 QO_{33}	17.7	X	145.20883	101.94125	209.60598	20.97127	0.0871996	0.35533013	1.9741555	20	—	—
518211 2016 QJ_{88}	17.5	X	256.50115	321.35140	127.00569	10.60696	0.1597165	0.23738125	2.5832817	20	9 18.2	21.0
518212 2016 QL_{89}	17.1	X	319.06127	294.00800	91.84124	13.54319	0.1852109	0.24170136	2.5524073	20	10 12.4	19.7
518213 2016 QM_{89}	16.2	X	355.25101	225.40805	96.05477	15.86617	0.0369512	0.22286924	2.6942380	20	9 8.1	20.0
518214 2016 QP_{89}	17.7	X	350.52674	232.69456	89.76976	4.34104	0.1728877	0.23658058	2.5891069	20	9 6.3	20.1
518215 2016 QQ_{89}	16.7	X	159.89060	36.68993	120.51457	14.60019	0.1923873	0.22671337	2.6636958	20	9 3.3	21.3
518216 2016 QR_{89}	17.6	X	276.92508	344.91060	54.49474	12.54018	0.0718280	0.23310294	2.6147944	20	8 27.6	21.2
518217 2016 QS_{89}	17.5	X	334.92284	63.65709	273.17466	13.73034	0.1452678	0.23612714	2.5924205	20	8 15.3	20.4
518218 2016 RB_{19}	18.5	X	326.91842	322.13024	205.74688	20.70152	0.0680339	0.37959089	1.8891170	20	—	—
518219 2016 RE_{19}	18.7	X	101.09677	250.09755	172.59867	26.71854	0.0672215	0.40174928	1.8189998	20	1 14.2	20.9
518220 2016 RP_{38}	18.1	X	199.49162	297.76784	340.27739	18.00508	0.0612999	0.35874977	1.9615902	20	—	—
518221 2016 RN_{42}	18.4	X	211.07591	106.05310	166.40294	21.90473	0.0789183	0.36560450	1.9369944	20	—	—
518222 2016 RP_{42}	18.6	X	335.17350	323.90720	190.17780	22.52431	0.0189181	0.36182673	1.9504536	20	—	—
518223 2016 SO_{1}	18.0	X	24.68766	58.59980	78.45845	19.75088	0.0162213	0.38794157	1.8619092	20	1 4.0	19.6
518224 2016 SN_{9}	18.4	X	220.50961	94.58255	181.69490	23.13478	0.0309592	0.37960819	1.8890596	20	—	—
518225 2016 SL_{35}	17.8	X	333.95748	100.49468	63.85207	22.36170	0.0467546	0.36721113	1.9313404	20	—	—
518226 2016 SK_{50}	17.6	X	14.50656	139.58917	172.64885	5.15721	0.1338873	0.24042135	2.5614587	20	10 2.3	20.3
518227 2016 TZ_{2}	17.8	X	301.59083	12.62899	209.00380	21.18235	0.0392961	0.38162149	1.8824098	20	—	—
518228 2016 TR_{16}	17.8	X	291.87304	65.87586	60.08926	8.57209	0.1368356	0.29206133	2.2498488	20	—	—
518229 2016 TX_{34}	18.6	X	90.87098	194.21466	207.07912	21.05255	0.0795456	0.35855308	1.9623076	20	—	—
518230 2016 TA_{50}	18.3	X	216.91555	193.53314	43.66798	4.98167	0.0484784	0.31264573	2.1499798	20	—	—
518231 2016 TC_{58}	17.1	X	241.20879	166.63719	297.35203	11.69198	0.1889279	0.23176198	2.6248707	20	9 5.3	21.1
518232 2016 US	17.7	X	304.02686	320.07927	123.25714	3.70435	0.1999477	0.26697426	2.3886716	20	12 8.0	19.3
518233 2016 UO_{6}	17.3	X	353.20086	149.26368	276.17632	6.33191	0.0540631	0.29106501	2.2549801	20	—	—
518234 2016 UX_{10}	18.8	X	23.65096	13.97680	20.40737	2.24370	0.0764097	0.29803603	2.2196791	20	—	—
518235 2016 UU_{14}	18.2	X	298.47811	61.39092	36.99475	7.31928	0.1486339	0.26577916	2.3958269	20	12 19.2	20.3
518236 2016 UA_{22}	18.2	X	309.82090	278.20136	175.07222	1.00643	0.1315787	0.27177319	2.3604690	20	—	—
518237 2016 UM_{27}	18.0	X	167.82254	214.49401	33.82118	7.92678	0.0420306	0.30710947	2.1757413	20	—	—
518238 2016 US_{29}	17.0	X	270.54924	237.20439	219.10002	12.79250	0.1128085	0.23841366	2.5758187	20	10 22.6	20.1
518239 2016 UU_{35}	17.5	X	308.36725	97.39834	355.53473	8.33877	0.1336551	0.27484753	2.3428339	20	—	—
518240 2016 UU_{36}	18.0	X	282.78116	43.27644	187.16485	22.33369	0.0354077	0.37699596	1.8977759	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518241 2016 UY_{37}	16.2	X	280.28461	32.29403	314.34704	8.76091	0.0404594	0.19068639	2.9894382	20	6 16.6	20.4
518242 2016 UO_{61}	17.6	X	269.75227	350.39535	136.66937	7.49951	0.0853399	0.27690952	2.3311889	20	12 18.8	20.1
518243 2016 UW_{62}	16.3	X	185.80931	299.84362	132.74377	10.12011	0.0659242	0.17374998	3.1806768	20	6 11.2	21.2
518244 2016 UC_{64}	15.8	X	160.93106	305.61176	158.64843	9.51479	0.0743132	0.17589830	3.1547258	20	6 22.7	20.7
518245 2016 UA_{68}	16.9	X	248.53700	263.57570	204.57295	16.92437	0.2503929	0.23349717	2.6118504	20	9 13.3	20.8
518246 2016 UV_{72}	18.4	X	318.52477	225.27064	224.59117	4.48860	0.1365412	0.27686525	2.3314373	20	—	—
518247 2016 UV_{85}	18.1	X	276.73286	64.27802	47.86702	5.47586	0.1497487	0.25592683	2.4569266	20	11 23.6	20.6
518248 2016 UQ_{97}	17.6	X	216.96331	304.17155	224.59481	7.48371	0.0760837	0.26161436	2.4211870	20	11 26.6	20.8
518249 2016 UK_{102}	18.2	X	259.64560	296.56088	222.20940	4.06878	0.0504424	0.28962388	2.2624542	20	—	—
518250 2016 UZ_{126}	17.4	X	313.46670	25.85729	45.31365	7.42313	0.1271125	0.25986386	2.4320479	20	12 5.8	19.8
518251 2016 UK_{136}	17.5	X	344.50156	223.32940	177.17070	4.46293	0.1715411	0.26188271	2.4195327	20	12 25.9	19.9
518252 2016 UX_{138}	17.1	X	260.50480	351.87854	128.95612	14.22757	0.2203192	0.24261082	2.5460246	20	10 31.9	20.5
518253 2016 UU_{140}	18.0	X	16.40843	284.98249	186.32241	20.35598	0.0288344	0.33864183	2.0384919	20	—	—
518254 2016 UE_{148}	17.2	X	272.52065	38.38011	88.07932	6.63713	0.0586076	0.26980578	2.3719301	20	12 22.2	19.8
518255 2016 UK_{148}	17.4	X	301.53182	275.92508	129.67221	4.34915	0.1687870	0.22379101	2.6868348	20	9 25.2	20.2
518256 2016 VV	18.0	X	181.48534	113.72725	215.32072	20.99464	0.1002781	0.36648136	1.9339034	20	1 2.4	20.8
518257 2016 VN_{19}	16.1	X	168.91460	127.76521	29.96547	10.08103	0.0417090	0.17323797	3.1869408	20	9 9.8	20.9
518258 2016 VR_{19}	16.9	X	243.13148	67.81783	5.29621	1.65748	0.1273942	0.19234996	2.9721768	20	8 8.9	21.3
518259 2016 VS_{19}	17.2	X	226.14335	78.26452	89.74006	12.79933	0.1372181	0.23427638	2.6060558	20	11 24.3	20.9
518260 2016 WV_{3}	18.1	X	2.17962	112.62642	314.10598	1.89070	0.1401491	0.28607889	2.2811062	20	—	—
518261 2016 WE_{5}	17.3	X	314.12482	350.50320	51.50358	5.03631	0.1679702	0.23578618	2.5949191	20	10 17.9	19.8
518262 2016 WT_{15}	17.2	X	238.60142	36.53132	57.60879	9.16594	0.1774243	0.21024206	2.8010637	20	8 30.2	21.5
518263 2016 WG_{25}	17.3	X	215.30049	152.69670	50.66577	8.16471	0.1064962	0.26809218	2.3820267	20	—	—
518264 2016 WP_{31}	17.1	X	197.33031	259.93364	250.71863	10.65441	0.1133055	0.22017536	2.7161697	20	9 24.7	21.5
518265 2016 WO_{37}	17.6	X	173.59179	1.41449	252.64149	4.86822	0.1316157	0.28517333	2.2859327	20	—	—
518266 2016 WK_{45}	17.1	X	285.60861	18.66252	68.28303	15.07461	0.1900124	0.23281384	2.6169586	20	10 28.4	20.0
518267 2016 WJ_{52}	16.3	X	260.89287	345.30540	62.43962	11.03789	0.2241902	0.19056898	2.9906660	20	7 15.8	20.8
518268 2016 WP_{54}	17.4	X	283.18990	221.22361	234.95773	12.33584	0.2041790	0.23654965	2.5893326	20	10 28.6	20.0
518269 2016 WW_{56}	17.6	X	254.49805	19.88444	101.25196	3.30126	0.0684425	0.23350902	2.6117621	20	11 9.1	20.8
518270 2016 WY_{56}	17.1	X	230.48788	337.17508	154.43286	11.00110	0.0610003	0.22801799	2.6535258	20	10 24.7	20.8
518271 2016 WZ_{56}	16.9	X	170.32364	59.28439	140.10874	14.05312	0.1448662	0.22086497	2.7105129	20	11 4.9	21.5
518272 2016 WA_{57}	16.7	X	231.43791	271.72510	184.93239	8.49998	0.1156960	0.19570451	2.9381153	20	8 24.9	21.1
518273 2016 XZ_{5}	16.8	X	257.29578	161.87166	281.21677	6.94124	0.1632878	0.21388206	2.7691925	20	9 1.2	20.7
518274 2016 XA_{7}	16.6	X	306.37270	25.54036	24.55603	11.47652	0.1900894	0.23452381	2.6042225	20	10 11.0	18.8
518275 2016 XA_{12}	16.4	X	194.52000	56.04949	58.55525	15.30587	0.1303066	0.18212762	3.0823753	20	8 14.0	21.5
518276 2016 XJ_{20}	15.9	X	313.83520	20.26558	295.62330	9.29816	0.1050864	0.17547094	3.1598460	20	6 13.9	20.0
518277 2016 YR_{1}	17.0	X	352.34845	356.18732	86.59641	7.06781	0.0746585	0.27669271	2.3324065	20	—	—
518278 2016 YM_{5}	16.7	X	311.62930	231.18397	232.20184	7.65113	0.1008564	0.24367425	2.5386118	20	—	—
518279 2016 YN_{5}	16.8	X	329.39968	300.68495	127.30304	28.35763	0.2165744	0.23771635	2.5808535	20	—	—
518280 2016 YZ_{7}	17.0	X	51.83028	332.40996	32.22834	3.35744	0.2557738	0.25264788	2.4781387	20	—	—
518281 2016 YS_{9}	17.2	X	271.76152	7.47456	88.17542	12.98362	0.1443370	0.23414451	2.6070342	20	10 25.2	20.5
518282 2016 YM_{12}	16.6	X	211.22443	68.13545	50.89847	13.93114	0.1107222	0.17529938	3.1619073	20	9 7.7	21.7
518283 2016 YD_{13}	16.0	X	88.67493	173.60415	86.21897	12.57296	0.0438734	0.17536590	3.1611077	20	10 15.6	20.7
518284 2017 AD	16.2	X	183.71308	72.10205	97.23403	12.66904	0.1520357	0.18336656	3.0684753	20	10 8.7	21.4
518285 2017 AG_{6}	16.3	X	178.07295	49.22100	101.70328	18.42025	0.1233715	0.17233595	3.1980516	20	9 11.9	21.7
518286 2017 AV_{6}	16.7	X	339.28077	79.92291	319.16360	5.77142	0.0441788	0.21938092	2.7227231	20	11 18.3	20.2
518287 2017 AF_{8}	16.8	X	300.83002	247.86268	163.11106	10.98823	0.0265693	0.18564671	3.0432985	20	10 9.5	21.0
518288 2017 AW_{9}	16.2	X	267.30003	339.37433	81.98980	18.95790	0.2285430	0.19116142	2.9844838	20	8 12.8	20.7
518289 2017 AQ_{12}	16.2	X	276.79881	299.83419	125.82891	10.30777	0.0838244	0.18897591	3.0074500	20	9 20.6	20.3
518290 2017 AX_{12}	16.5	X	337.87424	304.30898	135.62706	6.64875	0.1135102	0.25473460	2.4645866	20	—	—
518291 2017 AF_{14}	16.1	X	200.61541	34.10078	111.16144	3.77164	0.1395302	0.18231163	3.0803008	20	9 21.6	20.9
518292 2017 BG	16.3	X	275.72299	340.82417	101.96549	13.07984	0.0968653	0.20451797	2.8530873	20	10 15.4	20.2
518293 2017 BU_{2}	16.3	X	305.37102	333.67174	102.82318	15.02203	0.1609459	0.21303024	2.7765695	20	11 17.1	19.5
518294 2017 BF_{4}	16.9	X	20.40990	225.81432	130.22663	6.34628	0.0716745	0.21455367	2.7634106	20	11 25.5	20.6
518295 2017 BW_{4}	15.4	X	205.49782	68.40984	70.32124	10.27959	0.0456452	0.17519985	3.1631047	20	9 29.3	20.2
518296 2017 BY_{9}	17.2	X	53.05292	77.57677	287.85796	5.40634	0.1413844	0.25525392	2.4612427	20	—	—
518297 2017 BV_{10}	16.8	X	230.93664	38.22341	67.24884	2.28288	0.1317871	0.17528708	3.1620551	20	9 3.4	21.5
518298 2017 BH_{17}	16.4	X	137.04904	85.69823	139.48753	9.48261	0.1022823	0.18058892	3.0998593	20	10 28.5	21.3
518299 2017 BR_{18}	16.2	X	280.44882	95.65739	332.12036	8.57894	0.0530216	0.18354507	3.0664853	20	9 24.9	20.5
518300 2017 BA_{19}	16.1	X	136.71988	126.56906	95.41947	11.21290	0.1095197	0.17468139	3.1693604	20	10 25.3	21.2
518301 2017 BX_{21}	16.8	X	283.99725	277.03720	143.50609	6.53121	0.1355029	0.18717970	3.0266594	20	9 14.1	20.7
518302 2017 BF_{23}	16.5	X	126.52822	39.67993	238.87615	4.33877	0.0111698	0.22328160	2.6909198	20	12 22.8	20.2
518303 2017 BX_{25}	16.0	X	143.70921	79.98556	120.68615	16.78804	0.0678433	0.17095329	3.2152722	20	10 7.1	21.1
518304 2017 BG_{27}	16.2	X	200.90226	358.51732	129.14503	18.44860	0.0330397	0.17263071	3.1944101	20	9 9.3	21.0
518305 2017 BD_{33}	16.8	X	271.66462	127.93140	306.32983	4.66000	0.1782083	0.19198975	2.9758933	20	9 5.4	20.9
518306 2017 BP_{34}	15.9	X	210.26977	294.69237	158.14738	27.01596	0.2834557	0.17010897	3.2259026	20	7 17.9	21.9
518307 2017 BB_{36}	16.1	X	124.38249	135.56814	123.11601	4.53580	0.2118854	0.18523153	3.0478443	20	11 26.6	21.4
518308 2017 BU_{37}	15.9	X	172.77112	110.24829	81.35771	9.80036	0.0880304	0.18869459	3.0104385	20	10 25.5	20.6
518309 2017 BG_{40}	16.9	X	305.68634	315.68707	117.90634	5.55384	0.0540964	0.21297809	2.7770227	20	11 16.9	20.5
518310 2017 BK_{52}	16.4	X	238.92420	92.57069	1.86181	5.26809	0.1119583	0.17356607	3.1829232	20	8 31.8	21.0
518311 2017 BG_{54}	16.5	X	44.16163	240.04375	109.81844	10.13739	0.0486697	0.21782862	2.7356430	20	12 15.2	20.3
518312 2017 BP_{61}	16.3	X	295.95566	304.21900	80.60290	10.37143	0.1225761	0.18275896	3.0752724	20	8 19.6	20.4
518313 2017 BA_{63}	16.5	X	195.90243	131.69349	8.17656	7.49549	0.0736788	0.17600175	3.1534895	20	9 13.7	21.2
518314 2017 BM_{65}	15.9	X	229.29064	51.20250	61.57660	10.39679	0.0467912	0.17709913	3.1404492	20	9 25.2	20.5
518315 2017 BB_{67}	16.1	X	245.25553	335.99626	104.79594	17.87825	0.1433615	0.17880499	3.1204433	20	8 20.9	20.9
518316 2017 BV_{70}	17.3	X	314.16165	21.45469	21.18261	2.12315	0.0672347	0.20279899	2.8691870	20	10 15.2	20.9
518317 2017 BK_{74}	16.5	X	149.82311	325.40349	234.94319	3.23346	0.1472994	0.17452977	3.1711957	20	10 6.8	21.7
518318 2017 BB_{77}	17.1	X	227.32567	330.04167	162.51663	2.70181	0.0555208	0.19469494	2.9482634	20	10 14.2	21.3
518319 2017 BZ_{80}	16.5	X	72.87038	154.35992	129.73029	10.25991	0.0720948	0.17475231	3.1685029	20	10 27.9	21.2
518320 2017 BZ_{82}	16.2	X	221.15962	283.18699	203.15682	7.71709	0.0877815	0.18122317	3.0926224	20	9 21.3	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518321 2017 BC_{84}	16.1	X	191.12028	324.16191	205.00903	9.56127	0.0492000	0.19121765	2.9838986	20	10 16.6	20.5
518322 2017 BQ_{87}	17.4	X	17.50620	300.55790	68.28403	9.76832	0.1675389	0.24022272	2.5628705	20	12 27.3	20.5
518323 2017 BO_{96}	15.9	X	225.66478	96.66784	7.22197	15.28472	0.2844528	0.17478866	3.1680635	20	8 18.0	21.4
518324 2017 BV_{96}	17.0	X	312.77285	330.04228	81.17080	4.93692	0.0969661	0.21064465	2.7974936	20	10 26.5	20.4
518325 2017 BN_{100}	16.9	X	137.18978	87.69306	136.25593	1.95238	0.1044457	0.18112294	3.0937632	20	10 24.6	21.7
518326 2017 BR_{104}	16.5	X	227.48271	287.97363	258.20534	13.65250	0.0618988	0.22372262	2.6873823	20	12 24.1	20.2
518327 2017 BC_{105}	15.9	X	179.76529	43.99522	108.73515	17.46615	0.0739892	0.17022955	3.2243790	20	9 16.7	21.0
518328 2017 BU_{105}	16.8	X	137.90993	175.35077	89.28918	12.77901	0.0943131	0.21757786	2.7377445	20	12 17.9	20.8
518329 2017 BT_{108}	16.4	X	117.72217	349.05611	238.18395	10.29754	0.0330876	0.17654771	3.1469848	20	9 28.7	21.1
518330 2017 BN_{112}	16.1	X	272.68544	53.27472	13.19716	9.69977	0.0699440	0.17654806	3.1469808	20	9 14.9	20.4
518331 2017 BC_{120}	17.4	X	353.25235	264.63242	139.71963	7.46898	0.1065405	0.23363942	2.6107901	20	12 27.5	20.5
518332 2017 BM_{120}	16.2	X	333.12935	115.45864	245.93134	6.90694	0.0315266	0.17146002	3.2089341	20	9 11.5	20.7
518333 2017 BT_{121}	13.1	X	320.79467	303.87565	335.94568	24.92724	0.0041499	0.08344177	5.1865715	20	5 11.1	20.3
518334 2017 BK_{124}	16.1	X	220.76616	70.50617	59.70081	9.53884	0.0412641	0.17434699	3.1734116	20	10 5.7	20.8
518335 2017 BO_{128}	16.4	X	314.74888	306.42036	149.64706	22.33027	0.0302082	0.23492023	2.6012920	20	—	—
518336 2017 BE_{131}	16.2	X	358.02777	248.96317	115.86565	18.14281	0.1510660	0.19626540	2.9325149	20	11 14.0	20.0
518337 2017 BM_{134}	16.1	X	261.35664	325.41691	118.13216	14.62990	0.0960908	0.17495886	3.1660086	20	9 20.9	20.7
518338 2017 BH_{137}	16.0	X	268.37465	149.49863	285.88860	8.94818	0.0382370	0.15769409	3.3930670	20	9 15.2	21.0
518339 2017 BJ_{137}	18.2	X	268.55674	157.28816	75.64858	4.25326	0.0818889	0.28118806	2.3074810	20	—	—
518340 2017 BK_{137}	17.6	X	27.68359	26.99826	50.20527	7.49194	0.0938806	0.26417521	2.4055147	20	—	—
518341 2017 CY_{14}	16.5	X	195.63392	50.67589	104.48102	2.45254	0.1270751	0.17560636	3.1582213	20	9 28.2	21.4
518342 2017 CH_{18}	16.3	X	88.59961	162.86973	124.48389	11.40379	0.1220569	0.19311632	2.9643085	20	11 25.8	21.0
518343 2017 CG_{24}	16.9	X	199.08801	123.19417	44.03846	2.88831	0.0948590	0.18534000	3.0466550	20	10 18.9	21.3
518344 2017 CK_{29}	16.3	X	122.53596	96.36586	163.05179	16.50647	0.1749116	0.18158869	3.0884710	20	11 26.3	21.7
518345 2017 CN_{31}	16.4	X	279.35883	344.54283	93.65903	12.49745	0.0432239	0.18305449	3.0719617	20	10 17.3	20.8
518346 2017 CG_{32}	15.8	X	131.02810	145.79858	76.11608	16.05526	0.0984171	0.17887136	3.1196713	20	10 21.9	20.8
518347 2017 DF_{3}	16.6	X	121.78155	113.65900	140.05035	10.98255	0.0932954	0.18250820	3.0780887	20	11 15.8	21.5
518348 2017 DS_{4}	16.4	X	277.92902	285.13692	137.28204	16.97548	0.1013194	0.17186042	3.2039480	20	9 12.4	20.8
518349 2017 DB_{5}	16.4	X	177.60569	50.01882	138.04715	12.85410	0.0967985	0.17658933	3.1464904	20	10 24.9	21.4
518350 2017 DN_{5}	16.3	X	8.34694	356.90706	355.35103	9.01497	0.0694262	0.18251007	3.0780677	20	10 22.8	20.4
518351 2017 DL_{32}	16.4	X	236.39082	161.43537	312.26479	4.02536	0.1124586	0.17739044	3.1370100	20	9 19.3	20.9
518352 2017 DL_{33}	17.1	X	53.47693	183.74054	168.07790	3.96095	0.0655524	0.22577296	2.6710874	20	—	—
518353 2017 DG_{38}	16.0	X	227.97458	275.71148	213.90789	9.56682	0.0784430	0.19014722	2.9950867	20	10 5.5	20.4
518354 2017 DB_{40}	15.7	X	54.90766	223.61343	29.78475	3.13553	0.1515463	0.12392800	3.9843403	20	8 30.9	21.0
518355 2017 DP_{40}	17.7	X	353.34736	26.69025	27.35403	2.18543	0.0723615	0.22578682	2.6709781	20	—	—
518356 2017 DM_{42}	15.9	X	108.30982	278.46494	4.93243	9.23392	0.3000649	0.18411294	3.0601767	20	12 14.2	21.5
518357 2017 DP_{50}	16.0	X	44.37687	203.98128	118.72112	10.17486	0.0475056	0.17581372	3.1557375	20	11 5.9	20.5
518358 2017 DS_{57}	15.8	X	347.27231	347.12705	38.25584	12.39963	0.1343557	0.19220261	2.9736957	20	11 11.4	19.2
518359 2017 DG_{61}	15.4	X	12.85828	268.92058	89.25097	11.48313	0.0899220	0.17822384	3.1272230	20	11 13.0	19.6
518360 2017 DZ_{65}	14.3	X	55.57767	43.34108	153.65943	30.70900	0.0079679	0.08392908	5.1664759	20	6 9.3	21.5
518361 2017 DU_{108}	16.5	X	299.47116	113.38984	15.22992	13.92024	0.0628904	0.22243253	2.6977633	20	—	—
518362 2017 DA_{112}	16.4	X	241.35773	100.67744	10.29186	11.83214	0.1730974	0.18720403	3.0263972	20	9 18.8	20.8
518363 2017 DD_{117}	15.8	X	207.36819	264.94376	250.87929	13.20825	0.1399768	0.17290132	3.1910763	20	10 2.9	21.0
518364 2017 DZ_{120}	16.2	X	138.53923	5.31569	269.21420	8.26951	0.1102669	0.18708172	3.0277161	20	12 23.9	21.0
518365 2017 EJ_{5}	15.3	X	44.31734	224.70872	95.24087	18.25796	0.0981731	0.17723556	3.1388373	20	11 12.3	19.9
518366 2017 EJ_{8}	15.7	X	235.09703	329.23717	167.42744	17.85126	0.1891413	0.17696128	3.1420799	20	10 10.8	20.5
518367 2017 EN_{18}	15.6	X	347.12553	255.87190	102.03462	26.66942	0.2492895	0.17869973	3.1216685	20	10 25.6	19.3
518368 2017 ED_{24}	17.9	X	312.16905	314.53899	281.25500	5.93126	0.0710449	0.29400290	2.2399327	20	2 17.0	20.6
518369 2017 FS_{7}	16.1	X	233.70567	310.40446	174.48738	1.82260	0.0599841	0.16426752	3.3019330	20	10 6.6	20.9
518370 2017 FQ_{8}	17.0	X	261.10410	201.40004	326.64227	7.26995	0.1411076	0.21403689	2.7678568	20	—	—
518371 2017 FC_{25}	16.2	X	17.60827	123.67065	235.88473	7.43725	0.0731530	0.17563560	3.1578708	20	11 15.4	20.5
518372 2017 FC_{27}	15.9	X	231.34911	62.64503	104.54066	9.07109	0.0668441	0.18777456	3.0202638	20	11 28.5	20.2
518373 2017 FO_{50}	16.1	X	53.55266	321.96063	22.44562	8.18629	0.0546275	0.19820262	2.9133755	20	12 14.5	20.3
518374 2017 FS_{53}	16.4	X	57.74611	138.50639	177.65496	8.18518	0.0473316	0.17775891	3.1326735	20	11 12.5	20.9
518375 2017 FJ_{56}	16.5	X	283.02679	21.53866	53.69272	11.41047	0.2103419	0.17647145	3.1478914	20	9 23.3	20.7
518376 2017 FE_{70}	15.5	X	165.38041	44.45224	168.33748	23.34139	0.0656190	0.17560847	3.1581960	20	11 10.9	20.6
518377 2017 FC_{72}	16.0	X	21.56613	156.95634	187.54706	17.92397	0.1892318	0.18186631	3.0853271	20	11 21.4	20.1
518378 2017 FZ_{81}	16.5	X	347.95120	283.60273	152.89587	6.49422	0.0580237	0.20544910	2.8444603	20	—	—
518379 2017 FO_{118}	17.1	X	244.82554	333.18856	254.36550	1.92642	0.1613131	0.23516319	2.5995000	20	—	—
518380 2017 FO_{159}	16.5	X	39.52835	312.82071	51.13228	11.96160	0.1229086	0.20214024	2.8754172	20	—	—
518381 2017 FX_{160}	16.4	X	348.92957	334.96376	61.18230	11.01380	0.0452923	0.17060091	3.2196982	20	11 18.6	20.6
518382 2017 FY_{160}	16.8	X	343.48362	35.78734	61.14224	5.41486	0.0697673	0.21476164	2.7616262	20	—	—
518383 2017 FZ_{160}	16.5	X	214.46609	172.94859	21.80083	2.13504	0.1094905	0.18089623	3.0963475	20	12 3.7	21.1
518384 2017 GL_{9}	15.7	X	203.48233	155.53823	61.35340	12.13696	0.0109653	0.17228502	3.1986817	20	12 26.7	20.4
518385 2017 GM_{9}	16.5	X	176.58332	176.66176	68.99054	6.44844	0.1165453	0.17348451	3.1839208	20	12 23.2	21.5
518386 2017 GN_{9}	16.2	X	177.93857	208.47783	47.14953	9.92744	0.2150823	0.17705372	3.1409861	20	12 31.4	21.6
518387 2017 HZ_{61}	16.4	X	163.83201	81.16124	227.30347	11.63541	0.2298503	0.18719276	3.0265186	20	—	—
518388 2017 HA_{62}	16.9	X	84.28149	180.94841	182.97279	11.31528	0.0814140	0.18998914	2.9967478	20	—	—
518389 2017 QA_{14}	17.0	X	138.86769	197.02337	210.11583	3.54453	0.0700927	0.21451339	2.7637565	20	3 15.7	20.9
518390 2017 TD_{9}	16.1	X	257.66907	167.71107	105.84247	6.80674	0.0929706	0.18020828	3.1042228	20	2 14.3	20.7
518391 2017 TF_{10}	17.0	X	253.48857	105.78260	231.77076	12.19073	0.1965183	0.23409992	2.6073652	20	4 9.3	21.3
518392 2017 TS_{10}	17.2	X	335.24651	52.60677	247.02120	5.38133	0.1149994	0.27412429	2.3469528	20	6 30.1	19.2
518393 2017 TZ_{11}	16.5	X	238.74872	331.83331	0.62668	7.85997	0.2245484	0.21559438	2.7545105	20	3 21.9	21.2
518394 2017 TG_{13}	17.0	X	208.63142	56.55619	319.02173	5.00522	0.0427801	0.21427315	2.7658219	20	4 22.5	21.0
518395 2017 UV_{13}	17.0	X	179.22849	222.62235	209.00626	10.91346	0.1870343	0.23338220	2.6127081	20	6 2.3	21.4
518396 2017 UW_{15}	16.7	X	215.09279	176.98626	172.71051	6.23329	0.0895546	0.20725643	2.8278999	20	3 29.5	21.0
518397 2017 UX_{20}	16.9	X	211.99255	207.99761	151.02471	6.61723	0.0544640	0.21253720	2.7808618	20	4 9.4	21.0
518398 2017 UE_{33}	16.9	X	161.58486	70.91285	22.39863	22.24305	0.1066109	0.23718775	2.5846865	20	6 5.8	21.2
518399 2017 VM_{23}	16.4	X	353.23254	351.21055	250.40350	7.00489	0.1684159	0.21174929	2.7877558	20	5 3.0	19.2
518400 2017 WN_{22}	17.1	X	228.85352	351.19887	55.96542	4.09364	0.1292799	0.23490319	2.6014178	20	6 21.3	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518401 2017 XK_{26}	16.4	X	112.39928	79.74359	58.39777	13.11024	0.1260166	0.19238023	2.9718651	20	6 15.8	20.9
518402 2018 AS_4	16.1	X	198.50224	50.28468	16.90468	9.52893	0.0713452	0.18155963	3.0888005	20	6 16.3	20.9
518403 2018 AZ_6	15.9	X	103.10009	284.93208	246.70805	7.53736	0.0579806	0.16739417	3.2606874	20	7 8.4	20.7
518404 2018 AK_{16}	17.0	X	292.90743	318.64218	48.09269	3.47504	0.0859925	0.21680209	2.7442715	20	7 27.1	20.5
518405 2018 CT_4	16.9	X	248.96109	286.20532	144.83916	12.91295	0.1489770	0.23602714	2.5931527	20	8 13.3	20.4
518406 2018 CN_5	16.3	X	156.86743	120.12028	23.05581	14.01885	0.2796288	0.20195038	2.8772191	20	8 16.7	21.7
518407 2018 CD_6	16.9	X	225.81125	12.23348	74.87116	6.02882	0.2629972	0.23713527	2.5850679	20	7 29.1	21.2
518408 2018 CO_6	15.6	X	114.97307	221.62826	313.74525	27.38293	0.1858656	0.17438591	3.1729394	20	8 8.7	20.8
518409 2018 CW_{11}	16.5	X	129.02147	7.43834	170.65289	9.16811	0.1173379	0.18462789	3.0544839	20	8 21.2	21.2
518410 2018 CZ_{11}	18.1	X	239.88140	121.38563	44.20336	8.96662	0.1594124	0.29935815	2.2131388	20	12 20.5	20.4
518411 2018 CU_{15}	16.4	X	158.65354	49.97958	148.93345	33.84492	0.2260953	0.21621848	2.7492074	20	10 25.1	21.7
518412 2018 CV_{15}	16.2	X	146.65118	129.05032	39.98615	14.55584	0.2223038	0.18082442	3.0971672	20	9 7.7	21.7
518413 2018 DV	17.7	X	328.87353	39.00084	111.60251	23.75002	0.0314386	0.38820846	1.8610558	20	—	—
518414 2018 DW	18.2	X	147.41849	152.11709	162.70395	24.34865	0.0728045	0.37661175	1.8990663	20	—	—
518415 2018 DE_3	16.2	X	165.12400	141.56691	348.73155	17.03427	0.1648464	0.17695471	3.1421576	20	8 4.7	21.5
518416 2018 DF_3	15.8	X	176.74457	122.21422	352.01121	16.71525	0.1497851	0.17442801	3.1724289	20	7 26.4	21.2
518417 2018 DG_4	16.6	X	163.84680	187.81908	345.12736	15.46126	0.1711460	0.21183014	2.7870465	20	9 19.0	21.2
518418 2018 EH_2	18.9	X	48.93326	268.60082	165.94542	22.15642	0.1432504	0.39680972	1.8340641	20	—	—
518419 2018 EB_3	17.6	X	233.29596	29.07757	111.39255	3.32678	0.1722290	0.26726557	2.3869356	20	10 28.9	20.6
518420 2018 EG_6	17.6	X	213.96585	66.68153	99.47775	22.45524	0.2541122	0.26591859	2.3949893	20	11 7.7	21.7
518421 1995 QT_{16}	15.9	X	201.80350	141.51004	162.04571	18.29816	0.1168717	0.17992586	3.1074704	20	1 21.9	21.1
518422 1998 WH_{30}	17.4	X	209.36680	87.34267	235.70016	24.83121	0.4103245	0.29543396	2.2326935	20	2 1.8	22.4
518423 2000 GV_{176}	16.9	X	128.35921	242.91101	351.08155	10.14823	0.1729861	0.21855550	2.7295741	20	10 31.1	21.5
518424 2000 WK_{107}	18.2	X	208.21885	271.93408	233.67435	24.15838	0.5417898	0.23616819	2.5921201	20	8 29.2	24.0
518425 2002 CQ_{70}	17.2	X	218.84633	236.41328	316.87168	5.72914	0.0924417	0.25517274	2.4617647	20	12 27.1	20.3
518426 2002 ON_4	19.0	X	202.51828	160.92207	134.83496	10.46354	0.4039525	0.30679452	2.1772300	20	1 6.4	23.3
518427 2002 QK_{65}	17.3	X	83.77673	163.36717	146.28119	15.45203	0.1304175	0.23248024	2.6194615	20	12 23.9	21.5
518428 2002 QO_{70}	16.5	X	69.81227	134.33278	148.05881	15.12094	0.1803009	0.17172106	3.2056812	20	11 5.2	21.5
518429 2002 QE_{133}	17.3	X	137.02720	145.08573	162.46051	12.18411	0.1734870	0.24041314	2.5615171	20	—	—
518430 2002 RD_{187}	17.0	X	147.60305	25.57064	268.80951	4.73093	0.2712868	0.23934880	2.5691051	20	—	—
518431 2002 TG_{178}	17.3	X	84.21152	146.18339	210.18771	4.54442	0.2366236	0.23436167	2.6054235	20	—	—
518432 2003 AP_{16}	17.3	X	283.79226	19.78510	112.53048	24.72848	0.1701804	0.27281100	2.3544789	20	—	—
518433 2003 HQ_{24}	17.9	X	196.61964	201.45465	36.07014	2.67107	0.1874239	0.26500961	2.4004627	20	—	—
518434 2003 PB_8	17.1	X	104.34271	226.96981	142.70016	9.44975	0.3286770	0.25627965	2.4546710	20	1 18.3	20.2
518435 2003 SP_{258}	16.4	X	299.56241	180.58718	257.93664	12.56905	0.1646551	0.23555980	2.5965813	20	11 8.1	19.0
518436 2003 SG_{435}	16.9	X	85.86196	256.26156	208.67186	5.11809	0.0272477	0.20505649	2.8480900	20	3 18.0	20.8
518437 2003 TP_{46}	17.3	X	296.63489	242.19852	214.49962	10.89730	0.1584779	0.23660317	2.5889421	20	12 2.2	19.9
518438 2003 WL_5	15.9	X	305.89319	289.49189	141.46736	11.66493	0.1343894	0.17594844	3.1541264	20	11 1.7	19.9
518439 2003 YY_{182}	16.6	X	198.43091	48.08301	290.80689	8.08069	0.0605510	0.19231685	2.9725180	20	2 25.7	21.1
518440 2004 CL_1	19.4	X	292.86842	187.45709	3.21602	15.15013	0.5330152	0.35362120	1.9805107	20	—	—
518441 2004 FC_6	17.8	X	234.09019	179.55093	16.56242	8.97811	0.3155281	0.28380103	2.2932957	20	12 24.0	20.7
518442 2004 GO_{54}	17.1	X	136.56786	38.87723	212.62681	7.99573	0.1602315	0.21288350	2.7778452	20	11 30.9	21.7
518443 2004 HU_{13}	17.1	X	162.79507	177.82360	62.94587	6.04756	0.1068596	0.21841193	2.7307702	20	12 13.3	21.3
518444 2004 HU_{79}	16.4	X	286.70898	31.02980	193.86131	4.61676	0.0974341	0.17063754	3.2192374	20	1 17.9	21.1
518445 2004 RW_{84}	17.9	X	227.10551	108.63221	178.14939	24.21044	0.1204093	0.34533711	2.0120583	20	1 3.8	21.3
518446 2004 RL_{357}	17.6	X	203.64135	226.75354	158.43891	4.46734	0.1011678	0.22895098	2.6463120	20	4 30.2	21.7
518447 2004 TS_{371}	17.1	X	19.37038	261.52517	10.12274	13.93069	0.0528776	0.23813506	2.5778273	20	8 8.1	20.5
518448 2004 YG_{27}	16.0	X	281.58197	28.73615	66.12150	11.55295	0.0727557	0.17981100	3.1087936	20	11 2.1	20.2
518449 2005 BF_{38}	16.0	X	3.52547	260.53005	120.57998	14.78510	0.1635523	0.17819688	3.1275384	20	12 5.9	20.0
518450 2005 BD_{50}	16.7	X	115.41720	132.07869	318.55315	9.24007	0.0869750	0.20537618	2.8451336	20	4 11.1	20.9
518451 2005 EJ_{246}	17.7	X	150.69995	85.12648	175.28658	8.41043	0.1246989	0.23388042	2.6089964	20	12 27.4	21.9
518452 2005 ES_{267}	17.5	X	321.51159	312.77152	144.51516	20.05865	0.2349312	0.31128135	2.1562576	20	—	—
518453 2005 EZ_{333}	17.8	X	358.48868	326.64175	6.98660	4.16912	0.0696676	0.28561076	2.2835981	20	10 6.7	20.2
518454 2005 EA_{334}	16.5	X	262.91942	175.11848	126.40999	3.03668	0.0736783	0.19528895	2.9422818	20	3 25.3	20.6
518455 2005 GH_{18}	18.7	X	121.30699	231.78370	182.38133	22.93324	0.0888723	0.39012275	1.8549628	20	2 8.8	20.9
518456 2005 GN_{159}	17.3	X	210.75053	332.88876	206.58772	11.78521	0.1238710	0.22944865	2.6424841	20	11 20.4	21.1
518457 2005 GF_{177}	18.6	X	226.72062	91.91332	208.73248	24.21013	0.0227523	0.38364597	1.8757817	20	1 10.2	21.3
518458 2005 GL_{204}	17.0	X	156.63523	75.94023	200.71472	28.03816	0.0450326	0.23610284	2.5925984	20	—	—
518459 2005 GZ_{229}	18.3	X	179.81205	8.16471	213.86676	6.84996	0.0574847	0.29441044	2.2378651	20	12 29.9	21.2
518460 2005 HN_7	16.9	X	156.68867	44.87407	198.54296	17.82272	0.1593906	0.23059007	2.6337567	20	12 11.2	21.5
518461 2005 JR_4	17.0	X	178.36217	96.65860	97.89028	17.60024	0.2169808	0.22416656	2.6838331	20	11 5.6	21.8
518462 2005 JP_{73}	16.8	X	184.06089	338.14850	219.93824	12.47599	0.1251224	0.22552109	2.6730758	20	11 13.9	20.9
518463 2005 JY_{80}	16.8	X	157.17583	212.40020	117.90104	18.22891	0.5612838	0.22968386	2.6406798	20	2 2.9	22.3
518464 2005 JU_{119}	17.6	X	141.27649	53.43795	215.37766	12.60163	0.2368348	0.22584753	2.6704994	20	12 24.8	22.5
518465 2005 JB_{149}	17.2	X	181.74614	153.66925	52.04991	6.31177	0.1339323	0.22693545	2.6619577	20	11 19.8	21.2
518466 2005 JC_{162}	18.5	X	288.31556	157.68155	67.99433	22.27886	0.0450960	0.37806368	1.8942011	20	—	—
518467 2005 KV_{14}	17.5	X	130.31299	89.33496	107.06563	8.45650	0.0140010	0.27925553	2.3181144	20	9 26.5	20.5
518468 2005 LE_6	17.7	X	169.53156	195.14861	77.69319	10.59268	0.2322260	0.29632761	2.2282024	20	—	—
518469 2005 LH_8	18.7	X	165.00313	180.41660	86.66447	15.73305	0.5491976	0.22728734	2.6592095	20	12 30.2	24.3
518470 2005 PZ_4	17.1	X	106.46720	114.50364	187.68458	13.87150	0.1852155	0.21588199	2.7520635	20	—	—
518471 2005 QZ_9	17.3	X	86.16710	183.09021	167.13102	17.51008	0.2976972	0.21747313	2.7386233	20	—	—
518472 2005 QD_{191}	16.9	X	22.04791	356.57752	343.36534	0.39012	0.0837036	0.20186564	2.8780242	20	11 4.1	20.6
518473 2005 QE_{191}	16.0	X	199.86275	40.38408	344.62720	8.87752	0.0977821	0.17550192	3.1594741	20	4 23.0	21.0
518474 2005 RQ_{52}	16.2	X	68.27211	46.23616	1.21100	9.69775	0.0786086	0.15484157	3.4346119	20	1 1.3	21.0
518475 2005 RR_{52}	17.2	X	95.82550	359.30440	328.20244	5.63685	0.0765464	0.21272157	2.7792548	20	—	—
518476 2005 RS_{52}	16.3	X	322.47329	248.82067	351.67753	8.31985	0.1281357	0.17633371	3.1495305	20	3 17.3	20.3
518477 2005 SE_{185}	17.9	X	110.46093	136.88192	202.21500	4.79102	0.2226691	0.28581088	2.2825320	20	—	—
518478 2005 SF_{215}	17.2	X	98.90842	30.74909	304.18752	4.15449	0.1062867	0.28039072	2.3118534	20	—	—
518479 2005 SG_{217}	16.4	X	13.02931	353.12223	28.74106	17.56114	0.2287050	0.20314354	2.8659418	20	—	—
518480 2005 SE_{283}	17.8	X	155.24930	200.24648	120.65532	7.21553	0.2186067	0.29044928	2.2581659	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518481 2005 SH_{294}	16.4	X	292.30555	162.57897	204.83099	9.97004	0.0566073	0.18701843	3.0283991	20	7 24.9	20.7
518482 2005 TZ_{42}	17.6	X	163.27623	172.89213	160.92074	9.14774	0.2970564	0.29427750	2.2385390	20	1 21.0	21.4
518483 2005 TG_{189}	17.3	X	132.50101	87.19316	212.86542	22.97924	0.1707782	0.28308236	2.2971755	20	—	—
518484 2005 TR_{198}	17.4	X	231.69941	164.58671	40.64873	7.58500	0.0592994	0.27888141	2.3201871	20	—	—
518485 2005 UF_{13}	17.9	X	144.22165	79.77410	240.26982	1.99127	0.1078733	0.28619065	2.2805123	20	—	—
518486 2005 UC_{44}	18.1	X	37.98240	347.46791	59.86108	6.31559	0.0302924	0.27833125	2.3232435	20	—	—
518487 2005 UT_{532}	17.6	X	81.56339	122.96825	135.35308	1.99640	0.1461167	0.25997253	2.4313701	20	10 25.3	21.1
518488 2005 UX_{532}	16.1	X	336.99146	80.90718	267.52011	8.77219	0.0200491	0.18558358	3.0439885	20	9 1.1	20.4
518489 2005 VV_{137}	18.0	X	126.04403	255.60107	237.94657	4.59235	0.0595157	0.24048681	2.5609939	20	6 20.5	21.4
518490 2005 WC_{208}	16.4	X	177.65559	293.57875	258.39497	8.62750	0.0350219	0.19193031	2.9765077	20	10 28.3	20.7
518491 2005 XW_{119}	17.6	X	50.53486	234.43380	288.84687	1.57396	0.1085719	0.22491113	2.6779066	20	4 24.3	20.7
518492 2005 XX_{119}	17.0	X	359.35633	53.35763	254.11828	10.17103	0.0422140	0.24780370	2.5103303	20	8 16.7	20.3
518493 2005 YT_{7}	16.3	X	17.66033	241.21767	108.57244	11.84958	0.0185367	0.18628794	3.0363108	20	11 4.7	20.7
518494 2005 YY_{207}	16.0	X	280.91371	337.75428	118.66662	11.60779	0.0438678	0.18612014	3.0381355	20	11 9.5	20.3
518495 2005 YU_{229}	16.8	X	202.76619	151.61274	1.00257	4.90720	0.0882799	0.18367751	3.0650111	20	10 4.5	21.4
518496 2005 YZ_{242}	16.7	X	172.62244	144.68678	56.96481	5.73205	0.1099406	0.18580232	3.0415990	20	11 1.9	21.4
518497 2005 YK_{246}	16.8	X	247.57360	271.68048	208.31818	4.97624	0.1325035	0.18482250	3.0523394	20	10 9.6	21.0
518498 2005 YF_{264}	16.5	X	183.36700	54.09209	98.30796	7.45776	0.0764381	0.17830595	3.1262629	20	9 17.9	21.3
518499 2005 YS_{293}	17.7	X	151.10146	194.31268	249.26109	3.02272	0.1215272	0.22895873	2.6462523	20	5 19.1	21.8
518500 2006 BH_{56}	17.8	X	251.46186	38.72523	111.74043	4.61294	0.1501300	0.25678972	2.4514194	20	12 6.9	20.7
518501 2006 BF_{177}	17.9	X	185.82855	141.88427	87.57002	3.52631	0.1428797	0.25662056	2.4524966	20	12 28.1	21.3
518502 2006 BA_{230}	16.0	X	221.16804	46.62154	114.57846	11.11570	0.0312852	0.18513951	3.0488541	20	11 15.4	20.5
518503 2006 BM_{261}	18.1	X	206.58250	205.56099	7.94762	1.96121	0.1360217	0.25576928	2.4579354	20	12 31.8	21.4
518504 2006 DH_{71}	18.0	X	210.71620	49.23722	154.63973	1.79336	0.1343072	0.25365619	2.4715671	20	12 23.9	21.4
518505 2006 DW_{141}	18.3	X	204.19346	158.59940	43.53285	3.61498	0.1413332	0.25183615	2.4834609	20	12 12.6	21.8
518506 2006 DP_{219}	17.3	X	317.02794	58.36112	207.61406	4.89721	0.0302709	0.21476482	2.7615990	20	4 21.9	20.7
518507 2006 EE_{1}	19.8	X	337.84845	278.03335	154.22415	36.40396	0.2763958	0.74731613	1.2026331	20	—	—
518508 2006 EG_{76}	17.4	X	135.09803	216.34099	1.27370	12.71904	0.1916467	0.23908256	2.5710121	20	10 20.4	21.7
518509 2006 FZ_{51}	16.9	X	114.94583	322.79257	304.75785	5.05911	0.5036146	0.16463130	3.2970670	20	12 5.9	23.5
518510 2006 HG_{75}	17.9	X	161.09588	148.88588	101.95536	11.30703	0.1737119	0.24452933	2.5326902	20	12 25.8	22.1
518511 2006 HY_{154}	16.6	X	130.93142	58.26286	55.42378	9.19467	0.1035206	0.21756505	2.7378520	20	6 3.3	20.6
518512 2006 JN_{41}	17.4	X	136.15337	191.22504	103.12844	12.79883	0.1652154	0.24556218	2.5255835	20	—	—
518513 2006 JG_{82}	16.4	X	250.34221	70.14843	133.57456	13.23055	0.0235790	0.18227303	3.0807357	20	—	—
518514 2006 KO_{34}	18.2	X	138.19003	212.70365	75.38459	5.52104	0.2592233	0.24352298	2.5396629	20	—	—
518515 2006 KO_{94}	18.2	X	197.05248	34.24388	189.59279	2.99798	0.1779442	0.24696278	2.5160256	20	12 26.9	22.1
518516 2006 OE_{38}	17.3	X	102.14014	102.24979	211.65144	1.07154	0.1168396	0.22947451	2.6422855	20	—	—
518517 2006 QL_{168}	16.8	X	104.66432	305.20792	6.94288	11.69651	0.2017206	0.23157565	2.6262786	20	—	—
518518 2006 QZ_{187}	16.8	X	234.11748	116.41506	176.61624	1.03582	0.1510002	0.18237252	3.0796151	20	2 7.7	21.8
518519 2006 QC_{188}	16.8	X	133.56834	318.93011	332.93776	7.20962	0.1233916	0.23342446	2.6123927	20	—	—
518520 2006 QD_{188}	16.5	X	172.51347	101.04027	210.15835	1.94775	0.0377660	0.16972733	3.2307365	20	1 1.5	21.3
518521 2006 QF_{188}	17.0	X	308.55165	223.09483	178.53990	4.23658	0.1000786	0.21531988	2.7568510	20	10 5.9	20.3
518522 2006 RO_{17}	17.4	X	102.98505	146.63559	199.74590	14.40847	0.3184567	0.23477021	2.6024000	20	—	—
518523 2006 SV	16.8	X	72.83454	186.47917	177.26515	8.48508	0.3265377	0.22773034	2.6557598	20	—	—
518524 2006 SZ_{11}	17.2	X	127.92150	79.14423	235.78590	4.70913	0.3333494	0.23604246	2.5930404	20	—	—
518525 2006 ST_{91}	17.6	X	141.51576	94.54792	200.41606	12.22269	0.2697135	0.23321915	2.6139258	20	—	—
518526 2006 ST_{110}	16.9	X	96.07037	303.40852	28.75721	13.04664	0.2730483	0.23045096	2.6348164	20	—	—
518527 2006 SU_{237}	17.1	X	301.11823	277.93516	182.47650	13.34579	0.1136564	0.22036398	2.7146195	20	12 13.1	20.5
518528 2006 SE_{285}	16.5	X	93.79313	129.90220	229.29656	27.84332	0.4062026	0.23262243	2.6183939	20	1 1.5	20.2
518529 2006 SE_{405}	16.7	X	218.06752	281.43972	229.10632	8.58060	0.1286335	0.21146888	2.7902197	20	10 17.5	21.0
518530 2006 SF_{416}	16.6	X	220.84262	338.43768	5.32683	9.32234	0.0907797	0.18332739	3.0689124	20	3 28.6	21.3
518531 2006 SH_{416}	16.6	X	237.90888	301.89086	38.05268	9.55077	0.0402549	0.18382232	3.0634013	20	4 17.1	21.0
518532 2006 TT_{31}	17.4	X	116.75305	277.88267	34.65542	13.48166	0.2796156	0.23041508	2.6350900	20	—	—
518533 2006 TR_{76}	16.8	X	85.69768	118.05636	236.35534	13.90059	0.2778807	0.22989463	2.6390655	20	—	—
518534 2006 TF_{82}	17.3	X	95.11439	81.63220	248.48692	4.41788	0.2632572	0.22815618	2.6524541	20	—	—
518535 2006 UH_{175}	17.0	X	128.29688	165.00228	187.78206	13.42772	0.1662859	0.23903004	2.5713887	20	1 4.3	20.9
518536 2006 UN_{240}	18.6	X	165.68423	287.36009	18.20561	4.01560	0.1526943	0.30877025	2.1679324	20	—	—
518537 2006 UO_{338}	17.1	X	90.38873	100.11306	237.12295	5.87261	0.2317775	0.22531487	2.6747066	20	—	—
518538 2006 UH_{363}	18.3	X	121.06866	57.11048	193.39275	3.10639	0.0557856	0.28595710	2.2817538	20	11 26.1	21.4
518539 2006 UJ_{363}	16.9	X	181.48638	57.00035	337.00320	0.32512	0.1984017	0.18004887	3.1060548	20	4 19.7	22.2
518540 2006 UL_{363}	17.0	X	268.31130	118.18353	203.36273	9.92844	0.1353616	0.18658967	3.0330366	20	4 16.9	21.4
518541 2006 VD_{59}	17.3	X	304.45362	247.12631	201.41662	3.87833	0.0365845	0.21293103	2.7774319	20	12 3.9	20.9
518542 2006 VA_{76}	18.5	X	135.49962	102.68598	252.54104	0.88355	0.2360992	0.31197092	2.1530790	20	1 14.5	21.1
518543 2006 WV_{28}	17.5	X	183.32225	346.72841	246.85454	6.81583	0.0566726	0.28964016	2.2623695	20	—	—
518544 2006 WO_{93}	17.0	X	102.87798	250.37030	68.28360	12.65031	0.2539268	0.22413332	2.6840984	20	—	—
518545 2006 WB_{208}	17.8	X	108.07760	146.34133	243.54232	2.95069	0.1480459	0.23357660	2.6112583	20	1 25.6	21.2
518546 2006 WC_{208}	16.3	X	180.25077	10.51032	84.86116	11.63218	0.0489450	0.18533085	3.0467553	20	7 2.8	20.7
518547 2006 WF_{208}	16.0	X	143.92893	215.29927	251.90346	11.13348	0.0643883	0.18132804	3.0914299	20	6 6.9	20.6
518548 2006 XF_{74}	16.5	X	136.67953	4.78896	115.40517	10.87073	0.0553269	0.17654554	3.1470106	20	6 15.1	21.2
518549 2006 YJ_{39}	16.7	X	65.65962	264.29980	87.72983	14.83097	0.2038208	0.22182984	2.7026475	20	—	—
518550 2006 YV_{56}	17.4	X	134.65701	291.91007	313.53441	6.26987	0.0848255	0.27287062	2.3541359	20	11 30.8	20.8
518551 2007 AH_{10}	18.1	X	251.52040	145.90563	115.56107	25.39636	0.0116556	0.37610096	1.9007854	20	—	—
518552 2007 BJ_{103}	15.8	X	254.85934	90.79694	304.92286	8.25068	0.0888001	0.18502423	3.0501204	20	7 10.8	20.0
518553 2007 DD_{28}	18.2	X	219.83629	145.49559	49.25339	2.96850	0.1600013	0.27310662	2.3527795	20	12 24.6	21.2
518554 2007 DZ_{43}	18.2	X	241.79756	6.44428	198.63867	4.15573	0.0716720	0.28138861	2.3063845	20	—	—
518555 2007 DV_{118}	17.7	X	339.61595	270.64349	26.31804	1.55575	0.0799944	0.24391908	2.5369128	20	7 5.0	20.4
518556 2007 ET_{130}	17.0	X	166.26402	8.30142	164.27734	1.36368	0.1340908	0.18341899	3.0678905	20	9 20.9	21.8
518557 2007 EC_{132}	18.1	X	193.07030	246.57773	2.15081	3.29171	0.2138227	0.27352547	2.3503770	20	—	—
518558 2007 EF_{172}	16.6	X	121.43347	75.89282	194.07352	10.02738	0.0675308	0.19018364	2.9947043	20	12 2.3	21.2
518559 2007 EA_{176}	16.6	X	173.64209	164.96727	8.87044	2.44531	0.1203601	0.18239905	3.0793165	20	9 29.4	21.3
518560 2007 EH_{196}	18.4	X	208.43947	197.11186	16.13761	2.64496	0.1601253	0.27026125	2.3692644	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518561 2007 EL_{226}	16.1	X	73.11676	240.55717	31.49674	4.92803	0.1132050	0.17847087	3.1243367	20	10 15.8	20.6
518562 2007 FV_{21}	18.1	X	202.12153	243.92012	345.39489	6.35697	0.0902884	0.27701216	2.3306130	20	—	—
518563 2007 GL_{2}	17.7	X	214.92409	357.21163	221.86657	6.78951	0.2198039	0.27220418	2.3579767	20	—	—
518564 2007 GP_{23}	17.8	X	216.05716	168.57938	43.00075	5.68008	0.1923644	0.26928489	2.3749878	20	—	—
518565 2007 GL_{62}	16.8	X	171.50978	192.59705	4.87182	6.02577	0.0789868	0.25905869	2.4370846	20	11 6.7	20.4
518566 2007 HD_{39}	18.0	X	247.68485	59.97451	115.87760	2.91013	0.1510903	0.27095935	2.3651932	20	—	—
518567 2007 HB_{55}	17.6	X	159.01540	122.37240	139.60801	6.66236	0.1281787	0.26617133	2.3934730	20	—	—
518568 2007 HO_{67}	18.1	X	167.90994	104.93474	196.33484	13.25234	0.3561042	0.27194342	2.3594838	20	—	—
518569 2007 HV_{71}	18.1	X	230.29666	9.99397	186.76764	2.89885	0.1338982	0.27034794	2.3687579	20	—	—
518570 2007 HJ_{72}	17.8	X	234.00607	346.04512	212.81920	4.13975	0.1372361	0.27165951	2.3611275	20	—	—
518571 2007 HL_{80}	17.2	X	154.50930	161.85774	63.37932	0.39346	0.1411549	0.18502232	3.0501414	20	11 11.2	22.1
518572 2007 HG_{99}	16.8	X	209.19785	326.57485	174.28837	10.68238	0.0568525	0.18651219	3.0338765	20	10 2.2	21.2
518573 2007 HO_{99}	17.1	X	61.37128	312.48117	223.70877	13.21116	0.0948067	0.22792248	2.6542670	20	5 28.5	20.5
518574 2007 HP_{99}	16.3	X	340.87339	176.73172	79.13390	9.29440	0.0431195	0.22916887	2.6446344	20	5 12.5	19.6
518575 2007 JP_{46}	17.2	X	86.81871	334.47883	231.47139	9.96353	0.0661998	0.23970730	2.5665430	20	8 5.1	20.9
518576 2007 JR_{46}	16.7	X	309.12919	151.29917	108.50117	6.51351	0.0193824	0.21936733	2.7228355	20	4 7.5	20.4
518577 2007 KP_{2}	15.7	X	123.44704	248.87288	319.53130	24.70629	0.2902153	0.17662713	3.1460414	20	9 18.7	21.6
518578 2007 LM_{22}	16.1	X	50.51175	246.79230	90.76308	10.48785	0.0959140	0.17986578	3.1081623	20	12 5.6	20.5
518579 2007 LT_{36}	16.1	X	30.92060	139.01945	210.50750	27.40882	0.1753637	0.17524564	3.1625536	20	12 3.9	20.6
518580 2007 MP	16.5	X	171.86467	349.41251	208.41861	8.61725	0.1477224	0.18116577	3.0932756	20	10 25.2	21.5
518581 2007 PB_{51}	17.0	X	133.02223	49.83168	338.23485	9.56384	0.0149848	0.19268967	2.9686826	20	2 12.4	21.1
518582 2007 QD_{18}	16.1	X	189.74506	150.39318	150.80797	9.34866	0.0721282	0.18925002	3.0045453	20	1 6.5	20.7
518583 2007 TO_{455}	16.7	X	133.04334	209.55879	199.31836	10.04658	0.0383562	0.18941964	3.0027513	20	3 8.6	21.1
518584 2007 TR_{455}	16.7	X	329.00595	186.31537	113.79666	4.65520	0.2072703	0.21082484	2.7958994	20	6 6.5	19.5
518585 2007 TT_{455}	16.3	X	53.30904	92.89791	359.93821	9.33344	0.0614894	0.18148572	3.0896391	20	1 31.3	20.5
518586 2007 TW_{455}	17.3	X	221.74332	345.50593	36.66843	2.48828	0.0815111	0.20288847	2.8683433	20	5 15.9	21.5
518587 2007 TY_{455}	17.8	X	76.66047	53.54624	43.87546	7.21499	0.0758961	0.26409864	2.4059796	20	2 29.5	20.7
518588 2007 TZ_{455}	16.4	X	202.74027	290.59810	83.90477	10.76723	0.1100127	0.19415512	2.9537256	20	4 20.3	21.2
518589 2007 UJ_{143}	15.6	X	155.56368	88.55591	239.53002	9.39388	0.0985412	0.17883868	3.1200514	20	1 5.6	20.4
518590 2007 VS_{79}	17.1	X	242.95447	260.96046	238.66694	6.66020	0.1856608	0.22287353	2.6942034	20	10 27.0	20.9
518591 2007 VB_{107}	17.6	X	211.57858	279.26300	235.98897	3.58857	0.2447938	0.21915243	2.7246153	20	10 6.6	22.2
518592 2007 VQ_{338}	17.0	X	121.27350	86.83711	351.69980	2.88840	0.1766175	0.18658896	3.0330443	20	4 17.8	21.7
518593 2007 VR_{338}	16.5	X	137.43404	114.08008	256.75924	8.37830	0.0991332	0.17701824	3.1414057	20	2 4.3	21.3
518594 2007 VS_{338}	17.4	X	301.45103	282.79847	63.76463	7.97835	0.0889135	0.28595044	2.2817893	20	7 16.8	19.8
518595 2007 VT_{338}	17.0	X	31.59619	208.26707	74.96146	6.19101	0.1314265	0.21766997	2.7369721	20	9 17.7	20.4
518596 2007 VW_{338}	17.3	X	119.11725	202.37390	97.59551	3.38826	0.0782701	0.23609820	2.5926323	20	—	—
518597 2007 VB_{339}	16.4	X	70.81495	6.00323	38.50718	2.67009	0.0994228	0.17028143	3.2237240	20	—	—
518598 2007 VC_{339}	16.5	X	282.54599	44.90269	240.59809	9.87725	0.0523962	0.18979246	2.9988178	20	3 27.4	20.9
518599 2007 VH_{339}	16.3	X	284.19960	349.88309	251.95346	10.12835	0.0683933	0.17919446	3.1159203	20	2 3.9	20.9
518600 2007 VJ_{339}	17.0	X	153.53635	182.94356	79.64924	3.79083	0.1496549	0.23512275	2.5997981	20	—	—
518601 2007 VM_{339}	16.8	X	131.37372	95.53130	7.38545	4.23518	0.2179054	0.18712170	3.0272848	20	5 30.5	21.9
518602 2007 VO_{339}	16.8	X	347.48887	260.67570	55.40976	5.93395	0.0752707	0.21019678	2.8014659	20	8 14.7	20.2
518603 2007 XP_{60}	17.3	X	94.86821	311.58223	327.81816	4.60859	0.0236462	0.21775883	2.7362275	20	11 13.5	21.2
518604 2007 YU_{29}	17.3	X	243.17068	17.52490	90.21410	12.66267	0.3265568	0.21527400	2.7572427	20	9 4.9	21.9
518605 2007 YO_{75}	17.0	X	224.05778	323.30742	93.79029	7.16970	0.0671852	0.19757731	2.9195192	20	7 4.1	21.2
518606 2007 YQ_{75}	17.7	X	75.09841	249.14215	300.05220	5.87682	0.0711005	0.26908736	2.3761500	20	7 3.5	20.5
518607 2007 YR_{75}	17.0	X	122.18340	3.01271	91.90054	2.21623	0.1460609	0.18227833	3.0806760	20	5 7.1	21.7
518608 2007 YT_{75}	16.9	X	290.27819	87.58655	120.69733	15.89590	0.0512519	0.23982724	2.5656872	20	—	—
518609 2008 AC_{56}	17.1	X	158.84250	348.86232	178.24619	1.93894	0.0116459	0.20512728	2.8474346	20	9 9.0	20.9
518610 2008 AD_{86}	17.3	X	297.93106	332.64331	100.80143	4.34424	0.0500536	0.21429174	2.7656619	20	11 6.1	20.9
518611 2008 AG_{103}	17.1	X	263.63332	354.38604	108.74347	11.75968	0.2376112	0.21658385	2.7461147	20	10 4.6	20.9
518612 2008 AA_{117}	16.9	X	14.15201	83.34199	300.03666	5.37128	0.0570996	0.22361615	2.6882353	20	12 20.8	20.3
518613 2008 AV_{138}	15.6	X	93.74442	305.74783	290.73164	2.00487	0.0514917	0.12629705	3.9343583	20	9 10.5	21.2
518614 2008 AZ_{138}	16.6	X	200.58570	39.67817	319.43602	10.21755	0.1705821	0.18148297	3.0896703	20	3 21.6	21.9
518615 2008 AA_{139}	15.9	X	320.75928	141.18188	137.90299	10.80828	0.0628494	0.18041317	3.1018721	20	5 15.4	20.2
518616 2008 BV_{54}	16.6	X	65.37706	132.78695	132.72326	2.95333	0.0184663	0.20445745	2.8536503	20	9 19.4	20.4
518617 2008 CO_{23}	18.5	X	262.74169	209.85825	338.55733	2.79337	0.1042395	0.30590166	2.1814645	20	—	—
518618 2008 CE_{218}	17.4	X	253.06012	104.07945	150.79220	9.76499	0.1497905	0.23521381	2.5991270	20	1 4.9	21.5
518619 2008 CH_{218}	16.7	X	105.19236	138.88159	89.40500	2.00469	0.0975522	0.19886677	2.9068853	20	9 29.5	20.9
518620 2008 CJ_{218}	16.2	X	133.57037	129.03583	345.99934	9.35509	0.0365359	0.18196538	3.0842071	20	5 31.5	20.8
518621 2008 CK_{218}	16.6	X	142.80374	159.73939	329.73520	10.35519	0.1240919	0.18790970	3.0188156	20	7 9.3	21.5
518622 2008 CO_{218}	18.0	X	135.05955	181.16009	321.14389	2.60252	0.1099153	0.26982085	2.3718417	20	7 19.3	21.5
518623 2008 CQ_{218}	16.7	X	333.09611	86.39735	186.30867	2.67914	0.0515013	0.17660436	3.1463119	20	5 22.7	20.8
518624 2008 DG_{90}	16.8	X	118.06758	88.13844	5.64859	16.45753	0.1300142	0.17225836	3.1990118	20	4 24.2	21.7
518625 2008 ES_{171}	18.0	X	41.69736	30.87049	264.52156	2.21237	0.0709254	0.27434725	2.3456811	20	10 15.3	20.9
518626 2008 ET_{171}	16.9	X	153.77964	25.96005	346.58862	6.89029	0.1106152	0.23774873	2.5806191	20	2 21.8	20.5
518627 2008 EU_{171}	17.3	X	276.99109	329.39534	296.26543	2.37141	0.1809709	0.23683484	2.5872535	20	2 7.2	21.2
518628 2008 FU_{138}	18.2	X	283.41048	136.90140	17.41858	4.23464	0.0457111	0.29700195	2.2248284	20	—	—
518629 2008 FW_{138}	17.6	X	79.47664	10.05401	194.86723	6.52184	0.0693309	0.25897521	2.4376083	20	7 29.1	20.9
518630 2008 GP_{70}	18.0	X	260.50335	90.62277	91.29383	8.53106	0.1028421	0.29510349	2.2343600	20	—	—
518631 2008 GB_{79}	18.0	X	181.27197	236.79697	51.12609	8.38799	0.1620113	0.29675308	2.2260721	20	—	—
518632 2008 GJ_{119}	16.3	X	91.21270	194.43300	117.74862	9.33042	0.1506645	0.19973809	2.8984254	20	12 28.3	20.8
518633 2008 GY_{148}	16.8	X	74.50389	190.19414	44.76539	1.51944	0.1299213	0.18154174	3.0890034	20	9 4.6	21.2
518634 2008 GB_{149}	18.3	X	59.37239	180.31278	62.91604	2.85435	0.1235413	0.26220712	2.4175366	20	9 6.1	21.3
518635 2008 HO_{3}	18.1	X	123.96298	128.83692	206.10770	14.06354	0.6503369	0.19770087	2.9183026	20	1 27.5	24.1
518636 2008 HJ_{71}	17.2	X	339.11658	230.97232	96.39896	7.99250	0.1076638	0.26167211	2.4208307	20	8 24.3	19.6
518637 2008 JQ_{4}	18.1	X	230.58758	70.49986	138.36883	1.76135	0.1063052	0.29676692	2.2260029	20	—	—
518638 2008 JP_{14}	19.3	X	246.26505	206.39193	129.06019	10.71460	0.6187182	0.39054309	1.8536315	20	3 8.3	23.4
518639 2008 JC_{42}	17.5	X	286.33715	201.97240	60.03644	10.62145	0.0599257	0.23552332	2.5968495	20	3 6.4	21.2
518640 2008 KZ_{5}	20.1	X	250.32727	194.34194	142.60724	8.36855	0.4540819	0.39417408	1.8422307	20	3 16.5	23.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518641 2008 MY_3	17.8	X	170.99230	132.92991	124.58932	7.67360	0.0917913	0.27909931	2.3189793	20	—	—
518642 2008 OY_{25}	17.0	X	98.44339	114.97361	268.83478	1.79218	0.1239149	0.19903499	2.9052472	20	1 8.7	20.9
518643 2008 OZ_{25}	16.6	X	40.59525	198.14074	158.45636	10.81922	0.0930055	0.18146726	3.0898486	20	12 16.5	21.1
518644 2008 PO_7	18.4	X	161.40339	127.65191	182.80878	5.24912	0.2660857	0.28690093	2.2767469	20	—	—
518645 2008 PL_{12}	18.7	X	164.72045	186.47851	125.78905	0.72295	0.2839731	0.28747398	2.2737202	20	—	—
518646 2008 QD_1	19.0	X	173.74399	261.07594	72.71224	6.91301	0.4462005	0.29131488	2.2536905	20	2 8.1	23.5
518647 2008 QG_{46}	15.9	X	75.73030	149.80724	167.21797	23.47482	0.1695875	0.18059361	3.0998056	20	12 18.7	21.1
518648 2008 RQ_{19}	17.2	X	161.60728	190.27340	230.20451	2.58610	0.1862631	0.21660299	2.7459529	20	5 3.5	21.6
518649 2008 RZ_{61}	16.2	X	70.59152	152.95707	169.67867	17.74262	0.2375838	0.18114488	3.0935134	20	12 25.8	21.4
518650 2008 RO_{62}	16.9	X	73.56229	260.16103	58.89389	1.93563	0.1716451	0.17933591	3.1142815	20	12 17.3	21.5
518651 2008 RU_{143}	18.3	X	159.74310	97.15995	196.61918	5.10571	0.1897860	0.27956532	2.3164016	20	—	—
518652 2008 RB_{148}	17.1	X	175.58741	167.19676	183.00581	1.85513	0.0776812	0.20638878	2.8358200	20	2 17.0	21.4
518653 2008 RE_{148}	17.1	X	227.50473	331.15133	330.81964	3.69911	0.0530716	0.20996411	2.8035352	20	2 14.3	21.1
518654 2008 RG_{148}	16.9	X	253.54466	244.81686	29.33123	5.10227	0.1196000	0.21060936	2.7978061	20	2 5.1	21.2
518655 2008 RK_{148}	16.5	X	99.64149	307.21896	20.89083	9.13764	0.1114698	0.18469986	3.0536904	20	—	—
518656 2008 RM_{148}	16.4	X	57.55100	82.31287	318.22136	10.00005	0.0480531	0.19129148	2.9831309	20	—	—
518657 2008 RU_{148}	17.2	X	130.90914	226.92205	188.59744	3.98611	0.0993052	0.21133740	2.7913769	20	3 21.4	21.3
518658 2008 SF_{37}	16.7	X	69.11940	140.00956	180.81639	2.20960	0.1721508	0.17592171	3.1544459	20	12 14.6	21.5
518659 2008 SF_{141}	15.9	X	85.58585	51.21263	251.63614	12.16343	0.2331621	0.17863750	3.1223934	20	12 15.0	21.1
518660 2008 SK_{239}	16.2	X	130.92955	231.80617	17.49301	13.11052	0.2986596	0.17978555	3.1090869	20	11 18.2	21.9
518661 2008 ST_{252}	16.0	X	29.13900	154.31354	195.94606	26.46073	0.1374834	0.17070540	3.2183842	20	11 27.6	20.7
518662 2008 SK_{268}	17.1	X	84.50207	92.27202	217.29208	8.85261	0.2312085	0.17715476	3.1397917	20	12 21.1	22.3
518663 2008 SU_{312}	17.1	X	230.26415	201.33460	154.47109	3.36111	0.0359923	0.21753330	2.7381184	20	4 27.0	20.9
518664 2008 SV_{312}	17.0	X	188.42108	192.21115	217.39367	5.07132	0.0630664	0.21801552	2.7340793	20	5 14.9	20.9
518665 2008 SY_{312}	18.0	X	266.64718	4.72996	39.74728	4.46901	0.1095166	0.23726678	2.5841125	20	8 9.1	21.3
518666 2008 SC_{313}	16.6	X	10.48645	305.82422	126.57744	1.99561	0.1659777	0.17991648	3.1075783	20	—	—
518667 2008 SD_{313}	16.9	X	270.61478	50.77980	284.17201	4.46872	0.0969154	0.22211599	2.7003258	20	5 9.3	20.7
518668 2008 SE_{313}	16.6	X	13.42414	88.97480	0.99891	8.68719	0.1221729	0.18371941	3.0645451	20	—	—
518669 2008 SF_{313}	17.2	X	328.03026	309.43413	10.60046	12.57359	0.1031483	0.23201580	2.6229560	20	7 20.6	20.4
518670 2008 SG_{313}	17.2	X	86.53524	13.65673	205.16932	3.58220	0.1293646	0.23803189	2.5785721	20	9 2.4	20.8
518671 2008 SJ_{313}	17.0	X	323.52748	166.88272	315.05765	3.22172	0.1914003	0.17695814	3.1421171	20	—	—
518672 2008 TD_{181}	16.1	X	65.81342	275.68615	37.57028	25.57535	0.2012170	0.17301304	3.1897023	20	11 29.1	21.2
518673 2008 TN_{190}	17.7	X	265.16480	330.79677	166.96306	6.33679	0.0635209	0.25864914	2.4396565	20	12 22.7	20.7
518674 2008 TS_{192}	17.2	X	42.18107	202.00123	115.88347	3.82062	0.0358993	0.24586276	2.5235246	20	11 6.9	20.5
518675 2008 TW_{192}	17.3	X	247.69611	10.45914	292.08162	2.85434	0.0804091	0.20989752	2.8041281	20	3 4.8	21.4
518676 2008 UY_{46}	17.9	X	132.00865	308.04663	23.48855	5.99218	0.2233612	0.27354717	2.3502527	20	—	—
518677 2008 UK_{76}	17.5	X	333.72999	262.21270	237.37164	19.40131	0.0834983	0.35174894	1.9875322	20	—	—
518678 2008 UZ_{94}	17.4	X	196.75464	159.69046	248.25792	30.26039	0.5722559	0.30423553	2.1894217	20	5 12.1	22.4
518679 2008 UR_{110}	18.0	X	319.66647	313.56389	226.79345	19.92284	0.0674479	0.36284115	1.9468166	20	—	—
518680 2008 UV_{154}	17.9	X	162.02598	236.21924	60.56273	2.18573	0.1886329	0.27526734	2.3404512	20	—	—
518681 2008 UJ_{176}	17.9	X	128.59484	332.21423	356.32741	2.27728	0.2311649	0.27482853	2.3429418	20	—	—
518682 2008 UH_{199}	18.4	X	124.77615	160.99643	219.81998	21.22183	0.0925494	0.36635447	1.9343500	20	—	—
518683 2008 UQ_{374}	16.5	X	315.46103	302.63054	35.67964	12.94484	0.1642832	0.23104594	2.6302911	20	7 16.2	19.6
518684 2008 UR_{374}	17.0	X	213.65191	348.46905	54.54777	3.81078	0.0895579	0.21807032	2.7336212	20	6 2.0	20.9
518685 2008 UU_{374}	17.3	X	196.01900	213.93174	280.87883	7.53582	0.1310292	0.23326506	2.6135828	20	9 4.4	21.5
518686 2008 UA_{375}	17.1	X	209.59821	235.93451	253.59624	14.66788	0.1341193	0.23441038	2.6050626	20	9 7.9	21.5
518687 2008 UC_{375}	15.7	X	338.48983	195.82689	264.56690	8.57124	0.0652792	0.17530076	3.1618907	20	—	—
518688 2008 VO_{82}	17.2	X	197.28962	265.65945	69.38912	2.98756	0.0106525	0.20003298	2.8955760	20	2 23.5	21.2
518689 2008 WH_{13}	17.8	X	62.90803	342.68843	54.33577	23.95092	0.0527467	0.35419495	1.9783713	20	—	—
518690 2008 WO_{27}	17.5	X	160.02134	188.26982	51.38312	7.69217	0.0459604	0.25314926	2.4748655	20	12 19.8	20.9
518691 2008 WP_{143}	17.7	X	210.40809	51.53863	74.60469	3.54050	0.0752020	0.23233924	2.6205212	20	9 20.1	21.3
518692 2008 WT_{143}	17.4	X	189.27412	267.13078	128.65933	3.08780	0.1107845	0.21148931	2.7900401	20	4 28.9	21.8
518693 2008 WY_{143}	16.3	X	120.04349	271.50541	92.45018	10.56765	0.0489005	0.17907459	3.1173106	20	1 4.3	20.6
518694 2008 XJ_{57}	16.4	X	185.51864	129.54072	246.10645	9.82849	0.0081680	0.20127622	2.8836401	20	3 25.0	20.6
518695 2008 YM_{63}	17.9	X	230.63300	2.00917	147.16213	4.90233	0.2150896	0.23372817	2.6101292	20	10 25.8	21.7
518696 2008 YT_{101}	15.3	X	27.75021	208.01525	123.88298	12.25001	0.0865388	0.14689346	3.5574140	20	10 27.3	20.3
518697 2008 YD_{140}	17.2	X	205.14930	50.29035	117.67350	15.35572	0.0593435	0.23461000	2.6035847	20	11 13.1	21.1
518698 2008 YK_{175}	16.8	X	58.05526	176.47444	313.09094	3.24712	0.1277277	0.19015732	2.9949806	20	3 26.1	20.5
518699 2008 YL_{175}	17.5	X	100.85592	345.13300	260.19896	5.31411	0.0241882	0.22906598	2.6454262	20	10 9.7	21.1
518700 2008 YM_{175}	16.2	X	9.20219	257.95845	282.41449	8.60695	0.0496894	0.18877536	3.0095796	20	3 10.2	20.4
518701 2009 AD_{41}	17.2	X	87.26333	242.10091	126.87525	13.12606	0.2190375	0.25699035	2.4501434	20	—	—
518702 2009 AA_{52}	16.3	X	153.63182	211.41230	125.07780	17.42994	0.0383593	0.17744095	3.1364148	20	1 9.3	20.9
518703 2009 AB_{52}	17.8	X	195.71314	17.61228	130.26888	12.12745	0.1398762	0.22630343	2.6669116	20	9 27.4	22.1
518704 2009 AF_{52}	16.2	X	95.88050	132.41275	282.65983	9.93451	0.0704945	0.18124195	3.0924088	20	2 5.4	20.6
518705 2009 AK_{52}	16.6	X	257.77997	130.48334	103.00880	2.57762	0.0810875	0.17262826	3.1944404	20	—	—
518706 2009 AM_{52}	17.1	X	309.93085	263.99538	110.96401	7.15912	0.0555079	0.22304471	2.6928248	20	9 9.0	20.5
518707 2009 BJ_{25}	17.5	X	214.82976	161.07421	12.97086	5.28591	0.1392825	0.23093072	2.6311660	20	11 14.3	21.4
518708 2009 BY_{64}	16.6	X	160.90980	65.88990	119.35526	7.44266	0.0721800	0.22292882	2.6937580	20	10 10.3	20.6
518709 2009 BT_{122}	17.7	X	222.98362	32.35625	143.43009	5.55004	0.0937669	0.23436195	2.6054214	20	12 4.9	21.3
518710 2009 BV_{175}	17.4	X	264.53779	315.61914	169.04477	11.87871	0.1428184	0.23058646	2.6337842	20	11 18.1	20.8
518711 2009 BE_{184}	16.9	X	236.46656	235.19853	263.79016	5.18464	0.2600340	0.23032708	2.6357611	20	10 8.8	20.8
518712 2009 BR_{192}	16.0	X	131.52798	224.48254	148.31669	10.46104	0.0891239	0.17671034	3.1450537	20	2 1.5	20.5
518713 2009 CV_{65}	16.9	X	232.78399	203.21972	304.81813	4.98767	0.0907993	0.23287147	2.6165268	20	11 9.0	20.4
518714 2009 CK_{67}	16.8	X	136.51584	22.36591	323.93155	1.09146	0.0152475	0.17132299	3.2106450	20	—	—
518715 2009 CL_{67}	18.1	X	132.02334	187.05335	1.67354	3.80084	0.0540678	0.30221182	2.1991849	20	9 18.6	20.6
518716 2009 DA_8	16.5	X	271.63026	311.51849	173.10855	11.02803	0.1171156	0.23322914	2.6138511	20	12 2.3	19.8
518717 2009 DH_{32}	17.4	X	207.14990	131.94141	8.72836	3.01718	0.4347249	0.22310880	2.6923091	20	9 5.9	22.6
518718 2009 DP_{44}	17.2	X	195.01204	43.94859	131.12124	17.83655	0.1070090	0.22696337	2.6617394	20	11 5.1	21.5
518719 2009 DX_{56}	17.2	X	249.07849	328.63218	153.57970	14.11813	0.1987240	0.22861872	2.6488754	20	10 16.6	21.0
518720 2009 DG_{60}	17.0	X	173.19357	199.33046	23.69764	6.87729	0.1429213	0.22778393	2.6553432	20	12 1.0	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518721 2009 DA_{90}	17.7	X	229.94368	22.26089	140.19726	12.16896	0.1096041	0.23558522	2.5963946	20	11 26.8	21.5
518722 2009 DH_{145}	16.4	X	61.46303	333.69721	157.31922	12.53407	0.0488424	0.18549318	3.0449775	20	3 27.3	20.5
518723 2009 DL_{145}	16.1	X	337.22193	200.98994	12.27114	16.83316	0.1447862	0.17525549	3.1624351	20	3 9.1	20.1
518724 2009 DM_{145}	17.0	X	88.26823	351.91387	22.55803	6.22534	0.1285908	0.24383770	2.5374772	20	—	—
518725 2009 DN_{145}	16.6	X	298.96010	146.79833	81.90388	2.09388	0.1083537	0.17587981	3.1549469	20	2 4.9	21.0
518726 2009 EO_{22}	17.0	X	155.29826	197.67405	23.93676	13.15012	0.0900057	0.21993098	2.7181814	20	11 11.1	21.2
518727 2009 FL_{6}	17.2	X	128.15617	187.82289	92.89271	14.55933	0.1655633	0.22382146	2.6865911	20	12 29.0	21.5
518728 2009 FL_{70}	16.9	X	237.29929	67.22848	81.11875	6.52780	0.0712061	0.22257006	2.6966519	20	11 18.7	20.4
518729 2009 FC_{80}	17.4	X	164.00810	33.77825	197.98639	5.47947	0.1333446	0.22348443	2.6892915	20	12 4.3	21.7
518730 2009 FE_{80}	17.5	X	214.79987	104.02709	27.28103	8.28770	0.1590315	0.21713183	2.7414925	20	9 21.6	21.7
518731 2009 FF_{80}	17.5	X	13.67715	25.86074	175.18670	2.98781	0.1208579	0.26690349	2.3890939	20	4 12.1	19.5
518732 2009 GM_{2}	16.6	X	142.00355	133.20059	79.54482	10.73517	0.1400047	0.21369639	2.7707962	20	10 24.5	21.2
518733 2009 HA_{4}	17.2	X	249.78558	322.22851	162.84927	11.70384	0.0318892	0.22200906	2.7011928	20	11 12.9	21.0
518734 2009 HJ_{4}	17.0	X	128.15632	249.27757	37.94342	16.22268	0.1907628	0.22573118	2.6714170	20	—	—
518735 2009 JL_{1}	21.0	X	113.13979	289.60979	69.53205	11.51313	0.1706145	0.76899673	1.1799213	20	—	—
518736 2009 MC_{7}	16.8	X	165.00266	144.39120	146.37697	9.35604	0.2333077	0.22112625	2.7083774	20	—	—
518737 2009 OO_{9}	18.8	X	61.03982	322.15786	134.99962	13.59606	0.8125681	0.47636146	1.6237219	20	6 3.0	21.1
518738 2009 PL_{15}	16.8	X	169.81094	325.05372	334.40606	8.20968	0.2817050	0.21990441	2.7184004	20	—	—
518739 2009 PT_{21}	18.0	X	342.79669	142.41401	163.22803	7.35787	0.0876775	0.26175287	2.4203328	20	7 23.7	20.5
518740 2009 PV_{21}	16.9	X	176.44169	321.86919	355.48783	9.00001	0.1140448	0.22140023	2.7061426	20	1 12.0	21.1
518741 2009 QZ_{65}	16.6	X	346.31475	237.34458	101.22210	2.40149	0.1847688	0.17871688	3.1214688	20	9 8.2	19.8
518742 2009 QC_{66}	16.3	X	332.38570	338.46999	5.47523	10.73095	0.0734888	0.17380252	3.1800358	20	8 25.2	20.4
518743 2009 QG_{66}	17.1	X	36.41788	229.28439	173.63482	2.01744	0.0681976	0.20355128	2.8621133	20	—	—
518744 2009 RP_{71}	18.3	X	153.74028	120.80775	220.91768	1.69272	0.1840014	0.31111494	2.1570265	20	1 10.4	21.2
518745 2009 RX_{76}	17.2	X	308.30318	257.06194	17.00154	11.05082	0.0735146	0.23930419	2.5694244	20	4 11.9	20.2
518746 2009 SY_{73}	16.8	X	110.88572	204.61605	45.76401	11.87117	0.0688284	0.18061860	3.0995197	20	10 27.7	21.5
518747 2009 SR_{97}	16.5	X	179.72062	169.52623	356.27681	5.14503	0.1002232	0.18242895	3.0789800	20	9 25.9	21.3
518748 2009 SQ_{162}	17.0	X	91.73695	114.77836	170.18340	3.60375	0.1007754	0.19067463	2.9895612	20	11 21.6	21.5
518749 2009 SB_{164}	16.5	X	74.98202	259.47424	40.44656	10.23545	0.1229929	0.18449788	3.0559187	20	11 20.9	21.0
518750 2009 SG_{238}	15.7	X	54.65788	248.30985	55.57493	10.76554	0.0763582	0.18369753	3.0647885	20	10 30.1	19.9
518751 2009 SQ_{332}	15.3	X	348.29543	124.92340	239.10051	21.41819	0.1909599	0.17821973	3.1272711	20	10 12.0	19.0
518752 2009 SU_{371}	17.8	X	203.45584	357.27183	54.61693	5.04978	0.1212354	0.24574035	2.5243626	20	5 31.7	21.5
518753 2009 SV_{371}	18.2	X	184.64587	65.08139	24.28622	14.18435	0.1471957	0.24653758	2.5189176	20	6 30.7	22.4
518754 2009 SW_{371}	15.9	X	31.77614	285.50458	33.38013	15.99903	0.0791973	0.18197245	3.0841272	20	10 18.9	19.9
518755 2009 SZ_{371}	16.4	X	329.93341	326.49594	54.23627	10.56199	0.0566035	0.17737803	3.1371564	20	10 9.7	20.6
518756 2009 TC_{2}	16.0	X	83.98490	25.54021	249.45919	7.98920	0.1146830	0.18642851	3.0347843	20	10 31.1	20.5
518757 2009 TL_{5}	16.4	X	76.91302	89.24840	206.63715	9.43373	0.1674830	0.18906334	3.0065228	20	11 25.9	21.1
518758 2009 TJ_{46}	16.3	X	30.14079	295.66619	34.50981	15.57089	0.1626321	0.18331906	3.0690052	20	11 8.2	20.2
518759 2009 TX_{49}	17.7	X	137.38674	64.32702	42.56087	4.61772	0.2024344	0.23569446	2.5955922	20	6 9.3	22.0
518760 2009 UP_{60}	16.6	X	122.15681	197.85348	59.26292	8.05048	0.0816947	0.18770918	3.0209651	20	11 17.4	21.0
518761 2009 UH_{90}	15.7	X	289.58811	195.38156	236.68284	16.42891	0.2053442	0.17547063	3.1598496	20	9 17.3	20.1
518762 2009 UK_{100}	16.2	X	7.66435	286.30825	66.27133	11.50360	0.0690648	0.17604672	3.1529525	20	10 27.5	20.4
518763 2009 UN_{159}	16.1	X	95.51797	63.11809	229.67817	19.99885	0.0927367	0.18393488	3.0621514	20	12 1.8	20.8
518764 2009 UG_{160}	16.4	X	196.85291	210.92668	61.96179	12.86257	0.0428030	0.19864799	2.9090193	20	—	—
518765 2009 UM_{160}	17.0	X	253.42181	259.05348	31.97938	6.54070	0.0302993	0.22329739	2.6907930	20	3 4.9	20.7
518766 2009 UP_{160}	17.3	X	227.60389	283.27553	63.65024	4.16418	0.0730884	0.23236924	2.6202956	20	4 8.9	21.1
518767 2009 UQ_{160}	17.1	X	151.13286	4.88240	350.07058	5.93739	0.0453818	0.21185343	2.7868422	20	1 25.5	21.0
518768 2009 UR_{160}	17.0	X	186.98947	22.87906	359.30089	8.80903	0.0837156	0.22829772	2.6513578	20	4 5.7	21.0
518769 2009 VX_{58}	18.1	X	129.37174	264.36304	104.91760	6.34987	0.2153358	0.30704795	2.1760318	20	1 24.7	20.7
518770 2009 VB_{119}	16.3	X	50.41266	46.43406	265.35346	8.34892	0.0861464	0.17391745	3.1786346	20	10 29.8	20.8
518771 2009 WL_{1}	18.5	X	167.59930	323.04660	65.00323	29.02055	0.3348841	0.41288766	1.7861371	20	4 14.2	22.1
518772 2009 WG_{173}	17.7	X	9.44255	209.87332	225.34052	5.68366	0.0737551	0.28427836	2.2907279	20	—	—
518773 2009 WW_{207}	16.1	X	53.02068	263.03374	57.23155	11.54334	0.1233158	0.17722917	3.1389127	20	11 20.2	20.4
518774 2009 WL_{237}	16.3	X	55.42246	284.98449	56.62590	15.73052	0.2005442	0.18562359	3.0435511	20	12 29.4	21.0
518775 2009 WV_{253}	17.3	X	218.88296	181.20902	51.26036	6.76460	0.0366200	0.28687057	2.2769075	20	—	—
518776 2009 WT_{270}	17.6	X	137.90764	165.37992	246.36078	3.48313	0.1166080	0.22184770	2.7025024	20	3 24.1	21.6
518777 2009 WU_{270}	16.5	X	88.72425	265.39817	248.82322	13.70904	0.0587811	0.23220388	2.6215395	20	5 30.9	20.0
518778 2010 AW_{130}	15.7	X	176.34851	137.58570	171.40802	18.96282	0.1143650	0.17092595	3.2156150	20	1 6.4	21.1
518779 2010 AN_{133}	16.2	X	183.33814	28.68143	255.09241	11.89752	0.1473805	0.20950503	2.8076291	20	—	—
518780 2010 AH_{137}	17.1	X	245.40294	266.08575	207.03812	11.92519	0.0424815	0.23848555	2.5753010	20	10 21.1	20.3
518781 2010 AL_{138}	15.7	X	186.25931	16.03271	294.57814	13.99386	0.1429516	0.17329314	3.1862644	20	1 18.5	20.9
518782 2010 AB_{141}	16.7	X	113.03506	247.62661	133.87384	9.99182	0.0970718	0.19247641	2.9708750	20	1 20.9	21.0
518783 2010 AE_{141}	16.9	X	179.33126	328.37316	129.38055	8.28039	0.0679020	0.23272907	2.6175941	20	7 6.3	20.7
518784 2010 BK_{5}	17.1	X	143.95537	295.09698	112.08212	4.66196	0.0954562	0.21469579	2.7621910	20	3 27.4	21.2
518785 2010 BS_{11}	16.7	X	312.67870	317.19363	198.59636	17.66685	0.0875167	0.17113119	3.2130435	20	—	—
518786 2010 BV_{20}	16.5	X	357.00435	3.80158	239.50752	15.79269	0.1772993	0.20143428	2.8821315	20	5 14.6	19.3
518787 2010 BP_{24}	15.7	X	171.92301	320.77280	148.72035	6.74628	0.1090270	0.15245674	3.4703368	20	7 9.5	21.2
518788 2010 BL_{44}	16.0	X	313.20414	317.75863	88.52445	9.38168	0.1283404	0.17670153	3.1451583	20	10 13.9	19.9
518789 2010 BH_{53}	16.4	X	359.34749	206.70400	96.78500	8.28868	0.1281950	0.21685884	2.7437927	20	8 20.4	19.5
518790 2010 BO_{53}	16.6	X	340.20185	233.14701	174.98619	22.35382	0.0940610	0.18286774	3.0740528	20	11 28.7	20.9
518791 2010 BD_{56}	17.7	X	198.76332	256.61891	150.43345	9.11915	0.1595054	0.23983351	2.5656425	20	5 22.1	21.9
518792 2010 BQ_{68}	16.6	X	58.45206	160.67705	332.34497	13.72016	0.0525047	0.22365285	2.6879411	20	3 15.7	20.1
518793 2010 BY_{73}	17.1	X	191.97357	293.51384	216.46922	12.07738	0.1948793	0.23506462	2.6002266	20	9 16.0	21.6
518794 2010 BF_{76}	16.7	X	123.52850	139.97892	5.10091	7.75453	0.1377625	0.21354059	2.7721438	20	7 11.1	21.0
518795 2010 BH_{84}	16.6	X	99.33978	202.15537	162.49946	12.88933	0.0797407	0.20379229	2.8598563	20	—	—
518796 2010 BJ_{84}	16.6	X	58.92129	204.81365	162.00994	3.61691	0.0431825	0.19333904	2.9620315	20	—	—
518797 2010 BP_{88}	16.4	X	6.95384	166.30200	185.61738	12.99991	0.2001549	0.17928091	3.1149185	20	11 8.3	20.1
518798 2010 BU_{91}	16.0	X	207.04308	322.53522	140.61850	11.97645	0.1178021	0.15955921	3.3665737	20	8 5.4	21.2
518799 2010 BJ_{92}	16.7	X	347.37048	115.09717	70.95552	9.91527	0.0654621	0.21875956	2.7278764	20	2 19.6	20.3
518800 2010 BD_{94}	15.5	X	160.10642	347.74946	321.30080	7.99866	0.1580419	0.16205461	3.3319243	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518801 2010 BM_{94}	16.9	X	231.89300	249.82986	86.57121	16.53966	0.0619970	0.23115562	2.6294591	20	4 8.9	21.0
518802 2010 BU_{97}	16.2	X	18.27514	269.56794	270.86095	10.68215	0.1109913	0.19232561	2.9724277	20	3 22.5	20.0
518803 2010 BL_{107}	16.2	X	305.59507	41.61486	61.52348	11.30349	0.1059621	0.18512334	3.0490317	20	12 11.7	19.9
518804 2010 BP_{110}	15.9	X	175.85259	316.17223	2.47296	16.97021	0.1178332	0.16934725	3.2355686	20	1 23.4	21.2
518805 2010 BG_{112}	16.4	X	286.96369	352.51148	108.34116	7.41279	0.1717923	0.17864406	3.1223170	20	11 4.4	20.3
518806 2010 BY_{126}	16.3	X	322.44712	329.32501	123.09617	10.54380	0.1209313	0.18639159	3.0351851	20	12 26.1	20.0
518807 2010 BV_{127}	15.9	X	333.76285	272.32845	240.81163	16.86814	0.0888782	0.17278154	3.1925509	20	—	—
518808 2010 CN_{7}	16.2	X	235.64607	32.20902	114.68143	27.40708	0.1153121	0.17553857	3.1590344	20	11 10.6	21.3
518809 2010 CE_{14}	16.0	X	265.31259	17.75232	127.37141	18.17714	0.0879716	0.18235826	3.0797757	20	12 11.2	20.4
518810 2010 CF_{19}	21.7	X	12.70025	265.30811	154.72370	7.17721	0.2698831	0.75644081	1.1929422	20	—	—
518811 2010 CN_{43}	15.9	X	332.65924	348.05637	122.43941	11.80215	0.0509046	0.17790276	3.1309845	20	—	—
518812 2010 CC_{46}	15.8	X	336.02598	255.16759	124.87983	16.46782	0.0345575	0.17137870	3.2099491	20	10 19.3	20.5
518813 2010 CH_{48}	16.9	X	225.43444	98.96505	38.54105	18.68592	0.0734171	0.23439210	2.6051980	20	10 23.9	20.4
518814 2010 CG_{49}	16.8	X	38.64501	52.00016	266.13336	22.19989	0.0837882	0.26656213	2.3911331	20	11 10.5	20.1
518815 2010 CQ_{53}	16.3	X	43.61707	259.02518	97.37725	10.44396	0.1577097	0.18556704	3.0441694	20	12 28.9	20.4
518816 2010 CZ_{53}	16.1	X	33.77842	284.64488	265.54331	10.77139	0.0908912	0.19559228	2.9392390	20	5 2.2	19.8
518817 2010 CB_{93}	15.3	X	127.61116	189.06394	124.33390	12.88726	0.0524520	0.17729896	3.1380890	20	—	—
518818 2010 CP_{104}	16.6	X	289.29986	60.88766	151.57101	4.84342	0.1609827	0.18519819	3.0482100	20	—	—
518819 2010 CY_{110}	16.2	X	164.07776	341.04580	334.03870	15.11983	0.0743546	0.18365732	3.0652358	20	—	—
518820 2010 CG_{114}	16.1	X	100.85176	214.70927	122.59331	6.40836	0.0934879	0.17299110	3.1899720	20	—	—
518821 2010 CS_{114}	17.7	X	316.09218	351.91035	133.22768	7.18826	0.0678472	0.27023105	2.3694409	20	—	—
518822 2010 CW_{134}	17.1	X	169.83487	1.60155	230.53923	28.90203	0.1050868	0.24325677	2.5415155	20	12 12.5	21.2
518823 2010 CD_{140}	15.7	X	198.76337	248.80211	304.86609	19.10922	0.0832403	0.17701066	3.1414955	20	11 13.6	20.8
518824 2010 CZ_{163}	16.4	X	66.90896	283.75315	336.97124	13.91104	0.0899395	0.23804708	2.5784624	20	9 24.9	20.0
518825 2010 CM_{169}	17.0	X	302.12572	78.01686	132.79187	13.39137	0.0465577	0.19476036	2.9476031	20	1 23.1	21.0
518826 2010 CB_{182}	17.9	X	200.86760	61.15927	171.54591	2.58555	0.1484527	0.26246180	2.4159725	20	—	—
518827 2010 CB_{184}	15.5	X	285.19039	280.53268	263.23666	14.63265	0.2010257	0.17595606	3.1540355	20	—	—
518828 2010 CC_{184}	15.8	X	85.00099	322.92413	89.41553	17.83752	0.1973778	0.19786523	2.9166864	20	2 10.2	19.8
518829 2010 CJ_{187}	16.0	X	242.44832	12.56579	316.00046	17.53041	0.1338196	0.18752583	3.0229339	20	3 20.3	21.1
518830 2010 CH_{195}	16.3	X	224.11776	98.54909	205.96247	25.69935	0.1739676	0.17399386	3.1777039	20	2 6.3	22.0
518831 2010 CJ_{195}	18.0	X	186.61125	308.52136	247.38934	3.55254	0.1753725	0.23940222	2.5687229	20	11 11.4	22.0
518832 2010 CK_{199}	16.7	X	320.29965	223.80837	39.87895	4.59138	0.0801658	0.19277775	2.9677783	20	4 18.8	20.6
518833 2010 CW_{199}	16.6	X	277.12407	146.33368	358.54793	8.41760	0.0287312	0.18578702	3.0417661	20	12 31.9	20.9
518834 2010 CM_{200}	17.2	X	187.38353	291.18724	201.07513	12.47368	0.2002446	0.22586036	2.6703982	20	8 19.8	21.8
518835 2010 CV_{221}	17.4	X	153.34177	116.88542	11.80211	13.37134	0.0896443	0.24267688	2.5455626	20	7 23.1	21.4
518836 2010 CO_{223}	16.5	X	252.95853	107.99069	320.35647	9.36767	0.0648511	0.16203338	3.3322152	20	8 19.3	21.1
518837 2010 CX_{223}	16.8	X	209.52656	252.21527	156.83455	11.90530	0.0782394	0.20483391	2.8501528	20	6 7.8	21.3
518838 2010 CJ_{228}	16.6	X	308.90626	17.73232	87.98203	19.15486	0.1050340	0.18428095	3.0583165	20	12 20.6	20.2
518839 2010 CD_{232}	15.8	X	127.02520	157.99715	91.79412	15.80747	0.0319863	0.17877448	3.1207984	20	11 14.4	20.5
518840 2010 CB_{234}	16.9	X	355.70257	146.69316	115.42775	11.60693	0.0939972	0.24213461	2.5493617	20	6 12.3	19.7
518841 2010 CR_{236}	16.1	X	122.19063	205.32731	25.29644	20.17507	0.1039416	0.17088318	3.2161516	20	10 16.2	21.1
518842 2010 CF_{239}	16.1	X	16.43902	257.91511	102.97495	9.00813	0.0587460	0.17974073	3.1096037	20	11 17.4	20.3
518843 2010 CC_{240}	17.2	X	336.21345	310.73861	208.41568	3.79148	0.0120277	0.20827512	2.8186715	20	1 4.3	21.0
518844 2010 CH_{243}	15.7	X	219.97144	277.70179	258.41128	24.02652	0.2491703	0.17590464	3.1546501	20	10 30.8	21.1
518845 2010 CA_{251}	17.3	X	284.96789	29.22281	57.99823	7.37717	0.1097355	0.25660470	2.4525976	20	11 8.7	19.7
518846 2010 CF_{252}	16.3	X	229.26672	310.83259	355.61816	9.20499	0.0686303	0.19102826	2.9858705	20	2 24.6	20.7
518847 2010 DM	19.0	X	203.39876	220.97674	140.78270	5.00448	0.8398423	0.32845547	2.0804234	20	3 23.7	24.3
518848 2010 DA_{15}	15.9	X	133.89813	295.96950	102.01557	16.89952	0.1384437	0.17908025	3.1172449	20	3 17.6	21.0
518849 2010 DO_{17}	16.7	X	194.98971	22.60586	162.27799	18.88471	0.0829405	0.17289842	3.1911120	20	11 7.6	21.8
518850 2010 DK_{19}	16.2	X	252.33215	111.06956	154.04380	12.44765	0.0453657	0.17446155	3.1720223	20	2 1.5	20.8
518851 2010 DX_{29}	16.1	X	31.33580	310.11497	173.84571	10.80960	0.1046525	0.17699382	3.1416947	20	2 5.6	20.1
518852 2010 DG_{30}	16.0	X	313.88582	349.79682	105.80485	17.18843	0.0264755	0.18221970	3.0813367	20	12 18.4	20.2
518853 2010 DH_{33}	16.3	X	316.33748	242.44757	200.79197	10.76467	0.1785028	0.17942054	3.1133021	20	11 30.4	19.8
518854 2010 DE_{51}	16.4	X	359.61582	284.00651	288.11786	4.87325	0.0553529	0.18973687	2.9994035	20	4 8.1	20.4
518855 2010 DP_{52}	16.7	X	278.91978	306.65331	0.93536	3.69286	0.3162901	0.18452318	3.0556394	20	3 20.6	21.6
518856 2010 DR_{54}	17.8	X	259.92396	345.63346	100.09972	2.70163	0.0389961	0.24526833	2.5276003	20	10 7.4	21.1
518857 2010 DM_{60}	16.2	X	228.52075	236.47069	295.49047	14.16182	0.0669708	0.17735418	3.1374376	20	11 25.5	21.0
518858 2010 DK_{61}	16.6	X	39.72824	318.83793	216.19181	28.04189	0.0865731	0.22056612	2.7129608	20	4 21.3	19.7
518859 2010 DT_{62}	16.2	X	356.15958	310.95281	202.50429	9.33707	0.1296132	0.17476741	3.1683203	20	1 17.4	20.3
518860 2010 DE_{64}	15.8	X	215.34479	293.80008	4.56485	15.84084	0.1012235	0.16932474	3.2358554	20	2 6.2	21.0
518861 2010 DW_{65}	16.8	X	211.25188	36.15472	332.36380	10.97062	0.1954906	0.23141059	2.6275273	20	4 7.1	21.4
518862 2010 DY_{68}	17.2	X	150.74709	271.15584	216.40570	7.97386	0.1153160	0.23812132	2.5779265	20	7 13.3	21.2
518863 2010 DM_{73}	17.1	X	154.55273	239.73841	196.39919	10.78054	0.1607320	0.22881552	2.6473563	20	5 16.8	21.4
518864 2010 DN_{81}	16.8	X	176.48090	188.18530	109.73456	3.40675	0.0620490	0.19072218	2.9890643	20	—	—
518865 2010 DB_{86}	16.1	X	32.94551	297.17742	333.79402	19.79793	0.1510290	0.21052647	2.7985404	20	8 30.8	19.4
518866 2010 DV_{87}	17.0	X	109.68835	47.00327	203.08091	11.76280	0.1682543	0.22690552	2.6621918	20	11 8.6	21.2
518867 2010 DP_{88}	16.8	X	159.89682	302.34413	69.00979	5.35355	0.1187740	0.21630597	2.7484660	20	3 2.2	21.0
518868 2010 DB_{89}	16.9	X	303.07617	206.47556	257.43017	4.27219	0.1150956	0.17927070	3.1150368	20	12 7.1	20.5
518869 2010 DL_{89}	17.3	X	64.81560	236.07388	259.99680	3.55963	0.0339166	0.21969926	2.7200924	20	3 29.3	21.0
518870 2010 DW_{89}	17.1	X	99.46396	17.30778	62.18677	5.82924	0.0623042	0.21482161	2.7611123	20	3 11.7	20.9
518871 2010 DV_{93}	17.1	X	244.74042	215.92902	142.94594	6.71670	0.0532776	0.22012189	2.7166096	20	5 17.9	21.0
518872 2010 DZ_{93}	17.7	X	162.34116	324.30896	191.59303	3.59834	0.1081898	0.23246756	2.6195568	20	8 31.5	21.6
518873 2010 DA_{94}	17.6	X	174.67606	342.77381	181.55334	12.87664	0.1000991	0.23751320	2.5823249	20	9 26.1	21.5
518874 2010 ED_{9}	16.3	X	246.62738	177.50203	137.37576	9.50367	0.0508919	0.18239720	3.0793373	20	3 28.5	20.8
518875 2010 ER_{24}	16.0	X	330.81549	2.09142	205.76731	11.76160	0.1756601	0.17957680	3.1114958	20	2 7.3	20.2
518876 2010 EM_{36}	17.0	X	158.84916	347.79197	179.28984	8.77022	0.1196054	0.23397317	2.6083068	20	9 11.6	21.0
518877 2010 EJ_{37}	17.3	X	339.89812	269.96052	173.08136	14.50894	0.0394030	0.25804505	2.4434626	20	—	—
518878 2010 EY_{41}	16.7	X	343.07587	240.30596	224.88548	2.10418	0.1022819	0.17453551	3.1711261	20	—	—
518879 2010 EG_{50}	16.3	X	289.31279	270.80142	319.64656	23.97200	0.2902052	0.17362893	3.1821550	20	1 9.9	21.6
518880 2010 EA_{73}	16.8	X	230.44025	217.38808	55.46197	0.37104	0.1308711	0.18056795	3.1000992	20	1 13.8	21.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518881 2010 EQ_{139}	16.8	X	297.38484	342.15525	188.41779	0.88782	0.1193168	0.17200047	3.2022087	20	—	—
518882 2010 EA_{145}	16.4	X	328.50799	300.32777	118.74771	2.19479	0.0230163	0.17528520	3.1620777	20	11 20.6	20.7
518883 2010 EB_{148}	16.0	X	267.52220	344.66280	147.88603	11.07857	0.0630588	0.17522486	3.1628037	20	11 29.6	20.5
518884 2010 EY_{149}	16.6	X	262.22366	108.96092	207.87878	7.07994	0.1125975	0.18459705	3.0548242	20	4 6.5	21.1
518885 2010 ET_{154}	15.8	X	47.25487	333.52012	356.45895	10.51688	0.0517599	0.17086329	3.2164012	20	11 10.2	20.4
518886 2010 EK_{157}	16.1	X	284.97181	269.97456	189.42506	17.70716	0.1181859	0.17111010	3.2133074	20	11 4.1	20.4
518887 2010 EM_{162}	16.5	X	63.03967	295.67401	139.69150	6.51316	0.0611601	0.20378584	2.8599166	20	1 15.5	20.1
518888 2010 EW_{162}	16.7	X	322.12828	9.04646	96.34569	6.92411	0.0630275	0.18423698	3.0588030	20	—	—
518889 2010 ET_{163}	15.7	X	185.90709	133.61123	72.49055	17.57728	0.0920978	0.17261075	3.1946564	20	11 20.3	20.6
518890 2010 EL_{169}	16.9	X	277.87916	173.23318	92.57387	5.09222	0.0252862	0.21412909	2.7670623	20	3 4.4	20.7
518891 2010 EX_{169}	15.9	X	258.62983	209.79475	282.20285	16.60379	0.1425129	0.17151964	3.2081905	20	10 29.3	20.6
518892 2010 EJ_{173}	16.5	X	274.69681	319.11878	189.55915	1.51054	0.1541855	0.16281952	3.3214808	20	12 11.1	20.8
518893 2010 FL_{7}	16.0	X	271.87533	346.22006	142.07710	9.85055	0.0608940	0.17390673	3.1787652	20	11 29.7	20.5
518894 2010 FF_{36}	15.7	X	290.82548	226.64828	356.61348	19.25862	0.1748573	0.17042247	3.2219452	20	1 17.4	20.8
518895 2010 FR_{38}	16.2	X	338.18367	133.67808	263.32030	8.18576	0.0759450	0.16958077	3.2325976	20	11 3.3	20.5
518896 2010 FO_{42}	15.8	X	315.79738	67.83952	169.23414	23.33389	0.1025445	0.17928416	3.1148808	20	3 7.1	19.9
518897 2010 FR_{44}	16.4	X	328.25259	177.32795	296.40164	9.45326	0.0453203	0.18411360	3.0601694	20	—	—
518898 2010 FF_{58}	15.8	X	224.87218	359.55511	309.44445	14.06271	0.0464074	0.17099453	3.2147551	20	2 20.9	20.7
518899 2010 FO_{61}	16.0	X	279.19309	284.85776	353.56924	14.84983	0.0719991	0.17748726	3.1358691	20	3 16.1	20.4
518900 2010 FK_{64}	15.9	X	285.97505	296.35581	281.14229	12.94836	0.2087508	0.19256010	2.9700142	20	—	—
518901 2010 FW_{73}	16.4	X	279.69177	281.29761	329.58949	3.74889	0.1812987	0.17166878	3.2063321	20	1 31.8	21.4
518902 2010 FF_{76}	16.3	X	93.58226	112.11142	283.19501	10.96685	0.0626948	0.19665499	2.9286405	20	1 8.3	20.2
518903 2010 FA_{78}	16.5	X	76.05676	80.73628	101.17814	12.52247	0.1402383	0.22475943	2.6791114	20	7 3.3	20.0
518904 2010 FV_{79}	15.8	X	357.39795	143.44508	103.88598	14.81407	0.0511751	0.19019630	2.9945714	20	5 27.4	19.9
518905 2010 FM_{86}	16.5	X	256.01387	347.12558	212.85488	6.21375	0.1155897	0.18254638	3.0776594	20	—	—
518906 2010 FB_{98}	16.1	X	171.16742	296.68916	356.92315	8.36758	0.0817886	0.16948613	3.2338009	20	—	—
518907 2010 FW_{107}	17.0	X	280.69025	121.78530	139.40455	5.12642	0.0181303	0.21071616	2.7968606	20	3 1.9	20.9
518908 2010 FN_{112}	16.8	X	177.19589	111.65002	260.98792	3.24385	0.0902848	0.21532809	2.7567809	20	3 15.5	21.0
518909 2010 FH_{115}	15.9	X	308.34011	133.11030	357.20130	17.26056	0.1244947	0.18149890	3.0894894	20	—	—
518910 2010 FR_{116}	16.5	X	23.95976	265.01201	283.71772	5.58644	0.1735816	0.21259219	2.7803823	20	4 17.7	19.4
518911 2010 FW_{118}	16.2	X	333.84647	266.49617	2.92620	9.26947	0.0717163	0.18964537	3.0003682	20	5 14.0	20.2
518912 2010 FC_{121}	16.8	X	225.29616	210.68514	237.42733	9.02608	0.0614877	0.24430868	2.5342150	20	8 15.5	20.5
518913 2010 GS	17.3	X	148.82713	355.97283	122.13995	6.73080	0.1573590	0.23082187	2.6319931	20	7 2.1	21.4
518914 2010 GL_{11}	17.0	X	61.13257	203.83828	75.51725	9.02913	0.1912329	0.21459076	2.7630921	20	10 29.8	21.0
518915 2010 GA_{12}	16.3	X	316.60884	337.46565	121.50225	7.00536	0.2333088	0.17713423	3.1400342	20	12 18.3	19.3
518916 2010 GR_{17}	17.2	X	189.17382	44.30316	146.59956	10.88637	0.1767907	0.23160481	2.6260581	20	11 10.3	21.5
518917 2010 GN_{22}	17.3	X	149.22627	151.91240	287.12363	1.04673	0.1829607	0.22389654	2.6859905	20	5 15.0	21.6
518918 2010 GE_{32}	17.0	X	310.75578	282.49328	14.74074	1.77520	0.0266360	0.20715248	2.8288459	20	5 25.1	20.7
518919 2010 GS_{37}	16.3	X	67.77189	331.80962	73.13255	9.69789	0.0798298	0.19147120	2.9812639	20	—	—
518920 2010 GD_{43}	16.2	X	326.40430	335.02632	177.89127	11.68245	0.1188778	0.18887903	3.0084783	20	—	—
518921 2010 GM_{45}	16.3	X	354.77074	275.89176	128.21469	26.23232	0.2831362	0.17752955	3.1353711	20	—	—
518922 2010 GU_{49}	15.4	X	313.35397	128.79954	331.89779	26.20933	0.1481027	0.17507958	3.1645531	20	12 18.9	19.6
518923 2010 GD_{50}	17.2	X	113.22442	47.92422	195.05832	0.82648	0.1611434	0.22153697	2.7050289	20	11 1.2	21.5
518924 2010 GQ_{50}	16.3	X	241.40628	219.40021	337.48120	9.23297	0.1262055	0.17581633	3.1557063	20	—	—
518925 2010 GW_{56}	17.3	X	136.22114	123.36596	324.03548	6.18397	0.1181096	0.21987857	2.7186133	20	5 5.8	21.5
518926 2010 GX_{56}	16.3	X	2.03256	97.56407	318.88548	12.38184	0.1824713	0.17914489	3.1164950	20	—	—
518927 2010 GP_{64}	16.3	X	272.24208	133.24280	200.44965	19.66082	0.1596024	0.18431015	3.0579934	20	5 4.7	20.8
518928 2010 GQ_{72}	15.6	X	30.08682	341.86999	66.58224	17.73803	0.0982166	0.18098285	3.0953595	20	—	—
518929 2010 GT_{75}	17.1	X	76.12541	129.35023	132.72956	8.32927	0.1850665	0.21515159	2.7582884	20	10 24.4	21.3
518930 2010 GR_{77}	16.9	X	325.45449	61.11776	43.46972	10.92757	0.2640440	0.17942151	3.1132910	20	—	—
518931 2010 GX_{85}	16.6	X	303.17971	45.27708	230.49278	7.12742	0.1852443	0.21228128	2.7830964	20	3 21.0	20.5
518932 2010 GM_{91}	16.2	X	233.78825	73.88697	156.63394	10.97808	0.0217834	0.18451162	3.0557670	20	—	—
518933 2010 GW_{92}	17.2	X	245.60970	332.47289	68.42666	9.98020	0.1594282	0.23804861	2.5784514	20	6 28.5	21.0
518934 2010 GE_{94}	16.5	X	280.09111	158.12454	26.09680	9.65152	0.0949926	0.18265050	3.0764898	20	—	—
518935 2010 GC_{96}	17.0	X	94.24805	20.86881	80.91050	9.19032	0.1888251	0.21184616	2.7869060	20	4 22.2	21.0
518936 2010 GR_{103}	17.1	X	95.32645	170.18839	110.52061	6.25104	0.2150106	0.23108998	2.6299570	20	12 5.6	21.5
518937 2010 GT_{113}	16.5	X	22.69409	270.41916	214.99817	4.81165	0.1423380	0.18122169	3.0926393	20	1 24.5	20.1
518938 2010 GL_{116}	17.7	X	249.95899	6.83051	207.14589	5.56200	0.0623323	0.26331005	2.4107810	20	—	—
518939 2010 GM_{126}	18.1	X	157.31625	38.60665	215.06668	7.73827	0.1547800	0.24562690	2.5251398	20	12 26.3	22.3
518940 2010 GW_{143}	15.8	X	102.52871	289.96735	99.71690	9.19923	0.0477947	0.17088029	3.2161878	20	1 15.5	20.2
518941 2010 GV_{149}	16.7	X	151.10589	299.18702	316.53001	11.12896	0.1704054	0.23355456	2.6114225	20	12 21.6	21.1
518942 2010 GV_{153}	17.2	X	36.80148	15.28033	228.96940	16.92349	0.0940679	0.22851794	2.6496541	20	7 19.5	20.9
518943 2010 GP_{163}	16.5	X	3.79876	284.12171	19.95744	12.29476	0.1460320	0.20262509	2.8708285	20	8 31.9	19.8
518944 2010 GH_{166}	16.8	X	134.27909	216.12670	331.69187	16.54894	0.0768692	0.24353960	2.5395474	20	9 9.4	20.5
518945 2010 GM_{167}	15.7	X	324.46756	128.21843	328.69934	26.27650	0.2491687	0.17882790	3.1201768	20	—	—
518946 2010 GO_{176}	16.3	X	188.57596	343.77114	346.41365	11.16917	0.0834255	0.19051529	2.9912278	20	2 11.4	20.9
518947 2010 GQ_{176}	17.1	X	191.13996	32.35171	69.03665	12.55842	0.1056600	0.21902028	2.7257111	20	7 24.6	21.4
518948 2010 HV_{5}	15.9	X	223.28050	267.43457	346.53078	9.76414	0.0645757	0.18617881	3.0374972	20	—	—
518949 2010 HC_{7}	16.9	X	313.23881	182.64337	99.93680	2.97925	0.2090500	0.18450814	3.0558055	20	4 15.9	20.7
518950 2010 HO_{7}	15.5	X	354.14171	329.68523	117.46493	27.86617	0.0839765	0.17931298	3.1145470	20	—	—
518951 2010 HN_{8}	15.9	X	222.76880	236.78547	117.18995	26.54965	0.1670973	0.17424794	3.1746141	20	4 19.9	21.5
518952 2010 HD_{10}	16.0	X	295.37220	310.85084	180.39062	26.14676	0.1111497	0.17492290	3.1664425	20	12 27.7	20.6
518953 2010 HK_{11}	17.8	X	135.78165	75.34924	39.39235	11.96786	0.1557450	0.22446607	2.6814452	20	6 13.5	22.1
518954 2010 HG_{13}	16.9	X	252.41974	202.84990	135.80820	11.87670	0.2219064	0.17741205	3.1367553	20	4 16.8	22.1
518955 2010 HH_{14}	15.6	X	39.05829	116.84314	268.95991	13.96957	0.0953338	0.17636116	3.1492037	20	—	—
518956 2010 HY_{19}	15.7	X	5.99740	247.93613	153.12808	14.19734	0.1203137	0.17311463	3.1884544	20	12 25.5	20.0
518957 2010 HD_{27}	15.6	X	119.02121	216.10008	112.73728	19.68349	0.1189158	0.17985743	3.1082585	20	—	—
518958 2010 HR_{28}	16.5	X	248.13109	197.37290	129.61043	15.35285	0.0800802	0.21379675	2.7699290	20	4 12.1	20.8
518959 2010 HP_{34}	16.0	X	294.35022	264.76985	231.67214	8.68951	0.0644144	0.17464435	3.1698085	20	—	—
518960 2010 HF_{35}	16.3	X	142.97157	70.33266	25.38852	15.67605	0.0445582	0.18308736	3.0715939	20	5 16.8	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
518961 2010 HR_{38}	16.8	X	137.60331	239.08671	27.93886	11.79599	0.1707166	0.23095695	2.6309668	20	12 21.7	21.3
518962 2010 HT_{40}	16.1	X	312.58119	30.19608	207.03740	10.49510	0.1174518	0.17306543	3.1890586	20	2 27.7	20.6
518963 2010 HE_{43}	16.1	X	322.88988	352.17160	11.72951	9.08540	0.2262226	0.20027269	2.8932651	20	8 29.2	18.9
518964 2010 HF_{45}	16.9	X	83.83887	146.11177	189.02682	11.46164	0.0765572	0.23090393	2.6313695	20	—	—
518965 2010 HJ_{45}	16.9	X	290.04753	157.45808	127.71670	12.40858	0.2259005	0.17782841	3.1318572	20	3 20.7	21.6
518966 2010 HL_{45}	16.7	X	143.53449	308.15789	237.53133	6.58916	0.1016452	0.21117377	2.7928186	20	9 14.5	21.1
518967 2010 HN_{47}	16.3	X	271.73538	299.46722	351.67964	21.64407	0.1029918	0.17379874	3.1800818	20	3 17.5	21.0
518968 2010 HZ_{47}	16.0	X	254.06678	172.32696	138.99950	16.88458	0.0628692	0.17343905	3.1844770	20	4 2.9	20.9
518969 2010 HL_{50}	16.2	X	240.97903	345.05669	22.35151	19.63570	0.1028320	0.18223843	3.0811256	20	5 11.7	21.0
518970 2010 HU_{51}	16.7	X	241.89135	227.37830	103.58344	20.35967	0.1388272	0.17307723	3.1889136	20	4 11.0	22.1
518971 2010 HE_{53}	16.9	X	117.66234	295.58004	166.29056	7.86096	0.1679058	0.21690164	2.7434317	20	5 14.1	21.1
518972 2010 HX_{54}	16.4	X	177.18738	257.13200	54.25852	14.19972	0.0361193	0.18934132	3.0035794	20	1 3.9	20.9
518973 2010 HW_{60}	16.0	X	216.89843	254.74248	5.12924	14.36636	0.2226620	0.17964490	3.1107095	20	—	—
518974 2010 HC_{66}	17.4	X	179.33942	354.58621	274.05145	7.94925	0.1328504	0.24144921	2.5541840	20	—	—
518975 2010 HD_{66}	16.0	X	332.09158	272.98325	300.73620	17.42332	0.0945888	0.17082317	3.2169047	20	2 24.8	20.5
518976 2010 HH_{67}	16.8	X	55.14843	94.43472	69.49330	8.48591	0.1536357	0.21160504	2.7890227	20	5 11.9	20.0
518977 2010 HX_{73}	15.5	X	274.48366	59.51330	123.95422	23.37509	0.0773580	0.17850815	3.1239016	20	—	—
518978 2010 HA_{76}	16.5	X	298.17487	107.61445	145.41024	26.02543	0.2618521	0.17495936	3.1660026	20	2 11.6	21.0
518979 2010 HU_{88}	16.8	X	47.80850	96.89158	126.74953	12.15911	0.1537153	0.22179416	2.7029374	20	7 21.9	19.9
518980 2010 HD_{94}	16.5	X	300.65528	270.97860	201.01903	15.68401	0.0966796	0.17005406	3.2265969	20	12 12.3	20.9
518981 2010 HO_{95}	16.0	X	140.94050	270.99003	29.48349	23.59793	0.1007601	0.17490152	3.1667005	20	—	—
518982 2010 HR_{113}	16.9	X	62.64093	259.64911	33.98680	13.70776	0.1747982	0.21546457	2.7556167	20	11 11.2	20.9
518983 2010 HS_{114}	17.9	X	225.15284	99.79223	200.28406	5.70687	0.0994623	0.27476468	2.3433048	20	1 28.8	21.4
518984 2010 JH_{6}	17.1	X	49.19326	311.88327	34.44408	6.40775	0.1387652	0.22108833	2.7086870	20	12 29.6	21.0
518985 2010 JO_{10}	16.2	X	291.66211	125.68087	143.60004	15.96593	0.2467943	0.17492482	3.1664193	20	2 27.0	20.9
518986 2010 JP_{10}	17.0	X	132.07538	64.00833	208.32688	9.68615	0.1895132	0.22915844	2.6447146	20	12 23.1	21.6
518987 2010 JN_{12}	16.2	X	245.98657	5.28485	218.27843	10.35017	0.1712503	0.17758411	3.1347289	20	—	—
518988 2010 JU_{17}	15.9	X	273.03255	39.09874	277.56422	9.45249	0.0646246	0.17758949	3.1346655	20	4 22.8	20.5
518989 2010 JB_{21}	17.1	X	110.60236	190.24179	37.29542	7.10629	0.0642044	0.24174937	2.5520694	20	10 8.4	20.6
518990 2010 JV_{24}	15.8	X	181.09125	318.44785	317.34320	25.96049	0.1421111	0.17407692	3.1766931	20	—	—
518991 2010 JP_{26}	16.9	X	332.67633	132.24975	131.29930	15.51520	0.0663914	0.21383549	2.7695945	20	5 13.2	20.7
518992 2010 JY_{38}	16.3	X	220.68487	117.97484	211.32844	6.80319	0.0951123	0.18364769	3.0653429	20	3 9.3	21.1
518993 2010 JK_{54}	16.2	X	268.35875	245.54071	306.46596	12.31720	0.2459763	0.17456963	3.1707129	20	—	—
518994 2010 JX_{56}	15.7	X	280.23560	148.12999	11.90050	27.35947	0.1272037	0.17372095	3.1810312	20	—	—
518995 2010 JR_{57}	16.1	X	340.88374	287.80572	156.79827	18.42790	0.1854030	0.17494243	3.1662068	20	—	—
518996 2010 JB_{58}	16.7	X	273.49242	233.63113	86.23553	2.01472	0.1527429	0.17758489	3.1347197	20	4 19.6	21.3
518997 2010 JW_{59}	15.8	X	334.93355	357.45979	102.48212	18.96285	0.0430295	0.17270178	3.1935337	20	—	—
518998 2010 JR_{60}	16.6	X	273.93821	111.55368	197.87829	15.93130	0.1088671	0.17591493	3.1545270	20	4 12.8	21.0
518999 2010 JU_{61}	16.4	X	287.97806	183.32401	141.56892	12.75238	0.1727173	0.18235916	3.0797656	20	5 13.8	20.9
519000 2010 JU_{65}	16.3	X	214.21950	175.17287	98.22822	6.69541	0.0594655	0.18427435	3.0583894	20	—	—
519001 2010 JQ_{69}	16.0	X	356.09330	341.50896	241.64650	23.44444	0.1598606	0.17944364	3.1130350	20	4 11.9	19.8
519002 2010 JD_{70}	15.7	X	110.93899	44.04763	286.61341	14.85641	0.0562562	0.17307351	3.1889594	20	—	—
519003 2010 JN_{70}	15.8	X	157.90524	32.85979	268.32833	11.26565	0.0549710	0.17704288	3.1411142	20	—	—
519004 2010 JP_{92}	16.4	X	241.55329	41.07467	303.16636	4.56114	0.2121695	0.17238741	3.1974151	20	4 8.1	21.7
519005 2010 JA_{93}	15.8	X	134.03435	99.89482	247.49469	15.09668	0.1587338	0.18534221	3.0466308	20	1 9.8	20.6
519006 2010 JX_{94}	17.0	X	172.56912	165.59461	70.04986	15.09685	0.1071154	0.22939616	2.6428871	20	12 18.6	20.9
519007 2010 JG_{95}	16.5	X	124.61303	159.25793	215.80321	6.36266	0.0960040	0.19108609	2.9852681	20	1 25.2	20.9
519008 2010 JB_{96}	16.2	X	279.17851	268.29140	74.86837	15.37526	0.0718496	0.18419926	3.0592206	20	6 5.7	20.4
519009 2010 JG_{97}	17.3	X	124.07803	329.46128	210.21263	4.40154	0.1040901	0.23159770	2.6261119	20	8 20.7	21.2
519010 2010 JF_{98}	15.7	X	147.12082	45.42750	288.85955	7.90684	0.1328822	0.18373705	3.0643490	20	1 8.1	20.4
519011 2010 JV_{98}	15.9	X	149.74364	327.55645	8.32542	8.65713	0.0510982	0.18513264	3.0489296	20	1 5.4	20.4
519012 2010 JK_{102}	16.0	X	254.67600	288.18702	290.77471	16.26463	0.1286687	0.17771466	3.1331934	20	—	—
519013 2010 JD_{103}	16.0	X	322.61613	339.23598	288.60441	14.23960	0.0943692	0.17881040	3.1203803	20	4 20.0	20.5
519014 2010 JO_{108}	17.3	X	69.61214	124.62875	52.95386	12.36999	0.1221138	0.21605434	2.7505996	20	6 14.0	21.0
519015 2010 JO_{109}	14.9	X	191.80187	285.00531	133.89727	27.16388	0.1296616	0.17813734	3.1282353	20	6 4.9	20.4
519016 2010 JX_{113}	16.1	X	247.11118	219.71708	65.80536	12.69759	0.0900015	0.17671483	3.1450005	20	2 22.0	21.1
519017 2010 JM_{115}	16.6	X	357.17059	242.20898	28.82260	13.28574	0.2024654	0.20400792	2.8578408	20	6 26.2	19.6
519018 2010 JD_{116}	17.0	X	143.20512	5.25077	234.16759	13.19026	0.2036368	0.23539327	2.5978059	20	11 25.2	21.4
519019 2010 JV_{130}	16.5	X	119.13066	32.44358	108.95542	17.90081	0.1821534	0.22150032	2.7053273	20	7 4.7	20.7
519020 2010 JC_{131}	16.4	X	295.62876	293.28137	345.07926	9.30354	0.2049390	0.17551276	3.1593440	20	3 16.6	20.8
519021 2010 JH_{132}	16.5	X	238.33265	265.18168	116.18384	25.43273	0.3171268	0.17546712	3.1598918	20	5 22.2	22.4
519022 2010 JS_{132}	16.5	X	288.17289	26.49763	213.64520	8.27966	0.1329341	0.19180248	2.9778300	20	1 28.5	21.0
519023 2010 JG_{134}	17.1	X	149.04564	141.16719	102.82344	13.54314	0.2120135	0.22734471	2.6587621	20	12 5.5	21.8
519024 2010 JF_{135}	16.4	X	288.24177	118.95833	69.45151	18.15867	0.1105580	0.18016853	3.1046794	20	—	—
519025 2010 JC_{137}	16.6	X	59.32549	294.63368	262.16561	4.37139	0.0348817	0.21853062	2.7297812	20	6 13.5	20.1
519026 2010 JP_{137}	16.3	X	256.94810	143.77493	78.26584	15.75721	0.1449551	0.17828217	3.1265409	20	—	—
519027 2010 JX_{138}	15.7	X	286.40754	318.79202	345.72813	14.84985	0.0754993	0.17691378	3.1426423	20	4 19.6	20.4
519028 2010 JG_{141}	16.2	X	220.79769	216.80849	351.77765	16.75278	0.0192555	0.16864074	3.2445991	20	—	—
519029 2010 JE_{143}	16.9	X	357.26604	326.49218	20.37474	5.01628	0.1633331	0.20461193	2.8522139	20	10 15.0	20.0
519030 2010 JT_{145}	15.9	X	227.15700	251.39499	12.81121	26.55148	0.1719512	0.18062056	3.0994973	20	1 1.6	21.5
519031 2010 JR_{146}	17.0	X	209.31183	132.30421	274.70551	6.31022	0.0613662	0.22072947	2.7116222	20	6 4.2	20.9
519032 2010 JR_{156}	17.3	X	252.12869	123.47592	199.63276	10.17389	0.1074680	0.18803520	3.0174722	20	4 3.6	21.7
519033 2010 JZ_{167}	16.6	X	95.26672	143.29475	208.35820	14.38268	0.2716448	0.24037295	2.5618025	20	—	—
519034 2010 KG_{5}	15.8	X	287.85784	221.72724	62.63709	10.75483	0.0858369	0.17213401	3.2005523	20	4 6.6	20.4
519035 2010 KJ_{5}	15.6	X	288.82810	209.48909	94.62270	29.24476	0.1797543	0.17693022	3.1424476	20	4 29.5	20.6
519036 2010 KM_{11}	15.7	X	194.32666	158.87583	87.86512	22.70618	0.0397507	0.16971906	3.2308414	20	—	—
519037 2010 KA_{13}	16.3	X	354.17162	179.37602	87.59998	8.01040	0.1795375	0.18812928	3.0164661	20	6 12.9	19.3
519038 2010 KJ_{14}	15.7	X	245.64067	226.50271	2.42704	27.11916	0.2230461	0.17474203	3.1686271	20	—	—
519039 2010 KO_{18}	16.5	X	292.08351	54.91022	239.01858	9.24298	0.2074405	0.17657595	3.1466493	20	3 28.9	21.1
519040 2010 KC_{22}	16.0	X	346.86750	121.35971	189.70406	11.82264	0.0507442	0.19404844	2.9548081	20	7 30.3	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519041 2010 KH_{27}	15.6	X	211.57449	215.58412	166.60805	28.65265	0.1922324	0.17181801	3.2044753	20	5 5.3	21.3
519042 2010 KV_{30}	16.5	X	169.72474	245.91609	40.24213	19.44025	0.1250026	0.17199013	3.2023371	20	—	—
519043 2010 KG_{31}	16.4	X	318.35735	188.55338	118.58789	10.97794	0.1334393	0.18528297	3.0472801	20	6 7.5	20.3
519044 2010 KD_{32}	16.8	X	294.02512	19.09167	332.74252	3.05417	0.1286158	0.18770519	3.0210079	20	6 29.3	20.8
519045 2010 KE_{33}	17.6	X	111.60559	94.94556	139.43737	11.98994	0.1573868	0.23786075	2.5798088	20	10 26.8	21.9
519046 2010 KU_{35}	16.0	X	303.77552	117.82382	68.26665	22.13466	0.0253857	0.18382919	3.0633250	20	—	—
519047 2010 KZ_{46}	15.5	X	23.29736	307.72606	266.27853	20.27722	0.1708997	0.18165935	3.0876700	20	5 26.9	19.1
519048 2010 KM_{48}	16.3	X	348.83255	354.25774	253.53360	1.36376	0.1237217	0.18011117	3.1053385	20	5 8.5	20.0
519049 2010 KO_{50}	16.3	X	339.06883	243.00055	21.63097	15.41730	0.0296720	0.17899041	3.1182879	20	5 17.3	20.7
519050 2010 KA_{54}	15.6	X	298.21667	55.25666	262.26968	14.02599	0.0356666	0.18076800	3.0978116	20	6 2.9	19.8
519051 2010 KC_{75}	17.1	X	125.48410	186.45056	109.38129	3.65321	0.1846460	0.22888641	2.6468097	20	—	—
519052 2010 KX_{79}	16.9	X	47.27023	290.58713	68.58851	2.39665	0.0352515	0.22162819	2.7042866	20	12 29.1	20.4
519053 2010 KH_{83}	17.2	X	19.51826	343.82665	46.92849	9.10730	0.2300095	0.21716486	2.7412144	20	—	—
519054 2010 KC_{84}	16.3	X	294.15769	151.61505	5.84793	7.07191	0.0167994	0.17306227	3.1890974	20	—	—
519055 2010 KM_{84}	15.8	X	58.80565	276.39406	258.79723	18.63285	0.0596768	0.17488302	3.1669239	20	5 17.8	20.2
519056 2010 KB_{86}	16.5	X	223.40211	328.44752	299.79040	7.88617	0.1162485	0.17978176	3.1091306	20	1 3.1	21.3
519057 2010 KU_{87}	15.5	X	258.58365	28.62054	302.99145	9.16272	0.0907686	0.17273230	3.1931575	20	4 20.1	20.4
519058 2010 KY_{92}	17.0	X	275.07324	125.53064	85.18635	2.55529	0.0990986	0.17990746	3.1076822	20	—	—
519059 2010 KV_{98}	16.9	X	134.74597	56.38812	84.35336	12.47735	0.1298407	0.22364436	2.6880092	20	7 16.1	21.1
519060 2010 KM_{104}	16.8	X	307.16959	188.17240	330.00617	9.52324	0.1672008	0.17704388	3.1411025	20	—	—
519061 2010 KP_{106}	15.9	X	59.45395	350.84586	63.39306	16.59970	0.0851819	0.18083219	3.0970786	20	—	—
519062 2010 KE_{108}	16.6	X	356.19180	113.68737	151.75087	15.28045	0.1666239	0.18578714	3.0417647	20	6 16.6	20.2
519063 2010 KX_{109}	17.0	X	143.41028	55.82884	203.77274	4.65972	0.0916179	0.25323593	2.4743008	20	12 24.4	20.7
519064 2010 KY_{110}	16.1	X	259.77752	282.30258	281.01681	7.94736	0.0507904	0.17430317	3.1739435	20	—	—
519065 2010 KB_{113}	16.1	X	245.51073	60.72896	201.27260	12.62505	0.1099762	0.18376203	3.0640713	20	1 13.7	21.0
519066 2010 KE_{115}	15.5	X	174.19070	207.33600	94.64625	13.08499	0.0120008	0.17817889	3.1277489	20	—	—
519067 2010 KN_{119}	16.8	X	263.48247	304.46588	274.49362	6.31928	0.1193077	0.17756751	3.1349242	20	—	—
519068 2010 KS_{126}	15.8	X	168.24021	351.01377	296.84035	15.83452	0.0536392	0.17082010	3.2169433	20	—	—
519069 2010 LN	15.4	X	324.97269	155.61340	108.42519	17.08406	0.1060089	0.19167205	2.9791808	20	4 30.9	19.5
519070 2010 LJ_{2}	16.5	X	232.46632	224.11437	38.64132	15.46729	0.2465022	0.17563951	3.1578239	20	—	—
519071 2010 LF_{7}	16.7	X	264.02468	210.64742	17.96076	12.01505	0.1500302	0.17896995	3.1185255	20	—	—
519072 2010 LC_{11}	16.4	X	205.26748	239.99469	61.31212	9.59485	0.0519527	0.18495781	3.0508505	20	1 25.6	21.0
519073 2010 LZ_{17}	16.2	X	271.31034	314.04345	264.09228	11.47954	0.1055096	0.17928845	3.1148311	20	—	—
519074 2010 LP_{18}	16.6	X	273.28630	17.53042	327.69736	14.45151	0.0842456	0.17849017	3.1241115	20	5 27.0	21.3
519075 2010 LQ_{18}	15.6	X	211.57735	297.51891	257.07304	15.30488	0.0701245	0.15835990	3.3835498	20	11 30.5	20.6
519076 2010 LJ_{23}	16.2	X	130.54047	267.13040	257.42302	17.91684	0.0700441	0.22618499	2.6678425	20	7 30.9	20.4
519077 2010 LR_{24}	16.0	X	79.26451	281.50558	97.63880	9.67903	0.0262315	0.17285956	3.1915902	20	—	—
519078 2010 LB_{26}	16.4	X	334.28286	78.64212	92.87412	18.47704	0.0329601	0.18528048	3.0473075	20	1 19.7	20.7
519079 2010 LS_{32}	16.1	X	320.41413	71.74748	190.57349	18.61046	0.1034537	0.17278760	3.1924762	20	4 16.4	20.3
519080 2010 LM_{36}	15.8	X	14.92074	85.68431	332.31385	25.23014	0.2826315	0.17189590	3.2035072	20	—	—
519081 2010 LV_{36}	16.7	X	71.35065	359.88849	263.85734	9.23970	0.1059979	0.23306976	2.6150426	20	10 6.3	20.6
519082 2010 LZ_{46}	15.9	X	89.22491	308.53181	251.57448	14.11771	0.0717269	0.18857481	3.0117131	20	7 27.2	20.4
519083 2010 LH_{49}	16.0	X	257.96189	289.62445	91.25743	13.90944	0.1305835	0.18085129	3.0968604	20	6 19.2	20.6
519084 2010 LU_{51}	16.7	X	236.93289	259.67550	132.69749	3.15041	0.2187699	0.17582670	3.1555822	20	6 2.4	21.8
519085 2010 LT_{54}	15.7	X	233.40102	60.51500	332.28341	17.28860	0.0865477	0.17800075	3.1298353	20	6 10.7	20.7
519086 2010 LR_{57}	16.1	X	253.13314	307.35903	47.00871	15.03853	0.1802590	0.17387552	3.1791457	20	5 6.1	21.0
519087 2010 LO_{69}	17.4	X	182.00698	148.77151	4.64435	13.99579	0.0331282	0.23601128	2.5932688	20	9 24.5	20.9
519088 2010 LY_{77}	16.8	X	116.46193	306.83014	191.34810	3.33098	0.1738982	0.21693145	2.7431804	20	6 26.7	21.1
519089 2010 LC_{78}	16.1	X	217.36231	125.02127	135.85116	10.07363	0.0384408	0.17524370	3.1625770	20	—	—
519090 2010 LC_{83}	15.9	X	319.27318	162.85782	323.41726	15.69446	0.1003967	0.16986638	3.2289731	20	—	—
519091 2010 LO_{83}	15.7	X	209.20403	152.86713	123.06316	27.91124	0.1643529	0.17194342	3.2029169	20	1 1.3	21.2
519092 2010 LA_{87}	15.5	X	219.35221	121.64063	124.70373	23.49435	0.0591162	0.17052407	3.2206653	20	—	—
519093 2010 LT_{87}	16.0	X	133.26502	334.55151	44.34086	11.49055	0.1191164	0.18684276	3.0302970	20	2 18.7	20.7
519094 2010 LU_{89}	15.7	X	194.80873	213.27945	242.68847	8.09980	0.1028054	0.18277704	3.0750697	20	7 15.9	20.6
519095 2010 LV_{89}	16.9	X	336.61704	2.80678	326.26962	6.46049	0.0852410	0.19097737	2.9864009	20	8 10.3	20.4
519096 2010 LD_{92}	16.3	X	355.53350	271.60393	244.65737	8.03844	0.0950547	0.18678615	3.0309092	20	1 20.5	20.3
519097 2010 LF_{93}	16.7	X	53.36567	180.79893	43.21150	8.60046	0.1599639	0.21646658	2.7471064	20	8 4.2	20.3
519098 2010 LY_{94}	16.3	X	48.87691	191.37753	143.29861	22.22558	0.1636499	0.21282981	2.7783124	20	12 19.0	20.7
519099 2010 LV_{100}	15.9	X	63.46835	97.14403	68.96770	19.21382	0.0771652	0.16951330	3.2334553	20	5 17.9	20.3
519100 2010 LH_{101}	16.1	X	201.42257	163.26489	128.90289	16.57431	0.0080858	0.17950733	3.1122986	20	1 9.1	20.6
519101 2010 LY_{102}	15.8	X	207.25096	262.71890	150.80744	16.25495	0.2110907	0.17147607	3.2087339	20	6 5.3	21.5
519102 2010 LD_{114}	16.3	X	154.44439	264.55091	228.38291	12.16850	0.0615537	0.18373552	3.0643659	20	7 17.9	21.1
519103 2010 LD_{125}	16.3	X	250.35234	223.72663	146.70513	6.34709	0.1644348	0.17519908	3.1631139	20	5 25.9	21.2
519104 2010 LE_{128}	15.9	X	141.43996	192.43670	168.57647	15.65916	0.0784815	0.18157383	3.0886395	20	1 26.4	20.6
519105 2010 LX_{129}	16.0	X	35.04247	85.47395	151.02311	9.36318	0.0631306	0.18202434	3.0835411	20	7 4.4	20.2
519106 2010 LS_{135}	16.6	X	267.08049	118.91870	87.80649	2.12025	0.1424046	0.17329714	3.1862153	20	—	—
519107 2010 MU_{3}	16.7	X	343.50669	181.27187	118.31811	11.85044	0.1038673	0.19487497	2.9464473	20	7 11.2	20.1
519108 2010 MQ_{4}	17.6	X	141.99377	59.67520	224.15462	11.23484	0.2553615	0.23709724	2.5853443	20	—	—
519109 2010 MN_{9}	16.3	X	201.76273	149.26767	151.94678	19.98675	0.1375610	0.17724694	3.1387030	20	1 20.2	21.6
519110 2010 MA_{10}	16.6	X	270.39654	238.47929	156.19817	16.21184	0.0983740	0.18669818	3.0318613	20	7 26.1	21.0
519111 2010 MQ_{15}	17.0	X	2.21942	130.51300	129.39172	5.72157	0.0690005	0.21202521	2.7853368	20	6 18.2	20.5
519112 2010 MZ_{21}	16.2	X	205.08959	156.12330	158.51209	20.75386	0.1181576	0.18233089	3.0800839	20	2 6.6	21.2
519113 2010 MO_{22}	15.8	X	332.88286	263.50501	10.40309	10.06791	0.0912090	0.17568746	3.1572493	20	5 17.1	20.0
519114 2010 MS_{24}	15.5	X	198.23205	246.06134	182.72156	26.76898	0.0955181	0.17577216	3.1562349	20	6 17.6	20.9
519115 2010 MA_{25}	16.8	X	34.72116	298.88776	334.27721	8.29671	0.0495812	0.19114576	2.9846468	20	8 21.5	20.6
519116 2010 MR_{27}	16.7	X	248.00478	267.28333	140.25761	9.84872	0.1226828	0.18210894	3.0825860	20	7 11.9	21.2
519117 2010 MB_{29}	17.1	X	262.52986	91.32880	148.46389	12.20706	0.1876163	0.17732170	3.1378207	20	1 1.3	22.3
519118 2010 MR_{30}	16.0	X	316.19186	28.12374	281.57554	13.24054	0.0847951	0.17904405	3.1176650	20	6 12.0	20.0
519119 2010 MF_{34}	16.7	X	66.33769	185.97507	120.57757	15.45471	0.1675346	0.21079221	2.7961879	20	12 4.2	21.1
519120 2010 MZ_{34}	15.9	X	130.21220	24.89176	44.78032	12.56839	0.0235075	0.19783159	2.9170170	20	4 4.1	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519121 2010 MM_{39}	16.5	X	328.60217	118.11912	154.97847	10.26068	0.1934579	0.17660172	3.1463433	20	5 3.8	20.3
519122 2010 MP_{41}	17.1	X	137.27890	89.04640	33.64627	7.84965	0.1741610	0.21777216	2.7361158	20	6 27.7	21.6
519123 2010 MS_{42}	16.3	X	208.60968	262.03760	18.06831	13.43585	0.2280422	0.17029720	3.2235251	20	1 4.8	22.1
519124 2010 MP_{45}	16.9	X	303.88726	157.38163	48.93380	3.19437	0.0343884	0.18296053	3.0730133	20	1 24.5	21.1
519125 2010 MD_{46}	17.3	X	131.61524	132.14696	180.67635	11.80174	0.2876152	0.23201120	2.6229907	20	—	—
519126 2010 ML_{53}	15.8	X	156.57110	32.30350	303.27321	11.10468	0.1219804	0.17699481	3.1416830	20	1 19.1	20.7
519127 2010 ML_{56}	15.7	X	316.18210	250.48315	267.96356	9.34476	0.0762834	0.17455951	3.1708355	20	—	—
519128 2010 MX_{60}	16.1	X	187.97983	69.64820	228.39463	15.61761	0.0841215	0.17376175	3.1805331	20	1 1.8	21.2
519129 2010 MT_{63}	17.1	X	93.79119	354.26081	307.81000	3.35323	0.1884422	0.21742330	2.7390418	20	12 24.7	21.6
519130 2010 MW_{66}	16.5	X	257.85841	76.68578	282.69367	14.49487	0.1551548	0.17348759	3.1838830	20	5 18.1	21.5
519131 2010 MC_{76}	17.1	X	238.94773	143.52955	324.85214	11.82724	0.1523472	0.24043917	2.5613322	20	9 15.9	20.8
519132 2010 MB_{80}	16.7	X	281.27974	32.31361	42.74840	7.67308	0.0871622	0.19916292	2.9040030	20	10 8.8	20.4
519133 2010 MQ_{82}	15.6	X	12.66897	311.22411	284.73559	17.00361	0.1591497	0.17587577	3.1549953	20	6 5.6	19.3
519134 2010 MR_{86}	17.1	X	65.60306	132.12891	71.46444	12.34064	0.0549421	0.21419029	2.7665352	20	7 4.6	20.8
519135 2010 MB_{96}	15.9	X	175.15613	244.25936	102.01500	17.28515	0.1014756	0.18326618	3.0695956	20	2 19.8	20.9
519136 2010 MU_{97}	16.8	X	124.29783	119.91638	126.52144	8.63457	0.1847995	0.21122337	2.7923814	20	11 16.9	21.6
519137 2010 MY_{97}	16.6	X	263.61867	52.16124	338.13081	13.97625	0.0266124	0.18251297	3.0780350	20	7 26.9	21.0
519138 2010 MT_{99}	17.4	X	332.22817	97.03004	175.23027	6.46083	0.2051595	0.20204532	2.8763176	20	5 4.7	20.4
519139 2010 MV_{106}	17.7	X	149.69165	173.01462	124.21360	5.92514	0.1478932	0.23020302	2.6367080	20	—	—
519140 2010 MK_{112}	16.1	X	201.93372	252.05677	126.94203	16.76239	0.0658928	0.17247037	3.1963897	20	4 29.3	21.2
519141 2010 MU_{116}	17.5	X	23.69104	104.80581	186.65538	4.44814	0.0887207	0.21297282	2.7770686	20	9 5.3	21.0
519142 2010 NZ_{3}	16.5	X	322.08955	44.20902	329.87067	4.98350	0.0921670	0.20415786	2.8564414	20	9 16.9	20.0
519143 2010 NC_{10}	16.2	X	193.43206	262.51440	50.62970	15.82137	0.2047594	0.17366017	3.1817733	20	2 2.1	21.9
519144 2010 ND_{14}	15.4	X	101.10970	62.79531	99.39935	16.95007	0.0284318	0.17327143	3.1865304	20	6 21.8	19.8
519145 2010 NG_{16}	16.2	X	281.40595	274.03737	3.58917	14.01016	0.0784289	0.19123853	2.9836815	20	3 17.3	20.4
519146 2010 NL_{16}	16.9	X	0.18058	264.91586	77.74041	5.80840	0.0808949	0.23065446	2.6332665	20	10 15.1	20.0
519147 2010 NQ_{19}	17.0	X	351.35469	183.04291	117.07000	5.07201	0.1443827	0.18542347	3.0457406	20	7 25.1	20.3
519148 2010 NN_{23}	17.7	X	108.58678	67.36909	178.87707	16.91864	0.1588445	0.23284597	2.6167178	20	11 5.1	22.0
519149 2010 NL_{42}	16.5	X	100.48196	270.17684	324.70777	6.18647	0.2729049	0.20141490	2.8823164	20	10 13.6	21.5
519150 2010 NT_{42}	16.1	X	286.34792	239.22789	96.12262	14.29543	0.1848983	0.17543819	3.1602392	20	5 22.5	20.6
519151 2010 NR_{43}	16.3	X	259.41149	86.70329	330.00965	16.32116	0.2211003	0.18224212	3.0810841	20	7 27.8	21.0
519152 2010 NC_{46}	16.3	X	295.42789	215.50578	153.98120	11.21976	0.0318211	0.18428841	3.0582339	20	8 5.8	20.5
519153 2010 NG_{47}	16.0	X	218.67412	347.48687	50.80922	16.80342	0.1018344	0.16976479	3.2302612	20	5 29.7	21.1
519154 2010 NO_{50}	16.4	X	255.72354	254.64934	142.12309	18.81281	0.0958687	0.17885171	3.1198998	20	7 11.3	21.0
519155 2010 NS_{64}	16.4	X	303.51450	259.62472	88.01148	4.77906	0.2474569	0.21053359	2.7984773	20	6 19.9	19.7
519156 2010 NZ_{77}	16.5	X	263.05048	358.78475	286.72414	2.33697	0.1086285	0.18580180	3.0416047	20	2 29.4	21.1
519157 2010 NM_{78}	16.5	X	239.00847	100.41341	172.45826	25.46917	0.2510704	0.17206381	3.2014227	20	1 14.9	22.4
519158 2010 NW_{80}	17.2	X	56.98371	121.77514	321.83275	11.67018	0.1816918	0.23322532	2.6138797	20	1 24.9	19.7
519159 2010 NX_{88}	17.4	X	113.20867	156.76804	138.35576	2.30285	0.1960282	0.22048199	2.7136509	20	—	—
519160 2010 NY_{97}	15.9	X	259.38524	95.20790	274.51438	8.92362	0.0889518	0.17372207	3.1810174	20	6 12.2	20.4
519161 2010 NU_{102}	16.1	X	214.51450	125.16899	299.67053	7.85188	0.0570582	0.17463339	3.1699411	20	7 3.3	20.7
519162 2010 NG_{104}	16.3	X	355.20582	176.22962	91.11229	11.86221	0.1805873	0.17797981	3.1300809	20	6 15.5	19.6
519163 2010 NB_{105}	16.0	X	212.00670	133.17765	300.83653	9.36013	0.0450306	0.17660294	3.1463287	20	7 13.1	20.5
519164 2010 NR_{105}	16.4	X	9.46893	122.20113	136.57185	15.59437	0.2507220	0.18166764	3.0875760	20	7 8.8	19.5
519165 2010 NN_{110}	16.4	X	307.56023	57.95864	284.09150	5.97111	0.1463740	0.18114103	3.0935572	20	7 3.8	20.2
519166 2010 NN_{118}	15.7	X	255.20116	56.70373	269.42504	9.35784	0.0160876	0.17634942	3.1493434	20	4 19.6	20.4
519167 2010 OA_{2}	16.4	X	293.47442	10.38131	354.05911	4.44231	0.1483135	0.18128638	3.0919035	20	7 12.6	20.4
519168 2010 OT_{6}	16.1	X	86.84094	95.96631	310.33164	15.12954	0.0921250	0.17352615	3.1834114	20	1 22.4	20.3
519169 2010 OX_{20}	15.8	X	203.20205	137.34076	322.46485	15.26343	0.0929750	0.17854729	3.1234451	20	8 2.4	20.5
519170 2010 OW_{22}	16.1	X	268.21603	89.42137	281.39245	14.36304	0.0709920	0.17503591	3.1650794	20	6 27.4	20.6
519171 2010 OA_{28}	16.2	X	261.74586	46.14403	338.41938	26.53513	0.0762849	0.17580876	3.1557969	20	7 14.4	21.1
519172 2010 OW_{45}	16.5	X	312.51811	266.10903	71.39466	11.25629	0.1101110	0.17950420	3.1123348	20	7 10.8	20.5
519173 2010 OO_{55}	16.5	X	214.70483	270.16309	181.43033	9.79620	0.1966868	0.17567428	3.1574071	20	7 23.7	21.8
519174 2010 OM_{64}	16.6	X	305.00132	213.89745	288.31171	10.66999	0.1341906	0.21764814	2.7371551	20	—	—
519175 2010 OC_{67}	17.1	X	157.08133	104.86547	103.79529	12.76796	0.0779597	0.23630295	2.5911345	20	11 7.9	21.1
519176 2010 OW_{67}	16.8	X	273.41760	98.26285	209.03880	13.71352	0.0858157	0.19319731	2.9634800	20	4 10.5	21.1
519177 2010 OR_{83}	16.6	X	314.01484	204.17834	138.66876	6.37215	0.0625076	0.17914257	3.1165219	20	7 24.5	20.7
519178 2010 OG_{85}	16.2	X	246.28408	92.58696	339.97609	15.14040	0.1180194	0.18155094	3.0888990	20	8 14.8	20.7
519179 2010 OQ_{88}	15.8	X	255.85775	234.68524	139.82630	12.84098	0.0833463	0.17071026	3.2183231	20	6 16.0	20.6
519180 2010 OD_{97}	16.2	X	286.99828	88.98069	252.69619	11.26677	0.0563057	0.17100680	3.2146014	20	6 16.0	20.6
519181 2010 OC_{107}	16.3	X	99.29558	102.91525	315.07328	13.09935	0.0309793	0.17764646	3.1339953	20	2 10.1	20.8
519182 2010 OV_{109}	16.8	X	139.93620	25.69242	244.17768	10.88179	0.1567014	0.21470295	2.7621296	20	12 24.3	21.4
519183 2010 OD_{110}	17.8	X	55.12283	79.40167	119.74200	3.18660	0.0634683	0.26731012	2.3866704	20	6 16.2	20.5
519184 2010 OP_{111}	16.1	X	332.20716	294.92686	81.82867	11.43204	0.0846086	0.19317182	2.9637407	20	10 12.5	19.9
519185 2010 OK_{114}	16.3	X	39.69812	272.11935	325.95015	9.00075	0.0382342	0.17207615	3.2012697	20	7 11.5	20.7
519186 2010 OB_{116}	16.2	X	203.09925	184.79469	142.79786	11.71774	0.2139705	0.17458271	3.1705546	20	2 21.3	21.5
519187 2010 OE_{125}	17.0	X	168.50839	336.92343	345.36607	10.67716	0.1496655	0.23644629	2.5900872	20	1 10.9	21.2
519188 2010 PK_{7}	16.0	X	287.84240	45.54551	296.37391	8.97692	0.1037644	0.17139901	3.2096956	20	6 10.6	20.4
519189 2010 PY_{7}	16.2	X	231.23052	303.25732	352.67762	14.47180	0.0273594	0.17840506	3.1251049	20	2 19.9	20.8
519190 2010 PX_{18}	17.4	X	274.66995	54.05132	231.73259	13.62541	0.2416191	0.18355928	3.0663271	20	2 22.7	22.5
519191 2010 PD_{21}	16.3	X	83.27585	288.22704	355.45432	14.08189	0.1505456	0.20161463	2.8804125	20	11 12.4	20.9
519192 2010 PB_{35}	17.2	X	53.37458	238.70023	122.56023	5.40028	0.0811492	0.21146355	2.7902666	20	—	—
519193 2010 PB_{38}	17.6	X	93.81083	104.16222	141.56201	7.94418	0.0407047	0.22548336	2.6733740	20	10 8.1	21.4
519194 2010 PE_{50}	17.0	X	117.03203	313.35447	213.67514	15.54974	0.2064512	0.21540025	2.7561652	20	7 31.7	21.8
519195 2010 PF_{50}	17.3	X	151.73539	49.87791	164.31571	19.11900	0.1894904	0.23473027	2.6026953	20	11 6.3	21.9
519196 2010 PR_{68}	16.2	X	277.56782	260.44539	348.77313	17.03238	0.0961912	0.17698700	3.1417755	20	2 10.5	20.9
519197 2010 PF_{74}	17.2	X	111.23382	166.64373	151.58248	14.80513	0.2521972	0.23014615	2.6371423	20	—	—
519198 2010 PZ_{77}	17.0	X	116.65356	102.78535	229.87813	25.56088	0.3717811	0.22878101	2.6476225	20	—	—
519199 2010 PM_{81}	16.3	X	279.73271	86.26497	200.03481	8.98109	0.1247554	0.18624544	3.0367727	20	3 17.4	20.7
519200 2010 PR_{81}	16.6	X	240.63923	55.25020	349.96319	17.01762	0.1883328	0.17886892	3.1196998	20	6 25.3	21.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519201 2010 PU_{81}	16.7	X	24.48941	148.31681	103.39905	2.63956	0.0691213	0.18346663	3.0673594	20	7 10.2	20.4
519202 2010 RH_{19}	16.9	X	83.65716	148.26303	183.42989	13.47479	0.2680224	0.22564413	2.6721040	20	—	—
519203 2010 RA_{26}	16.3	X	307.64951	220.59506	154.07112	11.05740	0.1203402	0.19276529	2.9679061	20	8 21.6	19.8
519204 2010 RU_{46}	16.5	X	150.22390	86.90486	240.92051	13.44709	0.1379710	0.24035744	2.5619128	20	—	—
519205 2010 RY_{100}	16.8	X	314.53742	10.87682	322.13378	4.12001	0.1529878	0.18218043	3.0817796	20	7 2.5	20.4
519206 2010 RK_{137}	16.2	X	254.81157	77.43281	290.87825	8.21023	0.0955016	0.17477658	3.1682096	20	6 3.6	20.8
519207 2010 RS_{172}	17.5	X	25.97981	62.46110	335.97878	2.27564	0.1049613	0.22235238	2.6984116	20	—	—
519208 2010 RL_{189}	16.4	X	313.36128	126.16543	193.73809	11.08415	0.0711887	0.17623401	3.1507182	20	6 22.2	20.7
519209 2010 RO_{189}	17.7	X	137.38285	26.78752	80.70777	2.57570	0.1397093	0.25898053	2.4375749	20	6 6.3	21.3
519210 2010 SH_{44}	16.4	X	190.28735	77.22489	16.37094	18.24854	0.1863491	0.17343938	3.1844730	20	7 10.3	22.0
519211 2010 SJ_{44}	16.8	X	230.21755	40.93548	32.51066	8.60346	0.1116860	0.18170902	3.0871073	20	7 29.2	21.6
519212 2010 SR_{44}	17.5	X	341.62027	283.62524	199.64526	2.39369	0.1153984	0.22798271	2.6537995	20	—	—
519213 2010 TY_{61}	16.9	X	90.00274	303.01516	31.30609	13.60082	0.2732215	0.22362091	2.6881971	20	—	—
519214 2010 TP_{81}	16.3	X	295.16765	313.15115	17.59992	9.39475	0.1233235	0.17833002	3.1259816	20	6 1.5	20.6
519215 2010 TL_{135}	17.2	X	131.98707	196.12273	79.29990	6.26280	0.0093825	0.21406582	2.7676075	20	12 23.2	21.0
519216 2010 TU_{173}	15.9	X	265.97481	227.83963	151.41532	9.51695	0.0952004	0.17360879	3.1824011	20	7 1.3	20.5
519217 2010 TE_{194}	16.1	X	233.49223	354.44196	21.11539	11.13104	0.0432041	0.16951556	3.2334266	20	5 22.7	20.9
519218 2010 TM_{194}	16.9	X	164.63456	175.77066	63.06208	10.04055	0.0679496	0.20661282	2.8337696	20	12 12.1	21.1
519219 2010 TN_{194}	17.2	X	60.09866	166.28737	84.14524	5.19357	0.0764819	0.28353232	2.2947445	20	9 14.2	20.0
519220 2010 TP_{194}	18.4	X	236.87498	83.84874	344.85302	6.87593	0.0804855	0.28046277	2.3114574	20	8 10.6	21.2
519221 2010 UM_{109}	16.8	X	240.28988	208.58942	194.06934	1.40681	0.1338154	0.17224960	3.1991203	20	6 25.9	21.6
519222 2010 UQ_{109}	15.9	X	266.86010	301.72530	72.99029	12.48793	0.1058726	0.16984120	3.2292922	20	6 24.7	20.5
519223 2010 UT_{109}	17.7	X	34.93326	272.10069	352.09015	6.74082	0.0924136	0.27856509	2.3219432	20	8 27.5	20.3
519224 2010 UW_{109}	15.2	X	57.09148	357.62415	225.34123	15.92793	0.0817287	0.16988844	3.2286936	20	7 15.6	19.9
519225 2010 VT_{26}	15.7	X	172.47880	295.15352	245.57333	15.23864	0.1765734	0.18016831	3.1046819	20	9 29.5	21.1
519226 2010 VY_{34}	16.1	X	281.23460	35.53221	304.59880	9.15871	0.1407988	0.18077915	3.0976843	20	5 23.5	20.5
519227 2010 VF_{62}	17.1	X	56.22105	153.49822	280.73763	3.91176	0.2215162	0.22411730	2.6842263	20	1 14.9	19.4
519228 2010 VO_{81}	16.7	X	48.12579	84.59489	302.83501	4.89967	0.0890211	0.21533015	2.7567633	20	—	—
519229 2010 VB_{115}	17.3	X	195.70769	37.37273	210.41570	12.44227	0.1032243	0.21599771	2.7510804	20	—	—
519230 2010 VR_{124}	16.8	X	357.43779	18.77469	288.76521	2.38609	0.1082480	0.17936694	3.1139224	20	8 13.0	20.5
519231 2010 VL_{140}	16.8	X	310.93560	190.44048	212.69514	9.46611	0.0473609	0.18968477	2.9999527	20	10 8.7	20.7
519232 2010 VQ_{182}	16.4	X	302.30313	92.48070	264.37592	8.06488	0.1255350	0.17961347	3.1110723	20	7 16.9	20.4
519233 2010 VD_{190}	18.0	X	175.71354	66.77342	272.17600	0.71282	0.1903749	0.23976789	2.5661106	20	2 6.1	22.2
519234 2010 VN_{226}	17.1	X	98.32537	126.58298	248.42545	5.26034	0.0430299	0.22356058	2.6886807	20	—	—
519235 2010 VO_{226}	16.3	X	197.71725	215.75717	25.40867	13.85909	0.1435333	0.21944251	2.7222137	20	—	—
519236 2010 VS_{226}	16.8	X	114.02511	206.30785	68.21420	7.01536	0.0352427	0.20273150	2.8698238	20	11 29.5	20.8
519237 2010 VE_{227}	17.4	X	229.98038	284.49571	92.23338	8.03488	0.1078002	0.26287176	2.4134599	20	5 17.1	20.9
519238 2010 VG_{227}	16.4	X	44.20411	303.11598	85.73942	7.05566	0.0319454	0.21153327	2.7896535	20	—	—
519239 2010 VJ_{227}	17.8	X	172.12829	72.42972	105.23673	5.65140	0.0277607	0.27956075	2.3164268	20	10 24.4	20.8
519240 2010 VL_{227}	17.0	X	268.42925	82.21758	103.24755	8.46556	0.1627335	0.21312566	2.7757406	20	—	—
519241 2010 VU_{227}	17.4	X	130.18250	96.07221	246.51587	7.10151	0.1683595	0.22783365	2.6549569	20	—	—
519242 2010 VV_{227}	17.5	X	335.64411	114.72852	83.90819	9.02381	0.0617591	0.23927128	2.5696600	20	2 15.3	20.8
519243 2010 WB_{66}	16.2	X	276.42075	211.53551	82.83456	15.18630	0.0390787	0.24180146	2.5517029	20	4 10.4	19.9
519244 2010 XB_{75}	17.5	X	81.73510	355.38677	98.65741	14.82671	0.1217149	0.23523716	2.5989550	20	3 17.8	21.0
519245 2010 XU_{87}	16.2	X	162.50967	272.57077	243.01566	14.58638	0.0572524	0.17553869	3.1590329	20	8 20.1	21.2
519246 2010 XE_{92}	16.5	X	120.00595	149.24775	103.62133	10.72484	0.0419829	0.18069353	3.0986628	20	11 10.1	21.2
519247 2010 XL_{92}	16.9	X	214.33489	77.25684	71.58773	16.27118	0.2267191	0.18074252	3.0981028	20	10 8.2	22.2
519248 2010 XP_{92}	17.3	X	316.01732	22.58066	230.01513	8.24881	0.0742838	0.24563002	2.5251184	20	3 21.7	20.7
519249 2010 XV_{92}	17.7	X	58.12468	72.26946	61.81863	5.46712	0.1050471	0.23092870	2.6311813	20	3 29.5	20.8
519250 2010 XW_{92}	18.4	X	188.27238	97.58499	38.15351	3.18915	0.0849822	0.27209588	2.3586024	20	9 10.2	21.5
519251 2010 XX_{92}	16.9	X	306.82946	352.49238	87.90996	9.85558	0.0749272	0.18738157	3.0244852	20	11 20.1	20.8
519252 2010 XA_{93}	16.6	X	327.99994	154.90706	271.43217	7.77860	0.0740441	0.18895521	3.0076697	20	12 1.4	20.4
519253 2010 XC_{93}	17.8	X	120.74873	168.11143	79.53662	7.69052	0.0836104	0.29113166	2.2546359	20	11 23.8	20.9
519254 2010 XF_{93}	17.3	X	141.64184	198.82269	110.52877	3.10266	0.0380285	0.20436078	2.8545502	20	—	—
519255 2010 XJ_{93}	16.5	X	140.66394	303.36437	274.09327	2.96574	0.0888217	0.17426785	3.1743723	20	10 16.8	21.5
519256 2011 AB_{9}	15.8	X	128.01131	310.28651	295.15992	10.15134	0.2444992	0.17526315	3.1623431	20	11 10.7	21.4
519257 2011 AQ_{15}	16.7	X	264.72786	336.72392	103.46002	12.72152	0.2227285	0.18218624	3.0817140	20	9 2.3	21.2
519258 2011 AL_{48}	16.7	X	261.48917	345.20752	96.77583	11.97058	0.0702013	0.17359921	3.1825181	20	9 23.3	21.3
519259 2011 AU_{58}	16.0	X	91.12610	166.47182	122.03657	10.46299	0.0768975	0.18073976	3.0981343	20	11 22.9	20.7
519260 2011 AM_{69}	16.2	X	20.66892	237.28477	101.35718	11.56923	0.0547259	0.17777400	3.1324962	20	10 28.4	20.6
519261 2011 AF_{81}	16.4	X	4.66449	258.89842	101.69139	10.46974	0.0553763	0.18022385	3.1040440	20	11 2.7	20.7
519262 2011 AC_{82}	17.8	X	261.39354	234.79907	136.22527	2.05422	0.1240861	0.26053519	2.4278683	20	6 12.9	20.9
519263 2011 AF_{82}	17.7	X	305.25222	4.51733	344.69740	4.79921	0.1266174	0.26673947	2.3900732	20	7 20.5	20.0
519264 2011 AH_{82}	17.0	X	20.75149	137.36707	73.18029	6.21025	0.2006970	0.22722154	2.6597229	20	5 19.1	19.4
519265 2011 AJ_{82}	16.5	X	153.26592	161.03746	37.60370	1.74685	0.0873810	0.17127791	3.2112083	20	10 8.3	21.3
519266 2011 AK_{82}	17.2	X	37.82140	311.74576	180.59582	9.06980	0.1458455	0.21633663	2.7482064	20	2 22.9	20.1
519267 2011 AM_{82}	17.5	X	224.06096	13.81547	19.59391	5.30574	0.1303818	0.25362455	2.4717727	20	5 27.9	21.2
519268 2011 AP_{82}	17.1	X	20.37653	244.39214	328.98743	12.70557	0.1223396	0.23543977	2.5974638	20	5 9.8	20.3
519269 2011 AX_{82}	18.4	X	247.61848	210.39065	293.51821	3.74008	0.0732901	0.28876041	2.2669622	20	12 12.4	20.9
519270 2011 AY_{82}	17.6	X	162.76143	279.54166	152.79538	6.60136	0.1087645	0.24568441	2.5247458	20	5 18.0	21.5
519271 2011 AZ_{82}	18.4	X	194.80483	77.55038	24.19384	1.82985	0.1448285	0.26042435	2.4285571	20	7 27.8	22.1
519272 2011 AF_{83}	18.5	X	196.24552	350.70862	125.59065	2.26684	0.1270520	0.26534200	2.3984576	20	8 19.0	21.8
519273 2011 BJ_{37}	17.2	X	321.19873	278.69029	283.41998	3.36201	0.0387240	0.21877738	2.7277282	20	2 2.4	20.7
519274 2011 BR_{42}	16.1	X	328.98020	10.29290	68.31207	10.57103	0.0499328	0.18863832	3.0110371	20	12 17.5	20.0
519275 2011 BU_{58}	17.6	X	223.49732	344.01580	328.29285	2.75659	0.0679272	0.22311803	2.6922348	20	2 20.1	21.6
519276 2011 BA_{166}	17.9	X	130.78677	142.25723	328.46758	13.77935	0.0608742	0.24593356	2.5230403	20	5 23.0	21.7
519277 2011 BB_{166}	16.7	X	277.21218	352.21404	126.42840	14.69167	0.1213506	0.18597766	3.0396870	20	11 22.5	20.9
519278 2011 BC_{166}	17.0	X	342.81776	291.90758	301.55544	4.01097	0.0777451	0.23410476	2.6073293	20	4 6.7	20.2
519279 2011 BE_{166}	18.1	X	221.63651	102.80591	332.23691	10.49645	0.1161667	0.26301868	2.4125611	20	7 25.6	21.5
519280 2011 BH_{166}	17.7	X	68.99517	200.16243	24.96471	2.03231	0.1316355	0.25575660	2.4580166	20	8 24.5	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519281 2011 BL_{166}	17.5	X	298.17584	70.45944	151.41601	4.67195	0.1412857	0.21293564	2.7773917	20	1 15.7	21.4
519282 2011 BS_{166}	16.8	X	324.95157	288.73075	305.85171	12.03839	0.1344037	0.22349678	2.6891923	20	3 2.2	20.2
519283 2011 BT_{166}	17.2	X	345.04482	109.68055	144.52427	12.41079	0.1485391	0.23038392	2.6353276	20	5 11.8	20.2
519284 2011 BW_{166}	17.5	X	211.36207	63.96907	308.94781	12.71098	0.1935474	0.24157616	2.5532891	20	4 10.4	22.1
519285 2011 BZ_{166}	18.0	X	58.14271	222.91144	222.68377	3.82740	0.1393851	0.21607797	2.7503991	20	1 25.9	21.1
519286 2011 BF_{167}	17.6	X	259.71147	92.30998	206.76849	4.12455	0.0461424	0.22662646	2.6643768	20	3 16.8	21.3
519287 2011 BL_{167}	17.6	X	176.05797	268.60780	276.88968	6.43960	0.0496463	0.27424888	2.3462420	20	11 1.1	20.8
519288 2011 BP_{167}	17.3	X	15.47167	352.02410	194.13631	6.27021	0.0603203	0.22576265	2.6711687	20	3 27.4	20.5
519289 2011 BN_{168}	17.9	X	146.65636	127.25214	294.95625	8.13430	0.0806109	0.23302431	2.6153826	20	4 9.2	21.9
519290 2011 BS_{168}	16.9	X	106.73153	332.82869	66.23204	6.24024	0.1505479	0.21746702	2.7386747	20	2 10.5	20.7
519291 2011 BT_{168}	17.8	X	100.49014	135.04791	321.23568	2.09572	0.0747058	0.23078588	2.6322667	20	3 31.1	21.4
519292 2011 BF_{169}	17.4	X	314.79511	178.14966	126.53545	13.99117	0.1420922	0.24370948	2.5383671	20	5 30.0	20.5
519293 2011 CG_{38}	17.7	X	81.44108	298.51738	333.95557	6.68773	0.1020931	0.27354922	2.3502410	20	11 6.6	21.1
519294 2011 CO_{92}	17.2	X	237.58864	26.73788	276.21764	8.25301	0.1703887	0.21922146	2.7240433	20	2 14.9	21.7
519295 2011 CU_{120}	17.4	X	112.33243	318.98623	304.12675	5.89213	0.0905791	0.27447751	2.3449389	20	11 29.8	20.8
519296 2011 CX_{120}	17.0	X	156.14504	183.69919	175.31221	6.54306	0.0603651	0.21547285	2.7555461	20	2 3.4	21.0
519297 2011 CY_{120}	16.8	X	174.96359	50.03247	173.66406	2.58224	0.0811960	0.17668790	3.1453200	20	11 29.5	21.5
519298 2011 CD_{121}	16.4	X	123.30533	317.30952	337.09910	3.25328	0.1454499	0.17414643	3.1758476	20	12 31.5	21.5
519299 2011 CE_{121}	17.5	X	229.99766	197.07981	330.28059	5.28146	0.0974493	0.28002495	2.3138661	20	12 12.7	20.3
519300 2011 CM_{121}	16.6	X	190.11660	233.65278	133.85691	15.30680	0.1067316	0.22815563	2.6524584	20	3 28.5	20.9
519301 2011 DU_{7}	17.9	X	238.76160	149.45673	69.93403	8.26179	0.1300844	0.29476715	2.2360593	20	—	—
519302 2011 DR_{12}	18.2	X	259.25445	28.30467	158.22874	5.87304	0.1223363	0.29350921	2.2424438	20	—	—
519303 2011 DL_{45}	17.3	X	205.55844	159.11580	348.31011	6.15047	0.0875127	0.27062025	2.3671686	20	10 12.7	20.5
519304 2011 DG_{53}	18.3	X	188.41698	135.22545	39.97523	4.64776	0.1212278	0.27043578	2.3682449	20	10 28.2	21.4
519305 2011 DH_{53}	16.9	X	173.53428	134.95128	233.27241	5.92002	0.0458957	0.21477127	2.7615437	20	3 3.0	20.9
519306 2011 DN_{53}	17.5	X	44.30394	130.41897	119.32738	1.32537	0.0564336	0.24631087	2.5204630	20	8 9.9	20.4
519307 2011 EF_{15}	20.1	X	200.53296	232.55354	359.24545	0.26461	0.4430401	0.28139972	2.3063237	20	12 20.5	24.0
519308 2011 EJ_{62}	17.0	X	289.35302	195.38946	113.41667	10.94563	0.1541202	0.23014682	2.6371373	20	4 26.6	20.7
519309 2011 EP_{72}	18.0	X	230.28791	340.43552	238.70174	0.90885	0.1535312	0.29038994	2.2584735	20	—	—
519310 2011 EE_{89}	17.0	X	192.81253	135.51690	133.33052	3.84889	0.0382707	0.18692176	3.0294432	20	—	—
519311 2011 EG_{89}	17.3	X	349.18915	73.75538	130.34881	4.13401	0.0282381	0.21494933	2.7600185	20	3 17.4	20.9
519312 2011 EH_{89}	16.5	X	255.78395	19.92568	175.63277	5.58032	0.0594391	0.18480719	3.0525080	20	—	—
519313 2011 EK_{89}	17.1	X	60.52595	142.70947	7.93818	7.51519	0.0805651	0.21968493	2.7202106	20	4 18.0	20.6
519314 2011 EL_{89}	17.5	X	24.47162	231.30761	358.24273	7.71105	0.0978783	0.23261909	2.6184191	20	6 13.3	20.6
519315 2011 EN_{89}	17.7	X	324.16823	45.46322	224.63854	1.38072	0.0958082	0.23022690	2.6365257	20	4 28.7	20.9
519316 2011 ER_{89}	16.2	X	96.87151	286.65212	16.21636	8.73102	0.1246136	0.17192688	3.2031223	20	12 14.6	21.3
519317 2011 ES_{89}	17.1	X	217.83140	212.61541	158.51850	10.04503	0.0836217	0.23233011	2.6205898	20	4 29.9	21.1
519318 2011 EV_{89}	18.0	X	62.61644	193.07494	12.76007	6.34232	0.1402942	0.23938059	2.5688777	20	7 20.5	21.3
519319 2011 EY_{89}	17.7	X	138.69834	198.02630	10.34343	6.04989	0.0402512	0.26318753	2.4115291	20	10 16.4	21.0
519320 2011 EC_{90}	17.6	X	113.45139	169.53904	349.16761	9.57167	0.1097974	0.24070056	2.5594775	20	7 17.3	21.4
519321 2011 ED_{90}	17.6	X	257.03640	124.94810	352.22088	7.98615	0.1091522	0.27212346	2.3584431	20	11 5.9	20.5
519322 2011 EE_{90}	17.8	X	60.97695	28.78417	14.55228	6.75531	0.0305398	0.29458037	2.2370045	20	—	—
519323 2011 EF_{90}	17.0	X	166.18593	161.09618	232.40166	3.18820	0.0847339	0.21481883	2.7611361	20	3 30.1	21.2
519324 2011 FA_{16}	16.2	X	207.03956	123.75458	113.73091	6.17798	0.1083720	0.17484379	3.1673975	20	—	—
519325 2011 FT_{20}	17.6	X	312.45999	256.47121	23.11027	6.01630	0.0335220	0.22911438	2.6450537	20	5 1.6	20.9
519326 2011 FB_{52}	17.5	X	203.47520	168.96943	0.47200	5.99178	0.0701335	0.27194173	2.3594936	20	11 11.1	20.6
519327 2011 FV_{62}	17.3	X	296.64223	132.27330	194.62698	11.46784	0.0970002	0.23384096	2.6092898	20	6 5.6	20.7
519328 2011 FS_{63}	17.9	X	74.70453	15.09963	224.07120	1.65844	0.0462534	0.25392080	2.4698497	20	9 5.7	21.1
519329 2011 FA_{99}	16.9	X	210.23936	297.83020	350.66683	6.05000	0.2321108	0.19113900	2.9847171	20	1 12.8	22.1
519330 2011 FS_{107}	17.4	X	200.45869	164.36776	215.49154	6.45634	0.1466832	0.22709343	2.6607231	20	4 17.4	21.7
519331 2011 FY_{138}	16.5	X	201.73220	52.08887	190.54128	11.63274	0.1520590	0.18197742	3.0840711	20	—	—
519332 2011 FE_{159}	17.0	X	42.31425	150.42171	36.07595	14.05727	0.1136777	0.22208754	2.7005564	20	5 12.7	20.1
519333 2011 FF_{159}	17.7	X	1.28770	55.64559	198.71398	3.96573	0.1967201	0.22522781	2.6753958	20	6 11.0	20.0
519334 2011 FG_{159}	16.9	X	345.37984	63.80021	179.99656	5.10485	0.0577357	0.22054672	2.7131198	20	5 1.2	20.2
519335 2011 FH_{159}	16.7	X	16.17015	166.85201	55.11399	5.20938	0.0400881	0.22406350	2.6846559	20	5 16.7	20.0
519336 2011 FJ_{159}	17.4	X	214.01616	52.37366	13.86500	15.24026	0.1012921	0.24306161	2.5428757	20	7 4.8	21.4
519337 2011 FK_{159}	17.2	X	282.35158	153.97195	139.37396	5.52235	0.1400167	0.21590029	2.7519079	20	3 28.3	21.1
519338 2011 GW_{2}	16.8	X	356.25171	193.75947	71.13814	14.28433	0.1501180	0.22923717	2.6441090	20	6 14.8	19.4
519339 2011 GN_{46}	18.2	X	192.12615	21.82977	208.12576	23.51459	0.1650006	0.27774802	2.3264947	20	—	—
519340 2011 GW_{89}	16.8	X	75.69186	70.85354	60.66772	5.68401	0.0546648	0.21876153	2.7278600	20	4 14.1	20.3
519341 2011 GX_{89}	17.6	X	25.98179	279.55330	235.17965	3.39644	0.0126460	0.21079559	2.7961580	20	2 29.8	21.5
519342 2011 GA_{90}	17.4	X	137.23867	305.82063	179.98511	2.95111	0.1221048	0.23504172	2.6003955	20	6 28.4	21.4
519343 2011 GH_{90}	16.0	X	48.26934	324.15336	56.64694	21.58788	0.1902174	0.17156607	3.2076116	20	—	—
519344 2011 GL_{90}	16.6	X	72.78394	74.79968	28.81098	12.03861	0.0968299	0.21016999	2.8017040	20	3 14.2	20.3
519345 2011 HN_{9}	16.5	X	202.40430	126.66476	118.48153	5.75805	0.2163289	0.17505631	3.1648335	20	—	—
519346 2011 HQ_{12}	17.7	X	159.02522	208.36695	75.13790	8.58566	0.2694952	0.27477813	2.3432283	20	—	—
519347 2011 HQ_{32}	17.8	X	210.13028	165.70476	81.53063	7.05074	0.1393089	0.28667436	2.2779463	20	—	—
519348 2011 HV_{43}	18.7	X	223.91966	78.89795	132.79998	4.92655	0.1357249	0.28307476	2.2972166	20	—	—
519349 2011 HC_{71}	18.6	X	198.34400	193.42744	58.79369	3.91336	0.1816091	0.28633692	2.2797356	20	—	—
519350 2011 HZ_{103}	17.0	X	305.98127	220.65973	46.75164	4.08906	0.1299067	0.21467082	2.7624051	20	3 26.5	20.5
519351 2011 JN_{32}	17.7	X	266.85725	106.97059	56.28707	6.66903	0.1007094	0.28289064	2.2982133	20	—	—
519352 2011 JS_{32}	17.2	X	87.45123	57.72788	271.50311	6.02314	0.1258541	0.25470797	2.4647584	20	—	—
519353 2011 KG_{7}	16.2	X	214.20735	191.91729	146.01783	14.18339	0.2369771	0.19268767	2.9687031	20	3 12.1	21.4
519354 2011 KR_{12}	21.3	X	235.93561	1.55318	20.28785	7.42078	0.3803584	0.97422756	1.0077724	20	4 18.1	20.7
519355 2011 KB_{34}	17.0	X	345.73052	226.92705	106.31528	14.57272	0.1131628	0.23717797	2.5847576	20	9 14.5	20.1
519356 2011 KH_{49}	16.5	X	145.02209	210.47593	160.70588	1.55122	0.1069556	0.19018687	2.9946704	20	2 14.7	20.9
519357 2011 KJ_{49}	16.8	X	314.71065	158.53826	43.47848	10.00002	0.0130374	0.19342609	2.9611427	20	2 5.9	21.1
519358 2011 KK_{49}	16.2	X	187.93443	273.83990	47.63840	9.67439	0.1053278	0.18947952	3.0021187	20	2 1.9	21.0
519359 2011 KM_{49}	16.4	X	228.40441	83.08638	230.77380	11.35529	0.1221660	0.19589861	2.9361742	20	2 22.5	21.2
519360 2011 KO_{49}	16.6	X	188.44790	323.96566	115.51737	22.84160	0.0350710	0.22572807	2.6714415	20	6 25.5	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519361 2011 KP_{49}	16.5	X	182.94948	176.45459	157.08525	10.69656	0.0949964	0.18949353	3.0019707	20	2 6.8	21.2
519362 2011 LD_{29}	17.6	X	48.35562	328.86003	221.44310	4.24098	0.0858521	0.22085024	2.7106335	20	5 26.9	20.9
519363 2011 LF_{29}	15.7	X	275.48632	303.46184	296.15550	12.80301	0.1420256	0.17108465	3.2136261	20	1 18.5	20.6
519364 2011 MN_{11}	17.6	X	317.59666	201.26142	116.02765	5.16754	0.0446672	0.21567665	2.7538100	20	6 29.7	21.2
519365 2011 NK_{4}	16.3	X	215.48971	39.35315	276.38072	9.56254	0.0674886	0.17830618	3.1262602	20	2 16.8	21.2
519366 2011 NL_{4}	15.7	X	179.84965	354.90866	36.54295	16.67383	0.0829133	0.17433849	3.1735148	20	4 16.3	20.5
519367 2011 OK_{23}	17.0	X	47.09649	190.02634	115.49604	13.50815	0.1723404	0.24418542	2.5350677	20	11 19.9	20.7
519368 2011 OF_{25}	16.7	X	4.52671	60.68888	260.17505	5.16608	0.1289444	0.22873670	2.6479644	20	9 20.3	19.7
519369 2011 OD_{31}	16.5	X	176.16563	243.52195	63.34929	5.94773	0.1002392	0.16767351	3.2570649	20	1 4.7	21.5
519370 2011 OO_{54}	17.2	X	27.92899	225.63006	53.82995	4.67959	0.0501450	0.22379718	2.6867854	20	8 26.2	20.6
519371 2011 OT_{60}	16.5	X	196.09510	250.34732	125.16492	11.08371	0.1258639	0.18672716	3.0315476	20	4 15.2	21.5
519372 2011 OU_{60}	17.0	X	227.48268	192.90675	160.20215	10.35254	0.1107231	0.19046286	2.9917767	20	4 17.2	21.7
519373 2011 OV_{60}	16.4	X	214.56918	41.71664	292.68428	16.66655	0.2504672	0.18145623	3.0899737	20	2 28.2	22.1
519374 2011 PF_{16}	16.6	X	14.25527	217.30807	324.58573	7.99967	0.0771642	0.17953473	3.1119819	20	3 21.8	20.7
519375 2011 PG_{16}	17.2	X	342.46971	147.76778	175.88566	4.70057	0.0672048	0.21399419	2.7682251	20	8 13.7	20.6
519376 2011 QH_{12}	17.7	X	133.55001	342.48541	322.98529	7.06304	0.2938052	0.26094399	2.4253319	20	—	—
519377 2011 QT_{19}	17.9	X	115.22823	348.62799	345.32044	1.91965	0.1971479	0.26155009	2.4215836	20	—	—
519378 2011 QZ_{68}	17.9	X	111.26849	354.27623	339.71833	4.47424	0.2037767	0.25863407	2.4397513	20	—	—
519379 2011 QH_{69}	17.1	X	128.51957	48.19314	254.65181	12.58493	0.2378048	0.25819477	2.4425179	20	—	—
519380 2011 QH_{100}	18.1	X	218.69330	266.80544	19.57518	4.00932	0.1018368	0.27795473	2.3253411	20	1 6.6	21.5
519381 2011 QK_{100}	17.0	X	296.99606	200.15127	159.04410	5.85789	0.0591216	0.20846525	2.8169574	20	7 23.9	20.7
519382 2011 QL_{100}	16.6	X	299.55222	25.76045	26.77368	12.07520	0.1791043	0.21925346	2.7237782	20	9 30.5	19.5
519383 2011 RN_{10}	16.3	X	228.76200	49.08083	231.69286	4.61219	0.1601969	0.16932608	3.2358384	20	1 20.2	21.7
519384 2011 RG_{20}	17.2	X	330.65803	2.56247	87.98193	3.97940	0.0394005	0.24237004	2.5477106	20	—	—
519385 2011 RZ_{20}	16.7	X	219.34438	337.61934	346.87023	7.61622	0.0594388	0.17365862	3.1817922	20	3 6.8	21.4
519386 2011 RB_{21}	16.3	X	293.90913	281.72431	352.85552	12.15763	0.1391285	0.18316976	3.0706727	20	3 18.8	20.6
519387 2011 RC_{21}	16.8	X	114.13144	125.99415	340.26067	15.42593	0.1708289	0.17457228	3.1706808	20	5 8.9	22.0
519388 2011 SK_{5}	18.7	X	222.58433	127.98654	210.29821	21.40363	0.1358355	0.40670050	1.8042065	20	2 26.3	21.5
519389 2011 SJ_{12}	18.1	X	62.36938	214.19657	237.14266	16.33670	0.0748337	0.38761286	1.8629617	20	—	—
519390 2011 SN_{17}	17.1	X	287.03572	24.04023	235.98728	7.36749	0.2451781	0.18450737	3.0558139	20	2 6.7	21.9
519391 2011 SA_{19}	16.9	X	120.71702	249.98063	228.65384	8.12125	0.0375011	0.19097880	2.9863860	20	5 22.6	21.0
519392 2011 SE_{30}	16.5	X	237.35624	316.49617	204.64804	13.40385	0.1580541	0.22527476	2.6750241	20	11 23.1	20.2
519393 2011 SK_{30}	17.3	X	194.40834	49.22494	262.96607	11.02923	0.2743005	0.27853203	2.3221269	20	1 17.7	21.5
519394 2011 SR_{49}	18.2	X	130.67343	107.71212	219.61821	1.72892	0.2329104	0.26176979	2.4202285	20	—	—
519395 2011 SY_{71}	17.4	X	165.89719	45.76007	246.68547	5.75978	0.2369668	0.26454671	2.4032621	20	—	—
519396 2011 SA_{112}	16.5	X	227.43400	107.73623	245.23471	16.12882	0.2224610	0.18526509	3.0474762	20	4 2.9	21.9
519397 2011 SM_{278}	17.1	X	40.63767	287.36361	90.09989	11.48183	0.0523892	0.23696078	2.5863367	20	—	—
519398 2011 SB_{279}	16.4	X	190.92661	117.32503	260.93211	9.80211	0.0911172	0.17665115	3.1457563	20	4 5.5	21.4
519399 2011 SE_{279}	17.0	X	122.11586	241.20232	353.32196	3.25948	0.0549235	0.22373621	2.6872734	20	10 24.3	20.9
519400 2011 SG_{279}	15.8	X	260.38801	261.78994	15.19913	26.02101	0.2254139	0.17255624	3.1953292	20	2 20.9	21.3
519401 2011 SK_{279}	17.4	X	249.78708	67.76113	39.38829	6.90645	0.0280905	0.21904240	2.7255276	20	10 18.5	20.9
519402 2011 SL_{279}	17.5	X	347.13944	216.36670	153.84652	4.16887	0.0688110	0.22059851	2.7126952	20	10 27.8	20.9
519403 2011 SR_{279}	16.8	X	231.33249	263.95882	88.85933	12.27896	0.0933444	0.17912019	3.1167815	20	4 25.1	21.7
519404 2011 SV_{279}	17.0	X	329.42797	325.16838	96.76715	14.50975	0.0872691	0.22655661	2.6649244	20	12 10.7	20.1
519405 2011 SY_{279}	16.9	X	190.42258	304.62040	127.89557	11.00176	0.1285490	0.18291603	3.0735117	20	6 14.5	21.9
519406 2011 SA_{280}	17.2	X	189.27228	358.17633	87.95676	10.09117	0.0684191	0.18879110	3.0094124	20	6 30.9	21.6
519407 2011 SD_{280}	16.8	X	264.93493	47.95437	54.41256	15.02317	0.1608905	0.21992022	2.7182701	20	10 17.6	20.4
519408 2011 SF_{280}	16.8	X	267.82831	29.35552	56.36978	9.95223	0.0799570	0.21718048	2.7410830	20	10 10.1	20.4
519409 2011 SK_{280}	16.1	X	195.15900	84.06921	301.95817	9.62002	0.0933017	0.17550292	3.1594621	20	4 18.6	21.2
519410 2011 SP_{280}	16.2	X	132.86229	228.32698	210.45397	9.94374	0.0338893	0.17114984	3.2128101	20	4 16.8	20.8
519411 2011 TJ_{6}	17.7	X	79.73549	207.87051	130.06397	10.96562	0.1254208	0.24171722	2.5522957	20	—	—
519412 2011 US_{54}	18.4	X	304.89018	327.18511	229.80104	18.15121	0.0778968	0.37204471	1.9145761	20	—	—
519413 2011 UB_{62}	16.8	X	36.94688	263.17701	64.93522	14.74913	0.2203818	0.22067167	2.7120956	20	12 3.0	20.4
519414 2011 US_{90}	18.4	X	324.41292	293.69281	232.17268	19.35811	0.0605502	0.37464866	1.9056944	20	—	—
519415 2011 UC_{113}	16.9	X	328.78237	18.24521	55.04820	15.77907	0.0965366	0.22529953	2.6748280	20	12 22.2	20.2
519416 2011 UZ_{156}	16.4	X	116.08231	233.71446	58.07099	15.64859	0.1154388	0.23102116	2.6304792	20	12 31.5	20.6
519417 2011 UA_{158}	16.8	X	132.61359	32.34091	236.85984	13.33199	0.1512879	0.22675713	2.6633531	20	12 19.2	21.2
519418 2011 UW_{189}	17.5	X	346.73464	88.26005	55.08195	23.14923	0.0215723	0.37317574	1.9107056	20	—	—
519419 2011 UU_{270}	16.8	X	302.99549	313.17072	131.79348	8.66756	0.1478982	0.22379145	2.6868312	20	11 25.9	19.8
519420 2011 UU_{284}	16.6	X	267.15076	340.42113	348.72855	3.99837	0.1600772	0.18340083	3.0680930	20	4 20.5	21.3
519421 2011 UQ_{339}	16.5	X	257.96447	105.28367	224.64746	10.60429	0.1419952	0.18229877	3.0804457	20	4 13.8	21.1
519422 2011 UN_{382}	18.5	X	117.68102	173.49844	232.29779	20.27247	0.1150261	0.38050199	1.8861002	20	1 22.2	20.7
519423 2011 UV_{382}	16.8	X	197.34921	117.21581	311.04180	5.64383	0.1473300	0.18322795	3.0700225	20	6 14.1	21.8
519424 2011 UX_{413}	16.8	X	339.07312	312.97559	119.36616	14.88938	0.1695178	0.22952061	2.6419317	20	—	—
519425 2011 UN_{414}	16.7	X	173.51188	9.67622	235.44715	13.29910	0.2068981	0.23238623	2.6201679	20	12 24.5	21.2
519426 2011 UR_{415}	18.0	X	95.02818	266.15352	52.51229	3.48752	0.1788135	0.23873500	2.5735068	20	—	—
519427 2011 UT_{415}	16.7	X	247.50489	273.07083	50.03744	11.58586	0.1596609	0.17295184	3.1904547	20	3 30.9	21.8
519428 2011 UU_{415}	16.8	X	202.87544	40.91381	35.93483	9.86701	0.0348862	0.19276888	2.9678693	20	7 7.9	21.2
519429 2011 UZ_{415}	17.1	X	318.53452	337.78459	69.53829	3.51113	0.0588281	0.21773662	2.7364136	20	11 1.4	20.4
519430 2011 UB_{416}	16.3	X	51.80907	305.51625	246.05422	8.34614	0.0383594	0.17555177	3.1588760	20	5 27.4	20.6
519431 2011 UC_{416}	16.6	X	133.12717	225.98531	231.03902	14.99401	0.0539765	0.17300936	3.1897476	20	5 11.9	21.1
519432 2011 UL_{416}	17.4	X	189.91685	14.82667	232.97230	4.97936	0.0805424	0.24082069	2.5586263	20	—	—
519433 2011 UN_{416}	17.3	X	50.83158	290.54111	37.75017	6.10347	0.0662944	0.22302531	2.6929810	20	11 28.6	20.9
519434 2011 UD_{417}	15.9	X	347.38009	24.93947	250.40991	14.42748	0.1017878	0.18295850	3.0730360	20	6 13.5	19.6
519435 2011 UL_{417}	17.3	X	189.77553	238.43027	213.84132	0.44776	0.1236998	0.18329812	3.0692390	20	7 7.2	22.2
519436 2011 UU_{417}	16.2	X	143.21971	269.72253	256.45239	12.93835	0.1493714	0.18725052	3.0258962	20	8 17.4	21.4
519437 2011 VW_{19}	16.1	X	201.94728	121.69896	297.10361	18.76503	0.1130288	0.17939069	3.1136475	20	6 8.9	21.2
519438 2011 VO_{24}	16.3	X	104.24947	254.91538	237.77669	8.60126	0.0334838	0.17412801	3.1760717	20	5 19.5	20.8
519439 2011 WR_{15}	18.1	X	197.85468	85.28565	233.85178	21.88307	0.0524293	0.38188081	1.8815575	20	—	—
519440 2011 WX_{48}	17.0	X	47.86084	281.31382	87.10773	14.16809	0.1910594	0.23459107	2.6037247	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519441 2011 WO_{63}	16.8	X	341.21293	157.32626	259.42907	4.16839	0.0444017	0.22130201	2.7069432	20	12 16.1	20.3
519442 2011 WT_{78}	17.3	X	4.81668	4.41741	55.82326	12.35314	0.1144708	0.22589599	2.6701174	20	—	—
519443 2011 WN_{158}	15.7	X	303.58828	257.87455	93.38930	11.09026	0.1040895	0.18797847	3.0180793	20	7 16.8	19.6
519444 2011 XR_{3}	16.9	X	274.11118	328.29473	137.62457	12.24547	0.1116840	0.21443709	2.7644121	20	11 9.9	20.6
519445 2011 YB_{9}	16.1	X	337.39781	62.64386	256.68061	9.47447	0.0200224	0.18814181	3.0163322	20	7 27.8	20.4
519446 2011 YL_{9}	18.7	X	81.58476	350.97070	81.25094	23.46809	0.0980613	0.37407065	1.9076570	20	1 4.7	20.1
519447 2011 YN_{58}	16.8	X	205.32237	35.54492	101.89420	6.34456	0.1191848	0.19040987	2.9923318	20	9 20.5	21.4
519448 2011 YG_{66}	16.7	X	21.17947	289.24824	96.73062	13.68865	0.1515014	0.21804161	2.7338612	20	—	—
519449 2011 YW_{79}	17.0	X	289.55682	225.52928	305.74568	8.15075	0.1904219	0.22308351	2.6925126	20	—	—
519450 2011 YX_{79}	16.3	X	189.29844	159.03524	347.86749	9.98659	0.1643536	0.17746221	3.1361643	20	9 9.5	21.3
519451 2011 YE_{80}	16.4	X	208.28989	77.82025	316.33686	8.44280	0.0867828	0.15936635	3.3692892	20	5 14.5	21.7
519452 2011 YG_{80}	17.6	X	206.68626	262.77465	81.55260	10.44219	0.1215492	0.26433071	2.4045712	20	3 14.0	21.4
519453 2011 YN_{80}	16.5	X	129.35901	234.08207	329.99934	4.69270	0.1221036	0.18273583	3.0755320	20	9 22.1	21.3
519454 2011 YP_{80}	18.0	X	142.44656	53.48021	144.02681	3.74448	0.0384384	0.30530632	2.1842995	20	10 16.2	20.7
519455 2011 YS_{80}	16.7	X	342.06009	100.16434	133.56783	14.08604	0.1137984	0.24226857	2.5484219	20	4 10.1	19.8
519456 2012 AE_{25}	16.8	X	273.51671	297.94294	287.71537	11.94458	0.1495363	0.23030584	2.6359232	20	—	—
519457 2012 AK_{25}	16.8	X	151.14257	11.67089	121.96028	8.27690	0.0934331	0.17125105	3.2115441	20	7 18.9	21.8
519458 2012 AN_{25}	18.1	X	36.66196	113.59381	33.92068	1.49218	0.1500480	0.25345266	2.4728901	20	3 9.9	20.4
519459 2012 AO_{25}	16.9	X	236.72430	275.10002	221.87488	4.73155	0.2343949	0.18705087	3.0280489	20	10 5.2	21.6
519460 2012 AP_{25}	17.2	X	342.45886	229.53659	351.65709	13.11607	0.0982849	0.24126903	2.5554555	20	3 18.2	20.1
519461 2012 AQ_{25}	16.6	X	39.19427	18.49964	289.25967	10.49091	0.0169714	0.19227030	2.9729978	20	9 30.6	20.9
519462 2012 BX_{42}	16.9	X	13.25643	294.19678	98.80264	4.73844	0.0835594	0.21430949	2.7655093	20	—	—
519463 2012 BS_{152}	16.8	X	199.77055	1.57033	142.94843	12.21607	0.1675634	0.18310878	3.0713545	20	9 18.9	21.8
519464 2012 BO_{157}	16.3	X	140.52782	213.66214	323.43449	9.87445	0.0791974	0.17518093	3.1633324	20	8 28.8	21.2
519465 2012 BP_{157}	16.2	X	20.37296	313.15916	309.08259	13.90196	0.0193612	0.16998902	3.2274199	20	7 14.8	20.7
519466 2012 BR_{157}	16.6	X	169.35148	132.14313	7.91347	6.13933	0.1244800	0.17629919	3.1499417	20	8 16.9	21.7
519467 2012 BW_{157}	16.2	X	55.85745	117.61271	147.95306	17.73691	0.1429157	0.17162000	3.2069397	20	9 22.9	20.7
519468 2012 BZ_{157}	16.8	X	105.11184	13.20730	315.16010	5.76201	0.0365781	0.21179755	2.7873324	20	—	—
519469 2012 BA_{158}	17.1	X	119.55594	69.22314	150.30540	4.57372	0.0858160	0.17769825	3.1333863	20	9 30.6	21.8
519470 2012 BC_{158}	17.7	X	272.28715	203.94997	155.82026	17.83176	0.0559441	0.27744616	2.3281819	20	6 24.6	20.9
519471 2012 BJ_{158}	17.8	X	330.44552	332.98411	284.42727	1.85135	0.1527320	0.25679118	2.4514102	20	4 10.1	20.4
519472 2012 BL_{158}	16.2	X	129.48620	320.71796	275.05595	10.58667	0.0302133	0.18673442	3.0314690	20	10 24.0	20.8
519473 2012 BU_{158}	16.1	X	93.39552	257.61488	326.52279	18.35247	0.0931222	0.17632126	3.1496788	20	9 3.2	20.8
519474 2012 BH_{159}	17.2	X	267.35017	79.37833	138.78807	15.42939	0.0756029	0.22727357	2.6593169	20	—	—
519475 2012 CD_{17}	17.7	X	93.19510	287.55334	122.37712	24.54599	0.1263541	0.36054249	1.9550825	20	1 1.6	19.4
519476 2012 CP_{58}	16.9	X	115.85249	106.29815	152.25149	4.43734	0.2295440	0.18736646	3.0246479	20	11 21.1	22.1
519477 2012 CS_{58}	17.6	X	26.01097	272.81096	129.98934	3.42346	0.0776117	0.21552196	2.7551275	20	—	—
519478 2012 CW_{58}	17.3	X	286.55610	266.50467	170.64561	6.28398	0.2134796	0.19495062	2.9456849	20	9 28.8	20.6
519479 2012 CD_{59}	17.3	X	261.02242	127.13889	335.68132	9.04948	0.0305902	0.19186968	2.9771347	20	10 17.2	21.6
519480 2012 DX_{63}	16.4	X	315.80441	35.42811	313.66429	8.01678	0.0901221	0.17450281	3.1715223	20	8 1.9	20.3
519481 2012 DV_{65}	18.3	X	348.73473	265.85094	354.54438	2.75932	0.1140921	0.26385165	2.4074808	20	5 24.5	20.6
519482 2012 DD_{78}	15.9	X	164.57546	304.31730	246.78862	8.66377	0.2460846	0.18163318	3.0879666	20	10 6.6	21.5
519483 2012 DZ_{94}	17.4	X	238.51951	222.48407	6.63860	1.45025	0.0370429	0.22099112	2.7094814	20	—	—
519484 2012 DX_{101}	16.4	X	110.76328	101.33605	144.39170	19.04071	0.2143357	0.17751539	3.1355378	20	11 5.3	21.9
519485 2012 DD_{102}	16.0	X	209.13206	309.31059	22.24610	15.42365	0.1679780	0.24271830	2.5452730	20	3 3.0	20.3
519486 2012 DF_{102}	16.4	X	134.12461	174.95085	76.27658	11.14058	0.0622596	0.18837808	3.0138095	20	11 23.1	20.9
519487 2012 DO_{102}	16.7	X	218.53194	160.37662	344.93883	4.93115	0.0876610	0.18487083	3.0518074	20	10 11.9	21.2
519488 2012 DU_{102}	16.3	X	94.86122	133.43913	158.99648	17.48738	0.2101331	0.18067300	3.0988975	20	12 11.7	21.7
519489 2012 DV_{102}	17.8	X	103.88543	161.55002	79.14714	6.50731	0.0737400	0.29071596	2.2567847	20	10 27.4	20.9
519490 2012 DK_{103}	17.1	X	295.39234	35.19829	177.91471	22.02481	0.0041458	0.22793549	2.6541660	20	1 16.3	21.2
519491 2012 DO_{103}	17.4	X	223.74890	48.93502	121.02672	3.15665	0.0487468	0.19309116	2.9645660	20	11 25.4	21.7
519492 2012 DQ_{103}	17.7	X	148.45367	94.86068	14.71778	6.95148	0.0572858	0.26495479	2.4007938	20	6 15.5	21.1
519493 2012 DW_{103}	18.0	X	44.99866	167.69860	285.54936	3.11973	0.1518948	0.23272204	2.6176468	20	1 10.9	20.7
519494 2012 DO_{104}	16.9	X	138.55350	87.72035	208.91001	7.14136	0.0620351	0.20104604	2.8858407	20	—	—
519495 2012 DR_{104}	16.8	X	206.78572	247.40069	230.43156	3.65855	0.1276849	0.17048965	3.2210987	20	8 21.8	21.8
519496 2012 DT_{104}	17.8	X	296.87524	268.64205	3.64507	2.29857	0.0547287	0.24619921	2.5212250	20	3 27.5	21.0
519497 2012 DW_{104}	18.2	X	358.81665	72.65679	179.09765	2.00548	0.0624796	0.26206870	2.4183878	20	6 1.4	20.7
519498 2012 DA_{105}	16.0	X	106.47161	284.44248	6.17293	16.01908	0.1868467	0.18460782	3.0547053	20	12 14.9	21.3
519499 2012 DG_{105}	17.1	X	135.94152	194.74813	113.17548	3.25964	0.0636992	0.20399952	2.8579192	20	—	—
519500 2012 DH_{105}	17.3	X	184.99597	114.24527	116.61457	3.11670	0.1408519	0.19332490	2.9621760	20	12 16.5	22.1
519501 2012 DL_{105}	18.2	X	138.83858	323.42079	145.94313	8.39153	0.0570110	0.26353300	2.4094211	20	6 5.1	21.6
519502 2012 DO_{105}	17.4	X	243.76968	220.15269	125.86010	8.13331	0.1303808	0.25326782	2.4740931	20	4 21.8	21.1
519503 2012 DS_{105}	17.9	X	19.81918	55.09038	177.95368	5.04467	0.0944998	0.26008309	2.4306810	20	6 11.7	20.4
519504 2012 EU_{14}	20.3	X	219.08737	88.66153	185.02121	22.62932	0.4793083	0.32757348	2.0841560	20	—	—
519505 2012 EK_{19}	16.6	X	295.07524	134.32041	342.16796	8.29178	0.0955327	0.19668910	2.9283019	20	12 17.3	20.3
519506 2012 EL_{19}	16.9	X	220.04879	37.48045	211.10364	9.13664	0.1587528	0.20842021	2.8173632	20	—	—
519507 2012 EX_{19}	17.7	X	351.98130	311.58871	185.44543	3.41757	0.2177736	0.22373733	2.6872645	20	—	—
519508 2012 EZ_{19}	16.4	X	202.42245	279.03275	217.84933	12.75456	0.2433690	0.17454536	3.1710068	20	8 31.1	22.0
519509 2012 FS_{26}	16.8	X	149.76334	23.69714	180.91065	14.38444	0.1507282	0.17577641	3.1561841	20	10 14.4	22.0
519510 2012 FO_{60}	15.7	X	12.18868	269.41348	81.24368	12.19068	0.0635178	0.17262516	3.1944786	20	10 31.1	20.1
519511 2012 FO_{85}	16.8	X	314.25224	141.57410	27.00131	8.75852	0.0963070	0.21643263	2.7473936	20	—	—
519512 2012 FR_{85}	17.6	X	345.29167	119.10902	95.64563	3.79709	0.0814896	0.23928002	2.5695975	20	3 19.3	20.6
519513 2012 FS_{85}	16.1	X	237.08750	100.74234	68.71012	12.60091	0.0976993	0.18442724	3.0566990	20	12 1.4	20.4
519514 2012 FD_{86}	17.0	X	185.89011	279.38058	23.74688	4.04795	0.2163598	0.21036780	2.7999474	20	1 8.6	21.8
519515 2012 FF_{86}	17.0	X	226.66346	125.53521	43.58813	5.66190	0.1536918	0.18688513	3.0298389	20	11 12.4	21.5
519516 2012 FG_{86}	17.7	X	163.77674	118.15300	34.62269	7.21763	0.0461098	0.27890440	2.3200596	20	9 8.7	20.8
519517 2012 FK_{86}	16.5	X	200.20279	319.10059	181.63342	5.67283	0.1225848	0.17196891	3.2026005	20	9 13.6	21.5
519518 2012 FO_{86}	16.9	X	205.75916	142.31421	70.63403	6.93360	0.1334377	0.19072357	2.9890497	20	12 15.6	21.5
519519 2012 GR_{10}	16.7	X	116.29758	51.58506	204.32683	9.14498	0.1352350	0.17650711	3.1474674	20	11 12.0	21.7
519520 2012 GH_{30}	16.1	X	160.82611	136.54135	50.13532	25.28428	0.1261305	0.17405113	3.1770068	20	10 12.7	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519521 2012 GE_{40}	16.1	X	147.61778	105.76076	97.58012	26.91195	0.2006131	0.17235023	3.1978749	20	10 23.6	22.0
519522 2012 GP_{41}	16.1	X	104.41306	222.47540	97.15343	18.41673	0.2023766	0.18103951	3.0947137	20	—	—
519523 2012 HB_{36}	16.1	X	277.85532	49.83843	43.15626	17.28023	0.2071512	0.18001808	3.1064090	20	10 9.9	20.2
519524 2012 HT_{85}	17.6	X	27.89829	40.48043	156.75214	2.62939	0.1538149	0.24390111	2.5370374	20	5 9.1	20.0
519525 2012 HP_{86}	18.2	X	84.88933	82.54477	140.66109	6.49926	0.0904118	0.27073794	2.3664825	20	9 7.7	21.3
519526 2012 HG_{87}	17.9	X	70.54753	292.25197	212.82608	5.68453	0.1150612	0.24386516	2.5372867	20	5 1.3	20.7
519527 2012 JY_{45}	15.9	X	140.24193	122.56772	136.06687	27.91338	0.2342622	0.17484338	3.1674025	20	12 11.9	21.8
519528 2012 JW_{54}	17.5	X	336.07942	134.45213	69.66443	6.71097	0.0299675	0.22879782	2.6474928	20	2 28.7	21.0
519529 2012 JT_{67}	17.4	X	235.09366	165.18256	125.30377	9.10049	0.1971826	0.21426780	2.7658680	20	1 31.6	22.1
519530 2012 JW_{67}	17.7	X	2.30211	136.84555	135.37110	2.41729	0.1558989	0.25280883	2.4770868	20	7 12.1	19.7
519531 2012 JY_{67}	17.6	X	285.59261	109.62253	173.91176	2.08061	0.1780887	0.22963507	2.6410537	20	3 11.2	21.4
519532 2012 KS_{4}	16.4	X	158.51259	138.54149	127.60545	10.41762	0.0889317	0.18657876	3.0331549	20	—	—
519533 2012 KD_{22}	16.4	X	337.92440	329.39878	83.06470	10.99716	0.0716147	0.17911433	3.1168495	20	11 27.3	20.3
519534 2012 KG_{52}	16.3	X	58.05687	313.33099	225.46924	5.93905	0.0703530	0.24481075	2.5307489	20	5 23.2	19.2
519535 2012 KO_{52}	17.8	X	272.33875	144.74644	102.91351	10.47332	0.1426488	0.21582269	2.7525675	20	1 19.1	22.0
519536 2012 KP_{52}	16.9	X	323.31502	48.59515	253.87611	14.45051	0.1671020	0.23530210	2.5984768	20	6 3.7	19.5
519537 2012 KS_{52}	16.8	X	138.26072	261.84805	118.77454	9.94611	0.2379796	0.20949633	2.8077069	20	3 3.2	21.4
519538 2012 LV_{4}	17.0	X	329.12700	139.36978	93.19780	13.87547	0.1227306	0.23033673	2.6356875	20	3 19.8	20.4
519539 2012 LS_{14}	17.4	X	22.31160	1.52161	190.04154	16.05215	0.1337559	0.23764020	2.5814048	20	4 18.8	20.0
519540 2012 MQ_{16}	17.1	X	251.79367	350.52749	356.77090	9.42462	0.1721939	0.21568906	2.7537043	20	4 22.3	21.4
519541 2012 OW	17.1	X	11.42736	34.95091	217.32372	14.83399	0.1171128	0.24498762	2.5295307	20	6 24.5	20.0
519542 2012 PA_{45}	16.4	X	188.97962	88.38421	239.22982	9.15288	0.1152879	0.18881282	3.0091816	20	2 3.9	21.3
519543 2012 PB_{45}	16.5	X	321.31114	337.08373	314.36540	12.74151	0.1607652	0.22656791	2.6648358	20	5 10.7	19.9
519544 2012 PC_{45}	17.0	X	242.17232	74.90268	304.08690	11.70426	0.2165372	0.22325110	2.6911649	20	5 18.8	21.6
519545 2012 PG_{45}	16.9	X	212.23363	304.24418	150.26142	15.15364	0.0382121	0.24202629	2.5501224	20	8 13.7	20.3
519546 2012 QF_{53}	17.3	X	13.87108	69.35173	134.39696	3.99856	0.0207139	0.21548443	2.7554473	20	4 20.4	21.0
519547 2012 QG_{53}	17.5	X	281.22957	219.15734	254.47031	4.01444	0.0936238	0.26840688	2.3801644	20	12 14.5	20.0
519548 2012 QJ_{53}	15.9	X	344.04379	268.90236	241.41154	8.83158	0.0424993	0.17895123	3.1187430	20	1 4.8	20.2
519549 2012 QL_{53}	17.1	X	313.14956	179.15229	156.34638	9.83729	0.1971512	0.23420305	2.6065998	20	6 29.4	20.0
519550 2012 QN_{53}	16.0	X	144.38359	311.83505	7.49792	15.89848	0.2733394	0.17205290	3.2015581	20	1 4.1	21.6
519551 2012 QO_{53}	16.8	X	260.94936	180.58740	155.57943	15.50773	0.1512193	0.21562303	2.7542664	20	4 28.2	21.1
519552 2012 QP_{53}	16.7	X	116.33315	230.58598	159.70826	9.98781	0.0519583	0.18147514	3.0897591	20	1 30.2	21.2
519553 2012 QQ_{53}	16.2	X	20.36694	246.73869	276.17620	7.53943	0.0776020	0.19214369	2.9743036	20	3 4.3	20.0
519554 2012 QS_{53}	17.1	X	130.81200	181.47917	250.06288	2.71008	0.2379758	0.19337201	2.9616948	20	4 23.7	21.9
519555 2012 QT_{53}	16.6	X	153.83117	10.65379	345.02204	10.31418	0.0739329	0.18417035	3.0595407	20	2 5.8	21.2
519556 2012 QW_{53}	16.8	X	229.96293	180.64742	180.16207	3.53551	0.1090769	0.21198354	2.7857018	20	4 26.5	21.0
519557 2012 QX_{53}	16.4	X	210.47499	86.88084	303.47781	5.41612	0.0474548	0.21296709	2.7771183	20	5 14.4	20.4
519558 2012 QA_{54}	17.3	X	250.11206	217.40292	192.29452	4.44369	0.1410997	0.22321799	2.6914310	20	7 16.5	21.2
519559 2012 RG_{44}	16.5	X	144.30156	13.36405	10.02705	13.26246	0.0899467	0.18586506	3.0409145	20	3 2.6	21.1
519560 2012 RJ_{44}	16.2	X	320.77553	329.40140	291.09496	14.36840	0.1076191	0.20468384	2.8515458	20	4 2.0	20.2
519561 2012 RM_{44}	16.4	X	190.52488	70.14098	346.02767	13.27263	0.0489237	0.21254056	2.7808325	20	5 21.7	20.7
519562 2012 RN_{44}	16.6	X	138.03283	12.72225	354.26806	9.30229	0.0951778	0.17544771	3.1601249	20	2 5.8	21.3
519563 2012 SO_{13}	18.1	X	181.48582	274.85940	356.40867	4.18225	0.1567201	0.29350054	2.2424879	20	—	—
519564 2012 SH_{68}	18.0	X	90.36850	175.95964	166.59193	7.46621	0.0561935	0.27678557	2.3318848	20	—	—
519565 2012 SU_{69}	16.3	X	153.48288	126.40211	90.16731	15.81038	0.0268531	0.22440202	2.6819554	20	11 13.1	20.2
519566 2012 SV_{69}	16.6	X	100.09797	66.36481	17.83197	12.99077	0.0917110	0.18735185	3.0248051	20	3 24.5	20.8
519567 2012 SY_{69}	16.4	X	65.49732	283.07769	149.87563	10.53650	0.0921845	0.17751360	3.1355589	20	1 23.6	20.5
519568 2012 SZ_{69}	16.4	X	139.54078	103.10537	287.35476	7.14144	0.1215886	0.18481119	3.0524640	20	3 1.8	21.2
519569 2012 SB_{70}	16.8	X	185.99324	250.38506	204.70213	10.43043	0.1073234	0.21587954	2.7520842	20	7 7.1	21.3
519570 2012 SH_{70}	15.9	X	191.41420	275.38116	55.70726	11.06274	0.1196320	0.18969935	2.9997989	20	2 18.3	20.8
519571 2012 SK_{70}	16.3	X	151.26730	135.73662	219.13670	9.35777	0.0450969	0.17145696	3.2089723	20	1 26.9	21.2
519572 2012 SL_{70}	17.3	X	285.91553	343.97350	4.26244	8.64717	0.1973694	0.22165666	2.7040550	20	5 31.4	20.9
519573 2012 SR_{70}	17.8	X	260.06844	144.23291	269.03161	1.66385	0.1764139	0.23117552	2.6293082	20	7 29.8	21.5
519574 2012 ST_{70}	17.1	X	191.37705	123.01075	233.34302	2.45937	0.1213766	0.19208749	2.9748837	20	3 12.8	21.7
519575 2012 SV_{70}	17.5	X	211.20704	128.03287	349.52017	12.88181	0.2053790	0.23090885	2.6313321	20	8 28.6	21.8
519576 2012 SA_{71}	16.9	X	119.74651	104.59329	321.70662	7.38258	0.0961074	0.18278623	3.0749665	20	3 21.3	21.5
519577 2012 SF_{71}	17.7	X	293.50395	227.27610	141.98046	4.62399	0.1775845	0.22995582	2.6385973	20	7 16.7	20.8
519578 2012 SG_{71}	16.4	X	1.21132	335.26699	57.32609	16.08896	0.1187278	0.24352174	2.5396716	20	12 27.9	19.6
519579 2012 SH_{71}	17.8	X	328.49991	250.87686	235.24152	4.64811	0.1007272	0.28336556	2.2956447	20	—	—
519580 2012 SK_{71}	17.8	X	255.19627	179.67344	248.79066	3.60610	0.1338944	0.23678696	2.5876023	20	8 18.7	21.4
519581 2012 SM_{71}	16.5	X	33.86384	158.78468	348.91880	10.67951	0.0180055	0.19003422	2.9962738	20	3 6.7	20.5
519582 2012 SO_{71}	16.2	X	233.43594	101.83686	230.94098	8.08632	0.1500350	0.18934316	3.0035599	20	3 21.3	21.2
519583 2012 SQ_{71}	16.4	X	183.84978	8.17632	75.49247	13.32205	0.1121007	0.18916857	3.0054077	20	6 20.7	21.0
519584 2012 TD_{28}	17.1	X	198.47557	245.18636	188.97973	4.59966	0.0928348	0.22008972	2.7168743	20	6 25.6	21.2
519585 2012 TC_{280}	17.5	X	198.80044	315.46892	282.02288	6.26610	0.1201718	0.27901935	2.3194223	20	—	—
519586 2012 TW_{309}	17.9	X	102.95770	119.30293	250.29385	4.44356	0.1587767	0.29103469	2.2551367	20	—	—
519587 2012 TU_{327}	16.9	X	159.22408	254.97921	334.14632	13.41687	0.1283363	0.26197525	2.4189629	20	11 30.6	20.9
519588 2012 TA_{328}	17.0	X	205.01213	173.37358	191.02039	6.51605	0.0847263	0.19634879	2.9316845	20	4 6.4	21.4
519589 2012 TC_{328}	16.6	X	181.65886	228.12426	148.44546	11.54332	0.2043214	0.19223425	2.9733694	20	4 2.3	21.7
519590 2012 TE_{328}	16.7	X	43.21085	160.47425	341.58628	9.12352	0.0387063	0.18819582	3.0157551	20	3 11.9	20.9
519591 2012 TF_{328}	16.7	X	193.58199	121.56789	210.04640	9.19882	0.0671811	0.18024074	3.1038501	20	2 13.5	21.5
519592 2012 TJ_{328}	17.1	X	182.14977	19.38741	20.96646	7.99251	0.1026824	0.19740277	2.9212399	20	4 25.5	21.6
519593 2012 TL_{328}	16.3	X	10.77360	122.70607	34.80943	9.95443	0.0142147	0.17657979	3.1466037	20	2 24.4	20.8
519594 2012 TR_{328}	16.4	X	302.99929	256.22087	65.15399	7.40052	0.0565378	0.21257905	2.7804969	20	6 11.9	19.9
519595 2012 TT_{328}	17.5	X	235.61017	53.13513	48.68732	13.26232	0.1261486	0.23370029	2.6103369	20	9 17.6	21.4
519596 2012 TU_{328}	15.9	X	176.04979	301.48340	40.76900	10.96232	0.1089829	0.17518166	3.1633237	20	2 18.2	21.0
519597 2012 TB_{329}	17.3	X	0.56507	231.62316	50.94322	9.06936	0.2150143	0.22993690	2.6387420	20	7 30.4	19.7
519598 2012 TE_{329}	16.4	X	204.13859	124.75154	211.60577	10.59228	0.1092170	0.18211153	3.0825568	20	2 28.9	21.5
519599 2012 TF_{329}	17.1	X	325.85725	256.26318	0.15478	5.59724	0.0155388	0.20174713	2.8791512	20	4 21.9	20.9
519600 2012 TR_{329}	16.9	X	280.16591	148.13318	277.59387	12.63797	0.1098978	0.23779392	2.5802922	20	9 18.2	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519601 2012 TT_{329}	16.4	X	192.98738	114.80673	221.66127	15.78908	0.0413254	0.18199179	3.0839088	20	2 15.5	21.3
519602 2012 TZ_{329}	17.4	X	326.60393	253.07169	229.21120	6.25447	0.0649810	0.27395617	2.3479130	20	—	—
519603 2012 TA_{330}	17.6	X	226.14878	9.52448	62.43114	3.08601	0.1875850	0.22393855	2.6856545	20	7 15.3	21.8
519604 2012 TB_{330}	16.2	X	226.93750	65.32810	233.20909	9.15083	0.0900024	0.18092435	3.0960268	20	2 7.4	21.2
519605 2012 TC_{330}	16.9	X	224.59299	98.19652	220.67656	2.14896	0.0943967	0.18611431	3.0381989	20	3 1.8	21.7
519606 2012 TK_{330}	16.7	X	269.30672	66.95237	221.38540	7.31546	0.0202309	0.18825700	3.0151016	20	3 20.6	21.1
519607 2012 TO_{330}	16.5	X	284.77115	262.75093	54.21820	12.73861	0.2012433	0.20977025	2.8052621	20	4 23.1	20.4
519608 2012 UD_{39}	17.6	X	153.71694	276.27196	9.30589	7.22555	0.1136921	0.27941256	2.3172458	20	—	—
519609 2012 UH_{53}	16.6	X	304.25971	73.19900	295.49492	13.23204	0.2065093	0.23338607	2.6126792	20	7 29.7	19.4
519610 2012 UN_{68}	18.2	X	179.07429	36.23556	270.61180	2.34870	0.3719027	0.30462977	2.1875324	20	1 4.7	22.0
519611 2012 UF_{103}	16.9	X	313.98539	157.76234	82.53692	3.16193	0.0627053	0.18525121	3.0476284	20	3 15.4	21.0
519612 2012 UY_{180}	16.1	X	41.19959	230.24452	256.04150	10.60945	0.0470683	0.17767397	3.1336718	20	2 16.6	20.5
519613 2012 UZ_{180}	17.3	X	59.18677	133.11717	105.71719	3.38764	0.1456362	0.22943457	2.6425921	20	8 29.7	20.7
519614 2012 UA_{181}	17.3	X	285.57625	280.53743	50.82709	5.10232	0.0661902	0.21329445	2.7742761	20	5 30.2	21.1
519615 2012 UB_{181}	16.4	X	106.52051	273.18634	200.08016	9.17590	0.0612292	0.18961222	3.0007179	20	5 2.1	20.6
519616 2012 UD_{181}	16.6	X	109.22605	267.00982	184.02858	7.15959	0.1389294	0.18146359	3.0898902	20	4 18.2	21.1
519617 2012 UH_{181}	17.1	X	28.10075	124.44754	89.16023	3.16947	0.0027705	0.20385181	2.8592996	20	5 21.1	20.8
519618 2012 UK_{181}	17.1	X	209.22766	347.69434	60.34524	8.44914	0.0517343	0.20824644	2.8189302	20	6 5.7	21.2
519619 2012 UL_{181}	16.6	X	228.78166	268.49285	62.27809	11.53793	0.1080258	0.19148392	2.9811318	20	3 25.7	21.3
519620 2012 UO_{181}	17.8	X	265.66597	273.73220	135.97911	3.32297	0.1422581	0.22771755	2.6558592	20	8 6.8	21.3
519621 2012 UQ_{181}	16.9	X	188.07516	143.65009	194.60665	7.55566	0.1292626	0.17979222	3.1090100	20	2 17.9	22.0
519622 2012 UR_{181}	16.5	X	295.08692	177.34410	49.53444	5.50867	0.0525601	0.17381455	3.1798891	20	2 7.6	21.0
519623 2012 US_{181}	16.6	X	283.35841	54.01670	211.52300	9.22254	0.0626342	0.18502006	3.0501662	20	3 3.4	21.0
519624 2012 UX_{181}	16.5	X	108.67005	212.59922	220.88791	10.62630	0.0338756	0.17844028	3.1246937	20	3 8.6	21.1
519625 2012 UZ_{181}	16.3	X	24.03601	318.52816	190.96506	7.75075	0.1469940	0.17107295	3.2137726	20	2 28.8	20.1
519626 2012 UC_{182}	17.0	X	331.77885	57.84226	241.74915	3.62342	0.0432123	0.21409295	2.7673737	20	6 26.3	20.5
519627 2012 UG_{182}	16.4	X	140.55068	316.12274	122.93599	12.30792	0.1115414	0.19253559	2.9702661	20	5 7.4	21.1
519628 2012 UH_{182}	16.2	X	304.04482	4.62989	278.54544	8.08425	0.0276226	0.17596398	3.1539408	20	4 26.0	20.7
519629 2012 UL_{182}	16.7	X	102.67592	298.29429	163.81025	6.45015	0.0498035	0.18316496	3.0707264	20	4 12.7	21.0
519630 2012 UN_{182}	15.6	X	72.50156	231.11757	211.48706	11.52813	0.0301054	0.16835212	3.2483065	20	2 4.9	20.3
519631 2012 UO_{182}	17.3	X	333.80052	247.70516	75.28678	7.23203	0.1685287	0.22783569	2.6549410	20	7 29.0	19.9
519632 2012 UP_{182}	17.1	X	37.99599	227.49931	96.96258	5.64592	0.0453234	0.24670201	2.5177982	20	11 11.8	20.3
519633 2012 UQ_{182}	15.8	X	28.86898	70.75051	77.76818	12.24492	0.0704915	0.17393604	3.1784081	20	3 11.3	20.1
519634 2012 US_{182}	17.1	X	171.72459	335.71561	58.79591	12.29839	0.0974280	0.18856149	3.0118549	20	4 13.7	21.8
519635 2012 UT_{182}	17.0	X	314.96539	222.92813	81.44819	5.99700	0.0414195	0.20809986	2.8202537	20	6 8.4	20.7
519636 2012 UV_{182}	16.7	X	170.67112	7.71044	32.90200	1.90087	0.0877672	0.18924939	3.0045520	20	4 15.3	21.2
519637 2012 UW_{182}	17.4	X	192.40697	121.41819	116.10640	4.34934	0.0931167	0.26843587	2.3799930	20	—	—
519638 2012 UZ_{182}	17.0	X	160.21883	58.33419	96.71169	4.50753	0.0276120	0.22491894	2.6778445	20	8 30.5	20.7
519639 2012 UC_{183}	17.3	X	298.80436	117.10961	218.04010	3.62776	0.1278208	0.21553731	2.7549966	20	6 14.6	20.7
519640 2012 UD_{183}	16.0	X	62.22095	284.50654	220.27026	15.37505	0.2048986	0.17711918	3.1402121	20	5 5.4	19.9
519641 2012 UE_{183}	16.8	X	293.81024	279.69987	45.27511	13.74248	0.1572007	0.21152235	2.7897495	20	5 17.9	20.5
519642 2012 UF_{183}	17.2	X	103.14138	352.48901	221.90615	2.42389	0.0711568	0.22539012	2.6741113	20	9 8.0	20.9
519643 2012 UG_{183}	17.3	X	316.34624	265.53573	66.80488	3.74577	0.2082103	0.22228272	2.6989753	20	6 28.8	20.1
519644 2012 UH_{183}	17.0	X	272.02153	347.97037	31.18413	6.67692	0.0185677	0.21726412	2.7403795	20	7 25.5	20.7
519645 2012 UK_{183}	16.9	X	145.11931	106.71460	27.99472	4.14365	0.0453139	0.21092442	2.7950193	20	7 14.2	20.9
519646 2012 UN_{183}	17.2	X	284.66528	110.96301	302.02958	10.66973	0.1832258	0.23503473	2.6004471	20	8 29.9	20.2
519647 2012 UO_{183}	16.8	X	165.26646	210.71174	216.27529	4.47262	0.0225985	0.19374914	2.9578504	20	5 9.6	21.1
519648 2012 UP_{183}	15.9	X	144.27898	83.14842	298.00889	13.40233	0.0368171	0.17368453	3.1814758	20	2 16.8	20.6
519649 2012 VQ_{8}	17.9	X	198.19655	169.57007	43.37473	7.83239	0.0568834	0.26518008	2.3994339	20	—	—
519650 2012 VC_{38}	17.1	X	351.53218	320.18767	87.64274	8.45405	0.1442021	0.25796150	2.4439902	20	—	—
519651 2012 VQ_{86}	17.4	X	263.21566	5.64538	56.02678	16.10109	0.1736242	0.22736964	2.6585677	20	8 23.2	21.3
519652 2012 VH_{104}	17.4	X	327.98526	32.12033	69.79941	7.18487	0.0984103	0.26587967	2.3952231	20	—	—
519653 2012 VY_{114}	17.2	X	202.59595	56.92073	77.67026	14.11339	0.1722845	0.22184881	2.7024935	20	9 18.2	21.8
519654 2012 VC_{115}	16.2	X	233.42254	70.15484	259.73242	10.16590	0.0634963	0.18418603	3.0593671	20	3 22.5	20.9
519655 2012 VE_{115}	17.2	X	70.37169	255.84126	37.61072	6.79248	0.0590213	0.24111352	2.5565542	20	11 11.4	20.6
519656 2012 VG_{115}	16.9	X	169.52883	311.29088	96.17329	11.95263	0.1568057	0.18721482	3.0262809	20	4 29.6	22.0
519657 2012 VH_{115}	17.2	X	220.32510	162.64318	264.72097	3.21609	0.0441530	0.21235955	2.7824125	20	7 15.7	21.1
519658 2012 WY_{31}	15.8	X	91.66209	271.33063	250.10055	9.52018	0.0438486	0.19214914	2.9742473	20	6 10.9	19.8
519659 2012 WP_{36}	16.3	X	269.09665	247.47573	56.59666	10.96406	0.0850347	0.19110931	2.9850262	20	4 6.8	20.7
519660 2012 WQ_{36}	16.8	X	205.05887	217.71308	132.61157	1.73804	0.1892876	0.18656124	3.0333447	20	3 19.3	21.9
519661 2012 WV_{36}	16.0	X	14.40002	192.78980	99.34734	12.43312	0.0498289	0.21643250	2.7473947	20	8 24.1	19.6
519662 2012 XY_{51}	17.3	X	5.21704	169.84957	141.39258	5.82966	0.1408247	0.22782012	2.6550620	20	9 13.4	20.1
519663 2012 XG_{156}	16.7	X	254.91021	96.95723	287.73011	11.79318	0.2252449	0.21484191	2.7609383	20	6 9.3	21.1
519664 2012 XB_{159}	18.2	X	339.17581	337.09080	84.98552	4.22454	0.1627195	0.24728950	2.5138089	20	—	—
519665 2012 XC_{159}	16.8	X	253.46012	87.08773	276.21720	9.30546	0.1249573	0.19058044	2.9905461	20	5 22.5	21.2
519666 2012 XD_{159}	17.2	X	302.88756	346.49361	79.86796	15.96102	0.0720385	0.23286895	2.6165457	20	11 10.3	20.5
519667 2012 XG_{159}	16.7	X	210.09269	50.42578	325.55582	9.31649	0.0622406	0.18157451	3.0886318	20	4 23.1	21.5
519668 2012 YQ_{10}	16.5	X	256.22611	294.67037	108.14472	17.05717	0.1848342	0.20975447	2.8054029	20	7 9.1	20.7
519669 2012 YS_{10}	17.9	X	269.81237	105.15164	323.10623	1.84347	0.1689099	0.21983018	2.7190123	20	9 1.5	21.3
519670 2012 YU_{10}	17.1	X	243.83258	100.61269	336.67432	12.76227	0.1120470	0.21440149	2.7647180	20	8 20.1	20.9
519671 2012 YX_{10}	16.4	X	100.82708	209.26267	39.87824	13.78380	0.1908840	0.18925253	3.0045187	20	10 26.8	21.3
519672 2012 YY_{10}	16.9	X	211.20128	309.75123	99.64405	16.37909	0.2229306	0.19674559	2.9277414	20	6 2.8	22.0
519673 2012 YD_{11}	17.8	X	247.40899	103.23079	27.54942	3.68600	0.0682332	0.23001292	2.6381606	20	11 9.7	21.1
519674 2012 YE_{11}	17.7	X	16.51528	73.08369	341.69487	4.56191	0.0914198	0.25364702	2.4716267	20	—	—
519675 2012 YK_{11}	16.8	X	205.34804	89.25748	306.39430	5.12762	0.1541986	0.18750063	3.0232048	20	5 10.9	21.9
519676 2012 YL_{11}	16.3	X	337.38643	343.51387	301.66487	9.32321	0.0807618	0.18752801	3.0229105	20	6 12.0	20.1
519677 2012 YT_{11}	16.8	X	149.71656	339.01616	97.39935	11.91031	0.1001072	0.17669414	3.1452460	20	5 12.1	21.7
519678 2013 AR_{5}	16.4	X	340.13945	312.46804	272.73491	8.67954	0.0145424	0.17813670	3.1282428	20	3 30.5	21.0
519679 2013 AV_{5}	16.9	X	356.25636	257.13439	79.26540	10.61085	0.2017232	0.23353994	2.6115315	20	10 16.3	19.5
519680 2013 AP_{22}	17.1	X	184.08411	81.75985	128.69446	7.95577	0.1854705	0.22387561	2.6861579	20	11 25.7	21.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519681 2013 AN_{48}	16.6	X	78.52587	261.32293	326.89704	13.38239	0.2616942	0.19863602	2.9091361	20	9 14.2	21.2
519682 2013 AS_{93}	16.6	X	217.66537	52.67852	125.86809	14.33104	0.1835170	0.22903905	2.6456336	20	11 22.9	20.8
519683 2013 AC_{104}	17.1	X	240.87689	122.04922	43.91386	8.72130	0.0410442	0.24275572	2.5450114	20	12 24.1	20.5
519684 2013 AT_{117}	17.2	X	249.23496	40.79714	30.63779	3.91703	0.1802138	0.21211791	2.7845253	20	8 9.6	21.2
519685 2013 AA_{121}	16.5	X	203.31410	100.33931	272.87180	8.83901	0.1247366	0.18587393	3.0408178	20	4 10.8	21.6
519686 2013 AO_{172}	16.2	X	274.04112	131.14666	179.02577	10.69459	0.0767067	0.17283566	3.1918844	20	4 19.8	20.8
519687 2013 AZ_{185}	16.9	X	147.46376	266.20609	192.17102	3.15697	0.0461363	0.18362473	3.0655985	20	5 29.9	21.4
519688 2013 AB_{186}	16.9	X	277.84835	108.28066	262.67082	9.25823	0.1151640	0.20248476	2.8721547	20	7 3.8	20.7
519689 2013 AC_{186}	16.2	X	192.34669	128.88730	289.59224	9.54126	0.0511352	0.18631127	3.0360573	20	5 30.2	20.8
519690 2013 AD_{186}	16.6	X	226.36590	336.06870	100.62466	10.37495	0.1086580	0.20456895	2.8526133	20	7 28.9	20.9
519691 2013 AG_{186}	17.0	X	270.54704	145.95894	275.77110	5.12925	0.0185607	0.21141934	2.7906556	20	9 12.9	20.8
519692 2013 AJ_{186}	16.7	X	158.86577	286.43687	116.91695	5.86449	0.1875651	0.17194517	3.2028952	20	4 14.9	22.0
519693 2013 AO_{186}	17.0	X	296.14096	300.57713	93.48115	5.88678	0.1324096	0.21640031	2.7476672	20	9 3.6	20.3
519694 2013 AQ_{186}	16.9	X	280.15815	266.49359	135.11084	14.05380	0.1897385	0.21187188	2.7866804	20	8 7.1	20.5
519695 2013 AU_{186}	16.6	X	67.08352	211.29349	324.14165	4.45789	0.0804707	0.17151459	3.2082535	20	6 1.3	21.0
519696 2013 AV_{186}	17.2	X	214.38935	54.67101	96.33021	3.74658	0.0275247	0.22237512	2.6982276	20	10 30.9	20.8
519697 2013 AG_{187}	16.8	X	148.82067	348.57509	145.01743	16.95268	0.1095126	0.19042054	2.9922200	20	7 17.6	21.6
519698 2013 AK_{187}	17.7	X	248.11168	263.22606	201.92869	4.17170	0.0440890	0.21785274	2.7354411	20	10 9.9	21.2
519699 2013 AL_{187}	17.3	X	150.92978	203.71739	224.59641	4.12969	0.1735951	0.17286667	3.1915026	20	5 4.2	22.4
519700 2013 AM_{187}	16.8	X	38.65177	307.48611	288.77649	9.33597	0.0581182	0.18430624	3.0580366	20	7 9.3	20.9
519701 2013 AS_{187}	17.5	X	261.98662	134.76719	298.47924	6.69088	0.1158837	0.21415997	2.7667963	20	9 2.4	21.3
519702 2013 AT_{187}	17.0	X	139.57846	197.93896	302.96310	11.92888	0.0431524	0.18866138	3.0107917	20	7 14.2	21.3
519703 2013 AW_{187}	16.5	X	90.04834	34.59963	130.29066	18.20699	0.1118284	0.17783556	3.1317733	20	6 24.3	21.2
519704 2013 AZ_{187}	17.0	X	52.84390	299.28318	282.72802	3.26837	0.1544707	0.18274702	3.0754064	20	7 24.2	21.0
519705 2013 AA_{188}	17.5	X	190.20820	257.18209	275.03330	1.69093	0.0251042	0.22160234	2.7044969	20	10 26.0	21.3
519706 2013 AE_{188}	17.8	X	187.53191	17.69456	162.31874	5.18626	0.0921295	0.22016831	2.7162277	20	10 29.1	21.8
519707 2013 AH_{188}	16.7	X	156.93731	286.08248	162.00074	5.44250	0.1092134	0.17859100	3.1229355	20	5 31.5	21.6
519708 2013 AJ_{188}	16.9	X	157.88818	121.77770	126.99923	15.36775	0.1413700	0.22963689	2.6410398	20	12 20.4	21.2
519709 2013 AK_{188}	16.5	X	139.82344	286.60846	179.60080	8.79461	0.0800455	0.17727367	3.1383874	20	6 3.3	21.3
519710 2013 BP_{22}	15.9	X	229.13191	259.52958	163.57231	14.05817	0.1386252	0.20100187	2.8862636	20	7 9.4	20.6
519711 2013 BZ_{28}	16.8	X	247.33740	261.71155	247.99721	9.52362	0.0826455	0.23491128	2.6013580	20	12 3.8	20.1
519712 2013 BP_{44}	16.7	X	201.59688	62.32921	129.44226	16.91906	0.1938488	0.22474325	2.6792400	20	11 22.1	21.2
519713 2013 BP_{74}	17.1	X	308.40190	84.03092	289.61317	2.47398	0.1055943	0.21430612	2.7655382	20	8 25.6	20.4
519714 2013 BK_{80}	17.4	X	194.97509	59.52249	136.36161	13.56131	0.2175729	0.22646730	2.6656250	20	11 18.3	22.0
519715 2013 BV_{83}	16.3	X	53.84869	251.11438	336.63987	9.80790	0.0517539	0.18087480	3.0965921	20	7 20.4	20.6
519716 2013 BY_{83}	16.4	X	315.33433	147.66367	121.19968	10.56349	0.0163479	0.17087873	3.2162074	20	5 1.5	21.0
519717 2013 BA_{84}	16.8	X	73.92963	47.85829	142.69473	1.10379	0.1001509	0.18023192	3.1039514	20	7 3.8	21.0
519718 2013 BB_{84}	17.3	X	124.41579	260.33976	323.97920	6.75021	0.1618263	0.20988975	2.8041973	20	10 15.2	22.0
519719 2013 BC_{84}	16.7	X	177.10643	292.49722	122.36597	10.28338	0.1354287	0.17743430	3.1364930	20	5 13.7	21.9
519720 2013 BF_{84}	16.5	X	144.00981	116.62714	349.89617	13.45803	0.2508275	0.17255523	3.1953416	20	6 16.4	22.2
519721 2013 BH_{84}	16.8	X	46.03377	330.64678	269.57279	4.47461	0.0927360	0.18630240	3.0361537	20	7 28.8	20.9
519722 2013 BM_{84}	16.8	X	45.61409	326.46636	279.50472	8.24959	0.0109795	0.19145705	2.9814107	20	7 24.9	20.9
519723 2013 BN_{84}	16.4	X	250.41852	215.22709	165.41298	8.58798	0.1012963	0.18771580	3.0208940	20	6 14.5	20.9
519724 2013 CK_{6}	17.4	X	219.21390	38.63423	144.72714	14.10922	0.0398568	0.23473271	2.6026772	20	12 18.1	21.1
519725 2013 CV_{7}	16.5	X	174.64819	279.32908	141.82315	11.44130	0.0861307	0.17643928	3.1482740	20	5 18.3	21.5
519726 2013 CA_{26}	17.4	X	165.05475	288.13523	309.65125	11.60586	0.2260732	0.22429094	2.6828407	20	12 7.4	22.1
519727 2013 CL_{179}	16.9	X	269.51510	8.18736	118.37977	8.29917	0.1203407	0.23012480	2.6373055	20	11 30.3	20.1
519728 2013 CX_{192}	16.4	X	335.33384	281.97156	31.04220	17.21585	0.0189837	0.18973783	2.9993934	20	7 24.9	20.8
519729 2013 CH_{207}	16.9	X	165.29575	312.29516	276.64300	7.33650	0.2381257	0.21587522	2.7521210	20	11 25.7	21.8
519730 2013 CR_{207}	17.1	X	137.42676	150.50549	97.87186	11.66777	0.0947713	0.21871965	2.7282083	20	11 29.8	21.3
519731 2013 CE_{224}	16.9	X	224.90584	80.78035	64.49619	5.53951	0.1367759	0.21538846	2.7562658	20	10 21.3	20.8
519732 2013 CK_{224}	17.3	X	73.19005	68.55095	264.38097	1.27839	0.0812234	0.22872081	2.6480870	20	—	—
519733 2013 CL_{225}	17.1	X	135.35268	325.78399	300.97727	1.15687	0.0747321	0.22547172	2.6734660	20	12 19.3	20.9
519734 2013 CZ_{225}	16.7	X	148.26733	135.52546	352.35655	11.02661	0.0824002	0.18162221	3.0880909	20	7 11.1	21.5
519735 2013 CA_{226}	16.6	X	108.17523	297.42552	352.73822	9.83595	0.0791008	0.22334275	2.6904286	20	12 18.7	20.7
519736 2013 CB_{226}	16.3	X	14.74578	225.09029	91.28659	3.09423	0.1061459	0.19769708	2.9183399	20	9 27.4	19.9
519737 2013 CE_{226}	15.8	X	50.28548	306.46770	318.83373	9.19884	0.1815332	0.18711100	3.0274002	20	9 16.6	20.0
519738 2013 CH_{226}	16.5	X	82.53205	215.74435	4.82326	15.57506	0.0590803	0.19117282	2.9843651	20	8 23.6	20.9
519739 2013 CJ_{226}	16.8	X	80.18107	151.39244	75.63651	1.50616	0.1702727	0.18395243	3.0619566	20	9 6.9	21.4
519740 2013 CK_{226}	16.6	X	40.80246	55.20602	206.33161	4.57499	0.0978944	0.18166554	3.0875999	20	8 17.9	20.8
519741 2013 CM_{226}	17.3	X	198.42365	284.54258	289.07024	2.43065	0.1350418	0.22953219	2.6418429	20	12 16.8	21.3
519742 2013 CN_{226}	17.1	X	144.13671	10.78014	252.14855	2.12972	0.1331684	0.22650182	2.6653541	20	12 22.9	21.3
519743 2013 CO_{226}	16.5	X	81.89693	232.24375	324.31507	9.50608	0.0432228	0.18097739	3.0954218	20	7 15.1	20.9
519744 2013 CS_{226}	17.0	X	130.38881	31.49014	239.60390	3.89442	0.1321693	0.22502052	2.6770386	20	12 19.7	21.2
519745 2013 CV_{226}	16.6	X	163.20060	298.25423	160.53511	18.76197	0.1578228	0.17975908	3.1093921	20	6 21.4	22.0
519746 2013 CX_{226}	16.1	X	165.67206	340.69794	191.55398	13.91232	0.1386219	0.18352588	3.0666991	20	9 18.4	21.0
519747 2013 CY_{226}	15.7	X	72.12087	182.31342	75.38677	12.42354	0.0724237	0.17351276	3.1835752	20	9 27.3	20.4
519748 2013 CM_{227}	17.8	X	342.94107	278.86955	164.83625	11.91021	0.1606390	0.24108855	2.5567307	20	—	—
519749 2013 CS_{227}	16.3	X	143.38693	273.82888	190.47293	10.04070	0.2312478	0.17607085	3.1526644	20	6 13.1	21.8
519750 2013 CT_{227}	17.0	X	38.57074	332.80759	315.67043	10.99394	0.0236571	0.19743759	2.9208964	20	9 8.7	21.0
519751 2013 CX_{227}	16.9	X	120.67925	35.01592	270.02244	3.62197	0.1072329	0.23227313	2.6210184	20	—	—
519752 2013 CY_{227}	16.9	X	212.82273	277.21691	243.29903	3.07400	0.0386600	0.21577885	2.7529404	20	11 5.5	20.8
519753 2013 CZ_{227}	17.0	X	203.87034	106.26321	322.62206	7.88125	0.1181581	0.18315981	3.0707840	20	6 22.9	21.8
519754 2013 CC_{228}	16.2	X	87.81641	218.41028	319.24141	6.44612	0.0673948	0.17330828	3.1860788	20	6 30.5	20.7
519755 2013 CD_{228}	17.2	X	201.79793	96.69593	335.81805	13.07657	0.2642255	0.18848221	3.0126994	20	6 19.5	22.7
519756 2013 CE_{228}	16.8	X	291.36717	276.68963	172.84962	14.19931	0.0397060	0.21964620	2.7205304	20	11 21.1	20.6
519757 2013 DD_{17}	17.5	X	164.31127	97.85395	156.67210	12.21651	0.1526304	0.22933418	2.6433633	20	12 31.0	21.9
519758 2013 DJ_{17}	16.5	X	111.10100	231.97589	286.66117	2.58729	0.0653253	0.17475208	3.1685056	20	7 3.9	21.0
519759 2013 DK_{17}	16.8	X	193.81809	120.30406	326.39592	8.07330	0.0377514	0.17964722	3.1106827	20	7 9.0	21.4
519760 2013 DM_{17}	16.5	X	157.26172	109.17639	18.05192	14.16326	0.0743281	0.18047098	3.1012097	20	7 21.4	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519761 2013 DN_{17}	16.6	X	98.25044	253.74700	311.02004	3.40422	0.0870355	0.18384999	3.0630939	20	8 18.9	21.2
519762 2013 EE_{24}	17.0	X	135.68077	121.68843	143.77702	8.28440	0.1854673	0.21648404	2.7469587	20	12 17.1	21.7
519763 2013 EV_{62}	17.4	X	1.87524	245.03283	170.50643	3.98623	0.0689156	0.23143616	2.6273337	20	—	—
519764 2013 EL_{75}	17.4	X	215.06536	132.04906	19.73586	7.89582	0.1564690	0.21138419	2.7909649	20	10 14.1	21.6
519765 2013 EA_{94}	17.0	X	199.46400	333.32987	201.25783	15.43507	0.2150547	0.21297261	2.7770703	20	10 22.6	21.5
519766 2013 EQ_{96}	17.0	X	30.86361	233.36813	129.50521	2.97202	0.0925167	0.21861264	2.7290985	20	12 20.5	20.5
519767 2013 ED_{132}	17.0	X	264.12732	258.09371	146.59382	1.91089	0.1038835	0.18949517	3.0019534	20	7 31.4	21.0
519768 2013 EB_{151}	16.2	X	288.33106	188.16587	201.13577	7.41863	0.0579834	0.17835087	3.1257379	20	8 16.4	20.6
519769 2013 EV_{155}	17.3	X	108.28482	208.40259	76.78323	4.62649	0.0659240	0.21220825	2.7837349	20	12 9.9	21.3
519770 2013 EO_{156}	17.5	X	283.49406	259.28437	213.24520	4.11194	0.1605135	0.22840320	2.6505414	20	11 26.9	20.5
519771 2013 ER_{156}	17.3	X	307.55762	220.99983	237.15683	4.50753	0.0938083	0.23024588	2.6363807	20	12 23.9	20.3
519772 2013 EX_{156}	16.6	X	67.39586	135.89384	109.19736	15.64360	0.2445741	0.17564471	3.1577616	20	9 29.9	21.6
519773 2013 EC_{157}	16.3	X	92.95745	44.79115	152.63292	4.70785	0.1327315	0.17335179	3.1855456	20	8 8.4	21.1
519774 2013 EL_{157}	17.0	X	76.69058	148.21299	114.15134	2.63359	0.1879247	0.18688699	3.0298189	20	10 19.2	21.5
519775 2013 EN_{157}	16.2	X	341.47443	174.80517	163.45815	11.55199	0.1542059	0.18144961	3.0900489	20	8 27.4	19.7
519776 2013 EO_{157}	16.7	X	49.79652	126.56697	163.41760	10.58071	0.0724023	0.19057320	2.9906219	20	10 7.5	20.8
519777 2013 ER_{157}	16.8	X	66.82916	105.98860	186.14243	5.96640	0.2060181	0.19796334	2.9157226	20	11 17.5	21.2
519778 2013 ET_{157}	16.8	X	145.55849	107.28616	32.80885	5.48344	0.1102309	0.17752739	3.1353965	20	7 23.9	21.7
519779 2013 EX_{157}	16.8	X	152.77590	140.91192	25.78248	11.64002	0.1115560	0.18971375	2.9996471	20	9 6.3	21.6
519780 2013 EA_{158}	16.5	X	54.10369	85.79817	154.55988	9.89226	0.0448455	0.17481296	3.1677699	20	8 1.4	20.9
519781 2013 EB_{158}	16.5	X	137.73852	99.62111	39.43683	10.43305	0.1696612	0.17542911	3.1603482	20	7 18.6	21.8
519782 2013 FF_{16}	17.2	X	209.30710	130.48487	27.22700	8.61377	0.2121353	0.20987492	2.8043293	20	10 11.2	21.6
519783 2013 FP_{21}	16.9	X	129.96508	94.03000	191.41029	16.85710	0.4548679	0.20228714	2.8740250	20	—	—
519784 2013 FQ_{29}	16.3	X	160.09962	99.44509	38.71727	9.75367	0.0321598	0.17472645	3.1688155	20	8 5.6	21.1
519785 2013 FR_{29}	17.3	X	217.87806	79.56554	138.95918	2.74075	0.1416285	0.22537504	2.6742305	20	—	—
519786 2013 FU_{29}	17.3	X	216.48344	79.77131	174.04272	15.63277	0.1224821	0.24043251	2.5613795	20	—	—
519787 2013 GB_{39}	17.0	X	153.11947	67.12245	184.04152	8.79292	0.1385289	0.21580182	2.7527450	20	12 15.5	21.6
519788 2013 GR_{39}	16.4	X	290.23534	180.61190	199.17977	15.65903	0.0699830	0.17958684	3.1113799	20	8 3.3	20.9
519789 2013 GX_{52}	17.2	X	89.37100	114.96406	191.05577	14.55394	0.1535407	0.20373369	2.8604047	20	12 20.0	21.9
519790 2013 GQ_{73}	16.7	X	299.45530	209.19412	173.45870	9.24094	0.0517484	0.18676117	3.0311795	20	8 26.2	20.8
519791 2013 GX_{76}	17.0	X	120.92804	98.12739	182.18641	14.04615	0.1398841	0.21209330	2.7847406	20	12 19.9	21.7
519792 2013 GP_{100}	18.3	X	265.35710	174.79217	62.38774	23.43808	0.0758470	0.38688251	1.8653056	20	—	—
519793 2013 GS_{109}	17.4	X	283.60312	144.95098	114.11098	8.15249	0.1023734	0.26142542	2.4223534	20	2 14.6	20.6
519794 2013 GK_{118}	17.2	X	99.89965	277.03674	23.27688	4.03643	0.0802850	0.21075213	2.7965423	20	12 19.7	21.3
519795 2013 GL_{140}	16.4	X	72.98711	211.49630	94.82243	11.70648	0.1825497	0.18960077	3.0008387	20	12 6.2	21.1
519796 2013 GN_{140}	16.9	X	122.16818	169.66829	73.59053	10.92247	0.1542750	0.18995328	2.9971250	20	11 7.2	21.8
519797 2013 GO_{140}	16.6	X	211.34508	340.75222	140.23879	9.09042	0.0199420	0.18449289	3.0559738	20	9 14.5	20.9
519798 2013 GP_{140}	17.1	X	173.64942	225.83132	61.01927	16.04248	0.1325679	0.22344383	2.6896172	20	—	—
519799 2013 GQ_{140}	16.2	X	90.20982	159.62938	112.64927	11.73924	0.0732216	0.18721446	3.0262848	20	11 5.3	20.8
519800 2013 GU_{140}	16.3	X	39.12710	18.58301	34.81917	33.84760	0.1787642	0.23482600	2.6019879	20	—	—
519801 2013 GB_{141}	16.8	X	117.07310	29.11508	207.38149	0.14575	0.0526713	0.18899620	3.0072348	20	10 16.3	21.3
519802 2013 GC_{141}	17.6	X	193.90499	232.51667	60.34350	8.27586	0.1730501	0.23464775	2.6033054	20	—	—
519803 2013 GJ_{141}	17.0	X	99.89462	79.80334	148.87844	1.42153	0.1728475	0.17681566	3.1438048	20	9 28.2	21.8
519804 2013 GL_{141}	17.7	X	179.88562	120.52113	194.96790	4.02956	0.1686622	0.23563206	2.5960505	20	1 11.7	22.0
519805 2013 HW_{18}	18.5	X	84.04581	260.80991	165.26071	23.06274	0.0602443	0.38983335	1.8558807	20	—	—
519806 2013 HN_{31}	16.5	X	184.80373	157.59126	352.66823	10.13867	0.0426628	0.19014294	2.9951316	20	9 16.3	20.9
519807 2013 HM_{57}	16.9	X	12.45636	302.68244	351.66264	6.61296	0.0323499	0.17644846	3.1481649	20	8 16.1	21.2
519808 2013 HP_{58}	16.5	X	290.12100	5.46461	354.98869	8.87374	0.0815032	0.17063202	3.2193068	20	7 12.9	21.0
519809 2013 HK_{68}	17.0	X	12.95434	131.87597	255.26287	4.42695	0.0774599	0.21260245	2.7802929	20	12 23.4	20.6
519810 2013 HG_{107}	16.8	X	151.65282	83.98949	33.40136	9.15172	0.1914132	0.17049158	3.2210744	20	7 4.0	22.3
519811 2013 HG_{113}	16.5	X	229.11914	202.88758	209.00064	8.09403	0.0709785	0.16759149	3.2581274	20	6 30.8	21.4
519812 2013 HW_{115}	17.3	X	153.34895	180.08513	44.03911	3.18726	0.0892350	0.20294673	2.8677943	20	11 11.9	21.7
519813 2013 HC_{116}	17.2	X	153.58519	30.51404	201.97346	14.82825	0.0895675	0.20562805	2.8428098	20	11 23.9	21.7
519814 2013 HL_{124}	16.8	X	251.77007	86.22951	353.16683	9.82690	0.1467797	0.19283768	2.9671633	20	8 26.2	21.1
519815 2013 HQ_{136}	17.3	X	1.91429	186.20100	233.88611	4.36154	0.0473427	0.22405191	2.6847485	20	—	—
519816 2013 HK_{145}	17.1	X	123.60514	56.61356	238.93478	3.25216	0.1830081	0.21194707	2.7860213	20	—	—
519817 2013 HN_{157}	16.6	X	60.65335	69.83137	265.63896	4.57808	0.0741354	0.20001734	2.8957270	20	12 15.9	20.8
519818 2013 HQ_{157}	16.7	X	107.86617	92.34588	135.24278	12.23116	0.0774267	0.18088926	3.0964271	20	9 30.3	21.4
519819 2013 HR_{157}	17.5	X	197.79254	176.82916	111.98467	11.50936	0.1628089	0.23334078	2.6130173	20	—	—
519820 2013 HT_{157}	16.6	X	153.59176	19.90117	164.12785	12.87436	0.0665248	0.18254017	3.0777293	20	9 23.3	21.2
519821 2013 HD_{158}	16.6	X	122.92620	120.20442	125.83384	15.23072	0.2333843	0.19012671	2.9953020	20	11 16.5	22.0
519822 2013 HF_{158}	15.8	X	99.03018	186.04604	101.91173	10.86616	0.0870841	0.17972195	3.1098204	20	11 30.4	20.5
519823 2013 JC_{18}	19.3	X	161.10396	149.25286	197.30945	18.53200	0.0839860	0.38516472	1.8708475	20	—	—
519824 2013 JY_{35}	19.3	X	164.41142	222.80565	226.63163	30.63646	0.6688208	0.60394295	1.3861347	20	6 15.3	22.6
519825 2013 JN_{66}	16.6	X	59.29516	231.64831	81.74733	6.91904	0.1273863	0.18963360	3.0004924	20	11 23.2	20.9
519826 2013 JX_{66}	16.7	X	163.05525	248.08258	59.35258	15.10308	0.0649274	0.22868136	2.6483916	20	—	—
519827 2013 JB_{67}	16.4	X	147.41398	333.76884	197.76258	16.29676	0.0858961	0.17304279	3.1893367	20	8 26.9	21.5
519828 2013 JC_{67}	16.5	X	64.63344	118.46976	151.83705	10.98656	0.0728639	0.17386289	3.1792996	20	9 29.5	21.0
519829 2013 JE_{67}	16.5	X	99.54055	76.34652	205.91860	12.57302	0.1329935	0.19003448	2.9962712	20	11 28.9	21.3
519830 2013 JG_{67}	16.8	X	69.54502	161.18653	128.95318	12.36170	0.0854285	0.18102357	3.0948953	20	11 3.9	21.4
519831 2013 JH_{67}	16.3	X	92.82688	50.61918	198.70700	15.61156	0.0458930	0.17545015	3.1600956	20	9 30.5	20.8
519832 2013 JJ_{67}	16.9	X	159.67633	86.26179	117.88500	12.29378	0.0923199	0.18803800	3.0174422	20	10 28.6	21.8
519833 2013 JN_{67}	16.6	X	20.76824	138.24264	212.33248	16.21013	0.1218481	0.18136488	3.0910113	20	11 17.1	20.6
519834 2013 KH_{19}	15.9	X	132.44396	68.60164	282.26080	13.84005	0.1646284	0.20366675	2.8610314	20	1 12.5	20.1
519835 2013 KL_{19}	16.0	X	114.71779	10.99167	205.90736	23.96021	0.1754559	0.17415375	3.1757587	20	9 25.0	21.3
519836 2013 LL_{1}	15.6	X	25.72091	253.34562	102.70926	27.60353	0.1953092	0.18504553	3.0498863	20	12 14.9	19.8
519837 2013 LX_{24}	18.5	X	67.92983	355.33908	84.30566	24.26593	0.0738047	0.38346520	1.8763711	20	—	—
519838 2013 LZ_{26}	16.9	X	80.85458	211.80005	122.69546	16.70058	0.2650438	0.19484443	2.9467552	20	—	—
519839 2013 LM_{28}	16.8	X	216.90520	341.89064	235.94623	8.80824	0.1379446	0.21777499	2.7360921	20	—	—
519840 2013 LC_{30}	18.1	X	177.01548	94.94600	217.22333	20.67859	0.0885027	0.37140518	1.9167733	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519841 2013 LJ_{30}	16.9	X	116.72385	161.57854	76.37391	6.42084	0.1029108	0.18556544	3.0441869	20	10 23.2	21.6
519842 2013 LP_{32}	16.2	X	61.05882	221.81879	122.48206	13.32733	0.2955233	0.18947559	3.0021603	20	—	—
519843 2013 LL_{36}	17.0	X	222.80649	225.24532	50.17313	4.12656	0.1830570	0.22818602	2.6522229	20	1 3.1	21.3
519844 2013 LM_{36}	17.0	X	264.35005	101.39857	175.85331	12.44496	0.1197938	0.23188066	2.6239750	20	2 13.7	20.9
519845 2013 LO_{36}	16.7	X	233.05103	75.50639	228.79675	11.47354	0.1325476	0.23109536	2.6299161	20	2 11.7	21.0
519846 2013 LP_{36}	16.7	X	140.13077	43.01140	209.54046	10.27267	0.1853289	0.18344210	3.0676328	20	11 30.8	21.9
519847 2013 MF_{3}	17.9	X	340.70922	252.78931	240.46729	20.31394	0.0640429	0.36864981	1.9263123	20	—	—
519848 2013 MV_{12}	17.3	X	253.37769	107.56584	204.88995	9.71253	0.1508950	0.24537618	2.5268596	20	3 12.5	21.1
519849 2013 MW_{12}	17.4	X	261.60843	42.33652	250.72179	12.73035	0.1731900	0.24339044	2.5405848	20	2 19.8	21.7
519850 2013 MZ_{12}	17.2	X	165.55246	218.15699	102.52957	16.24100	0.1579056	0.21712039	2.7415887	20	1 7.3	21.5
519851 2013 MB_{13}	17.0	X	124.78791	135.36976	103.80824	2.49651	0.0925897	0.17535676	3.1612175	20	10 29.2	21.8
519852 2013 MK_{13}	17.5	X	179.76264	132.24831	208.48286	5.25746	0.1876371	0.22247553	2.6974157	20	2 11.5	22.0
519853 2013 MP_{13}	15.8	X	204.63056	281.27150	255.69741	8.14896	0.0759346	0.17196703	3.2026238	20	11 3.1	20.7
519854 2013 MQ_{13}	17.1	X	103.20824	298.38253	247.69465	6.45760	0.0538556	0.27909280	2.3190153	20	8 2.5	20.1
519855 2013 MR_{13}	17.0	X	234.06573	56.76155	266.32750	8.33790	0.0345913	0.24089308	2.5581136	20	3 12.6	20.6
519856 2013 NK_{11}	15.8	X	27.98643	245.63524	98.07659	11.69681	0.0884757	0.17462902	3.1699940	20	11 15.2	20.2
519857 2013 NF_{28}	17.5	X	209.87057	15.27808	314.98301	4.16671	0.1676395	0.23642215	2.5902635	20	2 24.1	21.7
519858 2013 NH_{28}	17.0	X	115.34938	165.66252	77.76380	3.46859	0.2240662	0.17418590	3.1753679	20	11 1.5	22.3
519859 2013 NT_{28}	17.9	X	233.80030	99.59920	272.51775	5.34350	0.1505082	0.25886250	2.4383158	20	5 8.2	21.6
519860 2013 NW_{28}	17.2	X	171.32589	223.53432	121.46263	6.29082	0.1753755	0.22548939	2.6733263	20	2 11.0	21.4
519861 2013 NX_{28}	16.1	X	51.42287	204.60503	119.67049	18.25234	0.1310910	0.17328879	3.1863177	20	11 28.3	20.9
519862 2013 NF_{29}	16.8	X	274.52626	328.57758	353.59940	7.72630	0.1964848	0.23757651	2.5818661	20	4 11.8	20.5
519863 2013 NG_{29}	16.7	X	330.65946	290.99668	9.11265	11.22009	0.0646949	0.24708076	2.5152246	20	6 25.6	19.9
519864 2013 NQ_{29}	16.9	X	179.35981	264.78887	318.42485	16.12041	0.1226067	0.18417797	3.0594563	20	11 29.8	22.0
519865 2013 NS_{29}	17.8	X	190.44231	24.81857	349.19996	2.91557	0.0605547	0.24139572	2.5545614	20	3 30.1	21.5
519866 2013 NV_{29}	18.1	X	332.25121	179.12983	104.21912	6.01426	0.1040957	0.26752855	2.3853711	20	5 31.4	20.4
519867 2013 NC_{30}	17.6	X	227.12235	282.67261	55.34583	4.12173	0.0774599	0.24378837	2.5378195	20	3 26.9	21.2
519868 2013 ND_{30}	17.7	X	135.42090	333.55332	71.79700	4.70835	0.0648899	0.23207424	2.6225157	20	3 10.7	21.4
519869 2013 NP_{30}	17.3	X	205.26985	155.47044	94.91801	6.05087	0.1480868	0.20563106	2.8427821	20	—	—
519870 2013 NS_{30}	16.1	X	234.69480	205.50456	327.91794	13.62246	0.0282780	0.18083459	3.0970512	20	12 11.5	20.7
519871 2013 NC_{31}	16.0	X	85.18506	292.73590	323.56252	7.96716	0.0387574	0.15534162	3.4272371	20	9 24.2	21.0
519872 2013 NE_{31}	16.6	X	292.72037	334.94073	117.52568	12.64749	0.0819199	0.16930595	3.2360947	20	11 12.8	21.1
519873 2013 NJ_{31}	17.2	X	217.10036	7.33010	10.34211	14.05226	0.1615524	0.23100550	2.6305981	20	4 26.0	21.5
519874 2013 NK_{31}	16.7	X	147.08891	20.09285	49.90145	5.93566	0.0478660	0.22096699	2.7096786	20	4 22.8	20.4
519875 2013 NL_{31}	16.2	X	126.79490	302.16238	44.07342	11.98369	0.1131574	0.18327274	3.0695224	20	—	—
519876 2013 NP_{31}	17.6	X	227.19368	149.05659	150.59574	3.51819	0.1876076	0.23173361	2.6250850	20	2 2.9	21.8
519877 2013 NX_{31}	16.4	X	156.93088	81.78517	149.21038	16.48653	0.0476632	0.17502353	3.1652286	20	11 23.7	21.4
519878 2013 NO_{32}	18.4	X	326.83181	117.65601	159.31381	6.43067	0.1319979	0.26301017	2.4126131	20	5 9.3	21.0
519879 2013 NY_{32}	16.8	X	110.29392	348.45814	294.22957	8.55759	0.0724770	0.17562301	3.1580216	20	12 1.5	21.6
519880 2013 NB_{33}	17.4	X	89.70415	155.33941	233.77909	1.16965	0.0923886	0.20478464	2.8506099	20	—	—
519881 2013 OH_{2}	18.7	X	332.29113	50.49752	111.46877	24.54078	0.1157383	0.36980423	1.9223013	20	—	—
519882 2013 OH_{3}	18.1	X	355.96081	9.62969	141.81866	24.26414	0.0493716	0.37014452	1.9211230	20	—	—
519883 2013 OX_{10}	17.0	X	117.47249	69.00041	193.64804	13.86014	0.2846444	0.17992424	3.1074890	20	11 28.2	22.7
519884 2013 OR_{12}	16.6	X	30.56812	184.14886	169.38813	11.10717	0.0792649	0.16974716	3.2304848	20	11 26.7	21.2
519885 2013 OT_{12}	16.8	X	330.86577	31.73653	242.12503	12.10691	0.1061680	0.24189559	2.5510408	20	5 13.2	19.5
519886 2013 OV_{12}	17.1	X	185.52491	72.42016	350.67020	12.87787	0.1380438	0.23398908	2.6081886	20	5 24.3	21.5
519887 2013 OW_{12}	16.2	X	101.71621	153.51620	203.81654	5.09215	0.1574667	0.18016929	3.1046706	20	—	—
519888 2013 OY_{12}	16.3	X	135.96193	137.51612	203.36641	12.40543	0.1467697	0.18567863	3.0429496	20	1 4.1	21.1
519889 2013 OZ_{12}	16.2	X	94.43849	302.78213	48.26873	0.31512	0.1625053	0.17497701	3.1657897	20	—	—
519890 2013 OA_{13}	16.4	X	112.02239	238.37870	110.69745	3.66556	0.2186187	0.18288566	3.0738520	20	—	—
519891 2013 OB_{13}	17.1	X	277.97051	263.64818	118.60163	6.61423	0.1388421	0.25855861	2.4402260	20	7 20.0	19.7
519892 2013 OC_{13}	17.2	X	284.51193	305.56590	81.31068	6.61358	0.1368274	0.26203170	2.4186155	20	8 9.5	19.9
519893 2013 OF_{13}	16.7	X	146.37246	279.32897	52.84486	2.73528	0.0667064	0.20305455	2.8667791	20	—	—
519894 2013 PQ_{20}	18.6	X	298.90982	81.97003	138.54255	22.87631	0.1390965	0.37629328	1.9001377	20	—	—
519895 2013 PK_{79}	16.2	X	116.07931	335.10043	325.49814	16.67965	0.1784578	0.18523881	3.0477645	20	—	—
519896 2013 PX_{79}	17.1	X	284.09996	9.26804	335.30752	7.43483	0.1019712	0.26202835	2.4186361	20	6 9.9	20.3
519897 2013 PE_{80}	18.1	X	307.99041	107.73312	188.73284	5.22211	0.1294950	0.26016090	2.4301964	20	5 5.2	20.8
519898 2013 PF_{80}	16.0	X	66.38894	251.58324	145.19724	10.14844	0.1364437	0.19302750	2.9652178	20	—	—
519899 2013 PG_{80}	16.2	X	49.54722	89.20986	299.93114	8.50035	0.1028246	0.18547329	3.0451951	20	—	—
519900 2013 PK_{80}	16.9	X	245.42841	291.07377	338.25421	13.77567	0.1182242	0.22246259	2.6975203	20	1 22.4	21.2
519901 2013 PL_{80}	16.4	X	123.49095	195.03953	79.50189	2.14027	0.1485627	0.17516669	3.1635038	20	12 9.3	21.4
519902 2013 PN_{80}	17.7	X	84.45747	69.49299	159.70082	5.42122	0.0799079	0.28208441	2.3025902	20	9 14.9	20.6
519903 2013 PR_{80}	17.5	X	235.44832	172.53375	158.05376	4.90891	0.1682787	0.23756283	2.5819652	20	3 19.8	21.6
519904 2013 PU_{80}	17.1	X	229.14060	111.32596	160.86028	3.64757	0.0504073	0.21306556	2.7762626	20	1 10.1	21.2
519905 2013 PZ_{81}	18.0	X	245.63012	46.20003	352.65062	7.94830	0.0945603	0.26314510	2.4117883	20	7 7.1	21.3
519906 2013 PF_{82}	17.7	X	261.00944	76.63464	198.67809	3.75699	0.0833940	0.22718396	2.6600161	20	2 12.8	21.5
519907 2013 PO_{82}	16.1	X	62.33170	68.30295	316.28330	8.88061	0.0596069	0.18655278	3.0334365	20	—	—
519908 2013 QS_{51}	16.8	X	189.18029	96.12728	177.66194	10.41636	0.0659127	0.19067563	2.9895507	20	—	—
519909 2013 QM_{64}	17.2	X	239.42510	38.25842	319.80474	15.28437	0.1555684	0.25177138	2.4838868	20	4 18.6	21.4
519910 2013 QA_{96}	17.2	X	163.61473	180.67126	186.47791	4.87839	0.0747777	0.22395222	2.6855452	20	2 22.1	21.0
519911 2013 QD_{96}	17.0	X	236.91290	121.54134	237.58199	12.11565	0.1744012	0.24394350	2.5367434	20	4 22.6	21.0
519912 2013 QH_{96}	18.2	X	231.02769	88.53588	326.31123	9.00929	0.1140352	0.26483740	2.4015032	20	7 8.5	21.7
519913 2013 QJ_{96}	17.5	X	277.29980	47.38228	354.51277	7.15272	0.1038186	0.28087150	2.3092144	20	8 27.6	20.0
519914 2013 RL_{1}	19.3	X	180.47256	139.75629	169.63862	23.18017	0.0764124	0.35293616	1.9830726	20	—	—
519915 2013 RD_{104}	16.9	X	167.73716	175.48782	185.56720	3.51058	0.1071789	0.21354293	2.7721236	20	2 22.6	21.0
519916 2013 RE_{104}	17.8	X	261.27672	229.57209	178.18422	6.62005	0.1129225	0.26714872	2.3876316	20	8 4.7	20.8
519917 2013 RG_{104}	17.0	X	229.95511	342.09542	357.59360	13.22477	0.1901052	0.23510229	2.5999489	20	3 23.1	21.1
519918 2013 RJ_{104}	16.3	X	115.61994	303.36060	342.56090	12.23425	0.1311814	0.17164588	3.2066173	20	12 13.2	21.6
519919 2013 RN_{104}	17.9	X	270.74064	86.57936	308.87587	6.06406	0.1182783	0.27110027	2.3643735	20	8 1.9	20.5
519920 2013 RP_{104}	18.1	X	253.70153	68.68877	317.53060	4.50507	0.1224781	0.26140964	2.4224509	20	6 24.5	21.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
519921 2013 RX_{104}	17.0	X	185.16173	175.24842	204.50048	5.71408	0.0397570	0.22605639	2.6688543	20	4 1.1	20.6
519922 2013 RY_{104}	17.0	X	326.97926	258.65491	1.32991	12.62184	0.0463634	0.23802733	2.5786050	20	4 20.3	20.4
519923 2013 RZ_{104}	16.9	X	172.06921	6.15791	334.60131	7.33716	0.2108630	0.21175413	2.7877134	20	2 9.9	21.7
519924 2013 RA_{105}	17.6	X	206.20196	19.68229	327.15621	4.79272	0.1634061	0.22541346	2.6739266	20	3 12.3	21.9
519925 2013 RB_{105}	16.7	X	69.76032	157.04199	221.74270	1.01292	0.0752285	0.17854024	3.1235273	20	—	—
519926 2013 RC_{105}	17.4	X	216.66874	186.03774	187.56131	15.00122	0.1099536	0.23705259	2.5856689	20	4 29.0	21.4
519927 2013 RD_{105}	17.2	X	208.44590	127.59721	180.25811	3.40164	0.0775312	0.20985414	2.8045145	20	1 30.4	21.5
519928 2013 RE_{105}	17.5	X	197.20186	225.90075	168.56485	4.70013	0.1675968	0.23498642	2.6008035	20	5 3.6	21.7
519929 2013 RF_{105}	17.1	X	182.76008	276.36145	71.45595	1.64386	0.0842170	0.21384602	2.7695036	20	2 22.3	21.1
519930 2013 RS_{105}	18.1	X	200.96513	201.42312	251.64166	1.91273	0.1353202	0.25914774	2.4365263	20	7 22.2	21.6
519931 2013 RT_{105}	17.3	X	213.12348	28.91172	339.44220	10.60392	0.1410074	0.23781439	2.5801441	20	4 10.7	21.6
519932 2013 RW_{105}	17.4	X	173.85580	223.79020	194.86810	4.05866	0.1362108	0.22677242	2.6632334	20	5 11.7	21.5
519933 2013 RY_{105}	17.3	X	154.80344	242.87603	189.60401	2.42022	0.0612320	0.22584056	2.6705544	20	5 5.7	21.1
519934 2013 RZ_{105}	16.8	X	142.54039	98.28902	185.99729	14.97219	0.2488874	0.18377937	3.0638785	20	—	—
519935 2013 RB_{106}	16.6	X	188.50790	275.19751	39.05247	13.26265	0.2119037	0.20965972	2.8062480	20	1 26.3	21.6
519936 2013 RC_{106}	18.5	X	299.95673	67.84301	353.71454	6.47619	0.0746766	0.29403460	2.2397717	20	11 6.9	20.9
519937 2013 RE_{106}	17.1	X	203.14510	165.80955	192.29275	5.73770	0.0644922	0.22357846	2.6885374	20	3 25.6	21.0
519938 2013 RF_{106}	17.7	X	236.28679	137.55815	194.71558	3.13008	0.0843423	0.22880282	2.6474542	20	3 28.4	21.6
519939 2013 RO_{106}	18.1	X	215.02112	35.49669	294.44486	1.27462	0.2033812	0.22462051	2.6802159	20	2 28.7	22.7
519940 2013 RP_{106}	17.0	X	295.44745	276.92091	38.33695	11.79947	0.0685888	0.23793599	2.5792649	20	5 20.0	20.4
519941 2013 RR_{106}	17.0	X	158.66672	190.18548	222.37427	5.68243	0.0612548	0.21622882	2.7491198	20	4 13.6	20.9
519942 2013 RS_{106}	16.9	X	272.21758	104.07592	224.08595	8.49829	0.1548151	0.23581152	2.5947331	20	4 24.3	20.5
519943 2013 RU_{106}	17.4	X	208.40550	189.79531	156.76848	14.55063	0.1953075	0.22745180	2.6579275	20	3 15.9	21.8
519944 2013 RV_{106}	17.6	X	202.84604	253.35879	137.89259	8.34312	0.1989726	0.23686667	2.5870217	20	5 5.6	22.0
519945 2013 RA_{107}	17.7	X	288.41004	277.19339	82.42515	7.33856	0.1344821	0.26135482	2.4227896	20	7 4.2	20.4
519946 2013 RC_{107}	16.9	X	186.75792	271.84714	142.23280	13.47884	0.1931033	0.23634570	2.5908220	20	5 21.1	21.5
519947 2013 RO_{107}	16.1	X	336.17966	7.57210	34.12432	5.99899	0.1140446	0.14764171	3.5453846	20	11 2.6	20.5
519948 2013 RS_{107}	17.9	X	227.72603	44.29532	265.54312	1.24787	0.1948936	0.22303745	2.6928832	20	2 15.7	22.4
519949 2013 SJ_{4}	17.3	X	270.74591	113.57354	266.71535	13.59294	0.1126845	0.25814800	2.4428129	20	7 9.0	20.5
519950 2013 SQ_{6}	16.4	X	3.41323	68.23331	34.81453	9.85375	0.0656590	0.17466781	3.1695247	20	—	—
519951 2013 SC_{9}	16.3	X	176.51236	268.25779	327.79645	11.18957	0.0270409	0.18198388	3.0839982	20	12 19.9	20.9
519952 2013 SL_{13}	16.5	X	7.71478	77.01040	0.07697	9.47290	0.2274125	0.17473165	3.1687526	20	—	—
519953 2013 SB_{85}	18.0	X	123.11861	337.72632	23.08455	20.68148	0.0856542	0.34234663	2.0237585	20	—	—
519954 2013 SQ_{101}	17.0	X	127.61186	274.15512	200.59554	12.28988	0.2188383	0.22401016	2.6850821	20	6 12.0	21.5
519955 2013 SR_{101}	16.1	X	83.58598	12.23715	54.85754	13.04393	0.0720473	0.18592386	3.0402734	20	2 11.9	20.5
519956 2013 SV_{101}	17.0	X	42.70841	230.45043	196.58717	2.85321	0.1035924	0.18162085	3.0881063	20	—	—
519957 2013 SX_{101}	17.6	X	208.11349	189.94457	154.20892	3.78814	0.1884232	0.22200921	2.7011916	20	3 12.2	22.0
519958 2013 SY_{101}	17.3	X	193.27232	290.86912	74.38826	5.59837	0.1289358	0.22118351	2.7079099	20	3 27.3	21.6
519959 2013 SZ_{101}	16.8	X	195.73234	225.11026	167.09726	13.45867	0.1984726	0.23265143	2.6181764	20	5 1.1	21.4
519960 2013 TH_{45}	16.9	X	279.56092	345.10149	210.88294	8.22148	0.0316737	0.18633995	3.0357458	20	—	—
519961 2013 TT_{84}	17.3	X	222.61572	354.63252	298.58901	5.64420	0.0627511	0.21073872	2.7966610	20	1 28.3	21.4
519962 2013 TH_{127}	19.0	X	248.21650	76.54633	191.44385	22.32896	0.0579304	0.36113713	1.9529357	20	—	—
519963 2013 TG_{155}	17.9	X	305.34230	104.77535	135.00177	2.79133	0.0763079	0.23642186	2.5902656	20	2 23.0	21.1
519964 2013 TL_{159}	17.4	X	292.37770	223.21060	144.48153	7.39362	0.1303079	0.26678760	2.3897857	20	7 23.4	19.9
519965 2013 TH_{165}	16.8	X	192.37251	66.03814	284.21729	2.82339	0.0811069	0.21412894	2.7670635	20	3 4.1	20.9
519966 2013 TL_{165}	17.8	X	142.54850	231.57826	198.60288	3.36220	0.1094604	0.22572990	2.6714271	20	4 22.5	21.6
519967 2013 TQ_{165}	17.3	X	283.84241	136.41851	180.03690	5.37301	0.0239846	0.23387896	2.6090072	20	5 15.6	20.7
519968 2013 TU_{165}	17.0	X	176.74665	145.61850	259.41962	6.42824	0.0803761	0.22354950	2.6887695	20	4 23.7	21.0
519969 2013 TC_{166}	17.6	X	251.53961	103.98703	195.04023	12.65379	0.1891415	0.22735341	2.6586943	20	2 20.8	22.1
519970 2013 TH_{166}	16.0	X	352.10547	261.75314	201.97833	15.92341	0.0969178	0.17568421	3.1572882	20	—	—
519971 2013 TK_{166}	16.7	X	229.76208	28.31392	255.29750	7.70052	0.0647709	0.19708488	2.9243803	20	1 24.5	21.1
519972 2013 TU_{166}	17.1	X	193.90401	167.94901	178.79022	3.66209	0.1522251	0.21659808	2.7459944	20	3 2.7	21.4
519973 2013 TY_{166}	18.5	X	295.46392	233.35567	183.50161	6.30258	0.1023002	0.27994922	2.3142834	20	10 20.9	20.6
519974 2013 TZ_{166}	17.5	X	170.46591	74.34651	287.87465	0.94238	0.0798123	0.21104721	2.7939351	20	2 25.9	21.6
519975 2013 TA_{167}	17.8	X	195.14744	32.27663	17.52612	9.91937	0.0333575	0.23888110	2.5724574	20	5 20.6	21.5
519976 2013 TB_{167}	18.4	X	218.11750	58.08008	355.18882	2.65953	0.1222564	0.24754354	2.5120888	20	6 18.5	22.2
519977 2013 TC_{167}	16.4	X	98.40749	115.40383	240.70401	8.28508	0.1146231	0.17660156	3.1463451	20	—	—
519978 2013 TD_{167}	17.1	X	195.35506	54.91975	290.85282	3.53571	0.1238501	0.21274880	2.7790177	20	3 1.9	21.6
519979 2013 TE_{167}	17.5	X	139.66317	98.17957	323.65549	3.17065	0.0916907	0.21487109	2.7606884	20	4 5.9	21.6
519980 2013 TK_{167}	17.4	X	212.47329	247.63515	81.14195	5.78179	0.1409090	0.21950367	2.7217080	20	2 29.9	21.8
519981 2013 TL_{167}	16.8	X	148.42556	355.75049	52.69650	10.55182	0.1414119	0.21822437	2.7323346	20	4 7.8	21.1
519982 2013 TQ_{167}	17.4	X	128.76043	264.40869	183.57410	12.27804	0.2106311	0.21947791	2.7219209	20	5 11.9	21.9
519983 2013 TU_{167}	17.1	X	138.43964	243.71183	187.46475	9.38380	0.0877023	0.22142036	2.7059785	20	4 18.3	21.0
519984 2013 TY_{167}	17.7	X	135.27296	330.97520	127.09655	3.03554	0.0220774	0.23208739	2.6224166	20	5 12.2	21.1
519985 2013 TB_{168}	17.1	X	292.89540	278.38803	40.50924	9.46213	0.0636738	0.24327447	2.5413922	20	5 22.7	20.2
519986 2013 TE_{168}	16.6	X	127.77492	135.19160	182.50438	2.51243	0.0647968	0.17400539	3.1775636	20	—	—
519987 2013 TM_{168}	17.5	X	318.21127	98.66210	188.36780	7.47481	0.1151189	0.24277951	2.5448452	20	5 11.6	20.4
519988 2013 TS_{168}	17.2	X	196.77436	14.98174	43.68006	15.48864	0.0818554	0.23596095	2.5936376	20	6 1.7	21.1
519989 2013 TT_{168}	16.4	X	151.80456	331.44899	38.62922	12.46660	0.1452207	0.21008970	2.8024178	20	2 27.8	20.9
519990 2013 TU_{168}	17.0	X	207.55901	318.42694	43.33093	5.32742	0.1700371	0.22594459	2.6697345	20	4 3.0	21.3
519991 2013 TW_{168}	18.1	X	261.24861	296.69624	56.04973	3.19320	0.1678679	0.24401050	2.5362791	20	5 12.5	21.5
519992 2013 TZ_{168}	17.4	X	158.28714	30.08183	55.90850	7.88767	0.0983657	0.23033109	2.6357305	20	5 28.3	21.4
519993 2013 TF_{169}	17.3	X	260.95465	124.68360	209.50484	13.66074	0.0894177	0.23850080	2.5751913	20	4 28.5	20.9
519994 2013 TH_{169}	18.1	X	290.02130	124.09099	223.86907	5.60664	0.1160275	0.25505991	2.4624906	20	6 21.9	21.0
519995 2013 TM_{169}	16.9	X	130.41732	187.91538	278.12640	6.59884	0.1473477	0.22673105	2.6635573	20	5 28.1	21.0
519996 2013 TO_{169}	17.3	X	124.12089	55.86350	347.80775	5.16757	0.0806451	0.20442224	2.8539780	20	2 27.1	21.3
519997 2013 TV_{169}	17.3	X	245.06474	93.30685	245.66938	6.52477	0.1484792	0.23123753	2.6288380	20	4 7.5	21.4
519998 2013 TW_{169}	17.1	X	134.91926	279.75431	169.10066	8.21038	0.2121003	0.21982297	2.7190717	20	5 18.4	21.6
519999 2013 TF_{170}	17.0	X	239.25261	277.32208	48.53511	8.20897	0.1501317	0.22030046	2.7151414	20	3 22.8	21.3
520000 2013 TG_{170}	16.3	X	50.71496	187.17636	242.45031	10.63261	0.0125893	0.18601666	3.0392621	20	—	—