ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 TT

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
412001	2012 KV_{35}	16.0	X	15.02389	240.14808	206.71627	16.22945	0.1042856	0.18008973	3.1055850	21	—	—
412002	2012 KB_{36}	16.5	X	84.99092	242.19588	205.08379	14.49387	0.1268943	0.20203280	2.8764365	21	2 24.9	20.5
412003	2012 KG_{44}	15.9	X	351.90077	311.60252	215.51671	9.81021	0.0573728	0.19100083	2.9861564	21	1 20.9	20.1
412004	2012 LN_{7}	15.8	X	57.24906	203.82153	211.38235	24.51234	0.0328737	0.17587427	3.1550132	21	—	—
412005	2012 LT_{26}	15.7	X	222.52999	63.28547	126.38737	14.17212	0.1733000	0.17286549	3.1915171	21	11 25.9	20.8
412006	2012 MU	15.7	X	86.42664	281.53002	110.90448	10.25998	0.1057046	0.17772243	3.1331022	21	—	—
412007	2012 MS_{7}	15.3	X	243.30119	126.57652	81.58791	10.99332	0.0605827	0.17217633	3.2000278	21	—	—
412008	2012 PU_{16}	17.5	X	89.24079	18.88660	331.78280	20.32619	0.0448619	0.36974235	1.9225158	21	—	—
412009	2012 RB_{2}	17.9	X	285.05925	90.44164	154.08255	22.81796	0.0733033	0.38973567	1.8561908	21	—	—
412010	2012 TC_{19}	16.2	X	281.25707	55.04050	8.22949	25.11899	0.1928412	0.20869448	2.8148942	21	9 6.8	20.1
412011	2012 TX_{230}	17.1	X	313.74699	6.48171	105.62213	2.78602	0.1057578	0.23038753	2.6353000	21	—	—
412012	2012 XB_{111}	16.5	X	279.87755	170.68392	284.28422	6.92730	0.1875568	0.21200933	2.7854759	21	10 3.7	20.1
412013	2012 XX_{119}	17.6	X	60.48389	231.25128	293.45204	16.42496	0.0514105	0.38350070	1.8762553	21	3 18.7	19.6
412014	2013 AE_{17}	15.7	X	48.30741	2.66729	274.14086	8.07235	0.0591452	0.18399901	3.0614398	21	9 1.1	20.0
412015	2013 AV_{19}	17.6	X	73.44658	209.90714	310.95982	19.69352	0.0930097	0.38168051	1.8822157	21	4 10.3	19.7
412016	2013 AO_{127}	16.0	X	72.85955	132.10696	145.92659	10.55159	0.0776164	0.19227880	2.9729102	21	10 15.9	20.3
412017	2013 AQ_{169}	16.0	X	50.14047	79.27711	181.16353	9.51186	0.0426008	0.17617596	3.1514103	21	8 12.8	20.5
412018	2013 BQ_{20}	17.6	X	270.19605	179.79218	132.86308	23.28095	0.0442835	0.37993169	1.8879872	21	3 26.9	20.0
412019	2013 BX_{39}	17.1	X	71.40430	282.57216	307.27476	18.84534	0.2665780	0.27869250	2.3212355	21	9 3.6	20.5
412020	2013 CT_{9}	16.2	X	282.45863	35.82088	125.76197	14.28826	0.0658896	0.22119869	2.7077860	21	—	—
412021	2013 CR_{17}	17.7	X	90.69677	141.06154	87.30762	3.29714	0.1595605	0.28350737	2.2948791	21	9 21.2	20.9
412022	2013 CD_{22}	18.7	X	185.46706	256.81640	161.68809	23.76917	0.0827293	0.38904066	1.8584008	21	5 9.2	21.4
412023	2013 CE_{33}	16.3	X	64.07898	284.15861	130.92729	22.46437	0.0632418	0.23261876	2.6184215	21	—	—
412024	2013 CX_{35}	18.4	X	65.72169	330.93355	169.24795	22.54099	0.0705475	0.37445205	1.9063614	21	3 2.0	19.7
412025	2013 CE_{37}	17.7	X	125.70046	307.46574	256.83862	4.46315	0.1436498	0.28970944	2.2620087	21	9 21.4	21.2
412026	2013 CO_{37}	16.3	X	319.55285	317.01885	271.65215	15.84631	0.1509786	0.24425983	2.5345528	21	1 28.5	19.8
412027	2013 CU_{64}	17.9	X	71.04276	59.09432	175.18068	3.82979	0.1812145	0.28071333	2.3100818	21	9 5.7	20.7
412028	2013 CP_{79}	17.7	X	72.85775	210.38865	292.89349	18.05191	0.0267693	0.38018387	1.8871522	21	3 3.4	19.9
412029	2013 CK_{84}	17.9	X	117.66870	33.91955	344.98492	19.01717	0.0213363	0.34527262	2.0123088	21	—	—
412030	2013 CK_{109}	17.5	X	62.87378	105.21312	107.77639	7.24984	0.1902620	0.27075979	2.3663552	21	7 26.9	20.0
412031	2013 CA_{112}	17.7	X	107.53142	248.12437	329.53556	7.17334	0.0602837	0.29099744	2.2553292	21	9 12.1	20.7
412032	2013 CJ_{113}	17.6	X	122.11925	271.39543	343.74725	6.27751	0.1358032	0.30057248	2.2071740	21	11 24.7	20.9
412033	2013 CV_{117}	18.1	X	159.33594	125.84843	93.89185	6.10605	0.0402320	0.30561106	2.1828472	21	11 23.9	20.7
412034	2013 CX_{143}	18.5	X	125.82892	45.89286	211.24871	1.43801	0.0837684	0.30708056	2.1758778	21	12 2.9	21.2
412035	2013 CX_{144}	18.3	X	126.04473	88.90253	156.29034	3.71082	0.1500348	0.30269484	2.1968448	21	11 19.2	21.6
412036	2013 CO_{153}	18.0	X	29.64446	229.05215	24.18181	4.71321	0.1715089	0.27055840	2.3675294	21	7 26.6	20.1
412037	2013 CW_{163}	17.8	X	105.65084	282.21363	2.01000	4.35588	0.1552448	0.30375692	2.1917210	21	12 18.4	21.1
412038	2013 CM_{173}	17.4	X	315.41543	301.67958	338.43549	8.33111	0.0972246	0.25722192	2.4486727	21	4 9.9	20.5
412039	2013 CT_{173}	18.4	X	205.57042	339.57558	160.44631	5.16811	0.0669974	0.29736798	2.2230023	21	9 29.8	21.2
412040	2013 CU_{184}	17.5	X	142.15499	204.58426	7.02964	7.08488	0.1463623	0.29439900	2.2379231	21	10 19.0	20.9
412041	2013 CK_{191}	17.2	X	42.67469	10.93977	191.17167	8.85033	0.1839094	0.25836249	2.4414607	21	6 2.1	19.5
412042	2013 CF_{202}	18.2	X	31.99545	177.36808	66.51313	2.21236	0.1453144	0.27156617	2.3616685	21	7 10.7	20.3
412043	2013 DK_{1}	18.1	X	98.62536	179.86800	62.42109	3.95715	0.1155508	0.29222528	2.2490073	21	10 14.7	21.0
412044	2013 DW_{2}	17.1	X	81.08368	320.55109	267.15244	6.40245	0.1117953	0.28288998	2.2982169	21	8 27.2	20.1
412045	2013 DD_{7}	17.8	X	111.33260	177.25488	54.82908	5.25391	0.1184597	0.29004423	2.2602678	21	10 15.5	20.9
412046	2013 DX_{8}	18.0	X	116.24207	165.90337	66.59040	3.21230	0.1337767	0.29648912	2.2273931	21	10 22.4	21.2
412047	2013 DV_{11}	17.8	X	163.27373	44.98093	304.67662	17.52873	0.0779862	0.35460146	1.9768591	21	—	—
412048	2013 EB_{3}	17.8	X	208.67047	43.36794	109.29738	7.39331	0.0942178	0.30051707	2.2074453	21	10 21.3	20.8
412049	2013 ES_{7}	18.6	X	101.57932	278.08484	312.70703	2.00473	0.1327043	0.28747518	2.2737139	21	10 1.3	21.8
412050	2013 EW_{9}	16.5	X	333.54319	102.15411	112.32270	13.48933	0.2268781	0.23661558	2.5888516	21	1 24.4	19.7
412051	2013 ED_{10}	17.1	X	25.87275	37.54988	244.26121	5.94130	0.1075669	0.27589696	2.3368891	21	8 19.7	19.6
412052	2013 EG_{13}	17.7	X	358.85699	270.83839	15.46256	2.57920	0.1828591	0.27054438	2.3676111	21	7 8.6	19.3
412053	2013 EH_{13}	18.7	X	175.07734	121.74480	134.04271	2.30219	0.0964314	0.32092713	2.1128326	21	—	—
412054	2013 EE_{20}	18.2	X	139.14734	106.46963	325.49897	18.17133	0.1160620	0.37306803	1.9110734	21	3 17.5	20.4
412055	2013 ES_{21}	17.7	X	35.42279	268.65145	339.12996	5.77220	0.1754173	0.26778122	2.3838704	21	7 29.9	19.9
412056	2013 EE_{26}	17.5	X	140.46719	6.33320	166.40274	6.90445	0.0713983	0.28221622	2.3018732	21	8 22.9	20.7
412057	2013 EB_{27}	17.4	X	359.46337	238.02186	52.06413	3.27292	0.1995869	0.26627170	2.3928715	21	7 17.5	18.9
412058	2013 EF_{31}	17.3	X	51.50844	239.28014	64.93760	7.38669	0.1409042	0.28895298	2.2659549	21	11 12.6	19.9
412059	2013 EF_{38}	17.1	X	92.67340	115.68501	126.73605	4.94754	0.2101210	0.28339460	2.2954879	21	10 17.6	20.5
412060	2013 EL_{40}	18.3	X	162.84808	35.05533	189.05078	4.90536	0.1325444	0.30213245	2.1995701	21	11 28.1	21.5
412061	2013 EV_{40}	17.7	X	356.11656	190.51229	141.42872	21.61497	0.0750361	0.29056395	2.2575718	21	9 19.3	20.2
412062	2013 EX_{62}	17.7	X	50.36911	251.67472	358.92775	2.84273	0.1713087	0.27271925	2.3550069	21	8 29.1	20.2
412063	2013 ED_{80}	18.6	X	144.54842	108.18051	124.72084	4.14890	0.0845927	0.30239704	2.1982868	21	11 22.0	21.5
412064	2013 EJ_{80}	17.9	X	134.62534	236.49336	13.29894	7.14523	0.1010480	0.30366828	2.1921475	21	11 30.8	21.1
412065	2013 ET_{86}	17.6	X	103.59053	137.26356	140.98756	7.23142	0.1308708	0.29863271	2.2167215	21	12 8.0	20.9
412066	2013 EV_{90}	17.0	X	97.88381	21.11816	210.20340	11.03350	0.1822727	0.28429739	2.2906257	21	10 1.8	20.5
412067	2013 EJ_{92}	17.3	X	43.30453	39.06647	176.45385	11.02920	0.1491642	0.26151434	2.4218043	21	6 18.6	20.0
412068	2013 ED_{102}	17.5	X	89.23858	170.12477	64.28706	5.68874	0.1876180	0.27878090	2.3207447	21	10 1.4	20.9
412069	2013 EN_{108}	18.1	X	73.30837	232.28135	357.08909	1.91854	0.1638826	0.27025713	2.3692885	21	8 30.1	21.1
412070	2013 EM_{111}	17.3	X	27.57924	228.70943	53.33728	5.58448	0.2011778	0.27023563	2.3694141	21	9 13.7	19.5
412071	2013 EG_{119}	17.7	X	117.28072	308.86096	307.21957	4.25586	0.0950363	0.29618849	2.2289001	21	11 19.2	20.9
412072	2013 EX_{119}	17.5	X	57.68089	317.56579	265.17860	0.86167	0.1906336	0.26417611	2.4055092	21	8 1.3	20.2
412073	2013 EB_{120}	17.3	X	78.52619	278.11590	315.66087	1.60245	0.1683516	0.27675448	2.3320594	21	9 12.2	20.4
412074	2013 ET_{120}	17.6	X	113.53437	266.85735	307.57890	1.82019	0.1825278	0.28163501	2.3050391	21	9 25.9	21.0
412075	2013 EU_{120}	17.2	X	38.42228	103.01582	228.56354	3.35526	0.1920915	0.29321157	2.2439610	21	12 10.6	20.0
412076	2013 EK_{121}	17.9	X	132.39872	258.42932	5.25609	2.11138	0.1481352	0.30214972	2.1994862	21	12 17.4	21.2
412077	2013 EN_{122}	17.9	X	51.41443	257.78332	342.99776	4.36498	0.1551464	0.27013864	2.3699812	21	8 13.3	20.5
412078	2013 EP_{127}	18.3	X	141.68762	53.75447	181.07979	8.73765	0.1329594	0.30216024	2.1994352	21	11 21.5	21.7
412079	2013 ES_{127}	16.9	X	99.10118	85.19776	163.66013	5.96749	0.1367032	0.28328184	2.2960970	21	10 25.3	20.1
412080	2013 FA_{1}	17.4	X	82.75553	325.19084	258.20858	4.28419	0.1893673	0.27450947	2.3447569	21	9 3.9	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412081 2013 FF_1	18.1	X	157.00033	24.87494	8.99198	19.26802	0.0978837	0.36337888	1.9448955	21	3 1.9	20.4
412082 2013 FG_4	17.0	X	46.58418	215.49178	74.22289	9.03269	0.1791458	0.28303386	2.2974379	21	10 24.8	19.8
412083 2013 FF_{13}	16.5	X	260.62963	153.54366	104.02945	6.62730	0.1581791	0.22175000	2.7032962	21	1 8.9	20.7
412084 2013 FQ_{15}	18.6	X	90.09271	300.87573	21.02252	5.15956	0.0110488	0.31289429	2.1488411	21	—	—
412085 2013 FE_{16}	17.9	X	92.25204	161.18860	59.32661	2.96654	0.1602100	0.27644912	2.3337764	21	9 11.5	21.1
412086 2013 FU_{16}	17.5	X	166.77105	339.88642	39.16696	21.85751	0.0915882	0.35381796	1.9797764	21	2 28.1	20.4
412087 2013 FE_{17}	17.3	X	37.95012	168.65296	108.15555	7.22462	0.1181431	0.27229447	2.3574555	21	9 10.5	19.9
412088 2013 FY_{17}	18.1	X	328.35333	223.91991	193.61672	6.01171	0.0714607	0.30638658	2.1791622	21	12 9.2	20.2
412089 2013 FV_{18}	17.0	X	271.52679	191.42814	77.51200	9.17024	0.1641937	0.22628423	2.6670625	21	2 2.8	21.2
412090 2013 FB_{19}	18.0	X	100.26844	207.05592	16.81022	3.83655	0.1408089	0.27986776	2.3147325	21	9 22.3	21.3
412091 2013 FY_{19}	17.5	X	345.72249	216.21369	72.42761	4.01100	0.1091467	0.26198322	2.4189138	21	6 15.7	19.6
412092 2013 FH_{20}	17.7	X	68.22359	233.54897	29.05683	7.30749	0.0834120	0.28244177	2.3006476	21	9 29.4	20.5
412093 2013 FL_{20}	17.8	X	52.74639	132.66526	116.66374	2.21312	0.1500471	0.27069592	2.3667274	21	8 27.1	20.3
412094 2013 FV_{20}	17.9	X	43.57646	81.06725	177.15820	6.51866	0.0776326	0.27223875	2.3577771	21	8 11.1	20.6
412095 2013 FC_{21}	17.7	X	46.39372	110.88664	182.45960	2.25009	0.1342756	0.28250352	2.3003123	21	10 18.8	20.3
412096 2013 FZ_{21}	16.9	X	287.39020	34.20330	200.75544	7.99456	0.0903627	0.22617910	2.6678889	21	1 12.9	20.9
412097 2013 FF_{23}	18.0	X	93.56987	183.22551	34.38179	7.59275	0.1184010	0.27636907	2.3342270	21	9 5.9	21.2
412098 2013 FR_{23}	17.7	X	139.28333	47.73310	217.46604	3.73328	0.1345090	0.30428409	2.1891888	21	12 26.4	20.9
412099 2013 FX_{24}	18.2	X	8.18643	206.87087	50.32148	2.32164	0.1575845	0.25710894	2.4493900	21	6 10.8	20.2
412100 2013 FT_{25}	17.5	X	79.54094	79.48587	139.49667	11.94707	0.1121329	0.27447531	2.3449515	21	8 15.8	20.2
412101 2013 FL_{26}	16.1	X	238.20634	247.24220	75.93546	30.90682	0.2976895	0.23024386	2.6363962	21	3 17.1	21.5
412102 2013 GD_5	17.7	X	264.74740	255.55294	27.95093	7.04834	0.1586210	0.23267733	2.6179821	21	2 14.0	21.9
412103 2013 GY_5	17.5	X	300.53673	90.46748	168.90842	9.55685	0.1773365	0.23629693	2.5911785	21	2 14.9	21.3
412104 2013 GK_6	17.9	X	13.16306	228.83388	69.60256	2.80618	0.1062507	0.27596055	2.3365301	21	8 27.1	20.0
412105 2013 GJ_7	17.7	X	19.73576	319.72331	238.26472	3.95795	0.1585356	0.24602289	2.5224295	21	4 1.9	20.0
412106 2013 GE_8	16.6	X	294.82206	245.51354	25.29041	30.36253	0.3049910	0.23565729	2.5958652	21	2 27.6	21.3
412107 2013 GD_9	17.6	X	349.05493	279.25019	16.59422	1.59343	0.1857623	0.26447662	2.4036867	21	6 29.5	19.3
412108 2013 GB_{10}	17.7	X	34.32076	125.89604	118.06500	3.49570	0.1696014	0.26220560	2.4175460	21	7 18.8	19.8
412109 2013 GH_{10}	17.8	X	54.38303	242.28918	39.90616	6.72084	0.1102648	0.28177850	2.3042565	21	10 11.6	20.5
412110 2013 GY_{11}	17.6	X	65.64828	20.12342	241.89097	6.25142	0.1489811	0.28558609	2.2837296	21	9 30.8	20.6
412111 2013 GF_{15}	17.6	X	23.85978	279.52046	11.63561	1.22534	0.1881184	0.27414364	2.3468424	21	9 15.7	19.5
412112 2013 GD_{16}	17.8	X	25.03538	188.45816	87.31038	3.62437	0.1953057	0.27095215	2.3652351	21	8 26.9	19.8
412113 2013 GC_{18}	15.8	X	157.07094	248.59260	11.00687	10.56287	0.1193508	0.18781803	3.0197978	21	12 17.5	20.8
412114 2013 GL_{19}	17.7	X	69.64723	107.91553	140.17217	8.09485	0.1825833	0.27645987	2.3337159	21	9 26.2	20.7
412115 2013 GF_{20}	17.1	X	301.37873	41.33882	161.28677	4.38879	0.1076432	0.22131796	2.7068131	21	—	—
412116 2013 GK_{20}	17.8	X	32.79469	165.20526	56.77224	3.24235	0.1088759	0.25691524	2.4506209	21	6 2.9	20.3
412117 2013 GB_{21}	17.7	X	24.68005	155.41102	153.86073	3.47097	0.1602407	0.27894608	2.3198284	21	10 12.3	20.0
412118 2013 GS_{25}	16.4	X	215.01741	203.08635	83.11290	15.00166	0.1609542	0.21531765	2.7568700	21	1 3.4	21.0
412119 2013 GU_{25}	16.7	X	338.73715	230.56278	52.12460	16.87214	0.1514084	0.25744241	2.4472743	21	5 18.2	18.9
412120 2013 GW_{25}	17.1	X	299.78614	146.74527	134.16738	13.09385	0.1599819	0.24117166	2.5561433	21	3 20.6	20.7
412121 2013 GO_{30}	17.6	X	352.12539	100.02239	207.72862	3.84700	0.2055413	0.26557718	2.3970415	21	7 26.6	19.2
412122 2013 GQ_{30}	16.6	X	167.36778	357.45383	251.77325	0.83250	0.2166191	0.18660590	3.0328607	21	12 12.9	21.6
412123 2013 GO_{35}	18.2	X	205.00022	188.67342	3.12731	4.24959	0.1075629	0.30473924	2.1870085	21	12 3.5	20.9
412124 2013 GF_{37}	16.8	X	329.58804	195.93475	98.57193	6.82042	0.1297856	0.25610287	2.4558005	21	5 24.7	19.5
412125 2013 GU_{39}	16.7	X	114.81730	143.46216	102.70394	6.42130	0.1679401	0.28802942	2.2707961	21	11 9.7	20.2
412126 2013 GA_{42}	17.4	X	78.12035	51.15538	194.94702	11.42799	0.1515059	0.27664253	2.3326885	21	9 25.7	20.4
412127 2013 GQ_{42}	17.1	X	303.91607	250.19005	38.96624	4.96935	0.2284559	0.24107285	2.5568417	21	3 24.3	20.6
412128 2013 GY_{42}	17.1	X	197.31344	249.69979	29.31916	8.33358	0.1649323	0.20466749	2.8516976	21	—	—
412129 2013 GS_{45}	17.9	X	121.83578	59.93152	32.58591	22.28395	0.0253165	0.36623530	1.9347696	21	3 28.9	20.0
412130 2013 GY_{45}	17.1	X	317.59775	345.04997	36.77294	6.53346	0.1777477	0.28338278	2.2955517	21	9 15.7	18.8
412131 2013 GS_{46}	17.6	X	19.19859	235.05652	44.29741	1.91472	0.1703102	0.26925649	2.3751548	21	8 15.1	19.5
412132 2013 GD_{47}	17.5	X	309.09145	158.22112	78.76213	4.82351	0.1477156	0.23208770	2.6224143	21	2 4.3	21.2
412133 2013 GP_{49}	17.9	X	133.00983	49.76343	198.26775	5.81950	0.0427188	0.29850530	2.2173522	21	11 27.8	20.7
412134 2013 GV_{49}	17.8	X	71.88313	62.84199	167.50565	1.87846	0.1408786	0.27091625	2.3654441	21	8 25.3	20.5
412135 2013 GW_{50}	17.5	X	322.77228	273.87620	58.59074	4.29731	0.1878343	0.26578290	2.3958044	21	6 29.4	19.6
412136 2013 GE_{51}	17.0	X	93.47440	165.00348	34.90278	7.68905	0.0586297	0.27095879	2.3651965	21	8 1.9	20.1
412137 2013 GX_{51}	16.0	X	243.91582	282.34379	29.62534	30.18642	0.2554515	0.22967268	2.6407654	21	3 10.9	21.1
412138 2013 GG_{52}	17.0	X	335.97632	234.83929	78.47905	13.13484	0.2347717	0.25560402	2.4589947	21	6 19.8	18.8
412139 2013 GB_{53}	17.1	X	290.52237	277.59165	52.73147	8.98275	0.1601449	0.25256895	2.4786549	21	5 9.1	20.2
412140 2013 GO_{53}	17.1	X	8.49539	133.73587	134.82303	2.96768	0.1961311	0.25658685	2.4527114	21	7 2.2	18.9
412141 2013 GH_{55}	17.6	X	295.78507	237.40539	23.46197	4.13315	0.1415216	0.23641309	2.5903296	21	2 18.9	21.2
412142 2013 GD_{58}	17.6	X	30.87926	315.07279	191.45995	22.23673	0.0451331	0.35376994	1.9799555	21	1 10.2	20.2
412143 2013 GN_{60}	17.2	X	299.68972	196.27053	81.38347	5.15026	0.2170806	0.23969673	2.5666185	21	3 7.2	20.8
412144 2013 GF_{63}	16.7	X	306.41427	87.76634	126.93873	25.41103	0.1253357	0.22115601	2.7081344	21	1 8.8	20.6
412145 2013 GV_{63}	16.8	X	331.90153	321.83486	307.68066	3.26281	0.1820468	0.24454821	2.5325599	21	4 11.2	19.6
412146 2013 GA_{66}	16.8	X	151.08446	97.70897	150.48126	6.10592	0.1474509	0.18197476	3.0841011	21	11 30.1	21.9
412147 2013 GX_{67}	17.1	X	326.73930	286.11739	37.96846	5.32720	0.1747646	0.26344836	2.4099371	21	6 26.2	19.3
412148 2013 GH_{70}	16.2	X	172.62845	11.09931	212.30884	12.06579	0.1872893	0.17550818	3.1593990	21	11 18.1	21.5
412149 2013 GE_{71}	18.1	X	66.31075	195.81197	18.68237	1.52976	0.1419472	0.26384793	2.4075035	21	7 25.8	20.7
412150 2013 GF_{71}	17.7	X	106.28314	350.92052	193.85352	4.73844	0.1635231	0.26998859	2.3708593	21	8 6.7	21.1
412151 2013 GK_{71}	17.0	X	314.32480	51.86723	161.96204	8.85182	0.2054403	0.22229085	2.6989095	21	1 4.5	21.0
412152 2013 GK_{72}	17.6	X	341.97933	357.43658	227.16200	3.62640	0.1074145	0.23716451	2.5848554	21	3 8.0	20.6
412153 2013 GV_{72}	17.2	X	274.30520	144.60266	166.36316	7.46880	0.2243919	0.23862771	2.5742781	21	3 19.7	21.1
412154 2013 GG_{73}	16.9	X	63.07670	197.08123	89.14634	7.05920	0.0991333	0.28462732	2.2888552	21	10 29.2	19.8
412155 2013 GU_{74}	17.2	X	89.14644	6.34919	220.73296	11.49168	0.1940115	0.27384317	2.3485588	21	9 15.1	20.7
412156 2013 GP_{79}	17.5	X	130.27527	44.44430	179.13859	5.16292	0.1222911	0.28622671	2.2803207	21	10 23.7	20.7
412157 2013 GH_{80}	17.7	X	175.10540	222.31437	203.57650	21.48406	0.0887832	0.37037007	1.9203430	21	5 3.7	19.9
412158 2013 GC_{81}	17.3	X	324.49822	40.12740	186.29512	3.48363	0.1619829	0.23279564	2.6170950	21	2 5.9	20.5
412159 2013 GH_{82}	17.6	X	123.90126	12.19227	212.27196	5.08498	0.0773761	0.28655295	2.2785897	21	10 14.1	20.5
412160 2013 GM_{82}	17.9	X	134.59243	357.37920	215.04565	3.04566	0.1141480	0.28603472	2.2813410	21	10 11.7	21.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412161 2013 GA_{83}	17.3	X	75.94512	246.08330	15.95378	2.26033	0.1885614	0.28113281	2.3077833	21	10 20.7	20.5
412162 2013 GA_{84}	17.5	X	139.62976	303.04924	253.32500	5.25615	0.0567586	0.28333336	2.2958186	21	9 20.9	20.7
412163 2013 GB_{84}	17.9	X	95.93308	222.15856	23.41733	6.53460	0.1365515	0.28226058	2.3016321	21	10 15.6	21.0
412164 2013 GO_{85}	17.4	X	16.74131	9.08257	209.44761	16.56916	0.0847435	0.24720967	2.5143501	21	4 29.9	20.0
412165 2013 GP_{85}	17.0	X	234.16075	67.98327	207.09701	6.98642	0.1887854	0.21254732	2.7807736	21	1 5.7	21.8
412166 2013 GR_{87}	17.3	X	131.35913	170.06495	75.97815	7.58643	0.1429696	0.29168923	2.2517618	21	11 23.4	20.5
412167 2013 GW_{87}	16.5	X	247.48172	214.73952	71.43806	11.09681	0.2852069	0.21962745	2.7206853	21	1 27.3	21.5
412168 2013 GW_{89}	16.5	X	126.39385	62.66092	209.14791	6.65781	0.1977178	0.18009656	3.1055064	21	12 6.6	21.7
412169 2013 GX_{89}	17.5	X	9.08915	263.97332	8.63973	3.01040	0.1774584	0.26003759	2.4309646	21	7 10.7	19.4
412170 2013 GR_{91}	17.2	X	40.61281	166.94999	48.43881	1.08203	0.1686472	0.25606377	2.4560505	21	6 15.6	19.3
412171 2013 GF_{92}	17.4	X	108.14384	270.97310	333.51964	2.56550	0.1227869	0.28592698	2.2819141	21	10 25.5	20.6
412172 2013 GY_{92}	17.7	X	40.06187	137.51471	19.17511	20.21842	0.0583605	0.35763247	1.9656737	21	2 26.9	19.8
412173 2013 GS_{93}	16.9	X	244.52421	236.87726	23.81477	8.92087	0.1271716	0.21684291	2.7439271	21	—	—
412174 2013 GV_{93}	17.3	X	8.66816	246.90813	43.06200	2.96836	0.1662017	0.26523553	2.3990994	21	8 8.6	19.2
412175 2013 GE_{94}	18.1	X	148.24701	295.26629	280.83687	2.71889	0.1099951	0.29487669	2.2355055	21	10 31.4	21.4
412176 2013 GL_{94}	17.8	X	317.05856	85.94995	191.05122	22.30387	0.0571170	0.37164990	1.9159317	21	4 3.0	19.4
412177 2013 GO_{94}	17.6	X	306.65060	33.36026	198.99363	4.37923	0.1957528	0.22857273	2.6492306	21	1 18.3	21.4
412178 2013 GW_{94}	17.8	X	84.02067	53.24852	195.43104	5.82234	0.0833849	0.27945248	2.3170251	21	9 28.1	20.7
412179 2013 GL_{95}	17.8	X	149.64275	349.66180	240.93718	3.03756	0.1153122	0.29632411	2.2282199	21	11 21.8	21.1
412180 2013 GD_{96}	16.9	X	41.98138	108.75624	163.21477	7.90631	0.1891105	0.26832352	2.3806573	21	9 19.0	19.4
412181 2013 GO_{96}	16.8	X	315.92272	131.42821	191.68672	14.19226	0.1860820	0.25962730	2.4335250	21	6 2.9	19.7
412182 2013 GZ_{96}	17.8	X	97.10541	219.73280	50.43164	3.84367	0.1629895	0.28878160	2.2668513	21	11 20.5	21.2
412183 2013 GG_{97}	17.8	X	173.58575	311.55799	260.09990	3.13026	0.1049956	0.30218748	2.1993030	21	11 23.9	20.6
412184 2013 GS_{97}	17.0	X	330.28998	190.71347	18.81851	9.96692	0.1222960	0.23170479	2.6253027	21	2 3.3	20.5
412185 2013 GU_{97}	17.8	X	73.98380	272.28638	212.83538	20.90421	0.0855243	0.36000033	1.9570449	21	2 17.9	20.0
412186 2013 GD_{98}	18.0	X	13.27917	7.63588	196.48057	22.08477	0.0692880	0.36446863	1.9410167	21	3 7.9	19.8
412187 2013 GT_{99}	17.4	X	311.49268	58.30743	186.90726	2.03168	0.1464300	0.23507242	2.6001692	21	2 15.4	20.7
412188 2013 GV_{99}	16.8	X	103.48928	142.99816	98.50570	7.01564	0.0904277	0.28218239	2.3020572	21	10 17.9	20.0
412189 2013 GR_{100}	17.4	X	88.72448	254.30737	34.53179	7.21680	0.1190775	0.29267509	2.2467023	21	12 1.9	20.6
412190 2013 GS_{100}	17.3	X	74.85360	123.06484	126.14945	5.60099	0.1441078	0.27398989	2.3477203	21	9 28.3	20.4
412191 2013 GT_{100}	17.1	X	58.48806	157.33676	84.79754	7.33704	0.1032687	0.26724075	2.3870834	21	8 19.5	19.9
412192 2013 GV_{100}	17.5	X	198.11632	286.35093	210.89390	5.74110	0.1197021	0.28473100	2.2882996	21	9 7.7	20.8
412193 2013 GB_{101}	16.9	X	281.39685	28.82890	183.97423	8.76476	0.1717605	0.21376540	2.7701999	21	—	—
412194 2013 GL_{101}	15.6	X	119.41815	257.57924	29.71947	10.53386	0.0632464	0.18346094	3.0674228	21	12 10.3	20.3
412195 2013 GM_{101}	17.2	X	331.20294	92.45545	200.12870	5.86354	0.1041747	0.25467788	2.4649526	21	5 27.8	19.8
412196 2013 GP_{101}	17.2	X	65.89558	127.64110	97.47881	6.89912	0.0685474	0.26502992	2.4003401	21	7 28.8	20.0
412197 2013 GV_{101}	17.1	X	349.09625	46.07140	210.91475	6.20577	0.1544997	0.24402910	2.5361502	21	5 1.6	19.5
412198 2013 GW_{101}	15.6	X	140.10426	201.49691	63.90414	11.88378	0.1039370	0.17687095	3.1431495	21	12 6.9	20.5
412199 2013 GC_{102}	17.2	X	27.77032	313.67286	349.83074	6.63465	0.1285197	0.27998994	2.3140590	21	9 30.9	19.6
412200 2013 GW_{103}	18.1	X	55.90416	30.94424	179.58183	2.08755	0.1147930	0.25990839	2.4317701	21	6 27.7	20.7
412201 2013 GQ_{104}	17.8	X	282.11027	69.85057	41.71502	5.70727	0.0821008	0.30529768	2.1843407	21	12 7.7	19.9
412202 2013 GE_{105}	17.1	X	71.43329	184.09407	91.18905	6.70253	0.0955542	0.28369607	2.2938614	21	10 24.6	20.0
412203 2013 GH_{106}	17.8	X	20.92197	218.44393	24.13380	2.59914	0.1540625	0.25716871	2.4490104	21	6 15.4	19.8
412204 2013 GJ_{106}	17.0	X	283.11963	218.01365	54.96121	6.12219	0.2398800	0.22707549	2.6608632	21	2 11.5	21.3
412205 2013 GU_{107}	16.7	X	1.04975	22.38793	209.80301	14.21883	0.1339303	0.24200909	2.5502432	21	4 19.3	19.1
412206 2013 GV_{107}	17.6	X	177.82369	64.59140	170.97180	5.56967	0.1253108	0.30460184	2.1876661	21	12 28.6	20.7
412207 2013 GP_{108}	16.5	X	330.94710	198.31687	54.95687	9.61147	0.1427955	0.24004330	2.5641474	21	3 31.1	19.5
412208 2013 GJ_{110}	17.6	X	100.15289	151.75027	27.47192	7.35963	0.0621838	0.26622354	2.3931601	21	7 11.2	20.8
412209 2013 GP_{110}	17.2	X	105.21086	6.55927	200.13354	8.78910	0.0953632	0.27241191	2.3567779	21	8 26.4	20.5
412210 2013 GD_{111}	17.2	X	73.79002	108.30238	131.53408	2.12018	0.1157504	0.27140101	2.3626265	21	9 7.4	20.0
412211 2013 GM_{112}	16.8	X	333.84557	284.08380	334.06738	2.88503	0.1934759	0.24021621	2.5629168	21	3 28.8	19.5
412212 2013 GU_{112}	17.3	X	293.00467	162.56845	86.74979	2.32376	0.1579705	0.22634146	2.6666129	21	1 30.8	21.1
412213 2013 GD_{113}	17.8	X	105.96301	119.76725	66.67709	4.49196	0.1500965	0.26782920	2.3835857	21	8 10.3	21.2
412214 2013 GK_{113}	16.5	X	291.18264	233.48357	45.24677	10.76422	0.1662322	0.23079775	2.6321765	21	3 9.7	20.4
412215 2013 GD_{114}	16.3	X	302.31502	262.96838	52.66703	4.87773	0.2669702	0.24135062	2.5548796	21	4 19.8	19.6
412216 2013 GJ_{114}	15.6	X	114.49031	248.16105	60.50097	14.56558	0.2590113	0.17513088	3.1639351	21	—	—
412217 2013 GL_{114}	17.1	X	355.32568	39.82395	204.02650	5.36542	0.1751941	0.24230831	2.5481433	21	4 22.1	19.4
412218 2013 GM_{114}	17.3	X	53.44877	53.97687	189.45252	2.05626	0.1438047	0.26165129	2.4209591	21	8 16.3	19.9
412219 2013 GP_{115}	17.5	X	347.81824	335.34826	290.54547	4.15650	0.0860070	0.25541065	2.4602357	21	5 16.8	20.1
412220 2013 GL_{116}	16.7	X	254.75289	90.90321	166.91559	12.07040	0.1352463	0.22157115	2.7047507	21	1 4.5	21.2
412221 2013 GT_{121}	18.2	X	109.65379	220.21119	347.00005	0.77149	0.1283902	0.27483831	2.3428863	21	9 8.0	21.4
412222 2013 GE_{125}	16.4	X	170.34447	61.17424	141.02912	10.73237	0.1286923	0.17317310	3.1877366	21	10 26.9	21.6
412223 2013 GB_{128}	17.7	X	86.40943	351.96071	223.93157	1.82377	0.1161578	0.26570801	2.3962546	21	8 19.6	20.8
412224 2013 GR_{134}	18.4	X	242.41533	356.49732	172.17292	3.82681	0.0283118	0.30786552	2.1721777	21	—	—
412225 2013 GZ_{135}	16.9	X	306.69894	218.55940	92.77103	3.42706	0.1351235	0.24528667	2.5274743	21	5 10.9	19.9
412226 2013 GB_{136}	17.5	X	79.36303	150.28905	87.57383	5.53251	0.1229708	0.26899251	2.3767085	21	9 15.4	20.6
412227 2013 HC_{1}	17.9	X	131.96459	81.67572	60.36503	21.89079	0.0620871	0.38185421	1.8816449	21	6 25.9	20.1
412228 2013 HH_{3}	17.0	X	10.89083	6.74580	167.96183	16.03590	0.1361681	0.23368055	2.6104838	21	2 12.8	20.0
412229 2013 HY_{3}	16.9	X	93.28893	187.42353	69.82705	6.03182	0.1401438	0.28506522	2.2865107	21	10 30.4	20.1
412230 2013 HA_{5}	17.3	X	15.42780	183.69658	109.12605	7.47219	0.1408093	0.27182598	2.3601634	21	8 27.3	19.5
412231 2013 HM_{9}	16.8	X	339.12154	129.54718	104.27203	14.63802	0.0449225	0.23993796	2.5648978	21	4 2.8	20.3
412232 2013 HV_{12}	17.7	X	53.24198	133.84069	120.58489	6.49623	0.1394529	0.26983409	2.3717642	21	9 3.9	20.4
412233 2013 HY_{12}	16.8	X	148.96690	24.35104	160.79657	22.83980	0.1951265	0.28115964	2.3076365	21	9 24.4	20.6
412234 2013 HT_{13}	16.3	X	126.18793	274.13432	23.97523	11.20433	0.1326686	0.18751214	3.0230811	21	—	—
412235 2013 HQ_{15}	17.4	X	160.38805	72.59729	109.80725	9.57997	0.1688752	0.28611188	2.2809309	21	10 4.2	21.1
412236 2013 HA_{17}	16.9	X	309.48510	210.24823	117.34180	7.09824	0.1339854	0.25887529	2.4382355	21	6 7.3	19.6
412237 2013 HO_{19}	17.2	X	342.09995	103.08435	126.10077	5.24089	0.2270151	0.23868803	2.5738444	21	2 27.2	19.8
412238 2013 HZ_{19}	16.3	X	15.41194	20.60781	178.27082	28.54078	0.1136451	0.23826721	2.5768741	21	3 31.3	19.0
412239 2013 HS_{20}	16.2	X	274.98991	188.29179	96.41089	13.00296	0.1452952	0.23146658	2.6271035	21	3 1.3	20.3
412240 2013 HU_{21}	16.8	X	114.47254	146.85206	132.05382	6.14705	0.1294365	0.17766961	3.1337231	21	12 1.5	21.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412241 2013 HY_{23}	15.9	X	295.02346	178.23157	96.95842	14.93383	0.1565794	0.23129023	2.6284387	21	3 12.2	19.9
412242 2013 HE_{24}	16.3	X	287.80581	174.99176	125.07868	15.47468	0.2513094	0.23115058	2.6294973	21	3 21.9	20.5
412243 2013 HA_{27}	17.5	X	81.66982	43.71397	236.88032	2.96192	0.0511191	0.28714045	2.2754806	21	11 4.9	20.2
412244 2013 HC_{27}	17.1	X	332.96628	228.16803	21.20979	5.16256	0.1499873	0.23986407	2.5654246	21	3 24.1	20.0
412245 2013 HG_{27}	16.8	X	195.46619	131.37018	112.81583	6.05285	0.1822594	0.19114344	2.9846709	21	—	—
412246 2013 HF_{28}	17.0	X	291.35434	189.50290	89.59589	13.16148	0.1659769	0.23222324	2.6213938	21	3 11.1	21.0
412247 2013 HL_{31}	17.5	X	311.38180	262.86621	304.26245	5.01369	0.1072246	0.22421795	2.6834229	21	1 6.7	21.0
412248 2013 HT_{31}	17.4	X	38.97441	357.82917	260.12582	5.55978	0.1020443	0.26752728	2.3853787	21	8 5.9	20.0
412249 2013 HF_{33}	17.9	X	253.21500	164.55199	261.78127	5.92911	0.0766478	0.28007755	2.3135764	21	8 12.7	20.9
412250 2013 HF_{35}	17.5	X	297.41206	274.92873	353.18348	6.18626	0.1062787	0.23621431	2.5917827	21	3 5.9	21.1
412251 2013 HP_{41}	17.1	X	292.53535	223.50160	17.39460	13.37896	0.1560827	0.22533740	2.6745283	21	1 24.3	21.3
412252 2013 HJ_{46}	18.1	X	168.90764	249.64614	296.26840	2.32047	0.1122391	0.29029746	2.2589532	21	10 12.8	21.5
412253 2013 HX_{51}	17.0	X	211.46407	263.12862	17.46486	10.13902	0.0999675	0.21013942	2.8019757	21	—	—
412254 2013 HY_{57}	17.8	X	250.07219	52.83733	326.44343	5.64600	0.0901139	0.26172346	2.4205141	21	6 2.1	21.2
412255 2013 HZ_{58}	16.2	X	153.93841	305.69357	356.44984	8.82968	0.1014003	0.19956773	2.9000747	21	—	—
412256 2013 HK_{82}	17.7	X	311.81146	199.04563	218.63722	5.15509	0.1398471	0.29616548	2.2290155	21	11 4.3	19.2
412257 2013 HZ_{84}	17.4	X	318.46951	323.06929	285.51184	2.18558	0.1849807	0.23663289	2.5887253	21	2 22.5	20.8
412258 2013 HC_{103}	17.5	X	263.37830	95.11822	222.03016	4.08125	0.2178059	0.23647658	2.5898660	21	3 15.7	21.8
412259 2013 HF_{103}	17.2	X	185.54689	288.08342	24.39838	9.09397	0.1628356	0.21089696	2.7952619	21	1 11.0	21.8
412260 2013 HK_{103}	18.3	X	45.61621	10.30783	4.79956	2.33943	0.0839997	0.31072047	2.1588517	21	—	—
412261 2013 HB_{107}	17.9	X	301.00442	90.06177	185.72984	2.61348	0.1409826	0.23862758	2.5742791	21	3 14.2	21.4
412262 2013 HY_{107}	18.4	X	353.81808	177.18161	151.24648	1.58145	0.1977391	0.27164519	2.3612105	21	9 9.3	19.9
412263 2013 HA_{110}	17.8	X	6.32708	292.97635	24.94618	1.40686	0.1980446	0.27163755	2.3612547	21	9 22.7	19.6
412264 2013 HL_{112}	17.8	X	297.75879	191.14698	188.00493	5.22995	0.1325556	0.27586813	2.3370519	21	8 2.5	20.4
412265 2013 HY_{113}	17.4	X	337.76354	297.95613	28.76111	5.51295	0.1306549	0.26762875	2.3847757	21	7 31.9	19.6
412266 2013 HT_{119}	17.4	X	187.47423	224.88838	146.19066	2.26143	0.0993671	0.23534571	2.5981558	21	3 17.0	21.1
412267 2013 HV_{128}	18.0	X	11.28641	321.31358	343.64139	4.16632	0.1499691	0.26976680	2.3721586	21	9 5.4	19.9
412268 2013 HG_{133}	17.3	X	173.94747	80.92736	221.54145	10.23805	0.1001054	0.20555025	2.8435272	21	—	—
412269 2013 JN_{1}	17.4	X	251.09325	197.23238	101.70344	5.17704	0.1414414	0.22903974	2.6456283	21	2 20.0	21.5
412270 2013 JL_{2}	17.2	X	239.77851	112.57215	181.55359	2.72385	0.1837182	0.21855295	2.7295954	21	1 31.9	21.7
412271 2013 JQ_{3}	17.5	X	165.01608	264.90537	279.71550	4.94936	0.0970131	0.28838972	2.2689044	21	10 5.6	20.7
412272 2013 JU_{3}	16.7	X	208.37896	168.75698	73.04992	12.99695	0.2427158	0.19949260	2.9008027	21	—	—
412273 2013 JY_{4}	17.7	X	179.37423	168.68834	28.25968	4.75846	0.0596196	0.29428231	2.2385147	21	11 12.7	20.4
412274 2013 JT_{5}	16.7	X	124.19890	212.86949	114.82847	3.21251	0.2155280	0.18406635	3.0606931	21	—	—
412275 2013 JF_{6}	17.2	X	272.54909	200.43402	50.64844	10.32999	0.1074878	0.21969280	2.7201457	21	1 19.4	21.4
412276 2013 JK_{6}	16.4	X	250.77439	105.78518	130.67398	15.79974	0.1104257	0.20611602	2.8383212	21	—	—
412277 2013 JL_{6}	17.1	X	229.14835	255.56152	44.52435	3.88903	0.1792779	0.21687460	2.7436598	21	2 1.4	21.7
412278 2013 JS_{8}	17.3	X	328.33225	229.21729	30.56051	7.62440	0.1627857	0.23954443	2.5677062	21	3 30.1	20.2
412279 2013 JN_{10}	17.0	X	310.41684	201.43086	52.02567	2.86051	0.1272811	0.23365861	2.6106472	21	3 1.8	20.4
412280 2013 JL_{11}	17.6	X	311.35873	291.42940	50.71699	6.51702	0.1373218	0.26026458	2.4295509	21	7 1.2	20.3
412281 2013 JP_{11}	17.5	X	333.49736	212.63773	55.82510	4.07746	0.1189717	0.24463199	2.5319817	21	4 24.9	20.4
412282 2013 JH_{13}	18.4	X	162.54421	17.92428	151.13771	4.25615	0.0871675	0.27893931	2.3198660	21	9 14.7	21.5
412283 2013 JF_{14}	16.9	X	233.23631	201.04703	144.17225	21.93177	0.0265071	0.23340366	2.6125480	21	4 12.4	20.9
412284 2013 JW_{15}	17.1	X	56.64378	108.26285	102.61950	7.36712	0.0899102	0.25595643	2.4567371	21	6 25.8	19.7
412285 2013 JT_{18}	16.2	X	142.82442	220.52458	65.34062	6.62540	0.0982150	0.18414413	3.0598311	21	—	—
412286 2013 JZ_{20}	17.4	X	114.85707	173.89488	3.29460	7.39306	0.0558030	0.26315864	2.4117056	21	7 28.5	20.6
412287 2013 JN_{21}	16.2	X	243.28629	187.12566	149.02625	22.12758	0.0582404	0.23458814	2.6037464	21	4 9.1	20.2
412288 2013 JW_{22}	17.3	X	142.95751	186.38839	46.42595	8.80706	0.0709741	0.29286061	2.2457534	21	11 17.0	20.3
412289 2013 JC_{24}	16.9	X	0.74376	353.33234	201.02289	5.73072	0.1065940	0.23147958	2.6270051	21	2 25.7	19.8
412290 2013 JD_{28}	16.9	X	350.71453	75.03265	179.83264	8.60027	0.1142612	0.24351605	2.5397111	21	5 7.5	19.6
412291 2013 JD_{30}	16.6	X	163.90448	175.06671	114.06985	5.91542	0.2232059	0.18837758	3.0138149	21	—	—
412292 2013 JR_{35}	17.1	X	287.87015	207.22924	35.91445	1.73162	0.1650694	0.21915004	2.7246351	21	1 18.2	21.1
412293 2013 JW_{36}	16.1	X	267.21020	168.20107	66.66886	9.61727	0.0840437	0.21229824	2.7829482	21	—	—
412294 2013 JP_{39}	17.7	X	82.14643	330.53194	231.48808	7.58772	0.0228973	0.25928787	2.4356483	21	7 9.1	20.8
412295 2013 JV_{39}	16.2	X	13.32910	222.56461	193.68538	11.67767	0.0594050	0.18171499	3.0870397	21	—	—
412296 2013 JS_{40}	17.0	X	272.50062	127.61931	106.38825	9.33672	0.0742916	0.21174862	2.7877617	21	1 1.5	21.0
412297 2013 JY_{42}	17.5	X	253.49510	85.77571	53.37121	6.60141	0.0813348	0.29951293	2.2123763	21	11 30.4	19.9
412298 2013 JC_{43}	17.2	X	110.29231	356.08209	230.00601	6.81980	0.0483712	0.27762640	2.3271741	21	9 23.9	20.2
412299 2013 JT_{44}	17.4	X	84.44915	219.29895	73.89789	3.88405	0.0957878	0.28745765	2.2738063	21	11 30.9	20.5
412300 2013 JJ_{46}	17.3	X	285.88787	144.35252	188.60301	8.08087	0.1760441	0.24029698	2.5623425	21	5 6.4	20.8
412301 2013 JE_{47}	17.2	X	338.44757	85.27869	129.56444	5.14760	0.1895979	0.23091906	2.6312545	21	2 8.3	20.1
412302 2013 JL_{48}	16.3	X	123.24504	290.62499	46.58202	14.91815	0.1857103	0.19270893	2.9684848	21	—	—
412303 2013 JX_{48}	16.6	X	351.19402	258.39528	53.31604	8.73222	0.1171517	0.26187903	2.4195554	21	8 6.2	19.1
412304 2013 JN_{49}	17.9	X	133.57545	134.67711	60.44307	7.07971	0.1191932	0.27843880	2.3226452	21	9 21.6	21.4
412305 2013 JU_{49}	16.8	X	277.72335	155.77689	53.56921	9.46678	0.1374216	0.21020544	2.8013890	21	—	—
412306 2013 JB_{51}	16.9	X	170.46388	186.29385	96.31567	4.78288	0.1020763	0.19174727	2.9784016	21	—	—
412307 2013 JX_{52}	17.4	X	217.04452	179.19023	2.07209	7.53362	0.0805697	0.30369382	2.1920246	21	12 7.9	20.2
412308 2013 JV_{55}	16.6	X	173.43985	222.23802	90.85599	7.61864	0.2104740	0.19713989	2.9238363	21	1 4.8	21.5
412309 2013 JK_{57}	17.2	X	193.04512	188.21815	116.79272	5.68722	0.1225393	0.20609257	2.8385366	21	1 6.4	21.5
412310 2013 JF_{58}	16.1	X	152.09382	68.61099	207.42692	9.62660	0.0407915	0.18539898	3.0460088	21	12 31.9	20.8
412311 2013 JR_{58}	17.2	X	336.79314	70.75820	220.52465	7.67070	0.0952777	0.25386054	2.4702405	21	6 5.3	19.8
412312 2013 JJ_{61}	17.7	X	56.29332	173.19941	67.39238	1.91558	0.1142641	0.26197348	2.4189738	21	8 13.2	20.5
412313 2013 JT_{61}	15.4	X	103.73738	235.09310	81.21908	10.63477	0.0792508	0.17897466	3.1184708	21	12 29.5	20.1
412314 2013 JW_{61}	17.1	X	41.99771	192.74163	82.43406	7.29790	0.0982162	0.26642001	2.3919834	21	9 11.7	19.9
412315 2013 JD_{62}	16.5	X	278.03216	173.72184	75.50083	10.67391	0.0903928	0.21755047	2.7379743	21	1 25.0	20.6
412316 2013 JG_{62}	17.2	X	338.07606	276.49752	62.23444	6.60835	0.1673789	0.26814211	2.3817310	21	8 21.0	19.2
412317 2013 JK_{62}	16.0	X	144.71742	178.00043	112.63355	7.63055	0.1728221	0.18523806	3.0477726	21	—	—
412318 2013 JO_{62}	17.5	X	322.64615	53.55834	190.80315	15.40572	0.1318961	0.23467895	2.6030747	21	3 1.4	20.9
412319 2013 JT_{63}	17.1	X	111.05914	179.70266	96.22439	9.19702	0.2295865	0.28953318	2.2629267	21	12 14.1	20.7
412320 2013 KE	18.3	X	109.24384	95.75421	257.50843	0.70343	0.0269067	0.31842125	2.1239031	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412321 2013 KF_2	17.7	X	186.46697	120.39115	55.19137	5.00070	0.1596320	0.29014247	2.2597576	21	10 17.6	21.0
412322 2013 KK_4	17.9	X	170.09982	122.51492	65.26331	4.79601	0.1060911	0.28969504	2.2620838	21	10 19.7	21.1
412323 2013 KN_5	16.5	X	340.54328	196.44581	50.70226	6.63017	0.1390644	0.23677061	2.5877214	21	4 6.3	19.3
412324 2013 KD_6	17.1	X	308.39454	192.74784	86.54113	4.05361	0.0597810	0.24034172	2.5620244	21	4 12.5	20.4
412325 2013 KE_6	16.3	X	148.29027	221.14723	73.08813	7.15288	0.1499467	0.18821107	3.0155921	21	—	—
412326 2013 KT_8	17.1	X	266.64842	247.25691	46.46627	2.92898	0.1834193	0.22829288	2.6513952	21	2 25.0	21.1
412327 2013 KO_{11}	16.9	X	148.03782	155.02679	168.36707	1.25327	0.1558213	0.19063459	2.9899797	21	—	—
412328 2013 KH_{13}	16.4	X	339.51719	32.94397	236.82117	6.83328	0.1649257	0.24169063	2.5524829	21	4 29.8	19.0
412329 2013 KT_{13}	16.7	X	207.05201	99.77299	205.73854	14.22997	0.1605228	0.20506292	2.8480304	21	1 17.4	21.6
412330 2013 KX_{13}	16.1	X	287.93649	221.14409	115.78250	14.37680	0.1954989	0.24289248	2.5440560	21	5 15.2	19.8
412331 2013 KM_{14}	17.4	X	281.83324	227.48740	91.86970	4.45186	0.0381660	0.24162238	2.5529635	21	5 3.4	20.8
412332 2013 KR_{17}	16.4	X	346.03374	34.99905	179.79115	13.52931	0.1080764	0.22937305	2.6430646	21	3 2.5	19.6
412333 2013 KE_{18}	16.3	X	283.88690	35.89490	226.09319	11.34358	0.1524886	0.22503476	2.6769256	21	2 1.8	20.6
412334 2013 KF_{18}	16.2	X	348.73300	160.99407	92.98030	13.93282	0.1121215	0.24158986	2.5531926	21	5 6.8	19.2
412335 2013 KH_{18}	17.0	X	355.03025	70.03048	191.50585	9.65789	0.1378555	0.24423663	2.5347133	21	5 23.5	19.6
412336 2013 LH	16.8	X	173.21141	109.47269	129.57385	2.25689	0.1240091	0.17934236	3.1142069	21	12 8.2	21.8
412337 2013 LS_1	16.2	X	289.98379	21.60763	235.29903	12.84049	0.1255092	0.22316037	2.6918943	21	2 4.7	20.5
412338 2013 LQ_2	16.4	X	125.52185	89.10364	217.90803	15.42798	0.2446852	0.17712627	3.1401283	21	—	—
412339 2013 LP_3	17.0	X	321.46796	30.13973	249.02460	5.61762	0.1199020	0.23973206	2.5663663	21	4 18.5	20.0
412340 2013 LV_3	17.3	X	81.97320	84.50964	118.76529	2.13679	0.0550467	0.25886646	2.4382909	21	7 17.4	20.2
412341 2013 LX_3	17.1	X	248.64688	204.44992	67.93493	6.10537	0.1224380	0.21420462	2.7664118	21	1 19.6	21.4
412342 2013 LB_5	16.9	X	266.47685	207.21224	128.69104	4.15995	0.1082672	0.23865024	2.5741161	21	4 26.5	20.5
412343 2013 LL_5	16.7	X	205.89174	288.64481	80.57853	11.27849	0.1057351	0.23064582	2.6333322	21	4 8.5	20.9
412344 2013 LZ_7	16.1	X	251.35908	136.78803	232.62929	11.12944	0.2802268	0.23870216	2.5737428	21	5 4.3	20.5
412345 2013 LL_8	16.3	X	164.41407	207.43953	105.04880	3.20201	0.2228538	0.19185117	2.9773262	21	—	—
412346 2013 LN_8	16.7	X	64.98968	73.26548	95.89301	6.48570	0.1413246	0.24460072	2.5321974	21	5 19.3	19.5
412347 2013 LR_8	16.6	X	274.96605	163.63294	152.48183	13.51524	0.1887437	0.23028708	2.6360663	21	4 3.2	20.7
412348 2013 LV_9	16.4	X	157.51424	162.14690	84.23436	6.39840	0.1023789	0.17428348	3.1741825	21	12 1.9	21.5
412349 2013 LD_{10}	16.6	X	309.96977	2.54101	245.10047	11.20977	0.1491513	0.22620318	2.6676995	21	2 13.1	20.5
412350 2013 LF_{11}	15.9	X	154.22514	67.90740	213.59086	9.91133	0.0258928	0.18440722	3.0569202	21	—	—
412351 2013 LO_{11}	16.4	X	128.78340	85.44655	209.48585	9.82856	0.2259654	0.17553168	3.1591170	21	—	—
412352 2013 LH_{14}	17.1	X	239.81170	109.41187	172.18712	5.38112	0.1391262	0.21071095	2.7969067	21	1 20.0	21.6
412353 2013 LF_{15}	16.9	X	345.85694	24.19573	190.56916	11.18805	0.0574417	0.22740440	2.6582968	21	3 8.4	20.2
412354 2013 LP_{15}	17.7	X	125.07647	109.12418	72.16099	3.06648	0.1292909	0.26947704	2.3738587	21	8 22.5	21.2
412355 2013 LT_{15}	16.6	X	118.68846	126.37150	187.55079	17.31951	0.1614792	0.17699197	3.1417166	21	—	—
412356 2013 LV_{15}	15.7	X	267.26326	288.51559	207.16698	15.02510	0.0379717	0.17528410	3.1620910	21	11 27.4	20.2
412357 2013 LV_{19}	16.6	X	160.98054	95.01254	198.60752	0.91762	0.1861888	0.18589534	3.0405843	21	—	—
412358 2013 LF_{20}	16.4	X	282.31033	27.89943	235.59288	11.35305	0.1175106	0.22142336	2.7059541	21	2 6.1	20.5
412359 2013 LN_{20}	17.5	X	202.16034	171.33010	46.44387	5.00769	0.0925008	0.30530685	2.1842970	21	—	—
412360 2013 LZ_{20}	17.0	X	344.52653	1.15984	242.48674	3.92226	0.1751362	0.23855396	2.5748086	21	3 29.5	19.6
412361 2013 LH_{21}	16.0	X	112.48270	67.79674	235.86352	15.01177	0.2232333	0.17369965	3.1812912	21	12 29.6	21.5
412362 2013 LT_{23}	16.7	X	256.04218	77.05514	215.05462	13.33484	0.1891865	0.22048446	2.7136306	21	2 8.2	21.4
412363 2013 LH_{26}	16.9	X	250.66169	105.52386	175.04636	6.31905	0.0357680	0.21476355	2.7616099	21	2 4.3	21.0
412364 2013 LO_{26}	17.3	X	219.91351	101.34752	164.48378	7.51623	0.1714332	0.20130962	2.8833212	21	—	—
412365 2013 LQ_{29}	16.8	X	38.10468	20.49549	173.10224	15.17843	0.1589596	0.24254158	2.5465092	21	5 10.8	19.6
412366 2013 MZ_1	17.0	X	325.60942	64.40273	192.83861	10.52605	0.0963454	0.23356857	2.6113181	21	3 31.3	20.1
412367 2013 MF_6	17.0	X	357.03057	44.76493	215.06313	11.07201	0.1687462	0.24524502	2.5277605	21	5 22.1	19.3
412368 2013 MZ_{10}	15.9	X	101.62856	305.28406	89.38584	11.46615	0.1140789	0.18908298	3.0063146	21	1 18.2	20.0
412369 2013 MK_{11}	15.9	X	65.98308	323.01279	85.88281	13.15793	0.0355867	0.18400171	3.0614099	21	—	—
412370 2013 NY_6	16.3	X	107.27804	207.77798	264.83086	12.91740	0.1058073	0.22133517	2.7066729	21	4 23.1	20.3
412371 2013 NC_{13}	16.2	X	303.85655	270.27286	271.15923	9.16211	0.0450087	0.18806913	3.0171093	21	—	—
412372 2013 NO_{19}	16.1	X	142.48606	221.48666	123.12238	10.08498	0.1592845	0.18413947	3.0598828	21	1 10.8	20.7
412373 2013 ND_{21}	15.7	X	94.68960	257.84015	120.14308	26.15299	0.1974936	0.17535081	3.1612890	21	1 4.2	20.0
412374 2013 NY_{21}	16.7	X	201.14759	214.48090	80.20932	4.16511	0.0189430	0.19058238	2.9905258	21	1 1.8	21.0
412375 2013 OO	16.6	X	125.56224	159.15521	235.69498	4.90581	0.0794925	0.19927100	2.9029528	21	2 7.1	20.7
412376 2013 OP_{10}	16.0	X	111.34266	168.97215	201.57717	17.23250	0.1789121	0.17809627	3.1287162	21	1 8.8	20.8
412377 2013 OD_{11}	15.9	X	117.12507	134.71077	219.42459	15.07253	0.0823364	0.17766851	3.1337360	21	—	—
412378 2013 PA_{26}	15.9	X	269.46846	125.35764	276.54346	13.50148	0.0187921	0.23228927	2.6208970	21	8 5.7	19.5
412379 2013 PL_{33}	15.2	X	104.06634	219.20914	169.86096	27.76561	0.0644093	0.17521879	3.1628768	21	1 9.2	20.1
412380 2013 PD_{43}	14.9	X	325.77138	346.24448	19.88790	11.87911	0.0601987	0.12192996	4.0277493	21	9 2.3	20.4
412381 2013 PN_{58}	16.4	X	239.34780	13.43531	225.46501	8.28152	0.0816245	0.18474118	3.0532351	21	—	—
412382 2013 PJ_{62}	15.8	X	276.57646	279.89132	281.01918	8.05322	0.0814974	0.18129112	3.0918496	21	—	—
412383 2013 PB_{69}	16.1	X	109.12095	190.63804	155.19728	10.74228	0.2160437	0.17115997	3.2126833	21	—	—
412384 2013 QK_{22}	16.2	X	189.13957	190.93454	141.05155	10.54105	0.0066669	0.18827702	3.0148879	21	2 1.0	20.5
412385 2013 QE_{47}	16.4	X	147.35612	170.15080	164.37112	9.54369	0.0809932	0.17752613	3.1354113	21	—	—
412386 2013 QK_{56}	13.6	X	192.48549	8.91003	22.40334	9.53407	0.0352837	0.08402310	5.1626209	21	4 26.8	20.5
412387 2013 QB_{59}	16.3	X	351.79830	68.53227	136.90815	11.28605	0.0667981	0.20391463	2.8587124	21	3 12.3	20.0
412388 2013 QR_{76}	15.8	X	268.15033	298.58706	251.19086	3.44524	0.1263072	0.17147941	3.2086923	21	—	—
412389 2013 QG_{82}	15.9	X	31.23546	346.29212	154.88313	11.07144	0.0590118	0.19231291	2.9725586	21	2 14.2	19.8
412390 2013 RG_{57}	15.4	X	17.68303	128.28363	194.17720	9.19213	0.1840087	0.12386727	3.9856425	21	9 25.0	20.1
412391 2013 RM_{78}	15.7	X	247.99390	232.22064	353.50044	15.63249	0.1633524	0.17476730	3.1683217	21	—	—
412392 2013 RV_{85}	15.9	X	206.57906	141.14910	233.06681	5.66194	0.0840926	0.19968745	2.8989153	21	4 11.3	20.3
412393 2013 SS_{58}	15.4	X	104.31160	306.07589	130.55689	10.06834	0.0798604	0.18004091	3.1061464	21	3 12.4	19.8
412394 2013 TZ_{46}	13.9	X	232.84528	186.64054	207.71105	27.26237	0.0626347	0.08430979	5.1509112	21	6 9.3	21.2
412395 2013 TX_{127}	13.4	X	265.43343	127.52777	206.33151	11.47496	0.0490684	0.08433938	5.1497063	21	5 10.7	20.3
412396 2013 TO_{155}	16.6	X	218.68414	106.39764	169.77122	10.09554	0.0679237	0.18455298	3.0553104	21	—	—
412397 2014 AJ_{42}	16.5	X	220.56359	212.58433	288.89992	12.99751	0.1625111	0.21428363	2.7657317	21	9 22.2	21.1
412398 2014 BG_{23}	16.7	X	278.93148	118.44289	331.39437	12.80569	0.1701663	0.21901335	2.7257686	21	9 27.6	20.3
412399 2014 BL_{29}	16.1	X	200.62381	244.65715	333.66315	12.06806	0.1309329	0.22935971	2.6431672	21	12 17.2	20.3
412400 2014 BO_{37}	16.6	X	235.76799	196.53608	318.93206	12.74122	0.1700772	0.22142192	2.7059659	21	10 26.7	20.8

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412401 2014 BX_{37}	17.8	X	220.09457	283.34302	323.80518	17.06503	0.0710583	0.37993737	1.8879683	21	—	—
412402 2014 BF_{39}	17.2	X	319.90082	157.45872	318.56737	7.11753	0.1135460	0.24070849	2.5594213	21	—	—
412403 2014 BE_{47}	17.8	X	52.77340	40.26119	144.85111	2.41291	0.0766597	0.29812135	2.2192557	21	5 7.2	19.8
412404 2014 BG_{57}	16.7	X	154.91562	328.39144	163.70047	7.29609	0.2721317	0.18444472	3.0565058	21	7 20.8	22.2
412405 2014 BQ_{62}	16.5	X	252.87743	215.61132	342.81972	14.78001	0.0460928	0.24252310	2.5466385	21	—	—
412406 2014 CU_{17}	17.8	X	343.26355	151.14198	10.38882	1.82852	0.1201847	0.26387408	2.4073444	21	—	—
412407 2014 CY_{17}	17.9	X	18.79924	58.34587	167.36913	2.98563	0.1325315	0.29148819	2.2527971	21	5 10.7	19.6
412408 2014 CD_{18}	17.4	X	63.99064	200.61554	327.56405	7.31895	0.0910638	0.29468793	2.2364601	21	4 27.7	19.8
412409 2014 CN_{18}	17.0	X	251.16359	343.65905	159.21729	14.33125	0.2086697	0.22183824	2.7025793	21	11 2.7	21.0
412410 2014 CV_{22}	16.7	X	257.41534	332.23479	175.05058	12.19598	0.0843962	0.22826292	2.6516272	21	12 3.6	20.3
412411 2014 CW_{22}	17.1	X	247.39224	325.05763	162.74891	9.18382	0.1574584	0.21913691	2.7247439	21	10 15.2	20.9
412412 2014 DT_{6}	17.8	X	14.28472	109.40142	39.05626	1.95854	0.1286730	0.27240224	2.3568337	21	1 4.0	20.2
412413 2014 DE_{21}	15.5	X	114.61057	223.62849	346.71482	10.25120	0.0551328	0.18912485	3.0058709	21	9 4.6	19.7
412414 2014 DB_{24}	15.7	X	61.86852	30.29199	342.29753	29.00788	0.1177525	0.23660951	2.5888959	21	—	—
412415 2014 DH_{60}	17.1	X	325.24143	1.35287	113.21888	4.99970	0.1792354	0.23992114	2.5650177	21	—	—
412416 2014 DU_{68}	15.7	X	42.91472	115.73881	152.33878	11.24844	0.0899082	0.17899736	3.1182072	21	8 20.9	19.8
412417 2014 DV_{82}	17.6	X	351.54212	240.29340	306.29641	4.04872	0.1630300	0.27412285	2.3469611	21	1 14.4	20.1
412418 2014 DF_{84}	17.5	X	121.98234	302.20976	132.83896	4.60236	0.1070012	0.28432843	2.2904590	21	3 21.1	20.2
412419 2014 DZ_{94}	16.3	X	240.82698	276.96029	191.64829	14.47613	0.1095446	0.20404431	2.8575010	21	9 13.6	20.4
412420 2014 DV_{97}	17.5	X	289.44873	327.27695	160.73702	5.19947	0.1776653	0.23273513	2.6175486	21	12 14.3	20.2
412421 2014 DD_{118}	16.1	X	126.27000	123.92574	12.70377	8.97595	0.1044609	0.17208773	3.2011260	21	6 20.9	21.0
412422 2014 DJ_{130}	17.6	X	285.31560	118.19797	107.26947	2.38422	0.1338704	0.25791993	2.4442528	21	—	—
412423 2014 DU_{130}	17.8	X	80.47864	340.83762	132.68124	3.58788	0.1183666	0.28260985	2.2997353	21	3 15.3	20.1
412424 2014 DK_{139}	17.9	X	2.99577	5.42717	208.67959	0.85127	0.1536328	0.28512474	2.2861924	21	3 15.7	19.9
412425 2014 DF_{142}	15.7	X	127.77729	318.90114	189.79930	16.85865	0.1589814	0.17818565	3.1276698	21	7 10.5	20.9
412426 2014 EV_{1}	16.3	X	127.44082	331.14835	285.40468	5.90025	0.0963432	0.20851500	2.8165093	21	11 17.9	20.7
412427 2014 EA_{2}	16.4	X	232.44167	245.54488	345.42576	16.70162	0.1937246	0.23427134	2.6060932	21	—	—
412428 2014 EN_{4}	16.9	X	301.76274	288.54108	20.21409	23.36362	0.1676183	0.28865488	2.2675147	21	4 16.5	19.5
412429 2014 EQ_{4}	17.1	X	287.40222	32.78046	143.58588	5.89920	0.1513987	0.24116932	2.5561598	21	—	—
412430 2014 EU_{11}	16.7	X	173.41467	113.06885	107.99160	8.93247	0.1624326	0.21047214	2.7990219	21	11 22.1	21.3
412431 2014 EF_{17}	17.6	X	301.35194	114.06114	103.89775	4.49494	0.1561135	0.26130610	2.4230908	21	—	—
412432 2014 EG_{31}	13.8	X	249.41925	23.69201	137.47586	8.33626	0.0198296	0.08420150	5.1553264	21	11 24.5	20.7
412433 2014 EY_{37}	17.1	X	315.93665	134.38356	117.71075	7.72747	0.0739328	0.27870283	2.3211781	21	3 9.9	19.9
412434 2014 EP_{47}	16.3	X	180.89432	217.67776	14.94763	15.38618	0.1206901	0.22259329	2.6964642	21	12 12.1	20.7
412435 2014 EV_{47}	17.4	X	44.35801	24.00209	124.15753	5.65848	0.1000788	0.27855005	2.3220268	21	3 1.6	19.5
412436 2014 EG_{50}	15.5	X	331.87617	193.13670	304.47123	14.47904	0.0494750	0.24436559	2.5338215	21	—	—
412437 2014 FW_{21}	17.2	X	271.51467	237.63917	271.14580	3.67587	0.2164182	0.23112379	2.6297004	21	12 4.7	20.0
412438 2014 FB_{25}	16.5	X	258.21000	108.83237	341.87450	26.38418	0.2887943	0.21199520	2.7855996	21	8 25.4	20.7
412439 2014 FT_{34}	16.8	X	310.28111	85.68703	89.38892	7.03181	0.1018230	0.25244373	2.4794745	21	—	—
412440 2014 FM_{35}	17.0	X	7.26608	29.74080	223.90224	6.57286	0.1444182	0.30010712	2.2094551	21	5 31.1	18.5
412441 2014 FF_{37}	16.8	X	189.25031	12.06251	147.45282	2.60375	0.1658805	0.19537808	2.9413869	21	9 20.9	21.6
412442 2014 FU_{40}	17.7	X	12.14125	143.07256	112.33142	5.90237	0.1934999	0.28843181	2.2686837	21	6 17.6	18.9
412443 2014 FV_{46}	17.4	X	201.17385	218.12658	49.92350	5.43137	0.1747668	0.23433326	2.6056341	21	—	—
412444 2014 FU_{49}	16.6	X	278.12245	229.65654	326.77019	15.71830	0.1306303	0.24491274	2.5300463	21	—	—
412445 2014 FG_{56}	15.5	X	6.37676	310.16327	350.73448	10.33875	0.0391482	0.17749699	3.1357545	21	8 9.7	19.7
412446 2014 FQ_{62}	16.1	X	124.39556	138.89422	46.07498	17.94328	0.1523041	0.17746764	3.1361002	21	8 31.9	21.4
412447 2014 GO_{4}	16.6	X	78.22150	26.61007	233.69468	0.72155	0.2032183	0.18408155	3.0605246	21	10 11.9	21.2
412448 2014 GY_{4}	17.5	X	298.81694	133.53021	7.77600	3.30244	0.1247146	0.23402462	2.6079245	21	—	—
412449 2014 GH_{5}	16.2	X	130.22907	322.04448	188.36957	1.87159	0.0467933	0.17154273	3.2079026	21	7 6.8	20.8
412450 2014 GS_{14}	16.5	X	137.28113	333.82670	199.73200	3.37328	0.1641275	0.18165226	3.0877503	21	8 20.5	21.5
412451 2014 GG_{15}	16.8	X	293.13038	75.30350	38.09919	5.76332	0.0666836	0.21981698	2.7191212	21	12 8.1	20.2
412452 2014 GU_{31}	17.6	X	27.10621	68.61903	110.27791	3.24689	0.1022146	0.27394991	2.3479487	21	3 17.1	19.8
412453 2014 GR_{36}	16.0	X	325.86129	1.20291	74.79847	6.40850	0.0373661	0.21728844	2.7401750	21	12 7.9	19.5
412454 2014 GV_{36}	16.2	X	159.59268	176.42454	119.65152	15.77206	0.1811180	0.22174235	2.7033584	21	—	—
412455 2014 GF_{39}	16.7	X	258.04977	58.66948	52.23657	8.23876	0.2041544	0.21164943	2.7886327	21	9 30.4	20.7
412456 2014 GO_{39}	17.3	X	326.72023	23.54957	192.82305	2.41297	0.1449302	0.26569524	2.3963313	21	1 22.7	20.3
412457 2014 GN_{42}	17.4	X	285.80720	265.12141	21.84890	9.22401	0.2633348	0.26375672	2.4080585	21	2 25.3	21.2
412458 2014 GU_{46}	17.5	X	321.55580	101.75605	138.77190	3.13819	0.1453470	0.26630080	2.3926972	21	2 17.8	20.2
412459 2014 GE_{48}	15.5	X	108.04060	96.00002	109.39513	26.93862	0.1464248	0.17759075	3.1346507	21	9 5.9	20.7
412460 2014 HC_{1}	16.4	X	301.49379	60.48243	65.69394	22.14695	0.1633719	0.22842394	2.6503809	21	—	—
412461 2014 HG_{1}	17.0	X	197.30371	170.46507	107.48571	5.78815	0.0635174	0.23912751	2.5706899	21	—	—
412462 2014 HD_{6}	17.7	X	339.99118	349.91905	239.73965	1.47179	0.1781424	0.27405823	2.3473300	21	2 22.5	20.2
412463 2014 HG_{6}	17.6	X	325.76713	238.92589	10.51646	5.56483	0.1733848	0.27443456	2.3451836	21	3 3.6	20.3
412464 2014 HH_{6}	16.6	X	217.21421	165.65514	73.60713	8.53351	0.0578720	0.22869126	2.6483152	21	—	—
412465 2014 HR_{6}	17.0	X	221.56309	162.21380	90.12993	5.44578	0.1062885	0.23417008	2.6068444	21	—	—
412466 2014 HX_{6}	16.7	X	203.29687	147.61095	83.71408	5.89808	0.0540564	0.22070410	2.7118299	21	—	—
412467 2014 HU_{16}	17.7	X	21.23832	60.90241	214.20923	3.23842	0.1591347	0.30047897	2.2076319	21	8 10.7	19.4
412468 2014 HR_{22}	16.9	X	216.97742	60.51377	168.66038	15.11186	0.1718859	0.22062911	2.7124444	21	—	—
412469 2014 HE_{25}	17.5	X	194.61432	79.32368	171.16350	8.41101	0.2861197	0.21934679	2.7230055	21	—	—
412470 2014 HR_{25}	17.3	X	260.08109	31.98565	197.25541	5.35858	0.1375350	0.24031443	2.5622184	21	—	—
412471 2014 HN_{33}	17.1	X	312.26927	215.98332	76.47708	8.68548	0.1404218	0.27968440	2.3157440	21	4 20.8	19.8
412472 2014 HE_{52}	16.0	X	77.93345	235.73838	45.11456	9.50774	0.0879870	0.19120230	2.9840583	21	10 24.5	20.2
412473 2014 HC_{93}	17.4	X	24.40819	89.37389	135.18972	3.83460	0.0962816	0.28641608	2.2793155	21	5 20.3	19.5
412474 2014 HN_{124}	17.4	X	327.76936	354.05429	127.96036	24.45537	0.0672090	0.36187994	1.9502624	21	—	—
412475 2014 HL_{130}	17.1	X	214.79662	197.93255	84.59390	3.68416	0.0967936	0.24622151	2.5210728	21	—	—
412476 2014 HC_{133}	15.8	X	43.70425	83.67182	197.94078	16.61945	0.1561638	0.17752998	3.1353660	21	9 15.7	19.9
412477 2014 HR_{147}	13.2	X	10.05032	27.59198	7.51818	20.62296	0.0573897	0.08146448	5.2701607	21	11 14.8	20.1
412478 2014 HX_{157}	17.2	X	304.26921	183.72158	113.60486	3.90427	0.2280996	0.27415304	2.3467888	21	3 31.9	20.2
412479 2014 HX_{180}	15.4	X	83.87155	196.63109	78.36331	14.93890	0.0903553	0.18526603	3.0474659	21	10 28.4	20.0
412480 2014 HP_{194}	17.3	X	60.71051	67.43131	136.46285	4.63766	0.0840679	0.29069138	2.2569119	21	6 20.4	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412481 2014 HQ_{194}	16.7	X	241.05348	358.37063	220.10889	6.29644	0.1531890	0.23104058	2.6303318	21	—	—
412482 2014 HU_{194}	15.8	X	104.15602	156.24189	59.91228	17.62760	0.2129087	0.17682991	3.1436358	21	9 24.8	21.1
412483 2014 HK_{195}	16.3	X	144.48345	334.67550	211.64671	1.50803	0.1712459	0.18690901	3.0295809	21	9 12.5	21.4
412484 2014 JP	16.4	X	226.57940	129.21798	119.58306	14.00894	0.0376162	0.23690612	2.5867346	21	—	—
412485 2014 JW_{2}	17.0	X	255.93067	53.32671	170.40731	4.37759	0.1374340	0.23496723	2.6009451	21	—	—
412486 2014 JL_{4}	15.4	X	34.55697	126.78474	172.56105	15.73891	0.1988888	0.17306532	3.1890600	21	10 4.9	19.3
412487 2014 JB_{6}	17.6	X	342.92673	149.92699	117.80109	3.97840	0.2415101	0.28103577	2.3083145	21	4 18.4	19.3
412488 2014 JE_{16}	18.1	X	41.30929	44.49642	156.51291	2.77119	0.1164010	0.28676363	2.2774735	21	5 16.8	20.0
412489 2014 JV_{16}	15.7	X	55.33841	180.11407	98.65262	11.25325	0.0690487	0.17987003	3.1081133	21	9 24.0	20.2
412490 2014 JZ_{18}	16.8	X	90.27841	207.09725	192.83547	4.54600	0.1010044	0.24561633	2.5252123	21	—	—
412491 2014 JW_{19}	17.3	X	304.29242	143.20739	137.60613	5.68067	0.1699631	0.27259554	2.3557193	21	3 18.1	20.2
412492 2014 JV_{20}	17.3	X	345.15726	180.62265	96.05808	5.54096	0.1452602	0.28751214	2.2735190	21	5 22.1	19.2
412493 2014 JV_{26}	17.1	X	292.03298	44.24915	125.63391	14.15659	0.1582591	0.23350315	2.6118059	21	—	—
412494 2014 JE_{33}	17.1	X	236.25173	198.27078	69.98924	9.31078	0.1723311	0.24065515	2.5597995	21	—	—
412495 2014 JN_{60}	16.9	X	208.39237	126.94384	147.73406	5.22790	0.2105628	0.22873587	2.6479709	21	—	—
412496 2014 JN_{70}	17.2	X	283.23611	272.11320	48.41592	6.64710	0.1409329	0.27431992	2.3458370	21	4 18.2	20.1
412497 2014 JL_{77}	16.5	X	90.24480	168.66381	141.48082	1.80159	0.1160260	0.19628944	2.9322754	21	12 14.9	20.8
412498 2014 KJ_{7}	17.1	X	134.32288	6.45951	45.98529	6.62935	0.0925739	0.26362568	2.4088564	21	3 8.9	20.3
412499 2014 KC_{26}	16.1	X	227.06351	0.07861	101.21728	8.22592	0.0810990	0.17441875	3.1725412	21	8 25.4	20.8
412500 2014 KR_{27}	17.5	X	295.73159	11.09390	189.23825	16.65544	0.0677828	0.24224443	2.5485912	21	—	—
412501 2014 KT_{27}	17.0	X	252.07776	12.77435	200.88818	11.62274	0.1282416	0.23610782	2.5925619	21	—	—
412502 2014 KY_{36}	17.0	X	309.51241	34.49355	118.76662	13.96695	0.1755397	0.23618663	2.5919851	21	—	—
412503 2014 KT_{58}	15.8	X	45.76627	219.40726	113.08723	12.66933	0.1096147	0.18380250	3.0636215	21	11 21.7	20.2
412504 2014 KA_{84}	17.0	X	252.03973	301.81700	26.53422	2.63606	0.2511763	0.26712061	2.3877991	21	3 16.6	21.1
412505 2014 KM_{85}	15.9	X	173.64356	217.76742	94.90293	11.41234	0.2276673	0.22823406	2.6518508	21	—	—
412506 2014 KJ_{86}	15.5	X	64.17080	177.25324	129.71005	17.03678	0.2055004	0.17655445	3.1469048	21	11 25.9	20.4
412507 2014 KV_{89}	15.9	X	68.83438	196.86194	70.99797	18.03337	0.1751062	0.17825469	3.1268622	21	10 15.8	20.7
412508 2014 KN_{90}	16.9	X	297.13715	348.35711	249.93813	10.74746	0.1365073	0.23724390	2.5842787	21	1 19.2	20.7
412509 2014 LL_{9}	17.9	X	78.03692	263.35999	139.65047	26.78964	0.1634610	0.36587444	1.9360415	21	—	—
412510 2014 LN_{11}	17.2	X	18.93600	305.71485	128.11448	4.01744	0.0750877	0.22075736	2.7113937	21	—	—
412511 2014 LO_{15}	17.1	X	272.55625	155.21811	173.66420	1.25402	0.1973426	0.25509853	2.4622420	21	4 10.4	20.7
412512 2014 LY_{26}	17.3	X	15.64195	262.53795	83.88916	4.67172	0.2624043	0.29262341	2.2469669	21	12 10.6	19.6
412513 2014 MY_{2}	16.9	X	179.25312	178.99275	209.55794	4.43713	0.1111646	0.26146879	2.4220855	21	3 26.8	20.6
412514 2014 MJ_{4}	16.4	X	190.66130	206.43423	115.00046	9.57142	0.1121405	0.22491295	2.6778921	21	1 20.2	20.4
412515 2014 MM_{5}	17.3	X	333.17112	145.41125	221.48998	0.52149	0.2467811	0.28494096	2.2871754	21	9 22.9	18.3
412516 2014 MM_{14}	17.6	X	147.14112	341.60643	156.92436	6.91032	0.0223512	0.29050160	2.2578948	21	7 10.4	20.4
412517 2014 MS_{16}	17.0	X	254.74933	142.58705	227.93385	0.27400	0.1957124	0.25560138	2.4590116	21	5 15.9	20.8
412518 2014 MD_{17}	17.5	X	44.83378	135.14944	139.91487	4.74193	0.1437481	0.28601500	2.2814459	21	9 23.3	19.9
412519 2014 MN_{20}	16.7	X	221.24711	222.49893	157.70704	7.15619	0.1431476	0.25419440	2.4680772	21	5 1.5	20.6
412520 2014 MW_{20}	17.4	X	33.92312	312.96061	320.41350	7.86953	0.2066583	0.28575923	2.2828070	21	9 8.9	19.6
412521 2014 ML_{22}	17.6	X	1.04511	41.03609	304.30931	5.31155	0.1788600	0.29118669	2.2543519	21	10 23.8	19.4
412522 2014 ME_{34}	16.9	X	326.55725	217.12875	34.46190	7.44216	0.0783743	0.27443498	2.3451812	21	3 24.4	19.6
412523 2014 MO_{34}	17.0	X	357.43169	180.07206	87.47590	5.52652	0.2022600	0.28180591	2.3041071	21	5 29.9	18.3
412524 2014 MY_{36}	17.3	X	285.72368	235.16478	77.38469	3.53946	0.2040175	0.25649963	2.4532674	21	4 4.1	20.8
412525 2014 MH_{37}	17.5	X	282.20083	135.73096	141.53266	5.27181	0.1863908	0.24196799	2.5505320	21	2 16.9	21.2
412526 2014 MT_{37}	17.1	X	276.89967	7.33955	341.35272	6.74185	0.1384359	0.26039108	2.4287640	21	5 16.7	20.4
412527 2014 MW_{37}	17.3	X	263.64377	243.00712	68.08205	2.20067	0.0763225	0.24196571	2.5505480	21	3 24.4	20.9
412528 2014 MX_{37}	16.9	X	88.39855	105.26801	123.29720	7.68696	0.0496219	0.28355023	2.2946479	21	9 3.8	19.7
412529 2014 MY_{37}	16.4	X	122.08037	313.24315	32.27030	2.35344	0.0935994	0.19666429	2.9285482	21	—	—
412530 2014 MN_{38}	17.8	X	331.70982	10.34321	325.81480	4.61951	0.1235356	0.27911928	2.3188687	21	8 3.1	19.9
412531 2014 MS_{39}	18.1	X	20.61669	283.12819	15.64500	4.25258	0.1852779	0.28837702	2.2689710	21	9 23.7	19.8
412532 2014 MS_{42}	17.1	X	275.13628	113.47445	232.82053	5.60831	0.1611503	0.25631600	2.4544390	21	5 10.5	20.4
412533 2014 MH_{43}	16.4	X	84.24080	161.68618	175.14298	10.93327	0.2299945	0.17659133	3.1464666	21	—	—
412534 2014 MN_{43}	17.9	X	355.58327	78.98939	239.30198	5.71855	0.2412819	0.28447724	2.2896602	21	8 27.6	19.1
412535 2014 MR_{43}	16.7	X	311.96268	100.99965	103.88484	15.68012	0.1295997	0.23477459	2.6023677	21	—	—
412536 2014 MF_{46}	16.8	X	149.58900	299.91671	44.20979	5.17290	0.0997591	0.21688045	2.7436105	21	1 5.6	20.8
412537 2014 MR_{49}	17.7	X	198.93475	261.97434	60.77366	3.89119	0.2092970	0.22668671	2.6639046	21	2 2.2	22.3
412538 2014 MN_{51}	15.5	X	21.89208	207.72043	164.96846	19.60995	0.1235044	0.16985718	3.2290896	21	12 6.9	20.1
412539 2014 MQ_{52}	18.3	X	87.04991	106.29615	174.65860	6.09743	0.2182251	0.30992793	2.1625305	21	12 2.8	21.6
412540 2014 MM_{53}	16.2	X	112.30806	125.41637	139.92694	17.35183	0.2260200	0.17577787	3.1561666	21	11 23.4	21.8
412541 2014 MV_{62}	15.6	X	262.47851	209.66410	303.71338	7.61276	0.0342237	0.18316994	3.0706707	21	12 13.8	19.9
412542 2014 MY_{62}	15.9	X	138.65473	302.39503	311.02879	8.28110	0.0620491	0.17547711	3.1597719	21	11 18.7	20.8
412543 2014 MJ_{64}	16.9	X	190.78163	238.53768	137.33002	16.01440	0.2279442	0.23416150	2.6069081	21	4 2.8	21.6
412544 2014 MK_{65}	16.3	X	79.04745	157.36287	187.19790	10.63391	0.1655747	0.17853051	3.1236408	21	—	—
412545 2014 NW	17.7	X	66.10282	21.38510	161.30947	6.73803	0.0476426	0.27718874	2.3296230	21	5 24.3	20.5
412546 2014 NP_{1}	18.0	X	301.12201	142.10796	158.10453	6.22894	0.1823309	0.26766586	2.3845553	21	4 8.3	21.0
412547 2014 NW_{12}	17.3	X	358.97495	172.47372	94.87674	7.51252	0.0905541	0.27493989	2.3423091	21	6 8.6	19.5
412548 2014 NF_{20}	16.6	X	278.32841	48.26377	222.40807	10.69602	0.1120503	0.23812924	2.5778693	21	2 8.9	20.6
412549 2014 ND_{24}	17.5	X	86.98326	331.52573	217.70288	6.50662	0.0529167	0.27681554	2.3317165	21	7 3.1	20.4
412550 2014 NL_{25}	17.4	X	94.89424	127.80028	136.63395	5.87870	0.2517722	0.31283642	2.1491060	21	11 22.1	20.9
412551 2014 NG_{29}	15.8	X	135.30078	328.89739	262.20847	6.92171	0.0587769	0.16894205	3.2407401	21	10 18.5	20.7
412552 2014 NT_{30}	16.5	X	235.46846	86.59717	139.61715	16.04649	0.2389807	0.21348867	2.7725932	21	—	—
412553 2014 NP_{33}	17.6	X	283.22854	197.02187	165.91247	6.67094	0.1327255	0.27146653	2.3622464	21	6 17.8	20.6
412554 2014 NZ_{37}	17.7	X	25.61065	161.79906	133.78498	5.76323	0.1702680	0.28717445	2.2753010	21	9 27.3	19.8
412555 2014 NA_{40}	16.5	X	229.15769	30.31363	207.48781	13.62312	0.1601767	0.21017986	2.8016163	21	—	—
412556 2014 NC_{44}	15.3	X	98.51096	12.72331	277.71220	17.92765	0.1233760	0.17171541	3.2057517	21	11 26.4	20.4
412557 2014 NH_{44}	16.0	X	55.14783	67.67233	279.05973	16.02029	0.0208820	0.17305714	3.1891604	21	12 2.4	20.6
412558 2014 NH_{45}	15.1	X	82.94547	60.48161	254.32669	14.73946	0.0765178	0.17424411	3.1746606	21	12 4.6	19.6
412559 2014 NQ_{51}	17.4	X	13.30229	320.60364	293.39896	6.35964	0.0857854	0.26828077	2.3809102	21	6 14.4	19.9
412560 2014 NP_{54}	15.9	X	62.04782	268.92606	87.52989	10.21480	0.0973701	0.17933816	3.1142555	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412561 2014 NS_{54}	17.2	X	90.07752	175.17970	65.88369	6.94133	0.0703919	0.29339800	2.2430104	21	9 29.6	20.0
412562 2014 NH_{55}	17.2	X	261.88186	284.82911	70.78744	4.18422	0.2309489	0.25512677	2.4620603	21	5 1.2	21.0
412563 2014 NH_{56}	16.1	X	231.38028	191.92076	105.42885	12.28436	0.0658578	0.22399810	2.6851785	21	2 2.6	20.1
412564 2014 NX_{58}	16.5	X	214.87678	175.66294	133.37916	14.28390	0.1660825	0.22444404	2.6816206	21	1 28.5	20.8
412565 2014 NY_{58}	16.2	X	80.76622	24.37220	317.06317	15.16742	0.0933658	0.18108162	3.0942338	21	—	—
412566 2014 NE_{59}	17.9	X	48.14171	173.81138	132.87850	5.30357	0.1848308	0.30033224	2.2083509	21	11 20.9	20.7
412567 2014 NM_{59}	15.6	X	125.82100	299.55687	329.40180	15.59281	0.2055209	0.17857188	3.1231583	21	11 30.3	21.2
412568 2014 NU_{59}	16.9	X	333.95600	174.95164	128.09329	6.79743	0.1288913	0.26870173	2.3784229	21	6 13.9	19.3
412569 2014 NX_{59}	16.5	X	307.56008	173.99424	116.77689	7.17538	0.1225270	0.25393488	2.4697584	21	4 17.3	19.6
412570 2014 NQ_{60}	17.5	X	351.82606	350.09728	312.16653	5.55995	0.2490184	0.27739814	2.3284506	21	7 16.9	18.3
412571 2014 NJ_{62}	16.0	X	43.34003	25.32502	331.87976	6.08779	0.1862538	0.17588158	3.1549257	21	12 24.4	20.4
412572 2014 OD_{2}	17.6	X	333.41620	194.30649	170.17553	3.44483	0.2327343	0.28359585	2.2944018	21	9 19.7	18.6
412573 2014 OD_{3}	16.9	X	270.33121	209.93302	144.65028	7.75619	0.1267459	0.25912367	2.4366772	21	5 22.8	20.3
412574 2014 OE_{3}	17.1	X	318.38984	235.40027	147.54723	6.24738	0.1681477	0.28366342	2.2940374	21	9 18.7	18.8
412575 2014 OK_{6}	16.4	X	308.09384	61.43173	164.88859	8.26449	0.4406808	0.24226175	2.5484697	21	—	—
412576 2014 OD_{12}	17.2	X	234.35357	126.29243	104.89204	5.50235	0.0514580	0.20898906	2.8122484	21	—	—
412577 2014 OA_{15}	17.4	X	294.09740	232.81545	121.78674	7.76057	0.1448561	0.27384986	2.3485205	21	6 19.8	20.1
412578 2014 OG_{20}	16.4	X	41.45135	232.28475	126.92935	10.11822	0.0551171	0.17816158	3.1279515	21	12 7.9	20.8
412579 2014 OC_{21}	18.3	X	315.69015	172.81718	134.49276	1.95763	0.1879508	0.26747624	2.3856821	21	5 8.1	20.7
412580 2014 OE_{29}	16.4	X	331.06435	53.10393	46.17799	1.26724	0.0595631	0.19142179	2.9817768	21	—	—
412581 2014 OF_{36}	16.8	X	333.11799	73.45272	113.34046	6.02578	0.0714265	0.22882284	2.6472999	21	1 12.8	20.2
412582 2014 ON_{38}	17.7	X	25.15790	174.20579	98.91869	1.99709	0.1857111	0.28469413	2.2884972	21	8 21.5	19.5
412583 2014 OR_{39}	17.5	X	189.20020	68.63084	316.24492	13.01396	0.2245305	0.23788669	2.5796213	21	3 31.3	22.2
412584 2014 OO_{42}	17.3	X	23.13710	296.97308	336.21763	6.82484	0.1339508	0.28290765	2.2981212	21	8 9.7	19.3
412585 2014 OK_{46}	17.6	X	255.69839	313.38555	326.89425	3.04608	0.2193710	0.23720148	2.5845868	21	1 25.8	22.0
412586 2014 OV_{46}	16.2	X	257.24435	98.58018	103.00753	6.96977	0.0217502	0.20380567	2.8597312	21	—	—
412587 2014 OU_{55}	16.6	X	180.44657	258.58827	129.92914	7.54909	0.0497909	0.24112427	2.5564782	21	3 31.3	20.2
412588 2014 OL_{57}	17.1	X	114.06815	9.62297	19.24353	4.59313	0.1210893	0.21246372	2.7815030	21	1 23.5	20.9
412589 2014 OE_{60}	15.7	X	177.19451	273.03175	333.59855	11.74291	0.0214271	0.18671180	3.0317138	21	12 28.5	20.2
412590 2014 OC_{64}	17.1	X	285.03661	30.81912	343.69704	9.56360	0.2542094	0.26975561	2.3722241	21	6 16.6	20.3
412591 2014 OS_{64}	17.7	X	325.40526	272.78879	32.77557	2.83678	0.1829711	0.26818806	2.3814589	21	5 22.5	20.0
412592 2014 OG_{65}	16.7	X	134.58994	36.61472	350.13707	4.64442	0.0640445	0.22046549	2.7137863	21	2 5.2	20.3
412593 2014 OU_{65}	18.3	X	43.91125	350.80844	321.55735	6.66900	0.2283854	0.30287574	2.1959699	21	11 26.9	21.1
412594 2014 OH_{67}	15.8	X	15.31092	286.30866	114.36082	10.63122	0.0879675	0.17868915	3.1217917	21	12 27.2	19.9
412595 2014 OF_{68}	15.6	X	5.38106	323.75129	82.09093	3.84187	0.0577914	0.17730871	3.1379739	21	12 16.4	19.7
412596 2014 OL_{68}	16.7	X	199.25661	211.01714	88.86285	5.07615	0.0238554	0.21490569	2.7603921	21	—	—
412597 2014 OU_{69}	18.0	X	24.75878	138.72448	176.29616	2.76877	0.0944877	0.29339453	2.2430280	21	10 11.9	20.3
412598 2014 OW_{70}	18.4	X	331.72216	247.48228	117.89159	4.11976	0.2205393	0.28586077	2.2822664	21	9 19.6	19.6
412599 2014 OY_{70}	17.4	X	235.39172	168.69592	123.30230	4.93882	0.2391114	0.22900483	2.6458972	21	1 23.7	22.1
412600 2014 ON_{71}	16.0	X	54.29869	17.73374	348.81548	8.89335	0.0414458	0.18030870	3.1030701	21	12 30.3	20.5
412601 2014 OX_{71}	18.4	X	3.18660	351.98351	344.95388	2.42189	0.1781576	0.29042424	2.2582957	21	10 16.7	20.1
412602 2014 OL_{72}	17.4	X	231.94982	214.59635	122.10224	6.56382	0.1757592	0.23734179	2.5835680	21	3 18.2	21.6
412603 2014 OW_{76}	17.9	X	328.23582	291.03628	20.67203	2.03651	0.1920576	0.27513828	2.3411830	21	6 5.3	19.7
412604 2014 OT_{80}	16.4	X	153.40508	23.78671	312.48961	14.33759	0.1370160	0.21417105	2.7667008	21	1 6.3	20.6
412605 2014 OK_{89}	17.3	X	38.54631	303.08606	206.10867	3.62375	0.1066542	0.24109461	2.5566879	21	2 26.2	19.9
412606 2014 OG_{90}	15.9	X	310.53331	309.43183	139.52102	10.88612	0.0565094	0.17871514	3.1214890	21	11 27.2	20.2
412607 2014 OA_{93}	17.0	X	145.00503	190.07871	166.93159	6.05565	0.0547592	0.21740311	2.7392114	21	1 9.3	20.8
412608 2014 OS_{94}	16.9	X	146.46179	275.26463	152.03872	15.02914	0.1357896	0.22848920	2.6498763	21	4 21.4	21.1
412609 2014 OH_{95}	16.9	X	219.88872	5.64626	341.19118	7.47951	0.1968212	0.23273237	2.6175693	21	3 16.2	21.4
412610 2014 OO_{95}	17.4	X	252.53061	237.14579	139.19178	6.39074	0.2038470	0.25346103	2.4728356	21	5 22.4	21.3
412611 2014 OG_{96}	17.6	X	340.22257	310.38885	338.68509	8.44363	0.2350199	0.26539176	2.3981578	21	5 15.5	19.9
412612 2014 OE_{99}	16.3	X	61.12655	218.74795	160.03434	12.74405	0.0747569	0.18229840	3.0804499	21	—	—
412613 2014 OT_{99}	17.0	X	356.60336	69.22606	158.12590	6.44051	0.0347703	0.24350655	2.5397772	21	4 13.9	20.2
412614 2014 OA_{100}	15.9	X	39.72732	73.89650	332.85761	15.14509	0.2277016	0.17881479	3.1203292	21	—	—
412615 2014 OH_{100}	16.6	X	54.63885	288.14441	148.26659	6.76082	0.2214934	0.19507612	2.9444214	21	1 7.8	19.5
412616 2014 OG_{101}	16.0	X	51.13291	216.81367	153.09568	28.20076	0.1992010	0.17187271	3.2037954	21	—	—
412617 2014 OP_{101}	16.6	X	208.42095	44.78525	331.61546	16.77715	0.2358341	0.23657194	2.5891700	21	4 3.8	21.4
412618 2014 OA_{102}	17.8	X	68.40313	117.25249	144.63599	8.44486	0.2209344	0.29351653	2.2424065	21	10 21.2	20.9
412619 2014 OM_{103}	17.8	X	73.63560	67.32239	155.78629	10.27073	0.1887485	0.27886309	2.3202887	21	8 25.5	20.5
412620 2014 OT_{103}	17.2	X	210.78076	110.57207	328.86447	7.53168	0.0754694	0.26547903	2.3976322	21	7 10.7	20.6
412621 2014 OW_{103}	16.3	X	83.83421	182.55931	145.88632	10.58952	0.0800588	0.17359026	3.1826275	21	12 22.3	21.1
412622 2014 OY_{103}	16.8	X	109.87182	314.20631	345.93722	11.70512	0.1214965	0.17509929	3.1643156	21	12 19.5	21.9
412623 2014 OT_{109}	17.2	X	153.89602	40.67583	329.56594	11.03414	0.1305077	0.22251562	2.6970917	21	2 13.4	21.3
412624 2014 OX_{110}	16.3	X	30.38435	60.01203	346.46599	7.06289	0.0534469	0.18627152	3.0364893	21	—	—
412625 2014 OS_{111}	17.5	X	63.98684	233.02427	6.83382	5.87745	0.0975715	0.28635909	2.2796179	21	8 24.1	20.1
412626 2014 OZ_{119}	16.8	X	300.64021	152.14463	84.14131	4.19522	0.0332233	0.23505792	2.6002761	21	2 8.6	20.2
412627 2014 OS_{130}	17.6	X	280.85962	278.78664	48.39468	1.98792	0.1969967	0.25578573	2.4578300	21	4 17.3	20.9
412628 2014 OQ_{136}	17.0	X	269.10200	73.20433	111.00097	6.61146	0.0569426	0.20281916	2.8689968	21	—	—
412629 2014 OO_{152}	16.6	X	245.58578	308.48616	327.61473	10.49500	0.0511914	0.23008770	2.6375890	21	1 23.2	20.4
412630 2014 OY_{167}	16.9	X	37.84802	57.92693	65.82725	9.01417	0.0881832	0.22758860	2.6568623	21	1 27.7	20.1
412631 2014 OG_{169}	17.2	X	195.28535	255.62131	49.48414	7.10861	0.0498570	0.21836912	2.7311270	21	1 3.6	21.2
412632 2014 OO_{169}	17.1	X	86.80194	25.45771	85.45290	10.67767	0.1561201	0.23839799	2.5759316	21	4 8.8	20.4
412633 2014 OW_{169}	15.8	X	318.32367	357.93048	91.44204	14.61939	0.1229577	0.17770576	3.1332981	21	12 4.1	19.6
412634 2014 OU_{171}	16.9	X	185.08158	299.64934	351.50869	7.54709	0.1902579	0.21074100	2.7966408	21	—	—
412635 2014 OU_{174}	15.9	X	96.44380	93.39674	327.47118	12.27433	0.0820781	0.22173904	2.7033852	21	2 2.4	19.4
412636 2014 OB_{175}	17.3	X	243.81057	270.12064	359.76883	4.30687	0.2511026	0.23094324	2.6310709	21	1 4.4	22.0
412637 2014 OA_{180}	17.5	X	204.08340	69.49772	351.32873	4.72771	0.2085352	0.25376024	2.4708914	21	6 1.1	21.7
412638 2014 OL_{180}	16.8	X	252.93726	4.00696	356.23464	5.02622	0.2176094	0.25330410	2.4738569	21	4 27.3	20.7
412639 2014 OL_{181}	16.5	X	210.96520	193.27050	10.91981	9.15983	0.0087553	0.18075412	3.0979703	21	12 15.2	21.0
412640 2014 OY_{184}	16.4	X	142.33285	219.49346	72.50736	10.18990	0.0508802	0.18631719	3.0359930	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412641 2014 OH_{185}	17.6	X	295.92448	29.86627	8.19827	4.90346	0.1866742	0.28290703	2.2981245	21	8 23.6	19.8
412642 2014 OJ_{185}	15.0	X	168.66081	73.06491	106.99458	10.84910	0.0604782	0.15479805	3.4352555	21	9 29.4	20.3
412643 2014 OH_{186}	15.9	X	147.38940	112.71290	124.39791	17.06847	0.1963933	0.17378860	3.1802055	21	11 18.2	21.5
412644 2014 OY_{186}	17.2	X	237.39329	12.14423	300.38351	3.41403	0.2533914	0.22983869	2.6394936	21	2 16.5	21.7
412645 2014 OV_{187}	16.1	X	109.97627	340.96653	337.73056	15.64906	0.1573238	0.17671279	3.1450247	21	—	—
412646 2014 OC_{188}	15.9	X	76.87410	38.64950	328.91339	8.65923	0.0916897	0.17821667	3.1273069	21	—	—
412647 2014 OL_{188}	17.5	X	15.15081	353.38145	312.79191	1.09727	0.1365328	0.27907711	2.3191023	21	9 14.1	19.4
412648 2014 OC_{189}	16.4	X	157.21694	310.92380	350.21452	9.43792	0.0965769	0.18748800	3.0233405	21	—	—
412649 2014 OE_{189}	17.8	X	310.31926	177.07515	174.47225	2.40811	0.1265174	0.26668027	2.3904269	21	7 14.9	20.4
412650 2014 OQ_{189}	17.4	X	310.88003	186.69495	133.11547	2.26544	0.1960018	0.25883016	2.4385189	21	5 18.0	20.0
412651 2014 OW_{190}	16.7	X	193.72278	172.47991	167.29151	4.89814	0.1170009	0.21508381	2.7588679	21	2 14.9	21.1
412652 2014 OH_{191}	17.4	X	301.31842	154.60009	172.13969	2.69227	0.1915426	0.25586288	2.4573359	21	5 14.3	20.4
412653 2014 OK_{191}	16.5	X	286.61375	270.45922	357.78921	3.21241	0.1192256	0.22680498	2.6629785	21	2 21.1	20.3
412654 2014 OO_{192}	16.2	X	32.08552	252.81955	157.87157	11.02292	0.0345184	0.17668909	3.1453060	21	—	—
412655 2014 OP_{192}	16.1	X	34.87230	256.18889	163.43160	16.21110	0.0295549	0.18126607	3.0921345	21	—	—
412656 2014 OU_{192}	17.3	X	314.15872	228.33141	108.57032	3.52860	0.2028762	0.26520952	2.3992563	21	6 16.6	19.5
412657 2014 OC_{193}	15.7	X	25.48928	268.47324	161.54382	17.35652	0.1129587	0.17808325	3.1288686	21	—	—
412658 2014 OH_{193}	16.9	X	183.87736	121.44959	358.38183	11.92848	0.0924874	0.26251383	2.4156532	21	8 5.9	20.5
412659 2014 OD_{194}	17.9	X	282.13658	275.33942	112.42553	2.25272	0.1878484	0.26604648	2.3942217	21	7 12.8	20.8
412660 2014 OU_{194}	17.0	X	185.33549	250.94707	126.08656	2.71613	0.0816225	0.22520207	2.6755997	21	3 23.3	21.0
412661 2014 OA_{195}	17.3	X	66.66119	296.61386	354.45414	6.89556	0.0848031	0.29373050	2.2413173	21	11 3.2	20.1
412662 2014 OC_{195}	18.4	X	66.44254	167.60702	131.18232	3.09484	0.1796592	0.29954236	2.2122314	21	11 29.9	21.4
412663 2014 OP_{195}	17.9	X	294.17088	244.24102	138.98438	1.89252	0.1900114	0.27020192	2.3696112	21	7 24.6	20.6
412664 2014 OH_{196}	17.2	X	332.24899	358.90832	295.75422	2.56750	0.1845025	0.26112015	2.4242410	21	5 18.9	19.4
412665 2014 OQ_{196}	16.4	X	104.83927	64.69413	339.61151	9.90746	0.1273718	0.20225244	2.8743537	21	2 3.7	20.3
412666 2014 OT_{196}	17.5	X	30.79140	358.54984	296.19359	3.08154	0.1248969	0.28190190	2.3035840	21	9 22.3	20.0
412667 2014 OY_{196}	17.0	X	305.55172	148.07708	167.62023	7.70720	0.1749221	0.25602097	2.4563242	21	5 9.2	20.0
412668 2014 OK_{197}	15.3	X	35.57655	246.28490	167.67931	26.60774	0.1666763	0.17664113	3.1458752	21	—	—
412669 2014 OF_{198}	16.2	X	170.55318	255.09836	162.88174	15.58473	0.1311355	0.23174245	2.6250182	21	5 2.9	20.5
412670 2014 OJ_{198}	16.7	X	271.85842	32.97091	337.75051	14.41616	0.1398838	0.25845712	2.4408648	21	6 11.2	20.3
412671 2014 OM_{198}	17.2	X	342.10252	331.80657	329.36673	5.87586	0.1462003	0.26448514	2.4036351	21	6 25.8	19.3
412672 2014 OU_{200}	16.0	X	154.89619	322.45938	309.50824	5.48173	0.0517901	0.18370191	3.0647398	21	12 31.1	20.6
412673 2014 OG_{202}	17.0	X	44.10334	15.76248	76.34678	4.57309	0.0620147	0.21410241	2.7672922	21	—	—
412674 2014 OW_{206}	16.7	X	64.83585	285.70403	64.76888	2.49662	0.1012146	0.17317198	3.1877503	21	12 29.2	21.3
412675 2014 OB_{207}	16.2	X	105.49445	92.07532	220.22370	14.78177	0.1961519	0.18000124	3.1066027	21	—	—
412676 2014 OW_{211}	17.8	X	316.56792	36.99907	349.77516	3.68355	0.2162487	0.28410457	2.2916620	21	9 13.2	18.9
412677 2014 OM_{214}	17.5	X	312.65660	5.92044	309.51422	6.16900	0.1557423	0.26760516	2.3849159	21	5 18.1	20.2
412678 2014 OX_{216}	15.4	X	70.45226	239.01148	105.38906	17.79416	0.2283000	0.17989591	3.1078152	21	—	—
412679 2014 OO_{222}	15.7	X	272.12250	42.26641	78.73690	10.29368	0.0422652	0.17537352	3.1610160	21	11 16.2	20.1
412680 2014 OL_{226}	16.3	X	173.84353	127.82583	109.14359	12.29775	0.0487532	0.17914295	3.1165174	21	12 10.5	21.0
412681 2014 OB_{227}	16.9	X	218.66132	252.31933	21.78194	7.88804	0.1775478	0.21418672	2.7665659	21	—	—
412682 2014 OY_{230}	17.3	X	298.27575	195.76103	137.93187	2.86694	0.2274814	0.25901307	2.4373708	21	5 13.9	20.4
412683 2014 OK_{231}	16.0	X	44.69557	254.72292	168.80192	10.34167	0.1749881	0.18244148	3.0788391	21	—	—
412684 2014 OT_{231}	15.6	X	124.76447	348.73923	337.66627	10.05348	0.1034023	0.18467460	3.0539688	21	—	—
412685 2014 OV_{232}	16.4	X	117.12138	134.16658	164.26051	15.86316	0.0898142	0.17081164	3.2170495	21	12 22.4	21.6
412686 2014 OP_{234}	17.3	X	287.16275	106.32978	142.34347	11.33208	0.0900217	0.23516952	2.5994533	21	1 29.2	20.9
412687 2014 OW_{234}	17.6	X	303.38778	19.42561	7.49873	4.80571	0.2090800	0.28058929	2.3107626	21	8 16.1	19.5
412688 2014 OT_{240}	18.1	X	357.73289	273.04823	346.60812	1.56004	0.1051237	0.26754930	2.3852478	21	5 23.8	20.5
412689 2014 OF_{251}	15.7	X	346.58623	77.56283	336.37447	15.35510	0.1554221	0.17309961	3.1886388	21	12 1.0	19.8
412690 2014 OC_{256}	17.0	X	44.67947	15.05121	20.38301	4.80242	0.2399830	0.18414058	3.0598704	21	—	—
412691 2014 OU_{256}	17.0	X	57.41112	102.94506	349.08797	10.83495	0.0281536	0.22134027	2.7066313	21	1 15.1	20.7
412692 2014 OF_{257}	16.6	X	247.75674	266.93846	57.76354	7.56262	0.1863944	0.24460886	2.5321412	21	3 17.7	20.7
412693 2014 OL_{258}	16.9	X	229.44867	201.67424	72.57459	7.03551	0.1056173	0.22142885	2.7059093	21	1 1.9	21.1
412694 2014 OS_{258}	16.7	X	309.72399	102.81251	103.18331	14.23233	0.1335774	0.22924618	2.6440397	21	—	—
412695 2014 OQ_{259}	15.8	X	54.66099	268.11300	93.75782	9.87723	0.0446734	0.18244431	3.0788072	21	12 25.1	20.0
412696 2014 OF_{274}	16.9	X	293.62871	172.94852	70.68297	8.74067	0.1578846	0.23794595	2.5791930	21	1 23.6	20.7
412697 2014 OW_{276}	15.8	X	95.03322	338.43524	332.83007	11.78650	0.1389816	0.17731016	3.1379568	21	12 20.3	20.9
412698 2014 OB_{277}	17.1	X	5.88032	305.52252	331.88104	6.71510	0.0910202	0.27315132	2.3525228	21	7 8.8	19.4
412699 2014 OE_{277}	17.7	X	284.71630	291.92100	32.41589	2.72616	0.2175275	0.25670112	2.4519835	21	4 15.0	21.3
412700 2014 OL_{277}	17.4	X	227.06451	211.55012	80.52558	3.31655	0.1121207	0.22312575	2.6921728	21	1 20.8	21.5
412701 2014 OH_{279}	16.2	X	50.73779	317.58958	72.83111	5.81546	0.1837503	0.18245102	3.0787318	21	—	—
412702 2014 OD_{280}	16.5	X	56.66117	59.26553	344.85821	14.99674	0.1580063	0.19166337	2.9792707	21	—	—
412703 2014 OD_{286}	17.7	X	109.39337	187.33012	33.97866	8.10005	0.0499020	0.29066181	2.2570650	21	9 23.6	20.5
412704 2014 OT_{292}	17.0	X	202.98488	242.94168	75.29456	5.95809	0.1598753	0.22093782	2.7099171	21	1 31.2	21.4
412705 2014 OC_{293}	16.2	X	48.35116	242.36904	171.27273	17.32987	0.1219085	0.18407721	3.0605727	21	—	—
412706 2014 OE_{294}	17.7	X	316.78285	235.34165	187.87240	6.07811	0.0831031	0.29555088	2.2321046	21	11 25.4	19.8
412707 2014 OL_{294}	16.8	X	148.59269	198.28216	171.27420	3.82229	0.1421123	0.20853524	2.8163270	21	2 9.1	21.0
412708 2014 OV_{294}	18.3	X	89.83462	105.50172	166.48330	7.36339	0.2437719	0.30271738	2.1967357	21	11 25.5	21.8
412709 2014 OB_{295}	17.5	X	238.56003	335.20929	350.29780	1.17402	0.2117903	0.23304705	2.6152124	21	3 6.8	22.0
412710 2014 OY_{295}	15.8	X	350.19118	49.69663	348.71169	19.09835	0.0408993	0.15517248	3.4297272	21	11 3.9	20.8
412711 2014 OF_{296}	17.4	X	243.23661	43.44609	10.15084	5.22503	0.1920818	0.25729249	2.4482249	21	6 30.7	21.1
412712 2014 OJ_{297}	17.2	X	221.12780	319.60024	25.42941	5.53738	0.0767100	0.22781350	2.6551134	21	3 21.6	21.1
412713 2014 OA_{298}	16.1	X	138.02407	41.02517	348.72468	6.15059	0.0332532	0.20987350	2.8043420	21	2 11.1	20.0
412714 2014 OH_{298}	16.5	X	194.17736	201.97401	172.31964	17.46009	0.1990751	0.22550837	2.6731763	21	3 31.5	21.0
412715 2014 OH_{299}	17.5	X	338.86415	138.61342	152.12045	2.86115	0.2027150	0.26210792	2.4181465	21	5 25.5	19.6
412716 2014 OP_{299}	17.2	X	243.40725	191.55213	130.68830	3.48716	0.0825293	0.22882429	2.6472886	21	3 16.7	21.1
412717 2014 OA_{307}	16.8	X	328.26662	202.75459	139.76305	15.33331	0.2306852	0.27735031	2.3287183	21	7 22.1	18.6
412718 2014 OM_{310}	17.9	X	11.95705	7.73517	281.83422	0.67230	0.2345279	0.28498766	2.2869255	21	8 25.2	19.0
412719 2014 OP_{316}	16.3	X	216.23986	7.23942	324.59817	14.78155	0.1242742	0.23445468	2.6047344	21	2 23.2	20.5
412720 2014 OX_{316}	15.6	X	122.54948	181.01959	108.14295	11.62311	0.0730873	0.18242454	3.0790297	21	12 18.1	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412721 2014 OP_{329}	15.5	X	224.21133	40.80959	109.33614	12.12923	0.0462788	0.16833544	3.2485210	21	10 27.1	20.4
412722 2014 OR_{333}	15.8	X	96.83136	35.58755	354.81300	14.93867	0.1492384	0.20221323	2.8747252	21	1 11.4	19.8
412723 2014 OX_{333}	18.3	X	23.01925	270.72572	57.69630	2.58130	0.0843339	0.28868797	2.2673414	21	10 26.6	20.6
412724 2014 OM_{334}	17.8	X	13.41843	89.94068	150.76452	2.24683	0.0994180	0.26865222	2.3787151	21	5 25.6	20.2
412725 2014 OT_{339}	17.7	X	236.25817	260.60824	120.48569	3.58246	0.2479313	0.25245189	2.4794212	21	5 9.6	21.8
412726 2014 OO_{341}	17.2	X	28.13771	297.73335	316.64763	5.67526	0.1067980	0.27649137	2.3335386	21	7 15.6	19.3
412727 2014 OX_{343}	16.0	X	62.52538	10.95544	322.14328	9.68076	0.1032513	0.17234696	3.1979153	21	12 5.2	20.7
412728 2014 OA_{344}	15.4	X	20.50576	79.59383	317.46058	24.54905	0.2349393	0.17014906	3.2253958	21	—	—
412729 2014 OG_{344}	16.5	X	343.55968	189.62419	133.76217	24.05714	0.1780672	0.28301170	2.2975578	21	8 4.4	17.8
412730 2014 OR_{346}	16.7	X	66.45858	173.12174	254.57306	4.90456	0.0135685	0.21635666	2.7480368	21	—	—
412731 2014 OV_{346}	17.6	X	147.32313	280.71065	201.08551	4.40910	0.0621571	0.26992257	2.3712458	21	6 20.6	20.8
412732 2014 OT_{347}	17.3	X	328.30560	357.38889	206.12679	3.52538	0.1051859	0.23604702	2.5930071	21	1 20.3	20.6
412733 2014 OY_{349}	17.0	X	270.33926	180.96303	148.00518	7.35790	0.1583447	0.25523647	2.4613549	21	4 15.1	20.6
412734 2014 OF_{353}	16.8	X	143.76083	223.36732	153.94250	6.30025	0.0310661	0.22414024	2.6840431	21	1 28.5	20.4
412735 2014 OD_{355}	18.4	X	289.53626	174.40601	155.14572	2.78873	0.1837915	0.26188146	2.4195404	21	5 3.1	21.6
412736 2014 OV_{355}	17.1	X	340.28754	245.42587	318.06302	11.68540	0.1307188	0.23996674	2.5646928	21	2 3.0	20.2
412737 2014 OP_{358}	16.2	X	261.51989	322.37803	317.38957	9.25036	0.0156504	0.22412446	2.6841692	21	2 16.9	19.8
412738 2014 OA_{359}	17.7	X	263.72355	128.66332	187.21051	1.06537	0.0523185	0.24104758	2.5570205	21	4 1.6	21.1
412739 2014 OS_{359}	16.7	X	247.00952	138.35309	147.65230	3.82045	0.1222266	0.22485250	2.6783721	21	1 31.3	20.8
412740 2014 OY_{359}	17.7	X	354.35456	307.01191	301.59253	0.72252	0.1391862	0.25516831	2.4617931	21	4 28.5	19.9
412741 2014 OE_{360}	15.7	X	5.11624	271.26210	158.65002	26.80308	0.1062211	0.17541475	3.1605207	21	—	—
412742 2014 OK_{360}	16.5	X	328.54312	233.14931	346.61764	12.46907	0.1966623	0.23462670	2.6034611	21	2 1.8	19.9
412743 2014 OV_{360}	16.4	X	309.77455	154.35551	342.65461	9.41649	0.0903688	0.18556099	3.0442356	21	—	—
412744 2014 OD_{362}	17.5	X	166.50903	251.18802	165.74022	0.86548	0.1568450	0.24531851	2.5272556	21	4 24.2	21.5
412745 2014 OX_{362}	17.6	X	353.26375	319.04548	339.20465	2.06761	0.1264328	0.27879569	2.3206627	21	7 16.6	19.4
412746 2014 OO_{363}	16.7	X	59.66362	322.53020	58.89330	2.63379	0.0565394	0.19140293	2.9819727	21	—	—
412747 2014 OB_{367}	17.9	X	66.13428	0.11976	345.50615	4.57410	0.1304696	0.31701120	2.1301964	21	—	—
412748 2014 OD_{367}	17.3	X	309.09531	264.95357	34.27862	1.37432	0.1891622	0.25708225	2.4495595	21	4 16.3	19.9
412749 2014 OV_{368}	17.2	X	9.20498	355.15967	146.51283	2.90364	0.0731835	0.22248118	2.6973700	21	1 6.5	20.3
412750 2014 OV_{369}	16.7	X	56.39348	284.05387	106.79260	4.90472	0.1018276	0.19201511	2.9756312	21	—	—
412751 2014 OC_{370}	17.1	X	162.16530	251.09148	60.28065	2.19655	0.1018087	0.19946317	2.9010880	21	—	—
412752 2014 OE_{370}	17.5	X	300.61080	357.78427	354.14384	6.00716	0.1135837	0.26812987	2.3818034	21	7 2.2	20.3
412753 2014 OP_{374}	15.9	X	86.26860	200.04318	93.16879	5.77125	0.1337765	0.17183708	3.2042382	21	11 20.1	20.8
412754 2014 OF_{375}	16.7	X	192.37053	67.58480	309.22977	12.15221	0.1833449	0.23692630	2.5865876	21	3 23.9	21.2
412755 2014 OA_{376}	16.2	X	30.46022	39.92258	327.75884	12.47580	0.0549980	0.17460104	3.1703327	21	11 29.9	20.8
412756 2014 OE_{377}	17.4	X	49.18150	231.01786	357.65468	6.42880	0.0642013	0.27278960	2.3546020	21	7 7.4	20.1
412757 2014 OW_{377}	17.5	X	56.86992	314.70075	267.48151	1.63077	0.1456303	0.27546239	2.3393462	21	7 22.4	20.0
412758 2014 OU_{378}	16.5	X	91.53457	248.01217	132.79740	3.63616	0.1506490	0.19475598	2.9476473	21	—	—
412759 2014 OJ_{380}	17.2	X	183.91185	40.82250	266.86800	5.41930	0.1092703	0.21619047	2.7494449	21	—	—
412760 2014 OX_{380}	16.2	X	340.40680	236.31254	183.36210	6.92793	0.1618920	0.17222566	3.1994168	21	12 1.4	19.9
412761 2014 OF_{381}	16.2	X	111.52250	6.55916	340.53782	8.44633	0.0998451	0.19116451	2.9844516	21	—	—
412762 2014 OC_{382}	16.9	X	70.96860	225.57585	157.89109	2.37744	0.0884232	0.19749843	2.9202965	21	—	—
412763 2014 OK_{384}	16.7	X	25.87387	189.01909	56.18990	6.61846	0.1697365	0.27071789	2.3665994	21	7 2.9	18.7
412764 2014 OE_{385}	15.9	X	356.39818	254.71527	153.95045	10.30388	0.0862407	0.17802904	3.1295038	21	12 11.2	20.1
412765 2014 OP_{385}	17.1	X	134.67554	291.24542	255.80672	7.11912	0.0645832	0.29259531	2.2471108	21	9 1.8	20.3
412766 2014 OD_{386}	18.7	X	351.26558	221.21549	156.33612	4.16372	0.0829495	0.30454995	2.1879146	21	11 19.9	20.8
412767 2014 OO_{386}	16.6	X	91.50872	104.92705	234.69122	3.26088	0.1442970	0.18668578	3.0319955	21	—	—
412768 2014 OQ_{386}	16.3	X	317.36024	176.61021	293.47028	8.38139	0.0239090	0.18779430	3.0200522	21	—	—
412769 2014 OS_{386}	16.0	X	31.66087	112.25941	258.70350	6.89314	0.0283139	0.17782142	3.1319393	21	12 4.8	20.2
412770 2014 OB_{387}	16.3	X	86.06136	85.39955	259.35528	6.80464	0.0622369	0.18875428	3.0098038	21	—	—
412771 2014 OC_{387}	16.1	X	61.42773	181.72333	186.29696	6.38026	0.0548369	0.18775717	3.0204504	21	—	—
412772 2014 OD_{387}	17.1	X	110.81094	202.21028	184.51404	3.69494	0.1044039	0.21143089	2.7905540	21	1 12.4	20.9
412773 2014 ON_{387}	17.8	X	8.65363	196.42162	50.61199	3.77304	0.1965650	0.27027867	2.3691626	21	5 23.9	19.4
412774 2014 OU_{388}	17.6	X	262.15563	221.61893	143.17266	7.15633	0.1244633	0.26279014	2.4139596	21	5 26.4	21.0
412775 2014 OP_{389}	17.2	X	255.84932	76.86274	227.40848	0.83145	0.0478218	0.24155845	2.5534140	21	3 7.8	20.5
412776 2014 OS_{390}	17.2	X	269.07161	256.48175	108.07236	3.08205	0.1921918	0.25923521	2.4359782	21	5 24.4	20.7
412777 2014 PY_{2}	17.5	X	314.05623	169.13231	140.43450	5.89242	0.2115768	0.26650715	2.3914619	21	5 6.4	20.2
412778 2014 PB_{6}	17.4	X	328.56587	189.64252	151.13553	6.77896	0.1418667	0.28219556	2.3019856	21	7 31.9	19.4
412779 2014 PS_{6}	17.0	X	111.57278	127.33228	167.32080	6.14617	0.2617599	0.18266218	3.0763586	21	12 23.7	22.4
412780 2014 PL_{10}	16.5	X	105.38734	315.38111	142.73062	15.60772	0.0552702	0.23671215	2.5881474	21	3 31.7	20.1
412781 2014 PS_{10}	16.0	X	208.92315	45.84269	145.58878	9.82900	0.0445188	0.17499923	3.1655216	21	11 25.9	20.7
412782 2014 PZ_{11}	16.2	X	98.10682	200.64227	145.77754	9.68642	0.1036966	0.18903699	3.0068021	21	—	—
412783 2014 PY_{12}	17.2	X	269.92079	137.92534	161.87267	0.82412	0.1157738	0.24258745	2.5461882	21	3 11.5	20.8
412784 2014 PX_{13}	16.8	X	185.95129	224.28568	148.11777	12.42200	0.1998098	0.23004909	2.6378840	21	3 23.1	21.3
412785 2014 PQ_{15}	16.8	X	122.53366	45.09899	312.34490	1.25453	0.0627504	0.20287263	2.8684927	21	—	—
412786 2014 PB_{17}	16.3	X	141.68188	329.55973	329.07454	8.95970	0.0604203	0.18996428	2.9970093	21	—	—
412787 2014 PE_{17}	16.8	X	125.95298	210.06239	128.55050	3.94354	0.1007458	0.19735999	2.9216620	21	—	—
412788 2014 PA_{19}	16.4	X	210.32883	259.42070	2.10287	6.32123	0.0165819	0.20166207	2.8799607	21	—	—
412789 2014 PC_{19}	16.9	X	143.55595	338.60962	95.58476	4.28684	0.1320491	0.23732041	2.5837232	21	4 23.2	20.7
412790 2014 PZ_{20}	17.9	X	9.49256	260.73306	357.92447	3.15660	0.1904201	0.27061603	2.3671932	21	6 16.5	19.4
412791 2014 PT_{21}	16.9	X	205.51222	310.71096	337.09246	1.77933	0.0556192	0.21060553	2.7978400	21	—	—
412792 2014 PU_{21}	16.9	X	351.53733	66.84711	140.02555	7.51954	0.0846069	0.23846188	2.5754715	21	3 4.4	19.9
412793 2014 PW_{21}	17.3	X	227.85651	195.96346	139.79202	5.34059	0.2086032	0.23609296	2.5926707	21	3 11.3	21.6
412794 2014 PN_{22}	16.0	X	95.90986	43.06937	327.24314	9.87234	0.0962068	0.19530826	2.9420879	21	—	—
412795 2014 PQ_{22}	18.0	X	307.96854	319.37037	359.07668	1.28568	0.2128704	0.26366776	2.4086001	21	5 6.8	20.6
412796 2014 PS_{22}	17.1	X	164.80027	13.77469	336.01773	2.89185	0.1076891	0.21573382	2.7533234	21	1 29.8	21.1
412797 2014 PZ_{22}	17.7	X	315.80420	64.53600	174.74620	3.56185	0.1284932	0.23984249	2.5655785	21	2 14.9	21.2
412798 2014 PF_{23}	16.5	X	56.86707	213.03222	150.68219	13.75925	0.1604597	0.17629995	3.1499326	21	—	—
412799 2014 PB_{25}	16.5	X	256.70302	303.84849	326.01401	10.80635	0.2672784	0.23117151	2.6293386	21	1 14.3	21.2
412800 2014 PG_{25}	17.4	X	241.89420	188.94554	133.34295	9.81826	0.1657697	0.23769955	2.5809751	21	3 9.9	21.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412801 2014 PK_{27}	17.4	X	235.77893	314.47602	76.41648	2.70302	0.2489370	0.25278370	2.4772510	21	5 20.4	21.5
412802 2014 PH_{28}	16.6	X	66.25169	46.45501	337.72820	1.08579	0.1510894	0.18584674	3.0411143	21	—	—
412803 2014 PK_{28}	16.8	X	140.35167	155.32643	139.44716	2.35473	0.0974041	0.18710988	3.0274123	21	—	—
412804 2014 PT_{28}	17.1	X	306.93747	353.23358	324.34517	5.86483	0.1236814	0.26157595	2.4214240	21	5 17.9	20.0
412805 2014 PG_{29}	17.7	X	346.20650	267.95654	2.27466	0.86803	0.1619976	0.26302097	2.4125471	21	5 12.5	19.9
412806 2014 PH_{29}	16.4	X	42.96971	249.23030	143.14687	10.64835	0.2166410	0.17672145	3.1449219	21	—	—
412807 2014 PC_{30}	18.1	X	5.60371	273.97648	348.64218	4.71571	0.2143997	0.27007904	2.3703299	21	6 12.8	19.7
412808 2014 PJ_{32}	16.4	X	83.68921	252.41011	125.15336	10.21484	0.1420633	0.19066168	2.9896966	21	—	—
412809 2014 PV_{32}	17.1	X	222.13026	217.35898	128.18179	11.07659	0.1287103	0.23615689	2.5922027	21	3 23.2	21.2
412810 2014 PP_{34}	17.3	X	341.10711	227.18093	101.54206	6.84460	0.1268806	0.27792463	2.3255090	21	8 11.7	19.3
412811 2014 PA_{35}	17.5	X	115.13699	290.28888	145.68619	7.82421	0.0799729	0.22979375	2.6398378	21	3 17.1	21.0
412812 2014 PL_{36}	17.0	X	161.72306	24.88171	339.63286	0.89678	0.0877388	0.21953406	2.7214568	21	2 10.6	21.0
412813 2014 PU_{36}	16.4	X	79.75550	337.28599	339.75109	1.64414	0.1808987	0.17142365	3.2093880	21	12 14.9	21.3
412814 2014 PN_{37}	17.5	X	154.98270	304.63341	63.65046	1.51405	0.1436303	0.21541253	2.7560605	21	2 14.5	21.8
412815 2014 PT_{37}	16.7	X	188.36377	201.83701	36.16057	1.30919	0.1359222	0.18533618	3.0466969	21	12 20.9	21.6
412816 2014 PG_{38}	17.4	X	90.03612	140.97473	113.61950	8.54505	0.1866764	0.29950692	2.2124059	21	10 31.9	20.7
412817 2014 PO_{38}	16.5	X	71.99020	280.61166	74.05440	2.52514	0.1584567	0.17850789	3.1239047	21	—	—
412818 2014 PE_{39}	16.7	X	262.65116	136.68176	161.34217	15.04193	0.0847992	0.23314976	2.6144443	21	3 5.9	20.5
412819 2014 PQ_{39}	16.3	X	89.03096	216.46363	163.08467	10.71257	0.0592473	0.19404201	2.9548733	21	—	—
412820 2014 PU_{39}	15.8	X	64.52309	208.19332	157.05747	10.17798	0.0624749	0.17872088	3.1214223	21	—	—
412821 2014 PV_{39}	16.9	X	140.88957	195.07265	146.86185	2.47600	0.0733666	0.20147693	2.8817248	21	—	—
412822 2014 PP_{40}	18.5	X	250.38357	97.36747	321.12433	2.38734	0.1852789	0.26744681	2.3858572	21	7 15.8	21.7
412823 2014 PU_{40}	17.1	X	125.87974	83.47691	331.65765	4.34267	0.0520422	0.22192173	2.7019014	21	2 26.9	20.6
412824 2014 PF_{41}	16.6	X	142.83828	301.45979	344.26588	2.97237	0.1939742	0.18546391	3.0452979	21	—	—
412825 2014 PK_{41}	16.1	X	359.31638	116.74623	350.25561	7.17568	0.0959278	0.19090588	2.9871464	21	—	—
412826 2014 PF_{42}	16.1	X	187.13006	94.24477	151.55452	7.11029	0.0620902	0.18235865	3.0797713	21	—	—
412827 2014 PK_{42}	15.7	X	355.09097	283.71395	152.42226	20.56139	0.0754285	0.17544846	3.1601159	21	—	—
412828 2014 PU_{44}	16.0	X	55.49902	244.07858	136.81242	12.42372	0.1625939	0.18503778	3.0499714	21	—	—
412829 2014 PY_{44}	17.6	X	212.15463	73.31575	308.05210	4.34903	0.1749941	0.24722067	2.5142755	21	4 19.3	21.7
412830 2014 PP_{45}	16.8	X	126.31088	95.30110	317.83678	11.50589	0.1538563	0.22182945	2.7026506	21	3 7.0	20.7
412831 2014 PQ_{45}	18.9	X	115.85523	105.09148	150.49128	1.49353	0.1668588	0.31193260	2.1532554	21	11 23.8	22.0
412832 2014 PB_{46}	16.7	X	35.74224	195.16787	224.14079	1.59115	0.0466902	0.19231390	2.9725484	21	—	—
412833 2014 PN_{46}	16.7	X	118.15603	308.79098	354.52665	4.06661	0.0993920	0.18297063	3.0729003	21	12 31.4	21.5
412834 2014 PQ_{46}	16.0	X	119.34414	173.59728	121.29345	5.99168	0.1395438	0.18116247	3.0933132	21	12 24.2	20.9
412835 2014 PP_{48}	16.2	X	110.03089	343.04761	348.77001	6.47677	0.1083304	0.18586124	3.0409562	21	—	—
412836 2014 PW_{48}	17.4	X	260.55508	240.73918	57.82709	3.57365	0.1438538	0.23658744	2.5890569	21	2 27.8	21.3
412837 2014 PP_{49}	18.1	X	120.88785	83.58646	157.54590	5.21387	0.1370098	0.30738958	2.1744193	21	11 9.7	21.3
412838 2014 PB_{50}	17.8	X	37.79280	319.44232	289.46050	3.13036	0.1575792	0.27698622	2.3307585	21	7 31.8	20.0
412839 2014 PC_{50}	16.3	X	82.44688	153.65442	163.43169	4.92541	0.1661632	0.17213467	3.2005441	21	12 16.5	21.2
412840 2014 PF_{50}	16.4	X	86.11172	2.62286	358.57717	9.11032	0.0863113	0.18687158	3.0299854	21	—	—
412841 2014 PY_{50}	16.2	X	130.33503	183.18161	121.31123	3.65664	0.0346822	0.18501977	3.0501693	21	—	—
412842 2014 PB_{52}	17.2	X	69.02624	234.80394	326.53218	6.33804	0.0610547	0.25995291	2.4314925	21	6 26.9	20.1
412843 2014 PM_{52}	16.5	X	132.15074	13.56637	255.33445	2.93239	0.1455014	0.17369498	3.1813482	21	12 5.0	21.6
412844 2014 PS_{52}	17.2	X	154.09357	65.47993	313.30103	10.40997	0.1036126	0.21816761	2.7328085	21	2 19.5	21.3
412845 2014 PV_{52}	16.7	X	131.72823	122.46336	174.51770	2.12723	0.0814227	0.18209013	3.0827983	21	—	—
412846 2014 PF_{53}	17.3	X	22.94924	145.05511	120.69951	3.56598	0.0331854	0.26781840	2.3836498	21	7 15.9	19.8
412847 2014 PL_{53}	16.4	X	305.69785	343.50091	166.92755	11.23222	0.0104230	0.18974718	2.9992948	21	—	—
412848 2014 PR_{53}	17.3	X	145.38677	267.97732	163.71067	11.86721	0.0987970	0.23292236	2.6161457	21	4 20.4	21.2
412849 2014 PO_{54}	17.0	X	100.39681	224.72013	103.36928	2.51689	0.1753531	0.18117119	3.0932140	21	—	—
412850 2014 PL_{55}	16.7	X	154.83828	168.90053	160.82782	6.46994	0.0663872	0.20236129	2.8733228	21	—	—
412851 2014 PY_{55}	16.3	X	170.26972	194.82417	153.02884	14.23545	0.1506393	0.21366003	2.7711106	21	2 4.1	20.8
412852 2014 PL_{56}	18.0	X	337.03617	212.37506	151.15870	5.84975	0.1848561	0.28463574	2.2888101	21	10 1.3	19.5
412853 2014 PQ_{56}	18.0	X	280.40160	44.24587	350.02884	7.00711	0.2760169	0.26764375	2.3846866	21	7 6.6	21.1
412854 2014 PT_{56}	16.0	X	80.44964	45.63448	279.67447	4.16900	0.1654440	0.17078560	3.2173765	21	12 23.5	20.8
412855 2014 PU_{56}	16.8	X	358.21539	335.80147	271.26768	3.41280	0.1591516	0.25742700	2.4473720	21	5 1.1	19.0
412856 2014 PY_{57}	17.1	X	282.01018	346.57950	289.70604	4.23578	0.2446511	0.23969823	2.5666077	21	2 8.8	21.1
412857 2014 PK_{62}	16.4	X	128.72147	247.58735	101.92069	10.71391	0.1595558	0.20662256	2.8336806	21	—	—
412858 2014 PD_{63}	17.2	X	316.42541	290.77883	330.01018	10.36317	0.2441424	0.25459125	2.4655117	21	2 23.9	20.5
412859 2014 PH_{64}	16.8	X	61.89845	234.71223	108.15342	3.28854	0.1211647	0.17398034	3.1778686	21	12 19.7	21.4
412860 2014 PX_{64}	16.7	X	215.82803	200.18038	106.22108	6.53236	0.0495392	0.22371492	2.6874439	21	1 27.2	20.4
412861 2014 PO_{67}	18.4	X	300.86327	38.05155	348.94050	4.15054	0.1535562	0.28450739	2.2894984	21	8 20.3	20.5
412862 2014 PV_{69}	17.7	X	310.04040	29.99667	281.34411	1.30119	0.1968058	0.26496854	2.4007108	21	5 2.3	20.5
412863 2014 PH_{70}	17.6	X	2.27371	185.25230	139.28928	4.61508	0.1860334	0.28775703	2.2722289	21	9 27.6	19.1
412864 2014 PJ_{70}	15.7	X	143.19886	329.01168	315.65027	11.74453	0.0547568	0.18555658	3.0442839	21	—	—
412865 2014 QT	17.7	X	331.77650	144.13616	157.26788	2.56430	0.1995204	0.26635047	2.3923997	21	5 27.3	19.7
412866 2014 QC_{1}	16.2	X	102.73928	210.27059	178.65492	10.71432	0.1539408	0.19922055	2.9034430	21	1 13.7	20.3
412867 2014 QF_{1}	17.1	X	278.73575	61.91042	281.63419	5.62068	0.1536495	0.25575880	2.4580025	21	5 10.9	20.5
412868 2014 QO_{1}	17.3	X	332.19222	137.11850	185.69699	6.34944	0.1400334	0.26924205	2.3752398	21	7 9.2	19.6
412869 2014 QP_{2}	17.8	X	35.71218	347.67223	275.43049	1.96698	0.2989469	0.28267194	2.2993985	21	9 14.9	19.8
412870 2014 QL_{3}	17.7	X	307.48695	65.73296	245.29310	3.62086	0.1975827	0.25892642	2.4379145	21	4 28.2	20.5
412871 2014 QB_{10}	15.3	X	349.11224	244.06910	203.47957	15.86321	0.2107056	0.18122040	3.0926539	21	—	—
412872 2014 QR_{15}	15.9	X	241.89712	318.91303	258.09913	10.01002	0.0422898	0.19714371	2.9237985	21	—	—
412873 2014 QV_{15}	16.6	X	251.25869	1.99688	249.67120	8.07350	0.2414098	0.22290307	2.6939654	21	—	—
412874 2014 QK_{18}	18.3	X	39.27074	346.81722	299.60383	2.48165	0.1709084	0.28531828	2.2851584	21	10 2.7	20.8
412875 2014 QL_{18}	17.9	X	344.68510	355.85589	301.27858	1.72952	0.1838317	0.26744933	2.3858421	21	6 20.6	19.7
412876 2014 QU_{18}	17.4	X	308.11399	170.45509	183.55346	6.39682	0.1312655	0.26927250	2.3750607	21	7 13.3	20.1
412877 2014 QE_{21}	16.3	X	321.31411	303.84231	273.40957	6.92070	0.0931355	0.22504272	2.6768626	21	1 31.8	19.9
412878 2014 QA_{24}	18.2	X	250.76518	132.86261	287.23931	4.52690	0.1924089	0.26729837	2.3867404	21	7 17.1	21.4
412879 2014 QG_{24}	15.6	X	294.77557	130.48416	311.96877	7.56393	0.1147817	0.15282545	3.4647529	21	10 11.5	20.4
412880 2014 QB_{25}	16.4	X	244.97170	309.23140	303.61940	7.78659	0.1090143	0.20971635	2.8057428	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412881 2014 QD_{25}	17.5	X	104.31747	320.74737	265.29602	4.66801	0.1538039	0.28876031	2.2669628	21	9 28.4	20.8
412882 2014 QZ_{25}	17.0	X	183.56214	136.38010	186.85770	6.07428	0.0495596	0.20931208	2.8093544	21	1 12.9	21.2
412883 2014 QH_{28}	17.4	X	184.59196	39.17967	343.47693	5.32093	0.0796491	0.22954422	2.6417506	21	3 26.6	21.4
412884 2014 QE_{30}	17.1	X	272.97080	23.21413	252.66890	3.78014	0.0265353	0.22632956	2.6667064	21	2 23.7	20.9
412885 2014 QF_{30}	16.7	X	170.32056	285.12504	137.27400	15.24708	0.1064987	0.23432465	2.6056979	21	5 8.6	21.0
412886 2014 QG_{33}	17.1	X	262.53610	266.07278	89.24392	4.21555	0.2993317	0.25260249	2.4784356	21	4 25.8	21.3
412887 2014 QJ_{36}	18.1	X	325.46418	199.25304	206.65038	2.26823	0.1604136	0.30018244	2.2090855	21	11 16.9	19.5
412888 2014 QM_{37}	18.7	X	119.42815	71.56230	175.34926	2.39201	0.0822466	0.31023517	2.1611025	21	11 12.9	21.4
412889 2014 QX_{39}	15.8	X	123.66483	18.05582	284.72222	10.24839	0.1171884	0.18420994	3.0591023	21	—	—
412890 2014 QT_{40}	16.7	X	236.08847	151.94346	149.89810	13.36115	0.2918080	0.23077936	2.6323163	21	2 2.1	21.6
412891 2014 QX_{49}	17.3	X	210.30152	216.55002	241.25225	5.76279	0.0810898	0.28083159	2.3094333	21	8 1.2	20.6
412892 2014 QP_{52}	17.1	X	114.10987	137.44096	216.46180	1.75513	0.0672226	0.20238449	2.8731033	21	—	—
412893 2014 QL_{54}	17.3	X	88.63831	322.04289	231.29255	3.30004	0.0411254	0.27423931	2.3462966	21	7 9.9	20.1
412894 2014 QW_{62}	16.9	X	285.77906	262.97549	315.94758	4.92218	0.0598909	0.22024025	2.7156362	21	—	—
412895 2014 QY_{64}	17.5	X	144.13597	244.18821	146.50776	6.15810	0.0968222	0.22743059	2.6580927	21	2 23.5	21.3
412896 2014 QQ_{70}	16.1	X	184.19796	277.06966	297.62339	14.43562	0.0761577	0.17826958	3.1266880	21	11 19.9	21.1
412897 2014 QE_{78}	16.3	X	148.20238	38.74095	287.28681	8.85676	0.0942937	0.20335439	2.8639604	21	—	—
412898 2014 QW_{78}	16.0	X	60.46804	200.65408	164.13113	12.67498	0.0589074	0.18278323	3.0750003	21	—	—
412899 2014 QW_{81}	16.4	X	99.76882	170.86754	199.54990	5.52084	0.0917279	0.19850068	2.9104583	21	—	—
412900 2014 QV_{95}	15.7	X	169.67612	291.38845	300.34507	13.09890	0.0328617	0.17314707	3.1880561	21	11 26.5	20.6
412901 2014 QV_{97}	15.8	X	232.32024	356.51102	172.74248	12.27061	0.0790054	0.17451357	3.1713920	21	11 21.7	20.6
412902 2014 QX_{97}	16.9	X	119.84834	198.40298	194.75360	5.56642	0.0606676	0.21478173	2.7614541	21	1 24.1	20.8
412903 2014 QS_{98}	17.4	X	143.68612	193.88620	199.38207	5.87885	0.0330782	0.22520336	2.6755894	21	2 16.4	21.1
412904 2014 QK_{101}	16.0	X	107.29075	145.19832	164.70086	10.54905	0.1289159	0.18119447	3.0929490	21	12 29.5	21.0
412905 2014 QH_{102}	16.9	X	196.40982	81.42059	275.76384	4.71963	0.0826197	0.23206406	2.6225924	21	3 5.9	21.0
412906 2014 QG_{106}	17.1	X	318.72510	173.70250	162.88528	7.41039	0.1410016	0.27301222	2.3533218	21	7 4.7	19.6
412907 2014 QA_{112}	16.8	X	208.12485	89.18600	233.17277	4.47505	0.0498217	0.22436274	2.6822683	21	2 4.8	20.8
412908 2014 QH_{118}	17.1	X	66.80612	194.31309	209.91514	1.06098	0.0980108	0.19254912	2.9701270	21	—	—
412909 2014 QV_{120}	17.0	X	288.55506	217.16408	114.89187	1.83195	0.1621683	0.25726271	2.4484138	21	5 8.5	20.0
412910 2014 QE_{122}	17.3	X	314.62211	312.31501	342.03875	0.39320	0.1729142	0.25648555	2.4533572	21	4 20.2	20.1
412911 2014 QY_{130}	17.5	X	106.37171	173.17734	347.43109	2.09675	0.0946028	0.25660589	2.4525901	21	6 26.8	20.6
412912 2014 QY_{131}	16.6	X	17.82219	82.70958	352.69635	8.21469	0.0950417	0.18423360	3.0588405	21	—	—
412913 2014 QA_{133}	17.9	X	257.33453	281.26087	91.40885	2.45902	0.1868273	0.25563476	2.4587976	21	5 22.8	21.5
412914 2014 QR_{136}	17.7	X	124.61642	44.23990	166.24046	6.88564	0.1570456	0.28875820	2.2669738	21	10 2.8	21.1
412915 2014 QT_{137}	16.1	X	178.69616	245.44051	351.48288	12.16220	0.2072663	0.17964105	3.1107540	21	12 5.2	21.5
412916 2014 QR_{138}	17.4	X	265.83621	38.60759	357.63982	5.79610	0.1324450	0.26565379	2.3965806	21	7 12.5	20.6
412917 2014 QS_{139}	18.4	X	341.79505	289.68733	95.47382	0.54754	0.1219987	0.29258520	2.2471625	21	11 13.7	20.1
412918 2014 QD_{140}	17.5	X	266.32965	46.49114	1.37446	6.00817	0.0677747	0.27229565	2.3574487	21	8 10.7	20.4
412919 2014 QK_{141}	16.1	X	157.98329	189.95056	106.77729	3.36451	0.0693985	0.18872756	3.0100878	21	—	—
412920 2014 QX_{144}	17.6	X	235.66550	238.88684	168.39618	5.85814	0.1145261	0.26013476	2.4303591	21	6 21.5	21.1
412921 2014 QK_{145}	16.9	X	66.22948	275.20873	161.22850	11.80972	0.1054648	0.20401687	2.8577572	21	1 13.9	20.6
412922 2014 QL_{149}	18.2	X	17.18405	303.60991	324.31496	0.27102	0.1881934	0.27350948	2.3504686	21	7 23.5	19.9
412923 2014 QC_{150}	17.2	X	233.62120	325.99660	1.30099	3.98278	0.2322141	0.23253632	2.6190403	21	3 4.8	21.7
412924 2014 QD_{150}	17.4	X	56.95113	119.31849	151.12829	5.38588	0.2274551	0.28961840	2.2624828	21	10 18.5	20.2
412925 2014 QF_{152}	16.8	X	183.78383	118.34747	194.47854	7.94844	0.1988111	0.21122620	2.7923565	21	1 8.9	21.5
412926 2014 QS_{152}	16.7	X	181.21809	83.27656	238.07717	7.53275	0.1648805	0.21195337	2.7859661	21	1 14.4	21.3
412927 2014 QZ_{152}	16.2	X	99.26939	357.15113	38.63704	6.03770	0.0769917	0.19642968	2.9308796	21	1 9.8	20.2
412928 2014 QY_{170}	17.2	X	102.19412	171.53734	219.94152	1.17301	0.1374144	0.19823489	2.9130593	21	1 15.3	21.1
412929 2014 QE_{172}	16.9	X	199.88119	26.37232	312.96101	4.29903	0.0711013	0.22290691	2.6939345	21	2 18.3	20.8
412930 2014 QG_{172}	16.7	X	82.80260	181.93691	229.84842	1.19920	0.0652305	0.20195063	2.8772167	21	1 3.8	20.5
412931 2014 QX_{175}	16.1	X	84.07240	203.60446	145.23348	2.96297	0.1209550	0.17831823	3.1261194	21	—	—
412932 2014 QS_{179}	18.0	X	354.92031	312.85181	10.64179	6.19127	0.1860212	0.27860505	2.3217212	21	9 5.9	19.5
412933 2014 QT_{179}	16.6	X	90.91425	331.54152	119.02273	10.21875	0.0649774	0.21443085	2.7644657	21	3 5.5	20.3
412934 2014 QC_{180}	16.2	X	49.12850	304.16558	81.01982	9.98689	0.1160399	0.18965838	3.0002309	21	—	—
412935 2014 QH_{188}	17.0	X	43.99565	184.10701	316.64278	12.30136	0.0733790	0.22835772	2.6508933	21	2 23.6	20.3
412936 2014 QQ_{203}	18.0	X	1.96349	69.08588	199.50360	1.86102	0.1694383	0.26875097	2.3781324	21	6 14.9	19.9
412937 2014 QD_{204}	16.3	X	132.65749	35.43660	266.36389	2.37493	0.1687202	0.18706205	3.0279284	21	—	—
412938 2014 QY_{207}	17.0	X	119.22732	106.43646	306.00138	3.10593	0.1078074	0.21683862	2.7439633	21	2 23.4	20.9
412939 2014 QY_{214}	17.3	X	173.05681	235.03190	227.36507	2.01173	0.1349230	0.25652703	2.4530927	21	6 27.1	20.9
412940 2014 QS_{216}	15.5	X	51.84833	176.17677	175.09232	10.80013	0.0623818	0.16931040	3.2360381	21	12 9.9	20.2
412941 2014 QY_{217}	17.2	X	278.83208	90.61707	176.11293	11.34420	0.1836584	0.23413810	2.6070818	21	1 30.9	21.4
412942 2014 QQ_{224}	17.1	X	49.27751	138.49725	276.65579	4.59251	0.2030351	0.18571992	3.0424986	21	—	—
412943 2014 QR_{225}	16.7	X	253.30719	12.79460	200.13411	5.24537	0.0263972	0.19425734	2.9526893	21	—	—
412944 2014 QE_{227}	16.6	X	36.55602	44.52844	19.90265	1.62995	0.0643751	0.18886406	3.0086373	21	—	—
412945 2014 QF_{227}	16.3	X	45.72361	42.86513	356.98087	4.59746	0.1311185	0.18091218	3.0961655	21	—	—
412946 2014 QX_{228}	17.8	X	276.12029	63.24225	290.47870	0.53894	0.0826068	0.25820261	2.4424684	21	6 2.7	21.0
412947 2014 QV_{229}	15.9	X	345.32890	302.86393	169.47824	19.79494	0.1186802	0.18527548	3.0473622	21	—	—
412948 2014 QP_{230}	16.1	X	81.76050	75.18201	342.44435	11.71031	0.1610648	0.19919711	2.9036707	21	1 26.0	19.7
412949 2014 QG_{238}	16.7	X	153.66384	113.38665	153.42511	8.39562	0.1512444	0.17893971	3.1188769	21	12 22.1	21.9
412950 2014 QP_{240}	16.6	X	206.99130	126.35158	107.82899	3.44401	0.0721200	0.18601462	3.0392844	21	—	—
412951 2014 QB_{241}	17.4	X	336.38419	57.91307	158.94494	3.91337	0.0309954	0.22655152	2.6649643	21	3 3.1	20.8
412952 2014 QP_{244}	15.4	X	349.35060	277.68831	105.51049	8.39695	0.1191686	0.15068809	3.4974386	21	10 28.4	19.8
412953 2014 QR_{245}	15.7	X	185.97595	181.76882	97.01681	10.19530	0.0641382	0.19305475	2.9649387	21	—	—
412954 2014 QH_{259}	16.0	X	240.33365	126.89780	70.33488	13.06649	0.0524641	0.17926717	3.1150776	21	—	—
412955 2014 QF_{270}	17.0	X	120.55481	107.51593	274.94055	2.64481	0.1077602	0.21379279	2.7699632	21	1 19.7	20.7
412956 2014 QU_{270}	17.4	X	318.46549	309.78316	30.17610	7.66121	0.1467358	0.28058579	2.3107818	21	7 10.9	19.7
412957 2014 QF_{271}	17.1	X	46.91456	229.42526	25.96231	8.66416	0.1070891	0.28823245	2.2697297	21	8 24.7	19.6
412958 2014 QN_{277}	17.4	X	272.14050	208.65715	142.10931	6.05279	0.2403892	0.25897693	2.4375975	21	5 5.3	21.1
412959 2014 QD_{280}	16.4	X	157.28642	285.51613	329.65615	6.57780	0.1169062	0.18574023	3.0422768	21	12 12.7	21.2
412960 2014 QX_{283}	16.0	X	97.46794	264.55373	102.98537	14.04770	0.1956741	0.19100050	2.9861598	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
412961 2014 QS_{290}	17.4	X	40.39989	200.53172	108.72363	8.69774	0.2571120	0.29601069	2.2297925	21	11 25.1	20.2
412962 2014 QO_{300}	17.3	X	239.50115	277.11117	86.78460	2.33386	0.1116188	0.24402116	2.5362052	21	4 30.5	21.0
412963 2014 QS_{300}	18.1	X	23.38512	156.01491	127.95802	5.66662	0.2294609	0.28003382	2.3138173	21	9 13.6	20.0
412964 2014 QW_{300}	15.4	X	136.46231	143.03604	152.63042	17.69619	0.0618027	0.17706484	3.1408545	21	—	—
412965 2014 QX_{304}	16.9	X	177.69386	237.90368	184.37083	14.73901	0.0725117	0.23822855	2.5771529	21	5 11.7	20.8
412966 2014 QU_{306}	16.1	X	86.89692	18.23568	345.44816	13.28815	0.2271504	0.18180337	3.0860391	21	—	—
412967 2014 QA_{309}	17.4	X	303.33595	205.11836	134.11021	1.94675	0.2015764	0.26313185	2.4118693	21	6 1.9	20.2
412968 2014 QG_{309}	17.4	X	32.85070	341.13272	338.19929	6.50343	0.1561201	0.29221503	2.2490599	21	11 6.8	20.0
412969 2014 QU_{336}	16.9	X	192.60164	211.62333	144.46533	5.75725	0.0921641	0.22183252	2.7026258	21	3 5.5	21.0
412970 2014 QV_{347}	16.4	X	165.21407	215.88249	138.63838	9.59466	0.1582480	0.21362954	2.7713743	21	2 8.8	20.7
412971 2014 QJ_{351}	17.1	X	168.29654	324.90021	147.71241	5.02988	0.0635223	0.25560669	2.4589776	21	7 3.8	20.6
412972 2014 QQ_{351}	16.1	X	23.98595	250.41476	161.27238	13.95554	0.0212618	0.17429593	3.1740314	21	—	—
412973 2014 QN_{360}	16.1	X	169.93364	350.23155	349.25461	17.80303	0.1427880	0.20889108	2.8131277	21	1 31.7	20.7
412974 2237 $P–L$	17.1	X	149.70413	347.39304	2.37222	4.74782	0.2951624	0.20038925	2.8921430	21	2 3.4	22.1
412975 5055 $T–2$	17.2	X	161.29064	105.14736	297.12143	6.50474	0.3040270	0.21705221	2.7421628	21	4 7.8	22.2
412976 1987 WC	19.9	X	93.04770	308.34846	51.82647	15.84388	0.2338186	0.61985754	1.3623064	21	—	—
412977 1990 UO	19.5	X	211.45483	333.48861	205.60058	31.56750	0.7730179	0.69936276	1.2569974	21	10 18.1	20.4
412978 1993 TB_5	17.2	X	255.07763	112.52625	218.00845	28.65131	0.3353618	0.23520006	2.5992283	21	3 13.1	22.3
412979 1995 BH_{14}	17.0	X	247.44806	167.50488	261.28276	1.56802	0.1495632	0.24390207	2.5370307	21	7 29.8	20.6
412980 1995 SL_{80}	17.1	X	142.34598	182.74880	225.19492	1.55367	0.1021921	0.20921653	2.8102097	21	3 17.0	21.1
412981 1995 UE_{10}	17.9	X	316.90029	112.62089	239.61671	0.72423	0.1947002	0.26207457	2.4183517	21	7 17.8	19.9
412982 1995 UN_{52}	16.8	X	127.70909	67.45880	7.13898	4.73231	0.1412530	0.21042594	2.7994316	21	4 7.5	20.8
412983 1996 FO_3	20.2	X	241.75043	162.75289	333.58988	5.81454	0.2904970	0.56866078	1.4428921	21	—	—
412984 1996 TJ_{32}	17.5	X	215.11163	292.34854	51.15335	8.49941	0.2258668	0.22047485	2.7137095	21	3 14.3	22.3
412985 1997 CT_{12}	16.6	X	90.04385	328.38348	141.64300	8.98977	0.1797970	0.20918725	2.8104719	21	4 17.1	20.4
412986 1997 SC_{14}	16.3	X	109.36021	105.06598	225.52864	7.13889	0.1990800	0.17423984	3.1747125	21	—	—
412987 1997 WM_{29}	16.0	X	30.98471	52.52027	67.99531	10.80897	0.2048297	0.17590071	3.1546970	21	1 27.2	19.4
412988 1998 AP_1	16.8	X	187.22919	293.33848	110.55432	9.65668	0.1759132	0.22597143	2.6695232	21	5 2.5	21.3
412989 1998 HA_{11}	17.4	X	114.48315	155.63232	60.33938	7.16244	0.0727631	0.26911095	2.3760111	21	9 23.6	20.7
412990 1998 HM_{31}	17.3	X	206.23194	97.38243	78.98746	7.22989	0.1500002	0.27527010	2.3404356	21	11 7.5	20.6
412991 1998 TO_{24}	15.5	X	335.88697	312.40018	21.55604	2.71636	0.2628549	0.12386768	3.9856336	21	7 18.6	19.7
412992 1998 VW_{40}	16.0	X	122.44269	236.32987	65.70492	11.01625	0.0575022	0.17620915	3.1510145	21	12 30.3	20.8
412993 1998 VO_{48}	17.2	X	291.22098	247.74667	101.10863	2.02102	0.1276232	0.24663997	2.5182204	21	6 10.5	20.3
412994 1999 GF_{56}	18.0	X	236.17897	144.40785	6.15242	6.90200	0.0410665	0.29084497	2.2561173	21	11 24.5	20.7
412995 1999 LP_{28}	20.0	X	4.31749	307.11330	87.94648	16.31253	0.0904495	0.73228905	1.2190299	21	—	—
412996 1999 ST_{16}	17.2	X	144.43320	61.34337	300.61342	5.35080	0.3639042	0.19839353	2.9115061	21	2 16.1	22.3
412997 1999 TH_{43}	17.9	X	278.35468	68.82283	349.03828	2.09002	0.1977221	0.26617737	2.3934368	21	8 18.9	20.6
412998 1999 TM_{84}	17.5	X	15.32502	282.38581	21.86887	6.61750	0.1142197	0.26523208	2.3991203	21	9 10.1	19.9
412999 1999 TL_{129}	17.4	X	274.92694	156.34611	191.78084	10.44646	0.2624512	0.26004039	2.4309471	21	5 1.3	21.1
413000 1999 TW_{261}	17.8	X	308.02229	30.44823	339.73962	2.03549	0.2073304	0.26446009	2.4037868	21	7 27.1	19.9
413001 1999 UR_{30}	17.9	X	306.18842	28.00050	57.36500	2.64009	0.2059451	0.27121893	2.3636839	21	11 24.3	19.3
413002 1999 VG_{22}	18.7	X	35.33826	222.78490	271.30147	2.85071	0.3300728	0.46664556	1.6461824	21	—	—
413003 1999 VK_{119}	17.7	X	331.09775	313.97472	0.97261	4.00496	0.0704241	0.26033364	2.4291212	21	7 3.9	20.5
413004 1999 VY_{121}	18.1	X	324.03173	160.59240	190.57037	2.22966	0.2331566	0.26357567	2.4091610	21	7 25.3	19.7
413005 1999 VR_{124}	16.4	X	355.16133	50.14783	59.08986	14.69888	0.0392687	0.18832655	3.0143593	21	—	—
413006 1999 VH_{154}	16.6	X	291.24275	83.72185	309.46846	0.11207	0.1902059	0.12533563	3.9544523	21	7 29.2	21.9
413007 1999 VP_{181}	17.9	X	256.06047	213.05638	212.54110	3.62537	0.2098418	0.26127436	2.4232870	21	7 27.3	21.3
413008 1999 VP_{197}	17.7	X	295.20536	302.25864	83.45290	5.85943	0.3044148	0.26417467	2.4055180	21	7 9.4	20.4
413009 1999 VF_{210}	17.9	X	222.85486	209.82583	204.87227	1.98775	0.1701392	0.25662817	2.4524482	21	6 13.1	21.8
413010 2000 CV_{39}	16.9	X	279.13841	121.41377	289.35265	9.37789	0.3387753	0.25957069	2.4338788	21	7 16.9	20.0
413011 2000 FY_7	15.5	X	8.01750	89.67843	10.93269	15.66603	0.0284625	0.17536714	3.1610928	21	—	—
413012 2000 GU_{149}	16.5	X	310.59658	276.51257	5.44024	16.04568	0.1589415	0.23573814	2.5952716	21	3 31.7	19.8
413013 2000 HP_{45}	18.1	X	126.67035	207.08861	39.18157	6.79236	0.2446209	0.29847148	2.2175197	21	11 20.5	21.9
413014 2000 NB_8	17.6	X	197.06124	356.67337	222.32473	3.75449	0.0638385	0.29823544	2.2186896	21	—	—
413015 2000 QT_{114}	16.4	X	201.21895	342.15321	356.73181	8.61336	0.2055046	0.21459635	2.7630441	21	2 24.5	21.2
413016 2000 QA_{221}	17.5	X	46.05694	335.53937	349.97020	4.79777	0.1953962	0.28941503	2.2635425	21	12 10.9	20.5
413017 2000 QG_{231}	17.0	X	214.85789	23.60732	325.01570	2.14513	0.1859123	0.21854293	2.7296788	21	3 16.2	21.7
413018 2000 SN_{93}	16.6	X	207.99636	183.81600	213.80554	10.39565	0.3041382	0.22016689	2.7162394	21	5 7.2	21.5
413019 2000 SB_{94}	17.5	X	336.77709	90.88386	279.32333	5.59040	0.1459711	0.28254420	2.3000915	21	10 4.9	19.4
413020 2000 SH_{130}	15.8	X	259.45495	59.29006	250.93257	13.46638	0.1210534	0.21943700	2.7222593	21	3 8.9	20.2
413021 2000 SY_{162}	19.4	X	340.88972	187.97144	213.20476	7.66714	0.4569694	0.28349610	2.2949399	21	—	—
413022 2000 SN_{250}	17.2	X	179.60308	112.69545	239.07142	1.70614	0.1947233	0.21217010	2.7840686	21	2 19.6	21.8
413023 2000 TR_{31}	16.3	X	177.27190	19.60270	356.98896	12.85689	0.1177130	0.21389267	2.7691009	21	3 16.3	20.7
413024 2000 TS_{51}	18.0	X	331.90887	173.65142	199.24039	10.27594	0.2162731	0.28085581	2.3093005	21	9 29.2	19.3
413025 2000 UA_4	17.3	X	321.02037	179.54774	231.01398	4.49898	0.2318311	0.28189218	2.3036369	21	11 6.5	18.3
413026 2000 UU_{38}	17.2	X	7.62539	330.94945	40.91249	7.19077	0.2647892	0.28493816	2.2871903	21	—	—
413027 2000 UF_{59}	16.7	X	188.75538	128.94023	237.20283	6.97187	0.3289022	0.21399043	2.7682575	21	3 16.4	22.1
413028 2000 UV_{72}	15.9	X	199.92858	113.30360	234.37495	6.58413	0.2400597	0.21245484	2.7815805	21	3 1.7	20.9
413029 2000 UB_{109}	16.8	X	133.34578	237.94146	196.23930	11.43919	0.2735248	0.21094838	2.7948076	21	4 27.3	21.4
413030 2000 WC_{66}	16.9	X	283.41113	198.44246	243.83068	22.31068	0.2155146	0.27936296	2.3175201	21	9 20.5	20.0
413031 2000 WQ_{133}	16.1	X	165.52573	102.18907	260.36038	14.71128	0.2776849	0.20934821	2.8090311	21	2 19.4	21.3
413032 2000 XF_{27}	17.3	X	316.36488	359.63202	52.66950	9.23772	0.2347610	0.27880560	2.3206077	21	10 28.1	18.5
413033 Aerts	17.2	X	287.76596	353.86571	81.85420	6.77894	0.1914380	0.27779172	2.3262507	21	10 7.3	19.4
413034 2000 YM_{23}	18.3	X	305.32211	146.34257	263.73184	0.59318	0.1758790	0.27568476	2.3380881	21	9 29.7	20.3
413035 2001 AQ_{49}	15.6	X	263.45834	229.48392	169.60504	3.00726	0.2588953	0.12464626	3.9690193	21	6 25.9	21.6
413036 2001 KO_{34}	17.2	X	307.67685	198.51860	72.90902	14.60348	0.2372093	0.24054037	2.5606137	21	3 11.2	21.0
413037 2001 KN_{51}	15.7	X	283.84814	132.91252	93.71890	24.38704	0.2788611	0.18386853	3.0628880	21	—	—
413038 2001 MF_1	16.9	X	210.10483	76.53822	288.62788	23.97384	0.5772464	0.22852311	2.6496141	21	3 15.5	23.2
413039 2001 NB_{12}	17.0	X	334.49558	116.56363	179.04549	4.31297	0.1818322	0.24298527	2.5434083	21	5 28.7	19.4
413040 2001 OS_{75}	17.1	X	280.41610	216.76215	76.79463	8.09585	0.2003948	0.23476182	2.6024621	21	3 10.7	21.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413041 2001 PL_{35}	15.7	X	294.04448	22.58292	271.33499	24.89740	0.1095634	0.23523749	2.5989526	21	3 20.7	19.9
413042 2001 PG_{43}	16.9	X	240.64325	237.04053	126.92831	17.75605	0.2233538	0.23460435	2.6036265	21	4 30.6	21.6
413043 2001 QM_{65}	16.7	X	274.26386	155.68461	167.58365	20.19091	0.2353535	0.23507438	2.6001547	21	4 5.2	20.9
413044 2001 QU_{108}	17.0	X	290.57142	73.00309	210.21130	28.62416	0.3621908	0.23436596	2.6053917	21	2 7.8	22.0
413045 2001 QS_{151}	17.8	X	190.97038	250.19219	167.15566	21.96449	0.1408178	0.38316167	1.8773619	21	5 15.2	20.8
413046 2001 QL_{161}	17.1	X	300.51334	303.55179	9.07912	2.36398	0.2128687	0.23817905	2.5775099	21	4 20.5	20.4
413047 2001 QC_{177}	17.4	X	239.32734	145.91521	163.83400	4.96555	0.2879744	0.22871000	2.6481705	21	2 13.8	22.3
413048 2001 QA_{188}	16.4	X	245.92032	50.70422	298.34043	10.94397	0.2147092	0.23267720	2.6179830	21	4 4.4	21.0
413049 2001 QY_{196}	16.3	X	317.71177	266.61948	22.26978	11.37390	0.1816326	0.23759506	2.5817318	21	4 17.5	19.2
413050 2001 QR_{227}	16.7	X	292.09377	107.80800	197.70985	11.36502	0.2008386	0.23570798	2.5954930	21	4 2.7	20.4
413051 2001 QT_{280}	16.8	X	208.53977	269.43155	127.68404	13.65134	0.2839255	0.23256915	2.6187939	21	5 11.1	21.8
413052 2001 QM_{330}	16.8	X	226.92525	19.38238	333.57620	13.13566	0.2670696	0.22834467	2.6509943	21	3 23.9	21.7
413053 2001 RY_{12}	16.4	X	252.19195	357.29007	342.40045	15.09824	0.1409436	0.23248117	2.6194545	21	4 4.5	20.7
413054 2001 RB_{35}	17.0	X	221.53685	173.04190	204.30079	3.75328	0.2450273	0.23298445	2.6156809	21	4 23.3	21.6
413055 2001 RV_{48}	17.1	X	49.15559	295.93751	56.54367	20.58658	0.2088949	0.30464376	2.1874654	21	—	—
413056 2001 RA_{87}	16.9	X	260.45056	0.42783	311.18020	2.79999	0.3252446	0.23142682	2.6274044	21	2 28.3	21.5
413057 2001 RN_{108}	17.0	X	238.39405	4.89211	14.74923	3.13076	0.1927883	0.23535439	2.5980919	21	5 12.2	21.2
413058 2001 RZ_{120}	17.8	X	53.37517	358.07133	18.00796	5.51515	0.1597519	0.30835981	2.1698558	21	—	—
413059 2001 RU_{121}	16.5	X	258.84843	287.82019	2.99301	14.79011	0.1768555	0.22852594	2.6495922	21	2 18.6	20.8
413060 2001 RM_{132}	18.3	X	79.10609	210.50869	119.03308	3.06090	0.1956436	0.30724653	2.1750941	21	—	—
413061 2001 RX_{145}	17.6	X	147.44949	356.44857	291.90703	3.61838	0.1445169	0.31251529	2.1505780	21	—	—
413062 2001 SA_{23}	17.0	X	224.30490	133.81239	182.58998	13.05632	0.2814880	0.22657956	2.6647444	21	2 9.8	22.0
413063 2001 SC_{36}	17.0	X	237.84531	218.64436	140.59269	2.37186	0.1647786	0.23118536	2.6292335	21	4 19.9	21.1
413064 2001 SG_{88}	17.4	X	244.72748	53.30719	289.05245	1.32573	0.2232965	0.23239141	2.6201290	21	3 30.8	21.7
413065 2001 SX_{96}	17.6	X	217.05230	140.59195	212.24272	3.70985	0.2263718	0.22892343	2.6465243	21	3 21.1	22.2
413066 2001 SG_{116}	17.1	X	230.22431	90.36166	294.66774	12.09096	0.3424633	0.23271798	2.6176772	21	4 30.6	22.2
413067 2001 SF_{117}	17.3	X	211.56028	154.46779	224.92404	5.14830	0.3362696	0.23070790	2.6328599	21	4 15.8	22.4
413068 2001 SB_{121}	17.3	X	214.87970	118.97291	261.22755	3.63133	0.2507959	0.23109307	2.6299335	21	4 20.1	21.9
413069 2001 SR_{122}	16.6	X	196.61014	71.47461	345.02019	5.14081	0.0862345	0.23446395	2.6046658	21	5 21.8	20.5
413070 2001 SG_{175}	16.8	X	185.88122	329.40148	100.80715	4.12125	0.3079842	0.22988118	2.6391684	21	5 30.9	21.7
413071 2001 SR_{184}	17.4	X	298.70257	168.92606	165.69237	3.81078	0.1562875	0.23942180	2.5685829	21	5 28.7	20.5
413072 2001 SD_{248}	17.4	X	175.60719	189.89038	189.82345	14.11260	0.2574559	0.22393856	2.6856544	21	3 22.7	22.1
413073 2001 SG_{264}	16.3	X	233.34975	80.72708	3.66753	27.46045	0.3381680	0.23880618	2.5729954	21	7 30.1	21.3
413074 2001 SL_{306}	17.5	X	227.97601	172.68598	211.49828	4.68775	0.1813817	0.23229238	2.6208736	21	5 10.3	21.7
413075 2001 SW_{306}	16.5	X	242.20024	339.34570	1.84802	13.06744	0.2971912	0.22927965	2.6437824	21	3 24.1	21.2
413076 2001 SF_{312}	17.5	X	188.19771	217.18975	185.42190	5.67873	0.1574443	0.22936513	2.6431255	21	4 28.5	21.7
413077 2001 SK_{321}	16.5	X	295.90123	92.69872	212.36116	12.28671	0.2138994	0.23542179	2.5975960	21	4 3.7	20.2
413078 2001 SZ_{321}	16.8	X	196.68128	134.35494	282.32406	6.79700	0.1627336	0.23194313	2.6235039	21	5 21.8	21.1
413079 2001 SN_{325}	15.8	X	247.67065	116.35373	249.90356	11.93491	0.1960147	0.23558434	2.5964010	21	5 3.0	20.0
413080 2001 TH_{17}	17.6	X	1.85431	104.99408	236.20570	5.20444	0.2095514	0.29625025	2.2285903	21	10 27.3	19.1
413081 2001 TP_{23}	17.0	X	274.98397	325.47298	355.68271	1.45765	0.2388451	0.23235432	2.6204078	21	3 31.1	21.0
413082 2001 TQ_{102}	16.8	X	240.58372	126.80622	229.81637	3.80833	0.1786229	0.23038808	2.6352958	21	4 16.8	20.9
413083 2001 TL_{103}	18.0	X	165.10234	217.98117	219.33758	21.15549	0.0807292	0.37815395	1.8938996	21	5 5.7	20.0
413084 2001 TJ_{123}	16.8	X	200.31518	109.37322	301.24768	5.70209	0.3352048	0.23020034	2.6367285	21	5 14.8	21.9
413085 2001 TE_{140}	16.3	X	218.36936	229.47518	168.72004	22.02382	0.0581586	0.23459773	2.6036755	21	5 28.8	20.5
413086 2001 TG_{166}	16.8	X	217.38161	134.28530	259.75493	10.34017	0.1930854	0.23026096	2.6362657	21	5 10.9	21.2
413087 2001 TA_{174}	17.0	X	237.19802	164.90923	280.16255	4.72083	0.2845429	0.23623905	2.5916017	21	7 25.7	21.2
413088 2001 TE_{230}	17.4	X	219.07114	180.41377	202.83769	7.60984	0.1256727	0.23104458	2.6303015	21	5 3.9	21.5
413089 2001 TZ_{254}	17.1	X	269.34334	288.86125	52.92769	10.00945	0.0674748	0.23269042	2.6178839	21	5 12.1	20.6
413090 2001 UH_{11}	15.9	X	158.47602	111.64039	27.23526	30.26853	0.3289499	0.23242847	2.6198505	21	8 20.2	21.4
413091 2001 UV_{16}	18.2	X	344.49814	92.45698	30.71953	38.05413	0.5035538	0.30439760	2.1886446	21	—	—
413092 2001 UM_{18}	17.4	X	190.14111	233.73251	180.25890	3.51472	0.1751025	0.22847681	2.6499721	21	5 14.3	21.8
413093 2001 UF_{31}	17.4	X	176.40484	251.27554	166.35037	3.95943	0.2574451	0.22757210	2.6569907	21	5 9.1	22.0
413094 2001 UK_{37}	18.3	X	60.40622	207.65659	142.73110	2.06706	0.2013825	0.30539537	2.1838748	21	—	—
413095 2001 UC_{56}	17.7	X	36.39736	25.32038	7.94442	4.61490	0.0827884	0.30644173	2.1789008	21	—	—
413096 2001 UY_{60}	17.9	X	18.59941	204.95136	212.50516	3.20873	0.1146462	0.30648942	2.1786747	21	—	—
413097 2001 UB_{78}	16.3	X	244.89596	117.17829	194.77713	13.76302	0.1236793	0.22618205	2.6678656	21	2 26.8	20.5
413098 2001 UW_{91}	16.4	X	243.16166	275.51978	61.92256	13.33794	0.1446518	0.22746403	2.6578322	21	4 5.2	20.7
413099 2001 UL_{96}	17.2	X	212.29146	243.53744	159.72523	2.82140	0.1752671	0.23111110	2.6297967	21	5 20.6	21.4
413100 2001 UE_{106}	17.2	X	148.03934	55.10984	39.49371	13.66038	0.2372983	0.22599580	2.6693312	21	5 27.9	21.8
413101 2001 UC_{134}	17.3	X	171.47403	168.43664	267.73229	1.33040	0.1881727	0.22933260	2.6433755	21	5 24.8	21.7
413102 2001 UK_{134}	16.7	X	192.87231	190.88797	216.97690	12.14248	0.1479763	0.22818908	2.6521993	21	5 8.8	20.8
413103 2001 UT_{142}	17.8	X	144.19073	51.04882	49.43632	3.66096	0.3650509	0.22439612	2.6820023	21	6 9.9	22.8
413104 2001 UM_{162}	16.7	X	159.12312	25.17192	63.56541	15.51476	0.2456578	0.22508203	2.6765509	21	5 31.7	21.3
413105 2001 UM_{163}	18.0	X	13.22058	321.03640	52.80185	6.22591	0.1972794	0.29906588	2.2145805	21	—	—
413106 2001 UV_{176}	17.2	X	178.78660	208.43331	212.40909	3.08240	0.1856302	0.22814294	2.6525568	21	5 12.5	21.6
413107 2001 UM_{196}	16.9	X	197.19640	19.47421	40.77331	6.59064	0.1228504	0.22989260	2.6390810	21	5 27.5	20.9
413108 2001 VN_{4}	17.3	X	65.95089	88.53337	250.34130	8.29464	0.1920624	0.30195695	2.2004223	21	—	—
413109 2001 VZ_{4}	17.3	X	147.39988	176.97697	245.46400	21.43130	0.1547180	0.37345053	1.9097682	21	3 19.8	20.1
413110 2001 VZ_{49}	17.0	X	207.08376	45.12508	338.78662	7.32721	0.3031903	0.22844994	2.6501799	21	4 16.6	21.9
413111 2001 VS_{61}	16.2	X	194.21643	147.69178	251.91623	11.13855	0.1438029	0.22659822	2.6645981	21	4 27.3	20.5
413112 2001 VA_{72}	16.1	X	161.98769	197.71129	233.60156	21.27944	0.1123956	0.22588315	2.6702186	21	5 6.0	20.1
413113 2001 VS_{111}	16.5	X	155.88035	57.32758	58.22796	14.18945	0.1116796	0.22874528	2.6478982	21	6 25.3	20.6
413114 2001 VF_{123}	16.7	X	102.24222	279.55942	225.65582	10.63250	0.1390218	0.22518443	2.6757394	21	6 7.6	20.4
413115 2001 VR_{133}	15.9	X	18.59924	251.80124	150.27227	10.44964	0.1132616	0.15408543	3.4458392	21	12 30.2	20.6
413116 2001 WK_{7}	16.7	X	149.79022	18.29176	60.54889	15.55353	0.1728014	0.22426278	2.6830653	21	5 9.7	20.9
413117 2001 WZ_{18}	17.5	X	356.52008	35.08045	45.84838	4.94192	0.0623630	0.30505103	2.1855180	21	—	—
413118 2001 WP_{25}	17.8	X	195.58664	353.43169	64.55765	3.15634	0.2021351	0.22929709	2.6436484	21	5 23.1	22.3
413119 2001 WL_{43}	16.7	X	264.87581	270.71146	60.24759	10.05978	0.0996038	0.22870620	2.6481999	21	4 21.2	20.5
413120 2001 WB_{44}	17.3	X	222.74375	294.98459	61.44963	6.37712	0.3155931	0.22896884	2.6461744	21	3 31.0	22.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413121 2001 WL_{56}	17.1	X	186.23949	3.32118	35.58624	4.52002	0.2181987	0.22582206	2.6707002	21	4 22.4	21.7
413122 2001 WB_{102}	18.0	X	334.83780	190.30024	229.33852	4.89791	0.1152656	0.29787739	2.2204672	21	12 24.2	19.9
413123 2001 XS_{1}	19.0	X	177.87719	164.79858	266.92265	10.93816	0.5561954	0.22600844	2.6692317	21	5 29.3	24.8
413124 2001 XN_{2}	17.3	X	100.08500	195.43161	293.62687	18.28004	0.0798723	0.37325559	1.9104331	21	4 6.5	19.6
413125 2001 XH_{5}	17.4	X	40.82210	139.76854	230.00474	6.73819	0.1706294	0.30174365	2.2014591	21	—	—
413126 2001 XU_{88}	16.3	X	245.03450	282.50805	103.35022	11.37831	0.3249957	0.23132721	2.6281586	21	5 19.9	21.0
413127 2001 XN_{91}	16.6	X	114.80675	53.77110	61.42129	13.85203	0.2158833	0.22232453	2.6986369	21	5 23.4	20.7
413128 2001 XL_{104}	17.6	X	88.77284	243.78446	263.35383	18.16817	0.0871839	0.37379961	1.9085790	21	4 26.6	19.5
413129 2001 XY_{142}	18.0	X	189.92528	340.09737	78.05141	2.94975	0.2189566	0.22660173	2.6645706	21	5 18.9	22.5
413130 2001 XQ_{145}	17.4	X	44.44567	91.95403	257.78805	4.86680	0.2165149	0.29927959	2.2135261	21	—	—
413131 2001 XB_{188}	17.3	X	209.91528	160.66448	259.39118	5.49685	0.2546223	0.22769860	2.6560065	21	6 5.0	21.7
413132 2001 XR_{222}	16.4	X	346.71356	221.08127	54.98588	11.57289	0.0161203	0.22988296	2.6391548	21	6 5.2	19.8
413133 2001 YU_{1}	15.3	X	169.28136	68.04989	272.89709	29.88568	0.3775537	0.21625627	2.7488872	21	1 28.5	20.8
413134 2001 YY_{20}	17.7	X	51.61022	158.96675	60.60373	23.23229	0.0335728	0.38178281	1.8818794	21	6 15.3	19.4
413135 2001 YZ_{25}	16.9	X	114.04349	67.94167	70.26741	6.61989	0.1829050	0.22427745	2.6829484	21	6 17.4	20.8
413136 2001 YJ_{66}	16.5	X	228.27405	322.39571	90.66251	16.78748	0.1835242	0.22951215	2.6419966	21	6 16.1	20.6
413137 2001 YA_{72}	17.7	X	189.90456	17.15310	77.52713	7.89689	0.2902610	0.22809166	2.6529544	21	7 1.9	22.6
413138 2001 YV_{90}	16.6	X	248.07342	274.05672	104.54215	13.15233	0.2920026	0.22980656	2.6397397	21	5 16.9	21.2
413139 2002 AU_{47}	17.1	X	81.20299	204.15360	292.46816	1.80301	0.1971460	0.21621350	2.7492496	21	5 7.9	20.5
413140 2002 AE_{156}	17.4	X	173.37897	98.79675	309.82393	11.04115	0.2972673	0.22090853	2.7101567	21	4 21.4	22.6
413141 2002 AW_{199}	17.1	X	85.75626	106.03502	26.72144	2.99195	0.1307366	0.21747809	2.7385817	21	4 28.9	20.5
413142 2002 CT_{87}	17.3	X	151.58055	92.38626	129.44305	6.63229	0.1245319	0.28505533	2.2865635	21	11 13.2	20.7
413143 2002 CH_{89}	17.4	X	156.38963	242.45286	329.96471	6.20179	0.1914497	0.28308824	2.2971437	21	10 30.5	21.3
413144 2002 CL_{89}	16.3	X	54.66345	167.76140	336.74593	8.88278	0.1011837	0.21093141	2.7949576	21	3 22.8	19.7
413145 2002 CT_{142}	17.0	X	105.82559	175.89675	300.01333	8.40540	0.1447531	0.21725965	2.7404170	21	5 2.1	21.0
413146 2002 CP_{177}	17.0	X	103.34675	351.07047	125.04867	9.66506	0.1280724	0.21647143	2.7470653	21	5 4.3	21.0
413147 2002 CO_{180}	17.4	X	208.35444	84.37366	103.33489	3.79692	0.1046631	0.28983446	2.2613582	21	12 1.1	20.4
413148 2002 CQ_{249}	17.4	X	146.02788	247.48980	344.02956	4.46449	0.1066908	0.28647653	2.2789949	21	11 16.6	20.7
413149 2002 CA_{257}	18.0	X	271.89954	348.35660	140.76982	1.93776	0.1481702	0.29234982	2.2483685	21	12 4.9	19.9
413150 2002 ED_{9}	16.5	X	111.76231	322.77186	171.07222	16.53358	0.2940495	0.21863042	2.7289505	21	6 21.9	21.3
413151 2002 ER_{23}	17.0	X	261.37500	309.26109	333.10482	1.25241	0.0361022	0.20536000	2.8452831	21	2 21.8	21.0
413152 2002 ET_{67}	16.8	X	120.56039	238.98065	350.46889	12.04725	0.1021997	0.27844666	2.3226015	21	10 13.7	20.2
413153 2002 EN_{113}	17.3	X	274.80759	89.24902	12.42718	7.40615	0.0410901	0.28471123	2.2884055	21	11 10.3	20.0
413154 2002 EA_{128}	17.6	X	165.40260	221.08095	345.68900	3.59820	0.1639464	0.28341297	2.2953887	21	11 2.6	21.1
413155 2002 FC_{3}	17.4	X	116.73918	33.08870	358.28732	20.14723	0.0887896	0.35512429	1.9749183	21	—	—
413156 2002 GS_{45}	16.7	X	38.49968	66.22802	209.26125	21.50948	0.2469435	0.26699322	2.3885585	21	9 24.2	19.5
413157 2002 GE_{59}	17.6	X	50.31032	222.67780	35.49426	4.73780	0.2101336	0.26860199	2.3790117	21	9 16.9	20.3
413158 2002 GE_{64}	16.6	X	254.47658	130.84510	99.23391	2.84745	0.2125529	0.19185734	2.9772623	21	—	—
413159 2002 GK_{103}	17.3	X	216.00706	137.32852	38.37171	7.19570	0.1054951	0.28414731	2.2914322	21	11 21.8	20.4
413160 2002 GV_{124}	17.2	X	209.77723	151.84679	5.17633	5.45546	0.0931881	0.28234054	2.3011974	21	10 21.2	20.3
413161 2002 GB_{184}	17.6	X	56.44908	314.83208	293.57989	4.63170	0.1984647	0.26965811	2.3727960	21	9 5.6	20.4
413162 2002 GW_{188}	17.6	X	59.08687	74.00054	190.14867	2.54022	0.1631357	0.27055760	2.3675340	21	9 28.1	20.4
413163 2002 LB_{59}	15.7	X	197.08534	155.93525	94.93275	15.43460	0.1872857	0.18372784	3.0644514	21	—	—
413164 2002 NL_{59}	15.6	X	116.61869	207.69614	137.60659	16.97423	0.1615192	0.17471661	3.1689345	21	—	—
413165 2002 NZ_{69}	15.5	X	80.53420	101.27935	259.62609	11.89694	0.2929312	0.17185502	3.2040152	21	—	—
413166 2002 PY_{161}	16.2	X	60.52163	268.94798	121.36440	7.42375	0.2060009	0.17261126	3.1946502	21	—	—
413167 2002 PX_{176}	15.5	X	64.79926	232.67264	148.22946	23.42204	0.1288628	0.17356841	3.1828946	21	—	—
413168 2002 QA_{58}	16.4	X	65.07019	156.51839	241.68112	3.92454	0.1575626	0.17327778	3.1864526	21	—	—
413169 2002 QL_{81}	15.7	X	71.58859	237.98514	150.71775	26.99416	0.1901213	0.17202652	3.2018854	21	—	—
413170 2002 QN_{82}	16.1	X	87.69196	358.57112	11.44927	8.89598	0.0758167	0.17345083	3.1843329	21	—	—
413171 2002 QP_{86}	18.1	X	308.04809	149.36658	200.96679	1.89267	0.2093196	0.25573744	2.4581394	21	6 24.9	20.8
413172 2002 QJ_{93}	16.1	X	77.10770	274.18575	137.08647	11.31782	0.1324684	0.17709664	3.1404786	21	1 9.4	20.1
413173 2002 QJ_{95}	15.7	X	63.89889	262.63357	129.95693	11.92500	0.0421394	0.17432966	3.1736220	21	—	—
413174 2002 QA_{96}	16.1	X	138.29676	46.80046	261.64346	8.43764	0.0654630	0.17429054	3.1740968	21	—	—
413175 2002 QS_{96}	18.1	X	312.79621	255.73851	91.58268	3.54317	0.2055543	0.25661197	2.4525514	21	6 29.9	20.5
413176 2002 QY_{103}	17.7	X	292.26856	148.87975	217.52499	7.64950	0.1641334	0.25511864	2.4621127	21	6 30.0	20.8
413177 2002 QM_{112}	17.5	X	46.20540	332.67609	309.60288	4.50462	0.1561686	0.26269801	2.4145240	21	9 30.7	20.4
413178 2002 QS_{116}	17.9	X	286.99900	318.90172	57.41327	2.20737	0.1995167	0.25507810	2.4623736	21	7 1.5	20.9
413179 2002 QR_{139}	16.0	X	67.35413	138.81059	253.61929	7.74162	0.1664666	0.17461982	3.1701053	21	—	—
413180 2002 RH_{1}	15.7	X	118.10389	115.86324	235.36826	10.76745	0.1480281	0.17613538	3.1518944	21	—	—
413181 2002 RX_{73}	16.1	X	150.33597	152.39354	166.68516	23.04975	0.1541976	0.17581829	3.1556828	21	—	—
413182 2002 RS_{235}	16.4	X	73.70395	159.93616	214.03433	3.88965	0.1350174	0.17025213	3.2240939	21	—	—
413183 2002 RH_{243}	17.1	X	272.44844	322.16906	64.60032	7.36955	0.0950017	0.25303253	2.4756266	21	7 13.6	20.4
413184 2002 RR_{247}	16.4	X	119.07224	319.20670	0.56335	4.72417	0.1837574	0.17229548	3.1985524	21	—	—
413185 2002 RU_{250}	16.7	X	93.14724	270.05071	114.78488	0.17028	0.1595493	0.17526625	3.1623057	21	1 3.9	20.9
413186 2002 RZ_{250}	17.9	X	278.78837	211.79757	161.00976	1.70484	0.1926664	0.25357864	2.4720710	21	6 16.3	21.0
413187 2002 RO_{282}	17.4	X	1.36718	45.20747	240.50406	8.69544	0.2269821	0.25616972	2.4553733	21	7 11.9	19.2
413188 2002 TC_{310}	16.2	X	135.75817	271.52065	56.50735	13.17932	0.0812646	0.17094282	3.2154034	21	—	—
413189 2002 TK_{314}	15.5	X	328.20586	59.66286	75.07401	14.80478	0.0388809	0.16792849	3.2537671	21	—	—
413190 2002 TE_{350}	16.2	X	111.04581	66.57623	271.37169	9.74529	0.1087484	0.17296743	3.1902631	21	—	—
413191 2002 TO_{350}	16.1	X	83.56540	108.27297	254.68713	8.01084	0.2152872	0.17092840	3.2155843	21	—	—
413192 2002 VY_{94}	16.8	X	36.56626	233.25040	280.87756	9.13502	0.6572257	0.16860730	3.2450281	21	6 18.5	19.8
413193 2002 VL_{105}	16.7	X	173.56951	193.55223	271.64038	4.75412	0.2129412	0.24134838	2.5548954	21	7 2.4	21.0
413194 2002 WA_{15}	15.4	X	99.46890	309.66038	105.40416	13.09159	0.2137585	0.17309967	3.1886381	21	3 1.6	20.0
413195 2002 WJ_{27}	13.9	X	252.50443	136.41441	218.84385	16.59302	0.1279257	0.08310078	5.2007502	21	5 11.8	21.1
413196 2002 XU_{60}	17.3	X	293.96979	77.71229	58.23907	22.52242	0.0629579	0.36966401	1.9227874	21	—	—
413197 2002 XH_{78}	16.0	X	57.63062	101.15152	310.48302	4.07009	0.4070349	0.16724405	3.2626383	21	1 19.3	18.7
413198 2002 XE_{119}	17.4	X	225.50014	320.03107	93.61909	3.67706	0.1348542	0.24435377	2.5339032	21	6 17.1	21.1
413199 2002 YB	16.0	X	167.11114	274.53537	147.68341	27.53009	0.4396987	0.23458837	2.6037447	21	5 18.9	21.7
413200 2003 AS_{77}	16.2	X	185.09590	125.37284	344.45127	14.59603	0.1821305	0.23978389	2.5659964	21	7 22.6	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413201 2003 AB_{79}	17.1	X	201.48232	192.66335	239.60992	2.15545	0.0686691	0.23645575	2.5900181	21	6 19.1	20.7
413202 2003 AB_{82}	16.3	X	135.87925	119.91260	50.39923	17.11877	0.2789517	0.23688202	2.5869100	21	9 2.6	21.2
413203 2003 AM_{82}	15.7	X	214.73885	36.67683	70.53443	26.95263	0.2223799	0.24120617	2.5558995	21	8 17.3	20.5
413204 2003 BA_{14}	17.2	X	121.93192	297.16299	198.82984	2.74320	0.2070568	0.23317318	2.6142693	21	6 25.1	21.2
413205 2003 BN_{54}	17.3	X	173.81884	188.74888	279.95089	3.98170	0.2429820	0.23759671	2.5817198	21	7 7.3	21.7
413206 2003 BS_{64}	16.7	X	260.18085	114.17301	291.92072	3.72803	0.2509226	0.24467984	2.5316515	21	7 1.6	20.5
413207 2003 BW_{70}	17.5	X	201.72437	67.64445	344.68274	1.49461	0.2085287	0.23411009	2.6072897	21	5 20.5	21.9
413208 2003 BR_{83}	16.9	X	146.41969	89.80941	66.45070	5.77142	0.2144064	0.23711567	2.5852103	21	8 15.1	21.3
413209 2003 FF_{35}	16.9	X	102.95263	162.75759	0.10814	4.48966	0.1874261	0.22888908	2.6467891	21	7 8.9	20.8
413210 2003 FD_{93}	16.5	X	312.93705	190.94425	30.26660	16.17972	0.1974930	0.21120155	2.7925738	21	1 20.1	20.7
413211 2003 GD_{28}	17.3	X	180.60938	258.46326	358.59842	6.63623	0.1149660	0.30457333	2.1878026	21	—	—
413212 2003 GX_{35}	16.7	X	102.38001	12.64884	128.77523	13.73506	0.2398506	0.22761985	2.6566191	21	6 17.4	20.8
413213 2003 GC_{45}	17.9	X	249.17867	19.74521	133.06029	5.45613	0.0969544	0.30242258	2.1981631	21	12 12.8	20.2
413214 2003 HY_{6}	16.9	X	122.74906	112.52956	25.11534	13.52128	0.1950604	0.22823971	2.6518070	21	6 27.1	21.3
413215 2003 JB_{1}	18.0	X	30.36681	140.28553	195.23204	2.49665	0.1848076	0.28963620	2.2623901	21	12 3.5	20.4
413216 2003 MA	18.9	X	209.07889	158.20469	96.00239	21.95826	0.3018203	0.46863978	1.6415090	21	—	—
413217 2003 PW_{3}	17.4	X	303.95716	344.90354	320.80391	17.21960	0.2913164	0.26510132	2.3999091	21	3 23.2	21.1
413218 2003 QU_{41}	16.0	X	134.54624	25.33842	350.52938	9.22611	0.3103252	0.18872721	3.0100915	21	2 23.9	21.1
413219 2003 QV_{72}	16.3	X	147.36995	115.65732	208.23107	9.48099	0.3559066	0.18707233	3.0278174	21	1 7.0	21.7
413220 2003 QY_{81}	16.6	X	135.13089	10.31605	342.86789	1.95585	0.1760983	0.18788184	3.0191140	21	1 15.1	21.2
413221 2003 QM_{87}	16.4	X	125.60395	258.72071	78.46224	11.93012	0.2747714	0.18425807	3.0585697	21	—	—
413222 2003 QM_{95}	16.0	X	14.56433	134.40999	305.45194	8.17974	0.0687757	0.18049409	3.1009450	21	—	—
413223 2003 RT_{3}	17.9	X	14.73888	331.26807	339.87945	6.49263	0.1252500	0.27503176	2.3417875	21	9 18.1	20.1
413224 2003 RF_{9}	17.3	X	336.56614	138.54606	199.17423	8.75875	0.2289971	0.27248841	2.3563368	21	8 2.9	19.1
413225 2003 RD_{10}	15.9	X	66.49388	71.61092	2.69623	10.76816	0.1370387	0.18416791	3.0595678	21	1 24.8	19.8
413226 2003 RC_{24}	16.9	X	317.24708	53.13094	340.65833	23.28577	0.2520498	0.27561675	2.3384728	21	9 14.4	18.4
413227 2003 SP_{22}	15.7	X	130.59760	301.67844	14.68274	26.86342	0.1749623	0.17903535	3.1177661	21	—	—
413228 2003 SM_{25}	16.4	X	108.08859	193.77634	201.16822	8.68747	0.1792010	0.18648313	3.0341918	21	2 1.9	20.8
413229 2003 SE_{63}	17.7	X	15.38052	69.86164	248.02774	3.47793	0.2305728	0.27574277	2.3377602	21	10 17.0	19.7
413230 2003 SB_{76}	17.6	X	309.14509	306.71782	93.86211	1.39321	0.2040954	0.27305448	2.3530790	21	9 19.4	19.4
413231 2003 SS_{89}	15.7	X	91.21168	201.05501	238.57508	9.93549	0.1011821	0.19061426	2.9901924	21	2 21.5	19.9
413232 2003 SX_{118}	16.8	X	74.81683	260.96023	159.57778	2.21646	0.0702900	0.18508956	3.0494026	21	1 8.4	20.7
413233 2003 SB_{129}	18.0	X	288.23587	133.18517	290.71895	4.60270	0.0849479	0.27550008	2.3391329	21	9 29.5	20.7
413234 2003 SF_{136}	18.1	X	298.21766	145.54057	262.69796	2.33577	0.2247567	0.27323627	2.3520352	21	9 1.8	20.4
413235 2003 SW_{149}	17.3	X	282.36562	358.76837	27.64523	9.39168	0.1983651	0.26821888	2.3812765	21	7 11.1	20.4
413236 2003 SQ_{154}	16.1	X	88.43276	8.81436	9.08338	25.51398	0.2110675	0.18001340	3.1064628	21	—	—
413237 2003 SQ_{160}	17.6	X	321.06734	274.78440	97.21683	4.48867	0.2555093	0.27216215	2.3582195	21	8 23.9	19.1
413238 2003 SM_{176}	16.3	X	124.70818	330.24670	4.20992	13.62105	0.2238403	0.18276466	3.0752085	21	—	—
413239 2003 SA_{200}	16.3	X	101.77721	160.34770	214.10628	18.32820	0.2870495	0.18118877	3.0930139	21	1 14.9	21.0
413240 2003 SE_{204}	16.8	X	83.45841	247.26111	158.73744	0.93590	0.2679261	0.18254094	3.0777206	21	1 30.6	20.5
413241 2003 SD_{210}	16.4	X	138.63825	131.71449	201.08082	15.96743	0.2167841	0.18452729	3.0555940	21	—	—
413242 2003 SU_{213}	17.6	X	306.32099	13.73096	43.44237	7.28426	0.1722792	0.27432436	2.3458116	21	10 16.0	19.4
413243 2003 SC_{215}	16.5	X	96.55379	338.85171	62.60812	9.67594	0.1248853	0.18726515	3.0257387	21	1 22.9	20.7
413244 2003 SE_{218}	16.4	X	125.35717	306.77907	34.85138	3.69850	0.2082844	0.18114667	3.0934931	21	—	—
413245 2003 SA_{219}	15.3	X	112.30299	60.86683	288.82126	20.86470	0.1224355	0.18104940	3.0946010	21	—	—
413246 2003 SO_{268}	17.7	X	304.01593	28.29010	1.65630	6.28101	0.1148898	0.26971526	2.3724607	21	9 5.0	20.0
413247 2003 SY_{273}	18.1	X	342.14658	223.60872	135.94461	2.96855	0.2351592	0.27373737	2.3491639	21	10 6.9	19.2
413248 2003 SX_{299}	16.2	X	99.62090	323.16072	30.67848	7.27230	0.2031223	0.17910030	3.1170123	21	—	—
413249 2003 SS_{311}	18.4	X	317.55483	171.00050	189.74595	2.39421	0.2135551	0.27047874	2.3679942	21	7 29.8	20.3
413250 2003 SW_{318}	16.6	X	44.88185	235.86181	201.94622	7.96879	0.0717478	0.18420818	3.0591218	21	—	—
413251 2003 SJ_{319}	18.4	X	1.26268	279.94891	36.66342	2.67690	0.2198009	0.27237889	2.3569684	21	9 11.8	19.9
413252 2003 SM_{322}	15.7	X	117.25047	46.48678	286.67363	13.19702	0.2386949	0.17910243	3.1169875	21	—	—
413253 2003 SU_{325}	17.8	X	229.02469	138.88404	317.22632	5.36503	0.0683580	0.27092551	2.3653901	21	8 24.9	20.7
413254 2003 SM_{328}	16.1	X	159.12687	130.61750	280.00395	11.86795	0.1835780	0.19648411	2.9303382	21	4 8.9	21.1
413255 2003 SJ_{393}	17.4	X	257.09817	339.14212	108.15106	5.03632	0.1664863	0.26973765	2.3723294	21	9 6.9	20.4
413256 2003 SL_{400}	16.2	X	104.65857	208.91727	169.56149	17.21819	0.1814429	0.18165565	3.0877119	21	1 11.5	20.7
413257 2003 SH_{428}	15.9	X	66.90745	48.19488	353.91951	26.87319	0.1410051	0.18164170	3.0878700	21	—	—
413258 2003 SR_{431}	16.7	X	143.84259	167.34801	200.89521	1.56484	0.1257940	0.19006660	2.9959335	21	2 4.0	21.3
413259 2003 SO_{433}	16.4	X	154.54252	70.44315	252.66523	7.88997	0.1358189	0.18576656	3.0419893	21	—	—
413260 2003 TL_{4}	19.4	X	186.60197	321.95823	220.01523	12.18737	0.3814219	1.43985309	0.7767071	21	—	—
413261 2003 TJ_{17}	15.5	X	139.08829	320.45433	34.04039	7.99710	0.1041785	0.18536785	3.0463498	21	1 14.2	20.1
413262 2003 TS_{21}	17.9	X	328.46395	212.35150	157.63951	1.18670	0.1937926	0.27245687	2.3565186	21	9 15.2	19.3
413263 2003 TM_{24}	16.2	X	69.86064	40.73515	346.95283	9.44471	0.0883302	0.17936353	3.1139619	21	—	—
413264 2003 TY_{34}	15.9	X	225.08503	235.77577	359.66270	15.58490	0.0743509	0.17898130	3.1183937	21	—	—
413265 2003 TK_{36}	16.5	X	196.23873	83.66939	225.98050	9.09447	0.0559052	0.18665925	3.0322828	21	1 13.9	21.2
413266 2003 TS_{41}	16.1	X	57.97728	50.26350	0.74474	12.84767	0.0586322	0.18043272	3.1016481	21	—	—
413267 2003 TA_{45}	16.2	X	138.84598	337.79327	349.06712	11.73931	0.0605805	0.18045230	3.1014237	21	—	—
413268 2003 TY_{47}	16.5	X	94.65765	52.15007	329.12054	9.18836	0.0770159	0.18370467	3.0647091	21	—	—
413269 2003 TF_{54}	16.4	X	94.35162	163.70096	172.11317	11.33907	0.0789152	0.17533713	3.1614534	21	—	—
413270 2003 UR_{3}	17.6	X	314.88685	176.08165	268.88214	2.76586	0.1953644	0.27822914	2.3238119	21	12 19.0	19.1
413271 2003 UK_{15}	16.2	X	92.33193	0.49837	18.91336	8.94174	0.1074325	0.18019428	3.1043836	21	—	—
413272 2003 UY_{18}	17.3	X	284.94575	3.32661	44.36016	12.94403	0.2328726	0.26835280	2.3804842	21	8 14.4	20.3
413273 2003 UM_{36}	17.0	X	348.87284	349.01623	346.96647	13.80167	0.2555916	0.27119517	2.3638219	21	9 11.5	18.1
413274 2003 UY_{47}	16.4	X	145.25809	70.97925	243.64039	7.44542	0.2718183	0.18312780	3.0711417	21	—	—
413275 2003 UU_{57}	15.8	X	52.61357	201.64807	252.99457	9.22939	0.0568170	0.18581966	3.0414098	21	1 16.9	19.8
413276 2003 UV_{57}	16.1	X	60.31692	52.30950	340.82911	10.07403	0.1470563	0.17781004	3.1320729	21	—	—
413277 2003 UP_{58}	15.9	X	119.28844	317.36480	356.38933	9.51169	0.2329007	0.17810797	3.1285792	21	—	—
413278 2003 UM_{65}	16.1	X	131.82144	312.24597	82.94166	8.63705	0.2801895	0.18888280	3.0084383	21	3 16.3	21.1
413279 2003 UG_{70}	18.3	X	15.71644	96.40053	216.44703	9.62410	0.2027261	0.27281073	2.3544804	21	10 3.4	20.3
413280 2003 UX_{78}	15.3	X	300.25346	155.44232	7.73416	17.11543	0.0687494	0.17804422	3.1293259	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413281 2003 UL_{80}	18.1	X	322.06392	291.70603	87.38865	1.62451	0.2202965	0.27200732	2.3591143	21	9 12.7	19.7
413282 2003 UO_{89}	17.8	X	0.48963	101.82065	296.40452	1.48062	0.1861817	0.28037533	2.3119380	21	—	—
413283 2003 UX_{108}	16.2	X	38.09484	171.40686	221.47896	12.33422	0.1015216	0.17230341	3.1984542	21	—	—
413284 2003 UG_{110}	15.9	X	14.85136	59.00044	52.20417	10.55463	0.1996146	0.17751176	3.1355805	21	—	—
413285 2003 UB_{113}	17.4	X	282.71369	299.90931	75.82522	7.58604	0.1985270	0.26508724	2.3999941	21	6 24.3	20.5
413286 2003 UN_{115}	17.3	X	335.60477	342.37133	334.07894	2.84521	0.2327875	0.26650324	2.3914853	21	6 25.0	18.8
413287 2003 UE_{128}	17.6	X	266.41270	142.93877	278.62999	5.13867	0.1161485	0.26705722	2.3881769	21	8 17.9	20.6
413288 2003 UL_{132}	15.0	X	112.08175	126.80980	240.03419	13.98300	0.2095628	0.18045806	3.1013577	21	1 9.0	19.6
413289 2003 US_{155}	17.9	X	233.23288	329.24722	109.92361	4.53804	0.0546443	0.26627425	2.3928562	21	8 9.8	21.0
413290 2003 UX_{161}	16.5	X	122.02570	132.19457	209.91544	13.63074	0.3001609	0.18125850	3.0922205	21	1 2.5	21.5
413291 2003 UO_{164}	15.2	X	105.87056	312.68751	64.05506	10.52568	0.1086809	0.18119622	3.0929290	21	1 2.2	19.5
413292 2003 UT_{170}	16.1	X	93.41456	157.38822	218.56826	17.04383	0.2039517	0.17994971	3.1071957	21	—	—
413293 2003 UR_{176}	17.4	X	334.96520	274.86791	82.10848	2.32670	0.1988243	0.27122525	2.3636471	21	9 10.5	19.0
413294 2003 UJ_{177}	17.7	X	214.00678	281.22747	49.88933	22.50312	0.0925500	0.35872504	1.9616804	21	2 14.5	20.8
413295 2003 UN_{178}	16.8	X	130.66562	117.81391	227.38344	7.37703	0.1945630	0.18276941	3.0751552	21	1 3.1	21.5
413296 2003 UZ_{178}	17.7	X	141.20013	149.51860	203.39750	21.72800	0.0924252	0.35137948	1.9889252	21	—	—
413297 2003 UL_{184}	15.9	X	150.48740	111.61902	226.54510	14.90102	0.1651309	0.18345984	3.0674350	21	1 8.9	20.9
413298 2003 UE_{195}	17.7	X	288.25539	34.62275	32.30761	6.80763	0.2176110	0.26934156	2.3746547	21	9 17.4	20.0
413299 2003 UV_{205}	15.5	X	76.35150	174.48099	243.66993	17.39736	0.2620220	0.17992048	3.1075323	21	1 28.1	19.6
413300 2003 UV_{206}	17.5	X	298.37898	155.70710	222.49967	10.64236	0.2284602	0.26697800	2.3886494	21	7 14.2	20.4
413301 2003 UJ_{219}	16.1	X	54.11409	228.69949	225.33439	15.79922	0.1105708	0.18345718	3.0674647	21	1 19.7	20.2
413302 2003 UW_{222}	15.5	X	102.41663	139.74282	241.19735	26.50045	0.2021724	0.18025064	3.1037365	21	1 8.9	20.2
413303 2003 UC_{223}	16.5	X	250.94115	244.49621	237.51314	21.00782	0.3922273	0.26667445	2.3904616	21	9 4.7	20.8
413304 2003 UR_{229}	15.9	X	69.22603	151.79398	236.44084	8.39500	0.1476603	0.17704177	3.1411275	21	—	—
413305 2003 UE_{230}	17.9	X	301.99314	256.95950	132.18213	3.19949	0.2050048	0.26887280	2.3774139	21	8 14.8	19.8
413306 2003 UQ_{233}	16.2	X	97.86016	168.75470	233.15710	6.65883	0.0968033	0.18336205	3.0685256	21	1 18.5	20.4
413307 2003 UF_{249}	18.0	X	304.84022	56.59651	330.76073	2.52620	0.2595036	0.26956814	2.3733239	21	8 7.5	19.9
413308 2003 UA_{264}	16.0	X	92.96245	325.05554	21.48048	17.62718	0.2175300	0.17614980	3.1517223	21	—	—
413309 2003 UG_{276}	16.0	X	78.46558	174.96348	225.55837	10.45426	0.2655831	0.17952179	3.1121315	21	1 14.0	19.9
413310 2003 UL_{291}	17.7	X	258.12336	269.34109	133.84757	1.75142	0.1900131	0.26314096	2.4118136	21	7 2.8	21.1
413311 2003 UM_{299}	18.4	X	280.56959	279.87388	158.09386	1.28513	0.1504577	0.27163799	2.3612522	21	9 29.9	20.9
413312 2003 UU_{300}	16.3	X	127.13915	77.51747	254.93414	5.08795	0.1613043	0.17988173	3.1079786	21	—	—
413313 2003 UX_{307}	15.9	X	300.88781	176.86816	29.33850	10.47783	0.0393058	0.18594137	3.0400825	21	1 12.1	20.3
413314 2003 UF_{317}	17.3	X	209.96603	353.22171	188.59862	22.92562	0.1346770	0.28074296	2.3099192	21	11 21.4	20.9
413315 2003 UL_{350}	16.4	X	5.66588	67.49159	37.43868	9.64594	0.1394163	0.17952150	3.1121349	21	—	—
413316 2003 UV_{375}	17.6	X	105.28736	60.45355	199.72448	6.38506	0.0902207	0.27985625	2.3147959	21	11 10.6	20.8
413317 2003 UB_{376}	16.4	X	55.22570	229.29479	202.14883	5.86763	0.2174893	0.18326952	3.0695583	21	1 5.8	19.7
413318 2003 UB_{378}	16.8	X	61.75025	37.85055	22.35865	3.89949	0.1205433	0.18319149	3.0704299	21	—	—
413319 2003 UE_{380}	16.7	X	57.17946	43.03933	25.39359	9.89284	0.1276969	0.18278079	3.0750276	21	—	—
413320 2003 UJ_{389}	16.4	X	68.47853	199.73960	211.70544	7.25374	0.1253507	0.18026485	3.1035733	21	—	—
413321 2003 WK_{2}	17.5	X	340.96403	61.75314	253.88784	3.37116	0.1546565	0.26434245	2.4044999	21	7 15.5	19.4
413322 2003 WD_{4}	17.5	X	307.62986	311.81938	64.21479	6.35342	0.2513125	0.26758430	2.3850398	21	7 29.0	19.7
413323 2003 WL_{15}	17.5	X	336.48206	108.91089	225.09656	6.35052	0.2707478	0.26857250	2.3791858	21	7 22.0	19.0
413324 2003 WZ_{28}	15.6	X	35.88691	214.28411	254.69040	15.63401	0.1979030	0.17915933	3.1163275	21	1 14.1	19.1
413325 2003 WL_{55}	17.2	X	70.59421	80.66345	331.68910	2.55753	0.3019385	0.17941210	3.1133998	21	1 24.7	20.6
413326 2003 WB_{62}	17.9	X	302.78421	182.52506	225.54248	1.69304	0.2028261	0.26943992	2.3740767	21	9 15.2	19.8
413327 2003 WK_{67}	15.8	X	73.12035	117.46337	246.78574	24.37078	0.2537781	0.17317506	3.1877126	21	—	—
413328 2003 WV_{86}	15.6	X	76.67200	135.74849	256.88576	7.92751	0.2661699	0.17748401	3.1359074	21	1 3.6	19.2
413329 2003 WT_{96}	15.8	X	112.02618	295.63504	54.24125	27.09344	0.2317224	0.17880222	3.1204755	21	—	—
413330 2003 WN_{108}	15.5	X	340.12659	221.10379	253.56282	20.07725	0.1644227	0.17181178	3.2045527	21	—	—
413331 2003 WA_{113}	17.0	X	301.90802	354.65684	43.07429	10.64946	0.1506222	0.26769064	2.3844081	21	9 12.8	19.6
413332 2003 WD_{113}	16.3	X	107.80642	352.99872	49.62525	18.01794	0.3065059	0.18398042	3.0616460	21	3 12.1	21.2
413333 2003 WN_{113}	17.6	X	241.26768	174.26259	276.17885	5.48453	0.1231345	0.26517008	2.3994942	21	8 23.2	21.0
413334 2003 WV_{124}	15.2	X	75.53065	359.46749	70.94791	25.65324	0.2575444	0.17908335	3.1172089	21	3 2.6	19.6
413335 2003 WJ_{134}	15.6	X	67.18121	358.58160	70.47224	11.03206	0.0778735	0.17890408	3.1192909	21	1 11.6	19.8
413336 2003 WR_{137}	17.5	X	335.10111	160.25245	240.13798	5.36722	0.2375090	0.27312738	2.3526603	21	11 27.1	18.7
413337 2003 WG_{149}	16.1	X	77.67211	127.69393	252.72399	8.55713	0.2002951	0.17601448	3.1533375	21	—	—
413338 2003 WQ_{158}	17.5	X	227.41438	28.25189	64.40496	3.52662	0.1546617	0.26279217	2.4139472	21	8 9.9	21.0
413339 2003 WY_{160}	17.8	X	296.68660	19.40570	75.14201	3.69138	0.1355635	0.27358312	2.3500468	21	11 25.6	19.8
413340 2003 WB_{162}	15.9	X	25.70001	31.46151	63.50479	13.72207	0.0930397	0.17693019	3.1424480	21	—	—
413341 2003 WM_{180}	16.1	X	322.12552	97.73518	71.80939	11.59341	0.1735734	0.17505466	3.1648534	21	—	—
413342 2003 WM_{183}	17.8	X	322.26403	294.92449	78.65913	3.29322	0.1996897	0.26851771	2.3795094	21	9 6.5	19.5
413343 2003 XA	16.6	X	322.99269	74.31339	314.19385	8.37928	0.3272769	0.27215237	2.3582760	21	9 12.2	17.7
413344 2003 XM_{1}	16.2	X	60.86357	23.90014	39.48912	15.87926	0.0667290	0.17807074	3.1290152	21	—	—
413345 2003 XN_{8}	15.4	X	72.15719	77.26724	321.12760	15.03283	0.2397849	0.17712002	3.1402022	21	1 2.6	19.1
413346 2003 XB_{21}	15.5	X	106.71025	323.76214	98.21764	28.82503	0.1935567	0.18118479	3.0930591	21	3 23.3	20.6
413347 2003 XU_{23}	16.5	X	5.44041	52.44056	78.10353	2.05986	0.1376145	0.17671590	3.1449879	21	—	—
413348 2003 XZ_{35}	16.0	X	41.66048	163.53880	282.44099	16.07957	0.2269124	0.17624507	3.1505864	21	1 1.4	19.1
413349 2003 YJ_{10}	15.9	X	80.46142	86.79076	292.97197	13.53080	0.3370834	0.17625371	3.1504835	21	1 6.5	19.4
413350 2003 YZ_{20}	17.5	X	222.23668	97.38731	286.60607	16.64572	0.1335985	0.36182126	1.9504732	21	4 20.3	20.6
413351 2003 YW_{45}	16.8	X	55.98876	90.89762	345.31481	7.04901	0.3161556	0.17778657	3.1323485	21	1 31.4	19.7
413352 2003 YQ_{47}	15.4	X	52.31735	162.92758	260.65493	27.02764	0.1494385	0.17534758	3.1613278	21	—	—
413353 2003 YE_{52}	17.4	X	267.51752	220.04035	281.95363	6.49001	0.2206121	0.27132472	2.3630694	21	11 27.2	19.8
413354 2003 YP_{54}	17.5	X	265.83348	349.62699	74.97207	8.45778	0.1985495	0.26464384	2.4026740	21	8 13.3	20.8
413355 2003 YD_{67}	18.7	X	252.82996	197.44143	212.98659	0.98106	0.1784786	0.26182397	2.4198946	21	7 8.0	22.0
413356 2003 YY_{67}	17.9	X	250.84259	326.25436	97.15397	2.37736	0.1770834	0.26214037	2.4179470	21	7 24.1	21.4
413357 2003 YY_{77}	17.1	X	235.73879	22.65391	82.86110	7.88992	0.1577553	0.26215093	2.4178821	21	9 8.1	20.6
413358 2003 YP_{103}	16.2	X	102.64681	353.36710	87.98364	8.62888	0.2404343	0.18581087	3.0415057	21	4 8.2	20.7
413359 2003 YB_{126}	15.1	X	63.21134	334.00181	52.32880	15.44367	0.1472177	0.17233899	3.1980140	21	—	—
413360 2003 YN_{148}	16.1	X	50.71276	90.44478	337.13047	12.30539	0.2898041	0.17470286	3.1691006	21	1 4.9	19.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413361 2004 BG	16.2	X	59.19906	250.76231	251.44322	11.65996	0.4525569	0.17871469	3.1214943	21	5 29.3	19.9
413362 2004 BX_{20}	17.8	X	251.58917	335.21472	106.50070	6.45610	0.1726410	0.26055139	2.4277676	21	8 21.2	21.1
413363 2004 BK_{26}	15.6	X	102.79356	128.82520	302.39226	8.21217	0.0775171	0.17861215	3.1226888	21	2 26.3	20.0
413364 2004 BB_{35}	18.3	X	244.61390	18.82208	76.24424	2.23035	0.1559610	0.26044595	2.4284228	21	9 1.6	21.7
413365 2004 BM_{69}	16.1	X	356.48682	271.11888	239.30466	4.76653	0.3142372	0.16943799	3.2344134	21	—	—
413366 2004 BL_{94}	16.2	X	1.21889	283.96593	205.00137	10.53047	0.3361303	0.16917166	3.2378072	21	—	—
413367 2004 BG_{140}	18.1	X	217.84384	170.36070	292.21881	3.79974	0.1336515	0.25713994	2.4491931	21	8 12.3	21.8
413368 2004 CD_{128}	16.0	X	252.01732	318.53159	19.16113	12.88771	0.2325507	0.23612845	2.5924109	21	4 1.4	20.2
413369 2004 FV_{135}	17.0	X	22.42210	193.29039	4.59808	12.52715	0.0959785	0.23341631	2.6124536	21	4 8.5	19.9
413370 2004 GZ_{9}	16.9	X	314.88091	231.49776	6.67558	5.59766	0.1675687	0.22304236	2.6928437	21	2 12.3	20.5
413371 2004 GN_{39}	16.2	X	275.70636	359.07467	292.25502	11.95523	0.1474051	0.22556780	2.6727068	21	2 28.3	20.4
413372 2004 GQ_{39}	16.6	X	326.45129	267.07964	338.96834	6.83415	0.2239446	0.22719861	2.6599018	21	2 26.8	19.7
413373 2004 GQ_{52}	17.4	X	22.66037	188.99585	33.73120	6.76111	0.0790220	0.23534174	2.5981851	21	5 15.5	20.5
413374 2004 GH_{78}	17.2	X	83.55696	169.04937	20.25271	8.07692	0.1326932	0.24078475	2.5588809	21	7 13.9	20.7
413375 2004 HA_{3}	16.5	X	15.16832	165.39502	73.31273	5.56754	0.1467950	0.23496933	2.6009296	21	5 29.1	18.9
413376 2004 HT_{10}	16.5	X	326.26766	219.83680	40.06372	13.86532	0.2055366	0.22765569	2.6563403	21	3 26.3	19.8
413377 2004 HE_{22}	17.2	X	320.17511	47.92014	204.20255	12.55557	0.1161946	0.22821995	2.6519601	21	3 11.6	20.7
413378 2004 HY_{45}	15.6	X	214.68905	63.38017	235.13412	34.40148	0.2580180	0.21210780	2.7846137	21	1 7.9	21.1
413379 2004 HD_{67}	16.9	X	279.92348	235.99672	31.67913	7.13407	0.1944262	0.22260305	2.6963855	21	2 7.6	21.1
413380 2004 JB_{3}	16.5	X	329.16037	0.45501	235.11697	11.41790	0.1390734	0.22550308	2.6732181	21	2 25.0	20.0
413381 2004 JD_{36}	16.7	X	318.11778	34.81857	217.05624	13.20376	0.2101186	0.22487401	2.6782013	21	2 20.4	20.5
413382 2004 JR_{45}	16.4	X	283.39411	24.44760	235.03534	8.71928	0.2570796	0.21906780	2.7253170	21	1 21.4	21.0
413383 2004 NS_{27}	18.2	X	119.52008	69.60741	220.89906	1.41738	0.1823791	0.30834955	2.1699039	21	—	—
413384 2004 PN_{41}	18.2	X	74.99362	118.66077	193.92191	0.77841	0.2394865	0.30194611	2.2004749	21	12 31.0	21.7
413385 2004 PM_{65}	16.2	X	155.64347	20.52639	326.72388	7.61430	0.2189634	0.20017564	2.8942002	21	1 30.1	20.9
413386 2004 PL_{111}	18.3	X	79.70142	290.32123	35.38083	1.98140	0.2559588	0.30402881	2.1904141	21	—	—
413387 2004 QS_{18}	18.2	X	86.32191	327.04228	331.66296	4.04374	0.2183987	0.30244820	2.1980389	21	12 22.4	21.6
413388 2004 RX_{49}	17.6	X	72.97455	326.50126	349.71881	3.76717	0.1830025	0.30129519	2.2036431	21	12 29.4	20.8
413389 2004 RH_{83}	16.3	X	131.31363	233.47361	167.99091	11.10003	0.1560438	0.20348863	2.8627007	21	3 4.3	20.6
413390 2004 RG_{96}	18.2	X	77.90572	98.07983	208.62566	5.02963	0.2536007	0.30227045	2.1989005	21	12 27.0	21.7
413391 2004 RZ_{152}	17.8	X	16.08677	126.86860	260.98117	4.97112	0.1013251	0.30091341	2.2055066	21	—	—
413392 2004 RA_{156}	16.5	X	144.74337	43.39935	334.62309	6.58072	0.0869310	0.20303252	2.8669865	21	2 11.6	20.7
413393 2004 RB_{164}	18.1	X	17.19844	40.16093	353.39657	3.64430	0.1904681	0.29887176	2.2155393	21	—	—
413394 2004 RX_{173}	17.6	X	338.40009	155.81637	204.28606	6.72815	0.1924667	0.29170412	2.2516852	21	9 26.6	18.9
413395 2004 RV_{206}	16.3	X	195.08951	23.97577	280.56798	9.19697	0.2691455	0.20367634	2.8609416	21	1 12.2	21.4
413396 2004 RS_{256}	17.7	X	13.34876	0.90569	359.00929	7.06264	0.1894129	0.29646848	2.2274965	21	12 13.8	20.0
413397 2004 RC_{258}	18.3	X	62.19222	79.74917	245.15663	1.48924	0.1873132	0.30011629	2.2094101	21	12 29.5	21.4
413398 2004 RA_{318}	17.7	X	131.77089	345.16737	296.49709	3.41248	0.1515334	0.30609807	2.1805313	21	—	—
413399 2004 RB_{325}	16.4	X	164.12382	164.27754	218.17437	12.63501	0.0982935	0.20575856	2.8416077	21	3 5.6	21.0
413400 2004 RV_{343}	18.0	X	29.26206	267.64502	96.71916	4.36041	0.2147016	0.29845351	2.2176087	21	—	—
413401 2004 RW_{346}	17.9	X	26.06186	109.65801	249.54604	3.07450	0.1887633	0.29731260	2.2232784	21	—	—
413402 2004 SM_{3}	17.6	X	12.78329	282.31250	115.28799	4.55167	0.1393401	0.30094461	2.2053541	21	—	—
413403 2004 TT_{2}	18.3	X	20.51979	148.42360	237.29266	1.93962	0.1499345	0.29852570	2.2172512	21	—	—
413404 2004 TZ_{32}	16.3	X	170.09540	120.61432	213.68106	11.35890	0.0611818	0.19738376	2.9214274	21	1 13.1	20.8
413405 2004 TC_{53}	17.8	X	51.22832	99.36101	219.48225	4.52758	0.2493065	0.29484001	2.2356909	21	12 16.5	20.9
413406 2004 TU_{81}	17.8	X	325.90785	78.92962	355.49008	5.43365	0.1010834	0.29701897	2.2247434	21	12 29.4	19.9
413407 2004 TK_{94}	17.9	X	316.25838	232.18488	207.28267	6.76988	0.0414874	0.29587910	2.2304536	21	12 17.1	20.3
413408 2004 TP_{139}	16.3	X	119.13128	159.57618	248.36106	7.92737	0.2037917	0.19971768	2.8986229	21	3 1.8	20.7
413409 2004 TX_{149}	17.1	X	171.08823	62.52222	308.69066	1.00018	0.0804354	0.20334929	2.8640083	21	3 2.1	21.4
413410 2004 TR_{152}	17.0	X	233.36421	299.15602	8.36250	1.90686	0.0309955	0.20372820	2.8604561	21	2 21.3	21.1
413411 2004 TR_{175}	17.7	X	28.90446	94.25361	275.22787	1.25703	0.1568239	0.29743829	2.2226520	21	—	—
413412 2004 TG_{177}	18.7	X	323.72811	246.14896	176.46921	1.20665	0.1760672	0.29359672	2.2419981	21	12 9.2	20.2
413413 2004 TW_{187}	16.5	X	224.79217	47.28248	203.03180	9.80285	0.0560263	0.19332361	2.9621891	21	—	—
413414 2004 TT_{192}	17.8	X	1.28635	20.42169	37.06710	3.06956	0.0441806	0.30078204	2.2061487	21	—	—
413415 2004 TD_{212}	16.6	X	188.97676	294.61034	30.96669	12.34955	0.0523144	0.19797609	2.9155974	21	1 29.1	21.1
413416 2004 TL_{219}	18.3	X	353.50344	221.98318	201.98390	3.11122	0.1166924	0.29888504	2.2154737	21	—	—
413417 2004 TH_{235}	17.7	X	222.82402	344.64437	23.34681	18.38950	0.1023561	0.38612286	1.8677513	21	4 6.1	19.7
413418 2004 TA_{244}	16.5	X	132.88878	355.75961	48.95324	7.05032	0.1383754	0.20010674	2.8948645	21	3 12.0	20.8
413419 2004 TB_{253}	17.1	X	180.56212	85.18756	246.83974	0.47020	0.1752978	0.20085473	2.8876730	21	1 29.7	21.8
413420 2004 TC_{342}	17.9	X	12.89875	330.54362	41.67353	6.73849	0.1758707	0.29483058	2.2357386	21	12 28.9	20.3
413421 2004 VA_{15}	18.1	X	141.01999	332.19103	34.69558	17.81336	0.5841444	0.19888985	2.9066605	21	3 13.7	24.1
413422 2004 VF_{40}	17.9	X	42.41141	276.83338	72.73885	2.29761	0.1813165	0.29578990	2.2309020	21	—	—
413423 2004 VW_{45}	16.2	X	146.63892	297.09483	90.19594	6.77684	0.0759587	0.19779117	2.9174143	21	2 26.6	20.5
413424 2004 WL	17.6	X	19.53007	256.24653	90.56119	4.82420	0.1971335	0.29220440	2.2491144	21	12 6.0	19.8
413425 2004 XC_{20}	15.6	X	44.32358	213.60240	256.00376	11.05699	0.1339248	0.18968327	2.9999685	21	1 25.1	19.3
413426 2004 XT_{49}	17.4	X	16.39676	126.31626	251.64996	7.02804	0.1875589	0.29415817	2.2391444	21	—	—
413427 2004 XB_{81}	15.6	X	66.07686	11.15599	89.07215	20.13522	0.2115404	0.19045018	2.9919096	21	3 13.8	19.5
413428 2004 XH_{146}	15.8	X	98.62550	322.06443	98.78241	11.72177	0.2715321	0.19133680	2.9826597	21	3 14.2	20.2
413429 2004 XN_{147}	17.7	X	27.55960	292.00657	79.67846	5.56174	0.2032003	0.29479567	2.2359151	21	—	—
413430 2004 XT_{160}	16.6	X	70.02863	137.90866	297.73746	16.65194	0.2529891	0.18816653	3.0160680	21	2 8.3	20.1
413431 2004 YB_{19}	16.4	X	14.78225	180.81843	289.25957	3.91086	0.1291681	0.18123205	3.0925214	21	—	—
413432 2004 YL_{19}	16.1	X	34.14179	350.18427	110.97049	16.50031	0.2059595	0.18367610	3.0650269	21	1 2.4	19.2
413433 2004 YB_{22}	16.2	X	86.30619	307.76153	116.76719	11.33683	0.2072291	0.18744499	3.0238030	21	2 18.8	20.1
413434 2005 AB_{14}	15.7	X	355.41457	189.72800	319.07587	22.44877	0.3185953	0.18140329	3.0905749	21	—	—
413435 2005 AW_{34}	16.4	X	142.06542	339.64211	110.52556	13.28094	0.2105497	0.20043602	2.8916931	21	5 22.3	21.3
413436 2005 AB_{68}	16.0	X	14.80248	147.74429	322.65299	8.57494	0.1826915	0.18068762	3.0987303	21	—	—
413437 2005 AP_{69}	17.2	X	119.26521	116.65453	100.99288	3.59300	0.1524136	0.27213507	2.3583760	21	10 5.7	20.7
413438 2005 BN	18.4	X	317.51094	14.67909	81.17324	3.90066	0.1831472	0.29036056	2.2586259	21	—	—
413439 2005 BH_{7}	17.6	X	279.03790	25.91234	93.11609	5.36699	0.0996604	0.28603058	2.2813631	21	12 7.5	19.8
413440 2005 BG_{16}	17.7	X	286.31945	14.72909	85.14354	7.27753	0.2227897	0.28575921	2.2828071	21	11 6.3	19.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413441 2005 BT_{24}	17.6	X	202.18871	26.34103	118.91363	4.19303	0.1767013	0.27558750	2.3386382	21	9 21.7	21.2
413442 2005 CJ_{22}	15.6	X	283.47961	320.02953	244.72850	13.27483	0.2304786	0.17475497	3.1684707	21	—	—
413443 2005 CX_{26}	15.6	X	354.35996	159.24580	331.94037	9.77805	0.1744998	0.17767059	3.1337116	21	—	—
413444 2005 CC_{32}	15.9	X	29.60427	348.47906	122.39343	5.68356	0.1110561	0.18041790	3.1018179	21	1 7.9	19.5
413445 2005 CK_{44}	17.4	X	118.11938	256.87200	335.03513	6.20722	0.0876490	0.27260853	2.3556445	21	10 14.2	20.7
413446 2005 CP_{44}	16.0	X	21.96663	312.38578	141.11525	11.79762	0.2155789	0.17813126	3.1283065	21	—	—
413447 2005 CA_{50}	16.9	X	174.80652	18.15219	141.22976	7.56875	0.0582587	0.27180421	2.3602894	21	9 17.2	20.0
413448 2005 CD_{55}	16.7	X	77.51354	336.97232	69.08707	2.25175	0.1915794	0.18076128	3.0978885	21	1 11.0	20.4
413449 2005 CS_{64}	18.2	X	227.63048	139.52112	4.75402	2.67226	0.1812263	0.27883619	2.3204379	21	10 14.6	21.2
413450 2005 EO_{6}	18.1	X	243.83351	118.82136	2.28465	2.50958	0.1623987	0.27630032	2.3346142	21	10 5.3	20.9
413451 2005 EW_{27}	16.7	X	132.00641	210.63116	345.86412	11.56386	0.1842993	0.26741292	2.3860587	21	9 18.7	20.5
413452 2005 EE_{34}	17.1	X	198.01781	349.54094	166.52663	23.46595	0.1659497	0.27450256	2.3447963	21	10 2.9	20.8
413453 2005 EZ_{65}	17.1	X	117.61602	218.06860	348.57102	6.86243	0.0893874	0.26659090	2.3909610	21	9 12.0	20.5
413454 2005 EF_{117}	16.4	X	346.12044	121.80301	17.55017	2.32514	0.2061793	0.17411425	3.1762389	21	—	—
413455 2005 EY_{146}	17.3	X	45.52776	234.79003	12.05018	8.41410	0.1906687	0.25682247	2.4512110	21	8 20.7	20.0
413456 2005 ER_{151}	18.1	X	119.32137	292.00714	178.24873	21.11703	0.0875080	0.37159818	1.9161095	21	4 26.3	20.3
413457 2005 EN_{153}	17.2	X	71.28282	101.79733	34.40258	22.29895	0.0626129	0.36965383	1.9228227	21	3 22.3	19.2
413458 2005 EN_{161}	17.4	X	147.58377	142.28911	31.50924	4.67952	0.0691440	0.26407092	2.4061479	21	9 3.7	20.7
413459 2005 EH_{169}	17.0	X	69.45462	157.83314	96.30723	6.24301	0.2044478	0.26488081	2.4012409	21	10 6.8	20.3
413460 2005 EB_{190}	16.2	X	286.64625	316.01075	230.80373	2.34118	0.0939585	0.17499710	3.1655473	21	—	—
413461 2005 EX_{201}	15.6	X	337.36661	114.68784	65.65780	20.02322	0.1237606	0.18011348	3.1053120	21	1 16.0	19.9
413462 2005 ER_{212}	15.6	X	358.44307	111.43026	18.73927	26.65070	0.2773254	0.17502559	3.1652039	21	—	—
413463 2005 EX_{256}	17.8	X	191.04516	178.06925	330.45592	2.22153	0.1112771	0.26914361	2.3758189	21	9 15.9	21.1
413464 2005 EL_{260}	18.2	X	172.21251	139.33693	33.96409	5.96913	0.1736851	0.26845366	2.3798879	21	9 28.9	22.0
413465 2005 EH_{299}	16.5	X	50.23775	34.38050	52.34397	1.20192	0.1635426	0.18058050	3.0999556	21	1 13.9	20.0
413466 2005 EA_{313}	15.7	X	63.64539	52.91654	357.58336	15.22106	0.2080322	0.17569484	3.1571609	21	—	—
413467 2005 GL_{31}	17.1	X	120.48886	49.98079	123.99174	5.60289	0.1357465	0.26021008	2.4298901	21	8 6.6	20.5
413468 2005 GY_{41}	18.0	X	168.08953	348.32553	167.48794	2.49804	0.1511535	0.27017523	2.3697673	21	8 31.9	21.7
413469 2005 GN_{75}	17.8	X	89.08880	283.35321	203.60948	20.44335	0.1014954	0.36814152	1.9280850	21	3 30.0	19.3
413470 2005 GM_{110}	17.7	X	158.69500	142.38800	22.54250	3.11985	0.1179420	0.26308086	2.4121809	21	9 4.3	21.2
413471 2005 GZ_{115}	18.0	X	191.88235	5.04107	148.86672	2.61704	0.1137719	0.26855038	2.3793164	21	9 25.1	21.3
413472 2005 GZ_{117}	17.7	X	240.16094	292.88821	154.27533	3.45016	0.0284398	0.26495682	2.4007816	21	9 2.7	20.8
413473 2005 GZ_{125}	17.7	X	266.05790	81.36700	23.10558	2.76159	0.1379162	0.27755435	2.3275768	21	10 17.8	20.2
413474 2005 GW_{150}	17.4	X	131.78170	134.15561	65.29066	7.40556	0.0550539	0.26259702	2.4151430	21	9 20.6	20.8
413475 2005 GP_{161}	16.9	X	69.61094	125.58300	119.33558	6.59792	0.1023004	0.26013111	2.4303819	21	9 7.4	19.9
413476 2005 GS_{180}	17.8	X	105.76106	95.21639	90.65067	2.42544	0.1171593	0.25877400	2.4388717	21	8 3.7	21.2
413477 2005 GR_{182}	17.5	X	151.94346	89.71394	62.83711	3.91235	0.1425073	0.26169175	2.4207096	21	8 13.0	21.3
413478 2005 JL_{2}	17.1	X	37.57611	234.51425	20.36219	4.75885	0.1573378	0.25656335	2.4528612	21	8 11.3	19.6
413479 2005 JO_{22}	16.4	X	242.83591	264.27868	50.67811	29.02705	0.3520978	0.23188915	2.6239110	21	3 9.1	21.9
413480 2005 JO_{28}	16.9	X	196.77847	1.44214	87.11184	15.42979	0.0622807	0.25289853	2.4765010	21	7 5.5	20.3
413481 2005 JH_{84}	18.0	X	336.40808	218.25272	24.68803	20.38640	0.0455243	0.36765189	1.9297965	21	3 22.7	19.9
413482 2005 JU_{145}	17.3	X	217.33478	128.24232	48.35584	11.28190	0.2413925	0.27480849	2.3430557	21	11 7.9	20.8
413483 2005 JB_{152}	17.9	X	127.37053	354.18748	205.19131	2.18605	0.1329496	0.26603092	2.3943151	21	9 15.9	21.4
413484 2005 LQ_{28}	17.0	X	273.69134	25.67874	232.15288	5.63172	0.1576624	0.22780874	2.6551504	21	1 19.2	21.1
413485 2005 ME_{30}	16.2	X	349.90166	86.52368	257.21382	6.34380	0.2841789	0.12412237	3.9801797	21	8 28.3	20.2
413486 2005 MW_{38}	17.1	X	234.53383	228.54865	129.57047	6.48200	0.1988815	0.23129101	2.6284328	21	4 15.3	21.5
413487 2005 NG_{5}	17.3	X	284.69391	215.45361	120.73300	10.90917	0.0888382	0.23878824	2.5731243	21	5 24.3	20.9
413488 2005 NU_{35}	16.8	X	268.88072	140.73542	213.54253	6.80756	0.1654361	0.23824815	2.5770115	21	5 15.0	20.6
413489 2005 NO_{40}	17.3	X	285.45475	174.85431	126.50289	3.11580	0.1831148	0.23462503	2.6034735	21	3 25.0	21.1
413490 2005 NR_{67}	15.5	X	343.56298	102.77682	246.43379	1.85146	0.2209021	0.12557613	3.9494017	21	8 25.9	19.7
413491 2005 NK_{70}	17.0	X	257.37079	358.46097	311.87230	12.53831	0.1708827	0.22925146	2.6439992	21	3 3.6	21.3
413492 2005 OZ_{17}	16.5	X	250.46828	13.48656	308.24600	12.05850	0.1405824	0.22794971	2.6540556	21	3 12.3	20.8
413493 2005 OA_{22}	16.9	X	278.01459	312.88635	328.07922	10.53016	0.2211484	0.22858844	2.6491093	21	2 15.6	20.8
413494 2005 PU_{11}	17.1	X	241.69273	319.99647	9.72055	2.14687	0.3049345	0.22775297	2.6555838	21	3 10.7	21.8
413495 2005 QZ_{3}	16.8	X	240.62719	325.16921	348.07442	9.25435	0.2030701	0.22463057	2.6801359	21	2 24.4	21.4
413496 2005 QQ_{5}	16.8	X	208.22415	195.92879	137.86765	15.23551	0.2594705	0.22293865	2.6936788	21	2 22.8	21.6
413497 2005 QZ_{5}	16.9	X	203.70556	65.06336	317.52443	5.16534	0.1558573	0.22734268	2.6587779	21	4 14.4	21.4
413498 2005 QZ_{15}	17.4	X	223.78291	151.78259	214.88215	1.01644	0.2113095	0.22823756	2.6518237	21	4 13.3	21.9
413499 2005 QR_{35}	17.0	X	257.84831	205.07443	132.83702	5.16179	0.1054074	0.22984070	2.6394782	21	4 20.6	20.8
413500 2005 QS_{38}	17.2	X	283.21547	122.20655	187.63471	2.58136	0.0888646	0.23147693	2.6270252	21	4 14.5	20.8
413501 2005 QU_{64}	16.4	X	277.96730	314.66178	351.30766	14.07155	0.1854811	0.23013922	2.6371953	21	3 19.9	20.3
413502 2005 QY_{72}	16.3	X	230.76896	14.18426	346.37772	12.38765	0.1765620	0.22738940	2.6584137	21	4 9.1	20.7
413503 2005 QM_{84}	16.8	X	246.54666	20.49577	318.94651	4.72978	0.0418394	0.22785382	2.6548002	21	4 11.5	20.6
413504 2005 QC_{126}	17.3	X	182.13545	277.43800	162.50494	4.98777	0.1804899	0.23119691	2.6291459	21	6 8.5	21.6
413505 2005 QB_{128}	17.2	X	230.18330	27.59943	356.36646	9.77245	0.3043576	0.23049393	2.6344890	21	5 1.8	22.1
413506 2005 QB_{129}	17.1	X	189.21328	354.64935	13.40044	6.39246	0.0475948	0.22268538	2.6957208	21	3 15.5	21.0
413507 2005 QD_{130}	17.1	X	186.87034	216.35946	140.43785	7.16242	0.0548600	0.22015633	2.7163262	21	2 27.0	20.9
413508 2005 QF_{132}	16.9	X	268.06035	289.62335	11.81299	9.30794	0.0801209	0.22635308	2.6665217	21	3 19.1	20.6
413509 2005 QB_{175}	17.5	X	248.08681	90.13418	194.94635	6.63537	0.3358486	0.22377401	2.6869708	21	1 20.5	22.6
413510 2005 RP_{9}	16.2	X	210.99600	20.52359	347.27399	14.20894	0.1157579	0.22484800	2.6784078	21	4 1.9	20.5
413511 2005 RS_{24}	16.3	X	198.02147	245.36679	185.20748	38.77664	0.1856291	0.23177497	2.6247727	21	6 9.5	21.5
413512 2005 RT_{44}	16.1	X	127.49876	199.60616	260.38377	15.97574	0.2055070	0.22004981	2.7172028	21	5 14.9	20.5
413513 2005 RR_{47}	17.4	X	161.51961	16.82335	71.24447	4.52411	0.1698796	0.22594707	2.6697151	21	5 30.3	21.6
413514 2005 RX_{47}	17.2	X	212.40845	180.45793	134.59893	11.24497	0.2092127	0.21542805	2.7559281	21	2 3.9	22.0
413515 2005 SH_{6}	16.5	X	180.20366	43.76766	1.91289	7.95695	0.2002645	0.22179584	2.7029237	21	4 23.2	21.2
413516 2005 SS_{16}	17.4	X	173.05099	181.51718	222.23537	1.22334	0.0910014	0.22276629	2.6950680	21	4 11.9	21.4
413517 2005 SU_{23}	17.3	X	220.10266	293.80941	59.98841	5.05643	0.2646023	0.22496121	2.6775091	21	3 27.1	22.0
413518 2005 SD_{28}	17.1	X	189.88542	171.16569	210.59938	12.84616	0.1186813	0.22180579	2.7028429	21	4 1.6	21.4
413519 2005 SA_{31}	16.3	X	196.80953	24.67334	16.28183	17.55925	0.1821892	0.22534053	2.6745035	21	4 28.9	20.9
413520 2005 SB_{32}	17.0	X	202.28529	183.21200	164.23685	3.93705	0.2130802	0.21920588	2.7241724	21	3 5.2	21.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413521 2005 SY_{39}	17.4	X	163.53883	75.66338	10.37196	2.05082	0.1792163	0.22550720	2.6731856	21	5 29.6	21.7
413522 2005 SE_{40}	17.4	X	284.26929	298.47395	27.13254	2.14521	0.1344904	0.23060739	2.6336248	21	4 29.6	20.9
413523 2005 SX_{40}	17.1	X	245.22867	151.52840	175.37253	2.29272	0.2159982	0.22515663	2.6759596	21	3 14.4	21.6
413524 2005 SC_{44}	16.8	X	227.31396	147.05845	220.24426	5.35900	0.0731651	0.22553702	2.6729500	21	4 24.6	20.8
413525 2005 SK_{54}	17.0	X	194.56021	352.27666	21.35848	6.48036	0.0472032	0.22060312	2.7126574	21	3 28.7	20.7
413526 2005 SX_{58}	17.3	X	263.11314	120.74322	197.40045	3.22068	0.1536922	0.22558715	2.6725539	21	3 24.9	21.4
413527 2005 SW_{63}	17.2	X	183.01217	179.20368	193.73864	6.56195	0.0548222	0.21908085	2.7252087	21	3 12.9	21.2
413528 2005 SO_{76}	16.9	X	165.12031	50.46771	15.53897	5.39037	0.1631124	0.22399226	2.6852252	21	5 4.6	21.3
413529 2005 SX_{83}	16.6	X	284.87445	270.38501	9.04928	13.81891	0.1065065	0.22308983	2.6924617	21	3 10.1	20.4
413530 2005 SQ_{85}	16.8	X	180.81571	28.72647	19.80446	5.17943	0.0133445	0.22504425	2.6768504	21	4 23.1	20.5
413531 2005 SW_{88}	16.9	X	189.53571	143.24194	234.81591	2.92082	0.1348376	0.22036244	2.7146322	21	3 28.6	21.1
413532 2005 SS_{93}	16.9	X	176.55746	17.39749	22.63761	10.84123	0.1292319	0.22053739	2.7131964	21	4 13.0	21.2
413533 2005 SC_{100}	17.2	X	131.21809	172.48121	272.83034	2.87255	0.0893159	0.22032058	2.7149761	21	4 17.2	21.0
413534 2005 SC_{104}	15.9	X	318.12832	246.10012	18.31167	21.74959	0.0069521	0.22313225	2.6921205	21	4 12.0	19.5
413535 2005 SU_{109}	17.2	X	230.53888	326.87092	6.29600	2.90443	0.0748998	0.22086667	2.7104991	21	3 16.8	21.3
413536 2005 SQ_{121}	16.7	X	228.10839	123.06512	222.69542	5.26615	0.0406439	0.22364740	2.6879849	21	3 29.8	20.5
413537 2005 SU_{129}	17.5	X	145.62255	13.81959	29.79513	3.54956	0.0986304	0.21603141	2.7507943	21	3 15.8	21.6
413538 2005 SJ_{131}	17.8	X	143.88674	152.78186	254.17495	0.69277	0.2152848	0.21597918	2.7512378	21	3 27.8	22.0
413539 2005 SO_{131}	17.7	X	120.57627	90.91306	358.89390	1.58913	0.1738060	0.21780305	2.7358571	21	4 22.2	21.7
413540 2005 SO_{142}	17.1	X	137.89634	297.04880	171.31945	12.84678	0.1566594	0.22552929	2.6730110	21	6 3.1	21.5
413541 2005 SX_{146}	17.2	X	198.23540	186.49835	193.27184	5.71486	0.0403768	0.22209846	2.7004679	21	4 8.9	20.9
413542 2005 SM_{159}	16.7	X	164.01380	129.28180	235.97094	6.69133	0.1594743	0.21550919	2.7552363	21	2 17.3	21.1
413543 2005 SQ_{161}	16.7	X	309.29363	247.76750	5.31726	14.77891	0.1597938	0.22420132	2.6835557	21	2 28.0	20.4
413544 2005 SW_{174}	17.1	X	186.28410	103.70725	311.62547	5.11431	0.0643272	0.22668434	2.6639232	21	5 8.6	21.0
413545 2005 SL_{176}	16.8	X	278.94369	290.48452	359.78912	12.76761	0.1155111	0.22379322	2.6868171	21	3 13.3	20.6
413546 2005 SC_{178}	17.1	X	152.58298	70.02561	343.32077	6.02535	0.0976131	0.22001612	2.7174801	21	4 1.2	21.1
413547 2005 SS_{178}	16.8	X	159.90247	210.55971	196.28501	12.85603	0.1529240	0.22034393	2.7147842	21	4 6.7	20.9
413548 2005 SJ_{180}	17.3	X	214.17105	329.98214	7.39963	5.97595	0.0593981	0.22127636	2.7071524	21	3 5.7	21.3
413549 2005 SJ_{182}	17.3	X	175.23877	165.15762	211.59971	6.93570	0.0818964	0.21785482	2.7354237	21	3 9.7	21.4
413550 2005 SG_{189}	16.8	X	62.67893	118.10553	24.73396	8.60461	0.0939738	0.21811858	2.7332180	21	4 4.1	20.1
413551 2005 SZ_{208}	17.1	X	74.77509	156.80457	3.33289	2.62116	0.1514207	0.22377635	2.6869521	21	5 22.8	20.5
413552 2005 SV_{218}	16.7	X	140.97633	351.72913	39.58914	10.33774	0.2895772	0.21190998	2.7863464	21	3 17.9	21.5
413553 2005 SR_{221}	15.9	X	212.56010	64.55546	289.23275	13.27840	0.1219019	0.21963001	2.7206641	21	3 14.7	20.5
413554 2005 SY_{232}	17.0	X	171.59725	353.82353	33.51325	5.90596	0.0734940	0.21689099	2.7435215	21	3 22.5	21.0
413555 2005 SO_{236}	16.9	X	251.02054	104.24375	229.38250	5.05281	0.0323043	0.22267782	2.6957818	21	4 12.3	20.7
413556 2005 SZ_{247}	17.2	X	187.65091	154.45724	210.37948	5.65824	0.0905855	0.21815699	2.7328972	21	3 8.8	21.3
413557 2005 SJ_{255}	17.1	X	230.46878	93.85716	280.79443	2.00182	0.1578262	0.22972750	2.6403453	21	5 1.1	21.3
413558 2005 ST_{266}	17.2	X	181.85793	163.98526	244.33608	2.75093	0.1006377	0.22544788	2.6736544	21	4 26.9	21.1
413559 2005 SN_{271}	16.6	X	218.74317	332.60813	13.45053	5.40119	0.0819489	0.22117213	2.7080028	21	3 20.3	20.5
413560 2005 SD_{284}	17.2	X	247.55700	310.07651	105.14748	7.04204	0.2017143	0.23482939	2.6019628	21	7 5.9	20.9
413561 2005 SB_{290}	16.7	X	135.62296	232.09751	199.25670	8.82528	0.1363370	0.21928664	2.7235034	21	4 11.3	20.7
413562 2005 TU_{36}	16.5	X	249.14422	332.12875	329.71408	12.50491	0.3059995	0.22441987	2.6818131	21	2 12.5	21.4
413563 2005 TG_{45}	17.6	X	210.24706	230.42420	273.43298	23.33525	0.3722296	1.75220251	0.6814173	21	—	
413564 2005 TW_{53}	17.0	X	188.20038	330.48232	41.89648	5.41854	0.1773875	0.22128636	2.7070708	21	3 24.4	21.5
413565 2005 TY_{55}	16.7	X	172.15641	243.98965	156.42190	5.42388	0.1634372	0.22110453	2.7085548	21	4 12.5	21.1
413566 2005 TH_{86}	17.3	X	165.71177	149.49550	278.35810	1.16139	0.0611785	0.22317890	2.6917453	21	5 2.8	21.2
413567 2005 TY_{91}	16.0	X	144.77578	91.55625	357.76010	21.22925	0.1303399	0.22437419	2.6821771	21	5 3.3	20.5
413568 2005 TC_{103}	16.8	X	268.46236	263.79746	112.10086	6.72154	0.3247215	0.23380014	2.6095935	21	5 25.1	21.1
413569 2005 TA_{119}	17.1	X	183.47558	46.79471	1.57176	3.07696	0.1449453	0.22385200	2.6863467	21	4 29.4	21.3
413570 2005 TD_{122}	17.2	X	165.69597	30.01613	34.06620	3.22903	0.0998874	0.22332046	2.6906077	21	4 30.4	21.2
413571 2005 TF_{126}	17.0	X	217.13461	166.00189	204.59541	5.44021	0.0237941	0.22335290	2.6903471	21	4 20.2	20.6
413572 2005 TO_{139}	16.9	X	166.91347	340.27870	69.81042	3.50492	0.0666626	0.22153075	2.7050795	21	4 13.5	20.8
413573 2005 TT_{157}	16.5	X	135.91567	246.65882	210.92523	10.21381	0.1315726	0.22238095	2.6981804	21	5 15.0	20.6
413574 2005 TX_{159}	17.0	X	277.25984	50.03833	247.46773	4.21482	0.1577603	0.22413341	2.6840977	21	3 12.0	21.0
413575 2005 TQ_{178}	16.6	X	206.18428	162.58867	215.98842	13.24664	0.1720816	0.22594346	2.6697435	21	4 13.2	21.1
413576 2005 UZ_{2}	16.5	X	197.92769	92.83774	290.33427	7.82350	0.1016778	0.22619238	2.6677844	21	4 8.3	20.7
413577 2005 UL_{5}	20.3	X	12.10806	127.74319	58.90106	14.31677	0.5697812	1.08784613	0.9363202	21	—	—
413578 2005 UM_{6}	18.7	X	113.21145	325.89690	256.88074	5.61998	0.0788226	0.42807369	1.7436408	21	10 14.4	20.3
413579 2005 UB_{14}	17.3	X	93.20252	266.85317	192.21767	7.72978	0.0700014	0.21599228	2.7511265	21	3 15.9	21.0
413580 2005 UV_{21}	16.5	X	278.64652	260.62089	16.53618	6.35088	0.0411003	0.21701307	2.7424925	21	3 7.7	20.2
413581 2005 UX_{43}	16.9	X	147.39505	185.62477	232.55279	5.22517	0.2069594	0.21783892	2.7355568	21	4 11.9	21.4
413582 2005 UY_{44}	17.0	X	146.16796	226.20134	183.83183	6.00398	0.0357208	0.21533748	2.7567008	21	3 16.0	20.9
413583 2005 UN_{49}	16.9	X	186.78811	16.27540	355.29361	7.90910	0.1845806	0.21824657	2.7321493	21	3 20.3	21.4
413584 2005 UG_{60}	16.1	X	127.39624	184.67518	235.74027	12.90675	0.1512831	0.21286637	2.7779943	21	3 16.9	20.5
413585 2005 UT_{61}	17.1	X	258.83715	220.25191	60.32328	3.13329	0.0220164	0.21140081	2.7908187	21	2 18.6	20.9
413586 2005 UF_{70}	16.1	X	247.73795	26.72016	289.27584	11.24660	0.1585094	0.22206128	2.7007693	21	3 2.2	20.6
413587 2005 UO_{83}	17.1	X	209.30042	287.12385	39.20454	4.26415	0.0951630	0.21451716	2.7637241	21	2 16.2	21.3
413588 2005 UP_{83}	17.1	X	263.23309	91.96196	213.77917	8.00828	0.1645646	0.22187828	2.7022541	21	3 6.8	21.5
413589 2005 UE_{87}	17.0	X	91.37184	81.31494	58.00006	4.87917	0.0694993	0.22127157	2.7071915	21	5 6.4	20.4
413590 2005 UF_{98}	16.5	X	132.75760	299.88292	83.04795	5.31320	0.1142331	0.20862525	2.8155169	21	2 7.4	20.5
413591 2005 UX_{104}	16.5	X	217.61882	111.66749	198.60818	6.04763	0.0226567	0.20934912	2.8090230	21	2 3.3	20.6
413592 2005 UU_{108}	17.1	X	190.27877	275.38475	52.73205	14.05760	0.3240749	0.21578528	2.7528856	21	2 10.2	22.4
413593 2005 US_{109}	16.3	X	198.58630	277.45524	40.40980	13.26004	0.2085403	0.21019545	2.8014777	21	2 1.6	21.3
413594 2005 UO_{111}	16.9	X	213.97393	90.84035	247.49940	8.36705	0.2261595	0.21672916	2.7448871	21	2 27.8	21.8
413595 2005 UH_{113}	17.0	X	144.82397	151.89339	254.52040	3.13500	0.0678838	0.21289244	2.7777675	21	3 12.6	21.0
413596 2005 UK_{117}	17.3	X	225.32924	325.55668	15.07095	2.09819	0.0970258	0.22083112	2.7107900	21	3 19.5	21.3
413597 2005 UO_{117}	16.6	X	93.55019	134.53052	25.33338	7.82174	0.1247717	0.22406860	2.6846152	21	6 13.2	20.4
413598 2005 UY_{122}	16.7	X	1.81925	23.68342	220.87075	11.94957	0.1196925	0.22533022	2.6745851	21	5 12.7	19.6
413599 2005 UU_{167}	16.2	X	52.44499	98.47518	31.59728	16.00155	0.0416263	0.21328855	2.7743273	21	3 6.1	20.1
413600 2005 UU_{171}	16.8	X	286.05170	243.91323	50.37175	7.64731	0.1223035	0.22096559	2.7096901	21	3 28.3	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413601 2005 UW_{171}	16.7	X	159.34741	326.18444	50.11738	6.87373	0.0743198	0.21166200	2.7885223	21	2 25.7	20.8
413602 2005 UZ_{171}	17.1	X	106.87919	53.09702	53.76711	2.90437	0.0370716	0.21699939	2.7426078	21	4 9.9	20.7
413603 2005 UU_{184}	17.2	X	216.00830	299.29738	61.61959	6.91370	0.0546136	0.21822589	2.7323219	21	4 8.2	21.1
413604 2005 UM_{195}	17.2	X	122.89418	31.28505	68.05375	4.98133	0.0889524	0.21794565	2.7346636	21	4 28.1	21.0
413605 2005 UB_{203}	16.8	X	323.12744	148.40891	63.68044	5.35768	0.0148359	0.21109713	2.7934945	21	2 14.6	20.7
413606 2005 UG_{204}	17.2	X	137.68063	337.23574	62.24807	3.49297	0.0569212	0.21146542	2.7902502	21	2 25.9	21.1
413607 2005 UK_{212}	16.9	X	191.50083	276.66879	62.29174	6.92936	0.0744156	0.21090369	2.7952024	21	2 14.4	21.2
413608 2005 UB_{222}	16.9	X	4.72266	305.63194	277.83120	2.77818	0.0408538	0.22174102	2.7033691	21	4 19.3	20.3
413609 2005 UP_{225}	17.3	X	91.98908	120.24708	350.85937	3.62084	0.0561914	0.21653063	2.7465647	21	3 28.2	20.8
413610 2005 UH_{228}	16.9	X	144.34056	222.73017	191.86414	3.46883	0.0902278	0.21518531	2.7580002	21	3 25.9	21.0
413611 2005 UJ_{233}	16.8	X	43.46176	310.56089	209.63507	12.84867	0.1451630	0.21310197	2.7759464	21	3 30.2	19.9
413612 2005 UV_{233}	16.7	X	226.89909	153.09024	178.75161	5.05651	0.1691522	0.21810733	2.7333120	21	3 7.1	21.0
413613 2005 UR_{257}	17.1	X	123.31743	228.68354	191.84810	3.53739	0.0892516	0.21311234	2.7758563	21	3 8.6	20.9
413614 2005 UJ_{261}	15.9	X	154.62928	174.22612	236.31439	15.79473	0.0545791	0.21384592	2.7695044	21	3 24.2	20.2
413615 2005 UD_{262}	17.1	X	220.09477	172.27173	161.24640	2.36396	0.0895387	0.21768729	2.7368269	21	3 5.7	21.3
413616 2005 UW_{262}	16.9	X	183.92921	325.82267	44.97123	5.67947	0.0606874	0.21867878	2.7285481	21	3 15.3	20.9
413617 2005 UU_{275}	16.9	X	172.01427	357.54835	29.99800	6.33740	0.0513126	0.21832671	2.7314807	21	3 21.7	20.8
413618 2005 UO_{282}	17.2	X	153.14117	303.14935	100.71242	3.02040	0.0657065	0.21661180	2.7458784	21	3 21.6	21.1
413619 2005 UY_{288}	17.3	X	351.89395	200.45790	11.26387	6.15621	0.1136339	0.21518076	2.7580391	21	3 12.8	20.5
413620 2005 US_{293}	16.9	X	51.57973	229.49230	273.17488	3.48714	0.0113194	0.21405891	2.7676670	21	3 8.7	20.6
413621 2005 UE_{296}	17.1	X	109.87563	54.49945	48.18730	8.33566	0.1869588	0.21459840	2.7630266	21	4 29.7	21.0
413622 2005 UG_{307}	17.0	X	72.18154	287.42304	233.45877	6.47413	0.1652138	0.21751676	2.7382571	21	5 23.4	20.4
413623 2005 UM_{310}	17.2	X	196.19064	188.60613	185.02783	6.08084	0.0812621	0.22135466	2.7065139	21	3 30.1	21.1
413624 2005 UB_{314}	16.6	X	168.73830	192.91760	186.19440	13.33701	0.1542850	0.21612560	2.7499950	21	3 11.5	21.0
413625 2005 UP_{315}	17.0	X	216.37117	291.79171	65.39207	6.89163	0.0416557	0.21855231	2.7296006	21	4 4.7	21.0
413626 2005 UQ_{323}	16.6	X	151.90056	23.52688	59.62044	6.07861	0.0525902	0.22087552	2.7104266	21	5 6.9	20.3
413627 2005 UK_{350}	17.0	X	163.30745	80.18295	268.42801	3.71783	0.1691461	0.21140745	2.7907602	21	1 31.2	21.4
413628 2005 UV_{353}	15.9	X	203.10011	114.72037	250.26286	12.52001	0.1922658	0.21936086	2.7228892	21	3 21.1	20.7
413629 2005 UD_{367}	16.6	X	144.39099	31.57622	56.61431	13.38703	0.1640827	0.21968265	2.7202295	21	5 14.4	20.9
413630 2005 UK_{374}	17.0	X	295.00776	344.08918	248.89004	3.27327	0.0163920	0.20830353	2.8184151	21	2 2.3	21.0
413631 2005 UE_{379}	16.6	X	313.05283	20.13822	209.27418	13.26605	0.1338578	0.21469334	2.7622120	21	1 30.4	20.7
413632 2005 UA_{383}	17.2	X	228.20898	147.26705	168.87449	3.54159	0.1890884	0.21658829	2.7460772	21	2 17.3	21.7
413633 2005 UC_{388}	16.5	X	149.91333	7.02926	53.07260	6.44813	0.0692040	0.21854117	2.7296934	21	4 8.2	20.4
413634 2005 UQ_{391}	17.1	X	319.28329	21.07843	150.45275	2.51923	0.0136422	0.20497125	2.8488795	21	—	—
413635 2005 UX_{416}	17.4	X	241.46381	242.24887	76.70562	5.52170	0.0405588	0.21722922	2.7406730	21	3 16.8	21.4
413636 2005 UL_{417}	16.8	X	236.18189	158.23533	194.27071	5.77554	0.0884830	0.22263942	2.6960918	21	4 15.4	20.9
413637 2005 UL_{424}	17.2	X	166.92458	117.06223	237.36941	1.55731	0.1114545	0.21155649	2.7894494	21	2 6.4	21.3
413638 2005 UH_{439}	16.5	X	213.28210	83.14175	334.91075	11.72853	0.2602592	0.22961150	2.6412345	21	6 3.3	21.4
413639 2005 UR_{442}	17.0	X	153.23013	345.56309	64.82145	4.25554	0.0936380	0.21749818	2.7384131	21	4 1.8	21.0
413640 2005 UW_{442}	16.9	X	110.36291	203.52528	229.46178	3.32871	0.1813102	0.21234457	2.7825434	21	3 20.9	20.8
413641 2005 UO_{475}	16.7	X	128.99883	29.77863	27.99805	14.46512	0.1146819	0.21331307	2.7741147	21	3 21.0	20.8
413642 2005 UC_{483}	16.9	X	176.42701	342.60472	61.59188	6.10849	0.1582509	0.22104303	2.7090572	21	4 20.8	21.2
413643 2005 UX_{491}	16.7	X	219.89534	289.53677	70.80073	16.80079	0.1982600	0.22241135	2.6979346	21	4 11.7	21.5
413644 2005 UZ_{498}	16.3	X	258.92558	200.70110	128.15683	11.25332	0.1756159	0.22452268	2.6809944	21	4 6.0	20.6
413645 2005 UV_{519}	17.9	X	232.61188	106.74285	175.72927	3.32400	0.2571279	0.21815670	2.7328996	21	1 11.2	22.8
413646 2005 VR_{4}	16.6	X	224.38714	105.66991	238.09011	10.15215	0.1197571	0.22047879	2.7136771	21	3 17.1	21.0
413647 2005 VS_{7}	16.2	X	124.44338	241.48455	211.00678	12.29348	0.0979233	0.21710639	2.7417066	21	4 21.0	20.0
413648 2005 VZ_{7}	16.9	X	194.26261	326.37583	44.89237	6.75050	0.0673652	0.21826140	2.7320256	21	3 27.6	20.9
413649 2005 VU_{12}	16.8	X	111.71586	185.82838	258.64575	3.08414	0.0756581	0.21462133	2.7628298	21	3 21.6	20.6
413650 2005 VF_{14}	16.7	X	246.01882	232.28157	61.32222	7.79546	0.0879651	0.21254434	2.7807996	21	2 16.1	21.0
413651 2005 VA_{19}	17.9	X	175.28339	48.22176	23.91738	1.49087	0.1333439	0.22395528	2.6855208	21	5 21.8	22.1
413652 2005 VW_{19}	16.9	X	216.54484	148.65540	204.89047	5.97277	0.1384158	0.21988828	2.7185333	21	3 24.1	21.3
413653 2005 VP_{22}	17.1	X	229.88110	260.04547	53.77357	9.72056	0.2460745	0.21822011	2.7323702	21	2 18.9	22.0
413654 2005 VB_{35}	16.6	X	82.64083	169.56855	347.76632	3.01585	0.1932101	0.22093150	2.7099688	21	6 6.3	20.1
413655 2005 VP_{35}	16.8	X	67.83259	283.81766	229.14979	12.22671	0.1536411	0.21821650	2.7324003	21	5 3.2	20.1
413656 2005 VU_{53}	16.7	X	199.76980	344.12706	1.43117	6.33465	0.0648822	0.21539334	2.7562242	21	2 28.8	20.7
413657 2005 VW_{57}	16.5	X	165.84940	307.68366	77.04203	13.33435	0.1253919	0.21278326	2.7787176	21	3 22.7	21.0
413658 2005 VW_{58}	16.5	X	194.17115	101.28507	265.37714	5.16618	0.0710459	0.21742994	2.7389860	21	3 16.5	20.8
413659 2005 VL_{61}	17.0	X	99.11556	279.51739	175.03411	7.02370	0.2809116	0.21076280	2.7964480	21	4 20.9	21.0
413660 2005 VO_{74}	16.5	X	142.35044	212.29400	228.78670	14.12684	0.1592716	0.21599482	2.7511049	21	5 2.4	20.8
413661 2005 VQ_{74}	17.1	X	94.88620	25.46682	83.96735	6.89081	0.1241849	0.21205497	2.7850762	21	4 13.7	20.9
413662 2005 VL_{76}	16.3	X	261.66805	107.47920	264.27890	14.54110	0.2388118	0.23409890	2.6073728	21	5 20.2	20.4
413663 2005 VP_{92}	17.1	X	196.84469	123.05854	203.90682	4.53473	0.0575750	0.21016232	2.8017721	21	1 31.8	21.3
413664 2005 VA_{99}	17.0	X	51.04496	358.49275	179.92617	4.99485	0.0509598	0.22095626	2.7097663	21	4 29.8	20.3
413665 2005 VD_{99}	16.8	X	156.50712	285.67746	112.31082	3.46118	0.0768791	0.21563622	2.7541542	21	3 19.3	20.7
413666 2005 VJ_{119}	10.7	X	21.48347	246.19633	301.49878	6.94478	0.6789677	0.00470074	35.2932839	21	7 6.8	23.8
413667 2005 VK_{127}	17.7	X	139.27515	274.27319	153.03658	3.81058	0.1844435	0.21889517	2.7267497	21	4 16.1	21.9
413668 2005 VG_{128}	17.1	X	197.78097	302.84367	80.37096	3.04390	0.1001695	0.22350696	2.6891107	21	4 13.8	21.2
413669 2005 WK_{19}	16.7	X	94.71983	357.89729	135.17965	10.01817	0.2492465	0.21347902	2.7726768	21	5 31.5	20.8
413670 2005 WS_{21}	16.5	X	289.03737	357.17666	281.38995	3.25048	0.0391041	0.21475981	2.7616420	21	3 19.3	20.2
413671 2005 WN_{31}	17.3	X	93.96547	172.00701	293.34204	3.01194	0.0660679	0.21100494	2.7943082	21	3 24.5	21.1
413672 2005 WP_{33}	16.5	X	119.96277	165.98930	269.13787	5.63492	0.0739007	0.21048488	2.7989090	21	3 18.8	20.5
413673 2005 WD_{34}	16.7	X	209.09432	324.27910	72.85862	8.54162	0.3139746	0.22307738	2.6925618	21	5 8.1	21.6
413674 2005 WG_{47}	16.5	X	139.03242	30.02336	38.06419	11.33734	0.0725413	0.21861226	2.7291016	21	4 6.7	20.4
413675 2005 WR_{67}	17.2	X	151.60943	193.00158	237.79433	2.97295	0.0812239	0.21615803	2.7497200	21	4 22.3	21.2
413676 2005 WW_{76}	17.2	X	145.68528	42.01093	52.66997	4.65579	0.0807820	0.21858907	2.7292946	21	5 16.5	20.9
413677 2005 WF_{79}	16.9	X	211.70904	259.82215	75.37490	5.37307	0.0755711	0.20979489	2.8050425	21	3 2.9	21.1
413678 2005 WD_{80}	17.2	X	124.68128	16.01525	71.15760	6.19221	0.1348463	0.21346340	2.7728120	21	4 21.6	21.2
413679 2005 WR_{88}	16.7	X	130.45977	4.45411	80.25405	7.88852	0.2795943	0.21379066	2.7699817	21	5 8.7	21.3
413680 2005 WK_{114}	17.0	X	140.66023	21.91448	46.93751	8.46488	0.2557341	0.21438176	2.7648877	21	4 25.1	21.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413681 2005 WC_{136}	17.2	X	83.04002	9.53877	67.08607	2.99162	0.0513414	0.20499614	2.8486489	21	2 3.0	21.0
413682 2005 WM_{152}	16.5	X	159.23384	302.57913	62.79675	12.25055	0.1758388	0.20882933	2.8136822	21	2 23.7	21.2
413683 2005 WR_{170}	16.8	X	154.90632	308.18121	80.84171	12.22846	0.2500792	0.21188487	2.7865665	21	3 25.5	21.7
413684 2005 WL_{173}	17.4	X	175.40171	315.07372	88.14298	4.54509	0.1973303	0.21751284	2.7382901	21	4 20.5	22.0
413685 2005 WL_{211}	17.1	X	154.67554	335.40756	74.71352	5.09225	0.1000905	0.21310668	2.7759054	21	4 4.5	21.3
413686 2005 XR_{23}	16.8	X	98.18165	60.03339	56.73039	15.57631	0.2503028	0.21175428	2.7877121	21	5 13.1	20.8
413687 2005 XR_{34}	17.2	X	163.83254	262.28989	143.19985	0.43260	0.0784938	0.21298573	2.7769563	21	4 4.7	21.4
413688 2005 XF_{43}	17.1	X	46.21026	128.94617	40.05856	4.03976	0.0387519	0.21401085	2.7680814	21	4 9.4	20.6
413689 2005 XB_{52}	16.5	X	129.70947	30.96720	72.07083	9.97801	0.1797801	0.21430536	2.7655448	21	5 20.7	20.7
413690 2005 XS_{58}	17.1	X	149.11627	168.38926	264.42265	3.16639	0.0323754	0.21599617	2.7510935	21	4 16.5	20.8
413691 2005 XP_{63}	17.0	X	120.73997	3.80733	6.90359	1.70571	0.0825015	0.20023254	2.8936518	21	1 5.4	21.1
413692 2005 XX_{64}	16.4	X	176.25875	193.51355	218.12236	8.25783	0.1372130	0.21740950	2.7391577	21	4 27.7	20.6
413693 2005 XX_{83}	16.8	X	175.18540	214.80665	222.44554	11.03703	0.3303323	0.21833238	2.7314334	21	6 1.7	22.0
413694 2005 XA_{111}	16.8	X	87.12870	290.88081	142.60301	6.90718	0.2241834	0.19564979	2.9386631	21	3 3.2	20.5
413695 2005 YH_{2}	17.2	X	188.50830	19.45884	357.25409	1.98824	0.1090320	0.21533420	2.7567288	21	3 26.7	21.6
413696 2005 YP_{2}	17.2	X	112.73800	26.13085	62.04917	5.75967	0.1307257	0.21230501	2.7828890	21	4 8.7	21.1
413697 2005 YA_{14}	17.2	X	145.10506	132.71516	292.05581	1.81225	0.2101761	0.21080194	2.7961018	21	4 18.9	21.7
413698 2005 YS_{23}	16.8	X	184.02678	1.90730	105.57635	16.00660	0.1388450	0.22314497	2.6920182	21	7 14.8	21.2
413699 2005 YW_{23}	16.9	X	114.73303	307.83957	107.42971	3.20247	0.0421966	0.20233643	2.8735582	21	2 16.2	20.7
413700 2005 YH_{32}	16.2	X	192.87620	286.51547	309.47066	8.99975	0.1086586	0.17968982	3.1101910	21	12 24.4	21.0
413701 2005 YR_{34}	16.1	X	269.04697	291.87984	270.49661	5.70648	0.2121837	0.18550215	3.0448793	21	—	—
413702 2005 YY_{44}	16.6	X	106.51566	324.49888	117.17523	8.60984	0.1136449	0.20610527	2.8384200	21	3 23.7	20.6
413703 2005 YQ_{59}	17.3	X	141.79480	37.83908	42.65111	7.36296	0.2834187	0.21915480	2.7245957	21	5 10.5	21.9
413704 2005 YW_{68}	16.7	X	355.89193	226.74899	302.67122	6.41443	0.1625276	0.19834673	2.9119641	21	1 19.2	20.0
413705 2005 YK_{75}	16.5	X	172.07900	252.18603	86.13455	8.43960	0.0383164	0.19965170	2.8992614	21	1 21.1	20.7
413706 2005 YK_{85}	16.8	X	123.59859	295.44181	98.33258	7.25597	0.1223130	0.20156391	2.8808957	21	2 12.7	20.9
413707 2005 YU_{143}	16.8	X	198.59156	313.37133	104.55240	4.57158	0.1903208	0.21814662	2.7329838	21	5 26.9	21.3
413708 2005 YV_{162}	17.2	X	138.79470	216.57079	225.50693	2.22402	0.1709669	0.21276462	2.7788799	21	5 1.7	21.5
413709 2005 YW_{165}	16.3	X	122.94539	327.87667	76.66377	7.33868	0.0659725	0.20310276	2.8663254	21	2 18.4	20.4
413710 2005 YA_{169}	17.1	X	95.89369	63.53283	55.67836	4.60003	0.0505180	0.21051581	2.7986349	21	4 14.8	20.9
413711 2005 YG_{192}	18.2	X	48.68907	325.57683	302.38497	19.18991	0.0623672	0.41584149	1.7776688	21	9 4.3	20.0
413712 2005 YM_{237}	14.2	X	235.26151	157.96494	203.89153	2.75571	0.0071018	0.08498382	5.1236393	21	5 13.1	21.0
413713 2005 YX_{237}	16.8	X	147.11286	96.69936	286.12827	13.55789	0.1624714	0.20315657	2.8658193	21	2 21.1	21.5
413714 2005 YC_{282}	16.6	X	240.22367	91.37897	270.76243	11.33755	0.2948172	0.22374093	2.6872357	21	4 12.7	21.6
413715 2006 AB_{18}	18.3	X	267.23801	32.75288	126.27690	3.19228	0.0992148	0.30862941	2.1685920	21	—	—
413716 2006 AO_{51}	16.2	X	154.57219	254.91360	116.25663	11.27236	0.1310392	0.20265714	2.8705257	21	2 19.7	20.6
413717 2006 AV_{100}	17.0	X	3.90679	165.80012	345.21225	1.69339	0.1141935	0.19510542	2.9441267	21	1 14.6	20.6
413718 2006 AH_{104}	17.6	X	121.28781	262.95248	173.68538	1.48319	0.1158688	0.20547889	2.8441854	21	3 31.9	21.6
413719 2006 BF_{26}	16.7	X	157.33970	325.56984	153.08337	10.02891	0.1912882	0.21771548	2.7365907	21	7 4.6	21.4
413720 2006 BH_{36}	16.6	X	196.56070	210.18509	109.09037	13.11921	0.0758665	0.19899917	2.9055958	21	1 26.8	20.9
413721 2006 BF_{67}	16.3	X	146.69946	202.57226	122.10013	11.60316	0.1025192	0.18808824	3.0169049	21	—	—
413722 2006 BO_{70}	16.1	X	195.37846	259.75400	349.22877	9.01248	0.0922013	0.18035397	3.1025509	21	—	—
413723 2006 BK_{74}	16.8	X	76.60549	87.04029	344.22744	7.64335	0.0655330	0.19483983	2.9468015	21	1 23.4	20.7
413724 2006 BY_{80}	16.2	X	315.17128	168.97949	353.42222	10.48418	0.0858738	0.18478206	3.0527847	21	—	—
413725 2006 BV_{108}	16.7	X	198.30887	299.73687	100.74432	3.92448	0.2266282	0.21507232	2.7589662	21	5 5.6	21.6
413726 2006 BF_{113}	16.8	X	145.17420	307.74191	93.90687	1.28691	0.1334352	0.20338804	2.8636445	21	3 17.5	21.0
413727 2006 BK_{117}	16.7	X	265.51629	251.70355	312.24714	3.55344	0.0695171	0.18332658	3.0689213	21	—	—
413728 2006 BD_{121}	16.4	X	36.66837	285.53964	162.96036	10.68980	0.0710831	0.18903980	3.0067723	21	—	—
413729 2006 BX_{127}	17.8	X	100.21227	313.75134	288.29669	2.59075	0.1814474	0.28655093	2.2786004	21	10 18.7	21.2
413730 2006 BD_{139}	16.5	X	302.51441	215.62351	327.14037	7.97517	0.0758468	0.18543123	3.0456556	21	—	—
413731 2006 BF_{155}	18.0	X	41.23598	294.74720	112.99231	4.18777	0.0969571	0.31107455	2.1572132	21	—	—
413732 2006 BX_{162}	16.6	X	60.03350	139.29269	316.99138	11.21994	0.1002489	0.19622711	2.9328964	21	2 1.9	20.2
413733 2006 BM_{175}	16.3	X	129.65731	337.48137	1.90724	9.12543	0.0955329	0.18699132	3.0286918	21	—	—
413734 2006 BY_{180}	17.1	X	80.57892	351.40144	133.28112	9.06158	0.1561144	0.20403507	2.8575873	21	4 20.5	20.9
413735 2006 BO_{205}	18.1	X	94.42327	129.52419	142.88703	4.04560	0.1300451	0.29574099	2.2311479	21	11 20.5	21.3
413736 2006 BT_{208}	17.1	X	79.96924	207.26845	238.97384	1.22000	0.0598983	0.19870966	2.9084173	21	2 11.8	21.0
413737 2006 BL_{216}	16.4	X	175.79123	355.05557	101.75900	13.44056	0.1775552	0.21893183	2.7264453	21	6 23.9	21.0
413738 2006 BU_{229}	17.5	X	99.92981	16.12267	59.30628	3.17885	0.2504152	0.20357070	2.8619313	21	3 25.2	21.5
413739 2006 BO_{232}	15.8	X	347.29379	183.63595	332.82334	13.84625	0.0521627	0.19294166	2.9660972	21	1 7.2	19.9
413740 2006 BG_{236}	16.1	X	266.44110	221.06666	1.43772	8.13622	0.0178527	0.18948391	3.0020723	21	—	—
413741 2006 BN_{243}	17.6	X	162.62408	242.54924	347.21248	6.43067	0.1437632	0.29756495	2.2220212	21	12 1.7	21.1
413742 2006 BZ_{247}	17.4	X	80.19581	338.80325	339.63833	6.95335	0.1774131	0.29992837	2.2103329	21	—	—
413743 2006 BK_{250}	16.0	X	7.72241	161.95616	330.29139	8.35799	0.1489839	0.19124662	2.9835973	21	—	—
413744 2006 BP_{264}	17.4	X	45.50119	21.60514	344.71399	5.97431	0.0574598	0.30202188	2.2001069	21	—	—
413745 2006 BS_{270}	16.4	X	122.07735	234.88668	301.26233	8.88228	0.2041823	0.21542654	2.7559410	21	8 13.3	21.0
413746 2006 BE_{279}	16.9	X	20.94806	153.86579	340.60733	4.78984	0.0762364	0.19192753	2.9765365	21	1 23.4	20.7
413747 2006 CP_{5}	16.3	X	87.44598	106.77312	271.72691	7.91981	0.1332113	0.18969478	2.9998472	21	—	—
413748 2006 CS_{14}	16.5	X	151.29311	292.82005	141.88288	7.89623	0.2388605	0.21189572	2.7864715	21	5 11.6	21.3
413749 2006 CN_{24}	15.8	X	190.90234	327.18018	316.20323	9.97842	0.0640166	0.18764039	3.0217034	21	—	—
413750 2006 CS_{34}	16.8	X	53.32141	301.57931	157.39233	5.45287	0.1587828	0.19696536	2.9255632	21	1 29.3	20.0
413751 2006 CT_{41}	15.9	X	93.90105	66.17793	327.58478	9.33794	0.1249734	0.18794972	3.0183870	21	1 9.4	19.9
413752 2006 DB_{14}	16.2	X	317.61320	177.57941	15.70205	9.42240	0.0922774	0.18926971	3.0043369	21	1 8.5	20.5
413753 2006 DT_{23}	16.2	X	236.06060	69.61427	152.13012	11.14270	0.0691557	0.17949277	3.1124669	21	—	—
413754 2006 DK_{26}	18.5	X	203.32208	40.96801	162.17651	2.55880	0.0846467	0.30055809	2.2072445	21	12 19.9	21.3
413755 2006 DS_{30}	16.1	X	260.14814	180.65445	349.23231	10.54683	0.0392911	0.17455950	3.1708356	21	12 29.4	20.7
413756 2006 DW_{99}	17.3	X	47.57909	76.01655	359.77367	8.36085	0.1227632	0.18846058	3.0129300	21	—	—
413757 2006 DM_{103}	18.2	X	64.48622	181.05177	142.84071	1.32280	0.1271925	0.29525321	2.2336046	21	12 23.1	21.0
413758 2006 DN_{113}	15.7	X	84.14379	267.27637	158.91671	9.82221	0.0604157	0.18968714	2.9999277	21	1 24.7	19.9
413759 2006 DZ_{119}	15.9	X	309.94962	124.53987	9.04664	10.46376	0.1231669	0.18117929	3.0931218	21	—	—
413760 2006 DR_{131}	15.9	X	87.63306	57.61519	26.41889	8.65063	0.0668047	0.19524999	2.9426732	21	2 25.1	19.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413761 2006 DL_{156}	16.6	X	260.52782	94.38486	132.24580	3.45238	0.0706451	0.18409142	3.0604152	21	—	—
413762 2006 DK_{166}	16.3	X	143.90760	318.76379	9.45232	9.86314	0.0685710	0.18117073	3.0932192	21	—	—
413763 2006 DX_{183}	17.7	X	177.32083	118.42681	115.05268	3.30257	0.1027382	0.29744129	2.2226370	21	12 26.3	20.6
413764 2006 DT_{195}	16.0	X	357.48837	157.48557	358.68646	13.33427	0.1031774	0.19207181	2.9750456	21	1 16.8	20.0
413765 2006 DN_{205}	16.5	X	7.98809	120.03287	339.76695	9.79211	0.0451177	0.18464586	3.0542857	21	—	—
413766 2006 DD_{215}	16.5	X	39.97711	85.85334	357.47973	9.50435	0.0923894	0.18600720	3.0393652	21	—	—
413767 2006 EY_{2}	18.2	X	343.01696	332.96984	102.47223	1.91462	0.1279215	0.30553459	2.1832114	21	—	—
413768 2006 EL_{15}	18.6	X	320.23434	304.00290	162.76930	4.36624	0.0884950	0.30381221	2.1914551	21	—	—
413769 2006 EV_{40}	16.6	X	27.47408	76.26415	43.74199	2.41440	0.0320969	0.18771432	3.0209797	21	1 15.9	20.8
413770 2006 FA_{20}	17.6	X	231.32797	139.49772	26.06351	7.37456	0.0475893	0.29331704	2.2434231	21	12 8.8	20.3
413771 2006 FW_{27}	16.0	X	42.51049	231.31861	199.83245	10.72639	0.0778593	0.17790552	3.1309521	21	—	—
413772 2006 FU_{29}	17.7	X	184.68452	163.40874	34.45147	4.04067	0.1041051	0.29045491	2.2581367	21	11 16.0	20.7
413773 2006 GU_{33}	15.9	X	110.42064	349.44392	12.57205	10.43725	0.0942945	0.17947630	3.1126574	21	—	—
413774 2006 GM_{46}	17.6	X	150.50275	11.01186	202.45355	11.30818	0.1683754	0.28596444	2.2817148	21	10 30.7	21.2
413775 2006 GF_{51}	15.6	X	341.74912	19.08837	136.19322	20.27433	0.2246829	0.18435960	3.0574466	21	—	—
413776 2006 GS_{54}	16.3	X	349.71934	68.72843	46.06832	9.51879	0.0436442	0.17601018	3.1533889	21	—	—
413777 2006 HU_{5}	17.5	X	144.31272	182.68236	53.92307	3.41216	0.1748709	0.28758217	2.2731499	21	11 22.2	20.8
413778 2006 HZ_{6}	15.2	X	268.99636	158.68392	76.26790	20.57869	0.1759637	0.18080774	3.0973577	21	—	—
413779 2006 HR_{15}	16.0	X	57.80997	40.79667	57.65733	7.02339	0.0731280	0.18558787	3.0439416	21	2 3.5	20.0
413780 2006 HS_{25}	17.3	X	11.35666	315.28028	63.10108	7.40899	0.1196911	0.28760536	2.2730277	21	12 23.7	19.7
413781 2006 HY_{27}	17.4	X	262.86574	346.95509	110.23984	7.43810	0.0643546	0.28432893	2.2904563	21	10 19.9	20.1
413782 2006 HG_{28}	15.8	X	248.52463	69.68737	158.51929	16.03280	0.0392888	0.17252236	3.1957475	21	—	—
413783 2006 HX_{32}	15.7	X	229.70816	38.23454	215.99121	8.62890	0.1368121	0.17557757	3.1585665	21	—	—
413784 2006 HA_{45}	15.9	X	242.38796	36.44418	192.62505	15.77649	0.1393492	0.17723560	3.1388369	21	—	—
413785 2006 HE_{46}	15.8	X	72.15014	62.61931	113.82306	14.04899	0.1189027	0.20414866	2.8565272	21	6 8.9	19.7
413786 2006 HA_{53}	15.5	X	300.37126	130.24739	75.09885	10.28750	0.0971692	0.18275595	3.0753062	21	1 1.5	19.9
413787 2006 HH_{68}	18.0	X	61.51613	239.82183	31.63467	4.01977	0.1590720	0.27685860	2.3314747	21	10 12.3	21.0
413788 2006 HE_{72}	17.3	X	265.71241	63.88082	92.61574	6.92849	0.1247723	0.29755844	2.2220536	21	—	—
413789 2006 HP_{87}	16.2	X	352.28040	110.92980	25.74040	8.63047	0.0426140	0.18240482	3.0792516	21	—	—
413790 2006 HZ_{87}	16.2	X	162.35321	275.68379	20.62739	9.45122	0.0689126	0.17461240	3.1701951	21	—	—
413791 2006 HK_{88}	16.4	X	43.68124	86.37443	18.62654	11.72035	0.0874986	0.18685983	3.0301125	21	1 24.2	20.4
413792 2006 HU_{101}	17.4	X	78.40809	164.07157	113.36039	4.28003	0.2224088	0.27952466	2.3166262	21	11 16.9	20.8
413793 2006 HU_{103}	16.0	X	278.40598	42.43547	138.97020	13.71512	0.0502750	0.17102401	3.2143857	21	—	—
413794 2006 HS_{107}	15.6	X	267.38396	160.24231	66.11781	13.69993	0.0868386	0.17846117	3.1244499	21	—	—
413795 2006 HB_{119}	16.0	X	346.92232	287.26995	202.71364	14.92022	0.0417409	0.17630219	3.1499059	21	—	—
413796 2006 HH_{151}	18.0	X	57.04663	182.53412	79.31634	1.22179	0.2072089	0.27582728	2.3372827	21	9 30.5	20.9
413797 2006 HG_{152}	15.8	X	231.33500	33.47059	223.60268	20.90648	0.0402991	0.17610402	3.1522685	21	—	—
413798 2006 HQ_{153}	15.8	X	58.15964	0.42832	52.67907	11.55873	0.0725786	0.17363448	3.1820872	21	—	—
413799 2006 JN_{1}	16.0	X	175.87713	61.71991	232.96001	12.09054	0.0504925	0.17267265	3.1938929	21	—	—
413800 2006 JK_{3}	15.6	X	254.19560	352.38872	220.27341	14.07999	0.1072046	0.17445429	3.1721103	21	—	—
413801 2006 JG_{10}	17.2	X	249.15901	110.12263	43.66436	6.45613	0.1373801	0.29407064	2.2395887	21	12 4.1	19.5
413802 2006 JT_{12}	16.4	X	356.96308	64.14023	99.16379	7.60966	0.1401616	0.18416219	3.0596311	21	1 19.9	20.0
413803 2006 JE_{31}	15.7	X	353.43328	73.16704	77.38832	12.29482	0.1213255	0.18192618	3.0846502	21	—	—
413804 2006 JW_{33}	16.1	X	341.96516	82.52344	55.23694	9.25150	0.1057816	0.17744645	3.1363499	21	—	—
413805 2006 JC_{44}	15.3	X	148.44350	239.73191	60.25147	13.94453	0.0532537	0.16870390	3.2437893	21	—	—
413806 2006 JH_{49}	17.9	X	21.49325	283.68706	60.21317	7.90773	0.1375306	0.28262105	2.2996746	21	11 22.3	20.0
413807 2006 KQ_{18}	15.5	X	108.15752	219.52456	112.30775	11.28993	0.0523886	0.16839185	3.2477954	21	—	—
413808 2006 KX_{30}	18.1	X	13.94678	269.54988	63.97056	2.46882	0.1147132	0.27841555	2.3227746	21	10 22.1	20.5
413809 2006 KF_{45}	16.1	X	178.84803	149.05925	140.28139	16.64571	0.0578344	0.17329006	3.1863021	21	—	—
413810 2006 KZ_{68}	15.6	X	271.54498	78.32754	108.94939	13.85015	0.1004242	0.17043836	3.2217450	21	—	—
413811 2006 KA_{76}	15.9	X	292.08691	293.42053	243.61325	14.47003	0.2114400	0.17559045	3.1584120	21	—	—
413812 2006 KN_{87}	17.4	X	235.47975	112.68755	60.72690	8.75612	0.0301024	0.29283568	2.2458809	21	12 29.3	20.1
413813 2006 KM_{100}	18.2	X	331.86928	74.88395	234.98474	20.04994	0.0927886	0.39559825	1.8378066	21	6 18.4	19.5
413814 2006 LF_{3}	16.0	X	35.75013	329.75032	136.32007	12.18198	0.0582485	0.17953432	3.1119867	21	1 10.9	20.1
413815 2006 PO_{8}	17.6	X	327.56253	69.63860	270.58553	0.82248	0.1940940	0.26207432	2.4183532	21	7 21.8	19.6
413816 2006 PE_{11}	17.4	X	337.89287	6.41924	321.60029	1.80489	0.2241500	0.26087710	2.4257465	21	7 23.5	19.1
413817 2006 PN_{16}	16.5	X	288.04332	5.98655	350.92944	14.25467	0.2630618	0.25464748	2.4651488	21	5 21.6	20.2
413818 2006 QC_{7}	17.6	X	302.50693	224.06712	126.68699	3.43991	0.2084506	0.25631407	2.4544513	21	6 16.5	20.2
413819 2006 QU_{17}	17.7	X	305.71671	204.04051	168.59295	3.73195	0.1950924	0.26063199	2.4272671	21	7 27.1	20.0
413820 2006 QR_{89}	19.5	X	205.00901	263.74726	166.37115	9.23988	0.3672428	0.37973619	1.8886351	21	6 9.5	23.0
413821 2006 QY_{104}	17.1	X	290.48103	99.76183	332.41478	20.00411	0.3688354	0.26264631	2.4148409	21	8 27.1	19.5
413822 2006 QO_{133}	17.8	X	336.50729	55.44259	257.11445	4.33285	0.2110843	0.25865216	2.4396375	21	6 23.8	19.8
413823 2006 QJ_{134}	16.7	X	279.25941	99.20701	256.04784	12.42477	0.2557787	0.25226494	2.4806459	21	5 13.9	20.4
413824 2006 QH_{146}	17.8	X	352.83208	305.68999	358.30412	2.10213	0.2207247	0.25960926	2.4336377	21	7 23.6	19.4
413825 2006 QN_{147}	17.7	X	260.11658	259.68830	152.76617	4.68759	0.1749339	0.25532865	2.4607624	21	7 19.5	21.1
413826 2006 QR_{162}	17.3	X	233.51456	121.24394	193.67160	6.99676	0.1986846	0.23830344	2.5766129	21	2 16.1	21.6
413827 2006 RH_{25}	17.6	X	226.91010	215.28997	247.89014	3.80603	0.1278864	0.26185807	2.4196845	21	8 23.1	21.2
413828 2006 RS_{33}	17.5	X	288.95142	24.64078	359.79301	1.52587	0.2238369	0.25712889	2.4492632	21	7 12.1	20.4
413829 2006 RK_{58}	17.2	X	108.40017	216.55573	356.70891	2.31334	0.1330098	0.25894059	2.4378256	21	9 14.1	20.5
413830 2006 RV_{67}	18.4	X	298.87912	126.69789	234.62999	1.90572	0.2062843	0.25627795	2.4546819	21	6 26.4	21.0
413831 2006 RG_{80}	18.1	X	260.23976	34.04862	20.28433	2.93949	0.1817213	0.25466684	2.4650238	21	7 22.7	21.5
413832 2006 RR_{122}	17.9	X	14.14038	282.41524	16.82336	2.40010	0.1771251	0.26101476	2.4248935	21	9 5.5	19.8
413833 2006 SJ_{20}	17.8	X	319.27303	174.05849	172.90530	5.56509	0.0767913	0.25605140	2.4561296	21	7 29.4	20.6
413834 2006 SR_{22}	15.1	X	310.29177	314.63411	65.24629	9.92221	0.1902994	0.12475189	3.9667787	21	8 12.5	20.2
413835 2006 SC_{26}	17.1	X	310.78854	74.40988	272.35726	5.80767	0.1234324	0.25537783	2.4604465	21	7 8.9	19.7
413836 2006 SK_{31}	17.6	X	302.65437	67.27168	340.95597	2.10358	0.2644620	0.26169247	2.4207052	21	9 3.7	19.3
413837 2006 SH_{87}	16.1	X	321.53047	348.47857	16.45574	2.75330	0.2162131	0.12356578	3.9921229	21	8 6.0	20.8
413838 2006 SF_{92}	17.1	X	24.99057	207.27273	20.51878	13.17693	0.0831504	0.24363116	2.5389111	21	5 23.8	20.2
413839 2006 SK_{108}	18.1	X	277.85918	42.09508	327.84305	1.15961	0.2460374	0.25120586	2.4876133	21	6 3.2	21.7
413840 2006 SS_{115}	16.8	X	275.07602	63.24118	269.53548	15.04146	0.2615494	0.24719874	2.5144242	21	4 4.5	21.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413841 2006 SY_{116}	17.9	X	245.72328	338.09231	25.89147	5.01343	0.0890195	0.24315888	2.5421976	21	5 8.2	21.4
413842 2006 SU_{186}	18.1	X	146.72198	12.72150	23.66697	24.15793	0.0926220	0.36271109	1.9472819	21	2 26.1	20.8
413843 2006 SF_{201}	15.7	X	331.85194	147.91164	214.76842	2.34295	0.1457072	0.12339929	3.9957129	21	8 26.1	20.5
413844 2006 SA_{210}	18.1	X	239.59572	312.92451	137.60726	1.08091	0.2655713	0.25382384	2.4704787	21	8 6.6	21.9
413845 2006 SN_{235}	17.8	X	309.93543	180.40438	164.50347	5.25134	0.1934315	0.25698085	2.4502038	21	6 23.0	20.5
413846 2006 SB_{247}	17.3	X	202.47494	78.36676	13.68530	4.99681	0.0471401	0.25316838	2.4747409	21	7 19.8	20.7
413847 2006 SQ_{343}	16.9	X	50.35852	50.72889	211.27862	15.46900	0.1080048	0.25626075	2.4547918	21	8 27.2	20.2
413848 2006 ST_{354}	17.9	X	50.86190	270.85227	199.56211	20.75664	0.0713087	0.35775894	1.9652104	21	—	—
413849 2006 SL_{361}	17.5	X	236.08662	205.08059	199.50775	9.50638	0.1608146	0.24593375	2.5230390	21	6 14.2	21.5
413850 2006 SY_{392}	16.6	X	337.99058	221.50042	53.83459	13.95271	0.1407467	0.23974259	2.5662911	21	5 10.4	19.2
413851 2006 SD_{399}	18.0	X	279.50150	151.40386	210.61657	5.03270	0.1947980	0.25091818	2.4895143	21	6 2.4	21.4
413852 2006 SX_{399}	18.3	X	268.85349	132.60493	197.45148	7.68492	0.2410397	0.24448821	2.5329742	21	4 4.1	22.4
413853 2006 SA_{407}	16.0	X	350.12121	298.89425	25.74805	3.03910	0.2440845	0.12419198	3.9786923	21	8 8.8	20.1
413854 2006 TL_{38}	18.2	X	264.54862	93.86902	239.48998	0.66440	0.2270040	0.24230557	2.5481625	21	4 5.7	22.3
413855 2006 TM_{38}	17.6	X	250.50071	175.27836	207.44203	4.12363	0.1768784	0.24590553	2.5232320	21	5 30.3	21.3
413856 2006 TS_{48}	17.6	X	268.35468	305.86418	40.12678	15.58255	0.1593331	0.24370150	2.5384225	21	5 2.9	21.3
413857 2006 TW_{80}	17.2	X	282.48604	80.50326	255.14229	4.94908	0.1737608	0.24552377	2.5258469	21	5 3.2	20.8
413858 2006 TT_{104}	17.8	X	172.77087	329.04900	37.45792	21.42124	0.0911723	0.36282234	1.9468838	21	2 13.7	20.6
413859 2006 UO_{40}	17.8	X	179.00703	14.31937	49.49231	22.92866	0.1002859	0.37179452	1.9154349	21	5 6.2	19.8
413860 2006 UJ_{41}	17.8	X	240.50808	170.41058	221.14560	11.47710	0.1827216	0.24488460	2.5302401	21	5 31.1	21.8
413861 2006 UY_{50}	15.9	X	333.02204	25.82665	324.14072	2.00104	0.2661308	0.12513691	3.9586377	21	8 1.9	20.2
413862 2006 UY_{54}	15.2	X	332.85123	85.87992	264.47672	6.33291	0.2855575	0.12468262	3.9682476	21	7 28.8	19.4
413863 2006 UE_{75}	17.7	X	165.79724	69.12806	30.27572	21.10950	0.1365602	0.37841913	1.8930147	21	6 7.7	20.5
413864 2006 UJ_{99}	18.1	X	276.22348	157.26984	183.13298	4.94342	0.2243278	0.24542262	2.5265409	21	4 27.7	21.7
413865 2006 UV_{113}	15.7	X	336.37887	4.97016	345.96486	1.17039	0.2254285	0.12444241	3.9733525	21	8 14.2	19.9
413866 2006 UV_{115}	18.2	X	128.47621	236.90993	206.09040	20.82187	0.0910487	0.36789465	1.9289475	21	3 21.7	20.3
413867 2006 UW_{126}	17.9	X	263.84779	340.81306	0.95515	4.03878	0.0780811	0.24171308	2.5523248	21	5 1.6	21.4
413868 2006 UE_{142}	17.6	X	259.25417	339.86671	8.28528	4.65026	0.1430032	0.24135203	2.5548696	21	4 26.9	21.2
413869 2006 UZ_{150}	18.3	X	248.23957	128.25056	245.09477	5.35607	0.2698544	0.24571233	2.5245545	21	5 6.9	22.4
413870 2006 UN_{208}	17.1	X	81.41836	269.60994	239.99678	20.88798	0.0678191	0.36933908	1.9239150	21	4 14.8	19.1
413871 2006 UU_{208}	17.9	X	233.38361	333.77727	65.55040	2.71441	0.2077014	0.24498574	2.5295436	21	5 31.8	22.0
413872 2006 UY_{218}	17.4	X	334.79506	243.48806	146.21087	3.85822	0.1536896	0.26462029	2.4028166	21	11 2.7	19.4
413873 2006 UA_{255}	17.8	X	169.44661	38.34203	70.70605	1.79062	0.0927802	0.24305733	2.5429056	21	7 1.5	21.5
413874 2006 UQ_{262}	17.1	X	141.91603	91.29790	49.85825	15.14413	0.1118588	0.24285417	2.5443236	21	7 16.8	21.2
413875 2006 UP_{265}	16.3	X	251.55639	61.90319	240.93098	12.69561	0.0844450	0.23214108	2.6220122	21	2 21.5	20.5
413876 2006 UM_{269}	17.7	X	217.45000	341.38097	43.30459	22.02425	0.0911222	0.37322212	1.9105473	21	4 26.4	19.8
413877 2006 UL_{271}	17.5	X	286.95417	315.77068	39.32914	2.35055	0.1574878	0.24714712	2.5147743	21	6 7.9	20.6
413878 2006 UL_{283}	17.6	X	172.70193	96.50163	32.66691	5.22348	0.2021633	0.24539045	2.5267616	21	8 2.9	21.9
413879 2006 UN_{335}	17.1	X	123.88120	97.83205	46.66029	16.02734	0.2322632	0.23713415	2.5850760	21	7 11.7	21.5
413880 2006 VX_{6}	17.4	X	225.61096	177.64550	234.63688	14.41022	0.2304556	0.24373813	2.5381682	21	6 8.7	21.7
413881 2006 VX_{30}	17.1	X	241.44902	113.43506	245.35586	14.46615	0.2487341	0.24022859	2.5628287	21	4 12.1	21.7
413882 2006 VX_{49}	17.3	X	259.71825	293.64137	58.01163	7.99330	0.1529577	0.23998184	2.5645852	21	5 3.2	21.1
413883 2006 VQ_{59}	16.5	X	322.19241	233.39200	66.80092	13.79947	0.0925423	0.24206611	2.5498427	21	5 25.7	19.6
413884 2006 VR_{63}	17.5	X	241.38880	107.51435	247.20861	2.88497	0.2163169	0.23846124	2.5754761	21	4 11.8	21.8
413885 2006 VW_{68}	17.3	X	272.66121	113.40701	243.55554	2.50356	0.1287294	0.24251816	2.5466731	21	5 27.4	20.6
413886 2006 VK_{77}	17.4	X	217.17169	329.39868	115.85352	2.40163	0.1663325	0.24645066	2.5195099	21	7 17.6	21.2
413887 2006 VT_{81}	18.5	X	90.47378	92.23230	30.24381	20.73084	0.0868128	0.36864220	1.9263389	21	4 1.4	20.2
413888 2006 VH_{94}	16.9	X	159.12221	209.65746	249.42224	9.54572	0.1271131	0.23672834	2.5880295	21	6 8.7	20.8
413889 2006 VX_{104}	17.5	X	258.62211	51.23306	329.08730	1.76936	0.1738647	0.24602985	2.5223820	21	6 4.6	21.3
413890 2006 VN_{109}	17.9	X	195.28183	215.97055	207.06581	3.87477	0.1845469	0.23996353	2.5647157	21	5 29.4	22.1
413891 2006 VV_{119}	17.1	X	252.12419	252.76997	60.29093	4.41237	0.2376538	0.23398703	2.6082038	21	3 3.7	21.5
413892 2006 VC_{124}	16.7	X	118.29835	135.47857	46.81145	5.42400	0.2410904	0.24098748	2.5574455	21	8 25.6	20.9
413893 2006 VV_{135}	17.4	X	100.39140	209.70095	291.24442	1.06930	0.1550849	0.23275010	2.6174363	21	6 1.3	21.0
413894 2006 VH_{139}	17.3	X	139.58376	186.43287	242.01699	19.69258	0.1156636	0.36390424	1.9430231	21	3 14.0	20.0
413895 2006 VW_{143}	16.6	X	235.33509	104.00341	269.53820	13.72566	0.1338262	0.24205264	2.5499373	21	5 3.2	20.7
413896 2006 VU_{145}	17.1	X	258.82856	45.46324	326.32682	8.98083	0.2103687	0.24608909	2.5219771	21	5 17.9	21.1
413897 2006 VO_{169}	16.8	X	258.62717	289.80658	76.40150	2.84227	0.1827266	0.24173087	2.5521996	21	5 16.8	20.4
413898 2006 WM_{5}	17.1	X	174.92124	208.90039	225.32097	13.68714	0.0489396	0.23748012	2.5825647	21	5 21.5	20.7
413899 2006 WN_{5}	15.9	X	343.59137	169.53804	174.76324	4.39759	0.2739392	0.12212065	4.0235554	21	8 16.2	19.9
413900 2006 WO_{6}	17.5	X	258.47020	145.35837	191.27167	5.49978	0.1648870	0.23814756	2.5777371	21	4 10.7	21.3
413901 2006 WS_{7}	17.6	X	160.72088	301.53613	145.95032	3.64290	0.1707136	0.23603924	2.5930640	21	5 29.3	21.7
413902 2006 WL_{16}	17.0	X	186.21699	196.30809	278.13116	3.91589	0.1874767	0.24394819	2.5367110	21	7 24.7	21.3
413903 2006 WQ_{22}	17.7	X	195.64537	6.31465	85.25463	7.76520	0.2774187	0.24106182	2.5569198	21	7 2.4	22.3
413904 2006 WU_{23}	17.0	X	220.49142	339.51361	83.89609	16.24702	0.1451762	0.24249680	2.5468227	21	6 23.5	21.0
413905 2006 WX_{26}	17.3	X	156.87728	177.76042	243.32664	17.96744	0.0916723	0.36598319	1.9356580	21	3 24.9	20.0
413906 2006 WF_{27}	16.7	X	234.34546	30.14941	5.11036	14.89750	0.1706140	0.23968285	2.5667175	21	5 26.2	21.0
413907 2006 WO_{29}	16.2	X	258.04923	254.53116	116.46689	28.30685	0.3716450	0.23953256	2.5677910	21	5 16.4	21.3
413908 2006 WK_{40}	17.2	X	304.57074	60.53906	218.34874	11.15995	0.0524280	0.23238875	2.6201490	21	4 4.8	20.8
413909 2006 WX_{40}	16.5	X	263.29852	143.87908	223.80902	13.52443	0.1219427	0.24287126	2.5442042	21	5 31.5	20.1
413910 2006 WD_{50}	16.9	X	294.85257	216.53802	121.75323	3.68389	0.1588397	0.24403008	2.5361434	21	5 27.5	20.0
413911 2006 WT_{61}	17.0	X	198.88987	332.76120	85.01197	11.99674	0.2551804	0.23833351	2.5763962	21	5 26.1	21.5
413912 2006 WN_{69}	16.0	X	135.43111	177.15327	283.11080	16.69233	0.1165093	0.22656548	2.6648549	21	5 12.4	20.2
413913 2006 WL_{74}	17.3	X	266.62110	296.51852	50.73518	8.15397	0.2153344	0.24289475	2.5440402	21	4 27.7	21.0
413914 2006 WB_{91}	16.8	X	96.39329	220.86721	317.17545	5.45482	0.2698220	0.23710906	2.5852583	21	7 31.3	20.7
413915 2006 WM_{95}	17.4	X	336.12822	204.78465	98.64718	3.06681	0.0954799	0.24550844	2.5259520	21	6 22.4	20.2
413916 2006 WT_{96}	17.8	X	175.80093	117.36021	337.17306	0.50617	0.1228660	0.23995489	2.5647772	21	6 19.7	21.7
413917 2006 WD_{103}	16.5	X	313.04523	197.26405	68.85836	16.65409	0.1140693	0.23133447	2.6281036	21	4 1.9	20.2
413918 2006 WA_{115}	17.6	X	276.64366	174.93930	262.25371	1.70204	0.1707488	0.25627039	2.4547302	21	9 15.5	20.3
413919 2006 WP_{126}	16.8	X	253.20828	220.88059	128.67652	15.33860	0.2924558	0.24179891	2.5517208	21	4 17.2	21.4
413920 2006 WD_{135}	16.9	X	240.12824	176.29045	203.32990	2.73281	0.1661223	0.24027586	2.5624926	21	5 16.8	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
413921 2006 WK_{151}	17.2	X	136.48253	141.88744	21.72302	5.01728	0.1929523	0.24209810	2.5496181	21	8 14.5	21.3
413922 2006 WC_{152}	15.8	X	346.03072	122.50396	218.03120	1.63408	0.2201342	0.12185306	4.0294437	21	8 19.6	20.2
413923 2006 WJ_{155}	16.7	X	62.15337	171.26320	60.20981	9.82527	0.0379479	0.24578278	2.5240720	21	7 28.6	20.0
413924 2006 WU_{166}	16.7	X	295.81495	220.74308	67.81077	16.62551	0.1611355	0.23439299	2.6051914	21	4 1.0	20.6
413925 2006 WJ_{171}	16.7	X	21.08456	138.85880	72.32619	12.26229	0.0952649	0.23180675	2.6245328	21	5 2.1	19.7
413926 2006 WU_{181}	16.4	X	116.36926	247.06525	243.88336	12.31112	0.0249261	0.23577202	2.5950230	21	5 20.2	19.8
413927 2006 WW_{192}	17.6	X	224.35702	199.99706	187.07620	0.88528	0.1856530	0.23886312	2.5725865	21	5 9.8	21.7
413928 2006 XV_{2}	16.9	X	134.12140	292.32619	237.01384	11.66311	0.1059050	0.24222150	2.5487520	21	8 7.0	20.9
413929 2006 XE_{10}	16.7	X	155.99315	223.77440	274.69137	9.07786	0.1707804	0.23890414	2.5722920	21	7 26.5	20.8
413930 2006 XW_{10}	16.7	X	207.29228	125.50504	283.39023	9.79268	0.1769146	0.23602967	2.5931342	21	5 20.8	21.0
413931 2006 XB_{16}	17.3	X	230.49884	339.40327	93.23693	4.32401	0.2354415	0.24428484	2.5343799	21	7 8.9	21.3
413932 2006 XL_{35}	17.1	X	205.67558	331.28094	94.67339	14.71765	0.1469981	0.23772213	2.5808117	21	6 13.1	21.2
413933 2006 XR_{38}	17.0	X	220.54372	319.91971	81.36519	3.38537	0.2356991	0.23720591	2.5845546	21	5 22.1	21.4
413934 2006 XD_{39}	17.3	X	182.16232	306.68031	99.09183	6.22929	0.1573339	0.22947058	2.6423157	21	4 28.3	21.6
413935 2006 XS_{49}	16.5	X	43.77242	74.24333	111.14396	14.44714	0.0711435	0.22480519	2.6787478	21	5 5.4	20.1
413936 2006 XO_{51}	17.0	X	186.89784	129.89280	254.90176	22.92525	0.0820324	0.36697006	1.9321861	21	3 2.8	20.1
413937 2006 XN_{70}	16.8	X	239.79968	33.52476	289.30605	5.42965	0.0228946	0.22156636	2.7047897	21	3 14.7	20.7
413938 2006 XS_{70}	17.1	X	211.00585	263.26930	135.16943	3.57800	0.0940149	0.23233413	2.6205596	21	5 16.5	20.9
413939 2006 YY_{6}	17.1	X	148.40336	232.12670	222.09113	12.69161	0.2550519	0.23317038	2.6142902	21	5 31.1	21.6
413940 2006 YA_{13}	17.1	X	151.13559	39.01432	85.78403	5.13724	0.2516495	0.23315158	2.6144307	21	7 9.9	21.6
413941 2006 YP_{19}	17.5	X	168.57279	157.13668	305.03628	3.17278	0.1483635	0.23436312	2.6054128	21	6 23.1	21.7
413942 2006 YW_{21}	17.0	X	190.37456	326.52613	82.21253	6.98567	0.1698962	0.23309780	2.6148328	21	5 8.6	21.2
413943 2006 YD_{35}	16.4	X	357.56007	160.14337	84.92766	9.23174	0.1410620	0.22543868	2.6737272	21	5 6.8	19.2
413944 2006 YE_{46}	16.6	X	179.12450	314.80398	108.02686	14.00536	0.1620541	0.23231656	2.6206917	21	5 18.6	21.0
413945 2006 YG_{47}	16.6	X	188.17691	195.47077	260.75271	4.68028	0.0753230	0.23816436	2.5776159	21	7 5.2	20.2
413946 2006 YW_{48}	17.1	X	218.85018	319.09800	99.57415	23.99774	0.0664973	0.36966122	1.9227971	21	6 20.7	19.2
413947 2007 AD	17.2	X	124.41998	106.23516	50.84102	5.87359	0.1151209	0.23604070	2.5930534	21	7 17.6	21.0
413948 2007 AK_{7}	17.3	X	202.34285	302.84089	128.83466	4.23775	0.1295499	0.23664561	2.5886326	21	6 17.2	21.2
413949 2007 AH_{14}	17.1	X	228.31864	117.14166	269.17336	3.65287	0.3542647	0.23841721	2.5757931	21	5 3.4	22.0
413950 2007 AS_{29}	16.9	X	287.81210	302.66787	305.88991	3.57146	0.0148880	0.21325785	2.7745935	21	2 12.7	20.8
413951 2007 BF_{12}	16.6	X	262.85472	167.50948	115.85554	10.86883	0.0518086	0.21488483	2.7605707	21	2 24.3	20.6
413952 2007 BP_{14}	17.6	X	155.55341	136.76715	347.52011	3.03543	0.1119867	0.23363677	2.6108099	21	7 7.6	21.5
413953 2007 BP_{40}	16.4	X	199.68683	88.17393	304.77120	9.94230	0.1222035	0.22765020	2.6563830	21	4 21.6	20.8
413954 2007 BF_{43}	17.3	X	113.55112	15.79690	121.43437	1.74588	0.0503623	0.22811212	2.6527957	21	5 29.7	20.8
413955 2007 BZ_{45}	16.0	X	89.12849	201.99808	313.36754	12.88908	0.2285000	0.22309987	2.6923809	21	6 18.4	19.9
413956 2007 BA_{47}	17.3	X	111.15951	112.39209	1.23625	4.97055	0.0745523	0.22142386	2.7059500	21	4 27.1	20.9
413957 2007 BJ_{50}	16.4	X	77.10368	44.07920	119.60417	15.20384	0.1657960	0.22366485	2.6878450	21	6 6.2	20.0
413958 2007 BM_{97}	17.5	X	93.18532	191.08142	318.03432	1.15012	0.1445374	0.22566236	2.6719601	21	6 1.8	21.1
413959 2007 BS_{101}	17.1	X	116.76883	0.07022	155.34488	7.90241	0.2171169	0.23044783	2.6348403	21	7 15.4	21.3
413960 2007 BB_{102}	16.2	X	117.89625	192.63847	278.05315	11.23051	0.1233336	0.22246497	2.6975011	21	5 7.1	20.2
413961 2007 CU	16.8	X	230.87309	308.18509	86.62315	10.14854	0.1405847	0.24126228	2.5555032	21	5 29.7	20.6
413962 2007 CP_{21}	16.0	X	89.98561	203.40679	288.35140	12.98713	0.1309269	0.22164924	2.7041154	21	4 28.5	19.8
413963 2007 CL_{27}	16.5	X	170.14790	98.91452	348.77160	12.00503	0.1590490	0.23204646	2.6227249	21	6 4.3	21.0
413964 2007 CB_{29}	17.1	X	168.15651	120.03847	305.67782	4.96778	0.0639255	0.22645421	2.6657277	21	5 1.1	21.0
413965 2007 CG_{30}	16.9	X	288.60029	110.10747	138.28874	5.10923	0.0180396	0.21291471	2.7775738	21	2 13.9	20.8
413966 2007 CC_{32}	16.7	X	207.20752	32.11962	320.78083	5.48881	0.0470334	0.21784944	2.7354687	21	3 14.6	20.7
413967 2007 CM_{38}	17.3	X	170.95703	157.09970	289.51386	1.23720	0.1876208	0.23125311	2.6287200	21	6 6.4	21.5
413968 2007 CM_{40}	17.1	X	134.64205	97.45090	54.65868	5.58595	0.1619742	0.23438934	2.6052185	21	7 26.3	21.2
413969 2007 DN_{7}	16.6	X	161.89704	69.30550	48.24080	8.93941	0.2087455	0.23332039	2.6131695	21	7 8.9	21.1
413970 2007 DM_{19}	16.9	X	161.19893	39.87809	348.90565	3.45035	0.0807718	0.21330578	2.7741778	21	3 11.9	20.9
413971 2007 DP_{23}	17.4	X	192.51951	247.44020	162.63487	4.82496	0.1652828	0.22560661	2.6724003	21	5 12.3	21.8
413972 2007 DB_{28}	17.0	X	151.39090	286.26901	145.94918	9.51586	0.1068879	0.21972996	2.7198390	21	4 29.9	21.2
413973 2007 DR_{29}	16.4	X	71.05642	336.61958	153.97642	9.04563	0.0788267	0.21421707	2.7663046	21	3 31.2	19.9
413974 2007 DX_{42}	16.3	X	348.03878	260.36454	300.91928	6.47656	0.1638945	0.21092244	2.7950367	21	2 12.3	19.6
413975 2007 DL_{54}	16.8	X	182.87245	227.20610	148.73996	9.24087	0.1277063	0.21501943	2.7594185	21	3 23.2	21.2
413976 2007 DQ_{58}	17.1	X	107.58561	124.84242	341.44438	4.34084	0.0658391	0.21650195	2.7468072	21	4 11.9	20.9
413977 2007 DV_{58}	17.2	X	124.23733	306.06685	165.09611	3.80710	0.0352002	0.22048004	2.7136668	21	5 7.9	20.8
413978 2007 DH_{74}	17.0	X	38.25496	7.81715	158.40479	3.41605	0.0273340	0.21402483	2.7679608	21	3 24.8	20.6
413979 2007 DX_{98}	16.6	X	136.97110	307.14799	146.80897	7.22321	0.0868862	0.22215297	2.7000262	21	5 8.6	20.6
413980 2007 DK_{109}	17.3	X	102.14206	299.78548	168.80300	8.84391	0.2458726	0.22007869	2.7169651	21	5 7.6	21.3
413981 2007 DG_{116}	16.2	X	8.47151	148.52126	45.16455	13.23939	0.0884004	0.21203278	2.7852705	21	3 23.3	19.7
413982 2007 EV_{14}	16.8	X	7.74101	9.66384	157.18185	9.67585	0.0478297	0.20934467	2.8090628	21	2 10.2	20.4
413983 2007 EA_{28}	17.1	X	192.69786	81.13266	308.78415	4.25676	0.0731370	0.22391706	2.6858263	21	4 13.2	21.2
413984 2007 ES_{30}	17.2	X	237.19087	280.96323	140.82512	7.12235	0.3029112	0.24049392	2.5609434	21	6 25.7	21.6
413985 2007 ED_{44}	16.9	X	75.10815	305.31390	199.52103	3.46295	0.0442864	0.21459173	2.7630838	21	4 17.9	20.3
413986 2007 EY_{57}	16.4	X	134.69329	346.27274	137.12710	13.36099	0.2192222	0.22787277	2.6546530	21	6 23.2	20.9
413987 2007 EZ_{75}	17.4	X	160.77909	289.73786	187.40756	11.32137	0.2158117	0.22827758	2.6515137	21	7 5.6	22.1
413988 2007 EV_{76}	17.0	X	90.28690	129.93540	349.68678	8.41278	0.1920580	0.21510186	2.7587135	21	4 24.3	20.8
413989 2007 EL_{88}	19.0	X	317.32635	116.15644	198.45131	30.84285	0.5219285	0.83197211	1.1196017	21	2 2.9	21.4
413990 2007 EZ_{107}	16.3	X	159.39618	258.51025	26.17941	15.97501	0.2669132	0.18020849	3.1042204	21	—	—
413991 2007 EW_{108}	16.7	X	127.74652	64.79529	25.70347	8.54328	0.1514495	0.21615304	2.7497623	21	4 27.8	20.7
413992 2007 EH_{114}	15.3	X	116.32447	287.44451	33.56163	26.25986	0.2439141	0.17468959	3.1692612	21	—	—
413993 2007 EC_{125}	16.6	X	139.70733	88.17744	353.09797	6.30350	0.0292198	0.21651982	2.7466560	21	4 14.7	20.5
413994 2007 EE_{150}	17.2	X	67.72909	345.06789	129.78170	5.13426	0.1247171	0.21043660	2.7993370	21	3 11.1	20.5
413995 2007 EW_{157}	17.3	X	175.43227	290.84156	125.51163	3.88887	0.1413813	0.22496268	2.6774975	21	5 4.0	21.6
413996 2007 EA_{158}	17.3	X	126.84412	157.11847	227.25684	1.17642	0.0775064	0.20324750	2.8649645	21	1 27.5	21.2
413997 2007 EJ_{168}	16.5	X	165.18079	174.94767	97.20875	2.45360	0.1538204	0.18055871	3.1002051	21	—	—
413998 2007 EU_{222}	16.6	X	88.58978	317.08616	183.95297	13.23198	0.1346956	0.21963288	2.7206404	21	5 17.0	20.4
413999 2007 ED_{224}	16.5	X	7.97887	138.53111	28.18434	15.49771	0.0786241	0.20471995	2.8512104	21	2 18.2	20.3
414000 2007 FU_{6}	16.9	X	149.27507	61.44174	357.37247	4.10436	0.0542217	0.21347691	2.7726951	21	4 1.9	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414001 2007 FQ_{23}	16.4	X	158.63383	230.93807	21.52151	8.02302	0.1632659	0.17730664	3.1379984	21	12 8.3	21.7
414002 2007 FP_{48}	17.2	X	72.35437	132.73081	13.29636	5.12632	0.1030787	0.21514205	2.7583700	21	4 22.7	20.7
414003 2007 FC_{49}	16.9	X	108.02903	92.43642	24.74442	7.46701	0.1411762	0.21438070	2.7648968	21	5 8.0	20.8
414004 2007 GP_{17}	16.3	X	224.58706	218.90870	16.30832	9.71145	0.0376103	0.18547457	3.0451812	21	—	—
414005 2007 GR_{27}	16.5	X	71.13338	291.74535	200.75238	24.51038	0.1399310	0.21003120	2.8029381	21	4 9.4	19.8
414006 2007 GO_{32}	16.3	X	314.25636	32.03794	208.95322	14.69435	0.0928578	0.20478350	2.8506206	21	2 22.8	20.5
414007 2007 GJ_{46}	15.9	X	166.26531	238.77441	44.06940	17.18158	0.2064914	0.17855285	3.1233802	21	—	—
414008 2007 GN_{49}	16.7	X	173.18809	276.37765	189.98724	27.32102	0.4067597	0.23479127	2.6022445	21	7 2.9	22.4
414009 2007 GR_{57}	16.3	X	151.85537	211.26105	82.64970	6.06968	0.1019926	0.18148845	3.0896080	21	—	—
414010 2007 GJ_{71}	15.7	X	190.09754	240.74315	47.87724	17.02775	0.1496454	0.18505628	3.0497682	21	—	—
414011 2007 GO_{73}	16.8	X	50.77761	93.35760	83.46325	8.65393	0.1631588	0.21277640	2.7787773	21	5 12.5	19.9
414012 2007 GT_{74}	16.7	X	222.40616	228.59264	43.62041	2.72626	0.1018716	0.19065326	2.9897846	21	—	—
414013 2007 HZ_{33}	16.9	X	281.46534	303.97527	269.74004	0.75282	0.0867758	0.19185343	2.9773028	21	—	—
414014 2007 HB_{36}	16.7	X	347.08382	105.48694	56.16526	6.49555	0.0536285	0.19427749	2.9524852	21	1 10.9	20.7
414015 2007 HN_{41}	16.0	X	181.35227	226.00593	64.13166	9.96656	0.1123433	0.18407405	3.0606077	21	—	—
414016 2007 HZ_{44}	16.7	X	116.92738	30.72509	33.38030	9.69589	0.1250143	0.20489590	2.8495779	21	3 16.1	20.8
414017 2007 HG_{64}	16.5	X	98.18686	102.29878	48.48928	10.53542	0.2012740	0.21840083	2.7308626	21	6 17.9	20.5
414018 2007 HP_{67}	15.8	X	356.75107	115.17686	43.95908	11.28802	0.0598575	0.19958496	2.8999077	21	1 20.9	19.8
414019 2007 HT_{72}	16.8	X	256.14985	7.58186	209.91544	10.96959	0.0909519	0.18758009	3.0223509	21	—	—
414020 2007 HA_{93}	18.4	X	76.65309	213.05348	89.78077	2.76972	0.1924400	0.30295910	2.1955671	21	12 16.8	21.5
414021 2007 HH_{97}	16.2	X	65.87942	106.72468	66.13615	12.95407	0.1947672	0.21274665	2.7790364	21	6 3.7	19.6
414022 2007 JW_{44}	16.1	X	85.02913	122.17072	235.83231	20.73952	0.1610734	0.17491346	3.1665564	21	—	—
414023 2007 LA_{4}	16.2	X	177.75467	188.05179	93.56163	9.21377	0.1685775	0.17890922	3.1192312	21	—	—
414024 2007 LB_{11}	16.2	X	105.43148	252.24351	84.39693	10.85351	0.0916249	0.17655625	3.1468834	21	—	—
414025 2007 LO_{15}	16.3	X	237.02409	17.61034	209.96353	22.52807	0.0994661	0.18190797	3.0848561	21	—	—
414026 Bochonko	17.6	X	41.62699	15.86485	335.69251	7.06616	0.2072192	0.29541199	2.2328042	21	—	—
414027 2007 MF_{13}	15.3	X	137.54392	203.22808	113.13803	18.90471	0.1877776	0.17819516	3.1275585	21	—	—
414028 2007 MD_{27}	17.9	X	68.71280	87.07869	241.11419	4.20865	0.1629288	0.29522413	2.2337513	21	—	—
414029 2007 OK_{1}	17.8	X	85.71621	133.46715	162.87303	7.80675	0.2249939	0.29649511	2.2273631	21	12 18.8	21.4
414030 2007 PC_{5}	17.9	X	43.07412	182.80348	142.28078	8.01967	0.2574183	0.29290277	2.2455379	21	12 17.2	21.0
414031 2007 PM_{28}	17.9	X	48.81566	154.98345	176.02973	5.12377	0.2006155	0.29387863	2.2405641	21	12 23.4	20.9
414032 2007 PJ_{34}	17.5	X	42.38658	212.95065	107.30568	7.33486	0.2662920	0.29248791	2.2476608	21	12 11.2	20.5
414033 2007 QT_{5}	18.1	X	60.75775	159.04687	151.38092	4.50308	0.2297856	0.29279941	2.2460664	21	12 13.3	21.3
414034 2007 RE_{28}	17.7	X	349.87085	271.89028	108.82730	4.83884	0.2453545	0.28754532	2.2733441	21	12 9.3	19.2
414035 2007 RX_{36}	17.8	X	356.83988	17.71446	14.59667	2.94850	0.2173146	0.28856436	2.2679889	21	—	—
414036 2007 RH_{56}	18.1	X	353.26866	36.60734	338.97264	7.61935	0.1645098	0.28624892	2.2802028	21	11 21.9	20.3
414037 2007 RK_{64}	17.7	X	314.92575	88.53444	347.92371	5.70668	0.1059662	0.29216903	2.2492959	21	12 9.1	19.8
414038 2007 RX_{86}	18.0	X	315.37879	193.70588	161.99505	1.20485	0.2097073	0.27658294	2.3330235	21	7 17.9	19.8
414039 2007 RL_{104}	18.0	X	16.34269	243.78811	138.97735	2.79833	0.1784518	0.29357474	2.2421101	21	—	—
414040 2007 RA_{105}	18.1	X	18.09389	239.99403	160.58323	7.40595	0.0986738	0.29768642	2.2214167	21	—	—
414041 2007 RY_{118}	18.0	X	30.66871	314.36067	34.10199	2.16075	0.2522176	0.29001994	2.2603940	21	12 31.8	20.9
414042 2007 RX_{133}	17.8	X	49.29198	336.24115	2.18865	1.15111	0.1268718	0.29329500	2.2435355	21	12 23.9	20.4
414043 2007 RB_{146}	17.4	X	4.09871	26.81000	345.38693	5.27776	0.2106715	0.28886397	2.2664204	21	12 18.4	19.6
414044 2007 RK_{159}	17.4	X	258.95571	114.38227	7.35169	8.21961	0.1314968	0.28926682	2.2643156	21	11 1.3	20.1
414045 2007 RY_{161}	17.7	X	207.15575	127.70232	42.79074	5.07413	0.0765097	0.28734208	2.2744160	21	11 9.0	20.6
414046 2007 RY_{163}	17.6	X	247.45693	321.74304	200.91464	6.32487	0.0635246	0.29783380	2.2206838	21	12 27.3	20.1
414047 2007 RW_{197}	18.2	X	35.98422	278.39569	85.69933	0.61827	0.1539023	0.29595655	2.2300645	21	—	—
414048 2007 RD_{209}	18.1	X	266.71112	287.46013	151.04801	5.21559	0.1686797	0.27848404	2.3223937	21	9 6.7	20.7
414049 2007 RQ_{210}	18.1	X	39.48988	14.05942	317.85172	3.45650	0.0837705	0.29127337	2.2539046	21	11 24.1	20.7
414050 2007 RC_{211}	16.3	X	54.00257	218.09238	170.60750	10.16036	0.0595940	0.16182976	3.3350099	21	—	—
414051 2007 RC_{213}	17.5	X	352.21034	49.47253	339.67845	6.45680	0.1113545	0.29023850	2.2592591	21	12 6.2	19.8
414052 2007 RV_{228}	17.7	X	8.22220	9.89731	3.73917	4.47905	0.1696624	0.29142402	2.2531278	21	12 21.3	20.0
414053 2007 RL_{250}	17.9	X	343.78493	133.06483	239.35121	5.40788	0.1245304	0.28408658	2.2917588	21	10 25.4	19.8
414054 2007 RZ_{264}	18.1	X	280.41233	72.15505	340.92369	5.55572	0.1354114	0.27902913	2.3193681	21	8 26.9	20.5
414055 2007 RL_{270}	17.4	X	318.67260	355.41737	42.00169	3.24953	0.1883319	0.27647517	2.3336298	21	10 9.9	19.0
414056 2007 RW_{270}	17.7	X	77.36046	75.30812	216.50961	6.60994	0.1350011	0.28924135	2.2644486	21	11 26.0	20.7
414057 2007 RK_{284}	18.1	X	48.98230	332.96869	331.43226	4.13816	0.1536674	0.28690237	2.2767392	21	11 8.5	20.9
414058 2007 RY_{285}	18.0	X	318.08096	152.94021	240.34916	1.90422	0.1841092	0.27623867	2.3349616	21	9 29.6	19.7
414059 2007 RM_{295}	17.4	X	173.86263	188.85534	16.30326	4.26388	0.1069478	0.28695647	2.2764531	21	11 12.5	20.5
414060 2007 RC_{302}	17.8	X	230.12894	304.60618	194.37848	21.32922	0.2672032	0.28002166	2.3138842	21	9 29.9	21.4
414061 2007 RF_{318}	17.7	X	43.93838	141.39794	262.39501	4.41522	0.1569959	0.30128528	2.2036914	21	—	—
414062 2007 SE_{17}	17.7	X	51.61083	274.75845	12.86019	8.23493	0.1658367	0.28640448	2.2793771	21	10 21.8	20.5
414063 2007 SG_{17}	17.8	X	345.09001	34.37050	15.36832	7.95718	0.1266258	0.29180216	2.2511808	21	12 28.2	20.0
414064 2007 SM_{19}	18.0	X	1.55242	248.58779	96.72851	6.24494	0.2568910	0.28356412	2.2945729	21	11 10.9	19.7
414065 2007 SO_{19}	18.2	X	217.25799	358.24242	156.21824	1.85145	0.0390128	0.28572153	2.2830078	21	11 5.9	20.9
414066 2007 SZ_{20}	18.0	X	350.75747	272.68837	97.80364	3.57331	0.2290091	0.28408813	2.2917505	21	11 20.9	19.6
414067 2007 SB_{22}	17.2	X	81.77413	221.25442	59.58155	5.62066	0.1933690	0.28830143	2.2693676	21	11 21.7	20.6
414068 2007 TX_{20}	18.5	X	319.50093	71.41482	353.27014	3.03117	0.1702282	0.28515592	2.2860257	21	11 28.2	20.1
414069 2007 TM_{30}	17.9	X	321.69646	140.63665	193.94817	1.58877	0.2489778	0.27292924	2.3537988	21	6 19.1	19.7
414070 2007 TS_{33}	18.1	X	291.65381	33.19246	40.53227	2.78395	0.2118331	0.27892413	2.3199502	21	10 5.0	19.9
414071 2007 TN_{54}	17.9	X	322.32116	322.83448	91.47150	1.34201	0.1832551	0.28296565	2.2978071	21	11 18.2	19.4
414072 2007 TD_{57}	17.9	X	323.32860	217.32316	214.71943	2.26514	0.1737374	0.28550152	2.2841805	21	12 20.4	19.6
414073 2007 TJ_{58}	17.5	X	47.60464	283.07105	29.33143	3.33607	0.2005148	0.28475563	2.2881676	21	11 25.3	20.3
414074 2007 TO_{64}	18.0	X	337.67575	291.27125	68.69844	2.67294	0.2121433	0.27819803	2.3239852	21	9 24.9	19.2
414075 2007 TU_{69}	18.3	X	333.66586	42.80345	13.28589	2.03902	0.2003916	0.28698799	2.2762864	21	12 21.6	19.9
414076 2007 TV_{77}	17.6	X	323.79898	2.27663	15.59985	9.06853	0.0484051	0.27748833	2.3279460	21	9 28.2	20.1
414077 2007 TA_{93}	17.7	X	36.59660	144.06750	170.04217	4.84662	0.1650761	0.28300537	2.2975921	21	11 9.2	20.3
414078 2007 TH_{103}	17.5	X	120.82900	174.23748	89.24393	2.69270	0.1306829	0.28644188	2.2791787	21	12 3.6	20.7
414079 2007 TU_{107}	17.1	X	145.90215	221.44530	13.79124	6.26122	0.0437701	0.28892526	2.2660998	21	11 22.4	20.0
414080 2007 TL_{116}	17.5	X	267.39682	242.57521	279.09061	3.70468	0.1009725	0.30174446	2.2014552	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414081 2007 TV_{122}	17.8	X	32.10366	123.50709	185.94241	4.62349	0.1669375	0.28123989	2.3071975	21	10 26.1	20.1
414082 2007 TN_{123}	18.5	X	316.91632	261.45525	113.70812	1.69574	0.1987020	0.27662118	2.3328085	21	8 26.6	20.1
414083 2007 TZ_{126}	18.5	X	13.57911	316.48770	51.78450	2.72912	0.1547975	0.28665732	2.2780366	21	12 18.4	20.9
414084 2007 TY_{153}	17.2	X	62.13353	35.75223	267.72897	4.33488	0.1398294	0.28739500	2.2741367	21	11 23.1	20.0
414085 2007 TG_{156}	16.9	X	37.62952	81.05688	225.15428	9.73538	0.2088678	0.28360754	2.2943387	21	11 5.2	19.4
414086 2007 TV_{165}	17.4	X	290.45220	89.47516	15.78528	6.06031	0.1189539	0.28656439	2.2785291	21	12 3.7	19.5
414087 2007 TY_{166}	17.4	X	281.91134	65.32699	8.05798	5.36251	0.1612252	0.27885021	2.3203601	21	9 24.6	19.5
414088 2007 TQ_{177}	18.0	X	8.99526	138.28643	194.31427	5.29702	0.1993317	0.28086926	2.3092267	21	10 24.9	19.7
414089 2007 TL_{181}	17.0	X	40.68002	266.35440	77.45946	7.24780	0.1618142	0.28954150	2.2628834	21	12 24.5	19.7
414090 2007 TS_{192}	17.3	X	259.55772	188.19152	305.22419	2.11774	0.0943719	0.28734045	2.2744245	21	11 26.8	19.7
414091 2007 TA_{199}	18.1	X	283.70435	209.00880	260.70426	1.49461	0.1594723	0.28497851	2.2869745	21	11 23.3	19.8
414092 2007 TG_{212}	17.1	X	102.76564	279.56307	2.45605	8.25609	0.0587642	0.28692804	2.2766034	21	12 2.4	20.2
414093 2007 TD_{213}	17.7	X	132.50820	340.77497	282.12775	3.72536	0.1152023	0.28931588	2.2640596	21	12 14.6	20.9
414094 2007 TD_{216}	18.1	X	326.20088	67.54694	1.22129	2.34422	0.1266555	0.28546334	2.2843842	21	12 18.5	20.1
414095 2007 TF_{222}	18.2	X	275.02912	226.15906	184.49526	4.25957	0.1359263	0.27390513	2.3482046	21	8 12.6	21.1
414096 2007 TD_{229}	18.1	X	279.55555	237.79464	219.06223	1.63183	0.1432732	0.28096340	2.3087109	21	10 28.7	20.3
414097 2007 TH_{231}	18.1	X	271.48685	66.06434	36.45442	6.35956	0.0581085	0.28401386	2.2921500	21	11 5.8	20.5
414098 2007 TT_{242}	17.7	X	39.05263	136.29404	267.83728	4.87619	0.1576850	0.29821888	2.2187717	21	—	—
414099 2007 TR_{243}	17.5	X	348.21740	119.88322	254.31519	5.84077	0.1731294	0.28374753	2.2935840	21	11 11.3	19.4
414100 2007 TG_{268}	17.7	X	344.14335	308.94648	31.23704	6.35994	0.1924868	0.27757098	2.3274839	21	9 8.6	19.2
414101 2007 TF_{281}	17.7	X	49.38903	125.38212	209.53772	6.95523	0.1549417	0.29118052	2.2543837	21	12 22.5	20.7
414102 2007 TJ_{298}	17.8	X	0.66812	260.25261	89.13836	1.73818	0.2480846	0.28179611	2.3041605	21	11 11.5	19.5
414103 2007 TQ_{318}	17.6	X	13.11092	115.56374	211.55700	4.22810	0.1505166	0.27780632	2.3261692	21	10 14.8	19.6
414104 2007 TX_{320}	18.3	X	331.21858	58.56342	359.05413	2.87619	0.1372342	0.28855753	2.2680247	21	12 12.8	20.1
414105 2007 TT_{332}	18.2	X	284.87849	138.50290	333.85090	1.65872	0.1578568	0.28396425	2.2924169	21	11 29.3	20.2
414106 2007 TK_{385}	18.3	X	22.45443	291.58156	12.82955	2.11382	0.2108501	0.28072648	2.3100097	21	10 8.6	20.3
414107 2007 TS_{386}	17.8	X	8.58218	76.62740	240.10703	0.76052	0.2016884	0.27615632	2.3354257	21	9 26.5	19.5
414108 2007 TM_{401}	17.7	X	52.17309	345.65422	346.59894	2.47129	0.1527115	0.29245497	2.2478296	21	12 22.5	20.5
414109 2007 TZ_{448}	17.6	X	353.33100	200.29278	126.48632	3.12052	0.2276721	0.27760999	2.3272658	21	9 9.4	18.8
414110 2007 UM_{18}	17.2	X	341.01819	309.57857	47.09765	9.97058	0.2332765	0.28104661	2.3082551	21	10 3.9	18.5
414111 2007 UR_{21}	17.9	X	32.65362	105.86118	206.61298	4.45879	0.1547498	0.27979226	2.3151489	21	10 28.3	20.3
414112 2007 UD_{23}	16.9	X	31.32674	255.57884	63.02654	6.02258	0.1791515	0.28203627	2.3028523	21	11 9.2	19.4
414113 2007 UQ_{29}	18.2	X	24.74011	154.26544	170.33436	2.18548	0.2169349	0.28422096	2.2910364	21	11 14.3	20.4
414114 2007 UM_{33}	17.6	X	337.48669	111.59732	261.01927	5.08096	0.1472914	0.27952840	2.3166056	21	10 10.8	19.6
414115 2007 UW_{34}	17.3	X	326.76129	26.21820	15.84867	7.26011	0.1079230	0.28075176	2.3098710	21	11 4.9	19.4
414116 2007 UG_{35}	17.8	X	356.45931	294.52429	84.25253	4.92142	0.1588546	0.28640835	2.2793566	21	12 5.3	19.7
414117 2007 UE_{49}	18.3	X	332.87937	311.38550	82.69820	0.98185	0.2031091	0.28055986	2.3109242	21	11 10.4	19.8
414118 2007 UZ_{49}	17.9	X	309.46869	214.09787	195.74599	5.50548	0.1622635	0.27763549	2.3271233	21	10 10.9	19.8
414119 2007 UN_{63}	18.3	X	2.58936	152.31191	209.83398	1.93262	0.2184052	0.28478078	2.2880329	21	12 1.0	20.3
414120 2007 UC_{68}	17.5	X	330.52575	315.71869	66.65134	7.13028	0.1283076	0.28010965	2.3133997	21	10 17.9	19.5
414121 2007 UF_{68}	17.8	X	192.20194	100.01783	39.92712	1.86191	0.1266406	0.26991671	2.3712802	21	9 6.4	21.2
414122 2007 UN_{68}	17.7	X	15.01769	232.44871	97.84890	2.77522	0.2409902	0.28205234	2.3027648	21	11 10.2	19.8
414123 2007 UQ_{87}	18.3	X	270.93782	205.65441	264.73166	2.01566	0.1440779	0.27971065	2.3155992	21	11 1.9	20.9
414124 2007 UQ_{131}	17.6	X	199.04290	124.77681	67.58985	4.70673	0.1853119	0.28210788	2.3024625	21	11 16.5	20.9
414125 2007 UP_{138}	17.8	X	319.90851	329.51741	66.24237	6.10966	0.1635987	0.27991814	2.3144547	21	10 14.9	19.6
414126 2007 UR_{139}	17.2	X	9.02625	11.71193	316.16398	3.18358	0.2810047	0.27858973	2.3218063	21	10 29.3	19.0
414127 2007 VR_{9}	18.0	X	6.67529	115.20141	228.81759	7.98255	0.2360647	0.28086617	2.3092436	21	11 12.9	19.6
414128 2007 VS_{43}	17.8	X	28.90585	19.72139	285.91331	5.85259	0.1922797	0.27858262	2.3218458	21	10 14.9	20.2
414129 2007 VL_{50}	17.7	X	307.99651	151.47810	258.29481	6.28869	0.0853746	0.27825368	2.3236753	21	10 12.3	20.3
414130 2007 VJ_{51}	18.3	X	258.84643	83.27716	348.33523	2.81101	0.1707657	0.27110236	2.3643614	21	8 16.0	21.2
414131 2007 VA_{57}	17.8	X	4.25380	233.27276	122.72906	4.12874	0.1976514	0.28172984	2.3045218	21	11 21.5	19.9
414132 2007 VJ_{62}	17.9	X	233.88653	180.41759	263.70621	3.61335	0.1143050	0.26722431	2.3871813	21	8 7.8	21.2
414133 2007 VG_{65}	17.8	X	184.55370	90.22757	54.66246	3.44184	0.0901512	0.26680135	2.3897036	21	9 7.2	21.1
414134 2007 VQ_{84}	16.8	X	254.33890	36.72898	70.72224	25.28750	0.2430944	0.27272381	2.3549806	21	10 5.1	20.5
414135 2007 VU_{102}	17.7	X	72.64928	260.33953	44.45679	4.73984	0.1485971	0.28944822	2.2633695	21	12 8.2	20.8
414136 2007 VB_{145}	17.9	X	349.70055	192.24181	162.15811	2.84799	0.2136818	0.27784483	2.3259543	21	10 17.9	19.3
414137 2007 VC_{166}	18.0	X	25.08201	245.27930	77.45810	3.41453	0.2271791	0.27931957	2.3177601	21	11 12.9	20.2
414138 2007 VB_{217}	17.5	X	119.24327	186.50732	49.34277	8.69051	0.0895665	0.27543968	2.3394748	21	10 25.4	20.7
414139 2007 VY_{223}	17.6	X	328.84114	339.32002	58.04572	10.74342	0.1217197	0.28172744	2.3045349	21	11 5.9	19.5
414140 2007 VL_{239}	18.5	X	236.79638	181.68389	227.80066	2.54034	0.1506706	0.26255850	2.4153792	21	6 21.9	22.1
414141 2007 VQ_{247}	17.9	X	3.13866	182.14684	168.00076	5.66419	0.1475626	0.28014564	2.3132015	21	11 2.8	20.0
414142 2007 VG_{256}	18.1	X	281.12298	270.43952	175.23427	5.96268	0.0568293	0.27978062	2.3152130	21	10 28.9	20.7
414143 2007 VR_{273}	18.4	X	292.90021	283.93499	167.17143	4.40822	0.1230398	0.28142311	2.3061960	21	11 17.8	20.6
414144 2007 VC_{285}	17.3	X	40.38113	202.88128	75.17365	7.13074	0.1066670	0.26927586	2.3750410	21	9 15.1	20.1
414145 2007 VB_{292}	18.2	X	275.92225	273.49586	150.58459	1.36583	0.1674637	0.27173231	2.3607058	21	8 29.6	20.8
414146 2007 VU_{293}	17.9	X	220.15984	7.95293	110.54198	3.57396	0.1209824	0.27074408	2.3664467	21	9 9.9	21.2
414147 2007 VH_{310}	17.4	X	293.40863	108.37651	296.22696	4.95510	0.1105436	0.26674435	2.3900440	21	9 4.9	20.0
414148 2007 VE_{313}	18.5	X	224.76861	199.56165	291.04363	1.26401	0.1708913	0.27185787	2.3599788	21	9 23.5	21.7
414149 2007 VJ_{335}	17.6	X	166.65520	95.13518	87.85102	8.28394	0.1411793	0.27056782	2.3674744	21	10 9.6	21.3
414150 2007 WK_{5}	17.9	X	345.84806	296.43356	58.68041	3.71778	0.1977439	0.27738083	2.3285474	21	10 8.2	19.4
414151 2007 WG_{11}	17.6	X	282.04402	314.78753	129.08244	5.55873	0.1953346	0.27675336	2.3320657	21	10 6.9	19.9
414152 2007 WM_{26}	17.4	X	103.56907	176.88811	71.23213	7.35112	0.0799075	0.27729525	2.3290265	21	10 24.2	20.5
414153 2007 WK_{28}	18.1	X	297.80405	357.50003	22.90053	6.46321	0.1540743	0.27224121	2.3577629	21	8 5.3	20.6
414154 2007 WC_{40}	17.4	X	198.44165	232.82648	281.07399	5.64273	0.0608530	0.27454283	2.3445670	21	10 3.6	20.6
414155 2007 WO_{43}	18.3	X	336.20684	127.81190	211.80786	5.12100	0.2546967	0.27343507	2.3508950	21	8 3.8	19.8
414156 2007 XW_{5}	17.5	X	314.32597	275.69801	104.85578	7.28492	0.1973861	0.27381150	2.3487399	21	9 1.4	19.5
414157 2007 XU_{18}	16.8	X	292.67681	37.72577	44.35697	10.69281	0.2283370	0.27595305	2.3365724	21	10 18.9	18.7
414158 2007 XC_{59}	18.1	X	318.18827	248.24678	188.97339	1.11292	0.1591215	0.27630481	2.3345889	21	12 13.2	19.7
414159 2007 YC_{3}	17.7	X	336.76641	274.72335	85.08217	2.53949	0.1921107	0.27470052	2.3436697	21	9 21.4	19.3
414160 2007 YJ_{12}	18.0	X	196.14815	93.37390	14.47735	4.76062	0.1866954	0.25834715	2.4415574	21	7 27.5	21.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414161 2007 YO_{45}	17.5	X	217.89281	319.04577	144.62926	1.59280	0.1396964	0.26054950	2.4277794	21	8 14.2	20.8
414162 2007 YD_{70}	16.7	X	80.09349	267.21920	296.79987	15.16977	0.0565990	0.25225111	2.4807366	21	7 16.3	19.6
414163 2008 AF_{13}	18.0	X	277.20348	182.81795	259.50914	3.63403	0.1306673	0.26996428	2.3710016	21	10 1.4	20.8
414164 2008 AW_{32}	17.5	X	305.52612	330.40295	89.34096	3.46051	0.1896480	0.27371805	2.3492744	21	10 16.2	19.3
414165 2008 AS_{61}	18.0	X	296.13024	239.86152	160.13250	2.43428	0.2043807	0.26735507	2.3864029	21	8 20.1	20.4
414166 2008 AU_{67}	16.1	X	290.03393	296.22389	309.18565	13.88139	0.1050456	0.22648006	2.6655249	21	1 28.7	19.7
414167 2008 AX_{82}	17.8	X	169.66527	49.73801	66.55663	2.31382	0.1252805	0.25438069	2.4668720	21	7 12.3	21.6
414168 2008 AB_{89}	17.6	X	148.01860	248.70578	266.39179	0.41993	0.1265200	0.25556358	2.4592541	21	8 9.7	21.3
414169 2008 AA_{91}	17.8	X	326.01680	135.73391	222.14263	1.56391	0.2496090	0.26702647	2.3883603	21	8 9.2	19.3
414170 2008 AS_{97}	18.3	X	278.58199	67.82825	2.70082	2.14683	0.1954427	0.26852127	2.3794884	21	9 7.4	20.8
414171 2008 AG_{99}	18.0	X	277.85838	54.28875	27.13258	2.85718	0.1747615	0.26948350	2.3738208	21	9 26.4	20.4
414172 2008 AR_{102}	17.9	X	216.05376	125.88423	353.30589	3.68593	0.1534559	0.26131177	2.4230558	21	9 1.2	21.5
414173 2008 AU_{128}	18.4	X	206.11557	108.44574	19.75091	1.77524	0.1342264	0.26315509	2.4117273	21	9 4.4	21.8
414174 2008 AK_{135}	17.2	X	156.29404	111.59030	32.59624	7.91059	0.0710314	0.25472994	2.4646167	21	8 5.4	20.8
414175 2008 BE_{14}	17.9	X	239.05972	352.69800	106.12364	5.50988	0.1853968	0.26312191	2.4119300	21	8 28.3	21.3
414176 2008 BK_{32}	17.4	X	199.72336	331.49190	152.74284	11.48061	0.1039764	0.25575745	2.4580112	21	8 24.2	20.7
414177 2008 BE_{38}	17.3	X	47.29375	44.73539	163.08037	6.22439	0.1209512	0.23988932	2.5652445	21	6 11.2	20.2
414178 2008 CW	18.4	X	264.49361	73.47027	6.70422	1.49688	0.1604142	0.26731251	2.3866562	21	9 5.9	21.2
414179 2008 CA_{4}	17.7	X	223.92350	22.20200	81.35917	3.33175	0.1520760	0.26126915	2.4233192	21	8 20.9	21.2
414180 2008 CO_{6}	17.9	X	158.35815	183.48314	337.72068	0.82756	0.1202565	0.25933425	2.4353579	21	8 28.7	21.5
414181 2008 CJ_{33}	18.3	X	243.13386	54.74011	39.26555	1.77401	0.1520300	0.26179554	2.4200697	21	8 29.6	21.6
414182 2008 CF_{39}	17.7	X	324.46013	285.18279	131.61425	6.05569	0.1982242	0.27356529	2.3501490	21	11 26.4	19.4
414183 2008 CS_{65}	18.0	X	184.29737	255.07062	241.10263	1.45514	0.1651538	0.25724928	2.4484991	21	8 20.6	21.9
414184 2008 CR_{81}	16.8	X	40.90527	64.11777	138.19912	16.21848	0.0846486	0.23855177	2.5748244	21	5 23.5	20.2
414185 2008 CE_{109}	17.2	X	322.64598	34.85349	201.66081	2.96776	0.1382327	0.22499201	2.6772648	21	2 21.6	20.7
414186 2008 CN_{109}	17.2	X	6.52593	276.62194	306.44436	4.90336	0.0642595	0.23322380	2.6138910	21	4 17.9	20.3
414187 2008 CL_{137}	15.9	X	294.97189	348.46097	347.59966	8.87476	0.1877485	0.24431197	2.5341922	21	5 15.8	19.5
414188 2008 CZ_{141}	16.3	X	288.65195	160.50109	163.40714	32.45345	0.0574032	0.23888485	2.5724305	21	5 20.6	20.5
414189 2008 CG_{159}	17.8	X	242.18463	35.72971	54.59327	3.78071	0.2066655	0.25995554	2.4314761	21	8 17.4	21.3
414190 2008 CC_{171}	17.1	X	308.60841	69.48895	221.69721	4.58728	0.1630675	0.23685111	2.5871350	21	4 10.2	20.3
414191 2008 CS_{174}	16.4	X	353.79394	93.92238	181.36819	9.51671	0.1673479	0.24241174	2.5474184	21	6 9.2	18.9
414192 2008 CU_{192}	17.4	X	0.45194	325.39154	307.38260	3.04510	0.0625626	0.24570207	2.5246248	21	6 20.8	20.3
414193 2008 CZ_{197}	17.2	X	328.62746	252.46189	356.13342	7.60654	0.1610138	0.22625817	2.6672673	21	3 15.7	20.5
414194 2008 CB_{200}	16.9	X	313.51008	251.70562	2.93810	10.87910	0.0848705	0.22675780	2.6633478	21	3 14.8	20.4
414195 2008 CC_{210}	17.9	X	262.10054	84.32758	354.38021	2.09556	0.1796291	0.26299735	2.4126915	21	8 28.2	20.9
414196 2008 CK_{210}	16.9	X	304.11842	263.85669	341.31919	10.46460	0.1524115	0.22457477	2.6805798	21	2 9.9	20.6
414197 2008 CD_{215}	17.1	X	19.40717	299.41345	268.70026	3.99626	0.2020394	0.23315766	2.6143853	21	4 19.4	19.3
414198 2008 DE_{6}	18.3	X	233.20275	122.00981	329.08102	4.38229	0.1948592	0.26177572	2.4201919	21	8 8.9	21.9
414199 2008 DT_{15}	14.9	X	269.02273	150.53987	356.54732	13.39259	0.2112012	0.12655895	3.9289287	21	11 5.9	20.6
414200 2008 DW_{15}	17.0	X	55.81221	209.10017	11.06354	10.63995	0.0599187	0.24468930	2.5315862	21	7 5.1	20.3
414201 2008 DU_{36}	17.0	X	332.55325	50.55656	177.76218	9.59924	0.0479044	0.22653447	2.6650980	21	3 9.9	20.3
414202 2008 DU_{43}	17.1	X	152.95760	61.51762	4.88490	14.51129	0.0871495	0.23217552	2.6217529	21	4 14.3	21.1
414203 2008 DE_{66}	16.6	X	10.84449	223.04444	346.19933	12.52084	0.1235526	0.22764675	2.6564099	21	4 2.4	19.6
414204 2008 DF_{66}	18.1	X	347.72495	254.84406	352.29309	20.87309	0.0168550	0.37984519	1.8882738	21	4 2.4	20.0
414205 2008 DB_{67}	17.1	X	188.20082	102.27564	343.33623	10.78769	0.1057187	0.24364467	2.5388172	21	6 21.3	21.1
414206 2008 DX_{77}	17.6	X	307.57014	257.16793	6.29787	7.14168	0.0240864	0.23106338	2.6301588	21	3 25.8	21.1
414207 2008 DQ_{78}	17.3	X	63.62387	4.54237	158.69498	9.29952	0.0513525	0.23352378	2.6116520	21	4 28.3	20.7
414208 2008 ET_{6}	16.7	X	20.54745	187.83083	69.66726	9.40398	0.1142112	0.24129540	2.5552694	21	7 5.9	19.4
414209 2008 EY_{15}	16.7	X	256.28903	199.06580	176.06440	10.55966	0.1180647	0.23978106	2.5660166	21	6 3.8	20.6
414210 2008 EN_{16}	16.9	X	144.22803	94.73874	4.16518	22.09474	0.1027455	0.23636760	2.5906620	21	5 12.3	21.1
414211 2008 EY_{19}	16.0	X	256.54454	17.96946	0.06780	11.03126	0.1468459	0.24202109	2.5501589	21	5 31.4	19.9
414212 2008 EU_{22}	16.8	X	339.05066	75.99714	163.81353	5.45838	0.1091967	0.23068436	2.6330389	21	3 28.0	19.7
414213 2008 EN_{42}	16.6	X	273.92635	260.34864	21.71369	13.14991	0.1751818	0.21919490	2.7242633	21	2 24.4	21.0
414214 2008 ES_{44}	17.1	X	267.56354	250.85860	73.35735	2.06476	0.0213100	0.23111359	2.6297778	21	4 23.5	20.6
414215 2008 EF_{46}	16.4	X	271.70742	101.12007	248.62729	7.55079	0.1070590	0.23622168	2.5917288	21	5 19.6	19.9
414216 2008 EE_{70}	17.2	X	270.79109	87.43140	358.48591	21.82552	0.2544696	0.26816007	2.3816246	21	9 11.4	20.2
414217 2008 EN_{74}	17.1	X	349.76993	77.50804	135.91216	3.21969	0.1414781	0.22526495	2.6751017	21	3 5.7	20.2
414218 2008 EZ_{82}	17.7	X	97.51488	190.38548	342.78728	19.30781	0.0566736	0.38973869	1.8561812	21	6 28.4	19.9
414219 2008 EE_{126}	17.3	X	285.73917	267.00658	352.88029	1.91126	0.0472231	0.22058556	2.7128014	21	2 19.6	21.0
414220 2008 EL_{152}	17.0	X	43.50929	157.11982	70.75775	7.49353	0.1138038	0.23875249	2.5733811	21	7 2.8	19.9
414221 2008 EP_{165}	16.8	X	325.62734	214.47056	40.20008	10.29595	0.2124355	0.22594917	2.6696985	21	3 16.2	20.2
414222 2008 FZ_{6}	16.7	X	81.77900	14.02085	147.80601	13.88980	0.1281259	0.23413200	2.6071271	21	6 3.7	20.3
414223 2008 FV_{7}	16.8	X	215.12760	181.38806	178.24873	13.11174	0.0493478	0.23193846	2.6235391	21	4 2.6	20.5
414224 2008 FA_{18}	18.2	X	264.90048	177.06307	173.10398	21.45698	0.1051026	0.38685264	1.8654016	21	5 5.2	20.6
414225 2008 FS_{20}	17.5	X	140.08687	35.41628	88.69637	5.56322	0.1802616	0.24082501	2.5585957	21	6 25.3	21.3
414226 2008 FX_{28}	17.7	X	194.71895	242.41821	241.21155	1.71071	0.1424558	0.25546120	2.4599111	21	8 15.2	21.3
414227 2008 FG_{41}	16.9	X	237.82924	284.90909	54.84185	7.02848	0.0564189	0.22558497	2.6725712	21	4 5.5	20.8
414228 2008 FB_{51}	16.4	X	276.47983	330.87467	18.09562	11.42928	0.0305117	0.23802312	2.5786355	21	6 3.3	20.0
414229 2008 FV_{54}	16.7	X	65.68080	148.91046	29.46984	8.00089	0.0531167	0.23233906	2.6205225	21	5 17.9	20.0
414230 2008 FM_{69}	17.0	X	122.12691	95.40188	42.73528	12.89110	0.1228286	0.23629051	2.5912254	21	6 18.1	20.9
414231 2008 FF_{70}	16.7	X	355.72846	192.80635	40.55735	10.14138	0.1082355	0.22488073	2.6781479	21	4 17.4	19.6
414232 2008 FL_{70}	16.9	X	72.14369	144.43532	32.57436	14.75881	0.0567575	0.23088400	2.6315209	21	5 24.3	20.4
414233 2008 FS_{72}	17.0	X	311.19915	96.45326	180.80971	15.77558	0.0650537	0.22778702	2.6553192	21	4 14.4	20.5
414234 2008 FA_{74}	17.2	X	97.25719	130.74467	38.83655	15.34242	0.0350570	0.23719913	2.5846038	21	6 16.1	20.8
414235 2008 FO_{76}	17.0	X	313.03434	265.50421	54.60431	2.10878	0.0893675	0.24237878	2.5476493	21	6 8.8	19.9
414236 2008 FW_{79}	17.3	X	174.99371	197.23514	195.30617	5.27221	0.0275842	0.22637325	2.6663632	21	3 26.7	21.1
414237 2008 FX_{105}	16.8	X	233.79205	303.24351	58.74539	6.81881	0.0894965	0.23005270	2.6378564	21	4 25.2	20.7
414238 2008 FC_{106}	16.7	X	228.85410	252.70267	68.12133	6.90304	0.0359276	0.22003807	2.7172994	21	3 4.9	20.6
414239 2008 FH_{112}	16.2	X	269.38477	258.71784	56.68213	12.07609	0.0818982	0.22367711	2.6877468	21	4 10.9	20.1
414240 2008 FZ_{128}	16.6	X	199.42436	277.61763	77.25781	7.63744	0.0677925	0.21770369	2.7366894	21	3 14.4	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414241 2008 FY_{131}	17.6	X	259.05403	355.62878	102.65899	2.27104	0.1488838	0.25747850	2.4470456	21	9 25.6	20.5
414242 2008 FS_{135}	17.0	X	130.15907	256.09732	215.67058	14.51398	0.0765282	0.23163667	2.6258173	21	5 20.3	20.7
414243 2008 GW_{17}	16.8	X	192.44011	292.32255	162.94351	10.17042	0.0428870	0.24209965	2.5496072	21	7 9.3	20.5
414244 2008 GO_{21}	15.7	X	16.44146	160.12149	66.80383	16.53192	0.2167439	0.22858887	2.6491060	21	5 17.7	17.8
414245 2008 GA_{24}	17.0	X	199.35644	48.02823	32.48187	16.55156	0.0620893	0.24183360	2.5514768	21	6 27.5	21.0
414246 2008 GN_{26}	17.0	X	184.88178	4.04745	36.50484	12.32055	0.0466779	0.22616062	2.6680342	21	4 20.3	20.7
414247 2008 GS_{30}	17.3	X	317.76223	167.81727	98.98072	2.78819	0.0352657	0.22918646	2.6444990	21	4 13.0	20.7
414248 2008 GT_{31}	16.7	X	98.32320	334.27243	173.06218	11.60781	0.1212183	0.23351285	2.6117335	21	6 4.0	20.5
414249 2008 GC_{32}	13.7	X	356.58317	188.68902	66.84247	17.91859	0.0316761	0.08235254	5.2322047	21	5 30.0	20.4
414250 2008 GH_{36}	16.3	X	210.10619	6.41839	58.93420	16.20487	0.0899314	0.23704770	2.5857045	21	6 17.2	20.2
414251 2008 GY_{36}	16.2	X	350.89163	164.15392	53.15168	14.67918	0.1876432	0.22204549	2.7008973	21	3 16.2	19.4
414252 2008 GN_{37}	16.3	X	214.76292	327.01818	51.84803	12.34123	0.0105442	0.22633900	2.6666322	21	4 29.9	19.8
414253 2008 GY_{41}	16.7	X	280.41253	172.73860	85.62697	4.76358	0.0556291	0.21610091	2.7502045	21	2 12.2	20.6
414254 2008 GG_{75}	17.1	X	49.40493	58.88548	108.03416	5.82306	0.0765356	0.22631129	2.6668499	21	4 15.4	20.4
414255 2008 GD_{77}	16.9	X	252.99456	167.78362	105.17217	6.32899	0.0462465	0.21231433	2.7828076	21	1 30.2	20.8
414256 2008 GJ_{77}	13.7	X	249.86195	283.69007	90.93728	10.82703	0.0377484	0.08336632	5.1897005	21	6 9.8	20.6
414257 2008 GZ_{77}	16.7	X	165.84032	339.13766	81.91287	6.35196	0.0340701	0.22659069	2.6646572	21	4 24.8	20.5
414258 2008 GD_{78}	16.1	X	13.72003	183.76898	52.00421	14.10805	0.1963224	0.22952451	2.6419018	21	5 21.5	18.3
414259 2008 GH_{87}	17.9	X	229.32733	13.35408	107.27515	3.64050	0.2346036	0.25960331	2.4336749	21	9 9.7	21.6
414260 2008 GQ_{88}	17.4	X	215.41820	309.54521	89.16621	3.28563	0.0260537	0.23400564	2.6080655	21	5 24.8	21.0
414261 2008 GV_{88}	17.1	X	204.04908	164.22805	198.38136	9.15625	0.0650676	0.22381473	2.6866449	21	3 23.2	21.1
414262 2008 GN_{92}	18.8	X	244.80840	124.08381	199.64730	21.31841	0.0902878	0.37154802	1.9162820	21	2 21.6	21.6
414263 2008 GP_{105}	17.0	X	226.84749	307.63768	90.51489	6.54756	0.2078526	0.23972716	2.5664012	21	5 25.5	21.3
414264 2008 GN_{111}	17.9	X	14.81676	53.91686	198.93635	21.11800	0.0570933	0.38435981	1.8734585	21	6 9.1	19.8
414265 2008 GC_{113}	16.2	X	85.21478	101.01527	105.06909	13.51703	0.1206680	0.24009462	2.5637820	21	8 6.4	19.7
414266 2008 GW_{121}	17.4	X	276.09811	334.37400	114.33295	3.50143	0.1697229	0.25992110	2.4316908	21	10 4.9	20.0
414267 2008 GW_{123}	17.1	X	294.65658	254.50502	358.72705	8.48401	0.1420759	0.21876364	2.7278425	21	2 11.8	21.0
414268 2008 HP	17.1	X	83.36670	144.53805	24.00710	11.37563	0.1051949	0.23553094	2.5967934	21	6 6.4	20.6
414269 2008 HW_{11}	16.9	X	344.28857	170.05719	52.67186	10.01935	0.1525811	0.22229047	2.6989126	21	3 13.4	20.1
414270 2008 HG_{21}	16.2	X	83.01861	325.98474	222.17815	26.57957	0.1999218	0.23529655	2.5985177	21	7 12.2	20.4
414271 2008 HR_{22}	17.2	X	253.34267	81.06354	215.95986	5.01853	0.0685820	0.21956743	2.7211811	21	2 23.4	21.3
414272 2008 HZ_{32}	17.6	X	131.82675	82.24378	77.77141	5.44071	0.1666215	0.24230119	2.5481932	21	8 3.2	21.6
414273 2008 JC_{4}	15.1	X	102.48130	46.31040	235.10892	22.08541	0.1769471	0.17718362	3.1394507	21	11 25.7	20.1
414274 2008 JR_{8}	16.6	X	297.65414	220.74362	61.54452	9.24046	0.1618964	0.22633830	2.6666377	21	3 22.4	20.4
414275 2008 JO_{21}	13.8	X	329.08598	214.23833	66.06397	23.39203	0.0558958	0.08074738	5.3013167	21	5 24.0	20.6
414276 2008 JF_{32}	15.8	X	180.62637	347.22546	300.13247	16.19145	0.2763242	0.19623060	2.9328615	21	—	—
414277 2008 JU_{34}	16.9	X	227.30611	150.83407	171.39430	9.95727	0.1122087	0.21176683	2.7876019	21	2 26.4	21.1
414278 2008 JW_{35}	16.6	X	203.45367	324.36865	61.35458	7.01973	0.0727321	0.22371170	2.6874698	21	4 23.7	20.6
414279 2008 KB_{26}	17.4	X	233.90067	254.45614	70.35947	23.68649	0.0689202	0.36612755	1.9351491	21	3 2.1	20.4
414280 2008 KD_{36}	16.9	X	70.82994	96.04397	82.97891	7.90392	0.1175927	0.23145164	2.6272166	21	6 7.3	20.0
414281 2008 KA_{43}	16.3	X	56.10576	86.25636	131.18702	13.98696	0.2144959	0.23303395	2.6153104	21	7 24.9	19.4
414282 2008 MN_{3}	15.1	X	117.35699	310.10330	23.58095	27.34645	0.2339000	0.17440015	3.1727668	21	—	—
414283 2008 MW_{4}	16.8	X	126.30133	80.64426	229.22738	12.06779	0.3503410	0.18100967	3.0950538	21	—	—
414284 2008 ML_{5}	15.2	X	113.65618	219.25026	124.83070	18.18639	0.1992734	0.17904934	3.1176037	21	—	—
414285 2008 OY	17.4	X	346.90886	72.59185	127.11052	23.38374	0.0671152	0.35717747	1.9673427	21	1 19.9	19.2
414286 2008 OC_{6}	18.6	X	118.03201	295.86679	177.59771	21.84551	0.1992391	1.11155091	0.9229606	21	—	—
414287 2008 OB_{9}	17.7	X	56.58324	238.57403	202.69826	13.49699	0.7586940	0.17172597	3.2056202	21	5 1.2	22.1
414288 2008 OD_{16}	16.5	X	103.38069	77.23340	285.33324	3.99989	0.1772819	0.18260360	3.0770165	21	—	—
414289 2008 PU_{7}	15.8	X	150.85303	29.31835	285.34607	10.31878	0.1247265	0.18368468	3.0649314	21	—	—
414290 2008 PY_{14}	16.2	X	109.61552	21.19532	323.27006	15.40324	0.2059478	0.17879076	3.1206088	21	—	—
414291 2008 PF_{22}	15.5	X	94.61314	15.82037	336.70647	26.95077	0.1458480	0.17301973	3.1896201	21	—	—
414292 2008 QF_{1}	16.1	X	89.96717	205.43687	148.11328	16.20987	0.2592537	0.17406457	3.1768434	21	—	—
414293 2008 QE_{6}	15.9	X	175.96432	65.64587	231.68586	9.23394	0.0849639	0.18320806	3.0702448	21	—	—
414294 2008 QC_{12}	16.6	X	150.83375	175.90368	151.14386	3.81991	0.2350719	0.18427794	3.0583497	21	1 5.3	21.7
414295 2008 QJ_{21}	15.5	X	113.94678	15.04403	323.75379	21.86364	0.1782843	0.17691339	3.1426469	21	—	—
414296 2008 QJ_{44}	15.5	X	137.79593	261.27735	74.04579	17.55329	0.2140687	0.18070467	3.0985354	21	1 1.6	20.4
414297 2008 QY_{45}	16.1	X	108.03937	87.34670	251.37475	14.68011	0.2747300	0.17619128	3.1512276	21	—	—
414298 2008 RT_{1}	15.7	X	56.41016	83.92235	358.60172	15.49050	0.0730919	0.18228234	3.0806307	21	1 15.4	20.0
414299 2008 RV_{11}	16.4	X	184.20812	270.81994	12.55904	9.50714	0.0298668	0.17794985	3.1304321	21	—	—
414300 2008 RQ_{13}	16.0	X	192.40922	68.15543	190.79209	16.18744	0.1367610	0.17712385	3.1401569	21	—	—
414301 2008 RS_{18}	16.5	X	156.83506	130.57308	195.32377	10.31269	0.0653631	0.18137241	3.0909258	21	—	—
414302 2008 RC_{26}	16.1	X	71.58045	172.23119	227.70004	16.22778	0.1283649	0.17971256	3.1099286	21	—	—
414303 2008 RX_{29}	16.3	X	116.59614	6.99924	353.73866	1.26081	0.1134590	0.17950583	3.1123160	21	—	—
414304 2008 RA_{33}	16.4	X	42.92074	238.59102	203.29637	4.90125	0.1759015	0.17744477	3.1363697	21	—	—
414305 2008 RC_{43}	15.8	X	331.97324	121.41934	8.09220	15.07192	0.0512797	0.17336634	3.1853674	21	—	—
414306 2008 RR_{45}	16.1	X	330.82486	142.81983	13.19962	10.26822	0.0845805	0.17932891	3.1143626	21	—	—
414307 2008 RQ_{53}	16.4	X	81.13772	217.82264	182.62642	13.93994	0.1627618	0.18063726	3.0993062	21	1 3.9	20.6
414308 2008 RJ_{76}	16.2	X	121.42263	281.26658	90.80606	6.94254	0.1684332	0.18413364	3.0599474	21	1 23.1	20.7
414309 2008 RF_{79}	16.2	X	64.42097	75.95780	321.43839	11.09533	0.1685380	0.17656079	3.1468294	21	—	—
414310 2008 RM_{85}	16.1	X	99.98482	158.25146	198.82695	10.14993	0.2239320	0.17556824	3.1586785	21	—	—
414311 2008 RV_{89}	16.2	X	344.63836	137.34324	337.77861	8.48159	0.0453474	0.17207603	3.2012712	21	—	—
414312 2008 RU_{99}	15.7	X	93.47781	20.84675	3.96534	13.92664	0.0649199	0.17835621	3.1256755	21	—	—
414313 2008 RQ_{109}	16.4	X	70.08071	351.54708	65.61985	1.67287	0.1671785	0.17765415	3.1339049	21	1 10.8	20.1
414314 2008 RC_{114}	16.1	X	92.91171	7.84558	351.81365	9.50806	0.0638240	0.17552919	3.1591468	21	—	—
414315 2008 RP_{115}	16.5	X	33.70401	241.32583	181.64822	5.60188	0.1302429	0.17395761	3.1781454	21	—	—
414316 2008 RX_{117}	16.4	X	85.13231	190.20298	211.55286	9.17611	0.0872131	0.17816866	3.1278687	21	1 2.1	20.7
414317 2008 RJ_{124}	16.9	X	87.25912	27.71443	350.13883	3.15477	0.1302050	0.17714548	3.1399014	21	—	—
414318 2008 RQ_{127}	16.7	X	118.13492	201.79036	187.16280	10.60280	0.0824045	0.18501445	3.0502279	21	1 24.9	21.2
414319 2008 RF_{128}	16.2	X	171.50336	93.82658	175.87642	12.40421	0.1487464	0.17639712	3.1487757	21	—	—
414320 2008 RO_{140}	16.1	X	143.65171	109.99737	193.24875	11.22096	0.1935396	0.17697714	3.1418921	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414321 2008 RA_{141}	15.4	X	175.87909	262.35212	7.83983	25.33719	0.2407598	0.17953634	3.1119633	21	—	—
414322 2008 RP_{141}	17.1	X	60.60290	51.81518	2.34774	1.57305	0.1725864	0.17737905	3.1371443	21	—	—
414323 2008 RD_{146}	16.4	X	127.91411	90.93582	209.23920	16.30654	0.2417653	0.17213341	3.2005597	21	—	—
414324 2008 SS_{8}	16.2	X	104.81941	7.02223	338.02735	10.02701	0.1849680	0.17545732	3.1600096	21	—	—
414325 2008 SG_{25}	15.6	X	178.23940	271.63497	5.74568	25.47907	0.2237105	0.17938824	3.1136759	21	—	—
414326 2008 SU_{28}	16.1	X	116.87196	41.37125	309.94052	2.94024	0.1086019	0.17614749	3.1517499	21	—	—
414327 2008 SC_{64}	16.3	X	138.80092	117.94847	232.42436	16.93281	0.1399909	0.18516749	3.0485469	21	1 8.1	21.1
414328 2008 SH_{77}	15.9	X	6.14032	111.32310	1.02695	19.39345	0.1869872	0.17414849	3.1758226	21	—	—
414329 2008 SD_{90}	15.9	X	106.72960	328.83690	2.32905	12.87121	0.0911406	0.16920505	3.2373811	21	—	—
414330 2008 SR_{97}	16.5	X	114.27002	166.55274	209.95780	9.96944	0.1230372	0.17857841	3.1230822	21	1 12.5	21.1
414331 2008 SY_{113}	16.2	X	131.14386	301.11954	37.10207	10.75643	0.1003565	0.17594596	3.1541560	21	—	—
414332 2008 SY_{133}	16.4	X	43.89446	248.65471	181.35198	8.52910	0.2272913	0.17747887	3.1359679	21	—	—
414333 2008 SN_{151}	15.3	X	193.49258	252.22437	10.83276	26.55980	0.0687612	0.17402808	3.1772874	21	—	—
414334 2008 SC_{170}	16.3	X	177.63259	73.47501	199.55025	8.87563	0.0513414	0.17539718	3.1607318	21	—	—
414335 2008 SB_{192}	16.3	X	44.64977	326.41667	95.73271	3.39462	0.1942836	0.17023272	3.2243389	21	—	—
414336 2008 SX_{214}	16.7	X	43.28657	252.81699	181.66452	1.28949	0.0817262	0.17691179	3.1426658	21	—	—
414337 2008 SC_{218}	15.2	X	86.01810	84.70703	247.48625	19.16293	0.1917703	0.16491794	3.2932456	21	—	—
414338 2008 SD_{219}	15.9	X	62.29715	159.19101	230.29068	5.15494	0.1189390	0.17202466	3.2019084	21	—	—
414339 2008 SK_{223}	16.0	X	202.07235	271.84770	346.28688	8.61112	0.0529199	0.17539664	3.1607383	21	—	—
414340 2008 SH_{245}	15.8	X	215.99488	42.02784	211.01863	21.73522	0.0623026	0.17700585	3.1415523	21	—	—
414341 2008 SQ_{252}	16.7	X	81.44697	232.78354	160.36899	2.36909	0.1824326	0.17480057	3.1679196	21	—	—
414342 2008 SB_{253}	16.4	X	52.08278	88.22832	305.63113	2.35028	0.1509095	0.16823515	3.2498119	21	—	—
414343 2008 SK_{278}	16.1	X	70.62826	117.38401	280.33759	5.08727	0.1403956	0.17364497	3.1819589	21	—	—
414344 2008 SX_{282}	16.1	X	69.11981	204.98310	202.03952	17.50356	0.2284434	0.17638687	3.1488976	21	1 2.0	20.1
414345 2008 SW_{286}	15.4	X	93.08352	108.70569	263.70410	14.28640	0.2656417	0.17473705	3.1686873	21	1 3.2	19.6
414346 2008 SV_{287}	15.7	X	280.89876	303.72981	239.91519	4.83162	0.0725512	0.17035296	3.2228216	21	—	—
414347 2008 SD_{303}	16.2	X	160.90886	72.59874	209.39223	25.14173	0.3115317	0.17753408	3.1353177	21	—	—
414348 2008 SK_{308}	16.2	X	102.17130	125.73095	217.16105	17.08129	0.2203592	0.17215580	3.2002822	21	—	—
414349 2008 TQ_{8}	15.7	X	314.06682	337.05919	179.95039	9.16524	0.0533164	0.17422228	3.1749259	21	—	—
414350 2008 TJ_{18}	15.8	X	220.96093	38.19071	221.33849	18.61935	0.0300191	0.17247465	3.1963367	21	—	—
414351 2008 TD_{31}	16.2	X	23.38924	87.60051	33.72682	7.10668	0.1518856	0.17654957	3.1469627	21	1 12.8	19.9
414352 2008 TB_{32}	16.4	X	118.72421	205.83021	143.78001	1.56686	0.0407027	0.17270907	3.1934438	21	—	—
414353 2008 TO_{44}	16.4	X	81.75541	341.27294	35.95016	1.57612	0.1576188	0.16952830	3.2332645	21	—	—
414354 2008 TP_{50}	16.3	X	77.31215	195.13871	194.44470	9.11604	0.1103659	0.17350308	3.1836935	21	—	—
414355 2008 TO_{56}	16.6	X	97.81442	170.02356	200.08783	9.30171	0.0728505	0.17341322	3.1847932	21	—	—
414356 2008 TB_{75}	15.9	X	43.89049	138.44029	214.56324	9.23235	0.0396027	0.15575436	3.4211799	21	11 26.5	20.7
414357 2008 TL_{79}	15.8	X	333.67740	126.55376	24.66809	11.32398	0.0993153	0.17646144	3.1480105	21	—	—
414358 2008 TL_{95}	15.9	X	257.34810	13.87932	215.76003	17.31863	0.0543039	0.18032335	3.1029021	21	—	—
414359 2008 TW_{106}	16.0	X	187.17548	229.63925	27.27786	16.43096	0.2072386	0.17442177	3.1725046	21	—	—
414360 2008 TH_{112}	15.6	X	54.50286	229.65634	214.02483	26.38580	0.1893142	0.17557136	3.1586410	21	1 14.0	19.8
414361 2008 TE_{126}	15.6	X	84.46756	7.84622	356.12382	11.09692	0.0682990	0.17034752	3.2228902	21	—	—
414362 2008 TF_{128}	16.1	X	9.09444	252.39354	214.36034	15.79317	0.1221449	0.17272649	3.1932291	21	—	—
414363 2008 TU_{149}	16.2	X	131.65235	288.66684	23.84892	12.38812	0.1282042	0.17265392	3.1941238	21	—	—
414364 2008 TZ_{149}	16.3	X	137.95116	301.40714	40.34963	5.30418	0.1270149	0.17923449	3.1154563	21	—	—
414365 2008 TC_{191}	16.3	X	45.68668	251.26262	182.88286	1.21182	0.0919133	0.17394904	3.1782498	21	—	—
414366 2008 UG_{9}	16.3	X	96.46249	179.04045	192.67825	11.39092	0.1041449	0.17604996	3.1529138	21	—	—
414367 2008 UO_{15}	16.2	X	38.76936	247.08280	201.35938	15.12721	0.2686804	0.17343548	3.1845208	21	—	—
414368 2008 UN_{68}	16.1	X	358.00009	37.19134	94.92059	6.28327	0.1439418	0.17423167	3.1748117	21	—	—
414369 2008 UM_{92}	15.6	X	145.65729	255.84210	64.02454	16.92916	0.2497011	0.17667360	3.1454898	21	—	—
414370 2008 UU_{113}	16.0	X	136.65125	95.47052	229.40998	18.10253	0.1283910	0.17135530	3.2102414	21	—	—
414371 2008 UD_{134}	15.6	X	186.92528	3.18483	226.81887	13.67698	0.0274712	0.15793997	3.3895446	21	12 12.6	20.6
414372 2008 UP_{204}	15.7	X	98.83176	148.43314	242.69689	16.26091	0.2050479	0.17923856	3.1154091	21	1 19.7	20.2
414373 2008 UB_{236}	16.3	X	119.18229	107.01806	228.11897	8.69053	0.0884850	0.17145982	3.2089367	21	—	—
414374 2008 UO_{249}	15.6	X	62.14161	53.54631	28.34264	18.75359	0.2027766	0.17908521	3.1171873	21	2 11.4	19.6
414375 2008 UQ_{251}	16.0	X	122.61035	297.13551	37.79746	5.89433	0.1279632	0.16950716	3.2335334	21	—	—
414376 2008 UB_{253}	15.2	X	165.43029	266.64857	25.76221	25.75152	0.2293523	0.17870252	3.1216361	21	—	—
414377 2008 UW_{290}	15.5	X	313.81680	292.96376	242.99187	9.48492	0.0512656	0.17397291	3.1779591	21	—	—
414378 2008 UV_{309}	15.7	X	0.55619	168.93625	319.96245	6.86150	0.0125099	0.17799683	3.1298813	21	—	—
414379 2008 UR_{338}	18.2	X	286.76934	142.88639	25.79171	1.94285	0.0583376	0.31802317	2.1256750	21	—	—
414380 2008 UH_{346}	18.1	X	7.08514	331.44166	92.62786	5.84572	0.1123234	0.30831641	2.1700594	21	—	—
414381 2008 US_{361}	16.1	X	92.11767	107.69929	260.64840	10.73247	0.0865316	0.17206987	3.2013475	21	—	—
414382 2008 UU_{363}	15.1	X	138.09470	201.22151	98.81659	20.39748	0.1902902	0.16917643	3.2377462	21	—	—
414383 2008 UW_{368}	15.4	X	356.50815	340.06550	80.41998	11.88848	0.0830193	0.15604108	3.4169878	21	12 18.9	19.9
414384 2008 VA_{73}	15.3	X	47.48690	277.17448	68.01252	17.14595	0.0851565	0.15314821	3.4598831	21	11 27.1	20.1
414385 2008 WT_{9}	16.4	X	105.36950	12.26230	79.51653	2.92964	0.1542003	0.18433660	3.0577009	21	4 9.7	20.7
414386 2008 WT_{14}	15.5	X	110.58808	106.59350	229.30501	23.68384	0.1515533	0.16920634	3.2373647	21	—	—
414387 2008 WO_{91}	17.2	X	237.78032	45.96425	115.05705	5.02874	0.1082695	0.29542369	2.2327452	21	12 4.2	19.7
414388 2008 WF_{130}	18.7	X	50.95434	42.63107	325.55789	1.09977	0.1210136	0.31298464	2.1484275	21	—	—
414389 2008 XD_{51}	15.9	X	44.96574	212.11895	269.49322	9.96926	0.1228228	0.17448439	3.1717455	21	2 12.8	20.0
414390 2008 YM_{48}	17.8	X	239.18801	105.63149	79.92160	2.25707	0.0828526	0.30238526	2.1983439	21	—	—
414391 2008 YM_{54}	17.2	X	223.89984	102.30112	83.95877	5.12153	0.0599380	0.29856979	2.2170329	21	12 27.6	19.7
414392 2008 YK_{116}	18.0	X	314.65400	12.90003	105.83334	5.22089	0.0784455	0.30757829	2.1735298	21	—	—
414393 2008 YK_{149}	18.7	X	54.26074	295.43247	83.92152	1.80244	0.1937456	0.31298911	2.1484070	21	—	—
414394 2009 AE_{27}	17.9	X	8.31041	120.12892	296.48620	5.53979	0.1014113	0.30622785	2.1799152	21	—	—
414395 2009 AW_{33}	17.4	X	155.92561	203.15112	8.60428	2.92980	0.1837600	0.28680868	2.2772350	21	10 31.7	21.1
414396 2009 AU_{44}	17.7	X	129.19093	71.26506	139.07655	6.76825	0.0583649	0.28054650	2.3109975	21	10 2.7	20.8
414397 2009 AM_{50}	17.9	X	183.59568	279.89192	272.70865	2.16438	0.0876969	0.28927507	2.2642726	21	11 8.9	21.0
414398 2009 BV_{8}	15.4	X	73.97250	349.62959	127.12849	12.17319	0.0667138	0.17338138	3.1851831	21	3 23.8	19.8
414399 2009 BF_{29}	17.8	X	291.26189	3.72354	106.47094	4.18015	0.0966446	0.29919628	2.2139370	21	12 19.7	19.8
414400 2009 BY_{31}	18.2	X	42.28263	270.21050	104.66427	4.91560	0.1151423	0.30368203	2.1920813	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414401 2009 BY_{38}	17.5	X	71.01680	139.20913	123.96098	7.38923	0.1447514	0.27808167	2.3246334	21	10 14.3	20.6
414402 2009 BV_{39}	17.6	X	81.69417	155.65051	109.86068	5.50004	0.1427621	0.28091288	2.3089877	21	10 29.0	20.8
414403 2009 BY_{46}	18.0	X	234.29696	2.89906	159.34874	4.14831	0.1205226	0.29309149	2.2445739	21	11 28.8	20.7
414404 2009 BK_{47}	17.6	X	148.78811	248.61315	313.83103	5.58329	0.1397857	0.28076251	2.3098120	21	10 10.8	21.3
414405 2009 BC_{69}	17.5	X	304.00210	122.54620	319.86325	6.08674	0.0709474	0.29372643	2.2413381	21	11 29.1	19.9
414406 2009 BL_{74}	17.7	X	189.03284	45.70073	153.92359	5.34685	0.1888804	0.29036087	2.2586243	21	11 17.9	21.1
414407 2009 BE_{87}	17.5	X	143.47492	293.72276	330.31810	2.65390	0.1538069	0.29491460	2.2353140	21	12 27.3	20.9
414408 2009 BJ_{107}	18.1	X	359.39986	136.22889	269.49130	0.89430	0.0723866	0.29895410	2.2151325	21	—	—
414409 2009 BW_{110}	17.3	X	129.12704	146.64708	93.58465	3.48511	0.1746658	0.28154311	2.3055406	21	11 13.5	20.8
414410 2009 BJ_{111}	17.2	X	282.39655	130.10361	355.46930	5.56095	0.0811229	0.29620743	2.2288051	21	12 27.8	19.5
414411 2009 BP_{112}	18.2	X	249.98586	343.42162	149.48217	5.55420	0.1755267	0.28814730	2.2701768	21	11 1.2	20.9
414412 2009 BW_{148}	17.5	X	115.23809	246.26829	323.89673	6.63500	0.0583771	0.27954084	2.3165368	21	9 10.2	20.6
414413 2009 BT_{150}	17.2	X	255.10366	270.23454	259.03187	4.28518	0.0494927	0.30133468	2.2034506	21	—	—
414414 2009 BN_{151}	17.6	X	240.68472	13.75898	161.83355	5.44752	0.0860046	0.29315398	2.2442549	21	12 30.9	20.2
414415 2009 BN_{169}	18.2	X	221.20189	349.14995	151.10331	2.59898	0.1461357	0.28195062	2.3033186	21	10 7.9	21.3
414416 2009 CF_{11}	17.9	X	229.31986	320.74085	254.45621	3.79194	0.0777974	0.30258825	2.1973606	21	—	—
414417 2009 CD_{26}	17.5	X	153.55845	233.06997	4.27823	3.94706	0.1149909	0.28944604	2.2633809	21	12 2.8	20.7
414418 2009 CA_{32}	17.9	X	76.41746	240.48336	4.64499	2.12556	0.1438529	0.27176778	2.3605003	21	9 21.9	21.0
414419 2009 CR_{34}	17.9	X	182.20235	189.17223	20.07280	3.93426	0.1133616	0.29256211	2.2472808	21	11 27.5	21.0
414420 2009 CS_{54}	17.6	X	334.62554	252.53183	135.18591	6.32037	0.1152569	0.28889021	2.2662831	21	11 5.1	19.7
414421 2009 CA_{65}	18.2	X	116.95429	71.19942	125.24646	1.98331	0.1240438	0.27203382	2.3589611	21	9 1.7	21.6
414422 2009 DV_{1}	18.3	X	313.92468	290.98190	162.73902	1.78206	0.1067815	0.29816034	2.2190621	21	—	—
414423 2009 DS_{7}	18.0	X	186.66725	200.89434	317.56642	3.25164	0.1291257	0.27961869	2.3161068	21	9 23.4	21.3
414424 2009 DW_{7}	17.6	X	304.47008	147.29635	329.04930	4.80040	0.0830587	0.29765344	2.2215808	21	—	—
414425 2009 DT_{18}	17.5	X	106.00565	49.05414	164.65934	8.08722	0.0636437	0.27318021	2.3523570	21	9 5.1	20.4
414426 2009 DF_{19}	17.3	X	301.73838	318.07185	359.07054	5.80192	0.2030128	0.25728532	2.4482703	21	4 26.5	20.3
414427 2009 DU_{29}	17.9	X	356.23315	139.91049	155.26720	1.96460	0.1907154	0.26324103	2.4112024	21	7 16.5	19.4
414428 2009 DE_{36}	17.6	X	51.10955	4.43985	255.22577	0.48025	0.1611515	0.26588597	2.3951852	21	9 9.2	20.3
414429 2009 DC_{43}	17.7	X	11.62181	172.83626	84.25205	20.84166	0.4896553	0.40802437	1.8003018	21	4 7.4*	18.4
414430 2009 DD_{58}	17.8	X	166.14395	108.59389	119.57559	2.94392	0.1168292	0.28782576	2.2718672	21	12 4.9	20.9
414431 2009 DP_{71}	17.6	X	256.94178	156.94196	354.59824	5.80510	0.1173438	0.29407921	2.2395452	21	12 16.9	20.0
414432 2009 DM_{74}	17.2	X	102.45309	234.47359	18.04584	2.30256	0.1832966	0.27844644	2.3226027	21	11 3.3	20.6
414433 2009 DM_{77}	17.4	X	16.11071	83.06734	322.48670	8.91490	0.0869007	0.30081579	2.2059837	21	—	—
414434 2009 DA_{80}	17.5	X	200.34646	122.03605	44.12018	2.41901	0.0966921	0.28375805	2.2935273	21	10 23.5	20.3
414435 2009 DH_{112}	17.9	X	260.11307	150.27279	338.72389	1.56146	0.0520777	0.29110637	2.2547665	21	11 28.7	20.4
414436 2009 DN_{117}	17.9	X	284.72339	334.85831	151.11511	4.73985	0.0936438	0.29536257	2.2330532	21	12 30.4	20.1
414437 2009 DO_{119}	17.8	X	8.88849	281.03724	340.67169	5.93100	0.1055641	0.25957685	2.4338403	21	6 18.9	20.3
414438 2009 DQ_{120}	17.8	X	309.05021	98.22106	166.01950	4.93695	0.2563563	0.24261049	2.5460270	21	2 19.8	21.3
414439 2009 DQ_{122}	18.0	X	291.95523	69.16622	16.72278	2.97604	0.1124106	0.28769487	2.2725562	21	11 8.7	20.2
414440 2009 DB_{132}	17.4	X	261.26344	129.08961	16.38469	8.31593	0.1004589	0.29403755	2.2397567	21	12 17.4	19.9
414441 2009 DG_{138}	18.0	X	80.32303	62.85879	185.11838	6.09440	0.0654842	0.27242896	2.3566796	21	9 18.8	20.9
414442 2009 EK_{20}	17.4	X	130.64253	211.16200	39.97123	5.71020	0.1323560	0.28280402	2.2986825	21	11 26.3	20.8
414443 2009 EB_{29}	18.2	X	131.26659	17.32654	199.40414	2.25658	0.1266343	0.27569400	2.3380359	21	10 13.7	21.4
414444 2009 FC_{2}	17.9	X	329.68509	327.44684	122.80526	2.27262	0.0978668	0.29635835	2.2280483	21	—	—
414445 2009 FR_{23}	17.4	X	172.81129	168.04649	18.26570	5.67086	0.1074311	0.27867064	2.3213568	21	10 17.3	20.7
414446 2009 FJ_{29}	17.1	X	233.87012	345.11778	93.04432	8.64120	0.0502439	0.27145623	2.3623061	21	8 11.6	20.2
414447 2009 FM_{50}	17.2	X	205.51231	98.68295	80.09877	5.25836	0.0556794	0.28490950	2.2873437	21	11 21.3	20.2
414448 2009 FG_{60}	18.1	X	313.54955	320.29664	127.52234	4.51239	0.1370867	0.29124115	2.2540708	21	12 24.9	19.8
414449 2009 FD_{61}	18.0	X	236.52377	122.54440	350.62403	3.45984	0.0682682	0.27851841	2.3222026	21	9 28.8	20.9
414450 2009 FJ_{73}	17.7	X	173.99185	344.45997	178.73528	1.32657	0.1293501	0.27350222	2.3505102	21	9 17.3	21.1
414451 2009 FN_{76}	17.5	X	78.01507	119.24616	143.86006	3.97525	0.0715665	0.27054332	2.3676173	21	10 9.6	20.5
414452 2009 GS	17.7	X	154.97377	20.80220	176.15053	5.97043	0.1754289	0.27638394	2.3341433	21	10 13.1	21.3
414453 2009 HB_{4}	17.7	X	24.20199	148.41328	121.01992	5.55810	0.1673348	0.25950035	2.4343186	21	8 7.9	19.8
414454 2009 HX_{12}	17.5	X	225.94155	337.41563	181.70109	5.80209	0.0471184	0.28477876	2.2880437	21	11 23.2	20.3
414455 2009 HO_{17}	17.8	X	325.53320	109.76520	204.96972	8.69885	0.1364521	0.25502010	2.4627469	21	6 14.9	20.6
414456 2009 HR_{17}	17.6	X	182.32670	133.11787	33.43472	6.97681	0.0488333	0.27449192	2.3448569	21	10 6.6	20.6
414457 2009 HV_{18}	17.5	X	96.72239	96.63843	97.39524	6.17827	0.1124527	0.25844179	2.4409612	21	8 3.6	20.8
414458 2009 HH_{26}	17.4	X	305.46101	257.99605	195.44614	4.34204	0.1171668	0.28738849	2.2741711	21	12 16.3	19.4
414459 2009 HP_{34}	17.9	X	245.21407	114.52011	35.67068	5.36046	0.1362285	0.28722290	2.2750451	21	11 21.8	20.7
414460 2009 HL_{37}	17.0	X	46.68502	250.71462	42.88867	11.53182	0.0997009	0.26759435	2.3849801	21	10 14.5	19.8
414461 2009 HC_{45}	17.1	X	80.75846	183.38727	43.09398	13.28059	0.1181433	0.26232452	2.4168153	21	9 4.9	20.6
414462 2009 HB_{46}	17.5	X	122.42942	142.77628	34.67855	5.66442	0.1642245	0.26365986	2.4086482	21	8 18.3	21.1
414463 2009 HL_{50}	17.3	X	42.18939	174.38931	125.15422	6.45784	0.0434132	0.27001876	2.3706827	21	10 7.7	20.2
414464 2009 HA_{67}	18.0	X	318.61615	248.23373	194.08579	4.67406	0.1285911	0.29118513	2.2543599	21	12 26.2	19.9
414465 2009 HK_{95}	16.6	X	320.38218	270.83437	21.87766	17.47216	0.3112034	0.24277023	2.5449100	21	4 6.5	19.4
414466 2009 KQ_{7}	17.6	X	75.98880	166.89673	53.96365	2.17331	0.1413199	0.26062040	2.4273391	21	8 18.3	20.6
414467 2009 KD_{14}	17.2	X	282.60474	19.04021	90.65864	25.92381	0.2071694	0.28414357	2.2914524	21	11 23.1	19.6
414468 2009 KM_{14}	13.2	X	225.81243	234.39918	145.65127	18.30315	0.0533723	0.08258739	5.2222810	21	5 23.6	20.5
414469 2009 KK_{23}	17.6	X	258.64363	350.01063	105.81396	7.58978	0.0754351	0.27231405	2.3573425	21	10 8.4	20.5
414470 2009 MQ_{8}	16.2	X	219.55046	233.35390	107.40551	15.12118	0.2251938	0.22133715	2.7066567	21	3 16.3	21.1
414471 2009 OP_{2}	16.2	X	227.63939	52.07983	298.43650	16.53978	0.2228800	0.22391817	2.6858174	21	3 18.9	21.1
414472 2009 OH_{3}	16.8	X	264.34451	350.81387	294.55445	6.22537	0.2306749	0.22280413	2.6947629	21	2 7.4	21.2
414473 2009 OQ_{4}	17.2	X	307.34008	165.82380	135.92374	8.10848	0.2276667	0.23542393	2.5975803	21	4 17.1	20.6
414474 2009 OJ_{11}	16.8	X	253.63842	178.31549	139.67494	13.41824	0.2321879	0.22378426	2.6868888	21	3 12.5	21.3
414475 2009 OJ_{24}	15.8	X	187.32736	93.96047	268.43271	12.69501	0.1862150	0.21139672	2.7908547	21	3 4.5	20.8
414476 2009 OQ_{24}	17.4	X	226.77810	74.96444	249.25639	1.08149	0.1881428	0.21758551	2.7376803	21	2 25.5	21.8
414477 2009 PH_{2}	16.0	X	174.76054	91.52075	306.39585	13.40969	0.1994224	0.21795867	2.7345547	21	4 4.6	20.9
414478 2009 PG_{6}	16.2	X	325.93636	225.57155	48.25194	13.22192	0.1520201	0.23401727	2.6079791	21	4 18.9	19.2
414479 2009 PK_{9}	16.6	X	154.32176	78.16787	349.82371	12.27569	0.1947704	0.21529320	2.7570787	21	4 25.7	21.4
414480 2009 PY_{18}	16.2	X	27.60878	185.20979	356.77451	9.36473	0.0375595	0.21777953	2.7360541	21	3 28.4	19.6

* The additional opposition: 10 8.5, $V = 19.3$

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414481 2009 PP_{21}	16.8	X	211.30439	115.09750	219.10955	13.33094	0.1264753	0.21368322	2.7709101	21	2 21.0	21.5
414482 2009 QC_{3}	17.1	X	187.04534	187.19364	180.69682	5.45792	0.0458932	0.21609510	2.7502538	21	3 11.9	21.0
414483 2009 QD_{15}	16.4	X	160.40725	60.32974	346.03462	12.11030	0.1249476	0.21352122	2.7723114	21	4 1.6	20.8
414484 2009 QF_{32}	17.8	X	182.11410	25.73462	336.27184	3.67419	0.2127781	0.21318124	2.7752582	21	3 6.6	22.6
414485 2009 QR_{35}	16.5	X	275.77170	163.43195	136.28480	5.13176	0.0684320	0.22233485	2.6985534	21	3 28.6	20.2
414486 2009 QE_{53}	16.2	X	186.68523	56.61079	301.44730	9.73040	0.1467437	0.21042597	2.7994314	21	2 28.6	20.8
414487 2009 QV_{54}	17.0	X	149.39279	184.37860	176.29729	10.00919	0.0456852	0.20406906	2.8572699	21	1 19.5	21.2
414488 2009 QS_{57}	16.2	X	136.74860	91.82586	339.21574	12.44277	0.1908700	0.21100363	2.7943198	21	4 12.7	20.8
414489 2009 QT_{58}	16.4	X	85.83675	131.20066	320.25684	2.82633	0.0603490	0.20927878	2.8096523	21	2 24.5	20.2
414490 2009 QG_{60}	16.8	X	191.06748	142.32562	201.84407	9.10702	0.2325644	0.21117390	2.7928175	21	2 19.4	21.8
414491 2009 RP_{4}	16.8	X	202.23838	148.40084	184.53555	7.83103	0.2254318	0.21191059	2.7863411	21	2 15.5	21.6
414492 2009 RK_{7}	16.7	X	255.74364	102.58680	201.99443	11.95968	0.2199219	0.21872926	2.7281283	21	2 21.9	21.4
414493 2009 RG_{8}	16.8	X	100.70592	277.49398	202.43709	6.90677	0.1811928	0.21178717	2.7874234	21	5 10.8	20.7
414494 2009 RW_{10}	17.0	X	163.53891	5.64847	330.39582	1.27127	0.0950874	0.19888584	2.9066995	21	1 13.5	21.4
414495 2009 RT_{12}	16.6	X	203.84576	184.00747	183.23404	11.83142	0.1213405	0.21427075	2.7658426	21	3 31.1	20.9
414496 2009 RE_{15}	16.6	X	170.91841	218.86250	183.32310	4.53131	0.0732045	0.21296072	2.7771737	21	4 8.4	20.6
414497 2009 RW_{21}	16.5	X	122.87874	270.66643	171.73757	21.76814	0.0654446	0.21844008	2.7305355	21	4 4.0	20.4
414498 2009 RC_{47}	17.2	X	168.43577	44.57596	310.00697	1.10756	0.0779575	0.20273164	2.8698224	21	2 7.4	21.3
414499 2009 RX_{48}	17.1	X	155.47799	324.20087	24.18607	2.21347	0.0743205	0.19792387	2.9161102	21	1 18.1	21.3
414500 2009 RZ_{70}	18.3	X	290.24975	159.13913	223.26313	20.47194	0.1292294	0.40604939	1.8061347	21	7 24.2	20.4
414501 2009 RK_{76}	16.1	X	176.84355	82.72798	276.45649	12.81181	0.0685364	0.20928989	2.8095529	21	2 14.9	20.6
414502 2009 SE_{1}	13.3	X	334.39898	60.71299	228.20508	28.03332	0.0549742	0.08438380	5.1478986	21	6 7.1	20.1
414503 2009 SX_{8}	16.9	X	152.87169	148.45333	227.86427	4.19225	0.2728049	0.20565915	2.8425232	21	3 3.0	21.8
414504 2009 SZ_{11}	17.2	X	188.66363	158.05702	191.52342	4.07147	0.0791632	0.20968735	2.8060015	21	2 20.7	21.4
414505 2009 SL_{12}	16.8	X	136.10358	280.01960	183.27734	7.26941	0.0599087	0.22151757	2.7051868	21	5 15.7	20.7
414506 2009 SP_{14}	17.0	X	179.99562	103.02736	239.46795	3.74351	0.1692198	0.20619366	2.8376087	21	2 8.0	21.6
414507 2009 SF_{16}	16.3	X	220.41335	303.82181	18.44172	13.50449	0.2008030	0.21243973	2.7817124	21	2 24.3	21.2
414508 2009 SF_{17}	17.2	X	179.41292	178.89306	185.43689	3.54212	0.1084327	0.21123337	2.7922933	21	3 2.6	21.5
414509 2009 SZ_{20}	15.4	X	160.01285	245.93601	159.53911	42.78667	0.2201662	0.21191057	2.7863412	21	4 13.4	20.6
414510 2009 SE_{27}	16.2	X	354.81091	195.38041	8.52219	9.20443	0.0940103	0.21185049	2.7868680	21	3 10.3	19.5
414511 2009 SK_{29}	17.0	X	217.55216	159.56063	178.03245	3.43907	0.0977549	0.21099956	2.7943557	21	3 8.4	21.1
414512 2009 SH_{30}	16.9	X	177.73625	304.14511	40.71975	2.49120	0.0740021	0.20295450	2.8677212	21	2 6.3	21.1
414513 2009 SJ_{30}	16.9	X	188.46259	183.72865	146.69735	2.69559	0.0667714	0.20234934	2.8734359	21	1 29.9	21.1
414514 2009 SU_{37}	16.4	X	203.38016	51.34580	206.34528	15.40173	0.1228886	0.18886242	3.0086547	21	—	—
414515 2009 SB_{40}	16.7	X	143.97087	301.97507	19.76904	9.52489	0.0677842	0.18828425	3.0148107	21	—	—
414516 2009 SC_{40}	17.0	X	156.93249	64.57816	283.08135	1.01253	0.1068087	0.19747433	2.9205341	21	1 21.5	21.4
414517 2009 SY_{40}	17.4	X	207.70223	180.33255	193.49558	2.58481	0.1080595	0.21889934	2.7267150	21	4 11.4	21.6
414518 2009 SU_{43}	16.5	X	211.19553	35.97011	246.04222	5.00159	0.1630402	0.19666105	2.9285804	21	—	—
414519 2009 SU_{50}	16.9	X	187.89515	162.67644	162.26550	2.30672	0.0902251	0.20394728	2.8584073	21	1 23.4	21.3
414520 2009 SL_{53}	16.9	X	184.88364	160.44204	197.15788	13.46661	0.2417625	0.20930001	2.8094624	21	3 2.6	22.0
414521 2009 SU_{53}	16.2	X	168.21830	337.13475	25.07105	10.46715	0.1028852	0.20441143	2.8540786	21	2 22.6	20.7
414522 2009 SF_{54}	16.4	X	158.81894	258.48368	30.03752	11.53343	0.1085435	0.18676297	3.0311601	21	—	—
414523 2009 SR_{67}	17.0	X	155.56963	241.01048	68.59558	4.98369	0.2214095	0.19176167	2.9782525	21	—	—
414524 2009 SE_{71}	17.3	X	261.66501	15.67903	316.08949	1.76440	0.0449647	0.22172299	2.7035157	21	4 22.0	21.1
414525 2009 SM_{75}	16.8	X	209.73427	349.81353	67.25629	6.29922	0.1584559	0.22242719	2.6978065	21	6 4.7	21.2
414526 2009 SO_{78}	16.1	X	336.26539	341.88482	231.10389	7.85448	0.0789579	0.21047494	2.7989971	21	2 18.9	19.9
414527 2009 SB_{82}	16.9	X	222.11571	341.38415	354.66688	5.80935	0.0377117	0.21457456	2.7632313	21	3 13.3	20.8
414528 2009 SV_{86}	16.9	X	213.92287	221.82541	110.51122	1.67465	0.1579907	0.21270553	2.7793945	21	2 26.3	21.3
414529 2009 SX_{96}	15.5	X	162.37868	22.45748	262.66049	9.92085	0.0920489	0.18973946	2.9993762	21	—	—
414530 2009 SV_{98}	15.9	X	234.21634	13.44577	274.97121	11.96375	0.1269434	0.21145577	2.7903351	21	1 21.9	20.4
414531 2009 SL_{99}	16.8	X	180.57896	148.77201	190.79292	12.41122	0.1797809	0.20472457	2.8511675	21	2 4.4	21.7
414532 2009 SM_{103}	16.8	X	172.77143	26.24377	300.33093	12.69696	0.5544786	0.20569170	2.8422233	21	1 31.7	22.8
414533 2009 SS_{114}	16.9	X	125.18255	181.85305	248.17038	4.27116	0.0656382	0.20936987	2.8088374	21	3 18.7	20.8
414534 2009 SZ_{121}	16.6	X	184.09825	156.27051	204.82657	5.25133	0.1420001	0.20851926	2.8164709	21	3 4.0	21.2
414535 2009 SH_{131}	16.9	X	139.29435	320.66946	73.79360	3.21721	0.1013264	0.20271019	2.8700249	21	2 28.1	21.0
414536 2009 SK_{132}	17.2	X	118.15040	248.30407	139.24260	3.25519	0.1059441	0.19684126	2.9267926	21	1 26.2	21.1
414537 2009 SZ_{135}	16.5	X	103.58200	143.89654	207.72658	8.30626	0.0863631	0.18527326	3.0473866	21	—	—
414538 2009 SY_{144}	17.3	X	154.85195	325.09549	90.43476	1.82683	0.0672894	0.21492722	2.7602077	21	4 6.9	21.1
414539 2009 SJ_{151}	16.1	X	78.89397	143.76967	287.35823	1.13329	0.0385954	0.19965445	2.8992348	21	1 20.3	19.9
414540 2009 SZ_{153}	17.3	X	108.84418	238.40733	180.85146	1.49086	0.1659260	0.20148290	2.8816679	21	3 2.5	21.3
414541 2009 SX_{154}	16.7	X	243.46403	94.44075	167.73288	11.29590	0.1013106	0.20607592	2.8386895	21	1 3.4	21.3
414542 2009 SN_{156}	16.4	X	321.39210	210.00043	18.31877	14.57981	0.1016646	0.20992439	2.8038888	21	2 25.2	20.3
414543 2009 SO_{158}	17.2	X	82.06867	72.68538	346.53402	5.65114	0.1799843	0.19268614	2.9687188	21	1 31.0	20.8
414544 2009 SW_{166}	16.6	X	245.26477	335.14351	26.82041	14.96765	0.1554424	0.22231627	2.6987038	21	4 29.0	20.8
414545 2009 SN_{168}	16.7	X	127.60063	287.44005	150.18478	7.29262	0.0787933	0.21399665	2.7682038	21	4 6.0	20.6
414546 2009 SR_{169}	16.4	X	230.93736	308.38400	358.02378	14.24857	0.1017864	0.21102177	2.7941596	21	2 16.8	20.8
414547 2009 SZ_{184}	16.3	X	215.24137	23.38653	242.99120	5.66676	0.1929123	0.19584475	2.9367125	21	—	—
414548 2009 SU_{188}	16.0	X	273.36081	214.88533	59.40095	10.15598	0.1160299	0.20825231	2.8188773	21	2 21.1	20.3
414549 2009 SA_{191}	16.9	X	172.90509	14.30635	309.86375	4.00968	0.1103980	0.19908298	2.9047803	21	1 10.3	21.3
414550 2009 SL_{215}	17.1	X	126.78264	219.10150	188.39916	9.13373	0.1321901	0.20446354	2.8535936	21	3 2.4	21.3
414551 2009 ST_{217}	17.3	X	220.10676	109.92118	199.05256	7.04514	0.2150823	0.21174946	2.7877544	21	2 1.2	22.2
414552 2009 SD_{239}	16.9	X	151.28214	146.31063	237.46309	5.34666	0.2733970	0.20585653	2.8407060	21	3 9.9	21.8
414553 2009 SP_{241}	15.2	X	298.62691	222.29981	238.73413	18.13153	0.1123770	0.17000203	3.2272552	21	11 15.7	19.3
414554 2009 SK_{259}	17.3	X	178.24836	330.98969	37.91923	3.12308	0.1237403	0.21051834	2.7986124	21	3 9.7	21.6
414555 2009 SX_{262}	16.9	X	133.79796	45.18411	40.23963	5.32972	0.2047002	0.21158175	2.7892274	21	5 4.1	21.4
414556 2009 SC_{265}	16.5	X	174.42748	55.25352	249.60016	3.04721	0.1697637	0.19302321	2.9652617	21	—	—
414557 2009 SJ_{274}	16.6	X	201.36301	256.68548	41.89269	3.23838	0.1547500	0.20102932	2.8860008	21	1 8.7	21.3
414558 2009 SU_{274}	16.2	X	172.40800	311.81759	21.78703	10.35736	0.1291176	0.20063340	2.8897963	21	1 24.9	20.9
414559 2009 SQ_{281}	16.8	X	193.10462	311.25948	48.59336	6.90040	0.0561919	0.20952532	2.8074479	21	3 13.7	21.0
414560 2009 SD_{296}	16.8	X	192.90768	250.89016	124.72350	7.42721	0.0647384	0.21038543	2.7997910	21	4 2.1	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414561 2009 SW_{299}	16.0	X	306.29541	190.86377	29.70618	9.60327	0.0689659	0.20451076	2.8531544	21	1 29.8	20.1
414562 2009 SU_{300}	16.3	X	43.70499	297.51990	175.96840	4.92599	0.1187537	0.19949165	2.9008119	21	1 28.2	19.6
414563 2009 SY_{300}	17.2	X	113.31727	287.86284	174.09417	2.83828	0.1484530	0.21094157	2.7948678	21	4 28.0	21.1
414564 2009 SM_{305}	16.2	X	318.31671	261.94164	330.25396	13.38931	0.0731769	0.21408616	2.7674322	21	2 22.3	19.9
414565 2009 SV_{316}	16.6	X	47.72838	163.57409	5.53334	18.29800	0.0784699	0.21732545	2.7398639	21	4 9.8	20.0
414566 2009 SM_{320}	16.5	X	189.34058	137.49961	230.32683	12.64369	0.2107160	0.21239143	2.7821341	21	3 15.2	21.5
414567 2009 SA_{323}	15.6	X	286.38698	175.41912	20.64130	10.11134	0.0633995	0.18991491	2.9975287	21	—	—
414568 2009 ST_{325}	18.0	X	179.06072	224.02637	186.12820	22.21484	0.0758632	0.38239784	1.8798611	21	4 13.1	20.0
414569 2009 SB_{331}	16.2	X	196.74395	322.18810	14.35398	13.77431	0.1959491	0.20942612	2.8083344	21	2 22.3	21.1
414570 2009 SW_{331}	16.4	X	202.70126	299.78027	94.19772	10.70474	0.2150571	0.21472212	2.7619651	21	5 3.9	21.3
414571 2009 SZ_{332}	17.9	X	240.22613	132.01871	182.31465	22.69252	0.0795948	0.37985109	1.8882542	21	2 2.6	20.7
414572 2009 SZ_{350}	16.1	X	302.07319	177.77157	51.16070	10.64238	0.0162676	0.20270199	2.8701023	21	2 12.9	20.2
414573 2009 SO_{354}	16.3	X	304.90366	130.63052	43.67260	6.49955	0.0813476	0.18448981	3.0560078	21	—	—
414574 2009 SX_{355}	16.9	X	64.65895	52.45826	31.59469	4.30956	0.1212361	0.19033687	2.9930968	21	1 29.0	20.5
414575 2009 SN_{356}	16.1	X	137.60282	273.41452	33.67190	12.95132	0.1667087	0.18351004	3.0668756	21	—	—
414576 2009 SE_{357}	16.9	X	118.25421	263.07881	204.66872	8.51295	0.1892088	0.21071302	2.7968884	21	5 16.1	21.1
414577 2009 SO_{357}	16.0	X	141.00393	257.81783	44.33104	8.88535	0.1160529	0.18040349	3.1019831	21	—	—
414578 2009 SF_{358}	17.1	X	143.29124	163.03752	221.36482	1.28032	0.0777726	0.20315848	2.8658013	21	2 15.4	21.1
414579 2009 SG_{360}	15.9	X	64.91995	353.40799	63.61332	10.11922	0.0998562	0.18823697	3.0153155	21	—	—
414580 2009 ST_{362}	16.5	X	97.97749	141.82739	202.32045	6.00045	0.1820124	0.18554066	3.0444579	21	—	—
414581 2009 SY_{363}	16.2	X	9.07307	264.62844	182.73146	10.04871	0.0379087	0.18415958	3.0596600	21	—	—
414582 2009 TB_{9}	17.5	X	202.29405	356.26457	34.57857	21.93972	0.0760806	0.38402341	1.8745524	21	4 16.0	19.4
414583 2009 TK_{18}	16.7	X	104.68011	351.37366	4.46563	6.70640	0.2271089	0.18925714	3.0044700	21	—	—
414584 2009 TH_{42}	16.7	X	143.89846	171.51446	215.74966	9.38677	0.0447349	0.20042023	2.8918450	21	2 13.2	21.0
414585 2009 UU_{18}	15.4	X	35.84757	209.50560	197.43390	29.19661	0.2607324	0.17813588	3.1282524	21	—	—
414586 2009 UV_{18}	16.0	X	9.87270	62.63957	86.78301	8.34062	0.6326858	0.17415171	3.1757835	21	—	—
414587 2009 UP_{23}	16.0	X	334.90125	97.04718	35.32631	9.40735	0.0993305	0.18387243	3.0628447	21	—	—
414588 2009 US_{27}	16.3	X	39.24243	117.60798	78.37339	6.39686	0.0078078	0.21215248	2.7842227	21	5 4.4	20.1
414589 2009 UW_{29}	17.5	X	111.41560	26.37943	43.41878	7.07245	0.2104047	0.19900355	2.9055532	21	3 27.6	21.7
414590 2009 UJ_{31}	17.0	X	109.55021	145.61002	234.30120	2.35278	0.1421117	0.19026977	2.9938005	21	1 12.7	21.1
414591 2009 UO_{33}	16.7	X	143.61816	302.29676	51.58734	11.56018	0.0684956	0.19071525	2.9891366	21	1 13.1	21.2
414592 2009 UM_{39}	16.9	X	62.11697	265.20911	186.52974	2.04874	0.1982931	0.19003743	2.9962402	21	2 10.8	20.2
414593 2009 UM_{40}	17.0	X	169.90973	203.71349	187.92229	4.87011	0.0349285	0.21393501	2.7687355	21	3 21.5	20.9
414594 2009 UM_{53}	15.5	X	114.50903	297.54497	47.88603	17.26276	0.2015133	0.18452500	3.0556192	21	—	—
414595 2009 UF_{57}	16.9	X	128.53082	54.73935	348.49015	1.83627	0.0161581	0.19903111	2.9052850	21	2 14.7	21.0
414596 2009 UE_{60}	17.2	X	148.60322	204.07079	171.30499	6.04915	0.1788829	0.20293395	2.8679148	21	2 20.2	21.7
414597 2009 UY_{71}	16.7	X	167.88550	274.16014	85.37876	3.20602	0.0793936	0.20287600	2.8684609	21	2 14.1	21.0
414598 2009 UZ_{81}	15.8	X	320.08059	100.57643	34.93192	9.78156	0.1266629	0.17869662	3.1217047	21	—	—
414599 2009 UF_{89}	16.0	X	74.51295	224.72488	240.74776	13.93853	0.2411267	0.19723644	2.9228820	21	3 21.8	19.8
414600 2009 UT_{89}	16.1	X	43.26411	90.29393	26.92951	13.32296	0.1075626	0.19422684	2.9529985	21	2 9.5	19.9
414601 2009 UE_{102}	16.3	X	112.92382	23.70729	51.68818	15.95879	0.1223245	0.20187517	2.8779337	21	3 29.5	20.6
414602 2009 UJ_{105}	16.4	X	149.11693	159.78556	227.06685	12.73359	0.1860168	0.19987283	2.8971226	21	3 3.2	21.3
414603 2009 UL_{106}	17.0	X	67.34997	35.82819	41.10178	1.26103	0.1502822	0.18835844	3.0140190	21	1 26.8	20.4
414604 2009 UM_{106}	15.8	X	328.20576	88.05638	53.99048	16.32757	0.1983891	0.17598147	3.1537317	21	—	—
414605 2009 UO_{106}	16.6	X	107.22045	110.13398	236.51680	9.00900	0.1993581	0.18209373	3.0827577	21	—	—
414606 2009 UG_{108}	15.7	X	208.31580	172.13076	54.78451	13.48186	0.0611424	0.17430285	3.1739474	21	—	—
414607 2009 US_{108}	16.1	X	63.71041	2.72815	50.98919	12.01476	0.0772722	0.18497448	3.0506672	21	—	—
414608 2009 UL_{115}	17.1	X	74.58799	212.66007	181.56788	3.46947	0.0341405	0.18868019	3.0105916	21	—	—
414609 2009 UM_{132}	15.4	X	57.89350	154.30792	239.97419	26.84609	0.1280319	0.18159581	3.0883903	21	—	—
414610 2009 UF_{134}	16.1	X	189.20726	243.34668	45.49291	12.09971	0.0782256	0.18949975	3.0019050	21	—	—
414611 2009 UT_{140}	16.1	X	347.23987	223.21373	258.80862	8.63135	0.0371826	0.18045456	3.1013979	21	—	—
414612 2009 UD_{143}	16.9	X	11.19708	51.81692	76.42756	2.11470	0.2159571	0.18415623	3.0596971	21	—	—
414613 2009 UH_{144}	16.4	X	34.88106	216.80374	219.86527	6.14154	0.1107436	0.18142430	3.0903363	21	—	—
414614 2009 UM_{144}	15.7	X	1.74161	90.05678	2.72019	16.85664	0.1703730	0.17940628	3.1134671	21	—	—
414615 2009 UP_{147}	15.7	X	141.87540	256.98733	58.55800	13.80832	0.1900145	0.18212865	3.0823636	21	—	—
414616 2009 US_{147}	16.1	X	33.42539	190.59905	249.03241	9.61328	0.0374755	0.18089543	3.0963567	21	—	—
414617 2009 UU_{150}	15.9	X	134.27731	262.12889	54.59108	12.32506	0.0662412	0.18092720	3.0959942	21	—	—
414618 2009 UQ_{151}	16.0	X	50.35474	340.53296	84.35839	11.91186	0.2084640	0.17727175	3.1384101	21	—	—
414619 2009 UU_{154}	16.9	X	84.67336	160.19577	228.95016	10.65328	0.1273374	0.18961712	3.0006662	21	—	—
414620 2009 VU_{3}	16.2	X	32.54680	81.39234	36.25736	10.48452	0.0718119	0.19109070	2.9852200	21	1 21.2	20.2
414621 2009 VN_{5}	15.7	X	52.45828	153.79481	241.95007	14.89780	0.1065411	0.18020036	3.1043137	21	—	—
414622 2009 VS_{11}	16.8	X	77.41778	145.73532	256.91130	1.70471	0.0671190	0.18661133	3.0328019	21	—	—
414623 2009 VK_{12}	16.6	X	149.87912	337.69536	38.96535	12.45088	0.0770352	0.19842746	2.9111743	21	2 20.6	21.1
414624 2009 VR_{12}	17.0	X	169.16324	346.44398	357.25496	1.71208	0.1042508	0.19653601	2.9298224	21	1 29.7	21.4
414625 2009 VT_{18}	16.5	X	135.54796	106.16616	254.17407	7.20129	0.0240954	0.18945188	3.0024107	21	1 3.9	20.8
414626 2009 VK_{19}	17.2	X	40.68763	285.39710	169.95413	0.93225	0.1684545	0.18470592	3.0536237	21	1 6.3	20.3
414627 2009 VM_{20}	16.7	X	28.36652	69.47361	8.65430	5.73124	0.0222155	0.18356897	3.0662192	21	—	—
414628 2009 VO_{22}	16.0	X	318.77298	315.99570	190.86707	3.30894	0.1332953	0.17641921	3.1485129	21	—	—
414629 2009 VX_{24}	16.4	X	181.16918	111.27645	221.21276	12.17643	0.1438682	0.20467126	2.8516626	21	1 25.1	21.2
414630 2009 VM_{29}	15.5	X	265.46122	180.63879	51.15892	11.52008	0.0997428	0.18876326	3.0097083	21	—	—
414631 2009 VZ_{31}	17.0	X	125.30049	221.92557	171.98470	2.24061	0.0933569	0.19711510	2.9240813	21	2 9.4	21.1
414632 2009 VW_{34}	16.5	X	347.27715	116.38705	42.26480	15.44041	0.2398463	0.18488983	3.0515983	21	—	—
414633 2009 VJ_{37}	16.2	X	140.95761	91.18975	274.05554	2.43928	0.1892712	0.19423078	2.9529585	21	2 3.4	20.8
414634 2009 VL_{37}	16.1	X	92.47662	6.57824	51.24064	10.84535	0.0973347	0.19142509	2.9817425	21	2 3.9	20.3
414635 2009 VY_{37}	15.9	X	128.59130	280.23875	61.75303	15.90576	0.2622458	0.18738567	3.0244411	21	1 5.2	20.7
414636 2009 VR_{42}	16.5	X	58.26611	13.31415	41.79673	5.05348	0.1704465	0.18397231	3.0617360	21	—	—
414637 2009 VS_{42}	16.1	X	72.39194	5.41578	30.23680	9.63661	0.1397868	0.18357833	3.0661150	21	—	—
414638 2009 VU_{46}	16.2	X	342.08443	76.45925	70.09560	11.37255	0.0442482	0.18528629	3.0472438	21	—	—
414639 2009 VB_{60}	15.6	X	17.97789	195.92091	233.19339	23.91273	0.2056054	0.17469722	3.1691689	21	—	—
414640 2009 VZ_{61}	16.2	X	44.52152	206.31155	238.47445	12.10032	0.0901788	0.18477686	3.0528420	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
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414641 2009 VM_{62}	16.4	X	119.19689	327.70490	62.52533	11.33787	0.1037366	0.19155943	2.9803484	21	2 4.2	20.8
414642 2009 VA_{64}	16.3	X	106.47664	164.28376	242.79685	7.38233	0.1379333	0.19090018	2.9872059	21	2 7.6	20.5
414643 2009 VT_{64}	16.6	X	146.21782	350.22080	37.38511	8.14184	0.0522491	0.19809399	2.9144404	21	2 24.9	20.9
414644 2009 VX_{64}	16.8	X	107.72580	100.52106	294.04799	4.11977	0.1346195	0.19084354	2.9877969	21	1 27.2	20.8
414645 2009 VP_{66}	15.9	X	208.21755	9.55890	258.82150	8.14768	0.0404927	0.18336690	3.0684715	21	—	—
414646 2009 VV_{67}	16.2	X	84.36817	153.13370	251.50931	8.29878	0.1486923	0.18646345	3.0344052	21	1 10.4	20.1
414647 2009 VX_{67}	17.1	X	64.81542	70.50795	344.23660	1.75449	0.1543188	0.18360397	3.0658296	21	—	—
414648 2009 VA_{69}	16.5	X	60.84117	151.00451	261.82758	8.29937	0.1158394	0.18114918	3.0934644	21	—	—
414649 2009 VG_{71}	16.2	X	94.43450	356.47975	60.78334	11.04782	0.1020836	0.18921073	3.0049612	21	2 6.9	20.4
414650 2009 VL_{80}	16.6	X	135.06178	258.26462	96.81359	14.39297	0.2692301	0.19523110	2.9428631	21	1 26.8	21.3
414651 2009 VU_{81}	16.1	X	36.47960	53.67670	49.49294	11.55166	0.0438969	0.18778412	3.0201613	21	1 7.5	20.2
414652 2009 VF_{83}	16.3	X	70.05950	177.72704	261.18334	8.43674	0.0423912	0.19203667	2.9754086	21	1 18.7	20.3
414653 2009 VF_{94}	16.7	X	95.22633	39.52106	50.21864	2.95953	0.0828892	0.19741464	2.9211228	21	3 13.7	20.6
414654 2009 VJ_{94}	16.8	X	128.03562	2.87548	61.32144	2.99273	0.0670938	0.20165377	2.8800398	21	3 19.6	20.8
414655 2009 VR_{103}	16.3	X	67.42110	317.09583	91.57029	12.65178	0.2384881	0.17781782	3.1319815	21	1 4.5	19.8
414656 2009 VT_{116}	16.1	X	141.99541	268.90217	54.56722	10.82139	0.0969235	0.18629192	3.0362676	21	—	—
414657 2009 WR_{4}	16.3	X	125.87736	276.44547	66.57879	17.37860	0.1432599	0.18563467	3.0434300	21	—	—
414658 2009 WZ_{9}	15.8	X	58.28795	204.54827	226.06896	16.01697	0.2420647	0.18438135	3.0572061	21	1 10.1	19.3
414659 2009 WM_{11}	16.9	X	40.85920	197.67600	227.22850	4.35624	0.2005038	0.18013789	3.1050315	21	—	—
414660 2009 WW_{26}	16.2	X	27.13614	203.07791	245.94476	9.20894	0.0477680	0.18271080	3.0758128	21	—	—
414661 2009 WB_{31}	16.3	X	87.04469	176.43590	248.10424	8.03072	0.0931541	0.18936857	3.0032913	21	1 29.2	20.4
414662 2009 WM_{34}	15.8	X	45.05845	242.01348	248.81674	14.22873	0.0761079	0.19168677	2.9790283	21	2 15.5	19.9
414663 2009 WW_{34}	16.7	X	32.78588	34.17798	53.62234	1.90766	0.1503345	0.17831575	3.1261484	21	—	—
414664 2009 WX_{34}	16.4	X	39.70403	354.23387	112.17463	3.85230	0.2373989	0.17928081	3.1149196	21	1 24.5	19.4
414665 2009 WX_{38}	16.5	X	161.09835	276.69633	62.91429	9.81974	0.1252465	0.19028997	2.9935886	21	1 20.8	21.2
414666 2009 WH_{39}	16.1	X	139.28749	74.97725	255.78894	9.89453	0.0777184	0.18163198	3.0879802	21	—	—
414667 2009 WZ_{42}	17.4	X	81.45344	282.40606	253.35247	17.91972	0.0594557	0.38030430	1.8867538	21	6 1.6	18.8
414668 2009 WQ_{44}	16.6	X	141.70917	139.88719	229.04946	8.00231	0.0545214	0.19229997	2.9726919	21	1 23.2	21.0
414669 2009 WQ_{69}	16.0	X	129.63782	103.96116	258.44474	11.83137	0.1935157	0.19235875	2.9720863	21	1 18.6	20.5
414670 2009 WM_{70}	15.5	X	261.67265	333.61952	235.16239	16.51087	0.1601608	0.17889388	3.1194095	21	—	—
414671 2009 WT_{73}	16.2	X	116.03661	132.55142	234.15370	10.21396	0.0724525	0.18503862	3.0499623	21	—	—
414672 2009 WB_{78}	16.1	X	52.51459	94.23221	305.59772	4.07612	0.0115449	0.17531982	3.1616615	21	—	—
414673 2009 WM_{81}	15.7	X	346.08602	90.48091	76.87335	26.57889	0.2065868	0.18014129	3.1049924	21	—	—
414674 2009 WN_{83}	16.6	X	344.64771	190.57846	315.83625	4.53892	0.1568745	0.18234827	3.0798882	21	—	—
414675 2009 WO_{85}	15.8	X	163.02266	320.64916	43.48657	12.74430	0.0715945	0.19550325	2.9401313	21	2 19.9	20.4
414676 2009 WA_{87}	16.2	X	143.58903	292.92230	18.02332	4.87245	0.1315346	0.17994100	3.1072960	21	—	—
414677 2009 WX_{87}	16.1	X	162.67603	282.70518	41.70259	8.82813	0.0975975	0.18639466	3.0351518	21	1 1.7	20.8
414678 2009 WN_{107}	16.6	X	115.29933	283.27112	78.94598	4.01024	0.1400937	0.18825846	3.0150861	21	—	—
414679 2009 WT_{117}	15.8	X	259.88596	175.23989	56.34886	13.43315	0.1005877	0.18564833	3.0432808	21	—	—
414680 2009 WW_{123}	16.3	X	358.80370	260.04142	234.00477	4.05135	0.0866093	0.18332855	3.0688993	21	—	—
414681 2009 WB_{125}	16.5	X	340.52361	311.71436	162.31413	0.69934	0.1605683	0.17373931	3.1808070	21	—	—
414682 2009 WY_{128}	16.0	X	306.87578	97.18481	54.01900	14.53473	0.1471098	0.17540151	3.1606798	21	—	—
414683 2009 WH_{131}	16.7	X	6.12771	346.34198	134.24767	1.90602	0.1515375	0.17922171	3.1156043	21	—	—
414684 2009 WJ_{131}	16.4	X	110.80565	220.64838	128.21821	2.03632	0.1690172	0.17981417	3.1087570	21	—	—
414685 2009 WR_{135}	16.7	X	129.24919	286.27825	80.17332	2.90354	0.1117825	0.19172188	2.9786646	21	1 16.0	20.8
414686 2009 WH_{139}	16.0	X	80.22974	353.49845	20.49694	11.44718	0.1854066	0.18199103	3.0839173	21	—	—
414687 2009 WO_{140}	15.8	X	25.00977	61.16314	70.56873	17.60367	0.1757824	0.18929817	3.0040358	21	1 26.7	19.3
414688 2009 WN_{151}	16.8	X	186.76922	251.47661	96.52392	7.21996	0.0685786	0.19899995	2.9055882	21	2 21.4	21.2
414689 2009 WS_{153}	15.5	X	300.13227	111.12507	40.45798	22.05511	0.0437197	0.17607628	3.1525995	21	—	—
414690 2009 WO_{154}	16.1	X	144.01310	301.36069	15.91307	10.24368	0.1330622	0.18317090	3.0706600	21	—	—
414691 2009 WO_{155}	15.8	X	52.92819	328.89578	96.58940	11.11374	0.0739516	0.18256973	3.0773971	21	—	—
414692 2009 WF_{156}	17.7	X	87.24159	316.13421	70.56578	3.59324	0.3480939	0.18638790	3.0352251	21	1 24.7	21.5
414693 2009 WC_{159}	16.0	X	52.66363	188.16345	241.23603	15.67223	0.0924827	0.18119054	3.0929937	21	—	—
414694 2009 WZ_{160}	16.6	X	35.84979	201.31894	279.11827	3.16784	0.1864387	0.18763209	3.0217925	21	1 29.6	19.7
414695 2009 WL_{161}	15.9	X	354.63375	104.94441	52.48037	10.03553	0.0783101	0.18732566	3.0250870	21	1 15.8	20.0
414696 2009 WV_{162}	16.5	X	55.21645	23.98410	63.34687	11.30419	0.1505137	0.18635898	3.0355391	21	1 22.6	20.2
414697 2009 WH_{163}	16.0	X	86.84345	146.60874	256.39213	7.73551	0.0516314	0.18479028	3.0526942	21	—	—
414698 2009 WR_{163}	16.8	X	109.06614	56.05216	294.88514	3.59653	0.1247076	0.17958432	3.1114090	21	—	—
414699 2009 WC_{166}	16.3	X	111.97640	304.86490	74.16633	9.66090	0.0957338	0.18483390	3.0522139	21	1 10.2	20.6
414700 2009 WB_{169}	16.1	X	86.02239	306.39235	81.61329	12.35282	0.1036933	0.18304023	3.0721212	21	—	—
414701 2009 WJ_{170}	16.4	X	9.15428	79.71965	52.94980	12.43549	0.2635344	0.18080537	3.0973848	21	—	—
414702 2009 WK_{170}	15.9	X	136.14966	289.61920	49.58472	9.69168	0.0764007	0.18298890	3.0726957	21	—	—
414703 2009 WY_{173}	16.6	X	13.56508	116.40432	11.01119	4.87568	0.0881496	0.18305207	3.0719888	21	1 5.1	20.6
414704 2009 WF_{182}	15.9	X	352.04210	72.19755	63.84080	22.01181	0.1308102	0.17925501	3.1152185	21	—	—
414705 2009 WM_{184}	16.5	X	26.60022	11.31511	72.44817	6.54728	0.1405186	0.18041160	3.1018902	21	—	—
414706 2009 WN_{190}	17.1	X	75.48242	179.54144	227.54702	0.65625	0.1542338	0.18397660	3.0616884	21	1 2.9	20.8
414707 2009 WX_{196}	15.7	X	43.79759	39.45173	44.93546	12.79499	0.1258287	0.18429210	3.0581931	21	—	—
414708 2009 WV_{202}	16.1	X	57.51477	56.17489	56.97059	13.68733	0.1355895	0.19310365	2.9644381	21	3 3.4	19.9
414709 2009 WL_{209}	16.2	X	157.04709	176.12902	175.31219	16.24134	0.2476725	0.19565134	2.9386475	21	2 4.6	21.4
414710 2009 WS_{212}	16.5	X	122.69408	296.40535	38.95988	5.84146	0.1660963	0.18033132	3.1028106	21	—	—
414711 2009 WP_{214}	16.4	X	116.97335	102.28753	245.34667	10.22839	0.1922472	0.18200113	3.0838033	21	—	—
414712 2009 WB_{218}	16.6	X	78.11977	201.05440	230.85732	10.65118	0.2628972	0.18813320	3.0164242	21	2 17.7	20.5
414713 2009 WQ_{218}	16.4	X	111.26443	276.36653	247.52667	9.05458	0.0694513	0.21751989	2.7382309	21	7 3.2	20.3
414714 2009 WE_{223}	17.4	X	80.27988	200.17588	220.08666	1.14716	0.2978433	0.18790551	3.0188604	21	2 16.0	20.9
414715 2009 WG_{230}	17.2	X	148.78785	141.08324	211.25018	6.53970	0.2018095	0.19513025	2.9438769	21	1 26.4	21.9
414716 2009 WV_{236}	16.4	X	90.74864	173.55486	244.82860	8.15614	0.0407420	0.18859383	3.0115106	21	1 20.4	20.6
414717 2009 WK_{239}	16.9	X	139.48094	193.38759	198.12251	6.42807	0.1505913	0.19815704	2.9138221	21	2 27.4	21.3
414718 2009 WV_{247}	16.1	X	73.17926	173.23770	243.21715	8.18718	0.1292365	0.18414321	3.0598413	21	1 6.9	19.9
414719 2009 WD_{249}	14.7	X	152.37329	39.47044	270.65315	26.37445	0.0304947	0.17491096	3.1665866	21	—	—
414720 2009 WJ_{252}	16.0	X	84.71415	319.11953	65.87539	11.65579	0.0889441	0.17963635	3.1108082	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414721 2009 WN_{256}	15.6	X	91.33623	302.35638	75.33594	18.03600	0.1349457	0.18131760	3.0915486	21	—	—
414722 2009 XP_{3}	16.5	X	80.37173	202.10581	238.35129	5.03106	0.1894126	0.18969184	2.9998781	21	2 22.7	20.4
414723 2009 XB_{5}	16.9	X	42.12698	240.14632	190.72732	1.48505	0.1428648	0.17936593	3.1139341	21	—	—
414724 2009 XU_{7}	15.8	X	78.96678	353.06196	65.10294	12.58703	0.0886603	0.18555256	3.0443278	21	1 14.6	19.9
414725 2009 XP_{11}	16.0	X	56.08494	297.79301	125.04743	10.84964	0.1944048	0.18192015	3.0847183	21	—	—
414726 2009 XO_{13}	16.4	X	100.73454	162.76326	234.57471	8.42054	0.1525839	0.18664084	3.0324822	21	1 22.9	20.7
414727 2009 XN_{20}	16.2	X	46.29284	282.03697	138.66782	1.99832	0.1687270	0.17481966	3.1676890	21	—	—
414728 2009 XS_{22}	15.5	X	6.67243	138.67969	318.88545	27.23699	0.1659796	0.17378641	3.1802323	21	—	—
414729 2009 YH_{1}	16.3	X	60.45974	144.99588	238.39031	9.66744	0.1070160	0.17957540	3.1115121	21	—	—
414730 2009 YH_{5}	16.4	X	64.82712	120.77160	318.13341	2.43447	0.2672102	0.18221627	3.0813754	21	2 11.2	19.7
414731 2009 YH_{19}	16.2	X	60.18840	96.29435	6.70006	10.41272	0.1642520	0.18774043	3.0206299	21	2 22.8	19.8
414732 2009 YS_{23}	15.6	X	10.22857	23.18722	100.47338	15.01683	0.1467347	0.18056157	3.1001723	21	—	—
414733 2010 AO_{18}	16.8	X	50.80532	59.50854	24.52172	1.52024	0.1614862	0.17984435	3.1084092	21	1 11.6	20.3
414734 2010 AO_{23}	16.1	X	39.89206	149.94406	293.43377	9.66681	0.2037152	0.17474929	3.1685393	21	—	—
414735 2010 AH_{59}	15.2	X	39.04693	325.65116	103.89175	29.72523	0.1784042	0.17295784	3.1903810	21	—	—
414736 2010 AD_{66}	15.8	X	65.69580	288.20872	119.26898	19.51666	0.1423485	0.17254552	3.1954616	21	—	—
414737 2010 AU_{76}	15.4	X	70.56795	284.95594	97.89181	26.44368	0.2636104	0.17351253	3.1835780	21	—	—
414738 2010 AB_{77}	15.9	X	45.11742	7.54085	117.77611	13.01901	0.2625734	0.18391099	3.0624165	21	3 9.7	19.0
414739 2010 AL_{77}	15.9	X	63.59303	325.53670	80.52330	11.75788	0.2112102	0.17573451	3.1566858	21	—	—
414740 2010 BP_{4}	15.4	X	339.28403	244.26903	311.99213	16.99090	0.0868193	0.17978998	3.1090358	21	2 8.9	19.5
414741 2010 CZ_{55}	16.8	X	40.63953	234.97728	235.06939	6.78709	0.2194906	0.17865209	3.1222235	21	1 27.9	20.0
414742 2010 CZ_{75}	17.2	X	172.53572	224.07712	158.17266	23.49970	0.0840746	0.35713208	1.9675094	21	2 23.7	19.5
414743 2010 CG_{132}	15.7	X	57.80348	287.47006	125.27325	17.23532	0.1412036	0.18181638	3.0858919	21	—	—
414744 2010 DK_{57}	16.6	X	96.48353	29.69996	25.89929	1.55446	0.1455095	0.19051455	2.9912355	21	2 10.2	20.5
414745 2010 EX_{13}	15.1	X	122.95904	234.01929	93.71386	20.14694	0.1050891	0.17474761	3.1685597	21	—	—
414746 2010 EH_{20}	18.0	X	199.30652	207.68992	120.69055	23.85660	0.5223523	0.23184501	2.6242440	21	2 13.6	23.7
414747 2010 EL_{28}	16.3	X	57.69956	170.04355	275.25520	6.44711	0.2364593	0.18473509	3.0533022	21	1 30.3	19.5
414748 2010 EW_{124}	15.6	X	49.49000	96.81151	19.73044	25.60280	0.3136816	0.17435193	3.1733517	21	3 22.0	18.9
414749 2010 FC_{56}	17.2	X	110.99274	275.21418	196.82228	21.16883	0.0814053	0.35919564	1.9599666	21	4 12.9	18.9
414750 2010 FV_{73}	17.8	X	50.93252	14.55127	263.71759	4.25739	0.2126431	0.27957714	2.3163363	21	10 13.8	20.6
414751 2010 FV_{97}	18.7	X	123.06300	273.22516	14.22094	5.76512	0.2279102	0.31353912	2.1458938	21	—	—
414752 2010 GN_{1}	15.6	X	333.03249	199.34702	286.82676	11.68641	0.0620324	0.16863434	3.2446812	21	—	—
414753 2010 GK_{28}	17.5	X	107.97850	141.33025	121.51749	6.77953	0.1411835	0.29736545	2.2230149	21	11 23.7	20.8
414754 2010 GN_{59}	15.8	X	47.77002	62.19439	63.42321	16.63749	0.1904484	0.18444930	3.0564552	21	3 13.1	19.6
414755 2010 GK_{92}	17.2	X	18.64652	199.26676	108.97064	6.79408	0.2503362	0.27486464	2.3427366	21	10 17.6	19.3
414756 2010 GD_{103}	18.3	X	154.56436	25.97093	248.52787	2.05033	0.1792649	0.31478069	2.1402475	21	—	—
414757 2010 GH_{130}	18.4	X	60.10379	270.93122	18.48384	7.63745	0.2102587	0.29506151	2.2345720	21	11 11.1	21.5
414758 2010 GS_{131}	18.5	X	31.48078	261.56625	25.13638	3.67509	0.2253749	0.28345404	2.2951669	21	10 1.8	20.7
414759 2010 JP	17.7	X	17.54593	234.21638	70.25706	6.02025	0.2755487	0.27909001	2.3190308	21	10 14.2	19.6
414760 2010 JM_{47}	17.8	X	166.32320	71.63981	179.42958	5.65909	0.1559987	0.31009044	2.1617749	21	—	—
414761 2010 JH_{74}	18.1	X	74.74216	94.32279	219.34416	5.08982	0.2068075	0.29823137	2.2187098	21	12 28.7	21.5
414762 2010 KZ_{104}	17.5	X	0.68051	80.02750	207.68242	3.96635	0.2260800	0.26367800	2.4085377	21	7 14.9	19.1
414763 2010 KH_{121}	16.9	X	19.66573	308.92668	68.59252	23.70711	0.1991830	0.28291044	2.2981060	21	—	—
414764 2010 LE_{1}	16.9	X	267.00808	188.76134	133.98907	12.63146	0.2823692	0.25445733	2.4663767	21	3 24.2	21.1
414765 2010 LW_{33}	16.7	X	207.54414	82.46353	234.13379	11.75751	0.2848344	0.23403359	2.6078579	21	1 27.7	21.6
414766 2010 MN_{2}	16.2	X	312.55711	207.33906	152.29043	18.46882	0.1567495	0.18698632	3.0287458	21	7 23.5	20.2
414767 2010 MC_{27}	16.6	X	333.63610	30.97564	294.24673	6.95184	0.2522654	0.26134987	2.4228202	21	7 2.6	18.3
414768 2010 MF_{90}	17.3	X	344.07982	240.77621	79.30043	3.03524	0.2352423	0.26225809	2.4172234	21	7 26.7	18.6
414769 2010 NV_{21}	17.6	X	0.73584	95.69539	233.15060	4.30931	0.1272186	0.26597978	2.3946220	21	9 16.5	19.9
414770 2010 OZ_{30}	16.6	X	148.66962	86.41127	301.10166	14.28008	0.2022041	0.22162263	2.7043319	21	3 1.3	21.1
414771 2010 OW_{46}	17.2	X	227.01751	130.73673	263.72001	10.08305	0.1393499	0.24300469	2.5432728	21	5 23.6	21.2
414772 2010 OC_{103}	18.9	X	268.47441	178.28715	17.95619	23.11075	0.6720183	0.75500195	1.1944574	21	—	—
414773 2010 OP_{112}	18.2	X	242.73971	325.23745	54.74201	14.09812	0.2803783	0.24376982	2.5379482	21	5 11.1	22.5
414774 2010 PO_{24}	18.0	X	271.09977	146.49689	205.29160	3.63049	0.2545786	0.25319000	2.4746000	21	5 2.4	21.8
414775 2010 PN_{56}	17.2	X	226.79717	321.96292	39.24260	5.29551	0.1252036	0.23437143	2.6053512	21	4 13.5	21.2
414776 2010 PE_{59}	17.4	X	52.19061	337.01525	288.16568	3.93565	0.1309013	0.27201415	2.3590748	21	9 12.3	20.3
414777 2010 PX_{60}	17.2	X	323.92037	0.36355	322.63225	6.17639	0.1320326	0.25986467	2.4320429	21	6 25.7	19.7
414778 2010 PQ_{61}	17.3	X	336.26164	168.89091	155.59741	3.98660	0.2412972	0.26398916	2.4066448	21	7 9.4	18.9
414779 2010 PN_{74}	18.0	X	344.88838	31.34829	253.59531	1.39458	0.2228532	0.26178883	2.4201111	21	5 26.2	19.4
414780 2010 PV_{77}	17.6	X	343.62270	24.62704	290.43823	1.42213	0.2101969	0.26502573	2.4003654	21	7 17.3	19.0
414781 2010 QM_{1}	18.0	X	340.91503	152.49721	160.69716	2.34372	0.2263091	0.26462713	2.4027752	21	7 4.3	19.7
414782 2010 QH_{3}	17.8	X	354.44655	129.64836	212.36158	0.62762	0.2129029	0.27189599	2.3597582	21	10 5.8	19.2
414783 2010 QD_{4}	17.9	X	278.11382	211.54846	148.98455	2.14653	0.2108310	0.25562773	2.4588426	21	5 27.2	21.1
414784 2010 RT_{25}	17.1	X	25.54785	124.70198	192.54302	6.66103	0.1340073	0.27195456	2.3594194	21	10 19.4	19.5
414785 2010 RA_{40}	17.3	X	294.35510	143.22740	228.81613	6.44229	0.2251555	0.26046120	2.4283281	21	6 30.9	20.2
414786 2010 RE_{48}	17.7	X	278.60810	218.75972	194.33401	2.96756	0.1564734	0.26202997	2.4186261	21	8 17.6	20.5
414787 2010 RE_{57}	17.3	X	43.22221	285.84447	326.16586	8.14649	0.1770462	0.26366063	2.4086435	21	8 18.8	19.7
414788 2010 RW_{59}	17.1	X	34.70118	78.66599	195.40071	10.50558	0.1958301	0.26504382	2.4002562	21	9 6.9	19.6
414789 2010 RY_{80}	17.8	X	276.61800	24.45307	342.26585	4.98162	0.1536745	0.25469044	2.4648715	21	6 10.3	21.1
414790 2010 RE_{106}	17.3	X	168.68566	333.80667	192.56331	6.37709	0.0590682	0.26362794	2.4088426	21	9 15.4	20.5
414791 2010 RD_{126}	17.6	X	356.85525	219.12469	74.39137	3.12391	0.2260914	0.26095066	2.4252906	21	7 15.9	18.9
414792 2010 RO_{134}	17.6	X	282.60927	245.82479	164.54222	1.17740	0.1810826	0.26287079	2.4134659	21	8 16.5	20.2
414793 2010 RR_{138}	16.5	X	222.42019	359.86078	338.13963	34.00311	0.1964347	0.23348323	2.6119544	21	3 4.4	21.0
414794 2010 RV_{146}	18.2	X	333.86749	303.21778	8.82426	2.51434	0.2157125	0.25757444	2.4464380	21	6 15.7	20.1
414795 2010 RU_{151}	17.9	X	3.18983	142.55853	175.51857	4.57703	0.1639747	0.26610169	2.3938906	21	9 9.9	19.9
414796 2010 RU_{166}	17.6	X	338.77993	179.82480	113.47319	2.64282	0.1771037	0.25790053	2.4443753	21	6 2.2	19.8
414797 2010 RN_{173}	17.2	X	155.14872	16.94632	48.14674	6.45392	0.1070717	0.22724751	2.6595202	21	4 21.8	21.1
414798 2010 RB_{176}	17.0	X	61.71166	294.20633	340.91032	6.69901	0.1042751	0.26923035	2.3753086	21	10 5.2	19.9
414799 2010 RH_{184}	16.8	X	30.72084	310.86558	303.77956	5.83132	0.0970103	0.25201649	2.4822761	21	7 18.6	19.4
414800 2010 SV_{3}	20.8	X	335.17290	224.36454	24.16971	6.19637	0.5151335	0.52976324	1.5126839	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414801 2010 SL_{18}	18.1	X	281.35199	134.70855	192.38685	8.10655	0.2270064	0.24689684	2.5164735	21	4 15.1	21.9
414802 2010 SK_{19}	17.8	X	240.74779	310.26081	134.72258	2.53915	0.1413987	0.25768491	2.4457387	21	8 14.9	21.0
414803 2010 SS_{23}	18.3	X	281.16068	136.74100	286.81769	0.41592	0.1709028	0.26741262	2.3860605	21	9 4.9	20.7
414804 2010 SN_{29}	17.6	X	277.22118	245.05383	163.40968	5.75373	0.1176780	0.26144020	2.4222621	21	8 15.6	20.4
414805 2010 SB_{35}	17.8	X	297.16741	179.58456	165.77133	3.55279	0.0194843	0.25326415	2.4741170	21	7 1.3	20.9
414806 2010 SP_{37}	18.4	X	322.81367	176.68452	186.89016	4.60455	0.1891287	0.26648114	2.3916175	21	8 18.7	20.3
414807 2010 TW_{15}	17.1	X	268.68426	291.24044	340.37533	8.51988	0.1045722	0.22789996	2.6544418	21	2 7.8	20.9
414808 2010 TF_{16}	16.9	X	52.06893	270.43889	319.67515	5.69831	0.0939110	0.25220607	2.4810320	21	7 18.2	19.7
414809 2010 TR_{20}	17.6	X	171.69736	162.45033	8.16304	2.26290	0.1500412	0.26436589	2.4043579	21	9 23.6	21.1
414810 2010 TQ_{25}	17.7	X	359.35630	42.75905	246.19399	2.82006	0.1531307	0.26012547	2.4304170	21	7 13.1	19.8
414811 2010 TS_{27}	17.1	X	329.91721	252.62453	349.94115	6.91691	0.1726312	0.23895538	2.5719243	21	3 5.7	20.2
414812 2010 TD_{36}	16.3	X	162.15524	190.60356	212.44177	12.92090	0.1526653	0.22821507	2.6519978	21	4 1.8	20.5
414813 2010 TR_{60}	17.3	X	16.60373	229.04504	344.10005	3.88389	0.0521789	0.24079832	2.5587847	21	4 20.4	20.3
414814 2010 TL_{79}	18.0	X	175.67333	248.10044	186.68880	8.33056	0.1403515	0.23943082	2.5685184	21	5 26.6	22.1
414815 2010 TX_{126}	17.4	X	330.93968	194.10037	111.96614	2.98180	0.1835783	0.25343784	2.4729865	21	6 5.3	19.5
414816 2010 TN_{127}	17.2	X	0.59686	277.47512	55.48192	6.68273	0.0819243	0.26436856	2.4043417	21	9 24.9	19.8
414817 2010 TL_{149}	16.9	X	155.85019	25.97809	44.40329	14.51307	0.2393501	0.22942266	2.6426836	21	5 6.5	21.2
414818 2010 UR_{11}	16.5	X	263.32636	108.53709	199.89057	9.58300	0.0968833	0.23298240	2.6156962	21	3 16.6	20.4
414819 2010 UV_{14}	17.0	X	192.35980	23.12172	52.43560	12.83564	0.1661719	0.23840240	2.5758998	21	6 10.1	21.2
414820 2010 UF_{21}	16.8	X	263.33286	298.84919	60.86416	14.36011	0.2035647	0.24218111	2.5490354	21	5 11.9	20.6
414821 2010 UV_{26}	17.3	X	106.99022	88.13548	46.81424	9.54735	0.0664227	0.23202804	2.6228638	21	5 18.9	20.7
414822 2010 UF_{27}	17.6	X	205.97044	184.77446	227.39735	3.58557	0.2040980	0.23828327	2.5767583	21	5 24.5	22.0
414823 2010 UC_{34}	16.6	X	218.97001	338.42158	22.35414	15.39840	0.1571624	0.23359328	2.6111339	21	4 4.9	20.9
414824 2010 UG_{36}	17.3	X	181.53197	118.61937	305.74232	4.67024	0.1446866	0.23257403	2.6187572	21	5 16.8	21.4
414825 2010 UP_{39}	17.2	X	240.78468	326.09579	24.89596	9.84945	0.1394742	0.23774138	2.5806724	21	4 12.9	21.2
414826 2010 UZ_{44}	17.1	X	300.25400	65.44126	243.77395	12.06828	0.1835000	0.24417852	2.5351155	21	4 17.1	20.5
414827 2010 UV_{49}	17.4	X	157.92669	249.90906	205.08373	12.94198	0.1260166	0.23672430	2.5880589	21	6 2.7	21.5
414828 2010 UM_{54}	17.5	X	226.53812	48.21199	293.01423	2.65601	0.1388832	0.23022196	2.6365634	21	3 17.1	21.6
414829 2010 UF_{59}	16.4	X	64.20924	307.31715	255.22454	10.71093	0.1922435	0.23257707	2.6187344	21	7 10.9	19.7
414830 2010 UC_{60}	17.5	X	205.17357	111.58251	276.65597	1.32688	0.2404878	0.23280614	2.6170163	21	4 23.2	22.1
414831 2010 UX_{60}	17.8	X	186.47742	54.26898	10.99366	4.24706	0.2012403	0.23716487	2.5848528	21	5 23.2	22.2
414832 2010 UF_{75}	16.9	X	181.49249	104.20363	318.79868	6.24307	0.1304997	0.23524997	2.5988607	21	5 13.9	21.1
414833 2010 UJ_{76}	16.8	X	255.54392	353.38705	2.11636	4.78285	0.2193491	0.23968730	2.5666858	21	4 24.8	21.0
414834 2010 UY_{77}	17.2	X	245.36427	100.62484	260.34754	10.44410	0.1688531	0.23606285	2.5928911	21	4 25.2	21.5
414835 2010 UW_{78}	17.1	X	150.29306	243.21143	268.06909	7.61927	0.1920122	0.24379264	2.5377899	21	8 6.8	21.3
414836 2010 UE_{80}	16.8	X	297.26080	278.45686	25.63702	15.33135	0.0930898	0.23667790	2.5883972	21	4 22.5	20.2
414837 2010 UY_{93}	16.6	X	320.12202	353.22258	257.33931	13.37064	0.0176704	0.22643286	2.6658953	21	3 20.2	20.5
414838 2010 UY_{96}	16.9	X	185.09402	181.78087	218.36449	11.63044	0.1823470	0.23056242	2.6339672	21	4 21.4	21.2
414839 2010 UZ_{99}	17.4	X	47.66203	147.49838	136.36531	1.99327	0.1778046	0.26771662	2.3842539	21	10 12.8	20.3
414840 2010 UD_{105}	17.1	X	245.73863	95.88266	188.60960	5.07469	0.1408071	0.22029166	2.7152137	21	1 27.0	21.4
414841 2010 VF_{22}	17.3	X	243.57883	292.18999	43.44255	4.68468	0.0608709	0.22916126	2.6446929	21	4 4.7	21.1
414842 2010 VP_{26}	17.4	X	174.84455	199.22021	237.77850	1.65095	0.0690774	0.23333949	2.6130269	21	5 25.6	21.3
414843 2010 VR_{30}	16.3	X	222.68886	143.29766	192.92930	12.51342	0.1244496	0.22983275	2.6395392	21	3 7.1	20.4
414844 2010 VY_{30}	17.1	X	246.74730	132.65432	202.14164	7.19479	0.1867856	0.23476198	2.6024609	21	3 25.3	21.4
414845 2010 VH_{31}	17.5	X	233.57745	177.11488	202.07310	8.26784	0.1704990	0.24000395	2.5644277	21	5 10.1	21.5
414846 2010 VE_{47}	17.1	X	293.36259	32.85663	279.61294	2.75565	0.1534871	0.23718453	2.5847099	21	4 19.3	20.5
414847 2010 VN_{49}	16.9	X	214.70214	329.54693	26.55842	12.48497	0.2047277	0.23121530	2.6290066	21	3 27.3	21.3
414848 2010 VV_{51}	16.9	X	291.81321	65.13052	210.90888	6.98678	0.1514771	0.22927818	2.6437937	21	3 1.1	20.7
414849 2010 VO_{61}	17.1	X	105.20470	47.48175	25.46075	6.39885	0.0692750	0.21463170	2.7627408	21	3 1.9	20.8
414850 2010 VK_{63}	16.1	X	10.47717	140.10947	35.37575	12.95845	0.0798833	0.21715756	2.7412759	21	3 1.8	19.6
414851 2010 VF_{65}	17.4	X	231.23809	64.02034	323.61247	3.56233	0.1653929	0.23910283	2.5708667	21	5 16.9	21.4
414852 2010 VS_{70}	17.1	X	161.49747	54.76037	5.84027	5.33399	0.1918509	0.22871774	2.6481108	21	4 25.6	21.5
414853 2010 VD_{80}	17.4	X	55.27420	151.90259	56.76686	6.34098	0.0711716	0.23994264	2.5648645	21	6 17.5	20.4
414854 2010 VU_{80}	16.9	X	48.64910	156.57027	57.77448	9.21358	0.1047756	0.23963372	2.5670683	21	6 19.6	19.9
414855 2010 VN_{82}	17.5	X	164.77594	43.79558	42.32837	3.81913	0.2519651	0.23402126	2.6079495	21	6 2.2	22.1
414856 2010 VS_{83}	16.9	X	126.90317	263.10354	239.75458	10.79852	0.1347637	0.23520284	2.5992079	21	7 1.0	20.9
414857 2010 VO_{84}	17.6	X	160.38245	175.75895	250.29399	2.72652	0.1586999	0.22745537	2.6578997	21	4 30.3	21.8
414858 2010 VD_{86}	17.0	X	245.11188	305.41806	62.73602	7.32222	0.3276067	0.24120869	2.5558817	21	4 26.7	21.5
414859 2010 VG_{89}	17.4	X	191.84825	96.22225	295.17957	2.98134	0.2155013	0.23005352	2.6378502	21	4 15.9	22.1
414860 2010 VW_{89}	16.6	X	225.65072	266.28807	54.35811	13.13210	0.2719543	0.22519225	2.6756775	21	2 24.5	21.6
414861 2010 VQ_{95}	17.4	X	339.23180	234.03060	41.30725	4.68410	0.0269623	0.23825968	2.5769284	21	5 23.7	20.7
414862 2010 VM_{102}	17.4	X	343.56762	46.04723	196.01164	1.03845	0.0576324	0.22809472	2.6529306	21	4 12.6	20.7
414863 2010 VU_{102}	16.9	X	272.96217	119.07445	230.78197	9.43916	0.1750422	0.24220009	2.5489022	21	5 11.8	20.5
414864 2010 VE_{108}	17.6	X	230.14219	216.08200	167.40896	4.22675	0.1313773	0.23962046	2.5671630	21	5 15.1	21.6
414865 2010 VA_{115}	17.1	X	224.93260	51.00865	352.96473	4.38535	0.2245629	0.24122684	2.5557535	21	5 28.3	21.4
414866 2010 VT_{117}	16.8	X	200.15045	14.92595	352.62051	5.23018	0.0607107	0.22444506	2.6816124	21	3 25.4	20.8
414867 2010 VV_{118}	16.5	X	280.73333	23.15918	282.98463	5.50834	0.0013479	0.22811799	2.6527502	21	4 16.7	20.1
414868 2010 VP_{131}	16.8	X	169.99177	2.14813	69.12016	14.11147	0.1475734	0.23377759	2.6097614	21	5 17.3	20.9
414869 2010 VB_{152}	17.1	X	265.46098	236.45315	90.03058	7.30762	0.2827469	0.24010737	2.5636912	21	3 28.5	21.4
414870 2010 VW_{163}	16.6	X	204.68510	107.86597	251.62024	11.75330	0.1973308	0.22715871	2.6602133	21	3 15.1	21.4
414871 2010 VG_{167}	17.3	X	211.57836	137.95919	187.28613	1.33209	0.0299473	0.21853649	2.7297324	21	2 14.5	21.3
414872 2010 VJ_{171}	16.6	X	72.72389	130.85970	65.20799	16.56390	0.1875040	0.23310953	2.6147451	21	7 16.7	20.2
414873 2010 VV_{176}	16.9	X	239.66192	7.88931	20.51061	12.28740	0.1204696	0.24176326	2.5519717	21	5 28.5	20.8
414874 2010 VA_{185}	17.3	X	154.14630	49.05590	58.77145	4.85528	0.1536988	0.23385976	2.6091500	21	6 16.2	21.3
414875 2010 VY_{191}	17.4	X	284.60052	271.76761	66.98908	5.28462	0.1620906	0.24299266	2.5433567	21	5 13.5	20.8
414876 2010 VA_{192}	17.2	X	170.06899	280.19812	207.82699	3.15698	0.1946859	0.24167450	2.5525964	21	7 27.2	21.4
414877 2010 VF_{193}	17.3	X	240.73337	178.11781	210.56723	4.49378	0.1415151	0.24281310	2.5446104	21	5 31.4	21.1
414878 2010 VM_{194}	16.8	X	197.43822	337.96444	124.10036	8.08103	0.1529661	0.23215115	2.6219364	21	7 20.4	20.9
414879 2010 VQ_{204}	17.3	X	203.44279	1.43930	11.27875	3.23455	0.0934407	0.23136021	2.6279087	21	4 4.3	21.3
414880 2010 VD_{212}	17.1	X	173.62795	358.89022	33.92569	6.44254	0.0996538	0.22668099	2.6639494	21	3 31.7	21.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414881 2010 VY_{218}	16.7	X	185.53588	175.25031	231.65398	11.20041	0.1834427	0.22982074	2.6396311	21	4 30.0	21.1
414882 2010 VW_{219}	17.8	X	182.25312	82.57472	349.98776	2.64046	0.1124283	0.23818342	2.5774784	21	5 28.0	21.6
414883 2010 WR_{5}	16.5	X	59.47571	270.61464	261.84181	10.20599	0.2062223	0.22307048	2.6926174	21	5 24.9	19.6
414884 2010 WR_{21}	17.6	X	173.97761	15.59794	53.01230	1.17146	0.0810697	0.23134115	2.6280530	21	5 14.1	21.5
414885 2010 WP_{32}	17.8	X	186.38436	157.73930	202.91041	1.71385	0.0896634	0.21927839	2.7235718	21	3 3.4	21.9
414886 2010 WB_{46}	16.7	X	318.69204	249.66805	71.83144	18.16902	0.0457753	0.24140933	2.5544653	21	6 24.7	20.0
414887 2010 WM_{49}	16.9	X	110.24718	246.59094	263.97106	2.39460	0.0856661	0.23301009	2.6154890	21	6 16.9	20.3
414888 2010 WG_{50}	17.2	X	249.22180	295.23270	79.03770	2.54035	0.1714435	0.23942957	2.5685273	21	5 18.6	21.0
414889 2010 WX_{50}	17.0	X	353.72204	220.52160	49.53612	6.66824	0.1267521	0.24444874	2.5332469	21	6 1.4	19.6
414890 2010 WE_{67}	16.7	X	165.59822	136.04189	272.93334	4.96206	0.0778682	0.22399127	2.6852331	21	4 7.3	20.6
414891 2010 XO_{12}	17.4	X	188.23746	349.52505	82.95340	7.80910	0.2889634	0.23320619	2.6140226	21	6 3.9	22.2
414892 2010 XS_{15}	17.4	X	144.96871	80.29850	69.73954	3.29474	0.1055759	0.24194734	2.5506771	21	7 30.3	21.1
414893 2010 XF_{16}	17.1	X	100.74598	42.28980	64.24834	5.91736	0.0685275	0.22135482	2.7065126	21	4 7.4	20.7
414894 2010 XE_{19}	16.3	X	182.77170	3.79007	96.61918	15.53932	0.0478592	0.23931902	2.5693183	21	7 4.9	20.0
414895 2010 XR_{20}	17.0	X	177.48849	340.61233	103.03036	7.72739	0.2431402	0.23146299	2.6271307	21	6 9.8	21.6
414896 2010 XP_{22}	17.6	X	167.83144	5.80539	65.65815	5.43887	0.0482259	0.23132485	2.6281765	21	5 9.8	21.2
414897 2010 XG_{24}	17.3	X	182.74874	296.49577	117.73850	7.26554	0.2118569	0.23190842	2.6237656	21	5 10.3	21.8
414898 2010 XW_{37}	17.3	X	239.90383	97.84274	40.52067	3.25730	0.1583755	0.25672121	2.4518555	21	10 22.4	20.7
414899 2010 XJ_{38}	17.0	X	118.64104	32.70678	76.46855	6.07981	0.1153924	0.21966865	2.7203451	21	5 9.1	20.8
414900 2010 XV_{38}	17.1	X	217.55538	166.80763	208.72572	4.00554	0.2673398	0.23368513	2.6104497	21	4 17.1	21.6
414901 2010 XT_{39}	17.1	X	180.11605	294.41366	201.72441	7.86712	0.1880013	0.24495267	2.5297713	21	8 13.8	21.5
414902 2010 XD_{42}	16.8	X	295.89017	161.33072	105.16671	5.67273	0.0198762	0.21274597	2.7790423	21	3 20.4	20.6
414903 2010 XT_{45}	17.4	X	201.75884	88.94894	202.45636	13.62826	0.2775630	0.48462767	1.6052053	21	—	—
414904 2010 XN_{64}	17.1	X	190.79231	289.45274	82.61983	6.96797	0.0604223	0.22239685	2.6980519	21	3 25.4	21.1
414905 2010 XR_{64}	16.6	X	194.59586	284.29048	93.52492	7.30044	0.0469786	0.22322995	2.6913349	21	4 5.7	20.6
414906 2010 XK_{69}	17.3	X	98.79597	316.05389	130.69313	6.00504	0.0762580	0.21480298	2.7612720	21	3 11.4	20.9
414907 2010 XN_{71}	16.7	X	224.81375	107.74958	277.33914	10.41540	0.1915099	0.23441737	2.6050108	21	5 4.9	21.2
414908 2010 XH_{76}	17.4	X	180.43214	210.39654	208.94021	2.97909	0.1518452	0.23030402	2.6359371	21	5 11.3	21.6
414909 2010 XL_{76}	16.4	X	231.19053	152.91532	250.97217	9.40905	0.1162720	0.23993817	2.5648963	21	6 11.9	20.2
414910 2010 XB_{84}	17.4	X	192.93983	259.95415	169.14800	4.32979	0.2146576	0.23491894	2.6013015	21	6 4.1	21.9
414911 2010 YE_{1}	17.5	X	152.38367	343.16569	122.08061	4.77577	0.1817554	0.22738999	2.6584091	21	6 13.4	21.9
414912 2010 YN_{2}	17.0	X	232.05164	305.57501	36.78446	7.26985	0.0762667	0.21747214	2.7386317	21	3 31.9	21.0
414913 2010 YY_{4}	17.4	X	192.82125	237.78362	235.79700	6.38082	0.1508550	0.24247519	2.5469740	21	7 29.1	21.5
414914 2011 AF_{9}	17.1	X	171.45805	334.85911	113.36650	5.24536	0.2167816	0.22917351	2.6445987	21	6 10.1	21.6
414915 2011 AR_{9}	16.4	X	64.09466	44.98556	105.17577	5.92428	0.0163924	0.21412437	2.7671030	21	4 9.5	20.1
414916 2011 AU_{11}	16.9	X	161.48595	326.16288	110.65678	7.30478	0.0304373	0.22096945	2.7096585	21	5 10.5	20.7
414917 2011 AA_{20}	16.7	X	36.17050	3.99884	131.66817	6.47552	0.2564139	0.20044244	2.8916314	21	2 21.5	19.1
414918 2011 AX_{27}	16.7	X	52.28301	207.56401	288.82117	6.47957	0.1399334	0.20506550	2.8480065	21	3 12.2	20.1
414919 2011 AP_{31}	16.1	X	142.83018	291.69541	104.84628	15.09793	0.1267697	0.20870214	2.8148253	21	3 12.9	20.6
414920 2011 AG_{33}	17.0	X	185.66003	297.81025	93.34792	6.94044	0.0478733	0.21602038	2.7508879	21	4 12.7	21.0
414921 2011 AX_{34}	17.0	X	132.74083	251.06741	248.10282	7.15777	0.1945697	0.22664070	2.6642651	21	7 7.8	21.3
414922 2011 AT_{36}	16.0	X	204.45194	146.41429	133.44601	11.02441	0.0490724	0.18490768	3.0514019	21	—	—
414923 2011 AT_{39}	16.0	X	307.90628	269.05580	272.07455	9.45026	0.0214549	0.18961582	3.0006800	21	—	—
414924 2011 AC_{41}	15.6	X	143.56346	245.39110	92.26386	11.40476	0.1252625	0.19183243	2.9775201	21	—	—
414925 2011 AG_{45}	17.0	X	239.51975	287.41397	126.21484	13.60644	0.2415017	0.23818645	2.5774565	21	6 23.1	21.4
414926 2011 AP_{45}	16.6	X	141.00581	310.07596	122.52791	9.84240	0.1897071	0.21466168	2.7624835	21	4 27.9	21.1
414927 2011 AG_{49}	16.0	X	31.34040	35.55477	123.15867	9.07394	0.2428598	0.20360485	2.8616112	21	3 17.2	18.6
414928 2011 AM_{49}	17.5	X	187.19053	345.96369	49.54063	5.34258	0.0854944	0.21964874	2.7205095	21	4 18.1	21.5
414929 2011 AV_{52}	15.9	X	355.56821	58.46699	84.52014	5.64595	0.0799357	0.18924267	3.0046231	21	—	—
414930 2011 AH_{57}	15.4	X	288.51939	185.08459	315.38483	12.86693	0.0626187	0.17325512	3.1867305	21	12 27.3	19.8
414931 2011 AQ_{63}	15.8	X	269.46793	79.13141	131.61075	11.91903	0.0350464	0.18325642	3.0697046	21	—	—
414932 2011 AC_{66}	15.7	X	209.41581	313.02360	309.83161	8.42185	0.0734294	0.18240967	3.0791971	21	—	—
414933 2011 AH_{67}	16.9	X	179.08201	194.97891	142.47083	2.20010	0.0870230	0.20088611	2.8873723	21	1 29.9	21.2
414934 2011 AW_{69}	16.7	X	284.55340	240.74493	327.97530	9.49531	0.0600312	0.19108849	2.9852431	21	—	—
414935 2011 AD_{75}	16.6	X	136.92838	114.96662	293.94053	14.31055	0.1915965	0.21144592	2.7904217	21	3 14.4	21.2
414936 2011 BJ_{1}	17.0	X	140.41526	104.10753	293.28289	6.90399	0.2185619	0.21067806	2.7971977	21	3 10.9	21.5
414937 2011 BV_{6}	17.3	X	157.69698	307.91263	107.09129	5.40990	0.0645227	0.21477082	2.7615476	21	4 11.2	21.3
414938 2011 BK_{7}	17.6	X	142.85230	85.33863	321.54464	1.32825	0.2411838	0.21364231	2.7712638	21	3 28.9	22.0
414939 2011 BC_{17}	16.5	X	92.30933	318.61090	148.07948	9.85140	0.2087423	0.20962613	2.8065478	21	4 20.1	20.4
414940 2011 BN_{27}	16.9	X	251.25399	135.76604	281.86723	4.49691	0.2623722	0.24041418	2.5615097	21	7 6.3	20.7
414941 2011 BX_{34}	16.1	X	221.73972	303.44573	312.47080	9.24311	0.0943538	0.18187299	3.0852515	21	—	—
414942 2011 BX_{45}	16.1	X	297.64000	62.82501	108.83985	12.46619	0.0954050	0.17928583	3.1148615	21	—	—
414943 2011 BS_{53}	16.0	X	261.64932	268.20696	320.50334	9.75269	0.0534374	0.18646673	3.0343696	21	—	—
414944 2011 BM_{55}	16.8	X	116.63280	136.11475	267.83411	6.55946	0.0735565	0.20103201	2.8859751	21	2 6.1	20.8
414945 2011 BR_{56}	17.0	X	139.32510	1.76298	77.49521	8.42175	0.1178199	0.21405596	2.7676925	21	4 26.6	21.2
414946 2011 BG_{57}	16.9	X	60.60773	92.86529	77.02038	8.59169	0.1615895	0.21155910	2.7894264	21	5 18.6	20.1
414947 2011 BH_{70}	16.8	X	170.67315	297.76136	110.74581	9.83099	0.1468465	0.21764576	2.7371751	21	4 23.4	21.3
414948 2011 BM_{70}	16.1	X	288.45085	355.80607	168.33063	10.32315	0.1478778	0.17385786	3.1793610	21	—	—
414949 2011 BK_{84}	16.9	X	100.31560	85.79656	49.10210	4.84168	0.1560218	0.21459712	2.7630376	21	5 24.9	20.8
414950 2011 BU_{85}	16.1	X	246.42242	138.89802	121.31783	11.24104	0.0667802	0.19017869	2.9947563	21	1 9.4	20.5
414951 2011 BF_{98}	15.9	X	147.11719	234.76106	101.73441	10.15545	0.0718168	0.18882722	3.0090286	21	—	—
414952 2011 BU_{100}	16.6	X	296.34826	21.63723	166.11099	2.81149	0.1373056	0.18028381	3.1033557	21	—	—
414953 2011 BO_{101}	17.0	X	120.69298	359.81180	90.80175	4.52619	0.1161083	0.21194293	2.7860576	21	4 19.1	21.0
414954 2011 BF_{116}	17.4	X	133.00266	328.68802	118.98457	4.13044	0.1497559	0.21670456	2.7450948	21	5 2.3	21.5
414955 2011 BC_{117}	17.1	X	189.51843	316.07307	80.97969	6.53517	0.1628308	0.22313309	2.6921137	21	4 24.6	21.6
414956 2011 BZ_{117}	16.1	X	110.79861	21.19474	343.14242	16.05268	0.0762781	0.18568531	3.0428766	21	—	—
414957 2011 BE_{119}	16.7	X	132.52814	323.31677	100.52010	8.08727	0.1222356	0.20853911	2.8162921	21	4 2.1	20.9
414958 2011 BH_{119}	17.1	X	136.67561	330.03630	100.94162	6.03946	0.0736371	0.20983985	2.8046418	21	4 8.9	21.2
414959 2011 BS_{122}	15.7	X	209.57784	270.28951	330.81248	8.47161	0.0854262	0.17447062	3.1719124	21	—	—
414960 2011 CS_{4}	19.9	X	111.58371	105.82194	287.53319	7.70361	0.3270298	0.48331490	1.6081106	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
414961 2011 CS_5	16.1	X	52.84907	317.35426	122.13927	10.08902	0.1024251	0.19091057	2.9870975	21	1 1.7	19.8
414962 2011 CD_7	16.7	X	125.55383	137.90882	310.09111	9.05917	0.1881356	0.21160356	2.7890356	21	4 23.5	21.2
414963 2011 CV_9	16.0	X	300.49298	35.73853	128.02041	9.72358	0.0628349	0.17972466	3.1097891	21	—	—
414964 2011 CY_9	16.3	X	318.99563	197.84927	322.69782	9.22751	0.0572234	0.18367066	3.0650874	21	—	—
414965 2011 CQ_{15}	16.9	X	15.05378	86.64764	12.35906	4.43891	0.1406119	0.18530621	3.0470254	21	—	—
414966 2011 CX_{22}	16.2	X	127.95623	70.84709	286.29755	7.11639	0.0488934	0.18625385	3.0366813	21	—	—
414967 2011 CX_{34}	16.8	X	125.11931	122.51537	318.97523	7.07535	0.2243534	0.21089593	2.7952710	21	4 19.7	21.3
414968 2011 CK_{37}	16.5	X	36.11606	68.02912	359.99675	2.89191	0.0951400	0.18389450	3.0625996	21	—	—
414969 2011 CP_{50}	16.0	X	353.22267	205.31236	273.63215	7.68976	0.1687416	0.18435264	3.0575235	21	—	—
414970 2011 CN_{69}	17.3	X	176.13936	223.21276	277.14332	2.08324	0.1631462	0.23473795	2.6026385	21	8 17.4	21.4
414971 2011 CY_{78}	16.6	X	19.93068	263.36600	195.19872	5.32024	0.1254056	0.18509276	3.0493675	21	—	—
414972 2011 CP_{85}	16.5	X	258.79191	41.40440	167.75228	9.53722	0.0596891	0.17615589	3.1516496	21	—	—
414973 2011 CH_{88}	16.5	X	55.83354	298.56900	151.26265	9.20561	0.1062803	0.19074891	2.9887850	21	1 18.9	20.2
414974 2011 CP_{106}	16.3	X	268.77228	189.86955	332.13703	4.10751	0.0422199	0.16805138	3.2521806	21	12 28.1	20.8
414975 2011 CP_{108}	16.8	X	134.55822	80.07658	272.46275	2.99525	0.1547374	0.18371158	3.0646322	21	1 11.6	21.4
414976 2011 DJ_1	15.9	X	55.38697	87.26625	329.61738	9.10916	0.0769992	0.17934430	3.1141845	21	—	—
414977 2011 DD_3	17.4	X	107.58897	110.16833	16.31521	2.94005	0.2324320	0.21427581	2.7657990	21	6 1.2	21.6
414978 2011 DY_{11}	16.5	X	50.58882	297.77628	198.95665	2.53248	0.1125581	0.19637209	2.9314526	21	3 11.8	20.0
414979 2011 DN_{12}	16.0	X	74.24311	85.88067	7.05377	8.11162	0.0597975	0.19662256	2.9289626	21	2 16.2	19.9
414980 2011 DB_{21}	16.4	X	62.32774	93.65790	136.17411	3.52966	0.0602321	0.22661571	2.6644611	21	7 26.5	19.6
414981 2011 DR_{22}	16.6	X	5.07046	343.18101	159.79844	6.88413	0.2026899	0.18602920	3.0391256	21	—	—
414982 2011 DX_{22}	16.1	X	316.18875	139.23679	54.91875	3.06632	0.1013985	0.18228946	3.0805506	21	1 6.8	20.2
414983 2011 DU_{37}	15.9	X	20.40168	239.37066	169.98719	8.08393	0.1541446	0.17086188	3.2164189	21	—	—
414984 2011 EB_3	16.1	X	353.79462	155.83591	349.19958	16.80258	0.1931897	0.18381882	3.0634401	21	—	—
414985 2011 EM_6	16.1	X	300.81940	307.34861	202.79865	14.70630	0.1936072	0.17353762	3.1832711	21	—	—
414986 2011 EW_{12}	15.8	X	305.05722	150.54931	39.32584	10.03497	0.0790506	0.18379204	3.0637377	21	—	—
414987 2011 EN_{23}	15.8	X	65.27173	54.24947	28.17436	10.51791	0.0886327	0.18757139	3.0224443	21	1 27.3	19.8
414988 2011 EX_{23}	16.5	X	357.84915	329.05804	154.04792	12.11943	0.1636090	0.18273387	3.0755539	21	—	—
414989 2011 ES_{47}	15.8	X	265.66945	83.82164	126.76234	13.98290	0.0374950	0.17626883	3.1503033	21	—	—
414990 2011 EM_{51}	21.9	X	226.67834	142.25365	134.16470	1.86441	0.3350294	0.64903706	1.3211630	21	—	—
414991 2011 EO_{73}	15.6	X	342.79133	143.44995	347.80056	27.43928	0.1439473	0.17740717	3.1368129	21	—	—
414992 2011 EK_{77}	16.5	X	26.61034	210.81857	288.36041	1.24453	0.1756709	0.19156469	2.9802937	21	2 4.7	19.7
414993 2011 EA_{78}	17.0	X	166.01351	293.31689	188.35906	28.20837	0.3875450	0.22827594	2.6515264	21	7 16.0	22.7
414994 2011 ES_{80}	16.6	X	11.59441	203.62538	276.16400	4.95095	0.2375499	0.18555346	3.0443180	21	—	—
414995 2011 EO_{84}	16.3	X	355.91382	84.42261	46.37384	4.76896	0.0991224	0.17867275	3.1219827	21	—	—
414996 2011 FJ	15.7	X	98.61052	253.12080	148.01298	21.52835	0.1115755	0.18514359	3.0488093	21	1 21.3	20.0
414997 2011 FN_{28}	15.9	X	322.10870	314.61651	199.73172	16.65471	0.1921393	0.17704117	3.1411345	21	—	—
414998 2011 FA_{35}	16.9	X	20.17698	37.29787	113.75563	4.07141	0.1249002	0.18950108	3.0018910	21	2 11.3	20.4
414999 2011 FJ_{55}	16.4	X	1.39767	27.08308	111.02587	2.31465	0.1347967	0.18369572	3.0648086	21	—	—
415000 2011 FB_{56}	16.0	X	25.20997	340.56022	159.01395	11.94872	0.0606191	0.18898477	3.0073560	21	2 3.7	20.0
415001 2011 FS_{60}	16.8	X	355.62007	322.23748	160.34746	0.99054	0.1345896	0.17584911	3.1553142	21	—	—
415002 2011 FN_{63}	16.8	X	25.13200	7.38861	112.45484	2.78437	0.1834976	0.18587794	3.0407741	21	1 8.7	19.9
415003 2011 FP_{89}	15.7	X	91.53119	11.53109	50.63620	10.20736	0.1070836	0.18820956	3.0156083	21	2 10.4	19.9
415004 2011 FC_{102}	17.2	X	141.76268	226.05580	225.90006	7.16035	0.1922927	0.21584613	2.7523682	21	5 18.9	21.5
415005 2011 FM_{105}	16.9	X	149.02362	356.22043	104.69420	5.05013	0.2399514	0.21849677	2.7300632	21	6 8.5	21.5
415006 2011 FS_{147}	15.5	X	270.03150	139.31346	77.30851	15.46969	0.1288215	0.17885123	3.1199054	21	—	—
415007 2011 GW_{20}	15.4	X	11.48799	143.61090	247.25659	8.60212	0.0301954	0.15189084	3.4789512	21	11 28.9	20.2
415008 2011 GS_{58}	16.2	X	51.71097	63.97335	45.09650	11.15894	0.1997056	0.18752275	3.0229670	21	2 22.2	19.7
415009 2011 GE_{67}	15.5	X	36.49588	52.85703	69.65248	13.92699	0.0553480	0.18549302	3.0449792	21	2 4.1	19.7
415010 2011 HF_{22}	15.8	X	336.73330	300.32789	207.37858	26.00990	0.2321800	0.17396263	3.1780842	21	—	—
415011 2011 HL_{34}	16.0	X	318.90499	318.68294	213.86813	9.49122	0.1735342	0.17620229	3.1510963	21	—	—
415012 2011 HR_{36}	15.8	X	1.26316	84.23019	58.59540	16.69075	0.0921908	0.17638005	3.1489788	21	1 7.5	20.1
415013 2011 HV_{64}	15.7	X	44.52943	39.55965	63.60804	21.89046	0.0974481	0.17924697	3.1153116	21	1 25.2	20.0
415014 2011 HD_{66}	16.1	X	252.08816	184.33517	43.71283	7.20361	0.0254339	0.17105917	3.2139453	21	—	—
415015 2011 HR_{85}	16.3	X	10.80391	96.33007	48.38827	7.92870	0.1153594	0.18217499	3.0818409	21	1 22.5	20.2
415016 2011 HT_{88}	16.2	X	354.73240	59.47447	57.49411	19.56508	0.1344424	0.17007246	3.2263642	21	—	—
415017 2011 HS_{93}	15.2	X	27.48874	207.70869	113.86991	4.93891	0.0749280	0.12560941	3.9487041	21	10 1.1	20.5
415018 2011 HC_{98}	16.3	X	44.53419	25.60047	54.47309	28.18005	0.1285559	0.17695804	3.1421182	21	—	—
415019 2011 HJ_{102}	15.8	X	6.15547	244.88994	173.10216	15.25772	0.0851391	0.15542540	3.4260055	21	12 29.1	20.6
415020 2011 JO_2	15.2	X	255.84649	174.23030	91.73570	27.86302	0.1029965	0.17507152	3.1646502	21	1 26.8	20.3
415021 2011 JJ_{16}	15.9	X	19.68633	72.06819	52.91856	16.51180	0.1956306	0.17851956	3.1237685	21	1 7.6	19.5
415022 2011 MP_{10}	17.2	X	170.96486	260.21946	126.91841	24.07543	0.1004769	0.36250946	1.9480039	21	3 7.4	19.9
415023 2011 NC_2	13.9	X	311.86077	352.80814	300.44593	7.85755	0.0867604	0.08436001	5.1488666	21	5 10.9	20.6
415024 2011 QS_{51}	17.0	X	231.06814	47.43251	250.50187	17.89874	0.0576946	0.35059070	1.9919073	21	1 4.7	19.6
415025 2011 QJ_{80}	18.4	X	115.43974	205.49502	218.05970	9.59159	0.1754835	0.34746341	2.0038413	21	2 16.5	20.4
415026 2011 QT_{85}	13.7	X	303.44826	253.34810	72.36828	7.05404	0.0519998	0.08397814	5.1644635	21	6 12.9	20.5
415027 2011 SG_5	18.2	X	229.75170	26.56563	229.80550	26.62270	0.3862077	0.65755207	1.3097325	21	—	—
415028 2011 SF_{187}	17.5	X	101.53013	267.70478	359.83464	6.48037	0.1609329	0.30707879	2.1758861	21	11 22.3	20.7
415029 2011 UL_{21}	15.8	X	27.69131	284.77887	275.55509	34.85059	0.6528159	0.31867823	2.1227611	21	7 25.9	17.5
415030 2011 UA_{354}	17.0	X	116.96399	352.73897	238.30106	6.89860	0.1043829	0.28978802	2.2615999	21	10 15.7	20.1
415031 2011 WC_{13}	17.2	X	31.54684	198.72072	67.22261	8.85913	0.1918662	0.27593017	2.3367016	21	8 27.8	19.5
415032 2011 WK_{75}	18.0	X	97.43585	50.16839	266.10452	4.71289	0.1461904	0.31147120	2.1553814	21	—	—
415033 2011 WT_{77}	17.9	X	318.38652	240.35298	202.61846	5.21394	0.0749696	0.29971062	2.2114034	21	12 27.3	20.1
415034 2011 WB_{141}	18.6	X	56.85849	4.08404	356.91426	2.10322	0.2096005	0.31030728	2.1607677	21	—	—
415035 2011 YT_4	17.1	X	246.65311	37.65956	67.76665	6.38833	0.0642211	0.27943796	2.3171053	21	10 6.7	19.9
415036 2011 YB_{24}	17.6	X	325.61557	312.26025	101.92299	7.78705	0.0805152	0.28741828	2.2740139	21	11 26.0	19.8
415037 2011 YV_{32}	17.6	X	312.88126	265.56895	203.35204	3.26906	0.1555517	0.29817300	2.2189993	21	—	—
415038 2011 YB_{42}	17.8	X	260.01762	83.73298	69.50301	6.92378	0.0367966	0.29667514	2.2264620	21	—	—
415039 2011 YN_{45}	17.5	X	102.10297	62.94487	148.82749	2.95386	0.1314751	0.26027004	2.4295170	21	9 5.2	20.8
415040 2011 YO_{45}	17.7	X	340.60230	86.45952	273.72674	5.31425	0.1225317	0.27637696	2.3341826	21	9 25.4	19.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415041 2011 YL_{48}	16.9	X	77.44183	168.13193	30.26582	6.76605	0.0765227	0.25213404	2.4815045	21	7 8.3	20.1
415042 2011 YY_{58}	18.3	X	221.19889	359.09493	102.59013	2.21785	0.1433683	0.26830500	2.3807669	21	8 15.9	21.6
415043 2011 YC_{59}	17.6	X	274.38840	140.08521	298.97600	6.74000	0.0713606	0.27747365	2.3280281	21	9 30.7	20.5
415044 2011 YG_{61}	17.6	X	226.70391	256.15373	251.82502	5.82793	0.0501449	0.28312963	2.2969198	21	11 5.9	20.4
415045 2011 YQ_{66}	17.3	X	10.70383	12.12082	337.67157	7.81929	0.1304944	0.28126267	2.3070729	21	11 8.1	19.8
415046 2011 YO_{67}	17.5	X	257.55969	141.86038	320.43689	6.92441	0.0678915	0.27783264	2.3260223	21	10 9.8	20.4
415047 2011 YP_{73}	18.2	X	194.94464	42.92221	84.37220	2.40035	0.1300817	0.26628988	2.3927626	21	8 23.2	21.8
415048 2011 YC_{74}	18.2	X	1.62737	350.12200	38.23969	7.58261	0.1401247	0.29492354	2.2352688	21	12 28.1	20.5
415049 2011 YA_{79}	17.8	X	345.56181	49.49812	30.11423	4.99316	0.1101584	0.29866636	2.2165550	21	—	—
415050 2012 AK_{2}	18.2	X	291.52019	206.62302	264.81868	4.35136	0.0946304	0.29242919	2.2479617	21	12 20.1	20.3
415051 2012 AX_{5}	17.3	X	146.89337	242.35458	274.17359	3.05064	0.1212784	0.25934079	2.4353170	21	8 9.5	20.9
415052 2012 AW_{6}	16.9	X	196.46022	214.43147	272.01427	5.54018	0.0661001	0.26620268	2.3932851	21	8 23.9	20.4
415053 2012 AR_{12}	17.0	X	211.27574	174.42298	2.27646	8.51254	0.1324992	0.28310388	2.2970591	21	11 11.9	20.4
415054 2012 AE_{24}	17.8	X	347.30763	88.60579	299.88992	5.97725	0.1237188	0.28684503	2.2770427	21	11 26.8	19.9
415055 2012 BC	17.4	X	100.72574	102.21962	96.66046	2.46113	0.1408707	0.25689169	2.4507707	21	8 18.6	20.8
415056 2012 BC_{10}	17.8	X	159.56396	345.09455	182.57919	4.89931	0.1663110	0.26025106	2.4296351	21	9 7.1	21.6
415057 2012 BV_{11}	17.7	X	326.04669	324.42908	91.91923	4.51254	0.1291878	0.28637010	2.2795595	21	11 30.1	19.6
415058 2012 BH_{19}	16.8	X	28.88496	120.61177	78.17395	6.63798	0.0829189	0.23544022	2.5974605	21	4 25.4	19.8
415059 2012 BP_{22}	17.4	X	287.70210	313.06210	140.38741	8.65808	0.0685349	0.28528154	2.2853546	21	11 20.6	20.0
415060 2012 BH_{26}	17.6	X	327.88415	10.22436	47.79156	7.16491	0.1749836	0.28828021	2.2694790	21	12 8.3	19.2
415061 2012 BW_{27}	17.9	X	202.29830	121.55969	0.75987	2.83500	0.1323719	0.26330010	2.4108417	21	8 23.8	21.6
415062 2012 BM_{44}	16.9	X	138.10466	176.55945	342.73520	2.06647	0.1372132	0.25674093	2.4517300	21	8 6.1	20.4
415063 2012 BO_{44}	18.2	X	286.73863	98.77579	347.06898	2.24889	0.0826407	0.28295296	2.2978758	21	11 1.9	20.7
415064 2012 BD_{51}	16.9	X	357.47675	181.26389	130.91603	6.76537	0.1910790	0.26559174	2.3969538	21	8 20.6	18.6
415065 2012 BH_{53}	17.7	X	333.37915	260.15857	130.32161	4.70563	0.1475099	0.27718143	2.3296640	21	11 4.5	19.6
415066 2012 BV_{54}	17.5	X	228.37146	21.31719	95.36977	2.55997	0.1322489	0.26865926	2.3786735	21	9 15.4	20.7
415067 2012 BE_{55}	17.8	X	240.39012	347.43145	120.17307	6.48155	0.1961028	0.27066114	2.3669302	21	9 10.2	21.1
415068 2012 BL_{56}	17.8	X	227.07694	95.58923	50.57192	2.61898	0.1057372	0.27503005	2.3417972	21	10 26.9	20.7
415069 2012 BZ_{56}	17.2	X	206.95031	225.52138	275.74068	1.41942	0.1130731	0.26933322	2.3747037	21	9 23.5	20.4
415070 2012 BS_{59}	17.8	X	193.61629	70.55007	8.90189	2.88137	0.1673198	0.25567981	2.4585088	21	6 17.2	21.7
415071 2012 BU_{62}	17.1	X	110.92680	315.35536	245.28608	3.00960	0.1048435	0.26022268	2.4298117	21	8 26.6	20.5
415072 2012 BJ_{65}	18.0	X	334.92750	246.56202	154.28253	5.27922	0.0594195	0.28409375	2.2917202	21	11 20.5	20.5
415073 2012 BZ_{67}	17.8	X	235.10448	245.22727	165.29702	2.96815	0.0744938	0.25778151	2.4451276	21	6 29.4	21.1
415074 2012 BF_{70}	17.8	X	127.42361	82.57682	47.29812	2.32417	0.0622207	0.24529064	2.5274470	21	6 6.9	21.1
415075 2012 BS_{72}	18.5	X	315.83163	1.31115	88.97726	1.91648	0.1953586	0.29293563	2.2453700	21	—	—
415076 2012 BR_{80}	18.1	X	290.07022	16.87361	84.27961	2.37316	0.1435138	0.28744613	2.2738671	21	11 25.8	19.9
415077 2012 BQ_{82}	18.0	X	268.20805	351.20863	118.08372	4.61804	0.0704391	0.28198937	2.3031076	21	11 10.6	20.6
415078 2012 BN_{88}	17.3	X	146.78523	72.20806	29.44798	3.62848	0.0355699	0.24418676	2.5350584	21	5 20.8	20.7
415079 2012 BH_{93}	17.4	X	194.58782	66.37361	105.29859	7.33328	0.0541774	0.27637948	2.3341684	21	10 30.5	20.6
415080 2012 BN_{98}	17.6	X	149.11292	80.17849	122.46084	2.19422	0.0495484	0.27244957	2.3565607	21	10 13.8	20.6
415081 2012 BX_{99}	17.8	X	206.42314	115.91887	24.61491	1.63991	0.1154317	0.27099598	2.3649801	21	9 23.1	20.9
415082 2012 BW_{109}	17.2	X	165.74930	68.73286	116.65158	5.97342	0.1516171	0.26816201	2.3816131	21	10 9.9	21.0
415083 2012 BH_{110}	17.2	X	330.81878	337.50188	313.00216	2.45617	0.1456923	0.24171831	2.5522881	21	5 17.5	19.8
415084 2012 BO_{111}	17.4	X	167.31865	359.28642	140.24429	2.64945	0.1813885	0.25740079	2.4475381	21	8 9.7	21.3
415085 2012 BZ_{111}	17.5	X	207.04702	165.52571	310.33108	3.74357	0.1223313	0.26307931	2.4121904	21	8 19.7	21.0
415086 2012 BT_{112}	18.3	X	213.25994	25.84341	134.27575	1.55831	0.1228451	0.27482986	2.3429343	21	10 26.9	21.4
415087 2012 BD_{113}	17.1	X	41.53220	252.06282	299.17266	2.79766	0.0502110	0.23345181	2.6121888	21	4 29.4	20.3
415088 2012 BF_{120}	18.1	X	232.72697	165.01251	304.02348	1.59661	0.1346686	0.27140453	2.3626061	21	9 8.1	21.3
415089 2012 BR_{124}	17.2	X	199.75451	319.58120	143.51024	6.38874	0.0583261	0.25924446	2.4359202	21	7 29.2	20.5
415090 2012 BM_{127}	17.4	X	144.92947	206.82194	330.04868	1.75339	0.0904278	0.26328832	2.4109136	21	9 3.2	20.6
415091 2012 BG_{130}	18.0	X	233.93423	28.99396	99.49084	2.30038	0.1293694	0.27474698	2.3434054	21	10 9.1	21.0
415092 2012 BY_{134}	17.4	X	244.86097	42.79267	80.75700	7.60835	0.1923612	0.27681665	2.3317102	21	10 10.1	20.5
415093 2012 BW_{140}	17.4	X	275.51315	268.85347	151.37230	12.39966	0.1610312	0.27020655	2.3695842	21	8 24.2	19.8
415094 2012 BR_{148}	16.7	X	338.95440	348.31110	255.79023	3.06218	0.1246323	0.22922041	2.6442379	21	3 29.2	19.7
415095 2012 BN_{151}	17.5	X	276.17813	125.68503	311.39302	6.27727	0.0914646	0.27896008	2.3197508	21	9 28.2	20.2
415096 2012 BY_{151}	17.1	X	261.98667	359.54026	106.16353	6.97125	0.0647332	0.27447042	2.3449793	21	10 28.4	19.9
415097 2012 BG_{152}	17.1	X	191.67674	256.24107	239.98599	5.92616	0.0674656	0.26511946	2.3997996	21	8 30.9	20.6
415098 2012 CR_{6}	17.7	X	215.54644	220.09119	233.06879	2.49491	0.0900320	0.26106048	2.4246104	21	7 31.9	21.1
415099 2012 CT_{8}	18.6	X	280.47725	274.88998	169.36440	2.13263	0.1620150	0.27913515	2.3187808	21	10 8.5	20.9
415100 2012 CC_{13}	17.5	X	323.34571	288.14268	123.39618	7.34130	0.0869960	0.27907407	2.3191191	21	11 17.1	19.9
415101 2012 CF_{13}	16.9	X	33.17603	160.85242	0.23957	5.84224	0.0198688	0.22319515	2.6916146	21	3 9.6	20.3
415102 2012 CD_{15}	17.4	X	57.00078	231.81255	324.58620	8.06833	0.1071166	0.23848757	2.5752865	21	6 7.4	20.5
415103 2012 CT_{15}	17.6	X	218.58039	196.02066	293.46985	3.06179	0.1764603	0.27127759	2.3633431	21	9 13.9	21.0
415104 2012 CU_{20}	17.0	X	15.15914	305.99712	263.44599	6.74765	0.2233870	0.22611993	2.6683543	21	4 10.4	19.3
415105 2012 CF_{23}	16.4	X	20.82883	300.07105	298.08662	11.82207	0.0666309	0.24127202	2.5554344	21	6 3.5	19.6
415106 2012 CP_{30}	17.6	X	140.48906	181.26761	329.95703	3.85963	0.0478501	0.25432854	2.4672092	21	7 22.6	20.9
415107 2012 CG_{34}	17.2	X	241.12517	254.66663	146.32361	4.64317	0.1747147	0.25720618	2.4487725	21	6 13.4	21.0
415108 2012 CK_{34}	17.8	X	340.25263	86.67044	345.73405	2.17707	0.1578257	0.29344806	2.2427553	21	—	—
415109 2012 CR_{35}	17.7	X	203.52721	168.60994	321.12576	3.18279	0.0799262	0.26545292	2.3977895	21	9 6.8	20.9
415110 2012 CS_{41}	16.3	X	248.50299	152.44859	135.81132	14.18322	0.1547061	0.21540580	2.7561178	21	2 4.2	20.8
415111 2012 CY_{47}	18.3	X	268.76004	109.15012	3.47292	6.40959	0.1910097	0.27986591	2.3147427	21	10 23.5	20.6
415112 2012 CZ_{47}	17.8	X	184.20177	102.74537	52.61437	3.28416	0.1202186	0.26327546	2.4109921	21	9 18.8	21.3
415113 2012 CV_{50}	17.6	X	230.02215	331.05106	167.77965	4.89527	0.0912644	0.27452622	2.3446615	21	10 23.8	20.5
415114 2012 CB_{52}	17.8	X	243.52970	211.81808	244.31397	1.84330	0.0671893	0.26662287	2.3907699	21	9 12.9	21.0
415115 2012 CG_{56}	17.5	X	255.63947	81.45902	25.46430	6.64535	0.0717312	0.27573127	2.3378252	21	10 16.6	20.1
415116 2012 CY_{56}	18.1	X	323.23521	265.79921	192.45917	5.31930	0.1391978	0.29546425	2.2325409	21	—	—
415117 2012 DC_{1}	16.8	X	290.27681	318.71009	327.32445	6.03402	0.0933933	0.22682372	2.6628318	21	3 20.7	20.5
415118 2012 DG_{13}	18.4	X	240.06733	323.38215	155.79396	2.34595	0.1895505	0.27418320	2.3466167	21	9 24.8	21.4
415119 2012 DJ_{15}	15.4	X	185.13517	238.40914	16.12905	25.77190	0.1855327	0.17479509	3.1679858	21	—	—
415120 2012 DH_{18}	17.4	X	133.96136	25.15982	192.03103	1.28060	0.1322816	0.26818807	2.3814588	21	10 16.6	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415121 2012 DG_{19}	17.0	X	43.84128	39.36954	169.64525	11.01900	0.0676534	0.23244701	2.6197111	21	6 2.0	20.4
415122 2012 DE_{22}	17.5	X	178.40138	90.23085	67.61873	5.51442	0.1640367	0.26144058	2.4222598	21	9 15.9	21.3
415123 2012 DH_{27}	17.9	X	150.46590	155.03655	332.15588	4.09872	0.1919330	0.24591337	2.5231784	21	7 10.3	22.0
415124 2012 DX_{29}	16.8	X	205.27076	16.08427	7.59139	11.78060	0.0399174	0.22771744	2.6558600	21	4 18.7	20.6
415125 2012 DN_{32}	16.6	X	283.00577	222.03420	353.41007	10.66780	0.1388306	0.19843823	2.9110689	21	—	—
415126 2012 DG_{35}	17.6	X	287.00280	59.16256	13.19922	5.98915	0.1622897	0.27315256	2.3525157	21	9 30.9	20.0
415127 2012 DH_{35}	17.3	X	27.22182	111.71080	84.06724	3.38257	0.1385635	0.22562212	2.6722778	21	4 20.6	20.0
415128 2012 DM_{36}	16.6	X	231.93511	272.90389	336.68953	7.15887	0.1192748	0.19204581	2.9753141	21	—	—
415129 2012 DS_{36}	17.8	X	106.41264	181.24306	307.09214	1.38215	0.1386084	0.23544474	2.5974272	21	5 20.1	21.3
415130 2012 DA_{38}	15.8	X	195.75593	241.61115	40.19190	11.06139	0.1155577	0.19445068	2.9507319	21	—	—
415131 2012 DP_{38}	16.3	X	129.25111	107.66002	350.14352	21.84267	0.0206573	0.23010399	2.6374645	21	4 12.2	20.2
415132 2012 DS_{38}	18.0	X	245.12613	73.75652	35.04395	3.53283	0.1296685	0.26981533	2.3718741	21	9 25.7	20.9
415133 2012 DY_{39}	17.2	X	95.49806	306.54154	195.76223	6.28521	0.1309594	0.23046395	2.6347175	21	5 25.4	20.8
415134 2012 DJ_{46}	17.7	X	120.28018	79.86147	44.74284	2.01819	0.1178366	0.23314905	2.6144497	21	5 29.5	21.3
415135 2012 DO_{54}	18.4	X	336.08844	255.71007	161.90983	10.67497	0.3363198	0.28824780	2.2696491	21	—	—
415136 2012 DG_{55}	17.8	X	208.35810	114.82344	7.93000	3.32009	0.1484857	0.26340002	2.4102320	21	8 29.8	21.4
415137 2012 DY_{57}	16.9	X	105.94343	329.89212	148.16336	5.11021	0.0577265	0.22706809	2.6609210	21	4 26.7	20.4
415138 2012 DE_{59}	17.3	X	269.88710	287.21242	145.70217	5.76391	0.1979882	0.26814624	2.3817065	21	8 28.2	20.1
415139 2012 DM_{61}	17.6	X	175.23936	82.33875	41.47234	6.82757	0.0777473	0.25415741	2.4683166	21	7 30.2	21.2
415140 2012 DV_{61}	15.5	X	174.22788	46.63401	241.85622	9.10413	0.1153609	0.18943326	3.0026075	21	—	—
415141 2012 DF_{65}	16.7	X	261.81598	209.44213	142.02912	3.29169	0.2344860	0.23947628	2.5681933	21	4 26.9	20.7
415142 2012 DY_{76}	16.8	X	356.79932	267.31097	276.68115	3.81006	0.0941403	0.21289863	2.7777137	21	2 11.4	20.2
415143 2012 DC_{82}	17.6	X	272.28268	115.40253	337.08160	2.26714	0.1546499	0.27374053	2.3491458	21	10 5.9	20.1
415144 2012 DC_{86}	17.4	X	209.83806	110.79829	340.18524	5.97856	0.1001851	0.25590119	2.4570906	21	7 23.7	21.0
415145 2012 DS_{93}	17.4	X	73.75314	333.69107	162.43005	1.88035	0.0324726	0.22476867	2.6790380	21	4 1.9	20.8
415146 2012 DM_{95}	17.2	X	330.99757	271.63622	333.68371	4.60570	0.1205193	0.22415621	2.6839157	21	3 20.0	20.4
415147 2012 EV_{3}	17.5	X	113.38599	184.25865	311.79819	4.05714	0.1651625	0.23765730	2.5812810	21	6 11.4	21.3
415148 2012 EJ_{17}	15.2	X	184.11172	195.36327	57.99174	13.11361	0.0901150	0.17792021	3.1307798	21	—	—
415149 2012 FN_{2}	18.1	X	247.33499	139.00003	341.04709	1.06095	0.1277497	0.27411451	2.3470087	21	10 13.4	20.8
415150 2012 FR_{2}	17.1	X	37.35197	175.40781	333.36528	4.83434	0.1045452	0.21887241	2.7269386	21	3 1.4	20.1
415151 2012 FS_{8}	17.0	X	286.91761	315.13086	330.37546	4.91060	0.0456255	0.22409342	2.6844170	21	3 23.5	20.7
415152 2012 FU_{18}	16.4	X	119.56859	172.62530	142.45740	1.67439	0.1244824	0.17901616	3.1179888	21	—	—
415153 2012 FE_{19}	17.1	X	225.02923	295.03160	29.89474	4.81587	0.0709627	0.21440888	2.7646546	21	3 3.3	21.2
415154 2012 FK_{25}	16.8	X	12.18277	174.12700	29.65673	7.04474	0.0181992	0.22235249	2.6984107	21	4 6.5	20.2
415155 2012 FP_{25}	16.9	X	53.51245	172.60933	23.36605	12.69398	0.0656244	0.23208070	2.6224670	21	5 24.2	20.3
415156 2012 FQ_{25}	16.7	X	161.61736	74.02697	8.51327	22.17091	0.0770705	0.23452713	2.6041979	21	5 8.8	20.9
415157 2012 FE_{26}	16.9	X	148.07354	204.44678	185.22061	6.10749	0.0441835	0.21115277	2.7930038	21	2 21.4	20.9
415158 2012 FL_{28}	17.3	X	211.47004	310.59823	55.84551	7.12091	0.0459979	0.22091125	2.7101344	21	4 9.7	21.2
415159 2012 FD_{32}	16.6	X	49.46438	9.50197	171.09070	14.13014	0.1889463	0.22530323	2.6747987	21	5 19.3	19.7
415160 2012 FB_{35}	17.0	X	345.57218	181.27819	41.45734	7.02627	0.0010382	0.21862424	2.7290019	21	3 29.6	20.6
415161 2012 FS_{36}	17.0	X	168.14396	323.25770	53.91971	6.80926	0.0835888	0.21197764	2.7857535	21	3 9.1	21.2
415162 2012 FR_{38}	17.2	X	167.55362	197.35485	297.42347	5.29541	0.0726945	0.25243270	2.4795468	21	8 2.1	20.8
415163 2012 FX_{38}	16.9	X	163.88989	150.24691	264.59456	4.42575	0.0071325	0.22676239	2.6633119	21	4 7.4	20.5
415164 2012 FB_{44}	16.2	X	89.33046	7.51408	15.88378	10.32161	0.0708040	0.18591112	3.0404122	21	—	—
415165 2012 FD_{45}	17.8	X	261.36836	336.96080	134.31557	2.00006	0.1387343	0.27360837	2.3499023	21	10 20.7	20.5
415166 2012 FJ_{50}	17.9	X	231.47275	14.28010	73.88622	3.59194	0.1661941	0.25831908	2.4417342	21	8 6.8	21.4
415167 2012 FF_{52}	17.0	X	279.75216	115.95306	173.50208	5.53944	0.0533776	0.22015754	2.7163163	21	3 20.9	20.6
415168 2012 FV_{52}	16.4	X	193.10378	54.87455	171.87033	9.12617	0.1498848	0.17359326	3.1825909	21	12 10.5	21.6
415169 2012 FW_{53}	16.6	X	210.03837	169.32309	128.84842	5.66923	0.0783351	0.19724013	2.9228455	21	1 15.1	21.1
415170 2012 FD_{61}	18.1	X	216.69863	4.71917	102.44311	2.29932	0.1344173	0.25640861	2.4538479	21	8 18.6	21.6
415171 2012 FW_{67}	17.9	X	237.48043	81.58998	47.63988	3.29223	0.1357714	0.26683107	2.3895261	21	10 12.3	21.1
415172 2012 FL_{68}	17.6	X	219.75270	95.65995	39.04011	8.32284	0.1097907	0.26550535	2.3974738	21	10 3.2	20.9
415173 2012 FS_{70}	15.6	X	42.56494	62.98643	46.11484	12.53427	0.0324745	0.20263597	2.8707257	21	1 21.4	19.6
415174 2012 FX_{70}	17.3	X	48.45737	163.05698	15.08431	2.42116	0.0649132	0.22267969	2.6957667	21	4 25.1	20.7
415175 2012 FC_{72}	16.8	X	60.46891	348.74624	194.81692	15.56721	0.2117147	0.22929475	2.6436663	21	6 13.0	20.2
415176 2012 FE_{72}	16.6	X	58.50066	328.64964	212.70141	12.93562	0.1834165	0.22387809	2.6861380	21	6 2.3	19.8
415177 2012 FZ_{72}	17.3	X	220.28406	22.53762	90.23394	5.51529	0.1445330	0.26177106	2.4202207	21	8 31.2	20.9
415178 2012 FG_{75}	16.0	X	169.36473	30.36468	20.91009	22.36549	0.0277525	0.22562558	2.6722505	21	4 12.8	19.7
415179 2012 FM_{76}	16.1	X	196.51793	252.68413	3.26377	9.96074	0.1508334	0.17944031	3.1130735	21	—	—
415180 2012 FY_{77}	15.9	X	353.53640	247.29560	329.74529	13.25466	0.0280788	0.22023180	2.7157057	21	3 22.5	19.6
415181 2012 FF_{78}	15.4	X	174.87234	240.68722	26.67157	24.46118	0.1129218	0.17294036	3.1905960	21	—	—
415182 2012 GA	16.6	X	44.63429	12.86258	200.41494	12.67459	0.2227930	0.22943472	2.6425910	21	6 28.6	19.6
415183 2012 GR_{4}	16.9	X	77.31816	151.25406	25.30268	4.17789	0.1827152	0.23210555	2.6222798	21	6 23.9	20.3
415184 2012 GZ_{8}	16.5	X	353.35627	288.37551	216.31254	6.16969	0.0686668	0.19803427	2.9150263	21	—	—
415185 2012 GT_{9}	17.3	X	139.47992	123.78329	7.86785	3.03262	0.0908583	0.23835714	2.5762259	21	6 27.7	21.0
415186 2012 GP_{10}	16.2	X	190.06420	51.33176	199.85365	9.10530	0.0968060	0.17639512	3.1487994	21	—	—
415187 2012 GE_{11}	16.6	X	250.18976	191.07241	202.16258	8.14886	0.0877332	0.24030969	2.5622521	21	6 22.9	20.3
415188 2012 GZ_{12}	16.2	X	301.95727	328.44211	202.82767	9.35181	0.0407676	0.18830476	3.0145918	21	—	—
415189 2012 GB_{14}	16.7	X	190.34369	230.74278	206.43506	13.63896	0.1206375	0.23790063	2.5795206	21	6 12.1	20.9
415190 2012 GX_{15}	15.6	X	167.82075	283.79371	21.63026	12.88261	0.1028257	0.18350023	3.0669849	21	—	—
415191 2012 GO_{20}	16.3	X	280.63111	175.82854	78.22909	11.65152	0.0623228	0.20270849	2.8700409	21	2 10.6	20.5
415192 2012 GG_{24}	16.9	X	58.77344	358.08957	180.21375	13.20371	0.1073252	0.22603993	2.6689838	21	5 19.4	20.3
415193 2012 GQ_{24}	16.7	X	103.28563	165.03318	10.12580	9.05516	0.1002388	0.23844259	2.5756103	21	7 15.9	20.4
415194 2012 GS_{24}	17.6	X	215.55412	47.73309	58.03257	2.29966	0.1434604	0.25458032	2.4655823	21	8 14.9	21.2
415195 2012 GL_{25}	17.0	X	12.82084	339.09027	195.71756	4.79261	0.0999209	0.21033413	2.8002462	21	2 24.5	20.4
415196 2012 GO_{25}	16.7	X	210.65730	192.06886	180.00517	5.36892	0.0626803	0.21842885	2.7306291	21	4 14.1	20.7
415197 2012 GY_{34}	16.4	X	188.88056	55.23226	217.60721	10.97276	0.1043416	0.17866706	3.1220490	21	—	—
415198 2012 GU_{35}	16.8	X	256.48185	55.64120	214.46103	10.58798	0.0526494	0.19878831	2.9076501	21	1 28.4	21.2
415199 2012 GM_{39}	15.6	X	305.71282	225.10653	271.57715	8.89054	0.0543833	0.17999116	3.1067187	21	—	—
415200 2012 GS_{39}	16.0	X	233.86553	227.66064	15.47530	11.49123	0.1174203	0.18440969	3.0568929	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415201 2012 HW	17.3	X	92.72209	248.91773	260.44695	2.26949	0.1444456	0.23003601	2.6379840	21	6 1.4	20.8
415202 2012 HH_{11}	16.3	X	228.47483	205.75635	143.89929	7.13491	0.0820665	0.21588617	2.7520279	21	4 6.6	20.4
415203 2012 HT_{12}	15.8	X	50.70132	301.40742	93.49668	12.52812	0.0397773	0.17212076	3.2007166	21	—	—
415204 2012 HZ_{14}	16.0	X	198.39551	214.59927	69.56469	11.65788	0.0893073	0.18930736	3.0039386	21	—	—
415205 2012 HG_{17}	15.9	X	199.94147	156.40669	101.26403	10.43278	0.0536878	0.17503693	3.1650671	21	—	—
415206 2012 HU_{18}	16.5	X	141.29213	354.64477	115.15776	15.35763	0.2011284	0.22689042	2.6623099	21	6 11.9	21.0
415207 2012 HP_{29}	17.0	X	74.46646	339.88525	124.47215	3.06109	0.0226885	0.20325250	2.8649174	21	2 23.3	20.9
415208 2012 HA_{32}	16.8	X	122.62146	57.26307	107.01068	13.09572	0.1187953	0.23634372	2.5908365	21	7 24.8	20.7
415209 2012 HC_{35}	16.1	X	212.05814	192.20824	74.31012	10.13765	0.0215054	0.18689417	3.0297413	21	—	—
415210 2012 HW_{38}	16.4	X	207.77932	60.00650	229.53983	15.43078	0.0415539	0.18505468	3.0497857	21	1 2.2	21.1
415211 2012 HJ_{39}	15.8	X	250.48897	17.92755	218.30954	21.00743	0.2381086	0.18346554	3.0673715	21	—	—
415212 2012 HV_{40}	16.3	X	49.65108	143.99193	359.76129	12.84488	0.0817329	0.21277911	2.7787537	21	3 15.5	19.7
415213 2012 HX_{43}	15.3	X	162.50946	248.24145	40.52675	11.76064	0.0685321	0.17491113	3.1665846	21	—	—
415214 2012 HQ_{44}	16.9	X	100.12616	115.93076	35.74146	2.87524	0.0722712	0.22886398	2.6469826	21	6 3.1	20.5
415215 2012 HV_{49}	15.8	X	184.45378	229.89428	50.00651	11.41003	0.1358149	0.17672993	3.1448214	21	—	—
415216 2012 HW_{49}	15.8	X	223.62619	206.54447	74.44312	11.91919	0.0648550	0.18787478	3.0191896	21	1 11.3	20.4
415217 2012 HT_{54}	16.4	X	62.78555	98.05223	53.15879	12.43641	0.0929922	0.21289451	2.7777494	21	4 18.7	19.9
415218 2012 HC_{56}	17.1	X	106.47056	325.14791	211.67975	14.68967	0.0870188	0.23788816	2.5796107	21	7 14.5	21.0
415219 2012 HO_{60}	15.5	X	184.99035	243.03465	45.19073	11.91588	0.0695084	0.18146856	3.0898338	21	—	—
415220 2012 HE_{61}	15.7	X	230.72680	229.32669	41.71512	11.19059	0.0610989	0.18994121	2.9972519	21	1 7.1	20.3
415221 2012 HT_{62}	16.5	X	126.81615	230.16914	191.67971	4.12406	0.0585186	0.20862884	2.8154846	21	3 10.9	20.4
415222 2012 HL_{65}	15.6	X	101.57209	283.89466	111.90056	15.37835	0.0737393	0.18648718	3.0341477	21	1 13.7	19.8
415223 2012 HN_{65}	16.5	X	111.12405	302.44645	190.01822	11.54433	0.1426976	0.22394411	2.6856101	21	6 2.9	20.5
415224 2012 HH_{66}	15.6	X	123.66262	241.58394	89.41899	10.34882	0.0734179	0.17446231	3.1720130	21	—	—
415225 2012 HP_{66}	16.9	X	171.77102	257.24238	231.67069	11.76479	0.1532281	0.24128662	2.5553313	21	7 26.7	21.2
415226 2012 HM_{67}	16.9	X	143.30397	283.47573	170.87805	7.54358	0.1405521	0.22183241	2.7026266	21	5 20.4	21.1
415227 2012 HH_{68}	15.9	X	36.74451	87.48708	89.60898	16.56620	0.0666014	0.21176018	2.7876603	21	4 16.9	19.7
415228 2012 HS_{72}	17.2	X	148.92569	87.03262	73.05689	12.29496	0.1498325	0.24603994	2.5223130	21	8 23.1	21.4
415229 2012 HM_{73}	16.0	X	257.36035	154.95966	77.74106	11.70004	0.0460185	0.18457022	3.0551202	21	—	—
415230 2012 HT_{75}	16.7	X	103.22984	13.42307	91.14463	5.98360	0.0827674	0.21640913	2.7475926	21	4 11.3	20.4
415231 2012 HY_{75}	16.8	X	211.09963	276.70936	79.58166	7.17739	0.0428508	0.21236979	2.7823230	21	3 29.8	20.9
415232 2012 HS_{78}	16.0	X	278.04636	323.16817	237.47822	15.65702	0.1170367	0.18374818	3.0642253	21	—	—
415233 2012 HL_{79}	15.7	X	193.43873	220.56736	70.17079	10.15132	0.0586775	0.17937979	3.1137737	21	—	—
415234 2012 JB_{1}	15.7	X	98.63366	281.04887	70.21667	16.22096	0.2221968	0.17087158	3.2162971	21	—	—
415235 2012 JZ_{3}	16.5	X	324.54494	309.23406	205.03030	9.02199	0.0307367	0.18267054	3.0762647	21	—	—
415236 2012 JF_{9}	17.4	X	95.63922	94.77672	61.36356	3.32800	0.1013327	0.22470398	2.6795521	21	6 7.9	20.9
415237 2012 JV_{12}	15.5	X	81.65955	310.68814	65.65942	14.84506	0.1535570	0.17785021	3.1316013	21	—	—
415238 2012 JE_{13}	16.0	X	300.84331	112.09532	61.61610	10.61574	0.0458010	0.18032590	3.1028728	21	—	—
415239 2012 JW_{16}	15.8	X	90.58927	324.46150	51.48248	14.88312	0.0925798	0.18046480	3.1012805	21	—	—
415240 2012 JQ_{19}	16.4	X	51.96640	135.26704	63.57195	12.26177	0.1293352	0.22437040	2.6822073	21	6 6.5	19.4
415241 2012 JR_{20}	15.7	X	139.76883	314.81120	52.78650	10.38106	0.0544668	0.18741877	3.0240850	21	1 25.2	20.2
415242 2012 JE_{23}	15.8	X	207.86050	44.30151	232.74852	16.57795	0.1853230	0.17928435	3.1148786	21	—	—
415243 2012 JN_{25}	16.3	X	246.57042	218.94266	50.18470	4.52147	0.0560804	0.19089656	2.9872437	21	1 21.9	20.7
415244 2012 JO_{33}	16.4	X	59.81381	222.17417	257.37838	4.82568	0.0808959	0.20343368	2.8632162	21	2 25.3	20.0
415245 2012 JD_{39}	16.2	X	15.91390	319.50083	187.20049	12.27721	0.0895604	0.19894745	2.9060994	21	1 25.4	20.1
415246 2012 JD_{41}	15.7	X	136.77999	261.49352	63.15203	14.47867	0.1377434	0.17554506	3.1589565	21	—	—
415247 2012 JH_{42}	16.7	X	111.93583	55.00447	57.88403	3.21698	0.0214226	0.21506438	2.7590340	21	4 22.1	20.4
415248 2012 JM_{43}	16.3	X	295.03309	311.88320	218.12873	11.00039	0.0141708	0.17955364	3.1117634	21	—	—
415249 2012 JV_{44}	16.0	X	1.75590	30.92061	65.83404	10.27564	0.0613568	0.17506424	3.1647379	21	—	—
415250 2012 JX_{47}	16.0	X	119.88590	267.21063	59.85692	11.69652	0.0913562	0.17250857	3.1959178	21	—	—
415251 2012 JB_{53}	16.2	X	193.34584	173.34167	88.55037	3.73712	0.0652552	0.17438540	3.1729457	21	—	—
415252 2012 JC_{58}	16.4	X	79.36430	270.31832	155.99557	9.40511	0.0986395	0.19516010	2.9435768	21	1 21.9	20.3
415253 2012 JB_{61}	16.5	X	274.68051	117.98241	140.95943	2.74232	0.0190337	0.20113158	2.8850226	21	2 11.7	20.5
415254 2012 JB_{63}	16.5	X	236.62461	190.46230	45.22978	1.69641	0.1069930	0.18101957	3.0949410	21	—	—
415255 2012 KK_{19}	16.5	X	149.72546	227.75039	112.96475	3.76343	0.1199680	0.18316838	3.0706882	21	1 9.8	21.1
415256 2012 KG_{22}	16.8	X	42.93505	292.28014	206.82456	14.54928	0.0948126	0.20573740	2.8418025	21	2 23.7	20.6
415257 2012 KY_{22}	17.2	X	108.23185	79.47997	82.32218	5.59560	0.2152486	0.23506156	2.6002492	21	7 16.2	21.1
415258 2012 KW_{23}	16.4	X	278.48475	1.54998	198.67678	1.36807	0.0946942	0.18141008	3.0904978	21	—	—
415259 2012 KA_{26}	17.5	X	122.59812	310.02877	180.71470	2.33726	0.0939337	0.22777259	2.6554314	21	6 7.2	21.2
415260 2012 KR_{28}	16.5	X	257.54773	86.34348	193.58987	9.34987	0.0742131	0.19829889	2.9124324	21	2 9.4	20.9
415261 2012 KK_{30}	16.4	X	157.68815	145.25224	189.88164	10.43145	0.0595535	0.18010916	3.1053616	21	1 4.9	21.2
415262 2012 KQ_{49}	16.0	X	188.27313	153.18255	148.73352	6.08967	0.0403052	0.17930895	3.1145937	21	—	—
415263 2012 LT_{12}	15.6	X	183.08281	178.16594	119.33282	11.12731	0.0755143	0.17689822	3.1428266	21	—	—
415264 2012 LM_{14}	16.1	X	253.30976	25.52968	187.42402	17.27641	0.1014273	0.17553628	3.1590618	21	—	—
415265 2012 RB_{5}	13.6	X	37.91103	193.28042	13.50448	21.83728	0.0132471	0.08288009	5.2099783	21	5 16.2	20.6
415266 2013 BA	17.3	X	136.15727	245.97917	119.15933	25.72101	0.0975091	0.35661349	1.9694163	21	—	—
415267 2013 BQ_{45}	18.2	X	104.94738	235.42438	339.19565	15.60976	0.4752473	0.27406852	2.3472712	21	10 1.8	23.0
415268 2013 CM_{89}	17.4	X	82.45358	35.95436	8.17214	19.49938	0.0794804	0.34740375	2.0040707	21	—	—
415269 2013 CO_{165}	17.7	X	26.04638	258.12854	359.38188	1.49506	0.1524192	0.26821135	2.3813210	21	7 21.7	19.8
415270 2013 CT_{170}	17.9	X	41.86714	123.22877	174.01669	6.50421	0.1573306	0.29096964	2.2554728	21	10 24.2	20.4
415271 2013 CA_{190}	17.4	X	40.19301	318.20375	307.51945	6.88268	0.0908512	0.28386314	2.2929613	21	8 19.9	19.8
415272 2013 EB_{8}	18.4	X	57.54236	26.72728	252.49286	2.01437	0.2120585	0.28530216	2.2852445	21	10 25.6	21.2
415273 2013 EV_{14}	18.0	X	126.99592	295.20511	353.02646	3.86985	0.1725233	0.31355634	2.1458152	21	—	—
415274 2013 EL_{45}	18.6	X	165.36123	297.52779	310.63937	1.79317	0.0817879	0.31390002	2.1442487	21	—	—
415275 2013 EF_{58}	17.7	X	105.80118	264.29675	5.11566	5.29934	0.1491412	0.29834723	2.2181353	21	11 27.5	21.0
415276 2013 EJ_{110}	17.6	X	139.45723	247.79102	347.07483	5.71801	0.1476415	0.29811184	2.2193028	21	11 15.2	21.0
415277 2013 EJ_{122}	18.0	X	18.55502	122.73987	143.88022	1.93829	0.1625488	0.26614994	2.3936012	21	7 20.9	20.0
415278 2013 EP_{123}	17.8	X	53.24517	244.89110	41.74917	6.07142	0.2500181	0.27832134	2.3232987	21	11 4.3	20.7
415279 2013 FV_{7}	17.5	X	57.46837	214.30602	77.50199	4.14475	0.1841746	0.28288293	2.2982550	21	11 8.7	20.5
415280 2013 FY_{9}	18.0	X	328.95670	270.71351	25.69847	2.55045	0.1997410	0.25716584	2.4490287	21	5 13.1	20.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415281 2013 FA_{15}	15.9	X	125.20926	101.26263	159.08503	25.25616	0.2329971	0.17487866	3.1669765	21	11 27.8	21.8
415282 2013 FK_{16}	17.9	X	88.61263	247.49091	19.27359	6.97866	0.1569583	0.28724577	2.2749243	21	11 5.6	21.1
415283 2013 FU_{19}	18.1	X	113.41354	226.29545	89.80078	3.02371	0.1903268	0.31121705	2.1565546	21	—	—
415284 2013 FS_{20}	17.7	X	123.45991	124.61984	136.38398	2.40130	0.2051631	0.29574313	2.2311372	21	12 6.1	21.2
415285 2013 FN_{23}	17.8	X	63.95239	238.46493	28.48075	2.73512	0.1906974	0.27740274	2.3284248	21	10 13.6	20.6
415286 2013 GX_{3}	17.8	X	56.42517	157.50811	118.12705	0.43913	0.1974098	0.27968437	2.3157442	21	10 17.3	20.6
415287 2013 GR_{8}	17.4	X	82.85168	116.72400	159.15960	7.17594	0.2216890	0.28628724	2.2799994	21	11 20.7	21.0
415288 2013 GS_{8}	17.5	X	308.61776	77.77183	142.99327	4.54598	0.1686225	0.22864512	2.6486715	21	1 10.4	21.2
415289 2013 GK_{27}	17.8	X	164.77414	159.61499	58.76137	5.65146	0.0948228	0.30031065	2.2084567	21	11 23.5	20.6
415290 2013 GF_{40}	17.5	X	38.99252	212.22717	67.99742	2.92682	0.1984603	0.27166160	2.3611154	21	9 29.2	20.0
415291 2013 GG_{44}	17.8	X	110.77063	157.45089	138.61175	3.92451	0.1727614	0.30049009	2.2075774	21	—	—
415292 2013 GL_{44}	17.4	X	52.61967	155.42073	155.96582	4.28578	0.1551036	0.28700165	2.2762141	21	11 25.7	20.3
415293 2013 GV_{47}	17.2	X	279.36675	209.77014	74.59201	5.53285	0.1904352	0.23457583	2.6038375	21	2 25.8	21.1
415294 2013 GY_{53}	17.7	X	79.14748	202.31077	60.67408	5.99318	0.1428754	0.28004312	2.3137661	21	10 21.9	20.9
415295 2013 GW_{63}	17.4	X	104.31173	24.55759	250.86491	3.61823	0.1604455	0.29142214	2.2531375	21	12 4.6	20.6
415296 2013 GG_{68}	17.8	X	10.23184	158.78748	48.28898	21.88375	0.0652054	0.36888687	1.9254870	21	3 27.3	19.9
415297 2013 GB_{70}	17.1	X	29.51744	337.48733	271.58483	2.93571	0.1506613	0.26165196	2.4209551	21	7 14.0	19.4
415298 2013 GH_{72}	16.6	X	277.52681	249.08337	27.03881	17.60534	0.2074957	0.22695199	2.6618284	21	2 19.4	21.1
415299 2013 GE_{79}	17.4	X	352.80871	188.29829	60.26580	8.20481	0.1210673	0.24567903	2.5247826	21	4 30.6	20.0
415300 2013 GD_{81}	18.0	X	84.11379	142.49957	103.84431	2.15838	0.1587590	0.27717569	2.3296962	21	10 6.4	21.1
415301 2013 GS_{81}	18.0	X	108.69914	211.05599	33.33571	1.79981	0.1372993	0.28677314	2.2774232	21	10 28.2	21.2
415302 2013 GX_{83}	17.4	X	12.25954	234.18274	33.03343	1.72190	0.1649483	0.26007626	2.4307236	21	7 7.9	19.3
415303 2013 GX_{85}	17.4	X	72.22144	158.10087	139.44369	4.56022	0.1136438	0.28663626	2.2781482	21	11 25.4	20.4
415304 2013 GH_{89}	17.5	X	1.98561	302.07776	339.34175	5.78695	0.1136714	0.26129582	2.4231543	21	7 7.7	19.8
415305 2013 GT_{92}	17.4	X	187.54753	153.84206	101.62397	4.31026	0.0928557	0.31410104	2.1433337	21	—	—
415306 2013 GJ_{99}	17.7	X	74.11375	306.14291	207.06349	21.17139	0.0710030	0.36758959	1.9300145	21	4 12.0	19.1
415307 2013 GT_{104}	17.2	X	30.01190	259.87280	31.90719	7.12596	0.1610910	0.27221639	2.3579062	21	9 25.7	19.5
415308 2013 GA_{109}	17.4	X	323.74061	231.49880	20.36566	7.67370	0.1597622	0.23877231	2.5732387	21	3 13.3	20.5
415309 2013 GF_{120}	17.8	X	317.58375	328.90770	4.76719	6.81426	0.0900351	0.26655092	2.3912001	21	7 7.5	20.5
415310 2013 GM_{120}	16.5	X	272.12155	196.69722	65.36598	11.88123	0.0665487	0.22090492	2.7101862	21	2 7.4	20.6
415311 2013 GU_{127}	17.6	X	14.78550	229.11033	103.47001	8.05073	0.1443127	0.27811796	2.3244312	21	10 29.9	20.0
415312 2013 GV_{130}	16.9	X	323.69411	199.08707	40.10040	14.11447	0.2056618	0.23122346	2.6289447	21	2 23.7	20.5
415313 2013 HD_{1}	16.2	X	217.82122	209.72852	108.65516	12.99564	0.2786203	0.21449883	2.7638815	21	2 13.4	21.3
415314 2013 HZ_{6}	17.8	X	16.38481	75.47761	124.87847	9.63578	0.1087776	0.23856626	2.5747202	21	4 7.9	20.7
415315 2013 HP_{12}	17.5	X	77.47411	174.38257	76.58440	6.53785	0.1379880	0.27704532	2.3304270	21	10 4.5	20.6
415316 2013 HC_{13}	17.3	X	341.14282	211.96402	104.55013	7.35576	0.1265738	0.26476496	2.4019412	21	7 20.4	19.4
415317 2013 HP_{14}	16.1	X	276.70031	162.52214	95.61429	16.97549	0.3003746	0.21630126	2.7485060	21	1 13.9	20.9
415318 2013 HS_{14}	17.2	X	297.71336	246.99598	42.88499	9.30113	0.1516084	0.23817773	2.5775194	21	3 30.8	20.7
415319 2013 HZ_{14}	17.2	X	139.86087	327.27349	102.03907	23.98399	0.0792685	0.36315937	1.9456791	21	4 3.9	20.0
415320 2013 HW_{15}	17.2	X	50.00881	305.24113	306.88511	5.52957	0.1162889	0.26514171	2.3996653	21	8 18.8	19.9
415321 2013 HZ_{15}	17.1	X	25.21195	246.75975	45.97083	5.88210	0.1289542	0.26592870	2.3949286	21	9 13.3	19.6
415322 2013 HF_{17}	17.9	X	115.15156	266.54208	329.25246	1.86706	0.1915151	0.28175688	2.3043743	21	10 25.5	21.4
415323 2013 HG_{17}	17.0	X	232.21839	233.93418	36.80825	14.41209	0.3276247	0.20544051	2.8445397	21	—	—
415324 2013 HB_{19}	16.9	X	290.88626	47.59493	215.19734	13.05080	0.2293848	0.22730926	2.6590385	21	1 31.9	21.3
415325 2013 HO_{21}	17.2	X	351.46633	207.82121	104.29949	2.55217	0.1883962	0.26298660	2.4127573	21	8 3.8	19.0
415326 2013 HD_{22}	17.8	X	52.22930	22.15789	241.04929	1.44004	0.1925554	0.27089383	2.3655745	21	9 21.3	20.6
415327 2013 HA_{24}	17.1	X	110.97171	18.97820	225.21831	22.81858	0.1898982	0.28288403	2.2982491	21	11 1.7	20.8
415328 2013 HC_{40}	17.8	X	14.46195	103.43139	243.19554	5.75442	0.1247671	0.28800395	2.2709300	21	11 13.6	19.9
415329 2013 HW_{42}	18.3	X	21.56147	301.68163	356.18729	6.41848	0.1146499	0.27240378	2.3568248	21	9 10.5	20.7
415330 2013 HS_{53}	18.3	X	349.58987	83.48100	238.28881	6.23104	0.1368932	0.27117589	2.3639339	21	8 12.5	20.6
415331 2013 HC_{54}	17.7	X	25.79583	37.75066	238.21058	4.42665	0.2121770	0.26525530	2.3989802	21	8 26.4	19.8
415332 2013 HN_{55}	17.2	X	157.92059	294.52835	13.01162	14.48890	0.2930354	0.19557185	2.9394437	21	—	—
415333 2013 HX_{57}	17.9	X	42.64205	319.20385	329.98090	3.83332	0.2276515	0.27378640	2.3488834	21	10 19.3	20.7
415334 2013 HQ_{68}	17.8	X	281.10025	358.48933	320.59232	2.94741	0.2349740	0.24202975	2.5500981	21	4 2.1	21.7
415335 2013 HT_{70}	18.2	X	112.54452	92.87747	238.61753	1.67834	0.1719336	0.31319367	2.1474714	21	—	—
415336 2013 HP_{77}	17.8	X	16.04819	321.25253	12.79185	5.59533	0.2031225	0.28048069	2.3113590	21	11 7.9	20.0
415337 2013 HA_{109}	17.8	X	330.32923	115.92536	197.02132	5.89844	0.1768396	0.25875553	2.4389878	21	6 15.7	20.1
415338 2013 HW_{110}	17.7	X	39.45270	126.24292	205.02300	4.49688	0.1524977	0.28945701	2.2633237	21	12 5.1	20.3
415339 2013 HV_{119}	17.6	X	327.23459	271.73574	66.67208	3.27651	0.2046286	0.26567693	2.3964414	21	7 17.3	19.4
415340 2013 HR_{125}	17.2	X	232.47495	91.76407	231.51275	11.42943	0.2705657	0.22654595	2.6650080	21	2 21.3	22.2
415341 2013 JP	17.6	X	112.30075	240.45074	215.71977	19.94738	0.1060430	0.35561142	1.9731143	21	3 20.0	19.8
415342 2013 JU	17.5	X	146.03013	155.60495	104.78890	6.27235	0.1664141	0.30226890	2.1989081	21	12 25.8	20.8
415343 2013 JE_{3}	17.5	X	172.33965	249.27752	320.37651	5.66136	0.0878175	0.29727866	2.2234476	21	11 18.8	20.6
415344 2013 JL_{4}	16.8	X	230.69292	230.22290	66.26341	8.69236	0.2015081	0.21172196	2.7879958	21	1 30.5	21.6
415345 2013 JJ_{21}	17.5	X	83.14027	37.33202	196.44774	11.70193	0.2079489	0.26929953	2.3749018	21	9 21.1	21.0
415346 2013 JU_{24}	17.5	X	30.47189	227.67211	62.54553	3.59982	0.1209762	0.26974663	2.3722768	21	9 16.8	19.9
415347 2013 JX_{24}	18.2	X	95.92720	35.86012	216.34261	6.90200	0.1004338	0.28225098	2.3016842	21	10 20.1	21.3
415348 2013 JS_{33}	16.0	X	267.81956	14.24573	241.87512	15.32312	0.2355085	0.21459463	2.7630589	21	1 6.5	20.8
415349 2013 JN_{36}	16.1	X	212.42057	234.67149	88.95187	14.20452	0.2130408	0.21360772	2.7715630	21	2 18.1	21.1
415350 2013 JS_{36}	16.5	X	278.72077	136.05542	206.67483	15.19218	0.1907890	0.24210086	2.5495987	21	5 8.1	20.1
415351 2013 JV_{36}	18.0	X	100.26300	336.27613	255.64793	1.66579	0.1613738	0.27755766	2.3275583	21	10 3.3	21.2
415352 2013 JN_{37}	16.3	X	146.16550	231.72483	69.75987	15.47181	0.2965662	0.18342817	3.0677881	21	—	—
415353 2013 JK_{39}	18.1	X	86.19583	26.99522	208.85710	3.37277	0.1612342	0.27113689	2.3641606	21	9 22.3	21.5
415354 2013 JE_{42}	16.0	X	308.71928	219.53336	81.10699	15.89026	0.1662223	0.23944162	2.5684412	21	4 30.3	19.4
415355 2013 JF_{43}	17.5	X	64.11773	303.70785	291.90188	1.05305	0.1529939	0.26467001	2.4025157	21	8 23.3	20.5
415356 2013 JR_{44}	17.8	X	5.87693	120.50587	189.32364	2.05441	0.1376308	0.26478868	2.4017978	21	8 30.3	20.0
415357 2013 JM_{46}	16.6	X	337.01950	83.59740	195.85661	10.03686	0.1853762	0.24278179	2.5448292	21	5 9.0	19.1
415358 2013 JN_{58}	17.2	X	99.50149	10.79231	257.22173	5.74501	0.0983104	0.28573353	2.2829439	21	11 14.2	20.2
415359 2013 KD_{2}	17.1	X	104.54800	4.23610	230.52565	5.60768	0.0992588	0.27770541	2.3267327	21	10 4.8	20.3
415360 2013 KL_{2}	16.2	X	293.69856	136.07372	154.79805	17.67153	0.1120055	0.21690753	2.7433821	21	4 5.0	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415361 2013 KR_3	15.3	X	93.89597	224.17163	109.66565	18.52373	0.2287931	0.17501250	3.1653617	21	—	—
415362 2013 KV_3	16.7	X	346.11741	106.08227	144.69679	15.27337	0.1092136	0.24090791	2.5580087	21	4 28.0	19.9
415363 2013 KQ_5	17.5	X	173.08627	34.82717	210.57863	6.23645	0.0267031	0.30230599	2.1987282	21	—	—
415364 2013 KM_9	16.9	X	133.78706	93.81618	205.92397	23.91178	0.3612735	0.17505810	3.1648120	21	—	—
415365 2013 KW_9	17.0	X	37.21429	43.35253	239.72331	8.94509	0.1032611	0.26824253	2.3811365	21	9 7.2	19.9
415366 2013 KB_{12}	16.9	X	10.88244	230.72193	97.90311	7.76871	0.0525540	0.27391968	2.3481215	21	10 5.1	19.7
415367 2013 KJ_{13}	17.1	X	26.26753	156.76458	68.25707	10.15319	0.0724448	0.24566277	2.5248940	21	5 25.3	20.0
415368 2013 KO_{14}	16.8	X	326.22773	270.31425	59.60196	7.41731	0.1110972	0.26099424	2.4250206	21	7 14.3	19.4
415369 2013 KJ_{16}	17.6	X	36.16194	214.35842	45.78863	2.81270	0.1750266	0.26004385	2.4309256	21	8 19.3	20.0
415370 2013 LG	17.4	X	293.44652	106.80542	160.60481	1.89909	0.0567981	0.22827984	2.6514962	21	3 7.9	20.7
415371 2013 LU_1	16.9	X	240.98552	242.35260	49.54563	9.10918	0.1849250	0.21502113	2.7594040	21	2 3.6	21.6
415372 2013 LH_2	18.3	X	200.86327	122.65180	83.49390	2.40913	0.0709704	0.30131849	2.2035295	21	12 22.9	20.7
415373 2013 LN_{12}	17.4	X	11.45343	106.68709	208.80466	5.89606	0.1220926	0.26468468	2.4024269	21	9 16.2	19.8
415374 2013 LT_{12}	16.7	X	165.79299	175.71125	130.31842	5.94702	0.2355915	0.18927504	3.0042806	21	—	—
415375 2013 LT_{16}	17.0	X	245.97863	219.76508	99.17727	7.03201	0.2198701	0.22163076	2.7042657	21	3 8.8	21.6
415376 2013 LG_{23}	17.1	X	272.40560	75.65772	222.36722	12.64492	0.1876364	0.22526939	2.6750666	21	3 1.8	21.5
415377 2013 LS_{24}	17.1	X	235.93505	154.43194	209.64207	11.17720	0.0910908	0.23635973	2.5907195	21	4 28.7	20.7
415378 2013 LF_{26}	17.2	X	14.41206	227.33008	92.49416	6.93384	0.1185135	0.26680476	2.3896832	21	10 4.5	19.8
415379 2013 LY_{26}	16.5	X	115.84921	145.67841	180.28805	15.59108	0.2044306	0.17947436	3.1126797	21	—	—
415380 2013 LA_{27}	17.1	X	347.49690	226.04785	151.45756	12.65113	0.0352903	0.28195647	2.3032867	21	11 7.9	20.0
415381 2013 LO_{32}	16.9	X	214.65621	90.19384	200.85695	14.38462	0.1486743	0.20552973	2.8437164	21	1 8.0	21.8
415382 2013 MW_1	17.4	X	19.10715	40.68458	171.45696	7.59647	0.1876895	0.24120993	2.5558730	21	4 28.2	19.6
415383 2013 MN_7	17.8	X	184.50018	148.05386	77.51896	3.72695	0.1070158	0.29986314	2.2106534	21	12 24.2	20.5
415384 2013 MZ_9	15.7	X	124.16845	252.60755	92.46165	8.96227	0.1518977	0.17770534	3.1333030	21	—	—
415385 2013 NO_2	16.3	X	197.26771	200.12150	128.19013	5.71368	0.1142310	0.19989343	2.8969236	21	2 7.7	20.7
415386 2013 NM_5	16.3	X	233.83922	112.53683	104.87028	5.46088	0.1083344	0.18089936	3.0963118	21	—	—
415387 2013 NO_5	16.1	X	88.00257	297.07257	107.68278	10.20032	0.0373301	0.18957646	3.0010952	21	1 1.9	20.2
415388 2013 NQ_{10}	15.6	X	84.89357	284.67346	86.86626	10.52271	0.0240319	0.18082605	3.0971487	21	—	—
415389 2013 NW_{11}	15.2	X	135.36657	218.60997	104.47802	29.57377	0.2316957	0.17508532	3.1644839	21	—	—
415390 2013 ND_{12}	16.0	X	60.15426	246.36836	294.34468	11.99620	0.1622032	0.23152101	2.6266918	21	5 29.6	19.2
415391 2013 NM_{12}	16.1	X	327.14594	246.76632	273.55098	11.64066	0.0643281	0.18916621	3.0054327	21	—	—
415392 2013 NP_{12}	16.8	X	339.26173	306.28760	262.93733	5.15297	0.1172741	0.21360686	2.7715705	21	2 13.9	20.4
415393 2013 NB_{13}	16.8	X	185.75265	26.69420	347.11207	5.79654	0.0345388	0.21545929	2.7556617	21	3 17.3	20.5
415394 2013 NG_{13}	16.5	X	216.37614	179.25660	81.95277	11.58172	0.0596440	0.18926255	3.0044127	21	—	—
415395 2013 NJ_{16}	17.4	X	162.27143	276.34513	250.41764	5.15507	0.0738243	0.25559104	2.4590780	21	9 5.9	21.0
415396 2013 NV_{16}	16.8	X	38.07213	286.51912	281.74414	10.15772	0.1365945	0.23118193	2.6292595	21	5 26.9	19.7
415397 2013 OG_4	15.0	X	159.39643	176.19701	109.05956	20.73034	0.1480147	0.17481922	3.1676943	21	—	—
415398 2013 OW_8	17.1	X	22.64833	29.92643	212.00558	5.05001	0.0943380	0.23697171	2.5862572	21	6 14.7	20.1
415399 2013 OY_8	16.7	X	176.89666	76.80708	210.52367	4.40048	0.1384409	0.17958898	3.1113552	21	—	—
415400 2013 OZ_8	16.0	X	213.25319	244.21256	2.22874	11.11038	0.1227219	0.17785438	3.1315524	21	—	—
415401 2013 ON_9	14.8	X	120.24333	215.32274	106.27582	19.61915	0.1077856	0.17177673	3.2049887	21	—	—
415402 2013 OO_9	16.0	X	214.20221	182.73239	104.13026	11.54873	0.2041068	0.19523567	2.9428171	21	1 6.7	20.9
415403 2013 PF_4	15.6	X	187.35207	38.97088	256.47353	9.21618	0.1039344	0.17692395	3.1425218	21	—	—
415404 2013 PB_{11}	15.8	X	233.84590	320.29191	259.95428	12.84606	0.1326125	0.17730807	3.1379815	21	—	—
415405 2013 PT_{17}	16.7	X	195.18006	86.64256	268.40021	0.95944	0.0773015	0.20361229	2.8615416	21	3 7.4	20.9
415406 2013 PD_{19}	17.3	X	144.24310	19.25809	185.42543	2.27363	0.1232222	0.26430939	2.4047005	21	10 10.4	20.9
415407 2013 PJ_{22}	16.2	X	275.51025	0.16970	197.52919	10.23972	0.0432444	0.17548442	3.1596842	21	—	—
415408 2013 PO_{25}	15.9	X	34.19527	248.86510	246.52727	8.97976	0.0471944	0.18704856	3.0280739	21	2 8.7	20.1
415409 2013 PA_{46}	16.0	X	240.85131	316.59713	297.94059	10.94074	0.1120698	0.18894355	3.0077934	21	—	—
415410 2013 PL_{47}	16.5	X	265.18517	146.38706	261.11481	3.89315	0.1223627	0.24067891	2.5596310	21	7 26.3	19.8
415411 2013 PY_{49}	16.1	X	36.30323	242.73417	229.72667	7.52872	0.0584659	0.18365529	3.0652583	21	1 17.0	20.2
415412 2013 PQ_{52}	15.5	X	326.18452	246.21116	274.27385	8.20231	0.0421131	0.17660667	3.1462845	21	—	—
415413 2013 PJ_{57}	15.7	X	336.27046	223.13625	264.69577	9.51465	0.0176442	0.17723121	3.1388887	21	—	—
415414 2013 PX_{58}	15.9	X	183.97940	53.69772	245.02272	6.56862	0.1191793	0.18364789	3.0653407	21	—	—
415415 2013 PP_{60}	16.5	X	316.85102	48.92206	188.00403	8.21703	0.1256594	0.21126524	2.7920124	21	2 17.7	20.2
415416 2013 PR_{62}	17.1	X	280.61033	228.93281	276.14006	5.83174	0.0455072	0.28554823	2.2839315	21	—	—
415417 2013 PS_{62}	16.8	X	130.05526	313.46635	200.21557	6.46600	0.1068271	0.23682643	2.5873148	21	7 16.1	20.6
415418 2013 PN_{64}	16.6	X	166.41170	154.06566	189.22868	10.22322	0.1103408	0.19005487	2.9960569	21	1 25.3	21.4
415419 2013 PG_{65}	16.3	X	49.59376	187.36905	288.37839	8.51187	0.0292923	0.19576408	2.9375192	21	2 4.4	20.4
415420 2013 PT_{71}	16.1	X	164.49466	340.78910	317.56644	10.00300	0.0863279	0.17547340	3.1598164	21	—	—
415421 2013 QN	16.8	X	120.68374	247.59728	185.73344	6.55523	0.0452181	0.20325483	2.8648956	21	3 17.0	20.6
415422 2013 QA_7	16.4	X	214.11644	33.72665	312.12899	14.41670	0.1509777	0.20313287	2.8660422	21	3 9.1	21.2
415423 2013 QM_7	15.7	X	330.24553	236.82518	275.33270	9.09022	0.0589396	0.17631542	3.1497484	21	—	—
415424 2013 QV_{11}	16.4	X	59.95354	205.58044	239.86485	7.22150	0.0439944	0.18336892	3.0684490	21	1 15.6	20.7
415425 2013 QZ_{11}	16.3	X	28.16642	283.06881	209.28460	8.22384	0.0431829	0.18925355	3.0045079	21	1 28.5	20.4
415426 2013 QP_{16}	17.3	X	311.88257	225.25525	292.24355	8.18933	0.0316556	0.29597529	2.2299703	21	—	—
415427 2013 QQ_{18}	16.7	X	73.13560	140.35615	339.05824	1.30414	0.0079061	0.20195300	2.8771942	21	3 10.2	20.5
415428 2013 QC_{30}	16.1	X	188.03107	316.30765	327.46007	7.71435	0.2377343	0.18243796	3.0788786	21	—	—
415429 2013 QM_{32}	16.6	X	296.76093	351.53088	145.44322	23.81355	0.1460652	0.28440206	2.2900637	21	—	—
415430 2013 QH_{40}	15.7	X	245.51918	309.22808	312.70320	9.92515	0.0672645	0.18829522	3.0146936	21	1 11.9	20.2
415431 2013 QM_{63}	16.9	X	342.09656	230.98895	27.40478	1.92196	0.0232525	0.22213242	2.7001926	21	5 6.2	20.2
415432 2013 QP_{63}	16.8	X	320.32935	97.06090	316.71766	5.56553	0.0899125	0.26422815	2.4051933	21	11 6.3	19.4
415433 2013 QQ_{65}	16.4	X	213.42271	294.49092	81.42145	5.56584	0.1237649	0.20920342	2.8103271	21	4 21.9	20.8
415434 2013 QL_{89}	16.1	X	164.97561	161.46635	141.68769	9.19288	0.0611058	0.17605670	3.1528333	21	—	—
415435 2013 RD_{13}	16.2	X	26.79282	256.30942	187.50237	7.72471	0.0308720	0.17147671	3.2087259	21	—	—
415436 2013 RS_{17}	15.8	X	12.89589	162.07206	316.01865	10.01926	0.0405077	0.17784967	3.1316076	21	—	—
415437 2013 RD_{55}	15.9	X	315.08138	347.43534	210.98582	9.31882	0.0269289	0.18764492	3.0216547	21	1 17.1	20.2
415438 2013 RW_{57}	15.8	X	287.60905	302.64760	270.11157	3.43062	0.0993587	0.18010882	3.1053656	21	—	—
415439 2013 RU_{70}	15.8	X	97.73669	297.22643	113.42769	5.61791	0.1295594	0.17234141	3.1979840	21	2 7.1	20.1
415440 2013 RQ_{88}	15.2	X	53.87781	73.46813	220.03528	7.94982	0.1548915	0.12421099	3.9782863	21	10 8.9	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415441 2013 SQ_{43}	16.1	X	263.31786	261.07557	106.05670	7.41696	0.0559706	0.21758950	2.7376469	21	6 10.3	19.9
415442 2013 SD_{53}	16.5	X	205.13320	207.82757	163.68393	6.55592	0.0936428	0.20196268	2.8771023	21	4 9.1	20.9
415443 2013 SQ_{62}	16.6	X	180.30499	326.19219	60.23008	2.93169	0.0928590	0.19761497	2.9191483	21	4 1.9	21.0
415444 2013 SV_{85}	13.4	X	192.20151	332.63669	92.08496	6.11111	0.0541615	0.08387467	5.1687102	21	6 4.4	20.5
415445 2013 SX_{85}	15.4	X	354.90588	285.80608	285.32668	13.21140	0.0482803	0.18666958	3.0321709	21	3 17.8	19.7
415446 2013 TX	16.2	X	83.21586	57.14266	63.22201	5.78338	0.0892371	0.19023604	2.9941543	21	4 8.5	20.2
415447 2013 TA_{8}	15.4	X	268.32304	356.14670	247.55922	10.65185	0.1737038	0.18312850	3.0711339	21	1 3.7	20.4
415448 2013 TB_{32}	16.4	X	335.15986	138.30831	159.48906	4.18873	0.0736672	0.21935742	2.7229176	21	6 15.7	19.7
415449 2013 TG_{39}	13.8	X	219.42402	200.75688	204.94236	11.14321	0.0533828	0.08239422	5.2304397	21	6 10.8	21.0
415450 2013 TT_{50}	15.9	X	103.06704	209.15706	222.13894	1.31591	0.0107878	0.18086770	3.0966732	21	2 19.3	20.2
415451 2013 TP_{53}	16.2	X	153.71703	271.62988	231.39636	11.27860	0.1208675	0.21705820	2.7421124	21	7 25.9	20.7
415452 2013 TP_{65}	15.7	X	325.90141	262.09890	293.32428	7.75179	0.0891102	0.18392943	3.0622119	21	1 21.2	19.8
415453 2013 TX_{88}	15.3	X	255.03955	24.83990	237.75386	7.11070	0.0088115	0.17241193	3.1971119	21	1 27.7	19.9
415454 2013 TL_{105}	13.8	X	200.23833	52.37170	1.38541	5.69673	0.0874809	0.08235149	5.2322490	21	5 28.7	21.1
415455 2013 UQ_{12}	15.8	X	107.09247	337.79840	110.35095	10.36866	0.0765869	0.18222001	3.0813333	21	3 31.5	20.3
415456 2014 HQ_{12}	15.8	X	281.79768	94.51211	174.50950	1.57225	0.1794547	0.12226908	4.0202983	21	2 23.5	21.7
415457 2014 HL_{41}	14.9	X	281.83350	207.17095	58.92216	3.84124	0.1954811	0.12698475	3.9201408	21	2 19.6	20.7
415458 2014 HQ_{151}	16.8	X	9.20149	31.58754	25.45648	3.59238	0.0805659	0.21486791	2.7607157	21	—	—
415459 2014 KE_{92}	16.2	X	245.62318	208.05177	118.32001	15.85502	0.2038194	0.24302655	2.5431203	21	3 18.8	20.6
415460 2014 MS_{6}	17.6	X	106.91180	87.33507	271.44765	18.12690	0.1311120	0.34312265	2.0207060	21	—	—
415461 2014 MU_{12}	16.9	X	148.78067	87.05919	233.28593	1.98398	0.1795236	0.19938341	2.9018617	21	—	—
415462 2014 MM_{35}	15.9	X	174.21416	166.28676	81.13979	16.29881	0.1009994	0.20358670	2.8617814	21	12 22.9	20.2
415463 2014 MJ_{37}	17.9	X	23.32732	356.94663	273.52227	1.59002	0.1878828	0.28012490	2.3133157	21	8 11.3	19.7
415464 2014 MY_{43}	17.9	X	289.37250	61.69139	280.78959	2.88749	0.2201609	0.26226826	2.4171609	21	5 13.4	21.1
415465 2014 MA_{53}	17.8	X	359.26404	137.64139	187.92045	5.91093	0.2061189	0.28647388	2.2790089	21	9 21.3	19.3
415466 2014 ME_{64}	17.4	X	31.74658	160.48673	124.77911	6.39747	0.1875206	0.28998682	2.2605661	21	9 26.7	19.6
415467 2014 NX_{37}	18.0	X	351.13041	37.15103	258.18402	0.75869	0.1886135	0.27381868	2.3486988	21	7 3.5	19.6
415468 2014 NZ_{43}	16.2	X	222.18864	344.06229	260.50081	14.18104	0.0979994	0.20338729	2.8636515	21	—	—
415469 2014 NL_{58}	16.9	X	213.79016	269.17895	91.26251	10.72306	0.2056652	0.23647174	2.5899013	21	4 2.9	21.4
415470 2014 OR_{3}	16.8	X	137.92490	228.01274	133.86102	5.67826	0.0836301	0.21227782	2.7831267	21	1 12.1	20.7
415471 2014 OL_{87}	16.1	X	213.21464	265.26324	214.87303	5.01606	0.0684270	0.15312622	3.4602144	21	8 28.7	21.3
415472 2014 OE_{93}	17.6	X	1.01920	128.82433	172.61627	3.99029	0.1725736	0.28364319	2.2941465	21	8 9.2	19.2
415473 2014 OC_{112}	16.9	X	324.96064	197.45465	129.38857	10.43118	0.3075321	0.26772360	2.3842124	21	6 4.1	19.2
415474 2014 OD_{182}	17.2	X	324.48116	307.81944	34.62837	6.78333	0.1249127	0.27789709	2.3256626	21	7 31.7	19.5
415475 2014 OF_{190}	17.1	X	181.87826	81.45470	327.31984	2.81900	0.1378233	0.23232700	2.6206132	21	4 27.4	21.2
415476 2014 OC_{191}	17.6	X	319.09751	144.34432	173.61314	3.02770	0.1645574	0.25984897	2.4321408	21	6 3.7	20.2
415477 2014 OQ_{191}	16.3	X	70.36470	324.83072	39.69657	1.53267	0.1454228	0.17353304	3.1833271	21	—	—
415478 2014 OP_{194}	17.4	X	309.62668	200.99869	107.37283	2.08548	0.1778255	0.25482904	2.4639777	21	5 2.9	20.3
415479 2014 OE_{195}	17.6	X	286.55581	290.79490	357.99331	5.74840	0.2309173	0.24168608	2.5525150	21	3 3.4	21.4
415480 2014 OJ_{195}	17.0	X	229.93989	185.49869	158.39633	6.71715	0.2383379	0.23450350	2.6043728	21	3 21.6	21.4
415481 2014 OU_{195}	17.3	X	281.73779	28.63271	345.00578	4.92189	0.1182375	0.26337996	2.4103544	21	7 4.1	20.4
415482 2014 OS_{196}	16.6	X	73.53036	220.10283	178.44474	7.66982	0.2221146	0.18566228	3.0431284	21	—	—
415483 2014 OZ_{206}	15.8	X	132.09069	353.94635	294.74317	7.41741	0.1209743	0.17963882	3.1107797	21	12 27.9	20.7
415484 2014 OY_{229}	18.3	X	106.82401	117.57853	179.03368	1.51601	0.1491973	0.31183426	2.1537080	21	—	—
415485 2014 OC_{231}	17.1	X	257.02163	91.24174	356.60388	6.72285	0.0730060	0.28119452	2.3074457	21	9 21.6	19.9
415486 2014 OR_{271}	17.0	X	182.37074	286.22438	93.06466	12.51771	0.2144147	0.23253432	2.6190553	21	4 1.5	21.7
415487 2014 OO_{287}	16.7	X	10.50269	213.22658	65.03335	8.07123	0.1061326	0.27407283	2.3472467	21	7 20.2	19.0
415488 2014 OZ_{291}	17.8	X	40.87362	240.89183	32.87243	7.10659	0.1750762	0.28692695	2.2766092	21	9 21.9	20.2
415489 2014 OV_{293}	16.9	X	234.16802	145.14870	176.96861	18.23692	0.0531483	0.22734885	2.6587298	21	3 5.9	20.9
415490 2014 OC_{295}	18.7	X	326.87181	28.70147	343.41948	3.59174	0.1482300	0.28104188	2.3082810	21	9 18.6	20.5
415491 2014 OC_{296}	18.1	X	19.51797	138.74087	148.47709	2.86786	0.2051064	0.27705220	2.3303884	21	9 3.6	19.7
415492 2014 OD_{298}	16.9	X	156.90728	11.26111	341.65805	1.28661	0.0824003	0.20394538	2.8584250	21	1 24.5	21.1
415493 2014 OG_{299}	17.7	X	247.01853	241.09394	171.69198	5.18612	0.0968114	0.26239211	2.4164003	21	7 14.2	21.1
415494 2014 OS_{299}	16.6	X	80.66649	14.95190	343.31423	0.33183	0.1763329	0.17505530	3.1648457	21	—	—
415495 2014 OC_{358}	16.3	X	11.59040	3.56441	145.61029	12.62717	0.0398276	0.21212417	2.7844704	21	1 23.9	20.0
415496 2014 OL_{359}	17.1	X	244.15564	143.53248	148.97422	6.17035	0.1228917	0.22619016	2.6678019	21	2 5.0	21.1
415497 2014 OE_{373}	15.6	X	73.13611	206.71247	144.97258	16.36424	0.1151338	0.18182396	3.0858061	21	—	—
415498 2014 OG_{375}	18.1	X	328.42713	161.76145	121.54888	2.26723	0.1796788	0.26435820	2.4044044	21	4 26.3	20.4
415499 2014 OB_{376}	16.9	X	160.54531	272.00274	65.35198	4.23178	0.0952923	0.21401261	2.7680662	21	1 9.4	20.9
415500 2014 OC_{378}	17.4	X	321.99742	112.53419	159.79575	1.57232	0.1561560	0.25504436	2.4625907	21	4 3.9	20.3
415501 2014 PO_{7}	16.8	X	88.69796	74.95008	296.94834	8.60566	0.0317788	0.19967628	2.8990234	21	—	—
415502 2014 PY_{7}	17.1	X	274.18278	310.88618	308.93304	10.65903	0.1566409	0.23501427	2.6005980	21	1 22.9	21.1
415503 2014 PN_{24}	18.9	X	339.14081	53.05284	327.92809	1.25689	0.2340267	0.29144928	2.2529976	21	11 9.9	20.0
415504 2014 PU_{32}	16.8	X	61.03180	359.94108	95.39492	4.91372	0.0596014	0.21440291	2.7647059	21	1 25.9	20.4
415505 2014 PH_{39}	17.7	X	290.35544	86.08575	195.55311	3.01847	0.1547251	0.24231414	2.5481024	21	3 5.9	21.4
415506 2014 PP_{39}	16.7	X	172.57918	103.87511	180.70379	2.06205	0.0641338	0.19351655	2.9602199	21	—	—
415507 2014 PG_{41}	16.7	X	97.31188	111.40747	337.41106	11.34544	0.1301488	0.22007432	2.7170010	21	3 15.0	20.3
415508 2014 PG_{48}	16.9	X	100.70015	276.26019	143.21191	9.58781	0.1558767	0.21089424	2.7952859	21	2 18.1	20.4
415509 2014 PM_{48}	16.7	X	235.10641	137.46928	115.99995	3.27976	0.0341649	0.20594668	2.8398769	21	—	—
415510 2014 PA_{55}	15.8	X	116.17841	150.05319	151.61587	9.63837	0.0720125	0.17476240	3.1683808	21	12 24.3	20.7
415511 2014 PG_{56}	17.1	X	264.38964	164.03637	152.63991	9.53322	0.1828658	0.24303590	2.5430551	21	3 21.9	21.0
415512 2014 PH_{56}	17.3	X	271.50445	25.04095	273.61052	1.61578	0.1648439	0.23997099	2.5646625	21	3 6.0	21.3
415513 2014 PB_{63}	18.2	X	44.38390	147.08524	134.49621	5.82972	0.1734947	0.29343469	2.2428234	21	10 9.5	20.7
415514 2014 PC_{65}	17.4	X	225.54439	10.45351	332.77655	5.12065	0.1614296	0.23959395	2.5673524	21	3 16.9	21.7
415515 2014 PX_{69}	17.2	X	266.61790	194.06985	162.83424	7.19809	0.2239239	0.25953583	2.4340967	21	5 9.3	20.9
415516 2014 QA_{1}	17.9	X	15.39276	40.65201	276.04513	1.50658	0.2470826	0.28716336	2.2753596	21	10 21.3	19.8
415517 2014 QC_{18}	18.1	X	235.23343	153.52795	269.83768	1.20352	0.1253897	0.26194807	2.4191302	21	7 11.6	21.5
415518 2014 QH_{18}	16.3	X	134.23275	98.72181	182.79793	9.55229	0.2080417	0.17817347	3.1278123	21	12 23.1	21.7
415519 2014 QW_{18}	16.9	X	325.23576	304.09382	312.14638	5.62064	0.1604362	0.24422668	2.5347822	21	3 15.4	20.1
415520 2014 QT_{23}	17.3	X	239.17391	73.30042	232.31692	4.60981	0.0307959	0.22612128	2.6683436	21	2 19.6	21.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415521 2014 QP_{25}	16.6	X	190.76536	310.51546	303.83735	7.89844	0.1735112	0.19117443	2.9843484	21	—	—
415522 2014 QK_{28}	17.0	X	75.30174	350.93886	6.81712	0.11148	0.2110007	0.17617795	3.1513866	21	—	—
415523 2014 QC_{32}	16.7	X	3.18011	242.96577	103.95511	10.36745	0.1729853	0.28654326	2.2786411	21	11 6.3	18.9
415524 2014 QF_{32}	16.8	X	276.52485	318.93298	11.08337	15.34767	0.1989155	0.25485863	2.4637869	21	4 13.2	20.5
415525 2014 QO_{35}	17.9	X	48.32908	1.08575	302.61740	6.21804	0.0296334	0.30090953	2.2055255	21	10 17.9	20.5
415526 2014 QS_{40}	17.4	X	29.08628	344.15607	304.76815	4.67227	0.1287498	0.28459389	2.2890345	21	9 10.9	19.7
415527 2014 QA_{50}	16.7	X	193.60087	187.87269	158.06005	11.74051	0.0625686	0.23119642	2.6291497	21	2 18.3	20.4
415528 2014 QV_{58}	18.0	X	308.03375	128.74591	161.33811	8.91440	0.1716057	0.25781080	2.4449425	21	4 7.1	21.0
415529 2014 QC_{63}	17.7	X	171.43439	146.00813	317.09659	6.12225	0.0925316	0.26650417	2.3914797	21	6 25.9	21.1
415530 2014 QS_{71}	16.4	X	85.38612	187.98365	164.06839	12.22305	0.1488898	0.18661464	3.0327660	21	—	—
415531 2014 QM_{72}	17.3	X	254.16932	189.83723	172.12625	7.91446	0.1701884	0.25623317	2.4549679	21	5 8.8	21.0
415532 2014 QA_{94}	15.9	X	339.10650	144.61053	270.37095	8.30585	0.0168921	0.16878398	3.2427632	21	11 18.9	20.5
415533 2014 QO_{104}	16.9	X	139.75604	129.18385	241.59779	3.94636	0.0786684	0.21388954	2.7691279	21	1 23.4	20.9
415534 2014 QD_{115}	17.2	X	198.50513	18.45086	325.54467	9.14605	0.2122149	0.22539706	2.6740564	21	2 24.6	21.9
415535 2014 QN_{115}	18.0	X	215.27327	127.53214	329.89975	3.76899	0.1467723	0.27209580	2.3586029	21	8 3.4	21.6
415536 2014 QO_{116}	16.4	X	152.65158	114.56066	179.64327	8.48393	0.0725024	0.18836388	3.0139610	21	—	—
415537 2014 QX_{120}	16.9	X	41.50235	51.38965	350.50397	9.49463	0.2219870	0.17751209	3.1355767	21	—	—
415538 2014 QV_{129}	17.5	X	338.57301	319.41598	339.68886	5.68412	0.1373469	0.26525882	2.3989590	21	6 15.0	19.8
415539 2014 QW_{130}	16.9	X	14.93280	316.08964	162.58936	2.25501	0.0181961	0.20281702	2.8690169	21	—	—
415540 2014 QH_{138}	17.6	X	177.98833	200.24888	350.89093	7.68993	0.0528137	0.29761651	2.2217646	21	11 1.9	20.7
415541 2014 QY_{138}	16.6	X	184.11763	315.07043	357.03420	1.58099	0.0500067	0.20391663	2.8586937	21	1 2.4	20.8
415542 2014 QF_{139}	18.5	X	136.04376	71.64580	157.61264	5.31001	0.0942252	0.29881729	2.2158085	21	11 7.9	21.6
415543 2014 QU_{140}	18.3	X	306.83435	30.81896	33.05791	2.90149	0.1002018	0.29331820	2.2434172	21	11 5.5	20.2
415544 2014 QO_{150}	16.6	X	250.05529	229.63874	15.22478	9.13633	0.1686641	0.20978605	2.8051213	21	—	—
415545 2014 QU_{152}	17.4	X	295.06177	55.39354	271.03494	1.25565	0.1838841	0.25701965	2.4499572	21	5 4.9	20.6
415546 2014 QB_{172}	16.6	X	99.38705	98.73415	237.67372	2.23495	0.0853445	0.18193217	3.0845825	21	—	—
415547 2014 QL_{175}	16.0	X	36.08175	36.69263	353.98551	15.95640	0.0728786	0.17439587	3.1728187	21	—	—
415548 2014 QH_{177}	17.8	X	190.31040	311.20185	114.28249	4.91024	0.2346367	0.24135977	2.5548150	21	5 28.4	22.2
415549 2014 QF_{178}	16.8	X	322.37897	79.23790	162.47114	14.47618	0.0704534	0.23438771	2.6052305	21	3 10.3	20.0
415550 2014 QZ_{190}	17.3	X	353.10381	160.53322	176.70532	4.12236	0.2229377	0.28577546	2.2827206	21	9 28.7	18.5
415551 2014 QG_{191}	16.2	X	23.04666	84.34272	311.93785	9.04648	0.0726030	0.17522302	3.1628258	21	12 30.1	20.6
415552 2014 QK_{196}	17.6	X	233.88289	162.10966	277.73912	5.96126	0.0663376	0.27588594	2.3369514	21	8 7.8	20.6
415553 2014 QW_{201}	17.2	X	243.84287	131.60125	171.83530	10.82460	0.0366959	0.22882504	2.6472829	21	2 22.5	21.0
415554 2014 QK_{210}	16.2	X	309.49570	322.90700	154.98633	11.31618	0.0317770	0.17903530	3.1177666	21	12 29.8	20.6
415555 2014 QG_{212}	15.7	X	22.03115	18.20602	339.84911	9.66068	0.0888597	0.15920303	3.3715932	21	11 6.8	20.3
415556 2014 QX_{213}	17.0	X	66.63802	324.89933	196.31389	4.67955	0.1737839	0.24369836	2.5384444	21	5 15.2	19.8
415557 2014 QD_{217}	17.6	X	239.12698	38.85346	307.15178	5.01953	0.1126733	0.24216135	2.5491741	21	4 3.6	21.5
415558 2014 QD_{221}	16.7	X	75.30228	100.27429	289.20097	8.49690	0.1478708	0.19088225	2.9873930	21	—	—
415559 2014 QZ_{223}	17.6	X	220.07836	66.69459	304.39610	3.44626	0.0968333	0.24261478	2.5459970	21	4 17.2	21.3
415560 2014 QK_{224}	17.0	X	334.56204	290.59407	227.34972	4.62921	0.0184155	0.20523046	2.8464802	21	—	—
415561 2014 QB_{226}	17.7	X	284.36794	50.38017	317.72387	4.27315	0.1200619	0.26593164	2.3949110	21	6 29.2	20.5
415562 2014 QG_{229}	16.9	X	2.07604	114.94605	314.68257	3.74405	0.3008152	0.16732197	3.2616253	21	—	—
415563 2014 QQ_{233}	17.0	X	283.83985	106.21907	132.43750	4.15693	0.0297697	0.21650754	2.7467599	21	1 24.3	20.9
415564 2014 QD_{234}	17.3	X	176.48197	51.99480	356.67770	11.69607	0.0704634	0.23781758	2.5801210	21	4 16.1	21.1
415565 2014 QQ_{235}	16.7	X	70.98136	85.05046	2.96752	6.16578	0.0083289	0.21271627	2.7793010	21	1 27.4	20.5
415566 2014 QY_{239}	17.1	X	85.33344	269.72883	165.84059	6.59033	0.0275549	0.21317215	2.7753370	21	1 29.1	20.8
415567 2014 QS_{240}	18.1	X	278.41235	291.65232	87.75849	2.09120	0.2245972	0.26475456	2.4020041	21	6 19.8	21.2
415568 2014 QX_{244}	15.6	X	176.03884	211.75912	55.55367	10.57656	0.0425531	0.18446558	3.0562754	21	—	—
415569 2014 QR_{247}	16.5	X	124.10966	241.43990	46.90348	7.02711	0.2526875	0.17848007	3.1242293	21	12 24.5	22.0
415570 2014 QG_{261}	15.8	X	146.02678	256.29393	21.46109	17.21370	0.1885921	0.18207751	3.0829408	21	12 28.5	21.3
415571 2014 QB_{265}	16.1	X	51.41020	274.18424	135.39442	18.14291	0.2432776	0.17978536	3.1090890	21	—	—
415572 2014 QU_{266}	17.2	X	351.00038	287.31932	93.18586	9.66501	0.2601019	0.28912282	2.2650674	21	12 14.7	18.6
415573 2014 QQ_{267}	17.7	X	324.70660	137.06277	227.59153	4.46013	0.1792169	0.28007835	2.3135720	21	8 26.9	19.5
415574 2014 QD_{275}	18.0	X	91.95135	251.51418	14.84872	6.20245	0.1526915	0.29741553	2.2227654	21	11 9.4	21.2
415575 2014 QL_{275}	17.9	X	70.51049	226.36060	50.28383	2.76290	0.1512501	0.29029861	2.2589472	21	10 30.9	20.9
415576 2014 QC_{277}	16.5	X	99.33325	191.83043	142.99681	9.89531	0.1063150	0.18777475	3.0202618	21	—	—
415577 2014 QU_{277}	15.8	X	247.63638	250.86890	328.43324	8.58681	0.0227690	0.20255093	2.8715291	21	—	—
415578 2014 QU_{282}	16.9	X	276.82692	175.32773	102.36696	12.90776	0.1678848	0.23743494	2.5828923	21	2 17.6	20.9
415579 2014 QY_{289}	17.0	X	269.30159	255.13511	52.87283	11.23137	0.1244767	0.24235339	2.5478273	21	3 25.9	20.8
415580 2014 QJ_{300}	17.0	X	136.79972	337.94979	2.95745	1.32042	0.0816468	0.19501609	2.9450257	21	—	—
415581 2014 QM_{300}	17.6	X	43.41276	265.14695	14.54021	2.76562	0.1588390	0.28395238	2.2924808	21	9 28.8	20.0
415582 2014 QR_{300}	17.4	X	139.89691	352.38353	63.38590	3.45172	0.1742081	0.21915876	2.7245628	21	4 1.6	21.6
415583 2014 QU_{301}	17.1	X	152.83467	254.96023	118.19694	2.85318	0.0897713	0.21192842	2.7861848	21	2 13.3	21.2
415584 2014 QS_{302}	17.1	X	8.34912	125.98982	201.89565	8.08752	0.1856363	0.28551268	2.2841211	21	10 13.9	18.7
415585 2014 QT_{302}	15.4	X	122.87033	8.61114	286.68157	9.70803	0.2087324	0.17654693	3.1469941	21	12 29.9	20.8
415586 2014 QC_{307}	16.1	X	65.55624	347.29320	20.68330	5.22581	0.0695769	0.17416439	3.1756293	21	—	—
415587 2014 QD_{308}	16.0	X	30.76264	319.17796	153.44281	3.22867	0.0621728	0.19903257	2.9052708	21	1 7.3	19.6
415588 2014 QP_{308}	16.1	X	119.71358	302.75611	319.96604	8.88641	0.0482258	0.16996414	3.2277349	21	11 6.6	21.0
415589 2014 QT_{308}	18.1	X	293.45516	14.33614	35.29825	3.21926	0.1445239	0.28007375	2.3135973	21	9 12.9	20.4
415590 2014 QX_{309}	16.4	X	147.56390	15.80555	38.29393	12.61062	0.1700332	0.23825082	2.5769922	21	4 6.7	20.4
415591 2014 QQ_{310}	15.5	X	127.94393	38.21777	278.00131	12.17587	0.0862837	0.18450333	3.0558585	21	—	—
415592 2014 QK_{311}	16.8	X	248.86853	145.38657	81.86214	12.75166	0.1417925	0.21702137	2.7424226	21	—	—
415593 2014 QE_{312}	16.9	X	96.53940	185.07201	189.17295	1.76335	0.0776777	0.20348885	2.8626987	21	—	—
415594 2014 QH_{313}	16.9	X	160.96163	147.14610	158.06608	2.21842	0.0445421	0.20367132	2.8609886	21	—	—
415595 2014 QB_{316}	16.1	X	165.52703	253.53168	334.65095	8.41801	0.0631091	0.17749341	3.1357967	21	11 16.8	21.0
415596 2014 QW_{320}	15.8	X	133.90400	293.51384	359.29909	15.69382	0.1191648	0.17434962	3.1733797	21	—	—
415597 2014 QK_{321}	15.7	X	29.87260	231.80069	187.32615	11.11265	0.0219982	0.17729479	3.1381382	21	—	—
415598 2014 QF_{325}	16.0	X	111.29103	306.63556	16.99281	4.32606	0.1996888	0.17785904	3.1314976	21	—	—
415599 2014 QG_{328}	16.8	X	247.54076	73.98186	9.91925	22.71517	0.1015301	0.26958354	2.3732335	21	9 7.2	20.1
415600 2014 QZ_{336}	17.5	X	262.11972	86.29986	5.79524	4.43817	0.0899384	0.28479397	2.2879623	21	10 2.8	20.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415601 2014 QK_{344}	16.7	X	137.32997	203.84027	166.97136	8.75394	0.0705755	0.21406806	2.7675882	21	1 19.4	20.7
415602 2014 QK_{345}	16.6	X	192.24029	320.65028	77.39784	13.45058	0.1727037	0.24150902	2.5537623	21	4 29.5	20.9
415603 2014 QN_{348}	15.8	X	239.55194	223.31163	350.70400	9.59179	0.0777913	0.18684123	3.0303136	21	—	—
415604 2014 QV_{348}	17.9	X	263.25992	278.79319	166.96767	4.57256	0.1859991	0.27866466	2.3213901	21	9 8.6	20.6
415605 2014 QX_{348}	18.0	X	300.37232	246.91579	171.46189	2.86431	0.1408740	0.28574880	2.2828626	21	10 10.6	20.0
415606 2014 QG_{350}	18.0	X	260.61782	99.97143	8.46492	7.80784	0.0415723	0.29338705	2.2430662	21	10 31.3	20.7
415607 2014 QP_{351}	16.8	X	151.41720	241.28192	126.03465	5.21002	0.1149639	0.20845657	2.8170356	21	2 7.7	20.9
415608 2014 QB_{353}	15.7	X	18.75032	53.38420	352.49839	10.87520	0.0836185	0.16971991	3.2308306	21	—	—
415609 2014 QK_{353}	17.6	X	295.44005	175.18121	166.22068	2.40490	0.2176681	0.26075387	2.4265107	21	5 21.9	20.6
415610 2014 QK_{354}	17.0	X	195.28205	52.56202	263.30159	0.97269	0.0819548	0.20877943	2.8141305	21	1 19.2	21.2
415611 2014 QS_{354}	16.5	X	119.52623	165.96553	174.47348	1.56574	0.1004436	0.18682089	3.0305335	21	—	—
415612 2014 QN_{355}	16.1	X	270.33884	42.64129	159.21503	2.74097	0.0150100	0.18976992	2.9990552	21	—	—
415613 2014 QW_{357}	18.1	X	319.49020	356.53965	330.94503	0.94505	0.2010143	0.26463527	2.4027259	21	6 12.1	20.4
415614 2014 QM_{358}	16.9	X	126.36690	215.82843	194.86970	5.58432	0.0184312	0.21375021	2.7703311	21	2 17.1	20.7
415615 2014 QA_{359}	17.3	X	261.62835	180.30071	198.26963	4.14346	0.0837278	0.25588710	2.4571808	21	6 18.1	20.5
415616 2014 QL_{359}	17.0	X	96.55954	216.87447	178.83778	5.58685	0.0753206	0.19594264	2.9357343	21	1 4.5	21.0
415617 2014 QP_{359}	16.8	X	125.38829	113.77233	295.79464	1.70047	0.0927709	0.21177383	2.7875405	21	2 26.2	20.6
415618 2014 QD_{360}	16.3	X	168.72418	359.35554	280.36030	1.82618	0.0803148	0.18301033	3.0724558	21	—	—
415619 2014 QX_{360}	18.1	X	254.57670	262.63013	146.66173	2.39349	0.1600407	0.26220427	2.4175541	21	7 10.8	21.4
415620 2014 QG_{361}	18.4	X	41.42158	104.89059	189.72503	6.44692	0.1391465	0.28511363	2.2862518	21	10 14.6	20.7
415621 2014 QM_{361}	18.0	X	327.22002	153.22027	173.53784	2.23341	0.2212842	0.26780212	2.3837463	21	6 23.8	20.0
415622 2014 QJ_{367}	16.1	X	136.17612	182.37615	166.46538	12.47161	0.1319500	0.19037430	2.9927045	21	1 4.5	20.7
415623 2014 QM_{367}	15.8	X	47.76347	254.44577	177.76191	22.43496	0.0850392	0.18206513	3.0830805	21	—	—
415624 2014 QW_{370}	15.7	X	153.05879	122.25009	148.80766	10.88250	0.1284362	0.17793427	3.1306149	21	12 26.3	20.8
415625 2014 QD_{371}	17.7	X	20.59814	212.18494	46.89048	1.80882	0.1591714	0.26710776	2.3878757	21	7 13.1	19.7
415626 2014 QF_{371}	17.9	X	259.07996	274.61182	138.79212	2.08515	0.1147560	0.26827238	2.3809599	21	7 29.2	20.9
415627 2014 QJ_{371}	15.8	X	5.53387	287.66168	165.84238	26.97479	0.1666906	0.17878346	3.1206937	21	—	—
415628 2014 QV_{371}	17.2	X	47.37312	163.23480	74.39475	3.69472	0.1403822	0.26683368	2.3895106	21	7 29.9	19.7
415629 2014 QX_{371}	17.9	X	18.49249	327.30251	19.09549	6.28909	0.1905254	0.29501241	2.2348199	21	12 1.7	20.3
415630 2014 QR_{374}	17.0	X	115.02065	75.29031	7.11455	8.94991	0.1709551	0.21841612	2.7307352	21	4 5.6	21.0
415631 2014 QM_{377}	16.3	X	350.17852	282.90772	206.02749	9.40665	0.0445617	0.19116758	2.9844196	21	—	—
415632 2014 QX_{377}	16.3	X	111.66259	139.83477	201.19872	7.13967	0.1450527	0.18401165	3.0612997	21	—	—
415633 2014 QJ_{378}	15.6	X	66.34773	172.04171	186.35557	11.23781	0.0616362	0.17113474	3.2129990	21	—	—
415634 2014 QX_{378}	17.1	X	129.62453	169.53042	189.87930	7.98132	0.0863394	0.19678051	2.9273950	21	1 2.5	21.4
415635 2014 QY_{378}	15.4	X	307.28420	308.35749	185.75273	12.61292	0.0895862	0.17414422	3.1758745	21	—	—
415636 2014 QJ_{379}	17.5	X	219.15110	75.26375	296.36301	1.90826	0.0479432	0.23582562	2.5946298	21	4 20.5	21.1
415637 2014 QL_{379}	16.7	X	315.31139	62.63720	194.05995	10.07432	0.0757221	0.23247177	2.6195251	21	3 17.9	20.0
415638 2014 QW_{379}	16.6	X	136.83853	140.68754	178.67627	8.30089	0.1859169	0.18784194	3.0195415	21	—	—
415639 2014 QM_{380}	15.7	X	351.18054	107.32995	349.00104	10.84683	0.0598605	0.17669534	3.1452318	21	—	—
415640 2014 QT_{384}	17.0	X	162.56870	218.26804	147.27496	3.96644	0.1050482	0.21371348	2.7706486	21	2 15.0	20.9
415641 2014 QD_{385}	16.5	X	101.64070	357.09051	359.41740	12.17852	0.1253290	0.18488914	3.0516059	21	—	—
415642 2014 QE_{385}	16.0	X	28.17463	54.65623	9.22332	4.49297	0.1104907	0.17794118	3.1305338	21	—	—
415643 2014 QU_{386}	18.7	X	330.32859	201.42447	174.36143	3.45205	0.1665437	0.28191178	2.3035301	21	10 3.6	20.1
415644 2014 QY_{387}	15.9	X	163.64650	277.39606	338.00749	8.77036	0.0694112	0.18048974	3.1009948	21	12 19.6	20.7
415645 2014 QV_{389}	15.8	X	153.98246	5.00457	295.19781	2.44811	0.0654639	0.18594302	3.0400645	21	—	—
415646 2014 QT_{393}	16.2	X	40.80269	285.74014	128.63910	11.02517	0.0755227	0.18052101	3.1006367	21	—	—
415647 2014 QQ_{395}	16.1	X	80.17003	8.96139	342.88154	8.96413	0.0926459	0.17409416	3.1764833	21	—	—
415648 2014 QE_{397}	17.1	X	257.90206	297.03117	329.52579	1.89759	0.1449109	0.21608489	2.7503404	21	1 19.1	21.3
415649 2014 QE_{402}	17.6	X	300.04325	281.44543	118.23954	6.79810	0.1125965	0.28370314	2.2938233	21	9 16.7	19.9
415650 2014 QB_{403}	17.4	X	191.63002	68.37752	351.51326	14.10262	0.0866546	0.24100220	2.5573414	21	5 16.8	21.5
415651 2014 QG_{403}	15.7	X	351.40015	270.73994	196.68584	12.67377	0.0881753	0.17753867	3.1352637	21	—	—
415652 2014 QX_{405}	16.9	X	116.73944	141.52618	292.11061	4.30009	0.1984473	0.21646670	2.7471054	21	3 29.8	20.9
415653 2014 QG_{406}	17.7	X	226.20314	198.64142	178.51451	12.43711	0.1971989	0.24362696	2.5389403	21	4 30.4	22.0
415654 2014 QR_{408}	16.7	X	260.40674	268.78586	359.36743	11.76382	0.2577095	0.22307693	2.6925655	21	1 17.8	21.5
415655 2014 QV_{409}	17.1	X	88.26912	349.69278	231.94993	5.04752	0.0097029	0.28419227	2.2911906	21	8 13.3	20.0
415656 2014 QF_{410}	17.9	X	252.17833	257.33028	159.11646	5.51197	0.1941051	0.26908251	2.3761785	21	7 13.0	21.4
415657 2014 QN_{410}	17.1	X	251.03644	110.70702	335.45204	8.97250	0.1963520	0.28046119	2.3114661	21	8 23.2	20.3
415658 2014 QO_{410}	17.3	X	272.99328	273.76513	149.29675	3.58767	0.1691450	0.28092201	2.3089377	21	8 23.9	20.1
415659 2014 QT_{410}	18.0	X	351.76272	2.15906	336.22629	3.35444	0.1495253	0.28519663	2.2858082	21	9 19.2	19.7
415660 2014 QF_{414}	16.5	X	182.88305	350.55919	351.03627	8.73963	0.1180400	0.21884101	2.7271995	21	2 9.1	20.7
415661 2014 QW_{418}	16.3	X	136.49666	39.71404	258.07833	3.78229	0.1516564	0.17990034	3.1077643	21	—	—
415662 2014 QK_{419}	18.0	X	227.52144	108.50609	312.44223	2.03309	0.2058758	0.25228995	2.4804820	21	6 23.2	22.0
415663 2014 QZ_{419}	16.8	X	71.23530	312.52859	121.58203	3.11302	0.0444587	0.20347390	2.8628389	21	1 13.6	20.6
415664 2014 QT_{420}	16.2	X	92.60637	300.60278	116.13630	3.11682	0.1123681	0.20218425	2.8749999	21	1 29.9	19.8
415665 2014 QG_{425}	17.3	X	339.07418	98.73255	163.71396	15.88317	0.1117389	0.25312160	2.4750458	21	4 29.5	20.3
415666 2014 QJ_{427}	17.1	X	95.06080	332.47575	6.34928	3.86157	0.1643769	0.17983974	3.1084623	21	—	—
415667 2014 QX_{427}	17.0	X	25.70814	14.74475	168.13355	15.03265	0.0654859	0.23253845	2.6190244	21	3 28.1	20.1
415668 2014 QC_{428}	16.7	X	112.29426	3.39965	343.87453	9.98856	0.1030497	0.18836502	3.0139489	21	—	—
415669 2014 QN_{435}	17.7	X	19.28913	199.23907	141.12781	3.97511	0.1842225	0.29090657	2.2553853	21	11 24.7	19.9
415670 2014 QO_{435}	16.9	X	105.10832	268.79868	160.88091	8.73120	0.2688708	0.20248230	2.8721779	21	3 26.7	21.1
415671 2014 RR_{9}	16.2	X	254.29038	30.54978	207.01647	8.50872	0.0661977	0.19923901	2.9032636	21	—	—
415672 2014 RH_{13}	15.8	X	111.33559	86.30085	243.71828	12.68291	0.2028778	0.18650940	3.0339067	21	—	—
415673 2014 RP_{16}	16.4	X	134.02017	145.51499	190.25911	16.31433	0.2141354	0.19689440	2.9262660	21	—	—
415674 2014 RB_{19}	17.4	X	273.38146	23.90337	8.78765	1.81313	0.1472351	0.26230282	2.4169486	21	7 14.5	20.5
415675 2014 RK_{19}	15.4	X	222.81633	189.06448	18.61331	8.16490	0.0086191	0.16828339	3.2491908	21	—	—
415676 2014 RZ_{19}	16.8	X	110.59227	3.24920	0.34155	1.60106	0.1398798	0.19538634	2.9413040	21	—	—
415677 2014 RO_{20}	15.7	X	6.30108	94.21670	330.26755	9.25702	0.0840883	0.17680025	3.1439874	21	—	—
415678 2014 RX_{21}	17.4	X	150.64007	247.16714	154.16309	5.36399	0.1676818	0.21928839	2.7234890	21	3 24.5	21.7
415679 2014 RD_{22}	16.6	X	319.51480	251.05544	21.60360	9.40332	0.0390213	0.24237177	2.5476984	21	4 19.1	19.7
415680 2014 RC_{23}	15.9	X	357.45608	10.05814	104.72275	11.70294	0.0916769	0.19511819	2.9439982	21	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415681 2014 RP_{23}	17.1	X	269.27528	94.98569	315.86228	5.59076	0.0870435	0.27707327	2.3302703	21	8 13.9	20.0
415682 2014 RX_{24}	18.0	X	26.84725	50.52370	270.90000	2.46279	0.1186319	0.29186650	2.2508500	21	10 26.9	20.3
415683 2014 RH_{30}	17.3	X	169.41729	34.67266	345.01283	5.87382	0.0637958	0.22545111	2.6736289	21	3 6.8	21.2
415684 2014 RS_{31}	16.3	X	107.18651	154.21061	180.89516	5.42536	0.1580655	0.18069719	3.0986210	21	—	—
415685 2014 RY_{33}	16.0	X	172.19003	302.00592	3.01595	14.76185	0.1517918	0.20122118	2.8841660	21	—	—
415686 2014 RL_{48}	15.7	X	143.87257	272.63233	32.61294	13.15532	0.1636803	0.18012468	3.1051832	21	—	—
415687 2014 SU_{54}	16.9	X	319.26510	259.25914	22.89370	7.81974	0.2440714	0.25565580	2.4586627	21	3 30.5	19.7
415688 5113 $T\text{–}2$	16.7	X	176.98518	147.60939	239.43548	8.90521	0.2541463	0.21741662	2.7390979	21	3 30.5	21.6
415689 1991 JN	18.3	X	72.76334	3.93646	212.23495	25.61380	0.1354551	0.39801394	1.8303629	21	8 1.9	20.9
415690 1992 UB	16.5	X	114.34711	294.58497	70.56380	16.24201	0.5678926	0.18015532	3.1048311	21	2 25.9	22.3
415691 1993 SM_{6}	17.1	X	285.92416	5.46981	359.43975	3.54272	0.2806912	0.24139845	2.5545421	21	5 31.9	20.7
415692 1995 SO_{9}	17.3	X	198.28125	23.53755	0.66006	4.21801	0.0801977	0.21500220	2.7595660	21	4 14.0	21.5
415693 1995 SC_{34}	17.2	X	151.70082	219.88586	170.13467	3.62530	0.0839278	0.21038753	2.7997723	21	3 3.6	21.3
415694 1995 SP_{42}	18.4	X	263.81913	315.73502	123.39618	2.06335	0.1549931	0.26302030	2.4125512	21	9 4.4	21.2
415695 1996 GE_{2}	15.6	X	288.26570	299.31865	15.18223	28.16104	0.2495046	0.23676390	2.5877703	21	4 4.3	19.5
415696 1996 GC_{5}	17.7	X	134.55852	238.73172	45.07956	5.63464	0.1818215	0.29531591	2.2332884	21	—	—
415697 1996 TY_{16}	16.1	X	220.82472	324.97391	328.14169	10.08739	0.1256101	0.17734047	3.1375993	21	1 24.1	21.2
415698 1996 TD_{31}	17.5	X	63.78551	292.44076	33.50183	9.18405	0.2425278	0.28133531	2.3066758	21	—	—
415699 1996 XL_{8}	17.4	X	329.26545	131.24058	279.93930	8.12972	0.1228075	0.27667030	2.3325324	21	11 23.7	19.5
415700 1996 XU_{23}	16.4	X	174.35160	142.21879	244.97131	13.02195	0.1229318	0.21692605	2.7432259	21	3 20.8	20.9
415701 1997 EJ_{1}	16.7	X	9.97429	296.99029	290.99396	6.59639	0.0784007	0.21055089	2.7983239	21	5 2.7	20.2
415702 1997 SD_{14}	16.2	X	53.06397	87.95640	358.28427	10.14738	0.2188948	0.17791271	3.1308678	21	1 27.6	19.6
415703 1997 US_{24}	17.0	X	260.60492	147.31536	213.35306	3.29192	0.2241938	0.23802394	2.5786296	21	5 7.4	20.8
415704 1998 BY_{5}	17.5	X	92.15336	47.15907	121.77740	4.47836	0.1135293	0.22464647	2.6800094	21	6 22.8	21.2
415705 1998 HD_{10}	16.3	X	68.61671	170.26940	43.29135	14.14012	0.1403145	0.22102661	2.7091914	21	7 30.6	20.1
415706 1998 RR_{21}	16.4	X	153.24390	156.63628	185.43112	5.30033	0.2471335	0.18969594	2.9998349	21	1 23.7	21.5
415707 1998 SM_{50}	16.8	X	168.33398	347.12085	25.42752	8.13423	0.1563875	0.19253062	2.9703173	21	3 10.1	21.6
415708 1998 SY_{97}	16.8	X	136.95303	203.59731	128.59016	1.35655	0.4141799	0.18699691	3.0286315	21	1 14.9	22.1
415709 1998 UK_{12}	16.1	X	134.07678	10.34747	30.67150	4.00040	0.2822234	0.19105964	2.9855435	21	3 21.6	21.0
415710 1998 WC_{2}	18.5	X	182.59281	270.44448	208.28074	26.57742	0.5604528	0.24135861	2.5548232	21	7 18.3	24.6
415711 1998 WT_{7}	19.1	X	63.55697	235.96383	248.26704	40.69755	0.1100250	0.79721726	1.1519092	21	—	—
415712 1998 WL_{38}	15.9	X	329.73681	48.42090	53.00704	20.62767	0.1105788	0.17609415	3.1523863	21	—	—
415713 1998 XX_{2}	19.9	X	359.70088	153.03044	74.43032	6.97241	0.3672650	1.54390401	0.7414056	21	—	—
415714 1998 YZ_{19}	17.0	X	250.56651	82.66352	314.64432	3.57557	0.2174272	0.24312339	2.5424449	21	6 13.8	21.0
415715 1999 AU_{23}	18.0	X	38.72315	118.00048	293.55993	20.44207	0.4098816	0.30984909	2.1628973	21	—	—
415716 1999 CV_{134}	16.2	X	66.95090	167.07573	323.40607	9.97630	0.1088308	0.18294910	3.0731413	21	3 26.5	20.4
415717 1999 CR_{140}	15.5	X	271.79266	289.53451	333.42940	15.21165	0.2076323	0.17593182	3.1543251	21	1 31.1	20.6
415718 1999 FS_{87}	18.2	X	287.00804	131.00298	358.58205	5.44825	0.0649667	0.29530578	2.2333395	21	—	—
415719 1999 HN_{7}	17.1	X	90.07999	152.33517	34.36790	5.60299	0.2123135	0.23073640	2.6326430	21	7 30.3	20.9
415720 1999 RU_{215}	7.3	X	52.85863	330.36657	14.21034	7.71993	0.0740117	0.00347383	43.1781348	21	11 6.1	23.5
415721 1999 SC	17.9	X	336.42229	330.40538	359.39340	5.06582	0.2966539	0.26591013	2.3950401	21	7 13.3	19.2
415722 1999 TV_{67}	16.8	X	163.47041	202.46282	190.35408	3.21807	0.2038609	0.20156583	2.8808774	21	3 28.6	21.4
415723 1999 TL_{134}	17.4	X	323.81855	6.24104	353.30587	3.00560	0.2541614	0.26628602	2.3927857	21	8 7.2	18.8
415724 1999 TL_{171}	16.9	X	345.39936	155.98246	207.32766	6.47387	0.1631426	0.26812253	2.3818469	21	10 13.9	18.6
415725 1999 TS_{294}	17.9	X	293.78110	54.35084	4.55695	5.66045	0.0833808	0.26748830	2.3856104	21	10 2.8	20.6
415726 1999 TC_{305}	17.6	X	317.88947	176.80349	211.56128	2.36263	0.1941148	0.26646723	2.3917008	21	9 17.9	19.4
415727 1999 TQ_{336}	18.3	X	340.59275	345.06142	355.07666	1.24871	0.1920876	0.26571023	2.3962412	21	8 24.7	19.7
415728 1999 UF_{33}	18.7	X	287.13033	188.43531	221.00772	0.79202	0.1882702	0.26466131	2.4025683	21	8 21.2	21.4
415729 1999 VL_{46}	16.9	X	146.91396	165.18637	235.33947	14.02339	0.4262404	0.20072076	2.8889577	21	4 3.6	22.5
415730 1999 VS_{46}	17.0	X	272.57510	357.75899	44.68394	24.97713	0.2296285	0.26156590	2.4214860	21	7 17.1	20.8
415731 1999 VY_{95}	16.8	X	320.15506	307.92616	37.07545	7.98126	0.2503818	0.26402277	2.4064405	21	7 3.7	19.0
415732 1999 VY_{104}	15.9	X	145.44995	31.26830	53.83002	13.07823	0.0670137	0.20433921	2.8547510	21	5 4.9	20.1
415733 1999 VF_{149}	16.0	X	65.90003	333.30962	73.76462	9.97592	0.1129772	0.18956933	3.0011705	21	—	—
415734 1999 VO_{153}	16.5	X	145.46051	333.32058	74.01289	6.44121	0.1051622	0.19985112	2.8973324	21	3 25.0	20.9
415735 1999 WN_{15}	17.3	X	303.17970	136.06298	223.68264	2.58038	0.2097551	0.21671402	2.7450149	21	6 30.8	20.6
415736 1999 XP_{147}	17.3	X	254.71941	50.65327	65.79093	7.39297	0.0724738	0.26665908	2.3905535	21	10 29.0	20.2
415737 1999 YH_{8}	18.0	X	254.21504	351.95342	96.76987	2.65248	0.1423381	0.25918244	2.4363088	21	9 7.1	21.1
415738 1999 YP_{18}	18.3	X	300.45096	80.42074	290.89452	1.20168	0.2030880	0.25724848	2.4485041	21	7 14.7	21.1
415739 2000 CW_{64}	17.0	X	202.91183	42.86672	123.29438	9.70625	0.1433279	0.25929405	2.4356096	21	10 23.2	20.8
415740 2000 DU_{1}	17.4	X	309.73015	252.96021	151.69643	3.04316	0.1687405	0.25959546	2.4337240	21	9 29.9	19.6
415741 2000 DY_{113}	16.4	X	40.22268	322.64986	144.22665	7.06020	0.2542915	0.18706514	3.0278950	21	1 23.5	19.2
415742 2000 DP_{114}	17.5	X	218.16154	26.29288	147.38144	1.90229	0.1910958	0.26147269	2.4220615	21	11 9.2	21.1
415743 2000 EN_{78}	15.9	X	1.98219	9.89144	141.01365	11.93115	0.1655516	0.18428543	3.0582669	21	1 8.6	19.5
415744 2000 EA_{160}	16.8	X	1.36493	2.97975	175.77918	5.01006	0.2161409	0.18606183	3.0387702	21	2 6.2	19.9
415745 2000 GV_{147}	19.3	X	41.84948	216.07653	68.67904	10.56477	0.4566414	0.42712675	1.7462170	21	12 3.2	21.6
415746 2000 JN_{10}	17.8	X	55.77217	254.60396	47.12446	21.45411	0.4295691	0.29064348	2.2571599	21	12 13.4	21.9
415747 2000 JD_{94}	17.9	X	233.75188	51.42696	12.53322	21.16923	0.0725820	0.38644464	1.8667143	21	7 30.3	20.4
415748 2000 KJ_{38}	15.6	X	326.13652	142.69408	85.23247	10.15033	0.0379184	0.18073381	3.0982023	21	3 15.2	20.0
415749 2000 KE_{70}	15.8	X	28.53181	134.26474	88.29516	25.49620	0.1014379	0.23683552	2.5872486	21	6 1.4	18.8
415750 2000 LW_{29}	15.7	X	170.87412	230.18984	87.55095	17.05674	0.0833712	0.17093579	3.2154916	21	1 3.4	20.6
415751 2000 NE_{4}	17.8	X	121.57367	60.69636	225.59695	2.24395	0.1669827	0.29676878	2.2259936	21	—	—
415752 2000 OB_{22}	16.9	X	189.85058	195.24592	154.50713	17.32567	0.5310725	0.21261364	2.7801953	21	3 5.4	22.8
415753 2000 QR_{24}	16.3	X	244.25068	30.54431	338.02659	12.72722	0.1842400	0.22305608	2.6927333	21	4 30.3	20.8
415754 2000 QU_{122}	17.1	X	322.82726	343.12505	337.78236	7.66910	0.2899150	0.27646543	2.3336846	21	5 18.2	19.4
415755 2000 QB_{144}	16.5	X	277.22604	318.90115	4.34587	8.55527	0.2632100	0.22370289	2.6875403	21	4 2.5	20.7
415756 2000 QL_{212}	16.7	X	260.68657	4.11927	344.15490	13.78806	0.2562076	0.22388933	2.6860481	21	4 13.8	21.4
415757 2000 RS	16.3	X	322.38437	39.08176	296.76724	13.14676	0.2144289	0.23139575	2.6276396	21	6 30.9	19.0
415758 2000 RO_{17}	16.7	X	216.19530	184.53168	200.88985	9.26724	0.2987463	0.22069413	2.7119116	21	4 28.6	21.6
415759 2000 RA_{100}	16.1	X	201.97130	98.37857	314.75679	22.33900	0.3396783	0.22002132	2.7174374	21	5 14.9	21.7
415760 2000 RD_{103}	17.1	X	317.71342	104.14457	242.39782	5.84798	0.2981361	0.27789879	2.3256532	21	6 19.9	19.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415761 2000 SF_{23}	17.9	X	21.24382	312.88601	15.92751	13.25940	0.3884066	0.28497681	2.2869835	21	12 11.1	20.9
415762 2000 SL_{31}	17.5	X	74.33126	7.06729	354.00400	6.50016	0.1338137	0.29465132	2.2366453	21	—	—
415763 2000 SQ_{69}	17.0	X	43.40939	332.28227	39.53400	7.69501	0.1239965	0.29049436	2.2579323	21	—	—
415764 2000 SD_{70}	16.5	X	162.51823	15.05081	16.05313	8.17322	0.2299340	0.21317717	2.7752935	21	3 27.2	21.1
415765 2000 SM_{129}	16.3	X	212.04641	88.66820	290.20944	15.04340	0.2843579	0.22012768	2.7165620	21	4 10.5	21.6
415766 2000 SG_{174}	17.3	X	26.02736	35.10563	311.75176	8.02349	0.2133340	0.28598453	2.2816080	21	12 16.6	20.0
415767 2000 SZ_{182}	18.8	X	25.51670	349.08424	356.71382	4.69056	0.2396255	0.28648089	2.2789718	21	12 18.6	21.5
415768 2000 SP_{228}	17.6	X	11.73700	21.43611	17.69088	5.74946	0.2064627	0.28823158	2.2697343	21	—	—
415769 2000 SU_{266}	16.4	X	194.29128	183.92640	213.13948	8.88519	0.2943309	0.21798323	2.7343493	21	4 27.1	21.2
415770 2000 SJ_{342}	18.1	X	33.42541	353.61293	19.81705	7.11940	0.1370346	0.29005531	2.2602102	21	—	—
415771 2000 TT_{26}	17.8	X	9.34870	359.49481	43.11024	6.26400	0.2396121	0.28873888	2.2670749	21	—	—
415772 2000 TX_{67}	17.9	X	28.78394	99.93030	273.05007	1.88238	0.2478713	0.28835813	2.2690701	21	—	—
415773 2000 UQ_{33}	16.9	X	222.19827	309.84298	56.25438	14.19776	0.3002678	0.21782696	2.7356569	21	4 14.2	22.0
415774 2000 UY_{62}	16.6	X	147.90822	147.57631	240.36444	8.55249	0.2684439	0.20968189	2.8060502	21	3 9.9	21.4
415775 2000 UH_{93}	16.4	X	189.41737	120.49029	257.28963	8.20272	0.1964925	0.21415612	2.7668294	21	3 27.2	21.2
415776 2000 VQ_{1}	17.7	X	320.25541	74.20801	48.79351	5.66775	0.3355358	0.28724064	2.2749514	21	—	—
415777 2000 VR_{6}	17.7	X	329.06371	18.86393	44.69507	7.52236	0.2602374	0.28374300	2.2936084	21	12 28.4	18.9
415778 2000 VG_{19}	16.5	X	197.62171	9.83114	38.53871	11.01497	0.2288824	0.21781817	2.7357305	21	5 11.9	21.3
415779 2000 WA_{3}	15.7	X	198.96059	122.09585	259.63638	31.64874	0.3373242	0.21518317	2.7580185	21	4 3.1	21.5
415780 2000 WO_{10}	17.7	X	286.33151	356.15895	84.52671	15.17338	0.4226512	0.27688917	2.3313031	21	9 1.4	20.6
415781 2000 WY_{10}	16.2	X	198.02663	342.30598	101.86850	9.33723	0.0568219	0.21612240	2.7500221	21	7 1.6	20.2
415782 2000 WP_{14}	17.4	X	28.96412	109.18490	269.01844	4.43221	0.1922354	0.28645930	2.2790863	21	—	—
415783 2000 WM_{27}	18.4	X	353.14950	336.36875	56.55907	3.22409	0.1910047	0.28401070	2.2921670	21	12 24.5	20.2
415784 2000 WS_{51}	17.2	X	201.56412	337.20329	61.11591	11.28790	0.2270243	0.21635791	2.7480261	21	5 5.8	22.0
415785 2000 WH_{74}	17.2	X	357.88501	144.07190	280.60249	5.09778	0.1350216	0.28746144	2.2737863	21	—	—
415786 2000 WT_{93}	16.7	X	166.65921	352.17274	70.96851	9.22333	0.2998495	0.21317363	2.7753242	21	5 10.8	21.7
415787 2000 WK_{139}	17.4	X	29.51826	167.11985	245.81437	5.94570	0.1603071	0.29032304	2.2588205	21	—	—
415788 2000 WZ_{176}	18.4	X	325.17695	299.21181	111.11052	2.53032	0.2500665	0.28153616	2.3055786	21	11 20.3	19.4
415789 2000 WO_{193}	16.8	X	348.67934	359.94501	243.86523	8.63599	0.0237298	0.21833664	2.7313979	21	4 24.8	20.5
415790 2000 XF_{3}	16.7	X	175.86233	36.49175	353.17453	8.98689	0.2673129	0.21276584	2.7788692	21	4 3.4	21.7
415791 2001 AR_{21}	17.3	X	164.78584	128.01532	298.44078	11.09605	0.3525564	0.21215162	2.7842303	21	5 10.9	22.7
415792 2001 AS_{49}	18.2	X	259.91217	203.70152	278.95246	5.61063	0.0789530	0.27645274	2.3337560	21	11 11.2	21.1
415793 2001 BT_{2}	16.8	X	268.86491	48.99595	111.22897	24.98625	0.2476962	0.27984474	2.3148594	21	12 27.4	18.9
415794 2001 BR_{32}	16.1	X	238.48420	78.43685	138.62628	27.03463	0.4737503	0.22871751	2.6481125	21	12 18.9	20.9
415795 2001 CE_{49}	17.1	X	248.57446	239.57067	312.98497	22.91120	0.1902782	0.28092659	2.3089125	21	—	—
415796 2001 DD_{102}	17.4	X	283.52130	62.55474	98.03194	6.97552	0.2153964	0.28121451	2.3073363	21	—	—
415797 2001 EP_{18}	16.9	X	296.30995	196.17978	345.95590	20.76109	0.1647889	0.28504167	2.2866366	21	—	—
415798 2001 FB_{150}	16.7	X	150.14472	162.90614	358.18862	21.98211	0.2155499	0.26057715	2.4276077	21	8 30.1	20.9
415799 2001 FY_{193}	16.2	X	121.94765	101.48666	95.97276	14.86775	0.2900398	0.21159733	2.7890904	21	9 22.2	21.3
415800 2001 FA_{204}	18.2	X	318.95207	82.98381	289.41930	0.38781	0.1983235	0.26372401	2.4082576	21	8 24.4	19.8
415801 2001 FF_{205}	16.8	X	58.59578	69.02738	12.52451	1.19581	0.0450929	0.18943110	3.0026303	21	1 9.5	20.7
415802 2001 JT_{2}	17.3	X	93.12663	231.78984	58.90436	43.38342	0.3320785	0.31061200	2.1593542	21	12 14.1	21.6
415803 2001 MY_{25}	17.6	X	279.31935	73.83495	230.60647	16.59492	0.3317104	0.23776500	2.5805014	21	2 27.1	22.3
415804 2001 OW_{15}	16.9	X	220.39495	32.96170	335.78598	7.57475	0.2316452	0.23352539	2.6116400	21	4 9.2	21.5
415805 2001 OW_{22}	17.4	X	251.63517	135.48491	244.11249	19.92798	0.0782337	0.38592102	1.8684024	21	6 1.6	19.1
415806 2001 PS	16.5	X	284.25635	187.50251	182.12134	7.63138	0.2903070	0.24212029	2.5494623	21	6 5.5	20.1
415807 2001 PH_{24}	16.1	X	260.35959	41.03246	345.80922	15.31002	0.2604488	0.23882822	2.5728371	21	6 2.9	20.5
415808 2001 PY_{30}	16.8	X	217.62953	259.49095	125.41884	26.72819	0.3388843	0.23293691	2.6160367	21	5 7.1	22.2
415809 2001 PX_{31}	16.7	X	350.79027	278.79435	35.64902	10.49247	0.2139005	0.24566911	2.5248506	21	8 10.1	18.9
415810 2001 PD_{37}	16.6	X	302.80018	314.86779	6.93529	13.68565	0.1083939	0.23940546	2.5686998	21	5 18.9	20.1
415811 2001 PK_{49}	17.7	X	261.21155	99.49330	222.33669	14.95991	0.4049692	0.23294772	2.6159558	21	3 3.6	22.9
415812 2001 PT_{52}	16.6	X	230.05853	348.06655	17.29669	6.59162	0.2523651	0.23364276	2.6107653	21	4 14.4	21.2
415813 2001 PT_{65}	16.2	X	203.43734	121.22925	280.98537	20.51835	0.1890883	0.23056310	2.6339621	21	5 6.4	20.9
415814 2001 PQ_{67}	17.0	X	312.79093	320.63550	16.75441	11.50005	0.2758179	0.24214040	2.5493212	21	5 30.2	20.0
415815 2001 QY_{48}	17.3	X	294.10307	20.22897	326.02305	1.91477	0.2328122	0.24061513	2.5600833	21	5 24.4	20.7
415816 2001 QT_{71}	17.3	X	271.62185	160.74328	164.38905	12.39832	0.1998367	0.23614726	2.5922732	21	4 8.5	21.3
415817 2001 QW_{89}	17.2	X	251.82422	68.96545	290.50405	15.28085	0.2731820	0.23354185	2.6115173	21	4 16.9	21.9
415818 2001 QX_{151}	16.3	X	245.08626	82.10118	312.65510	27.67625	0.3624770	0.23426737	2.6061226	21	5 20.9	21.6
415819 2001 QY_{151}	15.9	X	234.57450	110.21731	255.14301	28.72223	0.3045444	0.23105010	2.6302596	21	4 9.4	21.1
415820 2001 QJ_{154}	16.9	X	289.29013	310.20234	13.62813	14.42912	0.1529519	0.23601409	2.5932482	21	4 26.8	20.5
415821 2001 QS_{166}	16.8	X	289.80248	322.73702	10.52983	9.49799	0.1746986	0.23897659	2.5717721	21	5 7.7	20.3
415822 2001 QG_{170}	16.1	X	272.22581	32.42880	293.57444	18.56057	0.2465109	0.23385409	2.6091922	21	3 22.9	20.7
415823 2001 QE_{172}	16.5	X	239.40894	93.70701	298.69421	12.72545	0.1850677	0.23752239	2.5822583	21	5 29.6	20.7
415824 2001 QD_{186}	16.7	X	257.44799	101.10221	263.79304	11.36140	0.2998757	0.23567681	2.5957218	21	4 30.3	21.2
415825 2001 QL_{239}	16.9	X	307.40459	332.89659	344.52455	7.24347	0.2030309	0.23922697	2.5699773	21	5 5.7	20.3
415826 2001 QK_{245}	16.6	X	272.46851	9.39881	358.28300	13.83364	0.2556895	0.23732437	2.5836945	21	5 20.2	20.8
415827 2001 QX_{253}	16.9	X	201.88117	249.73706	114.99543	9.15579	0.1802540	0.22974462	2.6402141	21	3 28.4	21.4
415828 2001 QL_{266}	16.4	X	268.74180	76.15566	279.21270	11.75714	0.2063433	0.23844690	2.5755793	21	5 7.9	20.4
415829 2001 QJ_{267}	16.9	X	233.60101	207.75443	162.93472	14.24072	0.2823537	0.23365332	2.6106866	21	4 26.1	21.7
415830 2001 RV_{4}	17.0	X	243.99859	40.40477	312.07290	7.18040	0.2017332	0.23333406	2.6130675	21	4 9.9	21.4
415831 2001 RO_{7}	17.4	X	276.32053	347.40051	348.68100	0.55896	0.2100807	0.23642258	2.5902603	21	4 23.3	21.3
415832 2001 RS_{14}	17.3	X	219.99493	122.72927	269.85944	12.29969	0.2780806	0.23307070	2.6150355	21	5 6.9	22.1
415833 2001 RF_{28}	17.4	X	241.89990	178.54631	193.91767	14.24459	0.2424798	0.23526772	2.5987300	21	5 3.8	21.8
415834 2001 RM_{42}	16.7	X	297.42099	205.56350	120.49735	10.95983	0.2104518	0.23797716	2.5789675	21	5 9.9	20.3
415835 2001 RA_{62}	16.5	X	214.74348	267.78137	155.26349	10.69692	0.0978011	0.23676560	2.5877579	21	6 21.0	20.5
415836 2001 RW_{72}	16.9	X	254.85307	149.86531	196.21151	13.39581	0.2776096	0.23258862	2.6186477	21	4 9.9	21.2
415837 2001 RH_{83}	16.8	X	311.53930	351.61855	341.73997	14.11349	0.2111111	0.24062125	2.5600399	21	6 3.2	20.1
415838 2001 RN_{96}	17.2	X	294.88983	125.73651	206.66711	1.51934	0.1580701	0.23877795	2.5731982	21	5 19.2	20.4
415839 2001 RN_{116}	17.1	X	321.16620	273.68378	6.70366	5.63929	0.1998869	0.23653648	2.5894288	21	4 8.1	20.0
415840 2001 RO_{133}	17.4	X	260.28761	338.63720	23.53318	4.26283	0.2243840	0.23584190	2.5945104	21	5 8.1	21.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415841 2001 RS_{150}	18.2	X	103.13795	156.38708	164.15131	8.75413	0.2786458	0.30983808	2.1629486	21	—	—
415842 2001 SM_{7}	17.4	X	234.13426	236.50622	153.45579	4.01646	0.1839525	0.23602205	2.5931899	21	5 23.6	21.6
415843 2001 SM_{18}	16.6	X	221.59638	45.14819	5.91720	14.03877	0.1860767	0.23476874	2.6024109	21	6 3.7	21.1
415844 2001 SD_{60}	16.9	X	255.12446	104.84783	241.87217	5.02563	0.3073424	0.23374127	2.6100317	21	4 6.8	21.4
415845 2001 SC_{65}	16.8	X	217.54974	213.16069	196.20455	13.63936	0.2516910	0.23175544	2.6249201	21	5 29.9	21.5
415846 2001 SA_{69}	16.6	X	239.83043	8.15131	44.18080	11.97452	0.2820017	0.23430216	2.6058646	21	6 16.5	21.1
415847 2001 SF_{74}	16.7	X	266.69395	89.43824	256.28024	5.99984	0.2103222	0.23389954	2.6088542	21	4 24.3	20.8
415848 2001 SQ_{78}	17.4	X	270.83864	44.99993	1.12578	2.16806	0.1866260	0.24111423	2.5565492	21	7 23.5	20.9
415849 2001 SR_{79}	17.0	X	226.40069	81.18661	315.09079	7.83030	0.1925570	0.23651304	2.5895998	21	5 20.9	21.3
415850 2001 SA_{82}	15.4	X	125.16012	32.99410	323.27713	8.60503	0.1383792	0.16836109	3.2481911	21	1 8.2	20.1
415851 2001 SH_{97}	17.3	X	312.35957	352.16137	323.22748	3.74295	0.1141703	0.23778744	2.5803391	21	5 27.6	20.3
415852 2001 SN_{97}	18.6	X	71.08211	12.77832	323.44937	2.63556	0.1536969	0.30652946	2.1784850	21	—	—
415853 2001 SM_{103}	17.3	X	239.05459	48.44852	310.35065	5.22404	0.2977894	0.23201668	2.6229494	21	4 9.1	22.0
415854 2001 ST_{103}	17.0	X	311.42536	333.80361	350.01674	4.35425	0.0677051	0.23779843	2.5802596	21	6 14.9	20.3
415855 2001 SA_{117}	16.6	X	305.01312	347.47594	324.05305	10.91104	0.1567135	0.23751935	2.5822803	21	4 29.5	20.1
415856 2001 SB_{124}	17.5	X	256.33711	85.22141	273.13962	3.42636	0.2378252	0.23546933	2.5972464	21	4 27.9	21.6
415857 2001 SM_{132}	17.2	X	258.17225	10.57098	334.03195	3.96869	0.1637722	0.23340267	2.6125553	21	4 18.9	21.1
415858 2001 SA_{137}	18.1	X	93.30196	27.55098	340.03483	2.12340	0.1729016	0.31214204	2.1522921	21	—	—
415859 2001 SE_{142}	16.7	X	310.17623	305.77702	341.17328	11.03895	0.1618615	0.23456634	2.6039077	21	4 3.6	20.2
415860 2001 ST_{150}	17.0	X	240.64930	25.38162	327.11646	3.15139	0.2220834	0.23129012	2.6284396	21	4 8.2	21.3
415861 2001 SO_{159}	17.9	X	100.09587	6.70398	341.36634	5.02876	0.1652120	0.31082054	2.1583883	21	—	—
415862 2001 SV_{159}	16.6	X	280.20702	127.26325	215.70919	11.88824	0.2091490	0.23519896	2.5992364	21	5 7.6	20.2
415863 2001 SQ_{164}	17.7	X	216.32491	11.92546	15.36223	5.71435	0.2733473	0.23022893	2.6365102	21	4 29.3	22.4
415864 2001 SH_{172}	17.3	X	301.96447	0.76035	9.26415	3.95364	0.1571742	0.24160667	2.5530742	21	7 24.4	20.3
415865 2001 SE_{173}	18.5	X	68.10011	194.21218	166.64737	2.76885	0.1807592	0.30749419	2.1739261	21	—	—
415866 2001 SP_{194}	15.5	X	257.26690	273.44159	359.36549	13.86613	0.1888735	0.17623682	3.1506848	21	2 1.7	20.8
415867 2001 SR_{196}	15.6	X	162.57950	327.60227	0.73831	10.42028	0.0457441	0.16842279	3.2473977	21	1 6.2	20.5
415868 2001 SJ_{216}	16.0	X	150.70140	211.48199	152.75053	2.94146	0.0953127	0.17148231	3.2086560	21	2 6.4	20.7
415869 2001 SD_{268}	17.2	X	231.32234	207.51530	169.29922	3.53984	0.3148283	0.23110374	2.6298525	21	4 27.9	21.9
415870 2001 SA_{276}	16.8	X	232.37999	103.15944	325.66794	28.39976	0.3635510	0.23486756	2.6016809	21	7 3.6	22.0
415871 2001 SM_{278}	17.1	X	242.54997	113.02745	240.38672	5.22136	0.3588216	0.23134760	2.6280042	21	4 3.1	22.1
415872 2001 SN_{282}	18.0	X	102.01486	298.79444	46.33704	3.18241	0.2299582	0.31176172	2.1540421	21	—	—
415873 2001 SY_{293}	17.1	X	266.66548	321.56961	5.34726	9.65278	0.1650002	0.23270766	2.6177546	21	4 5.8	21.2
415874 2001 SZ_{295}	17.3	X	225.22294	191.06333	205.75432	4.28232	0.1912021	0.23487931	2.6015941	21	5 23.1	21.6
415875 2001 SE_{297}	17.1	X	233.74201	52.13161	340.60960	1.81730	0.1622720	0.23576596	2.5950675	21	5 26.9	21.0
415876 2001 SY_{302}	17.4	X	234.16432	75.85702	344.75331	8.42617	0.1549006	0.23848468	2.5753073	21	7 5.0	21.4
415877 2001 SC_{312}	16.5	X	318.47695	312.08559	336.63409	12.57122	0.2184507	0.23649437	2.5897361	21	4 7.1	19.8
415878 2001 SR_{323}	16.6	X	284.78005	69.47812	233.20781	11.67681	0.1969232	0.23244703	2.6197110	21	3 18.8	20.6
415879 2001 SV_{324}	17.1	X	256.78464	156.65131	229.16272	4.17758	0.2570785	0.23776897	2.5804726	21	6 1.5	21.2
415880 2001 SZ_{328}	17.7	X	256.10366	236.86758	137.63955	1.58113	0.1877667	0.23735354	2.5834828	21	5 24.6	21.7
415881 2001 ST_{337}	17.2	X	248.31572	18.60676	24.35661	3.36984	0.1637723	0.23826512	2.5768891	21	6 24.9	21.1
415882 2001 SJ_{340}	15.6	X	22.46835	169.24377	218.44084	16.02613	0.1536237	0.15585401	3.4197214	21	12 22.6	20.2
415883 2001 SU_{353}	17.2	X	290.30722	37.38160	299.65328	2.51187	0.1526241	0.23670179	2.5882229	21	5 19.3	20.5
415884 2001 TU	16.7	X	245.56894	114.00903	236.10417	27.88991	0.4005839	0.23237191	2.6202756	21	3 25.7	22.2
415885 2001 TG_{17}	17.4	X	100.70133	326.69705	352.73443	7.70380	0.2307121	0.30768048	2.1730485	21	—	—
415886 2001 TY_{25}	17.3	X	238.25608	358.11299	332.05279	4.06160	0.3026824	0.22874768	2.6478797	21	3 7.9	22.0
415887 2001 TV_{28}	16.7	X	219.80387	206.79041	230.48860	13.05963	0.2350564	0.23415573	2.6069509	21	7 3.3	21.3
415888 2001 TD_{58}	16.7	X	180.54579	162.62165	205.41191	12.71474	0.1009727	0.22343828	2.6896617	21	3 3.7	21.0
415889 2001 TJ_{85}	17.0	X	251.53313	168.04986	214.69757	2.99924	0.2454301	0.23458810	2.6037467	21	5 24.9	21.3
415890 2001 TK_{90}	17.3	X	251.65087	95.10595	261.67318	4.68679	0.2976246	0.23323295	2.6138226	21	4 16.9	21.8
415891 2001 TS_{92}	17.1	X	269.92668	14.57627	2.91701	9.92957	0.2129669	0.23709713	2.5853451	21	6 7.7	21.0
415892 2001 TV_{97}	16.4	X	253.54748	115.94376	215.86369	27.46475	0.2658731	0.23023581	2.6364576	21	3 19.3	21.2
415893 2001 TR_{99}	17.0	X	268.57935	123.29010	220.58285	10.06576	0.2554942	0.23410422	2.6073333	21	4 20.0	21.1
415894 2001 TH_{140}	16.9	X	299.18115	244.89411	67.51665	5.37687	0.2721862	0.23715222	2.5849447	21	4 12.5	20.5
415895 2001 TK_{145}	16.9	X	193.59557	8.65147	68.69739	6.60605	0.2324445	0.23191429	2.6237213	21	6 13.8	21.5
415896 2001 TH_{181}	17.9	X	222.45052	54.56076	353.70786	3.27073	0.2546685	0.23260654	2.6185132	21	5 30.6	22.4
415897 2001 TW_{185}	17.5	X	221.77646	146.20868	262.17542	2.71554	0.1926919	0.23281627	2.6169404	21	6 2.9	21.8
415898 2001 TT_{192}	16.8	X	225.50131	354.20763	26.29970	10.33425	0.3071851	0.22929930	2.6436314	21	4 26.7	21.5
415899 2001 TS_{198}	17.1	X	230.47836	335.99232	73.54947	6.97083	0.3070102	0.23477345	2.6023761	21	6 5.1	21.5
415900 2001 TM_{206}	16.7	X	268.05270	263.03934	124.24780	14.14818	0.2426588	0.23685024	2.5871414	21	6 17.7	20.6
415901 2001 TS_{215}	16.8	X	230.06253	130.25816	235.20962	17.09601	0.2267119	0.22986971	2.6392562	21	4 13.7	21.5
415902 2001 TJ_{219}	17.2	X	245.98430	197.86427	162.74621	4.31718	0.2306828	0.23214293	2.6219983	21	4 24.8	21.6
415903 2001 TB_{223}	17.9	X	233.11270	67.90786	315.47814	2.96974	0.1959801	0.23255132	2.6189277	21	5 11.6	22.2
415904 2001 TZ_{227}	16.3	X	287.77504	70.32340	296.25627	13.29572	0.3339833	0.24106823	2.5568744	21	5 28.2	20.1
415905 2001 TU_{262}	17.1	X	221.83750	186.34263	200.79791	13.60930	0.1639238	0.23312371	2.6146391	21	5 10.1	21.3
415906 2001 TW_{262}	16.5	X	199.96976	230.19976	226.21685	7.41551	0.1054946	0.23700726	2.5859986	21	7 16.1	20.5
415907 2001 UU_{21}	16.7	X	178.03880	198.90891	223.28162	12.25330	0.2713395	0.22939132	2.6429244	21	5 15.3	21.5
415908 2001 UP_{23}	16.4	X	227.09783	54.99607	341.84134	11.37666	0.1845864	0.23296626	2.6158170	21	5 21.5	20.9
415909 2001 UL_{28}	17.5	X	242.67357	349.58975	40.25008	6.33866	0.3295254	0.23441644	2.6050176	21	5 19.0	22.1
415910 2001 UB_{29}	16.9	X	281.15886	321.62983	43.57310	7.38073	0.2871188	0.23777525	2.5804272	21	5 25.9	20.8
415911 2001 UY_{41}	16.8	X	214.03490	2.75714	58.05667	4.46401	0.2186895	0.23237762	2.6202326	21	6 10.4	21.2
415912 2001 UH_{62}	17.1	X	270.90663	9.55575	23.92815	8.43003	0.1645126	0.23788215	2.5796541	21	7 10.4	20.7
415913 2001 UQ_{63}	18.2	X	88.28365	5.79719	333.19827	1.61945	0.2369369	0.30780916	2.1724428	21	—	—
415914 2001 UO_{84}	16.9	X	205.13252	239.97753	215.70572	12.50968	0.2419581	0.23360573	2.6110412	21	7 13.1	21.7
415915 2001 UC_{106}	17.6	X	147.41910	263.70005	41.03838	7.51219	0.0673597	0.30915203	2.1661473	21	—	—
415916 2001 UP_{132}	17.7	X	97.36637	311.20852	54.48168	3.88978	0.1990772	0.30960315	2.1640426	21	—	—
415917 2001 UH_{143}	18.3	X	43.21740	321.50773	66.69652	4.76335	0.1283212	0.30527344	2.1844563	21	—	—
415918 2001 UH_{148}	17.1	X	257.57272	143.61739	204.91253	2.30294	0.2038297	0.23169284	2.6253929	21	4 21.4	21.2
415919 2001 UE_{155}	17.4	X	182.87414	203.83470	221.53456	6.84975	0.3425682	0.22652869	2.6651434	21	5 23.4	22.5
415920 2001 UB_{157}	17.1	X	202.30509	144.46988	221.35757	12.79598	0.2713026	0.22522167	2.6754444	21	3 23.3	22.1

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
415921 2001 UK_{160}	17.2	X	245.09658	314.23806	51.14486	13.85104	0.2998154	0.23121133	2.6290366	21	4 26.2	21.7
415922 2001 UV_{187}	16.6	X	2.80684	284.11838	35.44067	14.61485	0.0191415	0.23966023	2.5668790	21	9 7.2	20.1
415923 2001 US_{190}	17.2	X	241.63492	99.06838	9.72775	12.57798	0.2632903	0.24183490	2.5514676	21	9 4.9	21.2
415924 2001 UD_{198}	18.7	X	109.09248	23.22715	302.52900	1.88936	0.2099617	0.30993254	2.1625091	21	—	—
415925 2001 UG_{210}	17.4	X	235.17709	168.73184	212.90755	3.21212	0.1226763	0.23336093	2.6128668	21	5 18.2	21.2
415926 2001 UA_{214}	17.7	X	191.05869	238.00128	188.02632	4.58291	0.1535447	0.23039560	2.6352385	21	5 30.1	21.9
415927 2001 UG_{215}	18.5	X	54.92775	10.33112	209.08014	21.83451	0.0102017	0.38390529	1.8749369	21	6 18.8	20.7
415928 2001 UZ_{228}	17.2	X	243.87995	263.51026	48.61973	11.50016	0.1116705	0.22619347	2.6677759	21	3 7.7	21.4
415929 2001 VV_{48}	16.5	X	181.41680	161.11934	269.94536	7.74668	0.3064018	0.22536638	2.6742990	21	5 28.2	21.4
415930 2001 VL_{49}	16.7	X	220.29003	140.16646	249.97074	11.21002	0.3039749	0.23132932	2.6281426	21	5 4.3	21.6
415931 2001 VQ_{58}	15.9	X	265.99392	91.68074	251.77003	13.46015	0.1351087	0.23086492	2.6316659	21	4 28.9	19.8
415932 2001 VS_{68}	16.2	X	214.69784	123.17584	272.95958	11.76766	0.2614259	0.23001519	2.6381432	21	5 8.0	21.0
415933 2001 VV_{78}	18.0	X	179.24488	191.03135	247.33842	18.60635	0.0817834	0.37853752	1.8926200	21	5 26.2	19.8
415934 2001 VG_{103}	16.8	X	181.31889	151.37641	245.85168	11.93745	0.1641152	0.22451286	2.6810725	21	4 11.8	21.3
415935 2001 VF_{112}	17.4	X	240.32580	24.58341	343.85046	2.04168	0.3122516	0.23077124	2.6323780	21	4 22.7	22.1
415936 2001 WP_{5}	16.7	X	228.58974	340.75111	71.98949	15.08612	0.2818454	0.23319624	2.6140969	21	6 8.7	21.2
415937 2001 WB_{6}	17.5	X	214.84961	205.09720	225.91307	3.98780	0.2663256	0.23288269	2.6164428	21	6 21.8	22.1
415938 2001 WA_{9}	17.3	X	220.03047	294.09972	90.12227	5.85491	0.3110008	0.22937031	2.6430858	21	4 30.2	22.1
415939 2001 WH_{11}	17.6	X	246.73470	298.60553	84.70669	6.69106	0.3006214	0.23325595	2.6136508	21	5 17.9	22.0
415940 2001 WC_{21}	17.1	X	240.63067	107.83433	250.72610	5.07960	0.2277271	0.22986659	2.6392800	21	4 15.1	21.7
415941 2001 WK_{41}	15.7	X	245.54746	131.35323	248.85104	13.11267	0.3509819	0.22995879	2.6385745	21	5 7.9	20.5
415942 2001 WW_{41}	16.8	X	269.37773	301.61833	30.91489	14.11919	0.2734596	0.23399400	2.6081520	21	4 7.9	20.9
415943 2001 WM_{54}	16.8	X	255.20854	300.76250	39.92508	8.29254	0.1999657	0.22966900	2.6407936	21	4 11.4	21.0
415944 2001 WY_{56}	17.2	X	187.39851	34.78546	47.91422	4.71763	0.2045088	0.22988550	2.6391354	21	6 15.7	21.6
415945 2001 WQ_{91}	16.2	X	243.36441	314.86997	42.86916	12.41708	0.2079945	0.22849619	2.6498222	21	4 21.1	20.5
415946 2001 WD_{96}	17.4	X	229.06630	280.85205	65.98829	4.73395	0.3490198	0.22677226	2.6632346	21	3 22.7	22.4
415947 2001 WS_{97}	16.2	X	313.39559	249.43429	82.94471	13.00076	0.2378131	0.23790220	2.5795092	21	6 3.8	19.1
415948 2001 WE_{102}	17.3	X	215.28499	26.75672	33.74364	6.70207	0.2072753	0.23084292	2.6318331	21	6 11.1	21.7
415949 2001 XY_{10}	19.3	X	118.81617	219.68381	92.94028	30.99377	0.3872882	1.21113394	0.8716483	21	—	—
415950 2001 XZ_{13}	16.5	X	151.22639	169.08705	290.06768	12.98490	0.2086755	0.22423544	2.6832835	21	6 5.8	21.0
415951 2001 XU_{17}	16.8	X	216.26234	125.98788	282.97387	10.81590	0.2921067	0.22921851	2.6442525	21	5 24.9	21.7
415952 2001 XG_{31}	17.6	X	219.21923	260.85345	91.72261	24.30524	0.1001090	0.37334482	1.9101287	21	3 24.3	20.7
415953 2001 XM_{31}	17.7	X	272.87790	277.52049	113.12446	24.81993	0.1958713	0.38379563	1.8752940	21	7 3.5	19.7
415954 2001 XZ_{38}	16.8	X	189.29928	39.64857	45.76852	14.04539	0.2388175	0.22835394	2.6509226	21	6 19.4	21.6
415955 2001 XY_{39}	15.1	X	23.20013	249.77917	281.22677	28.55733	0.3399390	0.21216085	2.7841495	21	2 12.7	17.7
415956 2001 XY_{75}	17.3	X	251.63095	273.85167	96.98476	6.09525	0.3045920	0.23321760	2.6139373	21	5 7.1	21.7
415957 2001 XG_{102}	16.7	X	233.81609	344.30928	51.49782	15.34923	0.1915484	0.23294789	2.6159546	21	5 27.7	20.9
415958 2001 XO_{103}	17.6	X	210.19353	100.41038	261.80524	19.43602	0.0965162	0.37207988	1.9144554	21	2 28.4	20.6
415959 2001 XP_{110}	17.0	X	195.95339	336.65508	95.78885	5.55937	0.2074218	0.23069490	2.6329588	21	6 10.5	21.4
415960 2001 XV_{112}	16.3	X	246.25533	136.86507	245.60558	12.52786	0.2714034	0.23099999	2.6306399	21	5 17.3	20.6
415961 2001 XK_{137}	16.1	X	230.92053	195.38110	254.30628	21.24893	0.0463090	0.23509569	2.5999976	21	8 9.3	20.2
415962 2001 XL_{139}	16.6	X	185.74749	35.25012	83.78950	14.58032	0.1296890	0.23169868	2.6253488	21	8 3.2	20.9
415963 2001 XN_{142}	17.0	X	165.29682	224.02643	248.64170	12.72545	0.2170106	0.22800929	2.6535933	21	7 3.5	21.7
415964 2001 XE_{182}	16.8	X	163.24738	199.44512	271.28058	12.71369	0.2287601	0.22544322	2.6736913	21	6 30.9	21.4
415965 2001 XA_{206}	16.6	X	166.39614	30.53673	92.18382	14.71408	0.2030603	0.22923918	2.6440935	21	7 18.8	21.1
415966 2001 XY_{214}	15.8	X	111.18125	276.04933	292.76580	23.95626	0.2843830	0.22710934	2.6605987	21	9 7.2	20.8
415967 2001 XG_{218}	16.6	X	162.63419	201.62934	249.23810	13.13317	0.1602312	0.22771121	2.6559085	21	6 3.4	20.9
415968 2001 XO_{218}	17.2	X	198.02211	172.00771	254.74893	12.70246	0.2539525	0.22971922	2.6404087	21	6 4.2	21.9
415969 2001 XJ_{221}	16.8	X	232.69862	125.90268	250.19097	10.57039	0.2197380	0.23022681	2.6365263	21	4 30.3	21.3
415970 2001 XW_{224}	16.2	X	233.92079	78.32153	257.35827	25.96901	0.2311311	0.22464174	2.6800470	21	3 2.2	21.4
415971 2001 XF_{228}	16.9	X	231.83426	147.78229	260.43300	16.59863	0.1593240	0.23143205	2.6273648	21	6 14.7	21.1
415972 2001 XH_{248}	17.8	X	201.80430	175.14972	282.77421	4.17947	0.2740161	0.22956896	2.6415607	21	7 14.7	22.6
415973 2001 XM_{262}	16.4	X	144.69420	245.30012	241.74685	11.16080	0.0765960	0.22959190	2.6413848	21	6 25.5	20.2
415974 2001 YV_{1}	17.5	X	124.02588	104.46828	84.80449	23.47947	0.2030882	0.38104022	1.8843237	21	9 26.7	20.9
415975 2001 YS_{2}	17.1	X	268.93360	272.63443	249.11012	21.78216	0.2591039	0.29776883	2.2210068	21	12 28.9	19.0
415976 2001 YU_{29}	16.8	X	215.63330	96.49879	272.34047	3.41250	0.1693956	0.22499617	2.6772317	21	4 9.1	21.2
415977 2001 YZ_{71}	15.7	X	63.22537	241.74271	296.26984	11.91653	0.2985684	0.21727032	2.7403274	21	6 25.7	19.0
415978 2001 YL_{73}	16.4	X	162.91863	189.29168	284.72926	10.90439	0.1439218	0.22595533	2.6696500	21	7 2.8	20.7
415979 2001 YX_{82}	16.7	X	236.11943	132.27337	300.73235	10.47718	0.1657673	0.23154897	2.6264803	21	7 21.1	20.7
415980 2001 YZ_{90}	17.5	X	321.86600	55.00376	89.94961	6.24933	0.3007608	0.30092449	2.2054524	21	—	—
415981 2001 YK_{98}	17.7	X	228.31077	188.81343	241.48131	4.75890	0.3000946	0.23282856	2.6168483	21	6 29.2	22.3
415982 2001 YN_{99}	17.7	X	203.00725	193.67520	240.11957	2.66620	0.2548344	0.22921902	2.6442486	21	6 16.6	22.2
415983 2001 YB_{116}	17.7	X	151.70633	213.86948	299.57470	17.50299	0.0853880	0.37928284	1.8901398	21	8 11.1	20.0
415984 2001 YH_{133}	15.8	X	125.94420	277.59785	268.97476	27.09013	0.2201542	0.23081109	2.6320751	21	8 18.2	20.7
415985 2001 YH_{134}	16.6	X	252.75194	123.84379	291.47444	10.31458	0.1615066	0.23451599	2.6042804	21	7 16.4	20.2
415986 2002 AT_{5}	18.1	X	159.17299	180.30378	332.51603	26.01217	0.5435829	0.22513797	2.6761075	21	8 23.4	23.9
415987 2002 AE_{9}	19.0	X	50.88662	129.19077	127.47144	37.89182	0.4361431	0.82906238	1.1222198	21	1 29.2*	17.1
415988 2002 AU_{15}	17.5	X	226.68582	2.14650	119.30291	34.82360	0.0329478	0.38922281	1.8578210	21	11 9.3	20.5
415989 2002 AC_{19}	16.4	X	244.37031	13.66837	26.15129	12.78438	0.1650279	0.23045833	2.6347603	21	6 14.9	20.7
415990 2002 AJ_{21}	16.5	X	258.13316	317.78986	112.17111	33.50854	0.2295699	0.23543863	2.5974722	21	8 2.3	20.5
415991 2002 AU_{43}	17.5	X	173.12935	219.95252	258.16767	2.76475	0.1666705	0.22747165	2.6577729	21	7 17.5	21.7
415992 2002 AT_{49}	16.3	X	106.51973	163.23768	299.17671	8.35921	0.1151133	0.21576161	2.7530870	21	4 9.9	20.3
415993 2002 AL_{55}	16.5	X	79.03841	203.39731	294.53081	7.77811	0.1217490	0.21615070	2.7497821	21	4 21.5	20.2
415994 2002 AR_{62}	16.4	X	148.96636	236.47625	307.18178	11.87100	0.1961183	0.22791376	2.6543347	21	9 11.6	21.1
415995 2002 AK_{67}	16.6	X	192.06347	189.76210	315.22784	13.09252	0.1877579	0.23152367	2.6266716	21	9 2.6	21.1
415996 2002 AT_{69}	16.3	X	284.88378	83.42659	275.80745	11.63132	0.3811792	0.23711751	2.5851969	21	5 8.9	20.5
415997 2002 AJ_{105}	17.2	X	178.68080	175.23941	298.32656	7.18994	0.1980420	0.22721796	2.6597508	21	7 17.3	21.5
415998 2002 AT_{108}	16.7	X	218.42980	118.84331	309.05931	7.69693	0.2660403	0.22883550	2.6472022	21	6 21.1	21.4
415999 2002 AH_{124}	16.1	X	254.68947	279.86198	123.56168	22.56823	0.1139824	0.22792767	2.6542267	21	7 9.7	19.9
416000 2002 AO_{151}	16.1	X	163.73926	56.55771	131.22596	14.25851	0.1997048	0.23098839	2.6307280	21	10 9.8	20.7

* The additional opposition: 12 20.3, $V = 21.1$