Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512001 2015 KZ_{153}	16.7	X	260.90526	236.19255	251.23055	6.45353	0.1562175	0.23303902	2.6152725	21	10 30.3	20.1
512002 2015 KE_{160}	17.0	X	156.64212	162.14545	112.22287	13.82861	0.1814591	0.23870465	2.5737250	21	—	—
512003 2015 KM_{160}	16.1	X	336.98334	13.39762	257.30827	7.90481	0.0232296	0.18003443	3.1062209	21	5 18.2	20.3
512004 2015 KX_{164}	17.1	X	218.89415	73.53175	79.96835	26.08278	0.1466785	0.22567744	2.6718410	21	10 28.9	21.6
512005 2015 KO_{165}	17.0	X	93.71313	32.75312	258.46720	2.06595	0.0699035	0.22382742	2.6865434	21	11 25.5	20.7
512006 2015 KR_{165}	17.1	X	168.92859	158.97094	74.83641	15.85141	0.0561828	0.23138472	2.6277231	21	12 8.5	20.9
512007 2015 LO_{1}	15.8	X	335.61226	179.97432	141.31520	18.93190	0.2082276	0.18010548	3.1054040	21	7 7.1	19.3
512008 2015 LY_{1}	17.8	X	298.78704	92.20339	113.60066	22.69712	0.1545042	0.28454144	2.2893158	21	—	—
512009 2015 LE_{12}	16.4	X	170.86409	177.97044	91.63567	15.56753	0.1974525	0.24342529	2.5403424	21	—	—
512010 2015 LV_{21}	17.3	X	131.67259	159.74083	139.31616	12.71734	0.1648417	0.23785110	2.5798786	21	—	—
512011 2015 LW_{22}	18.3	X	295.93687	5.21078	211.49221	4.35928	0.1154017	0.28189426	2.3036256	21	—	—
512012 2015 LA_{24}	16.0	X	81.43702	39.97347	287.93524	23.62621	0.1174572	0.21191603	2.7862934	21	12 31.0	20.2
512013 2015 LM_{26}	17.3	X	18.74827	216.79208	165.88335	6.25293	0.0669453	0.22556887	2.6726983	21	12 17.8	20.8
512014 2015 LT_{30}	17.2	X	261.87676	153.10918	114.23154	5.23137	0.0995961	0.27445891	2.3450449	21	1 17.1	20.3
512015 2015 LJ_{31}	17.3	X	314.28286	326.39165	205.63857	1.59450	0.1720334	0.25984729	2.4321513	21	—	—
512016 2015 LV_{31}	15.7	X	254.04547	318.48215	114.85854	18.71671	0.0680377	0.17369743	3.1813183	21	8 24.2	20.4
512017 2015 LA_{32}	16.9	X	15.79479	47.37068	300.41193	10.58885	0.1982434	0.18750770	3.0231287	21	11 2.7	20.6
512018 2015 LC_{33}	16.7	X	77.07485	184.82165	93.62472	9.90361	0.0571827	0.19162614	2.9796566	21	10 19.8	21.0
512019 2015 LD_{33}	16.7	X	72.25884	240.21045	92.99993	10.17627	0.0890108	0.21113226	2.7931847	21	12 22.8	20.5
512020 2015 LO_{35}	16.6	X	16.10234	162.78953	121.26707	10.10323	0.1073280	0.18422746	3.0589084	21	8 3.5	20.4
512021 2015 LG_{41}	16.4	X	199.58254	311.80615	242.86836	34.52825	0.1264104	0.22689726	2.6622564	21	11 17.7	20.5
512022 2015 LB_{42}	17.0	X	104.52397	185.26053	114.04380	12.34722	0.1267957	0.22420839	2.6834993	21	12 22.2	21.1
512023 2015 ML_{1}	15.9	X	88.22092	210.61041	113.64145	33.83595	0.1777368	0.23296000	2.6158639	21	—	—
512024 2015 MH_{7}	16.8	X	254.27800	34.76713	128.74073	14.84802	0.1332448	0.22538134	2.6741807	21	12 12.9	20.5
512025 2015 MW_{9}	17.4	X	280.48234	80.43431	129.95098	5.26852	0.1768819	0.26240015	2.4163509	21	—	—
512026 2015 MV_{24}	17.2	X	127.60625	57.41764	253.72319	10.76584	0.0947762	0.24714240	2.5148063	21	—	—
512027 2015 ME_{44}	16.5	X	317.80478	253.58145	195.97420	21.54686	0.0671137	0.22640512	2.6661130	21	12 15.2	20.2
512028 2015 MS_{47}	16.8	X	169.08007	144.13774	103.96222	9.80679	0.0932119	0.21555499	2.7548460	21	12 21.8	21.1
512029 2015 MG_{52}	17.2	X	155.37514	325.19966	294.25999	9.66779	0.1852461	0.22239942	2.6980311	21	12 20.8	21.8
512030 2015 MK_{58}	16.7	X	62.38129	337.98700	329.43730	6.17614	0.0840487	0.19640239	2.9311511	21	11 3.9	20.8
512031 2015 MG_{59}	15.9	X	334.06226	213.09336	116.42604	26.34676	0.2120134	0.16069028	3.3507573	21	7 14.8	19.7
512032 2015 MU_{65}	17.3	X	175.23871	25.11165	238.28922	4.82665	0.1577247	0.23477703	2.6023496	21	—	—
512033 2015 ME_{66}	16.5	X	151.15287	184.55204	118.96435	19.61293	0.2088689	0.23571194	2.5954639	21	—	—
512034 2015 MF_{66}	16.3	X	80.91591	169.71863	131.08463	9.94912	0.0902832	0.20248345	2.8721670	21	11 24.5	20.6
512035 2015 MX_{66}	16.4	X	109.83857	197.27657	84.72356	11.66987	0.2616839	0.21861473	2.7290811	21	12 12.7	21.0
512036 2015 MY_{66}	16.3	X	175.16817	155.74779	96.37887	15.79206	0.0729436	0.24043421	2.5613674	21	—	—
512037 2015 MO_{67}	17.0	X	232.90229	283.24617	295.00951	6.27573	0.1197006	0.24235416	2.5478219	21	—	—
512038 2015 MR_{67}	16.9	X	88.25421	220.36208	98.64791	4.29137	0.0982366	0.21259203	2.7803837	21	12 24.4	20.9
512039 2015 MS_{68}	16.9	X	64.39211	84.60230	254.73496	4.28585	0.0799523	0.21293123	2.7774301	21	12 20.4	20.8
512040 2015 MX_{69}	16.8	X	150.68855	155.50730	123.26705	14.20314	0.2474734	0.22997587	2.6384439	21	—	—
512041 2015 MS_{76}	16.9	X	253.24590	262.08064	260.58635	9.09851	0.2378562	0.22877526	2.6476669	21	11 22.6	20.3
512042 2015 MK_{77}	17.6	X	204.54243	105.08184	159.53367	7.26171	0.1292745	0.24690437	2.5164223	21	—	—
512043 2015 MS_{79}	16.8	X	108.96820	101.56549	134.65956	12.13454	0.0789039	0.18950746	3.0018236	21	10 6.7	21.4
512044 2015 MU_{79}	17.1	X	179.51825	16.39829	218.14777	4.23607	0.0603338	0.22030315	2.7151193	21	12 19.0	21.1
512045 2015 MO_{81}	16.6	X	305.47242	148.01545	268.30549	7.88326	0.0375747	0.19091840	2.9870159	21	10 7.6	20.8
512046 2015 MU_{81}	17.4	X	95.94654	255.79869	128.22190	10.55937	0.3145551	0.23146917	2.6270839	21	1 16.5	20.3
512047 2015 ML_{85}	16.6	X	119.60230	263.73788	291.07719	6.27046	0.2073484	0.18000496	3.1065599	21	8 31.6	21.8
512048 2015 MM_{85}	16.3	X	44.66963	184.25291	121.83237	11.04241	0.0805126	0.18631722	3.0359927	21	10 16.2	20.6
512049 2015 MZ_{88}	16.3	X	357.53230	205.30910	124.96393	13.82946	0.0743448	0.17429562	3.1740352	21	9 5.1	20.5
512050 2015 MH_{89}	17.1	X	162.70880	322.83451	257.82920	5.21417	0.1185818	0.20913014	2.8109835	21	11 10.0	21.6
512051 2015 MX_{91}	16.7	X	165.88255	141.79783	111.08226	15.61678	0.1966152	0.22344011	2.6896470	21	12 22.0	21.2
512052 2015 MK_{92}	17.1	X	204.11599	141.58572	100.81597	7.84947	0.0811568	0.25474837	2.4644978	21	—	—
512053 2015 MK_{93}	16.0	X	34.77473	174.05003	106.08361	10.45788	0.1154910	0.18630787	3.0360943	21	9 1.6	19.9
512054 2015 MA_{95}	16.8	X	193.52750	65.05367	187.10604	13.10867	0.0636406	0.24238992	2.5475713	21	—	—
512055 2015 MH_{99}	16.4	X	314.36273	254.04373	120.63183	9.10087	0.0547370	0.17283667	3.1918719	21	8 29.9	20.7
512056 2015 MW_{102}	16.2	X	40.35484	257.93213	151.38810	22.34615	0.0540281	0.22897211	2.6461492	21	—	—
512057 2015 MH_{103}	16.9	X	5.39242	278.50465	48.64794	1.77856	0.1649574	0.17489538	3.1667747	21	9 16.3	20.3
512058 2015 MJ_{103}	16.4	X	152.84259	118.60093	101.47676	10.45237	0.0588334	0.20078370	2.8883539	21	11 3.6	20.8
512059 2015 MY_{105}	16.8	X	98.76718	208.31556	116.63677	6.20142	0.1243634	0.22053149	2.7132448	21	—	—
512060 2015 MR_{111}	16.8	X	66.42454	176.45191	111.75410	10.34039	0.0879010	0.18928612	3.0041633	21	10 23.0	21.2
512061 2015 MB_{115}	16.5	X	231.62002	294.48730	259.33512	12.05101	0.1989794	0.23025612	2.6363026	21	12 12.4	20.0
512062 2015 MF_{117}	16.3	X	311.78404	344.29067	144.80763	22.29061	0.0272404	0.22805920	2.6532061	21	—	—
512063 2015 MH_{118}	16.1	X	26.93089	191.39004	109.86943	14.15161	0.1069693	0.17377123	3.1804175	21	9 17.4	20.4
512064 2015 MA_{123}	17.2	X	49.41704	128.99552	167.82431	7.98753	0.2108613	0.18537016	3.0463245	21	10 26.8	21.3
512065 2015 MQ_{123}	17.6	X	211.40570	101.22818	142.84724	15.52123	0.2180325	0.24325181	2.5415501	21	—	—
512066 2015 MC_{125}	15.8	X	34.45643	162.75213	144.34004	24.12156	0.0962238	0.17864670	3.1222862	21	10 4.9	20.2
512067 2015 MW_{126}	16.3	X	347.90280	307.15290	97.71657	10.96372	0.1033676	0.19978655	2.8979566	21	11 30.1	19.9
512068 2015 MG_{132}	16.6	X	68.75731	357.62142	310.88942	8.05110	0.0926214	0.20270168	2.8701052	21	11 15.2	20.8
512069 2015 MZ_{133}	17.0	X	121.01924	259.86831	46.65144	3.79503	0.1415407	0.21463163	2.7627414	21	—	—
512070 2015 MD_{134}	17.3	X	147.92525	288.71598	337.44421	3.26728	0.0810259	0.22076102	2.7113638	21	12 23.0	21.3
512071 2015 ME_{134}	15.7	X	356.78820	56.32736	305.02287	17.23553	0.1116789	0.18137280	3.0909213	21	10 3.1	19.9
512072 2015 MN_{134}	16.4	X	35.36865	221.46611	80.19340	10.61149	0.0736405	0.17502024	3.1652683	21	9 26.4	20.8
512073 2015 MR_{134}	16.1	X	20.61933	223.36817	100.43403	10.36155	0.1042783	0.17647889	3.1478029	21	10 6.7	20.3
512074 2015 MA_{135}	15.9	X	52.78085	39.95051	241.23783	4.69588	0.1404376	0.17390131	3.1788313	21	9 25.6	20.2
512075 2015 MC_{135}	17.4	X	259.71796	15.62764	170.92015	5.19163	0.0133492	0.23320051	2.6140650	21	—	—
512076 2015 NS_{4}	17.0	X	169.96859	328.06146	285.03337	12.58793	0.2202647	0.22978848	2.6398781	21	12 25.0	21.4
512077 2015 NM_{5}	16.1	X	24.20115	51.77587	273.99586	26.24486	0.1143920	0.18052595	3.1005801	21	9 26.6	20.7
512078 2015 NT_{6}	16.4	X	305.00867	245.89970	139.13007	10.19564	0.0935349	0.17472237	3.1688648	21	8 24.3	20.4
512079 2015 NM_{7}	17.5	X	241.28985	56.29802	158.39309	6.44466	0.1566165	0.24459458	2.5322398	21	—	—
512080 2015 NW_{7}	17.0	X	169.54144	352.88533	238.92731	4.21223	0.1081311	0.21660443	2.7459407	21	12 2.1	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512081 2015 NR_{11}	17.1	X	11.16946	237.01617	259.60684	6.03262	0.0582076	0.27931540	2.3177831	21	—	—
512082 2015 NQ_{12}	16.1	X	73.14376	336.76046	317.83741	10.80957	0.1100669	0.18894517	3.0077762	21	11 1.3	20.7
512083 2015 NV_{14}	15.8	X	1.88250	35.74577	291.46358	15.52902	0.1341331	0.17094102	3.2154260	21	8 29.8	19.9
512084 2015 NT_{23}	18.0	X	206.28634	46.57508	284.05612	4.93602	0.2167304	0.26946705	2.3739174	21	2 9.9	22.0
512085 2015 NW_{23}	16.8	X	129.08712	169.99441	143.71185	14.10525	0.1255948	0.22974552	2.6402072	21	—	—
512086 2015 NV_{25}	16.6	X	133.89426	359.19956	277.56962	6.53309	0.2052052	0.23030631	2.6359196	21	12 24.4	21.0
512087 2015 OF_{3}	15.6	X	20.62237	10.67537	330.86300	13.50480	0.1055910	0.18212501	3.0824047	21	10 17.9	19.8
512088 2015 OH_{3}	15.9	X	59.77409	38.93670	271.49824	13.63490	0.1803691	0.18832321	3.0143950	21	11 17.5	20.3
512089 2015 OO_{7}	15.9	X	254.22214	150.32942	292.00220	26.43415	0.1250013	0.17227525	3.1988027	21	8 14.1	20.9
512090 2015 OS_{7}	16.4	X	313.81595	224.68023	161.78184	11.67522	0.0907037	0.17585668	3.1552236	21	9 8.2	20.4
512091 2015 OP_{8}	16.5	X	33.16455	271.64622	152.13503	22.20373	0.0385629	0.23192904	2.6236101	21	—	—
512092 2015 OA_{12}	16.2	X	222.40039	0.00842	125.34460	15.96054	0.0833942	0.18341076	3.0679823	21	9 21.9	20.9
512093 2015 OE_{12}	17.4	X	228.45336	261.36491	2.48533	0.75425	0.1634881	0.25650181	2.4532535	21	—	—
512094 2015 OO_{12}	17.2	X	176.87604	147.53431	107.25318	7.18724	0.1599413	0.22904764	2.6455674	21	—	—
512095 2015 OA_{19}	17.6	X	236.96388	207.37525	48.79647	2.02914	0.1480869	0.25519486	2.4616224	21	—	—
512096 2015 OX_{22}	16.3	X	227.53483	290.64133	286.52873	12.47063	0.1167799	0.23341781	2.6124424	21	—	—
512097 2015 OY_{24}	17.6	X	222.13594	77.32885	211.03681	8.65615	0.1613169	0.25854061	2.4403392	21	1 4.2	21.7
512098 2015 OG_{25}	16.6	X	162.11190	18.93621	279.15610	13.96784	0.1083068	0.23153704	2.6265705	21	—	—
512099 2015 OQ_{25}	15.9	X	200.09920	62.04372	109.95574	18.40445	0.0856011	0.20319772	2.8654324	21	10 30.2	20.5
512100 2015 OS_{29}	16.4	X	171.30483	281.61754	340.99947	23.58271	0.2165349	0.21962601	2.7206971	21	—	—
512101 2015 OC_{30}	17.8	X	264.55224	298.83723	25.92858	6.67454	0.1893945	0.28604471	2.2812879	21	3 26.9	21.3
512102 2015 OZ_{32}	16.1	X	30.90998	223.57155	115.60772	12.29412	0.0807992	0.18422438	3.0589425	21	11 7.7	20.4
512103 2015 OU_{34}	17.0	X	74.71072	349.78048	359.07128	5.92882	0.0617755	0.21335337	2.7737653	21	—	—
512104 2015 OZ_{44}	16.4	X	5.70372	266.55923	96.64593	10.51371	0.0911138	0.19152730	2.9806817	21	11 3.7	20.3
512105 2015 OE_{47}	16.6	X	191.26957	174.02449	105.56648	15.36116	0.1222258	0.23822134	2.5772049	21	—	—
512106 2015 OV_{62}	16.2	X	128.18268	161.00700	89.51224	17.23691	0.0354501	0.18719452	3.0264996	21	11 12.1	20.8
512107 2015 OW_{63}	15.8	X	0.82101	263.70060	111.62256	19.78541	0.1140902	0.17919074	3.1159634	21	11 14.9	20.0
512108 2015 OH_{65}	15.8	X	41.43172	22.47067	324.84344	12.67926	0.0286299	0.19097281	2.9864485	21	11 16.8	20.2
512109 2015 OV_{66}	15.8	X	36.66218	11.92839	285.44740	10.87795	0.0918247	0.18095149	3.0957171	21	9 13.5	20.0
512110 2015 OM_{68}	16.6	X	31.65805	23.37715	292.94856	10.62781	0.1571749	0.18369329	3.0648356	21	10 10.2	20.7
512111 2015 OR_{72}	16.8	X	41.51467	166.55345	143.63124	11.56004	0.1081678	0.18630923	3.0360795	21	10 20.1	21.0
512112 2015 OB_{74}	16.3	X	25.97835	184.52840	134.09124	12.21692	0.0764144	0.18065746	3.0990752	21	10 4.3	20.5
512113 2015 OS_{74}	16.2	X	32.06566	22.93303	324.51993	11.14487	0.1226678	0.18520105	3.0481787	21	11 16.9	20.4
512114 2015 OB_{77}	16.5	X	167.87619	334.69240	330.89175	12.05170	0.2488552	0.23405245	2.6077178	21	—	—
512115 2015 OS_{83}	16.1	X	47.36902	342.89622	312.26154	11.20322	0.0494682	0.17249658	3.1960659	21	9 19.7	20.7
512116 2015 OP_{84}	15.5	X	70.17713	4.44460	276.06376	9.33776	0.0761060	0.17232588	3.1981762	21	10 4.7	20.2
512117 2015 OQ_{84}	16.2	X	107.67431	354.94146	285.67799	7.10947	0.0600475	0.19241822	2.9714739	21	11 21.2	20.7
512118 2015 OV_{84}	15.4	X	97.03574	278.32219	34.43363	15.42569	0.1263908	0.19934970	2.9021888	21	12 25.5	20.1
512119 2015 OX_{84}	16.7	X	137.02522	56.07511	230.90439	7.71978	0.0590057	0.21587528	2.7521205	21	—	—
512120 2015 OC_{85}	16.8	X	21.80061	221.22184	93.07015	3.64636	0.0357836	0.17563682	3.1578561	21	9 15.7	21.0
512121 2015 PU_{3}	17.5	X	255.94058	25.02593	296.93835	6.01591	0.1631920	0.28341945	2.2953537	21	3 12.7	21.0
512122 2015 PB_{5}	16.7	X	164.54208	308.25161	293.93881	10.48964	0.1212091	0.21603684	2.7507482	21	12 8.8	21.1
512123 2015 PY_{5}	16.9	X	40.04339	68.98029	291.25477	5.19497	0.1280279	0.20321964	2.8652263	21	12 21.3	20.8
512124 2015 PK_{6}	16.5	X	5.48643	114.85754	251.42263	4.50725	0.1920147	0.18596333	3.0398432	21	11 11.5	19.9
512125 2015 PU_{13}	18.4	X	236.56814	289.95066	336.48326	3.73825	0.2756403	0.26548389	2.3976030	21	—	—
512126 2015 PQ_{17}	16.6	X	122.97063	11.94317	320.39910	10.99851	0.0928106	0.23328365	2.6134439	21	—	—
512127 2015 PN_{29}	16.1	X	85.23423	317.07838	307.98351	17.74740	0.1094619	0.18264934	3.0765028	21	10 3.8	20.9
512128 2015 PL_{30}	16.6	X	34.59551	94.13263	226.66762	5.68045	0.1664906	0.18012870	3.1051370	21	10 26.4	20.5
512129 2015 PR_{30}	16.1	X	40.24286	354.55530	315.62389	7.34218	0.0677174	0.17745704	3.1362251	21	10 3.7	20.4
512130 2015 PF_{31}	16.4	X	149.88913	330.83187	307.12700	7.82200	0.1171519	0.21566192	2.7539353	21	—	—
512131 2015 PD_{32}	17.5	X	192.30054	346.96518	304.28792	5.92608	0.2132602	0.24615126	2.5215525	21	—	—
512132 2015 PA_{35}	16.1	X	116.52167	87.78602	136.69436	11.61617	0.0323115	0.18196701	3.0841887	21	9 24.4	20.6
512133 2015 PO_{36}	16.5	X	340.00918	55.08324	343.35298	18.62945	0.1099265	0.18753845	3.0227982	21	10 26.3	20.5
512134 2015 PY_{41}	16.6	X	48.63168	276.54375	12.81986	10.00390	0.0668969	0.17490479	3.1666610	21	9 23.5	20.8
512135 2015 PO_{47}	16.2	X	233.68010	135.99489	356.23943	11.96263	0.0516077	0.18348590	3.0671446	21	10 9.2	20.7
512136 2015 PP_{49}	16.9	X	198.35900	141.35938	70.55185	9.86742	0.2013956	0.21630365	2.7484857	21	11 29.5	21.4
512137 2015 PX_{60}	15.9	X	4.46132	269.58620	119.16944	12.06933	0.0829745	0.19346149	2.9607816	21	12 2.3	19.8
512138 2015 PS_{62}	16.9	X	60.67687	222.42975	147.90284	5.99625	0.0392616	0.22359270	2.6884232	21	—	—
512139 2015 PR_{63}	17.3	X	181.31449	356.94930	241.54411	2.42211	0.1469215	0.22640305	2.6661292	21	12 20.6	21.6
512140 2015 PG_{82}	17.2	X	97.39510	178.72235	142.27633	3.11661	0.0894163	0.21558576	2.7545839	21	—	—
512141 2015 PW_{101}	17.2	X	154.96237	126.06385	120.24664	8.86348	0.1595748	0.21517566	2.7580827	21	12 5.6	21.8
512142 2015 PQ_{112}	16.8	X	32.24627	342.50719	347.04057	5.65776	0.0357547	0.18897438	3.0074662	21	10 16.6	20.9
512143 2015 PY_{115}	17.0	X	298.57620	1.86593	47.42888	2.50253	0.0505948	0.17912022	3.1167812	21	9 21.4	21.2
512144 2015 PW_{118}	17.3	X	197.62517	317.92730	348.39595	6.13520	0.1105634	0.25528924	2.4610157	21	1 4.1	21.1
512145 2015 PB_{124}	16.2	X	75.03734	302.18523	326.51382	9.92935	0.1138964	0.18376712	3.0640147	21	10 2.9	20.8
512146 2015 PQ_{130}	16.7	X	202.87790	108.44516	136.60613	12.61667	0.0990461	0.23252441	2.6191298	21	—	—
512147 2015 PJ_{131}	16.2	X	7.51403	55.62790	316.55697	6.83483	0.1361191	0.19016742	2.9948746	21	11 15.7	19.9
512148 2015 PR_{178}	16.7	X	69.99891	284.45426	359.33738	9.10019	0.1113338	0.18456083	3.0552237	21	10 17.3	21.1
512149 2015 PS_{256}	17.1	X	121.24888	290.91951	330.17964	1.26532	0.0194989	0.20335847	2.8639221	21	11 12.1	21.0
512150 2015 PL_{269}	16.9	X	198.21449	129.64433	128.91288	13.82157	0.1374490	0.23444657	2.6047944	21	—	—
512151 2015 PR_{271}	15.9	X	356.52839	229.25738	131.78256	10.81296	0.0669757	0.17942102	3.1132967	21	10 15.1	20.1
512152 2015 PR_{294}	15.8	X	25.83731	263.62268	70.82448	11.10494	0.0960309	0.18606191	3.0387693	21	10 26.9	19.8
512153 2015 PF_{298}	15.8	X	21.06499	188.70518	149.87750	30.39060	0.1936237	0.17636898	3.1491106	21	11 9.2	20.3
512154 2015 PD_{299}	17.3	X	231.93882	93.91771	107.29579	4.99567	0.0368662	0.21071410	2.7968788	21	—	—
512155 2015 PX_{305}	16.8	X	109.65266	22.97621	2.33479	11.54792	0.1806793	0.23458043	2.6038035	21	1 19.4	20.3
512156 2015 PC_{314}	16.6	X	120.87136	269.70460	4.93752	10.95835	0.0860628	0.21148287	2.7900967	21	12 1.7	21.1
512157 2015 PE_{314}	16.6	X	140.26209	102.86658	125.91202	2.33593	0.0847100	0.18803655	3.0174578	21	10 27.7	21.2
512158 2015 QG_{10}	17.1	X	204.65183	311.01734	289.12626	4.78830	0.2143614	0.23277644	2.6172389	21	—	—
512159 2015 RW_{25}	16.0	X	23.30036	12.70083	320.41779	10.49300	0.0695504	0.17379112	3.1801748	21	10 7.4	20.4
512160 2015 RB_{29}	16.0	X	106.36932	356.31410	274.45103	4.77523	0.0453261	0.18267791	3.0761820	21	11 4.9	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512161 2015 RW_{30}	16.2	X	41.61668	38.69510	320.93403	8.66136	0.1322681	0.18446317	3.0563021	21	12 19.3	20.5
512162 2015 RK_{39}	18.1	X	174.56247	88.31628	305.25292	2.09964	0.1547456	0.26534829	2.3984197	21	3 30.2	21.7
512163 2015 RS_{48}	16.6	X	195.55961	309.38606	344.17561	15.08518	0.1535863	0.23866320	2.5740229	21	—	—
512164 2015 RR_{63}	16.7	X	59.09235	235.41886	69.42166	0.70890	0.1722951	0.17859443	3.1228955	21	11 8.9	21.1
512165 2015 RQ_{75}	17.9	X	217.25230	79.34685	247.48020	0.71376	0.1965074	0.26079519	2.4262543	21	2 16.0	21.7
512166 2015 RJ_{85}	15.5	X	102.07219	334.13068	290.47882	10.28132	0.0796665	0.18143968	3.0901617	21	10 24.1	20.2
512167 2015 RN_{85}	15.7	X	23.71421	96.95582	238.14079	7.99790	0.0819800	0.17478488	3.1681093	21	10 15.3	19.9
512168 2015 RD_{88}	15.9	X	48.13804	355.75402	313.49785	7.78431	0.0957651	0.17378951	3.1801945	21	10 16.1	20.3
512169 2015 RT_{91}	17.9	X	261.16161	89.04607	235.83119	5.73869	0.1438798	0.28656921	2.2785035	21	3 23.9	21.3
512170 2015 RF_{95}	16.0	X	74.87047	317.95953	315.23873	12.02879	0.1383537	0.17571000	3.1569793	21	10 8.7	20.8
512171 2015 RS_{99}	16.3	X	65.57668	127.07323	182.13790	2.40325	0.1149161	0.18369894	3.0647728	21	11 15.2	20.6
512172 2015 RW_{99}	16.6	X	161.48300	265.17522	0.34194	8.72910	0.1971178	0.21503574	2.7592790	21	12 31.9	21.4
512173 2015 RT_{100}	16.1	X	24.06043	50.73538	311.28764	9.47471	0.0913857	0.18525112	3.0476295	21	11 21.1	20.3
512174 2015 RW_{103}	17.7	X	149.87935	175.67710	224.47263	5.25869	0.1878414	0.25795650	2.4440217	21	3 16.9	21.6
512175 2015 RC_{104}	17.8	X	247.11506	253.53007	55.80953	2.00980	0.2204512	0.27493094	2.3423599	21	2 18.4	21.6
512176 2015 RF_{104}	16.1	X	22.47830	47.77180	319.72547	8.98940	0.0710488	0.18750234	3.0231864	21	11 23.8	20.2
512177 2015 RC_{114}	16.0	X	351.46237	199.49838	199.78639	22.97459	0.0881650	0.17427160	3.1743268	21	11 21.4	20.3
512178 2015 RL_{117}	16.2	X	32.05143	209.09882	148.86043	16.36223	0.1354197	0.17946858	3.1127466	21	12 6.9	20.6
512179 2015 RL_{119}	16.1	X	347.71485	184.35858	209.09396	7.48567	0.0649352	0.18246358	3.0785905	21	11 8.8	20.1
512180 2015 RR_{120}	16.7	X	138.95289	298.99068	336.99544	6.73019	0.2057188	0.21030542	2.8005011	21	12 25.1	21.5
512181 2015 RD_{134}	16.4	X	6.24217	10.10645	340.14849	2.55396	0.1520117	0.17211129	3.2008339	21	10 15.3	20.1
512182 2015 RA_{202}	16.2	X	212.31957	161.22060	32.50918	10.16293	0.0383829	0.18569088	3.0428158	21	11 30.9	20.7
512183 2015 RG_{202}	16.1	X	347.32535	17.34894	27.09280	11.80180	0.0739731	0.17702918	3.1412763	21	11 18.2	20.2
512184 2015 RA_{213}	17.5	X	259.76456	21.86800	241.85426	4.19721	0.1803140	0.26331006	2.4107809	21	1 6.9	21.2
512185 2015 RU_{218}	16.6	X	64.68172	275.36228	38.47717	1.26405	0.1389399	0.17999642	3.1066582	21	11 21.7	21.1
512186 2015 RC_{221}	17.7	X	177.44878	287.44388	86.88405	3.45391	0.2234744	0.25626321	2.4547760	21	3 16.1	21.8
512187 2015 RG_{236}	17.7	X	90.57399	276.76526	154.50591	12.98050	0.2547233	0.22546711	2.6735025	21	3 4.5	20.9
512188 2015 RX_{236}	17.3	X	277.98086	219.04021	97.38873	8.38759	0.2533473	0.28121807	2.3073168	21	3 26.7	21.0
512189 2015 RC_{243}	16.2	X	45.93438	56.65288	268.03983	3.98172	0.1223514	0.18318232	3.0705324	21	11 9.5	20.4
512190 2015 RM_{243}	17.6	X	251.06491	224.15781	126.50418	6.06105	0.1869585	0.27993006	2.3143890	21	4 18.4	21.1
512191 2015 RO_{252}	16.0	X	58.49425	233.41374	84.75481	12.65601	0.1022770	0.17566554	3.1575119	21	11 16.9	20.5
512192 2015 RU_{252}	16.8	X	199.11318	278.23155	0.99909	12.16918	0.2010651	0.23006688	2.6377481	21	—	—
512193 2015 RX_{252}	16.4	X	128.76122	348.27611	252.92984	3.84946	0.1320554	0.17916055	3.1163134	21	10 30.5	21.4
512194 2015 SH_{3}	16.7	X	16.72751	123.15375	228.07427	13.19304	0.2997936	0.17567882	3.1573528	21	11 26.1	20.1
512195 2015 SR_{10}	15.9	X	293.31378	98.91852	341.58526	8.84488	0.0531955	0.17488415	3.1669102	21	10 18.0	20.3
512196 2015 SW_{13}	15.6	X	128.65736	271.17635	322.88092	8.47382	0.0645090	0.17780934	3.1320811	21	10 14.7	20.4
512197 2015 SC_{14}	17.2	X	137.04249	56.46187	231.19805	7.11944	0.1876062	0.21220356	2.7837759	21	—	—
512198 2015 SY_{15}	16.4	X	95.33617	53.20254	210.21737	9.56019	0.0926979	0.17631432	3.1497615	21	10 20.2	21.1
512199 2015 TF_{11}	15.6	X	153.10705	294.03292	266.23931	7.67084	0.0423182	0.17397889	3.1778863	21	9 29.5	20.5
512200 2015 TT_{11}	16.2	X	150.18822	0.13394	261.03155	6.91541	0.1793187	0.21015876	2.8018037	21	12 16.6	20.8
512201 2015 TE_{22}	16.0	X	97.07016	290.67189	346.72029	8.76268	0.0750347	0.17889493	3.1193973	21	11 3.1	20.7
512202 2015 TW_{42}	16.8	X	131.12593	289.79320	31.56237	3.11825	0.0713191	0.20960794	2.8067101	21	—	—
512203 2015 TV_{45}	18.0	X	176.14717	160.49851	226.03229	0.60209	0.1914330	0.26211332	2.4181133	21	3 25.9	22.0
512204 2015 TX_{50}	16.4	X	58.38548	85.83910	216.76277	4.67890	0.1300665	0.17843600	3.1247437	21	10 30.4	20.8
512205 2015 TM_{52}	15.9	X	18.95247	95.77762	250.70724	8.33160	0.0822600	0.17604054	3.1530262	21	10 22.9	20.2
512206 2015 TP_{55}	16.1	X	349.09377	54.19950	328.14371	9.22547	0.0626533	0.17442189	3.1725032	21	10 21.4	20.5
512207 2015 TQ_{76}	17.3	X	358.74395	238.39686	170.52540	0.29389	0.1714919	0.17531522	3.1617168	21	12 20.6	21.0
512208 2015 TZ_{139}	15.9	X	171.78062	184.33533	77.04294	22.51285	0.1830089	0.19179914	2.9778646	21	12 30.6	21.0
512209 2015 TY_{151}	17.0	X	204.61120	257.91468	9.48665	5.69832	0.1606973	0.22820244	2.6520957	21	—	—
512210 2015 TP_{160}	16.2	X	358.36496	174.77540	188.03225	19.54593	0.1192223	0.17329688	3.1862185	21	10 18.7	20.1
512211 2015 TL_{165}	17.8	X	225.76629	261.61370	74.28542	1.90251	0.1839590	0.26219792	2.4175932	21	3 7.5	21.6
512212 2015 TE_{190}	17.3	X	158.46366	31.88053	313.01049	5.41643	0.2164534	0.23888854	2.5724040	21	1 23.6	21.4
512213 2015 TN_{191}	17.8	X	247.70593	76.45249	223.42392	4.08305	0.1900592	0.26476355	2.4019497	21	2 7.5	21.7
512214 2015 TS_{192}	15.9	X	65.24913	158.26524	183.39380	8.52740	0.0687277	0.18940668	3.0028884	21	12 18.3	20.3
512215 2015 TZ_{195}	16.4	X	180.77017	339.35171	320.92232	14.02073	0.0851057	0.22363221	2.6881065	21	—	—
512216 2015 TE_{199}	16.0	X	57.84945	197.06162	117.52828	2.30949	0.0962623	0.17328728	3.1863361	21	11 8.6	20.4
512217 2015 TJ_{199}	16.7	X	17.10515	278.62094	82.88654	1.84985	0.2324937	0.17433712	3.1735315	21	11 28.9	20.4
512218 2015 TJ_{215}	17.9	X	137.19386	67.29595	356.12882	3.92198	0.1421673	0.25561833	2.4589029	21	3 30.2	21.3
512219 2015 TC_{242}	16.4	X	20.10062	59.77704	303.86487	4.35399	0.1842939	0.17366030	3.1817717	21	11 28.6	20.3
512220 2015 TH_{243}	17.1	X	79.20805	36.90184	49.34106	7.20856	0.2400044	0.22904930	2.6455546	21	3 7.2	20.1
512221 2015 TW_{260}	15.8	X	146.98498	21.29310	275.63229	26.06039	0.1785257	0.21887200	2.7269420	21	—	—
512222 2015 TU_{266}	15.3	X	233.94237	81.99604	327.12895	7.08415	0.1064555	0.12594702	3.9416445	21	6 24.8	21.3
512223 2015 TP_{302}	17.8	X	156.58316	247.14202	150.73398	7.63390	0.2000432	0.25082112	2.4901565	21	3 26.1	21.8
512224 2015 TY_{306}	15.9	X	116.52955	167.33669	104.51613	16.25740	0.1636381	0.18385510	3.0630371	21	11 30.2	21.0
512225 2015 TJ_{345}	17.4	X	318.23766	50.00444	187.50787	6.54136	0.0618379	0.25502785	2.4626970	21	2 22.5	20.6
512226 2015 UP_{2}	16.0	X	138.20993	247.63032	13.91855	10.32608	0.0459886	0.18306703	3.0718214	21	11 28.2	20.7
512227 2015 UP_{20}	16.5	X	83.07025	84.74096	196.06873	15.85998	0.2408195	0.17582940	3.1555499	21	11 14.8	21.6
512228 2015 UQ_{43}	15.8	X	97.37983	217.77765	95.84686	10.68560	0.2038186	0.18936494	3.0033296	21	12 31.6	20.8
512229 2015 UG_{73}	15.8	X	343.44986	200.66795	201.33297	11.36279	0.0416803	0.17498335	3.1657132	21	11 12.3	20.0
512230 2015 UC_{83}	16.1	X	54.53736	236.68807	111.31390	11.87031	0.0879584	0.18749139	3.0233041	21	12 16.2	20.4
512231 2015 VW_{14}	18.1	X	326.21842	70.35601	206.54779	1.70901	0.2181675	0.29177115	2.2513403	21	3 31.3	20.3
512232 2015 VU_{24}	16.7	X	24.88883	215.16454	183.64972	8.83321	0.2346563	0.18525299	3.0476089	21	—	—
512233 2015 VW_{25}	15.8	X	56.31932	282.19094	69.32259	15.29675	0.1435270	0.18068008	3.0988166	21	12 27.1	20.3
512234 2015 VO_{66}	20.5	X	98.07833	219.29753	64.47127	14.02507	0.5999332	1.06080686	0.9521642	21	—	—
512235 2015 VT_{100}	15.5	X	231.47022	103.02769	84.68661	11.13919	0.0470502	0.17836619	3.1255590	21	12 15.2	19.9
512236 2015 VS_{107}	15.6	X	63.95614	325.90503	8.55294	11.58289	0.0913499	0.17973977	3.1096148	21	12 7.3	20.2
512237 2015 VO_{117}	17.2	X	59.30074	84.38720	32.03511	11.96759	0.2018980	0.22577935	2.6710370	21	3 10.0	20.0
512238 2015 XG_{104}	16.7	X	285.39054	59.68418	97.02800	11.19419	0.1041320	0.17667107	3.1455197	21	—	—
512239 2015 XT_{104}	18.4	X	200.69898	250.82157	205.53047	6.11732	0.0582093	0.28565540	2.2833602	21	7 20.4	21.5
512240 2015 XN_{195}	16.8	X	38.66950	290.88466	257.77164	5.56817	0.1306412	0.24359335	2.5391738	21	4 25.8	19.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512241 2015 XP_{195}	16.4	X	101.68498	149.45644	258.07512	11.24646	0.1059986	0.21510893	2.7586531	21	1 23.5	20.2
512242 2015 XZ_{261}	18.3	X	47.36511	203.45949	84.63323	31.45600	0.3139282	0.48802211	1.5977533	21	12 9.9	20.3
512243 2015 XZ_{385}	18.0	X	153.62021	212.03105	155.96669	23.85750	0.0537518	0.36938895	1.9237418	21	—	—
512244 2015 YE_{18}	17.8	X	188.56098	80.58197	256.72458	31.02607	0.5409716	0.93277210	1.0374146	21	—	—
512245 2016 AU_{8}	19.9	X	330.10952	21.53270	302.98569	9.18423	0.2001067	1.01250886	0.9822081	21	2 20.8	18.1
512246 2016 AW_{53}	13.4	X	295.78515	49.57248	294.13954	27.98954	0.0579546	0.08474291	5.1333451	21	6 27.1	20.2
512247 2016 BY_{9}	17.7	X	106.81944	305.45357	301.61007	5.70258	0.0841404	0.27304512	2.3531328	21	10 20.8	21.1
512248 2016 BU_{81}	18.5	X	113.26200	252.01813	169.84025	21.76275	0.1570176	0.37644307	1.8996336	21	1 31.6	20.3
512249 2016 BD_{82}	18.5	X	250.37476	279.91516	338.14538	17.36556	0.0777609	0.35274310	1.9837961	21	—	—
512250 2016 CF_{24}	16.2	X	93.47167	86.49476	329.87540	8.69028	0.0688245	0.19946364	2.9010834	21	1 26.4	20.0
512251 2016 CU_{138}	18.1	X	306.47702	286.06590	329.53984	18.56089	0.0304070	0.38838088	1.8605049	21	2 13.6	19.7
512252 2016 CP_{193}	17.5	X	129.80330	268.19266	112.84739	23.61939	0.0856965	0.36780408	1.9292641	21	—	—
512253 2016 CU_{213}	16.6	X	69.80823	313.21165	139.79783	10.55368	0.0750263	0.19074799	2.9887946	21	2 10.3	20.4
512254 2016 CM_{265}	18.8	X	112.89048	40.27891	26.35939	21.04839	0.0949913	0.37117959	1.9175498	21	2 15.2	21.1
512255 2016 CC_{268}	18.2	X	113.51566	62.55640	28.48741	21.10370	0.0957373	0.38482835	1.8719375	21	3 22.8	20.0
512256 2016 EK	17.8	X	176.55724	76.37764	303.86040	19.24731	0.0834224	0.38697998	1.8649923	21	2 14.5	20.0
512257 2016 EL_{60}	15.8	X	189.64847	103.41366	242.07217	9.44509	0.1018106	0.19480843	2.9471182	21	2 16.5	20.5
512258 2016 ER_{65}	17.8	X	163.79593	221.50077	351.16704	5.92063	0.1587460	0.27692290	2.3311137	21	11 7.1	21.5
512259 2016 ED_{122}	17.1	X	137.05189	235.16460	18.36133	22.44915	0.2397464	0.27792524	2.3255056	21	11 29.2	21.5
512260 2016 EJ_{124}	17.8	X	96.95429	267.77309	334.46267	5.79789	0.1474621	0.26116296	2.4239761	21	10 8.7	21.4
512261 2016 ED_{129}	17.8	X	92.50279	282.51312	341.00388	2.21874	0.1376857	0.26857897	2.3791476	21	11 1.8	21.3
512262 2016 EH_{148}	18.7	X	35.80600	145.99755	20.43947	21.16191	0.0407735	0.37964694	1.8889311	21	3 3.5	20.7
512263 2016 EG_{150}	18.1	X	87.61751	203.82406	71.05965	5.32723	0.1394042	0.26453123	2.4033559	21	11 12.4	21.4
512264 2016 EW_{178}	17.8	X	118.19153	14.03899	243.61332	3.68001	0.1756474	0.27428731	2.3460229	21	11 23.5	21.3
512265 2016 EB_{181}	17.7	X	93.00072	92.61044	198.44369	6.27261	0.1432978	0.27813647	2.3243280	21	12 10.4	21.2
512266 2016 EY_{181}	17.0	X	20.16553	92.81511	206.82350	9.07930	0.1800119	0.23720233	2.5845806	21	9 11.8	19.8
512267 2016 EK_{193}	17.6	X	147.91131	216.80308	60.43277	6.12889	0.2165605	0.28836900	2.2690131	21	—	—
512268 2016 EN_{200}	17.8	X	192.11897	208.81023	55.39920	6.00378	0.1556563	0.30533233	2.1841754	21	—	—
512269 2016 EQ_{203}	18.6	X	179.06602	177.67331	179.88440	22.89901	0.0663904	0.37026067	1.9207212	21	1 19.5	21.3
512270 2016 EQ_{205}	18.8	X	120.18364	258.99882	215.78688	21.37300	0.0868507	0.39320130	1.8452679	21	4 28.9	20.1
512271 2016 EZ_{206}	18.6	X	171.27907	190.06846	211.61967	21.07479	0.0855253	0.38073778	1.8853214	21	3 14.8	21.1
512272 2016 FU_{7}	18.3	X	45.50021	337.23559	186.50191	26.87836	0.0608644	0.38638937	1.8668923	21	2 24.5	20.2
512273 2016 FD_{20}	17.5	X	101.26749	214.31781	351.16635	9.93187	0.2106037	0.24326739	2.5414415	21	9 4.2	21.3
512274 2016 FH_{36}	17.6	X	112.97376	34.56124	188.62341	6.18132	0.0855198	0.25773055	2.4454500	21	9 27.4	20.9
512275 2016 FK_{41}	17.9	X	64.34953	141.91704	11.32478	21.97535	0.0698616	0.38982866	1.8558956	21	3 24.2	19.0
512276 2016 FU_{53}	17.6	X	117.97521	175.61806	338.61702	4.01747	0.1269891	0.23206529	2.6225831	21	7 7.1	21.3
512277 2016 FA_{61}	18.4	X	249.36098	95.69402	205.10809	20.25420	0.0491053	0.35818497	1.9636518	21	1 28.1	21.2
512278 2016 FC_{61}	18.1	X	80.21279	44.47991	62.27687	22.75316	0.0910667	0.37127543	1.9172198	21	2 19.1	20.3
512279 2016 FK_{61}	17.7	X	139.65130	267.96583	129.80459	26.16942	0.0272552	0.35793729	1.9645575	21	1 21.9	19.6
512280 2016 FL_{62}	15.8	X	256.28367	193.30137	156.22744	18.34613	0.1990643	0.17906473	3.1174250	21	4 30.2	21.0
512281 2016 GN_{21}	18.7	X	142.23782	342.62341	320.11648	3.16444	0.1889826	0.31065924	2.1591354	21	—	—
512282 2016 GC_{124}	13.5	X	260.72435	299.95846	196.41804	30.23886	0.0150836	0.08427658	5.1522639	21	11 9.5	20.5
512283 2016 GY_{124}	15.7	X	278.66966	268.35250	20.09454	15.75395	0.1367608	0.18415923	3.0596639	21	3 16.9	20.3
512284 2016 GP_{126}	17.0	X	359.99345	56.69915	210.21733	13.02613	0.1726159	0.21204630	2.7851521	21	6 10.4	20.0
512285 2016 GK_{129}	18.0	X	125.54076	44.68614	170.92071	1.70170	0.1844065	0.25898714	2.4375335	21	10 8.1	21.8
512286 2016 GX_{133}	16.5	X	259.73537	170.43756	160.12287	18.66713	0.1253616	0.18031470	3.1030013	21	4 17.5	21.4
512287 2016 GY_{165}	17.7	X	7.36123	219.94401	49.21413	4.88044	0.1839945	0.21588044	2.7520766	21	6 30.6	20.3
512288 2016 GC_{183}	17.4	X	94.96432	245.39512	101.75566	7.07213	0.2270831	0.29758669	2.2219130	21	—	—
512289 2016 GJ_{191}	17.2	X	66.46338	66.72075	185.34316	14.54836	0.0527166	0.23331005	2.6132468	21	8 28.8	20.8
512290 2016 GY_{216}	17.8	X	168.69882	88.79290	55.80023	3.20530	0.1455874	0.25948638	2.4344060	21	8 19.1	21.5
512291 2016 GJ_{220}	16.8	X	333.11475	144.81324	146.56968	8.61554	0.2040766	0.21379409	2.7699521	21	5 20.6	19.9
512292 2016 GH_{221}	18.3	X	17.07855	76.10543	149.32545	23.41612	0.0084534	0.39844424	1.8290448	21	5 3.4	20.6
512293 2016 GW_{225}	16.6	X	320.01021	238.40598	20.59729	16.40961	0.3691717	0.18053187	3.1005123	21	2 27.9	21.0
512294 2016 GD_{234}	18.3	X	84.49628	283.01477	216.57979	20.68640	0.0784217	0.38262098	1.8791302	21	4 4.4	19.9
512295 2016 GH_{238}	17.2	X	13.58279	147.11976	193.21779	13.37129	0.1805673	0.23891826	2.5721906	21	11 3.2	19.9
512296 2016 GT_{241}	17.1	X	8.44872	222.13597	90.68305	9.35943	0.1589030	0.22887499	2.6468977	21	9 13.0	20.0
512297 2016 GM_{242}	17.1	X	21.20613	86.75863	226.68393	4.10183	0.2742775	0.24271157	2.5453200	21	10 23.5	19.4
512298 2016 GS_{246}	18.1	X	188.26133	179.25129	9.37335	5.46403	0.1017144	0.27970887	2.3156089	21	11 5.6	21.3
512299 2016 GJ_{247}	17.0	X	15.01997	47.17615	245.09705	2.43735	0.1676452	0.22998324	2.6383875	21	8 20.3	19.6
512300 2016 GG_{252}	18.1	X	298.60851	171.77677	112.70504	23.76117	0.0541839	0.37481933	1.9051159	21	3 29.2	20.7
512301 2016 GZ_{254}	17.5	X	62.78990	183.98136	52.66033	2.85608	0.1409938	0.22978163	2.6399306	21	8 20.3	20.8
512302 2016 GS_{255}	16.7	X	9.00278	145.16700	136.19364	21.28208	0.1158119	0.21013105	2.8020501	21	7 19.2	20.0
512303 2016 HV	18.0	X	136.19104	210.50342	65.53970	3.92541	0.2317867	0.28173835	2.3044754	21	—	—
512304 2016 HW	16.5	X	33.80725	24.55693	212.16813	35.24137	0.1119968	0.21527786	2.7572097	21	6 21.6	20.6
512305 2016 HG_{3}	17.4	X	174.28457	94.68752	264.62373	16.98359	0.0848563	0.35132117	1.9891453	21	1 20.2	19.9
512306 2016 HA_{15}	18.1	X	182.15336	220.11591	51.58597	4.81728	0.1571534	0.30864375	2.1685248	21	—	—
512307 2016 HC_{21}	17.7	X	151.15233	316.81542	280.18962	1.39426	0.1520853	0.27769416	2.3267955	21	11 27.9	21.3
512308 2016 HZ_{23}	18.0	X	292.60249	177.85265	107.59302	23.43622	0.0376180	0.37015850	1.9210746	21	3 25.2	20.6
512309 2016 HG_{24}	18.5	X	108.12887	0.81640	75.90018	23.39028	0.1101353	0.37526946	1.9035921	21	2 23.1	20.8
512310 2016 JP_{8}	18.3	X	173.41112	150.45597	120.79663	2.82361	0.1518006	0.30331134	2.1938669	21	—	—
512311 2016 JS_{10}	16.4	X	328.12164	157.27692	101.04191	9.76205	0.0673239	0.18650761	3.0339262	21	4 20.4	20.5
512312 2016 JD_{12}	18.0	X	174.14038	247.76323	201.85368	20.90180	0.1115171	0.39755015	1.8317861	21	6 6.5	20.6
512313 2016 JU_{14}	16.9	X	316.80284	185.29056	156.62115	15.18883	0.0357092	0.22388395	2.6860911	21	7 21.7	20.6
512314 2016 JG_{27}	18.2	X	184.06191	185.71726	78.75011	7.04869	0.1798285	0.30251077	2.1977358	21	—	—
512315 2016 JP_{27}	17.4	X	116.18137	250.82750	85.72219	5.51890	0.1857541	0.29873675	2.2162068	21	—	—
512316 2016 JO_{35}	17.9	X	167.69257	147.07300	84.72776	3.22806	0.1694279	0.28081779	2.3095089	21	12 6.8	21.4
512317 2016 JB_{39}	18.6	X	138.78534	29.34223	106.35574	20.88586	0.0691974	0.40197814	1.8183093	21	6 29.7	20.2
512318 2016 JD_{39}	19.0	X	92.13388	294.08523	202.51169	21.14391	0.0943312	0.38049372	1.8861275	21	4 21.1	20.2
512319 2016 JU_{39}	17.3	X	18.15491	181.62322	159.09351	15.51068	0.1800327	0.23944061	2.5684484	21	11 14.4	20.5
512320 2016 KK	18.2	X	196.89473	297.21463	92.75614	24.25252	0.0818559	0.37606197	1.9009168	21	4 21.3	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512321 2016 KE_1	18.1	X	242.73852	263.39946	116.92214	23.14225	0.1095790	0.38836885	1.8605433	21	5 26.5	20.8
512322 2016 KX_2	17.6	X	112.57129	199.31620	94.75686	8.29925	0.2395692	0.26918731	2.3755618	21	—	—
512323 2016 KC_3	17.7	X	312.61902	134.78041	90.02479	24.06332	0.0620117	0.35747708	1.9662433	21	1 6.8	19.8
512324 2016 KK_3	16.3	X	27.12442	219.34490	96.06456	14.28212	0.2882699	0.22808506	2.6530055	21	11 11.0	19.6
512325 2016 LJ	17.5	X	3.57176	203.53126	112.28269	15.01644	0.3047500	0.22177446	2.7030974	21	9 25.6	19.9
512326 2016 LP_8	18.0	X	66.11439	288.24414	233.28259	20.88295	0.0801642	0.37754298	1.8959423	21	4 5.5	19.9
512327 2016 LY_{11}	18.5	X	249.45407	269.98342	109.56045	23.90859	0.0882111	0.39523440	1.8389343	21	6 3.9	20.9
512328 2016 LJ_{12}	15.6	X	259.24484	234.94878	102.53644	12.96051	0.0887128	0.18166554	3.0875998	21	4 30.9	20.3
512329 2016 LU_{13}	16.5	X	354.79609	249.04528	105.25685	13.00505	0.2845222	0.23203649	2.6228001	21	11 2.4	18.8
512330 2016 LJ_{22}	16.7	X	293.69088	198.75762	134.13126	6.53331	0.1488134	0.19593186	2.9358420	21	5 23.9	20.8
512331 2016 LX_{25}	18.6	X	184.22953	141.83423	135.98706	3.68069	0.1565598	0.30395944	2.1907473	21	—	—
512332 2016 LW_{29}	17.0	X	308.15822	216.49941	138.12403	6.54708	0.0522542	0.21865401	2.7287542	21	7 25.3	20.3
512333 2016 LC_{41}	16.8	X	19.33230	222.59801	98.25675	15.53906	0.2899700	0.22652066	2.6652063	21	11 6.9	19.9
512334 2016 LQ_{45}	16.1	X	304.56161	208.11418	134.17366	17.49305	0.2371645	0.18072978	3.0982484	21	6 9.0	20.4
512335 2016 LV_{49}	17.0	X	343.50139	167.98513	171.39695	15.37552	0.1315765	0.23001367	2.6381548	21	8 25.3	19.7
512336 2016 LL_{54}	16.4	X	309.24470	91.70206	239.26139	8.73809	0.2360686	0.17815390	3.1280414	21	5 29.1	20.2
512337 2016 LQ_{54}	17.2	X	319.86502	161.72948	181.06948	9.50957	0.1360495	0.18843070	3.0132484	21	7 14.8	21.1
512338 2016 LW_{54}	16.9	X	305.11057	222.07665	147.21977	15.19543	0.3291549	0.18243706	3.0788888	21	6 27.7	21.0
512339 2016 LB_{56}	16.9	X	307.74531	169.23035	165.94870	8.80408	0.0767456	0.17737488	3.1371935	21	6 25.3	21.2
512340 2016 LE_{56}	15.8	X	21.16037	84.25680	204.33289	11.48444	0.0907549	0.17905312	3.1175598	21	8 11.8	20.0
512341 2016 LF_{56}	16.7	X	296.79198	159.83142	204.95402	11.60006	0.1350535	0.18535772	3.0464608	21	7 8.1	20.9
512342 2016 MR	16.6	X	28.92416	37.60607	316.24288	14.33999	0.3335196	0.21723187	2.7406507	21	—	—
512343 2016 ML_2	17.8	X	151.60536	221.74350	112.94534	5.87511	0.1718046	0.30901688	2.1667788	21	—	—
512344 2016 MC_3	17.8	X	296.18030	40.64836	271.13797	17.96662	0.0609555	0.36832138	1.9274573	21	4 17.4	20.2
512345 2016 MD_3	16.2	X	305.06313	61.43877	262.77739	14.65210	0.2211613	0.17648765	3.1476989	21	5 15.2	20.6
512346 2016 NW_1	17.1	X	120.30060	224.26270	107.37350	7.52459	0.1291778	0.27581798	2.3373352	21	—	—
512347 2016 NE_2	16.4	X	113.99642	312.11508	281.51920	25.71310	0.3019724	0.23810269	2.5780610	21	10 14.1	21.5
512348 2016 NG_2	18.1	X	347.34512	351.11627	286.42473	17.57320	0.0734129	0.37482974	1.9050806	21	5 26.4	19.7
512349 2016 NR_5	16.6	X	34.52392	178.49072	127.95572	15.03392	0.1969932	0.21559116	2.7545379	21	10 25.5	20.3
512350 2016 NK_7	17.0	X	340.75833	85.67265	246.56623	8.40430	0.2160696	0.19043324	2.9920869	21	7 30.7	20.1
512351 2016 NK_{18}	17.2	X	36.60627	243.25876	119.51074	12.61844	0.2088622	0.24334950	2.5408698	21	—	—
512352 2016 NS_{18}	17.5	X	137.36654	40.80400	248.49646	22.16297	0.1384047	0.28397248	2.2923726	21	—	—
512353 2016 NC_{20}	16.9	X	341.19730	108.39388	232.31084	13.40945	0.1281865	0.22550015	2.6732413	21	8 17.3	20.1
512354 2016 NS_{20}	16.4	X	273.29884	204.55404	111.02762	11.04198	0.0700362	0.18356071	3.0663113	21	4 21.9	21.0
512355 2016 NO_{22}	18.1	X	63.01691	263.77420	267.01164	15.65336	0.1562917	0.37154813	1.9162816	21	4 30.2	19.5
512356 2016 NU_{27}	17.2	X	359.95511	163.39489	214.76680	11.36872	0.0304544	0.23699292	2.5861029	21	11 14.4	20.4
512357 2016 NT_{29}	15.9	X	343.90401	26.22163	298.79353	15.11488	0.2152958	0.18363557	3.0654778	21	7 28.9	18.9
512358 2016 NH_{30}	16.8	X	316.14071	134.04145	286.03019	13.31809	0.0763694	0.22450627	2.6811251	21	10 29.0	20.4
512359 2016 NU_{33}	16.2	X	7.88882	27.86996	318.49295	14.11686	0.0882164	0.21160845	2.7889927	21	10 6.6	19.9
512360 2016 NA_{39}	17.2	X	93.71798	50.93494	294.68700	0.36817	0.2025152	0.25567437	2.4585436	21	—	—
512361 2016 NY_{45}	16.5	X	334.94971	276.89600	130.19449	22.56323	0.0794121	0.23318948	2.6141474	21	11 25.0	20.1
512362 2016 NV_{47}	17.2	X	152.89620	348.55633	255.95358	5.98223	0.0919792	0.25381030	2.4705665	21	12 6.9	20.8
512363 2016 ND_{49}	17.1	X	34.91028	217.61277	147.57392	9.02639	0.1809831	0.23213367	2.6220680	21	—	—
512364 2016 NW_{49}	17.7	X	162.54038	170.92589	156.36602	5.17143	0.1653938	0.28979352	2.2615712	21	—	—
512365 2016 NV_{53}	16.4	X	158.41004	328.15242	268.02258	17.00870	0.0973170	0.23594405	2.5937615	21	11 29.2	20.5
512366 2016 NW_{53}	16.8	X	357.50805	153.72409	252.33478	14.00067	0.1116321	0.22827557	2.6515292	21	12 22.4	19.8
512367 2016 NA_{54}	16.3	X	349.39243	159.96854	244.78467	13.49736	0.0765943	0.22469376	2.6796333	21	12 4.6	19.4
512368 2016 NV_{54}	18.2	X	178.09083	24.81122	293.21586	6.79557	0.2338574	0.29582876	2.2307066	21	1 1.0	21.6
512369 2016 NS_{56}	18.3	X	111.92607	27.47916	123.65755	24.17808	0.0558266	0.37447927	1.9062691	21	6 16.6	20.6
512370 2016 NV_{56}	18.1	X	106.39154	9.46222	137.71802	23.93133	0.0380680	0.35926778	1.9597042	21	6 1.4	20.8
512371 2016 NE_{57}	18.0	X	17.75642	306.24557	293.62322	17.88634	0.0441079	0.36936208	1.9238351	21	5 19.8	20.0
512372 2016 NZ_{58}	17.4	X	351.27059	294.67429	110.32547	3.36034	0.0982192	0.24624364	2.5209218	21	12 15.2	20.1
512373 2016 NG_{60}	16.9	X	1.51494	171.90073	250.93118	11.70724	0.1631416	0.23962637	2.5671208	21	—	—
512374 2016 NN_{60}	17.3	X	288.10373	205.84974	170.36241	14.12058	0.1599678	0.18765670	3.0215283	21	7 8.1	21.6
512375 2016 NP_{61}	16.2	X	280.02121	87.11258	304.42397	14.09280	0.2486932	0.17477057	3.1682822	21	7 6.7	20.7
512376 2016 NB_{63}	17.7	X	57.13605	301.83321	39.81980	8.12428	0.2001360	0.23592165	2.5939256	21	—	—
512377 2016 NF_{63}	16.9	X	276.04644	27.63727	33.98691	9.77052	0.2455653	0.18393859	3.0621102	21	8 12.7	21.4
512378 2016 NQ_{64}	16.9	X	283.48408	15.60228	8.41404	1.00484	0.2066630	0.17225873	3.1990072	21	7 6.1	21.2
512379 2016 NC_{65}	16.8	X	339.97619	268.23169	119.32347	6.28874	0.1387303	0.21836528	2.7311591	21	10 30.9	19.8
512380 2016 NH_{65}	17.4	X	336.62275	300.38486	116.85109	13.57487	0.1935510	0.22759638	2.6568018	21	12 9.8	20.0
512381 2016 NM_{65}	16.8	X	33.55845	308.01527	11.69068	6.04550	0.0374437	0.20907852	2.8114462	21	10 10.3	20.5
512382 2016 NN_{65}	16.5	X	209.55147	69.75296	71.36075	10.05170	0.0764678	0.20464861	2.8518730	21	9 30.1	20.8
512383 2016 NP_{65}	17.1	X	334.19878	256.53583	139.88149	3.30450	0.1857664	0.21946514	2.7220265	21	10 31.2	19.7
512384 2016 NR_{65}	16.6	X	90.13251	262.47231	12.19721	4.12527	0.0164823	0.21326341	2.7745452	21	10 22.9	20.5
512385 2016 NC_{66}	16.1	X	307.68024	274.15840	93.68756	11.92509	0.1658909	0.19148696	2.9811002	21	7 27.8	19.8
512386 2016 ND_{66}	18.4	X	157.06202	265.86473	57.29673	6.97024	0.0261538	0.28746055	2.2737910	21	—	—
512387 2016 NG_{66}	16.5	X	99.46691	42.45794	271.90023	15.72160	0.1605597	0.24225564	2.5485126	21	—	—
512388 2016 OB	16.6	X	40.99368	252.12432	108.16579	23.91012	0.2650081	0.26341341	2.4101503	21	—	—
512389 2016 OG_1	17.8	X	130.82637	5.03427	118.17572	24.34755	0.0740981	0.37232286	1.9136224	21	6 5.6	20.4
512390 2016 OC_2	15.9	X	279.14783	78.65405	298.53838	24.63439	0.2936055	0.17524680	3.1625397	21	6 12.2	21.0
512391 2016 OF_3	16.8	X	22.64334	109.76567	284.59289	14.09427	0.1045064	0.23998144	2.5645881	21	—	—
512392 2016 OS_3	17.3	X	114.66380	270.79277	86.84058	5.98771	0.1461106	0.26658298	2.3910084	21	—	—
512393 2016 OE_4	17.0	X	308.49036	34.09133	327.67094	3.27487	0.1048347	0.19919784	2.9036636	21	7 29.0	20.5
512394 2016 OA_6	16.5	X	345.63366	97.45757	309.22346	23.58843	0.1991208	0.21094307	2.7948546	21	12 6.4	19.8
512395 2016 OK_6	16.5	X	197.36232	356.85311	215.24257	4.36020	0.1014060	0.21382764	2.7696623	21	12 6.7	20.6
512396 2016 OL_6	16.5	X	287.18923	5.64876	80.78989	14.13296	0.1074861	0.21550477	2.7552740	21	10 26.5	20.1
512397 2016 PD_4	17.2	X	74.67945	181.85205	116.11299	9.30024	0.0803014	0.23178286	2.6247131	21	11 17.4	21.0
512398 2016 PE_{25}	17.4	X	352.31696	12.79591	54.13318	5.66080	0.2598647	0.23869430	2.5737993	21	—	—
512399 2016 PL_{31}	16.7	X	284.24725	305.49026	86.23189	11.14848	0.0981223	0.18936034	3.0033782	21	8 5.2	20.8
512400 2016 PS_{50}	17.0	X	284.57371	336.28603	74.36465	7.01564	0.0969057	0.20310413	2.8663125	21	9 2.1	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512401 2016 PA_{53}	16.2	X	309.63147	228.85506	105.42685	14.91349	0.2042942	0.17883027	3.1201492	21	6 9.9	20.2
512402 2016 PC_{60}	17.1	X	305.02172	350.37661	88.49011	9.47616	0.2008260	0.21507798	2.7589178	21	10 31.6	20.1
512403 2016 PC_{61}	17.1	X	2.80795	346.14860	79.24965	17.80175	0.1016026	0.24082755	2.5585776	21	—	—
512404 2016 PS_{61}	17.4	X	355.41037	265.09992	91.00773	7.10255	0.0552105	0.21829425	2.7317515	21	10 11.3	20.9
512405 2016 PM_{67}	16.3	X	321.36098	125.78927	193.82620	16.18692	0.2395798	0.17746016	3.1361883	21	6 3.1	20.3
512406 2016 PE_{68}	17.4	X	72.33788	98.00278	270.79771	5.26449	0.2602912	0.25258456	2.4785528	21	—	—
512407 2016 PR_{71}	17.4	X	31.51080	38.35859	38.18636	8.08448	0.0485059	0.27774510	2.3265110	21	—	—
512408 2016 PE_{72}	16.3	X	54.49302	205.53890	28.15780	11.61690	0.1307069	0.18596488	3.0398263	21	8 3.6	20.5
512409 2016 PK_{72}	16.4	X	28.28739	216.54494	81.18604	10.61264	0.0636217	0.20041285	2.8919160	21	9 12.4	20.3
512410 2016 PA_{75}	16.4	X	6.59261	358.53701	1.79522	1.68907	0.0813279	0.20311612	2.8661998	21	10 28.7	19.9
512411 2016 PX_{75}	16.2	X	61.25475	336.07605	341.96509	12.83002	0.1641493	0.21972942	2.7198435	21	11 30.2	20.4
512412 2016 PL_{77}	16.4	X	42.80809	11.35328	328.03548	17.82637	0.3089548	0.22473353	2.6793172	21	12 31.3	20.6
512413 2016 PY_{77}	17.0	X	159.37268	311.44918	327.77635	6.12505	0.1046200	0.26021455	2.4298623	21	—	—
512414 2016 PY_{81}	16.4	X	293.48062	273.06876	103.35234	26.58581	0.2759738	0.17338267	3.1851673	21	6 29.4	20.7
512415 2016 PK_{83}	17.0	X	53.75374	317.61917	13.51902	8.81145	0.2034458	0.22123385	2.7074992	21	12 15.1	21.0
512416 2016 PM_{83}	16.7	X	295.54734	292.80948	100.31765	2.24265	0.1451490	0.17659580	3.1464135	21	8 13.6	20.9
512417 2016 PF_{86}	16.9	X	21.57996	14.17820	357.08212	13.53137	0.1619562	0.23126269	2.6286474	21	12 21.8	20.4
512418 2016 PV_{86}	15.7	X	226.95049	177.82574	261.53943	26.92352	0.1489336	0.17375281	3.1806423	21	7 13.6	21.0
512419 2016 PZ_{88}	17.4	X	49.39761	185.39461	176.62177	5.35066	0.1845430	0.22757351	2.6569797	21	—	—
512420 2016 PC_{89}	17.0	X	60.37047	13.02654	318.05890	3.58847	0.0621739	0.22224919	2.6992468	21	12 4.2	20.6
512421 2016 PE_{89}	17.2	X	336.04895	4.62044	45.22275	4.93275	0.0647213	0.20997501	2.8034382	21	11 17.1	20.6
512422 2016 PF_{89}	17.3	X	346.66855	215.75299	186.39559	4.15524	0.0726329	0.21523553	2.7575712	21	11 25.4	20.6
512423 2016 PG_{89}	16.4	X	7.02133	346.05163	40.42248	6.38691	0.0860320	0.21301735	2.7766815	21	12 4.4	19.8
512424 2016 PK_{89}	16.8	X	335.56414	304.19552	100.45574	15.36040	0.1230581	0.22547422	2.6734462	21	11 19.2	20.0
512425 2016 PO_{89}	17.0	X	14.99706	9.00899	13.47921	7.20894	0.0648360	0.21975997	2.7195914	21	12 9.4	20.6
512426 2016 PR_{89}	16.5	X	317.81182	124.13172	320.84467	16.40567	0.1011230	0.22530752	2.6747647	21	12 7.7	19.9
512427 2016 PS_{89}	17.3	X	324.06752	296.75528	133.88769	13.84706	0.1396211	0.22484303	2.6784473	21	12 2.7	20.4
512428 2016 PY_{89}	16.2	X	19.13408	254.92958	37.55669	9.76464	0.0855864	0.17564856	3.1577154	21	8 21.9	20.4
512429 2016 PB_{90}	16.5	X	288.45930	356.75109	35.41428	9.70139	0.0856264	0.17506727	3.1647014	21	8 14.9	20.9
512430 2016 PF_{90}	17.7	X	87.86869	180.20866	183.03655	3.26996	0.1264544	0.26581903	2.3955873	21	—	—
512431 2016 PK_{90}	16.0	X	219.61186	89.49928	344.06472	23.96869	0.1522276	0.17575412	3.1564510	21	7 12.5	21.4
512432 2016 PU_{90}	16.4	X	267.21379	31.33337	89.39367	15.43295	0.0343948	0.22315564	2.6919323	21	11 20.7	20.1
512433 2016 PW_{90}	17.3	X	332.68731	337.63332	103.64664	5.86493	0.1468050	0.23665129	2.5885912	21	—	—
512434 2016 PX_{90}	17.5	X	97.94999	275.81381	17.61825	3.96999	0.1532242	0.22695093	2.6618366	21	12 10.2	21.7
512435 2016 PE_{91}	17.2	X	127.99806	44.17245	231.10149	2.35668	0.0426045	0.22353973	2.6888479	21	12 12.7	20.8
512436 2016 PF_{91}	16.7	X	226.55428	203.98744	5.95315	15.42801	0.0736759	0.23982958	2.5656705	21	—	—
512437 2016 PG_{91}	16.7	X	181.43284	133.31374	85.65996	15.73735	0.0578995	0.23059006	2.6337568	21	12 5.2	20.4
512438 2016 QT	17.7	X	340.58509	65.68703	333.48078	6.77775	0.2328977	0.21697995	2.7427716	21	11 15.5	20.1
512439 2016 QJ_{3}	17.6	X	140.18432	168.53552	146.12485	3.16990	0.1822770	0.27511986	2.3412875	21	—	—
512440 2016 QC_{6}	16.9	X	9.17533	75.56993	277.14382	8.03098	0.1541294	0.21584877	2.7523458	21	10 30.4	20.2
512441 2016 QV_{11}	16.3	X	298.72034	49.56806	314.75367	14.49948	0.2697403	0.17792472	3.1307269	21	6 22.4	20.7
512442 2016 QA_{13}	16.7	X	344.79032	145.99293	160.81018	14.55454	0.3123209	0.18413517	3.0599304	21	6 25.6	19.5
512443 2016 QV_{14}	16.6	X	331.64774	175.04774	156.58497	3.23167	0.1898342	0.18913244	3.0057904	21	7 15.3	19.7
512444 2016 QW_{14}	18.1	X	152.32197	171.97152	161.03705	5.11428	0.1763848	0.29096173	2.2555137	21	—	—
512445 2016 QX_{16}	16.7	X	266.33451	198.32389	224.72584	7.82826	0.0861590	0.19384553	2.9568697	21	8 18.6	21.0
512446 2016 QK_{20}	16.6	X	274.36236	256.68258	186.28931	14.91820	0.1251122	0.20608381	2.8386170	21	9 22.2	20.5
512447 2016 QG_{21}	15.9	X	227.84702	174.28292	267.79411	8.04664	0.1364140	0.17675765	3.1444925	21	7 24.0	20.9
512448 2016 QF_{22}	16.7	X	198.70243	273.54075	292.31526	7.11645	0.0737017	0.24397301	2.5365389	21	12 7.8	20.3
512449 2016 QS_{23}	16.4	X	323.22707	16.45136	313.50236	9.74806	0.2256979	0.17838193	3.1253751	21	6 22.6	20.1
512450 2016 QN_{24}	16.5	X	319.49021	124.22768	274.13079	7.89598	0.0771869	0.20876227	2.8142848	21	10 3.1	20.1
512451 2016 QB_{25}	16.7	X	306.53300	192.72816	206.40740	12.02293	0.1461650	0.19843852	2.9110661	21	9 5.4	20.3
512452 2016 QG_{26}	16.7	X	60.40407	62.35895	239.66224	5.00947	0.0230610	0.21646488	2.7471208	21	10 21.0	20.5
512453 2016 QE_{27}	17.2	X	147.51066	40.51124	272.68629	6.02856	0.1261817	0.27007756	2.3703386	21	—	—
512454 2016 QM_{29}	17.6	X	105.68489	266.42665	94.67613	6.39866	0.1451836	0.27466988	2.3438440	21	—	—
512455 2016 QE_{33}	16.6	X	302.25879	248.98052	129.78781	6.37484	0.0714163	0.18841683	3.0133964	21	8 15.5	20.4
512456 2016 QL_{36}	17.6	X	175.94323	78.12328	177.14361	1.29269	0.1641275	0.26774332	2.3840953	21	—	—
512457 2016 QE_{40}	17.2	X	21.14787	59.08664	288.60172	2.20607	0.2051854	0.21691157	2.7433480	21	11 22.8	20.2
512458 2016 QW_{40}	16.6	X	61.73640	350.84421	332.20391	10.46635	0.1464077	0.22751617	2.6574262	21	12 7.5	20.6
512459 2016 QQ_{45}	17.6	X	56.78625	226.56707	120.21571	3.85441	0.1751972	0.23646531	2.5899483	21	—	—
512460 2016 QJ_{46}	16.4	X	31.95099	218.25592	120.74363	14.56956	0.1039044	0.22363293	2.6881008	21	11 19.2	20.1
512461 2016 QO_{46}	17.4	X	95.05600	347.91583	347.45765	2.79625	0.1908927	0.25546595	2.4598806	21	—	—
512462 2016 QQ_{46}	16.6	X	20.32251	202.03161	145.93676	13.28429	0.2139437	0.21737089	2.7394820	21	11 27.3	20.0
512463 2016 QB_{47}	17.9	X	317.12398	33.92258	135.60867	7.44378	0.0281618	0.28480083	2.2879255	21	—	—
512464 2016 QR_{47}	17.4	X	46.37161	241.64589	106.74358	4.08065	0.1818565	0.23151984	2.6267006	21	12 27.9	21.0
512465 2016 QD_{48}	17.1	X	14.78211	338.04086	24.33102	6.55130	0.0423088	0.22080470	2.7110062	21	11 10.5	20.7
512466 2016 QW_{52}	17.0	X	338.53717	107.83600	329.45325	9.86061	0.0694110	0.23716016	2.5848870	21	—	—
512467 2016 QJ_{53}	17.4	X	59.37838	204.18245	136.40682	4.75235	0.1218372	0.23398577	2.6082132	21	12 25.8	21.0
512468 2016 QP_{53}	17.7	X	156.36171	351.73999	258.92102	4.06596	0.1902013	0.25292603	2.4763215	21	12 14.9	21.7
512469 2016 QV_{53}	17.0	X	21.66213	125.15677	180.47999	14.96916	0.1534595	0.20366918	2.8610087	21	9 17.3	20.2
512470 2016 QX_{53}	17.4	X	133.95139	73.82983	239.50450	5.57669	0.1605185	0.26821148	2.3813203	21	—	—
512471 2016 QK_{55}	17.1	X	21.09062	80.23194	273.45372	7.84465	0.1587753	0.22298049	2.6933418	21	11 24.6	20.3
512472 2016 QL_{56}	17.9	X	190.85974	7.69930	294.04174	9.05493	0.1003459	0.29591577	2.2302693	21	—	—
512473 2016 QB_{57}	16.9	X	252.21119	204.13975	294.26841	11.69273	0.1207062	0.23402112	2.6079505	21	11 4.9	20.6
512474 2016 QU_{59}	16.4	X	356.85032	54.92950	277.13658	6.65638	0.1773258	0.20143429	2.8821314	21	9 5.8	19.4
512475 2016 QX_{59}	17.8	X	118.29261	126.26112	214.10943	5.64972	0.1470080	0.27333406	2.3514742	21	—	—
512476 2016 QP_{61}	16.6	X	352.60776	55.39143	237.48605	6.37040	0.2274769	0.18702037	3.0283782	21	7 1.1	19.5
512477 2016 QV_{61}	17.1	X	119.00824	355.71852	311.00627	15.59171	0.0652592	0.25778212	2.4451238	21	—	—
512478 2016 QW_{70}	16.6	X	244.82308	257.23962	162.53645	16.27267	0.2457135	0.17586094	3.1551726	21	7 4.3	22.0
512479 2016 QP_{72}	17.2	X	89.67672	297.15628	10.11297	4.20475	0.1026920	0.23100522	2.6306003	21	12 15.1	21.0
512480 2016 QW_{74}	16.1	X	338.21720	18.81320	314.02135	14.08097	0.1923309	0.18495061	3.0509297	21	7 31.6	19.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512481 2016 QM_{76}	16.6	X	8.79134	206.80023	221.50020	13.33107	0.2327708	0.24589550	2.5233006	21	—	—
512482 2016 QP_{76}	17.6	X	190.32230	330.49994	314.81963	6.38338	0.0983075	0.28649355	2.2789046	21	—	—
512483 2016 QO_{77}	16.8	X	48.05824	50.67184	307.88510	15.31561	0.2220199	0.23405784	2.6076777	21	—	—
512484 2016 QT_{77}	16.9	X	31.58328	26.11542	317.78947	16.19746	0.2284156	0.21966271	2.7203941	21	12 7.2	20.7
512485 2016 QV_{77}	16.0	X	343.55386	44.16498	293.12237	11.07675	0.1641822	0.18885882	3.0086929	21	8 15.6	19.3
512486 2016 QD_{78}	15.8	X	3.00470	31.98140	284.04939	8.93428	0.0999048	0.18806111	3.0171950	21	8 20.9	19.6
512487 2016 QR_{82}	17.1	X	310.13791	170.82620	171.24892	5.80110	0.1451601	0.18224586	3.0810419	21	6 28.1	21.0
512488 2016 QL_{83}	17.5	X	105.56214	194.84657	121.45509	3.29848	0.2139833	0.25651006	2.4532009	21	—	—
512489 2016 QM_{83}	18.1	X	125.31770	194.10314	118.02731	3.19083	0.2072328	0.26593495	2.3948911	21	—	—
512490 2016 QO_{84}	17.6	X	262.25301	296.67793	296.31312	6.20774	0.0862378	0.29560448	2.2318348	21	—	—
512491 2016 QV_{87}	15.3	X	338.47124	263.03892	76.83855	17.76556	0.1222273	0.17574952	3.1565059	21	8 21.0	19.4
512492 2016 QX_{87}	16.1	X	199.32910	233.12391	264.78547	9.09773	0.0700255	0.19170576	2.9788315	21	9 3.8	20.7
512493 2016 QB_{88}	17.6	X	125.65717	161.07171	142.36361	15.55062	0.1193483	0.24429928	2.5342800	21	—	—
512494 2016 QD_{88}	16.5	X	316.19737	324.07428	59.39825	12.45150	0.1047915	0.19192151	2.9765987	21	9 15.3	20.4
512495 2016 RC	17.8	X	241.90044	278.76858	9.54744	8.90655	0.1458656	0.30698828	2.1763138	21	1 18.3	21.1
512496 2016 RN_{2}	16.9	X	268.37975	165.11376	256.33747	14.18653	0.2431116	0.18183953	3.0856300	21	7 26.1	21.6
512497 2016 RS_{2}	18.0	X	169.49066	192.93353	101.65768	3.21730	0.1979577	0.27354747	2.3502510	21	—	—
512498 2016 RM_{3}	16.7	X	47.02135	25.65723	298.47194	4.16180	0.1390269	0.22111846	2.7084410	21	11 19.0	20.4
512499 2016 RE_{4}	16.3	X	315.37037	233.44108	99.46413	15.84242	0.1440982	0.17798738	3.1299921	21	6 24.7	20.3
512500 2016 RE_{6}	15.8	X	329.69847	54.39118	321.63842	20.80688	0.1103984	0.18291094	3.0735687	21	9 9.9	19.8
512501 2016 RR_{6}	17.6	X	135.07037	40.69942	284.98847	6.07871	0.1163044	0.27686955	2.3314132	21	—	—
512502 2016 RS_{6}	16.8	X	348.29297	118.36160	182.31466	12.08426	0.1785815	0.18509793	3.0493106	21	7 4.8	20.4
512503 2016 RW_{9}	17.1	X	335.85966	163.82681	169.44661	7.70758	0.1331967	0.18926057	3.0044336	21	7 30.0	20.7
512504 2016 RP_{11}	17.1	X	44.87906	251.20514	113.00705	9.62665	0.1804413	0.23858584	2.5745793	21	—	—
512505 2016 RJ_{13}	16.2	X	211.31026	147.55528	308.73428	14.06934	0.0841127	0.18298218	3.0727709	21	7 30.5	20.8
512506 2016 RR_{14}	17.7	X	119.96921	87.77334	262.12247	4.92773	0.0682496	0.27807908	2.3246478	21	—	—
512507 2016 RE_{21}	17.5	X	80.98322	69.33766	316.22151	5.83721	0.1205023	0.26782600	2.3836046	21	—	—
512508 2016 RQ_{23}	16.0	X	355.85484	255.17090	49.70066	10.06525	0.1103769	0.17805130	3.1292429	21	7 31.2	19.9
512509 2016 RT_{23}	16.6	X	106.55115	180.99460	121.28811	8.51803	0.1991116	0.24441684	2.5334673	21	—	—
512510 2016 RJ_{24}	16.6	X	59.72875	173.98344	132.19005	8.25843	0.1097702	0.21714791	2.7413571	21	11 11.4	20.5
512511 2016 RU_{24}	16.5	X	292.43522	126.23320	272.61577	8.87337	0.2337191	0.17617884	3.1513760	21	7 30.9	20.7
512512 2016 RN_{25}	17.7	X	176.71669	30.30570	304.95168	4.41882	0.1207779	0.29778971	2.2209030	21	1 10.8	20.6
512513 2016 RT_{25}	17.1	X	262.42978	10.18758	48.04769	12.69848	0.0212797	0.19753551	2.9199311	21	8 27.3	21.4
512514 2016 RX_{26}	16.9	X	50.77571	195.75010	142.96316	15.27000	0.2656549	0.22684500	2.6626652	21	12 31.1	21.1
512515 2016 RZ_{26}	16.2	X	320.51152	34.24230	339.35839	15.70561	0.2946470	0.18518402	3.0483655	21	8 11.3	19.3
512516 2016 RF_{27}	17.5	X	116.51416	115.09837	201.53867	1.97558	0.2024065	0.25602744	2.4562828	21	—	—
512517 2016 RN_{31}	17.4	X	338.84092	165.71346	308.01351	14.05087	0.0637710	0.25277050	2.4773372	21	—	—
512518 2016 RO_{31}	16.8	X	286.54341	214.05064	251.95402	12.41887	0.1465397	0.21348089	2.7726606	21	11 6.6	20.2
512519 2016 RV_{31}	17.1	X	9.73361	314.86746	29.98953	2.60890	0.0588763	0.20509348	2.8477475	21	10 12.2	20.8
512520 2016 RF_{32}	17.0	X	355.15154	332.77382	30.54748	2.28432	0.0873751	0.20562561	2.8428323	21	10 16.5	20.3
512521 2016 RL_{32}	16.3	X	303.87088	223.95389	150.97710	3.06584	0.1632012	0.18004492	3.1061003	21	7 29.6	20.2
512522 2016 RZ_{34}	17.4	X	340.28648	113.77943	286.15512	3.00548	0.0758203	0.21397587	2.7683831	21	11 10.9	20.9
512523 2016 RA_{35}	16.6	X	348.23619	12.51831	335.59886	7.37193	0.1167870	0.19285784	2.9669565	21	9 12.0	20.1
512524 2016 RF_{35}	16.8	X	45.68197	4.67765	331.87008	3.10795	0.1082558	0.22477301	2.6790035	21	11 29.6	20.4
512525 2016 RM_{35}	17.4	X	113.48931	339.06728	345.06651	4.61141	0.1997378	0.25865388	2.4396268	21	—	—
512526 2016 RP_{35}	17.9	X	153.12099	309.83385	1.20647	6.43768	0.1200103	0.27420767	2.3464771	21	—	—
512527 2016 RQ_{36}	16.7	X	332.79997	271.85731	106.54307	3.03322	0.1116315	0.20006277	2.8952886	21	9 30.8	20.1
512528 2016 RL_{37}	17.9	X	141.06755	323.03706	351.97530	2.51297	0.2407244	0.27224404	2.3577466	21	—	—
512529 2016 RE_{42}	17.2	X	316.20560	259.55559	181.83093	11.06638	0.1046507	0.22102871	2.7091742	21	12 1.5	20.5
512530 2016 RN_{43}	15.9	X	262.74497	56.61605	0.31108	26.19073	0.1852695	0.17479624	3.1679719	21	8 7.2	21.0
512531 2016 RQ_{43}	16.0	X	34.22515	204.05439	56.80892	18.40647	0.1518590	0.17836271	3.1255995	21	8 14.1	20.3
512532 2016 RW_{44}	16.9	X	94.89833	201.49620	87.25741	1.77607	0.0417170	0.21299895	2.7768414	21	11 19.4	20.8
512533 2016 RX_{44}	17.4	X	356.17842	86.51356	315.89138	4.18607	0.0696187	0.22280068	2.6947907	21	12 10.2	20.8
512534 2016 RY_{44}	16.5	X	254.06723	149.76287	282.36050	8.37720	0.0530670	0.17721892	3.1390338	21	8 18.7	21.1
512535 2016 RA_{45}	16.7	X	330.65776	277.90659	132.92384	10.79893	0.2162114	0.19234219	2.9722569	21	11 8.7	19.8
512536 2016 SN_{4}	15.8	X	357.37278	46.00845	242.14813	15.54291	0.2200398	0.17759428	3.1346092	21	7 3.6	19.1
512537 2016 SY_{4}	16.1	X	340.02348	81.78226	251.13809	14.57035	0.0544061	0.18192331	3.0846826	21	8 4.7	20.4
512538 2016 SC_{7}	16.4	X	273.61794	134.02608	286.65742	14.89751	0.1964910	0.17862932	3.1224888	21	8 7.0	20.9
512539 2016 SU_{7}	16.9	X	70.90985	16.00607	315.41023	13.64751	0.1685206	0.23414831	2.6070060	21	—	—
512540 2016 SZ_{7}	16.9	X	94.45022	0.87131	320.17162	14.73744	0.1410256	0.24183674	2.5514547	21	—	—
512541 2016 SF_{8}	16.2	X	343.55092	174.64529	260.29959	11.09214	0.1656891	0.22885585	2.6470453	21	—	—
512542 2016 SK_{8}	16.0	X	305.83795	62.95003	301.76524	16.60448	0.1515892	0.17451894	3.1713269	21	7 21.4	20.0
512543 2016 SN_{8}	16.3	X	287.51780	93.53000	294.15949	12.30356	0.1154684	0.17567920	3.1573482	21	7 28.7	20.5
512544 2016 SE_{9}	16.5	X	14.15768	310.22987	38.69707	14.59715	0.1598684	0.21420384	2.7664185	21	11 5.4	19.5
512545 2016 SG_{10}	16.9	X	316.88383	52.82042	325.26582	10.96861	0.1052925	0.19098006	2.9863729	21	8 30.8	20.6
512546 2016 SH_{10}	17.1	X	37.69443	231.92399	150.54930	5.38144	0.2356150	0.23284641	2.6167145	21	—	—
512547 2016 SK_{10}	16.3	X	294.37494	247.30869	178.69606	1.97460	0.0479880	0.20285361	2.8686720	21	10 9.4	20.1
512548 2016 SS_{10}	17.1	X	309.07141	33.47156	340.07544	1.16125	0.2216813	0.18069827	3.0986085	21	7 27.8	20.6
512549 2016 SO_{11}	16.5	X	261.59264	323.23499	127.42830	4.40156	0.1778704	0.18486131	3.0519122	21	9 7.8	20.8
512550 2016 SR_{12}	17.7	X	127.81597	257.49807	126.66101	6.86060	0.1109457	0.28090469	2.3090326	21	1 17.4	20.3
512551 2016 SH_{14}	18.0	X	191.48584	144.46106	173.20419	5.89443	0.1433954	0.29622458	2.2287190	21	1 5.2	21.3
512552 2016 SU_{14}	17.1	X	293.22388	82.13670	9.43996	3.83791	0.0918860	0.21266856	2.7797166	21	11 5.3	20.5
512553 2016 SK_{17}	17.1	X	45.07762	67.69664	271.69883	10.25706	0.2931758	0.22314961	2.6919808	21	12 28.3	21.0
512554 2016 SW_{18}	15.9	X	14.82586	204.80077	130.73175	9.58893	0.0486429	0.18873555	3.0100029	21	10 8.0	20.0
512555 2016 SK_{19}	17.9	X	170.56816	268.23874	30.80703	4.33561	0.2092072	0.28014458	2.3132074	21	—	—
512556 2016 SR_{19}	17.1	X	157.34820	10.06480	271.75097	0.55878	0.1754336	0.25935394	2.4352346	21	—	—
512557 2016 ST_{19}	16.4	X	288.10254	211.96869	192.18205	11.33319	0.0756644	0.18871128	3.0102610	21	8 25.0	20.5
512558 2016 SV_{19}	17.0	X	353.90326	185.23760	209.65845	4.31181	0.1152285	0.22041834	2.7141733	21	12 1.1	20.2
512559 2016 SW_{20}	16.2	X	262.20805	22.94170	52.28504	11.73602	0.0877177	0.17768627	3.1335272	21	9 6.4	20.8
512560 2016 SA_{21}	16.4	X	336.35417	320.78993	40.95467	14.87967	0.2218194	0.18712922	3.0272037	21	9 14.4	19.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512561 2016 SN_{21}	16.4	X	80.58188	156.90276	152.83504	10.58693	0.1331696	0.21676431	2.7445904	21	12 10.8	20.7
512562 2016 SM_{22}	17.3	X	53.42858	270.40319	88.02443	5.16653	0.0125701	0.23133265	2.6281174	21	12 25.3	20.7
512563 2016 SR_{23}	18.3	X	176.37823	83.59268	212.54706	2.42950	0.1824459	0.27636963	2.3342238	21	—	—
512564 2016 SH_{24}	17.1	X	352.88436	26.13891	350.89549	4.52687	0.1018343	0.20507514	2.8479173	21	10 30.1	20.5
512565 2016 SQ_{24}	16.1	X	225.36109	303.06836	155.14141	8.72167	0.1975421	0.16911356	3.2385486	21	8 5.8	21.3
512566 2016 ST_{24}	16.4	X	324.72674	316.07496	32.35231	6.66002	0.1529360	0.17952687	3.1120728	21	8 1.9	20.2
512567 2016 SD_{25}	16.7	X	317.51281	353.34488	74.00107	4.97999	0.0830904	0.21445625	2.7642474	21	11 13.6	19.9
512568 2016 SU_{25}	18.6	X	238.13948	220.58764	92.45078	1.43888	0.1160372	0.31956302	2.1188410	21	2 12.2	21.5
512569 2016 SN_{28}	15.7	X	79.87785	14.32097	193.20198	19.33720	0.0227040	0.15415175	3.4448507	21	7 10.9	20.9
512570 2016 SY_{28}	17.5	X	125.48774	250.93567	56.79506	2.85931	0.2193503	0.25699051	2.4501424	21	—	—
512571 2016 SD_{31}	16.0	X	255.89061	336.06975	112.75433	16.37198	0.0508052	0.17942560	3.1132436	21	9 21.2	20.6
512572 2016 SJ_{31}	17.5	X	340.54155	31.37097	21.52946	4.78941	0.1505574	0.21684232	2.7439321	21	12 2.5	20.3
512573 2016 SH_{32}	15.7	X	292.93700	221.16512	169.24715	10.61354	0.0560993	0.17129354	3.2110130	21	8 16.7	20.1
512574 2016 SX_{32}	17.2	X	95.30881	186.28782	130.29206	6.56327	0.2159014	0.23749373	2.5824660	21	—	—
512575 2016 SC_{34}	16.4	X	289.79425	46.88363	358.68897	12.56269	0.1008476	0.18538775	3.0461318	21	8 31.4	20.5
512576 2016 SP_{35}	16.5	X	342.36226	107.67841	327.42720	28.13231	0.3503866	0.23755702	2.5820073	21	—	—
512577 2016 SD_{37}	16.3	X	6.30050	327.01953	346.46259	10.04084	0.1021613	0.18231728	3.0802372	21	8 27.7	20.0
512578 2016 SH_{37}	16.1	X	248.04419	221.29208	216.60733	10.37992	0.1231526	0.17247518	3.1963302	21	8 8.7	21.0
512579 2016 ST_{38}	17.2	X	32.96113	167.87577	180.77714	9.41407	0.1789820	0.21769061	2.7367991	21	12 8.9	20.8
512580 2016 SL_{39}	17.3	X	243.16007	303.67912	175.60745	2.17902	0.0460198	0.20134048	2.8830266	21	10 10.6	21.3
512581 2016 SE_{40}	18.1	X	138.47298	167.70882	157.14030	1.75105	0.1988639	0.26965612	2.3728076	21	—	—
512582 2016 SJ_{40}	17.4	X	49.01888	275.62006	52.95544	2.45568	0.0634109	0.21497543	2.7597950	21	11 16.1	21.0
512583 2016 SO_{40}	17.2	X	319.58403	249.32038	178.57850	9.38021	0.0426450	0.21553103	2.7550502	21	11 20.2	20.9
512584 2016 SA_{41}	18.0	X	191.91954	135.25958	165.66529	5.77877	0.1618336	0.28782928	2.2718487	21	—	—
512585 2016 SY_{41}	17.1	X	17.17908	341.31795	38.44433	4.65216	0.1355647	0.22139539	2.7061820	21	12 19.8	20.4
512586 2016 SM_{42}	17.5	X	284.38984	115.84469	17.73623	13.96252	0.0272736	0.23310389	2.6147873	21	12 30.1	21.2
512587 2016 SU_{45}	17.6	X	141.34978	82.65436	217.87174	3.79067	0.1423484	0.25990256	2.4318065	21	—	—
512588 2016 SB_{47}	16.8	X	27.81561	156.91832	205.67346	8.46083	0.1159734	0.22448774	2.6812726	21	12 11.2	20.3
512589 2016 SX_{48}	17.3	X	303.90266	8.33884	127.09278	14.56773	0.1051444	0.23361788	2.6109507	21	—	—
512590 2016 SZ_{48}	15.5	X	345.80497	230.33289	107.85176	15.98619	0.2115652	0.17632476	3.1496370	21	8 27.0	18.9
512591 2016 SA_{49}	15.4	X	0.01359	235.42679	93.55802	17.28331	0.1216605	0.18309604	3.0714969	21	9 15.5	19.4
512592 2016 SB_{49}	17.1	X	246.87891	320.69199	175.70800	4.37930	0.0151847	0.20894912	2.8126067	21	11 12.1	20.9
512593 2016 SD_{49}	16.1	X	329.42332	324.75544	118.96863	22.84290	0.0421198	0.22693339	2.6619738	21	12 26.9	19.7
512594 2016 SE_{49}	16.6	X	52.21845	270.97760	73.27174	12.62217	0.1561308	0.21997939	2.7177826	21	12 23.3	20.4
512595 2016 TL_{1}	16.1	X	330.56382	41.64076	305.91360	11.46369	0.1612944	0.17786896	3.1313812	21	8 6.8	19.6
512596 2016 TW_{1}	16.3	X	332.00026	174.67758	220.32172	13.01787	0.1836888	0.20431883	2.8549409	21	10 17.8	19.2
512597 2016 TG_{3}	15.9	X	331.29713	321.09172	28.41557	17.73273	0.2121214	0.17418434	3.1753868	21	8 16.4	19.7
512598 2016 TX_{4}	16.6	X	223.65556	119.75061	356.57938	11.55577	0.0862734	0.18907080	3.0064437	21	9 8.7	21.0
512599 2016 TS_{5}	16.5	X	29.48639	309.36830	181.53055	22.80314	0.2143958	0.27942260	2.3171903	21	—	—
512600 2016 TD_{7}	16.3	X	356.53063	128.06479	179.54860	15.93844	0.0882229	0.17510651	3.1642286	21	7 29.7	20.6
512601 2016 TU_{7}	16.6	X	331.07611	313.03891	38.67768	12.67120	0.1835781	0.17800040	3.1298395	21	8 19.3	20.3
512602 2016 TZ_{8}	16.8	X	33.92870	76.38973	289.65662	8.74446	0.0805093	0.22377372	2.6869732	21	12 18.4	20.3
512603 2016 TM_{9}	16.7	X	32.61601	34.65098	308.81494	1.55698	0.1165226	0.20607948	2.8386567	21	11 18.8	20.4
512604 2016 TB_{14}	15.4	X	24.43112	12.39378	256.81707	11.56333	0.0673001	0.17168866	3.2060845	21	7 20.8	19.7
512605 2016 TJ_{15}	16.3	X	101.92146	32.90640	174.02703	9.74798	0.0197394	0.17258219	3.1950089	21	8 8.1	20.9
512606 2016 TM_{15}	17.0	X	10.32798	347.97491	93.26613	6.11925	0.2005861	0.24241890	2.5473683	21	—	—
512607 2016 TN_{15}	16.0	X	274.30469	268.94592	135.75856	9.66492	0.0753669	0.17377971	3.1803140	21	8 9.2	20.4
512608 2016 TR_{15}	17.0	X	154.78781	165.39588	124.46533	7.28301	0.0796565	0.25462140	2.4653171	21	—	—
512609 2016 TT_{15}	16.1	X	78.40181	338.74956	294.78535	10.28445	0.1066114	0.19988610	2.8969944	21	10 12.8	20.5
512610 2016 TH_{16}	16.9	X	3.53374	297.87784	86.56125	6.82127	0.0773444	0.21488456	2.7605731	21	11 27.7	20.3
512611 2016 TK_{16}	15.9	X	195.25667	84.60450	49.12983	12.15567	0.1699939	0.17036707	3.2226437	21	8 30.3	21.3
512612 2016 TP_{16}	16.2	X	281.12694	173.39523	330.24861	21.77540	0.0174030	0.22787379	2.6546450	21	—	—
512613 2016 TV_{20}	16.9	X	77.70217	330.16102	356.53949	6.11329	0.1274201	0.22656277	2.6648761	21	12 28.6	20.9
512614 2016 TJ_{23}	16.4	X	244.96585	107.35202	357.49651	11.10956	0.0680636	0.18650236	3.0339831	21	9 19.7	20.7
512615 2016 TW_{23}	16.7	X	58.19533	64.64368	240.72901	5.22407	0.1300590	0.20867684	2.8150528	21	11 6.6	20.5
512616 2016 TQ_{25}	16.4	X	281.86086	164.99543	230.77430	11.36897	0.0756298	0.17194980	3.2028377	21	8 3.2	21.1
512617 2016 TA_{34}	16.2	X	173.54044	235.26562	293.25371	8.94696	0.0452133	0.17691484	3.1426296	21	9 13.2	20.9
512618 2016 TZ_{36}	16.8	X	278.63691	200.77719	263.76028	3.31793	0.0664810	0.20946993	2.8079428	21	11 3.9	20.4
512619 2016 TK_{37}	17.3	X	303.20098	166.29933	305.28671	5.70208	0.1055657	0.22524895	2.6752284	21	12 20.3	20.4
512620 2016 TM_{38}	16.2	X	108.89435	226.51880	350.41576	8.72318	0.0310586	0.17927473	3.1149900	21	9 2.9	20.7
512621 2016 TJ_{39}	17.0	X	318.14642	16.98284	359.65506	10.15844	0.1431549	0.18386784	3.0628957	21	8 30.7	20.7
512622 2016 TU_{39}	16.5	X	284.73512	41.63448	350.44699	11.60075	0.1093763	0.17291916	3.1908567	21	8 5.3	20.9
512623 2016 TT_{41}	17.5	X	175.90421	275.04551	15.92993	6.05663	0.0790531	0.26391074	2.4071214	21	—	—
512624 2016 TZ_{41}	17.2	X	290.20120	71.84658	18.83778	6.82837	0.0783648	0.20418427	2.8561950	21	10 30.6	20.9
512625 2016 TD_{42}	17.1	X	330.42428	152.32894	193.74200	0.52397	0.1953893	0.17744941	3.1363150	21	8 1.8	20.6
512626 2016 TJ_{42}	17.1	X	315.85577	216.56509	202.84371	1.46482	0.0540042	0.20308698	2.8664739	21	10 30.5	20.8
512627 2016 TP_{43}	17.3	X	340.87066	233.89179	193.65088	3.06339	0.0714953	0.22043441	2.7140413	21	12 20.3	20.7
512628 2016 TU_{43}	16.7	X	189.68349	67.92649	0.82891	3.30942	0.2863832	0.12602388	3.9400416	21	6 2.1	23.5
512629 2016 TM_{44}	17.5	X	8.35212	135.24507	27.73864	4.13749	0.1195844	0.28927188	2.2642893	21	1 11.5	19.7
512630 2016 TN_{44}	16.9	X	80.33110	108.78849	193.37876	3.69835	0.0581223	0.21239787	2.7820778	21	11 21.1	20.9
512631 2016 TL_{45}	17.0	X	108.11579	11.94070	284.99522	14.01064	0.0856684	0.23267168	2.6180245	21	12 21.8	21.0
512632 2016 TC_{46}	16.2	X	246.23511	263.09621	189.09805	9.88861	0.1317214	0.17498827	3.1656539	21	8 24.9	20.9
512633 2016 TU_{46}	16.9	X	58.70149	61.98995	261.89332	5.38657	0.1374039	0.21021168	2.8013335	21	12 1.8	20.9
512634 2016 TA_{47}	15.6	X	146.22936	137.74799	19.59914	5.88466	0.0272425	0.15245864	3.4703080	21	8 3.7	20.7
512635 2016 TN_{47}	16.6	X	96.32932	171.65834	137.57288	5.18481	0.0574073	0.21276838	2.7788471	21	12 17.8	20.6
512636 2016 TO_{47}	16.5	X	221.83718	57.30000	194.13915	9.82215	0.1111046	0.25138598	2.4864249	21	—	—
512637 2016 TU_{47}	16.7	X	50.44189	259.58352	83.28277	5.81278	0.1202419	0.21233108	2.7826612	21	12 13.5	20.3
512638 2016 TW_{47}	16.7	X	312.47965	287.29730	106.04820	4.36453	0.0855083	0.17785314	3.1315669	21	9 17.7	20.7
512639 2016 TX_{48}	16.2	X	166.82778	300.16855	258.17829	8.47685	0.0367671	0.18835648	3.0140399	21	10 14.9	20.7
512640 2016 TT_{49}	16.8	X	94.15256	259.11910	49.07442	4.03952	0.0602905	0.21201676	2.7854108	21	12 13.7	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512641 2016 TS_{52}	16.6	X	7.14264	68.93172	302.06009	11.94231	0.2127595	0.21103496	2.7940432	21	11 29.1	19.8
512642 2016 TA_{54}	15.9	X	237.63475	172.59776	295.39899	9.77632	0.1002411	0.17240548	3.1971917	21	9 5.3	20.7
512643 2016 TB_{54}	16.2	X	242.14401	122.53754	334.95356	10.51612	0.1089514	0.16826996	3.2493637	21	8 31.2	21.0
512644 2016 TT_{56}	16.3	X	128.43459	341.58024	314.65236	11.58080	0.2494825	0.24026636	2.5625602	21	—	—
512645 2016 TE_{58}	16.3	X	80.83540	11.87663	296.55581	10.96784	0.1382720	0.22362453	2.6881681	21	12 9.7	20.4
512646 2016 TC_{59}	17.0	X	8.61497	51.55780	320.66085	5.33819	0.0706949	0.21385534	2.7694231	21	11 15.8	20.5
512647 2016 TC_{60}	15.9	X	305.77716	55.58454	310.29485	15.14338	0.2566737	0.17466355	3.1695762	21	7 7.9	19.9
512648 2016 TG_{60}	17.2	X	58.52385	128.05782	207.04853	3.41890	0.1064498	0.22178861	2.7029824	21	12 13.7	20.9
512649 2016 TR_{60}	16.7	X	26.51527	339.29606	0.44920	1.74687	0.1035435	0.20483467	2.8501458	21	11 3.2	20.1
512650 2016 TF_{61}	17.1	X	31.80301	328.37777	23.56944	6.22014	0.0341784	0.21215852	2.7841699	21	11 17.4	20.8
512651 2016 TY_{61}	16.1	X	145.18484	330.81255	191.59953	11.48798	0.0386449	0.16751014	3.2591822	21	8 5.1	21.0
512652 2016 TB_{62}	17.2	X	3.84393	18.26411	12.81997	6.10941	0.0545691	0.21898081	2.7260387	21	12 3.5	20.7
512653 2016 TZ_{64}	15.7	X	357.87682	78.25372	267.72057	8.81690	0.0910434	0.19128503	2.9831979	21	9 20.5	19.6
512654 2016 TH_{65}	16.5	X	353.56357	260.67928	103.42624	11.89241	0.0979858	0.19088097	2.9874063	21	10 19.3	20.4
512655 2016 TW_{67}	16.4	X	271.29977	301.68151	232.66253	14.36990	0.0716186	0.24483189	2.5306032	21	—	—
512656 2016 TC_{68}	17.1	X	8.85006	124.76380	239.87280	5.12771	0.0392613	0.21224951	2.7833741	21	11 4.2	20.6
512657 2016 TR_{68}	16.9	X	310.45269	160.08231	204.47329	2.77946	0.1822955	0.17844947	3.1245864	21	7 22.9	20.8
512658 2016 TO_{70}	16.5	X	302.27236	194.41042	202.95508	4.74584	0.1156975	0.18419231	3.0592976	21	8 31.9	20.5
512659 2016 TN_{71}	16.4	X	243.75814	24.84516	101.58028	3.24351	0.0106983	0.20353869	2.8622314	21	10 26.8	20.3
512660 2016 TY_{71}	16.2	X	25.63738	19.04208	297.64301	11.18496	0.0775349	0.19000798	2.9965497	21	9 21.7	20.4
512661 2016 TE_{72}	16.1	X	358.05312	25.99773	305.44183	7.92410	0.0907654	0.18393859	3.0621101	21	9 2.7	20.1
512662 2016 TR_{72}	16.3	X	309.69281	199.00193	182.76101	14.62100	0.2124299	0.17896214	3.1186163	21	8 7.2	20.2
512663 2016 TS_{72}	16.6	X	46.16393	264.13145	69.12921	6.19966	0.0700836	0.21121757	2.7924325	21	11 19.1	20.3
512664 2016 TV_{72}	16.5	X	5.22326	230.34235	136.13344	6.16081	0.1302794	0.20514945	2.8472296	21	11 11.6	19.9
512665 2016 TH_{74}	17.2	X	310.37438	85.92667	9.06659	4.77534	0.0641030	0.22215582	2.7000030	21	12 10.2	20.6
512666 2016 TZ_{74}	16.6	X	357.99760	296.20666	50.33973	2.92154	0.1133801	0.19482381	2.9469630	21	9 29.4	20.0
512667 2016 TE_{76}	17.1	X	62.54573	103.12659	274.77808	4.43249	0.1143880	0.23790632	2.5794794	21	—	—
512668 2016 TO_{78}	17.2	X	119.80429	328.33819	59.73644	4.85560	0.1236969	0.27322717	2.3520874	21	1 16.5	19.9
512669 2016 TR_{78}	17.3	X	200.46594	226.38880	78.98170	6.26104	0.2000031	0.29349211	2.2425309	21	1 3.0	20.8
512670 2016 TE_{79}	16.6	X	138.74047	12.90060	256.49346	11.19733	0.1618085	0.23210114	2.6223131	21	12 19.5	20.9
512671 2016 TH_{79}	16.4	X	9.45487	30.26240	299.56716	8.57294	0.1168303	0.18738152	3.0244857	21	9 19.3	20.2
512672 2016 TQ_{79}	15.7	X	185.61747	119.91015	323.73732	9.29243	0.2845231	0.12582224	3.9442500	21	6 16.9	22.5
512673 2016 TU_{79}	16.4	X	327.18813	150.93192	332.89591	6.85601	0.0934517	0.23937326	2.5689301	21	—	—
512674 2016 TB_{80}	17.4	X	53.39264	162.71605	206.04252	1.37982	0.0770059	0.23541037	2.5976800	21	—	—
512675 2016 TF_{80}	16.6	X	302.07335	22.65348	3.39740	0.22427	0.1862445	0.17793371	3.1306215	21	8 7.5	20.4
512676 2016 TE_{81}	17.7	X	243.80097	42.63735	241.95599	6.77152	0.1712316	0.30331053	2.1938709	21	1 11.7	21.2
512677 2016 TT_{82}	16.6	X	294.83627	198.41995	292.82323	8.64179	0.0058169	0.23226471	2.6210817	21	—	—
512678 2016 TZ_{82}	17.1	X	168.94477	13.75992	302.44106	4.11036	0.2104416	0.27971452	2.3155778	21	—	—
512679 2016 TD_{85}	16.3	X	150.44272	179.57281	85.89395	5.84093	0.0227766	0.21594546	2.7515242	21	12 24.8	20.0
512680 2016 TP_{87}	16.8	X	328.11009	106.23895	306.99633	4.93137	0.0538441	0.20514366	2.8472831	21	11 7.4	20.5
512681 2016 TS_{89}	17.1	X	355.43358	181.74322	156.97265	1.75614	0.1826426	0.18106889	3.0943788	21	9 13.9	20.1
512682 2016 TZ_{90}	17.1	X	84.97471	164.92414	200.67093	6.04299	0.0297158	0.23925701	2.5697622	21	—	—
512683 2016 TE_{91}	16.5	X	319.76020	177.55360	202.00680	8.83633	0.0888179	0.17392016	3.1786016	21	9 5.4	20.6
512684 2016 TN_{96}	16.5	X	342.70959	317.12437	143.17313	12.12719	0.1055130	0.23185337	2.6241809	21	—	—
512685 2016 TO_{96}	16.6	X	308.37810	255.70213	225.86011	12.27641	0.1221947	0.22047284	2.7137259	21	—	—
512686 2016 UU	17.1	X	30.37101	345.07443	27.59207	2.40519	0.0917409	0.22192618	2.7018653	21	12 23.1	20.5
512687 2016 UY	16.2	X	84.79428	248.68145	10.91614	9.67663	0.0058181	0.18635853	3.0355440	21	9 24.2	20.3
512688 2016 UF_1	16.9	X	245.42194	231.56806	221.94264	10.99690	0.1567146	0.17258579	3.1949644	21	8 20.5	22.0
512689 2016 UK_1	16.7	X	337.86354	7.03631	13.10754	17.51292	0.1149222	0.19206642	2.9751013	21	10 8.3	20.2
512690 2016 UL_1	17.3	X	70.48391	117.48906	264.49011	5.26919	0.0872906	0.24717753	2.5145681	21	—	—
512691 2016 UD_2	17.1	X	36.01356	237.20050	125.33205	7.04027	0.0375999	0.21962702	2.7206888	21	12 10.3	20.8
512692 2016 UB_3	16.1	X	313.78197	219.87964	150.50248	10.85689	0.1032750	0.17612561	3.1520109	21	8 15.9	20.0
512693 2016 UD_3	17.0	X	23.00538	296.71697	117.71646	7.42085	0.0985347	0.23790301	2.5795033	21	—	—
512694 2016 UM_3	17.4	X	6.93483	114.46471	271.15779	2.38180	0.0508627	0.21634031	2.7481752	21	11 30.8	21.0
512695 2016 US_5	16.7	X	42.30614	297.43768	70.50549	15.60613	0.2485857	0.24140817	2.5544735	21	—	—
512696 2016 UL_6	18.1	X	210.56857	344.31986	319.34581	5.85034	0.1558598	0.29104704	2.2550729	21	1 9.0	21.5
512697 2016 UN_6	16.6	X	16.01011	36.27830	296.01085	2.97219	0.0321639	0.18973054	2.9994702	21	9 28.5	20.7
512698 2016 UR_6	17.1	X	160.06725	302.63281	302.52783	5.27796	0.0093503	0.21975871	2.7196018	21	12 12.1	20.8
512699 2016 UY_6	15.8	X	34.29484	276.82934	12.62077	16.27892	0.1183082	0.17842686	3.1248504	21	9 14.1	19.9
512700 2016 UW_7	17.0	X	210.36812	5.72988	255.65162	9.15012	0.1972420	0.27872351	2.3210633	21	—	—
512701 2016 UO_8	16.7	X	327.08237	93.73555	293.76669	10.69265	0.0653275	0.19437453	2.9515025	21	9 27.0	20.7
512702 2016 UY_8	17.0	X	98.96013	342.74355	334.10575	12.65693	0.1762951	0.23680364	2.5874808	21	—	—
512703 2016 UJ_9	16.2	X	290.52301	215.37172	253.03407	14.18981	0.0357494	0.21543223	2.7558925	21	11 30.6	19.9
512704 2016 UB_{10}	16.9	X	286.58401	255.38302	251.31095	13.71227	0.1598777	0.22767090	2.6562220	21	—	—
512705 2016 UG_{10}	15.9	X	171.91935	245.45816	204.05805	4.09455	0.2751885	0.12377806	3.9875573	21	6 14.5	22.7
512706 2016 UT_{10}	17.5	X	29.78010	21.88835	11.53333	2.32468	0.0754446	0.23208225	2.6224553	21	—	—
512707 2016 UU_{10}	17.1	X	98.01727	101.23298	203.74984	12.51320	0.0694983	0.22578307	2.6710076	21	12 17.5	21.2
512708 2016 UL_{11}	16.6	X	347.20895	192.10340	231.42580	4.69262	0.0568148	0.22303239	2.6929240	21	12 23.8	19.9
512709 2016 UN_{11}	17.0	X	23.15265	1.11186	354.22587	4.66896	0.1772969	0.21111608	2.7933274	21	11 29.8	20.5
512710 2016 US_{11}	16.5	X	299.69442	28.77595	357.61324	6.10544	0.2110814	0.17440585	3.1726976	21	8 2.0	20.6
512711 2016 UA_{12}	17.3	X	299.57701	148.45585	229.61108	5.20152	0.1644890	0.17118960	3.2123125	21	7 25.4	21.5
512712 2016 UO_{12}	16.9	X	40.33833	119.46510	250.91739	4.55222	0.0455419	0.22547731	2.6734218	21	12 27.1	20.4
512713 2016 US_{13}	17.3	X	201.48372	169.78665	121.22315	7.01761	0.1542569	0.28291428	2.2980852	21	—	—
512714 2016 UA_{14}	17.9	X	184.25040	334.46267	329.08366	5.51032	0.0992648	0.27324330	2.3519949	21	—	—
512715 2016 UC_{14}	16.5	X	262.93251	73.00463	346.28223	8.88502	0.0222216	0.16835128	3.2483172	21	8 22.2	21.1
512716 2016 UD_{14}	16.9	X	334.65908	16.50178	356.30222	10.13898	0.1028509	0.18621864	3.0370640	21	9 22.6	20.7
512717 2016 UK_{16}	16.6	X	8.14984	345.95895	343.63678	9.40888	0.1584611	0.18569999	3.0427164	21	9 22.8	20.2
512718 2016 UQ_{17}	16.9	X	98.45863	297.85869	21.07544	9.66654	0.2154424	0.23664901	2.5886078	21	—	—
512719 2016 UU_{17}	17.2	X	41.00100	44.56586	332.26795	3.09782	0.1162397	0.22579731	2.6708953	21	—	—
512720 2016 UD_{18}	16.1	X	55.26655	302.58426	338.75303	15.57722	0.0682170	0.18469738	3.0537178	21	9 18.1	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512721 2016 UF_{18}	17.1	X	190.90803	283.25770	282.53384	11.88338	0.0976882	0.21617839	2.7495473	21	11 21.3	21.5
512722 2016 UH_{18}	16.1	X	245.21098	184.97768	271.63227	9.88894	0.0523845	0.18007320	3.1057750	21	9 5.8	20.7
512723 2016 UL_{18}	18.0	X	231.50541	328.97936	323.54246	7.94144	0.1692919	0.30045739	2.2077376	21	1 13.5	21.5
512724 2016 US_{18}	17.5	X	200.81495	346.16125	281.08813	6.36633	0.1671671	0.26540507	2.3980777	21	—	—
512725 2016 UM_{20}	16.7	X	271.82037	44.15040	32.53999	9.93760	0.1695185	0.17433948	3.1735029	21	9 6.5	21.2
512726 2016 UN_{20}	17.6	X	102.36311	67.45957	258.19827	1.55569	0.1021197	0.23411722	2.6072368	21	—	—
512727 2016 UZ_{20}	16.6	X	293.61734	332.20436	61.05820	8.11674	0.1074342	0.17103697	3.2142233	21	8 19.3	21.0
512728 2016 UQ_{21}	18.1	X	235.48474	79.84020	185.20489	1.13827	0.0710714	0.27627112	2.3347787	21	—	—
512729 2016 UF_{23}	16.7	X	3.19621	180.33293	196.14581	1.59896	0.0776209	0.20371860	2.8605459	21	11 14.2	20.1
512730 2016 UR_{24}	17.4	X	78.90698	233.88531	124.88460	6.61719	0.2202038	0.24342821	2.5403221	21	—	—
512731 2016 UY_{24}	17.2	X	94.24206	93.61461	221.14684	2.64333	0.0849898	0.22159332	2.7045703	21	12 25.9	21.1
512732 2016 UL_{26}	16.2	X	334.73027	344.74746	17.92350	11.50248	0.1004466	0.17894151	3.1188560	21	9 12.9	20.1
512733 2016 UZ_{26}	16.5	X	174.58781	246.60437	334.41832	3.48609	0.0446437	0.21014202	2.8019526	21	11 25.4	20.5
512734 2016 UE_{27}	16.1	X	347.38213	299.39664	47.40078	11.90473	0.1783996	0.18350497	3.0669321	21	9 15.8	19.6
512735 2016 UJ_{27}	16.7	X	298.34623	315.56335	107.25210	2.84854	0.2429716	0.18306693	3.0718226	21	9 12.5	20.4
512736 2016 UW_{27}	17.0	X	115.96053	286.97085	19.51222	8.17500	0.2130285	0.23972901	2.5663881	21	—	—
512737 2016 UT_{28}	16.0	X	239.56955	131.12348	316.07109	12.14626	0.1182125	0.17083754	3.2167243	21	8 14.3	20.7
512738 2016 UU_{28}	16.2	X	259.04293	79.12574	340.86016	15.43495	0.2042352	0.16546312	3.2860077	21	7 27.4	21.3
512739 2016 UW_{28}	17.2	X	296.71183	93.74263	44.84283	14.12473	0.1473790	0.22580954	2.6707989	21	—	—
512740 2016 UH_{29}	16.3	X	315.73575	53.60757	331.72296	15.75424	0.1306165	0.18011334	3.1053135	21	9 3.5	20.0
512741 2016 UK_{29}	16.9	X	102.46081	345.37953	314.07638	2.82329	0.1259530	0.22243811	2.6977182	21	12 19.5	21.1
512742 2016 UV_{29}	16.6	X	119.68408	356.34685	295.80562	14.24269	0.1177032	0.23011346	2.6373921	21	12 29.2	20.8
512743 2016 UX_{30}	16.2	X	288.20026	116.14740	320.00310	14.31734	0.1762038	0.18342044	3.0678743	21	9 17.1	20.3
512744 2016 UY_{30}	16.2	X	237.37777	169.49561	315.94938	16.45365	0.1534575	0.17895562	3.1186920	21	9 17.5	21.2
512745 2016 UG_{31}	16.0	X	63.65580	230.80998	99.33854	32.86497	0.2777873	0.23393154	2.6086162	21	—	—
512746 2016 UU_{31}	16.4	X	67.33208	72.29610	260.28716	25.75184	0.2941214	0.23340671	2.6125253	21	—	—
512747 2016 UE_{32}	16.3	X	43.58405	40.92177	274.86216	11.95500	0.1028895	0.20411168	2.8568722	21	10 23.2	20.3
512748 2016 UM_{33}	16.2	X	225.41012	282.62808	230.06772	9.51679	0.0417672	0.18876777	3.0096603	21	10 28.4	20.5
512749 2016 UP_{33}	15.8	X	343.08154	109.70813	240.43643	10.29587	0.1107199	0.17005401	3.2265975	21	8 30.5	20.0
512750 2016 UF_{35}	16.5	X	359.99065	311.09011	52.30744	11.01371	0.0641518	0.18708829	3.0276452	21	10 22.3	20.5
512751 2016 UB_{39}	16.3	X	256.22044	46.76692	10.52852	10.01245	0.0603968	0.15857871	3.3804366	21	8 7.7	21.2
512752 2016 US_{39}	16.4	X	93.55447	26.19155	220.57928	8.26702	0.0423067	0.17446435	3.1719884	21	9 19.1	21.0
512753 2016 UP_{42}	16.1	X	324.16343	81.38515	268.70801	8.36891	0.0947522	0.18091586	3.0961236	21	8 4.0	20.0
512754 2016 UE_{45}	16.0	X	201.88583	216.52585	276.44806	9.76066	0.0298687	0.17551312	3.1593397	21	9 2.0	20.8
512755 2016 UO_{45}	16.5	X	28.41431	6.34929	302.61830	5.35757	0.0947593	0.18581000	3.0415153	21	9 20.9	20.5
512756 2016 UY_{45}	16.8	X	12.00489	104.29881	287.64347	8.14608	0.0967790	0.21781075	2.7357927	21	12 22.2	20.1
512757 2016 UM_{46}	16.6	X	249.62842	178.86251	338.03046	7.27842	0.0192350	0.21741432	2.7391173	21	12 10.4	20.5
512758 2016 UP_{46}	16.7	X	8.29386	44.50859	292.37064	6.04782	0.1176446	0.18822396	3.0154545	21	9 28.2	20.4
512759 2016 UV_{46}	16.3	X	29.05187	359.42511	312.32347	7.68372	0.0988218	0.18577344	3.0419143	21	9 24.9	20.3
512760 2016 UY_{48}	17.3	X	314.81731	166.50458	7.36590	3.61022	0.1558172	0.25674492	2.4517046	21	—	—
512761 2016 UQ_{49}	16.7	X	337.52285	1.25559	7.35084	7.30685	0.1008907	0.18250730	3.0780989	21	9 22.4	20.5
512762 2016 UO_{51}	16.2	X	8.70720	284.33692	53.64548	3.31017	0.2907886	0.19053544	2.9910169	21	10 25.7	18.9
512763 2016 UL_{53}	17.1	X	5.29878	273.59562	124.48183	6.17228	0.0620732	0.22441908	2.6818194	21	12 18.0	20.5
512764 2016 UF_{54}	16.0	X	300.50081	331.47000	46.13728	23.56310	0.0854401	0.17197617	3.2025103	21	8 20.3	20.8
512765 2016 UT_{54}	16.4	X	315.31278	327.25604	86.29453	6.57161	0.1159889	0.18814926	3.0162526	21	10 18.2	20.1
512766 2016 UY_{54}	16.2	X	285.94567	251.44053	181.65252	6.45286	0.0891133	0.18028878	3.1032988	21	9 28.6	20.3
512767 2016 UP_{57}	16.1	X	305.40420	354.62869	24.05598	28.12403	0.1607545	0.17480796	3.1678303	21	8 24.1	20.7
512768 2016 UT_{57}	17.2	X	22.57509	358.95591	355.94154	4.49955	0.1656168	0.20939491	2.8086134	21	11 26.2	20.6
512769 2016 UA_{58}	15.9	X	334.50023	31.50548	308.69388	8.64730	0.1492383	0.17486875	3.1670961	21	8 5.4	19.4
512770 2016 UB_{58}	15.7	X	355.67008	29.39403	298.95793	9.78715	0.1022511	0.17901804	3.1179670	21	8 24.9	19.6
512771 2016 UK_{61}	16.4	X	304.03173	297.96043	88.12288	6.26227	0.1672458	0.17742912	3.1365540	21	8 15.5	20.3
512772 2016 UC_{62}	16.4	X	240.36302	119.13352	48.09736	15.36577	0.0551189	0.22179446	2.7029349	21	12 5.9	20.1
512773 2016 UF_{62}	16.6	X	8.24304	10.47690	49.50167	14.01353	0.1607103	0.22973436	2.6402927	21	—	—
512774 2016 UM_{64}	16.5	X	15.54025	220.77729	144.40658	6.25559	0.0685115	0.20898800	2.8122579	21	11 19.1	20.2
512775 2016 UY_{64}	17.1	X	123.69291	329.98181	315.35841	5.39471	0.0366891	0.22238293	2.6981644	21	12 19.7	21.0
512776 2016 UA_{65}	17.1	X	114.84246	333.83170	332.71841	8.16622	0.1154907	0.23407202	2.6075724	21	—	—
512777 2016 UR_{66}	17.1	X	136.35991	194.62706	107.28447	6.41552	0.1560373	0.24355243	2.5394582	21	—	—
512778 2016 US_{69}	16.0	X	185.84557	250.50937	183.22841	3.22603	0.2118539	0.12365869	3.9901230	21	6 6.4	22.5
512779 2016 UY_{69}	16.8	X	96.34855	99.22003	216.16369	11.52382	0.1456458	0.23124455	2.6287849	21	—	—
512780 2016 UE_{70}	17.1	X	33.40548	84.76881	257.75855	0.97094	0.0813246	0.20466634	2.8517083	21	11 13.7	20.7
512781 2016 UN_{70}	18.0	X	55.04947	255.38323	201.78488	1.75820	0.1842187	0.27014982	2.3699159	21	1 7.3	19.6
512782 2016 UP_{70}	16.5	X	116.06082	178.29198	41.12643	3.36325	0.0170811	0.17744416	3.1363769	21	9 13.6	20.9
512783 2016 UV_{70}	16.9	X	299.90629	27.38470	35.07452	10.52282	0.0956894	0.18899614	3.0072354	21	10 7.6	20.7
512784 2016 UW_{71}	16.0	X	195.52218	137.33728	280.92156	1.58938	0.2236792	0.12328831	3.9981104	21	5 26.4	22.4
512785 2016 UL_{72}	16.3	X	332.85443	197.34695	217.08104	14.85563	0.1228061	0.20512387	2.8474663	21	11 18.5	19.5
512786 2016 UQ_{72}	16.0	X	154.80452	155.03830	22.57685	9.45492	0.0272778	0.17409379	3.1764878	21	9 10.5	20.7
512787 2016 UW_{72}	17.7	X	59.75065	31.43581	27.86426	7.69355	0.0742747	0.25842161	2.4410884	21	—	—
512788 2016 UT_{73}	17.1	X	254.90910	125.70099	29.38779	3.84885	0.0258118	0.21998971	2.7176976	21	12 14.9	20.7
512789 2016 UU_{73}	16.8	X	68.01928	279.18190	24.71470	6.13096	0.0731302	0.20371133	2.8606140	21	11 7.5	20.8
512790 2016 UV_{73}	17.1	X	307.42631	271.17483	213.56140	20.20578	0.1596342	0.22357614	2.6885559	21	—	—
512791 2016 UO_{76}	16.3	X	344.36768	187.69871	161.64946	10.03311	0.0798998	0.17459193	3.1704429	21	9 6.9	20.2
512792 2016 UJ_{77}	15.3	X	288.82974	296.22687	79.68617	18.97540	0.0995002	0.14644784	3.5646268	21	7 19.1	20.4
512793 2016 UK_{81}	16.5	X	178.74691	44.79695	134.49232	1.67198	0.0468677	0.18705412	3.0280139	21	10 8.4	20.9
512794 2016 UX_{81}	17.3	X	75.41947	153.29762	185.00898	2.96782	0.1162784	0.22720127	2.6598811	21	—	—
512795 2016 UO_{82}	16.8	X	142.28911	182.04388	73.63073	1.78793	0.0239978	0.21436797	2.7650062	21	12 2.8	20.5
512796 2016 UU_{82}	16.8	X	347.19941	295.22829	41.11433	2.45312	0.2132382	0.18077351	3.0977487	21	8 24.8	19.7
512797 2016 UG_{84}	17.1	X	17.63613	304.18035	56.57162	2.70317	0.0849877	0.20337685	2.8637496	21	11 15.4	20.6
512798 2016 UV_{84}	17.1	X	20.27695	187.95636	172.11193	2.06288	0.0770812	0.20379990	2.8597851	21	11 17.9	20.7
512799 2016 UL_{86}	17.4	X	95.65953	64.53904	228.23486	3.13265	0.0794173	0.21395404	2.7685714	21	11 29.2	21.4
512800 2016 UZ_{86}	16.9	X	291.82868	27.26073	30.70256	1.16984	0.1162611	0.18212447	3.0824108	21	9 14.1	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512801 2016 UA_{87}	17.0	X	73.79935	62.44480	235.18257	1.20064	0.0926222	0.20455471	2.8527457	21	11 10.3	21.1
512802 2016 UC_{88}	17.2	X	289.76540	77.11281	346.41183	1.21818	0.0671469	0.18332722	3.0689142	21	9 24.6	21.1
512803 2016 UP_{88}	16.9	X	64.93598	272.70125	29.77067	2.05896	0.0777252	0.19763375	2.9189634	21	11 2.5	20.7
512804 2016 UV_{89}	17.0	X	271.43506	114.81220	345.03821	1.76922	0.0756969	0.19346143	2.9607821	21	10 15.8	20.9
512805 2016 UX_{89}	16.3	X	193.29302	107.26650	30.83401	10.76868	0.0236362	0.17334942	3.1855746	21	9 8.3	21.0
512806 2016 UK_{90}	17.1	X	157.51328	243.34366	25.70421	6.32141	0.1372650	0.23601633	2.5932319	21	—	—
512807 2016 UX_{90}	16.7	X	271.44511	230.63807	207.67488	6.98073	0.0455037	0.18325898	3.0696761	21	9 20.7	21.0
512808 2016 UY_{90}	17.1	X	331.79524	276.79833	209.94479	4.24951	0.0240054	0.24589837	2.5232810	21	—	—
512809 2016 US_{91}	17.3	X	262.60621	328.66559	210.26441	4.86129	0.1337471	0.23451150	2.6043137	21	—	—
512810 2016 UL_{93}	17.3	X	129.49703	65.32773	205.45100	5.45974	0.0327253	0.21502908	2.7593360	21	12 7.3	21.2
512811 2016 UP_{93}	16.6	X	178.27224	197.09333	40.15639	9.83098	0.0535638	0.22324202	2.6912379	21	12 21.4	20.6
512812 2016 UX_{94}	17.2	X	146.23676	257.28785	17.65437	4.59782	0.1902119	0.23990213	2.5651533	21	—	—
512813 2016 UH_{96}	17.1	X	88.10665	284.81110	29.51028	8.46733	0.1049461	0.22230671	2.6987812	21	12 20.6	21.2
512814 2016 UC_{99}	16.9	X	211.02353	353.12127	204.63405	5.88646	0.0594333	0.21535074	2.7565877	21	12 9.1	20.9
512815 2016 UR_{99}	17.3	X	253.00491	320.99162	225.93716	7.98069	0.0741484	0.23228253	2.6209477	21	—	—
512816 2016 UW_{99}	17.3	X	55.31364	339.06996	343.01196	1.28038	0.0691120	0.20521333	2.8466386	21	11 14.7	21.1
512817 2016 UE_{100}	17.5	X	327.31994	66.26424	27.57129	4.36425	0.0589692	0.22462480	2.6801818	21	—	—
512818 2016 UZ_{100}	16.6	X	103.85725	188.10582	132.89720	14.30038	0.2899095	0.22953620	2.6418121	21	—	—
512819 2016 UQ_{101}	16.5	X	291.49701	148.56488	243.05455	8.18320	0.2463745	0.17748865	3.1358528	21	7 18.4	20.8
512820 2016 UA_{102}	16.5	X	65.25735	3.13296	304.03598	1.08594	0.0537078	0.20318565	2.8655458	21	11 5.9	20.4
512821 2016 UQ_{103}	17.6	X	215.60228	138.36432	114.95352	1.60922	0.1951717	0.26174675	2.4203705	21	—	—
512822 2016 UL_{105}	16.8	X	133.15485	12.50515	246.81253	3.16039	0.0707932	0.21311455	2.7758372	21	11 27.9	20.9
512823 2016 UR_{105}	17.3	X	4.47293	202.69705	254.83615	3.59880	0.0836146	0.24737511	2.5132289	21	—	—
512824 2016 UV_{105}	17.0	X	179.00052	309.50668	305.69219	1.69754	0.1342359	0.24220196	2.5488892	21	—	—
512825 2016 UN_{106}	16.5	X	345.14336	205.48812	150.14623	10.34689	0.1473734	0.18313329	3.0710804	21	9 18.8	19.9
512826 2016 UN_{107}	16.7	X	42.48631	59.50632	249.08919	0.54406	0.0973429	0.19331407	2.9622866	21	10 14.3	20.4
512827 2016 US_{107}	17.7	X	98.72274	66.55480	258.36084	0.81373	0.0820700	0.23251812	2.6191770	21	—	—
512828 2016 UD_{109}	16.3	X	297.05382	195.12954	212.87935	8.84101	0.0650436	0.17898523	3.1183480	21	9 12.0	20.7
512829 2016 UH_{111}	17.1	X	345.96541	128.32337	228.81884	8.16372	0.0830482	0.18282780	3.0745005	21	9 16.9	21.1
512830 2016 UU_{111}	16.5	X	260.52762	284.16705	227.09644	3.16938	0.1504821	0.21098025	2.7945262	21	11 28.1	20.1
512831 2016 UY_{111}	17.5	X	170.69942	282.60063	10.61113	1.95054	0.2374484	0.26472972	2.4021544	21	—	—
512832 2016 UC_{112}	17.2	X	76.08000	242.84890	71.71805	1.28581	0.0661133	0.21347797	2.7726859	21	12 1.9	21.2
512833 2016 UM_{114}	16.9	X	241.37386	77.24434	50.44077	5.07831	0.2477314	0.18215214	3.0820987	21	9 23.9	21.7
512834 2016 UM_{117}	17.3	X	66.86796	90.86674	224.11167	4.95020	0.0759715	0.20960723	2.8067164	21	11 22.5	21.0
512835 2016 UK_{118}	17.0	X	128.20406	255.62997	13.11173	2.82850	0.0939107	0.21483052	2.7610360	21	12 4.8	21.1
512836 2016 UM_{122}	16.6	X	33.42891	294.06135	24.41040	9.89476	0.0681010	0.19177131	2.9781526	21	10 11.3	20.6
512837 2016 UD_{123}	16.7	X	238.98626	84.63233	39.22353	10.83941	0.0747234	0.18781325	3.0198490	21	10 8.4	21.0
512838 2016 UA_{124}	16.8	X	323.80437	146.18226	341.83686	6.72326	0.0919182	0.23599300	2.5934028	21	—	—
512839 2016 UQ_{135}	16.6	X	183.95965	9.50812	190.93383	8.00990	0.0914162	0.19488691	2.9463270	21	11 8.0	21.1
512840 2016 UD_{139}	15.8	X	304.70953	137.01161	248.81288	26.77493	0.2248576	0.17217681	3.2000218	21	7 24.7	20.4
512841 2016 UW_{142}	16.6	X	187.87460	290.56744	325.89319	13.75405	0.0945603	0.23689909	2.5867857	21	—	—
512842 2016 UN_{143}	16.1	X	313.42964	344.82698	14.89972	12.79163	0.1230547	0.17394371	3.1783147	21	8 4.4	20.3
512843 2016 UT_{143}	17.2	X	316.00207	307.82425	198.78724	5.64477	0.0759397	0.25396409	2.4695691	21	—	—
512844 2016 UB_{145}	17.6	X	20.82047	156.82713	208.65727	3.70735	0.0903387	0.21647712	2.7470172	21	11 29.7	21.1
512845 2016 UO_{145}	15.8	X	305.64862	143.34721	274.41190	26.64859	0.1290908	0.18154606	3.0889544	21	9 16.4	20.4
512846 2016 UP_{145}	18.2	X	195.51758	88.91897	205.22871	2.55632	0.1805310	0.27899914	2.3195343	21	—	—
512847 2016 UM_{146}	17.1	X	87.34787	57.43539	281.85306	6.27087	0.0717802	0.22939293	2.6429120	21	—	—
512848 2016 UY_{146}	16.7	X	140.43305	12.61086	288.96754	8.48907	0.1205540	0.24315611	2.5422169	21	—	—
512849 2016 VP_{3}	15.8	X	299.92609	90.18737	269.56815	24.22132	0.2965094	0.17637511	3.1490376	21	6 13.2	20.1
512850 2016 VQ_{8}	16.3	X	316.62747	343.33989	49.27738	12.42410	0.0666812	0.18074993	3.0980182	21	9 28.8	20.5
512851 2016 VT_{8}	18.8	X	77.31019	209.68908	184.29275	1.58251	0.1833360	0.25316598	2.4747566	21	—	—
512852 2016 VY_{8}	16.5	X	301.60953	346.59911	50.00347	10.11695	0.0792408	0.17381682	3.1798613	21	9 9.8	20.8
512853 2016 VG_{9}	16.1	X	263.20536	205.13107	227.39767	14.49843	0.0592727	0.16896630	3.2404301	21	8 26.4	21.0
512854 2016 VJ_{11}	16.0	X	241.45945	111.63916	25.96993	13.15913	0.2325551	0.18086993	3.0966478	21	10 7.1	20.8
512855 2016 VZ_{11}	17.1	X	293.25216	152.76672	4.81960	14.21487	0.0985738	0.23054825	2.6340752	21	—	—
512856 2016 VD_{14}	16.5	X	80.74697	65.65015	306.13047	11.15721	0.0213806	0.23812763	2.5778810	21	—	—
512857 2016 VN_{14}	17.2	X	252.06239	27.79597	95.28248	2.98138	0.0999626	0.18880067	3.0093107	21	10 18.2	21.4
512858 2016 VR_{15}	16.8	X	49.43880	308.80101	55.28380	6.50653	0.0856969	0.22350690	2.6891112	21	—	—
512859 2016 VV_{15}	16.2	X	283.48987	109.46952	315.24472	9.75165	0.0516997	0.17556476	3.1587201	21	9 15.2	20.6
512860 2016 VO_{16}	16.9	X	53.35496	49.64212	270.13637	2.23194	0.0892097	0.20053451	2.8907462	21	11 11.4	20.9
512861 2016 VS_{16}	17.0	X	60.17089	85.92672	258.54116	3.56499	0.0784918	0.21343848	2.7730279	21	12 21.6	20.9
512862 2016 VR_{17}	17.4	X	162.68839	163.56372	158.20541	2.96976	0.1139844	0.25973538	2.4328499	21	—	—
512863 2016 VG_{18}	15.4	X	161.82857	91.41189	66.95370	9.15206	0.0532254	0.15080503	3.4956303	21	8 25.7	20.7
512864 2016 VC_{19}	15.7	X	30.72140	215.56964	101.35299	28.47346	0.1346765	0.17859885	3.1228439	21	10 27.3	20.4
512865 2016 VD_{19}	16.5	X	68.94019	240.20587	89.11678	7.15267	0.0057704	0.21031565	2.8004102	21	12 3.5	20.2
512866 2016 VE_{19}	16.8	X	253.60884	162.88983	19.49967	4.57761	0.0507656	0.21973206	2.7198217	21	—	—
512867 2016 VF_{19}	17.4	X	76.91467	183.25223	183.56837	13.11526	0.1924376	0.23972661	2.5664052	21	—	—
512868 2016 VJ_{19}	16.8	X	160.82365	189.34810	130.93829	9.01784	0.1222416	0.25304359	2.4755545	21	—	—
512869 2016 WB_{4}	16.3	X	267.39588	73.12460	30.23658	11.86171	0.0382989	0.18943184	3.0026224	21	10 20.7	20.5
512870 2016 WR_{5}	15.7	X	325.38008	324.86974	63.40507	15.15945	0.0182951	0.17546159	3.1599582	21	10 9.4	20.3
512871 2016 WA_{6}	17.4	X	117.70425	180.60619	157.47994	0.71861	0.1381973	0.24405763	2.5359525	21	—	—
512872 2016 WN_{10}	16.4	X	281.59275	8.57216	62.88798	10.32003	0.0671286	0.17937471	3.1138325	21	9 28.9	20.8
512873 2016 WE_{12}	15.9	X	312.54770	121.83125	301.76509	8.67923	0.0641222	0.19109979	2.9851254	21	10 24.2	19.9
512874 2016 WT_{12}	16.8	X	285.71617	194.54829	222.20295	13.84112	0.0712652	0.17364227	3.1819920	21	9 4.0	21.4
512875 2016 WY_{12}	16.3	X	219.91682	204.20985	300.90270	11.40868	0.0677773	0.18466713	3.0540513	21	10 3.9	21.0
512876 2016 WT_{13}	15.6	X	327.38342	76.03718	295.46204	10.38523	0.0712074	0.17222327	3.1994463	21	9 5.1	19.9
512877 2016 WM_{15}	15.9	X	219.94558	151.59675	349.22912	8.74077	0.0233385	0.17801746	3.1296395	21	10 6.7	20.4
512878 2016 WN_{15}	16.8	X	70.73103	309.12714	9.23348	2.59979	0.1574009	0.21041382	2.7995391	21	12 10.9	21.0
512879 2016 WT_{16}	17.0	X	275.75153	335.25083	220.22707	11.49364	0.1059124	0.24217770	2.5490594	21	—	—
512880 2016 WP_{18}	16.6	X	254.78472	240.07549	213.35972	9.22867	0.0358676	0.17675290	3.1445488	21	9 18.5	21.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512881 2016 WD_{19}	18.1	X	104.38263	173.15591	256.65121	4.04808	0.1568227	0.27929092	2.3179186	21	2 21.8	20.8
512882 2016 WQ_{19}	16.1	X	111.46431	355.98545	242.79023	15.24955	0.0576057	0.17368570	3.1814615	21	9 29.3	21.0
512883 2016 WQ_{21}	16.3	X	30.05859	262.45467	102.96361	10.12871	0.1777243	0.20900095	2.8121418	21	12 23.4	19.8
512884 2016 WV_{22}	16.9	X	70.80660	132.55914	211.42681	5.03496	0.0525526	0.21579686	2.7527872	21	12 30.2	20.8
512885 2016 WJ_{23}	16.5	X	346.55324	205.91935	206.36379	25.38684	0.1365112	0.21932664	2.7231724	21	12 11.7	20.0
512886 2016 WR_{23}	16.2	X	291.36795	104.04444	279.19656	24.74337	0.2860081	0.17388779	3.1789961	21	7 2.9	20.6
512887 2016 WA_{25}	17.1	X	317.70664	318.31008	74.17652	2.14448	0.1685980	0.17499238	3.1656042	21	9 15.0	20.6
512888 2016 WL_{26}	16.1	X	352.35451	301.22643	58.83955	9.96609	0.0891895	0.17669872	3.1451917	21	10 7.9	20.1
512889 2016 WZ_{27}	16.6	X	12.63344	285.51604	104.95838	8.93770	0.0542966	0.20505211	2.8481305	21	12 13.5	20.3
512890 2016 WH_{29}	16.2	X	347.03780	254.17854	123.21537	10.80327	0.1141211	0.18408877	3.0604446	21	10 24.4	20.1
512891 2016 WD_{31}	16.5	X	350.87636	19.18937	88.12663	22.93476	0.0306867	0.23135533	2.6279456	21	—	—
512892 2016 WN_{31}	15.1	X	225.04492	268.76560	145.16263	10.11221	0.2044385	0.12592570	3.9420894	21	6 15.2	21.5
512893 2016 WE_{32}	17.1	X	259.71840	95.55804	17.68744	14.99030	0.2140576	0.17898760	3.1183205	21	9 29.3	21.6
512894 2016 WV_{33}	16.2	X	342.35898	139.92551	246.38178	9.68826	0.0110817	0.18379008	3.0637595	21	10 19.9	20.6
512895 2016 WJ_{36}	16.2	X	352.95482	80.56002	302.74538	3.22843	0.0789684	0.18878136	3.0095159	21	11 3.4	19.9
512896 2016 WM_{37}	16.8	X	84.28649	265.56562	54.97352	10.72431	0.1375765	0.21135611	2.7912122	21	12 25.4	21.1
512897 2016 WU_{38}	16.3	X	110.69187	36.09376	239.92315	1.13115	0.0916780	0.19562409	2.9389204	21	11 23.1	20.6
512898 2016 WF_{42}	15.8	X	294.80504	171.59789	267.91920	8.54639	0.0728504	0.18475048	3.0531326	21	10 18.2	20.0
512899 2016 WN_{44}	16.8	X	149.71802	17.24924	291.27317	4.70893	0.1074570	0.24216536	2.5491459	21	—	—
512900 2016 WX_{47}	15.8	X	295.00300	112.64646	257.96192	10.83296	0.1090352	0.15014514	3.5058650	21	7 16.5	20.6
512901 2016 WZ_{47}	17.4	X	70.74813	46.56417	316.04166	2.79245	0.3149148	0.23679973	2.5875093	21	—	—
512902 2016 WG_{48}	16.6	X	292.52504	60.60436	28.07549	5.41821	0.1640385	0.18652351	3.0337538	21	10 18.6	20.3
512903 2016 WZ_{48}	15.9	X	130.95654	358.10943	231.96464	13.25082	0.0201969	0.17797608	3.1301246	21	10 10.8	20.6
512904 2016 WN_{49}	16.0	X	264.33206	49.84871	69.99465	11.90007	0.0772561	0.18666250	3.0322476	21	11 3.3	20.2
512905 2016 WQ_{49}	16.7	X	131.37611	239.95593	57.18172	15.54260	0.1251582	0.23330957	2.6132504	21	—	—
512906 2016 WW_{49}	16.4	X	284.26900	0.10481	57.99961	11.15432	0.0695110	0.17286018	3.1915825	21	9 15.3	20.9
512907 2016 WX_{50}	17.8	X	133.41685	77.71775	270.25461	6.18181	0.1383748	0.25694927	2.4504045	21	—	—
512908 2016 WL_{52}	16.4	X	43.29984	2.42090	61.45626	14.78226	0.0465308	0.23595620	2.5936724	21	—	—
512909 2016 WA_{54}	18.3	X	115.87521	161.60581	260.01920	1.33497	0.1892983	0.28077429	2.3097474	21	3 5.1	21.2
512910 2016 XB_{4}	15.9	X	333.26854	312.15493	85.10561	12.39345	0.1310527	0.18179604	3.0861221	21	10 27.3	19.7
512911 2016 XE_{4}	16.4	X	109.43572	295.18243	58.25931	3.99677	0.0712934	0.23881981	2.5728975	21	—	—
512912 2016 XL_{4}	15.7	X	314.96297	324.66161	69.25080	11.68875	0.1345972	0.17223482	3.1993033	21	9 21.3	19.8
512913 2016 XT_{4}	16.1	X	263.01713	7.88194	88.87969	11.35180	0.1136066	0.17147688	3.2087237	21	9 29.9	20.8
512914 2016 XF_{5}	15.6	X	199.90723	26.02720	42.71958	1.43857	0.2406640	0.12349449	3.9936592	21	6 10.3	22.2
512915 2016 XP_{5}	16.0	X	356.79579	60.47503	294.32945	2.19347	0.0238868	0.17513312	3.1639081	21	9 29.7	20.4
512916 2016 XR_{5}	15.8	X	240.58253	251.54993	248.55323	15.37872	0.1855076	0.18174149	3.0867396	21	10 7.9	20.7
512917 2016 XY_{5}	15.8	X	153.05209	47.62773	247.55653	24.56461	0.1925655	0.24026053	2.5626016	21	—	—
512918 2016 XA_{6}	15.9	X	321.30740	129.09289	269.06132	8.79026	0.0594730	0.17937845	3.1137892	21	10 2.4	20.3
512919 2016 XN_{7}	16.5	X	327.67874	51.67584	29.91146	9.50421	0.1110695	0.20605490	2.8388825	21	12 14.2	19.9
512920 2016 XB_{9}	16.0	X	349.77391	301.62079	63.06531	6.02945	0.1515644	0.17748632	3.1358801	21	10 9.6	19.6
512921 2016 XJ_{10}	15.9	X	348.68919	113.37008	254.70308	13.35929	0.1417748	0.17608943	3.1524426	21	10 3.1	19.8
512922 2016 XQ_{11}	15.5	X	238.61224	228.11648	259.30473	14.49793	0.0502962	0.16920252	3.2374134	21	10 4.6	20.4
512923 2016 XA_{14}	15.5	X	134.72491	149.42180	91.26406	28.37711	0.0840588	0.17749889	3.1357321	21	11 14.2	20.7
512924 2016 XO_{14}	16.2	X	261.85044	31.42149	105.00510	16.37258	0.0221477	0.18977142	2.9990394	21	11 29.1	20.6
512925 2016 XW_{19}	15.0	X	76.08226	20.12032	292.82648	20.25603	0.0128848	0.17045557	3.2215280	21	11 11.5	20.0
512926 2016 XA_{20}	15.9	X	117.53147	338.41892	291.25371	13.03093	0.1366961	0.19604886	2.9346738	21	11 23.9	20.7
512927 2016 XR_{20}	16.5	X	115.33231	6.12876	280.65679	4.66043	0.0378853	0.20018049	2.8941534	21	12 7.6	20.7
512928 2016 XC_{23}	16.4	X	23.69996	74.67970	297.14379	13.64912	0.1652865	0.20338463	2.8636766	21	12 20.0	20.1
512929 2016 XF_{23}	16.4	X	318.01292	231.35688	159.23295	6.60458	0.1628248	0.17065902	3.2189672	21	9 12.4	20.3
512930 2017 AA_{4}	16.3	X	43.51131	280.49980	93.34768	15.15078	0.2154234	0.22940042	2.6428545	21	—	—
512931 2017 AR_{6}	15.8	X	25.30321	261.30520	98.25505	7.01882	0.0327347	0.16868267	3.2440614	21	11 14.1	20.3
512932 2017 AW_{8}	15.6	X	329.04211	68.45778	331.68087	20.47304	0.0285056	0.16865186	3.2444565	21	10 9.1	20.4
512933 2017 AD_{13}	12.9	X	209.47861	268.91168	123.48198	28.14869	0.0325998	0.08286833	5.2104712	21	5 26.1	20.3
512934 2017 AG_{19}	15.4	X	287.99361	232.80559	134.90560	29.10979	0.2641875	0.15802960	3.3882628	21	6 18.2	20.6
512935 2017 BX_{3}	18.5	X	175.74660	139.07188	285.56328	2.11218	0.0873282	0.30035059	2.2082609	21	5 5.8	21.6
512936 2017 BE_{6}	13.3	X	358.44227	188.22685	78.56676	29.78065	0.0504852	0.08563866	5.0974872	21	6 13.4	19.9
512937 2017 BA_{11}	16.1	X	350.65038	85.12004	325.46888	9.96635	0.1097432	0.17625085	3.1505176	21	12 3.4	20.1
512938 2017 BT_{12}	13.6	X	283.28412	22.16970	295.92424	20.49174	0.0844698	0.08372746	5.1747665	21	5 1.5	20.7
512939 2017 BM_{16}	13.4	X	148.93692	157.50003	311.81014	20.18956	0.0310784	0.08313209	5.1994441	21	6 9.2	20.6
512940 2017 BC_{45}	15.5	X	290.20515	311.39222	155.92282	5.33172	0.1301590	0.17210919	3.2008599	21	11 11.4	19.7
512941 2017 BB_{59}	18.0	X	144.21336	236.81483	224.55054	4.71850	0.0731652	0.30053978	2.2073341	21	5 18.6	20.6
512942 2017 BC_{68}	18.4	X	183.64738	193.56477	245.88638	4.54301	0.0775672	0.30725633	2.1750479	21	6 5.6	21.0
512943 2017 BQ_{88}	16.1	X	199.01843	256.59348	331.56760	9.44209	0.0317024	0.18786930	3.0192483	21	12 30.6	20.6
512944 2017 BE_{93}	13.3	X	301.56792	200.18225	128.92683	30.37822	0.0732319	0.08104488	5.2883353	21	6 17.8	20.4
512945 2017 BF_{93}	13.1	X	323.48583	189.19940	120.12132	31.05451	0.1166275	0.08174423	5.2581298	21	6 18.2	19.9
512946 2017 CK	13.5	X	39.15228	139.14036	82.24329	28.32775	0.0319105	0.08205680	5.2447688	21	6 12.2	20.3
512947 2017 CZ	13.7	X	350.87243	199.92533	78.94924	30.54199	0.0424032	0.08401435	5.1629797	21	6 17.3	20.3
512948 2017 CD_{32}	15.8	X	338.31523	245.91147	109.02134	32.91975	0.1093875	0.16943162	3.2344944	21	9 12.4	20.4
512949 2017 DU_{1}	17.2	X	56.22162	289.44834	143.56613	4.74084	0.1632202	0.22558679	2.6725568	21	—	—
512950 2017 EL_{5}	13.0	X	17.78130	170.74788	94.28081	29.23377	0.0487744	0.08132738	5.2760821	21	7 6.1	19.7
512951 2017 FH_{54}	15.4	X	216.84776	295.95488	312.69678	13.70803	0.1435240	0.17305937	3.1891330	21	—	—
512952 2017 FU_{127}	15.8	X	242.83389	293.21354	15.49858	15.59919	0.2413805	0.24421810	2.5348415	21	2 22.4	20.3
512953 2017 FV_{157}	15.9	X	311.33882	357.43577	128.19981	8.46320	0.1291528	0.16470626	3.2960666	21	—	—
512954 2017 NL_{5}	16.4	X	354.99183	190.60779	124.73057	16.47874	0.1633173	0.24336462	2.5407646	21	8 17.1	18.7
512955 2017 OO_{41}	15.9	X	250.16149	153.73713	171.96063	14.05109	0.1665649	0.17054832	3.2203600	21	3 27.1	20.9
512956 2017 OH_{67}	17.4	X	20.08402	330.59693	15.80467	16.80381	0.2189458	0.25956460	2.4339169	21	11 26.7	20.4
512957 2017 RL_{17}	16.8	X	292.83892	32.20256	1.72379	10.43247	0.1325452	0.22661227	2.6644880	21	8 18.9	20.1
512958 2017 SX_{8}	16.0	X	269.91225	350.49849	28.16139	15.88198	0.1458239	0.20417135	2.8563155	21	6 19.2	20.4
512959 2017 SZ_{26}	17.6	X	227.94917	74.51856	11.69724	1.83283	0.0548170	0.22416824	2.6838196	21	8 10.5	21.3
512960 2017 SX_{28}	16.4	X	32.32512	68.74544	191.55610	18.01765	0.0389747	0.17867175	3.1219944	21	7 17.7	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
512961 2017 SB_{29}	16.7	X	330.68433	258.99917	106.72326	7.30566	0.0551843	0.21305469	2.7763570	21	9 15.9	20.2
512962 2017 SW_{33}	17.3	X	297.22545	159.27351	277.42454	4.56223	0.0739919	0.25015317	2.4945873	21	10 30.5	20.3
512963 2017 SQ_{35}	17.8	X	26.10322	264.21593	76.37413	7.34860	0.1630914	0.26030522	2.4292980	21	11 24.8	20.4
512964 2017 SV_{36}	16.8	X	337.13905	43.11613	309.05739	14.67113	0.1568893	0.23490090	2.6014347	21	8 27.8	19.5
512965 2017 SB_{37}	16.1	X	208.90944	122.82563	292.45238	11.60006	0.1231437	0.17858081	3.1230542	21	6 4.1	21.2
512966 2017 SX_{39}	16.8	X	325.09410	158.92815	195.89352	12.23930	0.2166829	0.23373130	2.6101059	21	7 31.5	19.6
512967 2017 SX_{42}	16.6	X	261.23450	283.98458	103.69420	11.76226	0.1822590	0.18679752	3.0307863	21	6 18.4	21.1
512968 2017 TO_{7}	16.7	X	340.74004	298.72555	30.55871	12.10568	0.3160766	0.22990064	2.6390195	21	7 27.3	18.6
512969 2017 TR_{7}	16.9	X	319.06362	304.49599	47.61081	4.08496	0.3133655	0.22483985	2.6784725	21	6 30.2	19.4
512970 2017 TU_{7}	18.1	X	44.25405	160.21371	189.60977	6.96162	0.2583613	0.28715304	2.2754141	21	—	—
512971 2017 TG_{8}	17.4	X	351.58518	221.95951	194.32032	24.37501	0.2226944	0.27451080	2.3447494	21	—	—
512972 2017 TM_{10}	17.3	X	316.63941	56.93848	329.31502	6.73152	0.1937284	0.23387508	2.6090361	21	9 6.2	19.7
512973 2017 TU_{11}	16.4	X	13.30176	302.11775	4.35302	12.06334	0.2733442	0.23897527	2.5717816	21	9 26.2	18.3
512974 2017 TY_{11}	18.2	X	76.27286	8.60705	1.24035	4.26714	0.2031790	0.31540131	2.1374390	21	—	—
512975 2017 TA_{14}	16.2	X	271.44650	45.50195	300.59558	9.41027	0.2246224	0.17896588	3.1185728	21	4 29.7	21.2
512976 2017 UQ_{8}	18.0	X	43.04030	76.61711	313.87137	6.26675	0.1768524	0.29705113	2.2245828	21	—	—
512977 2017 UY_{8}	17.1	X	335.12350	315.85728	23.37701	10.95862	0.3099806	0.22652352	2.6651839	21	7 26.6	19.2
512978 2017 UA_{9}	17.3	X	309.88949	57.01475	341.61644	4.72918	0.1732090	0.24172298	2.5522551	21	9 15.6	19.7
512979 2017 UA_{10}	17.7	X	67.89807	13.12067	323.59384	7.36648	0.2612435	0.29348023	2.2425914	21	—	—
512980 2017 UC_{12}	17.6	X	6.44259	197.63090	166.07743	1.41116	0.1919192	0.25726005	2.4484307	21	11 28.6	20.0
512981 2017 UD_{12}	17.1	X	350.00848	156.18347	196.75520	4.34134	0.2331689	0.24090834	2.5580056	21	10 6.9	18.8
512982 2017 UG_{14}	16.5	X	274.02089	3.77438	337.20711	6.20098	0.1372805	0.18578065	3.0418355	21	5 7.9	21.0
512983 2017 UV_{14}	16.9	X	305.60379	206.77955	155.58954	8.86538	0.2191176	0.21403379	2.7678836	21	7 6.6	20.2
512984 2017 UM_{15}	16.5	X	212.12248	257.22523	178.03635	11.49209	0.2067626	0.19005932	2.9960101	21	6 27.5	21.7
512985 2017 UT_{27}	16.8	X	215.85235	231.66296	185.36464	12.23519	0.1638647	0.18095229	3.0957080	21	6 11.8	22.0
512986 2017 UY_{28}	16.6	X	223.03218	216.71448	186.41186	8.06898	0.1920760	0.18070200	3.0985660	21	5 31.3	21.8
512987 2017 UD_{34}	18.3	X	336.71664	42.59267	42.25227	4.87798	0.1850511	0.27959587	2.3162328	21	—	—
512988 2017 UZ_{34}	16.9	X	0.23126	323.82592	9.92939	13.32746	0.1863401	0.23606649	2.5928645	21	9 27.2	19.1
512989 2017 UG_{35}	16.4	X	214.30279	109.18643	327.48981	7.81249	0.1135535	0.18485957	3.0519313	21	7 8.0	21.1
512990 2017 UD_{36}	18.0	X	6.86346	39.97028	4.25953	9.62822	0.2069643	0.27915098	2.3186931	21	—	—
512991 2017 UK_{36}	15.9	X	227.05221	358.35621	68.61602	11.89243	0.2156275	0.17619713	3.1511579	21	6 29.9	21.2
512992 2017 UJ_{37}	18.0	X	38.07944	315.90487	44.75942	3.62755	0.1898794	0.27814644	2.3242725	21	—	—
512993 2017 UW_{37}	16.5	X	252.09196	185.35039	220.85334	7.94693	0.0988982	0.18354555	3.0664800	21	7 9.9	21.1
512994 2017 UY_{37}	17.2	X	350.27951	347.64576	53.41291	12.34197	0.1817268	0.25653425	2.4530467	21	12 19.5	19.6
512995 2017 UB_{38}	16.7	X	284.62882	208.47872	216.79241	5.03248	0.1189045	0.22838548	2.6506785	21	9 15.5	19.9
512996 2017 UG_{39}	18.0	X	337.18380	274.52071	143.56401	3.08320	0.2120687	0.25943345	2.4347370	21	12 23.5	19.7
512997 2017 UL_{40}	16.5	X	341.40755	29.05224	269.74196	12.03907	0.1058123	0.19110641	2.9850565	21	6 24.9	20.2
512998 2017 UZ_{41}	16.3	X	294.07875	112.38812	295.39127	13.22410	0.1148185	0.22292061	2.6938241	21	9 1.2	19.9
512999 2017 UF_{42}	16.1	X	17.91772	89.22452	228.84709	9.96243	0.2027936	0.22979799	2.6398053	21	10 7.1	18.9
513000 2017 UK_{42}	16.6	X	277.00588	333.06127	49.97037	8.90232	0.0684488	0.18701186	3.0284701	21	7 18.8	20.9
513001 2017 UT_{42}	16.9	X	247.77554	178.15502	233.69075	3.32577	0.1466575	0.18434967	3.0575564	21	7 7.5	21.5
513002 2017 UV_{44}	16.7	X	12.17453	212.72297	128.46613	14.08541	0.3143313	0.24455840	2.5324895	21	11 28.4	19.5
513003 2017 UL_{45}	18.3	X	335.44471	47.47056	23.59281	6.28098	0.1869577	0.26093069	2.4254143	21	—	—
513004 2017 UM_{45}	16.9	X	339.15138	291.01252	68.12730	5.76668	0.3229839	0.23598682	2.5934480	21	9 18.2	18.1
513005 2017 UN_{45}	17.1	X	338.81365	188.10987	185.86905	5.86271	0.2970937	0.24074258	2.5591797	21	10 13.9	18.1
513006 2017 UB_{46}	18.5	X	321.25356	325.77597	154.79326	5.29278	0.0922268	0.29097119	2.2554648	21	—	—
513007 2017 UK_{46}	17.9	X	18.12609	208.12012	123.28325	5.28158	0.2124533	0.24500282	2.5294261	21	11 5.5	20.5
513008 2017 UO_{46}	17.3	X	176.00413	140.55748	84.58595	7.74939	0.0719830	0.26878969	2.3779040	21	12 11.4	20.7
513009 2017 UP_{46}	16.7	X	246.87657	223.63869	190.15314	10.45544	0.1126960	0.19049055	2.9914868	21	7 11.7	21.3
513010 2017 UR_{46}	17.3	X	279.41008	289.48635	131.27313	5.74883	0.0540934	0.22048024	2.7136652	21	9 14.5	20.8
513011 2017 UO_{47}	17.5	X	26.19471	237.71174	107.51530	7.53328	0.2676039	0.26248662	2.4158201	21	12 18.3	20.4
513012 2017 UV_{47}	16.7	X	24.96326	220.42845	70.93805	18.67146	0.1484380	0.21535033	2.7565911	21	9 16.5	20.4
513013 2017 UZ_{47}	16.3	X	326.49177	230.49010	100.11026	10.42008	0.0421985	0.19081450	2.9881000	21	7 20.7	20.2
513014 2017 UJ_{48}	17.6	X	276.21210	26.87514	94.87248	12.00150	0.1675463	0.25098804	2.4890524	21	11 21.5	20.5
513015 2017 UL_{48}	16.5	X	322.92803	174.59385	139.21987	12.12360	0.0639410	0.17766804	3.1337416	21	6 21.5	20.8
513016 2017 UX_{48}	17.2	X	268.27461	350.90541	107.42307	8.71483	0.1403575	0.22921060	2.6443134	21	10 9.9	20.7
513017 2017 UL_{49}	16.8	X	273.70439	238.52006	201.28188	21.41218	0.0674850	0.22307461	2.6925841	21	9 26.4	20.4
513018 2017 UY_{49}	16.4	X	233.02350	270.44018	138.33526	11.14057	0.1050426	0.17325148	3.1867751	21	6 23.1	21.4
513019 2017 UX_{50}	16.0	X	163.50169	75.58473	25.91278	10.30682	0.0704800	0.15700374	3.4030060	21	6 14.6	21.3
513020 2017 UY_{50}	17.1	X	181.91345	341.04565	266.77681	4.31125	0.1150489	0.29022743	2.2593165	21	—	—
513021 2017 VS	16.6	X	278.75161	359.93415	38.69467	18.47332	0.3518994	0.20400514	2.8578667	21	6 28.0	21.2
513022 2017 VD_{1}	18.1	X	128.12616	328.48605	2.08403	6.19565	0.2285116	0.32228768	2.1068822	21	—	—
513023 2017 VT_{2}	16.9	X	7.91644	231.92759	84.20189	12.64144	0.1948553	0.23318614	2.6141724	21	9 24.6	19.7
513024 2017 VF_{3}	17.1	X	328.43739	326.25363	58.97417	13.21878	0.2041710	0.23625175	2.5915088	21	10 10.2	19.5
513025 2017 VN_{3}	15.2	X	299.57599	60.46334	254.71585	24.83102	0.1661683	0.17265077	3.1941627	21	5 4.2	19.9
513026 2017 VP_{3}	15.5	X	277.33288	58.70527	294.43605	13.50861	0.0794751	0.17232697	3.1981627	21	6 7.4	20.1
513027 2017 VS_{3}	16.3	X	268.55731	48.64289	339.61721	11.05067	0.1088229	0.18954768	3.0013990	21	7 9.2	20.7
513028 2017 VV_{3}	16.0	X	257.79650	80.49659	306.44677	8.70649	0.1238881	0.18110675	3.0939476	21	6 20.8	20.6
513029 2017 VW_{3}	15.9	X	264.77242	98.44335	273.04187	11.12698	0.1120248	0.17637711	3.1490139	21	6 10.7	20.5
513030 2017 VZ_{3}	15.8	X	30.73358	335.22973	297.42633	8.86109	0.0627257	0.19355884	2.9597887	21	8 5.7	19.5
513031 2017 VM_{4}	16.3	X	251.55130	59.19674	327.50132	13.52080	0.2274885	0.17842583	3.1248624	21	5 31.2	21.6
513032 2017 VT_{4}	16.6	X	334.85161	290.42498	70.98737	7.20931	0.1934559	0.22664146	2.6642592	21	9 13.7	19.1
513033 2017 VV_{4}	17.0	X	339.69250	270.46302	73.94238	13.82274	0.3193082	0.22908314	2.6452941	21	8 24.6	18.9
513034 2017 VW_{4}	16.5	X	294.21955	229.39276	158.98296	8.99662	0.2141981	0.21087284	2.7954750	21	7 24.9	20.2
513035 2017 VX_{4}	17.5	X	10.13841	176.78103	229.97356	10.69497	0.2606837	0.27595886	2.3365396	21	—	—
513036 2017 VY_{4}	16.2	X	230.24967	80.95061	313.73364	19.42023	0.3003980	0.18072644	3.0982865	21	5 15.2	22.1
513037 2017 VZ_{4}	16.9	X	276.76584	171.87013	243.00961	12.80041	0.2313471	0.22222704	2.6994261	21	7 30.2	20.8
513038 2017 VH_{5}	18.4	X	350.13990	142.83198	281.63292	1.48594	0.1872614	0.27396588	2.3478575	21	—	—
513039 2017 VK_{5}	15.9	X	273.47889	275.23691	69.97710	16.52928	0.2444456	0.17435454	3.1733201	21	5 6.3	20.8
513040 2017 VM_{5}	16.2	X	238.04768	223.59337	207.55002	12.54573	0.1060684	0.19031903	2.9932839	21	7 22.9	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513041 2017 VT_{5}	15.7	X	164.37087	0.67085	185.11141	25.28825	0.0566507	0.21803114	2.7339487	21	10 3.0	19.5
513042 2017 VA_{6}	16.8	X	259.13538	52.14744	46.41792	12.24572	0.1641467	0.22282962	2.6945574	21	9 25.0	20.6
513043 2017 VG_{6}	18.7	X	17.95561	18.71648	30.75975	3.30575	0.1978290	0.28437760	2.2901950	21	—	—
513044 2017 VM_{7}	16.5	X	344.89495	282.41572	8.19272	9.08657	0.0773537	0.18083632	3.0970314	21	6 21.5	20.6
513045 2017 VN_{7}	17.2	X	310.52636	113.22834	269.02292	5.22802	0.0288456	0.21821822	2.7323860	21	9 4.7	20.8
513046 2017 VR_{7}	16.6	X	296.45545	62.49687	266.63753	3.22875	0.1312214	0.17799601	3.1298909	21	5 24.4	20.9
513047 2017 VV_{7}	16.5	X	226.73490	183.43658	238.43964	5.07435	0.0766519	0.18224845	3.0810127	21	7 4.1	21.2
513048 2017 VN_{9}	17.0	X	291.05470	155.03858	269.62225	13.64532	0.0908887	0.23242258	2.6198947	21	9 22.9	20.7
513049 2017 VA_{10}	16.6	X	231.93689	70.13019	347.68639	15.45804	0.2350751	0.17944166	3.1130578	21	6 22.6	22.1
513050 2017 VE_{10}	16.3	X	305.89910	34.31643	292.36377	16.23656	0.1193337	0.18107581	3.0943000	21	6 5.3	20.5
513051 2017 VL_{10}	16.4	X	351.69932	76.17037	278.99325	20.83296	0.0272926	0.22975224	2.6401558	21	9 17.8	20.4
513052 2017 VM_{10}	15.4	X	214.79721	67.39852	11.79309	26.31357	0.1807517	0.17816906	3.1278639	21	7 11.8	21.0
513053 2017 VS_{10}	17.8	X	0.47565	288.79229	100.77370	10.63447	0.2214749	0.26189628	2.4194491	21	12 31.1	20.2
513054 2017 VE_{12}	17.8	X	9.98124	337.20258	63.28421	6.25339	0.2215197	0.27376894	2.3489833	21	—	—
513055 2017 VO_{12}	17.4	X	328.36811	222.55489	258.18987	22.02216	0.2675815	0.28721825	2.2750696	21	—	—
513056 2017 VK_{14}	17.0	X	349.65828	78.86653	60.48409	22.30845	0.2710981	0.28344765	2.2952015	21	—	—
513057 2017 WJ_{12}	18.2	X	214.23813	105.67074	215.50721	20.36862	0.0817272	0.36827253	1.9276277	21	1 11.9	21.1
513058 2017 WF_{14}	16.9	X	275.26320	274.46533	196.28323	27.66261	0.3490726	0.23064236	2.6333586	21	9 26.9	20.4
513059 2017 WW_{16}	17.6	X	344.69416	300.35580	70.17593	8.72515	0.2025932	0.23988673	2.5652630	21	10 23.9	19.8
513060 2017 WQ_{17}	17.5	X	341.13691	10.30819	50.44714	2.14039	0.1697704	0.25713896	2.4491993	21	12 30.5	19.8
513061 2017 WR_{17}	17.9	X	344.20259	191.14282	258.39287	1.88953	0.1938523	0.27534337	2.3400204	21	—	—
513062 2017 WS_{17}	18.3	X	90.97668	133.64691	239.43569	1.00650	0.1730774	0.31529444	2.1379219	21	—	—
513063 2017 WU_{17}	16.4	X	6.37707	356.31259	328.22153	1.91105	0.0654671	0.21668446	2.7452646	21	9 11.1	19.8
513064 2017 WG_{18}	17.1	X	306.61177	355.15041	35.76837	7.00477	0.0560818	0.21761665	2.7374191	21	9 14.1	20.6
513065 2017 WH_{18}	18.0	X	221.11029	340.34335	252.38714	4.66784	0.1082919	0.30436148	2.1888177	21	—	—
513066 2017 WU_{18}	16.5	X	262.11426	343.67048	38.88720	13.24145	0.0905579	0.17830721	3.1262481	21	6 23.7	21.2
513067 2017 WN_{19}	16.1	X	89.47514	91.30049	98.73304	10.06198	0.0195213	0.17448735	3.1717096	21	7 3.5	20.6
513068 2017 WO_{19}	16.5	X	276.79240	306.16027	80.60980	12.74807	0.0344939	0.19391524	2.9561610	21	7 29.0	20.7
513069 2017 WW_{19}	15.8	X	272.89475	260.23316	101.94028	26.59560	0.2788555	0.18219721	3.0815903	21	5 26.1	20.9
513070 2017 WH_{20}	16.9	X	345.28131	298.81162	61.43387	16.14877	0.1733270	0.23556238	2.5965623	21	10 12.3	19.6
513071 2017 WL_{20}	16.7	X	316.55645	298.69636	85.53655	7.83543	0.1854971	0.22699448	2.6614962	21	9 9.1	19.5
513072 2017 WM_{20}	16.9	X	359.53723	329.22360	67.79082	5.85049	0.0693921	0.25613297	2.4556081	21	12 16.1	19.7
513073 2017 WQ_{20}	18.0	X	317.61943	193.71663	252.17603	1.49177	0.1349800	0.25433965	2.4671374	21	12 17.6	20.3
513074 2017 WX_{20}	17.2	X	224.21897	75.05042	9.63401	0.80645	0.1612703	0.18984329	2.9982825	21	7 23.6	22.0
513075 2017 WA_{21}	16.6	X	314.08979	283.52524	155.70242	13.22925	0.1362271	0.24344810	2.5401837	21	11 30.9	19.5
513076 2017 WC_{21}	17.7	X	322.63541	85.95689	31.23538	23.49492	0.2652613	0.28027310	2.3125002	21	—	—
513077 2017 WE_{21}	17.0	X	342.45164	326.20771	37.27247	12.30805	0.1903168	0.23553849	2.5967380	21	10 6.4	19.3
513078 2017 WF_{21}	16.5	X	311.49777	107.43534	280.69144	4.93418	0.0290503	0.22247320	2.6974345	21	9 14.5	20.0
513079 2017 WG_{21}	16.0	X	270.74630	328.21450	23.05196	10.19541	0.2211588	0.17702651	3.1413079	21	5 7.4	20.8
513080 2017 WJ_{21}	17.1	X	3.47086	93.47955	227.51056	15.94947	0.3954357	0.23787091	2.5797354	21	10 14.5	18.7
513081 2017 WK_{21}	16.2	X	209.39833	5.09559	68.22646	11.08721	0.1130636	0.17012558	3.2256926	21	6 27.5	21.2
513082 2017 WL_{21}	16.5	X	288.97010	7.85677	63.99178	15.40081	0.1476702	0.22837184	2.6507841	21	10 7.8	19.9
513083 2017 WM_{21}	16.9	X	281.83821	347.29467	98.88304	3.72298	0.1751410	0.23009519	2.6375317	21	10 5.5	19.9
513084 2017 WP_{21}	16.3	X	356.92507	280.84637	61.75421	11.08824	0.0536337	0.22027676	2.7153361	21	9 27.9	19.8
513085 2017 WR_{21}	16.8	X	343.62337	288.67457	63.57580	6.55811	0.2280629	0.22860781	2.6489596	21	9 20.1	18.9
513086 2017 WS_{21}	17.1	X	339.90351	297.19903	70.45205	3.95199	0.2590422	0.23552197	2.5968594	21	10 5.4	18.7
513087 2017 WV_{21}	17.6	X	346.58407	145.35214	259.54250	5.51862	0.1226269	0.25624898	2.4548669	21	12 12.2	19.8
513088 2017 WY_{21}	17.9	X	79.01477	147.63791	179.82050	5.69263	0.1903040	0.28067269	2.3103048	21	—	—
513089 2017 WZ_{21}	16.4	X	240.81558	258.24296	231.91456	22.70250	0.2099465	0.21782599	2.7356650	21	9 25.4	20.9
513090 2017 WC_{22}	17.4	X	10.75358	287.91649	85.22135	6.66984	0.2020970	0.25538673	2.4603893	21	12 20.2	20.0
513091 2017 WD_{22}	17.3	X	345.57112	251.13085	141.27208	1.64607	0.1065308	0.24320815	2.5418542	21	11 18.5	20.0
513092 2017 WG_{22}	18.0	X	321.76669	219.78352	225.27049	2.09568	0.1486102	0.25663284	2.4524184	21	12 25.4	20.1
513093 2017 WL_{22}	15.3	X	218.16694	173.12592	243.38426	13.93990	0.0829656	0.16067894	3.3509150	21	6 17.6	20.4
513094 2017 WQ_{22}	17.6	X	58.70149	308.73524	75.51362	11.61189	0.0604750	0.29041762	2.2583300	21	—	—
513095 2017 WV_{22}	17.4	X	304.63259	347.73006	71.33597	8.21744	0.1973403	0.22789662	2.6544678	21	10 5.8	20.2
513096 2017 WF_{23}	16.1	X	309.46146	230.43180	105.38540	12.03795	0.0527739	0.18294292	3.0732105	21	7 1.7	20.2
513097 2017 WM_{23}	16.6	X	111.57091	65.81980	126.72686	11.42250	0.0528592	0.18773293	3.0207103	21	8 8.9	20.9
513098 2017 WO_{23}	16.4	X	225.37599	260.98259	166.16311	14.49538	0.0604314	0.17814589	3.1281352	21	7 10.2	21.2
513099 2017 WT_{23}	17.0	X	336.60414	152.14477	199.05219	13.63515	0.2261435	0.21988792	2.7185363	21	8 19.8	19.7
513100 2017 WV_{23}	15.8	X	169.83498	40.89549	85.10890	17.20033	0.0630749	0.17817084	3.1278431	21	7 23.9	20.6
513101 2017 WY_{23}	15.5	X	264.93944	317.79899	63.21333	8.29459	0.1108190	0.17636542	3.1491529	21	6 22.8	20.1
513102 2017 WF_{24}	17.8	X	335.07398	149.53331	272.53052	5.62975	0.1742087	0.26049117	2.4281418	21	12 21.5	19.9
513103 2017 WK_{24}	18.0	X	41.73464	312.12343	75.21739	7.71743	0.1131825	0.28311193	2.2970156	21	—	—
513104 2017 WO_{24}	18.0	X	63.12660	125.80273	244.77591	2.28190	0.1907544	0.29273790	2.2463810	21	—	—
513105 2017 WS_{24}	16.5	X	302.31952	98.55752	235.27212	11.09823	0.2981467	0.18550546	3.0448430	21	5 12.4	20.6
513106 2017 WZ_{24}	16.9	X	54.97972	329.35992	333.92270	5.90644	0.1201947	0.25254387	2.4788191	21	11 3.2	20.1
513107 2017 WO_{25}	17.2	X	318.25065	272.75122	156.87683	12.32875	0.2552678	0.24326635	2.5414487	21	11 20.7	19.3
513108 2017 WB_{26}	16.1	X	258.51874	0.20498	105.06386	26.53623	0.0698450	0.22046807	2.7137651	21	10 25.3	20.4
513109 2017 WD_{26}	17.4	X	295.25426	326.82763	145.39237	15.86339	0.1979418	0.24584725	2.5236308	21	12 7.4	20.1
513110 2017 WH_{26}	16.7	X	293.41600	347.05052	111.64245	15.16990	0.0691987	0.25175986	2.4839626	21	11 30.4	19.9
513111 2017 WK_{26}	16.9	X	268.13372	254.08744	131.56453	10.99407	0.1032963	0.18847695	3.0127555	21	7 3.9	21.3
513112 2017 WV_{26}	17.0	X	1.61467	131.02981	224.86408	2.06848	0.2233814	0.23985098	2.5655179	21	11 7.4	19.2
513113 2017 WY_{26}	17.9	X	335.84823	14.51596	9.18068	3.90287	0.2904527	0.24121569	2.5558323	21	10 19.7	19.2
513114 2017 WZ_{26}	16.4	X	239.53495	146.19243	256.42119	9.24795	0.2300313	0.17610922	3.1522064	21	6 10.5	21.6
513115 2017 WA_{27}	16.2	X	248.55448	0.11671	34.26504	9.39523	0.0964306	0.17520748	3.1630129	21	6 22.3	21.0
513116 2017 WE_{27}	16.5	X	262.92750	211.19342	243.75037	21.17637	0.0581561	0.22483494	2.6785115	21	9 27.9	20.5
513117 2017 WF_{27}	18.0	X	334.70799	70.50616	351.02243	2.09994	0.1781957	0.25540757	2.4602554	21	12 18.3	20.1
513118 2017 WJ_{27}	16.7	X	357.20564	304.38037	57.09902	9.68783	0.1795398	0.23801226	2.5787140	21	11 2.2	19.1
513119 2017 WK_{27}	17.1	X	342.93385	298.32637	58.80352	13.92495	0.2398679	0.22819170	2.6521789	21	10 1.5	19.4
513120 2017 WL_{27}	17.2	X	352.77467	308.65247	51.19140	13.87373	0.1815010	0.23538900	2.5978372	21	10 23.3	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513121 2017 WR_{27}	17.3	X	331.90112	225.13987	162.22023	4.21529	0.3005967	0.23473009	2.6026965	21	10 12.5	18.7
513122 2017 WU_{27}	18.2	X	26.11388	77.20460	302.73061	1.70013	0.2296668	0.27419357	2.3465575	21	—	—
513123 1996 CG_{6}	16.8	X	278.67682	268.40274	145.53432	16.84704	0.2914091	0.17844887	3.1245934	21	7 25.3	21.3
513124 1996 JJ_{3}	17.3	X	240.98762	121.54728	91.35138	4.56267	0.1285101	0.22146935	2.7055795	21	—	—
513125 1997 GC_{32}	18.4	X	104.60779	150.14988	177.21534	5.92037	0.6533945	0.34035424	2.0316487	21	—	—
513126 1998 QP	21.2	X	190.24895	78.40559	326.46561	9.35335	0.5824322	0.41313785	1.7854159	21	4 25.6	25.3
513127 1998 VR_{2}	17.4	X	61.14210	327.85037	46.07010	5.31797	0.2453021	0.26585003	2.3954011	21	—	—
513128 1999 UJ_{32}	17.0	X	16.60788	7.78916	43.31639	5.26127	0.1408067	0.23098667	2.6307411	21	—	—
513129 1999 UD_{41}	17.3	X	354.09471	8.04350	25.16778	17.89542	0.2286268	0.22725744	2.6594428	21	12 9.5	20.2
513130 2000 BH_{33}	17.8	X	349.90774	29.18821	135.16851	3.17446	0.1280445	0.27795313	2.3253500	21	—	—
513131 2000 SJ_{11}	17.8	X	183.72368	239.47207	183.66681	22.21351	0.1023985	0.36373519	1.9436251	21	5 13.5	20.6
513132 2000 SH_{136}	18.1	X	123.80611	42.26266	324.43158	3.66502	0.3193187	0.30093866	2.2053832	21	1 17.1	20.5
513133 2000 SV_{248}	16.6	X	303.12930	207.27489	171.24341	14.42382	0.2754290	0.18300379	3.0725290	21	7 14.0	20.8
513134 2000 TF_{1}	16.6	X	315.90487	32.10151	24.59362	33.48368	0.2315452	0.23401411	2.6080026	21	10 18.5	18.7
513135 2001 BF_{21}	16.8	X	20.07629	70.03204	308.72422	27.93162	0.3719135	0.23570857	2.5954887	21	—	—
513136 2001 FA_{65}	17.3	X	274.64778	328.58335	165.86842	13.78947	0.2691860	0.22801343	2.6535611	21	11 14.6	20.6
513137 2001 RF_{42}	17.0	X	174.92682	290.76007	334.88259	26.05913	0.3030824	0.21701479	2.7424780	21	—	—
513138 2002 CY_{58}	20.9	X	128.05602	39.98998	341.57219	8.28838	0.3843809	0.61707843	1.3663936	21	—	—
513139 2002 CM_{274}	17.2	X	221.12144	196.56410	338.69949	7.63837	0.2005374	0.18768290	3.0212471	21	10 31.5	22.2
513140 2002 EQ_{4}	16.3	X	138.90009	227.76026	349.75226	15.75171	0.1597355	0.17878098	3.1207226	21	10 8.9	21.5
513141 2002 EH_{13}	17.0	X	229.14739	233.19859	354.76936	29.53654	0.2147583	0.24273697	2.5451424	21	—	—
513142 2002 PM_{168}	17.1	X	218.00295	109.99476	140.77046	12.10973	0.2459244	0.23307630	2.6149936	21	—	—
513143 2002 RM_{179}	17.3	X	10.33794	194.94620	188.41800	4.27939	0.0796727	0.21392882	2.7687889	21	12 6.0	20.7
513144 2002 TU_{337}	17.0	X	113.74528	272.44632	33.71251	13.12627	0.1698594	0.21966613	2.7203658	21	—	—
513145 2002 XY_{69}	17.7	X	324.66722	102.51878	8.58918	22.05633	0.3689053	0.26224645	2.4172949	21	—	—
513146 2003 BZ_{70}	18.0	X	356.61782	325.14811	136.76904	5.88190	0.2212266	0.26345097	2.4099213	21	—	—
513147 2003 EL_{16}	17.8	X	24.63728	242.02471	6.50498	33.32831	0.1227130	0.39024564	1.8545733	21	7 15.8	20.3
513148 2003 GW_{37}	17.0	X	230.74716	186.23166	22.37226	25.70755	0.2920405	0.19955860	2.9001631	21	12 7.2	22.0
513149 2003 KO_{8}	17.6	X	244.43036	93.27522	141.36228	7.98042	0.1429372	0.25359016	2.4719961	21	—	—
513150 2003 OV_{7}	16.8	X	147.34744	62.73422	250.86842	4.30971	0.2462520	0.24258794	2.5461848	21	—	—
513151 2003 QL_{37}	16.6	X	96.40520	197.85400	144.63654	20.45975	0.2677265	0.23685051	2.5871394	21	—	—
513152 2003 QA_{104}	16.7	X	36.29720	17.85920	19.40035	7.14156	0.2565856	0.23073343	2.6326656	21	—	—
513153 2003 SF_{42}	17.6	X	299.44107	289.81926	12.92556	22.40456	0.1754015	0.37305708	1.9111108	21	3 28.8	19.4
513154 2003 SQ_{60}	16.7	X	50.94275	6.14281	347.54465	13.96031	0.1703333	0.22901908	2.6457874	21	—	—
513155 2003 SG_{115}	16.4	X	3.18993	302.01712	170.71976	26.69953	0.0957775	0.23907750	2.5710484	21	—	—
513156 2003 SF_{314}	16.9	X	332.21891	262.51040	129.64318	6.10819	0.3707520	0.16184723	3.3347699	21	9 23.6	19.4
513157 2003 SU_{401}	17.0	X	354.33969	286.83152	138.99050	13.07429	0.1914825	0.22484531	2.6784291	21	—	—
513158 2003 UP_{8}	17.1	X	29.60546	355.91456	2.78228	14.23855	0.2685066	0.22473371	2.6793158	21	—	—
513159 2003 UC_{297}	17.1	X	21.61615	297.90617	71.22295	14.05448	0.2825421	0.22441336	2.6818650	21	—	—
513160 2003 UR_{321}	17.4	X	130.24900	292.44983	3.15878	3.22958	0.1078171	0.23093864	2.6311058	21	—	—
513161 2003 WX_{194}	18.2	X	96.49127	213.52662	181.61927	0.99910	0.0902393	0.29232675	2.2484868	21	—	—
513162 2003 YD_{15}	17.5	X	314.14124	12.67456	73.13724	7.47416	0.3266970	0.21814067	2.7330335	21	11 15.1	19.1
513163 2003 YT_{124}	20.6	X	350.15653	118.52482	326.47144	5.47647	0.4767428	0.27866411	2.3213931	21	—	—
513164 2004 BY_{163}	13.7	X	228.95225	328.36546	70.85537	6.90570	0.0406037	0.08125102	5.2793869	21	6 14.1	20.8
513165 2004 CK_{39}	18.9	X	335.70743	268.76013	355.88921	12.24479	0.8317370	0.28404543	2.2919801	21	1 7.9	23.6
513166 2004 DY_{38}	18.4	X	337.21504	165.18958	342.24511	7.23020	0.1669067	0.27990106	2.3145489	21	—	—
513167 2004 EV_{23}	17.7	X	345.56176	132.53995	2.59455	24.62801	0.2384272	0.27834002	2.3231947	21	—	—
513168 2004 EA_{42}	17.4	X	296.77628	197.87437	355.60713	23.74200	0.1749318	0.27638470	2.3341390	21	—	—
513169 2004 EY_{78}	17.6	X	286.97469	179.63096	45.05895	3.14748	0.1536877	0.27911694	2.3188816	21	—	—
513170 2004 KH_{15}	19.8	X	244.20466	350.05137	78.09460	35.06895	0.1701720	1.04602873	0.9611112	21	—	—
513171 2004 MD_{6}	20.4	X	211.62386	231.44128	263.85920	29.32069	0.5630425	1.06301764	0.9508436	21	9 1.4	22.0
513172 2004 RC_{61}	15.4	X	273.88023	33.01808	9.80921	29.66258	0.2707090	0.16537586	3.2871635	21	7 18.5	20.8
513173 2004 RQ_{110}	17.4	X	357.96199	67.40769	338.30159	28.51290	0.3533652	0.23747706	2.5825869	21	—	—
513174 2004 RF_{239}	16.5	X	217.35904	341.81336	180.95402	10.02033	0.0089417	0.18030402	3.1031238	21	11 5.7	20.9
513175 2004 RW_{246}	15.9	X	27.47724	5.35949	335.83309	27.97173	0.1822159	0.17656816	3.1467419	21	10 27.9	20.5
513176 2004 TU_{24}	16.3	X	316.88658	28.00568	6.93674	19.96792	0.1567216	0.17155726	3.2077215	21	9 19.9	20.1
513177 2004 TX_{159}	17.5	X	18.25019	16.87967	26.85884	13.40536	0.1223523	0.23979599	2.5659101	21	—	—
513178 2004 XU_{6}	17.6	X	5.96533	98.65483	297.74309	4.26501	0.3477364	0.23569328	2.5956009	21	—	—
513179 2004 XT_{130}	16.7	X	344.67826	26.56009	64.41171	34.23114	0.2283973	0.23524880	2.5988693	21	—	—
513180 2004 XU_{146}	16.3	X	347.32946	325.08145	117.03641	34.34503	0.2326142	0.23382058	2.6094415	21	—	—
513181 2005 BS_{27}	20.3	X	45.05385	48.78660	324.13770	16.69997	0.3853222	0.83525729	1.1166640	21	—	—
513182 2005 CV_{38}	20.2	X	79.89508	62.84380	146.43548	11.87118	0.4362991	0.37898770	1.8911210	21	9 21.0	23.2
513183 2005 EK_{16}	17.5	X	239.57551	28.34787	156.12214	5.94544	0.0959675	0.22400674	2.6851094	21	12 23.4	21.1
513184 2005 EB_{134}	17.2	X	273.70572	336.79931	194.03921	13.21165	0.1924098	0.22665138	2.6641815	21	—	—
513185 2005 EF_{260}	18.1	X	317.84316	210.47596	22.70129	8.16990	0.1434462	0.30034693	2.2082789	21	1 30.4	20.9
513186 2005 GD_{14}	17.8	X	263.46404	29.89219	168.27322	7.94750	0.2230147	0.22892455	2.6465157	21	—	—
513187 2005 GJ_{32}	19.1	X	28.95806	119.82310	4.75018	1.90853	0.1847388	0.29992826	2.2103334	21	—	—
513188 2005 GQ_{38}	18.1	X	247.59518	299.25129	350.72716	5.06558	0.1772608	0.29590221	2.2303375	21	1 25.4	21.7
513189 2005 GD_{45}	17.1	X	209.00319	356.43406	217.37120	8.81102	0.1789341	0.21888075	2.7268694	21	12 13.7	21.3
513190 2005 GP_{45}	17.5	X	262.83434	90.26068	109.36717	7.53967	0.2677010	0.22693240	2.6619816	21	—	—
513191 2005 GO_{95}	18.4	X	303.22586	178.91690	72.02626	2.85645	0.1149879	0.30004794	2.2097456	21	2 6.9	21.0
513192 2005 HQ_{2}	18.7	X	316.33736	166.59116	37.68250	5.72452	0.1936076	0.29510651	2.2343448	21	—	—
513193 2005 JZ_{116}	17.5	X	276.52708	193.27710	125.13096	23.32136	0.0400666	0.36545152	1.9374995	21	4 21.7	20.2
513194 2005 NS_{35}	16.6	X	27.61627	35.89827	320.69608	3.68492	0.2647587	0.19518828	2.9432934	21	12 18.8	20.3
513195 2005 NW_{43}	17.8	X	114.70444	238.23362	120.00088	6.96247	0.1360115	0.27468250	2.3437721	21	—	—
513196 2005 QS_{115}	18.1	X	223.64005	212.67266	157.09494	24.06572	0.0927404	0.35433745	1.9778409	21	4 17.1	21.0
513197 2005 QE_{136}	18.0	X	18.37304	34.67168	30.46624	2.99031	0.1632748	0.26157163	2.4214507	21	—	—
513198 2005 RZ_{45}	17.9	X	11.74141	355.95124	98.80685	6.26292	0.1882108	0.26239302	2.4163946	21	—	—
513199 2005 SJ_{13}	16.3	X	331.58471	60.17998	1.31281	6.10107	0.0608861	0.19064281	2.9898938	21	11 20.2	20.3
513200 2005 SH_{27}	18.1	X	199.36095	13.92073	294.02701	4.02474	0.2371802	0.27756603	2.3275115	21	1 9.3	21.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513201 2005 SX_{33}	17.6	X	13.73781	344.99476	83.02356	3.39895	0.1884600	0.25868684	2.4394195	21	—	—
513202 2005 SH_{157}	16.9	X	315.43213	356.52308	28.78069	10.02715	0.0941927	0.18010948	3.1053580	21	9 13.2	20.9
513203 2005 SF_{188}	17.9	X	319.03018	354.67429	176.70596	2.50905	0.1242600	0.26829214	2.3808430	21	—	—
513204 2005 TC_{2}	17.5	X	68.11237	352.97986	10.52209	11.35151	0.2566548	0.25999872	2.4312068	21	—	—
513205 2005 TO_{41}	16.2	X	244.98967	252.55463	174.33530	18.04425	0.1891278	0.17431460	3.1738047	21	7 17.1	21.4
513206 2005 TF_{79}	18.4	X	25.41314	43.49028	26.99034	0.62272	0.1784013	0.26048132	2.4282030	21	—	—
513207 2005 TH_{82}	16.8	X	272.83830	229.27677	210.64220	9.60046	0.0668570	0.18219725	3.0815899	21	9 20.7	21.2
513208 2005 TH_{136}	18.2	X	28.19723	318.40037	108.78416	2.17859	0.1568644	0.26224294	2.4173165	21	—	—
513209 2005 UB_{40}	17.2	X	303.14405	321.37813	76.60102	2.45412	0.1725299	0.17565425	3.1576473	21	8 28.2	21.0
513210 2005 UV_{47}	16.3	X	320.46222	329.34719	48.34415	18.50125	0.2141850	0.17834970	3.1257516	21	9 5.3	20.2
513211 2005 UX_{55}	17.1	X	268.93403	330.47324	97.66071	2.46157	0.1583983	0.17380050	3.1800604	21	8 20.8	21.6
513212 2005 UU_{94}	18.3	X	12.16955	98.82797	333.95755	3.42587	0.1580984	0.25773207	2.4454404	21	—	—
513213 2005 UJ_{118}	16.8	X	5.75054	126.20723	227.16758	7.00222	0.0639843	0.18233861	3.0799970	21	10 12.8	20.9
513214 2005 US_{202}	16.5	X	240.44284	269.43219	215.69837	9.09678	0.0834086	0.18007231	3.1057853	21	10 5.2	21.0
513215 2005 UD_{228}	18.0	X	126.32733	157.44768	172.95115	1.07587	0.1802069	0.26342796	2.4100616	21	—	—
513216 2005 UP_{246}	16.7	X	228.49753	335.37859	139.29595	2.12962	0.1398294	0.17407699	3.1766923	21	9 4.2	21.4
513217 2005 UX_{248}	18.3	X	358.40833	13.94326	80.84543	2.42682	0.1497656	0.25798292	2.4438549	21	—	—
513218 2005 UU_{255}	18.0	X	358.43344	283.94394	154.44967	2.38030	0.1642445	0.25487877	2.4636572	21	—	—
513219 2005 UW_{267}	18.1	X	345.44537	33.08047	80.83167	3.15448	0.1567198	0.25813228	2.4429121	21	—	—
513220 2005 UG_{280}	16.7	X	288.95661	333.47253	76.48029	1.96511	0.2456416	0.17577111	3.1562475	21	8 10.5	20.9
513221 2005 UD_{306}	18.4	X	16.27485	52.58208	22.57022	1.70806	0.1530154	0.25888841	2.4381531	21	—	—
513222 2005 UJ_{319}	16.7	X	288.07947	185.23371	235.53534	6.53956	0.1247086	0.17752723	3.1353984	21	9 7.2	21.0
513223 2005 UR_{370}	18.0	X	344.64276	36.84314	78.34763	4.72390	0.1526187	0.25815573	2.4427641	21	—	—
513224 2005 UA_{394}	18.3	X	97.55460	202.40221	148.52219	1.84169	0.1847392	0.26304000	2.4124307	21	—	—
513225 2005 UR_{395}	16.6	X	309.08911	345.37834	34.08273	11.38699	0.2186785	0.17779081	3.1322988	21	8 10.3	20.5
513226 2005 UO_{397}	17.6	X	111.56761	242.22656	109.14695	3.23491	0.2270638	0.26626852	2.3928906	21	—	—
513227 2005 UK_{524}	16.9	X	272.97706	283.95066	156.55440	9.80542	0.1768632	0.17785929	3.1314947	21	9 7.9	21.2
513228 2005 VO_{10}	16.8	X	253.32387	42.40862	62.12571	17.44525	0.1374625	0.17685210	3.1433729	21	9 28.8	21.6
513229 2005 VJ_{42}	15.9	X	338.32861	295.54434	80.31934	17.25118	0.2283901	0.18035584	3.1025294	21	10 10.3	19.3
513230 2005 VT_{53}	17.7	X	34.95307	332.26652	90.27462	3.06161	0.1794631	0.25983331	2.4322386	21	—	—
513231 2005 VU_{70}	15.9	X	13.65300	297.30436	72.34562	10.84203	0.1038989	0.18396546	3.0618120	21	11 20.4	19.8
513232 2005 VT_{124}	18.8	X	339.98098	184.77930	272.65754	1.69272	0.2400120	0.25294167	2.4762194	21	—	—
513233 2005 WE_{2}	18.4	X	285.27510	280.84777	79.20684	23.98607	0.1518609	0.42067387	1.7640289	21	6 7.7	19.4
513234 2005 WC_{56}	18.2	X	30.72090	328.31136	76.44402	4.94782	0.1678699	0.25489937	2.4635244	21	—	—
513235 2005 WD_{66}	17.4	X	248.46160	32.50633	78.08350	3.17455	0.1872431	0.17557935	3.1585452	21	9 16.1	22.1
513236 2005 WA_{132}	18.3	X	40.75801	316.60367	69.96658	4.01226	0.1847780	0.25472566	2.4646443	21	—	—
513237 2005 WG_{168}	18.4	X	14.51812	330.61116	81.64285	1.69702	0.2200542	0.25293352	2.4762726	21	—	—
513238 2005 WV_{191}	16.0	X	305.14254	344.11321	80.95237	24.67036	0.1414521	0.17912543	3.1167207	21	10 23.6	20.3
513239 2005 XO_{24}	16.4	X	317.75323	121.43441	275.99732	9.26576	0.0629228	0.17274928	3.1929483	21	9 24.7	20.8
513240 2005 YY_{160}	16.6	X	277.90786	203.16487	256.36618	7.60896	0.0414027	0.17522697	3.1627783	21	10 24.5	21.0
513241 2006 AE_{37}	16.9	X	218.12793	192.46084	325.25186	4.62457	0.1530190	0.17137923	3.2099426	21	10 11.7	22.0
513242 2006 AL_{39}	16.6	X	226.74101	241.26378	299.40824	11.26622	0.2666988	0.17483606	3.1674909	21	11 3.4	21.9
513243 2006 AT_{75}	17.9	X	277.02334	166.34440	48.21443	2.19490	0.1398312	0.25294378	2.4762057	21	—	—
513244 2006 BU_{11}	15.7	X	274.91896	151.94110	306.03500	13.32607	0.0332832	0.17253073	3.1956441	21	10 14.6	20.4
513245 2006 BW_{40}	17.1	X	332.75669	279.30764	137.22991	15.94006	0.2054376	0.24029183	2.5623791	21	12 6.6	19.7
513246 2006 CB_{11}	16.9	X	241.76855	165.89162	305.51158	9.42955	0.1979431	0.17063482	3.2192715	21	9 3.7	21.9
513247 2006 DA_{29}	16.8	X	119.38862	351.09233	4.27591	12.25611	0.1291480	0.24628066	2.5206691	21	—	—
513248 2006 DJ_{88}	17.8	X	318.11364	283.03886	169.56674	9.51354	0.1757644	0.23904263	2.5712984	21	12 23.2	20.3
513249 2006 DG_{124}	17.5	X	266.65607	211.66817	338.19104	7.10181	0.0865909	0.24418553	2.5350670	21	—	—
513250 2006 DW_{209}	17.5	X	285.94173	93.43743	72.15762	1.96872	0.0905135	0.24288211	2.5441284	21	—	—
513251 2006 ER_{26}	14.3	X	320.70843	136.73289	158.69224	3.00407	0.0604750	0.07967667	5.3487043	21	5 30.3	21.1
513252 2006 ET_{48}	16.6	X	136.55755	323.12772	357.84762	11.58613	0.1613714	0.24398616	2.5364478	21	—	—
513253 2006 EK_{71}	13.5	X	15.95565	275.85375	331.09951	25.70497	0.0904291	0.08289239	5.2094629	21	6 17.0	20.3
513254 2006 HV_{67}	16.6	X	357.17500	55.25991	42.53013	22.89957	0.0393547	0.23679604	2.5875361	21	—	—
513255 2006 HO_{68}	16.7	X	208.33146	3.27689	206.85411	10.97579	0.0115406	0.22965365	2.6409113	21	12 28.8	20.5
513256 2006 HH_{80}	17.6	X	224.31322	175.81323	46.77259	13.75267	0.1870309	0.23474120	2.6026144	21	—	—
513257 2006 HZ_{91}	17.3	X	148.39057	190.78716	86.37132	9.18945	0.0837334	0.22923322	2.6441394	21	—	—
513258 2006 JS_{49}	17.6	X	241.56536	101.94641	138.16476	5.06935	0.1443701	0.23974887	2.5662463	21	—	—
513259 2006 PR_{11}	16.8	X	159.18746	148.49630	140.81445	14.45635	0.2541616	0.22379695	2.6867873	21	—	—
513260 2006 RT_{77}	18.6	X	138.53239	308.78781	178.79785	21.90429	0.0696751	0.38059916	1.8857791	21	6 16.4	21.3
513261 2006 RP_{108}	18.6	X	358.94001	150.73675	4.64604	2.82815	0.0579479	0.29285435	2.2457854	21	—	—
513262 2006 SE_{18}	18.4	X	52.50738	332.78741	87.58442	3.87344	0.2652902	0.28335232	2.2957162	21	—	—
513263 2006 SP_{44}	16.5	X	280.30172	226.90505	155.68190	21.55760	0.2948510	0.18751091	3.0230943	21	6 19.9	21.4
513264 2006 SA_{75}	18.1	X	84.42630	2.09658	29.83189	7.11515	0.1083296	0.28458732	2.2890697	21	—	—
513265 2006 SE_{121}	17.9	X	251.48118	339.00164	29.49634	21.50698	0.0824080	0.37944885	1.8895884	21	5 8.3	20.0
513266 2006 SE_{194}	17.1	X	48.49198	354.23463	351.23972	5.78445	0.1020363	0.20451936	2.8530744	21	12 9.5	21.1
513267 2006 SP_{249}	17.4	X	79.23806	72.85215	3.32564	6.74621	0.0669953	0.29226874	2.2487843	21	1 8.8	19.8
513268 2006 SJ_{294}	18.4	X	55.94705	207.39658	210.07765	2.21839	0.1567022	0.28432697	2.2904669	21	—	—
513269 2006 ST_{337}	16.5	X	258.53866	213.22361	179.42368	15.97223	0.1801001	0.18376328	3.0640574	21	6 21.5	21.5
513270 2006 SW_{346}	16.8	X	118.27652	318.19182	6.88366	22.64609	0.1905124	0.28045779	2.3114848	21	—	—
513271 2006 SL_{358}	18.6	X	103.35827	59.21323	316.83934	1.99183	0.2330349	0.28809989	2.2704258	21	—	—
513272 2006 TH_{25}	18.5	X	18.18120	71.75037	28.31540	2.57343	0.1640891	0.28102904	2.3083513	21	—	—
513273 2006 TJ_{43}	19.0	X	55.00534	186.56428	214.91286	5.84534	0.2537503	0.27849424	2.3223370	21	—	—
513274 2006 UL_{15}	18.3	X	65.82225	335.48438	56.21134	6.84522	0.2256536	0.27911792	2.3188762	21	—	—
513275 2006 UH_{40}	18.7	X	31.20820	55.61346	33.69197	7.55461	0.2154349	0.28063602	2.3105060	21	—	—
513276 2006 UM_{209}	17.1	X	333.82136	307.86598	65.75683	3.24492	0.2111217	0.19305595	2.9649264	21	9 20.5	20.0
513277 2006 VY_{15}	18.2	X	21.18187	148.22255	319.25893	1.73838	0.1497727	0.28112474	2.3078275	21	—	—
513278 2006 VG_{136}	18.4	X	79.63872	324.87111	54.35656	2.51568	0.1960105	0.27906792	2.3191532	21	—	—
513279 2006 VU_{150}	18.0	X	114.16087	39.53009	323.53756	3.30391	0.2182524	0.28487918	2.2875060	21	—	—
513280 2006 VC_{172}	17.1	X	291.32611	273.02795	148.59337	1.03931	0.1406539	0.18710001	3.0275188	21	9 14.9	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513281 2006 WO_{84}	17.0	X	340.45176	197.03048	205.03547	11.58289	0.1731561	0.19686901	2.9265177	21	11 14.9	20.1
513282 2006 WG_{156}	18.0	X	73.45403	124.90541	67.98479	22.52008	0.0693586	0.37497099	1.9046021	21	6 16.6	19.6
513283 2006 WY_{185}	16.6	X	342.57046	106.78643	274.10526	11.94800	0.2466859	0.19501342	2.9450525	21	10 14.0	19.5
513284 2006 WS_{207}	16.9	X	275.42164	355.44944	107.02103	8.71491	0.2091325	0.18745820	3.0236610	21	10 9.1	21.0
513285 2006 WT_{207}	16.5	X	255.69407	305.92062	132.55376	5.58629	0.1638472	0.17796676	3.1302338	21	8 17.3	21.0
513286 2006 XG_{12}	17.6	X	221.51923	354.22644	80.05048	24.16009	0.0274290	0.37880907	1.8917154	21	7 25.3	19.9
513287 2006 XU_{47}	18.2	X	45.00637	151.92131	289.08077	5.19599	0.1287139	0.27759181	2.3273674	21	—	—
513288 2006 YM_{46}	16.1	X	326.24306	237.72476	132.95055	16.92935	0.2384143	0.18147430	3.0897687	21	8 25.6	19.2
513289 2007 AC_{15}	16.2	X	303.74946	278.15961	119.22353	10.67589	0.0435062	0.18015527	3.1048317	21	9 17.1	20.5
513290 2007 AT_{31}	17.5	X	52.38694	146.37432	280.51933	5.90720	0.0625568	0.27346316	2.3507340	21	—	—
513291 2007 BW_{16}	16.9	X	252.73476	177.44292	307.40429	11.75578	0.1844091	0.18551063	3.0447866	21	10 1.6	21.7
513292 2007 BA_{51}	18.2	X	9.91822	5.28856	101.11259	6.01315	0.1821524	0.27214713	2.3583063	21	—	—
513293 2007 BJ_{61}	18.1	X	65.95332	301.15510	95.12220	3.83000	0.1782038	0.27385317	2.3485016	21	—	—
513294 2007 BA_{63}	16.5	X	322.27342	251.37911	141.67833	16.83862	0.1177845	0.18029560	3.1032205	21	10 2.9	20.5
513295 2007 BD_{63}	16.6	X	244.03020	201.62140	310.03134	7.62532	0.0401556	0.18596701	3.0398031	21	11 16.9	21.0
513296 2007 BN_{68}	17.5	X	272.50557	70.59490	149.56265	11.00933	0.1804467	0.26744072	2.3858934	21	—	—
513297 2007 BF_{71}	17.9	X	293.88238	54.89471	153.67368	8.16862	0.1503780	0.27017068	2.3697939	21	—	—
513298 2007 BR_{78}	16.2	X	99.59533	307.48171	336.55415	13.99050	0.0455226	0.18180514	3.0860191	21	11 8.9	21.0
513299 2007 BW_{79}	16.5	X	223.72715	27.89336	132.43405	11.54454	0.0690497	0.18394539	3.0620347	21	11 5.9	21.1
513300 2007 CN_{3}	16.2	X	245.10708	319.10135	155.73188	6.34851	0.1393275	0.18021840	3.1041066	21	9 23.5	20.7
513301 2007 CV_{3}	18.0	X	9.68194	58.96674	59.06929	3.30268	0.1470258	0.27383534	2.3486036	21	—	—
513302 2007 CD_{5}	17.8	X	296.68765	55.05179	139.26750	2.74545	0.1364599	0.26851465	2.3795275	21	—	—
513303 2007 CN_{8}	17.3	X	246.18222	3.05992	103.56739	3.26723	0.1347884	0.18088541	3.0964710	21	9 15.6	21.8
513304 2007 CA_{10}	16.7	X	15.09420	71.86578	303.93218	7.12708	0.0275737	0.18744709	3.0237804	21	11 19.9	21.0
513305 2007 CV_{10}	16.6	X	0.07262	67.60485	317.41731	11.02761	0.1245619	0.18672421	3.0315795	21	11 17.3	20.5
513306 2007 CW_{20}	18.3	X	339.25592	240.67829	260.00021	0.54332	0.1300939	0.27053718	2.3676531	21	—	—
513307 2007 CA_{66}	16.7	X	209.56096	69.53494	126.01079	6.65767	0.2411910	0.18220126	3.0815446	21	11 15.0	21.9
513308 2007 DX_{10}	16.2	X	115.87586	101.20334	164.96576	25.61745	0.1603496	0.17471895	3.1689061	21	11 22.8	21.7
513309 2007 DV_{15}	16.5	X	249.37821	126.37943	344.27378	16.25006	0.1556662	0.17954561	3.1118563	21	9 17.4	21.1
513310 2007 DJ_{33}	17.8	X	330.74374	6.78337	151.05209	6.90528	0.1258893	0.26783467	2.3835532	21	—	—
513311 2007 DZ_{35}	18.2	X	283.47731	77.70937	155.84183	2.31088	0.1722597	0.26962863	2.3729689	21	—	—
513312 2007 DM_{41}	22.0	X	10.68123	274.46803	1.72982	2.26456	0.5276561	0.76757548	1.1813774	21	1 22.0*	22.7
513313 2007 DX_{47}	16.2	X	139.08717	58.44866	163.09135	11.51652	0.0674075	0.17411526	3.1762267	21	10 17.3	21.0
513314 2007 DM_{50}	18.0	X	308.32922	91.79238	95.44903	3.51543	0.1674644	0.27215627	2.3582535	21	—	—
513315 2007 DK_{72}	18.1	X	26.64630	277.93648	156.42972	6.25573	0.2363046	0.26708562	2.3880076	21	—	—
513316 2007 DH_{113}	16.0	X	300.30907	50.21745	349.87548	29.02234	0.3113996	0.17655608	3.1468855	21	8 15.7	20.2
513317 2007 DJ_{113}	16.0	X	329.13765	29.21881	349.37611	30.43729	0.0370436	0.17196377	3.2026642	21	9 18.9	20.4
513318 2007 EB_{2}	16.5	X	289.51584	75.25245	354.80076	8.67472	0.0971713	0.17604624	3.1529583	21	9 26.9	20.6
513319 2007 EF_{2}	16.6	X	327.95587	244.05913	174.05861	10.28043	0.0163381	0.17963932	3.1107739	21	11 13.8	21.0
513320 2007 EJ_{4}	18.6	X	353.10119	144.41689	329.63077	1.07218	0.1213233	0.26822896	2.3812168	21	—	—
513321 2007 EJ_{19}	16.8	X	185.63266	170.77728	358.23257	10.04834	0.0814327	0.17405706	3.1769347	21	9 29.1	21.7
513322 2007 EV_{42}	15.9	X	153.47658	233.13513	4.70149	26.42160	0.1256379	0.17532297	3.1616236	21	11 7.3	21.4
513323 2007 EN_{48}	16.1	X	193.22099	183.79659	23.62459	15.53272	0.2041071	0.17665379	3.1457249	21	11 11.7	21.5
513324 2007 EA_{55}	18.4	X	0.48616	0.02713	90.61726	3.48120	0.1791541	0.26335306	2.4105185	21	—	—
513325 2007 EY_{135}	18.3	X	252.00702	41.04519	178.24808	1.00296	0.1320136	0.26115233	2.4240418	21	—	—
513326 2007 EP_{210}	17.8	X	349.72011	179.90241	305.39282	2.03579	0.1501741	0.26797950	2.3826943	21	—	—
513327 2007 EA_{211}	18.0	X	307.03376	198.89351	332.43659	0.85381	0.1330276	0.26618225	2.3934076	21	—	—
513328 2007 FH_{21}	16.1	X	85.30832	309.93331	340.75327	9.61100	0.0682936	0.17838662	3.1253203	21	11 4.5	20.8
513329 2007 FB_{24}	17.5	X	255.11346	180.12016	41.71895	2.62092	0.1801280	0.26009173	2.4306272	21	—	—
513330 2007 FL_{40}	18.0	X	278.09723	213.24084	14.21005	7.53667	0.2364636	0.26488843	2.4011948	21	—	—
513331 2007 GG_{41}	18.2	X	202.82009	36.53248	218.12384	0.91062	0.1553405	0.25251065	2.4790365	21	—	—
513332 2007 GV_{58}	16.2	X	199.46345	358.22044	188.25976	10.68000	0.1680870	0.17751278	3.1355685	21	10 31.0	21.3
513333 2007 HL_{16}	16.0	X	160.39118	249.82323	2.23738	25.38927	0.2835667	0.17877997	3.1207344	21	12 3.5	22.0
513334 2007 HX_{39}	18.0	X	240.86685	140.66306	82.19050	5.30773	0.0983061	0.25704493	2.4497966	21	—	—
513335 2007 HF_{75}	18.0	X	312.95170	56.48347	93.80837	2.47134	0.1319431	0.25736721	2.4477510	21	—	—
513336 2007 HJ_{94}	18.1	X	236.74130	230.10457	28.33482	1.62738	0.1557940	0.26297328	2.4128388	21	—	—
513337 2007 LH_{1}	16.2	X	239.82112	296.36776	231.29343	14.94914	0.1980248	0.17666577	3.1455827	21	11 11.4	21.0
513338 2007 ME_{1}	17.8	X	302.28720	22.27498	150.79832	6.26743	0.1737632	0.25750735	2.4468629	21	—	—
513339 2007 PT_{14}	16.7	X	139.96421	189.16919	131.31255	14.04014	0.2956631	0.23990918	2.5651030	21	—	—
513340 2007 PC_{49}	17.4	X	350.62322	10.92362	356.04477	5.46173	0.3182004	0.21490276	2.7604172	21	10 30.8	19.3
513341 2007 QJ_{4}	16.8	X	32.54193	16.58953	334.84116	17.41456	0.2248329	0.22150728	2.7052706	21	12 19.6	20.7
513342 2007 QA_{8}	16.4	X	116.38566	343.98884	346.24412	33.20501	0.1873694	0.23427710	2.6060505	21	—	—
513343 2007 RN_{36}	18.2	X	87.70494	154.66242	186.85598	2.95916	0.2546875	0.30090820	2.2055320	21	—	—
513344 2007 RT_{218}	17.6	X	350.56845	262.69206	161.13844	4.93366	0.1054141	0.22253367	2.6969458	21	—	—
513345 2007 RS_{249}	17.0	X	134.73821	359.91918	316.51665	14.69478	0.1773898	0.23397750	2.6082746	21	—	—
513346 2007 RV_{319}	17.3	X	86.10721	357.14538	345.73296	6.42498	0.1785270	0.22919929	2.6444003	21	—	—
513347 2007 TQ_{428}	16.7	X	33.94109	279.52990	73.32575	18.08532	0.2299244	0.21861688	2.7290631	21	12 21.5	20.4
513348 2007 TG_{455}	17.2	X	280.83971	38.17154	70.36043	10.20882	0.1851332	0.20935597	2.8089617	21	10 30.4	20.7
513349 2007 VM_{43}	17.3	X	267.46434	280.64598	220.25385	6.26173	0.1270439	0.21330927	2.7741476	21	11 28.6	20.8
513350 2007 VX_{123}	18.5	X	101.19724	162.44309	243.32433	5.82287	0.1357444	0.30758059	2.1735189	21	1 3.0	20.5
513351 2007 VG_{203}	17.3	X	327.90384	280.11212	153.43730	4.25103	0.0775297	0.21469770	2.7621746	21	12 7.8	20.7
513352 2007 VV_{337}	15.4	X	357.61441	308.80631	13.96222	3.59469	0.1350384	0.12626074	3.9351126	21	8 21.8	20.2
513353 2007 WZ_{45}	17.1	X	76.56762	11.53899	330.19975	4.71819	0.0315204	0.21808370	2.7335094	21	—	—
513354 2007 YQ_{13}	18.0	X	17.41903	124.17186	312.67735	6.74880	0.1898961	0.29132587	2.2536338	21	—	—
513355 2008 AA_{7}	16.6	X	9.20214	130.50012	249.29589	12.26429	0.0650781	0.21047172	2.7990257	21	11 26.8	20.1
513356 2008 AE_{61}	19.2	X	143.56604	11.89763	123.17336	23.86686	0.0451685	0.39783520	1.8309110	21	7 4.3	21.2
513357 2008 AN_{64}	18.7	X	64.21409	300.21568	163.47245	3.72229	0.0843303	0.30221465	2.1991712	21	1 20.0	20.7
513358 2008 CA_{5}	19.8	X	63.62586	273.03745	331.45198	25.02427	0.5948985	0.38610976	1.8677935	21	10 20.6	23.9
513359 2008 CO_{109}	18.4	X	324.14585	153.87120	164.08328	23.69056	0.0452600	0.39277834	1.8465923	21	6 28.7	20.6
513360 2008 CD_{157}	17.2	X	253.88210	320.63013	149.36658	15.67146	0.2030016	0.19234320	2.9722466	21	9 21.7	21.7

* The additional opposition: 12 10.0, $V = 23.0$

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513361 2008 CX_{182}	17.1	X	294.22927	274.98091	0.54784	18.90035	0.2333535	0.29913084	2.2142599	21	2 20.6	20.5
513362 2008 CX_{203}	18.7	X	54.26851	260.18985	196.49182	3.02731	0.1158095	0.29648847	2.2273964	21	—	—
513363 2008 DT_{5}	17.1	X	338.38530	199.16655	312.77156	27.04080	0.1452726	0.29356812	2.2421438	21	—	—
513364 2008 DJ_{12}	18.2	X	270.32446	135.31878	120.74147	4.22623	0.1286330	0.29636389	2.2280206	21	1 5.4	21.5
513365 2008 DT_{52}	18.2	X	335.98391	6.55691	192.35969	4.94820	0.1375748	0.29465338	2.2366349	21	1 5.9	21.0
513366 2008 DX_{65}	17.6	X	189.33217	167.63054	134.32098	7.81134	0.1283138	0.28306542	2.2972671	21	—	—
513367 2008 DF_{77}	19.0	X	20.64428	72.22909	56.84875	1.86769	0.1421598	0.29463012	2.2367526	21	—	—
513368 2008 DW_{80}	17.4	X	198.42649	60.43751	165.58707	8.94119	0.2680573	0.19655207	2.9296628	21	12 9.7	22.6
513369 2008 DT_{88}	18.2	X	62.76196	221.78075	359.16607	20.90491	0.0201633	0.39473474	1.8404858	21	7 19.9	20.4
513370 2008 EU_{86}	16.5	X	298.97283	17.69174	98.26098	3.19974	0.0370689	0.19632610	2.9319104	21	12 17.4	20.4
513371 2008 ER_{116}	17.3	X	205.51896	22.25021	173.19364	9.43380	0.1970008	0.19214046	2.9743369	21	11 15.8	22.2
513372 2008 EA_{121}	16.8	X	208.57057	344.17071	174.52862	8.21573	0.1949451	0.18834800	3.0141305	21	10 5.2	21.6
513373 2008 EU_{121}	18.5	X	6.53536	307.86098	192.19331	3.61475	0.0757479	0.29000614	2.2604657	21	—	—
513374 2008 EQ_{137}	16.9	X	172.46656	199.51678	22.85938	11.40953	0.0443383	0.19046699	2.9917335	21	11 19.8	21.4
513375 2008 EX_{149}	17.3	X	259.23435	119.46433	7.29273	7.04678	0.1521526	0.19258249	2.9697839	21	10 21.8	21.5
513376 2008 EJ_{171}	16.8	X	155.94092	101.58074	144.36318	6.82657	0.1901745	0.18366926	3.0651029	21	12 1.7	22.1
513377 2008 FV_{62}	16.9	X	318.77254	268.77480	168.15789	12.13882	0.0261559	0.19507292	2.9444537	21	11 27.6	21.1
513378 2008 FS_{73}	16.9	X	116.38651	143.45943	106.15613	3.61652	0.0960794	0.17997060	3.1069554	21	10 28.4	21.6
513379 2008 FL_{137}	16.5	X	138.14816	165.60466	52.64395	19.07692	0.0389561	0.17867792	3.1219226	21	10 15.9	21.2
513380 2008 GL	16.2	X	164.08987	235.21022	9.54510	22.05473	0.2213180	0.18931438	3.0038643	21	11 29.8	21.8
513381 2008 GZ_{7}	15.8	X	97.79522	254.21165	32.55210	17.26078	0.1847241	0.18113176	3.0936628	21	11 25.2	20.9
513382 2008 GU_{27}	17.3	X	209.44578	7.99196	182.08879	15.61733	0.1668628	0.19325792	2.9628604	21	11 15.9	22.1
513383 2008 GH_{43}	16.5	X	62.24944	322.98783	27.84392	10.28451	0.0782764	0.19143808	2.9816077	21	12 27.4	20.9
513384 2008 GL_{70}	18.2	X	239.37515	150.49682	125.78677	6.49675	0.2598817	0.28014750	2.3131913	21	1 1.4	22.2
513385 2008 GR_{71}	18.6	X	131.70494	82.59348	31.24753	21.00583	0.1084446	0.38391958	1.8748903	21	5 13.3	20.7
513386 2008 GK_{131}	16.8	X	176.20309	43.80425	158.66192	7.64792	0.1206621	0.18546855	3.0452471	21	11 1.5	21.7
513387 2008 GY_{133}	13.9	X	62.06854	125.74666	72.60824	14.50437	0.1280321	0.08236267	5.2317757	21	6 24.4	20.6
513388 2008 HZ_{5}	18.8	X	296.96897	22.91045	195.70967	5.50555	0.1967698	0.28706323	2.2758886	21	—	—
513389 2008 HQ_{14}	18.5	X	294.64970	341.41566	248.21627	3.15638	0.1242870	0.28871328	2.2672089	21	—	—
513390 2008 HP_{22}	18.7	X	349.04611	303.54865	228.12872	2.61878	0.1095186	0.29079746	2.2563631	21	—	—
513391 2008 HP_{29}	16.2	X	145.24428	141.36810	93.78424	13.81093	0.1214010	0.18219573	3.0816070	21	11 12.6	21.2
513392 2008 HA_{58}	16.5	X	92.25723	66.40986	218.96934	4.25014	0.0922207	0.18347473	3.0672691	21	11 13.4	20.9
513393 2008 HB_{62}	15.8	X	48.49846	244.46042	72.67452	15.81372	0.1061626	0.17457455	3.1706534	21	11 5.4	20.2
513394 2008 HE_{69}	14.0	X	47.66041	76.85014	141.95974	17.55015	0.1281605	0.08251392	5.2253805	21	6 30.6	20.7
513395 2008 HF_{71}	14.1	X	116.89857	93.80671	39.99867	19.94406	0.0456500	0.08253624	5.2244381	21	5 30.7	21.2
513396 2008 JM_{4}	18.3	X	292.49895	116.06119	115.79015	6.33114	0.1420570	0.28502197	2.2867420	21	—	—
513397 2008 JV_{22}	16.0	X	342.25882	318.68120	66.22809	27.99401	0.1046978	0.17776663	3.1325828	21	10 31.7	20.2
513398 2008 KM_{10}	14.0	X	52.10729	80.17463	134.16982	21.34832	0.0662322	0.08065831	5.3052187	21	6 25.1	20.9
513399 2008 KE_{14}	16.5	X	191.95387	64.97826	100.19804	17.23067	0.0685812	0.17751187	3.1355792	21	10 11.9	21.5
513400 2008 KS_{15}	16.1	X	16.99566	254.53823	106.80772	16.72080	0.0470272	0.17825328	3.1268787	21	11 12.9	20.6
513401 2008 KH_{23}	13.6	X	52.83043	140.80513	74.80976	29.42211	0.0522365	0.08168504	5.2606699	21	6 21.6	20.5
513402 2008 KH_{40}	16.1	X	156.29632	153.71386	75.83168	18.46527	0.2493728	0.18168567	3.0873718	21	11 15.6	21.6
513403 2008 KO_{43}	13.5	X	245.39033	271.08174	117.09688	18.99078	0.0899354	0.08134418	5.2753554	21	6 16.3	20.7
513404 2008 PR_{18}	17.2	X	202.01419	327.71572	343.27923	12.72012	0.2174516	0.27028989	2.3690970	21	1 18.4	21.3
513405 2008 RP_{7}	17.3	X	45.42831	200.47925	190.73789	5.43901	0.0842097	0.25144464	2.4860382	21	—	—
513406 2008 RB_{10}	17.5	X	351.27930	268.09367	168.08835	14.77834	0.0728899	0.24452753	2.5327027	21	—	—
513407 2008 RL_{10}	18.1	X	347.37706	36.97339	4.54649	4.88827	0.2549278	0.23393686	2.6085767	21	12 16.8	20.3
513408 2008 SK_{106}	17.6	X	315.10658	70.22400	28.84349	13.26334	0.2416849	0.23261534	2.6184472	21	12 20.8	19.9
513409 2008 SX_{117}	17.8	X	328.46624	79.88155	19.12147	10.69988	0.1610509	0.23780388	2.5802201	21	—	—
513410 2008 SQ_{132}	17.5	X	37.86870	354.82810	21.48322	15.28070	0.1115876	0.23782434	2.5800721	21	—	—
513411 2008 SK_{195}	17.7	X	356.93831	255.67629	161.33548	1.46942	0.2112942	0.23565053	2.5959148	21	—	—
513412 2008 SL_{235}	18.0	X	189.59589	219.83993	58.06838	3.19304	0.1645054	0.25699595	2.4501078	21	—	—
513413 2008 SU_{246}	17.8	X	15.02518	61.12430	354.94600	11.90915	0.1754402	0.24110680	2.5566017	21	—	—
513414 2008 SV_{267}	15.9	X	204.96472	354.12986	66.16724	3.70394	0.2540250	0.12522021	3.9568820	21	6 3.9	22.6
513415 2008 SP_{272}	18.2	X	208.40986	160.31234	220.48698	5.50999	0.1389989	0.35241281	1.9850354	21	4 7.9	20.7
513416 2008 SN_{277}	17.2	X	259.04889	133.93397	78.41036	7.53686	0.0977624	0.25126674	2.4872115	21	—	—
513417 2008 SV_{304}	18.0	X	329.98431	123.88298	323.34135	2.30727	0.1822884	0.23578830	2.5949035	21	—	—
513418 2008 TP_{72}	18.0	X	5.24620	57.75113	0.40560	3.00476	0.1044838	0.23783223	2.5800151	21	—	—
513419 2008 TB_{88}	17.5	X	33.44007	237.75223	168.18097	5.98050	0.1915533	0.24248631	2.5468961	21	—	—
513420 2008 TD_{90}	16.9	X	5.29694	206.85308	222.59766	12.44603	0.1246764	0.23738399	2.5832618	21	—	—
513421 2008 TH_{121}	17.5	X	348.01328	321.33736	104.85898	7.04013	0.2843857	0.23456106	2.6039468	21	—	—
513422 2008 TD_{185}	17.2	X	331.82068	13.33161	60.43784	12.85433	0.1678346	0.23354856	2.6114673	21	12 21.1	19.8
513423 2008 UF_{41}	18.1	X	357.27091	23.03898	29.73637	4.16224	0.2689872	0.23324662	2.6137205	21	—	—
513424 2008 UT_{53}	17.6	X	346.42236	17.36683	52.44438	15.46102	0.1088581	0.23295369	2.6159112	21	—	—
513425 2008 UV_{54}	17.3	X	1.11943	331.49296	46.82421	13.67599	0.2945958	0.22920713	2.6443401	21	12 16.2	19.9
513426 2008 UU_{56}	18.3	X	172.20516	61.98821	5.84152	19.26204	0.1067263	0.35831484	1.9631773	21	4 25.7	21.1
513427 2008 UO_{89}	17.4	X	316.60656	227.14044	231.93646	10.26228	0.0650006	0.23657963	2.5891138	21	12 28.2	20.6
513428 2008 UA_{129}	17.8	X	359.46002	175.44776	251.80665	3.48950	0.1704416	0.23763135	2.5814689	21	—	—
513429 2008 UM_{141}	17.6	X	18.91937	332.91520	50.30233	2.12140	0.2153753	0.23402001	2.6079588	21	—	—
513430 2008 UB_{151}	16.0	X	210.35000	196.95865	222.29518	1.98033	0.2021550	0.12419659	3.9785939	21	6 8.7	22.4
513431 2008 UY_{172}	17.5	X	310.55281	98.33839	36.38974	3.78851	0.0847077	0.23926040	2.5697379	21	—	—
513432 2008 UK_{202}	17.4	X	46.96420	231.22178	138.05389	5.69324	0.2872432	0.23958011	2.5674513	21	—	—
513433 2008 UC_{259}	15.8	X	210.13553	14.46834	55.32626	4.84172	0.2811140	0.12511888	3.9590182	21	6 17.4	22.4
513434 2008 UW_{269}	17.8	X	2.47429	316.52765	61.49959	5.82670	0.3337338	0.23122970	2.6288974	21	12 28.0	20.2
513435 2008 UK_{299}	16.9	X	201.37557	236.78035	12.30976	6.33483	0.1070219	0.24339871	2.5405273	21	—	—
513436 2008 UT_{309}	17.1	X	346.42381	145.27130	246.16204	11.46504	0.2945116	0.22910602	2.6451180	21	12 2.5	18.6
513437 2008 UR_{317}	17.1	X	329.73269	50.22280	51.41986	14.48363	0.1109874	0.23586785	2.5943201	21	—	—
513438 2008 UM_{324}	17.3	X	141.52801	257.04012	42.92726	5.54873	0.1480866	0.24087074	2.5582718	21	—	—
513439 2008 UQ_{342}	15.8	X	204.97925	319.43259	108.76818	4.54968	0.2282603	0.12281139	4.0084545	21	6 14.0	22.4
513440 2008 UL_{345}	17.0	X	44.41096	86.77226	292.92478	10.88499	0.1918466	0.23982172	2.5657266	21	—	—

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
513441	2008 UT_{364}	17.4	X	351.95246	268.54210	143.62744	13.42312	0.2730904	0.23195084	2.6234457	21	—	—
513442	2008 UR_{367}	17.3	X	359.93084	286.65699	141.33443	5.80208	0.2664962	0.23624944	2.5915257	21	—	—
513443	2008 VQ_{28}	15.9	X	209.56936	51.84019	0.20143	15.20932	0.2904545	0.12596089	3.9413550	21	5 23.7	22.8
513444	2008 VX_{43}	16.3	X	217.15395	118.91892	301.00642	8.02084	0.3050095	0.12540779	3.9529353	21	6 10.0	23.1
513445	2008 VE_{61}	17.1	X	235.55425	195.54892	65.50783	6.98528	0.1086512	0.25427903	2.4675295	21	—	—
513446	2008 VY_{81}	17.1	X	343.38580	291.99275	118.63931	5.84003	0.1000128	0.22255207	2.6967972	21	12 4.9	20.2
513447	2008 WO	17.3	X	9.24234	296.16460	117.74826	5.97894	0.2521005	0.23675017	2.5878703	21	—	—
513448	2008 WA_{80}	17.7	X	55.60499	84.11165	71.95591	24.97405	0.0428398	0.34324050	2.0202434	21	4 4.6	20.4
513449	2008 WN_{130}	17.7	X	340.24392	323.52879	121.63485	6.37560	0.3081063	0.23206934	2.6225526	21	—	—
513450	2008 WF_{134}	17.2	X	42.80233	324.27047	66.47779	16.31648	0.1229520	0.23896116	2.5718828	21	—	—
513451	2008 XC_{49}	17.1	X	299.39017	29.98500	102.09662	12.60562	0.1508157	0.22860753	2.6489618	21	—	—
513452	2008 XB_{56}	16.8	X	308.39877	179.81390	279.20578	13.97098	0.1765095	0.22579626	2.6709037	21	12 7.5	19.5
513453	2008 YL_{67}	17.1	X	8.49496	279.44785	101.28395	17.32733	0.2269605	0.22368171	2.6877099	21	12 22.6	19.9
513454	2008 YY_{70}	16.7	X	292.34963	249.39821	309.81503	12.37202	0.1616614	0.23621276	2.5917940	21	—	—
513455	2008 YG_{105}	17.7	X	302.84431	340.35551	123.71725	4.21599	0.0767850	0.22176435	2.7031795	21	12 11.1	21.0
513456	2008 YE_{121}	17.7	X	10.12919	335.95341	91.33296	6.17183	0.1488133	0.23246027	2.6196115	21	—	—
513457	2008 YZ_{142}	17.5	X	5.88504	306.03887	106.76336	3.32260	0.0583404	0.22594637	2.6697205	21	—	—
513458	2008 YB_{165}	17.2	X	324.91670	123.80230	309.61465	10.84508	0.1413508	0.21941495	2.7224416	21	12 1.7	20.4
513459	2009 AP_{30}	17.6	X	38.98356	94.31081	283.76481	5.27722	0.1089020	0.22900793	2.6458732	21	—	—
513460	2009 AE_{40}	17.4	X	28.44048	93.86120	282.52946	5.13750	0.0296988	0.22134311	2.7066081	21	12 16.4	20.9
513461	2009 AE_{49}	17.1	X	318.01330	71.86556	25.89117	12.99008	0.2354494	0.22423694	2.6832715	21	12 23.3	19.6
513462	2009 BR_{34}	16.8	X	293.93031	231.43364	323.11922	12.03984	0.1241550	0.23428360	2.6060023	21	—	—
513463	2009 BB_{45}	17.4	X	263.32914	169.70926	326.68394	4.07814	0.0989099	0.21529196	2.7570893	21	11 20.0	21.1
513464	2009 BV_{47}	17.7	X	288.76425	40.44661	118.87465	3.08621	0.1076487	0.22751701	2.6574196	21	—	—
513465	2009 BK_{66}	17.6	X	285.44174	320.51021	178.97673	3.98766	0.1084982	0.22131980	2.7067982	21	12 27.3	20.8
513466	2009 BJ_{98}	17.7	X	311.77184	10.84180	95.73225	5.28088	0.1368044	0.22482913	2.6785576	21	12 26.5	20.4
513467	2009 BP_{175}	17.1	X	272.29279	357.68143	113.42446	9.06463	0.1401132	0.21342709	2.7731265	21	10 29.8	20.8
513468	2009 BL_{177}	17.4	X	141.69258	119.69031	142.38199	4.59015	0.0602271	0.21368418	2.7709018	21	12 10.8	21.6
513469	2009 BG_{181}	16.8	X	13.92558	268.18090	146.07864	11.94041	0.2982778	0.22917599	2.6445796	21	—	—
513470	2009 BJ_{192}	17.3	X	268.10282	48.21379	138.27797	14.00283	0.1116852	0.22670216	2.6637836	21	—	—
513471	2009 CU_{4}	17.5	X	19.56983	281.10915	81.91760	5.99687	0.2733311	0.23001016	2.6381817	21	12 25.3	20.5
513472	2009 CS_{5}	19.4	X	262.28133	316.68193	320.48582	30.09792	0.6569681	0.55042865	1.4745812	21	—	—
513473	2009 CR_{38}	18.4	X	291.05576	178.40576	300.92057	0.85042	0.3274249	0.22209834	2.7004689	21	11 7.0	20.9
513474	2009 DC_{6}	16.7	X	347.24761	315.64834	131.53540	15.82851	0.1255671	0.22740486	2.6582932	21	—	—
513475	2009 DK_{7}	17.7	X	246.53948	148.71033	23.65839	1.65677	0.1011250	0.21590830	2.7518398	21	12 14.4	21.3
513476	2009 DL_{25}	17.0	X	6.54951	295.97741	143.97513	12.55812	0.0822170	0.22654455	2.6650190	21	—	—
513477	2009 DR_{26}	17.4	X	298.45969	154.30256	321.24749	2.77504	0.0454630	0.22113041	2.7083434	21	12 21.2	20.9
513478	2009 DG_{37}	17.2	X	335.97067	99.86103	323.25134	3.59522	0.0564682	0.21621388	2.7492464	21	12 5.1	20.6
513479	2009 DK_{39}	17.2	X	339.43708	73.64244	349.84688	27.51588	0.3784779	0.22460484	2.6803406	21	—	—
513480	2009 DW_{45}	16.9	X	281.75617	8.27096	158.67526	13.72048	0.1909147	0.22387808	2.6861381	21	—	—
513481	2009 DB_{56}	17.2	X	288.21645	2.74665	154.47828	14.75212	0.1386882	0.22236586	2.6983026	21	—	—
513482	2009 DN_{58}	17.5	X	299.89449	321.27092	148.35834	8.74969	0.1882816	0.21752692	2.7381719	21	12 3.8	20.4
513483	2009 DT_{59}	16.7	X	293.98538	340.83936	156.45319	26.21890	0.0912172	0.22119235	2.7078378	21	—	—
513484	2009 DC_{61}	17.2	X	161.50222	116.34447	142.61055	9.69242	0.1847887	0.21050338	2.7987450	21	12 23.6	21.9
513485	2009 DK_{66}	17.2	X	232.66847	266.88663	300.17558	1.84076	0.1905791	0.21908737	2.7251546	21	12 28.9	21.1
513486	2009 DE_{68}	17.4	X	334.53370	278.09967	142.42612	7.86686	0.2723782	0.22337430	2.6901753	21	12 11.9	19.5
513487	2009 DS_{96}	17.3	X	242.40028	53.34339	150.74205	14.01540	0.0821717	0.22300475	2.6931465	21	—	—
513488	2009 DM_{98}	16.8	X	104.07946	241.33345	61.54182	4.82118	0.0863584	0.21063524	2.7975768	21	12 20.2	21.0
513489	2009 EV	20.0	X	225.03454	250.22945	138.57220	17.00407	0.5234171	0.43379172	1.7282844	21	4 30.4	23.9
513490	2009 EH_{23}	16.8	X	235.41178	179.15980	22.81294	17.71716	0.1568893	0.21467585	2.7623620	21	12 29.9	21.1
513491	2009 FM	16.9	X	295.99248	149.82130	6.90534	14.25240	0.1874484	0.22555386	2.6728169	21	—	—
513492	2009 FA_{14}	18.0	X	267.48292	21.41312	126.90139	17.43912	0.3988235	0.21829097	2.7317788	21	11 4.3	22.1
513493	2009 FF_{48}	17.2	X	200.98847	34.55049	176.50459	12.21914	0.1158857	0.20946080	2.8080244	21	12 8.2	21.7
513494	2009 FC_{57}	16.6	X	213.37145	84.84707	150.09297	29.91743	0.3696464	0.21171480	2.7880586	21	12 27.3	21.9
513495	2009 HB_{32}	17.2	X	238.90422	128.30372	60.99743	8.61691	0.1495084	0.21179135	2.7873868	21	12 17.9	21.1
513496	2009 HM_{57}	16.9	X	211.25492	195.30746	40.98116	17.27285	0.2631487	0.21229890	2.7829425	21	—	—
513497	2009 HB_{82}	17.7	X	236.08965	301.55029	316.68399	10.97738	0.5991350	0.21506087	2.7590640	21	—	—
513498	2009 HH_{84}	17.1	X	238.27695	350.45890	202.47917	12.59615	0.2238176	0.21058174	2.7980507	21	12 12.2	21.3
513499	2009 HX_{108}	17.1	X	114.55931	92.66012	204.99334	4.40238	0.1016467	0.20344192	2.8631389	21	12 24.4	21.5
513500	2009 KE_{37}	13.5	X	339.06566	183.01129	90.82248	22.43007	0.1245373	0.08436085	5.1488324	21	5 27.9	19.9
513501	2009 OY_{20}	16.3	X	61.78958	320.01139	344.61980	7.46111	0.2401888	0.17733793	3.1376292	21	11 18.1	21.0
513502	2009 OB_{23}	16.2	X	59.85960	170.36170	143.53765	12.03331	0.0954927	0.17635141	3.1493198	21	11 13.6	20.8
513503	2009 PD_{9}	16.4	X	44.88299	325.96673	355.07999	6.14720	0.1657949	0.17150785	3.2083375	21	11 6.8	20.8
513504	2009 QD_{5}	15.9	X	50.18875	327.69742	335.19651	25.42035	0.2055003	0.17307410	3.1889521	21	10 16.1	20.7
513505	2009 QO_{21}	17.7	X	100.95032	15.02573	349.70704	6.24690	0.2020670	0.27714146	2.3298880	21	—	—
513506	2009 QK_{28}	16.0	X	123.52897	302.09791	329.85494	15.40633	0.1937769	0.18549945	3.0449088	21	12 2.6	21.3
513507	2009 QE_{32}	16.2	X	310.85517	293.06483	147.83883	15.79594	0.0675257	0.17910957	3.1169047	21	11 18.9	20.6
513508	2009 QD_{59}	18.8	X	53.13479	8.17614	17.05905	2.69780	0.2462147	0.26619573	2.3933267	21	—	—
513509	2009 RH_{52}	18.1	X	61.16541	355.92050	53.55024	2.02266	0.1704740	0.27067493	2.3668497	21	—	—
513510	2009 RL_{58}	17.5	X	84.70751	359.66674	0.24537	10.80685	0.2110215	0.26891517	2.3771642	21	—	—
513511	2009 RY_{58}	16.3	X	75.01736	25.93532	272.75909	7.79008	0.0789219	0.17451444	3.1713813	21	11 4.9	20.9
513512	2009 RB_{67}	16.5	X	39.00367	153.43433	167.95844	17.00817	0.1320155	0.17249052	3.1961407	21	10 31.4	20.9
513513	2009 SA_{50}	15.9	X	108.78382	283.87494	357.58532	25.29223	0.2246751	0.18024935	3.1037512	21	11 27.5	21.5
513514	2009 SG_{154}	18.3	X	17.37387	256.27229	176.45384	2.47626	0.1936919	0.26564145	2.3966548	21	—	—
513515	2009 SO_{250}	18.1	X	43.38260	34.52395	28.44582	9.13162	0.2007141	0.26825511	2.3810620	21	—	—
513516	2009 ST_{313}	18.2	X	52.09696	42.26130	359.66820	3.40505	0.1268465	0.26700781	2.3884715	21	—	—
513517	2009 SA_{315}	18.2	X	96.17387	36.72780	329.11146	0.48041	0.2017941	0.27364909	2.3496691	21	—	—
513518	2009 UC_{72}	18.1	X	54.07352	96.79418	292.19153	1.75805	0.1811773	0.26373424	2.4081953	21	—	—
513519	2009 UE_{98}	17.8	X	23.69011	10.98624	54.38931	5.51429	0.1719657	0.26242845	2.4161772	21	—	—
513520	2009 UB_{152}	17.9	X	4.02426	141.33130	317.32792	6.97893	0.2850800	0.26202228	2.4186734	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513521 2009 VS_{5}	18.2	X	174.14976	35.75141	44.94612	19.09115	0.0586743	0.38691493	1.8652014	21	5 18.1	20.0
513522 2009 VE_{20}	18.0	X	155.75300	348.51902	345.73615	2.55108	0.2287808	0.27921768	2.3183239	21	1 2.5	21.3
513523 2009 WW_{18}	18.0	X	259.62436	149.65333	80.09456	6.49231	0.0994573	0.27164954	2.3611853	21	—	—
513524 2009 WW_{32}	18.1	X	12.12946	350.95768	69.64054	6.46306	0.2107797	0.25630283	2.4545230	21	—	—
513525 2009 WF_{37}	18.0	X	25.61810	55.72441	20.14986	2.65902	0.1798192	0.26232028	2.4168413	21	—	—
513526 2009 WG_{127}	18.6	X	1.51759	192.75715	245.05780	1.05643	0.1492637	0.25629014	2.4546041	21	—	—
513527 2009 WJ_{181}	18.1	X	10.04827	334.73943	111.29104	3.55961	0.1965917	0.25996866	2.4313942	21	—	—
513528 2010 AH_{61}	14.9	X	174.92767	206.51454	255.36036	13.20766	0.1921177	0.12502584	3.9609819	21	6 28.8	21.3
513529 2010 CR_{1}	18.5	X	77.16421	70.68049	313.00915	25.75897	0.7333684	0.61355787	1.3716154	21	—	—
513530 2010 CY_{16}	17.0	X	286.50794	65.05900	124.69330	12.15106	0.2124009	0.23992466	2.5649927	21	—	—
513531 2010 CW_{100}	18.6	X	93.50058	71.49780	141.85070	24.50578	0.0489354	0.38385847	1.8750893	21	8 25.7	20.2
513532 2010 DC_{2}	16.6	X	273.79346	155.33750	325.09695	12.68943	0.1767758	0.23336869	2.6128089	21	10 31.7	20.1
513533 2010 DW_{6}	17.5	X	132.65787	41.61554	342.29154	24.33936	0.1926114	0.34869625	1.9991154	21	1 31.7	19.9
513534 2010 EB_{22}	18.2	X	146.73007	298.49435	177.42227	21.93036	0.0991592	0.37304269	1.9111599	21	6 13.4	21.1
513535 2010 EW_{35}	18.1	X	115.41279	337.84871	176.46625	21.69601	0.0439070	0.37225284	1.9138624	21	6 20.8	20.7
513536 2010 EA_{76}	17.2	X	281.11933	314.09208	189.05013	11.49120	0.1375456	0.23513674	2.5996949	21	12 25.3	20.3
513537 2010 ED_{104}	18.0	X	326.21889	192.38172	14.57109	19.45730	0.0726671	0.34855615	1.9996511	21	1 3.8	20.7
513538 2010 FP_{91}	17.8	X	283.97221	95.96243	81.69722	6.07916	0.2143357	0.24111953	2.5565117	21	—	—
513539 2010 GK_{32}	17.8	X	249.91151	49.31846	165.38040	12.81986	0.2957585	0.23758383	2.5818131	21	—	—
513540 2010 JZ_{4}	16.9	X	281.07916	238.94803	274.50193	10.40077	0.0852331	0.24353972	2.5395466	21	—	—
513541 2010 JF_{43}	17.3	X	233.74913	28.38447	183.32075	13.12845	0.1798634	0.23057525	2.6338695	21	—	—
513542 2010 JG_{43}	17.9	X	309.68775	215.77420	55.92522	23.53180	0.0483699	0.35012041	1.9936906	21	4 3.9	20.5
513543 2010 JY_{75}	16.9	X	121.29437	225.28513	73.47805	15.23757	0.2009871	0.21946586	2.7220205	21	—	—
513544 2010 JC_{104}	16.8	X	149.60660	191.26706	81.60276	13.53605	0.0635279	0.23708446	2.5854372	21	—	—
513545 2010 JB_{122}	17.2	X	237.89638	138.27407	87.55553	5.19486	0.1644488	0.23420118	2.6066136	21	—	—
513546 2010 LZ_{14}	17.1	X	289.77043	352.30842	184.11168	13.72053	0.1702635	0.23571406	2.5954484	21	—	—
513547 2010 MG_{40}	16.4	X	284.19418	103.14427	334.09220	14.73940	0.0571922	0.18168401	3.0873906	21	9 29.8	20.8
513548 2010 ML_{94}	16.1	X	23.30844	326.53513	358.64332	27.93477	0.1403260	0.18111904	3.0938077	21	10 4.6	20.1
513549 2010 MA_{116}	16.2	X	330.97685	62.33672	305.20096	15.83455	0.2679440	0.18016804	3.1046850	21	8 21.4	19.3
513550 2010 NG_{3}	17.2	X	239.20677	194.40616	64.11470	26.95600	0.5672506	0.23442936	2.6049220	21	—	—
513551 2010 NQ_{36}	16.3	X	18.79800	331.94095	357.05537	16.38965	0.1205283	0.17896819	3.1185460	21	10 3.8	20.2
513552 2010 NN_{66}	16.7	X	145.27018	157.69062	116.45475	9.26326	0.1970305	0.21017345	2.8016733	21	12 27.6	21.5
513553 2010 ND_{104}	15.7	X	324.13112	19.41315	12.30906	18.09639	0.1419832	0.17660754	3.1462741	21	9 28.9	19.4
513554 2010 OS_{45}	16.1	X	325.25073	36.86610	5.52029	12.39841	0.0942285	0.17808765	3.1288171	21	10 13.7	20.0
513555 2010 OK_{79}	15.9	X	340.29051	291.47215	69.86739	27.37834	0.2357315	0.17438178	3.1729896	21	10 1.6	19.8
513556 2010 OY_{85}	15.7	X	321.00208	69.43845	334.22097	14.91288	0.0737876	0.17655736	3.1468702	21	10 5.4	20.0
513557 2010 PE_{74}	16.5	X	151.84158	304.22532	340.88480	10.62109	0.2697403	0.21249099	2.7812650	21	—	—
513558 2010 RJ_{87}	16.3	X	290.35809	86.65392	326.67736	5.89916	0.1313579	0.17333774	3.1857178	21	9 1.8	20.6
513559 2010 RP_{133}	16.0	X	332.04189	52.75989	339.39425	21.57031	0.2006452	0.18026741	3.1035440	21	9 29.4	19.6
513560 2010 RT_{147}	15.9	X	14.48333	346.71889	18.19234	15.29547	0.0172658	0.18336957	3.0684416	21	11 2.3	20.2
513561 2010 RL_{188}	13.7	X	346.59130	356.39459	294.64241	6.17681	0.0184586	0.08120335	5.2814528	21	6 28.6	20.5
513562 2010 TX_{58}	16.8	X	87.64720	16.03143	284.15223	5.97322	0.1273616	0.18928083	3.0042192	21	11 29.9	21.4
513563 2010 TP_{60}	16.3	X	325.55419	136.79779	230.90496	9.12541	0.1071448	0.17343008	3.1845868	21	8 26.5	20.4
513564 2010 TM_{66}	16.4	X	70.58812	316.99113	351.23620	10.63730	0.0974496	0.18970233	2.9997675	21	11 14.3	20.8
513565 2010 UD_{7}	18.3	X	109.48378	86.19186	318.59778	4.36757	0.1029921	0.30775582	2.1726939	21	1 11.8	20.4
513566 2010 UO_{12}	18.3	X	133.78562	3.65548	4.67962	1.73760	0.1740134	0.30626492	2.1797392	21	1 8.3	20.6
513567 2010 UC_{102}	16.6	X	349.72102	309.40177	54.83451	12.07143	0.0793499	0.17434586	3.1734253	21	10 9.4	20.8
513568 2010 UQ_{108}	16.5	X	148.43681	231.86547	51.43517	6.05973	0.1019637	0.19742456	2.9210249	21	—	—
513569 2010 UU_{108}	16.4	X	289.66081	60.15959	17.23088	5.42822	0.1687261	0.17335950	3.1854512	21	9 27.7	20.4
513570 2010 VY_{12}	16.2	X	334.98750	310.36654	72.89358	12.04852	0.2259729	0.17703082	3.1412569	21	10 8.6	19.5
513571 2010 VW_{26}	17.8	X	16.77977	56.61059	61.37965	24.23746	0.1643286	0.29246696	2.2477681	21	—	—
513572 2010 VX_{39}	19.1	X	148.42108	15.35429	77.14887	11.31347	0.4220941	0.41043801	1.7932369	21	6 2.6	22.1
513573 2010 VN_{93}	16.0	X	205.28921	111.94394	57.42169	10.75005	0.0363029	0.17530814	3.1618019	21	10 27.4	20.6
513574 2010 VC_{101}	16.2	X	165.65175	163.84847	55.77233	12.71334	0.0691069	0.17683706	3.1435511	21	11 10.2	21.0
513575 2010 VF_{179}	16.0	X	20.62237	302.11240	58.53469	11.19643	0.0646686	0.17793620	3.1305922	21	11 13.1	20.0
513576 2010 VS_{191}	16.4	X	73.76316	62.72879	230.69190	7.00999	0.0123376	0.17297749	3.1901393	21	10 19.6	21.0
513577 2010 VH_{213}	16.2	X	12.93891	24.09675	356.63638	11.28261	0.0923638	0.18574012	3.0422780	21	11 28.4	20.3
513578 2010 VX_{217}	16.2	X	49.95014	280.23220	36.82314	15.41597	0.1003271	0.17827211	3.1266585	21	11 1.8	20.6
513579 2010 VB_{219}	16.0	X	268.78173	210.97685	261.03172	9.21730	0.0675805	0.17910546	3.1169524	21	10 24.6	20.4
513580 2010 WW_{2}	18.4	X	113.13675	296.27461	93.94349	1.86716	0.1503521	0.30162747	2.2020244	21	1 5.4	20.6
513581 2010 WT_{62}	18.6	X	62.78280	199.93833	247.19895	4.54175	0.1267489	0.29809143	2.2194041	21	—	—
513582 2010 XA_{50}	15.3	X	247.48693	37.84764	82.13707	24.24359	0.0896720	0.17040785	3.2221295	21	10 20.2	20.4
513583 2010 YW_{2}	15.9	X	187.62676	263.77854	341.80787	9.20297	0.0459135	0.17753968	3.1352518	21	—	—
513584 2011 AF_{38}	18.6	X	61.25102	356.73056	50.49871	3.84861	0.1335700	0.28365561	2.2940795	21	—	—
513585 2011 AS_{60}	18.3	X	46.39719	4.52735	84.64616	2.84839	0.1023474	0.28882766	2.2666103	21	—	—
513586 2011 CQ_{3}	17.8	X	311.54660	295.05726	291.20492	5.76760	0.1894916	0.28951333	2.2630301	21	1 6.2	20.6
513587 2011 CD_{14}	17.8	X	283.58825	277.65434	318.20549	6.75938	0.1599807	0.28508269	2.2864173	21	—	—
513588 2011 CP_{27}	18.5	X	46.55742	100.83696	349.89954	4.68135	0.1439702	0.28649826	2.2788797	21	—	—
513589 2011 CB_{36}	18.5	X	47.23721	331.38645	110.37359	5.33746	0.1936756	0.28675883	2.2774989	21	—	—
513590 2011 CW_{54}	18.4	X	67.98085	99.75010	327.57660	4.54414	0.1091329	0.28537773	2.2848411	21	—	—
513591 2011 CC_{92}	18.1	X	306.07673	346.35418	196.54230	4.67396	0.1148971	0.27798064	2.3251966	21	—	—
513592 2011 DW_{7}	17.9	X	256.67307	256.59701	358.86330	6.50885	0.1910945	0.27469646	2.3436927	21	—	—
513593 2011 DR_{24}	18.1	X	354.27937	22.34147	109.93756	6.88939	0.2239914	0.28054675	2.3109961	21	—	—
513594 2011 DP_{25}	17.6	X	308.15120	65.78790	134.67921	3.46566	0.1357465	0.27904877	2.3192593	21	—	—
513595 2011 DX_{50}	17.2	X	302.86715	49.89906	133.94920	22.74587	0.2112786	0.27196493	2.3593594	21	—	—
513596 2011 EV_{42}	17.6	X	237.60635	145.21486	148.15558	6.21071	0.1403857	0.27994245	2.3143207	21	1 21.9	21.1
513597 2011 EV_{43}	18.2	X	290.40864	96.23490	98.94254	2.37188	0.1225917	0.27280905	2.3544901	21	—	—
513598 2011 EH_{68}	17.8	X	295.87416	72.78635	156.92034	5.33408	0.1204076	0.28040041	2.3118001	21	1 2.8	21.0
513599 2011 FD_{1}	17.7	X	43.34091	84.04501	1.80517	22.51321	0.2362240	0.28628530	2.2800096	21	—	—
513600 2011 FZ_{39}	18.2	X	302.89360	96.33749	86.20300	3.31422	0.1186985	0.27112259	2.3642437	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513601 2011 FB_{82}	18.0	X	265.00658	178.43831	43.88719	2.24022	0.1250235	0.27047966	2.3679888	21	—	—
513602 2011 FU_{145}	17.2	X	289.15271	246.45879	355.13553	22.99295	0.2399812	0.27594332	2.3366273	21	1 4.9	21.4
513603 2011 FX_{152}	17.8	X	282.31208	84.87096	114.08323	22.09042	0.2703137	0.26715808	2.3875759	21	—	—
513604 2011 GY_{12}	18.1	X	299.76623	329.36565	227.25662	3.76017	0.1687832	0.27222795	2.3578395	21	—	—
513605 2011 GA_{30}	18.3	X	1.55306	70.37828	75.48997	3.16320	0.1517370	0.28005869	2.3136803	21	—	—
513606 2011 GL_{34}	18.1	X	240.24200	47.69865	207.32550	4.66539	0.1450184	0.26812463	2.3818345	21	—	—
513607 2011 GV_{42}	18.5	X	343.30396	80.40595	48.22774	2.41220	0.1348872	0.27389847	2.3482427	21	—	—
513608 2011 GV_{55}	17.9	X	347.63200	39.64401	106.28105	6.70555	0.0675177	0.26921424	2.3754034	21	—	—
513609 2011 GW_{58}	18.0	X	276.18251	188.95132	40.53107	3.02941	0.1934236	0.27044943	2.3681653	21	—	—
513610 2011 GO_{67}	17.6	X	288.68063	180.19133	57.72123	8.49577	0.2131694	0.27584872	2.3371615	21	—	—
513611 2011 GV_{67}	17.6	X	224.36268	212.45978	49.57930	11.74509	0.2201748	0.26291219	2.4132125	21	—	—
513612 2011 GZ_{73}	18.2	X	252.42158	246.18459	350.03052	0.95687	0.1754652	0.26517180	2.3994838	21	—	—
513613 2011 HX	18.4	X	85.04219	48.50259	136.14468	23.22027	0.0640718	0.40333060	1.8142422	21	6 27.4	20.3
513614 2011 HG_{31}	17.4	X	202.48454	300.80460	23.68502	7.58097	0.1380346	0.27543624	2.3394943	21	1 31.2	21.0
513615 2011 HA_{53}	18.2	X	244.05933	320.94925	41.34848	22.36071	0.1379493	0.39290209	1.8462046	21	4 22.2	20.4
513616 2011 HS_{66}	17.8	X	212.30382	178.23945	83.74186	3.42607	0.1681767	0.25714528	2.4491592	21	—	—
513617 2011 HS_{68}	18.1	X	330.93353	41.30849	121.21560	2.98877	0.1466487	0.27139433	2.3626653	21	—	—
513618 2011 HW_{68}	17.8	X	163.30205	233.93163	76.11600	3.94743	0.1842258	0.25724819	2.4485060	21	—	—
513619 2011 HG_{75}	17.8	X	244.22637	16.74254	242.39420	1.81285	0.1801742	0.26942769	2.3741486	21	—	—
513620 2011 JE_{16}	17.9	X	321.88264	85.94762	96.01799	3.11898	0.1172880	0.27158230	2.3615750	21	—	—
513621 2011 JH_{16}	18.0	X	253.13343	38.10224	200.26181	5.35320	0.1801178	0.26460661	2.4028994	21	—	—
513622 2011 JS_{24}	17.6	X	200.58300	168.69057	135.34465	7.23797	0.1338243	0.26848634	2.3796948	21	1 1.9	21.2
513623 2011 KH_{8}	17.6	X	251.98927	150.79763	92.00347	5.54895	0.1584585	0.26293563	2.4130691	21	—	—
513624 2011 KV_{11}	17.7	X	260.98162	307.66885	290.64155	6.36340	0.2092614	0.26675169	2.3900002	21	—	—
513625 2011 KD_{15}	17.6	X	250.53436	92.90376	154.99304	21.30462	0.2723582	0.26372310	2.4082631	21	—	—
513626 2011 KC_{30}	16.4	X	109.34408	277.58045	43.52297	11.27903	0.2888053	0.23780487	2.5802130	21	—	—
513627 2011 KU_{47}	15.9	X	69.36607	253.38996	99.18065	29.83799	0.3235772	0.23212650	2.6221220	21	—	—
513628 2011 LM_{8}	17.9	X	279.88166	74.25134	139.05574	2.03816	0.1277219	0.26479383	2.4017666	21	—	—
513629 2011 OU_{5}	16.9	X	314.73778	181.37549	258.69975	8.16192	0.1012532	0.21481391	2.7611783	21	11 24.0	20.0
513630 2011 OS_{22}	17.2	X	109.00089	0.72154	318.52546	5.57241	0.2311295	0.23045810	2.6347621	21	—	—
513631 2011 OH_{29}	18.5	X	250.50964	229.86061	115.71200	21.96280	0.0532055	0.37781607	1.8950286	21	4 23.2	21.2
513632 2011 OR_{52}	17.2	X	168.08350	138.97621	143.87156	11.07681	0.1090408	0.24059602	2.5602188	21	—	—
513633 2011 OU_{58}	13.6	X	295.65016	1.47609	323.79961	35.41425	0.0543696	0.08277068	5.2145682	21	6 1.2	20.9
513634 2011 OP_{60}	13.8	X	327.91482	328.40332	327.58609	14.44958	0.0423121	0.08360767	5.1797081	21	6 9.2	20.7
513635 2011 QQ_{25}	17.3	X	189.33737	291.50770	346.60043	12.89358	0.1925242	0.23894457	2.5720018	21	—	—
513636 2011 QW_{43}	17.4	X	199.87626	300.67428	298.36308	11.33764	0.0923969	0.23165253	2.6256974	21	—	—
513637 2011 QF_{46}	18.9	X	133.45653	307.35632	165.99803	23.74725	0.1333912	0.37146495	1.9165677	21	5 30.0	21.9
513638 2011 QD_{57}	18.6	X	352.38075	138.21797	159.14615	21.92099	0.0569694	0.38812060	1.8613366	21	7 15.4	20.4
513639 2011 QF_{62}	16.9	X	3.16715	31.42430	333.10872	14.55399	0.1514152	0.20432809	2.8548546	21	10 28.7	20.5
513640 2011 QR_{73}	14.0	X	5.11556	304.33769	323.49943	18.18042	0.0808741	0.08252259	5.2250141	21	6 26.8	20.7
513641 2011 QS_{77}	17.2	X	144.73255	309.93032	348.92911	10.52294	0.2540872	0.23192276	2.6236574	21	—	—
513642 2011 QE_{93}	18.3	X	204.75606	63.48131	335.27015	19.45368	0.1051994	0.36881560	1.9257350	21	4 17.2	21.2
513643 2011 RV_{4}	17.6	X	36.78633	174.03799	193.28103	5.29628	0.1005811	0.21503690	2.7592691	21	12 24.3	21.3
513644 2011 RX_{8}	17.7	X	179.10395	85.23294	181.85302	8.52009	0.0732769	0.22988082	2.6391711	21	—	—
513645 2011 RG_{10}	17.1	X	338.90194	213.75455	188.88031	9.02630	0.1278986	0.20625713	2.8370265	21	11 14.5	20.3
513646 2011 SO_{6}	17.2	X	44.24333	154.49708	197.31180	4.75394	0.1755113	0.21299433	2.7768815	21	12 24.8	21.0
513647 2011 SX_{21}	17.9	X	294.64884	179.49410	153.68270	24.27295	0.0452936	0.37808425	1.8941324	21	6 6.2	20.5
513648 2011 SP_{31}	18.4	X	164.76040	79.47418	5.81965	19.88701	0.0651032	0.36862267	1.9264069	21	5 6.9	20.9
513649 2011 SE_{38}	16.3	X	113.51091	296.41386	31.30762	14.27682	0.2307456	0.22342144	2.6897969	21	—	—
513650 2011 SE_{45}	17.1	X	63.91019	20.76957	316.20392	3.81565	0.0890920	0.21466785	2.7624306	21	12 18.5	21.0
513651 2011 SS_{66}	16.7	X	250.98724	99.07846	306.75589	9.05007	0.2401973	0.17921618	3.1156685	21	6 24.3	21.8
513652 2011 SW_{89}	17.8	X	252.31309	296.53323	7.70094	18.96825	0.0547696	0.35497661	1.9754660	21	2 21.9	20.4
513653 2011 SX_{107}	16.7	X	164.45183	272.87681	17.20244	14.98332	0.1312760	0.23143016	2.6273791	21	—	—
513654 2011 SA_{146}	17.1	X	27.09001	157.18696	227.86692	3.74706	0.0872922	0.21470027	2.7621525	21	12 31.7	20.8
513655 2011 SL_{150}	16.8	X	320.36159	87.65613	14.05490	9.20780	0.1342600	0.21342056	2.7731831	21	—	—
513656 2011 SB_{155}	17.3	X	56.43979	193.05252	160.68977	4.65379	0.0826610	0.21446938	2.7641346	21	12 29.2	21.2
513657 2011 SO_{235}	16.9	X	75.51426	332.91580	2.44320	9.13788	0.1747182	0.21354641	2.7720934	21	—	—
513658 2011 SO_{254}	17.4	X	81.11293	53.36122	268.35950	6.19752	0.0928525	0.21868710	2.7284789	21	12 20.6	21.4
513659 2011 TO_{8}	17.9	X	116.29156	279.13003	168.47628	23.46179	0.1152211	0.35499891	1.9753833	21	3 21.3	19.6
513660 2011 UC_{11}	17.4	X	41.00767	359.99618	354.67883	7.07148	0.0986485	0.21229543	2.7829728	21	12 12.6	21.2
513661 2011 UU_{95}	17.7	X	299.58938	266.23505	183.64507	1.78823	0.0293964	0.20298463	2.8674374	21	11 17.9	21.5
513662 2011 UN_{113}	16.1	X	297.96289	335.37564	55.20710	10.38764	0.2474606	0.18274903	3.0753838	21	7 31.6	20.1
513663 2011 UL_{158}	16.6	X	244.54997	15.28662	77.92546	14.52357	0.2395003	0.17921518	3.1156801	21	8 19.7	21.7
513664 2011 UX_{250}	16.6	X	316.83209	321.02471	67.56038	12.63645	0.1554100	0.18494622	3.0509780	21	9 17.4	20.4
513665 2011 UD_{315}	17.0	X	277.47627	336.44557	101.92220	4.02663	0.2037099	0.18543897	3.0455709	21	9 8.9	21.1
513666 2011 UK_{337}	16.9	X	273.40153	253.96023	187.66046	14.56649	0.3110191	0.18351397	3.0668318	21	8 18.3	21.6
513667 2011 UQ_{343}	16.7	X	309.64891	237.58094	146.32632	12.64563	0.2637707	0.18628042	3.0363925	21	8 4.5	20.0
513668 2011 UV_{351}	17.0	X	340.84259	338.09335	38.08207	10.40068	0.1004872	0.19324827	2.9629590	21	10 11.3	20.6
513669 2011 UN_{359}	16.6	X	314.08402	329.54564	62.84800	10.59108	0.2217508	0.18482179	3.0523472	21	9 7.7	20.1
513670 2011 UQ_{363}	17.0	X	50.10220	329.89209	49.36997	4.67305	0.1107170	0.21454171	2.7635133	21	—	—
513671 2011 VZ_{1}	16.8	X	305.76092	151.03160	280.51349	4.86196	0.0749885	0.19883034	2.9072404	21	10 27.1	20.5
513672 2011 WR_{11}	16.4	X	281.06011	356.52726	63.55702	11.18435	0.0790432	0.18247706	3.0784389	21	9 13.2	20.8
513673 2011 WO_{66}	16.2	X	345.71965	333.14435	66.15231	11.53623	0.1109207	0.19222639	2.9734505	21	11 17.3	19.7
513674 2011 WY_{72}	17.2	X	303.42562	134.28394	257.67813	9.58712	0.2994161	0.18362514	3.0655939	21	7 27.3	21.0
513675 2011 WN_{76}	15.9	X	179.40185	292.35031	247.49243	24.67283	0.2618117	0.17956430	3.1116403	21	9 24.4	21.8
513676 2011 WR_{87}	16.9	X	257.10114	208.27214	240.66216	13.32726	0.1228941	0.18074018	3.0981296	21	8 30.9	21.7
513677 2011 WM_{93}	16.8	X	200.59410	115.01265	104.62184	3.25115	0.0106191	0.20334419	2.8640562	21	12 26.6	20.7
513678 2011 WE_{98}	17.4	X	264.45999	341.00678	96.59329	2.38250	0.1546719	0.17880908	3.1203957	21	8 28.3	21.8
513679 2011 WB_{154}	16.4	X	277.52519	275.62002	159.60628	15.73565	0.2143820	0.18202227	3.0835645	21	9 1.1	20.7
513680 2011 YQ_{27}	15.8	X	103.12270	344.00108	293.43215	15.89733	0.1697245	0.17750869	3.1356167	21	11 18.7	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513681 2011 YY_{32}	15.4	X	144.44665	311.85376	266.64409	10.03562	0.0579824	0.17502911	3.1651614	21	10 12.3	20.4
513682 2011 YR_{79}	16.2	X	340.77048	270.19912	123.10744	9.88045	0.1418968	0.18426961	3.0584420	21	11 3.4	19.9
513683 2012 AJ_{1}	15.3	X	328.44387	69.93737	289.93645	24.84658	0.2876738	0.17531747	3.1616898	21	7 30.5	18.6
513684 2012 AY_{14}	16.6	X	284.61380	307.87551	129.44455	12.90318	0.1056853	0.17577201	3.1562368	21	10 4.2	21.0
513685 2012 BQ_{20}	16.2	X	26.63211	66.85914	299.44765	8.22331	0.0290598	0.18227048	3.0807644	21	11 22.4	20.5
513686 2012 BU_{27}	16.5	X	307.69653	297.93084	127.33010	8.66935	0.2132797	0.18114278	3.0935374	21	10 9.3	20.1
513687 2012 BF_{55}	16.1	X	258.05929	332.17746	144.39332	18.25286	0.1043629	0.17117251	3.2125263	21	10 18.9	20.9
513688 2012 BS_{55}	15.9	X	213.25434	352.51045	132.15582	11.17938	0.0621802	0.16043203	3.3543522	21	9 8.5	20.9
513689 2012 BY_{67}	16.4	X	287.29356	134.65688	293.08941	10.54613	0.2006714	0.17574536	3.1565558	21	9 1.7	20.8
513690 2012 BZ_{89}	16.9	X	257.42700	352.48908	106.59448	3.12146	0.1658747	0.17169154	3.2060487	21	9 14.1	21.5
513691 2012 BL_{94}	16.5	X	223.94446	16.51961	135.79321	29.03491	0.1406385	0.17557594	3.1585861	21	10 23.8	21.9
513692 2012 BF_{100}	15.9	X	47.79852	348.85145	330.59902	9.79538	0.0283415	0.17266588	3.1939764	21	10 18.2	20.5
513693 2012 BS_{102}	16.7	X	231.80556	24.33959	120.26126	11.78532	0.1712862	0.17749913	3.1357293	21	10 15.5	21.7
513694 2012 BL_{111}	16.0	X	299.88456	128.15672	316.04979	10.61144	0.1055004	0.17851580	3.1238123	21	10 24.8	20.2
513695 2012 BG_{135}	16.4	X	209.03160	33.93698	108.63220	5.25527	0.0983613	0.17194799	3.2028602	21	9 23.6	21.3
513696 2012 BC_{140}	16.1	X	249.19329	313.45522	160.91196	9.37763	0.1823026	0.17071805	3.2182251	21	9 21.2	20.9
513697 2012 BN_{141}	16.4	X	167.00857	106.43494	107.80025	12.23394	0.1956706	0.17316466	3.1878401	21	11 6.7	21.9
513698 2012 BM_{156}	16.0	X	169.97734	129.48449	137.23273	17.24434	0.2609647	0.17943048	3.1131872	21	—	—
513699 2012 CT_{24}	16.4	X	281.65124	252.22328	180.95302	8.57509	0.1752240	0.17059620	3.2197574	21	9 8.1	20.7
513700 2012 CQ_{40}	16.7	X	202.26086	69.11209	129.19084	11.24946	0.1384636	0.17537788	3.1609637	21	11 19.8	21.8
513701 2012 CA_{42}	16.6	X	214.11597	193.96775	329.92903	11.09848	0.1016327	0.17296687	3.1902700	21	10 16.7	21.6
513702 2012 CL_{42}	16.1	X	57.15155	345.80987	335.97026	16.58115	0.0130742	0.17308849	3.1887753	21	10 27.2	20.9
513703 2012 CS_{42}	15.7	X	163.84608	255.60011	344.56021	14.53580	0.1710791	0.17386095	3.1793233	21	11 25.8	21.2
513704 2012 CB_{43}	16.3	X	277.43101	0.36376	103.10666	10.21363	0.0928225	0.17807500	3.1289653	21	10 28.9	20.7
513705 2012 CA_{44}	16.1	X	158.92109	350.59051	218.47535	7.37469	0.0035747	0.17186964	3.2038335	21	10 19.2	20.7
513706 2012 CK_{51}	16.1	X	292.36477	297.13114	154.40256	24.64745	0.1031455	0.17595518	3.1540459	21	11 3.5	20.7
513707 2012 DL_{30}	16.5	X	214.08007	220.23654	295.85173	9.03735	0.0350354	0.17613942	3.1518461	21	10 14.8	21.2
513708 2012 FC_{11}	16.2	X	181.43583	285.84675	252.22914	2.98693	0.1804375	0.15814573	3.3866039	21	10 1.1	21.9
513709 2012 JS_{45}	18.2	X	296.85364	191.70936	75.28152	5.40754	0.2032453	0.31022699	2.1611405	21	2 8.8	21.1
513710 2012 MF_{9}	17.7	X	136.21651	239.05857	103.31802	6.85071	0.1762095	0.27940401	2.3172930	21	—	—
513711 2012 PC_{20}	21.3	X	338.08326	290.22083	330.15884	14.40886	0.1840037	0.64420822	1.3277568	21	1 19.9	21.7
513712 2012 RR_{29}	16.1	X	235.76104	158.33577	151.36788	12.08347	0.1699324	0.17685700	3.1433148	21	2 21.9	21.3
513713 2012 SL_{2}	17.3	X	90.76599	10.41207	341.78483	14.42658	0.1231960	0.25194961	2.4827153	21	—	—
513714 2012 SC_{11}	17.2	X	36.13053	75.21943	318.26889	4.75049	0.1214300	0.24037522	2.5617864	21	—	—
513715 2012 SM_{20}	17.8	X	351.23240	161.18045	274.43637	3.01956	0.1423047	0.23544551	2.5974215	21	—	—
513716 2012 ST_{30}	17.5	X	196.63958	349.68036	314.83714	8.70672	0.2387935	0.27472742	2.3435167	21	1 4.4	21.5
513717 2012 SH_{56}	17.4	X	262.08424	358.18694	274.91644	4.94024	0.2454019	0.28198727	2.3031190	21	1 14.4	21.3
513718 2012 SE_{66}	17.5	X	171.19658	350.64096	318.37988	4.18685	0.2327665	0.26815403	2.3816604	21	—	—
513719 2012 SJ_{68}	16.0	X	154.62441	184.44414	14.23479	10.91577	0.0254216	0.19166791	2.9792237	21	10 4.9	20.1
513720 2012 TB_{4}	17.1	X	339.58243	272.62732	158.40704	15.06854	0.1618695	0.22978986	2.6398676	21	12 31.7	20.2
513721 2012 TM_{10}	17.5	X	51.92850	340.02079	27.55004	14.20392	0.1771571	0.23664854	2.5886112	21	—	—
513722 2012 TK_{38}	17.6	X	293.19816	240.84123	294.94706	3.56308	0.0853891	0.25324931	2.4742137	21	—	—
513723 2012 TK_{44}	17.7	X	326.27915	205.72827	310.05288	6.22749	0.0735972	0.25750968	2.4468481	21	—	—
513724 2012 TB_{92}	17.4	X	8.15029	337.35588	94.49106	3.82746	0.1464207	0.24211301	2.5495134	21	—	—
513725 2012 TT_{117}	17.9	X	218.07640	15.44963	270.09164	2.69160	0.1646932	0.27004402	2.3705348	21	—	—
513726 2012 TB_{120}	17.7	X	293.96107	294.69726	280.43804	4.58139	0.1494021	0.26703252	2.3883242	21	—	—
513727 2012 TB_{136}	17.0	X	308.95170	348.58036	127.94548	6.05423	0.0991007	0.23890632	2.5722763	21	—	—
513728 2012 TW_{173}	17.6	X	316.98869	109.59454	6.59433	14.82584	0.0375359	0.24192789	2.5508138	21	—	—
513729 2012 TM_{187}	16.8	X	75.05081	287.76518	54.13845	14.45009	0.1311936	0.23209653	2.6223477	21	—	—
513730 2012 TS_{208}	17.8	X	349.19067	121.56688	300.90919	3.88264	0.1948687	0.22931688	2.6434962	21	—	—
513731 2012 TZ_{231}	17.2	X	49.04490	339.27640	63.53493	9.68267	0.1389308	0.24697119	2.5159684	21	—	—
513732 2012 TY_{244}	18.0	X	32.52021	256.86290	127.67203	3.03877	0.2339608	0.23794426	2.5792052	21	—	—
513733 2012 TT_{267}	17.7	X	50.51430	253.39158	123.86602	5.78605	0.1397842	0.23930672	2.5694063	21	—	—
513734 2012 TS_{324}	13.8	X	73.28835	172.19222	31.69117	12.88455	0.0221797	0.08257886	5.2226403	21	7 1.6	20.8
513735 2012 TR_{326}	16.7	X	236.64200	252.98807	228.41608	11.64375	0.1815761	0.20945023	2.8081189	21	9 14.3	21.1
513736 2012 TT_{326}	17.3	X	293.27192	332.38430	146.25191	6.23723	0.2012214	0.23001222	2.6381659	21	12 5.1	19.9
513737 2012 UT_{1}	18.0	X	3.44306	289.78771	134.81517	3.69779	0.1431213	0.23738953	2.5832217	21	—	—
513738 2012 UO_{5}	17.7	X	194.04948	216.09058	73.13464	3.33280	0.2116752	0.26529280	2.3987542	21	—	—
513739 2012 UJ_{53}	17.6	X	4.47046	50.54978	327.57758	7.28879	0.2991344	0.22510642	2.6763575	21	12 24.1	20.3
513740 2012 UR_{59}	17.8	X	352.89491	65.98274	339.31214	3.31563	0.2374970	0.22547573	2.6734343	21	12 29.5	20.3
513741 2012 UC_{76}	17.1	X	313.34465	61.05583	47.45489	11.83011	0.1478823	0.22971506	2.6404406	21	—	—
513742 2012 UC_{81}	17.5	X	356.97221	215.76303	223.16321	4.17908	0.1605149	0.24125962	2.5555220	21	—	—
513743 2012 UM_{88}	17.0	X	3.49297	22.44645	49.56858	5.22851	0.1063514	0.23393010	2.6086269	21	—	—
513744 2012 UQ_{88}	17.9	X	39.17611	138.27238	235.32862	4.10125	0.2256813	0.23225252	2.6211734	21	—	—
513745 2012 UM_{105}	17.2	X	11.89849	82.04750	318.65158	4.28735	0.1873846	0.23186422	2.6240990	21	—	—
513746 2012 UE_{109}	17.5	X	57.61582	337.29652	23.58093	9.36261	0.1742710	0.23798649	2.5789000	21	—	—
513747 2012 US_{116}	17.4	X	339.97318	86.22644	15.41528	17.58535	0.0647450	0.24096639	2.5575948	21	—	—
513748 2012 UJ_{133}	16.9	X	3.46859	114.07844	332.94120	8.98481	0.1022050	0.23983790	2.5656112	21	—	—
513749 2012 UV_{163}	17.2	X	52.70130	60.67070	305.11239	3.62401	0.1350830	0.23346988	2.6120539	21	—	—
513750 2012 UV_{166}	16.9	X	32.79470	310.68182	55.75842	13.28098	0.3294842	0.23052067	2.6342852	21	—	—
513751 2012 UL_{168}	17.2	X	344.09941	267.50741	182.36064	15.51352	0.1831280	0.23493604	2.6011753	21	—	—
513752 2012 VX_{31}	17.8	X	19.98334	183.33207	203.96725	2.74639	0.2337686	0.23280608	2.6170167	21	—	—
513753 2012 VN_{109}	17.6	X	307.36098	203.12366	244.34643	5.92444	0.2341339	0.21970626	2.7200346	21	11 10.2	20.1
513754 2012 VJ_{110}	17.5	X	308.51712	346.43977	116.64439	3.62867	0.0758156	0.22698598	2.6615626	21	12 19.5	20.7
513755 2012 VQ_{114}	17.0	X	359.72479	298.30126	84.73664	7.37615	0.0472034	0.21589340	2.7519665	21	11 18.5	20.5
513756 2012 VR_{114}	17.2	X	4.83093	262.45345	127.79649	7.00377	0.0845004	0.22078458	2.7111709	21	12 9.5	20.6
513757 2012 VW_{114}	16.6	X	292.21103	74.30249	72.65074	17.44397	0.1303744	0.22795537	2.6540117	21	—	—
513758 2012 WN_{7}	17.2	X	70.66605	293.63276	54.15836	15.05736	0.1391297	0.23334317	2.6129995	21	—	—
513759 2012 WA_{24}	17.0	X	2.50681	22.38000	47.87906	13.41659	0.1698562	0.23298577	2.6156710	21	—	—
513760 2012 WW_{29}	16.6	X	347.51745	19.18567	83.24599	33.61790	0.1488389	0.23256838	2.6187997	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513761 2012 WJ_{36}	16.3	X	271.87142	340.30557	70.77407	10.99692	0.1285191	0.19204098	2.9753641	21	8 10.8	20.6
513762 2012 XM_{2}	16.6	X	75.38773	91.03597	290.02708	1.98163	0.1936761	0.24210278	2.5495852	21	—	—
513763 2012 XP_{27}	17.4	X	305.39808	224.55276	257.27651	7.91808	0.2329356	0.22304278	2.6928403	21	12 28.5	19.7
513764 2012 XA_{30}	17.7	X	313.72279	199.68099	258.73501	4.85563	0.2323733	0.22107202	2.7088203	21	12 13.0	19.7
513765 2012 XZ_{44}	17.2	X	130.01840	227.46989	66.40747	5.67230	0.0562694	0.22770623	2.6559473	21	—	—
513766 2012 XL_{45}	16.7	X	31.45919	96.36350	335.56855	6.93354	0.1123171	0.24012720	2.5635501	21	—	—
513767 2012 XN_{46}	17.3	X	306.64559	198.83317	235.49167	5.94846	0.2463163	0.21225766	2.7833029	21	10 15.5	19.9
513768 2012 XP_{66}	17.6	X	342.47707	225.77138	195.12014	8.49097	0.1093259	0.22120344	2.7077473	21	12 16.6	20.8
513769 2012 XH_{81}	17.3	X	314.43217	263.93594	174.25106	5.13108	0.1439051	0.21763723	2.7372466	21	11 20.9	20.3
513770 2012 XR_{84}	17.2	X	11.10274	279.11949	125.64082	13.94819	0.1802680	0.22707098	2.6608984	21	—	—
513771 2012 XM_{100}	17.0	X	309.91171	177.09881	285.06503	8.28159	0.1340892	0.22099578	2.7094433	21	12 16.1	19.9
513772 2012 XP_{116}	16.2	X	141.83984	213.56841	110.08917	12.32315	0.1748611	0.24471969	2.5313767	21	—	—
513773 2012 YG_{4}	16.3	X	333.59549	209.37283	291.17665	12.30239	0.1133004	0.23177376	2.6247818	21	—	—
513774 2012 YD_{10}	17.0	X	1.89254	41.03791	3.74236	4.06281	0.0668464	0.21322861	2.7748471	21	12 19.2	20.6
513775 2012 YK_{10}	17.2	X	263.31179	50.37828	101.62035	6.11198	0.0647667	0.21111527	2.7933346	21	12 15.2	20.8
513776 2013 AA_{2}	18.2	X	288.75917	259.65684	155.63551	6.85852	0.5469484	0.20374145	2.8603321	21	7 4.3	22.9
513777 2013 AQ_{3}	16.4	X	359.89228	354.98136	109.06999	22.85507	0.0287745	0.22635619	2.6664972	21	—	—
513778 2013 AC_{9}	16.9	X	267.60419	72.67607	89.09308	14.81107	0.0699223	0.21682693	2.7440619	21	—	—
513779 2013 AU_{14}	16.2	X	233.76949	142.40342	310.06919	18.01482	0.1969026	0.18485945	3.0519327	21	8 7.1	21.0
513780 2013 AN_{36}	17.1	X	224.31837	69.41488	103.78026	12.46357	0.0676571	0.20561788	2.8429036	21	11 24.4	21.2
513781 2013 AX_{40}	17.2	X	338.82724	315.57603	135.87114	5.75085	0.0837832	0.21670040	2.7451300	21	—	—
513782 2013 AZ_{41}	16.7	X	3.59301	66.88874	334.37913	12.41542	0.1065999	0.20983857	2.8046532	21	12 21.4	20.4
513783 2013 AO_{70}	16.8	X	227.52011	86.70026	121.41894	13.47072	0.1660022	0.21044190	2.7992901	21	12 26.4	20.9
513784 2013 AN_{77}	16.3	X	208.04457	141.82265	69.18557	7.85602	0.0618181	0.20914607	2.8108407	21	12 19.9	20.4
513785 2013 AS_{78}	17.3	X	269.89755	256.85006	196.24110	5.87719	0.1916755	0.19751014	2.9201811	21	9 17.9	21.3
513786 2013 AY_{124}	16.9	X	337.00790	318.09226	95.79071	10.75905	0.2157288	0.21028974	2.8006403	21	11 30.5	19.5
513787 2013 BS_{9}	16.2	X	231.35027	108.74281	321.91978	8.72148	0.0790092	0.17796486	3.1302561	21	7 21.9	20.9
513788 2013 BL_{45}	18.0	X	198.80069	69.99845	298.11033	17.93280	0.1228475	0.37935092	1.8899136	21	2 26.3	20.7
513789 2013 BN_{46}	17.2	X	235.22722	112.47530	70.51618	8.77478	0.1547961	0.20960744	2.8067146	21	12 5.2	21.1
513790 2013 BH_{61}	16.0	X	169.96738	200.68791	320.70962	16.14467	0.2017815	0.17762387	3.1342610	21	9 1.0	21.5
513791 2013 BB_{83}	16.7	X	256.14017	315.98366	150.35672	10.27012	0.0473620	0.18760058	3.0221309	21	10 11.5	21.0
513792 2013 BH_{83}	16.2	X	133.28020	172.88102	70.20479	6.22815	0.0884397	0.17837614	3.1254428	21	11 5.9	20.9
513793 2013 CH_{4}	17.5	X	303.97507	286.19083	159.32145	8.16334	0.0556961	0.20212126	2.8755972	21	11 17.9	21.3
513794 2013 CN_{39}	17.2	X	220.93730	121.10578	98.00343	2.72702	0.1350793	0.21045678	2.7991582	21	—	—
513795 2013 CB_{43}	17.2	X	295.67536	322.21721	123.99961	10.02775	0.2294889	0.20270216	2.8701007	21	10 18.4	20.6
513796 2013 CD_{58}	16.1	X	315.96542	232.04651	165.36031	16.29255	0.0770046	0.18542002	3.0457784	21	9 29.8	20.0
513797 2013 CJ_{76}	16.8	X	211.97529	88.25793	141.09097	5.72788	0.1022382	0.20871222	2.8147347	21	—	—
513798 2013 CA_{92}	17.2	X	346.26937	264.96622	151.47060	11.61376	0.2089525	0.20968525	2.8060202	21	12 22.6	20.2
513799 2013 CP_{92}	16.9	X	223.20208	280.48541	294.69899	2.78501	0.1324592	0.20883235	2.8136551	21	—	—
513800 2013 CK_{103}	16.4	X	1.95743	300.56874	122.64163	9.60576	0.1407532	0.21422151	2.7662664	21	—	—
513801 2013 CV_{149}	16.6	X	173.55786	225.75573	357.97330	12.64508	0.1893170	0.18930554	3.0039578	21	11 15.9	21.8
513802 2013 CT_{161}	16.5	X	331.39436	231.55972	161.11315	10.43604	0.0540903	0.18498820	3.0505164	21	10 18.2	20.5
513803 2013 CO_{163}	17.2	X	213.90571	194.55607	353.47903	4.05686	0.1634544	0.19329568	2.9624745	21	11 14.6	21.8
513804 2013 CJ_{174}	17.2	X	248.93216	294.81220	186.97847	4.36993	0.1391327	0.19003558	2.9962596	21	10 6.4	21.4
513805 2013 CU_{174}	16.8	X	225.45251	320.48089	162.03590	12.30964	0.1128289	0.18139172	3.0907063	21	9 14.2	21.3
513806 2013 CC_{175}	15.7	X	132.92488	230.02744	341.77383	26.46585	0.1861701	0.17303823	3.1893928	21	9 24.0	21.1
513807 2013 CX_{207}	16.3	X	279.69991	323.76934	139.01039	11.06236	0.0598090	0.19097752	2.9863993	21	11 6.0	20.5
513808 2013 CJ_{224}	16.8	X	221.64724	137.81198	1.36724	10.37737	0.0627675	0.18473882	3.0532610	21	10 4.1	21.1
513809 2013 CM_{224}	16.9	X	195.03609	64.19343	150.18401	1.53073	0.0889488	0.19336551	2.9617613	21	12 4.8	21.3
513810 2013 CA_{225}	16.1	X	135.60033	58.32170	173.89424	16.78849	0.1763547	0.17723713	3.1388188	21	10 31.6	21.4
513811 2013 CE_{225}	16.8	X	248.30498	298.07779	177.98894	8.53968	0.1426293	0.18546051	3.0453350	21	9 27.9	21.2
513812 2013 DF_{4}	17.3	X	274.96457	98.19240	328.60367	13.11640	0.2589413	0.18865826	3.0108249	21	8 13.2	21.6
513813 2013 DV_{15}	16.8	X	272.37247	268.44681	181.23195	13.18357	0.0806092	0.18933537	3.0036424	21	10 4.3	20.7
513814 2013 DN_{16}	18.5	X	162.52076	313.59622	160.56192	23.09373	0.0616689	0.39437917	1.8415919	21	6 29.2	21.1
513815 2013 EN_{3}	16.3	X	151.36646	249.48596	339.34413	25.17174	0.2761190	0.17940466	3.1134859	21	10 26.5	22.3
513816 2013 EV_{3}	17.2	X	237.82991	156.27437	332.78816	8.70471	0.1075430	0.18790889	3.0188242	21	10 2.9	21.8
513817 2013 EZ_{4}	18.1	X	5.34206	112.61036	89.59569	23.67315	0.0519633	0.36792471	1.9288424	21	3 9.6	20.6
513818 2013 EX_{9}	17.0	X	235.87958	286.04107	199.92185	9.36437	0.0937579	0.18795800	3.0182983	21	10 1.2	21.5
513819 2013 EE_{10}	17.4	X	207.84942	314.38306	203.05051	11.82159	0.2196284	0.18349359	3.0670589	21	9 28.8	22.6
513820 2013 EE_{15}	16.8	X	182.83433	52.55419	161.68770	2.22457	0.0720789	0.19355219	2.9598565	21	11 23.4	21.1
513821 2013 EO_{17}	16.1	X	160.20127	45.42331	145.36167	10.61334	0.0523086	0.17321715	3.1871962	21	10 2.8	20.9
513822 2013 ES_{20}	16.3	X	215.10192	313.01351	176.34183	17.58461	0.2557024	0.18220120	3.0815453	21	8 29.9	21.7
513823 2013 EB_{21}	16.8	X	202.20941	332.55347	209.28810	8.78983	0.0344972	0.19291645	2.9663556	21	11 8.8	21.1
513824 2013 ET_{32}	18.4	X	13.23399	224.64740	350.23270	19.34975	0.0498899	0.37310302	1.9109539	21	3 24.8	20.0
513825 2013 EC_{35}	17.1	X	170.54689	69.91285	158.49656	12.89167	0.2450313	0.18529580	3.0471395	21	11 23.8	22.6
513826 2013 EK_{41}	18.0	X	216.94139	50.85643	329.98139	22.86902	0.0455963	0.37878803	1.8917855	21	4 1.6	20.6
513827 2013 EB_{52}	15.9	X	51.10614	296.87781	356.45810	18.31926	0.0857915	0.17321194	3.1872600	21	9 29.8	20.3
513828 2013 EX_{82}	17.2	X	255.10370	77.06592	18.73885	12.13371	0.1593287	0.18263741	3.0766368	21	9 11.9	21.8
513829 2013 EC_{88}	16.8	X	183.06634	296.39122	281.20876	0.59428	0.2008955	0.18634304	3.0357122	21	11 19.6	21.9
513830 2013 EJ_{91}	18.5	X	65.14080	251.99439	340.03833	21.20780	0.1093623	0.39150349	1.8505988	21	8 25.1	19.9
513831 2013 EB_{99}	16.9	X	238.53070	346.64591	161.50975	4.30852	0.0503213	0.18812616	3.0164995	21	11 8.4	21.2
513832 2013 EC_{102}	16.6	X	192.83545	73.89745	104.85830	6.23535	0.0804184	0.18107014	3.0943647	21	10 22.8	21.4
513833 2013 EZ_{109}	16.5	X	196.36189	22.32529	169.54278	12.65665	0.1540192	0.18598775	3.0395770	21	11 6.6	21.5
513834 2013 ET_{154}	18.9	X	170.68874	82.65769	355.68605	18.62456	0.0817316	0.38458122	1.8727393	21	5 4.2	21.5
513835 2013 FW	18.3	X	250.39753	343.41575	350.87961	20.99018	0.1664889	0.37415489	1.9073707	21	3 14.8	20.9
513836 2013 FT_{3}	16.5	X	155.04172	112.19196	137.66665	17.30728	0.1952233	0.18564010	3.0433706	21	12 7.5	21.9
513837 2013 FC_{4}	16.4	X	150.67725	187.59889	47.17080	17.96970	0.1906895	0.18230176	3.0804120	21	11 12.9	21.5
513838 2013 FW_{6}	16.8	X	193.31600	43.55067	132.48206	4.41851	0.1478958	0.18013157	3.1051040	21	10 15.1	21.7
513839 2013 FV_{24}	16.1	X	106.97782	80.39999	187.01109	9.92213	0.0819419	0.17579372	3.1559769	21	11 7.1	20.8
513840 2013 GY_{4}	17.4	X	198.90637	26.18262	176.24739	12.45765	0.2472598	0.18816472	3.0160874	21	11 14.9	22.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513841 2013 GC_{10}	16.6	X	176.10593	63.51052	147.00979	5.70114	0.0954634	0.18408029	3.0605386	21	11 11.1	21.4
513842 2013 GP_{18}	17.0	X	172.63967	140.54910	74.53601	9.53317	0.2215692	0.18385985	3.0629844	21	11 9.8	22.3
513843 2013 GC_{23}	18.1	X	36.80008	76.13943	161.78207	22.83857	0.0831132	0.38100292	1.8844466	21	7 1.9	20.2
513844 2013 GM_{53}	16.2	X	229.39532	105.67795	54.19436	13.85340	0.0957253	0.18267277	3.0762397	21	11 5.6	20.7
513845 2013 GD_{57}	16.6	X	235.34416	344.12760	168.84436	9.43993	0.0988310	0.18693864	3.0292608	21	11 5.1	21.1
513846 2013 GE_{74}	16.8	X	201.17267	106.85775	77.94081	12.89079	0.1706930	0.18538693	3.0461408	21	11 2.8	21.8
513847 2013 GJ_{74}	16.4	X	217.48062	51.48833	142.63616	13.16681	0.0956041	0.19275601	2.9680014	21	12 5.9	21.0
513848 2013 GP_{76}	15.8	X	112.46782	201.15276	48.34447	21.97798	0.0916832	0.17086885	3.2163314	21	10 26.1	20.7
513849 2013 GQ_{77}	18.2	X	208.74004	359.49725	18.83531	21.26098	0.0867779	0.36900098	1.9250900	21	4 5.2	20.5
513850 2013 GN_{79}	18.3	X	33.74050	80.47582	148.01451	22.28171	0.0861366	0.37918737	1.8904570	21	6 12.2	20.4
513851 2013 GM_{80}	18.0	X	18.82073	177.00025	51.79645	22.78912	0.0521157	0.37244998	1.9131870	21	5 7.3	19.2
513852 2013 GL_{96}	16.7	X	194.80269	109.99649	94.84530	2.63460	0.2134962	0.18569624	3.0427573	21	11 14.5	21.7
513853 2013 GX_{97}	16.5	X	183.14570	195.40931	15.63525	7.48249	0.2013728	0.18136538	3.0910056	21	11 10.2	21.8
513854 2013 GE_{99}	16.7	X	197.97601	111.78885	60.81884	6.77177	0.1889110	0.17962343	3.1109574	21	10 13.5	21.8
513855 2013 GA_{100}	16.2	X	128.04542	183.05000	89.30826	10.94282	0.2020027	0.17518597	3.1632717	21	12 8.3	21.5
513856 2013 GS_{107}	16.4	X	173.39364	24.86030	184.52402	11.23349	0.1432420	0.17647607	3.1478365	21	11 4.9	21.5
513857 2013 GP_{112}	16.2	X	217.49554	329.61651	203.34376	10.66246	0.1015655	0.18360307	3.0658395	21	11 7.3	20.8
513858 2013 GZ_{132}	16.6	X	222.32353	19.92805	141.11759	8.13882	0.1237265	0.18470468	3.0536373	21	10 29.1	21.3
513859 2013 GD_{133}	16.6	X	139.01796	341.27978	254.89141	3.79896	0.1066939	0.17829596	3.1263797	21	11 2.1	21.4
513860 2013 GN_{138}	18.1	X	351.80027	195.16768	53.02153	22.39076	0.0644094	0.36401783	1.9426189	21	4 24.6	19.9
513861 2013 HY_{14}	17.8	X	316.93358	172.10323	155.73679	22.36570	0.1001002	0.38117805	1.8838694	21	6 24.6	20.0
513862 2013 HJ_{16}	16.5	X	171.24681	178.58617	77.65894	4.01066	0.2184194	0.18732577	3.0250858	21	12 23.6	21.6
513863 2013 HP_{42}	16.6	X	229.16532	144.61165	358.24213	8.61544	0.0284969	0.17568479	3.1572813	21	10 19.2	21.2
513864 2013 HB_{45}	16.7	X	166.50782	266.51995	304.22019	4.47863	0.0544408	0.17610476	3.1522596	21	10 28.9	21.5
513865 2013 HQ_{57}	16.7	X	236.85955	160.97147	5.78617	10.12346	0.0425839	0.18763788	3.0217304	21	11 26.1	21.1
513866 2013 HC_{118}	16.9	X	233.37454	73.73364	33.45033	15.76259	0.2265094	0.17231025	3.1983696	21	8 30.2	22.3
513867 2013 HR_{124}	16.8	X	131.87249	262.52274	351.69001	11.80192	0.1147619	0.17724120	3.1387707	21	11 13.3	21.9
513868 2013 JU_{7}	17.7	X	250.29776	260.73696	125.24968	20.91569	0.0914849	0.38008002	1.8874959	21	6 13.2	20.2
513869 2013 JE_{24}	15.3	X	126.93763	160.22030	100.04270	29.03198	0.1603238	0.17447471	3.1718628	21	11 29.3	20.8
513870 2013 JG_{27}	15.8	X	168.34952	70.12168	163.07272	27.04704	0.0830236	0.17703484	3.1412094	21	12 1.7	21.1
513871 2013 JY_{37}	18.3	X	4.82660	104.36326	150.69816	24.83254	0.1024171	0.37451549	1.9061461	21	5 30.7	20.5
513872 2013 JZ_{40}	16.2	X	196.67414	33.81661	165.73437	13.07785	0.0790554	0.17537554	3.1609917	21	11 19.7	21.2
513873 2013 JT_{49}	17.0	X	223.64100	38.83173	135.15228	3.08913	0.1761582	0.18424276	3.0587390	21	11 7.4	21.7
513874 2013 JY_{52}	16.1	X	174.60702	174.22547	20.39537	16.79720	0.1437057	0.17379593	3.1801161	21	10 17.1	21.2
513875 2013 JF_{60}	16.0	X	131.14224	188.85243	54.49243	11.72984	0.0408393	0.16986143	3.2290358	21	10 31.9	20.8
513876 2013 KS_{6}	18.0	X	284.95555	223.50405	104.74852	24.79223	0.0851970	0.36296836	1.9463616	21	5 13.8	20.7
513877 2013 KQ_{8}	16.3	X	168.88772	14.03094	222.75887	9.95935	0.1633554	0.18164171	3.0878699	21	12 1.1	21.5
513878 2013 KK_{11}	16.0	X	151.50050	152.19140	102.00322	18.13190	0.2058637	0.17464465	3.1698049	21	12 7.7	21.5
513879 2013 KU_{13}	16.5	X	188.38322	36.87598	155.66467	9.58998	0.1528058	0.17462982	3.1699843	21	10 30.2	21.7
513880 2013 LE_{21}	15.4	X	170.76122	123.38195	94.68374	32.99481	0.0935975	0.17093802	3.2154637	21	11 22.9	20.8
513881 2013 LC_{29}	18.3	X	20.25932	144.44443	100.52348	24.64004	0.0423311	0.36936181	1.9238360	21	6 10.9	20.1
513882 2013 MH_{1}	16.7	X	166.21020	103.67781	121.43316	9.57444	0.1834051	0.17417737	3.1754716	21	11 16.9	22.1
513883 2013 OW	17.9	X	6.90762	162.46733	280.47774	10.47421	0.1710826	0.28573758	2.2829223	21	—	—
513884 2013 OF_{11}	17.9	X	334.71263	95.32489	164.79185	23.14279	0.0252870	0.34846814	1.9999877	21	4 19.4	20.3
513885 2013 PE_{42}	18.9	X	87.06158	121.77914	299.80975	3.37874	0.0915573	0.30530361	2.1843124	21	—	—
513886 2013 RR_{22}	18.4	X	81.35079	79.97591	339.27588	5.48050	0.1244774	0.29865131	2.2166295	21	—	—
513887 2013 SJ_{101}	17.5	X	50.45418	23.61316	24.05022	8.04867	0.0838701	0.28377249	2.2934495	21	—	—
513888 2013 SL_{101}	16.7	X	279.20332	185.71642	228.96235	13.48412	0.1654596	0.22556399	2.6727368	21	8 11.9	20.6
513889 2013 TS_{24}	16.9	X	94.52253	12.94770	19.88201	25.23790	0.1551850	0.28960432	2.2625561	21	—	—
513890 2013 TW_{39}	18.8	X	33.68482	291.47224	143.34376	0.76603	0.1876632	0.27916620	2.3186089	21	—	—
513891 2013 TY_{60}	13.8	X	290.97604	60.87166	258.42557	10.30218	0.0684320	0.08227677	5.2354164	21	5 19.3	20.6
513892 2013 TV_{84}	18.2	X	72.78970	115.74614	287.23465	2.74132	0.2281650	0.28679924	2.2772850	21	—	—
513893 2013 TX_{91}	18.2	X	141.75498	344.87962	11.63154	2.61704	0.1895781	0.30053173	2.2073735	21	1 6.4	20.8
513894 2013 TG_{93}	17.6	X	348.50638	356.05571	195.85183	5.27169	0.0426776	0.30783130	2.1723387	21	1 25.5	20.2
513895 2013 TJ_{129}	17.8	X	112.63389	208.97477	158.65649	5.41420	0.2592108	0.29096402	2.2555019	21	—	—
513896 2013 UJ_{8}	18.0	X	67.92232	301.19952	102.43916	7.19147	0.2363984	0.28228605	2.3014936	21	—	—
513897 2013 VJ_{25}	17.8	X	338.31157	118.15948	51.31274	4.38618	0.0890750	0.28373967	2.2936264	21	—	—
513898 2013 VK_{25}	16.8	X	312.82994	312.62521	141.18926	11.18499	0.1555272	0.23347459	2.6120188	21	12 12.9	19.6
513899 2013 WD_{34}	18.3	X	39.73815	190.31290	250.23416	1.15893	0.1274418	0.27772902	2.3266008	21	—	—
513900 2013 WP_{91}	18.4	X	40.62786	141.17378	295.34655	1.68487	0.1806684	0.27631229	2.3345468	21	—	—
513901 2013 XU_{26}	16.9	X	325.55280	295.65207	171.87218	11.92703	0.1295570	0.23509325	2.6000155	21	—	—
513902 2013 YQ_{4}	17.6	X	135.04262	270.36189	108.59758	5.74660	0.1178611	0.28490718	2.2873561	21	1 20.7	20.3
513903 2013 YP_{14}	16.5	X	340.87471	289.51780	110.85565	16.12808	0.1879323	0.23650264	2.5896757	21	11 28.9	19.2
513904 2013 YG_{26}	17.3	X	83.66379	285.07101	96.26195	5.92671	0.2157183	0.27146936	2.3622300	21	—	—
513905 2013 YE_{30}	18.3	X	343.90140	229.73211	251.73677	2.95726	0.1975139	0.25921652	2.4360953	21	—	—
513906 2013 YA_{54}	18.1	X	31.51591	140.01861	295.44802	1.58433	0.1643670	0.27075436	2.3663868	21	—	—
513907 2013 YU_{63}	17.5	X	1.46155	26.27686	87.24631	6.83352	0.1347598	0.26150774	2.4218450	21	—	—
513908 2013 YS_{77}	17.8	X	334.00080	62.83256	93.41829	9.73423	0.1494439	0.26582648	2.3955425	21	—	—
513909 2013 YN_{94}	18.1	X	341.76633	46.63300	87.50676	2.18660	0.1103570	0.26255756	2.4153850	21	—	—
513910 2013 YX_{115}	17.8	X	359.37197	20.86152	108.47761	3.81112	0.1156265	0.26580397	2.3956778	21	—	—
513911 2013 YF_{117}	18.0	X	310.63667	136.80434	32.75182	1.65958	0.1277675	0.25786581	2.4445947	21	—	—
513912 2013 YE_{126}	17.9	X	313.47420	91.37899	66.99664	0.48238	0.1389003	0.25859353	2.4400063	21	—	—
513913 2013 YC_{146}	18.2	X	120.04068	14.26316	352.12866	5.98287	0.1466223	0.27672342	2.3322339	21	—	—
513914 2014 AH_{25}	17.8	X	282.39886	18.49906	180.16287	4.16231	0.1994086	0.25535951	2.4605642	21	—	—
513915 2014 AY_{35}	18.0	X	49.79089	263.99375	160.08665	2.15182	0.1851456	0.27438495	2.3454663	21	—	—
513916 2014 AR_{46}	19.2	X	133.75811	284.07079	288.70873	22.04226	0.2101442	0.46893913	1.6408104	21	10 22.7	22.1
513917 2014 AF_{53}	17.6	X	1.22889	356.55720	120.75166	6.13576	0.1110420	0.26515327	2.3995956	21	—	—
513918 2014 AX_{56}	17.4	X	242.68921	141.91650	119.70468	7.63662	0.1014840	0.26969261	2.3725936	21	—	—
513919 2014 AH_{57}	17.6	X	331.32489	79.48610	16.57999	3.49419	0.1101948	0.24419025	2.5350343	21	—	—
513920 2014 BY_{16}	17.8	X	343.95521	100.46320	41.08262	3.16131	0.1402714	0.26522734	2.3991488	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
513921 2014 BO_{34}	18.0	X	282.40018	213.29931	4.53430	2.18833	0.1573608	0.26009998	2.4305758	21	—	—
513922 2014 BO_{42}	17.0	X	315.79092	271.03146	283.51513	6.55478	0.0596544	0.26981721	2.3718631	21	—	—
513923 2014 BO_{58}	17.3	X	296.80670	25.80945	147.21316	16.01059	0.0145488	0.25377550	2.4707924	21	—	—
513924 2014 BK_{66}	16.9	X	271.27704	189.61113	327.47663	12.06128	0.0412762	0.24528025	2.5275184	21	—	—
513925 2014 CK_{7}	17.6	X	325.70169	54.09913	91.29149	3.57143	0.1503373	0.25572167	2.4582404	21	—	—
513926 2014 CA_{12}	17.6	X	286.37758	10.69382	140.28175	16.76373	0.1856325	0.24108789	2.5567354	21	—	—
513927 2014 CD_{22}	17.0	X	241.36178	2.37588	150.50665	14.60381	0.1853158	0.22294838	2.6936004	21	11 7.8	21.1
513928 2014 DQ_{4}	16.8	X	169.04242	58.15070	241.25370	6.25400	0.2077650	0.24649637	2.5191983	21	—	—
513929 2014 DU_{4}	17.8	X	259.55678	60.66151	128.46149	6.21381	0.2522549	0.23621356	2.5917881	21	—	—
513930 2014 DZ_{19}	17.1	X	226.35018	224.74092	353.11924	12.55393	0.2230298	0.22972102	2.6403949	21	—	—
513931 2014 DO_{41}	17.6	X	358.26591	269.00166	205.07373	0.92226	0.1329450	0.25777862	2.4451460	21	—	—
513932 2014 DA_{44}	17.5	X	251.63468	101.82518	114.41008	7.04429	0.1743523	0.24317612	2.5420774	21	—	—
513933 2014 DB_{55}	17.3	X	208.17314	101.69184	150.50969	7.52207	0.1441098	0.23529232	2.5985488	21	—	—
513934 2014 DR_{56}	17.5	X	351.30717	62.23792	11.80579	11.63344	0.1769503	0.23645288	2.5900390	21	—	—
513935 2014 DL_{60}	17.5	X	255.74106	106.83383	62.10105	5.78445	0.0977640	0.22843486	2.6502965	21	12 25.6	20.8
513936 2014 DT_{66}	17.4	X	319.33982	316.72775	161.47679	22.46274	0.0230319	0.23207995	2.6224726	21	—	—
513937 2014 DJ_{76}	17.6	X	335.37135	103.18609	353.29910	12.52920	0.1246211	0.23586064	2.5943729	21	—	—
513938 2014 DN_{79}	17.3	X	333.06611	68.54846	17.89566	22.28424	0.0385496	0.22536072	2.6743438	21	—	—
513939 2014 DM_{83}	17.2	X	54.12654	240.69891	149.62267	7.80336	0.1460509	0.24263106	2.5458831	21	—	—
513940 2014 DP_{87}	16.9	X	326.87605	275.08462	164.65993	14.96531	0.0742044	0.22845382	2.6501498	21	12 18.2	20.4
513941 2014 DD_{88}	17.8	X	16.69667	91.26763	316.42065	6.66366	0.1918212	0.24362343	2.5389648	21	—	—
513942 2014 DR_{96}	17.9	X	230.82258	117.54905	91.24621	3.41494	0.1368708	0.23138773	2.6277003	21	—	—
513943 2014 DC_{105}	17.8	X	312.14444	112.21378	353.06352	2.43613	0.1956291	0.23586705	2.5943259	21	12 27.5	20.0
513944 2014 DJ_{107}	17.5	X	246.22418	246.87432	332.92255	4.37633	0.1473203	0.24142053	2.5543863	21	—	—
513945 2014 DJ_{110}	17.2	X	191.64757	268.05718	6.23322	16.00854	0.2200242	0.22974331	2.6402242	21	—	—
513946 2014 DE_{117}	17.4	X	294.46614	41.42122	96.36728	5.45112	0.0785005	0.23493277	2.6011994	21	—	—
513947 2014 DZ_{123}	17.0	X	189.82244	234.91682	359.35127	11.25994	0.1558028	0.22312989	2.6921394	21	12 22.5	21.4
513948 2014 DZ_{129}	17.6	X	9.03302	269.32070	153.37986	9.36976	0.0879079	0.23682511	2.5873244	21	—	—
513949 2014 DB_{139}	17.7	X	247.72533	18.58081	174.66081	13.58711	0.0939370	0.23496865	2.6009346	21	—	—
513950 2014 DO_{140}	17.3	X	213.40368	279.27012	349.58250	11.62982	0.3005910	0.23804772	2.5784578	21	—	—
513951 2014 DS_{146}	16.3	X	249.81876	245.91683	156.00459	11.80258	0.1579983	0.18306905	3.0717988	21	6 26.5	21.1
513952 2014 DC_{147}	17.0	X	260.22119	218.11493	325.66456	11.00227	0.1222570	0.23548051	2.5971642	21	—	—
513953 2014 DJ_{147}	17.3	X	1.17088	2.88796	53.34604	6.07761	0.0518265	0.22573642	2.6713756	21	—	—
513954 2014 DO_{147}	17.3	X	294.63820	347.45354	119.61780	4.61642	0.0526512	0.21610972	2.7501298	21	12 3.9	20.7
513955 2014 EO_{4}	17.6	X	271.19312	29.47562	164.29865	13.09540	0.2124090	0.23992959	2.5649575	21	—	—
513956 2014 EM_{43}	17.8	X	258.69950	232.51155	343.88751	4.93084	0.1769953	0.24223172	2.5486803	21	—	—
513957 2014 ED_{99}	17.0	X	224.71116	253.47836	314.55854	15.11718	0.0474262	0.23529503	2.5985289	21	—	—
513958 2014 EG_{123}	16.7	X	269.00910	175.68408	276.90547	8.05436	0.1133639	0.21512700	2.7584986	21	9 26.3	20.5
513959 2014 EF_{170}	17.6	X	9.91435	209.71178	224.88082	3.94402	0.2238011	0.24676267	2.5173856	21	—	—
513960 2014 ES_{188}	16.2	X	225.79485	183.72452	215.58332	10.24319	0.1119439	0.17960678	3.1111496	21	6 2.9	21.1
513961 2014 EB_{194}	17.7	X	320.88031	164.14706	286.16518	3.08845	0.2686136	0.23728879	2.5839528	21	12 26.2	19.2
513962 2014 EM_{226}	17.3	X	314.28860	128.64131	330.07025	11.81631	0.2235282	0.23389338	2.6089000	21	12 21.3	19.7
513963 2014 EO_{248}	17.3	X	263.00439	175.99024	30.49573	13.91683	0.1809380	0.23286175	2.6165997	21	—	—
513964 2014 FT_{8}	17.7	X	274.76203	13.39306	209.14400	5.31674	0.1465358	0.25812716	2.4429444	21	—	—
513965 2014 FO_{12}	16.9	X	10.56617	66.97591	353.97135	11.05589	0.0985735	0.23348732	2.6119239	21	—	—
513966 2014 FW_{15}	17.2	X	27.88564	25.87609	350.51843	5.76480	0.0600304	0.22174990	2.7032970	21	12 19.9	20.8
513967 2014 FJ_{20}	16.8	X	115.64608	353.20502	318.27021	13.30488	0.1499506	0.23277379	2.6172588	21	—	—
513968 2014 FF_{40}	17.4	X	238.78159	138.05539	93.96857	7.09397	0.1154081	0.24286743	2.5442309	21	—	—
513969 2014 FD_{43}	16.9	X	197.06182	281.92313	353.67481	12.15572	0.2676552	0.23033974	2.6356645	21	—	—
513970 2014 FZ_{52}	17.8	X	276.29983	119.95480	40.07636	4.26872	0.1598661	0.23239230	2.6201223	21	—	—
513971 2014 FH_{55}	17.1	X	210.16709	228.89952	25.92852	13.65037	0.2153291	0.23225681	2.6211411	21	—	—
513972 2014 FU_{56}	17.0	X	225.80876	113.06826	151.82078	13.79959	0.1306336	0.24463588	2.5319548	21	—	—
513973 2014 FN_{67}	17.6	X	289.95496	67.70463	102.25715	9.62625	0.1338348	0.23922564	2.5699868	21	—	—
513974 2014 FA_{73}	17.5	X	253.61294	327.06236	194.15812	8.48497	0.1620664	0.22046242	2.7138115	21	12 2.5	21.1
513975 2014 GO_{6}	17.6	X	186.84628	267.49108	346.65582	3.08349	0.1749412	0.22380888	2.6866917	21	—	—
513976 2014 GG_{14}	17.5	X	234.59049	32.56810	171.90086	5.66090	0.0856201	0.22439617	2.6820019	21	—	—
513977 2014 GA_{16}	17.8	X	261.41897	80.03119	89.92460	3.21063	0.2475173	0.22976710	2.6400419	21	12 12.3	20.7
513978 2014 GT_{25}	16.8	X	258.28392	134.05583	355.79551	11.00048	0.1206247	0.21531597	2.7568844	21	10 29.8	20.7
513979 2014 GC_{43}	17.8	X	203.68977	29.60133	192.50463	3.32848	0.1606257	0.21533139	2.7567528	21	12 19.6	22.1
513980 2014 GH_{44}	16.9	X	262.32917	166.81554	74.61872	13.34316	0.1588939	0.24449773	2.5329085	21	—	—
513981 2014 GH_{47}	17.4	X	224.71407	81.58905	149.11586	12.12504	0.1734508	0.23199684	2.6230990	21	—	—
513982 2014 GY_{56}	16.0	X	356.62101	261.96378	119.75120	10.84565	0.0934115	0.19082515	2.9879888	21	11 13.5	19.9
513983 2014 GG_{57}	16.9	X	66.90372	335.96460	31.98143	6.47416	0.0366634	0.21880869	2.7274681	21	—	—
513984 2014 GH_{57}	17.2	X	193.80950	5.28920	218.41767	7.10081	0.0729102	0.21240127	2.7820482	21	12 18.9	21.3
513985 2014 GN_{57}	17.4	X	281.67728	282.64524	205.46221	7.02518	0.1188954	0.21553802	2.7549906	21	12 4.6	20.7
513986 2014 GD_{58}	17.1	X	332.47346	278.11506	178.19526	4.34396	0.0230824	0.21782939	2.7356366	21	—	—
513987 2014 HN_{1}	16.6	X	345.43157	65.72713	22.65501	22.28362	0.0505746	0.22789392	2.6544887	21	—	—
513988 2014 HY_{10}	17.7	X	301.98172	79.82907	50.00152	13.06375	0.2175258	0.23051495	2.6343288	21	—	—
513989 2014 HV_{31}	17.5	X	220.59076	87.43786	109.88465	4.72741	0.0320873	0.21468302	2.7623005	21	12 23.1	21.2
513990 2014 HZ_{42}	17.1	X	228.87177	106.73794	131.68122	13.17797	0.1238632	0.22731256	2.6590128	21	—	—
513991 2014 HN_{48}	17.6	X	321.11796	79.09239	34.97320	12.84559	0.1638854	0.23078610	2.6322651	21	—	—
513992 2014 HK_{54}	17.3	X	185.13871	207.46657	50.14625	7.17062	0.2210415	0.21921682	2.7240817	21	—	—
513993 2014 HZ_{82}	17.4	X	306.59400	355.96170	104.30308	4.68868	0.1606934	0.21792111	2.7348689	21	12 5.1	20.2
513994 2014 HR_{89}	17.2	X	297.09749	263.37228	177.04411	10.96385	0.1246609	0.20376793	2.8600842	21	10 25.2	20.7
513995 2014 HP_{127}	17.0	X	134.00616	84.84805	227.16248	5.31519	0.0519632	0.22305689	2.6927267	21	—	—
513996 2014 HY_{134}	17.3	X	296.55862	214.49905	225.21827	5.19946	0.0363493	0.20001089	2.8957893	21	10 30.2	21.2
513997 2014 HK_{144}	17.3	X	243.94310	142.44983	61.57088	5.37990	0.1741178	0.23180225	2.6245668	21	—	—
513998 2014 HK_{145}	17.2	X	212.50705	215.27814	33.98931	12.64153	0.1187236	0.23339044	2.6126466	21	—	—
513999 2014 HF_{153}	17.1	X	278.19354	228.90560	263.59056	4.72752	0.0253912	0.20916343	2.8106852	21	12 14.6	20.7
514000 2014 HM_{153}	17.1	X	95.74892	145.84092	155.01056	2.58203	0.0922330	0.20328671	2.8645961	21	12 8.7	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514001 2014 HB_{159}	16.8	X	223.03200	178.66232	25.17175	13.23979	0.1286269	0.22168756	2.7038038	21	12 21.8	20.9
514002 2014 HJ_{172}	17.1	X	141.43099	138.22192	146.61880	7.18700	0.0632676	0.21261482	2.7801850	21	—	—
514003 2014 HV_{179}	17.8	X	260.29149	157.87827	46.78209	6.46859	0.1017244	0.23743218	2.5829123	21	—	—
514004 2014 JC_{10}	17.5	X	204.53542	58.83669	175.48714	4.85863	0.0556075	0.21759957	2.7375624	21	—	—
514005 2014 JF_{11}	16.9	X	174.92560	202.69350	75.85029	7.86944	0.0652235	0.22091927	2.7100688	21	—	—
514006 2014 JG_{18}	17.0	X	175.05524	188.01425	43.62649	5.44909	0.1017918	0.21233264	2.7826476	21	12 6.4	21.2
514007 2014 JR_{47}	17.0	X	133.77820	107.86916	142.40242	7.02431	0.1016875	0.19076654	2.9886009	21	11 17.8	21.7
514008 2014 JE_{48}	15.9	X	63.45432	225.93640	88.15762	15.97973	0.1255829	0.18315107	3.0708816	21	11 22.7	20.4
514009 2014 JK_{55}	16.5	X	321.37623	25.05060	57.37892	33.98401	0.2127914	0.23475490	2.6025132	21	12 5.9	18.9
514010 2014 JB_{59}	17.5	X	301.77437	32.35341	103.76756	13.54266	0.2142480	0.22889782	2.6467217	21	—	—
514011 2014 JZ_{59}	16.4	X	91.73542	197.94034	81.32102	11.05981	0.0802226	0.18799817	3.0178684	21	11 7.7	20.9
514012 2014 JW_{62}	17.6	X	294.22895	355.20972	174.40741	13.43614	0.1777897	0.23497056	2.6009206	21	—	—
514013 2014 JA_{79}	16.2	X	201.84228	170.87245	108.24981	34.02295	0.1575533	0.23048613	2.6345485	21	—	—
514014 2014 JG_{84}	17.1	X	169.98189	131.37002	150.42830	12.81879	0.0979198	0.22376833	2.6870163	21	—	—
514015 2014 JL_{84}	17.1	X	220.35416	359.35236	220.31635	2.72238	0.1324149	0.21750537	2.7383528	21	—	—
514016 2014 JT_{84}	16.4	X	216.77524	349.01739	148.65747	11.38312	0.0602056	0.18041482	3.1018532	21	9 30.6	21.0
514017 2014 JU_{84}	16.7	X	244.15469	325.74428	136.73926	10.44841	0.0418533	0.17624701	3.1505633	21	9 21.2	21.3
514018 2014 JZ_{84}	16.5	X	137.70506	89.13480	136.29486	11.26465	0.0186647	0.18314258	3.0709765	21	10 20.8	21.0
514019 2014 JP_{85}	16.5	X	113.88778	214.73681	66.71544	11.77266	0.1168042	0.19608606	2.9343026	21	12 4.2	20.9
514020 2014 JS_{85}	15.9	X	258.89549	352.59598	93.22154	17.14642	0.0712050	0.17548620	3.1596627	21	9 19.9	20.7
514021 2014 JD_{86}	16.6	X	223.24236	35.76944	137.80850	14.18837	0.0738103	0.19723769	2.9228696	21	11 22.6	21.1
514022 2014 KP_{7}	17.4	X	230.22608	342.09932	247.12581	5.03349	0.0856114	0.22870893	2.6481788	21	—	—
514023 2014 KS_{22}	16.6	X	158.76911	194.77880	98.96003	14.96144	0.1611684	0.22218601	2.6997585	21	—	—
514024 2014 KU_{22}	17.1	X	234.81252	144.00238	112.22770	14.43316	0.1429781	0.23764300	2.5813845	21	—	—
514025 2014 KK_{26}	16.2	X	12.55930	235.42690	94.63729	10.10818	0.0873342	0.17469018	3.1692541	21	9 30.7	20.4
514026 2014 KE_{34}	17.2	X	252.31145	42.45506	159.50521	15.68842	0.0587180	0.22551695	2.6731085	21	—	—
514027 2014 KR_{42}	16.0	X	87.66516	160.00781	126.54564	16.65684	0.2419634	0.18380427	3.0636018	21	11 28.9	21.2
514028 2014 KH_{53}	17.7	X	233.42472	116.11170	95.33611	10.54486	0.2254309	0.22004307	2.7172583	21	12 30.7	21.7
514029 2014 KF_{68}	16.6	X	174.85798	116.37715	89.05546	10.02596	0.0382779	0.19293059	2.9662106	21	11 8.4	21.0
514030 2014 KL_{72}	16.6	X	254.68594	309.44623	197.05454	10.85228	0.0382351	0.19832419	2.9121847	21	11 29.3	20.7
514031 2014 KY_{75}	16.7	X	192.90383	263.91759	6.79729	27.04246	0.4051490	0.23337356	2.6127726	21	—	—
514032 2014 KD_{93}	16.7	X	172.27463	136.79771	75.39654	18.05139	0.1916940	0.19557098	2.9394525	21	11 10.7	21.8
514033 2014 KQ_{96}	17.3	X	195.77473	128.38366	122.72883	5.97613	0.1166860	0.21645981	2.7471636	21	—	—
514034 2014 KN_{104}	15.7	X	64.47592	179.63267	115.02312	19.68132	0.2215876	0.17975684	3.1094179	21	11 16.5	20.6
514035 2014 LT_{17}	17.0	X	213.67635	91.87480	127.05986	9.78766	0.0870939	0.21147789	2.7901405	21	—	—
514036 2014 LO_{22}	16.2	X	75.31306	35.72757	260.56167	11.49065	0.1497536	0.18164007	3.0878885	21	11 13.1	20.8
514037 2014 LH_{29}	16.8	X	165.41735	165.33138	113.13520	9.60599	0.1983960	0.19850477	2.9104183	21	—	—
514038 2014 ME_{13}	16.1	X	56.20223	356.68496	328.57147	12.84958	0.1709291	0.17467669	3.1694172	21	11 26.4	20.8
514039 2014 MZ_{14}	16.1	X	106.16278	144.93084	135.04449	11.61248	0.1279155	0.17595077	3.1540986	21	11 26.2	21.2
514040 2014 MQ_{17}	17.1	X	215.89817	107.99381	143.82733	26.31459	0.2687128	0.22451406	2.6810630	21	—	—
514041 2014 MQ_{18}	15.7	X	125.39654	332.96173	347.28136	35.07752	0.5993071	0.19965012	2.8992767	21	1 21.9	21.6
514042 2014 ME_{26}	16.3	X	98.16472	342.57413	299.21390	16.13506	0.1839062	0.17468313	3.1693393	21	11 19.9	21.6
514043 2014 ME_{35}	15.8	X	232.85519	247.43726	251.97608	9.92508	0.0127788	0.18477490	3.0528636	21	10 22.6	20.3
514044 2014 MM_{50}	17.9	X	183.13549	95.96970	274.06799	18.78749	0.0789626	0.38025851	1.8869052	21	2 6.1	20.3
514045 2014 ML_{52}	15.8	X	85.11432	0.90736	277.84236	14.49532	0.1766757	0.16672145	3.2694527	21	11 1.2	21.1
514046 2014 ML_{63}	17.7	X	203.67451	80.20576	169.17744	9.08622	0.2358652	0.21954185	2.7213924	21	—	—
514047 2014 NM_{24}	15.9	X	119.99008	5.07768	274.01088	14.44351	0.1086547	0.18219937	3.0815660	21	12 5.1	20.7
514048 2014 ON_{37}	16.2	X	179.33141	255.73328	308.59662	15.31813	0.1876130	0.18055280	3.1002727	21	10 25.8	21.7
514049 2014 OK_{70}	16.1	X	149.13523	132.96196	140.71062	15.35603	0.2380165	0.18978654	2.9988801	21	12 27.7	21.5
514050 2014 OK_{104}	16.1	X	106.89260	149.39229	131.11727	9.55255	0.1787355	0.17373660	3.1808401	21	11 30.2	21.3
514051 2014 OE_{111}	15.9	X	75.06402	192.83360	111.88881	17.01198	0.0710753	0.17291152	3.1909508	21	11 18.5	20.7
514052 2014 OC_{119}	16.1	X	131.86835	312.14201	311.12739	7.70424	0.0430065	0.17940475	3.1134849	21	11 23.4	20.8
514053 2014 OM_{129}	16.5	X	69.35326	135.90551	163.58261	10.31212	0.1085175	0.18185371	3.0854696	21	11 8.9	21.0
514054 2014 OH_{135}	16.6	X	144.08448	308.25377	319.44386	8.20612	0.1926035	0.18944138	3.0025217	21	12 16.5	21.8
514055 2014 OR_{185}	16.3	X	87.10878	188.87995	116.50512	15.03588	0.1868701	0.17231581	3.1983008	21	12 11.3	21.5
514056 2014 OQ_{208}	16.7	X	110.50500	77.65344	188.62616	0.65150	0.1470370	0.17423112	3.1748184	21	11 13.0	21.5
514057 2014 OZ_{212}	15.9	X	174.97313	252.62890	307.37322	15.28518	0.1504351	0.17839850	3.1251815	21	10 17.2	21.3
514058 2014 OL_{298}	18.1	X	340.18095	293.60531	344.62129	19.59511	0.0614872	0.39534682	1.8385857	21	4 29.9	20.1
514059 2014 OZ_{352}	16.1	X	149.16762	308.91520	291.91840	7.73566	0.1650508	0.18042347	3.1017541	21	11 17.2	21.3
514060 2014 OX_{375}	16.4	X	113.67954	319.41466	325.30841	11.93053	0.1457461	0.17975009	3.1094957	21	12 6.5	21.5
514061 2014 OM_{382}	16.2	X	119.80549	296.07930	311.14121	15.29524	0.0980303	0.17123448	3.2117512	21	10 19.2	21.4
514062 2014 OT_{394}	14.0	X	290.36772	208.60886	94.41613	10.16180	0.0506683	0.08273499	5.2160681	21	5 6.2	20.9
514063 2014 OF_{401}	16.7	X	170.44051	98.33783	131.68638	8.14149	0.0398476	0.17588614	3.1548712	21	11 28.9	21.4
514064 2014 PB_{2}	16.2	X	156.48679	116.87802	112.85251	12.66486	0.0321423	0.17719625	3.1393016	21	11 15.9	21.0
514065 2014 PO_{6}	16.0	X	157.98384	285.75260	294.01417	12.39995	0.0404541	0.17080887	3.2170843	21	10 26.8	21.0
514066 2014 PD_{39}	16.2	X	173.83944	237.27759	350.59045	21.86338	0.2877938	0.17871441	3.1214975	21	11 12.9	22.2
514067 2014 PU_{65}	16.6	X	121.78051	19.68058	246.05503	3.13735	0.2348650	0.17822145	3.1272510	21	11 27.2	21.9
514068 2014 QG_{41}	16.0	X	163.71653	308.98002	271.79889	12.19438	0.2256316	0.17770003	3.1333654	21	11 4.6	21.6
514069 2014 QC_{172}	16.2	X	165.53624	266.80870	329.78913	8.78919	0.1926310	0.17657023	3.1467173	21	11 24.6	21.6
514070 2014 QZ_{199}	16.0	X	138.12257	95.57774	169.35432	19.58384	0.1507258	0.17661650	3.1461677	21	12 8.3	21.5
514071 2014 QB_{264}	16.0	X	194.52463	72.73809	158.33156	26.75380	0.1769828	0.17872913	3.1213262	21	12 17.7	21.5
514072 2014 QJ_{337}	16.9	X	113.94471	128.26376	151.67730	11.43954	0.2294927	0.17888926	3.1194633	21	12 8.6	22.3
514073 2014 QS_{344}	16.4	X	123.41579	128.33307	144.21220	10.30202	0.0425954	0.17283010	3.1919528	21	11 27.9	21.2
514074 2014 QO_{388}	18.5	X	214.01314	50.20500	337.04002	20.04707	0.0682384	0.39160804	1.8502695	21	4 8.9	21.0
514075 2014 QL_{421}	15.9	X	101.15348	151.25032	147.87551	13.73559	0.2858902	0.17579841	3.1559207	21	12 22.5	21.5
514076 2014 RT_{12}	17.6	X	295.72741	270.87413	51.47907	24.24743	0.1720485	0.38708963	1.8646401	21	4 26.7	19.5
514077 2014 RD_{18}	17.6	X	140.73233	189.10298	285.71980	22.58444	0.1097062	0.39059744	1.8534596	21	6 3.4	20.0
514078 2014 SP_{349}	13.9	X	282.31189	229.11848	106.32464	30.76609	0.0415885	0.08275479	5.2152357	21	6 7.4	21.0
514079 2014 SD_{351}	13.6	X	233.70378	259.42021	133.53171	18.01486	0.0252452	0.08415228	5.1573363	21	6 15.9	20.7
514080 2014 TP_{86}	18.3	X	173.26708	13.25339	31.86955	20.76667	0.0910669	0.35352766	1.9808600	21	4 6.5	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514081 2014 UN_{56}	18.0	X	326.79300	227.19544	43.63643	21.18876	0.0824180	0.37898087	1.8911437	21	4 12.3	19.7
514082 2014 UG_{98}	14.1	X	272.04991	166.18166	165.87311	7.65455	0.0882794	0.08263373	5.2203282	21	5 12.1	21.1
514083 2014 UL_{160}	13.9	X	293.33176	57.58414	257.79405	7.38036	0.0115685	0.08341806	5.1875542	21	5 25.1	20.8
514084 2014 UR_{225}	14.0	X	263.24074	273.39316	69.56168	8.58735	0.0437888	0.08456950	5.1403599	21	5 18.9	20.8
514085 2014 VO	18.1	X	268.76405	255.99048	89.74434	22.91186	0.1406134	0.38244800	1.8796967	21	5 6.6	20.7
514086 2014 VB_{2}	18.2	X	153.80072	268.77186	173.50315	22.37992	0.1202809	0.37190465	1.9150567	21	5 7.1	20.9
514087 2014 VC_{2}	18.4	X	316.75164	184.70959	80.18535	23.57367	0.0403585	0.37030597	1.9205645	21	4 4.4	21.0
514088 2014 VE_{10}	18.0	X	317.51060	123.99749	161.77726	22.59132	0.0711544	0.37354381	1.9094503	21	4 21.6	20.1
514089 2014 WS_{137}	13.8	X	314.11493	234.65964	65.97003	15.33564	0.1490156	0.08393813	5.1661047	21	5 18.0	20.2
514090 2014 WL_{355}	15.7	X	336.66165	344.06950	226.29403	8.85906	0.0239679	0.17736463	3.1373143	21	2 28.2	20.2
514091 2014 WL_{370}	18.4	X	119.10831	35.99680	90.17376	25.73224	0.1432161	0.36685294	1.9325974	21	6 1.8	20.7
514092 2014 WF_{371}	18.8	X	270.71518	197.04805	164.74028	23.70623	0.0911904	0.38459859	1.8726830	21	6 4.0	21.5
514093 2014 WD_{492}	17.1	X	279.30072	80.74422	41.86709	13.06047	0.1032030	0.27630900	2.3345653	21	12 7.5	19.7
514094 2014 WY_{510}	17.9	X	155.40807	351.65233	96.91371	24.40536	0.0921303	0.35848726	1.9625477	21	5 21.7	20.7
514095 2014 WF_{511}	13.4	X	318.77387	246.39359	69.50010	39.00456	0.0587587	0.08426821	5.1526052	21	6 14.8	20.2
514096 2014 WQ_{511}	18.3	X	79.14444	140.00780	7.52563	19.16048	0.0585003	0.35180079	1.9873370	21	4 8.5	20.0
514097 2014 XW_{20}	14.0	X	306.45615	46.96453	260.08050	5.13781	0.0561717	0.08268823	5.2180342	21	5 25.7	20.8
514098 2014 XE_{33}	13.5	X	244.93262	309.03677	64.37754	11.05114	0.0868202	0.08228526	5.2350563	21	5 28.2	20.5
514099 2014 XL_{40}	14.2	X	277.24144	260.28499	83.30985	2.46055	0.1206636	0.08244677	5.2282172	21	5 25.1	21.2
514100 2014 YY_{54}	16.3	X	306.39987	286.41326	87.40238	15.75324	0.0729392	0.22174706	2.7033201	21	8 21.9	19.9
514101 2015 AO_{1}	17.5	X	262.32171	288.34994	51.09454	22.18658	0.1211340	0.35862035	1.9620621	21	4 19.7	20.0
514102 2015 AT_{44}	18.2	X	208.22578	257.75866	97.96619	13.12238	0.2539361	0.35025663	1.9931737	21	3 14.4	21.7
514103 2015 AO_{281}	18.7	X	85.65053	170.84815	330.98072	17.40706	0.0796974	0.35317107	1.9821931	21	4 6.4	20.9
514104 2015 AA_{282}	18.1	X	155.40425	289.37637	158.70596	22.52554	0.1092056	0.36088863	1.9538322	21	5 19.2	21.1
514105 2015 BT_{92}	19.1	X	164.24882	38.48894	261.86282	8.96307	0.0728881	0.45122682	1.6834728	21	—	—
514106 2015 BG_{301}	17.8	X	262.75873	239.20843	37.18939	3.78541	0.1479680	0.30550813	2.1833375	21	1 22.2	21.0
514107 Ka`epaoka`awela	16.0	X	169.03077	257.32200	307.74432	163.12758	0.3782731	0.08482989	5.1298355	21	5 22.9	24.4
514108 2015 BJ_{541}	16.2	X	212.90813	359.86870	68.57761	11.40096	0.0744800	0.19225015	2.9732055	21	6 27.2	20.6
514109 2015 CD	17.8	X	314.43669	3.87810	2.19186	21.22388	0.0265107	0.38799030	1.8617533	21	9 12.9	19.3
514110 2015 CU_{54}	18.7	X	8.40396	150.38180	350.70377	3.87436	0.1379890	0.30393285	2.1908751	21	—	—
514111 2015 DX_{98}	17.9	X	266.31998	124.56970	143.01316	6.35048	0.1974465	0.29997137	2.2101216	21	1 10.9	21.4
514112 2015 DJ_{165}	18.0	X	251.01314	117.80503	155.21030	6.63413	0.1522036	0.29863485	2.2167109	21	1 5.9	21.5
514113 2015 DA_{168}	18.2	X	270.42091	123.99760	120.73867	5.12909	0.0737789	0.29766033	2.2215465	21	—	—
514114 2015 DF_{205}	17.6	X	270.56261	115.40711	142.27284	7.12521	0.0968626	0.29685993	2.2255379	21	1 9.6	20.6
514115 2015 DV_{230}	17.9	X	155.42060	193.32343	127.18999	10.12804	0.0684717	0.27238941	2.3569077	21	—	—
514116 2015 EB_{75}	16.8	X	353.69377	42.42480	351.60121	6.53531	0.1371382	0.24465992	2.5317889	21	12 6.5	19.6
514117 2015 FH_{105}	18.4	X	71.89743	222.23789	229.54071	5.85968	0.0712746	0.30711157	2.1757313	21	1 12.6	20.6
514118 2015 FL_{141}	18.1	X	294.31085	208.66083	49.64673	2.41906	0.1223422	0.30933000	2.1653163	21	2 3.2	20.9
514119 2015 FR_{173}	18.5	X	242.99757	177.63235	92.90381	6.90961	0.1031367	0.28961076	2.2625226	21	—	—
514120 2015 FL_{175}	17.7	X	176.07220	181.35699	109.71128	9.64205	0.1180649	0.26635524	2.3923711	21	—	—
514121 2015 FJ_{249}	17.4	X	165.50108	186.25682	153.56574	7.08420	0.1477495	0.29062132	2.2572747	21	1 7.7	20.5
514122 2015 FQ_{331}	16.8	X	206.97583	215.17708	91.67457	8.85519	0.1239196	0.27767317	2.3269128	21	1 10.1	20.2
514123 2015 FW_{338}	17.2	X	103.09023	202.75242	119.72475	7.60638	0.2411015	0.23045972	2.6347497	21	—	—
514124 2015 FS_{343}	17.2	X	280.04516	176.19629	22.98799	4.94778	0.0995324	0.27724383	2.3293145	21	—	—
514125 2015 FO_{402}	17.5	X	177.94807	200.81702	88.02505	7.58532	0.1308089	0.25755803	2.4465419	21	—	—
514126 2015 FR_{403}	17.3	X	113.16613	183.81984	138.61568	7.50861	0.1160268	0.24121097	2.5558656	21	—	—
514127 2015 GD_{18}	18.5	X	282.68760	41.63807	214.51750	3.35230	0.1752680	0.30196173	2.2003990	21	1 12.8	21.8
514128 2015 GB_{29}	17.5	X	210.73133	295.52643	3.04752	7.91447	0.1643226	0.28882652	2.2666163	21	1 3.9	21.1
514129 2015 GX_{30}	18.5	X	256.94423	197.62028	48.71225	1.45459	0.0511566	0.29047373	2.2580392	21	—	—
514130 2015 GY_{39}	18.1	X	355.73110	42.44171	136.84882	6.61950	0.0794446	0.30654115	2.1784296	21	1 14.3	20.4
514131 2015 HY_{27}	18.2	X	276.82743	96.62753	170.18624	5.52735	0.1413157	0.30015125	2.2092386	21	1 23.4	21.4
514132 2015 HS_{110}	16.6	X	52.29052	222.54005	124.84947	14.54818	0.2056187	0.23119374	2.6291700	21	—	—
514133 2015 HY_{133}	18.0	X	1.69703	263.13916	206.96060	7.20755	0.0677019	0.27355454	2.3502105	21	—	—
514134 2015 HL_{134}	18.1	X	342.58249	5.36275	207.98417	5.83207	0.1613908	0.30847029	2.1693377	21	1 27.5	20.4
514135 2015 HS_{152}	17.8	X	222.68322	348.96260	281.15775	1.71242	0.1947167	0.27074042	2.3664681	21	—	—
514136 2015 HX_{152}	18.0	X	262.37701	93.09359	148.96603	2.15560	0.1490500	0.27980370	2.3150857	21	—	—
514137 2015 HQ_{153}	18.3	X	49.52294	273.85273	173.24822	7.09097	0.0666176	0.27921029	2.3183648	21	—	—
514138 2015 HW_{173}	17.9	X	304.14434	139.61266	132.69868	4.12119	0.1905810	0.30966258	2.1637657	21	2 24.7	20.7
514139 2015 HO_{175}	18.2	X	332.14585	137.83911	78.90927	6.32176	0.1282010	0.30736279	2.1745456	21	1 26.1	20.6
514140 2015 HM_{176}	17.9	X	222.87762	256.10034	2.70235	5.38305	0.1999612	0.27096062	2.3651858	21	—	—
514141 2015 HL_{186}	18.0	X	348.11064	327.64980	149.45248	6.96717	0.0646617	0.26669762	2.3903232	21	—	—
514142 2015 HK_{187}	16.8	X	90.11513	38.07549	298.32925	4.91845	0.1814640	0.23700011	2.5860506	21	—	—
514143 2015 JK_{2}	17.8	X	255.14413	186.22932	47.75789	2.55293	0.1639456	0.27521420	2.3407525	21	—	—
514144 2015 JV_{13}	17.7	X	324.43923	79.56273	56.50727	6.41992	0.0813958	0.26576122	2.3959347	21	—	—
514145 2015 KO_{26}	18.3	X	351.93132	160.21505	27.97541	4.37387	0.0728214	0.30058103	2.2071322	21	1 25.9	20.8
514146 2015 KD_{42}	18.2	X	244.33172	180.70182	71.19947	2.37631	0.1537067	0.27303042	2.3532172	21	—	—
514147 2015 KN_{42}	17.9	X	313.03001	124.60543	56.52463	6.22044	0.1003864	0.27794912	2.3253724	21	—	—
514148 2015 KL_{43}	17.4	X	66.96389	174.35285	253.99696	5.15378	0.0262944	0.27348197	2.3506263	21	—	—
514149 2015 KN_{52}	17.6	X	247.73433	228.87357	80.54507	5.07729	0.1561659	0.29315995	2.2442245	21	2 21.1	21.0
514150 2015 KJ_{57}	21.4	X	352.09494	336.42827	14.39772	2.62777	0.4041225	0.50637796	1.5589045	21	—	—
514151 2015 KA_{92}	17.5	X	122.13065	261.54159	107.10658	7.42852	0.1267817	0.26735996	2.3863738	21	—	—
514152 2015 KQ_{94}	18.4	X	228.72851	97.55228	179.48307	5.34355	0.2274622	0.27333464	2.3514709	21	—	—
514153 2015 KD_{116}	17.8	X	242.28080	72.21887	177.10741	5.12668	0.2078655	0.27044281	2.3682039	21	—	—
514154 2015 KW_{125}	17.6	X	204.58716	201.03216	69.69636	6.17943	0.1899851	0.26454265	2.4032867	21	—	—
514155 2015 KQ_{137}	18.3	X	284.32902	184.91794	20.58990	2.54382	0.1516477	0.27769222	2.3268064	21	—	—
514156 2015 KA_{152}	18.3	X	256.59539	304.57534	310.11844	1.87379	0.1894742	0.27967771	2.3157810	21	—	—
514157 2015 KH_{165}	17.0	X	191.87934	169.42266	78.58958	6.06451	0.0941348	0.21799892	2.7342181	21	—	—
514158 2015 KM_{165}	17.4	X	359.44507	321.68748	108.83205	7.45818	0.0960119	0.24157506	2.5532969	21	—	—
514159 2015 KF_{166}	17.6	X	220.89123	206.00556	86.88320	7.31062	0.1412211	0.28188292	2.3036874	21	1 5.9	21.2
514160 2015 LH_{16}	16.6	X	129.73541	55.73745	245.39503	12.68641	0.1591168	0.23437333	2.6053371	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514161 2015 LM_{30}	17.0	X	101.19417	172.62819	123.57388	4.70298	0.1103755	0.21167184	2.7884359	21	12 11.8	21.3
514162 2015 LA_{37}	18.2	X	252.73688	34.88139	215.41914	4.46007	0.1796579	0.27812144	2.3244118	21	—	—
514163 2015 LD_{38}	17.9	X	303.62407	28.51300	205.45407	4.68288	0.1325776	0.29426356	2.2386098	21	1 12.3	20.9
514164 2015 LV_{41}	17.3	X	74.77083	206.14701	127.19299	3.16965	0.0806163	0.21426053	2.7659305	21	12 25.4	21.2
514165 2015 LM_{42}	17.2	X	158.92352	197.66025	58.37798	3.12224	0.0291821	0.21955801	2.7212588	21	12 23.6	20.9
514166 2015 MV_{6}	17.9	X	258.38566	34.06119	222.53512	5.60672	0.1963891	0.27069728	2.3667195	21	—	—
514167 2015 MY_{7}	18.1	X	276.82274	69.84896	141.32014	6.90359	0.1664463	0.26031890	2.4292129	21	—	—
514168 2015 MY_{9}	17.4	X	48.28889	223.20696	147.20337	6.88789	0.0310639	0.21768916	2.7368112	21	—	—
514169 2015 MU_{15}	16.9	X	166.12965	17.42277	221.43351	8.20101	0.0682255	0.21394101	2.7686838	21	12 8.4	21.0
514170 2015 MT_{16}	17.8	X	293.63517	312.29951	293.70795	4.67888	0.1378741	0.29774709	2.2211149	21	1 16.3	20.5
514171 2015 MZ_{17}	18.3	X	323.64453	302.43410	292.77554	4.87012	0.1494280	0.30689256	2.1767663	21	2 3.5	20.9
514172 2015 MG_{29}	18.8	X	313.54016	259.48559	304.40278	1.27897	0.1217658	0.28986147	2.2612178	21	—	—
514173 2015 MA_{31}	17.8	X	71.04069	200.48323	157.61127	9.19146	0.1807876	0.23974732	2.5662573	21	—	—
514174 2015 MS_{46}	17.1	X	155.23277	175.90622	87.82993	5.30942	0.1412021	0.21886698	2.7269837	21	12 25.7	21.4
514175 2015 MK_{47}	17.8	X	243.57706	232.04939	31.56102	2.77252	0.1632249	0.25979947	2.4324497	21	—	—
514176 2015 MN_{49}	17.1	X	189.88042	191.88063	86.16741	13.70873	0.1157594	0.23706620	2.5855699	21	—	—
514177 2015 MC_{52}	17.7	X	270.88947	3.85194	241.43970	1.99407	0.1942511	0.27249563	2.3562951	21	—	—
514178 2015 MM_{54}	18.2	X	202.56354	175.81822	97.58471	6.62256	0.2120847	0.25992748	2.4316511	21	—	—
514179 2015 MX_{57}	17.2	X	192.71725	198.44132	99.61994	7.53485	0.1155228	0.25323808	2.4742868	21	—	—
514180 2015 MC_{59}	17.7	X	277.44092	139.23702	101.15012	5.22765	0.1103309	0.27148723	2.3621263	21	—	—
514181 2015 MK_{61}	17.9	X	254.55319	190.30195	85.85108	4.16167	0.1818114	0.27700499	2.3306532	21	1 16.2	21.4
514182 2015 MT_{76}	17.7	X	232.09454	105.99629	144.84159	7.45062	0.1813989	0.25627446	2.4547042	21	—	—
514183 2015 MC_{77}	16.6	X	341.75460	223.93027	137.17980	15.07474	0.1858769	0.17704566	3.1410814	21	9 20.4	20.1
514184 2015 MX_{78}	17.2	X	236.99283	39.80785	144.06875	10.18702	0.0359751	0.22203070	2.7010173	21	12 27.7	21.0
514185 2015 MN_{79}	17.2	X	84.27311	89.77676	238.53658	4.44759	0.0636795	0.21535034	2.7565910	21	12 28.0	21.2
514186 2015 MQ_{79}	17.4	X	73.41571	209.19067	147.65987	6.70166	0.0645006	0.22225790	2.6991763	21	—	—
514187 2015 ML_{81}	17.6	X	219.39453	335.50282	257.83770	5.83091	0.0794366	0.23882735	2.5728434	21	—	—
514188 2015 MO_{85}	16.7	X	358.13107	235.43646	122.90872	22.33193	0.1303538	0.18363056	3.0655336	21	10 23.7	20.9
514189 2015 MX_{96}	16.9	X	28.45770	243.16673	102.45485	16.12478	0.1705375	0.20609142	2.8385471	21	11 27.9	20.6
514190 2015 MM_{98}	16.7	X	80.08171	224.72890	148.72025	11.10326	0.0853842	0.23059892	2.6336893	21	—	—
514191 2015 MX_{98}	17.2	X	66.30078	210.48335	130.06252	6.05485	0.0645913	0.21083317	2.7958256	21	12 21.9	21.2
514192 2015 MO_{101}	17.4	X	225.18381	150.04603	130.95958	6.58578	0.1251839	0.26360493	2.4089828	21	—	—
514193 2015 MN_{105}	17.2	X	197.02860	250.74345	31.99475	1.40177	0.2006262	0.25145863	2.4859460	21	—	—
514194 2015 MJ_{108}	16.6	X	338.10227	131.64823	295.69896	10.87747	0.0455658	0.21099396	2.7944051	21	12 12.7	20.2
514195 2015 MV_{110}	17.7	X	247.93717	63.94734	175.97246	1.27710	0.1398702	0.25675823	2.4516199	21	—	—
514196 2015 MD_{111}	17.4	X	185.42963	285.03048	317.19994	3.92128	0.1134959	0.22768754	2.6560926	21	—	—
514197 2015 MH_{111}	17.6	X	205.44382	198.22227	92.43119	2.46458	0.1801037	0.25575181	2.4580473	21	—	—
514198 2015 MW_{114}	16.9	X	55.09164	150.96634	176.68935	12.06567	0.0649151	0.19875503	2.9079748	21	11 22.2	21.1
514199 2015 ML_{118}	17.6	X	294.80059	182.83596	33.00949	3.99511	0.1983566	0.26863875	2.3787946	21	—	—
514200 2015 ML_{133}	18.0	X	211.80868	218.54643	16.51645	3.20921	0.1897660	0.24034265	2.5620178	21	—	—
514201 2015 MO_{134}	16.5	X	38.63002	234.31041	74.30640	10.62991	0.0561031	0.17549807	3.1595203	21	10 7.1	20.9
514202 2015 MS_{135}	16.5	X	335.84549	293.64685	102.95658	5.93435	0.1273831	0.18977181	2.9990353	21	10 29.5	20.0
514203 2015 MB_{136}	17.1	X	352.31234	287.22752	144.10926	7.07972	0.0674786	0.21989888	2.7184460	21	—	—
514204 2015 MG_{136}	17.2	X	182.14234	74.19274	186.45172	9.03781	0.0369636	0.23036035	2.6355073	21	—	—
514205 2015 MJ_{136}	17.2	X	67.75910	231.45089	101.61458	5.53158	0.0754503	0.21307450	2.7761850	21	12 16.3	21.0
514206 2015 MK_{136}	17.1	X	71.30810	229.67134	122.97234	7.20595	0.0473880	0.22265481	2.6959675	21	—	—
514207 2015 MA_{137}	15.9	X	355.99888	239.89352	113.65460	13.04332	0.1114324	0.18534086	3.0466456	21	10 9.4	19.8
514208 2015 MH_{137}	16.7	X	221.15003	240.42028	7.70989	11.59069	0.1616598	0.23045169	2.6348109	21	—	—
514209 2015 NN_{7}	16.4	X	314.55896	135.96631	261.13096	9.01899	0.1156800	0.18105129	3.0945794	21	9 15.9	20.4
514210 2015 NU_{8}	16.6	X	218.62824	299.00711	279.16881	4.53828	0.0771338	0.22993170	2.6387818	21	—	—
514211 2015 NJ_{16}	17.1	X	202.44476	308.38429	304.90199	9.66483	0.0977465	0.23287113	2.6165294	21	—	—
514212 2015 NP_{23}	17.0	X	120.14540	190.74570	107.63618	5.21588	0.2026711	0.22082854	2.7108110	21	—	—
514213 2015 NN_{26}	16.7	X	79.09748	84.25942	231.76789	1.17741	0.0478780	0.20263865	2.8707004	21	12 3.1	20.6
514214 2015 OU_{4}	17.2	X	206.14279	105.19372	148.67606	14.98639	0.0692835	0.24105436	2.5569725	21	—	—
514215 2015 OE_{6}	16.2	X	297.39469	180.17966	240.55734	9.44642	0.0960111	0.18400014	3.0614273	21	9 24.4	20.3
514216 2015 OB_{11}	17.5	X	222.52795	124.05359	82.72699	3.62529	0.0886353	0.22663626	2.6643000	21	—	—
514217 2015 OT_{12}	16.9	X	72.52052	214.00969	105.15604	10.73208	0.0689170	0.20378579	2.8599172	21	12 3.7	21.0
514218 2015 OU_{12}	16.9	X	111.40526	231.02899	97.84641	7.46753	0.0693245	0.22560413	2.6724199	21	—	—
514219 2015 OH_{14}	16.4	X	328.15887	256.79343	123.18514	10.18985	0.1398094	0.17584262	3.1553918	21	9 22.4	20.2
514220 2015 OK_{21}	16.9	X	351.35077	70.16825	289.46906	9.46692	0.1486615	0.18160751	3.0882576	21	9 27.8	20.6
514221 2015 ON_{23}	16.9	X	193.65360	89.23192	214.88045	3.17582	0.2477596	0.25268689	2.4778836	21	1 3.8	21.2
514222 2015 OA_{46}	17.0	X	177.38601	281.52308	338.96972	11.66790	0.1436799	0.23200201	2.6230600	21	—	—
514223 2015 OE_{59}	16.1	X	354.46334	348.44867	41.11564	10.87412	0.1185219	0.18872713	3.0100924	21	11 16.3	19.7
514224 2015 OC_{64}	16.7	X	179.82467	219.30169	65.78986	15.23136	0.0945006	0.22965152	2.6409276	21	—	—
514225 2015 OE_{70}	17.1	X	174.31030	340.52005	298.23854	13.59504	0.1053641	0.23532794	2.5982866	21	—	—
514226 2015 OE_{73}	17.2	X	193.83854	133.23361	137.69956	5.95677	0.1325846	0.24169031	2.5524852	21	—	—
514227 2015 OV_{73}	17.0	X	168.93547	108.79464	171.07608	13.85063	0.2704316	0.23143820	2.6273183	21	—	—
514228 2015 OO_{84}	17.1	X	119.15680	168.59655	121.11742	3.13379	0.0382891	0.20305007	2.8668213	21	12 16.4	21.2
514229 2015 OF_{85}	17.1	X	89.34883	101.06000	236.12624	5.36294	0.0327075	0.21721270	2.7408120	21	—	—
514230 2015 OJ_{85}	16.7	X	136.65126	121.24806	151.45219	2.45750	0.0504711	0.19632956	2.9318759	21	12 14.6	20.9
514231 2015 OH_{86}	16.7	X	20.35675	71.72206	355.08970	14.06334	0.0167100	0.21797348	2.7344308	21	—	—
514232 2015 OL_{86}	16.2	X	301.11229	259.47931	169.78691	9.33899	0.0410621	0.17539940	3.1607052	21	10 21.5	20.6
514233 2015 OC_{87}	16.4	X	208.06648	214.31230	351.40938	12.33017	0.1245948	0.21752748	2.7381672	21	12 6.4	20.7
514234 2015 OE_{87}	17.4	X	259.52100	219.53853	350.33074	6.95575	0.1428572	0.23698033	2.5861945	21	—	—
514235 2015 OS_{87}	16.3	X	302.54698	229.50221	166.85045	16.11435	0.1121973	0.17181979	3.2044531	21	8 31.2	20.5
514236 2015 OW_{87}	16.5	X	255.11615	332.18447	175.40601	12.51493	0.0588855	0.19899048	2.9056805	21	11 29.3	20.7
514237 2015 OC_{88}	17.1	X	75.79772	20.42615	315.47831	7.41167	0.0717380	0.20499072	2.8486991	21	12 27.3	21.2
514238 2015 OH_{88}	16.0	X	248.33256	341.04469	158.52115	11.65890	0.0360791	0.18066207	3.0990225	21	11 12.5	20.5
514239 2015 OL_{88}	16.9	X	137.04952	51.29860	265.70258	10.40252	0.0734640	0.22293633	2.6936974	21	—	—
514240 2015 OY_{88}	15.9	X	351.83977	276.11936	107.27263	11.32753	0.0505648	0.17822018	3.1272658	21	11 4.9	20.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514241 2015 PO_2	16.4	X	193.97548	139.23511	138.61757	40.94647	0.0435646	0.23768649	2.5810696	21	—	—
514242 2015 PM_3	16.9	X	178.68764	211.35762	94.13301	7.41503	0.1200994	0.24274733	2.5450701	21	—	—
514243 2015 PH_8	16.1	X	14.24765	200.00004	200.12098	9.73452	0.1145715	0.20017147	2.8942403	21	—	—
514244 2015 PY_{30}	17.3	X	217.10973	306.50309	316.05956	8.47771	0.1977172	0.24544102	2.5264146	21	—	—
514245 2015 PZ_{37}	17.2	X	225.09458	246.77347	334.10687	13.87782	0.0871838	0.22880604	2.6474294	21	—	—
514246 2015 PC_{50}	16.5	X	18.15030	276.99230	58.41966	5.58660	0.1702018	0.17709863	3.1404550	21	10 21.6	20.3
514247 2015 PD_{51}	16.6	X	190.24959	216.55539	77.25627	12.24541	0.1718982	0.24264936	2.5457551	21	—	—
514248 2015 PP_{52}	16.6	X	71.17534	297.32579	17.82237	18.27441	0.0896133	0.19514553	2.9437233	21	11 21.5	21.1
514249 2015 PG_{62}	17.1	X	163.91531	170.44346	151.33832	12.65200	0.1889230	0.24124758	2.5556070	21	—	—
514250 2015 PH_{94}	17.2	X	141.95796	167.75372	133.54967	4.42988	0.1944712	0.22918510	2.6445095	21	—	—
514251 2015 PK_{94}	16.7	X	2.71186	230.60037	133.58796	12.00512	0.0816620	0.18908093	3.0063364	21	10 30.9	20.7
514252 2015 PX_{119}	17.0	X	233.57095	234.23339	334.38736	13.10967	0.0464265	0.22842564	2.6503678	21	—	—
514253 2015 PO_{121}	16.4	X	13.10219	249.17599	120.11728	11.33093	0.1184975	0.19256378	2.9699763	21	11 24.6	20.2
514254 2015 PB_{123}	17.0	X	155.62988	274.93503	348.15344	2.82613	0.0790166	0.21768540	2.7368428	21	12 26.8	21.1
514255 2015 PK_{144}	17.5	X	266.42959	176.66814	74.10800	5.32349	0.1671243	0.26710181	2.3879112	21	—	—
514256 2015 PS_{254}	15.9	X	25.92535	57.80677	272.33671	8.95531	0.0787148	0.16961504	3.2321621	21	10 8.8	20.4
514257 2015 PP_{289}	16.4	X	107.69364	165.97966	92.18916	11.95644	0.0914230	0.18339657	3.0681405	21	11 1.8	21.2
514258 2015 PU_{295}	17.3	X	168.59598	157.38649	137.19568	15.09911	0.2681871	0.23342878	2.6123606	21	—	—
514259 2015 PV_{304}	16.9	X	111.16177	227.37396	104.61715	7.13442	0.0289077	0.21437045	2.7649850	21	—	—
514260 2015 PF_{309}	17.0	X	83.52075	185.65017	140.67824	11.08695	0.2829695	0.20418861	2.8561545	21	—	—
514261 2015 PV_{314}	17.1	X	116.16398	140.71051	141.90091	8.67002	0.0465442	0.19841841	2.9112627	21	12 5.5	21.4
514262 2015 PK_{315}	16.0	X	5.25906	330.88267	9.83541	10.90005	0.1395221	0.18114733	3.0934855	21	10 2.5	19.7
514263 2015 QA_{11}	16.6	X	113.08806	312.77830	320.67662	11.44468	0.0120040	0.19378971	2.9574375	21	11 11.9	21.1
514264 2015 RC_{19}	16.0	X	4.93198	26.98587	345.38050	13.42291	0.1588841	0.17923837	3.1154113	21	11 8.2	19.9
514265 2015 RK_{26}	15.9	X	348.71733	104.94772	285.71033	7.94268	0.0949906	0.17966145	3.1105184	21	11 4.0	19.9
514266 2015 RA_{57}	16.4	X	101.59355	105.24168	185.42132	9.51264	0.0619577	0.18633053	3.0358481	21	11 28.2	21.0
514267 2015 RJ_{58}	16.5	X	106.12916	78.19812	181.77691	10.50376	0.0463652	0.17415907	3.1756940	21	10 24.7	21.1
514268 2015 RF_{61}	16.2	X	156.02331	235.94445	357.65113	9.40086	0.0551997	0.18578474	3.0417909	21	11 14.1	20.8
514269 2015 RG_{64}	15.7	X	72.50213	275.41957	3.09590	10.84235	0.1234076	0.17124348	3.2116387	21	10 13.9	20.3
514270 2015 RN_{86}	15.9	X	349.76037	159.10571	222.45632	8.71959	0.0790464	0.17583499	3.1554831	21	10 25.9	19.8
514271 2015 RA_{87}	15.5	X	3.84918	87.57209	279.08394	10.15292	0.0508931	0.17503062	3.1651432	21	10 22.3	20.0
514272 2015 RJ_{89}	15.2	X	341.85369	122.63032	267.49893	9.19119	0.0273314	0.17044565	3.2216531	21	10 21.3	19.8
514273 2015 RK_{92}	16.5	X	13.53245	10.64991	330.94239	6.96894	0.2206628	0.17555863	3.1587936	21	10 22.9	20.2
514274 2015 RH_{93}	16.8	X	194.06515	313.39388	320.83419	6.51852	0.1611264	0.23585354	2.5944250	21	—	—
514275 2015 RT_{103}	16.8	X	151.48592	111.47118	172.03366	9.16303	0.1649708	0.21831469	2.7315809	21	—	—
514276 2015 RA_{105}	16.0	X	29.88130	352.04126	326.59937	10.68662	0.1039027	0.17032168	3.2232161	21	10 2.5	20.4
514277 2015 RN_{116}	15.8	X	54.47332	285.53406	41.37253	16.23835	0.0992188	0.17909492	3.1170747	21	11 17.8	20.2
514278 2015 RS_{116}	15.6	X	37.94369	240.84773	103.80500	12.68671	0.1423894	0.17868000	3.1218983	21	11 28.9	19.9
514279 2015 RS_{117}	16.1	X	38.55449	222.00474	136.07536	15.00376	0.1508950	0.18240838	3.0792115	21	12 17.3	20.5
514280 2015 RG_{122}	16.2	X	45.81063	337.82818	32.13167	9.87220	0.1071039	0.19860831	2.9094067	21	—	—
514281 2015 RK_{192}	16.1	X	49.85550	307.02673	13.49690	15.68207	0.1054897	0.17504623	3.1649550	21	11 2.3	20.5
514282 2015 RL_{216}	16.0	X	280.08169	96.15575	15.69980	12.63466	0.0463955	0.17888844	3.1194727	21	11 9.9	20.4
514283 2015 RP_{244}	16.7	X	161.69496	115.74416	170.62788	11.17591	0.1806771	0.21977616	2.7194578	21	—	—
514284 2015 RV_{252}	16.5	X	56.84392	293.88338	32.11570	5.48541	0.1736154	0.18601155	3.0393178	21	12 2.2	20.8
514285 2015 RF_{255}	16.3	X	16.78642	230.98112	146.05426	10.46514	0.0563150	0.17322388	3.1871135	21	11 28.0	20.8
514286 2015 RZ_{256}	16.3	X	117.63062	238.01946	35.75718	11.79690	0.2316376	0.18433979	3.0576656	21	12 1.8	21.7
514287 2015 SP_1	16.2	X	346.86737	97.12332	277.70259	10.48671	0.0459233	0.17767343	3.1336782	21	10 8.2	20.6
514288 2015 SB_{24}	16.1	X	164.08594	34.05507	171.58570	10.33169	0.0373668	0.17631941	3.1497008	21	10 24.5	20.8
514289 2015 TS_1	15.9	X	235.29412	75.62513	323.72759	2.55019	0.2039763	0.12258910	4.0132987	21	6 5.9	22.1
514290 2015 TW_5	16.6	X	121.71313	309.92197	339.14876	12.46889	0.1884566	0.21438048	2.7648987	21	12 27.5	21.4
514291 2015 TY_{16}	16.6	X	152.69048	177.33396	118.07582	15.96082	0.1778467	0.21817026	2.7327864	21	—	—
514292 2015 TV_{17}	16.1	X	327.66248	354.88671	59.93414	21.93121	0.0357661	0.17613980	3.1518417	21	11 9.5	20.4
514293 2015 TO_{26}	16.4	X	138.40044	239.40347	4.42041	10.11119	0.0330758	0.18157112	3.0886702	21	11 5.9	21.0
514294 2015 TN_{47}	15.9	X	58.97282	10.83661	291.66658	1.49496	0.0619443	0.17466322	3.1695802	21	10 20.1	20.3
514295 2015 TD_{81}	16.5	X	211.02968	49.40844	233.25460	12.23111	0.1711157	0.22333893	2.6904593	21	—	—
514296 2015 TZ_{104}	16.0	X	144.26147	183.39765	81.80623	16.97713	0.0559296	0.17345437	3.1842895	21	12 10.2	20.8
514297 2015 TR_{127}	16.0	X	140.56839	156.81424	89.12264	15.24488	0.1702499	0.17230825	3.1983944	21	11 20.0	21.4
514298 2015 TT_{194}	17.5	X	86.17338	106.26610	308.33519	5.77376	0.2112033	0.22451114	2.6810862	21	1 26.9	20.3
514299 2015 TT_{197}	17.0	X	161.81721	260.20584	16.28931	8.96629	0.1666661	0.21020570	2.8013867	21	—	—
514300 2015 TA_{198}	16.6	X	59.17679	232.41081	87.58220	2.43930	0.2193245	0.18141055	3.0904924	21	12 3.8	21.0
514301 2015 TU_{213}	16.1	X	202.59998	28.78655	204.48381	14.92566	0.0917782	0.20584714	2.8407924	21	—	—
514302 2015 TS_{233}	15.9	X	5.47715	86.44579	284.76161	9.24844	0.0730829	0.17189842	3.2034758	21	11 1.1	20.3
514303 2015 TR_{257}	16.8	X	173.40494	345.77965	314.25724	13.86082	0.2653820	0.23385876	2.6091574	21	—	—
514304 2015 TU_{284}	15.8	X	219.18484	135.97095	320.30775	2.58145	0.0293883	0.13907802	3.6894678	21	8 11.1	21.1
514305 2015 TR_{292}	16.0	X	65.45266	332.15955	342.61449	10.50100	0.1012650	0.17570207	3.1570742	21	11 14.6	20.7
514306 2015 TK_{294}	16.1	X	216.65250	345.34712	181.94280	9.36429	0.0355119	0.17649273	3.1476385	21	11 6.6	20.7
514307 2015 XM_{126}	15.8	X	113.02689	185.12968	118.97625	20.13191	0.0550344	0.16963919	3.2318554	21	12 23.2	20.7
514308 2015 XG_{386}	13.6	X	250.87922	189.55196	164.40517	26.72930	0.1010006	0.08357450	5.1810788	21	5 15.5	21.0
514309 2015 XL_{386}	13.9	X	262.27811	250.32020	107.03073	8.25010	0.0165919	0.08112016	5.2850634	21	6 7.0	20.8
514310 2015 YA_2	14.0	X	96.82419	305.99957	224.22866	9.65525	0.1116627	0.08335699	5.1900876	21	6 30.0	21.1
514311 2016 AJ_{92}	16.0	X	42.47128	116.80680	277.97792	8.61243	0.1086487	0.18893781	3.0078544	21	—	—
514312 2016 AE_{193}	8.1	X	15.35224	170.96450	292.40721	10.27275	0.4640965	0.00576971	30.7869471	21	2 12.0	20.6
514313 2016 CX_{29}	18.3	X	238.45056	221.70181	134.92471	23.27611	0.1147600	0.41083980	1.7920676	21	4 12.3	20.9
514314 2016 CJ_{284}	15.8	X	304.49989	256.24707	103.48287	14.24993	0.2225620	0.22013337	2.7165151	21	6 30.9	19.0
514315 2016 DO_{31}	18.0	X	226.16710	6.87323	357.73351	21.17968	0.0511597	0.39367516	1.8437868	21	3 29.3	19.8
514316 2016 GN_{130}	17.2	X	27.20564	65.71429	204.82050	3.83415	0.1239037	0.23104918	2.6302666	21	8 5.7	20.1
514317 2016 GF_{254}	18.6	X	355.32329	187.41145	74.57807	24.76598	0.0507121	0.39146505	1.8507200	21	5 21.8	20.0
514318 2016 JS_{17}	18.6	X	192.59256	334.52382	78.08278	24.41698	0.0703187	0.39074838	1.8529822	21	5 11.9	20.9
514319 2016 JC_{34}	18.7	X	139.72016	327.77464	100.48763	27.12064	0.1687471	0.36825730	1.9276809	21	4 17.8	21.9
514320 2016 KF_4	18.0	X	358.57432	74.04136	147.46728	23.26794	0.0292577	0.35538888	1.9739379	21	3 26.5	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514321 2016 LE_{57}	17.4	X	103.48961	119.83316	150.33887	15.26556	0.0850478	0.23565093	2.5959118	21	11 17.9	21.5
514322 2016 NO_{14}	15.9	X	266.76090	248.53742	129.78432	27.78096	0.2541585	0.17482820	3.1675858	21	6 10.2	21.2
514323 2016 NT_{56}	18.5	X	312.50652	336.88297	323.83583	19.96910	0.0372329	0.36476937	1.9399497	21	4 25.9	21.1
514324 2016 NZ_{66}	16.8	X	1.59421	255.69846	144.57827	12.17666	0.1898642	0.23378130	2.6097338	21	—	—
514325 2016 NN_{67}	17.4	X	38.57888	73.35411	35.25030	6.72135	0.0782790	0.29040112	2.2584155	21	—	—
514326 2016 NS_{67}	16.0	X	274.59486	175.10873	285.39704	10.74041	0.0581013	0.18695682	3.0290644	21	10 17.9	20.4
514327 2016 NU_{67}	18.0	X	46.45801	283.70041	121.99673	6.98169	0.1119201	0.27035823	2.3686978	21	—	—
514328 2016 NN_{68}	16.2	X	34.01530	53.41788	304.37377	26.14531	0.1498184	0.22270601	2.6955543	21	12 21.5	20.1
514329 2016 NS_{68}	16.1	X	279.85612	171.76571	279.61070	13.70125	0.0710554	0.19809784	2.9144027	21	10 11.6	20.4
514330 2016 NO_{70}	18.1	X	173.76989	245.13881	66.42562	7.48374	0.0555021	0.28614207	2.2807704	21	—	—
514331 2016 OQ_{5}	17.9	X	14.55649	48.46282	184.41434	22.69797	0.0569118	0.35278446	1.9836410	21	5 9.8	20.0
514332 2016 OQ_{6}	16.6	X	346.59018	116.23812	287.93201	8.24583	0.1566763	0.21696356	2.7429097	21	12 2.5	19.5
514333 2016 OS_{6}	16.9	X	354.71424	263.91672	112.54708	9.33839	0.2431420	0.21562227	2.7542729	21	11 21.6	19.5
514334 2016 PV_{4}	17.9	X	7.96845	47.26017	347.94077	7.61343	0.1955320	0.23533787	2.5982135	21	—	—
514335 2016 PX_{73}	16.3	X	308.19510	35.52510	345.91086	8.67016	0.1354258	0.17991430	3.1076035	21	8 20.3	20.2
514336 2016 PE_{76}	17.7	X	130.28554	321.37804	10.79637	6.82423	0.1375649	0.26141426	2.4224223	21	—	—
514337 2016 PC_{77}	17.6	X	135.76584	16.65645	325.56487	5.85929	0.2640839	0.28424337	2.2909160	21	—	—
514338 2016 PP_{89}	17.1	X	1.49611	236.37417	174.24820	9.23196	0.0938498	0.22369343	2.6876161	21	12 31.4	20.6
514339 2016 PQ_{89}	17.0	X	327.62244	246.70544	180.15576	9.12521	0.2147020	0.21943644	2.7222638	21	11 30.6	19.6
514340 2016 PZ_{89}	17.7	X	104.76384	307.49160	52.27493	4.03686	0.1447816	0.26182677	2.4198773	21	—	—
514341 2016 PZ_{90}	16.9	X	56.95692	339.77910	24.66606	12.52520	0.1540931	0.23262464	2.6183774	21	—	—
514342 2016 PN_{91}	16.5	X	259.71890	342.95017	88.67981	16.28551	0.2241814	0.17912960	3.1166723	21	8 8.1	21.4
514343 2016 PN_{92}	16.8	X	235.68287	283.48727	179.56032	9.93848	0.1848199	0.17252806	3.1956771	21	8 21.6	21.9
514344 2016 PQ_{92}	16.5	X	290.05139	249.42742	158.59194	7.93712	0.2597874	0.18139409	3.0906795	21	8 5.8	20.5
514345 2016 PA_{93}	16.7	X	45.46107	5.64223	23.01540	6.63877	0.1180304	0.25401752	2.4692227	21	—	—
514346 2016 PJ_{93}	17.1	X	70.88579	191.25593	172.27001	15.43635	0.1393256	0.24331656	2.5410991	21	—	—
514347 2016 PF_{94}	16.9	X	357.10091	303.18215	76.01933	14.64885	0.2037329	0.21606963	2.7504699	21	11 24.6	19.6
514348 2016 PM_{94}	17.4	X	350.79761	207.32327	213.92166	3.62619	0.0715495	0.22171622	2.7035707	21	12 26.9	20.7
514349 2016 PN_{94}	16.7	X	248.53288	176.00746	0.20180	11.72213	0.1193836	0.22621638	2.6675958	21	12 21.4	20.5
514350 2016 PO_{94}	17.3	X	331.73104	9.87498	25.14967	13.15111	0.1534190	0.21421059	2.7663604	21	10 21.2	20.2
514351 2016 PF_{96}	17.8	X	289.63208	283.30360	318.64680	4.16277	0.0529024	0.29856463	2.2170585	21	1 16.5	20.3
514352 2016 PL_{96}	18.2	X	282.61169	288.22058	297.78498	1.25545	0.0832758	0.29046191	2.2581004	21	—	—
514353 2016 PR_{97}	16.7	X	259.82382	38.61713	101.70252	17.70900	0.1310864	0.21843108	2.7306106	21	11 22.6	20.5
514354 2016 PN_{98}	17.0	X	23.93522	65.99690	5.24477	11.37063	0.1423032	0.24172799	2.5522199	21	—	—
514355 2016 QO	17.4	X	7.73794	259.79064	164.84600	15.58393	0.2462186	0.24576762	2.5241759	21	—	—
514356 2016 QB_{9}	17.0	X	35.97079	97.19921	284.76404	8.05226	0.1977617	0.24160307	2.5530996	21	—	—
514357 2016 QF_{9}	17.5	X	36.97281	348.39098	37.79104	6.12874	0.1224950	0.24609921	2.5219080	21	—	—
514358 2016 QQ_{15}	18.1	X	187.89643	47.60677	280.46097	8.77813	0.1978414	0.30660438	2.1781301	21	1 16.9	21.3
514359 2016 QO_{23}	18.2	X	109.97549	134.26517	229.94063	5.15648	0.0869631	0.27648955	2.3335489	21	—	—
514360 2016 QP_{24}	17.7	X	146.42810	112.61764	238.02394	5.69715	0.1315479	0.29059210	2.2574260	21	—	—
514361 2016 QG_{31}	17.7	X	128.81725	251.49792	82.86929	2.31732	0.2089054	0.27400538	2.3476318	21	—	—
514362 2016 QH_{48}	16.8	X	72.58342	336.28128	356.31097	11.98247	0.1980360	0.23490446	2.6014084	21	—	—
514363 2016 QU_{48}	16.7	X	254.48080	307.42077	151.26402	3.31227	0.1985377	0.18463360	3.0544210	21	9 5.9	21.1
514364 2016 QR_{54}	17.4	X	348.14811	46.43621	328.96413	12.80316	0.2080281	0.21119475	2.7926336	21	10 20.8	20.4
514365 2016 QT_{70}	18.4	X	172.73006	139.74202	203.94981	4.47163	0.2012167	0.30639485	2.1791230	21	1 22.2	21.6
514366 2016 QR_{83}	16.4	X	317.28789	92.40901	298.51207	12.48229	0.2847854	0.18869512	3.0104328	21	8 22.7	19.7
514367 2016 QE_{87}	17.8	X	73.59944	120.86980	288.13191	6.52689	0.0846805	0.26848695	2.3796911	21	—	—
514368 2016 QM_{87}	17.1	X	46.32821	36.62770	338.09953	2.36509	0.1257669	0.22536545	2.6743063	21	—	—
514369 2016 QE_{88}	16.8	X	339.07491	284.79322	177.27948	10.15792	0.1381671	0.23081192	2.6320688	21	—	—
514370 2016 QG_{88}	16.1	X	334.65661	283.80362	96.04761	11.26791	0.1133620	0.19156206	2.9803210	21	10 9.4	19.8
514371 2016 QH_{88}	15.8	X	308.26293	278.23719	111.50898	14.30294	0.1823910	0.17856669	3.1232188	21	8 26.7	19.7
514372 2016 QS_{88}	17.4	X	1.57879	173.34462	224.71720	5.31860	0.0622417	0.21535096	2.7565857	21	12 10.5	20.9
514373 2016 QZ_{88}	16.6	X	40.88001	301.04934	27.37109	14.59584	0.1065140	0.21464192	2.7626531	21	11 8.6	20.3
514374 2016 QF_{89}	17.2	X	82.51418	242.46496	101.45547	2.41067	0.1057967	0.22840372	2.6505374	21	—	—
514375 2016 RC_{6}	16.8	X	267.24696	81.91144	352.82383	18.30578	0.1207804	0.18259529	3.0771099	21	9 4.3	21.1
514376 2016 RK_{7}	17.8	X	352.45103	224.30961	204.23905	7.08667	0.1704009	0.23861403	2.5743765	21	—	—
514377 2016 RT_{12}	17.1	X	31.37938	93.06458	276.59327	14.14221	0.1807439	0.23365441	2.6106785	21	—	—
514378 2016 RJ_{27}	17.6	X	355.08645	51.62305	343.27818	4.03206	0.1192584	0.21901019	2.7257949	21	12 1.8	20.8
514379 2016 RP_{27}	15.7	X	326.75677	0.19108	315.69978	25.00978	0.0217536	0.17432262	3.1737074	21	7 8.3	20.3
514380 2016 RV_{30}	17.6	X	68.60387	221.17566	156.02457	3.12368	0.1741499	0.25304878	2.4755206	21	—	—
514381 2016 RD_{31}	17.6	X	129.07747	356.87415	9.92470	8.09204	0.1361045	0.28439714	2.2900901	21	—	—
514382 2016 RJ_{33}	16.4	X	337.14934	277.52594	89.12170	17.13821	0.2443645	0.17955766	3.1117169	21	9 22.6	19.8
514383 2016 RR_{38}	16.7	X	317.54143	112.93353	332.85687	14.40469	0.1527355	0.22008616	2.7169036	21	12 4.1	19.9
514384 2016 RK_{43}	16.3	X	285.10161	81.09133	325.78738	24.93571	0.2295537	0.17820175	3.1274814	21	8 7.2	20.6
514385 2016 RT_{44}	16.7	X	39.37201	69.26687	302.87886	8.98487	0.0889770	0.22732939	2.6588815	21	—	—
514386 2016 RJ_{45}	16.4	X	255.35019	56.37621	104.34511	16.23617	0.0908826	0.22598566	2.6694111	21	12 16.3	19.9
514387 2016 RS_{45}	17.6	X	359.04020	346.96808	65.34288	4.59985	0.1306594	0.22060382	2.7126516	21	—	—
514388 2016 SF_{11}	17.4	X	349.21095	210.46440	194.31430	7.69619	0.1447445	0.21850639	2.7299831	21	12 8.8	20.5
514389 2016 SM_{13}	17.4	X	352.05505	104.78178	329.67373	7.13732	0.1252976	0.23867937	2.5739066	21	—	—
514390 2016 SW_{14}	17.5	X	39.19078	270.94716	152.87469	6.72810	0.0794908	0.25608090	2.4559410	21	—	—
514391 2016 SQ_{15}	17.8	X	103.02732	248.71748	125.87582	3.12464	0.0921109	0.26781785	2.3836530	21	—	—
514392 2016 SO_{17}	17.1	X	326.68000	40.28381	356.54343	8.27073	0.1266591	0.20530864	2.8457576	21	10 11.8	20.4
514393 2016 SJ_{18}	16.8	X	69.94214	25.01951	323.23372	14.69071	0.1340609	0.23878024	2.5731818	21	—	—
514394 2016 SS_{23}	17.4	X	357.66353	45.54198	5.40436	5.14441	0.1067258	0.22432212	2.6825922	21	12 28.6	20.6
514395 2016 SV_{23}	16.9	X	279.58167	232.58859	203.38316	4.50912	0.2429885	0.18336218	3.0685241	21	8 30.1	21.1
514396 2016 SH_{26}	18.3	X	187.77303	198.55472	142.97476	3.75964	0.1671342	0.30577732	2.1820559	21	2 1.5	21.5
514397 2016 SR_{27}	18.3	X	178.27721	207.30032	150.80809	2.40403	0.1527159	0.30741726	2.1742888	21	2 12.1	21.4
514398 2016 SL_{34}	17.5	X	359.59594	351.76064	62.28273	4.21372	0.1775225	0.22439050	2.6820471	21	—	—
514399 2016 SU_{37}	17.6	X	356.95587	128.82401	315.52721	3.20641	0.1454879	0.24247286	2.5469903	21	—	—
514400 2016 SF_{49}	16.8	X	296.57283	317.77142	105.16024	10.86879	0.0824431	0.19020448	2.9944856	21	10 8.3	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514401 2016 SB_{50}	16.4	X	213.42985	22.05853	111.69004	17.06093	0.0117239	0.17465909	3.1696301	21	10 1.0	21.2
514402 2016 SG_{50}	16.2	X	256.17161	39.10284	55.69769	14.90235	0.0425821	0.18014714	3.1049251	21	10 1.4	20.8
514403 2016 TG_{5}	18.0	X	100.79460	153.11035	205.42736	2.30295	0.1595563	0.26331144	2.4107725	21	—	—
514404 2016 TK_{7}	17.3	X	313.01145	3.85946	65.08249	4.52052	0.0741101	0.20989979	2.8041078	21	11 8.2	20.7
514405 2016 TH_{8}	17.2	X	33.76208	316.10845	84.84073	5.57807	0.2537563	0.23198553	2.6231842	21	—	—
514406 2016 TF_{45}	16.9	X	353.00864	151.09480	293.04759	11.18722	0.1425864	0.23846976	2.5754147	21	—	—
514407 2016 TW_{46}	17.3	X	156.90289	28.11174	299.86496	3.89053	0.1166835	0.26851199	2.3795432	21	—	—
514408 2016 TE_{47}	17.0	X	36.65424	10.26202	14.25500	5.15676	0.0086100	0.22412173	2.6841909	21	—	—
514409 2016 TA_{49}	17.7	X	157.31906	3.37875	347.73823	5.19792	0.1195287	0.27928865	2.3179311	21	1 13.6	20.8
514410 2016 TW_{56}	17.4	X	180.51927	174.58537	136.86408	7.13413	0.2365880	0.27984932	2.3148341	21	—	—
514411 2016 TB_{63}	17.8	X	35.88680	340.58619	31.54737	4.11466	0.1334091	0.22693059	2.6619957	21	—	—
514412 2016 TW_{73}	17.3	X	342.80230	86.28652	349.46342	4.40584	0.1752164	0.22545090	2.6736306	21	—	—
514413 2016 TW_{75}	17.0	X	208.29435	240.72919	20.16386	22.66742	0.1728919	0.27233194	2.3572392	21	—	—
514414 2016 TX_{81}	16.6	X	323.99784	85.30849	14.31885	22.16501	0.0655395	0.22644442	2.6658045	21	—	—
514415 2016 TE_{88}	17.1	X	316.93752	182.03298	213.05338	9.11059	0.1015092	0.18202082	3.0835808	21	9 21.2	21.1
514416 2016 TM_{88}	16.3	X	322.79164	336.62103	45.20186	10.04698	0.0816440	0.17829479	3.1263934	21	9 21.4	20.4
514417 2016 TR_{96}	15.9	X	251.80360	313.30412	146.64510	12.67692	0.0367179	0.17550375	3.1594522	21	9 28.3	20.4
514418 2016 TU_{96}	16.0	X	54.26561	234.63513	74.77280	12.20053	0.0787591	0.18863178	3.0111067	21	10 31.9	20.3
514419 2016 TX_{96}	16.8	X	71.59500	101.06767	242.46146	4.80698	0.0223130	0.21550161	2.7553009	21	12 26.9	20.6
514420 2016 TY_{96}	17.7	X	147.31989	329.78711	353.34395	7.28125	0.1199456	0.26015151	2.4302548	21	—	—
514421 2016 TD_{97}	15.9	X	32.87429	305.01740	354.92761	12.45853	0.1129928	0.17857152	3.1231626	21	9 19.7	19.9
514422 2016 TE_{97}	16.3	X	203.11317	40.25109	111.68577	11.17720	0.0304235	0.17663354	3.1459653	21	10 7.3	21.0
514423 2016 UH_{2}	17.6	X	100.46249	252.18394	118.59590	7.02549	0.1324897	0.26220018	2.4175793	21	—	—
514424 2016 UQ_{2}	15.6	X	156.84601	39.17317	76.30338	2.76064	0.2102890	0.12599836	3.9405736	21	7 1.6	22.0
514425 2016 UR_{2}	17.4	X	14.74152	190.61802	191.14256	4.29713	0.0807593	0.21364812	2.7712136	21	12 10.2	21.0
514426 2016 UH_{9}	17.2	X	49.95248	44.96403	337.92524	10.52301	0.0950976	0.23677586	2.5876832	21	—	—
514427 2016 UH_{10}	17.7	X	54.93029	156.79786	207.57655	6.49598	0.1147939	0.23301512	2.6154514	21	—	—
514428 2016 UB_{11}	17.7	X	108.99371	139.51863	208.25855	5.29788	0.1143470	0.25621739	2.4550687	21	—	—
514429 2016 UU_{12}	18.4	X	244.12029	339.65746	329.08805	2.48256	0.1349009	0.31547425	2.1371095	21	2 12.4	21.5
514430 2016 UO_{14}	17.6	X	292.97042	192.32897	31.83401	4.10306	0.1294108	0.28262451	2.2996558	21	—	—
514431 2016 UO_{19}	17.8	X	136.04983	189.15122	159.37145	8.13823	0.1206048	0.27240413	2.3568228	21	—	—
514432 2016 UG_{22}	16.5	X	35.07596	225.53368	134.28733	6.38756	0.0897445	0.22274058	2.6952755	21	12 13.5	20.0
514433 2016 UJ_{22}	16.8	X	3.80820	231.75335	139.61945	5.80301	0.1640645	0.20983642	2.8046724	21	11 20.2	20.0
514434 2016 UK_{22}	16.9	X	15.16239	308.85565	66.79554	7.08984	0.0920449	0.21884697	2.7271500	21	12 4.9	20.2
514435 2016 UZ_{22}	18.1	X	180.27454	195.19946	144.39242	4.44829	0.2320753	0.29473073	2.2362435	21	1 29.0	21.5
514436 2016 UU_{23}	17.0	X	352.86013	31.27321	32.66875	10.28998	0.0284452	0.22011945	2.7166296	21	12 29.7	20.7
514437 2016 UV_{24}	18.2	X	199.48874	281.37744	35.29128	3.30783	0.1959695	0.29177810	2.2513046	21	1 16.8	21.7
514438 2016 UX_{24}	17.0	X	45.63734	109.96205	216.75533	11.31607	0.0630902	0.19863595	2.9091368	21	11 6.9	20.9
514439 2016 UF_{33}	16.8	X	79.80342	307.59011	3.00872	6.33602	0.0532489	0.21013867	2.8019824	21	11 27.8	20.8
514440 2016 UG_{33}	17.0	X	70.11276	14.64699	309.40573	3.18236	0.0684937	0.21322443	2.7748834	21	12 6.6	20.9
514441 2016 UL_{33}	17.0	X	61.92649	160.51039	233.81629	0.66379	0.0803967	0.23948350	2.5681417	21	—	—
514442 2016 UJ_{43}	17.4	X	211.49797	325.44123	23.12164	4.64501	0.1292276	0.31389823	2.1442568	21	3 5.4	20.5
514443 2016 UV_{45}	16.6	X	352.25462	9.70137	350.42486	10.38561	0.1242179	0.19107584	2.9853748	21	10 3.9	20.0
514444 2016 UM_{47}	17.0	X	9.86765	143.77824	260.47378	5.17648	0.0372756	0.22284824	2.6944073	21	12 28.5	20.5
514445 2016 UR_{51}	17.4	X	53.75027	338.84095	60.55127	3.19788	0.1285551	0.23780470	2.5802142	21	—	—
514446 2016 UV_{53}	17.7	X	262.60851	184.17425	36.16854	8.13275	0.0492536	0.25998186	2.4313119	21	—	—
514447 2016 UC_{54}	18.0	X	173.27236	227.50871	107.84601	6.07804	0.1279518	0.28762714	2.2729130	21	1 9.5	21.0
514448 2016 UM_{60}	16.9	X	37.61877	324.29622	36.49106	4.88098	0.0840780	0.21199147	2.7856323	21	12 13.9	20.5
514449 2016 UZ_{68}	16.9	X	343.55676	299.24340	119.70491	0.19657	0.0581539	0.21494364	2.7600672	21	12 11.0	20.4
514450 2016 UW_{70}	16.9	X	95.06498	290.04073	30.80110	13.10148	0.1848578	0.23433751	2.6056026	21	—	—
514451 2016 UM_{74}	17.6	X	238.26363	310.26007	253.90874	1.41417	0.0427211	0.23739611	2.5831740	21	—	—
514452 2016 UJ_{80}	16.2	X	346.93895	282.72508	76.63663	10.60965	0.1085336	0.17606062	3.1527865	21	9 30.2	20.2
514453 2016 UE_{81}	17.2	X	15.12078	7.65505	356.80627	1.56819	0.0809654	0.20325019	2.8649392	21	11 15.6	20.8
514454 2016 UB_{82}	16.8	X	316.31317	191.73456	211.86397	9.88336	0.1017480	0.18713215	3.0271721	21	10 2.9	20.7
514455 2016 UM_{86}	17.3	X	321.30408	84.14672	22.83245	6.18992	0.0585954	0.22819265	2.6521715	21	—	—
514456 2016 UB_{89}	16.9	X	226.86938	319.48280	210.07675	4.36546	0.0944239	0.20559343	2.8431290	21	11 16.9	20.9
514457 2016 UW_{89}	17.3	X	6.85930	36.13196	30.22617	22.66296	0.0575178	0.23273649	2.6175384	21	—	—
514458 2016 UV_{92}	17.4	X	142.85876	75.01258	200.55245	4.95555	0.0240941	0.22641579	2.6660293	21	12 30.1	21.2
514459 2016 UJ_{97}	17.4	X	343.47049	216.84216	231.65053	4.51379	0.0733393	0.22786401	2.6547210	21	—	—
514460 2016 UP_{98}	17.2	X	244.12580	330.17480	201.72444	5.93547	0.0619180	0.22246741	2.6974814	21	12 17.9	20.9
514461 2016 UE_{99}	17.2	X	296.33289	250.16664	235.82721	3.21496	0.0789214	0.22253929	2.6969005	21	12 29.4	20.5
514462 2016 UG_{106}	18.3	X	189.14729	353.29553	308.47841	2.53875	0.2165252	0.28048048	2.3113601	21	—	—
514463 2016 UJ_{106}	17.5	X	316.57455	252.97268	204.45126	3.16125	0.0477299	0.22030925	2.7150691	21	12 22.9	20.8
514464 2016 UR_{118}	17.2	X	269.85554	313.35827	224.72750	5.38164	0.0381452	0.24196827	2.5505300	21	—	—
514465 2016 UF_{124}	16.0	X	289.61335	36.24615	27.51532	10.71345	0.2255407	0.17554789	3.1589225	21	9 5.8	20.2
514466 2016 UT_{135}	16.2	X	306.85100	348.79181	30.62776	9.48342	0.0878347	0.17197838	3.2024829	21	8 24.0	20.5
514467 2016 UV_{136}	16.4	X	268.89612	35.97727	63.64559	11.42956	0.0824191	0.18514949	3.0487446	21	10 15.6	20.7
514468 2016 UT_{139}	16.0	X	282.54681	273.66690	142.60830	14.42706	0.1034897	0.17254148	3.1955113	21	8 31.9	20.4
514469 2016 UX_{145}	16.1	X	330.28827	1.27243	6.96187	10.53478	0.1217853	0.17883251	3.1201232	21	9 10.4	19.9
514470 2016 UG_{146}	16.3	X	326.19450	319.96063	74.42258	2.71788	0.1478750	0.18318905	3.0704572	21	10 6.1	19.7
514471 2016 UQ_{146}	16.7	X	24.74805	153.46578	288.46070	8.87121	0.1011368	0.24444053	2.5333036	21	—	—
514472 2016 UC_{148}	17.3	X	52.04347	245.12631	89.29336	1.78175	0.0750004	0.20893122	2.8127674	21	11 28.0	21.1
514473 2016 UD_{148}	16.9	X	22.71186	83.20541	337.35515	12.82024	0.1200003	0.23254878	2.6189468	21	—	—
514474 2016 UL_{148}	16.7	X	324.75390	66.14083	69.89848	6.48869	0.0810465	0.23700477	2.5860167	21	—	—
514475 2016 VR_{7}	17.3	X	259.56277	235.64639	204.25349	5.24677	0.1369597	0.16832618	3.2486401	21	8 24.3	22.0
514476 2016 VW_{8}	17.6	X	73.71931	217.20026	147.85312	2.10992	0.0400478	0.23381686	2.6094691	21	—	—
514477 2016 VB_{9}	17.2	X	11.61527	289.72925	70.63419	2.98733	0.0966529	0.19710342	2.9241969	21	11 6.7	20.8
514478 2016 VU_{14}	17.1	X	359.15733	147.71585	286.57472	3.40585	0.0671708	0.22541540	2.6739113	21	—	—
514479 2016 VB_{15}	15.6	X	343.35343	296.74325	75.14293	18.58910	0.1975450	0.18339090	3.0682037	21	10 16.9	19.2
514480 2016 VD_{15}	16.9	X	16.34857	86.12341	349.56875	11.78098	0.0792696	0.23782625	2.5800583	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514481 2016 VF_{17}	16.3	X	348.54607	234.56956	116.41691	8.76743	0.2194287	0.18065959	3.0990509	21	9 21.3	19.4
514482 2016 VK_{18}	17.0	X	226.34391	180.27466	68.01796	9.65273	0.0727292	0.24714981	2.5147561	21	—	—
514483 2016 VS_{18}	16.9	X	68.35842	25.88032	339.03438	8.45200	0.1751245	0.23823640	2.5770963	21	—	—
514484 2016 VO_{19}	15.9	X	303.29187	271.20168	153.31139	10.07714	0.0361010	0.18673077	3.0315085	21	10 21.7	20.1
514485 2016 VP_{19}	16.7	X	97.77331	204.04852	74.41254	10.91969	0.0323105	0.18880816	3.0092311	21	11 7.8	21.0
514486 2016 WJ_{4}	16.7	X	38.35660	190.97121	212.39873	5.54588	0.0706020	0.22947251	2.6423009	21	—	—
514487 2016 WS_{4}	16.3	X	117.66469	266.28793	62.20297	9.53681	0.1264108	0.23918504	2.5702776	21	—	—
514488 2016 WY_{5}	15.9	X	322.94328	150.63810	235.74101	9.38542	0.1104866	0.17540948	3.1605841	21	9 15.9	20.0
514489 2016 WM_{10}	17.3	X	358.72237	359.67941	64.35780	5.51292	0.0996826	0.22030475	2.7151061	21	—	—
514490 2016 WQ_{11}	16.5	X	272.21099	57.31085	41.83987	10.52532	0.1615547	0.17770120	3.1333517	21	10 5.5	20.8
514491 2016 WA_{12}	17.2	X	97.39106	28.54645	309.77445	11.22603	0.1445409	0.24199869	2.5503163	21	—	—
514492 2016 WG_{14}	17.3	X	337.03669	48.97926	19.02679	2.00640	0.0526938	0.20580523	2.8411780	21	12 10.8	21.0
514493 2016 WZ_{14}	17.2	X	102.09711	295.07676	43.89851	4.15001	0.1582855	0.23716657	2.5848404	21	—	—
514494 2016 WA_{16}	16.9	X	78.88236	102.24015	241.01630	4.84204	0.0556302	0.22232205	2.6986570	21	—	—
514495 2016 WL_{18}	17.2	X	225.25665	5.16890	212.85334	5.41569	0.0358073	0.22783818	2.6549217	21	—	—
514496 2016 WS_{18}	16.7	X	239.86923	50.43059	55.63491	10.32146	0.0500264	0.17439156	3.1728709	21	9 21.7	21.4
514497 2016 WB_{19}	17.0	X	40.01910	355.31531	50.71270	5.25723	0.1062755	0.23025611	2.6363027	21	—	—
514498 2016 WL_{19}	16.5	X	248.01519	71.19518	46.35047	5.05440	0.1116529	0.17456479	3.1707715	21	10 3.7	21.0
514499 2016 WU_{19}	16.9	X	74.27628	3.46060	338.38785	5.99663	0.0669502	0.21537277	2.7563997	21	—	—
514500 2016 WE_{21}	16.9	X	21.51631	236.05450	135.22407	8.15433	0.0933392	0.20329086	2.8645571	21	12 6.7	20.7
514501 2016 WS_{23}	15.9	X	230.86021	161.43718	330.01032	16.61195	0.1573264	0.17615917	3.1516105	21	9 19.2	20.9
514502 2016 WB_{24}	15.9	X	209.64530	206.07340	305.05680	16.37827	0.1673324	0.17521400	3.1629343	21	9 18.6	21.3
514503 2016 WD_{24}	16.7	X	191.23609	301.88200	322.51513	13.97641	0.0658431	0.24306384	2.5428602	21	—	—
514504 2016 WU_{24}	16.7	X	59.26477	22.81814	335.57255	15.10952	0.1293669	0.22393581	2.6856764	21	—	—
514505 2016 WM_{25}	16.6	X	62.53429	280.37028	19.58332	4.11314	0.0805412	0.18029778	3.1031954	21	10 25.1	20.8
514506 2016 WA_{30}	17.2	X	87.79193	190.45171	158.90639	7.18617	0.2708838	0.23858540	2.5745825	21	—	—
514507 2016 WK_{30}	16.2	X	296.71261	265.46921	165.43145	7.92186	0.0681108	0.18105184	3.0945732	21	10 15.3	20.3
514508 2016 WR_{31}	17.2	X	354.56956	50.42404	351.53715	3.91731	0.0689183	0.21072520	2.7967806	21	12 4.1	20.7
514509 2016 WT_{33}	17.2	X	207.63233	45.51151	259.18097	5.09690	0.0849635	0.27344584	2.3508333	21	1 6.5	20.4
514510 2016 WP_{36}	16.7	X	268.48902	121.42779	56.58871	14.03429	0.1239162	0.21841947	2.7307073	21	—	—
514511 2016 WT_{36}	16.9	X	330.44627	119.78919	285.33442	4.15391	0.1066560	0.18707341	3.0278057	21	10 27.0	20.6
514512 2016 WC_{37}	15.9	X	234.95814	53.39793	59.79618	12.65327	0.0282495	0.16758539	3.2582065	21	9 28.0	20.7
514513 2016 WT_{37}	16.4	X	303.04175	357.42526	59.34731	12.35999	0.0758660	0.17707771	3.1407024	21	10 8.7	20.7
514514 2016 WR_{39}	16.6	X	152.34236	246.11918	47.91380	10.03796	0.2040957	0.23865208	2.5741029	21	—	—
514515 2016 WR_{44}	16.3	X	186.52064	282.63867	246.76939	7.78181	0.0400819	0.17359142	3.1826133	21	9 30.1	21.1
514516 2016 WW_{44}	16.3	X	14.00910	275.97985	53.55026	9.72207	0.0984648	0.17456720	3.1707424	21	10 2.1	20.4
514517 2016 WL_{46}	17.3	X	12.85565	87.65742	310.43312	3.36083	0.0773840	0.21050547	2.7987265	21	12 26.9	20.8
514518 2016 WS_{46}	17.5	X	206.29853	230.27876	91.69786	3.30068	0.1279569	0.28782753	2.2718579	21	1 27.3	20.7
514519 2016 WH_{47}	16.2	X	310.11495	323.25665	84.19396	11.75378	0.0932378	0.17601225	3.1533641	21	10 5.9	20.4
514520 2016 WL_{47}	16.0	X	338.49963	136.93929	241.10605	8.75026	0.0710762	0.17576377	3.1563353	21	10 2.0	20.3
514521 2016 WX_{48}	17.3	X	68.33509	245.16587	118.22268	2.97019	0.0922897	0.22562430	2.6722605	21	—	—
514522 2016 WJ_{51}	16.4	X	80.20841	19.21198	354.87754	7.76949	0.1976954	0.23865073	2.5741126	21	—	—
514523 2016 WH_{52}	15.9	X	38.34535	313.84710	46.82030	9.69789	0.0353041	0.19657234	2.9294614	21	12 4.1	19.9
514524 2016 WO_{52}	16.1	X	255.49076	233.03056	271.32352	8.76089	0.0777089	0.19181208	2.9777306	21	11 18.8	20.3
514525 2016 WV_{55}	16.1	X	32.88450	267.70993	31.03290	10.51360	0.0965006	0.17197753	3.2024934	21	9 19.8	20.3
514526 2016 WU_{56}	16.4	X	288.38375	329.13191	120.54804	11.52889	0.1487553	0.18107520	3.0943070	21	10 20.3	20.6
514527 2016 XY_{2}	16.2	X	6.05484	304.44576	47.25142	10.80481	0.1103636	0.17919593	3.1159032	21	10 18.3	20.0
514528 2016 XS_{3}	16.9	X	125.62720	311.11012	36.53196	4.05639	0.0826230	0.24564270	2.5250315	21	—	—
514529 2016 XB_{11}	17.0	X	294.37793	132.61111	0.93786	3.82140	0.0463285	0.21373096	2.7704975	21	—	—
514530 2016 XN_{21}	16.4	X	94.95551	30.52801	276.72181	10.36741	0.0787032	0.21368572	2.7708885	21	12 15.9	20.4
514531 2016 YT_{6}	15.8	X	263.70593	217.64176	287.65902	9.94173	0.1846463	0.18120514	3.0928276	21	11 11.9	20.3
514532 2016 YA_{7}	17.2	X	108.21722	263.41602	73.51316	4.71566	0.1570313	0.23581909	2.5946776	21	—	—
514533 2016 YZ_{11}	16.4	X	84.65961	252.08984	134.91682	16.00907	0.1129031	0.21951765	2.7215924	21	—	—
514534 2017 AG_{17}	15.5	X	138.88276	329.51203	288.77826	9.37836	0.0329206	0.17478820	3.1680690	21	11 24.5	20.2
514535 2017 BX_{27}	13.5	X	318.02909	169.23454	153.64375	29.17057	0.0773376	0.08254918	5.2238922	21	6 27.9	20.5
514536 2017 BE_{31}	13.7	X	154.18273	48.47465	66.46872	20.87372	0.0367513	0.08446309	5.1446765	21	6 19.5	20.7
514537 2017 BK_{35}	16.0	X	190.35402	291.65664	318.29637	7.34397	0.0316859	0.18686959	3.0300070	21	—	—
514538 2017 BB_{57}	16.3	X	306.35320	188.85203	295.05694	7.33924	0.0934814	0.18644096	3.0346492	21	12 31.7	20.2
514539 2017 BM_{84}	16.0	X	214.56299	301.30935	261.88495	9.78231	0.0709160	0.17221678	3.1995267	21	12 10.3	20.8
514540 2017 BJ_{91}	13.4	X	347.96709	292.25537	339.22102	37.75792	0.0592617	0.08348188	5.1849101	21	5 30.7	20.5
514541 2017 BZ_{96}	14.4	X	96.30092	84.61477	81.79436	10.78455	0.1565449	0.08229175	5.2347811	21	7 1.5	21.5
514542 2017 CV	13.8	X	278.34754	241.76174	96.14652	30.86297	0.0744791	0.08254918	5.2238921	21	6 1.5	20.9
514543 2017 DL_{1}	13.4	X	309.12948	4.01034	324.65620	29.14924	0.0697177	0.08455369	5.1410007	21	6 26.9	20.3
514544 2017 DF_{110}	14.0	X	178.53054	248.23384	202.68055	8.40967	0.0248603	0.08185021	5.2535902	21	6 19.5	21.1
514545 2017 EO_{18}	15.5	X	239.54622	88.87993	102.54509	25.10089	0.0397556	0.17458938	3.1704738	21	12 29.6	20.0
514546 2017 SK_{23}	17.2	X	322.95359	47.74489	270.46741	2.49734	0.0901586	0.21275480	2.7789654	21	6 22.9	20.6
514547 2017 TS_{8}	17.1	X	286.74139	232.59796	146.22653	4.74655	0.2129566	0.21329472	2.7742738	21	7 2.2	20.9
514548 2017 UR_{44}	17.9	X	330.19108	342.48601	238.23405	20.86491	0.0352140	0.37748619	1.8961324	21	1 18.2	20.3
514549 2017 VP	18.2	X	110.99998	329.62360	119.03701	23.96070	0.0824272	0.38546209	1.8698852	21	3 7.8	20.3
514550 2017 VV_{31}	16.8	X	291.21710	278.41375	163.36440	5.40435	0.1234296	0.24025786	2.5626206	21	10 23.8	19.6
514551 2017 VP_{33}	15.9	X	281.97721	295.27321	83.33309	17.73419	0.1154333	0.18451962	3.0556787	21	7 10.8	20.2
514552 2017 WW_{2}	16.8	X	358.13180	257.46857	86.49931	7.19717	0.0753682	0.22183902	2.7025729	21	9 30.9	20.1
514553 2017 WS_{4}	16.5	X	11.61362	80.07888	258.77720	8.17332	0.2270156	0.23804936	2.5784460	21	10 31.5	19.2
514554 2017 WT_{5}	17.2	X	287.06430	27.60072	56.43770	5.46595	0.2512860	0.22917425	2.6445930	21	9 28.7	20.2
514555 2017 WX_{8}	16.9	X	327.06621	284.99215	111.28220	8.10881	0.2026083	0.23388392	2.6089703	21	10 21.2	19.3
514556 2017 WJ_{9}	15.9	X	182.04365	221.35356	267.25482	12.95760	0.2290430	0.17153304	3.2080234	21	8 2.1	21.6
514557 2017 WY_{9}	17.1	X	234.16741	102.14176	112.39614	8.91311	0.0704462	0.29279446	2.2460917	21	—	—
514558 2017 WV_{10}	15.9	X	224.27881	144.17366	286.96453	9.38236	0.2038704	0.17479152	3.1680290	21	7 3.8	21.2
514559 2017 WQ_{27}	16.5	X	281.15214	133.15102	304.35349	11.74516	0.2557163	0.21886406	2.7270080	21	8 31.9	20.2
514560 2017 XP	17.4	X	344.11922	53.06524	48.26219	24.54266	0.2963220	0.27540975	2.3396443	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514561 2017 XE_3	16.3	X	0.12731	56.66659	300.53799	16.17041	0.4139305	0.22853775	2.6495010	21	12 7.2	18.6
514562 2017 XF_{40}	16.4	X	240.27397	256.14357	254.11081	11.25025	0.2013502	0.23159157	2.6261582	21	10 26.0	20.3
514563 2017 XB_{59}	17.0	X	311.57462	278.38439	146.89801	14.24434	0.1844469	0.23688747	2.5868703	21	11 2.8	19.8
514564 2017 XC_{59}	17.5	X	319.96350	30.79089	114.27826	24.76646	0.2038571	0.28100520	2.3084819	21	—	—
514565 2017 XE_{61}	16.6	X	316.60331	123.49047	323.17948	30.98718	0.2377806	0.22519674	2.6756419	21	11 28.5	19.9
514566 2017 YK	15.9	X	224.55128	83.23423	65.48561	26.55742	0.2404643	0.17231605	3.1982977	21	10 15.7	21.5
514567 2017 YW_2	17.2	X	320.55352	241.90869	207.04617	7.85937	0.1093596	0.23569610	2.5955802	21	12 21.3	20.2
514568 1994 RC	19.3	X	326.16526	286.57899	344.27908	4.75732	0.6032095	0.28917074	2.2648172	21	1 29.2	23.0
514569 1995 OJ_{12}	17.3	X	149.47258	183.44145	133.06053	6.19040	0.2238950	0.24346405	2.5400727	21	—	—
514570 1995 VK_{11}	17.1	X	341.05648	25.56208	54.34374	15.19506	0.1638472	0.23184194	2.6242672	21	—	—
514571 1996 RY_3	20.4	X	258.96537	288.39406	174.23173	36.57104	0.1384879	0.75425510	1.1952458	21	—	—
514572 1997 SU_{21}	18.8	X	95.45378	51.72036	347.59305	5.80899	0.2530716	0.30303194	2.1952152	21	1 5.1	20.4
514573 1997 WG_6	15.7	X	169.38955	233.18199	61.44621	21.97014	0.2774046	0.17561174	3.1581568	21	—	—
514574 1999 TM_{309}	17.8	X	163.09452	295.80401	19.39455	13.31873	0.1654579	0.24060201	2.5601764	21	—	—
514575 1999 UY_{28}	17.4	X	20.09033	25.09335	30.98812	9.52872	0.1776398	0.23290758	2.6162564	21	—	—
514576 1999 VZ_{131}	18.7	X	90.03165	341.38962	48.49196	2.21990	0.2229358	0.28305430	2.2973273	21	—	—
514577 2000 CR_{99}	17.6	X	270.48179	12.78533	140.45792	7.02869	0.1416506	0.22002381	2.7174169	21	12 18.4	21.0
514578 2000 EP_{51}	18.2	X	319.92260	243.30448	303.67612	0.90070	0.1262295	0.27405553	2.3473454	21	—	—
514579 2000 SS_{364}	17.5	X	20.51907	359.50785	37.26214	7.30889	0.3389692	0.24257633	2.5462660	21	—	—
514580 2001 PL_{21}	17.2	X	197.82213	158.39080	129.81382	11.10411	0.2601972	0.22252867	2.6969863	21	—	—
514581 2001 PC_{53}	17.9	X	237.67202	161.15557	143.11217	5.12597	0.2528215	0.27928308	2.3179619	21	2 2.3	21.9
514582 2001 RX_{19}	16.8	X	130.47588	338.90089	333.17583	12.68714	0.2239380	0.21449481	2.7639161	21	—	—
514583 2001 SL_{36}	18.3	X	261.64274	9.07243	8.21581	20.28826	0.0998252	0.38599504	1.8681636	21	6 3.4	20.9
514584 2001 SV_{243}	17.8	X	164.58442	339.34654	9.20981	4.85417	0.1698348	0.27004054	2.3705552	21	1 25.9	21.4
514585 2001 TR_{180}	17.8	X	133.03977	104.71452	261.81591	3.84411	0.2394897	0.26653299	2.3913073	21	1 21.9	21.1
514586 2001 UO_{17}	18.4	X	144.11692	263.81717	205.70349	21.30321	0.1533694	0.37941099	1.8897141	21	6 3.9	21.1
514587 2001 WK_{104}	14.1	X	217.73809	292.90278	107.50391	8.80266	0.0189030	0.08192961	5.2501955	21	6 6.2	21.1
514588 2001 XS_{62}	16.5	X	338.03369	175.08059	242.21721	4.15488	0.2282106	0.24579731	2.5239726	21	12 20.4	18.5
514589 2001 YJ	18.0	X	238.08434	107.56671	276.32900	19.19404	0.1247527	0.37921163	1.8903764	21	5 13.1	20.7
514590 2001 YQ_{48}	17.7	X	31.46499	163.25715	276.82810	8.55174	0.0720753	0.25587229	2.4572756	21	—	—
514591 2002 AR_{31}	18.6	X	160.23845	342.64639	117.16278	24.91732	0.0604631	0.37502960	1.9044037	21	6 8.6	21.2
514592 2002 OM_{18}	17.2	X	237.88071	148.87867	161.69143	12.24230	0.2677657	0.24198025	2.5504458	21	2 12.6	21.8
514593 2002 SQ_{75}	15.4	X	141.76383	58.14399	244.91658	22.39619	0.2773082	0.17229034	3.1986159	21	—	—
514594 2002 VG_{86}	17.1	X	45.39393	58.54403	35.36587	22.97902	0.2487722	0.27586621	2.3370628	21	—	—
514595 2002 WF_{22}	18.0	X	73.22632	330.20394	64.97086	2.20087	0.1898720	0.27298374	2.3534855	21	—	—
514596 2003 FG	19.6	X	31.27381	312.90629	6.99555	15.66291	0.7150922	0.71264183	1.2413336	21	—	—
514597 2003 MD_7	20.3	X	6.98227	185.29974	200.46507	5.79173	0.5944190	0.55457508	1.4672220	21	—	—
514598 2003 OK_{33}	17.0	X	111.95067	215.55315	149.28350	13.21487	0.1957757	0.24130839	2.5551777	21	—	—
514599 2003 SE_{70}	17.2	X	87.14402	193.27261	172.09399	3.61829	0.1775772	0.23520507	2.5991914	21	—	—
514600 2003 SF_{130}	17.1	X	91.11206	149.68863	196.10462	13.51844	0.1360806	0.23420234	2.6066050	21	—	—
514601 2003 ST_{186}	17.2	X	128.72709	214.30081	125.23374	4.85887	0.2335998	0.23925994	2.5697412	21	—	—
514602 2003 SN_{221}	17.1	X	123.21565	338.78189	359.15331	4.57627	0.2429972	0.23739477	2.5831836	21	—	—
514603 2003 SF_{246}	18.3	X	279.82048	333.18116	7.81790	18.43755	0.0501552	0.37253100	1.9129096	21	5 9.6	20.5
514604 2003 SW_{276}	17.2	X	122.08470	343.34604	341.50681	13.73771	0.1680576	0.23552621	2.5968282	21	—	—
514605 2003 SC_{328}	16.2	X	64.56758	37.74410	19.15069	28.47772	0.1195777	0.23548880	2.5971032	21	—	—
514606 2003 SU_{334}	17.1	X	262.37437	232.40538	9.51188	15.02442	0.0582803	0.24409826	2.5356712	21	—	—
514607 2003 SO_{346}	16.8	X	141.19206	266.54912	3.45302	9.43245	0.2093097	0.17751318	3.1355639	21	12 14.8	22.3
514608 2003 SO_{429}	17.1	X	130.30747	327.27687	13.37280	13.81173	0.0974926	0.23645172	2.5900475	21	—	—
514609 2003 TY_7	18.8	X	329.76782	2.90453	24.11158	50.07898	0.0840183	0.44060303	1.7104264	21	10 28.2	20.4
514610 2003 TL_{45}	17.0	X	27.62822	37.31770	356.17243	11.98024	0.1866817	0.22791122	2.6543545	21	—	—
514611 2003 UK_{20}	17.0	X	18.79290	18.48938	21.31185	12.64139	0.2402008	0.22614923	2.6681238	21	—	—
514612 2003 UJ_{317}	17.4	X	107.75637	301.27754	24.22257	11.94133	0.1228312	0.23335664	2.6128989	21	—	—
514613 2003 UW_{332}	17.9	X	3.46029	103.48000	333.04859	2.90008	0.1715655	0.23159336	2.6261447	21	—	—
514614 2003 WD_{61}	17.3	X	26.38791	19.09215	62.31972	4.98497	0.1709615	0.23037029	2.6354315	21	—	—
514615 2003 XJ_{21}	16.6	X	47.63198	314.96400	64.54154	7.76320	0.3599496	0.22556130	2.6727581	21	—	—
514616 2004 BX_{163}	13.4	X	305.27232	248.40127	78.89589	26.74955	0.0873039	0.08437216	5.1483722	21	6 12.5	20.1
514617 2004 CU_{53}	17.1	X	228.13930	96.32756	149.88382	18.78304	0.2408002	0.21646464	2.7471228	21	—	—
514618 2004 EC_{24}	17.2	X	226.73314	41.80497	176.85632	9.80575	0.2351532	0.21145664	2.7903274	21	12 29.1	21.6
514619 2004 FJ_8	17.8	X	9.46491	41.16968	115.30137	4.00446	0.0992072	0.28410406	2.2916648	21	1 7.2	19.9
514620 2004 KO_{19}	15.2	X	348.80046	196.60343	137.68972	11.56125	0.1860209	0.12405756	3.9815657	21	8 19.6	19.7
514621 2004 PF_{68}	17.5	X	191.39850	99.08162	217.50280	3.33839	0.2395445	0.26296383	2.4128965	21	1 14.6	21.7
514622 2004 PL_{106}	17.4	X	196.24883	128.17820	171.99893	15.00775	0.2599977	0.26235530	2.4166263	21	—	—
514623 2004 RA_{246}	16.4	X	260.52353	305.90284	159.56909	10.46568	0.1888176	0.17452044	3.1713086	21	9 22.7	21.0
514624 2004 RD_{265}	19.0	X	178.23704	264.21491	96.35512	1.34538	0.1483974	0.32337152	2.1021718	21	2 13.2	21.9
514625 2004 RA_{303}	16.4	X	352.44026	141.97527	258.54866	7.05074	0.0548954	0.18209677	3.0827234	21	11 22.7	20.3
514626 2004 SO_4	16.1	X	19.03871	46.57350	328.64400	9.25120	0.1182188	0.18238975	3.0794212	21	12 4.1	20.2
514627 2004 SQ_{23}	17.8	X	170.47597	328.36270	357.27875	1.10137	0.2050340	0.25708782	2.4495241	21	1 7.4	21.4
514628 2004 TG_3	16.7	X	141.35300	267.11702	17.66920	10.35074	0.0561836	0.18551240	3.0447671	21	—	—
514629 2004 TR_{36}	17.6	X	218.75198	282.56344	19.62045	12.18699	0.2114174	0.26215018	2.4178867	21	1 22.6	21.9
514630 2004 TC_{62}	17.1	X	150.50169	326.18788	22.53827	6.69292	0.1481271	0.25768654	2.4457284	21	1 10.8	20.6
514631 2004 TQ_{154}	16.5	X	291.85250	50.34281	21.29783	16.23721	0.0566202	0.17299276	3.1899517	21	10 9.2	20.8
514632 2004 TM_{198}	16.5	X	47.77795	299.92052	42.33018	1.34353	0.1718217	0.17897220	3.1184994	21	12 10.2	20.9
514633 2004 TD_{213}	16.5	X	54.47002	293.05334	42.10381	10.73284	0.2126681	0.17858499	3.1230054	21	12 13.9	21.1
514634 2004 TD_{233}	16.1	X	100.25890	300.69552	29.41592	22.46487	0.0863919	0.18436557	3.0573806	21	—	—
514635 2004 TR_{243}	16.5	X	16.98284	326.38855	41.46702	6.00310	0.1422849	0.17599946	3.1535169	21	11 24.2	20.3
514636 2004 TA_{281}	17.4	X	141.21475	232.65393	112.74791	1.12745	0.1823263	0.25243552	2.4795283	21	—	—
514637 2004 VD_{47}	17.4	X	11.66377	314.56832	82.03112	6.12410	0.2892196	0.23701020	2.5859772	21	—	—
514638 2004 XP_{148}	17.8	X	341.15853	17.38277	84.80549	2.48805	0.2437469	0.23810613	2.5780361	21	—	—
514639 2004 XY_{177}	17.0	X	5.37883	342.23018	71.78350	7.52708	0.1510339	0.23891944	2.5721822	21	—	—
514640 2005 EH_{65}	17.0	X	296.72457	358.06565	161.89843	14.57211	0.1796998	0.23028259	2.6361006	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514641 2005 ES_{199}	17.1	X	231.14703	237.66670	354.84201	10.53921	0.2151036	0.22636597	2.6664204	21	—	—
514642 2005 GD_{40}	17.3	X	243.75491	219.16710	28.66269	10.55404	0.1668688	0.22853387	2.6495310	21	—	—
514643 2005 GE_{86}	18.2	X	259.94210	131.30147	146.79419	2.65631	0.2058192	0.29677420	2.2259665	21	1 18.6	21.6
514644 2005 GS_{106}	17.9	X	309.11428	305.15425	201.29061	1.36431	0.1501464	0.22733133	2.6588665	21	—	—
514645 2005 JD_{70}	17.3	X	184.10436	232.88465	43.78667	12.79684	0.1454268	0.22040418	2.7142895	21	—	—
514646 2005 LK_{27}	18.0	X	316.15881	145.26756	110.72707	7.45643	0.0940568	0.30098101	2.2051763	21	3 8.9	20.5
514647 2005 MT_{48}	18.1	X	255.86325	145.79210	150.16588	6.84809	0.1930454	0.28950705	2.2630629	21	2 7.6	21.5
514648 2005 NN_{70}	18.3	X	212.77763	190.86273	127.48871	2.90887	0.1742777	0.28426628	2.2907929	21	1 30.1	21.8
514649 2005 QW_{180}	16.4	X	273.55515	243.51551	181.69646	19.37378	0.2425373	0.17852030	3.1237599	21	8 6.9	21.2
514650 2005 RK_{15}	17.1	X	341.93929	46.78734	347.15509	12.26942	0.1297267	0.18988616	2.9978312	21	10 28.4	20.8
514651 2005 ST_{27}	17.4	X	189.24291	355.24343	344.42715	7.37121	0.1450952	0.27866868	2.3213677	21	2 5.1	20.8
514652 2005 SC_{71}	18.3	X	24.99037	117.85837	196.53124	32.38574	0.3827911	0.37337142	1.9100380	21	12 11.3	21.5
514653 2005 SM_{93}	16.7	X	257.04286	241.57171	203.64937	14.64724	0.2282537	0.17509415	3.1643776	21	8 14.2	21.7
514654 2005 SN_{113}	17.0	X	312.19728	78.50461	1.45654	1.31586	0.0743836	0.19005472	2.9960584	21	11 16.3	20.8
514655 2005 SN_{147}	17.6	X	127.20653	341.27961	26.20660	7.54859	0.1267142	0.27059423	2.3673203	21	—	—
514656 2005 SP_{174}	17.7	X	249.04557	37.54404	231.99968	6.76581	0.2169242	0.27985751	2.3147890	21	—	—
514657 2005 SO_{227}	18.6	X	29.25976	289.39380	136.76036	1.24319	0.1923476	0.26187397	2.4195865	21	—	—
514658 2005 SJ_{280}	17.7	X	229.71285	213.41155	111.35699	3.52105	0.1852327	0.28234993	2.3011464	21	2 23.1	21.4
514659 2005 TH_{34}	18.0	X	62.53572	299.07057	108.89745	2.38186	0.1347455	0.26598815	2.3945717	21	—	—
514660 2005 TD_{132}	17.8	X	215.35780	275.77688	41.58383	5.91775	0.1831723	0.27923754	2.3182140	21	2 3.1	21.6
514661 2005 TS_{168}	18.1	X	151.44835	50.36891	24.05664	16.40193	0.0564691	0.34711328	2.0051886	21	4 12.4	20.2
514662 2005 UE_{14}	16.4	X	300.41271	188.92422	213.56240	11.78078	0.1984939	0.17793049	3.1306592	21	8 20.3	20.6
514663 2005 UN_{35}	16.9	X	343.43047	4.45151	47.24725	6.71706	0.1125139	0.18632366	3.0359227	21	11 26.6	20.5
514664 2005 UE_{86}	18.3	X	48.75801	243.26111	193.36335	4.70408	0.0719084	0.26585948	2.3953443	21	—	—
514665 2005 UZ_{93}	16.9	X	252.97016	122.79078	333.55618	4.35418	0.1051364	0.17694918	3.1422231	21	9 12.0	21.5
514666 2005 UZ_{262}	15.5	X	42.15423	125.30104	184.77079	8.72688	0.2149527	0.12417924	3.9789643	21	10 23.9	20.6
514667 2005 UN_{267}	17.8	X	20.73140	11.16109	91.77541	2.75026	0.1808954	0.26218489	2.4176733	21	—	—
514668 2005 UG_{271}	17.5	X	118.98273	324.16288	64.98774	10.96449	0.0894538	0.27156393	2.3616815	21	1 11.9	20.4
514669 2005 UN_{282}	17.6	X	243.68282	226.90084	80.89789	3.18013	0.2085638	0.28267814	2.2993649	21	2 13.5	21.4
514670 2005 UT_{305}	17.8	X	236.27534	277.23218	23.30440	2.31808	0.2124665	0.27959433	2.3162413	21	1 29.5	21.6
514671 2005 UA_{318}	16.7	X	118.85710	263.48796	37.65251	8.87250	0.1870528	0.19489712	2.9462240	21	—	—
514672 2005 UX_{332}	18.4	X	347.97527	37.65175	87.11644	2.39447	0.1218160	0.26223301	2.4173775	21	—	—
514673 2005 UR_{343}	16.8	X	76.80285	302.06694	18.37560	10.59712	0.0865515	0.19002384	2.9963830	21	12 6.5	21.3
514674 2005 UE_{369}	17.4	X	301.50758	320.44947	122.75158	2.98728	0.1643956	0.18265966	3.0763869	21	10 26.4	21.0
514675 2005 UD_{522}	17.2	X	131.67931	132.82397	173.78214	12.37227	0.0335793	0.19700314	2.9251891	21	—	—
514676 2005 UM_{532}	16.4	X	359.60918	155.98817	226.07732	8.64252	0.0703520	0.18282412	3.0745417	21	11 11.4	20.4
514677 2005 VX_{45}	18.2	X	320.74315	95.27451	51.45501	6.85843	0.0810974	0.26069667	2.4268656	21	—	—
514678 2005 WM_{54}	16.4	X	274.41883	72.80408	359.92040	25.24127	0.3206770	0.17517884	3.1633576	21	8 20.8	21.3
514679 2005 WC_{75}	17.8	X	36.13034	14.23829	39.01846	7.08917	0.1298185	0.25846640	2.4408063	21	—	—
514680 2005 WL_{83}	16.3	X	312.94823	164.29811	241.51896	10.08813	0.0674103	0.17779317	3.1322710	21	9 30.2	20.6
514681 2005 WY_{110}	16.5	X	45.48268	96.85088	245.39467	9.29476	0.0771410	0.18380123	3.0636356	21	11 24.9	20.6
514682 2005 WW_{138}	17.1	X	287.71518	18.02569	47.21994	1.67561	0.1601537	0.17528002	3.1621401	21	9 10.9	21.3
514683 2005 XB_{42}	17.6	X	233.47948	301.61103	10.38736	3.05175	0.2487802	0.28081184	2.3095415	21	2 9.5	21.5
514684 2005 XA_{55}	18.4	X	11.61719	28.48254	58.57109	2.09135	0.1450174	0.25697533	2.4502389	21	—	—
514685 2005 XF_{61}	17.3	X	259.67258	121.31441	5.68560	0.66957	0.1169160	0.18085140	3.0968593	21	10 27.3	21.6
514686 2005 YK_{21}	18.1	X	342.34039	146.84468	342.69903	0.78955	0.1393632	0.25425972	2.4676544	21	—	—
514687 2005 YL_{25}	17.1	X	285.35583	317.09908	121.21789	2.27830	0.1475922	0.17289152	3.1911968	21	9 26.1	21.2
514688 2005 YD_{79}	17.8	X	300.29127	128.16828	76.57905	2.22621	0.1227344	0.25846482	2.4408163	21	—	—
514689 2005 YE_{230}	16.1	X	311.48608	330.71996	84.81343	15.34454	0.1621561	0.17746544	3.1361262	21	10 13.6	20.1
514690 2006 BT_{26}	16.4	X	253.19388	9.49823	117.65407	11.29237	0.0435133	0.17291612	3.1908941	21	11 2.7	21.1
514691 2006 BC_{73}	16.6	X	186.56761	240.86904	332.63679	16.96336	0.0958339	0.17273142	3.1931684	21	11 16.1	21.9
514692 2006 BV_{81}	13.7	X	32.19493	251.40595	344.55788	29.69457	0.0497793	0.08212323	5.2419398	21	6 25.2	20.8
514693 2006 BE_{108}	17.9	X	272.23279	149.91399	74.28186	2.18907	0.1332886	0.25311615	2.4750813	21	—	—
514694 2006 BP_{163}	16.5	X	225.62562	204.00198	318.36843	10.79252	0.0224123	0.17236425	3.1977015	21	11 6.1	21.3
514695 2006 CW_{45}	18.1	X	274.31321	220.22309	7.09060	1.86589	0.1336918	0.25448185	2.4662182	21	—	—
514696 2006 DA_{134}	13.9	X	315.66531	179.12474	137.66944	9.97201	0.0908645	0.08251733	5.2252364	21	6 14.6	20.6
514697 2006 EP_{51}	17.7	X	345.22699	337.15974	126.66117	4.44699	0.1067467	0.24488775	2.5302184	21	—	—
514698 2006 GE_{28}	18.0	X	248.42833	35.00373	175.12873	4.84336	0.1620588	0.23845690	2.5755073	21	—	—
514699 2006 JK_{36}	17.1	X	197.03389	114.22116	172.25556	13.02156	0.2540402	0.23661527	2.5888539	21	—	—
514700 2006 KX_{54}	17.3	X	209.07427	21.06117	228.78289	13.60884	0.1053610	0.23490821	2.6013807	21	—	—
514701 2006 KL_{113}	16.9	X	217.59592	172.42185	87.97554	14.67498	0.2374553	0.23797902	2.5789540	21	—	—
514702 2006 MP_{6}	18.7	X	302.78166	26.66903	269.99546	7.11337	0.3178621	0.31852235	2.1234536	21	3 5.5	22.0
514703 2006 QE_{76}	17.2	X	122.18961	182.74922	147.46246	9.78471	0.0956219	0.22038154	2.7144754	21	—	—
514704 2006 QY_{84}	17.2	X	219.00831	108.42663	153.54778	16.67322	0.1427267	0.22856109	2.6493206	21	—	—
514705 2006 RU_{11}	17.2	X	86.00265	19.10366	341.55343	7.55794	0.2266901	0.21670595	2.7450831	21	—	—
514706 2006 SX_{17}	16.8	X	152.55807	295.64514	19.28922	14.33510	0.2103486	0.22075599	2.7114049	21	—	—
514707 2006 SM_{41}	17.0	X	165.67877	293.62219	15.63782	10.38511	0.1769960	0.22299386	2.6932341	21	—	—
514708 2006 SU_{136}	16.4	X	216.47523	291.46469	7.62465	29.83649	0.2911076	0.23450218	2.6043826	21	1 30.4	21.7
514709 2006 SP_{221}	18.7	X	71.95435	61.91681	356.50601	2.55158	0.1532995	0.28833660	2.2691831	21	—	—
514710 2006 SB_{230}	17.2	X	36.65190	46.09712	333.96924	5.87280	0.0212798	0.20890821	2.8129739	21	12 28.1	21.1
514711 2006 SY_{256}	17.4	X	117.96344	78.80521	216.88236	4.66239	0.1760810	0.21053173	2.7984938	21	12 29.5	22.1
514712 2006 SY_{288}	16.7	X	150.47911	290.67969	38.87140	11.87159	0.1531546	0.22295304	2.6935629	21	—	—
514713 2006 SU_{333}	16.8	X	123.25571	303.04207	23.86203	12.12041	0.0895653	0.21570489	2.7535696	21	—	—
514714 2006 SG_{361}	18.1	X	94.99580	18.48317	46.49990	5.89450	0.2127902	0.28920347	2.2646463	21	2 12.2	20.3
514715 2006 TZ_{88}	17.1	X	158.11565	285.84078	26.96582	8.51007	0.1775239	0.21788153	2.7352001	21	—	—
514716 2006 UK_{130}	17.1	X	187.72941	28.82725	242.17898	3.31297	0.1769305	0.21606330	2.7505236	21	—	—
514717 2006 UE_{134}	17.4	X	259.30684	265.32754	207.75721	11.18401	0.2642507	0.19111380	2.9849794	21	9 18.3	21.9
514718 2006 UM_{168}	17.0	X	123.91372	271.01896	56.14211	6.07243	0.0871016	0.21413883	2.7669784	21	—	—
514719 2006 UH_{178}	16.8	X	179.13850	280.83125	45.81667	17.22122	0.3097215	0.22766282	2.6562848	21	1 30.7	21.9
514720 2006 UX_{272}	16.9	X	17.03817	354.82524	22.18444	6.89716	0.0740054	0.19903145	2.9052817	21	12 1.7	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514721 2006 UU_{335}	18.2	X	66.05471	29.82349	48.94999	7.18944	0.1065333	0.28681101	2.2772227	21	—	—
514722 2006 VL_{6}	16.7	X	239.66474	325.95425	228.45454	14.17036	0.0864758	0.20452307	2.8530399	21	12 30.9	20.9
514723 2006 VR_{47}	18.2	X	168.15029	30.30216	60.53876	23.30107	0.0877610	0.37594385	1.9013149	21	5 29.4	20.2
514724 2006 VL_{67}	18.0	X	61.50368	354.34051	61.75590	6.76958	0.1977092	0.28011427	2.3133742	21	—	—
514725 2006 VE_{83}	16.7	X	349.82329	17.02874	41.61145	6.39254	0.0551781	0.20128883	2.8835198	21	12 15.7	20.4
514726 2006 VQ_{104}	16.3	X	87.21433	296.89900	81.77526	10.29778	0.1061349	0.21438528	2.7648574	21	—	—
514727 2006 WK_{36}	18.0	X	104.77073	248.57515	129.16436	4.07024	0.1772355	0.28348573	2.2949959	21	—	—
514728 2006 WV_{113}	17.1	X	290.10424	37.64373	18.55345	17.29519	0.4084190	0.18840293	3.0135446	21	8 1.6	21.6
514729 2006 WZ_{181}	18.3	X	43.32794	2.07557	71.00563	6.63373	0.2292728	0.27882159	2.3205189	21	—	—
514730 2006 WM_{200}	17.3	X	345.58015	250.00996	178.84493	1.86782	0.0500045	0.19945427	2.9011743	21	12 22.4	20.9
514731 2006 XR_{51}	18.3	X	82.18117	343.27086	75.58266	6.74860	0.0876601	0.28477681	2.2880542	21	—	—
514732 2006 YG_{55}	17.1	X	268.98024	89.41714	60.27663	4.91992	0.0863794	0.19275882	2.9679725	21	12 12.5	20.9
514733 2007 AY_{30}	16.6	X	215.85431	222.94103	302.66811	7.95980	0.0829192	0.18402890	3.0611083	21	10 25.2	21.3
514734 2007 BJ_{41}	17.2	X	205.82671	278.06979	278.73331	0.55715	0.1960707	0.18608993	3.0384642	21	11 14.9	22.0
514735 2007 BP_{47}	16.3	X	306.78359	106.09560	339.48009	11.81785	0.0589917	0.18510210	3.0492649	21	11 11.8	20.6
514736 2007 BV_{68}	16.7	X	256.74042	0.09976	153.00939	6.26107	0.1390434	0.18733569	3.0249791	21	11 24.2	20.9
514737 2007 BL_{100}	16.9	X	233.57862	16.99050	119.30866	7.61193	0.1150406	0.18198696	3.0839633	21	10 12.4	21.6
514738 2007 CQ_{12}	18.2	X	354.74837	29.99175	127.56949	5.81315	0.0333168	0.27653872	2.3332722	21	—	—
514739 2007 CP_{29}	16.4	X	185.99045	306.68088	311.17644	8.30490	0.1820959	0.19227385	2.9729611	21	—	—
514740 2007 CT_{33}	18.2	X	322.43026	252.49796	293.28542	0.53152	0.1316591	0.27344304	2.3508494	21	—	—
514741 2007 CD_{37}	17.2	X	255.61085	170.98794	322.62579	2.35475	0.1307767	0.18565828	3.0431720	21	10 28.3	21.5
514742 2007 CA_{52}	16.6	X	268.69185	113.07725	352.59191	12.90287	0.2754621	0.18509648	3.0493267	21	9 19.4	21.0
514743 2007 CS_{70}	16.8	X	304.36712	293.15326	131.02821	9.89345	0.1268249	0.18280886	3.0747128	21	10 13.8	20.7
514744 2007 DX_{1}	16.0	X	272.58394	309.24135	168.11215	18.84661	0.1972788	0.18587322	3.0408255	21	10 24.8	20.3
514745 2007 DD_{42}	17.6	X	306.37667	216.60291	322.00419	10.22138	0.1510682	0.26820040	2.3813858	21	—	—
514746 2007 DE_{44}	16.7	X	191.09981	73.59725	168.48775	17.23313	0.2494144	0.18434006	3.0576626	21	12 21.5	22.3
514747 2007 DQ_{76}	18.2	X	305.95713	159.81261	162.87580	23.15653	0.0886244	0.36350258	1.9444542	21	5 30.8	20.7
514748 2007 DR_{85}	16.9	X	203.92758	50.71601	155.54870	11.85461	0.0193386	0.18607961	3.0385766	21	12 11.5	21.5
514749 2007 DS_{111}	16.0	X	260.86534	105.71687	354.21928	17.23818	0.0771161	0.17601010	3.1533898	21	9 27.9	20.5
514750 2007 DS_{113}	18.3	X	311.99799	19.91445	172.89604	6.84122	0.0534009	0.27137349	2.3627863	21	—	—
514751 2007 DP_{118}	16.6	X	211.81290	201.26931	11.44957	4.37335	0.1993656	0.18323060	3.0699930	21	12 7.3	21.5
514752 2007 EE_{7}	16.7	X	354.59581	227.37992	163.01720	5.26785	0.0331953	0.18028144	3.1033830	21	11 13.7	20.9
514753 2007 EJ_{17}	18.1	X	255.58715	81.75807	172.98817	1.50505	0.1587314	0.26757678	2.3850845	21	—	—
514754 2007 EX_{22}	17.2	X	278.08417	310.96996	166.76583	8.77236	0.2174187	0.18494200	3.0510244	21	10 28.3	21.2
514755 2007 EH_{37}	17.6	X	257.75833	252.75604	351.29795	11.68380	0.1543814	0.26542195	2.3979760	21	—	—
514756 2007 EK_{39}	19.0	X	109.91158	80.42115	178.66532	27.60615	0.0752465	0.44893351	1.6892011	21	12 14.4	21.6
514757 2007 EJ_{50}	17.0	X	152.58825	59.14470	178.28876	10.55830	0.1722236	0.17625790	3.1504336	21	11 19.2	22.3
514758 2007 EH_{55}	16.0	X	335.70163	245.60263	154.05390	10.96564	0.0741628	0.17714337	3.1399262	21	11 1.4	20.2
514759 2007 ET_{64}	16.7	X	305.02313	299.25784	166.61306	14.71178	0.0566735	0.18383819	3.0632249	21	12 10.5	21.1
514760 2007 EA_{66}	16.9	X	259.31597	10.99014	122.26896	3.35557	0.1283890	0.18126948	3.0920957	21	11 3.5	21.1
514761 2007 EV_{94}	18.7	X	301.40978	138.85073	171.14463	23.48629	0.0426172	0.35865207	1.9619465	21	5 10.7	21.2
514762 2007 EH_{99}	13.6	X	336.86888	286.24503	3.77273	28.36644	0.0545720	0.08483543	5.1296123	21	6 8.2	20.6
514763 2007 EB_{114}	16.2	X	286.77500	311.27520	156.95378	16.88429	0.1722501	0.18466241	3.0541033	21	11 7.1	20.3
514764 2007 EV_{114}	17.9	X	232.32155	213.12502	27.34081	15.01158	0.0504905	0.25890556	2.4380455	21	—	—
514765 2007 EL_{115}	16.4	X	169.60273	199.74883	39.55071	10.76119	0.1306831	0.17629545	3.1499861	21	12 2.9	21.5
514766 2007 EY_{124}	17.1	X	236.00976	129.52622	29.00619	5.27477	0.1391860	0.17796307	3.1302771	21	11 3.4	21.6
514767 2007 EL_{126}	18.6	X	28.01028	144.40667	328.50350	3.97615	0.1923601	0.27459956	2.3442440	21	—	—
514768 2007 ET_{137}	16.5	X	247.80470	155.13153	8.39464	20.66087	0.1337340	0.18388133	3.0627458	21	11 17.4	21.2
514769 2007 EG_{183}	16.9	X	290.14608	321.78123	153.50129	10.23212	0.1589545	0.18664665	3.0324193	21	11 21.5	20.8
514770 2007 EO_{183}	17.1	X	228.64301	144.22706	17.08439	5.29377	0.0912143	0.18127601	3.0920214	21	11 4.3	21.6
514771 2007 ER_{225}	13.9	X	24.68157	242.91677	8.38212	29.41076	0.0650538	0.08402923	5.1623701	21	7 4.5	20.9
514772 2007 ET_{225}	14.1	X	23.93627	249.39552	350.98204	15.27155	0.1266286	0.08295365	5.2068979	21	6 21.5	20.6
514773 2007 FW_{37}	18.5	X	350.65584	120.27773	12.22746	2.51778	0.1414199	0.26639392	2.3921395	21	—	—
514774 2007 FR_{44}	18.3	X	278.23754	27.70184	175.32650	1.38522	0.1357195	0.26167239	2.4208290	21	—	—
514775 2007 FL_{45}	18.2	X	292.61997	199.56252	8.41179	5.74605	0.1441422	0.26687003	2.3892936	21	—	—
514776 2007 FU_{45}	18.5	X	333.53390	324.13093	178.59502	1.47658	0.1379599	0.26570060	2.3962991	21	—	—
514777 2007 GO	17.9	X	313.70830	2.56179	187.97629	1.01028	0.1269741	0.26607626	2.3940431	21	—	—
514778 2007 GL_{5}	13.7	X	349.09454	268.73642	16.55365	25.65407	0.1390018	0.08315340	5.1985556	21	6 17.6	20.3
514779 2007 GG_{16}	18.0	X	255.24281	264.87451	16.20507	4.92417	0.1765925	0.26676631	2.3899128	21	1 25.7	21.9
514780 2007 GL_{18}	17.0	X	275.01979	103.75370	146.24337	12.82175	0.1963371	0.26559426	2.3969387	21	1 2.9	21.0
514781 2007 GS_{18}	18.1	X	249.39004	225.64199	24.71186	2.61909	0.1508840	0.26081770	2.4261148	21	—	—
514782 2007 GC_{40}	18.0	X	288.75715	165.10641	51.27016	5.36892	0.1457009	0.26364296	2.4087511	21	—	—
514783 2007 GQ_{54}	16.2	X	233.14100	144.80994	45.66828	22.85884	0.0688573	0.18046019	3.1013333	21	12 14.1	20.9
514784 2007 GP_{70}	18.4	X	289.73005	196.84819	34.95524	1.81804	0.1378338	0.26886906	2.3774360	21	—	—
514785 2007 GX_{70}	16.3	X	211.63908	0.55591	192.42553	27.35992	0.0286730	0.17920982	3.1157422	21	12 1.4	21.2
514786 2007 HS_{30}	18.3	X	298.43888	134.88903	51.19923	3.16345	0.1528675	0.26282368	2.4137543	21	—	—
514787 2007 HV_{83}	18.0	X	181.88943	329.42033	324.38815	1.94046	0.1823203	0.25430389	2.4673686	21	—	—
514788 2007 HM_{85}	17.5	X	286.34802	155.58136	89.14015	5.90560	0.1812023	0.26637241	2.3922683	21	1 8.6	21.0
514789 2007 JU_{18}	18.3	X	286.70502	122.31588	93.61677	5.24894	0.1673621	0.26171319	2.4205774	21	—	—
514790 2007 JK_{30}	18.4	X	295.45491	202.45032	18.82508	3.31521	0.1799701	0.26555855	2.3971536	21	—	—
514791 2007 JH_{34}	17.8	X	232.39072	162.64037	119.38275	5.90988	0.2192931	0.26089260	2.4256504	21	1 5.9	22.0
514792 2007 LK_{32}	16.4	X	193.11556	149.33144	60.20784	14.75329	0.1657782	0.17276420	3.1927644	21	11 19.4	21.6
514793 2007 MW_{6}	16.6	X	181.10490	102.73685	137.17842	16.66308	0.2435671	0.17556829	3.1586778	21	12 12.8	22.3
514794 2007 MY_{10}	17.0	X	118.21158	35.90606	288.61900	13.35803	0.2552470	0.23764186	2.5813928	21	—	—
514795 2007 NP_{4}	16.0	X	145.25579	295.51306	29.15765	18.24191	0.3040819	0.24387092	2.5372468	21	—	—
514796 2007 PY_{42}	16.8	X	66.58669	22.07613	329.89165	13.71420	0.2542433	0.22833769	2.6510483	21	—	—
514797 2007 PS_{49}	17.6	X	11.83978	122.96630	275.88217	1.71621	0.0878281	0.22585244	2.6704607	21	12 31.5	21.0
514798 2007 RG_{113}	18.1	X	190.36718	288.15384	8.25284	7.31676	0.2087350	0.24270975	2.5453328	21	—	—
514799 2007 RJ_{221}	17.5	X	178.65481	306.77907	11.92218	13.38743	0.1769972	0.24168601	2.5525154	21	1 9.0	21.8
514800 2007 RE_{241}	16.3	X	63.20062	209.82104	188.64863	33.66962	0.2416061	0.23238287	2.6201932	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514801 2007 RV_{247}	17.3	X	66.24701	351.99521	357.68310	12.50522	0.1367791	0.22795387	2.6540233	21	—	—
514802 2007 RP_{253}	17.2	X	91.30440	184.55281	172.10384	15.10614	0.2616696	0.23433673	2.6056084	21	—	—
514803 2007 RL_{285}	17.4	X	201.31463	238.23884	19.77324	11.22513	0.2411534	0.23792441	2.5793486	21	—	—
514804 2007 RD_{298}	17.3	X	79.01184	228.03615	132.58503	3.26341	0.2186910	0.23000362	2.6382317	21	—	—
514805 2007 RU_{308}	17.7	X	52.15660	101.37399	273.61657	2.54041	0.0455381	0.22694122	2.6619126	21	—	—
514806 2007 SV_{3}	16.4	X	100.18721	314.86662	21.65734	16.75917	0.2021951	0.22853621	2.6495129	21	—	—
514807 2007 SP_{21}	17.1	X	5.75487	221.05721	188.74819	12.17287	0.1952775	0.22292450	2.6937928	21	—	—
514808 2007 TK_{145}	16.8	X	58.34326	8.55565	22.25789	15.04137	0.1204062	0.22749422	2.6575971	21	—	—
514809 2007 TF_{245}	16.9	X	68.93637	21.31564	342.01278	11.65358	0.2060458	0.22608391	2.6686377	21	—	—
514810 2007 TO_{266}	17.4	X	346.43893	268.06660	169.01274	11.73180	0.1961360	0.22468127	2.6797326	21	—	—
514811 2007 TE_{280}	15.8	X	130.79665	139.71371	159.02743	31.76064	0.2781802	0.16546512	3.2859812	21	—	—
514812 2007 TJ_{311}	17.4	X	81.16802	330.62363	25.17358	7.88119	0.1278308	0.22788089	2.6545900	21	—	—
514813 2007 TQ_{386}	17.3	X	68.30698	332.53446	40.28510	6.00123	0.1197294	0.22407496	2.6845645	21	—	—
514814 2007 TM_{420}	17.2	X	331.61749	72.19061	353.22810	23.78905	0.3096820	0.21324580	2.7746981	21	11 27.3	19.9
514815 2007 TA_{436}	16.8	X	44.98005	356.70894	43.24421	15.74323	0.1051631	0.22636304	2.6664434	21	—	—
514816 2007 TH_{439}	17.5	X	301.13811	307.20033	155.49063	5.63693	0.1270873	0.21373939	2.7704246	21	12 1.3	20.8
514817 2007 UE_{94}	17.4	X	337.95614	177.58229	258.74064	2.56969	0.1029857	0.21758155	2.7377135	21	12 28.2	20.5
514818 2007 UA_{141}	17.7	X	355.67720	115.15634	314.23039	3.23619	0.0812302	0.21801945	2.7340465	21	—	—
514819 2007 VY_{1}	17.0	X	335.03246	164.20742	252.72274	7.02394	0.2141056	0.21403482	2.7678747	21	11 29.7	19.5
514820 2007 VB_{116}	17.0	X	342.30944	351.57572	81.55785	10.81428	0.1421026	0.21476814	2.7615705	21	—	—
514821 2007 VZ_{179}	17.8	X	76.77257	299.35620	61.69097	7.16310	0.0464738	0.22404335	2.6848170	21	—	—
514822 2007 VX_{225}	17.5	X	260.20651	134.90659	52.70398	2.34089	0.0808109	0.22416872	2.6838158	21	—	—
514823 2007 VB_{242}	16.9	X	57.90567	241.68019	143.54795	7.93048	0.2702475	0.22511691	2.6762744	21	—	—
514824 2007 VD_{338}	16.4	X	337.56034	150.41970	316.23049	8.01392	0.1085069	0.20952489	2.8074518	21	—	—
514825 2007 WW_{61}	16.5	X	42.77365	116.75948	250.26163	11.82980	0.0681918	0.21505470	2.7591168	21	12 26.3	20.2
514826 2007 XS_{54}	17.0	X	295.22010	49.63867	104.85154	6.02970	0.0976737	0.21419659	2.7664809	21	—	—
514827 2008 AK_{18}	18.6	X	44.76207	5.60500	113.27483	6.66136	0.1034276	0.30038786	2.2080783	21	1 8.7	20.3
514828 2008 AS_{25}	16.8	X	242.16781	55.29588	126.54175	15.76800	0.0886107	0.20404850	2.8574618	21	12 21.5	21.0
514829 2008 AQ_{54}	17.3	X	229.35988	126.10872	106.44634	3.91133	0.0801674	0.21404674	2.7677720	21	—	—
514830 2008 AO_{58}	17.2	X	167.89305	133.02121	143.14591	3.58287	0.0043236	0.21187893	2.7866186	21	—	—
514831 2008 AY_{115}	17.2	X	230.12514	220.86891	322.98601	14.24738	0.0909755	0.20139302	2.8825251	21	12 6.2	21.6
514832 2008 CG_{18}	18.5	X	285.73037	15.89367	333.22315	20.63236	0.0082612	0.39263640	1.8470373	21	6 21.7	20.7
514833 2008 CF_{34}	17.1	X	195.84423	88.69702	140.60366	6.42762	0.1989546	0.19983989	2.8974410	21	12 15.9	21.9
514834 2008 CB_{38}	17.1	X	246.54518	186.85398	354.12991	6.87392	0.2504723	0.20300605	2.8672357	21	11 30.4	21.4
514835 2008 CO_{91}	18.8	X	349.32176	233.47853	327.33804	2.54812	0.0750359	0.30115687	2.2043177	21	2 7.2	20.9
514836 2008 CT_{127}	17.3	X	323.73544	297.92596	157.79716	2.39752	0.0277073	0.20311092	2.8662487	21	12 26.7	21.1
514837 2008 CR_{138}	18.2	X	334.34245	220.83951	351.10185	4.99946	0.1275631	0.29834256	2.2181585	21	1 24.7	20.8
514838 2008 CG_{142}	18.1	X	319.84980	45.55764	148.33765	3.12642	0.1785452	0.28826452	2.2695613	21	—	—
514839 2008 CN_{159}	18.1	X	42.38814	324.72043	121.39453	5.68235	0.1537553	0.29123394	2.2541080	21	—	—
514840 2008 CY_{193}	16.4	X	142.75422	283.23054	352.01982	8.68722	0.1159208	0.19355202	2.9598582	21	12 24.3	21.2
514841 2008 DL_{15}	17.9	X	29.57751	346.17475	166.82585	23.55533	0.1778082	0.29911383	2.2143438	21	1 24.9	20.2
514842 2008 DV_{17}	17.0	X	173.77484	112.54205	150.58587	7.77426	0.2618452	0.19818465	2.9135516	21	—	—
514843 2008 DE_{37}	17.7	X	255.92628	266.65682	354.46003	22.70280	0.2316282	0.28547585	2.2843175	21	—	—
514844 2008 DN_{60}	18.9	X	337.55113	101.01949	101.30551	1.79336	0.0911678	0.29756796	2.2220062	21	1 20.7	21.3
514845 2008 EB_{7}	17.0	X	234.65844	99.64062	86.25562	2.78424	0.1675695	0.20002804	2.8956238	21	12 5.0	21.1
514846 2008 EQ_{7}	22.6	X	319.82625	65.39176	142.42526	5.96762	0.2230605	0.58800214	1.4110750	21	—	—
514847 2008 EM_{12}	17.1	X	244.25581	31.01536	127.80085	5.38431	0.0723974	0.19620968	2.9330700	21	11 26.5	21.2
514848 2008 EA_{14}	18.1	X	333.42261	187.00771	45.32593	5.23511	0.1179629	0.30030563	2.2084813	21	2 24.2	20.5
514849 2008 EU_{67}	16.5	X	130.21097	299.73154	335.34049	11.18258	0.0919247	0.19353910	2.9599900	21	12 10.5	21.3
514850 2008 EN_{99}	18.7	X	128.99836	311.40449	187.55550	21.15571	0.0803996	0.39057551	1.8535290	21	6 20.6	21.3
514851 2008 EK_{150}	19.3	X	312.68177	298.85829	270.99357	0.73986	0.1641322	0.29019381	2.2594910	21	—	—
514852 2008 EB_{153}	18.3	X	316.58165	138.29668	50.63224	7.05432	0.0415495	0.28753428	2.2734023	21	—	—
514853 2008 EA_{154}	16.9	X	171.49808	86.54374	159.93484	6.01243	0.0204026	0.19572141	2.9379461	21	12 22.4	21.1
514854 2008 EV_{164}	16.9	X	270.78789	69.38439	59.26436	0.86098	0.0228897	0.19383154	2.9570120	21	11 27.7	20.9
514855 2008 FS_{13}	18.0	X	129.76836	203.51175	199.78085	4.54510	0.1695755	0.29771486	2.2212752	21	2 19.3	20.7
514856 2008 FA_{21}	16.5	X	78.91234	185.91909	131.21383	7.45690	0.0879279	0.18753653	3.0228189	21	12 7.6	21.0
514857 2008 FH_{56}	18.4	X	266.79127	236.23663	18.15611	3.12026	0.0984038	0.28772772	2.2723833	21	1 3.7	21.6
514858 2008 FL_{65}	18.3	X	288.96193	88.27003	171.01545	2.86888	0.1929658	0.29025261	2.2591859	21	1 23.5	21.7
514859 2008 FB_{73}	18.5	X	34.05988	39.71356	101.73655	3.97514	0.2165579	0.29693193	2.2251781	21	1 16.0	19.4
514860 2008 FT_{121}	16.7	X	177.88536	153.83005	64.75914	8.95426	0.0725254	0.18985480	2.9981613	21	11 22.6	21.0
514861 2008 FC_{127}	16.3	X	158.59847	24.30176	205.97407	16.71892	0.1370007	0.18377950	3.0638771	21	11 16.2	21.3
514862 2008 FX_{131}	16.9	X	131.85026	175.50466	80.25782	2.16113	0.1557323	0.18534020	3.0466529	21	11 21.8	21.9
514863 2008 GE_{49}	17.2	X	244.95308	59.67252	131.77123	4.03498	0.0985385	0.20271228	2.8700051	21	—	—
514864 2008 GP_{51}	17.0	X	216.49877	153.50453	39.47941	5.14184	0.1174094	0.19329421	2.9624895	21	11 28.2	21.5
514865 2008 GV_{72}	17.1	X	159.61886	47.83652	181.08678	4.60998	0.0955442	0.18832130	3.0144153	21	11 16.3	21.7
514866 2008 GU_{92}	17.5	X	307.63279	32.36486	187.49545	24.23906	0.1520578	0.28866708	2.2674508	21	—	—
514867 2008 GF_{131}	16.9	X	200.45560	125.05409	85.61056	4.57694	0.1075790	0.18843541	3.0131983	21	12 3.6	21.4
514868 2008 GT_{133}	17.6	X	249.52080	220.07776	60.89447	10.26683	0.2189475	0.28383192	2.2931294	21	1 16.5	21.5
514869 2008 GV_{133}	13.9	X	16.03680	143.38617	118.40215	12.77784	0.1072052	0.08151196	5.2681139	21	7 3.7	20.4
514870 2008 GX_{133}	16.4	X	265.83502	92.70866	57.72763	10.62796	0.1298083	0.19225710	2.9731338	21	12 2.6	20.2
514871 2008 GT_{141}	14.1	X	328.20616	156.85688	142.57276	14.23397	0.0541262	0.08100403	5.2901132	21	6 14.9	21.0
514872 2008 HF_{1}	16.6	X	197.43164	122.81294	105.22034	10.00833	0.1578747	0.19102515	2.9859029	21	12 17.5	21.3
514873 2008 HK_{22}	17.0	X	155.21910	69.02250	191.60973	17.39810	0.2465171	0.18506035	3.0497235	21	12 16.2	22.6
514874 2008 HR_{27}	18.2	X	308.28328	206.65364	18.82934	5.11942	0.1209316	0.29095388	2.2555543	21	1 10.9	21.1
514875 2008 HB_{33}	14.2	X	45.35780	130.93730	87.63853	6.06360	0.1198213	0.08383270	5.1704351	21	6 25.5	20.5
514876 2008 HS_{43}	16.2	X	305.34712	33.68941	38.75370	20.92934	0.0962443	0.18518791	3.0483229	21	10 26.9	20.0
514877 2008 HR_{47}	19.0	X	333.97719	42.89975	173.23371	6.86880	0.2206635	0.29224942	2.2488834	21	1 13.8	21.8
514878 2008 HP_{58}	17.7	X	222.48885	277.62925	261.52052	0.92955	0.2386609	0.19340868	2.9613205	21	11 6.1	22.4
514879 2008 JR_{23}	16.1	X	9.47664	295.57846	74.42127	10.67881	0.0429315	0.17895443	3.1187059	21	11 9.5	20.4
514880 2008 JD_{28}	18.3	X	333.70547	98.42318	118.98175	4.56040	0.1372754	0.29175816	2.2514071	21	1 30.3	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514881 2008 KH_{14}	16.8	X	102.39563	128.41245	145.80785	11.28560	0.1244274	0.17782625	3.1318826	21	11 16.2	21.8
514882 2008 KQ_{16}	14.1	X	108.03893	47.05781	116.09296	16.06051	0.0807193	0.08288064	5.2099553	21	7 1.6	21.2
514883 2008 KG_{27}	18.4	X	289.34094	145.32711	135.24176	5.96546	0.2241970	0.29238706	2.2481776	21	2 17.6	21.5
514884 2008 LD_{7}	17.1	X	213.03090	65.79917	160.76821	9.69548	0.1800889	0.19227585	2.9729405	21	12 28.0	21.9
514885 2008 LR_{7}	16.7	X	182.21551	44.03592	197.43964	11.21420	0.1072002	0.18790532	3.0188625	21	12 21.0	21.6
514886 2008 MJ	16.9	X	213.47880	322.68607	226.96894	10.61340	0.2443613	0.18831651	3.0144664	21	11 9.8	21.9
514887 2008 QO_{1}	17.7	X	166.47570	226.81615	118.05992	3.03409	0.2261222	0.26668251	2.3904135	21	1 27.4	21.3
514888 2008 QA_{10}	18.1	X	237.56922	308.14237	344.63310	2.00700	0.2080676	0.27354142	2.3502856	21	1 21.7	22.0
514889 2008 QH_{26}	17.6	X	176.61174	213.83657	117.81871	3.08953	0.1884772	0.26729292	2.3867728	21	1 17.2	21.1
514890 2008 RQ_{3}	17.7	X	158.14840	163.36197	192.54275	4.04219	0.0766694	0.26452904	2.4033691	21	1 16.4	20.9
514891 2008 RU_{21}	17.3	X	168.22999	4.71795	343.74316	6.37908	0.1507370	0.26807881	2.3821059	21	1 28.0	20.7
514892 2008 RC_{96}	17.7	X	237.00581	114.12031	173.13897	8.77298	0.2172082	0.27349931	2.3505269	21	1 12.9	21.8
514893 2008 RE_{110}	15.6	X	125.16838	243.30173	5.77101	13.81530	0.0325967	0.15828989	3.3845474	21	10 24.4	20.6
514894 2008 RO_{111}	17.8	X	166.37599	309.15495	37.11928	3.63993	0.1974759	0.26448679	2.4036251	21	1 27.9	21.4
514895 2008 RU_{115}	17.8	X	228.65397	289.05171	7.28050	2.30729	0.2162131	0.27154780	2.3617750	21	1 19.2	21.7
514896 2008 RS_{140}	17.8	X	210.23022	62.66841	239.81845	2.21869	0.1854496	0.26841827	2.3800970	21	1 10.7	21.6
514897 2008 SB_{7}	16.8	X	7.09067	48.34109	12.22837	31.80401	0.3708497	0.23652993	2.5894765	21	—	—
514898 2008 SH_{10}	16.1	X	132.54764	314.24545	356.56105	10.60058	0.3172424	0.17691262	3.1426559	21	—	—
514899 2008 SJ_{12}	18.0	X	21.69241	239.94086	152.34301	4.65882	0.2109845	0.23773676	2.5807058	21	—	—
514900 2008 SC_{47}	18.4	X	350.83957	98.71420	192.90523	21.65254	0.0772959	0.36733824	1.9308948	21	6 28.3	20.6
514901 2008 SS_{70}	17.4	X	203.94473	157.96968	168.97052	6.84398	0.1330195	0.27042803	2.3682902	21	2 1.3	21.1
514902 2008 SR_{88}	18.1	X	240.19756	169.30163	191.23583	21.80122	0.0723395	0.35666634	1.9692218	21	4 21.3	20.4
514903 2008 SA_{135}	15.9	X	143.67578	285.35483	350.08083	25.19560	0.2211159	0.17437162	3.1731128	21	12 25.1	21.8
514904 2008 SY_{145}	17.9	X	195.72313	126.03071	198.46941	1.60480	0.2155472	0.26545484	2.3977779	21	1 26.4	21.7
514905 2008 SS_{205}	17.6	X	337.51096	28.51849	96.39286	5.46565	0.1849616	0.24252292	2.5466398	21	—	—
514906 2008 SJ_{211}	16.1	X	204.30646	60.52621	7.79923	6.52248	0.2843731	0.12628732	3.9345604	21	6 11.2	22.9
514907 2008 SJ_{225}	18.2	X	235.36080	278.40421	20.21115	3.51676	0.1793310	0.26854560	2.3793446	21	1 28.9	22.0
514908 2008 SU_{226}	18.4	X	305.86070	152.53741	186.55925	22.28948	0.0786683	0.37040119	1.9202354	21	6 23.5	20.8
514909 2008 SY_{235}	17.7	X	328.00080	32.96029	38.83244	5.45531	0.3151181	0.22765882	2.6563159	21	12 12.9	19.0
514910 2008 ST_{281}	17.8	X	9.94680	296.03866	147.63155	1.68022	0.1853549	0.24043485	2.5613628	21	—	—
514911 2008 SY_{290}	17.1	X	154.05126	335.53523	12.07484	14.93231	0.1451908	0.25900751	2.4374056	21	1 15.4	20.9
514912 2008 SY_{298}	17.6	X	40.24764	353.75948	50.10635	6.02254	0.1501237	0.24477767	2.5309769	21	—	—
514913 2008 TD_{5}	17.4	X	169.08046	315.59810	18.32075	4.10423	0.1659216	0.26191132	2.4193565	21	1 12.6	21.0
514914 2008 TN_{26}	20.0	X	92.54233	22.38869	253.59542	9.41325	0.6332280	0.40004251	1.8241699	21	12 22.1	24.0
514915 2008 TO_{38}	17.8	X	349.45549	206.11549	266.99249	3.43370	0.2011170	0.24344212	2.5402253	21	—	—
514916 2008 TY_{54}	17.2	X	184.80692	281.77660	16.49639	13.78314	0.0708181	0.25566850	2.4585813	21	—	—
514917 2008 TX_{111}	17.8	X	349.50534	173.25145	231.59764	6.78558	0.3200169	0.23197399	2.6232712	21	—	—
514918 2008 TC_{149}	17.7	X	68.04603	14.89592	37.46790	5.81815	0.0908460	0.25352441	2.4724235	21	—	—
514919 2008 TW_{163}	18.3	X	13.30565	87.09183	318.69862	0.70526	0.1692694	0.23742883	2.5829366	21	—	—
514920 2008 TQ_{191}	17.7	X	225.79556	185.71912	196.83426	20.27882	0.1090478	0.36380631	1.9433718	21	5 2.9	20.2
514921 2008 UC_{108}	15.6	X	216.42070	32.19317	25.75334	9.47077	0.3296323	0.12507464	3.9599516	21	6 5.2	22.5
514922 2008 UJ_{111}	18.0	X	341.96232	183.93605	251.29573	4.78429	0.3002920	0.23329400	2.6133666	21	—	—
514923 2008 UB_{117}	17.7	X	200.79760	298.36476	353.65735	6.05989	0.1262492	0.25534324	2.4606687	21	—	—
514924 2008 UB_{122}	16.0	X	16.81569	328.89739	15.26447	9.85393	0.0783575	0.14662473	3.5617592	21	10 13.8	20.6
514925 2008 UJ_{135}	17.0	X	220.23948	224.39838	41.56720	15.14500	0.0922396	0.25279780	2.4771588	21	—	—
514926 2008 UT_{143}	16.0	X	211.48743	354.62267	69.16524	3.81023	0.2218553	0.12565206	3.9478106	21	6 13.8	22.5
514927 2008 US_{166}	17.2	X	214.34528	235.30868	58.41221	6.72532	0.1346639	0.25901805	2.4373395	21	1 4.8	21.1
514928 2008 US_{185}	16.7	X	129.87415	260.81273	57.41585	12.51680	0.0962279	0.24224433	2.5485919	21	—	—
514929 2008 UX_{215}	18.0	X	69.09278	135.24029	49.41387	22.10240	0.0519102	0.35334121	1.9815568	21	5 22.4	19.8
514930 2008 UH_{246}	17.2	X	7.71276	315.29751	98.93662	5.45854	0.1570128	0.23516105	2.5995158	21	—	—
514931 2008 UU_{249}	17.9	X	332.88728	49.92447	60.08471	4.16290	0.1530556	0.23967093	2.5668026	21	—	—
514932 2008 UC_{260}	17.7	X	321.80485	270.69647	202.41237	10.92073	0.1586554	0.23686816	2.5870109	21	—	—
514933 2008 US_{277}	17.7	X	355.44945	36.31407	38.49049	5.52604	0.1710192	0.23803890	2.5785215	21	—	—
514934 2008 UR_{304}	17.7	X	4.97356	254.35962	167.58634	4.69762	0.2769384	0.23645870	2.5899966	21	—	—
514935 2008 UB_{330}	17.4	X	1.41427	26.37874	44.55827	15.74752	0.1203198	0.23808289	2.5782039	21	—	—
514936 2008 UZ_{341}	17.9	X	354.74014	137.30188	329.52784	2.65522	0.1280112	0.24357955	2.5392697	21	—	—
514937 2008 UG_{365}	17.1	X	36.50363	67.63001	344.46180	12.57014	0.2221510	0.24283073	2.5444873	21	—	—
514938 2008 VH_{29}	17.7	X	358.61385	68.44445	345.15548	3.28660	0.1727613	0.23374029	2.6100390	21	—	—
514939 2008 VS_{38}	17.7	X	101.70272	42.29772	0.49688	2.87760	0.1011097	0.25263219	2.4782413	21	1 11.6	20.6
514940 2008 VM_{52}	18.5	X	17.90030	232.40246	28.61053	21.90302	0.0270055	0.36420173	1.9419649	21	6 29.2	20.9
514941 2008 VA_{54}	17.5	X	141.80057	304.22236	4.54125	3.99478	0.1781856	0.24699952	2.5157761	21	—	—
514942 2008 VK_{79}	16.8	X	326.75044	157.18252	286.22303	12.79273	0.2150078	0.22991283	2.6389262	21	12 26.5	18.9
514943 2008 WN_{5}	17.6	X	350.24738	350.07942	64.56757	4.84955	0.2266370	0.23297963	2.6157170	21	—	—
514944 2008 WS_{23}	17.7	X	3.26803	24.60560	43.41081	6.44046	0.2830920	0.23647719	2.5898615	21	—	—
514945 2008 WB_{100}	18.4	X	353.82370	214.30223	208.92206	3.90761	0.1684260	0.23442570	2.6049490	21	—	—
514946 2008 XY_{40}	18.0	X	351.13999	28.30777	53.77770	4.60899	0.1146402	0.23256875	2.6187968	21	—	—
514947 2008 XU_{42}	17.0	X	41.24521	319.07514	76.03499	7.05045	0.1298870	0.23419846	2.6066338	21	—	—
514948 2008 YG_{43}	16.8	X	142.98224	63.90984	258.93434	5.22710	0.1142041	0.24439254	2.5336352	21	—	—
514949 2008 YE_{117}	17.6	X	10.98692	317.32826	89.53109	2.52348	0.2097762	0.22927157	2.6438445	21	—	—
514950 2008 YO_{122}	17.4	X	268.56667	73.23109	119.66088	13.76290	0.1351521	0.23159526	2.6261303	21	—	—
514951 2008 YD_{128}	17.4	X	338.41102	322.50059	115.69351	8.58461	0.2638411	0.22656737	2.6648400	21	—	—
514952 2008 YZ_{145}	16.8	X	9.36409	105.91299	303.38554	12.37703	0.1654816	0.22625993	2.6672534	21	—	—
514953 2008 YZ_{169}	17.7	X	347.59206	320.40236	130.10559	2.52537	0.1094065	0.23021925	2.6365841	21	—	—
514954 2008 YB_{175}	17.1	X	263.75641	32.63266	123.96891	10.14333	0.0055803	0.22108239	2.7087356	21	12 31.3	20.9
514955 2009 AA_{35}	17.6	X	329.36383	320.51097	148.63285	3.13591	0.0864488	0.23102508	2.6304495	21	—	—
514956 2009 BC_{28}	17.1	X	120.62736	220.74671	116.66350	13.60481	0.1402382	0.23415657	2.6069447	21	—	—
514957 2009 BD_{34}	17.1	X	57.95788	280.62518	124.81555	22.65740	0.0558280	0.23278953	2.6171408	21	—	—
514958 2009 BP_{47}	17.6	X	290.21361	5.17222	124.72486	7.97677	0.1216199	0.22289703	2.6940141	21	12 21.8	20.8
514959 2009 BC_{50}	17.6	X	330.82958	125.36139	4.68720	0.93805	0.1499700	0.23116627	2.6293783	21	—	—
514960 2009 BT_{54}	17.2	X	354.53827	300.33730	122.15520	13.98264	0.1625797	0.22463454	2.6801043	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
514961 2009 BZ_{58}	17.5	X	350.49096	8.66172	110.82528	15.64155	0.0379462	0.23644882	2.5900687	21	—	—
514962 2009 BU_{65}	17.9	X	351.48500	288.05113	146.76045	4.62668	0.1942620	0.22535038	2.6744256	21	—	—
514963 2009 BG_{98}	16.9	X	64.35591	273.62878	104.82331	12.39360	0.1548649	0.23302892	2.6153481	21	—	—
514964 2009 BE_{128}	17.2	X	293.82264	115.29907	357.24512	8.27542	0.1541018	0.21860488	2.7291630	21	11 26.9	20.4
514965 2009 BJ_{131}	17.2	X	275.07995	195.78677	4.03348	7.58790	0.1407415	0.22713811	2.6603741	21	—	—
514966 2009 BZ_{149}	17.5	X	300.46681	304.51064	156.18503	7.97089	0.1942108	0.21754012	2.7380611	21	11 22.2	20.4
514967 2009 BC_{171}	17.5	X	344.00813	290.85664	117.42812	10.43126	0.2112862	0.21940926	2.7224886	21	12 10.6	20.2
514968 2009 BA_{184}	17.5	X	297.22855	118.95002	22.91004	8.65634	0.2992500	0.22580343	2.6708471	21	—	—
514969 2009 CS_{2}	16.5	X	298.76954	123.96750	307.11919	15.09671	0.2190043	0.21500803	2.7595161	21	9 22.2	20.0
514970 2009 CZ_{15}	16.6	X	12.05542	109.61412	330.98574	21.50101	0.0377520	0.22541433	2.6739198	21	—	—
514971 2009 CH_{18}	16.6	X	179.86128	307.15103	304.84353	12.59261	0.1433999	0.21957271	2.7211374	21	—	—
514972 2009 CT_{46}	17.6	X	263.46450	151.76591	52.77361	3.00192	0.1345479	0.23016037	2.6370337	21	—	—
514973 2009 CH_{60}	17.4	X	17.14052	255.54519	135.35117	4.00831	0.0680471	0.21832184	2.7315213	21	12 24.3	20.8
514974 2009 CH_{62}	17.8	X	311.95003	295.53980	191.10500	3.00803	0.1792156	0.22357341	2.6885778	21	—	—
514975 2009 CZ_{66}	17.2	X	5.45231	254.39516	193.44702	1.47236	0.0361720	0.22569154	2.6717298	21	—	—
514976 2009 DQ_{24}	17.4	X	318.98198	16.15136	126.17930	3.90443	0.1239405	0.22577470	2.6710737	21	—	—
514977 2009 DJ_{25}	17.9	X	221.17039	78.17942	127.37241	3.55998	0.1598978	0.21731300	2.7399685	21	12 18.1	21.9
514978 2009 DM_{35}	16.7	X	187.41771	271.71308	4.19373	13.41337	0.1614284	0.21804329	2.7338472	21	—	—
514979 2009 DA_{52}	17.3	X	302.96021	72.24785	137.99096	6.54861	0.1020450	0.23979220	2.5659372	21	—	—
514980 2009 DA_{60}	17.2	X	204.37123	263.97825	5.99525	12.86344	0.1616760	0.22339966	2.6899717	21	—	—
514981 2009 DB_{85}	17.2	X	279.93313	16.83781	153.00078	2.53880	0.1587380	0.22083828	2.7107314	21	—	—
514982 2009 DH_{123}	16.7	X	234.18507	244.47692	355.54152	11.05273	0.1521932	0.22365221	2.6879463	21	—	—
514983 2009 EL_{23}	16.5	X	247.53297	209.30738	16.37664	13.93155	0.0989875	0.22174342	2.7033497	21	—	—
514984 2009 FN_{14}	16.8	X	224.76778	231.16119	7.13573	8.77696	0.0765400	0.22295734	2.6935283	21	—	—
514985 2009 FK_{28}	17.4	X	271.39324	129.30703	14.51439	8.68751	0.2397823	0.21602203	2.7508739	21	11 18.6	20.9
514986 2009 FB_{30}	17.5	X	291.12617	314.44245	191.01336	6.41128	0.1925200	0.21969163	2.7201553	21	—	—
514987 2009 FZ_{38}	16.7	X	297.87908	33.23012	160.39316	14.45239	0.0317478	0.22977248	2.6400007	21	—	—
514988 2009 FR_{41}	17.0	X	251.37253	168.72352	21.10942	10.30100	0.1640161	0.21752597	2.7381799	21	—	—
514989 2009 FH_{69}	17.5	X	210.71444	164.21757	39.58345	3.22650	0.1343047	0.21177828	2.7875015	21	12 6.5	21.7
514990 2009 HY_{4}	17.0	X	296.68648	120.79098	32.64930	14.84328	0.0806604	0.21942705	2.7223415	21	—	—
514991 2009 HN_{14}	17.3	X	247.16885	18.60479	172.20889	14.57465	0.1289930	0.21616086	2.7496960	21	—	—
514992 2009 HH_{27}	17.4	X	245.64828	181.14809	27.90056	3.84269	0.1304532	0.21658297	2.7461221	21	—	—
514993 2009 HR_{59}	17.0	X	192.43103	225.61661	46.09838	13.96798	0.2183326	0.21358997	2.7717165	21	—	—
514994 2009 HP_{63}	17.3	X	167.24349	110.78402	169.46719	1.97882	0.1864528	0.20963529	2.8064660	21	—	—
514995 2009 KF_{1}	17.3	X	220.97026	85.10994	146.72751	10.09501	0.2499241	0.21284252	2.7782018	21	—	—
514996 2009 KT_{7}	17.0	X	241.03374	148.81326	44.25040	8.67942	0.1560775	0.21292250	2.7775061	21	12 24.7	20.9
514997 2009 KP_{14}	14.3	X	330.72442	131.59211	152.07955	18.15867	0.1282236	0.08293864	5.2075258	21	5 26.8	20.9
514998 2009 KH_{28}	17.2	X	249.70792	4.07856	195.58263	7.94565	0.1380679	0.21157838	2.7892570	21	—	—
514999 2009 ON_{14}	15.6	X	16.09669	185.07885	157.02322	28.66305	0.1922301	0.17183487	3.2042656	21	11 2.6	20.0
515000 2009 PC_{8}	16.6	X	97.62947	141.77187	171.12666	11.76623	0.2003408	0.18468942	3.0538055	21	12 29.7	21.8
515001 2009 PL_{19}	16.7	X	26.85483	190.16842	169.33040	3.31676	0.1358807	0.17376060	3.1805472	21	11 28.3	20.8
515002 2009 QS_{4}	18.2	X	258.04780	163.48573	147.78399	7.69621	0.2353015	0.30604988	2.1807602	21	2 25.2	21.5
515003 2009 QH_{20}	17.6	X	193.43420	354.85519	353.90710	6.25286	0.1746552	0.29590024	2.2303473	21	2 19.4	20.9
515004 2009 QR_{31}	15.8	X	37.15842	168.55998	168.54385	28.13012	0.1623614	0.17269875	3.1935710	21	11 22.1	20.6
515005 2009 QA_{49}	18.0	X	106.69563	262.06079	109.55154	3.03049	0.2376648	0.27753348	2.3276935	21	—	—
515006 2009 QA_{57}	16.5	X	205.30503	31.96618	191.03326	15.46434	0.0968344	0.18465161	3.0542223	21	12 22.6	21.4
515007 2009 QU_{65}	16.8	X	110.90904	123.79346	179.48206	5.34603	0.1016084	0.18302936	3.0722429	21	12 23.9	21.5
515008 2009 QV_{65}	16.3	X	67.44346	160.38934	194.46271	9.99676	0.0457294	0.18212822	3.0823685	21	12 31.0	20.9
515009 2009 RE_{33}	18.1	X	276.12339	290.14341	14.78928	4.65492	0.1725974	0.30184901	2.2009468	21	3 12.4	21.1
515010 2009 SK_{2}	18.9	X	131.14341	257.12621	23.93593	38.22997	0.4716795	0.43726162	1.7191291	21	—	—
515011 2009 SF_{23}	16.3	X	72.77835	35.84338	290.31858	8.54672	0.1002292	0.18172777	3.0868949	21	12 10.8	20.9
515012 2009 SK_{68}	16.5	X	46.19625	9.26686	335.10742	9.08979	0.0832377	0.17439260	3.1728583	21	11 25.5	21.0
515013 2009 SN_{69}	18.0	X	78.86625	207.40193	142.56758	3.29622	0.3084036	0.26618184	2.3934100	21	—	—
515014 2009 SP_{78}	18.0	X	36.61934	277.95783	222.47117	6.53772	0.0265265	0.29018719	2.2595254	21	1 29.3	20.6
515015 2009 SQ_{112}	18.1	X	265.30045	18.80501	282.02351	3.28886	0.1970068	0.30227215	2.1988923	21	2 19.6	21.4
515016 2009 SK_{117}	16.5	X	346.60939	217.27210	207.53970	9.61454	0.0132176	0.17653143	3.1471784	21	12 12.4	20.9
515017 2009 SJ_{118}	15.9	X	160.00950	226.35877	5.19714	17.96787	0.1317096	0.17376085	3.1805442	21	11 10.5	21.3
515018 2009 SB_{130}	17.8	X	31.90268	256.04530	187.57746	12.87631	0.1385813	0.27082833	2.3659559	21	—	—
515019 2009 SC_{174}	16.1	X	91.99744	318.20348	341.18112	9.77834	0.0986913	0.17613283	3.1519247	21	11 26.8	21.0
515020 2009 SD_{221}	16.5	X	117.39760	26.71575	243.22375	5.50199	0.1900723	0.18034996	3.1025968	21	11 26.6	21.6
515021 2009 SL_{236}	15.4	X	104.80636	281.15212	18.75184	26.23764	0.2104353	0.18238311	3.0794960	21	12 18.5	21.0
515022 2009 SU_{246}	15.8	X	49.16111	345.91904	354.16246	28.22438	0.1541148	0.17468434	3.1693246	21	11 27.8	20.8
515023 2009 SY_{284}	18.4	X	48.12992	58.74853	356.03609	3.52439	0.1892430	0.27091600	2.3654455	21	—	—
515024 2009 SK_{303}	17.1	X	108.87605	135.61278	192.43821	5.10996	0.0748521	0.18628281	3.0363666	21	—	—
515025 2009 SP_{307}	18.2	X	86.92706	307.78304	76.07121	3.40638	0.1930158	0.27299063	2.3534459	21	—	—
515026 2009 SH_{354}	15.7	X	347.88755	15.83230	22.65367	21.02766	0.1425486	0.17019453	3.2248213	21	11 9.2	19.7
515027 2009 SW_{357}	18.8	X	42.82022	110.17158	335.90246	0.84794	0.1502413	0.27347244	2.3506808	21	—	—
515028 2009 TW_{27}	17.5	X	65.32564	327.35742	82.78924	6.04787	0.2157015	0.27006875	2.3703901	21	—	—
515029 2009 UG_{129}	16.4	X	79.49343	170.73072	183.34937	10.64601	0.1760862	0.18428915	3.0582257	21	—	—
515030 2009 UM_{130}	17.3	X	60.76340	327.23023	53.55473	11.87623	0.3340923	0.26400362	2.4065569	21	—	—
515031 2009 VS_{30}	16.0	X	42.21888	331.67745	36.06756	12.98012	0.0921561	0.16988170	3.2287789	21	12 19.9	20.6
515032 2009 VZ_{50}	18.1	X	41.86239	341.25507	83.58244	3.89757	0.2189106	0.26558428	2.3969987	21	—	—
515033 2009 VF_{91}	17.1	X	84.99394	251.78875	144.65105	22.75838	0.2845135	0.27228065	2.3575353	21	—	—
515034 2009 WT_{4}	18.4	X	155.21600	131.26852	203.33190	6.01008	0.1471897	0.27518991	2.3408902	21	—	—
515035 2009 WE_{28}	18.0	X	59.12162	16.19783	48.02097	3.30320	0.1617152	0.26900199	2.3766527	21	—	—
515036 2009 WB_{36}	18.0	X	31.95602	316.36238	128.15448	1.81145	0.1542935	0.26989282	2.3714201	21	—	—
515037 2009 WE_{40}	17.4	X	250.21262	13.49117	270.65881	5.36399	0.1240363	0.28026103	2.3125665	21	1 22.8	20.9
515038 2009 WF_{56}	18.3	X	359.31623	12.37873	87.17572	3.78652	0.1623144	0.26171282	2.4205797	21	—	—
515039 2009 YW_{19}	18.3	X	320.46405	52.54423	120.24690	5.93770	0.1738466	0.25875752	2.4389753	21	—	—
515040 2009 YB_{23}	17.5	X	97.59540	325.21754	95.91247	7.54775	0.0931484	0.27185307	2.3600066	21	1 24.9	20.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515041 2010 CU_{19}	17.8	X	298.91569	289.78899	212.34811	56.55469	0.3593927	0.24463009	2.5319948	21	12 16.9	21.1
515042 2010 CU_{62}	17.9	X	296.29319	93.05180	120.79993	2.58608	0.1313854	0.25512777	2.4620539	21	—	—
515043 2010 CW_{148}	18.0	X	285.44059	220.65145	349.79402	1.94853	0.1518595	0.25602080	2.4563253	21	—	—
515044 2010 CM_{181}	17.4	X	277.62896	85.05860	147.94730	4.64629	0.1475533	0.25536831	2.4605076	21	—	—
515045 2010 DB_{75}	17.9	X	239.77964	48.51798	167.95468	2.31139	0.0607148	0.24240237	2.5474840	21	—	—
515046 2010 EA_{72}	17.6	X	203.64025	81.92545	173.19115	8.40015	0.1332768	0.23972632	2.5664072	21	—	—
515047 2010 EN_{83}	18.0	X	140.75295	139.98762	5.67967	20.36277	0.0687849	0.37681731	1.8983756	21	7 28.2	20.6
515048 2010 EL_{129}	16.5	X	14.18318	66.35754	20.55254	22.11681	0.0084530	0.23773860	2.5806924	21	—	—
515049 2010 FL	19.3	X	59.22137	214.07291	66.63291	11.40276	0.6552270	0.37095586	1.9183208	21	12 14.7	23.3
515050 2010 FT_{85}	17.5	X	267.27133	184.80742	0.88832	3.28672	0.0534262	0.23852133	2.5750435	21	—	—
515051 2010 GA	17.6	X	194.17863	103.26324	180.07568	11.77148	0.2085575	0.22677446	2.6632174	21	—	—
515052 2010 GA_{99}	18.0	X	267.79750	67.93638	142.81467	2.35512	0.1431076	0.24246897	2.5470176	21	—	—
515053 2010 GZ_{101}	17.2	X	213.51261	185.61160	55.12215	14.71302	0.1583999	0.23151281	2.6267538	21	—	—
515054 2010 GM_{140}	18.2	X	139.05395	245.52194	205.90861	20.50762	0.1021959	0.36027743	1.9560413	21	4 26.4	20.2
515055 2010 JA_{31}	17.7	X	221.44426	149.33410	89.01666	4.62391	0.2613466	0.23303867	2.6152752	21	—	—
515056 2010 JQ_{43}	17.5	X	221.68618	129.85630	95.01012	8.25649	0.0892824	0.22939561	2.6428914	21	—	—
515057 2010 JU_{115}	17.1	X	165.81555	125.73880	158.05974	13.19685	0.2522567	0.22483058	2.6785461	21	—	—
515058 2010 JY_{175}	17.4	X	215.87660	127.73579	151.83985	12.37226	0.2680198	0.23711390	2.5852232	21	—	—
515059 2010 LQ_{20}	17.2	X	191.29374	155.15709	109.14625	11.76667	0.0973653	0.24013945	2.5634629	21	—	—
515060 2010 LO_{55}	16.0	X	3.34127	87.76384	275.31932	21.17641	0.1203848	0.18571073	3.0425991	21	10 20.3	20.2
515061 2010 LM_{71}	16.4	X	357.95022	35.94832	354.75275	15.80408	0.1485091	0.18984439	2.9982709	21	11 22.0	20.2
515062 2010 LV_{72}	16.5	X	280.41050	91.43768	321.96901	13.84575	0.2570730	0.17131613	3.2107307	21	8 2.7	21.1
515063 2010 MO_{61}	16.9	X	171.09187	284.85553	2.26553	8.07008	0.2545674	0.21363392	2.7713363	21	—	—
515064 2010 MO_{62}	17.0	X	148.35519	297.30356	5.45289	9.03447	0.2143143	0.20986221	2.8044426	21	—	—
515065 2010 MT_{64}	16.5	X	48.85281	75.41792	286.55861	10.87084	0.0730326	0.19504209	2.9447639	21	12 25.2	20.5
515066 2010 MG_{72}	16.8	X	206.99174	40.75704	217.73806	8.26675	0.1232046	0.21262087	2.7801323	21	—	—
515067 2010 NH_{60}	16.6	X	337.47677	61.04561	357.41308	12.56783	0.1015647	0.18675303	3.0312676	21	11 22.4	20.5
515068 2010 NO_{113}	16.5	X	287.61473	86.30778	357.02143	9.53801	0.2083638	0.17632442	3.1496411	21	9 25.3	20.4
515069 2010 OG_{32}	16.5	X	7.70624	200.93376	171.14555	12.46417	0.1944040	0.18289395	3.0737591	21	11 25.7	20.2
515070 2010 OA_{34}	16.3	X	1.58643	249.19389	132.91170	6.52418	0.1189205	0.18331309	3.0690719	21	11 20.1	20.1
515071 2010 OU_{34}	16.6	X	72.41545	302.83958	21.03548	13.49965	0.0387321	0.18786858	3.0192561	21	11 27.8	21.1
515072 2010 OF_{58}	16.4	X	321.96921	67.04503	348.70505	15.14669	0.0410869	0.18085234	3.0968485	21	10 24.7	20.8
515073 2010 OL_{111}	16.1	X	32.30130	331.16148	31.22158	19.63601	0.1149928	0.18592739	3.0402348	21	12 3.8	20.4
515074 2010 PX_{64}	16.9	X	6.27769	126.82778	277.20577	0.91051	0.0961848	0.19663915	2.9287978	21	12 23.8	20.4
515075 2010 PZ_{67}	16.1	X	35.10798	0.93272	333.30850	11.18614	0.0734803	0.17819076	3.1276101	21	10 26.2	20.5
515076 2010 RY_{85}	16.9	X	356.11487	222.18263	153.41531	10.22113	0.0850605	0.18667525	3.0321095	21	11 2.9	20.9
515077 2010 RQ_{148}	16.8	X	5.98838	52.86352	304.29855	4.24305	0.1447907	0.18355332	3.0663935	21	10 24.2	20.4
515078 2010 RE_{155}	16.0	X	111.05687	6.48159	309.80436	8.88232	0.0328607	0.20054441	2.8906511	21	—	—
515079 2010 SF_{4}	16.4	X	348.14986	118.81891	245.34035	6.42688	0.1160113	0.17955062	3.1117984	21	9 30.1	20.3
515080 2010 SN_{12}	16.2	X	355.17453	172.68541	196.68642	14.84287	0.1504895	0.18375580	3.0641406	21	10 25.3	19.6
515081 2010 SZ_{43}	16.2	X	277.10347	56.71892	29.04086	16.37326	0.1960995	0.17276743	3.1927246	21	9 22.4	20.7
515082 2010 TM_{3}	20.6	X	86.48083	25.53088	30.01674	8.60428	0.2174680	0.57819960	1.4269788	21	—	—
515083 2010 TS_{32}	16.7	X	150.60895	51.02830	194.02185	9.40179	0.0469498	0.18841130	3.0134553	21	11 26.4	21.2
515084 2010 TX_{98}	17.0	X	93.35887	311.58617	17.87790	10.80549	0.1238593	0.19869099	2.9085996	21	—	—
515085 2010 TO_{115}	16.1	X	136.86620	230.49024	22.99751	15.05431	0.0470813	0.18676339	3.0311555	21	11 16.4	20.7
515086 2010 TS_{155}	16.9	X	31.74712	187.11935	177.32460	9.64724	0.1009406	0.18919858	3.0050899	21	12 9.7	21.1
515087 2010 TN_{165}	16.5	X	1.67206	205.30822	200.82282	8.54194	0.1006542	0.18792777	3.0186221	21	12 18.0	20.4
515088 2010 TN_{193}	16.4	X	12.10790	221.50475	188.19774	10.24739	0.0220352	0.18930497	3.0039639	21	12 28.3	20.7
515089 2010 UT_{4}	18.2	X	152.63869	36.26664	321.83430	2.14281	0.1800931	0.30833212	2.1699857	21	1 18.5	20.8
515090 2010 UH_{43}	18.5	X	89.33997	11.84036	53.06786	5.87766	0.1090013	0.30608714	2.1805832	21	1 9.0	20.4
515091 2010 UV_{56}	16.2	X	293.13930	36.08579	46.96434	14.84641	0.2498977	0.17174609	3.2053698	21	10 3.6	20.3
515092 2010 US_{69}	18.2	X	138.07688	342.70615	37.45905	5.26859	0.1275845	0.30816382	2.1707757	21	1 24.3	20.8
515093 2010 UP_{79}	15.6	X	234.14937	245.46415	252.33096	15.74171	0.1093984	0.17247226	3.1963664	21	10 5.5	20.6
515094 2010 UT_{108}	16.5	X	221.51903	148.02356	19.09278	6.99328	0.0511542	0.18046670	3.1012587	21	11 7.5	21.0
515095 2010 VZ_{25}	16.8	X	57.21825	279.44520	70.44030	3.04595	0.1651501	0.18596202	3.0398574	21	12 30.8	21.2
515096 2010 VX_{61}	16.1	X	214.14892	289.11196	274.17005	9.92826	0.0882971	0.18461320	3.0546460	21	12 10.2	20.7
515097 2010 VY_{87}	16.1	X	53.20745	280.17800	47.01700	9.48180	0.0640778	0.17756963	3.1348993	21	11 13.2	20.3
515098 2010 VW_{99}	16.4	X	317.55352	38.91072	19.30623	16.90165	0.2341947	0.17546275	3.1599443	21	10 11.4	19.8
515099 2010 VT_{140}	16.7	X	167.11568	88.16439	209.98015	14.47377	0.1501956	0.20348394	2.8627447	21	—	—
515100 2010 VD_{153}	16.7	X	329.44524	128.01420	259.48983	9.65633	0.0350666	0.17398829	3.1777717	21	9 30.8	21.2
515101 2010 VQ_{161}	16.7	X	336.09312	23.02741	47.34515	10.56704	0.1007169	0.18267636	3.0761995	21	12 7.0	20.5
515102 2010 VU_{163}	15.7	X	327.63920	343.62182	59.76168	27.03045	0.0850680	0.17329386	3.1862555	21	10 30.2	20.0
515103 2010 VR_{178}	16.2	X	307.38717	11.93812	53.07057	9.69720	0.0619828	0.17420492	3.1751368	21	10 22.7	20.5
515104 2010 VW_{208}	16.5	X	78.52483	92.59152	238.06784	9.54392	0.1146029	0.19221858	2.9735310	21	12 25.4	20.9
515105 2010 VD_{209}	16.5	X	291.15170	49.61725	27.43010	24.64058	0.1274688	0.17368178	3.1815094	21	10 9.6	20.7
515106 2010 VQ_{209}	16.5	X	328.40698	350.07614	52.29747	12.40648	0.0983788	0.17473493	3.1687129	21	10 23.3	20.5
515107 2010 WJ_{11}	16.7	X	296.52898	106.95411	346.89637	8.55981	0.0669812	0.17847811	3.1242522	21	11 7.3	21.0
515108 2010 WS_{33}	16.0	X	229.75894	83.88049	74.78210	11.10461	0.0844626	0.17408337	3.1766146	21	11 6.1	20.7
515109 2010 WV_{61}	16.7	X	287.22264	20.17774	62.44564	2.04202	0.1164656	0.16961540	3.2321576	21	10 7.9	20.9
515110 2010 XR_{14}	16.2	X	51.07292	50.90517	279.48194	11.17534	0.1489304	0.18462055	3.0545649	21	11 27.0	20.5
515111 2010 XH_{73}	18.4	X	91.84687	323.57422	93.37506	5.70400	0.1407949	0.30144336	2.2029209	21	1 6.6	20.0
515112 2011 AS_{27}	18.5	X	47.39635	155.81795	283.85920	3.44867	0.1083329	0.28645921	2.2790868	21	—	—
515113 2011 BW_{88}	18.8	X	33.43274	354.56796	135.87135	3.61452	0.1720797	0.29124404	2.2540559	21	1 2.3	20.5
515114 2011 BZ_{135}	18.7	X	40.60119	52.40105	81.79916	3.53745	0.0597951	0.29731384	2.2232722	21	1 27.4	20.8
515115 2011 CS_{79}	18.7	X	29.05816	282.34848	190.79020	4.81913	0.1315427	0.28525792	2.2854808	21	—	—
515116 2011 CH_{91}	18.4	X	292.76010	36.54270	173.38144	1.52557	0.1262714	0.27928123	2.3179722	21	—	—
515117 2011 DH_{38}	18.0	X	232.91264	358.92745	314.47183	2.49308	0.1963573	0.28931463	2.2640662	21	2 9.6	21.6
515118 2011 DX_{48}	18.0	X	315.22635	207.69682	356.05470	7.29955	0.1361391	0.28264343	2.2995532	21	—	—
515119 2011 EK_{37}	17.7	X	275.57450	146.30316	117.59813	5.76246	0.1292635	0.28277563	2.2988364	21	1 23.6	21.0
515120 2011 EZ_{51}	18.0	X	334.73571	104.26850	108.44173	6.28119	0.0884281	0.28966078	2.2622621	21	2 3.3	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515121 2011 EX_{67}	17.9	X	313.30628	341.35681	221.62846	0.90447	0.1248602	0.28018277	2.3129972	21	—	—
515122 2011 EF_{70}	18.6	X	34.49740	85.93253	32.36258	1.97354	0.1768874	0.28307143	2.2972346	21	—	—
515123 2011 EW_{70}	18.3	X	14.50338	152.51160	345.96024	7.30764	0.1682841	0.28396189	2.2924296	21	—	—
515124 2011 EE_{85}	18.2	X	356.80948	135.91549	350.37219	5.34409	0.1763346	0.27509193	2.3414460	21	—	—
515125 2011 FX_{5}	17.2	X	117.97044	13.85144	20.84666	26.03389	0.2113600	0.28503724	2.2866603	21	2 18.5	20.7
515126 2011 FN_{13}	18.0	X	267.93244	91.30950	183.07105	7.85315	0.1981267	0.27938399	2.3174038	21	1 22.6	21.8
515127 2011 FQ_{13}	18.5	X	5.83139	313.84236	181.93321	4.86409	0.1717683	0.27828578	2.3234966	21	—	—
515128 2011 FR_{13}	18.0	X	314.93089	31.96640	181.27899	4.71089	0.1880580	0.27950061	2.3167591	21	—	—
515129 2011 FS_{17}	17.2	X	38.50780	176.11985	296.42264	5.68675	0.1177379	0.28114083	2.3077394	21	—	—
515130 2011 FN_{32}	18.2	X	288.91637	168.20989	87.84065	3.30929	0.1449687	0.28136911	2.3064910	21	1 27.0	21.3
515131 2011 FO_{82}	18.0	X	227.18756	279.88149	12.38943	1.51333	0.1934869	0.27398557	2.3477450	21	1 12.6	21.8
515132 2011 FU_{87}	17.8	X	297.25552	269.52754	352.72850	8.41654	0.2299694	0.28579298	2.2826273	21	2 4.4	21.2
515133 2011 FD_{91}	18.3	X	234.12243	253.00820	16.96381	2.21655	0.1911228	0.27153055	2.3618750	21	—	—
515134 2011 GP_{12}	18.4	X	238.54035	298.84912	317.90488	1.62187	0.1686251	0.26766501	2.3845603	21	—	—
515135 2011 GY_{48}	18.6	X	293.19869	250.28123	4.48542	3.13946	0.2048340	0.28092842	2.3089025	21	1 23.8	22.0
515136 2011 GB_{62}	17.8	X	353.05892	91.39559	73.64099	23.53403	0.2855825	0.28425947	2.2908295	21	—	—
515137 2011 GL_{70}	17.5	X	256.08789	214.44158	48.09688	12.19235	0.1874379	0.27025979	2.3692730	21	1 1.7	21.5
515138 2011 HZ	17.3	X	324.65106	100.69898	106.22526	23.03945	0.1811043	0.27621933	2.3350705	21	—	—
515139 2011 HX_{13}	17.9	X	338.96742	17.43859	157.40817	5.32471	0.1698420	0.27676396	2.3320062	21	—	—
515140 2011 HT_{25}	17.9	X	255.42886	165.52357	119.19758	6.95109	0.1957290	0.27467071	2.3438392	21	1 26.9	21.5
515141 2011 HG_{39}	17.7	X	208.63059	222.42305	105.81649	5.87940	0.1769747	0.27111903	2.3642644	21	2 10.6	21.5
515142 2011 HO_{43}	17.9	X	340.69283	345.06962	190.53566	5.69791	0.1970698	0.27727032	2.3291661	21	—	—
515143 2011 HZ_{72}	18.3	X	358.58136	323.98746	197.18587	4.20918	0.1692997	0.28163286	2.3050508	21	—	—
515144 2011 HN_{77}	18.2	X	286.16223	124.36519	108.49402	3.14881	0.1838789	0.27169973	2.3608945	21	—	—
515145 2011 HK_{84}	18.0	X	281.03409	131.96437	100.93271	3.22756	0.1610056	0.27034860	2.3687541	21	—	—
515146 2011 HO_{100}	18.4	X	255.82324	126.32350	132.62889	4.89718	0.1399763	0.26882017	2.3777242	21	—	—
515147 2011 JU_{12}	16.4	X	202.25609	262.71061	56.92955	26.06418	0.1317176	0.26928872	2.3749653	21	1 28.6	20.6
515148 2011 JH_{17}	18.2	X	291.64941	145.20156	107.49550	2.04475	0.1526978	0.27700751	2.3306391	21	1 25.2	21.6
515149 2011 KK_{21}	16.9	X	271.42068	172.91929	97.12061	7.58811	0.0958923	0.27298728	2.3534652	21	2 1.9	20.2
515150 2011 KP_{27}	18.4	X	273.57139	337.30042	259.01077	1.29397	0.1786856	0.26771405	2.3842691	21	—	—
515151 2011 KJ_{33}	17.6	X	259.60667	146.45475	126.75295	8.77875	0.1907561	0.27044733	2.3681775	21	1 17.0	21.2
515152 2011 LV_{9}	17.8	X	282.06761	100.71941	103.55178	5.21775	0.0754786	0.26241131	2.4162823	21	—	—
515153 2011 LR_{20}	17.0	X	143.08665	173.28495	158.72456	34.40379	0.2400221	0.23405667	2.6076864	21	—	—
515154 2011 MC_{4}	17.3	X	138.33092	170.28716	133.87666	14.54203	0.2331593	0.23529872	2.5985017	21	—	—
515155 2011 MK_{11}	13.8	X	293.99593	54.11641	282.11351	10.00523	0.1440879	0.08563804	5.0975118	21	6 1.3	20.5
515156 2011 OY_{7}	17.7	X	263.33947	165.21936	88.77258	2.33817	0.1501605	0.25986186	2.4320604	21	1 1.3	21.4
515157 2011 OH_{9}	17.4	X	19.23058	250.05247	209.45916	8.07787	0.1296043	0.23776613	2.5804932	21	—	—
515158 2011 PK_{13}	17.3	X	208.42654	304.75485	353.75584	4.59547	0.1654810	0.25293291	2.4762766	21	1 7.3	21.2
515159 2011 PA_{14}	16.8	X	94.94622	186.15799	160.01815	8.47791	0.2484697	0.22685755	2.6625671	21	—	—
515160 2011 PC_{16}	16.3	X	166.35227	116.03986	332.21306	12.76816	0.0465792	0.17357678	3.1827923	21	5 29.6	21.2
515161 2011 QO_{12}	18.5	X	326.05141	142.14518	161.37584	23.61069	0.0971054	0.38425898	1.8737862	21	6 1.8	20.8
515162 2011 QH_{28}	18.3	X	247.58586	197.67618	153.21800	23.03818	0.0807339	0.37256836	1.9127817	21	4 19.3	21.0
515163 2011 QN_{33}	16.5	X	56.24795	191.65686	188.55449	13.43951	0.2491533	0.21957582	2.7211118	21	—	—
515164 2011 QO_{38}	16.7	X	117.75909	189.72632	130.81813	7.17238	0.2101572	0.23046382	2.6347184	21	—	—
515165 2011 QX_{41}	17.3	X	291.88220	248.24770	356.74690	8.11712	0.1839758	0.26332909	2.4106648	21	1 16.5	20.9
515166 2011 QV_{45}	19.0	X	186.36240	239.89876	164.96636	23.40634	0.1194378	0.36755337	1.9301413	21	4 22.1	21.8
515167 2011 QJ_{66}	17.8	X	264.56900	191.14622	126.19961	5.78029	0.2789303	0.26899535	2.3766918	21	3 12.4	21.7
515168 2011 QW_{99}	17.0	X	9.98542	211.73091	181.94244	8.00744	0.2222225	0.21034659	2.8001357	21	—	—
515169 2011 RK_{1}	17.7	X	172.72118	28.11014	256.71761	3.95958	0.2496093	0.23667990	2.5883826	21	—	—
515170 2011 SA_{43}	17.5	X	353.93078	81.08874	356.27254	8.33304	0.1226711	0.21809932	2.7333790	21	—	—
515171 2011 SY_{54}	17.4	X	25.98983	303.63926	120.17240	3.15474	0.0649006	0.22082067	2.7108755	21	—	—
515172 2011 SE_{56}	17.0	X	16.00579	17.50046	59.48129	6.18236	0.0955887	0.22069808	2.7118792	21	—	—
515173 2011 SE_{67}	16.4	X	132.03940	332.84438	14.89598	17.93306	0.2378900	0.23257586	2.6187435	21	1 7.1	20.6
515174 2011 SU_{94}	17.3	X	117.19504	314.87587	6.27688	9.32788	0.0989982	0.22499055	2.6772763	21	—	—
515175 2011 SD_{120}	16.9	X	83.04050	355.42299	324.46960	8.54026	0.0873757	0.21333488	2.7739256	21	12 19.0	21.1
515176 2011 SA_{141}	16.4	X	270.69298	217.69710	16.08555	14.59767	0.1339568	0.23962702	2.5671162	21	—	—
515177 2011 SB_{179}	17.2	X	262.76441	75.01544	9.99338	15.97466	0.3113064	0.18360561	3.0658113	21	8 21.1	22.1
515178 2011 SU_{241}	17.4	X	77.03456	311.33780	43.34655	2.95596	0.1395089	0.22103730	2.7091040	21	—	—
515179 2011 SN_{249}	16.6	X	118.53695	295.37845	48.64563	15.94579	0.1932233	0.22765249	2.6563652	21	—	—
515180 2011 SL_{278}	17.0	X	245.38657	17.64378	205.48531	13.40629	0.1208373	0.23050523	2.6344029	21	—	—
515181 2011 TB_{15}	16.4	X	34.22391	317.58197	47.43724	9.33045	0.3210918	0.21143313	2.7905343	21	—	—
515182 2011 TL_{17}	16.6	X	161.65236	24.87177	255.87481	10.82223	0.1182824	0.22882233	2.6473038	21	—	—
515183 2011 UJ_{66}	16.9	X	311.48497	50.85287	63.02404	9.90578	0.1216354	0.20945254	2.8080983	21	12 31.7	20.2
515184 2011 UM_{69}	16.8	X	62.66675	14.44845	337.20907	8.75140	0.1691101	0.21465523	2.7625389	21	—	—
515185 2011 UZ_{78}	17.1	X	85.56800	345.98013	21.03925	6.42584	0.0443489	0.21885761	2.7270616	21	—	—
515186 2011 UZ_{93}	16.6	X	271.73459	197.04026	26.47755	14.46838	0.2119611	0.23611907	2.5924795	21	—	—
515187 2011 UC_{95}	16.9	X	243.77589	216.80199	30.94539	11.98118	0.1477300	0.23546997	2.5972417	21	—	—
515188 2011 UH_{103}	17.2	X	87.96636	265.85397	89.46597	3.16571	0.1632048	0.21744540	2.7388562	21	—	—
515189 2011 UW_{167}	17.3	X	289.23967	10.66624	45.53682	2.25612	0.2093859	0.18506636	3.0496574	21	8 25.8	21.1
515190 2011 UW_{168}	18.5	X	150.30558	57.14971	11.36823	22.25709	0.1511066	0.35913181	1.9601989	21	4 8.9	20.8
515191 2011 UK_{198}	17.0	X	46.45113	343.19796	57.95417	7.24946	0.0725657	0.21440788	2.7646631	21	—	—
515192 2011 UZ_{223}	17.2	X	321.85263	48.65435	40.32448	6.57800	0.0220790	0.20950776	2.8076048	21	12 16.9	21.0
515193 2011 UA_{226}	17.3	X	50.18213	201.86531	189.77430	5.79939	0.0492336	0.21852070	2.7298638	21	—	—
515194 2011 UL_{246}	18.2	X	314.65058	253.71033	49.65769	22.00256	0.0961014	0.36750719	1.9303030	21	5 7.2	19.5
515195 2011 UX_{248}	17.1	X	352.94031	1.69063	60.35934	7.01094	0.0477177	0.20357097	2.8619287	21	12 24.6	20.8
515196 2011 UB_{319}	16.7	X	129.42388	243.52346	59.36271	9.99263	0.1445040	0.21270525	2.7793969	21	—	—
515197 2011 UH_{330}	16.7	X	89.60953	273.11328	84.68750	7.32981	0.0474119	0.21902205	2.7256964	21	—	—
515198 2011 UT_{355}	16.9	X	65.95647	259.36644	73.77565	4.92955	0.1122179	0.20907164	2.8115079	21	12 17.9	20.9
515199 2011 UC_{362}	17.1	X	147.17673	169.11338	196.73092	2.81136	0.2583591	0.23624138	2.5915846	21	2 10.5	21.3
515200 2011 UH_{414}	17.0	X	42.04126	205.31994	184.18970	6.28801	0.0366024	0.21002262	2.8030144	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515201 2011 UO_{414}	16.7	X	164.32730	229.53739	82.87129	14.12372	0.2086806	0.23201513	2.6229611	21	—	—
515202 2011 UV_{414}	16.6	X	144.81201	220.97335	25.96504	6.33147	0.0352233	0.19553529	2.9398102	21	11 20.9	21.0
515203 2011 VJ_{2}	17.9	X	264.77038	122.85703	223.44144	19.21708	0.0708557	0.36662573	1.9333957	21	4 30.6	19.8
515204 2011 WB_{26}	17.5	X	354.75953	334.77472	88.02419	3.21776	0.0669435	0.20622538	2.8373178	21	12 30.5	21.2
515205 2011 WD_{56}	17.4	X	32.20592	210.40333	214.45395	3.52972	0.0918564	0.21588417	2.7520449	21	—	—
515206 2011 WZ_{59}	17.2	X	24.98881	347.63878	88.06201	7.57058	0.0282392	0.21465267	2.7625608	21	—	—
515207 2011 WG_{64}	16.9	X	323.56170	349.13721	64.53658	10.92778	0.1209843	0.19073273	2.9889540	21	10 31.7	20.5
515208 2011 WY_{64}	17.5	X	293.08343	64.52349	353.30743	2.47682	0.2734433	0.18263414	3.0766735	21	8 22.6	21.4
515209 2011 WX_{87}	16.7	X	221.02386	75.32085	75.55159	25.72482	0.3082915	0.18030658	3.1030945	21	10 11.2	22.5
515210 2011 WX_{102}	16.9	X	49.26328	241.57499	146.41343	6.76810	0.0693893	0.21278809	2.7786756	21	—	—
515211 2011 WB_{129}	17.9	X	326.26948	315.75966	83.06988	2.43488	0.2059975	0.18961945	3.0006417	21	10 9.4	20.9
515212 2011 YR_{27}	16.7	X	359.11204	67.08985	285.32874	6.80425	0.0559351	0.17287001	3.1914615	21	9 28.1	21.0
515213 2011 YQ_{34}	16.3	X	275.27001	8.14527	95.00189	11.30295	0.1287993	0.18190431	3.0848974	21	10 22.0	20.6
515214 2011 YJ_{43}	16.6	X	320.10979	332.47188	102.99677	6.23110	0.1545450	0.19006733	2.9959259	21	11 20.4	20.0
515215 2012 AV_{8}	16.3	X	300.13675	115.62531	295.16381	17.42745	0.1794520	0.17565862	3.1575948	21	8 29.5	20.6
515216 2012 AT_{17}	16.5	X	266.08417	82.20359	356.96761	15.60067	0.2275336	0.17173215	3.2055432	21	8 25.4	21.2
515217 2012 BL_{4}	16.0	X	175.89453	301.81871	285.50126	8.44007	0.0616779	0.18674713	3.0313315	21	11 29.9	20.6
515218 2012 BF_{9}	15.7	X	329.61811	283.33233	149.70726	11.08437	0.0530991	0.18066108	3.0990339	21	12 3.7	20.0
515219 2012 BN_{23}	17.2	X	293.88531	75.96337	16.78229	14.99635	0.2056267	0.18468600	3.0538432	21	10 17.9	20.9
515220 2012 BB_{38}	16.5	X	4.88080	38.26081	312.24588	11.00871	0.1145556	0.17416651	3.1756036	21	10 5.6	20.6
515221 2012 BW_{40}	16.5	X	278.06216	358.12311	109.34781	8.34246	0.0444775	0.18116597	3.0932733	21	11 9.1	20.8
515222 2012 BM_{50}	16.4	X	58.67652	24.62033	290.66649	9.05540	0.0049408	0.17861102	3.1227020	21	10 24.9	20.9
515223 2012 BC_{65}	16.5	X	255.31739	11.39537	134.35084	11.57291	0.0902714	0.18501687	3.0502012	21	11 21.8	21.0
515224 2012 BK_{70}	16.1	X	219.22873	207.14662	327.79751	10.38146	0.0276242	0.17997373	3.1069193	21	11 14.9	20.7
515225 2012 BD_{74}	16.4	X	238.79363	300.90451	135.54574	29.45313	0.3567634	0.16581768	3.2813218	21	7 12.2	22.4
515226 2012 BY_{74}	16.9	X	268.50197	65.00571	65.35739	10.66712	0.2561118	0.18340584	3.0680371	21	10 26.3	21.1
515227 2012 BP_{80}	17.2	X	282.46648	98.84786	32.44261	2.03771	0.1665003	0.18771884	3.0208614	21	11 26.3	20.9
515228 2012 BH_{94}	16.1	X	211.83358	215.50262	316.86303	13.78704	0.1529184	0.17232242	3.1982190	21	10 18.2	21.4
515229 2012 BW_{96}	18.0	X	277.06700	235.58197	103.97472	24.33867	0.0894079	0.35396893	1.9792134	21	5 18.2	20.7
515230 2012 BZ_{99}	16.3	X	307.09933	296.17815	122.24723	12.01322	0.1266084	0.17630071	3.1499235	21	10 10.9	20.4
515231 2012 BS_{101}	17.1	X	241.66123	32.63434	126.77243	2.13029	0.1087852	0.18239364	3.0793775	21	11 16.3	21.5
515232 2012 BH_{106}	16.6	X	230.12056	15.92735	108.28518	17.91330	0.1794451	0.17082318	3.2169046	21	9 19.9	21.9
515233 2012 BU_{106}	16.8	X	252.97112	325.82732	129.51719	15.73382	0.2277977	0.16997537	3.2275927	21	8 28.5	21.8
515234 2012 BA_{115}	16.3	X	8.44032	211.11685	135.27393	14.20751	0.0773168	0.17102327	3.2143951	21	10 14.1	20.7
515235 2012 BE_{121}	16.5	X	242.41485	343.89400	158.95428	9.69821	0.0391435	0.17466385	3.1695725	21	11 7.6	21.1
515236 2012 BC_{137}	17.0	X	229.99936	296.86341	216.09614	0.22767	0.1151984	0.17558328	3.1584980	21	10 24.3	21.5
515237 2012 BE_{142}	17.3	X	319.06754	280.86717	28.94315	20.94139	0.0785126	0.35053562	1.9921159	21	5 22.4	19.4
515238 2012 BP_{156}	16.6	X	281.48668	297.19028	156.77475	10.41084	0.0317477	0.17313016	3.1882637	21	10 28.4	21.1
515239 2012 BT_{156}	16.2	X	243.35731	86.92850	49.59237	9.28414	0.1653111	0.17333775	3.1857177	21	10 15.4	20.9
515240 2012 CQ_{7}	16.0	X	200.64270	258.48712	302.05962	9.20904	0.1389062	0.17743441	3.1364917	21	11 15.5	21.1
515241 2012 CR_{11}	16.8	X	310.17682	307.38932	129.27512	10.25256	0.0376068	0.17704692	3.1410665	21	11 13.5	21.2
515242 2012 CQ_{16}	16.9	X	303.10322	323.21370	113.98535	4.50176	0.1779573	0.17863916	3.1223741	21	10 19.6	20.6
515243 2012 CV_{17}	16.5	X	232.30998	21.81354	143.43403	9.42665	0.1034123	0.17823544	3.1270873	21	11 15.1	21.2
515244 2012 CY_{22}	16.2	X	296.44723	249.08260	164.66182	10.88183	0.1121626	0.16935618	3.2354548	21	9 14.7	20.3
515245 2012 CK_{27}	16.6	X	36.38238	29.69546	331.34382	11.15905	0.1215515	0.18489053	3.0515906	21	12 12.1	20.9
515246 2012 CN_{33}	16.1	X	169.05799	282.96424	313.79040	15.49282	0.1709535	0.17447412	3.1718699	21	11 27.7	21.6
515247 2012 CV_{37}	16.1	X	207.22705	53.68091	152.01645	17.28144	0.1701898	0.17930657	3.1146213	21	12 1.0	21.4
515248 2012 CB_{47}	16.1	X	14.71783	245.75724	151.38329	16.58390	0.0468518	0.18304055	3.0721176	21	12 19.8	20.6
515249 2012 CF_{51}	16.2	X	148.17502	100.16543	156.10943	27.27398	0.0770518	0.17637668	3.1490189	21	12 8.6	21.5
515250 2012 CS_{52}	16.4	X	161.77473	284.75696	329.00238	7.53223	0.1312038	0.17881090	3.1203745	21	12 13.9	21.5
515251 2012 DW_{63}	16.3	X	290.42952	268.57514	149.96309	12.20767	0.1665640	0.17062783	3.2193595	21	9 4.9	20.4
515252 2012 DZ_{70}	16.3	X	230.19653	220.58423	298.32732	9.71735	0.0176066	0.17369624	3.1813329	21	11 9.4	21.0
515253 2012 DB_{83}	16.3	X	192.51089	62.54339	154.54288	16.33565	0.0479826	0.17810882	3.1285692	21	12 8.3	21.2
515254 2012 DW_{96}	16.0	X	209.15188	116.09754	98.01852	27.01300	0.2535498	0.17488845	3.1668583	21	12 6.5	21.5
515255 2012 EA_{11}	16.3	X	227.84504	356.90302	168.39899	5.33437	0.1040246	0.17057289	3.2200506	21	11 7.7	21.1
515256 2012 FB_{82}	16.0	X	222.41461	143.25282	38.73361	11.09387	0.1498984	0.17240091	3.1972482	21	11 14.4	20.9
515257 2012 JS_{19}	18.3	X	308.05249	107.64713	147.61189	2.94836	0.1225964	0.31396053	2.1439732	21	2 14.2	20.9
515258 2012 PF_{3}	18.3	X	100.76367	224.05048	171.67833	5.00760	0.1193143	0.26694693	2.3888347	21	—	—
515259 2012 PK_{42}	15.5	X	84.40212	133.85271	154.48006	4.35646	0.1519597	0.12735295	3.9125813	21	11 8.9	21.3
515260 2012 QM_{52}	15.0	X	108.38669	214.41293	29.68719	3.25684	0.1616415	0.12389340	3.9850820	21	10 12.8	21.1
515261 2012 RC_{4}	16.9	X	136.62231	15.73837	317.01699	16.50190	0.2561590	0.26285528	2.4135608	21	—	—
515262 2012 RH_{16}	17.6	X	172.04228	153.04714	196.73081	7.35785	0.1421684	0.28077030	2.3097693	21	1 27.2	21.0
515263 2012 RR_{22}	17.6	X	348.86104	212.98703	184.69620	4.14704	0.3057668	0.22639591	2.6661853	21	12 19.6	19.6
515264 2012 RC_{30}	17.6	X	131.55929	196.06409	141.51547	7.92410	0.2111167	0.26200621	2.4187723	21	—	—
515265 2012 RJ_{40}	17.0	X	106.27244	5.75891	13.33323	12.04940	0.2691040	0.26199944	2.4188140	21	1 13.2	19.9
515266 2012 SJ_{3}	17.8	X	151.81747	297.60384	33.66531	3.34324	0.1988034	0.26375487	2.4080697	21	—	—
515267 2012 SA_{15}	17.2	X	9.64208	46.87382	352.93125	12.73665	0.1666795	0.23254992	2.6189382	21	—	—
515268 2012 SS_{30}	17.4	X	268.97844	353.18750	320.94749	6.32948	0.1677436	0.29658850	2.2268955	21	3 14.7	20.7
515269 2012 SP_{40}	18.1	X	270.61211	87.29909	199.67186	4.70274	0.1299834	0.28994912	2.2607620	21	2 14.0	21.4
515270 2012 SD_{68}	18.0	X	292.04924	170.29600	58.22648	2.94535	0.0579339	0.27366483	2.3495790	21	1 6.3	20.9
515271 2012 TX_{18}	17.0	X	15.52703	356.65898	54.46352	14.91281	0.2391817	0.23488361	2.6015623	21	—	—
515272 2012 TR_{26}	18.3	X	359.63962	47.06058	6.39752	2.01797	0.2333154	0.23189498	2.6238670	21	—	—
515273 2012 TA_{55}	17.3	X	16.49205	169.51500	234.43532	11.09369	0.1512153	0.23289840	2.6163251	21	—	—
515274 2012 TQ_{55}	18.0	X	109.36775	221.05995	194.08325	3.35058	0.1118194	0.26791007	2.3831060	21	2 4.8	20.9
515275 2012 TK_{95}	17.6	X	248.15584	288.72010	5.48713	7.06900	0.1150857	0.27901013	2.3194734	21	2 6.5	21.0
515276 2012 TM_{103}	17.8	X	201.53344	290.30983	0.65717	6.71251	0.1163162	0.26507316	2.4000790	21	—	—
515277 2012 TV_{103}	17.6	X	243.05042	8.93258	242.21320	4.47485	0.0801897	0.26404618	2.4062982	21	—	—
515278 2012 TJ_{145}	17.3	X	1.60852	43.04647	24.01698	13.57068	0.2661297	0.23563509	2.5960282	21	—	—
515279 2012 TO_{153}	18.1	X	200.79561	253.71569	49.30263	2.01583	0.1895356	0.27231884	2.3573148	21	1 3.3	21.9
515280 2012 TY_{158}	17.8	X	13.39372	235.90333	167.51110	4.14949	0.1469020	0.23597755	2.5935160	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
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515281 2012 TV_{169}	17.5	X	24.03509	308.54986	112.88607	5.23680	0.1840873	0.24039451	2.5616494	21	—	—
515282 2012 TC_{191}	18.3	X	251.19977	297.44864	350.98511	10.84721	0.2973871	0.28644323	2.2791715	21	1 25.5	22.5
515283 2012 TV_{193}	17.5	X	312.87666	288.78242	190.22520	2.83435	0.2691201	0.22935919	2.6431711	21	—	—
515284 2012 TZ_{202}	17.2	X	355.13588	92.28584	34.18614	6.91911	0.0871970	0.25707071	2.4496327	21	—	—
515285 2012 TL_{223}	17.6	X	132.93176	229.68215	98.31362	10.09573	0.2072356	0.25490871	2.4634642	21	—	—
515286 2012 TO_{225}	18.0	X	267.59198	228.45515	38.49280	4.84353	0.1612323	0.27950987	2.3167079	21	1 18.4	21.5
515287 2012 TR_{227}	18.2	X	262.65994	95.95021	177.21214	4.94367	0.1852252	0.28099977	2.3085117	21	1 17.7	21.8
515288 2012 TM_{232}	17.6	X	101.59358	252.70838	163.45306	6.36522	0.1764729	0.26541321	2.3980286	21	2 5.8	20.2
515289 2012 TD_{237}	17.8	X	198.01072	210.88689	89.56605	4.73324	0.1214240	0.26629755	2.3927166	21	—	—
515290 2012 TM_{242}	17.8	X	109.54987	358.59707	39.38685	6.19145	0.0635633	0.26400962	2.4065204	21	1 8.3	20.7
515291 2012 TO_{275}	17.6	X	239.99010	298.71235	324.92533	5.92415	0.1419471	0.26783710	2.3835388	21	—	—
515292 2012 TC_{304}	16.7	X	27.23733	27.90925	25.62439	18.70871	0.2672813	0.23710751	2.5852696	21	—	—
515293 2012 TS_{305}	17.5	X	100.13427	21.58010	6.17224	5.15226	0.1086779	0.25913066	2.4366333	21	—	—
515294 2012 TT_{312}	18.1	X	157.91349	229.04667	132.55716	1.97287	0.1968199	0.27317800	2.3523696	21	2 5.3	21.3
515295 2012 TW_{326}	16.9	X	214.44236	216.85667	94.95563	7.51257	0.1229737	0.27076403	2.3663305	21	1 25.5	20.5
515296 2012 UB_{39}	17.4	X	345.59799	62.95097	14.27841	9.13447	0.1141909	0.23272180	2.6176486	21	—	—
515297 2012 UP_{41}	17.8	X	5.06877	248.72628	200.78669	4.89702	0.1942183	0.24131136	2.5551567	21	—	—
515298 2012 UA_{51}	17.7	X	352.43643	242.73436	189.73937	1.66049	0.1059594	0.23257140	2.6187770	21	—	—
515299 2012 US_{61}	16.8	X	23.44267	285.65439	95.10791	14.27059	0.3087146	0.23185367	2.6241787	21	—	—
515300 2012 UA_{84}	17.2	X	2.70849	22.09885	31.37851	14.25708	0.2531481	0.22832813	2.6511224	21	—	—
515301 2012 UV_{87}	17.3	X	105.89745	79.01045	274.31752	0.79650	0.0295494	0.24348038	2.5399591	21	—	—
515302 2012 UC_{119}	17.2	X	95.96324	277.26635	60.93350	5.96979	0.0674775	0.23593766	2.5938083	21	—	—
515303 2012 UT_{132}	17.5	X	28.35904	282.15140	128.12124	4.87504	0.1902530	0.23717224	2.5847992	21	—	—
515304 2012 UK_{133}	17.5	X	215.76806	352.43808	326.77068	9.62385	0.2229782	0.27984253	2.3148716	21	2 4.8	21.5
515305 2012 VK_{1}	17.7	X	24.66806	273.10548	151.50521	11.85942	0.1167859	0.24237362	2.5476855	21	—	—
515306 2012 VD_{22}	18.1	X	349.48904	47.12105	58.87150	1.44178	0.0962204	0.24168286	2.5525376	21	—	—
515307 2012 VQ_{26}	18.2	X	244.93201	284.96583	28.39001	4.58018	0.1157752	0.28346509	2.2951073	21	2 26.5	21.4
515308 2012 VS_{52}	17.6	X	189.45942	312.91500	46.52057	8.85099	0.1411964	0.27597837	2.3364295	21	3 5.3	21.2
515309 2012 VL_{58}	17.6	X	194.48475	180.03296	70.95075	5.10732	0.0890878	0.24032542	2.5621403	21	—	—
515310 2012 VX_{83}	16.8	X	194.57123	186.86383	71.24035	4.30677	0.0951933	0.24065125	2.5598271	21	—	—
515311 2012 VO_{105}	16.6	X	83.18613	336.68999	17.63998	15.62956	0.1513571	0.24055964	2.5604769	21	—	—
515312 2012 WP_{5}	17.8	X	60.65870	62.72093	310.26533	0.43172	0.0819244	0.23487113	2.6016545	21	—	—
515313 2012 WN_{34}	16.8	X	233.58258	311.71732	250.06212	13.84237	0.0539450	0.22781501	2.6551017	21	—	—
515314 2012 XL_{5}	17.3	X	71.91510	218.54639	144.40096	5.54920	0.2135894	0.23807119	2.5782884	21	—	—
515315 2012 XQ_{6}	16.7	X	299.52569	67.96677	48.75480	26.94655	0.3258310	0.21610492	2.7501705	21	11 18.1	19.1
515316 2012 XM_{7}	17.4	X	5.64937	356.23562	66.73327	8.22128	0.3001342	0.23055513	2.6340228	21	—	—
515317 2012 XQ_{15}	17.0	X	117.74737	285.41088	25.64274	7.42514	0.0421400	0.23037943	2.6353619	21	—	—
515318 2012 XW_{15}	16.6	X	293.21956	220.06623	274.79696	13.93774	0.0728084	0.22700357	2.6614252	21	—	—
515319 2012 XM_{43}	17.1	X	105.79386	294.11226	66.46798	5.74501	0.0993890	0.24247936	2.5469448	21	—	—
515320 2012 XN_{61}	17.3	X	207.38701	164.04538	149.22982	7.01138	0.1459598	0.26336590	2.4104402	21	1 20.7	21.1
515321 2012 XB_{76}	17.4	X	73.42443	250.77401	140.83937	4.46196	0.0668007	0.24399055	2.5364174	21	—	—
515322 2012 XS_{116}	16.9	X	25.58792	158.10024	245.02944	11.52807	0.0836174	0.23064403	2.6333459	21	—	—
515323 2012 XT_{139}	17.7	X	332.83335	308.78299	134.43074	4.57805	0.1969806	0.22351484	2.6890475	21	—	—
515324 2012 XZ_{144}	17.1	X	260.50368	90.73905	104.55960	13.27145	0.2145665	0.21977507	2.7194668	21	—	—
515325 2012 XO_{154}	16.8	X	15.51052	268.26245	168.49507	14.03025	0.1475988	0.23735958	2.5834390	21	—	—
515326 2012 XC_{155}	17.4	X	24.14722	156.73369	249.47830	4.66471	0.3029758	0.23394784	2.6084951	21	—	—
515327 2012 YF_{5}	16.6	X	89.13428	231.76401	156.64206	6.67770	0.2566912	0.24591588	2.5231612	21	—	—
515328 2013 AE_{8}	17.0	X	268.95757	69.45835	124.15941	6.82745	0.1584143	0.21990700	2.7183791	21	—	—
515329 2013 AD_{13}	16.6	X	245.25355	42.15741	114.19380	17.27925	0.2252554	0.20486492	2.8498652	21	11 10.9	21.1
515330 2013 AL_{27}	16.6	X	308.79799	29.23795	84.97803	33.88485	0.2334781	0.22504168	2.6768708	21	12 24.4	18.8
515331 2013 AQ_{44}	17.2	X	293.65725	53.27354	100.91244	4.58414	0.1339551	0.21677794	2.7444753	21	—	—
515332 2013 AB_{49}	17.5	X	299.86333	296.49072	170.83674	11.20213	0.2545086	0.21242349	2.7818541	21	11 21.2	20.4
515333 2013 AP_{52}	17.1	X	259.79219	109.02666	60.58790	8.91869	0.1592160	0.21263952	2.7799697	21	12 18.8	20.7
515334 2013 AN_{55}	16.0	X	118.62628	235.28705	89.54313	14.49326	0.2027701	0.22500228	2.6771833	21	—	—
515335 2013 AW_{60}	18.8	X	223.44948	278.53770	127.85356	28.17105	0.4193269	0.40854627	1.7987683	21	5 27.9	22.8
515336 2013 AY_{98}	17.2	X	258.44815	79.16354	104.72657	8.66306	0.1556779	0.21527531	2.7572315	21	—	—
515337 2013 AD_{128}	17.7	X	304.24965	114.61636	4.21982	7.02875	0.1403168	0.21660650	2.7459232	21	12 27.4	20.8
515338 2013 AP_{136}	16.9	X	148.19867	154.06894	124.34319	6.42058	0.0330572	0.21320398	2.7750609	21	—	—
515339 2013 AE_{143}	16.9	X	264.83402	352.53028	212.92276	13.38618	0.1869101	0.22308820	2.6924748	21	—	—
515340 2013 AD_{170}	17.3	X	104.03075	195.28464	169.46157	9.79897	0.0950000	0.23215317	2.6219212	21	—	—
515341 2013 AX_{184}	17.4	X	336.51913	247.79242	212.47431	5.44118	0.0878164	0.21751914	2.7382372	21	—	—
515342 2013 BT_{10}	17.2	X	211.47550	129.16021	115.59903	1.69876	0.0576302	0.22307520	2.6925794	21	—	—
515343 2013 BK_{14}	16.9	X	242.25162	313.25831	269.27174	11.85020	0.1265970	0.23291430	2.6162061	21	—	—
515344 2013 BC_{15}	17.2	X	38.69123	288.93298	123.34553	9.10997	0.0499555	0.22518753	2.6757148	21	—	—
515345 2013 BH_{38}	17.0	X	337.40035	127.28269	289.84725	8.85957	0.1151063	0.20928993	2.8095526	21	11 29.2	20.3
515346 2013 BV_{39}	17.4	X	33.29419	276.23776	134.50792	7.04386	0.0677701	0.22078764	2.7111458	21	—	—
515347 2013 BK_{61}	16.6	X	36.35802	267.33899	125.15937	14.09320	0.1486587	0.21696801	2.7428722	21	—	—
515348 2013 BT_{67}	16.8	X	53.37974	331.44495	34.44629	5.33259	0.1228367	0.21650940	2.7467442	21	—	—
515349 2013 BV_{70}	17.1	X	340.17048	305.66167	122.36862	8.74626	0.1609486	0.21440231	2.7647110	21	12 23.9	20.0
515350 2013 CY_{9}	17.4	X	349.22926	300.55471	139.75761	6.45205	0.1087461	0.21770459	2.7366820	21	—	—
515351 2013 CH_{32}	17.4	X	287.12479	54.91651	139.72554	9.33574	0.1366221	0.22151264	2.7052270	21	—	—
515352 2013 CA_{54}	17.0	X	143.37522	335.30644	313.61934	5.18731	0.0207972	0.20869203	2.8149162	21	—	—
515353 2013 CL_{61}	17.3	X	276.59603	359.45597	162.14700	13.47365	0.1151362	0.21064694	2.7974733	21	—	—
515354 2013 CY_{74}	17.1	X	17.07748	6.41583	52.29650	5.70858	0.0791588	0.21645088	2.7472392	21	—	—
515355 2013 CX_{96}	17.2	X	271.05018	228.90963	319.84087	2.42642	0.1295572	0.21682881	2.7440460	21	—	—
515356 2013 CL_{110}	16.9	X	141.14830	180.32855	127.54857	15.17200	0.1116669	0.21422790	2.7662114	21	—	—
515357 2013 CJ_{117}	17.0	X	326.10328	103.49596	9.23459	8.43747	0.1077200	0.21244817	2.7816387	21	—	—
515358 2013 CY_{145}	16.6	X	156.24784	298.22315	359.31732	8.68998	0.1390175	0.21176985	2.7875754	21	—	—
515359 2013 CH_{158}	17.0	X	227.75470	160.37116	351.23508	10.37014	0.0787391	0.19045942	2.9918128	21	10 22.6	21.6
515360 2013 CS_{159}	17.0	X	300.96050	5.76008	136.27853	4.91033	0.0598191	0.21128343	2.7918522	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
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515361 2013 CJ_{162}	16.7	X	191.48764	78.48227	139.22157	2.86386	0.0368961	0.19719853	2.9232566	21	12 10.0	21.0
515362 2013 CC_{178}	16.8	X	283.60927	355.13980	181.59998	9.32207	0.0954940	0.21759969	2.7375614	21	—	—
515363 2013 CM_{188}	16.9	X	270.86384	312.44144	123.45235	11.72119	0.2843096	0.19068723	2.9894295	21	8 16.5	21.2
515364 2013 CY_{204}	17.0	X	38.48396	265.27817	130.22089	5.50386	0.1221049	0.21547726	2.7555085	21	—	—
515365 2013 CW_{224}	16.5	X	197.46416	38.76745	169.33886	11.24788	0.0595881	0.17708363	3.1406324	21	12 1.3	21.4
515366 2013 DE_{1}	18.3	X	335.97491	288.38931	11.96796	18.51698	0.0668290	0.39346363	1.8444476	21	6 11.0	20.2
515367 2013 EZ_{25}	16.7	X	259.71978	148.82005	11.89182	2.05095	0.0323328	0.19979012	2.8979221	21	12 23.1	20.5
515368 2013 ER_{28}	16.8	X	167.37790	292.27984	341.71821	16.51540	0.0590743	0.20609318	2.8385309	21	—	—
515369 2013 EE_{38}	16.4	X	2.10489	24.64847	21.68347	9.74739	0.0221103	0.19679823	2.9272192	21	12 12.6	20.5
515370 2013 EJ_{38}	16.4	X	23.08891	314.90613	26.02709	9.63467	0.0338948	0.18090910	3.0962007	21	10 19.5	20.6
515371 2013 EC_{41}	19.0	X	66.56902	219.37485	351.93148	19.26997	0.0393339	0.39271044	1.8468052	21	7 10.1	21.1
515372 2013 EO_{58}	15.6	X	92.54879	291.99067	1.69251	14.98580	0.2094632	0.18179925	3.0860857	21	11 30.8	20.8
515373 2013 EZ_{60}	17.0	X	200.24676	36.66084	171.81831	11.48310	0.1673992	0.19297152	2.9657911	21	11 28.4	21.9
515374 2013 EV_{72}	17.4	X	295.31746	345.06156	150.51126	2.45017	0.0175220	0.20655357	2.8343115	21	—	—
515375 2013 EN_{73}	17.4	X	227.62165	21.05049	151.04431	7.70196	0.1455979	0.19450087	2.9502242	21	11 14.9	21.9
515376 2013 EJ_{76}	16.7	X	129.46129	127.04859	158.29924	10.02937	0.0865869	0.19616364	2.9335289	21	12 23.2	21.3
515377 2013 EW_{81}	17.5	X	274.21791	140.56065	1.47576	7.99149	0.1803207	0.20177063	2.8789276	21	11 27.0	21.2
515378 2013 EH_{87}	16.4	X	137.98561	131.40889	134.47020	10.67811	0.0513405	0.19102417	2.9859132	21	12 8.5	21.0
515379 2013 ED_{108}	16.7	X	324.23787	67.76935	325.92869	9.73398	0.1598528	0.18770055	3.0210577	21	9 25.8	20.2
515380 2013 EH_{155}	17.3	X	187.21863	240.71102	10.30842	3.10569	0.0977328	0.20198716	2.8768698	21	—	—
515381 2013 EJ_{155}	17.1	X	229.84429	152.58874	27.62345	2.68048	0.0605850	0.19169370	2.9789565	21	12 4.6	21.2
515382 2013 EN_{155}	16.9	X	59.60757	124.92934	242.42987	1.10160	0.0797659	0.20320456	2.8653681	21	—	—
515383 2013 ER_{155}	16.5	X	224.24562	28.28557	119.65852	11.61197	0.0724433	0.18313980	3.0710076	21	10 22.9	21.2
515384 2013 FD_{4}	18.4	X	189.87122	250.79708	176.22252	22.51014	0.1305643	0.38568913	1.8691513	21	5 26.4	21.4
515385 2013 FT_{21}	17.1	X	187.67443	190.95542	44.10916	1.79919	0.1659527	0.19159070	2.9800240	21	12 15.9	21.9
515386 2013 GP_{3}	17.9	X	168.51355	287.08322	184.90369	22.32469	0.1007587	0.38800007	1.8617221	21	7 2.4	20.8
515387 2013 GG_{15}	17.2	X	178.65879	34.92859	191.17160	8.78694	0.2331945	0.18601606	3.0392687	21	11 25.9	22.5
515388 2013 GU_{23}	16.6	X	330.51526	227.37877	207.50177	9.01559	0.0069016	0.19042275	2.9921968	21	12 7.6	20.8
515389 2013 GF_{28}	16.3	X	185.43816	166.42049	51.85266	11.67281	0.1901912	0.18899298	3.0072689	21	11 22.5	21.2
515390 2013 GG_{34}	17.0	X	223.13180	16.24385	193.29097	14.76689	0.0912091	0.20557785	2.8432726	21	12 29.9	21.4
515391 2013 GZ_{42}	17.0	X	137.52304	83.92992	189.83248	4.70294	0.1671595	0.18323336	3.0699621	21	12 17.1	22.1
515392 2013 GQ_{47}	17.0	X	145.38588	146.59733	111.92674	3.56365	0.1980648	0.18234379	3.0799387	21	12 6.7	22.2
515393 2013 GY_{65}	16.9	X	139.83982	232.12382	52.70473	7.22074	0.1246282	0.18941394	3.0028116	21	—	—
515394 2013 GX_{69}	16.3	X	149.24346	185.19990	48.77100	18.14187	0.1647144	0.17507673	3.1645874	21	11 10.6	21.6
515395 2013 GV_{76}	16.6	X	18.42674	351.35469	22.44777	9.88736	0.0193950	0.18714079	3.0270789	21	11 20.3	20.9
515396 2013 GN_{80}	18.1	X	336.43538	271.16831	55.50226	23.45955	0.0465912	0.38922511	1.8578136	21	8 25.3	20.4
515397 2013 GJ_{88}	16.3	X	185.16585	82.86191	99.92394	11.21404	0.1080136	0.17611441	3.1521446	21	10 20.4	21.4
515398 2013 GU_{105}	16.5	X	143.24672	280.02741	16.83501	15.91259	0.3551330	0.18467729	3.0539392	21	—	—
515399 2013 GV_{116}	16.6	X	349.59612	265.90480	188.88186	19.31332	0.0899804	0.20662417	2.8336659	21	—	—
515400 2013 GQ_{120}	16.6	X	168.23209	54.34582	145.30486	1.92481	0.1254754	0.17550188	3.1594746	21	10 19.1	21.6
515401 2013 GS_{133}	17.2	X	218.17921	34.12267	183.40844	8.50684	0.1857554	0.19946298	2.9010898	21	12 23.1	21.7
515402 2013 GM_{135}	16.6	X	160.80631	62.08380	195.15260	15.57982	0.0967738	0.18569322	3.0427903	21	12 18.7	21.6
515403 2013 GE_{139}	16.4	X	141.90203	228.29591	24.01843	6.52267	0.1398300	0.17776561	3.1325948	21	11 23.8	21.4
515404 2013 HB_{2}	16.8	X	165.30637	97.94449	129.93126	9.79835	0.0618554	0.17780599	3.1321205	21	11 21.6	21.7
515405 2013 HU_{7}	18.4	X	21.60661	219.83954	53.90240	21.87277	0.0618797	0.38780094	1.8623593	21	8 17.3	20.6
515406 2013 HB_{8}	18.3	X	78.51991	65.97162	154.10145	24.23665	0.0244173	0.39045308	1.8539164	21	8 5.3	20.0
515407 2013 HX_{18}	18.2	X	12.99847	106.06172	171.32836	22.74558	0.0588453	0.38168969	1.8821855	21	7 19.6	20.3
515408 2013 HN_{24}	16.3	X	159.76557	235.84560	32.88430	7.71403	0.1736613	0.18619669	3.0373027	21	12 30.0	21.5
515409 2013 HS_{26}	16.6	X	294.36916	60.89045	48.18324	14.38304	0.1069674	0.18982616	2.9984628	21	11 22.9	20.3
515410 2013 HN_{32}	16.5	X	126.63436	273.73636	348.94889	9.25592	0.2031483	0.17560650	3.1582196	21	11 23.5	21.9
515411 2013 HO_{33}	15.8	X	348.67170	11.67692	4.95247	19.78020	0.1691159	0.17126889	3.2113211	21	10 14.9	19.5
515412 2013 HT_{37}	17.0	X	125.09132	322.58705	316.25636	4.72402	0.1091024	0.18205025	3.0832485	21	12 9.4	21.9
515413 2013 HB_{41}	17.2	X	150.34939	247.69771	7.81579	9.52233	0.0713936	0.18405856	3.0607794	21	12 5.0	22.0
515414 2013 HH_{50}	16.7	X	115.43006	295.30866	13.21505	11.05318	0.1341351	0.18569419	3.0427797	21	—	—
515415 2013 HV_{60}	16.7	X	127.55336	252.46470	6.74616	10.96357	0.0332477	0.17979866	3.1089358	21	11 11.6	21.4
515416 2013 HS_{66}	16.3	X	79.37821	35.26775	284.20892	4.03042	0.1751287	0.17816108	3.1279574	21	12 17.9	21.1
515417 2013 HM_{88}	16.6	X	19.51527	331.01966	18.22869	5.90649	0.0764568	0.17373662	3.1808398	21	10 27.5	20.8
515418 2013 HF_{92}	16.8	X	251.50586	258.31637	206.74350	18.67975	0.2303130	0.17972454	3.1097904	21	9 1.5	21.9
515419 2013 HX_{100}	16.8	X	354.13228	359.44847	20.71706	10.07198	0.0808305	0.17623873	3.1506620	21	10 29.7	20.9
515420 2013 HM_{106}	17.0	X	238.77692	70.69243	35.36962	1.82731	0.1147918	0.17045941	3.2214797	21	9 7.5	21.7
515421 2013 HC_{122}	17.2	X	261.32782	105.89188	25.27374	13.80201	0.1138101	0.18614337	3.0378827	21	11 2.7	21.3
515422 2013 HA_{124}	16.8	X	75.02356	351.41031	355.77319	11.46915	0.1136341	0.18977233	2.9990299	21	—	—
515423 2013 HE_{124}	17.0	X	198.36351	343.15168	223.39463	11.60798	0.2154495	0.18681212	3.0306283	21	11 19.1	22.1
515424 2013 HL_{135}	16.3	X	133.44685	28.13535	210.80732	9.75251	0.0593788	0.17334988	3.1855690	21	10 29.1	21.0
515425 2013 HK_{142}	17.1	X	86.90433	140.33886	188.48248	6.38268	0.1265778	0.18454371	3.0554127	21	12 31.8	21.9
515426 2013 HQ_{146}	16.7	X	106.59980	299.48443	341.59509	1.19606	0.1626416	0.17513084	3.1639356	21	11 27.3	21.7
515427 2013 HE_{157}	17.1	X	165.08606	109.05227	142.19041	11.13126	0.1206048	0.18164987	3.0877774	21	12 16.0	22.1
515428 2013 JS_{35}	16.8	X	177.33243	71.31612	155.07856	3.27040	0.1376749	0.17985168	3.1083247	21	11 27.4	21.8
515429 2013 JA_{47}	16.6	X	197.03166	63.06612	154.45245	10.65370	0.1921169	0.18069444	3.0986524	21	12 2.7	21.8
515430 2013 JO_{48}	16.3	X	185.84675	334.01067	218.07972	9.72303	0.1715531	0.17497617	3.1657998	21	10 23.4	21.4
515431 2013 JG_{54}	16.6	X	166.56987	163.50943	83.23434	6.44326	0.0899747	0.18177276	3.0863855	21	12 12.1	21.2
515432 2013 JF_{56}	16.6	X	218.32276	359.61670	197.39987	9.99568	0.0713912	0.18239093	3.0794080	21	12 9.4	21.2
515433 2013 JE_{58}	16.3	X	120.29691	247.06593	66.11629	14.02333	0.2576226	0.17815020	3.1280847	21	—	—
515434 2013 JU_{60}	16.8	X	154.47243	208.37849	53.37761	2.34814	0.1463848	0.17980172	3.1089005	21	12 16.8	21.8
515435 2013 KL_{8}	18.1	X	15.93448	98.27128	183.69814	21.80553	0.0361800	0.38205549	1.8809839	21	7 29.8	20.3
515436 2013 KH_{12}	18.5	X	33.10281	135.05936	106.98012	23.75608	0.0690494	0.37234963	1.9135307	21	6 30.2	19.8
515437 2013 KW_{16}	16.6	X	138.05314	23.95485	249.50083	3.92733	0.1511904	0.17549412	3.1595677	21	12 15.7	21.7
515438 2013 LF_{30}	18.4	X	12.53909	132.79074	126.47335	23.92713	0.0564048	0.37209960	1.9143878	21	6 21.7	20.4
515439 2013 OG_{2}	17.8	X	335.98004	147.49944	161.42412	24.50748	0.0729308	0.36948270	1.9234164	21	7 2.8	20.1
515440 2013 RU_{65}	15.5	X	17.19811	19.23975	298.25516	1.28491	0.2004527	0.12335354	3.9967007	21	9 19.8	20.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515441 2013 TX_{33}	15.3	X	57.35427	171.02346	130.75718	2.34704	0.2323074	0.12471166	3.9676317	21	11 4.5	20.7
515442 2013 TW_{90}	14.1	X	208.28654	36.50501	9.17600	12.77887	0.0268381	0.08375099	5.1737974	21	5 28.4	21.2
515443 2013 TZ_{131}	18.4	X	63.04410	28.99542	16.17133	6.38033	0.2356624	0.28327948	2.2961097	21	—	—
515444 2013 TQ_{141}	18.8	X	31.31500	303.11211	136.81749	2.70326	0.1963776	0.28142870	2.3061655	21	—	—
515445 2013 TW_{159}	14.1	X	261.43944	339.43383	31.94942	12.40186	0.0431881	0.08307485	5.2018323	21	6 16.7	21.1
515446 2013 UG_{5}	20.3	X	287.14664	79.96311	37.66977	23.33156	0.2882813	0.50702919	1.5575694	21	—	—
515447 2013 UY_{15}	13.7	X	259.52675	326.53136	60.36462	18.28218	0.0407053	0.08223351	5.2372524	21	7 3.3	20.8
515448 2013 VK_{24}	13.3	X	284.05151	65.77714	275.56778	13.23765	0.0930418	0.07999240	5.3346210	21	6 2.7	20.3
515449 2013 VM_{24}	13.6	X	274.85745	72.43128	280.64517	20.45160	0.0883725	0.08123311	5.2801630	21	6 6.8	20.6
515450 2013 WB_{36}	13.7	X	178.13940	15.02435	82.16528	21.73069	0.0335620	0.08397669	5.1645229	21	6 25.6	20.7
515451 2013 WU_{50}	17.3	X	77.59883	14.67005	8.81491	8.17663	0.2759891	0.27900106	2.3195237	21	—	—
515452 2013 WX_{55}	18.7	X	41.85300	47.32637	47.73815	4.89556	0.1889384	0.28219353	2.3019966	21	—	—
515453 2013 WR_{100}	17.8	X	96.39496	320.62477	53.95142	10.04033	0.2236985	0.28149760	2.3057891	21	—	—
515454 2013 WG_{106}	17.4	X	78.04059	298.59379	78.52094	8.86408	0.2627852	0.27736587	2.3286312	21	—	—
515455 2013 WH_{110}	14.2	X	244.16998	270.10175	117.74683	6.34984	0.1095898	0.08290388	5.2089813	21	6 11.1	21.4
515456 2013 XP_{26}	18.2	X	108.31387	286.07189	129.28876	3.94247	0.0865353	0.28934117	2.2639278	21	1 26.8	20.4
515457 2013 YX_{10}	17.7	X	16.19834	350.86083	135.60352	8.04996	0.0707786	0.27011651	2.3701107	21	—	—
515458 2013 YU_{15}	18.0	X	18.05425	350.16319	110.91037	3.42468	0.1689946	0.26686294	2.3893359	21	—	—
515459 2013 YW_{27}	18.2	X	350.92298	49.03106	104.75820	4.12373	0.1532411	0.27160612	2.3614369	21	—	—
515460 2013 YX_{32}	18.6	X	20.25182	78.63902	57.43364	1.46209	0.1384242	0.28494407	2.2871587	21	—	—
515461 2013 YM_{50}	18.2	X	318.93035	319.35655	201.87753	1.99256	0.1621028	0.25940425	2.4349198	21	—	—
515462 2013 YR_{53}	18.1	X	0.14604	188.14896	303.47489	1.99009	0.1271546	0.27534665	2.3400018	21	—	—
515463 2013 YR_{62}	17.8	X	358.70641	306.18947	155.24600	1.64490	0.1331164	0.25932974	2.4353861	21	—	—
515464 2013 YK_{96}	18.5	X	18.59073	158.72776	286.08906	1.92947	0.1929200	0.26186177	2.4196617	21	—	—
515465 2013 YN_{102}	17.9	X	83.94352	306.82593	115.10573	6.09309	0.1468146	0.27888950	2.3201422	21	1 7.4	19.8
515466 2013 YX_{109}	18.5	X	348.89904	354.57438	123.92774	2.40084	0.1874783	0.26088326	2.4257083	21	—	—
515467 2013 YL_{113}	18.0	X	130.57500	305.23040	104.63997	5.48404	0.0718691	0.29034829	2.2586895	21	2 19.3	20.6
515468 2013 YS_{125}	17.9	X	302.88044	216.58791	11.14158	2.41906	0.1608274	0.27229228	2.3574681	21	1 5.7	21.3
515469 2013 YF_{152}	17.5	X	304.65563	315.61804	201.37763	1.89558	0.0492913	0.25367896	2.4714192	21	—	—
515470 2013 YY_{152}	18.3	X	322.27491	185.81950	353.58763	1.18171	0.1245951	0.26465924	2.4025808	21	—	—
515471 2014 AK_{6}	18.1	X	350.32962	113.03621	30.41747	1.69043	0.1298859	0.26818721	2.3814639	21	—	—
515472 2014 AN_{10}	17.1	X	254.63813	66.80001	146.71463	10.80349	0.1275634	0.25373566	2.4710510	21	—	—
515473 2014 AW_{16}	16.8	X	34.46735	345.56403	120.01702	25.93887	0.1991777	0.27861046	2.3216911	21	—	—
515474 2014 AD_{19}	18.0	X	350.85143	202.14403	306.40783	1.85930	0.1460021	0.26824791	2.3811047	21	—	—
515475 2014 AM_{26}	18.3	X	2.38969	214.20446	265.19689	4.68201	0.1642868	0.27256518	2.3558943	21	—	—
515476 2014 AF_{57}	16.9	X	272.47960	183.62277	4.97230	7.47083	0.1593833	0.23109236	2.6299389	21	—	—
515477 2014 BN_{6}	18.1	X	41.25582	19.19070	104.04084	2.95570	0.0754461	0.27678305	2.3318989	21	1 17.2	20.2
515478 2014 BL_{15}	18.1	X	349.50062	112.11057	17.16592	2.58759	0.1350281	0.26367501	2.4085559	21	—	—
515479 2014 BX_{25}	18.1	X	326.39520	351.89431	157.79797	1.89707	0.1334628	0.26009055	2.4306346	21	—	—
515480 2014 BF_{26}	17.7	X	340.77442	268.93999	290.34420	5.63920	0.1036688	0.28116339	2.3076160	21	1 22.5	20.3
515481 2014 BZ_{26}	18.0	X	338.15159	339.88462	150.83461	2.58295	0.1598215	0.26090388	2.4255805	21	—	—
515482 2014 BK_{28}	18.2	X	8.72827	308.56070	196.57861	2.58878	0.1158833	0.27561713	2.3384706	21	—	—
515483 2014 BD_{35}	18.0	X	343.49552	54.03257	104.42809	3.72281	0.1302944	0.26469212	2.4023819	21	—	—
515484 2014 BB_{44}	17.9	X	324.58981	188.87424	334.78199	0.63077	0.1258625	0.26130569	2.4230933	21	—	—
515485 2014 BS_{44}	18.3	X	355.79151	203.38986	261.88259	0.66121	0.1480598	0.25525416	2.4612411	21	—	—
515486 2014 BP_{65}	17.7	X	14.65150	338.89293	148.94869	5.34155	0.0547044	0.26470661	2.4022942	21	—	—
515487 2014 CR_{1}	18.1	X	30.56327	4.16850	89.07465	2.52663	0.1363265	0.26596586	2.3947056	21	—	—
515488 2014 DQ_{7}	17.4	X	251.00383	200.29064	37.01584	3.23431	0.1412585	0.25716152	2.4490561	21	—	—
515489 2014 DB_{8}	17.8	X	148.36780	232.76280	151.97985	6.34341	0.1183857	0.28738166	2.2742071	21	2 13.2	20.8
515490 2014 DN_{8}	17.9	X	300.00258	310.40087	239.40344	0.43107	0.1311921	0.26094317	2.4253370	21	—	—
515491 2014 DV_{26}	18.2	X	337.27891	289.24463	232.63227	1.85578	0.1104531	0.26485742	2.4013822	21	—	—
515492 2014 DU_{32}	17.5	X	261.03412	76.16564	107.27810	5.90141	0.0778426	0.23886439	2.5725774	21	—	—
515493 2014 DE_{59}	17.8	X	334.65331	26.54378	87.43853	5.62326	0.0601860	0.23968872	2.5666756	21	—	—
515494 2014 DS_{62}	17.7	X	236.90615	256.46746	47.88197	1.66898	0.2204780	0.26218208	2.4176906	21	2 5.4	21.6
515495 2014 DV_{66}	17.9	X	346.35313	32.67460	56.71816	6.11604	0.2388604	0.24155520	2.5534369	21	—	—
515496 2014 DD_{69}	17.8	X	29.24457	345.39964	118.59096	6.00117	0.0754126	0.25489612	2.4635454	21	—	—
515497 2014 DB_{72}	18.1	X	304.63522	88.81004	57.28215	5.14038	0.1321587	0.23881703	2.5729175	21	—	—
515498 2014 DK_{88}	18.1	X	52.04454	114.23593	325.53172	3.98626	0.1770126	0.26716098	2.3875585	21	—	—
515499 2014 DL_{98}	18.1	X	270.49269	76.26868	188.30306	2.00877	0.1803920	0.26422422	2.4052172	21	1 17.7	21.7
515500 2014 DA_{106}	17.6	X	216.19111	271.49398	341.64251	2.77162	0.1871855	0.23919352	2.5702169	21	—	—
515501 2014 DJ_{113}	17.9	X	230.34239	78.39497	161.05769	7.99418	0.1537550	0.24252430	2.5466302	21	—	—
515502 2014 DP_{113}	17.8	X	15.07729	310.24653	170.61290	5.52632	0.1087630	0.26324040	2.4112062	21	—	—
515503 2014 DP_{114}	17.8	X	315.48134	89.34734	18.19557	10.99124	0.1965149	0.23667472	2.5884203	21	—	—
515504 2014 DL_{116}	17.0	X	98.98913	219.61368	152.88330	12.17790	0.0614784	0.24607879	2.5220475	21	—	—
515505 2014 DP_{147}	17.0	X	257.87562	53.32047	102.17563	9.40070	0.0926966	0.21411148	2.7672140	21	12 9.7	20.7
515506 2014 DJ_{148}	17.5	X	204.66423	110.51671	173.27248	3.72626	0.1437036	0.24566308	2.5248919	21	—	—
515507 2014 DK_{148}	17.6	X	280.81385	152.55035	20.47293	8.35992	0.0538835	0.23882446	2.5728641	21	—	—
515508 2014 ED_{7}	17.2	X	283.32337	251.84248	1.17561	10.14456	0.2123224	0.26217021	2.4177635	21	1 16.1	21.1
515509 2014 EO_{14}	17.7	X	345.39859	264.54697	157.92629	7.92397	0.1817707	0.23252248	2.6191443	21	—	—
515510 2014 EX_{19}	17.2	X	133.56141	217.91587	140.13573	7.89590	0.1142381	0.25529862	2.4609553	21	—	—
515511 2014 EQ_{21}	17.9	X	260.52927	171.03842	22.88150	4.52151	0.1060605	0.24037215	2.5618082	21	—	—
515512 2014 EY_{26}	17.6	X	249.94938	48.98288	144.26686	8.11299	0.1071968	0.23419380	2.6066684	21	—	—
515513 2014 ER_{30}	17.6	X	56.16698	312.35713	150.33425	7.45180	0.0756547	0.26630211	2.3926893	21	1 14.7	20.3
515514 2014 EJ_{32}	17.6	X	277.62774	119.15790	51.11472	6.19319	0.1175256	0.23273346	2.6175612	21	—	—
515515 2014 EQ_{45}	17.9	X	298.40702	126.48951	32.50765	5.61486	0.1233390	0.24411852	2.5355309	21	—	—
515516 2014 EO_{47}	17.5	X	220.08425	215.80800	16.96758	13.82559	0.2094787	0.23367408	2.6105320	21	—	—
515517 2014 EF_{102}	17.3	X	236.71676	331.18855	313.84820	6.26152	0.0828380	0.26509073	2.3999730	21	1 15.6	20.8
515518 2014 ES_{133}	18.1	X	336.33437	211.10899	240.24713	3.95554	0.2232431	0.24053071	2.5606823	21	—	—
515519 2014 EF_{225}	17.3	X	222.23060	339.45592	314.03368	1.25732	0.1436568	0.25846745	2.4407997	21	1 11.7	21.1
515520 2014 EQ_{248}	17.4	X	268.15081	213.85617	338.80950	5.87334	0.1258639	0.24095419	2.5576811	21	—	—

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515521 2014 FG_{4}	17.4	X	45.38689	38.92070	62.69533	7.90295	0.0824772	0.26265633	2.4147794	21	—	—
515522 2014 FQ_{5}	17.6	X	269.39969	188.36461	12.08512	9.68956	0.0696934	0.24677630	2.5172929	21	—	—
515523 2014 FL_{9}	17.4	X	287.24380	277.33162	308.82130	2.16064	0.1211803	0.26475339	2.4020112	21	—	—
515524 2014 FL_{35}	17.1	X	263.16267	197.45456	20.72730	12.33846	0.2392896	0.23738267	2.5832715	21	—	—
515525 2014 FC_{57}	17.3	X	259.70420	24.39123	176.31575	14.63878	0.0451030	0.23886594	2.5725662	21	—	—
515526 2014 FK_{64}	17.0	X	219.45026	284.83271	2.97950	12.86998	0.2950835	0.24207846	2.5497559	21	1 8.1	21.9
515527 2014 FJ_{73}	17.5	X	264.51153	247.47278	289.44861	0.94758	0.1177773	0.22928648	2.6437299	21	—	—
515528 2014 FW_{73}	17.1	X	218.65677	167.41255	79.96438	5.41381	0.1952722	0.22875076	2.6478559	21	—	—
515529 2014 FX_{73}	17.0	X	247.66636	111.47239	37.81351	14.17758	0.1771755	0.21433856	2.7652592	21	11 5.1	20.8
515530 2014 GG_{5}	16.7	X	270.76572	184.26833	9.49010	30.13984	0.0328040	0.23949600	2.5680523	21	—	—
515531 2014 GG_{6}	17.3	X	267.71964	344.85719	200.38814	3.96779	0.0560050	0.23066153	2.6332127	21	—	—
515532 2014 GN_{7}	17.8	X	219.30494	79.65302	167.29110	4.62031	0.1078059	0.23608184	2.5927521	21	—	—
515533 2014 GS_{7}	17.4	X	200.61117	86.29084	186.36722	11.53835	0.0588501	0.23971547	2.5664847	21	—	—
515534 2014 GS_{13}	17.3	X	203.99220	248.59099	9.12493	14.78409	0.0752623	0.23396044	2.6084015	21	—	—
515535 2014 GC_{14}	17.3	X	279.83131	122.70135	30.55602	12.38978	0.2340483	0.23015700	2.6370595	21	12 21.4	20.3
515536 2014 GU_{25}	17.2	X	199.66138	238.15178	4.73534	8.18927	0.0902509	0.22316602	2.6918489	21	—	—
515537 2014 GQ_{28}	17.5	X	276.64681	108.61563	40.04213	11.45346	0.1216984	0.22153949	2.7050084	21	12 23.9	20.9
515538 2014 GJ_{30}	17.6	X	286.17243	25.27454	172.64263	1.66814	0.1652278	0.24244765	2.5471669	21	—	—
515539 2014 GO_{37}	18.4	X	265.89910	142.03955	76.65244	5.37515	0.2335366	0.24223194	2.5486788	21	—	—
515540 2014 GB_{43}	17.6	X	295.59440	134.79400	43.93836	6.38656	0.2097994	0.23952961	2.5678121	21	—	—
515541 2014 GD_{43}	17.5	X	219.51338	349.13838	215.44915	2.05148	0.1459041	0.21719364	2.7409723	21	12 16.7	21.5
515542 2014 GU_{45}	17.3	X	174.66333	181.46301	67.74649	5.94003	0.0649172	0.22023238	2.7157009	21	12 31.3	21.4
515543 2014 GL_{53}	17.3	X	269.15054	347.41050	210.17083	13.43577	0.1889112	0.23897043	2.5718163	21	—	—
515544 2014 GJ_{56}	17.5	X	167.30839	104.73669	182.68898	2.19241	0.1117761	0.22453433	2.6809017	21	—	—
515545 2014 GK_{56}	17.4	X	157.96324	113.06626	178.27487	5.24805	0.0353516	0.22349315	2.6892215	21	—	—
515546 2014 GA_{57}	17.2	X	231.38857	212.63846	28.56353	15.40045	0.0597746	0.23434694	2.6055326	21	—	—
515547 2014 GC_{57}	16.9	X	1.79032	66.36075	14.04314	22.26388	0.0461009	0.22778404	2.6553423	21	—	—
515548 2014 GK_{57}	17.6	X	184.16701	248.85926	43.45582	4.25668	0.1277369	0.23261877	2.6184214	21	—	—
515549 2014 GM_{57}	17.3	X	121.54529	159.13877	165.97443	5.19855	0.0430946	0.22321175	2.6914812	21	—	—
515550 2014 GZ_{57}	17.1	X	241.70679	332.52745	219.30066	4.12354	0.0285967	0.21950217	2.7217204	21	—	—
515551 2014 GB_{58}	16.2	X	193.08443	64.34295	30.58959	13.28182	0.1689196	0.17285623	3.1916311	21	7 8.1	21.6
515552 2014 HC_{2}	16.6	X	244.82822	31.84892	207.88896	32.44219	0.1624087	0.23255904	2.6188697	21	—	—
515553 2014 HA_{8}	17.1	X	242.40803	112.22882	120.05203	12.63917	0.0515367	0.23057783	2.6338499	21	—	—
515554 2014 HO_{13}	17.8	X	224.50272	56.83049	166.40926	2.61699	0.1422221	0.22391160	2.6858700	21	—	—
515555 2014 HD_{16}	17.1	X	87.35670	298.68170	34.35950	6.49056	0.0496411	0.21462708	2.7627805	21	—	—
515556 2014 HJ_{22}	17.0	X	216.75421	145.81330	105.88222	6.38755	0.2219585	0.22882416	2.6472897	21	—	—
515557 2014 HT_{22}	16.7	X	208.28887	141.94372	133.75686	14.40466	0.1536969	0.23202844	2.6228608	21	—	—
515558 2014 HY_{22}	17.5	X	247.66350	80.59811	115.08648	12.24321	0.2362442	0.22485412	2.6783591	21	12 27.7	21.1
515559 2014 HD_{23}	17.0	X	192.36229	138.21447	133.75024	12.44163	0.1703678	0.22306141	2.6926904	21	—	—
515560 2014 HF_{23}	16.9	X	193.35920	134.68603	118.81184	11.80871	0.2744670	0.21689050	2.7435257	21	—	—
515561 2014 HG_{23}	17.3	X	265.17561	136.44587	38.30628	18.17722	0.1117127	0.23064208	2.6333607	21	—	—
515562 2014 HK_{24}	17.4	X	278.33030	162.07061	24.11764	7.66738	0.1189308	0.23792094	2.5793737	21	—	—
515563 2014 HU_{27}	17.5	X	302.04662	114.06227	48.81037	3.65268	0.0398142	0.23584514	2.5944866	21	—	—
515564 2014 HW_{31}	17.8	X	273.52132	46.50387	110.33576	5.75019	0.1577495	0.22485014	2.6783908	21	12 26.3	20.8
515565 2014 HJ_{33}	17.4	X	135.84519	175.46368	138.23472	4.24217	0.1892185	0.21764719	2.7371631	21	—	—
515566 2014 HY_{38}	17.4	X	312.30539	339.78522	196.56631	14.57232	0.1176199	0.24278704	2.5447925	21	—	—
515567 2014 HU_{40}	17.4	X	129.13828	182.72981	151.99617	4.92415	0.0993135	0.22640309	2.6661289	21	—	—
515568 2014 HB_{43}	16.8	X	240.10877	7.84737	199.23508	13.11378	0.1128189	0.22500687	2.6771469	21	—	—
515569 2014 HL_{47}	17.3	X	119.53643	212.18922	84.67925	5.57102	0.0411885	0.21310506	2.7759195	21	12 27.4	21.3
515570 2014 HA_{98}	17.3	X	197.88313	167.92053	139.42114	5.41265	0.2103820	0.23814553	2.5777518	21	1 11.4	21.6
515571 2014 HG_{100}	17.4	X	94.98695	266.21825	65.25116	6.54815	0.0374128	0.21637283	2.7478998	21	—	—
515572 2014 HC_{102}	17.3	X	116.40313	216.36769	92.70904	4.72921	0.0564306	0.21499367	2.7596389	21	—	—
515573 2014 HV_{131}	17.1	X	231.90028	67.39000	171.79238	14.15213	0.0697603	0.22713981	2.6603608	21	—	—
515574 2014 HA_{136}	17.4	X	308.69817	48.82357	44.83649	5.03230	0.0259473	0.21010827	2.8022526	21	12 5.4	21.1
515575 2014 HX_{137}	17.2	X	163.38278	166.91704	89.48506	6.98343	0.0203732	0.21471929	2.7619894	21	12 28.7	21.1
515576 2014 HW_{151}	17.2	X	175.18211	151.59817	159.17883	10.37260	0.0883014	0.24148216	2.5539517	21	—	—
515577 2014 HF_{163}	17.9	X	305.92621	174.53602	345.59390	8.23499	0.1924931	0.24377214	2.5379321	21	—	—
515578 2014 HG_{167}	17.3	X	143.92563	176.69683	137.65234	7.19179	0.0700647	0.22361309	2.6882597	21	—	—
515579 2014 HK_{173}	17.5	X	307.22651	77.57636	72.16135	13.92317	0.2047645	0.23523810	2.5989481	21	—	—
515580 2014 HU_{190}	17.5	X	242.97156	61.90764	168.18703	12.20069	0.2479624	0.22964670	2.6409646	21	—	—
515581 2014 HH_{202}	17.3	X	228.78105	116.46993	132.02355	14.52360	0.1302917	0.23400224	2.6080908	21	—	—
515582 2014 HA_{203}	17.5	X	193.86565	220.54385	90.46685	6.49699	0.1488073	0.23995323	2.5647890	21	1 10.1	21.5
515583 2014 JV	16.7	X	185.49954	34.59482	265.37419	7.94307	0.2267809	0.22903994	2.6456267	21	—	—
515584 2014 JC_{12}	17.7	X	176.05922	185.56548	100.75243	3.57282	0.1792734	0.22041222	2.7142235	21	—	—
515585 2014 JM_{12}	17.0	X	259.43536	139.53794	63.93251	13.20231	0.1171725	0.22919234	2.6444538	21	—	—
515586 2014 JN_{12}	17.5	X	175.92002	138.65051	104.15417	4.55193	0.0421097	0.20968007	2.8060664	21	12 24.3	21.4
515587 2014 JG_{13}	17.1	X	141.66895	217.67551	82.03108	10.47806	0.1699642	0.21161407	2.7889433	21	—	—
515588 2014 JF_{14}	17.2	X	357.31430	46.25271	73.69363	13.09756	0.1253021	0.23802517	2.5786207	21	—	—
515589 2014 JN_{16}	16.8	X	214.01343	105.10345	204.50769	28.00958	0.3188063	0.23599473	2.5933901	21	1 21.9	22.2
515590 2014 JS_{22}	17.3	X	214.85255	25.97813	210.27056	8.52341	0.1801376	0.21911868	2.7248951	21	—	—
515591 2014 JB_{27}	17.1	X	185.18075	163.92086	127.65438	11.38395	0.1793172	0.22693345	2.6619733	21	—	—
515592 2014 JN_{31}	17.4	X	173.81036	136.53055	148.49075	8.58267	0.1780552	0.21713384	2.7414755	21	—	—
515593 2014 JJ_{33}	17.6	X	204.07080	117.97088	104.06670	4.40750	0.0340160	0.21630595	2.7484662	21	—	—
515594 2014 JA_{34}	16.8	X	219.18232	112.93360	93.37535	9.82737	0.0802243	0.21746417	2.7386986	21	12 26.6	20.6
515595 2014 JU_{36}	16.9	X	359.37623	9.39794	58.22200	5.26349	0.0951789	0.21461686	2.7628682	21	—	—
515596 2014 JQ_{40}	16.7	X	4.94269	10.93810	56.11589	26.71866	0.1264426	0.21939672	2.7225924	21	—	—
515597 2014 JX_{40}	17.6	X	218.37449	158.25912	66.86103	4.25502	0.0523090	0.21918194	2.7243707	21	—	—
515598 2014 JY_{45}	17.3	X	149.75545	66.90713	250.82021	0.80170	0.0924953	0.22712262	2.6604951	21	—	—
515599 2014 JC_{53}	17.1	X	246.65470	168.54679	52.59099	12.62458	0.1330594	0.22889237	2.6467637	21	—	—
515600 2014 JX_{62}	17.1	X	174.30678	108.68197	172.30318	13.21032	0.2023029	0.21880217	2.7275222	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515601 2014 JL_{64}	17.1	X	345.10344	76.92768	63.24242	5.99684	0.0782752	0.23924057	2.5698799	21	—	—
515602 2014 JD_{65}	17.0	X	162.55706	146.48512	123.14306	4.27131	0.0527913	0.21390330	2.7690092	21	—	—
515603 2014 JN_{65}	17.4	X	273.12426	53.98250	154.95185	4.45785	0.0632331	0.23558684	2.5963826	21	—	—
515604 2014 JT_{73}	17.2	X	235.54120	339.19023	227.98520	11.46076	0.1342197	0.21982185	2.7190810	21	—	—
515605 2014 JK_{84}	17.0	X	359.90496	1.52150	109.08313	16.29975	0.0682614	0.23122871	2.6289049	21	—	—
515606 2014 JA_{85}	17.4	X	303.70902	1.26995	174.56401	7.63668	0.1277666	0.23540629	2.5977100	21	—	—
515607 2014 JC_{85}	17.2	X	294.14326	92.62142	69.23105	11.87982	0.0287040	0.22561251	2.6723537	21	—	—
515608 2014 JG_{85}	17.2	X	83.99359	253.58468	121.22650	5.80969	0.0057242	0.22477064	2.6790223	21	—	—
515609 2014 KM_{1}	17.2	X	220.56576	146.30815	104.73922	9.02940	0.2955186	0.22707456	2.6608704	21	—	—
515610 2014 KA_{17}	17.5	X	181.70052	157.37624	133.90837	3.77840	0.1637321	0.22279771	2.6948147	21	—	—
515611 2014 KF_{19}	17.1	X	243.02913	64.00021	88.89689	3.24354	0.0139138	0.20226124	2.8742703	21	11 26.1	21.0
515612 2014 KC_{36}	16.8	X	262.32208	16.74916	165.61458	13.26225	0.1049783	0.22516700	2.6758775	21	—	—
515613 2014 KM_{41}	17.6	X	209.25585	227.54194	24.94037	2.40201	0.1609795	0.22239821	2.6980408	21	—	—
515614 2014 KF_{45}	16.8	X	209.06870	282.92462	36.68027	28.00510	0.3949232	0.23494802	2.6010869	21	2 19.9	22.5
515615 2014 KZ_{52}	17.2	X	260.86839	75.83614	145.89256	4.25133	0.1862788	0.23285188	2.6166736	21	—	—
515616 2014 KN_{67}	17.0	X	224.54255	126.44920	106.27644	7.30667	0.0184056	0.22110887	2.7085193	21	—	—
515617 2014 KR_{87}	17.0	X	222.33204	129.85791	87.62887	15.08111	0.1002883	0.22043498	2.7140367	21	—	—
515618 2014 KY_{91}	16.9	X	256.87876	103.04345	136.35358	13.87452	0.2331787	0.23582103	2.5946634	21	—	—
515619 2014 KU_{94}	17.1	X	181.80305	134.94300	134.90463	9.61987	0.0740157	0.21598564	2.7511829	21	—	—
515620 2014 KK_{98}	16.2	X	74.81845	219.25724	89.51041	9.59584	0.0812624	0.18682272	3.0305137	21	11 22.6	20.5
515621 2014 KB_{104}	16.5	X	151.90930	247.76460	64.78321	17.78124	0.1227573	0.21823602	2.7322374	21	—	—
515622 2014 KC_{104}	16.7	X	185.76080	256.29143	37.72130	11.82733	0.2036628	0.21509850	2.7587422	21	—	—
515623 2014 KG_{104}	17.4	X	275.74216	353.52019	190.53394	11.70400	0.1262183	0.22629647	2.6669663	21	—	—
515624 2014 KE_{105}	17.2	X	251.80641	41.21262	167.43127	9.57063	0.1739625	0.22360644	2.6883130	21	—	—
515625 2014 KM_{105}	17.3	X	207.95779	201.05175	66.69360	3.12806	0.0123743	0.22654638	2.6650046	21	—	—
515626 2014 LP	16.7	X	247.07691	335.35321	254.33050	12.71078	0.1243509	0.22848082	2.6499411	21	—	—
515627 2014 LW_{3}	17.0	X	113.02582	242.83692	95.57823	7.23229	0.0453239	0.21766767	2.7369914	21	—	—
515628 2014 LA_{6}	17.1	X	343.88787	356.99510	99.29650	5.50109	0.0339967	0.21577851	2.7529432	21	—	—
515629 2014 LL_{12}	17.4	X	228.75468	201.29309	55.79767	3.71413	0.1409901	0.22882252	2.6473023	21	—	—
515630 2014 LJ_{23}	17.2	X	175.89477	171.85573	115.12053	9.76913	0.2525930	0.21489625	2.7604729	21	—	—
515631 2014 LM_{27}	17.7	X	257.36973	52.17899	161.94240	12.55973	0.2412059	0.23089617	2.6314285	21	—	—
515632 2014 LG_{29}	16.2	X	107.20223	148.70523	155.55866	11.84678	0.1636022	0.18091805	3.0960986	21	12 25.7	21.3
515633 2014 LU_{29}	16.1	X	151.17379	37.29732	223.75554	9.69928	0.0593912	0.18461901	3.0545819	21	12 14.1	20.7
515634 2014 MR_{3}	16.4	X	111.15040	66.18348	235.47636	12.32609	0.0881076	0.20192224	2.8774864	21	12 23.9	20.8
515635 2014 MW_{6}	17.4	X	199.99217	102.74319	185.36399	12.44957	0.1810017	0.22569451	2.6717063	21	—	—
515636 2014 MX_{9}	17.1	X	237.98123	176.32320	124.67260	7.76401	0.2092884	0.24286312	2.5442610	21	2 4.7	21.5
515637 2014 MO_{14}	16.9	X	219.48352	145.40302	128.01100	14.75902	0.2521131	0.23217385	2.6217655	21	—	—
515638 2014 MC_{21}	16.9	X	191.28874	4.59148	254.50308	8.10332	0.1059291	0.21525321	2.7574202	21	—	—
515639 2014 MK_{27}	21.5	X	122.80116	349.45769	69.54194	8.47999	0.3391270	0.93022866	1.0393047	21	—	—
515640 2014 MZ_{32}	16.5	X	113.77207	28.35150	263.88953	11.56235	0.0794440	0.19733243	2.9219340	21	12 14.9	20.8
515641 2014 ML_{35}	17.1	X	173.82370	193.20515	79.10924	9.57183	0.2006833	0.21024300	2.8010553	21	—	—
515642 2014 MF_{57}	16.4	X	109.76025	315.52514	316.82875	15.74490	0.2065695	0.17557418	3.1586072	21	11 19.9	21.9
515643 2014 MH_{64}	16.8	X	163.80072	9.45253	270.24153	7.23185	0.2217938	0.19811286	2.9142553	21	—	—
515644 2014 ME_{72}	16.6	X	82.86857	331.75559	351.95213	7.51789	0.0625754	0.18133179	3.0913873	21	12 14.0	21.2
515645 2014 NZ_{27}	16.4	X	34.83192	211.87753	149.58246	11.27301	0.0974501	0.17491010	3.1665970	21	12 7.6	20.9
515646 2014 NB_{36}	16.3	X	94.68688	274.80365	50.31450	13.87478	0.1914870	0.18015199	3.1048694	21	—	—
515647 2014 NP_{60}	16.5	X	103.20703	344.22028	318.44982	9.80620	0.0733695	0.17704229	3.1411213	21	12 11.9	21.4
515648 2014 OA_{19}	16.6	X	112.93996	2.01617	280.21482	6.36293	0.0604982	0.17907927	3.1172562	21	11 27.3	21.3
515649 2014 OU_{30}	17.1	X	154.45949	187.21747	101.62280	3.08149	0.0846671	0.19776186	2.9177026	21	—	—
515650 2014 OZ_{37}	17.1	X	142.88256	137.06314	130.41899	3.48537	0.0876523	0.18472503	3.0534130	21	12 13.7	21.7
515651 2014 OT_{41}	17.0	X	185.07943	135.77544	96.56008	5.57369	0.1724929	0.19251302	2.9704984	21	12 10.6	21.9
515652 2014 OO_{46}	16.2	X	149.89130	283.99055	310.57702	8.10188	0.0453751	0.17584684	3.1553413	21	11 7.2	21.0
515653 2014 OY_{77}	16.3	X	69.89621	222.34238	85.99496	11.23787	0.0718803	0.17358316	3.1827143	21	11 14.1	20.9
515654 2014 OL_{79}	16.4	X	23.70145	332.75266	48.59185	5.18983	0.1093215	0.17909835	3.1170348	21	12 17.3	20.5
515655 2014 OP_{84}	16.3	X	251.21330	26.31212	103.62136	10.24262	0.0425230	0.17643556	3.1483184	21	11 3.7	20.9
515656 2014 OX_{87}	16.8	X	289.29116	274.92736	203.73079	5.71215	0.0055489	0.18353014	3.0666517	21	12 8.8	21.1
515657 2014 OB_{105}	16.9	X	199.04094	146.92348	134.58626	14.42384	0.1683868	0.22777467	2.6554151	21	—	—
515658 2014 OH_{131}	16.7	X	216.48280	87.75920	182.95658	14.63321	0.0827669	0.22846591	2.6500564	21	—	—
515659 2014 OW_{133}	15.9	X	259.18941	18.14805	113.16964	17.31411	0.1021764	0.17812270	3.1284067	21	11 9.9	20.6
515660 2014 OA_{183}	16.5	X	130.75724	294.70549	340.72393	14.22961	0.1669446	0.18037902	3.1022637	21	12 11.9	21.9
515661 2014 OZ_{190}	16.0	X	141.07213	306.77197	348.35798	17.18441	0.3023080	0.18535659	3.0464732	21	—	—
515662 2014 OE_{201}	16.3	X	93.45591	161.51647	131.63322	18.54792	0.1219179	0.17431339	3.1738195	21	11 29.9	21.4
515663 2014 OM_{226}	16.2	X	101.52167	212.82312	74.57359	6.81903	0.1605163	0.17222370	3.1994411	21	11 29.9	21.3
515664 2014 OV_{245}	16.4	X	154.25698	267.49795	351.65914	9.46136	0.0719984	0.18833552	3.0142636	21	12 15.1	21.1
515665 2014 OH_{259}	16.2	X	53.77884	359.49048	341.16926	9.30688	0.0378521	0.17478961	3.1680521	21	11 23.9	20.8
515666 2014 OY_{285}	16.4	X	90.33443	226.08898	98.88303	12.28132	0.1148262	0.17870688	3.1215852	21	12 29.1	21.2
515667 2014 OE_{290}	15.7	X	106.02995	170.73322	123.58968	19.83904	0.1476105	0.17650663	3.1474731	21	12 14.2	20.9
515668 2014 OP_{306}	16.8	X	38.30778	255.09841	120.42677	5.97182	0.0179503	0.18215848	3.0820271	21	12 18.3	21.1
515669 2014 OH_{317}	16.3	X	174.02112	86.89041	152.86439	16.46937	0.0885804	0.17390906	3.1787368	21	12 12.2	21.5
515670 2014 OG_{322}	16.6	X	60.70220	214.14373	123.00776	12.55075	0.0261815	0.17852348	3.1237228	21	12 2.1	21.2
515671 2014 OK_{328}	16.8	X	104.06078	160.34301	134.84023	6.56600	0.1624252	0.17931403	3.1145349	21	12 12.6	21.8
515672 2014 OE_{352}	16.9	X	134.88540	355.73406	293.27417	3.90864	0.1285975	0.18900461	3.0071456	21	—	—
515673 2014 OL_{361}	17.2	X	125.47161	262.68128	36.76167	2.13783	0.1360014	0.19091706	2.9870298	21	—	—
515674 2014 OV_{374}	17.0	X	128.22230	195.35511	110.90457	3.90818	0.1189638	0.19105653	2.9855760	21	—	—
515675 2014 OT_{378}	16.3	X	115.11162	307.88303	341.56678	16.56625	0.2054490	0.17782560	3.1318902	21	12 17.2	21.8
515676 2014 OV_{381}	16.7	X	121.19589	243.86683	42.32385	2.42078	0.0983649	0.18440330	3.0569635	21	12 14.2	21.3
515677 2014 OV_{385}	16.3	X	122.19891	340.64113	284.93761	7.91561	0.0611593	0.17514095	3.1638138	21	11 16.1	21.1
515678 2014 OK_{399}	17.1	X	192.73400	44.58573	194.24770	5.54285	0.0226051	0.19092457	2.9869515	21	—	—
515679 2014 OE_{400}	16.9	X	197.34225	104.22936	122.44094	4.55465	0.1417586	0.18825466	3.0151267	21	12 16.5	21.6
515680 2014 OO_{400}	17.1	X	170.29871	328.71226	271.38628	1.39834	0.1579149	0.18624317	3.0367974	21	12 6.4	22.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515681 2014 OA_{401}	17.1	X	266.56249	64.54502	87.19531	2.45172	0.0137171	0.18107838	3.0942707	21	12 19.2	21.4
515682 2014 OV_{401}	16.4	X	125.94204	144.99852	135.20897	8.20458	0.1269263	0.18157185	3.0886618	21	12 13.6	21.3
515683 2014 OG_{402}	16.1	X	206.27806	139.47951	18.14504	6.01008	0.0541816	0.15620411	3.4146098	21	10 8.5	21.1
515684 2014 PA_{1}	16.3	X	139.69937	146.55489	125.13874	3.55468	0.0907771	0.18443218	3.0566444	21	12 15.4	21.0
515685 2014 PL_{2}	15.9	X	257.95909	271.09722	115.85721	4.08067	0.2142532	0.12396351	3.9835793	21	6 11.6	22.0
515686 2014 PG_{10}	17.0	X	128.66880	159.50846	121.66414	5.70068	0.1162518	0.18046730	3.1012518	21	12 16.2	21.9
515687 2014 PB_{23}	17.0	X	205.04179	134.90214	146.80855	21.39942	0.2455461	0.21368029	2.7709354	21	—	—
515688 2014 PC_{34}	17.1	X	325.58199	339.05443	2.22508	6.87303	0.1460922	0.27578997	2.3374935	21	7 29.1	19.2
515689 2014 PX_{61}	16.6	X	87.34938	334.39052	321.74486	10.04128	0.2292449	0.17675626	3.1445090	21	12 2.2	21.8
515690 2014 PN_{72}	16.5	X	175.46699	95.19312	136.70839	6.28048	0.1238038	0.17465079	3.1697305	21	12 2.3	21.5
515691 2014 QY_{42}	15.9	X	16.39443	207.59500	129.73641	28.96663	0.1789941	0.17493136	3.1663404	21	11 1.1	20.3
515692 2014 QD_{49}	16.4	X	169.85421	4.70771	239.19963	5.08398	0.1042163	0.18747396	3.0234915	21	12 12.4	21.0
515693 2014 QF_{54}	16.5	X	163.23312	7.45067	226.64662	4.06588	0.1072670	0.18072426	3.0983115	21	11 23.9	21.2
515694 2014 QH_{60}	16.6	X	134.41483	331.47151	294.83948	3.81382	0.2142422	0.18339059	3.0682072	21	12 6.9	21.8
515695 2014 QM_{91}	16.4	X	107.42396	109.88122	175.36418	11.54076	0.1325756	0.17329392	3.1862547	21	12 2.2	21.5
515696 2014 QS_{108}	16.3	X	86.01874	84.51838	237.45602	7.49242	0.0621532	0.17770909	3.1332589	21	12 15.3	20.8
515697 2014 QV_{119}	17.1	X	132.97881	127.05528	152.11470	1.27924	0.1266630	0.17712341	3.1401622	21	12 17.4	22.1
515698 2014 QV_{122}	16.5	X	173.73643	261.89361	344.47143	7.80294	0.1259911	0.18065125	3.0991463	21	12 16.7	21.5
515699 2014 QL_{173}	17.1	X	138.88934	116.28513	166.36010	6.10497	0.1485522	0.18025272	3.1037126	21	12 27.2	22.2
515700 2014 QF_{189}	16.2	X	208.87748	310.80650	240.56344	3.53529	0.0641107	0.17332376	3.1858890	21	11 21.2	21.0
515701 2014 QD_{201}	16.1	X	203.46175	266.65388	287.26122	4.49073	0.1284940	0.17199148	3.2023202	21	11 11.7	21.2
515702 2014 QU_{339}	16.7	X	137.59225	136.22608	149.75391	14.07858	0.0510927	0.18456236	3.0552068	21	12 29.3	21.5
515703 2014 QB_{340}	16.6	X	109.54573	123.73019	152.28983	14.58024	0.2709469	0.17579891	3.1559147	21	12 3.8	22.3
515704 2014 QD_{366}	15.4	X	104.09033	308.84556	358.97952	18.81585	0.1446983	0.17241345	3.1970932	21	12 24.8	20.8
515705 2014 QS_{375}	16.6	X	132.95056	98.60057	194.25106	8.98447	0.0708395	0.17516451	3.1635300	21	12 30.2	21.6
515706 2014 QT_{380}	16.1	X	154.74533	280.46815	344.04755	11.75486	0.2388210	0.17852400	3.1237167	21	12 19.5	21.8
515707 2014 QZ_{383}	16.0	X	151.94474	320.35876	330.59789	16.17719	0.2485449	0.19075496	2.9887218	21	—	—
515708 2014 QL_{447}	15.9	X	128.16588	206.29905	132.59308	10.71840	0.1346398	0.18485282	3.0520056	21	—	—
515709 2014 QZ_{449}	16.6	X	146.73614	220.79912	53.10623	6.85167	0.2407458	0.17639865	3.1487575	21	12 23.8	22.1
515710 2014 QG_{450}	16.5	X	111.89467	229.14962	59.80883	6.02140	0.1967573	0.17330910	3.1860687	21	12 12.7	21.7
515711 2014 RT_{7}	16.8	X	166.72927	95.99856	160.30692	10.91310	0.0840006	0.17940544	3.1134768	21	12 23.3	21.7
515712 2014 SF_{60}	16.2	X	110.83180	152.37613	146.80660	13.39359	0.2345231	0.17688616	3.1429693	21	12 26.6	21.7
515713 2014 SM_{223}	16.6	X	183.85534	240.37894	53.42717	7.74635	0.3077175	0.20549906	2.8439993	21	—	—
515714 2014 TT_{3}	16.1	X	83.34658	340.25467	35.30400	4.40767	0.0420898	0.17600908	3.1534019	21	—	—
515715 2014 TR_{61}	15.6	X	156.41567	67.50696	230.09004	9.73015	0.1152137	0.17816873	3.1278679	21	—	—
515716 2014 UD_{64}	15.7	X	125.25944	313.22447	20.56159	9.55477	0.0649002	0.17935202	3.1140950	21	—	—
515717 2014 UX_{182}	14.0	X	156.40583	19.79840	87.05807	8.54845	0.0763260	0.08402327	5.1626141	21	6 16.4	21.1
515718 2014 UQ_{194}	14.1	X	182.71316	41.21541	46.01387	20.59980	0.2203172	0.09000771	4.9311656	21	6 16.8	21.8
515719 2014 VJ_{2}	18.3	X	92.44750	325.23057	217.63238	20.03527	0.0825173	0.38870969	1.8594556	21	7 2.9	20.6
515720 2014 VL_{2}	17.7	X	151.08751	260.06062	180.86130	21.84268	0.1144272	0.36824815	1.9277128	21	4 30.1	20.2
515721 2014 WM_{220}	14.2	X	194.45993	33.91902	34.28653	8.81219	0.0969711	0.08444665	5.1453441	21	6 8.2	21.5
515722 2014 WE_{242}	15.4	X	201.24557	304.35568	261.64676	14.28484	0.2112078	0.17843448	3.1247614	21	11 18.9	20.7
515723 2014 WR_{246}	15.8	X	147.63430	227.73354	50.25884	12.06927	0.1731653	0.17718704	3.1394103	21	12 28.9	21.2
515724 2014 WZ_{364}	18.6	X	94.34861	312.40610	206.26912	20.70276	0.0656853	0.37633208	1.9000071	21	5 28.1	20.6
515725 2014 WT_{366}	17.5	X	257.33442	30.54943	311.07708	17.09409	0.0793829	0.36710684	1.9317061	21	3 31.0	20.2
515726 2014 WD_{387}	13.8	X	267.79305	269.11175	86.12785	29.19473	0.0061809	0.08159265	5.2646401	21	6 12.4	20.8
515727 2014 WF_{403}	14.0	X	207.17664	330.24929	79.42048	6.99513	0.0519649	0.08221275	5.2381339	21	6 2.7	21.2
515728 2014 WS_{490}	13.6	X	279.50175	243.36113	108.32610	31.06951	0.0540959	0.08221737	5.2379378	21	6 18.4	20.6
515729 2014 WV_{500}	16.8	X	199.13688	244.61233	77.99762	12.00656	0.3404963	0.21185164	2.7868579	21	2 7.9	22.2
515730 2014 WT_{510}	14.1	X	19.71059	104.57016	144.01033	18.69941	0.0973647	0.08204596	5.2452307	21	6 24.3	20.8
515731 2014 WS_{511}	17.8	X	343.23025	175.25417	88.08871	24.07467	0.0583853	0.35736862	1.9666411	21	5 10.8	20.0
515732 2014 XW_{31}	18.0	X	78.33512	216.72747	317.55824	17.99510	0.0966422	0.36795858	1.9287240	21	5 29.3	20.2
515733 2014 YX_{43}	18.5	X	290.68714	6.01732	332.07776	17.96938	0.0679748	0.37549335	1.9028354	21	5 21.6	20.9
515734 2014 YQ_{50}	17.7	X	105.94651	358.16557	182.83319	23.68527	0.0459682	0.36770909	1.9295964	21	7 16.5	20.4
515735 2014 YX_{50}	18.6	X	244.79638	16.15495	338.16687	18.94123	0.0725474	0.35896060	1.9608221	21	4 5.1	21.4
515736 2014 YA_{52}	18.6	X	26.30823	286.29237	303.45685	17.15906	0.0505172	0.36309565	1.9459067	21	5 17.8	20.7
515737 2015 AL_{26}	18.4	X	137.91966	119.97676	4.59035	19.61740	0.0895259	0.36206395	1.9496015	21	6 8.7	21.2
515738 2015 AW_{95}	13.8	X	78.88777	21.49144	190.06968	20.40891	0.0490708	0.08281220	5.2128254	21	7 17.1	20.9
515739 2015 BV_{101}	16.5	X	74.28095	209.08115	329.38766	0.47567	0.1713597	0.19102811	2.9858721	21	6 21.1	20.5
515740 2015 BO_{298}	17.6	X	261.88733	47.92488	93.24655	3.28021	0.1468580	0.25972106	2.4329393	21	11 27.7	20.3
515741 2015 BO_{512}	18.0	X	141.78576	172.41623	295.18712	19.63582	0.0394598	0.36200842	1.9498009	21	5 9.9	20.6
515742 2015 CU	20.8	X	23.47364	197.81119	154.06821	35.37688	0.2038745	1.02960878	0.9713026	21	—	—
515743 2015 CY_{24}	18.7	X	68.56809	184.62670	336.21193	18.22565	0.1130393	0.33908762	2.0367048	21	4 13.3	20.9
515744 2015 CX_{61}	17.6	X	16.72519	61.88516	177.63566	23.68124	0.0677785	0.34655859	2.0073277	21	5 26.4	20.0
515745 2015 DT_{230}	17.9	X	227.68477	229.66537	47.46956	9.56205	0.0442475	0.28752773	2.2734369	21	—	—
515746 2015 EB_{39}	18.0	X	246.57991	307.68470	350.42734	4.57272	0.2167595	0.31276962	2.1494120	21	1 30.9	21.4
515747 2015 FH_{1}	16.9	X	168.54767	109.33273	10.55509	13.59315	0.1521356	0.22087107	2.7104631	21	7 19.5	21.5
515748 2015 FQ_{6}	18.3	X	298.11089	166.65382	145.60248	24.34523	0.0792764	0.35843670	1.9627323	21	5 6.7	21.1
515749 2015 FN_{40}	18.4	X	318.58984	14.50856	208.09265	6.67711	0.1061409	0.30362964	2.1923334	21	1 16.7	21.1
515750 2015 FD_{76}	16.9	X	261.39159	52.73767	35.21168	13.95201	0.1413288	0.22350138	2.6891554	21	9 18.0	20.7
515751 2015 FQ_{163}	18.2	X	347.81997	107.10052	72.47257	5.20263	0.0711395	0.30200364	2.2001954	21	1 5.9	20.7
515752 2015 FX_{200}	18.6	X	26.78297	151.63237	348.86848	7.51648	0.1189546	0.31247595	2.1507585	21	1 3.9	20.6
515753 2015 FM_{211}	17.7	X	246.10378	240.47835	45.46361	9.34809	0.1898177	0.29499390	2.2349134	21	1 19.6	21.4
515754 2015 FX_{326}	18.2	X	239.14197	206.58617	77.55771	6.46736	0.2594647	0.28736340	2.2743035	21	1 10.0	22.1
515755 2015 FS_{330}	17.5	X	102.48140	145.48200	4.94876	18.98174	0.0567576	0.35160747	1.9880653	21	5 18.4	20.0
515756 2015 FM_{334}	17.6	X	179.35416	171.28843	133.08701	7.22144	0.1337887	0.26532252	2.3985750	21	—	—
515757 2015 FB_{354}	16.3	X	338.59016	272.26117	27.23344	9.56854	0.0505071	0.18727835	3.0255964	21	6 25.5	20.4
515758 2015 FJ_{384}	17.5	X	217.16312	194.93522	187.42597	23.00223	0.0766965	0.34444744	2.0155214	21	4 25.4	20.1
515759 2015 FS_{402}	17.9	X	20.69299	94.47253	31.70057	6.44512	0.0362616	0.29224834	2.2488890	21	—	—
515760 2015 GW_{2}	17.5	X	343.56649	110.76149	172.47240	23.20515	0.0468201	0.35331149	1.9816679	21	6 7.0	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515761 2015 GH_{34}	18.3	X	279.20898	136.32985	124.70539	7.94734	0.1735826	0.29693431	2.2251663	21	1 17.1	21.4
515762 2015 HT_{15}	17.9	X	311.35043	195.05931	46.12711	4.64020	0.1248767	0.30658537	2.1782201	21	2 2.0	20.6
515763 2015 HJ_{36}	17.7	X	244.67961	183.64304	108.74276	7.31151	0.1387235	0.29537809	2.2329750	21	1 26.2	20.9
515764 2015 HC_{84}	18.0	X	292.36451	178.54008	97.88849	2.67825	0.1348401	0.30943208	2.1648401	21	2 23.9	20.8
515765 2015 HC_{92}	17.9	X	182.26671	132.83179	168.91089	2.84000	0.1806804	0.26640242	2.3920886	21	—	—
515766 2015 HH_{186}	18.3	X	251.02877	102.94941	178.71486	4.56114	0.0499375	0.29473801	2.2362067	21	1 21.5	21.2
515767 2015 JA_{2}	21.1	X	188.91552	246.21364	126.61789	16.42129	0.3492453	0.93714830	1.0341825	21	—	—
515768 2015 JR_{3}	17.8	X	213.73398	304.87720	352.95739	6.66366	0.1816683	0.27874390	2.3209501	21	1 7.9	21.5
515769 2015 KK_{10}	16.9	X	87.16648	235.74658	120.11435	14.39470	0.2163624	0.24155368	2.5534476	21	—	—
515770 2015 KW_{25}	17.8	X	0.08353	234.93375	271.04084	2.14468	0.1080283	0.28856269	2.2679976	21	—	—
515771 2015 KB_{29}	18.0	X	264.11696	18.03618	277.29713	4.84358	0.1562776	0.30095211	2.2053175	21	2 14.1	21.4
515772 2015 KX_{36}	18.1	X	225.26997	196.62042	116.59713	3.93138	0.2462156	0.27317090	2.3524104	21	2 5.2	22.0
515773 2015 KS_{38}	18.3	X	249.53865	176.95350	131.61986	5.27181	0.2048517	0.29301986	2.2449397	21	2 17.8	21.7
515774 2015 KX_{38}	16.0	X	143.71912	262.86356	214.48475	12.94910	0.1678167	0.17578177	3.1561199	21	6 19.5	21.2
515775 2015 KX_{49}	18.5	X	279.74651	200.10628	71.50273	5.85360	0.1609887	0.29473646	2.2362146	21	2 3.7	21.8
515776 2015 KZ_{51}	16.2	X	139.27022	247.69089	72.21853	7.11081	0.2530903	0.24366755	2.5386583	21	—	—
515777 2015 KJ_{52}	18.3	X	307.84285	8.59041	221.87394	5.15290	0.1664383	0.29377694	2.2410811	21	1 8.5	21.3
515778 2015 KW_{55}	18.1	X	219.26782	213.01191	88.54261	4.54182	0.2479144	0.27432181	2.3458262	21	1 17.8	22.0
515779 2015 KN_{74}	17.4	X	129.34449	234.01043	117.05033	7.45118	0.1900689	0.26142569	2.4223517	21	—	—
515780 2015 KZ_{88}	18.4	X	237.00214	120.57862	139.15399	4.95935	0.1078554	0.27629107	2.3346663	21	—	—
515781 2015 KF_{137}	18.4	X	275.90285	190.22641	50.42171	6.09802	0.1232673	0.28570495	2.2830962	21	—	—
515782 2015 KV_{146}	17.5	X	125.42085	171.15820	143.98340	12.60440	0.0724414	0.24157177	2.5533201	21	—	—
515783 2015 KY_{147}	16.8	X	155.15143	227.68759	67.07396	10.56046	0.1997043	0.23822906	2.5771491	21	—	—
515784 2015 KD_{151}	17.6	X	232.19452	165.39324	97.23689	10.70663	0.1252261	0.27582420	2.3373001	21	—	—
515785 2015 KC_{154}	17.8	X	191.08887	197.42271	88.01893	3.22732	0.1871951	0.25906498	2.4370451	21	—	—
515786 2015 KD_{161}	17.9	X	287.64413	199.63461	72.01737	6.62484	0.1385764	0.29976989	2.2111118	21	2 14.8	21.0
515787 2015 KU_{165}	16.3	X	5.20829	223.45836	149.85341	16.84765	0.1161482	0.18435880	3.0574554	21	11 17.4	20.4
515788 2015 KY_{165}	18.3	X	207.41683	138.64021	142.32264	1.55261	0.1307352	0.26527566	2.3988575	21	—	—
515789 2015 LD_{15}	16.9	X	123.11050	76.80630	252.16187	13.81469	0.1515903	0.24214061	2.5493197	21	—	—
515790 2015 LK_{20}	16.6	X	154.77641	58.27241	237.18543	13.90409	0.0903778	0.23204722	2.6227192	21	—	—
515791 2015 LT_{21}	17.2	X	203.74899	35.87923	257.11836	8.32194	0.2159152	0.26748576	2.3856255	21	—	—
515792 2015 LC_{22}	16.6	X	86.07183	222.39413	104.51517	11.27715	0.3182204	0.21927813	2.7235739	21	—	—
515793 2015 LH_{23}	17.7	X	183.84466	209.84014	111.97629	3.39802	0.2007079	0.26620727	2.3932576	21	1 12.8	21.5
515794 2015 LR_{27}	18.2	X	247.71460	55.79310	203.54375	4.43128	0.1743729	0.27674901	2.3320901	21	—	—
515795 2015 LA_{36}	16.6	X	175.62745	51.58251	232.15161	14.32762	0.1282083	0.23897368	2.5717930	21	—	—
515796 2015 LS_{38}	16.5	X	94.13331	327.86605	281.13342	10.85462	0.0836259	0.18824674	3.0152112	21	9 25.7	21.1
515797 2015 LR_{39}	17.0	X	171.14905	65.01122	235.78125	10.51028	0.1707860	0.24227913	2.5483479	21	—	—
515798 2015 LG_{42}	16.8	X	137.78089	21.74733	291.31909	10.77544	0.0699098	0.23587897	2.5942385	21	—	—
515799 2015 LK_{42}	16.7	X	119.21366	199.89177	111.49293	14.05772	0.0949451	0.22515766	2.6759515	21	—	—
515800 2015 LL_{42}	17.1	X	61.67714	226.95936	131.85578	5.76096	0.0730099	0.21830973	2.7316224	21	—	—
515801 2015 MQ_{6}	17.5	X	163.55964	169.05576	141.30347	3.43699	0.1102741	0.24553934	2.5257401	21	—	—
515802 2015 MR_{7}	17.2	X	177.51185	144.88125	116.72981	15.93082	0.0599793	0.23097757	2.6308102	21	—	—
515803 2015 MK_{9}	16.9	X	74.57621	184.57491	140.99027	13.01745	0.0838651	0.21130549	2.7916579	21	12 16.9	21.1
515804 2015 MO_{9}	18.1	X	281.81630	48.75349	210.65798	2.43107	0.0968414	0.28055543	2.3109485	21	1 27.4	21.1
515805 2015 ME_{12}	17.9	X	246.99605	282.93882	350.54013	3.99514	0.1486814	0.27282916	2.3543744	21	1 8.3	21.5
515806 2015 MC_{26}	18.3	X	214.30939	21.98554	266.98068	6.08809	0.1112202	0.27609675	2.3357616	21	—	—
515807 2015 MT_{46}	18.0	X	280.86924	187.91045	64.51946	5.10968	0.1779940	0.27453220	2.3446275	21	1 12.1	21.5
515808 2015 MY_{47}	17.7	X	271.30462	222.72624	82.74259	7.12891	0.1339204	0.28655060	2.2786022	21	3 16.9	21.0
515809 2015 MP_{49}	17.3	X	199.45874	289.85616	23.36217	8.42862	0.1738345	0.25516245	2.4618308	21	1 18.4	21.4
515810 2015 MU_{50}	17.0	X	185.16565	286.25172	344.76707	14.51603	0.1029180	0.23102763	2.6304301	21	—	—
515811 2015 MW_{50}	16.9	X	89.75269	266.88535	78.38195	10.88556	0.1724988	0.21707459	2.7419743	21	—	—
515812 2015 ME_{52}	17.7	X	232.92875	198.14837	115.51295	7.53488	0.1344448	0.27593291	2.3366861	21	2 14.4	21.3
515813 2015 MJ_{54}	16.8	X	279.97566	8.32842	217.27298	25.34366	0.2097022	0.27796307	2.3252946	21	—	—
515814 2015 MS_{56}	17.9	X	267.14559	162.73699	107.34173	6.54405	0.1564410	0.27925005	2.3181447	21	1 21.4	21.3
515815 2015 MF_{57}	16.8	X	119.07506	53.53730	286.03466	13.39214	0.0204124	0.23855545	2.5747979	21	—	—
515816 2015 MC_{58}	17.8	X	209.48502	224.35783	72.79118	2.19850	0.1871282	0.26137751	2.4226494	21	1 5.3	21.8
515817 2015 MZ_{74}	18.0	X	246.31650	108.50587	143.34217	3.82400	0.0917491	0.26077407	2.4263854	21	—	—
515818 2015 MO_{79}	17.7	X	264.56645	322.65539	263.61815	6.54066	0.0886833	0.25736882	2.4477408	21	—	—
515819 2015 ME_{85}	18.6	X	288.80287	93.67356	151.87248	1.58145	0.1583796	0.27827615	2.3235502	21	1 11.8	21.9
515820 2015 MX_{90}	15.7	X	318.57564	240.35598	178.76290	27.13982	0.2439445	0.17062148	3.2194393	21	10 14.6	19.2
515821 2015 MU_{106}	17.6	X	199.71474	150.16423	152.35511	3.22737	0.1569013	0.25801238	2.4436688	21	1 2.2	21.4
515822 2015 MS_{111}	17.9	X	312.72132	253.86672	330.04308	3.14457	0.1386796	0.28036256	2.3120082	21	1 13.6	20.9
515823 2015 MM_{114}	16.0	X	326.62257	182.71465	219.73110	11.67602	0.0918421	0.18910380	3.0060939	21	10 19.1	19.8
515824 2015 MD_{115}	17.0	X	169.79352	151.46819	148.45645	14.82279	0.1070062	0.24145096	2.5541717	21	—	—
515825 2015 ML_{117}	18.2	X	290.01731	249.41598	16.51426	2.93794	0.2086843	0.28746237	2.2737814	21	2 2.4	21.6
515826 2015 ML_{121}	17.2	X	121.66837	144.00689	161.71455	10.40046	0.2324264	0.21737678	2.7394326	21	—	—
515827 2015 MG_{126}	17.8	X	182.28541	256.86552	36.85712	0.86774	0.2229905	0.24639066	2.5199188	21	—	—
515828 2015 MV_{134}	16.9	X	29.73190	203.84373	128.95531	2.04637	0.1780085	0.18241164	3.0791749	21	11 6.8	20.7
515829 2015 MF_{135}	16.6	X	147.96766	157.21956	145.15357	10.61517	0.1962662	0.21978013	2.7194250	21	—	—
515830 2015 MJ_{135}	17.6	X	149.26590	284.99307	20.05513	3.01994	0.1578121	0.23426839	2.6061150	21	—	—
515831 2015 MF_{136}	17.0	X	133.96465	168.28135	120.88669	7.03133	0.1145188	0.22173647	2.7034061	21	—	—
515832 2015 MV_{136}	17.4	X	130.96002	108.92838	223.15620	1.38999	0.0881505	0.22901559	2.6458142	21	—	—
515833 2015 MK_{137}	17.7	X	278.21920	198.66528	27.89524	2.95873	0.1182046	0.25861175	2.4398917	21	—	—
515834 2015 NP_{4}	17.6	X	213.85182	112.08366	182.07550	5.44008	0.1451307	0.25869656	2.4393584	21	1 4.1	21.5
515835 2015 NC_{6}	17.1	X	157.77216	139.44668	144.04928	12.93991	0.0854463	0.23240021	2.6200628	21	—	—
515836 2015 NO_{16}	16.8	X	148.93862	171.07001	130.87976	15.28348	0.2511058	0.23041468	2.6350930	21	—	—
515837 2015 NX_{18}	17.3	X	161.38357	204.48630	126.21775	19.33117	0.2185527	0.24341042	2.5404458	21	1 8.6	21.3
515838 2015 NF_{19}	16.2	X	43.39772	232.87004	142.11280	15.95068	0.1563266	0.20570290	2.8421202	21	—	—
515839 2015 NQ_{23}	16.9	X	133.81939	272.19240	79.27951	2.85764	0.1292549	0.24707568	2.5152591	21	—	—
515840 2015 NR_{26}	16.5	X	197.42783	348.86590	281.01681	14.20351	0.0940793	0.24241406	2.5474021	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515841 2015 OB_{2}	17.9	X	217.40059	124.77019	175.08385	4.66065	0.2132871	0.26357594	2.4091594	21	1 14.2	22.1
515842 2015 OO_{10}	17.9	X	309.28097	171.29167	43.36913	2.30028	0.1422063	0.27362636	2.3497992	21	—	—
515843 2015 OY_{15}	17.3	X	154.95395	338.71363	332.68286	10.29248	0.1281656	0.23706479	2.5855802	21	—	—
515844 2015 OX_{17}	17.2	X	79.18250	340.96996	355.88993	3.57708	0.1041313	0.21270694	2.7793822	21	—	—
515845 2015 OY_{27}	16.6	X	5.14743	217.23902	139.78096	11.34308	0.2178645	0.17488488	3.1669014	21	11 3.9	20.2
515846 2015 OK_{31}	16.6	X	19.87382	2.89608	348.42466	11.69635	0.2047050	0.18213599	3.0822808	21	11 13.8	20.5
515847 2015 OL_{32}	17.5	X	267.01691	201.78537	96.49432	8.07477	0.1256158	0.27745579	2.3281280	21	3 4.3	20.9
515848 2015 OH_{36}	18.1	X	282.38960	126.52680	154.86479	3.76554	0.2349658	0.28414165	2.2914627	21	2 11.1	21.6
515849 2015 OU_{36}	17.0	X	101.64986	227.58495	149.27612	15.45481	0.0945585	0.23530651	2.5984443	21	—	—
515850 2015 OE_{37}	16.6	X	1.03226	304.19851	155.75379	22.09323	0.0399187	0.22829667	2.6513659	21	—	—
515851 2015 OH_{53}	16.4	X	330.72765	325.67307	72.51719	9.71562	0.0894075	0.18401848	3.0612238	21	10 24.1	20.3
515852 2015 OD_{55}	17.0	X	275.01179	167.94705	82.60184	13.94113	0.1455430	0.26884353	2.3775865	21	1 7.2	20.5
515853 2015 OP_{68}	17.4	X	101.35995	72.43684	255.38713	3.75301	0.1121939	0.22019318	2.7160232	21	—	—
515854 2015 OW_{71}	17.6	X	98.44566	78.52057	283.60425	1.63379	0.0992315	0.23255813	2.6188766	21	—	—
515855 2015 OA_{73}	17.2	X	134.01665	176.34752	139.41051	10.11632	0.0881669	0.23015762	2.6370547	21	—	—
515856 2015 OO_{76}	17.5	X	168.13606	149.60848	169.92526	5.58481	0.2377653	0.23776416	2.5805075	21	1 3.1	21.8
515857 2015 OJ_{77}	16.0	X	23.38854	7.04846	346.39114	9.83518	0.0957458	0.17802740	3.1295230	21	11 7.1	20.2
515858 2015 OX_{82}	17.2	X	342.04628	359.73497	67.09556	3.03650	0.0413456	0.20061181	2.8900036	21	12 14.8	20.9
515859 2015 ON_{84}	17.0	X	130.43129	159.39478	162.39028	13.18032	0.1622909	0.21636597	2.7479579	21	—	—
515860 2015 OD_{85}	16.2	X	18.73536	306.79331	75.95909	10.56415	0.1076366	0.18837989	3.0137902	21	12 14.1	19.9
515861 2015 OH_{85}	17.3	X	201.36620	298.80598	337.26746	2.85161	0.0671648	0.22755833	2.6570979	21	—	—
515862 2015 OD_{86}	17.4	X	194.29181	283.26795	55.07369	7.60949	0.1319257	0.26777389	2.3839139	21	2 10.8	21.1
515863 2015 OG_{86}	17.5	X	87.33833	254.72443	63.55017	3.00876	0.0673039	0.20166333	2.8799487	21	12 17.3	21.6
515864 2015 OF_{87}	17.7	X	215.34023	171.81087	98.09409	2.29180	0.0140512	0.23814227	2.5777753	21	—	—
515865 2015 OG_{87}	17.9	X	192.45591	240.21023	37.93224	2.44807	0.1119897	0.23595390	2.5936893	21	—	—
515866 2015 OQ_{87}	17.5	X	190.47725	138.68191	164.82792	11.58037	0.0680586	0.24570454	2.5246078	21	—	—
515867 2015 OE_{88}	16.9	X	45.93661	182.17658	181.23665	9.17966	0.1028348	0.19169363	2.9789572	21	12 26.1	21.2
515868 2015 OM_{88}	16.6	X	81.39697	347.78477	313.09676	9.22566	0.1153902	0.18874648	3.0098867	21	11 21.2	21.2
515869 2015 OS_{88}	17.1	X	86.20294	232.08217	121.06792	6.64561	0.0523291	0.21731397	2.7399604	21	—	—
515870 2015 OU_{88}	16.6	X	194.60414	280.06294	296.13592	7.80250	0.0420745	0.19904994	2.9051017	21	12 11.1	20.9
515871 2015 PO_{1}	17.3	X	132.82514	181.59201	165.14472	8.03766	0.1735596	0.23824521	2.5770327	21	—	—
515872 2015 PV_{2}	17.1	X	133.78406	164.69779	172.83504	14.59769	0.2735105	0.23206874	2.6225571	21	—	—
515873 2015 PE_{3}	17.5	X	215.16711	67.71693	226.48932	3.04871	0.1893291	0.25652996	2.4530741	21	1 6.7	21.4
515874 2015 PK_{3}	16.2	X	30.14302	225.92806	119.42563	12.28585	0.1759365	0.18647607	3.0342682	21	11 26.2	20.2
515875 2015 PB_{4}	17.5	X	226.81834	286.07410	4.36962	8.74542	0.2234763	0.26126265	2.4233594	21	1 13.5	21.8
515876 2015 PC_{4}	17.3	X	172.01894	264.12569	54.71233	6.14225	0.2392685	0.24358307	2.5392452	21	1 5.6	21.6
515877 2015 PA_{6}	16.5	X	132.93776	59.69930	295.58299	7.52083	0.0546365	0.24655695	2.5187857	21	—	—
515878 2015 PT_{9}	18.2	X	216.47696	108.39045	192.58867	0.71578	0.1752491	0.26330444	2.4108152	21	1 14.9	22.2
515879 2015 PY_{12}	17.1	X	211.60427	132.57042	171.92663	15.90394	0.1143404	0.25909117	2.4368809	21	1 12.9	21.1
515880 2015 PF_{26}	17.2	X	157.60498	289.60724	75.63277	3.72427	0.1917026	0.25688180	2.4508336	21	2 12.8	20.9
515881 2015 PL_{26}	16.9	X	62.33163	28.93330	345.62874	7.73694	0.2199358	0.21488145	2.7605996	21	—	—
515882 2015 PO_{26}	17.5	X	136.26059	316.56145	329.82873	13.25146	0.1058822	0.22021934	2.7158081	21	—	—
515883 2015 PB_{30}	17.4	X	227.72034	55.42073	205.68438	4.05864	0.0857458	0.24580828	2.5238975	21	—	—
515884 2015 PB_{31}	17.4	X	203.94104	111.09261	196.00011	5.49078	0.1051796	0.25277216	2.4773263	21	1 9.8	21.1
515885 2015 PP_{35}	17.7	X	230.17391	209.79892	40.05514	5.09010	0.0612742	0.24345308	2.5401490	21	—	—
515886 2015 PR_{36}	16.9	X	131.09290	240.92030	47.21270	6.26634	0.0870731	0.21397488	2.7683916	21	12 31.2	21.2
515887 2015 PE_{37}	17.1	X	73.81267	319.16837	35.73159	5.56123	0.0546237	0.21419342	2.7665082	21	—	—
515888 2015 PH_{38}	17.6	X	271.39477	169.43879	69.15294	3.62703	0.1267769	0.26043950	2.4284629	21	—	—
515889 2015 PY_{38}	17.2	X	172.72810	142.02551	131.12884	13.57320	0.1489343	0.22909230	2.6452236	21	—	—
515890 2015 PH_{40}	17.0	X	103.95843	166.14129	120.73184	12.17990	0.0854161	0.19963100	2.8994619	21	12 1.7	21.5
515891 2015 PC_{42}	17.1	X	84.90131	311.23695	55.34702	7.27046	0.0666549	0.22354791	2.6887823	21	—	—
515892 2015 PK_{43}	17.0	X	2.90241	53.71998	52.58606	8.97488	0.0829731	0.23026684	2.6362208	21	—	—
515893 2015 PY_{44}	17.3	X	282.05388	161.79053	83.65098	8.00971	0.1512928	0.26735657	2.3863939	21	1 7.9	20.7
515894 2015 PR_{45}	16.9	X	43.56920	337.02882	60.07430	7.44430	0.0480754	0.21551650	2.7551740	21	—	—
515895 2015 PD_{46}	17.2	X	121.88882	227.89205	84.82960	6.14585	0.1191119	0.21778001	2.7360501	21	—	—
515896 2015 PG_{48}	17.6	X	181.52781	285.45588	349.91693	9.35483	0.0968033	0.23334284	2.6130019	21	—	—
515897 2015 PV_{62}	17.3	X	160.48088	101.30840	214.95436	2.16701	0.0717999	0.24544555	2.5263835	21	—	—
515898 2015 PM_{68}	17.3	X	192.62997	309.32586	326.62730	5.80494	0.1149263	0.24429435	2.5343141	21	—	—
515899 2015 PH_{74}	18.1	X	277.07616	123.82856	140.22391	2.39774	0.1919524	0.28058699	2.3107752	21	1 19.9	21.6
515900 2015 PE_{80}	17.5	X	271.52184	349.56471	260.90697	0.74581	0.1421194	0.27068380	2.3667981	21	1 3.4	21.1
515901 2015 PQ_{94}	17.1	X	5.40104	260.42294	132.21642	2.97709	0.0725347	0.20309219	2.8664249	21	12 7.5	20.7
515902 2015 PE_{98}	17.4	X	251.69013	159.03850	130.81030	7.26275	0.1128305	0.27454058	2.3445798	21	2 3.1	20.9
515903 2015 PC_{125}	18.0	X	296.17971	160.14739	67.34034	2.94521	0.1190087	0.26917512	2.3756335	21	1 3.3	21.3
515904 2015 PX_{126}	18.0	X	241.20227	297.00187	332.64169	1.77562	0.1773176	0.26360729	2.4089684	21	—	—
515905 2015 PB_{133}	17.7	X	240.01973	179.89872	128.06858	7.31713	0.1359202	0.27498154	2.3420726	21	2 13.7	21.3
515906 2015 PD_{169}	18.1	X	234.27641	247.67767	49.94877	3.83634	0.2207989	0.27005556	2.3704673	21	1 25.8	22.2
515907 2015 PA_{170}	18.0	X	228.45961	250.40318	47.33525	2.88365	0.1760603	0.26607203	2.3940685	21	1 21.9	21.9
515908 2015 PW_{180}	17.0	X	14.38438	25.20806	342.17651	9.39343	0.1166399	0.19022044	2.9943181	21	11 17.0	20.9
515909 2015 PM_{190}	17.7	X	201.95429	246.65304	11.28409	8.38610	0.0568115	0.23202380	2.6228957	21	—	—
515910 2015 PT_{257}	17.6	X	195.98558	174.52281	146.68676	2.86345	0.2108652	0.26099380	2.4250234	21	1 23.2	21.6
515911 2015 PB_{290}	16.5	X	45.36924	269.86944	86.28985	13.09258	0.0788330	0.19550190	2.9401449	21	12 14.5	20.4
515912 2015 PQ_{293}	17.0	X	187.70326	332.86096	313.99160	9.41256	0.1876700	0.23780678	2.5801991	21	—	—
515913 2015 PE_{294}	17.5	X	185.01188	173.36436	166.18469	3.15408	0.2027634	0.25449093	2.4661596	21	2 5.3	21.4
515914 2015 PU_{299}	16.9	X	154.86842	336.85443	344.97145	16.32539	0.1829260	0.23444826	2.6047819	21	—	—
515915 2015 PW_{302}	16.4	X	320.75380	347.09583	91.67698	7.67121	0.1099415	0.18858046	3.0116529	21	11 27.1	20.0
515916 2015 PZ_{302}	16.0	X	338.88563	258.37254	134.90168	16.44391	0.1767875	0.17429946	3.1739886	21	10 31.2	19.8
515917 2015 PG_{311}	17.8	X	239.37431	257.74368	37.36975	8.83439	0.2615546	0.26646144	2.3917354	21	1 27.9	22.1
515918 2015 PP_{311}	16.2	X	303.32836	151.19149	282.20135	9.98550	0.1110235	0.19159262	2.9800041	21	10 18.3	20.1
515919 2015 PQ_{314}	16.9	X	52.71571	237.05799	153.18573	7.06402	0.0393188	0.21108359	2.7936140	21	—	—
515920 2015 PU_{314}	16.7	X	78.62335	335.52626	16.51676	13.51950	0.1780007	0.20959254	2.8068476	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
515921 2015 PC_{315}	17.1	X	62.97160	39.42566	359.47444	12.89930	0.1517647	0.22924700	2.6440335	21	—	—
515922 2015 PM_{315}	16.9	X	161.34795	256.88426	319.13886	10.84946	0.0343123	0.18996641	2.9969868	21	10 28.6	21.5
515923 2015 QA_{3}	17.5	X	212.29385	119.38030	180.73117	1.99360	0.2122824	0.25761540	2.4461787	21	1 11.7	21.6
515924 2015 QV_{4}	16.4	X	5.64927	221.48307	178.16128	2.02873	0.0666591	0.19907445	2.9048633	21	12 14.9	20.1
515925 2015 QX_{10}	16.6	X	189.38676	209.14404	102.48117	12.28014	0.2108484	0.25234652	2.4801113	21	1 7.9	20.5
515926 2015 QS_{12}	17.2	X	227.89298	261.08565	345.72852	4.87820	0.1390877	0.23438877	2.6052227	21	—	—
515927 2015 QZ_{12}	16.8	X	103.69718	249.09599	63.82740	11.42770	0.0687587	0.18968579	2.9999419	21	12 26.3	21.3
515928 2015 QE_{13}	17.0	X	75.98578	136.05972	209.34323	8.11999	0.0621915	0.20324368	2.8650003	21	—	—
515929 2015 QJ_{13}	16.7	X	339.90664	297.72195	134.14279	10.49583	0.0161761	0.18406272	3.0607333	21	12 15.1	21.0
515930 2015 QR_{13}	15.4	X	212.78727	83.21993	95.75985	13.07475	0.0896296	0.17143221	3.2092812	21	11 12.2	20.3
515931 2015 QW_{13}	16.7	X	43.16564	191.12718	189.99553	6.34659	0.1050791	0.20173265	2.8792889	21	—	—
515932 2015 RG_{1}	16.1	X	152.46409	54.10665	260.65505	8.34423	0.0236884	0.22106552	2.7088734	21	—	—
515933 2015 RC_{3}	16.8	X	109.22007	154.87092	149.21324	21.70561	0.1517984	0.21231404	2.7828102	21	—	—
515934 2015 RE_{14}	16.5	X	22.12746	3.59702	332.36172	7.81098	0.1953366	0.18149163	3.0895720	21	10 27.9	20.3
515935 2015 RB_{15}	18.3	X	255.79472	349.22376	291.35561	2.30975	0.2110385	0.27339479	2.3511259	21	1 21.4	22.1
515936 2015 RA_{23}	17.2	X	202.98642	77.44592	196.06503	3.12293	0.1131235	0.23697156	2.5862583	21	—	—
515937 2015 RF_{24}	16.2	X	334.68765	250.43519	172.29789	19.76069	0.1987426	0.18409345	3.0603927	21	11 30.3	19.8
515938 2015 RV_{25}	17.0	X	105.38880	43.17796	296.49660	4.41971	0.0878752	0.21574096	2.7532627	21	—	—
515939 2015 RY_{26}	16.0	X	40.96514	339.28178	17.62099	16.54872	0.1947293	0.18430356	3.0580663	21	12 23.3	20.5
515940 2015 RG_{27}	16.8	X	69.88669	320.90795	17.31326	4.07681	0.1835149	0.19271072	2.9684664	21	—	—
515941 2015 RJ_{27}	15.8	X	352.76587	14.02717	12.96145	13.64656	0.1500843	0.17087190	3.2162931	21	11 5.2	19.7
515942 2015 RW_{29}	15.6	X	340.80123	41.15644	6.91983	26.53362	0.1576517	0.17542096	3.1604461	21	11 4.5	19.6
515943 2015 RX_{29}	16.5	X	238.29885	255.82347	6.27602	38.02277	0.1408249	0.24106883	2.5568701	21	—	—
515944 2015 RD_{30}	17.4	X	201.34868	349.45324	329.41357	1.12383	0.2623727	0.25423820	2.4677937	21	1 27.5	21.6
515945 2015 RY_{34}	17.1	X	176.66004	300.95005	345.61461	11.10829	0.1483193	0.22736824	2.6585787	21	—	—
515946 2015 RG_{43}	18.1	X	255.90154	81.26719	200.05963	0.73975	0.1721978	0.26407200	2.4061414	21	1 25.5	22.0
515947 2015 RX_{47}	16.6	X	358.15227	253.03958	191.34001	9.10485	0.0413629	0.20673865	2.8326197	21	—	—
515948 2015 RO_{56}	16.2	X	271.41020	272.52539	200.24675	4.30875	0.0942388	0.17480224	3.1678994	21	10 27.6	20.5
515949 2015 RG_{58}	16.9	X	0.29714	99.69773	332.30515	1.66276	0.0426920	0.20100592	2.8862248	21	—	—
515950 2015 RN_{60}	17.1	X	80.19022	168.56507	176.61489	2.04433	0.1015096	0.20211027	2.8757015	21	—	—
515951 2015 RY_{64}	16.8	X	36.97579	324.00644	5.37461	9.32576	0.1287247	0.17550602	3.1594249	21	11 1.1	21.1
515952 2015 RL_{65}	16.7	X	86.88091	279.69275	50.91504	2.66691	0.0681976	0.19834945	2.9119375	21	12 31.2	21.0
515953 2015 RB_{73}	16.5	X	256.93750	21.41038	159.62874	2.46028	0.0249969	0.20359338	2.8617187	21	—	—
515954 2015 RO_{74}	17.1	X	90.91802	91.99087	250.35509	1.07770	0.0734605	0.20365024	2.8611861	21	—	—
515955 2015 RP_{77}	17.0	X	130.20926	72.81271	214.42810	5.15852	0.0283482	0.19950893	2.9006444	21	12 24.4	21.1
515956 2015 RT_{77}	16.5	X	268.07687	118.90546	347.73997	18.56612	0.1075395	0.17193413	3.2030323	21	10 6.6	21.1
515957 2015 RJ_{78}	17.0	X	245.51964	10.25582	195.03790	8.99228	0.1136880	0.21510844	2.7586573	21	—	—
515958 2015 RB_{79}	17.0	X	349.40344	244.38470	173.46173	2.25039	0.1065163	0.18771571	3.0208950	21	12 14.8	20.6
515959 2015 RK_{85}	16.9	X	217.72817	27.15883	255.32095	7.33833	0.0738298	0.24372463	2.5382619	21	—	—
515960 2015 RL_{90}	16.3	X	10.02672	356.99486	10.90097	5.17716	0.2116214	0.17333167	3.1857921	21	11 20.4	20.0
515961 2015 RO_{93}	17.9	X	242.26370	259.82903	46.36037	1.80317	0.2041740	0.27138689	2.3627085	21	2 11.5	21.8
515962 2015 RR_{93}	17.7	X	244.42149	130.07960	155.81672	5.29033	0.2029914	0.26577495	2.3958522	21	1 19.2	21.6
515963 2015 RG_{99}	17.9	X	262.99590	64.22699	213.28514	3.47872	0.2646274	0.27064930	2.3669992	21	1 20.4	22.0
515964 2015 RF_{101}	15.8	X	347.87321	33.79048	345.94613	22.06974	0.0474867	0.17444865	3.1721787	21	10 10.6	20.4
515965 2015 RG_{101}	15.4	X	322.05592	238.20956	173.65530	16.71766	0.0865651	0.17517730	3.1633761	21	10 26.3	19.6
515966 2015 RG_{104}	16.8	X	85.87101	176.03346	173.33459	15.12889	0.1078375	0.21048347	2.7989215	21	—	—
515967 2015 RH_{106}	16.0	X	33.74613	337.36151	359.68992	9.75970	0.1014505	0.17906510	3.1174207	21	11 2.5	20.2
515968 2015 RZ_{106}	15.9	X	254.42360	203.44022	180.34647	1.64526	0.3083177	0.12653242	3.9294779	21	5 26.9	22.1
515969 2015 RD_{107}	16.8	X	77.55782	195.11034	163.40784	7.61904	0.1624926	0.20659352	2.8339461	21	—	—
515970 2015 RA_{109}	15.9	X	4.68037	10.52275	17.51369	11.40874	0.1403400	0.17649940	3.1475591	21	11 28.3	19.9
515971 2015 RU_{114}	16.6	X	51.40413	10.61573	12.58705	15.40568	0.1401899	0.20346250	2.8629458	21	—	—
515972 2015 RM_{118}	16.0	X	343.22811	5.51905	9.75257	9.10132	0.2086803	0.17180654	3.2046179	21	10 7.4	19.2
515973 2015 RE_{119}	16.2	X	17.68851	139.93804	203.31976	11.01646	0.0808290	0.17567860	3.1573554	21	10 19.2	20.3
515974 2015 RT_{138}	16.6	X	328.78527	289.34178	156.05559	4.64500	0.1100644	0.19306625	2.9648209	21	12 18.8	20.2
515975 2015 RY_{141}	16.8	X	328.87965	36.25088	3.76359	2.76419	0.0900944	0.17289186	3.1911926	21	10 17.4	20.8
515976 2015 RF_{146}	17.0	X	184.74986	296.61503	5.04895	12.75572	0.1546614	0.23841993	2.5757736	21	—	—
515977 2015 RT_{182}	16.9	X	36.55801	6.95562	353.83945	11.03106	0.0410808	0.19211322	2.9746181	21	11 30.6	21.2
515978 2015 RJ_{185}	16.9	X	140.60769	133.57616	193.39752	9.69133	0.0864694	0.21621459	2.7492404	21	—	—
515979 2015 RN_{185}	17.3	X	54.95750	226.83192	149.24653	2.51866	0.1079394	0.19576479	2.9375120	21	—	—
515980 2015 RE_{186}	16.5	X	98.13810	103.18021	188.02698	8.89413	0.0719316	0.17923500	3.1154504	21	11 24.9	21.2
515981 2015 RV_{191}	16.9	X	110.61162	194.39868	149.29330	4.73508	0.1084887	0.21383449	2.7696031	21	—	—
515982 2015 RG_{192}	17.0	X	208.51251	243.06721	13.37416	14.01907	0.1276562	0.22251937	2.6970614	21	—	—
515983 2015 RT_{195}	17.1	X	224.45845	241.02130	71.42603	3.21675	0.2278595	0.26005749	2.4308406	21	2 5.9	21.2
515984 2015 RR_{198}	16.7	X	69.09623	229.92672	141.42139	6.35849	0.0783192	0.20336543	2.8638567	21	—	—
515985 2015 RH_{199}	16.5	X	49.81631	178.44960	176.18216	11.57296	0.1005088	0.18725688	3.0258277	21	12 19.6	20.9
515986 2015 RJ_{199}	16.7	X	22.90617	244.85698	109.52714	3.17654	0.0913553	0.17428748	3.1741339	21	11 11.2	20.9
515987 2015 RH_{200}	16.5	X	276.77935	77.57389	32.09203	11.32644	0.0740989	0.17335561	3.1854989	21	11 1.2	20.9
515988 2015 RN_{205}	17.3	X	154.62882	217.56023	99.85830	3.57873	0.0881402	0.22020008	2.7159664	21	—	—
515989 2015 RW_{207}	15.9	X	308.24634	62.20241	23.70671	15.41448	0.0695590	0.17509445	3.1643739	21	11 12.3	20.1
515990 2015 RC_{208}	16.4	X	97.44318	317.38407	17.80436	15.36258	0.1525430	0.20281101	2.8690736	21	—	—
515991 2015 RC_{209}	16.1	X	265.79277	103.54556	32.13105	10.49509	0.0452829	0.18008314	3.1056607	21	11 22.7	20.4
515992 2015 RX_{210}	16.2	X	20.84577	208.58836	177.61678	10.49906	0.0587601	0.18491359	3.0513369	21	12 15.3	20.5
515993 2015 RE_{218}	16.9	X	90.40523	290.94410	10.17158	5.08186	0.1264873	0.18661341	3.0327793	21	12 2.9	21.5
515994 2015 RS_{218}	16.2	X	14.73588	356.20731	10.62679	15.69072	0.0110590	0.17538282	3.1609043	21	11 2.1	20.7
515995 2015 RY_{222}	17.3	X	102.43681	279.78157	40.61804	2.93519	0.0900722	0.19734563	2.9218037	21	—	—
515996 2015 RN_{227}	16.2	X	179.61663	127.41184	71.91852	5.86643	0.0902667	0.17027550	3.2237989	21	10 30.7	21.2
515997 2015 RP_{233}	16.6	X	342.72180	47.60259	30.15395	8.25334	0.0457856	0.18878704	3.0094556	21	12 26.9	20.7
515998 2015 RW_{233}	16.6	X	10.37278	233.11845	150.51855	12.44556	0.0300999	0.17276169	3.1927954	21	11 25.7	21.2
515999 2015 RC_{234}	16.6	X	90.21937	150.02995	172.93771	12.85817	0.1116689	0.18637534	3.0353614	21	12 27.5	21.4
516000 2015 RK_{239}	16.8	X	167.73312	172.66266	153.83862	15.00144	0.2566046	0.23048813	2.6345332	21	1 13.0	21.4