Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476001 2007 RG_{48}	17.6	X	75.74372	280.32083	13.85988	4.16961	0.1911858	0.21884900	2.7271332	21	11 21.4	21.8
476002 2007 RT_{49}	17.3	X	72.08048	145.23853	210.17844	1.93518	0.1244161	0.22672299	2.6636204	21	—	—
476003 2007 RP_{56}	17.0	X	133.61479	107.69025	189.73070	15.60274	0.3884429	0.23418700	2.6067189	21	—	—
476004 2007 RZ_{59}	16.6	X	97.80080	11.06741	341.25962	9.38579	0.0913278	0.23414513	2.6070296	21	—	—
476005 2007 RL_{66}	17.2	X	54.06216	37.88718	337.73533	9.62462	0.1446512	0.22953914	2.6417896	21	—	—
476006 2007 RN_{76}	17.5	X	48.37086	198.34379	170.87908	1.51367	0.1157414	0.22725001	2.6595007	21	—	—
476007 2007 RQ_{89}	17.3	X	76.84403	257.34498	2.63222	7.79373	0.1852745	0.21340432	2.7733238	21	10 9.9	21.4
476008 2007 RO_{93}	16.9	X	35.56621	2.98852	7.10481	5.45232	0.1697373	0.22236090	2.6983427	21	—	—
476009 2007 RN_{94}	16.8	X	46.04511	341.16808	20.10050	7.37617	0.2172221	0.22251574	2.6970907	21	—	—
476010 2007 RK_{95}	16.9	X	60.99845	262.78768	39.13949	13.41206	0.2111504	0.21300194	2.7768154	21	11 16.2	20.9
476011 2007 RL_{96}	17.0	X	21.74857	303.42781	45.39500	5.59300	0.0281677	0.21419900	2.7664602	21	11 1.3	20.7
476012 2007 RA_{107}	16.9	X	321.06582	56.26818	350.15979	10.85258	0.2748272	0.21228276	2.7830835	21	10 2.1	19.3
476013 2007 RA_{131}	17.2	X	6.31809	85.68685	6.17052	6.93039	0.1820600	0.22790434	2.6544079	21	—	—
476014 2007 RU_{132}	17.0	X	34.81104	244.84541	124.62431	12.51654	0.1984294	0.22395083	2.6855563	21	—	—
476015 2007 RD_{134}	16.8	X	22.99776	230.07371	149.08006	9.10348	0.2393281	0.22122890	2.7075395	21	—	—
476016 2007 RQ_{136}	16.6	X	121.91935	291.98062	357.98661	14.68334	0.1454740	0.22880901	2.6474065	21	12 29.8	21.1
476017 2007 RO_{157}	16.7	X	63.27321	334.32332	14.58264	15.03908	0.1250902	0.22607930	2.6686739	21	—	—
476018 2007 RE_{160}	17.2	X	21.95804	44.75638	19.49948	5.12792	0.1713125	0.22689125	2.6623034	21	—	—
476019 2007 RB_{166}	16.9	X	90.72985	332.82948	338.94042	8.87508	0.1747679	0.22675017	2.6634076	21	12 28.1	21.2
476020 2007 RP_{173}	17.3	X	0.56966	281.83394	131.30171	4.07755	0.1889807	0.22073680	2.7115621	21	—	—
476021 2007 RH_{189}	17.6	X	46.16083	212.89126	154.59509	2.91105	0.1534994	0.22417350	2.6837777	21	—	—
476022 2007 RR_{190}	17.5	X	77.20263	352.22794	343.06733	3.88378	0.2262812	0.22646566	2.6656378	21	—	—
476023 2007 RN_{192}	16.6	X	26.02077	323.57326	13.39456	12.31207	0.2154685	0.21651737	2.7466768	21	11 14.5	20.0
476024 2007 RS_{194}	16.8	X	2.71136	250.83616	174.40798	11.30463	0.1670970	0.22373309	2.6872984	21	—	—
476025 2007 RM_{203}	17.8	X	11.79501	249.72355	185.26318	2.80797	0.2594264	0.22535909	2.6743566	21	—	—
476026 2007 RN_{203}	17.2	X	301.37827	68.48789	6.96413	4.06122	0.0904058	0.21415581	2.7668321	21	10 27.8	20.5
476027 2007 RY_{206}	17.1	X	359.10985	254.46777	150.94901	4.39288	0.0807021	0.22100710	2.7093508	21	12 19.6	20.5
476028 2007 RC_{221}	15.9	X	151.83233	155.03058	9.96312	27.32257	0.1742397	0.20045287	2.8915310	21	9 6.5	21.0
476029 2007 RC_{230}	17.2	X	25.59329	6.67061	33.45764	3.17045	0.1760738	0.22468015	2.6797416	21	—	—
476030 2007 RW_{232}	16.4	X	34.86184	352.96331	23.44415	9.60357	0.2057511	0.22347140	2.6893960	21	—	—
476031 2007 RB_{235}	17.1	X	304.93774	120.24351	350.80324	16.94960	0.1495413	0.22350980	2.6890879	21	12 18.8	20.4
476032 2007 RN_{235}	17.9	X	33.20194	181.88920	201.16972	1.74435	0.2155010	0.22436199	2.6822744	21	—	—
476033 2007 RQ_{252}	16.7	X	42.22019	31.99226	323.09285	9.57734	0.3253306	0.22030570	2.7150983	21	—	—
476034 2007 RE_{260}	17.3	X	291.95388	0.88860	101.20572	3.76582	0.1362555	0.21645763	2.7471821	21	11 14.8	20.4
476035 2007 RR_{265}	17.5	X	81.12709	150.34457	181.81417	7.11392	0.1566113	0.22734371	2.6587699	21	—	—
476036 2007 RB_{267}	16.8	X	30.45928	347.18750	28.80273	5.59429	0.1336248	0.22212299	2.7002691	21	—	—
476037 2007 RB_{271}	17.2	X	83.50216	39.56707	354.52065	14.76758	0.1558294	0.23459648	2.6036847	21	—	—
476038 2007 RZ_{272}	17.2	X	24.73155	7.43687	358.78775	15.07328	0.2421502	0.21908994	2.7251334	21	12 30.9	20.9
476039 2007 RL_{280}	17.3	X	60.28015	127.84634	230.38874	13.32057	0.2573642	0.22623444	2.6674538	21	—	—
476040 2007 RU_{280}	16.4	X	343.27823	119.96515	272.35481	11.85359	0.1905680	0.21453480	2.7635727	21	11 8.5	19.3
476041 2007 RX_{280}	16.2	X	8.37546	126.58383	290.13639	12.23207	0.1618889	0.22320672	2.6915216	21	—	—
476042 2007 RH_{286}	17.0	X	29.90176	64.79758	315.89492	11.80178	0.2830946	0.22229422	2.6988822	21	—	—
476043 2007 RN_{287}	17.4	X	143.59350	225.77573	19.10932	2.02079	0.0230725	0.21864514	2.7288280	21	11 21.3	21.3
476044 2007 RT_{287}	17.0	X	36.42016	167.30633	166.91700	10.28533	0.0599940	0.21946017	2.7220676	21	11 9.7	20.7
476045 2007 RH_{288}	17.3	X	350.85111	215.93237	146.82209	5.08948	0.2135778	0.21372805	2.7705226	21	10 18.9	19.8
476046 2007 RN_{288}	17.1	X	28.42181	251.00467	158.18865	3.75201	0.2631872	0.22557091	2.6726822	21	—	—
476047 2007 RL_{290}	17.5	X	301.40176	58.45193	37.62152	8.81995	0.1760484	0.21190285	2.7864089	21	11 14.8	20.4
476048 2007 RX_{290}	17.2	X	27.95210	323.39434	35.95397	10.07618	0.2261853	0.21475284	2.7617018	21	12 20.7	20.8
476049 2007 RB_{293}	16.1	X	195.09266	197.68098	29.94160	15.19571	0.1366596	0.22406054	2.6846796	21	12 20.0	20.5
476050 2007 RJ_{294}	17.5	X	8.91025	166.05342	205.06350	3.70519	0.1120321	0.21609512	2.7502536	21	11 22.2	20.6
476051 2007 RQ_{296}	17.0	X	26.78731	3.45452	15.97189	5.87311	0.0604695	0.22097314	2.7096283	21	12 22.1	20.6
476052 2007 RL_{308}	17.8	X	4.22346	191.31324	176.95544	4.24497	0.1148528	0.21791133	2.7349507	21	11 12.2	20.9
476053 2007 RB_{313}	16.7	X	14.41629	28.14148	341.66476	13.05929	0.1582320	0.21741998	2.7390697	21	12 2.4	20.2
476054 2007 RY_{314}	16.6	X	23.72465	344.83986	348.08376	9.14030	0.1684288	0.21569126	2.7536855	21	10 28.9	20.0
476055 2007 RF_{316}	17.3	X	348.65994	196.77793	219.53475	0.12299	0.1915912	0.22114302	2.7082405	21	12 28.7	20.0
476056 2007 RN_{318}	17.7	X	78.22850	315.67466	21.58633	2.16943	0.2098080	0.22677195	2.6632371	21	—	—
476057 2007 RU_{319}	16.9	X	320.62533	215.87687	191.31847	7.79623	0.2153422	0.21230822	2.7828610	21	10 12.4	19.5
476058 2007 RQ_{321}	16.9	X	18.30759	13.52069	6.52809	9.10295	0.1963486	0.22113930	2.7082709	21	—	—
476059 2007 RE_{322}	17.0	X	355.36459	67.73125	323.55227	14.33229	0.2821397	0.21699648	2.7426323	21	12 18.7	19.8
476060 2007 RA_{325}	17.0	X	268.95825	43.39765	37.99635	11.12752	0.1235550	0.20574411	2.8417407	21	9 18.9	20.9
476061 2007 RS_{325}	17.3	X	57.40422	136.60734	228.85829	8.30289	0.1454323	0.21935031	2.7229764	21	—	—
476062 2007 SH_{12}	17.0	X	53.50049	309.54623	36.16837	8.67242	0.3109390	0.22480554	2.6787450	21	—	—
476063 2007 SG_{13}	16.4	X	100.07854	336.25332	357.12642	13.26932	0.0612640	0.22789039	2.6545162	21	—	—
476064 2007 SR_{13}	16.9	X	77.47577	347.90444	355.59711	9.34049	0.1251812	0.22572088	2.6714982	21	—	—
476065 2007 SN_{14}	17.0	X	29.81533	154.43186	194.43290	3.51306	0.2404886	0.21670244	2.7451127	21	12 13.4	20.4
476066 2007 SY_{19}	16.5	X	336.92085	156.18317	270.76765	8.91064	0.2124532	0.21825609	2.7320699	21	12 20.3	19.0
476067 2007 SF_{21}	17.1	X	306.30486	87.78076	354.74623	11.37718	0.2410331	0.21097770	2.7945487	21	10 24.2	19.9
476068 2007 SL_{21}	17.0	X	18.62974	109.41641	302.37798	10.30556	0.1852985	0.22409668	2.6843910	21	—	—
476069 2007 SQ_{21}	16.7	X	350.78100	184.42572	232.04189	5.12743	0.1700983	0.22109127	2.7086631	21	12 29.9	19.6
476070 2007 SP_{22}	16.5	X	309.13961	59.28422	23.75748	18.30799	0.0468803	0.21719225	2.7409840	21	11 18.1	20.2
476071 2007 TV_{4}	16.8	X	339.44721	165.29530	227.92582	3.50984	0.0725955	0.21202807	2.7853117	21	10 31.9	20.3
476072 2007 TV_{8}	17.3	X	75.26461	112.99895	214.56818	4.80867	0.1249045	0.22051533	2.7133773	21	12 24.9	21.3
476073 2007 TP_{18}	16.8	X	53.24585	318.77628	24.58352	16.78240	0.1594401	0.21942729	2.7223396	21	12 23.3	21.0
476074 2007 TL_{19}	17.2	X	17.67675	81.18153	314.37063	8.61628	0.2777700	0.22144251	2.7057981	21	—	—
476075 2007 TY_{21}	16.4	X	298.73560	221.21237	230.90725	11.29268	0.2216198	0.20945894	2.8080410	21	10 28.6	19.4
476076 2007 TK_{25}	16.8	X	352.84284	64.63577	8.42026	13.70925	0.1578342	0.22241906	2.6978723	21	—	—
476077 2007 TA_{29}	16.7	X	32.43991	306.30591	32.70286	3.78751	0.0823018	0.21266979	2.7797059	21	11 9.2	20.3
476078 2007 TH_{30}	17.0	X	56.34181	119.16796	208.14360	5.47387	0.0116132	0.21422718	2.7662175	21	11 16.8	20.7
476079 2007 TU_{30}	17.2	X	335.13662	4.69396	37.61714	4.86915	0.0646163	0.21230944	2.7828503	21	11 6.4	20.6
476080 2007 TJ_{35}	16.7	X	0.95372	330.78574	53.51714	14.49722	0.2947035	0.21458688	2.7631254	21	12 19.7	19.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476081 2007 TS_{43}	17.1	X	15.43898	173.57680	233.20909	9.20918	0.2806381	0.22030713	2.7150865	21	—	—
476082 2007 TK_{44}	17.1	X	345.11360	43.14893	9.69648	7.55862	0.2946361	0.21398336	2.7683185	21	12 26.3	19.4
476083 2007 TX_{46}	16.8	X	108.30260	75.67380	226.87199	6.06398	0.2445543	0.22611920	2.6683600	21	—	—
476084 2007 TZ_{47}	16.6	X	295.39059	252.45516	217.41931	9.28651	0.1848904	0.21536216	2.7564902	21	11 24.3	19.5
476085 2007 TP_{48}	17.4	X	6.35326	67.95324	357.07095	3.98687	0.1097693	0.22290840	2.6939225	21	—	—
476086 2007 TK_{52}	16.9	X	117.51501	65.97929	212.05747	12.50654	0.0447997	0.21726049	2.7404100	21	12 3.6	20.9
476087 2007 TL_{52}	17.0	X	15.73241	165.99746	213.30902	9.07409	0.1472703	0.21685481	2.7438267	21	12 17.7	20.4
476088 2007 TS_{55}	17.1	X	41.79082	356.47836	21.91855	4.91642	0.0355112	0.22099156	2.7094777	21	—	—
476089 2007 TB_{58}	16.9	X	233.16086	116.06076	36.44798	5.59277	0.0998127	0.21115341	2.7929981	21	11 2.6	20.7
476090 2007 TA_{61}	17.1	X	320.77326	219.88624	214.06404	3.68906	0.1890355	0.21322143	2.7749095	21	11 23.0	19.6
476091 2007 TB_{63}	17.2	X	288.56101	173.98815	227.69741	1.15993	0.0691065	0.20275346	2.8696165	21	8 26.6	20.9
476092 2007 TP_{64}	17.5	X	41.60654	170.23141	190.26358	4.16557	0.2281779	0.21906972	2.7253010	21	—	—
476093 2007 TC_{66}	19.5	X	190.73862	35.24509	102.29183	10.52470	0.7101778	0.33050360	2.0718195	21	8 18.8	24.5
476094 2007 TY_{75}	17.7	X	8.35246	38.54078	19.87594	3.38457	0.1140174	0.22135065	2.7065466	21	—	—
476095 2007 TG_{88}	17.0	X	42.10739	309.97014	80.19466	3.89477	0.1614839	0.22297839	2.6933587	21	—	—
476096 2007 TG_{98}	16.9	X	301.98690	349.90452	88.11437	2.81381	0.1021078	0.21354974	2.7720647	21	11 1.9	20.3
476097 2007 TV_{113}	16.8	X	9.03147	211.47357	154.46920	8.64737	0.2310084	0.21558467	2.7545932	21	12 2.9	19.9
476098 2007 TH_{115}	16.5	X	315.46737	28.78366	59.90956	14.40732	0.2717231	0.21351540	2.7723618	21	11 26.1	18.5
476099 2007 TO_{123}	17.4	X	32.93850	267.08844	134.85822	1.76962	0.1709707	0.22337661	2.6901567	21	—	—
476100 2007 TZ_{124}	16.6	X	110.50391	270.56707	41.80409	10.70011	0.1681963	0.22567165	2.6718868	21	—	—
476101 2007 TP_{126}	17.5	X	7.33265	190.27850	194.85528	3.16423	0.1941355	0.21553785	2.7549921	21	12 18.6	20.6
476102 2007 TX_{129}	17.1	X	31.98349	315.67844	43.77379	4.88638	0.0861647	0.21515940	2.7582217	21	12 5.7	20.6
476103 2007 TU_{138}	16.6	X	2.28954	61.21903	315.97803	13.90006	0.1917639	0.21520463	2.7578352	21	11 25.5	19.8
476104 2007 TA_{147}	17.1	X	359.33899	15.16366	31.94106	10.59176	0.2253672	0.21642381	2.7474683	21	—	—
476105 2007 TB_{149}	17.2	X	21.18983	189.06309	172.41816	3.64232	0.2062122	0.21719533	2.7409581	21	12 12.1	20.4
476106 2007 TA_{155}	16.3	X	86.22634	144.15296	203.55091	31.54232	0.1921076	0.22773600	2.6557158	21	—	—
476107 2007 TR_{155}	16.0	X	39.95345	343.94586	10.05208	13.99568	0.1081761	0.21859895	2.7292124	21	12 11.7	19.9
476108 2007 TU_{156}	16.7	X	85.32660	112.85368	214.49258	12.05519	0.2802938	0.22574676	2.6712941	21	—	—
476109 2007 TZ_{157}	16.9	X	71.50247	293.86274	16.05291	23.88533	0.2767924	0.22097235	2.7096348	21	12 11.8	21.7
476110 2007 TF_{158}	17.5	X	16.37377	166.04479	217.19963	5.57254	0.2137890	0.21848366	2.7301724	21	—	—
476111 2007 TD_{162}	16.9	X	77.61218	126.02313	195.63610	12.31604	0.2791264	0.22412055	2.6842004	21	—	—
476112 2007 TG_{169}	16.8	X	38.97182	161.97075	229.12658	7.37175	0.2225946	0.22323769	2.6912727	21	—	—
476113 2007 TG_{172}	17.0	X	356.86921	277.87603	123.39888	3.77400	0.2531386	0.21564458	2.7540830	21	12 30.3	19.7
476114 2007 TT_{176}	16.7	X	61.41580	279.30053	38.52507	6.75169	0.0378480	0.21420597	2.7664002	21	11 13.8	20.3
476115 2007 TL_{179}	16.8	X	7.57018	334.01006	51.83700	12.70859	0.3267017	0.21594737	2.7515080	21	—	—
476116 2007 TN_{187}	17.4	X	19.61499	227.29643	141.77208	5.16617	0.2316097	0.21685334	2.7438391	21	12 23.3	20.6
476117 2007 TK_{193}	17.3	X	1.37756	181.85113	204.10948	4.24969	0.0827289	0.21313101	2.7756942	21	11 26.4	20.7
476118 2007 TU_{198}	16.3	X	165.77779	232.47588	17.30487	10.77843	0.0511705	0.22189590	2.7021110	21	12 23.0	20.4
476119 2007 TM_{204}	17.4	X	5.81622	222.05480	166.84674	4.17833	0.0832378	0.21489456	2.7604874	21	12 7.3	20.8
476120 2007 TU_{212}	17.0	X	34.57025	348.23465	13.74183	10.25175	0.2233731	0.21825002	2.7321205	21	—	—
476121 2007 TC_{213}	16.6	X	72.86381	110.32351	230.50083	11.15220	0.1873176	0.22231262	2.6987333	21	—	—
476122 2007 TO_{215}	16.8	X	65.72849	301.77372	10.89955	6.10709	0.0130174	0.21125878	2.7920694	21	11 7.7	20.7
476123 2007 TA_{216}	17.7	X	29.61096	346.37765	14.91111	4.58959	0.2145195	0.21657755	2.7461679	21	12 24.8	21.2
476124 2007 TU_{217}	17.3	X	320.25801	46.53121	33.66843	10.49454	0.0994335	0.21355944	2.7719807	21	12 1.5	20.7
476125 2007 TS_{224}	17.3	X	344.68255	227.31213	180.72382	3.09312	0.1885850	0.21787539	2.7352515	21	12 8.1	19.9
476126 2007 TQ_{225}	16.8	X	86.97625	262.41364	352.77486	13.31236	0.1833441	0.21789521	2.7350856	21	10 12.1	21.1
476127 2007 TC_{227}	17.6	X	355.61200	206.61288	220.85569	12.34463	0.1619836	0.21944149	2.7222221	21	—	—
476128 2007 TL_{227}	17.3	X	20.04434	142.97562	234.40035	3.37384	0.0887798	0.21649523	2.7468640	21	12 13.4	20.6
476129 2007 TS_{228}	17.1	X	358.53235	176.67984	229.81176	0.87075	0.2243196	0.21661250	2.7458725	21	—	—
476130 2007 TB_{230}	16.6	X	30.49602	342.93835	347.33744	7.76303	0.2298162	0.21393375	2.7687464	21	11 15.2	20.1
476131 2007 TW_{232}	17.4	X	343.82008	201.90148	217.93859	9.48461	0.2023414	0.21427578	2.7657993	21	12 22.1	20.2
476132 2007 TP_{237}	17.2	X	15.37929	116.87823	242.40167	3.71644	0.1631810	0.21185188	2.7868558	21	11 21.9	20.5
476133 2007 TO_{240}	16.6	X	16.85758	274.80635	104.23342	11.59600	0.2341549	0.21952383	2.7215414	21	—	—
476134 2007 TR_{241}	16.7	X	287.26222	88.77786	42.84099	12.16392	0.1184568	0.21664227	2.7456210	21	12 16.3	20.1
476135 2007 TY_{245}	16.9	X	27.78730	14.98928	11.64843	9.49862	0.2758132	0.22358471	2.6884872	21	—	—
476136 2007 TG_{249}	17.0	X	83.34605	49.25984	236.65909	4.51671	0.1412087	0.21656744	2.7462534	21	11 14.2	20.9
476137 2007 TZ_{250}	17.1	X	57.28275	18.92350	345.19062	5.50466	0.0685447	0.22393402	2.6856907	21	—	—
476138 2007 TK_{251}	16.9	X	17.22164	146.97728	243.85244	3.51107	0.1224738	0.22024663	2.7155838	21	12 31.9	20.4
476139 2007 TJ_{262}	16.8	X	50.68488	321.01880	37.87389	7.00892	0.0745837	0.21846662	2.7303144	21	12 28.6	20.6
476140 2007 TD_{268}	16.8	X	321.06364	77.90455	32.47637	14.31221	0.1395694	0.22111409	2.7084767	21	—	—
476141 2007 TN_{288}	17.0	X	347.30569	305.44430	109.94883	4.56336	0.1890147	0.21750389	2.7383652	21	12 23.3	19.6
476142 2007 TG_{291}	17.3	X	50.64769	115.37463	256.51268	4.76598	0.0566881	0.22551582	2.6731175	21	—	—
476143 2007 TF_{295}	17.1	X	341.29835	180.96085	204.33908	7.98241	0.1163680	0.21358754	2.7717375	21	10 26.1	20.1
476144 2007 TT_{296}	16.9	X	1.11381	302.81975	64.55338	5.36079	0.1563811	0.21057711	2.7980916	21	11 8.2	19.9
476145 2007 TQ_{297}	17.5	X	50.81239	344.17160	341.87294	8.89916	0.1462039	0.22143267	2.7058782	21	11 26.1	21.3
476146 2007 TK_{308}	16.6	X	21.66447	311.68751	55.76558	5.20078	0.0804652	0.21636833	2.7479379	21	12 1.4	20.2
476147 2007 TV_{309}	16.4	X	353.89529	67.26970	359.76225	13.44116	0.0411516	0.22794878	2.6540628	21	—	—
476148 2007 TS_{320}	17.2	X	66.88644	115.01451	218.52668	2.62905	0.0948468	0.22132194	2.7067807	21	12 19.8	21.1
476149 2007 TK_{324}	16.3	X	328.96760	55.16193	8.60671	11.28777	0.0220180	0.21522595	2.7576530	21	11 22.9	20.1
476150 2007 TG_{325}	17.0	X	359.37420	121.34661	236.90886	7.41235	0.1906740	0.21096216	2.7946859	21	10 24.4	19.7
476151 2007 TB_{326}	17.2	X	314.60637	74.57265	7.28892	10.02257	0.1545673	0.21387200	2.7692793	21	11 20.3	20.4
476152 2007 TQ_{328}	17.2	X	85.31699	288.88325	11.52200	8.30677	0.1968345	0.21778497	2.7360085	21	12 8.2	21.6
476153 2007 TE_{333}	17.2	X	89.80908	43.24940	258.62971	2.72055	0.0849651	0.21548718	2.7554239	21	12 4.5	21.1
476154 2007 TE_{334}	16.2	X	236.15962	250.46669	233.96212	11.85523	0.0861905	0.20485919	2.8499183	21	9 29.3	20.5
476155 2007 TX_{343}	17.1	X	24.17941	227.58239	143.30662	4.69542	0.0455270	0.21633243	2.7482419	21	12 5.7	20.7
476156 2007 TA_{346}	16.7	X	341.29641	347.37616	44.81890	7.11158	0.0600974	0.21412425	2.7671040	21	11 3.1	19.9
476157 2007 TU_{354}	16.8	X	53.96790	324.34957	33.86337	15.08246	0.2922127	0.22485479	2.6783539	21	—	—
476158 2007 TU_{357}	17.4	X	35.41615	131.70739	203.23086	2.83437	0.2033133	0.21792885	2.7348042	21	11 27.9	20.8
476159 2007 TU_{364}	16.7	X	350.36413	20.45556	50.82786	10.01378	0.2546142	0.21600746	2.7509976	21	—	—
476160 2007 TH_{368}	17.0	X	284.52054	4.27606	45.50803	10.33233	0.0711193	0.19959945	2.8997674	21	9 6.4	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476161 2007 TG_{371}	16.8	X	14.78650	286.39110	92.17174	6.74643	0.0602934	0.21487508	2.7606542	21	12 4.1	20.2
476162 2007 TE_{374}	16.1	X	133.60674	275.25703	4.18091	13.86524	0.1096760	0.22566929	2.6719054	21	12 25.9	20.5
476163 2007 TB_{379}	17.1	X	42.07231	207.91375	142.25354	3.31273	0.2406191	0.22013030	2.7165404	21	12 30.7	20.9
476164 2007 TO_{383}	17.1	X	22.80525	142.15926	208.52383	3.29399	0.1093620	0.21229352	2.7829894	21	11 15.1	20.4
476165 2007 TX_{384}	17.0	X	34.72736	158.35325	172.74491	8.22288	0.2275318	0.21158607	2.7891893	21	11 25.9	20.6
476166 2007 TC_{385}	16.8	X	270.72261	80.86289	53.36354	16.98802	0.0653986	0.21295823	2.7771954	21	11 30.9	20.6
476167 2007 TZ_{391}	17.1	X	60.59289	148.45980	219.47118	4.60866	0.0827358	0.22479539	2.6788257	21	—	—
476168 2007 TC_{398}	17.2	X	339.97124	64.09984	343.76169	5.07943	0.0555066	0.21360647	2.7715738	21	11 19.5	20.8
476169 2007 TQ_{402}	17.1	X	46.39348	132.87179	190.11648	13.64252	0.1350685	0.21424783	2.7660398	21	11 17.9	20.9
476170 2007 TP_{414}	16.6	X	9.99300	309.64748	80.34256	13.85736	0.1841465	0.21736010	2.7395727	21	12 28.1	19.8
476171 2007 TQ_{420}	16.7	X	88.16987	15.91381	336.99642	17.44251	0.2154678	0.22991913	2.6388780	21	—	—
476172 2007 TZ_{424}	17.4	X	336.77669	189.61505	217.00912	4.46713	0.0993158	0.21253548	2.7808769	21	11 15.7	20.5
476173 2007 TB_{427}	17.1	X	352.32346	192.29821	215.88735	14.86910	0.0810496	0.21730258	2.7400561	21	12 11.8	20.7
476174 2007 TH_{427}	17.2	X	306.31509	31.25492	40.34771	13.27269	0.0838485	0.21184060	2.7869547	21	10 31.8	20.7
476175 2007 TZ_{428}	16.7	X	282.43985	280.94273	214.57006	14.78290	0.2522093	0.21541921	2.7560035	21	11 26.1	19.8
476176 2007 TD_{432}	16.9	X	38.79783	156.11504	231.67991	4.72878	0.0411986	0.22338721	2.6900717	21	—	—
476177 2007 TK_{432}	17.4	X	344.99534	180.50022	228.29931	3.10912	0.0982418	0.21550280	2.7552908	21	12 2.4	20.4
476178 2007 TH_{438}	16.7	X	213.26884	113.05858	37.84959	2.82836	0.0317050	0.20961829	2.8066178	21	10 16.8	20.5
476179 2007 TM_{440}	17.0	X	345.36240	6.63867	62.21480	8.91114	0.1578281	0.21816419	2.7328371	21	—	—
476180 2007 TM_{441}	16.8	X	35.15507	11.42817	356.58546	11.75046	0.1734618	0.21916135	2.7245414	21	—	—
476181 2007 TS_{447}	16.7	X	55.43242	328.98130	52.67317	10.29650	0.1393979	0.22605346	2.6688773	21	—	—
476182 2007 TV_{449}	17.0	X	317.31437	138.82949	262.54665	8.33643	0.1167328	0.20625447	2.8370509	21	9 30.2	20.6
476183 2007 TW_{449}	16.7	X	3.94758	321.27478	76.09662	4.17219	0.0929285	0.21535107	2.7565849	21	12 16.0	20.0
476184 2007 TY_{451}	16.7	X	48.83038	323.85907	25.89139	14.32019	0.2469252	0.21805545	2.7337456	21	—	—
476185 2007 TO_{452}	17.1	X	309.26147	203.57623	269.41981	6.68013	0.1858177	0.21593011	2.7516545	21	12 25.2	19.6
476186 2007 UN_{8}	17.2	X	339.87967	81.89974	330.83395	8.65953	0.2633024	0.21320985	2.7750100	21	12 6.8	19.6
476187 2007 UQ_{13}	20.0	X	74.27762	29.42334	217.67411	29.30020	0.4253175	0.78375102	1.1650663	21	12 4.0	21.5
476188 2007 UT_{17}	17.1	X	60.56043	278.26185	19.63403	4.52188	0.0532772	0.21224650	2.7834004	21	10 20.6	20.9
476189 2007 UP_{24}	17.2	X	341.21345	349.08068	86.09406	4.59449	0.1743990	0.21695879	2.7429500	21	—	—
476190 2007 UR_{26}	16.8	X	298.47562	65.44172	25.89223	8.94538	0.1032380	0.21873293	2.7280978	21	11 12.2	20.0
476191 2007 UP_{28}	17.2	X	333.55838	138.46632	246.85505	1.51047	0.1950220	0.20865166	2.8152793	21	10 8.3	19.8
476192 2007 UO_{40}	16.8	X	299.73546	218.86483	227.65030	8.10408	0.1056860	0.21189964	2.7864370	21	11 7.8	20.1
476193 2007 US_{40}	17.3	X	47.65862	347.76957	23.68545	5.39506	0.1313078	0.22112584	2.7083808	21	—	—
476194 2007 UH_{41}	17.3	X	350.02375	162.13234	222.22061	3.66214	0.0757042	0.21165172	2.7886126	21	11 5.8	20.6
476195 2007 UJ_{41}	16.6	X	331.48532	29.30255	33.56552	9.45307	0.1569379	0.21382552	2.7696806	21	11 27.5	19.5
476196 2007 UB_{43}	17.2	X	315.07085	235.66606	195.50859	3.51224	0.0789874	0.21368417	2.7709019	21	11 14.7	20.4
476197 2007 UW_{45}	16.9	X	39.97497	320.98040	16.74207	9.99114	0.1150215	0.21394760	2.7686270	21	11 20.7	20.7
476198 2007 UD_{46}	16.8	X	348.35533	336.77318	56.12241	5.72978	0.1789292	0.21357816	2.7718187	21	11 21.4	19.6
476199 2007 UY_{51}	16.4	X	18.71995	284.36493	59.23717	15.18434	0.2070225	0.21007476	2.8025506	21	11 13.8	19.4
476200 2007 UX_{55}	17.5	X	37.67535	135.51853	223.11113	12.46075	0.1854031	0.21712127	2.7415813	21	12 26.4	21.3
476201 2007 UD_{58}	18.3	X	37.11342	125.55483	225.69367	2.70493	0.2445001	0.21700901	2.7425267	21	12 26.1	21.9
476202 2007 UE_{59}	17.6	X	320.57093	55.09851	42.84030	3.85337	0.1619489	0.21662831	2.7457389	21	12 28.1	20.4
476203 2007 UP_{60}	17.3	X	348.46792	213.01633	216.59260	3.04208	0.1593669	0.21676423	2.7445910	21	—	—
476204 2007 US_{62}	17.7	X	16.72630	205.00386	206.91429	2.41931	0.1631214	0.22354426	2.6888116	21	—	—
476205 2007 UD_{71}	16.6	X	14.00355	191.58415	221.38851	12.34404	0.0966401	0.22072690	2.7116432	21	—	—
476206 2007 UO_{74}	17.2	X	337.89359	162.05583	219.40845	5.19877	0.0846293	0.20883292	2.8136500	21	10 12.7	20.7
476207 2007 UH_{78}	16.7	X	25.40134	187.89471	226.23705	11.45512	0.1806073	0.22460404	2.6803469	21	—	—
476208 2007 UE_{87}	16.6	X	357.18117	145.61992	247.61458	3.71768	0.1131799	0.21272468	2.7792277	21	12 1.7	19.9
476209 2007 UL_{89}	17.5	X	353.13217	335.84990	72.62866	0.29338	0.0904038	0.21468893	2.7622498	21	12 13.8	20.6
476210 2007 UC_{91}	17.3	X	316.88674	341.73169	33.98559	2.32994	0.0825408	0.20250080	2.8720029	21	9 2.7	20.9
476211 2007 UY_{93}	16.9	X	328.97605	145.20780	240.19761	2.61760	0.0786904	0.20692339	2.8309334	21	10 3.5	20.2
476212 2007 UX_{97}	17.2	X	84.25791	264.31437	50.28587	5.83903	0.2402520	0.22021905	2.7158105	21	12 29.2	21.7
476213 2007 UN_{102}	17.3	X	25.97165	126.74593	229.66018	2.71294	0.1071636	0.21371432	2.7706413	21	11 26.8	20.7
476214 2007 UT_{102}	17.0	X	338.58967	178.12864	234.31964	3.37430	0.0593576	0.21300478	2.7767907	21	11 25.1	20.3
476215 2007 US_{107}	17.4	X	32.69661	46.41282	331.83225	1.50081	0.0887960	0.22109296	2.7086493	21	—	—
476216 2007 UX_{109}	17.2	X	357.22245	171.29661	210.19181	4.18040	0.0819574	0.21323253	2.7748131	21	11 14.1	20.4
476217 2007 UP_{112}	17.0	X	18.61750	325.45425	41.32580	6.79704	0.0827359	0.21474806	2.7617427	21	11 25.7	20.4
476218 2007 UU_{114}	17.0	X	36.52207	144.48998	240.31186	8.65571	0.1465776	0.21993267	2.7181675	21	—	—
476219 2007 US_{116}	16.7	X	20.32526	340.84910	73.47342	8.16044	0.2550961	0.22236821	2.6982836	21	—	—
476220 2007 UK_{129}	16.8	X	42.73571	110.34415	257.85517	8.05707	0.1157838	0.21743961	2.7389048	21	—	—
476221 2007 UA_{130}	17.0	X	49.55220	197.15102	183.14481	14.12955	0.2523228	0.22293630	2.6936977	21	—	—
476222 2007 UM_{131}	17.4	X	315.86940	205.47877	247.46863	2.99472	0.0674305	0.21430895	2.7655139	21	12 14.4	20.6
476223 2007 UW_{134}	17.2	X	10.31076	248.09420	123.97238	1.01829	0.0866986	0.21370277	2.7707411	21	11 21.8	20.7
476224 2007 UW_{136}	17.2	X	2.69313	290.06337	117.57935	9.38331	0.1756784	0.21655147	2.7463884	21	—	—
476225 2007 UT_{140}	16.7	X	106.26184	214.87663	66.01975	10.63382	0.1761142	0.21417408	2.7666748	21	12 2.9	21.0
476226 2007 VU_{16}	17.9	X	0.62649	357.39190	69.10944	2.74192	0.1656711	0.22049735	2.7135249	21	—	—
476227 2007 VX_{18}	17.4	X	157.84372	94.83020	114.05595	1.37678	0.0453819	0.20961247	2.8066697	21	10 23.9	21.3
476228 2007 VU_{20}	17.3	X	347.20930	340.35934	42.00554	5.11178	0.1237923	0.21370263	2.7707423	21	11 1.4	20.4
476229 2007 VZ_{20}	17.0	X	357.40962	208.11991	179.25898	3.84304	0.1860528	0.21620119	2.7493540	21	12 3.5	19.8
476230 2007 VC_{24}	16.9	X	260.02691	113.83397	59.14888	12.59073	0.1131152	0.22069991	2.7118643	21	—	—
476231 2007 VT_{25}	17.1	X	56.77915	121.50744	231.13383	6.34537	0.1269206	0.22194953	2.7016758	21	—	—
476232 2007 VO_{29}	17.1	X	75.90776	318.59282	30.72338	7.06511	0.0299770	0.22337237	2.6901908	21	—	—
476233 2007 VW_{31}	17.0	X	359.58516	37.45885	342.50782	4.58059	0.1828890	0.21301580	2.7766950	21	11 24.1	19.9
476234 2007 VJ_{34}	17.6	X	322.23740	22.28851	57.83013	5.07048	0.1851749	0.21357351	2.7718590	21	12 4.4	20.1
476235 2007 VE_{35}	17.0	X	346.98963	323.47660	83.31181	5.55268	0.0596897	0.21251592	2.7810475	21	11 30.2	20.5
476236 2007 VY_{36}	17.1	X	36.49667	91.09508	231.14878	2.48177	0.1840044	0.21130283	2.7916813	21	11 8.4	20.6
476237 2007 VD_{41}	17.4	X	253.51893	297.50503	212.80046	3.53907	0.0393086	0.21543677	2.7558537	21	12 4.9	21.0
476238 2007 VF_{57}	16.9	X	333.74282	315.44520	89.44668	7.39931	0.1178236	0.20974883	2.8054532	21	11 9.8	20.1
476239 2007 VP_{57}	17.1	X	55.23717	242.00523	109.79354	4.95245	0.1130755	0.21715089	2.7413320	21	12 30.2	21.0
476240 2007 VW_{61}	17.3	X	283.15618	45.74371	51.32865	18.95253	0.3151110	0.20499757	2.8486357	21	10 3.8	21.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476241 2007 VH_{64}	16.8	X	34.07728	309.00802	35.43704	4.46790	0.2026018	0.21122822	2.7923387	21	12 5.9	20.3
476242 2007 VT_{65}	17.6	X	5.75443	264.42525	165.54530	2.39501	0.0715606	0.22655383	2.6649462	21	—	—
476243 2007 VJ_{66}	17.3	X	64.74354	173.64857	195.15166	5.83449	0.0324014	0.22129207	2.7070243	21	—	—
476244 2007 VL_{67}	16.8	X	322.51906	17.79762	34.09291	7.26403	0.0471269	0.21320235	2.7750750	21	10 31.8	20.4
476245 2007 VC_{69}	17.3	X	4.67304	355.40043	4.01050	4.24717	0.0882560	0.21253532	2.7808782	21	10 26.2	20.6
476246 2007 VT_{74}	17.5	X	18.80812	298.23744	52.39843	5.64697	0.0501447	0.21007173	2.8025776	21	11 1.8	21.2
476247 2007 VT_{76}	17.5	X	318.73038	323.42357	60.47559	6.57337	0.1147225	0.20441399	2.8540548	21	9 16.8	20.9
476248 2007 VB_{77}	17.6	X	348.79963	160.63188	217.90138	3.11068	0.1057618	0.20899226	2.8122197	21	10 27.9	20.8
476249 2007 VV_{77}	17.2	X	314.20930	1.77082	59.52992	6.87583	0.0173284	0.20970892	2.8058091	21	11 3.7	20.8
476250 2007 VU_{79}	17.0	X	56.92767	98.81842	243.22546	5.48510	0.0531311	0.21335954	2.7737118	21	12 11.2	20.9
476251 2007 VU_{84}	17.2	X	48.35876	113.48840	239.74815	1.67871	0.1522083	0.21822206	2.7323539	21	12 29.4	21.0
476252 2007 VG_{91}	16.8	X	301.54924	240.91352	233.69734	8.96992	0.1928713	0.21614493	2.7498311	21	12 11.4	19.7
476253 2007 VJ_{94}	17.1	X	359.05245	129.10842	251.66843	5.27087	0.1233228	0.21139434	2.7908756	21	11 18.5	20.3
476254 2007 VG_{97}	16.2	X	215.58401	251.84071	249.56596	13.91509	0.0986623	0.20297007	2.8675745	21	9 23.3	20.7
476255 2007 VW_{97}	17.0	X	6.91727	351.28610	9.60333	3.82808	0.1101985	0.20937993	2.8087474	21	11 2.4	20.2
476256 2007 VC_{99}	17.3	X	319.23978	319.42002	99.17091	0.58022	0.0636143	0.21364728	2.7712208	21	11 4.7	20.6
476257 2007 VE_{103}	17.1	X	351.62925	197.30012	163.02969	4.24762	0.1288322	0.21041122	2.7995622	21	10 10.4	20.2
476258 2007 VF_{103}	17.4	X	4.13117	268.86194	80.53267	3.30903	0.0929875	0.21083352	2.7958226	21	10 14.7	20.7
476259 2007 VJ_{103}	17.6	X	15.80461	232.22547	115.41798	2.71428	0.1438947	0.21349286	2.7725570	21	11 5.9	20.7
476260 2007 VS_{104}	17.0	X	3.00301	3.78803	15.71049	2.17801	0.1001583	0.21135447	2.7912266	21	11 20.7	20.4
476261 2007 VS_{110}	16.9	X	306.50315	157.71155	240.21533	5.01509	0.0618387	0.20154742	2.8810528	21	9 15.3	20.6
476262 2007 VC_{117}	17.0	X	284.63801	128.31238	296.37399	4.72617	0.0305462	0.20044908	2.8915675	21	9 23.6	20.9
476263 2007 VN_{124}	17.1	X	315.26066	120.43338	55.06197	5.51464	0.1570776	0.22677489	2.6632140	21	—	—
476264 2007 VX_{124}	17.0	X	280.55250	16.42444	53.40787	2.56690	0.0628327	0.20126013	2.8837938	21	9 24.1	20.7
476265 2007 VO_{142}	16.8	X	332.11117	223.17557	205.58842	4.14464	0.0449293	0.21334831	2.7738091	21	12 6.9	20.3
476266 2007 VV_{145}	17.2	X	340.46390	21.86513	26.76170	5.68723	0.0731950	0.21041075	2.7995663	21	11 21.6	20.8
476267 2007 VF_{154}	17.1	X	359.33517	349.11004	37.84041	6.61783	0.0489238	0.21612668	2.7499859	21	11 20.9	20.7
476268 2007 VH_{158}	17.3	X	34.58265	254.64278	104.21259	4.36645	0.2101889	0.21594594	2.7515201	21	12 27.3	20.9
476269 2007 VM_{160}	16.4	X	18.63867	278.88717	100.99497	6.29159	0.0747761	0.21431574	2.7654555	21	12 12.6	19.8
476270 2007 VC_{161}	17.3	X	322.20605	279.31499	138.88252	4.36950	0.0827635	0.20934124	2.8090935	21	11 8.7	20.7
476271 2007 VG_{163}	17.3	X	348.71198	335.01129	20.41259	2.14791	0.0826884	0.20261596	2.8709147	21	9 25.2	20.6
476272 2007 VT_{168}	17.2	X	321.67444	321.29174	60.92476	3.88526	0.0895504	0.20031970	2.8928124	21	9 19.3	20.7
476273 2007 VZ_{177}	17.3	X	307.41074	330.07950	73.91253	2.99873	0.0708884	0.20690121	2.8311358	21	9 28.6	20.8
476274 2007 VQ_{178}	17.1	X	327.93739	293.80878	82.11239	2.91782	0.0973143	0.20529594	2.8458749	21	9 20.6	20.5
476275 2007 VF_{183}	17.1	X	12.44044	37.16431	355.31498	8.02664	0.2353443	0.21681571	2.7441565	21	—	—
476276 2007 VV_{195}	17.1	X	358.22526	162.02521	238.33999	3.34432	0.0645999	0.21664613	2.7455883	21	12 9.1	20.5
476277 2007 VH_{199}	17.1	X	299.99616	169.66617	225.07509	1.25061	0.0734484	0.20266822	2.8704211	21	9 2.2	20.9
476278 2007 VZ_{213}	17.2	X	27.50137	189.19851	169.99377	4.13712	0.1100458	0.21302061	2.7766531	21	12 3.4	20.7
476279 2007 VB_{218}	16.9	X	310.00557	309.48740	91.10455	3.29361	0.0688970	0.20241955	2.8727714	21	9 27.8	20.5
476280 2007 VD_{218}	17.0	X	39.09997	258.72875	70.75599	9.68301	0.1592507	0.20938821	2.8086733	21	11 18.4	20.6
476281 2007 VL_{222}	17.1	X	34.28822	141.08218	195.83990	7.07727	0.1173865	0.21431388	2.7654715	21	11 15.9	20.6
476282 2007 VT_{225}	17.3	X	140.07042	220.43323	47.24403	2.90577	0.0683942	0.21857173	2.7294390	21	12 16.1	21.3
476283 2007 VN_{227}	17.2	X	350.17379	82.89298	261.21052	0.95538	0.0769634	0.20381642	2.8596306	21	9 11.3	20.8
476284 2007 VB_{231}	17.2	X	285.08046	264.56530	238.68270	2.96003	0.1286435	0.21617922	2.7495402	21	12 28.0	20.4
476285 2007 VJ_{238}	16.8	X	326.36353	176.20765	248.19312	5.37186	0.0339935	0.21035280	2.8000805	21	11 22.2	20.2
476286 2007 VW_{239}	17.0	X	2.11265	178.57283	231.25829	7.42180	0.1451429	0.21497839	2.7597697	21	—	—
476287 2007 VG_{242}	16.9	X	350.31838	252.18213	141.61972	8.43137	0.2366971	0.21219180	2.7838788	21	12 4.0	19.6
476288 2007 VM_{244}	17.2	X	333.95898	92.27754	41.16649	14.20667	0.2850142	0.22214979	2.7000519	21	—	—
476289 2007 VU_{256}	17.4	X	40.76487	157.26865	190.68886	9.04685	0.1489059	0.21515067	2.7582963	21	12 12.9	21.2
476290 2007 VT_{263}	16.9	X	113.87611	277.42857	319.03392	4.87115	0.0125945	0.20489798	2.8495586	21	9 30.9	21.0
476291 2007 VS_{284}	17.1	X	140.30519	209.78889	68.83385	7.30375	0.0220248	0.21631025	2.7484298	21	12 29.1	21.0
476292 2007 VG_{295}	17.1	X	294.76708	267.88313	236.21745	8.36485	0.1362036	0.21967909	2.7202589	21	—	—
476293 2007 VY_{307}	16.9	X	289.08542	32.54167	68.32555	3.90827	0.0388878	0.20956107	2.8071286	21	11 18.0	20.6
476294 2007 VZ_{310}	16.6	X	343.13139	297.04793	103.45618	4.48299	0.1932159	0.20437935	2.8543773	21	11 21.1	19.5
476295 2007 VW_{315}	16.8	X	5.43591	334.83877	80.33448	10.29672	0.0715539	0.21559514	2.7545039	21	—	—
476296 2007 VE_{319}	17.2	X	314.56315	143.24392	245.57837	1.07368	0.0763211	0.20276560	2.8695020	21	9 15.8	20.7
476297 2007 VZ_{321}	16.1	X	351.26280	211.14925	277.24841	10.54743	0.1245863	0.22619494	2.6677643	21	—	—
476298 2007 VQ_{325}	17.1	X	353.20972	84.75781	358.07102	7.28372	0.2807578	0.21873049	2.7281181	21	—	—
476299 2007 VV_{326}	17.0	X	309.04470	309.96251	79.63181	12.19940	0.0924167	0.19933719	2.9023102	21	9 13.9	20.9
476300 2007 VQ_{328}	17.0	X	316.44871	63.21918	5.82383	9.16823	0.1867466	0.20935210	2.8089963	21	11 2.5	19.9
476301 2007 VZ_{332}	16.5	X	252.76971	128.61809	315.96848	8.38489	0.2542637	0.19702312	2.9249914	21	8 10.9	21.1
476302 2007 VD_{334}	17.1	X	12.69330	135.54170	284.46092	13.94733	0.3278127	0.21585384	2.7523027	21	—	—
476303 2007 VW_{334}	17.2	X	342.64440	44.67903	16.82085	4.96029	0.1476225	0.20933214	2.8091749	21	12 16.3	20.3
476304 2007 VH_{335}	16.8	X	351.59058	346.34116	81.97604	14.05350	0.1164523	0.21644640	2.7472771	21	—	—
476305 2007 WO_{26}	16.8	X	49.39544	265.27039	82.15847	5.26838	0.0782248	0.21521574	2.7577402	21	12 12.5	20.3
476306 2007 WW_{30}	15.9	X	306.33219	186.14086	259.63630	13.88964	0.0510762	0.21068345	2.7971501	21	11 20.6	19.6
476307 2007 WU_{31}	17.1	X	357.41144	121.08805	270.59175	7.23267	0.2329067	0.21255438	2.7807120	21	12 13.9	19.7
476308 2007 WL_{34}	17.0	X	45.25132	319.87140	34.50496	6.39360	0.0624303	0.21307387	2.7761904	21	12 12.6	20.7
476309 2007 WD_{62}	16.6	X	355.29255	331.53986	75.50007	13.77917	0.1550706	0.21188815	2.7865377	21	12 20.5	19.7
476310 2007 XA_{13}	17.0	X	7.24982	29.98544	8.95833	2.75466	0.0975258	0.21575121	2.7531755	21	12 23.7	20.3
476311 2007 XF_{17}	16.7	X	342.04613	150.74779	283.13898	9.09431	0.2512146	0.21268615	2.7795633	21	—	—
476312 2007 XQ_{18}	16.8	X	304.53864	57.80212	75.30081	8.83124	0.1561580	0.21487183	2.7606820	21	—	—
476313 2007 XE_{21}	17.0	X	42.98539	353.05476	0.05223	3.24792	0.1041726	0.21370811	2.7706950	21	12 14.7	20.7
476314 2007 XU_{32}	18.1	X	130.70597	313.37616	78.40759	5.42782	0.1680315	0.30751303	2.1738373	21	2 6.1	20.6
476315 2007 XM_{33}	16.4	X	10.90716	150.30935	259.62597	14.45210	0.1445295	0.21607436	2.7504297	21	—	—
476316 2007 XT_{43}	16.7	X	352.85664	87.11715	261.47437	4.09489	0.1745856	0.20141809	2.8822859	21	9 22.9	19.8
476317 2007 XC_{44}	16.2	X	239.47059	19.18347	90.62957	9.93775	0.0520253	0.19885266	2.9070229	21	9 28.0	20.4
476318 2007 XG_{55}	18.4	X	93.30709	1.53439	94.35122	4.15580	0.1210665	0.30942130	2.1648904	21	3 6.7	20.5
476319 2007 XW_{55}	16.4	X	247.21293	202.13863	249.11278	8.43389	0.1432986	0.19852055	2.9102641	21	8 22.9	20.9
476320 2007 YE_{2}	16.5	X	313.73513	231.28545	260.19769	11.01756	0.1775260	0.21537142	2.7564111	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476321 2007 YX_3	16.9	X	44.28610	290.04932	70.60656	10.25551	0.1804270	0.21438821	2.7648323	21	—	—
476322 2007 YZ_5	16.9	X	321.16391	44.67851	16.24333	4.35849	0.0950670	0.20952771	2.8074266	21	11 7.5	20.2
476323 2007 YL_7	18.2	X	332.82489	171.54015	284.98225	1.69937	0.2530994	0.21188480	2.7865672	21	—	—
476324 2007 YQ_{10}	16.7	X	208.56158	113.17941	333.54013	8.50728	0.0561375	0.18333265	3.0688536	21	7 18.7	21.2
476325 2007 YG_{26}	16.4	X	77.22564	242.16940	85.48486	12.07432	0.0526398	0.20629313	2.8366965	21	12 16.4	20.3
476326 2007 YX_{28}	17.2	X	329.31541	144.49885	279.25445	3.18880	0.0924606	0.20914692	2.8108332	21	11 24.8	20.4
476327 2007 YM_{41}	16.0	X	349.37597	34.90455	300.06202	9.83730	0.1223794	0.18960339	3.0008110	21	8 24.4	19.5
476328 2007 YW_{63}	17.6	X	225.36142	313.80438	312.35800	7.53090	0.1011759	0.29178025	2.2512935	21	—	—
476329 2007 YS_{65}	17.4	X	237.41166	292.80957	315.97049	7.72779	0.1130151	0.29059448	2.2574136	21	—	—
476330 2007 YV_{66}	16.4	X	281.25053	127.72701	291.39263	8.42212	0.1515624	0.19206923	2.9750723	21	8 23.6	20.6
476331 2008 AW_{20}	15.9	X	80.26296	239.60957	322.62201	14.74577	0.0217540	0.17544164	3.1601977	21	7 10.3	20.4
476332 2008 AT_{31}	16.0	X	250.94033	152.17145	284.62532	11.31244	0.1249898	0.19079721	2.9882805	21	8 11.4	20.5
476333 2008 AW_{36}	16.1	X	192.62815	325.76598	135.32051	16.58815	0.2833055	0.18295011	3.0731300	21	7 11.5	21.7
476334 2008 AR_{37}	18.6	X	70.95497	154.11300	319.16174	1.94667	0.0861451	0.30519177	2.1848461	21	2 15.5	20.3
476335 2008 AP_{43}	16.0	X	103.10844	221.29461	314.01478	9.11340	0.0560541	0.17429794	3.1740070	21	7 8.2	20.5
476336 2008 AQ_{44}	16.3	X	174.16675	230.69525	312.02282	16.38886	0.1290600	0.18942369	3.0027086	21	9 26.4	21.4
476337 2008 AY_{44}	16.2	X	88.03011	261.16049	317.72571	17.41209	0.1421545	0.17702357	3.1413427	21	8 22.2	20.9
476338 2008 AB_{53}	16.4	X	27.35773	228.24402	118.47944	18.94874	0.1468810	0.20129234	2.8834862	21	11 25.4	20.4
476339 2008 AS_{72}	16.7	X	351.76047	263.26282	149.69586	10.71795	0.3605804	0.21130159	2.7916922	21	—	—
476340 2008 AQ_{73}	16.6	X	351.70314	117.05497	280.68928	7.96482	0.1340710	0.20428830	2.8552253	21	11 27.6	19.9
476341 2008 AZ_{75}	16.3	X	249.54885	329.78783	110.53378	18.92735	0.2473964	0.18956540	3.0012119	21	8 4.3	21.1
476342 2008 AT_{83}	16.4	X	215.33538	340.84260	102.11957	15.84530	0.0439353	0.18411661	3.0601360	21	7 21.5	20.9
476343 2008 AC_{98}	18.5	X	142.65533	101.77598	341.90580	3.71030	0.0497877	0.31439450	2.1419998	21	4 14.7	21.1
476344 2008 AM_{98}	16.6	X	203.96787	98.57176	330.34862	8.26314	0.0800628	0.17752440	3.1354317	21	6 18.3	21.4
476345 2008 AV_{105}	16.4	X	220.86261	343.25844	100.82313	19.83714	0.1057927	0.18677367	3.0310443	21	7 24.2	21.1
476346 2008 AO_{111}	16.9	X	31.58676	306.06259	124.99841	7.30207	0.2339542	0.21846799	2.7303029	21	—	—
476347 2008 AS_{117}	16.7	X	54.96030	321.66548	332.04372	10.93904	0.0570766	0.18965379	3.0002794	21	10 1.5	21.0
476348 2008 AT_{123}	17.4	X	329.74443	238.37349	121.95543	3.07046	0.1504455	0.19123921	2.9836744	21	8 26.9	20.6
476349 2008 AC_{127}	17.0	X	233.34820	105.06877	323.81819	9.09593	0.0912464	0.18504727	3.0498672	21	7 20.9	21.6
476350 2008 AE_{127}	16.9	X	219.43489	115.72915	350.74435	10.50442	0.0873992	0.18917083	3.0053837	21	8 23.3	21.5
476351 2008 AZ_{127}	16.5	X	119.01208	300.86261	263.22167	4.26555	0.0422196	0.18491920	3.0512752	21	8 28.6	20.9
476352 2008 AK_{134}	16.3	X	32.87674	201.92513	98.56668	11.52273	0.0743671	0.19008467	2.9957437	21	9 23.1	20.5
476353 2008 BZ_1	16.2	X	152.10814	146.55174	353.27282	12.64596	0.1371933	0.17825096	3.1269057	21	7 27.7	21.3
476354 2008 BN_3	16.8	X	249.80809	157.08244	294.50528	12.19337	0.0832700	0.19145245	2.9814585	21	9 1.5	21.3
476355 2008 BV_{12}	17.9	X	276.84146	264.93581	315.53792	17.66729	0.0998865	0.36653140	1.9337274	21	—	—
476356 2008 BR_{14}	16.7	X	322.82376	307.45788	89.72978	2.96738	0.1037963	0.19751875	2.9200962	21	10 9.4	20.2
476357 2008 BX_{22}	16.2	X	74.31341	251.51973	335.32730	11.65106	0.1125242	0.17470983	3.1690164	21	8 15.5	20.5
476358 2008 BO_{33}	16.2	X	93.98624	253.43590	317.59675	8.29904	0.0298263	0.17680193	3.1439675	21	8 6.9	20.5
476359 2008 BR_{38}	16.4	X	256.68945	97.12293	328.14103	10.36211	0.1351650	0.18380027	3.0636463	21	8 6.7	20.8
476360 2008 BA_{40}	16.7	X	306.65947	43.80294	53.88503	8.33657	0.2118200	0.20558751	2.8431835	21	11 22.2	19.3
476361 2008 BP_{46}	16.4	X	72.43504	254.65496	345.09313	8.13745	0.0363603	0.17701040	3.1414986	21	8 18.4	20.7
476362 2008 BS_{46}	17.9	X	266.82904	270.76319	314.87164	2.70284	0.0801276	0.28875260	2.2670031	21	—	—
476363 2008 BJ_{49}	17.1	X	223.11004	336.60545	152.21374	12.65086	0.1347620	0.19151266	2.9808336	21	9 19.2	21.7
476364 2008 BP_{49}	16.4	X	256.72508	108.24435	330.00973	18.13381	0.0940817	0.18587780	3.0407756	21	8 26.8	20.6
476365 2008 CX_2	15.6	X	170.85830	160.43371	348.95635	28.33523	0.1315658	0.17936894	3.1138993	21	8 29.0	20.7
476366 2008 CW_{11}	16.1	X	178.18414	350.74240	131.83973	10.16045	0.0167680	0.17807634	3.1289496	21	7 27.7	20.5
476367 2008 CH_{14}	15.8	X	46.52593	289.97739	342.64414	15.72803	0.0688591	0.17986091	3.1082184	21	8 30.6	20.0
476368 2008 CE_{19}	18.1	X	248.96527	62.15217	142.32707	2.34043	0.1491375	0.27876769	2.3208180	21	—	—
476369 2008 CL_{26}	16.8	X	139.32760	131.87639	29.55013	3.27831	0.1011826	0.17877079	3.1208413	21	8 5.9	21.5
476370 2008 CB_{27}	18.4	X	55.04798	110.25381	21.50078	2.26259	0.1291853	0.30429959	2.1891145	21	2 18.9	19.9
476371 2008 CY_{33}	17.1	X	248.20037	345.57702	117.08565	3.48665	0.0828122	0.18939506	3.0030112	21	9 20.6	21.4
476372 2008 CL_{34}	16.4	X	95.69795	241.02377	327.10834	13.31639	0.0503868	0.17760201	3.1345182	21	8 9.5	20.8
476373 2008 CO_{35}	18.3	X	7.86819	185.31104	338.46137	2.81845	0.0452068	0.29877887	2.2159985	21	1 18.6	20.5
476374 2008 CS_{35}	16.4	X	227.08764	107.52900	333.93725	9.55196	0.1120129	0.18131038	3.0916306	21	7 28.3	21.1
476375 2008 CK_{36}	16.4	X	54.01145	304.76781	291.25946	4.46458	0.1476943	0.17253755	3.1955599	21	8 2.7	20.6
476376 2008 CT_{36}	18.1	X	67.20888	193.90183	258.88503	2.18775	0.0875057	0.29805419	2.2195890	21	1 10.8	20.1
476377 2008 CD_{41}	18.1	X	13.14699	5.21295	207.79622	2.99595	0.1132549	0.30699628	2.1762760	21	4 3.3	19.9
476378 2008 CD_{43}	16.4	X	109.33926	201.91704	0.58148	9.73112	0.0550900	0.17701755	3.1414140	21	8 21.2	21.0
476379 2008 CG_{48}	16.4	X	285.37821	230.36862	164.84295	10.06646	0.0421764	0.18149983	3.0894789	21	8 15.5	20.6
476380 2008 CH_{48}	16.7	X	246.36493	156.43010	323.72938	9.54907	0.0506829	0.19138303	2.9821794	21	10 8.8	21.1
476381 2008 CS_{50}	16.3	X	143.50314	61.50013	121.16073	9.54396	0.1928984	0.18084284	3.0969570	21	9 11.2	21.5
476382 2008 CO_{54}	16.1	X	205.31353	312.84890	144.00907	18.37606	0.0594052	0.18144597	3.0900902	21	7 25.2	20.7
476383 2008 CQ_{68}	16.1	X	342.65311	30.75741	313.80734	13.65816	0.1340320	0.18805296	3.0172822	21	8 25.3	19.6
476384 2008 CC_{69}	16.5	X	240.53207	170.45445	289.80193	7.71101	0.0499376	0.19045298	2.9918802	21	9 7.4	20.9
476385 2008 CH_{71}	15.8	X	130.33623	197.41290	312.87321	13.63554	0.1975178	0.17377372	3.1803872	21	7 21.5	21.0
476386 2008 CX_{76}	15.8	X	116.32779	243.11264	329.87613	20.85099	0.1365336	0.18338195	3.0683035	21	9 10.8	20.7
476387 2008 CS_{90}	16.7	X	227.45527	286.71689	159.90595	11.67439	0.0467387	0.18152627	3.0891789	21	8 7.6	21.2
476388 2008 CL_{108}	16.4	X	198.53194	229.27007	273.14043	4.58774	0.2132485	0.18653662	3.0336116	21	9 3.1	21.5
476389 2008 CG_{127}	16.3	X	60.90631	92.47264	152.66254	11.01758	0.0771225	0.17735432	3.1374359	21	8 13.9	20.7
476390 2008 CZ_{133}	16.3	X	241.54555	127.44953	302.92462	9.16498	0.0987393	0.18378495	3.0638165	21	7 29.7	20.8
476391 2008 CQ_{136}	18.5	X	296.63527	322.90868	265.55345	1.05098	0.0490817	0.29797285	2.2199929	21	1 7.3	21.0
476392 2008 CW_{149}	17.8	X	287.27228	52.76037	168.17181	7.72170	0.0564761	0.29180169	2.2511833	21	—	—
476393 2008 CD_{163}	16.2	X	337.89676	154.74269	149.52101	9.49722	0.0715189	0.17415857	3.1757002	21	6 29.5	20.4
476394 2008 CJ_{164}	16.8	X	217.01964	190.13784	266.93115	4.08814	0.2040002	0.18272382	3.0756667	21	7 27.9	21.8
476395 2008 CQ_{171}	16.3	X	31.03953	28.36765	288.18102	8.27043	0.0868184	0.18776535	3.0203625	21	10 1.8	20.5
476396 2008 CP_{182}	17.5	X	220.18052	165.15046	84.42969	6.90366	0.1867300	0.27926310	2.3180725	21	—	—
476397 2008 CE_{191}	17.9	X	7.50473	20.68600	143.93616	7.06264	0.0085932	0.29917570	2.2140385	21	1 22.1	20.5
476398 2008 CQ_{191}	16.4	X	293.84482	95.81635	319.44695	9.58855	0.1117639	0.18944112	3.0025244	21	9 11.2	20.4
476399 2008 CR_{196}	16.6	X	109.29219	7.66556	213.05248	1.71590	0.0119896	0.18450407	3.0558504	21	9 4.6	20.8
476400 2008 CC_{200}	16.3	X	203.75054	317.62575	164.23023	11.57590	0.1181732	0.18444100	3.0565469	21	8 19.9	21.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476401 2008 CF_{203}	16.2	X	356.43608	127.75328	173.42080	10.91417	0.0398202	0.17107679	3.2137246	21	7 21.9	20.7
476402 2008 CE_{205}	18.1	X	21.97873	138.34603	37.81312	5.35509	0.0809186	0.30288284	2.1959356	21	2 27.1	20.1
476403 2008 CE_{207}	16.5	X	11.79517	345.46934	331.38501	9.45749	0.0463631	0.18253425	3.0777959	21	9 3.6	20.4
476404 2008 CG_{207}	17.1	X	232.35003	284.88880	156.36905	4.50254	0.1132194	0.18333015	3.0688815	21	7 31.1	21.8
476405 2008 CK_{207}	16.7	X	129.74754	269.75672	249.27715	3.63387	0.0951235	0.17456907	3.1707197	21	7 21.2	21.5
476406 2008 CO_{207}	16.9	X	20.21158	288.09890	352.23657	18.32874	0.1479261	0.17266343	3.1940066	21	8 14.7	20.9
476407 2008 CW_{207}	16.8	X	234.71679	143.47241	326.89168	11.63415	0.0250191	0.18791495	3.0187594	21	9 16.2	21.1
476408 2008 CU_{210}	16.4	X	83.53991	214.41277	3.08765	5.86691	0.0922117	0.17410997	3.1762911	21	8 12.6	20.9
476409 2008 CU_{212}	17.8	X	278.44404	144.03332	55.22369	4.31717	0.1647574	0.28098181	2.3086100	21	—	—
476410 2008 DY_{1}	15.8	X	345.37910	338.44982	327.13822	9.40728	0.0970468	0.17859393	3.1229013	21	7 13.3	19.8
476411 2008 DK_{3}	16.8	X	295.02680	82.71357	328.03748	9.01051	0.1612055	0.19058793	2.9904677	21	9 1.9	20.7
476412 2008 DQ_{3}	17.0	X	225.11965	137.56053	335.80055	6.20879	0.1465993	0.18575898	3.0420721	21	8 29.8	21.7
476413 2008 DD_{13}	16.4	X	241.60473	70.73671	352.87351	6.38651	0.1193634	0.17915514	3.1163761	21	7 20.5	21.1
476414 2008 DT_{17}	16.5	X	225.48350	100.53953	345.80013	8.48061	0.0384542	0.17901456	3.1180075	21	8 9.0	21.0
476415 2008 DX_{20}	17.9	X	221.37727	196.33699	7.09994	4.75927	0.1561189	0.27162028	2.3613549	21	12 26.8	21.0
476416 2008 DC_{26}	17.9	X	228.77892	338.78708	224.83443	5.51953	0.2456253	0.27363471	2.3497515	21	12 23.3	20.9
476417 2008 DO_{28}	16.2	X	104.49060	264.24368	325.52662	8.27053	0.0600218	0.18622150	3.0370329	21	9 14.4	20.6
476418 2008 DO_{29}	16.5	X	276.79613	76.18675	335.83298	6.51553	0.0336862	0.18608634	3.0385033	21	8 28.7	20.6
476419 2008 DS_{31}	16.5	X	292.30998	70.19477	10.03908	10.18255	0.0902027	0.19231262	2.9725615	21	10 16.4	20.3
476420 2008 DP_{32}	16.2	X	100.03243	42.14315	154.61381	14.70322	0.0729449	0.17335700	3.1854818	21	7 31.6	20.9
476421 2008 DE_{34}	16.3	X	144.60574	237.44599	314.03445	10.42781	0.1773950	0.18268575	3.0760940	21	9 15.1	21.5
476422 2008 DT_{34}	16.0	X	88.91450	42.57503	173.07792	17.63220	0.0267627	0.17702451	3.1413315	21	8 3.3	20.7
476423 2008 DE_{55}	18.5	X	80.65298	84.47475	165.89622	25.07229	0.0888913	0.40096342	1.8213757	21	10 17.6	20.7
476424 2008 DS_{59}	16.5	X	282.08148	287.10625	175.77627	11.19488	0.0599001	0.19464515	2.9487661	21	11 8.3	20.5
476425 2008 DO_{62}	16.0	X	54.42454	73.24712	157.82331	26.17532	0.1621559	0.16926437	3.2366248	21	7 29.5	20.5
476426 2008 DR_{65}	16.1	X	171.19289	352.88404	178.50752	23.34480	0.1123571	0.18062657	3.0994285	21	9 17.9	21.0
476427 2008 DR_{67}	17.8	X	354.25349	342.35127	219.28799	5.10174	0.0831649	0.29840123	2.2178677	21	2 13.1	20.3
476428 2008 DR_{71}	16.5	X	80.65167	9.04423	187.40275	4.42087	0.0736249	0.17054985	3.2203407	21	7 7.7	21.0
476429 2008 DG_{77}	17.7	X	359.48740	352.87499	145.22416	6.84607	0.0342205	0.29064176	2.2571688	21	—	—
476430 2008 DY_{78}	17.2	X	249.95854	262.93631	334.44986	21.53525	0.1946335	0.28890644	2.2661982	21	—	—
476431 2008 DA_{82}	16.3	X	238.15482	107.31072	359.87552	9.93466	0.1123360	0.18487654	3.0517446	21	9 10.2	20.8
476432 2008 DZ_{82}	16.7	X	214.99371	137.43767	3.39285	9.51154	0.0220926	0.18556261	3.0442179	21	10 3.3	20.9
476433 2008 DV_{83}	18.3	X	316.51087	215.76196	8.99767	2.05918	0.1077878	0.29531876	2.2332741	21	1 20.9	20.9
476434 2008 DQ_{87}	16.2	X	47.06699	61.12161	182.48223	15.83690	0.0750217	0.17030039	3.2234847	21	7 21.2	20.8
476435 2008 DY_{88}	18.1	X	279.45780	235.56181	11.28750	6.82507	0.0728080	0.29238353	2.2481957	21	1 10.6	21.1
476436 2008 DM_{89}	16.0	X	328.87315	339.55523	7.36469	12.25573	0.1013053	0.17616763	3.1515097	21	8 14.3	20.1
476437 2008 EQ_{3}	18.8	X	132.75932	335.62843	108.13850	6.77127	0.0863559	0.30979123	2.1631666	21	4 12.5	21.5
476438 2008 EB_{9}	20.4	X	242.61814	251.38322	341.70271	21.35041	0.2171719	0.50452821	1.5627125	21	—	—
476439 2008 ET_{9}	16.4	X	123.42343	7.74971	141.84033	17.84537	0.0650506	0.17371972	3.1810462	21	6 30.7	21.3
476440 2008 EA_{17}	17.2	X	261.28636	286.30954	260.87729	5.62268	0.0750955	0.27602880	2.3361449	21	—	—
476441 2008 EL_{26}	16.6	X	267.00030	257.70927	174.68056	16.54753	0.0546440	0.18475399	3.0530940	21	9 6.9	20.8
476442 2008 EL_{28}	16.8	X	237.29486	82.68061	38.89339	13.47303	0.1932030	0.18933844	3.0036098	21	9 22.6	21.6
476443 2008 EP_{35}	18.2	X	333.81811	160.20180	54.62960	6.68707	0.1043439	0.29676811	2.2259969	21	2 2.4	20.8
476444 2008 EA_{36}	16.4	X	207.93922	281.28167	182.46922	14.38391	0.2356853	0.18174188	3.0867352	21	7 25.1	21.9
476445 2008 EW_{39}	17.6	X	327.67000	195.85594	340.61640	7.27014	0.0998752	0.28868813	2.2673406	21	—	—
476446 2008 EN_{40}	16.5	X	184.88692	192.80454	337.38319	9.16928	0.1358597	0.18482954	3.0522619	21	9 26.9	21.4
476447 2008 EW_{41}	18.0	X	303.43422	209.75417	20.16251	7.79791	0.0570403	0.29255980	2.2472926	21	1 20.7	20.9
476448 2008 EQ_{45}	18.3	X	192.43386	51.68229	208.07842	4.88368	0.1854036	0.27639949	2.3340557	21	—	—
476449 2008 EW_{45}	17.7	X	211.00640	355.54241	239.63472	5.94950	0.1896499	0.27261858	2.3555866	21	—	—
476450 2008 EO_{50}	17.2	X	264.55542	326.48713	120.53671	3.07438	0.0925529	0.18849009	3.0126154	21	9 19.5	21.4
476451 2008 EV_{50}	15.8	X	172.80724	163.17236	330.89780	13.15458	0.1094960	0.17650586	3.1474824	21	8 7.2	20.7
476452 2008 EY_{50}	18.2	X	220.58126	247.28681	341.24416	4.66672	0.1854015	0.27408517	2.3471762	21	—	—
476453 2008 EZ_{58}	16.3	X	76.01987	272.70431	326.56144	13.59212	0.0866625	0.17688838	3.1429431	21	8 26.9	20.6
476454 2008 EC_{65}	16.5	X	180.50227	323.14051	187.65735	15.18584	0.1465690	0.18121595	3.0927045	21	8 30.3	21.7
476455 2008 EV_{70}	17.8	X	306.65406	223.39832	318.24940	5.75619	0.1361214	0.28710445	2.2756708	21	—	—
476456 2008 EY_{74}	17.8	X	357.81838	13.12095	90.70391	2.50282	0.1267636	0.28291283	2.2980931	21	—	—
476457 2008 EY_{79}	15.8	X	169.37853	337.36905	176.49160	27.80937	0.1057366	0.17800632	3.1297701	21	8 24.0	20.9
476458 2008 EP_{108}	16.6	X	314.13756	59.32329	324.98428	7.58918	0.1304823	0.18869329	3.0104523	21	9 1.2	20.3
476459 2008 EZ_{116}	15.6	X	90.24959	197.56474	18.69537	27.92203	0.1380878	0.17089892	3.2159541	21	9 7.2	20.7
476460 2008 EB_{126}	18.3	X	333.10212	310.23138	190.41647	6.18516	0.1009552	0.28302246	2.2974996	21	—	—
476461 2008 EG_{127}	18.3	X	212.64467	93.58344	166.34869	3.42498	0.1401015	0.27730216	2.3289878	21	—	—
476462 2008 EG_{130}	16.1	X	83.86907	239.39664	7.01011	17.63368	0.1570176	0.17681262	3.1438408	21	9 26.1	20.6
476463 2008 EF_{141}	15.8	X	325.20652	28.61407	338.76698	10.33181	0.0512405	0.17849550	3.1240492	21	9 3.2	19.7
476464 2008 EU_{149}	16.3	X	7.33656	98.87610	188.59386	8.81491	0.0405426	0.16953787	3.2331430	21	7 19.4	20.8
476465 2008 ED_{153}	16.7	X	69.17135	228.37085	52.48521	9.85125	0.0512539	0.17990090	3.1077577	21	10 9.7	21.1
476466 2008 EO_{154}	16.0	X	342.56472	250.95203	25.33194	7.67052	0.0795056	0.15924835	3.3709534	21	5 29.4	20.4
476467 2008 EY_{156}	16.0	X	122.37719	189.64758	14.43221	18.14554	0.1682371	0.17573806	3.1566432	21	9 18.4	21.1
476468 2008 ER_{158}	18.3	X	89.84504	348.53272	133.45221	3.68339	0.0846096	0.30237075	2.1984143	21	4 4.2	20.6
476469 2008 EU_{164}	15.9	X	102.28107	224.83337	344.38073	15.49598	0.1513504	0.17371469	3.1811075	21	8 30.8	20.7
476470 2008 EY_{164}	16.5	X	212.92200	100.38105	13.98302	9.93507	0.0725499	0.17874191	3.1211774	21	8 28.1	21.2
476471 2008 FL_{2}	18.1	X	127.31149	135.24594	315.49504	3.06262	0.1166747	0.30858628	2.1687940	21	4 14.3	20.8
476472 2008 FP_{2}	16.2	X	316.51817	41.87489	351.63569	11.33653	0.0311782	0.18573002	3.0423883	21	9 25.5	20.2
476473 2008 FG_{9}	16.2	X	317.72189	9.96361	348.76686	9.46150	0.1004417	0.18056821	3.1000964	21	8 10.3	20.2
476474 2008 FY_{18}	16.6	X	166.94210	173.65162	1.10198	9.57736	0.0191704	0.18249246	3.0782656	21	9 19.0	21.0
476475 2008 FN_{20}	16.4	X	180.90773	347.81225	163.09613	11.12726	0.1507773	0.17860760	3.1227419	21	9 1.7	21.5
476476 2008 FG_{22}	17.1	X	119.37266	254.17522	85.04247	7.57341	0.1372061	0.27423958	2.3462950	21	—	—
476477 2008 FY_{30}	15.7	X	330.12123	353.85152	341.57566	10.61132	0.0473794	0.17683914	3.1435265	21	8 2.7	20.0
476478 2008 FN_{36}	16.4	X	242.59793	105.07802	3.97516	11.74651	0.1068952	0.18629762	3.0362056	21	9 18.2	20.8
476479 2008 FM_{42}	16.1	X	144.89546	153.70561	359.65036	16.58400	0.1445689	0.17356841	3.1828946	21	8 9.1	21.4
476480 2008 FD_{44}	16.1	X	115.52044	206.26465	354.93847	10.71454	0.0615826	0.17561333	3.1581377	21	8 26.9	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476481 2008 FZ_{44}	18.2	X	253.27900	227.16617	7.94721	7.48607	0.1167429	0.28460373	2.2889817	21	—	—
476482 2008 FF_{49}	16.9	X	275.10758	285.18353	186.32003	13.01304	0.1415010	0.19230557	2.9726342	21	10 28.3	20.8
476483 2008 FN_{52}	17.4	X	347.55571	322.30933	188.34967	22.84456	0.1148024	0.28759924	2.2730600	21	—	—
476484 2008 FA_{56}	18.0	X	100.94344	351.68187	63.01489	5.65920	0.0928796	0.29274229	2.2463585	21	1 15.5	20.4
476485 2008 FT_{63}	15.8	X	185.94166	122.85563	38.96019	14.65352	0.2201886	0.18281190	3.0746787	21	9 23.9	21.2
476486 2008 FV_{63}	17.9	X	216.54227	40.65740	207.52046	5.23743	0.1338863	0.27350828	2.3504755	21	—	—
476487 2008 FR_{64}	18.0	X	191.14937	169.90127	87.94329	2.36486	0.1620228	0.27059624	2.3673086	21	—	—
476488 2008 FK_{90}	16.1	X	99.31300	41.31145	151.99165	10.89504	0.1457879	0.17388418	3.1790401	21	8 5.1	20.8
476489 2008 FL_{98}	18.1	X	60.30593	277.55843	144.45539	6.72759	0.0837133	0.28275142	2.2989676	21	—	—
476490 2008 FZ_{104}	17.8	X	167.71856	69.57939	184.59717	4.79523	0.1973310	0.26296704	2.4128769	21	12 29.6	21.8
476491 2008 FY_{106}	18.3	X	225.84506	60.41870	153.95094	2.73544	0.1643713	0.27217721	2.3581325	21	—	—
476492 2008 FG_{108}	16.7	X	211.90911	95.40808	25.74390	8.70604	0.0849385	0.17942726	3.1132244	21	9 3.3	21.4
476493 2008 FR_{112}	17.9	X	183.46060	87.01087	156.41469	5.59251	0.1603413	0.26745047	2.3858354	21	—	—
476494 2008 FS_{116}	18.5	X	301.91735	196.21366	26.74856	3.73088	0.1244025	0.28818181	2.2699955	21	—	—
476495 2008 FQ_{120}	16.3	X	194.55087	126.43119	47.62058	10.00734	0.0881925	0.18616216	3.0376783	21	10 18.5	20.9
476496 2008 FD_{123}	15.7	X	298.08138	190.71094	201.74191	26.21608	0.0577989	0.17370120	3.1812723	21	8 22.1	20.5
476497 2008 FG_{126}	18.0	X	201.44755	97.28641	165.98618	8.32367	0.0923265	0.27629883	2.3346226	21	—	—
476498 2008 FA_{133}	16.6	X	174.32949	333.61991	219.19504	5.82982	0.1581173	0.18372589	3.0644731	21	10 15.3	21.5
476499 2008 FG_{136}	17.8	X	209.22466	129.92014	100.08401	6.86163	0.2177376	0.26940986	2.3742534	21	—	—
476500 2008 GA_{6}	16.3	X	345.95449	286.49799	54.68757	12.74588	0.0708251	0.17391623	3.1786495	21	9 5.8	20.6
476501 2008 GS_{8}	16.0	X	243.65033	45.60096	6.53295	17.46487	0.1354216	0.17464747	3.1697707	21	7 8.1	21.1
476502 2008 GP_{10}	16.4	X	88.75505	48.84665	205.98113	9.01304	0.0565404	0.17437100	3.1731204	21	9 26.3	20.9
476503 2008 GE_{17}	18.1	X	62.41848	333.72199	172.98864	7.36339	0.1276878	0.29877304	2.2160273	21	3 31.5	19.9
476504 2008 GD_{20}	19.1	X	34.01027	292.83186	29.35404	19.58995	0.1170873	0.40264105	1.8163130	21	11 25.6	21.0
476505 2008 GA_{22}	15.7	X	335.29254	320.30290	87.76112	28.96984	0.1751029	0.17918646	3.1160130	21	11 18.4	19.5
476506 2008 GE_{32}	18.0	X	40.23673	0.93255	135.37962	6.96886	0.0638942	0.29247359	2.2477342	21	1 30.0	20.2
476507 2008 GT_{34}	16.0	X	35.70146	285.09996	15.48481	9.88829	0.0764345	0.17640485	3.1486837	21	9 21.9	20.2
476508 2008 GG_{43}	18.9	X	16.41035	348.80171	187.64751	2.46557	0.0579813	0.29651905	2.2272433	21	2 17.3	21.0
476509 2008 GX_{48}	18.0	X	289.77434	237.82935	350.22589	7.03263	0.0655432	0.29146852	2.2528984	21	—	—
476510 2008 GY_{50}	16.5	X	229.75381	251.89344	185.34455	10.79001	0.0797034	0.17307506	3.1889403	21	7 24.8	21.5
476511 2008 GP_{52}	18.5	X	198.93552	102.16359	181.01347	3.98867	0.1451568	0.27891579	2.3199964	21	—	—
476512 2008 GA_{58}	16.5	X	36.49526	252.52323	23.06043	11.68419	0.0402237	0.17145576	3.2089872	21	8 20.8	21.0
476513 2008 GW_{61}	16.2	X	64.86430	116.36806	147.97167	10.85317	0.0589346	0.17353662	3.1832833	21	9 11.9	20.7
476514 2008 GD_{69}	18.1	X	210.44115	138.18002	123.95387	3.19801	0.1803454	0.27376013	2.3490337	21	—	—
476515 2008 GM_{70}	16.8	X	344.62102	115.31603	54.92528	22.36476	0.1657013	0.28715175	2.2754209	21	—	—
476516 2008 GW_{72}	16.3	X	133.06570	7.01700	189.18550	11.76067	0.0117829	0.17665125	3.1457551	21	9 1.1	20.9
476517 2008 GR_{73}	16.1	X	355.24310	269.16425	58.69699	12.22302	0.0779968	0.17311424	3.1884591	21	9 1.9	20.4
476518 2008 GN_{75}	16.0	X	244.53639	8.06774	72.11436	10.19843	0.0551185	0.17325905	3.1866822	21	8 24.3	20.7
476519 2008 GM_{77}	18.3	X	207.02028	128.67848	110.29927	5.71180	0.1096058	0.27048785	2.3679410	21	—	—
476520 2008 GU_{82}	16.3	X	174.79582	355.62270	177.83483	10.30785	0.0564401	0.17965167	3.1106313	21	9 25.5	20.8
476521 2008 GH_{84}	18.0	X	149.27955	268.20069	60.68693	5.61559	0.1699168	0.27791801	2.3255459	21	—	—
476522 2008 GH_{88}	18.3	X	158.11032	143.20556	105.20481	2.27415	0.1510028	0.26323098	2.4112637	21	12 16.6	22.0
476523 2008 GO_{90}	18.0	X	168.50585	238.29869	35.75880	6.50631	0.0948761	0.27107312	2.3645314	21	—	—
476524 2008 GU_{93}	18.2	X	212.45919	9.09866	46.29117	1.86898	0.1157355	0.31882820	2.1220954	21	6 4.1	21.1
476525 2008 GQ_{95}	15.9	X	103.53000	201.52032	42.33941	17.03518	0.1990785	0.17639323	3.1488220	21	10 19.4	21.0
476526 2008 GP_{99}	18.2	X	178.65326	150.49148	110.36765	2.74037	0.1623889	0.26806841	2.3821675	21	—	—
476527 2008 GY_{104}	15.4	X	297.01930	280.23899	47.77468	15.66600	0.1457362	0.15845987	3.3821265	21	5 21.3	20.1
476528 2008 GX_{111}	16.6	X	215.54666	183.38421	31.97107	26.34074	0.1596317	0.26980200	2.3719522	21	—	—
476529 2008 GJ_{117}	16.2	X	241.94963	78.89261	48.67040	23.37528	0.0545609	0.18266207	3.0763598	21	10 22.5	20.8
476530 2008 GD_{126}	17.7	X	229.56987	323.19849	249.31843	2.99392	0.1348958	0.27212687	2.3584234	21	—	—
476531 2008 GX_{129}	15.9	X	310.72411	359.36349	43.44465	28.01573	0.0500606	0.17963971	3.1107695	21	10 11.4	20.4
476532 2008 GT_{131}	18.4	X	170.10391	124.51866	164.81862	5.67789	0.2135299	0.26952880	2.3735548	21	—	—
476533 2008 GZ_{138}	17.4	X	112.83760	341.91336	44.07458	10.98299	0.1084959	0.28296637	2.2978032	21	—	—
476534 2008 GQ_{141}	14.2	X	73.92354	107.52964	73.27226	2.72171	0.0253335	0.08207251	5.2440992	21	6 5.9	20.9
476535 2008 GP_{143}	17.5	X	210.06100	316.67934	259.88628	3.98660	0.1683123	0.26809720	2.3819969	21	12 27.8	20.8
476536 2008 HE_{5}	16.1	X	248.39450	86.40033	25.11119	12.69330	0.1257126	0.18495149	3.0509201	21	9 27.5	20.5
476537 2008 HE_{6}	18.5	X	244.67448	216.41265	39.73103	5.89167	0.1967081	0.28163282	2.3050510	21	—	—
476538 2008 HN_{9}	16.0	X	88.63449	51.42500	201.15917	27.08215	0.1066689	0.17684001	3.1435161	21	9 30.1	20.7
476539 2008 HL_{14}	16.1	X	38.59458	268.89568	19.57968	31.54789	0.0945285	0.17255253	3.1953749	21	9 23.7	20.7
476540 2008 HC_{24}	16.4	X	293.34551	309.01495	115.04833	10.96122	0.0400369	0.17906993	3.1173646	21	10 8.5	20.8
476541 2008 HM_{36}	17.7	X	32.26610	356.84024	119.85540	6.25755	0.0439234	0.28375451	2.2935464	21	—	—
476542 2008 HV_{36}	16.0	X	102.90476	136.70386	92.71916	10.71219	0.0378091	0.17040747	3.2221342	21	9 15.8	20.8
476543 2008 HQ_{43}	16.5	X	234.07882	92.83694	43.75029	10.60130	0.0705603	0.18391241	3.0624008	21	10 17.7	20.9
476544 2008 HB_{44}	16.0	X	264.80413	6.41306	43.93139	15.52258	0.0857909	0.17087133	3.2163002	21	8 8.8	20.9
476545 2008 HD_{46}	18.2	X	187.86878	190.39800	107.23905	3.50638	0.2164910	0.27341886	2.3509880	21	—	—
476546 2008 HO_{50}	18.3	X	166.80289	75.44140	201.43244	4.33015	0.2064139	0.26597366	2.3946587	21	—	—
476547 2008 HH_{51}	17.9	X	253.00275	9.75898	218.59304	7.04447	0.1695293	0.27712134	2.3300008	21	—	—
476548 2008 HO_{56}	18.1	X	200.97578	219.36981	83.37152	3.69626	0.2219384	0.28051719	2.3111585	21	1 3.3	21.9
476549 2008 JB_{10}	18.0	X	160.84646	204.77440	60.49030	2.92206	0.1668058	0.26351390	2.4095376	21	—	—
476550 2008 JQ_{10}	16.5	X	49.62790	224.59003	65.65177	10.57893	0.0344604	0.17542126	3.1604425	21	9 25.8	21.0
476551 2008 JO_{13}	17.4	X	132.44694	282.93436	80.60564	13.64950	0.2751074	0.27533285	2.3400799	21	1 22.9	20.7
476552 2008 JQ_{16}	18.3	X	210.56606	127.98279	151.34532	3.74640	0.2180788	0.27521441	2.3407513	21	—	—
476553 2008 JR_{16}	16.1	X	253.36183	57.20205	63.27795	18.28961	0.0815841	0.18240195	3.0792839	21	10 23.9	20.6
476554 2008 JN_{18}	17.9	X	256.98674	39.53199	211.32439	10.41257	0.1686263	0.28193703	2.3033926	21	—	—
476555 2008 JJ_{27}	15.5	X	151.07772	161.85219	64.90406	18.75249	0.1513460	0.18138880	3.0907395	21	11 7.9	20.6
476556 2008 JM_{33}	15.9	X	197.31559	303.61205	213.85544	26.87299	0.1656458	0.17978385	3.1091065	21	9 19.9	21.3
476557 2008 KA_{1}	17.7	X	241.31587	333.22283	202.82889	9.04760	0.1577484	0.26540850	2.3980570	21	12 14.6	20.7
476558 2008 KP_{21}	18.1	X	142.77126	84.29175	191.16059	4.34813	0.2867891	0.25908643	2.4369107	21	—	—
476559 2008 OC_{10}	17.2	X	99.68505	87.29027	321.13470	14.17700	0.3312016	0.25967310	2.4332389	21	2 18.7	20.0
476560 2008 OP_{12}	15.5	X	218.41507	183.54869	145.37151	3.39535	0.2197150	0.12522429	3.9567961	21	3 5.3	22.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476561 2008 OU_{20}	17.8	X	121.56396	180.97086	145.84290	7.09879	0.1650704	0.25507448	2.4623968	21	—	—
476562 2008 OB_{21}	17.7	X	64.05069	257.49892	162.24529	5.29116	0.0928975	0.25926852	2.4357695	21	—	—
476563 2008 PD_{19}	18.5	X	43.31520	225.68764	150.55476	2.09319	0.2299817	0.24435503	2.5338945	21	—	—
476564 2008 QL_{21}	17.1	X	53.05431	185.89829	215.26474	6.61571	0.1911760	0.25064048	2.4913529	21	—	—
476565 2008 QA_{37}	18.4	X	89.47160	319.93211	345.67891	3.03139	0.2294346	0.24432551	2.5340986	21	12 25.7	22.5
476566 2008 RC_{4}	18.4	X	48.53223	191.57162	193.26737	2.48690	0.2726292	0.24447442	2.5330695	21	—	—
476567 2008 RY_{9}	17.8	X	68.68592	4.52972	337.71989	5.85261	0.0532951	0.24106711	2.5568823	21	—	—
476568 2008 RE_{12}	17.3	X	12.35416	205.85221	186.60060	12.16207	0.1882385	0.23825816	2.5769393	21	—	—
476569 2008 RJ_{16}	18.1	X	93.03453	77.63636	312.07207	4.26984	0.1380967	0.25576719	2.4579488	21	—	—
476570 2008 RH_{23}	17.0	X	31.82268	133.38163	207.07284	13.00943	0.2866581	0.23428361	2.6060022	21	12 15.7	20.6
476571 2008 RZ_{28}	18.1	X	63.61064	174.38438	173.78386	9.83829	0.1420442	0.24344023	2.5402385	21	—	—
476572 2008 RX_{30}	17.0	X	232.57514	237.21893	348.10152	10.77260	0.1179071	0.25557531	2.4591789	21	—	—
476573 2008 RA_{35}	18.4	X	200.06160	305.83025	174.47763	23.98064	0.0219376	0.37648942	1.8994777	21	9 2.6	20.4
476574 2008 RG_{40}	17.3	X	12.88138	36.85380	357.73070	13.92253	0.0983920	0.23967494	2.5667740	21	—	—
476575 2008 RQ_{41}	16.6	X	235.50361	18.63064	171.18532	3.73117	0.1813442	0.24478184	2.5309482	21	12 17.3	20.0
476576 2008 RZ_{43}	18.2	X	61.48248	54.80727	9.48518	2.52741	0.1814672	0.25412658	2.4685163	21	—	—
476577 2008 RQ_{44}	17.3	X	296.81886	104.47893	1.31663	12.24269	0.2155366	0.23469993	2.6029195	21	11 17.1	20.1
476578 2008 RX_{57}	17.7	X	30.23645	225.40512	162.43001	3.73059	0.1252107	0.24254071	2.5465153	21	—	—
476579 2008 RC_{63}	17.9	X	62.32498	15.80616	23.94897	2.72149	0.2126633	0.25043116	2.4927409	21	—	—
476580 2008 RZ_{88}	17.3	X	347.03328	226.40015	243.27139	5.34174	0.2194604	0.24506643	2.5289884	21	—	—
476581 2008 RY_{117}	17.1	X	320.21972	262.28041	195.85542	20.95225	0.0723947	0.23871205	2.5736718	21	12 31.6	20.7
476582 2008 RW_{123}	18.3	X	32.34848	38.22801	329.52985	2.68914	0.1598121	0.24167398	2.5526001	21	—	—
476583 2008 RA_{131}	17.4	X	315.42339	57.09198	27.07015	6.89257	0.2291521	0.22914794	2.6447954	21	11 27.1	19.6
476584 2008 RP_{131}	17.5	X	27.61932	206.95480	178.33332	13.05412	0.1726888	0.24238302	2.5476196	21	—	—
476585 2008 RM_{135}	15.9	X	167.42545	254.36001	193.65546	9.78882	0.2809464	0.12554053	3.9501484	21	6 10.2	22.7
476586 2008 RV_{135}	17.3	X	44.47337	200.20405	156.02659	5.86135	0.1864732	0.23905063	2.5712410	21	—	—
476587 2008 RP_{137}	16.8	X	309.39997	247.14880	182.90374	21.82309	0.0479178	0.23472976	2.6026990	21	11 12.9	20.4
476588 2008 RB_{139}	18.0	X	68.42839	170.02446	187.33279	3.77258	0.1582573	0.24126335	2.5554956	21	—	—
476589 2008 SU_{11}	18.1	X	1.09832	121.30742	195.81726	21.47217	0.0832290	0.37711446	1.8973783	21	9 6.9	19.7
476590 2008 SR_{13}	17.8	X	121.91927	1.26260	334.91546	4.41086	0.2132320	0.25669970	2.4519926	21	—	—
476591 2008 SL_{19}	17.8	X	126.11233	20.70476	318.22074	3.91176	0.1988667	0.25720186	2.4488000	21	—	—
476592 2008 SS_{21}	18.0	X	141.71686	165.53898	150.17760	1.95084	0.1966920	0.25708482	2.4495432	21	—	—
476593 2008 SD_{38}	17.7	X	104.44740	13.63696	352.72950	3.23990	0.2574443	0.25496785	2.4630833	21	—	—
476594 2008 SH_{40}	18.1	X	87.95443	322.93515	66.49024	2.68728	0.2024097	0.25242885	2.4795720	21	—	—
476595 2008 SE_{44}	17.7	X	335.19949	225.29424	194.52107	4.62442	0.1924196	0.23219835	2.6215811	21	12 10.1	20.1
476596 2008 SU_{49}	18.6	X	65.12909	166.81357	184.72422	5.66148	0.2585328	0.24392453	2.5368750	21	—	—
476597 2008 ST_{54}	17.9	X	60.39488	328.43061	9.05750	0.66716	0.1565492	0.23906737	2.5711210	21	12 28.5	21.6
476598 2008 SB_{72}	17.5	X	60.87060	350.17834	41.35901	5.26152	0.2162753	0.24307641	2.5427725	21	—	—
476599 2008 SA_{74}	18.5	X	55.72703	91.79969	290.05164	1.12449	0.2316964	0.24482922	2.5306217	21	—	—
476600 2008 SQ_{83}	15.7	X	193.12100	273.63355	149.72249	1.59502	0.1757726	0.12633802	3.9335077	21	5 31.4	22.0
476601 2008 SE_{85}	19.8	X	18.32808	294.92193	177.43291	29.61052	0.5252584	0.47550028	1.6256817	21	—	—
476602 2008 SZ_{96}	17.6	X	339.87868	62.70252	344.77649	3.32022	0.1693448	0.23182724	2.6243781	21	11 29.1	20.2
476603 2008 ST_{99}	17.0	X	1.82152	223.51088	181.88112	11.67979	0.0594346	0.23591755	2.5939556	21	12 24.5	20.4
476604 2008 SQ_{105}	17.3	X	1.72655	211.92790	200.27716	11.55651	0.0526626	0.23719462	2.5846366	21	12 31.7	20.8
476605 2008 SM_{110}	15.3	X	170.53193	285.60610	166.42733	6.23135	0.2549361	0.12419456	3.9786372	21	6 16.3	22.0
476606 2008 SM_{120}	17.0	X	215.30624	161.72906	27.17998	15.40341	0.0664775	0.23514173	2.5996582	21	12 2.1	20.8
476607 2008 SL_{124}	17.6	X	43.89027	184.31529	206.84467	14.72555	0.1150806	0.24258832	2.5461821	21	—	—
476608 2008 SF_{125}	17.6	X	339.25441	237.85805	213.47353	3.97147	0.2276920	0.23720661	2.5845495	21	—	—
476609 2008 SR_{130}	17.8	X	18.55822	42.81437	347.50033	3.47959	0.1677282	0.23645294	2.5900386	21	—	—
476610 2008 SE_{132}	17.6	X	346.58846	33.09478	15.49333	3.42416	0.0847439	0.23262865	2.6183473	21	12 7.3	20.6
476611 2008 SV_{135}	16.8	X	322.68807	280.95685	168.97113	28.72150	0.3179330	0.23610031	2.5926169	21	—	—
476612 2008 SK_{137}	18.2	X	74.87904	119.79309	242.70314	3.99790	0.1779015	0.24450894	2.5328310	21	—	—
476613 2008 SV_{137}	18.6	X	42.41055	338.33830	59.81703	2.32589	0.1855537	0.24268431	2.5455107	21	—	—
476614 2008 SK_{138}	17.6	X	28.04262	304.71568	85.91629	4.17939	0.1427583	0.23837596	2.5760903	21	—	—
476615 2008 SJ_{142}	17.5	X	325.22359	319.00120	77.30848	2.89858	0.0925733	0.22523708	2.6753224	21	10 17.0	20.5
476616 2008 ST_{142}	17.7	X	98.92034	157.82146	177.90298	2.69280	0.2546763	0.24601237	2.5225015	21	—	—
476617 2008 SX_{143}	17.2	X	61.06954	265.11533	42.54478	7.83732	0.1586234	0.23018895	2.6368154	21	11 19.9	20.9
476618 2008 SG_{151}	17.1	X	4.77050	117.91331	323.34763	7.01180	0.2141562	0.24465955	2.5317915	21	—	—
476619 2008 SA_{155}	17.8	X	98.98495	342.40972	22.28160	5.07529	0.2023268	0.25336198	2.4734801	21	—	—
476620 2008 SD_{157}	18.0	X	107.23991	131.15575	231.65410	1.44441	0.2202274	0.25482807	2.4639840	21	—	—
476621 2008 SP_{162}	17.7	X	0.81542	233.57174	179.93573	3.64054	0.2252757	0.23774437	2.5806507	21	—	—
476622 2008 SC_{163}	17.6	X	132.71167	338.55852	42.77464	3.24377	0.2117710	0.26171884	2.4205426	21	2 8.8	20.9
476623 2008 SQ_{167}	17.6	X	48.43339	222.40203	189.16421	9.78064	0.2809959	0.24543393	2.5264632	21	—	—
476624 2008 SE_{182}	16.8	X	273.44133	118.79509	35.36800	31.76415	0.2702558	0.23322071	2.6139141	21	11 26.1	20.2
476625 2008 SA_{188}	15.7	X	180.03295	119.24933	310.36989	2.23454	0.1796283	0.12306277	4.0029938	21	5 27.3	22.0
476626 2008 SP_{189}	17.1	X	103.37152	237.44018	13.29169	14.75921	0.0843372	0.22790962	2.6543669	21	10 16.9	20.9
476627 2008 SB_{190}	17.4	X	292.07233	96.43248	8.77716	6.96091	0.1464288	0.23202622	2.6228775	21	11 18.3	20.4
476628 2008 SV_{194}	17.6	X	76.59059	132.24537	200.48451	7.91081	0.1778318	0.23983251	2.5656497	21	—	—
476629 2008 SG_{198}	17.9	X	49.28721	301.39156	42.59106	10.58445	0.2179073	0.23591191	2.5939970	21	12 31.7	21.8
476630 2008 SA_{200}	17.5	X	69.76997	331.04913	354.53658	4.66277	0.1515383	0.23685839	2.5870821	21	12 22.9	21.3
476631 2008 SW_{200}	18.0	X	72.48826	21.06801	341.15691	2.73029	0.1613454	0.24338559	2.5406186	21	—	—
476632 2008 SQ_{213}	15.8	X	192.37837	221.39105	203.81622	5.45636	0.2526866	0.12614645	3.9374890	21	6 1.2	22.4
476633 2008 SQ_{217}	17.7	X	43.48745	267.47906	102.41422	2.54523	0.0928575	0.23756655	2.5819383	21	—	—
476634 2008 SR_{217}	18.3	X	216.14067	228.80673	200.60403	22.15976	0.1106073	0.36265616	1.9474785	21	6 25.9	21.3
476635 2008 SD_{233}	17.6	X	94.68760	242.27907	65.13128	3.99449	0.0761704	0.24027990	2.5624639	21	12 20.2	21.3
476636 2008 SA_{244}	17.6	X	16.55915	211.56367	192.92664	11.37746	0.1907648	0.23957782	2.5674677	21	—	—
476637 2008 SX_{250}	18.3	X	40.03753	302.92113	75.72867	1.11861	0.2207431	0.24063597	2.5599355	21	—	—
476638 2008 SO_{252}	18.1	X	85.41228	200.83385	35.62403	21.76104	0.0586252	0.37323743	1.9104951	21	10 1.1	20.4
476639 2008 SD_{253}	18.2	X	358.01684	42.29284	24.36019	5.00830	0.2343793	0.23781541	2.5801367	21	—	—
476640 2008 SX_{253}	17.5	X	47.94919	196.66447	169.62254	9.69639	0.1226480	0.24033683	2.5620592	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476641 2008 SL_{254}	16.9	X	234.86902	128.73062	21.07479	16.65051	0.1395067	0.22884216	2.6471509	21	10 27.0	20.7
476642 2008 SW_{257}	15.4	X	163.25514	77.20027	20.42267	13.10935	0.1737226	0.12400513	3.9826880	21	6 13.5	21.9
476643 2008 SS_{260}	17.0	X	67.30226	12.85834	347.86416	14.82709	0.2697005	0.24330510	2.5411789	21	—	—
476644 2008 SN_{264}	18.4	X	45.67879	218.45160	195.91043	12.51602	0.2960943	0.24508207	2.5288808	21	—	—
476645 2008 SD_{266}	18.2	X	15.26674	224.66762	177.66673	3.31398	0.2112892	0.23693535	2.5865218	21	—	—
476646 2008 SS_{269}	18.3	X	21.14745	231.20131	205.04879	4.70528	0.2328332	0.24294085	2.5437183	21	—	—
476647 2008 SH_{270}	17.9	X	329.49069	45.35979	45.58382	2.84613	0.1325033	0.23683759	2.5872335	21	—	—
476648 2008 SK_{271}	17.2	X	54.66458	239.40805	136.90379	5.48590	0.2424763	0.24258242	2.5462234	21	—	—
476649 2008 SG_{273}	18.0	X	21.11144	2.16655	62.54288	5.24981	0.1729335	0.24072783	2.5592842	21	—	—
476650 2008 SP_{273}	17.8	X	30.10207	352.25654	72.55897	9.60996	0.1636966	0.24092293	2.5579024	21	—	—
476651 2008 SZ_{282}	17.6	X	33.28256	178.95423	182.68648	3.74546	0.2280799	0.23298917	2.6156456	21	—	—
476652 2008 SF_{283}	18.0	X	38.13492	196.50282	207.03886	7.47564	0.1881224	0.24179367	2.5517577	21	—	—
476653 2008 SF_{284}	18.1	X	343.43918	269.01831	185.82679	5.36096	0.2767892	0.23598697	2.5934469	21	—	—
476654 2008 SJ_{284}	17.1	X	272.92325	253.83688	273.71218	5.66754	0.1153902	0.24048499	2.5610068	21	—	—
476655 2008 SD_{288}	18.0	X	68.52184	193.65118	165.92103	4.28774	0.2696662	0.24359212	2.5391824	21	—	—
476656 2008 SE_{290}	17.4	X	327.22064	84.29626	354.23369	2.82501	0.1969439	0.23363086	2.6108540	21	12 20.5	19.7
476657 2008 SC_{300}	17.7	X	42.92860	30.68933	346.77647	4.52581	0.2176521	0.23988153	2.5653001	21	—	—
476658 2008 SP_{303}	16.8	X	11.69159	120.77380	316.81575	12.04990	0.2520234	0.24091164	2.5579822	21	—	—
476659 2008 SO_{306}	18.0	X	298.96744	110.70395	212.32126	20.13247	0.0844536	0.36261097	1.9476403	21	5 15.6	19.9
476660 2008 SW_{309}	17.1	X	42.13665	220.05192	192.08599	5.79536	0.2259060	0.24163665	2.5528630	21	—	—
476661 2008 TB_{8}	18.2	X	75.29027	328.81223	31.27514	7.22680	0.1852134	0.24600856	2.5225275	21	—	—
476662 2008 TH_{8}	17.6	X	73.65230	285.22601	54.59252	4.45557	0.2894342	0.24327226	2.5414076	21	—	—
476663 2008 TG_{10}	17.4	X	59.18931	310.78211	359.51659	7.48585	0.1807526	0.23470377	2.6028911	21	11 23.6	21.1
476664 2008 TC_{17}	18.2	X	80.31772	109.29591	225.53205	3.68307	0.2023642	0.24072532	2.5593020	21	—	—
476665 2008 TH_{17}	18.4	X	24.95890	177.36000	219.62782	4.69469	0.2243240	0.23798097	2.5789399	21	—	—
476666 2008 TC_{18}	17.7	X	43.09682	32.85412	357.00671	0.97587	0.2012613	0.24072020	2.5593383	21	—	—
476667 2008 TB_{31}	18.2	X	84.94765	155.64616	195.55321	4.38826	0.1379850	0.24501155	2.5293660	21	—	—
476668 2008 TC_{33}	18.1	X	78.20454	149.13827	180.31148	3.67879	0.1567528	0.24011784	2.5636167	21	—	—
476669 2008 TN_{33}	17.2	X	242.86264	98.46434	65.00235	3.97657	0.1310449	0.23422356	2.6064476	21	11 27.8	20.6
476670 2008 TW_{35}	17.7	X	25.25923	27.22430	352.28600	5.14039	0.1718775	0.23879750	2.5730578	21	—	—
476671 2008 TR_{39}	17.2	X	61.96243	321.70716	24.17166	9.88506	0.1797904	0.23890823	2.5722626	21	—	—
476672 2008 TX_{39}	17.0	X	279.33574	77.02091	29.74897	14.88727	0.0247772	0.23018927	2.6368130	21	11 14.5	20.5
476673 2008 TN_{44}	17.7	X	336.27992	52.75079	33.01435	17.47030	0.1556263	0.23519563	2.5992609	21	—	—
476674 2008 TX_{47}	17.4	X	98.45265	198.96707	109.18372	4.76208	0.2023649	0.23994320	2.5648605	21	—	—
476675 2008 TD_{51}	17.8	X	50.37948	346.67087	26.95886	4.96941	0.1640031	0.24209830	2.5496167	21	—	—
476676 2008 TU_{54}	16.0	X	194.71639	179.09579	242.78246	1.79946	0.2447316	0.12460542	3.9698865	21	5 29.8	22.6
476677 2008 TV_{55}	16.2	X	192.47433	39.84666	25.61669	3.11084	0.2458614	0.12435881	3.9751331	21	5 31.8	22.8
476678 2008 TP_{58}	17.6	X	355.21558	16.96814	27.09130	5.01925	0.1914899	0.23423778	2.6063421	21	12 28.6	20.3
476679 2008 TV_{63}	15.7	X	196.58694	221.30875	208.18073	3.47693	0.2580290	0.12506072	3.9602455	21	6 8.7	22.3
476680 2008 TN_{64}	17.7	X	2.56008	8.48313	37.35794	2.67900	0.1013504	0.23615473	2.5922186	21	12 31.8	20.8
476681 2008 TB_{67}	17.4	X	303.81847	296.64357	195.28412	8.01486	0.1096360	0.23949018	2.5680940	21	—	—
476682 2008 TY_{73}	17.6	X	16.51768	192.50296	225.49689	4.54388	0.1491944	0.23963688	2.5670457	21	—	—
476683 2008 TR_{74}	18.0	X	56.70527	24.32220	19.12788	3.91648	0.1721259	0.24569647	2.5246631	21	—	—
476684 2008 TE_{79}	18.1	X	85.15093	115.07725	181.74283	5.13185	0.2698229	0.23993706	2.5649043	21	12 14.3	22.4
476685 2008 TN_{80}	17.1	X	154.56786	222.00502	19.38497	9.04055	0.1184436	0.23869856	2.5737687	21	11 30.1	21.2
476686 2008 TW_{85}	17.7	X	136.88515	306.72595	12.97897	6.32792	0.1065647	0.25192668	2.4828660	21	—	—
476687 2008 TP_{88}	17.7	X	344.42448	170.17683	282.59366	4.53802	0.1066934	0.24275587	2.5450103	21	—	—
476688 2008 TN_{95}	17.7	X	76.25208	14.06511	298.34189	6.54629	0.0912946	0.23739895	2.5831534	21	12 6.4	21.4
476689 2008 TL_{99}	18.7	X	31.28321	212.76958	179.41511	3.56463	0.2124719	0.24100163	2.5573454	21	—	—
476690 2008 TY_{101}	17.6	X	357.33960	17.81922	22.29898	3.15792	0.1302968	0.23443719	2.6048639	21	12 18.5	20.5
476691 2008 TS_{102}	18.1	X	31.98297	12.40920	22.18857	8.71393	0.2065263	0.24087328	2.5582538	21	—	—
476692 2008 TO_{103}	16.7	X	325.49914	64.98945	29.35847	8.91089	0.0974601	0.23796117	2.5790830	21	—	—
476693 2008 TX_{103}	17.3	X	145.05786	208.66682	29.66530	9.51591	0.0427366	0.23275108	2.6174290	21	11 15.9	21.0
476694 2008 TH_{104}	18.4	X	28.20328	177.58563	246.20991	1.60652	0.1639522	0.24449269	2.5329433	21	—	—
476695 2008 TF_{107}	17.4	X	69.54437	185.62369	113.90061	2.88604	0.1480097	0.23433571	2.6056160	21	11 20.3	21.1
476696 2008 TN_{119}	17.3	X	320.45066	177.83303	274.20259	6.73953	0.1624154	0.23714354	2.5850078	21	12 26.5	19.6
476697 2008 TC_{121}	17.5	X	42.35567	227.30698	183.61171	10.93311	0.1522485	0.24558522	2.5254255	21	—	—
476698 2008 TG_{126}	16.9	X	286.00336	291.00294	218.12307	11.16962	0.0948492	0.24277101	2.5449045	21	—	—
476699 2008 TY_{130}	17.9	X	45.95762	145.10557	243.56024	3.42339	0.2254703	0.24245222	2.5471349	21	—	—
476700 2008 TU_{131}	17.4	X	38.76774	91.57357	300.76782	3.00360	0.2106334	0.24150788	2.5537704	21	—	—
476701 2008 TX_{131}	17.3	X	62.87592	160.55018	265.79179	3.54522	0.1682104	0.25214926	2.4814046	21	—	—
476702 2008 TX_{136}	15.6	X	204.30167	46.37738	12.44961	2.87680	0.2419546	0.12481158	3.9655138	21	6 1.8	22.2
476703 2008 TQ_{145}	16.1	X	201.74234	255.67813	168.75991	3.12495	0.2367569	0.12777514	3.9039581	21	6 7.2	22.5
476704 2008 TH_{152}	17.1	X	303.27939	289.97662	182.33179	15.27225	0.1158774	0.23831169	2.5765534	21	12 24.1	20.3
476705 2008 TO_{152}	18.5	X	18.95795	19.63533	35.33170	7.53783	0.2486659	0.24141762	2.5544069	21	—	—
476706 2008 TT_{154}	17.1	X	143.29034	33.39612	251.72049	10.62756	0.1295463	0.24488716	2.5302225	21	—	—
476707 2008 TO_{161}	17.6	X	302.06033	115.82224	18.37775	5.53894	0.0772089	0.24156146	2.5533927	21	—	—
476708 2008 TE_{165}	18.3	X	26.29001	25.57149	3.71756	4.14917	0.1918147	0.23740712	2.5830941	21	—	—
476709 2008 TG_{172}	18.3	X	225.09714	23.88560	37.44263	21.68811	0.0936560	0.36349002	1.9444990	21	6 28.0	21.1
476710 2008 TM_{172}	17.3	X	65.85537	308.43565	50.72018	15.84200	0.1784490	0.24040473	2.5615768	21	—	—
476711 2008 TN_{172}	17.4	X	41.13380	356.74357	64.51336	9.30331	0.2107293	0.24453610	2.5326435	21	—	—
476712 2008 TS_{172}	16.5	X	85.91856	155.13965	231.01352	14.51796	0.1419747	0.24584088	2.5236743	21	—	—
476713 2008 TX_{177}	16.6	X	35.71869	277.62946	89.28681	15.53412	0.1303648	0.23653939	2.5894075	21	12 31.7	20.0
476714 2008 TX_{181}	16.7	X	227.22205	166.57106	37.76609	8.72143	0.2138542	0.24197981	2.5504489	21	12 20.3	20.5
476715 2008 TB_{183}	17.0	X	61.49442	112.56323	296.82597	5.20472	0.0937827	0.25102914	2.4887807	21	—	—
476716 2008 TG_{185}	16.9	X	64.07433	104.21161	253.98080	15.82392	0.2113841	0.24291033	2.5439314	21	—	—
476717 2008 TZ_{185}	17.0	X	22.58514	178.36246	241.78669	16.33564	0.1931648	0.24144179	2.5542364	21	—	—
476718 2008 TM_{186}	17.5	X	53.30415	289.11632	109.55533	5.72408	0.2402535	0.24460676	2.5321557	21	—	—
476719 2008 TP_{186}	18.2	X	106.78322	324.26491	37.01719	6.28775	0.1276179	0.25169699	2.4843763	21	—	—
476720 2008 UU_{3}	17.7	X	91.74103	108.71459	282.20975	5.76824	0.1521564	0.25474118	2.4645442	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476721 2008 UV_4	17.6	X	43.14263	51.99930	326.73375	6.80187	0.1822628	0.24107085	2.5568559	21	—	—
476722 2008 UT_6	18.6	X	48.31419	200.25955	212.01683	2.41412	0.2505674	0.24504711	2.5291213	21	—	—
476723 2008 UG_{12}	17.7	X	84.13910	340.55066	319.99887	4.85980	0.1737430	0.23750373	2.5823935	21	12 8.9	21.7
476724 2008 UH_{16}	17.6	X	38.72216	198.71522	202.48979	12.67247	0.1733551	0.24382071	2.5375951	21	—	—
476725 2008 UW_{19}	16.0	X	184.28104	43.45261	35.97206	7.95328	0.2463425	0.12376953	3.9877405	21	6 10.4	22.7
476726 2008 UW_{21}	17.1	X	56.97023	321.99623	26.32914	15.52218	0.1543368	0.23887493	2.5725017	21	—	—
476727 2008 UX_{21}	18.2	X	103.36688	301.93548	23.67900	2.24695	0.1405469	0.24467034	2.5317170	21	—	—
476728 2008 UZ_{24}	17.9	X	77.94806	44.28664	5.67582	2.63782	0.1948103	0.25547064	2.4598506	21	—	—
476729 2008 UR_{29}	17.5	X	67.43622	133.30367	211.30348	7.74151	0.2320315	0.23951330	2.5679287	21	—	—
476730 2008 UR_{32}	17.8	X	85.82483	314.20930	51.73287	8.29951	0.1898723	0.24628079	2.5206683	21	—	—
476731 2008 UE_{33}	16.0	X	200.22837	291.10681	143.80131	3.27716	0.3111111	0.12429366	3.9765220	21	6 16.2	22.8
476732 2008 UR_{34}	17.7	X	346.92870	283.97119	186.57815	4.49038	0.2134093	0.24041891	2.5614760	21	—	—
476733 2008 UF_{35}	18.2	X	25.81081	16.73544	25.25048	4.39919	0.2221873	0.24023980	2.5627490	21	—	—
476734 2008 UH_{35}	17.9	X	52.19555	333.39783	33.07035	3.14784	0.1399662	0.24065074	2.5598307	21	—	—
476735 2008 UL_{35}	17.7	X	354.29849	25.42664	26.94712	7.01306	0.0783902	0.23619601	2.5919165	21	12 25.1	20.8
476736 2008 UR_{36}	17.7	X	350.73817	172.35245	260.86976	3.51185	0.1631579	0.23550222	2.5970045	21	—	—
476737 2008 UM_{45}	17.2	X	86.63137	252.31533	38.63922	11.87693	0.1892117	0.23519687	2.5992518	21	11 29.3	21.3
476738 2008 UN_{46}	17.8	X	21.96100	114.96825	292.04684	2.68711	0.0815003	0.23742793	2.5829431	21	—	—
476739 2008 UP_{47}	16.7	X	40.02251	333.19173	40.73070	11.20943	0.1962519	0.23629291	2.5912079	21	—	—
476740 2008 UO_{51}	17.2	X	48.56047	316.36766	42.39091	5.91003	0.1854057	0.23519888	2.5992370	21	—	—
476741 2008 UU_{52}	16.6	X	155.90743	232.93923	60.62887	4.51032	0.1508987	0.24309842	2.5426190	21	—	—
476742 2008 UB_{53}	17.6	X	16.56492	336.48115	50.93920	4.54751	0.0889121	0.23180666	2.6245334	21	12 24.9	20.8
476743 2008 UX_{53}	18.3	X	48.93705	202.88739	221.54948	5.50529	0.2109273	0.24538885	2.5267727	21	—	—
476744 2008 UN_{54}	16.5	X	136.18830	269.98237	52.16545	3.13626	0.1413170	0.24506416	2.5290040	21	—	—
476745 2008 UG_{57}	17.9	X	50.53172	180.33710	186.89863	3.45697	0.2173215	0.23993452	2.5649224	21	—	—
476746 2008 UZ_{57}	15.5	X	233.85660	304.00273	83.22693	4.10496	0.0822765	0.12657051	3.9286895	21	5 31.8	21.3
476747 2008 UB_{59}	18.1	X	3.10103	253.44206	155.73008	3.83984	0.1925763	0.23528786	2.5985817	21	—	—
476748 2008 UF_{59}	15.3	X	200.13193	231.98607	191.93127	8.30360	0.2704461	0.12386971	3.9855902	21	6 5.1	22.1
476749 2008 UG_{60}	17.3	X	351.88454	214.11908	266.06967	4.27564	0.1475464	0.24482243	2.5306684	21	—	—
476750 2008 UJ_{61}	18.0	X	48.02267	36.27563	353.88768	3.06650	0.2820914	0.24190857	2.5509496	21	—	—
476751 2008 UY_{61}	18.3	X	39.60079	30.75127	27.84566	7.91692	0.3299096	0.24327239	2.5414067	21	—	—
476752 2008 UZ_{62}	18.7	X	25.82743	189.07672	234.05297	6.03983	0.2683477	0.24125290	2.5555694	21	—	—
476753 2008 UB_{64}	17.4	X	52.97719	282.48593	81.16226	6.24289	0.0581164	0.24088124	2.5581975	21	—	—
476754 2008 UJ_{66}	17.7	X	71.97606	107.97728	269.52476	4.57530	0.2044053	0.24413031	2.5354492	21	—	—
476755 2008 UA_{71}	16.6	X	168.75370	219.14977	14.11872	9.17171	0.0450983	0.23062186	2.6335147	21	12 6.6	20.5
476756 2008 UR_{72}	17.8	X	324.61629	62.86323	14.17382	6.29759	0.2264788	0.22863430	2.6487551	21	12 9.6	20.0
476757 2008 UB_{73}	17.6	X	345.48344	81.39713	16.70118	5.99663	0.3220623	0.23564918	2.5959247	21	—	—
476758 2008 UJ_{73}	17.2	X	41.70803	9.85850	17.59926	7.59105	0.2906899	0.23950796	2.5679668	21	—	—
476759 2008 UJ_{74}	17.4	X	313.83032	161.95281	270.52311	6.52953	0.1510883	0.22621949	2.6675713	21	11 10.7	20.3
476760 2008 UH_{76}	17.7	X	88.12582	293.89089	39.97269	8.43052	0.2211297	0.23922809	2.5699693	21	—	—
476761 2008 UV_{76}	17.3	X	6.14413	169.85048	239.07293	11.14553	0.2049549	0.23386472	2.6091131	21	—	—
476762 2008 UU_{79}	17.9	X	59.12446	126.99443	231.24806	10.33913	0.1553034	0.24024960	2.5626793	21	—	—
476763 2008 UP_{90}	16.0	X	46.29088	97.76404	308.29263	27.68630	0.3261513	0.23691732	2.5866530	21	—	—
476764 2008 UY_{99}	15.6	X	221.51586	159.92592	233.99113	2.82666	0.2742224	0.12525190	3.9562146	21	5 16.1	22.0
476765 2008 UT_{108}	17.0	X	20.45210	90.92384	325.14858	4.84174	0.1285312	0.23798236	2.5789299	21	—	—
476766 2008 UX_{109}	17.4	X	351.22132	99.77848	289.48982	4.69966	0.0833861	0.22950900	2.6420208	21	11 17.1	20.5
476767 2008 UZ_{109}	17.3	X	327.41966	183.74232	277.16413	4.78868	0.0346993	0.23879165	2.5730997	21	—	—
476768 2008 UN_{111}	17.7	X	22.35069	122.79940	307.74510	3.28410	0.2262884	0.24207871	2.5497542	21	—	—
476769 2008 UV_{112}	18.7	X	70.81755	89.98919	282.54586	2.73531	0.1989646	0.24451492	2.5327897	21	—	—
476770 2008 UN_{113}	17.5	X	92.75283	105.87805	239.89811	8.68150	0.0148665	0.24165965	2.5527010	21	—	—
476771 2008 UG_{116}	17.6	X	13.73665	171.46376	246.74870	9.03342	0.1880043	0.23807135	2.5782872	21	—	—
476772 2008 UL_{118}	17.3	X	76.25737	5.71750	21.44266	9.24764	0.1992340	0.24717575	2.5145801	21	—	—
476773 2008 US_{120}	16.9	X	2.13790	120.55221	278.79398	7.61195	0.1021585	0.23215814	2.6218838	21	12 21.4	20.1
476774 2008 UR_{123}	17.8	X	48.02999	62.15859	324.98083	3.42119	0.2533858	0.24072924	2.5592742	21	—	—
476775 2008 UT_{125}	16.3	X	76.43325	78.96544	252.94755	15.53528	0.2581385	0.23759667	2.5817200	21	—	—
476776 2008 UH_{126}	17.1	X	303.44727	187.81188	279.80893	4.77922	0.0826699	0.23040417	2.6351731	21	12 18.1	20.2
476777 2008 UJ_{126}	17.1	X	120.83692	353.48609	338.35953	3.49631	0.1400674	0.24398862	2.5364307	21	—	—
476778 2008 UF_{128}	16.9	X	101.12195	243.80808	67.42507	13.27806	0.1193208	0.23398510	2.6082181	21	—	—
476779 2008 UQ_{128}	17.8	X	61.09154	217.95083	168.04257	4.50753	0.2493822	0.24404140	2.5360650	21	—	—
476780 2008 UC_{131}	18.0	X	26.29002	124.81557	317.51330	1.09161	0.1222071	0.24576686	2.5241810	21	—	—
476781 2008 UP_{132}	17.4	X	352.43757	234.56807	223.16540	9.33360	0.1410458	0.24074630	2.5591533	21	—	—
476782 2008 UC_{133}	18.0	X	47.34293	131.56501	235.47701	1.33771	0.1924224	0.23805959	2.5783721	21	—	—
476783 2008 UK_{134}	17.6	X	341.62307	65.34436	38.06892	9.09358	0.1238952	0.24021734	2.5629088	21	—	—
476784 2008 UZ_{134}	17.8	X	359.22185	66.02938	218.84906	19.87535	0.0393020	0.36432426	1.9415295	21	7 1.9	20.0
476785 2008 UZ_{141}	17.6	X	68.28630	308.15177	52.35126	6.77743	0.1693428	0.24055073	2.5605402	21	—	—
476786 2008 UV_{145}	17.4	X	48.20202	307.80636	59.58222	4.43988	0.2428064	0.23838953	2.5759925	21	—	—
476787 2008 UP_{146}	17.7	X	64.40252	153.90123	246.36691	3.71681	0.1152504	0.24556043	2.5255955	21	—	—
476788 2008 UB_{149}	17.6	X	24.90081	54.11868	13.81431	1.41496	0.1221213	0.24118152	2.5560736	21	—	—
476789 2008 UJ_{149}	17.8	X	40.59409	320.54125	88.91276	1.74138	0.1274610	0.24460087	2.5321964	21	—	—
476790 2008 UD_{156}	17.0	X	310.06688	78.36190	51.22543	13.84685	0.2201666	0.23409998	2.6073648	21	—	—
476791 2008 UL_{156}	17.5	X	58.79969	326.39302	43.37852	6.36504	0.1380500	0.24165244	2.5527518	21	—	—
476792 2008 UU_{156}	17.0	X	290.02340	43.58466	51.72511	10.75866	0.1814853	0.22491134	2.6779049	21	10 29.5	20.0
476793 2008 UV_{156}	18.0	X	38.14404	342.54264	52.76456	5.95178	0.2024215	0.23932876	2.5692485	21	—	—
476794 2008 UJ_{158}	17.0	X	69.14094	64.73927	276.38998	9.86890	0.2414932	0.23738340	2.5832662	21	—	—
476795 2008 UN_{158}	17.6	X	41.48752	94.50985	294.80356	7.57921	0.1725662	0.23793922	2.5792416	21	—	—
476796 2008 UY_{162}	17.4	X	330.32544	229.10110	240.49706	5.80872	0.1115375	0.24006127	2.5640195	21	—	—
476797 2008 UD_{163}	17.3	X	98.01635	297.77918	10.08185	6.79720	0.1164651	0.23794652	2.5791889	21	12 27.5	21.3
476798 2008 UA_{164}	18.0	X	60.37235	39.05971	334.54643	2.26353	0.1611508	0.24242061	2.5473562	21	—	—
476799 2008 UB_{164}	18.3	X	55.77495	145.18971	243.90925	5.23488	0.1622569	0.24382634	2.5375560	21	—	—
476800 2008 UJ_{166}	17.0	X	148.42711	180.04417	45.04628	14.29125	0.0472409	0.22697212	2.6616710	21	11 4.5	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476801 2008 UY_{167}	18.1	X	98.69944	143.52270	179.67061	2.69482	0.1771412	0.24174168	2.5521236	21	—	—
476802 2008 UG_{168}	17.7	X	339.60756	43.20760	52.95441	10.66239	0.0838103	0.23899716	2.5716245	21	—	—
476803 2008 UJ_{169}	18.7	X	63.27232	300.51486	89.18837	2.94456	0.2071784	0.24492414	2.5299678	21	—	—
476804 2008 UY_{169}	16.7	X	127.76181	39.33310	261.93656	5.32682	0.1745514	0.24654733	2.5188512	21	—	—
476805 2008 UW_{176}	15.8	X	198.57537	90.22446	347.04569	2.29832	0.2534921	0.12562103	3.9484606	21	6 18.8	22.4
476806 2008 UJ_{185}	17.5	X	325.80766	8.11242	53.64984	6.77686	0.1664568	0.22706784	2.6609229	21	11 19.9	20.1
476807 2008 UP_{188}	16.9	X	87.64721	266.34392	50.85689	16.83452	0.3662415	0.24061970	2.5600508	21	—	—
476808 2008 UJ_{190}	18.3	X	45.24610	47.06000	40.63593	3.08057	0.1655066	0.25396385	2.4695706	21	—	—
476809 2008 UK_{193}	16.9	X	254.85594	96.71148	56.66550	14.27614	0.1106305	0.23241821	2.6199275	21	12 2.0	20.2
476810 2008 UM_{193}	18.3	X	193.05420	273.10501	228.33492	20.10558	0.0595906	0.36969990	1.9226630	21	9 14.7	20.9
476811 2008 UD_{196}	17.5	X	110.70935	181.39964	100.54838	5.91528	0.0859928	0.23773568	2.5807136	21	12 6.9	21.3
476812 2008 UN_{196}	17.6	X	135.74423	108.61747	197.22046	6.71860	0.1183045	0.24499006	2.5295139	21	—	—
476813 2008 UT_{199}	19.2	X	31.38687	224.70182	45.87689	23.12219	0.1118112	0.37000487	1.9216063	21	9 14.1	21.6
476814 2008 UB_{206}	16.7	X	351.01067	201.07146	244.64119	12.71784	0.1167288	0.23815570	2.5776784	21	—	—
476815 2008 UD_{207}	17.5	X	46.54573	307.32279	44.51202	5.90200	0.0539234	0.23777433	2.5804339	21	12 15.1	20.9
476816 2008 UP_{207}	18.0	X	28.67980	21.79265	9.90698	4.35739	0.1024436	0.23805344	2.5784165	21	—	—
476817 2008 UV_{209}	18.0	X	0.74375	221.35066	247.19276	2.35072	0.1732671	0.24470788	2.5314581	21	—	—
476818 2008 UV_{222}	16.7	X	172.54489	354.86893	277.27542	3.67533	0.0639739	0.24228247	2.5483245	21	—	—
476819 2008 UG_{240}	17.7	X	8.48693	176.13195	256.85764	8.92896	0.1795237	0.23911304	2.5707936	21	—	—
476820 2008 UJ_{242}	16.6	X	161.53790	219.76530	354.49526	9.19407	0.1202640	0.22365087	2.6879570	21	10 31.5	21.0
476821 2008 UA_{243}	17.1	X	335.80351	217.04862	262.06046	15.53770	0.1703881	0.23861668	2.5743574	21	—	—
476822 2008 UG_{245}	16.5	X	274.72781	217.27184	258.59791	12.36595	0.2108106	0.22369642	2.6875921	21	10 22.2	20.1
476823 2008 UU_{245}	16.8	X	25.31388	17.21428	45.82062	15.45606	0.0749066	0.23946699	2.5682598	21	—	—
476824 2008 UJ_{248}	18.0	X	13.78255	335.68567	79.35762	3.72045	0.1334109	0.23566234	2.5958281	21	—	—
476825 2008 UL_{254}	16.7	X	63.06303	246.26154	47.29909	13.16036	0.1830893	0.22684755	2.6626453	21	11 8.3	20.4
476826 2008 UO_{261}	17.2	X	307.58467	244.24685	220.18500	14.01401	0.2904615	0.22889379	2.6467528	21	12 4.4	19.1
476827 2008 UF_{263}	17.4	X	27.13656	91.03234	285.69498	2.13148	0.2416293	0.23336192	2.6128595	21	—	—
476828 2008 UH_{272}	17.5	X	326.33783	122.94626	18.97694	4.40345	0.1311170	0.24284564	2.5443832	21	—	—
476829 2008 UB_{278}	17.4	X	287.80389	100.27320	37.59671	17.21150	0.2030470	0.23429182	2.6059414	21	12 19.6	20.3
476830 2008 UP_{279}	17.8	X	83.74329	263.54258	49.31884	3.28637	0.2168567	0.23821642	2.5772403	21	12 27.5	21.9
476831 2008 US_{279}	17.1	X	235.98570	127.27465	41.96593	10.25918	0.0558202	0.23370873	2.6102740	21	12 5.9	20.6
476832 2008 UB_{280}	18.7	X	32.03527	338.51227	64.78669	4.33426	0.2932009	0.24033669	2.5620602	21	—	—
476833 2008 UU_{281}	16.8	X	212.00689	176.88968	57.82872	15.61454	0.0902192	0.23906588	2.5711316	21	—	—
476834 2008 UP_{284}	17.6	X	45.95237	314.21237	73.41805	3.07988	0.1039092	0.24083707	2.5585102	21	—	—
476835 2008 UC_{286}	17.7	X	71.77204	167.32313	170.25540	3.57797	0.2196376	0.24002755	2.5642596	21	—	—
476836 2008 UL_{295}	18.1	X	74.45549	314.11587	6.63940	2.65835	0.2410677	0.23728729	2.5839636	21	12 30.8	22.3
476837 2008 UD_{296}	17.7	X	43.63493	125.13017	298.83272	1.59484	0.1485332	0.24581833	2.5238287	21	—	—
476838 2008 UO_{298}	17.4	X	56.40030	358.40391	16.69857	6.72673	0.1809524	0.24034763	2.5619825	21	—	—
476839 2008 UT_{300}	17.3	X	44.16488	75.56898	323.42337	4.31727	0.2655649	0.24147460	2.5540050	21	—	—
476840 2008 UB_{301}	17.2	X	295.84783	217.89033	253.45322	12.96457	0.0472695	0.23131507	2.6282506	21	12 14.1	20.3
476841 2008 UG_{302}	17.6	X	347.86035	103.22472	23.53638	4.09973	0.2371565	0.24095208	2.5576960	21	—	—
476842 2008 UN_{304}	17.9	X	85.12004	48.09752	16.69796	4.41855	0.1557532	0.25269183	2.4778513	21	1 24.6	20.6
476843 2008 UO_{304}	17.7	X	74.77774	42.50625	345.17507	3.03660	0.1216908	0.24376335	2.5379932	21	—	—
476844 2008 UF_{306}	17.0	X	22.77328	166.19913	268.50490	5.84259	0.1699151	0.24323638	2.5416575	21	—	—
476845 2008 UC_{308}	16.9	X	61.70908	356.75900	29.83261	15.79447	0.1196375	0.24290355	2.5439787	21	—	—
476846 2008 UG_{308}	17.7	X	20.28039	71.75686	304.84304	4.35687	0.2580970	0.23381612	2.6094746	21	—	—
476847 2008 UR_{308}	17.1	X	286.81174	277.37461	241.42725	26.00192	0.0965647	0.23891572	2.5722089	21	—	—
476848 2008 UQ_{321}	18.1	X	48.21756	146.47476	227.54559	13.02615	0.1946310	0.24096081	2.5576342	21	—	—
476849 2008 UY_{322}	17.9	X	334.54917	91.72645	338.99031	5.21764	0.2267079	0.23291349	2.6162122	21	12 27.8	20.1
476850 2008 UU_{325}	18.2	X	11.47848	145.94272	284.04456	4.72406	0.3283438	0.23912146	2.5707333	21	—	—
476851 2008 UN_{326}	16.8	X	63.42394	352.61597	0.74517	11.12317	0.2062733	0.24034541	2.5619982	21	—	—
476852 2008 UQ_{326}	16.7	X	103.34054	79.46574	296.59417	4.26232	0.2537926	0.24394619	2.5367248	21	1 4.1	19.6
476853 2008 UT_{326}	16.0	X	352.91202	131.17647	284.51840	20.91598	0.0969596	0.22406022	2.6846822	21	12 27.1	19.2
476854 2008 UV_{330}	17.7	X	48.53904	182.07643	211.00063	1.37080	0.1145805	0.24073968	2.5592002	21	—	—
476855 2008 UB_{335}	17.8	X	5.16052	182.45960	216.96800	2.89077	0.1170363	0.23574505	2.5952209	21	12 28.7	20.8
476856 2008 UW_{336}	16.6	X	321.32207	212.21388	231.75257	21.34035	0.0409455	0.23187016	2.6240542	21	12 13.7	20.1
476857 2008 US_{337}	17.4	X	15.97504	138.97216	288.34785	2.03837	0.1589061	0.23990635	2.5651232	21	—	—
476858 2008 UJ_{340}	17.4	X	83.90278	56.10947	317.73893	2.45488	0.0616286	0.24205878	2.5498942	21	—	—
476859 2008 UM_{341}	17.3	X	47.37345	12.07069	2.33916	5.47568	0.1723693	0.23897612	2.5717754	21	—	—
476860 2008 UW_{344}	17.0	X	325.10675	352.08381	109.83335	15.01451	0.2031574	0.22600429	2.6692644	21	—	—
476861 2008 UE_{350}	16.7	X	273.69500	58.07354	51.97827	15.48179	0.0502476	0.22728166	2.6592538	21	11 11.0	20.2
476862 2008 UA_{352}	16.9	X	66.05043	253.46914	148.62239	12.78511	0.2225704	0.24596667	2.5228139	21	—	—
476863 2008 UY_{354}	17.6	X	66.96181	96.59542	260.38160	2.34248	0.1529352	0.23789642	2.5795510	21	—	—
476864 2008 UC_{356}	16.9	X	6.48832	223.47050	230.08820	26.65094	0.1827478	0.24049761	2.5609172	21	—	—
476865 2008 UP_{361}	18.0	X	206.40068	178.93821	264.16447	17.74851	0.0776800	0.36410553	1.9423070	21	7 6.9	20.2
476866 2008 UK_{365}	16.5	X	334.78145	328.43441	116.17004	8.49636	0.1733797	0.23419099	2.6066893	21	—	—
476867 2008 VD_{5}	17.3	X	31.49755	313.55303	80.92083	5.06742	0.1887026	0.23866620	2.5740013	21	—	—
476868 2008 VS_{8}	17.6	X	71.49045	101.71832	279.88006	5.92082	0.1459912	0.24458252	2.5323230	21	—	—
476869 2008 VU_{10}	17.6	X	76.83059	176.86703	185.44443	4.65551	0.2118120	0.24318492	2.5420161	21	—	—
476870 2008 VO_{14}	17.6	X	61.30573	93.77500	310.51708	6.26840	0.3150328	0.24634901	2.5202029	21	—	—
476871 2008 VC_{15}	17.6	X	25.94667	160.78861	236.84877	0.98845	0.1438456	0.23878890	2.5731195	21	—	—
476872 2008 VT_{19}	17.7	X	23.70278	332.17974	62.78503	16.26895	0.1298021	0.23552636	2.5968271	21	—	—
476873 2008 VR_{23}	17.4	X	58.90997	322.94012	77.07618	8.92601	0.1292235	0.24318731	2.5419994	21	—	—
476874 2008 VE_{24}	18.2	X	31.80347	281.16751	154.94786	3.08134	0.2215876	0.24284875	2.5443614	21	—	—
476875 2008 VT_{24}	17.8	X	48.82494	304.26350	83.20546	7.52571	0.2468850	0.23978505	2.5659881	21	—	—
476876 2008 VG_{27}	17.3	X	38.89497	108.75587	270.90530	2.76335	0.1717737	0.23789318	2.5795744	21	—	—
476877 2008 VL_{30}	17.4	X	115.28488	314.09167	5.55124	3.95290	0.1552567	0.24258133	2.5462310	21	—	—
476878 2008 VC_{34}	16.5	X	149.55333	208.16994	66.48806	16.22539	0.1123821	0.23829741	2.5766563	21	—	—
476879 2008 VW_{39}	17.3	X	19.88512	352.80256	14.24189	4.37508	0.2139739	0.23005758	2.6378192	21	12 21.5	20.5
476880 2008 VN_{40}	17.9	X	64.40896	123.97836	254.22393	11.16099	0.1929407	0.24281100	2.5446251	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476881 2008 VJ_{43}	17.5	X	234.30935	263.30377	284.35731	9.76782	0.0710646	0.23382504	2.6094083	21	12 26.8	20.9
476882 2008 VN_{45}	16.8	X	2.27738	190.75462	221.83710	31.82322	0.1306591	0.23372826	2.6101286	21	—	—
476883 2008 VV_{46}	18.1	X	2.90985	212.05801	232.28506	10.88080	0.1577383	0.23880283	2.5730195	21	—	—
476884 2008 VR_{50}	17.3	X	56.98218	333.96225	41.09098	3.22081	0.1799355	0.24175245	2.5520478	21	—	—
476885 2008 VF_{62}	17.7	X	109.44844	146.86198	182.80561	0.48397	0.0578226	0.24133042	2.5550222	21	—	—
476886 2008 VW_{66}	17.4	X	293.64334	222.10340	219.32228	3.40604	0.0949251	0.22431105	2.6826804	21	10 25.9	20.5
476887 2008 VV_{71}	17.0	X	48.14814	58.96134	317.13580	3.31822	0.2553855	0.23440536	2.6050998	21	—	—
476888 2008 VT_{73}	17.4	X	102.16187	250.07368	74.73607	5.59571	0.1332040	0.23876495	2.5732916	21	—	—
476889 2008 VK_{74}	17.7	X	345.26182	221.27531	235.79802	8.02118	0.1271972	0.23774854	2.5806205	21	—	—
476890 2008 VY_{77}	16.8	X	109.67575	268.62091	63.22519	15.37523	0.1354811	0.24200161	2.5502958	21	—	—
476891 2008 VJ_{78}	17.2	X	31.39847	258.00493	189.19404	4.33543	0.2500070	0.24364278	2.5388304	21	—	—
476892 2008 WU	17.4	X	314.33118	14.25323	56.11414	5.30505	0.0715919	0.22899257	2.6459915	21	11 15.5	20.4
476893 2008 WB_{10}	17.3	X	25.50227	278.89772	75.10150	3.04653	0.0761203	0.22734592	2.6587527	21	11 21.6	20.7
476894 2008 WR_{12}	16.2	X	75.17792	103.83148	259.14545	9.90971	0.1536638	0.23975805	2.5661808	21	—	—
476895 2008 WT_{12}	17.5	X	65.98971	329.41817	65.77240	6.68775	0.1309537	0.24560384	2.5252979	21	—	—
476896 2008 WU_{19}	17.2	X	352.14604	16.99659	56.76399	12.39250	0.0481397	0.23555258	2.5966344	21	—	—
476897 2008 WJ_{20}	17.5	X	74.09590	282.36455	43.17005	2.52604	0.2074298	0.23522324	2.5990575	21	—	—
476898 2008 WS_{21}	17.5	X	34.60816	201.23478	223.83665	5.54901	0.1286154	0.24236640	2.5477361	21	—	—
476899 2008 WD_{23}	15.6	X	220.81514	178.34580	227.99714	1.89480	0.2659925	0.12532085	3.9547633	21	5 30.2	22.1
476900 2008 WE_{28}	15.8	X	209.84218	354.42463	58.14002	11.84919	0.1435769	0.12343150	3.9950177	21	6 2.1	22.1
476901 2008 WA_{30}	17.0	X	357.66152	173.99556	257.10801	12.96882	0.2215955	0.23413262	2.6071225	21	—	—
476902 2008 WQ_{30}	17.1	X	58.81452	91.33387	309.51498	2.32047	0.0846768	0.24117871	2.5560935	21	—	—
476903 2008 WS_{30}	17.6	X	20.85747	141.31322	287.57374	2.48812	0.2328728	0.23868207	2.5738873	21	—	—
476904 2008 WK_{32}	19.2	X	130.55578	139.86417	58.77757	15.45123	0.3788327	0.59749066	1.3960961	21	10 24.5	21.1
476905 2008 WB_{33}	17.9	X	29.22777	246.31472	47.64480	22.20503	0.0497026	0.37219098	1.9140744	21	10 4.9	20.1
476906 2008 WK_{39}	17.9	X	47.27762	216.96398	195.62937	1.47963	0.1941109	0.24351973	2.5396856	21	—	—
476907 2008 WS_{39}	17.6	X	337.42410	358.65290	79.90235	2.84310	0.1725563	0.23232069	2.6206606	21	—	—
476908 2008 WF_{40}	17.7	X	315.14947	36.01125	76.25782	4.97026	0.1639317	0.23304290	2.6152435	21	—	—
476909 2008 WU_{40}	17.6	X	26.04109	317.86931	71.81326	5.04468	0.1573835	0.23487024	2.6016611	21	—	—
476910 2008 WN_{42}	17.1	X	11.14283	104.37325	260.40812	5.13899	0.0377053	0.22451080	2.6810890	21	11 9.1	20.6
476911 2008 WO_{44}	17.3	X	22.48276	290.62431	62.35267	5.51595	0.1974214	0.22812871	2.6526671	21	12 3.5	20.2
476912 2008 WW_{50}	17.6	X	301.79236	34.87819	63.87047	5.90269	0.1799991	0.22884108	2.6471592	21	11 24.5	20.0
476913 2008 WF_{56}	16.9	X	46.28682	276.53752	46.64505	14.07563	0.1492847	0.22740373	2.6583021	21	11 19.3	20.4
476914 2008 WJ_{61}	18.0	X	211.36969	69.05705	53.75026	22.14958	0.1124023	0.36903055	1.9249872	21	9 28.7	20.8
476915 2008 WH_{63}	16.1	X	32.05754	172.20422	253.39330	29.25431	0.1355792	0.24118089	2.5560781	21	—	—
476916 2008 WY_{72}	17.3	X	303.09692	64.82213	44.28069	4.41137	0.1143376	0.22865491	2.6485959	21	12 16.7	20.2
476917 2008 WN_{73}	17.4	X	326.89901	5.46952	43.39264	3.02007	0.1274836	0.22309879	2.6923896	21	11 3.7	20.1
476918 2008 WS_{73}	16.7	X	61.57573	164.10168	232.08085	5.29233	0.2345173	0.24273151	2.5451806	21	—	—
476919 2008 WK_{83}	17.2	X	58.27760	288.76506	121.01273	4.31104	0.2504367	0.24458814	2.5322842	21	—	—
476920 2008 WE_{94}	17.2	X	45.43229	284.00337	81.40365	4.51992	0.1818823	0.23513010	2.5997439	21	—	—
476921 2008 WM_{96}	17.1	X	80.06682	314.64239	16.29912	9.03175	0.1755936	0.23809376	2.5781254	21	—	—
476922 2008 WN_{98}	17.4	X	87.57336	246.13321	171.37499	8.60464	0.1931926	0.25227312	2.4805923	21	1 21.3	20.1
476923 2008 WH_{99}	17.1	X	33.65600	331.53500	85.19064	4.76408	0.1248887	0.24140759	2.5544776	21	—	—
476924 2008 WG_{102}	17.5	X	31.12453	227.75413	180.17055	2.07202	0.2056525	0.23987240	2.5653652	21	—	—
476925 2008 WQ_{109}	17.8	X	5.87533	10.90042	22.87403	1.56587	0.0875884	0.22964290	2.6409937	21	12 17.1	20.9
476926 2008 WF_{113}	18.1	X	31.82368	167.04639	252.02249	3.71110	0.1925279	0.23997632	2.5646245	21	—	—
476927 2008 WM_{113}	17.4	X	47.01150	299.01391	76.43753	5.10202	0.1744754	0.23607873	2.5927748	21	—	—
476928 2008 WW_{117}	17.7	X	50.66592	305.89624	77.61320	6.33782	0.0875940	0.23682100	2.5873543	21	—	—
476929 2008 WV_{122}	17.5	X	44.29737	232.49144	114.01154	3.40079	0.1877781	0.23465501	2.6032517	21	12 24.6	20.9
476930 2008 WP_{123}	16.7	X	131.50124	252.57460	58.23408	5.86089	0.0819917	0.23884053	2.5727487	21	—	—
476931 2008 WB_{125}	16.4	X	24.24851	262.98756	75.57633	13.79429	0.0575600	0.22387808	2.6861381	21	11 1.3	20.0
476932 2008 WD_{126}	17.5	X	29.80675	3.34122	46.34350	2.05041	0.1070226	0.23361005	2.6110090	21	—	—
476933 2008 WQ_{126}	17.7	X	355.55490	179.74174	293.36407	2.92200	0.1871062	0.23633074	2.5909313	21	—	—
476934 2008 WB_{128}	16.2	X	119.50489	212.07601	92.94253	15.72397	0.0789463	0.22975117	2.6401640	21	—	—
476935 2008 WP_{129}	17.1	X	50.72140	272.89230	74.71586	14.93946	0.2380107	0.23322696	2.6138674	21	—	—
476936 2008 WX_{129}	16.2	X	323.05118	179.05008	253.30361	21.22538	0.0407673	0.22627285	2.6671519	21	12 1.2	19.7
476937 2008 WP_{133}	16.8	X	352.10174	184.73723	273.35323	11.13650	0.1380473	0.23989952	2.5651718	21	—	—
476938 2008 WY_{136}	16.7	X	47.40747	353.70971	31.76584	8.49063	0.2036217	0.23807783	2.5782404	21	—	—
476939 2008 WL_{138}	16.5	X	9.56431	327.95082	86.21151	10.06271	0.1186404	0.23234034	2.6205129	21	—	—
476940 2008 WK_{139}	17.1	X	298.46875	292.24044	134.67870	4.82507	0.2566549	0.21924642	2.7238365	21	9 21.2	20.0
476941 2008 WR_{140}	16.9	X	15.97603	17.18166	71.25892	15.93073	0.0995753	0.24066887	2.5597022	21	—	—
476942 2008 WS_{140}	17.4	X	81.02546	25.56573	338.03028	3.08306	0.1799680	0.24301758	2.5431828	21	—	—
476943 2008 XC	17.9	X	36.58736	303.68041	83.70162	6.64248	0.2987670	0.23751054	2.5823441	21	—	—
476944 2008 XY_{2}	16.9	X	49.76951	162.25176	251.60757	17.10008	0.1530752	0.24124900	2.5555970	21	—	—
476945 2008 XG_{3}	16.0	X	336.00812	346.93637	83.38768	22.81370	0.0295080	0.22863436	2.6487546	21	12 16.7	19.3
476946 2008 XH_{4}	16.6	X	47.92360	119.06552	277.46510	8.36506	0.1753276	0.24009527	2.5637774	21	—	—
476947 2008 XZ_{4}	17.4	X	43.19034	42.25787	358.24277	6.84993	0.2446494	0.24138776	2.5546176	21	—	—
476948 2008 XT_{16}	17.8	X	49.11404	162.26488	246.76636	5.60977	0.2354987	0.24197334	2.5504943	21	—	—
476949 2008 XA_{17}	17.6	X	17.92081	175.87998	177.10909	2.48581	0.1228761	0.22423853	2.6832588	21	11 15.3	20.7
476950 2008 XA_{24}	17.7	X	324.36669	117.95532	320.17523	4.69519	0.1938309	0.22908706	2.6452639	21	12 11.3	20.2
476951 2008 XE_{28}	17.3	X	40.50960	7.93310	335.36605	5.13654	0.0131790	0.22551179	2.6731493	21	11 16.8	20.9
476952 2008 XH_{34}	17.3	X	46.98247	79.65077	304.53684	3.12320	0.2235803	0.23836156	2.5761941	21	—	—
476953 2008 XO_{34}	17.1	X	317.16663	225.85989	269.14205	11.85539	0.1114572	0.23696355	2.5863166	21	—	—
476954 2008 XB_{35}	16.6	X	279.32514	217.81985	261.75811	20.45925	0.0909967	0.22606536	2.6687837	21	11 25.0	20.0
476955 2008 XK_{36}	18.0	X	0.40825	39.25589	47.12351	4.45234	0.2262605	0.23721662	2.5844768	21	—	—
476956 2008 XK_{38}	17.3	X	53.34966	17.85015	40.38617	3.47696	0.1776971	0.24382881	2.5375389	21	—	—
476957 2008 XG_{41}	16.8	X	63.17542	118.93039	261.90697	27.89171	0.1167384	0.23961608	2.5671943	21	—	—
476958 2008 XZ_{41}	17.8	X	8.14040	135.06423	314.35591	4.39565	0.2975395	0.23726863	2.5840991	21	—	—
476959 2008 XE_{48}	16.8	X	11.42329	215.68878	117.21235	5.38426	0.0775850	0.21135524	2.7912198	21	10 3.9	20.2
476960 2008 XS_{49}	16.4	X	294.69278	320.84269	118.20431	9.61725	0.1794664	0.21285388	2.7781030	21	10 16.3	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
476961 2008 XJ_{53}	16.8	X	44.39096	358.11308	34.97337	5.39939	0.2946413	0.23635069	2.5907855	21	—	—
476962 2008 XW_{53}	18.0	X	24.01917	226.29132	208.00921	2.31782	0.2789567	0.24012040	2.5635985	21	—	—
476963 2008 XA_{56}	16.8	X	50.47811	299.99829	120.01685	6.97641	0.0819046	0.24404738	2.5360236	21	—	—
476964 2008 YK_{1}	16.3	X	25.81588	323.57889	92.97395	14.43963	0.1444865	0.23490934	2.6013724	21	—	—
476965 2008 YG_{4}	17.1	X	14.35268	143.22716	274.63891	11.72793	0.1470507	0.23081181	2.6320696	21	—	—
476966 2008 YS_{4}	17.0	X	339.31845	108.44761	312.77956	5.38992	0.1727601	0.22171121	2.7036114	21	12 15.4	19.7
476967 2008 YL_{13}	16.6	X	15.07678	119.54637	294.43840	29.74871	0.3163009	0.23425913	2.6061838	21	—	—
476968 2008 YO_{13}	17.1	X	13.47630	312.62017	105.50336	4.29748	0.2326634	0.23173606	2.6250665	21	—	—
476969 2008 YU_{13}	16.8	X	354.73500	340.13848	91.78082	4.94835	0.2341657	0.23023087	2.6364954	21	—	—
476970 2008 YG_{16}	17.7	X	36.43047	145.34919	277.11765	2.87462	0.2255894	0.23798361	2.5789209	21	—	—
476971 2008 YZ_{16}	17.4	X	12.68026	274.42335	111.34450	13.79503	0.2801830	0.22646429	2.6656486	21	—	—
476972 2008 YB_{21}	17.2	X	55.41636	112.90529	282.23618	2.69608	0.1918137	0.23505670	2.6002851	21	—	—
476973 2008 YF_{21}	16.7	X	30.04565	109.09561	289.92024	10.43743	0.2030866	0.23072624	2.6327203	21	—	—
476974 2008 YS_{31}	17.1	X	306.86547	84.26538	33.37449	14.06613	0.1507869	0.22483722	2.6784934	21	—	—
476975 2008 YC_{37}	17.1	X	342.49262	93.17783	303.55344	12.02294	0.1775396	0.21890466	2.7266708	21	11 12.4	20.0
476976 2008 YQ_{38}	16.2	X	73.46895	130.13888	267.69646	10.60425	0.3014164	0.24194141	2.5507188	21	—	—
476977 2008 YM_{49}	17.6	X	2.49909	17.42664	91.40991	4.84633	0.1541448	0.23547163	2.5972294	21	—	—
476978 2008 YT_{49}	17.4	X	155.28783	96.33558	71.89448	3.35136	0.0097371	0.20105914	2.8857155	21	8 29.7	21.4
476979 2008 YO_{51}	17.4	X	11.42746	336.52730	87.30708	3.61567	0.1999316	0.23121796	2.6289864	21	—	—
476980 2008 YZ_{53}	17.7	X	356.93697	5.52788	75.59906	4.89469	0.2078654	0.23031946	2.6358193	21	—	—
476981 2008 YT_{54}	17.7	X	41.81923	70.75119	359.28067	3.98106	0.2753391	0.23945375	2.5683544	21	—	—
476982 2008 YZ_{54}	17.2	X	279.56129	40.48183	31.02963	3.85138	0.0713953	0.20831567	2.8183057	21	9 24.5	20.8
476983 2008 YE_{59}	17.7	X	330.83827	150.22109	342.84054	1.44458	0.1432738	0.23451528	2.6042856	21	—	—
476984 2008 YA_{65}	17.0	X	77.83638	234.10456	81.35556	7.23212	0.2174258	0.22210026	2.7004533	21	12 22.8	21.1
476985 2008 YC_{73}	16.7	X	33.27241	107.02087	288.23433	14.18659	0.1751468	0.23344780	2.6122186	21	—	—
476986 2008 YE_{81}	17.2	X	15.32549	343.24903	87.67659	6.99951	0.2468241	0.23545557	2.5973476	21	—	—
476987 2008 YF_{81}	16.0	X	346.80884	126.90611	290.36008	20.91659	0.0731035	0.22445346	2.6815455	21	12 18.4	19.4
476988 2008 YA_{93}	17.5	X	329.96733	300.96803	104.56779	9.29668	0.2017327	0.21998843	2.7177082	21	11 7.0	20.1
476989 2008 YH_{95}	16.9	X	260.94358	65.91084	108.08870	17.52665	0.1126878	0.22644956	2.6657642	21	—	—
476990 2008 YM_{98}	17.5	X	44.18174	252.07462	120.73022	4.04728	0.2541149	0.23072393	2.6327379	21	—	—
476991 2008 YU_{102}	16.7	X	199.26499	92.75205	118.78753	11.89147	0.1140093	0.21981683	2.7191224	21	12 9.3	20.9
476992 2008 YA_{104}	17.2	X	304.91115	117.10151	302.91972	3.01014	0.0898576	0.21385062	2.7694639	21	10 11.9	20.7
476993 2008 YE_{108}	16.9	X	102.17825	279.63506	306.20301	6.49245	0.1177829	0.19952263	2.9005116	21	9 14.1	21.2
476994 2008 YZ_{108}	16.8	X	308.39194	315.14792	111.96760	5.91601	0.0535437	0.21418403	2.7665891	21	11 3.1	20.3
476995 2008 YV_{109}	17.5	X	46.64541	282.68803	88.37570	5.81125	0.1939031	0.23558143	2.5964224	21	—	—
476996 2008 YW_{111}	16.4	X	153.60605	220.92377	86.93980	12.38680	0.1421298	0.24393031	2.5368349	21	—	—
476997 2008 YN_{115}	17.5	X	344.37351	357.50495	90.11795	3.33344	0.1792784	0.23000190	2.6382449	21	—	—
476998 2008 YN_{122}	16.9	X	298.95822	237.21238	280.07022	13.06428	0.0508451	0.23283968	2.6167650	21	—	—
476999 2008 YL_{124}	17.0	X	91.04231	55.32356	295.37444	13.05075	0.0110587	0.23036160	2.6354978	21	—	—
477000 2008 YN_{125}	16.7	X	74.01843	259.89408	106.90574	7.04774	0.1841880	0.23388376	2.6089715	21	—	—
477001 2008 YF_{127}	16.6	X	47.13649	243.22798	108.66661	14.68484	0.2052469	0.22437826	2.6821446	21	—	—
477002 2008 YT_{128}	17.9	X	336.29532	35.71030	13.61652	2.22831	0.1135996	0.22131323	2.7068517	21	11 20.0	21.0
477003 2008 YE_{132}	17.4	X	297.54464	327.43805	76.88509	4.19771	0.0426258	0.20935131	2.8090034	21	9 18.9	21.1
477004 2008 YG_{133}	16.8	X	329.49633	179.60044	246.48891	10.19059	0.1925276	0.22742822	2.6581112	21	12 4.7	19.0
477005 2008 YO_{133}	16.7	X	54.51032	93.37412	283.96985	12.10866	0.1456763	0.23218917	2.6216502	21	—	—
477006 2008 YH_{136}	17.4	X	139.83892	305.29129	333.05050	2.34532	0.0308923	0.22670126	2.6637907	21	12 30.6	21.2
477007 2008 YB_{140}	17.2	X	3.27943	110.55154	269.79020	5.71167	0.0871094	0.21961762	2.7207664	21	11 22.6	20.4
477008 2008 YB_{143}	17.4	X	17.77829	99.20170	302.60638	3.98751	0.2767445	0.23095661	2.6309693	21	—	—
477009 2008 YH_{146}	17.4	X	300.16904	334.50471	136.58454	5.62543	0.0688871	0.22143217	2.7058823	21	12 16.7	20.7
477010 2008 YO_{146}	17.2	X	38.15358	266.63555	133.23100	2.70440	0.0981043	0.22884671	2.6471157	21	—	—
477011 2008 YJ_{150}	17.2	X	358.33262	329.98783	103.75098	5.07034	0.1969664	0.22921594	2.6442723	21	—	—
477012 2008 YP_{150}	17.4	X	38.26170	129.83441	257.64262	2.52692	0.1147763	0.22971164	2.6404668	21	—	—
477013 2008 YA_{151}	17.6	X	351.82122	183.86074	264.26980	4.47979	0.2769713	0.23260347	2.6185362	21	—	—
477014 2008 YW_{154}	16.2	X	57.07105	184.19237	126.14370	15.14685	0.1932587	0.21267272	2.7796804	21	11 25.6	20.4
477015 2008 YV_{156}	17.3	X	273.81911	157.79737	287.87586	3.75858	0.0898223	0.21104849	2.7939237	21	9 29.4	21.1
477016 2008 YT_{159}	17.2	X	280.51188	286.52362	145.42465	5.01564	0.0410045	0.20868648	2.8149662	21	10 1.2	21.0
477017 2008 YZ_{159}	16.8	X	31.22819	78.06456	304.36823	5.24718	0.0357746	0.22267918	2.6957709	21	12 29.1	20.4
477018 2008 YQ_{160}	17.3	X	327.26999	341.28943	148.56078	3.21976	0.2560829	0.22725533	2.6594592	21	—	—
477019 2008 YN_{161}	17.3	X	318.76459	13.83015	106.03933	14.49273	0.1267125	0.22967261	2.6407660	21	—	—
477020 2008 YC_{162}	17.7	X	351.25319	341.44363	112.22450	5.20875	0.1784581	0.23319097	2.6141363	21	—	—
477021 2008 YN_{162}	17.4	X	240.21002	118.97140	10.36437	1.65989	0.0374891	0.21507385	2.7589530	21	10 22.0	21.3
477022 2008 YK_{164}	17.7	X	20.78428	333.62750	105.94016	2.68110	0.1864986	0.23666218	2.5885117	21	—	—
477023 2008 YD_{169}	16.3	X	191.87305	67.81913	123.81037	11.04171	0.1049927	0.21413173	2.7670395	21	11 9.9	20.7
477024 2008 YY_{169}	17.8	X	33.29534	87.27244	319.40276	3.26367	0.2267627	0.23536325	2.5980268	21	—	—
477025 2008 YR_{170}	17.1	X	34.51407	231.60989	156.71108	2.51286	0.0789921	0.22591594	2.6699603	21	—	—
477026 2008 YU_{170}	17.8	X	0.14207	301.71742	150.16703	4.36922	0.1957267	0.23381077	2.6095145	21	—	—
477027 2008 YE_{172}	17.1	X	14.91889	31.88993	54.93773	4.19433	0.1744274	0.23464823	2.6033019	21	—	—
477028 2008 YY_{172}	17.6	X	21.81273	207.17799	227.62114	1.79420	0.1404507	0.23503103	2.6004744	21	—	—
477029 2009 AP_{10}	17.2	X	324.71882	81.50432	316.46077	3.47448	0.0775412	0.21421838	2.7662933	21	10 14.1	20.5
477030 2009 AE_{13}	16.4	X	10.64863	146.21864	275.26639	8.74973	0.0628187	0.22965639	2.6408903	21	—	—
477031 2009 AR_{14}	18.1	X	346.47188	332.10948	116.84841	5.84308	0.2067926	0.22926153	2.6439217	21	—	—
477032 2009 AT_{15}	16.4	X	124.51119	150.93264	89.05094	12.92989	0.0673569	0.21115094	2.7930199	21	10 30.9	20.7
477033 2009 AZ_{18}	16.5	X	353.32274	249.89393	113.93923	24.94322	0.2775691	0.21773930	2.7363911	21	11 14.1	19.5
477034 2009 AW_{19}	17.1	X	320.77926	302.54437	98.21153	6.18193	0.1725978	0.21558633	2.7545790	21	10 10.9	20.0
477035 2009 AP_{21}	16.3	X	134.23669	184.25191	99.66078	15.90536	0.0633562	0.22709091	2.6607427	21	12 31.2	20.3
477036 2009 AA_{22}	16.8	X	61.82130	194.06491	114.91530	14.23046	0.0962708	0.21594156	2.7515573	21	11 17.4	20.8
477037 2009 AG_{22}	16.7	X	142.81269	315.66459	289.15682	12.27142	0.1695924	0.21504468	2.7592025	21	11 20.4	21.5
477038 2009 AJ_{22}	17.5	X	334.40405	186.80910	285.31516	5.34708	0.1688046	0.23139578	2.6276394	21	—	—
477039 2009 AD_{24}	17.4	X	357.06317	334.60174	126.74589	5.02363	0.2210851	0.23396468	2.6083699	21	—	—
477040 2009 AY_{27}	16.4	X	9.10047	36.51945	313.51031	5.33771	0.0154349	0.20977443	2.8052249	21	10 12.1	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477041 2009 AD_{29}	17.6	X	0.58378	0.02375	85.34369	6.14719	0.1541288	0.23393538	2.6085877	21	—	—
477042 2009 AJ_{32}	16.9	X	50.46665	47.63282	303.44145	8.28177	0.0960083	0.22040127	2.7143134	21	12 22.3	20.6
477043 2009 AE_{34}	16.9	X	336.81663	342.58238	91.88015	6.51124	0.0440775	0.22634884	2.6665549	21	12 23.5	20.0
477044 2009 AO_{36}	17.4	X	37.59951	324.34233	81.16689	5.37245	0.2128037	0.23615779	2.5921962	21	—	—
477045 2009 AT_{42}	16.6	X	316.37099	127.60616	307.12879	13.39679	0.1769924	0.22133631	2.7066635	21	11 12.9	19.6
477046 2009 AW_{44}	17.1	X	67.42384	52.30865	15.81401	4.07612	0.2524670	0.24345951	2.5401043	21	1 10.3	19.0
477047 2009 AM_{45}	17.4	X	357.71867	273.99002	155.55071	3.99388	0.0703489	0.22384119	2.6864332	21	—	—
477048 2009 AS_{45}	17.1	X	217.01629	42.07388	138.30025	10.67654	0.0814136	0.21706970	2.7420155	21	11 24.8	21.2
477049 2009 AZ_{45}	16.5	X	121.83893	157.77801	122.20065	14.96253	0.0844437	0.22117272	2.7079980	21	12 14.7	20.7
477050 2009 AB_{48}	16.9	X	86.25904	311.38753	346.53709	5.74758	0.0646351	0.21295141	2.7772546	21	11 21.4	21.0
477051 2009 BD_{2}	17.7	X	18.21333	263.97819	165.42324	14.63124	0.5064433	0.23612690	2.5924223	21	—	—
477052 2009 BU_{7}	18.1	X	254.70923	82.51049	303.92792	18.50852	0.0609636	0.35305282	1.9826357	21	6 23.9	20.5
477053 2009 BC_{10}	17.1	X	28.75805	4.64376	53.31857	7.45310	0.2948567	0.23641709	2.5903004	21	—	—
477054 2009 BD_{10}	17.2	X	275.47065	179.55211	279.08808	4.12659	0.1242853	0.21584250	2.7523991	21	10 14.3	20.7
477055 2009 BU_{11}	17.1	X	307.46648	355.50285	147.38542	14.53947	0.1924144	0.22866310	2.6485326	21	—	—
477056 2009 BE_{21}	17.5	X	47.11444	252.16937	135.26986	5.28392	0.2534039	0.23484269	2.6018645	21	—	—
477057 2009 BV_{21}	17.5	X	316.44101	308.10150	112.57512	3.49254	0.0601556	0.21476090	2.7616326	21	11 4.9	20.9
477058 2009 BM_{27}	16.6	X	214.67540	156.57719	317.35409	14.18559	0.0869946	0.20292728	2.8679776	21	8 23.6	21.0
477059 2009 BA_{33}	17.5	X	298.74238	189.78692	316.60842	4.49014	0.1586956	0.22699150	2.6615195	21	—	—
477060 2009 BF_{33}	17.0	X	229.24180	188.43985	323.44864	3.61173	0.1409710	0.21277424	2.7787961	21	10 22.1	21.2
477061 2009 BL_{36}	17.3	X	290.24261	76.04552	3.43510	4.67013	0.1426058	0.21300131	2.7768209	21	10 9.3	20.6
477062 2009 BJ_{40}	16.9	X	292.70301	27.61698	124.37588	12.70988	0.1392261	0.22536477	2.6743117	21	—	—
477063 2009 BC_{42}	16.9	X	304.40142	344.40251	127.39869	5.68301	0.0661158	0.22090841	2.7101577	21	12 23.6	20.1
477064 2009 BB_{43}	17.0	X	302.21411	157.33001	325.23891	5.31429	0.1876386	0.22315748	2.6919175	21	12 27.3	19.6
477065 2009 BE_{53}	16.7	X	26.51598	235.54433	117.93054	7.18462	0.0466308	0.21350605	2.7724428	21	11 17.7	20.4
477066 2009 BG_{57}	17.2	X	42.39992	87.15187	143.60144	5.16663	0.1574430	0.18805699	3.0172391	21	7 10.6	20.8
477067 2009 BB_{58}	17.1	X	344.81158	1.57974	138.78369	13.38174	0.2103128	0.23349228	2.6118869	21	—	—
477068 2009 BS_{58}	16.8	X	305.68412	50.45007	91.23798	14.20609	0.1952000	0.23311205	2.6147263	21	—	—
477069 2009 BA_{59}	17.5	X	10.83966	294.72951	100.41217	2.58714	0.1136321	0.22527057	2.6750573	21	12 28.6	20.7
477070 2009 BM_{63}	16.8	X	117.76947	170.36366	102.78069	4.89416	0.0623680	0.21484124	2.7609441	21	11 28.8	20.9
477071 2009 BO_{63}	16.7	X	284.29570	133.07494	321.39903	11.56201	0.1744390	0.21554719	2.7549124	21	10 10.0	20.3
477072 2009 BU_{69}	16.7	X	24.81886	316.28886	99.58000	6.81701	0.2634929	0.23405057	2.6077317	21	—	—
477073 2009 BW_{73}	16.8	X	218.77184	52.03711	105.80546	5.96825	0.0992087	0.21180684	2.7872509	21	10 26.9	20.9
477074 2009 BV_{74}	16.7	X	5.14423	75.95906	5.70409	11.16619	0.2861576	0.23413776	2.6070843	21	—	—
477075 2009 BT_{78}	16.5	X	305.11845	154.97825	328.37117	12.49457	0.1383240	0.22466158	2.6798893	21	—	—
477076 2009 BV_{78}	16.5	X	262.65946	149.50149	358.22630	8.52750	0.2527746	0.21727685	2.7402724	21	11 9.0	20.3
477077 2009 BU_{79}	17.9	X	356.76211	145.13853	331.66641	5.67564	0.2432847	0.23660958	2.5888954	21	—	—
477078 2009 BA_{85}	16.8	X	37.01409	89.98892	289.21486	6.16278	0.1066499	0.22416483	2.6838469	21	—	—
477079 2009 BB_{89}	17.3	X	278.22196	255.13648	157.75363	2.37264	0.0577034	0.20311222	2.8662364	21	8 29.4	21.1
477080 2009 BD_{89}	17.1	X	318.13707	292.76123	137.29849	6.77507	0.0210620	0.21538290	2.7563132	21	11 21.7	20.9
477081 2009 BF_{90}	16.8	X	322.54833	278.97847	140.81243	4.77273	0.0626849	0.21473481	2.7618563	21	11 12.9	20.2
477082 2009 BT_{91}	17.9	X	348.29362	296.52095	136.72912	4.54648	0.2347617	0.22648228	2.6655075	21	—	—
477083 2009 BZ_{97}	17.3	X	36.08040	32.62356	22.15349	3.80894	0.1359813	0.23383934	2.6093019	21	—	—
477084 2009 BO_{104}	16.1	X	69.70641	252.73402	323.79932	15.32256	0.1804942	0.18516771	3.0485446	21	8 6.9	20.2
477085 2009 BB_{106}	17.1	X	350.21547	301.38952	149.74766	12.15400	0.1434455	0.22676687	2.6632769	21	—	—
477086 2009 BE_{106}	16.6	X	238.49643	54.30808	138.01033	10.91532	0.0846121	0.21948787	2.7218386	21	—	—
477087 2009 BS_{113}	17.9	X	337.17252	130.88035	308.66764	10.75840	0.2568066	0.22751411	2.6574422	21	—	—
477088 2009 BX_{114}	17.2	X	6.17868	346.32131	126.85420	14.85717	0.2154513	0.23637479	2.5906095	21	—	—
477089 2009 BR_{119}	16.7	X	307.23528	127.64000	329.63497	11.78200	0.1688819	0.22006650	2.7170654	21	11 28.9	19.8
477090 2009 BN_{123}	16.5	X	16.89526	327.27873	314.40246	8.55408	0.0311377	0.19156263	2.9803151	21	7 27.9	20.4
477091 2009 BH_{129}	17.1	X	8.56022	48.61072	351.32589	5.43403	0.1223390	0.21975024	2.7196717	21	12 31.8	20.5
477092 2009 BX_{134}	16.6	X	27.55924	303.95848	311.81598	8.60663	0.0483740	0.19050487	2.9913369	21	7 10.2	20.5
477093 2009 BW_{142}	17.4	X	327.40888	41.23580	24.16653	2.59082	0.1876678	0.21884128	2.7271972	21	11 25.7	19.9
477094 2009 BN_{143}	17.4	X	317.33298	309.33787	134.53143	4.80438	0.0931188	0.21878001	2.7277064	21	12 5.8	20.6
477095 2009 BS_{146}	16.3	X	102.42710	253.97339	318.68005	9.19251	0.0450804	0.19209827	2.9747724	21	8 21.3	20.6
477096 2009 BE_{147}	18.0	X	327.66479	293.12187	188.18372	2.67719	0.1847285	0.22651957	2.6652149	21	—	—
477097 2009 BU_{147}	17.4	X	66.06283	123.30316	295.05091	3.38577	0.2880860	0.23961378	2.5672108	21	—	—
477098 2009 BW_{147}	17.8	X	338.88273	240.65520	211.36909	1.87923	0.1520284	0.22373602	2.6872750	21	—	—
477099 2009 BJ_{148}	16.0	X	124.88181	251.64470	314.44123	10.70652	0.0698908	0.19672447	2.9279509	21	9 8.7	20.4
477100 2009 BZ_{148}	18.2	X	3.68686	117.21572	318.91246	5.82802	0.2409259	0.23112533	2.6296888	21	—	—
477101 2009 BJ_{153}	17.1	X	301.02915	70.76364	337.78350	1.98398	0.0952708	0.20885582	2.8134444	21	9 20.4	20.6
477102 2009 BP_{154}	17.2	X	353.38880	28.93823	356.54337	3.62383	0.1086124	0.21534930	2.7565999	21	11 14.2	20.3
477103 2009 BL_{162}	16.7	X	36.53441	234.47391	84.09020	3.13261	0.0461447	0.20455690	2.8527253	21	10 15.2	20.4
477104 2009 BY_{164}	16.3	X	43.39041	245.59137	329.70769	25.60471	0.2044364	0.17969908	3.1100842	21	7 5.0	20.4
477105 2009 BL_{166}	17.2	X	311.13541	306.19210	127.63774	5.99661	0.1008800	0.21217195	2.7840524	21	11 12.0	20.5
477106 2009 BX_{166}	16.4	X	50.50967	48.80646	142.69896	11.06618	0.1686689	0.17667665	3.1454535	21	6 4.9	20.5
477107 2009 BD_{172}	16.9	X	105.95281	343.20314	222.06494	1.08058	0.0132329	0.19618537	2.9333123	21	8 12.6	21.0
477108 2009 BA_{174}	16.8	X	28.44033	259.85237	126.46680	3.73145	0.1320734	0.22308361	2.6925118	21	—	—
477109 2009 BN_{175}	16.7	X	208.39280	110.58510	76.18301	13.07149	0.2059225	0.21107085	2.7937265	21	11 10.6	21.3
477110 2009 BQ_{177}	16.6	X	120.03467	236.07214	344.81357	12.10842	0.0536698	0.19556541	2.9395083	21	9 21.8	21.0
477111 2009 BX_{177}	16.4	X	83.00818	269.24648	332.69286	15.50908	0.2041556	0.19029910	2.9934928	21	9 20.5	21.1
477112 2009 BB_{178}	17.7	X	25.26657	97.59578	339.46593	5.47518	0.2502604	0.23273738	2.6175317	21	—	—
477113 2009 BT_{181}	16.8	X	261.91026	156.89471	28.37923	12.77080	0.2083305	0.22380781	2.6867003	21	—	—
477114 2009 BR_{183}	16.5	X	35.24585	315.42685	96.38183	19.13503	0.1350214	0.23327629	2.6134988	21	—	—
477115 2009 BX_{183}	17.4	X	80.21674	327.98905	96.85585	4.96648	0.1814032	0.24464622	2.5318834	21	1 21.1	19.9
477116 2009 BE_{186}	16.3	X	272.66712	72.82042	327.91641	11.26218	0.0629625	0.19744194	2.9208535	21	8 6.3	20.2
477117 2009 BR_{187}	16.5	X	56.67958	304.31525	311.62625	4.46540	0.1701395	0.18768433	3.0212317	21	9 5.2	20.4
477118 2009 BQ_{189}	17.2	X	10.82967	38.95914	7.87450	8.48636	0.1855296	0.22285652	2.6943406	21	—	—
477119 2009 CR_{28}	17.0	X	29.38251	228.51970	128.78043	5.30898	0.0814990	0.21246741	2.7814708	21	11 29.8	20.7
477120 2009 CK_{31}	17.0	X	337.37283	313.11801	112.95234	4.50736	0.1830332	0.21818758	2.7326417	21	12 18.2	19.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477121 2009 CL_{31}	16.5	X	66.70624	125.73511	139.98820	11.83563	0.0657369	0.19590012	2.9361591	21	9 20.6	20.6
477122 2009 CM_{33}	17.0	X	336.81027	131.39194	341.78767	15.02725	0.1879247	0.22684413	2.6626721	21	—	—
477123 2009 CU_{36}	16.8	X	214.20448	224.35531	319.44327	11.01669	0.1751911	0.21150963	2.7898613	21	11 8.1	21.4
477124 2009 CX_{37}	17.1	X	38.45855	212.28871	267.03121	13.05773	0.0942470	0.24495808	2.5297341	21	1 13.3	20.0
477125 2009 CM_{44}	16.9	X	313.06587	218.52120	281.72624	6.73939	0.2188737	0.22703902	2.6611481	21	—	—
477126 2009 CD_{48}	16.8	X	159.45947	249.29436	357.18151	5.58095	0.0177021	0.21371082	2.7706715	21	12 11.1	20.8
477127 2009 CK_{48}	16.7	X	17.72299	65.14646	352.71979	12.83388	0.1865460	0.22510868	2.6763396	21	—	—
477128 2009 CJ_{54}	16.2	X	62.16060	73.42944	144.19531	28.04850	0.1349658	0.18555728	3.0442761	21	7 20.7	20.5
477129 2009 CZ_{54}	18.5	X	166.81742	120.62218	330.51173	16.90668	0.1156373	0.34477717	2.0142362	21	5 29.6	21.6
477130 2009 CS_{57}	16.9	X	220.73023	189.20668	346.77224	9.39701	0.1154627	0.21289059	2.7777835	21	11 12.7	21.1
477131 2009 CH_{59}	17.1	X	278.21011	352.67018	150.69506	10.73714	0.1241872	0.21800809	2.7341414	21	12 19.4	20.6
477132 2009 DM	18.1	X	21.92422	95.71340	311.13474	10.29909	0.3013178	0.22906179	2.6454585	21	—	—
477133 2009 DY_{2}	17.7	X	4.30614	172.65429	286.14065	12.41564	0.2132696	0.24007318	2.5639347	21	—	—
477134 2009 DU_{9}	16.7	X	2.82465	315.68064	158.84658	33.30122	0.2728472	0.23404935	2.6077408	21	—	—
477135 2009 DM_{10}	18.2	X	12.42515	282.37952	150.61945	0.66194	0.2377317	0.22937816	2.6430254	21	—	—
477136 2009 DL_{14}	16.7	X	330.32334	148.56355	276.10790	3.29567	0.0485405	0.21116114	2.7929300	21	11 28.0	20.3
477137 2009 DR_{14}	17.3	X	302.52574	120.26162	317.22803	5.44636	0.0845251	0.20855601	2.8161400	21	10 30.3	20.9
477138 2009 DE_{15}	18.0	X	207.37553	94.74746	335.94771	16.14052	0.1154819	0.35082044	1.9910376	21	6 20.9	21.0
477139 2009 DT_{16}	17.0	X	313.54962	320.98446	145.87221	17.14482	0.2339733	0.22383656	2.6864702	21	12 27.6	19.6
477140 2009 DA_{17}	16.6	X	268.88683	165.20104	343.82347	8.95492	0.2706867	0.21714366	2.7413929	21	11 16.2	20.2
477141 2009 DK_{33}	16.4	X	50.07545	238.07155	9.33786	15.97976	0.0707297	0.18371121	3.0646363	21	8 9.0	20.8
477142 2009 DM_{36}	18.1	X	89.96457	53.89787	145.11201	25.46984	0.0710116	0.34857031	1.9995969	21	7 27.6	20.3
477143 2009 DH_{37}	17.8	X	333.31244	297.44793	159.72787	2.00220	0.0478418	0.22260910	2.6963366	21	—	—
477144 2009 DW_{39}	17.2	X	326.41549	80.83827	329.21924	3.27224	0.2060481	0.21426237	2.7659147	21	10 28.9	19.8
477145 2009 DQ_{41}	17.6	X	30.53890	101.26003	329.35935	12.16645	0.2470686	0.23413810	2.6070818	21	—	—
477146 2009 DJ_{52}	16.5	X	174.61059	245.77826	340.80121	13.58256	0.1235735	0.21466794	2.7624298	21	11 26.5	21.1
477147 2009 DL_{58}	17.0	X	285.82537	300.72223	153.23178	9.59090	0.1834576	0.21116579	2.7928890	21	10 19.3	20.4
477148 2009 DS_{64}	16.9	X	303.72798	318.30339	167.68554	18.69021	0.1577021	0.22234696	2.6984554	21	—	—
477149 2009 DT_{76}	16.5	X	267.96100	154.69666	346.65935	8.54221	0.1808598	0.21546027	2.7556533	21	11 19.0	20.2
477150 2009 DE_{79}	17.1	X	294.68973	151.01766	348.52472	10.08753	0.2302699	0.22152265	2.7051454	21	12 31.8	19.9
477151 2009 DC_{84}	17.0	X	71.42624	243.24439	12.14187	6.55515	0.0874668	0.19228105	2.9728869	21	9 14.7	21.0
477152 2009 DJ_{84}	16.5	X	333.68516	277.28344	79.54152	3.04507	0.0782889	0.19502128	2.9449735	21	9 3.7	20.1
477153 2009 DS_{88}	18.3	X	236.49397	248.29120	19.07503	7.50649	0.1767356	0.30935162	2.1652155	21	—	—
477154 2009 DA_{91}	17.4	X	338.03021	135.06095	287.24400	2.37354	0.1854208	0.21838175	2.7310217	21	12 14.1	19.9
477155 2009 DQ_{106}	15.8	X	29.13697	244.28902	0.13336	27.17102	0.0594240	0.17870369	3.1216224	21	6 30.9	20.5
477156 2009 DS_{130}	15.9	X	46.17356	62.64288	200.58479	19.46362	0.0864749	0.18175015	3.0866416	21	8 14.1	20.3
477157 2009 DG_{132}	17.5	X	37.55458	9.17134	7.14228	6.61267	0.0438620	0.21574479	2.7532300	21	12 29.2	21.3
477158 2009 DH_{132}	16.5	X	66.12741	232.02061	15.48805	2.01054	0.1174130	0.18751158	3.0230870	21	8 31.9	20.6
477159 2009 DO_{133}	16.8	X	77.77365	49.20853	164.94309	7.18878	0.0918291	0.18365446	3.0652676	21	7 29.2	21.1
477160 2009 DR_{133}	16.8	X	319.44094	120.00610	316.60513	2.25194	0.1657009	0.21168237	2.7883434	21	11 23.6	19.5
477161 2009 DV_{138}	16.6	X	248.01605	72.21963	25.83185	9.01648	0.0629331	0.19675019	2.9276958	21	9 19.4	20.7
477162 2009 ES	20.6	X	313.42845	311.19242	343.72357	30.33397	0.3293420	0.57264184	1.4361969	21	2 20.9	22.2
477163 2009 ED_{9}	16.6	X	22.36630	267.68259	136.77919	22.73862	0.1353837	0.22739283	2.6583870	21	—	—
477164 2009 EW_{14}	18.1	X	167.19233	293.99530	165.57839	25.21248	0.2274991	0.34724456	2.0046832	21	6 20.9	21.9
477165 2009 EY_{18}	17.2	X	267.76235	148.05906	341.99273	9.90601	0.0570494	0.21506965	2.7589889	21	11 22.1	21.0
477166 2009 EX_{19}	17.1	X	341.19064	81.88625	331.97073	7.32421	0.1224462	0.21707292	2.7419885	21	12 3.2	20.2
477167 2009 ED_{24}	16.7	X	6.81620	257.99330	5.53941	9.91588	0.0878903	0.17910581	3.1169483	21	6 19.5	20.8
477168 2009 EM_{28}	16.1	X	63.24033	60.93662	188.33605	9.33001	0.1511192	0.18157615	3.0886131	21	9 1.5	20.4
477169 2009 EF_{29}	16.7	X	310.90532	81.98231	2.99707	7.34175	0.2037385	0.21348710	2.7726069	21	11 13.9	19.4
477170 2009 FL_{2}	17.2	X	304.87754	273.50422	199.62530	14.75230	0.3194269	0.22276644	2.6950668	21	12 4.5	19.4
477171 2009 FR_{9}	17.3	X	42.12927	346.05266	12.16200	5.96868	0.0529839	0.21252484	2.7809696	21	12 11.9	21.2
477172 2009 FJ_{15}	16.7	X	57.00033	24.65422	316.86537	5.58397	0.0224597	0.21619585	2.7493993	21	12 6.2	20.5
477173 2009 FR_{27}	16.9	X	164.44937	3.16964	143.75094	7.20794	0.0828457	0.19025142	2.9939930	21	8 12.6	21.5
477174 2009 FD_{28}	15.4	X	72.23866	201.16451	73.26112	11.89063	0.0533666	0.19702723	2.9249507	21	10 10.2	19.6
477175 2009 FZ_{31}	15.7	X	342.47944	52.23753	283.74306	16.48429	0.1995709	0.17560926	3.1581865	21	8 6.7	19.2
477176 2009 FX_{34}	16.5	X	353.33913	55.20148	28.42023	13.77659	0.0815632	0.21773154	2.7364561	21	—	—
477177 2009 FJ_{49}	15.9	X	168.83699	29.60342	158.38529	19.51728	0.1050435	0.19848391	2.9106222	21	10 11.4	20.6
477178 2009 FW_{53}	17.0	X	4.30826	349.09816	76.10895	5.95628	0.0928689	0.21556608	2.7547515	21	—	—
477179 2009 FN_{55}	16.7	X	335.07594	46.62328	46.42841	9.76085	0.0831793	0.21589064	2.7519900	21	—	—
477180 2009 FE_{58}	17.1	X	258.17055	320.38452	230.45703	3.48393	0.1253522	0.21672673	2.7449076	21	—	—
477181 2009 FT_{58}	16.8	X	156.78977	353.72262	186.64623	9.43385	0.0513822	0.19423046	2.9529617	21	9 13.9	21.1
477182 2009 FR_{61}	17.2	X	68.76904	41.68520	164.70539	4.59333	0.1091020	0.17857571	3.1231137	21	7 10.2	21.4
477183 2009 FH_{65}	16.5	X	16.26698	310.40634	358.29887	9.60641	0.0996525	0.18991946	2.9974808	21	9 7.2	20.1
477184 2009 FB_{68}	16.5	X	38.41485	234.25305	4.97778	5.98202	0.0723610	0.17639783	3.1487672	21	7 6.2	20.6
477185 2009 FJ_{69}	16.4	X	13.52099	225.53021	27.68740	16.05113	0.1386482	0.17481112	3.1677922	21	6 16.7	20.4
477186 2009 FT_{69}	18.8	X	265.84300	176.04812	91.24652	3.45659	0.0894162	0.31316358	2.1476090	21	1 15.1	21.7
477187 2009 FS_{73}	16.8	X	294.48178	327.29585	203.26014	15.55739	0.2105426	0.22319037	2.6916530	21	—	—
477188 2009 FK_{78}	15.9	X	157.72632	86.23420	67.99337	18.21870	0.0497340	0.18963681	3.0004585	21	8 21.1	20.7
477189 2009 GJ	16.1	X	353.57513	32.59062	291.01769	15.08217	0.1248609	0.17714951	3.1398537	21	8 13.5	20.1
477190 2009 HR_{6}	16.5	X	180.06268	346.26889	166.48115	10.45031	0.0692892	0.18938596	3.0031074	21	9 5.6	20.9
477191 2009 HS_{7}	16.4	X	66.67329	103.12994	132.87552	6.26823	0.0840599	0.18078227	3.0976487	21	8 11.9	20.7
477192 2009 HH_{8}	16.2	X	167.10365	79.73579	73.85325	10.32940	0.1287268	0.18749432	3.0232726	21	8 28.8	21.2
477193 2009 HR_{12}	16.1	X	90.10760	155.29443	38.55748	14.32526	0.0918663	0.18118890	3.0930123	21	7 23.4	20.8
477194 2009 HQ_{16}	17.0	X	323.95414	49.73838	74.64720	3.48914	0.2002686	0.22250325	2.6971916	21	—	—
477195 2009 HS_{18}	16.1	X	28.51326	187.43706	69.25160	15.16987	0.1757398	0.17357227	3.1828474	21	7 27.3	20.0
477196 2009 HD_{24}	16.3	X	35.24694	108.33270	160.46242	10.20054	0.1246176	0.17881086	3.1203750	21	8 14.1	20.1
477197 2009 HA_{32}	16.4	X	234.03076	31.68063	81.47589	6.71967	0.1346549	0.19511167	2.9440638	21	9 13.3	20.9
477198 2009 HW_{35}	16.4	X	195.43718	25.14345	83.28744	10.75227	0.0883391	0.18042378	3.1017505	21	7 29.8	21.2
477199 2009 HT_{46}	16.6	X	48.33090	143.95068	168.63217	9.77203	0.0984191	0.19598818	2.9352795	21	10 30.6	20.6
477200 2009 HU_{64}	16.4	X	28.30933	101.13007	191.14477	16.50812	0.2198000	0.18062140	3.0994877	21	9 15.8	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477201 2009 HH_{67}	16.2	X	81.83701	341.63693	219.70831	15.32966	0.1842526	0.17874564	3.1211340	21	7 27.3	21.0
477202 2009 HX_{70}	16.6	X	26.56364	54.35133	214.33670	18.42410	0.1965370	0.17604705	3.1529485	21	8 2.7	20.7
477203 2009 HQ_{71}	16.3	X	118.62202	129.73169	47.37370	12.48607	0.0647184	0.18014089	3.1049969	21	8 2.3	21.0
477204 2009 HG_{85}	15.8	X	20.23649	239.35137	66.11180	20.46159	0.2062588	0.18160120	3.0883291	21	10 2.3	19.7
477205 2009 HE_{86}	16.8	X	246.50126	86.24492	60.20916	9.62538	0.1136940	0.20545264	2.8444277	21	11 9.5	20.8
477206 2009 HR_{97}	15.5	X	51.34804	195.13901	71.61100	17.00091	0.1942482	0.18075030	3.0980140	21	9 26.3	20.0
477207 2009 HN_{98}	16.8	X	39.80324	135.21298	91.46845	14.87378	0.2248236	0.17191509	3.2032688	21	7 10.7	20.5
477208 2009 HK_{105}	16.3	X	26.62131	203.45884	113.79551	5.94156	0.1806100	0.18293727	3.0732738	21	10 15.7	20.0
477209 2009 JN	18.0	X	232.28180	52.92064	224.75056	7.02210	0.2097113	0.30209264	2.1997633	21	—	—
477210 2009 JL_{7}	16.2	X	353.69654	261.30573	67.93765	1.60003	0.2357022	0.17655099	3.1469459	21	8 28.9	19.1
477211 2009 JN_{8}	15.6	X	338.65667	258.70851	87.08231	14.24229	0.2863991	0.17610680	3.1522353	21	8 15.9	18.6
477212 2009 JJ_{16}	15.9	X	65.31478	353.98495	233.38576	16.22626	0.1423979	0.17701059	3.1414963	21	8 1.0	20.5
477213 2009 JT_{16}	16.2	X	62.91321	19.75476	228.92537	11.36451	0.1634274	0.17994026	3.1073045	21	8 29.9	20.7
477214 2009 JF_{18}	16.2	X	6.32892	206.07805	97.87737	19.86657	0.0786008	0.17867933	3.1219061	21	8 16.0	20.4
477215 2009 KY_{6}	16.2	X	8.06138	131.33475	178.36437	12.12323	0.1415178	0.17833690	3.1259012	21	8 24.1	19.9
477216 2009 KL_{9}	18.6	X	238.57672	234.69022	84.77157	2.86345	0.2039274	0.31141712	2.1556309	21	2 20.5	22.0
477217 2009 KG_{14}	16.5	X	31.22796	150.24017	155.93961	14.40928	0.1347713	0.18226585	3.0808166	21	10 1.9	20.5
477218 2009 KG_{16}	16.9	X	57.68628	174.43539	111.98338	7.59233	0.0847578	0.18539298	3.0460745	21	10 7.7	21.1
477219 2009 KC_{17}	18.6	X	266.88319	135.56593	149.76908	3.16631	0.1028785	0.31330029	2.1469842	21	2 7.8	21.3
477220 2009 LK	15.5	X	243.16131	203.54599	228.52546	5.63170	0.0642908	0.16873975	3.2433298	21	8 4.6	20.2
477221 2009 LY	15.7	X	42.37071	78.28350	151.19169	25.23386	0.3353182	0.17042398	3.2219262	21	8 5.8	19.5
477222 2009 PL_{11}	17.6	X	86.94858	101.12208	236.36647	1.29558	0.2355302	0.27068468	2.3667929	21	—	—
477223 2009 PS_{11}	18.1	X	136.82273	227.31357	151.81953	5.86788	0.2032662	0.28623817	2.2802599	21	2 3.4	21.1
477224 2009 PK_{15}	17.7	X	115.84322	241.27695	151.85608	6.09925	0.2433320	0.28397957	2.2923345	21	2 2.1	20.4
477225 2009 PY_{15}	17.9	X	163.46662	317.45490	344.75771	6.59169	0.1322675	0.27790255	2.3256322	21	—	—
477226 2009 PB_{21}	18.4	X	181.19019	17.42251	290.84344	1.48098	0.2269194	0.28686706	2.2769261	21	—	—
477227 2009 QB_{12}	18.3	X	192.26674	325.38215	10.74350	1.37093	0.2706286	0.29337591	2.2431230	21	2 6.4	21.9
477228 2009 QG_{42}	17.7	X	160.53992	234.16632	125.56621	3.30856	0.1774352	0.28956059	2.2627839	21	2 1.2	20.9
477229 2009 RX_{3}	18.5	X	97.38233	53.52224	336.06390	5.24651	0.2412226	0.27778361	2.3262960	21	—	—
477230 2009 RW_{6}	17.8	X	175.63077	99.07284	233.10180	3.36480	0.2855920	0.28821300	2.2698318	21	1 20.2	21.5
477231 2009 RH_{9}	17.8	X	168.14359	344.64761	347.56542	1.85640	0.0749188	0.28257977	2.2998985	21	—	—
477232 2009 RG_{12}	18.3	X	140.65948	160.52877	166.68405	2.48205	0.1847965	0.27699282	2.3307215	21	—	—
477233 2009 RT_{14}	17.5	X	24.85581	66.63194	11.42687	5.30114	0.1307470	0.26912267	2.3759422	21	—	—
477234 2009 RD_{16}	18.7	X	116.02107	221.50630	170.14350	1.88921	0.2171686	0.28087886	2.3091741	21	1 27.9	21.2
477235 2009 RA_{20}	18.3	X	176.36174	132.04096	187.31175	21.66901	0.2057425	0.28619120	2.2805094	21	—	—
477236 2009 RU_{30}	17.1	X	141.86783	341.42059	2.85416	26.08131	0.2017358	0.27997122	2.3141622	21	—	—
477237 2009 RQ_{31}	17.6	X	153.40517	357.58366	343.70988	4.45572	0.1421167	0.28131056	2.3068111	21	—	—
477238 2009 RC_{34}	18.4	X	94.80051	188.79997	190.89224	3.42200	0.2411333	0.27336156	2.3513164	21	—	—
477239 2009 RJ_{35}	17.2	X	191.25986	42.08567	199.11149	12.02663	0.0629192	0.26351390	2.4095375	21	—	—
477240 2009 RW_{42}	18.2	X	170.08041	98.48597	329.06025	5.99851	0.0670866	0.30262887	2.1971640	21	4 29.4	21.1
477241 2009 RW_{46}	18.6	X	100.60384	107.87676	283.46946	1.02854	0.2013695	0.27752229	2.3277561	21	1 1.8	20.7
477242 2009 RD_{48}	18.2	X	147.03741	122.04133	196.58569	3.73839	0.2542655	0.27767852	2.3268829	21	—	—
477243 2009 RS_{48}	18.6	X	161.11505	107.98240	203.92511	1.86944	0.2224767	0.27901386	2.3194528	21	—	—
477244 2009 RK_{54}	18.0	X	217.21200	257.14334	37.76665	6.34570	0.2098957	0.28683452	2.2770983	21	1 6.3	21.8
477245 2009 RF_{65}	17.5	X	304.25414	186.88236	40.37299	4.47941	0.0777692	0.28641422	2.2793254	21	1 15.2	20.5
477246 2009 RL_{70}	18.4	X	170.30676	122.82497	187.66626	3.15447	0.1672776	0.28013666	2.3132510	21	—	—
477247 2009 RS_{70}	18.3	X	187.13235	109.71504	179.85840	5.41640	0.2264729	0.28126108	2.3070816	21	—	—
477248 2009 SV	19.8	X	1.41483	4.62635	185.39807	24.93604	0.2783574	0.54974407	1.4758051	21	—	—
477249 2009 SM_{11}	16.8	X	299.37972	249.79317	207.03371	6.74000	0.1292406	0.17391679	3.1786427	21	11 11.3	20.9
477250 2009 SS_{11}	18.3	X	172.52184	338.13796	340.88105	5.42022	0.2017615	0.28213430	2.3023188	21	—	—
477251 2009 SR_{27}	17.7	X	174.23381	79.61556	186.76438	23.04785	0.2513106	0.27418689	2.3465956	21	—	—
477252 2009 SM_{30}	18.3	X	138.22774	127.40696	178.75434	8.54813	0.2396123	0.27342190	2.3509705	21	—	—
477253 2009 SV_{36}	17.9	X	144.95397	5.11433	322.16144	2.27344	0.1690501	0.27666198	2.3325792	21	—	—
477254 2009 SS_{48}	18.2	X	66.05534	63.99285	0.74941	7.28048	0.2345190	0.27296479	2.3535945	21	—	—
477255 2009 SX_{58}	18.0	X	346.33857	184.48931	345.35383	6.50619	0.0537312	0.28177180	2.3042930	21	—	—
477256 2009 SB_{61}	18.2	X	137.66949	17.48330	286.73286	3.29316	0.2072871	0.27132764	2.3630524	21	—	—
477257 2009 SM_{61}	16.7	X	286.86372	352.15815	207.65012	22.97407	0.1602845	0.27624220	2.3349417	21	—	—
477258 2009 SB_{65}	17.6	X	111.14471	262.18383	173.34584	7.15898	0.1973884	0.29055243	2.2576314	21	3 18.8	20.0
477259 2009 SV_{65}	18.1	X	123.68828	258.65656	172.89108	6.23387	0.0641374	0.29091649	2.2557475	21	3 8.6	20.6
477260 2009 SH_{74}	17.9	X	23.38349	58.52995	106.35048	4.12296	0.0987660	0.28833606	2.2691859	21	2 13.1	20.0
477261 2009 SO_{74}	17.4	X	172.37429	249.93936	41.68121	10.47919	0.1324012	0.27409780	2.3471041	21	—	—
477262 2009 SA_{76}	18.4	X	115.06098	257.93776	135.01277	5.11420	0.1312490	0.28021239	2.3128341	21	1 14.6	21.0
477263 2009 SH_{77}	17.7	X	78.97556	313.67538	107.60394	5.01611	0.1141507	0.27692319	2.3311121	21	—	—
477264 2009 SA_{79}	17.5	X	189.34615	320.73890	289.26510	4.60097	0.1062394	0.27026164	2.3692621	21	—	—
477265 2009 SW_{90}	18.3	X	133.08880	187.99837	229.85643	4.44004	0.1295452	0.29211938	2.2495508	21	3 10.0	21.1
477266 2009 SR_{92}	18.0	X	121.45135	347.35275	22.20329	3.37900	0.1959984	0.27567079	2.3381671	21	1 4.1	20.7
477267 2009 SR_{100}	17.6	X	23.43336	317.05068	128.69220	2.89340	0.1826039	0.26852666	2.3794565	21	—	—
477268 2009 SG_{102}	18.2	X	153.19780	195.93496	186.37745	2.23646	0.1881925	0.28896699	2.2658817	21	2 23.2	21.5
477269 2009 SH_{102}	18.0	X	145.21425	156.79897	196.65718	7.01241	0.1683423	0.28257245	2.2999382	21	1 5.9	21.2
477270 2009 SF_{107}	17.6	X	54.27354	205.61542	214.66636	4.95082	0.1486137	0.27114167	2.3641328	21	—	—
477271 2009 SR_{109}	17.7	X	81.34965	15.85283	19.00291	7.11109	0.1365954	0.27469125	2.3437224	21	—	—
477272 2009 SJ_{110}	17.8	X	103.95593	325.72977	36.18335	5.33917	0.2453307	0.27372305	2.3492459	21	—	—
477273 2009 SN_{112}	17.7	X	96.52584	149.38908	295.74264	4.16897	0.0979870	0.28959194	2.2626206	21	2 20.5	20.1
477274 2009 SO_{117}	18.0	X	107.99597	41.78390	325.87372	3.26181	0.1476055	0.27580011	2.3374362	21	—	—
477275 2009 SF_{121}	17.8	X	68.08491	192.74906	204.32550	6.01240	0.1322040	0.27172179	2.3607667	21	—	—
477276 2009 SN_{124}	17.8	X	179.72213	73.22900	233.62298	4.79740	0.1817571	0.28155468	2.3054774	21	—	—
477277 2009 SC_{130}	17.4	X	61.45514	7.21954	28.11797	7.84614	0.1196959	0.26892295	2.3771184	21	—	—
477278 2009 SF_{130}	17.8	X	185.19791	280.84534	31.62295	5.19345	0.2148446	0.28421003	2.2910951	21	1 1.1	21.4
477279 2009 SO_{131}	17.8	X	188.35854	252.41607	40.49109	6.82477	0.1322831	0.27845505	2.3225549	21	—	—
477280 2009 SY_{133}	18.3	X	84.57733	3.15566	83.29712	3.58244	0.1645210	0.28290999	2.2981085	21	2 17.6	20.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477281 2009 SK_{135}	18.2	X	168.20390	91.46583	234.88068	2.14895	0.2324055	0.28261351	2.2997155	21	1 3.9	21.7
477282 2009 SX_{140}	17.9	X	123.74975	144.13622	246.02503	3.22962	0.2275065	0.28282613	2.2985627	21	2 5.5	20.7
477283 2009 SV_{144}	17.0	X	84.00666	42.93003	10.57271	6.47262	0.0632067	0.28167521	2.3048197	21	—	—
477284 2009 SW_{151}	18.4	X	56.94498	202.20701	223.64064	0.87625	0.1686602	0.27438346	2.3454748	21	—	—
477285 2009 SZ_{151}	18.1	X	169.31361	353.82422	305.97700	1.20021	0.1868748	0.27897559	2.3196649	21	—	—
477286 2009 SL_{156}	17.6	X	87.27562	56.73307	20.73738	5.40890	0.2306137	0.28134378	2.3066295	21	2 21.7	19.7
477287 2009 SA_{157}	18.6	X	101.01629	262.10253	150.28046	2.30690	0.1866545	0.28115461	2.3076640	21	1 29.2	20.8
477288 2009 ST_{157}	17.5	X	80.36925	2.31743	11.64396	10.09251	0.1235344	0.26892624	2.3770989	21	—	—
477289 2009 SD_{170}	17.8	X	23.36147	36.87325	27.54006	3.60392	0.1831577	0.26308875	2.4121327	21	—	—
477290 2009 SS_{170}	18.1	X	76.58973	77.37891	330.45070	2.15338	0.1621989	0.27299633	2.3534132	21	—	—
477291 2009 SG_{171}	18.4	X	102.53648	80.30218	338.97210	5.77912	0.1734472	0.28351214	2.2948534	21	2 9.1	20.7
477292 2009 SD_{185}	17.7	X	9.01605	136.17951	344.06217	6.44804	0.0552966	0.27544657	2.3394358	21	—	—
477293 2009 SM_{187}	18.3	X	100.24245	277.92860	109.72944	3.22748	0.2176972	0.27565865	2.3382358	21	—	—
477294 2009 SV_{187}	17.6	X	116.87216	324.95312	48.59416	5.53245	0.2215088	0.27779790	2.3262162	21	1 6.8	20.2
477295 2009 SD_{192}	17.6	X	79.87165	109.33106	340.43408	5.65902	0.1244943	0.28508340	2.2864135	21	2 7.0	19.6
477296 2009 SD_{199}	17.5	X	34.23096	144.99176	341.84903	5.96955	0.1454833	0.28088854	2.3091211	21	1 5.9	19.6
477297 2009 SR_{202}	18.7	X	176.86491	139.32766	159.34132	4.54104	0.2551566	0.28071055	2.3100970	21	—	—
477298 2009 SY_{203}	18.2	X	70.41171	165.97444	229.68100	1.74753	0.2039889	0.27018307	2.3697214	21	—	—
477299 2009 SA_{204}	17.8	X	160.16430	320.60455	351.90365	2.15978	0.2299573	0.27817601	2.3241078	21	—	—
477300 2009 SG_{204}	18.8	X	104.44981	185.20159	240.03536	0.96337	0.1888776	0.28302597	2.2974806	21	2 21.7	21.3
477301 2009 SC_{205}	18.1	X	193.81030	107.19575	201.26983	4.91965	0.1802644	0.28353391	2.2947359	21	—	—
477302 2009 ST_{209}	18.3	X	161.03598	312.01788	7.25712	5.43824	0.2137792	0.28046181	2.3114627	21	—	—
477303 2009 SY_{222}	17.6	X	246.87004	238.78662	322.67151	4.90731	0.0750604	0.27153902	2.3618259	21	—	—
477304 2009 SM_{225}	17.7	X	201.73985	261.15385	321.00011	4.00448	0.1391208	0.26771139	2.3842849	21	12 29.6	21.1
477305 2009 SJ_{253}	17.9	X	210.87059	270.21340	10.92330	4.60330	0.2264461	0.28380852	2.2932554	21	—	—
477306 2009 SD_{257}	18.2	X	175.22240	70.13069	223.85979	2.13998	0.2584342	0.28189612	2.3036154	21	—	—
477307 2009 SS_{275}	18.2	X	107.89117	246.30602	170.00521	4.94588	0.2004981	0.28340210	2.2954474	21	2 15.8	20.6
477308 2009 SZ_{287}	18.1	X	83.44000	183.53109	270.95993	3.45201	0.0977656	0.28627789	2.2800490	21	2 13.5	20.5
477309 2009 SB_{289}	18.9	X	73.50502	341.60190	69.26680	3.23972	0.2082316	0.27341320	2.3510204	21	—	—
477310 2009 SZ_{294}	18.4	X	36.65394	169.31332	250.03310	0.74315	0.1740732	0.26909545	2.3761024	21	—	—
477311 2009 SR_{302}	18.1	X	160.71258	63.77850	244.38154	1.63331	0.1975346	0.27704507	2.3304284	21	—	—
477312 2009 SW_{306}	18.3	X	102.58294	217.80299	155.18645	4.34948	0.2229104	0.27503997	2.3417409	21	—	—
477313 2009 SG_{313}	18.9	X	100.71769	307.70579	127.61243	3.01273	0.1702903	0.28483612	2.2877365	21	2 28.2	21.2
477314 2009 SX_{327}	17.9	X	151.40390	217.03591	105.42428	3.02466	0.2338753	0.27827340	2.3235655	21	—	—
477315 2009 SO_{333}	18.0	X	31.34542	82.48649	32.64240	6.96045	0.1266847	0.28295619	2.2978584	21	—	—
477316 2009 SE_{342}	18.2	X	133.49701	49.03836	314.20397	1.32380	0.0355335	0.27906467	2.3191712	21	—	—
477317 2009 SO_{342}	18.4	X	153.02217	136.75460	184.58753	6.74173	0.2065984	0.28076245	2.3098123	21	—	—
477318 2009 SR_{345}	18.3	X	113.01773	332.65483	55.96660	5.05273	0.2553850	0.28034071	2.3121283	21	1 28.0	20.9
477319 2009 SQ_{347}	18.7	X	105.61481	5.94953	61.21680	6.31841	0.0709243	0.28588390	2.2821433	21	2 9.6	21.3
477320 2009 SV_{349}	17.8	X	185.87415	260.11111	34.04710	10.31519	0.2095075	0.27912500	2.3188370	21	—	—
477321 2009 SZ_{349}	17.7	X	47.40037	284.38537	215.98896	8.28951	0.1122162	0.28810923	2.2703768	21	2 15.7	19.9
477322 2009 SV_{357}	18.4	X	120.40928	209.59125	201.45732	2.06943	0.0866871	0.28551728	2.2840965	21	2 7.5	21.0
477323 2009 TE_{1}	17.8	X	132.19486	282.73504	63.45426	4.98314	0.2472587	0.27774651	2.3265031	21	—	—
477324 2009 TF_{2}	17.7	X	16.88612	154.54807	345.88916	2.49742	0.1722331	0.28065568	2.3103981	21	—	—
477325 2009 TK_{2}	18.3	X	109.99115	162.25719	196.23059	3.67224	0.2249351	0.27502665	2.3418165	21	—	—
477326 2009 TQ_{7}	17.8	X	156.00906	111.43572	214.93079	11.19190	0.3007604	0.28021924	2.3127965	21	—	—
477327 2009 TB_{8}	18.3	X	113.23262	227.52913	277.39247	10.29193	0.7086727	0.28786823	2.2716437	21	7 31.2	23.4
477328 2009 TR_{19}	18.3	X	135.96161	106.10916	195.00592	2.11459	0.1918966	0.26792831	2.3829979	21	—	—
477329 2009 TG_{21}	17.7	X	145.11613	282.78581	82.61507	5.99299	0.2489351	0.28334888	2.2957348	21	2 2.9	21.0
477330 2009 TV_{21}	18.6	X	217.71766	286.40134	199.14746	21.13228	0.0849105	0.40882294	1.7979566	21	10 3.9	20.0
477331 2009 TW_{22}	17.7	X	151.57873	183.21124	149.68920	2.76806	0.2379302	0.27891104	2.3200228	21	—	—
477332 2009 TE_{29}	18.1	X	259.66409	28.14831	245.71772	6.03881	0.0882911	0.28978012	2.2616409	21	1 19.4	21.2
477333 2009 TA_{33}	17.9	X	54.57718	274.31586	224.49733	7.07598	0.0619404	0.29217602	2.2492601	21	2 23.3	20.4
477334 2009 TE_{33}	18.1	X	132.80208	333.40576	350.98807	5.35777	0.2079451	0.27489728	2.3425512	21	—	—
477335 2009 TV_{42}	18.7	X	109.83507	328.13831	96.46100	0.58249	0.1891884	0.28436011	2.2902889	21	3 1.3	21.2
477336 2009 TY_{43}	18.1	X	101.94375	247.22098	148.21603	5.53981	0.2298795	0.27549475	2.3391631	21	1 15.0	20.5
477337 2009 TU_{46}	17.6	X	69.06842	102.20370	308.18788	4.15676	0.1992542	0.27024270	2.3693728	21	—	—
477338 2009 UE_{3}	18.0	X	81.86224	5.34948	53.79361	6.65175	0.2198651	0.27716095	2.3297788	21	1 11.2	19.8
477339 2009 UZ_{11}	17.7	X	85.82733	55.00487	45.89595	7.25027	0.1430869	0.28125839	2.3070963	21	3 12.6	20.1
477340 2009 UB_{13}	18.0	X	149.34142	273.42853	58.07710	6.99508	0.2687089	0.27928885	2.3179300	21	—	—
477341 2009 UJ_{16}	17.8	X	139.24871	143.30428	213.95605	5.07278	0.1322827	0.28432295	2.2904885	21	—	—
477342 2009 UK_{19}	18.1	X	100.88009	182.52679	212.32218	1.73244	0.1775758	0.27567875	2.3381221	21	1 3.8	20.4
477343 2009 UD_{27}	17.8	X	77.23904	184.96971	199.79051	6.07988	0.1416612	0.26776000	2.3839963	21	—	—
477344 2009 UB_{33}	18.4	X	75.31623	211.61210	205.11575	0.76816	0.1708980	0.27254301	2.3560221	21	—	—
477345 2009 UC_{34}	17.6	X	351.42999	310.73203	220.80004	4.01356	0.0585434	0.27846808	2.3224824	21	1 7.1	20.2
477346 2009 UW_{36}	17.5	X	326.00187	311.84035	210.20239	6.14072	0.0657636	0.27228915	2.3574862	21	—	—
477347 2009 UQ_{37}	18.1	X	97.20019	339.75352	73.38371	3.07363	0.1697860	0.27714356	2.3298762	21	1 23.2	20.4
477348 2009 UG_{39}	17.9	X	114.22671	295.19910	82.99309	1.90740	0.2170351	0.27556050	2.3387910	21	1 8.7	20.3
477349 2009 UV_{39}	18.0	X	150.50243	329.73350	39.20616	3.96369	0.2045995	0.28169891	2.3046904	21	2 8.3	21.2
477350 2009 UE_{52}	18.0	X	23.73306	106.48924	17.49496	1.89933	0.1413325	0.27485124	2.3428128	21	—	—
477351 2009 UF_{63}	18.2	X	24.58861	50.49119	86.22815	3.63858	0.1250932	0.28058522	2.3107849	21	1 3.0	20.3
477352 2009 UM_{68}	17.4	X	91.10581	348.65411	33.02103	8.19310	0.1654134	0.27081252	2.3660480	21	—	—
477353 2009 UR_{68}	17.6	X	136.06361	3.31278	7.84062	7.47182	0.1303562	0.28547184	2.2843389	21	1 14.9	20.5
477354 2009 UR_{76}	18.0	X	26.68418	103.59626	19.11066	4.72470	0.1349433	0.27673909	2.3321458	21	—	—
477355 2009 UX_{79}	18.0	X	91.35453	28.36146	351.98756	3.58365	0.1014084	0.27114451	2.3641163	21	—	—
477356 2009 UM_{85}	18.1	X	56.71165	331.18149	98.88974	2.41142	0.1611536	0.26979148	2.3720139	21	—	—
477357 2009 UL_{87}	18.1	X	93.83251	69.20007	310.30137	3.20575	0.2734194	0.27143159	2.3624491	21	—	—
477358 2009 UB_{88}	17.9	X	95.50420	239.30807	121.91809	2.50327	0.1987735	0.26885793	2.3775016	21	—	—
477359 2009 UV_{91}	17.7	X	207.00685	301.11350	66.96170	5.66457	0.1896494	0.29728731	2.2234045	21	3 29.8	21.2
477360 2009 UG_{93}	17.9	X	96.48674	94.45521	341.33501	2.36067	0.1458065	0.28233798	2.3012114	21	2 17.9	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477361 2009 US_{93}	18.3	X	75.52250	0.32406	29.09344	2.51596	0.2196235	0.26847353	2.3797704	21	—	—
477362 2009 UT_{98}	17.9	X	129.52751	290.38545	62.73256	4.88959	0.0895830	0.27345793	2.3507640	21	—	—
477363 2009 UU_{100}	18.3	X	61.42664	350.24393	99.89676	3.12662	0.1740128	0.27522268	2.3407044	21	1 8.7	19.9
477364 2009 UT_{101}	18.1	X	84.83732	328.01944	61.99830	7.09345	0.1075860	0.27010871	2.3701563	21	—	—
477365 2009 UT_{104}	17.9	X	52.05537	76.48971	59.78897	7.91452	0.2172786	0.28327216	2.2961493	21	3 9.9	19.5
477366 2009 UQ_{106}	17.8	X	169.62467	83.85797	261.51480	3.54040	0.1625484	0.28407853	2.2918020	21	1 21.8	21.1
477367 2009 UM_{107}	17.9	X	358.51402	15.17153	75.56156	4.21354	0.1702111	0.26015288	2.4302463	21	—	—
477368 2009 UZ_{107}	18.4	X	118.09460	324.81815	55.50182	2.24986	0.2012753	0.27691785	2.3311421	21	1 14.6	21.1
477369 2009 UP_{113}	17.9	X	30.40891	39.12118	58.65421	2.47740	0.1527477	0.27373889	2.3491552	21	—	—
477370 2009 UM_{115}	17.7	X	13.36208	74.28970	28.62484	7.19117	0.0828391	0.27239633	2.3568678	21	—	—
477371 2009 UO_{118}	18.3	X	128.50010	261.60497	40.56180	1.91477	0.1822226	0.26831296	2.3807198	21	—	—
477372 2009 UB_{127}	17.7	X	144.46136	352.40126	17.35693	6.02143	0.1813461	0.28169594	2.3047067	21	1 31.6	20.8
477373 2009 UO_{131}	17.5	X	106.29293	239.48564	195.13983	5.65504	0.1346160	0.28234938	2.3011495	21	2 27.7	20.1
477374 2009 UZ_{132}	17.6	X	58.50125	240.65314	203.95403	7.56976	0.1725343	0.27308577	2.3528993	21	—	—
477375 2009 UE_{137}	17.8	X	117.71350	35.40323	356.03845	6.14232	0.2534874	0.27816333	2.3241784	21	2 7.6	20.6
477376 2009 UO_{141}	17.5	X	73.59561	3.79621	61.43810	6.51099	0.2032776	0.27175732	2.3605609	21	1 1.2	19.3
477377 2009 UO_{149}	18.7	X	114.48579	180.96288	167.73194	1.46455	0.2037405	0.27132072	2.3630926	21	—	—
477378 2009 UP_{149}	18.3	X	48.75048	130.14466	302.78117	2.03373	0.2027928	0.26776208	2.3839840	21	—	—
477379 2009 VO	17.6	X	118.91325	311.81290	55.05568	23.87557	0.2442296	0.27697053	2.3308465	21	1 2.7	20.7
477380 2009 VF_{4}	18.1	X	94.14242	22.93044	0.67620	2.45285	0.1997769	0.27179211	2.3603595	21	—	—
477381 2009 VG_{12}	17.4	X	63.11388	61.16661	39.66623	9.57517	0.1865215	0.27768148	2.3268664	21	2 3.5	19.4
477382 2009 VR_{18}	18.5	X	72.22974	31.30776	11.40514	2.85383	0.1822321	0.26945718	2.3739753	21	—	—
477383 2009 VJ_{19}	17.9	X	104.06062	133.97444	255.94395	6.99910	0.2313888	0.27442065	2.3452629	21	1 10.7	20.3
477384 2009 VY_{22}	18.1	X	113.05449	196.39147	171.34722	1.49794	0.1903691	0.27201509	2.3590694	21	—	—
477385 2009 VH_{24}	18.4	X	75.02761	124.14361	295.66064	2.00100	0.2138025	0.27126626	2.3634089	21	—	—
477386 2009 VU_{25}	18.5	X	238.36868	246.55286	232.28184	24.89358	0.0744944	0.40876177	1.7981360	21	10 28.6	20.0
477387 2009 VV_{26}	17.8	X	10.20114	217.10269	249.09057	6.44292	0.1045788	0.26742630	2.3859791	21	—	—
477388 2009 VB_{28}	17.8	X	166.80862	122.09830	233.70566	2.38535	0.1848907	0.28396560	2.2924096	21	2 3.1	21.3
477389 2009 VV_{28}	17.5	X	104.35740	338.23690	45.94862	10.69734	0.1392798	0.27399365	2.3476988	21	—	—
477390 2009 VQ_{32}	18.2	X	133.45351	58.11176	306.60754	3.21400	0.2217561	0.27673677	2.3321589	21	1 16.6	21.0
477391 2009 VO_{37}	18.1	X	120.75154	125.11695	228.63138	1.71306	0.2236552	0.27367804	2.3495034	21	—	—
477392 2009 VO_{38}	18.4	X	88.73047	73.89189	309.02072	0.89534	0.1932630	0.27017575	2.3697643	21	—	—
477393 2009 VH_{43}	18.0	X	110.86218	292.65107	99.65508	2.35924	0.1900163	0.27567536	2.3381413	21	1 18.8	20.4
477394 2009 VG_{45}	17.5	X	156.07978	334.59073	10.96130	4.09936	0.2475055	0.27847047	2.3224691	21	1 19.9	21.0
477395 2009 VA_{46}	18.7	X	110.74233	12.43600	47.53207	1.12863	0.1727022	0.28372870	2.2936855	21	2 21.9	21.3
477396 2009 VA_{49}	18.5	X	85.63420	132.69581	279.46084	0.39157	0.1685177	0.27425882	2.3461853	21	—	—
477397 2009 VF_{51}	17.3	X	135.03449	258.12076	102.42022	4.31442	0.2578544	0.27751448	2.3277998	21	1 17.9	20.3
477398 2009 VZ_{54}	17.9	X	30.96631	62.11566	33.32996	4.51134	0.1430133	0.26578724	2.3957783	21	—	—
477399 2009 VL_{57}	17.1	X	96.66215	140.43561	272.37626	5.36860	0.0801503	0.27550271	2.3391180	21	1 7.7	19.5
477400 2009 VN_{58}	18.1	X	117.93481	256.54628	129.33795	3.15382	0.2336254	0.27755165	2.3275919	21	1 26.5	20.6
477401 2009 VC_{59}	18.1	X	142.95445	184.86657	202.20441	2.27862	0.1990058	0.28421112	2.2910892	21	2 20.1	21.3
477402 2009 VM_{59}	18.0	X	120.03786	252.79816	129.97221	2.92433	0.2015580	0.27790016	2.3256455	21	1 19.9	20.6
477403 2009 VQ_{59}	17.5	X	57.30965	18.09464	90.21165	5.03527	0.1386585	0.27800371	2.3250680	21	1 26.1	19.4
477404 2009 VS_{61}	19.0	X	95.13000	341.82687	59.37723	2.14321	0.1904611	0.27415117	2.3467995	21	1 5.9	21.3
477405 2009 VM_{67}	17.7	X	136.51427	93.21244	256.02508	5.69156	0.1615108	0.27358318	2.3500465	21	—	—
477406 2009 VQ_{68}	18.2	X	145.37128	326.82337	22.94283	2.61392	0.2099491	0.27614698	2.3354784	21	1 9.8	21.3
477407 2009 VF_{70}	17.9	X	324.14528	122.16700	17.78955	2.33970	0.1594423	0.25963015	2.4335072	21	—	—
477408 2009 VZ_{79}	17.4	X	89.11552	273.60923	138.45429	20.90388	0.2558094	0.27358887	2.3500139	21	1 21.5	19.5
477409 2009 VQ_{84}	18.0	X	1.70085	72.97103	57.03451	3.51835	0.1259909	0.26645564	2.3917701	21	—	—
477410 2009 VG_{86}	17.9	X	323.68655	39.66489	75.67055	6.88050	0.1007414	0.25595419	2.4567514	21	—	—
477411 2009 VQ_{93}	18.3	X	96.09069	135.56476	274.27746	0.69178	0.1714888	0.27630129	2.3346087	21	1 16.2	20.3
477412 2009 VO_{97}	17.7	X	349.37909	195.12709	277.25667	3.77771	0.1778742	0.26061688	2.4273609	21	—	—
477413 2009 VO_{98}	18.1	X	98.89877	355.98493	359.46740	2.38791	0.1862872	0.26543991	2.3978678	21	—	—
477414 2009 VV_{108}	17.8	X	165.87105	252.38873	78.45719	6.46086	0.1829708	0.27915228	2.3186859	21	1 3.4	21.2
477415 2009 VK_{116}	18.3	X	39.01385	61.58800	49.58419	2.99519	0.1616736	0.26640370	2.3920810	21	—	—
477416 2009 WW_{1}	17.8	X	16.37681	2.82644	104.71241	2.19257	0.1456350	0.27149181	2.3620997	21	—	—
477417 2009 WF_{15}	17.7	X	349.02409	0.69564	107.59441	5.03781	0.1912385	0.25839100	2.4412811	21	—	—
477418 2009 WE_{35}	17.3	X	135.86490	176.75882	194.61236	5.93230	0.2511354	0.27894520	2.3198333	21	1 29.6	20.5
477419 2009 WB_{37}	18.3	X	67.48095	53.61585	18.10006	2.72376	0.1727296	0.27156486	2.3616761	21	—	—
477420 2009 WV_{38}	17.5	X	125.39210	312.62111	58.82422	7.50202	0.1221188	0.27371581	2.3492873	21	—	—
477421 2009 WY_{45}	17.6	X	47.90259	106.29999	279.30515	3.93301	0.1990142	0.25922390	2.4360490	21	—	—
477422 2009 WA_{49}	18.1	X	92.86935	325.84483	123.46690	3.13659	0.1702382	0.27967260	2.3158091	21	3 9.4	20.4
477423 2009 WK_{50}	17.9	X	106.22763	272.41438	148.10332	5.51155	0.2253819	0.28093478	2.3088677	21	2 25.1	20.3
477424 2009 WX_{56}	18.6	X	66.78129	24.44851	95.25790	3.32345	0.1674267	0.28129167	2.3069144	21	3 7.4	20.5
477425 2009 WB_{79}	18.3	X	79.97160	21.82693	65.47902	4.07883	0.2036851	0.27954599	2.3165083	21	2 17.9	20.2
477426 2009 WE_{80}	17.8	X	186.72601	312.37046	331.07575	4.22315	0.0086269	0.26303348	2.4124706	21	—	—
477427 2009 WL_{81}	17.9	X	61.92911	46.34873	19.52129	2.57814	0.1975188	0.26722371	2.3871849	21	—	—
477428 2009 WX_{84}	17.7	X	196.26152	308.37539	330.45791	4.67089	0.1210293	0.26880203	2.3778312	21	—	—
477429 2009 WW_{96}	18.2	X	108.82593	168.07964	209.61450	2.28455	0.1747555	0.27331893	2.3515610	21	—	—
477430 2009 WF_{120}	18.1	X	131.79549	139.98418	203.81318	0.90506	0.2067900	0.27238383	2.3569399	21	—	—
477431 2009 WH_{123}	15.8	X	161.68601	12.94603	68.66153	4.43964	0.1536790	0.12607180	3.9390432	21	5 25.5	22.1
477432 2009 WO_{125}	17.6	X	358.39935	56.02319	74.06944	4.54124	0.1679790	0.26546923	2.3976912	21	—	—
477433 2009 WS_{133}	17.5	X	157.29333	347.06005	6.70236	6.47120	0.1970537	0.28130133	2.3068615	21	1 26.6	20.9
477434 2009 WJ_{136}	18.1	X	38.47850	51.61097	48.54161	4.27547	0.1927024	0.27124819	2.3635139	21	—	—
477435 2009 WU_{155}	18.4	X	58.87217	78.47341	28.39929	3.02985	0.1262855	0.27734237	2.3287627	21	1 26.7	20.4
477436 2009 WL_{159}	17.8	X	125.86481	289.22150	86.66354	5.07289	0.2639484	0.27722329	2.3294295	21	1 28.9	20.7
477437 2009 WM_{159}	17.1	X	277.92758	213.43316	34.02268	10.06288	0.0742716	0.28528687	2.2853262	21	1 11.2	20.3
477438 2009 WS_{160}	17.6	X	29.58367	77.06094	5.85088	5.39441	0.0916463	0.26765485	2.3846207	21	—	—
477439 2009 WK_{161}	17.8	X	115.17358	319.10401	42.51834	5.81377	0.1109627	0.26895393	2.3769358	21	—	—
477440 2009 WV_{166}	17.2	X	69.29640	330.50674	89.69779	6.02336	0.2073720	0.26854721	2.3793352	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477441 2009 WP_{168}	18.0	X	67.93566	309.00561	135.57036	1.81477	0.1508497	0.27404025	2.3474327	21	1 12.4	20.0
477442 2009 WM_{170}	17.7	X	19.89952	158.39126	287.40934	3.61403	0.1146445	0.26288645	2.4133700	21	—	—
477443 2009 WM_{171}	18.2	X	154.95509	55.79763	295.01849	2.80923	0.1903256	0.27955176	2.3164765	21	1 17.9	21.3
477444 2009 WT_{173}	18.1	X	66.86155	166.78426	291.72922	4.69762	0.1201621	0.27793929	2.3254272	21	1 26.9	20.1
477445 2009 WM_{177}	17.1	X	88.08577	141.05659	293.68778	5.58841	0.0804026	0.27752124	2.3277619	21	1 24.6	19.7
477446 2009 WP_{180}	15.7	X	175.39404	325.80336	115.88290	4.50332	0.2572200	0.12743444	3.9109133	21	6 7.9	22.3
477447 2009 WQ_{185}	18.0	X	17.48155	219.07533	238.61687	5.80230	0.0617917	0.26807134	2.3821501	21	—	—
477448 2009 WJ_{196}	17.6	X	168.13204	219.71008	90.96901	6.32893	0.1218004	0.27255875	2.3559313	21	—	—
477449 2009 WW_{202}	16.0	X	155.95727	56.62925	26.93142	0.84446	0.1695989	0.12537449	3.9536353	21	5 23.3	22.3
477450 2009 WS_{203}	17.7	X	110.43381	297.70709	89.07753	3.17279	0.2174414	0.27427850	2.3460731	21	1 15.5	20.3
477451 2009 WL_{207}	18.0	X	101.55873	17.75542	28.89940	1.97691	0.1857497	0.27585651	2.3371176	21	1 24.1	20.4
477452 2009 WM_{214}	18.5	X	70.19704	203.16471	204.84622	0.78115	0.1787277	0.26752072	2.3854177	21	—	—
477453 2009 WK_{217}	17.5	X	57.75969	303.96182	121.61159	3.48598	0.2050931	0.26733600	2.3865164	21	—	—
477454 2009 WB_{226}	15.8	X	241.18158	109.37434	201.43454	2.91190	0.2406566	0.12421797	3.9781373	21	2 28.2	22.2
477455 2009 WC_{230}	18.0	X	81.96806	267.25957	97.07752	2.54055	0.1919897	0.26594887	2.3948076	21	—	—
477456 2009 WH_{240}	17.8	X	63.09774	7.31930	103.53462	3.98526	0.1925092	0.27235634	2.3570985	21	2 18.8	19.5
477457 2009 WO_{240}	18.4	X	59.71362	223.66246	206.37676	2.03354	0.1750160	0.26964771	2.3728570	21	—	—
477458 2009 WR_{243}	18.1	X	136.89191	57.14904	336.90936	2.72444	0.2072430	0.28135281	2.3065801	21	2 24.8	21.3
477459 2009 WO_{249}	17.2	X	85.07465	347.24786	93.70206	10.77759	0.0988498	0.27757815	2.3274438	21	2 2.6	19.7
477460 2009 WU_{251}	15.3	X	159.38208	231.87039	223.01846	10.60213	0.2329030	0.12558962	3.9491189	21	6 10.6	21.9
477461 2009 WP_{255}	15.5	X	195.02012	306.42067	93.14757	4.57582	0.1394115	0.12558677	3.9491787	21	5 7.1	21.6
477462 2009 WH_{261}	15.0	X	154.09031	192.35026	263.09533	9.80227	0.2316509	0.12416357	3.9792992	21	6 7.2	21.4
477463 2009 WK_{263}	17.0	X	308.20172	109.94724	65.55361	11.03928	0.0922687	0.26943872	2.3740838	21	—	—
477464 2009 XK_{1}	17.9	X	70.03932	145.40034	296.52173	1.61404	0.1562882	0.27253187	2.3560863	21	1 13.8	19.9
477465 2009 XZ_{1}	21.7	X	95.38552	152.98662	81.98619	8.15858	0.5337832	1.24514091	0.8557043	21	—	—
477466 2009 XM_{17}	18.1	X	80.49504	342.25448	87.64184	2.18786	0.1497317	0.26900186	2.3766534	21	1 16.8	20.1
477467 2009 XA_{20}	16.8	X	194.20788	236.59398	292.78561	12.74892	0.1576429	0.22710374	2.6606425	21	10 2.8	21.4
477468 2009 YO_{3}	18.5	X	83.87679	249.15881	172.94384	1.45074	0.1733451	0.26949999	2.3737240	21	1 14.1	20.7
477469 2009 YU_{5}	18.1	X	347.91850	150.29581	319.09164	1.72771	0.1548261	0.25382827	2.4704499	21	—	—
477470 2009 YH_{7}	18.1	X	15.46990	27.84892	96.16513	3.62175	0.1685688	0.26509421	2.3999520	21	—	—
477471 2010 AG_{2}	17.5	X	52.44029	103.74392	352.17170	4.32918	0.1558691	0.26654717	2.3912226	21	1 1.2	19.5
477472 2010 AS_{5}	17.7	X	9.96432	193.23849	273.60669	1.49770	0.1671694	0.25680644	2.4513130	21	—	—
477473 2010 AE_{8}	17.1	X	8.91694	106.06866	329.65046	6.14735	0.2362882	0.25498815	2.4629526	21	—	—
477474 2010 AB_{9}	18.0	X	98.62451	196.34276	223.31585	1.98729	0.1703057	0.27014896	2.3699209	21	2 4.1	20.6
477475 2010 AL_{12}	17.4	X	66.53528	151.31905	309.45076	6.31897	0.2508264	0.27099466	2.3649878	21	2 16.3	18.9
477476 2010 AK_{18}	15.6	X	177.81573	133.32349	304.12265	4.65622	0.2735692	0.12441320	3.9739746	21	6 4.2	22.4
477477 2010 AX_{21}	16.5	X	202.18988	278.17043	297.36192	15.67746	0.1441098	0.23813786	2.5778071	21	12 16.3	20.5
477478 2010 AO_{35}	18.3	X	31.44986	290.88456	158.38571	2.31924	0.1710251	0.25894063	2.4378253	21	—	—
477479 2010 AG_{38}	17.2	X	100.22830	57.88082	337.30413	5.95668	0.1808865	0.26363609	2.4087930	21	1 8.7	19.7
477480 2010 AX_{43}	18.3	X	45.64863	13.52255	80.09574	5.29719	0.1950251	0.26586566	2.3953072	21	—	—
477481 2010 AN_{71}	16.7	X	265.50054	197.32892	315.74701	13.13821	0.1041433	0.23836084	2.5761992	21	12 21.2	20.1
477482 2010 AN_{131}	15.9	X	35.71948	174.61534	128.09914	23.75983	0.3502193	0.19959776	2.8997837	21	11 15.5	20.2
477483 2010 AO_{132}	16.4	X	29.54273	332.07071	65.27623	12.00154	0.1326132	0.23276398	2.6173323	21	—	—
477484 2010 BO_{1}	17.3	X	308.40565	151.43301	308.63023	11.26909	0.1383293	0.24086530	2.5583103	21	12 16.4	20.0
477485 2010 BU_{3}	18.2	X	62.64052	308.36272	111.87536	3.00771	0.1959720	0.26282363	2.4137546	21	—	—
477486 2010 BL_{51}	16.7	X	243.01447	99.84581	84.23904	15.79568	0.0188494	0.22994481	2.6386815	21	—	—
477487 2010 BW_{66}	16.4	X	310.86495	118.10978	337.15178	11.28288	0.1788865	0.22912272	2.6449894	21	12 6.3	19.2
477488 2010 CA_{2}	17.9	X	66.98087	313.17583	149.11081	3.73990	0.2120197	0.26981262	2.3718900	21	2 15.6	19.4
477489 2010 CU_{11}	16.6	X	280.17155	85.92252	50.95689	27.62846	0.1737850	0.22867942	2.6484066	21	12 3.5	19.8
477490 2010 CG_{18}	20.6	X	244.85787	351.59473	78.80251	10.15447	0.2259797	0.57114712	1.4387016	21	7 31.8	21.2
477491 2010 CD_{19}	17.9	X	136.67788	132.61104	309.43157	20.75299	0.5786975	0.29079870	2.2563566	21	5 20.8	23.0
477492 2010 CG_{19}	19.5	X	198.78171	117.51974	148.97261	61.93827	0.1866155	0.50422808	1.5633325	21	—	—
477493 2010 CN_{24}	16.9	X	106.20789	304.80389	312.76356	8.37900	0.0768748	0.22640716	2.6660970	21	10 25.8	20.9
477494 2010 CM_{38}	16.9	X	218.42679	216.37456	335.48455	12.42770	0.1296823	0.23260532	2.6185223	21	12 2.3	20.9
477495 2010 CH_{56}	16.3	X	230.59860	246.15460	301.61428	12.94969	0.1222832	0.23722189	2.5844386	21	12 15.8	19.9
477496 2010 CK_{62}	16.9	X	213.40379	192.41697	348.91569	12.95527	0.1622507	0.22856361	2.6493012	21	11 6.8	21.2
477497 2010 CO_{65}	16.6	X	201.76576	199.60220	339.43129	14.75248	0.1163848	0.22523081	2.6753720	21	10 25.2	20.9
477498 2010 CQ_{79}	17.8	X	181.42328	99.33880	161.71876	1.01712	0.0996413	0.23846592	2.5754424	21	—	—
477499 2010 CW_{81}	17.3	X	238.56179	216.86899	334.66608	11.01229	0.1174720	0.23703123	2.5858242	21	—	—
477500 2010 CC_{82}	16.4	X	283.18712	300.80055	169.06171	22.47565	0.0809344	0.22831304	2.6512392	21	11 23.9	20.2
477501 2010 CK_{89}	17.6	X	83.43381	206.84004	157.06575	12.14620	0.0418801	0.24669600	2.5178391	21	—	—
477502 2010 CH_{93}	16.8	X	92.43708	221.17860	137.50163	5.84212	0.0933581	0.24264769	2.5457667	21	—	—
477503 2010 CL_{94}	17.0	X	128.42358	275.16459	350.92620	3.90796	0.0633349	0.22712169	2.6605023	21	12 2.4	20.8
477504 2010 CQ_{101}	17.2	X	97.91384	53.58460	332.98281	9.82119	0.2654963	0.26179590	2.4200676	21	1 8.3	19.7
477505 2010 CH_{105}	17.7	X	253.23545	58.63212	131.54412	4.91802	0.0185637	0.24392782	2.5368522	21	—	—
477506 2010 CE_{125}	18.3	X	270.47345	265.62210	159.92538	21.24917	0.0770413	0.38991749	1.8556137	21	9 25.3	19.7
477507 2010 CQ_{129}	16.8	X	250.79922	56.91883	122.44925	13.31206	0.1538276	0.23816265	2.5776282	21	12 26.8	20.1
477508 2010 CK_{140}	17.0	X	153.78044	141.34482	70.72368	8.76563	0.1264610	0.21048589	2.7989001	21	10 26.1	21.5
477509 2010 CZ_{140}	16.1	X	276.49618	337.53231	143.00254	28.78239	0.0968230	0.23353372	2.6115779	21	12 1.3	20.1
477510 2010 CM_{144}	17.3	X	32.20918	67.28955	61.99868	11.19869	0.1692603	0.26521621	2.3992159	21	1 9.5	19.5
477511 2010 CK_{150}	17.3	X	242.61201	12.60156	100.26159	4.83135	0.1440713	0.22337186	2.6901949	21	9 22.8	21.2
477512 2010 CL_{155}	16.8	X	240.89276	171.77351	347.84967	11.88791	0.1341087	0.23179508	2.6246209	21	11 15.2	20.6
477513 2010 CD_{160}	17.3	X	12.38009	147.28394	331.80509	11.84868	0.1720300	0.26027885	2.4294621	21	—	—
477514 2010 CT_{168}	17.5	X	264.47278	201.06112	331.83802	4.32485	0.2043032	0.23818025	2.5775013	21	12 30.4	20.5
477515 2010 CQ_{169}	16.6	X	83.19920	288.27157	341.32613	11.96050	0.2580247	0.21208614	2.7848033	21	11 1.1	21.3
477516 2010 CX_{216}	15.9	X	253.46305	147.78387	34.38436	33.67353	0.1796564	0.23119864	2.6291328	21	12 21.7	20.0
477517 2010 CB_{230}	17.0	X	304.96955	113.54078	324.58808	12.95244	0.0416071	0.21553539	2.7550130	21	11 5.5	20.9
477518 2010 DV_{45}	17.0	X	128.43983	295.82250	318.44475	4.49537	0.1153999	0.22216650	2.6999165	21	11 18.7	21.3
477519 2010 DJ_{56}	19.2	X	105.29573	309.28601	149.92560	34.84526	0.2453925	0.70530525	1.2499270	21	—	—
477520 2010 DV_{64}	16.5	X	219.79873	334.45990	243.33805	16.52238	0.0944892	0.22568505	2.6717810	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477521 2010 DQ_{77}	16.6	X	177.87873	195.88975	60.86040	14.10687	0.1324108	0.23859238	2.5745323	21	—	—
477522 2010 DA_{79}	17.7	X	58.85946	10.83737	80.51239	3.15476	0.1805149	0.26018641	2.4300375	21	1 11.4	19.6
477523 2010 ES_{32}	17.0	X	163.23847	24.24938	169.33406	8.31291	0.0702728	0.21895467	2.7262556	21	10 12.8	21.1
477524 2010 EH_{43}	18.8	X	284.27311	195.98057	5.41506	37.54393	0.0441029	0.68232539	1.2778357	21	—	—
477525 2010 EF_{69}	17.1	X	322.53754	265.25070	178.63114	8.80158	0.1411039	0.22869688	2.6482718	21	12 16.5	20.0
477526 2010 EP_{73}	16.6	X	255.42041	166.11958	349.83638	13.99665	0.1804138	0.23167712	2.6255116	21	11 22.1	20.3
477527 2010 EO_{84}	17.1	X	302.60903	105.28288	10.81260	12.04684	0.0872267	0.23380898	2.6095278	21	12 29.7	20.4
477528 2010 EP_{84}	17.9	X	335.74533	355.36655	124.53752	2.44225	0.1801822	0.24483079	2.5306108	21	—	—
477529 2010 EH_{86}	16.4	X	328.19422	128.87886	359.29364	8.85729	0.0592645	0.23922119	2.5700187	21	—	—
477530 2010 EU_{87}	16.6	X	231.16924	173.44600	37.38547	14.37499	0.1815638	0.22989333	2.6390754	21	—	—
477531 2010 EZ_{87}	16.5	X	155.45577	64.36866	160.01935	18.45258	0.2571378	0.21715097	2.7413314	21	11 12.9	21.7
477532 2010 ET_{96}	16.2	X	69.44322	311.96118	2.45774	14.73360	0.0786525	0.22470588	2.6795370	21	11 22.9	20.2
477533 2010 EX_{97}	17.0	X	266.50806	340.89481	126.97067	5.44249	0.1048355	0.22565522	2.6720165	21	10 23.0	20.4
477534 2010 EL_{106}	16.4	X	208.37624	188.98069	24.91997	13.87410	0.2177687	0.22925265	2.6439900	21	12 8.7	20.8
477535 2010 EZ_{112}	17.5	X	154.55003	228.20063	21.06549	4.06385	0.1174785	0.22360276	2.6883426	21	12 8.7	21.7
477536 2010 EF_{123}	17.0	X	112.43218	213.72699	77.94948	6.50822	0.1163479	0.22087932	2.7103956	21	12 18.9	21.2
477537 2010 EJ_{138}	17.1	X	268.81469	165.67922	34.02985	16.06413	0.0595665	0.23923681	2.5699068	21	—	—
477538 2010 EU_{138}	18.2	X	123.83842	342.53743	167.48714	22.92194	0.0520072	0.37230982	1.9136671	21	6 28.5	20.9
477539 2010 EJ_{140}	16.4	X	131.66155	213.69975	15.43458	16.36480	0.1635424	0.21483517	2.7609961	21	10 22.1	21.0
477540 2010 EQ_{171}	16.8	X	40.34382	330.33439	105.24556	8.81459	0.1807583	0.25149712	2.4856923	21	—	—
477541 2010 FG_{14}	16.9	X	142.06541	97.74494	173.24864	10.69533	0.0930903	0.22545976	2.6735606	21	12 23.6	21.1
477542 2010 FY_{16}	17.1	X	55.13002	18.67734	6.76613	7.09806	0.0356330	0.23477110	2.6023934	21	—	—
477543 2010 FS_{20}	17.3	X	170.25234	187.55996	21.05372	7.32719	0.0410239	0.22239126	2.6980971	21	11 6.6	21.1
477544 2010 FX_{22}	16.7	X	102.40485	198.26859	170.37686	14.93316	0.1235453	0.24513217	2.5285362	21	—	—
477545 2010 FJ_{26}	16.8	X	51.95517	303.18856	41.72795	6.37105	0.0619893	0.22624763	2.6673501	21	12 11.8	20.5
477546 2010 FT_{29}	17.0	X	189.91939	170.78378	35.51107	8.05976	0.0650658	0.22149079	2.7054049	21	11 24.5	20.9
477547 2010 FR_{48}	16.3	X	254.35619	51.40615	86.34550	14.06662	0.2104708	0.22965959	2.6408658	21	11 2.6	20.0
477548 2010 FT_{53}	17.2	X	301.99443	3.42273	140.71727	7.63939	0.0997008	0.24011317	2.5636500	21	—	—
477549 2010 FS_{56}	16.6	X	214.44405	1.71258	203.22064	13.71477	0.1844673	0.22864184	2.6486968	21	12 9.7	20.8
477550 2010 FS_{82}	16.2	X	186.43310	160.64051	42.16234	14.17188	0.0837909	0.22277048	2.6950343	21	11 15.1	20.1
477551 2010 FA_{85}	16.3	X	121.09472	86.28000	173.52939	27.16100	0.2448601	0.21587657	2.7521095	21	11 27.4	21.6
477552 2010 FK_{87}	17.5	X	132.77956	0.54341	249.76473	0.68744	0.1075211	0.21861603	2.7290702	21	11 18.6	21.7
477553 2010 FQ_{90}	17.5	X	196.81856	358.86173	188.59972	2.44626	0.1171584	0.22272912	2.6953679	21	11 6.4	21.5
477554 2010 FO_{101}	17.7	X	280.18631	119.08179	204.16793	22.89341	0.0506435	0.35802025	1.9642540	21	4 22.2	19.6
477555 2010 GF_{75}	16.6	X	205.53680	175.17301	38.87572	15.76236	0.1402479	0.22871431	2.6481372	21	12 13.8	20.7
477556 2010 GP_{75}	16.7	X	32.47687	3.06162	9.01889	11.59983	0.0703045	0.22881389	2.6473689	21	12 23.6	20.4
477557 2010 GV_{97}	17.1	X	147.94198	117.37125	124.68653	4.40901	0.1128236	0.21919254	2.7242829	21	11 24.7	21.3
477558 2010 GW_{101}	16.8	X	108.48658	289.14817	19.91046	10.78927	0.1422542	0.22588553	2.6701999	21	—	—
477559 2010 GJ_{108}	17.8	X	228.72137	285.29730	211.63424	19.54734	0.0848814	0.39064148	1.8533203	21	11 8.4	19.3
477560 2010 GX_{109}	16.7	X	186.88939	127.36277	80.95791	6.10089	0.0649369	0.22148501	2.7054519	21	11 25.5	20.5
477561 2010 GY_{113}	17.3	X	251.75958	122.39440	24.19853	2.95822	0.0882249	0.22328409	2.6908999	21	11 21.4	21.0
477562 2010 GE_{114}	17.0	X	66.49603	236.87670	37.63485	2.29341	0.2161565	0.20254082	2.8716246	21	10 20.7	21.2
477563 2010 GA_{115}	17.7	X	327.18488	125.00746	24.45634	5.80465	0.1918974	0.24417198	2.5351608	21	—	—
477564 2010 GJ_{122}	17.0	X	308.17328	339.97390	126.00518	6.59472	0.2683480	0.23479478	2.6022185	21	12 14.1	18.8
477565 2010 GX_{126}	16.7	X	54.60538	239.31443	95.90484	10.09773	0.1207631	0.21444236	2.7643668	21	12 10.2	20.6
477566 2010 GG_{128}	17.8	X	142.56663	124.73267	35.02215	21.17426	0.0367106	0.37838506	1.8931283	21	8 25.7	20.4
477567 2010 GE_{129}	16.9	X	318.14355	71.19244	60.73628	16.26720	0.0241673	0.23379331	2.6096444	21	—	—
477568 2010 GV_{133}	17.7	X	335.07854	279.14701	188.15006	8.12880	0.1222523	0.23949603	2.5680522	21	—	—
477569 2010 GY_{145}	16.1	X	173.23372	218.61883	46.86169	33.43458	0.1855968	0.23018803	2.6368225	21	—	—
477570 2010 GK_{160}	16.6	X	169.64641	235.28803	348.91397	13.71962	0.1942449	0.22027740	2.7153309	21	11 15.9	21.4
477571 2010 HC_{44}	16.6	X	24.90449	174.87856	119.39360	10.14516	0.1028285	0.18446598	3.0562710	21	9 2.5	20.5
477572 2010 HH_{74}	16.3	X	1.68399	10.99043	303.54705	8.31594	0.1406736	0.18163273	3.0879717	21	8 19.4	19.9
477573 2010 HV_{77}	16.7	X	103.94838	62.68449	219.21094	12.03011	0.1250403	0.21477829	2.7614835	21	11 29.2	21.0
477574 2010 HQ_{105}	16.7	X	172.53071	222.02294	35.80612	15.70242	0.0907439	0.22679368	2.6630669	21	—	—
477575 2010 HZ_{105}	17.2	X	85.74734	241.04287	55.17189	4.49781	0.0752177	0.21350998	2.7724088	21	11 21.5	21.2
477576 2010 JS_{1}	16.6	X	117.81674	230.83107	51.94197	14.22433	0.0822357	0.21684405	2.7439174	21	12 9.7	20.8
477577 2010 JN_{2}	16.8	X	315.55053	93.48793	33.29713	14.69597	0.0445139	0.23380750	2.6095388	21	—	—
477578 2010 JY_{14}	16.7	X	175.60546	180.74043	54.18114	15.21573	0.1071107	0.22465095	2.6799738	21	12 11.4	20.9
477579 2010 JH_{15}	17.6	X	254.72746	351.05330	70.55533	23.69973	0.0907319	0.37489192	1.9048700	21	8 27.6	20.2
477580 2010 JO_{17}	16.3	X	348.12143	96.27763	221.40116	23.07232	0.3861949	0.17708583	3.1406063	21	7 8.6	19.0
477581 2010 JP_{20}	15.8	X	13.42732	42.47310	243.41255	23.50490	0.2012207	0.17892466	3.1190518	21	7 28.3	19.7
477582 2010 JQ_{37}	16.7	X	105.33193	297.90946	2.69819	7.32604	0.2034189	0.21799022	2.7342908	21	12 27.9	21.3
477583 2010 JO_{43}	16.8	X	136.43789	160.57838	77.82418	8.23781	0.0681211	0.21112324	2.7932642	21	11 7.7	21.0
477584 2010 JT_{43}	16.3	X	264.55432	113.62343	77.40148	15.09309	0.0704207	0.23251587	2.6191939	21	—	—
477585 2010 JJ_{46}	16.8	X	193.50650	13.31265	179.53660	12.92498	0.1002610	0.21541943	2.7560016	21	11 11.9	21.1
477586 2010 JD_{53}	17.1	X	225.68018	259.15310	268.78107	7.66993	0.1676986	0.23196084	2.6233704	21	11 6.3	21.0
477587 2010 JT_{86}	15.3	X	315.47691	331.71639	26.67941	26.40979	0.4882356	0.17191359	3.2032874	21	5 23.4	19.8
477588 2010 JD_{87}	19.4	X	232.71532	148.59820	338.34813	24.62128	0.6395528	0.57767160	1.4278482	21	8 28.5	21.2
477589 2010 JA_{89}	15.9	X	46.23336	320.76271	309.38968	13.03218	0.2423754	0.18504427	3.0499002	21	9 14.9	20.0
477590 2010 JN_{98}	16.0	X	332.54500	87.17762	232.84869	24.75188	0.3059375	0.17347033	3.1840943	21	6 12.2	19.5
477591 2010 JA_{102}	15.9	X	336.99668	60.56570	259.62362	14.18091	0.0899238	0.17509063	3.1644200	21	7 15.2	20.0
477592 2010 JF_{119}	16.8	X	296.01552	249.08068	211.20420	12.15998	0.2312129	0.22274350	2.6952519	21	11 7.5	19.4
477593 2010 JR_{131}	15.9	X	333.99751	117.99281	244.56262	24.67686	0.3674755	0.17779436	3.1322570	21	7 30.7	19.2
477594 2010 JW_{142}	16.1	X	285.47789	49.05598	314.45772	8.86687	0.1153443	0.17045614	3.2215209	21	6 26.6	20.6
477595 2010 JX_{142}	16.2	X	343.38475	20.20251	315.18427	9.34992	0.1400259	0.17865375	3.1222041	21	8 15.4	19.6
477596 2010 JE_{155}	17.3	X	289.33344	89.83183	58.79170	7.95484	0.0968098	0.23093681	2.6311197	21	—	—
477597 2010 JN_{163}	17.4	X	88.96104	132.26999	160.13948	2.04658	0.2028816	0.21199389	2.7856111	21	12 3.4	21.7
477598 2010 JX_{171}	16.5	X	14.87752	49.91550	35.51735	22.56878	0.0798574	0.23640326	2.5904015	21	—	—
477599 2010 KT_{7}	18.0	X	308.45252	46.25621	223.13596	36.74156	0.2680281	0.34937654	1.9965195	21	1 26.1	21.9
477600 2010 KU_{13}	16.4	X	358.58236	120.24922	159.88726	5.80158	0.1626875	0.17283923	3.1918404	21	6 28.1	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477601 2010 KH_{17}	16.1	X	311.00846	145.65897	234.06744	16.84275	0.1233984	0.17925152	3.1152589	21	8 14.6	20.4
477602 2010 KJ_{36}	17.1	X	247.48264	25.92272	185.03809	13.71829	0.1982728	0.23283061	2.6168330	21	—	—
477603 2010 KG_{46}	16.2	X	354.72102	211.94832	120.13155	4.22500	0.0735134	0.18009984	3.1054688	21	9 1.8	20.2
477604 2010 KX_{52}	15.5	X	346.68426	10.78528	308.65442	16.27381	0.2043043	0.17559047	3.1584118	21	7 28.9	18.6
477605 2010 KF_{56}	15.8	X	323.36503	36.36156	320.88904	15.41341	0.2469653	0.17521150	3.1629644	21	7 29.9	19.2
477606 2010 KN_{84}	15.1	X	357.83932	44.81647	279.59441	26.79815	0.2092786	0.17830002	3.1263322	21	8 14.5	18.9
477607 2010 KU_{90}	15.0	X	322.07984	55.38773	304.04258	25.79780	0.2231829	0.17478627	3.1680924	21	7 30.3	18.5
477608 2010 KS_{103}	16.6	X	1.61084	115.98765	191.04691	12.02466	0.2188685	0.17686729	3.1431929	21	8 10.1	20.0
477609 2010 KC_{109}	16.3	X	309.55153	87.40782	280.67974	11.09987	0.1549865	0.17377326	3.1803927	21	7 28.6	20.3
477610 2010 KM_{114}	16.7	X	29.36000	173.97614	135.93786	2.63803	0.2628109	0.18433969	3.0576668	21	10 21.5	20.3
477611 2010 KL_{115}	16.3	X	314.75344	129.67704	227.39970	7.70696	0.1804293	0.17287950	3.1913447	21	7 18.8	20.3
477612 2010 KZ_{119}	16.2	X	16.64476	306.92999	346.61785	10.82107	0.2469280	0.17855560	3.1233482	21	9 1.3	19.4
477613 2010 KE_{121}	16.0	X	282.80981	61.77788	338.83453	25.52949	0.2538878	0.17156644	3.2076070	21	7 28.4	20.8
477614 2010 KW_{121}	15.7	X	345.24797	43.15795	296.39808	14.59895	0.2071664	0.17712687	3.1401213	21	8 18.2	19.1
477615 2010 KT_{122}	15.8	X	10.38909	129.69897	155.17017	26.76349	0.2183819	0.17547351	3.1598151	21	7 31.2	19.4
477616 2010 LR_{2}	16.7	X	330.36140	171.19019	167.11358	16.57938	0.2431378	0.17351564	3.1835399	21	7 14.2	20.5
477617 2010 LT_{5}	15.7	X	323.62587	89.38728	280.44764	10.41658	0.1229592	0.17753438	3.1353142	21	8 24.5	19.7
477618 2010 LF_{13}	15.4	X	339.06773	348.53032	343.61085	26.13411	0.1252696	0.17472791	3.1687978	21	8 13.8	19.5
477619 2010 LU_{32}	15.7	X	319.35756	102.04104	302.32614	14.33511	0.0485227	0.18582564	3.0413446	21	10 5.4	20.0
477620 2010 LR_{36}	17.8	X	119.87100	46.68484	119.52427	24.36928	0.0624292	0.36602888	1.9354969	21	7 19.9	19.7
477621 2010 LD_{37}	16.4	X	352.07241	145.75936	172.13560	7.51698	0.1712877	0.17505609	3.1648362	21	8 5.9	19.9
477622 2010 LT_{51}	17.0	X	357.50068	32.75861	289.71881	0.12658	0.1812873	0.17681554	3.1438061	21	8 25.4	20.2
477623 2010 LU_{55}	16.8	X	345.47713	216.16412	125.18219	0.72136	0.2212175	0.17688599	3.1429714	21	8 26.3	19.7
477624 2010 LZ_{56}	16.3	X	29.70633	122.00201	167.32615	22.16360	0.2202226	0.18014823	3.1049126	21	9 16.8	19.8
477625 2010 LR_{58}	16.0	X	11.40257	50.63851	254.64879	11.73141	0.1568547	0.17692420	3.1425188	21	8 21.0	19.9
477626 2010 LF_{68}	15.6	X	21.38401	20.83133	288.75623	27.06946	0.1502553	0.17502874	3.1651658	21	9 1.2	20.1
477627 2010 LY_{69}	16.2	X	324.17675	188.43128	166.85767	4.90058	0.1920720	0.17374247	3.1807685	21	8 1.9	19.9
477628 2010 LN_{78}	15.4	X	280.40549	88.43103	292.52903	12.13257	0.0493965	0.16935028	3.2355301	21	7 20.9	19.9
477629 2010 LZ_{87}	16.6	X	48.35373	356.36716	287.92828	9.15542	0.1524522	0.18176278	3.0864985	21	9 23.0	20.8
477630 2010 LZ_{96}	15.8	X	44.11705	100.90832	167.10729	26.03389	0.2104676	0.17902842	3.1178465	21	9 9.6	19.7
477631 2010 LG_{97}	16.3	X	336.42755	16.65484	328.28731	10.05380	0.2330291	0.17468820	3.1692780	21	8 10.4	19.4
477632 2010 LT_{112}	15.5	X	60.66042	343.57222	268.61013	16.36316	0.1507876	0.18536463	3.0463851	21	8 26.0	20.0
477633 2010 LD_{118}	16.6	X	56.82447	248.90204	6.76826	9.97609	0.1915852	0.17850442	3.1239452	21	9 11.1	20.8
477634 2010 LU_{122}	15.8	X	339.66630	92.49815	286.68246	9.60955	0.0819753	0.18276498	3.0752049	21	10 3.9	19.9
477635 2010 MU	15.9	X	314.91391	145.15373	243.60195	26.11726	0.1613105	0.17371730	3.1810757	21	8 22.4	20.5
477636 2010 MQ_{6}	15.9	X	14.83657	321.58959	343.02915	19.83204	0.1998047	0.17749901	3.1357307	21	9 6.0	19.2
477637 2010 MK_{20}	15.9	X	356.12263	348.83013	348.59156	14.34629	0.0019917	0.17690866	3.1427028	21	9 8.3	20.3
477638 2010 MW_{31}	16.8	X	324.28914	228.24947	132.82547	3.21721	0.2016296	0.17317432	3.1877216	21	8 10.0	20.3
477639 2010 MC_{37}	15.9	X	21.80181	273.49632	345.75288	23.60603	0.3114529	0.17271759	3.1933388	21	8 11.4	19.2
477640 2010 MD_{41}	15.9	X	22.96670	333.61670	342.57713	14.13877	0.0492335	0.17830600	3.1262623	21	9 17.1	20.1
477641 2010 MN_{61}	16.5	X	5.56114	326.85141	356.47854	10.19392	0.2284890	0.17746374	3.1361461	21	9 16.5	19.5
477642 2010 ME_{68}	15.4	X	335.29125	341.26200	357.49098	15.00286	0.0609925	0.17091180	3.2157925	21	8 16.1	19.8
477643 2010 MO_{74}	16.7	X	327.33776	80.00605	295.63996	7.32282	0.0910118	0.17649960	3.1475567	21	9 10.9	20.8
477644 2010 MP_{77}	16.2	X	348.91656	131.18866	208.36390	4.58945	0.2072703	0.17533994	3.1614197	21	8 29.6	19.5
477645 2010 MJ_{84}	17.5	X	298.85639	249.42540	269.79605	7.68434	0.1972478	0.24305893	2.5428944	21	—	—
477646 2010 ME_{87}	15.9	X	322.21866	311.99055	345.05715	9.33723	0.0482853	0.15767289	3.3933711	21	5 29.3	20.7
477647 2010 MQ_{89}	16.1	X	320.61370	129.87045	231.15757	15.04853	0.1268526	0.17177588	3.2049993	21	8 5.6	20.4
477648 2010 MX_{89}	16.1	X	2.86678	53.41062	291.51601	14.68369	0.1029031	0.17901465	3.1180064	21	9 22.2	20.4
477649 2010 ML_{102}	15.9	X	334.96237	235.10349	112.50976	18.26897	0.0417143	0.17147412	3.2087582	21	8 26.4	20.4
477650 2010 MR_{105}	16.1	X	278.62974	236.84866	194.72000	15.67209	0.2352890	0.17186437	3.2038990	21	8 21.4	20.8
477651 2010 NZ_{31}	16.2	X	274.14807	58.42951	11.25643	10.59852	0.1385038	0.17191300	3.2032948	21	9 3.8	20.7
477652 2010 NT_{44}	17.0	X	52.15130	324.19289	33.96724	7.78583	0.0510746	0.22483092	2.6785434	21	12 27.5	20.7
477653 2010 NH_{45}	16.3	X	331.80985	193.05792	163.43814	6.69356	0.1701527	0.17224911	3.1991263	21	8 20.5	19.9
477654 2010 NG_{49}	16.7	X	13.66632	136.21616	174.34428	1.63761	0.1930125	0.17494395	3.1661884	21	9 10.9	20.2
477655 2010 NF_{61}	15.8	X	348.45263	346.37071	353.91195	18.95858	0.1859188	0.17359588	3.1825588	21	9 4.3	19.2
477656 2010 ND_{62}	16.5	X	358.83032	336.71944	3.76077	9.12656	0.0924238	0.17516097	3.1635727	21	9 18.8	20.4
477657 2010 NJ_{67}	15.8	X	326.86344	161.50051	208.46047	15.08404	0.2289124	0.17289825	3.1911140	21	8 18.9	19.5
477658 2010 NA_{69}	16.0	X	11.70199	282.11024	43.70764	15.20301	0.2045506	0.17717908	3.1395043	21	10 6.2	19.6
477659 2010 NN_{82}	16.5	X	292.83826	49.89837	14.57593	15.49714	0.1784456	0.17567707	3.1573738	21	9 18.1	20.6
477660 2010 NJ_{91}	15.5	X	306.43813	183.85566	207.42391	20.67443	0.1521228	0.17310249	3.1886033	21	8 19.9	20.0
477661 2010 NB_{98}	16.6	X	271.28541	251.54459	199.64355	12.84369	0.2583471	0.17243949	3.1967713	21	9 3.4	21.3
477662 2010 NU_{101}	16.0	X	332.28453	355.69933	11.28079	13.66702	0.0887662	0.17380382	3.1800198	21	9 14.4	20.0
477663 2010 NY_{117}	16.6	X	50.94992	76.66789	215.09743	9.90679	0.1341579	0.18869818	3.0104002	21	10 7.9	20.7
477664 2010 OE_{2}	16.0	X	282.18282	357.67007	62.90441	5.93389	0.1591332	0.16995320	3.2278733	21	8 30.1	20.4
477665 2010 OZ_{11}	15.9	X	349.78110	332.05688	8.80984	12.21261	0.1322516	0.17243034	3.1968843	21	9 7.6	19.7
477666 2010 OG_{14}	15.8	X	211.88411	166.75002	220.15983	9.29498	0.0912953	0.14708831	3.5542717	21	5 7.3	21.1
477667 2010 OG_{15}	15.8	X	270.50923	238.28610	211.13607	24.73141	0.2452221	0.17168583	3.2061199	21	8 29.9	20.9
477668 2010 OY_{43}	15.8	X	327.07173	11.43714	5.69313	16.94131	0.1297283	0.17289731	3.1911255	21	9 16.2	19.6
477669 2010 OA_{63}	16.7	X	184.53911	116.74758	49.43091	8.31648	0.1587655	0.21229480	2.7829782	21	9 29.2	21.3
477670 2010 OZ_{77}	16.2	X	254.99039	242.73845	227.24620	12.60456	0.2480727	0.17150754	3.2083414	21	9 8.2	21.3
477671 2010 OH_{85}	15.9	X	308.15000	186.84019	217.63858	15.06636	0.1270683	0.17281672	3.1921175	21	9 13.8	20.1
477672 2010 OJ_{101}	16.3	X	20.52444	75.32477	230.60728	9.53334	0.1719827	0.18408433	3.0604938	21	9 11.9	20.1
477673 2010 OT_{109}	15.2	X	227.72804	259.04489	232.57026	24.84144	0.1723865	0.17134447	3.2103766	21	9 12.3	20.7
477674 2010 OS_{115}	16.4	X	188.30948	203.32944	0.87943	17.23060	0.1280615	0.21904678	2.7254913	21	11 10.1	21.0
477675 2010 OY_{125}	16.5	X	115.22687	127.63291	83.69250	17.81097	0.1222291	0.20235645	2.8733687	21	9 23.3	21.3
477676 2010 PE_{47}	15.8	X	13.05232	283.73807	46.44741	26.60585	0.2079241	0.17567925	3.1573477	21	10 18.7	19.6
477677 2010 PS_{60}	16.5	X	313.25186	206.83750	170.36577	10.84248	0.1374718	0.17588203	3.1549203	21	8 18.9	20.5
477678 2010 PX_{80}	16.5	X	356.14337	100.79457	216.19598	11.23193	0.1254781	0.17428515	3.1741623	21	8 9.4	20.5
477679 2010 QR_{4}	15.7	X	65.77026	288.01687	335.61499	10.67396	0.1633949	0.18365542	3.0652569	21	9 23.5	20.0
477680 2010 RV_{4}	16.6	X	318.11417	269.23402	88.37971	3.06577	0.1271426	0.17247299	3.1963573	21	8 3.9	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477681 2010 RO_{8}	17.1	X	24.19226	112.29858	209.02124	3.88768	0.1061849	0.18260841	3.0769625	21	10 3.7	20.8
477682 2010 RL_{16}	15.8	X	334.61198	59.09058	303.06427	9.85835	0.0590482	0.18057451	3.1000242	21	9 5.7	19.9
477683 2010 RW_{36}	16.3	X	316.75414	152.36605	212.25822	4.06287	0.3272832	0.17228932	3.1986286	21	7 10.2	19.9
477684 2010 RP_{37}	16.2	X	321.70649	198.35304	184.47835	9.59964	0.2267301	0.17545218	3.1600712	21	8 30.3	19.7
477685 2010 RR_{48}	16.4	X	344.83176	333.73104	5.66367	9.88434	0.1623551	0.17308682	3.1887959	21	8 26.9	20.0
477686 2010 RU_{49}	16.1	X	299.55847	36.87620	5.27004	12.10500	0.0971524	0.17321486	3.1872242	21	9 9.1	20.3
477687 2010 RE_{65}	16.0	X	3.81937	336.64074	311.86720	16.21449	0.2893704	0.17501104	3.1653793	21	7 27.0	18.5
477688 2010 RT_{67}	16.6	X	15.90838	287.36094	4.09852	16.17700	0.2186517	0.17338633	3.1851225	21	8 28.9	20.1
477689 2010 RN_{69}	16.2	X	344.24486	195.38955	169.30231	7.59693	0.1587168	0.18068745	3.0987323	21	9 28.1	19.6
477690 2010 RQ_{91}	16.7	X	324.29063	163.50993	212.68222	6.74820	0.1719702	0.17693169	3.1424301	21	8 31.8	20.4
477691 2010 RV_{92}	15.4	X	357.02298	332.72512	326.65753	15.31675	0.0994795	0.17080248	3.2171645	21	7 25.4	19.4
477692 2010 RR_{96}	16.3	X	328.47519	4.31471	13.69150	11.89902	0.1219918	0.17490968	3.1666021	21	9 19.9	20.1
477693 2010 RM_{97}	15.9	X	3.76828	326.11507	7.81427	16.50724	0.2090953	0.17691067	3.1426790	21	9 26.6	19.1
477694 2010 RA_{99}	16.6	X	346.49089	161.33207	201.54559	8.60804	0.1850753	0.17831967	3.1261025	21	9 27.5	19.9
477695 2010 RV_{110}	16.3	X	298.21186	213.70932	182.68968	16.34394	0.1556320	0.17145092	3.2090476	21	8 16.4	20.6
477696 2010 RM_{111}	17.0	X	294.28334	267.04890	141.53017	1.86146	0.1793870	0.17263707	3.1943317	21	8 26.1	20.9
477697 2010 RG_{113}	16.1	X	231.60347	289.95767	208.45635	19.08189	0.1180424	0.17970839	3.1099768	21	10 7.3	20.8
477698 2010 RR_{116}	16.1	X	0.46489	299.48688	22.51426	25.15632	0.2022769	0.17343980	3.1844679	21	9 14.5	19.9
477699 2010 RA_{118}	15.3	X	116.00597	138.16544	36.32034	12.16326	0.0501244	0.16024629	3.3569438	21	7 23.9	20.4
477700 2010 RA_{124}	16.1	X	25.03039	129.81557	180.65641	26.73021	0.1804052	0.17845547	3.1245164	21	10 1.1	19.8
477701 2010 RL_{132}	15.6	X	235.89469	194.39898	268.73334	7.01533	0.1545747	0.17180917	3.2045853	21	8 23.6	20.7
477702 2010 RA_{141}	16.1	X	359.24278	303.77038	351.60072	16.22532	0.1877357	0.17187522	3.2037641	21	7 27.3	19.8
477703 2010 RB_{141}	16.4	X	305.22537	54.57716	351.33110	8.18576	0.2213740	0.17635716	3.1492513	21	9 3.7	19.9
477704 2010 RW_{143}	16.5	X	327.55869	169.37328	209.21225	10.21341	0.0491073	0.17600339	3.1534699	21	9 18.6	20.8
477705 2010 RY_{143}	16.5	X	279.04747	240.86262	205.77407	9.42155	0.1934202	0.17601726	3.1533042	21	9 18.3	20.8
477706 2010 RD_{145}	16.4	X	358.36237	330.39496	359.72097	9.80672	0.0746194	0.17290728	3.1910029	21	9 4.9	20.4
477707 2010 RO_{148}	16.4	X	354.60711	11.36723	341.93935	10.63344	0.1137980	0.17980989	3.1088063	21	9 26.4	20.2
477708 2010 RX_{149}	16.0	X	236.91385	263.59502	193.54039	9.83644	0.0801707	0.17354335	3.1832010	21	8 26.5	20.7
477709 2010 RF_{164}	16.2	X	316.49821	63.02596	351.91180	15.18743	0.1533786	0.18495875	3.0508402	21	10 9.8	19.9
477710 2010 RK_{166}	15.8	X	347.30560	171.17652	180.89317	18.06516	0.2185683	0.17696983	3.1419786	21	9 13.9	18.8
477711 2010 RB_{168}	16.0	X	273.24076	59.64949	350.53585	14.50057	0.0784595	0.17232003	3.1982486	21	8 18.4	20.5
477712 2010 RJ_{170}	16.6	X	330.87005	131.36019	218.32249	8.99836	0.0603846	0.17595762	3.1540168	21	8 15.1	20.9
477713 2010 RY_{175}	16.7	X	275.84557	99.33900	321.24576	4.34249	0.1128147	0.17082307	3.2169060	21	8 25.3	21.0
477714 2010 SV	16.7	X	298.40752	88.29405	322.25465	11.89971	0.2539941	0.17365209	3.1818720	21	8 22.2	20.7
477715 2010 SL_{6}	18.6	X	161.61888	17.14479	351.23850	4.86862	0.1893758	0.31343404	2.1463734	21	2 12.2	21.5
477716 2010 SZ_{8}	15.9	X	256.29378	139.21422	314.27111	4.16391	0.0372730	0.17754104	3.1352358	21	9 21.1	20.4
477717 2010 ST_{14}	16.3	X	297.15895	39.55799	15.56594	11.37461	0.0980996	0.17683913	3.1435265	21	9 22.1	20.5
477718 2010 SD_{15}	16.3	X	60.12100	84.97969	184.31491	26.27439	0.1107645	0.17641425	3.1485719	21	9 17.2	20.7
477719 2010 SG_{15}	25.2	X	206.74847	199.50975	182.29289	0.82798	0.4766006	0.32878047	2.0790521	21	4 11.5	29.5
477720 2010 SW_{17}	16.3	X	354.06313	128.08671	189.05191	26.68987	0.2340509	0.17298819	3.1900078	21	8 5.5	20.0
477721 2010 SW_{20}	16.2	X	297.82593	204.12745	193.61353	8.43448	0.0627701	0.17263047	3.1944131	21	8 31.4	20.6
477722 2010 SA_{21}	16.8	X	293.39334	154.45483	260.74348	1.10426	0.1084798	0.17458897	3.1704787	21	9 12.1	21.1
477723 2010 SK_{21}	16.3	X	261.82358	249.52959	192.46480	15.57249	0.1782713	0.17000192	3.2272566	21	8 22.5	21.3
477724 2010 SC_{22}	15.8	X	325.68939	344.77257	8.69364	9.50848	0.1261334	0.17198916	3.2023490	21	8 14.1	19.8
477725 2010 SN_{25}	16.3	X	288.34686	33.49199	11.89125	5.08487	0.1657218	0.17114252	3.2129017	21	8 17.1	20.5
477726 2010 SN_{26}	16.0	X	335.46217	333.29659	13.93574	18.45413	0.1792415	0.17295915	3.1903649	21	8 24.5	19.9
477727 2010 SY_{31}	16.5	X	266.59799	2.56883	62.26665	4.94148	0.1010520	0.17076497	3.2176356	21	8 23.3	21.1
477728 2010 TX_{3}	16.5	X	310.85424	43.50778	353.56045	9.18525	0.1033866	0.17452076	3.1713048	21	9 15.8	20.4
477729 2010 TP_{12}	16.0	X	239.52716	293.15737	203.93652	26.20439	0.1792010	0.17971978	3.1098454	21	10 7.6	20.8
477730 2010 TV_{34}	16.3	X	229.46933	86.11930	33.13876	9.55057	0.0372852	0.17405313	3.1769825	21	9 25.1	20.9
477731 2010 TX_{44}	15.8	X	179.17133	86.12607	19.78974	10.27095	0.0908520	0.15561283	3.4232540	21	7 9.3	21.2
477732 2010 TK_{69}	16.1	X	335.66416	3.80330	3.29903	9.27427	0.0850565	0.17586626	3.1551090	21	9 17.5	20.0
477733 2010 TU_{69}	16.4	X	0.11175	144.65584	186.39764	12.20574	0.1447433	0.17802799	3.1295161	21	9 8.3	20.1
477734 2010 TL_{77}	16.6	X	327.99594	160.92039	197.91145	10.56488	0.0734045	0.17006051	3.2265153	21	8 22.1	21.0
477735 2010 TC_{80}	16.6	X	261.97616	257.71277	187.58967	10.01180	0.0793871	0.17237020	3.1976279	21	9 11.8	21.2
477736 2010 TT_{88}	16.9	X	326.40601	272.28965	94.94784	2.67950	0.1373126	0.17317446	3.1877200	21	8 30.2	20.7
477737 2010 TZ_{99}	16.2	X	243.73997	276.39358	188.94952	22.05002	0.1043705	0.17364719	3.1819319	21	9 10.8	21.1
477738 2010 TR_{107}	16.3	X	18.93608	294.40004	17.57753	8.97105	0.0918085	0.17404030	3.1771386	21	9 14.4	20.3
477739 2010 TV_{121}	16.1	X	324.75837	344.62746	43.06905	10.20715	0.0754117	0.17706977	3.1407962	21	10 1.3	20.2
477740 2010 TW_{138}	15.5	X	198.29957	297.89605	218.53195	32.23683	0.0818106	0.17230100	3.1984841	21	9 23.6	20.7
477741 2010 TF_{141}	16.4	X	287.18068	48.73404	6.57858	9.64195	0.0601696	0.17003944	3.2267818	21	9 12.4	20.9
477742 2010 TG_{142}	15.8	X	322.22936	158.45672	240.82416	10.07443	0.0320989	0.17599189	3.1536073	21	10 7.6	20.2
477743 2010 TX_{166}	16.6	X	258.24093	117.63898	338.68493	8.04872	0.0599742	0.17461838	3.1701228	21	9 23.2	21.0
477744 2010 TX_{177}	15.6	X	315.45351	287.17706	53.95953	21.87197	0.2587344	0.16722817	3.2628448	21	6 15.0	19.7
477745 2010 TW_{179}	16.6	X	22.93911	285.98104	20.61177	9.12399	0.0833523	0.17418348	3.1753973	21	9 13.0	20.7
477746 2010 UL_{9}	16.1	X	224.06831	120.72342	35.74495	26.75205	0.1924028	0.17517743	3.1633745	21	10 19.1	21.2
477747 2010 UR_{65}	15.7	X	132.42286	338.02518	236.47714	17.47750	0.1723510	0.17235357	3.1978337	21	9 30.1	21.2
477748 2010 VB_{32}	15.7	X	264.62515	273.91869	174.78063	4.52689	0.1077525	0.16901469	3.2398115	21	9 16.2	20.2
477749 2010 VY_{42}	16.7	X	334.75744	40.16874	318.35487	2.64696	0.0963261	0.17018559	3.2249342	21	9 2.2	20.8
477750 2010 VE_{44}	16.2	X	38.23335	68.86620	229.61867	13.69494	0.1311574	0.17379158	3.1801692	21	9 23.4	20.5
477751 2010 VE_{46}	18.8	X	128.04748	174.70524	260.57891	2.49755	0.1009664	0.31446737	2.1416689	21	3 20.9	21.2
477752 2010 VY_{120}	17.1	X	292.41565	308.35906	183.36670	3.93245	0.1095552	0.18352110	3.0667524	21	12 18.3	21.0
477753 2010 VN_{129}	15.7	X	272.60612	82.58818	57.39795	19.76031	0.1830096	0.18273560	3.0755345	21	11 19.9	19.8
477754 2010 VS_{214}	16.3	X	297.81407	108.37788	310.02940	8.63395	0.0587231	0.17515854	3.1636020	21	9 25.1	20.7
477755 2010 VX_{215}	16.1	X	95.94630	218.50483	36.93406	11.09985	0.0560023	0.17303215	3.1894674	21	10 9.4	20.7
477756 2010 WK_{5}	18.8	X	201.05183	58.01770	309.24314	2.17256	0.1667850	0.31970302	2.1182224	21	3 16.9	22.1
477757 2010 WM_{67}	18.3	X	125.77416	339.27308	54.50239	4.95905	0.1639518	0.30459533	2.1876972	21	2 2.2	20.8
477758 2010 WW_{69}	18.0	X	174.51647	286.98333	74.86963	4.85085	0.1310814	0.30886676	2.1674808	21	2 13.1	21.0
477759 2010 WD_{73}	18.6	X	148.59389	110.76481	284.40109	0.35434	0.1399735	0.30998135	2.1622820	21	2 26.8	21.1
477760 2010 XU_{47}	16.5	X	248.01512	274.00266	207.42860	8.00678	0.1995316	0.17173770	3.2054742	21	9 23.8	21.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477761 2010 XW_{51}	15.8	X	287.71903	239.16448	221.78907	13.61959	0.2328920	0.17397593	3.1779223	21	10 12.6	20.0
477762 2010 XZ_{67}	19.7	X	196.91835	169.13265	280.23685	11.85324	0.4945481	0.33340845	2.0597680	21	6 26.8	23.8
477763 2010 YJ_{2}	15.6	X	275.06566	64.18726	85.97310	27.63852	0.1574845	0.17535864	3.1611949	21	12 9.9	19.8
477764 2011 AV_{18}	18.7	X	127.50568	78.64163	6.03100	3.64504	0.1680326	0.30931214	2.1653997	21	4 14.1	21.5
477765 2011 AH_{20}	18.2	X	114.63066	110.94974	331.33927	5.42407	0.1721219	0.30590671	2.1814406	21	3 24.6	20.8
477766 2011 AQ_{24}	16.1	X	254.77333	229.05454	284.53106	7.61596	0.1913624	0.16907093	3.2390930	21	11 8.8	20.9
477767 2011 AD_{28}	17.8	X	75.48410	84.46228	321.48402	6.57105	0.0933328	0.28399762	2.2922373	21	—	—
477768 2011 AY_{37}	18.5	X	76.67012	27.65068	53.27761	3.79061	0.0759877	0.29408884	2.2394963	21	1 10.9	20.7
477769 2011 AO_{39}	18.9	X	129.73121	68.29350	357.48852	3.36981	0.1530964	0.30678044	2.1772967	21	3 20.1	21.4
477770 2011 AJ_{54}	17.8	X	244.31058	261.36004	299.88189	9.50185	0.1205827	0.27146448	2.3622583	21	—	—
477771 2011 AR_{56}	18.5	X	14.40638	151.20521	307.86214	1.71323	0.1588446	0.28136812	2.3064964	21	—	—
477772 2011 AK_{62}	17.5	X	216.14665	277.23244	336.53589	6.35005	0.0943687	0.27907664	2.3191049	21	—	—
477773 2011 AS_{66}	18.4	X	50.42496	143.42473	305.46551	4.51460	0.0994447	0.28750838	2.2735388	21	—	—
477774 2011 AU_{68}	18.5	X	64.32879	190.61206	292.66201	4.02852	0.0983154	0.29768471	2.2214252	21	2 20.4	20.5
477775 2011 BR_{3}	18.3	X	125.23074	322.40888	107.85138	5.68327	0.0941776	0.30491287	2.1861781	21	3 14.7	20.9
477776 2011 BS_{4}	17.9	X	303.74894	1.85726	128.92487	6.23461	0.0726916	0.27078787	2.3661916	21	—	—
477777 2011 BP_{8}	18.8	X	146.99772	354.26645	60.49363	1.41330	0.1646147	0.30859055	2.1687740	21	3 27.7	21.5
477778 2011 BK_{26}	18.0	X	87.58450	308.56707	106.89392	6.84546	0.1273652	0.29210219	2.2496390	21	—	—
477779 2011 BQ_{26}	17.9	X	68.96804	99.35507	331.83654	2.74442	0.1290844	0.29057093	2.2575356	21	—	—
477780 2011 BE_{33}	17.9	X	114.96838	277.01796	136.16823	6.05832	0.1237430	0.29606147	2.2295376	21	2 7.4	20.1
477781 2011 BD_{36}	18.3	X	94.82694	220.09164	267.77285	1.37507	0.0787430	0.30727745	2.1749482	21	4 16.7	20.4
477782 2011 BY_{40}	15.5	X	157.82439	250.25628	193.44467	2.56999	0.1688296	0.12449168	3.9723043	21	5 25.5	21.8
477783 2011 BV_{51}	18.0	X	121.44257	94.74664	342.81189	3.89736	0.0768296	0.30307266	2.1950186	21	3 13.8	20.5
477784 2011 BD_{54}	17.9	X	334.74987	247.06317	328.40195	4.09085	0.0992489	0.29540461	2.2328414	21	2 3.7	20.4
477785 2011 BZ_{56}	17.8	X	273.27804	49.20255	183.99104	6.80388	0.0741102	0.28355881	2.2946015	21	—	—
477786 2011 BS_{57}	17.7	X	208.78470	255.91588	343.53735	3.00184	0.1364892	0.26753646	2.3853241	21	—	—
477787 2011 BU_{70}	15.9	X	157.49895	204.45347	239.76359	4.01368	0.1355057	0.12369603	3.9893200	21	5 24.1	22.1
477788 2011 BJ_{76}	17.6	X	189.21178	340.37978	309.10091	5.58131	0.1512564	0.27264797	2.3554174	21	—	—
477789 2011 BW_{86}	17.9	X	220.21592	279.55951	285.80155	1.35777	0.1300154	0.26371778	2.4082955	21	12 29.7	21.1
477790 2011 BM_{93}	18.6	X	89.48794	221.25855	254.62804	2.14573	0.1630874	0.30299963	2.1953713	21	4 4.8	20.8
477791 2011 BL_{103}	17.2	X	150.06729	122.59417	161.45175	15.93559	0.2402716	0.26034686	2.4290390	21	—	—
477792 2011 BS_{104}	18.1	X	308.56897	6.76755	154.00790	6.80837	0.0560498	0.27299880	2.3533989	21	—	—
477793 2011 BP_{108}	18.4	X	37.72891	205.24102	309.82841	4.81961	0.0756391	0.29660661	2.2268049	21	2 20.5	20.5
477794 2011 BG_{112}	18.2	X	151.89068	205.12769	176.56859	7.16565	0.1772302	0.29496896	2.2350393	21	2 18.2	21.3
477795 2011 CZ_{33}	15.6	X	141.26691	338.44629	124.26074	4.86111	0.1641261	0.12780103	3.9034308	21	6 2.1	21.7
477796 2011 CQ_{46}	17.0	X	162.02380	237.58274	317.44909	29.77290	0.3956095	0.23827801	2.5767962	21	9 23.3	22.6
477797 2011 CJ_{55}	18.1	X	338.04027	251.05347	321.23037	2.55700	0.0407525	0.29577170	2.2309935	21	2 12.7	20.6
477798 2011 CM_{67}	17.8	X	348.12497	233.52323	304.99119	6.82991	0.0938369	0.29095745	2.2555358	21	1 4.5	20.4
477799 2011 CH_{77}	18.3	X	115.29655	39.05986	28.74309	5.29639	0.1179484	0.29782887	2.2207083	21	3 1.7	20.8
477800 2011 CY_{80}	17.7	X	55.58466	120.02783	306.52155	4.95314	0.1096024	0.27987642	2.3146847	21	—	—
477801 2011 CU_{85}	18.4	X	19.27260	239.30066	257.26513	1.95728	0.1626434	0.28786301	2.2716712	21	—	—
477802 2011 CB_{91}	17.5	X	193.82643	310.74410	297.67441	5.84710	0.0941276	0.26394141	2.4069350	21	—	—
477803 2011 CQ_{91}	15.4	X	157.88229	236.78014	214.08832	2.62502	0.1568059	0.12537030	3.9537232	21	6 2.2	21.6
477804 2011 CK_{103}	17.8	X	230.82860	277.48238	316.42571	7.19199	0.0713942	0.27060563	2.3672538	21	—	—
477805 2011 CE_{116}	18.4	X	174.16552	358.24028	248.36796	1.68880	0.1680912	0.25570623	2.4583394	21	12 27.0	22.2
477806 2011 DA_{5}	17.1	X	311.55147	229.51769	281.33577	9.83163	0.1106051	0.27149529	2.3620795	21	—	—
477807 2011 DC_{9}	16.8	X	295.77029	123.12442	93.27399	10.44277	0.1699973	0.27938958	2.3173728	21	—	—
477808 2011 DY_{9}	18.1	X	350.85697	135.55381	33.37530	2.37546	0.1410781	0.28236849	2.3010456	21	—	—
477809 2011 DX_{17}	17.8	X	307.04042	54.25993	139.79594	5.63063	0.1641967	0.27807298	2.3246818	21	—	—
477810 2011 DX_{23}	18.2	X	22.92835	28.05251	77.97172	3.85823	0.1613138	0.27751006	2.3278245	21	—	—
477811 2011 DH_{44}	17.7	X	90.65169	85.48416	348.95963	7.43666	0.0773689	0.28885609	2.2664616	21	1 27.7	20.1
477812 2011 DV_{47}	17.2	X	9.88922	213.69545	327.57053	7.19435	0.0433026	0.29338322	2.2430857	21	2 16.6	19.4
477813 2011 EA_{3}	17.6	X	6.39915	191.63650	331.99898	4.21157	0.0628635	0.28564983	2.2833899	21	1 17.6	19.9
477814 2011 EX_{6}	17.8	X	319.92453	260.48213	300.20903	5.41894	0.1451689	0.28460127	2.2889949	21	—	—
477815 2011 ED_{9}	17.7	X	144.62335	250.51511	334.62355	4.04437	0.1304819	0.24092321	2.5579004	21	11 1.2	21.8
477816 2011 EE_{21}	15.4	X	152.72771	62.41382	43.55390	4.24196	0.1859425	0.12623810	3.9355832	21	6 16.1	21.6
477817 2011 EY_{25}	17.6	X	189.01828	225.72596	66.60280	3.56973	0.2202356	0.26793124	2.3829804	21	—	—
477818 2011 EP_{26}	18.2	X	18.59960	342.28397	124.67006	2.59623	0.1322215	0.27768212	2.3268628	21	—	—
477819 2011 EA_{32}	17.8	X	213.30564	65.54923	174.26048	7.82856	0.1719167	0.26274766	2.4142198	21	—	—
477820 2011 EC_{36}	17.7	X	343.74585	187.99116	4.62167	5.77972	0.1166103	0.28557085	2.2838108	21	1 16.5	20.2
477821 2011 EH_{36}	17.4	X	56.56001	238.97324	159.35380	6.26390	0.0998867	0.26645463	2.3917762	21	—	—
477822 2011 EB_{37}	18.0	X	77.13062	82.55342	6.95213	5.39562	0.1054861	0.28668458	2.2778922	21	1 30.8	20.2
477823 2011 EC_{42}	17.1	X	76.30629	301.18866	126.78325	7.27092	0.0670957	0.28026276	2.3125570	21	—	—
477824 2011 EA_{45}	17.1	X	89.56891	38.05351	21.99329	8.14270	0.1400074	0.28465205	2.2887227	21	1 14.5	19.4
477825 2011 EL_{50}	17.6	X	89.96877	9.94374	88.70832	7.94657	0.0726501	0.29368903	2.2415284	21	3 2.8	20.1
477826 2011 EB_{51}	16.8	X	130.84067	104.61291	141.07519	28.63080	0.3743999	0.23443566	2.6048753	21	11 27.3	22.4
477827 2011 EU_{52}	16.8	X	123.08928	84.58922	162.37087	12.21121	0.3015128	0.23298546	2.6156733	21	11 17.5	21.7
477828 2011 EW_{60}	16.9	X	124.50238	186.62803	70.69220	8.83061	0.1669157	0.24261179	2.5460178	21	11 24.9	20.9
477829 2011 EJ_{67}	17.6	X	314.90968	289.86597	275.19226	1.25351	0.1588242	0.28074251	2.3099217	21	—	—
477830 2011 EG_{69}	17.8	X	28.57867	66.30537	72.03458	4.14457	0.1138641	0.28536314	2.2849190	21	1 12.8	19.9
477831 2011 EL_{71}	17.5	X	120.32780	3.64831	44.33612	7.66472	0.1032208	0.28243637	2.3006769	21	2 10.9	20.3
477832 2011 EW_{75}	17.8	X	341.21765	188.46064	349.00068	3.20774	0.1083047	0.28337386	2.2955999	21	—	—
477833 2011 ET_{85}	17.4	X	1.38203	28.36656	106.92503	8.30575	0.1111305	0.27839287	2.3229007	21	—	—
477834 2011 FZ_{4}	17.5	X	308.74180	345.56114	152.17191	12.32428	0.1378285	0.26500557	2.4004871	21	—	—
477835 2011 FH_{6}	17.4	X	17.15231	100.87669	82.28588	7.64747	0.0711385	0.29098720	2.2553821	21	3 6.1	19.8
477836 2011 FF_{7}	17.7	X	326.17609	151.46037	10.31093	4.18285	0.1308538	0.27381336	2.3487293	21	—	—
477837 2011 FN_{19}	17.6	X	110.66499	189.65835	42.00612	9.20516	0.2228199	0.22772940	2.6557671	21	10 15.9	21.9
477838 2011 FR_{36}	17.5	X	329.05878	108.76477	51.48212	5.07979	0.1110476	0.27258301	2.3557915	21	—	—
477839 2011 FL_{40}	17.5	X	295.19388	93.84420	106.31675	2.32548	0.1384982	0.27119164	2.3638424	21	—	—
477840 2011 FX_{40}	18.2	X	291.37243	227.97729	341.34643	4.70272	0.0658844	0.27298622	2.3534713	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477841 2011 FS_{45}	17.7	X	351.08087	42.15519	118.04086	3.23290	0.1340489	0.27694031	2.3310161	21	—	—
477842 2011 FL_{55}	16.9	X	304.50134	91.20198	94.00137	9.27611	0.0596879	0.27177733	2.3604451	21	—	—
477843 2011 FJ_{70}	17.5	X	224.07354	174.85752	40.24588	5.99233	0.1428318	0.25939506	2.4349773	21	—	—
477844 2011 FO_{76}	18.1	X	182.37892	136.95798	150.36604	3.72673	0.1155806	0.26534579	2.3984348	21	—	—
477845 2011 FJ_{81}	18.1	X	357.46450	339.47435	157.66261	2.03261	0.1500520	0.27718443	2.3296472	21	—	—
477846 2011 FY_{100}	18.5	X	71.12033	176.97723	286.98405	1.64210	0.1272810	0.28783002	2.2718448	21	2 10.2	20.5
477847 2011 FH_{129}	17.1	X	155.56712	199.41282	28.54798	16.14056	0.1058807	0.24493438	2.5298972	21	11 14.1	21.0
477848 2011 FJ_{137}	18.2	X	96.62641	77.05712	356.29759	7.58755	0.1696392	0.29110296	2.2547841	21	2 18.7	20.4
477849 2011 FH_{152}	18.6	X	67.26284	319.48292	48.50130	17.14394	0.1428358	0.44435462	1.7007856	21	—	—
477850 2011 FC_{153}	17.4	X	354.47430	174.51685	335.47722	4.73724	0.0633133	0.27996619	2.3141899	21	—	—
477851 2011 GT_{27}	17.3	X	238.25415	102.60274	145.19743	14.66645	0.1660718	0.26551262	2.3974300	21	—	—
477852 2011 GZ_{28}	17.0	X	67.22361	128.34682	167.68578	12.16115	0.2681161	0.23113046	2.6296499	21	11 28.5	21.3
477853 2011 GN_{36}	18.0	X	358.40689	326.86467	206.34989	11.20935	0.1864611	0.28217543	2.3020950	21	—	—
477854 2011 GJ_{47}	17.2	X	80.06367	236.97036	40.10503	17.27948	0.2185222	0.22551987	2.6730854	21	11 8.6	21.3
477855 2011 GR_{48}	18.5	X	248.09927	269.80606	311.69888	1.05902	0.0906292	0.26326436	2.4110599	21	—	—
477856 2011 GC_{49}	18.0	X	136.43469	232.70312	21.60387	7.47560	0.1674141	0.23956059	2.5675907	21	11 29.5	22.3
477857 2011 GQ_{49}	18.0	X	252.53247	212.31741	27.32587	3.60729	0.1113854	0.26794193	2.3829171	21	—	—
477858 2011 GV_{57}	16.7	X	125.49649	230.95157	30.73196	32.21931	0.3558744	0.23338069	2.6127194	21	11 24.2	22.1
477859 2011 GU_{58}	17.6	X	174.11972	4.71622	202.34284	8.24857	0.1014852	0.23971457	2.5664911	21	11 10.9	21.5
477860 2011 GH_{61}	17.3	X	112.29964	206.77696	73.61500	12.22368	0.1892048	0.23782843	2.5800425	21	12 11.4	21.6
477861 2011 GE_{69}	16.8	X	19.55900	357.93657	140.48658	26.16531	0.2162865	0.28051906	2.3111482	21	—	—
477862 2011 HD_{10}	17.8	X	18.02803	341.54580	159.94583	8.34909	0.1462878	0.27948472	2.3168469	21	—	—
477863 2011 HM_{10}	18.2	X	29.76244	96.20488	39.09687	6.51632	0.0874454	0.28265115	2.2995113	21	1 14.1	20.6
477864 2011 HE_{12}	17.4	X	151.36102	216.20995	84.38504	4.79828	0.1604609	0.25321152	2.4744599	21	—	—
477865 2011 HC_{21}	17.4	X	130.01623	323.89706	324.65679	3.88151	0.1553677	0.24380983	2.5376705	21	—	—
477866 2011 HN_{22}	17.2	X	246.55767	192.00362	75.43205	6.37278	0.0353112	0.27180720	2.3602722	21	1 3.9	20.4
477867 2011 HY_{24}	17.5	X	112.34586	69.09122	172.39179	15.24273	0.1512748	0.22667826	2.6639709	21	10 25.4	21.8
477868 2011 HV_{25}	17.2	X	294.29538	17.70978	147.66610	8.28386	0.0539044	0.25857851	2.4401008	21	—	—
477869 2011 HZ_{30}	17.0	X	300.03095	99.50125	97.68803	7.41225	0.0719157	0.26655145	2.3911970	21	—	—
477870 2011 HO_{37}	16.7	X	54.77138	245.80643	68.90692	14.76835	0.1463947	0.22966695	2.6408093	21	11 21.6	20.4
477871 2011 HC_{40}	16.9	X	111.68489	235.67571	59.68430	17.54716	0.1591966	0.24141293	2.5544399	21	12 27.1	21.1
477872 2011 HC_{42}	16.9	X	157.75231	136.38391	77.25266	13.15829	0.0526385	0.23239566	2.6200970	21	11 5.2	20.8
477873 2011 HZ_{49}	17.2	X	139.05317	115.29300	123.08883	5.91516	0.2335976	0.23303795	2.6152806	21	11 16.2	21.8
477874 2011 HN_{52}	17.0	X	152.91052	49.43657	178.01690	13.40334	0.1111073	0.23407272	2.6075672	21	11 15.3	21.2
477875 2011 HD_{56}	17.1	X	180.74575	145.34124	57.31252	12.20579	0.1126239	0.23847399	2.5753843	21	11 11.5	21.1
477876 2011 HO_{56}	17.5	X	138.91884	84.42300	177.67884	7.19380	0.1803765	0.23822090	2.5772081	21	12 12.7	21.8
477877 2011 HE_{64}	17.5	X	117.48840	26.38341	216.59036	11.27466	0.1309354	0.22841132	2.6504786	21	10 27.9	21.5
477878 2011 HW_{65}	18.0	X	293.97745	130.37746	88.33361	3.56798	0.1052698	0.27562245	2.3384405	21	—	—
477879 2011 HC_{66}	17.5	X	102.21717	201.11968	43.45468	8.89062	0.2253015	0.22788601	2.6545502	21	10 23.7	21.7
477880 2011 HX_{66}	17.6	X	99.39062	197.56316	91.31527	7.49714	0.1825831	0.23243239	2.6198210	21	12 9.8	21.8
477881 2011 HA_{80}	17.6	X	108.56084	113.44608	180.48373	7.34972	0.1959872	0.23484841	2.6018223	21	12 24.2	22.0
477882 2011 HS_{84}	17.4	X	252.82623	5.06317	228.13618	6.63629	0.1168430	0.26250290	2.4157203	21	—	—
477883 2011 HQ_{97}	17.3	X	213.37271	304.31409	325.88498	6.15442	0.0963444	0.26461444	2.4028520	21	—	—
477884 2011 JO_{6}	17.7	X	244.87282	137.11920	55.66297	5.74757	0.0776220	0.25497560	2.4630334	21	—	—
477885 2011 JT_{9}	17.1	X	72.51150	185.25822	118.96673	19.06723	0.5196485	0.22312084	2.6922122	21	12 29.7	22.4
477886 2011 JA_{13}	16.4	X	133.05037	185.32915	93.09969	19.13094	0.2342519	0.23859392	2.5745211	21	12 26.9	20.8
477887 2011 JS_{13}	16.9	X	119.15260	181.69712	90.23665	16.36129	0.1154551	0.23618275	2.5920135	21	12 5.8	20.9
477888 2011 JX_{17}	17.2	X	141.03040	147.95769	98.40177	7.75180	0.1938060	0.23457804	2.6038211	21	11 26.3	21.6
477889 2011 JX_{20}	17.7	X	359.49662	92.82761	75.58516	7.70200	0.0569831	0.27579934	2.3374405	21	1 17.3	20.3
477890 2011 JP_{21}	17.7	X	141.29334	40.01654	199.48338	4.48015	0.1118646	0.23938255	2.5688637	21	11 17.4	21.6
477891 2011 JH_{22}	17.4	X	86.18115	114.04741	176.05090	11.49923	0.1882563	0.22957520	2.6415129	21	11 30.5	21.7
477892 2011 JE_{27}	17.0	X	118.15545	169.40458	87.90611	15.28784	0.2218437	0.23159878	2.6261037	21	11 22.9	21.5
477893 2011 KL_{1}	16.7	X	113.89008	166.13119	94.03351	9.50509	0.1012267	0.23062886	2.6334614	21	11 15.5	20.7
477894 2011 KW_{3}	16.9	X	142.13519	213.78760	81.50479	7.27746	0.2607871	0.24198491	2.5504131	21	—	—
477895 2011 KU_{4}	17.2	X	143.38393	186.11967	73.08358	9.97438	0.1343884	0.23783369	2.5800045	21	12 12.3	21.1
477896 2011 KB_{6}	17.6	X	330.11856	289.91622	239.56941	2.73645	0.1024386	0.26970051	2.3725473	21	—	—
477897 2011 KP_{6}	16.9	X	193.55829	321.10888	233.13318	12.04976	0.0842242	0.23773645	2.5807080	21	11 15.7	20.5
477898 2011 KM_{9}	16.4	X	146.15207	149.81201	100.47250	16.49725	0.2050092	0.23541127	2.5976734	21	12 6.1	20.9
477899 2011 KP_{11}	16.8	X	116.05778	192.54635	77.06105	15.80520	0.2257816	0.23155790	2.6264127	21	12 3.4	21.1
477900 2011 KX_{11}	16.3	X	207.97530	295.54186	244.52747	21.15190	0.0640281	0.23527410	2.5986830	21	11 15.6	19.9
477901 2011 KL_{23}	17.5	X	203.80620	350.08619	187.08442	7.92233	0.1679093	0.23699228	2.5861076	21	10 30.1	21.5
477902 2011 KT_{24}	17.2	X	338.73018	86.89560	69.81280	8.03165	0.0665455	0.26644746	2.3918191	21	—	—
477903 2011 KF_{27}	17.6	X	278.32488	128.10430	81.67004	5.60542	0.1668680	0.26374750	2.4081146	21	—	—
477904 2011 KQ_{27}	17.3	X	102.70519	38.95091	241.38203	10.54979	0.1586153	0.23041374	2.6351002	21	11 30.4	21.5
477905 2011 KX_{29}	17.6	X	170.51645	340.39590	259.84554	4.28347	0.1825243	0.24123343	2.5557070	21	12 13.2	21.6
477906 2011 KY_{30}	17.1	X	97.18107	89.23242	228.85289	10.45191	0.2590836	0.23408607	2.6074681	21	—	—
477907 2011 KW_{32}	16.8	X	22.76673	275.43913	80.40291	7.94794	0.1911455	0.22542871	2.6738061	21	12 6.6	19.9
477908 2011 KS_{45}	17.6	X	131.48586	105.43764	167.24085	11.00936	0.1683555	0.23608718	2.5927130	21	12 18.5	22.0
477909 2011 LF_{4}	17.4	X	119.79717	92.76897	218.16549	10.72896	0.1995502	0.24103832	2.5570859	21	—	—
477910 2011 LF_{6}	17.8	X	314.30665	339.67469	205.70697	4.42768	0.1441954	0.26707620	2.3880638	21	—	—
477911 2011 LY_{10}	16.8	X	84.50344	189.26411	110.30671	15.35762	0.2486412	0.22674695	2.6634328	21	12 14.8	21.2
477912 2011 LO_{17}	17.6	X	350.21366	46.71609	256.78001	15.59130	0.4741340	0.19580587	2.9371012	21	6 11.2	18.4
477913 2011 LG_{25}	17.2	X	200.70841	348.65222	203.66676	7.44559	0.1350635	0.23869175	2.5738176	21	11 17.4	21.0
477914 2011 ML_{5}	16.4	X	128.55007	42.45679	253.57231	31.62787	0.1733199	0.23476455	2.6024419	21	—	—
477915 2011 NO	16.7	X	137.96346	62.65004	224.72950	16.65082	0.2252527	0.23606181	2.5928987	21	—	—
477916 2011 OE_{1}	17.3	X	18.01190	70.57047	240.58584	6.00785	0.3451675	0.20531187	2.8457277	21	10 17.9	20.0
477917 2011 OK_{1}	16.5	X	81.58500	7.14756	302.39435	15.33731	0.3417487	0.22197843	2.7014413	21	12 30.2	21.4
477918 2011 PK_{2}	16.3	X	112.66800	201.00692	304.03706	16.12367	0.1515623	0.17836291	3.1255973	21	6 23.4	21.2
477919 2011 PR_{8}	16.5	X	257.95393	126.82890	337.04518	24.25765	0.1317752	0.20061126	2.8900089	21	9 18.6	20.8
477920 2011 PO_{13}	16.4	X	65.29491	349.25225	331.14872	16.55929	0.1586242	0.21722608	2.7406994	21	12 7.7	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
477921 2011 QN_{10}	16.7	X	173.85499	263.08026	323.54799	11.89933	0.0647940	0.21786723	2.7353198	21	11 30.6	21.0
477922 2011 QY_{18}	16.9	X	129.20455	126.31312	163.26577	14.32241	0.1186353	0.22591695	2.6699523	21	—	—
477923 2011 QV_{23}	16.7	X	327.37253	35.58539	330.85056	7.10988	0.0678018	0.19566385	2.9385223	21	9 4.9	20.3
477924 2011 QQ_{24}	16.6	X	95.54026	278.16687	338.10144	9.23621	0.0516671	0.20409440	2.8570334	21	10 6.8	20.7
477925 2011 QK_{29}	16.4	X	329.08585	1.71762	342.58532	9.80354	0.0778797	0.19131240	2.9829133	21	8 10.9	20.2
477926 2011 QL_{36}	17.0	X	46.81362	193.51402	158.43808	4.80956	0.0791172	0.21501892	2.7594229	21	12 15.3	20.7
477927 2011 QG_{46}	17.5	X	152.41016	169.50070	6.20898	20.23860	0.0756767	0.39580233	1.8371748	21	9 24.1	19.2
477928 2011 QS_{48}	17.3	X	133.96626	276.02314	342.97782	8.10808	0.1341273	0.21860464	2.7291650	21	11 29.2	21.8
477929 2011 QM_{55}	17.0	X	86.53591	10.48904	289.19799	7.15329	0.1823891	0.21538028	2.7563356	21	12 7.8	21.3
477930 2011 QZ_{57}	16.8	X	293.20823	96.15958	300.54676	9.17966	0.1206081	0.19255414	2.9700755	21	8 16.8	20.6
477931 2011 QX_{58}	16.4	X	92.77705	339.00346	304.58562	8.21273	0.1145222	0.21479028	2.7613808	21	11 16.2	20.6
477932 2011 QN_{62}	16.8	X	167.58610	256.62215	327.35803	7.67696	0.0935372	0.21521837	2.7577178	21	11 18.8	21.2
477933 2011 QZ_{63}	17.2	X	143.89565	334.57568	276.31063	7.97795	0.0897939	0.21927078	2.7236348	21	11 29.7	21.4
477934 2011 QC_{67}	15.3	X	306.39178	57.77428	267.05452	21.91608	0.1983573	0.18029340	3.1032457	21	5 22.0	19.6
477935 2011 QD_{74}	16.9	X	303.09834	127.41271	238.58612	1.33400	0.1120761	0.18847360	3.0127912	21	7 24.3	20.9
477936 2011 QQ_{74}	17.4	X	28.39027	33.31689	346.43326	2.70793	0.1027403	0.21487089	2.7606901	21	12 29.6	21.0
477937 2011 QU_{78}	16.8	X	39.21641	359.73288	346.27781	8.39079	0.1357045	0.21157196	2.7893134	21	12 3.8	20.6
477938 2011 QM_{82}	16.4	X	316.31611	38.94640	349.85215	8.81056	0.1055982	0.20005835	2.8953313	21	9 15.7	19.8
477939 2011 QH_{83}	16.5	X	67.59223	324.07085	349.34298	9.81762	0.1119972	0.21390206	2.7690199	21	11 23.9	20.6
477940 2011 QF_{88}	17.2	X	322.65062	295.26419	50.98302	1.87352	0.2110409	0.18947897	3.0021246	21	7 16.6	20.3
477941 2011 QM_{88}	16.9	X	329.92274	42.00780	334.08515	1.11046	0.0692688	0.19859749	2.9095124	21	9 22.6	20.6
477942 2011 QJ_{93}	16.6	X	77.61424	331.75694	337.90209	14.29355	0.0586163	0.21128656	2.7918246	21	11 22.3	20.8
477943 2011 QH_{94}	16.9	X	258.79046	106.32837	313.06728	8.98229	0.1226953	0.18704792	3.0280808	21	8 2.4	21.3
477944 2011 QQ_{94}	17.6	X	21.33898	56.53770	323.89725	6.57662	0.2345490	0.21086202	2.7955706	21	—	—
477945 2011 QV_{94}	16.4	X	174.57541	148.39356	310.04296	8.65226	0.0249729	0.17789095	3.1311232	21	6 23.2	21.0
477946 2011 QY_{94}	17.6	X	48.32083	44.65787	236.64187	2.23432	0.0901617	0.19794969	2.9158566	21	9 15.7	21.4
477947 2011 QB_{97}	16.9	X	85.75243	279.93271	11.50568	4.32878	0.0435798	0.20892101	2.8128590	21	11 10.1	20.9
477948 2011 QF_{98}	16.2	X	258.73443	267.43720	158.03661	26.04373	0.2600467	0.18342411	3.0678333	21	7 22.6	21.3
477949 2011 RM_{4}	16.7	X	17.52231	253.33655	78.54155	3.25488	0.0928340	0.19830666	2.9123564	21	10 10.3	20.3
477950 2011 RT_{11}	16.1	X	259.05084	94.56371	295.47907	6.63533	0.0363839	0.17941978	3.1133110	21	7 7.9	20.4
477951 2011 RE_{12}	16.5	X	350.73481	244.31794	181.32852	15.47616	0.1988653	0.21090043	2.7952312	21	—	—
477952 2011 RL_{12}	16.6	X	47.91615	356.48791	355.75271	15.97580	0.1725164	0.21268867	2.7795414	21	12 31.3	20.8
477953 2011 RX_{12}	17.2	X	82.60967	157.66901	177.45383	6.48551	0.0604766	0.22005357	2.7171718	21	—	—
477954 2011 RW_{15}	16.6	X	181.58981	285.26308	283.85047	8.84652	0.1099847	0.21769608	2.7367533	21	11 14.9	20.9
477955 2011 RS_{17}	16.5	X	226.22790	245.82331	193.79588	9.08247	0.0708843	0.18350925	3.0668845	21	7 24.9	21.3
477956 2011 RT_{18}	16.8	X	229.16529	42.33846	13.19515	10.06677	0.0882355	0.17570526	3.1570361	21	6 28.9	21.7
477957 2011 SF_{5}	17.1	X	342.54158	132.73991	250.73150	1.06078	0.0770458	0.20293862	2.8678708	21	10 22.2	20.7
477958 2011 SG_{9}	16.3	X	78.01437	14.63671	24.83414	14.87275	0.1762847	0.22862479	2.6488285	21	—	—
477959 2011 SU_{11}	16.8	X	286.22189	165.23011	242.93163	6.72290	0.0808641	0.19125318	2.9835290	21	8 26.5	20.9
477960 2011 SB_{23}	16.9	X	22.52509	94.28959	263.40191	0.94250	0.0793189	0.20384834	2.8593320	21	11 17.6	20.6
477961 2011 SX_{33}	16.7	X	237.86579	263.52485	156.18538	0.44719	0.1696895	0.17637196	3.1490752	21	7 4.9	21.7
477962 2011 SA_{34}	17.9	X	110.49307	201.91239	340.86207	16.60262	0.0582647	0.38451297	1.8729609	21	8 7.7	19.8
477963 2011 SG_{35}	16.2	X	288.81830	323.47583	26.95297	9.15796	0.0937639	0.17522681	3.1627803	21	6 15.8	20.6
477964 2011 SL_{37}	15.6	X	123.83700	146.54239	30.07172	27.32854	0.1414336	0.17434600	3.1734237	21	8 26.3	21.1
477965 2011 SH_{42}	16.7	X	269.85841	340.48293	21.87016	0.39547	0.1095236	0.17725989	3.1385501	21	6 5.4	21.0
477966 2011 SF_{45}	16.1	X	232.96260	65.09416	332.71087	7.95335	0.0944734	0.17572522	3.1567970	21	6 9.1	21.0
477967 2011 SW_{47}	17.2	X	283.13029	213.66697	181.78369	4.70708	0.2209479	0.18592271	3.0402859	21	7 17.4	21.4
477968 2011 SE_{51}	15.6	X	307.33371	25.87194	289.50292	6.72265	0.2049065	0.17420901	3.1750871	21	5 8.9	19.8
477969 2011 SV_{52}	16.6	X	234.05539	72.54748	9.06325	10.97016	0.1025883	0.18288401	3.0738704	21	8 8.4	21.3
477970 2011 SZ_{52}	16.4	X	342.30279	316.91259	9.08042	8.71581	0.0145101	0.18435380	3.0575107	21	8 9.8	20.7
477971 2011 SL_{64}	17.5	X	60.20185	97.50500	221.81604	7.41368	0.2105807	0.21344924	2.7729346	21	12 8.4	21.6
477972 2011 SE_{65}	15.9	X	180.57100	266.33906	247.73444	9.04292	0.0544595	0.18977177	2.9990357	21	9 3.9	20.5
477973 2011 SH_{65}	16.3	X	309.55103	54.21776	310.11938	7.34483	0.1541969	0.18578632	3.0417736	21	7 26.7	19.9
477974 2011 SL_{68}	17.9	X	15.31953	102.99749	178.34899	27.02236	0.1118942	0.38457126	1.8727717	21	8 6.0	19.7
477975 2011 ST_{76}	17.2	X	28.53565	11.67834	306.69462	1.45495	0.1065140	0.19951748	2.9005615	21	10 8.6	20.8
477976 2011 SJ_{78}	17.2	X	313.57170	220.41019	185.18292	8.91551	0.1396423	0.19772213	2.9180935	21	9 30.8	20.6
477977 2011 SJ_{82}	16.5	X	284.13694	12.39059	346.09589	4.22732	0.1539245	0.18008037	3.1056926	21	6 11.4	20.9
477978 2011 SL_{83}	16.4	X	328.81411	334.17498	8.43517	11.38401	0.0771289	0.18390402	3.0624939	21	8 10.3	20.5
477979 2011 SK_{85}	17.9	X	3.59560	115.08659	194.54486	21.57436	0.0464711	0.38470563	1.8723356	21	8 25.2	19.8
477980 2011 SN_{85}	17.0	X	256.38024	237.26049	191.45375	11.02451	0.2242237	0.17852458	3.1237100	21	7 26.5	21.9
477981 2011 SN_{89}	15.9	X	336.77385	331.39482	3.56055	9.52607	0.1054045	0.18505082	3.0498282	21	8 9.8	19.7
477982 2011 SF_{91}	16.4	X	240.10526	126.20115	306.53492	3.23243	0.0882271	0.17830200	3.1263090	21	8 1.3	21.0
477983 2011 SY_{93}	16.3	X	214.67309	233.71811	216.71327	15.34057	0.2004475	0.17346927	3.1841073	21	7 15.2	21.8
477984 2011 SU_{95}	17.3	X	312.20397	68.16276	2.88901	1.62160	0.1419545	0.20331604	2.8643205	21	11 2.2	20.3
477985 2011 SE_{99}	16.8	X	57.16673	119.86345	144.33766	1.31636	0.0862537	0.19099385	2.9862292	21	9 5.7	20.7
477986 2011 SN_{101}	17.1	X	353.71484	239.54219	150.77746	2.45388	0.0778793	0.20656293	2.8342259	21	11 19.0	20.6
477987 2011 SY_{104}	16.7	X	347.99395	184.78851	226.78734	14.50304	0.1220776	0.20421168	2.8559394	21	12 9.4	20.1
477988 2011 SG_{107}	16.1	X	348.20098	104.69053	225.31174	21.88649	0.0577343	0.17921137	3.1157242	21	8 10.1	20.7
477989 2011 SW_{109}	17.0	X	349.56902	72.96695	2.36983	8.75567	0.2099445	0.21522501	2.7576611	21	—	—
477990 2011 SB_{116}	16.8	X	8.43619	39.33423	9.13683	7.71828	0.2234678	0.21386147	2.7693702	21	—	—
477991 2011 SX_{117}	16.5	X	63.34562	2.31940	14.71460	9.62848	0.1487028	0.22100261	2.7093874	21	—	—
477992 2011 SL_{124}	16.9	X	124.11812	106.34229	182.91782	4.19065	0.0341519	0.21335147	2.7737818	21	12 23.0	20.8
477993 2011 SB_{127}	17.1	X	307.60635	337.10835	29.97157	4.59379	0.2278529	0.18504334	3.0499104	21	7 16.4	20.7
477994 2011 SM_{127}	16.5	X	270.39146	343.29110	40.71574	5.25509	0.1596605	0.17754077	3.1352390	21	6 26.8	21.0
477995 2011 SC_{132}	15.8	X	299.39313	341.97652	35.80207	18.40244	0.1926612	0.18221188	3.0814250	21	7 28.3	20.1
477996 2011 SA_{134}	16.7	X	21.83662	194.03366	124.20509	2.96250	0.0818197	0.19100665	2.9860957	21	9 26.5	20.4
477997 2011 SO_{134}	17.3	X	330.49680	164.06167	189.76608	8.65155	0.1128172	0.18921410	3.0049256	21	8 18.7	21.0
477998 2011 SH_{137}	15.9	X	355.83069	301.30376	353.09430	9.22110	0.0359704	0.18075360	3.0979762	21	7 16.5	20.1
477999 2011 SF_{138}	16.9	X	20.51720	7.82648	6.34217	6.10960	0.0548405	0.20904723	2.8117267	21	12 2.7	20.6
478000 2011 SG_{139}	17.7	X	323.92771	333.35080	16.94975	2.28141	0.2154269	0.18729495	3.0254177	21	7 24.6	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478001 2011 SN_{139}	17.3	X	293.12601	47.80433	15.39797	5.40285	0.1556034	0.19219287	2.9737962	21	9 19.1	21.0
478002 2011 SG_{140}	17.0	X	7.11145	306.31923	30.23999	2.02462	0.0684761	0.19339609	2.9614490	21	9 26.8	20.7
478003 2011 SU_{141}	17.3	X	0.63560	0.34313	30.35393	2.04715	0.2220133	0.20415727	2.8564469	21	12 14.5	20.1
478004 2011 SH_{142}	16.9	X	319.41441	152.42939	197.57936	1.76936	0.0968410	0.18326143	3.0696487	21	7 29.5	20.7
478005 2011 SF_{144}	16.3	X	277.27410	242.55190	173.31553	9.06344	0.1372681	0.18794288	3.0184603	21	8 17.4	20.4
478006 2011 SC_{160}	16.5	X	7.93395	343.02101	358.26675	17.46151	0.1171585	0.20174540	2.8791676	21	10 5.2	19.9
478007 2011 SL_{164}	17.2	X	322.18512	236.41934	164.91962	2.11985	0.1042327	0.19585816	2.9365784	21	10 12.6	20.8
478008 2011 SN_{164}	16.5	X	185.03776	295.23549	194.19398	10.06886	0.0580397	0.18035954	3.1024870	21	8 10.3	21.3
478009 2011 SM_{165}	16.8	X	306.69371	320.89542	39.16113	2.73979	0.1634859	0.18175095	3.0866325	21	7 14.9	20.8
478010 2011 SN_{170}	16.2	X	304.66826	168.02345	214.20705	9.06412	0.0778380	0.18362287	3.0656192	21	8 18.4	20.4
478011 2011 SA_{178}	16.6	X	256.46517	55.30438	2.77834	12.88128	0.1375709	0.18100991	3.0950510	21	7 31.2	21.3
478012 2011 ST_{183}	16.5	X	348.97963	185.05943	145.69325	3.64576	0.0691072	0.18359400	3.0659405	21	8 21.2	20.4
478013 2011 SQ_{184}	18.5	X	8.55313	95.51121	196.50581	20.99368	0.1008479	0.38288107	1.8782791	21	8 6.4	20.3
478014 2011 SX_{189}	16.7	X	62.76626	309.32074	344.86225	9.28311	0.0812203	0.20523008	2.8464837	21	10 18.5	20.7
478015 2011 SM_{191}	16.3	X	9.74235	2.49376	31.62845	9.64496	0.1649184	0.20980146	2.8049839	21	12 28.7	19.8
478016 2011 SH_{192}	17.2	X	46.04828	109.96688	247.33197	1.76987	0.0951196	0.21346132	2.7728301	21	12 22.6	20.8
478017 2011 SD_{197}	17.2	X	30.54815	26.01836	307.38899	1.02331	0.0701029	0.20411357	2.8568545	21	10 27.2	20.9
478018 2011 SF_{197}	17.2	X	306.31178	256.85923	190.44036	1.74579	0.0222491	0.21131678	2.7915584	21	11 25.5	20.8
478019 2011 SS_{197}	17.3	X	355.21576	353.94214	328.55938	2.26674	0.0899059	0.19192925	2.9765186	21	8 20.6	20.9
478020 2011 SZ_{199}	17.3	X	330.80490	23.74247	28.35625	3.10081	0.1399597	0.20596151	2.8397406	21	11 10.6	20.5
478021 2011 SB_{202}	17.0	X	297.98802	22.21775	1.55646	10.04895	0.1090047	0.19037062	2.9927431	21	8 14.1	20.9
478022 2011 SZ_{206}	16.3	X	184.33975	46.42798	166.14364	25.64286	0.0774007	0.21841878	2.7307130	21	11 29.8	20.9
478023 2011 SU_{208}	16.7	X	324.85611	13.28423	329.52599	10.07283	0.0621106	0.18682449	3.0304946	21	8 2.9	20.7
478024 2011 SX_{208}	16.5	X	301.47498	290.06802	62.87942	6.29799	0.1551459	0.17932990	3.1143512	21	6 28.2	20.5
478025 2011 SA_{210}	16.9	X	333.18777	163.35022	150.52905	1.77915	0.0799309	0.18324857	3.0697922	21	7 4.3	20.9
478026 2011 SE_{217}	16.8	X	34.36729	18.79011	356.01239	8.04721	0.1554404	0.21411208	2.7672088	21	—	—
478027 2011 SY_{225}	16.8	X	314.36180	47.21441	345.85770	9.70822	0.1961172	0.19122485	2.9838238	21	9 7.2	20.0
478028 2011 SN_{233}	16.0	X	210.85177	198.42667	283.44064	9.14058	0.0381276	0.18496195	3.0508051	21	8 30.4	20.6
478029 2011 SF_{236}	17.1	X	92.04011	12.84852	288.56992	2.63807	0.0795800	0.21399213	2.7682428	21	12 5.4	21.0
478030 2011 SM_{236}	17.3	X	29.50615	124.31655	188.02242	8.61716	0.0996183	0.19934868	2.9021987	21	10 2.0	21.0
478031 2011 SH_{240}	17.0	X	315.00437	40.23858	13.10308	1.79533	0.0632614	0.20118235	2.8845371	21	10 20.1	20.7
478032 2011 SH_{241}	16.8	X	275.78593	350.57051	27.33290	2.41187	0.0708265	0.18121984	3.0926604	21	7 8.8	21.0
478033 2011 SY_{242}	16.7	X	321.16186	173.62480	172.14297	9.89490	0.1810178	0.18632171	3.0359439	21	7 15.4	20.3
478034 2011 SA_{254}	16.5	X	298.41202	80.58042	289.58787	9.89583	0.1093097	0.18473878	3.0532616	21	7 22.8	20.6
478035 2011 SB_{255}	17.1	X	359.23488	146.06333	249.29777	6.74395	0.2256902	0.21033671	2.8002233	21	12 20.7	20.0
478036 2011 SS_{255}	16.3	X	220.46559	232.88271	203.03485	10.75239	0.0619626	0.17916783	3.1162290	21	7 14.3	21.2
478037 2011 SN_{256}	17.5	X	257.64352	11.17061	36.95964	0.53048	0.1743957	0.18204170	3.0833450	21	7 10.8	22.1
478038 2011 SA_{257}	16.9	X	184.43462	132.13220	355.41790	10.80885	0.0543303	0.18207557	3.0829627	21	8 13.5	21.6
478039 2011 SA_{258}	17.2	X	266.14082	66.51682	11.10046	2.16733	0.1990048	0.18556271	3.0442168	21	8 24.2	21.4
478040 2011 SV_{258}	16.4	X	165.19676	139.85262	41.16061	16.95970	0.0488097	0.18471738	3.0534973	21	10 1.5	21.1
478041 2011 SY_{258}	16.2	X	300.73123	173.38846	219.71947	9.63807	0.1038338	0.18153930	3.0890311	21	8 22.9	20.5
478042 2011 SE_{259}	16.2	X	34.15890	106.08021	224.87556	11.41599	0.1231351	0.20470093	2.8513870	21	11 6.0	19.8
478043 2011 SG_{259}	16.4	X	268.80469	24.92793	4.82674	11.12013	0.0890190	0.18252532	3.0778962	21	7 14.8	21.0
478044 2011 SZ_{259}	16.9	X	250.62319	217.70861	208.46290	10.11087	0.1346133	0.18117853	3.0931304	21	7 27.5	21.7
478045 2011 SB_{260}	17.2	X	276.28178	197.80094	199.34965	9.47320	0.1189408	0.18354985	3.0664321	21	7 24.4	21.7
478046 2011 SS_{260}	16.5	X	199.31021	84.32855	31.35627	10.44491	0.1882366	0.17338492	3.1851398	21	8 9.7	21.9
478047 2011 SB_{261}	16.8	X	354.44948	338.53779	8.83566	2.34006	0.0794205	0.18916795	3.0054142	21	9 21.6	20.6
478048 2011 SD_{261}	17.4	X	6.55618	20.56941	344.44413	1.31096	0.1148842	0.20080200	2.8881784	21	11 6.5	20.8
478049 2011 SO_{261}	17.5	X	322.84961	3.16748	28.72958	2.27073	0.0761810	0.19812540	2.9141324	21	10 3.0	20.9
478050 2011 SR_{265}	16.5	X	321.62823	280.69535	62.04019	3.85452	0.1264402	0.18288399	3.0738707	21	7 21.2	20.3
478051 2011 SU_{268}	16.3	X	260.18874	23.13862	31.08906	9.71208	0.1139011	0.18280436	3.0747633	21	8 1.9	20.9
478052 2011 SR_{274}	16.6	X	65.76524	311.04865	21.72511	4.95698	0.1612102	0.21402704	2.7679418	21	12 24.4	20.7
478053 2011 SU_{275}	16.8	X	280.71516	293.94400	105.00906	5.22489	0.1458974	0.18665411	3.0323385	21	7 31.7	20.9
478054 2011 TX	16.1	X	3.39009	291.93484	335.42422	9.66891	0.0556065	0.17301547	3.1896725	21	6 19.8	20.4
478055 2011 TU_{7}	17.0	X	4.58923	226.03093	173.38879	8.86944	0.1558437	0.21005966	2.8026849	21	12 25.9	20.4
478056 2011 TB_{8}	17.0	X	14.68470	239.51594	115.10123	3.13952	0.0860491	0.20149399	2.8815621	21	11 4.2	20.5
478057 2011 TC_{10}	17.9	X	144.69401	133.58164	339.10356	18.57318	0.0822891	0.36720338	1.9313676	21	5 28.5	20.6
478058 2011 TJ_{10}	16.9	X	344.62719	163.99847	188.88559	11.22185	0.0305425	0.19233310	2.9723505	21	9 12.4	21.0
478059 2011 TR_{13}	16.2	X	285.95684	9.60517	30.36763	18.09273	0.2760262	0.18185243	3.0854840	21	7 24.7	20.8
478060 2011 TH_{14}	16.9	X	287.67181	298.10641	100.60075	3.86552	0.1934651	0.18727366	3.0256469	21	8 2.6	21.0
478061 2011 TN_{15}	17.0	X	7.82164	160.03837	241.50834	7.06232	0.2196034	0.21102787	2.7941057	21	—	—
478062 2011 UZ_{2}	16.2	X	262.20793	23.49161	14.57334	14.68751	0.1991231	0.17618888	3.1512563	21	7 1.0	21.2
478063 2011 UA_{4}	16.1	X	276.00355	173.53745	223.33263	8.24105	0.1132782	0.17959784	3.1112528	21	7 24.4	20.7
478064 2011 UM_{4}	17.4	X	238.53892	141.18027	12.44719	1.89185	0.0176868	0.20544723	2.8444777	21	11 20.7	21.4
478065 2011 UT_{5}	15.8	X	213.45744	87.36755	47.04356	15.14472	0.0103708	0.18634357	3.0357065	21	10 2.4	20.3
478066 2011 UB_{6}	15.9	X	4.83589	261.76172	45.82606	10.66801	0.0984627	0.17948983	3.1125009	21	8 20.9	19.9
478067 2011 UR_{6}	16.9	X	4.26010	324.48607	37.36668	2.75457	0.0834594	0.19407637	2.9545246	21	10 26.4	20.5
478068 2011 UY_{6}	16.1	X	306.36055	318.52627	45.51562	16.72079	0.0569420	0.17712944	3.1400909	21	8 9.6	20.7
478069 2011 UA_{7}	16.9	X	320.79766	345.62303	37.29854	2.13696	0.1616541	0.18722163	3.0262075	21	9 9.6	20.3
478070 2011 UQ_{8}	16.6	X	311.03416	312.30775	67.55046	0.91179	0.1192277	0.18249524	3.0782344	21	8 23.7	20.5
478071 2011 UJ_{9}	16.3	X	294.23074	338.99335	47.20246	14.61807	0.1800947	0.18054113	3.1004063	21	8 1.6	20.6
478072 2011 UT_{10}	16.9	X	318.26988	236.91870	203.05536	13.90320	0.1041838	0.21279631	2.7786040	21	11 30.5	20.3
478073 2011 UE_{11}	16.9	X	58.42754	135.80376	199.68434	5.95400	0.0214366	0.21196163	2.7858937	21	11 30.8	20.8
478074 2011 UW_{13}	17.1	X	284.32066	164.71510	268.68773	6.32522	0.2512700	0.18788299	3.0191017	21	8 30.5	21.2
478075 2011 UB_{23}	16.1	X	24.97834	57.28543	235.02544	10.17659	0.1243778	0.18703323	3.0282393	21	8 25.8	20.0
478076 2011 UL_{24}	16.7	X	335.51089	90.05461	240.81743	4.53683	0.1699367	0.18169591	3.0872558	21	7 22.9	20.2
478077 2011 UZ_{25}	16.6	X	268.04789	201.80589	215.98743	12.19646	0.1408067	0.18028646	3.1033253	21	8 4.4	21.2
478078 2011 UD_{26}	16.2	X	217.51989	258.96713	212.78560	14.78097	0.2040004	0.17600722	3.1534242	21	8 10.9	21.7
478079 2011 UE_{29}	16.2	X	162.80855	254.76857	255.50537	8.42071	0.0468441	0.17468260	3.1693457	21	8 10.4	21.0
478080 2011 UG_{29}	15.7	X	316.12740	0.12534	32.86921	19.57401	0.2034504	0.18812427	3.0165197	21	9 19.7	19.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478081 2011 UX_{29}	16.4	X	292.69631	204.94198	214.85099	8.33561	0.2433950	0.18564905	3.0432728	21	8 25.8	20.3
478082 2011 UQ_{33}	16.0	X	247.86546	233.51460	210.33409	24.29756	0.2390662	0.18192740	3.0846363	21	7 30.9	21.4
478083 2011 UM_{35}	16.4	X	336.09623	69.09187	230.35728	8.13691	0.0573842	0.17465171	3.1697195	21	6 21.2	20.6
478084 2011 UB_{38}	16.2	X	326.55229	307.77746	24.02594	9.60367	0.0896334	0.17525639	3.1624244	21	7 19.8	20.4
478085 2011 US_{38}	17.1	X	354.96185	289.05549	55.59884	12.40647	0.1182848	0.18690624	3.0296109	21	9 26.5	20.9
478086 2011 UP_{40}	17.0	X	337.90525	351.29540	0.08449	2.53012	0.0165687	0.18746591	3.0235780	21	9 3.1	20.9
478087 2011 UB_{41}	17.3	X	327.47462	142.81055	198.70224	1.01695	0.2066518	0.18519114	3.0482874	21	7 19.2	20.5
478088 2011 UJ_{41}	17.2	X	326.42555	28.64326	1.99558	1.68321	0.1146749	0.19402546	2.9550414	21	10 3.7	20.5
478089 2011 UU_{41}	16.5	X	257.30560	22.51949	23.90883	9.83225	0.1076131	0.17847089	3.1243364	21	7 19.1	21.2
478090 2011 UD_{45}	16.2	X	254.77574	198.81943	215.81419	18.85678	0.1302695	0.17871413	3.1215008	21	7 16.3	21.2
478091 2011 UF_{48}	16.8	X	329.97877	145.63729	226.81886	7.97937	0.1287568	0.18799625	3.0178890	21	9 10.0	20.5
478092 2011 UJ_{48}	16.6	X	261.11002	1.26580	32.54690	1.02402	0.2013902	0.17363170	3.1821211	21	6 23.3	21.5
478093 2011 US_{48}	16.1	X	20.63673	253.35910	37.93062	9.74904	0.0541102	0.17960556	3.1111637	21	8 20.2	20.3
478094 2011 UR_{49}	16.1	X	265.81577	198.84788	207.67641	2.38081	0.0744113	0.17710213	3.1404136	21	7 31.1	20.6
478095 2011 UV_{50}	16.2	X	295.37772	350.12687	52.13567	9.91593	0.1215738	0.18403080	3.0610873	21	9 3.3	20.3
478096 2011 UA_{54}	16.2	X	222.36491	229.38071	230.38077	10.60670	0.0807730	0.17583663	3.1554634	21	8 11.5	21.2
478097 2011 UF_{54}	15.8	X	329.66713	123.44064	230.04371	9.73625	0.0977845	0.18048890	3.1010044	21	8 15.3	19.8
478098 2011 UO_{58}	17.1	X	355.00701	150.22820	200.35758	8.65026	0.1063804	0.19253961	2.9702249	21	9 26.7	20.6
478099 2011 UV_{61}	16.2	X	283.29267	341.95178	69.07539	12.17537	0.1212993	0.17924819	3.1152975	21	8 28.7	20.6
478100 2011 UZ_{61}	16.7	X	265.30482	28.69068	64.87017	14.15624	0.1118837	0.18467790	3.0539325	21	10 1.9	21.2
478101 2011 US_{64}	17.2	X	318.25791	298.46709	98.46431	3.61880	0.1678212	0.19124752	2.9835879	21	9 25.3	20.5
478102 2011 UR_{66}	16.7	X	11.90280	247.07443	57.31115	10.66787	0.0997178	0.18486592	3.0518615	21	8 29.0	20.6
478103 2011 UH_{74}	17.0	X	342.51600	251.20982	72.28222	2.07635	0.2806759	0.18613738	3.0379479	21	7 19.5	19.5
478104 2011 UL_{74}	16.7	X	284.65909	199.38840	192.22627	4.51910	0.1423054	0.18076012	3.0979017	21	7 26.0	20.9
478105 2011 UW_{74}	16.3	X	253.27766	225.92887	203.00898	9.15723	0.0513324	0.18057492	3.1000195	21	8 14.3	20.8
478106 2011 UB_{76}	16.5	X	255.78289	179.32994	255.35955	6.77594	0.1323433	0.18061300	3.0995838	21	8 13.6	21.2
478107 2011 UJ_{76}	15.8	X	270.82941	156.71032	242.01353	9.61566	0.2266796	0.17774673	3.1328166	21	7 5.4	20.5
478108 2011 UC_{78}	15.9	X	254.40851	34.83297	37.17108	27.96480	0.1560448	0.17880746	3.1204145	21	8 24.3	21.1
478109 2011 UK_{80}	16.3	X	339.53057	108.84311	236.12829	8.84865	0.0453481	0.18179506	3.0861332	21	8 22.1	20.6
478110 2011 UW_{81}	16.2	X	277.45954	4.33415	52.21494	10.37003	0.1872596	0.18130163	3.0917301	21	8 16.8	20.6
478111 2011 UF_{82}	16.0	X	276.02916	169.23397	249.00743	10.53066	0.1424871	0.18075199	3.0979947	21	8 14.4	20.4
478112 2011 US_{82}	16.0	X	300.53275	20.01614	40.09215	17.62501	0.1655085	0.18791405	3.0187689	21	10 1.5	19.9
478113 2011 UT_{82}	16.0	X	333.87193	118.90129	254.88496	8.81987	0.0869704	0.18640172	3.0350750	21	9 18.9	20.0
478114 2011 UW_{84}	16.3	X	285.84874	9.72828	42.05616	14.15526	0.0778278	0.18086887	3.0966598	21	9 10.5	20.7
478115 2011 UK_{85}	16.0	X	237.46205	192.51379	248.82397	9.63359	0.0133999	0.17568885	3.1572326	21	8 13.9	20.7
478116 2011 UM_{88}	17.2	X	310.91643	333.76014	31.19324	0.37236	0.2018937	0.17918294	3.1160538	21	7 22.2	21.0
478117 2011 UR_{97}	17.1	X	40.53995	30.70148	266.22965	2.39937	0.1402597	0.19313561	2.9641111	21	10 1.7	21.0
478118 2011 UG_{98}	16.6	X	277.38633	102.31132	311.13639	6.01723	0.1026443	0.18206714	3.0830578	21	8 19.9	20.8
478119 2011 UZ_{99}	15.9	X	174.27293	249.50443	234.97562	9.68128	0.0730822	0.17006710	3.2264319	21	7 22.8	21.0
478120 2011 UY_{101}	16.0	X	290.60837	354.18322	32.51882	9.21516	0.1425949	0.17907183	3.1173426	21	8 1.4	20.3
478121 2011 UB_{103}	15.9	X	45.40511	24.07264	253.95750	15.87871	0.0721661	0.17871315	3.1215123	21	8 26.8	20.5
478122 2011 UY_{103}	16.1	X	305.48705	16.42695	33.58946	10.22431	0.0742313	0.18872609	3.0101035	21	10 2.4	20.1
478123 2011 UF_{105}	16.1	X	318.59812	320.70314	48.25169	9.62185	0.1277256	0.18027397	3.1034687	21	8 24.8	20.1
478124 2011 UG_{107}	16.8	X	241.93005	223.40623	207.71528	8.56147	0.1142501	0.18033533	3.1027647	21	7 26.9	21.5
478125 2011 UU_{107}	16.9	X	237.16179	25.77818	78.63414	15.18536	0.1046003	0.18564849	3.0432790	21	9 13.2	21.7
478126 2011 UW_{112}	15.9	X	194.17759	260.17912	229.07263	12.94118	0.0845692	0.17434866	3.1733914	21	8 16.2	21.0
478127 2011 UZ_{112}	16.3	X	277.00212	167.00529	222.87821	8.19195	0.0976945	0.17403245	3.1772342	21	7 19.2	20.9
478128 2011 UJ_{113}	16.2	X	74.93459	354.63284	53.02690	15.09837	0.0855537	0.22407865	2.6845349	21	—	—
478129 2011 UY_{119}	15.7	X	248.23360	36.92529	42.73788	28.54762	0.1663614	0.17822119	3.1272540	21	8 25.8	21.0
478130 2011 US_{120}	16.9	X	327.44186	100.86417	246.72545	1.43255	0.1351055	0.18408311	3.0605073	21	8 4.5	20.3
478131 2011 UX_{122}	16.5	X	289.60288	203.28601	173.46172	1.16811	0.1934410	0.18061489	3.0995621	21	7 6.5	20.5
478132 2011 UG_{125}	17.0	X	302.85428	67.06123	307.33139	3.91749	0.1809144	0.18459911	3.0548015	21	7 25.2	20.6
478133 2011 UG_{126}	18.0	X	328.87410	273.19843	25.51870	20.03884	0.0691288	0.37202737	1.9146355	21	5 21.5	19.9
478134 2011 UL_{127}	16.0	X	335.84505	275.81546	63.83994	13.22595	0.1215858	0.18004795	3.1060654	21	8 15.2	20.0
478135 2011 UG_{129}	16.9	X	2.91195	324.40188	60.80679	6.56139	0.0786705	0.20572016	2.8419612	21	11 25.1	20.3
478136 2011 UU_{131}	17.1	X	338.40030	9.87936	358.03968	0.48929	0.2142117	0.18956787	3.0011859	21	9 19.9	20.0
478137 2011 UK_{136}	16.1	X	302.58049	147.46939	237.56623	9.49161	0.1505510	0.18264371	3.0765660	21	8 8.4	20.2
478138 2011 UV_{136}	16.6	X	57.65488	250.50613	32.49367	11.11643	0.0064124	0.18445367	3.0564070	21	9 22.5	21.0
478139 2011 UW_{136}	15.6	X	93.72716	319.82143	244.38258	8.30957	0.0278225	0.17162153	3.2069205	21	7 25.7	20.2
478140 2011 UL_{138}	16.4	X	19.71442	288.48662	46.50646	10.82591	0.1892861	0.19170756	2.9788128	21	10 28.7	19.8
478141 2011 UD_{139}	16.8	X	287.21391	32.07747	31.64467	5.03765	0.1091474	0.18596029	3.0398762	21	9 17.9	20.8
478142 2011 UV_{143}	16.6	X	283.64139	205.26857	192.85297	16.54172	0.1396392	0.17805089	3.1292478	21	7 30.8	21.2
478143 2011 UJ_{145}	16.1	X	302.16388	116.96785	251.32291	14.80510	0.0850379	0.17487106	3.1670683	21	7 24.8	20.6
478144 2011 UV_{145}	16.6	X	284.46927	117.85366	305.49647	2.78577	0.1184257	0.18251778	3.0779809	21	9 8.9	20.7
478145 2011 UW_{147}	16.4	X	325.66276	149.50202	194.98670	10.10497	0.0447852	0.18744901	3.0237598	21	8 3.3	20.7
478146 2011 US_{152}	16.1	X	293.62073	175.73669	229.65161	12.57983	0.1532118	0.18069550	3.0986402	21	8 19.7	20.4
478147 2011 UA_{154}	15.8	X	263.41538	116.49152	322.55478	16.78688	0.1602548	0.18524259	3.0477230	21	8 25.3	20.1
478148 2011 UE_{154}	16.2	X	210.55504	105.95658	356.72329	26.77379	0.0230134	0.17957612	3.1115038	21	8 22.5	21.0
478149 2011 UT_{154}	16.7	X	304.52772	325.56439	51.13751	0.17489	0.2004094	0.17892016	3.1191041	21	7 27.7	20.4
478150 2011 UR_{155}	16.4	X	7.65483	267.99142	74.33097	12.15646	0.1446161	0.18888258	3.0084406	21	10 16.6	20.1
478151 2011 UW_{156}	16.5	X	312.36297	15.63118	357.02131	7.00308	0.2285848	0.18354214	3.0665181	21	8 2.5	20.1
478152 2011 UY_{156}	17.1	X	153.62399	90.55818	198.41943	8.60207	0.1173345	0.22862204	2.6488497	21	—	—
478153 2011 UM_{157}	16.7	X	269.86073	27.99351	68.26542	10.75584	0.0671115	0.18843582	3.0131938	21	10 15.2	20.9
478154 2011 UT_{157}	16.8	X	325.66961	197.47980	196.67757	4.21311	0.1957565	0.18937069	3.0032688	21	9 30.5	20.0
478155 2011 UF_{159}	16.6	X	229.99801	89.43451	337.78131	8.73093	0.0781778	0.17699718	3.1416550	21	7 16.7	21.3
478156 2011 UP_{159}	17.9	X	82.27732	24.03350	211.14706	21.61606	0.0249053	0.38571965	1.8690527	21	8 31.1	20.3
478157 2011 UV_{160}	16.4	X	256.80229	195.61099	240.28669	5.96128	0.1518782	0.17693136	3.1424340	21	8 13.8	21.2
478158 2011 UR_{167}	17.4	X	310.67192	192.67488	221.17843	5.44571	0.1257821	0.19475243	2.9476831	21	10 6.6	20.9
478159 2011 UK_{172}	16.0	X	294.98564	39.94238	351.46931	13.73866	0.0994243	0.18486200	3.0519046	21	8 20.9	20.1
478160 2011 UB_{173}	16.7	X	5.62395	127.89224	308.82096	7.40494	0.2245914	0.21346565	2.7727926	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478161 2011 UC_{173}	16.4	X	241.06406	161.64920	268.51266	9.35509	0.2093786	0.17607320	3.1526363	21	7 15.9	21.4
478162 2011 UN_{175}	16.1	X	337.50479	42.09167	259.35826	9.34211	0.2096181	0.17590306	3.1546689	21	6 12.1	19.5
478163 2011 UW_{175}	16.6	X	296.30338	24.10583	20.02647	9.88728	0.1351605	0.18501331	3.0502404	21	9 3.9	20.5
478164 2011 UE_{176}	16.3	X	251.00124	311.44307	243.30875	9.02120	0.1666566	0.21195836	2.7859224	21	—	—
478165 2011 UG_{176}	16.2	X	342.01017	256.71289	38.09624	22.91785	0.2961941	0.17646379	3.1479826	21	5 25.9	19.5
478166 2011 UW_{176}	16.2	X	250.54205	200.18147	232.31407	9.58949	0.2023124	0.17710690	3.1403573	21	7 27.1	21.2
478167 2011 UV_{177}	16.7	X	357.38295	261.72864	62.14430	9.77989	0.2190338	0.18561803	3.0436120	21	9 4.7	19.9
478168 2011 UH_{178}	16.9	X	306.59136	232.89824	188.37980	4.27471	0.1742462	0.19017050	2.9948422	21	10 4.6	20.1
478169 2011 UR_{180}	16.8	X	336.15303	143.16337	238.58998	8.93473	0.0193584	0.19064299	2.9898919	21	10 6.6	21.0
478170 2011 UM_{181}	16.0	X	304.57040	33.00385	26.40752	12.15960	0.1769691	0.19014471	2.9951130	21	10 1.2	19.5
478171 2011 UR_{182}	16.4	X	332.39430	317.58288	25.66072	9.37195	0.0881761	0.17711710	3.1402367	21	8 15.2	20.5
478172 2011 UM_{183}	15.9	X	219.39258	221.69093	243.27064	15.59920	0.1728392	0.17154445	3.2078812	21	8 5.1	21.3
478173 2011 UP_{190}	16.7	X	16.65162	336.42400	54.37124	13.11446	0.2014295	0.21020603	2.8013837	21	—	—
478174 2011 UZ_{190}	16.3	X	299.61211	325.49279	60.37802	10.79388	0.1165677	0.17974925	3.1095055	21	8 18.8	20.5
478175 2011 UV_{191}	16.4	X	341.82214	41.73542	331.78373	5.59981	0.0651126	0.19054183	2.9909500	21	10 4.2	20.2
478176 2011 UT_{193}	16.3	X	305.14734	63.55880	338.01885	4.49331	0.2756900	0.18689910	3.0296880	21	8 20.3	19.7
478177 2011 UY_{193}	17.6	X	247.38804	1.71481	53.39398	22.89938	0.0800419	0.37879360	1.8917669	21	7 31.8	20.2
478178 2011 UU_{198}	17.1	X	300.75445	181.24431	212.64939	4.74887	0.1677729	0.18167750	3.0874643	21	8 16.9	21.0
478179 2011 UX_{199}	16.8	X	306.31135	122.13168	266.83869	9.44221	0.2731512	0.18351829	3.0667837	21	8 1.5	20.6
478180 2011 UX_{201}	17.1	X	296.70611	286.53425	90.14915	2.58799	0.1716538	0.17791986	3.1307839	21	7 20.3	21.1
478181 2011 UN_{202}	17.2	X	275.51077	27.02812	61.65165	8.50385	0.2092061	0.18599690	3.0394773	21	9 21.5	21.4
478182 2011 UJ_{208}	16.5	X	305.88227	3.54739	17.74386	12.38616	0.1084737	0.18501324	3.0502411	21	8 24.5	20.5
478183 2011 UL_{212}	16.0	X	255.09129	37.09948	14.31391	15.24706	0.0465195	0.17860833	3.1227334	21	8 3.9	20.7
478184 2011 UP_{223}	16.9	X	231.05847	20.23554	41.47180	2.79090	0.1422259	0.17380633	3.1799892	21	7 3.4	21.9
478185 2011 UC_{230}	16.9	X	328.85682	23.19515	42.12457	9.14699	0.0786411	0.20400215	2.8578947	21	11 24.3	20.4
478186 2011 UO_{233}	16.5	X	210.16671	255.62672	210.08013	8.25073	0.0326828	0.18155457	3.0888579	21	8 10.8	21.1
478187 2011 UG_{235}	16.5	X	338.28889	280.92009	36.91657	26.22348	0.2396674	0.18034112	3.1026982	21	7 3.6	20.3
478188 2011 UW_{241}	16.1	X	35.50144	44.59282	238.35550	17.99523	0.1719382	0.18060717	3.0996505	21	9 1.6	20.4
478189 2011 UZ_{241}	16.9	X	321.72517	119.88841	250.67817	3.37257	0.2175363	0.18461143	3.0546655	21	8 15.4	20.1
478190 2011 US_{242}	17.4	X	285.27811	109.50761	288.31242	0.16636	0.2476721	0.17956372	3.1116470	21	7 19.9	21.6
478191 2011 UG_{243}	16.1	X	247.31378	36.87729	51.76726	16.59080	0.1021012	0.17898843	3.1183109	21	9 6.3	20.9
478192 2011 UB_{244}	16.0	X	28.39615	63.39642	238.85303	15.61653	0.1154581	0.18273547	3.0755360	21	9 9.9	20.3
478193 2011 UD_{244}	16.6	X	322.91235	167.55190	234.52059	11.42144	0.2049613	0.19064549	2.9898658	21	10 1.9	20.0
478194 2011 UY_{244}	16.7	X	292.19907	86.34559	293.73212	1.26868	0.1429974	0.17941928	3.1133168	21	7 22.4	20.9
478195 2011 UK_{247}	16.0	X	324.62131	107.32120	230.77383	9.46942	0.0861515	0.17405271	3.1769876	21	7 20.3	20.3
478196 2011 UG_{249}	16.1	X	355.78769	284.53423	56.73561	19.54234	0.1560210	0.18566168	3.0431348	21	9 29.9	19.9
478197 2011 UC_{250}	17.2	X	290.70405	7.76138	36.82321	0.31241	0.1652410	0.18090906	3.0962012	21	8 18.3	21.2
478198 2011 UJ_{250}	16.8	X	281.39801	267.00635	137.38441	1.95525	0.1760512	0.17804821	3.1292791	21	8 3.1	21.2
478199 2011 UQ_{252}	16.1	X	324.60064	149.57184	224.65594	11.09232	0.0775213	0.18137032	3.0909494	21	9 5.3	20.2
478200 2011 UZ_{252}	17.0	X	303.26699	335.03392	73.72340	0.49021	0.1934192	0.18593260	3.0401781	21	9 8.8	20.6
478201 2011 UB_{253}	16.7	X	303.74466	167.87274	194.38071	0.85938	0.2076760	0.17742159	3.1366429	21	7 5.7	20.5
478202 2011 UQ_{253}	16.2	X	316.86270	313.95434	72.26217	11.30883	0.0949646	0.18300723	3.0724905	21	9 19.2	20.3
478203 2011 UA_{257}	17.7	X	314.55498	122.40188	290.73917	1.05603	0.1336518	0.19266807	2.9689044	21	10 11.7	21.3
478204 2011 UN_{263}	17.0	X	302.30965	318.37193	68.55852	0.08287	0.1913547	0.18020909	3.1042136	21	8 8.3	20.8
478205 2011 UM_{268}	16.6	X	338.12789	29.39527	1.57252	8.01855	0.2077966	0.19503650	2.9448202	21	10 21.7	19.6
478206 2011 UB_{279}	16.8	X	266.17949	35.67667	31.02975	2.54531	0.1091826	0.17786398	3.1314396	21	8 23.2	21.3
478207 2011 UP_{282}	15.8	X	186.94739	102.24474	57.43911	17.90976	0.1342948	0.18211669	3.0824986	21	9 28.4	21.0
478208 2011 UM_{283}	16.3	X	266.55341	3.61236	72.93775	10.51599	0.1294681	0.18254030	3.0777278	21	9 7.0	20.8
478209 2011 UV_{283}	16.2	X	192.30022	93.62624	64.99952	17.78631	0.1210764	0.18285642	3.0741796	21	10 2.9	21.3
478210 2011 UC_{297}	17.0	X	287.24284	282.02912	209.66146	10.42206	0.1910684	0.20314637	2.8659153	21	12 5.4	20.3
478211 2011 US_{297}	17.2	X	311.62452	305.99598	97.63220	2.82110	0.1745002	0.18988107	2.9978848	21	9 20.9	20.6
478212 2011 UU_{298}	17.0	X	354.04811	76.22563	238.25394	16.89276	0.2404449	0.18320508	3.0702780	21	7 30.5	20.3
478213 2011 UK_{299}	16.1	X	297.41778	345.44903	54.25883	12.48810	0.1387381	0.18349868	3.0670022	21	9 1.9	20.3
478214 2011 UU_{299}	16.9	X	304.98287	279.30794	98.73393	2.28149	0.1931668	0.18087733	3.0965632	21	7 31.8	20.7
478215 2011 UO_{301}	16.9	X	28.63781	60.99984	263.37242	1.60545	0.0895368	0.19285471	2.9669886	21	10 13.4	20.6
478216 2011 UG_{303}	17.0	X	234.24927	246.56280	226.22701	8.40479	0.1119264	0.18589650	3.0405716	21	9 8.1	21.7
478217 2011 UQ_{305}	16.9	X	315.19831	15.86760	350.64096	5.78393	0.1280774	0.18569076	3.0428172	21	8 12.6	20.7
478218 2011 UV_{308}	16.0	X	313.63705	122.15875	264.56717	13.80398	0.1243550	0.18510998	3.0491783	21	8 28.5	20.1
478219 2011 UY_{311}	16.7	X	331.49348	351.55024	37.51640	12.22409	0.0550655	0.19242065	2.9714488	21	10 14.4	20.5
478220 2011 UL_{312}	16.4	X	130.86526	233.82101	33.80190	16.75371	0.2320084	0.21372707	2.7705311	21	12 6.9	21.4
478221 2011 UJ_{313}	16.8	X	19.04393	114.74495	213.31140	10.79857	0.1184498	0.19060404	2.9902992	21	10 6.2	20.5
478222 2011 UO_{313}	16.0	X	63.76530	191.42227	56.87512	11.50160	0.0242696	0.17672240	3.1449107	21	8 20.1	20.6
478223 2011 UB_{314}	16.1	X	272.97348	342.52715	56.58113	12.14454	0.1133620	0.17748743	3.1358672	21	7 28.9	20.7
478224 2011 UV_{314}	16.5	X	202.13794	283.83657	211.74349	12.09577	0.0533455	0.18206110	3.0831260	21	9 5.6	21.2
478225 2011 UC_{317}	16.6	X	280.75173	182.20667	235.98321	10.95513	0.1493765	0.18162376	3.0880733	21	8 19.3	21.0
478226 2011 UY_{317}	16.1	X	320.04853	129.50432	235.64081	14.00857	0.0428394	0.17866515	3.1220713	21	8 18.5	20.6
478227 2011 UH_{323}	16.6	X	331.27371	275.34416	46.68742	1.98486	0.1780429	0.18198675	3.0839657	21	7 2.8	20.1
478228 2011 UH_{327}	16.6	X	286.40266	226.01832	144.11071	3.32515	0.1464187	0.17738583	3.1370644	21	6 30.8	20.9
478229 2011 UB_{329}	16.8	X	281.04394	246.12206	163.86460	7.24692	0.1282182	0.18473072	3.0533503	21	8 16.7	20.9
478230 2011 UP_{329}	16.8	X	296.95454	48.10087	354.23582	9.61620	0.0825739	0.18632140	3.0359473	21	9 6.9	20.7
478231 2011 UO_{331}	16.2	X	248.70694	41.13040	7.53050	10.72532	0.1136223	0.17122837	3.2118276	21	7 10.8	21.1
478232 2011 UA_{334}	16.5	X	315.50163	97.90858	250.75167	7.50325	0.0621787	0.18490020	3.0514842	21	7 24.1	20.7
478233 2011 UR_{334}	16.4	X	71.79654	320.19906	11.45537	22.53467	0.1028897	0.21345602	2.7728760	21	12 21.3	20.9
478234 2011 UM_{335}	16.7	X	250.32120	33.74303	38.64493	19.48474	0.2303704	0.17817984	3.1277378	21	8 2.4	22.0
478235 2011 UR_{335}	16.9	X	102.83103	279.64016	1.38569	5.90916	0.1898569	0.21378834	2.7700017	21	11 29.9	21.5
478236 2011 UY_{337}	16.5	X	289.47249	345.01591	24.65037	11.77049	0.0949851	0.17990134	3.1077527	21	7 14.7	21.0
478237 2011 UK_{338}	17.0	X	40.33314	353.28542	7.33916	5.42089	0.0425798	0.21277966	2.7787489	21	12 11.2	20.9
478238 2011 UE_{340}	17.4	X	51.03644	356.78954	354.15353	5.37244	0.0991739	0.21519087	2.7579528	21	12 21.9	21.3
478239 2011 UH_{340}	16.1	X	289.27514	115.75903	229.57514	14.99760	0.1267825	0.17228041	3.1987389	21	6 5.8	20.6
478240 2011 UF_{341}	16.1	X	172.92522	253.93850	222.35650	15.44710	0.0960585	0.16841024	3.2475591	21	7 10.9	21.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
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478241 2011 UK_{344}	16.0	X	298.93187	167.18486	215.18938	10.88664	0.1073632	0.18278936	3.0749314	21	8 5.7	20.2
478242 2011 UK_{349}	15.7	X	137.17299	304.08421	217.99441	17.09207	0.1196563	0.17555608	3.1588243	21	7 30.1	21.0
478243 2011 UW_{350}	16.7	X	203.16757	339.80628	229.66162	4.28056	0.1058925	0.21012482	2.8021055	21	12 8.5	20.9
478244 2011 UH_{351}	17.1	X	251.06042	301.76807	150.75242	1.22479	0.1328393	0.18081152	3.0973146	21	9 2.4	21.7
478245 2011 UB_{356}	17.0	X	345.73231	224.24377	118.47687	3.07489	0.0970940	0.18787810	3.0191541	21	9 2.2	20.7
478246 2011 UQ_{356}	16.6	X	262.73137	200.72890	218.13905	15.52086	0.0645009	0.17788239	3.1312236	21	8 8.6	21.4
478247 2011 UX_{359}	16.4	X	96.72891	22.11705	223.48521	13.53877	0.0404142	0.18875192	3.0098289	21	9 21.2	20.9
478248 2011 UE_{360}	17.5	X	332.41228	110.12989	311.55283	1.93819	0.1404773	0.20375209	2.8602325	21	11 26.1	20.6
478249 2011 UT_{360}	17.1	X	259.84268	342.58555	104.54549	2.40055	0.1242970	0.18469310	3.0537649	21	9 8.5	21.4
478250 2011 UV_{365}	17.4	X	308.41062	260.87530	118.76628	1.93294	0.2357776	0.18637639	3.0353501	21	8 1.9	21.0
478251 2011 UQ_{367}	16.7	X	297.59469	220.31357	194.73903	10.48796	0.0977604	0.19083055	2.9879324	21	9 20.5	20.6
478252 2011 UJ_{368}	16.4	X	307.15054	307.89936	45.86246	9.26269	0.0919833	0.17966273	3.1105037	21	7 18.8	20.6
478253 2011 UV_{368}	17.6	X	280.95824	351.45106	35.22047	4.77249	0.2402312	0.17693501	3.1423908	21	7 1.7	22.1
478254 2011 UM_{373}	16.7	X	340.98054	261.58884	58.30532	9.91234	0.2215244	0.18464812	3.0542608	21	7 16.8	19.9
478255 2011 UB_{374}	16.0	X	348.57058	294.41555	49.59387	10.21097	0.0343064	0.18367824	3.0650031	21	9 12.6	20.3
478256 2011 UV_{387}	16.9	X	313.85530	177.89458	187.90278	9.55471	0.2652184	0.18295901	3.0730303	21	7 16.3	20.5
478257 2011 UF_{391}	16.4	X	262.62882	236.08898	186.54481	16.78129	0.2192540	0.17825263	3.1268863	21	7 25.6	21.4
478258 2011 UA_{392}	16.5	X	268.25624	312.04108	82.11640	6.27229	0.1608383	0.17581374	3.1557373	21	7 7.1	21.0
478259 2011 UP_{394}	16.3	X	241.63202	153.49625	285.56297	14.18392	0.1208233	0.18127248	3.0920615	21	8 3.9	21.1
478260 2011 UA_{395}	16.0	X	19.28634	248.11328	28.68236	15.28696	0.0492164	0.17718815	3.1393972	21	7 30.5	20.5
478261 2011 UB_{400}	16.8	X	233.41070	323.53239	120.65116	4.35729	0.1374595	0.17729542	3.1381308	21	8 3.1	21.7
478262 2011 UR_{401}	17.1	X	295.93679	12.26115	54.69875	4.68286	0.1112920	0.18912776	3.0058401	21	10 4.9	20.8
478263 2011 UT_{401}	16.4	X	358.64821	284.55827	45.98000	11.45139	0.0959338	0.18483232	3.0522313	21	9 12.1	20.3
478264 2011 UW_{401}	17.1	X	235.23364	241.41657	235.26523	7.06969	0.0516684	0.18698774	3.0287304	21	9 22.1	21.6
478265 2011 UU_{403}	16.4	X	276.46946	210.14845	194.61710	27.68509	0.1533509	0.17802737	3.1295234	21	7 26.6	21.3
478266 2011 UG_{404}	17.1	X	141.28071	285.08061	264.28276	18.64935	0.0911376	0.36995276	1.9217868	21	9 13.7	20.0
478267 2011 UE_{406}	16.3	X	284.07640	178.37617	200.47542	27.51987	0.1292651	0.17942737	3.1132232	21	7 7.1	21.2
478268 2011 UF_{407}	16.0	X	292.64613	132.67126	268.98317	12.73875	0.1932486	0.19025653	2.9939393	21	8 8.3	20.1
478269 2011 UO_{408}	17.1	X	346.18765	205.45546	203.46866	8.09741	0.2021443	0.20449439	2.8533067	21	12 9.3	20.0
478270 2011 VF	16.1	X	244.58593	9.33726	60.34022	15.93590	0.0748513	0.17491140	3.1665813	21	8 9.6	21.0
478271 2011 VE_{2}	17.4	X	269.97142	74.11186	260.59965	17.45977	0.0980705	0.36839588	1.9271974	21	4 8.7	20.0
478272 2011 VN_{4}	16.2	X	302.76543	351.89911	343.96482	10.75205	0.0695046	0.16983803	3.2293324	21	6 20.6	20.8
478273 2011 VY_{4}	15.6	X	288.46231	108.65456	257.79139	11.67653	0.0885310	0.17245086	3.1966307	21	7 6.3	20.0
478274 2011 VT_{8}	16.8	X	296.83467	298.83227	87.62948	14.76814	0.1587029	0.18363172	3.0655207	21	8 7.4	20.9
478275 2011 VN_{13}	16.0	X	23.63908	69.72734	229.81093	21.46152	0.1403110	0.18278867	3.0749392	21	8 30.9	20.3
478276 2011 VX_{14}	17.3	X	306.68457	40.77117	40.25942	4.50132	0.1345983	0.19744880	2.9207858	21	11 5.9	20.6
478277 2011 VV_{15}	16.6	X	346.07587	124.62262	222.60652	10.86292	0.0858544	0.18606233	3.0387647	21	9 3.2	20.5
478278 2011 VH_{19}	17.7	X	280.35613	28.87082	62.71215	0.54009	0.2452788	0.18924234	3.0046266	21	9 22.2	21.7
478279 2011 VQ_{19}	16.7	X	276.45032	233.29801	166.31108	13.70309	0.2142060	0.18031787	3.1029649	21	7 14.9	21.4
478280 2011 VM_{21}	17.2	X	271.38964	303.24797	121.71515	2.24677	0.1528974	0.18081501	3.0972748	21	8 20.7	21.5
478281 2011 VY_{21}	16.6	X	37.33930	186.98953	119.26363	4.39412	0.1162194	0.18928889	3.0041340	21	10 8.7	20.5
478282 2011 VK_{22}	16.5	X	326.63482	348.82095	1.34296	8.66677	0.1129716	0.17954534	3.1118593	21	8 12.2	20.4
478283 2011 WC_{4}	16.2	X	320.11921	304.72711	48.65023	10.27029	0.0850349	0.18195196	3.0843588	21	8 10.1	20.3
478284 2011 WM_{4}	15.8	X	289.95238	147.39775	253.99734	17.64987	0.2118127	0.18157900	3.0885808	21	7 29.8	20.2
478285 2011 WU_{5}	17.0	X	285.48944	0.39369	70.75721	2.15458	0.1561483	0.18609956	3.0383594	21	9 17.4	20.9
478286 2011 WX_{5}	16.6	X	321.04809	142.06916	229.81351	4.58347	0.1221087	0.18259028	3.0771662	21	8 26.2	20.4
478287 2011 WK_{10}	17.2	X	283.40965	19.11358	74.71835	3.04464	0.0630780	0.19246672	2.9709747	21	10 27.4	21.1
478288 2011 WH_{11}	16.4	X	41.74135	216.13466	65.33118	10.50125	0.0757247	0.17922603	3.1155543	21	9 9.9	20.7
478289 2011 WU_{13}	16.2	X	290.96923	157.14686	242.41365	14.26394	0.0685625	0.17949316	3.1124624	21	8 19.3	20.8
478290 2011 WE_{14}	16.8	X	337.45447	320.22811	63.17571	16.41414	0.0973957	0.19179669	2.9778899	21	10 19.9	20.6
478291 2011 WJ_{16}	16.6	X	286.12678	235.19748	219.96619	7.95092	0.0446491	0.19076436	2.9886236	21	11 2.7	20.4
478292 2011 WT_{16}	16.1	X	291.01569	168.74062	245.42210	12.24269	0.1813648	0.18188673	3.0850962	21	8 22.6	20.5
478293 2011 WO_{18}	16.7	X	289.42364	7.94649	30.13758	9.90576	0.1720111	0.18498121	3.0505933	21	8 11.4	20.9
478294 2011 WQ_{19}	16.6	X	356.63699	60.53088	230.62102	21.67737	0.2224378	0.17770443	3.1333137	21	7 3.8	20.2
478295 2011 WY_{22}	16.8	X	118.66809	9.89315	240.42019	7.87083	0.0187992	0.18872813	3.0100818	21	10 23.5	21.0
478296 2011 WH_{23}	16.2	X	28.65831	246.18176	67.77627	9.82120	0.1317523	0.18524520	3.0476943	21	10 9.9	20.1
478297 2011 WS_{23}	16.7	X	329.99635	263.46989	69.00682	10.93772	0.2408689	0.17752448	3.1354308	21	7 7.2	20.0
478298 2011 WG_{24}	17.0	X	289.38053	5.94080	66.71091	10.28170	0.1110300	0.18669926	3.0318496	21	10 5.8	21.1
478299 2011 WW_{24}	16.6	X	275.21317	337.40770	72.94027	6.55180	0.1838773	0.17945979	3.1128482	21	8 3.6	21.1
478300 2011 WB_{33}	16.9	X	5.45380	291.04642	64.33931	10.63854	0.0454163	0.19080914	2.9881560	21	10 20.4	20.9
478301 2011 WU_{40}	16.0	X	308.77019	320.74703	67.59237	18.95496	0.2809379	0.18364685	3.0653523	21	8 13.7	19.9
478302 2011 WP_{49}	16.0	X	311.91551	261.82458	78.96475	19.68782	0.1788995	0.17163803	3.2067150	21	6 23.6	20.1
478303 2011 WH_{55}	16.1	X	223.07709	42.63936	49.43839	15.63522	0.0450636	0.17788530	3.1311894	21	8 17.7	20.9
478304 2011 WQ_{55}	16.9	X	288.21769	311.26761	89.30048	3.47093	0.1022379	0.18238272	3.0795004	21	8 20.3	21.0
478305 2011 WA_{59}	17.0	X	267.73357	350.32632	101.61088	6.14709	0.0718849	0.18538045	3.0462118	21	10 4.4	21.2
478306 2011 WZ_{64}	15.7	X	306.74409	120.42138	260.13578	25.96692	0.2007396	0.17911205	3.1168759	21	7 25.8	20.0
478307 2011 WV_{67}	16.2	X	309.75691	152.94854	233.16234	8.96005	0.0861640	0.17847268	3.1243155	21	8 28.9	20.4
478308 2011 WX_{68}	16.5	X	300.84469	7.34878	12.07969	7.15617	0.0692343	0.17827182	3.1266619	21	8 16.4	20.7
478309 2011 WS_{69}	16.5	X	294.69067	101.14124	280.80753	8.83095	0.2382831	0.17859180	3.1229261	21	7 13.1	20.7
478310 2011 WD_{71}	16.4	X	289.57317	19.53195	60.86736	11.56077	0.1238386	0.18775969	3.0204233	21	10 14.1	20.4
478311 2011 WS_{72}	16.0	X	330.52853	320.23577	59.34119	11.03071	0.1079818	0.18364563	3.0653659	21	9 30.6	19.9
478312 2011 WU_{73}	16.3	X	236.50418	144.83616	284.54478	7.96791	0.0707232	0.17303480	3.1894350	21	7 24.9	21.1
478313 2011 WZ_{73}	16.4	X	327.53644	107.89202	274.78631	7.56024	0.1390980	0.18892544	3.0079857	21	9 18.1	20.0
478314 2011 WW_{76}	15.8	X	129.39950	312.03976	254.87594	10.80214	0.1017884	0.17894406	3.1188263	21	9 13.9	20.8
478315 2011 WD_{79}	16.9	X	291.87320	166.53413	253.60765	4.40986	0.1594039	0.18551499	3.0447388	21	9 8.2	20.9
478316 2011 WU_{79}	16.6	X	254.07987	243.94840	226.48196	4.32747	0.1187308	0.18671534	3.0316755	21	9 29.3	21.0
478317 2011 WY_{80}	17.3	X	248.89119	251.93089	178.17440	1.27176	0.1562902	0.17434686	3.1734132	21	7 30.4	22.1
478318 2011 WA_{82}	16.3	X	349.65043	116.47791	234.79066	10.58964	0.0686112	0.18368052	3.0649777	21	9 13.6	20.4
478319 2011 WR_{82}	15.8	X	343.29140	262.66821	68.04445	20.00879	0.0904980	0.17642470	3.1484475	21	8 19.4	20.2
478320 2011 WL_{86}	17.3	X	291.64876	227.69943	215.59441	2.52373	0.1124518	0.19134946	2.9825282	21	10 17.7	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478321 2011 WT_{88}	15.8	X	200.31733	218.60396	267.51719	10.57916	0.1544683	0.16908165	3.2389561	21	8 15.9	21.2
478322 2011 WZ_{89}	16.3	X	309.19894	173.61385	247.66260	8.50072	0.0647599	0.18876572	3.0096821	21	10 17.7	20.3
478323 2011 WZ_{92}	15.9	X	307.48675	271.33299	79.34771	16.19218	0.1096345	0.17047614	3.2212689	21	7 10.9	20.2
478324 2011 WW_{96}	15.6	X	155.04252	308.46411	252.63952	13.42898	0.2300062	0.17809100	3.1287779	21	10 4.8	21.2
478325 2011 WA_{97}	17.0	X	242.57006	351.58202	109.74586	2.51211	0.1311350	0.18031866	3.1029559	21	9 4.8	21.5
478326 2011 WS_{97}	16.6	X	230.80849	247.36079	241.57021	3.26939	0.1054349	0.18385690	3.0630171	21	9 26.7	21.1
478327 2011 WY_{103}	16.4	X	34.15173	265.14710	9.56478	9.73578	0.0175481	0.17415893	3.1756957	21	8 12.7	20.9
478328 2011 WA_{104}	16.8	X	190.65329	151.78255	9.71735	10.44483	0.0719385	0.18470843	3.0535960	21	9 28.2	21.3
478329 2011 WF_{104}	16.7	X	183.64388	119.30222	16.88377	11.60687	0.0255959	0.17553463	3.1590816	21	8 25.5	21.4
478330 2011 WO_{104}	15.9	X	46.25294	355.90889	286.14325	10.26615	0.0620403	0.18120554	3.0928231	21	9 4.2	20.2
478331 2011 WW_{109}	16.2	X	322.92976	321.94883	70.36634	12.25796	0.0541164	0.18644962	3.0345552	21	10 9.5	20.4
478332 2011 WD_{110}	16.6	X	319.80363	97.71410	235.36113	10.19639	0.1385947	0.17239708	3.1972955	21	7 1.3	20.7
478333 2011 WU_{113}	15.7	X	240.82926	194.88964	262.70358	7.88049	0.0509003	0.17598809	3.1536527	21	9 2.8	20.5
478334 2011 WB_{116}	16.3	X	297.89688	176.90001	257.84024	8.27682	0.1196266	0.18837841	3.0138060	21	10 11.5	20.3
478335 2011 WG_{118}	16.7	X	262.96615	347.32905	79.34639	4.75726	0.1653685	0.17883940	3.1200430	21	8 11.8	21.3
478336 2011 WM_{120}	16.6	X	326.14624	291.02030	109.65138	12.69708	0.2261358	0.19263884	2.9692048	21	10 16.9	19.8
478337 2011 WG_{127}	16.3	X	169.72625	272.90612	254.97545	9.09144	0.1171558	0.17501357	3.1653488	21	9 7.6	21.5
478338 2011 WV_{128}	16.7	X	325.04837	307.17937	66.07517	11.76973	0.0547294	0.18156042	3.0887915	21	9 17.7	21.0
478339 2011 WU_{129}	15.9	X	137.59771	181.91846	352.38337	9.85828	0.0953945	0.17043827	3.2217460	21	8 20.5	20.8
478340 2011 WE_{130}	15.9	X	309.54454	306.01083	110.37978	17.30341	0.0872974	0.19010256	2.9955558	21	10 21.4	20.1
478341 2011 WR_{130}	16.0	X	336.05925	239.03109	76.70154	11.69111	0.0464329	0.16984927	3.2291900	21	7 14.2	20.4
478342 2011 WB_{135}	15.6	X	147.88650	299.62896	259.41243	15.30429	0.1838927	0.17535556	3.1612319	21	9 23.6	21.1
478343 2011 WF_{135}	16.2	X	230.85674	22.29769	74.09629	10.82464	0.0649457	0.17319634	3.1874514	21	8 27.6	21.0
478344 2011 WE_{136}	16.1	X	298.36482	340.57306	80.37321	15.83403	0.1421765	0.18278871	3.0749388	21	10 3.3	20.3
478345 2011 WT_{136}	16.9	X	290.46822	53.92322	11.98101	7.17040	0.0887531	0.18586810	3.0408814	21	9 26.9	20.8
478346 2011 WU_{136}	16.3	X	319.92481	95.82040	272.07726	8.42005	0.1028375	0.18005251	3.1060130	21	8 19.2	20.3
478347 2011 WX_{136}	16.5	X	241.19989	44.04698	57.05604	12.57667	0.1143286	0.17776209	3.1326361	21	9 10.8	21.3
478348 2011 WZ_{136}	16.6	X	318.70748	309.94871	52.21605	6.23435	0.1448483	0.17858016	3.1230618	21	8 11.3	20.4
478349 2011 WR_{138}	16.5	X	258.08055	196.88744	242.21012	8.43281	0.0563070	0.17947311	3.1126942	21	8 31.2	21.1
478350 2011 WZ_{140}	15.7	X	274.15632	135.91766	270.16665	12.86947	0.0619435	0.17348455	3.1839202	21	8 7.9	20.3
478351 2011 WV_{141}	17.2	X	297.92871	168.77771	201.26972	0.15126	0.1954752	0.17734754	3.1375159	21	7 9.3	21.2
478352 2011 WT_{143}	16.8	X	37.45133	284.45933	57.39587	15.61891	0.1711739	0.20162754	2.8802896	21	11 29.9	20.6
478353 2011 WA_{150}	16.4	X	44.76474	144.83286	289.74798	15.42671	0.1103651	0.22382489	2.6865636	21	—	—
478354 2011 WY_{150}	15.9	X	358.12518	196.07095	174.98867	19.62975	0.1988717	0.19311828	2.9642885	21	11 10.7	19.3
478355 2011 WQ_{151}	16.3	X	348.68800	359.05190	354.23885	15.57385	0.1626205	0.18995680	2.9970879	21	9 20.6	19.6
478356 2011 XW_{2}	18.7	X	332.10196	137.88306	220.13583	21.00984	0.0811903	0.38376609	1.8753902	21	9 17.9	20.5
478357 2011 YZ_{1}	16.2	X	291.05566	7.56642	28.02415	10.49889	0.0722826	0.17552321	3.1592186	21	8 25.4	20.6
478358 2011 YJ_{3}	15.1	X	304.62227	96.95891	299.30290	24.97283	0.1671405	0.17441989	3.1725274	21	8 17.9	19.4
478359 2011 YR_{7}	16.1	X	249.77793	8.11757	99.14182	11.80232	0.1724646	0.17552551	3.1591910	21	9 19.2	21.0
478360 2011 YP_{8}	16.2	X	344.67010	93.98906	245.48942	11.17930	0.1142283	0.17874077	3.1211906	21	8 19.2	20.2
478361 2011 YY_{19}	16.0	X	216.14248	228.74832	289.35060	15.12766	0.1900060	0.17585709	3.1552186	21	10 1.6	21.5
478362 2011 YR_{23}	16.0	X	339.99945	274.92666	101.45257	18.03176	0.2527168	0.18279570	3.0748604	21	10 15.2	19.3
478363 2011 YX_{23}	16.4	X	271.71678	86.97329	36.67848	10.58302	0.3015701	0.18583168	3.0412787	21	10 14.2	20.5
478364 2011 YW_{24}	16.5	X	253.16135	342.59279	107.70200	6.20341	0.1838913	0.17158568	3.2073673	21	8 27.7	21.3
478365 2011 YP_{25}	16.0	X	309.52496	105.61444	295.01835	14.89509	0.2316420	0.17745015	3.1363063	21	8 26.1	19.8
478366 2011 YW_{30}	15.9	X	322.56344	100.58324	302.12162	6.86618	0.0745231	0.18198171	3.0840226	21	10 10.3	20.0
478367 2011 YB_{36}	16.7	X	304.59992	37.84067	352.47514	8.66513	0.0991910	0.17398198	3.1778486	21	8 30.5	20.8
478368 2011 YN_{37}	17.6	X	76.00178	78.90954	116.88859	24.48322	0.0703684	0.35361037	1.9805511	21	7 1.4	19.6
478369 2011 YU_{45}	16.4	X	221.53834	169.01533	309.24193	16.89703	0.1352346	0.16825717	3.2495284	21	8 27.1	21.6
478370 2011 YK_{48}	18.6	X	335.83312	341.71177	309.15818	17.34534	0.0453916	0.35516123	1.9747813	21	6 1.0	20.8
478371 2011 YF_{55}	17.0	X	306.76563	13.81607	46.43269	3.50808	0.2424554	0.18319029	3.0704433	21	9 24.2	20.3
478372 2011 YW_{56}	16.5	X	210.74622	32.73445	101.29689	7.13822	0.1912095	0.16952345	3.2333262	21	9 8.9	21.8
478373 2011 YX_{56}	16.4	X	216.35058	177.59464	309.58066	5.56855	0.2324565	0.16958619	3.2325287	21	8 29.6	21.8
478374 2011 YA_{62}	15.9	X	318.42972	297.38026	65.89648	17.44736	0.2341127	0.17855257	3.1233835	21	8 1.7	19.7
478375 2011 YK_{70}	17.8	X	251.39214	321.58999	97.02981	23.56123	0.0911913	0.36881898	1.9257233	21	8 5.7	20.0
478376 2011 YS_{71}	16.4	X	292.21882	286.01589	112.31527	9.76670	0.1180430	0.17174180	3.2054233	21	8 20.8	20.7
478377 2012 AJ_{6}	15.4	X	280.19446	288.90592	123.78402	27.22087	0.2591757	0.17188364	3.2036595	21	7 30.7	19.9
478378 2012 AR_{11}	17.7	X	187.51282	114.21056	343.71780	18.06613	0.1024764	0.36096364	1.9535615	21	7 12.3	20.5
478379 2012 AS_{11}	16.4	X	306.22415	183.65596	285.78644	13.22354	0.2587274	0.19830265	2.9123957	21	11 29.6	19.4
478380 2012 AS_{18}	17.9	X	249.28813	85.44271	325.54419	18.32144	0.1170976	0.36705088	1.9319025	21	7 19.0	20.1
478381 2012 AK_{22}	16.2	X	257.70366	127.57682	10.52647	14.48091	0.2924253	0.18153989	3.0890244	21	10 13.3	20.7
478382 2012 AU_{22}	17.4	X	231.84917	343.94078	71.92845	24.41461	0.0714538	0.35915868	1.9601011	21	6 30.7	19.8
478383 2012 BZ	15.9	X	279.74856	111.69698	301.21146	10.89660	0.0640155	0.16786567	3.2545788	21	8 24.6	20.4
478384 2012 BE_{2}	15.7	X	271.98551	130.02664	306.96219	12.69936	0.0433347	0.17420190	3.1751734	21	9 14.6	20.3
478385 2012 BP_{13}	19.3	X	305.10583	84.10913	310.10838	8.47790	0.2481226	0.37964693	1.8889311	21	9 2.1	19.8
478386 2012 BK_{16}	17.1	X	260.09867	41.14601	74.30011	6.21943	0.3208691	0.17804683	3.1292954	21	9 19.6	21.9
478387 2012 BF_{22}	17.3	X	304.29044	220.60994	200.53362	3.04878	0.2939398	0.18170702	3.0871299	21	9 9.6	20.8
478388 2012 BQ_{26}	16.2	X	194.02958	84.92254	87.20981	16.68824	0.0492381	0.17561314	3.1581399	21	10 22.8	21.1
478389 2012 BH_{27}	17.9	X	243.82921	116.21778	303.23605	17.76739	0.1047356	0.36613171	1.9351345	21	7 22.2	19.9
478390 2012 BG_{29}	15.7	X	169.14586	80.23551	118.09849	10.58328	0.0705014	0.17607971	3.1525587	21	10 23.3	20.6
478391 2012 BN_{32}	15.7	X	192.22572	48.04748	107.06866	19.71830	0.0496337	0.16997662	3.2275769	21	9 30.4	20.8
478392 2012 BB_{59}	18.2	X	359.00200	324.51745	310.59727	15.96818	0.0633257	0.35618514	1.9709950	21	6 20.6	20.0
478393 2012 BK_{65}	16.0	X	187.79494	213.78004	280.92973	9.81197	0.1086185	0.16061657	3.3517824	21	8 16.7	21.3
478394 2012 BC_{66}	16.5	X	219.17740	255.91126	246.98431	4.56768	0.1230232	0.17330224	3.1861528	21	9 27.9	21.4
478395 2012 BW_{67}	16.0	X	257.21869	144.68978	312.18686	25.12303	0.1333775	0.17474284	3.1686173	21	9 3.2	20.9
478396 2012 BU_{72}	15.9	X	265.48319	317.68662	128.57130	29.36307	0.1677719	0.17122946	3.2118141	21	9 10.5	20.8
478397 2012 BX_{86}	16.0	X	247.22497	44.12952	75.83626	18.02916	0.1696636	0.17314886	3.1880341	21	10 6.5	21.1
478398 2012 BD_{97}	16.6	X	259.48943	282.67133	177.78197	20.72159	0.4308837	0.17604065	3.1530249	21	8 14.4	22.1
478399 2012 BD_{98}	17.9	X	55.95993	261.29633	337.82837	17.36311	0.0694747	0.35824473	1.9634334	21	8 12.2	19.7
478400 2012 BJ_{103}	15.5	X	281.12574	130.81671	284.72011	14.10800	0.0363550	0.16940617	3.2348183	21	8 30.0	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478401 2012 BX_{106}	18.2	X	151.83299	167.59442	312.16738	18.40734	0.0430516	0.35382922	1.9797343	21	6 23.1	20.7
478402 2012 BE_{128}	15.9	X	266.37836	132.08339	334.62502	9.74399	0.1885781	0.17582408	3.1556136	21	9 26.7	20.4
478403 2012 BW_{131}	15.8	X	243.84266	311.69479	151.00333	17.24117	0.1913903	0.16875353	3.2431533	21	8 30.7	20.8
478404 2012 BJ_{132}	15.7	X	234.66190	76.65608	46.01979	26.18487	0.2566374	0.17254751	3.1954370	21	9 23.5	21.3
478405 2012 BQ_{146}	18.5	X	299.55800	62.46338	302.19103	17.51996	0.0782823	0.36703692	1.9319515	21	7 27.9	19.7
478406 2012 CB	16.4	X	301.35468	158.31543	267.36023	9.74992	0.1614242	0.18008748	3.1056108	21	9 26.4	20.4
478407 2012 CQ	17.6	X	240.09536	78.44462	342.48190	19.40905	0.0918995	0.36045114	1.9554128	21	7 28.1	20.0
478408 2012 CQ_{18}	16.1	X	247.35173	280.43808	210.49167	14.00756	0.2139297	0.17631743	3.1497244	21	10 3.0	20.9
478409 2012 CK_{33}	16.6	X	254.71026	287.69539	166.57627	11.36643	0.2286549	0.16874768	3.2432282	21	8 25.8	21.5
478410 2012 CZ_{42}	16.5	X	232.37485	123.09447	2.47315	8.47563	0.1653832	0.17125768	3.2114612	21	9 18.8	21.4
478411 2012 CC_{44}	18.0	X	228.02943	270.46976	150.95447	22.71873	0.1078786	0.36114973	1.9528903	21	7 3.3	20.9
478412 2012 CF_{55}	16.2	X	248.74567	60.95082	73.63920	12.35703	0.2572191	0.17723104	3.1388907	21	10 11.6	21.2
478413 2012 DG	15.3	X	252.90773	325.77954	121.62579	19.27380	0.1305631	0.16175201	3.3360785	21	8 31.5	20.3
478414 2012 DU	16.3	X	252.81234	112.18697	8.04162	19.07830	0.3216377	0.17962248	3.1109683	21	9 18.8	21.2
478415 2012 DB_{16}	16.0	X	271.22782	335.19314	163.82111	26.82933	0.1168095	0.17569441	3.1571661	21	11 29.4	20.8
478416 2012 DE_{97}	16.1	X	228.98138	69.08796	75.17566	18.64883	0.1507556	0.17261763	3.1945716	21	10 17.9	21.3
478417 2012 EB_{3}	18.4	X	279.91148	283.60144	326.05659	5.24851	0.1515811	0.31055508	2.1596181	21	1 3.4	21.5
478418 2012 EU_{3}	18.1	X	229.03118	54.37686	341.40911	17.66145	0.1343066	0.34736857	2.0042061	21	5 16.6	21.2
478419 2012 FK_{65}	18.5	X	240.90129	269.92913	31.74664	4.14202	0.2053406	0.31179174	2.1539039	21	1 31.4	21.9
478420 2012 FP_{67}	18.4	X	247.11318	183.41033	88.20376	5.99466	0.1741646	0.29948016	2.2125377	21	—	—
478421 2012 GA_{3}	18.6	X	310.34400	172.91993	31.79950	2.76199	0.1004488	0.30683869	2.1770211	21	—	—
478422 2012 GG_{5}	18.1	X	240.18800	34.50315	244.44978	7.41607	0.3017417	0.29966360	2.2116347	21	1 1.6	22.1
478423 2012 GX_{26}	18.4	X	277.48964	209.16535	23.65470	5.44833	0.1031853	0.30131718	2.2035358	21	—	—
478424 2012 GC_{40}	17.5	X	138.29044	79.49595	85.45155	23.86951	0.0736742	0.35295414	1.9830052	21	8 22.1	20.4
478425 2012 HS_{5}	17.8	X	205.32387	171.38113	96.74335	5.86964	0.2214587	0.28728491	2.2747177	21	—	—
478426 2012 HW_{6}	18.0	X	186.24647	136.63333	152.56681	3.83811	0.1428151	0.28946944	2.2632589	21	—	—
478427 2012 HE_{21}	18.1	X	224.36397	232.74238	101.17380	4.18705	0.1990236	0.31294375	2.1486146	21	2 26.8	21.4
478428 2012 HN_{21}	18.1	X	240.28420	247.78527	43.20243	3.13334	0.1636106	0.30424681	2.1893676	21	1 18.6	21.3
478429 2012 HE_{28}	18.4	X	189.15609	146.14776	131.01377	3.88031	0.3018948	0.27893870	2.3198694	21	—	—
478430 2012 HN_{34}	17.7	X	336.11560	243.69466	219.74956	18.02761	0.1001790	0.38896084	1.8586551	21	—	—
478431 2012 HX_{38}	18.4	X	203.34337	32.46330	215.93520	4.97358	0.2114534	0.27927769	2.3179918	21	—	—
478432 2012 HS_{39}	17.5	X	262.85397	217.17951	38.18605	6.56239	0.2042554	0.30089322	2.2056052	21	—	—
478433 2012 HT_{52}	18.1	X	203.93133	58.88105	208.02762	4.79759	0.1576815	0.28704210	2.2760003	21	—	—
478434 2012 HA_{58}	17.7	X	177.44583	165.84839	104.92123	9.15989	0.1525799	0.27637753	2.3341794	21	—	—
478435 2012 HF_{66}	17.9	X	238.18900	127.65801	132.91696	7.47942	0.1694346	0.29371004	2.2414214	21	—	—
478436 2012 HY_{67}	18.1	X	157.13758	113.61345	186.99600	5.29070	0.2252521	0.27498015	2.3420805	21	—	—
478437 2012 HB_{72}	18.1	X	195.47998	175.41972	94.22049	7.52101	0.2019575	0.28252908	2.3001736	21	—	—
478438 2012 HA_{73}	18.2	X	158.99190	102.18499	193.13609	7.96503	0.2209088	0.28002727	2.3138533	21	—	—
478439 2012 HB_{79}	18.3	X	299.34763	20.93153	238.05366	3.82331	0.1167998	0.31188552	2.1534721	21	2 7.8	21.0
478440 2012 JH_{21}	18.0	X	220.55161	39.58437	212.69102	6.87514	0.1859944	0.28591287	2.2819892	21	—	—
478441 2012 JJ_{21}	18.0	X	266.15292	202.06169	71.41764	4.92855	0.1931572	0.30391868	2.1909432	21	1 19.1	21.3
478442 2012 JZ_{25}	18.4	X	167.14203	153.77162	98.75338	4.11128	0.1646272	0.27023608	2.3694115	21	12 30.4	22.1
478443 2012 JU_{66}	17.6	X	217.64227	124.33216	135.62222	22.93747	0.2027792	0.28954974	2.2628404	21	—	—
478444 2012 KR	18.1	X	219.32607	128.93225	82.27915	2.18681	0.1408157	0.27754090	2.3276520	21	—	—
478445 2012 KZ_{4}	18.5	X	184.58429	185.29269	113.02601	2.98078	0.2256210	0.28273183	2.2990738	21	—	—
478446 2012 KT_{11}	18.1	X	229.97272	253.39379	85.67264	2.30107	0.1912037	0.31395855	2.1439822	21	3 9.8	21.3
478447 2012 KR_{12}	18.6	X	193.74055	197.42088	121.34162	3.60171	0.2453699	0.29289772	2.2455638	21	1 16.0	22.0
478448 2012 KQ_{43}	18.2	X	232.83096	24.42724	236.68590	5.50409	0.1750076	0.29075656	2.2565747	21	—	—
478449 2012 KN_{44}	18.1	X	192.41484	55.76761	226.47179	2.33972	0.2248363	0.28117812	2.3075354	21	—	—
478450 2012 KJ_{45}	17.1	X	6.64012	307.70772	251.02276	24.92983	0.2284844	0.31893360	2.1216278	21	1 23.1	19.6
478451 2012 KF_{48}	18.0	X	167.57187	89.56541	209.67038	6.49965	0.1968296	0.27731808	2.3288987	21	—	—
478452 2012 LK	18.1	X	149.88471	138.25087	184.65969	4.65928	0.2408201	0.27697267	2.3308345	21	—	—
478453 2012 LT_{4}	16.8	X	206.27943	20.37813	260.14407	24.38752	0.1680206	0.28516835	2.2859593	21	—	—
478454 2012 LZ_{7}	18.4	X	209.03631	173.00859	157.12749	6.15437	0.2025924	0.29818999	2.2189151	21	2 8.5	21.9
478455 2012 NV_{1}	17.0	X	112.80337	3.74866	332.35592	14.67840	0.1636975	0.25953848	2.4340802	21	—	—
478456 2012 OY_{1}	17.8	X	109.66797	227.35896	171.37727	7.07340	0.1215512	0.27320926	2.3521902	21	1 14.0	20.6
478457 2012 OV_{2}	17.5	X	131.80533	235.92150	90.15220	3.68905	0.2077458	0.25869028	2.4393979	21	—	—
478458 2012 PB_{14}	17.7	X	174.76462	357.68814	304.50678	4.37527	0.1134138	0.26574115	2.3960553	21	—	—
478459 2012 PF_{16}	17.6	X	120.55053	133.74665	182.43491	3.30950	0.1933768	0.25665184	2.4522973	21	—	—
478460 2012 PY_{31}	17.5	X	205.56156	325.01879	358.47561	5.53609	0.1669605	0.28573872	2.2829163	21	1 31.2	21.0
478461 2012 PB_{34}	17.6	X	170.56332	95.56302	246.71300	5.81761	0.1348080	0.27903962	2.3193100	21	1 16.5	20.8
478462 2012 PN_{38}	17.8	X	190.81866	350.90126	272.64445	3.91006	0.2057311	0.26762427	2.3848023	21	—	—
478463 2012 QO_{3}	18.0	X	198.06676	217.73684	77.22598	8.01891	0.2326801	0.28007306	2.3136011	21	—	—
478464 2012 QT_{13}	17.5	X	335.30140	87.15339	334.88614	11.23949	0.0560767	0.23710840	2.5852632	21	12 6.5	20.9
478465 2012 QS_{14}	17.2	X	104.81845	105.83684	263.68019	7.78134	0.3792073	0.25713033	2.4492541	21	1 13.5	20.0
478466 2012 QG_{15}	17.6	X	85.72728	38.02286	304.65652	2.59297	0.1461080	0.24739017	2.5131269	21	—	—
478467 2012 QF_{20}	18.0	X	135.03271	182.17311	171.59854	7.84572	0.1522746	0.26665520	2.3905767	21	—	—
478468 2012 QS_{20}	17.9	X	142.22613	57.90095	278.98580	2.38771	0.2352281	0.26561370	2.3968218	21	—	—
478469 2012 QJ_{22}	18.0	X	115.81187	347.23054	304.52424	4.07626	0.2056089	0.24745687	2.5126753	21	12 30.1	22.3
478470 2012 QP_{22}	17.6	X	91.15507	215.32624	206.07720	3.59837	0.1350580	0.26974971	2.3722588	21	1 19.6	20.0
478471 2012 QH_{23}	17.8	X	111.92234	208.89752	179.22598	6.45784	0.1166636	0.26749417	2.3855755	21	1 3.9	20.7
478472 2012 QJ_{23}	17.0	X	313.10973	92.67971	338.63787	14.58775	0.0960308	0.23028696	2.6360672	21	11 6.9	20.4
478473 2012 QU_{24}	17.4	X	84.72010	2.04826	273.80220	2.61571	0.1364832	0.23069186	2.6329819	21	11 3.9	21.2
478474 2012 QK_{26}	17.7	X	80.31813	224.99580	179.86642	6.44596	0.1233468	0.26082712	2.4260564	21	—	—
478475 2012 QW_{27}	17.2	X	188.36367	15.64717	176.64353	9.35893	0.1090617	0.23315008	2.6144420	21	11 7.2	21.2
478476 2012 QA_{32}	17.4	X	58.10235	197.85938	211.98482	7.08333	0.0989658	0.25664022	2.4523714	21	—	—
478477 2012 QJ_{33}	17.5	X	112.96077	63.77716	268.95125	4.07303	0.1897578	0.25419877	2.4680488	21	—	—
478478 2012 QC_{36}	17.2	X	63.91770	218.05292	199.71681	6.50174	0.1730825	0.25792206	2.4442393	21	—	—
478479 2012 QL_{48}	17.6	X	81.17662	107.27832	293.91755	10.13207	0.1591176	0.26430110	2.4047507	21	—	—
478480 2012 QT_{49}	17.2	X	49.01562	47.12899	31.85340	6.83788	0.0926208	0.26140626	2.4224718	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478481 2012 QH_{51}	17.3	X	140.21144	306.09976	352.46140	14.00900	0.1746111	0.25760341	2.4462545	21	—	—
478482 2012 RV_{1}	17.5	X	0.48751	95.62092	290.48612	3.64887	0.0466917	0.23464562	2.6033212	21	11 25.3	20.7
478483 2012 RT_{2}	18.3	X	156.21666	346.35668	348.02273	0.97926	0.2010625	0.26860486	2.3789947	21	1 1.9	21.7
478484 2012 RP_{3}	16.8	X	143.34194	42.44987	277.94541	10.00644	0.2660023	0.26238616	2.4164368	21	—	—
478485 2012 RW_{5}	17.2	X	288.32328	274.85290	338.29726	7.91888	0.1357188	0.28998429	2.2605792	21	1 23.3	20.4
478486 2012 RV_{7}	17.7	X	59.35259	92.50014	262.19663	4.26397	0.2408682	0.24312185	2.5424557	21	—	—
478487 2012 RA_{18}	18.0	X	83.88532	108.57531	190.87177	8.55377	0.3297550	0.23954681	2.5676892	21	12 20.2	22.6
478488 2012 RS_{21}	18.2	X	105.02421	139.57623	197.81457	1.94043	0.2336744	0.25251849	2.4789852	21	—	—
478489 2012 RY_{21}	17.5	X	23.26908	34.82448	304.86186	3.35534	0.0670679	0.22791979	2.6542879	21	10 27.5	20.8
478490 2012 RT_{22}	18.1	X	95.58966	211.08647	176.10925	1.49061	0.2305395	0.25862636	2.4397998	21	—	—
478491 2012 RY_{27}	17.3	X	133.11310	64.47507	254.00957	5.55928	0.1558948	0.25837678	2.4413707	21	—	—
478492 2012 RR_{31}	17.8	X	59.53348	214.85220	151.59679	4.34098	0.1891710	0.24489463	2.5301710	21	—	—
478493 2012 RP_{32}	17.0	X	122.25381	271.90392	40.77959	7.57152	0.1179203	0.25173370	2.4841347	21	—	—
478494 2012 RC_{33}	17.8	X	22.67361	225.67219	182.38737	7.49769	0.1908998	0.24340528	2.5404816	21	—	—
478495 2012 RT_{37}	17.3	X	352.98510	227.63271	194.62872	12.50216	0.1100225	0.23625419	2.5914910	21	—	—
478496 2012 RB_{40}	17.3	X	108.24183	341.27734	26.62138	4.91151	0.2074711	0.26038919	2.4287757	21	—	—
478497 2012 RE_{40}	17.3	X	58.99121	224.07390	114.78754	6.43575	0.3456284	0.23811690	2.5779584	21	—	—
478498 2012 SO_{3}	17.2	X	91.39772	349.18677	31.06520	4.82732	0.1861470	0.25500109	2.4628692	21	—	—
478499 2012 SQ_{6}	17.8	X	145.49061	280.63751	53.45055	3.04978	0.2328606	0.26451226	2.4034707	21	—	—
478500 2012 SM_{12}	17.6	X	55.03433	75.51443	21.80749	2.38957	0.1791397	0.26294208	2.4130296	21	1 11.2	19.5
478501 2012 SC_{13}	18.0	X	127.26803	313.47050	46.08593	2.23476	0.2069687	0.26261644	2.4150240	21	1 3.2	21.0
478502 2012 SJ_{17}	17.5	X	80.60403	347.70474	347.46925	2.38159	0.1318977	0.24194159	2.5507175	21	—	—
478503 2012 SY_{17}	17.2	X	30.44283	11.31348	331.07479	4.70995	0.0724924	0.22419475	2.6836080	21	11 10.1	20.7
478504 2012 SN_{19}	18.1	X	197.20096	136.66726	161.14000	2.62799	0.1633385	0.27137573	2.3627732	21	—	—
478505 2012 SW_{21}	16.9	X	162.53565	271.16119	342.63982	10.28578	0.0916275	0.24511280	2.5286694	21	12 27.9	20.8
478506 2012 SA_{23}	18.0	X	61.26188	27.94368	23.35794	1.63048	0.1769612	0.25364060	2.4716684	21	—	—
478507 2012 SQ_{27}	17.9	X	135.67548	157.73797	187.68879	2.09010	0.2155321	0.26310536	2.4120312	21	—	—
478508 2012 SV_{28}	17.4	X	118.40157	26.33916	311.10939	6.02291	0.1825439	0.25829886	2.4418617	21	—	—
478509 2012 SH_{29}	18.1	X	133.97163	104.18846	238.13662	1.81521	0.2307322	0.26162802	2.4211027	21	—	—
478510 2012 SZ_{29}	17.9	X	33.30370	294.04579	195.30610	5.67388	0.0799142	0.27035442	2.3687200	21	1 12.9	20.5
478511 2012 SZ_{30}	17.0	X	9.94183	34.22142	18.14497	6.19787	0.2306694	0.23389822	2.6088640	21	—	—
478512 2012 SC_{31}	16.7	X	314.19642	85.08651	27.61313	22.34112	0.0544650	0.23491470	2.6013328	21	—	—
478513 2012 SR_{36}	17.7	X	212.95543	266.56569	356.88102	6.43897	0.1470900	0.26568908	2.3963684	21	—	—
478514 2012 ST_{39}	17.9	X	135.99715	84.06708	233.74903	1.46004	0.2104411	0.25801562	2.4436484	21	—	—
478515 2012 SR_{46}	17.9	X	90.57224	176.34504	192.49845	1.68340	0.2148639	0.25383367	2.4704149	21	—	—
478516 2012 SF_{48}	17.6	X	115.34685	192.43136	139.88741	1.79278	0.1970299	0.25402571	2.4691697	21	—	—
478517 2012 SG_{50}	17.5	X	155.24041	111.10781	198.97773	11.82555	0.1768314	0.25938258	2.4350554	21	—	—
478518 2012 SA_{55}	17.0	X	45.59023	324.92243	34.98646	9.87344	0.1887111	0.23284585	2.6167188	21	—	—
478519 2012 SE_{56}	17.2	X	15.57167	121.46258	325.24482	4.33516	0.2064192	0.24530857	2.5273239	21	—	—
478520 2012 SG_{56}	16.6	X	111.29173	289.28140	355.30344	11.92731	0.1163674	0.23345618	2.6121562	21	12 9.9	20.8
478521 2012 SK_{56}	17.1	X	12.85120	204.82126	167.05009	2.35193	0.2186741	0.22692173	2.6620650	21	12 17.0	20.0
478522 2012 SL_{56}	16.8	X	19.84374	356.61808	26.31783	13.86956	0.1350699	0.23114380	2.6295487	21	12 30.9	20.3
478523 2012 SM_{57}	16.9	X	332.83373	95.14404	357.79615	11.99003	0.2176391	0.23409452	2.6074053	21	—	—
478524 2012 SV_{57}	16.7	X	329.71412	47.40211	21.04997	13.09650	0.1773049	0.22537064	2.6742653	21	12 4.5	19.5
478525 2012 SL_{58}	16.6	X	24.93168	339.02954	24.53285	18.73528	0.2264190	0.23282283	2.6168912	21	12 26.4	20.2
478526 2012 SU_{60}	18.0	X	120.05351	162.93969	164.79763	1.44118	0.1954595	0.25492117	2.4633840	21	—	—
478527 2012 SW_{60}	17.5	X	33.18999	139.70488	217.22812	2.63269	0.1236982	0.23407621	2.6075413	21	12 14.3	20.7
478528 2012 SY_{64}	17.6	X	19.51517	49.82643	325.48278	4.96255	0.2619030	0.23222786	2.6213590	21	—	—
478529 2012 TG_{1}	17.8	X	113.62931	177.57599	177.70357	2.18801	0.2164128	0.25810248	2.4431001	21	—	—
478530 2012 TB_{2}	17.7	X	129.48578	305.10691	12.61935	7.14906	0.2294451	0.25404629	2.4690363	21	—	—
478531 2012 TR_{2}	17.1	X	350.48915	142.84711	351.59105	6.67140	0.1196568	0.26129581	2.4231544	21	—	—
478532 2012 TZ_{5}	17.4	X	41.17385	134.34384	192.79807	11.53823	0.0920335	0.22504715	2.6768274	21	11 11.6	21.0
478533 2012 TX_{7}	17.2	X	264.88468	177.49652	295.92295	9.27850	0.1685082	0.22948541	2.6422019	21	10 10.9	20.9
478534 2012 TP_{9}	16.4	X	356.73446	42.04073	11.36782	31.93453	0.2329758	0.23123783	2.6288358	21	—	—
478535 2012 TW_{10}	16.7	X	258.15157	313.38440	212.22541	31.55007	0.2308859	0.22876391	2.6477544	21	12 2.6	20.5
478536 2012 TP_{11}	18.5	X	46.94573	23.60333	36.68796	2.74097	0.1988681	0.24690749	2.5164011	21	—	—
478537 2012 TZ_{12}	16.6	X	336.99308	47.84713	29.00084	22.48500	0.0631945	0.23152934	2.6266287	21	12 28.4	20.3
478538 2012 TK_{14}	16.5	X	308.80705	110.01655	307.24899	11.83657	0.3066854	0.21313735	2.7756391	21	9 10.2	19.4
478539 2012 TB_{17}	17.2	X	101.91201	349.77928	16.77077	7.26627	0.1137512	0.25506236	2.4624748	21	—	—
478540 2012 TU_{17}	17.4	X	49.20465	316.55224	29.65680	4.89939	0.1322219	0.23395273	2.6084587	21	12 22.1	20.9
478541 2012 TZ_{17}	17.9	X	146.77979	17.85116	286.40010	1.73936	0.1854562	0.25539512	2.4603354	21	—	—
478542 2012 TY_{18}	17.9	X	11.84403	129.43467	17.70179	5.02701	0.1099761	0.26724700	2.3870462	21	1 2.2	20.5
478543 2012 TK_{22}	17.0	X	296.00305	244.87732	202.15054	13.17734	0.1877507	0.21987527	2.7186406	21	10 25.4	19.8
478544 2012 TB_{23}	18.0	X	85.60847	75.74661	314.54532	2.21721	0.1825711	0.25566084	2.4586304	21	—	—
478545 2012 TM_{25}	17.3	X	28.38202	152.67038	194.32074	6.32529	0.1140066	0.22652225	2.6651939	21	11 22.5	20.6
478546 2012 TU_{25}	17.4	X	130.66612	329.52842	22.41116	6.75863	0.1258706	0.25994694	2.4315297	21	—	—
478547 2012 TF_{26}	17.5	X	87.57696	174.61788	144.00887	2.95914	0.1816794	0.24142680	2.5543421	21	—	—
478548 2012 TE_{32}	17.5	X	9.28584	150.03149	243.89059	1.13501	0.1405562	0.23154383	2.6265191	21	12 30.0	20.6
478549 2012 TB_{33}	17.3	X	348.35328	252.17227	202.45317	14.22572	0.0544567	0.24260833	2.5460421	21	—	—
478550 2012 TR_{34}	17.3	X	355.38306	117.91842	295.91564	3.09907	0.2253372	0.22996185	2.6385511	21	—	—
478551 2012 TU_{34}	17.5	X	11.69152	165.62829	184.74343	5.81174	0.0325273	0.22058594	2.7127983	21	10 22.8	21.1
478552 2012 TW_{34}	17.5	X	1.87645	108.54412	310.89347	2.59218	0.2040453	0.23464242	2.6033448	21	—	—
478553 2012 TX_{36}	17.3	X	25.13032	98.83181	345.97407	5.81779	0.0726278	0.25671499	2.4518952	21	—	—
478554 2012 TW_{37}	19.7	X	78.12999	99.87072	228.60797	1.83911	0.3073891	0.24416361	2.5352186	21	—	—
478555 2012 TT_{39}	16.2	X	101.40142	285.84932	3.33110	15.02396	0.1175083	0.23372608	2.6101448	21	12 4.1	20.4
478556 2012 TJ_{40}	17.4	X	16.92915	18.40409	323.89124	5.39795	0.0816332	0.22163008	2.7042712	21	10 21.4	20.9
478557 2012 TS_{40}	18.3	X	106.55434	39.06586	317.61555	4.66321	0.1742927	0.25457230	2.4656341	21	—	—
478558 2012 TB_{47}	17.6	X	53.53570	187.60745	268.93251	5.30372	0.0955790	0.26511369	2.3998344	21	1 2.9	20.0
478559 2012 TH_{56}	16.8	X	28.58793	166.39930	229.27158	11.20712	0.0236137	0.23310961	2.6147445	21	—	—
478560 2012 TJ_{56}	17.0	X	53.96514	144.44980	247.49383	3.97564	0.0548705	0.24022713	2.5628391	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478561 2012 TA_{57}	16.4	X	213.29730	172.20810	40.17134	16.57730	0.1070475	0.23151780	2.6267160	21	12 25.8	20.4
478562 2012 TG_{60}	17.3	X	59.25402	51.44785	30.48775	8.98906	0.1831559	0.25894200	2.4378167	21	—	—
478563 2012 TM_{64}	17.7	X	81.19150	330.59464	7.00852	12.80560	0.2112418	0.24203307	2.5500747	21	—	—
478564 2012 TP_{66}	17.1	X	48.00976	356.69116	25.57467	15.49208	0.1258809	0.23847187	2.5753995	21	—	—
478565 2012 TQ_{66}	16.9	X	14.98710	322.75213	21.52994	11.56305	0.1447962	0.21903920	2.7255542	21	10 29.2	20.0
478566 2012 TK_{67}	17.5	X	37.05608	126.57324	267.94222	2.66074	0.1643859	0.23830094	2.5766309	21	—	—
478567 2012 TL_{67}	16.7	X	12.56548	161.08250	221.84497	13.00807	0.1139188	0.22770747	2.6559375	21	12 15.4	20.0
478568 2012 TY_{67}	17.6	X	34.76993	143.20939	203.18366	3.11788	0.1265058	0.22476736	2.6790483	21	12 1.5	21.1
478569 2012 TR_{68}	17.3	X	24.86842	250.85817	151.12097	1.54907	0.1559533	0.23560126	2.5962767	21	—	—
478570 2012 TZ_{68}	17.8	X	93.66789	119.12584	189.19169	3.16072	0.2440803	0.23706992	2.5855429	21	12 31.8	22.3
478571 2012 TZ_{69}	17.6	X	78.52345	324.82626	8.20755	5.05177	0.1994840	0.24117235	2.5561384	21	—	—
478572 2012 TT_{73}	17.4	X	317.76450	77.00350	348.52902	5.56215	0.1012364	0.22607699	2.6686921	21	11 10.2	20.6
478573 2012 TF_{77}	16.8	X	14.38991	25.71785	44.01782	12.54970	0.1591573	0.23569587	2.5955819	21	—	—
478574 2012 TS_{78}	18.5	X	263.91068	196.69200	8.28593	32.67479	0.3814575	0.48331900	1.6081016	21	—	—
478575 2012 TQ_{79}	13.8	X	355.52132	280.35753	359.20064	18.14460	0.1337543	0.08280962	5.2129335	21	6 24.8	20.3
478576 2012 TF_{81}	18.1	X	170.39933	220.42317	73.72071	2.33575	0.2133432	0.26170859	2.4206058	21	—	—
478577 2012 TU_{85}	17.1	X	119.66690	256.36388	17.48970	17.09274	0.1934220	0.23659598	2.5889946	21	12 6.7	21.7
478578 2012 TF_{86}	16.8	X	351.62760	324.10435	18.71447	3.81539	0.0703791	0.21133913	2.7913617	21	9 14.3	20.0
478579 2012 TZ_{90}	17.3	X	121.47858	338.59922	34.25465	7.14702	0.1021098	0.26330092	2.4108367	21	—	—
478580 2012 TK_{91}	17.7	X	77.46948	113.79360	180.15092	12.11664	0.2564455	0.23358390	2.6112038	21	12 3.7	22.1
478581 2012 TF_{93}	18.0	X	55.35674	276.53024	113.73766	2.92930	0.1122754	0.24667430	2.5179868	21	—	—
478582 2012 TX_{93}	17.6	X	359.55844	350.83771	103.19279	3.03856	0.1583110	0.24455836	2.5324898	21	—	—
478583 2012 TE_{96}	17.5	X	63.44965	12.52074	326.22788	2.13699	0.0214336	0.23102375	2.6304596	21	12 14.0	20.9
478584 2012 TR_{96}	17.7	X	90.20136	177.37195	217.82473	5.17094	0.0889806	0.25690944	2.4506578	21	—	—
478585 2012 TX_{96}	17.1	X	356.08609	353.95669	13.71050	6.23779	0.0526259	0.21956648	2.7211889	21	10 22.8	20.6
478586 2012 TL_{100}	17.1	X	97.50213	167.40005	223.46562	14.02176	0.0842233	0.25807448	2.4432769	21	—	—
478587 2012 TQ_{102}	17.4	X	132.20613	130.28157	229.44788	4.28656	0.1102648	0.26197190	2.4189835	21	—	—
478588 2012 TC_{104}	17.5	X	105.50906	299.54899	355.86725	6.77201	0.1943679	0.23935053	2.5690928	21	12 24.3	21.8
478589 2012 TK_{109}	17.0	X	43.87481	136.00529	219.40677	10.74192	0.1987915	0.23460898	2.6035922	21	—	—
478590 2012 TD_{111}	17.6	X	100.94439	54.70738	249.85388	6.53589	0.2002486	0.24032503	2.5621431	21	12 31.1	21.9
478591 2012 TR_{111}	17.3	X	126.89847	319.76098	320.55500	4.90028	0.1475292	0.23946256	2.5682914	21	12 23.3	21.3
478592 2012 TL_{114}	17.5	X	30.99309	105.98616	219.91847	13.79754	0.0923606	0.22124735	2.7073890	21	10 23.6	20.8
478593 2012 TQ_{115}	17.2	X	199.44671	16.31526	275.07154	5.60754	0.1118258	0.26366282	2.4086302	21	—	—
478594 2012 TF_{117}	17.6	X	55.66048	84.61539	230.25111	7.43637	0.1565041	0.22738433	2.6584533	21	11 22.9	21.1
478595 2012 TP_{119}	17.2	X	9.68467	81.32230	263.20567	5.05176	0.0234474	0.21770821	2.7366516	21	10 7.7	20.9
478596 2012 TC_{122}	17.4	X	110.03605	282.54181	353.05398	11.78846	0.1747603	0.23248704	2.6194104	21	11 29.9	21.9
478597 2012 TD_{127}	17.2	X	105.77186	121.35758	3.32454	23.69232	0.1708334	0.28439873	2.2900815	21	5 4.7	20.6
478598 2012 TA_{128}	17.7	X	359.54956	242.96547	145.30784	4.33243	0.1110489	0.22924217	2.6440705	21	12 3.5	20.7
478599 2012 TJ_{129}	17.4	X	143.44152	239.32529	90.35055	3.46118	0.2250779	0.26033557	2.4291092	21	—	—
478600 2012 TA_{130}	17.0	X	359.43165	33.87040	1.06642	6.24043	0.2235783	0.22614049	2.6681925	21	12 25.8	19.8
478601 2012 TQ_{130}	16.3	X	288.63016	44.65242	30.73568	14.87165	0.0720675	0.21222811	2.7835612	21	10 13.8	19.8
478602 2012 TJ_{132}	16.7	X	301.94871	236.06854	219.20162	12.46835	0.2306921	0.22393114	2.6857137	21	11 12.6	19.0
478603 2012 TD_{137}	17.9	X	111.18859	224.42638	108.75544	1.12111	0.0530606	0.24723330	2.5141898	21	—	—
478604 2012 TL_{137}	17.7	X	140.11775	250.10619	81.41531	2.67991	0.2118461	0.26212239	2.4180576	21	—	—
478605 2012 TT_{138}	17.3	X	38.16214	93.39733	257.50810	2.96081	0.1475635	0.23156023	2.6263951	21	12 16.0	20.6
478606 2012 TN_{141}	17.9	X	161.22831	145.14968	153.10505	3.35294	0.1852595	0.25915177	2.4365010	21	—	—
478607 2012 TX_{143}	17.4	X	240.36740	284.39910	219.36152	4.61436	0.0594286	0.22621900	2.6675751	21	11 8.6	21.0
478608 2012 TM_{145}	16.5	X	54.09925	268.30674	128.84997	14.26216	0.1700327	0.23910174	2.5708746	21	—	—
478609 2012 TN_{150}	17.7	X	55.67241	95.34210	232.40531	3.90772	0.3363485	0.23281889	2.6169208	21	12 30.8	21.9
478610 2012 TY_{150}	17.1	X	10.76812	23.94983	327.63593	2.82528	0.1120349	0.21925201	2.7237903	21	10 28.8	20.3
478611 2012 TL_{151}	17.2	X	8.19123	188.08869	216.67192	2.25805	0.1994277	0.23093210	2.6311555	21	—	—
478612 2012 TZ_{151}	17.1	X	67.91144	45.35502	279.43388	12.31820	0.2244140	0.23525967	2.5987892	21	12 27.7	21.1
478613 2012 TB_{157}	18.0	X	27.68974	51.11647	21.12057	10.61990	0.2333860	0.24546553	2.5262464	21	—	—
478614 2012 TF_{157}	17.3	X	228.73004	248.82039	228.46274	3.26388	0.0541174	0.21381963	2.7697315	21	9 18.7	21.2
478615 2012 TP_{157}	17.6	X	60.60604	272.41721	36.13723	0.52085	0.1340304	0.22719621	2.6599205	21	11 17.5	21.2
478616 2012 TT_{157}	17.1	X	300.82854	181.78464	15.26883	6.56527	0.0637398	0.26265903	2.4147629	21	—	—
478617 2012 TB_{160}	17.4	X	42.01361	191.75138	157.14255	4.33066	0.1464036	0.23206961	2.6225505	21	12 18.6	20.9
478618 2012 TU_{162}	16.6	X	323.06796	50.19601	32.43606	15.12830	0.0909822	0.22953347	2.6418330	21	12 12.9	19.9
478619 2012 TZ_{163}	17.0	X	13.19404	201.85198	193.01559	14.06482	0.2560259	0.23175818	2.6248994	21	—	—
478620 2012 TU_{165}	18.1	X	49.52685	351.28283	38.43777	7.48399	0.2851439	0.24216325	2.5491607	21	—	—
478621 2012 TW_{168}	17.2	X	15.20675	232.83087	192.61425	12.00320	0.1717723	0.23857010	2.5746925	21	—	—
478622 2012 TV_{171}	17.9	X	87.59942	102.71081	214.61611	8.07030	0.1752446	0.23899797	2.5716187	21	—	—
478623 2012 TC_{173}	17.7	X	198.20665	340.77141	313.55325	2.68991	0.1242000	0.26574595	2.3960265	21	—	—
478624 2012 TP_{173}	17.0	X	169.42068	249.08568	354.98888	7.16761	0.1330216	0.24067098	2.5596872	21	12 18.9	21.1
478625 2012 TH_{174}	17.9	X	349.67621	282.19649	226.85587	6.66162	0.0692808	0.26212267	2.4180558	21	—	—
478626 2012 TJ_{175}	17.8	X	11.65402	187.19865	193.70611	14.01424	0.1902363	0.23121977	2.6289727	21	12 23.1	21.1
478627 2012 TS_{176}	17.8	X	88.64293	117.43513	218.35235	0.57199	0.1194181	0.24384077	2.5374559	21	—	—
478628 2012 TQ_{178}	17.4	X	350.34214	103.13894	258.49595	5.39887	0.0328868	0.21798394	2.7343433	21	10 3.7	20.9
478629 2012 TJ_{186}	17.3	X	40.06343	122.37230	228.93539	15.74645	0.2093875	0.22614543	2.6681537	21	12 25.1	21.1
478630 2012 TA_{187}	17.1	X	67.42469	329.31645	50.69364	6.65537	0.1399468	0.24045985	2.5611853	21	—	—
478631 2012 TN_{189}	17.7	X	18.41518	210.65686	196.81014	8.27275	0.1344196	0.23678199	2.5876385	21	—	—
478632 2012 TP_{189}	17.5	X	19.51753	219.77895	201.83734	14.31273	0.0798303	0.24140685	2.5544829	21	—	—
478633 2012 TD_{190}	17.4	X	310.37961	193.51170	239.96223	5.23005	0.2350383	0.21849152	2.7301069	21	10 26.1	19.8
478634 2012 TG_{190}	16.7	X	24.84116	121.79987	224.18791	11.91535	0.1038471	0.22163565	2.7042259	21	11 12.9	19.8
478635 2012 TN_{191}	17.4	X	31.49707	25.03113	9.31705	4.67112	0.1972125	0.23648767	2.5897850	21	—	—
478636 2012 TW_{191}	17.4	X	45.54587	73.94957	326.34645	6.94344	0.1572850	0.24476456	2.5310673	21	—	—
478637 2012 TF_{193}	17.1	X	285.45910	205.28908	213.76435	5.90019	0.0266133	0.20968415	2.8060300	21	9 19.6	20.9
478638 2012 TW_{193}	17.7	X	124.66129	209.70592	81.27028	1.57047	0.0756945	0.23562268	2.5961193	21	12 31.5	21.6
478639 2012 TT_{194}	17.1	X	305.60631	51.45157	44.77622	12.53494	0.0783209	0.22559157	2.6725190	21	12 3.5	20.3
478640 2012 TD_{195}	17.4	X	71.49580	286.76810	44.08455	13.55840	0.2915132	0.23680888	2.5874426	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
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478641 2012 TY_{195}	17.1	X	336.89468	199.31796	236.69663	13.51442	0.2343758	0.22637067	2.6663835	21	—	—
478642 2012 TM_{196}	17.0	X	339.98688	46.20017	354.01988	5.90166	0.0213716	0.21963924	2.7205879	21	11 9.5	20.7
478643 2012 TU_{198}	16.9	X	309.30434	86.10928	8.34600	10.08084	0.0732274	0.22936375	2.6431361	21	12 8.1	20.3
478644 2012 TJ_{199}	17.1	X	66.89873	344.19186	9.98113	4.72059	0.2331897	0.24099182	2.5574149	21	—	—
478645 2012 TL_{199}	17.5	X	344.64895	240.06374	157.38096	5.29510	0.1211002	0.22819188	2.6521775	21	11 22.2	20.4
478646 2012 TU_{199}	16.7	X	8.30208	14.54342	11.99427	15.65712	0.3093733	0.22748401	2.6576766	21	—	—
478647 2012 TE_{205}	16.9	X	259.35009	141.92100	307.19982	6.02897	0.0227126	0.21184913	2.7868799	21	9 23.8	20.7
478648 2012 TA_{220}	17.2	X	103.50192	243.22753	21.86894	12.94835	0.1761880	0.23000150	2.6382479	21	11 11.0	21.5
478649 2012 TA_{228}	17.4	X	4.21103	252.51310	181.83145	14.34110	0.1485093	0.23992915	2.5649606	21	—	—
478650 2012 TL_{230}	17.1	X	18.14442	349.76253	50.46385	7.04856	0.2482624	0.23305040	2.6151874	21	—	—
478651 2012 TQ_{230}	17.2	X	13.22026	109.39578	329.93125	11.88241	0.2395269	0.24352334	2.5396604	21	—	—
478652 2012 TL_{232}	18.0	X	94.72493	334.69585	60.28454	2.22624	0.1893289	0.25794111	2.4441189	21	1 1.2	20.4
478653 2012 TX_{239}	17.8	X	6.65299	281.23299	141.29513	1.67986	0.1675482	0.23682519	2.5873238	21	—	—
478654 2012 TF_{241}	17.3	X	9.67216	231.47352	164.11793	4.98541	0.1413616	0.22944389	2.6425206	21	—	—
478655 2012 TE_{242}	17.3	X	330.00709	256.88768	198.26262	12.66206	0.1548761	0.23412892	2.6071499	21	—	—
478656 2012 TH_{243}	17.3	X	19.35217	2.63060	41.35658	5.83299	0.0870127	0.23756334	2.5819615	21	—	—
478657 2012 TX_{244}	17.8	X	106.03513	243.09075	81.27709	3.02836	0.1213116	0.24664055	2.5182165	21	—	—
478658 2012 TY_{245}	17.0	X	60.77108	145.69264	226.27558	8.06077	0.2483836	0.23960247	2.5672915	21	—	—
478659 2012 TJ_{247}	17.3	X	58.81838	56.26131	291.93316	2.84807	0.2394013	0.23715230	2.5849441	21	—	—
478660 2012 TQ_{247}	17.0	X	354.40809	127.00747	277.25233	4.83626	0.1048289	0.22704195	2.6611252	21	12 14.7	19.9
478661 2012 TK_{251}	17.3	X	89.79542	351.58764	337.25329	7.12731	0.2490312	0.24267161	2.5455994	21	—	—
478662 2012 TH_{255}	17.3	X	87.10963	13.02520	326.79029	2.60883	0.2311143	0.24232487	2.5480272	21	—	—
478663 2012 TO_{256}	16.6	X	49.55378	291.83890	25.43459	9.65984	0.0792042	0.21913000	2.7248013	21	11 3.9	20.1
478664 2012 TV_{257}	17.5	X	70.28071	348.65470	74.97631	5.33871	0.1608761	0.25686874	2.4509166	21	—	—
478665 2012 TN_{258}	17.7	X	64.74033	199.50219	142.48525	1.76472	0.2138458	0.23719329	2.5846463	21	—	—
478666 2012 TP_{258}	16.8	X	80.82880	308.11600	28.65962	29.02225	0.1937572	0.24050115	2.5608921	21	—	—
478667 2012 TD_{263}	17.6	X	354.75999	308.44972	43.57583	6.92403	0.0227741	0.21544816	2.7557566	21	10 1.8	21.3
478668 2012 TL_{263}	17.1	X	311.96506	321.21619	73.39655	5.42620	0.0693335	0.21104026	2.7939964	21	9 24.9	20.6
478669 2012 TV_{276}	17.2	X	51.76610	335.66906	341.49365	4.59490	0.0298077	0.22233408	2.6985597	21	10 30.5	20.9
478670 2012 TZ_{277}	17.1	X	307.11906	166.84752	262.05234	4.03200	0.1009264	0.22087022	2.7104700	21	10 27.9	20.3
478671 2012 TS_{280}	17.6	X	128.32037	295.96486	2.89300	11.52594	0.0479935	0.24111545	2.5565406	21	—	—
478672 2012 TB_{282}	17.5	X	67.87797	63.24151	265.50269	12.15833	0.1882040	0.23461741	2.6035298	21	12 27.9	21.4
478673 2012 TU_{285}	17.6	X	4.57901	308.00233	110.25087	2.63560	0.1129456	0.23273411	2.6175563	21	—	—
478674 2012 TO_{290}	17.6	X	65.66409	256.04622	88.36200	5.01413	0.1971780	0.23641454	2.5903190	21	—	—
478675 2012 TQ_{292}	17.2	X	74.36201	70.37377	263.78547	6.15320	0.1429844	0.23335584	2.6129049	21	—	—
478676 2012 TJ_{293}	17.6	X	321.00795	88.61162	323.46917	4.52256	0.1619637	0.21695379	2.7429921	21	10 22.7	20.6
478677 2012 TO_{294}	17.6	X	76.59014	125.33518	227.53841	13.64982	0.1912008	0.23927293	2.5696482	21	—	—
478678 2012 TA_{295}	17.6	X	8.89342	162.74384	235.59262	2.73189	0.2069518	0.22828362	2.6514669	21	—	—
478679 2012 TH_{295}	17.6	X	38.77467	172.25986	227.69627	8.29945	0.1581983	0.23756159	2.5819742	21	—	—
478680 2012 TA_{300}	17.1	X	7.59803	139.77919	228.45301	10.65624	0.1580793	0.21996327	2.7179154	21	11 22.6	20.0
478681 2012 TL_{301}	17.4	X	97.66865	189.71091	144.39292	6.09256	0.2256761	0.24720613	2.5143741	21	—	—
478682 2012 TA_{302}	17.1	X	225.85971	233.90743	40.76646	7.95877	0.1124315	0.26844556	2.3799358	21	—	—
478683 2012 TE_{302}	17.3	X	95.02124	298.06348	72.60619	4.81528	0.1925909	0.25578325	2.4578459	21	—	—
478684 2012 TY_{307}	17.0	X	348.88947	151.19371	241.05233	10.48405	0.2021593	0.21941637	2.7224298	21	11 25.5	19.4
478685 2012 TB_{311}	17.1	X	2.31656	178.08757	260.05072	4.03467	0.2568818	0.23416122	2.6069102	21	—	—
478686 2012 TD_{313}	16.9	X	78.64594	60.54795	284.61134	10.92922	0.2301686	0.24185934	2.5512958	21	—	—
478687 2012 TE_{313}	16.5	X	18.65095	143.32175	290.60854	12.02502	0.1408053	0.24239870	2.5475098	21	—	—
478688 2012 TF_{314}	17.7	X	199.10493	278.37852	32.64000	2.80338	0.1554078	0.27152477	2.3619085	21	1 10.4	21.3
478689 2012 TX_{315}	16.8	X	21.07931	222.85970	196.92330	12.37444	0.2704607	0.23666208	2.5885125	21	—	—
478690 2012 UZ_{12}	18.0	X	65.74710	193.95075	176.04426	6.75871	0.2283358	0.24398066	2.5364858	21	—	—
478691 2012 UD_{15}	17.5	X	72.88983	121.77482	189.53187	9.58588	0.1729588	0.23182585	2.6243886	21	12 10.8	21.6
478692 2012 UT_{19}	17.4	X	76.53299	110.53295	192.65613	14.33189	0.0991296	0.22829159	2.6514052	21	11 26.5	21.3
478693 2012 UY_{20}	17.1	X	357.59053	53.27984	344.31502	14.02945	0.1825325	0.22733107	2.6588684	21	12 20.6	20.3
478694 2012 UV_{25}	17.0	X	257.49097	174.89204	334.99831	10.15417	0.1178645	0.22781240	2.6551219	21	11 27.9	20.7
478695 2012 UE_{28}	17.1	X	8.99858	266.43636	66.88703	4.98305	0.1086465	0.21254988	2.7807513	21	10 3.4	20.3
478696 2012 UG_{29}	16.5	X	41.14244	26.37292	359.40390	14.97186	0.1115107	0.23758362	2.5818146	21	—	—
478697 2012 UH_{31}	16.4	X	68.85623	231.17704	46.56679	14.02855	0.0982130	0.21205886	2.7850421	21	10 16.3	20.3
478698 2012 UQ_{34}	17.4	X	93.08877	211.92079	181.37850	5.00113	0.1088620	0.25851235	2.4405171	21	—	—
478699 2012 UZ_{34}	17.8	X	4.32892	9.81968	19.13122	2.10349	0.2253391	0.22586652	2.6703497	21	12 26.4	20.5
478700 2012 UG_{35}	17.9	X	337.63096	148.90104	242.89299	2.41609	0.2003956	0.21763492	2.7372660	21	10 29.5	20.4
478701 2012 UG_{36}	17.4	X	34.67428	166.27628	207.60676	2.15446	0.1585909	0.23040215	2.6351886	21	—	—
478702 2012 UL_{36}	17.3	X	350.07354	256.01360	215.25867	12.02408	0.1024126	0.24101235	2.5572696	21	—	—
478703 2012 UN_{36}	17.0	X	72.93280	293.95287	51.34679	13.59097	0.1634859	0.23524566	2.5988924	21	—	—
478704 2012 UO_{36}	17.2	X	45.04687	301.35730	65.36640	4.10802	0.2071001	0.23264246	2.6182437	21	—	—
478705 2012 UP_{36}	17.0	X	35.67194	305.51534	54.68848	7.78537	0.1954483	0.22792681	2.6542334	21	12 31.1	20.6
478706 2012 UJ_{37}	16.8	X	4.61672	3.59809	316.86068	7.14919	0.0159573	0.20347015	2.8628741	21	8 29.1	20.6
478707 2012 UH_{38}	17.3	X	325.42366	169.51768	307.59929	4.00367	0.0462282	0.23944593	2.5684103	21	—	—
478708 2012 UV_{38}	16.6	X	87.60817	46.24130	251.11883	5.15006	0.0694397	0.22599832	2.6693114	21	11 26.5	20.3
478709 2012 UF_{45}	16.8	X	134.08728	218.33321	43.94763	12.38201	0.1503074	0.23239183	2.6201258	21	12 5.5	21.1
478710 2012 UG_{45}	17.6	X	358.82792	243.65370	174.83839	1.98448	0.1731778	0.23196508	2.6233384	21	—	—
478711 2012 UW_{45}	17.0	X	317.44466	94.15212	53.04773	8.99364	0.0858842	0.24638341	2.5199683	21	—	—
478712 2012 UC_{46}	18.0	X	72.95567	281.62642	57.28449	7.61091	0.2718243	0.23926119	2.5697323	21	—	—
478713 2012 UG_{48}	17.2	X	112.89013	248.75594	51.12160	8.25677	0.1439867	0.23742543	2.5829613	21	—	—
478714 2012 UJ_{48}	18.3	X	91.69283	310.40509	28.42873	1.51306	0.2238163	0.24420190	2.5349536	21	—	—
478715 2012 UO_{48}	17.4	X	300.71609	215.62707	199.06094	4.32143	0.0612497	0.21353250	2.7722139	21	10 2.8	21.0
478716 2012 UU_{48}	17.7	X	66.25387	286.71920	30.69962	2.26622	0.2053060	0.23024570	2.6363822	21	12 14.0	21.5
478717 2012 UO_{50}	17.1	X	58.56848	233.87224	146.86213	4.94101	0.2580926	0.24161794	2.5529948	21	—	—
478718 2012 UY_{50}	17.7	X	84.54917	278.90974	48.86380	4.09116	0.2633040	0.23908492	2.5709952	21	—	—
478719 2012 UD_{53}	17.6	X	75.09171	74.62367	268.67034	12.12578	0.1899982	0.23972059	2.5664481	21	—	—
478720 2012 US_{53}	17.3	X	3.99414	167.00352	226.42368	3.85616	0.1727526	0.22784122	2.6548981	21	12 24.4	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478721 2012 UK_{55}	17.0	X	19.09921	157.66987	225.70921	12.55989	0.2462813	0.22990850	2.6389593	21	—	—
478722 2012 UO_{56}	17.5	X	332.30795	131.18859	247.93236	3.07586	0.1134460	0.21243927	2.7817164	21	9 29.5	20.7
478723 2012 UC_{58}	17.1	X	2.95364	36.94620	28.86290	6.94319	0.3040643	0.23194490	2.6234905	21	—	—
478724 2012 UG_{58}	17.2	X	94.06147	293.40921	36.22747	9.44664	0.1796486	0.23945738	2.5683285	21	—	—
478725 2012 UF_{59}	17.3	X	105.64548	15.39957	307.59743	2.63148	0.1234593	0.23934769	2.5691131	21	—	—
478726 2012 UV_{60}	16.5	X	69.48061	302.69249	53.55902	13.65279	0.1965394	0.23775121	2.5806012	21	—	—
478727 2012 UV_{63}	16.7	X	54.15005	193.33788	201.81751	12.84271	0.0796224	0.24081509	2.5586659	21	—	—
478728 2012 UX_{63}	16.9	X	28.00509	249.83810	167.52133	5.19196	0.2237492	0.23813994	2.5777921	21	—	—
478729 2012 UJ_{65}	17.0	X	12.77195	145.49398	214.37254	4.17384	0.1730766	0.21990499	2.7183956	21	11 22.2	19.9
478730 2012 UR_{65}	17.5	X	357.81318	266.66788	194.83859	2.57560	0.2556985	0.23767935	2.5811213	21	—	—
478731 2012 UV_{65}	17.0	X	45.54298	296.56806	48.39213	7.62090	0.2538393	0.22949620	2.6421190	21	—	—
478732 2012 UG_{66}	17.4	X	315.80793	230.75731	207.90853	6.30057	0.0383970	0.22236972	2.6982714	21	11 29.1	20.9
478733 2012 UJ_{66}	17.1	X	350.00426	235.67213	218.47819	12.09736	0.0956843	0.23639154	2.5904871	21	—	—
478734 2012 UP_{66}	17.0	X	307.51874	301.34444	217.27536	11.80704	0.0210508	0.24456372	2.5324528	21	—	—
478735 2012 UA_{67}	17.4	X	92.98873	195.03658	129.41886	5.54694	0.2768894	0.24088043	2.5582032	21	—	—
478736 2012 UQ_{67}	17.5	X	40.39666	213.46706	197.96413	4.65772	0.3468833	0.24051843	2.5607695	21	—	—
478737 2012 UQ_{72}	18.0	X	28.04301	252.82348	142.17339	0.23343	0.1468473	0.23668900	2.5883162	21	—	—
478738 2012 UE_{73}	17.8	X	350.91210	190.30302	195.84550	3.02816	0.1764350	0.22270285	2.6955798	21	11 19.9	20.5
478739 2012 UJ_{73}	17.8	X	148.67211	268.86102	40.75357	2.60610	0.1875674	0.25440057	2.4667435	21	—	—
478740 2012 UK_{76}	17.8	X	88.56955	131.67908	202.34861	7.98814	0.1779466	0.23971903	2.5664593	21	—	—
478741 2012 UT_{78}	17.0	X	83.04424	315.84410	21.11943	13.19999	0.2025344	0.23928568	2.5695569	21	—	—
478742 2012 UV_{78}	17.3	X	25.95987	23.43727	23.61651	15.42346	0.1710221	0.23667640	2.5884081	21	—	—
478743 2012 UK_{80}	17.1	X	17.66864	153.91959	238.78882	13.32742	0.0934964	0.23055337	2.6340361	21	12 31.9	20.6
478744 2012 UC_{84}	16.8	X	32.53010	4.82086	18.83471	8.35877	0.1231309	0.23020950	2.6366586	21	—	—
478745 2012 UH_{85}	17.7	X	56.61336	313.47127	4.22744	5.41218	0.2756693	0.23286471	2.6165774	21	12 12.9	21.6
478746 2012 UX_{85}	17.3	X	13.81722	177.70281	237.12113	3.97651	0.2356802	0.23333972	2.6130252	21	—	—
478747 2012 UN_{88}	17.8	X	99.82045	120.63392	228.21273	14.14304	0.1557118	0.24387346	2.5372291	21	—	—
478748 2012 UT_{88}	17.5	X	25.86144	44.03038	12.52554	0.12706	0.1138719	0.23693867	2.5864976	21	—	—
478749 2012 UH_{89}	16.6	X	238.04592	202.88663	226.14947	9.32529	0.1086177	0.19224522	2.9732563	21	7 20.7	21.2
478750 2012 UD_{94}	17.5	X	233.08124	207.94746	134.29626	4.44296	0.1764185	0.28971436	2.2619831	21	3 19.9	20.9
478751 2012 UZ_{95}	17.1	X	119.76582	359.34476	224.95292	3.40908	0.0459261	0.21166418	2.7885032	21	9 27.7	21.1
478752 2012 UX_{96}	17.3	X	41.82739	244.59305	134.54500	4.82808	0.2034241	0.23730445	2.5838391	21	—	—
478753 2012 UY_{97}	17.1	X	68.84910	65.60710	277.35130	10.72456	0.1985828	0.23545728	2.5973350	21	—	—
478754 2012 UG_{98}	16.3	X	241.64726	307.59326	242.18389	26.15342	0.1275627	0.23405068	2.6077309	21	12 26.1	20.0
478755 2012 UK_{101}	17.3	X	238.15802	241.72512	208.93981	5.01827	0.0351121	0.20300283	2.8672660	21	8 27.9	21.3
478756 2012 UG_{102}	18.0	X	67.49775	270.78459	65.96729	3.08799	0.2204791	0.23468748	2.6030116	21	—	—
478757 2012 UW_{103}	17.3	X	25.38366	325.56244	77.84318	5.40546	0.0632950	0.23533725	2.5982181	21	—	—
478758 2012 UX_{103}	17.6	X	115.33617	249.89806	85.66465	1.82172	0.0847882	0.24575571	2.5242574	21	—	—
478759 2012 UJ_{106}	17.5	X	343.55044	178.01020	224.09672	3.30968	0.1444034	0.22271847	2.6954538	21	11 25.5	20.2
478760 2012 UD_{107}	16.7	X	113.46256	235.68575	15.92516	14.45417	0.1619918	0.22028371	2.7152790	21	11 1.4	21.2
478761 2012 UJ_{108}	16.9	X	10.79239	0.37136	31.73192	10.06841	0.1222000	0.22830856	2.6512738	21	12 26.4	20.2
478762 2012 UM_{109}	17.4	X	39.41344	267.67656	35.43107	13.49571	0.2970586	0.21925670	2.7237514	21	11 5.7	20.8
478763 2012 UZ_{110}	17.2	X	37.64610	180.09172	189.83987	4.57746	0.1654768	0.23134781	2.6280026	21	—	—
478764 2012 UZ_{112}	17.8	X	352.83568	226.68973	219.66051	4.07505	0.2140337	0.23666951	2.5884583	21	—	—
478765 2012 UK_{117}	17.2	X	351.96722	47.66127	24.13754	12.89095	0.2491872	0.23200689	2.6230232	21	—	—
478766 2012 UR_{118}	16.6	X	95.82559	46.03027	232.82339	33.90848	0.1483929	0.21901960	2.7257168	21	11 19.4	20.8
478767 2012 UN_{119}	16.8	X	76.95043	288.82950	56.37252	12.77027	0.2861239	0.23853294	2.5749599	21	—	—
478768 2012 UR_{120}	17.0	X	52.13988	338.97796	30.84739	17.50245	0.0743491	0.23312488	2.6146304	21	—	—
478769 2012 UT_{121}	16.8	X	291.29232	212.73359	251.91221	10.37274	0.1672695	0.21904303	2.7255224	21	11 11.4	20.0
478770 2012 UD_{124}	17.0	X	251.29126	209.90749	315.21613	3.42394	0.0615477	0.22692427	2.6620451	21	12 19.7	20.5
478771 2012 UF_{125}	16.1	X	211.71701	332.52313	241.91625	22.31627	0.1223911	0.22984567	2.6394402	21	12 22.8	20.1
478772 2012 UO_{127}	17.2	X	86.71179	314.74289	33.18161	11.77529	0.2553048	0.24198047	2.5504443	21	—	—
478773 2012 UA_{130}	17.0	X	111.59589	325.43472	357.93767	9.78439	0.1061712	0.24276853	2.5449219	21	—	—
478774 2012 UG_{131}	18.0	X	38.80715	256.79614	112.26249	4.16074	0.2418015	0.23568969	2.5956272	21	—	—
478775 2012 UT_{131}	16.9	X	60.39654	115.89890	243.28548	15.31636	0.2662454	0.23682090	2.5873551	21	—	—
478776 2012 UW_{131}	16.9	X	56.58862	60.42915	254.62634	12.12377	0.2791295	0.23094596	2.6310502	21	12 10.3	20.9
478777 2012 UY_{131}	17.4	X	81.15109	143.70469	209.32831	12.80032	0.3025577	0.24364009	2.5388490	21	—	—
478778 2012 UR_{132}	16.7	X	25.23897	88.99385	311.75591	4.95820	0.1814067	0.23433577	2.6056154	21	—	—
478779 2012 UU_{132}	17.3	X	45.88369	244.59136	132.09233	2.43068	0.1951203	0.23534608	2.5981531	21	—	—
478780 2012 UC_{133}	16.4	X	15.84996	191.28202	259.67646	13.88662	0.0745813	0.24538088	2.5268273	21	—	—
478781 2012 UG_{133}	16.7	X	14.49595	137.04598	269.26756	10.78895	0.1461110	0.23261871	2.6184218	21	—	—
478782 2012 US_{133}	16.4	X	157.69699	4.33020	279.72566	13.66525	0.0530374	0.24366191	2.5386975	21	—	—
478783 2012 US_{135}	16.4	X	63.52627	61.62393	324.57919	4.87336	0.1197320	0.24056566	2.5604342	21	—	—
478784 2012 UV_{136}	25.5	X	127.86171	289.90086	207.93000	2.10414	0.1397743	0.97493077	1.0072877	21	—	—
478785 2012 UD_{137}	17.8	X	62.46404	349.29822	59.19934	6.87488	0.1458692	0.25036122	2.4932051	21	—	—
478786 2012 UV_{139}	16.8	X	269.76157	180.07768	319.56091	9.18476	0.1149051	0.22803598	2.6533862	21	12 3.6	20.2
478787 2012 UO_{140}	17.4	X	193.56664	289.62223	306.14866	6.50446	0.0457143	0.24170803	2.5523604	21	—	—
478788 2012 UX_{140}	17.6	X	79.28634	144.91046	192.43661	5.00836	0.3060866	0.24218905	2.5489797	21	—	—
478789 2012 US_{145}	17.1	X	104.86523	168.92429	133.67672	5.56977	0.2165761	0.23826351	2.5769008	21	—	—
478790 2012 UZ_{146}	17.3	X	48.09218	344.43389	22.11650	4.80109	0.1341504	0.23374289	2.6100196	21	—	—
478791 2012 UD_{147}	17.2	X	34.50379	296.86932	20.98620	5.02374	0.1713944	0.21738757	2.7393419	21	10 29.3	20.6
478792 2012 UO_{147}	17.4	X	315.77880	164.73863	242.43685	3.43708	0.0612719	0.21376154	2.7702333	21	10 14.3	20.8
478793 2012 UU_{150}	16.8	X	342.22498	16.22178	40.48470	6.91120	0.0661001	0.22404902	2.6847717	21	12 7.8	20.1
478794 2012 UB_{151}	17.2	X	346.62268	181.19118	203.46552	3.77069	0.1659806	0.21680156	2.7442760	21	11 6.8	19.9
478795 2012 UV_{152}	18.0	X	40.58743	212.81449	172.78528	4.58438	0.2116976	0.23631601	2.5910390	21	—	—
478796 2012 UW_{153}	17.1	X	337.80097	184.99630	217.93364	8.89904	0.1883653	0.21817655	2.7327338	21	11 16.4	19.6
478797 2012 UC_{155}	17.0	X	320.20045	139.73642	259.83558	2.75741	0.1008598	0.21246363	2.7815037	21	10 7.9	20.3
478798 2012 UG_{155}	17.2	X	59.36451	98.20090	234.86574	7.34131	0.2293390	0.23009618	2.6375241	21	12 28.3	21.2
478799 2012 UO_{156}	17.2	X	349.75490	26.83529	28.61447	14.19087	0.2469781	0.22693998	2.6619223	21	—	—
478800 2012 UU_{160}	17.6	X	105.05565	272.44450	28.81896	17.14834	0.2688825	0.24015426	2.5633575	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478801 2012 UM_{161}	16.7	X	334.77668	205.89533	243.93819	13.34877	0.0284503	0.23221748	2.6214371	21	—	—
478802 2012 UT_{166}	18.2	X	47.58657	99.58973	346.02114	8.30953	0.1890912	0.25354530	2.4722877	21	—	—
478803 2012 UF_{169}	16.5	X	329.33716	27.93871	76.26513	10.92870	0.1104263	0.23694264	2.5864688	21	—	—
478804 2012 UJ_{169}	17.2	X	305.40773	265.68775	143.56388	8.94673	0.2509639	0.21177718	2.7875111	21	9 8.6	20.1
478805 2012 UT_{171}	16.2	X	7.18546	188.47837	247.59661	13.54370	0.0888967	0.23531795	2.5983601	21	—	—
478806 2012 UZ_{171}	17.3	X	356.59239	75.40728	344.88730	4.74436	0.1477096	0.22927237	2.6438384	21	—	—
478807 2012 UQ_{172}	16.6	X	328.31201	139.98273	264.64467	7.94090	0.0947983	0.21639008	2.7477538	21	10 28.0	19.9
478808 2012 UM_{174}	15.8	X	53.95229	276.98200	83.79638	28.86590	0.3994472	0.23233520	2.6205516	21	—	—
478809 2012 VT	17.3	X	73.52474	12.97005	43.23382	15.28847	0.0907237	0.25413320	2.4684734	21	—	—
478810 2012 VN_{2}	16.9	X	77.48251	141.43738	223.73290	13.64082	0.1389640	0.24011875	2.5636103	21	—	—
478811 2012 VO_{2}	16.8	X	154.91790	32.31000	248.30969	14.25508	0.0792623	0.24279762	2.5447186	21	—	—
478812 2012 VG_{7}	16.9	X	34.28641	188.86550	196.98575	34.46573	0.2196917	0.23254954	2.6189411	21	—	—
478813 2012 VB_{9}	17.8	X	84.61184	118.95095	214.98378	7.68082	0.1779184	0.23951885	2.5678890	21	—	—
478814 2012 VN_{10}	16.9	X	1.07765	224.23237	240.60247	13.90202	0.0341159	0.24418174	2.5350932	21	—	—
478815 2012 VO_{10}	16.9	X	328.66913	218.84380	239.10814	10.78419	0.1524614	0.22929197	2.6436877	21	—	—
478816 2012 VB_{11}	17.7	X	331.56299	226.53942	207.76187	7.28046	0.1802700	0.22896215	2.6462259	21	12 21.1	20.3
478817 2012 VF_{14}	17.1	X	193.28846	2.11655	204.10695	11.57707	0.1269513	0.22788710	2.6545417	21	11 26.1	21.2
478818 2012 VM_{14}	17.1	X	6.96753	179.55238	238.03973	5.36262	0.2443309	0.23250429	2.6192809	21	—	—
478819 2012 VN_{18}	17.3	X	68.22176	189.22973	156.17302	3.45279	0.1809211	0.23353270	2.6115855	21	—	—
478820 2012 VU_{18}	17.2	X	343.38292	219.94549	183.85291	5.27955	0.1588720	0.22011159	2.7166943	21	11 28.5	20.0
478821 2012 VX_{18}	17.4	X	357.78292	285.61849	91.39511	6.03411	0.2808064	0.22044918	2.7139201	21	12 3.9	19.6
478822 2012 VG_{20}	17.5	X	107.27570	125.11004	239.47125	1.50872	0.2356035	0.26101983	2.4248621	21	—	—
478823 2012 VO_{23}	17.6	X	68.76941	336.52340	30.55387	2.92156	0.1555938	0.24111269	2.5565601	21	—	—
478824 2012 VT_{26}	17.9	X	91.98999	340.65459	347.35767	0.73256	0.1792345	0.24145304	2.5541571	21	—	—
478825 2012 VW_{28}	18.0	X	100.19253	36.18631	337.33595	2.49970	0.1032041	0.25298546	2.4759337	21	—	—
478826 2012 VT_{29}	17.0	X	14.87925	114.93263	319.05970	5.44011	0.1579107	0.24090190	2.5580512	21	—	—
478827 2012 VP_{30}	17.1	X	311.55038	244.03269	227.54671	21.35561	0.0540258	0.23436336	2.6054109	21	—	—
478828 2012 VV_{33}	16.8	X	71.80874	132.78369	222.67221	30.53477	0.1873811	0.23749046	2.5824897	21	—	—
478829 2012 VT_{36}	18.2	X	32.88903	216.42974	230.80591	4.31453	0.2226624	0.24424004	2.5346897	21	—	—
478830 2012 VE_{38}	17.7	X	49.83601	277.23962	100.94497	7.24448	0.3421606	0.23865269	2.5740985	21	—	—
478831 2012 VF_{38}	16.4	X	355.77627	358.98516	66.65405	13.26546	0.1408392	0.23037858	2.6353683	21	—	—
478832 2012 VT_{38}	17.0	X	355.33640	68.22606	47.39251	13.56921	0.2126894	0.23960580	2.5672677	21	—	—
478833 2012 VE_{39}	17.2	X	13.81557	42.96828	42.31968	12.78848	0.1558213	0.23979027	2.5659509	21	—	—
478834 2012 VM_{39}	17.3	X	10.61781	138.62627	287.68760	12.29978	0.1720773	0.23555949	2.5965836	21	—	—
478835 2012 VE_{40}	17.2	X	4.85385	355.58320	31.52254	2.04359	0.1441228	0.22145246	2.7057171	21	12 11.5	20.4
478836 2012 VG_{40}	16.6	X	77.35732	268.24960	54.34765	8.18843	0.0569836	0.22308251	2.6925206	21	12 13.4	20.3
478837 2012 VN_{40}	16.8	X	175.81116	139.89722	38.63286	9.49140	0.0604294	0.21334239	2.7738605	21	10 8.3	20.9
478838 2012 VW_{40}	17.4	X	20.22914	105.88355	211.50122	3.47743	0.0626301	0.21109896	2.7934784	21	9 20.9	21.0
478839 2012 VJ_{44}	17.2	X	20.97891	121.88372	223.74914	6.15632	0.0853592	0.22053360	2.7132275	21	11 3.7	20.4
478840 2012 VO_{44}	17.3	X	39.71419	115.44095	287.41995	1.76876	0.1545069	0.23540682	2.5977061	21	—	—
478841 2012 VH_{45}	17.1	X	257.28041	45.63472	103.06625	10.16077	0.1336867	0.21771339	2.7366082	21	11 26.3	20.8
478842 2012 VZ_{45}	17.2	X	321.91646	200.72557	250.03619	8.38902	0.2323551	0.22332957	2.6905345	21	12 22.5	19.2
478843 2012 VN_{47}	17.2	X	258.25305	275.49036	183.50175	3.70473	0.0605672	0.21373770	2.7704392	21	10 2.9	21.0
478844 2012 VQ_{49}	17.5	X	334.32913	291.29497	132.57689	1.73908	0.1141106	0.22637217	2.6663717	21	12 8.6	20.4
478845 2012 VC_{52}	17.2	X	41.51979	261.70874	153.51665	2.73596	0.2008963	0.23931204	2.5693682	21	—	—
478846 2012 VM_{53}	17.3	X	288.16447	282.32378	228.84322	13.03841	0.0898875	0.23467338	2.6031159	21	—	—
478847 2012 VB_{56}	17.3	X	79.22707	289.96940	51.47591	12.16176	0.2050448	0.23809297	2.5781311	21	—	—
478848 2012 VB_{60}	17.6	X	158.56451	214.18308	72.55759	4.65642	0.0585397	0.24042749	2.5614151	21	—	—
478849 2012 VQ_{60}	17.6	X	8.62021	148.01863	204.30847	2.91446	0.1070680	0.21491299	2.7603295	21	10 26.5	20.7
478850 2012 VH_{61}	17.3	X	50.08143	313.69718	59.53280	3.33124	0.1282838	0.23411736	2.6072358	21	—	—
478851 2012 VF_{63}	17.6	X	305.19876	338.61839	108.94780	3.48169	0.0726201	0.22228852	2.6989284	21	11 23.6	20.8
478852 2012 VV_{67}	17.1	X	18.39952	126.19132	219.31059	6.40297	0.0708156	0.21685029	2.7438648	21	10 28.2	20.5
478853 2012 VN_{70}	17.9	X	46.81257	271.39157	132.35447	2.98829	0.1226037	0.24105851	2.5569432	21	—	—
478854 2012 VS_{71}	18.2	X	100.47957	262.40478	66.14484	3.43878	0.2003626	0.23958127	2.5674430	21	—	—
478855 2012 VC_{72}	17.1	X	12.31239	144.93622	214.02565	4.50917	0.1302515	0.21729238	2.7401419	21	11 13.8	20.1
478856 2012 VK_{73}	17.3	X	328.65009	245.07645	125.40062	2.98125	0.0890291	0.20679018	2.8321490	21	9 14.4	20.6
478857 2012 VT_{73}	16.3	X	43.15277	258.83943	77.58289	17.19451	0.2150307	0.22163828	2.7042045	21	12 11.7	20.0
478858 2012 VZ_{73}	17.0	X	23.91513	199.51666	220.01841	12.64027	0.1362664	0.23774814	2.5806234	21	—	—
478859 2012 VE_{75}	17.3	X	66.67586	142.49360	232.54513	2.76471	0.2162963	0.23978033	2.5660218	21	—	—
478860 2012 VK_{75}	16.8	X	84.30465	308.86898	32.95154	9.82697	0.1363695	0.23738252	2.5832725	21	—	—
478861 2012 VB_{76}	17.5	X	293.10927	271.93623	166.15587	2.22261	0.1834183	0.20939827	2.8085834	21	10 6.6	20.6
478862 2012 VW_{78}	17.3	X	33.82980	319.11159	91.17826	2.98094	0.0933590	0.23749478	2.5824584	21	—	—
478863 2012 VK_{80}	16.8	X	338.33405	298.13376	83.52237	5.87177	0.1695917	0.21477024	2.7615526	21	10 18.8	19.6
478864 2012 VX_{80}	17.3	X	37.81191	309.09150	91.56422	9.90653	0.1630168	0.23784549	2.5799192	21	—	—
478865 2012 VG_{82}	17.7	X	37.24615	178.08600	229.41505	6.34352	0.3272148	0.23888167	2.5724533	21	—	—
478866 2012 VN_{84}	18.0	X	40.82121	90.20663	339.30797	2.66805	0.2422846	0.24291192	2.5439203	21	—	—
478867 2012 VU_{84}	16.9	X	173.44271	230.57483	57.30473	12.68960	0.1462668	0.24793333	2.5094552	21	—	—
478868 2012 VT_{86}	17.0	X	10.19207	10.47341	14.79985	5.41166	0.0945849	0.22328981	2.6908538	21	12 11.0	20.4
478869 2012 VA_{91}	17.6	X	53.94754	201.84783	216.01857	3.08934	0.1390228	0.24463030	2.5319933	21	—	—
478870 2012 VR_{95}	16.8	X	7.07780	325.77538	59.18823	6.97217	0.0428818	0.22267331	2.6958182	21	11 30.5	20.3
478871 2012 VW_{95}	17.0	X	24.78860	192.03939	206.69087	5.21688	0.1150651	0.23011830	2.6373551	21	—	—
478872 2012 VY_{97}	16.7	X	40.19166	8.15571	18.77240	15.56718	0.1274586	0.23491630	2.6013210	21	—	—
478873 2012 VZ_{97}	17.1	X	77.87138	275.32897	92.91741	14.36819	0.3214011	0.24494071	2.5298537	21	—	—
478874 2012 VR_{98}	17.2	X	347.42908	223.61068	215.61155	11.67016	0.2693205	0.22918540	2.6445072	21	—	—
478875 2012 VX_{100}	16.8	X	99.97846	93.57536	206.10218	10.66372	0.1948895	0.23247356	2.6195117	21	12 22.9	21.2
478876 2012 VA_{101}	17.3	X	5.06528	191.41513	193.29746	8.28397	0.1829180	0.22305190	2.6927669	21	12 14.9	20.3
478877 2012 VU_{102}	17.1	X	25.82005	355.18739	55.11116	4.83181	0.1015429	0.23391383	2.6087479	21	—	—
478878 2012 VA_{106}	17.2	X	303.95425	212.74930	236.51599	4.25916	0.1133014	0.21970334	2.7200587	21	11 19.4	20.3
478879 2012 VL_{106}	17.4	X	30.54157	312.67255	49.29284	6.53134	0.1433010	0.22533872	2.6745179	21	12 17.7	20.8
478880 2012 VP_{106}	17.0	X	358.53012	353.43070	52.46272	14.93812	0.0876720	0.22600321	2.6692729	21	12 19.8	20.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478881 2012 VZ_{110}	16.4	X	13.50563	263.67135	39.41055	15.32982	0.1601237	0.20568483	2.8422867	21	9 9.8	19.8
478882 2012 WW_{1}	17.6	X	8.20642	276.02737	69.26464	8.01542	0.0709001	0.21129305	2.7917674	21	10 15.8	21.1
478883 2012 WA_{8}	16.3	X	286.91900	326.81214	47.61091	11.61429	0.0279044	0.18946231	3.0023006	21	7 28.5	20.6
478884 2012 WB_{8}	17.2	X	283.98105	58.41623	45.37221	8.34058	0.1904686	0.21334221	2.7738620	21	10 26.7	20.4
478885 2012 WD_{8}	16.7	X	44.55942	341.03411	53.50271	13.59719	0.1746016	0.23583962	2.5945270	21	—	—
478886 2012 WM_{8}	17.1	X	10.87204	84.14034	255.50550	4.76979	0.0441602	0.20904399	2.8117557	21	10 3.7	20.7
478887 2012 WD_{9}	17.3	X	30.73601	272.88983	66.43598	11.31532	0.2752421	0.22185547	2.7024393	21	12 8.2	20.7
478888 2012 WH_{9}	17.6	X	67.22205	105.01788	292.34313	2.26945	0.1939101	0.24339334	2.5405647	21	—	—
478889 2012 WV_{9}	17.3	X	328.32686	259.42132	224.85099	4.65751	0.1927349	0.22898302	2.6460652	21	—	—
478890 2012 WX_{10}	17.8	X	335.49271	274.83142	233.45332	12.89432	0.1298073	0.24529373	2.5274259	21	—	—
478891 2012 WQ_{12}	17.3	X	53.14729	258.28780	144.99453	1.95658	0.1194047	0.24072701	2.5592900	21	—	—
478892 2012 WM_{13}	16.6	X	111.61276	30.24810	229.19364	12.88905	0.0524714	0.21354648	2.7720929	21	11 2.8	20.5
478893 2012 WA_{15}	17.0	X	12.78960	273.23879	95.23470	5.02926	0.1069450	0.21705166	2.7421674	21	11 24.6	20.2
478894 2012 WZ_{16}	16.5	X	9.38815	324.68738	137.00379	30.12547	0.2977005	0.24317766	2.5420667	21	—	—
478895 2012 WF_{17}	17.2	X	355.78996	350.95097	44.61227	14.07288	0.1565846	0.22272821	2.6953753	21	12 7.4	20.2
478896 2012 WC_{18}	16.4	X	44.03040	243.63695	22.50847	6.50976	0.0778834	0.19471361	2.9480749	21	8 22.6	20.3
478897 2012 WJ_{20}	17.1	X	9.30127	328.36333	37.48682	5.63128	0.1759073	0.21862791	2.7289714	21	11 23.3	20.0
478898 2012 WR_{21}	16.7	X	64.11017	300.62065	41.37538	7.39235	0.1377588	0.22813580	2.6526121	21	—	—
478899 2012 WW_{21}	17.2	X	315.64162	177.97902	266.09489	6.42895	0.0577923	0.22073752	2.7115562	21	12 4.1	20.4
478900 2012 WC_{22}	17.0	X	21.11928	335.51523	48.17531	6.41591	0.0292838	0.22355130	2.6887551	21	12 16.1	20.5
478901 2012 WL_{22}	17.7	X	52.06198	47.74765	334.20284	1.25722	0.1755101	0.23591201	2.5939963	21	—	—
478902 2012 WN_{22}	17.2	X	353.61815	327.66157	50.53655	5.60770	0.1085971	0.21480738	2.7612343	21	11 6.2	20.3
478903 2012 WH_{23}	17.3	X	65.91048	63.27188	305.96847	2.86295	0.1110338	0.23531083	2.5984125	21	—	—
478904 2012 WK_{23}	17.0	X	98.10650	85.23722	257.71111	10.91087	0.0639730	0.23626639	2.5914018	21	—	—
478905 2012 WP_{27}	17.6	X	38.55697	2.07712	53.59172	4.70402	0.2703753	0.23966131	2.5668713	21	—	—
478906 2012 WA_{28}	17.7	X	6.04613	28.00416	20.31970	2.70202	0.1936009	0.22900996	2.6458576	21	—	—
478907 2012 WT_{29}	17.2	X	343.76428	41.76416	82.69269	13.88510	0.2071333	0.23502296	2.6005339	21	—	—
478908 2012 WM_{32}	16.2	X	189.76041	168.55685	306.46768	7.74576	0.0299891	0.17352840	3.1833838	21	7 31.8	20.8
478909 2012 WQ_{33}	16.4	X	80.56868	275.44209	108.64867	13.54569	0.1628149	0.24338194	2.5406440	21	—	—
478910 2012 WY_{34}	17.3	X	65.67786	279.25625	92.46560	6.78867	0.2980989	0.23852803	2.5749952	21	—	—
478911 2012 WF_{35}	16.9	X	65.66842	28.58771	5.50614	2.55724	0.1280907	0.24205134	2.5499464	21	—	—
478912 2012 XS	17.4	X	5.99985	124.20087	298.58848	1.13308	0.1146418	0.23229200	2.6208765	21	—	—
478913 2012 XZ	17.3	X	320.55990	228.75814	242.50808	5.24581	0.1036253	0.22847637	2.6499754	21	—	—
478914 2012 XH_{1}	16.7	X	13.93603	325.34037	45.00051	6.69617	0.0547893	0.21774186	2.7363696	21	11 21.1	20.3
478915 2012 XV_{1}	17.2	X	74.94300	94.92071	235.79637	11.96912	0.2114023	0.23224694	2.6212155	21	—	—
478916 2012 XB_{2}	16.9	X	278.91241	242.98642	229.88766	8.02045	0.1136133	0.21500572	2.7595358	21	11 10.5	20.4
478917 2012 XH_{2}	17.8	X	37.90089	280.93619	128.69988	5.73101	0.3412248	0.23813238	2.5778466	21	—	—
478918 2012 XV_{2}	17.3	X	79.99415	274.56497	84.13495	7.45649	0.2774740	0.24196364	2.5505626	21	—	—
478919 2012 XG_{3}	17.6	X	358.17513	83.76621	313.96384	2.42176	0.1422971	0.22106475	2.7088797	21	12 14.5	20.5
478920 2012 XO_{3}	16.7	X	339.29987	176.53363	240.43205	11.72646	0.1470679	0.21966996	2.7203342	21	12 7.4	19.5
478921 2012 XW_{3}	16.6	X	34.35074	274.00958	91.23988	6.96248	0.0349364	0.22083497	2.7107584	21	12 10.9	20.3
478922 2012 XL_{4}	17.4	X	346.89785	331.29097	95.07064	10.02959	0.0872191	0.22463974	2.6800630	21	12 30.1	20.6
478923 2012 XP_{7}	17.7	X	88.87565	18.83244	41.27120	4.24601	0.2976049	0.25811354	2.4430303	21	2 16.6	20.1
478924 2012 XS_{8}	17.2	X	81.53614	240.41090	88.07582	6.62385	0.1354356	0.22983239	2.6395419	21	—	—
478925 2012 XG_{10}	16.9	X	29.22210	19.11814	34.16178	2.83389	0.0880400	0.23439742	2.6051586	21	—	—
478926 2012 XJ_{10}	17.3	X	353.67594	154.82303	262.15047	7.34218	0.2201714	0.22513471	2.6761333	21	—	—
478927 2012 XP_{10}	17.5	X	344.68438	8.99727	23.31170	2.45528	0.1861344	0.21627936	2.7486915	21	11 13.9	20.0
478928 2012 XW_{10}	17.6	X	341.60898	277.53107	174.17686	2.19462	0.1228301	0.23245458	2.6196543	21	—	—
478929 2012 XN_{11}	17.2	X	2.11235	120.37050	221.76194	3.09807	0.1115216	0.20940265	2.8085442	21	9 30.1	20.5
478930 2012 XY_{11}	18.1	X	14.23979	68.93520	305.83248	3.01193	0.2718719	0.22555390	2.6728166	21	12 31.5	21.2
478931 2012 XF_{12}	17.6	X	347.48143	88.71386	300.44150	1.92827	0.1119510	0.21779830	2.7358969	21	11 10.6	20.8
478932 2012 XO_{14}	17.2	X	44.04036	135.48679	272.17384	12.66387	0.1572071	0.23771143	2.5808891	21	—	—
478933 2012 XH_{19}	16.9	X	283.68505	212.50316	249.42586	9.29662	0.1098867	0.21443426	2.7644363	21	11 2.1	20.3
478934 2012 XM_{20}	17.0	X	5.75965	5.09019	70.52434	16.61981	0.1213828	0.23356726	2.6113279	21	—	—
478935 2012 XC_{21}	17.2	X	111.92121	99.44381	223.08328	1.67193	0.2292860	0.24035048	2.5619622	21	—	—
478936 2012 XR_{25}	17.4	X	40.46563	125.56314	242.42087	5.49664	0.1552613	0.22916714	2.6446477	21	—	—
478937 2012 XN_{29}	16.3	X	228.46506	254.30766	255.91505	13.19893	0.1297399	0.20924267	2.8099756	21	10 17.7	20.7
478938 2012 XR_{29}	17.0	X	67.99807	86.33667	268.00759	4.26942	0.0362092	0.22859764	2.6490382	21	—	—
478939 2012 XV_{30}	17.4	X	86.79780	296.84561	32.48334	3.87257	0.1929800	0.23218225	2.6217023	21	—	—
478940 2012 XL_{34}	17.0	X	84.11489	297.09884	77.94427	6.91119	0.1447413	0.24179709	2.5517336	21	—	—
478941 2012 XU_{36}	16.2	X	300.14605	72.83857	251.32615	10.42184	0.0808039	0.17856581	3.1232291	21	5 30.7	20.4
478942 2012 XF_{38}	17.1	X	325.10002	240.46981	245.40629	10.71922	0.2467720	0.22896436	2.6462089	21	—	—
478943 2012 XE_{40}	17.2	X	52.63349	297.95019	83.85847	5.11373	0.2823193	0.23709518	2.5853592	21	—	—
478944 2012 XK_{44}	17.6	X	70.02460	0.56568	8.42546	1.02697	0.1650582	0.23615950	2.5921837	21	—	—
478945 2012 XK_{45}	17.2	X	3.53519	2.43611	70.62759	13.23697	0.1694968	0.23074176	2.6326023	21	—	—
478946 2012 XR_{45}	17.0	X	56.80847	110.56487	226.65848	8.69995	0.1245514	0.22717259	2.6601049	21	12 17.4	20.7
478947 2012 XS_{45}	17.0	X	281.43106	240.05443	225.78166	8.35478	0.1177533	0.21762439	2.7373542	21	11 4.8	20.2
478948 2012 XV_{45}	17.4	X	355.17738	12.53920	59.43917	5.80145	0.0964766	0.23267828	2.6179750	21	—	—
478949 2012 XS_{46}	17.1	X	306.56264	7.43116	92.45848	6.59595	0.0891104	0.21969137	2.7201575	21	12 9.9	20.4
478950 2012 XO_{49}	17.3	X	354.16336	169.34234	193.33479	3.34047	0.1100553	0.21270526	2.7793969	21	10 16.6	20.4
478951 2012 XD_{50}	16.5	X	64.82840	274.95320	73.00885	14.96786	0.1427792	0.22958065	2.6414711	21	—	—
478952 2012 XG_{50}	17.7	X	24.50732	2.70222	76.47263	5.57794	0.1713017	0.23979906	2.5658882	21	—	—
478953 2012 XO_{54}	16.4	X	57.77667	301.15642	81.56948	16.50828	0.1040614	0.23609234	2.5926752	21	—	—
478954 2012 XP_{56}	16.9	X	301.20715	94.74269	345.38889	6.13408	0.2613566	0.21276784	2.7788518	21	10 9.7	19.8
478955 2012 XK_{62}	17.4	X	91.03437	194.85225	124.09097	8.73906	0.1823678	0.23005863	2.6378111	21	—	—
478956 2012 XS_{64}	16.5	X	322.10720	218.99663	226.04822	13.82250	0.0820170	0.22091090	2.7101373	21	12 14.4	19.8
478957 2012 XH_{66}	17.2	X	336.78702	253.99350	159.00744	7.31881	0.0341048	0.21662734	2.7457471	21	11 25.1	20.8
478958 2012 XX_{66}	16.4	X	164.56035	69.43798	216.96883	12.93321	0.2012788	0.23851477	2.5750907	21	—	—
478959 2012 XL_{67}	16.7	X	358.69405	339.68666	91.74013	22.92770	0.0347647	0.22909851	2.6451758	21	—	—
478960 2012 XD_{71}	17.5	X	61.86439	225.14749	148.45037	3.31626	0.2258081	0.23847880	2.5753497	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
478961 2012 XG_{79}	17.4	X	71.87508	276.16671	113.82878	4.51503	0.2061107	0.24524603	2.5277535	21	—	—
478962 2012 XM_{79}	16.8	X	55.05407	324.92440	79.51660	16.16930	0.1034912	0.24242552	2.5473219	21	—	—
478963 2012 XA_{85}	17.7	X	331.40433	304.25183	140.56493	9.18731	0.2936963	0.22281026	2.6947134	21	—	—
478964 2012 XJ_{85}	17.9	X	13.51050	286.97864	152.33104	10.34291	0.2205738	0.23498206	2.6008357	21	—	—
478965 2012 XD_{86}	16.7	X	37.61817	356.95836	34.32163	13.47145	0.1744626	0.23276930	2.6172924	21	—	—
478966 2012 XQ_{86}	17.8	X	17.47504	39.17738	63.11526	4.70939	0.1334625	0.24471589	2.5314029	21	—	—
478967 2012 XO_{94}	17.1	X	68.79048	193.35631	177.44862	2.23236	0.2425103	0.23817009	2.5775746	21	—	—
478968 2012 XL_{95}	17.0	X	355.39418	354.57321	91.14386	14.32047	0.2228017	0.23076531	2.6324232	21	—	—
478969 2012 XP_{96}	17.2	X	309.39633	97.56234	350.35587	3.91423	0.1166207	0.21724176	2.7405675	21	11 24.7	20.3
478970 2012 XK_{97}	17.3	X	26.24450	318.37324	38.70613	6.24303	0.0665116	0.21608369	2.7503506	21	11 22.0	20.7
478971 2012 XN_{97}	17.1	X	151.75694	342.39558	317.87828	4.38611	0.0971903	0.23846328	2.5754613	21	—	—
478972 2012 XB_{99}	17.2	X	31.22034	49.86470	39.27451	5.94226	0.2138718	0.24323152	2.5416913	21	—	—
478973 2012 XH_{99}	17.3	X	51.77084	359.71497	344.50011	4.14448	0.1140993	0.22217049	2.6998842	21	12 17.7	21.0
478974 2012 XL_{103}	15.9	X	256.96935	252.22137	233.17639	23.54382	0.1705142	0.21008575	2.8024528	21	10 15.2	20.0
478975 2012 XT_{104}	16.7	X	56.25983	129.05671	235.00947	8.60445	0.1037850	0.23439594	2.6051695	21	—	—
478976 2012 XU_{105}	16.6	X	10.24963	331.40069	77.94492	11.59142	0.2003678	0.22230699	2.6987789	21	—	—
478977 2012 XX_{106}	16.0	X	146.05106	256.71555	274.54570	14.87476	0.1784711	0.17827860	3.1265826	21	8 20.5	21.4
478978 2012 XL_{108}	16.3	X	316.24360	202.05345	261.49265	15.99843	0.0933282	0.22267273	2.6958229	21	12 29.3	19.5
478979 2012 XK_{109}	16.5	X	300.58207	296.11113	74.40459	6.78543	0.0594624	0.19085400	2.9876877	21	8 5.4	20.5
478980 2012 XU_{111}	17.0	X	320.69493	264.86061	239.09778	14.88675	0.4158725	0.22533195	2.6745714	21	—	—
478981 2012 XK_{116}	17.0	X	331.36890	208.45236	217.86370	7.89619	0.1748456	0.21818082	2.7326982	21	12 6.0	19.7
478982 2012 XV_{116}	17.0	X	314.05972	131.19657	293.26993	6.72298	0.2790609	0.21380894	2.7698238	21	10 10.8	19.6
478983 2012 XB_{118}	17.0	X	350.32567	81.81663	320.96235	6.54525	0.0524668	0.21138818	2.7909298	21	11 27.4	20.7
478984 2012 XL_{119}	17.2	X	288.34029	31.62253	79.97025	12.37989	0.1307454	0.21064529	2.7974879	21	11 21.9	20.7
478985 2012 XY_{119}	17.3	X	316.17552	68.75913	25.29025	5.09164	0.1318304	0.21353980	2.7721506	21	12 13.5	20.3
478986 2012 XQ_{120}	17.6	X	43.37575	153.28005	256.66231	2.40369	0.2426831	0.24031269	2.5622308	21	—	—
478987 2012 XR_{120}	16.3	X	56.91720	341.31122	49.98532	6.47105	0.3459041	0.23617279	2.5920864	21	—	—
478988 2012 XM_{121}	16.6	X	142.34687	302.01952	206.45562	11.09768	0.0608256	0.18249583	3.0782278	21	7 17.5	21.3
478989 2012 XD_{124}	17.1	X	54.33643	278.51208	103.33606	14.05593	0.1840551	0.23485255	2.6017917	21	—	—
478990 2012 XT_{124}	16.3	X	109.84574	129.21748	213.52766	10.28069	0.1901201	0.24121773	2.5558178	21	—	—
478991 2012 XJ_{126}	18.0	X	25.68845	47.12005	9.86366	2.82400	0.1658204	0.23692129	2.5866242	21	—	—
478992 2012 XU_{128}	17.0	X	277.72632	223.54573	243.67782	10.48121	0.1215963	0.21653408	2.7465355	21	10 29.9	20.6
478993 2012 XV_{128}	17.0	X	192.29482	200.85501	52.92113	12.38881	0.0237847	0.23929779	2.5694702	21	—	—
478994 2012 XQ_{131}	17.0	X	277.30395	8.56869	124.68849	7.99109	0.2499898	0.21669006	2.7452173	21	11 17.3	20.3
478995 2012 XX_{131}	16.5	X	103.17197	82.19686	240.03833	13.36046	0.1336420	0.23132545	2.6281719	21	—	—
478996 2012 XF_{132}	18.5	X	23.62249	223.75770	199.55513	4.77310	0.2704128	0.23561803	2.5961535	21	—	—
478997 2012 XU_{134}	17.6	X	0.03991	84.54759	55.50337	28.03756	0.4062198	0.23544979	2.5973901	21	—	—
478998 2012 XD_{135}	17.3	X	290.17647	5.40594	88.06186	4.60109	0.1665486	0.21475306	2.7616998	21	10 27.5	20.5
478999 2012 XQ_{136}	17.2	X	68.36646	346.59669	35.23928	1.76707	0.2290548	0.24231169	2.5481196	21	—	—
479000 2012 XK_{137}	17.3	X	6.22727	38.83090	33.85533	9.57260	0.1907404	0.23313013	2.6145911	21	—	—
479001 2012 XX_{137}	17.3	X	57.83684	355.72146	46.93194	5.27647	0.1737054	0.24214498	2.5492890	21	—	—
479002 2012 XF_{140}	16.6	X	202.62316	96.80604	82.99577	9.73553	0.0716636	0.21308080	2.7761302	21	11 8.2	20.7
479003 2012 XT_{141}	17.6	X	348.75495	195.47290	220.65675	4.26346	0.1545930	0.22304313	2.6928375	21	12 24.9	20.4
479004 2012 XX_{143}	17.9	X	8.42521	351.97617	114.20565	2.30418	0.2066240	0.24065494	2.5598009	21	—	—
479005 2012 XF_{144}	15.7	X	95.20863	334.45139	230.82288	22.35224	0.1481223	0.18077201	3.0977659	21	8 7.9	20.8
479006 2012 XH_{146}	16.9	X	93.85387	79.81241	247.90967	3.22625	0.2687607	0.23729723	2.5838915	21	—	—
479007 2012 XN_{146}	18.0	X	11.26245	345.85729	89.53694	7.16427	0.2644957	0.23482579	2.6019894	21	—	—
479008 2012 XZ_{146}	17.4	X	9.48017	1.89854	46.23803	5.13836	0.0910579	0.22626894	2.6671827	21	—	—
479009 2012 XG_{147}	16.7	X	260.70344	255.44560	251.63683	14.35665	0.2380946	0.21393359	2.7687478	21	11 8.9	20.6
479010 2012 XO_{147}	16.8	X	320.05101	353.63967	81.48437	7.64423	0.0059998	0.21638170	2.7478247	21	11 29.8	20.5
479011 2012 XG_{149}	16.6	X	304.77983	356.23477	105.56843	14.88928	0.0550252	0.22046486	2.7137914	21	12 13.1	20.0
479012 2012 XK_{151}	16.2	X	321.99220	243.72685	99.76326	15.97813	0.0129235	0.17985656	3.1082684	21	8 3.8	20.6
479013 2012 XD_{152}	16.6	X	316.01483	150.28994	302.38525	8.67695	0.2169243	0.21593294	2.7516305	21	12 8.3	19.2
479014 2012 XJ_{152}	15.8	X	192.45713	211.98022	277.82712	20.46213	0.1706362	0.18069464	3.0986501	21	8 9.6	21.2
479015 2012 XC_{154}	16.0	X	190.80469	202.47608	264.43924	15.78689	0.1825495	0.17535367	3.1612546	21	7 16.1	21.4
479016 2012 XF_{156}	16.9	X	51.87222	32.20116	19.05162	4.43048	0.1965191	0.24060953	2.5601230	21	—	—
479017 2012 YG_{1}	16.1	X	179.44180	322.75916	138.85909	11.88370	0.1237234	0.17068295	3.2186663	21	7 2.9	21.3
479018 2012 YW_{1}	16.3	X	165.67782	32.24691	94.53546	17.23216	0.1429580	0.17389934	3.1788553	21	7 21.4	21.5
479019 2012 YL_{3}	16.9	X	29.53942	356.42454	29.97831	8.58885	0.3387753	0.22453488	2.6808972	21	—	—
479020 2012 YH_{8}	15.9	X	295.24807	310.50571	227.41109	31.01202	0.2134902	0.23387090	2.6090671	21	—	—
479021 2013 AC_{2}	17.5	X	302.10165	274.20718	183.24040	6.15799	0.2811451	0.21172498	2.7879692	21	11 6.2	20.0
479022 2013 AY_{11}	16.5	X	247.75537	277.91747	271.06243	11.26715	0.1328649	0.22499746	2.6772215	21	—	—
479023 2013 AZ_{11}	17.3	X	33.11604	13.42201	41.22787	14.61549	0.2752306	0.23206016	2.6226218	21	—	—
479024 2013 AL_{12}	15.7	X	68.28876	141.34523	118.20596	18.74046	0.0891464	0.18372752	3.0644549	21	9 20.6	20.2
479025 2013 AP_{12}	16.3	X	278.96592	254.57602	121.39122	11.54568	0.1211457	0.17935740	3.1140328	21	7 2.6	20.7
479026 2013 AP_{13}	15.6	X	340.53016	341.21146	280.00113	8.46029	0.0748466	0.15592718	3.4186515	21	5 6.9	20.2
479027 2013 AQ_{17}	17.1	X	358.13216	352.06900	112.03664	14.04749	0.2422020	0.22921992	2.6442417	21	—	—
479028 2013 AC_{19}	16.1	X	215.29800	333.81010	125.13045	10.48496	0.0147609	0.17705929	3.1409202	21	8 13.6	20.6
479029 2013 AZ_{19}	16.6	X	37.78112	98.33746	286.33504	9.86749	0.0423571	0.21577803	2.7529473	21	—	—
479030 2013 AD_{20}	16.6	X	28.89779	87.34645	355.20450	27.30243	0.3969630	0.23351864	2.6116903	21	—	—
479031 2013 AK_{22}	16.3	X	218.83375	148.33414	312.65556	8.56009	0.1159490	0.17801613	3.1296551	21	8 10.1	21.1
479032 2013 AX_{22}	16.6	X	218.82999	348.50870	126.21366	14.38242	0.1718892	0.18275260	3.0753438	21	8 24.9	21.5
479033 2013 AC_{23}	17.0	X	344.05981	340.85698	115.16878	7.13684	0.1281695	0.21891043	2.7266229	21	—	—
479034 2013 AL_{25}	16.0	X	203.00060	22.44689	85.78459	14.32351	0.0138997	0.18869813	3.0104007	21	8 13.7	20.4
479035 2013 AK_{28}	17.1	X	311.24634	298.94951	166.88980	1.98129	0.1905191	0.21168555	2.7883154	21	12 17.5	19.8
479036 2013 AC_{30}	17.7	X	323.19737	253.50638	193.36198	7.92668	0.2856617	0.22273580	2.6953140	21	12 19.9	19.7
479037 2013 AY_{32}	16.1	X	209.19396	350.34038	127.64162	18.99409	0.0779152	0.18071968	3.0983638	21	8 26.6	20.8
479038 2013 AC_{33}	16.3	X	235.16958	122.36532	340.06556	9.67211	0.1496566	0.18732710	3.0250715	21	8 27.2	20.8
479039 2013 AL_{33}	17.1	X	325.35402	20.72501	71.11846	6.18818	0.1283167	0.22161723	2.7043757	21	12 29.9	20.1
479040 2013 AX_{35}	15.8	X	235.55856	113.69215	311.83028	12.76532	0.0512000	0.17716159	3.1397110	21	7 23.3	20.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479041 2013 AJ_{37}	16.6	X	268.93710	309.57693	116.28965	12.75022	0.1478501	0.18944733	3.0024587	21	8 21.8	20.9
479042 2013 AS_{37}	16.3	X	283.93473	96.04165	298.80785	7.87564	0.1074014	0.18371625	3.0645803	21	8 4.0	20.3
479043 2013 AR_{39}	17.1	X	224.66410	211.95889	275.48675	1.94609	0.1081845	0.18981195	2.9986125	21	9 18.8	21.6
479044 2013 AJ_{40}	16.0	X	81.21220	297.02300	294.28034	13.23896	0.0584698	0.17404035	3.1771380	21	8 16.4	20.6
479045 2013 AR_{41}	16.8	X	249.05390	283.63403	120.90828	10.36736	0.0872996	0.17542695	3.1603742	21	7 7.1	21.4
479046 2013 AN_{44}	16.5	X	340.04013	82.85587	326.33030	8.55466	0.1205354	0.20368001	2.8609072	21	11 20.1	20.0
479047 2013 AJ_{45}	16.2	X	300.97141	113.24163	316.80528	9.67339	0.1048358	0.19658145	2.9293709	21	10 11.3	20.1
479048 2013 AF_{46}	16.5	X	239.39634	127.38614	328.32185	8.23757	0.1008044	0.18332540	3.0689345	21	8 27.6	20.9
479049 2013 AX_{47}	16.9	X	312.09075	16.07044	23.23697	8.61812	0.0337824	0.19683956	2.9268095	21	10 1.2	20.8
479050 2013 AF_{48}	16.7	X	339.89802	16.85558	72.28211	14.35026	0.1172285	0.22166216	2.7040103	21	—	—
479051 2013 AD_{50}	15.8	X	359.73235	246.17709	60.81407	10.07912	0.0865915	0.17937451	3.1138348	21	8 9.9	19.8
479052 2013 AU_{52}	17.0	X	282.35842	193.48536	320.02466	18.52086	0.2017720	0.21552678	2.7550864	21	12 30.8	20.4
479053 2013 AJ_{53}	15.3	X	183.37197	349.76836	113.64573	23.61817	0.1168782	0.17099772	3.2147151	21	7 9.2	20.4
479054 2013 AB_{56}	16.2	X	164.51615	180.37582	330.36391	8.96522	0.1405049	0.17736688	3.1372878	21	8 18.3	21.2
479055 2013 AG_{56}	16.8	X	234.77777	97.12308	322.88946	10.40635	0.0956467	0.17662770	3.1460347	21	7 11.0	21.6
479056 2013 AO_{56}	16.5	X	142.48367	262.84240	327.96934	10.32277	0.0428390	0.19800068	2.9153560	21	10 26.7	20.9
479057 2013 AS_{56}	16.7	X	13.02836	40.14238	353.46513	2.97239	0.1302965	0.21382646	2.7696725	21	12 29.4	20.1
479058 2013 AR_{57}	16.5	X	279.47995	93.87628	315.12009	9.40010	0.1208297	0.18632392	3.0359199	21	8 14.7	20.5
479059 2013 AR_{64}	16.2	X	255.85218	142.37004	281.77354	8.57348	0.1308471	0.18649427	3.0340708	21	8 1.8	20.7
479060 2013 AX_{68}	16.0	X	150.15415	231.51113	290.76943	15.20425	0.0489592	0.17881150	3.1203676	21	8 10.4	20.8
479061 2013 AA_{69}	17.7	X	359.69474	303.65122	103.42896	4.51051	0.1919803	0.21756449	2.7378566	21	—	—
479062 2013 AU_{75}	17.5	X	353.93816	113.59618	322.05651	6.89831	0.2964721	0.22255658	2.6967608	21	—	—
479063 2013 AK_{78}	16.7	X	275.82164	273.24571	159.97081	9.22493	0.0732397	0.19190455	2.9767740	21	9 19.5	20.7
479064 2013 AQ_{78}	17.0	X	358.63154	141.53614	279.09280	14.79971	0.2348681	0.21979481	2.7193040	21	—	—
479065 2013 AY_{78}	16.7	X	5.05074	301.35522	133.95981	13.42419	0.2431255	0.22473143	2.6793339	21	—	—
479066 2013 AP_{81}	17.2	X	273.79961	122.73068	292.10915	7.38917	0.1611061	0.19019755	2.9945583	21	8 8.1	21.3
479067 2013 AV_{82}	17.5	X	17.78641	137.00215	301.22059	3.95233	0.2273207	0.23116501	2.6293878	21	—	—
479068 2013 AB_{83}	16.4	X	313.80775	297.19663	115.46760	10.89419	0.0560240	0.19956722	2.9000795	21	10 23.3	20.4
479069 2013 AJ_{83}	16.3	X	191.04660	81.34157	69.20645	9.73833	0.0269693	0.18912660	3.0058524	21	9 22.8	20.8
479070 2013 AY_{84}	17.3	X	49.34592	316.02466	12.57680	1.90703	0.0686273	0.20359424	2.8617107	21	11 14.9	21.1
479071 2013 AK_{85}	17.5	X	330.95422	101.82880	337.63551	1.70403	0.1189591	0.21505510	2.7591134	21	12 20.7	20.6
479072 2013 AC_{87}	15.6	X	42.34949	155.66294	104.52603	18.37548	0.1238140	0.17393753	3.1783900	21	8 17.6	19.9
479073 2013 AX_{87}	16.2	X	212.28092	330.34217	99.05973	10.52819	0.0585806	0.17226552	3.1989231	21	6 29.2	20.9
479074 2013 AK_{90}	16.0	X	16.11582	40.85093	314.92302	15.71227	0.0783204	0.20303771	2.8669376	21	10 29.5	20.1
479075 2013 AA_{91}	17.0	X	331.62711	325.83172	118.52904	10.47135	0.1929517	0.21609594	2.7502466	21	12 31.9	19.7
479076 2013 AT_{92}	16.8	X	352.28510	118.61688	335.12470	12.40854	0.2348145	0.22310561	2.6923348	21	—	—
479077 2013 AE_{93}	17.1	X	309.97748	127.83065	357.50940	4.56701	0.1110484	0.21749696	2.7384234	21	—	—
479078 2013 AR_{93}	15.7	X	157.31107	170.00752	324.87121	14.34703	0.1004336	0.17106804	3.2138341	21	7 23.9	20.8
479079 2013 AE_{95}	17.8	X	26.07964	325.34253	98.65680	6.84380	0.1659940	0.22834529	2.6509895	21	—	—
479080 2013 AK_{96}	16.8	X	287.90594	142.58968	279.97291	4.69892	0.1184405	0.20213627	2.8754549	21	9 13.2	20.5
479081 2013 AE_{99}	16.2	X	298.30308	316.49421	77.99438	13.63281	0.0513681	0.18880530	3.0092615	21	9 8.9	20.5
479082 2013 AQ_{99}	17.2	X	343.78368	94.73757	330.74389	8.21557	0.2655149	0.21885134	2.7271137	21	—	—
479083 2013 AU_{100}	16.4	X	209.17041	281.43718	160.00263	3.19538	0.1396356	0.17300258	3.1898310	21	7 5.9	21.4
479084 2013 AL_{101}	17.7	X	273.84604	46.75635	102.17030	3.31413	0.1453250	0.21401550	2.7680413	21	12 15.4	21.0
479085 2013 AF_{104}	16.0	X	13.19344	248.81486	104.15101	17.44724	0.1187414	0.19956479	2.9001031	21	11 9.5	19.9
479086 2013 AQ_{105}	17.0	X	311.69192	87.45301	31.40932	8.21625	0.1844137	0.21443131	2.7644617	21	—	—
479087 2013 AS_{108}	16.0	X	336.29469	37.47661	285.60947	6.88180	0.0207359	0.17283238	3.1919247	21	7 24.3	20.5
479088 2013 AO_{110}	15.8	X	35.09605	334.28244	295.00730	9.33555	0.0551433	0.17663034	3.1460034	21	8 5.7	19.9
479089 2013 AM_{116}	16.5	X	228.25169	16.50153	68.27477	3.79799	0.0768445	0.17652743	3.1472259	21	8 5.3	21.1
479090 2013 AU_{116}	16.1	X	206.00682	357.13721	109.23532	13.25097	0.0616796	0.17491305	3.1665613	21	8 8.8	20.8
479091 2013 AF_{117}	17.2	X	336.38695	348.03445	95.94821	8.36864	0.1137982	0.21533242	2.7567440	21	—	—
479092 2013 AF_{118}	17.0	X	359.58601	56.33456	21.02392	5.07673	0.1486907	0.22123617	2.7074803	21	—	—
479093 2013 AV_{119}	17.3	X	325.50806	329.20842	95.42968	5.64953	0.1185866	0.21028201	2.8007089	21	11 21.3	20.5
479094 2013 AY_{119}	16.4	X	215.23224	179.47599	305.24433	8.52818	0.0199442	0.19034517	2.9930098	21	9 11.1	20.8
479095 2013 AM_{120}	16.9	X	293.28919	312.27065	112.97988	4.90400	0.0588379	0.19349736	2.9604156	21	10 6.7	20.8
479096 2013 AC_{121}	15.8	X	137.67530	304.01564	270.20248	11.43103	0.0616927	0.19983582	2.8974803	21	9 30.8	20.4
479097 2013 AU_{123}	16.1	X	106.59175	246.52956	322.92103	10.09091	0.0333435	0.17629548	3.1499858	21	8 20.3	20.6
479098 2013 AU_{128}	16.4	X	237.88409	100.12989	340.16488	15.89001	0.1104210	0.18449171	3.0559868	21	8 9.8	21.0
479099 2013 AT_{130}	17.1	X	282.74892	212.62429	251.59408	2.82913	0.0606967	0.21447251	2.7641077	21	11 11.4	20.8
479100 2013 AR_{135}	16.7	X	279.77951	277.76716	143.17334	11.68929	0.0288266	0.18776595	3.0203561	21	9 16.2	20.9
479101 2013 AN_{142}	16.5	X	279.15438	197.38419	183.36893	16.63821	0.1242415	0.17975169	3.1094773	21	7 6.8	21.2
479102 2013 AE_{153}	17.5	X	316.02267	292.02707	179.06353	9.09455	0.2298130	0.21799612	2.7342415	21	—	—
479103 2013 AW_{154}	17.3	X	282.13896	208.66522	193.80354	9.77261	0.1034252	0.18644906	3.0345614	21	8 10.3	21.6
479104 2013 AN_{156}	16.2	X	315.34081	111.34297	244.67470	11.83146	0.0558396	0.18000386	3.1065726	21	7 31.7	20.6
479105 2013 AP_{160}	16.6	X	21.13801	226.95655	148.51578	14.93828	0.1634856	0.21248763	2.7812943	21	12 23.1	20.3
479106 2013 AE_{163}	17.0	X	228.68994	232.05859	240.48061	11.29563	0.1015327	0.18822366	3.0154577	21	8 31.9	21.8
479107 2013 AS_{163}	16.9	X	27.77080	246.81751	153.42227	14.66185	0.1818704	0.22297807	2.6933613	21	—	—
479108 2013 AU_{164}	16.4	X	61.65324	71.16940	208.29896	10.38341	0.0924062	0.18654038	3.0335708	21	9 29.9	20.7
479109 2013 AH_{168}	16.4	X	2.60520	93.35931	218.82544	8.20676	0.0675281	0.17899445	3.1182410	21	8 13.6	20.7
479110 2013 AO_{168}	16.5	X	187.06489	266.60659	245.14047	8.16094	0.0910980	0.18509938	3.0492947	21	9 7.1	21.3
479111 2013 AH_{169}	16.3	X	154.49212	296.56639	201.81268	8.85801	0.0147552	0.17150470	3.2083768	21	7 16.6	21.0
479112 2013 AQ_{170}	17.4	X	335.98277	278.05187	209.85723	8.48829	0.1636497	0.22692277	2.6620569	21	—	—
479113 2013 AS_{177}	16.9	X	33.35511	221.15623	173.29489	9.36747	0.0837862	0.22045616	2.7138628	21	—	—
479114 2013 AR_{182}	16.8	X	299.32007	285.87451	226.04502	11.72759	0.1442976	0.22081793	2.7108979	21	—	—
479115 2013 BO_{2}	17.2	X	39.50857	247.06848	160.03471	5.54475	0.3424079	0.23843818	2.5756421	21	—	—
479116 2013 BU_{9}	16.3	X	315.95607	285.29817	92.81593	9.04290	0.0637238	0.18826498	3.0150165	21	9 8.3	20.3
479117 2013 BY_{14}	16.5	X	255.34829	325.67170	121.30704	10.55536	0.0920075	0.18977040	2.9990502	21	9 9.9	20.8
479118 2013 BK_{19}	17.1	X	287.68230	239.72894	258.82774	6.40582	0.1693298	0.21417167	2.7666955	21	12 20.6	20.2
479119 2013 BN_{19}	17.2	X	319.83914	293.73386	168.88203	8.02336	0.1834065	0.21659442	2.7460253	21	—	—
479120 2013 BU_{20}	16.5	X	16.61270	336.24740	332.56609	10.50221	0.0250036	0.18415945	3.0596614	21	8 30.1	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479121 2013 BY_{20}	16.9	X	238.64073	133.09516	308.85961	7.35956	0.1015898	0.18372556	3.0644767	21	8 9.4	21.4
479122 2013 BZ_{20}	17.1	X	47.02073	293.04903	99.84316	5.46747	0.1868513	0.22750290	2.6575295	21	—	—
479123 2013 BR_{22}	16.9	X	313.98462	248.03538	210.16597	3.30331	0.1099627	0.21078573	2.7962452	21	12 16.0	20.1
479124 2013 BW_{23}	15.8	X	116.50782	258.97726	298.31492	16.95157	0.0432466	0.17742668	3.1365829	21	8 14.2	20.4
479125 2013 BR_{25}	17.3	X	273.50395	115.71069	324.43583	3.04391	0.1687160	0.19247239	2.9709163	21	9 9.3	21.3
479126 2013 BD_{26}	15.6	X	31.55055	330.21089	326.36387	20.99850	0.0296799	0.17637467	3.1490429	21	8 31.1	20.0
479127 2013 BA_{27}	17.3	X	20.84371	264.96863	157.06034	27.94672	0.3885902	0.22886203	2.6469976	21	—	—
479128 2013 BH_{28}	16.1	X	172.53634	164.41185	39.38753	10.27992	0.1306608	0.19169733	2.9789189	21	10 29.1	20.9
479129 2013 BB_{30}	16.7	X	263.78626	19.39630	14.94907	3.72471	0.1521731	0.17995582	3.1071254	21	7 3.5	21.3
479130 2013 BA_{37}	17.0	X	327.60942	299.18961	123.67840	8.62062	0.2131781	0.21024028	2.8010795	21	11 22.8	19.7
479131 2013 BN_{38}	17.2	X	286.01615	106.93509	25.86823	8.00701	0.1782698	0.21399278	2.7682372	21	12 7.6	20.4
479132 2013 BM_{39}	16.7	X	168.63145	59.86312	136.61437	8.91342	0.0752505	0.19165556	2.9793517	21	10 20.9	21.3
479133 2013 BS_{41}	16.0	X	333.70462	215.11003	131.76549	28.61871	0.1386255	0.17981446	3.1087536	21	8 15.2	19.6
479134 2013 BC_{48}	16.0	X	253.03524	93.37540	318.39419	7.07553	0.0471017	0.17767348	3.1336776	21	7 27.2	20.3
479135 2013 BZ_{48}	17.0	X	283.22072	282.17271	317.86535	3.24188	0.1267166	0.24283681	2.5444448	21	1 9.4	20.6
479136 2013 BD_{51}	17.5	X	342.13687	48.84661	25.03309	4.62822	0.1534402	0.21595043	2.7514820	21	—	—
479137 2013 BE_{51}	16.4	X	341.44854	28.20975	316.38113	18.40808	0.1242095	0.18548257	3.0450936	21	8 22.9	20.1
479138 2013 BK_{54}	17.1	X	28.04218	343.49752	42.79360	4.92107	0.1101652	0.21420678	2.7663932	21	—	—
479139 2013 BY_{54}	16.0	X	246.21252	131.29359	326.88670	10.84629	0.1173654	0.18480356	3.0525479	21	9 4.2	20.4
479140 2013 BM_{57}	16.8	X	359.89055	259.34217	117.04890	6.81902	0.0599189	0.20178244	2.8788153	21	11 9.8	20.6
479141 2013 BU_{57}	16.5	X	319.28970	312.70941	123.38158	9.52637	0.1136768	0.20852038	2.8164608	21	11 27.1	19.9
479142 2013 BY_{58}	17.1	X	323.97651	84.62871	309.13400	1.32788	0.2416441	0.20187553	2.8779302	21	9 23.9	19.5
479143 2013 BU_{61}	16.1	X	126.09484	257.89788	319.63416	9.68347	0.0938160	0.18108463	3.0941995	21	9 24.3	20.9
479144 2013 BZ_{62}	15.9	X	340.39494	38.86555	322.20066	14.82825	0.0589663	0.18360634	3.0658032	21	9 11.9	20.1
479145 2013 BP_{65}	17.1	X	330.89935	180.88991	289.85324	7.44730	0.2212838	0.22025029	2.7155537	21	—	—
479146 2013 BF_{67}	15.8	X	355.34341	315.60096	331.98198	9.93054	0.0259077	0.16904707	3.2393978	21	7 6.3	20.3
479147 2013 BZ_{70}	16.3	X	250.56261	266.18883	157.07421	12.41501	0.1910388	0.18140600	3.0905441	21	7 19.0	21.2
479148 2013 BN_{71}	16.9	X	24.79568	353.10926	13.55745	3.65688	0.1050641	0.20953257	2.8073832	21	12 6.4	20.5
479149 2013 BG_{73}	16.0	X	278.51238	67.47188	327.07845	9.32792	0.0934594	0.17528697	3.1620565	21	7 31.4	20.4
479150 2013 BH_{74}	15.9	X	182.68490	153.12547	345.36183	15.66453	0.1120083	0.17921257	3.1157103	21	8 23.4	20.9
479151 2013 BJ_{74}	15.9	X	229.35870	117.03920	317.12838	10.15875	0.1015247	0.17933481	3.1142943	21	7 21.9	20.6
479152 2013 BP_{76}	15.8	X	260.09851	294.07673	131.17144	22.20444	0.1262873	0.18367353	3.0650555	21	8 11.0	20.2
479153 2013 BR_{79}	16.2	X	182.28468	160.31052	330.50092	7.83272	0.1462461	0.17101411	3.2145097	21	8 10.7	21.4
479154 2013 CG	16.1	X	192.02053	303.07453	155.97677	13.05238	0.1621653	0.17043351	3.2218061	21	7 10.3	21.5
479155 2013 CD_{6}	16.8	X	198.60983	301.87494	152.91254	7.44478	0.1279090	0.17204948	3.2016005	21	7 12.2	22.0
479156 2013 CN_{6}	17.3	X	5.60301	131.48736	261.70524	4.56222	0.1357214	0.20910985	2.8111653	21	12 16.7	20.5
479157 2013 CS_{6}	16.3	X	346.57419	30.95633	290.86618	8.12221	0.0815090	0.17510068	3.1642988	21	8 3.5	20.4
479158 2013 CH_{8}	17.4	X	325.51747	144.15894	305.23858	13.91559	0.2953260	0.21580847	2.7526884	21	12 29.8	19.4
479159 2013 CL_{14}	15.7	X	305.42328	18.15541	341.05760	9.17216	0.0886536	0.17112441	3.2131284	21	7 24.1	20.1
479160 2013 CU_{14}	16.9	X	256.83629	63.11924	40.00333	2.93396	0.0836066	0.18939700	3.0029907	21	10 1.0	21.1
479161 2013 CB_{15}	16.9	X	298.56703	296.94692	127.67301	11.27121	0.0871828	0.19104932	2.9856511	21	10 12.1	20.9
479162 2013 CO_{17}	16.5	X	149.27985	180.16225	1.84283	8.76032	0.0187161	0.17479315	3.1680093	21	9 7.3	21.0
479163 2013 CX_{20}	16.6	X	219.25698	141.27884	293.47974	3.54408	0.1588724	0.17292255	3.1908150	21	7 6.5	21.6
479164 2013 CM_{21}	16.0	X	248.57300	90.12776	334.91098	9.25536	0.0589560	0.17503547	3.1650847	21	8 6.9	20.5
479165 2013 CY_{24}	16.0	X	312.22974	200.28570	157.75716	9.92987	0.0958712	0.17522177	3.1628408	21	7 28.3	20.1
479166 2013 CF_{29}	16.1	X	276.57232	91.18346	309.32069	8.97629	0.0998879	0.17907154	3.1173459	21	8 3.2	20.5
479167 2013 CT_{29}	16.4	X	243.66025	72.82700	339.99405	8.98245	0.1322133	0.17261001	3.1946656	21	7 7.7	21.3
479168 2013 CC_{30}	16.9	X	352.08138	313.94922	107.03276	5.44347	0.0574358	0.20828449	2.8185869	21	12 24.2	20.4
479169 2013 CS_{31}	15.7	X	224.30003	126.21200	40.64278	13.61497	0.0963518	0.19181375	2.9777134	21	11 7.5	20.1
479170 2013 CQ_{34}	15.8	X	155.38873	46.27648	154.52349	18.07425	0.1725667	0.17853718	3.1235630	21	10 12.8	21.2
479171 2013 CB_{37}	17.6	X	316.43896	312.42096	154.77835	5.48952	0.3091726	0.21512060	2.7585533	21	12 27.4	19.4
479172 2013 CC_{40}	16.1	X	208.99727	130.06364	354.25471	16.25210	0.1214797	0.18425865	3.0585632	21	9 1.3	20.9
479173 2013 CZ_{44}	16.7	X	346.06491	76.72007	336.59344	14.40556	0.2701541	0.21002826	2.8029642	21	12 25.7	19.4
479174 2013 CF_{45}	16.6	X	130.45156	245.61771	328.08015	13.28898	0.0234098	0.18167040	3.0875448	21	9 18.8	21.2
479175 2013 CO_{45}	16.1	X	116.58939	257.65706	337.81893	9.99683	0.0536956	0.18277521	3.0750902	21	10 3.3	20.6
479176 2013 CO_{50}	17.9	X	336.50812	283.44092	176.71172	3.01861	0.2236319	0.22253472	2.6969374	21	—	—
479177 2013 CE_{51}	17.3	X	353.20272	273.41009	140.62186	8.87823	0.2399149	0.21518820	2.7579756	21	—	—
479178 2013 CP_{52}	17.2	X	32.47128	13.57545	87.84303	5.80048	0.1791546	0.23372371	2.6101625	21	—	—
479179 2013 CR_{53}	15.1	X	295.58783	95.47197	154.00174	3.39419	0.1574752	0.12258214	4.0134505	21	2 18.9	20.7
479180 2013 CU_{53}	16.2	X	212.15807	134.56258	336.95828	9.12915	0.1489297	0.17565322	3.1576596	21	8 15.5	21.1
479181 2013 CA_{55}	15.4	X	198.08573	124.79920	1.15487	14.33314	0.1004172	0.17098645	3.2148564	21	8 25.2	20.4
479182 2013 CL_{56}	16.0	X	288.91775	231.63492	151.95913	27.02935	0.1907699	0.17615357	3.1516774	21	7 15.4	20.6
479183 2013 CY_{56}	15.6	X	183.13078	188.16834	331.84325	27.15836	0.0738305	0.17910676	3.1169373	21	9 9.6	20.5
479184 2013 CC_{59}	16.6	X	282.60937	329.41506	147.32617	15.92003	0.0923493	0.20502186	2.8484107	21	11 26.0	20.6
479185 2013 CW_{60}	16.3	X	276.23988	67.52485	349.95119	7.71197	0.1095727	0.18135145	3.0911639	21	8 24.9	20.4
479186 2013 CB_{63}	16.1	X	92.44493	304.24419	295.13779	9.88154	0.0808221	0.17628525	3.1501077	21	9 11.5	20.9
479187 2013 CH_{66}	16.5	X	163.63708	233.05889	320.17338	8.99922	0.0966537	0.18316514	3.0707244	21	10 3.2	21.3
479188 2013 CS_{66}	16.1	X	246.91212	141.54068	314.51468	10.86624	0.1823971	0.18501513	3.0502204	21	8 25.1	20.7
479189 2013 CV_{66}	16.9	X	244.79647	266.39830	185.02351	4.88391	0.1830196	0.18279023	3.0749217	21	8 17.8	21.6
479190 2013 CE_{67}	16.4	X	235.77475	266.62576	172.24384	5.93269	0.1761989	0.17700019	3.1416194	21	7 24.9	21.5
479191 2013 CH_{69}	16.5	X	258.27950	130.16830	301.02770	5.25954	0.1772383	0.18218725	3.0817027	21	8 8.5	21.0
479192 2013 CY_{71}	16.4	X	285.92382	247.96657	138.12086	12.06041	0.0376178	0.17628368	3.1501264	21	8 5.9	20.6
479193 2013 CG_{72}	16.0	X	160.30159	19.95111	147.12759	18.87458	0.0773532	0.17818916	3.1276287	21	9 2.8	20.8
479194 2013 CR_{72}	15.6	X	325.21866	38.48171	285.72290	13.39967	0.0349279	0.16918694	3.2376121	21	7 10.2	20.0
479195 2013 CE_{73}	15.6	X	239.35318	290.15748	136.62343	11.81523	0.0480864	0.17339366	3.1850328	21	7 28.2	20.1
479196 2013 CN_{80}	17.0	X	337.41697	49.10559	67.54860	14.06801	0.2229503	0.22306749	2.6926415	21	—	—
479197 2013 CA_{83}	16.6	X	189.74072	6.43540	143.46569	7.77149	0.1369865	0.17628308	3.1501336	21	9 10.4	21.7
479198 2013 CK_{83}	16.1	X	265.31479	174.96090	244.73761	7.96884	0.0075811	0.17672912	3.1448309	21	8 22.9	20.7
479199 2013 CA_{85}	16.2	X	260.43023	68.41032	352.97252	8.04760	0.1157643	0.18320428	3.0702869	21	8 9.9	20.6
479200 2013 CW_{86}	16.0	X	272.21323	139.82330	258.65695	7.91689	0.0543963	0.17170602	3.2058685	21	7 30.2	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479201 2013 CS_{90}	16.7	X	193.97156	350.69919	140.81118	10.72081	0.0156406	0.17985495	3.1082871	21	8 28.8	21.1
479202 2013 CT_{101}	16.3	X	298.96418	29.75005	161.33379	22.59003	0.0459844	0.22499462	2.6772441	21	—	—
479203 2013 CN_{103}	16.7	X	222.92502	84.25967	40.14609	4.05380	0.1420071	0.18541571	3.0458256	21	9 12.3	21.5
479204 2013 CK_{107}	17.0	X	269.78070	44.19589	1.64914	1.75372	0.1332253	0.17712194	3.1401795	21	7 27.9	21.3
479205 2013 CQ_{109}	16.6	X	230.13275	130.00800	2.42071	6.78814	0.0545587	0.18896884	3.0075251	21	10 7.4	20.9
479206 2013 CB_{119}	16.5	X	259.96532	292.28738	142.02266	6.28195	0.1246335	0.18030634	3.1030972	21	8 22.3	21.0
479207 2013 CM_{124}	15.4	X	351.15481	349.74995	310.45942	14.21534	0.0607841	0.17152570	3.2081150	21	7 16.3	19.6
479208 2013 CO_{126}	16.2	X	141.03916	210.85756	314.45964	15.49007	0.0728179	0.17216513	3.2001666	21	8 8.9	21.0
479209 2013 CV_{127}	15.6	X	216.87626	53.06302	96.60304	19.25093	0.0352801	0.18098171	3.0953725	21	10 24.9	20.4
479210 2013 CG_{128}	16.7	X	333.02778	324.24710	151.44759	33.26149	0.2264170	0.22890149	2.6466934	21	—	—
479211 2013 CH_{130}	17.0	X	347.00357	269.82769	168.89345	7.54703	0.2095748	0.21359333	2.7716875	21	—	—
479212 2013 CS_{132}	16.9	X	10.39971	258.36952	137.16551	4.08729	0.1997287	0.21715032	2.7413368	21	—	—
479213 2013 CZ_{155}	16.0	X	260.76330	73.33130	349.78202	9.41414	0.0665455	0.17382381	3.1797761	21	8 18.9	20.5
479214 2013 CD_{156}	15.7	X	285.45535	64.63555	346.68139	14.82957	0.0971983	0.17936429	3.1139531	21	8 31.4	19.9
479215 2013 CU_{159}	16.6	X	303.47088	71.99849	348.34296	4.79060	0.1374445	0.18942355	3.0027101	21	10 1.5	20.3
479216 2013 CS_{160}	16.5	X	261.44249	92.35580	347.98130	11.49648	0.1676740	0.18235146	3.0798523	21	8 27.4	20.9
479217 2013 CK_{163}	16.1	X	73.10319	247.13757	16.12944	11.38622	0.0532988	0.17284038	3.1918263	21	9 21.1	20.6
479218 2013 CC_{169}	16.6	X	186.75745	32.28278	130.32536	11.69297	0.0711697	0.18193212	3.0845830	21	9 28.7	21.4
479219 2013 CO_{177}	16.3	X	74.54131	298.69429	319.18305	15.20364	0.0109687	0.17756483	3.1349557	21	9 3.6	20.8
479220 2013 CR_{177}	15.8	X	52.12676	349.62246	314.71582	11.56739	0.0524967	0.18501279	3.0502461	21	10 8.3	20.2
479221 2013 CG_{178}	16.8	X	307.41974	315.61587	180.68282	10.26078	0.1895455	0.21524081	2.7575261	21	—	—
479222 2013 CV_{178}	16.6	X	160.45949	200.33166	338.05522	16.93777	0.1375374	0.17863430	3.1224308	21	9 13.5	21.6
479223 2013 CW_{178}	16.6	X	258.82663	92.50794	341.04767	8.44834	0.1291815	0.18249295	3.0782602	21	8 20.4	21.0
479224 2013 CY_{178}	17.2	X	343.82478	341.18138	111.77362	4.58580	0.1662940	0.21733574	2.7397775	21	—	—
479225 2013 CF_{180}	16.4	X	190.60819	173.10003	356.87744	6.88739	0.2113693	0.18459972	3.0547947	21	9 30.6	21.6
479226 2013 CD_{184}	16.9	X	3.98212	341.81256	98.00720	15.05060	0.2232218	0.22243847	2.6977153	21	—	—
479227 2013 CT_{188}	16.9	X	291.68212	129.11371	336.73032	10.83608	0.0651987	0.20124532	2.8839354	21	11 19.9	20.9
479228 2013 CK_{189}	16.7	X	319.70489	341.37223	139.55947	13.04700	0.2351409	0.21409612	2.7673464	21	—	—
479229 2013 CL_{189}	17.0	X	313.06123	20.15939	115.31275	9.44149	0.3165943	0.21557447	2.7546800	21	—	—
479230 2013 CM_{189}	16.1	X	227.27980	178.56650	292.45735	14.74006	0.1743131	0.18353528	3.0665944	21	8 21.1	21.2
479231 2013 CX_{189}	16.7	X	74.69115	81.60211	303.50640	14.17904	0.2689981	0.23089167	2.6314626	21	—	—
479232 2013 CS_{193}	16.9	X	328.68387	39.46623	355.27260	9.24273	0.0705130	0.19210733	2.9746789	21	10 12.1	20.8
479233 2013 CM_{205}	16.4	X	215.75652	7.18983	118.27998	10.27262	0.0085732	0.18097511	3.0954478	21	9 20.9	20.9
479234 2013 CT_{205}	16.2	X	9.53247	198.59562	139.67977	16.32863	0.0665543	0.18988566	2.9978365	21	10 6.9	20.3
479235 2013 CV_{205}	16.8	X	321.15287	230.57136	149.97056	9.14679	0.1203076	0.19038195	2.9926243	21	9 11.7	20.4
479236 2013 CD_{212}	16.7	X	291.37703	105.21502	315.29326	7.23188	0.1708000	0.18867180	3.0106808	21	9 6.7	20.5
479237 2013 CH_{214}	16.5	X	279.67783	126.40046	277.76202	3.37863	0.1213069	0.17901221	3.1180347	21	8 8.0	20.7
479238 2013 DN_{7}	15.8	X	45.76843	337.33562	0.15431	11.82872	0.0660977	0.19744799	2.9207939	21	11 16.5	20.0
479239 2013 DC_{8}	16.1	X	272.23300	315.58063	109.32943	12.18634	0.0911313	0.18460737	3.0547103	21	9 3.7	20.4
479240 2013 DU_{8}	16.2	X	128.05449	193.67722	3.16709	7.16236	0.0651481	0.16852319	3.2461077	21	9 3.7	20.9
479241 2013 DH_{11}	16.6	X	282.37332	307.75142	120.37234	10.28435	0.1549903	0.18889518	3.0083068	21	9 11.8	20.7
479242 2013 DO_{12}	16.1	X	214.69729	197.93055	299.09036	9.85829	0.1179817	0.17782102	3.1319440	21	9 14.4	21.0
479243 2013 DP_{16}	16.9	X	307.41543	24.92997	97.96289	12.71545	0.2598373	0.21480043	2.7612938	21	12 29.6	19.1
479244 2013 EO_{1}	16.4	X	131.85688	206.94570	356.40080	9.24865	0.0079138	0.17461711	3.1701381	21	9 11.2	20.9
479245 2013 EE_{3}	16.0	X	65.59502	310.69282	318.65499	14.60301	0.0508349	0.17884195	3.1200134	21	9 11.4	20.6
479246 2013 EX_{7}	15.9	X	323.64051	35.06506	337.27611	17.68580	0.0982910	0.17641028	3.1486191	21	9 2.9	20.0
479247 2013 EB_{11}	16.3	X	236.49214	142.13405	293.00069	9.27652	0.2193379	0.17653298	3.1471599	21	7 18.0	21.3
479248 2013 EV_{16}	16.6	X	292.40624	262.00471	153.53173	9.39680	0.1507692	0.18958878	3.0009652	21	9 7.9	20.3
479249 2013 EB_{37}	15.6	X	238.47481	81.09448	353.56397	17.16424	0.1390330	0.16978215	3.2300410	21	8 2.1	20.7
479250 2013 EJ_{40}	17.1	X	24.71022	349.30969	75.79816	8.99619	0.1972709	0.22835596	2.6509070	21	—	—
479251 2013 EV_{57}	16.0	X	291.89273	40.78912	3.35458	9.04315	0.0782270	0.17463893	3.1698741	21	9 2.9	20.3
479252 2013 EL_{69}	15.9	X	238.72657	289.39212	161.89053	19.55816	0.1104914	0.17562560	3.1579907	21	8 19.1	20.7
479253 2013 EK_{70}	17.1	X	250.94630	313.21095	142.40447	1.32033	0.1337235	0.18235369	3.0798272	21	9 6.3	21.5
479254 2013 ED_{81}	16.3	X	226.36956	85.85131	19.15178	11.70560	0.0896872	0.17375390	3.1806290	21	8 30.6	21.2
479255 2013 ER_{86}	16.3	X	222.80181	314.00088	167.81449	9.54158	0.0614325	0.17613961	3.1518439	21	9 14.9	20.8
479256 2013 EF_{90}	15.4	X	201.62665	300.98152	162.89137	27.18676	0.2116399	0.17220403	3.1996846	21	7 22.6	21.2
479257 2013 ES_{90}	16.7	X	310.86727	72.54144	47.63137	9.79198	0.3021955	0.21302717	2.7765961	21	12 30.6	18.8
479258 2013 EH_{101}	15.6	X	255.97764	61.29675	18.96077	12.17264	0.0560197	0.17568781	3.1572451	21	9 7.7	20.1
479259 2013 EU_{101}	16.4	X	173.66709	90.71902	71.22222	5.60958	0.0950077	0.17046670	3.2213878	21	9 11.6	21.5
479260 2013 ER_{102}	15.7	X	91.26586	220.30753	1.04317	16.80346	0.0328376	0.16891592	3.2410744	21	8 22.6	20.5
479261 2013 EP_{110}	16.5	X	219.91810	59.78967	105.34294	13.13311	0.1620456	0.18851493	3.0123508	21	10 30.8	21.4
479262 2013 EK_{111}	16.5	X	277.57322	318.72598	129.21115	5.15391	0.0915590	0.18079462	3.0975076	21	10 7.9	20.7
479263 2013 EN_{111}	15.7	X	199.37234	126.95542	40.11781	9.97230	0.0419301	0.17840661	3.1250868	21	10 17.1	20.2
479264 2013 EN_{112}	16.2	X	165.58381	87.94086	74.31943	11.31175	0.0767280	0.16912137	3.2384490	21	9 6.4	21.3
479265 2013 ET_{119}	15.7	X	290.61900	53.99303	359.77482	21.84832	0.1201394	0.17856083	3.1232872	21	9 10.2	19.9
479266 2013 EV_{121}	16.6	X	237.88463	116.41011	3.46290	4.63370	0.0801042	0.18057597	3.1000075	21	9 27.7	21.0
479267 2013 EE_{122}	16.9	X	229.55442	105.34758	47.24479	0.94194	0.1285888	0.18809318	3.0168521	21	10 23.5	21.2
479268 2013 FL_{1}	16.6	X	188.44570	235.53773	284.55669	8.28788	0.1246077	0.18121396	3.0927273	21	9 16.6	21.6
479269 2013 FO_{1}	16.3	X	203.88566	125.43734	35.50424	11.98791	0.1060481	0.18447036	3.0562226	21	10 11.0	21.0
479270 2013 FD_{3}	15.9	X	179.53242	119.61107	62.98711	10.24594	0.0426909	0.18076557	3.0978395	21	10 16.1	20.5
479271 2013 FU_{6}	15.7	X	185.07215	55.83885	93.15664	16.71332	0.1586034	0.17058164	3.2199406	21	9 9.7	21.2
479272 2013 FT_{19}	16.4	X	231.71290	74.58790	48.00346	9.80821	0.1550812	0.18172634	3.0869111	21	9 20.5	21.2
479273 2013 FS_{22}	16.1	X	184.39098	191.24756	350.35102	18.22927	0.1589184	0.18055140	3.1002888	21	10 5.9	21.3
479274 2013 FR_{25}	16.3	X	288.00975	36.01866	68.18482	19.54074	0.3004677	0.19827116	2.9127040	21	10 21.7	20.0
479275 2013 FX_{26}	16.6	X	272.19349	258.91889	201.08730	4.50122	0.0954056	0.18431582	3.0579307	21	10 13.5	20.5
479276 2013 GR_{2}	15.7	X	242.94879	81.24185	12.07628	10.20034	0.0905162	0.17194907	3.2028468	21	9 2.3	20.5
479277 2013 GW_{10}	16.2	X	190.82549	308.88665	196.78943	13.51783	0.2234212	0.17150481	3.2083754	21	8 29.9	21.8
479278 2013 GC_{12}	15.5	X	234.07061	96.78395	16.75848	16.21922	0.0815028	0.17178803	3.2048481	21	9 19.2	20.3
479279 2013 GK_{12}	17.8	X	213.75933	324.96357	77.63764	19.22208	0.0483337	0.38300676	1.8778681	21	5 21.3	19.7
479280 2013 GG_{18}	16.8	X	222.55131	54.94401	78.36604	12.92488	0.1416959	0.18091672	3.0961138	21	9 27.8	21.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479281 2013 GR_{22}	15.5	X	170.47234	135.98758	48.83849	28.37217	0.2355443	0.17451542	3.1713695	21	10 14.2	21.3
479282 2013 GM_{34}	16.2	X	214.46989	87.03873	42.36530	14.27898	0.2086800	0.17398050	3.1778667	21	9 10.0	21.6
479283 2013 GO_{39}	16.5	X	226.05189	305.87981	183.51941	17.62046	0.2490665	0.18452250	3.0556468	21	9 8.6	21.7
479284 2013 GK_{45}	16.3	X	221.76885	86.90035	84.40212	2.66755	0.0648414	0.18966215	3.0001912	21	11 14.5	20.5
479285 2013 GK_{46}	15.9	X	213.32944	128.76182	24.29380	12.39338	0.0565068	0.18295523	3.0730727	21	10 13.9	20.2
479286 2013 GM_{46}	15.8	X	270.98290	54.73777	14.66614	16.18433	0.0881869	0.17569067	3.1572108	21	9 9.5	20.3
479287 2013 GY_{56}	16.6	X	187.22855	3.46741	144.83185	1.88241	0.1256592	0.17003461	3.2268429	21	9 5.1	21.6
479288 2013 GE_{69}	18.6	X	19.35060	225.71275	359.72413	4.56897	0.2613814	0.36869188	1.9261658	21	4 18.2	18.1
479289 2013 GL_{76}	16.9	X	257.83004	294.11883	184.87616	9.66352	0.0857629	0.18887209	3.0085521	21	10 22.2	21.1
479290 2013 GD_{83}	15.7	X	114.34227	144.69173	90.19165	9.82408	0.1112245	0.17073839	3.2179696	21	10 12.5	20.8
479291 2013 GH_{91}	16.8	X	347.20036	287.06828	211.18802	8.01280	0.0357772	0.22148174	2.7054786	21	—	—
479292 2013 GQ_{91}	16.0	X	234.61711	132.89052	33.78686	15.14871	0.1869183	0.19050116	2.9913757	21	11 6.6	20.5
479293 2013 GG_{95}	15.9	X	159.62113	24.80390	175.31688	19.62706	0.1191016	0.17102573	3.2143642	21	10 12.7	21.1
479294 2013 GN_{102}	16.6	X	233.83925	76.63890	28.73777	9.93858	0.1835581	0.17371324	3.1811252	21	8 29.1	21.7
479295 2013 GT_{103}	15.7	X	257.06409	68.33236	22.72460	20.59343	0.1332332	0.17478771	3.1680749	21	9 15.8	20.5
479296 2013 GF_{136}	16.5	X	231.33529	88.21723	50.57932	10.53504	0.1469303	0.18013876	3.1050215	21	10 9.5	21.3
479297 2013 HS_{15}	15.6	X	217.16871	66.31541	105.46708	27.31391	0.2021542	0.18178720	3.0862222	21	11 7.4	21.0
479298 2013 HY_{26}	16.5	X	216.18275	288.08782	222.96526	8.93318	0.1888723	0.17707808	3.1406980	21	9 29.3	21.7
479299 2013 HU_{53}	16.9	X	258.06938	263.13054	213.71026	16.11816	0.2018047	0.18547411	3.0451862	21	9 29.1	21.5
479300 2013 HC_{140}	16.2	X	280.43407	254.97023	201.51476	11.93231	0.2382615	0.18658355	3.0331029	21	9 27.7	20.2
479301 2013 HD_{144}	15.5	X	164.07264	266.89021	243.42083	9.85319	0.0796280	0.15837526	3.3833310	21	8 11.1	20.9
479302 2013 JT_{14}	18.6	X	343.24859	120.04897	220.79734	20.77609	0.0524813	0.39342606	1.8445650	21	9 8.9	20.6
479303 2013 JL_{17}	17.7	X	194.55632	249.47767	224.89649	20.37628	0.0891994	0.38829624	1.8607753	21	8 2.5	20.5
479304 2013 JX_{17}	18.0	X	309.81161	311.00233	66.33492	23.46389	0.0842894	0.39524168	1.8389118	21	10 6.2	20.0
479305 2013 JM_{20}	18.2	X	331.49384	269.89314	102.70513	22.29612	0.0920803	0.39685684	1.8339189	21	11 9.6	20.1
479306 2013 JD_{33}	15.6	X	171.02376	115.96948	45.67444	27.22056	0.1825455	0.17094931	3.2153221	21	9 21.7	21.4
479307 2013 KF_{3}	17.8	X	177.19769	288.64510	193.54303	22.02594	0.0519113	0.38657896	1.8662819	21	7 27.0	20.4
479308 2013 LZ_{6}	18.4	X	323.21662	103.98450	233.41091	20.84417	0.0732397	0.37854524	1.8925943	21	7 18.5	20.5
479309 2013 LK_{17}	16.3	X	209.38811	85.24844	79.48685	16.24373	0.1784841	0.17347734	3.1840084	21	10 19.6	21.7
479310 2013 MA	18.1	X	295.13663	227.95995	159.19391	23.81485	0.0856544	0.38912158	1.8581432	21	8 30.2	19.2
479311 2013 ME_{7}	18.0	X	53.44756	67.52926	225.04277	20.98131	0.1155519	0.39202598	1.8489542	21	11 11.8	19.7
479312 2013 MS_{7}	16.1	X	338.14473	72.53188	82.01458	30.46014	0.3665752	0.21706133	2.7420860	21	—	—
479313 2013 NC_{2}	18.0	X	237.89577	125.52947	283.28986	18.52737	0.1055144	0.36402565	1.9425911	21	6 26.8	20.0
479314 2013 OQ_{3}	18.3	X	136.44381	352.52234	153.78007	34.38580	0.2644269	0.36444919	1.9410858	21	7 28.3	21.7
479315 2013 PS_{6}	17.9	X	279.46979	252.67492	149.73458	23.96562	0.0784356	0.37481917	1.9051164	21	8 27.3	19.1
479316 2013 PF_{44}	18.7	X	167.17006	182.21319	311.39611	17.73634	0.0835818	0.36620056	1.9348919	21	8 4.6	20.6
479317 2013 PB_{47}	18.4	X	302.84181	357.50155	335.79156	16.13293	0.0831720	0.35366735	1.9803384	21	6 6.4	20.7
479318 2013 QJ_{11}	17.9	X	206.93523	273.63625	191.05605	21.83523	0.1240900	0.36670189	1.9331280	21	8 3.9	21.0
479319 2013 QQ_{17}	17.7	X	229.96888	269.01929	197.67515	21.04519	0.1185885	0.36939942	1.9237054	21	9 8.5	20.1
479320 2013 RW_{12}	18.1	X	207.31467	104.92436	331.39711	16.52440	0.1068068	0.35364474	1.9804228	21	7 1.8	20.9
479321 2013 SL_{24}	17.5	X	24.44212	41.94676	203.36740	22.37056	0.0739177	0.34867019	1.9992150	21	6 16.2	19.8
479322 2013 SO_{39}	18.4	X	155.46572	8.36290	4.65399	3.26795	0.1362583	0.30838235	2.1697501	21	2 6.0	21.0
479323 2013 SL_{50}	18.2	X	76.19481	56.34966	18.48081	3.54284	0.1924803	0.29090726	2.2557952	21	1 14.2	19.8
479324 2013 SB_{71}	18.3	X	174.66975	49.97488	280.54252	3.55334	0.1622679	0.30619403	2.1800757	21	1 4.7	21.3
479325 2013 TV_{5}	19.2	X	355.99842	69.83720	351.19978	18.77468	0.2525873	0.63984013	1.3337929	21	—	—
479326 2013 TG_{25}	18.0	X	115.63678	2.22782	13.78184	4.42126	0.1447478	0.29241658	2.2480263	21	—	—
479327 2013 TS_{37}	18.1	X	133.80942	278.42687	98.79040	4.38640	0.1469257	0.30209898	2.1997325	21	1 17.3	20.4
479328 2013 TY_{49}	17.9	X	130.92139	14.12967	34.26286	6.81070	0.1086269	0.30821580	2.1705316	21	2 21.9	20.5
479329 2013 TP_{84}	17.8	X	8.89174	257.39821	229.89257	4.90762	0.1670430	0.28703211	2.2760531	21	—	—
479330 2013 TM_{89}	18.2	X	83.71785	71.34913	1.79736	5.83488	0.1631245	0.29662526	2.2267115	21	1 22.6	20.1
479331 2013 TX_{113}	17.3	X	230.52695	324.96505	237.74303	7.14607	0.0605236	0.26551022	2.3974445	21	—	—
479332 2013 TU_{124}	17.6	X	325.04580	337.94623	210.11211	6.32956	0.1044372	0.29824733	2.2186306	21	—	—
479333 2013 WU	17.5	X	47.97936	274.05558	64.42021	22.23459	0.1016751	0.37878480	1.8917962	21	—	—
479334 2013 WC_{4}	18.1	X	54.72858	304.13620	103.35969	3.39738	0.1934369	0.27426911	2.3461266	21	—	—
479335 2013 WR_{4}	18.3	X	119.79553	192.87227	250.15535	3.28517	0.1521350	0.30804417	2.1713378	21	3 29.6	20.8
479336 2013 WM_{9}	19.1	X	126.26735	0.49964	24.57983	3.23895	0.2183123	0.29631869	2.2282471	21	1 31.4	21.7
479337 2013 WS_{10}	18.1	X	145.59468	158.08026	247.44501	3.69019	0.1264930	0.30771332	2.1728939	21	3 6.0	21.0
479338 2013 WK_{19}	18.0	X	36.57732	218.78758	225.39388	6.18895	0.0630974	0.27795274	2.3253522	21	—	—
479339 2013 WP_{26}	17.5	X	48.73320	176.43026	257.70805	6.17932	0.0888260	0.28215429	2.3022100	21	—	—
479340 2013 WD_{28}	18.3	X	278.09043	185.49395	60.85626	6.76647	0.0416345	0.29583298	2.2306854	21	1 9.9	21.1
479341 2013 WP_{35}	18.6	X	120.85814	149.93038	251.13975	3.18748	0.1915343	0.29753076	2.2221914	21	2 8.1	21.1
479342 2013 WX_{47}	18.1	X	183.98554	241.38037	126.64123	0.43218	0.1878174	0.31464925	2.1408435	21	3 4.4	21.3
479343 2013 WY_{48}	17.7	X	119.42171	74.08004	350.56464	8.50426	0.1162510	0.30343805	2.1932561	21	2 28.5	20.0
479344 2013 WT_{64}	17.7	X	51.89065	46.87949	21.10831	6.52562	0.1767435	0.27972933	2.3154961	21	—	—
479345 2013 WY_{67}	19.2	X	214.57416	151.95091	63.99491	19.82145	0.3727409	0.63346465	1.3427272	21	—	—
479346 2013 WV_{72}	17.9	X	36.71109	241.69164	265.78695	6.70550	0.0747752	0.29961390	2.2118792	21	2 4.9	20.2
479347 2013 WW_{73}	18.2	X	79.20755	30.57136	38.73455	8.16826	0.1297767	0.28981291	2.2614704	21	1 4.8	20.4
479348 2013 WF_{74}	15.9	X	250.26877	227.42317	277.49572	30.95117	0.2218938	0.23231927	2.6206713	21	10 21.0	20.4
479349 2013 WG_{85}	18.3	X	3.80906	229.40438	223.07699	4.66061	0.1434652	0.26632949	2.3925253	21	—	—
479350 2013 WZ_{91}	18.2	X	178.49390	13.10699	335.17159	1.43446	0.0861381	0.29841303	2.2178093	21	1 26.3	20.8
479351 2013 WY_{92}	17.3	X	275.69285	338.79316	265.70097	6.66073	0.0484340	0.29240306	2.2480956	21	1 3.4	20.2
479352 2013 WA_{95}	17.2	X	353.45660	217.64903	262.35481	5.72263	0.0792513	0.27367744	2.3495068	21	—	—
479353 2013 WZ_{97}	17.6	X	353.09893	145.10884	336.15532	1.73952	0.1725138	0.27003875	2.3705657	21	—	—
479354 2013 WK_{106}	16.3	X	47.86546	176.26096	294.36205	24.10644	0.2359491	0.28422998	2.2909879	21	1 7.3	17.4
479355 2013 WL_{106}	17.5	X	44.05374	310.96063	142.89683	6.29553	0.1920063	0.28152732	2.3056268	21	—	—
479356 2013 XZ_{1}	17.0	X	180.49627	167.46776	22.46636	18.43669	0.1552974	0.21993332	2.7181621	21	10 20.4	21.4
479357 2013 XP_{2}	17.2	X	98.85583	270.94774	200.34826	25.03864	0.2196919	0.30841255	2.1696084	21	4 24.4	19.6
479358 2013 XN_{8}	17.3	X	309.86007	252.11707	233.21675	8.05530	0.1397290	0.24261687	2.5459823	21	—	—
479359 2013 XO_{8}	17.7	X	147.91323	116.49762	280.45142	4.64959	0.1314971	0.30926080	2.1656393	21	2 25.3	20.4
479360 2013 XU_{8}	17.6	X	33.16174	166.94833	255.16295	10.59495	0.2084809	0.26620603	2.3932650	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479361 2013 XV_{12}	17.7	X	22.48725	127.82289	333.89965	2.00583	0.1604557	0.27015753	2.3698708	21	—	—
479362 2013 XW_{12}	18.7	X	85.90081	26.97520	33.41783	2.46183	0.2350543	0.28406774	2.2918601	21	1 21.8	20.4
479363 2013 XY_{12}	17.7	X	7.11069	103.42672	72.83343	5.18690	0.0526735	0.28901718	2.2656193	21	2 7.2	20.1
479364 2013 XF_{15}	18.3	X	48.50768	341.80275	63.33690	2.39042	0.1767193	0.26997454	2.3709415	21	—	—
479365 2013 XK_{15}	18.0	X	217.75438	85.38629	258.60523	3.66434	0.1048077	0.31000082	2.1621915	21	3 2.4	21.0
479366 2013 XS_{15}	18.2	X	99.99322	311.93621	70.41121	3.20591	0.1066273	0.28039034	2.3118555	21	—	—
479367 2013 XH_{16}	17.9	X	330.28474	204.96377	298.24235	6.33508	0.0405468	0.27247358	2.3564222	21	—	—
479368 2013 XJ_{16}	18.2	X	216.58658	300.22305	25.94191	5.13672	0.2237892	0.30793425	2.1718545	21	2 11.8	21.8
479369 2013 XA_{18}	18.1	X	44.29261	213.48978	232.91515	2.78200	0.1894371	0.27853822	2.3220925	21	—	—
479370 2013 XX_{19}	17.8	X	351.77478	96.31276	50.75538	1.94734	0.1327186	0.27158866	2.3615381	21	—	—
479371 2013 XB_{20}	17.3	X	11.25645	349.52449	96.41116	7.04602	0.1114832	0.25894022	2.4378279	21	—	—
479372 2013 XF_{20}	16.8	X	270.85252	188.29776	309.46587	7.70198	0.0597753	0.23325820	2.6136340	21	12 12.3	20.1
479373 2013 XL_{20}	17.9	X	55.64843	13.13099	75.34574	4.59358	0.1529515	0.27884763	2.3203745	21	—	—
479374 2013 XR_{20}	18.1	X	129.69745	95.75365	330.09680	6.56085	0.1274405	0.30454188	2.1879532	21	3 14.9	20.8
479375 2013 XD_{21}	17.2	X	155.46475	57.36348	291.56655	22.28303	0.2257128	0.28251265	2.3002628	21	1 18.1	20.5
479376 2013 XZ_{23}	17.3	X	58.01115	134.61030	275.53832	5.43407	0.1771896	0.26928800	2.3749696	21	—	—
479377 2013 XQ_{24}	16.8	X	224.94314	90.32817	84.58035	4.25353	0.0923957	0.22376361	2.6870541	21	11 24.5	20.4
479378 2013 XA_{25}	17.7	X	5.42953	91.65932	33.66942	5.49238	0.1355593	0.27601878	2.3362015	21	—	—
479379 2013 YM_{1}	16.5	X	90.49205	329.99469	289.55801	10.20105	0.0904968	0.21838513	2.7309935	21	10 9.4	20.7
479380 2013 YT_{1}	16.9	X	161.77683	84.19195	99.39927	8.40231	0.1573722	0.21236718	2.7823459	21	9 30.7	21.5
479381 2013 YR_{3}	17.7	X	78.44337	248.66974	147.92365	2.43270	0.2160543	0.27944256	2.3170800	21	—	—
479382 2013 YA_{4}	16.8	X	218.09912	86.41744	103.23712	16.44236	0.1271738	0.23676253	2.5877803	21	12 5.1	20.6
479383 2013 YC_{5}	18.5	X	121.70731	312.71277	94.18274	4.09389	0.1431173	0.29079216	2.2563905	21	2 13.8	21.2
479384 2013 YN_{7}	18.3	X	46.06810	24.26021	85.26986	4.71692	0.0473238	0.28804088	2.2707359	21	1 2.7	20.7
479385 2013 YV_{8}	18.4	X	116.56909	283.59911	121.77998	2.06426	0.1510705	0.28724055	2.2749519	21	2 5.2	20.7
479386 2013 YZ_{10}	18.0	X	13.38559	266.65119	223.17277	2.43864	0.1249398	0.27048073	2.3679826	21	—	—
479387 2013 YD_{11}	17.2	X	324.31503	346.30634	145.17699	7.31850	0.1210847	0.25296493	2.4760676	21	—	—
479388 2013 YF_{11}	18.1	X	119.43730	293.53235	153.83793	4.73932	0.1263613	0.29726349	2.2235232	21	4 5.0	20.8
479389 2013 YN_{11}	16.8	X	13.82388	204.24021	291.31434	23.09447	0.1834516	0.27314790	2.3525425	21	—	—
479390 2013 YR_{13}	16.6	X	58.39958	146.73639	294.00116	23.94225	0.1901925	0.27417820	2.3466452	21	—	—
479391 2013 YA_{16}	17.7	X	56.51788	294.68847	120.68246	5.69474	0.1044571	0.26530743	2.3986660	21	—	—
479392 2013 YM_{16}	18.3	X	47.82754	228.83959	202.88811	1.10702	0.1426029	0.26912803	2.3759106	21	—	—
479393 2013 YX_{20}	18.1	X	171.66957	340.05627	44.52804	6.18982	0.1491161	0.30332444	2.1938038	21	3 15.4	21.3
479394 2013 YE_{24}	17.0	X	267.75860	256.96594	256.84662	13.67233	0.0345723	0.25666316	2.4522252	21	—	—
479395 2013 YS_{26}	16.4	X	189.78982	62.47214	98.64363	14.40158	0.1545931	0.21574936	2.7531912	21	10 2.2	21.1
479396 2013 YF_{27}	17.5	X	7.28177	52.30151	85.02651	2.25607	0.1250874	0.27335855	2.3513337	21	—	—
479397 2013 YA_{28}	18.4	X	120.93489	315.11715	93.49991	3.89694	0.1985366	0.29169085	2.2517535	21	2 24.0	21.1
479398 2013 YN_{28}	17.7	X	86.56951	292.31764	102.08576	6.61831	0.1027682	0.27156582	2.3616705	21	—	—
479399 2013 YJ_{29}	17.1	X	358.83711	286.50160	63.78628	4.68794	0.2145364	0.23894293	2.5720136	21	10 23.9	19.2
479400 2013 YY_{29}	18.4	X	102.77048	175.78434	219.42984	1.95991	0.2343066	0.28079971	2.3096080	21	1 15.4	20.7
479401 2013 YZ_{29}	18.0	X	114.20429	163.05032	232.52732	2.46209	0.1301118	0.28087117	2.3092163	21	1 16.4	20.4
479402 2013 YB_{33}	18.1	X	325.63926	44.91447	91.81468	3.55464	0.1604592	0.26477417	2.4018855	21	—	—
479403 2013 YL_{33}	17.8	X	63.78387	35.76978	97.38042	22.84458	0.1728802	0.29349168	2.2425330	21	4 3.8	20.5
479404 2013 YY_{34}	17.7	X	58.90149	11.57146	60.82578	2.18137	0.1491889	0.27498934	2.3420284	21	—	—
479405 2013 YY_{41}	18.0	X	352.78951	129.06308	331.98212	2.68080	0.1457839	0.26453010	2.4033627	21	—	—
479406 2013 YM_{42}	16.7	X	250.64653	11.10603	134.63285	14.21117	0.1273612	0.22683963	2.6627073	21	11 18.9	20.5
479407 2013 YR_{47}	16.3	X	240.41511	278.75141	273.29553	16.19169	0.1175594	0.24377371	2.5379213	21	—	—
479408 2013 YQ_{49}	18.0	X	325.56180	6.85144	155.22855	1.66355	0.1474116	0.26380896	2.4077406	21	—	—
479409 2013 YV_{49}	16.8	X	315.82250	169.91927	289.65276	14.42813	0.0676126	0.24169876	2.5524256	21	12 30.8	19.9
479410 2013 YV_{58}	16.9	X	280.17524	173.32657	295.91980	9.20116	0.1479287	0.23222085	2.6214117	21	11 2.2	20.1
479411 2013 YU_{60}	17.8	X	28.24354	1.04794	87.48370	7.33746	0.0820555	0.26677527	2.3898593	21	—	—
479412 2013 YG_{61}	17.3	X	229.76060	298.11311	299.31048	7.44190	0.1607062	0.25683744	2.4511158	21	—	—
479413 2013 YR_{65}	16.7	X	184.29400	145.50378	110.35177	13.96815	0.1448036	0.24077575	2.5589446	21	—	—
479414 2013 YY_{66}	18.2	X	42.09350	85.92298	18.59036	6.28892	0.1668439	0.27888430	2.3201710	21	—	—
479415 2013 YR_{72}	16.4	X	34.94044	301.68738	277.43137	8.64275	0.1631805	0.17530735	3.1618114	21	6 12.9	20.1
479416 2013 YV_{72}	17.8	X	290.43092	244.54276	320.59578	2.14241	0.1296439	0.26788951	2.3832279	21	—	—
479417 2013 YG_{73}	17.6	X	352.99915	245.06025	247.39697	3.86062	0.1393289	0.26563908	2.3966691	21	—	—
479418 2013 YT_{74}	18.3	X	85.82595	78.62813	337.89296	4.66606	0.1774928	0.28046930	2.3114216	21	1 7.6	20.2
479419 2013 YY_{75}	18.5	X	92.39145	271.42943	132.57321	8.34199	0.2551289	0.28040409	2.3117799	21	1 13.4	20.4
479420 2013 YS_{76}	17.9	X	352.72425	133.83008	20.38963	2.67327	0.1259070	0.27306377	2.3530257	21	—	—
479421 2013 YT_{77}	17.6	X	4.27126	9.25230	86.73661	7.30572	0.0454519	0.25927364	2.4357374	21	—	—
479422 2013 YR_{78}	17.7	X	350.93777	121.13466	356.41296	2.59082	0.1228237	0.26331141	2.4107727	21	—	—
479423 2013 YG_{80}	18.2	X	347.26489	160.50187	349.26201	1.24714	0.1218381	0.27034680	2.3687645	21	—	—
479424 2013 YV_{82}	18.1	X	45.62919	175.41527	289.45770	4.85019	0.1781211	0.27812235	2.3244067	21	—	—
479425 2013 YX_{83}	17.7	X	45.75686	316.71139	128.75819	10.24397	0.1325334	0.27169831	2.3609027	21	—	—
479426 2013 YK_{84}	18.0	X	111.86209	115.74615	268.23337	6.09804	0.1184669	0.27492714	2.3423816	21	—	—
479427 2013 YW_{86}	18.0	X	30.87295	68.31309	48.93251	3.65488	0.1869337	0.27487737	2.3426643	21	—	—
479428 2013 YR_{88}	17.1	X	278.42220	92.06678	109.25687	10.32424	0.0625202	0.25896709	2.4376592	21	—	—
479429 2013 YE_{90}	18.4	X	56.66359	239.67696	185.30722	1.50878	0.1524235	0.26685124	2.3894057	21	—	—
479430 2013 YQ_{90}	16.7	X	316.38064	333.06633	130.22681	10.29817	0.0236303	0.23824896	2.5770057	21	—	—
479431 2013 YW_{90}	18.6	X	71.91498	278.95384	161.14708	3.91416	0.2141324	0.27936818	2.3174912	21	1 18.5	20.1
479432 2013 YC_{93}	18.0	X	27.31935	76.39506	58.36241	5.54002	0.0820807	0.28062587	2.3105617	21	1 9.4	20.3
479433 2013 YG_{95}	17.1	X	259.51387	118.66238	84.34869	3.95142	0.1191700	0.25277732	2.4772926	21	—	—
479434 2013 YC_{99}	18.1	X	45.13312	41.28742	64.41269	3.36626	0.1579001	0.27827012	2.3235838	21	—	—
479435 2013 YT_{99}	18.1	X	83.29030	291.10546	110.30381	2.05657	0.1634672	0.27301788	2.3532893	21	—	—
479436 2013 YD_{100}	17.9	X	18.21056	30.12435	94.71504	2.29236	0.1361973	0.27228129	2.3575316	21	—	—
479437 2013 YD_{101}	17.9	X	34.18680	89.20098	12.05412	6.84878	0.0454264	0.27379872	2.3488130	21	—	—
479438 2013 YM_{101}	15.8	X	6.55995	294.32031	302.63512	20.78224	0.1802288	0.17711741	3.1402330	21	5 6.9	19.7
479439 2013 YM_{104}	17.4	X	17.73336	9.39731	93.24215	7.40851	0.1200479	0.26335513	2.4105059	21	—	—
479440 2013 YF_{109}	16.9	X	178.99337	314.41162	281.87212	13.98890	0.0821184	0.23957221	2.5675077	21	12 22.9	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479441 2013 YH_{109}	17.3	X	34.14966	223.16673	275.68345	6.02592	0.0476456	0.28470965	2.2884140	21	1 25.2	19.9
479442 2013 YM_{109}	17.4	X	323.43052	25.92079	127.83386	7.18532	0.0601140	0.26310125	2.4120563	21	—	—
479443 2013 YH_{110}	16.3	X	286.69732	151.73375	16.67219	33.67663	0.1704252	0.23041931	2.6350577	21	—	—
479444 2013 YD_{111}	17.8	X	334.83757	200.91580	331.70498	6.19109	0.0771123	0.26909840	2.3760850	21	—	—
479445 2013 YE_{114}	18.0	X	302.91501	200.64227	338.81161	0.93433	0.1333736	0.25999414	2.4312354	21	—	—
479446 2013 YQ_{115}	18.0	X	58.18228	284.34217	119.40193	3.04647	0.2094870	0.26508675	2.3999970	21	—	—
479447 2013 YL_{117}	17.7	X	57.53974	27.05256	28.12067	1.44707	0.1656053	0.26522775	2.3991463	21	—	—
479448 2013 YM_{118}	17.5	X	24.88365	284.52102	214.94303	5.13733	0.1576144	0.28033737	2.3121467	21	1 3.4	19.6
479449 2013 YT_{120}	18.8	X	62.46880	212.73182	211.57848	0.82197	0.1686343	0.27437158	2.3455424	21	—	—
479450 2013 YZ_{120}	18.3	X	70.77611	259.63301	197.81450	1.93315	0.0618205	0.28543735	2.2845229	21	1 25.1	20.8
479451 2013 YJ_{121}	17.4	X	297.61468	29.51487	126.85794	6.63863	0.0790937	0.25537955	2.4604354	21	—	—
479452 2013 YB_{123}	18.0	X	86.60716	269.58729	128.71249	6.15511	0.2250142	0.27726669	2.3291864	21	—	—
479453 2013 YX_{123}	18.3	X	105.17123	198.12499	236.86940	3.37661	0.0897674	0.28678902	2.2773391	21	2 18.2	20.8
479454 2013 YT_{124}	17.4	X	127.99397	282.28128	90.89246	6.88506	0.1161790	0.27223914	2.3577749	21	1 5.9	20.3
479455 2013 YD_{125}	17.5	X	97.21207	59.07993	318.88320	5.87096	0.1261104	0.26438838	2.4042215	21	—	—
479456 2013 YG_{126}	18.0	X	141.14978	27.33771	314.79844	5.61160	0.2224093	0.28696483	2.2764089	21	—	—
479457 2013 YL_{129}	18.2	X	80.54456	186.21335	276.75790	2.12235	0.1633717	0.29009100	2.2600248	21	3 2.3	20.2
479458 2013 YM_{129}	17.3	X	344.04936	176.38509	280.71441	5.06491	0.0930448	0.25238121	2.4798841	21	—	—
479459 2013 YS_{129}	16.7	X	69.54538	97.29973	347.74877	22.97591	0.2554744	0.28433129	2.2904437	21	2 6.1	18.6
479460 2013 YC_{131}	17.3	X	8.77096	178.10122	349.74085	5.83873	0.1559018	0.28294849	2.2979000	21	1 16.9	19.4
479461 2013 YL_{132}	18.0	X	119.85651	29.36769	10.54205	5.74040	0.1385705	0.28760036	2.2730540	21	2 2.2	20.6
479462 2013 YD_{133}	17.4	X	124.65154	353.98720	33.95301	6.92871	0.1771442	0.28671859	2.2777120	21	1 30.2	20.2
479463 2013 YC_{135}	17.5	X	320.12490	199.77907	32.60499	7.24324	0.0558390	0.29210205	2.2496398	21	2 17.3	20.2
479464 2013 YK_{137}	18.2	X	101.54321	32.40523	21.36892	7.14681	0.0886620	0.28423577	2.2909568	21	1 17.9	20.8
479465 2013 YD_{139}	16.9	X	230.10727	113.82181	59.53862	11.06022	0.0480895	0.23954138	2.5677280	21	12 6.6	20.3
479466 2013 YB_{140}	18.0	X	37.39980	352.70632	113.37173	2.12210	0.1370752	0.27493183	2.3423549	21	—	—
479467 2013 YY_{146}	17.6	X	20.22612	194.25703	335.23160	7.44564	0.0780898	0.29101177	2.2552551	21	2 14.7	19.9
479468 2013 YJ_{149}	18.0	X	101.67546	178.68995	236.42957	3.92346	0.1913242	0.28473353	2.2882860	21	2 1.7	20.4
479469 2014 AC_{1}	15.9	X	36.99421	266.28005	304.71134	24.26577	0.2470369	0.17002186	3.2270043	21	6 20.2	19.8
479470 2014 AP_{1}	18.5	X	46.70257	26.13468	40.32099	3.13171	0.1501534	0.26744785	2.3858510	21	—	—
479471 2014 AS_{1}	17.8	X	146.84403	102.35796	307.26483	8.13556	0.1220371	0.29800571	2.2198297	21	3 12.1	20.8
479472 2014 AV_{1}	17.6	X	14.14498	2.63688	31.98769	3.02466	0.1592962	0.24565725	2.5249318	21	—	—
479473 2014 AW_{1}	18.3	X	114.60517	332.32532	91.62892	6.99047	0.1490322	0.29141035	2.2531982	21	3 2.6	20.9
479474 2014 AH_{2}	17.9	X	357.90410	59.19951	60.80382	3.87477	0.1207541	0.26399654	2.4065999	21	—	—
479475 2014 AC_{6}	17.6	X	314.83677	149.32010	39.28432	4.11925	0.1457668	0.26908929	2.3761386	21	—	—
479476 2014 AJ_{6}	18.7	X	88.62755	91.35197	314.98993	4.39345	0.1711234	0.27748506	2.3279643	21	—	—
479477 2014 AY_{6}	17.7	X	284.85066	44.19873	83.86005	3.41897	0.0714754	0.24044899	2.5612624	21	12 20.3	20.8
479478 2014 AB_{8}	17.7	X	30.77700	42.84241	99.11472	6.89011	0.0760177	0.28298643	2.2976946	21	1 25.5	20.1
479479 2014 AE_{14}	16.7	X	19.78136	90.62491	302.39885	28.20351	0.1810113	0.23975757	2.5661842	21	—	—
479480 2014 AZ_{19}	17.7	X	69.72483	243.67096	156.79104	2.84685	0.1614493	0.26312602	2.4119050	21	—	—
479481 2014 AQ_{22}	16.5	X	269.85121	37.52200	80.40667	13.95257	0.1412426	0.23091627	2.6312757	21	11 7.5	19.9
479482 2014 AW_{25}	17.1	X	208.45892	143.84646	97.07171	6.28579	0.1074357	0.24454066	2.5326120	21	—	—
479483 2014 AY_{25}	18.2	X	101.09044	21.92977	60.22750	3.75579	0.1499375	0.28859470	2.2678299	21	3 7.9	20.6
479484 2014 AF_{26}	16.8	X	262.57207	22.87633	118.85481	13.42750	0.0922528	0.23226945	2.6210461	21	12 4.2	20.3
479485 2014 AR_{26}	17.6	X	92.83784	2.14618	68.40355	6.87627	0.1018513	0.28643283	2.2792267	21	1 29.4	20.0
479486 2014 AD_{28}	16.7	X	163.59290	325.85440	278.26980	9.39072	0.0929525	0.22704457	2.6611047	21	12 13.1	20.6
479487 2014 AH_{28}	17.2	X	294.92924	149.27026	289.13644	5.86794	0.0903849	0.22497126	2.6774293	21	10 21.8	20.6
479488 2014 AZ_{31}	17.4	X	23.67535	37.21398	118.55087	5.99270	0.0680317	0.28467568	2.2885960	21	2 2.5	19.8
479489 2014 AG_{33}	17.4	X	42.12713	146.46447	299.87160	5.40245	0.0890119	0.27053194	2.3676837	21	—	—
479490 2014 AZ_{33}	17.4	X	297.57442	303.66472	130.69416	6.69367	0.1349088	0.23042708	2.6349985	21	10 22.2	20.5
479491 2014 AC_{34}	18.4	X	127.01500	271.57160	143.98945	2.58152	0.2153559	0.29595067	2.2300940	21	3 13.8	21.2
479492 2014 AE_{36}	17.6	X	73.44427	311.69852	109.05564	5.23985	0.0780190	0.28069861	2.3101625	21	—	—
479493 2014 AN_{36}	17.3	X	229.61052	276.97571	257.49796	12.44769	0.1039678	0.24268643	2.5454958	21	11 30.7	20.8
479494 2014 AU_{41}	17.0	X	299.21366	311.06443	133.20645	22.67020	0.0246142	0.22540937	2.6739590	21	11 22.0	21.1
479495 2014 AA_{42}	17.1	X	189.85682	93.94724	130.54794	6.43902	0.1337586	0.23219126	2.6216345	21	12 14.5	21.1
479496 2014 AN_{42}	17.0	X	244.29270	245.65891	276.87706	3.51938	0.1841453	0.23394923	2.6084848	21	11 20.0	20.6
479497 2014 AB_{43}	16.6	X	285.56548	177.43313	314.47221	13.86458	0.0672339	0.23424287	2.6063043	21	12 26.9	19.9
479498 2014 AB_{44}	16.4	X	341.07036	90.64118	330.73075	21.59809	0.0482463	0.22557954	2.6726140	21	12 12.2	20.3
479499 2014 AY_{47}	17.8	X	84.40180	346.81058	107.28266	3.55771	0.0191187	0.28491038	2.2873390	21	2 7.3	20.3
479500 2014 AW_{49}	18.3	X	136.46359	289.24084	154.34595	4.78546	0.0911267	0.30450050	2.1881514	21	4 16.5	20.9
479501 2014 AC_{53}	16.6	X	17.23117	193.66560	336.11238	24.61857	0.1640150	0.28237507	2.3010098	21	2 9.9	18.7
479502 2014 AR_{53}	17.0	X	243.19083	260.54688	227.69718	11.77836	0.2186578	0.22317447	2.6917809	21	9 27.5	21.2
479503 2014 AW_{54}	16.3	X	158.62467	306.39538	298.62647	9.52361	0.0733638	0.23033722	2.6356838	21	12 10.0	20.3
479504 2014 BR_{2}	16.9	X	248.31525	126.11778	113.69433	6.06412	0.0959255	0.26217844	2.4177129	21	—	—
479505 2014 BK_{4}	18.1	X	130.68904	13.47762	58.52763	3.38059	0.1055521	0.29957142	2.2120883	21	3 25.9	20.8
479506 2014 BF_{7}	18.2	X	355.20869	153.44377	1.25527	1.43570	0.1165110	0.26982909	2.3717935	21	—	—
479507 2014 BX_{7}	16.8	X	148.68875	106.42367	128.38544	7.54359	0.0763596	0.22071626	2.7117303	21	11 18.1	20.9
479508 2014 BA_{10}	17.7	X	47.06834	55.71353	358.21994	5.29782	0.1466222	0.26514476	2.3996469	21	—	—
479509 2014 BO_{12}	17.9	X	69.92317	141.87314	329.80910	6.48333	0.0544304	0.28269509	2.2992730	21	2 14.1	20.4
479510 2014 BP_{12}	17.0	X	235.54521	4.04302	120.09308	5.70692	0.0727872	0.21510998	2.7586441	21	10 7.7	20.9
479511 2014 BV_{15}	17.1	X	216.82260	253.98983	325.65015	9.14180	0.1359320	0.24358574	2.5392267	21	—	—
479512 2014 BJ_{17}	18.1	X	92.28278	3.82246	105.93007	6.50510	0.1074493	0.29501501	2.2348068	21	3 27.8	20.5
479513 2014 BY_{17}	16.9	X	159.21219	305.28187	271.90667	5.68506	0.0579767	0.21947380	2.7219549	21	11 3.7	20.9
479514 2014 BP_{20}	17.7	X	8.71232	314.25862	128.91451	7.40758	0.0828477	0.25123039	2.4874514	21	—	—
479515 2014 BV_{20}	16.8	X	147.47230	293.28294	304.58126	3.86952	0.0609725	0.22166670	2.7039734	21	11 17.2	20.8
479516 2014 BW_{21}	16.9	X	56.15186	218.27986	142.80517	9.73043	0.0121188	0.23573296	2.5953096	21	—	—
479517 2014 BY_{22}	17.2	X	323.20404	241.72808	236.34768	2.08308	0.0676518	0.24521800	2.5279462	21	—	—
479518 2014 BT_{27}	18.1	X	12.09049	131.32209	335.89414	0.98908	0.1255777	0.26313168	2.4118703	21	—	—
479519 2014 BW_{28}	18.3	X	43.53467	265.25163	211.01326	1.60960	0.1597368	0.27975210	2.3153704	21	1 7.5	19.9
479520 2014 BC_{29}	17.0	X	213.85064	345.70447	296.95137	4.31302	0.1289648	0.26414608	2.4056915	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479521 2014 BQ_{29}	17.9	X	49.74488	18.93535	92.43279	6.69961	0.1863627	0.27916335	2.3186247	21	1 14.8	19.5
479522 2014 BT_{29}	16.7	X	332.32890	118.92787	326.13796	7.50888	0.0447277	0.23527600	2.5986690	21	—	—
479523 2014 BD_{30}	16.7	X	169.65450	235.34976	291.21906	8.63353	0.0350690	0.20344347	2.8631244	21	9 8.7	21.0
479524 2014 BQ_{30}	16.1	X	149.04206	179.76508	294.25657	9.72192	0.0695310	0.17882753	3.1201811	21	6 14.9	20.9
479525 2014 BA_{34}	16.9	X	213.03785	260.68148	323.67474	21.59638	0.0396444	0.24173575	2.5521652	21	—	—
479526 2014 BE_{34}	17.9	X	301.04075	162.79740	7.84239	2.90750	0.1417911	0.25280885	2.4770867	21	—	—
479527 2014 BL_{34}	18.2	X	83.58555	101.45984	14.61992	3.37244	0.1532006	0.29056873	2.2575470	21	3 27.7	20.1
479528 2014 BW_{35}	17.9	X	65.74919	333.15578	127.38260	4.41194	0.1628995	0.27885090	2.3203563	21	2 1.4	19.7
479529 2014 BX_{35}	18.0	X	12.59861	118.56046	335.22243	3.24965	0.2068303	0.25852123	2.4404612	21	—	—
479530 2014 BL_{36}	17.8	X	163.00051	323.78881	9.10864	2.44848	0.0370071	0.26574566	2.3960282	21	—	—
479531 2014 BW_{36}	17.3	X	13.55347	317.49089	143.73403	6.79807	0.1037349	0.25971228	2.4329941	21	—	—
479532 2014 BS_{37}	15.7	X	19.72157	263.38626	329.91845	13.59816	0.1212814	0.16364874	3.3102512	21	5 30.9	20.0
479533 2014 BV_{37}	16.1	X	90.71421	284.87187	322.34456	15.69965	0.0844039	0.19727284	2.9225224	21	9 19.7	20.5
479534 2014 BS_{38}	16.9	X	223.37633	42.86875	140.73334	5.98644	0.1033094	0.22525137	2.6752093	21	12 3.0	20.7
479535 2014 BU_{38}	17.2	X	99.38602	60.92249	337.81218	6.02841	0.1415653	0.26653554	2.3912921	21	1 5.1	19.8
479536 2014 BR_{39}	18.0	X	7.30926	1.29725	85.23932	2.91706	0.1602998	0.25640559	2.4538672	21	—	—
479537 2014 BS_{39}	17.9	X	354.97739	97.67413	43.24693	2.09345	0.1362821	0.26645964	2.3917462	21	—	—
479538 2014 BX_{39}	17.6	X	76.29026	337.50904	107.98307	5.19383	0.1836249	0.28099830	2.3085197	21	2 2.6	19.5
479539 2014 BP_{40}	17.4	X	317.84674	85.81129	343.34996	5.03794	0.1678106	0.23123743	2.6288388	21	11 13.7	19.9
479540 2014 BS_{41}	17.7	X	317.45312	65.43018	18.10478	2.29675	0.1157103	0.23334131	2.6130133	21	12 7.6	20.5
479541 2014 BT_{42}	17.7	X	19.97136	259.05693	209.84762	1.81965	0.1589402	0.26525593	2.3989764	21	—	—
479542 2014 BC_{46}	17.4	X	252.12709	63.91708	29.83002	4.51075	0.0328015	0.21654816	2.7464164	21	9 23.8	21.0
479543 2014 BR_{46}	17.6	X	23.94763	103.01593	332.96806	4.59152	0.1608489	0.25529001	2.4610107	21	—	—
479544 2014 BO_{47}	18.1	X	49.88357	197.23610	313.47688	2.02194	0.1729096	0.28728563	2.2747139	21	3 16.7	19.8
479545 2014 BH_{53}	17.3	X	179.33372	18.82017	320.36679	6.51350	0.1354968	0.28333372	2.2958167	21	1 23.1	20.6
479546 2014 BU_{53}	17.9	X	84.10831	274.18367	139.67348	1.59802	0.1783425	0.27514547	2.3411423	21	1 1.1	19.8
479547 2014 BZ_{54}	17.7	X	334.86886	121.43162	320.83497	11.44951	0.2204560	0.24301177	2.5432234	21	—	—
479548 2014 BG_{55}	17.5	X	303.85758	353.13718	109.66829	15.16243	0.0918925	0.24082991	2.5585609	21	12 15.9	20.5
479549 2014 BV_{55}	17.8	X	111.43537	294.67986	141.24697	7.75787	0.1556594	0.28760235	2.2730436	21	3 15.3	20.5
479550 2014 BS_{58}	18.1	X	119.17532	112.72810	293.43851	4.54080	0.2187241	0.28396529	2.2924113	21	2 19.5	20.9
479551 2014 BU_{60}	18.2	X	91.72234	231.49982	217.79950	3.37853	0.2206595	0.28578031	2.2826948	21	3 12.4	20.5
479552 2014 BG_{61}	17.1	X	33.03784	234.84690	245.35681	7.69864	0.1131834	0.27470483	2.3436451	21	—	—
479553 Garyzema	16.8	X	283.05558	127.05235	33.48921	6.24925	0.0492819	0.25057506	2.4917865	21	—	—
479554 2014 CA	17.0	X	358.95072	299.94231	115.27526	8.72254	0.2481222	0.24222387	2.5487355	21	—	—
479555 2014 CD	17.0	X	241.99445	202.74893	344.72114	13.45022	0.1787780	0.23360516	2.6110454	21	12 20.5	20.8
479556 2014 CK	17.1	X	294.70765	270.35180	238.03109	10.77157	0.1204779	0.24244401	2.5471924	21	—	—
479557 2014 CY	17.3	X	323.38361	60.08407	93.13476	3.91001	0.1453493	0.25794779	2.4440768	21	—	—
479558 2014 CP_{3}	16.5	X	204.11739	192.86102	326.05188	13.21936	0.1383598	0.21486530	2.7607380	21	9 30.7	21.0
479559 2014 CT_{3}	16.3	X	111.42664	310.04017	309.72300	12.57934	0.1757600	0.21411399	2.7671923	21	11 8.6	21.0
479560 2014 CB_{4}	17.4	X	285.73758	79.12939	123.12557	4.56553	0.0581616	0.26082935	2.4260425	21	—	—
479561 2014 CG_{5}	17.8	X	50.64399	87.08987	354.50018	2.34622	0.1458905	0.26979375	2.3720006	21	—	—
479562 2014 CN_{5}	17.9	X	54.29236	20.63596	115.47382	8.12697	0.0985053	0.28632496	2.2797991	21	2 28.9	20.1
479563 2014 CU_{5}	16.7	X	328.94256	94.33567	324.19497	26.84688	0.1888497	0.23379227	2.6096521	21	11 12.6	20.0
479564 2014 CF_{6}	17.6	X	112.35164	287.17180	104.56620	6.52607	0.0616305	0.27103072	2.3647780	21	—	—
479565 2014 CP_{6}	17.7	X	306.94191	78.91647	115.57103	5.44634	0.0548813	0.26620980	2.3932424	21	—	—
479566 2014 CF_{7}	17.8	X	43.90924	84.93312	343.22622	6.35051	0.1190856	0.26156781	2.4214742	21	—	—
479567 2014 CC_{8}	17.6	X	320.32927	108.35416	341.11077	11.02425	0.2320859	0.24046810	2.5611267	21	12 25.3	19.8
479568 2014 CE_{8}	15.9	X	257.12513	59.32210	327.08184	11.12644	0.0618941	0.18455093	3.0553330	21	6 28.3	20.4
479569 2014 CO_{8}	17.4	X	145.53841	305.19752	328.47015	11.15359	0.0461477	0.23645754	2.5900050	21	—	—
479570 2014 CB_{9}	17.3	X	102.93759	244.43358	114.76273	7.11786	0.2059139	0.25986209	2.4320590	21	—	—
479571 2014 CV_{9}	17.2	X	1.91414	316.27382	118.02186	13.43811	0.0597767	0.24543479	2.5264574	21	—	—
479572 2014 CU_{11}	15.8	X	72.49778	247.38468	332.04837	25.81876	0.1814986	0.18217825	3.0818041	21	8 16.3	20.1
479573 2014 CY_{11}	18.3	X	5.35121	11.06680	106.67536	1.62442	0.1782160	0.26186184	2.4196613	21	—	—
479574 2014 CC_{12}	17.2	X	7.99036	187.64454	332.19066	7.62531	0.1336251	0.27366351	2.3495866	21	1 9.7	19.6
479575 2014 CM_{12}	17.2	X	213.41663	148.21721	31.70763	4.35710	0.1164385	0.22511553	2.6762853	21	11 13.9	21.0
479576 2014 CN_{15}	17.2	X	323.72847	107.50199	332.09483	3.12745	0.1882293	0.23378726	2.6096894	21	12 13.9	19.4
479577 2014 CW_{15}	16.6	X	289.65025	157.30462	338.06663	5.15999	0.2504175	0.23628748	2.5912476	21	12 15.5	18.9
479578 2014 CB_{16}	16.8	X	288.82891	105.52509	13.21851	13.05830	0.2186806	0.22835175	2.6509395	21	11 18.1	19.8
479579 2014 CS_{17}	17.9	X	58.06693	325.39152	121.21037	4.02500	0.2004155	0.27166351	2.3611043	21	—	—
479580 2014 CC_{18}	16.9	X	278.19281	228.22206	229.03099	4.36764	0.1277218	0.21889353	2.7267632	21	10 17.6	20.3
479581 2014 CK_{18}	16.0	X	134.89255	125.84747	2.24552	10.72115	0.0235499	0.17122689	3.2118462	21	6 10.8	20.8
479582 2014 CS_{18}	16.7	X	89.44989	159.94961	142.97329	7.27278	0.0377076	0.21605101	2.7506279	21	12 1.8	20.7
479583 2014 CV_{18}	17.8	X	78.53194	51.02512	25.44761	5.40137	0.1132044	0.26884121	2.3776001	21	1 19.8	20.2
479584 2014 CF_{20}	18.1	X	73.27714	216.47523	266.18614	3.82177	0.2059109	0.28878389	2.2668393	21	3 25.4	20.1
479585 2014 CB_{21}	17.0	X	246.24353	176.88579	304.68652	3.44015	0.1648361	0.21997927	2.7177836	21	9 30.8	21.0
479586 2014 CC_{22}	17.1	X	284.78620	148.40409	341.55673	13.71853	0.1904536	0.23433696	2.6056067	21	12 4.1	20.2
479587 2014 CK_{22}	17.1	X	89.76714	144.61242	289.43565	5.86093	0.0766492	0.27612616	2.3355957	21	1 25.8	19.8
479588 2014 CL_{22}	16.8	X	294.78999	247.89181	242.42167	3.53396	0.1714987	0.23803362	2.5785596	21	12 29.5	19.3
479589 2014 CM_{22}	17.7	X	347.48932	349.32755	177.06543	6.71063	0.1483086	0.26680512	2.3896810	21	—	—
479590 2014 CN_{22}	16.9	X	331.11697	148.38295	305.62089	10.21965	0.1423204	0.24007278	2.5639375	21	—	—
479591 2014 DV	17.7	X	327.42982	290.14400	253.32133	1.53144	0.1355029	0.26504485	2.4002499	21	—	—
479592 2014 DD_{4}	15.6	X	44.84625	267.60497	330.15838	25.11141	0.2341333	0.17459700	3.1703815	21	8 10.0	19.5
479593 2014 DE_{4}	16.8	X	322.08530	267.20751	164.80839	22.27552	0.0372764	0.22635654	2.6664944	21	12 3.1	20.7
479594 2014 DS_{4}	17.4	X	45.27069	289.41266	145.20984	14.61439	0.1992007	0.26451555	2.4034509	21	—	—
479595 2014 DG_{5}	16.3	X	80.45220	304.32576	286.11021	7.98568	0.0738505	0.18934735	3.0035156	21	8 18.6	20.6
479596 2014 DH_{5}	16.6	X	171.95913	285.54836	294.04776	8.81890	0.0581448	0.22087175	2.7104575	21	11 20.9	20.7
479597 2014 DN_{6}	18.0	X	20.21134	80.16159	51.69948	2.86669	0.1228945	0.27001716	2.3706920	21	—	—
479598 2014 DW_{7}	17.1	X	223.20557	26.39105	147.43867	7.28565	0.1206568	0.22314303	2.6920338	21	11 19.2	21.1
479599 2014 DY_{8}	17.9	X	36.98202	306.27647	151.91434	1.47461	0.1370656	0.26584232	2.3954474	21	—	—
479600 2014 DZ_{8}	16.4	X	85.71035	343.62178	330.25910	13.58904	0.0339504	0.22542032	2.6738724	21	12 9.9	20.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479601 2014 DU_9	17.0	X	168.97984	113.20479	136.20346	13.47329	0.1386955	0.23141426	2.6274995	21	12 24.2	21.3
479602 2014 DM_{10}	16.1	X	117.33387	282.80132	306.22758	13.77950	0.1120394	0.20197418	2.8769931	21	9 29.1	20.8
479603 2014 DW_{10}	17.7	X	27.33913	155.92477	339.06532	9.54535	0.1365233	0.27451806	2.3447080	21	1 8.7	20.0
479604 2014 DG_{13}	15.8	X	33.41780	266.57186	3.23624	15.85641	0.2146100	0.17942042	3.1133036	21	8 31.7	19.5
479605 2014 DR_{15}	16.5	X	267.40603	5.46974	133.00019	11.39974	0.0990091	0.22675564	2.6633648	21	12 4.2	20.0
479606 2014 DM_{16}	17.0	X	154.46697	311.64234	298.62155	11.77704	0.1476692	0.22124660	2.7073951	21	12 9.2	21.5
479607 2014 DY_{18}	17.5	X	5.92888	230.40426	294.25069	4.25292	0.1518164	0.27324480	2.3519862	21	1 9.2	19.6
479608 2014 DJ_{19}	17.9	X	342.62037	296.63928	188.80403	1.61778	0.1696639	0.25438398	2.4668508	21	—	—
479609 2014 DN_{19}	16.9	X	289.89517	339.41742	141.25864	8.33244	0.1367774	0.23202442	2.6228910	21	12 10.4	20.0
479610 2014 DJ_{20}	17.8	X	61.97794	76.83376	359.72602	9.30301	0.2522173	0.26629916	2.3927070	21	—	—
479611 2014 DT_{20}	17.7	X	20.25691	39.85020	95.49654	3.23123	0.1524046	0.26931522	2.3748095	21	—	—
479612 2014 DH_{21}	17.2	X	320.34900	357.64100	119.77643	1.86237	0.1023908	0.23725084	2.5842283	21	—	—
479613 2014 DC_{24}	16.1	X	28.08972	49.95143	340.27149	13.75172	0.0571171	0.22982336	2.6396110	21	—	—
479614 2014 DD_{26}	17.4	X	252.00267	134.44453	29.31005	5.09671	0.0696774	0.22789067	2.6545140	21	12 17.6	20.9
479615 2014 DL_{26}	16.2	X	95.49228	203.23244	6.02684	10.50955	0.1189528	0.18221865	3.0813486	21	8 22.4	20.8
479616 2014 DP_{26}	17.1	X	4.18282	110.12390	327.02134	14.36856	0.0920161	0.24533286	2.5271571	21	—	—
479617 2014 DU_{26}	17.9	X	87.51900	231.39968	218.60876	2.06611	0.1177111	0.28438423	2.2901594	21	2 17.6	20.1
479618 2014 DD_{29}	18.1	X	31.84244	313.03091	144.14203	2.40065	0.1504797	0.26579793	2.3957141	21	—	—
479619 2014 DM_{29}	16.5	X	55.49542	248.84613	329.30811	8.62476	0.1107907	0.17657957	3.1466063	21	7 9.1	20.7
479620 2014 DP_{30}	17.6	X	40.65824	138.53610	299.80547	5.75603	0.1105188	0.25971617	2.4329698	21	—	—
479621 2014 DQ_{30}	17.0	X	176.88305	56.30910	157.62097	3.91588	0.0339424	0.22218294	2.6997833	21	11 23.7	20.7
479622 2014 DH_{32}	17.1	X	277.62560	144.67284	354.01454	13.03937	0.1959390	0.23292631	2.6161162	21	12 1.8	20.4
479623 2014 DY_{32}	17.6	X	3.17525	16.86427	124.37173	7.66827	0.0848728	0.26336454	2.4104484	21	—	—
479624 2014 DJ_{34}	16.4	X	192.29488	198.05581	347.30764	13.34008	0.1311129	0.21358098	2.7717943	21	10 22.4	21.0
479625 2014 DV_{34}	17.4	X	247.65338	217.48423	340.49558	6.24610	0.0560077	0.23967821	2.5667507	21	—	—
479626 2014 DX_{35}	17.3	X	344.08697	308.74446	134.97910	5.88103	0.2461089	0.24262127	2.5459515	21	—	—
479627 2014 DP_{36}	17.9	X	10.97598	106.19005	12.09210	4.71630	0.1699679	0.26096097	2.4252267	21	—	—
479628 2014 DH_{38}	17.1	X	267.99843	309.51725	182.30684	14.25259	0.1710162	0.22095021	2.7098158	21	11 14.6	20.7
479629 2014 DM_{39}	16.7	X	27.68301	231.28955	122.47647	14.65061	0.1171646	0.22933271	2.6433746	21	12 3.7	20.2
479630 2014 DO_{39}	17.1	X	166.90617	236.14989	346.75057	1.38560	0.1437439	0.22273190	2.6953455	21	11 18.1	21.4
479631 2014 DZ_{40}	17.1	X	238.90076	135.97636	34.71891	4.55540	0.1376054	0.22622215	2.6675504	21	11 29.0	20.8
479632 2014 DH_{41}	18.1	X	91.82048	341.91905	93.38394	5.70394	0.1938533	0.27892038	2.3199710	21	2 20.6	20.4
479633 2014 DM_{42}	17.0	X	175.78731	191.03450	61.83803	4.53504	0.0620363	0.23117119	2.6293410	21	—	—
479634 2014 DP_{43}	16.8	X	222.18768	164.24429	323.27755	8.45870	0.0776200	0.20462831	2.8520616	21	9 18.7	21.0
479635 2014 DT_{44}	17.0	X	149.59169	185.41258	104.34478	5.12020	0.0359941	0.23701641	2.5859320	21	—	—
479636 2014 DD_{45}	17.3	X	44.97422	88.66576	356.18263	6.27968	0.0900020	0.26289167	2.4133381	21	—	—
479637 2014 DF_{46}	16.2	X	39.33305	217.83258	96.24967	7.33335	0.0735868	0.20099390	2.8863398	21	10 18.7	20.1
479638 2014 DN_{46}	17.3	X	297.19772	177.86672	313.03942	3.04544	0.1213452	0.23266795	2.6180524	21	—	—
479639 2014 DA_{47}	18.0	X	51.58511	253.26996	201.24472	1.92958	0.1402196	0.26361773	2.4089048	21	—	—
479640 2014 DH_{47}	16.9	X	351.88182	75.50621	345.96055	10.14040	0.0586788	0.22471348	2.6794766	21	12 29.8	20.4
479641 2014 DT_{47}	16.8	X	249.09950	316.18180	179.33946	10.11323	0.0637848	0.21324687	2.7746887	21	11 8.5	20.7
479642 2014 DC_{48}	16.3	X	32.16688	102.03962	177.44349	16.64746	0.0689070	0.17971002	3.1099580	21	8 15.4	20.5
479643 2014 DY_{49}	17.8	X	93.38668	61.43470	16.90642	7.28978	0.1932979	0.27754452	2.3276318	21	2 28.4	20.2
479644 2014 DN_{53}	17.6	X	332.94608	282.65008	170.99505	11.38356	0.1564262	0.23545421	2.5973576	21	—	—
479645 2014 DX_{53}	17.7	X	301.94837	74.37496	75.62475	0.37134	0.0670354	0.23926637	2.5696952	21	—	—
479646 2014 DM_{55}	16.6	X	88.19907	242.62309	8.95002	10.44302	0.1206245	0.19113365	2.9847728	21	10 2.9	21.0
479647 2014 DV_{57}	16.5	X	20.43860	281.81758	20.64333	10.11998	0.0996486	0.18583569	3.0412349	21	9 7.5	20.3
479648 2014 DW_{57}	17.0	X	226.82035	44.50198	108.13021	5.50416	0.0130618	0.21215552	2.7841962	21	11 9.0	20.9
479649 2014 DZ_{57}	16.7	X	70.61908	232.88945	147.21220	13.03773	0.1715617	0.24176361	2.5519692	21	—	—
479650 2014 DU_{59}	16.9	X	349.32094	356.61678	64.50689	4.87418	0.0435048	0.22435786	2.6823072	21	12 23.2	20.2
479651 2014 DC_{60}	16.8	X	50.10412	297.87232	109.50352	5.76323	0.1105803	0.24378558	2.5378388	21	—	—
479652 2014 DO_{60}	16.9	X	317.12815	322.35350	121.04014	7.59461	0.1496180	0.22524507	2.6752591	21	12 5.2	19.7
479653 2014 DB_{61}	16.3	X	65.94347	189.58636	41.74438	5.25695	0.0877559	0.17655018	3.1469555	21	8 7.2	20.6
479654 2014 DA_{62}	16.2	X	262.57973	332.54196	156.28911	12.93833	0.1084263	0.21832241	2.7315166	21	11 13.5	20.0
479655 2014 DZ_{62}	17.0	X	330.91479	310.38954	121.30762	3.31246	0.1153786	0.22391050	2.6858788	21	12 12.8	19.8
479656 2014 DJ_{63}	16.1	X	71.12471	203.26292	29.99068	5.19977	0.0752833	0.17900340	3.1181370	21	8 14.9	20.4
479657 2014 DM_{64}	17.4	X	359.17084	30.52341	61.31042	3.42734	0.1662390	0.24386169	2.5373108	21	—	—
479658 2014 DX_{66}	17.1	X	221.99920	147.93431	23.43088	15.15760	0.0383171	0.21587642	2.7521108	21	11 17.9	21.1
479659 2014 DY_{66}	16.7	X	37.74581	309.22362	65.39243	7.18981	0.0477783	0.22280579	2.6947495	21	12 29.0	20.3
479660 2014 DA_{67}	16.9	X	194.02303	128.90004	70.44791	7.62762	0.0405166	0.21480679	2.7612393	21	11 23.3	20.7
479661 2014 DM_{67}	17.3	X	358.78629	350.22236	89.04541	6.05722	0.2212564	0.24135268	2.5548650	21	—	—
479662 2014 DN_{68}	16.4	X	47.88363	158.77835	111.62777	6.61028	0.1213585	0.18082164	3.0971990	21	9 7.5	20.5
479663 2014 DZ_{68}	16.4	X	335.67434	68.26206	9.64623	22.08146	0.0568825	0.22460972	2.6803017	21	12 27.1	20.3
479664 2014 DW_{71}	16.8	X	160.92323	96.89787	44.41215	5.94582	0.1241556	0.18243223	3.0789432	21	8 4.9	21.7
479665 2014 DG_{73}	18.0	X	72.94015	41.92460	62.92826	6.59443	0.1455564	0.27469434	2.3437048	21	2 25.2	20.3
479666 2014 DQ_{75}	16.2	X	45.24657	218.55821	94.51901	7.22724	0.0879801	0.19663144	2.9288744	21	10 26.4	20.2
479667 2014 DV_{75}	17.3	X	52.58040	308.86232	111.70173	5.28041	0.1732121	0.25402598	2.4691679	21	—	—
479668 2014 DA_{77}	16.5	X	164.91179	53.64939	89.46330	6.35967	0.0498693	0.18543308	3.0456354	21	8 9.3	21.0
479669 2014 DP_{77}	17.2	X	306.67762	10.55330	82.34234	2.97853	0.0685802	0.22108026	2.7087530	21	12 2.2	20.3
479670 2014 DW_{78}	17.1	X	3.24169	283.74245	143.53874	8.39004	0.2527071	0.23908230	2.5710139	21	—	—
479671 2014 DL_{79}	16.0	X	100.83645	188.22516	18.37785	18.07084	0.1347473	0.17920507	3.1157972	21	8 31.5	20.9
479672 2014 DW_{79}	16.9	X	172.81042	118.00941	26.22665	8.85610	0.0816670	0.18757326	3.0224243	21	8 22.1	21.6
479673 2014 DK_{81}	17.9	X	65.14532	3.54604	81.20549	2.54593	0.1623914	0.26953759	2.3735032	21	1 9.9	19.8
479674 2014 DD_{82}	17.1	X	199.75952	152.27727	9.01996	3.78215	0.0380659	0.21387747	2.7692321	21	10 12.7	21.1
479675 2014 DB_{83}	16.4	X	155.13512	241.20390	268.94990	8.92421	0.0401352	0.19070302	2.9892645	21	8 2.5	20.9
479676 2014 DJ_{83}	17.2	X	208.75400	350.23267	182.53516	5.02754	0.0700695	0.21783697	2.7355731	21	11 5.5	21.1
479677 2014 DK_{83}	16.8	X	242.74175	185.99949	315.92414	7.34305	0.0788311	0.22051147	2.7134090	21	11 2.2	20.6
479678 2014 DS_{83}	17.8	X	101.15207	326.20939	95.51067	2.53182	0.1663670	0.27443269	2.3451943	21	2 11.1	20.3
479679 2014 DA_{84}	17.1	X	130.13623	199.61943	123.80134	3.90863	0.0612469	0.23984621	2.5655520	21	—	—
479680 2014 DN_{85}	16.2	X	71.28028	262.10129	345.00742	8.92498	0.0532041	0.18577763	3.0418685	21	8 28.8	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479681 2014 DV_{85}	16.9	X	280.73755	163.61232	340.89015	4.70906	0.1041757	0.23330604	2.6132767	21	12 31.1	20.1
479682 2014 DE_{87}	17.8	X	17.23581	276.79088	143.09020	1.80333	0.1897767	0.24491588	2.5300247	21	—	—
479683 2014 DX_{87}	17.3	X	250.80512	26.74927	139.07017	4.40960	0.1042437	0.23212937	2.6221004	21	12 15.1	20.6
479684 2014 DB_{90}	16.4	X	207.05020	175.87188	23.05940	13.49094	0.1195589	0.21492713	2.7602085	21	11 26.0	20.7
479685 2014 DM_{90}	16.6	X	38.57465	256.78272	165.97815	13.28782	0.1170938	0.24006599	2.5639858	21	—	—
479686 2014 DY_{90}	16.9	X	226.03084	10.34540	159.97014	8.09065	0.0686523	0.22159177	2.7045829	21	11 24.3	20.7
479687 2014 DJ_{91}	16.6	X	85.80206	354.40748	343.32344	4.56748	0.0647645	0.23161065	2.6260139	21	—	—
479688 2014 DT_{91}	16.6	X	102.06797	123.99054	155.03550	4.64835	0.0710270	0.21336866	2.7736328	21	11 19.7	20.7
479689 2014 DW_{93}	16.9	X	332.47233	72.30689	353.49391	4.99248	0.0218086	0.22325237	2.6911547	21	12 4.1	20.4
479690 2014 DE_{97}	17.5	X	61.50194	223.33139	176.08504	2.94702	0.0326317	0.24276231	2.5449654	21	—	—
479691 2014 DN_{103}	16.7	X	319.48260	97.86046	345.42439	21.76061	0.0481032	0.22516160	2.6759202	21	12 6.7	20.6
479692 2014 DK_{104}	17.9	X	34.54937	273.65643	177.90182	2.42065	0.1406063	0.25962118	2.4335633	21	—	—
479693 2014 DR_{104}	16.5	X	51.56045	7.98933	261.41064	3.01553	0.0684098	0.18542343	3.0457410	21	8 31.0	20.7
479694 2014 DW_{104}	17.1	X	236.61067	85.60132	349.08942	9.21879	0.0478853	0.19084222	2.9878107	21	8 7.6	21.4
479695 2014 DN_{109}	16.9	X	262.15916	139.66485	18.06782	15.98749	0.1900157	0.22484393	2.6784401	21	12 1.3	20.6
479696 2014 DS_{109}	17.0	X	286.15730	319.21610	142.63131	6.58476	0.0998555	0.21938876	2.7226583	21	11 11.9	20.5
479697 2014 DY_{111}	17.5	X	321.89167	88.46038	338.95737	1.23075	0.0642943	0.22691584	2.6621111	21	11 22.4	20.5
479698 2014 DY_{113}	16.8	X	247.50799	218.97812	339.07729	16.28551	0.0558321	0.23940795	2.5686819	21	—	—
479699 2014 DA_{114}	16.8	X	120.64734	116.06265	148.15203	4.96467	0.0744848	0.21500815	2.7595151	21	11 22.4	20.9
479700 2014 DT_{114}	17.7	X	50.79155	232.30257	219.90168	1.95874	0.1572286	0.26883303	2.3776484	21	—	—
479701 2014 DB_{116}	16.0	X	16.05362	269.18743	354.10688	10.90231	0.0876361	0.16974582	3.2305018	21	7 6.3	20.3
479702 2014 DQ_{116}	17.1	X	314.53562	112.43016	344.70318	14.48507	0.0976425	0.23266528	2.6180725	21	12 22.6	20.4
479703 2014 DV_{116}	17.4	X	76.30872	50.90808	286.41768	0.97828	0.0972293	0.22547421	2.6734463	21	—	—
479704 2014 DB_{117}	16.5	X	141.76816	128.71347	15.70936	10.77885	0.0714439	0.17980811	3.1088269	21	7 17.7	21.3
479705 2014 DJ_{119}	16.6	X	264.17234	142.33352	342.32989	13.18300	0.0947060	0.22006936	2.7170419	21	11 2.9	20.4
479706 2014 DL_{119}	16.5	X	14.66773	333.94761	344.88825	9.85831	0.1109495	0.19421351	2.9531336	21	9 16.9	20.0
479707 2014 DR_{119}	17.0	X	224.99692	8.88547	145.82507	4.18302	0.0330750	0.21231755	2.7827794	21	11 6.3	20.8
479708 2014 DU_{119}	17.0	X	98.79237	190.67551	138.68234	5.65025	0.0772926	0.22793494	2.6541703	21	—	—
479709 2014 DN_{120}	17.2	X	357.33860	165.36039	319.53580	5.62817	0.0834943	0.25812845	2.4429362	21	—	—
479710 2014 DO_{120}	16.7	X	196.59750	202.84372	10.52616	10.63087	0.2188009	0.22122698	2.7075552	21	11 26.4	21.3
479711 2014 DB_{125}	16.1	X	352.99800	310.07298	338.60354	21.81744	0.0457030	0.17766041	3.1338313	21	7 7.9	20.6
479712 2014 DZ_{125}	16.6	X	220.87471	217.29823	344.81858	14.24162	0.0430604	0.23067366	2.6331203	21	—	—
479713 2014 DW_{127}	16.9	X	15.29417	81.09126	340.37468	11.39868	0.0447823	0.23642440	2.5902470	21	—	—
479714 2014 DZ_{128}	17.2	X	167.71008	188.77448	27.00895	3.93065	0.0341359	0.21482589	2.7610756	21	11 12.5	21.0
479715 2014 DA_{129}	17.4	X	101.94761	216.85525	95.28026	2.78594	0.0489539	0.22594051	2.6697667	21	12 29.3	21.2
479716 2014 DH_{129}	16.7	X	79.18529	183.78518	122.09681	3.80493	0.0816584	0.21376710	2.7701852	21	11 27.6	20.6
479717 2014 DJ_{129}	16.6	X	73.83416	246.81256	354.78555	15.25544	0.0407475	0.18814553	3.0162925	21	8 26.5	20.8
479718 2014 DM_{130}	16.2	X	267.43294	227.77910	160.87678	15.08729	0.0894838	0.18444210	3.0565348	21	7 8.2	20.8
479719 2014 DS_{130}	17.2	X	184.71528	166.52274	29.20733	2.58505	0.0136157	0.21357524	2.7718440	21	11 9.0	21.1
479720 2014 DX_{131}	17.9	X	64.69562	304.67095	128.26685	2.25116	0.1642800	0.26436527	2.4043616	21	—	—
479721 2014 DM_{132}	16.6	X	99.03623	222.08466	337.86325	4.64588	0.0485243	0.18132517	3.0914625	21	8 2.5	21.0
479722 2014 DZ_{132}	16.9	X	246.20473	191.63094	345.88509	10.67405	0.1186442	0.22874078	2.6479330	21	12 20.9	20.6
479723 2014 DO_{133}	16.8	X	30.86313	345.89538	5.75755	3.51386	0.0110138	0.21326626	2.7745206	21	11 13.3	20.5
479724 2014 DA_{134}	18.4	X	70.73362	40.67900	45.76577	2.39871	0.1632153	0.27079161	2.3661698	21	1 24.3	20.5
479725 2014 DE_{134}	17.1	X	84.56887	141.47729	152.73491	6.28271	0.0400225	0.21047086	2.7990333	21	11 14.9	21.0
479726 2014 DE_{136}	17.0	X	268.00620	37.54183	35.34647	2.33528	0.0439310	0.20028340	2.8931620	21	9 13.7	20.8
479727 2014 DP_{136}	18.0	X	44.36188	5.83613	110.12113	2.28861	0.0604314	0.26769033	2.3844100	21	1 14.5	20.7
479728 2014 DR_{136}	17.0	X	3.80133	264.82805	153.31949	8.97121	0.0616136	0.23141124	2.6275224	21	—	—
479729 2014 DJ_{137}	16.9	X	348.81637	280.49431	77.43838	2.94994	0.0203040	0.20050984	2.8909834	21	9 28.6	20.7
479730 2014 DU_{137}	17.4	X	289.30643	67.23366	22.47791	4.40920	0.0215610	0.21342501	2.7731446	21	11 5.6	21.0
479731 2014 DA_{138}	17.0	X	128.92476	68.71108	171.99677	4.43304	0.0196420	0.20928764	2.8095731	21	10 29.5	20.9
479732 2014 DP_{138}	15.9	X	324.11394	338.12276	357.86489	10.28705	0.0645606	0.18115835	3.0933601	21	7 24.9	20.1
479733 2014 DM_{139}	16.9	X	231.02770	25.44105	150.36833	9.26089	0.0781058	0.22408600	2.6844763	21	12 6.0	20.7
479734 2014 DN_{140}	16.7	X	191.52897	212.58263	358.88219	8.78467	0.0936700	0.21864109	2.7288617	21	11 29.0	20.9
479735 2014 DV_{140}	17.3	X	285.54445	280.63752	255.21781	2.91264	0.1959245	0.24255352	2.5464256	21	—	—
479736 2014 DA_{142}	17.5	X	311.76561	250.41424	234.04877	3.59786	0.2093009	0.24176174	2.5519824	21	—	—
479737 2014 DD_{142}	17.9	X	78.48948	20.75212	79.05135	3.72964	0.1598543	0.28122268	2.3072916	21	2 26.6	20.0
479738 2014 EM_{2}	16.9	X	352.58008	22.01139	13.23891	6.48404	0.0466471	0.21855762	2.7295564	21	11 21.8	20.5
479739 2014 ET_{2}	17.3	X	353.37592	303.89797	115.11725	3.52606	0.2148467	0.23459541	2.6036926	21	—	—
479740 2014 EG_{4}	16.0	X	56.40142	148.46385	154.77602	9.91985	0.1175918	0.19913720	2.9042530	21	11 2.2	20.1
479741 2014 EE_{5}	17.6	X	318.47131	129.46860	349.70107	13.16615	0.2046237	0.24182082	2.5515667	21	—	—
479742 2014 ER_{6}	16.4	X	20.03670	108.17158	169.61404	10.92205	0.0667810	0.17888804	3.1194775	21	7 26.8	20.6
479743 2014 EK_{8}	17.2	X	185.55226	109.56252	102.08153	10.03318	0.1367991	0.21495130	2.7600015	21	11 23.8	21.6
479744 2014 EL_{9}	17.0	X	62.13925	254.49610	104.77914	4.68762	0.0579147	0.23126489	2.6286307	21	—	—
479745 2014 EZ_{9}	16.8	X	334.05916	268.88628	130.70676	6.97830	0.0151717	0.21351445	2.7723701	21	11 4.6	20.6
479746 2014 EQ_{10}	16.7	X	59.84008	258.63281	119.50389	6.08407	0.1100033	0.23508468	2.6000787	21	—	—
479747 2014 EA_{12}	17.5	X	17.01824	43.82194	81.07448	4.70183	0.1635884	0.26193753	2.4191951	21	—	—
479748 2014 EE_{12}	17.8	X	38.34642	157.45872	308.89603	5.05485	0.1479225	0.26394249	2.4069284	21	—	—
479749 2014 EZ_{12}	16.9	X	136.25126	111.68541	126.35249	5.29010	0.0774565	0.20932099	2.8092746	21	11 7.1	21.1
479750 2014 EA_{16}	17.0	X	324.78394	41.44743	15.89656	5.57441	0.1232690	0.21893950	2.7263816	21	11 9.4	20.1
479751 2014 EY_{16}	18.0	X	59.60269	69.06135	354.25546	1.21954	0.1641595	0.25867080	2.4395203	21	—	—
479752 2014 EO_{17}	18.3	X	57.93995	358.63317	100.72419	5.78473	0.1840175	0.27304940	2.3531082	21	1 17.2	19.8
479753 2014 EF_{18}	17.5	X	2.23227	72.03368	14.62852	10.29383	0.1446057	0.24658006	2.5186283	21	—	—
479754 2014 EG_{19}	16.7	X	49.41338	339.06531	6.68763	11.55466	0.0674699	0.21903324	2.7256036	21	12 7.6	20.6
479755 2014 ER_{20}	16.5	X	160.17832	178.51658	120.62656	5.55400	0.0495761	0.24523546	2.5278262	21	—	—
479756 2014 ED_{22}	17.9	X	22.18141	345.15917	160.01223	4.94978	0.1339698	0.27118222	2.3638971	21	1 12.5	20.2
479757 2014 EH_{22}	17.5	X	4.02952	270.93275	157.50298	8.20942	0.2464796	0.24435197	2.5339157	21	—	—
479758 2014 EU_{22}	16.8	X	99.05788	251.05006	4.18108	1.78120	0.0157547	0.20289920	2.8682422	21	10 8.4	20.8
479759 2014 EN_{23}	17.0	X	234.93589	154.34280	50.76163	14.20150	0.1894795	0.22885033	2.6470878	21	12 31.1	20.9
479760 2014 EF_{25}	17.2	X	264.96498	356.55562	117.85221	3.67743	0.0193483	0.21295772	2.7771998	21	11 7.7	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479761 2014 EJ_{25}	16.7	X	334.25953	28.28586	88.25741	6.53161	0.0903294	0.24472918	2.5313112	21	—	—
479762 2014 EN_{25}	16.7	X	335.18382	40.77732	65.96011	9.54722	0.1743966	0.24441608	2.5334725	21	—	—
479763 2014 EG_{26}	17.3	X	319.89594	38.05327	50.16573	2.98035	0.0442082	0.22489522	2.6780328	21	12 16.9	20.6
479764 2014 EM_{26}	17.2	X	40.84992	347.79457	45.01379	3.14029	0.0207878	0.23284759	2.6167057	21	—	—
479765 2014 EP_{26}	16.7	X	166.75066	27.11737	136.92490	2.84380	0.0311373	0.19399589	2.9553417	21	9 6.3	20.8
479766 2014 EW_{26}	17.0	X	84.15520	263.75678	34.69917	6.03701	0.0197795	0.21251932	2.7810178	21	11 14.8	20.8
479767 2014 EX_{26}	17.7	X	332.49693	71.37015	30.37016	5.19617	0.2051959	0.24057589	2.5603617	21	—	—
479768 2014 EG_{28}	16.8	X	193.76647	126.16611	67.38024	5.93626	0.1027736	0.21528754	2.7571271	21	11 11.2	21.0
479769 2014 EL_{28}	16.8	X	258.01837	179.97137	333.37655	11.89753	0.0571185	0.22996465	2.6385297	21	12 14.5	20.4
479770 2014 EO_{29}	16.8	X	154.88096	154.46269	126.97209	4.28166	0.0361465	0.23476656	2.6024270	21	—	—
479771 2014 EF_{30}	17.6	X	10.54853	23.80805	44.85302	5.84449	0.2064380	0.24255888	2.5463881	21	—	—
479772 2014 EX_{30}	16.6	X	287.66396	124.93421	11.01208	15.29219	0.0578138	0.22887909	2.6468661	21	—	—
479773 2014 EK_{31}	16.5	X	105.57150	235.52206	46.20121	5.46059	0.0846426	0.20836745	2.8178388	21	11 25.5	20.6
479774 2014 EM_{32}	16.2	X	80.97480	36.33078	164.97246	11.28544	0.0381867	0.17524934	3.1625092	21	7 8.9	20.8
479775 2014 EP_{32}	17.0	X	35.29643	205.27722	161.02493	5.94220	0.0379630	0.22059601	2.7127157	21	12 14.0	20.6
479776 2014 EB_{33}	16.7	X	55.73104	203.61176	128.83035	9.77506	0.0579713	0.21180905	2.7872315	21	11 30.3	20.7
479777 2014 ES_{34}	17.1	X	287.12633	119.69077	24.05547	13.39670	0.1357351	0.23289982	2.6163145	21	—	—
479778 2014 EY_{34}	15.2	X	338.50323	298.51996	16.53706	23.31366	0.1686725	0.17302111	3.1896031	21	7 12.9	19.4
479779 2014 EB_{36}	16.2	X	58.35955	179.18774	63.38749	6.53435	0.0782391	0.17865223	3.1222218	21	8 10.5	20.5
479780 2014 EN_{36}	17.6	X	336.37032	306.71752	123.74526	7.13186	0.2246791	0.23179926	2.6245893	21	12 30.6	19.9
479781 2014 ER_{38}	16.1	X	26.34993	258.55438	34.37363	10.52190	0.1063248	0.18480505	3.0525316	21	9 5.9	20.1
479782 2014 EV_{39}	16.3	X	234.15037	328.12434	114.79175	10.14946	0.0142336	0.18515754	3.0486562	21	8 18.2	20.6
479783 2014 EK_{44}	16.2	X	109.16550	125.01408	104.57705	7.11851	0.0301079	0.19686416	2.9265657	21	9 23.3	20.4
479784 2014 EP_{44}	16.1	X	80.67019	278.07364	10.42845	16.78119	0.0894281	0.20660013	2.8338857	21	11 1.8	20.4
479785 2014 EE_{45}	16.1	X	34.53435	144.95381	121.39276	12.09371	0.0948012	0.17377479	3.1803741	21	8 7.6	20.1
479786 2014 EV_{45}	17.0	X	101.83724	247.43694	88.96509	3.97006	0.0927147	0.23513824	2.5996839	21	—	—
479787 2014 EM_{47}	16.5	X	136.23244	104.49384	56.22301	9.19161	0.0579748	0.18249663	3.0782187	21	7 30.9	21.1
479788 2014 EN_{48}	16.5	X	351.45048	295.43581	138.28785	15.51664	0.1085336	0.23432469	2.6056976	21	—	—
479789 2014 EO_{48}	16.2	X	318.67348	76.70088	13.68907	22.17475	0.0579728	0.22696363	2.6617374	21	12 15.1	20.0
479790 2014 ET_{49}	16.0	X	138.35108	259.54652	272.23457	11.14767	0.1772578	0.18401026	3.0613150	21	8 16.7	21.1
479791 2014 ES_{50}	17.0	X	256.34783	136.73659	29.69717	13.09139	0.1717107	0.22856954	2.6492553	21	12 9.9	20.6
479792 2014 EB_{51}	17.7	X	15.98501	8.81346	124.86211	2.94307	0.1541442	0.26623274	2.3931049	21	—	—
479793 2014 FD_{1}	16.8	X	67.23568	149.88142	92.86602	2.90398	0.0006402	0.18298131	3.0727807	21	8 9.9	21.1
479794 2014 FS_{5}	17.1	X	118.56139	186.04115	75.60013	4.82040	0.0543263	0.21024133	2.8010702	21	11 14.4	21.1
479795 2014 FW_{5}	16.0	X	42.43913	255.39108	35.89691	9.25402	0.2099112	0.18630554	3.0361195	21	10 10.2	19.9
479796 2014 FH_{6}	16.2	X	341.89897	283.54687	32.38952	15.95472	0.0820307	0.17887016	3.1196852	21	7 25.7	20.5
479797 2014 FF_{8}	16.3	X	86.33075	50.86698	169.07979	8.65982	0.0872296	0.18021580	3.1041365	21	8 15.5	20.7
479798 2014 FW_{8}	16.5	X	57.34100	179.34629	172.68754	6.28306	0.0446779	0.22136514	2.7064285	21	12 24.5	20.2
479799 2014 FK_{15}	17.0	X	158.97945	243.98143	355.79411	11.31778	0.0558343	0.21937217	2.7227955	21	11 30.3	21.2
479800 2014 FP_{16}	17.1	X	271.09275	298.94021	181.09158	14.09239	0.1463104	0.22066676	2.7121358	21	11 7.4	20.6
479801 2014 FB_{20}	15.7	X	56.35192	270.93966	329.08979	25.27261	0.1532428	0.18000231	3.1065904	21	8 15.8	19.7
479802 2014 FD_{27}	16.3	X	42.81093	320.26172	344.29268	9.52856	0.0721542	0.19601529	2.9350089	21	10 3.7	20.2
479803 2014 FU_{27}	17.1	X	299.81428	176.05559	285.30302	2.90274	0.0652652	0.22200501	2.7012256	21	12 3.2	20.3
479804 2014 FD_{28}	16.6	X	58.62765	314.48735	334.54432	8.44954	0.0629246	0.19661967	2.9289913	21	10 3.3	20.6
479805 2014 FN_{28}	16.8	X	213.21458	211.47528	337.45055	10.72339	0.1108786	0.21883312	2.7272651	21	11 22.0	21.0
479806 2014 FC_{30}	16.5	X	122.84651	198.77203	6.38159	8.70701	0.0182794	0.19243268	2.9713251	21	9 6.0	20.6
479807 2014 FQ_{30}	17.7	X	113.45772	4.98675	55.42098	8.13045	0.2161284	0.27842795	2.3227056	21	3 10.2	20.7
479808 2014 FL_{31}	16.7	X	287.42136	142.46460	0.61307	11.79739	0.1255102	0.23233255	2.6205715	21	—	—
479809 2014 FG_{34}	16.7	X	43.30187	260.36900	11.42510	10.78088	0.0972643	0.18193987	3.0844954	21	8 31.8	20.8
479810 2014 FK_{35}	15.3	X	82.74655	195.70586	6.48694	23.45012	0.1169967	0.17786085	3.1314764	21	8 4.6	20.2
479811 2014 FW_{35}	16.1	X	173.13156	110.91777	28.08143	27.58343	0.1439047	0.18455957	3.0552377	21	8 27.9	21.6
479812 2014 FY_{35}	16.2	X	181.18162	157.99056	37.54226	17.07594	0.1625776	0.20371669	2.8605638	21	10 27.7	20.8
479813 2014 FB_{36}	17.4	X	317.98756	319.21995	154.93990	5.00789	0.1811341	0.23962355	2.5671410	21	—	—
479814 2014 FD_{36}	16.4	X	103.49352	198.53989	13.62664	10.16180	0.0818022	0.18798923	3.0179641	21	8 31.1	20.9
479815 2014 FN_{36}	16.9	X	272.89733	132.32421	43.25813	14.09389	0.1878507	0.23039664	2.6352306	21	—	—
479816 2014 FD_{39}	17.2	X	148.67985	226.06624	24.06574	13.75377	0.0920037	0.21349538	2.7725352	21	11 30.3	21.7
479817 2014 FN_{46}	16.2	X	120.94344	112.01635	52.81673	17.08240	0.1712316	0.17548215	3.1597115	21	7 31.4	21.5
479818 2014 FJ_{51}	16.7	X	210.40781	154.20224	67.67866	14.15306	0.1227099	0.22568916	2.6717485	21	12 31.9	20.7
479819 2014 FS_{51}	16.9	X	251.36847	148.20225	41.34823	11.18358	0.1404964	0.22916211	2.6446863	21	—	—
479820 2014 FP_{53}	16.3	X	266.15162	29.33289	38.35673	12.17604	0.1036271	0.18822656	3.0154268	21	8 31.2	20.7
479821 2014 FL_{57}	17.0	X	212.74322	239.36977	295.00033	3.55797	0.2374198	0.21350326	2.7724669	21	10 23.9	21.5
479822 2014 FA_{58}	17.3	X	21.19853	27.74002	11.60704	5.68343	0.0429893	0.22351517	2.6890449	21	—	—
479823 2014 FR_{62}	16.7	X	254.09928	57.47565	93.02491	12.33131	0.1270288	0.22044603	2.7139460	21	11 26.0	20.3
479824 2014 FZ_{62}	17.2	X	327.99344	329.52875	216.28160	5.34021	0.1191245	0.26153091	2.4217020	21	—	—
479825 2014 FF_{63}	15.8	X	99.46230	296.09159	248.91499	12.90616	0.1376010	0.17367664	3.1815722	21	7 22.1	20.7
479826 2014 FE_{64}	16.4	X	198.02862	152.29995	342.06828	9.89137	0.0875607	0.19093506	2.9868421	21	9 1.9	21.0
479827 2014 FG_{64}	17.1	X	317.90380	180.36959	309.97395	4.29967	0.1292503	0.23709618	2.5853520	21	—	—
479828 2014 FR_{64}	17.2	X	307.78063	331.00986	171.09056	9.34142	0.0906691	0.23681474	2.5873999	21	—	—
479829 2014 FV_{64}	15.9	X	320.46458	336.35367	50.02217	12.81489	0.0638298	0.19713573	2.9238774	21	9 28.9	19.8
479830 2014 FY_{64}	16.1	X	66.94041	358.76924	254.55268	9.61867	0.1808278	0.17700808	3.1415260	21	9 12.2	20.8
479831 2014 FQ_{65}	16.9	X	248.08676	332.12986	182.99062	9.60105	0.1042782	0.21831499	2.7315784	21	11 26.4	20.7
479832 2014 FC_{66}	16.9	X	293.84864	270.21845	216.47973	10.61051	0.2534615	0.22972887	2.6403348	21	12 9.6	19.4
479833 2014 FM_{66}	16.4	X	350.37111	359.19544	78.62301	14.49528	0.0128128	0.22487921	2.6781600	21	—	—
479834 2014 FU_{66}	15.9	X	91.31940	38.90224	163.24394	28.14689	0.1480988	0.17052477	3.2206564	21	8 6.8	20.9
479835 2014 FW_{67}	15.9	X	186.28496	335.19285	178.49471	13.71442	0.0686422	0.18907376	3.0064124	21	9 13.1	20.3
479836 2014 GD_{1}	16.6	X	359.18807	91.41627	12.60632	14.21147	0.1534653	0.23715489	2.5849253	21	—	—
479837 2014 GL_{3}	17.0	X	233.65075	176.71429	354.26120	6.95767	0.0759275	0.21806115	2.7336979	21	11 29.2	20.9
479838 2014 GR_{3}	16.1	X	60.49655	132.93089	189.38782	19.56507	0.2102390	0.20201776	2.8765793	21	12 10.6	20.7
479839 2014 GL_{4}	16.6	X	97.72813	226.62840	7.10158	3.81336	0.1403399	0.18527659	3.0473501	21	9 23.5	21.0
479840 2014 GF_{5}	16.7	X	175.15190	291.18942	226.24913	2.53749	0.0945952	0.19138914	2.9821159	21	9 4.9	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479841 2014 GL_8	18.0	X	33.95535	60.80490	73.82716	2.47400	0.1299391	0.27295356	2.3536590	21	1 20.5	20.0
479842 2014 GM_{11}	16.4	X	143.02907	196.57680	357.30198	12.90757	0.0692185	0.19243148	2.9713374	21	9 17.4	20.8
479843 2014 GY_{12}	16.5	X	337.41613	74.56031	358.54562	8.30054	0.1596500	0.22623567	2.6674441	21	12 30.1	19.4
479844 2014 GE_{15}	15.9	X	335.67603	320.50239	27.68273	16.70626	0.0828651	0.18436879	3.0573450	21	9 1.5	20.0
479845 2014 GH_{18}	16.4	X	88.65597	232.87255	30.23583	19.31235	0.0910153	0.18516885	3.0485320	21	10 15.6	20.8
479846 2014 GS_{18}	17.4	X	336.48623	359.70883	104.29638	5.81431	0.1663444	0.23684482	2.5871808	21	—	—
479847 2014 GT_{18}	16.1	X	148.19582	105.94136	114.73581	10.93644	0.1161714	0.20162586	2.8803055	21	10 31.8	20.8
479848 2014 GV_{18}	16.7	X	307.67967	2.05696	150.14256	12.67149	0.1284209	0.23719853	2.5846082	21	—	—
479849 2014 GD_{21}	16.7	X	261.92924	138.89224	354.12259	8.44981	0.1297414	0.21664079	2.7456335	21	11 7.6	20.4
479850 2014 GZ_{22}	16.6	X	56.91984	315.54569	358.78737	12.68242	0.0775621	0.19884818	2.9070666	21	11 3.0	20.7
479851 2014 GA_{26}	17.0	X	262.54441	125.62870	13.15205	8.53744	0.1481451	0.21554137	2.7549621	21	11 13.6	20.6
479852 2014 GR_{26}	17.1	X	274.21200	148.96692	9.98123	9.53608	0.1394625	0.22534644	2.6744568	21	—	—
479853 2014 GQ_{27}	17.1	X	254.74306	307.48845	201.31176	7.19198	0.1634569	0.21459764	2.7630331	21	11 16.9	20.8
479854 2014 GV_{27}	15.8	X	281.81553	334.08353	47.56519	11.88129	0.0542190	0.16788258	3.2543603	21	7 26.5	20.5
479855 2014 GG_{28}	16.6	X	162.97273	315.34610	210.39211	8.82155	0.0353977	0.17939158	3.1136372	21	8 30.3	21.3
479856 2014 GD_{29}	17.1	X	137.56272	98.88046	176.28658	4.54849	0.0205666	0.21141200	2.7907202	21	12 20.7	21.1
479857 2014 GX_{30}	16.3	X	258.27491	28.25057	33.87557	10.17183	0.0877194	0.18089603	3.0963499	21	8 14.2	20.9
479858 2014 GT_{31}	17.1	X	345.21911	68.18170	42.46442	13.73920	0.1344324	0.23593875	2.5938003	21	—	—
479859 2014 GW_{31}	16.5	X	355.33083	292.47394	170.19369	13.24845	0.1516291	0.23778551	2.5803530	21	—	—
479860 2014 GB_{32}	16.6	X	337.19877	48.99308	65.07342	8.35303	0.0546340	0.23038690	2.6353048	21	—	—
479861 2014 GC_{32}	16.7	X	327.79108	85.24100	47.93422	18.04445	0.1183421	0.23583180	2.5945844	21	—	—
479862 2014 GA_{36}	16.5	X	355.12009	283.90322	103.07813	4.73055	0.1010571	0.20972906	2.8056294	21	11 19.6	19.9
479863 2014 GE_{36}	16.7	X	263.92631	357.05441	135.77370	4.78299	0.0463891	0.21069777	2.7970233	21	11 25.3	20.4
479864 2014 GC_{37}	16.7	X	186.68569	182.34754	61.98284	6.18464	0.0168951	0.22622303	2.6675435	21	—	—
479865 2014 GM_{38}	16.2	X	220.53626	272.07328	172.93150	15.64381	0.0978565	0.18222444	3.0812834	21	7 23.0	21.2
479866 2014 GY_{38}	16.3	X	37.45415	96.37320	165.56928	12.68999	0.0766376	0.17337027	3.1853193	21	8 1.5	20.7
479867 2014 GJ_{39}	16.5	X	22.65088	253.01218	123.55407	7.27143	0.0801834	0.21445098	2.7642927	21	12 14.9	20.1
479868 2014 GS_{39}	16.0	X	154.45672	327.80852	192.40857	12.44907	0.0433799	0.18204450	3.0833135	21	8 13.7	20.8
479869 2014 GF_{40}	17.7	X	34.12632	331.37512	164.76957	6.90035	0.1974165	0.26565107	2.3965969	21	1 20.5	19.5
479870 2014 GG_{40}	16.3	X	83.51911	203.30028	63.02784	10.09769	0.1272676	0.18634101	3.0357343	21	10 19.7	20.8
479871 2014 GV_{40}	16.6	X	159.58174	65.36916	109.09700	10.10206	0.0647617	0.18714812	3.0269999	21	9 14.5	21.3
479872 2014 GQ_{41}	16.3	X	35.37065	270.43910	22.51827	9.87525	0.0509367	0.17742363	3.1366188	21	9 10.6	20.6
479873 2014 GR_{44}	16.1	X	357.51585	30.63631	43.11159	22.23140	0.0627129	0.22579112	2.6709442	21	—	—
479874 2014 GR_{46}	16.9	X	314.16327	85.49036	37.49422	16.81947	0.0884414	0.22554877	2.6728571	21	—	—
479875 2014 GX_{46}	17.2	X	310.27214	349.50847	153.95949	4.52555	0.1923168	0.23470232	2.6029019	21	—	—
479876 2014 GD_{51}	16.3	X	184.15429	44.18103	152.81466	15.58046	0.0828228	0.20425999	2.8554892	21	11 8.9	20.9
479877 2014 HK_1	15.7	X	316.19310	308.75380	34.32352	17.07602	0.1276179	0.17253476	3.1955943	21	7 14.5	20.1
479878 2014 HX_3	17.1	X	224.80291	334.92230	208.84070	7.69182	0.1369961	0.21580326	2.7527328	21	11 28.6	21.1
479879 2014 HE_6	16.0	X	160.91842	138.53157	6.84773	15.77218	0.0161054	0.17962290	3.1109635	21	8 11.4	20.7
479880 2014 HF_6	16.6	X	146.38258	292.65721	216.90932	4.76902	0.0872173	0.17758427	3.1347270	21	7 26.2	21.4
479881 2014 HO_6	16.3	X	33.77924	222.93161	81.64816	6.52864	0.1276517	0.18006458	3.1058741	21	10 3.0	20.3
479882 2014 HL_7	17.1	X	285.17353	303.57983	192.80281	12.77674	0.2126070	0.22480888	2.6787185	21	12 10.9	20.2
479883 2014 HM_8	16.5	X	213.48986	277.46215	199.55497	18.60051	0.0796142	0.18465274	3.0542099	21	8 23.6	21.4
479884 2014 HO_9	16.7	X	132.69799	12.03819	180.39788	5.53371	0.0736793	0.18072490	3.0983042	21	9 2.4	21.4
479885 2014 HX_9	16.1	X	35.64404	287.39053	41.61604	12.95275	0.1710845	0.18857079	3.0117559	21	11 9.2	20.0
479886 2014 HC_{12}	16.4	X	148.77356	156.42262	44.56040	12.14712	0.0864043	0.18926917	3.0043426	21	10 6.4	21.1
479887 2014 HA_{16}	17.3	X	116.07317	47.62021	208.09819	9.53062	0.0651358	0.19634423	2.9317298	21	11 3.1	21.5
479888 2014 HP_{16}	17.3	X	272.48248	327.96077	209.21285	5.70125	0.0636309	0.22921961	2.6442440	21	—	—
479889 2014 HM_{19}	16.4	X	129.65436	162.24333	25.05528	10.36551	0.0474621	0.17776193	3.1326379	21	8 26.9	21.1
479890 2014 HK_{22}	16.1	X	136.77605	106.65315	48.49599	20.28945	0.1189251	0.17218003	3.1999820	21	8 1.2	21.4
479891 2014 HL_{24}	16.9	X	64.34796	336.20882	22.51479	13.90864	0.0412733	0.22077881	2.7112181	21	—	—
479892 2014 HP_{25}	17.6	X	284.11524	98.43359	46.35110	5.78974	0.0579241	0.22143617	2.7058498	21	—	—
479893 2014 HS_{25}	16.6	X	297.77340	235.21554	197.56484	5.74267	0.0736568	0.19888668	2.9066914	21	10 19.6	20.3
479894 2014 HH_{26}	16.1	X	355.25734	292.23386	38.57164	10.53008	0.1169787	0.17537454	3.1610038	21	9 5.6	20.0
479895 2014 HM_{26}	16.9	X	359.89419	105.34631	89.62727	14.26416	0.0913863	0.26408704	2.4060500	21	2 28.4	19.8
479896 2014 HY_{26}	16.2	X	356.92447	142.56956	197.77069	10.84513	0.0835877	0.18325798	3.0696872	21	9 13.2	20.0
479897 2014 HY_{27}	17.2	X	324.43156	350.12753	162.22715	4.88632	0.1226128	0.24347970	2.5399639	21	—	—
479898 2014 HC_{33}	16.3	X	3.97486	265.70601	50.98151	16.58631	0.0866597	0.17337297	3.1852861	21	9 4.0	20.7
479899 2014 HS_{34}	16.7	X	334.42134	320.33207	131.52260	5.84091	0.0778956	0.22013304	2.7165179	21	—	—
479900 2014 HQ_{36}	16.6	X	347.28244	154.97441	180.87492	10.24044	0.1515318	0.17139451	3.2097518	21	8 21.0	20.4
479901 2014 HT_{37}	16.8	X	174.19283	43.21943	153.38174	8.28758	0.0491087	0.19624854	2.9326828	21	10 27.5	21.2
479902 2014 HK_{40}	16.5	X	81.15071	211.04687	47.12705	10.48023	0.0954825	0.18785690	3.0193812	21	10 3.6	20.9
479903 2014 HR_{40}	16.8	X	206.11599	305.08684	187.90021	11.32356	0.0538614	0.18526690	3.0474564	21	9 9.2	21.4
479904 2014 HW_{42}	16.9	X	268.45952	70.96588	62.67482	7.01109	0.0979194	0.21204544	2.7851597	21	11 24.3	20.3
479905 2014 HF_{43}	16.7	X	20.72373	230.82699	189.38584	15.12668	0.0933109	0.23610902	2.5925531	21	—	—
479906 2014 HB_{44}	17.0	X	321.50870	359.27236	105.61053	5.66661	0.0636322	0.22020710	2.7159087	21	—	—
479907 2014 HV_{44}	16.8	X	153.62433	120.06312	69.61204	1.99392	0.0639762	0.18974932	2.9992723	21	9 23.9	21.2
479908 2014 HC_{45}	16.9	X	69.23102	325.08236	31.78720	13.82619	0.0998478	0.21868983	2.7284563	21	—	—
479909 2014 HN_{45}	15.6	X	293.84822	294.14954	81.42617	10.73222	0.0930889	0.17265692	3.1940868	21	7 27.8	20.0
479910 2014 HF_{46}	16.2	X	22.50920	231.98091	70.92296	11.34104	0.0903456	0.17568850	3.1572368	21	9 11.7	20.4
479911 2014 HE_{47}	16.3	X	305.18719	221.67121	187.25495	12.04393	0.0526219	0.19224378	2.9732711	21	9 30.2	20.2
479912 2014 HF_{47}	15.0	X	299.38823	67.90665	181.75743	9.59800	0.1751112	0.12357276	3.9919725	21	2 19.4	20.6
479913 2014 HJ_{47}	17.3	X	125.55032	150.75946	137.73030	4.25096	0.0644532	0.21137296	2.7910638	21	12 24.6	21.4
479914 2014 HO_{49}	17.3	X	349.67673	17.05670	57.09365	3.09360	0.0534317	0.22021643	2.7158320	21	—	—
479915 2014 HF_{50}	16.3	X	292.55229	26.43062	34.34765	17.10881	0.1914436	0.19671954	2.9279999	21	9 17.7	20.1
479916 2014 HD_{52}	16.4	X	60.43815	244.28126	37.52147	16.48959	0.1318185	0.18317359	3.0706300	21	10 12.3	20.7
479917 2014 HN_{52}	16.3	X	344.88219	139.10895	189.68497	10.62894	0.0806998	0.17400578	3.1775589	21	8 8.6	20.5
479918 2014 HY_{55}	17.3	X	311.90679	106.10603	41.30403	8.81730	0.1416003	0.23760638	2.5816497	21	—	—
479919 2014 HH_{68}	16.3	X	287.94787	312.76032	71.53609	6.46652	0.0256148	0.17535077	3.1612894	21	8 10.3	20.7
479920 2014 HO_{77}	16.8	X	204.49450	18.64053	190.46294	6.11355	0.0065525	0.21320253	2.7750735	21	12 20.9	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
479921 2014 HQ_{96}	16.0	X	190.86290	35.52358	73.93286	8.24585	0.0714111	0.17290380	3.1910456	21	7 26.4	20.9
479922 2014 HV_{97}	16.9	X	254.18260	257.10605	177.03136	11.21421	0.1279142	0.18349479	3.0670455	21	8 12.5	21.6
479923 2014 HH_{100}	15.8	X	297.52031	327.19798	46.46900	17.70724	0.1340372	0.17180883	3.2045894	21	7 27.5	20.4
479924 2014 HJ_{110}	15.6	X	273.80035	121.32219	160.21111	9.45243	0.1063637	0.12489988	3.9636446	21	3 10.3	21.3
479925 2014 HW_{121}	17.4	X	343.57976	284.19926	169.70450	6.26862	0.0126452	0.22075095	2.7114463	21	—	—
479926 2014 HG_{122}	15.9	X	289.65440	171.10810	195.94938	5.25906	0.0787808	0.16890621	3.2411986	21	7 10.6	20.4
479927 2014 HX_{122}	16.6	X	127.73017	179.10169	40.48020	1.58578	0.0873780	0.19057629	2.9905895	21	10 3.5	20.9
479928 2014 HZ_{125}	17.3	X	302.70249	54.98446	43.78246	4.89332	0.0338790	0.21107758	2.7936670	21	12 3.6	20.9
479929 2014 HR_{126}	17.0	X	259.98209	20.78938	70.96924	2.43856	0.0171272	0.19107232	2.9854115	21	9 30.8	21.2
479930 2014 HE_{128}	15.9	X	183.12581	92.25042	33.12169	16.18321	0.0422165	0.17518866	3.1632394	21	8 13.3	20.8
479931 2014 HL_{128}	16.2	X	15.73519	304.07841	38.30288	14.35459	0.1838427	0.18681957	3.0305477	21	10 29.1	19.7
479932 2014 HO_{130}	16.2	X	58.42608	271.15732	46.28264	12.54925	0.0162494	0.20469835	2.8514110	21	11 5.9	20.0
479933 2014 HP_{130}	17.1	X	276.78454	114.93427	48.76612	11.78747	0.0978945	0.23135383	2.6279570	21	—	—
479934 2014 HF_{136}	17.7	X	320.70881	345.41735	154.81390	1.67839	0.0970785	0.23543042	2.5975325	21	—	—
479935 2014 HL_{141}	16.6	X	311.23911	74.77695	12.46666	6.79040	0.0941025	0.20974856	2.8054555	21	11 25.9	20.0
479936 2014 HU_{141}	17.1	X	334.62645	191.90988	236.96847	3.19262	0.0836901	0.21086688	2.7955277	21	12 10.7	20.5
479937 2014 HH_{142}	17.4	X	268.91235	247.45100	265.68503	2.49292	0.0424040	0.21595962	2.7514039	21	12 27.8	21.0
479938 2014 HT_{145}	16.5	X	55.03004	252.66023	100.56229	7.41794	0.0513759	0.21670485	2.7450923	21	12 23.2	20.1
479939 2014 HN_{150}	16.3	X	310.56820	313.49110	85.84993	3.10116	0.1151554	0.19593220	2.9358386	21	9 21.3	19.9
479940 2014 HQ_{150}	16.7	X	265.63044	92.99250	359.19960	1.59369	0.0236677	0.20037680	2.8922628	21	10 7.2	20.6
479941 2014 HV_{150}	16.3	X	319.65679	324.72830	42.91301	10.29523	0.0960924	0.17381823	3.1798442	21	8 27.9	20.5
479942 2014 HL_{153}	16.8	X	64.87444	71.93898	206.24395	9.13212	0.0677007	0.18410522	3.0602623	21	9 28.7	21.1
479943 2014 HL_{155}	16.4	X	141.13993	325.32609	207.68550	12.72530	0.1356547	0.17789756	3.1310455	21	8 18.8	21.6
479944 2014 HZ_{155}	16.5	X	235.54922	225.04993	210.28397	8.56469	0.0639165	0.17525287	3.1624667	21	7 30.4	21.3
479945 2014 HU_{161}	16.7	X	333.13187	9.89313	85.69338	14.92100	0.1517625	0.22296500	2.6934665	21	—	—
479946 2014 HQ_{163}	17.1	X	294.36434	265.90289	223.18495	8.42880	0.1241406	0.22895966	2.6462451	21	12 27.9	20.1
479947 2014 HV_{167}	15.6	X	334.61868	287.39642	76.68786	23.17023	0.0945122	0.17877631	3.1207769	21	9 25.3	20.1
479948 2014 HF_{169}	16.2	X	117.91274	158.14218	59.41493	9.76040	0.0492986	0.17857020	3.1231779	21	9 20.6	20.9
479949 2014 HD_{172}	16.5	X	163.47691	30.41426	165.35313	8.01540	0.1462300	0.19242750	2.9713783	21	10 12.7	21.4
479950 2014 HL_{176}	17.0	X	281.81964	247.99181	252.15297	4.97418	0.0270973	0.21704736	2.7422037	21	12 30.2	20.7
479951 2014 HW_{178}	17.0	X	297.71341	296.07013	191.02055	12.95079	0.1249423	0.22753566	2.6572744	21	12 30.1	20.3
479952 2014 HH_{181}	17.1	X	230.63501	67.74589	129.13272	8.98559	0.1381945	0.21596207	2.7513831	21	12 20.9	21.1
479953 2014 HX_{181}	17.1	X	324.64310	63.07450	63.97773	12.96854	0.1283659	0.22848918	2.6498764	21	—	—
479954 2014 HG_{182}	16.5	X	142.60840	111.51198	41.08868	16.63788	0.1657413	0.17904955	3.1176012	21	8 7.3	21.9
479955 2014 HP_{182}	16.5	X	315.82839	249.93216	177.62284	14.67463	0.1392658	0.21269303	2.7795034	21	11 9.7	19.8
479956 2014 HP_{185}	16.3	X	115.10752	7.11028	179.02338	18.75008	0.0619512	0.17619780	3.1511499	21	8 2.2	21.2
479957 2014 HP_{188}	15.5	X	79.19045	190.24529	65.93251	29.47939	0.1573669	0.17426063	3.1744600	21	10 18.1	20.7
479958 2014 HA_{195}	15.6	X	55.80371	56.11795	230.74689	20.76224	0.1179261	0.17724165	3.1387654	21	10 1.1	20.2
479959 2014 JC_{4}	16.5	X	25.37103	86.09329	217.69546	15.68495	0.1463446	0.17320817	3.1873063	21	9 12.1	20.7
479960 2014 JA_{8}	16.1	X	325.79709	318.13171	63.18184	10.81965	0.0405259	0.18191149	3.0848162	21	9 29.0	20.4
479961 2014 JM_{10}	16.2	X	317.65089	335.43639	66.22879	13.99441	0.0914616	0.18530867	3.0469984	21	10 11.8	20.2
479962 2014 JS_{10}	16.6	X	66.04955	250.68110	69.12412	11.14720	0.0900525	0.19296974	2.9658094	21	11 26.6	20.7
479963 2014 JN_{11}	16.3	X	251.30877	47.20923	67.97258	13.02362	0.0611172	0.19237258	2.9719438	21	10 17.7	20.6
479964 2014 JU_{11}	17.1	X	17.43275	31.36273	61.55399	14.77085	0.2236308	0.23702097	2.5858989	21	—	—
479965 2014 JJ_{17}	16.1	X	82.56629	44.75165	185.32241	9.16561	0.0738492	0.17874108	3.1211871	21	8 20.9	20.6
479966 2014 JO_{27}	15.6	X	330.31613	286.02411	98.03303	22.52862	0.1079695	0.18531877	3.0468876	21	10 13.6	19.9
479967 2014 JM_{31}	16.4	X	239.07213	90.68374	53.08608	15.72163	0.0971202	0.20319373	2.8654699	21	10 31.8	20.5
479968 2014 JZ_{35}	16.2	X	126.54515	132.78814	47.43446	14.29573	0.0832087	0.17055430	3.2202847	21	8 19.3	21.3
479969 2014 JF_{36}	16.8	X	217.99372	330.46227	221.34489	7.98494	0.1879889	0.21196440	2.7858695	21	11 24.7	21.0
479970 2014 JN_{36}	16.4	X	164.40285	95.05573	54.40205	13.09610	0.1136850	0.17479070	3.1680389	21	8 21.7	21.6
479971 2014 JT_{37}	16.8	X	122.66003	37.30128	212.71114	9.83590	0.0579854	0.19121148	2.9839628	21	11 1.9	21.3
479972 2014 JB_{38}	16.2	X	45.78742	187.72167	83.33498	12.27236	0.0454077	0.16853365	3.2459735	21	8 27.6	20.8
479973 2014 JJ_{39}	16.7	X	303.80378	314.05966	212.39286	5.45803	0.1742457	0.23622626	2.5916953	21	—	—
479974 2014 JV_{42}	16.3	X	101.45670	19.93435	209.32679	15.64669	0.0297844	0.17265127	3.1941566	21	9 3.4	21.1
479975 2014 JM_{43}	15.3	X	86.07289	184.31448	86.26231	19.32128	0.1870254	0.17864387	3.1223193	21	11 6.2	20.4
479976 2014 JL_{45}	16.7	X	274.15543	75.84902	42.71360	5.73173	0.0678657	0.20583195	2.8409322	21	11 15.4	20.3
479977 2014 JS_{45}	16.7	X	102.05106	9.41939	228.48239	4.75649	0.0987075	0.18091879	3.0960901	21	9 26.4	21.3
479978 2014 JB_{47}	16.1	X	119.60771	163.41591	34.88940	9.48771	0.1608039	0.17306026	3.1891221	21	9 7.6	21.2
479979 2014 JB_{53}	15.9	X	45.71892	250.55024	52.45923	15.93467	0.0388347	0.18059117	3.0998336	21	10 9.1	20.3
479980 2014 JE_{58}	16.1	X	205.46594	20.21306	130.27282	12.69002	0.0289915	0.18867592	3.0106370	21	10 9.4	20.6
479981 2014 JJ_{59}	16.2	X	334.76358	155.34106	212.93143	12.24837	0.1293424	0.17640760	3.1486510	21	9 10.9	20.2
479982 2014 JZ_{63}	16.7	X	149.88114	347.66093	217.79489	8.49335	0.0212192	0.18693250	3.0293272	21	10 5.1	21.0
479983 2014 JJ_{64}	16.7	X	359.13350	53.46075	51.47012	13.51262	0.1206115	0.23226584	2.6210732	21	—	—
479984 2014 JK_{65}	16.8	X	316.92641	299.86627	164.35853	4.60869	0.0394577	0.21323784	2.7747671	21	12 30.4	20.5
479985 2014 JD_{72}	16.6	X	319.00750	73.70812	48.69859	14.10536	0.0489663	0.21899136	2.7259511	21	—	—
479986 2014 JV_{77}	16.6	X	269.26660	91.64966	97.66897	12.39504	0.1309045	0.22894866	2.6463298	21	—	—
479987 2014 JE_{79}	15.5	X	155.50257	292.15163	219.16910	24.91296	0.1645308	0.17338703	3.1851140	21	8 2.9	21.2
479988 2014 KH_{1}	16.1	X	252.52329	74.39830	81.44526	16.18995	0.1118296	0.21254367	2.7808054	21	11 30.7	19.9
479989 2014 KT_{8}	17.6	X	340.54696	151.09833	345.21568	3.65941	0.1764144	0.23991824	2.5650384	21	—	—
479990 2014 KT_{18}	17.1	X	270.18900	308.07415	199.12141	4.68045	0.0971910	0.21441954	2.7645629	21	12 14.8	20.6
479991 2014 KQ_{22}	16.4	X	138.94568	326.57075	248.75370	9.53487	0.0545519	0.19297004	2.9658063	21	10 4.7	20.9
479992 2014 KT_{22}	16.8	X	230.74224	52.01281	131.45526	13.39022	0.0919067	0.21622132	2.7491834	21	12 12.2	20.8
479993 2014 KN_{23}	16.9	X	243.20281	297.47806	226.06871	9.91161	0.1808036	0.21101908	2.7941834	21	11 17.6	20.8
479994 2014 KW_{30}	16.7	X	97.77160	30.81939	219.75241	11.20270	0.0641821	0.18109147	3.0941217	21	10 2.5	21.4
479995 2014 KB_{41}	16.0	X	40.13737	254.05412	48.88653	12.94571	0.0532381	0.17694762	3.1422415	21	10 2.0	20.4
479996 2014 KD_{42}	16.1	X	134.18846	124.88628	93.35345	12.06316	0.0519310	0.18545405	3.0454058	21	10 11.9	20.8
479997 2014 KT_{62}	16.6	X	206.54422	293.07124	206.13516	4.23993	0.0497036	0.18075500	3.0979602	21	9 17.9	21.1
479998 2014 KA_{63}	16.7	X	265.14440	93.09373	50.99763	8.51383	0.1749352	0.21018573	2.8015641	21	11 20.8	20.4
479999 2014 KH_{64}	15.9	X	194.00723	251.17205	243.41275	15.87758	0.0653547	0.17218904	3.1998704	21	8 21.3	21.1
480000 2014 KR_{65}	15.9	X	255.22274	220.78830	247.27483	9.44547	0.0353491	0.18316308	3.0707474	21	10 7.1	20.3