Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508001 2015 BL_{254}	18.4	X	309.02416	295.48998	191.07821	2.98069	0.1618034	0.28261991	2.2996807	21	—	—
508002 2015 BM_{258}	17.6	X	219.88611	278.65544	263.47352	5.94456	0.0523279	0.26667079	2.3904835	21	12 10.6	20.7
508003 2015 BC_{259}	18.1	X	43.54616	237.78915	138.86966	8.55170	0.2336634	0.28639014	2.2794532	21	—	—
508004 2015 BP_{260}	17.0	X	211.51333	235.72412	182.26198	4.68174	0.0580809	0.21389316	2.7690967	21	6 13.4	21.1
508005 2015 BK_{276}	16.6	X	35.48605	215.54370	105.35558	2.28853	0.0764736	0.23838476	2.5760269	21	10 25.7	19.7
508006 2015 BQ_{297}	17.9	X	267.95951	97.08714	64.26503	3.24921	0.1129428	0.26864011	2.3787866	21	—	—
508007 2015 BU_{299}	17.8	X	213.52772	118.57016	86.41181	3.59607	0.1297905	0.25822542	2.4423246	21	12 20.1	21.2
508008 2015 BE_{301}	17.1	X	141.23458	107.07091	136.24430	5.77395	0.1088604	0.24117998	2.5560845	21	11 23.1	21.0
508009 2015 BX_{303}	16.9	X	59.52949	160.21401	116.68027	5.95752	0.1426791	0.21572497	2.7533987	21	10 9.3	20.6
508010 2015 BM_{304}	16.4	X	99.77708	236.20755	7.68725	16.50333	0.1055576	0.22215614	2.7000004	21	10 6.4	20.3
508011 2015 BB_{313}	18.1	X	334.94707	13.14181	87.57768	1.37008	0.1891147	0.28724850	2.2749099	21	—	—
508012 2015 BS_{313}	17.8	X	103.87853	234.86248	59.26197	4.13269	0.1415753	0.27596538	2.3365029	21	12 24.1	21.2
508013 2015 BC_{316}	18.4	X	328.92370	40.07985	73.18193	3.47894	0.1456892	0.28416788	2.2913216	21	—	—
508014 2015 BB_{317}	17.9	X	135.78269	208.76414	38.48436	2.17972	0.1605775	0.25414061	2.4684254	21	11 23.4	21.7
508015 2015 BC_{339}	16.5	X	329.66341	197.15852	110.95177	7.77994	0.0237991	0.21382588	2.7696775	21	6 26.1	20.0
508016 2015 BH_{352}	18.2	X	54.36351	125.95389	280.25247	6.16613	0.1718330	0.30151568	2.2025686	21	—	—
508017 2015 BY_{354}	16.3	X	66.13780	9.19486	262.99022	13.95564	0.1082773	0.22773250	2.6557430	21	9 27.9	20.2
508018 2015 BF_{355}	17.2	X	111.28062	7.37291	224.69188	11.17556	0.1260315	0.22986288	2.6393085	21	10 5.6	21.2
508019 2015 BP_{356}	17.1	X	37.70142	251.36897	141.40467	22.27248	0.1828081	0.28298260	2.2977153	21	—	—
508020 2015 BL_{389}	17.3	X	155.78092	211.50244	15.81022	4.83706	0.1293948	0.25333407	2.4736618	21	11 16.6	21.1
508021 2015 BA_{394}	17.8	X	290.26143	37.00319	90.20933	7.76663	0.0508508	0.27366261	2.3495917	21	—	—
508022 2015 BG_{401}	18.2	X	20.70404	109.16035	305.57078	6.51564	0.1199003	0.28564906	2.2833939	21	—	—
508023 2015 BD_{407}	17.5	X	73.14861	176.75136	113.40713	2.10657	0.1047176	0.24556192	2.5255853	21	11 8.7	20.9
508024 2015 BX_{421}	17.3	X	117.09292	286.65163	307.99397	3.62372	0.1432297	0.23569673	2.5955756	21	10 17.2	21.3
508025 2015 BJ_{427}	16.7	X	93.33421	121.26025	129.87023	8.13797	0.0149159	0.23807837	2.5782365	21	10 3.5	20.2
508026 2015 BO_{429}	18.2	X	86.72463	220.22066	103.31324	3.79611	0.0754384	0.26652859	2.3913337	21	—	—
508027 2015 BQ_{429}	18.4	X	282.38340	74.02692	54.07066	2.04103	0.1231445	0.26904235	2.3764150	21	12 18.5	20.8
508028 2015 BD_{435}	17.1	X	120.12285	114.08404	130.72721	6.89909	0.1113858	0.24288048	2.5441398	21	11 5.3	21.0
508029 2015 BQ_{435}	16.9	X	267.36815	293.72475	90.38498	1.61527	0.1207050	0.22030441	2.7151089	21	6 28.2	20.5
508030 2015 BR_{437}	18.1	X	111.00846	195.19148	87.68990	2.53375	0.0830109	0.25594605	2.4568036	21	12 10.9	21.7
508031 2015 BF_{438}	17.8	X	288.10729	183.25859	313.16591	4.49993	0.1365029	0.27403267	2.3474760	21	—	—
508032 2015 BM_{455}	17.2	X	74.97789	147.69999	92.38609	3.00219	0.1230428	0.22086299	2.7105291	21	9 7.1	20.8
508033 2015 BE_{458}	16.3	X	298.92059	356.80845	330.26501	14.74929	0.1393511	0.20460467	2.8522813	21	5 17.7	20.4
508034 2015 BC_{461}	17.7	X	152.31222	179.00127	69.20190	3.09562	0.1588780	0.25399476	2.4693703	21	12 9.4	21.7
508035 2015 BQ_{471}	17.2	X	257.07228	279.40505	284.65356	4.33316	0.0810796	0.29028687	2.2590081	21	—	—
508036 2015 BV_{481}	17.5	X	138.68132	90.91788	147.52764	6.73754	0.0764926	0.25381371	2.4705444	21	11 16.4	21.1
508037 2015 BO_{484}	18.5	X	47.01962	273.36195	130.19659	5.92634	0.1418959	0.29517937	2.2339771	21	—	—
508038 2015 BG_{497}	16.8	X	9.45883	155.45909	133.84957	12.13956	0.0540739	0.21925126	2.7237964	21	7 28.5	20.1
508039 2015 BN_{500}	19.1	X	341.53447	166.89514	287.99746	1.89688	0.1649206	0.28551777	2.2840939	21	—	—
508040 2015 BG_{532}	16.6	X	329.85929	33.45328	356.66344	12.24872	0.0942677	0.23261277	2.6184664	21	10 12.4	19.7
508041 2015 BL_{532}	16.7	X	273.45421	65.72805	20.48478	13.17176	0.1129154	0.23249375	2.6193600	21	10 2.9	20.1
508042 2015 BK_{533}	16.5	X	314.21614	222.97564	105.62670	12.63755	0.1148359	0.18542425	3.0457320	21	6 21.3	20.4
508043 2015 BW_{533}	15.8	X	303.14481	287.29404	334.02820	13.95541	0.0417259	0.15404765	3.4464024	21	3 20.4	20.7
508044 2015 BY_{533}	16.8	X	316.32437	174.63776	153.07191	9.29206	0.1292796	0.21402779	2.7679353	21	6 20.7	20.3
508045 2015 BT_{534}	17.2	X	316.63561	196.60738	284.30041	6.18113	0.0886043	0.27479133	2.3431533	21	—	—
508046 2015 BG_{535}	17.4	X	271.93394	250.12363	162.46340	13.55857	0.1736520	0.23708086	2.5854634	21	8 2.5	21.0
508047 2015 BT_{535}	16.9	X	124.42311	150.92949	100.93167	4.61311	0.1881124	0.24305174	2.5429446	21	11 19.7	21.1
508048 2015 BA_{536}	17.2	X	77.77258	175.00168	88.80659	8.93031	0.1633699	0.23884917	2.5726866	21	10 21.4	21.0
508049 2015 BD_{536}	16.3	X	70.31781	65.25586	219.54973	12.17976	0.1274252	0.23910206	2.5708723	21	10 30.6	19.9
508050 2015 BG_{536}	17.2	X	345.44300	308.39774	53.13312	7.61235	0.1524849	0.23392086	2.6086956	21	10 7.7	19.7
508051 2015 BK_{536}	17.1	X	280.35914	342.92220	111.86555	7.68752	0.0982321	0.25017705	2.4944286	21	10 31.7	20.1
508052 2015 BL_{536}	17.2	X	172.48075	182.91710	53.12938	3.53139	0.1430358	0.25468452	2.4649097	21	12 13.8	20.9
508053 2015 BT_{536}	17.4	X	346.14868	225.31286	116.78348	3.62961	0.1023378	0.22951016	2.6420119	21	9 6.8	20.2
508054 2015 BW_{536}	17.1	X	217.81062	185.17195	301.35215	9.95198	0.0237428	0.22955649	2.6416564	21	9 18.4	20.9
508055 2015 BC_{537}	16.9	X	71.88371	121.29453	153.66542	3.76786	0.0349872	0.22461472	2.6802620	21	10 5.9	20.4
508056 2015 BF_{537}	17.3	X	111.12763	6.06008	197.66092	4.72635	0.0952418	0.21174347	2.7878069	21	8 26.9	21.4
508057 2015 BH_{537}	17.0	X	326.03555	334.75285	21.22315	5.85460	0.0561782	0.21135404	2.7912304	21	8 25.3	20.5
508058 2015 BK_{537}	18.0	X	145.39684	105.80134	177.79900	7.90946	0.0275249	0.28185084	2.3038622	21	—	—
508059 2015 BO_{537}	16.6	X	14.22184	189.80217	139.19400	15.81896	0.1476550	0.22830044	2.6513367	21	10 17.1	19.9
508060 2015 BP_{537}	17.0	X	192.96869	98.00619	53.35771	9.83609	0.0664202	0.22125660	2.7073136	21	9 26.1	21.0
508061 2015 CL_{1}	18.5	X	291.57304	186.01164	329.57937	1.97294	0.1657422	0.28233475	2.3012289	21	—	—
508062 2015 CS_{1}	16.3	X	305.86241	307.52687	327.34799	11.37333	0.0351819	0.18308256	3.0716477	21	4 5.9	20.8
508063 2015 CC_{5}	17.5	X	180.43459	291.03942	302.30321	2.71539	0.0872148	0.27353734	2.3503090	21	12 26.5	20.7
508064 2015 CA_{9}	17.8	X	18.46344	191.50599	167.83861	3.49830	0.0803415	0.25667738	2.4521347	21	11 25.7	20.6
508065 2015 CZ_{11}	17.7	X	227.24362	199.31872	350.05624	1.81364	0.1515397	0.26120988	2.4236858	21	12 13.8	20.8
508066 2015 CJ_{31}	18.2	X	259.63545	115.83032	65.57355	4.64710	0.1530680	0.27812360	2.3243998	21	—	—
508067 2015 CK_{31}	17.6	X	223.02709	91.07839	99.64092	7.66759	0.0617849	0.26862648	2.3788670	21	12 25.1	20.5
508068 2015 CT_{31}	18.2	X	37.45037	237.98984	144.40130	2.90239	0.1954238	0.28117728	2.3075400	21	—	—
508069 2015 CX_{39}	17.4	X	290.98628	52.51147	165.55836	6.38280	0.1145993	0.29556730	2.2320220	21	—	—
508070 2015 CZ_{43}	17.3	X	104.12174	336.94400	261.32854	2.65013	0.1015686	0.23233367	2.6205631	21	10 4.8	21.0
508071 2015 CB_{44}	17.4	X	188.68413	44.17550	165.49989	7.89909	0.0614918	0.25887739	2.4382223	21	12 6.4	20.8
508072 2015 CV_{54}	17.4	X	237.44128	137.40460	351.86271	10.81620	0.0574225	0.24002913	2.5642483	21	10 15.5	20.9
508073 2015 DO_{19}	18.2	X	279.88624	27.65978	124.44918	8.30087	0.0501007	0.27326583	2.3518656	21	—	—
508074 2015 DA_{40}	17.4	X	318.48120	28.04714	99.47330	7.18841	0.0607394	0.27904642	2.3192723	21	—	—
508075 2015 DV_{41}	17.3	X	331.57624	329.92481	83.11072	6.05079	0.0882530	0.25419703	2.4680601	21	11 25.6	19.8
508076 2015 DM_{46}	17.4	X	283.00005	211.55652	12.03559	8.47369	0.1124703	0.29782068	2.2207490	21	—	—
508077 2015 DB_{48}	17.4	X	13.41476	280.39640	25.21150	5.60247	0.0573994	0.22228519	2.6989553	21	8 29.8	20.7
508078 2015 DF_{52}	17.0	X	291.71637	329.89045	48.11497	6.97000	0.0437165	0.21807552	2.7335778	21	8 7.1	20.6
508079 2015 DS_{52}	16.6	X	358.09693	254.00104	27.08847	9.77686	0.0912565	0.19846402	2.9108167	21	6 29.6	20.3
508080 2015 DT_{52}	16.6	X	43.64430	154.17630	152.58250	13.90442	0.1795126	0.23118591	2.6292294	21	11 5.5	20.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508081 2015 DA_{56}	17.6	X	50.48302	158.79297	150.89509	12.93986	0.0324160	0.24513479	2.5285182	21	10 29.3	21.1
508082 2015 DB_{64}	17.5	X	152.69588	143.70614	109.03655	3.24265	0.1646233	0.25610736	2.4557718	21	12 15.5	21.3
508083 2015 DC_{64}	18.7	X	7.83643	327.89974	95.59001	2.39749	0.2020753	0.28512028	2.2862163	21	—	—
508084 2015 DT_{86}	17.5	X	324.18663	110.18452	343.35542	7.37764	0.0544162	0.26994007	2.3711434	21	—	—
508085 2015 DU_{91}	18.5	X	280.24291	83.05773	57.65451	2.22982	0.1263560	0.27115161	2.3640751	21	—	—
508086 2015 DY_{96}	16.9	X	16.09697	204.47449	105.68216	4.52557	0.1775254	0.21651537	2.7466937	21	9 21.7	19.8
508087 2015 DT_{99}	16.6	X	217.40432	5.46899	116.13178	14.77665	0.1468949	0.22097225	2.7096356	21	9 7.7	20.9
508088 2015 DF_{102}	18.3	X	345.96461	6.17962	59.79787	7.09976	0.0819794	0.27564547	2.3383103	21	—	—
508089 2015 DF_{114}	17.7	X	236.09270	111.25146	53.49101	7.84330	0.0923695	0.26369945	2.4084071	21	12 1.5	20.8
508090 2015 DP_{116}	16.6	X	74.12551	271.57289	7.71836	14.57486	0.1548497	0.23907063	2.5710976	21	10 27.4	20.4
508091 2015 DY_{116}	16.5	X	338.83529	240.39690	109.44330	16.12815	0.1564646	0.23726700	2.5841109	21	9 9.5	19.3
508092 2015 DX_{117}	16.7	X	37.84100	248.08359	29.93317	12.20160	0.0835035	0.21496257	2.7599051	21	9 4.2	20.4
508093 2015 DA_{118}	16.6	X	70.85364	242.45722	17.45545	13.04552	0.1810687	0.21692735	2.7432149	21	10 5.1	20.3
508094 2015 DL_{124}	16.9	X	149.93236	183.88011	19.72586	14.13426	0.1777850	0.22986619	2.6392831	21	10 11.9	21.3
508095 2015 DX_{127}	17.1	X	225.09554	64.48919	43.62071	13.36992	0.1405643	0.23062433	2.6334958	21	9 2.7	21.3
508096 2015 DU_{131}	17.2	X	273.46396	60.08576	24.11982	17.84048	0.1611597	0.24114791	2.5563111	21	9 27.3	20.4
508097 2015 DN_{133}	16.2	X	314.49171	205.54162	84.49736	16.25483	0.1311011	0.17539590	3.1607472	21	5 5.6	20.6
508098 2015 DL_{142}	17.9	X	303.00978	258.37910	206.42765	6.37043	0.1089560	0.27590449	2.3368466	21	12 24.8	20.2
508099 2015 DD_{146}	18.3	X	280.93302	317.64053	217.46404	3.24320	0.0911969	0.28973211	2.2618908	21	—	—
508100 2015 DY_{151}	17.6	X	155.63108	108.10220	115.24179	4.82007	0.0837623	0.24293112	2.5437863	21	11 13.5	21.3
508101 2015 DN_{153}	17.8	X	347.64888	30.03722	61.92018	3.66823	0.1943198	0.27917454	2.3185627	21	—	—
508102 2015 DO_{156}	19.0	X	331.88858	56.14440	46.10556	4.54007	0.1847996	0.28150528	2.3057472	21	—	—
508103 2015 DC_{157}	18.1	X	23.73808	215.81402	210.09262	6.88499	0.1358874	0.29900489	2.2148816	21	—	—
508104 2015 DM_{164}	17.9	X	177.18489	176.22053	32.70995	2.91015	0.0645990	0.24641768	2.5197346	21	11 18.3	21.5
508105 2015 DS_{166}	18.1	X	350.05641	118.60295	22.14457	7.55205	0.0572563	0.29284235	2.2458468	21	—	—
508106 2015 DR_{167}	17.2	X	63.31987	125.72890	132.58661	3.00550	0.0400400	0.21768548	2.7368421	21	9 2.0	20.9
508107 2015 DD_{175}	16.6	X	75.12771	354.14284	274.04718	11.70140	0.1601487	0.21941120	2.7224726	21	10 11.6	20.8
508108 2015 DP_{175}	17.3	X	9.06965	280.97969	130.19659	4.58306	0.0765195	0.26561622	2.3968066	21	—	—
508109 2015 DD_{179}	16.6	X	9.87406	70.48196	264.36308	8.47774	0.0635366	0.23693148	2.5865500	21	9 28.8	19.9
508110 2015 DL_{179}	16.4	X	74.30374	306.72046	287.35665	16.10130	0.1030664	0.21551556	2.7551820	21	8 17.6	20.4
508111 2015 DJ_{197}	15.6	X	300.85846	354.55161	282.36828	11.56864	0.0470133	0.17218910	3.1998696	21	4 1.0	20.3
508112 2015 DU_{205}	16.8	X	333.46559	221.65323	178.60996	21.71184	0.1139891	0.23397975	2.6082579	21	11 9.5	20.0
508113 2015 DM_{208}	16.9	X	215.51820	335.27041	157.61564	14.26189	0.0884233	0.22377749	2.6869430	21	9 23.5	20.8
508114 2015 DJ_{210}	16.3	X	8.59709	182.74733	95.90511	13.14528	0.0666320	0.18867227	3.0106759	21	7 12.7	20.2
508115 2015 DC_{211}	16.7	X	132.19334	68.06223	159.07603	12.47695	0.1342795	0.22190970	2.7019991	21	10 25.9	21.1
508116 2015 DM_{212}	15.9	X	341.69331	204.96508	104.56182	9.91314	0.1800869	0.18262961	3.0767243	21	7 5.2	18.9
508117 2015 DS_{218}	17.3	X	312.81993	235.78367	289.95529	6.20385	0.0458106	0.28574841	2.2828647	21	—	—
508118 2015 DC_{222}	17.0	X	69.15823	240.35460	7.95531	4.81567	0.1214230	0.21097418	2.7945798	21	9 8.9	20.7
508119 2015 DX_{228}	16.3	X	92.10552	127.57575	128.70559	17.63516	0.2390836	0.21128073	2.7918760	21	11 3.1	21.2
508120 2015 DA_{229}	16.4	X	36.17866	248.89892	43.58916	12.02961	0.0689238	0.22434991	2.6823706	21	9 20.5	19.9
508121 2015 DL_{229}	17.6	X	57.27352	168.80054	162.34151	2.77528	0.0211398	0.24678961	2.5172024	21	11 30.1	20.9
508122 2015 DN_{229}	16.4	X	240.81108	225.22592	235.49370	21.48190	0.0260602	0.23669287	2.5882880	21	9 11.2	20.4
508123 2015 DR_{229}	16.1	X	285.14926	295.77025	80.52294	16.01541	0.1624863	0.20304069	2.8669096	21	7 4.6	20.1
508124 2015 DS_{229}	17.5	X	283.11568	13.69557	75.63084	15.11056	0.0873679	0.23729869	2.5838809	21	10 30.3	20.8
508125 2015 DY_{229}	17.1	X	287.39872	287.53357	155.04329	12.79706	0.0649040	0.23109070	2.6299515	21	10 27.4	20.6
508126 2015 EC_{22}	17.9	X	214.59982	255.02273	302.07544	1.72550	0.1165129	0.26180409	2.4200171	21	12 13.5	21.0
508127 2015 EH_{28}	18.2	X	276.03486	163.25860	354.94787	2.74162	0.1356601	0.27405426	2.3473527	21	—	—
508128 2015 EU_{36}	16.3	X	250.30087	170.92346	156.21294	9.93337	0.0695283	0.17862427	3.1225476	21	4 7.6	20.9
508129 2015 ER_{40}	18.2	X	311.97205	100.29131	20.25628	5.02997	0.0965088	0.27581935	2.3373274	21	—	—
508130 2015 EW_{63}	16.7	X	179.59524	268.59946	0.83856	15.65346	0.1684286	0.26239931	2.4163560	21	—	—
508131 2015 EU_{68}	17.2	X	80.82721	157.26272	119.75028	4.60470	0.0966343	0.23830191	2.5766239	21	10 31.1	20.8
508132 2015 FD_{7}	17.9	X	19.75714	96.61107	1.63925	5.72402	0.1014498	0.30385884	2.1912309	21	—	—
508133 2015 FH_{20}	16.9	X	261.63723	341.18790	125.94750	14.61275	0.1329549	0.23964483	2.5669890	21	10 17.1	20.5
508134 2015 FV_{21}	16.6	X	103.02508	168.59827	39.02519	17.00627	0.1059286	0.20947881	2.8078634	21	9 3.7	21.0
508135 2015 FN_{32}	16.8	X	195.32505	137.58707	42.63059	14.45661	0.1040725	0.23334722	2.6129692	21	10 29.8	20.7
508136 2015 FW_{37}	17.6	X	225.20497	134.84349	42.23316	13.56204	0.1189274	0.24442957	2.5333793	21	11 25.1	21.1
508137 2015 FN_{43}	17.2	X	239.34309	159.73940	36.79725	15.15331	0.0372494	0.25702986	2.4498923	21	—	—
508138 2015 FL_{45}	15.9	X	312.26526	277.64380	49.58944	14.10151	0.2063365	0.17645752	3.1480571	21	5 31.7	19.9
508139 2015 FV_{64}	16.2	X	87.16508	303.28637	281.09089	13.16062	0.0380463	0.21288455	2.7778361	21	8 13.3	20.3
508140 2015 FT_{74}	16.6	X	346.91646	241.68928	44.73158	11.00987	0.1773271	0.17819430	3.1275685	21	6 11.6	20.2
508141 2015 FX_{74}	17.6	X	267.59925	160.55957	50.82727	5.36945	0.1132798	0.27681108	2.3317415	21	—	—
508142 2015 FF_{75}	17.3	X	130.14438	45.41059	158.19516	4.08993	0.1206335	0.21263425	2.7800156	21	9 20.5	21.6
508143 2015 FN_{75}	17.0	X	318.37995	277.17020	105.33324	2.84262	0.0922420	0.21330769	2.7741613	21	9 15.0	20.2
508144 2015 FR_{75}	17.2	X	220.88932	128.82183	27.79070	5.97892	0.1407982	0.23722076	2.5844468	21	10 23.3	20.7
508145 2015 FO_{76}	17.2	X	102.42033	200.01514	42.92842	12.67893	0.0595384	0.21497206	2.7598239	21	10 8.1	21.2
508146 2015 FT_{76}	16.5	X	358.53069	214.45678	82.79391	6.68880	0.1750850	0.18637928	3.0353187	21	7 23.9	19.8
508147 2015 FM_{94}	16.1	X	91.38674	210.60973	279.16782	6.81422	0.1543472	0.17866801	3.1220380	21	5 7.8	20.5
508148 2015 FC_{111}	17.4	X	321.79549	266.99372	229.15157	4.39030	0.1734897	0.27978079	2.3152121	21	—	—
508149 2015 FR_{140}	18.2	X	240.45855	24.51921	156.60019	1.68220	0.1408348	0.25889135	2.4381347	21	12 21.3	21.3
508150 2015 FH_{151}	17.5	X	306.21621	19.69066	79.38448	2.32399	0.1504078	0.25660469	2.4525977	21	12 14.7	19.5
508151 2015 FG_{153}	17.3	X	164.37140	154.61248	23.84938	6.53474	0.0134781	0.22123437	2.7074949	21	9 25.4	20.9
508152 2015 FM_{157}	17.1	X	126.88537	155.79194	44.54326	9.64818	0.0973775	0.21404643	2.7677746	21	9 15.7	21.3
508153 2015 FN_{158}	17.4	X	217.15738	26.55556	106.76217	6.10072	0.0116061	0.22452575	2.6809699	21	10 6.1	21.1
508154 2015 FO_{158}	17.1	X	316.62232	333.99034	49.68469	11.32198	0.0316684	0.21964426	2.7205465	21	9 24.1	20.8
508155 2015 FW_{158}	17.1	X	159.80977	131.12186	94.45374	5.06313	0.0948051	0.23728001	2.5840165	21	11 19.1	21.0
508156 2015 FG_{161}	17.3	X	321.20722	318.63019	68.16369	7.32967	0.0413517	0.22267420	2.6958110	21	10 2.6	20.8
508157 2015 FZ_{164}	17.0	X	234.56841	110.96077	25.25247	22.59973	0.0938866	0.23651154	2.5896108	21	10 18.9	20.5
508158 2015 FS_{166}	17.5	X	139.74510	116.62996	115.25408	2.93126	0.0642487	0.23173131	2.6251024	21	11 4.9	21.2
508159 2015 FE_{167}	16.9	X	323.07473	197.75242	102.21628	2.36066	0.1803136	0.17620405	3.1510754	21	5 19.1	20.6
508160 2015 FY_{167}	17.3	X	205.22790	156.33324	27.35391	12.49075	0.1102684	0.24238654	2.5475950	21	11 11.0	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508161 2015 FS_{168}	16.8	X	300.11178	47.39038	17.90392	22.39926	0.0548628	0.23638059	2.5905670	21	10 17.9	20.0
508162 2015 FY_{171}	17.1	X	8.63484	218.68187	103.77217	7.08905	0.0355477	0.21297276	2.7770691	21	9 13.1	20.8
508163 2015 FM_{183}	16.9	X	335.90843	196.92420	154.66765	7.06653	0.0387878	0.21863367	2.7289235	21	9 2.3	20.4
508164 2015 FG_{198}	17.7	X	274.96137	231.57993	284.61005	4.29232	0.1595836	0.26947990	2.3738420	21	—	—
508165 2015 FT_{203}	16.0	X	335.82806	37.34265	318.43207	5.29948	0.0533771	0.22283461	2.6945171	21	9 6.1	19.3
508166 2015 FR_{205}	17.7	X	281.09298	270.78170	207.70273	6.33354	0.0747153	0.25509744	2.4622491	21	12 5.5	20.5
508167 2015 FW_{211}	17.0	X	231.17591	13.31614	83.41125	11.20039	0.1594959	0.22197667	2.7014556	21	8 19.7	21.2
508168 2015 FY_{211}	16.3	X	349.67509	126.75682	158.34447	15.07254	0.2308753	0.17899676	3.1182141	21	6 14.7	19.8
508169 2015 FZ_{211}	15.6	X	344.34568	166.79333	88.62645	11.48890	0.0236763	0.17438162	3.1729915	21	5 12.6	20.0
508170 2015 FF_{212}	16.5	X	2.53250	182.94340	75.15062	11.57308	0.1796722	0.17718643	3.1394175	21	6 4.7	19.9
508171 2015 FJ_{217}	18.4	X	293.99717	103.92278	23.46860	2.52840	0.1551852	0.26781678	2.3836594	21	—	—
508172 2015 FW_{222}	16.6	X	167.19806	13.95100	124.64482	6.04785	0.1048395	0.21439619	2.7647636	21	8 6.7	20.7
508173 2015 FJ_{225}	16.7	X	337.17440	2.09976	26.42303	9.50880	0.0761807	0.23889900	2.5723289	21	10 26.5	19.5
508174 2015 FV_{274}	16.9	X	116.61389	151.06703	62.54091	6.08592	0.0505685	0.22260911	2.6963365	21	9 16.1	20.7
508175 2015 FB_{279}	17.7	X	174.29031	154.46186	52.74232	5.38506	0.1139252	0.24271998	2.5452613	21	11 10.3	21.6
508176 2015 FN_{285}	18.2	X	359.72170	97.58531	11.73831	3.46169	0.1297519	0.29533624	2.2331860	21	—	—
508177 2015 FA_{286}	17.0	X	251.12816	7.04683	82.30446	18.42834	0.0570669	0.21644114	2.7473216	21	9 22.5	21.2
508178 2015 FL_{287}	16.8	X	149.72457	321.76782	239.68803	4.79753	0.2209494	0.23069385	2.6329668	21	10 8.1	21.4
508179 2015 FX_{292}	18.0	X	305.17455	280.84172	195.17687	1.77171	0.1654242	0.26339899	2.4102383	21	—	—
508180 2015 FA_{294}	16.2	X	16.52047	182.78218	62.25408	18.37495	0.1455616	0.17648550	3.1477244	21	6 11.3	19.9
508181 2015 FF_{296}	16.1	X	354.94498	193.77223	121.69042	9.98727	0.1641617	0.19059102	2.9904355	21	8 12.0	19.3
508182 2015 FZ_{298}	16.4	X	10.48632	176.18124	113.52180	9.78251	0.0899734	0.18823689	3.0153164	21	8 1.2	20.1
508183 2015 FN_{302}	16.7	X	75.45664	111.97118	166.88552	12.63428	0.0937265	0.21097885	2.7945385	21	10 24.0	20.7
508184 2015 FO_{310}	16.7	X	150.50122	183.01743	29.64984	15.10318	0.1557990	0.23020606	2.6366848	21	10 23.1	20.7
508185 2015 FT_{317}	17.4	X	58.23940	178.52544	113.70816	5.98332	0.0872162	0.22055663	2.7130386	21	10 19.8	21.1
508186 2015 FG_{318}	16.7	X	288.19923	260.34802	150.40012	11.40445	0.0504108	0.22123838	2.7074622	21	9 13.8	20.1
508187 2015 FC_{319}	16.7	X	257.71306	283.67333	85.06508	8.89729	0.0168368	0.18785502	3.0194014	21	6 11.3	20.9
508188 2015 FH_{321}	17.0	X	248.25362	32.95473	58.32511	13.74760	0.1350960	0.22799978	2.6536670	21	9 8.4	21.0
508189 2015 FN_{321}	15.4	X	269.54356	272.34207	65.11931	15.53004	0.2263766	0.17312924	3.1882750	21	4 25.9	20.5
508190 2015 FV_{329}	16.9	X	8.11227	288.29018	74.89225	12.65830	0.0300528	0.23349200	2.6118889	21	11 8.1	20.3
508191 2015 FR_{330}	17.7	X	198.07963	280.79525	263.10948	3.24675	0.1086863	0.23907704	2.5710516	21	11 4.9	21.4
508192 2015 FW_{330}	17.3	X	157.90693	3.62103	193.96460	2.42726	0.0481241	0.22935755	2.6431837	21	10 11.5	21.1
508193 2015 FN_{344}	16.8	X	163.65117	200.94268	9.55557	13.60140	0.1190148	0.23384262	2.6092775	21	10 29.6	21.0
508194 2015 FR_{348}	16.6	X	275.38406	318.21761	83.04217	15.48980	0.1859700	0.21862824	2.7289687	21	7 23.2	20.5
508195 2015 FU_{352}	16.8	X	83.44888	268.36526	353.63051	4.17612	0.0804847	0.21659570	2.7460145	21	10 7.2	20.6
508196 2015 FN_{355}	16.9	X	305.17581	343.58423	43.93145	5.81996	0.0885530	0.21350530	2.7724493	21	9 2.9	20.4
508197 2015 FS_{365}	16.2	X	63.61052	25.45599	248.40699	12.16125	0.1633932	0.22792909	2.6542157	21	10 7.7	20.0
508198 2015 FB_{377}	17.0	X	90.96147	343.93465	241.26339	8.24720	0.1322277	0.21731586	2.7399445	21	9 2.5	21.2
508199 2015 FM_{381}	16.9	X	249.45330	235.24695	208.31782	14.22956	0.0741504	0.23138532	2.6277186	21	8 26.8	20.7
508200 2015 FX_{394}	16.7	X	319.27744	104.32767	197.47525	1.01736	0.1501669	0.17987318	3.1080770	21	5 19.2	20.5
508201 2015 FA_{396}	17.5	X	136.07840	190.05666	20.98446	4.74787	0.1036307	0.22154638	2.7049523	21	10 5.5	21.5
508202 2015 FJ_{396}	16.6	X	78.99336	9.95286	186.02600	12.93678	0.1281853	0.17809374	3.1287457	21	7 11.8	21.2
508203 2015 FP_{396}	17.2	X	198.67819	282.77175	183.56636	1.82669	0.0174086	0.20230617	2.8738447	21	8 1.8	21.3
508204 2015 FR_{396}	16.5	X	299.18237	26.91980	41.03614	15.47796	0.1103846	0.23327919	2.6134772	21	10 19.5	19.5
508205 2015 FS_{396}	16.7	X	169.01299	128.53370	72.82482	13.84070	0.2014288	0.22625344	2.6673045	21	10 29.3	21.3
508206 2015 FU_{396}	16.9	X	291.71293	277.28965	169.50322	14.68337	0.2004638	0.23242596	2.6198693	21	10 20.5	19.8
508207 2015 FV_{396}	16.9	X	331.81904	37.68463	319.88398	4.49287	0.0678777	0.21342804	2.7731183	21	9 1.4	20.4
508208 2015 FX_{396}	16.5	X	33.32912	240.05098	124.80826	7.16059	0.0771560	0.22583971	2.6705610	21	12 16.4	20.0
508209 2015 FF_{397}	17.7	X	219.89412	154.49496	353.18491	5.88480	0.1731416	0.22988244	2.6391588	21	10 5.7	21.7
508210 2015 GV_{16}	16.1	X	332.32120	143.09645	162.39562	16.27965	0.2247339	0.17509335	3.1643871	21	6 7.9	20.0
508211 2015 GU_{20}	17.7	X	317.93995	36.87492	64.36747	2.32523	0.1439573	0.26371358	2.4083211	21	—	—
508212 2015 GA_{21}	16.6	X	139.82626	269.79687	186.65214	10.68411	0.0570791	0.17916682	3.1162407	21	5 14.0	21.3
508213 2015 GF_{22}	17.7	X	251.20017	65.82998	40.90815	12.00978	0.1528014	0.23262698	2.6183598	21	9 27.5	21.4
508214 2015 GS_{22}	17.0	X	302.56757	306.48742	97.21693	14.84155	0.0648526	0.21691283	2.7433374	21	9 29.6	20.8
508215 2015 GY_{23}	16.0	X	306.61198	207.38539	110.97199	16.17486	0.0770667	0.17416243	3.1756532	21	6 4.9	20.5
508216 2015 GN_{24}	16.4	X	145.19513	124.45447	75.15229	13.63254	0.0962125	0.22000939	2.7175356	21	10 7.3	20.8
508217 2015 GO_{29}	18.0	X	274.08995	347.51812	163.98269	1.30660	0.1211627	0.26312411	2.4119166	21	—	—
508218 2015 GN_{31}	18.1	X	282.68123	24.69498	110.47855	2.25704	0.1337720	0.26094633	2.4253175	21	12 25.6	20.4
508219 2015 GY_{31}	18.0	X	221.69333	320.28874	198.50800	7.55194	0.1141136	0.24208688	2.5496968	21	10 31.8	21.6
508220 2015 GW_{34}	15.9	X	77.29743	320.96829	200.88005	18.71751	0.0238978	0.17720828	3.1391594	21	5 14.6	20.4
508221 2015 GJ_{37}	18.1	X	36.54198	10.44742	87.80885	5.82958	0.1213643	0.29515815	2.2340842	21	—	—
508222 2015 GB_{40}	17.5	X	264.41107	79.23904	43.89791	15.66160	0.0685376	0.24416567	2.5352044	21	11 14.0	20.6
508223 2015 GD_{42}	16.4	X	283.95302	220.41275	101.47409	10.58037	0.0628709	0.17449464	3.1716213	21	5 12.9	21.0
508224 2015 GR_{42}	17.9	X	209.28818	130.91559	50.05505	14.45647	0.1528127	0.24345604	2.5401285	21	11 10.5	21.7
508225 2015 GR_{45}	16.9	X	307.97551	272.05057	122.39229	6.92276	0.0564996	0.21908324	2.7251889	21	9 20.8	20.4
508226 2015 GL_{51}	16.7	X	18.19188	25.33542	292.58232	11.59084	0.1088958	0.22111840	2.7084415	21	9 18.8	20.2
508227 2015 GN_{51}	16.0	X	246.96609	322.06849	82.85579	7.70718	0.1891106	0.19737682	2.9214959	21	6 23.6	20.6
508228 2015 HP	16.1	X	274.13698	261.69498	86.44146	11.03155	0.1081524	0.17752831	3.1353857	21	5 25.4	20.7
508229 2015 HM_{4}	16.5	X	6.28683	266.37024	344.16717	17.95523	0.1878602	0.18097519	3.0954469	21	5 27.3	20.2
508230 2015 HT_{4}	17.4	X	309.58490	229.77440	265.06500	6.03632	0.1842704	0.27721083	2.3294993	21	—	—
508231 2015 HN_{6}	17.0	X	81.29464	331.83955	261.19918	8.32110	0.1075319	0.20960924	2.8066985	21	8 27.8	21.1
508232 2015 HT_{12}	16.0	X	250.46302	340.17369	29.84057	11.65459	0.0505632	0.17980989	3.1088063	21	5 28.2	20.6
508233 2015 HC_{13}	16.8	X	70.25145	146.52976	123.49252	8.05947	0.0546324	0.21385055	2.7694645	21	10 1.6	20.7
508234 2015 HK_{20}	14.9	X	170.04741	275.85204	58.39963	3.18912	0.2116289	0.12309081	4.0023859	21	2 4.9	21.5
508235 2015 HY_{25}	16.1	X	127.46099	332.11187	204.67847	27.74278	0.1359964	0.20418494	2.8561888	21	8 8.5	21.1
508236 2015 HP_{27}	17.2	X	217.24507	52.47261	106.91720	4.15406	0.0466973	0.23471491	2.6028088	21	11 4.4	20.7
508237 2015 HF_{28}	17.0	X	131.20434	30.17660	190.33707	13.66691	0.1467316	0.22067488	2.7120693	21	10 14.7	21.2
508238 2015 HD_{33}	16.9	X	4.03131	168.42439	185.09027	6.00070	0.0486910	0.22210073	2.7004495	21	10 17.6	20.2
508239 2015 HF_{33}	17.1	X	184.48207	353.71906	187.67498	7.70308	0.1446127	0.23079987	2.6321603	21	10 17.3	21.2
508240 2015 HK_{34}	16.7	X	11.96812	255.06567	78.22731	5.29123	0.0784547	0.21395450	2.7685674	21	10 5.8	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508241 2015 HG_{36}	17.0	X	103.74965	156.17218	90.80740	9.78895	0.1108911	0.21737575	2.7394412	21	10 20.7	21.2
508242 2015 HE_{37}	16.5	X	329.03021	167.12799	125.54185	5.15415	0.1544423	0.17233932	3.1980099	21	5 23.9	20.5
508243 2015 HK_{37}	16.8	X	146.87813	4.31249	153.18633	6.54996	0.0247557	0.19885532	2.9069969	21	8 3.3	21.0
508244 2015 HT_{38}	16.7	X	309.84401	235.32637	188.63149	21.70660	0.0564613	0.22951981	2.6419378	21	11 3.3	20.2
508245 2015 HW_{39}	15.7	X	313.66218	248.51172	73.80890	15.96470	0.2192925	0.17357374	3.1828294	21	5 28.2	19.6
508246 2015 HY_{45}	16.5	X	330.95067	235.94290	44.79071	19.48067	0.2024430	0.17338505	3.1851382	21	5 3.6	20.3
508247 2015 HG_{56}	15.9	X	327.03449	68.01419	255.97715	14.43495	0.0744723	0.18407098	3.0606418	21	7 6.9	19.9
508248 2015 HM_{60}	16.3	X	327.37844	147.66108	185.50544	16.36182	0.0997157	0.17783962	3.1317256	21	7 16.8	20.6
508249 2015 HO_{64}	17.1	X	330.41766	260.52916	37.83579	7.01453	0.1688646	0.17570568	3.1570310	21	5 29.5	20.8
508250 2015 HN_{65}	17.0	X	61.97315	165.26959	60.56503	1.12827	0.0742958	0.19106178	2.9855212	21	7 22.2	21.0
508251 2015 HA_{72}	17.1	X	165.43224	118.80220	58.94826	3.86121	0.0179731	0.21658601	2.7460964	21	9 25.6	20.8
508252 2015 HT_{74}	17.3	X	72.68902	189.17743	53.87360	8.05412	0.0663355	0.20165158	2.8800606	21	8 31.8	21.3
508253 2015 HV_{76}	16.7	X	269.63972	325.08494	49.74532	1.88895	0.0951996	0.18698739	3.0287343	21	6 22.9	21.0
508254 2015 HF_{77}	17.3	X	131.47277	11.66467	210.22280	8.86454	0.1024321	0.21914698	2.7246605	21	10 12.9	21.6
508255 2015 HB_{80}	16.6	X	346.01946	240.10131	31.18942	13.93905	0.1666987	0.17067909	3.2187149	21	5 19.3	20.4
508256 2015 HR_{84}	17.1	X	258.66437	295.65555	159.28724	3.72002	0.1428302	0.22579229	2.6709349	21	9 17.4	20.6
508257 2015 HZ_{84}	16.7	X	44.31033	31.19771	201.65012	7.85625	0.0727825	0.18443440	3.0566198	21	7 4.5	20.9
508258 2015 HG_{87}	16.3	X	57.51330	157.80186	59.06493	10.53143	0.1586411	0.18439421	3.0570640	21	7 17.7	20.4
508259 2015 HH_{90}	16.4	X	331.11034	269.85672	48.28927	11.18510	0.0880984	0.18524076	3.0477431	21	7 7.0	20.4
508260 2015 HM_{100}	16.8	X	232.40331	36.49957	60.35631	4.31005	0.0584869	0.20865128	2.8152827	21	8 30.4	20.8
508261 2015 HP_{114}	16.1	X	278.90380	203.13289	169.09688	11.32501	0.1289287	0.19202455	2.9755337	21	6 26.2	20.4
508262 2015 HF_{133}	17.0	X	37.60527	201.89148	49.93219	9.20711	0.1042053	0.18728937	3.0254777	21	7 27.5	20.9
508263 2015 HK_{134}	16.9	X	219.83899	95.85083	48.00647	12.17344	0.1349161	0.22871028	2.6481684	21	10 10.2	20.9
508264 2015 HP_{141}	16.8	X	59.27486	205.09345	57.41309	12.58288	0.0745502	0.20299658	2.8673249	21	9 12.8	20.9
508265 2015 HQ_{157}	16.9	X	184.49778	299.33852	222.64688	7.57143	0.1213521	0.22208398	2.7005852	21	9 20.2	21.2
508266 2015 HO_{164}	16.8	X	350.04883	248.53675	71.99671	3.08913	0.0007478	0.19933144	2.9023660	21	8 11.8	20.8
508267 2015 HS_{166}	16.6	X	1.66745	68.22905	206.27944	15.70799	0.1879923	0.17638959	3.1488653	21	6 24.8	20.3
508268 2015 HD_{169}	16.7	X	44.93398	194.90976	61.00510	3.16634	0.1124247	0.19229697	2.9727228	21	8 13.4	20.5
508269 2015 HF_{169}	16.8	X	224.53593	139.78352	37.99256	13.58634	0.1309195	0.24426032	2.5345494	21	11 23.3	20.3
508270 2015 HY_{171}	16.4	X	121.32824	10.79708	234.18680	14.11730	0.0676657	0.23120674	2.6290715	21	10 29.6	20.3
508271 2015 HW_{172}	17.1	X	133.70362	216.06268	15.17325	3.52312	0.1701982	0.22612719	2.6682972	21	10 29.9	21.5
508272 2015 HY_{172}	17.4	X	235.69188	121.83710	65.95084	3.42145	0.1314817	0.25771795	2.4455297	21	12 24.8	20.4
508273 2015 HC_{174}	16.6	X	240.11730	173.34342	73.64516	10.85790	0.1186454	0.27447509	2.3449527	21	—	—
508274 2015 HD_{174}	17.3	X	208.31059	118.53808	57.60451	13.02879	0.1974201	0.23775724	2.5805576	21	10 31.9	21.4
508275 2015 HM_{179}	16.8	X	104.80780	14.75171	210.41143	7.57434	0.1578621	0.21136933	2.7910957	21	9 22.2	21.2
508276 2015 HH_{181}	16.8	X	235.48175	113.03157	47.44261	12.40633	0.1240610	0.24125027	2.5555880	21	11 16.3	20.2
508277 2015 HZ_{184}	16.4	X	294.47080	111.27705	215.29257	10.96013	0.0393517	0.17411649	3.1762117	21	6 1.9	20.9
508278 2015 HM_{185}	16.5	X	357.14105	126.57097	142.34759	2.95410	0.1281354	0.17503929	3.1650386	21	6 10.9	20.2
508279 2015 HP_{185}	16.5	X	311.60667	285.77586	31.94699	10.52342	0.0916861	0.17455714	3.1708642	21	6 4.2	20.9
508280 2015 HQ_{185}	16.2	X	234.87736	279.53132	138.83108	4.22687	0.0350185	0.18419283	3.0592918	21	7 13.9	20.6
508281 2015 HR_{185}	16.7	X	168.91030	293.64836	177.22544	9.85796	0.0780830	0.18064697	3.0991952	21	7 2.3	21.6
508282 2015 HT_{185}	16.0	X	272.58793	137.70715	247.60859	14.86619	0.0740372	0.18626238	3.0365885	21	7 10.4	20.4
508283 2015 HU_{185}	16.6	X	305.00832	210.41753	133.03323	9.80999	0.1025066	0.18768009	3.0212773	21	6 28.7	20.6
508284 2015 JU_{12}	16.4	X	234.84746	69.50808	52.41042	13.33371	0.2212439	0.22356296	2.6886616	21	9 21.3	20.8
508285 2015 JZ_{12}	16.5	X	58.01782	46.52545	169.62402	9.85215	0.0442370	0.17258584	3.1949638	21	6 29.1	21.0
508286 2015 KF_{4}	16.4	X	316.58123	166.30775	240.79667	13.52852	0.0585389	0.23240343	2.6200387	21	10 16.4	19.7
508287 2015 KY_{6}	16.8	X	281.93995	194.04116	266.52508	9.79621	0.0885820	0.23372496	2.6101531	21	11 3.2	20.1
508288 2015 KP_{12}	16.4	X	7.76693	177.10856	113.87870	14.40977	0.1039441	0.18212822	3.0823684	21	7 29.8	20.1
508289 2015 KC_{15}	16.4	X	1.24301	143.73474	139.26244	11.08282	0.0481638	0.17635028	3.1493333	21	7 6.7	20.6
508290 2015 KU_{16}	16.5	X	323.39209	180.50054	142.80048	13.42697	0.1232378	0.17638793	3.1488851	21	6 27.7	20.6
508291 2015 KY_{16}	16.5	X	331.28798	176.61095	153.09223	12.74223	0.0925132	0.18328885	3.0693425	21	7 20.7	20.5
508292 2015 KA_{17}	15.8	X	204.21427	316.41113	112.94366	16.85575	0.0732648	0.17630751	3.1498426	21	6 20.6	20.7
508293 2015 KT_{23}	17.6	X	251.06608	230.65714	281.08663	2.09786	0.1637643	0.24135005	2.5548836	21	11 19.2	20.9
508294 2015 KW_{24}	17.1	X	219.06239	21.72844	119.32069	12.16228	0.1543763	0.22331611	2.6906426	21	10 4.5	21.4
508295 2015 KM_{31}	16.9	X	125.61062	229.49741	51.27410	18.09919	0.2017749	0.23219301	2.6216213	21	12 20.9	21.6
508296 2015 KB_{34}	17.1	X	140.45987	293.71347	282.06769	3.39349	0.0477059	0.21677892	2.7444670	21	10 11.2	21.2
508297 2015 KE_{34}	16.7	X	58.34496	230.68989	342.89844	4.28717	0.0901296	0.18060939	3.0996251	21	7 3.3	20.9
508298 2015 KF_{35}	16.8	X	280.76500	162.83103	260.61267	3.24745	0.0464502	0.21210431	2.7846443	21	9 16.5	20.5
508299 2015 KN_{37}	16.3	X	285.67891	171.64884	202.81683	9.87231	0.0607805	0.18224035	3.0811040	21	7 16.3	20.7
508300 2015 KQ_{37}	15.9	X	306.49953	289.17810	77.36829	26.40060	0.2636902	0.17906810	3.1173858	21	7 4.9	20.0
508301 2015 KA_{40}	16.5	X	15.99996	222.69210	60.19487	10.79964	0.0874354	0.18344423	3.0676090	21	8 3.2	20.5
508302 2015 KJ_{46}	16.2	X	4.95912	154.57858	102.92042	5.70752	0.1050685	0.16863479	3.2446755	21	6 9.6	20.2
508303 2015 KD_{53}	16.6	X	27.21496	134.43726	135.11522	3.40847	0.0698861	0.18062549	3.0994409	21	7 28.6	20.5
508304 2015 KT_{53}	16.0	X	11.80316	220.73311	58.91361	11.17322	0.1896245	0.17703094	3.1412556	21	7 28.6	19.5
508305 2015 KF_{62}	17.1	X	154.94770	118.21157	90.61102	12.27442	0.0671376	0.22233105	2.6985841	21	10 27.1	21.3
508306 2015 KK_{83}	16.1	X	184.76294	232.01270	205.16609	25.18834	0.1597273	0.17453552	3.1711260	21	6 7.2	21.6
508307 2015 KD_{87}	16.4	X	173.47624	13.45073	96.90237	9.79109	0.0116279	0.18462721	3.0544914	21	7 6.4	20.6
508308 2015 KC_{94}	16.2	X	342.26403	201.70499	99.10445	11.92443	0.0938496	0.17659480	3.1464254	21	6 30.3	20.1
508309 2015 KO_{94}	16.9	X	173.15020	333.89183	153.49811	8.33008	0.0419159	0.18962253	3.0006091	21	7 27.4	21.3
508310 2015 KK_{96}	16.0	X	248.68824	301.91945	85.98074	19.83132	0.1618662	0.17150593	3.2083615	21	6 8.6	20.9
508311 2015 KD_{118}	16.4	X	61.92867	220.53204	148.80651	13.81952	0.0587585	0.24036630	2.5618498	21	—	—
508312 2015 KA_{123}	16.5	X	317.93303	238.47385	94.16987	12.18227	0.0508388	0.18120381	3.0928427	21	7 9.8	20.6
508313 2015 KZ_{133}	16.7	X	270.62880	125.70170	89.27525	7.75359	0.0671729	0.27231602	2.3573311	21	—	—
508314 2015 KG_{137}	17.6	X	133.54059	160.27521	46.92079	5.82129	0.1929427	0.21212781	2.7844386	21	10 3.2	22.2
508315 2015 KK_{138}	16.7	X	148.60513	314.96894	245.11403	12.98170	0.1566466	0.21535146	2.7565815	21	9 30.1	21.4
508316 2015 KN_{139}	16.2	X	315.45854	259.35796	62.93629	12.75094	0.0514391	0.17741363	3.1367367	21	6 21.8	20.5
508317 2015 KM_{140}	17.4	X	159.33901	122.57336	73.27872	6.05160	0.1002637	0.21685236	2.7438474	21	10 12.2	21.7
508318 2015 KW_{150}	17.5	X	201.71113	38.27671	142.55461	5.11956	0.0782834	0.23194998	2.6234522	21	11 9.5	21.3
508319 2015 KE_{165}	17.1	X	127.68885	327.24961	255.45171	2.36267	0.1204798	0.21066231	2.7973372	21	10 9.8	21.5
508320 2015 LL_{1}	16.8	X	195.58649	26.24133	160.17640	15.65299	0.0545864	0.23032252	2.6357959	21	11 13.8	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508321 2015 LT_7	16.2	X	15.80172	157.97811	122.80095	14.18236	0.1265131	0.17868963	3.1217862	21	7 30.4	19.9
508322 2015 LT_{22}	16.4	X	18.91437	174.70093	92.92586	11.91171	0.1038292	0.17660838	3.1462641	21	7 16.3	20.2
508323 2015 LR_{24}	15.4	X	163.87472	303.70699	271.34131	32.02329	0.1439202	0.20541887	2.8447394	21	10 30.4	20.6
508324 2015 LF_{34}	16.6	X	276.43081	359.21064	101.49264	3.26565	0.0199889	0.20363636	2.8613161	21	11 3.4	20.4
508325 2015 LW_{41}	16.8	X	25.75789	215.23372	50.05819	0.14893	0.1025872	0.17746888	3.1360856	21	7 23.8	20.8
508326 2015 LY_{41}	15.5	X	237.89018	149.58699	245.22691	18.05033	0.0392718	0.16865935	3.2443604	21	6 16.5	20.2
508327 2015 MG_7	16.8	X	160.62173	358.04232	279.79819	14.05398	0.0746374	0.23052821	2.6342278	21	—	—
508328 2015 MX_7	16.8	X	113.08131	343.42196	224.42824	4.34883	0.1565803	0.18236444	3.0797061	21	9 6.9	21.6
508329 2015 MP_{13}	16.0	X	298.79556	305.89251	81.33645	13.99357	0.1300564	0.17374283	3.1807641	21	8 16.7	20.3
508330 2015 MY_{23}	16.4	X	96.83420	103.07011	59.72628	14.84408	0.1371806	0.17909312	3.1170955	21	6 23.7	21.0
508331 2015 MV_{33}	16.7	X	330.82691	172.79893	132.79215	11.39516	0.0696206	0.17638430	3.1489283	21	6 21.6	21.0
508332 2015 MA_{44}	16.2	X	294.30037	345.97480	133.82321	22.56237	0.0618428	0.23407973	2.6075152	21	12 25.2	19.7
508333 2015 ML_{52}	16.2	X	310.09949	227.32592	171.93815	19.89128	0.1660208	0.19783980	2.9169363	21	9 12.4	19.6
508334 2015 MK_{104}	16.0	X	107.31666	92.00896	110.70501	27.70025	0.1597239	0.18019652	3.1043579	21	9 2.5	21.1
508335 2015 NC_{13}	16.0	X	294.67439	271.48209	107.28559	25.92743	0.2411885	0.17539016	3.1608162	21	7 8.9	20.1
508336 2015 PK_{41}	16.3	X	76.68686	273.83880	353.88960	14.34647	0.0504709	0.17813876	3.1282187	21	9 26.7	20.7
508337 2015 PH_{80}	15.9	X	323.07121	294.74924	312.27579	1.63583	0.1372527	0.12716708	3.9163929	21	3 23.7	21.1
508338 2015 SO_{20}	6.5	X	0.64162	354.62274	33.61623	23.39059	0.8038459	0.00044836	169.0641943	21	10 31.3	21.7
508339 2015 UQ_{65}	16.0	X	106.00697	162.06483	173.33959	12.32925	0.0752022	0.19208478	2.9749117	21	—	—
508340 2015 VA_{41}	17.2	X	140.42116	226.50061	181.44521	8.16659	0.1596072	0.24251463	2.5466979	21	3 17.6	20.7
508341 2015 XB_1	18.7	X	302.27202	83.53343	237.68871	28.61065	0.1617130	0.45324858	1.6784629	21	4 18.4	20.4
508342 2016 AQ_{23}	17.9	X	122.19063	337.83242	86.94762	3.62640	0.1970536	0.22431740	2.6826298	21	3 27.9	21.8
508343 2016 AC_{195}	18.2	X	290.52445	33.02361	205.60617	21.30645	0.0728725	0.36703546	1.9319566	21	—	—
508344 2016 BN_{39}	18.5	X	192.77768	282.89861	84.07625	22.97628	0.0738323	0.40324094	1.8145111	21	3 3.1	21.1
508345 2016 BG_{82}	18.2	X	97.69792	29.94535	70.50918	24.43963	0.0315973	0.38665420	1.8660398	21	3 4.4	20.7
508346 2016 BL_{82}	18.0	X	282.15809	221.16710	73.64359	23.13920	0.0549316	0.39122143	1.8514882	21	3 22.7	20.6
508347 2016 CY_{29}	18.2	X	149.39860	250.79111	126.97176	22.43152	0.1262838	0.37891486	1.8913633	21	1 18.2	19.8
508348 2016 CB_{123}	17.0	X	99.22933	332.69241	293.34747	7.17747	0.1651680	0.28631860	2.2798328	21	11 15.6	20.5
508349 2016 CX_{265}	18.9	X	161.01035	238.10649	184.18592	22.17889	0.0330401	0.40221970	1.8175812	21	3 27.3	20.0
508350 2016 CG_{267}	18.7	X	186.90385	357.18938	12.10637	21.75891	0.0447654	0.38992520	1.8555892	21	2 26.1	21.0
508351 2016 CD_{279}	17.5	X	327.17770	354.97268	50.36313	7.75066	0.0870080	0.27310163	2.3528082	21	11 10.7	19.9
508352 2016 EV_{19}	16.9	X	334.50635	348.08705	309.75135	16.60869	0.1252043	0.22496275	2.6774969	21	6 8.7	20.2
508353 2016 ET_{37}	17.0	X	113.30863	186.45530	98.18600	14.16435	0.1963395	0.27309279	2.3528590	21	12 23.0	20.7
508354 2016 EE_{55}	18.0	X	101.70104	126.82341	307.20703	19.63510	0.0982016	0.38156832	1.8825846	21	1 21.9	19.1
508355 2016 EF_{66}	16.8	X	136.20949	128.32261	86.90019	7.36186	0.0797770	0.26057012	2.4276513	21	10 17.3	20.3
508356 2016 EF_{84}	18.4	X	119.10424	190.38598	198.02335	21.48378	0.0818866	0.36196620	1.9499525	21	—	—
508357 2016 EV_{85}	17.7	X	9.49368	141.65719	24.01025	23.06712	0.0840246	0.37388163	1.9082999	21	—	—
508358 2016 EW_{110}	18.0	X	306.81940	199.41364	20.54720	19.77697	0.0550043	0.35633300	1.9704497	21	—	—
508359 2016 EH_{127}	17.8	X	64.24904	291.07004	357.64633	5.38619	0.1272976	0.26827345	2.3809536	21	10 30.9	21.0
508360 2016 EV_{133}	16.9	X	354.54677	270.52591	355.14405	8.48428	0.1379132	0.21675279	2.7446876	21	5 26.9	20.0
508361 2016 EQ_{149}	16.5	X	23.84380	250.01517	35.12625	12.29223	0.2677688	0.22934541	2.6432770	21	9 20.0	19.2
508362 2016 EP_{150}	17.6	X	86.92089	168.21008	136.82438	2.60226	0.1531468	0.27908767	2.3190438	21	12 22.5	20.9
508363 2016 EU_{170}	16.5	X	328.90528	103.05355	175.53722	19.88752	0.1670145	0.20918396	2.8105013	21	5 1.6	20.1
508364 2016 EV_{192}	18.2	X	166.11713	244.53594	20.56135	5.77288	0.1257248	0.30743710	2.1741952	21	—	—
508365 2016 EL_{193}	18.1	X	184.35009	102.43700	133.24747	5.86691	0.1186391	0.29473128	2.2362408	21	—	—
508366 2016 EL_{200}	16.8	X	30.35150	242.85333	34.26246	15.43643	0.1830516	0.22640568	2.6661086	21	9 8.9	20.0
508367 2016 EO_{200}	17.0	X	11.62608	108.68003	205.79348	13.92621	0.1629230	0.23080298	2.6321367	21	9 13.3	19.8
508368 2016 EV_{204}	18.4	X	238.43773	75.52975	209.56425	19.45573	0.0753263	0.36233015	1.9486465	21	—	—
508369 2016 ET_{214}	16.6	X	273.80622	280.21836	37.15767	14.07487	0.2523358	0.18474129	3.0532339	21	4 1.9	21.5
508370 2016 ES_{215}	17.1	X	232.02068	50.10809	114.50166	7.04354	0.0438690	0.27998756	2.3140721	21	12 8.2	19.9
508371 2016 EY_{215}	15.8	X	283.97454	268.65969	43.10081	9.29621	0.0622516	0.18962496	3.0005835	21	4 26.2	19.8
508372 2016 EZ_{215}	17.8	X	120.41724	229.63400	43.42876	8.15236	0.0341603	0.27512974	2.3412315	21	12 9.3	20.9
508373 2016 EB_{216}	16.5	X	329.81461	247.66458	69.65641	6.70646	0.1112693	0.21290668	2.7776436	21	6 30.7	19.7
508374 2016 EG_{217}	17.3	X	26.30552	42.63848	261.61125	5.57948	0.1600101	0.23720082	2.5845916	21	9 26.3	20.2
508375 2016 ER_{217}	17.1	X	57.97224	211.13289	72.52823	5.91972	0.1454781	0.24399842	2.5363628	21	10 19.7	20.4
508376 2016 FK	17.7	X	208.37318	58.72678	279.00833	18.67208	0.0783871	0.37845252	1.8929034	21	1 26.3	20.0
508377 2016 FQ_2	16.6	X	56.93099	249.55622	357.67246	29.53915	0.3124285	0.23485820	2.6017500	21	9 21.2	20.1
508378 2016 FK_7	17.6	X	149.00987	206.85272	58.15065	6.41595	0.1663529	0.29651987	2.2272391	21	—	—
508379 2016 FV_{37}	17.8	X	85.52077	214.60917	104.66324	6.09393	0.1310928	0.28611052	2.2809381	21	—	—
508380 2016 FR_{46}	18.3	X	137.56435	49.76008	223.65141	3.62650	0.1478942	0.29261343	2.2470180	21	—	—
508381 2016 FO_{53}	17.9	X	52.03613	228.53368	77.07694	1.83082	0.2006087	0.25841127	2.4411535	21	11 18.1	21.1
508382 2016 FT_{61}	18.2	X	356.75035	103.33168	69.03685	23.38362	0.0571257	0.36090094	1.9537877	21	—	—
508383 2016 FH_{62}	16.3	X	291.27983	211.79800	113.19439	15.60278	0.2972494	0.18334419	3.0687248	21	4 25.9	21.1
508384 2016 FR_{62}	17.5	X	1.60135	317.63800	36.27595	6.30290	0.0986640	0.26851897	2.3795020	21	10 26.3	19.8
508385 2016 FA_{63}	16.6	X	282.06474	186.04046	120.62136	12.52785	0.1217221	0.18495758	3.0508530	21	4 14.7	21.2
508386 2016 FE_{63}	17.2	X	18.10188	231.52684	70.57572	8.44725	0.1928003	0.23296536	2.6158238	21	9 21.2	20.0
508387 2016 FK_{63}	17.1	X	12.31582	146.84973	126.28836	14.42201	0.1646089	0.21671109	2.7450396	21	7 16.3	19.8
508388 2016 GK_1	17.1	X	140.54283	220.85303	67.99578	7.22145	0.1822611	0.29888574	2.2154702	21	—	—
508389 2016 GM_3	17.7	X	153.12520	165.26576	93.27878	5.84667	0.1537932	0.29649699	2.2273537	21	12 29.6	21.1
508390 2016 GD_{29}	17.9	X	116.08626	277.00203	22.73139	1.88846	0.2051375	0.29394192	2.2402425	21	—	—
508391 2016 GC_{86}	17.9	X	71.61619	177.57677	130.48495	3.51739	0.2004982	0.27241831	2.3567410	21	12 14.6	21.3
508392 2016 GQ_{98}	18.0	X	104.80643	195.16956	89.60189	4.01275	0.1114470	0.28011862	2.3133503	21	12 12.4	21.1
508393 2016 GA_{126}	16.6	X	39.27398	287.88677	21.68585	14.63448	0.1495365	0.25455601	2.4657393	21	10 26.5	19.5
508394 2016 GO_{133}	16.9	X	54.82481	210.13770	48.49862	11.20156	0.2753798	0.23456678	2.6039045	21	10 3.4	20.5
508395 2016 GJ_{170}	17.5	X	166.78787	206.54943	68.78123	6.75456	0.1757260	0.30256950	2.1974514	21	—	—
508396 2016 GO_{174}	18.2	X	126.38238	253.00253	64.11761	7.12582	0.1753527	0.30109672	2.2046113	21	—	—
508397 2016 GL_{187}	18.0	X	92.64964	218.85061	116.23539	5.01717	0.1605675	0.29455040	2.2371562	21	—	—
508398 2016 GX_{189}	16.2	X	344.65857	280.21897	66.95186	14.90377	0.1567461	0.23454503	2.6040655	21	9 21.3	19.1
508399 2016 GO_{190}	17.1	X	166.80856	188.93078	49.31150	28.75366	0.1355270	0.28119863	2.3074231	21	12 9.8	20.9
508400 2016 GA_{211}	18.1	X	62.47408	133.68069	182.71065	2.29383	0.1939434	0.27217073	2.3581700	21	12 14.9	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508401 2016 GY_{225}	16.6	X	51.27664	16.18051	268.78755	12.72313	0.1936682	0.24153987	2.5535449	21	10 11.3	20.2
508402 2016 GX_{237}	17.5	X	79.12918	67.42972	187.89589	8.40234	0.1257899	0.23939059	2.5688061	21	10 3.0	20.8
508403 2016 GN_{241}	17.8	X	161.26955	240.02564	36.69560	6.52220	0.1763512	0.30132289	2.2035080	21	—	—
508404 2016 GF_{248}	18.1	X	103.75006	62.41857	218.07208	1.97813	0.2110981	0.27059343	2.3673250	21	12 10.2	22.0
508405 2016 GB_{253}	17.9	X	8.19566	129.16711	43.13802	22.31581	0.0578211	0.35674356	1.9689376	21	1 19.0	20.4
508406 2016 GM_{256}	17.2	X	345.32726	146.92428	173.79058	14.35405	0.2174127	0.21350472	2.7724543	21	7 25.9	19.9
508407 2016 GL_{257}	16.6	X	98.62375	175.25682	58.16740	6.00162	0.1494024	0.24028150	2.5624525	21	10 2.4	20.5
508408 2016 GM_{257}	16.8	X	354.84587	267.13137	84.72985	15.76167	0.1687038	0.24147733	2.5539858	21	10 21.3	19.6
508409 2016 HQ_{10}	17.9	X	86.83930	165.27494	130.65233	6.00610	0.1661088	0.26869569	2.3784585	21	12 11.0	21.6
508410 2016 HJ_{24}	16.5	X	267.20285	236.77325	93.33218	9.21701	0.2826560	0.17687328	3.1431219	21	4 8.9	21.7
508411 2016 JL	18.5	X	102.11414	292.33601	195.33598	18.69330	0.0791095	0.39079760	1.8528266	21	4 20.1	19.8
508412 2016 JR_{4}	17.0	X	72.31342	219.03722	100.39449	10.20330	0.0557983	0.27058879	2.3673521	21	12 13.7	20.0
508413 2016 JD_{8}	17.9	X	126.42611	122.65310	122.20570	6.55700	0.2167850	0.26772515	2.3842032	21	11 17.5	21.9
508414 2016 JW_{9}	18.3	X	141.11132	155.64117	93.14853	6.93190	0.0650463	0.27607610	2.3358781	21	12 4.3	21.4
508415 2016 JU_{11}	16.8	X	3.66822	210.77816	86.07709	13.19610	0.2387943	0.21503984	2.7592440	21	8 11.9	19.3
508416 2016 JG_{14}	16.8	X	43.71654	154.23826	157.82676	15.79996	0.1523592	0.24603113	2.5223732	21	11 10.9	20.3
508417 2016 JB_{15}	16.4	X	287.71487	139.64487	191.75385	22.96414	0.2710822	0.18869897	3.0103919	21	4 27.7	21.0
508418 2016 JT_{23}	16.4	X	4.41488	242.41404	47.27385	14.18803	0.1780225	0.21756267	2.7378719	21	7 30.9	19.4
508419 2016 JA_{26}	17.4	X	98.74411	192.10974	66.61510	11.70549	0.1743055	0.25544427	2.4600198	21	11 6.9	21.2
508420 2016 JL_{27}	17.7	X	92.77665	145.25337	180.27273	6.50524	0.1499855	0.28299193	2.2976649	21	—	—
508421 2016 JY_{29}	17.3	X	147.34301	187.93655	51.11604	6.58938	0.1260581	0.27694735	2.3309765	21	11 26.9	20.8
508422 2016 JM_{30}	17.0	X	40.28483	68.27504	209.35617	10.92956	0.1758579	0.23154838	2.6264848	21	9 13.7	20.2
508423 2016 JJ_{31}	16.7	X	27.09245	203.55348	80.12009	15.06050	0.2355862	0.22404128	2.6848335	21	9 21.4	19.9
508424 2016 JF_{32}	16.7	X	29.29526	208.55014	79.75401	17.01454	0.2531656	0.22443983	2.6816541	21	10 6.6	20.1
508425 2016 JJ_{32}	16.8	X	37.83701	222.41418	79.64737	8.25498	0.3202935	0.22968419	2.6406772	21	11 10.7	20.2
508426 2016 JR_{32}	16.9	X	72.21683	133.69878	126.20640	12.56838	0.2144592	0.23423466	2.6063652	21	10 17.6	20.9
508427 2016 JU_{35}	16.6	X	49.26867	197.15025	82.35531	15.67882	0.2365767	0.23389434	2.6088928	21	10 21.1	20.3
508428 2016 JU_{36}	18.2	X	175.48280	115.10265	142.59498	5.17485	0.2740159	0.29160853	2.2521773	21	—	—
508429 2016 JE_{39}	18.3	X	50.11128	285.01965	224.38086	20.29677	0.0840637	0.36588065	1.9360196	21	2 7.6	20.5
508430 2016 JJ_{40}	16.9	X	295.70672	110.12812	192.17344	16.65315	0.2287030	0.17670795	3.1450821	21	4 6.1	21.2
508431 2016 JL_{40}	16.5	X	42.85038	77.07265	197.00776	25.71892	0.1214264	0.22583126	2.6706277	21	9 2.2	20.2
508432 2016 KV_{1}	16.5	X	14.21362	221.66787	106.74302	15.11705	0.2819484	0.23046873	2.6346810	21	11 7.5	19.4
508433 2016 KU_{2}	16.8	X	54.27593	191.60629	91.27486	11.27586	0.1947885	0.23534429	2.5981663	21	10 23.3	20.5
508434 2016 KZ_{2}	16.5	X	44.43679	198.87705	114.81997	15.51111	0.1823664	0.24222432	2.5487322	21	11 18.9	20.1
508435 2016 KG_{4}	18.5	X	94.41259	17.47770	94.27268	23.94616	0.0329357	0.37981431	1.8883761	21	3 17.3	21.0
508436 2016 KA_{5}	16.8	X	18.33047	333.86923	311.47295	12.80276	0.1820091	0.21986668	2.7187114	21	8 16.7	19.5
508437 2016 LZ	16.6	X	5.08101	214.20119	108.83516	10.32236	0.3425822	0.22741188	2.6582385	21	10 18.5	18.7
508438 2016 LY_{2}	17.2	X	9.99492	198.12492	122.85773	13.79820	0.1986734	0.23411292	2.6072687	21	10 5.7	20.0
508439 2016 LF_{6}	16.4	X	251.63395	206.03845	140.63143	17.91295	0.1362429	0.18368415	3.0649373	21	4 29.3	21.4
508440 2016 LH_{7}	17.6	X	358.94958	145.95036	208.19209	12.46248	0.1734047	0.23845912	2.5754913	21	10 23.5	19.8
508441 2016 LF_{21}	18.1	X	115.68296	64.44592	215.32660	6.14570	0.1230052	0.26994228	2.3711304	21	12 16.1	21.6
508442 2016 LM_{27}	17.0	X	355.70404	194.11077	113.97120	9.11250	0.1930586	0.21353147	2.7722227	21	8 4.5	19.4
508443 2016 LE_{29}	17.2	X	350.73810	123.04814	215.27012	14.23324	0.1824530	0.22453173	2.6809224	21	9 3.6	20.0
508444 2016 LK_{29}	16.8	X	186.72437	143.06389	182.85564	8.89224	0.3149540	0.12373297	3.9885261	21	2 6.8	23.7
508445 2016 LT_{33}	18.0	X	79.89180	151.97851	146.69155	4.45709	0.1768689	0.25403680	2.4690978	21	12 6.3	21.7
508446 2016 LW_{34}	17.9	X	158.40253	86.35179	141.28198	5.40209	0.0697930	0.26744063	2.3858939	21	11 25.8	21.2
508447 2016 LZ_{51}	16.8	X	132.66124	11.16811	222.03976	13.51751	0.1907438	0.23671699	2.5881122	21	11 2.6	20.9
508448 2016 LS_{53}	16.6	X	329.87906	76.15471	219.01766	12.79646	0.2713105	0.17545251	3.1600673	21	5 10.6	20.0
508449 2016 LX_{53}	17.2	X	331.48449	137.96519	170.92738	12.30463	0.1871570	0.20001655	2.8957347	21	6 13.7	20.7
508450 2016 LC_{54}	16.8	X	284.45488	145.07933	178.01115	11.04179	0.2278924	0.17822245	3.1272393	21	4 20.5	21.4
508451 2016 LG_{56}	16.5	X	28.07653	234.92540	104.95514	13.25484	0.1596761	0.24396327	2.5366064	21	11 25.6	19.7
508452 2016 MX_{1}	17.1	X	14.90380	219.21530	101.56177	7.29657	0.1148077	0.23948666	2.5681191	21	10 2.1	20.1
508453 2016 NF_{1}	17.0	X	71.65665	261.40507	126.80708	24.13076	0.2655090	0.28898422	2.2657916	21	—	—
508454 2016 NH_{2}	16.5	X	3.90313	201.88900	113.50132	13.88312	0.1602203	0.22046150	2.7138190	21	9 6.2	19.5
508455 2016 NY_{12}	15.7	X	300.79212	70.42016	277.59740	15.60185	0.1655823	0.18499108	3.0504847	21	6 19.3	19.6
508456 2016 NA_{17}	17.4	X	80.35059	29.66837	230.80055	10.28514	0.2411138	0.22920818	2.6443319	21	10 22.2	21.6
508457 2016 NB_{17}	16.5	X	100.08404	345.48664	268.42303	12.73367	0.1356829	0.23254993	2.6189381	21	10 20.4	20.7
508458 2016 NN_{17}	15.9	X	68.59551	105.52606	196.38002	16.42178	0.2220379	0.24405898	2.5359432	21	12 2.6	20.0
508459 2016 NO_{21}	15.9	X	66.42649	201.40337	110.40831	16.35417	0.1595768	0.24128419	2.5553485	21	12 6.8	19.7
508460 2016 NK_{23}	16.6	X	57.81360	7.92137	311.29733	16.06931	0.2031966	0.22776629	2.6554803	21	12 6.2	20.7
508461 2016 NV_{23}	17.6	X	218.11267	3.77938	197.55607	6.22183	0.1708417	0.27451270	2.3447385	21	12 18.5	20.8
508462 2016 NU_{37}	16.1	X	351.43437	159.65514	158.80839	13.44060	0.1472190	0.18580915	3.0415245	21	8 6.5	19.6
508463 2016 NL_{46}	16.9	X	129.55090	293.38204	274.85829	3.35972	0.0410934	0.21492347	2.7602398	21	9 17.9	20.9
508464 2016 NM_{52}	17.2	X	358.62422	172.66261	171.56235	6.62893	0.0285842	0.21714990	2.7413404	21	9 25.3	20.6
508465 2016 NG_{63}	16.5	X	356.01402	2.63180	357.29839	15.72442	0.1957966	0.20676032	2.8324217	21	10 15.2	19.4
508466 2016 NB_{65}	16.7	X	232.22881	275.92558	136.28256	13.67404	0.1279213	0.18170700	3.0871302	21	6 24.6	21.7
508467 2016 ND_{65}	17.1	X	2.34385	67.61794	318.24458	13.56547	0.1274592	0.22607625	2.6686979	21	12 3.5	20.4
508468 2016 NF_{65}	16.6	X	3.57966	354.77090	55.83510	5.69675	0.1667186	0.24382750	2.5375480	21	—	—
508469 2016 NQ_{65}	17.4	X	231.73344	316.44226	152.31681	4.97094	0.0275321	0.21237451	2.7822819	21	9 16.9	21.1
508470 2016 NU_{65}	16.1	X	127.31661	209.10048	306.31807	16.05309	0.0394182	0.18096793	3.0955297	21	7 11.0	20.6
508471 2016 NA_{66}	16.2	X	267.94052	270.23987	133.60086	15.92535	0.1349504	0.18822514	3.0154419	21	7 22.3	20.6
508472 2016 NB_{66}	16.6	X	324.26420	25.87791	62.21281	13.63678	0.1458682	0.24223694	2.5486438	21	12 29.4	19.2
508473 2016 NF_{66}	16.8	X	275.26541	284.87193	169.96886	14.99790	0.0875620	0.22660278	2.6645624	21	10 21.4	20.3
508474 2016 OR_{1}	17.0	X	103.82004	63.38717	189.32362	6.68328	0.0954720	0.22892678	2.6464985	21	10 24.0	20.7
508475 2016 OX_{1}	17.8	X	93.87767	43.65172	221.96382	12.42910	0.1350164	0.23309007	2.6148906	21	11 1.8	21.8
508476 2016 PG_{2}	16.4	X	67.28249	105.49508	190.52706	14.57449	0.1456470	0.24270879	2.5453395	21	11 15.5	20.1
508477 2016 PV_{9}	16.3	X	327.24358	231.72788	119.43303	11.26158	0.0535589	0.19316023	2.9638592	21	8 18.7	20.1
508478 2016 PC_{12}	17.2	X	77.46905	100.68248	194.53186	14.97478	0.1547056	0.23198207	2.6232102	21	11 24.7	21.2
508479 2016 PZ_{13}	17.0	X	143.70069	152.71524	62.38498	15.42911	0.1339186	0.21964011	2.7205807	21	10 23.8	21.5
508480 2016 PF_{37}	16.5	X	342.44532	105.94586	187.70895	15.28924	0.2193723	0.18173176	3.0868498	21	6 10.7	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508481 2016 PE_{41}	16.1	X	307.87399	249.06573	85.88952	9.04731	0.0739820	0.18259187	3.0771483	21	6 25.4	20.0
508482 2016 PT_{57}	16.0	X	115.10673	132.46445	66.35334	13.33563	0.0238985	0.18808972	3.0168891	21	8 23.4	20.5
508483 2016 PW_{61}	16.8	X	227.79733	19.68061	114.61671	13.44456	0.1080140	0.22571170	2.6715707	21	10 12.0	20.9
508484 2016 PD_{66}	16.4	X	341.11675	205.95378	109.56305	16.91278	0.0334733	0.18690156	3.0296614	21	7 21.7	20.4
508485 2016 PR_{67}	16.2	X	306.44250	51.66221	289.04164	8.96512	0.0350945	0.17559987	3.1582991	21	7 6.4	20.4
508486 2016 PZ_{67}	16.1	X	42.52559	68.91418	229.92597	15.01779	0.1351854	0.21588299	2.7520550	21	10 7.3	19.8
508487 2016 PN_{70}	16.7	X	316.13535	298.87107	54.71306	10.36442	0.0955599	0.18852768	3.0122150	21	8 2.5	20.7
508488 2016 PM_{71}	17.0	X	8.65271	285.78528	21.23313	12.29587	0.0164166	0.19585286	2.9366314	21	8 23.7	21.2
508489 2016 PC_{72}	16.3	X	191.99812	3.19078	87.34081	10.59253	0.0332871	0.17761066	3.1344164	21	7 3.5	20.9
508490 2016 PO_{72}	16.8	X	82.20318	170.82186	95.75720	6.97664	0.0242584	0.21195008	2.7859950	21	10 7.9	20.7
508491 2016 PG_{77}	15.3	X	324.95186	6.53125	310.10697	9.17027	0.0709080	0.17042613	3.2218991	21	6 27.4	19.6
508492 2016 PA_{89}	17.0	X	327.81666	29.21138	15.19831	9.12265	0.1792403	0.21530544	2.7569743	21	10 24.9	19.6
508493 2016 PH_{89}	17.3	X	50.32395	71.93908	201.94437	5.61426	0.0535841	0.20026072	2.8933804	21	9 3.1	21.1
508494 2016 PN_{89}	16.8	X	20.71475	53.64304	263.55470	2.65346	0.0948533	0.20959726	2.8068055	21	9 24.3	20.2
508495 2016 PA_{90}	16.6	X	331.26071	316.62469	28.09952	10.37944	0.1315132	0.17786650	3.1314101	21	8 12.6	20.5
508496 2016 QJ	15.7	X	348.73704	354.94298	287.30295	8.86675	0.0207443	0.17207815	3.2012449	21	6 19.2	20.1
508497 2016 QY	16.2	X	228.96614	196.24522	229.96957	8.39897	0.0609326	0.17605906	3.1528051	21	7 12.4	21.0
508498 2016 QU_{2}	17.7	X	193.36389	37.79271	187.37685	1.88052	0.1571389	0.26279350	2.4139391	21	12 21.3	21.4
508499 2016 QS_{4}	16.2	X	251.59903	250.43422	153.21080	17.29326	0.1811172	0.17285113	3.1916939	21	6 28.5	21.4
508500 2016 QB_{5}	16.5	X	296.40673	41.89112	315.63264	8.65646	0.0879208	0.18197436	3.0841057	21	7 8.1	20.6
508501 2016 QP_{15}	16.3	X	347.79776	94.58016	224.27709	11.18883	0.0390508	0.18818501	3.0158706	21	7 31.2	20.6
508502 2016 QA_{16}	16.2	X	23.88028	333.44673	282.16336	10.97170	0.0937020	0.17798458	3.1300250	21	7 6.8	20.0
508503 2016 QF_{19}	16.8	X	92.27724	14.11040	239.87807	8.62948	0.0802849	0.21298014	2.7770049	21	10 5.1	20.8
508504 2016 QH_{19}	15.7	X	43.27408	326.50159	283.32469	9.83810	0.0705430	0.18175828	3.0865495	21	7 24.9	19.9
508505 2016 QY_{20}	15.8	X	5.66747	353.47824	285.78943	9.47706	0.0955286	0.17752379	3.1354390	21	7 9.3	19.6
508506 2016 QT_{24}	16.1	X	206.21380	270.70876	288.22149	11.74491	0.1048470	0.24495013	2.5297888	21	12 4.2	19.8
508507 2016 QO_{28}	15.5	X	2.66845	328.34422	310.45067	12.22933	0.1609095	0.17384858	3.1794740	21	7 6.0	19.1
508508 2016 QJ_{30}	16.6	X	351.62062	182.32819	126.60471	10.87676	0.0499824	0.18136771	3.0909791	21	7 27.1	20.5
508509 2016 QE_{35}	16.7	X	326.22536	60.41586	262.14884	1.16827	0.0502927	0.17754846	3.1351485	21	7 8.2	20.8
508510 2016 QC_{37}	16.0	X	344.74398	167.78488	151.08992	18.86122	0.1154145	0.18839094	3.0136724	21	7 27.2	19.7
508511 2016 QE_{43}	16.2	X	327.85703	44.67525	265.82982	9.86778	0.0554313	0.17162734	3.2068482	21	6 24.2	20.5
508512 2016 QO_{52}	16.7	X	254.86547	244.09603	164.12362	3.55693	0.1071318	0.17878125	3.1207195	21	7 15.6	21.2
508513 2016 QX_{55}	16.3	X	357.28162	38.06205	246.64896	9.73991	0.1248923	0.18245495	3.0786875	21	7 1.5	20.0
508514 2016 QN_{56}	16.2	X	299.91124	274.45555	169.43140	21.97680	0.0616672	0.22874550	2.6478965	21	11 16.5	19.9
508515 2016 QK_{60}	16.0	X	285.31797	159.45322	199.42752	8.76195	0.0979454	0.17480074	3.1679175	21	6 21.9	20.5
508516 2016 QY_{62}	16.7	X	353.39317	55.94497	232.36577	6.92090	0.1265090	0.17718828	3.1393956	21	6 29.9	20.4
508517 2016 QW_{63}	16.3	X	350.54840	322.81272	332.29882	10.07029	0.0693264	0.17832167	3.1260792	21	7 8.6	20.4
508518 2016 QS_{71}	16.1	X	311.11310	96.69334	259.54835	10.16593	0.0457682	0.18401170	3.0612990	21	7 28.7	20.3
508519 2016 QG_{79}	16.0	X	88.39879	275.86408	288.82551	15.53361	0.0791403	0.18000926	3.1065104	21	7 27.5	20.4
508520 2016 QZ_{81}	16.4	X	262.24710	180.02169	242.28924	9.23013	0.1103246	0.19417431	2.9535310	21	8 8.4	20.7
508521 2016 QK_{82}	15.7	X	1.59818	21.40852	269.55678	8.22090	0.0496661	0.17727122	3.1384163	21	7 16.8	19.8
508522 2016 QB_{85}	15.3	X	323.82971	155.54302	158.31473	28.82036	0.2030749	0.17357042	3.1828700	21	6 9.4	19.8
508523 2016 QF_{85}	16.1	X	66.53761	285.09056	316.95179	8.60018	0.1052313	0.18317028	3.0706669	21	8 21.6	20.3
508524 2016 QU_{87}	16.1	X	356.98888	315.65885	22.75702	10.25327	0.1153210	0.18347486	3.0672677	21	9 17.6	19.8
508525 2016 RN_{3}	16.7	X	15.51837	261.46583	165.69371	14.46765	0.0718082	0.25393014	2.4697892	21	—	—
508526 2016 RX_{6}	15.8	X	284.65879	69.54839	288.55168	8.77649	0.0991768	0.17211545	3.2007823	21	6 20.5	20.3
508527 2016 RD_{11}	17.3	X	114.62387	272.07884	330.43697	4.29489	0.1544910	0.22667877	2.6639668	21	10 24.3	21.5
508528 2016 RQ_{11}	16.0	X	319.43990	197.53117	131.33706	18.71448	0.1869014	0.17763061	3.1341818	21	6 21.6	20.1
508529 2016 RR_{22}	17.1	X	91.98229	277.80076	337.93122	3.26741	0.0162149	0.21358366	2.7717711	21	9 30.7	20.9
508530 2016 RR_{23}	16.6	X	313.43452	353.12965	97.12355	7.21052	0.0886010	0.22572579	2.6714595	21	12 9.7	19.7
508531 2016 RG_{33}	16.3	X	288.80496	25.95411	358.73628	15.36888	0.0694907	0.17844648	3.1246213	21	8 9.7	20.7
508532 2016 RH_{34}	16.3	X	285.00990	57.33980	98.84950	36.78133	0.0689425	0.24032979	2.5621092	21	—	—
508533 2016 RD_{40}	17.6	X	317.29941	300.34914	206.01015	6.01012	0.0407405	0.26690287	2.3890975	21	—	—
508534 2016 RD_{45}	17.1	X	254.47623	95.64720	66.45310	13.81059	0.1900646	0.23165960	2.6256440	21	12 1.5	20.6
508535 2016 RF_{45}	16.5	X	274.70695	46.52815	103.40986	16.04306	0.0455625	0.22858924	2.6491031	21	—	—
508536 2016 SM	16.2	X	358.81015	290.60717	126.23873	30.43666	0.2488126	0.23606271	2.5928922	21	—	—
508537 2016 SY_{5}	16.3	X	47.09661	30.86167	247.94849	15.67463	0.1867764	0.19932806	2.9023988	21	9 19.4	20.4
508538 2016 SP_{12}	15.8	X	276.00110	26.27609	46.60765	23.98278	0.0974899	0.18157048	3.0886774	21	9 27.7	20.4
508539 2016 ST_{32}	16.6	X	170.42792	155.90061	84.47741	7.44369	0.0278187	0.22589449	2.6701293	21	12 19.1	20.3
508540 2016 SJ_{46}	16.2	X	26.98951	32.95856	236.42914	17.11987	0.1876670	0.18154379	3.0889802	21	8 2.8	20.2
508541 2016 TM_{4}	16.6	X	301.73943	237.34315	187.56832	14.72442	0.1331935	0.20248161	2.8721845	21	10 9.1	20.0
508542 2016 TN_{8}	15.2	X	248.63045	254.79235	177.57455	16.61872	0.1783273	0.15859953	3.3801408	21	7 27.8	20.6
508543 2016 TD_{9}	16.4	X	319.95188	178.91481	248.25065	5.90490	0.0309383	0.21032134	2.8003597	21	11 16.9	20.0
508544 2016 TH_{12}	15.7	X	113.26346	4.40659	267.41219	8.97003	0.0626157	0.21538092	2.7563301	21	11 20.8	19.8
508545 2016 TR_{20}	15.6	X	94.41080	336.26287	242.80424	15.25808	0.1463874	0.18457465	3.0550713	21	8 25.9	20.5
508546 2016 TJ_{83}	16.5	X	237.11291	129.06767	349.85474	8.53963	0.1573805	0.18200369	3.0837743	21	9 16.3	21.1
508547 2016 TK_{90}	16.3	X	277.07222	32.71430	52.65241	10.45696	0.0378151	0.18579749	3.0416517	21	10 13.5	20.5
508548 2016 UV_{15}	16.1	X	28.77737	286.49678	23.97658	18.83911	0.1420458	0.18558005	3.0440272	21	10 5.7	19.9
508549 2016 UQ_{24}	16.3	X	278.14985	76.34444	65.58666	15.01682	0.0678818	0.22282564	2.6945895	21	12 23.9	19.7
508550 2016 UZ_{30}	16.0	X	8.05345	14.88822	299.51989	16.60041	0.1239784	0.17225937	3.1989993	21	8 24.2	20.0
508551 2016 UG_{35}	16.2	X	15.20602	107.46960	222.81221	7.42876	0.0799031	0.17826459	3.1267464	21	9 26.9	20.3
508552 2016 US_{44}	16.2	X	289.76233	168.85163	295.44273	13.87970	0.0708654	0.21478123	2.7614584	21	11 17.8	20.0
508553 2016 UX_{45}	15.9	X	241.94954	179.95289	261.35877	11.08948	0.0441033	0.16805303	3.2521594	21	8 14.5	20.7
508554 2016 UP_{47}	16.4	X	0.83852	62.95707	340.90181	8.44262	0.0180599	0.22024306	2.7156131	21	12 13.1	20.1
508555 2016 UV_{56}	15.5	X	289.56639	98.39064	287.54585	25.38791	0.2167203	0.17493482	3.1662987	21	7 13.9	19.9
508556 2016 UU_{57}	16.3	X	309.90791	75.96856	19.91212	17.29566	0.1074223	0.21405736	2.7676804	21	12 2.7	19.8
508557 2016 UV_{62}	16.4	X	2.31364	294.67158	73.79649	11.80171	0.1582528	0.20474203	2.8510054	21	11 12.4	19.6
508558 2016 UO_{87}	16.8	X	194.75647	219.22006	21.64112	7.98918	0.1451845	0.23951889	2.5678887	21	—	—
508559 2016 UA_{130}	16.1	X	259.79128	230.57073	207.87729	15.57485	0.0545186	0.17381185	3.1799219	21	9 1.2	20.9
508560 2016 UT_{142}	16.6	X	344.83056	176.33231	256.89727	12.52599	0.1287240	0.23654481	2.5893679	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508561 2016 UR_{145}	15.9	X	211.97858	93.60680	28.02831	9.59269	0.0317060	0.17433243	3.1735884	21	9 8.7	20.5
508562 2016 VU	15.4	X	282.33458	101.89671	266.00566	20.91560	0.0517683	0.17835420	3.1256990	21	7 4.6	19.9
508563 2016 VE_{11}	16.3	X	255.73361	304.78760	162.01279	13.07846	0.1532479	0.17883340	3.1201128	21	9 24.1	20.7
508564 2016 WP_{28}	16.0	X	339.28861	218.70882	157.18432	9.57805	0.0933094	0.17808161	3.1288879	21	10 6.1	19.9
508565 2016 WM_{36}	15.7	X	119.50315	348.77318	262.84066	9.46832	0.1363326	0.18337931	3.0683330	21	11 2.6	20.6
508566 2016 WD_{40}	16.0	X	216.10272	265.83931	258.74646	7.42601	0.0331169	0.18761541	3.0219716	21	11 1.0	20.5
508567 2016 XH_{6}	16.2	X	198.34171	343.74322	278.05818	12.99198	0.0858212	0.24454712	2.5325674	21	—	—
508568 2016 XR_{7}	15.7	X	88.40002	202.47898	51.86666	16.11811	0.0267454	0.17383652	3.1796211	21	9 30.8	20.4
508569 2017 FP_{106}	17.9	X	33.97572	33.63902	199.50895	6.44726	0.1874085	0.26141244	2.4224336	21	7 2.3	20.2
508570 2017 FN_{121}	17.4	X	21.40350	5.91816	166.19091	14.19484	0.1906148	0.23650265	2.5896756	21	2 27.0	19.5
508571 2017 NB_{2}	17.0	X	317.24644	321.33367	338.48280	8.26366	0.2218530	0.21663304	2.7456990	21	4 24.5	20.6
508572 2017 NE_{4}	17.5	X	337.31908	191.18589	134.26532	6.79803	0.2044470	0.23668476	2.5883471	21	7 17.9	19.6
508573 2017 NL_{4}	16.8	X	339.15955	175.19767	134.24713	13.84369	0.1868937	0.22922179	2.6442273	21	6 29.2	19.5
508574 2017 NO_{5}	15.7	X	219.16984	34.25776	329.86952	26.39152	0.1559495	0.17192187	3.2031846	21	3 29.3	21.3
508575 2017 OF_{2}	17.5	X	1.24680	170.35987	158.32932	2.94285	0.1911304	0.25724239	2.4485428	21	9 25.4	19.3
508576 2017 OO_{3}	16.7	X	252.48786	202.82584	127.05882	1.80300	0.1629133	0.18083886	3.0970024	21	4 2.3	21.6
508577 2017 OT_{3}	15.8	X	167.07775	104.90959	311.03613	8.03672	0.0893701	0.17521415	3.1629325	21	4 21.1	20.8
508578 2017 OW_{5}	16.7	X	278.47473	215.92048	90.66921	3.88602	0.1280361	0.18259153	3.0771521	21	4 6.0	21.1
508579 2017 OP_{7}	16.2	X	321.49833	278.76376	314.75738	24.87251	0.2326158	0.18471892	3.0534803	21	2 8.7	20.2
508580 2017 OY_{7}	17.0	X	242.47836	185.54593	155.18264	1.42415	0.1570861	0.18221124	3.0814322	21	4 5.7	22.0
508581 2017 OY_{11}	17.4	X	212.77088	205.66587	307.88435	7.84322	0.0179706	0.28381230	2.2932351	21	10 27.7	20.4
508582 2017 OT_{17}	17.7	X	306.66768	133.69231	197.81771	8.33502	0.2771357	0.22162464	2.7043154	21	5 17.5	21.1
508583 2017 OK_{30}	16.4	X	243.18032	101.26389	244.77827	9.92519	0.1243173	0.17697955	3.1418636	21	4 12.7	21.4
508584 2017 OO_{36}	16.9	X	330.88642	249.95955	63.64060	14.81384	0.2797300	0.23331730	2.6131926	21	5 31.8	19.2
508585 2017 OA_{39}	17.5	X	100.66250	307.22136	332.68351	7.02803	0.1087072	0.28845709	2.2685511	21	12 1.6	20.9
508586 2017 OF_{43}	16.0	X	266.19376	78.95778	266.13907	9.25032	0.0291737	0.19222753	2.9734387	21	5 19.5	20.2
508587 2017 OX_{46}	16.0	X	243.65413	38.54308	313.58565	9.22529	0.2314733	0.17571011	3.1569779	21	4 10.4	21.4
508588 2017 OT_{49}	17.5	X	322.09686	32.85753	314.97890	4.11878	0.2633427	0.23102251	2.6304690	21	7 10.0	19.8
508589 2017 OD_{53}	16.4	X	260.76349	354.38150	323.52381	10.01217	0.1033218	0.18605752	3.0388171	21	3 27.5	21.0
508590 2017 OW_{56}	18.0	X	339.68218	177.79098	143.34980	5.93355	0.3090866	0.23492190	2.6012797	21	7 3.2	19.7
508591 2017 OF_{60}	17.5	X	320.47186	213.70179	134.68734	6.72553	0.2434622	0.23077953	2.6323150	21	7 10.0	20.0
508592 2017 OQ_{60}	17.7	X	70.20136	172.45414	130.64582	4.56807	0.2431119	0.28933323	2.2639692	21	12 13.8	21.1
508593 2017 OU_{60}	17.4	X	340.94494	240.56915	130.43226	5.61934	0.1372754	0.25742570	2.4473803	21	10 16.6	19.7
508594 2017 OJ_{61}	18.8	X	41.70928	23.48063	348.80601	1.90124	0.2549761	0.29765647	2.2215657	21	—	—
508595 2017 OQ_{61}	17.1	X	354.88726	163.88676	147.86493	14.08370	0.2634874	0.23922102	2.5700200	21	8 10.4	18.7
508596 2017 QS_{3}	17.1	X	338.72944	194.62703	164.80553	6.22121	0.1434420	0.25439284	2.4667935	21	9 21.1	19.3
508597 2017 QZ_{3}	18.0	X	67.49733	143.83260	166.92062	5.95782	0.2139441	0.28734209	2.2744159	21	12 17.7	21.4
508598 2017 QO_{11}	17.3	X	258.75349	154.36567	231.45405	1.68735	0.0859478	0.22079774	2.7110632	21	6 24.5	21.2
508599 2017 QQ_{20}	17.5	X	326.87799	104.48035	214.35254	1.87616	0.1279150	0.22840744	2.6505086	21	6 25.4	20.3
508600 2017 RU_{3}	17.6	X	75.51671	7.30940	301.69643	5.32192	0.2063457	0.29331539	2.2434315	21	12 23.3	20.9
508601 2017 RQ_{5}	17.0	X	278.70082	188.29086	159.04688	5.63311	0.1265756	0.21237652	2.7822643	21	5 25.4	21.0
508602 2017 RY_{7}	16.7	X	291.02020	150.14840	191.23522	5.79317	0.0716621	0.20398343	2.8580696	21	6 10.7	20.6
508603 2017 RW_{16}	16.2	X	268.96568	73.75110	255.34730	14.75153	0.2624791	0.17788458	3.1311979	21	4 1.2	21.5
508604 2017 ST_{8}	17.0	X	307.23958	180.48213	176.82204	7.13668	0.0936017	0.22536204	2.6743333	21	7 21.3	20.4
508605 2017 SZ_{9}	17.7	X	15.77611	16.02832	3.92684	3.50112	0.1801542	0.28487256	2.2875414	21	—	—
508606 2017 SH_{13}	16.9	X	319.77926	287.07952	108.38084	4.63368	0.3055174	0.23474230	2.6026063	21	9 17.0	18.6
508607 2017 SB_{19}	17.7	X	6.37638	246.95219	243.86849	18.21392	0.0863668	0.35224307	1.9856730	21	—	—
508608 2017 SG_{22}	17.9	X	78.88979	22.74631	288.69799	5.72779	0.1276442	0.28187676	2.3037209	21	12 20.6	21.2
508609 2017 SM_{22}	17.3	X	318.61973	165.26318	214.76133	11.19656	0.1883349	0.23354763	2.6114742	21	8 28.8	20.1
508610 2017 SG_{23}	17.7	X	307.27218	93.22075	299.43891	2.87358	0.1710560	0.24246935	2.5470149	21	9 1.3	20.4
508611 2017 SP_{26}	17.0	X	312.74998	162.49955	184.22275	4.89920	0.1758208	0.22092579	2.7100155	21	7 3.6	20.2
508612 2017 SP_{33}	17.3	X	274.12306	182.52785	225.75906	11.70569	0.1745541	0.23188566	2.6239373	21	7 27.7	21.0
508613 2017 SW_{34}	17.4	X	4.25554	334.84882	92.60370	8.73232	0.1283353	0.29453182	2.2372503	21	—	—
508614 2017 SN_{35}	16.9	X	337.31748	260.33974	79.18085	7.41908	0.0529452	0.21712089	2.7415845	21	8 21.1	20.4
508615 2017 SE_{36}	16.5	X	287.93729	161.81408	186.01844	14.52673	0.0804233	0.18534490	3.0466013	21	6 14.3	21.0
508616 2017 SR_{37}	17.4	X	348.17065	103.92397	253.73616	8.96777	0.1310007	0.24437949	2.5337254	21	9 30.1	20.2
508617 2017 SP_{38}	16.4	X	29.68701	323.46786	315.96568	12.33339	0.1470445	0.23003591	2.6379848	21	8 25.2	19.3
508618 2017 SQ_{38}	16.0	X	317.54995	44.50404	226.09761	16.32382	0.1802005	0.17567221	3.1574320	21	3 29.1	20.3
508619 2017 SA_{39}	16.4	X	260.86719	49.37197	8.62586	9.05679	0.2164052	0.20925450	2.8098697	21	7 24.7	20.7
508620 2017 SG_{39}	16.7	X	338.94525	80.34115	276.66341	9.59665	0.1310672	0.23445764	2.6047125	21	9 7.9	19.6
508621 2017 SD_{40}	17.3	X	315.26871	108.00430	260.02047	3.93372	0.0895534	0.23322993	2.6138452	21	8 19.2	20.4
508622 2017 SG_{40}	16.2	X	272.78105	331.75654	341.33668	10.61596	0.1334530	0.17130270	3.2108985	21	4 2.5	21.1
508623 2017 SR_{40}	16.2	X	263.69888	215.95703	162.83513	10.54597	0.0619416	0.18339859	3.0681180	21	6 25.5	20.7
508624 2017 SU_{40}	16.0	X	310.23022	200.13793	123.77469	8.65228	0.0363558	0.18055452	3.1002530	21	6 19.7	20.3
508625 2017 SA_{41}	17.0	X	330.65399	233.01002	77.20915	3.14357	0.0486730	0.20309839	2.8663665	21	6 28.3	20.6
508626 2017 SH_{41}	16.6	X	318.96935	199.72930	105.81057	5.94221	0.1324899	0.18391042	3.0624228	21	5 26.9	20.4
508627 2017 SN_{41}	17.5	X	36.74281	290.97825	62.73620	6.48578	0.1224677	0.27427208	2.3461097	21	12 23.3	20.3
508628 2017 SD_{42}	18.2	X	107.33619	187.21808	124.85598	7.68181	0.1336175	0.29859258	2.2169201	21	—	—
508629 2017 SR_{42}	16.7	X	337.64923	241.01256	104.03959	7.83708	0.2261546	0.22588133	2.6702330	21	8 20.8	18.9
508630 2017 SV_{42}	17.0	X	297.99459	206.09586	180.84685	17.96995	0.2442138	0.21433405	2.7652980	21	7 22.2	20.8
508631 2017 TM	17.8	X	344.47960	265.25256	253.68919	17.24981	0.0896415	0.35132336	1.9891370	21	—	—
508632 2017 TC_{2}	16.6	X	324.94228	285.60228	60.46581	13.92921	0.3103376	0.22627887	2.6671046	21	7 4.5	19.2
508633 2017 TL_{3}	16.8	X	280.01833	210.05456	218.30700	13.85238	0.0838816	0.23820302	2.5773370	21	9 16.9	20.2
508634 2017 TN_{7}	17.1	X	320.34683	275.22065	58.83371	5.20122	0.0761313	0.21233177	2.7826552	21	7 13.4	20.6
508635 2017 TF_{8}	17.7	X	349.83952	35.06818	17.79374	7.17951	0.1311641	0.27682585	2.3316586	21	—	—
508636 2017 TO_{8}	16.5	X	302.40304	242.23719	158.05388	8.43806	0.2104057	0.23557353	2.5964805	21	8 28.4	19.1
508637 2017 TE_{9}	17.7	X	333.04340	292.41040	125.66883	6.11887	0.0988927	0.27350784	2.3504780	21	12 10.9	20.1
508638 2017 TH_{9}	16.2	X	298.15968	218.04680	110.06451	4.47460	0.1356645	0.19307433	2.9647382	21	5 25.0	20.2
508639 2017 TM_{9}	18.0	X	5.38568	243.84165	110.79873	5.56538	0.2471103	0.26013531	2.4303558	21	11 24.4	20.1
508640 2017 TR_{9}	17.4	X	47.99662	317.33669	33.64559	7.91922	0.1278547	0.28544112	2.2845028	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508641 2017 TA_{10}	16.7	X	273.33476	271.74576	98.93691	3.29209	0.0830463	0.20444984	2.8537212	21	6 23.8	20.7
508642 2017 TH_{10}	16.1	X	270.69196	118.14000	214.30371	24.84509	0.2114117	0.17559603	3.1583451	21	4 17.2	20.9
508643 2017 TT_{10}	17.4	X	307.42742	47.42246	10.49451	16.97858	0.1475590	0.24363375	2.5388931	21	10 11.7	20.1
508644 2017 TZ_{10}	17.8	X	7.87503	72.15708	332.38877	3.87422	0.1288416	0.28020470	2.3128765	21	—	—
508645 2017 TF_{11}	18.4	X	341.06437	51.06025	355.64838	3.56810	0.1612392	0.26136716	2.4227134	21	12 9.2	20.6
508646 2017 TJ_{11}	16.9	X	342.48842	13.04822	342.90464	4.09147	0.1389244	0.23537394	2.5979480	21	9 19.0	19.5
508647 2017 TL_{11}	17.0	X	282.80173	32.57371	359.09416	4.66764	0.1681775	0.21081745	2.7959646	21	7 22.8	20.8
508648 2017 TT_{11}	17.3	X	24.91613	54.23770	252.56962	4.70854	0.1219341	0.23674313	2.5879216	21	9 22.6	20.4
508649 2017 TV_{11}	16.5	X	317.20089	143.00560	218.31778	12.87812	0.1051470	0.22016723	2.7162366	21	8 6.8	20.0
508650 2017 TD_{12}	15.8	X	273.01254	122.60353	206.48359	25.76710	0.2456185	0.17539647	3.1607404	21	4 11.9	20.8
508651 2017 TF_{12}	15.9	X	276.72380	54.39054	269.57292	3.86796	0.2138419	0.17553306	3.1591004	21	4 11.7	20.8
508652 2017 TL_{12}	15.8	X	216.93271	39.63067	7.72017	18.48308	0.1912311	0.17211308	3.2008117	21	5 25.0	21.4
508653 2017 TO_{12}	17.8	X	267.55627	38.10563	125.41822	5.60888	0.0471946	0.30120107	2.2041021	21	—	—
508654 2017 TY_{12}	17.4	X	59.74737	64.09534	229.49464	4.22597	0.2245792	0.26376940	2.4079813	21	11 15.3	20.6
508655 2017 TL_{13}	17.8	X	308.53982	158.80628	289.11137	5.75374	0.0698590	0.27144119	2.3623934	21	12 10.1	20.4
508656 2017 UK	17.7	X	104.17939	186.28433	127.58229	7.24159	0.1560942	0.30241257	2.1982116	21	—	—
508657 2017 UY_{1}	18.7	X	61.24261	310.84794	195.54440	20.23505	0.1261307	0.39275411	1.8466683	21	2 25.6	19.9
508658 2017 UC_{2}	17.8	X	18.49877	110.59313	187.75115	28.65388	0.3472853	0.23687324	2.5869739	21	10 9.9	20.0
508659 2017 UD_{2}	17.6	X	110.32074	340.40325	63.30902	25.32174	0.0526036	0.35701371	1.9679442	21	—	—
508660 2017 UV_{2}	16.9	X	356.39913	357.88953	357.90178	13.41804	0.1953702	0.24014224	2.5634431	21	10 18.2	19.3
508661 2017 UF_{7}	17.9	X	177.63488	118.43139	237.60747	20.56419	0.1025544	0.37611137	1.9007503	21	1 14.8	20.5
508662 2017 UM_{8}	16.1	X	207.13219	118.67034	319.96304	8.82840	0.0540988	0.18495418	3.0508905	21	7 6.4	20.6
508663 2017 UQ_{9}	17.1	X	285.07003	284.63143	133.76066	6.65318	0.2606065	0.23092230	2.6312299	21	8 16.7	20.2
508664 2017 US_{9}	17.3	X	28.13201	260.80102	68.79190	6.51141	0.2124102	0.26565019	2.3966022	21	11 21.6	20.0
508665 2017 UZ_{9}	16.5	X	306.32177	133.96604	250.43730	13.15816	0.1233278	0.22497095	2.6774318	21	8 17.7	20.0
508666 2017 UJ_{10}	16.9	X	313.63810	5.74132	21.27298	12.08580	0.1886327	0.23251078	2.6192322	21	9 8.7	19.6
508667 2017 UL_{10}	16.3	X	214.31167	65.89277	23.15116	24.70404	0.3404120	0.18160849	3.0882465	21	7 14.6	22.4
508668 2017 US_{10}	16.0	X	252.92041	58.17837	28.41896	22.42750	0.0379711	0.22902937	2.6457081	21	9 24.6	19.8
508669 2017 UV_{10}	17.3	X	356.05687	267.60758	31.63079	2.30204	0.1911919	0.22518816	2.6757098	21	7 22.7	19.7
508670 2017 UM_{11}	16.9	X	302.96559	353.69784	56.66933	7.24357	0.2177832	0.22975900	2.6401039	21	9 16.3	19.7
508671 2017 US_{11}	17.4	X	17.99114	103.57425	276.78242	6.92044	0.1598255	0.26742957	2.3859597	21	—	—
508672 2017 UW_{11}	15.4	X	27.71619	0.03035	262.22713	14.48834	0.0381212	0.18399604	3.0614727	21	7 14.4	19.7
508673 2017 UE_{12}	17.6	X	357.26481	8.36720	10.55017	2.78363	0.2169896	0.25811084	2.4430473	21	12 6.8	19.7
508674 2017 UH_{12}	17.2	X	322.02679	330.76220	61.33183	5.00053	0.1796355	0.23456507	2.6039171	21	10 2.7	19.7
508675 2017 UU_{12}	16.5	X	74.01520	232.94930	354.13761	12.59955	0.1968111	0.23059467	2.6337217	21	9 1.1	20.1
508676 2017 UB_{13}	16.5	X	320.39766	119.65909	215.96731	12.79924	0.1775819	0.22158490	2.7046388	21	6 29.7	19.7
508677 2017 UE_{13}	16.4	X	237.15457	216.51479	219.12995	13.31621	0.0523049	0.22396554	2.6854387	21	8 2.8	20.5
508678 2017 UG_{13}	16.0	X	172.37655	152.24414	289.42947	8.11067	0.0941714	0.17735351	3.1374456	21	5 31.2	20.9
508679 2017 UN_{13}	17.3	X	354.43053	80.22211	294.55690	5.98995	0.1162192	0.26436495	2.4043635	21	11 11.9	19.9
508680 2017 UC_{14}	17.5	X	26.86003	309.36747	345.96324	5.47735	0.1965967	0.24406648	2.5358912	21	9 23.5	19.9
508681 2017 US_{15}	17.7	X	11.62883	260.09150	50.36497	3.06439	0.1478664	0.23970412	2.5665657	21	9 12.2	20.3
508682 2017 UV_{15}	16.1	X	250.25110	316.77275	28.01570	5.88896	0.1916025	0.17230813	3.1983958	21	4 15.4	21.3
508683 2017 UT_{16}	16.9	X	299.17885	185.58843	190.44673	7.77993	0.0961070	0.22419648	2.6835943	21	8 2.9	20.4
508684 2017 UU_{16}	18.5	X	346.11762	232.08567	185.80141	4.19254	0.2131331	0.27749013	2.3279359	21	—	—
508685 2017 UZ_{16}	16.9	X	216.68503	83.07023	16.76015	4.48239	0.0762946	0.22014303	2.7164357	21	8 13.6	20.9
508686 2017 UD_{17}	18.3	X	18.54170	143.79877	214.56575	0.93286	0.2010116	0.27215270	2.3582741	21	12 16.3	20.8
508687 2017 UJ_{17}	17.0	X	296.57571	116.15864	191.42401	3.43485	0.1265926	0.18280157	3.0747946	21	4 28.1	21.1
508688 2017 UL_{17}	16.6	X	165.01255	270.67134	179.54241	6.61341	0.0913352	0.17509335	3.1643871	21	6 4.5	21.6
508689 2017 UP_{17}	17.3	X	294.44477	170.82048	184.07056	3.56473	0.1148892	0.20841288	2.8174292	21	6 26.3	20.9
508690 2017 UT_{17}	16.6	X	255.41972	235.64259	188.71705	21.73947	0.0414781	0.22499280	2.6772585	21	8 13.8	20.7
508691 2017 UC_{18}	16.9	X	293.93109	19.55370	20.62692	12.39200	0.1590719	0.23147631	2.6270299	21	8 28.0	20.1
508692 2017 UE_{18}	17.8	X	272.45870	257.32499	191.48477	7.37513	0.1265789	0.24717512	2.5145844	21	10 2.6	20.9
508693 2017 UK_{18}	16.9	X	352.48291	279.81989	29.88201	5.98129	0.1252689	0.22315070	2.6919720	21	8 2.2	19.9
508694 2017 UG_{19}	17.7	X	119.59115	120.88550	137.16137	2.98281	0.0490355	0.27328608	2.3517494	21	11 20.7	20.9
508695 2017 UK_{19}	18.5	X	340.85525	307.83396	43.19623	4.26849	0.2637120	0.24135071	2.5548790	21	9 10.2	20.0
508696 2017 UL_{19}	17.6	X	24.71273	278.32800	24.52401	14.37068	0.1587352	0.24441630	2.5334710	21	9 29.8	20.3
508697 2017 UQ_{19}	16.4	X	195.73477	261.68686	177.56281	11.30496	0.1769799	0.18079476	3.0975060	21	6 20.0	21.7
508698 2017 US_{19}	17.3	X	24.24481	157.92756	167.11200	6.47764	0.1117281	0.25555592	2.4593032	21	10 23.5	20.1
508699 2017 UY_{19}	16.1	X	200.88831	245.05705	167.57079	9.48187	0.0899442	0.17504220	3.1650036	21	5 27.3	21.1
508700 2017 UA_{20}	16.1	X	309.04368	236.63682	22.21173	22.17972	0.3218475	0.17522466	3.1628061	21	2 26.5	21.0
508701 2017 UP_{20}	16.0	X	86.15938	21.99083	176.34912	15.21843	0.0785127	0.20592455	2.8400804	21	7 17.1	20.2
508702 2017 UR_{20}	18.0	X	323.13534	351.23402	57.36413	3.43878	0.1888183	0.25734815	2.4478719	21	11 2.9	19.6
508703 2017 UW_{20}	16.3	X	279.04322	159.55449	159.86253	9.09224	0.1367843	0.17806929	3.1290322	21	4 22.5	20.9
508704 2017 UY_{20}	16.5	X	239.30011	221.26768	162.08487	10.24933	0.1062601	0.18441192	3.0568683	21	5 30.1	21.3
508705 2017 UB_{22}	16.8	X	338.23668	116.10722	171.50618	8.03910	0.0102627	0.18814172	3.0163332	21	6 12.7	21.1
508706 2017 UH_{22}	17.5	X	20.71772	126.50554	160.83993	6.91687	0.0948583	0.22536859	2.6742815	21	8 15.9	20.5
508707 2017 UN_{22}	16.0	X	216.32374	29.87565	43.23302	6.32401	0.0245382	0.20215901	2.8752392	21	7 12.4	20.1
508708 2017 UR_{22}	17.3	X	320.13393	271.03486	91.62513	4.26740	0.1013966	0.22926867	2.6438668	21	8 21.9	20.3
508709 2017 UY_{22}	17.0	X	263.54933	284.38375	171.27908	6.98972	0.1784171	0.23944321	2.5684298	21	9 20.6	20.4
508710 2017 UC_{23}	17.0	X	6.24253	192.91804	109.94517	3.37629	0.0395811	0.22069904	2.7118714	21	8 11.9	20.4
508711 2017 UD_{23}	17.1	X	2.46004	163.02259	137.43579	4.42342	0.1205490	0.22254086	2.6968878	21	8 4.8	19.8
508712 2017 UP_{23}	17.7	X	340.17776	297.43777	28.76636	4.41931	0.1853704	0.22625098	2.6673237	21	7 29.6	20.2
508713 2017 UB_{24}	18.1	X	324.39154	285.26268	126.70646	2.24763	0.1469951	0.25987903	2.4319533	21	11 12.9	20.1
508714 2017 UT_{24}	16.3	X	273.24389	251.71948	81.88956	2.43260	0.1761092	0.18057219	3.1000508	21	4 26.3	20.8
508715 2017 UQ_{25}	17.9	X	269.01806	0.24497	106.83389	3.83215	0.1542667	0.25356696	2.4721469	21	10 21.5	20.9
508716 2017 UU_{25}	17.0	X	29.72379	144.64577	135.00744	5.27263	0.0770934	0.22404012	2.6848427	21	8 18.9	20.2
508717 2017 UK_{26}	17.5	X	329.87362	215.40066	141.10680	3.34333	0.1184497	0.23036517	2.6354706	21	8 27.5	20.2
508718 2017 UQ_{26}	18.0	X	115.87359	250.41967	44.31300	6.24557	0.1370864	0.30036632	2.2081838	21	—	—
508719 2017 UR_{26}	18.0	X	358.19364	287.27114	47.02156	5.71656	0.1899496	0.24140903	2.5544674	21	9 26.5	20.2
508720 2017 UY_{26}	17.4	X	210.40851	269.66849	186.78115	14.32375	0.1584168	0.19952703	2.9004689	21	7 22.4	22.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508721 2017 UA_{27}	17.2	X	288.95702	333.47501	53.90675	4.86285	0.1348084	0.21770167	2.7367064	21	7 31.8	20.7
508722 2017 UF_{27}	15.6	X	124.16554	104.00236	30.65213	18.50811	0.0956468	0.17081230	3.2170412	21	6 12.5	20.7
508723 2017 UL_{27}	17.3	X	253.78044	261.12614	160.91788	3.83379	0.0857397	0.21564007	2.7541214	21	8 5.1	21.0
508724 2017 US_{27}	16.7	X	238.49468	286.34650	132.42727	2.89973	0.0642568	0.20360326	2.8616261	21	7 15.7	20.6
508725 2017 UV_{27}	16.6	X	36.13826	91.12892	170.78284	5.88264	0.0267624	0.20983752	2.8046626	21	7 26.9	20.3
508726 2017 UA_{28}	18.1	X	18.82698	248.61058	86.81636	2.37048	0.1926284	0.25795568	2.4440269	21	11 10.2	20.6
508727 2017 UF_{28}	17.1	X	200.29842	96.48962	30.61924	11.79436	0.0581861	0.22439820	2.6819858	21	9 4.9	21.1
508728 2017 UG_{28}	17.7	X	229.05300	133.63855	35.40864	8.45820	0.0493780	0.27907591	2.3191090	21	12 6.9	20.6
508729 2017 UH_{28}	18.2	X	221.14723	46.33122	164.39571	4.42804	0.0254857	0.30594396	2.1812635	21	—	—
508730 2017 UO_{28}	16.8	X	29.03966	208.21527	78.42109	2.02666	0.0876928	0.23255244	2.6189193	21	8 30.3	19.9
508731 2017 UQ_{28}	16.7	X	149.96637	135.46863	30.32507	5.60782	0.1015900	0.22186299	2.7023783	21	8 25.8	20.8
508732 2017 UR_{28}	18.6	X	339.77012	359.51520	49.50508	2.11346	0.1743577	0.27003057	2.3706135	21	12 14.7	20.4
508733 2017 UB_{29}	16.6	X	206.99268	216.79079	189.11226	9.27135	0.0781003	0.17514903	3.1637165	21	5 25.3	21.5
508734 2017 UD_{29}	18.4	X	46.78996	243.97912	108.84076	2.43993	0.1713346	0.28934681	2.2638983	21	—	—
508735 2017 UE_{29}	17.1	X	290.30354	308.77854	71.21486	4.52232	0.1255147	0.21892850	2.7264729	21	7 24.3	20.6
508736 2017 UQ_{29}	16.1	X	274.31592	306.24635	26.75128	11.84120	0.1694563	0.18122078	3.0926496	21	4 25.7	20.8
508737 2017 UD_{30}	18.3	X	353.18842	327.02948	47.78750	3.30944	0.2016650	0.25962742	2.4335242	21	11 20.4	20.4
508738 2017 UJ_{30}	17.6	X	324.19490	108.25811	357.69784	4.56903	0.1670730	0.28608747	2.2810606	21	—	—
508739 2017 UV_{30}	17.7	X	348.52703	21.90512	342.30496	1.93972	0.1735598	0.25258685	2.4785379	21	10 19.1	19.8
508740 2017 UA_{32}	17.8	X	68.09009	85.27174	203.55893	5.91253	0.1139628	0.26364508	2.4087382	21	11 4.7	20.8
508741 2017 UB_{32}	17.3	X	264.91649	228.37162	199.08387	3.71158	0.1639917	0.22510021	2.6764067	21	8 14.7	20.9
508742 2017 UF_{33}	16.1	X	327.18879	250.80409	30.03294	11.65671	0.1063537	0.17913915	3.1165615	21	5 7.6	20.0
508743 2017 UP_{33}	16.5	X	352.23584	311.34993	3.72447	4.27884	0.0653660	0.21126911	2.7919783	21	8 8.1	19.9
508744 2017 UH_{34}	17.8	X	356.86476	172.60276	197.31750	6.32183	0.1694121	0.25471003	2.4647451	21	11 16.4	20.1
508745 2017 UJ_{34}	17.2	X	280.91524	10.93092	47.12045	2.65375	0.0683526	0.22723079	2.6596507	21	9 10.9	20.6
508746 2017 UP_{34}	17.4	X	349.45496	307.63906	32.51849	5.07003	0.2746621	0.23534773	2.5981409	21	9 17.3	18.9
508747 2017 UV_{34}	17.7	X	34.48942	51.57134	314.18881	5.23639	0.1204468	0.27591380	2.3367940	21	—	—
508748 2017 UX_{35}	15.9	X	227.03987	65.29105	327.54310	9.90139	0.1218383	0.17544035	3.1602133	21	5 23.9	21.0
508749 2017 UA_{36}	16.3	X	301.22340	282.18671	12.31173	13.35056	0.2707237	0.17722820	3.1389243	21	3 28.5	20.6
508750 2017 UL_{36}	15.9	X	274.93591	296.79072	55.19643	16.49931	0.2547882	0.17723248	3.1388737	21	5 11.3	20.7
508751 2017 UM_{36}	16.4	X	305.21412	194.65356	206.59494	33.55358	0.1980637	0.23531862	2.5983552	21	8 30.6	20.0
508752 2017 UO_{36}	17.5	X	339.48103	134.18562	207.91975	12.37065	0.2025571	0.22813515	2.6526172	21	8 14.4	20.1
508753 2017 UQ_{36}	16.2	X	284.90561	269.74296	48.72270	2.55771	0.1594607	0.17200200	3.2021897	21	4 23.3	20.8
508754 2017 UT_{36}	16.7	X	348.69741	298.47806	14.87224	9.41620	0.1237786	0.21213028	2.7844170	21	8 1.2	19.9
508755 2017 UD_{37}	16.3	X	289.52295	78.28847	244.07991	9.36765	0.1879600	0.17997589	3.1068944	21	4 27.2	20.7
508756 2017 UP_{37}	18.3	X	99.76138	111.91179	240.22120	0.27121	0.1960172	0.31667085	2.1317225	21	—	—
508757 2017 UH_{38}	15.7	X	322.55606	264.01420	38.04449	15.31561	0.0184730	0.17102443	3.2143805	21	6 7.2	20.3
508758 2017 UP_{38}	16.5	X	199.41792	287.57523	152.74283	10.01998	0.0590947	0.17503566	3.1650825	21	6 28.4	21.3
508759 2017 UR_{38}	16.1	X	258.71250	260.18946	133.98337	6.24503	0.3013538	0.18960975	3.0007439	21	6 10.9	21.1
508760 2017 UY_{38}	16.5	X	192.51251	283.32850	218.14486	3.56852	0.0575900	0.21643356	2.7473858	21	9 6.5	20.5
508761 2017 UQ_{40}	17.4	X	315.09719	121.52035	282.89046	4.28213	0.0943225	0.23972267	2.5664333	21	10 9.9	20.4
508762 2017 UW_{40}	16.9	X	332.61436	4.13161	342.34585	5.70656	0.0223477	0.21044532	2.7992597	21	8 22.2	20.6
508763 2017 UO_{41}	16.2	X	93.50329	140.56838	30.29673	9.34410	0.0267569	0.17387672	3.1791309	21	6 14.2	20.8
508764 2017 UQ_{42}	18.1	X	48.96942	267.82182	117.19560	4.12660	0.1904185	0.29781196	2.2207924	21	—	—
508765 2108 $P–L$	18.8	X	40.69819	6.15790	344.04793	2.59543	0.3872045	0.27735527	2.3286905	21	—	—
508766 1991 VX_{10}	18.0	X	52.87818	345.69829	64.43818	5.09570	0.2003855	0.27098054	2.3650699	21	—	—
508767 1993 BD_{2}	18.1	X	42.57797	65.65736	96.80397	25.52904	0.3945535	0.31894097	2.1215951	21	5 7.3	19.5
508768 1995 UB_{73}	18.6	X	53.45599	259.81890	133.02402	1.78873	0.1847446	0.27494343	2.3422891	21	—	—
508769 1995 VU_{17}	18.8	X	359.68762	45.86124	49.16035	3.40613	0.2100249	0.27200610	2.3591214	21	—	—
508770 1995 WY_{2}	7.1	X	291.31253	111.64211	78.70639	1.64457	0.1245986	0.00313886	46.1978087	21	1 7.6	23.6
508771 1997 JA_{10}	17.0	X	121.47149	142.44014	71.44119	26.30765	0.1109084	0.21624260	2.7490030	21	10 9.7	21.7
508772 1998 WP_{7}	19.8	X	306.25208	65.45078	230.74051	21.97014	0.4328368	0.72665323	1.2253249	21	1 11.3	21.9
508773 1998 WQ_{39}	18.1	X	23.27457	359.07686	57.77672	7.18731	0.1032790	0.26441816	2.4040410	21	—	—
508774 1999 JE_{1}	19.8	X	157.15695	302.70407	53.08254	20.90949	0.7017849	0.64748246	1.3232768	21	2 18.2	21.4
508775 1999 RW_{105}	17.2	X	39.56865	48.93492	308.48150	12.09552	0.2862761	0.23109291	2.6299347	21	—	—
508776 1999 RF_{108}	16.9	X	341.28921	107.86096	289.29218	6.96329	0.3796981	0.22576441	2.6711548	21	12 6.4	18.0
508777 1999 TZ_{156}	18.1	X	119.01903	135.71279	209.08342	4.35844	0.2253025	0.28502162	2.2867438	21	—	—
508778 1999 VQ_{19}	17.3	X	358.09063	304.48189	84.65539	4.18995	0.1098300	0.22485858	2.6783237	21	11 30.6	20.4
508779 1999 VB_{138}	17.8	X	62.68227	340.42359	37.78991	10.30846	0.3491079	0.27907735	2.3191010	21	—	—
508780 1999 VU_{152}	18.1	X	344.18574	321.43907	80.48697	4.60309	0.1099050	0.22437514	2.6821696	21	11 24.9	21.0
508781 1999 VZ_{152}	18.2	X	259.12383	44.85585	70.61873	6.55978	0.2705769	0.21977555	2.7194628	21	9 28.8	22.1
508782 1999 VN_{211}	18.3	X	39.76928	341.62399	62.29589	6.23297	0.2338391	0.27759412	2.3273545	21	—	—
508783 1999 XE_{49}	16.7	X	254.11422	324.89266	63.89598	10.42452	0.2895352	0.21262068	2.7801339	21	5 30.9	21.3
508784 1999 XV_{81}	18.1	X	292.56036	216.11459	252.33353	3.79563	0.4600060	0.22266074	2.6959197	21	9 28.3	21.1
508785 2000 AY_{226}	16.9	X	236.10249	212.31733	305.14782	11.73909	0.1759627	0.21673505	2.7448373	21	10 29.3	21.2
508786 2000 BL_{19}	19.9	X	252.88191	244.57030	311.52991	14.61681	0.6361164	0.21713090	2.7415003	21	11 9.2	25.1
508787 2000 BJ_{50}	17.7	X	237.96537	235.94680	300.37378	3.01641	0.2677051	0.21842212	2.7306852	21	11 16.5	21.8
508788 2000 CQ_{114}	6.9	X	100.04467	29.23278	38.30448	2.69739	0.1128162	0.00317519	45.8446989	21	3 21.0	23.6
508789 2000 DF_{11}	18.2	X	207.55145	66.36104	331.30185	19.35856	0.0676628	0.38242408	1.8797751	21	4 17.2	20.8
508790 2000 EA_{23}	18.4	X	275.75327	5.95295	202.05671	0.71040	0.1300164	0.27051034	2.3678098	21	—	—
508791 2000 EH_{104}	18.0	X	236.96932	141.87048	49.13568	5.49666	0.4656244	0.21525905	2.7573704	21	11 13.1	22.6
508792 2000 FX_{53}	7.8	X	0.75533	36.54738	175.18418	4.66899	0.1287942	0.00343877	43.4710606	21	4 23.6	23.6
508793 2000 FM_{71}	17.7	X	4.03925	108.74198	20.39017	2.41561	0.1766880	0.27245166	2.3565487	21	—	—
508794 2000 HG_{17}	18.1	X	279.81499	49.98746	162.51245	2.54821	0.1255567	0.26859600	2.3790470	21	—	—
508795 2000 HM_{20}	16.7	X	245.48696	133.64440	60.13049	25.68421	0.3504321	0.21707827	2.7419434	21	12 3.2	20.8
508796 2000 KN_{44}	18.5	X	270.32606	97.65957	75.14219	26.28496	0.5611045	0.21959736	2.7209338	21	11 14.8	22.6
508797 2000 PV_{5}	17.8	X	134.77748	7.45275	299.37203	5.92614	0.1473120	0.29959315	2.2119814	21	—	—
508798 2000 QB_{149}	17.9	X	145.53175	22.06398	316.67894	6.66171	0.2440208	0.30358658	2.1925407	21	—	—
508799 2000 QM_{193}	17.2	X	19.04620	253.36536	120.07494	4.16008	0.3076676	0.24162931	2.5529147	21	—	—
508800 2000 SL_{34}	17.1	X	26.45789	12.76667	349.29081	11.33832	0.2789633	0.24063130	2.5599686	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508801 2000 SD_{72}	17.2	X	16.86243	293.40287	52.26760	5.17833	0.3499866	0.23821833	2.5772265	21	12 12.7	19.9
508802 2000 SZ_{93}	17.6	X	346.25340	120.77691	274.94218	3.91997	0.2935061	0.23771123	2.5808905	21	12 12.4	19.1
508803 2000 SO_{125}	16.8	X	1.52595	293.45648	81.25930	4.24712	0.3550178	0.23695664	2.5863668	21	12 27.4	19.0
508804 2000 TW_{17}	16.1	X	272.16667	349.17610	20.62274	7.93909	0.2561632	0.17735506	3.1374273	21	5 27.9	20.9
508805 2000 TT_{28}	17.8	X	324.20287	134.50771	302.53730	6.86491	0.4631658	0.23726865	2.5840990	21	12 25.8	17.3
508806 2000 TK_{50}	17.4	X	349.98626	209.79257	144.83881	6.75353	0.3523776	0.23487909	2.6015957	21	10 25.8	18.7
508807 2000 UE_{17}	17.0	X	5.20077	312.08524	64.16902	7.57765	0.3138749	0.23779687	2.5802709	21	12 29.1	19.6
508808 2000 UK_{19}	17.3	X	23.82924	285.21155	58.70216	13.28950	0.3625611	0.23813355	2.5778382	21	12 21.6	20.6
508809 2000 UV_{24}	17.0	X	21.78227	283.53992	67.21326	6.01144	0.3065226	0.23805015	2.5784403	21	12 19.6	20.0
508810 2000 WD_{13}	16.3	X	301.11804	68.54351	92.55730	28.21990	0.4867705	0.23391756	2.6087202	21	—	—
508811 2000 WA_{54}	16.6	X	342.90051	150.77433	249.43887	13.28619	0.2540871	0.23614239	2.5923089	21	12 4.7	18.3
508812 2000 WX_{66}	16.8	X	271.76763	75.63754	72.99235	29.56811	0.3175509	0.23357982	2.6112343	21	11 23.4	19.8
508813 2000 WZ_{109}	16.6	X	316.99518	21.98008	48.16596	14.21543	0.1847161	0.23373818	2.6100547	21	11 14.5	18.8
508814 2000 WF_{186}	17.5	X	343.78357	347.75194	101.99377	6.67886	0.2818378	0.23953728	2.5677573	21	—	—
508815 2000 XE_{2}	18.7	X	10.95993	16.79285	43.89063	7.37432	0.4255065	0.28708018	2.2757990	21	—	—
508816 2000 XT_{23}	17.8	X	325.28978	69.58690	3.58639	4.33888	0.3191488	0.23478273	2.6023075	21	12 9.6	19.1
508817 2001 CY_{10}	17.4	X	280.28654	149.53605	322.13378	15.78189	0.3245226	0.22986071	2.6393251	21	10 1.8	21.0
508818 2001 DC_{1}	16.6	X	268.02849	78.73440	143.87067	28.83078	0.3624307	0.23414938	2.6069980	21	—	—
508819 2001 FD_{1}	18.2	X	257.37432	158.38908	359.24507	7.94423	0.2394521	0.22815758	2.6524433	21	11 19.3	21.8
508820 2001 FB_{62}	17.1	X	254.24612	15.00411	142.88876	5.00246	0.2405941	0.22737694	2.6585109	21	11 19.2	20.7
508821 2001 RF_{10}	18.2	X	210.23857	88.66829	294.53763	17.76977	0.1346630	0.38071639	1.8853920	21	3 31.0	21.2
508822 2001 RQ_{97}	18.5	X	116.74786	154.08235	220.75865	1.80215	0.1583279	0.31580560	2.1356144	21	—	—
508823 2001 RX_{143}	6.6	X	106.52485	240.88926	20.51722	19.20125	0.2965364	0.00397150	39.4911232	21	10 27.3	23.2
508824 2001 RW_{155}	16.9	X	56.19580	241.45699	115.48342	9.72105	0.2074116	0.25524869	2.4612763	21	—	—
508825 2001 SK_{169}	17.4	X	259.48083	264.58444	177.14633	20.10663	0.5634031	0.18768907	3.0211809	21	7 13.3	23.4
508826 2001 SK_{172}	17.9	X	91.25507	329.69353	9.08700	2.69868	0.1923575	0.25935515	2.4352271	21	—	—
508827 2001 ST_{197}	17.0	X	44.15254	178.72626	171.30478	12.49237	0.1260606	0.20475805	2.8508568	21	12 14.8	21.1
508828 2001 SH_{212}	18.2	X	14.08864	215.85762	165.65303	3.24360	0.2762956	0.25246526	2.4793336	21	—	—
508829 2001 SZ_{262}	18.1	X	216.64307	36.18180	356.04603	20.59600	0.0831032	0.38215546	1.8806559	21	4 22.6	20.7
508830 2001 TL_{124}	16.6	X	284.05694	151.60604	229.92471	10.63772	0.2822043	0.18987722	2.9979253	21	6 21.8	21.0
508831 2001 UE	17.7	X	15.31096	314.04729	113.72029	3.47166	0.1747900	0.25579990	2.4577392	21	—	—
508832 2001 UO_{90}	17.6	X	75.19970	290.56572	51.95822	6.19445	0.2255087	0.25574321	2.4581024	21	—	—
508833 2001 UM_{141}	17.9	X	85.32895	198.71394	209.01665	2.91658	0.1761210	0.26333097	2.4106533	21	—	—
508834 2001 WX_{4}	17.9	X	97.80155	117.34310	57.96441	22.37683	0.0633148	0.38137441	1.8832227	21	6 27.7	20.0
508835 2001 XZ_{2}	18.0	X	139.02179	186.32407	268.12199	19.62817	0.0995072	0.37433583	1.9067560	21	4 21.8	20.6
508836 2001 XA_{124}	15.4	X	170.66744	266.45901	239.28109	15.83600	0.0751402	0.18425661	3.0585858	21	8 10.8	20.4
508837 2001 XQ_{161}	17.1	X	344.66674	167.64376	238.13160	3.96661	0.1894045	0.24633432	2.5203031	21	12 13.8	19.2
508838 2002 AB_{50}	17.0	X	249.62630	239.90409	289.35186	11.12149	0.2122878	0.24242819	2.5473032	21	12 2.8	20.3
508839 2002 AR_{98}	16.4	X	227.49772	130.22130	303.11283	23.15757	0.2609664	0.17975330	3.1094587	21	7 8.0	21.8
508840 2002 AN_{113}	16.6	X	7.12402	264.92426	112.01889	12.75742	0.2644605	0.24473844	2.5312474	21	12 27.3	19.2
508841 2002 BO_{18}	16.8	X	306.32489	304.16508	128.64273	25.89452	0.2415861	0.24071370	2.5593843	21	11 3.9	19.8
508842 2002 BT_{32}	15.4	X	239.41120	77.32939	317.82527	8.73426	0.1985215	0.12385357	3.9859364	21	6 4.6	21.8
508843 2002 CK_{44}	17.8	X	270.65457	352.10051	330.55104	18.90693	0.0694958	0.36782756	1.9291820	21	3 23.2	20.3
508844 2002 CS_{74}	16.3	X	170.04142	24.54438	141.21684	18.62108	0.1679025	0.17884702	3.1199544	21	9 12.7	21.6
508845 2002 CG_{129}	16.4	X	171.66224	31.59359	147.23342	22.84472	0.2977896	0.18035567	3.1025313	21	9 29.8	22.2
508846 2002 CG_{150}	16.0	X	148.26635	246.96799	335.22219	15.02893	0.1878426	0.18244971	3.0787465	21	10 21.5	21.5
508847 2002 CU_{213}	16.3	X	164.15375	180.85246	345.21138	16.25986	0.0995760	0.17701050	3.1414973	21	9 5.2	21.1
508848 2002 CG_{237}	16.3	X	193.23790	245.73649	348.32112	18.62290	0.3337037	0.18523882	3.0477643	21	12 6.7	22.1
508849 2002 CY_{264}	18.2	X	300.43656	324.80805	163.56430	4.77939	0.1168585	0.24290697	2.5439549	21	—	—
508850 2002 CB_{267}	17.0	X	172.46523	51.45775	139.65429	8.17403	0.1894483	0.18267464	3.0762188	21	10 14.8	22.2
508851 2002 CR_{308}	18.4	X	273.34136	203.46659	320.60449	4.89391	0.1926000	0.24403714	2.5360945	21	—	—
508852 2002 ET_{9}	17.8	X	320.78903	295.44388	336.80563	18.07241	0.0480567	0.36661042	1.9334495	21	3 25.5	19.9
508853 2002 GB_{71}	17.0	X	254.73921	125.20676	0.77073	27.21694	0.1583624	0.23531273	2.5983986	21	10 12.1	20.8
508854 2002 GC_{192}	14.2	X	279.84964	179.37620	294.72029	6.56596	0.0683706	0.08465730	5.1368054	21	10 27.3	21.0
508855 2002 JS_{125}	17.4	X	139.17262	58.02383	228.11533	5.11221	0.2754086	0.23139901	2.6276149	21	—	—
508856 2002 LW_{56}	17.3	X	151.93734	223.64369	86.31027	13.59884	0.2198186	0.28584254	2.2823635	21	—	—
508857 2002 LK_{63}	16.7	X	188.86329	125.44487	110.18026	22.51730	0.3327479	0.17880648	3.1204260	21	12 11.1	22.6
508858 2002 PQ_{88}	18.2	X	39.53084	276.25045	116.30796	5.52375	0.3080313	0.27121226	2.3637226	21	—	—
508859 2002 QU	17.8	X	66.11199	173.61337	186.90512	1.66737	0.2692662	0.27320547	2.3522120	21	—	—
508860 2002 RR_{36}	15.3	X	141.52609	36.56343	318.15081	8.98462	0.3400282	0.12585223	3.9436234	21	2 12.1	21.9
508861 2002 RN_{38}	17.3	X	182.22674	118.60767	296.15549	4.16045	0.6729722	0.13218895	3.8165645	21	5 13.4	25.2
508862 2002 RY_{75}	17.8	X	92.63740	38.80809	308.30975	0.14545	0.2673116	0.27545832	2.3393693	21	—	—
508863 2002 RZ_{274}	17.7	X	333.90226	1.70513	15.40703	3.45877	0.1930049	0.20943771	2.8082307	21	9 28.2	20.3
508864 2002 SS_{34}	17.6	X	78.55063	307.94930	54.29474	2.35967	0.1972698	0.27399393	2.3476972	21	—	—
508865 2002 TT_{303}	17.4	X	46.43384	271.77107	64.28106	6.63655	0.0506728	0.21195509	2.7859510	21	11 20.1	21.2
508866 2002 UZ_{53}	18.3	X	10.60510	352.41876	77.32726	6.01623	0.2163490	0.26917370	2.3756419	21	—	—
508867 2002 VY_{70}	17.6	X	57.62295	304.18320	79.79169	6.28223	0.2321581	0.27084621	2.3658518	21	—	—
508868 2002 VV_{87}	16.7	X	305.35201	165.11208	251.93646	9.92690	0.3004688	0.20271542	2.8699755	21	9 2.5	20.1
508869 2002 VT_{130}	5.7	X	121.50929	344.45519	334.20270	1.16485	0.0360399	0.00357630	42.3493809	21	12 16.2	22.0
508870 2002 XL_{117}	18.6	X	118.70857	49.34480	72.17311	23.62865	0.0593547	0.39605060	1.8364070	21	5 10.7	20.4
508871 2003 CN_{17}	18.9	X	94.10522	265.60148	330.83078	32.07024	0.5183701	0.39300524	1.8458815	21	10 15.9	23.3
508872 2003 CO_{25}	17.2	X	200.05458	54.82285	93.17621	9.68371	0.3579576	0.19118154	2.9842744	21	9 11.6	22.9
508873 2003 FW_{29}	17.0	X	164.24460	40.05144	137.79072	10.83461	0.2668112	0.18644131	3.0346454	21	9 22.9	22.5
508874 2003 FO_{79}	17.0	X	287.90313	173.40346	2.02595	10.67723	0.1712414	0.25705150	2.4497548	21	—	—
508875 2003 GA_{2}	15.8	X	173.02701	124.34582	13.17678	15.96281	0.1025303	0.18066377	3.0990031	21	8 16.8	20.9
508876 2003 HY_{36}	15.9	X	132.25453	155.47200	107.92784	18.90614	0.2667975	0.18556356	3.0442075	21	12 6.9	21.5
508877 2003 KB_{12}	16.8	X	184.71911	1.55057	183.20928	13.04519	0.3216276	0.18829596	3.0146857	21	10 11.9	22.4
508878 2003 LQ_{1}	18.2	X	282.05169	218.41522	79.01151	23.40887	0.0416102	0.37688911	1.8981345	21	3 31.2	20.9
508879 2003 SL_{16}	17.5	X	347.33506	280.05915	85.28144	4.02241	0.3727212	0.22024786	2.7155737	21	10 30.2	18.6
508880 2003 SL_{70}	17.0	X	343.57746	23.91920	12.23807	9.52841	0.2311557	0.22216029	2.6999668	21	11 19.6	19.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508881 2003 SZ_{121}	17.9	X	35.70807	196.87144	201.17407	4.90237	0.3374903	0.28602084	2.2814149	21	—	—
508882 2003 SJ_{209}	17.7	X	26.27292	192.72760	229.21189	3.89793	0.2078429	0.28718774	2.2752308	21	—	—
508883 2003 SA_{245}	18.3	X	111.37867	342.80256	25.01063	2.05106	0.2074579	0.29498215	2.2349727	21	—	—
508884 2003 SK_{260}	16.8	X	348.31199	100.97559	345.56506	12.49127	0.1018359	0.23211291	2.6222244	21	—	—
508885 2003 SX_{267}	15.9	X	58.10129	209.42487	187.89827	16.30102	0.2671207	0.12245557	4.0162156	21	—	—
508886 2003 SS_{279}	18.2	X	29.16719	169.87040	238.15575	1.99831	0.2228441	0.28588804	2.2821213	21	—	—
508887 2003 SX_{305}	17.1	X	136.19448	45.14657	281.36809	4.04514	0.2933074	0.23868765	2.5738472	21	—	—
508888 2003 SR_{324}	17.5	X	327.10666	52.11090	354.27078	8.78606	0.1853930	0.22183532	2.7026030	21	10 25.8	20.1
508889 2003 SZ_{331}	18.7	X	68.11772	60.42924	331.34545	2.51535	0.2272574	0.28903246	2.2655395	21	—	—
508890 2003 SL_{420}	18.7	X	58.25314	218.63829	227.49680	3.22908	0.1529520	0.29665573	2.2265591	21	—	—
508891 2003 SR_{428}	17.3	X	128.13404	107.74052	204.46768	16.90142	0.1980332	0.23442894	2.6049251	21	—	—
508892 2003 TY_{35}	18.5	X	97.50314	89.13942	304.93379	3.23135	0.1459044	0.29434091	2.2382175	21	—	—
508893 2003 UL	16.8	X	355.73867	139.63314	236.20999	15.79481	0.2742570	0.22033984	2.7148179	21	11 26.0	19.0
508894 2003 UR_{58}	16.4	X	80.15524	52.25456	242.85225	4.43040	0.1400198	0.22447469	2.6813764	21	11 23.2	20.1
508895 2003 UB_{107}	16.8	X	51.30350	43.75663	308.85816	10.86706	0.2098034	0.22892111	2.6465422	21	—	—
508896 2003 UZ_{172}	17.0	X	34.96254	334.73178	16.69223	12.38467	0.2023591	0.22409158	2.6844317	21	12 18.1	20.7
508897 2003 UC_{231}	18.4	X	78.38875	133.61340	253.77239	2.28666	0.2038693	0.29052128	2.2577928	21	—	—
508898 2003 UN_{278}	17.4	X	342.42406	6.12527	13.14902	9.52782	0.2016053	0.21892019	2.7265419	21	10 20.8	19.9
508899 2003 UD_{316}	16.4	X	4.51627	351.81738	42.48866	18.03970	0.2144568	0.22184011	2.7025641	21	12 30.6	19.7
508900 2003 UX_{317}	17.3	X	343.21282	355.96581	25.14931	5.48486	0.1733027	0.21954980	2.7213267	21	10 25.8	19.8
508901 2003 WH_{10}	16.8	X	348.53046	313.97110	41.17121	17.37057	0.3143358	0.21683598	2.7439855	21	10 13.1	18.6
508902 2003 WG_{35}	17.7	X	221.61749	166.29792	234.12638	20.35521	0.0897357	0.36991408	1.9219207	21	5 23.5	19.9
508903 2003 WX_{41}	16.8	X	83.90515	131.34497	250.41794	21.95243	0.2312582	0.28875379	2.2669969	21	—	—
508904 2003 WR_{58}	17.0	X	16.42440	340.51005	57.25807	14.08582	0.1554252	0.22421234	2.6834677	21	—	—
508905 2003 WX_{87}	18.2	X	28.26096	324.73737	98.47521	13.02672	0.4909836	0.28195601	2.3032892	21	—	—
508906 2003 WM_{108}	17.4	X	237.27467	219.08900	258.30637	12.82526	0.2690658	0.20980466	2.8049554	21	8 29.6	22.3
508907 2003 XH_{14}	16.8	X	82.91091	95.72133	293.78372	20.57663	0.3528199	0.28972531	2.2619262	21	—	—
508908 2003 YX_{1}	20.9	X	203.87715	223.18110	89.65380	5.75704	0.2670015	1.19427581	0.8798317	21	—	—
508909 2003 YG_{32}	16.7	X	330.01282	103.19337	289.61280	10.10799	0.3623113	0.21535364	2.7565629	21	9 22.6	18.6
508910 2003 YJ_{53}	17.7	X	27.85511	206.46801	251.91615	7.78031	0.1839692	0.28762003	2.2729504	21	—	—
508911 2003 YB_{137}	17.3	X	318.61181	344.32823	62.24390	9.09771	0.3800585	0.21466421	2.7624619	21	9 17.7	19.3
508912 2004 BB	19.5	X	64.81351	57.94233	129.50155	24.50200	0.5176520	0.35307627	1.9825479	21	8 16.7	22.2
508913 2004 BG_{8}	18.2	X	339.82284	219.29590	285.16740	7.02368	0.1882560	0.28164348	2.3049929	21	—	—
508914 2004 BT_{16}	16.8	X	291.18080	52.39136	81.60618	11.87124	0.2850338	0.21672446	2.7449268	21	12 5.4	19.3
508915 2004 BL_{39}	16.9	X	0.08784	209.04074	302.22944	24.03248	0.1981829	0.28489482	2.2874223	21	—	—
508916 2004 BP_{69}	17.9	X	278.23097	184.11168	125.32160	25.02781	0.0756069	0.35443401	1.9774816	21	4 5.1	20.8
508917 2004 BS_{71}	17.6	X	60.15227	293.35747	133.04859	22.36950	0.2363304	0.28521555	2.2857072	21	—	—
508918 2004 BG_{86}	19.2	X	346.48035	123.40835	146.66483	36.17013	0.6132605	0.62667477	1.3524085	21	1 10.8*	22.1
508919 2004 CM_{17}	17.4	X	295.54238	168.20380	136.64605	24.24600	0.0691932	0.35670293	1.9690871	21	4 23.9	20.1
508920 2004 CN_{108}	16.6	X	252.59410	238.01604	307.98047	11.96117	0.1564970	0.21341844	2.7732015	21	—	—
508921 2004 EX_{43}	17.8	X	306.77122	36.67421	157.73697	4.89483	0.1695609	0.27815478	2.3242260	21	—	—
508922 2004 EH_{116}	16.0	X	100.73845	177.13907	311.90544	1.73339	0.1269516	0.12422249	3.9780407	21	5 18.7	21.6
508923 2004 FC_{19}	18.1	X	106.10466	323.49623	181.24062	13.60894	0.1424620	0.35553603	1.9733932	21	6 8.9	20.5
508924 2004 FV_{23}	18.0	X	177.02574	256.68324	337.35958	1.76688	0.1616620	0.26254844	2.4154409	21	12 15.8	21.7
508925 2004 FY_{43}	17.5	X	323.53936	140.62472	8.25652	20.07832	0.1894429	0.27641017	2.3339956	21	—	—
508926 2004 FR_{80}	17.0	X	247.01094	152.97278	30.13021	10.23636	0.1468467	0.20914598	2.8108416	21	12 19.8	21.0
508927 2004 FT_{95}	17.1	X	271.46869	162.16961	358.42689	25.17771	0.1837830	0.27149522	2.3620799	21	—	—
508928 2004 FL_{130}	17.2	X	336.21320	39.03784	129.25307	8.39753	0.1345804	0.27864086	2.3215222	21	—	—
508929 2004 GP_{2}	17.5	X	341.67086	27.32147	140.72353	25.67946	0.2130854	0.27967268	2.3158087	21	—	—
508930 2004 GW_{9}	16.3	X	236.96386	125.83235	107.90317	34.30256	0.2655433	0.21277606	2.7787803	21	—	—
508931 2004 HP_{63}	17.8	X	19.14158	108.29438	95.43076	18.74698	0.1478040	0.34471568	2.0144757	21	4 5.5	19.7
508932 2004 JY_{11}	17.6	X	321.40897	78.18067	117.46349	22.54795	0.3083842	0.27708847	2.3301851	21	—	—
508933 2004 OU	18.3	X	172.86486	254.15871	95.91337	27.37990	0.1825351	0.38200440	1.8811516	21	1 16.2	20.6
508934 2004 RN_{35}	17.4	X	4.58287	251.45444	130.30279	4.51712	0.2319096	0.23856154	2.5747541	21	12 21.9	20.1
508935 2004 RK_{53}	17.0	X	319.13644	8.37948	17.92774	7.82673	0.1934872	0.23147955	2.6270054	21	9 15.4	19.4
508936 2004 RH_{63}	17.6	X	358.72549	25.94786	346.63626	3.92368	0.2677353	0.23611676	2.5924965	21	12 1.1	19.9
508937 2004 RW_{98}	17.1	X	4.46813	143.42904	218.68065	3.66905	0.2276986	0.23664236	2.5886563	21	11 22.6	19.4
508938 2004 RG_{102}	17.3	X	338.55969	192.30557	182.76717	14.74559	0.2652245	0.23342438	2.6123934	21	10 13.0	19.0
508939 2004 RX_{148}	17.5	X	336.61093	212.34975	175.83669	5.72354	0.2545647	0.23413664	2.6070926	21	10 29.6	19.2
508940 2004 RQ_{165}	17.8	X	358.01750	42.86458	353.14257	4.18079	0.3625164	0.23578737	2.5949103	21	—	—
508941 2004 RV_{212}	16.8	X	45.02977	49.09306	292.09436	11.38512	0.3045804	0.24068440	2.5595921	21	—	—
508942 2004 RU_{324}	17.6	X	4.73516	16.88456	315.55535	5.30159	0.3180696	0.23273193	2.6175726	21	10 19.6	19.6
508943 2004 RK_{329}	17.0	X	325.24498	65.98152	329.37689	13.24995	0.1634213	0.23284517	2.6167239	21	10 5.1	19.8
508944 2004 RQ_{331}	18.3	X	179.54292	133.74149	242.35694	14.73246	0.1736433	0.38304594	1.8777401	21	2 21.1	21.1
508945 2004 RJ_{345}	17.2	X	339.93043	167.50637	244.09030	7.96602	0.2434986	0.23670780	2.5881791	21	12 14.1	19.0
508946 2004 RD_{356}	17.9	X	359.61278	28.37541	343.30905	2.87892	0.2651237	0.23488973	2.6015171	21	12 1.1	20.2
508947 2004 SF_{9}	15.7	X	5.42229	65.88693	268.14371	25.16716	0.2739812	0.17375906	3.1805660	21	9 19.9	19.5
508948 2004 SF_{17}	17.5	X	8.63690	316.28634	75.22101	6.75273	0.3048441	0.23876701	2.5732768	21	—	—
508949 2004 SU_{34}	17.3	X	9.80359	311.27774	46.19586	4.34749	0.2756618	0.23542476	2.5975742	21	12 3.1	19.7
508950 2004 SK_{53}	17.7	X	323.69958	51.36559	350.01337	5.44518	0.3224292	0.23167800	2.6255050	21	10 2.4	19.3
508951 2004 TC_{20}	17.5	X	3.36804	267.75556	95.65063	28.37640	0.4166076	0.23644366	2.5901064	21	12 26.7	19.8
508952 2004 TU_{38}	17.4	X	269.09099	92.76740	24.93009	13.39677	0.2279383	0.23245960	2.6196166	21	10 18.7	20.6
508953 2004 TD_{44}	17.8	X	48.23289	136.01436	218.08224	7.67668	0.1770028	0.23956411	2.5675656	21	—	—
508954 2004 TO_{50}	17.3	X	326.63926	172.26645	225.06617	13.18492	0.2477781	0.23020767	2.6366725	21	10 10.2	19.5
508955 2004 TH_{104}	17.6	X	32.09682	214.04480	149.20488	2.53134	0.2228733	0.23953273	2.5677898	21	—	—
508956 2004 TD_{125}	16.8	X	334.34397	326.46009	57.40870	6.26164	0.1477258	0.23283118	2.6168287	21	10 16.9	19.3
508957 2004 TN_{142}	17.0	X	338.45168	47.62519	15.47281	15.33004	0.1253596	0.23749026	2.5824912	21	12 16.4	20.1
508958 2004 TO_{149}	17.9	X	295.24103	153.12780	316.21642	2.11648	0.1819667	0.23641862	2.5902892	21	11 28.3	20.5
508959 2004 TF_{187}	17.9	X	351.51482	30.45854	6.77690	3.50245	0.2159866	0.23620201	2.5918726	21	12 15.0	20.2
508960 2004 TZ_{201}	17.8	X	6.65116	2.65183	15.76408	5.58099	0.2309420	0.23432903	2.6056655	21	12 19.1	20.6

* The additional opposition: 11 20.6, $V = 21.5$

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
508961 2004 TV_{220}	17.5	X	312.26710	83.64998	306.52069	11.79283	0.2940200	0.22890966	2.6466305	21	8 15.3	19.8
508962 2004 TW_{274}	18.8	X	87.13537	18.30188	16.68128	3.10443	0.1759298	0.30869851	2.1682684	21	—	—
508963 2004 TD_{315}	17.3	X	20.47721	116.84631	225.66345	3.38712	0.1687116	0.23468416	2.6030361	21	11 13.5	20.0
508964 2004 TW_{317}	17.3	X	10.50783	32.21191	309.32149	2.24388	0.2741918	0.23316486	2.6143315	21	11 10.2	19.8
508965 2004 TJ_{333}	17.8	X	15.36061	341.32780	34.32993	3.90922	0.1960457	0.23581081	2.5947384	21	12 24.8	20.7
508966 2004 UZ_{1}	17.2	X	340.42927	49.40612	310.78776	10.89969	0.3355686	0.23062915	2.6334592	21	9 11.3	18.6
508967 2004 VC_{17}	18.4	X	154.31305	65.14388	229.21767	20.40140	0.8109136	0.37760866	1.8957224	21	—	—
508968 2004 VR_{54}	18.1	X	115.69717	265.67191	243.05823	19.40453	0.0342503	0.38942326	1.8571834	21	6 8.3	19.6
508969 2004 VH_{69}	17.6	X	329.17869	335.95587	77.93975	3.84454	0.1555502	0.23081617	2.6320364	21	11 17.3	20.1
508970 2004 VX_{87}	18.1	X	342.63107	31.62862	14.41343	5.05709	0.2187396	0.23314453	2.6144834	21	12 7.3	20.4
508971 2004 VH_{105}	18.7	X	282.89722	148.54275	41.10485	5.33052	0.0863242	0.30617795	2.1801520	21	—	—
508972 2004 WA_{7}	17.1	X	297.85676	178.02294	260.67973	9.48445	0.1784020	0.22976068	2.6400911	21	10 15.5	20.1
508973 2004 XD_{10}	17.1	X	330.91252	341.82048	102.93187	8.36240	0.3024490	0.23300179	2.6155511	21	—	—
508974 2004 XC_{61}	17.4	X	303.82340	48.79277	70.74990	30.08390	0.3006939	0.23319199	2.6141287	21	12 14.9	19.2
508975 2004 XQ_{111}	17.4	X	310.44006	105.51490	338.14267	4.56758	0.2562468	0.22854349	2.6494566	21	11 10.3	19.7
508976 2004 XS_{157}	13.4	X	286.80907	211.38079	101.31507	10.60824	0.0515569	0.08392675	5.1665715	21	5 12.7	20.3
508977 2004 XR_{170}	17.3	X	22.61207	265.59129	280.93965	20.06487	0.0087835	0.37547253	1.9029057	21	2 17.9	19.6
508978 2004 XX_{171}	18.5	X	178.21929	314.63857	74.88219	24.04480	0.0118728	0.37841034	1.8930441	21	3 20.5	21.2
508979 2004 XV_{182}	18.0	X	63.51932	62.65129	86.93195	23.77542	0.0126228	0.37821792	1.8936860	21	3 27.9	20.6
508980 2005 AH_{27}	18.3	X	198.24063	312.01792	113.41403	21.54716	0.1075753	0.38495620	1.8715230	21	6 5.5	20.9
508981 2005 AV_{58}	17.5	X	278.48442	358.59359	125.17371	9.64659	0.2680593	0.22669072	2.6638732	21	11 6.8	20.7
508982 2005 CB	18.2	X	156.65619	333.06653	131.22733	24.42382	0.0899983	0.38315005	1.8773999	21	6 12.2	20.9
508983 2005 CU_{15}	16.9	X	234.97230	40.27010	139.72602	14.04249	0.1878386	0.22487097	2.6782254	21	12 2.7	21.0
508984 2005 EF_{69}	16.9	X	224.34776	202.83274	8.03153	9.76914	0.2193272	0.22128132	2.7071119	21	12 21.1	21.2
508985 2005 EH_{70}	17.2	X	262.20297	328.25143	189.30567	8.03802	0.4219292	0.22482694	2.6785750	21	11 1.8	21.1
508986 2005 EP_{97}	16.6	X	274.48562	196.67037	324.28170	16.25554	0.1297350	0.22748237	2.6576893	21	—	—
508987 2005 ER_{133}	17.7	X	34.01116	88.75519	357.14612	22.86935	0.3120098	0.30028474	2.2085838	21	—	—
508988 2005 ET_{135}	16.8	X	339.12105	94.26844	327.53422	4.70215	0.0638014	0.22154452	2.7049675	21	12 9.6	20.2
508989 2005 EQ_{201}	17.2	X	287.25045	65.91944	88.51265	13.29847	0.2579695	0.22872412	2.6480615	21	—	—
508990 2005 EY_{225}	18.1	X	14.44129	249.19216	5.02185	16.50275	0.0643239	0.37921818	1.8903546	21	6 7.1	19.9
508991 2005 EZ_{237}	17.0	X	177.49161	221.94062	6.85624	11.76901	0.1088400	0.21847919	2.7302096	21	12 4.2	21.4
508992 2005 EU_{245}	17.2	X	57.18556	327.76101	357.17250	12.03009	0.0304530	0.21568758	2.7537169	21	11 12.9	21.1
508993 2005 EA_{250}	18.3	X	49.05029	315.24234	171.89398	22.31526	0.0701195	0.36382413	1.9433083	21	1 8.8	20.5
508994 2005 ER_{250}	18.2	X	54.77942	179.69827	358.03939	16.96079	0.1537281	0.37063531	1.9194267	21	4 18.1	19.4
508995 2005 EP_{271}	16.6	X	315.37302	86.07077	131.25274	0.74439	0.2019640	0.17756440	3.1349608	21	1 20.1	20.9
508996 2005 EP_{284}	18.7	X	322.66824	283.83860	219.24836	1.86539	0.1307690	0.29060723	2.2573476	21	—	—
508997 2005 FL_{4}	17.0	X	258.71724	176.86904	66.78398	28.43525	0.7211176	0.22836269	2.6508549	21	12 29.7	21.6
508998 2005 GO_{7}	16.9	X	206.71410	163.52800	63.92677	5.78135	0.2787094	0.21927692	2.7235840	21	12 18.6	21.5
508999 2005 GW_{19}	17.4	X	246.01674	290.15396	201.13498	8.32185	0.2460322	0.21544070	2.7558202	21	10 2.9	21.7
509000 2005 GZ_{40}	17.8	X	179.84757	63.67711	190.73692	4.80641	0.1401056	0.27930235	2.3178553	21	—	—
509001 2005 GF_{59}	18.2	X	125.00925	114.89042	32.90866	21.64751	0.0814910	0.37795396	1.8945676	21	6 29.5	20.8
509002 2005 GF_{124}	18.1	X	129.33088	117.97744	352.35848	19.88353	0.0424704	0.37598654	1.9011710	21	4 18.4	20.3
509003 2005 GW_{148}	18.2	X	290.36828	152.89235	56.67583	8.43264	0.1084730	0.29130153	2.2537593	21	—	—
509004 2005 GR_{229}	17.1	X	211.48771	214.22579	32.04187	3.80497	0.1023156	0.22333641	2.6904795	21	—	—
509005 2005 JR_{24}	18.7	X	264.81307	47.07845	223.97780	19.23710	0.0772188	0.35613079	1.9711955	21	1 5.9	21.6
509006 2005 JU_{28}	17.3	X	221.14457	114.92099	83.42418	13.73258	0.2761497	0.21694718	2.7430478	21	11 28.4	21.8
509007 2005 JV_{28}	18.1	X	267.97604	130.24940	92.32186	9.73764	0.1456815	0.28790045	2.2714743	21	—	—
509008 2005 JM_{50}	18.0	X	168.89947	201.66484	104.94630	3.03033	0.2098238	0.28220659	2.3019256	21	—	—
509009 2005 JF_{62}	16.7	X	210.92249	11.67939	202.61549	8.06524	0.2140152	0.21894485	2.7263371	21	12 12.9	21.0
509010 2005 LD_{2}	17.5	X	233.75186	122.66976	120.85973	6.43669	0.3620864	0.22386706	2.6862262	21	—	—
509011 2005 LU_{39}	16.0	X	289.67171	227.70677	95.19458	28.77062	0.1308218	0.18229432	3.0804958	21	5 18.7	20.7
509012 2005 LE_{53}	18.5	X	311.52097	29.85262	285.53081	5.51349	0.2078421	0.30171990	2.2015746	21	5 3.4	21.0
509013 2005 MX_{14}	17.8	X	301.47499	108.70363	138.94039	7.33173	0.2288683	0.29202453	2.2500379	21	1 17.3	20.9
509014 2005 MO_{22}	16.1	X	301.26286	67.14241	304.04543	8.11928	0.0888446	0.18419674	3.0592485	21	7 31.7	20.1
509015 2005 MH_{28}	18.5	X	260.96832	63.70340	263.62010	7.40030	0.1882306	0.29447652	2.2375304	21	3 20.4	22.0
509016 2005 ME_{38}	16.9	X	34.21933	21.17907	288.40427	4.47697	0.2498431	0.19157802	2.9801555	21	10 24.6	20.5
509017 2005 MP_{48}	18.3	X	11.76316	108.60774	128.22167	23.94501	0.1111461	0.36265687	1.9474760	21	5 17.5	20.5
509018 2005 NE_{1}	17.5	X	251.41156	234.63291	339.04602	3.18425	0.4239230	0.22217932	2.6998127	21	12 27.1	21.3
509019 2005 NZ_{7}	16.7	X	102.73443	336.81456	296.21873	18.39050	0.1663648	0.19871471	2.9083681	21	11 14.4	21.6
509020 2005 NU_{18}	16.4	X	338.14732	218.81211	135.17127	8.79306	0.1477144	0.18764398	3.0216649	21	9 3.6	19.7
509021 2005 NE_{42}	17.9	X	77.12037	177.64116	188.13793	2.65509	0.1970716	0.26799751	2.3825876	21	—	—
509022 2005 NX_{76}	16.5	X	301.33476	148.61856	193.17530	9.04125	0.1487571	0.17982144	3.1086732	21	6 14.5	20.8
509023 2005 NC_{88}	16.1	X	168.01060	265.46951	268.60718	11.74950	0.1136267	0.19245942	2.9710498	21	9 12.9	21.1
509024 2005 PZ_{1}	16.9	X	26.75175	22.07655	356.34953	18.28516	0.4073363	0.25558894	2.4590914	21	—	—
509025 2005 PR_{4}	17.3	X	68.92782	310.19165	67.61082	10.48253	0.3372077	0.26556606	2.3971084	21	—	—
509026 2005 QJ_{17}	17.6	X	74.69073	316.30082	34.01615	2.12855	0.2599935	0.26194049	2.4191769	21	—	—
509027 2005 QF_{18}	17.6	X	45.07498	226.90127	148.44745	1.88689	0.1951080	0.25944365	2.4346733	21	—	—
509028 2005 QJ_{20}	17.5	X	45.68601	23.16516	340.94771	7.75678	0.3027789	0.25885856	2.4383405	21	—	—
509029 2005 QL_{34}	17.8	X	6.29981	134.65832	255.87386	1.59683	0.2156411	0.25552462	2.4595041	21	—	—
509030 2005 QG_{42}	17.4	X	55.67261	24.91383	340.56870	4.75687	0.2398059	0.26042598	2.4285470	21	—	—
509031 2005 QY_{59}	17.7	X	60.09781	163.82150	198.46691	1.38249	0.1984433	0.26029909	2.4293361	21	—	—
509032 2005 QW_{81}	17.7	X	83.44541	347.82089	0.46763	2.91460	0.2184874	0.26431580	2.4046616	21	—	—
509033 2005 QK_{180}	17.6	X	46.54852	330.65282	24.13078	9.45921	0.2702012	0.25760912	2.4462184	21	—	—
509034 2005 RZ_{42}	18.0	X	42.25992	343.05490	29.69795	3.09431	0.2203224	0.25819533	2.4425143	21	—	—
509035 2005 SS_{19}	16.5	X	337.64221	209.51813	145.41257	8.48037	0.1770120	0.18258625	3.0772114	21	9 1.0	19.8
509036 2005 SO_{35}	17.1	X	60.86532	331.66207	36.69342	7.15736	0.1565659	0.25977575	2.4325978	21	—	—
509037 2005 SF_{53}	18.0	X	60.00488	194.99830	172.94802	2.35711	0.2136689	0.26090990	2.4255432	21	—	—
509038 2005 ST_{72}	16.5	X	295.66634	20.97791	27.43767	10.80461	0.2702690	0.17821785	3.1272931	21	8 18.9	20.6
509039 2005 SE_{87}	18.5	X	17.38131	5.52753	38.57120	1.70615	0.1863984	0.25698937	2.4501496	21	—	—
509040 2005 SK_{120}	18.1	X	4.97752	62.94663	2.10245	2.80356	0.1777668	0.25821821	2.4423701	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509041 2005 SO_{127}	16.6	X	275.99481	63.10030	16.31746	11.31024	0.0488384	0.18333205	3.0688603	21	9 30.4	20.8
509042 2005 SQ_{138}	18.2	X	97.10903	295.22294	48.03588	2.03983	0.1902464	0.26386172	2.4074196	21	—	—
509043 2005 SF_{144}	16.9	X	266.00342	25.18910	21.75806	15.14678	0.2837383	0.17419115	3.1753041	21	7 6.4	22.1
509044 2005 SD_{151}	16.4	X	355.24840	161.66462	170.08466	2.76772	0.1791452	0.18051614	3.1006924	21	9 3.0	19.4
509045 2005 SQ_{177}	16.7	X	289.78593	203.47320	212.67344	11.41548	0.0930100	0.18106490	3.0944243	21	9 7.9	21.0
509046 2005 SP_{181}	16.9	X	23.18536	348.86527	338.51009	4.14806	0.0704990	0.18372660	3.0644651	21	10 5.4	20.9
509047 2005 ST_{186}	17.7	X	155.56800	117.31523	188.07190	4.83088	0.1149176	0.26718170	2.3874351	21	—	—
509048 2005 SG_{197}	16.8	X	271.35073	70.43895	13.62226	12.34474	0.1919056	0.18094046	3.0958430	21	9 11.6	21.2
509049 2005 SQ_{237}	17.8	X	347.03730	219.48445	233.86976	2.62502	0.1931229	0.25659085	2.4526859	21	—	—
509050 2005 SY_{242}	16.9	X	304.55951	157.71337	213.73782	0.37320	0.1939054	0.17612697	3.1519947	21	7 21.4	20.8
509051 2005 SH_{245}	18.2	X	10.00004	174.35087	233.56534	0.82464	0.1769636	0.25573057	2.4581834	21	—	—
509052 2005 SS_{266}	16.8	X	310.63488	131.33385	193.16805	13.28127	0.2881045	0.17559354	3.1583750	21	5 16.0	20.9
509053 2005 SJ_{285}	16.6	X	243.92731	268.87433	135.84133	12.41461	0.0311730	0.16913972	3.2382148	21	7 8.1	21.3
509054 2005 SY_{289}	18.4	X	43.01656	27.08418	355.15835	1.90656	0.2021978	0.25845325	2.4408891	21	—	—
509055 2005 SE_{290}	16.4	X	291.69545	38.35277	47.33202	9.02359	0.0394085	0.18633208	3.0358313	21	10 30.1	20.5
509056 2005 TA_{15}	18.4	X	26.21777	102.16515	280.27807	5.37527	0.2651819	0.25546196	2.4599062	21	—	—
509057 2005 TE_{31}	18.3	X	47.53625	224.46874	158.41360	2.48093	0.2061348	0.25980536	2.4324130	21	—	—
509058 2005 TH_{46}	17.6	X	80.87039	63.85556	269.98168	5.16653	0.2375726	0.26071660	2.4267419	21	—	—
509059 2005 TW_{70}	18.0	X	21.83499	37.34109	27.86171	2.53976	0.1493536	0.25964742	2.4333993	21	—	—
509060 2005 TO_{86}	17.9	X	77.16161	297.67775	53.81559	3.19041	0.2398058	0.26196548	2.4190230	21	—	—
509061 2005 TW_{91}	18.0	X	87.59272	81.51807	260.23602	3.63288	0.2420845	0.26291347	2.4132047	21	—	—
509062 2005 TX_{96}	16.6	X	342.97669	1.32112	19.77749	11.16188	0.0866138	0.18342377	3.0678372	21	10 16.5	20.3
509063 2005 TU_{102}	18.1	X	49.32418	126.66459	250.88100	1.17863	0.1853733	0.25811203	2.4430399	21	—	—
509064 2005 TC_{114}	18.4	X	357.39659	79.10336	10.74016	4.07549	0.1270827	0.26058900	2.4275340	21	—	—
509065 2005 TR_{114}	16.5	X	225.79924	244.68227	199.40937	15.14864	0.1894058	0.17253574	3.1955823	21	7 18.5	21.9
509066 2005 TQ_{116}	17.0	X	295.87701	154.17246	203.32120	8.58085	0.0840083	0.17426864	3.1743628	21	7 5.6	21.4
509067 2005 TG_{125}	18.4	X	350.82650	220.21728	222.53017	1.95920	0.1644201	0.25669151	2.4520447	21	—	—
509068 2005 TN_{131}	17.9	X	139.24855	124.00245	197.23328	5.40608	0.1533989	0.26607690	2.3940392	21	—	—
509069 2005 TN_{139}	16.9	X	241.23876	0.51793	112.93131	2.44562	0.1318244	0.18024644	3.1037846	21	9 18.3	21.5
509070 2005 TD_{153}	17.6	X	5.11083	258.46916	216.88741	9.22884	0.0896891	0.26626685	2.3929006	21	—	—
509071 2005 TU_{182}	16.1	X	261.56481	96.18115	331.34541	11.16453	0.1884203	0.17672558	3.1448729	21	8 8.2	20.7
509072 2005 TJ_{196}	17.0	X	270.88839	173.25294	210.70340	16.40644	0.1466855	0.17243418	3.1968369	21	6 27.1	21.9
509073 2005 UM_{5}	20.6	X	6.57976	170.60751	84.88971	3.22370	0.5522896	0.73948639	1.2111072	21	11 7.6	20.9
509074 2005 UR_{11}	18.0	X	319.25946	309.59358	111.60772	4.06319	0.0707145	0.24692297	2.5162959	21	11 15.7	20.8
509075 2005 UC_{15}	16.1	X	270.31034	10.81803	41.26687	17.20231	0.2048889	0.17372049	3.1810368	21	7 31.4	21.0
509076 2005 UP_{19}	16.0	X	12.58804	300.27360	44.54763	16.36460	0.2716735	0.18325389	3.0697328	21	11 6.9	19.1
509077 2005 UN_{21}	18.5	X	85.53356	199.08647	230.37361	6.12680	0.0870291	0.27124402	2.3635381	21	1 14.4	21.2
509078 2005 US_{37}	16.3	X	253.96636	43.38336	55.64935	17.04906	0.1750390	0.17497195	3.1658507	21	9 17.5	21.3
509079 2005 US_{44}	18.6	X	8.74365	272.19001	122.28446	2.12452	0.2602200	0.25217090	2.4812626	21	—	—
509080 2005 UU_{62}	17.9	X	21.39477	194.07827	209.41374	1.78970	0.2046394	0.25459689	2.4654753	21	—	—
509081 2005 UA_{63}	17.3	X	224.13531	19.59359	81.76980	2.08047	0.1831399	0.16905767	3.2392624	21	8 11.1	22.5
509082 2005 UY_{99}	17.9	X	70.86834	210.11153	145.06812	3.89002	0.1716149	0.25762432	2.4461222	21	—	—
509083 2005 UZ_{132}	17.9	X	74.60870	281.59042	24.58192	2.19980	0.2085053	0.25417619	2.4681950	21	12 12.6	21.5
509084 2005 UF_{151}	16.5	X	168.70467	140.73942	45.03488	10.92279	0.1446782	0.17735763	3.1373969	21	10 6.2	21.6
509085 2005 UB_{161}	17.2	X	349.14232	314.65944	107.74991	6.79026	0.2422509	0.25232756	2.4802356	21	—	—
509086 2005 UM_{161}	17.8	X	23.54853	110.12858	275.04787	6.70885	0.2976299	0.25551156	2.4595879	21	—	—
509087 2005 UQ_{185}	16.7	X	252.79842	2.59987	62.80299	7.12311	0.0932951	0.17044524	3.2216582	21	8 8.5	21.4
509088 2005 UY_{197}	18.5	X	9.53078	247.03688	185.00820	2.41907	0.1398519	0.25902028	2.4373255	21	—	—
509089 2005 UP_{198}	16.6	X	266.49308	198.26179	228.15720	14.98072	0.1856250	0.17450317	3.1715180	21	8 5.4	21.5
509090 2005 UW_{239}	16.4	X	273.84838	12.02182	76.59961	12.66617	0.0304059	0.17994940	3.1071993	21	10 16.2	20.9
509091 2005 UA_{258}	16.5	X	263.24024	220.86597	214.34364	15.11752	0.1328397	0.17524924	3.1625103	21	8 20.4	21.4
509092 2005 UB_{326}	16.9	X	8.70721	263.57623	63.46783	3.04097	0.1078063	0.18052884	3.1005470	21	9 19.1	20.7
509093 2005 UY_{351}	15.6	X	286.88343	216.92867	250.70593	13.46258	0.0336462	0.18737974	3.0245049	21	11 19.4	19.8
509094 2005 UX_{371}	16.3	X	249.65620	9.71786	53.59848	17.49776	0.1060271	0.16945232	3.2342311	21	8 3.2	21.4
509095 2005 UU_{406}	16.6	X	236.33173	272.04219	192.42850	14.53240	0.1806591	0.17658393	3.1465546	21	8 23.2	21.8
509096 2005 US_{419}	17.2	X	311.86884	307.14401	46.70329	14.40242	0.3121793	0.17607844	3.1525738	21	6 18.6	21.1
509097 2005 UN_{422}	16.8	X	315.67163	341.14864	42.76183	9.65744	0.0849600	0.17678656	3.1441497	21	9 13.0	21.0
509098 2005 UE_{443}	17.5	X	1.91512	114.08501	236.43553	11.76035	0.2325467	0.24674579	2.5175004	21	11 1.9	19.8
509099 2005 UF_{463}	17.6	X	224.14064	124.75595	113.95348	3.24543	0.1605950	0.26391216	2.4071128	21	—	—
509100 2005 UR_{476}	17.9	X	57.44745	332.21772	40.36960	7.83609	0.1228903	0.25611814	2.4557029	21	—	—
509101 2005 UZ_{520}	17.1	X	77.11738	101.81082	187.33201	8.29970	0.0887969	0.18931151	3.0038946	21	11 2.6	21.4
509102 2005 VB_{7}	19.6	X	143.40697	212.39510	241.45514	32.57195	0.3478565	0.40751273	1.8018084	21	5 26.6	22.1
509103 2005 VE_{97}	16.4	X	6.39674	272.82899	47.23975	9.85884	0.0851466	0.17541125	3.1605628	21	9 8.0	20.5
509104 2005 VF_{103}	17.2	X	226.96308	87.25978	18.91393	13.25955	0.2529375	0.17094195	3.2154143	21	8 19.1	22.7
509105 2005 VZ_{111}	18.1	X	2.30116	106.07871	305.13550	2.39279	0.2270759	0.25117805	2.4877969	21	—	—
509106 2005 VP_{126}	17.1	X	137.15514	79.36748	153.48736	2.14131	0.0873987	0.18954288	3.0014496	21	10 29.5	21.7
509107 2005 VY_{130}	16.4	X	196.85815	350.34017	185.69020	18.83030	0.1934003	0.18466336	3.0540928	21	10 15.7	21.4
509108 2005 VO_{137}	17.9	X	281.03704	71.56775	115.33677	2.69336	0.1180850	0.26200248	2.4187953	21	—	—
509109 2005 WZ_{20}	16.4	X	300.27769	129.69387	265.77187	8.17997	0.0800662	0.17361889	3.1822776	21	8 27.7	20.8
509110 2005 WD_{27}	17.7	X	12.07954	352.47575	20.16417	1.86264	0.1491871	0.24733035	2.5135321	21	12 10.9	20.6
509111 2005 WZ_{36}	16.8	X	182.44633	26.78773	130.43452	2.13923	0.1063908	0.17157999	3.2074381	21	9 12.3	21.9
509112 2005 WN_{44}	16.8	X	217.21367	62.53580	60.62557	1.92671	0.1293555	0.17281159	3.1921808	21	9 4.6	21.6
509113 2005 WT_{67}	17.4	X	331.09702	175.07019	250.12485	12.28541	0.1506405	0.24670004	2.5178116	21	12 11.6	19.8
509114 2005 WT_{68}	17.2	X	259.53787	310.14540	245.73622	8.55568	0.1544320	0.25517242	2.4617667	21	—	—
509115 2005 WW_{84}	16.4	X	295.46156	149.28752	248.55825	14.85666	0.1126811	0.17376650	3.1804751	21	8 16.4	20.9
509116 2005 WY_{91}	18.1	X	3.01580	38.66161	53.75210	1.58940	0.1477177	0.25943177	2.4347476	21	—	—
509117 2005 WQ_{99}	16.2	X	2.76780	289.57622	77.14408	10.77737	0.0850677	0.18004094	3.1061461	21	10 31.8	20.3
509118 2005 WT_{126}	17.8	X	14.51001	20.43464	62.20029	3.05379	0.1749580	0.25815592	2.4427629	21	—	—
509119 2005 WX_{177}	17.8	X	322.39125	129.51232	20.01096	1.33831	0.1371611	0.25456677	2.4656697	21	—	—
509120 2005 WU_{210}	17.8	X	127.80267	127.65735	186.20788	1.24803	0.1909757	0.25910026	2.4368239	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509121 2005 XE_4	17.5	X	15.74735	172.33556	244.63454	7.51524	0.1632845	0.25407233	2.4688676	21	—	—
509122 2005 XS_{90}	16.1	X	214.34872	258.80017	281.09755	12.35899	0.1558001	0.17657759	3.1466298	21	11 1.8	21.3
509123 2005 YH_{71}	17.6	X	102.24125	10.01371	305.32658	7.54831	0.0559382	0.24812338	2.5081736	21	—	—
509124 2005 YM_{110}	18.3	X	335.85277	197.27140	241.40807	3.05610	0.1485809	0.24624656	2.5209018	21	—	—
509125 2005 YM_{159}	17.4	X	319.05543	305.71606	107.68244	28.24175	0.2038300	0.24082398	2.5586030	21	11 11.4	20.5
509126 2005 YH_{160}	16.8	X	227.48712	239.17205	235.44932	4.39780	0.0912652	0.16889066	3.2413975	21	9 5.3	21.6
509127 2005 YQ_{168}	17.3	X	335.31997	104.01251	273.58165	10.45929	0.1711623	0.23728726	2.5839639	21	10 1.1	20.1
509128 2005 YB_{221}	16.2	X	270.02448	305.65297	117.68087	17.57937	0.2128711	0.17269744	3.1935872	21	8 8.6	20.8
509129 2005 YA_{222}	16.5	X	214.88367	188.62875	293.20650	4.86919	0.0981433	0.16917597	3.2377522	21	8 31.1	21.5
509130 2005 YM_{264}	17.7	X	209.95353	195.37991	338.67105	3.53825	0.1181292	0.23645077	2.5900545	21	11 3.5	21.4
509131 2005 YB_{269}	17.5	X	266.29942	36.76521	130.96156	14.34140	0.1179917	0.24271785	2.5452761	21	—	—
509132 2005 YF_{279}	17.4	X	344.57046	123.31517	277.38913	10.63292	0.1524515	0.24210921	2.5495401	21	11 30.6	20.1
509133 2006 AK_{15}	18.4	X	335.45042	315.50227	126.29767	7.44803	0.1974675	0.24581924	2.5238225	21	—	—
509134 2006 AN_{22}	17.0	X	334.41572	340.59414	70.30744	8.82018	0.2683815	0.24262347	2.5459362	21	12 2.8	18.2
509135 2006 AB_{35}	16.2	X	185.38982	59.34458	115.25799	16.03657	0.0642208	0.16949840	3.2336448	21	10 14.1	21.4
509136 2006 AH_{47}	17.9	X	286.24762	89.57690	9.81939	3.72592	0.1613293	0.24016098	2.5633097	21	10 31.9	20.8
509137 2006 AQ_{73}	17.1	X	337.97219	145.74021	267.09860	2.68443	0.1852418	0.24196619	2.5505446	21	12 8.1	19.3
509138 2006 AU_{75}	17.3	X	178.40987	95.64924	113.32001	4.74974	0.1192842	0.23558134	2.5964230	21	11 16.6	21.3
509139 2006 AR_{76}	17.7	X	261.14171	54.97020	128.48436	5.63322	0.1115291	0.24588623	2.5233640	21	—	—
509140 2006 AW_{77}	13.7	X	11.50710	124.74612	129.08482	26.56104	0.2121214	0.08335210	5.1902909	21	6 24.8	19.7
509141 2006 BF_{35}	18.5	X	329.08815	146.60312	308.54145	12.99467	0.2728894	0.24718535	2.5145150	21	—	—
509142 2006 BH_{71}	17.8	X	305.42551	82.17918	23.46984	4.22873	0.2068827	0.24262581	2.5459198	21	12 13.9	19.8
509143 2006 BY_{101}	17.9	X	333.49428	129.43169	297.33754	2.88121	0.2309896	0.24190044	2.5510068	21	12 22.9	19.6
509144 2006 BF_{102}	13.8	X	337.66014	329.71465	322.46973	17.37967	0.1316506	0.08379770	5.1718746	21	6 11.7	20.3
509145 2006 BY_{107}	17.9	X	326.97784	71.35503	330.17582	5.30907	0.1376028	0.23616112	2.5921718	21	10 24.2	20.5
509146 2006 BD_{110}	17.4	X	0.68170	304.97229	89.88731	3.47609	0.1795484	0.24133042	2.5550221	21	12 25.8	19.9
509147 2006 BF_{116}	18.3	X	299.62678	327.00877	150.91498	5.80450	0.1387572	0.24144894	2.5541859	21	12 25.3	20.9
509148 2006 BR_{117}	18.4	X	309.25471	83.84339	346.17727	3.79037	0.2238726	0.23945273	2.5683617	21	10 24.6	20.5
509149 2006 BT_{126}	17.7	X	177.11750	337.90193	279.98530	1.84632	0.1715243	0.23871089	2.5736801	21	—	—
509150 2006 BB_{208}	17.2	X	318.39012	228.39023	224.62338	4.23213	0.2770176	0.24327090	2.5414170	21	12 26.1	18.6
509151 2006 BX_{247}	17.7	X	291.04199	321.19336	134.92510	4.76819	0.0785040	0.23587505	2.5942672	21	11 16.7	20.8
509152 2006 BZ_{251}	17.3	X	206.79608	257.70536	325.74453	8.93878	0.1217602	0.23983988	2.5655971	21	—	—
509153 2006 BJ_{274}	18.0	X	301.54914	97.32895	350.52960	3.30532	0.1489873	0.23891575	2.5722087	21	11 13.1	20.5
509154 2006 CK_{18}	18.3	X	323.79336	278.63866	147.22433	4.86966	0.2800271	0.24144128	2.5542400	21	11 26.9	19.8
509155 2006 CU_{46}	17.8	X	359.01701	296.98484	112.42357	4.19820	0.1213312	0.24253184	2.5465773	21	—	—
509156 2006 DA_{14}	17.1	X	204.46735	72.02894	89.01738	4.50125	0.1477063	0.22892205	2.6465349	21	10 12.5	21.3
509157 2006 DG_{39}	17.1	X	183.61847	185.52195	357.73343	13.65509	0.1844879	0.22669358	2.6638508	21	10 12.2	21.7
509158 2006 DA_{43}	17.4	X	118.91686	319.71744	342.21159	8.25507	0.0881006	0.23845836	2.5754968	21	—	—
509159 2006 DO_{53}	17.8	X	320.71122	99.90261	316.61907	3.21269	0.1882630	0.23631269	2.5910633	21	11 1.6	20.2
509160 2006 DO_{93}	17.7	X	232.33843	352.40522	168.26000	1.53156	0.1356998	0.23236698	2.6203126	21	11 10.9	21.4
509161 2006 DP_{99}	17.6	X	335.37974	242.57523	171.57315	3.54875	0.2809263	0.23985264	2.5655061	21	12 11.5	19.2
509162 2006 DS_{99}	17.5	X	314.31584	333.66059	93.02248	2.94635	0.1071666	0.23386642	2.6091005	21	11 10.4	20.4
509163 2006 DC_{119}	18.1	X	252.48957	45.49298	158.51444	1.36961	0.1689927	0.24377042	2.5379441	21	—	—
509164 2006 DK_{155}	17.6	X	294.15628	240.70443	274.72658	2.21825	0.1215079	0.24244704	2.5471712	21	—	—
509165 2006 EV_{6}	17.9	X	283.06903	157.40651	337.68846	2.82755	0.1544617	0.23938340	2.5688576	21	12 17.1	20.6
509166 2006 EQ_{39}	18.2	X	315.86316	122.36637	352.42584	5.16435	0.1844987	0.24169243	2.5524703	21	—	—
509167 2006 EB_{56}	17.9	X	274.18552	277.73184	208.66425	3.85183	0.1896469	0.23706766	2.5855593	21	11 14.9	20.7
509168 2006 FJ_{18}	17.1	X	207.36154	202.79235	24.95793	14.76968	0.2038949	0.23391946	2.6087061	21	12 28.9	21.4
509169 2006 FU_{23}	18.0	X	256.64870	183.09388	9.29784	6.12954	0.2172008	0.24019898	2.5630393	21	—	—
509170 2006 GV_{3}	17.4	X	288.86973	340.96694	156.64212	3.30396	0.1537764	0.24082494	2.5585962	21	12 31.4	20.1
509171 2006 GH_{55}	17.7	X	207.16885	88.27576	138.63133	2.32047	0.1114768	0.23286383	2.6165841	21	—	—
509172 2006 HF_{28}	17.6	X	266.91031	48.26127	127.34000	14.01549	0.1838281	0.23521958	2.5990845	21	—	—
509173 2006 HH_{45}	17.7	X	272.74727	344.88650	196.99809	7.57529	0.1352372	0.24108355	2.5567661	21	—	—
509174 2006 HA_{70}	17.4	X	299.66186	4.80472	137.10069	14.61654	0.1806968	0.23528266	2.5986200	21	—	—
509175 2006 HF_{71}	17.5	X	290.78600	62.92449	96.78920	5.62808	0.2043379	0.23899880	2.5716127	21	—	—
509176 2006 HA_{72}	17.6	X	281.09366	86.62132	93.53635	6.74437	0.2184344	0.24002689	2.5642643	21	—	—
509177 2006 HA_{78}	17.0	X	90.05872	263.11879	51.91617	5.79613	0.1270578	0.22933025	2.6433935	21	12 27.2	21.0
509178 2006 HQ_{83}	17.6	X	267.61438	146.36701	61.71734	13.42322	0.2001360	0.24056934	2.5604081	21	—	—
509179 2006 HL_{152}	16.6	X	182.83594	130.89646	114.09350	32.39077	0.2489063	0.23051722	2.6343115	21	12 27.0	21.3
509180 2006 HK_{153}	18.5	X	174.08778	111.06615	167.47271	3.27310	0.1500469	0.29802936	2.2197122	21	—	—
509181 2006 JN_{47}	16.9	X	148.93876	170.10171	78.84792	10.46078	0.1109306	0.22461315	2.6802744	21	12 3.9	20.9
509182 2006 JS_{52}	17.2	X	214.73198	333.89388	211.80254	15.50294	0.2007315	0.23088519	2.6315119	21	11 15.9	21.3
509183 2006 JV_{53}	17.3	X	227.79576	342.41938	233.81740	3.37669	0.1927233	0.23399355	2.6081554	21	—	—
509184 2006 KD_{26}	16.8	X	114.41008	195.61461	93.82327	14.83545	0.1698352	0.22516032	2.6759304	21	12 21.7	21.2
509185 2006 KO_{46}	17.0	X	325.49524	2.69944	80.12251	7.52079	0.1227235	0.22763300	2.6565168	21	12 19.4	19.9
509186 2006 KO_{49}	17.3	X	25.03595	123.72144	203.15103	3.35115	0.0952404	0.21466776	2.7624314	21	10 16.2	20.6
509187 2006 KL_{54}	17.7	X	215.98552	74.80306	131.37619	2.71087	0.1599231	0.23015107	2.6371048	21	12 15.6	21.5
509188 2006 KS_{58}	17.5	X	308.94776	58.79630	80.24608	12.51678	0.1374812	0.23639692	2.5904478	21	—	—
509189 2006 KQ_{70}	17.3	X	181.72766	33.88647	216.87227	12.02029	0.1513591	0.22997998	2.6384125	21	—	—
509190 2006 KT_{112}	17.1	X	114.84662	158.53279	133.53932	16.96834	0.1939633	0.22275090	2.6951922	21	12 26.6	21.8
509191 2006 OC_{5}	19.2	X	347.74745	245.71743	149.13323	4.74531	0.6519036	0.26484950	2.4014300	21	—	—
509192 2006 OD_{7}	19.3	X	230.84030	197.32456	127.67250	30.33331	0.1662874	0.63912825	1.3347831	21	—	—
509193 2006 OX_{19}	17.4	X	90.86366	159.57813	161.90322	12.40561	0.3751725	0.28266862	2.2994165	21	—	—
509194 2006 QQ_{108}	16.4	X	202.56351	224.61873	178.37951	14.49885	0.3010516	0.17603083	3.1531422	21	5 13.5	22.3
509195 2006 QR_{185}	18.2	X	158.71609	97.02980	345.26638	23.58004	0.1454391	0.37545596	1.9029617	21	4 26.4	21.2
509196 2006 RK_{23}	18.2	X	38.69568	11.77700	338.72838	5.24811	0.2469318	0.27293191	2.3537834	21	—	—
509197 2006 RA_{37}	16.5	X	59.22582	328.84797	15.52750	8.23453	0.2291593	0.20926407	2.8097840	21	—	—
509198 2006 RM_{48}	18.1	X	24.02439	202.84704	199.49906	1.56435	0.2304433	0.27475076	2.3433839	21	—	—
509199 2006 RD_{71}	18.3	X	73.66591	42.60900	0.29895	2.39596	0.1933326	0.28536944	2.2848853	21	—	—
509200 2006 RQ_{88}	18.1	X	49.07612	88.23407	345.53837	3.97082	0.1356616	0.28524462	2.2855518	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509201 2006 RA_{99}	16.4	X	247.87811	21.76915	16.26884	14.97111	0.2358331	0.18185976	3.0854011	21	6 9.4	21.6
509202 2006 RN_{101}	17.6	X	113.96930	70.79251	273.40692	8.27624	0.1971206	0.28642766	2.2792541	21	—	—
509203 2006 RM_{104}	17.0	X	236.91619	347.80183	97.32331	6.42185	0.1185584	0.18692024	3.0294596	21	8 11.6	21.6
509204 2006 SF_{13}	15.7	X	280.89651	176.17272	248.70385	10.83888	0.0245926	0.19707896	2.9244389	21	9 16.5	19.9
509205 2006 SY_{20}	17.8	X	51.74748	134.00054	243.75201	3.51222	0.1529300	0.27926482	2.3180630	21	—	—
509206 2006 SR_{32}	18.2	X	90.10738	159.33836	196.41820	1.53988	0.2249044	0.28248093	2.3004350	21	—	—
509207 2006 SY_{47}	16.3	X	242.87972	355.88897	13.90714	9.46885	0.1118271	0.17909231	3.1171049	21	5 12.4	21.2
509208 2006 SC_{50}	17.7	X	55.50497	344.25524	10.70006	2.44481	0.2297868	0.27456387	2.3444472	21	—	—
509209 2006 SH_{80}	18.2	X	110.79298	103.64911	216.42333	3.70576	0.1916174	0.28163870	2.3050189	21	—	—
509210 2006 ST_{126}	16.5	X	267.61814	296.73181	72.10368	8.52454	0.2866760	0.18320068	3.0703272	21	5 20.8	21.4
509211 2006 SZ_{140}	18.4	X	8.61830	130.72675	271.32091	3.43274	0.2882304	0.27166801	2.3610783	21	—	—
509212 2006 SA_{141}	17.9	X	107.80897	306.15402	28.37682	2.57918	0.2220202	0.28418725	2.2912175	21	—	—
509213 2006 SK_{160}	18.6	X	54.06727	358.75200	41.82081	5.65068	0.1821067	0.27980156	2.3150975	21	—	—
509214 2006 SK_{186}	16.8	X	317.04918	12.06327	20.06914	14.96615	0.1498219	0.19288213	2.9667075	21	9 21.3	20.3
509215 2006 SK_{202}	17.0	X	321.78854	60.35426	318.97978	1.10660	0.1085746	0.19433587	2.9518938	21	9 10.9	20.6
509216 2006 SR_{224}	18.1	X	146.57783	171.49687	156.12931	8.40911	0.2119345	0.29293645	2.2453658	21	—	—
509217 2006 SY_{231}	18.6	X	32.81680	202.25220	234.45006	3.12695	0.1947599	0.28234791	2.3011574	21	—	—
509218 2006 SW_{241}	16.8	X	58.79982	295.83958	27.43419	2.73544	0.1088582	0.20572471	2.8419193	21	11 26.2	20.7
509219 2006 SZ_{250}	17.7	X	289.72435	16.00634	28.22373	1.58929	0.2095927	0.19008816	2.9957071	21	8 10.5	21.6
509220 2006 SY_{262}	18.2	X	105.73989	158.93949	185.37534	3.94720	0.2580663	0.28225324	2.3016719	21	—	—
509221 2006 SM_{272}	17.6	X	92.11181	347.25762	29.60410	7.02304	0.1487732	0.28516955	2.2859529	21	—	—
509222 2006 SW_{296}	18.8	X	53.80612	82.12383	309.53004	1.12844	0.2136802	0.28004871	2.3137352	21	—	—
509223 2006 SC_{315}	18.6	X	44.21443	223.73769	174.14250	5.67993	0.1879028	0.27810984	2.3244764	21	—	—
509224 2006 SV_{329}	17.6	X	266.01957	0.26593	63.58265	3.26288	0.2393168	0.18700933	3.0284973	21	8 1.5	22.1
509225 2006 SM_{331}	18.4	X	242.63543	121.36098	189.12675	22.75872	0.0449058	0.36862815	1.9263878	21	2 1.8	21.2
509226 2006 SF_{344}	18.7	X	40.54878	103.24032	260.55537	2.05837	0.1351584	0.27243547	2.3566420	21	—	—
509227 2006 SK_{374}	16.9	X	292.43869	18.29717	55.87643	11.36391	0.1406207	0.19561049	2.9390567	21	10 9.1	20.7
509228 2006 ST_{398}	18.5	X	46.92822	200.91292	211.63514	4.12212	0.1842157	0.28122128	2.3072993	21	—	—
509229 2006 SR_{404}	18.1	X	31.07568	85.79992	307.90343	4.37928	0.2408559	0.27441583	2.3452903	21	—	—
509230 2006 SB_{406}	17.4	X	62.85271	316.94377	42.11595	7.77575	0.1421423	0.27749070	2.3279327	21	—	—
509231 2006 ST_{412}	17.6	X	266.68659	195.74477	52.14621	9.00001	0.0613851	0.28995045	2.2607551	21	—	—
509232 2006 TS_{29}	17.3	X	273.09024	255.85740	172.25308	1.50759	0.1528475	0.18846663	3.0128655	21	8 26.7	21.3
509233 2006 TK_{38}	17.0	X	299.98241	280.96776	48.24813	2.25301	0.2481468	0.18187003	3.0852850	21	5 11.4	21.2
509234 2006 TW_{41}	19.2	X	47.04302	11.59308	40.15759	2.07015	0.1762352	0.27838867	2.3229241	21	—	—
509235 2006 TG_{44}	18.5	X	67.27411	338.04823	42.61845	3.52329	0.2245597	0.27828992	2.3234735	21	—	—
509236 2006 TB_{45}	18.7	X	10.86251	243.64085	155.41943	1.47134	0.1793122	0.26987909	2.3715005	21	—	—
509237 2006 TE_{54}	18.5	X	175.51839	358.30412	41.56409	21.40626	0.0715816	0.36769397	1.9296493	21	4 2.9	20.9
509238 2006 TV_{58}	18.6	X	82.40360	12.82225	2.43205	4.78886	0.2077443	0.28104843	2.3082452	21	—	—
509239 2006 TX_{78}	17.8	X	79.35076	326.07101	38.57349	6.36218	0.2444599	0.27862797	2.3215938	21	—	—
509240 2006 TE_{79}	18.3	X	266.96038	115.22508	215.28130	21.06508	0.0304855	0.37170013	1.9157591	21	4 12.8	20.3
509241 2006 TX_{81}	18.2	X	34.82652	52.80379	1.92841	5.21826	0.1579760	0.27710006	2.3301201	21	—	—
509242 2006 TR_{100}	18.6	X	37.62560	56.33780	348.45842	2.42638	0.1681010	0.27650717	2.3334497	21	—	—
509243 2006 TV_{104}	18.4	X	16.54063	49.04450	45.60782	11.37459	0.1629976	0.27924571	2.3181687	21	—	—
509244 2006 TU_{105}	18.3	X	53.24030	343.46833	36.28622	5.60991	0.2086603	0.27660677	2.3328896	21	—	—
509245 2006 TJ_{126}	18.3	X	28.79848	261.01877	159.09522	4.45139	0.2024099	0.27556716	2.3387533	21	—	—
509246 2006 TX_{126}	16.5	X	335.27217	65.21161	261.07489	4.88603	0.0207780	0.18235336	3.0798308	21	7 26.8	20.7
509247 2006 US_{5}	17.2	X	257.41324	337.41219	69.77056	4.27370	0.3002253	0.18304072	3.0721157	21	6 25.2	22.1
509248 2006 US_{8}	18.8	X	356.17033	217.78423	208.47435	0.80495	0.1700020	0.27135832	2.3628743	21	—	—
509249 2006 UX_{14}	16.3	X	258.43768	179.73950	211.45432	11.42191	0.1129103	0.18000228	3.1065908	21	6 26.9	21.0
509250 2006 UJ_{30}	17.2	X	259.81016	27.45484	14.47365	3.05648	0.2878824	0.18350304	3.0669536	21	6 22.2	22.2
509251 2006 UC_{33}	18.0	X	177.94113	77.49332	198.26471	4.37372	0.1691853	0.28233232	2.3012421	21	—	—
509252 2006 UT_{34}	18.7	X	33.86764	246.29883	169.44738	1.37050	0.1571557	0.27752854	2.3277211	21	—	—
509253 2006 UF_{40}	17.3	X	286.19458	256.47364	89.49702	0.15151	0.2007009	0.18106554	3.0944171	21	5 22.5	21.7
509254 2006 UZ_{54}	17.9	X	41.97001	37.96767	356.50025	6.29763	0.2413910	0.27662190	2.3328045	21	—	—
509255 2006 UW_{61}	17.8	X	79.74789	46.01139	299.03381	5.26787	0.2563698	0.27831969	2.3233079	21	—	—
509256 2006 UF_{62}	16.3	X	227.38232	151.00043	233.39522	9.02115	0.0949064	0.17218170	3.1999613	21	5 18.4	21.1
509257 2006 UE_{82}	18.5	X	12.01435	86.05572	359.53612	4.95340	0.1979205	0.27680901	2.3317531	21	—	—
509258 2006 UP_{88}	16.7	X	344.82675	334.29725	22.50000	4.79394	0.1649187	0.19131191	2.9829184	21	9 20.3	19.9
509259 2006 UC_{104}	16.8	X	270.57205	219.23763	211.57426	9.21098	0.2339623	0.18639987	3.0350952	21	8 11.9	21.4
509260 2006 UF_{122}	18.3	X	17.46960	255.53440	192.82814	5.40810	0.1042057	0.28036383	2.3120012	21	—	—
509261 2006 UZ_{140}	17.4	X	268.88198	67.38288	354.78667	2.98818	0.2251922	0.18503198	3.0500352	21	8 4.3	21.7
509262 2006 UM_{142}	17.0	X	295.41562	33.72031	14.45567	7.76789	0.0846849	0.18925059	3.0045393	21	9 13.3	20.9
509263 2006 UP_{156}	16.9	X	60.95296	181.50550	125.18758	3.11931	0.0715589	0.19957935	2.8999620	21	11 3.7	20.8
509264 2006 UM_{159}	18.5	X	51.52135	327.35472	55.41029	4.30350	0.2442664	0.27703920	2.3304613	21	—	—
509265 2006 US_{176}	17.1	X	270.67483	302.99486	87.40692	5.90919	0.2575664	0.18498896	3.0505081	21	6 22.1	21.7
509266 2006 UO_{179}	16.0	X	240.51342	179.49419	194.96870	17.16818	0.2047017	0.17618710	3.1512775	21	5 12.2	21.3
509267 2006 UD_{195}	17.3	X	15.89399	142.31450	211.04133	1.39142	0.0880648	0.19783498	2.9169836	21	11 2.8	20.8
509268 2006 UE_{211}	16.7	X	305.70087	46.52876	289.10651	4.43837	0.1478753	0.18085363	3.0968338	21	6 12.5	20.8
509269 2006 UL_{212}	18.6	X	38.90051	89.19088	339.97794	2.73296	0.1628876	0.27848417	2.3223930	21	—	—
509270 2006 UP_{225}	17.7	X	118.59168	102.00175	12.49812	20.99465	0.0540312	0.37589340	1.9014851	21	4 15.8	19.6
509271 2006 UD_{230}	17.1	X	264.93437	336.38623	68.34719	2.69672	0.3498308	0.18521949	3.0479764	21	6 23.8	22.1
509272 2006 UD_{239}	18.4	X	20.87826	58.47762	347.82662	2.23424	0.1656878	0.27361554	2.3498612	21	—	—
509273 2006 UX_{243}	18.6	X	76.16920	154.23541	179.57163	1.25624	0.2083744	0.27587014	2.3370406	21	—	—
509274 2006 UW_{252}	17.4	X	251.99570	211.45051	216.14915	10.06284	0.1233353	0.18476195	3.0530063	21	8 1.1	22.1
509275 2006 US_{253}	18.4	X	49.13816	302.51096	49.65048	2.49258	0.2078435	0.27174656	2.3606233	21	—	—
509276 2006 UK_{268}	18.9	X	29.97501	9.63443	49.36813	4.27227	0.1173041	0.27655589	2.3331757	21	—	—
509277 2006 UE_{289}	18.2	X	2.50173	21.05466	55.28422	5.74688	0.1204816	0.27510247	2.3413862	21	—	—
509278 2006 UL_{340}	16.5	X	221.80699	174.56063	242.82360	11.00726	0.1302895	0.17566217	3.1575523	21	6 19.1	21.5
509279 2006 VP_{1}	18.1	X	42.72086	52.80545	4.50908	5.95460	0.2217224	0.27857326	2.3218978	21	—	—
509280 2006 VQ_{4}	17.3	X	19.57537	344.35618	48.13920	7.49069	0.2961184	0.27076963	2.3662979	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509281 2006 VK_{10}	16.7	X	305.11019	174.46721	227.70173	9.53026	0.1012308	0.18971457	2.9996386	21	9 11.6	20.8
509282 2006 VX_{13}	17.1	X	253.40826	276.12954	74.64045	23.64377	0.1137317	0.37276731	1.9121010	21	4 28.9	19.8
509283 2006 VN_{18}	18.3	X	0.33915	84.87630	28.91051	5.92906	0.1606609	0.27852652	2.3221575	21	—	—
509284 2006 VW_{21}	18.4	X	198.08870	277.30906	45.12703	21.76436	0.1103998	0.36113583	1.9529404	21	1 3.6	21.2
509285 2006 VE_{32}	18.6	X	45.16092	196.77764	204.89792	1.61101	0.2265581	0.27766350	2.3269668	21	—	—
509286 2006 VD_{33}	18.4	X	11.90398	3.35296	72.87490	2.60540	0.1436549	0.27519110	2.3408835	21	—	—
509287 2006 VE_{48}	16.3	X	182.42653	254.73756	222.37256	9.96283	0.1165147	0.17743805	3.1364489	21	7 22.1	21.4
509288 2006 VA_{50}	17.1	X	287.67769	356.39368	21.25097	1.82654	0.2758097	0.18317678	3.0705942	21	6 22.8	21.5
509289 2006 VO_{54}	18.9	X	11.99399	2.62640	75.58246	2.61722	0.1556805	0.27465633	2.3439210	21	—	—
509290 2006 VV_{58}	18.6	X	13.49032	9.81757	87.53208	3.27436	0.1714022	0.27741546	2.3283537	21	—	—
509291 2006 VK_{59}	16.4	X	347.88033	285.20839	69.15991	10.85612	0.1057606	0.18939534	3.0030082	21	9 27.1	20.2
509292 2006 VO_{59}	18.5	X	114.07924	247.85615	231.88338	21.49737	0.1215854	0.36759831	1.9299840	21	5 5.7	20.4
509293 2006 VJ_{68}	16.6	X	348.90278	106.71431	247.37184	8.37338	0.1032022	0.18794151	3.0184749	21	9 17.4	20.4
509294 2006 VU_{68}	16.8	X	277.30344	197.29412	243.37056	8.68551	0.2568667	0.18683770	3.0303518	21	8 28.5	21.2
509295 2006 VL_{98}	18.4	X	47.26414	313.25511	44.86052	2.02052	0.1873096	0.26953848	2.3734980	21	—	—
509296 2006 VQ_{105}	16.5	X	299.44472	152.02303	243.41024	8.07768	0.0965202	0.18711939	3.0273097	21	8 25.4	20.6
509297 2006 VY_{108}	18.5	X	87.55987	232.09804	239.91272	21.50961	0.1031491	0.36188155	1.9502566	21	2 19.7	20.9
509298 2006 VQ_{116}	18.4	X	42.28056	11.53310	27.85564	2.06868	0.1665731	0.27503452	2.3417718	21	—	—
509299 2006 VX_{117}	17.0	X	276.69956	28.66511	33.83054	1.88532	0.1107700	0.18618710	3.0374070	21	8 31.5	21.1
509300 2006 VB_{119}	17.1	X	277.26262	46.30171	31.56140	10.68830	0.0875317	0.19100386	2.9861248	21	9 27.6	21.1
509301 2006 VH_{127}	16.4	X	305.24128	96.46804	257.03812	13.29706	0.3354494	0.18598303	3.0396284	21	6 5.2	20.1
509302 2006 VQ_{138}	16.9	X	254.35340	335.78585	71.18636	6.67662	0.1424423	0.17987841	3.1080168	21	7 9.9	21.5
509303 2006 VR_{143}	18.3	X	85.12490	349.90965	26.03309	3.13606	0.1978127	0.28446816	2.2897089	21	—	—
509304 2006 VY_{148}	16.4	X	284.23990	344.01638	65.87565	17.78901	0.1495258	0.18488006	3.0517059	21	8 27.3	20.8
509305 2006 VE_{153}	17.7	X	41.25275	300.12602	60.48280	6.39243	0.2066469	0.27162207	2.3613445	21	—	—
509306 2006 VK_{155}	18.0	X	48.40121	64.98128	353.83381	5.68900	0.2248411	0.27944096	2.3170888	21	—	—
509307 2006 VX_{167}	17.1	X	248.64312	235.26835	196.00424	8.47438	0.2584414	0.18592072	3.0403076	21	7 19.2	22.1
509308 2006 VU_{173}	17.1	X	283.26769	8.96233	69.75539	10.06699	0.0600406	0.18989594	2.9977283	21	10 11.9	21.3
509309 2006 WJ_{1}	16.1	X	236.05853	325.01465	136.95900	30.68216	0.3299140	0.17353688	3.1832801	21	8 9.9	21.6
509310 2006 WD_{7}	17.3	X	250.72615	280.21362	128.42215	4.02156	0.1729647	0.17999986	3.1066187	21	7 3.9	22.1
509311 2006 WK_{14}	18.4	X	27.65496	299.94905	107.89648	3.24078	0.2132164	0.27234044	2.3571902	21	—	—
509312 2006 WP_{18}	17.0	X	214.64756	138.62186	347.46764	4.47838	0.1406368	0.18667700	3.0320906	21	9 4.8	21.6
509313 2006 WP_{22}	17.5	X	40.00028	302.58319	76.82850	12.08246	0.2718091	0.27169779	2.3609057	21	—	—
509314 2006 WG_{29}	16.5	X	198.13890	42.60660	62.45163	16.56793	0.1739441	0.17641614	3.1485494	21	7 26.1	21.9
509315 2006 WO_{34}	17.1	X	296.74993	336.37079	76.64487	11.57208	0.2109422	0.18854686	3.0120107	21	9 7.4	21.0
509316 2006 WL_{44}	18.6	X	31.91954	275.60253	139.98065	4.00143	0.1691702	0.27479513	2.3431317	21	—	—
509317 2006 WO_{58}	17.6	X	294.36241	47.44919	5.15976	3.21473	0.2147694	0.18782842	3.0196864	21	8 27.9	21.3
509318 2006 WZ_{76}	16.6	X	194.29915	251.14361	240.62325	7.81433	0.1500525	0.18028258	3.1033699	21	8 18.8	21.8
509319 2006 WG_{97}	18.6	X	13.26646	157.09113	244.52644	3.84459	0.2333907	0.26975655	2.3722186	21	—	—
509320 2006 WM_{97}	18.8	X	26.69248	144.69650	254.91495	0.67087	0.1853131	0.27170393	2.3608702	21	—	—
509321 2006 WV_{104}	16.5	X	83.44051	319.71296	240.23932	8.36918	0.0229755	0.17412563	3.1761006	21	7 7.7	21.0
509322 2006 WM_{106}	19.0	X	38.01728	222.55552	208.37819	1.22422	0.1585563	0.27759213	2.3273656	21	—	—
509323 2006 WA_{112}	18.0	X	50.45560	270.51280	133.61267	2.92600	0.1942585	0.27532909	2.3401013	21	—	—
509324 2006 WL_{133}	16.6	X	241.31273	201.22462	243.67380	10.49938	0.1276783	0.18506659	3.0496550	21	8 9.2	21.4
509325 2006 WR_{137}	17.7	X	355.48733	63.76761	82.45168	3.46193	0.1459293	0.28130148	2.3068607	21	—	—
509326 2006 WL_{138}	18.7	X	354.24883	22.45734	33.28547	3.21931	0.2262541	0.26799009	2.3826316	21	—	—
509327 2006 WO_{162}	16.8	X	271.12768	351.10277	76.20901	7.06395	0.1742746	0.18529584	3.0471390	21	8 23.1	21.2
509328 2006 WX_{167}	17.0	X	313.58462	299.44346	69.77123	7.17124	0.1686421	0.18554779	3.0443800	21	8 9.3	20.7
509329 2006 WP_{180}	17.1	X	224.32518	270.46022	216.79514	2.39648	0.1079881	0.18598715	3.0395836	21	9 18.1	21.7
509330 2006 WR_{187}	18.1	X	135.20116	222.70742	238.06434	18.19211	0.0951642	0.36817083	1.9279827	21	5 1.5	20.2
509331 2006 WC_{192}	18.8	X	23.82833	183.94372	237.63995	1.75544	0.1961963	0.27363895	2.3497272	21	—	—
509332 2006 WJ_{199}	18.8	X	312.33192	206.56271	255.33718	5.53940	0.1728767	0.26569004	2.3963626	21	—	—
509333 2006 XV	17.3	X	295.24954	301.91272	86.01085	14.06274	0.2006735	0.18382707	3.0633485	21	7 30.4	21.4
509334 2006 XJ_{12}	17.1	X	273.48398	331.05600	73.35367	8.55569	0.1715150	0.18148060	3.0896972	21	7 26.4	21.5
509335 2006 XR_{19}	16.4	X	243.21695	177.70191	269.93434	10.78199	0.1896116	0.17873152	3.1212984	21	8 8.1	21.4
509336 2006 XE_{29}	18.4	X	341.92594	13.51359	104.34033	2.96916	0.0996089	0.27372366	2.3492424	21	—	—
509337 2006 XC_{36}	17.6	X	50.40808	273.19590	135.64080	11.50358	0.2588830	0.27724048	2.3293332	21	—	—
509338 2006 XV_{41}	16.4	X	235.36625	328.10458	103.14725	10.17295	0.0582250	0.17371218	3.1811381	21	7 29.1	21.0
509339 2006 XU_{71}	15.9	X	355.34827	246.58190	98.03909	22.77674	0.1220115	0.18161725	3.0881472	21	10 2.3	20.1
509340 2006 YO_{12}	18.0	X	339.07430	341.50344	106.42841	8.48948	0.1848917	0.26489261	2.4011695	21	—	—
509341 2006 YT_{16}	16.0	X	296.37619	280.82560	124.89021	14.71522	0.2237970	0.18217399	3.0818521	21	8 20.8	19.9
509342 2006 YS_{18}	16.9	X	233.56988	303.80990	111.32013	18.75123	0.2292616	0.17298041	3.1901035	21	6 21.8	22.3
509343 2006 YC_{22}	18.2	X	68.13322	6.82475	43.17207	2.11223	0.1022857	0.27698007	2.3307930	21	—	—
509344 2006 YB_{30}	16.9	X	272.73108	311.71069	82.19771	6.03584	0.2841749	0.17825395	3.1268708	21	6 25.4	21.5
509345 2006 YF_{32}	16.1	X	148.95369	267.27221	298.66991	23.83135	0.2266534	0.17811417	3.1285066	21	9 26.8	22.0
509346 2006 YM_{32}	17.8	X	332.46577	57.29613	67.11723	4.81220	0.1753858	0.26889026	2.3773110	21	—	—
509347 2006 YE_{35}	18.0	X	13.12326	11.01959	65.55558	4.86868	0.1670541	0.26957059	2.3733095	21	—	—
509348 2006 YH_{45}	16.7	X	353.49089	151.64253	191.05756	1.81321	0.1118747	0.18575906	3.0420713	21	9 13.6	20.1
509349 2006 YK_{45}	16.6	X	32.43235	247.07380	89.61122	10.68560	0.0507636	0.19101858	2.9859713	21	11 3.0	20.7
509350 2006 YG_{51}	16.6	X	249.05381	91.63545	297.13542	24.61076	0.3227972	0.17361342	3.1823444	21	5 23.9	22.5
509351 2006 YV_{54}	17.0	X	229.45615	16.47684	123.85916	12.48722	0.2134568	0.18380885	3.0635509	21	10 4.3	22.0
509352 2007 AG	20.1	X	59.11940	5.70280	283.22914	11.94583	0.3740908	1.61114777	0.7206302	21	—	—
509353 2007 AT_{2}	19.6	X	186.52473	215.68902	294.09723	13.63344	0.3755469	0.44710346	1.6938074	21	9 3.9	22.6
509354 2007 AU_{5}	17.0	X	260.96266	324.23233	104.01324	9.18244	0.3334605	0.18067792	3.0988413	21	7 20.9	22.0
509355 2007 AY_{6}	18.0	X	13.37486	329.10681	88.12525	3.75247	0.2021495	0.26663386	2.3907042	21	—	—
509356 2007 AR_{10}	18.3	X	43.77841	151.05683	259.40172	3.03308	0.1738962	0.27177283	2.3604711	21	—	—
509357 2007 AZ_{19}	16.6	X	179.76846	56.00838	101.84405	11.02542	0.1644011	0.17578239	3.1561125	21	9 13.5	21.9
509358 2007 AO_{23}	18.1	X	326.21877	260.02592	263.35885	3.10832	0.2334033	0.27115098	2.3640787	21	—	—
509359 2007 AR_{29}	18.3	X	236.89139	344.80908	196.17653	0.63680	0.1771008	0.25710039	2.4494442	21	12 10.6	21.6
509360 2007 AZ_{30}	16.8	X	301.82457	274.86596	124.03834	11.98155	0.1081025	0.18065113	3.0991476	21	9 7.8	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509361 2007 AR_{31}	16.7	X	267.64376	282.18126	120.02026	17.42695	0.2777152	0.17780914	3.1320835	21	7 1.8	21.6
509362 2007 BZ_{4}	16.9	X	284.51275	109.08811	306.56222	15.65630	0.3522405	0.18311161	3.0713227	21	7 26.9	21.1
509363 2007 BJ_{7}	17.4	X	290.85584	179.76085	7.93015	2.56772	0.1418707	0.26597560	2.3946471	21	—	—
509364 2007 BS_{11}	18.1	X	289.43172	142.04334	351.29372	5.55307	0.1524881	0.26029964	2.4293328	21	—	—
509365 2007 BO_{12}	18.2	X	331.37366	44.91587	76.42289	2.44459	0.1205151	0.26662108	2.3907806	21	—	—
509366 2007 BV_{18}	17.9	X	7.01349	33.70089	92.62748	5.56333	0.1849780	0.27519675	2.3408514	21	—	—
509367 2007 BU_{20}	18.0	X	207.50704	80.64439	318.75451	17.72577	0.1102832	0.36621379	1.9348453	21	4 23.4	21.0
509368 2007 BY_{22}	18.0	X	75.78359	261.07827	119.65371	2.94484	0.2099844	0.27239908	2.3568519	21	—	—
509369 2007 BD_{37}	16.2	X	163.61408	281.18806	303.39954	10.64735	0.1582483	0.18413208	3.0599647	21	11 9.5	21.5
509370 2007 BM_{42}	16.9	X	244.35014	175.36125	302.03300	11.27785	0.2651025	0.18234388	3.0799376	21	9 5.7	21.9
509371 2007 BX_{45}	18.0	X	311.02421	180.80733	2.12985	1.47887	0.1226244	0.27128160	2.3633198	21	—	—
509372 2007 BB_{67}	18.3	X	327.31830	158.01249	311.55541	0.58896	0.1647196	0.26236531	2.4165648	21	—	—
509373 2007 BE_{69}	17.2	X	298.34454	31.25432	141.52693	9.23601	0.1940427	0.26526287	2.3989346	21	—	—
509374 2007 BX_{69}	15.9	X	168.94645	226.29080	331.52434	15.87241	0.1766831	0.17625268	3.1504957	21	10 9.1	21.4
509375 2007 BN_{71}	16.8	X	221.64554	280.04463	274.05918	2.17627	0.2229491	0.18526577	3.0474688	21	11 23.1	21.5
509376 2007 BA_{73}	18.0	X	40.64667	222.36057	313.73626	17.60497	0.0583128	0.35699151	1.9680258	21	3 8.7	19.9
509377 2007 BW_{75}	18.3	X	328.35352	241.97889	234.73719	0.52998	0.1325470	0.26411400	2.4058863	21	—	—
509378 2007 BC_{78}	17.9	X	284.09350	234.96120	336.02041	1.95119	0.1617286	0.26878088	2.3779560	21	—	—
509379 2007 BF_{79}	18.2	X	317.43936	224.89849	297.14654	1.59670	0.1365559	0.26845983	2.3798514	21	—	—
509380 2007 BR_{85}	16.8	X	128.67252	180.76933	48.64620	1.18993	0.1354354	0.17836562	3.1255656	21	10 17.7	21.7
509381 2007 BY_{99}	16.6	X	230.55558	41.06445	114.12550	17.60160	0.0666674	0.18610245	3.0383280	21	11 10.8	21.3
509382 2007 CO_{1}	16.7	X	187.59273	200.46562	323.10450	9.48513	0.1655783	0.17657031	3.1467164	21	9 19.2	22.0
509383 2007 CH_{9}	17.7	X	272.77107	255.15880	320.06789	1.90653	0.1739460	0.26775020	2.3840545	21	—	—
509384 2007 CL_{9}	17.2	X	216.51774	165.58237	299.63352	7.89753	0.2092045	0.17433726	3.1735298	21	8 5.8	22.4
509385 2007 CM_{11}	15.9	X	169.24041	250.07449	317.38679	22.25834	0.2511936	0.17801378	3.1296826	21	10 15.2	21.8
509386 2007 CP_{16}	16.9	X	207.94472	154.41053	306.58492	7.24413	0.1538531	0.17307138	3.1889855	21	7 28.2	21.9
509387 2007 CT_{23}	17.6	X	164.59203	282.71437	152.53897	23.16734	0.1128666	0.36334709	1.9450089	21	5 12.9	20.7
509388 2007 CD_{25}	15.8	X	209.69138	321.08135	137.12858	20.30003	0.1105366	0.16987297	3.2288896	21	7 28.5	20.8
509389 2007 CR_{35}	15.8	X	160.74469	265.82490	318.37623	14.45323	0.1505641	0.18150553	3.0894142	21	11 4.0	21.1
509390 2007 CT_{38}	18.2	X	341.05327	198.13419	279.01252	1.30367	0.1673184	0.26757957	2.3850679	21	—	—
509391 2007 CH_{39}	18.3	X	282.99972	8.55866	187.47208	1.08992	0.1290143	0.26778778	2.3838314	21	—	—
509392 2007 CA_{43}	16.2	X	226.70287	159.21339	320.31502	17.26279	0.1776771	0.17661541	3.1461806	21	8 31.5	21.3
509393 2007 CP_{53}	16.0	X	259.74775	106.54706	341.49687	15.84156	0.2372532	0.17851905	3.1237744	21	8 25.7	20.6
509394 2007 CV_{65}	18.1	X	324.43176	109.70124	45.03087	6.33866	0.2787580	0.26794784	2.3828821	21	—	—
509395 2007 DH_{16}	17.7	X	243.38564	153.68477	81.21694	3.67415	0.1798941	0.26399374	2.4066169	21	—	—
509396 2007 DH_{17}	16.5	X	148.05865	87.27362	129.51038	11.37601	0.1075650	0.17694332	3.1422924	21	10 24.3	21.6
509397 2007 DX_{17}	16.2	X	102.14797	123.90572	154.73265	9.58079	0.0606816	0.17904539	3.1176495	21	11 14.7	20.9
509398 2007 DX_{20}	18.5	X	278.29686	154.58353	28.18605	1.67465	0.1393240	0.26238870	2.4164212	21	—	—
509399 2007 DW_{25}	16.0	X	246.14080	311.86708	155.38819	19.02829	0.1674940	0.17660852	3.1462625	21	9 11.7	20.8
509400 2007 DG_{34}	17.7	X	277.98384	190.93022	4.44122	2.42235	0.1449320	0.26308740	2.4121409	21	—	—
509401 2007 DX_{38}	17.9	X	317.03613	39.45953	113.62361	2.10285	0.1340440	0.26363887	2.4087760	21	—	—
509402 2007 DB_{51}	16.4	X	161.35716	70.44720	150.87723	16.47652	0.1576197	0.17674194	3.1446789	21	11 10.9	21.8
509403 2007 DN_{55}	17.8	X	341.35039	323.71768	124.20164	4.53529	0.1732067	0.26043352	2.4285001	21	—	—
509404 2007 DB_{59}	16.0	X	162.23561	230.73119	329.95092	15.30599	0.1716765	0.17583223	3.1555161	21	10 7.2	21.5
509405 2007 DG_{74}	17.7	X	14.96774	316.18462	159.15394	6.62966	0.0623569	0.26958088	2.3732491	21	—	—
509406 2007 DG_{79}	18.1	X	352.43170	92.94615	348.44955	9.42889	0.1867993	0.26268500	2.4146037	21	—	—
509407 2007 DL_{81}	17.7	X	1.89353	286.48563	169.84427	5.02779	0.0724177	0.26464150	2.4026882	21	—	—
509408 2007 DU_{82}	15.9	X	202.88279	197.33517	0.87634	21.03983	0.2080097	0.17977190	3.1092442	21	11 4.5	21.3
509409 2007 DY_{94}	13.0	X	195.79763	264.22585	157.11663	28.18393	0.0181744	0.08569858	5.0951106	21	6 9.0	20.2
509410 2007 DS_{104}	16.4	X	217.32142	357.81478	124.72852	6.06791	0.1009557	0.17467771	3.1694049	21	9 7.2	21.2
509411 2007 DF_{115}	16.6	X	124.42295	65.90111	171.36277	7.53320	0.1329043	0.17192712	3.2031193	21	10 23.7	21.6
509412 2007 DC_{116}	17.8	X	321.40711	46.62794	106.58949	3.35789	0.1357061	0.26540073	2.3981038	21	—	—
509413 2007 EO_{2}	17.5	X	259.91277	234.83658	336.16841	1.81112	0.1586725	0.26245465	2.4160164	21	—	—
509414 2007 EF_{13}	18.0	X	278.82865	44.55494	151.24514	2.88728	0.1336011	0.26652964	2.3913274	21	—	—
509415 2007 EE_{28}	17.8	X	281.79884	349.79419	204.74213	2.27706	0.1401956	0.26440117	2.4041439	21	—	—
509416 2007 ED_{31}	16.3	X	172.26471	269.61004	330.28662	13.04599	0.2148769	0.18219193	3.0816498	21	12 3.9	21.8
509417 2007 EG_{35}	17.6	X	266.00968	89.13054	120.16239	5.25162	0.1670800	0.26165221	2.4209535	21	—	—
509418 2007 EN_{44}	16.7	X	178.68342	29.91712	130.75890	1.92121	0.1171535	0.17355978	3.1830001	21	9 12.6	21.8
509419 2007 EY_{46}	18.2	X	292.19743	357.61930	168.59813	1.54419	0.1272335	0.26018076	2.4300727	21	—	—
509420 2007 EQ_{47}	18.2	X	9.42852	102.68978	8.95103	3.88686	0.1558208	0.26710390	2.3878987	21	—	—
509421 2007 ES_{48}	17.5	X	265.57017	191.35066	34.50898	6.28265	0.1767071	0.26188669	2.4195082	21	—	—
509422 2007 EM_{50}	16.9	X	237.83806	266.15191	196.86784	2.94885	0.0603484	0.17095981	3.2151904	21	9 7.8	21.5
509423 2007 ED_{51}	18.3	X	280.51272	4.00878	189.94483	0.83623	0.1341736	0.26134891	2.4228261	21	—	—
509424 2007 EV_{56}	17.7	X	240.53642	180.54649	163.11528	23.23636	0.0594711	0.35711418	1.9675751	21	3 29.6	20.1
509425 2007 EQ_{67}	18.2	X	264.32123	80.80041	140.74096	2.16793	0.1306299	0.26363340	2.4088093	21	—	—
509426 2007 EB_{70}	17.9	X	256.35811	106.52013	123.67955	3.26957	0.1382026	0.26269574	2.4145379	21	—	—
509427 2007 EP_{91}	18.3	X	302.82817	29.32990	122.31347	2.96116	0.1420397	0.26368839	2.4084745	21	—	—
509428 2007 ES_{93}	18.8	X	340.22696	257.86760	209.55906	0.94924	0.1387565	0.26189927	2.4194307	21	—	—
509429 2007 EE_{99}	17.7	X	294.79754	144.59677	37.84738	3.15678	0.1232347	0.26394982	2.4068839	21	—	—
509430 2007 EB_{104}	18.1	X	239.84562	209.00810	26.50462	1.57843	0.1425096	0.26149695	2.4219117	21	—	—
509431 2007 EQ_{112}	17.9	X	274.41791	166.67209	22.70047	2.67327	0.1302671	0.25845888	2.4408537	21	—	—
509432 2007 ET_{127}	18.2	X	119.88163	252.39418	170.64479	2.50919	0.1898926	0.28193470	2.3034053	21	3 12.9	21.1
509433 2007 EV_{150}	18.1	X	260.89012	152.50993	33.62925	4.70185	0.1398329	0.25821402	2.4423965	21	—	—
509434 2007 EM_{151}	16.1	X	140.66004	51.18609	166.18057	23.86859	0.1108000	0.17168897	3.2060807	21	10 16.3	21.3
509435 2007 EB_{152}	16.8	X	170.04384	106.44628	111.17173	3.87132	0.2258742	0.17597080	3.1538593	21	11 9.3	22.3
509436 2007 EO_{152}	16.6	X	231.83232	315.87577	151.05407	10.18936	0.1175772	0.17104796	3.2140857	21	8 31.4	21.5
509437 2007 EG_{167}	18.0	X	279.19405	152.06066	30.29719	3.06127	0.1346734	0.26352436	2.4094738	21	—	—
509438 2007 ER_{193}	17.1	X	328.43666	206.66659	338.66000	23.91495	0.2201071	0.27007187	2.3703718	21	—	—
509439 2007 EO_{196}	18.0	X	296.62869	155.08686	13.33567	2.35180	0.1640898	0.26018830	2.4300258	21	—	—
509440 2007 EC_{198}	18.0	X	344.32962	186.67234	319.69389	1.91253	0.1436010	0.26602306	2.3943622	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509441 2007 EQ_{219}	17.7	X	258.74244	56.96103	154.18341	2.63654	0.1591850	0.26058700	2.4275465	21	—	—
509442 2007 EW_{225}	17.9	X	272.07201	0.98800	187.40894	2.10715	0.1449175	0.25931685	2.4354669	21	—	—
509443 2007 FO_{24}	16.6	X	183.78951	167.77216	346.34742	6.46678	0.2314699	0.17284262	3.1917987	21	9 6.4	22.0
509444 2007 GJ_{17}	16.5	X	203.89160	321.48983	224.22129	13.57657	0.2248855	0.17473025	3.1687696	21	10 27.9	21.8
509445 2007 GJ_{48}	17.9	X	268.49088	104.37691	89.14605	3.21349	0.1607914	0.25563577	2.4587911	21	—	—
509446 2007 GC_{54}	17.8	X	278.32886	110.88046	118.06018	4.68071	0.1688279	0.26422376	2.4052200	21	—	—
509447 2007 GE_{74}	17.4	X	239.68171	139.56744	74.90555	11.09274	0.2240351	0.25668392	2.4520930	21	—	—
509448 2007 GH_{76}	17.9	X	275.87161	157.96315	44.89868	5.54012	0.1410020	0.26044347	2.4284382	21	—	—
509449 2007 HE_{6}	17.7	X	269.00944	155.07330	56.28784	2.91411	0.1738438	0.26057764	2.4276046	21	—	—
509450 2007 HB_{14}	17.8	X	269.12825	128.04778	62.67400	2.58819	0.1354350	0.25764077	2.4460180	21	—	—
509451 2007 HT_{31}	18.0	X	277.32462	220.39749	311.41476	1.68369	0.1439408	0.25519564	2.4616174	21	—	—
509452 2007 HF_{42}	18.2	X	311.55968	12.27769	139.32199	2.24233	0.1342595	0.26018509	2.4300457	21	—	—
509453 2007 HD_{73}	17.3	X	271.69837	133.68534	48.04814	12.78404	0.1228073	0.25469283	2.4648561	21	—	—
509454 2007 HF_{87}	17.6	X	223.69267	119.49853	109.64997	3.21964	0.1488100	0.25173217	2.4841448	21	—	—
509455 2007 JC_{7}	17.9	X	232.89468	193.82718	47.90266	3.61706	0.1759923	0.25567039	2.4585691	21	—	—
509456 2007 LF	20.5	X	177.72296	333.75137	239.43655	6.98674	0.4198998	0.45172708	1.6822297	21	11 25.6	22.9
509457 2007 LE_{5}	16.4	X	333.72771	262.08351	96.37097	22.93855	0.0733876	0.22758143	2.6569181	21	9 19.8	20.1
509458 2007 LG_{23}	16.9	X	169.33784	185.29410	145.22005	11.36318	0.1524224	0.25524970	2.4612698	21	1 7.3	20.6
509459 2007 LF_{33}	14.9	X	299.75181	63.23912	279.06349	21.02863	0.0826745	0.13629935	3.7394425	21	6 23.9	20.1
509460 2007 RD_{43}	17.3	X	194.12807	279.80929	321.89113	7.05599	0.1011004	0.23133917	2.6280680	21	—	—
509461 2007 RB_{103}	17.0	X	19.87561	166.86110	191.36870	12.60481	0.2545259	0.21707052	2.7420087	21	12 13.6	20.4
509462 2007 RS_{108}	17.3	X	310.40318	73.64312	349.40994	4.04152	0.2018024	0.21249585	2.7812226	21	10 13.4	20.0
509463 2007 RP_{113}	18.4	X	51.67815	162.08050	210.72245	4.21193	0.2024557	0.29763025	2.2216962	21	—	—
509464 2007 RE_{128}	17.0	X	58.24208	320.13180	16.23798	9.25607	0.0902174	0.22056210	2.7129937	21	12 11.0	20.9
509465 2007 RX_{149}	18.0	X	63.04982	93.98342	280.65722	5.13960	0.1560879	0.30045132	2.2077674	21	—	—
509466 2007 RC_{165}	17.6	X	53.49017	153.17270	206.04449	4.23346	0.0600188	0.22644438	2.6658049	21	12 31.6	21.3
509467 2007 RS_{167}	17.3	X	18.67841	355.24803	10.12402	6.67600	0.0851774	0.22021891	2.7158116	21	11 24.6	20.7
509468 2007 RS_{176}	17.0	X	0.50185	357.67251	350.12053	3.13639	0.1072580	0.21243466	2.7817566	21	10 5.6	20.1
509469 2007 RJ_{182}	17.3	X	328.23411	59.73274	352.63874	8.68290	0.1973208	0.21732656	2.7398546	21	11 4.5	19.9
509470 2007 RE_{253}	18.1	X	82.76907	0.04921	35.16594	3.26084	0.2042083	0.30355453	2.1926951	21	—	—
509471 2007 RC_{264}	18.0	X	307.11134	121.78803	306.03640	2.98747	0.1896163	0.21460113	2.7630031	21	10 15.3	20.8
509472 2007 RP_{277}	14.8	X	255.48923	276.44005	101.18849	13.51487	0.2092109	0.12520317	3.9572410	21	5 31.7	20.9
509473 2007 RM_{286}	16.8	X	318.48201	20.61742	5.81733	8.12289	0.2315031	0.21016616	2.8017380	21	9 5.8	19.4
509474 2007 RS_{295}	17.4	X	334.82045	24.74985	27.45696	7.06328	0.0852382	0.21717810	2.7411031	21	11 19.1	20.7
509475 2007 RT_{320}	16.6	X	127.41839	246.73422	31.10014	12.42609	0.1862879	0.22328360	2.6909037	21	12 18.1	21.3
509476 2007 SY_{6}	16.7	X	63.04687	0.72849	23.18534	13.39748	0.1949333	0.22841511	2.6504492	21	—	—
509477 2007 SN_{7}	17.1	X	300.61418	1.14248	28.85420	6.68643	0.1227309	0.20510655	2.8476265	21	8 25.0	20.6
509478 2007 SM_{22}	17.1	X	62.34457	40.61620	303.06702	6.29327	0.1763611	0.22293694	2.6936926	21	—	—
509479 2007 TJ_{66}	16.5	X	13.00928	92.35654	288.04115	11.56146	0.1420187	0.22036526	2.7146091	21	12 15.5	19.7
509480 2007 TQ_{82}	17.4	X	342.74328	28.51026	1.26671	7.96004	0.2180947	0.21406553	2.7676100	21	11 4.5	19.9
509481 2007 TA_{87}	18.7	X	87.35707	232.07123	175.52452	3.80854	0.1442958	0.30685944	2.1769230	21	—	—
509482 2007 TB_{133}	17.3	X	357.21076	348.52454	47.46473	5.24573	0.1221896	0.21484685	2.7608961	21	12 6.3	20.4
509483 2007 TE_{145}	17.6	X	119.46061	113.40620	206.26815	12.07617	0.2759695	0.23175340	2.6249355	21	—	—
509484 2007 TN_{146}	18.1	X	96.65013	135.74009	237.23881	1.27290	0.2191922	0.30425144	2.1893454	21	—	—
509485 2007 TW_{196}	17.0	X	73.66631	337.39996	327.68882	5.45523	0.1285503	0.22159138	2.7045861	21	11 25.3	20.9
509486 2007 TS_{246}	17.3	X	292.58681	6.19826	80.47638	3.28203	0.2490392	0.20898844	2.8122539	21	10 8.1	20.4
509487 2007 TV_{246}	16.2	X	284.76253	96.82013	301.20888	11.63070	0.2010818	0.20062964	2.8898323	21	7 27.0	19.9
509488 2007 TD_{256}	16.9	X	36.12829	321.25785	42.65042	7.36054	0.1411223	0.21878031	2.7277039	21	12 26.1	20.5
509489 2007 TP_{267}	17.6	X	284.70890	61.88843	29.32999	13.00872	0.2089480	0.20907606	2.8114682	21	10 8.7	21.0
509490 2007 TU_{326}	16.0	X	91.41870	273.98827	8.55073	8.90380	0.1376554	0.21454425	2.7634915	21	11 15.5	20.2
509491 2007 TR_{333}	17.3	X	342.86360	347.81801	32.52844	5.72104	0.1804175	0.20907879	2.8114437	21	10 22.4	20.1
509492 2007 TX_{367}	16.7	X	10.07225	313.80746	57.13096	5.24695	0.0810120	0.21102022	2.7941733	21	11 18.6	20.2
509493 2007 TJ_{389}	16.7	X	117.58073	274.07429	45.43973	7.14802	0.1395850	0.22925612	2.6439633	21	—	—
509494 2007 TA_{397}	16.5	X	281.61821	342.29785	75.73058	9.67508	0.2974804	0.20364768	2.8612100	21	8 6.5	20.5
509495 2007 TV_{422}	19.1	X	60.86396	253.65522	169.00061	1.65112	0.1577112	0.30276434	2.1965086	21	—	—
509496 2007 TH_{426}	17.1	X	35.25182	353.07659	27.84132	16.80238	0.0523948	0.22257316	2.6966268	21	—	—
509497 2007 TJ_{433}	17.6	X	300.48307	316.07664	161.31277	2.59640	0.0547514	0.22040614	2.7142734	21	12 25.5	20.9
509498 2007 TV_{440}	18.0	X	78.05463	44.05669	322.40661	6.40446	0.1770654	0.30002980	2.2098347	21	—	—
509499 2007 UT_{21}	17.1	X	129.06519	64.12275	210.39655	9.07108	0.1232486	0.21893059	2.7264555	21	12 14.6	21.4
509500 2007 UH_{23}	18.5	X	80.59472	344.95806	96.92362	2.12213	0.1464242	0.31052904	2.1597388	21	1 21.4	20.0
509501 2007 UB_{50}	17.0	X	3.15882	162.89247	210.13941	9.57133	0.1357609	0.21019572	2.8014754	21	11 17.2	20.2
509502 2007 UK_{106}	17.0	X	39.41898	300.21961	24.65217	4.26469	0.1031307	0.20972776	2.8056410	21	11 2.9	20.5
509503 2007 UO_{116}	16.9	X	9.85352	319.65152	65.80044	5.12234	0.0744921	0.21520954	2.7577933	21	12 7.0	20.3
509504 2007 UX_{134}	17.2	X	35.36918	305.60177	41.76671	4.72527	0.0794016	0.21303745	2.7765069	21	11 23.5	20.7
509505 2007 VL_{8}	21.2	X	151.04814	194.71018	62.34429	9.34181	0.3593469	1.08858371	0.9358972	21	—	—
509506 2007 VY_{11}	18.2	X	118.23669	234.11903	135.67586	6.83847	0.1945928	0.30668498	2.1777484	21	—	—
509507 2007 VQ_{32}	17.3	X	21.28532	358.23061	346.46362	3.91528	0.0802006	0.21085445	2.7956376	21	10 30.2	20.9
509508 2007 VQ_{48}	17.3	X	326.19699	120.33675	292.51281	5.11732	0.0390291	0.21001940	2.8030431	21	11 5.4	21.0
509509 2007 VL_{65}	18.4	X	97.04944	138.22043	250.16304	5.17097	0.1636428	0.30285081	2.1960904	21	—	—
509510 2007 VP_{122}	18.5	X	110.58672	124.11567	255.11680	3.87496	0.2111794	0.30665739	2.1778791	21	—	—
509511 2007 VA_{143}	17.1	X	338.31870	271.19074	99.35547	2.90211	0.2361511	0.20583988	2.8408591	21	9 28.0	19.4
509512 2007 VK_{156}	16.6	X	192.36726	316.40731	254.32705	8.28180	0.0930208	0.21367383	2.7709913	21	11 30.2	20.8
509513 2007 VW_{162}	16.9	X	293.40024	77.62661	358.73014	1.63995	0.0343783	0.20638108	2.8358905	21	10 22.8	20.8
509514 2007 VG_{202}	17.5	X	301.52959	248.22502	122.14517	8.38243	0.3487354	0.20104351	2.8858650	21	6 20.2	21.2
509515 2007 VN_{289}	16.7	X	354.42861	270.53518	87.01576	10.04672	0.1617963	0.20548882	2.8440938	21	10 17.1	19.9
509516 2007 VD_{307}	18.2	X	56.97283	196.24273	240.65839	6.40544	0.1423022	0.30228762	2.1988173	21	—	—
509517 2007 VH_{313}	18.8	X	35.41773	168.38125	266.80681	7.35331	0.1439956	0.29807870	2.2194673	21	—	—
509518 2007 VT_{328}	18.4	X	71.16399	128.70801	282.09413	5.39200	0.1354847	0.30286956	2.1959998	21	—	—
509519 2007 VT_{330}	18.4	X	353.91661	48.24276	69.48241	6.66598	0.0593315	0.29812583	2.2192334	21	—	—
509520 2007 WB	18.9	X	163.01770	203.75112	83.06284	13.73389	0.7096280	0.45709209	1.6690407	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509521 2007 WX_{15}	17.3	X	138.86059	44.66736	205.36843	3.85121	0.0139732	0.20966163	2.8062310	21	11 21.2	21.3
509522 2007 WA_{41}	17.3	X	2.47613	187.79659	183.13509	4.40714	0.0889368	0.21020553	2.8013882	21	11 8.9	20.7
509523 2007 XP_{3}	19.3	X	32.70396	214.22261	94.77899	13.15564	0.8872224	0.29309221	2.2445702	21	—	—
509524 2007 XU_{6}	16.2	X	10.77338	304.41603	85.74088	14.07944	0.2053495	0.21375516	2.7702884	21	12 31.9	19.5
509525 2007 XJ_{19}	17.6	X	146.73042	55.50917	258.55581	21.42586	0.1164669	0.37240485	1.9133415	21	—	—
509526 2007 XW_{42}	18.3	X	110.44355	82.06935	277.32593	5.17392	0.1963910	0.30079673	2.2060769	21	—	—
509527 2007 XW_{58}	16.5	X	16.55293	202.66750	113.49124	12.63429	0.0931794	0.18947242	3.0021937	21	9 20.9	20.4
509528 2007 XJ_{60}	16.4	X	35.34101	59.22003	294.43390	7.58680	0.1597396	0.20697322	2.8304791	21	12 12.3	20.1
509529 2007 YG_{1}	18.3	X	259.53098	48.41439	301.96874	13.92422	0.2659415	0.39964111	1.8253912	21	3 29.9	21.3
509530 2007 YG_{13}	16.3	X	162.74292	149.62195	321.50195	9.15509	0.1672865	0.17891497	3.1191644	21	6 30.7	21.5
509531 2007 YS_{39}	18.9	X	48.46904	28.61252	54.21969	4.83923	0.0961230	0.29822212	2.2187557	21	—	—
509532 2007 YK_{59}	18.1	X	347.79155	22.98351	111.55177	10.01786	0.2038056	0.29339625	2.2430193	21	—	—
509533 2007 YG_{70}	17.0	X	158.90051	61.34819	106.87719	6.69246	0.0862080	0.18574338	3.0422424	21	9 4.7	21.7
509534 2007 YK_{72}	18.1	X	356.93922	58.21498	78.47187	6.68965	0.1359793	0.29372716	2.2413343	21	—	—
509535 2007 YY_{72}	16.6	X	188.18680	346.62766	110.27154	18.70602	0.1974042	0.17942602	3.1132387	21	7 4.7	22.0
509536 2007 YL_{75}	17.1	X	330.20858	33.21026	10.77844	1.97144	0.0271137	0.20122741	2.8841065	21	10 30.7	21.0
509537 2008 AN	18.2	X	10.47305	22.41178	89.59894	6.67290	0.1458180	0.29347039	2.2426415	21	—	—
509538 2008 AN_{7}	16.4	X	202.92519	271.80421	298.96604	13.57116	0.1020239	0.20394396	2.8584382	21	12 8.9	20.9
509539 2008 AO_{10}	18.8	X	56.37685	135.71095	281.95990	5.20178	0.1560203	0.29446212	2.2376033	21	—	—
509540 2008 AW_{11}	17.1	X	293.19274	289.99133	127.73126	13.45776	0.2199823	0.19680327	2.9271693	21	9 3.9	20.7
509541 2008 AF_{35}	16.8	X	163.33308	43.18139	123.49172	1.02927	0.0873980	0.18699086	3.0286968	21	9 5.4	21.3
509542 2008 AG_{61}	16.9	X	241.04772	348.41338	130.58365	12.03118	0.0767890	0.19478447	2.9473598	21	10 7.1	21.3
509543 2008 AD_{65}	17.0	X	189.38578	221.28272	314.37717	11.70344	0.0813078	0.19212298	2.9745174	21	10 7.7	21.7
509544 2008 AD_{89}	16.8	X	280.84383	172.04497	293.74796	14.09656	0.0976171	0.20187832	2.8779038	21	10 29.4	20.9
509545 2008 AQ_{100}	18.3	X	153.25724	133.09963	300.63235	19.33948	0.0883581	0.38757810	1.8630731	21	3 29.5	20.9
509546 2008 AT_{101}	17.4	X	274.17088	328.01281	121.19706	7.13550	0.1986385	0.19781097	2.9172196	21	9 21.6	21.4
509547 2008 AA_{107}	17.5	X	269.34019	136.73608	300.16135	5.36993	0.2131489	0.19443139	2.9509269	21	8 23.5	21.8
509548 2008 AT_{114}	17.4	X	63.80406	215.01707	292.80420	18.89083	0.0708747	0.38193805	1.8813695	21	2 25.5	19.2
509549 2008 AO_{127}	16.2	X	293.28125	89.16128	300.03394	14.10331	0.1369129	0.19138301	2.9821796	21	8 4.7	20.0
509550 2008 AG_{134}	17.2	X	208.21594	88.83352	64.17959	2.14268	0.1349061	0.19488478	2.9463484	21	10 2.9	21.9
509551 2008 BW_{11}	15.9	X	352.15941	175.52131	116.81737	11.56931	0.0557612	0.17912200	3.1167605	21	7 5.8	19.9
509552 2008 BA_{20}	16.1	X	77.28276	337.20181	291.68149	8.92284	0.0570424	0.19301091	2.9653877	21	9 28.4	20.5
509553 2008 BG_{24}	17.0	X	243.98604	249.31858	293.66076	22.42279	0.2379917	0.27664882	2.3326532	21	12 19.5	20.0
509554 2008 BS_{37}	18.0	X	17.61704	332.50884	119.06340	6.32476	0.1220870	0.29187721	2.2507949	21	—	—
509555 2008 BK_{42}	17.4	X	234.83884	70.34822	100.95275	8.08245	0.3251263	0.19842234	2.9112243	21	11 3.2	22.2
509556 2008 BS_{51}	18.6	X	351.12560	108.48347	23.48643	5.85152	0.1775704	0.29193431	2.2505014	21	—	—
509557 2008 BK_{53}	16.0	X	182.09644	311.67117	130.51710	23.10958	0.0626474	0.17664097	3.1458771	21	6 15.3	21.0
509558 2008 BT_{53}	17.0	X	223.28911	161.26361	333.83279	6.18842	0.1014959	0.18950022	3.0019001	21	9 26.5	21.5
509559 2008 BY_{53}	16.7	X	277.64286	141.80862	352.81907	14.15371	0.1038035	0.20324260	2.8650105	21	12 2.7	20.6
509560 2008 CG_{10}	16.9	X	161.34750	20.67291	159.50639	17.94225	0.2645825	0.18225969	3.0808861	21	9 22.3	22.4
509561 2008 CU_{10}	18.7	X	107.93727	142.85636	316.69282	20.14292	0.0657990	0.38403175	1.8745252	21	3 1.0	20.4
509562 2008 CW_{10}	16.6	X	214.56962	302.68010	134.37022	15.93465	0.2551306	0.18168509	3.0873784	21	6 30.4	22.1
509563 2008 CG_{21}	18.4	X	45.63158	106.56964	353.13301	7.67469	0.3658337	0.29960261	2.2119348	21	—	—
509564 2008 CT_{27}	16.9	X	251.41556	110.43664	342.16799	9.53514	0.0979834	0.18998375	2.9968044	21	9 7.8	21.1
509565 2008 CZ_{27}	17.0	X	184.44337	119.41563	2.76591	5.26004	0.1121873	0.18104746	3.0946231	21	8 3.9	21.9
509566 2008 CB_{33}	17.4	X	258.88687	23.46936	73.41957	1.79096	0.1407783	0.19167822	2.9791168	21	9 17.8	21.5
509567 2008 CJ_{41}	18.3	X	320.12462	343.88113	182.46689	4.72522	0.0919354	0.28828344	2.2694620	21	—	—
509568 2008 CM_{48}	16.6	X	172.53569	11.69269	148.14401	17.07163	0.2300638	0.18229524	3.0804855	21	9 6.2	21.9
509569 2008 CJ_{70}	21.1	X	315.12092	69.93001	145.66357	17.33736	0.1518811	0.59136459	1.4057211	21	—	—
509570 2008 CQ_{79}	17.2	X	202.22492	165.21866	348.51628	9.01081	0.1320311	0.18997669	2.9968787	21	9 25.4	21.9
509571 2008 CF_{87}	18.2	X	325.82745	25.59849	107.41918	5.40349	0.1035674	0.28390298	2.2927467	21	—	—
509572 2008 CK_{87}	16.5	X	197.12585	4.72462	123.48552	8.58839	0.0905443	0.18179348	3.0861511	21	8 24.9	21.2
509573 2008 CN_{91}	18.5	X	345.45113	317.35591	152.62943	2.81954	0.1174022	0.28491343	2.2873227	21	—	—
509574 2008 CE_{98}	17.1	X	162.19017	187.91518	46.15216	2.38236	0.1211623	0.19523873	2.9427864	21	11 24.2	21.6
509575 2008 CS_{98}	17.9	X	241.83350	262.10739	328.14706	9.71114	0.0585652	0.28577399	2.2827284	21	—	—
509576 2008 CR_{128}	18.1	X	352.68141	353.64486	148.03020	3.83435	0.0651601	0.29147677	2.2528559	21	—	—
509577 2008 CZ_{131}	18.1	X	309.21439	224.23140	340.56741	4.74423	0.1760904	0.29171176	2.2516459	21	—	—
509578 2008 CR_{191}	17.4	X	231.29328	255.97579	233.46026	1.96044	0.1221335	0.19100599	2.9861026	21	9 27.3	21.8
509579 2008 CT_{191}	18.3	X	259.79523	318.37079	271.10370	1.64995	0.0785704	0.28797549	2.2710797	21	—	—
509580 2008 CW_{191}	17.2	X	276.65998	285.77425	164.37773	7.16867	0.0966670	0.19275009	2.9680622	21	10 9.6	21.2
509581 2008 CM_{194}	18.0	X	335.96940	22.50062	134.82569	4.39744	0.1238309	0.28703393	2.2760435	21	—	—
509582 2008 CX_{197}	16.7	X	152.93382	234.58523	336.06394	4.19865	0.1715656	0.18529351	3.0471646	21	10 17.2	21.8
509583 2008 CA_{199}	16.9	X	174.39316	320.14254	247.97655	1.50464	0.0982174	0.19282627	2.9672804	21	11 5.5	21.4
509584 2008 CS_{200}	17.2	X	210.60146	298.20642	175.72593	5.89951	0.1458851	0.18197359	3.0841144	21	8 14.9	22.0
509585 2008 CE_{208}	17.2	X	207.16077	29.16586	138.21079	5.26314	0.1260398	0.19219013	2.9738244	21	10 20.9	21.8
509586 2008 CJ_{212}	17.9	X	221.05935	326.46523	351.22088	20.25232	0.0597813	0.37020479	1.9209145	21	1 28.2	20.5
509587 2008 DY_{17}	18.4	X	290.71429	13.87530	146.54298	5.51090	0.1161629	0.28129760	2.3068819	21	—	—
509588 2008 DF_{21}	18.6	X	353.77572	95.85318	34.11757	4.11807	0.0903220	0.28901516	2.2656299	21	—	—
509589 2008 DL_{22}	18.2	X	193.89254	6.96264	337.48531	18.13044	0.0732666	0.37166365	1.9158845	21	1 29.6	20.5
509590 2008 DL_{24}	18.2	X	281.56119	199.17736	14.68187	4.68073	0.1054100	0.28840241	2.2688379	21	—	—
509591 2008 DY_{24}	17.7	X	323.17240	281.43302	264.75168	7.43199	0.1413253	0.29112937	2.2546478	21	—	—
509592 2008 DF_{25}	18.0	X	263.35170	137.36227	49.26626	4.78247	0.1102606	0.28021656	2.3128112	21	—	—
509593 2008 DL_{35}	18.4	X	289.88927	333.74067	198.49816	5.41249	0.1462989	0.28077654	2.3097351	21	—	—
509594 2008 DA_{38}	17.5	X	205.23468	31.77614	179.78775	5.95026	0.4420272	0.19366678	2.9586888	21	11 18.3	23.2
509595 2008 DC_{66}	17.9	X	265.74804	271.07061	320.47302	6.01787	0.1307002	0.28378424	2.2933862	21	—	—
509596 2008 DQ_{86}	17.2	X	144.82337	275.41354	252.35079	1.93113	0.1192160	0.17848844	3.1241316	21	8 18.4	22.1
509597 2008 EZ_{8}	16.7	X	176.72984	199.78742	357.05683	7.33006	0.2519733	0.18893007	3.0079364	21	10 19.1	22.1
509598 2008 EX_{9}	16.7	X	41.19201	75.69145	158.19633	9.36001	0.0115598	0.17399455	3.1776956	21	6 26.1	21.2
509599 2008 EW_{13}	16.8	X	207.86955	99.66835	53.48457	5.19910	0.1692035	0.18831809	3.0144496	21	9 30.9	21.7
509600 2008 EO_{22}	17.7	X	249.00488	91.60157	122.63756	8.65688	0.2223545	0.28112210	2.3078419	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509601 2008 EH_{24}	16.4	X	133.79514	183.08486	48.48027	9.70197	0.1981854	0.18473167	3.0533398	21	10 29.1	21.5
509602 2008 ES_{62}	16.1	X	137.20288	200.52276	322.92951	15.74450	0.1485683	0.17533541	3.1614741	21	8 9.2	21.1
509603 2008 EU_{63}	17.4	X	248.42765	224.34434	277.30390	5.76001	0.2819812	0.19724619	2.9227856	21	10 9.9	22.0
509604 2008 EP_{67}	16.3	X	233.76084	87.40886	339.34881	11.11696	0.2683035	0.17980133	3.1089050	21	7 3.4	21.7
509605 2008 ED_{70}	17.8	X	334.35557	334.86530	163.79259	23.40965	0.1373402	0.28845271	2.2685741	21	—	—
509606 2008 ED_{76}	16.6	X	132.58716	19.62718	171.17014	16.54204	0.1130339	0.17653721	3.1471096	21	9 2.7	21.6
509607 2008 EG_{88}	16.6	X	192.05617	18.61204	176.50186	8.87533	0.1713885	0.19180966	2.9777557	21	11 5.3	21.5
509608 2008 ES_{91}	17.3	X	269.96473	88.95196	111.05896	22.21211	0.2886331	0.27876611	2.3208268	21	—	—
509609 2008 ES_{102}	18.2	X	348.23848	63.19933	53.52214	4.96564	0.1110353	0.28519528	2.2858154	21	—	—
509610 2008 EA_{136}	17.4	X	266.16941	262.21349	279.32901	6.26624	0.0465397	0.27933195	2.3176915	21	—	—
509611 2008 ET_{144}	18.7	X	298.14357	235.54175	319.77616	0.37074	0.1410086	0.28790081	2.2714724	21	—	—
509612 2008 ED_{152}	18.1	X	254.69687	27.36576	214.54733	1.70092	0.1639961	0.28336218	2.2956629	21	—	—
509613 2008 EL_{158}	18.4	X	232.68340	287.24204	268.43105	1.47648	0.1595778	0.27173654	2.3606813	21	12 30.2	21.4
509614 2008 EX_{158}	18.5	X	278.09103	208.09722	5.74510	4.18283	0.1198309	0.28389818	2.2927726	21	—	—
509615 2008 EU_{166}	17.9	X	335.18328	29.64080	133.70675	7.61344	0.1831747	0.28823999	2.2696901	21	—	—
509616 2008 FP_{6}	15.9	X	156.84452	105.93249	40.53820	10.10507	0.0222888	0.17666845	3.1455509	21	8 5.0	20.6
509617 2008 FH_{8}	17.1	X	161.90878	122.59633	76.53124	3.07587	0.1003479	0.18673539	3.0314585	21	10 14.3	21.7
509618 2008 FA_{10}	17.0	X	203.94286	196.39943	344.64431	11.74418	0.0927411	0.19353892	2.9599918	21	10 30.0	21.7
509619 2008 FG_{14}	17.0	X	184.40108	326.16048	219.75732	1.13395	0.1273974	0.18784013	3.0195609	21	10 18.2	21.8
509620 2008 FK_{20}	16.5	X	165.62313	194.71077	0.88912	19.73710	0.0157707	0.18481094	3.0524667	21	10 8.7	21.0
509621 2008 FK_{21}	18.2	X	325.82251	165.67675	14.77399	4.43192	0.1435208	0.28872105	2.2671683	21	—	—
509622 2008 FJ_{32}	16.6	X	176.18293	196.97816	348.81899	10.97560	0.1628018	0.18763441	3.0217676	21	10 6.7	21.6
509623 2008 FQ_{32}	18.2	X	151.99586	289.35577	326.69827	1.77968	0.2011419	0.26640334	2.3920832	21	12 19.3	22.2
509624 2008 FS_{37}	16.7	X	126.07140	174.41504	55.07066	6.47817	0.0845683	0.18078464	3.0976216	21	10 14.2	21.3
509625 2008 FS_{44}	16.9	X	184.93723	65.07420	146.76288	2.69585	0.1420181	0.19299408	2.9655601	21	11 18.9	21.7
509626 2008 FL_{53}	16.7	X	141.91347	151.35213	58.52851	2.20350	0.1210004	0.18035181	3.1025756	21	10 7.2	21.5
509627 2008 FC_{58}	18.2	X	276.66886	109.99803	91.38937	1.83948	0.1470284	0.28152392	2.3056454	21	—	—
509628 2008 FJ_{72}	16.6	X	59.21549	174.23925	107.78343	6.79003	0.1369849	0.17524670	3.1625410	21	10 10.1	21.0
509629 2008 FL_{73}	18.7	X	331.69227	51.05748	92.16904	4.18372	0.2651887	0.28506820	2.2864947	21	—	—
509630 2008 FQ_{76}	18.1	X	215.53880	223.90109	181.82675	22.29810	0.1109578	0.39091527	1.8524548	21	5 24.5	20.8
509631 2008 FN_{101}	17.3	X	76.62614	249.71241	119.49459	6.65165	0.1320763	0.27085058	2.3658264	21	—	—
509632 2008 FR_{118}	16.3	X	301.41698	34.67452	29.38193	14.95794	0.0981690	0.18622690	3.0369743	21	10 11.0	20.2
509633 2008 FG_{124}	16.5	X	142.19162	68.48907	148.21821	5.15354	0.1358849	0.17847943	3.1242368	21	10 16.9	21.5
509634 2008 FY_{129}	14.2	X	336.98497	260.14877	24.51513	15.42002	0.1442327	0.08408350	5.1601486	21	5 28.3	20.5
509635 2008 FZ_{131}	18.0	X	233.14734	207.80373	41.18599	6.19394	0.1338413	0.27710028	2.3301188	21	—	—
509636 2008 FL_{133}	16.6	X	212.16522	292.72145	185.63179	13.31581	0.1576685	0.18106450	3.0944290	21	8 19.6	21.7
509637 2008 FZ_{133}	16.9	X	189.01116	19.26123	166.18386	5.31126	0.1665583	0.18502844	3.0500741	21	10 21.4	21.9
509638 2008 FW_{135}	16.6	X	193.78496	167.44390	37.07856	7.28174	0.1736614	0.19272940	2.9682745	21	11 14.9	21.4
509639 2008 FQ_{137}	15.6	X	181.66889	118.51693	33.14869	22.69987	0.0372549	0.17433198	3.1735939	21	9 18.1	20.6
509640 2008 GP_{1}	17.9	X	255.78208	216.74904	6.70790	5.50444	0.1739582	0.27919138	2.3184695	21	—	—
509641 2008 GV_{10}	17.8	X	130.88136	71.42833	202.70448	6.58295	0.1015022	0.26062377	2.4273181	21	12 22.0	21.4
509642 2008 GV_{11}	18.5	X	274.19454	166.81447	53.91695	5.12428	0.2078762	0.28017322	2.3130497	21	—	—
509643 2008 GK_{24}	18.4	X	337.30768	94.20699	47.96138	5.36571	0.0794121	0.28338535	2.2955378	21	—	—
509644 2008 GS_{35}	16.3	X	137.32907	147.44807	79.50526	9.31036	0.1394959	0.17973656	3.1096518	21	10 26.3	21.3
509645 2008 GQ_{39}	16.9	X	223.63613	334.93686	164.02701	3.40895	0.0990093	0.18740591	3.0242234	21	10 4.3	21.3
509646 2008 GZ_{42}	16.9	X	202.78031	140.33434	10.03749	10.17682	0.0716365	0.18351374	3.0668344	21	9 27.7	21.4
509647 2008 GC_{46}	18.7	X	258.00291	113.27053	127.16952	4.55103	0.1754812	0.28049605	2.3112746	21	—	—
509648 2008 GQ_{49}	17.9	X	284.83422	112.69163	76.95670	3.36872	0.1462696	0.27953136	2.3165892	21	—	—
509649 2008 GT_{50}	16.8	X	194.61568	43.64458	89.78808	2.12996	0.1722871	0.17869884	3.1216789	21	8 24.4	21.8
509650 2008 GW_{54}	18.4	X	211.83290	127.37219	80.59486	2.42586	0.1476280	0.26861840	2.3789148	21	12 21.7	21.8
509651 2008 GH_{60}	17.8	X	253.85125	133.76254	65.00805	6.12042	0.1773608	0.27530388	2.3402441	21	—	—
509652 2008 GN_{60}	18.4	X	43.78802	155.53754	30.47255	21.77560	0.1079822	0.37856737	1.8925205	21	4 13.6	19.3
509653 2008 GL_{66}	16.2	X	46.74679	286.04834	51.99565	15.94024	0.0246485	0.18363043	3.0655351	21	11 14.3	20.3
509654 2008 GJ_{86}	17.4	X	118.28261	272.38593	15.67120	21.48998	0.0443934	0.26589400	2.3951370	21	12 25.3	21.2
509655 2008 GX_{86}	18.4	X	317.58581	117.44270	50.49368	8.47900	0.1291685	0.28428308	2.2907026	21	—	—
509656 2008 GL_{111}	16.2	X	140.71494	31.76589	206.28972	11.21853	0.2273702	0.18348011	3.0672092	21	11 11.2	21.6
509657 2008 GS_{121}	16.5	X	187.90193	132.45151	42.60345	12.65174	0.1581940	0.18412562	3.0600362	21	10 10.7	21.5
509658 2008 GV_{127}	16.1	X	115.52685	167.14602	93.61234	15.19990	0.1363694	0.17839379	3.1252365	21	11 15.3	21.2
509659 2008 GL_{133}	16.6	X	128.47548	99.89244	133.52483	2.08812	0.1301132	0.17811941	3.1284451	21	10 22.6	21.6
509660 2008 GY_{136}	16.6	X	117.26240	162.50140	59.03538	10.62745	0.0462018	0.17459084	3.1704561	21	9 24.5	21.4
509661 2008 GE_{138}	16.5	X	197.22819	36.87374	114.85652	11.46090	0.0617281	0.17639376	3.1488156	21	9 27.7	21.3
509662 2008 GG_{144}	16.3	X	333.16655	333.94748	21.75703	12.13658	0.0449782	0.17481883	3.1676990	21	9 4.9	20.6
509663 2008 HY_{7}	16.1	X	134.93511	129.48292	101.18398	13.25677	0.1168450	0.17964926	3.1106591	21	10 29.8	21.2
509664 2008 HW_{15}	18.7	X	74.65151	113.54417	56.73116	21.49029	0.0693160	0.37921904	1.8903518	21	5 13.5	20.0
509665 2008 HM_{19}	18.0	X	292.71553	129.24788	102.82526	9.31317	0.1833366	0.28605974	2.2812080	21	—	—
509666 2008 HN_{46}	18.5	X	238.08455	152.14124	99.92158	3.34783	0.1857439	0.27711554	2.3300333	21	—	—
509667 2008 HY_{55}	16.2	X	48.35883	177.97485	124.64360	11.58100	0.0187535	0.17335817	3.1854675	21	10 6.5	20.8
509668 2008 HJ_{60}	16.4	X	199.98225	26.06439	169.17338	12.26294	0.1048609	0.18668484	3.0320057	21	11 17.4	21.2
509669 2008 HL_{66}	18.0	X	314.70388	38.17908	137.43070	6.60484	0.1438919	0.28193082	2.3034264	21	—	—
509670 2008 HM_{66}	17.4	X	342.20770	123.07985	62.35360	23.24329	0.1728289	0.28986162	2.2612170	21	—	—
509671 2008 JC_{7}	16.3	X	187.50461	55.42134	156.82814	11.75847	0.2670936	0.18692046	3.0294572	21	11 17.2	21.8
509672 2008 JN_{11}	17.8	X	339.35789	350.91983	101.05820	3.94813	0.0797973	0.26755549	2.3852110	21	—	—
509673 2008 JC_{23}	16.4	X	115.80535	162.35895	99.39682	10.15170	0.0329318	0.18082329	3.0971802	21	11 8.3	21.0
509674 2008 JA_{28}	16.5	X	92.81119	129.71078	133.14128	12.20419	0.0458726	0.17513251	3.1639154	21	10 15.9	21.2
509675 2008 KM_{4}	16.3	X	174.27785	65.71286	113.21066	12.60769	0.2193405	0.17832925	3.1259906	21	10 3.9	21.9
509676 2008 KO_{42}	17.6	X	171.62018	276.63503	96.78382	24.01941	0.1075370	0.36259289	1.9477051	21	2 18.1	20.4
509677 2008 LK	18.4	X	104.72325	267.99894	221.69991	23.14750	0.2333340	0.37837589	1.8931589	21	5 26.7	20.5
509678 2008 LN_{10}	16.4	X	154.21234	103.20601	68.97578	25.26997	0.2264072	0.17313714	3.1881780	21	9 19.3	22.3
509679 2008 LX_{17}	17.0	X	266.28521	320.12176	300.71735	24.30520	0.2763170	0.28044395	2.3115609	21	1 4.9	21.2
509680 2008 MF_{2}	17.8	X	232.76133	129.97406	128.10245	7.57906	0.1006038	0.27616095	2.3353996	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509681 2008 OW_5	17.4	X	335.65076	88.14294	279.97802	9.97881	0.3218040	0.22936460	2.6431296	21	9 6.8	19.1
509682 2008 PO_{10}	17.2	X	56.79850	111.92364	194.19151	8.19849	0.1702768	0.23969606	2.5666232	21	11 18.2	20.7
509683 2008 PE_{21}	17.2	X	14.72492	253.95938	101.15807	9.10082	0.2085660	0.23618830	2.5919730	21	11 29.6	20.1
509684 2008 PH_{22}	16.8	X	332.63676	96.43691	282.03971	11.63918	0.2628055	0.22825293	2.6517046	21	9 18.3	19.1
509685 2008 QH_{10}	17.4	X	6.53377	220.37157	163.23612	5.75031	0.2517177	0.23630214	2.5911404	21	12 30.1	20.2
509686 2008 QT_{28}	15.6	X	140.61687	278.78303	341.83392	25.25232	0.2727473	0.17358980	3.1826331	21	11 30.6	21.7
509687 2008 QD_{44}	16.6	X	359.28417	51.52748	284.53306	11.03045	0.2836159	0.22743568	2.6580531	21	9 28.5	18.9
509688 2008 QV_{45}	17.2	X	10.76827	287.60666	83.83700	3.57436	0.2129977	0.23594812	2.5937316	21	12 14.4	19.8
509689 2008 QW_{47}	17.2	X	4.92236	187.88978	163.42015	16.38579	0.2038798	0.23107882	2.6300416	21	11 7.2	20.1
509690 2008 RV_5	16.5	X	327.94635	13.41273	2.30167	15.03435	0.3124938	0.22560512	2.6724120	21	9 6.8	18.2
509691 2008 RU_8	18.2	X	314.27752	342.90616	309.26485	2.92515	0.2351970	0.28927839	2.2642553	21	3 31.3	20.8
509692 2008 RT_{23}	17.2	X	32.43478	29.40970	324.57743	13.30633	0.2320662	0.23701760	2.5859234	21	12 27.9	20.7
509693 2008 RA_{66}	17.1	X	300.99347	19.20388	6.20351	13.28593	0.1639039	0.22254589	2.6968471	21	8 16.8	20.4
509694 2008 RE_{84}	17.0	X	3.31789	1.25602	304.29682	3.39525	0.1306633	0.22508042	2.6765636	21	8 14.2	19.6
509695 2008 RF_{98}	16.4	X	7.65452	328.83085	40.12744	34.56760	0.2462719	0.23319948	2.6140727	21	11 28.3	19.5
509696 2008 RQ_{98}	16.3	X	31.51995	263.91777	90.08269	29.32390	0.3546423	0.23538758	2.5978477	21	—	—
509697 2008 RE_{99}	14.4	X	56.47640	137.18461	197.80877	4.87769	0.0485193	0.08367040	5.1771190	21	11 10.6	21.2
509698 2008 RB_{132}	17.4	X	6.51050	227.18422	139.17679	5.28070	0.3250564	0.23332073	2.6131670	21	12 18.6	19.9
509699 2008 RL_{138}	17.5	X	21.82825	333.63581	23.05279	5.88197	0.2554540	0.23587979	2.5942325	21	12 18.5	20.6
509700 2008 RG_{142}	17.9	X	333.23890	63.75651	355.20458	4.83077	0.1499900	0.23549616	2.5970491	21	12 2.3	20.4
509701 2008 SR_4	17.4	X	14.20454	257.62109	87.69271	3.49104	0.2088427	0.23167130	2.6255557	21	11 13.2	20.0
509702 2008 SY_{22}	17.3	X	331.94317	232.77114	171.32622	12.09908	0.1592101	0.23426952	2.6061067	21	11 12.2	20.0
509703 2008 SR_{30}	17.4	X	340.85955	118.87233	265.77204	5.37874	0.1857139	0.22957950	2.6414799	21	10 27.3	19.8
509704 2008 SC_{55}	17.5	X	39.09090	5.71585	13.16051	14.70729	0.1540911	0.24079547	2.5588049	21	—	—
509705 2008 SM_{56}	16.7	X	225.69144	357.63618	192.63869	13.59171	0.1211794	0.23970029	2.5665930	21	12 13.6	20.5
509706 2008 SH_{58}	17.8	X	325.63136	214.20290	165.61204	2.57333	0.2166662	0.22391195	2.6858672	21	9 13.8	19.8
509707 2008 SX_{66}	17.0	X	1.52066	43.63914	327.70207	14.89134	0.2168490	0.23055422	2.6340297	21	11 21.8	20.0
509708 2008 SX_{67}	17.4	X	346.57578	343.97083	30.57377	7.40070	0.2719199	0.22888507	2.6468200	21	11 1.6	19.3
509709 2008 SV_{72}	16.8	X	348.59341	161.46217	212.00695	13.48948	0.1687416	0.22523547	2.6753351	21	10 27.5	19.3
509710 2008 SZ_{76}	17.8	X	29.72638	45.61669	282.27598	1.44262	0.1165944	0.23167230	2.6255481	21	10 29.8	21.0
509711 2008 SX_{91}	17.9	X	338.17307	59.34950	3.28983	4.39210	0.2604943	0.23305046	2.6151870	21	12 27.7	19.9
509712 2008 SM_{96}	18.0	X	4.04313	77.30238	319.08002	1.92312	0.1568007	0.23552274	2.5968537	21	12 28.7	20.9
509713 2008 SZ_{105}	18.0	X	345.85951	15.20204	31.76378	4.52820	0.2776251	0.23122113	2.6289624	21	12 23.9	20.0
509714 2008 SD_{108}	17.7	X	47.59085	40.09477	259.65478	1.97988	0.1666614	0.23396144	2.6083940	21	10 25.8	20.9
509715 2008 SG_{119}	17.9	X	149.04506	149.71152	200.43405	5.75555	0.1633994	0.25864937	2.4396551	21	1 10.3	21.4
509716 2008 SN_{130}	17.8	X	339.29794	119.57803	331.09177	1.86443	0.0493847	0.24002628	2.5642686	21	—	—
509717 2008 SB_{132}	17.9	X	2.77442	29.10311	7.44764	5.22328	0.2501641	0.23359693	2.6111067	21	—	—
509718 2008 SV_{141}	17.6	X	172.19454	181.11776	92.83422	2.10788	0.0917054	0.24565872	2.5249217	21	—	—
509719 2008 SR_{155}	17.3	X	13.21257	310.36904	49.57558	5.33846	0.2507668	0.23256869	2.6187973	21	12 7.5	20.0
509720 2008 SP_{157}	16.9	X	346.62005	9.15666	359.37323	13.06841	0.2958176	0.22935255	2.6432222	21	10 20.1	18.7
509721 2008 SP_{166}	17.4	X	332.23168	7.41675	29.08514	2.57968	0.2122711	0.22822356	2.6519321	21	10 27.3	19.5
509722 2008 SU_{167}	16.7	X	0.75083	307.56501	59.66025	4.74343	0.2722980	0.22981633	2.6396649	21	11 27.1	18.9
509723 2008 SX_{180}	17.9	X	305.39324	216.80026	194.21807	2.93911	0.1225142	0.22460230	2.6803607	21	9 29.8	21.0
509724 2008 SK_{187}	18.4	X	199.74816	72.04350	260.86037	2.47716	0.1420926	0.26712568	2.3877689	21	2 5.8	21.9
509725 2008 SF_{203}	18.0	X	15.85897	249.58108	130.67974	2.78643	0.1191400	0.23362644	2.6108869	21	12 19.4	21.2
509726 2008 SD_{207}	16.9	X	32.94776	302.78654	44.17533	18.64905	0.2356491	0.23316098	2.6143604	21	12 14.9	20.5
509727 2008 SX_{207}	17.1	X	286.72082	258.17948	60.22298	22.14560	0.0690476	0.35829946	1.9632334	21	4 28.8	19.3
509728 2008 SL_{211}	17.3	X	22.75804	111.55560	225.68489	5.74048	0.1278973	0.22701429	2.6613414	21	11 1.9	20.5
509729 2008 SQ_{233}	18.1	X	311.28989	326.85787	71.48683	2.87918	0.2614948	0.22448889	2.6812634	21	9 4.6	20.5
509730 2008 SX_{244}	17.5	X	314.48090	21.35359	12.76251	17.21096	0.1818437	0.22531209	2.6747286	21	9 19.9	20.3
509731 2008 SJ_{251}	17.3	X	24.29101	340.67460	25.35346	8.54375	0.2015861	0.23465761	2.6032325	21	12 25.8	20.6
509732 2008 SX_{254}	17.2	X	4.90974	33.79815	319.25111	6.49630	0.3110200	0.22987062	2.6392493	21	11 19.9	19.6
509733 2008 SD_{265}	18.0	X	327.66394	283.19394	138.49602	2.96048	0.1235239	0.23015455	2.6370782	21	11 25.5	20.7
509734 2008 SW_{268}	17.5	X	350.08992	63.01720	312.22788	12.56869	0.3058341	0.22938934	2.6429396	21	11 12.9	19.7
509735 2008 SV_{274}	17.8	X	39.37563	215.94589	149.70626	2.90246	0.1169810	0.23862300	2.5743120	21	—	—
509736 2008 SB_{284}	17.6	X	248.03465	356.79237	321.77280	7.57899	0.2715929	0.27667311	2.3325166	21	2 25.7	21.5
509737 2008 SU_{295}	17.3	X	349.70893	79.11997	345.37550	26.98818	0.2845865	0.23741882	2.5830092	21	—	—
509738 2008 SR_{301}	17.6	X	1.73152	44.62284	349.77894	7.15435	0.1968024	0.23476797	2.6024166	21	12 28.2	20.4
509739 2008 TC_{12}	17.9	X	343.64844	72.67969	330.61276	1.07970	0.2137157	0.23296600	2.6158190	21	12 5.6	20.0
509740 2008 TA_{20}	18.0	X	4.44050	9.49794	30.23707	3.18332	0.1524749	0.23399105	2.6081739	21	—	—
509741 2008 TU_{31}	17.6	X	284.90480	254.34403	195.71995	12.40603	0.2375813	0.22472955	2.6793489	21	10 1.8	20.8
509742 2008 TJ_{46}	17.8	X	342.10551	266.04668	160.15141	4.29265	0.1143512	0.23401917	2.6079650	21	12 26.9	20.7
509743 2008 TX_{53}	17.7	X	4.90573	275.49066	124.62029	2.44079	0.1506688	0.23652110	2.5895410	21	—	—
509744 2008 TR_{57}	17.1	X	27.12884	289.30525	23.91126	3.71432	0.0430487	0.22424511	2.6832063	21	9 26.6	20.4
509745 2008 TW_{60}	16.7	X	315.14003	48.34397	25.02032	22.32320	0.0392177	0.23170503	2.6253008	21	11 15.6	20.3
509746 2008 TX_{70}	17.4	X	29.49092	128.79286	190.95339	12.21745	0.2624663	0.22930982	2.6435505	21	11 12.8	20.6
509747 2008 TE_{78}	16.3	X	186.74059	250.88075	176.77422	2.90346	0.2143758	0.12516498	3.9580459	21	5 31.1	22.8
509748 2008 TZ_{82}	17.7	X	123.53796	158.91495	352.82438	20.33997	0.0863567	0.36971416	1.9226135	21	7 11.8	20.4
509749 2008 TC_{83}	17.5	X	264.13167	153.27739	327.09955	3.71345	0.1295820	0.23088937	2.6314801	21	10 28.9	20.9
509750 2008 TL_{96}	17.2	X	38.25997	25.47403	317.34191	4.22020	0.2547233	0.23630221	2.5911399	21	12 22.6	20.6
509751 2008 TA_{103}	16.7	X	277.92504	203.22537	228.98410	13.14280	0.2281417	0.22293381	2.6937177	21	8 23.7	20.6
509752 2008 TH_{107}	17.2	X	270.25970	84.62890	73.10112	3.93520	0.0765207	0.24235625	2.5478072	21	—	—
509753 2008 TO_{120}	17.2	X	313.39771	243.75605	161.43755	7.27545	0.2028111	0.22587815	2.6702581	21	9 28.6	19.7
509754 2008 TY_{129}	17.8	X	316.95053	182.86794	266.19856	3.49114	0.1674900	0.23331284	2.6132259	21	12 13.5	20.0
509755 2008 TH_{161}	15.8	X	179.68329	226.45747	220.84697	2.06079	0.1780177	0.12575165	3.9457259	21	6 16.7	22.0
509756 2008 TS_{163}	17.7	X	313.02401	27.38456	11.72605	5.22372	0.0557417	0.22381441	2.6866475	21	10 2.5	21.1
509757 2008 TC_{165}	15.5	X	226.10388	226.81340	169.66883	6.57203	0.1792694	0.12661323	3.9278056	21	5 28.7	21.7
509758 2008 TA_{169}	17.7	X	10.55858	313.79529	56.63937	6.15232	0.1933595	0.23065652	2.6332508	21	12 7.7	20.5
509759 2008 TQ_{180}	17.9	X	4.58566	93.28806	280.20637	10.09416	0.3053781	0.23245076	2.6196830	21	12 21.1	20.4
509760 2008 TA_{184}	17.0	X	7.90711	326.44711	48.85474	10.29968	0.1226074	0.23230037	2.6208135	21	11 29.5	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509761 2008 UM	17.0	X	320.50458	57.37648	339.77033	13.47666	0.2243951	0.22767580	2.6561838	21	9 23.9	19.4
509762 2008 UK_{13}	17.7	X	338.23006	65.44801	9.66244	4.68603	0.1562762	0.23708169	2.5854573	21	—	—
509763 2008 UW_{31}	17.1	X	312.48786	58.75684	47.32230	14.30423	0.1250495	0.23420678	2.6065721	21	12 30.3	20.1
509764 2008 UP_{32}	17.5	X	100.66715	124.23298	195.11395	6.27329	0.1146632	0.23967717	2.5667581	21	—	—
509765 2008 UZ_{33}	17.2	X	337.95674	31.80982	49.98897	15.70232	0.1169935	0.23517959	2.5993791	21	—	—
509766 2008 UA_{43}	17.9	X	52.22625	283.08222	85.71098	3.27809	0.0768647	0.23783504	2.5799948	21	—	—
509767 2008 UQ_{46}	17.5	X	314.84229	63.19239	19.31322	4.95480	0.1436041	0.22881266	2.6473784	21	11 28.4	20.3
509768 2008 UY_{47}	18.3	X	201.92056	111.00218	223.15265	2.83760	0.2101588	0.26849095	2.3796675	21	2 10.8	22.3
509769 2008 UW_{69}	17.8	X	356.23440	238.29433	147.59450	3.65835	0.2241140	0.23175986	2.6248868	21	12 8.8	20.3
509770 2008 UF_{77}	17.1	X	351.54702	292.24712	61.53669	5.78230	0.1740054	0.22063479	2.7123978	21	10 6.7	19.7
509771 2008 UV_{90}	17.5	X	321.07313	21.32081	29.66401	8.72616	0.1985598	0.22747830	2.6577211	21	10 23.6	19.6
509772 2008 UZ_{92}	16.7	X	5.58689	343.28495	62.70872	15.35159	0.2540005	0.23546707	2.5972630	21	—	—
509773 2008 UX_{99}	17.4	X	0.83762	355.56755	17.85200	2.46692	0.2471653	0.23019235	2.6367895	21	12 2.1	19.7
509774 2008 UV_{106}	16.9	X	33.53164	358.56110	42.10533	13.21906	0.0651090	0.24099218	2.5574123	21	—	—
509775 2008 UD_{113}	17.6	X	310.61997	37.01252	2.97364	4.86662	0.1745691	0.22215448	2.7000139	21	9 17.3	20.3
509776 2008 UN_{119}	17.6	X	356.45934	90.32479	331.89182	3.69177	0.0813277	0.23542955	2.5975389	21	—	—
509777 2008 UN_{123}	16.4	X	357.25241	101.92469	250.31739	12.70737	0.1482937	0.22293174	2.6937344	21	10 6.3	19.5
509778 2008 UG_{145}	17.9	X	348.61486	195.88133	210.03676	5.32414	0.1618356	0.23057679	2.6338578	21	12 13.9	20.5
509779 2008 UE_{158}	17.6	X	307.88010	247.49653	222.22458	11.78119	0.2208646	0.23080588	2.6321147	21	12 19.9	20.0
509780 2008 UF_{174}	17.7	X	320.23113	89.20313	34.42965	3.54550	0.1861755	0.23679668	2.5875315	21	—	—
509781 2008 US_{176}	17.7	X	290.77285	220.05842	240.05201	3.84870	0.1269512	0.22925347	2.6439837	21	11 12.7	20.5
509782 2008 UF_{178}	16.9	X	236.30896	301.43660	227.14853	11.91046	0.1380563	0.23247933	2.6194683	21	11 25.3	20.4
509783 2008 UX_{182}	17.2	X	23.27716	258.74895	63.08580	3.10383	0.2157468	0.22718515	2.6600068	21	10 27.3	20.0
509784 2008 UR_{185}	17.6	X	358.52676	310.93161	67.78700	3.11119	0.2182686	0.22784911	2.6548368	21	11 30.4	20.1
509785 2008 UW_{193}	16.1	X	351.96804	3.93666	53.21957	33.31625	0.2763523	0.23176887	2.6248187	21	—	—
509786 2008 UR_{205}	17.5	X	348.58829	149.95676	250.29001	9.00089	0.2228624	0.22918065	2.6445437	21	12 11.9	19.9
509787 2008 UU_{229}	17.7	X	344.88355	23.39903	10.39264	3.80528	0.1743506	0.22579666	2.6709005	21	11 17.8	20.3
509788 2008 UM_{230}	17.5	X	353.54538	315.72378	80.92247	5.58704	0.1888599	0.23046177	2.6347340	21	12 13.1	19.9
509789 2008 UK_{231}	17.7	X	321.40282	209.94753	205.01956	2.35429	0.1398965	0.23016083	2.6370302	21	11 3.5	20.2
509790 2008 US_{238}	17.2	X	206.77743	273.25415	256.03414	10.54649	0.0229593	0.22678082	2.6631676	21	11 2.2	20.9
509791 2008 UY_{241}	17.2	X	24.82706	192.40998	162.71636	14.94606	0.2802785	0.23422085	2.6064677	21	12 24.9	20.7
509792 2008 UK_{242}	16.8	X	333.14146	252.25215	150.22053	13.66941	0.2658002	0.22734273	2.6587775	21	11 13.8	19.1
509793 2008 UO_{247}	17.9	X	330.53605	220.97609	220.73732	1.40094	0.1920521	0.23046433	2.6347146	21	12 31.1	20.3
509794 2008 UX_{254}	17.5	X	27.67564	318.23910	44.82389	5.18363	0.1977812	0.23284462	2.6167279	21	12 25.6	20.7
509795 2008 UB_{257}	16.9	X	339.30639	287.79521	99.03735	14.25226	0.1916185	0.22662012	2.6644264	21	11 4.9	19.7
509796 2008 UK_{259}	17.0	X	341.31999	268.17698	101.71302	10.51516	0.2327299	0.22579747	2.6708941	21	10 14.8	19.4
509797 2008 UQ_{291}	17.9	X	9.50244	114.59680	295.66665	2.15259	0.1415960	0.23715051	2.5849571	21	—	—
509798 2008 UQ_{298}	17.2	X	261.66925	106.17794	24.29674	7.89413	0.1551926	0.22591383	2.6699769	21	11 3.5	20.5
509799 2008 UJ_{303}	17.2	X	7.24276	322.47154	46.81115	11.12779	0.2174000	0.22844018	2.6502554	21	12 2.3	19.9
509800 2008 US_{308}	17.6	X	344.40980	151.22749	268.29796	6.91537	0.1033801	0.23184526	2.6242421	21	12 20.3	20.6
509801 2008 UX_{337}	17.3	X	279.21523	85.35655	47.56119	12.71368	0.1988693	0.22904091	2.6456193	21	11 26.7	20.3
509802 2008 UT_{351}	17.1	X	18.96256	320.05208	72.57512	15.14465	0.1861895	0.23533131	2.5982618	21	—	—
509803 2008 UX_{352}	17.0	X	356.20418	299.53203	93.82951	7.10886	0.0839068	0.22706019	2.6609827	21	12 1.8	20.3
509804 2008 UL_{359}	17.2	X	6.97585	237.48183	120.39400	7.03189	0.3172002	0.23007027	2.6377221	21	12 5.8	19.7
509805 2008 UM_{360}	16.8	X	51.64252	69.09174	224.22615	10.89178	0.2942644	0.22960121	2.6413134	21	11 10.4	20.5
509806 2008 VA	19.1	X	245.47704	160.21985	223.10973	28.29993	0.0727032	0.44070856	1.7101534	21	5 26.3	20.7
509807 2008 VT_{2}	16.5	X	339.32813	136.96526	264.72945	7.69800	0.3341495	0.22653104	2.6651249	21	12 1.2	17.9
509808 2008 VA_{5}	16.7	X	59.75396	73.89025	291.23413	5.95918	0.1946817	0.24057156	2.5603924	21	—	—
509809 2008 VA_{11}	17.4	X	312.59840	337.91322	131.61138	4.02025	0.1385777	0.23319001	2.6141435	21	—	—
509810 2008 VD_{14}	16.7	X	346.50112	294.89435	67.69207	17.50941	0.2687894	0.22431045	2.6826852	21	10 21.7	19.0
509811 2008 VA_{22}	17.2	X	335.04181	18.68167	57.60566	14.17009	0.2130152	0.23194079	2.6235215	21	—	—
509812 2008 VD_{32}	17.0	X	75.51336	267.80079	69.94879	9.55704	0.1828496	0.23846982	2.5754143	21	—	—
509813 2008 VM_{48}	17.8	X	345.99223	164.75644	227.63165	0.58087	0.1622955	0.22628830	2.6670305	21	11 18.3	20.4
509814 2008 VQ_{66}	17.2	X	274.19177	9.85946	98.20821	8.74725	0.2682147	0.22293914	2.6936748	21	10 10.3	20.7
509815 2008 VP_{71}	17.7	X	297.15355	177.82739	269.41841	3.84599	0.2165503	0.22362349	2.6881764	21	10 21.8	20.6
509816 2008 VT_{81}	17.2	X	282.99470	62.23332	100.04677	10.08008	0.1176317	0.23491950	2.6012974	21	—	—
509817 2008 WF_{1}	17.2	X	346.52375	162.72623	258.13531	13.36598	0.2290833	0.23262120	2.6184032	21	—	—
509818 2008 WG_{36}	17.6	X	324.13648	184.48703	238.29518	2.95238	0.2106837	0.22670772	2.6637401	21	11 16.9	19.8
509819 2008 WY_{39}	17.9	X	305.04483	265.53897	195.49397	1.62060	0.1575224	0.22908351	2.6452913	21	12 6.4	20.5
509820 2008 WD_{47}	17.6	X	301.02579	181.83997	243.33333	4.56028	0.1279762	0.22103946	2.7090863	21	10 9.4	20.8
509821 2008 WQ_{63}	20.1	X	150.33559	228.75402	317.33871	0.91999	0.6074458	0.43179564	1.7336066	21	10 1.7	24.0
509822 2008 WP_{73}	17.3	X	344.10841	127.03230	258.20887	10.60013	0.2165609	0.22408730	2.6844659	21	11 4.6	19.7
509823 2008 WA_{74}	17.4	X	294.53032	359.73153	90.73135	12.99739	0.2053746	0.22054518	2.7131325	21	10 30.7	20.6
509824 2008 WT_{84}	17.3	X	13.86826	330.53262	62.13223	8.16026	0.1111913	0.23038799	2.6352965	21	12 30.9	20.6
509825 2008 WO_{99}	17.3	X	333.66136	327.15305	77.62965	4.40167	0.1963820	0.22498794	2.6772971	21	11 12.5	19.5
509826 2008 WE_{110}	17.7	X	276.04401	244.82216	264.39141	1.37777	0.1402691	0.23123081	2.6288890	21	12 24.3	20.5
509827 2008 WK_{111}	17.3	X	283.66271	10.16574	57.47899	6.34353	0.0370879	0.21747475	2.7386098	21	10 2.7	21.0
509828 2008 WA_{136}	17.3	X	308.62771	16.37747	93.96874	7.94789	0.1773889	0.22844727	2.6502005	21	12 25.1	19.7
509829 2008 WZ_{138}	16.8	X	354.79468	305.95844	87.48437	14.33785	0.1774729	0.22741933	2.6581805	21	12 9.5	19.5
509830 2008 XQ_{1}	16.9	X	326.29462	162.13217	281.48526	6.78936	0.3486373	0.22900872	2.6458671	21	12 31.8	18.0
509831 2008 XC_{6}	17.0	X	357.72381	135.09314	277.06529	12.55673	0.2542084	0.23208110	2.6224640	21	—	—
509832 2008 XQ_{7}	16.9	X	171.02624	184.89288	103.65075	5.22495	0.1582765	0.24533443	2.5271463	21	—	—
509833 2008 XK_{41}	17.3	X	358.31409	97.67474	272.82992	11.04420	0.2843792	0.22645756	2.6657014	21	11 26.8	19.6
509834 2008 XL_{46}	16.5	X	286.11821	32.23912	41.93153	12.44929	0.3254234	0.21619794	2.7493816	21	9 3.7	20.1
509835 2008 XJ_{47}	16.9	X	269.56597	140.77155	290.71943	16.36181	0.0688827	0.20888927	2.8131440	21	9 1.3	21.1
509836 2008 YA_{5}	17.7	X	308.15830	167.80161	285.27702	4.87611	0.0941372	0.22330616	2.6907225	21	12 3.2	20.7
509837 2008 YJ_{17}	17.7	X	304.46291	299.87879	110.03435	9.00486	0.2257869	0.21419068	2.7665318	21	9 15.0	20.7
509838 2008 YQ_{20}	17.3	X	244.58386	218.82944	290.64150	8.10483	0.1202111	0.21681371	2.7441734	21	11 8.3	21.3
509839 2008 YY_{22}	16.8	X	301.92142	155.12046	244.83028	1.91320	0.2291756	0.21090219	2.7952157	21	8 20.7	20.0
509840 2008 YS_{41}	17.4	X	290.28977	343.69321	95.34442	10.05299	0.0879776	0.22098585	2.7095245	21	10 23.3	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509841 2008 YO_{50}	17.1	X	263.00365	9.29902	104.57100	10.29100	0.1116553	0.21373760	2.7704401	21	10 25.7	20.9
509842 2008 YX_{50}	17.2	X	256.88072	51.31242	109.49930	12.92061	0.1271602	0.22174755	2.7033161	21	12 12.3	20.7
509843 2008 YK_{55}	16.9	X	44.53782	236.36183	107.89857	6.90501	0.0487401	0.21803173	2.7339438	21	11 29.8	20.6
509844 2008 YX_{65}	17.8	X	322.34657	104.96971	312.07319	5.47835	0.3457922	0.22244551	2.6976584	21	10 17.6	19.4
509845 2008 YV_{74}	17.8	X	341.44595	293.30714	96.38360	10.07009	0.2193113	0.22055282	2.7130698	21	11 10.5	20.3
509846 2008 YF_{75}	16.8	X	342.14265	126.24568	305.97694	14.98323	0.1162603	0.22572610	2.6714571	21	—	—
509847 2008 YX_{87}	16.4	X	326.16643	293.07108	107.37255	14.06710	0.2013259	0.21926488	2.7236836	21	10 25.4	19.3
509848 2008 YQ_{96}	17.8	X	315.80811	87.36830	303.67242	8.76351	0.3166663	0.21534940	2.7565991	21	8 19.2	20.3
509849 2008 YJ_{98}	17.2	X	40.57682	235.82951	118.81688	7.18604	0.0398327	0.22062373	2.7124885	21	12 6.9	20.8
509850 2008 YM_{101}	17.1	X	226.24674	24.29249	118.28511	10.19659	0.1040499	0.21292957	2.7774446	21	10 18.0	21.3
509851 2008 YE_{102}	17.9	X	292.22163	224.09777	216.50388	1.53148	0.2055963	0.21688675	2.7435573	21	10 5.3	20.8
509852 2008 YR_{105}	16.6	X	331.99737	83.47938	296.82194	6.15338	0.2460355	0.21472478	2.7619423	21	9 22.2	19.1
509853 2008 YE_{111}	17.9	X	281.28224	19.73680	70.40492	5.68368	0.0939085	0.22070604	2.7118141	21	10 21.0	21.3
509854 2008 YF_{111}	16.9	X	157.37248	210.94725	74.54505	15.50387	0.1315165	0.23846071	2.5754799	21	—	—
509855 2008 YB_{123}	17.2	X	306.64874	305.98287	120.73116	9.68060	0.1192424	0.21743513	2.7389425	21	10 27.9	20.5
509856 2008 YM_{133}	17.7	X	314.71616	346.19347	98.51569	7.29988	0.1439748	0.22312081	2.6922124	21	12 1.8	20.6
509857 2008 YL_{137}	16.9	X	189.65617	328.35032	282.05115	13.55667	0.0513973	0.22931093	2.6435419	21	—	—
509858 2008 YU_{139}	17.8	X	306.17684	206.24964	229.25447	3.02779	0.0929117	0.21874315	2.7280128	21	11 5.9	20.9
509859 2008 YT_{161}	17.2	X	224.35242	222.02390	271.30959	7.93942	0.1073166	0.21182912	2.7870554	21	9 24.6	21.4
509860 2008 YA_{166}	17.2	X	341.42568	301.67096	107.52676	14.17683	0.2583540	0.22735889	2.6586515	21	12 13.7	19.3
509861 2008 YG_{166}	17.1	X	282.79547	190.56100	281.65143	9.69425	0.2637012	0.22276906	2.6950457	21	10 20.2	20.5
509862 2008 YC_{170}	17.4	X	280.45774	12.37385	88.43755	4.58754	0.1593512	0.21722350	2.7407211	21	10 23.7	20.7
509863 2008 YO_{171}	16.3	X	310.04639	80.73786	308.35265	12.17089	0.2234741	0.21268646	2.7795606	21	8 19.4	19.3
509864 2009 AO_{2}	16.8	X	350.85348	279.90617	97.35378	12.00341	0.2863936	0.22306333	2.6926750	21	11 22.1	19.0
509865 2009 AO_{26}	16.7	X	191.05509	62.42006	115.92979	14.41482	0.1305581	0.21045267	2.7991946	21	10 24.4	21.4
509866 2009 AZ_{27}	16.9	X	260.87143	167.55771	308.14383	8.75622	0.1661619	0.21426124	2.7659244	21	10 7.3	20.8
509867 2009 AR_{31}	17.3	X	224.15581	234.47102	261.22254	3.01158	0.1448438	0.21031072	2.8004540	21	9 25.9	21.5
509868 2009 AH_{40}	18.2	X	322.10153	106.71740	294.83737	7.53515	0.2948368	0.21803878	2.7338849	21	9 23.7	20.4
509869 2009 AJ_{41}	16.8	X	273.82810	205.26180	278.53532	13.57193	0.2075361	0.22338733	2.6900707	21	10 31.4	20.5
509870 2009 AF_{46}	17.0	X	248.66540	18.38797	111.25674	9.19993	0.1717167	0.21629950	2.7485208	21	10 18.9	21.0
509871 2009 BX_{2}	17.0	X	337.82583	269.18420	122.40200	14.13541	0.4117466	0.22630408	2.6669065	21	11 22.2	18.2
509872 2009 BD_{4}	16.8	X	279.09792	222.54827	273.09893	10.52681	0.2493594	0.22203580	2.7009759	21	11 20.7	20.0
509873 2009 BW_{4}	16.7	X	273.94775	297.56657	151.27454	10.32029	0.1508241	0.21189755	2.7864554	21	9 29.3	20.3
509874 2009 BT_{6}	16.8	X	319.95367	164.12008	266.76045	6.89968	0.2188054	0.22072853	2.7116298	21	11 15.9	19.2
509875 2009 BO_{19}	17.1	X	14.33691	49.03170	310.32148	8.02077	0.1849539	0.21854770	2.7296390	21	11 23.2	20.3
509876 2009 BB_{26}	17.3	X	307.02666	344.18299	89.46782	5.32288	0.0519599	0.21595898	2.7514094	21	11 9.1	20.8
509877 2009 BJ_{36}	17.7	X	252.09634	107.73743	36.37569	2.82939	0.1868108	0.21584219	2.7524018	21	11 3.4	21.3
509878 2009 BQ_{42}	17.9	X	251.15201	35.61770	112.34795	2.45652	0.1660327	0.21588653	2.7520248	21	11 11.1	21.7
509879 2009 BV_{44}	17.3	X	298.60728	114.18844	319.82224	6.92621	0.2060272	0.21329380	2.7742818	21	10 3.5	20.4
509880 2009 BO_{60}	16.8	X	307.50705	354.63390	79.10365	14.62769	0.1553761	0.22461845	2.6802322	21	11 6.6	19.8
509881 2009 BK_{62}	16.8	X	305.60557	306.39251	104.93346	8.91007	0.2202944	0.21478565	2.7614205	21	9 20.8	19.8
509882 2009 BN_{64}	17.0	X	313.47259	299.80401	121.12968	8.77083	0.2126433	0.21598595	2.7511802	21	10 22.4	19.8
509883 2009 BA_{65}	17.1	X	259.64525	191.46875	323.48272	14.15730	0.1957214	0.21862375	2.7290060	21	11 22.6	20.9
509884 2009 BZ_{67}	16.8	X	218.25453	233.94914	328.83211	14.45915	0.2182586	0.21508393	2.7588669	21	12 2.9	21.4
509885 2009 BY_{73}	17.2	X	264.98855	140.44981	324.56314	8.29530	0.2412271	0.21113702	2.7931427	21	9 19.2	21.2
509886 2009 BC_{85}	17.5	X	287.60972	181.35527	275.07392	2.31269	0.1623537	0.21670323	2.7451061	21	10 25.4	20.6
509887 2009 BQ_{88}	17.6	X	316.64370	268.10987	140.20109	3.16729	0.2734653	0.21597634	2.7512619	21	9 29.2	19.8
509888 2009 BJ_{97}	16.9	X	198.61556	74.00225	145.11204	12.12833	0.1089402	0.21574483	2.7532298	21	12 16.9	21.2
509889 2009 BV_{97}	17.6	X	312.60372	16.82207	87.61324	13.90857	0.2471061	0.22951953	2.6419400	21	12 22.1	19.3
509890 2009 BA_{116}	17.4	X	270.50308	346.63233	121.97385	2.20128	0.0999692	0.21591489	2.7517839	21	10 27.2	20.9
509891 2009 BC_{119}	17.3	X	213.01704	73.86564	132.43677	8.87013	0.1529956	0.21931275	2.7232873	21	12 12.5	21.4
509892 2009 BK_{121}	17.7	X	200.81986	317.79537	229.93545	1.06019	0.0836547	0.21160260	2.7890441	21	11 11.8	21.9
509893 2009 BZ_{126}	17.7	X	222.08959	58.83566	148.04472	5.91661	0.1876712	0.21862892	2.7289629	21	12 17.8	21.8
509894 2009 BF_{168}	17.1	X	315.45253	187.49518	237.11057	4.97885	0.0499560	0.21180330	2.7872819	21	11 6.8	20.6
509895 2009 BT_{178}	16.9	X	262.65818	246.99308	334.15856	27.30445	0.4276895	0.22569681	2.6716882	21	—	—
509896 2009 CK_{15}	17.3	X	170.18521	103.14029	115.45413	4.92561	0.0405762	0.21323110	2.7748255	21	11 20.3	21.3
509897 2009 CS_{25}	17.1	X	298.54076	292.51456	127.23503	8.38955	0.2731259	0.21154512	2.7895493	21	9 7.8	20.2
509898 2009 CF_{28}	17.4	X	299.08706	320.33554	118.86843	2.78039	0.1820315	0.21376838	2.7701742	21	10 20.4	20.4
509899 2009 CQ_{38}	17.1	X	19.07610	73.68593	312.60366	6.24576	0.1018703	0.22105036	2.7089972	21	12 26.7	20.5
509900 2009 CV_{50}	17.1	X	277.74803	153.28977	349.69604	9.30725	0.1821016	0.22054518	2.7131325	21	12 8.6	20.4
509901 2009 DK	17.4	X	198.04799	45.21912	199.60524	3.82971	0.1200585	0.22180166	2.7028764	21	—	—
509902 2009 DW_{2}	17.2	X	350.15065	305.12332	84.55546	8.03159	0.1894947	0.22642382	2.6659662	21	11 26.3	19.7
509903 2009 DK_{19}	17.3	X	279.74445	100.70767	5.83622	3.95771	0.1625056	0.21218705	2.7839203	21	10 25.8	20.6
509904 2009 DB_{30}	17.4	X	344.06350	232.97927	153.91104	2.98850	0.0656590	0.20624234	2.8371622	21	10 30.8	21.0
509905 2009 DJ_{42}	17.2	X	219.64420	44.81634	156.08383	11.01488	0.1933633	0.21599376	2.7511140	21	12 8.3	21.6
509906 2009 DO_{93}	18.3	X	349.28287	34.32162	103.91627	3.60283	0.0686807	0.30981452	2.1630582	21	—	—
509907 2009 DH_{96}	17.3	X	295.60881	143.03152	319.01522	8.73870	0.2165252	0.21927281	2.7236180	21	11 5.7	20.3
509908 2009 DN_{112}	17.2	X	242.76918	8.47595	153.65566	8.67410	0.1587146	0.21412352	2.7671103	21	11 20.9	21.2
509909 2009 EB_{16}	16.5	X	23.28983	140.73955	132.06815	2.92626	0.1809432	0.18472481	3.0534155	21	8 7.5	19.8
509910 2009 FY_{3}	16.7	X	190.21889	248.46467	1.86978	14.94645	0.2179805	0.21365590	2.7711463	21	—	—
509911 2009 FW_{7}	16.1	X	171.21589	65.65890	29.42251	11.00576	0.0854579	0.18113045	3.0936778	21	6 14.7	21.0
509912 2009 FD_{17}	17.1	X	263.91406	138.51665	15.52319	24.97696	0.2890818	0.21695305	2.7429983	21	11 6.9	21.1
509913 2009 FC_{40}	16.7	X	229.52316	153.46908	73.67231	5.96575	0.1030742	0.21907514	2.7252561	21	—	—
509914 2009 FH_{41}	16.6	X	270.92987	169.85512	13.71037	17.49147	0.1104415	0.22273037	2.6953578	21	—	—
509915 2009 FR_{48}	16.5	X	268.49131	276.67501	158.67727	25.98259	0.3331948	0.21096252	2.7946828	21	8 5.2	20.9
509916 2009 FM_{75}	17.0	X	215.17419	123.13153	49.59166	8.56568	0.2502231	0.20455902	2.8527056	21	10 25.1	21.6
509917 2009 HA	16.4	X	221.20181	141.20592	84.31227	11.26516	0.2214384	0.21329136	2.7743029	21	—	—
509918 2009 HG_{8}	15.7	X	1.25045	265.44470	58.49808	16.96106	0.2383119	0.18016418	3.1047293	21	9 19.9	19.1
509919 2009 HF_{12}	15.8	X	52.92093	188.85381	55.14002	26.16419	0.2254719	0.17759387	3.1346140	21	9 10.1	20.5
509920 2009 HU_{37}	16.9	X	153.52551	107.66974	65.37359	4.85567	0.0568903	0.19121681	2.9839074	21	9 4.5	21.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
509921 2009 HK_{42}	18.8	X	263.01850	127.23359	84.11716	4.62792	0.2030284	0.30087411	2.2056986	21	—	—
509922 2009 HN_{62}	18.4	X	213.13472	140.67399	152.57678	4.58660	0.1773634	0.30659488	2.1781751	21	—	—
509923 2009 HS_{67}	16.3	X	240.30481	75.51662	127.93212	15.04197	0.2891174	0.21559158	2.7545343	21	12 20.7	20.6
509924 2009 HS_{87}	15.9	X	22.66974	162.59387	110.24312	6.71731	0.1077266	0.17895861	3.1186573	21	7 29.9	19.7
509925 2009 HW_{108}	13.1	X	318.05776	213.49398	84.67257	31.24744	0.0681734	0.08174706	5.2580084	21	6 1.8	19.9
509926 2009 NY	15.4	X	43.40851	213.56700	120.66314	17.85478	0.1759105	0.18068431	3.0987682	21	11 30.6	19.9
509927 2009 OE	17.9	X	299.50453	225.96067	82.23601	23.28531	0.1013190	0.39978480	1.8249538	21	4 28.3	20.1
509928 2009 OX_{2}	17.6	X	84.74773	189.07395	124.41039	13.54324	0.2730985	0.26816825	2.3815762	21	—	—
509929 2009 OV_{8}	17.4	X	34.99823	15.53005	321.12838	9.23285	0.2772149	0.25837676	2.4413708	21	12 18.6	20.7
509930 2009 OV_{20}	17.2	X	42.75156	261.50421	118.02847	11.14355	0.2419092	0.26701482	2.3884297	21	—	—
509931 2009 ON_{22}	15.8	X	63.85003	354.25053	291.45107	10.23569	0.1725409	0.17556136	3.1587610	21	10 17.1	20.5
509932 2009 OH_{24}	17.7	X	58.51851	56.74600	310.86862	10.62293	0.2862224	0.26722582	2.3871723	21	—	—
509933 2009 PJ_{8}	16.7	X	97.63512	6.55525	316.19922	6.28905	0.1290841	0.26951402	2.3736416	21	—	—
509934 2009 PF_{19}	18.5	X	54.32108	35.09702	355.74102	2.34556	0.1734845	0.26919903	2.3754928	21	—	—
509935 2009 QL_{8}	19.4	X	121.87523	339.64526	84.48296	4.24025	0.5406533	0.36735058	1.9308516	21	4 21.3	22.5
509936 2009 QT_{19}	18.0	X	77.62550	19.82639	337.97181	1.93700	0.2165948	0.27131284	2.3631384	21	—	—
509937 2009 QU_{31}	17.8	X	97.38347	339.58384	0.86837	2.60439	0.2364403	0.27274110	2.3548811	21	—	—
509938 2009 QN_{46}	17.9	X	54.42777	16.38070	347.67856	2.77153	0.2092348	0.26404846	2.4062844	21	—	—
509939 2009 QB_{51}	17.8	X	118.28564	190.29192	137.68308	4.75513	0.1894923	0.27444108	2.3451464	21	—	—
509940 2009 QK_{51}	15.7	X	76.04393	287.41455	349.71696	25.53059	0.2434643	0.17269884	3.1935700	21	10 21.1	21.0
509941 2009 QD_{53}	15.8	X	75.71061	335.57600	331.00884	16.05734	0.0953844	0.17837504	3.1254555	21	11 14.3	20.6
509942 2009 QZ_{54}	17.3	X	31.11071	126.14157	234.28909	8.03988	0.2358651	0.25910291	2.4368073	21	—	—
509943 2009 QH_{55}	18.5	X	352.79146	240.50355	163.86930	2.84144	0.1971645	0.25608741	2.4558994	21	—	—
509944 2009 RQ_{13}	18.1	X	78.72667	26.96266	326.18932	0.71019	0.1980079	0.26680858	2.3896604	21	—	—
509945 2009 RX_{15}	18.4	X	123.92007	152.04718	172.08033	1.36875	0.1908845	0.27208717	2.3586528	21	—	—
509946 2009 RV_{48}	18.2	X	41.55224	27.61938	15.80675	3.55213	0.1234769	0.26609587	2.3939255	21	—	—
509947 2009 RY_{74}	17.8	X	119.08040	312.07564	13.41835	10.25489	0.2527142	0.27428208	2.3460527	21	—	—
509948 2009 SF_{20}	17.2	X	80.46721	5.89647	332.30867	10.99302	0.2684283	0.26602576	2.3943460	21	—	—
509949 2009 SN_{20}	18.1	X	69.26105	267.76111	86.23473	1.72090	0.2428921	0.26672654	2.3901504	21	—	—
509950 2009 SH_{40}	18.3	X	19.03102	150.34829	283.73812	0.58704	0.1555239	0.26515557	2.3995817	21	—	—
509951 2009 SX_{45}	16.3	X	331.37607	264.85445	25.30298	12.89014	0.2634787	0.22811992	2.6527352	21	4 28.7	18.9
509952 2009 SJ_{50}	18.0	X	349.12243	48.33388	19.04316	1.51798	0.1458796	0.26068184	2.4269576	21	—	—
509953 2009 SA_{51}	18.1	X	71.75773	285.89217	34.30216	1.44432	0.1834244	0.26122598	2.4235862	21	12 25.9	21.6
509954 2009 SN_{67}	15.6	X	300.42481	326.61694	41.57264	10.77408	0.0894998	0.14992416	3.5093091	21	7 28.9	20.5
509955 2009 SA_{82}	17.8	X	74.00583	8.89944	356.94578	6.47378	0.1548246	0.26964187	2.3728912	21	—	—
509956 2009 SF_{133}	17.9	X	75.58433	285.99346	59.99292	2.99996	0.2303479	0.26456855	2.4031298	21	—	—
509957 2009 SV_{146}	17.8	X	55.26882	315.20970	63.36307	2.63237	0.1819406	0.26408235	2.4060786	21	—	—
509958 2009 SN_{152}	18.0	X	56.67265	58.59416	329.21825	4.37187	0.2065824	0.26931070	2.3748361	21	—	—
509959 2009 SZ_{152}	18.3	X	23.86839	43.78971	319.92155	2.45705	0.2148170	0.25806521	2.4433354	21	12 30.2	21.2
509960 2009 SK_{187}	17.4	X	33.85763	333.80865	75.15007	3.82399	0.1652678	0.26375023	2.4080980	21	—	—
509961 2009 SD_{202}	18.0	X	50.28269	317.83016	51.87268	3.06392	0.2365299	0.26233800	2.4167325	21	—	—
509962 2009 SZ_{202}	18.0	X	100.15762	304.60225	39.48390	7.34669	0.1685304	0.26911003	2.3760166	21	—	—
509963 2009 SM_{252}	17.7	X	18.04945	278.26127	111.14188	2.91151	0.2134101	0.25681659	2.4512484	21	—	—
509964 2009 SF_{255}	15.9	X	93.00137	166.77396	125.78763	19.39813	0.3254921	0.18204285	3.0833321	21	12 14.7	21.5
509965 2009 SJ_{258}	18.2	X	53.02501	270.44180	116.72902	2.38668	0.1971341	0.26644240	2.3918494	21	—	—
509966 2009 SG_{280}	18.1	X	54.41935	316.38381	72.49078	3.75522	0.1889290	0.26612177	2.3937701	21	—	—
509967 2009 SD_{289}	18.3	X	1.02508	322.19181	112.44450	2.59209	0.1677291	0.26100611	2.4249471	21	—	—
509968 2009 SN_{317}	18.2	X	92.38663	194.09106	143.96004	1.69962	0.1950527	0.26628934	2.3927658	21	—	—
509969 2009 SC_{321}	17.4	X	92.89371	86.59730	247.59910	6.39279	0.2346229	0.26751278	2.3854649	21	—	—
509970 2009 SZ_{323}	18.4	X	12.99789	28.13465	21.22745	9.33764	0.1959401	0.25997830	2.4313342	21	—	—
509971 2009 SS_{333}	18.3	X	7.54623	333.47180	89.96694	2.35904	0.1711130	0.26434159	2.4045052	21	—	—
509972 2009 SO_{341}	18.3	X	194.71241	172.70450	132.16931	3.75303	0.1674745	0.28351649	2.2948299	21	—	—
509973 2009 SJ_{342}	18.2	X	9.35671	195.27169	234.66703	0.64759	0.1761170	0.26197010	2.4189946	21	—	—
509974 2009 SG_{358}	18.2	X	29.86330	90.37445	305.34788	1.60682	0.2009951	0.26098888	2.4250538	21	—	—
509975 2009 TW_{9}	17.4	X	43.12504	319.73433	48.09599	10.05744	0.2643802	0.26053227	2.4278864	21	—	—
509976 2009 TA_{11}	18.0	X	225.97519	323.33287	30.89387	20.06820	0.0961033	0.38281510	1.8784949	21	3 27.3	20.4
509977 2009 TF_{11}	17.4	X	85.22621	340.33278	23.01713	7.34350	0.1321265	0.26718857	2.3873942	21	—	—
509978 2009 TX_{14}	17.4	X	72.08163	259.45450	99.25956	7.84471	0.2814019	0.26539202	2.3981562	21	—	—
509979 2009 TC_{18}	17.6	X	48.34197	277.56026	99.14079	3.33791	0.2378652	0.26109855	2.4243747	21	—	—
509980 2009 TL_{19}	18.1	X	117.13301	121.04518	201.98527	1.59839	0.2024131	0.26854823	2.3793291	21	—	—
509981 2009 TH_{23}	17.6	X	72.01236	131.05834	220.66030	6.43261	0.3323294	0.26399227	2.4066258	21	—	—
509982 2009 TN_{25}	17.5	X	71.59347	352.76102	11.59963	2.70673	0.2041556	0.26585990	2.3953418	21	—	—
509983 2009 UP_{18}	18.0	X	177.86005	29.28621	69.09122	23.27666	0.0959499	0.39201692	1.8489827	21	6 22.3	20.2
509984 2009 UT_{49}	18.0	X	47.08794	299.07314	65.93460	1.63706	0.2214044	0.25995554	2.4314761	21	—	—
509985 2009 UE_{51}	18.6	X	145.17975	227.08245	222.12703	11.91245	0.1665999	0.37996482	1.8878774	21	5 7.1	20.5
509986 2009 US_{61}	18.3	X	246.37547	311.56819	27.60484	18.69201	0.0760723	0.38605163	1.8679810	21	3 28.9	20.4
509987 2009 UM_{95}	18.1	X	15.33845	348.17282	77.49815	2.35471	0.1829403	0.26179598	2.4200671	21	—	—
509988 2009 UF_{99}	18.0	X	345.76424	294.14620	153.33329	1.86914	0.1452884	0.25763390	2.4460615	21	—	—
509989 2009 UV_{110}	18.1	X	27.27481	5.89674	53.69051	6.88989	0.1211109	0.26111098	2.4242978	21	—	—
509990 2009 US_{113}	18.4	X	84.13053	283.87814	73.45412	1.45964	0.0676606	0.26734909	2.3864385	21	—	—
509991 2009 UT_{128}	18.0	X	2.21533	107.17988	353.62773	3.74862	0.1805714	0.26463856	2.4027060	21	—	—
509992 2009 UT_{143}	17.5	X	298.79560	353.87204	91.87269	5.57605	0.1705424	0.23769145	2.5810337	21	11 5.4	20.1
509993 2009 UZ_{154}	17.9	X	20.57819	2.75002	55.11148	6.25218	0.1711687	0.25973358	2.4328611	21	—	—
509994 2009 VV_{1}	17.8	X	239.59088	116.34838	256.02684	20.14676	0.1103902	0.38890834	1.8588223	21	4 26.7	20.2
509995 2009 VP_{30}	17.1	X	89.57447	83.69937	267.76930	6.30407	0.1210362	0.26303715	2.4124481	21	—	—
509996 2009 VB_{37}	17.7	X	57.87373	80.33141	283.75587	1.27263	0.2345893	0.26060504	2.4274344	21	—	—
509997 2009 VS_{41}	17.8	X	11.43252	309.94301	107.55242	3.34500	0.1735182	0.25706853	2.4496466	21	—	—
509998 2009 VA_{44}	17.8	X	15.01749	16.66562	84.51253	6.82598	0.2217052	0.26521044	2.3992507	21	—	—
509999 2009 VU_{47}	18.0	X	352.43926	284.41209	156.68648	2.71503	0.1767020	0.25651325	2.4531806	21	—	—
510000 2009 VM_{49}	18.7	X	16.25521	231.85782	181.66342	1.43018	0.1772414	0.26063342	2.4272582	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510001 2009 VR_{59}	17.5	X	6.20265	350.22785	72.49957	9.97848	0.1819064	0.25685154	2.4510261	21	—	—
510002 2009 VP_{92}	17.1	X	55.94525	93.79347	269.82360	5.91723	0.1464911	0.26011568	2.4304780	21	—	—
510003 2009 VH_{112}	18.1	X	96.91005	207.74424	250.41810	18.90046	0.0948761	0.37154599	1.9162890	21	2 11.5	20.3
510004 2009 WT_{17}	17.6	X	224.40114	201.42598	72.46993	7.21928	0.0603942	0.27595259	2.3365751	21	—	—
510005 2009 WJ_{24}	17.4	X	35.65926	31.21456	66.24477	9.61009	0.1328491	0.27127054	2.3633840	21	—	—
510006 2009 WF_{25}	17.6	X	69.56242	357.29584	96.87075	24.59897	0.0785735	0.36037471	1.9556892	21	—	—
510007 2009 WU_{27}	18.0	X	320.78760	66.63224	58.63438	3.26668	0.1473723	0.25761502	2.4461810	21	—	—
510008 2009 WQ_{29}	17.9	X	41.67447	331.19617	61.94480	7.45409	0.1142931	0.26348279	2.4097272	21	—	—
510009 2009 WU_{36}	18.3	X	19.15240	31.43331	29.43446	2.96304	0.1969107	0.25880592	2.4386712	21	—	—
510010 2009 WK_{70}	18.1	X	341.78489	39.16487	76.29206	2.39320	0.1448056	0.26041610	2.4286084	21	—	—
510011 2009 WQ_{145}	18.2	X	203.94792	124.97316	229.36513	20.66620	0.1040845	0.37728317	1.8968126	21	2 11.7	21.2
510012 2009 WN_{260}	17.0	X	59.83799	62.95884	259.54235	14.07617	0.1477158	0.24595130	2.5229189	21	12 9.3	20.5
510013 2009 YZ_{1}	17.3	X	320.03392	273.24438	104.23357	28.48013	0.4012777	0.23697183	2.5862563	21	7 24.6	19.4
510014 2009 YN_{7}	15.9	X	174.79693	216.87575	236.91216	3.23778	0.1775782	0.12644126	3.9313662	21	6 20.1	22.2
510015 2009 YL_{11}	17.4	X	4.27144	153.49326	289.87647	11.98306	0.0869904	0.25358493	2.4720301	21	—	—
510016 2009 YJ_{14}	18.3	X	247.06468	245.97531	98.62126	24.97637	0.0659212	0.37359914	1.9092617	21	4 19.9	21.2
510017 2009 YB_{21}	17.8	X	340.47930	78.47229	339.18223	3.50286	0.2222071	0.24441079	2.5335091	21	12 25.8	19.8
510018 2010 AA_{4}	17.8	X	313.08348	162.75826	117.24338	26.30930	0.1098259	0.37196456	1.9148511	21	4 5.6	20.5
510019 2010 AF_{21}	18.3	X	103.66165	115.86389	305.60310	16.37487	0.1220485	0.35544864	1.9737167	21	1 16.9	19.5
510020 2010 AW_{31}	17.0	X	159.45308	87.81289	129.56606	13.41972	0.1055825	0.22609087	2.6685829	21	11 10.9	21.4
510021 2010 AV_{50}	17.4	X	217.28726	28.49461	147.91747	13.61466	0.1928466	0.23233653	2.6205415	21	11 11.4	21.7
510022 2010 AN_{77}	17.7	X	324.59590	333.07440	92.45781	13.30867	0.2901154	0.24254420	2.5464909	21	11 30.6	19.2
510023 2010 AT_{125}	16.2	X	91.38226	184.00893	139.09253	38.13429	0.0991915	0.22451271	2.6810738	21	—	—
510024 2010 BW_{60}	15.6	X	120.36720	336.70424	257.78005	28.19005	0.0825011	0.24370473	2.5384001	21	10 10.8	19.9
510025 2010 BX_{99}	15.8	X	280.48839	231.60773	75.74059	29.00567	0.2133682	0.17492652	3.1663988	21	4 14.5	21.1
510026 2010 BH_{130}	17.4	X	206.09145	84.22156	138.30454	11.83750	0.1316942	0.22662978	2.6643508	21	12 27.8	21.5
510027 2010 CK_{4}	18.0	X	305.15506	274.18563	340.96789	18.97700	0.0407547	0.35337374	1.9814352	21	2 18.7	20.0
510028 2010 CL_{17}	17.1	X	196.36325	330.83317	266.13514	6.76029	0.2573078	0.22533639	2.6745363	21	12 23.9	21.4
510029 2010 CF_{31}	17.1	X	167.31722	251.43707	353.88430	7.56574	0.2281515	0.22715524	2.6602403	21	12 12.3	21.7
510030 2010 CF_{33}	17.5	X	236.18018	96.42768	95.26655	4.71194	0.1010118	0.23959215	2.5673652	21	12 30.9	20.9
510031 2010 CN_{41}	17.3	X	218.82614	77.72828	322.36451	18.81098	0.0976119	0.37789365	1.8947692	21	5 10.1	20.2
510032 2010 CX_{98}	17.4	X	181.20946	94.25667	149.30011	7.00019	0.1171251	0.23266070	2.6181068	21	12 29.6	21.5
510033 2010 CB_{104}	17.9	X	51.08656	176.51240	348.12165	18.73521	0.0332075	0.35879125	1.9614391	21	3 15.6	19.6
510034 2010 CX_{152}	17.8	X	301.09411	317.73370	147.70341	5.17994	0.2485891	0.23725198	2.5842200	21	11 28.7	20.0
510035 2010 CS_{161}	17.4	X	294.96057	144.63890	342.94258	9.33817	0.1481754	0.23731463	2.5837652	21	12 29.2	20.3
510036 2010 CW_{181}	17.7	X	224.95343	352.22684	175.43429	2.76250	0.1235853	0.23062559	2.6334862	21	11 12.8	21.3
510037 2010 CS_{182}	17.6	X	261.74382	251.24168	289.40190	6.24183	0.1334251	0.24180755	2.5516600	21	—	—
510038 2010 CM_{183}	17.7	X	276.59957	3.68628	150.83286	6.48257	0.2307813	0.23746827	2.5826506	21	12 21.2	20.5
510039 2010 CH_{185}	17.9	X	136.33261	144.67191	322.14104	18.34864	0.0847424	0.37369784	1.9089256	21	5 1.8	20.5
510040 2010 CP_{206}	15.8	X	296.70839	219.43409	101.68602	17.62552	0.0925369	0.18290091	3.0736811	21	5 24.9	20.2
510041 2010 CY_{213}	16.7	X	299.68972	11.39480	105.82163	28.77254	0.2178780	0.23135756	2.6279287	21	12 17.9	19.4
510042 2010 DB_{64}	17.1	X	274.90528	48.79946	151.11717	12.52957	0.2216894	0.23708286	2.5854488	21	—	—
510043 2010 DC_{76}	17.1	X	182.88258	39.43870	178.49235	13.65758	0.2006278	0.22448184	2.6813196	21	11 26.3	21.7
510044 2010 DB_{79}	16.9	X	219.59149	4.06164	169.20367	13.87047	0.1843379	0.22554428	2.6728926	21	11 8.8	21.2
510045 Vincematteo	17.0	X	212.64978	336.93641	192.98390	6.81474	0.2157146	0.22606961	2.6687502	21	10 23.8	21.1
510046 2010 ED_{31}	18.6	X	144.16646	286.21383	160.89680	22.38954	0.0867418	0.36799735	1.9285886	21	4 29.5	21.2
510047 2010 EM_{35}	16.2	X	277.29723	308.57119	169.07595	13.34556	0.1402218	0.23228958	2.6208946	21	11 17.3	19.5
510048 2010 EK_{72}	17.2	X	92.78128	333.73623	354.18586	22.15429	0.0133204	0.23390210	2.6088351	21	—	—
510049 2010 EM_{77}	16.7	X	255.15341	278.99116	179.01068	27.97654	0.1879499	0.22186985	2.7023226	21	9 8.3	20.7
510050 2010 EH_{107}	17.5	X	226.30627	205.06041	356.68672	3.43961	0.1373071	0.23160692	2.6260422	21	12 24.7	21.1
510051 2010 EJ_{107}	17.4	X	239.54094	199.59865	3.75887	6.27364	0.2395738	0.23450772	2.6043416	21	12 29.2	21.1
510052 2010 EB_{138}	17.8	X	210.27327	202.47776	2.10734	3.85069	0.1560497	0.22850722	2.6497370	21	12 7.2	21.8
510053 2010 FQ_{31}	17.5	X	245.14635	243.01846	273.86920	4.36793	0.2332762	0.23032141	2.6358044	21	11 5.9	21.2
510054 2010 FK_{69}	16.0	X	33.41023	14.72688	337.29782	17.32460	0.1295340	0.20234125	2.8735125	21	11 28.5	20.2
510055 2010 FH_{81}	21.6	X	72.10487	158.28929	84.62177	16.79298	0.2104215	0.72639008	1.2256208	21	11 24.8	21.8
510056 2010 FN_{92}	16.8	X	243.91902	155.20724	36.80121	13.35759	0.2166567	0.23210877	2.6222556	21	12 21.5	20.6
510057 2010 FM_{97}	17.5	X	193.46781	183.60859	47.55545	5.27757	0.2044709	0.22701722	2.6613184	21	12 18.7	21.8
510058 2010 GW_{65}	17.8	X	83.75113	116.28990	34.64567	21.81822	0.0692459	0.36130691	1.9523239	21	4 26.6	19.1
510059 2010 GS_{143}	17.1	X	231.43624	333.57741	188.85475	13.46837	0.1866990	0.22220432	2.6996101	21	11 5.7	21.2
510060 2010 GL_{145}	17.5	X	192.31626	56.59594	189.55697	12.83207	0.2175315	0.22680014	2.6630164	21	—	—
510061 2010 GB_{146}	16.2	X	242.31878	146.07719	341.30600	11.73844	0.1394719	0.22100098	2.7094008	21	10 4.7	20.1
510062 2010 GE_{159}	17.7	X	240.20575	339.83374	230.31968	4.21468	0.2575251	0.23424148	2.6063147	21	—	—
510063 2010 HU_{21}	14.3	X	2.73112	79.49581	178.60828	18.80778	0.0886109	0.08229815	5.2345095	21	6 10.9	21.0
510064 2010 HO_{45}	16.4	X	198.04409	21.59107	91.09091	11.59703	0.0440122	0.18182825	3.0857576	21	8 9.9	21.0
510065 2010 HG_{59}	16.3	X	193.93387	326.91432	273.20580	41.41328	0.1558673	0.30578968	2.1819971	21	—	—
510066 2010 HG_{74}	16.7	X	101.19122	154.45795	77.24883	4.69838	0.0926728	0.18947775	3.0021375	21	9 22.0	21.2
510067 2010 HZ_{107}	17.2	X	196.96540	110.80798	97.71019	14.30377	0.1559079	0.22028014	2.7153083	21	11 30.5	21.6
510068 2010 HX_{108}	16.8	X	190.94624	144.28564	80.04789	14.37368	0.2016150	0.22381154	2.6866704	21	12 8.8	21.2
510069 2010 JZ_{29}	16.9	X	258.27266	100.89806	70.15360	12.46319	0.1236578	0.22807876	2.6530544	21	12 27.6	20.3
510070 2010 JO_{72}	16.9	X	170.01012	155.83968	94.45454	12.96822	0.1455589	0.22239462	2.6980699	21	12 23.7	21.0
510071 2010 JJ_{76}	16.7	X	143.85408	209.24511	73.35462	17.19755	0.1205124	0.22354996	2.6887659	21	—	—
510072 2010 JL_{83}	16.3	X	146.07204	120.06753	112.73508	13.24900	0.1599733	0.21388338	2.7691811	21	11 15.0	21.0
510073 2010 JF_{88}	18.5	X	95.10953	212.10193	115.66409	17.31025	0.6582578	0.29530439	2.2333465	21	—	—
510074 2010 JQ_{111}	17.4	X	227.87312	147.74902	41.27986	8.92329	0.2356912	0.22629359	2.6669889	21	11 26.4	21.4
510075 2010 JN_{132}	15.5	X	41.85023	146.71384	81.20126	17.59757	0.0604310	0.17012587	3.2256889	21	6 23.6	19.9
510076 2010 JB_{153}	16.5	X	202.13772	133.37833	100.50052	14.36764	0.2320187	0.22794944	2.6540577	21	12 27.7	20.8
510077 2010 JF_{176}	17.0	X	218.52321	141.62028	98.16839	14.69482	0.2360833	0.23011654	2.6373686	21	—	—
510078 2010 JN_{179}	13.4	X	247.09005	276.14386	64.80816	18.37109	0.0504156	0.08387433	5.1687238	21	5 2.1	20.4
510079 2010 KZ_{36}	16.8	X	169.29150	192.23899	67.78336	16.41816	0.1335433	0.22367653	2.6877514	21	—	—
510080 2010 KB_{60}	17.5	X	166.14445	166.47706	96.93515	6.18644	0.2591499	0.22322963	2.6913374	21	12 31.3	22.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510081 2010 KP_{97}	16.2	X	6.29778	22.90820	303.81250	10.66820	0.2071363	0.18087272	3.0966159	21	9 15.1	19.6
510082 2010 KL_{100}	16.0	X	294.00368	77.97321	315.33816	14.63118	0.2509753	0.17286694	3.1914993	21	7 26.8	20.1
510083 2010 KC_{114}	16.5	X	3.57564	45.61699	308.06581	13.02513	0.0271422	0.18631295	3.0360390	21	10 2.6	21.0
510084 2010 KB_{117}	16.4	X	10.93049	163.05519	170.40253	9.71641	0.1647638	0.18298408	3.0727497	21	10 6.9	19.9
510085 2010 LM_{1}	16.9	X	220.40146	173.34299	74.59080	14.72868	0.2226042	0.23231196	2.6207263	21	—	—
510086 2010 LF_{96}	16.2	X	332.61471	251.77321	333.83231	12.33397	0.2635658	0.17412362	3.1761250	21	2 14.9	20.2
510087 2010 MS_{8}	16.0	X	208.74976	247.65747	281.70677	8.45207	0.0944603	0.18935400	3.0034453	21	10 21.7	20.7
510088 2010 MY_{24}	15.8	X	258.23518	259.34209	164.38417	8.88949	0.1348963	0.16957071	3.2327255	21	8 3.5	20.7
510089 2010 MD_{36}	16.2	X	316.62414	35.90831	343.15455	26.97626	0.1864937	0.17436323	3.1732147	21	8 27.3	19.9
510090 2010 MY_{93}	16.3	X	327.27755	64.56375	290.75876	15.56834	0.1496059	0.17186171	3.2039321	21	8 8.8	20.2
510091 2010 NH_{35}	16.8	X	328.84477	194.33805	211.33140	9.87006	0.0426316	0.18334173	3.0687522	21	10 28.5	20.8
510092 2010 OX_{6}	17.3	X	234.74557	237.23353	330.51668	7.21566	0.1113990	0.23280959	2.6169905	21	—	—
510093 2010 OK_{10}	16.3	X	139.61817	279.81454	313.27969	7.83670	0.0963580	0.18365075	3.0653089	21	10 27.7	21.2
510094 2010 OS_{40}	16.3	X	17.20131	50.20049	273.42203	14.19539	0.2189580	0.17731589	3.1378892	21	10 1.3	20.2
510095 2010 ON_{55}	15.9	X	260.79394	254.14353	203.16834	25.14657	0.2122566	0.17067463	3.2187709	21	9 3.6	20.9
510096 2010 OD_{64}	16.3	X	337.05344	200.69850	89.76977	18.73505	0.2076043	0.18407353	3.0606135	21	5 29.7	19.7
510097 2010 OF_{126}	14.9	X	351.89265	203.75246	102.20159	34.61028	0.2115844	0.16753052	3.2589180	21	7 18.6	18.4
510098 2010 PZ_{40}	16.0	X	77.34432	304.27890	323.05859	15.25478	0.0661319	0.17211889	3.2007397	21	9 23.7	20.7
510099 2010 PZ_{61}	18.6	X	111.69643	220.92768	151.35428	5.26182	0.1719115	0.30605596	2.1807313	21	—	—
510100 2010 PY_{70}	15.6	X	306.88428	333.69139	73.89926	29.16419	0.1921607	0.17169411	3.2060167	21	10 1.4	20.1
510101 2010 RE_{8}	15.8	X	271.64431	75.65776	341.00230	21.78021	0.1103362	0.17342036	3.1847058	21	8 20.3	20.3
510102 2010 RK_{11}	16.6	X	78.97060	97.22045	195.32681	9.76986	0.0625790	0.18599954	3.0394486	21	11 4.8	20.9
510103 2010 RO_{22}	18.3	X	63.75037	180.61697	197.04295	4.55144	0.2013335	0.29342518	2.2428719	21	—	—
510104 2010 RE_{50}	16.1	X	327.07447	2.34042	9.25826	9.72721	0.1039534	0.17365161	3.1818778	21	9 10.2	20.1
510105 2010 RA_{60}	18.2	X	119.22028	20.68079	333.19792	4.52120	0.1645255	0.30191066	2.2006471	21	—	—
510106 2010 RF_{62}	18.1	X	81.65660	62.67396	314.96170	4.94178	0.1958197	0.29714158	2.2241314	21	—	—
510107 2010 RW_{80}	18.1	X	69.57106	87.04473	256.87704	4.47892	0.1742058	0.28925017	2.2644025	21	—	—
510108 2010 RR_{100}	16.1	X	349.69414	350.72323	358.30563	15.83437	0.0815471	0.17488239	3.1669314	21	9 15.8	20.0
510109 2010 RR_{101}	18.4	X	58.24268	112.44903	300.68907	1.65406	0.1655857	0.29702943	2.2246911	21	—	—
510110 2010 RF_{103}	18.2	X	25.99028	236.82047	195.55588	6.39282	0.1689897	0.29272906	2.2464262	21	—	—
510111 2010 RG_{112}	17.0	X	354.29936	259.36096	72.45297	2.01197	0.1728203	0.17442466	3.1724695	21	9 1.7	20.5
510112 2010 RN_{149}	16.3	X	280.69208	107.31723	336.70666	8.67831	0.0611955	0.18287847	3.0739325	21	10 6.0	20.5
510113 2010 RV_{156}	16.0	X	348.09578	356.84429	340.70835	7.84380	0.0922149	0.17483305	3.1675273	21	8 28.4	19.9
510114 2010 SC_{23}	16.7	X	33.57878	160.36477	182.25965	9.25811	0.1297836	0.18756853	3.0224751	21	11 19.7	20.7
510115 2010 SG_{40}	16.5	X	349.97845	342.30770	21.68520	16.50036	0.1129810	0.17998108	3.1068347	21	10 7.6	20.2
510116 2010 TP_{6}	17.9	X	122.47411	335.44129	23.91363	6.18564	0.2092853	0.30225048	2.1989974	21	—	—
510117 2010 TU_{17}	16.1	X	4.32675	102.75118	275.46592	10.35511	0.0660298	0.19023575	2.9941574	21	11 12.2	20.1
510118 2010 TD_{21}	16.8	X	240.74600	105.62533	8.16825	4.59732	0.0956274	0.17483814	3.1674657	21	9 21.5	21.5
510119 2010 TZ_{25}	16.9	X	41.07990	118.07343	206.28055	7.88575	0.1127647	0.18585846	3.0409865	21	11 3.2	20.8
510120 2010 TT_{61}	15.7	X	310.27523	227.53428	152.31353	10.27218	0.0972611	0.17271742	3.1933409	21	8 23.8	19.9
510121 2010 TN_{75}	18.0	X	58.34876	38.00061	22.76536	7.28706	0.1021624	0.29933175	2.2132690	21	—	—
510122 2010 TK_{84}	18.6	X	42.75674	64.31002	23.19108	4.30078	0.1249190	0.30212219	2.1996199	21	—	—
510123 2010 TA_{91}	18.8	X	142.54860	194.42411	162.76658	2.95011	0.0514930	0.30765851	2.1731520	21	—	—
510124 2010 TA_{101}	16.2	X	307.00172	5.76825	28.91345	11.38233	0.0688311	0.17388343	3.1790492	21	9 15.5	20.5
510125 2010 TG_{124}	18.6	X	76.09653	314.82334	88.45067	1.19692	0.1500325	0.29963004	2.2117998	21	—	—
510126 2010 TY_{137}	17.9	X	99.30095	47.60900	285.12139	2.92844	0.1945088	0.29148167	2.2528307	21	—	—
510127 2010 TL_{176}	15.8	X	12.62350	69.38843	293.90254	13.86043	0.1126605	0.18345781	3.0674577	21	11 6.2	19.9
510128 2010 TQ_{176}	17.9	X	104.53333	92.86901	284.48071	5.81981	0.1900629	0.30107818	2.2047018	21	—	—
510129 2010 UX_{1}	16.2	X	346.20215	118.03667	234.41424	8.69429	0.1016129	0.17242199	3.1969875	21	9 9.2	20.3
510130 2010 US_{9}	18.0	X	87.02331	155.65521	229.54987	1.89684	0.1982429	0.29698455	2.2249153	21	—	—
510131 2010 UC_{45}	18.3	X	65.50541	85.46492	289.47384	4.35750	0.1686174	0.28937261	2.2637637	21	—	—
510132 2010 UY_{57}	18.3	X	48.94385	349.96879	36.46762	5.99986	0.1432645	0.28384909	2.2930369	21	—	—
510133 2010 UH_{59}	18.1	X	64.77227	352.72141	41.69914	6.78160	0.1027802	0.28836336	2.2690427	21	—	—
510134 2010 UJ_{69}	18.0	X	133.29202	348.30633	353.42119	6.99516	0.1922551	0.30233185	2.1986028	21	—	—
510135 2010 UY_{69}	15.5	X	322.44230	350.05961	50.61938	27.58473	0.1252527	0.17362662	3.1821832	21	10 18.7	19.7
510136 2010 UH_{70}	17.4	X	75.12020	340.54735	49.58571	7.53043	0.1322335	0.29279106	2.2461091	21	—	—
510137 2010 UK_{70}	18.3	X	73.91083	297.59704	70.50140	2.64053	0.2681617	0.29010603	2.2599468	21	—	—
510138 2010 UJ_{80}	18.2	X	26.29896	198.07406	306.36125	5.26920	0.0656704	0.30645361	2.1788444	21	1 15.4	20.4
510139 2010 UX_{82}	16.5	X	333.41514	166.11671	196.42566	15.75035	0.0982450	0.17431399	3.1738122	21	9 2.9	20.7
510140 2010 UK_{108}	14.0	X	350.80050	103.85289	300.58611	6.07194	0.0447115	0.08497662	5.1239286	21	11 6.7	20.7
510141 2010 VQ_{36}	18.0	X	37.57831	255.51900	186.77282	4.86759	0.1318033	0.29482295	2.2357772	21	—	—
510142 2010 VC_{46}	15.5	X	231.44071	268.48025	244.41127	20.65790	0.0935619	0.17372097	3.1810308	21	10 25.5	20.4
510143 2010 VQ_{67}	16.6	X	41.56866	4.46245	314.24454	4.90932	0.0802870	0.17488314	3.1669224	21	10 18.7	21.0
510144 2010 VE_{78}	18.4	X	114.13524	172.57065	194.16193	4.69782	0.1746857	0.29903319	2.2147419	21	—	—
510145 2010 VW_{91}	18.6	X	20.88627	146.23629	273.10963	1.73851	0.2084342	0.28251969	2.3002245	21	—	—
510146 2010 VO_{108}	18.9	X	54.31797	258.70072	163.69057	3.69342	0.1194603	0.29468174	2.2364914	21	—	—
510147 2010 VH_{152}	18.2	X	26.19951	280.71817	126.50937	2.93065	0.2213047	0.28162526	2.3050923	21	—	—
510148 2010 VF_{160}	18.7	X	92.22381	70.83180	349.84956	4.61893	0.1367288	0.30479454	2.1867439	21	1 12.3	20.6
510149 2010 VC_{168}	18.4	X	86.11760	341.85236	48.74216	3.77342	0.1524329	0.29597362	2.2299787	21	—	—
510150 2010 VC_{173}	18.3	X	30.68855	210.03478	238.92259	5.78725	0.1093294	0.29083433	2.2561723	21	—	—
510151 2010 VR_{214}	16.0	X	78.30818	312.28077	314.98999	10.12422	0.0555081	0.17322762	3.1870677	21	9 25.5	20.6
510152 2010 WU_{2}	18.1	X	99.43130	292.39144	75.29970	5.99972	0.1554740	0.29364781	2.2417381	21	—	—
510153 2010 WQ_{30}	18.0	X	71.17452	134.62487	222.34958	1.60180	0.2202025	0.28482686	2.2877861	21	—	—
510154 2010 WJ_{35}	18.0	X	44.03366	2.43913	73.48563	9.03409	0.1211625	0.29222155	2.2490264	21	—	—
510155 2010 WZ_{47}	17.9	X	43.35621	284.87707	68.45968	6.77571	0.1111383	0.27339896	2.3511020	21	12 29.7	20.9
510156 2010 WO_{55}	16.9	X	308.02831	257.63901	273.88389	20.70275	0.3135413	0.27759145	2.3273694	21	—	—
510157 2010 XB_{23}	18.7	X	28.68235	156.89336	251.30641	3.36678	0.1596402	0.28338858	2.2955204	21	—	—
510158 2010 XN_{31}	18.7	X	122.33051	297.55166	85.98833	3.34800	0.1518383	0.30239818	2.1982813	21	1 10.5	20.9
510159 2010 XF_{56}	15.9	X	212.28725	32.85953	80.37312	19.80303	0.1702635	0.15560238	3.4234072	21	8 20.3	21.7
510160 2010 XO_{56}	20.1	X	280.13358	252.80111	272.82330	40.57510	0.1117187	0.83495770	1.1169311	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
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510161 2010 XR_{56}	18.0	X	27.83894	38.43096	6.41457	6.41084	0.2605110	0.28230547	2.3013880	21	—	—
510162 2010 XT_{76}	18.6	X	62.83419	257.53640	146.01152	2.78271	0.1515082	0.28983359	2.2613628	21	—	—
510163 2010 XJ_{77}	15.5	X	34.28753	90.06074	250.44784	15.41805	0.0616259	0.17239807	3.1972833	21	11 2.6	19.9
510164 2011 AK_{8}	17.9	X	247.59330	295.24073	292.58700	5.38681	0.0724872	0.28119319	2.3074529	21	—	—
510165 2011 AO_{15}	18.4	X	357.53532	147.99996	288.06523	4.60460	0.2474592	0.27626633	2.3348057	21	—	—
510166 2011 AZ_{28}	17.8	X	6.86416	317.00963	128.52382	6.81843	0.2184199	0.27864178	2.3215171	21	—	—
510167 2011 AX_{42}	18.3	X	32.65196	80.37313	348.85763	5.69381	0.1302214	0.28116558	2.3076040	21	—	—
510168 2011 AY_{42}	18.2	X	347.25674	134.33874	16.60097	3.77428	0.1886043	0.28533153	2.2850877	21	—	—
510169 2011 AH_{43}	18.0	X	49.58747	257.82655	117.37180	6.31979	0.1684289	0.27204845	2.3588765	21	—	—
510170 2011 AX_{46}	17.9	X	17.84971	169.10143	283.04021	4.93854	0.1775747	0.28039583	2.3118253	21	—	—
510171 2011 AU_{48}	17.9	X	42.07108	88.35715	302.30837	8.90735	0.2324135	0.27546087	2.3393549	21	—	—
510172 2011 AY_{50}	18.2	X	5.34666	234.77016	260.79510	5.17372	0.2133847	0.28671475	2.2777324	21	—	—
510173 2011 AM_{56}	18.3	X	359.47603	334.05209	116.63187	5.50655	0.1512000	0.27579606	2.3374590	21	—	—
510174 2011 AN_{56}	18.3	X	308.12236	157.82390	43.02348	0.44982	0.1978169	0.28301824	2.2975225	21	—	—
510175 2011 AO_{69}	18.2	X	59.66710	19.96230	23.44144	2.39571	0.2507709	0.28582382	2.2824631	21	—	—
510176 2011 BN_{31}	18.8	X	9.16729	19.34008	83.88980	2.95282	0.1992960	0.28127028	2.3070313	21	—	—
510177 2011 BX_{31}	18.0	X	1.72585	141.41090	333.00399	7.15342	0.1235790	0.28229892	2.3014237	21	—	—
510178 2011 BC_{43}	17.6	X	286.87486	186.35753	44.73829	7.94213	0.3477704	0.27884768	2.3203742	21	—	—
510179 2011 BT_{62}	18.2	X	12.24754	75.64907	344.56228	6.26814	0.1990450	0.27288287	2.3540654	21	—	—
510180 2011 BS_{70}	18.4	X	322.48706	234.67589	268.73631	4.34401	0.0889424	0.27434081	2.3457178	21	—	—
510181 2011 BN_{101}	17.8	X	340.53548	60.03001	89.03167	4.44634	0.0677054	0.28247104	2.3004886	21	—	—
510182 2011 BB_{102}	18.2	X	312.30151	143.42377	332.15534	2.38911	0.1234034	0.26734133	2.3864846	21	—	—
510183 2011 BG_{103}	15.8	X	104.52079	102.45861	33.28356	3.97111	0.1540104	0.12320961	3.9998127	21	6 3.1	21.7
510184 2011 BM_{115}	18.8	X	28.81128	289.22590	139.02364	1.81572	0.1556939	0.27996748	2.3141828	21	—	—
510185 2011 BZ_{118}	18.3	X	49.63586	99.97608	328.96022	6.12391	0.1424469	0.28414998	2.2914179	21	—	—
510186 2011 BB_{119}	18.0	X	258.77222	166.71218	61.98657	5.11233	0.1781950	0.27599848	2.3363160	21	—	—
510187 2011 BS_{121}	18.5	X	342.17631	272.71692	214.23308	5.35408	0.1765345	0.27730827	2.3289536	21	—	—
510188 2011 BW_{123}	18.5	X	313.21371	119.17660	34.89485	2.09254	0.1263135	0.27494395	2.3422861	21	—	—
510189 2011 CZ_{4}	17.7	X	319.25692	269.76580	325.15416	21.09635	0.3847393	0.28852043	2.2682191	21	1 6.9	21.5
510190 2011 CX_{7}	20.5	X	218.51828	194.48151	107.03608	10.52648	0.3226811	0.66560127	1.2991520	21	—	—
510191 2011 CO_{9}	18.4	X	276.27557	41.74740	120.80605	2.06244	0.1323374	0.26659826	2.3909171	21	—	—
510192 2011 CN_{16}	17.9	X	301.80792	190.80542	324.40895	3.64497	0.1001169	0.27171524	2.3608047	21	—	—
510193 2011 CA_{28}	18.3	X	358.80550	137.54232	305.11898	5.65841	0.1558758	0.27252739	2.3561121	21	—	—
510194 2011 CZ_{30}	18.4	X	282.51727	16.86370	134.95722	2.77785	0.1449424	0.26733770	2.3865062	21	—	—
510195 2011 CH_{36}	18.2	X	297.85208	55.57555	91.52041	2.19697	0.1284741	0.27021544	2.3695321	21	—	—
510196 2011 CS_{44}	18.2	X	304.83341	284.90426	268.52429	5.87349	0.0744746	0.28205979	2.3027242	21	—	—
510197 2011 CT_{52}	18.2	X	22.92122	317.60398	110.47788	2.20799	0.1597918	0.27527762	2.3403930	21	—	—
510198 2011 CY_{66}	18.0	X	347.11246	311.78183	140.17329	6.95822	0.1036939	0.27207299	2.3587347	21	—	—
510199 2011 CN_{67}	18.2	X	285.07128	78.02030	126.06710	11.76708	0.1632583	0.27826740	2.3235989	21	—	—
510200 2011 CC_{74}	16.7	X	340.50732	204.70396	351.84919	25.34271	0.2100091	0.28793894	2.2712718	21	1 6.6	20.0
510201 2011 CW_{75}	16.1	X	107.41055	239.14411	348.03789	29.57449	0.3297201	0.22946796	2.6423358	21	10 1.8	21.1
510202 2011 CC_{79}	18.0	X	316.29301	285.14319	204.16238	3.20996	0.1422464	0.26989156	2.3714275	21	—	—
510203 2011 CR_{79}	18.2	X	225.93766	346.84323	272.68372	5.64236	0.1035014	0.27556114	2.3387873	21	—	—
510204 2011 CB_{81}	17.7	X	288.67412	255.42857	309.74546	12.38655	0.0994873	0.27726812	2.3291784	21	—	—
510205 2011 CM_{82}	18.0	X	93.42492	358.69545	275.04309	1.81395	0.1394156	0.24274482	2.5450876	21	11 12.8	21.6
510206 2011 CU_{86}	18.2	X	38.75525	273.38276	164.61728	6.80819	0.1867991	0.28181139	2.3040772	21	—	—
510207 2011 CP_{89}	17.6	X	137.19124	61.87303	209.31676	4.93746	0.0733895	0.25698059	2.4502054	21	12 24.2	21.1
510208 2011 CZ_{111}	18.5	X	2.03802	269.29331	196.35408	6.29535	0.0626599	0.27410565	2.3470593	21	—	—
510209 2011 CP_{112}	18.5	X	317.58252	177.04318	289.24493	1.70413	0.1139912	0.26472090	2.4022078	21	—	—
510210 2011 DY_{1}	17.4	X	275.29538	7.64750	161.10268	6.93107	0.0671892	0.26926785	2.3750881	21	—	—
510211 2011 DP_{11}	18.3	X	253.43711	56.87616	183.15883	2.77052	0.1980387	0.27583971	2.3372124	21	—	—
510212 2011 DG_{13}	18.3	X	327.30966	180.87542	283.13393	2.38085	0.1571536	0.26874644	2.3781591	21	—	—
510213 2011 DM_{19}	18.3	X	265.20988	226.51224	351.37860	2.06235	0.1171766	0.27386736	2.3484205	21	—	—
510214 2011 DQ_{28}	17.9	X	220.11974	42.51058	163.32784	2.44952	0.1487007	0.25979371	2.4324857	21	12 26.6	21.1
510215 2011 DJ_{49}	18.2	X	313.58517	354.92970	163.27387	3.63761	0.1568240	0.27400077	2.3476581	21	—	—
510216 2011 DK_{51}	17.7	X	358.97224	117.15136	18.89490	2.23127	0.2285629	0.27956707	2.3163919	21	—	—
510217 2011 EK_{5}	17.8	X	208.87614	98.17654	155.89251	1.94821	0.1588061	0.26799171	2.3826220	21	—	—
510218 2011 EW_{7}	18.4	X	310.12595	168.43187	354.36506	1.97911	0.1335342	0.27120703	2.3637530	21	—	—
510219 2011 ES_{8}	18.5	X	358.26568	348.43099	120.81394	2.85783	0.1646443	0.27795962	2.3253138	21	—	—
510220 2011 EY_{8}	18.6	X	342.88287	21.33492	88.43996	2.12811	0.1916434	0.27435965	2.3456105	21	—	—
510221 2011 EM_{12}	18.3	X	231.19011	284.15757	253.52889	0.40702	0.1283916	0.25440237	2.4667319	21	12 5.6	21.4
510222 2011 EZ_{18}	18.3	X	344.06929	337.70787	165.16158	4.91738	0.1603605	0.27861598	2.3216604	21	—	—
510223 2011 ED_{27}	17.2	X	190.50138	241.97347	18.49519	14.84797	0.0931336	0.25870867	2.4392823	21	—	—
510224 2011 EU_{27}	18.6	X	4.49852	354.19151	146.99996	3.29750	0.1837600	0.28186975	2.3037591	21	—	—
510225 2011 EE_{29}	18.1	X	316.72662	58.37475	128.90700	2.74472	0.1551705	0.28004065	2.3137797	21	—	—
510226 2011 EH_{35}	18.1	X	235.35710	322.27161	266.83107	1.61166	0.1534684	0.26576284	2.3959250	21	—	—
510227 2011 EU_{44}	17.9	X	294.97815	111.36806	94.97521	4.88354	0.1615948	0.27648967	2.3335482	21	—	—
510228 2011 EG_{45}	17.8	X	339.56211	112.83709	82.99729	6.90299	0.1878386	0.28412817	2.2915351	21	1 2.1	20.4
510229 2011 EA_{55}	18.4	X	322.51548	34.33446	117.99914	3.09232	0.1485019	0.27127978	2.3633303	21	—	—
510230 2011 ER_{67}	18.5	X	293.00396	257.20957	289.48801	0.65890	0.1310140	0.27151843	2.3619453	21	—	—
510231 2011 EP_{70}	17.8	X	353.11349	102.82468	23.37229	6.76584	0.0731554	0.27078167	2.3662278	21	—	—
510232 2011 ER_{76}	18.1	X	320.50869	333.34953	211.39982	4.83109	0.1786102	0.27834578	2.3231627	21	—	—
510233 2011 EJ_{78}	18.2	X	247.48151	294.00344	300.33762	2.25001	0.1602941	0.26982981	2.3717893	21	—	—
510234 2011 FN_{6}	17.7	X	233.53217	101.15864	157.11931	5.64584	0.2172018	0.26259601	2.4151492	21	—	—
510235 2011 FT_{6}	17.2	X	341.49292	148.48410	30.37875	24.34311	0.2591059	0.28559262	2.2836948	21	—	—
510236 2011 FM_{13}	17.9	X	259.71597	154.86123	60.20744	2.81403	0.1335961	0.26552525	2.3973540	21	—	—
510237 2011 FY_{23}	17.9	X	265.95122	14.24086	197.09244	1.85850	0.1676180	0.26604713	2.3942178	21	—	—
510238 2011 FC_{29}	20.7	X	28.38071	357.99993	21.77974	6.69474	0.4408586	0.82992131	1.1214453	21	—	—
510239 2011 FJ_{31}	18.0	X	334.80837	352.96601	142.46791	1.62426	0.1318084	0.26733608	2.3865159	21	—	—
510240 2011 FD_{32}	18.0	X	295.47014	230.50876	3.32477	2.71070	0.2340075	0.27552587	2.3389869	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510241 2011 FK_{41}	17.7	X	302.75697	112.73344	72.70556	8.38940	0.1426868	0.27440123	2.3453735	21	—	—
510242 2011 FJ_{53}	18.2	X	245.90583	93.24829	136.73312	1.99766	0.1398981	0.26724887	2.3870351	21	—	—
510243 2011 FT_{55}	18.0	X	268.43332	45.07343	167.22044	3.13411	0.1548412	0.26781194	2.3836881	21	—	—
510244 2011 FR_{63}	18.4	X	311.39858	324.78847	203.49424	2.03443	0.2281868	0.27299848	2.3534008	21	—	—
510245 2011 FZ_{117}	17.9	X	204.98530	14.20075	245.75759	5.11983	0.1133290	0.26198928	2.4188765	21	—	—
510246 2011 FY_{133}	18.5	X	281.54101	249.17677	244.55684	0.61941	0.1305086	0.25849995	2.4405951	21	12 21.2	21.1
510247 2011 FA_{141}	18.2	X	298.00498	239.62336	308.23335	0.74885	0.1180570	0.27154576	2.3617868	21	—	—
510248 2011 FP_{146}	18.0	X	306.40572	147.50862	4.91744	2.46648	0.1494147	0.26679221	2.3897582	21	—	—
510249 2011 GF_{28}	18.2	X	241.18664	32.03532	196.23386	6.05794	0.1520297	0.26341895	2.4101165	21	—	—
510250 2011 GC_{68}	17.9	X	286.93910	232.24511	63.18955	22.35051	0.0716611	0.38971595	1.8562534	21	3 28.1	20.5
510251 2011 GN_{78}	17.5	X	290.53752	85.98310	129.88317	21.93857	0.2750818	0.27289051	2.3540215	21	—	—
510252 2011 GP_{89}	16.9	X	9.34081	359.00668	13.72370	6.95792	0.1560515	0.24110835	2.5565907	21	12 4.9	19.8
510253 2011 GQ_{89}	18.1	X	301.13329	12.90929	135.63905	3.69118	0.1263834	0.26124530	2.4234667	21	—	—
510254 2011 HY	18.3	X	224.28261	202.92439	102.92873	23.54048	0.0578830	0.37472467	1.9054367	21	1 5.2	20.4
510255 2011 HZ_{22}	16.7	X	113.79953	200.77302	111.33950	13.50160	0.2379579	0.24593923	2.5230015	21	—	—
510256 2011 HX_{30}	16.9	X	137.20616	186.41338	98.45707	11.75819	0.2318932	0.24000896	2.5643920	21	—	—
510257 2011 HV_{31}	18.1	X	280.77692	312.15173	205.28932	13.39190	0.1934950	0.26008830	2.4306486	21	—	—
510258 2011 HG_{34}	17.3	X	121.60887	209.41159	29.68848	6.89543	0.1333770	0.23331625	2.6132005	21	10 27.7	21.3
510259 2011 HZ_{35}	17.4	X	197.42590	33.10796	181.57503	12.39395	0.1013598	0.24318982	2.5419819	21	12 15.2	21.3
510260 2011 HJ_{48}	17.0	X	176.63951	149.53169	138.18087	8.70330	0.2343236	0.25350490	2.4725503	21	—	—
510261 2011 HE_{59}	17.9	X	267.69592	50.91822	180.85838	8.34058	0.1531345	0.26712703	2.3877608	21	—	—
510262 2011 HJ_{61}	19.3	X	28.33547	191.01232	216.04789	21.07905	0.4175123	0.54537472	1.4836771	21	—	—
510263 2011 HY_{61}	18.7	X	100.07275	72.92158	80.40156	23.90305	0.0423710	0.39647799	1.8350870	21	5 26.7	20.2
510264 2011 HA_{62}	18.0	X	331.65314	171.66359	76.75790	24.08062	0.0867991	0.38427686	1.8737281	21	3 22.5	20.5
510265 2011 HZ_{64}	18.0	X	347.91971	46.17192	96.45075	6.54473	0.1843394	0.27429556	2.3459758	21	—	—
510266 2011 HD_{67}	16.9	X	6.59497	229.84176	86.59851	8.86248	0.2242228	0.21214936	2.7842500	21	9 19.3	19.6
510267 2011 HF_{67}	16.6	X	85.84027	184.66123	99.13196	13.78631	0.1516997	0.22850936	2.6497204	21	11 20.8	20.7
510268 2011 HS_{81}	17.5	X	246.16368	138.65515	105.53405	6.11071	0.1973656	0.26399043	2.4066370	21	—	—
510269 2011 HW_{83}	18.1	X	282.15344	131.49735	47.91417	3.37638	0.1712966	0.26268193	2.4146225	21	—	—
510270 2011 HE_{85}	17.8	X	198.42120	29.06350	174.09236	17.46397	0.0928789	0.24438303	2.5337009	21	12 4.6	21.8
510271 2011 HH_{94}	17.6	X	352.09698	26.55838	102.80087	11.54338	0.0906137	0.26864481	2.3787588	21	—	—
510272 2011 JQ_{8}	16.1	X	94.65023	218.15127	91.05565	13.84492	0.2483481	0.23382014	2.6094448	21	—	—
510273 2011 JT_{17}	17.7	X	232.19496	168.13459	51.43582	3.59585	0.1434028	0.25521684	2.4614810	21	—	—
510274 2011 KA_{8}	17.5	X	131.18239	212.57005	79.68984	4.06920	0.1804164	0.24027921	2.5624688	21	—	—
510275 2011 KF_{8}	17.0	X	151.07581	194.16720	72.52422	13.48832	0.1451660	0.24052429	2.5607278	21	12 28.4	21.1
510276 2011 KK_{8}	16.9	X	125.13982	211.92706	90.61418	12.05744	0.1700041	0.24093531	2.5578147	21	—	—
510277 2011 KW_{8}	18.6	X	90.84861	304.63680	238.08981	19.71109	0.0540085	0.40071717	1.8221218	21	6 25.6	20.4
510278 2011 KN_{10}	17.1	X	49.92794	166.46329	117.57831	16.97973	0.0988468	0.21768494	2.7368466	21	10 4.0	21.1
510279 2011 KS_{11}	17.4	X	248.57418	155.59154	92.29420	4.71922	0.1415384	0.26408579	2.4060577	21	—	—
510280 2011 KU_{17}	17.3	X	145.67922	165.40848	71.25294	14.51512	0.1238847	0.23294771	2.6159559	21	11 18.6	21.4
510281 2011 KU_{22}	18.0	X	210.23039	1.28290	69.69112	21.27562	0.1650363	0.39928997	1.8264612	21	6 18.1	20.3
510282 2011 KJ_{37}	17.9	X	266.42918	81.17236	125.85823	2.42851	0.1404842	0.25987967	2.4319493	21	—	—
510283 2011 KB_{49}	18.8	X	210.05708	231.82242	116.33439	23.30670	0.0823608	0.37418370	1.9072728	21	2 23.6	21.3
510284 2011 KC_{49}	17.2	X	55.57730	244.56124	82.40044	6.24337	0.1582811	0.22667618	2.6639872	21	12 8.0	20.9
510285 2011 LK_{11}	18.4	X	241.53283	89.81966	208.97158	10.53625	0.2857555	0.26746859	2.3857276	21	1 27.4	22.8
510286 2011 LM_{28}	16.0	X	292.28360	32.88708	301.54200	10.34436	0.2984650	0.17868813	3.1218036	21	4 27.5	20.7
510287 2011 LA_{29}	16.0	X	292.68105	196.87343	204.47657	9.20284	0.0780767	0.19549482	2.9402158	21	8 27.7	20.0
510288 2011 ME_{3}	18.0	X	350.32790	125.89753	121.45108	24.78016	0.0179312	0.37724908	1.8969269	21	5 1.3	20.6
510289 2011 OX_{1}	14.0	X	4.08785	329.79789	286.43978	12.22876	0.1096457	0.08332601	5.1913739	21	6 9.7	20.4
510290 2011 OH_{4}	16.7	X	160.42102	319.75169	302.91477	32.00493	0.2345829	0.23456580	2.6039117	21	—	—
510291 2011 OG_{5}	18.4	X	171.29074	251.83548	143.11747	23.49291	0.0842677	0.36336372	1.9449495	21	3 16.4	20.8
510292 2011 OH_{5}	17.4	X	294.43913	325.88187	292.14847	3.52871	0.1719953	0.27024876	2.3693374	21	2 2.2	20.8
510293 2011 OO_{12}	16.7	X	263.68685	247.79266	297.67577	13.77977	0.0388679	0.23853996	2.5749094	21	—	—
510294 2011 OS_{16}	17.0	X	203.39277	270.61635	330.85237	16.92485	0.1727811	0.23381824	2.6094589	21	—	—
510295 2011 OF_{17}	16.9	X	118.49742	339.23904	327.42846	14.90236	0.1958565	0.22632198	2.6667659	21	—	—
510296 2011 OA_{18}	18.2	X	100.44401	357.64889	168.51028	22.85910	0.0540905	0.38659838	1.8662194	21	6 18.9	20.7
510297 2011 OE_{28}	16.5	X	124.99471	341.93663	327.72842	15.89606	0.1787651	0.22829394	2.6513870	21	—	—
510298 2011 PG_{5}	16.3	X	336.75466	253.62211	186.07460	21.53490	0.0572689	0.22509132	2.6764772	21	12 29.1	20.2
510299 2011 PP_{13}	17.6	X	210.39522	11.05473	321.13315	17.09170	0.0781925	0.36009119	1.9567157	21	1 31.9	19.8
510300 2011 PN_{14}	17.7	X	39.04230	304.16183	278.49560	19.78679	0.0565082	0.38206175	1.8809634	21	6 3.9	19.3
510301 2011 QD_{17}	16.9	X	67.60840	73.70411	249.69375	3.16205	0.0714467	0.21430288	2.7655661	21	12 3.7	20.6
510302 2011 QS_{19}	17.4	X	166.50543	2.72733	266.38450	6.88922	0.1956714	0.23347746	2.6119974	21	—	—
510303 2011 QM_{21}	17.8	X	200.19872	59.21412	309.32991	18.03315	0.0782551	0.36322361	1.9454497	21	3 1.5	20.4
510304 2011 QQ_{29}	17.0	X	54.72410	119.06006	213.41816	12.40198	0.2166986	0.21429802	2.7656080	21	12 18.6	21.2
510305 2011 QA_{34}	16.4	X	82.56382	47.40501	266.87376	12.45402	0.1938166	0.21664661	2.7455843	21	12 22.7	20.5
510306 2011 QA_{38}	17.3	X	308.52515	155.85817	155.04704	23.69012	0.1136036	0.37822450	1.8936641	21	5 11.7	19.7
510307 2011 QC_{38}	18.2	X	66.25500	32.07682	163.76192	22.95887	0.0377078	0.38037158	1.8865313	21	6 9.2	20.6
510308 2011 QX_{46}	17.9	X	91.60638	146.89615	182.49042	12.29348	0.2149749	0.22416499	2.6838456	21	—	—
510309 2011 QT_{49}	17.7	X	320.39089	307.49154	336.51824	19.75346	0.0034093	0.37432751	1.9067842	21	4 15.8	20.1
510310 2011 QJ_{59}	16.7	X	25.25450	27.95932	330.02043	6.63483	0.1036245	0.21175037	2.7877464	21	11 25.1	20.3
510311 2011 QN_{63}	16.5	X	152.94895	294.20152	353.19505	13.40823	0.2071595	0.22973050	2.6403223	21	—	—
510312 2011 QK_{68}	16.3	X	21.33125	65.47979	278.68640	11.99871	0.1526113	0.20914997	2.8108058	21	11 6.2	19.9
510313 2011 QW_{77}	16.7	X	302.87075	45.78634	324.14950	13.33470	0.0760002	0.19078590	2.9883987	21	8 5.2	20.5
510314 2011 QS_{79}	18.3	X	22.20506	277.07948	345.53704	22.87518	0.1037803	0.38711091	1.8645718	21	8 1.8	20.0
510315 2011 QX_{88}	17.2	X	317.81874	175.70676	167.75036	6.64801	0.2062507	0.19104704	2.9856749	21	7 3.3	20.8
510316 2011 QL_{97}	16.7	X	238.54915	75.23491	338.01231	20.96106	0.2684412	0.17942046	3.1133031	21	6 20.9	22.3
510317 2011 QN_{99}	18.2	X	61.63813	233.41052	332.93542	15.44742	0.0219863	0.38035647	1.8865812	21	6 11.8	20.3
510318 2011 RN_{12}	17.8	X	334.25778	39.49085	182.80503	23.13275	0.0486904	0.35636795	1.9703209	21	2 3.1	20.4
510319 2011 RZ_{12}	17.5	X	334.92804	161.99293	243.60901	1.19179	0.0938234	0.20675768	2.8324458	21	11 9.6	20.9
510320 2011 RC_{18}	16.3	X	286.65814	202.08207	191.04303	16.14372	0.0980462	0.18610594	3.0382900	21	8 4.1	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510321 2011 RK_{19}	16.4	X	191.23870	317.78341	321.95890	14.09732	0.1067747	0.23730618	2.5838265	21	—	—
510322 2011 SY_{6}	17.4	X	323.92193	39.86586	286.79027	2.65099	0.2017097	0.18635855	3.0355438	21	6 22.1	20.9
510323 2011 SU_{8}	17.0	X	317.26861	57.08545	284.81460	3.42811	0.1876479	0.18593331	3.0401703	21	7 3.5	20.6
510324 2011 SW_{19}	16.4	X	266.41720	113.14344	283.21577	14.94494	0.3262931	0.17979485	3.1089797	21	6 17.9	21.4
510325 2011 SS_{22}	16.9	X	6.66759	12.34849	353.91660	4.57645	0.1139028	0.20674100	2.8325982	21	11 8.4	20.3
510326 2011 SQ_{27}	16.4	X	306.59759	118.05148	220.83255	14.63607	0.3017319	0.18375753	3.0641213	21	5 24.9	20.5
510327 2011 SD_{37}	16.5	X	287.22093	163.58919	199.16464	15.10500	0.1260898	0.17643483	3.1483270	21	6 24.5	21.2
510328 2011 SQ_{37}	17.3	X	222.64316	314.85343	21.36587	20.34824	0.0931344	0.35480543	1.9761013	21	3 4.1	20.1
510329 2011 SY_{47}	16.8	X	27.04773	335.34785	358.70765	15.21552	0.1476211	0.20372953	2.8604437	21	10 28.1	20.5
510330 2011 SX_{48}	17.5	X	350.08050	149.95982	230.71067	1.06620	0.0765479	0.20371264	2.8606017	21	10 30.4	21.0
510331 2011 SY_{63}	16.2	X	40.62665	183.02472	110.99151	11.52876	0.0850666	0.19088855	2.9873272	21	9 26.7	20.3
510332 2011 SD_{69}	17.2	X	288.24813	258.55736	128.56943	9.88035	0.3202258	0.18256687	3.0774292	21	6 29.3	21.6
510333 2011 SM_{70}	17.2	X	125.74002	86.03033	221.39780	11.24052	0.2908129	0.22682245	2.6628417	21	—	—
510334 2011 SP_{72}	17.6	X	144.65126	58.17116	197.60180	7.37182	0.0922633	0.21602508	2.7508480	21	12 6.9	21.9
510335 2011 SP_{73}	16.9	X	283.48341	132.78030	203.87048	5.99790	0.2548802	0.17657470	3.1466642	21	5 1.3	21.6
510336 2011 SC_{75}	17.0	X	353.46055	159.74184	223.43465	8.53896	0.1367546	0.20431711	2.8549569	21	11 12.3	20.0
510337 2011 SG_{82}	16.8	X	84.99656	315.47869	341.19095	3.14317	0.0750597	0.20988404	2.8042481	21	11 19.8	20.9
510338 2011 SE_{88}	16.6	X	189.40005	288.40586	5.63523	13.99283	0.1798813	0.23648850	2.5897790	21	—	—
510339 2011 SG_{108}	16.5	X	277.90616	44.89558	336.46119	23.39563	0.3405101	0.18083110	3.0970910	21	6 6.0	21.8
510340 2011 SY_{108}	15.8	X	269.71265	24.38932	351.47138	16.73962	0.2154430	0.18026636	3.1035561	21	6 5.6	20.8
510341 2011 SP_{111}	16.7	X	326.89465	29.44528	322.03158	12.41936	0.2667974	0.19059191	2.9904261	21	7 26.7	19.6
510342 2011 SK_{115}	16.6	X	95.65401	49.00087	256.19897	12.96938	0.1931980	0.21968952	2.7201728	21	12 23.7	20.9
510343 2011 SO_{115}	16.6	X	3.71469	312.95175	57.72143	2.68607	0.0789314	0.20341563	2.8633856	21	11 7.4	20.1
510344 2011 SE_{121}	16.4	X	235.00159	238.35499	191.67030	13.44244	0.2836488	0.17537042	3.1610533	21	7 4.2	22.0
510345 2011 SZ_{122}	16.0	X	234.09072	237.25603	203.00301	16.16084	0.2035242	0.17569555	3.1571524	21	7 19.9	21.4
510346 2011 SE_{136}	16.6	X	326.85607	137.26127	200.36658	11.37220	0.1465834	0.18617528	3.0375355	21	7 17.3	20.4
510347 2011 SN_{147}	17.4	X	278.36958	239.11435	184.62260	1.45791	0.1304070	0.19093861	2.9868051	21	8 31.6	21.5
510348 2011 SF_{162}	16.6	X	253.67305	78.82395	2.95524	13.13881	0.3262827	0.18060098	3.0997212	21	8 5.1	21.8
510349 2011 SJ_{163}	17.2	X	322.79969	118.55397	265.36209	5.95463	0.1526477	0.19182636	2.9775829	21	9 11.5	20.8
510350 2011 SB_{166}	16.4	X	325.14671	21.17913	354.54082	9.29646	0.0851184	0.19221037	2.9736157	21	9 13.8	19.9
510351 2011 SH_{167}	16.7	X	347.09732	119.89831	253.52924	4.69650	0.0805695	0.20070683	2.8890914	21	10 14.2	20.2
510352 2011 SL_{197}	17.2	X	7.39070	142.93398	215.92752	1.27876	0.0790167	0.20392978	2.8585708	21	10 28.4	20.7
510353 2011 SN_{197}	17.5	X	152.47713	72.77473	202.46036	2.33900	0.0694565	0.22364248	2.6880243	21	—	—
510354 2011 SX_{201}	16.9	X	349.29675	220.56471	167.78497	7.59689	0.0888209	0.20617182	2.8378091	21	11 11.6	20.4
510355 2011 SQ_{217}	17.1	X	43.96183	26.56910	347.30462	5.84905	0.0381162	0.21784015	2.7355465	21	—	—
510356 2011 SK_{220}	16.8	X	272.99445	204.91001	175.26150	4.96891	0.1512619	0.18023340	3.1039344	21	6 25.9	21.2
510357 2011 SS_{233}	16.4	X	249.29500	50.41248	9.12606	14.30678	0.2385672	0.17671524	3.1449956	21	7 12.0	21.7
510358 2011 SS_{235}	16.4	X	243.71167	182.30631	271.46733	9.58637	0.0863319	0.18517883	3.0484226	21	8 27.9	21.0
510359 2011 SH_{244}	17.1	X	327.04594	168.01338	216.38825	1.12549	0.1151456	0.19531293	2.9420410	21	9 26.2	20.5
510360 2011 SD_{248}	17.5	X	326.32185	21.24068	352.71155	8.87052	0.2190320	0.19249046	2.9707304	21	9 2.8	20.6
510361 2011 ST_{248}	16.7	X	304.72851	26.30470	354.65397	6.34590	0.1787861	0.18617345	3.0375555	21	8 8.4	20.4
510362 2011 SM_{254}	16.0	X	313.63838	58.40217	267.49010	16.48788	0.2530576	0.18566056	3.0431471	21	5 25.3	19.9
510363 2011 SC_{259}	16.5	X	89.47120	254.44580	58.71611	12.80224	0.2051630	0.21185372	2.7868397	21	12 27.4	21.1
510364 2011 SR_{263}	17.2	X	3.60320	216.73808	163.98069	5.25920	0.0836026	0.20892774	2.8127986	21	11 22.9	20.7
510365 2011 ST_{266}	17.0	X	51.67564	141.73690	176.61685	15.57428	0.1405281	0.20926980	2.8097327	21	11 19.6	21.1
510366 2011 SB_{275}	16.4	X	327.34017	68.33877	288.14683	11.35966	0.1361922	0.19176069	2.9782627	21	8 13.8	20.1
510367 2011 TO_{4}	17.1	X	96.82911	233.27269	103.86116	10.14725	0.1823143	0.22019669	2.7159944	21	—	—
510368 2011 TP_{4}	16.6	X	91.68655	163.43536	147.09026	14.71765	0.1078951	0.21037267	2.7999042	21	12 19.6	21.1
510369 2011 TE_{8}	16.7	X	63.38000	34.78233	316.11797	7.81719	0.1683214	0.21559782	2.7544811	21	—	—
510370 2011 UO	16.6	X	314.69768	236.26342	115.18829	11.03159	0.1129602	0.18138348	3.0907999	21	7 22.7	20.5
510371 2011 UH_{9}	16.5	X	290.41981	348.19696	44.03087	15.45905	0.2762037	0.18138862	3.0907416	21	7 17.7	20.9
510372 2011 UZ_{11}	16.7	X	268.13624	334.91414	107.62506	11.48711	0.0743385	0.18986867	2.9980153	21	9 25.4	21.0
510373 2011 UP_{12}	16.5	X	279.16972	17.60419	33.33978	8.69583	0.1577504	0.18288448	3.0738651	21	8 15.7	20.8
510374 2011 UF_{23}	17.0	X	266.40359	216.97442	168.76175	16.97252	0.2175930	0.17586564	3.1551164	21	6 17.8	22.1
510375 2011 UL_{23}	16.9	X	305.44935	34.54566	1.31332	13.43029	0.1520485	0.18819164	3.0157997	21	9 4.5	20.6
510376 2011 UO_{30}	16.4	X	247.43846	228.46496	227.29958	15.06548	0.1593392	0.18023250	3.1039447	21	8 23.8	21.4
510377 2011 UK_{39}	16.0	X	30.58150	193.02423	74.75520	16.92052	0.2137478	0.18391373	3.0623861	21	8 26.4	19.9
510378 2011 UF_{41}	16.8	X	303.29357	128.83845	207.97944	14.45725	0.1791087	0.17694338	3.1422918	21	6 6.2	21.1
510379 2011 UG_{41}	16.7	X	269.44950	190.93429	211.39115	10.02230	0.0778697	0.18069418	3.0986553	21	7 27.7	21.2
510380 2011 UO_{45}	17.0	X	45.23454	212.37862	113.52700	11.94244	0.0877803	0.20016182	2.8943334	21	11 13.2	21.1
510381 2011 UW_{49}	16.6	X	296.66224	140.32389	220.34880	10.18334	0.1218713	0.17576288	3.1563460	21	7 4.9	21.0
510382 2011 UL_{52}	16.8	X	219.36253	46.97740	61.80302	10.85166	0.1800954	0.17567294	3.1574232	21	8 20.0	22.0
510383 2011 UX_{52}	16.8	X	285.12249	325.33618	78.25781	7.30606	0.0924269	0.18088988	3.0964201	21	8 23.1	21.1
510384 2011 UC_{55}	15.5	X	24.96930	49.49360	233.33296	10.64884	0.0389081	0.17386865	3.1792293	21	8 4.7	20.0
510385 2011 US_{77}	16.8	X	319.61754	18.34206	354.29418	3.91206	0.1468889	0.18521611	3.0480135	21	8 25.5	20.2
510386 2011 UH_{81}	17.3	X	275.28432	278.67901	140.75604	0.72183	0.1866593	0.18149445	3.0895400	21	8 13.2	21.7
510387 2011 UE_{83}	17.1	X	285.22277	21.83341	20.33715	5.99713	0.1370332	0.18023017	3.1039715	21	8 14.0	21.3
510388 2011 UL_{83}	16.1	X	325.63606	122.55409	241.38296	10.54604	0.1027105	0.18252481	3.0779020	21	8 21.8	20.2
510389 2011 UR_{83}	17.3	X	287.91573	58.79661	322.44229	2.46205	0.2223988	0.17765402	3.1339065	21	7 6.0	21.4
510390 2011 UE_{95}	17.2	X	50.19788	276.35367	47.32761	2.73933	0.0683034	0.20106803	2.8856304	21	11 9.8	21.1
510391 2011 UJ_{98}	16.7	X	296.56747	47.61622	0.45086	9.55380	0.0662716	0.18652462	3.0337417	21	9 15.7	20.6
510392 2011 UO_{101}	16.2	X	4.36676	252.09257	68.95650	11.22667	0.0313847	0.18001804	3.1064094	21	9 4.8	20.6
510393 2011 UT_{114}	16.6	X	318.59064	279.40917	75.78994	9.88423	0.1482044	0.17812765	3.1283488	21	7 31.7	20.5
510394 2011 UU_{114}	16.0	X	336.15787	271.07643	62.75239	26.29303	0.2873394	0.18244826	3.0787628	21	7 18.6	19.4
510395 2011 UG_{121}	16.6	X	58.26979	225.27380	67.22266	7.13182	0.0781581	0.19586105	2.9365495	21	10 15.5	20.6
510396 2011 UX_{124}	17.2	X	41.04854	305.68485	45.21751	2.38135	0.1105790	0.20584459	2.8408158	21	12 8.8	21.0
510397 2011 UH_{127}	17.3	X	287.28196	288.54901	107.43078	3.06532	0.2080013	0.18026598	3.1035604	21	7 26.6	21.3
510398 2011 UJ_{128}	16.8	X	257.53203	260.73849	142.73516	10.44959	0.2288749	0.17694960	3.1422181	21	6 28.5	21.8
510399 2011 UH_{130}	17.2	X	75.52403	148.62323	192.53195	5.68692	0.0159150	0.21136013	2.7911768	21	12 26.9	21.1
510400 2011 UF_{132}	16.2	X	254.85640	348.04000	8.32030	4.94578	0.2365404	0.16504111	3.2916069	21	4 28.5	21.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510401 2011 UY_{134}	16.6	X	222.86321	53.60925	45.02510	9.20826	0.0954918	0.17578994	3.1560221	21	8 17.7	21.5
510402 2011 UB_{140}	16.8	X	249.28855	213.93897	236.52574	12.78482	0.1872091	0.18056820	3.1000964	21	8 16.4	21.8
510403 2011 UO_{140}	16.5	X	252.46783	224.03392	235.98307	15.19768	0.2281177	0.18209892	3.0826991	21	8 25.6	21.5
510404 2011 UE_{151}	16.4	X	232.12345	191.77196	280.65302	7.99584	0.0916641	0.18257046	3.0773889	21	9 6.6	21.1
510405 2011 UH_{154}	16.3	X	255.34627	124.01159	291.36300	13.29870	0.2085176	0.17777786	3.1324509	21	7 13.2	21.2
510406 2011 UD_{160}	16.2	X	325.94687	117.76827	254.57137	15.15726	0.1775172	0.18787832	3.0191518	21	8 24.4	19.9
510407 2011 UW_{161}	16.6	X	260.75492	47.02439	42.52041	10.69902	0.1655865	0.18179446	3.0861400	21	9 11.0	21.2
510408 2011 UJ_{162}	16.5	X	239.15604	10.55953	78.52834	10.85450	0.1936503	0.17544269	3.1601852	21	8 12.2	21.6
510409 2011 UU_{168}	16.2	X	104.90636	353.53981	272.11770	8.15495	0.0932543	0.20498805	2.8487239	21	11 3.9	20.5
510410 2011 UT_{192}	19.4	X	94.18839	57.81140	219.09060	25.79776	0.1141460	0.50766801	1.5562625	21	12 27.8	21.5
510411 2011 UL_{200}	16.6	X	280.41656	164.84469	272.77418	6.74725	0.1489367	0.18473122	3.0533448	21	9 14.6	20.7
510412 2011 UF_{218}	16.7	X	243.33712	0.45339	40.52309	10.44533	0.0915669	0.17302743	3.1895255	21	6 25.3	21.5
510413 2011 UH_{240}	16.8	X	51.67700	268.92521	30.40413	4.95817	0.1191527	0.19258931	2.9697138	21	10 18.5	20.8
510414 2011 UD_{252}	17.0	X	328.95008	204.06648	167.38447	3.17137	0.1684654	0.18444405	3.0565132	21	9 6.9	20.3
510415 2011 UY_{252}	17.2	X	317.10460	333.88583	63.03475	2.58137	0.1337683	0.18737000	3.0246097	21	9 25.4	20.7
510416 2011 UJ_{257}	16.5	X	305.23921	172.72402	228.99458	8.38104	0.1293721	0.18692433	3.0294154	21	9 7.6	20.4
510417 2011 UA_{264}	15.8	X	292.14721	299.13482	81.85292	10.15800	0.1213962	0.17904195	3.1176894	21	7 28.5	20.0
510418 2011 UP_{265}	16.3	X	305.33807	321.03149	54.65658	8.85237	0.1435806	0.17879905	3.1205124	21	8 8.6	20.4
510419 2011 UE_{269}	16.0	X	349.45327	134.18007	190.22666	9.59604	0.0223886	0.18438167	3.0572026	21	8 11.3	20.3
510420 2011 UH_{275}	16.3	X	198.67691	115.07611	27.00074	9.37913	0.2541775	0.17803605	3.1294216	21	9 6.6	21.8
510421 2011 UX_{280}	17.1	X	74.08882	108.09973	209.17479	8.31772	0.4473260	0.21355670	2.7720044	21	—	—
510422 2011 UG_{294}	17.0	X	296.70726	174.28686	225.47831	8.43698	0.1263157	0.18182341	3.0858124	21	8 22.8	21.2
510423 2011 UX_{308}	15.5	X	254.02982	121.26706	287.09193	12.00420	0.0372188	0.17387093	3.1792016	21	7 23.5	20.1
510424 2011 US_{310}	17.1	X	314.98464	241.69439	142.58732	6.52280	0.2880204	0.18978703	2.9988750	21	8 12.2	20.3
510425 2011 UB_{320}	15.9	X	336.90444	267.53513	68.62840	22.46161	0.1415400	0.17793804	3.1305707	21	8 12.7	20.0
510426 2011 UY_{332}	16.1	X	269.74059	287.42872	130.04509	12.18020	0.1712036	0.17998925	3.1067407	21	8 6.1	20.4
510427 2011 UU_{333}	16.0	X	304.95533	223.41030	135.15762	10.61344	0.1201686	0.17933852	3.1142513	21	7 15.7	20.0
510428 2011 UU_{334}	17.9	X	163.94933	144.04379	169.65715	12.12539	0.3173885	0.23943117	2.5685159	21	—	—
510429 2011 UK_{336}	16.2	X	71.84842	110.15625	295.52400	1.72661	0.2231452	0.12434465	3.9754349	21	1 20.5	21.2
510430 2011 UV_{340}	17.3	X	38.61564	131.19622	209.95507	1.41693	0.0762791	0.20350534	2.8625441	21	11 18.4	21.1
510431 2011 UD_{343}	17.4	X	272.44704	7.97559	44.93093	3.97218	0.2008421	0.17906793	3.1173878	21	7 31.5	21.9
510432 2011 UM_{349}	16.5	X	222.79325	96.55850	33.74021	15.30559	0.2223224	0.18067738	3.0988474	21	9 17.2	21.7
510433 2011 UZ_{369}	17.1	X	263.83210	116.59811	344.95350	3.87004	0.1413867	0.18962911	3.0005397	21	9 27.8	21.2
510434 2011 UG_{387}	16.3	X	275.42309	260.41365	131.33916	9.74889	0.0913441	0.17545868	3.1599931	21	7 22.4	20.8
510435 2011 UM_{387}	15.9	X	191.82363	26.45827	116.53301	10.28415	0.0966551	0.17880839	3.1204037	21	9 7.8	20.8
510436 2011 UM_{389}	16.0	X	255.07870	339.05669	111.62979	10.02632	0.0677290	0.18736584	3.0246545	21	9 18.6	20.4
510437 2011 UL_{390}	16.4	X	259.48353	230.75336	187.55633	9.97145	0.2207714	0.17624104	3.1506344	21	7 17.8	21.3
510438 2011 UG_{391}	16.4	X	308.45015	209.78700	184.59933	15.32132	0.0956821	0.18547361	3.0451916	21	9 8.9	20.4
510439 2011 UU_{400}	15.9	X	272.00832	276.01371	88.57950	25.07134	0.3895646	0.17503684	3.1650682	21	5 16.7	21.4
510440 2011 UD_{414}	16.6	X	204.11465	282.53759	213.27298	5.93074	0.0852051	0.17752034	3.1354795	21	9 7.1	21.4
510441 2011 VX_{7}	15.7	X	342.68260	251.71577	76.99167	14.67051	0.1317018	0.18092570	3.0960113	21	8 10.6	19.6
510442 2011 VM_{8}	17.7	X	13.26652	328.21044	280.66503	17.05305	0.0528644	0.36591717	1.9358908	21	5 30.4	19.4
510443 2011 VJ_{14}	16.8	X	288.35282	136.79164	224.36956	8.00543	0.1170339	0.17248351	3.1962274	21	6 25.8	21.2
510444 2011 VG_{15}	16.7	X	281.37329	142.14104	230.92433	8.53071	0.1045251	0.17486664	3.1671217	21	7 3.3	21.2
510445 2011 VF_{21}	16.5	X	275.94017	208.28098	209.53934	11.02951	0.1700046	0.18056500	3.1001331	21	8 10.6	21.1
510446 2011 WG_{4}	16.1	X	228.21911	275.64945	239.33954	18.77058	0.1865845	0.18827922	3.0148644	21	10 15.2	21.0
510447 2011 WE_{9}	16.9	X	320.32757	314.31317	60.30660	10.07555	0.1126243	0.18286659	3.0740657	21	9 6.7	20.8
510448 2011 WQ_{9}	16.4	X	138.93230	138.40044	58.69415	14.90794	0.1077441	0.17885954	3.1198088	21	9 25.5	21.5
510449 2011 WS_{10}	16.8	X	247.15664	244.96245	213.15253	1.35361	0.1021239	0.18167053	3.0875433	21	9 8.3	21.3
510450 2011 WT_{11}	17.3	X	206.57981	82.37593	95.77399	2.04710	0.0288016	0.19492175	2.9459759	21	11 10.1	21.5
510451 2011 WQ_{15}	16.4	X	296.52768	332.84130	65.01296	14.07379	0.2281152	0.18423330	3.0588438	21	8 13.6	20.5
510452 2011 WC_{20}	16.0	X	293.26035	161.87932	245.65932	11.37413	0.1528762	0.18135127	3.0911659	21	8 22.0	20.3
510453 2011 WS_{27}	15.9	X	312.06294	283.63893	58.64472	8.74329	0.0341674	0.17218296	3.1999456	21	7 17.2	20.3
510454 2011 WG_{29}	17.0	X	217.57293	123.26112	36.26209	15.79704	0.3046547	0.18173770	3.0867825	21	10 8.6	22.4
510455 2011 WW_{31}	17.4	X	214.06932	119.72903	1.79146	8.44294	0.2420778	0.17233651	3.1980446	21	8 24.3	22.8
510456 2011 WZ_{35}	16.7	X	287.64030	126.86887	206.01678	12.02856	0.2718288	0.17790346	3.1309763	21	4 29.0	21.2
510457 2011 WS_{38}	16.9	X	329.12778	291.13433	75.71435	6.59297	0.1714675	0.18304267	3.0720939	21	9 4.2	20.4
510458 2011 WW_{39}	16.8	X	259.77058	300.27644	119.47936	12.75955	0.0916969	0.18000134	3.1066016	21	8 8.8	21.2
510459 2011 WA_{50}	16.7	X	194.55147	57.43571	82.56785	12.51479	0.2268284	0.17152954	3.2080671	21	9 3.5	22.4
510460 2011 WR_{50}	16.0	X	341.14388	91.94995	257.53920	8.56301	0.1376650	0.18284046	3.0743585	21	8 27.3	19.7
510461 2011 WG_{55}	17.0	X	240.99138	264.40608	207.38176	7.74981	0.2451165	0.18083512	3.0970451	21	8 30.9	22.1
510462 2011 WG_{59}	16.3	X	189.90182	100.70429	82.72575	11.23540	0.0183109	0.18976284	2.9991298	21	10 31.7	20.7
510463 2011 WQ_{59}	16.8	X	255.80418	335.29944	100.15331	3.90360	0.0658660	0.17682922	3.1436440	21	8 27.9	21.2
510464 2011 WU_{59}	16.9	X	227.77731	37.91097	75.88629	14.38950	0.0977543	0.17823175	3.1271304	21	9 14.3	21.8
510465 2011 WT_{60}	16.6	X	283.46539	17.78577	81.00947	10.52017	0.0395655	0.19179994	2.9778564	21	11 7.6	20.7
510466 2011 WK_{61}	17.6	X	110.21893	68.51498	67.72413	22.37612	0.0839759	0.35630580	1.9705500	21	5 22.8	19.5
510467 2011 WR_{62}	15.7	X	5.51261	31.53775	266.63515	10.81601	0.0285790	0.17450961	3.1714399	21	7 29.3	20.1
510468 2011 WF_{72}	16.1	X	303.52084	329.63285	64.01282	18.52701	0.2016333	0.18089460	3.0963662	21	8 27.3	20.3
510469 2011 WT_{74}	17.6	X	327.35930	227.81050	83.11386	22.38645	0.0587400	0.37146910	1.9165534	21	6 18.7	18.8
510470 2011 WC_{80}	16.7	X	12.39558	266.79924	66.87737	10.64534	0.0855694	0.18638744	3.0352301	21	10 6.5	20.7
510471 2011 WZ_{84}	16.7	X	250.34312	10.77293	106.31238	3.15651	0.0984741	0.18582401	3.0413624	21	10 8.7	21.0
510472 2011 WW_{89}	16.1	X	296.68409	260.82771	140.51951	9.09544	0.2051064	0.18169489	3.0872673	21	8 16.8	19.8
510473 2011 WJ_{91}	17.0	X	259.03164	146.79553	281.50928	9.33783	0.1986318	0.17388772	3.1789969	21	8 1.3	21.9
510474 2011 WC_{98}	16.4	X	281.63403	160.55233	239.80840	12.03404	0.1618691	0.17645339	3.1481062	21	7 27.3	20.9
510475 2011 WV_{98}	16.9	X	270.26200	195.80555	238.29982	8.61675	0.0720677	0.18073378	3.0982028	21	9 7.3	21.4
510476 2011 WK_{100}	15.9	X	299.33327	251.04100	138.50644	9.95893	0.1111284	0.17994997	3.1071928	21	8 19.5	19.9
510477 2011 WO_{105}	15.9	X	264.13986	192.23034	262.82697	8.74784	0.0012961	0.18546929	3.0452389	21	10 6.6	20.3
510478 2011 WB_{108}	17.3	X	238.06002	35.90027	84.70316	2.06070	0.1568698	0.18161094	3.0882186	21	9 20.8	22.0
510479 2011 WY_{108}	16.3	X	307.83683	233.43591	142.78918	12.14927	0.1563257	0.18382023	3.0634245	21	8 7.9	20.0
510480 2011 WX_{114}	16.5	X	295.06587	289.09027	74.95540	17.04745	0.2543137	0.17616344	3.1515597	21	6 17.4	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510481 2011 WL_{116}	15.9	X	164.97560	284.00540	280.36465	9.18655	0.0180735	0.18811937	3.0165721	21	10 19.5	20.4
510482 2011 WU_{118}	15.7	X	281.74961	143.99182	260.66090	21.59745	0.1710387	0.17681457	3.1438176	21	7 27.7	20.4
510483 2011 WT_{120}	16.0	X	331.49493	54.06487	277.06044	14.94253	0.0775773	0.17416070	3.1756741	21	7 22.3	20.2
510484 2011 WD_{124}	17.1	X	269.44429	45.48132	57.03191	15.45078	0.2317767	0.18919659	3.0051110	21	10 1.8	21.5
510485 2011 WU_{131}	16.9	X	299.45623	342.30041	78.20104	13.72666	0.0846642	0.18690676	3.0296053	21	10 10.4	21.1
510486 2011 WO_{144}	16.5	X	238.50742	45.96560	72.63793	27.78784	0.1888011	0.18058565	3.0998967	21	10 1.2	21.8
510487 2011 WX_{157}	16.3	X	249.87922	55.90503	79.84936	18.12233	0.2272723	0.18596887	3.0397827	21	10 21.5	21.1
510488 2011 XX	15.7	X	47.83376	27.12817	233.96799	21.50454	0.0556157	0.17500609	3.1654389	21	8 5.3	20.5
510489 2011 XA_{4}	16.2	X	125.87448	20.35805	265.79943	11.48866	0.0710824	0.19867375	2.9087678	21	12 20.0	20.6
510490 2011 YE	17.7	X	243.49540	237.74215	97.08654	25.67494	0.0700886	0.35228779	1.9855050	21	4 2.5	20.9
510491 2011 YU	16.6	X	312.62518	299.77379	100.28089	15.83209	0.1811046	0.19033497	2.9931168	21	9 23.9	20.4
510492 2011 YG_{4}	16.5	X	249.50197	174.77331	284.80364	8.45720	0.2613847	0.17411405	3.1762414	21	8 21.5	21.7
510493 2011 YF_{15}	16.2	X	247.23490	1.28894	104.52322	17.17975	0.1329347	0.17288328	3.1912982	21	9 21.3	21.2
510494 2011 YD_{23}	16.0	X	244.99291	18.94420	100.37575	24.05293	0.0763774	0.17680595	3.1439198	21	10 18.3	21.0
510495 2011 YA_{26}	16.4	X	263.97245	332.56254	121.68785	9.88906	0.0449792	0.17412347	3.1761269	21	10 6.3	21.0
510496 2011 YX_{27}	16.0	X	276.35271	83.14449	325.80695	11.91926	0.0704759	0.16885099	3.2419052	21	8 17.8	20.4
510497 2011 YY_{40}	15.9	X	358.70557	58.72910	272.86207	12.51151	0.0870495	0.17953705	3.1119551	21	8 30.4	20.1
510498 2011 YD_{44}	15.7	X	87.63145	162.91269	125.29782	14.07542	0.1016035	0.17957518	3.1115146	21	11 16.7	20.5
510499 2011 YX_{45}	15.6	X	186.76284	269.70306	306.64610	24.25951	0.2240011	0.17957061	3.1115674	21	11 14.2	21.3
510500 2011 YK_{49}	13.8	X	336.65618	95.11962	302.75644	13.68465	0.1064482	0.08299734	5.2050703	21	10 5.7	20.4
510501 2011 YG_{72}	16.1	X	218.68698	49.27396	120.99858	18.02759	0.1732417	0.17874859	3.1210996	21	11 4.1	21.3
510502 2011 YD_{78}	16.7	X	282.52806	279.72141	126.38152	7.69626	0.2132682	0.17917089	3.1161934	21	8 1.4	21.0
510503 2012 AG_{3}	13.1	X	9.23458	340.14322	286.38449	18.43518	0.0665423	0.08556925	5.1002434	21	6 28.9	19.5
510504 2012 BW_{3}	16.7	X	234.00385	146.50643	324.67039	6.96037	0.1469412	0.16948223	3.2338505	21	9 3.1	21.5
510505 2012 BL_{15}	14.5	X	317.88570	116.89552	329.56238	8.00953	0.1595147	0.08207192	5.2441243	21	11 2.4	20.8
510506 2012 BC_{22}	16.2	X	194.46206	238.33735	289.90491	17.86969	0.1158666	0.17200229	3.2021861	21	9 26.2	21.6
510507 2012 BQ_{25}	15.8	X	49.93837	223.21021	107.32249	19.47463	0.0911250	0.18104693	3.0946291	21	11 23.7	20.4
510508 2012 BY_{34}	13.8	X	337.06575	80.07014	335.75321	10.07510	0.1278820	0.08109150	5.2863086	21	10 28.1	20.3
510509 2012 BJ_{35}	16.5	X	282.74651	306.89183	85.47889	7.86770	0.1936887	0.17518435	3.1632912	21	7 18.4	20.8
510510 2012 BA_{44}	16.1	X	234.74385	48.15300	114.02775	10.39545	0.0966916	0.18233028	3.0800907	21	11 16.0	20.7
510511 2012 BR_{53}	16.5	X	248.27169	335.55432	137.28310	17.93598	0.1712930	0.17102710	3.2143470	21	9 22.8	21.5
510512 2012 BA_{58}	15.6	X	68.72904	200.39430	119.85301	19.21805	0.0301272	0.18210798	3.0825968	21	11 25.7	20.3
510513 2012 BE_{79}	15.8	X	273.81896	341.98187	119.24482	28.93540	0.1277592	0.17846398	3.1244170	21	10 24.8	20.7
510514 2012 BB_{95}	16.4	X	278.39076	106.08501	327.79600	15.43478	0.2464237	0.17514109	3.1638121	21	8 25.4	20.7
510515 2012 BV_{96}	14.0	X	20.25545	312.66989	67.06860	12.59798	0.0518602	0.08324230	5.1948539	21	11 18.0	20.7
510516 2012 BU_{98}	16.2	X	109.60194	312.90694	316.46944	15.01904	0.0548782	0.17571100	3.1569673	21	11 1.9	21.2
510517 2012 BN_{102}	15.8	X	246.70472	28.49618	111.00344	10.88309	0.0436541	0.17913539	3.1166051	21	11 9.9	20.4
510518 2012 BE_{133}	16.2	X	226.29710	247.39968	269.70618	8.63309	0.1831379	0.17617638	3.1514054	21	10 14.9	21.2
510519 2012 BB_{155}	14.1	X	51.14916	207.54691	154.83699	7.92006	0.0494925	0.08338728	5.1888307	21	12 4.8	20.9
510520 2012 BE_{155}	14.3	X	318.94635	146.06099	301.70879	3.39239	0.0618137	0.08414956	5.1574476	21	11 15.9	20.9
510521 2012 BT_{155}	15.8	X	34.65318	46.23576	152.07270	1.68404	0.1107269	0.12521185	3.9570582	21	5 14.6	20.9
510522 2012 CQ_{2}	16.2	X	293.27104	321.78379	137.08316	9.15421	0.0337365	0.17871038	3.1215445	21	11 18.6	20.6
510523 2012 CW_{38}	16.7	X	264.83735	303.08233	140.23411	20.71050	0.1294632	0.16922929	3.2370720	21	9 9.5	21.4
510524 2012 CE_{57}	16.1	X	275.55044	310.26117	152.06817	19.74582	0.1953297	0.17880732	3.1204161	21	10 10.1	20.5
510525 2012 CC_{58}	16.2	X	59.30737	357.21650	311.24166	13.55193	0.0340817	0.17047146	3.2213278	21	10 17.1	21.0
510526 2012 DH_{22}	15.4	X	235.45114	43.17396	116.19104	14.81385	0.0887051	0.17273204	3.1931608	21	11 14.9	20.3
510527 2012 DJ_{77}	17.9	X	227.27656	94.61111	145.03069	9.13605	0.0353963	0.29407499	2.2395666	21	—	—
510528 2012 DM_{87}	17.7	X	273.00627	306.66113	258.68725	6.78036	0.1125842	0.30143394	2.2029668	21	—	—
510529 2012 EY_{11}	21.7	X	303.94936	238.87902	167.59630	9.02098	0.1506894	0.80095173	1.1483259	21	—	—
510530 2012 FV_{19}	18.6	X	358.52737	49.98354	95.39236	2.17927	0.0818107	0.30944428	2.1647832	21	—	—
510531 2012 FR_{34}	18.1	X	209.22236	257.89905	38.26735	7.04786	0.1375940	0.30161754	2.2020727	21	—	—
510532 2012 FK_{68}	18.4	X	246.94868	187.17553	82.75425	4.48061	0.0261009	0.30980397	2.1631073	21	—	—
510533 2012 FE_{83}	18.0	X	238.64181	146.68990	68.76329	8.79075	0.2030005	0.28903890	2.2655058	21	—	—
510534 2012 GW_{39}	17.3	X	273.97161	345.40143	216.45577	6.28096	0.0793352	0.29275502	2.2462934	21	—	—
510535 2012 HS_{3}	17.5	X	347.90045	80.83959	193.82939	8.33889	0.2724639	0.22015256	2.7163573	21	5 16.2	19.7
510536 2012 HU_{4}	17.8	X	232.72943	121.77704	139.75361	7.53815	0.1256631	0.29642863	2.2276962	21	—	—
510537 2012 HT_{7}	18.4	X	218.61632	114.19395	179.91463	6.64294	0.0880082	0.30850927	2.1691549	21	—	—
510538 2012 HL_{34}	18.1	X	248.08623	149.14971	125.04539	7.77449	0.1490988	0.30062037	2.2069396	21	1 4.7	21.5
510539 2012 HK_{58}	17.9	X	288.03968	126.42143	52.98191	6.10667	0.0996945	0.29306946	2.2446864	21	—	—
510540 2012 HD_{59}	18.2	X	196.31051	135.89764	152.46341	7.60114	0.1412822	0.28768649	2.2726004	21	—	—
510541 2012 HX_{73}	18.4	X	282.32483	172.86900	74.39347	3.60477	0.1358300	0.30537442	2.1839748	21	1 4.7	21.5
510542 2012 JD_{1}	18.3	X	213.20507	148.55194	132.15466	5.47296	0.1544946	0.29256744	2.2472534	21	—	—
510543 2012 JK_{10}	17.5	X	98.02595	116.97926	225.39721	8.05605	0.2264106	0.26951156	2.3736560	21	—	—
510544 2012 JM_{46}	18.4	X	125.50815	184.30933	96.23395	3.37306	0.1944663	0.26184534	2.4197629	21	12 26.3	22.3
510545 2012 JC_{52}	18.7	X	315.89743	323.97300	234.24420	4.14914	0.0849190	0.30150873	2.2026025	21	—	—
510546 2012 JJ_{67}	14.1	X	313.90340	122.59654	324.82622	5.34497	0.0607368	0.08387165	5.1688342	21	11 8.5	20.8
510547 2012 KB_{13}	18.0	X	148.39839	188.36243	117.58429	2.89804	0.2137953	0.27659602	2.3329500	21	—	—
510548 2012 KE_{15}	18.0	X	8.84435	33.90638	90.59531	5.98070	0.0117116	0.29182198	2.2510789	21	—	—
510549 2012 KJ_{17}	18.2	X	296.22365	62.18352	200.84830	4.65004	0.1723441	0.30925443	2.1656691	21	2 3.1	21.3
510550 2012 KT_{43}	17.7	X	120.87346	261.32734	73.08994	7.09230	0.2525476	0.27702882	2.3305195	21	—	—
510551 2012 KZ_{51}	16.5	X	343.69701	82.38010	283.29592	13.85572	0.1037399	0.22867047	2.6484757	21	9 25.9	19.9
510552 2012 LC_{8}	17.8	X	78.98448	228.19283	124.59157	3.09269	0.2416203	0.26347497	2.4097749	21	—	—
510553 2012 LB_{17}	17.3	X	71.77555	154.67436	138.40307	12.82005	0.1768674	0.24604024	2.5223109	21	11 22.9	21.2
510554 2012 LX_{17}	17.8	X	119.31213	197.74580	128.31117	7.59235	0.1329068	0.27119208	2.3638398	21	—	—
510555 2012 LM_{26}	17.2	X	6.46732	229.30436	76.95883	33.03813	0.2458434	0.23419624	2.6066503	21	9 30.6	20.6
510556 2012 MS	17.2	X	28.53906	227.68539	106.48441	12.99362	0.2977519	0.24285395	2.5443251	21	12 8.8	20.4
510557 2012 MR_{11}	16.1	X	25.68367	252.13106	67.68455	30.07266	0.3308179	0.23192570	2.6236353	21	11 21.1	19.2
510558 2012 MS_{13}	18.1	X	248.22958	150.32850	88.29128	2.97039	0.1730752	0.28267545	2.2993795	21	—	—
510559 2012 PZ_{3}	17.8	X	318.13691	90.92630	288.32387	3.03443	0.0926278	0.21855419	2.7295850	21	9 7.6	21.0
510560 2012 PP_{7}	16.9	X	4.74099	41.34330	279.98937	12.35290	0.2642781	0.22289412	2.6940376	21	9 14.6	19.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510561 2012 PV_9	18.1	X	145.45004	122.67175	204.52450	6.53109	0.1324734	0.26613784	2.3936738	21	—	—
510562 2012 PG_{12}	16.8	X	56.18250	129.30311	171.48978	17.46640	0.2101293	0.23113063	2.6296486	21	11 16.9	20.8
510563 2012 PA_{23}	17.2	X	344.88491	95.83005	267.50029	3.51849	0.1056376	0.22613625	2.6682259	21	10 1.1	20.3
510564 2012 PL_{24}	14.0	X	223.15731	174.56149	204.54116	8.77451	0.0499564	0.08251197	5.2254625	21	5 16.5	21.1
510565 2012 PS_{31}	16.4	X	355.18246	79.79880	267.52283	15.19574	0.2587212	0.22549393	2.6732904	21	9 30.5	19.0
510566 2012 PK_{37}	17.4	X	121.52509	207.80287	145.42641	5.06125	0.1568809	0.26258638	2.4152083	21	—	—
510567 2012 PN_{44}	13.5	X	285.49049	50.81629	292.39691	12.84159	0.1251053	0.08438883	5.1476943	21	6 1.7	20.4
510568 2012 QF_{10}	13.7	X	241.82143	236.54616	122.22569	17.86655	0.0546558	0.08400607	5.1633189	21	5 17.4	20.9
510569 2012 QR_{15}	17.5	X	175.82804	38.48436	252.04315	6.57824	0.1260699	0.26776069	2.3839922	21	—	—
510570 2012 QW_{29}	17.1	X	236.49627	264.22970	342.67862	6.71157	0.0769753	0.26877491	2.3779911	21	—	—
510571 2012 QB_{32}	17.5	X	31.39733	59.85724	238.78057	4.92122	0.2544214	0.22348548	2.6892830	21	10 12.1	20.6
510572 2012 QS_{33}	17.1	X	20.78948	21.98570	333.63286	13.80103	0.2711118	0.23013822	2.6372029	21	12 17.2	20.5
510573 2012 QN_{52}	13.9	X	291.36962	122.15602	194.19039	12.50344	0.0693739	0.08175598	5.2576262	21	5 18.3	20.8
510574 2012 RT	17.7	X	22.98059	134.09709	181.40176	13.19001	0.2704170	0.22652209	2.6651951	21	10 28.7	20.6
510575 2012 RU_9	17.7	X	5.33470	153.39191	216.43782	12.11585	0.3011118	0.22895500	2.6462810	21	12 14.9	20.4
510576 2012 RW_{23}	17.2	X	29.33499	225.96206	124.46904	4.52062	0.1599503	0.22701582	2.6613294	21	12 5.1	20.4
510577 2012 RX_{32}	17.3	X	16.16924	11.03626	349.89114	12.59559	0.1664969	0.23057643	2.6338605	21	11 26.7	20.6
510578 2012 RD_{36}	16.8	X	312.29096	234.84821	162.86008	9.17083	0.3066810	0.21317078	2.7753490	21	8 24.6	19.2
510579 2012 RF_{40}	17.2	X	146.95747	166.14754	160.34235	4.82054	0.1966054	0.26387260	2.4073534	21	—	—
510580 2012 RE_{41}	16.9	X	2.36137	11.97739	11.16630	13.16885	0.2914870	0.22911917	2.6450167	21	12 27.2	19.8
510581 2012 SP	16.8	X	64.52162	355.55193	318.49249	8.71574	0.2962327	0.23397327	2.6083061	21	12 18.9	21.0
510582 2012 ST	17.3	X	9.87120	116.03956	260.42724	10.13828	0.2026586	0.23292475	2.6161278	21	12 17.2	20.1
510583 2012 SQ_5	17.7	X	322.62844	201.01594	228.66102	0.94209	0.2230560	0.22564541	2.6720939	21	11 23.2	19.6
510584 2012 SC_{10}	17.3	X	64.19508	121.84081	183.58866	14.10371	0.1967582	0.23394921	2.6084849	21	11 28.8	21.3
510585 2012 SJ_{10}	18.0	X	131.88380	324.10613	5.76998	1.12105	0.2023903	0.26152917	2.4217128	21	—	—
510586 2012 SH_{13}	17.3	X	328.04356	231.81901	146.77771	2.73711	0.1657224	0.21646927	2.7470836	21	9 21.0	20.1
510587 2012 SU_{15}	17.0	X	344.02662	56.67921	291.16903	3.85833	0.1717248	0.21244078	2.7817032	21	9 5.2	19.7
510588 2012 SG_{16}	17.5	X	123.05605	352.33397	312.78956	4.46333	0.1644090	0.24630991	2.5204696	21	—	—
510589 2012 SG_{19}	17.4	X	7.51526	114.89613	294.96765	11.53775	0.1727449	0.23727696	2.5840387	21	—	—
510590 2012 SH_{25}	17.0	X	330.40293	0.78172	354.20456	3.39338	0.1103115	0.21168893	2.7882858	21	8 25.4	20.0
510591 2012 SA_{32}	14.2	X	305.82716	144.53262	180.24944	9.50002	0.1301553	0.08497620	5.1239455	21	6 6.2	20.8
510592 2012 SE_{38}	17.6	X	284.60276	272.88642	183.39107	1.76816	0.0351441	0.22965449	2.6409049	21	11 10.2	21.0
510593 2012 SU_{52}	17.5	X	359.10690	117.54497	302.82115	3.63454	0.2303008	0.23660143	2.5889548	21	—	—
510594 2012 SJ_{57}	17.2	X	34.67041	322.23960	24.39573	6.40571	0.2798500	0.22974121	2.6402403	21	12 25.3	20.8
510595 2012 SQ_{64}	17.0	X	4.80321	91.39490	286.35882	11.44531	0.2747545	0.22681234	2.6629209	21	12 20.5	19.7
510596 2012 SB_{65}	17.1	X	338.41888	29.63542	19.79483	13.83040	0.2478019	0.22383252	2.6865026	21	11 27.9	19.5
510597 2012 SC_{68}	17.0	X	16.36820	24.18505	289.35155	3.30202	0.0547526	0.20971169	2.8057844	21	9 8.5	20.6
510598 2012 TK_2	17.4	X	307.38757	229.13262	186.36627	11.72592	0.0921357	0.22340359	2.6899401	21	10 13.8	20.5
510599 2012 TL_{12}	17.3	X	64.66969	275.49820	53.34199	2.95531	0.1415273	0.23083393	2.6319015	21	12 19.0	21.1
510600 2012 TK_{15}	18.2	X	163.35299	334.59336	13.75673	22.60773	0.1490237	0.38239722	1.8798631	21	—	—
510601 2012 TJ_{18}	17.0	X	206.80543	308.00094	200.97884	10.85577	0.0325056	0.21682387	2.7440877	21	10 6.2	20.8
510602 2012 TB_{19}	17.3	X	313.89023	1.85121	73.46132	13.01626	0.1663231	0.22285268	2.6943715	21	11 16.8	20.0
510603 2012 TA_{27}	17.4	X	23.97449	215.19323	148.94400	4.38205	0.2295277	0.23040137	2.6351946	21	12 26.2	20.6
510604 2012 TK_{33}	16.8	X	350.94703	17.99129	340.12854	5.65309	0.0472734	0.21750490	2.7383567	21	10 1.2	20.3
510605 2012 TT_{34}	16.5	X	324.00837	38.86880	2.26748	16.83935	0.1936041	0.22323086	2.6913276	21	10 10.4	19.1
510606 2012 TU_{37}	17.1	X	312.13231	39.69983	358.44094	7.49936	0.3109890	0.21258509	2.7804442	21	8 27.1	19.6
510607 2012 TP_{51}	17.7	X	256.12871	244.91434	22.20441	5.18553	0.2344050	0.27916107	2.3186373	21	1 4.4	21.7
510608 2012 TO_{52}	13.7	X	121.70387	250.67348	264.90425	6.43337	0.0052032	0.08177710	5.2567208	21	6 28.9	20.6
510609 2012 TF_{59}	17.4	X	282.14021	163.48747	280.55612	3.73937	0.1807493	0.21619146	2.7494365	21	9 25.8	20.8
510610 2012 TS_{70}	17.3	X	297.40537	154.64856	258.33409	7.16640	0.2203777	0.21232811	2.7826872	21	8 29.8	20.7
510611 2012 TN_{85}	17.4	X	280.18452	225.00160	205.74799	3.38499	0.0788886	0.21371204	2.7706610	21	9 21.9	21.1
510612 2012 TQ_{96}	17.6	X	290.74566	80.79629	0.74239	3.26769	0.1997750	0.21617351	2.7495887	21	10 4.9	20.6
510613 2012 TT_{96}	17.4	X	308.65608	141.24487	244.31847	2.23475	0.1948730	0.20943970	2.8082130	21	8 17.6	20.5
510614 2012 TT_{101}	17.7	X	334.82770	203.85986	225.22709	1.63698	0.1190766	0.23027987	2.6361214	21	12 17.7	20.5
510615 2012 TD_{104}	17.5	X	247.13028	262.15947	258.75062	3.39899	0.0600299	0.23341576	2.6124577	21	12 10.4	21.0
510616 2012 TO_{105}	17.5	X	72.30516	341.16544	357.26419	5.11202	0.1271672	0.23821229	2.5772701	21	—	—
510617 2012 TH_{125}	17.4	X	134.49232	28.74073	264.77469	3.62365	0.1406946	0.24746847	2.5125968	21	—	—
510618 2012 TX_{130}	17.1	X	324.83905	171.04845	251.61863	7.68818	0.2501558	0.22497526	2.6773976	21	11 16.1	19.0
510619 2012 TA_{135}	13.9	X	288.53205	270.14013	61.57160	10.58347	0.0809564	0.07987118	5.3400169	21	5 29.3	20.8
510620 2012 TJ_{138}	17.3	X	18.78074	198.86530	193.19502	13.64475	0.2168282	0.23320382	2.6140403	21	—	—
510621 2012 TA_{142}	17.8	X	352.27592	239.09785	172.97943	2.18645	0.1168495	0.23065231	2.6332829	21	12 23.9	20.6
510622 2012 TZ_{153}	17.5	X	320.28274	191.53010	188.04915	5.02630	0.1754967	0.21383038	2.7696386	21	9 3.3	20.2
510623 2012 TU_{158}	17.2	X	335.59856	252.96272	112.59910	1.64195	0.0875217	0.21403099	2.7679077	21	9 19.7	20.4
510624 2012 TV_{161}	17.3	X	271.06504	39.92603	17.43822	5.93049	0.0438109	0.20776579	2.8232761	21	8 30.4	21.1
510625 2012 TX_{164}	14.3	X	318.00235	288.93497	25.68904	10.28895	0.1165217	0.08417546	5.1563896	21	6 10.0	20.9
510626 2012 TP_{168}	16.9	X	341.19852	249.65513	127.86157	5.78693	0.1241559	0.21637527	2.7478792	21	10 18.2	19.9
510627 2012 TX_{169}	16.8	X	54.73873	335.33477	29.98300	12.91192	0.2093389	0.23686961	2.5870003	21	—	—
510628 2012 TP_{174}	17.5	X	108.47175	150.02923	233.74601	4.98024	0.1474317	0.26140318	2.4224908	21	—	—
510629 2012 TY_{174}	17.6	X	352.55439	69.43404	344.10130	5.44145	0.1978855	0.23107326	2.6300838	21	—	—
510630 2012 TM_{175}	17.6	X	323.71399	37.15510	6.91078	3.08697	0.1598832	0.22156989	2.7047609	21	10 19.4	20.3
510631 2012 TU_{176}	17.9	X	354.81979	230.84942	191.02249	3.88282	0.0703093	0.23727723	2.5840367	21	—	—
510632 2012 TT_{177}	14.6	X	291.36207	78.56881	269.56640	5.53222	0.0571181	0.08308043	5.2015993	21	6 23.8	21.4
510633 2012 TF_{189}	17.4	X	308.04245	54.79267	33.82546	6.51564	0.1397849	0.22519311	2.6756706	21	11 23.6	20.2
510634 2012 TN_{201}	17.6	X	349.58177	351.22932	55.30589	4.32902	0.1259442	0.23043080	2.6349702	21	12 12.5	20.3
510635 2012 TT_{206}	17.9	X	321.85132	169.25716	248.40928	7.96188	0.1905632	0.21955438	2.7212889	21	11 1.3	20.6
510636 2012 TT_{207}	17.0	X	46.87909	55.49125	239.18263	10.99352	0.1847807	0.21652163	2.7466407	21	10 16.5	20.6
510637 2012 TB_{208}	17.5	X	326.09839	73.19097	328.26553	5.16698	0.1039742	0.21802194	2.7340256	21	10 20.0	20.7
510638 2012 TQ_{208}	18.8	X	314.35841	67.56499	265.60239	3.86292	0.2096864	0.31291744	2.1487351	21	6 7.2	20.4
510639 2012 TS_{210}	17.4	X	14.12874	119.44121	252.47178	5.14215	0.1605735	0.22841830	2.6504246	21	12 10.4	20.5
510640 2012 TV_{213}	16.5	X	9.19399	80.25331	262.48601	5.99823	0.0532523	0.21628654	2.7486307	21	10 6.4	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510641 2012 TA_{216}	16.7	X	324.69986	122.61006	302.07644	13.09414	0.1894103	0.22325122	2.6911639	21	11 16.9	19.6
510642 2012 TQ_{216}	17.0	X	18.49007	21.26904	351.80851	4.85281	0.1818059	0.22762538	2.6565761	21	12 21.7	20.3
510643 2012 TC_{219}	16.5	X	333.19555	331.95890	46.88191	15.26361	0.1869191	0.21246689	2.7814753	21	10 7.0	19.4
510644 2012 TM_{219}	18.6	X	241.95908	296.17502	41.95067	22.13180	0.1015058	0.40196660	1.8183441	21	3 25.5	21.1
510645 2012 TF_{221}	18.1	X	326.79653	67.79434	20.03120	3.85977	0.1690148	0.23290560	2.6162712	21	—	—
510646 2012 TV_{222}	17.8	X	46.67498	199.13914	143.40392	2.15855	0.2325699	0.23459802	2.6036733	21	12 28.4	21.5
510647 2012 TZ_{233}	16.9	X	30.91751	296.81812	102.26920	9.15645	0.1112586	0.24120308	2.5559214	21	—	—
510648 2012 TG_{235}	16.9	X	345.51529	188.97535	162.19555	9.38838	0.1474561	0.21493415	2.7601484	21	9 16.5	19.6
510649 2012 TJ_{235}	17.2	X	356.20455	240.43922	129.19119	6.68164	0.0491871	0.22256313	2.6967079	21	10 29.9	20.7
510650 2012 TS_{238}	16.2	X	212.65686	299.20233	55.76127	9.11204	0.0853675	0.17392750	3.1785122	21	4 1.8	21.1
510651 2012 TE_{241}	17.0	X	299.96376	341.17858	66.33915	5.81201	0.1198115	0.21023233	2.8011501	21	9 18.1	20.4
510652 2012 TG_{244}	17.5	X	350.62730	225.95685	172.37359	6.05810	0.1922833	0.22424395	2.6832156	21	12 9.0	20.2
510653 2012 TH_{256}	17.3	X	321.87646	211.03170	152.43585	2.59022	0.0833279	0.20316160	2.8657720	21	8 23.7	20.9
510654 2012 TV_{260}	17.2	X	247.04506	53.64446	51.36407	9.64606	0.1859295	0.20900055	2.8121454	21	9 13.8	21.5
510655 2012 TF_{266}	16.3	X	304.57131	88.50422	195.79321	10.54612	0.0426517	0.17920712	3.1157735	21	4 21.9	20.6
510656 2012 TN_{268}	17.4	X	285.88938	346.57194	155.55976	14.15177	0.1000477	0.23505973	2.6002627	21	—	—
510657 2012 TC_{282}	17.7	X	8.41460	54.31807	318.29405	10.47817	0.1892025	0.22559672	2.6724783	21	12 4.2	20.8
510658 2012 TK_{284}	17.3	X	257.88955	181.35447	106.22299	5.57656	0.2265983	0.28251838	2.3002317	21	1 30.4	21.0
510659 2012 TX_{286}	17.0	X	327.54782	270.52153	123.98406	5.20511	0.0819554	0.21625559	2.7488929	21	10 18.6	20.3
510660 2012 TC_{293}	17.2	X	310.76674	83.97435	294.77137	4.90980	0.0748883	0.20510010	2.8476862	21	8 26.5	20.8
510661 2012 TD_{296}	17.4	X	28.20347	335.30740	20.27237	5.23475	0.1869372	0.22652380	2.6651817	21	12 12.9	20.7
510662 2012 TW_{300}	16.0	X	340.79777	65.46882	275.60839	19.43430	0.1346916	0.21037110	2.7999181	21	8 12.5	19.5
510663 2012 TU_{306}	16.8	X	96.99425	31.07538	313.70200	14.33249	0.1490987	0.24478033	2.5309586	21	—	—
510664 2012 TL_{308}	16.2	X	214.08922	347.57341	254.56884	13.51010	0.0621234	0.24543435	2.5264604	21	—	—
510665 2012 TS_{312}	17.1	X	338.39629	60.93509	16.97055	13.41189	0.2393072	0.23256693	2.6188105	21	—	—
510666 2012 TM_{322}	16.3	X	50.70392	56.55032	337.77958	14.53376	0.1428985	0.24169650	2.5524416	21	—	—
510667 2012 UB_{1}	16.8	X	1.09125	71.39626	330.93988	28.66791	0.3557855	0.23369560	2.6103717	21	—	—
510668 2012 UO_{6}	17.0	X	341.74164	192.38958	184.27120	12.31311	0.1113885	0.21831509	2.7315776	21	10 16.8	20.0
510669 2012 UR_{7}	17.2	X	334.93429	260.67404	99.68574	5.48850	0.0827619	0.21150021	2.7899442	21	9 13.2	20.6
510670 2012 UO_{12}	17.8	X	346.51159	265.42006	153.64889	3.93595	0.0844597	0.23144831	2.6272418	21	12 21.5	21.0
510671 2012 UM_{15}	18.2	X	70.07408	179.71902	160.74457	4.44030	0.1480019	0.23774121	2.5806736	21	—	—
510672 2012 UP_{21}	17.3	X	333.03048	219.27531	154.70358	6.44631	0.0618598	0.21462387	2.7628080	21	9 28.7	20.7
510673 2012 UL_{26}	17.9	X	349.68983	31.64990	346.11510	8.43756	0.2042003	0.22024932	2.7155616	21	11 2.4	20.5
510674 2012 UL_{28}	17.6	X	150.45269	171.81078	39.71374	6.79017	0.0076548	0.21990785	2.7183720	21	10 19.8	21.3
510675 2012 UK_{38}	17.4	X	308.47875	102.26823	336.78233	4.46129	0.1446270	0.22055217	2.7130751	21	11 8.8	20.4
510676 2012 UM_{38}	17.2	X	292.33667	206.79341	250.86474	6.80312	0.1934991	0.21908865	2.7251440	21	10 30.4	20.3
510677 2012 UO_{43}	17.3	X	3.24696	339.30351	66.99651	7.24245	0.1857512	0.22817024	2.6523452	21	—	—
510678 2012 UJ_{47}	17.1	X	272.33912	50.70824	58.97476	4.44360	0.1135333	0.21919916	2.7242281	21	10 29.6	20.5
510679 2012 UY_{48}	17.5	X	59.58189	161.28879	187.96247	2.52254	0.0472691	0.23226635	2.6210694	21	12 26.4	21.0
510680 2012 UH_{49}	17.2	X	323.85389	9.62563	47.56573	12.10469	0.0619683	0.22096009	2.7097350	21	11 10.9	20.6
510681 2012 UJ_{51}	17.5	X	302.46597	77.78854	41.32824	4.50645	0.2134291	0.22624799	2.6673473	21	12 20.9	20.0
510682 2012 UW_{57}	16.9	X	304.34692	220.87376	225.24802	13.62256	0.1626977	0.21960761	2.7208491	21	11 11.1	19.8
510683 2012 UY_{57}	17.2	X	5.92777	88.15573	260.86766	2.12569	0.2072367	0.21733503	2.7397834	21	10 28.6	19.9
510684 2012 UM_{66}	17.6	X	321.43930	8.25881	49.54888	12.17853	0.1541462	0.21722694	2.7406922	21	11 4.6	20.3
510685 2012 UB_{67}	16.8	X	2.64746	288.59179	125.82758	10.94546	0.1084084	0.23342313	2.6124027	21	—	—
510686 2012 UH_{90}	17.5	X	108.19766	275.26015	54.54361	2.48039	0.0143444	0.23504941	2.6003388	21	—	—
510687 2012 UG_{107}	17.0	X	10.40890	54.32991	355.55032	9.86250	0.0951961	0.23366701	2.6105846	21	—	—
510688 2012 UL_{110}	16.6	X	317.39799	340.13747	68.41513	5.31167	0.0615779	0.21295677	2.7772081	21	10 21.5	20.1
510689 2012 UA_{115}	17.3	X	177.92596	240.28804	6.31195	5.55944	0.0977691	0.24034675	2.5619887	21	—	—
510690 2012 UQ_{123}	17.8	X	349.65331	165.19751	280.22197	2.97531	0.1043950	0.23306284	2.6150943	21	—	—
510691 2012 UC_{126}	17.4	X	311.11861	53.83164	34.48917	6.40041	0.0873659	0.22137423	2.7063544	21	11 30.9	20.7
510692 2012 UD_{126}	16.9	X	275.05191	129.49513	24.06080	5.56366	0.1023884	0.22839345	2.6506168	21	—	—
510693 2012 UP_{126}	17.9	X	20.67236	84.47328	285.63092	6.03252	0.1596155	0.22547361	2.6734511	21	12 17.1	21.1
510694 2012 UX_{131}	17.3	X	303.56199	168.78806	244.33854	13.71128	0.3450918	0.21361837	2.7714708	21	8 15.7	20.6
510695 2012 UF_{133}	17.0	X	21.84647	73.83187	318.51581	9.10791	0.1504376	0.23136127	2.6279006	21	—	—
510696 2012 UF_{135}	17.3	X	334.74554	44.21769	354.78697	4.73871	0.1833765	0.22381926	2.6866087	21	11 2.9	19.7
510697 2012 UF_{137}	17.3	X	335.30973	263.29493	124.84070	5.09384	0.1153312	0.21587322	2.7521380	21	10 22.1	20.4
510698 2012 UE_{138}	17.2	X	5.47320	346.09095	28.79352	5.35054	0.1245776	0.22306285	2.6926788	21	11 23.3	20.2
510699 2012 UC_{146}	17.2	X	337.52834	176.05374	267.08440	11.22392	0.1267656	0.23251606	2.6191925	21	—	—
510700 2012 UA_{152}	17.8	X	324.39648	355.89954	59.26223	9.77665	0.2012841	0.21687885	2.7436240	21	11 5.3	20.2
510701 2012 UK_{153}	17.2	X	4.62713	236.14990	165.60833	2.51567	0.0742678	0.22636740	2.6664092	21	12 23.4	20.4
510702 2012 UE_{160}	17.2	X	297.67724	95.66169	48.34482	16.66337	0.1982545	0.22985292	2.6393847	21	—	—
510703 2012 US_{165}	16.9	X	325.52035	95.57978	332.22758	12.19533	0.1564842	0.22225317	2.6992145	21	11 23.4	19.9
510704 2012 UN_{169}	16.4	X	22.25871	110.69091	280.84365	11.99994	0.1551723	0.23199299	2.6231280	21	—	—
510705 2012 UP_{169}	16.8	X	286.02846	204.71696	251.90619	18.28302	0.2444629	0.21459103	2.7630898	21	10 3.4	20.4
510706 2012 UT_{178}	17.5	X	306.95349	25.79873	40.83076	4.60551	0.0853433	0.21541010	2.7560812	21	10 26.7	20.7
510707 2012 UY_{178}	17.5	X	281.50525	292.71437	182.92775	4.28697	0.1213839	0.22301218	2.6930866	21	11 19.6	20.8
510708 2012 UC_{179}	17.6	X	149.57183	346.42320	286.81992	2.77163	0.0627907	0.23811693	2.5779581	21	—	—
510709 2012 VJ	16.6	X	348.02215	270.18971	101.42816	12.14201	0.0301314	0.21654424	2.7464496	21	10 22.4	20.4
510710 2012 VS_{2}	16.9	X	247.23539	259.87021	266.23219	11.26036	0.1032463	0.23002259	2.6380866	21	12 10.1	20.4
510711 2012 VR_{9}	17.5	X	342.04035	23.94552	21.28274	5.64287	0.1853910	0.22457312	2.6805930	21	11 28.7	20.1
510712 2012 VF_{11}	17.6	X	156.11247	6.61041	210.00671	2.08551	0.0699929	0.22414963	2.6839682	21	11 1.8	21.6
510713 2012 VG_{21}	17.5	X	281.22716	138.91003	44.84163	14.96427	0.1715487	0.24266276	2.5456613	21	—	—
510714 2012 VY_{22}	17.9	X	57.29438	312.13637	38.30695	3.95786	0.1041091	0.23189755	2.6238476	21	—	—
510715 2012 VL_{30}	16.8	X	43.31481	55.59855	242.19324	12.89310	0.1297798	0.21576966	2.7530185	21	10 5.2	20.5
510716 2012 VY_{32}	18.4	X	344.74573	312.28490	241.55694	19.87807	0.0371473	0.37671886	1.8987064	21	1 2.7	20.5
510717 2012 VJ_{35}	16.4	X	49.84210	250.49065	63.64444	8.16928	0.1641270	0.21938937	2.7226532	21	11 15.0	19.9
510718 2012 VP_{37}	17.2	X	277.10390	255.15850	193.36313	5.85194	0.0152797	0.21790863	2.7349733	21	10 21.8	20.9
510719 2012 VZ_{38}	17.4	X	310.18835	38.23108	34.52705	10.63074	0.2947804	0.21906377	2.7253504	21	10 18.6	19.5
510720 2012 VJ_{40}	17.2	X	332.73371	169.67873	251.73332	3.95913	0.1078144	0.21945674	2.7220960	21	11 30.3	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510721 2012 VL_{48}	17.3	X	21.20015	139.71253	184.30080	4.48896	0.0703649	0.21344015	2.7730134	21	10 3.6	20.5
510722 2012 VC_{60}	17.6	X	287.25225	70.20252	60.46389	6.69083	0.0971024	0.22679993	2.6630180	21	12 21.1	20.8
510723 2012 VN_{61}	17.2	X	5.56860	343.59469	57.29679	15.01506	0.0898229	0.22733330	2.6588511	21	12 24.7	20.6
510724 2012 VJ_{74}	17.2	X	70.34152	262.42844	60.12116	8.13767	0.1385716	0.22821716	2.6519817	21	12 16.3	21.0
510725 2012 VQ_{77}	17.7	X	15.53549	152.72809	231.77657	3.15730	0.2628222	0.22938133	2.6430010	21	—	—
510726 2012 VP_{84}	16.0	X	157.77715	269.90839	250.68125	22.86066	0.0577524	0.19108286	2.9853017	21	8 11.1	21.0
510727 2012 VR_{92}	17.1	X	286.90063	238.80441	144.94103	2.34832	0.1341955	0.19508981	2.9442837	21	7 21.3	21.0
510728 2012 VZ_{92}	16.4	X	0.69076	275.87370	73.27793	11.36689	0.3426342	0.21602733	2.7508289	21	11 10.4	18.5
510729 2012 VO_{94}	17.3	X	355.45531	350.17638	60.53123	5.77676	0.1549378	0.22666953	2.6640392	21	12 30.9	20.3
510730 2012 VT_{97}	16.9	X	290.08527	231.64725	226.59785	7.90340	0.1400115	0.21947594	2.7219372	21	11 5.4	20.0
510731 2012 VG_{99}	16.8	X	21.37365	309.00630	72.49793	12.40825	0.1901782	0.23078992	2.6322360	21	—	—
510732 2012 VR_{102}	16.5	X	202.15953	359.30023	60.59669	12.32760	0.1032774	0.17739111	3.1370022	21	6 3.5	21.5
510733 2012 VE_{103}	18.2	X	8.66393	281.84854	253.11792	19.48105	0.1000140	0.37717355	1.8971801	21	1 1.7	19.9
510734 2012 VK_{105}	16.6	X	10.57354	97.48281	235.68357	23.71071	0.1660268	0.21468667	2.7622692	21	10 3.9	20.0
510735 2012 VR_{111}	16.9	X	334.41143	136.62440	223.95659	8.26546	0.0788634	0.20506645	2.8479977	21	9 5.6	20.5
510736 2012 VF_{114}	13.7	X	1.92764	347.39214	269.61426	16.48951	0.0165635	0.08084013	5.2972613	21	6 7.7	20.6
510737 2012 VL_{114}	16.5	X	43.31235	227.50728	115.46406	3.15910	0.0785069	0.20593866	2.8399506	21	11 27.9	20.3
510738 2012 WP_{2}	17.6	X	325.31130	308.04888	147.32320	0.92204	0.0464047	0.22934604	2.6432721	21	—	—
510739 2012 WS_{5}	17.1	X	298.77508	125.22591	244.94823	8.32350	0.2346533	0.19879344	2.9076001	21	7 3.5	20.9
510740 2012 WG_{13}	17.5	X	272.25305	28.90678	89.17090	4.42633	0.0523082	0.21782451	2.7356774	21	11 17.8	21.1
510741 2012 WM_{14}	17.6	X	306.60232	231.28780	199.39429	3.63146	0.1386530	0.21369113	2.7708417	21	10 26.2	20.6
510742 2012 WN_{20}	17.5	X	9.23831	123.49457	286.67239	4.23137	0.0423743	0.22804844	2.6532895	21	—	—
510743 2012 XX_{1}	17.3	X	337.92106	337.21957	51.47017	9.28917	0.2299964	0.21421422	2.7663291	21	10 27.5	19.5
510744 2012 XH_{18}	16.5	X	216.44115	189.58528	248.03994	9.03147	0.0431229	0.18636509	3.0354728	21	7 13.9	21.1
510745 2012 XZ_{29}	17.1	X	4.45864	340.49564	60.61219	4.34201	0.1734642	0.22464915	2.6799881	21	—	—
510746 2012 XB_{30}	16.3	X	207.66062	143.67632	262.30745	8.47270	0.0822393	0.17460390	3.1702980	21	5 24.3	21.2
510747 2012 XK_{39}	16.5	X	305.51950	199.30155	245.90923	12.90898	0.0558239	0.21601249	2.7509549	21	11 19.9	20.0
510748 2012 XX_{41}	16.1	X	223.60417	272.72667	256.27717	13.83826	0.0545888	0.21448810	2.7639738	21	11 17.7	20.0
510749 2012 XL_{47}	16.7	X	250.00653	169.01797	235.41705	8.51838	0.1431466	0.18652466	3.0337414	21	6 30.5	21.3
510750 2012 XQ_{50}	17.2	X	72.07174	250.31745	86.33172	5.18392	0.1352588	0.23180367	2.6245560	21	—	—
510751 2012 XW_{53}	17.3	X	300.11944	213.71128	274.91044	4.71671	0.0898419	0.22671217	2.6637052	21	—	—
510752 2012 XK_{56}	18.3	X	265.34468	261.02507	74.16896	23.60886	0.0980730	0.39539435	1.8384384	21	4 22.3	20.8
510753 2012 XW_{62}	16.5	X	262.34015	13.40409	108.35546	10.29176	0.1464360	0.21186828	2.7867120	21	10 29.3	20.4
510754 2012 XL_{94}	17.3	X	285.12618	33.75951	89.12862	9.07776	0.1791145	0.21705360	2.7421511	21	11 26.1	20.4
510755 2012 XW_{110}	17.8	X	73.71819	357.33929	90.84610	24.07632	0.0551262	0.36546658	1.9374817	21	—	—
510756 2012 XF_{123}	16.3	X	212.56797	294.46931	108.98099	15.42774	0.1398454	0.17522329	3.1628226	21	5 27.6	21.5
510757 2012 XH_{126}	16.9	X	48.84209	86.48336	273.80797	6.92440	0.2332454	0.23254504	2.6189749	21	—	—
510758 2012 XJ_{128}	16.4	X	242.18180	109.76996	264.01382	8.80287	0.2546561	0.17823312	3.1271144	21	5 5.8	21.8
510759 2012 XA_{138}	17.2	X	354.55619	1.40913	38.32158	4.72555	0.1705257	0.22106515	2.7088764	21	12 13.8	20.0
510760 2012 XQ_{152}	16.3	X	236.70560	184.12936	67.27555	13.99256	0.1480774	0.23594152	2.5937800	21	—	—
510761 2012 YU_{2}	17.0	X	311.88852	150.77656	280.85547	7.99461	0.2760092	0.21249007	2.7812730	21	10 16.3	19.6
510762 2012 YL_{8}	18.0	X	130.90086	72.34493	48.47015	23.77952	0.0744625	0.39004120	1.8552213	21	5 20.3	19.7
510763 2012 YA_{9}	16.6	X	305.74970	335.30896	113.14956	29.73324	0.1450107	0.21644019	2.7473296	21	11 29.0	20.3
510764 2013 AY_{4}	17.5	X	251.76301	288.03115	136.51077	1.69631	0.1757154	0.18681383	3.0306099	21	7 24.7	22.2
510765 2013 AO_{11}	17.8	X	4.55698	295.45271	280.41895	17.20814	0.0458827	0.38730697	1.8639425	21	2 28.8	19.9
510766 2013 AA_{23}	15.4	X	189.92501	340.86326	130.65443	29.07163	0.1481845	0.17262120	3.1945275	21	7 24.6	20.7
510767 2013 AK_{23}	16.4	X	242.56262	271.24203	127.90044	16.93545	0.2776007	0.17488152	3.1669419	21	6 8.2	21.9
510768 2013 AZ_{25}	17.4	X	337.64296	301.34529	89.09397	6.08166	0.1710576	0.21208098	2.7848485	21	10 29.1	20.2
510769 2013 AS_{32}	16.5	X	219.15829	282.40616	307.96217	8.52403	0.1543248	0.21427780	2.7657819	21	—	—
510770 2013 AZ_{37}	15.8	X	101.64887	89.51036	120.58807	22.54233	0.0563680	0.17517213	3.1634384	21	8 20.7	20.5
510771 2013 AA_{38}	16.8	X	223.33681	156.36797	305.53625	4.36056	0.1220159	0.18290006	3.0736906	21	8 15.4	21.4
510772 2013 AL_{42}	15.8	X	35.64712	324.86354	305.36445	7.77577	0.0485143	0.17415057	3.1757974	21	8 7.7	20.0
510773 2013 AX_{48}	16.8	X	8.09309	320.15986	89.16290	3.51343	0.2312107	0.22618593	2.6678351	21	—	—
510774 2013 AD_{52}	18.1	X	151.74668	163.21937	258.12984	15.27258	0.0621181	0.38359922	1.8759341	21	3 8.6	20.4
510775 2013 AY_{56}	16.5	X	175.73472	23.32245	110.68185	18.33741	0.1631214	0.17527843	3.1621592	21	8 9.4	21.8
510776 2013 AS_{57}	16.7	X	238.09257	327.89826	114.04158	12.57576	0.1967025	0.18350246	3.0669601	21	7 30.7	21.5
510777 2013 AZ_{58}	16.5	X	163.28477	126.19565	141.19270	6.62195	0.0230348	0.21297350	2.7770626	21	—	—
510778 2013 AM_{61}	16.5	X	345.89626	34.97462	321.59221	10.62214	0.1120276	0.19585981	2.9365619	21	9 16.9	20.0
510779 2013 AK_{68}	18.4	X	111.53704	340.63933	128.63528	23.76709	0.0811696	0.38179464	1.8818406	21	4 17.9	20.9
510780 2013 AO_{68}	17.7	X	84.52693	144.75691	323.76752	20.16131	0.0790823	0.37277911	1.9120607	21	2 14.2	19.0
510781 2013 AJ_{70}	17.0	X	338.67178	34.14151	9.78978	8.77934	0.2095892	0.20999035	2.8033016	21	11 14.6	19.7
510782 2013 AM_{71}	16.8	X	182.13027	63.76423	76.39300	16.50172	0.2378249	0.18037238	3.1023397	21	8 26.2	22.5
510783 2013 AU_{72}	18.0	X	193.64197	275.15580	87.37807	24.21863	0.1021270	0.37579949	1.9018018	21	3 4.5	20.9
510784 2013 AS_{83}	18.1	X	119.42354	299.09543	123.13758	24.68745	0.0448383	0.36907307	1.9248393	21	1 28.1	19.5
510785 2013 AZ_{93}	16.4	X	180.40145	30.16158	128.97516	17.00155	0.2484852	0.18189361	3.0850184	21	9 13.5	22.0
510786 2013 AT_{102}	16.3	X	318.84124	87.68585	309.93226	18.27490	0.1685120	0.20055769	2.8905235	21	9 15.8	19.9
510787 2013 AB_{105}	16.4	X	278.55031	96.71046	349.52138	16.11293	0.2163046	0.20196927	2.8770397	21	9 17.2	20.1
510788 2013 AL_{105}	18.0	X	155.18801	256.91969	116.21156	23.41817	0.0972963	0.37037292	1.9203331	21	1 16.9	19.5
510789 2013 AB_{109}	16.4	X	291.98955	106.94942	291.98542	8.05471	0.1302062	0.18831076	3.0145278	21	8 16.1	20.3
510790 2013 AQ_{110}	16.9	X	151.30232	107.61691	116.16268	6.70471	0.0211886	0.20010886	2.8948440	21	11 4.5	21.1
510791 2013 AW_{120}	18.4	X	77.26732	214.30528	277.13488	19.27994	0.0436555	0.38555970	1.8695696	21	2 19.4	20.5
510792 2013 AB_{126}	17.8	X	37.17151	82.49321	96.87517	23.40831	0.0831880	0.37681300	1.8983901	21	3 31.7	20.0
510793 2013 AU_{132}	13.6	X	198.70261	228.54731	329.98247	8.57566	0.0029957	0.08454125	5.1415050	21	11 7.4	20.6
510794 2013 AW_{133}	18.0	X	158.61529	272.30817	128.12553	24.56839	0.1767605	0.37731814	1.8966954	21	3 20.7	20.8
510795 2013 AO_{144}	17.2	X	230.12883	288.67446	157.29486	15.35342	0.2540833	0.18425108	3.0586470	21	7 21.9	22.5
510796 2013 AH_{164}	16.6	X	252.65929	235.97811	181.80215	11.47821	0.1362713	0.18186135	3.0853832	21	7 20.0	21.4
510797 2013 AK_{166}	17.0	X	245.94596	238.96405	187.41917	8.51330	0.1481456	0.18248944	3.0782996	21	7 22.2	21.8
510798 2013 AT_{175}	17.3	X	304.37446	229.47521	183.31222	14.55834	0.1906218	0.19920371	2.9036065	21	9 17.1	20.6
510799 2013 AC_{184}	18.6	X	271.99645	203.49848	89.96290	22.54615	0.0235939	0.37822540	1.8936611	21	3 5.9	21.1
510800 2013 AE_{184}	18.4	X	202.66819	138.14749	281.47254	19.61883	0.0674880	0.39536645	1.8385248	21	5 26.8	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510801 2013 BF_3	16.3	X	229.35124	329.34545	111.59454	17.27925	0.0539384	0.17927933	3.1149368	21	8 4.1	20.8
510802 2013 BR_3	15.5	X	192.24272	148.22199	334.40372	13.25307	0.0684440	0.17757830	3.1347973	21	8 13.9	20.3
510803 2013 BK_9	16.6	X	324.43488	100.91585	312.57469	10.35147	0.0997056	0.20439475	2.8542339	21	10 28.6	20.3
510804 2013 BV_{11}	16.9	X	256.05836	37.13142	95.01330	11.52702	0.0926264	0.20452862	2.8529883	21	11 9.4	20.9
510805 2013 BO_{21}	15.9	X	126.41283	75.52695	112.66903	17.22938	0.1867353	0.17356133	3.1829811	21	9 3.9	21.3
510806 2013 BF_{25}	17.8	X	224.62769	278.96124	186.34542	0.62056	0.2540608	0.18391033	3.0624239	21	8 10.6	23.0
510807 2013 BS_{27}	18.4	X	202.99526	197.87454	140.93184	23.99744	0.0765800	0.36921453	1.9243476	21	1 27.8	20.6
510808 2013 BE_{29}	15.6	X	143.81853	234.90204	337.23172	26.42842	0.2291192	0.17494453	3.1661815	21	10 1.2	21.4
510809 2013 BU_{29}	16.1	X	318.68212	250.37243	91.28946	9.36019	0.0824264	0.17653829	3.1470968	21	7 19.8	20.2
510810 2013 BX_{29}	16.4	X	84.59389	203.07072	94.24025	11.43636	0.1203822	0.20088095	2.8874216	21	11 26.8	20.7
510811 2013 BT_{30}	17.3	X	278.12428	14.81027	40.01722	3.22908	0.1648682	0.18973139	2.9994613	21	8 16.1	21.3
510812 2013 BF_{32}	15.7	X	82.67138	119.46185	114.15632	26.30296	0.1613602	0.17244395	3.1967162	21	9 15.8	20.8
510813 2013 BQ_{41}	16.6	X	317.29035	257.98273	128.95303	9.30316	0.0786539	0.18764245	3.0216813	21	9 19.4	20.5
510814 2013 BJ_{42}	15.9	X	34.76445	239.79900	134.20776	16.08628	0.1294396	0.21102831	2.7941019	21	—	—
510815 2013 BK_{62}	16.1	X	108.09915	96.61318	128.82788	10.58786	0.0312479	0.17870210	3.1216409	21	9 14.8	20.6
510816 2013 BM_{69}	15.5	X	72.80152	139.83846	111.55499	12.29678	0.0477599	0.17815003	3.1280867	21	9 7.0	20.0
510817 2013 BA_{70}	18.4	X	290.56556	197.25305	130.88775	24.60762	0.0675610	0.39172446	1.8499028	21	5 21.3	20.9
510818 2013 BB_{72}	16.5	X	248.44534	203.15641	224.74631	2.80447	0.1288918	0.18240901	3.0792045	21	7 30.0	21.1
510819 2013 BZ_{72}	18.2	X	154.60666	287.39178	181.72814	23.28712	0.0845458	0.39610681	1.8362332	21	6 11.0	20.9
510820 2013 BT_{73}	18.5	X	225.89399	24.97977	355.44823	18.97224	0.0493875	0.39095931	1.8523157	21	4 18.6	20.7
510821 2013 BK_{74}	17.4	X	251.28995	54.30005	17.05062	1.65612	0.2478206	0.18831830	3.0144473	21	7 25.2	22.0
510822 2013 BL_{75}	15.7	X	233.47242	326.40372	113.11101	10.77251	0.0628918	0.17658269	3.1465693	21	8 5.9	20.2
510823 2013 BC_{77}	17.0	X	346.79020	310.37554	120.32411	5.71791	0.1016256	0.21117979	2.7927656	21	—	—
510824 2013 BG_{77}	16.6	X	158.95136	48.67597	126.56349	15.74233	0.1428717	0.17968171	3.1102846	21	9 15.6	21.8
510825 2013 CD	18.2	X	80.78218	19.29331	118.41865	25.16004	0.0514554	0.37620464	1.9004362	21	4 8.9	20.7
510826 2013 CB_4	16.8	X	261.18811	154.93506	279.75372	6.61212	0.1945527	0.18781406	3.0198403	21	8 12.7	21.4
510827 2013 CE_4	16.5	X	264.06413	161.07577	293.23502	9.61977	0.0588977	0.19161265	2.9797965	21	9 26.6	20.8
510828 2013 CL_6	17.0	X	339.53448	270.62452	161.60735	6.50244	0.0426431	0.20981976	2.8048208	21	12 20.6	20.8
510829 2013 CF_{15}	16.0	X	357.46814	202.32950	136.43675	12.78569	0.0243396	0.17987633	3.1080408	21	9 14.9	20.3
510830 2013 CT_{17}	16.9	X	184.10103	59.90391	114.17437	5.82389	0.1227364	0.18292199	3.0734450	21	10 6.5	21.8
510831 2013 CZ_{18}	16.5	X	259.48769	278.70032	149.44945	16.51424	0.2498847	0.18095904	3.0956311	21	7 27.6	21.3
510832 2013 CZ_{20}	16.9	X	296.48963	251.82313	218.89931	1.22343	0.0162175	0.20576658	2.8415337	21	12 11.2	20.8
510833 2013 CJ_{24}	16.3	X	164.14756	214.11790	341.52562	9.32811	0.1785581	0.18159813	3.0883639	21	10 7.3	21.5
510834 2013 CU_{29}	16.6	X	174.15898	19.63745	133.09214	18.70003	0.1708829	0.17633421	3.1495245	21	8 31.0	21.9
510835 2013 CF_{32}	17.9	X	162.69779	244.28780	142.68018	25.13817	0.0846513	0.36755872	1.9301226	21	2 16.4	19.7
510836 2013 CJ_{33}	16.2	X	197.47412	214.43684	288.60273	13.45005	0.1556696	0.18214757	3.0821502	21	9 1.2	21.5
510837 2013 CC_{34}	17.9	X	331.37956	73.47056	139.70516	23.78334	0.1095496	0.36300055	1.9462466	21	1 8.7	20.2
510838 2013 CN_{36}	18.2	X	243.09606	158.57139	148.86829	23.74960	0.0869969	0.36767118	1.9297290	21	2 1.4	20.7
510839 2013 CW_{36}	16.4	X	191.01590	336.24292	154.30817	14.64211	0.1704679	0.17811168	3.1285357	21	8 16.3	21.5
510840 2013 CS_{40}	18.1	X	148.54531	305.52965	151.44170	22.87927	0.1061063	0.38444143	1.8731933	21	5 23.0	20.9
510841 2013 CL_{43}	16.5	X	130.35492	131.48287	122.70537	11.76769	0.3346698	0.18370405	3.0647159	21	11 26.7	22.3
510842 2013 CO_{44}	16.5	X	105.82318	161.01754	103.68433	3.58904	0.2433975	0.18268429	3.0761104	21	11 15.7	21.6
510843 2013 CC_{46}	18.1	X	88.32157	143.17446	316.70546	17.78361	0.0822604	0.36830518	1.9275138	21	2 8.3	19.2
510844 2013 CM_{47}	17.1	X	237.97546	32.14834	77.36925	6.10571	0.1407955	0.18704028	3.0281633	21	9 11.5	21.7
510845 2013 CO_{47}	16.9	X	292.73198	152.34107	262.46728	3.01570	0.1141452	0.18540298	3.0459650	21	9 9.9	20.9
510846 2013 CM_{53}	16.2	X	145.51330	252.46395	321.01253	6.45372	0.1000779	0.18303990	3.0721249	21	10 10.7	21.1
510847 2013 CJ_{59}	18.2	X	183.75467	217.39672	136.18171	24.38969	0.0819016	0.36780832	1.9292493	21	1 25.4	20.5
510848 2013 CF_{60}	16.3	X	223.97456	293.93659	147.79847	10.11902	0.0635680	0.17407943	3.1766625	21	7 26.8	21.0
510849 2013 CE_{61}	16.4	X	279.58280	140.85065	343.00777	14.66581	0.0855827	0.20423113	2.8557582	21	11 22.9	20.4
510850 2013 CR_{62}	18.6	X	149.51050	89.44739	323.61174	18.08941	0.1024489	0.37382890	1.9084794	21	3 4.2	20.7
510851 2013 CT_{67}	16.7	X	227.81169	63.13116	156.85955	12.45453	0.1010908	0.21218849	2.7839077	21	—	—
510852 2013 CB_{70}	17.4	X	263.43229	350.77720	128.56744	7.29659	0.2191257	0.19849386	2.9105250	21	10 13.6	21.5
510853 2013 CY_{70}	16.4	X	121.67803	57.64597	151.08268	17.07428	0.1703073	0.17570461	3.1570439	21	9 21.1	21.5
510854 2013 CU_{73}	17.1	X	179.24885	16.18589	105.33574	2.36879	0.1386781	0.17380508	3.1800046	21	7 27.2	22.1
510855 2013 CG_{75}	16.2	X	116.67051	295.69344	324.77807	15.99328	0.2143309	0.18242899	3.0789796	21	11 11.4	21.7
510856 2013 CM_{75}	16.7	X	245.11181	159.56977	313.30164	8.00056	0.0805838	0.18635674	3.0355634	21	9 24.4	21.1
510857 2013 CO_{76}	16.6	X	227.27605	326.20614	113.26050	14.09922	0.1445001	0.17467094	3.1694868	21	7 21.2	21.5
510858 2013 CY_{78}	17.1	X	284.65474	324.68923	120.24683	3.62334	0.1945350	0.20011731	2.8947626	21	9 30.6	20.7
510859 2013 CJ_{79}	18.2	X	83.02043	150.11305	1.83980	21.02519	0.0518766	0.38167988	1.8822178	21	4 12.9	19.9
510860 2013 CF_{85}	17.0	X	131.99327	51.69680	125.37663	1.97335	0.1011723	0.17333994	3.1856908	21	8 16.4	21.7
510861 2013 CP_{86}	17.7	X	305.67313	280.58555	337.21283	17.19202	0.0416676	0.36732017	1.9309582	21	2 18.9	19.4
510862 2013 CD_{88}	17.6	X	238.80872	180.50452	138.79975	23.32209	0.0642085	0.36736973	1.9307845	21	2 15.0	19.6
510863 2013 CO_{91}	16.5	X	118.05459	189.55494	137.43893	10.31231	0.1262461	0.21724699	2.7405235	21	—	—
510864 2013 CX_{94}	16.5	X	288.04095	237.03850	157.03621	9.72587	0.1415160	0.17956880	3.1115883	21	8 3.1	20.8
510865 2013 CJ_{97}	16.3	X	123.55217	105.22722	142.53710	10.79051	0.0236886	0.19034319	2.9930306	21	11 1.2	20.7
510866 2013 CR_{97}	17.1	X	259.95527	298.54589	125.40042	2.20928	0.1675592	0.18086328	3.0967237	21	8 3.2	21.7
510867 2013 CB_{107}	16.3	X	267.99717	359.27575	45.59139	4.02663	0.1933053	0.17885849	3.1198210	21	7 16.5	20.8
510868 2013 CH_{108}	16.6	X	148.47269	235.05524	340.44305	10.50888	0.1059601	0.18401454	3.0612675	21	10 15.1	21.5
510869 2013 CG_{109}	16.8	X	264.07426	85.13191	339.16799	25.41419	0.2436721	0.18531662	3.0469112	21	8 6.6	21.6
510870 2013 CJ_{109}	16.1	X	211.75753	7.96396	125.21891	17.76548	0.1340947	0.18315316	3.0708583	21	9 15.3	21.1
510871 2013 CQ_{110}	16.6	X	264.10202	303.70745	124.42895	12.02525	0.0717553	0.17983167	3.1085553	21	8 29.1	21.0
510872 2013 CK_{115}	16.0	X	113.22105	101.29431	135.59320	10.71429	0.0608646	0.17781223	3.1320472	21	10 8.9	20.7
510873 2013 CD_{118}	17.8	X	336.74979	240.19016	343.06995	18.24507	0.0798999	0.36295992	1.9463918	21	2 11.2	19.7
510874 2013 CS_{120}	16.2	X	260.85326	3.26187	47.75159	10.50695	0.1227619	0.17957728	3.1114903	21	7 27.6	20.8
510875 2013 CF_{122}	17.1	X	200.22122	29.41162	115.36292	4.44035	0.1749662	0.18348014	3.0672088	21	9 12.9	22.2
510876 2013 CK_{126}	15.7	X	45.06781	125.66006	139.59756	10.33127	0.0463075	0.17396692	3.1780321	21	8 14.7	19.8
510877 2013 CG_{127}	16.6	X	172.04343	93.49719	74.23273	6.02344	0.0990516	0.17757309	3.1348585	21	9 17.7	21.5
510878 2013 CO_{128}	17.7	X	257.67513	31.63559	310.93313	19.37788	0.0561423	0.37896491	1.8911968	21	3 31.8	20.3
510879 2013 CS_{128}	17.9	X	153.38000	249.75633	143.11884	22.73914	0.1013677	0.36650730	1.9338122	21	2 14.8	19.9
510880 2013 CX_{130}	16.6	X	233.40849	358.41669	67.00099	3.08168	0.1277379	0.17248510	3.1962077	21	7 11.8	21.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510881 2013 CT_{132}	18.1	X	75.71959	337.52268	140.92615	24.98237	0.0532579	0.37171451	1.9157097	21	2 12.8	19.5
510882 2013 CT_{135}	18.7	X	5.91687	144.94715	347.01102	16.57381	0.1333013	0.34933579	1.9966748	21	—	—
510883 2013 CB_{142}	17.0	X	244.17056	350.55884	112.50567	7.12037	0.1297623	0.18577816	3.0418628	21	9 11.1	21.5
510884 2013 CQ_{143}	16.8	X	203.80539	200.92236	320.54807	5.49465	0.0942707	0.18668873	3.0319636	21	10 7.7	21.5
510885 2013 CY_{143}	17.6	X	198.71385	128.17934	43.84732	0.57214	0.1692338	0.19071711	2.9891172	21	10 13.2	22.2
510886 2013 CC_{144}	16.1	X	113.52262	295.26562	315.69541	15.78484	0.2334976	0.17854017	3.1235281	21	10 28.4	21.7
510887 2013 CQ_{147}	16.8	X	116.34099	184.94454	43.83850	3.28944	0.0306685	0.17879536	3.1205553	21	9 26.9	21.2
510888 2013 CW_{152}	16.8	X	274.50917	269.04842	135.65096	16.46167	0.3215888	0.18320428	3.0702870	21	7 6.2	21.6
510889 2013 CP_{158}	16.4	X	111.14385	275.90445	341.05288	8.35517	0.1291127	0.17979875	3.1089348	21	10 29.7	21.4
510890 2013 CK_{164}	16.8	X	205.46636	227.64146	354.50580	11.24307	0.0571639	0.20501591	2.8484658	21	12 31.7	21.1
510891 2013 CU_{170}	16.4	X	145.40824	248.06080	327.74918	11.80947	0.1133246	0.18130188	3.0917273	21	10 11.1	21.5
510892 2013 CH_{173}	16.1	X	84.53449	269.80218	340.13772	15.32072	0.0512517	0.17294732	3.1905104	21	9 13.5	20.6
510893 2013 CX_{174}	16.2	X	182.63102	216.84621	333.52034	10.05935	0.1108823	0.18524427	3.0477045	21	10 18.0	21.1
510894 2013 CE_{178}	17.0	X	236.71751	277.62010	212.01690	5.99381	0.1905046	0.19079419	2.9883121	21	9 24.9	21.5
510895 2013 CA_{181}	16.1	X	132.51540	314.73459	290.01968	8.26865	0.1146316	0.18630087	3.0361703	21	11 5.4	21.0
510896 2013 CU_{189}	16.8	X	298.35487	323.24453	154.21394	4.61696	0.0553826	0.21120873	2.7925104	21	12 20.5	20.5
510897 2013 CC_{190}	16.4	X	143.97152	271.06685	314.78281	14.12673	0.1606075	0.18450581	3.0558312	21	10 21.9	21.7
510898 2013 CS_{190}	15.8	X	47.02767	356.56629	295.01864	11.63515	0.1363596	0.17888330	3.1195325	21	9 26.3	20.2
510899 2013 CR_{191}	18.5	X	123.98671	283.18761	162.04893	22.81770	0.1164477	0.37845773	1.8928860	21	3 27.9	20.4
510900 2013 CD_{194}	16.3	X	327.20127	280.86281	105.37995	11.64301	0.0597657	0.18750027	3.0232086	21	10 7.4	20.4
510901 2013 CD_{197}	17.1	X	191.79254	22.97984	133.44569	5.74241	0.0937610	0.18260670	3.0769817	21	9 23.3	21.8
510902 2013 CP_{206}	17.1	X	251.04662	112.09266	316.84511	15.69548	0.2149101	0.18043100	3.1016678	21	7 26.8	21.9
510903 2013 CY_{209}	16.3	X	297.61218	123.24096	271.34928	7.63010	0.1314464	0.18755509	3.0226195	21	8 17.5	20.3
510904 2013 CX_{210}	13.5	X	288.53696	266.97376	189.66704	19.51093	0.0352847	0.08077392	5.3001554	21	10 25.5	20.4
510905 2013 CH_{224}	16.9	X	170.17209	359.65800	186.28777	8.60898	0.0163254	0.18540731	3.0459176	21	10 7.0	21.2
510906 2013 DR	18.1	X	312.34886	348.26945	303.11534	17.57635	0.0739839	0.38313524	1.8774483	21	3 31.1	20.4
510907 2013 DX_{6}	15.7	X	238.69913	312.96944	138.63558	11.58832	0.0238149	0.17714572	3.1398985	21	9 1.9	20.2
510908 2013 DO_{8}	17.0	X	175.14247	303.29325	197.48740	9.50501	0.1648282	0.17178846	3.2048427	21	8 12.6	22.5
510909 2013 DR_{8}	16.7	X	142.35702	119.77030	82.73262	2.51031	0.1183162	0.17457192	3.1706852	21	9 28.7	21.7
510910 2013 DS_{11}	17.9	X	245.51356	182.87367	127.83279	28.46812	0.0921373	0.36875382	1.9259501	21	2 10.2	20.2
510911 2013 DJ_{14}	15.7	X	73.17545	353.94389	299.02812	11.03447	0.1242731	0.18490114	3.0514739	21	11 1.1	20.4
510912 2013 EM	18.0	X	165.91366	221.39914	155.06513	23.08393	0.1124638	0.36459953	1.9405521	21	2 8.2	20.2
510913 2013 EG_{1}	16.6	X	133.78100	252.60885	327.32213	9.25685	0.0489925	0.18443591	3.0566032	21	10 3.0	21.2
510914 2013 EQ_{1}	16.8	X	251.38708	127.15147	354.00793	12.90871	0.1058006	0.19048381	2.9915574	21	10 9.5	21.2
510915 2013 EM_{2}	17.0	X	298.35204	0.17053	82.15144	10.24504	0.1372273	0.20144413	2.8820376	21	10 29.7	20.6
510916 2013 EN_{6}	17.1	X	174.45494	24.03890	174.33910	5.05875	0.0889273	0.18514086	3.0488393	21	10 25.8	21.7
510917 2013 EC_{9}	16.5	X	106.44409	278.56546	333.90988	7.72793	0.1527846	0.17719179	3.1393542	21	10 21.6	21.6
510918 2013 EP_{11}	18.3	X	200.95438	272.08608	147.19036	25.41796	0.1619313	0.38648248	1.8665925	21	5 31.1	21.6
510919 2013 EK_{16}	16.9	X	294.25396	300.94865	134.27431	6.10925	0.1064649	0.18880928	3.0092192	21	10 14.5	20.8
510920 2013 EM_{16}	16.5	X	84.67178	134.72653	149.32289	10.34977	0.1459290	0.17918905	3.1159829	21	11 12.1	21.3
510921 2013 EJ_{18}	17.1	X	265.31875	172.24367	322.03298	5.13123	0.0393435	0.20168150	2.8797758	21	11 25.9	21.0
510922 2013 EU_{24}	15.6	X	72.70405	310.51518	350.34965	15.81100	0.0640677	0.18308447	3.0716263	21	10 30.4	20.3
510923 2013 EU_{30}	16.2	X	130.97510	91.47953	136.28544	7.53000	0.1450568	0.17347146	3.1840804	21	10 20.7	21.4
510924 2013 EJ_{34}	16.2	X	245.54777	106.79998	329.64378	26.81168	0.1228383	0.17985648	3.1082695	21	8 12.4	20.9
510925 2013 ED_{40}	16.7	X	247.39523	32.61220	67.39929	9.55335	0.1068760	0.18975700	2.9991914	21	9 16.8	21.1
510926 2013 EL_{41}	17.9	X	292.08630	345.04677	333.06891	16.47181	0.0625386	0.37841912	1.8930148	21	4 16.5	20.1
510927 2013 EU_{43}	16.6	X	151.11237	217.72668	347.72895	10.64288	0.1039079	0.17809010	3.1287885	21	10 6.3	21.5
510928 2013 EW_{49}	16.6	X	151.98040	18.89519	185.78143	4.87208	0.0887954	0.17816569	3.1279034	21	10 9.2	21.4
510929 2013 EX_{51}	15.5	X	329.94694	75.70220	159.06490	9.57883	0.1519940	0.12510509	3.9593089	21	3 19.2	20.5
510930 2013 EK_{58}	16.4	X	76.73645	259.41200	5.55595	10.71159	0.0293801	0.17336999	3.1853227	21	9 22.6	21.0
510931 2013 EZ_{62}	16.2	X	255.39705	278.26352	168.20987	16.93314	0.2135652	0.17916967	3.1162076	21	8 18.6	21.0
510932 2013 EA_{67}	17.9	X	168.65839	349.88726	98.28277	24.81333	0.0744081	0.38283257	1.8784377	21	6 2.2	20.3
510933 2013 EH_{75}	16.9	X	177.65903	21.30841	164.62007	11.77207	0.1622922	0.17935660	3.1140420	21	10 12.8	22.1
510934 2013 EU_{90}	15.8	X	192.93534	145.25837	84.49482	13.81744	0.1357926	0.19916642	2.9039690	21	12 17.7	20.3
510935 2013 EA_{93}	18.1	X	156.97627	90.77083	7.89213	20.62645	0.0943619	0.38598413	1.8681988	21	5 19.5	20.7
510936 2013 ED_{94}	17.9	X	342.63890	245.68177	344.13768	18.51819	0.0529997	0.36635274	1.9343561	21	3 2.4	19.4
510937 2013 EC_{97}	16.4	X	118.76486	218.93598	15.47845	9.22339	0.0459308	0.17501611	3.1653182	21	10 6.7	20.9
510938 2013 EM_{101}	15.9	X	157.31944	127.77518	145.20939	19.30330	0.0684675	0.19951262	2.9006086	21	—	—
510939 2013 EL_{103}	15.8	X	100.29719	160.47451	97.26199	12.34327	0.1398242	0.17531100	3.1617676	21	10 28.9	20.8
510940 2013 EM_{104}	16.4	X	200.81431	135.16168	16.61010	5.77481	0.1128313	0.17780180	3.1321697	21	9 24.3	21.1
510941 2013 ES_{104}	15.5	X	86.61418	139.27381	170.34216	17.75960	0.2382454	0.18026973	3.1035173	21	12 20.1	20.9
510942 2013 EP_{107}	18.4	X	341.39095	24.08805	172.12512	23.08577	0.0431979	0.35443834	1.9774655	21	1 9.5	21.1
510943 2013 EO_{118}	18.3	X	147.32356	275.21153	182.82397	20.56460	0.1197513	0.38314662	1.8774111	21	5 20.6	20.9
510944 2013 EQ_{119}	16.5	X	156.72976	252.82231	316.45569	15.31632	0.2357069	0.17808031	3.1289031	21	10 12.5	22.3
510945 2013 EC_{122}	16.6	X	145.54589	222.07533	3.22647	9.95365	0.1745619	0.17789022	3.1311317	21	10 26.3	21.8
510946 2013 EB_{126}	16.7	X	137.41899	50.51694	178.46562	14.25113	0.2011311	0.17302511	3.1895540	21	10 29.2	22.1
510947 2013 EA_{155}	17.1	X	151.51284	181.96074	30.71701	0.53612	0.1200729	0.17756949	3.1349009	21	10 18.4	22.0
510948 2013 EF_{155}	16.6	X	104.09023	71.71352	174.50545	9.79664	0.0183518	0.17962736	3.1109120	21	10 2.2	21.1
510949 2013 EG_{155}	16.7	X	307.97550	219.00698	176.95336	2.83624	0.1744969	0.17959723	3.1112599	21	8 31.8	20.5
510950 2013 FR_{14}	15.8	X	173.35983	62.12780	122.43359	9.67988	0.1219839	0.17584472	3.1553667	21	10 9.7	20.9
510951 2013 FU_{14}	16.1	X	185.29510	112.25392	136.46114	12.95372	0.0837476	0.19837240	2.9117129	21	—	—
510952 2013 FR_{21}	16.2	X	108.42959	241.11044	18.91522	16.61431	0.0981962	0.17388093	3.1790796	21	10 27.6	21.1
510953 2013 FS_{21}	16.5	X	167.26966	22.50127	149.41573	2.16784	0.1182370	0.16914702	3.2381215	21	9 14.7	21.5
510954 2013 FX_{21}	16.8	X	199.49011	167.53928	11.24421	8.36028	0.1582804	0.18216501	3.0819535	21	10 20.4	21.8
510955 2013 FB_{29}	16.5	X	225.94430	39.61892	81.02353	6.04236	0.0416022	0.17163622	3.2067376	21	9 21.8	21.2
510956 2013 GV_{1}	16.1	X	234.00409	160.64159	0.83713	18.02658	0.1138250	0.18946285	3.0022949	21	11 2.9	20.7
510957 2013 GD_{21}	16.1	X	186.73824	49.74417	139.30843	28.34630	0.2266693	0.17590804	3.1546094	21	10 27.5	22.0
510958 2013 GF_{24}	16.2	X	204.61311	269.72242	227.72374	6.41276	0.1195633	0.17287455	3.1914056	21	9 6.4	21.2
510959 2013 GL_{34}	16.5	X	230.79686	260.96874	203.61413	12.56770	0.0564016	0.17779095	3.1322972	21	8 30.7	21.3
510960 2013 GW_{44}	17.8	X	88.38644	284.06126	197.98420	20.22238	0.0700025	0.36577543	1.9363909	21	3 13.9	19.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
510961 2013 GP_{45}	16.2	X	162.04434	28.18131	183.06983	18.72953	0.1533713	0.17891036	3.1192180	21	10 28.8	21.4
510962 2013 GZ_{51}	18.1	X	206.44077	358.77673	13.95880	20.40023	0.0444463	0.36811904	1.9281635	21	3 25.9	20.2
510963 2013 GU_{56}	16.4	X	178.50096	16.97470	152.14915	5.88631	0.1614685	0.17355161	3.1831000	21	9 22.2	21.7
510964 2013 GO_{67}	16.6	X	343.52214	100.59415	237.98830	2.25052	0.0319541	0.16878499	3.2427502	21	8 21.9	21.1
510965 2013 GA_{68}	16.2	X	169.27001	46.06984	143.05212	11.24670	0.1674217	0.17440778	3.1726743	21	10 10.1	21.5
510966 2013 GS_{68}	18.1	X	152.79915	55.88989	44.59543	21.93393	0.0947912	0.37937989	1.8898174	21	5 21.9	20.3
510967 2013 GT_{68}	18.2	X	111.80088	85.42794	40.98375	22.21901	0.1392790	0.37646633	1.8995554	21	5 12.3	20.0
510968 2013 GN_{69}	18.5	X	156.44767	218.19248	226.21152	19.02834	0.0936291	0.37304207	1.9111620	21	5 6.2	20.2
510969 2013 GY_{74}	16.5	X	143.55305	180.77415	55.90579	10.26883	0.0910790	0.17792762	3.1306929	21	11 8.2	21.3
510970 2013 GE_{98}	16.7	X	168.81097	162.54775	38.61697	8.75617	0.1972976	0.17622352	3.1508433	21	10 20.8	22.1
510971 2013 GR_{98}	16.2	X	192.38266	133.80892	48.45580	10.95406	0.2026687	0.17851022	3.1238775	21	10 19.4	21.5
510972 2013 GZ_{103}	16.9	X	228.94527	305.29243	199.10870	5.76271	0.2391469	0.18435875	3.0574560	21	9 30.8	21.9
510973 2013 GX_{116}	16.2	X	90.29163	263.49560	23.18828	11.28886	0.1162672	0.17642647	3.1484264	21	11 11.9	21.1
510974 2013 GO_{132}	16.8	X	181.42078	228.97413	333.59451	1.87001	0.0843550	0.18469993	3.0536896	21	11 5.1	21.4
510975 2013 GM_{138}	18.2	X	82.69734	69.01757	45.45443	22.15818	0.1137000	0.35766702	1.9655471	21	3 19.9	20.4
510976 2013 HB	18.7	X	111.83936	41.57622	64.30350	23.00711	0.0849125	0.36423478	1.9418474	21	4 17.8	21.1
510977 2013 HJ	18.2	X	158.22287	258.96595	201.87532	23.03361	0.1108166	0.37760466	1.8957358	21	6 4.4	20.9
510978 2013 HE_{5}	15.9	X	202.40399	46.39566	80.58184	13.55228	0.1569147	0.17159459	3.2072562	21	8 28.6	21.3
510979 2013 HC_{7}	15.4	X	162.00917	79.75975	165.79335	12.49488	0.1224577	0.17773367	3.1329700	21	12 6.7	20.6
510980 2013 HZ_{8}	15.5	X	177.08924	82.55039	75.44487	25.03826	0.2164384	0.17308585	3.1888077	21	9 19.4	21.4
510981 2013 HC_{11}	16.2	X	232.44015	15.08419	147.92689	24.39738	0.1657811	0.18306171	3.0718809	21	11 9.9	21.3
510982 2013 HR_{12}	15.8	X	200.84190	102.41761	35.89023	23.79166	0.1916772	0.17094894	3.2153266	21	9 15.5	21.5
510983 2013 HM_{18}	18.1	X	340.20687	107.12325	96.98238	24.75833	0.1341168	0.35863094	1.9620236	21	1 3.7	20.1
510984 2013 HC_{23}	17.8	X	74.18807	123.15493	72.06806	21.91109	0.0552642	0.37788216	1.8948076	21	6 19.8	19.4
510985 2013 HC_{41}	16.4	X	264.77373	109.73155	7.30727	10.12448	0.0635808	0.18059999	3.0997326	21	10 26.6	20.7
510986 2013 HF_{80}	16.4	X	190.39714	129.24785	25.77689	9.81245	0.1584214	0.17035144	3.2228407	21	9 17.9	21.7
510987 2013 HM_{125}	16.6	X	247.26044	161.47370	306.51777	6.19518	0.2167206	0.17801453	3.1296738	21	9 4.7	21.4
510988 2013 HJ_{144}	16.4	X	224.02736	287.05542	221.13381	19.29322	0.2238833	0.18157408	3.0886366	21	9 29.1	21.6
510989 2013 JX_{3}	16.3	X	202.06330	182.87091	64.34672	16.47409	0.1968985	0.20143484	2.8821262	21	—	—
510990 2013 JH_{5}	16.2	X	216.80220	54.07116	88.61256	11.86500	0.1839559	0.17742237	3.1366337	21	9 28.8	21.4
510991 2013 JM_{5}	15.4	X	250.06308	52.33252	89.97707	22.51846	0.0433371	0.17899321	3.1182554	21	11 19.9	20.0
510992 2013 JX_{35}	17.9	X	346.34924	142.13278	122.72383	27.57762	0.1782616	0.36629483	1.9345599	21	5 4.1	20.2
510993 2013 JU_{40}	16.1	X	178.81795	107.85727	88.93482	10.92319	0.0865897	0.17086768	3.2163461	21	10 29.9	21.2
510994 2013 JB_{57}	18.7	X	41.98981	114.13181	56.03504	24.68818	0.0977208	0.35968876	1.9581749	21	4 1.3	20.9
510995 2013 JP_{62}	16.3	X	229.07582	308.75047	213.02299	14.50145	0.1794729	0.18179507	3.0861331	21	10 27.6	21.0
510996 2013 KA_{3}	18.8	X	340.92260	53.94466	282.41099	21.75860	0.1580647	0.49135293	1.5905244	21	9 3.8	19.8
510997 2013 KW_{17}	16.1	X	175.05007	84.16493	145.88229	19.07888	0.1925934	0.17583970	3.1554267	21	11 30.7	21.7
510998 2013 LB_{15}	18.3	X	73.35657	53.62717	121.16989	25.10337	0.0994580	0.36912642	1.9246538	21	6 3.1	20.6
510999 2013 LE_{30}	17.9	X	232.34085	217.77156	128.53592	24.54562	0.0811754	0.35209871	1.9862158	21	3 28.0	20.9
511000 2013 LA_{36}	18.1	X	359.88245	138.37776	110.34132	24.14369	0.0668348	0.36627890	1.9346160	21	5 16.5	20.4
511001 2013 MW_{5}	18.0	X	349.55221	28.86504	235.96350	19.93429	0.0333401	0.35985439	1.9575740	21	5 14.9	19.7
511002 2013 MZ_{5}	20.1	X	347.41155	274.14081	93.50302	29.14605	0.1766404	0.50949516	1.5525396	21	—	—
511003 2013 NG_{18}	18.0	X	140.54463	42.08836	302.18683	5.99526	0.2151835	0.30608377	2.1805992	21	—	—
511004 2013 NN_{21}	17.8	X	81.27485	244.08409	103.53821	3.03157	0.2554957	0.28505631	2.2865583	21	—	—
511005 2013 OD_{6}	18.5	X	102.54710	101.13314	217.34258	3.20157	0.1863919	0.28309589	2.2971023	21	—	—
511006 2013 OZ_{7}	18.2	X	101.10036	87.61403	226.39660	3.95809	0.2824236	0.28420995	2.2910955	21	—	—
511007 2013 PD_{4}	18.4	X	209.50729	209.44652	49.47819	4.97357	0.1423608	0.30587430	2.1815947	21	—	—
511008 2013 PX_{6}	18.5	X	303.06508	229.65506	187.41096	13.66087	0.6513553	0.23558799	2.5963742	21	7 4.2	22.6
511009 2013 PM_{14}	18.0	X	95.85938	76.19833	312.63447	4.69012	0.1410726	0.29695723	2.2250517	21	—	—
511010 2013 PV_{23}	18.3	X	5.43053	141.31882	307.52419	3.14067	0.2045636	0.28168067	2.3047900	21	—	—
511011 2013 PU_{26}	18.4	X	218.01280	66.79834	181.58156	3.25105	0.1327594	0.30103724	2.2049017	21	—	—
511012 2013 PT_{37}	17.8	X	160.75616	220.61749	76.08537	6.16903	0.1138041	0.29774435	2.2211285	21	—	—
511013 2013 PA_{56}	18.3	X	123.12498	45.08777	307.33179	2.55412	0.0728369	0.29662688	2.2267034	21	—	—
511014 2013 PD_{71}	18.2	X	65.08290	68.28486	308.59021	2.26164	0.2196678	0.28344347	2.2952240	21	—	—
511015 2013 PD_{73}	18.4	X	76.85733	225.34768	88.02843	3.26695	0.2241828	0.27277592	2.3546808	21	12 27.9	22.1
511016 2013 QJ_{1}	16.9	X	78.26307	48.23992	295.27581	22.56402	0.2728612	0.27713289	2.3299361	21	—	—
511017 2013 QU_{2}	18.4	X	83.09078	44.24477	275.33414	2.08086	0.2398958	0.27792192	2.3255241	21	—	—
511018 2013 QK_{3}	18.6	X	86.56300	170.13534	206.96470	2.66407	0.2053127	0.29147925	2.2528431	21	—	—
511019 2013 QJ_{6}	17.3	X	71.24159	230.65524	133.45652	24.12975	0.2880550	0.28082036	2.3094948	21	—	—
511020 2013 QN_{20}	17.5	X	45.05973	284.75495	121.18142	6.36223	0.0921415	0.28835258	2.2690992	21	—	—
511021 2013 QQ_{25}	17.9	X	15.27459	276.33837	146.49268	3.29273	0.2093702	0.27995233	2.3142663	21	—	—
511022 2013 QB_{26}	18.1	X	103.99584	225.15457	147.54537	7.16817	0.2421582	0.29573344	2.2311859	21	—	—
511023 2013 QB_{41}	17.9	X	9.14390	125.00008	303.37779	5.04466	0.1397161	0.28051582	2.3111660	21	—	—
511024 2013 QW_{41}	18.2	X	8.59079	233.35367	183.64403	5.26893	0.1435561	0.27657172	2.3330866	21	—	—
511025 2013 QO_{47}	17.7	X	81.88877	105.39735	268.35775	6.27335	0.1516652	0.28655688	2.2785688	21	—	—
511026 2013 QZ_{56}	18.1	X	146.53277	304.43396	44.99127	4.47331	0.1408164	0.30456918	2.1878225	21	—	—
511027 2013 QH_{61}	18.0	X	124.97366	52.66971	317.99264	7.89981	0.2310247	0.30393186	2.1908799	21	1 9.8	20.3
511028 2013 QD_{66}	18.9	X	39.94809	176.02541	217.62075	1.65772	0.2287111	0.27858975	2.3218062	21	—	—
511029 2013 QL_{72}	18.5	X	101.38546	272.64353	121.22114	5.62546	0.1771714	0.29954510	2.2122179	21	—	—
511030 2013 QF_{81}	17.7	X	71.99772	171.78951	188.99614	25.06421	0.2037955	0.28304311	2.2973879	21	—	—
511031 2013 QH_{89}	18.6	X	79.02447	46.89498	333.60792	5.89829	0.1597727	0.29084811	2.2561011	21	—	—
511032 2013 RH_{3}	18.0	X	93.56984	16.74510	11.95120	4.09584	0.1540918	0.29167953	2.2518118	21	—	—
511033 2013 RF_{16}	18.5	X	80.67081	80.03471	332.49125	4.34717	0.1662991	0.29677374	2.2259688	21	—	—
511034 2013 RE_{19}	18.2	X	51.05083	106.46322	289.26871	4.47740	0.1584810	0.28313320	2.2969005	21	—	—
511035 2013 RJ_{19}	17.9	X	116.23709	197.42695	178.01987	6.44839	0.1795664	0.29896122	2.2150973	21	—	—
511036 2013 RL_{20}	17.3	X	33.59450	27.54017	332.48046	11.71146	0.2524996	0.26375602	2.4080627	21	—	—
511037 2013 RY_{20}	17.6	X	123.15205	184.72525	156.30646	4.34210	0.1941821	0.29064397	2.2571574	21	—	—
511038 2013 RA_{26}	18.0	X	106.09317	275.02664	90.87165	4.37064	0.2404325	0.29080741	2.2563116	21	—	—
511039 2013 RU_{39}	18.4	X	40.34192	267.55894	162.81284	4.62140	0.1168272	0.28751666	2.2734952	21	—	—
511040 2013 RB_{42}	18.1	X	9.09836	289.57137	140.03843	7.35109	0.2220885	0.27133489	2.3630103	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511041 2013 RX_{47}	18.3	X	65.01132	44.00867	346.31239	2.74515	0.1784471	0.28276876	2.2988736	21	—	—
511042 2013 RM_{54}	18.2	X	125.55585	138.73818	223.09623	6.18383	0.1439028	0.30134584	2.2033962	21	—	—
511043 2013 RR_{57}	18.0	X	140.96373	36.08831	319.76766	5.51891	0.0824049	0.30269245	2.1968563	21	—	—
511044 2013 RA_{58}	17.7	X	345.19274	170.84098	290.91192	3.52007	0.0949220	0.28149481	2.3058043	21	—	—
511045 2013 RG_{64}	14.4	X	244.39941	171.55943	169.59289	7.80454	0.0827455	0.08282842	5.2121445	21	4 23.8	21.6
511046 2013 RT_{69}	18.1	X	39.61837	96.50163	293.83613	3.10137	0.2031330	0.27150055	2.3620490	21	—	—
511047 2013 RY_{74}	18.3	X	68.86680	18.04293	354.07507	5.40202	0.1817008	0.28083460	2.3094167	21	—	—
511048 2013 RX_{87}	17.9	X	27.58036	137.04588	276.60570	3.37809	0.1460532	0.27548365	2.3392259	21	—	—
511049 2013 RZ_{94}	18.1	X	28.18290	297.28408	120.31345	3.49885	0.2122389	0.27528090	2.3403743	21	—	—
511050 2013 RK_{95}	17.6	X	320.91991	26.46553	340.62274	13.34374	0.2364107	0.23871441	2.5736548	21	8 15.5	19.8
511051 2013 RU_{95}	18.0	X	73.34699	198.54316	160.66682	8.10579	0.0992725	0.28321004	2.2964850	21	—	—
511052 2013 RC_{96}	17.8	X	4.48233	298.49215	101.88166	4.04932	0.1780767	0.25872099	2.4392049	21	—	—
511053 2013 SK_{10}	18.3	X	101.36579	189.53057	175.88720	4.70607	0.2407807	0.29204514	2.2499320	21	—	—
511054 2013 SE_{14}	18.6	X	39.21580	93.84593	337.99544	2.85011	0.2019347	0.28568928	2.2831797	21	—	—
511055 2013 SP_{29}	17.8	X	23.37999	68.68265	306.62094	3.72062	0.2309387	0.26224324	2.4173146	21	—	—
511056 2013 SU_{45}	13.9	X	255.46796	206.82739	136.76153	5.27331	0.0850925	0.08369445	5.1761273	21	5 7.5	20.9
511057 2013 SO_{54}	18.2	X	102.48806	42.28284	336.12708	2.79441	0.1719794	0.29217121	2.2492847	21	—	—
511058 2013 SR_{59}	18.0	X	19.31881	166.86942	226.88647	0.70052	0.1861973	0.26732610	2.3865753	21	—	—
511059 2013 SB_{62}	18.2	X	100.17688	33.55134	6.39221	5.15244	0.1453754	0.29905691	2.2146248	21	—	—
511060 2013 SK_{64}	17.6	X	330.48706	108.79918	3.66360	10.73895	0.1503591	0.27670429	2.3323414	21	—	—
511061 2013 SM_{84}	17.8	X	77.72391	97.31861	223.45286	20.70249	0.2957345	0.27170515	2.3608631	21	—	—
511062 2013 SD_{85}	17.8	X	13.87318	289.17800	131.85892	3.50278	0.2064623	0.26889696	2.3772715	21	—	—
511063 2013 SY_{86}	17.8	X	79.07298	302.99679	76.62628	8.40139	0.2196188	0.28397488	2.2923597	21	—	—
511064 2013 TH_{5}	17.6	X	311.21796	107.48176	271.18487	24.91742	0.5807734	0.23421421	2.6065169	21	6 5.4	21.1
511065 2013 TP_{6}	17.2	X	357.88986	108.34042	315.24686	13.01407	0.0958210	0.27347719	2.3506537	21	—	—
511066 2013 TC_{7}	17.9	X	46.24710	178.55246	187.49936	0.99810	0.1970843	0.26843236	2.3800138	21	—	—
511067 2013 TS_{10}	17.9	X	80.26284	224.73590	132.60118	6.45405	0.3130262	0.27823616	2.3237728	21	—	—
511068 2013 TX_{19}	18.3	X	11.03524	218.04685	170.40136	2.42733	0.2277434	0.26181669	2.4199394	21	—	—
511069 2013 TC_{25}	17.0	X	9.81330	168.36077	252.96681	17.96348	0.0410269	0.27278973	2.3546013	21	—	—
511070 2013 TW_{27}	17.9	X	8.49089	36.65918	14.83973	2.67235	0.1871504	0.26669851	2.3903178	21	—	—
511071 2013 TB_{30}	17.7	X	327.53623	153.43606	197.62867	5.03302	0.2797719	0.23495651	2.6010242	21	7 23.8	19.9
511072 2013 TZ_{32}	17.8	X	50.44530	5.17610	20.63269	2.53803	0.1780856	0.27249075	2.3563233	21	—	—
511073 2013 TA_{33}	17.6	X	27.51086	332.40178	39.86127	2.15794	0.2042630	0.26132801	2.4229553	21	—	—
511074 2013 TT_{34}	18.1	X	72.09142	330.47703	63.92573	6.38170	0.1269561	0.28128937	2.3069269	21	—	—
511075 2013 TD_{48}	17.6	X	101.48841	63.19458	272.22269	7.67037	0.2858801	0.28024612	2.3126486	21	—	—
511076 2013 TO_{53}	17.1	X	216.34972	351.31515	341.64486	5.76513	0.1112454	0.31582663	2.1355196	21	2 16.3	19.8
511077 2013 TJ_{56}	18.3	X	89.17058	127.01105	285.02473	3.25041	0.0616460	0.29578475	2.2309279	21	—	—
511078 2013 TG_{64}	18.3	X	139.85186	34.94611	324.97665	1.84592	0.0738770	0.29799039	2.2199058	21	—	—
511079 2013 TT_{70}	18.4	X	42.37331	231.14631	174.99372	3.25952	0.1792591	0.27779685	2.3262221	21	—	—
511080 2013 TE_{80}	18.2	X	347.55293	285.90695	127.01560	2.11752	0.1694511	0.25945215	2.4346201	21	12 31.9	20.6
511081 2013 TC_{81}	18.0	X	121.53011	36.31990	316.91120	3.74573	0.1386167	0.29247441	2.2477300	21	—	—
511082 2013 TJ_{85}	18.1	X	31.31345	132.61298	315.43592	5.29944	0.1122301	0.28851212	2.2682626	21	—	—
511083 2013 TD_{92}	17.8	X	123.93141	84.57710	265.17072	5.85759	0.2477364	0.29355634	2.2422037	21	—	—
511084 2013 TV_{96}	18.0	X	20.30451	232.84096	142.41223	2.70890	0.2238812	0.26086575	2.4258169	21	—	—
511085 2013 TH_{98}	17.9	X	23.17907	252.32278	169.19517	2.70574	0.1917618	0.27082459	2.3659777	21	—	—
511086 2013 TO_{101}	18.1	X	81.28054	20.76527	354.91279	5.17192	0.1661547	0.27854513	2.3220541	21	—	—
511087 2013 TJ_{108}	18.1	X	351.26956	350.04200	97.86567	2.66000	0.1564022	0.26814481	2.3817150	21	—	—
511088 2013 TT_{113}	17.9	X	57.67231	310.29998	65.98688	3.95368	0.1906484	0.27266152	2.3553393	21	—	—
511089 2013 TO_{116}	18.1	X	44.02933	77.16640	345.53976	5.35269	0.2066899	0.27860592	2.3217163	21	—	—
511090 2013 TF_{121}	18.0	X	103.77198	99.90609	207.72322	4.42030	0.0915330	0.26932735	2.3747383	21	—	—
511091 2013 TR_{136}	18.0	X	30.44280	104.35534	288.51619	2.85065	0.1914583	0.27225109	2.3577059	21	—	—
511092 2013 TS_{137}	18.6	X	63.11862	226.50588	164.82939	4.71625	0.2236238	0.27819176	2.3240201	21	—	—
511093 2013 TZ_{138}	18.0	X	17.26199	8.84230	59.94830	8.20418	0.2469600	0.26996686	2.3709865	21	—	—
511094 2013 TK_{139}	18.0	X	48.71738	336.72005	70.42553	3.56348	0.1988518	0.27582354	2.3373038	21	—	—
511095 2013 TN_{139}	17.6	X	21.61976	305.72572	83.26493	6.53318	0.2253525	0.26032593	2.4291692	21	—	—
511096 2013 TO_{139}	16.8	X	285.02255	318.23598	56.57796	10.72306	0.3931948	0.22551503	2.6731237	21	5 29.4	20.8
511097 2013 TG_{140}	17.9	X	194.79256	344.80964	261.98742	3.46417	0.0769605	0.27529018	2.3403218	21	—	—
511098 2013 TV_{140}	18.6	X	345.23287	112.11857	321.53305	0.66825	0.1599347	0.26449877	2.4035525	21	—	—
511099 2013 TV_{159}	14.6	X	271.92012	204.68026	145.95416	1.98017	0.0451068	0.08670154	5.0557414	21	6 5.8	21.3
511100 2013 UV_{4}	17.3	X	27.30815	111.09781	257.78299	9.00950	0.2111536	0.26127096	2.4233081	21	—	—
511101 2013 UL_{14}	17.8	X	25.30502	298.00366	97.99162	2.67028	0.1818607	0.26448023	2.4036648	21	—	—
511102 2013 VD_{2}	17.0	X	10.27557	228.93766	247.88056	23.19708	0.1864495	0.28422325	2.2910240	21	—	—
511103 2013 VE_{4}	17.2	X	326.07229	224.57377	157.61554	7.47718	0.1510154	0.24169899	2.5524240	21	9 28.6	19.6
511104 2013 VO_{21}	17.7	X	136.42165	235.86814	106.49942	6.14941	0.2121277	0.29335885	2.2432099	21	—	—
511105 2013 VP_{21}	17.9	X	70.80635	241.60483	107.76429	8.62256	0.2797115	0.27168583	2.3609750	21	—	—
511106 2013 VK_{22}	18.0	X	12.05304	76.82847	17.78993	6.12185	0.2037629	0.27436935	2.3455552	21	—	—
511107 2013 VV_{24}	17.6	X	325.82335	137.83485	289.10892	6.85219	0.1818999	0.23763254	2.5814602	21	11 30.3	20.0
511108 2013 WE	17.8	X	33.85795	287.54250	112.88360	22.83707	0.3276335	0.26900318	2.3766457	21	—	—
511109 2013 WP	15.8	X	6.89714	138.13751	242.06246	28.18297	0.1637921	0.24297317	2.5434928	21	12 12.2	18.7
511110 2013 WB_{1}	17.4	X	5.85963	326.83210	87.17641	5.92806	0.1419061	0.25599826	2.4564695	21	—	—
511111 2013 WL_{4}	17.9	X	33.62412	1.00054	53.82564	5.89780	0.1934631	0.26976289	2.3721815	21	—	—
511112 2013 WC_{14}	17.7	X	33.96133	294.45690	109.27932	7.48791	0.1023815	0.26371680	2.4083014	21	—	—
511113 2013 WM_{18}	18.1	X	58.07806	281.61387	93.47565	0.27512	0.2210910	0.26620245	2.3932865	21	—	—
511114 2013 WX_{24}	17.7	X	328.47345	316.38960	180.22216	7.40120	0.4657180	0.25870125	2.4393289	21	—	—
511115 2013 WQ_{26}	17.8	X	59.87721	354.84048	14.31750	3.35425	0.1765414	0.26846143	2.3798420	21	—	—
511116 2013 WL_{43}	18.0	X	325.54461	186.69710	329.90693	2.64961	0.1179367	0.27179891	2.3603201	21	—	—
511117 2013 WK_{46}	17.9	X	22.19024	297.92029	92.92123	3.47961	0.1987413	0.26131789	2.4230179	21	—	—
511118 2013 WE_{47}	18.1	X	60.90132	161.87926	222.82121	2.06717	0.1859736	0.27328980	2.3517280	21	—	—
511119 2013 WQ_{54}	17.9	X	47.09755	67.41450	309.56987	5.92337	0.1915752	0.26508517	2.4000066	21	—	—
511120 2013 WJ_{56}	18.3	X	38.60632	2.35407	43.76411	2.39512	0.1711903	0.26835854	2.3804502	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511121 2013 WZ_{57}	18.0	X	41.85917	222.79169	178.68548	0.94714	0.1838377	0.26926807	2.3750868	21	—	—
511122 2013 WF_{58}	18.1	X	9.91116	212.21097	213.61884	4.26246	0.1506296	0.26389706	2.4072047	21	—	—
511123 2013 WB_{59}	17.8	X	43.29828	261.34870	122.43729	2.11472	0.1928274	0.26500617	2.4004835	21	—	—
511124 2013 WR_{63}	16.6	X	353.61424	17.15342	358.24441	5.12326	0.2359232	0.23972504	2.5664164	21	11 19.3	18.8
511125 2013 WW_{74}	17.0	X	10.16844	328.90572	76.38254	7.30323	0.1206891	0.25795936	2.4440037	21	—	—
511126 2013 WQ_{80}	16.4	X	311.61005	338.95990	99.48817	22.88156	0.0277987	0.23395402	2.6084491	21	11 30.7	20.0
511127 2013 WD_{92}	17.0	X	6.70757	72.24615	254.98445	15.03610	0.2030526	0.23377297	2.6097958	21	9 22.9	20.0
511128 2013 WN_{97}	17.8	X	6.65098	26.30375	65.73447	5.67390	0.1563836	0.26786572	2.3833690	21	—	—
511129 2013 WZ_{105}	16.3	X	293.84394	280.87321	83.47625	25.44747	0.2385423	0.22218952	2.6997300	21	6 17.8	19.7
511130 2013 WV_{107}	9.9	X	5.78496	220.58082	274.68103	23.96551	0.2666509	0.01760160	14.6364097	21	2 1.9	20.3
511131 2013 XM_{9}	17.7	X	338.25352	87.26737	46.18720	11.90045	0.1923122	0.26742927	2.3859615	21	—	—
511132 2013 XA_{14}	17.9	X	329.76274	265.24276	267.41686	4.77349	0.1140519	0.27936720	2.3174966	21	—	—
511133 2013 XQ_{17}	16.5	X	307.92602	266.65074	119.12804	7.34111	0.0364237	0.21632349	2.7483177	21	9 10.5	20.1
511134 2013 XJ_{18}	18.4	X	338.50239	104.83363	285.78826	3.33138	0.2729705	0.24305915	2.5428929	21	11 9.5	20.0
511135 2013 XR_{19}	17.0	X	233.84286	355.12242	159.58499	14.05795	0.1833757	0.22273234	2.6953419	21	11 1.2	21.2
511136 2013 XO_{23}	17.3	X	272.57900	37.96010	101.01722	9.85838	0.1527190	0.23856244	2.5747477	21	12 6.3	20.3
511137 2013 XM_{24}	19.0	X	116.20561	118.20743	99.45866	38.34966	0.4247998	0.45785019	1.6671978	21	11 14.9	23.0
511138 2013 XN_{26}	18.0	X	287.22495	7.15661	124.62625	3.95873	0.1501564	0.23623068	2.5916630	21	12 19.6	20.8
511139 2013 YR_{1}	17.6	X	307.48312	346.65137	99.27637	10.34169	0.1019134	0.23770849	2.5809104	21	11 27.9	20.5
511140 2013 YJ_{2}	17.3	X	253.83083	267.47067	234.78092	26.05388	0.4045935	0.23343528	2.6123120	21	10 2.1	21.9
511141 2013 YX_{3}	17.8	X	11.51517	326.26708	78.17879	7.12983	0.1797968	0.25736069	2.4477924	21	—	—
511142 2013 YG_{4}	18.3	X	325.68518	105.04272	304.19436	3.39244	0.2403999	0.23684400	2.5871868	21	10 30.8	20.3
511143 2013 YU_{4}	17.8	X	298.12946	169.54577	276.06075	3.16742	0.1334044	0.23436958	2.6053649	21	11 4.5	20.6
511144 2013 YX_{6}	16.5	X	44.54655	221.80404	84.99418	7.96758	0.1072945	0.23240736	2.6200091	21	10 25.8	19.9
511145 2013 YY_{6}	16.8	X	193.90901	63.98918	84.47868	24.92209	0.3711211	0.21301346	2.7767153	21	9 16.3	22.5
511146 2013 YH_{14}	16.7	X	185.97936	127.95578	100.25935	14.40582	0.1292908	0.23792366	2.5793540	21	12 16.7	20.6
511147 2013 YJ_{20}	17.4	X	301.80429	221.34823	225.65016	4.58103	0.2476928	0.23985709	2.5654743	21	10 31.9	19.6
511148 2013 YU_{27}	17.7	X	306.37959	182.02726	287.34962	5.50861	0.2011318	0.24373744	2.5381730	21	12 23.3	19.6
511149 2013 YZ_{27}	17.2	X	220.11947	82.25131	103.59607	15.31837	0.0474946	0.23756965	2.5819158	21	12 12.1	20.7
511150 2013 YL_{28}	17.2	X	341.74329	98.02786	303.05494	1.92637	0.2458553	0.24043764	2.5613430	21	12 3.6	18.9
511151 2013 YM_{29}	18.1	X	46.63899	341.17760	83.13404	7.04807	0.1856382	0.27497947	2.3420844	21	—	—
511152 2013 YP_{32}	16.4	X	279.63355	206.36392	294.30480	13.04469	0.0606794	0.23777735	2.5804121	21	12 30.7	19.7
511153 2013 YV_{37}	18.0	X	287.09523	293.90499	156.90833	4.98463	0.2384500	0.23218686	2.6216676	21	10 9.9	20.8
511154 2013 YS_{38}	17.0	X	240.13733	245.37519	296.09999	29.16592	0.2580155	0.23379943	2.6095988	21	11 29.5	21.3
511155 2013 YR_{39}	16.4	X	33.61746	200.23022	121.46524	10.75527	0.0772501	0.21944083	2.7222275	21	10 25.3	20.1
511156 2013 YU_{39}	16.9	X	319.62327	292.44985	118.71093	22.46803	0.0638150	0.22639020	2.6662301	21	11 8.0	20.7
511157 2013 YC_{40}	17.7	X	336.27502	262.81168	137.39723	6.39651	0.3030853	0.23613099	2.5923923	21	11 22.4	19.2
511158 2013 YR_{40}	18.4	X	336.59240	162.58556	319.09366	2.35466	0.1719910	0.26362204	2.4088785	21	—	—
511159 2013 YV_{40}	17.7	X	55.21574	327.48674	75.69888	8.35319	0.1124704	0.27039652	2.3684742	21	—	—
511160 2013 YO_{41}	17.6	X	243.07173	302.84337	222.05189	3.19197	0.1842968	0.24291916	2.5438698	21	11 23.9	20.8
511161 2013 YB_{42}	18.1	X	1.41958	107.38027	326.26509	1.58317	0.1775500	0.26002310	2.4310549	21	—	—
511162 2013 YV_{42}	16.6	X	356.86578	282.61633	89.93758	12.36949	0.2121392	0.23514786	2.5996129	21	11 22.3	19.1
511163 2013 YF_{43}	17.1	X	291.36643	161.62886	299.82243	13.35714	0.2065193	0.23528039	2.5986366	21	10 30.9	20.3
511164 2013 YW_{44}	17.5	X	306.94266	339.87191	113.68828	9.74962	0.1239512	0.24000574	2.5644149	21	12 6.3	20.3
511165 2013 YS_{45}	16.9	X	26.38881	327.31617	34.95532	4.64749	0.2094985	0.24412649	2.5354757	21	12 27.4	20.0
511166 2013 YJ_{49}	17.1	X	260.92101	7.31631	115.08671	14.95137	0.0739363	0.22927110	2.6438481	21	11 12.1	20.8
511167 2013 YC_{56}	16.7	X	319.54230	331.27524	109.34340	16.24194	0.0877584	0.23580618	2.5947723	21	12 10.9	19.9
511168 2013 YX_{57}	17.9	X	7.66043	80.20919	54.63927	5.65041	0.0907410	0.27580497	2.3374087	21	—	—
511169 2013 YO_{60}	16.9	X	258.03896	180.11487	314.72391	5.57496	0.2172927	0.23236775	2.6203068	21	10 25.4	20.4
511170 2013 YL_{62}	17.8	X	320.45015	198.41589	296.93322	0.56956	0.1712635	0.25422290	2.4678927	21	—	—
511171 2013 YM_{62}	16.6	X	229.70469	223.79065	293.01036	10.63845	0.1325594	0.22740510	2.6582914	21	10 28.9	20.7
511172 2013 YV_{63}	17.2	X	284.92010	63.34044	83.52279	6.89672	0.1578740	0.24226244	2.5484649	21	—	—
511173 2013 YR_{69}	18.0	X	262.50659	167.46036	312.95688	5.39073	0.2097541	0.22663593	2.6643026	21	10 12.6	21.7
511174 2013 YL_{73}	17.2	X	328.19745	46.71421	99.04956	10.91990	0.0632617	0.26078087	2.4263432	21	—	—
511175 2013 YO_{73}	17.6	X	330.91267	175.66568	333.32580	4.47784	0.1650756	0.26104479	2.4247075	21	—	—
511176 2013 YK_{75}	17.7	X	270.46457	337.02122	151.54554	3.69012	0.1847895	0.23369941	2.6103433	21	11 12.9	20.7
511177 2013 YM_{78}	16.8	X	283.66387	32.05527	66.17898	12.91763	0.1121172	0.23187871	2.6239898	21	11 4.8	19.9
511178 2013 YR_{82}	17.2	X	344.45513	244.62029	108.97802	10.07605	0.1748026	0.21999242	2.7176753	21	9 23.7	20.0
511179 2013 YO_{83}	17.4	X	149.31929	94.22631	232.61902	3.98962	0.1196719	0.26638257	2.3922075	21	—	—
511180 2013 YE_{93}	17.3	X	283.89969	33.80154	91.42048	13.45724	0.1227519	0.23952728	2.5678288	21	12 9.9	20.2
511181 2013 YF_{95}	17.6	X	3.95690	287.15710	100.54618	6.06127	0.2437149	0.24192704	2.5508198	21	12 31.9	20.2
511182 2013 YD_{102}	17.8	X	349.61642	12.81113	132.04085	7.29590	0.0823755	0.26913143	2.3758906	21	—	—
511183 2013 YK_{107}	16.4	X	314.87894	124.47100	302.68374	21.48970	0.0296504	0.22647830	2.6655387	21	11 5.9	20.4
511184 2013 YC_{108}	18.2	X	20.60699	18.99218	24.94949	2.66022	0.1607318	0.25962216	2.4335571	21	—	—
511185 2013 YX_{108}	16.7	X	336.56090	331.43810	70.46620	13.73569	0.1552149	0.23653922	2.5894087	21	11 17.7	19.2
511186 2013 YZ_{108}	16.8	X	143.71310	107.35644	121.92240	13.00756	0.1044097	0.22370417	2.6875300	21	11 9.6	21.2
511187 2013 YA_{109}	17.6	X	0.48243	184.56136	226.09258	2.47027	0.1261307	0.24587579	2.5234355	21	—	—
511188 2013 YC_{109}	17.8	X	334.87658	6.98612	124.18267	6.96873	0.0622374	0.26072207	2.4267080	21	—	—
511189 2013 YH_{111}	16.8	X	261.70498	206.31101	301.04652	12.22783	0.1011473	0.23272749	2.6176059	21	12 5.8	20.3
511190 2013 YA_{112}	17.6	X	356.49572	272.56945	122.69089	3.77927	0.1872416	0.24238795	2.5475851	21	12 20.4	20.2
511191 2013 YM_{114}	17.9	X	322.39181	132.15990	306.70131	7.97076	0.1398546	0.23846535	2.5754465	21	12 11.3	20.6
511192 2013 YJ_{118}	17.7	X	292.08645	357.98406	177.95431	2.52787	0.1519449	0.25804767	2.4434460	21	—	—
511193 2013 YK_{119}	16.5	X	302.12050	291.41063	117.63439	10.41522	0.1212442	0.22443939	2.6816576	21	9 26.9	19.8
511194 2013 YB_{124}	18.0	X	296.17721	32.59920	55.27114	2.87884	0.1852975	0.23059495	2.6337195	21	10 29.3	20.7
511195 2013 YL_{124}	16.9	X	145.60278	175.35639	114.94088	15.49015	0.1366703	0.24119074	2.5560085	21	—	—
511196 2013 YM_{124}	17.0	X	313.59408	325.57246	113.43040	15.80604	0.1568181	0.23326924	2.6135515	21	11 27.5	19.9
511197 2013 YQ_{125}	16.7	X	318.63532	83.89781	315.56485	13.18641	0.1619803	0.22241313	2.6979202	21	9 25.4	19.8
511198 2013 YC_{128}	17.5	X	252.13451	239.84848	297.33898	6.48510	0.1437681	0.24185931	2.5512960	21	12 28.0	20.6
511199 2013 YO_{129}	17.8	X	250.23555	32.48108	96.62274	7.37736	0.2353530	0.22515662	2.6759597	21	10 11.7	21.8
511200 2013 YV_{129}	17.5	X	308.70306	169.96845	272.66528	9.09747	0.1164413	0.22930458	2.6435908	21	11 19.0	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511201 2013 YT_{138}	16.9	X	320.95415	74.80430	12.40641	7.25498	0.0873107	0.24390121	2.5370366	21	12 21.9	19.9
511202 2013 YU_{142}	16.4	X	10.61301	80.74861	271.19364	21.24147	0.2520221	0.24173529	2.5521685	21	11 24.2	19.2
511203 2013 YW_{143}	17.6	X	50.00352	289.87553	90.90425	6.58154	0.0769878	0.25870647	2.4392961	21	—	—
511204 2013 YB_{147}	17.6	X	302.20480	41.38179	26.41382	5.73826	0.2218999	0.23283518	2.6167987	21	10 7.1	20.0
511205 2013 YV_{149}	16.7	X	337.87670	166.79625	247.87956	4.42021	0.2350443	0.23958386	2.5674245	21	12 14.2	18.5
511206 2013 YB_{152}	17.1	X	219.24265	280.40408	313.53099	11.92228	0.0551486	0.24555021	2.5256656	21	—	—
511207 2014 AL_{7}	17.2	X	147.44270	100.77585	104.78382	8.97385	0.0657909	0.21568416	2.7537460	21	10 13.0	21.4
511208 2014 AK_{9}	17.1	X	57.57209	233.06090	102.76387	5.99164	0.0940735	0.23500809	2.6006436	21	12 14.4	20.5
511209 2014 AH_{14}	17.2	X	345.78022	18.72539	30.32000	15.01334	0.1009535	0.23788180	2.5796567	21	12 6.5	20.3
511210 2014 AW_{19}	17.3	X	345.52997	276.63480	135.20430	13.89249	0.1823386	0.23770768	2.5809162	21	12 21.9	20.1
511211 2014 AY_{19}	17.3	X	22.98359	109.92733	275.17758	3.52645	0.2508911	0.24438648	2.5336771	21	—	—
511212 2014 AR_{21}	17.8	X	29.84006	89.54160	307.31788	12.78056	0.2089524	0.25551957	2.4595365	21	—	—
511213 2014 AZ_{21}	17.4	X	316.19172	210.63646	204.88152	3.82243	0.2876472	0.23542318	2.5975858	21	10 10.7	19.2
511214 2014 AA_{22}	17.4	X	34.59604	94.51214	311.80108	5.22299	0.1463436	0.25694588	2.4504261	21	—	—
511215 2014 AM_{22}	17.9	X	336.37119	28.71482	80.41762	2.40867	0.1316751	0.25313144	2.4749817	21	—	—
511216 2014 AY_{31}	17.2	X	239.76893	14.93123	151.09707	13.78566	0.1764795	0.23182221	2.6244160	21	11 23.9	21.1
511217 2014 AH_{48}	17.5	X	332.76538	112.93973	296.54879	3.69654	0.3122099	0.23896063	2.5718866	21	11 25.4	18.7
511218 2014 AP_{48}	16.8	X	358.18907	256.05949	117.76262	7.44865	0.0200248	0.22401800	2.6850195	21	11 5.7	20.4
511219 2014 AG_{49}	17.1	X	149.29733	191.99526	70.32607	4.12757	0.0290566	0.23423311	2.6063768	21	12 23.1	20.5
511220 2014 AY_{52}	16.8	X	232.39795	296.68506	206.56126	9.74154	0.1449925	0.21878383	2.7276746	21	10 16.4	20.7
511221 2014 AV_{54}	17.8	X	356.69233	273.74072	129.65114	12.58512	0.1874972	0.24406196	2.5359225	21	—	—
511222 2014 AK_{56}	18.1	X	299.36638	147.73902	296.85287	1.47576	0.1867400	0.23204280	2.6227526	21	10 29.5	20.8
511223 2014 AW_{56}	16.9	X	348.23300	113.10077	320.18704	4.02003	0.1733653	0.23887779	2.5724812	21	—	—
511224 2014 AZ_{56}	17.5	X	255.61458	252.22333	306.57288	11.17200	0.1795680	0.24215188	2.5492406	21	—	—
511225 2014 BK_{1}	17.2	X	44.92846	204.83673	119.87587	7.36640	0.0706687	0.22611844	2.6683660	21	11 11.5	20.8
511226 2014 BR_{3}	17.8	X	263.54660	42.41456	97.37734	7.20415	0.2069186	0.23463014	2.6034357	21	11 15.2	21.0
511227 2014 BO_{4}	17.7	X	321.40998	59.83366	102.29225	6.21768	0.1682096	0.26336825	2.4104258	21	—	—
511228 2014 BW_{6}	16.9	X	164.75745	309.19333	314.37388	13.83256	0.0576915	0.23876666	2.5732793	21	—	—
511229 2014 BC_{8}	17.5	X	285.33619	175.59761	319.46634	8.23600	0.1061154	0.23780718	2.5801962	21	12 26.9	20.5
511230 2014 BK_{10}	16.7	X	203.98188	81.26692	97.29386	25.38659	0.2696112	0.21909982	2.7250514	21	11 2.6	21.8
511231 2014 BJ_{11}	17.6	X	339.26434	293.16792	121.17157	6.02111	0.2699779	0.23984505	2.5655602	21	12 21.5	19.5
511232 2014 BG_{12}	17.0	X	141.18131	287.42011	298.62171	3.57131	0.0683246	0.21696045	2.7429359	21	10 25.7	21.0
511233 2014 BH_{12}	17.3	X	223.41804	79.05944	130.54381	13.89072	0.1168956	0.23937847	2.5688928	21	—	—
511234 2014 BV_{12}	17.2	X	358.64897	83.46722	310.19825	9.35209	0.1599819	0.23509713	2.5999869	21	12 16.1	20.1
511235 2014 BF_{14}	17.2	X	255.58682	120.56733	325.58453	12.71769	0.1794046	0.21490411	2.7604056	21	8 25.4	21.0
511236 2014 BU_{14}	17.6	X	307.53974	149.81493	320.92741	11.86722	0.1582761	0.24531285	2.5272945	21	—	—
511237 2014 BA_{16}	16.5	X	341.40802	66.31751	311.36640	12.03660	0.2013163	0.22922193	2.6442262	21	10 12.4	19.2
511238 2014 BK_{17}	16.1	X	285.65964	146.48037	305.51689	21.51950	0.0333059	0.22727558	2.6593012	21	10 26.0	20.2
511239 2014 BF_{19}	17.1	X	304.74470	136.20024	307.40044	12.86920	0.0473980	0.22811691	2.6527586	21	11 16.4	20.7
511240 2014 BW_{24}	16.4	X	95.65123	38.39764	287.35796	11.88535	0.1152184	0.23514040	2.5996679	21	—	—
511241 2014 BR_{29}	16.9	X	279.77279	176.80791	302.86483	11.14916	0.1435619	0.23386521	2.6091095	21	11 17.7	20.2
511242 2014 BX_{29}	17.6	X	304.76849	297.25466	168.10301	6.02864	0.1420718	0.23575755	2.5951292	21	12 15.4	20.3
511243 2014 BS_{32}	18.8	X	164.72517	271.26526	334.95536	11.64632	0.2170497	0.49807930	1.5761724	21	—	—
511244 2014 BS_{33}	17.3	X	4.39963	294.99569	104.19269	4.79462	0.2448896	0.24154499	2.5535088	21	—	—
511245 2014 BC_{34}	17.4	X	347.67916	65.74255	332.82738	10.55219	0.1863664	0.23206134	2.6226128	21	12 2.4	20.1
511246 2014 BT_{35}	17.7	X	283.38893	328.86050	127.31129	4.76185	0.2230709	0.22690077	2.6622290	21	10 13.7	20.7
511247 2014 BN_{36}	17.6	X	266.38693	117.35815	27.70831	1.71393	0.1868353	0.23360007	2.6110834	21	11 26.9	20.7
511248 2014 BT_{38}	16.7	X	13.35995	72.57761	332.39210	21.73836	0.0858669	0.23480643	2.6021324	21	—	—
511249 2014 BC_{40}	17.3	X	286.24622	53.06497	75.81631	5.92744	0.2152538	0.23770955	2.5809027	21	12 5.2	19.7
511250 2014 BD_{47}	17.6	X	304.40163	163.71319	317.50895	4.76726	0.2032311	0.23990811	2.5651106	21	—	—
511251 2014 BD_{48}	17.5	X	327.98555	129.43745	322.46521	12.33803	0.2519855	0.24290142	2.5439936	21	—	—
511252 2014 BL_{48}	16.9	X	145.61486	318.58198	160.19926	10.67104	0.1833843	0.17651856	3.1473314	21	6 24.7	22.2
511253 2014 BR_{48}	17.6	X	320.03723	147.20763	319.29962	3.88987	0.1784481	0.23851786	2.5750684	21	—	—
511254 2014 BV_{54}	17.4	X	277.53668	19.33304	141.71685	14.53443	0.1107926	0.24208932	2.5496797	21	—	—
511255 2014 BM_{61}	17.4	X	326.32938	3.49600	74.33934	3.58344	0.0101030	0.23073158	2.6326797	21	12 13.6	20.7
511256 2014 BN_{63}	16.8	X	303.22794	350.49807	114.78701	22.83573	0.0395791	0.23424085	2.6063194	21	12 20.6	20.3
511257 2014 BO_{65}	16.9	X	304.91482	276.46743	148.39015	5.85308	0.0036326	0.21281763	2.7784184	21	10 29.7	20.7
511258 2014 BS_{65}	17.5	X	328.41360	280.70093	171.09592	12.56242	0.1340036	0.24111597	2.5565369	21	—	—
511259 2014 CC	17.1	X	275.22382	308.16118	158.26289	12.05533	0.1521005	0.22622133	2.6675569	21	10 27.7	20.5
511260 2014 CF_{4}	17.9	X	307.91844	78.66586	113.15417	3.69715	0.1160191	0.26313624	2.4118425	21	—	—
511261 2014 CQ_{4}	17.0	X	120.20583	148.63206	144.27509	15.09744	0.0445970	0.23354592	2.6114869	21	12 28.1	20.9
511262 2014 CO_{11}	17.5	X	293.40550	359.94380	112.80712	4.06167	0.1240241	0.23309501	2.6148537	21	12 6.4	20.3
511263 2014 CT_{17}	17.0	X	286.20808	135.71274	339.70532	11.60558	0.1488475	0.22992582	2.6388268	21	11 19.6	20.3
511264 2014 CX_{18}	17.2	X	217.31934	196.80147	4.50492	8.50916	0.2360408	0.22322816	2.6913493	21	11 29.8	21.6
511265 2014 CP_{19}	17.5	X	255.55420	149.79303	23.01366	6.28214	0.2008303	0.23240434	2.6200318	21	12 15.1	20.8
511266 2014 CH_{20}	16.2	X	121.85517	71.13646	162.85748	18.73977	0.1744734	0.20206600	2.8761214	21	10 25.2	21.1
511267 2014 CE_{21}	17.0	X	262.48596	199.80624	324.54374	15.75783	0.1350974	0.23656904	2.5891911	21	12 27.9	20.4
511268 2014 CC_{24}	16.4	X	110.11528	334.59908	226.64444	18.56373	0.0529816	0.17306314	3.1890867	21	8 9.8	21.4
511269 2014 CK_{24}	17.2	X	317.12323	338.99386	130.95180	7.44891	0.1134618	0.23790751	2.5794708	21	—	—
511270 2014 DB_{1}	17.9	X	310.05038	300.00582	171.35688	2.39131	0.2166155	0.24032750	2.5621256	21	—	—
511271 2014 DL_{4}	17.5	X	232.92378	271.30464	299.84778	11.81918	0.1195152	0.23824144	2.5770599	21	—	—
511272 2014 DM_{4}	17.1	X	230.49065	303.28290	191.50681	9.48762	0.1063816	0.21482756	2.7610613	21	10 8.3	21.0
511273 2014 DN_{14}	17.5	X	270.16197	112.41012	55.02306	10.25785	0.1419390	0.23635634	2.5907443	21	—	—
511274 2014 DP_{15}	17.2	X	238.47744	45.48621	92.17165	5.33411	0.1545001	0.21680346	2.7442599	21	10 17.6	21.2
511275 2014 DX_{15}	17.3	X	206.47943	193.74951	17.63040	9.31232	0.1337961	0.22546707	2.6735027	21	12 12.8	21.4
511276 2014 DD_{16}	16.6	X	186.24235	218.32046	16.27102	9.86268	0.1477904	0.22424636	2.6831963	21	12 19.7	21.0
511277 2014 DA_{20}	16.3	X	188.06319	33.33242	169.74794	12.46243	0.1162688	0.21331929	2.7740607	21	11 17.6	20.7
511278 2014 DJ_{28}	16.8	X	289.80421	233.31262	153.05017	9.74786	0.1174315	0.20269690	2.8701503	21	7 31.1	20.6
511279 2014 DK_{29}	17.4	X	287.89296	288.63038	145.12630	12.80166	0.1401277	0.21907201	2.7252821	21	10 3.7	20.8
511280 2014 DO_{30}	16.8	X	328.41801	257.29531	164.58098	14.56502	0.1235557	0.22813748	2.6525992	21	11 28.9	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511281 2014 DU_{33}	17.1	X	150.32012	228.71799	6.43978	8.22082	0.1261628	0.21319824	2.7751107	21	11 14.6	21.6
511282 2014 DR_{38}	17.6	X	259.91474	122.76789	24.48794	2.77530	0.1356999	0.22894489	2.6463590	21	11 27.3	20.9
511283 2014 DA_{39}	16.1	X	57.01601	100.80176	151.86361	17.29500	0.2156561	0.18144869	3.0900594	21	9 10.7	20.2
511284 2014 DW_{40}	17.3	X	278.16444	25.61229	119.47545	4.75436	0.1418831	0.23364865	2.6107214	21	12 22.8	20.1
511285 2014 DS_{42}	16.4	X	108.14954	45.14348	158.87329	17.20764	0.0225682	0.18588858	3.0406580	21	8 13.7	20.9
511286 2014 DH_{43}	17.1	X	204.42018	14.40924	172.75857	4.33953	0.0356820	0.21563917	2.7541290	21	11 21.7	21.1
511287 2014 DP_{46}	16.6	X	238.58829	145.29184	340.86242	9.71536	0.1885551	0.21123444	2.7922839	21	9 23.7	20.7
511288 2014 DV_{51}	17.0	X	194.91122	192.03213	20.30562	5.24120	0.0994178	0.21973525	2.7197954	21	12 4.5	21.0
511289 2014 DB_{58}	17.1	X	341.82992	23.88327	73.75940	4.56948	0.1818705	0.24178642	2.5518087	21	—	—
511290 2014 DA_{59}	17.4	X	273.46048	106.09716	10.96601	12.65410	0.2197075	0.22348623	2.6892770	21	10 21.5	20.9
511291 2014 DW_{61}	17.3	X	298.71348	349.68485	156.49055	10.23499	0.1383503	0.23780617	2.5802036	21	—	—
511292 2014 DN_{62}	17.0	X	256.43190	112.44511	8.25140	8.54097	0.0775662	0.21239679	2.7820873	21	10 23.8	20.7
511293 2014 DU_{63}	17.3	X	251.69138	118.24739	8.01388	8.65940	0.1020258	0.21295684	2.7772074	21	10 21.4	21.2
511294 2014 DR_{65}	17.0	X	288.88605	121.06684	2.17139	28.25527	0.1809723	0.22894357	2.6463691	21	11 22.2	20.6
511295 2014 DH_{66}	17.3	X	352.99095	293.53458	144.10286	10.02556	0.1852293	0.23712630	2.5851330	21	—	—
511296 2014 DO_{66}	17.0	X	237.65588	155.63838	23.89539	12.48376	0.1074694	0.22453200	2.6809202	21	12 11.3	20.9
511297 2014 DK_{67}	16.9	X	312.84126	298.71036	148.83813	12.99918	0.0585409	0.21980376	2.7192301	21	12 6.8	20.5
511298 2014 DF_{70}	17.0	X	76.46076	178.21717	102.06910	3.65903	0.1650421	0.19327581	2.9626775	21	11 1.2	21.4
511299 2014 DL_{70}	17.5	X	273.96191	60.16056	60.77552	4.41659	0.1925263	0.22214549	2.7000867	21	11 3.9	20.6
511300 2014 DM_{70}	17.9	X	246.20187	106.89209	92.50164	3.92484	0.1524883	0.23221156	2.6214817	21	—	—
511301 2014 DO_{72}	16.3	X	129.15029	247.16473	25.03085	12.53406	0.1075843	0.21203776	2.7852269	21	12 8.3	20.8
511302 2014 DR_{73}	17.2	X	338.06939	293.85680	144.15185	13.08552	0.2533479	0.23369963	2.6103418	21	—	—
511303 2014 DO_{78}	17.4	X	182.32774	131.54394	93.73902	6.46552	0.0450801	0.21897811	2.7260610	21	12 11.9	21.4
511304 2014 DU_{83}	17.0	X	289.99665	306.20872	140.53760	5.53894	0.1347275	0.21836594	2.7311536	21	10 23.8	20.2
511305 2014 DO_{84}	17.5	X	163.56277	182.83819	65.53710	3.61154	0.1049582	0.22042034	2.7141568	21	12 16.6	21.6
511306 2014 DH_{87}	17.0	X	270.96151	151.37713	345.29926	10.70563	0.0920592	0.22754875	2.6571725	21	12 3.7	20.5
511307 2014 DJ_{88}	17.2	X	179.60131	271.04632	298.44855	2.17382	0.1314747	0.21790442	2.7350085	21	11 13.5	21.4
511308 2014 DF_{90}	16.3	X	36.70805	148.82741	169.78597	14.69897	0.0417900	0.20931803	2.8093011	21	10 16.9	20.1
511309 2014 DF_{96}	17.0	X	309.60430	326.46083	170.58353	14.07017	0.1320150	0.23702968	2.5858355	21	—	—
511310 2014 DO_{98}	17.4	X	202.02735	265.58851	306.96138	2.06451	0.1246846	0.22343240	2.6897089	21	12 11.1	21.5
511311 2014 DD_{107}	17.0	X	14.34246	195.03042	160.07266	2.79747	0.0834653	0.21069041	2.7970885	21	11 5.4	20.4
511312 2014 DH_{109}	16.7	X	136.96295	122.91620	165.84089	9.66473	0.1172943	0.21555755	2.7548242	21	—	—
511313 2014 DL_{110}	16.3	X	144.31808	12.86328	176.82762	9.61191	0.0935920	0.18858135	3.0116435	21	9 13.5	20.8
511314 2014 DY_{116}	18.0	X	249.27014	211.92797	321.07207	3.93230	0.2405151	0.23036098	2.6355026	21	11 30.5	21.7
511315 2014 DY_{117}	17.4	X	295.74280	63.83667	40.81545	4.93149	0.0657365	0.22439809	2.6819867	21	12 1.7	20.8
511316 2014 DL_{118}	17.7	X	302.58214	7.96414	97.11150	4.33388	0.1947377	0.23109841	2.6298930	21	12 4.8	20.0
511317 2014 DP_{118}	17.0	X	335.71493	15.10101	44.83160	5.89650	0.1427916	0.22490646	2.6779436	21	12 5.4	19.7
511318 2014 DV_{120}	17.1	X	3.95252	234.93949	159.07613	12.05415	0.1810982	0.22875717	2.6478065	21	12 26.9	20.2
511319 2014 DW_{122}	16.8	X	226.18130	336.61623	160.02441	14.09381	0.1389577	0.21027155	2.8008017	21	10 4.0	21.0
511320 2014 DF_{124}	16.7	X	247.04502	350.61534	143.71902	5.56170	0.1011408	0.21640330	2.7476419	21	10 30.5	20.5
511321 2014 DX_{124}	17.2	X	130.22118	53.37028	264.87967	1.82063	0.0577855	0.23689274	2.5868319	21	—	—
511322 2014 DE_{128}	17.0	X	142.68058	82.13974	164.20692	5.10317	0.0760578	0.21528538	2.7571455	21	11 23.9	21.1
511323 2014 DU_{128}	17.1	X	30.24101	230.48509	152.52918	4.50508	0.1287551	0.23035576	2.6355423	21	—	—
511324 2014 DY_{129}	17.7	X	278.87052	73.44298	38.45821	2.80350	0.1367345	0.22282098	2.6946271	21	11 7.2	20.9
511325 2014 DU_{133}	17.1	X	230.83784	325.03541	165.71637	6.23447	0.0159230	0.20544356	2.8445115	21	10 15.7	21.0
511326 2014 DB_{140}	17.7	X	286.68016	106.22883	37.60246	1.70512	0.1041792	0.23368383	2.6104594	21	—	—
511327 2014 DU_{145}	16.2	X	82.45463	23.06709	4.21591	14.01882	0.1816137	0.24275680	2.5450039	21	—	—
511328 2014 DF_{146}	16.4	X	82.84671	53.30946	161.08992	12.30968	0.0457756	0.17554059	3.1590101	21	7 28.7	20.9
511329 2014 DG_{146}	16.0	X	66.62564	238.42662	52.49603	17.13291	0.2053293	0.18127017	3.0920879	21	11 6.9	20.5
511330 2014 DJ_{146}	16.2	X	287.59656	18.36865	20.93673	13.57786	0.1673198	0.19269647	2.9686127	21	8 13.5	20.3
511331 2014 ER_{3}	17.0	X	258.27771	193.70423	350.70950	13.34955	0.1911248	0.23522958	2.5990108	21	—	—
511332 2014 EC_{9}	16.7	X	348.86672	189.74633	144.46547	12.48314	0.0354920	0.19327933	2.9626416	21	8 27.2	20.5
511333 2014 EQ_{13}	17.2	X	332.44894	322.12089	129.95808	5.54073	0.2211053	0.23927288	2.5696485	21	—	—
511334 2014 EU_{13}	17.2	X	324.21743	48.45540	8.27374	12.61776	0.2521468	0.22433757	2.6824690	21	10 31.4	19.5
511335 2014 EV_{13}	16.2	X	218.83139	293.47842	154.91813	16.99836	0.0102603	0.18584043	3.0411832	21	8 3.3	20.7
511336 2014 EQ_{14}	17.7	X	323.46336	91.85376	13.31908	3.17940	0.1195447	0.23700545	2.5860117	21	—	—
511337 2014 EN_{16}	17.0	X	344.72568	104.62446	341.48837	8.73422	0.0801332	0.23633843	2.5908751	21	—	—
511338 2014 EU_{19}	17.0	X	48.02634	308.74383	24.55575	6.70505	0.0397689	0.21339132	2.7734365	21	11 15.8	20.7
511339 2014 EG_{22}	17.9	X	303.14379	114.21682	16.16776	2.45136	0.1309964	0.23733900	2.5835883	21	—	—
511340 2014 EW_{23}	16.8	X	298.51735	130.56681	13.19800	13.23642	0.1071587	0.23452824	2.6041897	21	—	—
511341 2014 ED_{25}	16.9	X	214.80549	70.02058	88.04313	8.36914	0.0850587	0.21290294	2.7776762	21	10 25.4	21.0
511342 2014 EA_{28}	17.5	X	166.88223	222.94904	311.96330	1.45490	0.1740851	0.20160322	2.8805212	21	9 19.1	22.3
511343 2014 EJ_{36}	16.8	X	337.57393	292.76327	138.11453	9.54901	0.1550272	0.22893234	2.6464557	21	12 27.1	19.6
511344 2014 EJ_{39}	16.3	X	78.48513	100.43814	92.84002	6.66667	0.0908621	0.17015999	3.2252577	21	7 4.1	20.8
511345 2014 EZ_{42}	16.5	X	135.98077	26.11038	140.10486	11.75672	0.0387816	0.18364696	3.0653511	21	8 2.0	21.0
511346 2014 ET_{44}	17.3	X	261.99527	212.07222	333.18108	12.69750	0.1778705	0.23734810	2.5835223	21	—	—
511347 2014 EM_{46}	16.0	X	236.23074	36.25106	37.14857	10.77820	0.0904233	0.19076872	2.9885781	21	8 1.6	20.6
511348 2014 EU_{47}	17.2	X	225.67582	204.87416	16.97003	11.86573	0.1305995	0.23332894	2.6131057	21	—	—
511349 2014 EL_{48}	17.6	X	236.33803	76.22480	49.92672	8.33452	0.2591970	0.21379188	2.7699711	21	9 20.2	22.1
511350 2014 EF_{49}	17.3	X	263.82632	206.54744	22.60177	6.61902	0.0832748	0.25536779	2.4605109	21	—	—
511351 2014 EH_{52}	17.2	X	184.50865	264.84812	332.40418	3.82053	0.0610842	0.22403857	2.6848551	21	12 28.8	21.1
511352 2014 FW_{1}	16.9	X	311.49586	18.06180	87.49823	10.32157	0.0504184	0.22762911	2.6565471	21	12 27.9	20.2
511353 2014 FR_{2}	16.5	X	98.80317	26.02024	183.63624	8.24165	0.0963448	0.18074116	3.0981183	21	8 18.1	21.1
511354 2014 FV_{2}	16.2	X	344.29527	263.87534	75.50984	10.79996	0.0969176	0.18934527	3.0035376	21	8 30.9	20.0
511355 2014 FQ_{3}	16.5	X	258.47157	80.05485	34.45088	13.21209	0.0621670	0.21195785	2.7859268	21	10 23.4	20.1
511356 2014 FH_{4}	17.5	X	203.48555	83.53354	148.41702	14.90931	0.2273716	0.22486790	2.6782497	21	12 27.0	22.0
511357 2014 FL_{10}	17.5	X	151.14160	259.29590	3.55071	2.56488	0.1484380	0.21689586	2.7434804	21	12 20.6	22.0
511358 2014 FW_{14}	16.9	X	288.41715	118.77430	18.30197	17.54018	0.1140062	0.23232744	2.6206099	21	—	—
511359 2014 FA_{15}	17.5	X	279.89394	37.67597	85.58966	7.28235	0.2756227	0.22931600	2.6435030	21	11 5.9	20.4
511360 2014 FP_{20}	16.3	X	59.54013	318.02446	297.46644	9.29492	0.0554328	0.19187335	2.9770967	21	8 21.1	20.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511361 2014 FV_{28}	17.3	X	120.69448	353.58679	277.56248	4.54038	0.0670033	0.21339004	2.7734475	21	11 28.5	21.4
511362 2014 FQ_{32}	16.9	X	234.08507	204.79026	12.69561	13.90078	0.1964819	0.22617527	2.6679190	21	—	—
511363 2014 FM_{36}	17.0	X	126.46940	221.65836	79.15866	5.95538	0.1519241	0.21131798	2.7915479	21	—	—
511364 2014 FU_{36}	17.3	X	249.67638	204.22402	24.24937	5.01823	0.2124937	0.23558661	2.5963844	21	—	—
511365 2014 FZ_{40}	16.7	X	215.75236	191.82724	23.44669	9.72091	0.2205915	0.21774697	2.7363268	21	12 16.7	21.1
511366 2014 FQ_{41}	16.6	X	276.72288	93.92644	71.52344	13.49688	0.2113031	0.22871059	2.6481660	21	—	—
511367 2014 FW_{45}	16.7	X	347.22461	298.20046	54.31013	10.47407	0.1215204	0.19676863	2.9275128	21	9 24.0	20.2
511368 2014 FJ_{49}	17.2	X	264.13895	144.27421	26.51814	13.70288	0.1968288	0.23046090	2.6347407	21	12 25.4	20.6
511369 2014 FX_{50}	17.7	X	313.84490	288.14778	166.73994	13.11667	0.2319008	0.23598169	2.5934857	21	12 15.3	20.1
511370 2014 FQ_{57}	16.9	X	230.28415	295.43838	244.41897	2.95078	0.2646630	0.21925805	2.7237402	21	11 14.4	21.0
511371 2014 FU_{63}	17.4	X	274.71598	290.64569	252.50870	3.72025	0.1467252	0.23749113	2.5824849	21	—	—
511372 2014 FM_{64}	16.2	X	143.01692	175.07038	356.31629	9.91145	0.0588858	0.18258149	3.0772649	21	8 21.4	20.8
511373 2014 FG_{65}	17.5	X	328.99989	310.38996	155.47775	9.65096	0.2503943	0.23934923	2.5691021	21	—	—
511374 2014 FL_{65}	16.3	X	94.91527	225.83912	58.20488	15.99939	0.1261117	0.20409723	2.8570071	21	11 20.7	20.7
511375 2014 FP_{67}	16.9	X	308.28422	51.02224	107.25399	8.35616	0.1335172	0.24115619	2.5562527	21	—	—
511376 2014 FL_{73}	17.2	X	230.19692	290.02994	213.51270	6.81109	0.1722738	0.21069560	2.7970426	21	10 9.7	21.5
511377 2014 FO_{73}	15.6	X	48.70160	241.13765	40.65302	17.11499	0.0803674	0.17961338	3.1110734	21	9 23.4	20.1
511378 2014 FP_{73}	17.2	X	283.43934	131.60232	59.78167	11.08826	0.0249382	0.24080619	2.5587290	21	—	—
511379 2014 FR_{73}	16.8	X	327.09178	310.40453	174.93551	12.63838	0.1401743	0.23628569	2.5912607	21	—	—
511380 2014 GJ_{6}	16.2	X	219.45104	249.92496	203.22172	17.67067	0.0668826	0.17855420	3.1233645	21	7 31.9	21.2
511381 2014 GP_{9}	16.5	X	94.36037	39.17716	187.74146	11.36729	0.1204682	0.18384657	3.0631318	21	9 6.9	21.0
511382 2014 GC_{10}	17.3	X	231.55490	132.92601	62.94953	5.42331	0.0292274	0.22407516	2.6845628	21	—	—
511383 2014 GA_{17}	16.7	X	206.75625	173.04525	81.09260	14.97818	0.2118324	0.22638513	2.6662700	21	—	—
511384 2014 GQ_{19}	17.3	X	214.40597	156.83314	357.14809	8.97842	0.0690562	0.20360080	2.8616492	21	10 14.5	21.4
511385 2014 GS_{29}	17.3	X	109.25909	239.65332	32.52171	3.54122	0.1208452	0.19820068	2.9133945	21	11 19.2	21.8
511386 2014 GA_{32}	17.0	X	226.37504	111.46927	55.05969	8.21882	0.1469120	0.21016793	2.8017223	21	11 7.3	21.1
511387 2014 GW_{36}	16.9	X	240.45627	139.44202	95.66675	14.69330	0.2247011	0.23367508	2.6105246	21	—	—
511388 2014 GX_{38}	16.7	X	24.63408	197.60464	140.91614	6.46353	0.0752216	0.19905925	2.9050111	21	10 28.5	20.5
511389 2014 GQ_{40}	16.0	X	210.08546	68.10233	99.23033	16.08683	0.0894088	0.20483609	2.8501326	21	11 2.6	20.5
511390 2014 GD_{46}	17.4	X	286.89567	357.34651	149.18462	5.91905	0.1652131	0.23423278	2.6063792	21	—	—
511391 2014 GP_{50}	16.9	X	176.47768	177.37193	66.45776	14.05557	0.1205505	0.21626525	2.7488111	21	12 21.6	21.3
511392 2014 GN_{53}	15.9	X	99.47349	137.59270	82.48336	18.17809	0.1531345	0.18086656	3.0966862	21	9 19.1	21.0
511393 2014 GU_{54}	13.7	X	175.94312	39.04936	179.74092	25.03956	0.0262026	0.08358696	5.1805639	21	11 10.1	20.9
511394 2014 GD_{56}	16.7	X	164.06788	26.19196	160.19239	17.75030	0.2952627	0.18763101	3.0218040	21	10 2.4	22.3
511395 2014 GG_{56}	16.9	X	249.61711	70.07470	134.95456	12.06031	0.1354502	0.23060362	2.6336535	21	—	—
511396 2014 GN_{56}	15.8	X	16.22809	231.72416	80.99787	13.18429	0.1132437	0.17259287	3.1948770	21	9 17.8	20.0
511397 2014 GO_{56}	16.7	X	102.86843	259.38104	10.95803	4.94892	0.1050026	0.19358488	2.9595232	21	11 7.9	21.2
511398 2014 GR_{56}	16.2	X	106.26636	246.12040	84.66419	12.39085	0.0902170	0.22172128	2.7035296	21	—	—
511399 2014 GS_{56}	17.2	X	179.88639	104.04788	161.71953	14.44113	0.1427288	0.22236168	2.6983364	21	—	—
511400 2014 HS_{5}	16.3	X	48.66313	265.48031	24.72769	10.26518	0.0572852	0.18742197	3.0240506	21	9 25.8	20.4
511401 2014 HB_{10}	16.6	X	147.73651	314.34813	198.69252	12.84114	0.0760712	0.17333673	3.1857301	21	7 29.3	21.6
511402 2014 HZ_{12}	16.9	X	263.72647	309.91374	209.54635	12.11448	0.1928483	0.22255329	2.6967874	21	12 9.2	20.4
511403 2014 HR_{19}	17.8	X	253.62865	269.23657	271.31186	1.09833	0.1339166	0.22506989	2.6766471	21	12 31.5	21.3
511404 2014 HJ_{21}	16.6	X	156.36647	303.72573	218.21639	14.23385	0.1658057	0.18258753	3.0771970	21	8 19.7	21.9
511405 2014 HE_{23}	16.5	X	176.43937	163.89098	114.08140	14.15853	0.0832602	0.22138822	2.7062404	21	—	—
511406 2014 HZ_{27}	17.0	X	264.77921	30.10555	76.49690	3.23892	0.0507956	0.20188773	2.8778143	21	10 22.2	21.0
511407 2014 HS_{28}	17.2	X	216.75081	135.04062	96.72758	3.08263	0.1672806	0.22500743	2.6771424	21	—	—
511408 2014 HH_{30}	16.9	X	287.34990	273.67712	153.86840	7.03528	0.1059068	0.19470388	2.9481731	21	9 24.1	20.6
511409 2014 HS_{47}	16.4	X	220.10762	57.44895	50.37452	10.39357	0.0339083	0.18268130	3.0761439	21	9 2.9	21.0
511410 2014 HQ_{56}	17.7	X	196.01479	44.29634	160.32468	2.64279	0.1608608	0.21051524	2.7986399	21	11 21.6	22.2
511411 2014 HA_{70}	17.4	X	190.68477	52.13275	140.00227	2.79008	0.0086955	0.20301137	2.8671856	21	11 11.9	21.5
511412 2014 HM_{127}	16.4	X	126.09852	339.71353	217.64207	27.29613	0.0907352	0.18007172	3.1057921	21	8 26.7	21.6
511413 2014 HE_{147}	17.1	X	209.37034	281.83836	313.95573	1.49528	0.1219043	0.22877846	2.6476422	21	—	—
511414 2014 HY_{155}	16.9	X	99.82855	227.85986	41.80882	8.62916	0.1564656	0.19111144	2.9850041	21	11 9.3	21.6
511415 2014 HK_{157}	17.3	X	248.52123	311.18913	170.12163	9.37460	0.1820446	0.21233524	2.7826249	21	10 3.1	21.2
511416 2014 HS_{159}	16.6	X	99.95381	152.81473	90.31011	9.36081	0.0273962	0.18378370	3.0638305	21	9 28.9	21.1
511417 2014 HR_{161}	16.6	X	108.48197	163.40370	98.75863	12.26356	0.1280287	0.19137343	2.9822792	21	11 10.9	21.4
511418 2014 HS_{161}	15.6	X	50.41824	190.07553	94.02057	10.99369	0.1577751	0.17522666	3.1627820	21	10 6.8	20.0
511419 2014 HM_{167}	16.1	X	10.26724	227.48665	103.56269	11.61297	0.0919960	0.17687799	3.1430662	21	9 29.7	20.3
511420 2014 HC_{168}	16.8	X	121.55485	179.12860	2.09674	4.89828	0.0760932	0.18063825	3.0992949	21	8 9.6	21.4
511421 2014 HC_{179}	16.8	X	290.80638	319.93499	204.97395	13.15834	0.1895056	0.23263585	2.6182932	21	—	—
511422 2014 HJ_{179}	16.9	X	237.33912	113.74998	118.02429	14.14896	0.1988545	0.23089092	2.6314683	21	—	—
511423 2014 HG_{181}	16.7	X	201.37216	101.96745	120.37795	9.26078	0.0948463	0.21198846	2.7856587	21	12 23.7	20.8
511424 2014 HO_{181}	16.6	X	126.69981	49.89828	146.19966	10.99138	0.1547389	0.17574416	3.1565702	21	9 8.4	21.6
511425 2014 HC_{185}	16.8	X	267.00087	89.80990	56.47220	19.96948	0.0190155	0.20934733	2.8090390	21	12 15.8	20.8
511426 2014 HD_{186}	16.5	X	342.96265	195.63964	172.95751	12.14186	0.0705315	0.18905458	3.0066157	21	10 2.9	20.4
511427 2014 HN_{186}	16.3	X	112.03253	105.76039	95.53256	12.79752	0.1359369	0.17447500	3.1718593	21	9 2.1	21.3
511428 2014 HM_{188}	17.3	X	161.83212	185.66759	75.19905	4.62231	0.0481659	0.21504511	2.7591989	21	12 31.3	21.4
511429 2014 HR_{188}	16.7	X	137.67643	257.18644	9.54985	4.85330	0.0690369	0.21548178	2.7554700	21	12 11.5	20.9
511430 2014 HS_{194}	17.0	X	259.74897	149.23498	51.86339	5.97965	0.2155079	0.23141615	2.6274852	21	—	—
511431 2014 HZ_{194}	15.9	X	103.77337	185.25840	82.61341	14.65782	0.1542003	0.18796762	3.0181954	21	11 14.3	20.7
511432 2014 HL_{201}	15.8	X	64.91321	184.96410	94.74421	28.64281	0.1052920	0.17975981	3.1093837	21	10 23.1	20.8
511433 2014 HQ_{202}	17.1	X	200.94166	81.75772	121.99931	3.02781	0.0091366	0.20343530	2.8632011	21	12 8.1	21.1
511434 2014 JA	18.4	X	283.18896	271.60205	54.47458	23.88852	0.0791865	0.41710616	1.7740737	21	4 27.3	20.0
511435 2014 JW_{4}	16.8	X	161.47972	84.98124	104.31148	9.57874	0.0291070	0.18287309	3.0739928	21	10 4.9	21.4
511436 2014 JR_{10}	17.0	X	144.52613	155.90743	73.15324	9.19621	0.0732236	0.19252246	2.9704013	21	11 3.1	21.5
511437 2014 JB_{14}	16.6	X	254.14107	35.93642	75.77339	13.14379	0.0660112	0.19199458	2.9758433	21	10 16.8	20.9
511438 2014 JE_{14}	17.2	X	253.81389	87.49983	107.78333	6.81845	0.0161123	0.22213493	2.7001723	21	—	—
511439 2014 JY_{23}	16.5	X	177.62392	194.10363	75.92316	15.04270	0.1801799	0.21559311	2.7545213	21	—	—
511440 2014 JY_{25}	18.4	X	257.59667	185.02539	94.24798	24.50960	0.1245866	0.38721945	1.8642233	21	1 5.2	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511441 2014 JU_{26}	16.3	X	141.02191	82.89798	175.36553	19.15588	0.1650232	0.20069536	2.8892015	21	12 6.2	21.4
511442 2014 JE_{27}	17.0	X	289.61778	17.03630	136.76378	12.03344	0.0196860	0.22138968	2.7062285	21	—	—
511443 2014 JN_{27}	16.8	X	231.13056	28.42545	163.93958	14.25848	0.1324013	0.21533676	2.7567070	21	12 17.1	21.0
511444 2014 JR_{27}	16.1	X	46.79498	138.48845	156.22733	16.92315	0.0874767	0.17666665	3.1455722	21	10 2.5	20.4
511445 2014 JJ_{29}	17.1	X	277.29792	52.87629	107.35540	17.98244	0.1267754	0.22516528	2.6758911	21	—	—
511446 2014 JZ_{40}	16.4	X	107.22815	183.77696	60.65964	12.79154	0.0498546	0.18314264	3.0709759	21	10 12.3	21.0
511447 2014 JB_{41}	16.8	X	146.03459	154.48749	66.70797	8.40811	0.1194848	0.19001519	2.9964739	21	10 26.9	21.5
511448 2014 JS_{49}	16.0	X	45.97681	223.19976	92.45318	17.75608	0.2116168	0.17678685	3.1441463	21	11 16.6	20.5
511449 2014 JX_{49}	16.9	X	282.88317	338.86738	164.02547	14.03815	0.1549988	0.21630700	2.7484574	21	12 21.5	20.4
511450 2014 JN_{51}	17.1	X	226.90834	104.55595	78.13242	5.98992	0.0960910	0.21055832	2.7982581	21	12 3.4	20.9
511451 2014 JE_{54}	16.3	X	70.43448	169.66858	135.78087	22.83427	0.0746915	0.18633024	3.0358513	21	11 18.3	21.1
511452 2014 JO_{58}	16.4	X	113.55697	49.33196	156.97858	15.12183	0.1306097	0.17366730	3.1816862	21	9 4.8	21.1
511453 2014 JZ_{68}	17.5	X	257.32396	183.04533	25.98072	4.54282	0.1890354	0.23085371	2.6317511	21	—	—
511454 2014 JU_{83}	16.2	X	38.09048	186.43737	126.83908	10.75097	0.1617006	0.18139875	3.0906265	21	10 26.7	20.4
511455 2014 JF_{84}	16.3	X	64.47694	198.06231	81.73056	13.11838	0.1377509	0.17590602	3.1546336	21	10 17.2	20.9
511456 2014 KR_{15}	17.0	X	314.79049	50.30009	75.98070	6.31132	0.1016223	0.22177949	2.7030565	21	—	—
511457 2014 KP_{16}	16.9	X	135.87255	159.52014	76.00351	10.71954	0.1101778	0.18998483	2.9967931	21	11 3.6	21.6
511458 2014 KD_{17}	16.5	X	129.31940	129.39799	77.78016	12.48224	0.0567611	0.17704283	3.1411149	21	9 23.1	21.4
511459 2014 KA_{18}	16.2	X	253.48594	11.51556	94.22814	10.63392	0.0449144	0.18624404	3.0367879	21	10 10.1	20.6
511460 2014 KK_{20}	16.2	X	90.60733	176.69564	91.19933	17.86203	0.0998351	0.18211301	3.0825401	21	10 30.2	21.0
511461 2014 KS_{30}	16.4	X	134.11682	337.00761	219.91091	16.63943	0.1758549	0.17963060	3.1108746	21	9 11.5	21.8
511462 2014 KZ_{40}	16.8	X	85.33459	93.93450	208.93321	2.16947	0.0791164	0.19392277	2.9560845	21	11 26.8	21.0
511463 2014 KC_{42}	16.1	X	194.71485	52.28298	89.02532	22.73784	0.0329011	0.17828539	3.1265032	21	9 20.5	21.1
511464 2014 KO_{44}	16.2	X	140.86737	197.32734	81.11736	14.80784	0.0778566	0.20959385	2.8068359	21	12 28.1	20.5
511465 2014 KA_{54}	16.2	X	118.04318	163.12340	93.31955	13.80681	0.1007204	0.18789314	3.0189929	21	11 11.5	21.0
511466 2014 KU_{56}	16.5	X	112.88173	122.51334	139.43012	9.22873	0.0722893	0.18750158	3.0231946	21	11 9.2	21.1
511467 2014 KC_{70}	16.6	X	19.03457	189.45320	156.18199	8.28282	0.1184888	0.18009408	3.1055350	21	10 31.6	20.6
511468 2014 KX_{80}	16.9	X	270.33642	295.20766	225.96625	14.20869	0.2151500	0.22520116	2.6756068	21	12 17.6	20.2
511469 2014 KH_{86}	16.5	X	197.90492	129.46498	132.01313	13.86538	0.1696693	0.21748949	2.7384861	21	—	—
511470 2014 KN_{86}	15.6	X	62.82448	169.83149	116.86142	10.13571	0.1941944	0.17416877	3.1755761	21	10 29.1	20.3
511471 2014 KU_{92}	16.4	X	232.20992	123.34090	67.99995	13.29813	0.0785416	0.20973142	2.8056084	21	12 21.6	20.4
511472 2014 KP_{97}	17.0	X	220.76642	140.34509	96.52416	6.01864	0.0579306	0.22125335	2.7073401	21	—	—
511473 2014 KY_{98}	16.6	X	106.99373	343.77700	259.72898	7.85818	0.0869620	0.18472999	3.0533584	21	10 5.9	21.2
511474 2014 KD_{100}	16.4	X	134.73269	127.31526	101.60424	14.53443	0.1097232	0.18572481	3.0424452	21	10 28.7	21.4
511475 2014 KE_{101}	16.2	X	101.49869	169.40129	80.91723	18.25150	0.1582456	0.17972294	3.1098089	21	10 26.5	21.3
511476 2014 LX_{11}	17.1	X	203.12583	153.52213	67.49410	3.92879	0.1687767	0.20962014	2.8066012	21	12 16.0	21.4
511477 2014 LN_{20}	17.2	X	275.61754	111.63665	90.87810	18.63962	0.2287596	0.23284886	2.6166962	21	—	—
511478 2014 MD_{7}	16.9	X	245.71428	136.02527	62.73981	14.28903	0.1232433	0.22141768	2.7060004	21	—	—
511479 2014 MR_{15}	16.4	X	149.35304	142.82793	72.86691	17.48470	0.0416585	0.18463659	3.0543880	21	10 26.2	21.1
511480 2014 MD_{44}	16.6	X	97.13715	66.25239	208.52270	4.27278	0.1684587	0.17266865	3.1939422	21	11 12.3	21.5
511481 2014 MJ_{56}	15.8	X	116.16886	311.72496	317.64444	9.10416	0.2031544	0.17774382	3.1328507	21	11 23.4	21.1
511482 2014 MU_{58}	17.1	X	226.84536	74.95599	124.11117	14.13325	0.1664275	0.21095384	2.7947594	21	12 15.9	21.3
511483 2014 MC_{60}	15.8	X	286.66420	10.99717	102.21997	13.00340	0.0835024	0.18270584	3.0758685	21	11 23.2	20.0
511484 2014 NE	16.2	X	109.39476	157.08587	115.76076	11.91613	0.0707616	0.19046264	2.9917790	21	11 19.2	20.8
511485 2014 NO	16.6	X	133.53877	109.72676	126.83855	7.74580	0.1080823	0.18557478	3.0440847	21	11 2.0	21.4
511486 2014 NZ	16.8	X	167.73150	359.44842	214.74753	8.43671	0.1144107	0.19077298	2.9885336	21	11 6.1	21.4
511487 2014 NT_{1}	16.9	X	206.45807	89.88312	148.40183	13.13367	0.2258476	0.22239840	2.6980394	21	—	—
511488 2014 NS_{16}	16.6	X	190.03468	311.41616	222.36209	8.72470	0.2006237	0.19194839	2.9763208	21	10 4.5	21.6
511489 2014 NT_{17}	16.4	X	107.39295	130.08968	110.31368	12.62089	0.0758178	0.17497189	3.1658514	21	10 10.0	21.3
511490 2014 NP_{28}	16.6	X	127.84491	129.56987	131.04249	8.31892	0.2276657	0.18195696	3.0843023	21	11 27.9	22.0
511491 2014 NB_{33}	16.4	X	116.68478	126.49424	127.57006	11.70588	0.1125942	0.17267605	3.1938509	21	11 6.2	21.5
511492 2014 NM_{63}	17.5	X	202.49938	62.37094	270.67553	17.15943	0.0782527	0.35706277	1.9677640	21	1 17.9	19.9
511493 2014 NY_{63}	15.0	X	179.52470	324.98072	258.17305	25.87642	0.1279075	0.17573121	3.1567252	21	11 25.0	20.1
511494 2014 OG_{11}	16.0	X	144.34553	289.63118	301.94619	11.48588	0.1244488	0.17719304	3.1393395	21	10 29.4	21.2
511495 2014 OQ_{34}	16.6	X	184.85413	231.30130	329.94231	11.02862	0.1772573	0.18197481	3.0841006	21	10 29.4	21.9
511496 2014 OU_{41}	16.3	X	139.54001	291.00944	340.55764	5.36198	0.1388424	0.18618758	3.0374018	21	12 15.8	21.2
511497 2014 OV_{96}	16.0	X	175.23726	246.83571	335.32548	25.28830	0.2716791	0.17642963	3.1483889	21	11 5.1	22.1
511498 2014 OB_{98}	18.2	X	180.07185	173.93539	150.32011	24.21362	0.0854578	0.35474918	1.9763102	21	—	—
511499 2014 OC_{113}	16.0	X	115.29828	145.16961	119.50545	12.45718	0.0700352	0.17504861	3.1649263	21	11 14.2	20.9
511500 2014 OO_{113}	16.3	X	156.21495	107.65042	108.53439	4.58897	0.1258873	0.17611947	3.1520842	21	10 28.6	21.3
511501 2014 OU_{122}	16.3	X	127.26448	295.96064	313.65087	15.12968	0.2130231	0.17688203	3.1430183	21	11 6.9	21.9
511502 2014 ON_{129}	15.8	X	67.65729	161.72637	108.73610	20.88497	0.1338975	0.17176417	3.2051448	21	10 12.2	20.7
511503 2014 OW_{157}	16.5	X	127.64011	271.76622	316.07963	24.13094	0.2376173	0.17408697	3.1765707	21	10 5.9	22.4
511504 2014 OS_{175}	15.8	X	83.72896	181.22460	109.99940	18.28096	0.0788511	0.17151442	3.2082555	21	11 14.2	20.8
511505 2014 OK_{184}	16.3	X	148.76666	129.81793	116.99461	15.79894	0.3513718	0.18432571	3.0578214	21	11 30.2	22.3
511506 2014 OH_{188}	18.2	X	355.28634	36.32886	163.33690	23.27185	0.0612604	0.37017186	1.9210284	21	1 29.2	20.3
511507 2014 OW_{227}	16.1	X	158.05709	121.49651	113.56480	11.15008	0.1901635	0.17656450	3.1467854	21	11 21.9	21.6
511508 2014 OM_{239}	16.0	X	297.49645	326.78061	118.07537	13.04752	0.0525184	0.17156424	3.2076345	21	11 6.4	20.6
511509 2014 OA_{338}	18.7	X	156.91767	79.49052	321.49489	17.27744	0.1327415	0.38160813	1.8824537	21	2 28.3	20.8
511510 2014 OC_{344}	15.5	X	109.69046	303.27106	320.14925	25.72732	0.2341801	0.17374416	3.1807479	21	11 4.9	21.3
511511 2014 OD_{344}	17.6	X	4.57343	6.93568	318.62566	4.84776	0.2564450	0.28799568	2.2709735	21	10 11.1	19.1
511512 2014 ON_{363}	16.6	X	143.13907	131.61364	124.80048	5.84178	0.1052452	0.18106409	3.0944336	21	12 1.6	21.6
511513 2014 OT_{382}	18.5	X	171.20078	242.32659	112.50699	23.16299	0.0660717	0.36981157	1.9222759	21	1 7.8	20.2
511514 2014 OY_{394}	18.4	X	166.42556	14.64447	16.82075	22.13230	0.0881192	0.37365545	1.9090699	21	3 10.3	20.8
511515 2014 PR_{4}	16.2	X	169.42589	242.81617	315.04267	24.45819	0.2141754	0.17398175	3.1778514	21	10 2.3	22.1
511516 2014 PT_{58}	17.8	X	105.82223	209.74114	296.46956	21.86862	0.0192388	0.39970748	1.8251891	21	5 6.3	20.1
511517 2014 PW_{67}	18.4	X	123.77120	319.06048	134.59144	20.69160	0.0908609	0.38546615	1.8698720	21	4 10.7	20.7
511518 2014 QV_{33}	18.8	X	95.63396	349.35956	168.10204	22.76587	0.0804518	0.40543391	1.8079622	21	6 2.1	21.1
511519 2014 QF_{179}	17.7	X	119.01431	262.04313	151.68719	23.73204	0.1172698	0.35685660	1.9685218	21	1 28.6	19.6
511520 2014 QW_{296}	18.6	X	121.63910	303.92644	88.65716	9.77226	0.3526523	0.34822702	2.0009108	21	2 18.7	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511521 2014 QY_{371}	18.6	X	52.94151	130.70519	358.80666	19.71904	0.0680220	0.36317558	1.9456212	21	2 1.7	20.6
511522 2014 QV_{374}	18.0	X	48.09202	215.86364	343.39483	20.63138	0.0328326	0.39211288	1.8486810	21	4 21.1	20.1
511523 2014 QS_{439}	19.3	X	193.78293	134.81447	87.50159	11.45001	0.3651506	0.47270733	1.6320789	21	—	—
511524 2014 QO_{442}	18.8	X	93.84276	260.69819	201.20388	21.09568	0.1005354	0.36143686	1.9518559	21	2 21.3	20.9
511525 2014 QY_{442}	14.0	X	311.92509	85.51992	213.24340	33.74679	0.0687159	0.08285578	5.2109971	21	5 20.8	20.9
511526 2014 RF	17.8	X	354.53351	45.99735	156.40511	23.72186	0.0631007	0.37247018	1.9131178	21	1 31.9	19.7
511527 2014 RN	17.8	X	50.59585	243.78591	280.78401	16.76299	0.0852479	0.38051484	1.8860577	21	3 1.1	19.6
511528 2014 RO_{12}	17.7	X	140.29094	141.68339	257.90486	17.79291	0.1185452	0.36119085	1.9527421	21	1 31.9	20.1
511529 2014 SV	18.2	X	280.26403	146.47456	120.41801	24.03114	0.0691232	0.36459684	1.9405617	21	1 22.9	20.3
511530 2014 SN_{219}	16.7	X	287.98322	244.18155	80.98999	16.78645	0.2472934	0.24002027	2.5643114	21	4 24.9	20.7
511531 2014 SY_{282}	15.6	X	334.99730	300.23534	193.88882	17.56991	0.0170179	0.17650557	3.1474858	21	—	—
511532 2014 SP_{303}	18.2	X	119.91583	95.75262	42.17230	21.79230	0.0612237	0.38994322	1.8555321	21	5 27.3	20.1
511533 2014 SN_{349}	13.5	X	330.79770	171.83873	101.78567	29.53035	0.0623345	0.08345202	5.1861468	21	5 26.2	20.4
511534 2014 SQ_{349}	13.6	X	307.12531	193.27543	109.41715	29.69497	0.0742501	0.08234044	5.2327172	21	5 28.7	20.6
511535 2014 SY_{350}	18.8	X	199.37908	32.18086	19.94135	21.75971	0.0969004	0.38667512	1.8659725	21	5 3.8	21.2
511536 2014 TS_{9}	17.7	X	118.02241	133.89549	298.88494	16.77796	0.1186339	0.35977118	1.9578758	21	2 18.9	19.7
511537 2014 TE_{18}	18.1	X	353.59779	297.58452	273.49900	17.16566	0.0300348	0.37198618	1.9147769	21	2 10.7	20.3
511538 2014 TH_{33}	18.0	X	52.86149	230.90236	271.39065	17.25261	0.0763797	0.36216151	1.9492514	21	2 3.6	19.9
511539 2014 TO_{33}	18.6	X	321.00345	22.87004	232.63255	21.02004	0.0597290	0.37824952	1.8935806	21	2 20.6	21.2
511540 2014 TP_{33}	18.7	X	349.51664	354.97730	223.56261	20.75902	0.0380175	0.37296777	1.9114158	21	2 14.2	21.3
511541 2014 TV_{33}	18.5	X	310.59934	332.23068	331.82399	20.18796	0.0860102	0.39191723	1.8492962	21	4 13.8	20.8
511542 2014 TW_{33}	17.8	X	224.92980	42.55798	308.63016	19.00442	0.0215844	0.37172382	1.9156777	21	3 4.3	20.2
511543 2014 TV_{57}	17.9	X	197.81226	324.83115	40.57659	22.17370	0.0829365	0.37221416	1.9139950	21	3 16.3	20.7
511544 2014 TM_{58}	17.8	X	151.75568	133.29348	220.86425	20.17282	0.0782727	0.34261768	2.0226910	21	—	—
511545 2014 TP_{59}	18.2	X	203.95613	117.82598	221.71511	19.58277	0.0835073	0.35642431	1.9701131	21	1 26.1	21.2
511546 2014 TM_{63}	18.2	X	158.14198	181.14325	228.24068	20.45700	0.0876012	0.36252707	1.9479408	21	3 8.3	20.9
511547 2014 UZ_{62}	15.6	X	311.41105	129.63295	240.83960	2.58416	0.1871932	0.12185661	4.0293655	21	7 29.4	20.7
511548 2014 UO_{117}	18.7	X	13.73996	243.87200	7.85680	8.99304	0.1163280	0.39051844	1.8537095	21	6 2.0	19.7
511549 2014 UV_{182}	18.6	X	142.65603	8.90119	48.85382	22.39359	0.0935658	0.35857949	1.9622112	21	3 24.7	21.3
511550 2014 UO_{191}	17.8	X	187.14168	292.17515	63.72005	22.74094	0.1032221	0.35776443	1.9651903	21	2 17.4	20.9
511551 2014 UD_{225}	6.7	X	98.39909	297.15356	343.20733	3.65140	0.1309746	0.00342882	43.5551412	21	10 25.9	23.2
511552 2014 UE_{225}	6.1	X	174.57441	335.96427	241.39996	4.49632	0.0624993	0.00339142	43.8748024	21	10 25.7	22.8
511553 2014 UK_{225}	7.5	X	0.15111	166.73494	233.52372	10.69534	0.1303812	0.00341338	43.6864275	21	11 2.9	23.3
511554 2014 UL_{225}	7.4	X	348.81339	188.27980	225.11207	7.95429	0.2016492	0.00310356	46.5474730	21	10 30.0	23.1
511555 2014 UM_{225}	7.4	X	16.15696	359.46766	15.10037	18.25834	0.1028374	0.00330093	44.6729827	21	10 25.2	23.5
511556 2014 VN	17.9	X	253.74805	177.66003	206.05003	18.53763	0.0842720	0.39147734	1.8506813	21	6 10.2	20.1
511557 2014 VR_{1}	18.3	X	229.09744	262.81888	102.85366	23.67241	0.0661442	0.37563394	1.9023605	21	4 25.7	21.2
511558 2014 VE_{2}	18.2	X	200.59754	302.82663	87.01504	24.86739	0.0619611	0.37376969	1.9086809	21	4 25.6	21.0
511559 2014 VR_{11}	18.5	X	356.91682	239.88999	143.60804	1.86158	0.0788352	0.28380914	2.2932521	21	12 1.7	21.0
511560 2014 VR_{22}	16.8	X	317.85341	76.62155	231.61046	10.88785	0.1930553	0.24155525	2.5534365	21	5 13.9	19.7
511561 2014 WT_{58}	18.6	X	331.40253	85.24856	34.05802	4.55926	0.0751290	0.30657675	2.1782609	21	—	—
511562 2014 WJ_{62}	18.3	X	95.11908	54.90386	43.81135	21.09162	0.0771328	0.35551287	1.9734789	21	3 10.6	20.7
511563 2014 WJ_{120}	18.2	X	36.85835	111.86653	111.50563	23.44061	0.1007409	0.38126603	1.8835796	21	6 11.6	19.8
511564 2014 WR_{215}	13.6	X	53.70230	125.70309	58.84570	20.31590	0.0201755	0.08251914	5.2251600	21	5 17.4	20.3
511565 2014 WY_{355}	16.6	X	138.05450	295.19039	254.46362	15.26805	0.1747845	0.23028048	2.6361167	21	9 6.4	21.2
511566 2014 WR_{364}	17.7	X	140.88127	313.85889	82.86987	23.48742	0.1011288	0.35242842	1.9849768	21	2 12.3	20.3
511567 2014 WZ_{369}	18.1	X	164.15386	314.20680	91.85878	23.67855	0.0788015	0.36335940	1.9449649	21	4 3.7	21.1
511568 2014 WD_{392}	13.7	X	267.38003	250.91294	91.82370	19.95447	0.0352715	0.08173251	5.2586324	21	5 27.5	20.7
511569 2014 WY_{453}	17.6	X	294.25164	327.03492	169.63423	5.60451	0.0768680	0.28278166	2.2988037	21	—	—
511570 2014 WP_{463}	12.9	X	328.76899	206.34183	78.60702	13.28582	0.1173436	0.08251909	5.2251622	21	5 24.0	19.4
511571 2014 WT_{468}	17.2	X	348.62676	312.06474	110.96201	13.42386	0.1331554	0.27499576	2.3419919	21	—	—
511572 2014 WT_{479}	16.3	X	30.98349	3.51663	274.84143	11.07502	0.1285426	0.22156146	2.7048296	21	8 19.6	19.7
511573 2014 WB_{480}	17.3	X	206.13968	338.17450	263.25428	6.43092	0.0591495	0.28178900	2.3041992	21	—	—
511574 2014 WR_{494}	17.4	X	282.52442	292.46286	254.81160	8.58748	0.0697742	0.29316492	2.2441991	21	—	—
511575 2014 WE_{495}	16.2	X	59.38112	85.46757	148.33993	13.61676	0.1644169	0.21132181	2.7915142	21	8 12.2	19.8
511576 2014 WM_{511}	14.0	X	297.97628	234.98585	66.43900	14.24946	0.0370654	0.08321167	5.1961285	21	5 13.3	20.8
511577 2014 XP_{3}	18.2	X	138.62317	87.96022	48.26702	22.59386	0.0906380	0.38137300	1.8832274	21	6 30.4	20.8
511578 2014 XN_{8}	17.9	X	259.24198	41.92061	323.00068	19.07575	0.0475642	0.37881851	1.8916840	21	5 18.4	20.4
511579 2014 XW_{8}	18.2	X	94.37188	219.22104	261.38825	18.77419	0.1424567	0.35760461	1.9657758	21	3 30.0	20.5
511580 2014 XP_{13}	17.7	X	177.51576	176.81868	254.17414	20.47717	0.0596520	0.37342482	1.9098559	21	5 9.8	19.9
511581 2014 XC_{17}	17.8	X	168.01773	179.44804	245.96075	20.03854	0.0477634	0.36753121	1.9302189	21	4 13.2	20.3
511582 2014 XA_{40}	13.6	X	359.53678	149.13379	96.66233	20.01103	0.0767676	0.08274305	5.2157290	21	5 26.5	20.2
511583 2014 XE_{41}	18.0	X	37.74069	0.56758	193.35587	22.37663	0.0207879	0.36187360	1.9502852	21	4 12.3	19.6
511584 2014 YA_{1}	18.4	X	27.80410	287.21420	297.94560	17.20250	0.0788277	0.36606853	1.9353572	21	5 12.4	20.4
511585 2014 YF_{4}	18.1	X	340.99603	339.64072	148.27409	1.77428	0.1178550	0.29545098	2.2326078	21	—	—
511586 2014 YW_{6}	17.0	X	199.27876	254.12042	277.85005	5.50799	0.0906179	0.25601582	2.4563571	21	10 24.4	20.5
511587 2014 YO_{15}	18.2	X	270.94536	11.42248	310.81784	18.19666	0.0593397	0.36059443	1.9548947	21	3 22.9	20.9
511588 2015 AY_{9}	17.8	X	286.58453	106.33229	27.18414	6.97107	0.0861281	0.28040153	2.3117940	21	—	—
511589 2015 AK_{27}	17.9	X	4.24698	125.58555	274.05217	1.29133	0.1957089	0.28413848	2.2914797	21	—	—
511590 2015 AV_{30}	17.5	X	163.00509	305.12728	271.09999	2.48954	0.1455007	0.25787931	2.4445094	21	11 10.4	21.4
511591 2015 AV_{108}	18.2	X	139.82933	174.06733	140.28674	3.80246	0.1587815	0.29731053	2.2232887	21	—	—
511592 2015 AY_{110}	18.2	X	38.24149	265.72115	129.28788	6.83402	0.1852597	0.29466734	2.2365642	21	—	—
511593 2015 AY_{111}	18.2	X	128.08374	37.65512	236.15111	1.86697	0.1844608	0.26810619	2.3819437	21	12 21.2	22.2
511594 2015 AV_{153}	18.2	X	75.79928	74.49297	117.13210	24.30810	0.1088377	0.36197853	1.9499082	21	7 1.4	20.1
511595 2015 AX_{158}	18.0	X	325.85363	307.80254	118.22682	3.18410	0.1989305	0.27415874	2.3467563	21	12 13.8	19.4
511596 2015 AN_{171}	18.4	X	263.91630	88.70258	102.99138	3.85927	0.0988577	0.28859174	2.2678455	21	—	—
511597 2015 AN_{198}	17.4	X	330.89546	97.96089	317.58362	8.64308	0.0797869	0.27556171	2.3387841	21	11 30.8	20.1
511598 2015 AT_{233}	16.9	X	108.57060	343.84189	275.51031	5.48660	0.1846716	0.24120628	2.5558988	21	11 12.4	21.0
511599 2015 AL_{235}	16.6	X	7.61104	22.50627	275.79261	11.98985	0.1058683	0.22114996	2.7081838	21	8 6.1	19.8
511600 2015 AZ_{245}	16.8	X	93.25180	357.91817	252.29666	68.91651	0.7327114	0.38963673	1.8565050	21	11 30.1	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511601 2015 AR_{253}	18.9	X	290.16393	79.80160	84.05890	2.78158	0.1340072	0.28860460	2.2677781	21	—	—
511602 2015 AM_{258}	18.0	X	312.91055	8.90252	78.71439	4.56093	0.1658552	0.27649237	2.3335330	21	12 17.9	19.7
511603 2015 AJ_{280}	17.7	X	48.27025	259.58085	140.35427	20.63911	0.1860300	0.28971568	2.2619763	21	—	—
511604 2015 BS_{5}	17.7	X	331.17365	29.02209	92.93241	3.38153	0.0810715	0.29232763	2.2484823	21	—	—
511605 2015 BF_{6}	18.4	X	322.29900	290.45808	140.67738	4.01717	0.1831930	0.27076584	2.3663199	21	12 11.8	20.3
511606 2015 BP_{6}	16.5	X	109.46869	205.15008	318.29595	8.07705	0.0723114	0.20843965	2.8171880	21	7 2.7	20.6
511607 2015 BH_{8}	17.4	X	271.58980	2.31300	91.45837	7.33655	0.0759092	0.25994388	2.4315488	21	10 22.0	20.4
511608 2015 BK_{21}	16.9	X	226.34575	156.42967	270.90360	4.52013	0.0664599	0.22066775	2.7121277	21	7 12.0	20.8
511609 2015 BQ_{22}	18.1	X	32.48782	163.93942	244.64704	2.33214	0.0653197	0.28403530	2.2920346	21	—	—
511610 2015 BB_{23}	18.1	X	48.87960	252.79377	163.05925	4.75630	0.1250107	0.29680102	2.2258324	21	—	—
511611 2015 BW_{23}	18.2	X	11.82907	283.16029	183.14091	3.77793	0.1535700	0.30040026	2.2080175	21	—	—
511612 2015 BM_{24}	18.0	X	282.05486	359.52346	257.21337	2.79522	0.0968470	0.31642918	2.1328077	21	1 17.6	20.6
511613 2015 BX_{24}	17.2	X	171.97939	229.17045	299.99452	3.82130	0.0610797	0.23473403	2.6026675	21	9 19.6	21.0
511614 2015 BB_{25}	17.7	X	263.67166	60.34151	155.80779	5.28683	0.1265777	0.29080951	2.2563007	21	—	—
511615 2015 BD_{25}	17.2	X	173.01968	302.74442	169.23050	3.55003	0.0458673	0.21371893	2.7706015	21	7 8.1	21.1
511616 2015 BT_{25}	18.4	X	352.58727	208.60436	272.74432	1.86209	0.0898345	0.29527386	2.2335005	21	—	—
511617 2015 BW_{25}	18.4	X	265.04961	280.47116	245.06189	0.71050	0.1269446	0.27327146	2.3518333	21	—	—
511618 2015 BF_{26}	16.9	X	42.67753	311.77759	321.13696	6.74661	0.1919968	0.21592337	2.7517118	21	9 12.7	20.3
511619 2015 BZ_{26}	18.2	X	309.24269	58.91904	135.24057	4.07184	0.0962612	0.30246172	2.1979734	21	—	—
511620 2015 BR_{32}	15.5	X	56.87432	298.46992	122.26076	12.40520	0.1218917	0.15320998	3.4589532	21	—	—
511621 2015 BT_{34}	16.2	X	176.79976	277.39743	98.30661	4.45510	0.1002175	0.18467268	3.0539900	21	3 19.2	20.9
511622 2015 BS_{59}	17.9	X	296.24940	132.43897	321.20616	3.89912	0.1316455	0.26690683	2.3890739	21	11 20.5	20.3
511623 2015 BE_{72}	16.4	X	203.18618	78.98478	299.14830	8.45698	0.0911281	0.19084540	2.9877775	21	4 10.3	21.2
511624 2015 BX_{87}	18.2	X	284.04225	269.95231	306.54632	5.39278	0.0910972	0.30341571	2.1933638	21	—	—
511625 2015 BZ_{88}	17.0	X	171.01688	329.52126	124.83568	5.29444	0.0300260	0.20848011	2.8168235	21	6 12.9	21.0
511626 2015 BG_{99}	18.7	X	152.58965	65.27718	303.11658	4.33951	0.0474438	0.32190025	2.1085723	21	1 10.3	20.9
511627 2015 BL_{100}	17.5	X	110.94492	291.11830	317.01652	10.78760	0.1373795	0.24061557	2.5600802	21	10 24.6	21.6
511628 2015 BQ_{100}	18.1	X	248.67499	68.10174	134.64988	5.87544	0.1829475	0.27902929	2.3193673	21	—	—
511629 2015 BX_{101}	18.0	X	305.41268	331.80026	154.41525	5.51985	0.1844080	0.27619077	2.3352315	21	—	—
511630 2015 BA_{102}	16.2	X	179.78683	99.14188	334.34300	14.05521	0.1290061	0.20375440	2.8602108	21	5 25.6	21.1
511631 2015 BU_{102}	18.4	X	273.33620	289.95659	180.79639	1.29775	0.1310891	0.25864363	2.4396912	21	11 5.3	21.0
511632 2015 BZ_{102}	17.0	X	192.88778	131.07562	324.81734	3.50932	0.0127326	0.21387449	2.7692578	21	7 12.9	20.8
511633 2015 BZ_{106}	17.8	X	329.66213	227.26203	275.99149	8.69473	0.0646425	0.28612587	2.2808565	21	—	—
511634 2015 BA_{107}	16.6	X	106.61448	235.03179	313.59302	14.19981	0.0878553	0.20612783	2.8382129	21	8 2.8	20.7
511635 2015 BB_{118}	17.2	X	264.75270	165.40599	213.76823	5.63468	0.0384788	0.22558851	2.6725432	21	6 29.8	20.8
511636 2015 BS_{126}	18.0	X	314.24922	166.59698	327.50913	3.67072	0.1518624	0.28832006	2.2692699	21	—	—
511637 2015 BQ_{138}	17.4	X	227.92174	110.84391	73.48876	5.77976	0.1669704	0.26694459	2.3888486	21	12 7.1	20.5
511638 2015 BC_{139}	18.0	X	16.65582	56.59909	11.69968	5.36453	0.1188074	0.29166971	2.2518623	21	—	—
511639 2015 BW_{149}	18.3	X	358.70303	143.09069	353.77881	3.91619	0.0535512	0.30639145	2.1791391	21	—	—
511640 2015 BX_{153}	17.7	X	181.91378	194.48279	107.71720	7.23019	0.1259852	0.30131714	2.2035361	21	—	—
511641 2015 BO_{156}	17.1	X	105.96328	314.74719	11.23776	7.82330	0.1448685	0.27451228	2.3447409	21	—	—
511642 2015 BJ_{195}	17.8	X	263.86328	153.51105	100.13875	6.29093	0.1554306	0.30799540	2.1715670	21	—	—
511643 2015 BQ_{197}	18.3	X	90.88591	339.54341	45.26964	2.00718	0.1275144	0.30619524	2.1800699	21	—	—
511644 2015 BT_{202}	18.2	X	302.92435	98.14369	98.58592	6.31382	0.0474516	0.30613456	2.1803580	21	—	—
511645 2015 BW_{231}	17.8	X	172.32744	206.32741	49.69004	6.41202	0.1454540	0.27975150	2.3153737	21	—	—
511646 2015 BR_{249}	17.3	X	310.59228	288.39138	130.91157	4.36598	0.1005550	0.25697539	2.4502385	21	10 30.9	19.9
511647 2015 BM_{252}	17.3	X	152.08592	331.52309	286.45315	5.40781	0.0971734	0.26471719	2.4022302	21	12 24.7	20.7
511648 2015 BZ_{252}	17.7	X	294.61245	240.40895	282.77346	6.64547	0.1052700	0.28810166	2.2704165	21	—	—
511649 2015 BO_{258}	17.8	X	251.55166	290.83934	286.35099	6.59781	0.0867613	0.29268521	2.2466506	21	—	—
511650 2015 BX_{260}	17.9	X	187.95950	342.04333	244.55989	4.45742	0.1215613	0.26781246	2.3836850	21	12 21.7	21.4
511651 2015 BN_{261}	17.2	X	146.76098	262.79749	274.82599	1.72743	0.1068539	0.22845253	2.6501599	21	9 3.8	21.1
511652 2015 BZ_{262}	18.7	X	89.76755	59.10658	355.47551	1.43729	0.0827088	0.31021303	2.1612053	21	—	—
511653 2015 BP_{270}	18.3	X	86.08883	306.59290	109.47678	6.27438	0.0293337	0.30915003	2.1661566	21	—	—
511654 2015 BC_{278}	18.5	X	304.73246	289.13295	246.57793	1.48734	0.1073316	0.29530285	2.2333543	21	—	—
511655 2015 BU_{288}	16.7	X	116.00868	325.26335	245.14515	10.66863	0.1208155	0.23036287	2.6354881	21	9 9.9	20.9
511656 2015 BJ_{291}	16.6	X	276.08596	39.74742	327.39416	5.47384	0.0201051	0.21165912	2.7885476	21	7 2.9	20.4
511657 2015 BS_{291}	17.9	X	221.87916	61.51304	119.81362	2.25315	0.1323622	0.25968793	2.4331462	21	11 29.8	21.2
511658 2015 BK_{298}	17.8	X	263.21904	25.65621	139.79499	5.70437	0.1705610	0.26799203	2.3826201	21	12 31.7	20.4
511659 2015 BZ_{298}	17.7	X	331.49406	33.99479	135.06836	7.52117	0.0417757	0.29783819	2.2206620	21	—	—
511660 2015 BK_{300}	17.8	X	240.49027	203.32866	38.67135	7.86092	0.0838931	0.28600978	2.2814737	21	—	—
511661 2015 BY_{301}	18.0	X	249.20666	146.68923	97.45188	7.57272	0.0775537	0.28895020	2.2659695	21	—	—
511662 2015 BJ_{302}	17.9	X	335.23360	77.75511	45.46510	7.70659	0.0839898	0.28024260	2.3126680	21	—	—
511663 2015 BF_{303}	16.8	X	318.04380	36.93365	70.04841	7.83015	0.0550061	0.26405902	2.4062202	21	—	—
511664 2015 BG_{304}	17.4	X	193.81061	85.03630	129.99314	8.82659	0.1069430	0.25226113	2.4806709	21	12 13.2	21.0
511665 2015 BY_{316}	18.2	X	78.02581	283.17465	102.60553	4.88560	0.1231594	0.30179633	2.2012029	21	—	—
511666 2015 BD_{321}	18.2	X	111.47509	320.61336	52.21005	3.43315	0.1239741	0.30884115	2.1676007	21	—	—
511667 2015 BE_{327}	18.3	X	309.27241	95.72141	56.00683	3.23364	0.1139342	0.29053516	2.2577209	21	—	—
511668 2015 BZ_{344}	17.6	X	22.34579	310.13282	125.04390	3.77026	0.1374464	0.29357514	2.2421080	21	—	—
511669 2015 BL_{355}	17.1	X	145.12800	26.02883	139.49621	5.09395	0.1071311	0.22178745	2.7029919	21	8 18.3	21.1
511670 2015 BK_{356}	18.5	X	301.95775	7.59404	140.22070	4.55239	0.0725065	0.28328039	2.2961048	21	—	—
511671 2015 BO_{356}	18.4	X	25.39843	141.81622	323.00344	3.90942	0.1237693	0.30448778	2.1882124	21	—	—
511672 2015 BU_{377}	17.6	X	102.44672	316.18161	0.11306	2.47951	0.1593332	0.28549805	2.2841991	21	—	—
511673 2015 BQ_{415}	17.9	X	143.87709	250.76383	80.37554	4.00016	0.1813249	0.29726012	2.2235400	21	—	—
511674 2015 BQ_{421}	18.5	X	60.09022	269.63719	121.44625	2.97762	0.2225210	0.29562179	2.2317476	21	—	—
511675 2015 BK_{424}	17.3	X	200.60397	239.91741	175.92660	1.90337	0.0596444	0.20371352	2.8605935	21	5 29.2	21.4
511676 2015 BS_{427}	18.9	X	324.33734	207.08789	337.26521	5.94318	0.0325314	0.30853181	2.1690493	21	—	—
511677 2015 BG_{430}	16.1	X	29.38130	346.22061	340.99215	13.79102	0.3235528	0.24498195	2.5295697	21	11 30.6	19.6
511678 2015 BC_{443}	17.6	X	213.19646	95.20060	40.91561	3.24604	0.0663667	0.24049688	2.5609224	21	9 28.0	21.1
511679 2015 BY_{446}	18.8	X	90.44805	48.08232	357.13229	5.91624	0.0884573	0.30685238	2.1769563	21	—	—
511680 2015 BK_{449}	18.3	X	33.32978	28.34042	57.69769	4.27925	0.0573589	0.29740915	2.2227972	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511681 2015 BG_{452}	18.0	X	244.71607	142.63327	114.38437	5.16125	0.1295128	0.29967843	2.2115617	21	—	—
511682 2015 BV_{462}	17.3	X	279.25625	232.22367	136.15827	7.12804	0.0661449	0.21351657	2.7723517	21	7 1.0	21.1
511683 2015 BV_{490}	18.3	X	101.35252	252.18218	147.61941	3.33103	0.0615298	0.31180532	2.1538413	21	—	—
511684 2015 BN_{509}	20.7	X	75.21292	143.19622	120.11059	4.15354	0.5683925	0.97596446	1.0065763	21	1 19.4	19.1
511685 2015 BT_{510}	18.2	X	294.77483	317.94110	337.56625	16.19032	0.0952084	0.35011802	1.9936997	21	3 19.1	20.5
511686 2015 BH_{512}	17.9	X	275.66739	307.36539	199.94338	5.66556	0.1474739	0.27562271	2.3384390	21	—	—
511687 2015 BM_{513}	17.6	X	250.08958	223.33991	277.59820	6.58624	0.1524205	0.26483341	2.4015273	21	11 8.1	20.7
511688 2015 BB_{515}	13.5	X	289.27767	194.20708	138.16827	31.35172	0.0643968	0.08384171	5.1700646	21	6 9.4	20.7
511689 2015 BQ_{519}	18.1	X	309.75391	188.93382	98.30753	23.79042	0.0182129	0.35890705	1.9610172	21	5 1.8	20.8
511690 2015 BW_{532}	17.1	X	176.40211	123.27584	86.66210	15.23989	0.1354430	0.25282414	2.4769868	21	11 19.4	21.0
511691 2015 BC_{534}	16.2	X	298.92377	100.95594	359.01373	13.79871	0.1409599	0.24381055	2.5376655	21	11 24.2	19.1
511692 2015 BF_{535}	18.1	X	333.59959	167.65395	342.79005	6.71428	0.0616044	0.29506327	2.2345631	21	—	—
511693 2015 BB_{537}	16.9	X	89.43698	111.05262	165.34963	9.15480	0.1779762	0.22603208	2.6690456	21	11 16.3	21.1
511694 2015 BM_{537}	16.1	X	56.46660	255.82220	71.60014	15.01311	0.1439603	0.21768918	2.7368110	21	12 5.7	19.8
511695 2015 CH	17.3	X	110.90714	4.69196	117.29442	25.61267	0.0630195	0.35016355	1.9935269	21	5 10.2	20.2
511696 2015 CQ_{1}	16.8	X	103.04255	234.44951	335.91928	12.25072	0.1042168	0.22172046	2.7035363	21	8 29.3	20.6
511697 2015 CG_{9}	18.0	X	279.01019	20.03973	163.34554	7.40248	0.0402826	0.29103710	2.2551243	21	—	—
511698 2015 CN_{10}	17.3	X	216.66544	18.15642	143.42309	11.37599	0.1892498	0.25573843	2.4581330	21	10 26.4	21.2
511699 2015 CP_{10}	18.0	X	39.14051	69.24752	138.35739	21.47983	0.1613011	0.34958973	1.9957077	21	5 30.3	20.0
511700 2015 CS_{12}	16.4	X	149.79814	151.01562	107.41244	31.87925	0.0993987	0.24100722	2.5573059	21	12 22.1	20.4
511701 2015 CS_{21}	17.9	X	205.80446	307.72529	343.71048	5.93632	0.1293503	0.30301092	2.1953168	21	—	—
511702 2015 CG_{24}	16.7	X	103.91271	325.94353	149.73837	12.59072	0.0697121	0.18111403	3.0938647	21	4 29.2	21.3
511703 2015 CQ_{25}	15.5	X	359.50054	235.52513	352.79756	15.71020	0.1561313	0.17401093	3.1774961	21	4 13.1	19.4
511704 2015 CW_{25}	17.0	X	195.46916	103.87376	352.31439	9.48689	0.0902138	0.21222814	2.7835609	21	7 15.3	21.3
511705 2015 CO_{33}	16.6	X	67.59130	214.67248	344.95987	14.54089	0.0833032	0.20312356	2.8661298	21	6 27.8	20.7
511706 2015 CE_{34}	18.2	X	349.72437	87.57861	343.32964	6.44486	0.1879317	0.28636288	2.2795978	21	—	—
511707 2015 CP_{39}	17.8	X	3.35926	313.32894	164.21213	7.13973	0.0281135	0.29082367	2.2562275	21	—	—
511708 2015 CF_{44}	18.1	X	259.17873	239.38221	286.00025	0.61445	0.1303522	0.27019510	2.3696511	21	12 31.9	20.8
511709 2015 CG_{44}	18.5	X	293.65688	59.29423	158.28855	4.48715	0.0922660	0.30422699	2.1894627	21	—	—
511710 2015 CO_{45}	18.8	X	341.50658	31.94466	117.73922	3.07075	0.0811480	0.29823147	2.2187093	21	—	—
511711 2015 CF_{49}	18.0	X	230.69717	132.04723	138.64105	5.47505	0.0253200	0.29843035	2.2177234	21	—	—
511712 2015 CG_{49}	18.5	X	56.52230	317.51279	126.85468	4.58544	0.0975167	0.30441064	2.1885821	21	—	—
511713 2015 CA_{52}	17.5	X	0.98497	147.89312	289.79297	4.61635	0.0546929	0.27191533	2.3596464	21	—	—
511714 2015 CC_{53}	18.0	X	286.40884	19.78908	129.07612	4.34526	0.1539170	0.27055236	2.3675646	21	—	—
511715 2015 CE_{53}	17.7	X	341.20399	87.06399	27.88025	4.93390	0.1533048	0.28248454	2.3004154	21	—	—
511716 2015 CH_{53}	17.3	X	180.51507	160.78495	108.46318	3.91050	0.1109018	0.26695231	2.3888026	21	—	—
511717 2015 CX_{53}	17.9	X	247.52189	233.21085	354.04254	6.99924	0.1742641	0.27797181	2.3252459	21	—	—
511718 2015 CX_{55}	16.7	X	34.16183	32.23892	173.19310	2.77394	0.1119049	0.18164542	3.0878279	21	5 18.9	20.4
511719 2015 CG_{58}	15.6	X	0.19255	127.86790	112.53808	13.88979	0.0381268	0.17316249	3.1878667	21	5 15.9	20.1
511720 2015 CM_{58}	16.5	X	133.44462	181.14477	96.28211	14.80063	0.2583040	0.23518508	2.5993387	21	12 25.9	21.1
511721 2015 CJ_{63}	18.7	X	51.80950	335.94760	107.66117	4.90979	0.0667929	0.30422948	2.1894508	21	—	—
511722 2015 CM_{63}	17.5	X	203.66107	277.81485	14.57131	7.21007	0.1309671	0.29591087	2.2302939	21	—	—
511723 2015 CP_{63}	17.8	X	251.14099	275.39679	356.79956	3.04664	0.1299501	0.30606224	2.1807015	21	1 5.3	21.0
511724 2015 CP_{64}	16.7	X	351.66772	343.86150	328.19305	4.66745	0.1046220	0.22142238	2.7059621	21	8 2.4	19.7
511725 2015 DL_{2}	17.3	X	353.96314	108.81440	289.71724	5.44688	0.1039527	0.27224611	2.3577347	21	12 18.1	19.7
511726 2015 DQ_{20}	17.5	X	53.88889	279.98034	86.07818	5.05041	0.1456068	0.27177169	2.3604777	21	—	—
511727 2015 DJ_{23}	17.0	X	32.21082	189.38394	147.94302	15.83402	0.1829381	0.24499286	2.5294946	21	12 2.2	20.5
511728 2015 DS_{30}	17.3	X	309.01435	323.57804	40.31972	6.64550	0.0379774	0.22122566	2.7075660	21	8 13.8	20.9
511729 2015 DB_{31}	18.2	X	7.66827	36.80906	49.20383	5.99364	0.1063188	0.28660826	2.2782965	21	—	—
511730 2015 DB_{33}	17.7	X	128.11425	289.52080	47.33964	4.97189	0.1642939	0.28432357	2.2904851	21	—	—
511731 2015 DZ_{33}	17.5	X	76.77654	213.71753	127.62316	5.19648	0.0257106	0.26593219	2.3949076	21	—	—
511732 2015 DF_{36}	17.8	X	1.07576	92.31250	354.40919	10.12962	0.1635977	0.28594787	2.2818030	21	—	—
511733 2015 DJ_{42}	17.6	X	147.58761	173.34977	90.07791	7.68460	0.0727488	0.25792576	2.4442160	21	12 26.1	21.0
511734 2015 DP_{48}	18.4	X	342.34203	99.74872	52.02225	3.41340	0.0115932	0.29910465	2.2143891	21	—	—
511735 2015 DG_{53}	16.9	X	326.47784	136.70658	148.59336	11.92390	0.0565500	0.18993924	2.9972727	21	5 22.7	21.1
511736 2015 DR_{55}	17.6	X	332.52195	105.84796	324.81898	2.19105	0.1404440	0.27090326	2.3655197	21	12 30.2	19.8
511737 2015 DU_{81}	18.3	X	231.29984	256.25244	12.73259	7.54563	0.1090282	0.29764846	2.2216056	21	—	—
511738 2015 DM_{83}	18.7	X	7.17392	131.21546	4.85442	5.11682	0.0382563	0.30441575	2.1885575	21	—	—
511739 2015 DJ_{88}	17.7	X	156.32102	103.19856	165.37258	6.33125	0.1083382	0.26826781	2.3809869	21	—	—
511740 2015 DT_{94}	17.0	X	136.83299	135.83335	34.56232	8.90788	0.1376861	0.21626047	2.7488515	21	8 21.4	21.4
511741 2015 DU_{98}	17.6	X	106.03675	159.92266	99.45167	2.82134	0.0741577	0.23347590	2.6120091	21	11 2.6	21.2
511742 2015 DK_{118}	18.1	X	240.62376	185.12939	44.10965	7.71215	0.0825925	0.28236172	2.3010824	21	—	—
511743 2015 DE_{119}	16.6	X	31.36642	284.41965	67.42083	5.13373	0.1947383	0.24700917	2.5157105	21	12 18.6	19.7
511744 2015 DF_{120}	17.7	X	196.24955	232.06017	48.55114	7.24787	0.1188598	0.28203219	2.3028744	21	—	—
511745 2015 DH_{120}	17.7	X	173.59453	235.45995	63.42614	7.66649	0.1303083	0.28051417	2.3111751	21	—	—
511746 2015 DK_{120}	15.5	X	322.61059	124.27230	147.83442	19.62391	0.2089565	0.17161475	3.2070050	21	4 13.2	19.8
511747 2015 DP_{120}	17.4	X	320.05725	73.43583	55.74098	7.10927	0.0806164	0.27849614	2.3223264	21	—	—
511748 2015 DD_{121}	17.9	X	255.90881	164.05123	76.32743	7.50251	0.1548932	0.28970057	2.2620550	21	—	—
511749 2015 DG_{133}	16.8	X	205.68432	120.96300	99.00351	14.35419	0.1252417	0.25860613	2.4399270	21	12 30.8	20.3
511750 2015 DW_{134}	17.2	X	92.81667	205.41698	92.62225	13.36193	0.0596447	0.24302449	2.5431346	21	12 6.6	20.7
511751 2015 DC_{138}	16.6	X	279.82359	340.09786	119.77534	22.75640	0.0132810	0.22972419	2.6403706	21	11 19.4	20.6
511752 2015 DQ_{144}	18.3	X	17.71826	262.04826	177.69794	6.32866	0.1079580	0.29803772	2.2196708	21	—	—
511753 2015 DS_{145}	16.5	X	35.82728	283.00704	279.00578	7.26996	0.0395608	0.19890018	2.9065598	21	5 7.3	20.4
511754 2015 DN_{146}	16.4	X	81.95797	341.48017	288.27304	14.56621	0.1880589	0.24117231	2.5561387	21	10 26.7	20.5
511755 2015 DC_{151}	17.3	X	314.29539	257.06808	269.66138	7.53940	0.1231420	0.29500234	2.2348707	21	—	—
511756 2015 DK_{152}	18.3	X	351.45297	75.50475	58.75406	4.43618	0.0905530	0.29410075	2.2394359	21	—	—
511757 2015 DA_{154}	17.3	X	164.95404	175.14082	108.18791	7.02211	0.2146048	0.26238493	2.4164443	21	—	—
511758 2015 DF_{175}	15.7	X	10.44062	338.53437	252.61155	12.39998	0.1567262	0.17743834	3.1364454	21	5 12.6	19.3
511759 2015 DG_{204}	17.5	X	221.95602	14.72906	245.92043	5.08701	0.1031786	0.28439472	2.2901031	21	—	—
511760 2015 DH_{204}	17.5	X	277.15653	329.64866	275.44927	5.22956	0.1430149	0.30019337	2.2090319	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511761 2015 DS_{208}	17.6	X	269.63337	86.65572	112.15565	5.54487	0.0985490	0.27313099	2.3526396	21	—	—
511762 2015 DC_{209}	17.1	X	173.63427	72.48302	167.31375	14.62219	0.1537486	0.24402219	2.5361981	21	12 18.2	21.4
511763 2015 DP_{209}	17.5	X	210.08894	178.98523	72.27133	11.67903	0.2254661	0.26267615	2.4146580	21	—	—
511764 2015 DB_{210}	17.1	X	164.70841	68.79258	157.25265	15.27369	0.0116164	0.23693332	2.5865366	21	11 30.2	20.9
511765 2015 DC_{210}	17.3	X	264.45215	102.98556	95.22416	9.50767	0.1066247	0.27006682	2.3704014	21	—	—
511766 2015 DZ_{210}	17.8	X	352.18065	68.89852	93.07259	8.70103	0.0677960	0.29331978	2.2434091	21	—	—
511767 2015 DA_{212}	17.2	X	233.59082	118.08088	125.00665	6.35418	0.0882118	0.27185577	2.3599910	21	—	—
511768 2015 DN_{212}	17.8	X	214.90039	116.59915	145.40152	10.97975	0.0966988	0.26983962	2.3717318	21	—	—
511769 2015 DC_{213}	18.2	X	294.68712	122.90019	105.57796	8.14035	0.0545154	0.29642901	2.2276942	21	1 4.5	21.0
511770 2015 DP_{213}	15.8	X	310.94796	261.24210	38.96687	32.55160	0.1153746	0.16951022	3.2334945	21	5 6.3	20.1
511771 2015 DZ_{216}	17.9	X	248.81118	195.77383	37.49109	3.58345	0.1277624	0.28202613	2.3029075	21	—	—
511772 2015 DB_{228}	16.5	X	258.14762	90.56661	34.63882	22.42016	0.0419407	0.23707865	2.5854794	21	11 8.6	20.0
511773 2015 DQ_{228}	17.1	X	43.39310	144.21415	154.45688	8.22891	0.1942478	0.22362289	2.6881812	21	10 24.9	20.6
511774 2015 DR_{228}	18.5	X	196.83928	126.92521	162.29610	0.80992	0.0408682	0.29560592	2.2318276	21	—	—
511775 2015 DT_{229}	15.8	X	122.48356	146.62463	172.88880	29.57465	0.1838439	0.24159805	2.5531349	21	—	—
511776 2015 DG_{230}	18.3	X	14.72860	199.75312	185.20805	2.89744	0.1887911	0.27856261	2.3219570	21	—	—
511777 2015 EZ	20.3	X	294.56869	65.11385	185.43603	13.21825	0.2837054	0.61821965	1.3647115	21	—	—
511778 2015 EK_{3}	16.7	X	50.33384	89.41213	73.19946	2.04917	0.1398446	0.17899724	3.1182085	21	4 21.4	20.4
511779 2015 EF_{4}	18.2	X	205.64086	240.72666	346.03551	1.30501	0.1420679	0.26633873	2.3924700	21	—	—
511780 2015 EM_{8}	17.2	X	114.84394	225.22332	334.87253	3.64688	0.0584392	0.22109716	2.7086150	21	8 24.7	20.8
511781 2015 EL_{12}	18.2	X	217.37683	132.58048	81.88680	6.28276	0.1139101	0.27273027	2.3549435	21	—	—
511782 2015 EN_{20}	18.2	X	248.18673	289.38911	332.36523	3.67504	0.1287984	0.30188660	2.2007641	21	—	—
511783 2015 EU_{20}	18.3	X	266.13578	249.84546	1.73395	2.23727	0.1357714	0.30475870	2.1869153	21	—	—
511784 2015 EK_{21}	16.9	X	34.76216	118.54742	172.52781	6.66534	0.1292009	0.22393729	2.6856646	21	9 18.7	20.0
511785 2015 EE_{34}	18.0	X	196.75894	215.76688	9.46723	1.28336	0.1404673	0.26157846	2.4214085	21	12 26.5	21.4
511786 2015 EN_{34}	16.8	X	26.49897	45.74753	163.84987	4.09129	0.1296688	0.18261145	3.0769283	21	5 13.4	20.4
511787 2015 EF_{63}	17.7	X	249.91626	215.49451	39.96149	8.32925	0.2722473	0.28462407	2.2888727	21	—	—
511788 2015 EV_{64}	16.7	X	97.00660	140.95646	120.24042	9.63806	0.2378643	0.21968412	2.7202174	21	11 10.5	21.3
511789 2015 EZ_{74}	16.2	X	343.69732	359.53580	10.43725	12.13420	0.1045652	0.22228283	2.6989745	21	10 8.9	19.2
511790 2015 FC_{1}	17.6	X	231.34507	214.80308	47.05881	7.32055	0.0922551	0.30218590	2.1993107	21	—	—
511791 2015 FL_{1}	16.2	X	81.39225	259.47411	10.90970	12.78481	0.1215939	0.24085778	2.5583636	21	10 22.0	19.9
511792 2015 FQ_{10}	16.2	X	12.39033	308.87846	60.34153	13.82576	0.2033987	0.24266840	2.5456219	21	12 13.0	19.0
511793 2015 FQ_{12}	17.2	X	30.17419	213.60232	119.27591	10.40018	0.0804948	0.23090400	2.6313690	21	11 5.9	20.7
511794 2015 FQ_{13}	16.9	X	72.23555	212.82788	52.39469	13.73082	0.1653892	0.21416795	2.7667275	21	10 14.9	20.9
511795 2015 FR_{35}	18.5	X	35.38399	206.93622	253.13689	6.09584	0.2587306	0.30402577	2.1904287	21	—	—
511796 2015 FM_{36}	17.4	X	305.35689	87.12443	107.16602	7.02005	0.1058618	0.28782514	2.2718705	21	—	—
511797 2015 FD_{38}	16.1	X	116.89379	115.34384	25.91023	15.46330	0.0240735	0.18227126	3.0807556	21	6 2.9	20.7
511798 2015 FF_{38}	16.9	X	307.72319	40.63499	24.45864	5.43669	0.1366794	0.23602531	2.5931661	21	10 24.2	19.4
511799 2015 FC_{41}	16.6	X	236.73164	124.28870	23.93506	15.20029	0.0505626	0.23747558	2.5825976	21	11 9.2	20.2
511800 2015 FK_{72}	18.4	X	202.39312	102.44340	171.22646	4.74474	0.0964771	0.27292263	2.3538368	21	—	—
511801 2015 FS_{72}	18.2	X	311.40867	15.57156	177.75577	5.32160	0.0644519	0.29034479	2.2587077	21	—	—
511802 2015 FW_{73}	18.5	X	280.66000	218.19104	349.88583	2.28033	0.1394186	0.28187973	2.3037047	21	—	—
511803 2015 FK_{75}	17.5	X	45.10064	69.55982	44.69735	6.47871	0.0610743	0.29703532	2.2246618	21	1 5.5	19.9
511804 2015 FB_{76}	18.0	X	276.46878	199.72564	29.58693	7.53585	0.0694721	0.28608658	2.2810653	21	—	—
511805 2015 FQ_{82}	16.7	X	131.60490	29.38389	260.59438	9.77091	0.0921889	0.26457857	2.4030692	21	—	—
511806 2015 FL_{107}	18.1	X	252.36377	358.77826	253.49002	4.33822	0.1541884	0.28792288	2.2713563	21	—	—
511807 2015 FO_{107}	17.3	X	204.20894	289.89170	319.00642	5.50596	0.1225215	0.26680581	2.3896770	21	—	—
511808 2015 FH_{120}	18.6	X	74.20521	15.45147	71.44119	11.09254	0.6095922	0.33867596	2.0383549	21	4 23.3	20.3
511809 2015 FG_{121}	17.5	X	201.07853	159.79795	74.29409	3.55449	0.1379245	0.26611644	2.3938021	21	—	—
511810 2015 FS_{123}	18.1	X	289.57596	75.96940	143.86270	5.48946	0.1368096	0.29358699	2.2420477	21	—	—
511811 2015 FF_{137}	17.0	X	54.82342	212.26934	145.99907	4.56777	0.1822297	0.25215602	2.4813603	21	—	—
511812 2015 FH_{137}	17.7	X	189.02195	143.72951	128.75117	2.92389	0.1969454	0.26611526	2.3938092	21	—	—
511813 2015 FD_{139}	18.2	X	262.31608	67.99403	108.04728	3.17520	0.1360276	0.26705705	2.3881780	21	—	—
511814 2015 FN_{142}	17.7	X	222.61315	247.87624	17.68340	4.97753	0.2301931	0.27602453	2.3361690	21	—	—
511815 2015 FR_{142}	18.1	X	281.86264	35.37399	190.12994	7.36789	0.0832462	0.29252578	2.2474668	21	—	—
511816 2015 FU_{149}	18.3	X	253.47684	86.70221	145.30083	5.44089	0.0758027	0.28233611	2.3012216	21	—	—
511817 2015 FY_{149}	17.9	X	340.33257	347.54069	85.86038	4.43128	0.1536455	0.26013476	2.4303591	21	—	—
511818 2015 FQ_{155}	17.9	X	23.88881	67.40032	40.13928	8.76622	0.1229490	0.29252990	2.2474457	21	—	—
511819 2015 FB_{158}	18.2	X	288.46659	136.97751	66.50871	6.38109	0.0686210	0.28607118	2.2811472	21	—	—
511820 2015 FN_{163}	17.8	X	228.56682	180.79761	57.78854	7.00584	0.0787033	0.27195000	2.3594458	21	—	—
511821 2015 FC_{166}	17.7	X	289.15559	80.08722	42.83293	4.96538	0.1730912	0.25967577	2.4332222	21	12 14.4	19.8
511822 2015 FT_{168}	17.0	X	317.39139	225.93640	173.33038	13.33377	0.1062299	0.23216075	2.6218641	21	10 8.9	19.9
511823 2015 FV_{173}	17.7	X	277.36368	47.48120	124.03546	7.94451	0.0443050	0.26698499	2.3886077	21	—	—
511824 2015 FL_{174}	17.8	X	359.57573	38.91730	112.79727	7.79120	0.0428621	0.29469054	2.2364469	21	—	—
511825 2015 FJ_{183}	18.0	X	309.32955	128.07010	39.48674	4.55365	0.0951745	0.28583254	2.2824167	21	—	—
511826 2015 FS_{212}	16.1	X	90.30073	69.41132	78.98241	11.75574	0.0332746	0.17570343	3.1570579	21	5 16.4	20.5
511827 2015 FL_{249}	17.5	X	174.10144	170.37796	144.19310	6.43240	0.1430518	0.28129610	2.3068901	21	—	—
511828 2015 FD_{288}	16.5	X	244.42197	319.69001	152.66474	23.92465	0.0729858	0.23777667	2.5804170	21	10 8.3	20.3
511829 2015 FB_{294}	16.9	X	137.83465	62.87631	139.72326	9.16694	0.1420751	0.21552279	2.7551204	21	9 30.5	21.3
511830 2015 FR_{302}	18.1	X	347.58642	57.81274	120.61069	8.55887	0.0991458	0.29460989	2.2368550	21	1 1.1	20.6
511831 2015 FU_{302}	16.9	X	120.55372	162.70577	118.09151	9.91273	0.1854487	0.22850561	2.6497494	21	12 18.3	21.4
511832 2015 FA_{303}	16.6	X	52.74317	116.07919	130.67218	12.24807	0.1021130	0.18794981	3.0183861	21	8 9.9	20.5
511833 2015 FM_{303}	17.4	X	287.07771	55.70169	131.11851	12.98803	0.1097081	0.27153399	2.3618551	21	—	—
511834 2015 FA_{304}	16.8	X	156.13705	81.13357	130.14919	12.08969	0.1213156	0.22121148	2.7076817	21	10 30.5	21.3
511835 2015 FG_{304}	17.2	X	121.11469	179.42127	117.39641	10.83346	0.1176955	0.23631213	2.5910674	21	—	—
511836 2015 FZ_{304}	16.5	X	165.23033	94.39169	164.46544	15.14646	0.1246170	0.23902587	2.5714186	21	—	—
511837 2015 FM_{305}	18.0	X	285.06663	192.66984	342.76889	2.00821	0.1271543	0.27756548	2.3275146	21	—	—
511838 2015 FH_{312}	17.4	X	274.18674	134.39966	76.29335	7.85144	0.0412543	0.28561861	2.2835563	21	—	—
511839 2015 FU_{317}	16.4	X	343.49188	226.80843	130.30564	8.05399	0.1548166	0.21738859	2.7393334	21	9 24.1	19.2
511840 2015 FZ_{319}	16.9	X	2.03825	197.28880	155.24204	14.75264	0.1209824	0.22419885	2.6835754	21	10 23.5	20.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511841 2015 FT_{323}	17.8	X	193.07902	237.17018	65.82984	11.94746	0.0474918	0.28643710	2.2792040	21	—	—
511842 2015 FX_{324}	17.8	X	241.28558	56.50092	133.26873	11.10217	0.1915293	0.26071382	2.4267592	21	12 26.7	20.9
511843 2015 FC_{326}	18.0	X	305.74290	124.32106	74.35866	7.41256	0.0546940	0.29179627	2.2512111	21	—	—
511844 2015 FH_{326}	18.1	X	316.69887	68.32655	81.45874	6.72100	0.2181277	0.28262889	2.2996320	21	—	—
511845 2015 FA_{330}	16.8	X	266.76181	40.22341	36.13455	22.39760	0.0437730	0.22312945	2.6921429	21	9 28.9	20.7
511846 2015 FZ_{332}	16.5	X	140.44823	241.84724	64.32470	15.26031	0.1587376	0.25683281	2.4511453	21	—	—
511847 2015 FR_{334}	17.1	X	213.52688	157.28817	109.68106	7.49801	0.1721370	0.26563822	2.3966742	21	—	—
511848 2015 FD_{335}	16.9	X	195.96225	72.12496	141.08278	6.43326	0.1670300	0.24044457	2.5612938	21	12 5.8	20.9
511849 2015 FW_{335}	17.6	X	225.98893	127.60723	108.49084	3.55251	0.1318803	0.26051294	2.4280065	21	—	—
511850 2015 FB_{336}	16.7	X	150.03877	0.61970	208.26527	16.15313	0.0964590	0.21578144	2.7529183	21	10 15.4	20.8
511851 2015 FZ_{336}	17.1	X	171.21031	186.06393	76.60266	16.21033	0.1363462	0.24463923	2.5319317	21	—	—
511852 2015 FK_{340}	16.5	X	168.97161	315.42089	259.89146	11.27867	0.0788266	0.23221446	2.6214598	21	11 13.6	20.4
511853 2015 FV_{340}	16.6	X	242.04935	149.03626	4.19696	13.16060	0.1021521	0.24114097	2.5563602	21	11 14.5	20.2
511854 2015 FE_{347}	15.9	X	205.21322	241.56167	131.66818	15.89188	0.1782836	0.17233347	3.1980823	21	4 16.7	21.5
511855 2015 FV_{347}	16.1	X	181.50991	337.17740	109.62059	12.73252	0.0236778	0.19339432	2.9614671	21	6 16.8	20.3
511856 2015 FO_{354}	16.3	X	320.46200	271.79384	39.69525	1.54099	0.2079847	0.17603700	3.1530685	21	5 25.3	20.2
511857 2015 FK_{363}	18.3	X	12.10873	141.47913	334.41061	7.47015	0.0203877	0.30110631	2.2045645	21	—	—
511858 2015 FW_{390}	18.0	X	292.99477	276.29126	293.01336	4.72275	0.1067801	0.29132332	2.2536469	21	—	—
511859 2015 FA_{397}	17.0	X	210.91253	133.64805	64.43881	5.21572	0.1241558	0.24038516	2.5617158	21	12 5.7	20.6
511860 2015 FB_{397}	17.5	X	225.83242	280.03263	314.16620	5.74593	0.0865213	0.26127877	2.4232598	21	—	—
511861 2015 GT_{1}	17.7	X	306.57531	49.51011	44.67988	5.26389	0.2007619	0.26854781	2.3793316	21	12 8.7	19.4
511862 2015 GY_{4}	17.0	X	131.50841	13.64159	298.13677	11.67661	0.1304835	0.26597431	2.3946548	21	—	—
511863 2015 GS_{14}	17.7	X	127.76284	44.58117	197.81773	3.28615	0.1289622	0.23196347	2.6233505	21	11 7.2	21.7
511864 2015 GJ_{16}	18.0	X	163.99897	260.59879	30.87755	2.10598	0.2303892	0.26184337	2.4197750	21	—	—
511865 2015 GE_{20}	18.3	X	275.37598	194.50782	32.04982	6.63570	0.1248865	0.28907570	2.2653136	21	—	—
511866 2015 GU_{22}	17.1	X	131.48410	84.84429	132.61947	13.28538	0.0202836	0.21729246	2.7401412	21	10 8.1	21.1
511867 2015 GY_{22}	17.3	X	156.39640	65.18236	158.13663	14.14541	0.1179803	0.22983882	2.6394927	21	11 14.3	21.7
511868 2015 GN_{23}	17.1	X	155.71386	81.61469	148.54185	13.35974	0.1171263	0.23096795	2.6308832	21	11 21.9	21.5
511869 2015 GP_{24}	17.1	X	164.47402	212.04651	91.70388	8.49897	0.1235519	0.26746188	2.3857675	21	—	—
511870 2015 GS_{27}	17.9	X	167.59059	213.24335	77.91665	3.79659	0.1803405	0.25992923	2.4316401	21	—	—
511871 2015 GM_{28}	18.2	X	222.86484	2.74445	265.43282	2.29921	0.1680874	0.28200350	2.3030307	21	—	—
511872 2015 GQ_{28}	18.1	X	215.97421	0.68081	252.81846	2.80033	0.1838840	0.27183573	2.3601070	21	—	—
511873 2015 GF_{29}	18.2	X	201.09126	174.65137	84.67497	1.59813	0.1909560	0.26703685	2.3882984	21	—	—
511874 2015 GP_{29}	17.9	X	175.97305	213.47254	60.67458	1.22811	0.1449583	0.26279291	2.4139427	21	—	—
511875 2015 GK_{31}	18.1	X	305.81189	103.97328	53.32692	2.01395	0.1222705	0.27868505	2.3212768	21	—	—
511876 2015 GT_{33}	17.0	X	39.40490	289.93308	82.66288	14.54738	0.1446249	0.24797128	2.5091991	21	—	—
511877 2015 GB_{35}	17.8	X	298.74099	9.07616	132.48232	2.96095	0.1459420	0.26753119	2.3853554	21	—	—
511878 2015 GQ_{35}	18.6	X	344.03746	15.74021	146.55598	2.89251	0.1123869	0.29366037	2.2416742	21	—	—
511879 2015 GP_{38}	17.2	X	167.45942	203.46687	122.63216	7.62657	0.1389896	0.28210475	2.3024796	21	—	—
511880 2015 GJ_{39}	17.8	X	187.20834	167.48829	93.45197	7.18684	0.1508885	0.26141990	2.4223875	21	—	—
511881 2015 GR_{39}	18.0	X	237.55974	145.60913	106.02259	6.71695	0.1414292	0.28006056	2.3136700	21	—	—
511882 2015 GV_{42}	18.4	X	30.35670	22.08567	91.17220	5.61962	0.1011899	0.29539811	2.2328741	21	—	—
511883 2015 GG_{43}	17.7	X	70.01124	349.73949	76.87205	7.17510	0.0844194	0.29006782	2.2601452	21	—	—
511884 2015 GW_{44}	17.9	X	43.05451	342.96412	108.11144	7.09925	0.0515819	0.28953248	2.2629304	21	—	—
511885 2015 GM_{45}	17.2	X	23.62532	216.49432	123.75695	7.08772	0.1010293	0.22534647	2.6744565	21	11 6.5	20.5
511886 2015 GP_{45}	16.6	X	22.41454	228.50650	65.97381	10.72142	0.0786410	0.20392387	2.8586260	21	9 1.1	20.4
511887 2015 GV_{45}	16.3	X	326.39965	134.48508	181.56799	16.86710	0.2329180	0.18168987	3.0873242	21	6 8.5	20.1
511888 2015 GK_{51}	16.1	X	310.23996	211.48042	230.18902	25.91658	0.0991993	0.23512568	2.5997765	21	11 23.9	19.0
511889 2015 HT_{6}	17.2	X	129.59448	13.78677	235.51502	12.09275	0.1543792	0.23424104	2.6063179	21	11 17.9	21.4
511890 2015 HF_{7}	17.3	X	84.55144	247.05650	101.16558	6.31376	0.1142876	0.25288517	2.4765882	21	—	—
511891 2015 HN_{8}	17.7	X	198.14837	195.30180	58.85881	6.34754	0.1310108	0.26927668	2.3750361	21	—	—
511892 2015 HL_{14}	17.9	X	251.50991	39.67989	158.68190	5.15851	0.1083237	0.27211516	2.3584910	21	—	—
511893 2015 HJ_{15}	17.3	X	265.53523	115.52438	88.72689	5.27671	0.1957184	0.27102423	2.3648157	21	—	—
511894 2015 HN_{15}	17.2	X	103.42692	214.44702	103.74909	7.86001	0.1925636	0.24198448	2.5504161	21	—	—
511895 2015 HP_{15}	17.1	X	119.47665	69.00351	184.59105	13.39489	0.1313233	0.22611253	2.6684125	21	11 13.9	21.4
511896 2015 HV_{15}	17.7	X	292.53327	26.43776	179.53768	5.92705	0.0808805	0.29401905	2.2398507	21	—	—
511897 2015 HG_{26}	16.8	X	19.15162	102.50884	159.60849	2.85597	0.0340722	0.18956274	3.0012401	21	7 4.3	20.9
511898 2015 HV_{27}	16.6	X	65.56622	146.85343	149.59492	3.73507	0.0863717	0.22153705	2.7050283	21	11 2.1	20.2
511899 2015 HK_{28}	17.2	X	245.41349	83.29632	44.66956	15.90831	0.1028463	0.23703241	2.5858157	21	10 23.7	20.6
511900 2015 HE_{30}	16.6	X	0.37512	243.92393	37.47513	17.53912	0.2213183	0.18086865	3.0966623	21	7 4.2	20.0
511901 2015 HE_{34}	17.6	X	242.62201	107.85795	79.28695	3.32244	0.1468912	0.25781120	2.4449399	21	12 31.1	20.7
511902 2015 HH_{39}	17.8	X	253.48394	162.32932	74.98979	8.97712	0.2096027	0.27693785	2.3310299	21	—	—
511903 2015 HK_{42}	15.5	X	341.32403	176.27950	84.34629	28.46841	0.1126534	0.17011633	3.2258095	21	5 15.4	19.9
511904 2015 HS_{60}	16.5	X	133.90400	188.82741	115.29029	15.71307	0.1665109	0.23855975	2.5747670	21	—	—
511905 2015 HG_{62}	17.1	X	202.54523	173.97143	93.07811	7.06931	0.1017508	0.26291047	2.4132231	21	—	—
511906 2015 HA_{65}	18.2	X	299.11995	266.18868	226.79425	1.70300	0.1396299	0.26263375	2.4149179	21	—	—
511907 2015 HJ_{66}	17.4	X	219.12224	321.32414	278.50844	1.85983	0.1356797	0.26450279	2.4035282	21	—	—
511908 2015 HU_{67}	17.7	X	126.16860	247.68588	42.22187	4.73145	0.2732529	0.23583647	2.5945501	21	—	—
511909 2015 HQ_{73}	18.0	X	188.54072	115.06402	159.69260	2.54132	0.1732509	0.26165828	2.4209160	21	—	—
511910 2015 HV_{79}	17.7	X	266.80549	78.84954	27.36806	4.17408	0.1697130	0.23669634	2.5882627	21	10 10.5	21.0
511911 2015 HX_{85}	18.0	X	205.03463	4.34988	192.86509	9.89361	0.1358120	0.24361219	2.5390429	21	11 28.9	21.9
511912 2015 HR_{87}	16.2	X	328.74764	259.39056	66.72852	9.37679	0.0950723	0.18827382	3.0149221	21	7 13.6	20.1
511913 2015 HA_{88}	17.1	X	270.69685	26.57752	66.72899	6.18991	0.1239584	0.22913805	2.6448715	21	10 7.5	20.5
511914 2015 HW_{92}	17.5	X	219.66014	152.00114	109.04692	2.85395	0.1377987	0.27025906	2.3692772	21	—	—
511915 2015 HM_{94}	16.7	X	28.24630	206.12006	130.97449	4.46515	0.0810538	0.21880880	2.7274671	21	11 4.1	20.1
511916 2015 HR_{94}	17.0	X	119.48367	199.32258	90.96712	5.46445	0.1235895	0.23682261	2.5873426	21	12 27.1	21.0
511917 2015 HD_{95}	17.8	X	273.55158	116.28389	65.62139	7.35635	0.0793066	0.26617003	2.3934808	21	—	—
511918 2015 HO_{96}	17.3	X	98.98325	66.47861	271.73236	1.22255	0.1079348	0.25293657	2.4762527	21	—	—
511919 2015 HD_{100}	17.3	X	119.34610	108.44623	203.44331	9.43023	0.1009582	0.24761520	2.5116041	21	—	—
511920 2015 HK_{110}	16.6	X	0.18650	251.95308	89.70984	15.93695	0.1028835	0.21046772	2.7990612	21	10 6.6	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
511921 2015 HZ_{110}	16.6	X	8.70919	205.38771	151.05785	15.78648	0.1639070	0.21794600	2.7346606	21	11 13.5	20.0
511922 2015 HT_{123}	18.6	X	247.62776	54.05166	179.56690	1.69389	0.1432664	0.27420822	2.3464739	21	—	—
511923 2015 HM_{134}	16.7	X	343.12130	151.95986	141.75528	1.94676	0.1472183	0.17668513	3.1453529	21	6 18.4	20.3
511924 2015 HK_{141}	17.8	X	129.69005	144.02660	151.43419	2.40163	0.0947939	0.24648363	2.5192851	21	—	—
511925 2015 HU_{150}	15.7	X	312.05390	338.63601	30.12890	11.10285	0.1444030	0.19706974	2.9245301	21	8 12.9	19.4
511926 2015 HG_{152}	17.9	X	346.89586	273.38274	225.27196	3.49248	0.1618253	0.28469589	2.2884877	21	—	—
511927 2015 HM_{152}	17.0	X	113.10981	7.21887	285.88030	6.10853	0.1626733	0.23527106	2.5987054	21	12 26.0	21.1
511928 2015 HG_{155}	17.5	X	198.65400	318.19497	298.30223	5.69197	0.0768791	0.26776653	2.3839575	21	—	—
511929 2015 HG_{161}	18.0	X	288.69160	162.39235	11.37718	1.86447	0.1141350	0.27191876	2.3596265	21	—	—
511930 2015 HD_{164}	17.3	X	116.31689	251.77009	60.15062	11.64791	0.1449147	0.24509726	2.5287763	21	—	—
511931 2015 HH_{164}	16.9	X	279.78492	346.19500	63.50555	6.80352	0.0767117	0.20891873	2.8128796	21	8 28.5	20.7
511932 2015 HB_{166}	17.2	X	166.34366	18.89371	212.93880	13.39737	0.1970781	0.23588122	2.5942220	21	11 29.2	21.6
511933 2015 HT_{166}	17.0	X	60.35120	306.31715	56.17504	15.90586	0.1464683	0.24335548	2.5408282	21	—	—
511934 2015 HA_{167}	17.6	X	221.87538	167.41333	75.68157	7.96675	0.0890881	0.26534154	2.3984604	21	—	—
511935 2015 HE_{169}	18.3	X	248.20823	199.55204	40.64674	2.07964	0.1434495	0.27603383	2.3361166	21	—	—
511936 2015 HQ_{169}	18.0	X	347.09290	170.61603	1.56033	4.31112	0.1015871	0.29765143	2.2215908	21	—	—
511937 2015 HS_{170}	15.6	X	31.97604	178.52620	46.32232	29.66150	0.1632037	0.17376215	3.1805282	21	6 7.9	19.7
511938 2015 HT_{170}	17.6	X	219.08018	191.21574	52.28536	6.07064	0.1856270	0.26229619	2.4169893	21	—	—
511939 2015 HE_{172}	16.9	X	218.58425	337.09358	275.45387	9.80834	0.1964494	0.26987848	2.3715041	21	—	—
511940 2015 HH_{172}	17.9	X	323.44068	222.98803	338.71641	2.37760	0.0914226	0.30155845	2.2023604	21	—	—
511941 2015 HE_{173}	17.3	X	341.83973	90.02231	21.73121	7.98920	0.0564757	0.27163330	2.3612794	21	—	—
511942 2015 HQ_{173}	17.9	X	259.69477	195.63395	31.91546	6.31505	0.1389431	0.27931470	2.3177870	21	—	—
511943 2015 HX_{173}	17.2	X	218.79489	133.86106	109.87616	7.13468	0.0749906	0.26515562	2.3995814	21	—	—
511944 2015 HG_{174}	16.9	X	172.69311	113.41862	90.44499	15.64965	0.1324861	0.22969189	2.6406182	21	11 7.9	21.3
511945 2015 HD_{175}	17.3	X	202.80156	200.76471	43.88976	5.32744	0.1688343	0.25985311	2.4321150	21	—	—
511946 2015 HH_{185}	17.2	X	113.60906	102.72480	147.33889	5.09897	0.0470540	0.21583066	2.7524998	21	10 26.8	21.1
511947 2015 HJ_{185}	17.5	X	88.21657	269.85512	61.76985	14.64538	0.1338234	0.23917408	2.5703562	21	—	—
511948 2015 HN_{185}	17.5	X	150.57770	30.38287	257.20202	5.27329	0.1225608	0.25662761	2.4524517	21	—	—
511949 2015 HO_{185}	17.4	X	199.60910	247.20494	335.61615	3.99516	0.0688456	0.24678303	2.5172471	21	—	—
511950 2015 JW_{5}	17.2	X	114.28875	305.79377	349.56710	6.54236	0.1972892	0.23122026	2.6289690	21	12 30.9	21.7
511951 2015 JB_{11}	17.3	X	192.40071	11.18065	133.36967	4.35940	0.0198063	0.22058092	2.7128394	21	9 16.0	20.9
511952 2015 JV_{12}	17.1	X	75.73379	234.54612	38.24668	3.45112	0.0449192	0.21050145	2.7987621	21	10 7.5	20.9
511953 2015 KB_{1}	16.2	X	68.63018	36.64991	247.92829	13.71660	0.0866942	0.22856728	2.6492728	21	10 17.7	20.0
511954 2015 KD_{1}	17.8	X	255.33431	265.77393	311.34323	10.38571	0.1041667	0.28104645	2.3082561	21	—	—
511955 2015 KC_{2}	16.8	X	100.35870	25.63989	257.84958	10.39439	0.0648079	0.23831261	2.5765468	21	11 25.0	20.4
511956 2015 KG_{3}	18.0	X	16.94338	282.76342	224.31711	4.50123	0.1666184	0.29953979	2.2122440	21	—	—
511957 2015 KQ_{7}	17.6	X	349.47854	248.97385	250.97278	7.09190	0.1403254	0.28268086	2.2993502	21	—	—
511958 2015 KC_{9}	16.9	X	148.95981	186.93391	93.04273	16.25378	0.1010941	0.24303620	2.5430530	21	—	—
511959 2015 KU_{9}	16.4	X	78.85846	228.29726	135.28652	11.55889	0.2203076	0.24087815	2.5582194	21	—	—
511960 2015 KW_{9}	16.6	X	19.60475	193.60582	99.13056	17.43319	0.0882914	0.18993124	2.9973568	21	8 24.2	20.6
511961 2015 KK_{12}	16.2	X	286.84770	339.67577	114.07282	13.67370	0.0845245	0.22485616	2.6783430	21	11 8.7	19.8
511962 2015 KB_{13}	17.3	X	214.66797	16.28916	148.98793	11.92752	0.0632450	0.22491940	2.6778409	21	11 7.7	21.3
511963 2015 KD_{14}	17.1	X	108.79000	182.93142	106.19573	13.67281	0.2520345	0.22170514	2.7036608	21	12 20.4	21.9
511964 2015 KW_{14}	16.4	X	44.78920	146.68161	137.94585	10.92720	0.0719430	0.19613975	2.9337671	21	9 16.2	20.3
511965 2015 KN_{17}	16.8	X	124.47619	165.82119	115.20853	15.33880	0.1296657	0.23028639	2.6360716	21	12 20.9	21.1
511966 2015 KY_{17}	16.7	X	163.67368	36.79838	172.04060	9.39628	0.0694636	0.21891994	2.7265439	21	11 1.9	20.8
511967 2015 KC_{24}	16.5	X	292.70553	181.98375	255.86633	5.06833	0.0434865	0.21719583	2.7409539	21	10 23.2	20.0
511968 2015 KU_{26}	16.3	X	46.85097	235.23723	101.19598	12.87685	0.0853118	0.22338452	2.6900933	21	11 30.4	20.0
511969 2015 KF_{38}	16.3	X	358.93480	220.68942	79.55872	23.23689	0.1319227	0.18032476	3.1028859	21	7 29.9	20.3
511970 2015 KY_{40}	16.0	X	275.69153	323.10915	70.97267	16.45781	0.0663476	0.18944621	3.0024707	21	8 2.9	20.4
511971 2015 KE_{42}	17.5	X	150.08861	59.93751	220.00270	4.34885	0.1377456	0.24057643	2.5603578	21	—	—
511972 2015 KY_{43}	18.2	X	280.17496	264.20983	305.19548	0.69861	0.1285566	0.27424125	2.3462856	21	—	—
511973 2015 KO_{47}	16.4	X	85.47893	209.55665	92.57237	7.66917	0.0133218	0.22463688	2.6800857	21	11 24.4	20.0
511974 2015 KY_{51}	17.5	X	140.90354	198.86565	76.57529	3.19417	0.1735330	0.23255457	2.6189033	21	12 28.7	21.8
511975 2015 KH_{58}	16.3	X	354.59388	247.47846	88.37318	14.78280	0.0951401	0.18069355	3.0986625	21	9 13.5	20.5
511976 2015 KN_{58}	17.4	X	82.98817	193.41215	194.38844	6.89808	0.0580697	0.26970103	2.3725442	21	—	—
511977 2015 KW_{60}	18.0	X	216.41089	180.91191	59.07912	2.07556	0.1489660	0.26088899	2.4256728	21	—	—
511978 2015 KY_{64}	17.7	X	252.21394	37.05863	115.25140	7.32708	0.1294543	0.24530998	2.5273142	21	11 29.5	21.0
511979 2015 KS_{67}	17.3	X	125.39188	221.53502	76.61563	14.46385	0.1423548	0.24004129	2.5641617	21	—	—
511980 2015 KE_{75}	17.0	X	78.56875	150.16467	198.86173	12.01910	0.2244081	0.23525850	2.5987978	21	—	—
511981 2015 KK_{75}	16.8	X	26.68651	237.03485	140.04716	8.28340	0.2074493	0.22883664	2.6471934	21	—	—
511982 2015 KO_{82}	16.1	X	309.42202	315.31581	86.30711	26.65323	0.1372187	0.21124140	2.7922225	21	10 7.9	20.1
511983 2015 KO_{86}	16.9	X	255.74195	35.45586	93.85884	15.40423	0.0832637	0.23402854	2.6078954	21	11 13.0	20.5
511984 2015 KJ_{88}	16.0	X	15.47456	162.99116	117.36837	11.69079	0.2654623	0.17920475	3.1158009	21	8 13.1	19.0
511985 2015 KZ_{92}	16.2	X	114.11870	84.42521	212.51322	12.55467	0.1032714	0.23252782	2.6191042	21	12 27.1	20.4
511986 2015 KV_{93}	17.8	X	288.30062	69.29880	86.26737	12.20518	0.1648009	0.25992876	2.4316431	21	—	—
511987 2015 KD_{94}	16.8	X	76.36845	251.13763	85.85097	15.48373	0.1383947	0.23174166	2.6250242	21	—	—
511988 2015 KC_{102}	17.4	X	210.17784	137.18652	79.53449	15.89573	0.0404381	0.24408003	2.5357974	21	—	—
511989 2015 KN_{104}	16.5	X	21.83350	149.66576	112.33413	11.52203	0.1086287	0.17722691	3.1389395	21	7 13.4	20.4
511990 2015 KL_{123}	17.3	X	168.33512	188.11908	117.50835	7.23431	0.1157751	0.26571977	2.3961839	21	—	—
511991 2015 KE_{125}	18.3	X	249.09646	49.01620	186.47482	2.13929	0.1458111	0.27422982	2.3463507	21	—	—
511992 2015 KS_{125}	18.3	X	314.27546	168.03619	74.55020	6.80244	0.1158334	0.30575091	2.1821815	21	2 10.2	20.9
511993 2015 KK_{128}	17.4	X	52.67363	356.08504	80.58274	8.16703	0.0670489	0.27884183	2.3204067	21	—	—
511994 2015 KZ_{128}	16.5	X	36.95135	257.39951	76.49386	10.11224	0.1711498	0.21524964	2.7574507	21	11 23.9	19.9
511995 2015 KE_{129}	17.6	X	205.06209	168.06122	89.00582	7.52835	0.0958164	0.26189651	2.4194477	21	—	—
511996 2015 KV_{129}	17.3	X	139.18858	239.40000	59.94125	16.41199	0.1563135	0.24753973	2.5121145	21	—	—
511997 2015 KR_{130}	16.7	X	281.33089	1.59073	99.15955	13.75516	0.1183198	0.22825906	2.6516571	21	11 5.9	20.1
511998 2015 KT_{133}	16.4	X	74.52141	185.37460	86.29221	16.52904	0.1129402	0.20662986	2.8336138	21	10 21.4	20.7
511999 2015 KD_{146}	17.7	X	308.41131	303.65049	216.12086	3.62039	0.1481485	0.27004154	2.3705493	21	—	—
512000 2015 KJ_{146}	17.0	X	135.69011	49.28009	179.30268	12.54596	0.0625528	0.21235430	2.7824584	21	10 25.8	21.1