ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228001 2007 MD_{5}	15.6	X	337.18400	203.65429	201.78029	15.21163	0.0343403	0.17890434	3.1192879	20	11 16.8	19.9
228002 2007 MP_{7}	15.9	X	14.69064	281.68070	76.47999	8.20351	0.0342415	0.17778266	3.1323945	20	11 8.1	20.2
228003 2007 MF_{12}	15.9	X	213.95390	55.67423	136.19645	4.14193	0.0614396	0.17656488	3.1467808	20	12 5.3	20.5
228004 2007 QC_{5}	13.4	X	312.71202	325.87859	94.75710	4.42542	0.0702913	0.08540980	5.1065891	20	10 14.9	19.9
228005 2007 QR_{12}	13.0	X	41.44445	324.03836	357.73774	6.62618	0.0223415	0.08176555	5.2572159	20	10 8.0	19.8
228006 2007 RL_{6}	13.0	X	349.59323	106.22340	277.74379	5.91206	0.0992856	0.08266818	5.2188780	20	10 16.3	19.5
228007 2007 RE_{27}	13.4	X	326.53146	211.46244	194.88670	7.27778	0.0837959	0.08138009	5.2738033	20	10 13.2	19.9
228008 2007 RG_{157}	13.1	X	342.07332	28.26327	5.88102	6.95262	0.0408692	0.08197599	5.2482149	20	10 19.4	19.8
228009 2007 RL_{162}	12.7	X	348.25358	130.95754	267.59989	6.52754	0.0487341	0.08335796	5.1900473	20	10 31.5	19.4
228010 2007 RL_{164}	13.3	X	325.78559	153.01517	254.15872	3.38745	0.0065902	0.08203346	5.2457634	20	10 16.2	20.3
228011 2007 RB_{288}	12.9	X	292.72815	39.58219	23.47261	3.79129	0.0373138	0.07895188	5.3813894	20	9 24.8	19.9
228012 2008 CE_{192}	17.3	X	16.77302	338.15105	349.34493	18.13843	0.0969402	0.36148385	1.9516868	20	11 10.7	19.7
228013 2008 DK_{17}	16.4	X	279.99958	156.74104	160.76995	6.33239	0.1056443	0.25644047	2.4536447	20	4 28.9	19.6
228014 2008 ER_{41}	17.1	X	61.90443	248.88289	49.48881	2.56588	0.2096897	0.27562857	2.3384059	20	12 3.0	20.5
228015 2008 ED_{139}	16.8	X	34.24779	37.36657	208.44190	6.65278	0.0712600	0.26117120	2.4239251	20	7 20.9	19.6
228016 2008 EH_{147}	17.7	X	170.22947	95.03982	213.41454	3.21932	0.1884623	0.30552940	2.1832361	20	—	—
228017 2008 ES_{148}	17.4	X	89.17858	334.47497	337.42752	1.72272	0.2219950	0.28486976	2.2875564	20	—	—
228018 2008 FO_{8}	17.3	X	263.72052	30.46613	45.88675	22.79676	0.0871778	0.35427726	1.9780649	20	10 21.3	19.1
228019 2008 FC_{15}	16.0	X	183.01410	265.06515	52.72526	15.43572	0.2792998	0.22096392	2.7097037	20	1 27.2	21.1
228020 2008 FQ_{15}	16.4	X	7.96452	231.72906	76.82392	9.75240	0.1328760	0.26435159	2.4044445	20	9 25.9	19.0
228021 2008 FV_{15}	16.1	X	237.25649	240.78353	50.12981	13.72689	0.2580631	0.22799186	2.6537285	20	2 3.2	21.0
228022 2008 FM_{54}	17.5	X	233.61531	165.92974	111.55514	2.02505	0.1046596	0.31019924	2.1612693	20	1 5.2	20.3
228023 2008 FZ_{69}	15.9	X	230.13750	282.52206	41.46859	11.81440	0.2031863	0.23278770	2.6171545	20	3 10.5	20.4
228024 2008 FQ_{71}	17.1	X	3.20555	299.61795	17.26718	5.15377	0.2434219	0.27086593	2.3657370	20	10 11.9	18.8
228025 2008 FG_{73}	16.7	X	53.21867	221.25070	94.16694	5.35657	0.1547838	0.27773811	2.3265500	20	12 10.3	19.8
228026 2008 FF_{94}	17.4	X	178.60166	240.33741	86.03982	5.77838	0.1055490	0.30795973	2.1717346	20	1 10.5	20.3
228027 2008 FF_{96}	17.0	X	242.38648	156.23623	179.13487	3.02188	0.3350963	0.23985092	2.5655183	20	3 20.5	21.7
228028 2008 FY_{117}	17.4	X	354.25486	278.93321	21.15503	0.99128	0.1447968	0.25839856	2.4412335	20	8 9.7	19.3
228029 MANIAC	17.4	X	349.61310	70.42358	212.88447	0.30914	0.2379118	0.25478121	2.4642860	20	6 30.6	18.5
228030 2008 GO_{1}	17.3	X	35.10928	12.27718	38.68513	21.55297	0.0715944	0.38017599	1.8871783	20	—	—
228031 2008 GS_{1}	16.4	X	323.34800	50.21773	205.47062	6.07943	0.2564887	0.23995076	2.5648067	20	3 9.9	19.4
228032 2008 GS_{20}	16.8	X	76.35927	241.81698	38.87311	6.50238	0.2152079	0.27704574	2.3304247	20	11 24.8	20.5
228033 2008 GZ_{40}	16.6	X	281.33577	224.24166	80.63424	5.44661	0.2071359	0.24207182	2.5498026	20	3 31.7	20.3
228034 2008 GG_{45}	17.0	X	86.93426	351.73069	275.28000	1.32791	0.1623932	0.27404283	2.3474179	20	11 13.5	20.5
228035 2008 GJ_{57}	16.7	X	176.52621	239.40388	42.67450	2.91612	0.1681153	0.21638799	2.7477715	20	—	—
228036 2008 GO_{59}	17.6	X	117.55155	136.00580	136.86583	2.14765	0.1495569	0.28041751	2.3117061	20	12 20.6	21.1
228037 2008 GQ_{68}	17.0	X	47.00921	210.06754	91.96637	6.05410	0.1211627	0.27021877	2.3695127	20	11 10.6	20.0
228038 2008 GE_{79}	16.4	X	169.86661	255.31171	57.63266	8.91471	0.2831274	0.21398375	2.7683151	20	1 10.6	21.4
228039 2008 GQ_{81}	16.9	X	244.13918	250.84136	66.07969	5.54325	0.2935618	0.23119382	2.6291694	20	3 5.6	21.5
228040 2008 GX_{97}	16.9	X	103.77229	81.99266	225.32996	6.30564	0.1207588	0.28517042	2.2859483	20	—	—
228041 2008 GO_{111}	17.0	X	192.47654	223.40079	41.49836	6.23032	0.1524284	0.29670783	2.2262984	20	—	—
228042 2008 GW_{119}	16.6	X	294.88128	63.64752	211.39002	12.81377	0.1717073	0.23725975	2.5841636	20	3 7.9	20.3
228043 2008 GQ_{138}	17.5	X	105.11315	68.84246	205.68654	6.01550	0.0898290	0.27995332	2.3142277	20	12 8.9	20.7
228044 2008 HD_{5}	17.4	X	48.79532	235.99766	54.24253	3.31249	0.2183409	0.26905151	2.3763611	20	11 9.0	20.4
228045 2008 HW_{12}	14.7	X	332.05357	253.50739	86.71181	17.72254	0.2938393	0.17317156	3.1877555	20	8 2.6	17.8
228046 2008 HM_{18}	16.3	X	248.77333	175.13707	143.91571	8.64714	0.2002086	0.23622314	2.5917180	20	3 16.9	20.4
228047 2008 HH_{21}	17.6	X	259.38898	286.54402	221.54198	21.07286	0.0750961	0.36791124	1.9288895	20	—	—
228048 2008 HN_{21}	17.5	X	130.54877	271.35361	79.09612	4.90887	0.2020409	0.30099370	2.2051143	20	—	—
228049 2008 HE_{31}	17.2	X	243.52268	108.44488	190.61227	2.84539	0.1879627	0.23021750	2.6365974	20	2 15.7	21.5
228050 2008 HD_{34}	16.5	X	353.77935	291.51863	79.90023	12.78836	0.2150467	0.27154596	2.3617857	20	12 11.2	18.6
228051 2008 HQ_{36}	16.8	X	32.58200	156.40546	150.78972	6.89751	0.1358920	0.26637185	2.3922717	20	10 31.4	19.7
228052 2008 HZ_{41}	17.8	X	213.73927	59.98845	216.11109	4.18545	0.1031337	0.30287224	2.1959868	20	—	—
228053 2008 HK_{67}	16.8	X	239.38645	68.48720	207.95406	4.03076	0.1555701	0.22565234	2.6720392	20	1 18.4	21.1
228054 2008 HB_{70}	17.4	X	246.17844	263.58311	3.56828	3.69972	0.1774339	0.30708884	2.1758387	20	1 3.4	20.7
228055 2008 JV_{9}	16.5	X	343.15357	297.21510	59.61855	10.31717	0.1307492	0.26716856	2.3875134	20	10 20.3	18.8
228056 2008 JU_{11}	17.3	X	85.50939	139.47419	141.16456	2.89770	0.1140311	0.27315793	2.3524849	20	11 26.2	20.7
228057 2008 JA_{20}	17.4	X	66.32609	52.46036	213.08716	0.82044	0.1589147	0.26716811	2.3875160	20	10 19.5	20.5
228058 2008 JV_{24}	16.7	X	130.56012	102.82913	184.28108	7.74722	0.0892591	0.28436977	2.2902370	20	—	—
228059 2008 JH_{34}	16.1	X	355.40031	34.39796	168.24832	13.96595	0.1245230	0.23962811	2.5671084	20	3 13.3	18.6
228060 2008 KB	17.6	X	227.38593	221.56781	14.10781	2.16947	0.0957552	0.29851657	2.2172964	20	—	—
228061 2008 KR_{9}	16.5	X	86.93074	149.29587	215.20405	5.84816	0.0526744	0.21127356	2.7919391	20	—	—
228062 2008 KZ_{23}	16.5	X	23.14442	285.51837	171.11510	5.31311	0.0567638	0.21913447	2.7247642	20	—	—
228063 2008 LU	17.0	X	255.89172	255.52038	71.64571	4.73614	0.2915456	0.23827632	2.5768084	20	3 25.9	21.3
228064 2008 LU_{7}	15.5	X	147.51211	176.09357	106.18086	16.46428	0.1186597	0.20555788	2.8434568	20	—	—
228065 2008 LF_{11}	16.6	X	220.85092	121.47042	198.51245	1.52081	0.0617090	0.22205458	2.7008236	20	2 26.7	20.5
228066 2008 OM_{2}	16.4	X	305.04270	140.51055	133.55908	6.01826	0.1008846	0.23106078	2.6301785	20	4 7.3	19.8
228067 2008 OL_{7}	15.1	X	147.60487	296.67070	295.32454	9.65742	0.0531764	0.18350593	3.0669214	20	11 9.6	19.8
228068 2008 OF_{8}	17.0	X	249.80845	46.81433	242.32887	2.56313	0.2138057	0.22113973	2.7082674	20	2 8.4	21.6
228069 2008 OF_{9}	15.5	X	94.61346	223.67240	138.73679	11.36161	0.1234936	0.19784368	2.9168981	20	—	—
228070 2008 OL_{20}	15.6	X	41.70262	157.12973	167.31089	9.95160	0.0767836	0.17693619	3.1423769	20	11 7.4	20.0
228071 2008 OT_{22}	13.7	X	345.59534	251.19327	113.26355	0.90100	0.0517651	0.08444457	5.1454286	20	9 22.4	20.2
228072 2008 PP_{1}	16.2	X	191.57245	124.30899	166.92453	2.07419	0.0450850	0.20262743	2.8708063	20	—	—
228073 2008 PT_{6}	15.3	X	131.43345	214.22900	32.08139	7.90751	0.1199275	0.18058150	3.0999442	20	11 12.9	20.2
228074 2008 PT_{7}	15.4	X	346.64694	190.23577	237.56101	6.70471	0.1492012	0.18543263	3.0456403	20	—	—
228075 2008 PE_{11}	15.5	X	75.28610	259.38998	38.29269	10.23953	0.1543916	0.18239603	3.0793505	20	11 21.6	20.2
228076 2008 PJ_{15}	16.2	X	39.42199	169.38469	170.20276	0.47066	0.1439252	0.17877390	3.1208050	20	11 30.3	20.4
228077 2008 QD_{6}	13.1	X	315.68704	181.52293	203.05390	16.04937	0.1093491	0.08261309	5.2211977	20	8 29.2	19.7
228078 2008 QY_{6}	16.7	X	144.05959	337.57457	356.38640	1.19425	0.0563744	0.20036892	2.8923386	20	—	—
228079 2008 QA_{17}	16.1	X	163.68884	149.57021	146.00283	1.64312	0.0644156	0.19750520	2.9202297	20	—	—
228080 2008 QS_{17}	15.9	X	111.79220	307.34036	327.73113	7.31609	0.0691431	0.18097242	3.0954785	20	11 23.9	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228081 2008 QS_{28}	15.6	X	40.56662	303.74171	92.38881	3.17372	0.0635912	0.19016107	2.9949412	20	—	—
228082 2008 QK_{30}	15.5	X	91.16037	57.82051	250.66875	7.57711	0.0680683	0.18349657	3.0670257	20	12 13.4	20.0
228083 2008 QO_{38}	16.0	X	116.65054	114.46030	283.69847	4.98054	0.0731011	0.20383682	2.8594398	20	2 8.7	20.1
228084 2008 RV_{3}	13.8	X	43.04536	110.43888	203.69048	3.67739	0.0209420	0.08356414	5.1815069	20	10 2.2	20.6
228085 2008 RT_{29}	13.4	X	349.65824	192.01884	182.52352	4.34604	0.0315812	0.08474516	5.1332543	20	10 8.8	19.9
228086 2008 RX_{78}	13.2	X	342.06076	115.12567	256.32395	7.93737	0.0238979	0.08044380	5.3146458	20	9 21.9	20.2
228087 2008 RL_{100}	15.0	X	273.43779	329.38900	146.92644	10.99926	0.0516154	0.18030828	3.1030749	20	11 20.7	19.4
228088 2008 RM_{105}	13.6	X	138.44370	49.21869	187.43152	2.64694	0.0033837	0.08179997	5.2557408	20	10 20.5	20.5
228089 2008 RV_{126}	13.4	X	73.88266	81.74782	207.88646	5.14778	0.0728307	0.08317140	5.1978055	20	10 16.4	20.3
228090 2008 RE_{127}	12.9	X	319.92266	142.86067	262.77396	7.94847	0.0159450	0.08234518	5.2325162	20	10 5.3	19.9
228091 2008 SS_{2}	15.3	X	30.16077	306.26166	34.25878	10.31820	0.1060244	0.17863620	3.1224086	20	11 12.5	19.5
228092 2008 SY_{6}	15.7	X	231.71072	250.46668	111.19002	5.44896	0.1270824	0.22134512	2.7065917	20	4 29.1	19.9
228093 2008 SV_{9}	14.9	X	227.02362	91.05327	198.73408	3.14812	0.1151085	0.12485288	3.9646393	20	2 4.8	20.9
228094 2008 SJ_{18}	16.4	X	196.60479	139.55352	147.68896	2.62009	0.0425551	0.20314337	2.8659434	20	—	—
228095 2008 SF_{24}	13.5	X	323.27111	33.82035	357.08040	3.66717	0.1260345	0.08281779	5.2125907	20	9 18.4	19.7
228096 2008 SA_{27}	13.3	X	114.21066	49.29906	192.06134	9.62962	0.0941268	0.08360005	5.1800230	20	10 7.9	20.5
228097 2008 SQ_{31}	13.5	X	330.70344	112.57999	284.43435	6.07699	0.0916201	0.08131258	5.2767221	20	10 4.7	20.1
228098 2008 SM_{38}	13.4	X	55.68585	279.75298	28.65529	7.33237	0.0068317	0.08086264	5.2962782	20	10 9.4	20.3
228099 2008 SC_{51}	13.8	X	350.88669	71.36442	305.70696	0.22667	0.0769156	0.08380515	5.1715680	20	10 12.7	20.2
228100 2008 SM_{148}	15.4	X	239.75202	47.93270	309.15918	13.36970	0.1387901	0.22410148	2.6843526	20	4 21.9	19.8
228101 2008 SP_{154}	13.1	X	17.11672	295.65247	54.03792	4.63931	0.0618681	0.08501495	5.1223886	20	10 16.5	19.7
228102 2008 SY_{172}	12.4	X	264.17084	236.82401	222.29503	26.14561	0.0647818	0.08450182	5.1431043	20	9 24.8	19.5
228103 2008 SA_{192}	13.0	X	340.28646	288.57524	114.13013	4.37422	0.0283639	0.08248552	5.2265798	20	10 29.9	19.7
228104 2008 SF_{197}	13.4	X	12.85994	263.05846	117.97148	2.51404	0.0401330	0.08348135	5.1849320	20	11 12.8	20.1
228105 2008 SA_{224}	13.5	X	254.36328	76.20206	49.95902	5.09764	0.0220989	0.08387817	5.1685663	20	10 24.2	20.4
228106 2008 SZ_{229}	13.0	X	314.05100	189.81688	216.56058	10.30263	0.0714475	0.08123588	5.2800429	20	9 25.7	19.8
228107 2008 SS_{231}	13.8	X	358.80645	111.24791	253.59112	4.67327	0.0278402	0.08351804	5.1834134	20	10 6.4	20.6
228108 2008 SU_{277}	13.2	X	275.43729	210.25303	238.83008	1.60420	0.0909698	0.08303511	5.2034918	20	9 26.4	20.1
228109 2008 TA_{5}	15.7	X	46.28340	204.14087	276.19233	1.11944	0.0599322	0.20349566	2.8626348	20	2 17.9	19.4
228110 Eudorus	13.5	X	344.15067	321.84149	73.66620	1.46831	0.0335710	0.08035332	5.3186345	20	10 24.8	20.3
228111 2008 TK_{10}	13.5	X	13.58654	327.23464	34.68014	8.51760	0.0279925	0.08377737	5.1727112	20	10 22.7	20.2
228112 2008 TG_{35}	13.4	X	320.39935	205.70353	199.23299	5.40569	0.0957244	0.08152884	5.2673870	20	10 2.1	19.9
228113 2008 TZ_{50}	13.0	X	0.29358	296.67480	66.34138	1.84636	0.0332315	0.08047902	5.3130953	20	10 8.3	19.7
228114 2008 TB_{61}	12.6	X	346.61338	291.34421	91.29628	14.02882	0.0186320	0.08451635	5.1425151	20	10 20.2	19.5
228115 2008 TK_{76}	13.3	X	268.66956	276.26347	188.68732	7.40481	0.0744685	0.08212353	5.2419272	20	10 9.3	20.1
228116 2008 TK_{82}	13.4	X	325.83615	50.87484	358.76683	6.96226	0.0095200	0.08423409	5.1539965	20	10 18.7	20.2
228117 2008 TJ_{93}	13.2	X	10.48153	193.16261	170.45485	4.93439	0.0426492	0.08425745	5.1530440	20	10 22.5	19.8
228118 2008 TZ_{111}	12.9	X	330.94345	133.83997	272.72522	6.85853	0.0596457	0.08116764	5.2830019	20	10 17.5	19.7
228119 2008 TM_{136}	13.4	X	341.64843	16.81097	25.21361	5.10002	0.0507578	0.08128984	5.2777062	20	10 28.1	20.0
228120 2008 TV_{139}	13.1	X	56.90744	66.64458	251.07694	4.67273	0.0657960	0.08192861	5.2502379	20	10 26.3	20.0
228121 2008 TN_{175}	14.0	X	315.19927	200.23885	226.26521	7.70694	0.0415386	0.08386971	5.1689140	20	10 23.9	20.7
228122 2008 UH_{11}	13.5	X	301.05554	57.62264	5.86888	4.18460	0.0412214	0.08161707	5.2635901	20	10 4.0	20.3
228123 2008 UH_{45}	13.7	X	298.22555	41.12270	52.05008	5.92868	0.0953330	0.08276339	5.2148748	20	10 28.9	20.2
228124 2008 YC_{7}	13.0	X	303.45309	197.09172	207.46209	12.05562	0.2056941	0.08237805	5.2311242	20	8 23.9	19.5
228125 2008 YV_{30}	12.5	X	307.17363	338.56698	86.22884	10.77451	0.0417728	0.08432571	5.1502626	20	10 18.0	19.3
228126 2009 ON_{1}	14.6	X	324.27225	232.57387	108.02082	33.46389	0.0797175	0.16981646	3.2296059	20	8 4.1	19.0
228127 2009 PL	17.1	X	29.77966	354.27817	315.13631	3.05934	0.2388916	0.27822244	2.3238492	20	11 14.8	20.0
228128 2009 PN_{8}	16.8	X	349.98508	196.51368	127.65833	3.04987	0.2196358	0.26961746	2.3730344	20	9 19.4	18.2
228129 2009 PL_{12}	16.0	X	111.10342	350.77035	349.38662	4.42968	0.0683804	0.21065289	2.7974206	20	—	—
228130 2009 PE_{17}	16.8	X	0.07994	133.22254	173.78920	1.29370	0.1900571	0.26954522	2.3734584	20	9 9.5	18.4
228131 2009 QE_{1}	16.5	X	82.85828	231.99465	127.28790	4.38251	0.1980016	0.20910816	2.8111805	20	—	—
228132 2009 QC_{13}	17.1	X	233.42147	70.38558	327.70837	8.16724	0.1642609	0.25264281	2.4781719	20	6 10.7	20.9
228133 Ripoll	17.7	X	8.20954	6.22007	305.49739	1.70582	0.1877365	0.27199920	2.3591613	20	10 3.8	19.8
228134 2009 QG_{43}	15.6	X	156.64154	268.17383	8.42447	7.68496	0.1545340	0.21007916	2.8025114	20	—	—
228135 Sodnik	16.8	X	116.44665	32.15696	348.47895	2.91573	0.1045232	0.21509186	2.7587991	20	1 22.5	20.5
228136 Billary	17.1	X	80.12116	135.17535	210.02791	3.27370	0.1046807	0.29100143	2.2553086	20	—	—
228137 2009 RY_{32}	17.0	X	144.14385	336.35981	340.27300	1.33234	0.0623255	0.20548286	2.8441488	20	—	—
228138 2009 RB_{33}	17.0	X	51.91918	304.96304	14.70007	6.98710	0.1323076	0.27744157	2.3282075	20	12 10.2	20.2
228139 2009 RS_{33}	16.2	X	234.66179	145.54307	198.16826	11.73982	0.0910426	0.23680523	2.5874692	20	4 9.5	20.0
228140 2009 RT_{33}	12.9	X	324.69517	180.93052	208.19230	20.03427	0.1338791	0.08342526	5.1872561	20	9 14.2	19.4
228141 2009 RM_{37}	15.9	X	350.85649	357.58448	4.66546	0.77121	0.1265639	0.18098338	3.0953534	20	10 15.8	19.6
228142 2009 RZ_{45}	17.4	X	284.85890	97.35136	324.01305	1.31334	0.0879497	0.26757304	2.3851067	20	10 5.9	20.0
228143 2009 RE_{50}	16.3	X	300.20331	95.94857	307.14155	0.44453	0.0943912	0.17444051	3.1722773	20	9 17.2	20.5
228144 2009 RP_{50}	16.2	X	50.48290	149.59654	196.77246	4.56426	0.2033898	0.19196322	2.9761675	20	12 31.7	20.6
228145 2009 RU_{51}	17.7	X	100.11848	15.77632	24.80177	2.62445	0.1974040	0.30707961	2.1758823	20	1 25.1	19.6
228146 2009 RX_{55}	17.3	X	354.22964	229.33168	142.49051	2.74266	0.2200980	0.27435919	2.3456131	20	12 14.7	19.5
228147 2009 SB_{18}	16.1	X	192.66832	142.51383	206.39198	14.55438	0.3441073	0.22987320	2.6392295	20	3 2.1	21.3
228148 2009 SH_{19}	12.3	X	281.88470	315.63489	102.73647	5.48622	0.0309826	0.08112062	5.2850431	20	9 9.6	19.2
228149 2009 ST_{28}	17.2	X	335.83556	339.91666	10.40273	3.04267	0.2341791	0.26762117	2.3848208	20	9 25.4	18.5
228150 2009 SJ_{38}	13.6	X	298.40184	49.37893	7.24147	3.35205	0.1205443	0.08283772	5.2117544	20	9 14.9	20.2
228151 2009 SU_{39}	16.0	X	292.54059	113.37109	305.07033	0.39146	0.1575948	0.17486850	3.1670991	20	9 17.4	20.1
228152 2009 SL_{44}	16.8	X	87.13741	3.77198	249.57057	4.68832	0.1063744	0.26817098	2.3815600	20	10 19.8	20.1
228153 2009 SV_{48}	16.4	X	237.57736	88.83668	215.57864	7.91386	0.1604513	0.22964327	2.6409909	20	2 16.4	20.8
228154 2009 SZ_{48}	18.1	X	128.92241	169.85398	236.14108	0.70154	0.1421867	0.31370038	2.1451583	20	3 2.2	20.5
228155 2009 SF_{61}	12.6	X	334.71075	358.19615	9.48153	20.55106	0.1737337	0.08319923	5.1966465	20	9 11.6	18.7
228156 2009 SG_{69}	16.7	X	148.64930	245.68224	147.08618	4.37975	0.2262540	0.22483639	2.6785000	20	3 22.9	21.0
228157 2009 SF_{88}	14.6	X	241.23120	48.82484	45.38863	11.90295	0.0832993	0.17065819	3.2189776	20	9 11.6	19.4
228158 2009 SZ_{96}	14.8	X	343.96502	135.41691	212.96768	18.15633	0.0218414	0.17715899	3.1397416	20	9 9.1	19.3
228159 2009 SQ_{114}	17.1	X	305.84590	172.74947	216.26519	5.74093	0.0951039	0.26747994	2.3856601	20	9 21.9	19.6
228160 2009 SD_{138}	17.5	X	256.89953	159.68263	280.52450	0.25934	0.1632718	0.26179249	2.4200886	20	9 6.4	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228161 2009 SF_{138}	17.1	X	133.36323	142.53648	210.04067	1.62766	0.0878618	0.21215097	2.7842359	20	1 5.4	21.0
228162 2009 SO_{141}	13.6	X	268.58557	75.76741	1.00015	4.25402	0.0238489	0.08249979	5.2259769	20	9 14.4	20.5
228163 2009 SN_{143}	15.5	X	61.09770	63.35639	203.17553	6.97174	0.0281139	0.17212904	3.2006139	20	9 9.3	20.0
228164 2009 SY_{166}	17.6	X	124.43700	91.47672	220.23159	6.01213	0.1643620	0.29908176	2.2145021	20	—	—
228165 Mezentsev	16.1	X	93.07881	28.11844	58.22022	10.00516	0.1134474	0.22306103	2.6926934	20	3 21.3	19.8
228166 2009 ST_{170}	17.1	X	115.16639	53.41632	242.28703	3.15016	0.1936407	0.28913211	2.2650189	20	—	—
228167 2009 SQ_{186}	15.9	X	259.12371	23.76405	86.10041	3.95367	0.0390122	0.17995638	3.1071189	20	10 25.7	20.2
228168 2009 SZ_{188}	17.2	X	114.51791	268.47797	15.82137	4.87449	0.1740419	0.29159889	2.2522269	20	—	—
228169 2009 SP_{204}	15.6	X	223.31137	234.41507	252.45329	1.94746	0.1321662	0.17217811	3.2000057	20	9 18.8	20.4
228170 2009 SS_{205}	17.4	X	114.45736	286.54611	170.25369	0.51217	0.1087482	0.22990080	2.6390183	20	4 24.5	21.0
228171 2009 SG_{211}	17.1	X	264.18617	273.73261	26.78512	3.74384	0.1417526	0.23693964	2.5864906	20	3 13.9	20.8
228172 2009 SK_{212}	16.8	X	96.38799	359.55918	21.28786	2.17996	0.2595614	0.21025431	2.8009549	20	1 21.0	20.5
228173 2009 SV_{232}	15.1	X	354.98855	187.19883	155.33222	10.75773	0.0754025	0.17787835	3.1312709	20	9 25.6	19.1
228174 2009 SG_{233}	15.5	X	16.38341	228.56483	169.80720	10.64016	0.1347831	0.19141829	2.9818132	20	—	—
228175 2009 SC_{234}	17.0	X	349.46520	159.43237	224.34538	5.11594	0.2276723	0.27289099	2.3540188	20	12 23.9	19.1
228176 2009 SP_{263}	17.4	X	302.57932	275.51620	104.28875	2.81008	0.1924599	0.26388783	2.4072608	20	8 22.3	19.4
228177 2009 SK_{275}	15.9	X	346.69885	341.64425	34.57556	5.11696	0.1437580	0.18194426	3.0844458	20	10 28.3	19.2
228178 2009 SA_{285}	16.7	X	141.59071	190.06159	189.08825	3.30331	0.1992244	0.22408996	2.6844446	20	2 25.4	20.9
228179 2009 TF_4	17.5	X	331.46024	187.64375	203.67487	0.48466	0.1846656	0.27023262	2.3694317	20	11 20.3	19.1
228180 Puertollano	17.4	X	124.64230	153.63032	219.21315	4.29911	0.1758043	0.30698076	2.1763493	20	1 16.0	19.9
228181 2009 TF_9	15.3	X	31.78354	87.20993	255.79724	8.50049	0.0540384	0.18193500	3.0845504	20	11 11.9	19.5
228182 2009 TQ_{16}	17.3	X	324.08441	168.87020	214.54727	2.54348	0.1885067	0.26731582	2.3866365	20	10 19.2	18.8
228183 2009 TQ_{20}	16.5	X	189.27133	193.04886	161.62549	3.74005	0.1371861	0.22868705	2.6483477	20	3 7.5	20.7
228184 2009 TR_{20}	16.6	X	22.10025	289.57741	40.41498	7.18622	0.1330368	0.27303797	2.3531739	20	11 14.4	19.3
228185 2009 TD_{27}	17.1	X	287.14217	340.77041	97.41644	5.70989	0.1675774	0.26972176	2.3724226	20	10 28.9	19.2
228186 2009 TP_{31}	17.0	X	25.67919	328.13031	52.02654	7.52948	0.1981067	0.28388433	2.2928471	20	—	—
228187 2009 TQ_{35}	15.6	X	10.81286	197.07725	218.86170	12.72901	0.1135461	0.19037321	2.9927159	20	—	—
228188 2009 UA_{21}	16.3	X	201.82254	12.12773	4.33744	7.52356	0.1593194	0.23448122	2.6045379	20	4 12.8	20.4
228189 2009 UT_{36}	17.2	X	87.76891	117.95799	195.42382	2.13306	0.1455134	0.28410664	2.2916509	20	—	—
228190 2009 UY_{38}	15.7	X	216.75823	83.24676	106.98018	2.71192	0.0474654	0.18419908	3.0592226	20	12 9.4	20.0
228191 2009 UX_{72}	16.2	X	174.76137	325.67789	45.04674	6.90784	0.0439252	0.22156148	2.7048294	20	3 12.8	20.1
228192 2009 UM_{82}	16.7	X	179.95563	211.94209	196.46573	3.90637	0.0765341	0.23326528	2.6135811	20	5 3.6	20.4
228193 2693 $P–L$	15.6	X	356.11688	211.49989	177.79815	11.31480	0.2200855	0.18158201	3.0885467	20	12 9.9	19.2
228194 3046 $P–L$	15.7	X	294.54577	2.13899	318.67752	8.25289	0.1793371	0.24335873	2.5408055	20	5 6.9	19.1
228195 6675 $P–L$	16.1	X	228.47600	69.01943	9.33449	5.26274	0.2693611	0.24376133	2.5380072	20	7 20.2	20.2
228196 7574 $P–L$	15.3	X	5.55805	351.03800	34.04718	7.02855	0.2594739	0.18193013	3.0846055	20	12 26.1	18.9
228197 2149 $T–3$	15.4	X	228.66953	79.44003	217.46970	10.92777	0.1345475	0.21845020	2.7304512	20	1 31.9	20.0
228198 3200 $T–3$	16.6	X	19.44297	22.20393	32.74618	7.78643	0.1199383	0.28047583	2.3113857	20	—	—
228199 3765 $T–3$	15.4	X	36.38099	168.33671	189.99726	11.52868	0.0606653	0.18609184	3.0384435	20	12 9.8	19.7
228200 4088 $T–3$	16.3	X	127.13517	203.72499	168.14899	9.71060	0.2063673	0.21605216	2.7506182	20	2 3.6	20.5
228201 4106 $T–3$	17.0	X	85.31382	314.25257	97.72489	3.48618	0.2279423	0.21496483	2.7598858	20	2 9.2	20.4
228202 5058 $T–3$	16.2	X	182.54285	291.26148	52.26437	11.29335	0.1998537	0.21835714	2.7312269	20	2 25.0	21.0
228203 5772 $T–3$	15.1	X	350.79244	297.17430	85.41671	9.22096	0.0489675	0.18443585	3.0566038	20	11 9.9	19.2
228204 1993 VM_7	15.0	X	101.65240	233.07245	23.43836	16.94304	0.0493398	0.18211843	3.0824789	20	10 20.9	19.4
228205 1994 JP_2	16.8	X	102.12237	138.28289	61.96136	4.96163	0.1887997	0.23550503	2.5969839	20	9 5.1	20.9
228206 1995 BY_8	16.0	X	263.35169	125.05315	93.21781	3.29082	0.0243250	0.19280674	2.9674807	20	—	—
228207 1995 CM_4	16.5	X	3.55173	261.14725	186.57776	1.60221	0.0856418	0.19065113	2.9898068	20	—	—
228208 1995 MR_2	17.0	X	118.69368	135.50971	254.20063	6.10654	0.1105639	0.29819974	2.2188667	20	1 22.0	19.5
228209 1995 TF_4	17.5	X	103.91055	307.89320	14.92316	3.48550	0.1986020	0.28713961	2.2754850	20	—	—
228210 1995 UT_{59}	16.5	X	124.37845	11.95248	20.95520	4.20430	0.0824856	0.21483216	2.7610219	20	2 14.2	20.3
228211 1995 VR_5	16.2	X	160.67795	335.29787	68.27703	8.90582	0.1616871	0.21906429	2.7253460	20	4 14.5	20.6
228212 1995 YG_9	16.7	X	179.87913	114.33034	124.97249	7.17140	0.0684000	0.27581919	2.3373284	20	—	—
228213 1995 YG_{17}	16.8	X	94.12841	285.38938	81.08978	7.30917	0.2118637	0.28797299	2.2710928	20	—	—
228214 1996 AO_{14}	17.5	X	227.67652	149.59443	8.69702	2.55990	0.1167284	0.27184069	2.3600782	20	11 21.8	20.4
228215 1996 DD_2	17.6	X	357.57833	230.20901	199.02261	2.11337	0.2049936	0.27732642	2.3288520	20	—	—
228216 1996 LJ_3	15.2	X	8.53783	227.23102	188.85142	9.82205	0.0256311	0.18525804	3.0475535	20	—	—
228217 1996 RU_{16}	16.7	X	164.83063	257.08124	178.61130	2.55471	0.0247402	0.23588546	2.5941909	20	5 20.1	20.3
228218 1996 TJ_{17}	15.2	X	199.65152	267.60003	320.80375	7.96921	0.0466738	0.17484431	3.1673912	20	—	—
228219 1996 VG_{33}	16.2	X	198.75892	54.54040	51.07158	5.28593	0.2842119	0.23605567	2.5929437	20	7 29.1	20.9
228220 1996 VB_{36}	17.6	X	40.68877	124.40102	304.93654	5.08993	0.1225258	0.30081448	2.2059901	20	—	—
228221 1996 XO_7	16.6	X	190.16867	213.35577	185.86104	3.17419	0.2249901	0.23015005	2.6371125	20	5 2.3	21.0
228222 1996 XG_{30}	16.9	X	120.27457	32.22208	76.88299	2.74599	0.0914593	0.22831717	2.6512072	20	5 15.7	20.6
228223 1997 GS_{15}	17.4	X	277.70484	181.83305	22.67246	4.14946	0.1766958	0.28888993	2.2662846	20	—	—
228224 1998 DK_{12}	16.5	X	204.61006	284.10119	128.03444	4.90964	0.2175986	0.23424129	2.6063160	20	5 30.3	21.0
228225 1998 HM_{16}	16.3	X	244.58302	210.39232	101.23835	3.00284	0.0757605	0.22183363	2.7026167	20	3 14.7	20.1
228226 1998 HO_{19}	16.4	X	71.24995	224.81481	316.66432	1.98318	0.1845336	0.23019867	2.6367412	20	7 3.5	19.7
228227 1998 HF_{25}	15.9	X	261.36595	131.53654	129.95024	2.94310	0.2187204	0.21596804	2.7513324	20	1 17.9	20.4
228228 1998 HM_{80}	16.5	X	95.14870	134.24803	23.66675	7.03168	0.2566677	0.23035559	2.6355437	20	7 11.1	20.6
228229 1998 MO_{17}	16.6	X	63.60858	48.04876	133.93451	2.87468	0.1602412	0.21971933	2.7199267	20	6 19.0	20.1
228230 1998 QL_{74}	16.2	X	85.12240	114.25939	267.64121	6.03996	0.1222617	0.28634108	2.2797135	20	—	—
228231 1998 QT_{101}	17.4	X	3.25046	240.99212	108.46154	2.48321	0.3030150	0.27276908	2.3547201	20	12 12.2	19.7
228232 1998 RX_{10}	16.2	X	109.56188	300.87097	16.74762	1.71863	0.0641385	0.19118069	2.9842831	20	—	—
228233 1998 RG_{13}	16.3	X	10.72389	46.17333	36.97758	1.19509	0.0381376	0.19190977	2.9767201	20	—	—
228234 1998 SC_7	17.4	X	78.98502	145.66973	208.49257	0.77366	0.1900334	0.28250754	2.3002905	20	—	—
228235 1998 SS_{69}	16.6	X	31.98217	122.29982	296.11682	7.15761	0.1737132	0.28214721	2.3022485	20	—	—
228236 1998 SO_{119}	15.9	X	77.48769	311.08310	69.86712	2.56707	0.2255317	0.19258004	2.9698091	20	—	—
228237 1998 SB_{167}	16.5	X	97.02204	328.11267	14.69129	11.80536	0.1459521	0.28269940	2.2992496	20	—	—
228238 1998 SB_{170}	16.6	X	80.67655	71.28686	295.30223	6.48534	0.1343089	0.28304134	2.2973975	20	—	—
228239 1998 TK_{21}	13.2	X	234.71742	250.51356	225.97038	4.36757	0.1272716	0.08409739	5.1595803	20	9 8.6	20.3
228240 1998 TK_{26}	16.8	X	349.04522	172.51256	247.44168	1.36640	0.2570089	0.18370261	3.0647320	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228241 1998 UO_{11}	17.6	X	344.15455	352.88546	58.12648	3.54674	0.1671633	0.27312032	2.3527008	20	—	—
228242 1998 UQ_{17}	16.6	X	3.46248	71.29291	313.31911	5.96327	0.1608565	0.27401556	2.3475737	20	—	—
228243 1998 US_{17}	17.1	X	47.40228	71.31396	274.82145	2.05200	0.2102381	0.27607957	2.3358585	20	—	—
228244 1998 UD_{42}	16.8	X	51.94349	312.32381	59.22425	3.90020	0.1730482	0.27860827	2.3217033	20	—	—
228245 1998 VL_{48}	16.8	X	53.32042	223.25726	65.46510	7.35186	0.1049973	0.26672569	2.3901555	20	10 28.9	19.8
228246 1998 WC_{46}	15.0	X	274.52272	22.30690	101.01146	17.22402	0.2445875	0.17455379	3.1709047	20	11 6.7	19.4
228247 1998 XH_{10}	15.0	X	340.46475	42.29750	68.44888	10.26425	0.1126827	0.18661273	3.0327867	20	—	—
228248 1998 XD_{13}	15.3	X	40.44037	331.82653	61.06580	10.51585	0.0331900	0.18592630	3.0402468	20	—	—
228249 1998 XO_{35}	15.3	X	6.65139	151.33157	254.11885	14.28289	0.2827965	0.18353760	3.0665686	20	—	—
228250 1998 YD_{20}	15.9	X	330.88101	332.97800	80.25718	2.20693	0.1655874	0.17547219	3.1598310	20	11 16.6	19.5
228251 1999 AY_{11}	17.0	X	284.65895	200.81886	290.33058	3.43173	0.0988411	0.26835795	2.3804537	20	—	—
228252 1999 AO_{32}	17.8	X	294.40523	109.95753	317.83329	2.13406	0.2114150	0.26404436	2.4063093	20	10 15.9	19.8
228253 1999 CT_{136}	17.5	X	242.93756	38.13310	130.42904	3.00361	0.1401852	0.26612685	2.3937397	20	12 22.6	20.2
228254 1999 CL_{141}	16.7	X	2.45356	257.85120	129.58247	9.44976	0.2059760	0.26790317	2.3831469	20	—	—
228255 1999 ET_7	16.0	X	257.04552	110.16755	78.65307	0.35737	0.1371250	0.17549458	3.1595622	20	—	—
228256 1999 EE_{12}	16.5	X	330.68149	1.87717	112.66239	5.57409	0.1694510	0.26908667	2.3761540	20	—	—
228257 1999 JL_{111}	16.5	X	26.51758	164.25694	94.30610	7.39786	0.2339900	0.23908534	2.5709921	20	8 24.2	19.1
228258 1999 NV_{56}	15.3	X	143.38520	99.39216	261.63697	9.52315	0.2304473	0.21078765	2.7962282	20	2 6.8	20.0
228259 1999 PL_3	15.8	X	146.13371	301.56611	129.88636	13.36304	0.3901315	0.21639113	2.7477449	20	5 17.8	21.2
228260 1999 RM_{59}	16.2	X	140.63033	196.05991	150.72682	9.12879	0.2307349	0.20942438	2.8083499	20	1 21.6	20.8
228261 1999 RJ_{82}	17.5	X	202.81712	116.34747	240.44193	2.61768	0.1549130	0.31282663	2.1491509	20	3 15.3	20.6
228262 1999 TX_{67}	16.1	X	311.72879	205.34313	67.34331	4.56100	0.0485915	0.21548525	2.7554404	20	4 22.3	19.6
228263 1999 TH_{128}	16.5	X	47.37485	84.85176	218.66907	4.76883	0.1367895	0.28470186	2.2884557	20	11 16.9	19.5
228264 1999 TM_{130}	17.0	X	307.93795	81.69772	212.80902	2.16450	0.1089331	0.31912401	2.1207838	20	5 1.8	18.7
228265 1999 TF_{174}	17.4	X	127.56409	237.34756	142.63094	2.81293	0.1783946	0.30246664	2.1979496	20	1 31.6	20.2
228266 1999 TZ_{195}	16.9	X	180.80703	61.44785	283.11735	5.36504	0.1883691	0.30599974	2.1809984	20	2 9.5	20.3
228267 1999 TC_{200}	16.2	X	309.31058	265.75538	236.73726	19.68844	0.3106870	0.29013094	2.2598174	20	—	—
228268 1999 TR_{219}	15.7	X	94.05046	70.12632	332.79114	6.54854	0.2120164	0.20578015	2.8414089	20	2 8.4	19.5
228269 1999 TO_{233}	15.8	X	136.52948	136.85624	260.16671	8.02166	0.1628436	0.21155319	2.7894783	20	3 7.4	20.3
228270 1999 TT_{260}	17.1	X	226.16673	49.75543	255.01700	1.90727	0.1456639	0.31045462	2.1600839	20	1 31.7	20.4
228271 1999 TG_{266}	15.9	X	154.55189	111.75506	247.51372	8.41549	0.2942170	0.21112433	2.7932546	20	2 17.8	21.0
228272 1999 TM_{313}	17.1	X	121.28880	76.01748	345.05102	3.38702	0.1930312	0.21261157	2.7802133	20	3 27.9	21.3
228273 1999 UJ_{28}	15.9	X	26.13507	78.25512	30.85048	15.14622	0.1099308	0.20517914	2.8469549	20	1 6.9	19.5
228274 1999 UV_{43}	16.1	X	162.33250	89.07685	262.06508	6.10663	0.3091767	0.21008321	2.8024755	20	2 15.9	21.2
228275 1999 VG_{57}	15.4	X	69.92920	106.66312	218.03846	9.56055	0.1099644	0.19280797	2.9674682	20	12 16.1	19.9
228276 1999 VB_{65}	15.3	X	12.39667	169.45052	224.82775	14.40647	0.1643187	0.19228260	2.9728710	20	—	—
228277 1999 VD_{108}	15.6	X	81.91495	334.26176	57.88396	12.93285	0.1631183	0.20027038	2.8932874	20	1 1.7	19.3
228278 1999 WJ_{11}	17.1	X	69.04350	238.03051	225.91662	4.10338	0.0822363	0.30244577	2.1980507	20	2 15.3	19.3
228279 1999 WS_{27}	15.9	X	126.81008	271.86935	117.73181	2.36436	0.1059627	0.20567497	2.8423775	20	2 15.9	19.9
228280 1999 XK_{48}	15.6	X	65.91004	336.31955	74.38908	9.78159	0.2079013	0.20028270	2.8931687	20	1 6.5	18.8
228281 1999 XA_{118}	17.2	X	121.72869	348.41480	42.77588	5.37139	0.1812398	0.30216998	2.1993879	20	2 11.8	19.9
228282 1999 XH_{149}	16.0	X	352.76702	247.60328	242.57756	3.74666	0.0590163	0.19981356	2.8976955	20	—	—
228283 2000 AO_{60}	17.2	X	304.91832	254.41197	297.22189	5.08992	0.3621665	0.28709024	2.2757459	20	—	—
228284 2000 AJ_{176}	15.2	X	116.73287	269.22207	125.20034	13.18915	0.1074176	0.20329404	2.8645272	20	2 11.3	19.2
228285 2000 AW_{179}	16.0	X	279.12156	290.73063	270.24673	20.02778	0.2207714	0.28772910	2.2723760	20	—	—
228286 2000 BZ_1	16.4	X	0.77423	127.12922	308.01333	2.64916	0.2075820	0.18879232	3.0093995	20	—	—
228287 2000 BE_3	15.4	X	258.65670	75.10519	112.99506	4.04095	0.2704445	0.18418103	3.0594225	20	12 25.9	19.5
228288 2000 BZ_{33}	15.6	X	326.89643	136.47380	350.04462	3.15243	0.0970321	0.18861146	3.0113229	20	—	—
228289 2000 BG_{34}	17.1	X	340.49426	150.78056	10.78130	2.38127	0.0856432	0.29120928	2.2542353	20	—	—
228290 2000 CS_{69}	14.2	X	321.48777	88.96477	313.97041	5.33787	0.0598483	0.07960040	5.3521204	20	10 1.7	21.0
228291 2000 CX_{95}	17.4	X	17.87959	353.79135	129.01322	1.31947	0.1447752	0.29265933	2.2467830	20	—	—
228292 2000 DS_{10}	16.4	X	319.23611	295.58682	162.58246	0.52618	0.2193685	0.18535138	3.0465302	20	12 26.7	19.4
228293 2000 DK_{14}	15.8	X	190.82632	195.62877	18.16230	0.37957	0.2016816	0.17658006	3.1466005	20	11 25.1	21.1
228294 2000 DT_{52}	17.0	X	25.69766	119.96533	325.48387	3.63764	0.1399884	0.28751410	2.2735087	20	—	—
228295 2000 DV_{60}	17.3	X	193.17571	70.32074	123.82231	1.96405	0.1307223	0.27289693	2.3539846	20	11 26.5	20.7
228296 2000 DD_{95}	17.0	X	261.71327	123.96675	3.53712	4.48597	0.1796750	0.27651871	2.3333848	20	11 20.1	19.3
228297 2000 DO_{100}	16.8	X	248.86058	154.13048	47.72404	3.74455	0.1574629	0.28117684	2.3075424	20	—	—
228298 2000 EX_4	17.7	X	351.98776	92.18690	15.61821	0.65099	0.1161834	0.28607327	2.2811361	20	—	—
228299 2000 EX_{23}	17.4	X	276.30263	160.49462	348.68911	2.29024	0.1428503	0.27813490	2.3243368	20	—	—
228300 2000 EH_{52}	15.5	X	175.60100	88.83577	183.35043	0.85826	0.0938231	0.18217695	3.0818188	20	—	—
228301 2000 EA_{54}	15.8	X	253.03105	188.00337	341.45667	1.63731	0.0277420	0.18266573	3.0763188	20	12 30.1	20.0
228302 2000 EO_{57}	16.0	X	307.98321	230.12807	277.61803	0.58555	0.2619277	0.18580534	3.0415661	20	—	—
228303 2000 GT_{36}	16.7	X	14.74803	19.55415	8.98539	3.56456	0.1402413	0.27374033	2.3491470	20	—	—
228304 2000 GE_{41}	16.0	X	238.98382	318.03306	205.39331	3.22643	0.1489265	0.17556958	3.1586624	20	11 18.2	20.4
228305 2000 GY_{128}	17.2	X	144.08170	210.53195	13.70335	1.88334	0.1532627	0.21845796	2.7303865	20	11 5.2	21.7
228306 2000 HT_{78}	15.0	X	226.16722	111.72929	91.70038	18.27278	0.1175703	0.17773329	3.1329745	20	12 25.1	19.6
228307 2000 HB_{94}	17.0	X	23.07696	271.68582	51.13524	4.50531	0.0731304	0.26049603	2.4281116	20	10 25.9	19.9
228308 2000 HE_{98}	17.2	X	261.04308	55.22622	74.76326	3.21529	0.1484191	0.27219297	2.3580415	20	11 27.9	19.4
228309 2000 JA_{43}	16.6	X	23.36470	233.86896	54.09771	9.66101	0.2281320	0.25422309	2.4678914	20	10 4.9	19.3
228310 2000 JV_{44}	16.5	X	152.83111	111.34027	52.01814	5.39755	0.1359855	0.25909577	2.4368521	20	9 6.8	20.3
228311 2000 LB_{31}	16.2	X	53.00567	218.91552	99.06142	12.37306	0.2636567	0.26035439	2.4289922	20	12 21.9	19.9
228312 2000 OS_8	16.6	X	127.36002	7.08403	309.27595	18.14967	0.0506086	0.36604683	1.9354336	20	—	—
228313 2000 OB_{28}	15.9	X	321.65654	66.89736	273.88152	6.10566	0.1073403	0.24532025	2.5272437	20	8 3.9	18.6
228314 2000 OA_{41}	15.5	X	293.68035	120.33381	218.08563	9.41136	0.1626234	0.24202725	2.5501156	20	6 6.2	18.6
228315 2000 QX_{22}	16.6	X	241.27799	173.33338	214.06741	3.27823	0.2083181	0.23773512	2.5807176	20	6 1.1	20.5
228316 2000 QE_{32}	16.0	X	271.76699	302.09938	10.93469	7.63348	0.2231258	0.23543908	2.5974688	20	3 27.7	19.9
228317 2000 QE_{58}	16.1	X	257.85520	249.63199	90.58282	5.60312	0.1658223	0.23631210	2.5910676	20	4 25.1	19.9
228318 2000 QF_{82}	15.0	X	212.43658	295.73086	345.85433	12.47480	0.2472859	0.17281704	3.1921136	20	1 9.7	20.8
228319 2000 QC_{104}	16.4	X	205.35504	282.82412	108.02789	5.28390	0.2410836	0.23153532	2.6265835	20	5 4.9	21.0
228320 2000 QO_{105}	16.2	X	250.51399	230.71525	117.40648	6.41557	0.3252272	0.23418032	2.6067684	20	4 14.2	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228321 2000 QQ_{130}	16.9	X	300.65553	13.45680	312.94769	1.88697	0.1324237	0.24021012	2.5629601	20	6 4.4	19.9
228322 2000 QU_{203}	16.2	X	214.46548	323.63581	355.65085	13.07800	0.2492108	0.22737319	2.6585401	20	2 18.8	21.0
228323 2000 QP_{204}	16.3	X	193.42429	171.47314	218.94968	4.32598	0.2325064	0.23078014	2.6323104	20	4 23.3	20.8
228324 2000 QK_{212}	17.0	X	284.51697	201.46803	150.61061	5.34394	0.2283865	0.23993470	2.5649211	20	6 1.8	20.3
228325 2000 QS_{224}	15.5	X	273.82719	87.77172	259.63792	11.71698	0.2203272	0.23876094	2.5733204	20	5 11.8	19.1
228326 2000 QK_{243}	16.9	X	196.25796	99.69938	330.92880	3.41352	0.2436192	0.23724267	2.5842876	20	6 13.6	21.4
228327 2000 RN_{18}	15.9	X	208.33473	83.95291	294.89462	5.02529	0.3546340	0.23084160	2.6318431	20	4 15.9	21.0
228328 2000 RO_{19}	15.7	X	222.43266	69.28216	305.39970	9.61562	0.1291268	0.23328348	2.6134452	20	4 29.2	20.0
228329 2000 RC_{21}	16.8	X	243.08738	106.97363	259.88053	2.77462	0.2862568	0.23489700	2.6014635	20	4 30.3	21.3
228330 2000 RQ_{34}	16.0	X	234.55352	44.14991	286.47116	2.82106	0.2834013	0.23031881	2.6358242	20	3 11.2	20.8
228331 2000 RD_{86}	16.0	X	235.00062	210.84443	128.64354	5.99269	0.2527643	0.23079450	2.6322012	20	3 27.2	20.5
228332 2000 RL_{99}	16.0	X	190.94352	100.74820	292.25978	10.17602	0.3095333	0.22926150	2.6439219	20	4 20.2	21.2
228333 2000 SW_{19}	16.3	X	228.53288	98.23324	308.32361	9.88374	0.2419865	0.23482627	2.6019859	20	6 10.3	20.7
228334 2000 SK_{28}	15.9	X	158.38559	196.17626	227.66660	12.48395	0.1566472	0.22922626	2.6441929	20	5 3.0	20.0
228335 2000 SW_{64}	15.9	X	174.96511	216.65159	185.22267	14.24064	0.1152703	0.22882145	2.6473106	20	4 22.3	20.0
228336 2000 SE_{76}	16.4	X	233.38606	303.73215	66.55264	4.58265	0.2259039	0.23245525	2.6196492	20	5 2.3	20.6
228337 2000 SS_{76}	16.1	X	226.89928	259.96342	75.29568	5.77717	0.2751048	0.22892878	2.6464831	20	3 15.8	20.8
228338 2000 SZ_{98}	16.3	X	204.73055	88.09683	264.91618	3.62058	0.1356485	0.22753952	2.6572443	20	3 17.9	20.6
228339 2000 SL_{100}	16.0	X	210.89294	36.23670	347.02708	14.19787	0.1998490	0.23009041	2.6375682	20	4 23.6	20.6
228340 2000 SS_{129}	16.6	X	321.31870	52.37553	278.64756	11.86346	0.2243965	0.24323837	2.5416437	20	7 6.2	18.7
228341 2000 SK_{136}	16.5	X	162.35529	128.41853	271.31281	3.35271	0.2436847	0.22573263	2.6714055	20	4 9.6	21.2
228342 2000 SN_{136}	16.3	X	279.07537	63.41110	295.39394	8.37868	0.2242230	0.23796160	2.5790799	20	6 2.8	19.8
228343 2000 SN_{139}	15.5	X	228.18569	98.97079	237.04638	12.60357	0.2295394	0.22866064	2.6485516	20	3 11.6	20.4
228344 2000 SN_{145}	16.1	X	289.66489	346.10424	4.98576	5.53067	0.2379354	0.23875397	2.5733705	20	6 4.0	19.4
228345 2000 SG_{180}	15.9	X	209.59457	26.55869	0.38880	13.26857	0.1818975	0.23007797	2.6376633	20	4 29.0	20.5
228346 2000 SG_{184}	16.1	X	251.66620	87.19989	268.77008	11.84507	0.2497029	0.23539136	2.5978199	20	4 24.5	20.5
228347 2000 SK_{198}	16.4	X	211.21344	50.10122	8.20863	2.54343	0.1424355	0.23550361	2.5969943	20	6 16.0	20.4
228348 2000 SY_{224}	16.0	X	130.99789	260.42263	195.85839	12.20829	0.1328019	0.22819090	2.6521851	20	5 16.8	20.1
228349 2000 SU_{278}	16.0	X	166.36483	1.58435	49.35714	10.52708	0.3054778	0.22485411	2.6783593	20	4 30.3	21.0
228350 2000 SV_{282}	16.0	X	183.55185	140.99179	252.38926	9.67877	0.1814136	0.22849949	2.6497968	20	4 16.3	20.5
228351 2000 SK_{290}	17.0	X	236.50067	79.88774	328.11885	3.92106	0.2578729	0.23626961	2.5913783	20	6 18.1	21.3
228352 2000 SX_{303}	15.9	X	192.81178	26.36982	327.37347	7.13295	0.2872732	0.22525171	2.6752065	20	3 9.4	20.9
228353 2000 SL_{306}	16.2	X	261.75687	97.97779	221.59060	11.43059	0.1471922	0.23128264	2.6284962	20	3 31.6	20.3
228354 2000 SD_{315}	15.8	X	202.90972	81.41435	277.81472	11.30030	0.1410477	0.22738756	2.6584281	20	3 19.5	20.4
228355 2000 SU_{316}	16.2	X	303.66749	56.16098	242.14165	13.09062	0.1293401	0.23597399	2.5935420	20	4 29.4	19.6
228356 2000 TN_{14}	17.3	X	239.52503	337.25785	35.84531	2.41162	0.2408220	0.23350075	2.6118237	20	5 9.0	21.6
228357 2000 TC_{22}	16.5	X	205.43543	199.57914	129.58336	2.91949	0.2328633	0.22476034	2.6791042	20	2 20.9	21.3
228358 2000 TL_{65}	17.0	X	249.02704	15.53605	3.55194	2.89442	0.1914751	0.23506343	2.6002354	20	5 30.2	21.0
228359 2000 TZ_{66}	16.1	X	202.77291	52.49418	62.98244	4.86630	0.1091751	0.24186631	2.5512467	20	8 26.5	19.9
228360 2000 UA_{3}	16.1	X	140.79351	52.62668	47.79068	8.35532	0.2952659	0.22664105	2.6642624	20	6 8.8	20.9
228361 2000 UQ_{22}	16.5	X	256.89587	269.72927	76.73465	5.52464	0.3149475	0.23357100	2.6113000	20	4 17.2	20.9
228362 2000 UA_{73}	15.6	X	138.57923	167.41373	235.60999	12.83600	0.0902309	0.22043342	2.7140495	20	3 7.4	19.8
228363 2000 UD_{88}	15.8	X	255.88983	261.93273	52.28770	7.17681	0.2404459	0.22906315	2.6454480	20	3 16.1	20.1
228364 2000 VH_{22}	16.3	X	185.72059	156.60148	234.56652	4.77338	0.1659167	0.22636115	2.6664583	20	4 17.2	20.7
228365 2000 VB_{56}	16.0	X	107.86986	187.66978	256.77848	10.52994	0.1238554	0.21984346	2.7189028	20	3 29.2	20.1
228366 2000 VO_{62}	16.6	X	185.37218	298.38678	92.40948	4.45728	0.2897992	0.22598307	2.6694315	20	4 20.0	21.5
228367 2000 VS_{64}	16.6	X	208.50785	318.44559	65.74122	2.88316	0.2154156	0.22886138	2.6470026	20	4 28.9	21.1
228368 2000 WK_{10}	18.4	X	354.16940	244.47816	57.97195	14.73820	0.7021244	0.54799008	1.4789526	20	3 17.1	19.2
228369 2000 WQ_{12}	16.0	X	139.68482	338.39045	112.68836	17.35352	0.2632830	0.22409077	2.6844381	20	5 30.6	20.9
228370 2000 WJ_{27}	15.7	X	250.41958	221.77894	98.67370	10.47635	0.0146639	0.21839053	2.7309485	20	4 13.0	19.6
228371 2000 WB_{46}	16.2	X	155.15657	209.97688	196.29996	5.04912	0.1769036	0.22251644	2.6970851	20	4 9.9	20.6
228372 2000 WB_{52}	16.2	X	111.37821	177.89472	243.76065	8.01483	0.1571489	0.21772931	2.7364748	20	3 9.9	20.3
228373 2000 WG_{62}	15.7	X	231.14044	270.92843	93.75237	15.05071	0.2315096	0.23140608	2.6275614	20	4 28.9	20.3
228374 2000 WU_{66}	15.9	X	190.84062	147.08330	254.95537	16.22398	0.1752891	0.22595716	2.6696355	20	5 4.2	20.4
228375 2000 WH_{70}	16.2	X	173.07326	103.55118	290.28646	6.12571	0.2390418	0.22501968	2.6770453	20	4 9.2	21.0
228376 2000 WJ_{71}	15.5	X	155.53136	198.63574	263.81824	12.56942	0.0706716	0.22991832	2.6388842	20	6 15.0	19.3
228377 2000 WM_{71}	16.4	X	172.12412	93.73162	267.39751	10.69847	0.1920548	0.22121447	2.7076573	20	2 26.0	21.1
228378 2000 WN_{71}	15.3	X	168.18425	269.82222	244.08088	21.09231	0.0729815	0.24067600	2.5596516	20	8 27.2	19.6
228379 2000 WN_{82}	16.2	X	154.79181	42.24174	42.44127	5.87437	0.1465179	0.22561549	2.6723301	20	5 25.1	20.4
228380 2000 WH_{85}	16.6	X	162.39043	128.33148	307.81634	2.68705	0.1674118	0.22551767	2.6731028	20	5 22.4	20.9
228381 2000 WM_{133}	15.7	X	186.84600	14.32015	22.94019	14.02132	0.1913723	0.22690213	2.6622183	20	4 24.8	20.2
228382 2000 WC_{149}	15.9	X	150.34115	249.52303	164.31749	11.76651	0.1896143	0.22266516	2.6958840	20	4 18.5	20.4
228383 2000 WO_{187}	15.7	X	186.13748	83.01468	268.45805	14.50848	0.3188536	0.22400134	2.6851526	20	2 26.5	21.0
228384 2000 XD_{14}	16.4	X	182.88396	331.56043	89.79436	3.28688	0.0779369	0.22611555	2.6683887	20	5 23.7	20.2
228385 2000 XW_{20}	16.0	X	149.35746	173.32123	306.12953	8.02169	0.1873517	0.22780832	2.6551537	20	7 6.2	20.4
228386 2000 YW_{19}	15.7	X	123.71838	264.20550	159.08701	13.33821	0.1703819	0.21869545	2.7284095	20	4 2.8	19.9
228387 2000 YY_{35}	15.8	X	74.60987	350.10911	117.40719	9.98318	0.2644489	0.21460489	2.7629709	20	4 16.6	19.4
228388 2000 YM_{60}	15.9	X	30.28429	36.20481	117.46259	9.80899	0.1940157	0.21147289	2.7901845	20	3 19.9	18.7
228389 2000 YV_{106}	15.7	X	72.61054	353.16640	83.48100	28.87704	0.2113814	0.21247527	2.7814022	20	3 2.6	19.8
228390 2000 YW_{112}	15.2	X	62.60454	8.29888	100.90379	10.47867	0.1142898	0.21180983	2.7872247	20	3 8.3	18.7
228391 2000 YT_{127}	15.9	X	29.71611	155.81334	337.54837	7.67670	0.1132241	0.20921049	2.8102638	20	2 12.6	19.0
228392 2001 AG_{26}	15.5	X	146.62010	2.70599	71.32478	14.04803	0.0776129	0.22111455	2.7084730	20	5 3.1	19.5
228393 2001 AX_{47}	15.5	X	76.78647	3.05658	98.83570	15.94904	0.1480226	0.21270176	2.7794274	20	3 28.7	19.4
228394 2001 BO_{18}	16.1	X	83.53728	72.23672	83.47756	5.37793	0.1975849	0.21880722	2.7274803	20	6 16.0	19.9
228395 2001 BC_{27}	16.2	X	65.76468	348.08699	125.79602	9.13365	0.1920569	0.21191314	2.7863187	20	3 30.2	19.6
228396 2001 BO_{29}	16.6	X	141.24789	35.83218	122.19517	9.09818	0.2526813	0.22683717	2.6627266	20	8 19.1	21.2
228397 2001 CK_{21}	16.3	X	53.75153	135.25785	331.82000	8.43313	0.2296498	0.21047941	2.7989575	20	2 29.4	19.2
228398 2001 CT_{21}	15.6	X	136.44709	351.19529	103.82783	11.16992	0.1848155	0.22009073	2.7168660	20	5 25.9	20.0
228399 2001 CM_{46}	16.3	X	141.39946	92.98936	325.16466	1.57002	0.0610840	0.21303255	2.7765494	20	4 1.0	20.1
228400 2001 DK_{76}	15.5	X	336.64004	16.39082	147.93859	8.83569	0.1034560	0.20211082	2.8756962	20	1 1.3	19.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228401 2001 DY_{80}	15.0	X	224.47649	187.41928	35.70839	10.77577	0.0701346	0.19406235	2.9546668	20	—	—
228402 2001 EP_{1}	15.3	X	100.51087	338.44057	89.88143	10.79871	0.2676468	0.21112261	2.7932698	20	3 30.9	19.6
228403 2001 EA_{3}	15.6	X	85.36093	271.16445	136.66416	4.01039	0.0528744	0.20053957	2.8906976	20	1 11.1	19.5
228404 2001 EQ_{17}	16.8	X	359.58064	106.99606	49.97345	24.71607	0.2462911	0.30555827	2.1830986	20	—	—
228405 2001 FL_{2}	15.6	X	48.86634	5.00536	99.09150	7.41990	0.1557112	0.20554174	2.8436056	20	2 10.8	18.8
228406 2001 FH_{139}	15.9	X	4.93985	147.47957	342.73912	1.44334	0.0164566	0.19848989	2.9105638	20	1 6.9	19.8
228407 2001 FF_{146}	15.1	X	219.19683	257.97605	317.46176	8.98700	0.0415850	0.18949547	3.0019502	20	—	—
228408 2001 FT_{157}	16.8	X	208.68842	171.43068	87.76023	6.69598	0.1992533	0.29353461	2.2423144	20	—	—
228409 2001 FM_{184}	15.2	X	257.26867	248.30712	350.67379	10.85456	0.0571927	0.19834453	2.9119857	20	1 5.0	19.6
228410 2001 HS_{58}	16.7	X	233.10917	344.34657	270.81085	6.08958	0.1458401	0.29646703	2.2275038	20	—	—
228411 2001 KQ_{53}	15.6	X	167.39679	165.07987	74.33963	6.54189	0.1249494	0.17990294	3.1077342	20	12 8.5	20.4
228412 2001 KD_{79}	15.6	X	247.60126	124.80986	194.95156	10.33791	0.1522878	0.24702571	2.5155982	20	3 16.4	19.5
228413 2001 LU_{17}	16.5	X	96.80565	214.41750	78.57091	11.62752	0.2830566	0.27506900	2.3415761	20	12 29.9	20.6
228414 2001 MR_{21}	17.5	X	36.82520	248.47657	77.01694	3.45604	0.1995506	0.26922613	2.3753334	20	12 8.2	20.4
228415 2001 NV_{4}	15.4	X	197.51436	306.79841	310.82920	5.34288	0.1880276	0.18078526	3.0976145	20	—	—
228416 2001 OJ_{57}	16.4	X	27.53334	1.45494	314.11158	3.90811	0.2408095	0.26588838	2.3951708	20	11 17.5	19.3
228417 2001 OU_{59}	16.1	X	62.63686	50.26827	293.67434	4.92739	0.2717489	0.27425911	2.3461837	20	—	—
228418 2001 OA_{64}	16.2	X	52.58160	228.69403	116.60899	7.51501	0.2258927	0.27205044	2.3588651	20	—	—
228419 2001 OV_{65}	16.1	X	15.35951	17.98432	317.97002	11.82903	0.2902272	0.26471638	2.4022351	20	12 6.1	19.1
228420 2001 ON_{80}	16.7	X	357.17242	269.16578	108.84048	3.87987	0.1996960	0.26553369	2.3973032	20	12 22.1	19.0
228421 2001 OL_{97}	16.1	X	18.92745	254.61935	104.11333	7.18936	0.1755793	0.26851423	2.3795300	20	12 25.5	19.0
228422 2001 OO_{111}	14.7	X	232.70194	272.22702	305.26547	13.21412	0.1949885	0.17970334	3.1100350	20	—	—
228423 2001 PB_{19}	16.5	X	314.15460	292.19484	88.35474	8.62007	0.1773070	0.26216949	2.4177680	20	9 25.5	18.7
228424 2001 PH_{22}	17.1	X	74.25858	276.96606	17.98149	2.27255	0.2163903	0.26957079	2.3733083	20	12 9.9	20.7
228425 2001 PU_{28}	16.6	X	359.78573	325.82355	6.79850	3.19530	0.2649963	0.26272175	2.4143786	20	10 30.1	18.4
228426 2001 PC_{30}	16.7	X	97.08390	64.53154	277.40354	10.24430	0.0365411	0.27924652	2.3181643	20	—	—
228427 2001 PQ_{46}	15.7	X	2.08242	86.17204	285.06550	21.20767	0.2722007	0.26623778	2.3930748	20	—	—
228428 2001 PE_{52}	16.9	X	94.87159	285.91036	57.39988	4.05753	0.1229435	0.27819692	2.3239913	20	—	—
228429 2001 PV_{53}	17.5	X	358.10091	248.86037	66.67310	4.39440	0.2571731	0.26169324	2.4207004	20	9 30.3	19.2
228430 2001 PC_{62}	16.3	X	19.33342	66.35831	323.40702	6.24058	0.1166536	0.27178204	2.3604178	20	—	—
228431 2001 QZ	17.2	X	331.12057	75.88356	291.24054	1.88255	0.1871713	0.26198431	2.4189071	20	10 6.6	19.1
228432 2001 QD_{38}	17.0	X	57.34865	23.83854	289.76858	1.60194	0.2026810	0.27010692	2.3701668	20	12 15.9	20.5
228433 2001 QN_{41}	17.3	X	30.91270	104.97436	260.62715	1.22488	0.2489162	0.27099191	2.3650038	20	—	—
228434 2001 QQ_{45}	17.6	X	355.61388	211.92406	114.70032	2.89986	0.2098323	0.26210777	2.4181475	20	10 4.4	19.5
228435 2001 QR_{59}	16.4	X	68.43991	292.18362	358.95001	6.00035	0.1469348	0.26859644	2.3790444	20	11 21.2	19.8
228436 2001 QH_{71}	18.0	X	68.99566	127.05307	289.13358	15.57354	0.1344902	0.38754742	1.8631714	20	—	—
228437 2001 QV_{86}	16.5	X	356.46955	78.13784	269.68541	11.28119	0.1094298	0.26230627	2.4169274	20	10 18.8	19.3
228438 2001 QC_{133}	16.5	X	84.72595	62.08798	231.05192	6.51780	0.1290088	0.26999650	2.3708130	20	12 11.2	19.9
228439 2001 QA_{147}	16.4	X	224.77726	346.61621	35.18577	16.01962	0.1448815	0.24474846	2.5311783	20	5 10.9	20.4
228440 2001 QK_{149}	17.0	X	31.13758	329.86978	33.27275	3.48480	0.1843847	0.27113813	2.3641534	20	—	—
228441 2001 QK_{157}	16.8	X	336.08297	131.80228	248.30946	1.81327	0.1994727	0.26380346	2.4077740	20	11 11.6	18.5
228442 2001 QJ_{159}	17.2	X	353.01894	328.80073	17.42335	1.53949	0.1963953	0.26263954	2.4148823	20	10 26.0	19.3
228443 2001 QB_{162}	17.1	X	332.07870	325.28174	43.78337	2.43406	0.2028853	0.26205605	2.4184656	20	10 14.8	18.8
228444 2001 QT_{165}	16.9	X	224.19033	179.22912	78.69854	5.44085	0.1761378	0.28753036	2.2734230	20	—	—
228445 2001 QH_{167}	16.9	X	108.47173	209.75081	130.12757	6.60754	0.1478525	0.27929917	2.3178729	20	—	—
228446 2001 QJ_{167}	17.0	X	10.34525	311.99105	78.18213	2.34994	0.1881469	0.27015632	2.3698778	20	—	—
228447 2001 QK_{172}	16.3	X	18.26442	142.66968	241.61697	5.31347	0.1181507	0.27110933	2.3643208	20	—	—
228448 2001 QA_{174}	16.4	X	306.12227	136.02685	258.81390	7.26999	0.2304283	0.25885609	2.4383561	20	9 11.3	18.5
228449 2001 QF_{179}	16.2	X	7.26088	72.61785	283.79918	4.60710	0.1324121	0.26216291	2.4178084	20	11 25.6	18.9
228450 2001 QH_{195}	17.3	X	326.72422	260.48412	110.16073	3.04324	0.2316721	0.26179996	2.4200425	20	10 4.9	18.7
228451 2001 QF_{210}	16.4	X	334.52214	33.65336	3.11112	1.89663	0.1468044	0.26386895	2.4073756	20	11 28.7	18.4
228452 2001 QA_{217}	17.0	X	355.61994	9.74035	13.04818	2.18722	0.2215423	0.26573044	2.3961197	20	12 30.2	19.3
228453 2001 QC_{217}	16.9	X	49.75222	333.01329	27.73895	2.42254	0.1504034	0.27183279	2.3601240	20	—	—
228454 2001 QY_{245}	16.3	X	307.52920	206.63837	178.63859	4.12685	0.2943710	0.25692693	2.4505466	20	8 21.8	17.9
228455 2001 QE_{252}	17.0	X	34.31506	250.30451	108.79900	2.96126	0.1896188	0.27041371	2.3683738	20	—	—
228456 2001 QF_{258}	16.4	X	113.92010	46.52430	220.29196	10.01900	0.1860639	0.27040689	2.3684136	20	12 8.9	20.3
228457 2001 QB_{275}	16.7	X	99.04697	235.77887	58.01386	7.33175	0.0896896	0.27252980	2.3560982	20	12 24.8	20.1
228458 2001 QC_{275}	16.9	X	185.43464	206.77072	81.11800	6.92906	0.1804449	0.28506706	2.2865008	20	—	—
228459 2001 QN_{323}	16.6	X	33.00735	68.89139	292.30412	5.70228	0.1476860	0.26800993	2.3825140	20	—	—
228460 2001 RH_{1}	17.2	X	347.44177	217.62173	180.70788	1.12312	0.1823632	0.26680801	2.3896638	20	12 31.8	19.4
228461 2001 RN_{24}	16.7	X	304.69548	262.85819	176.03012	2.01649	0.1847111	0.26599923	2.3945052	20	12 2.3	18.4
228462 2001 RJ_{28}	17.3	X	0.22911	234.85269	159.80145	2.35012	0.1564658	0.26901653	2.3765671	20	—	—
228463 2001 RR_{46}	17.1	X	115.10638	344.13014	20.62042	24.36988	0.0650469	0.38679950	1.8655724	20	—	—
228464 2001 RY_{52}	17.4	X	326.83889	316.38402	45.18037	2.13520	0.1950870	0.25993973	2.4315746	20	9 18.2	19.0
228465 2001 RV_{55}	16.5	X	34.56830	246.61910	111.14306	4.35872	0.1449645	0.26918013	2.3756040	20	—	—
228466 2001 RF_{83}	16.7	X	300.12266	94.84901	316.06243	6.03766	0.1841880	0.26071009	2.4267823	20	10 1.9	18.9
228467 2001 RT_{90}	16.5	X	20.19215	278.29913	67.40756	3.29658	0.2010456	0.26543370	2.3979052	20	12 12.7	19.3
228468 2001 RB_{113}	17.3	X	284.13621	72.96344	347.84029	1.94755	0.1730087	0.25987922	2.4319521	20	9 19.9	19.6
228469 2001 RN_{153}	16.8	X	39.93987	261.58579	102.22320	5.66335	0.1468722	0.26984910	2.3716762	20	—	—
228470 2001 SK_{2}	17.3	X	342.55061	21.37215	356.33405	1.48726	0.2196353	0.26208105	2.4183118	20	11 24.4	19.2
228471 2001 SU_{19}	17.1	X	357.14276	349.65715	16.79139	1.36615	0.2051374	0.26379916	2.4078002	20	12 5.5	19.4
228472 2001 SC_{27}	17.2	X	271.12344	268.40284	174.98509	2.40918	0.1727797	0.25926696	2.4357793	20	10 1.2	19.7
228473 2001 SX_{37}	17.0	X	346.15014	298.64232	64.75273	3.31555	0.1994044	0.26091991	2.4254811	20	11 7.7	18.8
228474 2001 SZ_{46}	17.1	X	280.73921	267.31427	113.38422	2.60201	0.2252826	0.25304874	2.4755209	20	7 6.7	20.1
228475 2001 SM_{49}	16.9	X	35.79829	268.59360	67.95723	4.12227	0.2214067	0.26606180	2.3941299	20	12 23.4	20.1
228476 2001 SU_{50}	16.7	X	335.01477	318.81123	75.32680	5.54489	0.1886044	0.26217331	2.4177445	20	11 30.0	18.5
228477 2001 SK_{52}	16.7	X	42.88549	272.27778	55.33129	4.80752	0.2052906	0.26550981	2.3974469	20	12 17.5	19.9
228478 2001 SS_{73}	16.2	X	295.53259	105.55036	325.27204	3.92942	0.1623384	0.26123636	2.4235220	20	10 27.6	18.6
228479 2001 SR_{74}	16.0	X	315.18378	121.30609	258.90621	5.25415	0.1176752	0.25767589	2.4457958	20	9 20.8	18.5
228480 2001 SR_{76}	16.7	X	211.95618	104.17639	292.70433	2.81502	0.1705443	0.24570417	2.5246104	20	5 17.9	20.8

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228481 2001 SB_{78}	17.2	X	317.16358	230.25472	190.56404	1.56450	0.1856596	0.26417071	2.4055420	20	12 1.9	18.9
228482 2001 SF_{90}	17.2	X	9.51925	220.90364	202.99437	0.75103	0.1689005	0.27291228	2.3538963	20	—	—
228483 2001 SL_{109}	16.3	X	35.57822	64.96028	240.13676	4.32450	0.1086732	0.25996232	2.4314338	20	10 23.3	19.2
228484 2001 SX_{120}	16.4	X	333.52719	253.41084	210.06500	5.87936	0.1781001	0.27244388	2.3565935	20	—	—
228485 2001 SC_{128}	17.1	X	305.02755	198.03022	195.98923	2.26802	0.1546907	0.25923881	2.4359556	20	9 22.0	19.2
228486 2001 SH_{166}	17.5	X	292.78604	119.83845	284.66166	0.56675	0.1747026	0.25863456	2.4397482	20	9 10.8	19.7
228487 2001 SL_{171}	17.5	X	321.94279	169.95645	179.44084	2.54150	0.2010054	0.25699542	2.4501112	20	8 12.4	19.3
228488 2001 SD_{172}	16.9	X	309.58263	205.79246	182.85468	1.04131	0.1912128	0.25883260	2.4385036	20	9 19.6	18.6
228489 2001 SW_{210}	17.0	X	355.22061	276.59086	101.50082	3.35848	0.2217845	0.26450831	2.4034947	20	12 22.2	19.3
228490 2001 SL_{211}	17.4	X	322.49839	281.63729	141.79503	0.60210	0.1776811	0.26475644	2.4019928	20	12 17.9	19.1
228491 2001 SU_{228}	17.1	X	4.99125	203.97474	126.63870	2.32574	0.1946078	0.26055246	2.4277610	20	10 26.8	19.4
228492 2001 ST_{233}	16.6	X	284.71469	346.33054	96.90567	2.33286	0.1284035	0.26070705	2.4268012	20	11 1.5	19.0
228493 2001 SL_{241}	16.4	X	92.12328	54.00499	188.74816	5.88243	0.0717897	0.25872653	2.4391700	20	10 8.2	19.5
228494 2001 SV_{252}	16.0	X	335.58726	321.80077	39.42704	6.84539	0.1508957	0.25798749	2.4438260	20	10 8.3	18.1
228495 2001 SA_{266}	16.5	X	193.30904	195.93672	206.64708	12.93528	0.1702087	0.24143536	2.5542817	20	5 9.8	20.7
228496 2001 SA_{282}	16.1	X	37.33698	248.49232	102.24068	14.18223	0.3011663	0.26707291	2.3880834	20	—	—
228497 2001 SR_{285}	16.7	X	232.38982	338.81079	13.24672	5.24292	0.0729130	0.24168208	2.5525431	20	4 18.1	20.4
228498 2001 SO_{286}	16.0	X	330.92723	282.07030	89.19755	8.10960	0.2430057	0.25733913	2.4479291	20	10 20.3	17.7
228499 2001 SS_{288}	16.3	X	182.69388	212.37196	215.20478	14.30853	0.0858636	0.24498319	2.5295612	20	5 31.6	20.1
228500 2001 SU_{289}	15.9	X	351.15188	103.83821	271.35243	5.93324	0.1260113	0.26403567	2.4063621	20	11 25.2	18.4
228501 2001 SW_{347}	16.5	X	52.09240	53.54369	254.42317	10.27833	0.1134717	0.26568267	2.3964069	20	11 20.4	19.6
228502 2001 TE_{2}	19.9	X	2.86327	35.72763	171.12765	7.62524	0.1966442	0.87387884	1.0835158	20	—	—
228503 2001 TX_{7}	16.5	X	357.68706	283.16782	81.41573	3.11155	0.2107876	0.26118360	2.4238483	20	12 4.1	18.8
228504 2001 TG_{16}	16.5	X	314.07493	296.40066	98.91649	7.72737	0.1878355	0.25909870	2.4368337	20	10 16.9	18.6
228505 2001 TF_{21}	16.7	X	75.76432	128.78499	232.55277	19.33874	0.0875989	0.37740817	1.8963938	20	—	—
228506 2001 TM_{27}	17.2	X	6.84641	46.27435	310.79169	1.72105	0.2375619	0.26291693	2.4131835	20	12 13.9	19.8
228507 2001 TV_{36}	16.3	X	179.74295	12.74901	13.45319	9.44396	0.1941362	0.23545032	2.5973862	20	4 6.5	20.6
228508 2001 TS_{52}	17.2	X	309.59171	261.09612	100.92117	3.36489	0.2142946	0.25523438	2.4613683	20	8 3.3	19.2
228509 2001 TP_{54}	16.6	X	295.93367	123.05359	329.34911	4.47905	0.1978614	0.26428355	2.4048572	20	11 30.1	18.4
228510 2001 TU_{91}	16.9	X	357.05289	81.62990	303.71033	1.26361	0.2180770	0.26446144	2.4037787	20	—	—
228511 2001 TZ_{93}	17.1	X	16.00042	50.11420	289.86232	1.96800	0.2207021	0.26292223	2.4131511	20	12 1.3	19.7
228512 2001 TH_{104}	16.4	X	198.57014	176.13887	215.57320	13.09341	0.1596449	0.23984425	2.5655659	20	4 30.3	20.6
228513 2001 TL_{127}	16.4	X	38.21880	55.90342	249.52037	9.37810	0.2440206	0.26442903	2.4039751	20	11 18.5	19.5
228514 2001 TL_{140}	16.3	X	25.32313	285.71695	83.52745	5.54937	0.1408924	0.26873786	2.3782097	20	—	—
228515 2001 TA_{193}	15.6	X	199.98169	96.96579	339.54290	5.18798	0.2080615	0.24139494	2.5545668	20	6 25.9	19.9
228516 2001 TN_{196}	17.1	X	20.10161	297.57012	59.33467	22.97701	0.1463723	0.37030889	1.9205544	20	—	—
228517 2001 TX_{217}	16.6	X	269.05707	136.61660	330.20348	3.81901	0.1452409	0.26326966	2.4110276	20	11 4.1	19.3
228518 2001 TC_{233}	16.7	X	318.81194	233.90533	135.74409	6.85560	0.1537578	0.25715790	2.4490790	20	9 15.1	18.9
228519 2001 TA_{238}	16.6	X	216.09082	95.93567	301.06184	5.40446	0.1036102	0.24649977	2.5191752	20	5 26.1	20.3
228520 2001 UJ	17.0	X	350.35943	5.20690	39.79227	23.34883	0.0981067	0.37117170	1.9175770	20	—	—
228521 2001 UX_{2}	17.4	X	3.38198	241.46662	78.60042	5.99663	0.2092340	0.25944383	2.4346721	20	10 11.9	19.6
228522 2001 UY_{25}	16.2	X	265.73344	101.80456	318.18741	5.73145	0.1632142	0.25402997	2.4691420	20	8 20.1	19.0
228523 2001 UX_{29}	16.3	X	32.42989	203.51860	144.95493	6.71431	0.2518203	0.26653442	2.3912988	20	—	—
228524 2001 UP_{31}	17.1	X	8.99678	240.03513	75.97198	3.33784	0.2235044	0.25942982	2.4347598	20	10 17.5	19.4
228525 2001 UE_{43}	17.0	X	203.90219	2.05898	64.03660	3.38914	0.1496204	0.24557347	2.5255061	20	6 18.6	21.0
228526 2001 UC_{83}	16.7	X	278.63845	295.73862	121.93674	3.17274	0.1880551	0.25454521	2.4658090	20	9 3.4	19.3
228527 2001 UN_{101}	16.6	X	286.43662	30.34694	77.00901	3.28762	0.0865824	0.26515460	2.3995876	20	12 13.8	19.1
228528 2001 UT_{113}	16.9	X	302.95826	13.52046	85.17651	3.11308	0.1527989	0.26385039	2.4074885	20	12 28.6	18.7
228529 2001 UE_{116}	16.8	X	183.92873	10.85614	48.16167	5.78038	0.1653837	0.24074660	2.5591512	20	5 20.6	21.0
228530 2001 UO_{118}	16.9	X	345.86887	226.71920	98.29448	3.00016	0.1790994	0.25386761	2.4701947	20	9 2.8	18.8
228531 2001 UV_{136}	17.0	X	314.17169	16.23793	47.52780	2.90646	0.1777680	0.26379252	2.4078406	20	11 28.7	18.7
228532 2001 VF_{19}	17.2	X	149.49574	208.25692	238.89212	4.04218	0.2315044	0.23807405	2.5782677	20	5 28.1	21.6
228533 2001 VR_{19}	16.1	X	150.07152	205.20737	240.64012	7.12342	0.1581199	0.23859895	2.5744850	20	5 23.2	20.0
228534 2001 VO_{35}	16.6	X	171.36729	24.55011	56.93116	13.17713	0.2494806	0.23899833	2.5716161	20	6 6.7	21.2
228535 2001 VL_{55}	14.4	X	100.42111	193.50237	262.17240	7.79288	0.1753746	0.12671233	3.9257574	20	4 17.6	20.2
228536 2001 VJ_{63}	16.8	X	218.17084	356.33202	22.09859	4.25833	0.2704126	0.24208080	2.5497396	20	4 25.9	21.3
228537 2001 VX_{80}	16.4	X	196.53201	113.87497	286.94105	1.82537	0.1824673	0.24045514	2.5612187	20	5 8.7	20.7
228538 2001 VO_{95}	16.0	X	267.41626	337.29373	163.11749	10.21684	0.1791518	0.26212264	2.4180560	20	12 16.8	18.7
228539 2001 VS_{100}	16.8	X	248.14785	102.75919	45.79960	4.15541	0.1479586	0.26185551	2.4197003	20	11 30.0	19.5
228540 2001 VX_{109}	16.9	X	159.63372	6.44905	47.07271	6.34544	0.1254210	0.23577606	2.5949933	20	4 20.6	20.9
228541 2001 WU_{7}	16.7	X	316.03945	306.55514	111.03411	5.90947	0.0921200	0.25949176	2.4343723	20	11 22.9	19.3
228542 2001 WS_{18}	17.3	X	185.74909	148.53454	258.25206	2.35718	0.2419147	0.24020231	2.5630157	20	5 6.8	21.8
228543 2001 WP_{30}	16.7	X	341.71630	232.12539	92.28670	3.35265	0.2186977	0.25348695	2.4726671	20	8 23.3	18.3
228544 2001 WR_{53}	16.6	X	104.16162	272.05367	231.89258	7.67629	0.1209758	0.24016197	2.5633027	20	6 15.1	20.2
228545 2001 WJ_{56}	16.6	X	352.66495	80.22519	247.30003	6.07467	0.1167353	0.25419460	2.4680758	20	9 11.8	19.2
228546 2001 WW_{76}	16.9	X	278.62898	252.34873	246.93899	0.45882	0.1292666	0.26424400	2.4050971	20	—	—
228547 2001 WM_{95}	16.9	X	231.26061	96.04648	243.52752	3.47326	0.1442269	0.23840486	2.5758821	20	3 26.0	20.9
228548 2001 XE_{2}	16.5	X	253.55577	212.91285	286.72715	17.61460	0.0782574	0.36675275	1.9329493	20	—	—
228549 2001 XA_{3}	16.7	X	43.03600	92.70353	266.59867	19.07166	0.0746913	0.36985763	1.9221163	20	—	—
228550 2001 XL_{15}	17.4	X	288.59204	33.89867	38.86402	3.22585	0.1664323	0.25650107	2.4532582	20	10 17.5	19.9
228551 2001 XH_{23}	17.0	X	194.67279	113.32566	344.51452	3.82622	0.2631902	0.24292159	2.5438528	20	7 16.7	21.5
228552 2001 XH_{31}	17.0	X	69.64592	226.41125	89.36019	23.30985	0.0902794	0.36748265	1.9303890	20	—	—
228553 2001 XU_{71}	17.0	X	168.72319	190.80491	237.89346	4.89851	0.1544939	0.23885277	2.5726608	20	5 19.0	21.1
228554 2001 XG_{83}	16.5	X	263.79547	342.42936	151.87470	2.86125	0.1446169	0.25926573	2.4357870	20	12 5.6	19.2
228555 2001 XU_{96}	15.6	X	66.02802	244.17079	262.44017	11.57876	0.2320160	0.23082944	2.6319355	20	5 14.9	18.8
228556 2001 XF_{102}	15.9	X	334.42440	118.90079	246.86418	8.77260	0.2244259	0.25850998	2.4405320	20	10 10.7	17.7
228557 2001 XH_{103}	17.1	X	203.70612	269.57722	257.30992	17.88467	0.0802937	0.36159106	1.9513010	20	11 29.4	18.9
228558 2001 XV_{103}	16.7	X	105.06435	257.34065	102.19700	25.45896	0.1173302	0.37643680	1.8996547	20	—	—
228559 2001 XD_{105}	14.9	X	170.35216	273.44422	124.23550	4.30121	0.2385334	0.12483142	3.9650936	20	4 19.8	21.5
228560 2001 XZ_{125}	16.4	X	202.94973	66.39414	103.82392	4.47559	0.1456660	0.25641683	2.4537955	20	11 3.3	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228561 2001 XC_{137}	15.9	X	319.41660	223.97960	96.13801	3.52209	0.2092763	0.24668026	2.5179462	20	6 17.1	18.2
228562 2001 XD_{153}	16.0	X	3.41753	111.29031	223.88807	3.38205	0.2160115	0.25481811	2.4640482	20	10 31.1	18.2
228563 2001 XZ_{154}	16.0	X	262.86969	301.40355	107.75751	2.85645	0.1143352	0.24791222	2.5095976	20	8 9.1	19.0
228564 2001 XP_{187}	16.3	X	244.54566	272.64934	105.67806	5.95782	0.1651358	0.24028659	2.5624163	20	5 28.9	20.2
228565 2001 XQ_{188}	16.1	X	226.69060	306.33091	117.99574	7.53991	0.0745217	0.24187225	2.5512050	20	7 18.2	19.7
228566 2001 XW_{199}	16.8	X	198.35932	210.11671	249.03372	3.85137	0.2272889	0.24180397	2.5516852	20	7 21.2	21.0
228567 2001 XH_{202}	16.4	X	194.85656	236.14272	277.31302	5.36646	0.0971828	0.25305941	2.4754513	20	10 3.4	20.1
228568 2001 XR_{207}	14.3	X	119.99753	348.36617	99.06715	11.95866	0.2471324	0.12525994	3.9560453	20	5 10.1	20.7
228569 2001 XV_{219}	15.6	X	323.03441	316.75085	260.39504	10.77894	0.1326202	0.22989680	2.6390488	20	2 5.4	19.1
228570 2001 XA_{221}	16.8	X	285.86332	275.23793	63.64698	5.54006	0.2102113	0.24626843	2.5207526	20	5 18.4	20.1
228571 2001 XN_{223}	14.6	X	130.16879	77.94404	343.16208	4.08908	0.1084872	0.12554940	3.9499624	20	4 2.2	20.4
228572 2001 YY_{4}	17.6	X	290.99785	110.93283	8.83034	10.15549	0.2265761	0.36579716	1.9363142	20	—	—
228573 2001 YC_{8}	16.3	X	221.35742	47.81136	100.50456	6.94205	0.1422132	0.25542255	2.4601592	20	10 28.4	19.7
228574 2001 YU_{57}	16.4	X	284.94463	280.29917	68.46324	6.77117	0.2825309	0.24650465	2.5191419	20	5 19.7	19.9
228575 2001 YW_{58}	16.9	X	281.30027	138.47236	301.17661	3.19492	0.1617207	0.25517335	2.4617607	20	10 12.0	19.5
228576 2001 YR_{72}	15.5	X	232.36033	72.51508	282.52792	12.58113	0.2280275	0.23634422	2.5908328	20	4 5.4	20.1
228577 2001 YM_{88}	16.2	X	290.71028	270.20258	101.18075	15.71510	0.1597154	0.24546160	2.5262734	20	7 20.4	19.0
228578 2001 YB_{92}	15.9	X	254.63255	43.12286	302.98092	5.42908	0.3412177	0.24029572	2.5623514	20	4 7.7	20.5
228579 2001 YF_{92}	17.0	X	359.56619	316.32458	105.20630	25.18226	0.0761090	0.36785425	1.9290887	20	—	—
228580 2001 YP_{96}	16.2	X	226.81089	44.94702	35.71236	4.52245	0.1729547	0.24430274	2.5342561	20	7 30.9	20.0
228581 2001 YL_{100}	15.8	X	251.13267	271.34858	96.68055	12.69525	0.1486941	0.24145246	2.5541611	20	5 26.1	19.6
228582 2001 YJ_{112}	16.1	X	189.29194	79.34068	324.93593	6.41008	0.1528165	0.23527823	2.5986526	20	5 4.9	20.4
228583 2001 YA_{121}	16.3	X	191.91542	345.50610	94.03649	11.77451	0.0957712	0.23835792	2.5762202	20	6 26.0	20.1
228584 2001 YA_{127}	15.9	X	272.16861	43.56223	344.33105	4.26439	0.1367378	0.24642528	2.5196829	20	7 19.9	19.2
228585 2001 YO_{161}	16.2	X	10.68771	156.15782	104.31125	6.77894	0.0946328	0.24103918	2.5570798	20	7 5.6	18.9
228586 2002 AG_{4}	17.5	X	299.61382	55.28900	87.20408	23.35860	0.0974948	0.36998397	1.9216787	20	—	—
228587 2002 AP_{7}	19.5	X	257.21179	283.42742	98.57728	23.86968	0.0932904	0.61845093	1.3643712	20	7 29.7	19.1
228588 2002 AJ_{26}	16.5	X	64.49429	94.98318	352.79166	2.70744	0.0754732	0.21895256	2.7262731	20	2 2.3	19.7
228589 2002 AG_{35}	16.7	X	287.35803	125.83612	279.31785	5.86592	0.1148329	0.25094438	2.4893410	20	9 6.6	19.7
228590 2002 AE_{38}	16.5	X	234.18634	298.11481	121.42198	6.74309	0.1453809	0.24493007	2.5299269	20	7 12.3	20.0
228591 2002 AG_{51}	16.5	X	141.43025	194.95705	288.28005	6.52763	0.1498496	0.23566694	2.5957943	20	7 1.5	20.4
228592 2002 AY_{51}	16.7	X	160.34776	226.63498	280.92786	2.08338	0.1219904	0.24135897	2.5548207	20	8 19.7	20.5
228593 2002 AQ_{56}	16.6	X	155.99533	239.43521	248.44961	3.65397	0.1266286	0.23938669	2.5688341	20	7 20.5	20.5
228594 2002 AE_{66}	16.4	X	82.19738	311.51991	248.10608	2.12983	0.1510635	0.23624548	2.5915547	20	8 5.7	20.0
228595 2002 AV_{71}	15.9	X	152.72746	19.43572	94.82101	14.80949	0.1188615	0.23838144	2.5760508	20	6 29.7	19.9
228596 2002 AG_{78}	16.3	X	182.30188	264.14932	85.53044	6.04482	0.0144744	0.22376571	2.6870373	20	2 21.8	20.0
228597 2002 AQ_{96}	16.9	X	186.04194	13.53140	86.62125	4.58084	0.1630934	0.24038131	2.5617432	20	7 15.1	21.0
228598 2002 AC_{98}	17.3	X	216.55044	101.85117	318.34784	2.95005	0.2789660	0.24169332	2.5524639	20	6 15.2	21.7
228599 2002 AF_{115}	16.2	X	170.98696	320.56439	123.33157	13.08700	0.1081484	0.23497032	2.6009223	20	6 10.8	20.3
228600 2002 AF_{138}	16.8	X	125.23120	221.57700	195.00818	0.69211	0.1271724	0.22715765	2.6602215	20	3 18.5	20.6
228601 2002 AR_{163}	16.6	X	228.54204	118.84557	294.62228	3.48279	0.2286928	0.24006579	2.5639873	20	6 20.4	20.6
228602 2002 AH_{164}	16.3	X	213.62917	130.99325	269.29551	3.73445	0.2417783	0.23632845	2.5909481	20	5 20.7	20.8
228603 2002 AB_{177}	16.6	X	166.37293	163.66198	308.09006	4.88990	0.1993542	0.23746865	2.5826478	20	7 11.6	20.8
228604 2002 AC_{178}	16.7	X	193.28842	316.65035	118.34494	6.30354	0.2148783	0.23754168	2.5821185	20	6 17.9	21.1
228605 2002 AS_{187}	15.4	X	22.57125	103.41144	93.14401	11.62536	0.1885231	0.22253007	2.6969749	20	5 5.1	18.1
228606 2002 BU_{2}	16.0	X	53.70898	123.79165	349.95073	11.21122	0.1195347	0.22212747	2.7002327	20	2 25.5	19.0
228607 2002 BH_{5}	15.8	X	119.60156	135.34732	15.72941	11.86854	0.1238609	0.23540238	2.5977388	20	7 15.7	19.9
228608 2002 BT_{5}	15.8	X	213.77138	120.57496	337.00285	8.28708	0.2075334	0.24470617	2.5314699	20	8 5.8	19.9
228609 2002 BW_{18}	16.4	X	223.45938	10.31907	84.90867	10.12868	0.0974192	0.24456100	2.5324716	20	8 27.0	20.1
228610 2002 BO_{19}	16.4	X	127.80674	97.29868	68.45134	4.63263	0.1550745	0.23600024	2.5933497	20	8 13.9	20.4
228611 2002 BC_{24}	16.2	X	10.71675	122.90997	18.50095	9.00705	0.1105246	0.21820162	2.7325245	20	1 22.5	19.5
228612 2002 BZ_{31}	16.8	X	158.78328	349.99089	108.84118	3.34767	0.0729172	0.23533656	2.5982231	20	6 14.3	20.5
228613 2002 CY_{5}	16.7	X	153.17556	308.92822	162.59004	7.20685	0.1879687	0.23403151	2.6078733	20	6 28.8	21.1
228614 2002 CV_{30}	16.4	X	200.96602	46.38066	43.29106	4.02723	0.1977424	0.24037766	2.5617691	20	7 14.4	20.6
228615 2002 CH_{35}	16.0	X	156.37239	45.07735	99.72503	15.12476	0.1045394	0.23793118	2.5792997	20	8 15.5	20.0
228616 2002 CR_{35}	16.1	X	129.51780	83.79929	55.64236	6.14252	0.1244108	0.23411054	2.6072864	20	7 8.9	20.1
228617 2002 CS_{39}	16.7	X	3.27422	73.03024	304.45297	17.45868	0.1209923	0.35981454	1.9577185	20	—	—
228618 2002 CC_{49}	16.8	X	199.25415	84.99977	320.24333	2.23261	0.2508462	0.23596486	2.5936089	20	5 14.9	21.3
228619 2002 CE_{73}	16.4	X	215.15839	85.20917	335.31864	3.43994	0.1494468	0.23796492	2.5790559	20	6 22.7	20.3
228620 2002 CA_{75}	16.5	X	225.15398	94.65746	327.26156	4.56604	0.1865477	0.23979981	2.5658829	20	7 2.0	20.4
228621 2002 CT_{82}	16.5	X	132.53655	117.89986	17.41456	2.67360	0.1488845	0.23352148	2.6116691	20	7 8.4	20.6
228622 2002 CR_{97}	16.3	X	173.01192	352.80927	119.76868	3.26798	0.1693386	0.23659964	2.5889679	20	7 18.2	20.6
228623 2002 CO_{102}	16.2	X	46.59498	57.34084	134.34714	4.30616	0.1390223	0.22601150	2.6692076	20	6 3.1	19.2
228624 2002 CD_{106}	16.1	X	139.81534	40.16878	87.03865	3.02568	0.0939412	0.23160533	2.6260542	20	7 1.3	19.8
228625 2002 CB_{126}	16.7	X	216.60352	183.06580	257.69759	3.24784	0.2648951	0.24083988	2.5584903	20	7 11.5	20.9
228626 2002 CP_{142}	16.1	X	189.45394	282.79753	159.71239	4.90331	0.0979735	0.23824625	2.5770252	20	6 27.0	20.0
228627 2002 CB_{158}	16.1	X	105.77174	62.95653	111.04493	2.96775	0.0611793	0.23413887	2.6070761	20	7 20.1	19.4
228628 2002 CS_{185}	16.8	X	27.52764	144.72198	55.69013	2.39222	0.1463281	0.22667624	2.6639867	20	5 12.2	19.3
228629 2002 CH_{215}	16.6	X	132.79324	139.36088	351.19994	3.10828	0.1746681	0.23269141	2.6178765	20	7 4.2	20.7
228630 2002 CR_{227}	16.5	X	227.16885	144.97316	263.87754	4.91926	0.2387390	0.23964026	2.5670216	20	6 12.4	20.6
228631 2002 CB_{234}	15.4	X	93.38264	124.27807	87.00781	12.47937	0.1790408	0.23837544	2.5760940	20	9 13.6	19.5
228632 2002 CQ_{251}	15.9	X	195.01423	1.62144	119.52035	13.94690	0.1102220	0.24188787	2.5510951	20	8 25.4	19.8
228633 2002 CS_{255}	16.1	X	101.96410	115.33765	340.84380	9.04930	0.0879520	0.22354892	2.6887742	20	4 2.1	19.8
228634 2002 CU_{255}	16.8	X	190.36643	167.24037	277.62560	2.75862	0.2522297	0.23756053	2.5819819	20	6 26.7	21.3
228635 2002 CZ_{272}	16.3	X	221.37031	153.55261	267.78317	12.08094	0.2462635	0.23963408	2.5670657	20	6 22.5	20.5
228636 2002 CK_{273}	17.0	X	260.74494	251.00742	128.89442	4.10313	0.1335423	0.23920833	2.5701108	20	6 22.4	20.4
228637 2002 CH_{285}	16.4	X	201.49223	235.16948	121.99796	5.40998	0.0507945	0.22671043	2.6637189	20	3 25.3	20.2
228638 2002 CV_{302}	16.8	X	185.51200	203.83888	252.40964	5.96169	0.2866463	0.23855698	2.5747869	20	7 5.8	21.5
228639 2002 CA_{309}	16.8	X	187.10603	116.15057	9.36690	4.06204	0.0194340	0.23963026	2.5670931	20	8 26.7	20.2
228640 2002 EU_{15}	16.4	X	212.68544	227.77433	231.84933	6.33009	0.2772366	0.24255271	2.5464313	20	7 29.5	20.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228641 2002 ET_{19}	15.6	X	113.58271	24.96271	115.76597	12.92326	0.1324169	0.23050252	2.6344235	20	6 23.7	19.5
228642 2002 EK_{24}	16.4	X	142.71018	74.13256	355.41904	2.46257	0.0609459	0.22363881	2.6880536	20	4 16.5	20.2
228643 2002 EP_{33}	16.3	X	160.72357	352.20624	103.98750	5.57317	0.1507941	0.23283425	2.6168057	20	6 15.6	20.4
228644 2002 EY_{33}	16.9	X	162.99621	72.74622	21.77595	5.16108	0.2392840	0.23367680	2.6105117	20	6 17.1	21.5
228645 2002 EW_{43}	16.8	X	99.96938	208.59119	353.74979	3.88702	0.1824545	0.23387867	2.6090094	20	9 2.8	20.7
228646 2002 EA_{53}	16.7	X	39.23915	111.19879	78.79545	2.17968	0.1387172	0.22463244	2.6801210	20	5 18.2	19.6
228647 2002 EJ_{64}	16.1	X	11.62277	292.24438	334.01561	8.30982	0.1211167	0.22974675	2.6401978	20	7 19.3	19.1
228648 2002 EQ_{75}	16.4	X	186.21692	189.55436	281.61889	7.93863	0.1172458	0.23761331	2.5815995	20	7 29.2	20.5
228649 2002 EQ_{85}	16.1	X	59.53015	132.83458	9.12494	12.65926	0.0923334	0.22085488	2.7105955	20	4 6.5	19.4
228650 2002 EU_{92}	15.4	X	224.02228	236.14303	344.29134	14.35715	0.0927448	0.20481582	2.8503207	20	—	—
228651 2002 EQ_{101}	16.0	X	38.98828	77.84241	110.48573	11.07113	0.1229796	0.22507956	2.6765704	20	5 17.0	19.2
228652 2002 EP_{120}	16.6	X	194.30751	114.59601	320.75443	3.44315	0.2087782	0.23532208	2.5983297	20	6 19.1	21.1
228653 2002 EZ_{129}	15.7	X	28.87522	274.75156	221.03140	10.49458	0.2110832	0.21884419	2.7271731	20	2 8.9	18.5
228654 2002 EQ_{146}	16.1	X	270.65215	148.01783	83.11195	2.62700	0.0724330	0.20913396	2.8109492	20	1 5.5	20.1
228655 2002 FS_{25}	15.8	X	187.75021	8.87952	78.81457	13.72456	0.2654557	0.23580485	2.5947821	20	6 27.5	20.5
228656 2002 FE_{31}	15.5	X	281.29504	142.25442	91.54921	15.80861	0.1801259	0.21119395	2.7926408	20	1 7.9	19.8
228657 2002 FD_{36}	15.9	X	157.05265	38.33763	89.30830	14.62696	0.1973801	0.23347240	2.6120352	20	7 24.2	20.3
228658 2002 GP_{2}	15.7	X	25.48583	153.46299	121.90242	10.64360	0.0581052	0.23269623	2.6178403	20	8 17.9	19.0
228659 2002 GZ_{3}	16.1	X	144.49603	104.24735	24.39555	26.85716	0.2766118	0.23168707	2.6254365	20	7 24.5	21.3
228660 2002 GP_{11}	15.8	X	49.81513	73.61364	94.45546	10.82865	0.2192998	0.22049141	2.7135735	20	5 20.4	18.9
228661 2002 GJ_{22}	16.4	X	182.78677	338.74253	146.60203	5.58550	0.2440554	0.23722643	2.5844055	20	8 9.9	20.7
228662 2002 GA_{37}	16.1	X	15.92598	159.33656	90.51056	5.36248	0.1191295	0.22728365	2.6592382	20	6 30.5	18.8
228663 2002 GU_{71}	16.0	X	169.18392	90.81744	22.21409	12.03304	0.2476390	0.23462461	2.6034765	20	7 18.1	20.8
228664 2002 GM_{76}	16.6	X	172.31693	113.20277	87.32289	6.05378	0.2073267	0.24198325	2.5504248	20	11 5.1	20.9
228665 2002 GX_{114}	16.0	X	357.90968	142.61697	114.60739	5.42364	0.0203376	0.22587788	2.6702602	20	6 7.9	19.5
228666 2002 GG_{131}	16.5	X	33.92366	300.53167	202.21201	2.87459	0.0319482	0.21413936	2.7669738	20	2 25.8	20.1
228667 2002 GK_{144}	15.9	X	153.23971	4.17749	108.51826	12.22317	0.1662988	0.22911343	2.6450609	20	6 29.9	20.3
228668 2002 JF_{5}	15.6	X	312.57289	143.20852	43.82052	13.01422	0.0387660	0.20586776	2.8406026	20	1 7.4	19.7
228669 2002 JT_{10}	15.5	X	9.28044	53.07850	112.65569	14.60100	0.1500489	0.21191523	2.7863004	20	2 21.6	18.6
228670 2002 JY_{21}	15.4	X	86.17487	208.59200	92.36181	11.02227	0.3030150	0.18170314	3.0871739	20	12 19.2	20.6
228671 2002 JX_{59}	14.7	X	67.58749	73.29658	230.43813	17.96170	0.1372464	0.18227340	3.0807315	20	11 20.2	19.1
228672 2002 JP_{61}	15.5	X	319.76306	140.78435	67.19416	14.40548	0.1482852	0.20971653	2.8057412	20	1 28.5	19.4
228673 2002 JR_{75}	15.2	X	88.36890	289.09366	54.23634	10.69261	0.0369185	0.19364969	2.9588629	20	—	—
228674 2002 JZ_{80}	16.1	X	7.13621	170.02171	27.90057	3.72658	0.1262187	0.21716097	2.7412472	20	3 31.1	19.1
228675 2002 JT_{86}	15.3	X	59.48797	56.29908	231.51093	11.95774	0.1636964	0.17954954	3.1118108	20	10 24.4	19.8
228676 2002 JK_{91}	15.4	X	75.06193	280.88815	53.40693	9.39301	0.1007044	0.18911640	3.0059604	20	12 31.4	19.9
228677 2002 JW_{118}	15.5	X	131.58337	27.39653	114.98160	14.56329	0.1170874	0.23043521	2.6349365	20	7 13.7	19.4
228678 2002 JW_{122}	15.6	X	313.96297	68.56550	140.17484	10.82917	0.0500885	0.21043590	2.7993433	20	2 1.4	19.2
228679 2002 KH_{14}	16.2	X	101.19456	45.61918	189.88568	14.91514	0.0954544	0.23344879	2.6122113	20	10 8.1	19.8
228680 2002 KX_{15}	16.1	X	68.90727	79.77272	226.58571	12.01338	0.1418437	0.18251224	3.0780432	20	11 25.5	20.7
228681 2002 LX_{6}	15.6	X	115.86422	5.35420	118.36137	8.16220	0.0397021	0.21850238	2.7300164	20	5 24.9	19.4
228682 2002 LR_{50}	15.3	X	207.43619	337.39657	247.85787	9.69869	0.0494688	0.18649327	3.0340817	20	—	—
228683 2002 NJ_{24}	14.8	X	34.55204	79.94342	273.85793	8.37898	0.2224721	0.17424756	3.1746188	20	12 21.3	19.1
228684 2002 NK_{55}	14.5	X	36.31832	55.65562	290.25848	26.06005	0.2582019	0.17419536	3.1752530	20	12 21.4	19.1
228685 2002 ND_{61}	15.0	X	158.73715	139.23822	112.38644	17.51015	0.0366633	0.18152134	3.0892348	20	12 18.9	19.6
228686 2002 NZ_{64}	15.5	X	12.45984	308.96748	102.39305	16.11091	0.2336682	0.18173491	3.0868141	20	—	—
228687 2002 OA_{8}	15.8	X	130.48487	343.98965	294.83368	4.28837	0.1294808	0.18196983	3.0841569	20	12 20.9	20.7
228688 2002 OF_{10}	15.4	X	110.55922	47.41754	279.10333	10.41381	0.0520229	0.18284167	3.0743449	20	—	—
228689 2002 OR_{16}	17.7	X	174.04226	79.69618	226.94929	5.52515	0.1762242	0.30301654	2.1952896	20	—	—
228690 2002 OE_{28}	17.5	X	91.57148	244.36034	149.17162	3.83248	0.1620517	0.30055405	2.2072642	20	—	—
228691 2002 OR_{28}	17.1	X	83.11353	126.45627	262.23226	6.58356	0.1726185	0.29680540	2.2258105	20	—	—
228692 2002 PL_{12}	15.2	X	343.80578	141.24720	285.38775	16.03338	0.0748877	0.18033756	3.1027390	20	12 23.3	19.2
228693 2002 PN_{17}	18.0	X	128.55900	115.02968	235.24503	0.33249	0.2083028	0.30037172	2.2081574	20	—	—
228694 2002 PE_{92}	15.0	X	108.76067	18.01764	257.49424	15.15860	0.1027114	0.17591493	3.1545270	20	11 24.1	19.9
228695 2002 PU_{92}	17.9	X	115.04659	76.90213	251.03801	1.56787	0.3233099	0.29389177	2.2404973	20	—	—
228696 2002 PX_{95}	17.0	X	228.01647	14.29253	291.02672	5.22476	0.0865505	0.30999496	2.1622187	20	2 4.2	19.8
228697 2002 PP_{170}	17.9	X	241.26276	247.39575	15.10349	3.42488	0.1441669	0.30656301	2.1783260	20	—	—
228698 2002 PF_{187}	17.4	X	140.57362	270.01436	99.62964	7.33493	0.1032081	0.30457448	2.1877971	20	1 23.7	19.9
228699 2002 PX_{187}	16.1	X	161.15015	181.78095	75.60948	2.43674	0.0847788	0.18351577	3.0668118	20	12 25.5	20.9
228700 2002 QH_{44}	17.4	X	185.33701	283.19183	60.29794	5.18989	0.1967656	0.30734363	2.1746360	20	2 16.3	20.8
228701 2002 QR_{57}	17.6	X	176.56560	242.53929	142.72010	2.71931	0.1073520	0.31098202	2.1576410	20	3 27.4	20.5
228702 2002 QH_{66}	17.5	X	92.58004	275.79003	126.36636	2.47483	0.1219772	0.30100426	2.2050628	20	1 2.2	19.3
228703 2002 QM_{83}	15.8	X	26.98616	95.97997	309.92232	9.38561	0.1124490	0.18067655	3.0988569	20	—	—
228704 2002 QC_{93}	15.3	X	30.27863	260.45057	130.63572	10.88581	0.1317089	0.17803427	3.1294425	20	—	—
228705 2002 QY_{98}	15.8	X	201.22952	212.54434	71.14490	6.53517	0.1448700	0.19096254	2.9865556	20	—	—
228706 2002 QA_{105}	16.1	X	313.76148	22.78308	19.96900	0.87074	0.1299830	0.16840436	3.2476346	20	10 3.3	20.0
228707 2002 QB_{123}	15.7	X	38.64595	17.80695	298.49749	5.95799	0.0156539	0.17264856	3.1941900	20	10 9.9	20.2
228708 2002 RG_{54}	15.0	X	359.96724	233.59568	151.72729	6.79914	0.1367355	0.17036996	3.2226072	20	11 28.9	19.0
228709 2002 RN_{74}	17.4	X	75.68348	327.58939	338.21971	2.98990	0.2166677	0.28584796	2.2823346	20	12 27.8	20.9
228710 2002 RF_{148}	15.4	X	85.35697	235.77106	73.97381	1.88438	0.1812498	0.17491409	3.1665488	20	12 17.8	20.2
228711 2002 RP_{169}	17.0	X	193.87076	142.19829	159.10837	1.49444	0.0715561	0.30082461	2.2059406	20	—	—
228712 2002 RZ_{205}	17.3	X	26.02363	129.46999	254.94581	1.70576	0.1652093	0.28550506	2.2841617	20	—	—
228713 2002 RD_{256}	15.8	X	36.61892	119.63107	281.77316	9.59316	0.0645637	0.18168751	3.0873509	20	—	—
228714 2002 RM_{257}	15.5	X	152.03737	190.67298	75.87950	7.97389	0.1604193	0.18311059	3.0713342	20	12 25.6	20.6
228715 2002 RH_{258}	15.9	X	168.00654	137.92897	90.42546	0.53327	0.1120648	0.17525836	3.1624007	20	11 26.1	20.9
228716 2002 RK_{279}	17.4	X	75.00844	119.57527	259.74500	4.52161	0.1498028	0.29331298	2.2434438	20	—	—
228717 2002 SM_{44}	17.0	X	332.41711	7.28509	27.63680	7.40501	0.1246654	0.27706012	2.3303440	20	11 23.2	19.2
228718 2002 SH_{52}	16.7	X	93.75575	238.37311	114.70984	8.62326	0.1362697	0.29204375	2.2499392	20	—	—
228719 2002 TP	15.3	X	63.99852	190.88756	137.41172	6.33398	0.1387531	0.17239558	3.1973141	20	12 13.7	20.1
228720 2002 TN_{4}	17.4	X	144.58191	183.80528	173.14573	3.54518	0.2000479	0.29937703	2.2130458	20	1 23.5	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228721 2002 TV_{26}	18.0	X	33.38855	195.07144	204.87533	1.80730	0.1905532	0.28641197	2.2793373	20	—	—
228722 2002 TZ_{37}	16.8	X	126.38720	316.94986	47.67623	4.87520	0.1736646	0.29636014	2.2280393	20	1 10.5	19.5
228723 2002 TE_{40}	16.6	X	75.56545	328.13287	63.06900	4.55514	0.1568606	0.29135739	2.2534713	20	—	—
228724 2002 TZ_{51}	16.9	X	0.05389	333.79198	57.25275	3.31379	0.2117355	0.27845072	2.3225789	20	—	—
228725 2002 TW_{75}	17.1	X	86.31531	134.52568	309.23852	3.26241	0.0903090	0.30161017	2.2021086	20	2 16.7	19.3
228726 2002 TK_{77}	17.1	X	118.30514	30.33747	288.36031	2.07770	0.2234573	0.29128735	2.2538325	20	—	—
228727 2002 TF_{98}	17.1	X	170.80331	306.12554	350.31810	2.16506	0.0571690	0.29507040	2.2345271	20	—	—
228728 2002 TM_{119}	15.3	X	330.15747	144.63925	285.32661	7.09614	0.0536084	0.17022147	3.2244811	20	12 3.8	19.6
228729 2002 TH_{121}	16.5	X	35.93615	152.89361	251.75239	7.10724	0.1407853	0.28741988	2.2740055	20	—	—
228730 2002 TX_{124}	17.0	X	323.45666	275.94229	246.32169	6.95919	0.0465284	0.29721537	2.2237632	20	—	—
228731 2002 TV_{130}	15.7	X	49.37973	86.05463	278.80793	3.95320	0.0498027	0.17524192	3.1625984	20	12 28.6	20.0
228732 2002 TQ_{132}	17.3	X	285.70897	20.33254	256.37621	3.88864	0.1757607	0.31150671	2.1552175	20	2 21.3	20.0
228733 2002 TY_{132}	17.2	X	107.76436	127.32360	266.15720	4.57471	0.1854750	0.29821175	2.2188071	20	1 24.4	19.5
228734 2002 TW_{154}	15.1	X	83.96173	78.66936	259.96988	8.66246	0.0767999	0.17865876	3.1221458	20	—	—
228735 2002 TP_{169}	15.1	X	67.99298	72.37210	330.09660	14.90619	0.0523243	0.18259825	3.0770766	20	—	—
228736 2002 TY_{204}	17.3	X	65.53953	282.48662	129.75831	5.51034	0.0449673	0.29426216	2.2386169	20	—	—
228737 2002 TB_{211}	16.7	X	142.79326	316.28207	37.19417	5.09988	0.1680430	0.29751492	2.2222703	20	1 15.1	19.6
228738 2002 TU_{257}	17.8	X	150.27326	292.17536	63.99347	4.08928	0.2094429	0.29933119	2.2132717	20	1 31.5	21.0
228739 2002 TV_{275}	16.5	X	205.74100	91.62030	239.20889	3.23890	0.2022952	0.30480913	2.1866741	20	2 14.7	20.0
228740 2002 TT_{281}	17.0	X	83.51706	13.02895	339.60257	5.07674	0.1836607	0.28835877	2.2690667	20	—	—
228741 2002 TQ_{282}	16.8	X	57.93891	94.57038	283.61133	4.22184	0.1292499	0.28677031	2.2774381	20	—	—
228742 2002 TA_{287}	17.0	X	112.89920	115.38539	271.20724	4.85610	0.0813686	0.29552760	2.2322218	20	1 6.5	19.4
228743 2002 TZ_{290}	16.6	X	106.35192	61.14332	267.80877	4.83685	0.1934933	0.28850947	2.2682766	20	—	—
228744 2002 UO_{37}	17.0	X	25.35038	59.66518	269.20009	1.70950	0.1454499	0.27576311	2.3376452	20	11 20.7	19.6
228745 2002 UE_{40}	16.9	X	41.52226	308.88783	109.42827	7.27074	0.0812024	0.28872755	2.2671342	20	—	—
228746 2002 UQ_{51}	15.9	X	104.28929	23.70506	259.37082	9.38291	0.1820658	0.17687535	3.1430974	20	12 4.4	21.0
228747 2002 VH_{3}	16.9	X	40.52272	172.44433	273.01962	3.69329	0.0949816	0.29198069	2.2502631	20	—	—
228748 2002 VA_{4}	17.2	X	76.37704	111.74126	278.24016	4.18678	0.1827184	0.29062730	2.2572437	20	—	—
228749 2002 VY_{8}	16.4	X	106.16151	59.84210	275.84589	5.34906	0.2093415	0.28994102	2.2608041	20	—	—
228750 2002 VH_{9}	16.6	X	126.46480	249.22196	125.26474	6.41337	0.1084279	0.29525135	2.2336140	20	1 13.3	19.0
228751 2002 VY_{30}	17.0	X	59.49128	323.15377	52.08240	5.40444	0.1554891	0.28503134	2.2866918	20	—	—
228752 2002 VG_{31}	17.1	X	44.09566	193.68043	217.00808	5.14399	0.1967461	0.28709135	2.2757400	20	—	—
228753 2002 VT_{32}	16.7	X	77.60789	190.67961	219.93551	6.08383	0.0711320	0.29163838	2.2520236	20	—	—
228754 2002 VZ_{35}	17.5	X	64.56324	170.07525	260.79076	2.05138	0.1914574	0.29198453	2.2502433	20	1 3.2	18.7
228755 2002 VK_{54}	16.8	X	25.82452	214.85061	216.94795	6.13927	0.0924107	0.28744149	2.2738915	20	—	—
228756 2002 VM_{74}	16.9	X	67.65336	276.04313	64.30775	7.00286	0.1995100	0.28416314	2.2913471	20	—	—
228757 2002 VF_{80}	17.3	X	49.31824	262.69439	106.23410	3.51541	0.2353637	0.28367816	2.2939579	20	—	—
228758 2002 VZ_{83}	16.2	X	54.37014	298.65829	86.49515	7.20745	0.1119378	0.28501888	2.2867585	20	—	—
228759 2002 VC_{90}	17.0	X	199.79799	259.03823	67.11815	5.35668	0.1208314	0.30110623	2.2045649	20	2 5.3	20.1
228760 2002 VW_{91}	16.3	X	155.18459	256.20840	73.19940	9.42444	0.1995748	0.29438509	2.2379936	20	—	—
228761 2002 VJ_{102}	17.4	X	167.25420	34.08010	317.92578	1.49575	0.1533414	0.30084183	2.2058564	20	2 5.6	20.5
228762 2002 VR_{102}	17.2	X	85.16107	171.50124	251.54748	4.72982	0.0603625	0.29622078	2.2287381	20	1 12.4	19.4
228763 2002 VN_{104}	16.8	X	105.13655	113.03478	288.35525	3.42148	0.1076410	0.29544387	2.2326436	20	1 20.2	19.2
228764 2002 VL_{128}	16.7	X	69.86649	168.11967	198.89159	3.24253	0.1272122	0.28471344	2.2883937	20	—	—
228765 2002 VH_{131}	14.7	X	30.34069	105.81564	342.15007	26.17469	0.1325818	0.18026344	3.1035895	20	—	—
228766 2002 VS_{146}	17.4	X	49.74071	125.83760	199.12026	0.86819	0.1903997	0.27887453	2.3202252	20	12 22.9	20.6
228767 2002 WX_{5}	17.1	X	168.96170	60.79394	335.60287	5.71433	0.1566584	0.30605683	2.1807271	20	4 2.8	20.3
228768 2002 WQ_{17}	16.3	X	343.38314	26.74976	81.26668	26.16431	0.2290425	0.28368195	2.2939375	20	—	—
228769 2002 WP_{21}	17.2	X	263.92706	307.38630	153.83079	2.60318	0.1609002	0.27038869	2.3685199	20	10 20.5	19.6
228770 2002 WR_{25}	17.0	X	324.74538	273.93934	214.03538	7.68521	0.0682904	0.28526920	2.2854206	20	—	—
228771 2002 XU_{18}	16.4	X	45.21394	109.99349	308.83371	9.80822	0.0769103	0.28649524	2.2788957	20	—	—
228772 2002 XL_{20}	16.7	X	134.41461	53.14328	268.57411	6.09632	0.1371014	0.28934968	2.2638833	20	—	—
228773 2002 XT_{23}	17.0	X	35.30071	0.67555	25.54199	6.70179	0.1621456	0.28216257	2.3021650	20	—	—
228774 2002 XR_{29}	16.8	X	10.16043	301.51747	128.56202	5.64215	0.1949265	0.28300559	2.2975909	20	—	—
228775 2002 XK_{35}	17.3	X	354.76912	144.29712	263.41842	4.86837	0.1576163	0.27841414	2.3227824	20	—	—
228776 2002 XD_{42}	17.8	X	346.71447	330.16931	131.99028	0.70086	0.1662837	0.28287081	2.2983207	20	—	—
228777 2002 XZ_{43}	17.6	X	43.73822	82.50040	356.25145	2.79764	0.1228280	0.28935836	2.2638381	20	—	—
228778 2002 XJ_{52}	16.6	X	81.59324	268.23217	95.29800	6.36715	0.1757960	0.28530175	2.2852467	20	—	—
228779 2002 XP_{53}	16.7	X	24.31777	12.87835	93.55826	8.09211	0.0512452	0.29099015	2.2553668	20	—	—
228780 2002 XS_{84}	15.3	X	12.22401	292.65151	263.75330	10.56595	0.2551470	0.23624225	2.5915783	20	3 27.6	17.5
228781 2002 XM_{96}	17.0	X	5.88954	51.69762	77.19577	6.08501	0.0999753	0.29063563	2.2572006	20	—	—
228782 2002 XO_{104}	17.7	X	45.32295	267.47695	137.86002	1.37060	0.2310067	0.28620375	2.2804427	20	—	—
228783 2002 XX_{108}	17.5	X	346.51779	76.26276	354.70355	2.38294	0.1672957	0.28019793	2.3129137	20	—	—
228784 2002 XP_{109}	17.5	X	84.00917	88.79554	308.81691	4.24966	0.1649924	0.29147986	2.2528400	20	—	—
228785 2002 YG_{7}	16.2	X	311.70899	323.26254	124.49489	6.50769	0.1932684	0.27257496	2.3558379	20	—	—
228786 2002 YJ_{9}	16.5	X	83.59620	279.19163	92.50117	4.63595	0.2002623	0.28595065	2.2817882	20	—	—
228787 2002 YH_{10}	16.3	X	335.44754	113.48140	271.89127	6.00929	0.1904222	0.26994584	2.3711096	20	11 19.2	18.1
228788 2002 YM_{17}	16.5	X	249.98844	259.67728	255.78482	5.36411	0.0470226	0.27589699	2.3368889	20	12 31.6	19.2
228789 2002 YW_{20}	16.2	X	279.39210	43.08227	100.48910	25.10248	0.2311329	0.27513693	2.3411907	20	—	—
228790 2002 YJ_{24}	16.5	X	18.60992	296.95867	102.23736	7.59351	0.1166604	0.27813393	2.3243422	20	—	—
228791 2002 YQ_{29}	16.9	X	281.63076	24.74729	93.56459	3.31158	0.1495010	0.27172360	2.3607562	20	12 18.1	18.7
228792 2002 YM_{30}	16.7	X	60.43271	136.38575	269.07378	5.14545	0.1049552	0.28519803	2.2858007	20	—	—
228793 2002 YM_{33}	16.7	X	23.60703	153.50440	279.26967	5.61216	0.0521542	0.28601309	2.2814560	20	—	—
228794 2003 AT_{13}	16.6	X	206.13931	262.60310	224.23752	7.26587	0.2066987	0.26133355	2.4229211	20	9 1.8	20.5
228795 2003 AY_{26}	17.2	X	83.92687	295.04900	100.31987	4.17451	0.1025761	0.28657200	2.2784887	20	—	—
228796 2003 AC_{27}	17.2	X	320.74647	328.33605	95.83348	3.32711	0.1878561	0.27224223	2.3577571	20	12 19.3	18.7
228797 2003 AX_{32}	17.7	X	335.26947	154.56700	337.24862	1.74870	0.1443074	0.28220985	2.3019079	20	—	—
228798 2003 AO_{33}	16.8	X	261.81266	111.82777	5.79321	1.45932	0.1356925	0.26813200	2.3817908	20	11 11.7	19.3
228799 2003 AP_{38}	16.2	X	41.42277	135.43901	267.09872	7.15562	0.1066619	0.27995026	2.3142777	20	—	—
228800 2003 AL_{48}	17.1	X	348.93026	14.76193	65.12378	4.05284	0.1523653	0.27846208	2.3225158	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228801 2003 AB_{55}	16.7	X	28.36470	338.28095	74.03072	6.91107	0.2048798	0.28101949	2.3084037	20	—	—
228802 2003 AP_{61}	16.8	X	282.28649	325.36410	161.81872	6.65465	0.1565720	0.27250295	2.3562529	20	—	—
228803 2003 AX_{62}	16.3	X	81.15319	250.54589	102.65623	7.36507	0.1353735	0.28025789	2.3125838	20	—	—
228804 2003 AE_{63}	16.6	X	200.53685	73.10276	111.92198	7.25690	0.0417950	0.26942706	2.3741523	20	12 4.4	19.7
228805 2003 AW_{78}	16.7	X	4.68493	154.77636	266.03412	3.31393	0.1105782	0.27625481	2.3348706	20	—	—
228806 2003 AA_{82}	16.0	X	7.34931	15.65376	84.30821	23.94604	0.1500453	0.28127544	2.3070031	20	—	—
228807 2003 AZ_{82}	16.2	X	352.70778	115.37355	306.16696	9.01732	0.1812985	0.27560462	2.3385413	20	—	—
228808 2003 AR_{88}	16.5	X	123.40646	45.69872	286.42994	5.22034	0.1657421	0.28402915	2.2920677	20	—	—
228809 2003 AP_{91}	17.0	X	343.74750	2.97795	55.48058	7.72154	0.2062938	0.27441337	2.3453043	20	—	—
228810 2003 BZ_{2}	16.5	X	42.53507	294.38942	108.74716	23.83101	0.3049868	0.28253813	2.3001245	20	—	—
228811 2003 BR_{6}	16.3	X	332.16813	148.66952	273.38581	5.90683	0.0983837	0.27239558	2.3568721	20	12 30.1	18.6
228812 2003 BM_{14}	16.7	X	316.88453	182.30872	259.40237	4.34141	0.1126022	0.27191024	2.3596758	20	—	—
228813 2003 BL_{17}	16.5	X	304.43513	92.45059	44.05080	5.49453	0.1700761	0.27485273	2.3428043	20	—	—
228814 2003 BP_{17}	17.1	X	301.97974	210.94486	306.84899	3.02796	0.1729585	0.27785231	2.3259125	20	—	—
228815 2003 BW_{24}	16.6	X	326.63332	224.72877	243.53626	5.42913	0.1756857	0.27578585	2.3375168	20	—	—
228816 2003 BE_{28}	16.9	X	212.27236	178.69725	261.59120	2.41317	0.1387539	0.25511595	2.4621300	20	7 16.8	20.6
228817 2003 BN_{31}	16.7	X	353.94381	313.19800	139.91504	6.40806	0.1500361	0.27888677	2.3201574	20	—	—
228818 2003 BC_{38}	17.2	X	311.84108	102.42675	358.85870	2.22271	0.1635579	0.27399447	2.3476942	20	—	—
228819 2003 BH_{55}	17.3	X	266.36535	97.76140	94.52564	3.28672	0.1123044	0.27756332	2.3275267	20	—	—
228820 2003 BJ_{55}	17.1	X	183.15084	129.47695	78.06433	3.27603	0.1780371	0.26562372	2.3967615	20	11 26.9	20.9
228821 2003 BV_{57}	17.0	X	258.12454	166.86807	321.20024	1.55604	0.1513887	0.26821750	2.3812847	20	11 17.9	19.4
228822 2003 BR_{62}	16.7	X	307.58938	341.83132	89.47860	7.29536	0.1797824	0.26911196	2.3760052	20	11 29.0	18.4
228823 2003 BF_{65}	17.6	X	266.16839	221.66336	217.79442	1.12244	0.1482995	0.26381298	2.4077161	20	9 21.8	20.2
228824 2003 BR_{66}	17.3	X	220.41114	172.83417	326.27998	2.79495	0.1633412	0.26231349	2.4168831	20	10 9.2	20.6
228825 2003 BK_{74}	16.4	X	238.82147	53.72908	94.88861	10.49866	0.1597089	0.26717653	2.3874659	20	11 19.4	19.4
228826 2003 BC_{80}	16.3	X	297.18369	17.42812	74.55476	8.00406	0.0424804	0.26844142	2.3799602	20	12 12.5	19.0
228827 2003 BV_{86}	17.0	X	305.38771	25.36214	117.84985	3.43079	0.1097436	0.27551294	2.3390601	20	—	—
228828 2003 CS_{12}	16.7	X	317.97143	86.48249	336.00153	5.16858	0.1278255	0.26836558	2.3804086	20	12 4.7	19.0
228829 2003 CO_{14}	17.1	X	153.49424	324.46992	221.71769	3.15004	0.1493277	0.25771737	2.4455333	20	10 2.8	20.9
228830 2003 DP	16.7	X	301.32499	177.58134	268.70073	1.82340	0.1547514	0.26817005	2.3815655	20	12 7.8	18.4
228831 2003 DN_{2}	17.2	X	180.49203	26.43121	158.74815	1.57774	0.1274672	0.26112381	2.4242183	20	10 30.9	20.7
228832 2003 DE_{3}	17.5	X	317.16532	132.75283	340.06001	2.13679	0.1435748	0.27387239	2.3483918	20	—	—
228833 2003 DV_{3}	17.3	X	324.83740	326.44700	131.32132	1.30418	0.1795209	0.27316010	2.3524724	20	—	—
228834 2003 DL_{8}	17.5	X	264.88704	90.12104	20.97186	1.88777	0.1310377	0.26488172	2.4012353	20	11 7.3	19.9
228835 2003 DU_{8}	17.8	X	326.07046	313.26290	154.97726	3.50585	0.2507438	0.27545738	2.3393746	20	—	—
228836 2003 DW_{8}	16.7	X	202.70525	114.13745	98.68015	3.14347	0.1527263	0.26707562	2.3880673	20	12 26.8	20.1
228837 2003 EY_{6}	17.4	X	262.48716	234.45812	300.49078	0.67821	0.1173913	0.27196043	2.3593855	20	—	—
228838 2003 EQ_{12}	17.1	X	260.44640	288.91361	245.24403	2.10142	0.1844721	0.27104887	2.3646724	20	—	—
228839 2003 EG_{14}	16.6	X	283.98282	357.70768	80.28398	5.75561	0.0967463	0.26348712	2.4097008	20	10 29.5	19.1
228840 2003 EV_{19}	17.1	X	223.17547	197.96321	312.18169	2.13592	0.1720316	0.26276437	2.4141175	20	10 26.1	20.5
228841 2003 EZ_{24}	17.3	X	338.33639	50.67574	64.25838	3.85966	0.2413340	0.27756752	2.3275032	20	—	—
228842 2003 EN_{32}	16.1	X	331.18178	319.95904	340.73588	8.46088	0.0956582	0.24410204	2.5356450	20	6 25.1	19.0
228843 2003 ES_{46}	16.8	X	181.56532	118.32589	70.51303	6.29984	0.1405411	0.26069740	2.4268611	20	11 5.4	20.5
228844 2003 EX_{51}	17.3	X	310.20022	38.52465	67.12519	3.27489	0.1642832	0.27018381	2.3697171	20	—	—
228845 2003 EQ_{54}	16.9	X	260.49748	329.88222	171.09615	1.04755	0.1304559	0.26384426	2.4075258	20	12 12.7	19.4
228846 2003 EG_{60}	16.7	X	240.64315	98.09712	83.27579	6.09974	0.1721892	0.26683934	2.3894768	20	12 31.9	19.3
228847 2003 FW	16.5	X	242.55294	83.28133	77.28655	23.96676	0.2554410	0.26651989	2.3913857	20	11 25.9	19.6
228848 2003 FC_{31}	16.6	X	144.80511	119.01871	66.12899	7.05891	0.0771759	0.25464755	2.4651483	20	9 26.8	20.2
228849 2003 FP_{37}	17.0	X	306.37759	160.38785	331.86032	2.47975	0.1061107	0.27110011	2.3643744	20	—	—
228850 2003 FZ_{51}	16.1	X	154.28486	162.66341	98.34617	8.06401	0.2020070	0.26357711	2.4091523	20	—	—
228851 2003 FD_{65}	16.7	X	268.17116	54.79629	70.63723	6.48074	0.1338677	0.26457370	2.4030987	20	12 3.1	19.2
228852 2003 FJ_{77}	16.6	X	97.16137	253.68480	301.47093	3.00727	0.1111326	0.24580797	2.5238996	20	8 13.7	20.1
228853 2003 FU_{84}	16.3	X	207.28076	221.02420	321.76177	6.59774	0.0917900	0.26271833	2.4143995	20	11 29.2	19.6
228854 2003 FP_{98}	17.1	X	187.78991	66.65637	98.31631	3.34239	0.1599414	0.25768337	2.4457485	20	10 10.9	20.8
228855 2003 FK_{109}	17.3	X	270.58906	56.85258	104.36506	3.04284	0.1531563	0.26857577	2.3791665	20	—	—
228856 2003 FN_{116}	16.7	X	288.90160	44.48762	48.95614	3.13867	0.1754261	0.26519538	2.3993416	20	11 19.5	18.6
228857 2003 FD_{120}	16.5	X	316.54099	43.77834	114.79194	7.14229	0.0521293	0.27834706	2.3231555	20	—	—
228858 2003 GL	16.7	X	281.23468	247.51257	189.07706	22.33891	0.1116247	0.37336721	1.9100523	20	11 24.4	18.4
228859 2003 GY_{3}	17.1	X	22.87675	258.93408	201.27107	2.21244	0.1984913	0.27972651	2.3155116	20	—	—
228860 2003 GX_{4}	16.4	X	288.11616	44.67862	186.30484	7.18822	0.1483010	0.27996689	2.3141860	20	1 3.8	19.7
228861 2003 GG_{12}	17.0	X	172.67011	253.23065	276.55785	1.75757	0.1291565	0.25560956	2.4589592	20	9 30.9	20.7
228862 2003 GX_{31}	14.2	X	298.05360	136.03630	48.95734	10.73453	0.2261442	0.10379377	4.4842366	20	—	—
228863 2003 GO_{32}	16.3	X	180.88182	15.69776	129.10158	4.89672	0.0673215	0.25157690	2.4851668	20	9 12.5	19.7
228864 2003 GL_{35}	17.4	X	264.64452	72.11954	72.55542	3.06966	0.1571233	0.26650772	2.3914585	20	12 21.9	19.7
228865 2003 GT_{47}	17.0	X	205.84510	126.21901	67.86444	2.79079	0.1579464	0.26216959	2.4177674	20	12 4.7	20.4
228866 2003 HM_{4}	15.9	X	268.18672	219.91679	77.29443	12.92224	0.1812988	0.22438534	2.6820883	20	3 16.6	20.2
228867 2003 HS_{7}	16.0	X	219.58538	53.44573	198.42546	8.45506	0.1037705	0.21254256	2.7808151	20	—	—
228868 2003 HB_{12}	16.0	X	139.74011	151.15573	111.03638	11.65263	0.2292098	0.25693400	2.4505016	20	12 22.3	20.2
228869 2003 HU_{21}	16.2	X	15.50191	333.16579	194.60254	6.87189	0.1722972	0.22764225	2.6564449	20	2 27.5	18.8
228870 2003 HL_{27}	16.8	X	218.40776	114.07079	80.17986	6.05001	0.1589810	0.26282450	2.4137492	20	12 19.6	19.8
228871 2003 HQ_{31}	16.0	X	72.65750	1.45310	226.91137	6.24198	0.0939836	0.24413931	2.5353869	20	8 22.9	19.5
228872 2003 HS_{38}	15.9	X	39.22416	312.87497	262.15083	12.73964	0.2326773	0.23791923	2.5793861	20	7 7.9	18.6
228873 2003 HD_{45}	16.2	X	301.03699	74.77550	47.83815	11.21358	0.2632060	0.26813668	2.3817631	20	—	—
228874 2003 HD_{52}	16.2	X	269.71051	249.11120	73.38163	12.85936	0.0844809	0.23122217	2.6289545	20	4 28.9	19.9
228875 2003 KX_{3}	15.7	X	249.07449	5.24361	280.78510	8.38850	0.2671327	0.21791342	2.7349333	20	1 31.6	20.6
228876 2003 LH_{4}	16.8	X	49.38541	137.61705	236.00958	19.72146	0.0965308	0.37235464	1.9135135	20	—	—
228877 2003 MM_{2}	14.7	X	32.45060	97.72124	264.19243	10.64096	0.2987859	0.18416998	3.0595449	20	—	—
228878 2003 ME_{3}	15.8	X	18.74998	152.11371	85.86932	14.73015	0.2123361	0.23327897	2.6134789	20	6 28.1	18.1
228879 2003 NF	16.1	X	349.75305	347.94684	281.07990	11.30887	0.2688271	0.22937676	2.6430362	20	6 1.2	17.9
228880 2003 OA_{8}	15.0	X	347.36048	79.36423	264.55241	25.21445	0.2363568	0.17466702	3.1695342	20	8 31.7	18.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228881 2003 OT_8	14.7	X	25.02200	57.46040	271.68098	16.12786	0.3337957	0.17763251	3.1341595	20	11 25.7	18.8
228882 2003 OW_{17}	15.5	X	130.65127	252.91858	86.08697	4.75123	0.1683052	0.20025397	2.8934454	20	—	—
228883 Cliffsimak	15.2	X	44.29111	122.85078	234.89228	9.40155	0.1073848	0.18855993	3.0118715	20	12 24.6	19.5
228884 2003 QK_{15}	15.6	X	99.72396	91.23923	250.37795	8.54597	0.1131227	0.19287462	2.9667844	20	—	—
228885 2003 QZ_{24}	15.2	X	20.94755	76.17086	308.84403	6.98566	0.3226863	0.18442897	3.0566799	20	—	—
228886 2003 QF_{28}	15.3	X	17.85850	318.94142	329.81053	10.55129	0.1910348	0.17376595	3.1804819	20	8 29.8	18.8
228887 2003 QR_{31}	16.1	X	237.04338	34.99779	286.95367	2.28334	0.0958683	0.21412640	2.7670855	20	3 15.5	20.2
228888 2003 QA_{67}	16.0	X	297.43149	270.95915	333.74691	3.36791	0.0464163	0.21107287	2.7937086	20	2 26.2	19.8
228889 2003 QH_{70}	15.5	X	77.40101	10.60063	1.14027	10.11128	0.1292258	0.18981724	2.9985568	20	—	—
228890 2003 QH_{78}	15.0	X	73.21662	65.85317	318.13853	8.89494	0.1509983	0.19207598	2.9750026	20	—	—
228891 2003 QU_{99}	14.9	X	52.46951	199.67232	158.52651	24.54556	0.2285257	0.18770268	3.0210349	20	—	—
228892 2003 QL_{115}	15.5	X	318.25742	339.29234	62.77164	11.61545	0.2069020	0.17573066	3.1567318	20	10 11.3	19.0
228893 Gerevich	16.3	X	223.42606	178.07296	146.06259	4.87333	0.1028434	0.20986760	2.8043946	20	3 5.9	20.5
228894 2003 RD_{11}	14.9	X	26.12922	234.43593	116.09129	11.34128	0.1467791	0.18219775	3.0815842	20	11 29.8	19.0
228895 2003 RQ_{22}	15.3	X	17.36840	152.41928	246.90063	12.92317	0.2114423	0.18509431	3.0493504	20	—	—
228896 2003 SF_{11}	16.6	X	104.94544	353.59102	279.77947	19.33832	0.0590652	0.35738958	1.9665642	20	12 24.7	18.9
228897 2003 SG_{22}	15.4	X	354.78449	86.31244	296.70318	8.74857	0.0967340	0.17870161	3.1216466	20	11 12.9	19.5
228898 2003 SB_{29}	15.2	X	42.99324	75.28170	287.51112	7.73905	0.1467365	0.18383718	3.0632361	20	—	—
228899 2003 SG_{58}	15.4	X	58.27226	141.59748	224.69680	12.02168	0.1594767	0.18931851	3.0038207	20	—	—
228900 2003 ST_{69}	15.7	X	121.81672	81.95859	203.29422	4.71043	0.0402299	0.18471516	3.0535218	20	12 17.5	20.1
228901 2003 SG_{71}	15.2	X	330.78431	203.53844	251.31145	7.73156	0.0837209	0.18693443	3.0293063	20	—	—
228902 2003 SS_{79}	15.2	X	351.87571	198.90225	199.24156	17.29721	0.1942248	0.18003611	3.1062016	20	12 9.3	19.0
228903 2003 SN_{107}	15.4	X	29.39308	102.48186	261.33405	4.91173	0.1370020	0.18073928	3.0981399	20	12 16.2	19.6
228904 2003 SO_{133}	15.1	X	350.56401	124.94370	283.69716	8.44180	0.0831690	0.18384654	3.0631322	20	12 11.4	19.0
228905 2003 SL_{140}	15.3	X	350.45401	328.45768	94.67455	4.67725	0.2900572	0.18120562	3.0928221	20	—	—
228906 2003 SC_{141}	15.0	X	335.27998	149.32283	252.58827	9.22311	0.2039974	0.17645890	3.1480407	20	11 9.4	18.2
228907 2003 SO_{145}	15.7	X	45.19910	56.06790	318.99399	10.05403	0.1677337	0.18521847	3.0479876	20	—	—
228908 2003 ST_{145}	15.0	X	25.28189	86.87802	268.92159	13.77707	0.0795559	0.18059043	3.0998420	20	11 22.2	19.3
228909 2003 SZ_{145}	15.2	X	326.66924	147.57046	277.41499	13.66923	0.0749130	0.18090280	3.0962726	20	11 25.1	19.3
228910 2003 SD_{153}	15.5	X	174.14515	253.17088	78.52816	6.94980	0.0724785	0.20171322	2.8794739	20	1 26.3	19.8
228911 2003 SA_{164}	14.9	X	64.95583	272.60092	19.88188	11.08016	0.0765366	0.17433172	3.1735970	20	10 23.8	19.4
228912 2003 SH_{169}	15.5	X	19.03976	207.68340	135.62840	6.25654	0.1385838	0.17763743	3.1341015	20	11 8.3	19.5
228913 2003 SD_{184}	15.7	X	48.82865	320.83136	12.09403	2.83689	0.0619506	0.18018568	3.1044823	20	11 22.0	20.0
228914 2003 ST_{200}	15.6	X	320.00047	359.84430	38.51371	1.90727	0.1502937	0.17256699	3.1951965	20	10 7.9	19.4
228915 2003 SF_{206}	15.8	X	342.76837	135.74916	211.49179	8.63085	0.0883283	0.17427012	3.1743448	20	9 7.7	20.0
228916 2003 SF_{214}	15.3	X	312.02507	48.98082	51.51784	10.61688	0.1074592	0.17866162	3.1221125	20	12 16.2	19.3
228917 2003 SU_{217}	15.9	X	23.22909	194.92583	190.40328	5.75818	0.1183991	0.18264690	3.0765301	20	12 31.6	20.1
228918 2003 SM_{225}	15.2	X	23.20435	187.38442	187.59286	10.06244	0.1144110	0.18097179	3.0954856	20	12 18.6	19.5
228919 2003 SN_{225}	16.0	X	325.46662	312.65523	102.98242	1.71951	0.1956916	0.17705266	3.1409986	20	11 9.6	19.1
228920 2003 SJ_{234}	15.4	X	275.97077	14.12496	72.39063	5.80612	0.1467656	0.17429318	3.1740648	20	10 3.8	19.6
228921 2003 SZ_{238}	15.1	X	255.85935	53.36546	358.58659	16.89800	0.1104074	0.16576911	3.2819628	20	8 3.3	20.1
228922 2003 SL_{245}	16.1	X	53.54039	2.92692	319.36956	0.61199	0.1665331	0.18094215	3.0958237	20	11 29.8	20.4
228923 2003 SB_{254}	15.1	X	30.19207	119.57916	267.27899	8.32921	0.1303638	0.18289696	3.0737253	20	—	—
228924 2003 ST_{256}	15.7	X	78.23829	110.95606	267.98732	0.64913	0.0580209	0.19368092	2.9585448	20	—	—
228925 2003 SE_{267}	15.1	X	89.84141	71.27313	286.23385	7.44545	0.1271672	0.18869894	3.0103922	20	—	—
228926 2003 SQ_{275}	16.2	X	30.83848	326.25327	36.55184	0.73789	0.1654436	0.18090591	3.0962372	20	12 20.9	20.3
228927 2003 SY_{284}	16.1	X	333.63470	104.04161	295.92022	6.44643	0.1466716	0.17779590	3.1322390	20	11 1.8	19.8
228928 2003 SN_{285}	15.6	X	21.62825	115.71397	267.74223	8.52760	0.2203945	0.18151025	3.0893607	20	—	—
228929 2003 SF_{299}	14.4	X	355.03501	113.27627	259.20162	14.61147	0.2248232	0.17551461	3.1593218	20	11 11.1	17.9
228930 2003 SC_{310}	16.1	X	336.33657	275.48448	112.09901	2.50183	0.1965183	0.17527139	3.1622439	20	10 24.9	19.4
228931 2003 SU_{310}	15.4	X	316.47169	84.90321	3.10373	15.35158	0.2366695	0.18083681	3.0970258	20	11 29.4	18.7
228932 2003 SY_{319}	15.8	X	66.71794	98.93204	287.12576	5.99298	0.2042498	0.19178395	2.9780218	20	—	—
228933 2003 SY_{320}	15.0	X	150.99018	175.71035	48.16426	8.91111	0.0269344	0.17811715	3.1284716	20	11 5.7	19.6
228934 2003 SP_{330}	16.4	X	116.88889	216.87563	58.60254	4.55731	0.1278828	0.18341591	3.0679248	20	12 4.8	21.3
228935 2003 SK_{350}	14.8	X	122.47518	226.99734	43.78331	12.05575	0.0357627	0.18141558	3.0904354	20	11 28.6	19.3
228936 2003 SC_{390}	16.0	X	270.41566	50.66945	65.94250	5.97705	0.1134102	0.17813147	3.1283040	20	11 6.4	20.3
228937 2003 SG_{411}	16.1	X	164.91372	88.81586	194.72383	1.16969	0.0398174	0.19274715	2.9680924	20	—	—
228938 2003 TR	15.5	X	26.95370	79.29570	309.76059	6.37352	0.1024537	0.18321810	3.0701326	20	—	—
228939 2003 TQ_6	15.2	X	104.93706	272.81858	86.99599	11.78156	0.1144613	0.19318979	2.9635569	20	—	—
228940 2003 TP_{14}	15.2	X	34.34327	276.83251	100.09447	6.77314	0.2465470	0.18298111	3.0727829	20	—	—
228941 2003 TU_{16}	15.7	X	25.50943	132.46496	246.71850	8.82783	0.1365909	0.18310353	3.0714131	20	12 29.7	19.8
228942 2003 TB_{18}	15.3	X	46.49355	39.93601	284.52572	8.71843	0.0833900	0.17899303	3.1182574	20	11 10.1	19.7
228943 2003 TX_{49}	15.4	X	28.92688	202.30305	152.52185	19.35509	0.1315985	0.18049900	3.1008887	20	12 7.2	19.9
228944 2003 TD_{54}	15.2	X	233.35223	78.17884	52.58702	10.09908	0.0576080	0.17474006	3.1686510	20	10 17.8	19.8
228945 2003 TC_{57}	14.9	X	41.46151	65.98099	269.16977	12.55147	0.1608213	0.17906160	3.1174614	20	11 29.5	19.2
228946 2003 TD_{57}	14.9	X	355.11641	141.74992	259.29910	14.70732	0.0634225	0.17994347	3.1072675	20	12 5.9	19.1
228947 2003 TQ_{59}	15.3	X	338.39609	186.63539	246.06811	8.98096	0.0265099	0.18224827	3.0810147	20	12 20.5	19.5
228948 2003 UX_8	14.9	X	349.61749	105.27949	327.95676	21.93996	0.2089290	0.18143241	3.0902442	20	—	—
228949 2003 UD_{53}	15.2	X	8.56893	71.76681	269.27911	9.52157	0.2074441	0.17316373	3.1878516	20	10 21.3	19.0
228950 2003 UT_{54}	15.2	X	68.02167	76.38502	285.45375	9.68725	0.2557242	0.18542621	3.0457107	20	—	—
228951 2003 UA_{75}	15.1	X	350.67891	135.24734	270.59020	8.40041	0.0783589	0.18060423	3.0996841	20	12 6.8	19.2
228952 2003 UM_{77}	15.8	X	324.91094	129.20435	261.57779	9.37753	0.2072490	0.17264382	3.1942485	20	9 27.8	19.5
228953 2003 UA_{82}	15.1	X	348.27368	324.85764	90.33196	10.73872	0.0588661	0.17976961	3.1092707	20	12 13.8	19.2
228954 2003 UQ_{85}	16.1	X	16.34347	249.80991	124.36720	2.16515	0.1852595	0.17842110	3.1249177	20	12 17.2	19.8
228955 2003 UO_{99}	15.0	X	358.27057	322.30834	100.13272	12.79500	0.0814337	0.17948842	3.1125172	20	—	—
228956 2003 UC_{108}	15.6	X	314.47855	189.50777	266.55337	9.40743	0.1848157	0.17824362	3.1269916	20	12 12.1	18.9
228957 2003 UU_{112}	14.9	X	37.56126	316.64893	60.85991	11.41322	0.1209534	0.18276025	3.0752579	20	—	—
228958 2003 UV_{112}	14.9	X	11.06433	290.92917	62.89088	10.66170	0.2238370	0.17557791	3.1585624	20	11 18.4	18.4
228959 2003 UJ_{113}	15.7	X	14.03550	296.03929	63.13720	14.64021	0.1706808	0.17655221	3.1469314	20	11 22.7	19.5
228960 2003 UC_{114}	15.6	X	70.98760	277.40980	115.32500	5.83552	0.1301283	0.19005713	2.9960331	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
228961 2003 UM_{125}	15.1	X	345.30500	359.37817	67.32187	12.38966	0.1263290	0.18114095	3.0935582	20	12 28.3	18.9
228962 2003 UT_{133}	14.9	X	29.28839	98.30781	240.80771	15.13485	0.0563040	0.17636555	3.1491515	20	11 2.7	19.3
228963 2003 UX_{138}	15.6	X	351.11077	286.49053	137.17176	5.25467	0.1385584	0.18400364	3.0613885	20	—	—
228964 2003 UN_{139}	15.7	X	67.58111	269.01263	56.82191	14.54573	0.1367499	0.18210227	3.0826613	20	12 14.6	20.4
228965 2003 UC_{143}	15.5	X	336.95465	82.83294	301.73210	4.04680	0.1571124	0.17269795	3.1935810	20	10 17.7	19.3
228966 2003 UD_{161}	15.6	X	341.77216	9.80414	39.08009	5.61679	0.1519289	0.17746204	3.1361662	20	11 29.8	19.1
228967 2003 UR_{162}	15.7	X	320.50031	24.84303	110.36486	4.16065	0.2756873	0.18272525	3.0756507	20	—	—
228968 2003 UW_{170}	15.4	X	320.21826	225.62387	228.59168	9.08704	0.0523712	0.18092186	3.0960552	20	12 22.6	19.6
228969 2003 UT_{184}	15.2	X	296.75041	137.28954	29.82474	14.47782	0.0641106	0.18776470	3.0203696	20	—	—
228970 2003 UT_{196}	15.4	X	137.60442	356.10167	341.92502	1.53409	0.0412490	0.19209690	2.9747865	20	—	—
228971 2003 UH_{199}	15.1	X	325.27927	187.32551	212.99498	12.71038	0.1041714	0.17476256	3.1683790	20	10 21.3	18.9
228972 2003 UL_{208}	15.5	X	295.89362	324.94818	151.95750	1.99105	0.2516640	0.17643647	3.1483075	20	11 26.4	19.0
228973 2003 UV_{217}	15.5	X	21.60058	302.06669	114.00284	4.03662	0.0606188	0.18571582	3.0425434	20	—	—
228974 2003 UV_{224}	15.4	X	306.90282	116.04373	324.63188	4.28023	0.1632664	0.17570824	3.1570004	20	11 6.9	19.2
228975 2003 UB_{250}	15.7	X	295.40442	24.69821	73.94816	6.03382	0.1327867	0.17616525	3.1515381	20	11 16.8	19.7
228976 2003 UK_{266}	14.7	X	86.49656	240.60682	37.58856	11.84515	0.0632948	0.17358953	3.1826365	20	10 30.9	19.2
228977 2003 UH_{271}	14.8	X	243.00330	32.73166	102.02560	17.73411	0.1497651	0.17195598	3.2027610	20	10 26.9	19.8
228978 2003 UP_{272}	15.6	X	14.43336	280.71898	138.71498	5.34532	0.1076692	0.18320586	3.0702694	20	—	—
228979 2003 UD_{274}	15.3	X	66.62493	253.27547	104.67177	9.98662	0.1820699	0.18314706	3.0709265	20	—	—
228980 2003 UZ_{289}	15.8	X	343.71963	268.90138	101.71515	2.57618	0.1715936	0.17123476	3.2117477	20	10 15.2	19.3
228981 2003 UC_{316}	15.2	X	51.99351	192.87729	138.58717	8.77911	0.0561010	0.17775798	3.1326844	20	11 25.5	19.7
228982 2003 UF_{316}	16.0	X	268.18210	166.07906	280.93013	3.02690	0.1674730	0.16915622	3.2380041	20	9 15.6	20.6
228983 2003 UU_{322}	16.1	X	99.25189	222.47745	78.38952	2.97173	0.1322428	0.18305689	3.0719349	20	12 18.0	20.7
228984 2003 UA_{375}	15.5	X	156.73195	316.07948	241.91276	5.21834	0.0252018	0.17783155	3.1318204	20	10 9.9	20.0
228985 2003 VR_{7}	15.8	X	351.25341	206.78602	172.38573	1.25539	0.1978957	0.17384375	3.1795330	20	11 11.5	19.2
228986 2003 VP_{11}	14.9	X	21.21623	127.40496	254.53182	25.83512	0.1371555	0.18049076	3.1009831	20	12 24.7	19.1
228987 2003 WP_{5}	15.2	X	3.47634	348.76040	50.78775	5.56618	0.1416875	0.17763837	3.1340905	20	12 23.2	19.1
228988 2003 WN_{10}	15.8	X	50.32589	118.86796	286.68911	8.07175	0.0413083	0.18578967	3.0417371	20	—	—
228989 2003 WW_{11}	15.2	X	347.40256	123.91218	296.02446	9.94416	0.1295384	0.17707573	3.1407258	20	12 22.9	19.0
228990 2003 WV_{36}	15.3	X	345.94890	192.34915	272.94351	9.55993	0.0702539	0.18409674	3.0603563	20	—	—
228991 2003 WH_{55}	15.0	X	274.92286	220.75829	264.69566	9.99646	0.0485428	0.17474104	3.1686391	20	11 29.5	19.3
228992 2003 WV_{71}	15.3	X	83.26584	54.63214	296.10605	10.08548	0.3017615	0.18666013	3.0322733	20	—	—
228993 2003 WJ_{72}	15.6	X	65.39363	107.95657	276.37069	10.21755	0.0513754	0.18370208	3.0647379	20	—	—
228994 2003 WO_{87}	14.7	X	306.69665	91.23325	6.16501	15.84147	0.3492346	0.16990797	3.2284461	20	10 30.8	17.9
228995 2003 WO_{95}	15.0	X	2.90908	329.75664	64.57631	12.45206	0.0728546	0.17677781	3.1442535	20	12 7.7	19.0
228996 2003 WF_{101}	15.9	X	2.33326	161.15568	294.11485	7.62160	0.0832349	0.18646830	3.0343526	20	—	—
228997 2003 WM_{101}	14.6	X	86.85076	250.45605	84.91857	22.65514	0.1169242	0.18297080	3.0728983	20	—	—
228998 2003 WJ_{112}	15.2	X	284.92528	154.31297	274.46611	8.79742	0.1287452	0.16848869	3.2465508	20	9 17.6	19.8
228999 2003 WN_{141}	14.4	X	355.98295	292.55029	85.72090	18.07754	0.2227832	0.17110527	3.2133679	20	11 24.3	18.0
229000 2003 WQ_{148}	14.8	X	298.15185	16.95604	78.17297	29.16682	0.1224796	0.17553206	3.1591124	20	11 22.9	18.9
229001 2003 WL_{155}	15.3	X	73.34323	233.82376	105.18419	11.05384	0.1838701	0.18088503	3.0964753	20	—	—
229002 2003 WN_{169}	14.7	X	323.30359	327.23940	86.22049	26.44491	0.2247387	0.17273722	3.1930969	20	11 10.9	18.4
229003 2003 WZ_{170}	14.8	X	41.60515	268.34743	104.73764	17.58026	0.1575310	0.18081532	3.0972712	20	—	—
229004 2003 WL_{178}	16.2	X	198.84659	134.03252	49.36761	6.00836	0.0836072	0.17599495	3.1535707	20	11 6.2	21.0
229005 2003 WX_{188}	14.8	X	356.46335	120.77154	269.65447	21.77560	0.1554213	0.17947448	3.1126784	20	12 3.2	18.6
229006 2003 WT_{192}	15.3	X	333.83688	3.70469	83.52915	17.21577	0.1133135	0.17820232	3.1274748	20	—	—
229007 2003 XF_{11}	17.0	X	41.95227	173.93577	116.01130	8.62193	0.8472365	0.30273854	2.1966334	20	12 29.1	22.0
229008 2003 XT_{11}	15.2	X	329.13622	229.44857	224.13046	17.12749	0.2409507	0.17613215	3.1519328	20	—	—
229009 2003 XJ_{22}	14.7	X	334.38875	66.86766	351.50691	21.68390	0.2096262	0.17602003	3.1532711	20	11 23.3	18.5
229010 2003 XJ_{26}	15.4	X	278.25725	44.84534	103.20281	9.97160	0.1111526	0.17612284	3.1520439	20	12 24.7	19.5
229011 2003 YF	16.6	X	22.43893	232.14640	126.68741	24.78344	0.0936497	0.35334248	1.9815520	20	—	—
229012 2003 YD_{14}	15.4	X	327.75822	32.45012	65.33772	15.86983	0.2542831	0.17465378	3.1696943	20	—	—
229013 2003 YR_{23}	15.4	X	24.78263	92.01227	281.49457	18.49383	0.2145836	0.17691086	3.1426769	20	—	—
229014 2003 YN_{27}	14.4	X	274.81140	206.83305	264.43116	25.06281	0.0997882	0.17311030	3.1885075	20	11 1.9	19.1
229015 2003 YV_{45}	14.9	X	353.43737	126.58787	282.00728	16.12113	0.3157793	0.17747149	3.1360549	20	—	—
229016 2003 YW_{49}	15.2	X	251.17002	104.66378	50.12510	0.81160	0.1326698	0.17115773	3.2127113	20	11 22.9	19.7
229017 2003 YS_{61}	15.2	X	314.61649	326.39462	116.69532	6.29713	0.1431673	0.17201680	3.2020059	20	11 26.9	19.1
229018 2003 YT_{61}	14.7	X	261.33360	268.27923	259.21729	14.22623	0.1933991	0.17261871	3.1945581	20	12 12.6	19.0
229019 2003 YD_{65}	14.6	X	281.43031	109.84307	117.04944	17.10485	0.1893773	0.18100285	3.0951315	20	1 3.6	19.3
229020 2003 YU_{68}	17.1	X	174.69738	144.56521	204.06674	1.83535	0.1692194	0.31162122	2.1546895	20	2 7.9	20.3
229021 2003 YG_{92}	14.7	X	329.86388	304.72629	97.35037	20.30051	0.2054854	0.17247348	3.1963512	20	11 7.6	18.5
229022 2003 YO_{100}	15.0	X	7.06487	117.68538	316.71895	13.49599	0.2152764	0.17652636	3.1472386	20	—	—
229023 2003 YT_{160}	14.9	X	285.57507	85.71472	89.38722	25.93437	0.2642019	0.17870300	3.1216305	20	—	—
229024 2003 YT_{164}	15.7	X	334.27919	341.28573	77.74226	1.43287	0.1771634	0.17437561	3.1730644	20	11 30.1	19.0
229025 2004 BJ_{13}	17.4	X	51.46935	196.80875	288.41730	2.34395	0.0557010	0.30987698	2.1627675	20	2 15.0	19.4
229026 2004 BS_{32}	17.8	X	31.41772	151.71115	338.47523	3.74805	0.0336946	0.30748099	2.1739883	20	1 22.7	19.9
229027 2004 BK_{46}	15.3	X	28.00464	312.20752	144.13575	6.71329	0.1029013	0.18127762	3.0920031	20	—	—
229028 2004 CZ_{3}	16.9	X	148.08008	28.00612	350.29519	4.62130	0.1409288	0.30994335	2.1624588	20	2 17.9	19.7
229029 2004 CS_{45}	16.3	X	185.32216	256.76555	357.63838	6.07843	0.1556131	0.28900881	2.2656631	20	—	—
229030 2004 CQ_{58}	15.1	X	7.43059	129.36515	339.57042	9.90254	0.0925334	0.17870220	3.1216397	20	—	—
229031 2004 DE_{33}	16.3	X	140.92017	258.67454	355.97339	7.57698	0.1182309	0.27912198	2.3188537	20	12 20.4	19.8
229032 2004 DN_{34}	15.5	X	21.64741	312.89978	122.36229	6.01997	0.1800357	0.17646827	3.1479292	20	—	—
229033 2004 DF_{46}	16.6	X	183.87689	37.02608	252.12727	5.60205	0.1814355	0.29352127	2.2423823	20	—	—
229034 2004 DP_{70}	17.5	X	329.38982	184.14107	51.11411	0.81916	0.0888060	0.30826527	2.1702994	20	3 11.7	19.8
229035 2004 EJ_{3}	15.3	X	265.67462	102.01945	128.52188	12.27661	0.2474597	0.17225704	3.1990281	20	—	—
229036 2004 EX_{55}	17.0	X	303.12786	318.20206	271.96132	4.46904	0.1261002	0.30084156	2.2058577	20	1 20.0	19.8
229037 2004 EE_{62}	16.5	X	330.18972	287.02832	170.83839	2.34845	0.0165779	0.22507957	2.6765704	20	—	—
229038 2004 EG_{63}	17.0	X	182.54154	3.21162	268.09719	2.30814	0.1253161	0.28733550	2.2744507	20	—	—
229039 2004 EN_{73}	17.3	X	15.53755	297.38404	180.57353	7.86913	0.0731541	0.29678583	2.2259083	20	—	—
229040 2004 EC_{77}	17.1	X	224.84506	159.70964	92.05653	1.42897	0.1682988	0.29084428	2.2561209	20	—	—

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229041 2004 EJ_{94}	16.9	X	41.21784	55.49392	70.47806	3.75513	0.0682090	0.30376074	2.1917026	20	2 2.6	18.9
229042 2004 EQ_{98}	16.5	X	40.37071	193.38438	163.81638	10.58206	0.2315475	0.28140257	2.3063082	20	—	—
229043 2004 EG_{102}	17.7	X	122.60115	240.70981	59.12673	1.66599	0.0941964	0.28356184	2.2945852	20	—	—
229044 2004 FX_{8}	16.2	X	102.34701	264.20507	69.28952	6.93090	0.1501703	0.28325046	2.2962666	20	—	—
229045 2004 FM_{11}	17.2	X	283.72313	243.94989	301.41290	6.28209	0.0977716	0.29232561	2.2484927	20	—	—
229046 2004 FB_{23}	16.8	X	15.88862	270.89436	3.66922	6.13094	0.1085553	0.26000926	2.4311411	20	8 11.3	19.3
229047 2004 FP_{28}	17.2	X	134.35656	137.97476	101.43056	2.38501	0.1486586	0.27211532	2.3584901	20	11 23.7	20.9
229048 2004 FE_{34}	17.2	X	304.21336	314.58065	244.61430	3.45974	0.1386132	0.29693627	2.2251565	20	—	—
229049 2004 FH_{36}	17.2	X	188.85699	184.16076	79.10083	3.35587	0.1457877	0.28531188	2.2851926	20	—	—
229050 2004 FK_{57}	14.7	X	85.96536	124.07853	349.72775	7.71644	0.1054749	0.12690664	3.9217493	20	4 13.5	20.2
229051 2004 FR_{60}	17.1	X	192.61342	152.25573	126.73558	7.38926	0.1940574	0.28462077	2.2888904	20	—	—
229052 2004 FH_{64}	17.0	X	191.84174	206.05473	48.51679	5.11087	0.1339170	0.28404645	2.2919746	20	—	—
229053 2004 FS_{67}	16.3	X	147.97462	74.30862	157.28073	7.92641	0.0930014	0.27372337	2.3492440	20	11 30.0	19.8
229054 2004 FT_{85}	17.1	X	65.16079	337.66128	108.61453	7.42804	0.0451061	0.30272843	2.1966823	20	1 12.4	19.0
229055 2004 FD_{112}	17.4	X	261.98750	117.47273	118.17223	0.47011	0.1226753	0.29469615	2.2364185	20	—	—
229056 2004 FC_{126}	17.5	X	188.73226	251.87348	12.35500	3.28718	0.1015309	0.28628749	2.2799980	20	—	—
229057 2004 FB_{137}	16.5	X	129.46040	207.90495	69.18153	10.58298	0.2010093	0.27489098	2.3425870	20	—	—
229058 2004 FR_{142}	17.3	X	251.84712	173.24723	40.51551	2.72297	0.1847328	0.28761548	2.2729744	20	—	—
229059 2004 FA_{165}	17.9	X	86.73218	33.80705	331.40422	0.49742	0.1710372	0.29201716	2.2500757	20	—	—
229060 2004 GM_{4}	17.7	X	274.22181	162.51268	39.60337	3.40334	0.1007286	0.29090053	2.2558300	20	—	—
229061 2004 GJ_{12}	16.8	X	169.18129	11.26085	255.23317	4.96960	0.1396719	0.28149716	2.3057915	20	—	—
229062 2004 GB_{24}	17.0	X	156.57038	161.94243	99.76651	5.41980	0.1207601	0.27808043	2.3246403	20	—	—
229063 2004 GP_{31}	17.0	X	117.72643	201.80697	52.82030	3.05701	0.1838835	0.26979165	2.3720129	20	11 26.9	20.9
229064 2004 GJ_{33}	16.8	X	209.17691	12.17048	215.03772	5.02480	0.1213212	0.28193067	2.3034272	20	—	—
229065 2004 GK_{46}	17.5	X	89.51814	177.52697	98.53775	1.56891	0.1096537	0.26986632	2.3715753	20	11 23.2	20.9
229066 2004 GM_{46}	16.7	X	50.06721	318.09100	45.48554	4.63462	0.1253390	0.27889496	2.3201120	20	—	—
229067 2004 GZ_{59}	17.4	X	258.99872	36.25958	164.39029	3.35284	0.1017309	0.28697330	2.2763641	20	—	—
229068 2004 GD_{71}	17.3	X	41.42843	220.05477	70.79162	5.41075	0.1861324	0.26187216	2.4195977	20	10 27.3	20.4
229069 2004 GK_{79}	17.3	X	219.87440	242.00980	59.49156	2.46686	0.0732806	0.29913960	2.2142166	20	1 24.3	20.1
229070 2004 HJ_{8}	17.2	X	296.93666	109.84007	72.71111	5.34314	0.0891936	0.29133562	2.2535835	20	—	—
229071 2004 HS_{34}	16.4	X	130.55308	196.32369	76.25162	8.13782	0.0968146	0.27650281	2.3334743	20	—	—
229072 2004 HO_{36}	16.7	X	257.32878	87.55014	106.64323	6.52296	0.0438373	0.28531273	2.2851881	20	—	—
229073 2004 HO_{57}	17.3	X	339.44978	24.44271	76.62751	2.58718	0.1724594	0.28439915	2.2900793	20	—	—
229074 2004 JL_{6}	16.9	X	173.69179	343.84482	252.03395	4.61667	0.1893378	0.27548621	2.3392114	20	12 23.7	20.5
229075 2004 JX_{18}	17.0	X	216.89113	333.87002	240.80392	4.40588	0.0922546	0.28018421	2.3129893	20	—	—
229076 2004 JO_{50}	16.6	X	47.32962	325.80314	50.53167	7.52903	0.1339046	0.27882445	2.3205031	20	—	—
229077 2004 LA_{13}	17.2	X	179.22036	157.58708	93.60324	8.69669	0.1464173	0.27970301	2.3156413	20	—	—
229078 2004 LY_{15}	15.5	X	286.20553	200.60098	114.50756	15.19619	0.2197737	0.23870473	2.5737244	20	4 22.9	19.4
229079 2004 LH_{17}	16.6	X	185.96434	325.13519	271.55175	5.09635	0.1069827	0.27604827	2.3360351	20	—	—
229080 2004 LS_{19}	16.6	X	3.51367	325.88427	55.65962	7.78058	0.1071469	0.27002675	2.3706359	20	12 23.6	19.3
229081 2004 MV_{5}	16.8	X	258.96547	298.67552	294.75408	4.80221	0.1189895	0.28454999	2.2892699	20	—	—
229082 2004 NR_{6}	15.8	X	179.64053	229.13479	127.07130	10.38902	0.2155642	0.22076235	2.7113529	20	3 5.9	20.5
229083 2004 NE_{11}	15.9	X	213.40436	247.67293	89.71639	8.32876	0.2938779	0.22573822	2.6713614	20	3 9.6	20.9
229084 2004 NL_{11}	16.2	X	270.54563	249.18982	100.53209	9.70972	0.1841840	0.23873463	2.5735095	20	5 19.9	19.9
229085 2004 NC_{13}	17.0	X	263.18962	308.77722	259.36034	5.40014	0.2564932	0.28362942	2.2942207	20	—	—
229086 2004 NG_{14}	17.2	X	259.42967	80.21159	246.56227	2.94548	0.2412197	0.23435068	2.6055049	20	3 29.4	21.4
229087 2004 NS_{16}	16.5	X	340.54441	70.29304	240.93468	3.04585	0.1029672	0.24710415	2.5150658	20	7 26.6	19.2
229088 2004 NM_{31}	16.3	X	130.86522	197.23608	101.91571	11.87703	0.2064559	0.26977516	2.3721096	20	—	—
229089 2004 OG_{8}	16.1	X	82.05278	23.97222	295.96603	11.30504	0.1004770	0.26538975	2.3981699	20	—	—
229090 2004 PQ_{10}	16.7	X	275.84789	57.37953	298.25571	11.33646	0.2142131	0.23971664	2.5664763	20	5 25.9	20.4
229091 2004 PV_{36}	16.4	X	238.11248	239.33028	275.45464	5.25272	0.0675983	0.26183484	2.4198276	20	12 6.9	19.5
229092 2004 PL_{95}	16.5	X	244.66592	52.76592	254.57834	6.56447	0.2344519	0.22795052	2.6540494	20	2 21.7	21.0
229093 2004 PV_{112}	15.7	X	168.57450	359.74444	118.87421	15.48520	0.0449848	0.24189604	2.5510377	20	7 22.4	19.1
229094 2004 QT_{4}	16.3	X	185.75513	283.61624	101.07666	4.55999	0.2437702	0.22261246	2.6963095	20	4 13.2	21.0
229095 2004 QC_{7}	16.0	X	143.09155	252.39131	127.11164	18.31431	0.2196009	0.21766954	2.7369757	20	3 4.7	20.6
229096 2004 QQ_{7}	16.8	X	303.93087	292.09377	346.50802	2.52745	0.1008563	0.23084803	2.6317942	20	4 8.2	20.2
229097 2004 QC_{9}	15.5	X	145.72439	329.53050	17.11484	6.56125	0.3349720	0.21044599	2.7992538	20	2 5.7	20.4
229098 2004 QO_{18}	16.4	X	197.69159	264.75402	66.21647	13.38576	0.2800194	0.22329660	2.6907993	20	2 22.9	21.5
229099 2004 RM_{13}	16.6	X	172.33098	190.43921	170.34412	5.01832	0.1255295	0.21970873	2.7200142	20	2 27.6	20.9
229100 2004 RC_{26}	15.9	X	223.00337	269.06333	101.38801	12.58911	0.2257264	0.22964401	2.6409852	20	4 28.5	20.6
229101 2004 RU_{28}	16.4	X	156.39100	54.70840	353.67751	6.60121	0.2492062	0.22276861	2.6950494	20	4 15.3	21.1
229102 2004 RV_{31}	16.6	X	267.34057	199.13293	112.72706	4.06081	0.1177771	0.23062686	2.6334765	20	4 5.2	20.3
229103 2004 RC_{32}	16.1	X	207.87454	216.06157	154.17127	5.31852	0.0722010	0.22864555	2.6486681	20	4 17.0	20.0
229104 2004 RW_{33}	16.6	X	309.38715	243.03339	49.42798	4.52318	0.1684934	0.23529531	2.5985268	20	4 25.8	19.6
229105 2004 RP_{39}	16.3	X	144.10327	0.18518	25.74641	2.48916	0.3094060	0.21725229	2.7404790	20	3 16.8	21.0
229106 2004 RJ_{40}	16.5	X	129.17217	297.33531	185.84426	7.19507	0.1532580	0.23194066	2.6235225	20	6 19.1	20.7
229107 2004 RZ_{49}	16.4	X	152.52670	204.25613	166.34539	3.78335	0.2082014	0.21725226	2.7404792	20	2 26.8	20.9
229108 2004 RA_{51}	16.4	X	271.52363	171.40924	125.52373	3.48474	0.2489464	0.22970106	2.6405479	20	3 5.9	20.5
229109 2004 RQ_{56}	17.0	X	274.30268	100.67541	216.18975	3.10357	0.1324178	0.23198297	2.6232035	20	4 15.6	20.6
229110 2004 RG_{64}	16.5	X	159.30649	37.31981	333.55649	2.64282	0.2101631	0.21800157	2.7341960	20	3 3.9	20.9
229111 2004 RR_{74}	16.4	X	185.51788	296.86834	104.52463	3.68917	0.1817123	0.22565695	2.6720028	20	5 2.0	20.8
229112 2004 RV_{75}	16.3	X	150.37845	338.90380	20.60046	7.84212	0.1574554	0.21417080	2.7667030	20	2 11.3	20.7
229113 2004 RN_{82}	17.2	X	164.42575	153.22120	262.20281	0.75422	0.2420018	0.22398999	2.6852433	20	5 1.4	21.7
229114 2004 RE_{89}	16.1	X	125.02903	133.55426	227.86110	6.02426	0.3317473	0.21240237	2.7820386	20	2 2.2	20.7
229115 2004 RZ_{96}	16.3	X	163.87946	62.97469	297.98364	8.29086	0.2244549	0.21770650	2.7366659	20	2 23.4	21.0
229116 2004 RK_{99}	16.7	X	222.50065	57.37097	296.03576	3.52346	0.1015526	0.22768670	2.6560991	20	4 6.4	20.8
229117 2004 RH_{102}	16.6	X	287.36860	27.20579	270.61792	3.50299	0.1057847	0.23101627	2.6305164	20	4 9.6	20.2
229118 2004 RJ_{105}	16.2	X	122.70720	157.03103	240.30338	7.95238	0.1558259	0.21436919	2.7649957	20	2 21.8	20.3
229119 2004 RR_{108}	16.4	X	225.82754	131.42516	261.36133	3.71515	0.0486276	0.23491209	2.6013521	20	6 6.8	20.0
229120 2004 RE_{121}	16.7	X	304.79126	283.07338	5.27262	2.88758	0.0530711	0.23229119	2.6208825	20	4 29.9	20.1

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
229121	2004 RQ_{136}	15.6	X	191.68502	108.67557	239.61889	7.96028	0.2474324	0.22109397	2.7086410	20	2 29.3	20.6
229122	2004 RM_{138}	15.7	X	153.38331	258.06859	225.56576	14.04655	0.0579361	0.23862339	2.5743092	20	7 7.6	19.7
229123	2004 RC_{139}	15.7	X	170.23784	71.44462	270.53336	10.67184	0.1480327	0.21699034	2.7426841	20	2 1.9	20.1
229124	2004 RV_{157}	16.5	X	85.10489	0.81368	275.85373	5.33419	0.0947282	0.25420680	2.4679969	20	11 13.4	20.0
229125	2004 RE_{162}	16.9	X	283.60016	50.84316	303.38040	10.17923	0.1928969	0.23754131	2.5821212	20	6 7.8	20.4
229126	2004 RP_{176}	15.3	X	163.57853	151.49849	232.16770	8.22159	0.1923390	0.22104919	2.7090068	20	3 18.8	19.9
229127	2004 RD_{178}	16.0	X	162.28238	165.79124	226.06177	6.29759	0.0551979	0.22340789	2.6899056	20	3 20.1	20.0
229128	2004 RG_{178}	15.9	X	161.24006	148.24971	299.00722	9.79878	0.1365746	0.22977535	2.6399787	20	6 3.3	20.1
229129	2004 RV_{187}	16.4	X	267.42233	99.77052	264.04545	7.29911	0.1009617	0.23508973	2.6000415	20	6 13.9	19.8
229130	2004 RR_{191}	15.1	X	162.27480	115.75321	240.15746	6.51549	0.2371226	0.21536553	2.7564615	20	2 17.0	19.9
229131	2004 RC_{206}	16.1	X	181.65218	73.98167	298.29966	7.99491	0.2738680	0.21983230	2.7189948	20	3 21.0	21.2
229132	2004 RH_{218}	15.9	X	256.40675	61.02498	275.37342	10.16465	0.1990891	0.22891437	2.6465941	20	4 8.4	20.3
229133	2004 RQ_{218}	16.1	X	299.81283	35.27643	297.69419	11.46905	0.1842036	0.23553434	2.5967685	20	6 3.4	19.3
229134	2004 RU_{218}	15.8	X	183.43084	101.61844	301.11338	13.18103	0.1296358	0.22379613	2.6867938	20	4 24.5	20.3
229135	2004 RO_{219}	15.5	X	157.65401	65.78344	288.41739	11.50934	0.1179072	0.21361288	2.7715184	20	2 3.4	19.7
229136	2004 RM_{227}	16.8	X	111.68233	120.24970	310.90106	3.26133	0.1067943	0.21580595	2.7527098	20	3 18.2	20.7
229137	2004 RK_{269}	17.0	X	280.08873	35.26778	282.75002	1.08599	0.0661604	0.23188036	2.6239773	20	5 4.3	20.4
229138	2004 RF_{289}	15.6	X	210.41748	156.76816	275.68655	21.23582	0.0726802	0.23553829	2.5967394	20	7 7.6	19.4
229139	2004 RF_{292}	16.1	X	358.45740	126.05993	311.82456	8.41967	0.1818422	0.19773137	2.9180026	20	—	—
229140	2004 RQ_{292}	16.3	X	190.72616	226.22921	89.90536	6.31219	0.2314677	0.21487401	2.7606634	20	1 27.4	21.1
229141	2004 RD_{299}	16.9	X	246.57987	339.18614	23.88072	1.15052	0.1006464	0.23212696	2.6221185	20	5 17.3	20.6
229142	2004 RH_{311}	15.7	X	140.32489	336.46079	45.48973	6.55475	0.1315296	0.21334240	2.7738604	20	2 25.9	19.9
229143	2004 RO_{315}	15.9	X	187.07861	262.80563	87.21336	11.87125	0.2221938	0.22156372	2.7048112	20	3 7.4	20.7
229144	2004 RF_{318}	16.1	X	332.86091	24.80358	312.45326	7.65012	0.1814593	0.24089933	2.5580694	20	8 17.1	18.4
229145	2004 RD_{326}	15.4	X	132.98370	125.95281	269.88946	12.45761	0.1681128	0.21124966	2.7921497	20	2 29.7	20.0
229146	2004 SV_{1}	16.0	X	98.32068	171.50043	276.33027	12.09037	0.1471412	0.21768000	2.7368881	20	3 23.2	20.0
229147	2004 SD_{13}	16.1	X	229.30755	309.95843	46.91741	5.02658	0.0748122	0.22871228	2.6481529	20	4 22.7	19.8
229148	2004 SP_{17}	16.2	X	8.70006	200.37505	96.79262	9.35337	0.2314915	0.24530198	2.5273691	20	9 19.8	18.7
229149	2004 SN_{23}	16.9	X	180.54281	140.83357	195.99361	3.69735	0.0976805	0.21397336	2.7684047	20	2 5.5	21.1
229150	2004 ST_{31}	16.7	X	153.03334	57.46943	323.34620	2.70155	0.1144127	0.21755892	2.7379034	20	3 3.1	20.7
229151	2004 SY_{37}	15.9	X	164.25454	269.18646	105.43463	4.93007	0.0904886	0.21645723	2.7471855	20	3 8.1	20.0
229152	2004 SY_{40}	15.7	X	6.24512	354.94032	22.18610	10.50962	0.1119286	0.18978513	2.9988950	20	11 27.0	19.5
229153	2004 SZ_{43}	15.8	X	142.50542	172.44691	250.31057	3.93679	0.1530477	0.22001210	2.7175133	20	4 15.4	20.0
229154	2004 SG_{49}	15.7	X	138.52367	240.22285	133.23202	15.87157	0.1126749	0.21357127	2.7718783	20	2 8.9	19.8
229155	2004 SP_{54}	15.9	X	137.65005	285.84662	88.42387	5.82924	0.1725141	0.21194838	2.7860098	20	2 17.2	20.2
229156	2004 TU	16.0	X	90.53314	60.58700	7.77755	3.25639	0.0763190	0.21292335	2.7774986	20	2 15.1	19.6
229157	2004 TC_{2}	16.0	X	178.46267	328.63684	3.69889	5.98143	0.0705799	0.21419485	2.7664959	20	1 30.5	20.2
229158	2004 TF_{4}	16.6	X	209.14790	272.46178	53.12959	1.57467	0.0981807	0.21772163	2.7365392	20	2 21.9	20.6
229159	2004 TW_{14}	16.0	X	190.81623	61.65033	248.13514	7.84508	0.2377803	0.21288650	2.7778192	20	1 17.9	20.9
229160	2004 TW_{42}	16.7	X	90.65199	333.72113	250.28888	2.78190	0.1200177	0.23958038	2.5674493	20	9 12.8	20.4
229161	2004 TL_{52}	15.9	X	347.19066	89.49899	289.46312	0.77990	0.1022285	0.18430429	3.0580583	20	10 30.9	19.5
229162	2004 TU_{65}	16.0	X	209.78770	310.56074	34.62568	6.76888	0.0958977	0.22145534	2.7056936	20	3 18.9	20.1
229163	2004 TC_{67}	16.1	X	228.02081	237.94860	94.75716	6.16577	0.2697749	0.22339315	2.6900240	20	3 14.2	20.9
229164	2004 TA_{75}	15.9	X	151.10814	0.46809	29.91367	3.44664	0.1462578	0.21521106	2.7577802	20	3 17.1	20.1
229165	2004 TK_{75}	16.1	X	242.15776	153.28988	206.65753	3.54020	0.1294424	0.22693240	2.6619816	20	5 5.7	20.0
229166	2004 TP_{96}	16.4	X	115.78175	294.51473	119.90251	0.62919	0.0654425	0.21415620	2.7668288	20	2 27.0	20.2
229167	2004 TM_{97}	16.6	X	304.45029	212.65762	38.92910	3.92700	0.0387206	0.21967040	2.7203306	20	3 16.9	20.2
229168	2004 TP_{129}	16.4	X	119.35013	344.74042	75.47370	4.55285	0.1842080	0.21685955	2.7437867	20	3 26.7	20.5
229169	2004 TQ_{130}	15.5	X	281.92146	224.21052	52.11056	13.33285	0.1034593	0.22253641	2.6969237	20	3 15.9	19.5
229170	2004 TR_{136}	15.9	X	139.23299	140.64823	294.03544	5.12823	0.1209394	0.22096344	2.7097076	20	4 23.3	20.0
229171	2004 TW_{136}	15.5	X	112.93032	128.19419	259.19597	4.70330	0.0819317	0.20902192	2.8119537	20	1 22.7	19.3
229172	2004 TR_{138}	15.9	X	221.40482	72.56703	258.88253	8.20589	0.0576992	0.22113687	2.7082907	20	3 8.9	20.1
229173	2004 TU_{145}	16.2	X	95.07187	291.42106	170.04967	3.48475	0.1623615	0.21802273	2.7340190	20	4 15.7	19.9
229174	2004 TA_{151}	16.7	X	126.40292	43.99487	351.93903	2.43174	0.0787895	0.21372786	2.7705243	20	2 18.9	20.6
229175	2004 TV_{157}	16.3	X	120.34540	124.80483	274.50615	3.27098	0.0778847	0.21086632	2.7955327	20	2 14.4	20.2
229176	2004 TW_{157}	16.0	X	283.16391	7.54589	265.13045	3.92208	0.1247996	0.21911497	2.7249258	20	2 29.9	20.0
229177	2004 TF_{158}	16.7	X	86.07465	145.54334	287.96927	2.40908	0.0789108	0.20998576	2.8033424	20	2 14.7	20.3
229178	2004 TD_{160}	16.4	X	245.66377	35.70663	246.21753	3.35180	0.0324009	0.21254057	2.7808324	20	2 10.1	20.5
229179	2004 TD_{166}	16.3	X	206.63614	137.79958	210.11981	4.45699	0.0214786	0.22161691	2.7043784	20	3 16.9	20.1
229180	2004 TU_{177}	17.0	X	231.92828	32.72002	307.44549	1.17291	0.1061647	0.22556510	2.6727281	20	3 31.8	21.1
229181	2004 TX_{178}	16.7	X	316.59758	225.14887	47.48022	1.03602	0.0593154	0.22890587	2.6466596	20	4 25.7	19.9
229182	2004 TK_{187}	16.3	X	34.00646	280.98950	205.51530	3.81214	0.1551941	0.21120447	2.7925480	20	2 9.4	19.3
229183	2004 TH_{188}	16.8	X	228.95223	71.16421	204.81839	3.51616	0.0182945	0.21159792	2.7890852	20	1 15.7	20.7
229184	2004 TV_{196}	16.5	X	231.54647	66.08795	205.66141	3.79562	0.0183908	0.20960658	2.8067223	20	1 13.9	20.4
229185	2004 TH_{210}	15.9	X	165.07783	33.82195	338.70941	4.70091	0.1259750	0.21665418	2.7455203	20	3 6.2	20.1
229186	2004 TO_{219}	16.2	X	152.41449	178.36923	203.69771	8.43557	0.0356843	0.21549123	2.7553894	20	2 23.8	20.2
229187	2004 TP_{219}	16.9	X	131.61886	53.61788	4.45447	1.48901	0.0769395	0.21736671	2.7395172	20	3 22.6	20.6
229188	2004 TF_{221}	15.9	X	120.91538	28.49492	71.84949	10.85019	0.2232810	0.22086207	2.7105367	20	5 19.9	20.3
229189	2004 TH_{222}	15.6	X	163.76525	291.79065	80.72423	14.18791	0.2470952	0.21657279	2.7462082	20	3 19.1	20.6
229190	2004 TN_{225}	16.8	X	7.06713	201.56551	51.35215	1.43172	0.1522579	0.23477457	2.6023678	20	6 20.3	19.1
229191	2004 TD_{241}	15.8	X	63.97181	161.42921	252.94822	7.19652	0.2073001	0.20392847	2.8585831	20	1 5.7	18.8
229192	2004 TN_{256}	16.2	X	42.70669	129.89079	356.42126	3.78172	0.0504034	0.21316275	2.7754186	20	2 19.8	19.8
229193	2004 TE_{276}	16.3	X	36.84413	185.55159	52.46815	3.84764	0.0652563	0.22993016	2.6387936	20	7 13.2	19.5
229194	2004 TD_{281}	15.8	X	124.22735	317.95452	71.53530	4.62383	0.1247088	0.20957695	2.8069868	20	2 16.2	19.8
229195	2004 TV_{285}	16.0	X	184.26701	33.32894	276.01058	6.81474	0.2091003	0.21073042	2.7967344	20	1 13.1	20.6
229196	2004 TN_{303}	16.5	X	157.18753	108.42061	290.82484	2.45281	0.1027866	0.22087942	2.7103947	20	3 28.2	20.6
229197	2004 TV_{346}	15.9	X	208.54641	96.60462	287.35255	3.99461	0.0679218	0.22475779	2.6791244	20	5 2.5	19.8
229198	2004 TS_{357}	15.9	X	35.77141	57.44696	279.91435	1.97543	0.0704291	0.18753184	3.0228694	20	11 13.9	20.0
229199	2004 TB_{368}	17.0	X	265.68838	70.34659	43.66902	4.06184	0.1823946	0.24500971	2.5293787	20	10 31.0	19.7
229200	2004 UT_{7}	15.9	X	101.34160	226.27390	251.75757	7.31221	0.1147514	0.21843228	2.7306005	20	5 6.4	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229201 2004 UA_{10}	17.1	X	239.84849	292.92357	230.22142	18.70277	0.1039620	0.37720481	1.8970753	20	—	—
229202 2004 VR_{6}	15.5	X	246.64909	230.06754	215.73686	10.54802	0.0506056	0.17565392	3.1576512	20	9 2.7	20.2
229203 2004 VA_{8}	16.5	X	122.98679	270.43584	121.26624	2.05361	0.0903484	0.20954527	2.8072697	20	2 11.5	20.3
229204 2004 VJ_{14}	16.1	X	199.32407	288.61545	82.24887	3.45547	0.2063083	0.22029006	2.7152268	20	4 6.8	20.7
229205 2004 VN_{24}	16.0	X	307.57553	121.54503	314.86848	5.00556	0.1800360	0.18465195	3.0542186	20	11 3.1	19.5
229206 2004 VE_{25}	15.7	X	87.97031	137.33106	270.84027	4.86211	0.0607209	0.20530820	2.8457617	20	1 14.8	19.4
229207 2004 VW_{29}	16.1	X	285.85834	196.59793	61.28363	11.37592	0.1490390	0.21514393	2.7583539	20	2 19.0	20.3
229208 2004 VA_{35}	16.5	X	103.79558	268.89185	119.71077	3.06615	0.0753992	0.20541708	2.8447560	20	1 13.4	20.2
229209 2004 VL_{48}	15.8	X	110.46873	270.40852	82.51422	10.79723	0.1532992	0.20070871	2.8890733	20	—	—
229210 2004 VJ_{52}	15.5	X	18.47068	60.59341	90.16554	8.22196	0.0705965	0.20873992	2.8144857	20	2 19.4	19.1
229211 2004 VS_{54}	15.3	X	350.10565	264.98612	134.80207	21.74897	0.2230975	0.18743962	3.0238607	20	12 17.4	18.9
229212 2004 VJ_{59}	15.6	X	12.09820	65.21968	296.54507	3.75476	0.1733221	0.18552967	3.0445782	20	11 24.8	19.3
229213 2004 VF_{65}	15.9	X	262.42514	238.53954	96.05779	5.22505	0.0925199	0.22296493	2.6934671	20	5 2.4	19.6
229214 2004 VG_{67}	16.7	X	223.85260	19.64698	254.61809	0.97893	0.0318555	0.20557591	2.8432905	20	1 8.9	20.8
229215 2004 VN_{69}	15.6	X	286.60336	50.70589	70.87328	11.24441	0.0270504	0.18704762	3.0280841	20	12 14.7	19.8
229216 2004 VK_{72}	15.5	X	205.21934	247.72426	77.30702	6.00791	0.1247348	0.21239515	2.7821016	20	2 19.4	20.0
229217 2004 VN_{73}	15.8	X	336.67754	210.88106	123.06037	15.94710	0.3000108	0.24054288	2.5605959	20	8 21.8	17.1
229218 2004 VW_{77}	15.8	X	59.27481	345.78691	108.75803	3.20900	0.1442686	0.20598122	2.8395594	20	2 13.3	19.0
229219 2004 VW_{83}	16.5	X	250.90420	272.08773	65.00394	4.62684	0.1166121	0.22332911	2.6905382	20	4 18.7	20.5
229220 2004 VA_{84}	16.4	X	27.52054	29.98159	70.00365	3.05966	0.0260174	0.20318061	2.8655932	20	—	—
229221 2004 WW_{2}	16.4	X	152.26320	299.16347	120.68691	3.88464	0.1164279	0.21862100	2.7290288	20	4 22.0	20.5
229222 2004 XX_{3}	15.8	X	142.09115	320.58576	73.59084	5.42820	0.0765135	0.21146998	2.7902101	20	3 8.1	19.9
229223 2004 XB_{5}	15.2	X	1.45145	241.49669	261.23740	12.25385	0.0425541	0.20301551	2.8671467	20	1 13.0	19.0
229224 2004 XD_{9}	15.0	X	310.59841	5.99838	64.98728	19.37028	0.0310905	0.18232459	3.0801549	20	11 15.2	19.2
229225 2004 XU_{16}	16.3	X	31.55323	189.77728	281.29874	8.80836	0.0811218	0.20370984	2.8606280	20	1 16.0	19.8
229226 2004 XT_{17}	15.9	X	215.61768	85.70725	276.66921	5.19631	0.0359271	0.21753817	2.7380775	20	4 13.9	19.8
229227 2004 XE_{18}	15.1	X	342.91275	96.11144	79.65394	14.12693	0.0530830	0.20570242	2.8421246	20	2 1.9	19.0
229228 2004 XC_{27}	15.9	X	87.62089	10.70802	97.15094	3.91694	0.0197937	0.21175602	2.7876968	20	3 25.8	19.6
229229 2004 XT_{32}	15.9	X	59.89722	81.35404	82.31298	6.88720	0.1745820	0.21343631	2.7730467	20	5 22.1	19.2
229230 2004 XU_{36}	16.0	X	102.19740	288.35468	53.46238	2.32656	0.1333372	0.19472477	2.9479622	20	—	—
229231 2004 XS_{40}	14.9	X	52.31650	281.93838	64.55672	13.46272	0.1894794	0.18797111	3.0181581	20	12 31.5	19.4
229232 2004 XV_{60}	16.3	X	197.85769	168.26640	289.06627	2.98808	0.0711789	0.22559226	2.6725136	20	7 26.8	20.2
229233 2004 XV_{64}	15.7	X	147.27895	108.92988	293.08880	8.17338	0.1465837	0.21347261	2.7727323	20	3 22.3	20.1
229234 2004 XN_{65}	16.1	X	113.41073	2.97668	13.54350	1.87854	0.1069382	0.20352638	2.8623468	20	1 15.8	20.0
229235 2004 XU_{68}	15.2	X	313.47695	8.70741	79.76215	9.26823	0.0662317	0.18564861	3.0432777	20	12 7.8	18.9
229236 2004 XM_{76}	15.5	X	176.69483	239.56451	86.18042	16.00846	0.1548045	0.20423794	2.8556947	20	1 26.3	20.2
229237 2004 XG_{79}	16.3	X	143.60975	37.76484	24.99750	2.11007	0.0636001	0.21466581	2.7624481	20	4 10.3	20.3
229238 2004 XY_{80}	15.1	X	280.60274	209.10416	269.64679	15.01277	0.1541266	0.18102632	3.0948640	20	11 15.8	19.3
229239 2004 XY_{84}	15.9	X	339.51470	118.70822	307.67843	4.01283	0.1528298	0.18460604	3.0547250	20	12 21.8	19.3
229240 2004 XB_{98}	15.9	X	307.46444	65.26159	62.04029	3.20831	0.1665360	0.18539730	3.0460272	20	—	—
229241 2004 XF_{114}	16.6	X	158.46095	23.06676	12.13128	1.27016	0.1008903	0.21345749	2.7728632	20	3 26.3	20.7
229242 2004 XV_{119}	16.4	X	38.03806	6.55487	109.98174	2.18137	0.1187806	0.20012618	2.8946770	20	2 5.4	19.7
229243 2004 XJ_{122}	15.8	X	128.70425	297.33496	120.87793	5.81481	0.1122302	0.21295669	2.7772088	20	3 26.5	19.9
229244 2004 XA_{123}	15.4	X	266.59036	76.40799	91.33651	10.88852	0.1022424	0.18817533	3.0159740	20	—	—
229245 2004 XK_{123}	15.1	X	272.33171	82.49784	79.10229	11.98446	0.1662027	0.18606775	3.0387057	20	12 28.4	18.8
229246 2004 XQ_{126}	15.8	X	309.02154	289.87071	239.54826	2.96780	0.1358478	0.19395887	2.9557177	20	—	—
229247 2004 XX_{131}	15.8	X	18.08699	83.96458	24.13045	6.29304	0.1872875	0.19728642	2.9223883	20	—	—
229248 2004 XU_{135}	15.2	X	342.53061	239.73610	288.52928	9.34609	0.1951712	0.19833067	2.9121213	20	1 3.5	18.5
229249 2004 XE_{157}	15.4	X	52.24774	276.82051	76.30858	12.16538	0.1077389	0.18537322	3.0462910	20	12 28.1	19.7
229250 2004 XP_{170}	15.1	X	81.79407	270.97690	96.41206	13.04422	0.1323439	0.19088056	2.9874105	20	—	—
229251 2004 XQ_{182}	15.6	X	240.41932	52.28763	279.46396	10.91055	0.1860656	0.22203751	2.7009620	20	3 18.9	20.2
229252 2004 YW_{3}	15.0	X	212.49085	49.69993	101.87014	9.16734	0.0544941	0.17285352	3.1916644	20	10 20.5	19.8
229253 2004 YK_{4}	15.3	X	350.18639	329.63118	119.13263	20.52325	0.2559609	0.18869233	3.0104625	20	—	—
229254 2004 YL_{14}	16.5	X	259.33280	57.40633	66.52626	1.35207	0.1966971	0.17587448	3.1550107	20	10 18.9	20.7
229255 Andrewelliott	16.4	X	122.82965	322.81328	100.01303	3.47128	0.0468337	0.20691896	2.8309739	20	3 17.0	20.3
229256 2005 AW_{2}	15.4	X	326.69129	89.67032	108.81514	9.80629	0.0350692	0.19878325	2.9076995	20	2 10.8	19.4
229257 2005 AF_{13}	16.0	X	67.86190	46.32903	93.29391	10.21491	0.1256057	0.21298065	2.7770005	20	4 27.3	19.6
229258 2005 AR_{13}	15.2	X	161.03587	138.91895	77.61443	12.35643	0.0882701	0.17486938	3.1670885	20	11 9.3	20.1
229259 2005 AA_{14}	15.7	X	138.12778	134.48348	317.25635	12.79121	0.1651123	0.21305111	2.7763881	20	5 16.1	20.4
229260 2005 AJ_{17}	15.3	X	310.65570	77.28096	119.34777	17.88181	0.0527185	0.19668135	2.9283788	20	1 15.4	19.3
229261 2005 AW_{19}	15.4	X	294.70116	7.68550	106.21238	7.15111	0.1370030	0.18007066	3.1058042	20	12 5.7	19.3
229262 2005 AT_{20}	15.3	X	7.53988	159.26264	279.11903	8.26620	0.1316842	0.18809792	3.0168013	20	—	—
229263 2005 AN_{21}	15.5	X	281.60736	18.94035	86.74771	6.39831	0.1089637	0.17649193	3.1476480	20	11 9.2	19.6
229264 2005 AR_{31}	15.9	X	76.76388	278.59229	157.28850	2.33388	0.0513492	0.19995318	2.8963464	20	2 3.4	19.6
229265 2005 AT_{34}	15.4	X	0.35747	105.69203	280.67753	8.44043	0.0843009	0.17832432	3.1260482	20	11 25.7	19.6
229266 2005 AC_{36}	15.0	X	270.41249	0.18887	133.14457	12.31549	0.0531115	0.17842781	3.1248393	20	12 6.1	19.5
229267 2005 AM_{38}	15.7	X	230.30697	338.48381	284.47207	9.48986	0.0441505	0.19399915	2.9553085	20	1 4.0	19.9
229268 2005 AF_{50}	15.3	X	290.18922	251.38693	265.26521	8.35589	0.0488717	0.18669501	3.0318956	20	—	—
229269 2005 AJ_{55}	15.4	X	280.73889	5.95036	118.24671	10.85898	0.0396902	0.18077241	3.0977612	20	12 9.5	19.7
229270 2005 AZ_{60}	15.3	X	324.22681	322.74797	122.24571	12.14451	0.0758090	0.18015947	3.1047834	20	12 18.1	19.3
229271 2005 AH_{68}	15.6	X	323.03038	191.94781	267.88858	6.96543	0.2431238	0.18290076	3.0736828	20	—	—
229272 2005 AK_{68}	15.6	X	329.38949	48.74066	88.97814	6.82707	0.1827734	0.18742705	3.0239960	20	—	—
229273 2005 AQ_{68}	14.5	X	261.86979	45.56097	142.75211	13.78281	0.2296113	0.17726754	3.1384598	20	—	—
229274 2005 AY_{76}	15.6	X	23.95225	286.53093	101.16810	7.67901	0.1164515	0.18062768	3.0994158	20	—	—
229275 2005 AG_{81}	17.2	X	128.65104	265.17541	96.69793	23.86336	0.1217875	0.38897222	1.8586188	20	—	—
229276 2005 AV_{81}	15.7	X	314.30704	24.96450	59.17309	16.59171	0.2938881	0.18079879	3.0974600	20	11 19.1	18.1
229277 2005 BD_{9}	15.3	X	321.95446	341.75867	79.01719	6.43340	0.1533448	0.17714078	3.1399569	20	11 11.9	18.8
229278 2005 BN_{18}	16.2	X	86.72762	87.48346	298.19940	9.03605	0.1212667	0.19283605	2.9671800	20	—	—
229279 2005 BL_{24}	15.6	X	280.12283	10.56649	116.47574	2.26338	0.1804063	0.17684829	3.1434181	20	11 22.9	19.5
229280 2005 BN_{47}	16.2	X	48.79415	314.84656	92.76247	1.08228	0.1001561	0.19004074	2.9962053	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229281 2005 CE_1	15.0	X	305.08891	149.42053	282.21048	17.74024	0.1198387	0.17415393	3.1757565	20	10 21.6	19.4
229282 2005 CT_7	16.9	X	328.42438	165.04510	275.74814	18.38307	0.0919216	0.37132329	1.9170551	20	—	—
229283 2005 CX_8	15.5	X	208.16400	143.50885	84.65451	6.24169	0.0875776	0.18102782	3.0948469	20	—	—
229284 2005 CJ_9	15.5	X	261.18320	125.78957	99.03566	7.29668	0.0411335	0.18983422	2.9983780	20	—	—
229285 2005 CQ_{12}	16.3	X	286.23334	203.13491	249.99647	2.75017	0.1133971	0.17444910	3.1721732	20	10 27.6	20.5
229286 2005 CJ_{35}	15.6	X	91.51670	354.29986	9.97678	3.08557	0.1043464	0.18680851	3.0306674	20	—	—
229287 2005 CG_{36}	15.9	X	274.95560	147.84978	41.41576	2.53903	0.1030918	0.18546056	3.0453345	20	—	—
229288 2005 CM_{38}	16.4	X	8.07962	180.53248	265.71905	18.27139	0.0899047	0.37909077	1.8907782	20	—	—
229289 2005 CO_{57}	14.9	X	239.90903	271.32453	283.24800	9.11250	0.0975658	0.17980172	3.1089005	20	—	—
229290 2005 CX_{60}	16.0	X	291.86229	57.20127	125.51672	0.61425	0.0734795	0.18806412	3.0171629	20	—	—
229291 2005 CY_{63}	15.9	X	313.16016	356.66197	106.40593	2.69831	0.1813239	0.17995182	3.1071714	20	12 19.7	19.1
229292 2005 CG_{69}	16.3	X	309.10804	272.26033	196.28436	0.34914	0.0630417	0.18207109	3.0830132	20	12 25.5	20.4
229293 2005 CS_{79}	15.8	X	240.35199	331.99660	255.19227	0.59087	0.1057957	0.18281790	3.0746114	20	—	—
229294 2005 EH_2	17.1	X	10.34367	64.73025	358.70635	20.76800	0.1047698	0.37223776	1.9139141	20	—	—
229295 2005 EN_2	15.7	X	330.54329	129.84733	307.10151	9.20845	0.2126663	0.17772294	3.1330961	20	12 19.1	18.9
229296 2005 EQ_5	15.2	X	240.59697	70.16228	98.44108	2.92689	0.1254297	0.17170254	3.2059118	20	11 28.4	19.7
229297 2005 EZ_6	16.0	X	305.45157	295.08864	133.81591	1.20991	0.0992508	0.16813064	3.2511584	20	10 26.8	20.2
229298 2005 EE_{20}	16.2	X	295.36086	9.31718	143.77143	1.59685	0.1222114	0.18115940	3.0933481	20	—	—
229299 2005 ET_{30}	15.7	X	334.37846	286.56460	141.74950	10.70462	0.2274614	0.17676933	3.1443540	20	12 16.6	19.0
229300 2005 EL_{41}	15.1	X	217.57890	109.22185	112.69448	16.34447	0.0900532	0.17669586	3.1452256	20	—	—
229301 2005 ED_{42}	16.3	X	248.33337	348.98181	164.13512	1.63812	0.1373478	0.17572339	3.1568189	20	11 18.3	20.6
229302 2005 EF_{49}	15.8	X	325.23240	227.37574	263.87591	2.11449	0.1584690	0.18337281	3.0684056	20	—	—
229303 2005 EE_{80}	15.1	X	338.88037	11.80695	133.25863	13.19900	0.1564890	0.18531430	3.0469367	20	—	—
229304 2005 EX_{93}	16.8	X	315.98091	63.69049	42.06016	21.46371	0.1022856	0.36828319	1.9275905	20	—	—
229305 2005 EN_{95}	16.0	X	0.49776	312.12777	114.41574	7.87206	0.2354297	0.18425829	3.0585671	20	—	—
229306 2005 EQ_{100}	15.0	X	359.80663	338.63994	88.25531	7.99496	0.0519827	0.17534880	3.1613131	20	—	—
229307 2005 EH_{153}	17.3	X	259.37266	27.65642	35.67001	21.36618	0.1001623	0.35452931	1.9771272	20	9 24.8	19.5
229308 2005 EN_{158}	15.7	X	324.26308	51.44517	10.72920	0.62074	0.1240843	0.16965130	3.2317016	20	11 14.9	19.6
229309 2005 EF_{196}	16.7	X	203.04339	138.34128	195.00955	5.66456	0.1217235	0.25674279	2.4517182	20	2 19.0	20.6
229310 2005 EL_{276}	14.6	X	333.17809	332.66772	122.32830	17.30238	0.1021063	0.17545454	3.1600428	20	—	—
229311 2005 EG_{281}	15.5	X	265.00914	39.23427	114.35326	6.48701	0.0858701	0.17314527	3.1880782	20	12 16.2	19.9
229312 2005 GQ_{35}	15.1	X	296.30076	77.41697	87.05364	11.07519	0.0509738	0.18097825	3.0954120	20	—	—
229313 2005 GK_{64}	15.5	X	332.91290	34.67690	90.20473	15.28820	0.1831472	0.18245155	3.0787259	20	—	—
229314 2005 GW_{94}	18.2	X	255.41473	187.73753	91.84702	1.81890	0.1369006	0.31738862	2.1285073	20	1 28.8	21.2
229315 2005 GK_{123}	16.6	X	290.68740	67.86878	120.30040	23.99385	0.0849641	0.37834169	1.8932730	20	—	—
229316 2005 JB_{69}	15.2	X	272.60452	86.02006	94.08728	25.48332	0.2999439	0.17457165	3.1706884	20	12 28.2	18.8
229317 2005 MJ_{12}	17.0	X	293.02897	233.07273	85.87321	3.92008	0.1389348	0.32146643	2.1104689	20	5 10.9	19.2
229318 2005 MH_{15}	17.3	X	80.39083	74.15421	262.63678	3.68945	0.1419082	0.28393728	2.2925621	20	—	—
229319 2005 ML_{17}	17.3	X	30.59065	91.67519	295.20325	3.96961	0.1824612	0.28221011	2.3019065	20	—	—
229320 2005 MZ_{31}	17.0	X	121.16424	213.73204	77.99613	3.39914	0.1661713	0.28604710	2.2812752	20	—	—
229321 2005 NL_2	16.8	X	183.34604	33.68050	268.12633	7.71509	0.1921864	0.29682871	2.2256940	20	—	—
229322 2005 NV_{11}	17.7	X	113.90972	306.75407	115.70671	1.65358	0.1438863	0.30629447	2.1795990	20	3 7.9	20.2
229323 2005 NL_{13}	17.7	X	141.45234	120.25930	183.79169	1.94850	0.1572508	0.29235071	2.2483640	20	—	—
229324 2005 NV_{45}	17.9	X	63.74172	55.70863	272.99054	1.61043	0.2097776	0.27966286	2.3158629	20	—	—
229325 2005 NL_{60}	16.4	X	111.38316	321.60358	32.07617	2.76424	0.2508139	0.28890542	2.2662036	20	—	—
229326 2005 NM_{60}	16.6	X	94.17660	237.87990	105.06619	6.25776	0.1939489	0.28411853	2.2915870	20	—	—
229327 2005 NR_{74}	17.4	X	71.08644	96.89099	292.85059	7.03569	0.1075129	0.29262961	2.2469352	20	—	—
229328 2005 NT_{95}	17.4	X	62.29415	281.57036	111.17557	5.50606	0.1197674	0.29181123	2.2511342	20	—	—
229329 2005 NZ_{98}	17.8	X	143.86419	48.77644	248.13657	1.96761	0.1840790	0.29132608	2.2536327	20	—	—
229330 2005 OS	16.8	X	102.86788	249.62421	12.41195	6.78025	0.1089091	0.27780485	2.3261774	20	11 18.9	20.1
229331 2005 OS_{12}	16.9	X	320.73519	55.87337	353.62583	5.62268	0.2500339	0.26815883	2.3816319	20	11 24.9	18.3
229332 2005 OH_{27}	17.3	X	180.89186	83.01200	196.11654	3.12399	0.1311421	0.29215901	2.2493474	20	—	—
229333 2005 QC_2	17.0	X	83.52303	53.04345	319.81106	5.21744	0.1751783	0.28833637	2.2691843	20	—	—
229334 2005 QV_4	16.9	X	19.36849	91.35785	288.05048	3.57413	0.2400803	0.27507715	2.3415299	20	—	—
229335 2005 QY_9	17.1	X	33.10205	162.63526	199.96793	5.99857	0.1243247	0.27734378	2.3287548	20	—	—
229336 2005 QW_{10}	16.9	X	334.36515	333.80199	320.39510	0.70814	0.1845630	0.25737989	2.4476706	20	6 12.3	18.7
229337 2005 QP_{12}	16.7	X	32.72491	207.96144	182.67828	6.01868	0.1857217	0.28073799	2.3099465	20	—	—
229338 2005 QS_{14}	17.9	X	347.95236	71.33999	318.99690	1.26427	0.2138501	0.27144642	2.3623630	20	12 28.1	19.8
229339 2005 QM_{15}	17.3	X	21.31142	62.37004	307.33727	2.56033	0.0754814	0.27590930	2.3368194	20	12 30.1	20.0
229340 2005 QQ_{21}	16.5	X	94.94770	237.13951	110.32379	5.42225	0.1597131	0.28539741	2.2847360	20	—	—
229341 2005 QK_{29}	17.4	X	313.02593	231.09249	163.56600	5.38154	0.2179549	0.26444366	2.4038864	20	10 9.5	18.9
229342 2005 QM_{32}	17.8	X	37.81570	197.40962	113.38656	1.71000	0.2312556	0.27058422	2.3673787	20	11 25.3	20.9
229343 2005 QG_{33}	17.2	X	356.76815	61.10585	314.32742	1.08777	0.2157181	0.27136655	2.3628265	20	12 22.5	19.5
229344 2005 QH_{38}	17.4	X	144.11655	83.27759	245.38952	2.06868	0.1367715	0.29060741	2.2573467	20	—	—
229345 2005 QJ_{45}	15.7	X	265.27193	253.26703	106.97262	2.99227	0.0981993	0.18497901	3.0506174	20	6 6.3	20.0
229346 2005 QF_{49}	17.1	X	334.43787	40.81090	287.13027	1.37256	0.1992957	0.26066879	2.4270386	20	8 8.9	18.9
229347 2005 QC_{50}	16.4	X	23.77176	244.81649	99.32131	6.01051	0.1511600	0.27084205	2.3658760	20	12 9.7	19.1
229348 2005 QH_{51}	16.5	X	79.22125	216.37734	110.24678	7.08401	0.1516954	0.27859884	2.3217557	20	—	—
229349 2005 QR_{52}	16.7	X	294.18787	0.72951	55.44342	1.97458	0.1593446	0.26400389	2.4065552	20	10 6.4	19.0
229350 2005 QV_{52}	17.0	X	48.34816	354.79152	323.03233	2.68457	0.2380859	0.27512951	2.3412328	20	12 17.0	20.3
229351 2005 QE_{55}	17.2	X	51.80711	264.95605	120.58764	3.60883	0.2452898	0.28193665	2.3033947	20	—	—
229352 2005 QB_{57}	17.4	X	325.29290	78.80396	316.13605	4.02933	0.2317404	0.26797885	2.3826982	20	11 11.4	18.9
229353 2005 QN_{65}	16.7	X	18.04291	148.62525	202.93972	5.23694	0.2598705	0.27112036	2.3642567	20	12 28.0	19.6
229354 2005 QX_{67}	17.0	X	39.27970	326.04348	56.57808	6.03087	0.2040444	0.28129430	2.3069000	20	—	—
229355 2005 QU_{74}	17.2	X	65.78369	83.89769	252.05362	0.99435	0.1784232	0.27787332	2.3257952	20	—	—
229356 2005 QA_{84}	17.0	X	333.70153	126.65213	242.84978	0.47572	0.1869988	0.26437925	2.4042768	20	10 18.8	18.5
229357 2005 QW_{87}	17.5	X	330.10236	183.30764	192.64836	3.74691	0.1874696	0.26434120	2.4045076	20	10 21.4	19.1
229358 2005 QS_{99}	17.0	X	154.61713	90.83418	281.77000	3.74707	0.0242265	0.30147076	2.2027874	20	2 3.1	19.5
229359 2005 QX_{104}	17.6	X	341.70478	167.80906	252.00143	1.89399	0.1715420	0.27453565	2.3446079	20	—	—
229360 2005 QE_{106}	17.5	X	80.99410	233.20658	85.35538	4.19788	0.2078045	0.27972018	2.3155466	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229361 2005 QU_{106}	17.6	X	64.02762	231.64563	95.48162	4.00993	0.2144054	0.27748204	2.3279811	20	—	—
229362 2005 QW_{112}	16.6	X	322.35490	307.28121	71.84970	5.08221	0.2667178	0.26381721	2.4076903	20	10 8.3	17.8
229363 2005 QY_{156}	16.5	X	188.77374	351.97476	282.98061	9.22234	0.1382728	0.29137820	2.2533639	20	—	—
229364 2005 QY_{170}	16.6	X	6.61564	82.53606	245.34027	4.86191	0.2457628	0.26633524	2.3924909	20	11 3.3	18.8
229365 2005 QK_{171}	16.3	X	57.10174	65.06180	276.91447	5.02177	0.1326416	0.27629796	2.3346275	20	—	—
229366 2005 QE_{180}	17.1	X	346.53724	122.86737	220.70106	3.09523	0.1690342	0.26541173	2.3980375	20	10 4.3	19.1
229367 2005 QM_{188}	17.6	X	10.27753	121.03659	354.80890	3.41030	0.1146890	0.28906831	2.2653522	20	—	—
229368 2005 RC_{3}	16.4	X	130.93087	181.01376	86.36013	5.55042	0.1774691	0.27878552	2.3207191	20	12 25.4	20.2
229369 2005 RF_{5}	17.2	X	300.77429	213.78082	87.53829	3.61799	0.0870426	0.31920902	2.1204072	20	5 5.5	19.2
229370 2005 RZ_{7}	17.3	X	68.87981	18.64362	345.71085	1.39720	0.2438963	0.28106062	2.3081785	20	—	—
229371 2005 RS_{8}	17.4	X	357.46154	228.91141	176.06319	2.22815	0.1988427	0.27303871	2.3531696	20	—	—
229372 2005 RM_{9}	16.7	X	209.44721	240.07615	58.43214	4.98273	0.1940113	0.29818566	2.2189365	20	1 11.5	20.3
229373 2005 RG_{11}	17.0	X	0.06818	73.66207	272.44437	3.98463	0.2069166	0.26614305	2.3936425	20	11 11.1	19.2
229374 2005 RM_{11}	16.1	X	36.00115	346.37315	339.52224	5.42420	0.1968723	0.27006511	2.3704114	20	12 6.7	19.3
229375 2005 RG_{25}	16.9	X	77.27136	65.42307	255.05064	5.85752	0.2197017	0.27763976	2.3270994	20	—	—
229376 2005 SP	17.0	X	15.89961	242.49769	281.03751	3.63338	0.0447596	0.30057089	2.2071818	20	2 14.5	19.2
229377 2005 SJ_{6}	17.2	X	331.46288	165.97773	332.40895	3.45822	0.0573493	0.28382246	2.2931803	20	—	—
229378 2005 SN_{8}	17.2	X	249.71038	289.87407	3.54748	3.50140	0.2402391	0.30414647	2.1898491	20	2 6.2	20.7
229379 2005 SZ_{9}	17.2	X	300.66312	229.32495	199.22005	1.53898	0.2038584	0.26388986	2.4072484	20	11 3.5	19.0
229380 2005 SX_{10}	16.5	X	160.84772	70.23320	236.50235	3.75006	0.1194190	0.22144451	2.7057818	20	—	—
229381 2005 SR_{14}	16.5	X	85.22496	272.45180	54.19202	6.79570	0.1490061	0.28024268	2.3126675	20	—	—
229382 2005 SE_{50}	17.8	X	348.26176	13.40896	19.17378	2.39054	0.0906978	0.26871245	2.3783596	20	12 12.5	20.3
229383 2005 SV_{52}	17.0	X	318.79417	318.68454	98.29672	3.41789	0.1743627	0.26757421	2.3850997	20	11 30.8	18.7
229384 2005 SB_{60}	17.0	X	313.23797	271.47504	175.27887	2.04150	0.1484364	0.27041845	2.3683461	20	—	—
229385 2005 SV_{61}	17.3	X	257.76609	101.41450	17.86733	4.71616	0.1841902	0.26545690	2.3977655	20	10 29.5	19.8
229386 2005 SL_{68}	16.8	X	358.35385	263.83077	218.45627	4.38664	0.1324973	0.28614217	2.2807699	20	—	—
229387 2005 SG_{70}	17.3	X	337.20342	85.19639	303.91119	0.65087	0.1935177	0.26840465	2.3801776	20	11 29.7	19.0
229388 2005 SU_{70}	17.1	X	18.77442	304.16697	96.53427	4.10186	0.0249444	0.27892599	2.3199399	20	—	—
229389 2005 SY_{79}	17.9	X	7.86940	104.92899	75.94284	0.90662	0.0534833	0.30259793	2.1973138	20	2 28.2	20.1
229390 2005 SH_{88}	16.8	X	231.94389	232.84770	71.75468	5.14867	0.2119826	0.30448150	2.1882425	20	2 7.1	20.3
229391 2005 SA_{91}	17.8	X	339.09632	104.51604	8.54294	2.00845	0.0922893	0.28019384	2.3129362	20	—	—
229392 2005 SA_{103}	16.5	X	53.72427	85.70885	300.25198	3.27122	0.1235872	0.28031061	2.3122938	20	—	—
229393 2005 SW_{117}	16.7	X	7.73084	260.54143	72.61471	7.14306	0.1428187	0.26565403	2.3965792	20	10 29.9	19.2
229394 2005 SF_{123}	16.7	X	355.88423	37.69887	2.98986	4.49939	0.1954963	0.27181747	2.3602126	20	—	—
229395 2005 SK_{124}	16.8	X	0.18485	210.75113	302.84924	4.91152	0.0783811	0.29540588	2.2328350	20	1 5.2	19.0
229396 2005 SA_{129}	16.9	X	262.47235	64.22116	34.89248	2.76823	0.1546857	0.26246835	2.4159323	20	10 13.7	19.6
229397 2005 SM_{134}	16.7	X	3.55477	143.52890	298.22377	4.10555	0.1767003	0.28131199	2.3068032	20	—	—
229398 2005 SL_{140}	17.2	X	72.14718	205.10042	80.44643	2.43097	0.1615658	0.26973046	2.3723716	20	11 21.7	20.6
229399 2005 SP_{149}	16.9	X	64.03824	314.05041	52.76964	3.52430	0.2240310	0.27905654	2.3192163	20	—	—
229400 2005 SW_{149}	17.8	X	324.39575	60.99366	51.46294	3.32630	0.1646740	0.27611448	2.3356616	20	—	—
229401 2005 SU_{152}	16.5	X	170.11975	298.07324	54.00222	12.51843	0.3181545	0.22957688	2.6415000	20	2 29.8	21.5
229402 2005 SJ_{195}	17.7	X	67.99427	28.60103	268.96443	0.58371	0.1911622	0.27231238	2.3573521	20	12 5.7	21.3
229403 2005 SB_{209}	16.4	X	68.81982	268.03532	60.28218	8.48110	0.1618191	0.27500499	2.3419394	20	—	—
229404 2005 SU_{213}	16.5	X	74.57646	34.07491	293.27012	9.06913	0.0819063	0.27519860	2.3408409	20	—	—
229405 2005 SL_{215}	16.6	X	313.90322	138.12597	254.53166	4.01113	0.1731007	0.26187907	2.4195551	20	10 6.5	18.7
229406 2005 SX_{221}	16.5	X	311.96584	266.64276	109.52598	10.64037	0.1772494	0.26132527	2.4229723	20	9 12.4	18.7
229407 2005 SU_{224}	17.2	X	282.82520	267.95697	192.72614	4.96089	0.1994508	0.26677238	2.3898766	20	11 16.5	19.3
229408 2005 SS_{229}	17.1	X	281.79258	248.49213	173.09314	6.09924	0.1987106	0.26035427	2.4289929	20	9 12.6	19.5
229409 2005 SB_{237}	17.4	X	98.54175	67.63357	257.92747	1.77974	0.2585023	0.28070148	2.3101468	20	—	—
229410 2005 SD_{238}	17.2	X	160.41925	274.31683	310.54686	1.85882	0.0810906	0.26878306	2.3779431	20	12 2.7	20.5
229411 2005 SD_{243}	17.0	X	340.63317	79.90715	350.21762	1.87104	0.1768401	0.27202989	2.3589838	20	—	—
229412 2005 SM_{249}	17.0	X	151.87567	343.58213	224.27489	0.98846	0.1675468	0.26222303	2.4174388	20	10 29.5	20.7
229413 2005 SE_{257}	16.9	X	227.08703	159.27415	117.65136	3.07812	0.2638751	0.23254487	2.6189761	20	1 5.9	21.5
229414 2005 SS_{264}	17.5	X	278.21755	306.38581	158.37483	3.86292	0.1822242	0.26754706	2.3852611	20	11 16.4	19.8
229415 2005 SP_{278}	16.9	X	263.38718	87.31662	65.57329	3.93225	0.1211361	0.27391757	2.3481336	20	—	—
229416 2005 TT_{3}	16.8	X	313.70328	317.32369	82.32711	6.28076	0.1441660	0.26372358	2.4082602	20	10 24.6	19.0
229417 2005 TN_{10}	16.1	X	44.34098	95.57728	253.51532	4.71902	0.2492394	0.27390645	2.3481971	20	—	—
229418 2005 TY_{10}	17.6	X	280.41113	105.03059	314.59667	1.37317	0.1837340	0.25874318	2.4390654	20	9 9.2	20.0
229419 2005 TZ_{17}	16.9	X	284.94446	349.04069	74.59681	3.37683	0.1730473	0.26158267	2.4213825	20	9 28.5	19.2
229420 2005 TH_{23}	16.7	X	73.91642	301.65009	59.81363	4.55277	0.1283569	0.28062808	2.3105496	20	—	—
229421 2005 TT_{26}	17.4	X	270.08010	315.24062	181.38969	2.36336	0.1394299	0.26883004	2.3776660	20	12 23.3	19.7
229422 2005 TJ_{39}	17.3	X	102.92979	240.81214	56.23401	3.22568	0.1862045	0.27617465	2.3353224	20	—	—
229423 2005 TG_{41}	16.2	X	217.09347	356.00448	82.09659	17.61372	0.1423521	0.24092243	2.5579059	20	7 19.3	20.2
229424 2005 TT_{48}	17.0	X	30.30751	300.18589	67.61191	3.18503	0.2390366	0.27248980	2.3563287	20	—	—
229425 Grosspointner	16.7	X	107.12332	156.97682	300.19005	2.68397	0.1593138	0.23008987	2.6375724	20	4 21.5	20.3
229426 2005 TB_{52}	16.4	X	147.04644	221.97072	239.38909	8.36840	0.0862660	0.24136673	2.5547659	20	6 4.9	20.1
229427 2005 TT_{52}	16.6	X	197.22489	35.94623	251.87588	5.56439	0.1336749	0.29032552	2.2588076	20	—	—
229428 2005 TP_{71}	16.7	X	11.19464	318.84112	67.20238	3.12590	0.2160549	0.27406267	2.3473047	20	—	—
229429 2005 TA_{72}	16.7	X	202.23754	195.29131	123.61385	6.03224	0.1467870	0.30059716	2.2070532	20	1 28.5	20.0
229430 2005 TP_{99}	17.3	X	340.48251	53.29552	320.45654	1.54824	0.1937444	0.26632298	2.3925643	20	11 11.4	19.1
229431 2005 TY_{105}	16.9	X	306.29491	349.23197	128.25169	4.07955	0.0620682	0.27805843	2.3247630	20	—	—
229432 2005 TQ_{106}	17.7	X	255.26193	83.18722	73.56798	2.42050	0.1210594	0.27157193	2.3616351	20	12 30.3	20.1
229433 2005 TJ_{138}	17.2	X	130.10748	244.24493	85.47928	3.00987	0.1401021	0.28562858	2.2835031	20	—	—
229434 2005 TH_{143}	17.3	X	274.95361	329.72366	117.68754	3.08772	0.1986342	0.26218688	2.4176611	20	10 11.5	19.7
229435 2005 TO_{161}	16.5	X	180.12411	301.13577	225.43760	9.28371	0.1409332	0.25988245	2.4319320	20	10 2.8	20.3
229436 2005 TL_{166}	17.5	X	154.83776	329.07815	326.31192	0.89436	0.0592163	0.28173352	2.3045017	20	—	—
229437 2005 TZ_{170}	16.9	X	343.66373	99.52383	283.89197	3.65763	0.2336664	0.26549261	2.3975505	20	12 9.7	18.7
229438 2005 TQ_{171}	16.7	X	65.55260	73.17611	294.92388	5.65574	0.1435653	0.27913472	2.3187832	20	—	—
229439 2005 TA_{180}	15.9	X	127.15963	13.28618	92.47351	14.77625	0.0816246	0.22951423	2.6419807	20	5 21.5	19.8
229440 Filimon	15.4	X	145.31738	145.38982	256.94160	21.12930	0.0384266	0.22728138	2.6592559	20	3 2.3	19.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229441 2005 UJ_8	16.8	X	26.10601	284.32151	76.34085	3.48835	0.2316740	0.27007027	2.3703812	20	—	—
229442 2005 UC_{14}	17.1	X	193.45250	77.36466	90.89608	2.45386	0.1233787	0.26366820	2.4085974	20	10 24.2	20.5
229443 2005 UA_{51}	17.2	X	31.07112	89.72989	297.79447	2.21649	0.2407185	0.27484087	2.3428717	20	—	—
229444 2005 UF_{54}	16.2	X	205.75946	148.23986	202.04994	9.43415	0.0965398	0.23380957	2.6095234	20	3 15.9	20.2
229445 2005 UH_{59}	16.6	X	194.42042	196.32709	193.25833	9.72204	0.2055041	0.23697822	2.5862099	20	4 24.4	20.9
229446 2005 UZ_{70}	16.4	X	253.61809	221.15203	285.95863	6.14660	0.0480715	0.27070643	2.3666661	20	12 24.2	19.2
229447 2005 UH_{72}	16.5	X	148.08105	11.61485	251.90195	12.80957	0.0810630	0.27496039	2.3421927	20	—	—
229448 2005 UW_{97}	16.7	X	173.57686	130.38081	63.18496	10.00806	0.1578579	0.26119128	2.4238008	20	11 3.1	20.5
229449 2005 UY_{110}	16.8	X	201.70226	185.08595	330.04325	1.63958	0.1525945	0.25656239	2.4528673	20	10 10.5	20.3
229450 2005 UK_{115}	17.5	X	258.51479	214.51629	225.26709	5.84852	0.1421027	0.25732800	2.4479997	20	9 8.4	20.5
229451 2005 UH_{148}	16.7	X	104.93056	34.97666	236.27407	5.81711	0.1306369	0.26720904	2.3872723	20	12 3.8	20.3
229452 2005 UT_{161}	16.9	X	337.97938	326.83876	69.59906	2.56370	0.1889495	0.26551919	2.3973905	20	12 11.0	18.8
229453 2005 UJ_{162}	16.2	X	0.16356	266.35411	112.74803	6.73491	0.1549598	0.26746341	2.3857584	20	12 22.1	18.7
229454 2005 UQ_{162}	16.5	X	346.37253	11.47295	88.58369	6.83243	0.1834553	0.27593651	2.3366658	20	—	—
229455 2005 UM_{180}	16.1	X	22.55162	294.71376	222.21799	13.29156	0.0538839	0.22513655	2.6761187	20	2 22.7	19.7
229456 2005 UN_{190}	17.3	X	171.63709	310.28997	235.94309	1.66985	0.1566515	0.25876680	2.4389169	20	10 20.4	21.0
229457 2005 UZ_{191}	17.2	X	267.72145	247.37135	266.85205	1.41026	0.1202462	0.26969445	2.3725828	20	—	—
229458 2005 UC_{196}	17.0	X	155.40784	340.80869	209.47805	4.08207	0.0988645	0.25877336	2.4388758	20	10 11.3	20.5
229459 2005 UM_{196}	17.0	X	171.52312	180.05444	61.08656	2.84161	0.1815475	0.27400905	2.3476109	20	12 28.6	20.4
229460 2005 UO_{196}	17.5	X	323.03563	278.08102	167.65156	1.02710	0.1582717	0.26990284	2.3713614	20	—	—
229461 2005 UG_{217}	17.1	X	269.77149	66.81160	52.79533	2.74553	0.1406842	0.26629985	2.3927029	20	11 26.9	19.7
229462 2005 UU_{217}	17.4	X	294.44245	119.79923	79.45755	3.98309	0.1445208	0.28491893	2.2872932	20	—	—
229463 2005 UZ_{221}	17.6	X	181.49467	225.60672	291.57401	2.28904	0.1291869	0.25661983	2.4525013	20	9 23.5	21.3
229464 2005 UK_{226}	17.0	X	170.84345	352.59487	213.30229	4.57747	0.0906032	0.26452509	2.4033931	20	11 19.2	20.3
229465 2005 UB_{250}	17.1	X	325.73342	71.46736	301.21930	4.62675	0.1522331	0.26109230	2.4244134	20	9 30.7	19.2
229466 2005 UO_{252}	16.2	X	143.40459	4.95530	15.34816	6.25223	0.0429339	0.22508653	2.6765152	20	2 15.6	19.9
229467 2005 UT_{252}	16.4	X	329.73017	175.50578	261.10419	6.45423	0.0937758	0.26978813	2.3720335	20	—	—
229468 2005 UE_{253}	17.3	X	271.04146	83.73942	359.34995	1.07165	0.1565741	0.25939964	2.4349486	20	10 2.9	19.9
229469 2005 UV_{253}	17.1	X	225.70589	126.32866	229.54990	6.61731	0.2187221	0.24011905	2.5636081	20	4 5.8	21.4
229470 2005 UT_{267}	17.6	X	185.31983	96.44483	60.23276	7.96186	0.1089857	0.25601362	2.4563712	20	10 3.3	21.2
229471 2005 UX_{272}	17.8	X	269.77900	38.68936	77.27895	5.99020	0.0812116	0.26415488	2.4056381	20	11 29.5	20.3
229472 2005 UA_{275}	15.5	X	196.85548	324.68971	56.34356	32.99724	0.1706462	0.23473037	2.6026945	20	4 26.9	20.1
229473 2005 UV_{278}	16.8	X	28.40030	175.63679	210.40109	3.81862	0.1484316	0.27349976	2.3505243	20	—	—
229474 2005 UB_{288}	17.6	X	188.72411	53.09863	106.03923	3.42021	0.1317442	0.25914720	2.4365297	20	10 6.8	21.3
229475 2005 UY_{293}	17.1	X	259.73821	319.14438	268.80061	3.70973	0.1175649	0.28539207	2.2847645	20	—	—
229476 2005 UU_{296}	16.7	X	149.59843	68.12880	47.49524	10.55191	0.0869134	0.24127856	2.5553883	20	6 26.6	20.6
229477 2005 UX_{297}	16.0	X	355.49280	308.94277	230.67750	11.67189	0.2217411	0.22136435	2.7064350	20	1 27.9	19.0
229478 2005 UN_{299}	17.4	X	339.30352	358.26452	53.83709	3.40638	0.1105074	0.26720504	2.3872961	20	12 27.6	19.7
229479 2005 UJ_{302}	16.7	X	260.63971	244.24931	139.60539	4.60326	0.1148098	0.24725244	2.5140601	20	6 30.6	19.9
229480 2005 UU_{318}	17.0	X	130.57355	255.32396	313.33070	1.40551	0.1609771	0.25738479	2.4476396	20	10 9.9	20.8
229481 2005 UM_{323}	17.5	X	342.86241	322.07876	95.72223	2.43956	0.1589167	0.27067599	2.3668436	20	—	—
229482 2005 UD_{337}	17.3	X	162.53829	121.00113	48.59857	1.90594	0.1275416	0.25625458	2.4548311	20	9 22.3	21.0
229483 2005 UY_{349}	17.4	X	339.11812	304.84832	109.24430	3.61543	0.1833438	0.26802906	2.3824006	20	—	—
229484 2005 UU_{369}	17.1	X	334.33958	308.17072	110.74927	2.31657	0.1686211	0.26724066	2.3870840	20	—	—
229485 2005 UN_{386}	16.4	X	333.49367	2.09030	75.24159	13.14874	0.2025441	0.27144670	2.3623614	20	—	—
229486 2005 UC_{387}	16.9	X	158.94226	266.33776	33.73184	2.70319	0.0565963	0.27987734	2.3146796	20	—	—
229487 2005 UQ_{403}	17.2	X	267.61324	44.29335	90.43761	2.21398	0.1209969	0.27002824	2.3706272	20	12 19.1	19.4
229488 2005 UX_{438}	16.5	X	216.02880	309.56390	62.40622	6.71942	0.2765497	0.23821084	2.5772806	20	4 18.9	21.1
229489 2005 UR_{445}	17.0	X	275.12423	68.24390	76.46503	5.69667	0.2422376	0.26635630	2.3923648	20	12 31.1	18.6
229490 2005 UD_{452}	15.7	X	41.85326	251.55326	269.58335	11.03970	0.1540324	0.21983508	2.7189719	20	4 7.5	19.0
229491 2005 UR_{456}	17.0	X	297.12996	223.93970	260.32730	2.45305	0.1180404	0.27186673	2.3599276	20	—	—
229492 2005 UU_{461}	16.0	X	65.86415	40.46955	104.14700	7.83097	0.2034312	0.21847558	2.7302397	20	5 11.4	19.4
229493 2005 UX_{483}	16.5	X	120.78594	251.24690	59.16156	7.37958	0.1346670	0.28090016	2.3090574	20	—	—
229494 2005 US_{499}	17.0	X	222.85212	198.47805	105.08311	7.90056	0.1605978	0.29893142	2.2152445	20	1 29.5	20.4
229495 2005 UG_{508}	15.8	X	112.68808	61.37696	5.44169	2.43846	0.0305936	0.21063666	2.7975643	20	3 5.6	19.5
229496 2005 UH_{509}	17.2	X	207.52544	334.59999	261.25002	1.86824	0.0943310	0.27500248	2.3419537	20	—	—
229497 2005 VW_4	17.5	X	316.89611	214.65708	247.19849	0.50794	0.1464277	0.27098432	2.3650479	20	—	—
229498 2005 VX_{13}	16.9	X	232.94619	319.39420	159.30707	7.20510	0.0565970	0.25969059	2.4331296	20	10 15.9	20.0
229499 2005 VW_{47}	17.0	X	216.11284	151.91993	183.74965	2.73073	0.2107530	0.23455712	2.6039759	20	3 6.5	21.4
229500 2005 VZ_{50}	16.7	X	278.27555	40.42084	78.38619	7.00353	0.1447173	0.26786880	2.3833507	20	12 11.3	18.8
229501 2005 VY_{55}	16.5	X	104.98650	153.02889	280.41387	3.15150	0.0640276	0.22831743	2.6512052	20	3 5.1	20.0
229502 2005 VS_{80}	16.8	X	303.13893	288.49627	85.65820	7.28560	0.1539811	0.25512049	2.4621008	20	8 21.1	19.3
229503 2005 WX_1	16.9	X	4.19467	287.55411	115.31955	6.09693	0.1902003	0.27109204	2.3644213	20	—	—
229504 2005 WA_4	16.6	X	191.48095	314.74182	128.27292	6.39167	0.2279192	0.24153155	2.5536035	20	6 25.9	21.0
229505 2005 WQ_{38}	16.8	X	260.82765	130.54382	204.14714	2.63205	0.1492678	0.23618385	2.5920055	20	4 20.9	20.7
229506 2005 WO_{64}	16.7	X	142.59878	25.83298	100.49721	5.44283	0.1825244	0.23400451	2.6080740	20	7 8.2	21.0
229507 2005 WF_{72}	16.6	X	15.47404	329.21093	118.49227	12.90548	0.1069203	0.27843479	2.3226675	20	—	—
229508 2005 WC_{80}	16.7	X	175.53463	298.92053	270.66584	4.96492	0.0820460	0.25959244	2.4337429	20	11 28.0	20.0
229509 2005 WM_{86}	16.5	X	107.43652	83.97825	68.41005	12.64290	0.1266458	0.23761907	2.5815578	20	6 30.9	20.3
229510 2005 WO_{88}	16.1	X	184.95573	298.10015	108.56295	14.33823	0.1788652	0.23112671	2.6296783	20	5 11.8	20.7
229511 2005 WX_{97}	16.4	X	234.82145	213.50835	62.09094	2.95035	0.0469957	0.21550201	2.7552975	20	1 21.4	20.4
229512 2005 WU_{113}	16.1	X	216.55680	39.74744	266.01101	12.06064	0.2306365	0.22590156	2.6700736	20	1 29.2	20.9
229513 2005 WZ_{123}	17.3	X	226.18095	133.85471	44.72043	2.09701	0.1285734	0.27000682	2.3707525	20	12 15.3	20.3
229514 2005 WB_{148}	16.3	X	270.06083	115.49824	225.91788	3.70034	0.1056204	0.24002270	2.5642941	20	5 17.1	19.7
229515 2005 WO_{159}	15.6	X	140.94057	348.25249	97.07935	15.16003	0.2115179	0.22668510	2.6639173	20	5 21.2	20.1
229516 2005 WE_{170}	17.3	X	213.37416	125.05049	95.77577	3.04964	0.1383431	0.27021869	2.3695132	20	—	—
229517 2005 WS_{170}	16.6	X	350.70905	202.82199	85.27980	3.84967	0.0984149	0.24259651	2.5461248	20	7 11.3	19.1
229518 2005 WZ_{173}	16.0	X	117.06058	205.78233	248.14484	12.61083	0.1275401	0.22821237	2.6520188	20	4 23.7	19.9
229519 2005 WM_{178}	15.4	X	167.35834	197.29569	279.83333	14.19345	0.1390144	0.23674836	2.5878836	20	7 17.2	19.5
229520 2005 WY_{185}	15.9	X	75.38909	199.68548	244.39963	9.00696	0.1944010	0.21866459	2.7286662	20	2 25.0	19.3

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
229521	2005 WG_{195}	16.6	X	255.42467	151.73244	225.46196	6.80555	0.2922150	0.24563460	2.5250870	20	5 24.2	20.5
229522	2005 XQ_{2}	16.0	X	240.68484	312.42256	27.98310	5.97169	0.1450999	0.23522822	2.5990209	20	4 7.7	20.0
229523	2005 XF_{7}	15.9	X	166.41120	278.96613	67.24349	13.37221	0.0794115	0.22209987	2.7004565	20	2 5.0	20.1
229524	2005 XG_{11}	16.7	X	274.87597	30.17720	113.57676	3.54454	0.1446494	0.26604412	2.3942359	20	—	—
229525	2005 XY_{14}	16.2	X	83.34609	273.84642	240.76626	10.73011	0.1459979	0.23008119	2.6376387	20	6 6.8	19.7
229526	2005 XK_{21}	16.6	X	243.61764	342.75161	53.62862	8.82887	0.1360314	0.24365941	2.5387149	20	6 23.0	20.2
229527	2005 XN_{24}	16.6	X	114.37275	165.83401	97.45395	9.54739	0.1337435	0.25651060	2.4531975	20	12 2.3	20.4
229528	2005 XK_{38}	16.3	X	120.33965	326.13340	151.36032	2.67579	0.1518418	0.22284836	2.6944063	20	6 2.6	20.3
229529	2005 XO_{43}	16.9	X	193.96821	288.24221	15.55703	2.87789	0.0299294	0.21656289	2.7462919	20	1 9.3	20.8
229530	2005 XT_{65}	15.6	X	227.94539	112.93653	264.17332	25.33022	0.1266526	0.23620068	2.5918824	20	5 10.7	19.9
229531	2005 XE_{79}	15.6	X	131.92510	47.63749	81.66515	13.69119	0.1191631	0.23060805	2.6336198	20	6 26.8	19.6
229532	2005 YN_{26}	16.0	X	149.05175	208.14916	239.75570	12.96348	0.2355404	0.22911761	2.6450288	20	5 28.9	20.5
229533	2005 YZ_{33}	16.4	X	97.85199	359.31893	115.07561	5.07813	0.0942153	0.22445596	2.6815256	20	4 27.2	20.0
229534	2005 YO_{36}	16.0	X	335.37762	106.19574	99.31428	4.01976	0.0709710	0.21576702	2.7530409	20	2 24.6	19.4
229535	2005 YQ_{36}	16.9	X	91.26454	141.48338	349.76049	1.03591	0.0602589	0.22542497	2.6738356	20	5 3.1	20.3
229536	2005 YC_{37}	16.2	X	155.84978	52.66448	94.43277	4.98241	0.0400076	0.24367670	2.5385947	20	8 15.9	19.7
229537	2005 YU_{42}	16.4	X	143.16356	288.19723	125.71311	3.56729	0.0598464	0.22264754	2.6960263	20	3 30.2	20.2
229538	2005 YM_{75}	16.8	X	47.48983	168.47164	345.13640	2.77505	0.0565543	0.22302916	2.6929500	20	3 31.4	20.3
229539	2005 YA_{79}	17.1	X	52.99016	85.79667	100.00404	2.37908	0.0808458	0.22859625	2.6490489	20	5 27.0	20.3
229540	2005 YP_{86}	16.2	X	142.36166	355.05277	101.38355	13.59489	0.1433178	0.23139279	2.6276620	20	5 30.6	20.4
229541	2005 YA_{110}	16.7	X	190.19526	266.65139	147.27773	2.55727	0.1690686	0.23356020	2.6113805	20	5 21.0	20.8
229542	2005 YP_{113}	16.2	X	187.77456	275.12945	66.96375	5.76303	0.0602690	0.21755364	2.7379477	20	2 21.4	20.2
229543	2005 YJ_{115}	16.5	X	116.44780	41.49403	89.99278	5.42878	0.1423010	0.22954705	2.6417288	20	6 15.3	20.4
229544	2005 YP_{118}	16.2	X	270.98514	178.99629	100.71084	6.04517	0.1086019	0.21837151	2.7311071	20	3 2.3	20.1
229545	2005 YU_{121}	16.1	X	138.43207	172.51150	283.18052	11.26071	0.1551582	0.23064993	2.6333009	20	5 22.9	20.3
229546	2005 YQ_{124}	16.3	X	189.01948	333.46105	63.66235	6.95142	0.1597102	0.23106314	2.6301606	20	4 29.7	20.6
229547	2005 YM_{138}	16.3	X	258.32960	245.61421	99.79312	7.55178	0.3255827	0.23686784	2.5870132	20	4 17.4	20.7
229548	2005 YD_{141}	16.2	X	248.75815	199.75528	90.29558	5.90049	0.0832782	0.21898629	2.7259931	20	2 21.9	20.2
229549	2005 YG_{150}	16.5	X	93.80686	72.52799	69.77046	4.00685	0.0513397	0.22818060	2.6522650	20	5 20.6	20.1
229550	2005 YP_{162}	16.9	X	191.99348	226.44633	154.81165	2.22340	0.1103718	0.22823544	2.6518401	20	4 12.3	20.8
229551	2005 YP_{173}	15.8	X	199.91434	320.54664	99.13625	14.74695	0.1533765	0.23321257	2.6139749	20	6 7.7	20.1
229552	2005 YP_{189}	17.1	X	216.18232	284.86790	129.07142	2.26569	0.2047456	0.23927652	2.5696225	20	6 11.6	21.2
229553	2005 YT_{191}	16.5	X	105.70175	132.56360	329.22014	2.80362	0.0600571	0.22209619	2.7004863	20	4 12.2	20.1
229554	2005 YR_{195}	16.4	X	92.76654	269.93055	177.56818	3.95689	0.0623549	0.21936045	2.7228925	20	3 9.3	20.0
229555	2005 YD_{202}	15.4	X	28.15139	301.11123	284.55150	11.57701	0.1093586	0.22794740	2.6540735	20	6 16.1	18.4
229556	2005 YO_{217}	16.0	X	123.90666	309.26964	103.56409	9.44837	0.1052002	0.21857512	2.7294107	20	3 14.8	20.0
229557	2005 YE_{227}	16.7	X	216.93782	92.05279	253.83491	3.75358	0.2166316	0.23237902	2.6202221	20	3 17.8	21.2
229558	2005 YV_{230}	16.1	X	142.27885	70.52206	301.17496	3.98157	0.0770571	0.21211415	2.7845581	20	2 6.3	20.1
229559	2005 YX_{240}	16.4	X	173.97866	261.46271	104.64825	9.63810	0.3301736	0.22461511	2.6802589	20	3 18.0	21.5
229560	2005 YV_{272}	16.1	X	153.54771	311.98526	80.51092	6.84754	0.0278536	0.21919520	2.7242609	20	3 14.6	19.9
229561	2005 YA_{287}	16.2	X	197.77951	268.00848	109.94973	10.68327	0.1249596	0.22734214	2.6587821	20	4 18.3	20.5
229562	2006 AX_{8}	15.9	X	212.14354	21.86946	64.68430	14.50944	0.1316753	0.23995208	2.5647973	20	7 28.1	20.0
229563	2006 AA_{9}	16.6	X	152.93983	308.73160	129.14098	3.61220	0.0564497	0.22855018	2.6494049	20	5 10.9	20.4
229564	2006 AK_{28}	16.9	X	328.58753	327.31195	131.71520	5.25990	0.1247577	0.26913717	2.3758568	20	—	—
229565	2006 AF_{30}	16.5	X	177.28156	145.90940	129.68439	11.75679	0.2243172	0.26741607	2.3860400	20	—	—
229566	2006 AP_{32}	16.1	X	188.32501	176.95765	140.66557	6.10016	0.1528637	0.21200863	2.7854820	20	1 24.1	20.5
229567	2006 AR_{33}	15.9	X	224.59626	257.12827	85.90209	12.58216	0.2245005	0.22814673	2.6525274	20	3 29.0	20.6
229568	2006 AA_{41}	16.3	X	348.24927	161.11059	57.27308	2.67859	0.0608124	0.21986202	2.7187498	20	3 31.6	19.7
229569	2006 AL_{43}	16.7	X	125.30761	334.75834	204.94766	1.79748	0.0417894	0.23907098	2.5710951	20	8 19.1	20.1
229570	2006 AA_{45}	15.8	X	145.55367	347.11606	75.01044	15.86736	0.0468891	0.22119022	2.7078552	20	4 17.5	19.9
229571	2006 AH_{49}	17.1	X	149.66147	76.40657	7.78775	2.34129	0.0607367	0.23070091	2.6329130	20	5 13.7	20.8
229572	2006 AG_{73}	16.0	X	175.55704	74.84666	286.90219	4.98419	0.0607175	0.21640357	2.7476396	20	2 27.5	20.1
229573	2006 AX_{77}	15.9	X	45.32719	29.56375	123.06444	10.07674	0.0437240	0.21838608	2.7309856	20	3 31.7	19.5
229574	2006 AX_{95}	17.0	X	258.44357	123.35844	262.54009	0.76573	0.1550222	0.23938889	2.5688183	20	6 24.4	20.5
229575	2006 BA_{1}	16.6	X	160.90754	203.62468	252.71662	4.40775	0.1248214	0.23313474	2.6145567	20	6 15.0	20.6
229576	2006 BV_{17}	16.2	X	140.13876	231.90675	134.59215	3.69836	0.1128495	0.21249457	2.7812338	20	2 2.0	20.1
229577	2006 BZ_{19}	15.8	X	33.93338	256.56971	267.01332	7.58249	0.1163510	0.21684237	2.7439316	20	3 25.6	19.1
229578	2006 BD_{38}	16.3	X	202.01550	313.64410	90.06756	3.44212	0.0155366	0.22503109	2.6769547	20	5 25.1	19.9
229579	2006 BU_{79}	15.1	X	76.55221	28.01844	358.22993	11.74948	0.0700273	0.19730892	2.9221662	20	—	—
229580	2006 BT_{81}	16.4	X	284.16741	247.98228	40.98023	2.83709	0.0611414	0.21661386	2.7458610	20	4 3.9	20.0
229581	2006 BW_{89}	15.7	X	148.61191	233.89357	125.81237	5.16738	0.1162024	0.20925432	2.8098713	20	2 3.8	19.8
229582	2006 BD_{92}	16.0	X	45.73707	156.22458	103.63157	4.74000	0.1150621	0.23674710	2.5878927	20	9 5.5	19.2
229583	2006 BF_{96}	16.4	X	318.19065	356.03775	147.60378	2.71717	0.0157004	0.19541658	2.9410006	20	—	—
229584	2006 BR_{114}	16.0	X	255.58786	188.02666	292.21850	1.69687	0.0415078	0.18301929	3.0723556	20	11 1.1	20.2
229585	2006 BP_{127}	16.6	X	169.56338	275.51723	160.97837	2.43101	0.1847711	0.22838610	2.6506737	20	5 30.8	21.1
229586	2006 BN_{145}	16.2	X	109.34111	265.42225	172.37763	4.97742	0.1470577	0.21907022	2.7252969	20	3 31.1	20.1
229587	2006 BA_{147}	16.5	X	182.22398	314.56503	113.29705	2.80832	0.1187908	0.22913561	2.6448902	20	5 31.3	20.5
229588	2006 BL_{148}	15.7	X	86.80124	255.90890	283.73343	11.95271	0.0607280	0.22775628	2.6555581	20	7 2.6	19.1
229589	2006 BW_{148}	16.2	X	88.22563	32.52303	66.37298	2.82981	0.0474494	0.21758258	2.7377049	20	3 17.8	19.8
229590	2006 BU_{162}	16.0	X	322.80866	59.15519	132.09631	3.71992	0.0382498	0.20832538	2.8182181	20	1 24.1	19.6
229591	2006 BX_{176}	15.6	X	199.07308	211.25758	108.99736	7.73102	0.0636976	0.21044768	2.7992389	20	2 6.3	19.7
229592	2006 BE_{183}	16.3	X	220.92877	173.37248	48.36369	1.59772	0.0915049	0.19106804	2.9854561	20	—	—
229593	2006 BX_{189}	16.3	X	22.13386	44.16636	73.88139	3.09835	0.0244761	0.20366048	2.8610902	20	1 12.8	20.0
229594	2006 BL_{204}	16.2	X	178.86275	163.27097	85.24846	1.49131	0.0166760	0.19172771	2.9786041	20	—	—
229595	2006 BE_{214}	15.9	X	206.12974	71.88711	266.26519	4.67056	0.0381264	0.21777995	2.7360506	20	3 2.8	19.8
229596	2006 BX_{219}	16.2	X	246.12112	254.62752	90.77883	5.41264	0.2511454	0.23621718	2.5917617	20	4 12.4	20.5
229597	2006 BV_{220}	16.1	X	197.54535	123.07298	259.96572	5.07172	0.0560476	0.22465406	2.6799490	20	4 18.8	20.1
229598	2006 BQ_{251}	16.4	X	136.23936	196.42089	148.07017	2.72723	0.0794692	0.20170744	2.8795289	20	—	—
229599	2006 BM_{252}	17.1	X	113.83170	70.49690	348.47626	1.22164	0.1999972	0.21599103	2.7511371	20	3 18.7	21.1
229600	2006 BW_{270}	15.9	X	117.00549	247.79625	241.67125	6.47191	0.1173857	0.22540187	2.6740183	20	6 10.5	19.7

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
229601	2006 BE_{276}	16.4	X	21.11965	224.44322	165.70530	2.28264	0.0630174	0.18707136	3.0278278	20	12 28.9	20.4
229602	2006 CO	16.1	X	84.22721	259.98243	183.94512	8.93107	0.1512172	0.21403740	2.7678524	20	3 6.1	19.6
229603	2006 CG_{10}	15.2	X	8.89678	44.55026	102.83437	36.22463	0.1696384	0.20476260	2.8508145	20	1 22.3	18.5
229604	2006 CF_{22}	16.7	X	250.24329	347.32377	92.56508	3.42657	0.1349181	0.24404669	2.5360283	20	8 31.9	20.0
229605	2006 CR_{37}	16.1	X	24.44605	297.45484	302.48674	6.48755	0.2516944	0.22317617	2.6917672	20	7 20.2	18.3
229606	2006 DM_{1}	17.1	X	157.78446	75.28375	64.90169	3.51634	0.1709737	0.23564395	2.5959631	20	8 9.6	21.3
229607	2006 DD_{10}	15.5	X	350.15298	17.98894	116.02992	7.03679	0.0430437	0.20003506	2.8955560	20	—	—
229608	2006 DQ_{20}	16.0	X	310.54798	92.05936	110.03317	1.24844	0.1621701	0.20374559	2.8602933	20	1 5.3	19.8
229609	2006 DQ_{27}	15.2	X	32.84890	222.20619	165.00140	15.45968	0.2594895	0.18977252	2.9990279	20	—	—
229610	2006 DR_{32}	15.8	X	252.59605	116.57582	352.55370	2.14008	0.1478030	0.17833012	3.1259803	20	9 29.2	20.1
229611	2006 DZ_{32}	16.1	X	289.22771	342.60496	183.18399	1.30724	0.0385325	0.19200280	2.9757585	20	—	—
229612	2006 DS_{36}	16.2	X	100.05507	80.17685	326.14460	1.15783	0.0702318	0.20275883	2.8695659	20	1 30.5	20.1
229613	2006 DP_{53}	16.2	X	97.71126	123.99161	222.74934	1.00630	0.1113397	0.19460210	2.9492010	20	—	—
229614	2006 DF_{59}	16.3	X	78.83059	225.06835	203.76063	1.26064	0.0625536	0.20346490	2.8629234	20	1 29.1	20.1
229615	2006 DZ_{66}	17.0	X	133.59708	206.51937	268.15335	5.83567	0.2994437	0.22770985	2.6559191	20	6 21.9	21.6
229616	2006 DK_{68}	15.3	X	71.46679	270.94847	103.94876	16.26467	0.0713721	0.19266795	2.9689056	20	—	—
229617	2006 DY_{74}	16.4	X	106.17774	217.81250	114.41123	3.73017	0.0880678	0.19328163	2.9626181	20	—	—
229618	2006 DT_{75}	16.0	X	353.76245	342.52247	116.14587	2.67962	0.0722251	0.19545631	2.9406020	20	—	—
229619	2006 DH_{82}	16.3	X	279.02443	115.40344	62.49482	0.70959	0.0450178	0.19308606	2.9646182	20	—	—
229620	2006 DZ_{83}	16.1	X	104.95275	354.32481	311.95517	1.84516	0.0661119	0.18334185	3.0687510	20	12 25.4	20.7
229621	2006 DQ_{96}	16.0	X	85.74745	246.97332	182.36993	1.87478	0.0507452	0.20303207	2.8669907	20	2 6.3	19.8
229622	2006 DQ_{121}	15.5	X	177.05735	166.82388	113.29967	2.83196	0.0204264	0.19498945	2.9452939	20	—	—
229623	2006 DD_{128}	16.2	X	348.00230	277.27865	99.75000	3.05067	0.1181459	0.18262614	3.0767633	20	10 31.7	19.8
229624	2006 DN_{133}	16.4	X	41.95085	60.39398	73.06966	3.19599	0.0753347	0.21061901	2.7977206	20	3 1.8	19.9
229625	2006 DR_{143}	16.1	X	31.24606	349.80499	23.83266	1.59791	0.2219550	0.18707228	3.0278179	20	—	—
229626	2006 DQ_{148}	16.1	X	345.21013	267.05379	279.71232	0.96827	0.0318721	0.20659194	2.8339605	20	2 17.6	19.9
229627	2006 DF_{160}	16.1	X	23.09607	212.16500	348.15217	6.15529	0.0775177	0.21731957	2.7399133	20	4 26.9	19.5
229628	2006 DA_{164}	16.0	X	188.88953	171.89036	187.49634	4.23226	0.1173788	0.21242928	2.7818036	20	3 13.1	20.2
229629	2006 DF_{191}	15.8	X	341.13833	71.42910	102.05460	3.00364	0.0212624	0.20199133	2.8768302	20	1 29.2	19.7
229630	2006 DR_{201}	15.7	X	317.26700	144.75348	97.10671	9.96792	0.1035769	0.20922262	2.8101551	20	3 17.1	19.5
229631	Cluny	16.3	X	186.82784	290.55139	149.83839	13.29797	0.1208914	0.23190102	2.6238214	20	6 21.6	20.6
229632	2006 ED_{32}	16.2	X	135.80336	136.56830	322.72850	5.07792	0.1595581	0.22365525	2.6879220	20	5 25.3	20.4
229633	2006 ED_{39}	15.9	X	10.86498	269.66883	262.69018	6.54242	0.1595115	0.20946588	2.8079790	20	2 26.8	19.0
229634	2006 EE_{43}	15.0	X	122.13410	191.98500	68.19190	13.01764	0.1783240	0.17261556	3.1945970	20	11 23.2	20.3
229635	2006 EC_{59}	16.0	X	91.52558	195.14067	305.47938	3.73581	0.0541328	0.21926524	2.7236806	20	5 14.5	19.7
229636	2006 FS_{2}	16.1	X	241.64562	210.02234	54.27172	2.84661	0.0042279	0.19853179	2.9101543	20	1 21.1	20.2
229637	2006 FU_{4}	15.8	X	12.63328	136.86318	49.44503	8.45009	0.1471858	0.21001262	2.8031034	20	3 28.8	18.8
229638	2006 FN_{8}	15.8	X	311.62406	256.63167	196.26573	9.44807	0.0823008	0.18011609	3.1052819	20	12 8.9	19.8
229639	2006 FZ_{8}	15.8	X	145.89751	154.37597	74.02903	2.75806	0.0515664	0.17160426	3.2071358	20	11 4.8	20.6
229640	2006 FD_{11}	15.8	X	237.58182	86.13687	57.66445	3.58753	0.1315922	0.17872111	3.1214195	20	10 27.3	20.4
229641	2006 FJ_{16}	15.9	X	180.63263	277.69613	10.73211	6.26760	0.0645876	0.19191324	2.9766841	20	—	—
229642	2006 FU_{20}	16.0	X	38.18366	268.10807	35.48774	2.94463	0.0684586	0.16854552	3.2458210	20	10 3.6	20.4
229643	2006 FC_{38}	16.1	X	212.83772	185.62867	128.95281	2.95302	0.0600643	0.20404577	2.8574874	20	2 14.2	20.2
229644	2006 FO_{42}	15.7	X	311.20914	75.59556	65.94241	3.23778	0.0895225	0.18939485	3.0030134	20	—	—
229645	2006 FH_{49}	15.7	X	127.40326	25.54032	126.24213	16.42487	0.0686770	0.22646685	2.6656285	20	7 17.0	19.6
229646	2006 FD_{50}	15.1	X	128.05112	243.44916	296.45076	28.39423	0.1997529	0.23308299	2.6149436	20	8 19.5	19.8
229647	2006 FF_{53}	16.1	X	169.54151	7.93013	212.62429	2.71545	0.1042893	0.17386739	3.1792448	20	11 18.8	20.9
229648	2006 GG_{2}	15.8	X	203.39507	99.69320	93.70731	4.76926	0.0304498	0.17886159	3.1197849	20	11 29.0	20.2
229649	2006 GC_{5}	15.8	X	356.72389	82.90120	121.28854	5.01004	0.0375568	0.21043632	2.7993396	20	3 28.7	19.4
229650	2006 GY_{22}	16.1	X	315.84309	145.82567	79.27255	3.18706	0.1255116	0.20302270	2.8670790	20	2 16.4	19.8
229651	2006 GR_{36}	15.8	X	138.11139	286.66512	49.36586	3.45474	0.0108061	0.19273722	2.9681943	20	—	—
229652	2006 HX_{1}	16.6	X	182.57768	100.62836	81.46394	5.74383	0.2178210	0.24159776	2.5531369	20	10 22.3	20.8
229653	2006 HQ_{6}	15.3	X	267.16796	292.50693	211.58868	8.72459	0.1078846	0.18113394	3.0936380	20	12 6.7	19.5
229654	2006 HE_{18}	15.5	X	250.64722	283.06063	203.71338	10.88722	0.0613728	0.17363843	3.1820389	20	10 30.8	19.9
229655	2006 HO_{32}	16.1	X	120.73275	197.05908	196.17758	1.65617	0.0768694	0.20304518	2.8668673	20	2 8.9	20.2
229656	2006 HH_{34}	15.9	X	310.32410	102.31354	54.19124	3.39477	0.1518688	0.19096761	2.9865027	20	—	—
229657	2006 HT_{39}	14.8	X	247.78277	85.15121	62.83948	27.42673	0.1249227	0.17648580	3.1477208	20	11 16.1	19.4
229658	2006 HV_{41}	15.1	X	157.74444	180.07896	105.18921	12.38216	0.0871531	0.17960790	3.1111367	20	—	—
229659	2006 HK_{49}	15.8	X	339.79909	337.56504	100.84069	3.55083	0.1376613	0.18537280	3.0462956	20	—	—
229660	2006 HB_{110}	15.8	X	97.79046	112.61699	37.97094	27.20773	0.2428531	0.21951895	2.7215816	20	6 29.3	20.5
229661	2006 JV_{46}	14.9	X	205.43552	318.85806	231.65969	25.43797	0.1692059	0.17418673	3.1753579	20	11 13.2	19.9
229662	2006 KV_{12}	15.0	X	143.71319	144.91983	143.07843	10.25338	0.0951480	0.17966739	3.1104499	20	—	—
229663	2006 KX_{20}	14.9	X	200.47622	118.38040	97.02936	11.61516	0.0486995	0.17615371	3.1516757	20	12 18.9	19.4
229664	2006 KV_{40}	16.1	X	37.80731	271.44020	137.84540	2.14728	0.0945900	0.18500381	3.0503449	20	—	—
229665	2006 MC_{2}	15.5	X	200.70887	99.13474	119.25476	10.47604	0.0393287	0.17558519	3.1584752	20	12 23.7	20.1
229666	2006 QF_{33}	16.6	X	53.25139	50.98094	283.38296	18.97344	0.0634816	0.36755263	1.9301439	20	—	—
229667	2006 SQ_{182}	16.4	X	138.13551	182.47742	303.07719	0.51541	0.1158487	0.19120993	2.9839789	20	6 27.5	21.0
229668	2006 SQ_{408}	17.8	X	297.44593	239.60831	61.51276	4.27166	0.2286274	0.26192295	2.4192849	20	4 9.8	20.9
229669	2006 TF_{41}	17.8	X	216.92489	89.17866	217.90585	4.56597	0.1201497	0.31817450	2.1250010	20	1 23.8	20.8
229670	2006 TP_{58}	17.6	X	220.10828	274.31495	229.40533	18.70561	0.0701422	0.35762253	1.9657101	20	11 20.1	19.3
229671	2006 VT_{87}	17.4	X	133.69134	355.44834	331.81482	2.97377	0.1914032	0.30446930	2.1883009	20	—	—
229672	2006 WR_{1}	17.9	X	236.62535	132.10489	105.99751	38.18698	0.6137914	0.64039981	1.3330157	20	—	—
229673	2006 WQ_{123}	17.3	X	125.91709	139.32853	272.11897	3.94915	0.0673187	0.30556710	2.1830566	20	2 23.0	19.8
229674	2006 YK_{23}	17.4	X	237.91974	239.94354	31.90917	2.08311	0.0948804	0.30340102	2.1934346	20	1 4.1	20.3
229675	2007 BH_{2}	16.8	X	290.46605	66.50550	102.21832	5.53598	0.0900882	0.28678315	2.2773702	20	—	—
229676	2007 BR_{4}	17.1	X	7.35879	123.27811	18.22337	5.82126	0.1316926	0.29759136	2.2218898	20	—	—
229677	2007 BY_{19}	17.1	X	293.48580	118.87990	82.65449	6.48868	0.1046879	0.29591008	2.2302979	20	—	—
229678	2007 BY_{21}	17.4	X	262.47355	98.35113	85.48099	2.60422	0.1042385	0.28510647	2.2862901	20	—	—
229679	2007 BO_{69}	17.3	X	32.60990	275.42654	138.43314	6.24283	0.1544832	0.28713674	2.2755001	20	—	—
229680	2007 CX_{11}	17.0	X	110.83243	304.64455	281.82124	4.18859	0.1384487	0.25991448	2.4317321	20	10 11.2	20.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229681 2007 CL_{52}	17.0	X	352.55837	233.80686	231.59814	5.37720	0.1070493	0.28855601	2.2680326	20	—	—
229682 2007 CN_{52}	16.6	X	216.81504	244.76726	307.63779	5.17036	0.0715040	0.27399421	2.3476956	20	12 31.6	19.4
229683 2007 CR_{62}	17.1	X	194.95581	333.12656	247.06726	2.20779	0.1402382	0.27493671	2.3423272	20	12 30.8	20.2
229684 2007 DQ_{11}	17.4	X	349.15861	330.89291	147.74915	8.18961	0.1734238	0.28978965	2.2615913	20	—	—
229685 2007 DK_{25}	17.2	X	144.17469	264.77441	321.56166	2.21505	0.1437605	0.26375027	2.4080977	20	11 14.2	21.0
229686 2007 DP_{36}	16.7	X	304.86937	131.66443	146.51350	2.74345	0.1747841	0.22902257	2.6457605	20	3 30.3	20.1
229687 2007 DO_{48}	17.4	X	236.20846	240.19063	319.21169	1.84520	0.1614039	0.27745262	2.3281458	20	—	—
229688 2007 DL_{51}	17.2	X	209.75189	171.53811	2.03712	2.59928	0.1322141	0.26729436	2.3867642	20	11 16.3	20.6
229689 2007 DQ_{57}	17.1	X	166.34478	116.64835	89.47374	3.39613	0.1268826	0.26409585	2.4059965	20	11 12.7	20.7
229690 2007 DS_{70}	17.1	X	343.04919	43.87305	358.26269	4.78877	0.2329995	0.27330923	2.3516166	20	—	—
229691 2007 DX_{78}	17.4	X	30.28070	135.94374	356.09796	4.66553	0.0683952	0.29902307	2.2147918	20	1 25.0	19.5
229692 2007 DP_{82}	17.8	X	286.56599	211.73133	207.83262	0.73175	0.1575214	0.26337454	2.4103875	20	9 25.9	20.2
229693 2007 DC_{88}	17.4	X	334.47190	25.29880	67.13533	2.07187	0.1010329	0.28022602	2.3127592	20	—	—
229694 2007 DE_{97}	16.4	X	135.11272	42.41691	337.39534	5.40987	0.0728927	0.22058423	2.7128123	20	2 7.8	20.2
229695 2007 DH_{105}	16.0	X	288.25861	207.62169	47.25283	5.54878	0.0630067	0.21856161	2.7295232	20	2 27.0	19.8
229696 2007 DT_{106}	17.0	X	291.28668	98.26850	71.48613	6.62781	0.0312801	0.28484406	2.2876940	20	—	—
229697 2007 EZ_{12}	16.9	X	294.60872	77.90215	51.65698	2.64404	0.0960884	0.27910228	2.3189629	20	—	—
229698 2007 EL_{16}	16.6	X	291.18433	25.50461	136.09692	6.56842	0.1075595	0.28226945	2.3015838	20	—	—
229699 2007 EW_{25}	15.8	X	336.83327	187.27793	40.20169	7.22936	0.2107053	0.22511102	2.6763210	20	3 9.2	18.7
229700 2007 EQ_{29}	16.9	X	228.07745	136.57530	104.18707	2.56006	0.1780130	0.28176680	2.3043202	20	—	—
229701 2007 EP_{41}	18.3	X	68.45808	224.82590	196.93924	1.18360	0.1629917	0.29852213	2.2172689	20	—	—
229702 2007 EO_{48}	15.8	X	14.50390	337.28685	103.79569	3.23549	0.0371426	0.20377213	2.8600449	20	—	—
229703 2007 EP_{69}	17.5	X	194.08243	45.47490	141.79612	3.23495	0.1169723	0.26500016	2.4005198	20	11 19.2	20.8
229704 2007 EJ_{76}	17.6	X	231.44710	279.59481	244.47288	1.24419	0.1622622	0.26875904	2.3780848	20	11 27.5	20.3
229705 2007 EX_{78}	17.6	X	271.10792	15.65996	124.60870	2.91431	0.1248039	0.27408593	2.3471719	20	—	—
229706 2007 EV_{85}	16.9	X	58.83636	158.01765	48.19220	9.62241	0.1003033	0.23833169	2.5764093	20	7 7.7	20.2
229707 2007 EE_{117}	16.5	X	119.28241	316.68216	62.52661	5.94393	0.0682446	0.21041290	2.7995473	20	1 20.4	20.4
229708 2007 ED_{119}	16.1	X	73.74586	152.06423	25.32435	13.76344	0.0878262	0.23559262	2.5963402	20	6 13.9	19.7
229709 2007 EZ_{119}	16.9	X	80.38061	67.89232	53.97799	6.74922	0.0382193	0.22490509	2.6779545	20	4 5.5	20.4
229710 2007 ET_{120}	16.6	X	210.34103	88.08378	16.06648	10.38752	0.2053122	0.25761190	2.4462008	20	8 14.9	20.6
229711 2007 EH_{133}	17.1	X	336.88882	285.96882	164.49483	3.09634	0.1277021	0.27848068	2.3224124	20	—	—
229712 2007 EZ_{133}	18.0	X	287.55581	121.70456	8.31378	2.48616	0.1477461	0.27562675	2.3384162	20	—	—
229713 2007 EJ_{141}	17.3	X	348.36710	109.28974	333.92031	3.68653	0.1973004	0.28026162	2.3125633	20	—	—
229714 2007 EH_{147}	16.5	X	3.83971	238.70682	34.32549	4.98896	0.1315222	0.24134880	2.5548924	20	7 15.6	19.1
229715 2007 EY_{167}	17.6	X	334.42048	62.79784	45.60587	3.06524	0.1685789	0.28011026	2.3133963	20	—	—
229716 2007 ER_{169}	17.9	X	214.86082	60.02825	107.02490	2.25573	0.1343688	0.26345756	2.4098810	20	11 14.2	21.2
229717 2007 EC_{172}	15.4	X	134.05345	129.64510	193.73199	7.62994	0.2058681	0.20137210	2.8827248	20	—	—
229718 2007 EA_{179}	17.2	X	265.32858	183.11744	338.75764	2.40955	0.1608280	0.27426191	2.3461677	20	—	—
229719 2007 EN_{210}	17.5	X	249.13902	135.52748	23.71072	4.11067	0.1233010	0.27483995	2.3428769	20	12 24.7	20.1
229720 2007 EK_{219}	16.3	X	41.33734	190.33959	147.87992	1.26923	0.2573946	0.18828262	3.0148281	20	12 18.8	20.5
229721 2007 FC_{38}	16.8	X	262.58323	77.72593	93.39766	4.17371	0.1364317	0.27525946	2.3404959	20	—	—
229722 2007 GE	16.3	X	9.18681	50.59403	181.36036	6.29794	0.0444744	0.23430053	2.6058767	20	5 21.4	19.5
229723 2007 GG_{2}	16.2	X	175.64560	264.76412	71.22518	3.88265	0.0590785	0.20898305	2.8123023	20	1 31.1	20.4
229724 2007 GQ_{7}	17.5	X	194.01678	169.62603	15.34469	3.01141	0.1707842	0.26390207	2.4071742	20	11 8.9	21.0
229725 2007 GX_{16}	16.6	X	55.53756	194.71156	357.09355	2.15949	0.1215342	0.23298020	2.6157127	20	6 14.3	19.7
229726 2007 GH_{17}	16.0	X	285.87307	18.01888	239.43070	5.24650	0.0145616	0.21835554	2.7312402	20	2 28.9	19.9
229727 2007 GZ_{19}	17.2	X	243.39459	264.74035	274.18859	1.84776	0.1508408	0.27024578	2.3693548	20	—	—
229728 2007 GX_{30}	17.0	X	40.09376	313.02685	199.49712	1.71995	0.0664462	0.22292280	2.6938065	20	3 20.2	20.3
229729 2007 GB_{35}	16.7	X	226.49380	64.29300	64.24028	7.24755	0.0781765	0.26158634	2.4213599	20	10 18.3	19.8
229730 2007 GP_{37}	17.7	X	240.85214	1.36826	127.63094	2.59405	0.1422547	0.26211187	2.4181223	20	10 26.7	20.8
229731 2007 GN_{42}	16.1	X	41.63130	283.92101	32.53080	1.54119	0.2037249	0.17475084	3.1685206	20	11 12.5	20.4
229732 2007 GY_{47}	16.0	X	53.77633	155.45453	209.80077	9.96366	0.1137895	0.18833986	3.0142173	20	—	—
229733 2007 GK_{53}	16.7	X	123.57549	231.56494	217.41594	1.72011	0.0361538	0.22633357	2.6666749	20	4 15.7	20.3
229734 2007 GT_{53}	16.2	X	119.03035	142.23752	165.89313	4.67709	0.1641232	0.18829664	3.0146785	20	—	—
229735 2007 HK_{1}	16.4	X	338.30346	304.50439	315.46146	1.00828	0.2085371	0.22866469	2.6485203	20	4 24.3	18.8
229736 2007 HK_{3}	15.9	X	130.64030	356.88571	159.75003	13.83865	0.0851287	0.24183952	2.5514351	20	7 28.3	19.8
229737 Porthos	16.1	X	173.94277	190.52125	171.85775	7.36294	0.0802983	0.21645391	2.7472136	20	2 28.9	20.3
229738 2007 HW_{21}	17.5	X	309.97276	150.64873	164.54799	2.32112	0.0910196	0.23285859	2.6166233	20	6 10.1	20.5
229739 2007 HB_{22}	15.9	X	139.37143	326.19602	55.88583	7.32554	0.1139240	0.21234265	2.7825601	20	2 23.8	20.1
229740 2007 HO_{53}	15.6	X	188.45562	269.43790	79.30332	9.74307	0.0202714	0.21486840	2.7607114	20	3 2.7	19.6
229741 2007 HM_{58}	15.3	X	122.11142	237.12721	81.10867	11.37178	0.1134439	0.19549653	2.9401987	20	—	—
229742 2007 HV_{82}	16.6	X	268.78528	119.83329	120.68913	6.84470	0.0813535	0.28566175	2.2833263	20	1 1.2	19.8
229743 2007 JA_{5}	15.0	X	102.55650	18.61007	221.21839	16.30264	0.0980835	0.17384306	3.1795413	20	10 3.6	19.9
229744 2007 JQ_{8}	16.1	X	127.02549	290.22702	56.91145	3.23778	0.0555825	0.20044239	2.8916318	20	—	—
229745 2007 JA_{15}	16.3	X	195.67350	9.47375	250.80961	1.06670	0.0078471	0.19895588	2.9060173	20	—	—
229746 2007 JF_{17}	15.4	X	138.61237	207.58575	107.55375	3.43493	0.0786648	0.19439913	2.9512534	20	—	—
229747 2007 JV_{18}	15.9	X	204.96548	240.89467	93.94084	6.96202	0.1724040	0.21073654	2.7966803	20	3 1.9	20.6
229748 2007 JZ_{19}	16.3	X	147.98452	172.93576	110.90966	3.01803	0.1677008	0.18975492	2.9992132	20	—	—
229749 2007 JH_{21}	15.8	X	74.13650	321.98260	249.52768	11.85803	0.2311910	0.23924909	2.5698189	20	8 18.1	19.8
229750 2007 JC_{23}	15.9	X	262.81369	48.68532	255.03376	5.24726	0.0525623	0.22003093	2.7173582	20	3 24.7	19.7
229751 2007 JK_{27}	15.0	X	354.65442	276.30977	75.31865	18.64431	0.1245843	0.17054223	3.2204366	20	10 16.3	19.3
229752 2007 JL_{36}	16.2	X	269.64585	42.81836	264.87570	4.01935	0.0994525	0.22121859	2.7076237	20	4 1.4	20.0
229753 2007 KA_{4}	15.5	X	19.67975	278.00957	101.61207	10.35168	0.0689763	0.18354902	3.0664414	20	12 14.8	19.7
229754 2007 KO_{6}	16.3	X	129.67933	293.34446	240.47903	5.49343	0.1135362	0.24296896	2.5435221	20	8 19.9	20.1
229755 2007 LW_{3}	15.7	X	42.89488	265.23143	94.14340	9.60080	0.1976233	0.17980102	3.1089086	20	—	—
229756 2007 LC_{8}	14.9	X	70.71847	223.02845	106.15759	11.09256	0.1225350	0.18118016	3.0931118	20	12 21.6	19.5
229757 2007 MU_{9}	16.9	X	339.03975	168.91915	237.60061	3.26957	0.2577430	0.24188166	2.5511388	20	12 28.0	18.8
229758 2007 NG	15.9	X	324.22147	166.05992	99.01131	14.51651	0.0678611	0.22192534	2.7018721	20	5 2.6	19.6
229759 2007 NZ_{2}	15.8	X	111.46019	237.12552	85.37752	7.07376	0.1442344	0.18189884	3.0849592	20	—	—
229760 2007 RM_{225}	13.5	X	342.07917	87.36415	322.20975	3.32502	0.0704667	0.08402023	5.1627387	20	11 5.5	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229761 2007 RC_{288}	13.6	X	11.77685	8.94524	3.66808	5.50912	0.0496349	0.08470637	5.1348215	20	10 31.9	20.2
229762 2007 UK_{126}	3.3	X	344.93410	346.67218	131.05190	23.38745	0.4842788	0.00158675	72.7998848	20	12 8.6	19.5
229763 2008 FZ_{52}	17.4	X	113.07945	155.10741	162.25336	4.57991	0.1842544	0.28864178	2.2675833	20	—	—
229764 2008 FE_{88}	16.9	X	96.10055	239.64006	26.37544	6.81910	0.0900997	0.27799989	2.3250893	20	11 15.9	20.2
229765 2008 FT_{95}	17.0	X	353.50010	229.36379	109.72219	2.39053	0.2030459	0.27028575	2.3691212	20	10 20.9	18.8
229766 2008 GX_{76}	17.1	X	160.32261	195.87724	119.25169	5.02676	0.1880179	0.29827225	2.2185071	20	—	—
229767 2008 HA_{33}	17.5	X	78.93755	261.98268	68.80886	8.62512	0.1805833	0.28294862	2.2978993	20	—	—
229768 2008 HT_{68}	17.2	X	137.57056	247.38308	93.93315	6.85165	0.1386669	0.29695516	2.2250621	20	—	—
229769 2008 JX_{19}	15.5	X	269.53765	68.44694	249.48235	13.45558	0.2453842	0.23733133	2.5836440	20	3 22.9	19.8
229770 2008 JX_{30}	16.8	X	234.83439	195.62936	159.99239	5.53812	0.2838899	0.23907039	2.5710994	20	4 12.5	21.2
229771 2008 JQ_{32}	17.5	X	241.38560	189.15051	71.96775	2.65737	0.2251567	0.30437395	2.1887579	20	—	—
229772 2008 KX_{10}	16.3	X	242.90126	185.89704	163.07884	5.85909	0.3403872	0.23827057	2.5768499	20	4 6.9	20.9
229773 2008 LW_{10}	16.9	X	244.93282	122.64691	175.30626	3.41773	0.0814745	0.23046148	2.6347363	20	2 23.6	20.6
229774 2008 LY_{14}	15.6	X	130.25802	89.95467	260.59641	11.50800	0.1547884	0.20536391	2.8452470	20	1 7.8	19.8
229775 2008 LM_{15}	16.3	X	244.14495	204.48285	151.04088	4.48710	0.2589422	0.23873781	2.5734866	20	4 21.5	20.5
229776 2008 ME_{2}	17.1	X	45.50803	256.00569	116.52075	7.60956	0.1357209	0.28246612	2.3005154	20	—	—
229777 ENIAC	15.8	X	203.55916	359.19966	262.46933	9.14972	0.0789529	0.20406299	2.8573266	20	—	—
229778 2008 NX_{4}	15.7	X	179.98594	281.33971	86.95648	11.05962	0.1934795	0.21514743	2.7583240	20	3 23.4	20.5
229779 2008 ON_{20}	16.4	X	48.82360	178.28200	295.05767	3.29906	0.0183389	0.21159787	2.7890857	20	2 8.4	20.2
229780 2008 OJ_{21}	16.0	X	38.04747	87.33882	6.60203	1.48496	0.0407595	0.20172488	2.8793629	20	1 4.2	19.6
229781 Arthurmcdonald	15.4	X	72.59727	340.16013	308.45073	14.05007	0.0820283	0.17555392	3.1588501	20	10 23.7	20.3
229782 2008 PZ_{3}	16.4	X	241.97030	36.90417	318.98636	2.86785	0.1983373	0.22744386	2.6579893	20	4 22.4	20.6
229783 2008 PG_{17}	15.4	X	3.05837	215.01575	140.23763	9.93336	0.0760623	0.17435093	3.1733639	20	10 24.9	19.7
229784 2008 PM_{18}	15.6	X	291.88650	217.96522	97.77762	21.21115	0.3534368	0.23287055	2.6165337	20	4 16.3	19.9
229785 2008 QR_{2}	16.0	X	49.79697	86.40864	304.26600	9.34014	0.2148464	0.18740556	3.0242271	20	—	—
229786 2008 QU_{8}	15.9	X	43.38108	281.35254	26.77271	0.57998	0.1390196	0.17230261	3.1984640	20	10 25.9	20.3
229787 2008 QV_{22}	15.4	X	213.68978	331.97206	251.32702	9.27440	0.0479319	0.19184280	2.9774127	20	—	—
229788 2008 QV_{41}	16.5	X	215.20254	222.77504	314.47983	2.78706	0.0989722	0.25970280	2.4330533	20	11 30.9	19.7
229789 2008 RH_{10}	14.7	X	211.30284	358.38250	168.84671	10.60936	0.0281519	0.17343734	3.1844980	20	11 8.2	19.4
229790 2008 RH_{30}	17.0	X	197.40914	5.50665	177.84730	1.16395	0.1174454	0.25812527	2.4429563	20	11 15.9	20.5
229791 2008 RP_{43}	15.7	X	329.40807	24.52574	45.59629	1.96910	0.1508189	0.17340689	3.1848707	20	12 4.7	19.4
229792 2008 RD_{79}	16.0	X	48.97790	81.14375	326.07796	2.16512	0.1195730	0.18785986	3.0193495	20	—	—
229793 2008 RB_{90}	16.1	X	212.44481	64.08763	318.99151	5.56764	0.0498535	0.22114014	2.7082640	20	5 6.3	20.1
229794 2008 RR_{99}	16.6	X	104.86016	341.31340	38.15315	2.06451	0.1287619	0.19593258	2.9358348	20	1 13.2	20.5
229795 2008 RM_{100}	14.8	X	111.14222	274.23736	172.43144	7.70005	0.2411454	0.12425876	3.9772667	20	4 29.1	21.0
229796 2008 RC_{122}	16.0	X	262.21166	140.94320	19.58487	4.44312	0.1062893	0.18218421	3.0817369	20	12 20.1	20.1
229797 2008 RT_{130}	15.2	X	152.10277	247.02962	119.02537	13.11553	0.0501727	0.20289735	2.8682596	20	2 10.7	19.4
229798 2008 SK_{15}	16.3	X	33.05463	151.74132	195.55850	1.51020	0.1073419	0.17802121	3.1295956	20	11 26.3	20.6
229799 2008 SN_{18}	16.3	X	358.25894	234.48264	133.32938	1.18514	0.0912342	0.17379895	3.1800793	20	10 31.3	20.2
229800 2008 ST_{35}	16.2	X	124.19989	332.63212	51.04808	1.03997	0.0706402	0.19947587	2.9009648	20	2 1.9	20.1
229801 2008 SN_{37}	16.3	X	319.33913	200.84046	43.06141	3.14870	0.0206756	0.21374980	2.7703347	20	3 29.2	20.0
229802 2008 SP_{51}	15.5	X	240.12222	288.37274	237.04108	4.00706	0.1411880	0.17554711	3.1589319	20	11 22.5	20.0
229803 2008 SL_{57}	16.2	X	286.97395	89.54685	181.72345	2.31768	0.0460635	0.21205127	2.7851086	20	3 17.5	20.0
229804 2008 SO_{60}	14.9	X	319.95023	153.58137	280.23679	4.10108	0.1612656	0.17173559	3.2055005	20	11 21.3	18.5
229805 2008 SC_{69}	15.9	X	2.19599	19.12062	254.18006	5.01725	0.0927941	0.23255856	2.6188734	20	7 8.3	18.9
229806 2008 SX_{112}	16.0	X	13.59386	96.72337	121.53858	4.00977	0.0245150	0.21906783	2.7253167	20	5 9.1	19.6
229807 2008 ST_{145}	16.3	X	271.29801	161.69590	158.74274	4.66002	0.1284353	0.22396420	2.6854495	20	4 19.4	20.1
229808 2008 SB_{148}	13.5	X	334.99914	6.16928	42.98461	1.79816	0.0621640	0.08221318	5.2381157	20	10 28.2	20.0
229809 2008 SA_{164}	13.0	X	236.37716	301.87744	189.09567	12.60613	0.0245000	0.08202234	5.2462375	20	10 9.1	19.9
229810 2008 SE_{164}	15.8	X	334.43604	352.69455	57.77244	2.05255	0.1553902	0.17020425	3.2246985	20	11 17.4	19.2
229811 2008 ST_{187}	13.3	X	322.55187	125.69793	280.33197	3.77467	0.0684263	0.07949241	5.3569665	20	10 6.4	20.1
229812 2008 SC_{201}	16.4	X	316.89152	168.58581	334.38520	1.94557	0.0472954	0.18448938	3.0560126	20	—	—
229813 2008 SW_{223}	13.5	X	357.02901	34.89656	328.38874	6.05111	0.0775637	0.08304982	5.2028773	20	10 3.1	20.0
229814 2008 SQ_{246}	16.1	X	156.20251	98.62053	266.77302	0.90999	0.0869549	0.20480484	2.8504225	20	2 15.9	20.3
229815 2008 SX_{256}	14.8	X	106.21104	216.00584	71.08723	10.62231	0.1641991	0.17776943	3.1325499	20	12 9.5	19.8
229816 2008 SY_{261}	13.7	X	346.45470	212.61864	176.65819	3.11315	0.0469212	0.08305900	5.2024939	20	10 21.3	20.3
229817 2008 SK_{285}	16.1	X	308.11372	158.54753	106.07453	1.84949	0.0196943	0.21435232	2.7651408	20	4 10.3	19.9
229818 2008 TP_{4}	16.4	X	248.85337	302.64963	13.82677	1.86567	0.0691623	0.21594906	2.7514936	20	3 25.4	20.2
229819 2008 TK_{13}	16.4	X	345.09749	158.65447	311.44463	1.72720	0.1431141	0.18534094	3.0466447	20	—	—
229820 2008 TA_{84}	16.0	X	145.27398	118.08260	332.68972	1.71634	0.1049413	0.21758099	2.7377183	20	5 20.8	20.2
229821 2008 TQ_{105}	15.9	X	172.33961	293.49352	353.92959	2.07236	0.1102901	0.19007408	2.9958549	20	—	—
229822 2008 TA_{112}	13.2	X	11.79837	112.60661	253.28688	6.04585	0.0455762	0.08222473	5.2376252	20	10 23.8	20.0
229823 2008 TA_{152}	16.3	X	58.35914	313.79607	73.87269	3.45022	0.0824829	0.18602598	3.0391606	20	—	—
229824 2008 UQ_{1}	14.9	X	93.86561	179.48257	127.68695	6.05906	0.0355629	0.17296715	3.1902665	20	12 10.1	19.5
229825 2008 UB_{5}	15.2	X	10.31986	226.92995	45.50444	13.61668	0.2606843	0.23191887	2.6236868	20	8 18.8	17.7
229826 2008 UK_{8}	13.2	X	295.81103	46.10310	19.45519	1.01524	0.0818082	0.08107339	5.2870954	20	9 25.9	20.0
229827 2008 UC_{56}	16.4	X	191.61698	351.76556	332.72434	1.31130	0.0591189	0.20358144	2.8618306	20	2 3.3	20.5
229828 2008 UH_{124}	15.3	X	157.57038	350.85803	275.98434	14.74641	0.2201497	0.17551207	3.1593522	20	12 27.9	20.6
229829 2008 UG_{134}	15.7	X	142.19823	6.79903	245.55788	1.58927	0.0733664	0.16953553	3.2331727	20	11 28.3	20.5
229830 2008 US_{357}	15.4	X	48.13680	273.72544	135.71348	10.70839	0.0712039	0.18053234	3.1005070	20	—	—
229831 2008 VH_{72}	15.9	X	112.35035	153.41296	75.28359	15.79999	0.0544830	0.23877834	2.5731954	20	10 17.2	19.8
229832 2008 WQ_{33}	13.8	X	298.69787	35.55382	64.46826	2.27465	0.0568993	0.08305992	5.2024554	20	11 9.6	20.4
229833 2009 BQ_{25}	17.9	X	43.89030	204.30020	69.98903	2.63460	0.1647542	0.30498715	2.1858232	20	10 11.9	20.3
229834 2009 FM_{59}	16.0	X	14.30055	340.18967	304.84828	1.06190	0.0851751	0.19693484	2.9258654	20	8 11.1	19.5
229835 2009 QA_{31}	17.1	X	66.67131	299.18655	22.40176	12.30891	0.2746498	0.28796956	2.2711108	20	—	—
229836 Wladimarinello	16.1	X	28.73708	340.38285	354.83303	10.86594	0.0467694	0.18925757	3.0044654	20	10 26.9	20.4
229837 2009 RL_{10}	16.8	X	28.39035	146.50271	193.73552	1.20441	0.2094475	0.18692301	3.0294297	20	11 28.2	20.5
229838 2009 RV_{16}	16.4	X	169.41595	157.79938	156.69050	2.21244	0.0680027	0.21461512	2.7628830	20	—	—
229839 2009 SB_{46}	17.0	X	77.64102	14.14903	240.09378	4.69229	0.1329809	0.26750732	2.3854973	20	10 13.0	20.3
229840 2009 SF_{99}	15.6	X	30.69640	321.33278	7.26712	12.72428	0.1915272	0.18545540	3.0453910	20	11 9.6	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229841 2009 SO_{114}	17.3	X	17.73712	81.09796	238.44708	3.15572	0.2017013	0.27322901	2.3520769	20	11 4.8	19.8
229842 2009 SF_{143}	16.1	X	213.82389	74.68487	197.56998	4.22872	0.0674676	0.21445161	2.7642872	20	—	—
229843 2009 SF_{147}	17.3	X	93.66587	279.18723	46.07901	7.09573	0.1173527	0.28910211	2.2651756	20	—	—
229844 2009 ST_{204}	17.9	X	236.03106	294.68330	218.42826	1.87627	0.1228720	0.27549982	2.3391344	20	11 26.9	20.8
229845 2009 ST_{229}	16.3	X	85.98312	141.94342	257.23849	2.43206	0.0972820	0.21401360	2.7680577	20	1 4.3	19.7
229846 2009 SZ_{230}	16.6	X	54.81058	228.27183	198.52199	4.64445	0.1495243	0.21126466	2.7920176	20	—	—
229847 2009 SR_{234}	15.0	X	17.35101	328.14269	29.81716	13.07663	0.2562511	0.18371286	3.0646179	20	12 8.4	18.9
229848 2009 SW_{251}	17.1	X	327.02237	359.42140	69.28540	3.26491	0.1231070	0.27286204	2.3541852	20	—	—
229849 2009 SK_{253}	17.7	X	243.08661	152.74397	287.14026	0.44879	0.1644232	0.25869335	2.4393786	20	8 18.1	21.1
229850 2009 SP_{255}	17.1	X	35.89471	297.31634	94.81036	24.83410	0.1022398	0.37830084	1.8934093	20	—	—
229851 2009 SQ_{267}	12.5	X	289.65021	203.55890	222.14817	23.30058	0.0474332	0.08088634	5.2952433	20	9 17.5	19.7
229852 2009 SH_{275}	17.5	X	238.89470	312.43771	104.67833	1.91816	0.1894518	0.25362624	2.4717617	20	7 9.8	21.2
229853 2009 SN_{275}	16.2	X	280.36519	17.20036	103.39232	2.56375	0.1277345	0.18814350	3.0163141	20	11 25.2	20.0
229854 2009 SD_{276}	16.4	X	157.61309	224.45554	149.55525	3.31577	0.0451582	0.22518246	2.6757550	20	2 22.4	20.0
229855 2009 ST_{288}	15.4	X	346.27471	339.04953	30.01389	10.04517	0.0989571	0.18047023	3.1012183	20	10 16.7	19.3
229856 2009 SU_{339}	15.9	X	180.24352	208.85298	236.23094	11.24666	0.1399982	0.23664509	2.5886364	20	6 19.5	20.1
229857 2009 SM_{346}	15.7	X	333.91312	240.59848	52.03473	15.59341	0.0764110	0.24145768	2.5541243	20	6 16.7	18.8
229858 2009 TZ_{5}	15.2	X	39.39815	279.67356	44.06078	12.34203	0.1416570	0.18193896	3.0845057	20	11 10.7	19.3
229859 2009 TD_{6}	12.6	X	317.63048	342.97872	68.38042	10.05880	0.1342435	0.08220496	5.2384650	20	10 7.4	19.1
229860 2009 TA_{12}	16.4	X	196.50797	312.35411	58.67503	13.54807	0.1866281	0.23196031	2.6233743	20	4 8.4	20.9
229861 2009 TL_{17}	15.6	X	306.92171	298.22561	134.75613	5.84881	0.1195154	0.17899644	3.1182178	20	11 5.8	19.5
229862 2009 TY_{17}	14.7	X	11.20551	262.17004	108.13935	17.44684	0.1136259	0.18151806	3.0892721	20	11 30.2	18.9
229863 2009 TC_{20}	15.7	X	128.88024	216.94048	226.16902	16.60075	0.0332396	0.22734811	2.6587356	20	4 12.3	19.4
229864 Sichouzhilu	15.0	X	359.72795	324.15185	36.22589	23.99599	0.1830760	0.18025304	3.1037090	20	11 1.4	18.4
229865 2009 TQ_{26}	16.8	X	45.45928	299.70801	56.10736	7.00277	0.1972917	0.28560129	2.2836486	20	—	—
229866 2009 TV_{27}	15.0	X	48.90644	244.75164	58.52924	16.04244	0.0830846	0.17655755	3.1468679	20	10 24.8	19.5
229867 2009 TS_{29}	16.5	X	132.28996	6.41070	326.03871	4.33403	0.0752516	0.20835439	2.8179564	20	—	—
229868 2009 TS_{35}	15.5	X	346.76743	178.25571	215.98688	15.76145	0.1282251	0.17995198	3.1071697	20	11 20.2	19.2
229869 2009 UZ_{4}	15.8	X	337.94125	225.95449	197.67007	0.95123	0.1235849	0.18502826	3.0500760	20	12 14.0	19.4
229870 2009 UD_{12}	15.6	X	359.25475	181.97351	224.06645	11.45937	0.0984335	0.18598530	3.0396038	20	12 22.1	19.6
229871 2009 UO_{26}	17.5	X	78.98439	342.54047	56.43578	5.18982	0.1331352	0.29878172	2.2159844	20	—	—
229872 2009 UB_{30}	15.9	X	262.95711	236.10466	219.25510	4.22318	0.1163550	0.17223659	3.1992813	20	9 27.6	20.5
229873 2009 UD_{30}	15.4	X	74.77833	274.92537	46.39174	9.94793	0.1203393	0.18732647	3.0250783	20	12 16.6	20.1
229874 2009 UC_{31}	15.7	X	332.92334	210.22552	223.75632	8.02480	0.0726006	0.18606723	3.0387113	20	12 17.5	19.6
229875 2009 UR_{33}	15.4	X	187.90851	313.41750	225.45391	6.50821	0.1243287	0.17163596	3.2067408	20	10 16.3	20.5
229876 2009 UT_{34}	15.2	X	191.88988	161.30539	61.89754	8.66900	0.0524934	0.18542062	3.0457718	20	12 19.7	19.6
229877 2009 UR_{35}	16.1	X	64.00070	340.22153	235.53144	11.20211	0.0979222	0.24266333	2.5456574	20	7 23.9	19.6
229878 2009 UE_{40}	12.9	X	288.51857	212.41719	226.08548	14.29243	0.1309991	0.08173955	5.2583304	20	9 21.5	19.7
229879 2009 UZ_{46}	15.6	X	275.45576	223.87571	50.04542	19.26858	0.2804869	0.22820293	2.6520919	20	2 15.5	20.3
229880 2009 UM_{71}	15.0	X	276.92852	230.60478	252.57343	9.14357	0.1131721	0.18102915	3.0948317	20	11 22.8	19.0
229881 2009 US_{71}	16.4	X	144.27777	347.75089	60.88890	10.73183	0.2120783	0.22381955	2.6866063	20	4 9.6	20.9
229882 2009 UT_{71}	15.9	X	29.18225	304.90756	134.12739	2.96168	0.0896292	0.19998367	2.8960520	20	—	—
229883 2009 UV_{72}	15.7	X	216.83813	250.31137	60.32810	12.06124	0.1866787	0.22277074	2.6950322	20	2 13.1	20.4
229884 2009 UL_{82}	16.0	X	151.42708	338.68876	49.21371	11.95712	0.0897331	0.22184424	2.7025306	20	3 14.4	20.2
229885 2009 UV_{82}	16.6	X	228.83181	277.06836	103.21735	2.63477	0.0692362	0.23854715	2.5748577	20	5 23.1	20.1
229886 2009 UZ_{84}	16.2	X	147.78499	253.60286	90.64711	4.72579	0.1019215	0.20950624	2.8076183	20	1 13.9	20.2
229887 2009 UA_{85}	16.2	X	4.09378	220.95049	133.91932	2.94990	0.1482290	0.17576745	3.1562913	20	10 30.3	19.9
229888 2009 UZ_{88}	17.0	X	82.83924	322.44990	61.32671	8.72060	0.0962388	0.29672555	2.2262098	20	—	—
229889 2009 UX_{102}	15.5	X	268.07148	273.17715	41.80663	11.93886	0.1974078	0.23447403	2.6045911	20	4 2.1	19.4
229890 2009 UH_{110}	17.7	X	4.55165	111.79396	262.38590	1.42438	0.2084391	0.27436818	2.3455619	20	—	—
229891 2009 UF_{111}	15.8	X	300.32725	30.66155	56.49016	12.28036	0.1450819	0.17757138	3.1348786	20	11 9.4	19.5
229892 2009 UW_{127}	15.9	X	356.29009	168.67804	258.35178	2.74297	0.0624463	0.18971287	2.9996565	20	—	—
229893 2009 UJ_{128}	16.4	X	133.61519	165.17083	214.16899	3.87756	0.1159439	0.21386633	2.7693282	20	2 9.3	20.5
229894 2009 UC_{130}	16.0	X	186.06247	22.73172	58.96741	29.31784	0.1316291	0.23891250	2.5722320	20	6 16.7	20.3
229895 2009 VK_{1}	16.2	X	260.59829	244.33524	125.39713	8.01413	0.1106324	0.24300977	2.5432373	20	6 12.5	19.7
229896 2009 VE_{3}	17.5	X	189.20794	218.98146	119.32821	3.67475	0.1187100	0.31191081	2.1533556	20	2 7.3	20.4
229897 2009 VL_{22}	15.4	X	163.74428	39.82712	208.17547	5.13464	0.1165817	0.18498928	3.0505046	20	12 16.4	20.3
229898 2009 VG_{23}	17.7	X	164.27176	275.22208	110.26599	1.42979	0.1909513	0.31728525	2.1289696	20	3 19.1	20.8
229899 2009 VW_{25}	15.1	X	83.55545	243.95679	74.97335	12.91602	0.0346283	0.18656609	3.0332922	20	12 14.2	19.5
229900 Emmagreaves	16.3	X	242.30577	230.68409	131.42513	6.94294	0.1573290	0.23817354	2.5775497	20	5 7.9	20.3
229901 2009 VD_{61}	16.0	X	296.74846	143.89727	262.25153	2.92318	0.1051283	0.16871035	3.2437066	20	9 12.4	20.2
229902 2009 VA_{81}	12.7	X	309.84375	325.81402	96.01845	8.38575	0.0193179	0.08258561	5.2223557	20	10 18.4	19.6
229903 2009 WH_{14}	15.9	X	336.50957	291.25707	149.09054	3.13756	0.0526138	0.18379839	3.0636672	20	12 29.0	19.8
229904 2009 WO_{19}	15.7	X	299.99879	156.20363	84.84126	10.49665	0.1062911	0.21949815	2.7217536	20	2 19.0	19.5
229905 2009 WC_{33}	15.8	X	44.16778	306.39417	72.24592	10.06760	0.1308070	0.18820383	3.0156695	20	—	—
229906 2009 WE_{85}	15.5	X	32.86343	303.05175	44.39740	16.46045	0.1779166	0.18095639	3.0956613	20	12 4.2	19.8
229907 4513 *P–L*	17.1	X	36.49061	357.64922	39.98962	3.50015	0.1570896	0.28357861	2.2944948	20	—	—
229908 6005 *P–L*	17.6	X	311.58553	51.47777	337.06425	0.79910	0.1983184	0.26277129	2.4140751	20	9 24.4	19.4
229909 6201 *P–L*	18.1	X	139.44536	115.27335	245.00462	2.32385	0.1865569	0.30363901	2.1922883	20	1 20.1	21.0
229910 6798 *P–L*	16.7	X	339.09466	353.87555	13.30607	6.99139	0.2060931	0.26348880	2.4096905	20	10 27.7	18.6
229911 2107 *T–3*	15.3	X	207.44939	57.30825	342.56598	7.25992	0.0285478	0.24582711	2.5237686	20	5 23.6	18.8
229912 4378 *T–3*	16.1	X	178.59690	312.56828	75.11579	6.20920	0.1257340	0.22004741	2.7172225	20	4 9.7	20.4
229913 4503 *T–3*	17.3	X	9.90856	296.65848	97.60126	3.64817	0.2170205	0.27863349	2.3215632	20	—	—
229914 5104 *T–3*	15.1	X	24.79265	259.53373	130.61858	10.84752	0.1103615	0.18695879	3.0290432	20	—	—
229915 1990 *SH*	15.5	X	197.21153	263.19287	95.45778	14.54927	0.2610337	0.21768755	2.7368248	20	3 27.3	20.6
229916 1995 CA_{4}	17.3	X	281.19430	314.08351	164.87051	2.67806	0.1297244	0.26276503	2.4141134	20	12 16.9	19.8
229917 1995 CQ_{7}	16.9	X	328.97498	166.02533	248.22446	1.45508	0.1836074	0.26261556	2.4150294	20	12 17.4	18.6
229918 1995 CJ_{10}	15.8	X	300.66083	248.01861	349.96289	12.33020	0.2257247	0.23293976	2.6160154	20	1 28.3	19.7
229919 1995 FN_{5}	17.1	X	164.48750	90.90948	120.83737	2.95548	0.1341567	0.25572127	2.4582430	20	11 16.2	20.9
229920 1995 FB_{19}	16.4	X	127.98289	87.16540	154.91984	4.97960	0.1439205	0.25451193	2.4660239	20	11 19.2	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
229921 1995 SC_{43}	16.4	X	154.34938	64.81831	39.12208	4.64824	0.0856880	0.22621498	2.6676068	20	6 15.9	20.4
229922 1995 ST_{60}	16.6	X	235.92477	185.24923	139.47568	2.83336	0.1498332	0.22254105	2.6968862	20	3 15.3	20.7
229923 1995 UQ_{40}	17.5	X	347.47516	88.50858	4.58531	4.01395	0.0861035	0.28647240	2.2790168	20	—	—
229924 1995 UA_{59}	16.5	X	233.91086	291.91948	93.21021	3.52288	0.0489213	0.22428877	2.6828580	20	6 6.8	20.2
229925 1996 EM_{11}	17.2	X	323.58192	15.61868	151.18413	5.65148	0.0961598	0.28091956	2.3089511	20	—	—
229926 1996 FB_{11}	17.7	X	261.17534	100.21583	98.94179	2.92357	0.1540732	0.27377034	2.3489753	20	—	—
229927 1996 TN_{9}	16.1	X	195.42184	51.71670	20.55162	7.86276	0.1347959	0.23584932	2.5944559	20	6 18.2	20.3
229928 1997 AB_{21}	16.7	X	266.52326	195.42484	161.73436	2.23622	0.0767055	0.22732631	2.6589056	20	6 7.5	20.3
229929 1997 GL_{5}	16.6	X	139.59275	42.84595	4.78412	5.90861	0.0595416	0.21366128	2.7710998	20	3 17.6	20.5
229930 1997 ST_{16}	16.2	X	285.74343	108.76405	356.15230	8.98190	0.1854323	0.26206287	2.4184237	20	11 25.4	18.6
229931 1997 SL_{31}	16.1	X	347.32152	221.43343	177.13278	0.75670	0.1674264	0.17669436	3.1452434	20	11 27.9	19.4
229932 1997 TY_{1}	16.3	X	258.35222	193.08411	245.20680	2.45950	0.1733522	0.25430169	2.4673829	20	9 1.9	19.4
229933 1997 TG_{27}	16.9	X	325.78314	336.74823	47.48107	2.94985	0.2074875	0.25632198	2.4544008	20	10 22.1	18.5
229934 1998 BS_{22}	17.0	X	189.13112	6.29357	120.10513	5.14747	0.0882957	0.24195213	2.5506434	20	8 25.9	20.7
229935 1998 KB_{43}	15.4	X	294.87029	221.23511	91.68305	16.21858	0.1261941	0.22390170	2.6859492	20	5 14.5	19.0
229936 1998 QL_{21}	16.7	X	109.57449	30.76185	329.33182	6.56356	0.1353842	0.28826335	2.2695675	20	—	—
229937 1998 RZ_{6}	16.0	X	214.40958	188.47345	163.62720	6.13562	0.0744066	0.21004003	2.8028596	20	4 1.8	20.1
229938 1998 SJ_{87}	17.1	X	124.06185	82.53902	257.61125	4.14786	0.1898947	0.28607744	2.2811139	20	—	—
229939 1998 SM_{95}	16.6	X	59.76048	344.67265	33.71783	7.62319	0.1243680	0.28191119	2.3035334	20	—	—
229940 1998 SU_{115}	16.9	X	72.78073	353.69619	342.65119	2.46076	0.2300653	0.27920448	2.3183969	20	—	—
229941 1998 SV_{152}	17.0	X	105.37357	352.83109	344.74180	5.21141	0.1787023	0.28328896	2.2960585	20	—	—
229942 1998 SJ_{173}	16.4	X	81.54985	246.95042	178.44157	1.89591	0.0639261	0.19964500	2.8993262	20	1 29.2	20.3
229943 1998 TH	16.9	X	80.05206	130.90876	228.55716	3.22440	0.2361308	0.28134916	2.3066001	20	—	—
229944 1998 UW	15.7	X	344.85241	121.26809	322.60963	24.19671	0.2642066	0.27719004	2.3296158	20	—	—
229945 1998 US_{8}	17.5	X	54.25563	43.56265	337.77015	2.12519	0.1824125	0.27983377	2.3149199	20	—	—
229946 1998 UZ_{9}	17.7	X	301.09006	217.25551	182.08261	0.85016	0.1772855	0.26830174	2.3807862	20	9 21.9	19.6
229947 1998 VJ_{41}	17.0	X	348.84436	340.15709	66.27173	3.07626	0.2068623	0.27254216	2.3560270	20	—	—
229948 1998 WC_{19}	16.7	X	81.56148	55.05198	330.21614	1.27101	0.2212298	0.28250611	2.3002983	20	—	—
229949 1998 WV_{26}	16.0	X	87.18481	100.85456	229.85051	4.25004	0.1669034	0.18584093	3.0411777	20	—	—
229950 1998 XD_{5}	16.3	X	334.41321	141.40501	305.57243	6.41018	0.0608529	0.27416274	2.3467334	20	—	—
229951 1998 XU_{21}	15.7	X	311.82623	40.79741	110.41165	6.41841	0.1049024	0.18201676	3.0836267	20	—	—
229952 1998 XM_{25}	17.0	X	308.96289	150.09017	242.13835	9.11357	0.2626337	0.26617063	2.3934772	20	9 10.7	18.8
229953 1998 YB_{17}	16.2	X	246.03219	23.34622	132.55043	3.49895	0.1309325	0.17341871	3.1847260	20	11 19.9	20.7
229954 1999 BC_{5}	15.0	X	280.29598	132.42154	333.34843	18.92092	0.0847576	0.16977108	3.2301814	20	10 29.1	19.7
229955 1999 BS_{30}	16.1	X	327.87201	114.68255	1.52429	1.12403	0.1370179	0.18014849	3.1049097	20	—	—
229956 1999 CS_{115}	15.3	X	323.12071	170.21045	316.91468	22.12431	0.1167661	0.17764677	3.1339917	20	—	—
229957 1999 KF_{7}	16.0	X	354.02986	195.77255	79.87515	10.98315	0.1782520	0.23769449	2.5810117	20	6 28.0	18.3
229958 1999 RD_{43}	17.3	X	173.99590	264.51498	81.13280	8.15192	0.3527916	0.30720342	2.1752976	20	2 18.0	21.3
229959 1999 RV_{172}	15.7	X	87.09061	326.72461	24.59793	8.36608	0.1969446	0.20186123	2.8780662	20	—	—
229960 1999 RP_{227}	15.5	X	142.26810	23.66890	19.84530	9.23680	0.1576354	0.21490599	2.7603896	20	3 25.9	19.7
229961 1999 TS_{12}	15.5	X	174.42842	351.11984	26.98907	9.91836	0.1495727	0.21313535	2.7756565	20	3 25.8	19.9
229962 1999 TS_{125}	18.1	X	151.22737	125.87026	230.14255	3.76038	0.1930397	0.30496351	2.1859361	20	1 27.3	21.2
229963 1999 TX_{146}	15.6	X	117.70085	26.69761	38.36344	8.56644	0.2802504	0.21090064	2.7952293	20	4 9.9	20.1
229964 1999 TA_{158}	16.0	X	189.36425	81.46058	316.67740	4.03502	0.1268829	0.21902003	2.7257132	20	4 28.7	20.4
229965 1999 TY_{185}	16.0	X	190.53970	67.21614	298.64280	7.53562	0.1675850	0.21484095	2.7609466	20	3 19.5	20.7
229966 1999 TH_{203}	17.3	X	239.25137	350.37830	355.33745	3.59538	0.1105699	0.31536158	2.1376185	20	4 10.1	20.2
229967 1999 TU_{225}	15.6	X	57.41503	318.15275	13.92089	7.97753	0.1076096	0.19307069	2.9647755	20	12 9.8	19.9
229968 1999 TB_{235}	16.5	X	140.88929	232.11720	169.28250	2.46198	0.1902979	0.21188488	2.7865664	20	3 23.7	20.8
229969 1999 TN_{249}	15.8	X	175.01904	84.83028	315.02855	6.23563	0.1554023	0.21720964	2.7408377	20	4 16.4	20.4
229970 1999 TR_{250}	15.6	X	152.28723	191.21919	228.00454	11.78751	0.1381016	0.21615667	2.7497315	20	4 19.8	20.0
229971 1999 UX_{11}	16.8	X	119.22126	28.21331	53.01443	5.13670	0.0391861	0.21211185	2.7845783	20	4 3.6	20.6
229972 1999 UO_{16}	15.7	X	131.51216	80.94843	347.58748	1.30703	0.2316437	0.21202076	2.7853758	20	4 19.8	20.3
229973 1999 UX_{26}	16.1	X	119.21834	46.78898	8.76309	7.86870	0.2290270	0.20966278	2.8062207	20	3 24.4	20.3
229974 1999 UR_{36}	16.7	X	149.90781	83.60145	320.46587	2.78491	0.1005359	0.21574428	2.7532344	20	3 26.8	20.8
229975 1999 VC_{40}	16.4	X	200.50215	305.32169	43.58638	5.90098	0.1554124	0.21347785	2.7726869	20	3 14.4	20.9
229976 1999 VP_{55}	16.4	X	187.54085	140.56813	225.86953	1.62053	0.1586855	0.21369882	2.7707753	20	3 20.7	21.0
229977 1999 VM_{62}	16.2	X	146.75723	347.89439	45.75054	4.13500	0.1018843	0.21041453	2.7995328	20	3 14.1	20.3
229978 1999 VW_{119}	16.6	X	106.64132	111.31535	4.24177	3.77873	0.0144236	0.21660322	2.7459510	20	4 25.4	20.3
229979 1999 VJ_{129}	16.4	X	221.60944	72.46595	273.36446	3.30153	0.1259960	0.21633359	2.7482321	20	3 26.5	20.7
229980 1999 VV_{141}	16.3	X	103.80420	106.86610	280.83572	0.94533	0.0843425	0.20358512	2.8617961	20	1 13.9	20.0
229981 1999 VC_{182}	16.5	X	70.51669	225.30169	232.68276	2.35443	0.1192903	0.20612196	2.8382667	20	2 29.9	20.1
229982 1999 WG_{17}	15.9	X	91.27423	47.93789	38.92776	7.84385	0.1946365	0.20970176	2.8058730	20	3 30.0	19.7
229983 1999 WU_{23}	16.5	X	8.94145	146.31348	59.81587	5.14978	0.1348265	0.21191879	2.7862692	20	4 16.5	19.5
229984 1999 XN_{63}	16.4	X	336.26109	152.39253	268.03594	1.91525	0.2275559	0.18900715	3.0071186	20	12 14.1	19.3
229985 1999 XQ_{78}	17.0	X	36.70136	267.00051	251.66222	4.78072	0.0767176	0.30385730	2.1912382	20	3 11.3	19.3
229986 1999 XZ_{121}	17.5	X	135.31389	45.90876	324.23027	4.88788	0.2919303	0.30314243	2.1946818	20	2 10.9	20.7
229987 1999 XU_{194}	16.2	X	76.33270	78.00474	330.49652	6.23623	0.3120784	0.20031147	2.8928916	20	2 7.1	19.5
229988 1999 XO_{225}	17.3	X	309.95638	334.03489	293.96008	4.30133	0.0905158	0.30371801	2.1919081	20	3 26.7	19.7
229989 1999 YR_{2}	17.3	X	117.48407	87.01930	289.98198	7.49154	0.1096620	0.29484343	2.2356737	20	1 4.9	19.6
229990 1999 YB_{15}	15.6	X	180.94418	273.40880	94.00342	7.82892	0.1798060	0.21102688	2.7941145	20	3 21.3	20.4
229991 2000 AH_{207}	16.9	X	26.63177	215.57968	303.35709	6.04894	0.0594277	0.29785977	2.2205547	20	2 24.6	19.1
229992 2000 AW_{207}	15.5	X	5.44658	332.65073	82.73515	10.64963	0.0593543	0.19214248	2.9743161	20	—	—
229993 2000 AK_{218}	17.4	X	93.59312	342.77482	103.91361	5.07373	0.0997352	0.29989062	2.2105184	20	3 8.5	19.8
229994 2000 BJ_{9}	16.0	X	127.20513	145.82527	258.32717	0.99911	0.1008746	0.20092033	2.8870444	20	3 4.1	20.1
229995 2000 CE_{15}	17.4	X	85.96491	315.70695	119.96971	3.60090	0.0811867	0.29597429	2.2299753	20	2 4.9	19.6
229996 2000 CS_{17}	17.1	X	3.31702	33.30854	145.10035	6.31300	0.1243880	0.29644107	2.2276338	20	2 10.2	19.1
229997 2000 CU_{74}	16.2	X	308.63268	342.34254	137.98372	2.66613	0.0382357	0.18551662	3.0447209	20	—	—
229998 2000 CG_{106}	13.9	X	347.91939	68.09602	310.39512	7.61860	0.0933753	0.08166423	5.2615634	20	10 6.5	20.5
229999 2000 DG_{42}	17.6	X	3.61121	337.42278	142.63608	3.00997	0.0949563	0.28828026	2.2694787	20	—	—
230000 2000 DW_{43}	16.8	X	224.08640	214.68144	335.92232	5.94504	0.0339995	0.27779792	2.3262161	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230001 2000 DP_{58}	17.1	X	264.59766	272.76374	305.64281	2.63553	0.1206256	0.28505693	2.2865550	20	—	—
230002 2000 DU_{59}	16.7	X	10.85429	108.09513	338.58590	7.29038	0.0672242	0.28418629	2.2912227	20	—	—
230003 2000 DL_{71}	15.5	X	227.98987	139.68425	344.51283	14.13840	0.2375527	0.17397381	3.1779481	20	9 10.4	20.5
230004 2000 DC_{99}	16.7	X	264.37383	85.53934	145.54160	6.71822	0.1661298	0.28682899	2.2771275	20	—	—
230005 2000 DH_{99}	16.3	X	98.40186	99.55540	144.10414	7.03158	0.0900549	0.26699838	2.3885278	20	10 22.6	19.7
230006 2000 DO_{104}	15.3	X	295.32761	136.06009	59.56601	6.43117	0.1188429	0.18917149	3.0053767	20	—	—
230007 2000 EO_{30}	16.5	X	300.53436	154.33188	34.69911	7.21051	0.0762124	0.28705051	2.2759559	20	—	—
230008 2000 EF_{92}	15.6	X	319.94346	321.28646	193.64264	7.50843	0.2814442	0.18777497	3.0202595	20	—	—
230009 2000 EY_{101}	15.8	X	135.96180	5.08696	345.02226	8.55873	0.0973004	0.18818849	3.0158334	20	1 12.3	20.3
230010 2000 FW_{23}	16.5	X	207.16037	124.02192	106.92538	8.11153	0.2237324	0.27554864	2.3388581	20	—	—
230011 2000 FC_{48}	17.0	X	260.24824	136.01340	88.59211	7.36966	0.1579970	0.28252053	2.3002200	20	—	—
230012 2000 FC_{66}	17.1	X	229.27542	83.75474	151.10272	3.18562	0.1161818	0.28000921	2.3139529	20	—	—
230013 2000 GU_{44}	17.3	X	199.24363	94.27536	161.14408	2.68112	0.1926019	0.27696331	2.3308870	20	—	—
230014 2000 GQ_{54}	16.9	X	133.77282	353.93317	209.97603	5.64132	0.0540320	0.26278839	2.4139704	20	10 4.7	20.2
230015 2000 GB_{72}	15.3	X	152.46451	216.02409	76.64685	3.05503	0.1299272	0.17588822	3.1548463	20	—	—
230016 2000 GP_{112}	15.5	X	284.69343	46.52509	165.78796	6.78164	0.1457213	0.18676632	3.0311238	20	—	—
230017 2000 GE_{164}	14.8	X	199.68444	149.50586	86.90767	18.53937	0.1787278	0.17564678	3.1577367	20	12 29.5	19.8
230018 2000 HO_{7}	16.5	X	127.41265	136.40855	78.75472	2.25059	0.1369717	0.26291738	2.4131808	20	10 16.8	20.2
230019 2000 HE_{17}	16.3	X	316.65624	212.23507	188.59343	7.05683	0.1346172	0.21648979	2.7469100	20	10 17.2	19.3
230020 2000 HM_{33}	16.7	X	241.58909	135.18239	76.01170	6.93707	0.0719577	0.27875356	2.3208965	20	—	—
230021 2000 HS_{78}	16.3	X	112.89050	168.33208	109.89588	15.51259	0.2367736	0.26745015	2.3858373	20	12 22.8	20.5
230022 2000 HW_{90}	15.6	X	227.31447	319.45725	222.11700	4.24873	0.1390104	0.17421424	3.1750236	20	11 27.8	20.2
230023 2000 JW_{3}	17.1	X	42.13863	224.82031	66.21432	23.00538	0.0567714	0.35814109	1.9638122	20	11 3.7	19.4
230024 2000 JK_{6}	14.9	X	263.32605	46.06858	109.17867	17.91582	0.1895996	0.17682834	3.1436545	20	12 5.4	19.3
230025 2000 JB_{55}	16.9	X	165.05451	191.07077	72.83186	7.74148	0.2126375	0.27107883	2.3644982	20	—	—
230026 2000 JJ_{69}	16.4	X	306.20401	126.77871	73.48430	1.04478	0.2135025	0.18683521	3.0303787	20	—	—
230027 2000 KR_{64}	16.7	X	204.93785	118.79923	90.39546	6.21986	0.1747909	0.27178874	2.3603790	20	12 23.0	19.9
230028 2000 KU_{66}	17.2	X	201.58988	89.77554	107.15973	23.18435	0.0473628	0.36763719	1.9298479	20	—	—
230029 2000 KQ_{81}	16.4	X	119.18202	158.44303	87.43426	8.45934	0.0407368	0.26336595	2.4104399	20	11 14.3	19.7
230030 2000 OO_{55}	16.7	X	226.29987	91.54809	145.40578	5.04510	0.1987379	0.27244518	2.3565860	20	—	—
230031 2000 PG	16.9	X	10.12419	236.71730	128.99642	24.18069	0.0951023	0.35627036	1.9706807	20	—	—
230032 2000 QP_{3}	16.1	X	242.11739	45.07125	343.88447	13.39056	0.1287280	0.23826248	2.5769082	20	6 11.4	20.1
230033 2000 QK_{16}	16.8	X	5.25576	185.26493	111.15629	1.50361	0.1746718	0.24678589	2.5172277	20	8 28.7	19.1
230034 2000 QV_{26}	16.5	X	289.61962	33.58405	305.48874	3.19056	0.1678571	0.24039485	2.5616470	20	5 30.2	19.8
230035 2000 QJ_{34}	15.5	X	246.70897	219.52148	143.61862	22.56416	0.1130519	0.23711259	2.5852327	20	5 23.0	19.8
230036 2000 QG_{78}	16.0	X	179.60860	257.37279	343.60150	5.70536	0.0784063	0.26121641	2.4236454	20	—	—
230037 2000 QG_{85}	15.8	X	234.01397	96.89257	315.69628	11.24186	0.2960324	0.23794489	2.5792006	20	6 19.1	20.4
230038 2000 QX_{129}	15.8	X	202.02455	258.16101	125.55287	17.92405	0.3074831	0.22863614	2.6487408	20	4 28.1	21.0
230039 2000 QR_{156}	15.7	X	194.46867	76.88875	301.57211	13.68647	0.1389370	0.23115544	2.6294605	20	4 2.7	20.2
230040 2000 QT_{162}	16.5	X	234.64655	177.84138	204.85809	5.61631	0.3225454	0.23589475	2.5941228	20	5 11.9	21.0
230041 2000 QW_{165}	16.2	X	30.85703	65.52711	262.61789	5.35635	0.1679895	0.25262638	2.4782793	20	11 25.1	19.3
230042 2000 QR_{212}	17.0	X	263.92565	26.06112	351.85855	3.48712	0.2534595	0.23895678	2.5719142	20	6 6.3	20.8
230043 2000 QO_{249}	16.4	X	195.67359	105.58982	293.04056	8.00538	0.2697234	0.23272320	2.6176381	20	5 1.9	21.2
230044 2000 RJ_{56}	16.3	X	314.11654	282.86615	4.89185	5.15840	0.2681192	0.23824605	2.5770266	20	4 8.2	19.3
230045 2000 SZ_{19}	16.5	X	229.68424	38.48601	310.20119	4.81189	0.2670870	0.23082635	2.6319590	20	3 28.7	21.2
230046 2000 SO_{30}	16.3	X	174.60349	75.77961	357.47193	12.56059	0.2225231	0.23186485	2.6240943	20	5 27.9	21.1
230047 2000 SJ_{40}	16.3	X	183.94220	297.20509	135.45607	4.27228	0.2186390	0.23134888	2.6279945	20	6 7.4	20.8
230048 2000 ST_{99}	16.5	X	199.15134	207.53841	228.03250	3.82301	0.1786523	0.23450489	2.6043626	20	6 24.6	20.7
230049 2000 ST_{105}	16.9	X	187.89153	87.33049	332.73410	3.16895	0.2225454	0.23122391	2.6289413	20	5 24.7	21.4
230050 2000 SU_{109}	16.0	X	192.57526	198.26681	196.82950	12.18827	0.2000416	0.22928695	2.6437263	20	4 30.0	20.5
230051 2000 SZ_{114}	15.5	X	164.68432	154.41903	28.32231	2.00893	0.0610736	0.24586502	2.5235092	20	10 11.6	19.0
230052 2000 SP_{129}	15.6	X	301.21864	91.18864	269.38658	13.92119	0.1642810	0.24304225	2.5430107	20	7 18.2	18.5
230053 2000 SV_{133}	16.1	X	195.83417	104.09495	327.82188	12.33573	0.2453933	0.23328794	2.6134119	20	6 15.0	20.9
230054 2000 SY_{148}	16.6	X	278.84751	166.58040	204.69349	4.29706	0.2284244	0.23845837	2.5754967	20	6 19.6	20.1
230055 2000 SC_{149}	16.0	X	207.78899	195.96632	196.81555	7.45657	0.2394987	0.23061635	2.6335565	20	5 8.5	20.6
230056 2000 SS_{182}	16.5	X	219.07100	207.01608	179.52357	3.47304	0.1415129	0.23277101	2.6172796	20	5 15.0	20.5
230057 2000 SY_{182}	16.8	X	224.35727	230.29377	202.31661	2.56089	0.1840084	0.23775387	2.5805820	20	7 14.3	20.8
230058 2000 SD_{193}	15.7	X	194.77019	63.27351	349.19738	13.60889	0.0973515	0.23522160	2.5990696	20	5 19.9	20.0
230059 2000 SJ_{250}	16.0	X	224.46039	54.27877	37.28943	9.45897	0.1372449	0.24113023	2.5564361	20	8 18.5	19.9
230060 2000 SO_{265}	16.2	X	149.59376	279.27909	161.26354	7.11239	0.2397878	0.22712565	2.6604714	20	5 22.1	20.8
230061 2000 SH_{288}	15.9	X	202.01110	68.86111	318.56788	10.38141	0.1902912	0.22765771	2.6563246	20	4 22.7	20.5
230062 2000 SM_{310}	16.1	X	243.87657	127.89359	261.62971	15.70175	0.1873897	0.23571625	2.5954323	20	6 8.5	20.1
230063 2000 SH_{350}	16.4	X	209.46706	247.61203	157.31258	17.24788	0.2785458	0.23263386	2.6183082	20	5 25.8	21.4
230064 2000 SN_{352}	16.6	X	246.10113	247.69374	116.83894	12.64947	0.2340588	0.23363099	2.6108529	20	5 9.9	21.0
230065 2000 TM_{48}	16.1	X	166.19604	273.37543	136.88318	7.39804	0.2355051	0.22666555	2.6640704	20	4 29.3	20.8
230066 2000 TR_{59}	16.0	X	304.33762	243.14259	119.14949	12.21005	0.2267254	0.24094471	2.5577482	20	7 18.8	18.6
230067 2000 TG_{72}	16.6	X	242.08275	319.27590	100.33181	5.43909	0.1806739	0.23796144	2.5790810	20	7 17.2	20.4
230068 2000 UM	15.9	X	258.32333	331.68400	71.49906	16.78456	0.1345535	0.23826866	2.5768636	20	7 23.0	19.6
230069 2000 UC_{30}	15.3	X	115.20124	254.99960	210.76772	30.75857	0.2521924	0.22070470	2.7118250	20	5 22.5	19.9
230070 2000 UX_{33}	15.5	X	142.08779	50.43438	43.46522	22.72839	0.0471789	0.22847151	2.6500130	20	5 14.1	19.2
230071 2000 UH_{55}	15.6	X	153.21712	210.08631	209.11116	11.61562	0.2095108	0.22355106	2.6887570	20	4 26.1	20.0
230072 2000 UD_{58}	17.1	X	199.94452	85.89061	339.68668	5.53546	0.2885738	0.23151739	2.6267191	20	6 8.5	22.0
230073 2000 UG_{70}	16.2	X	192.81387	354.59325	2.93323	5.62205	0.1874911	0.22407574	2.6845582	20	3 15.3	20.6
230074 2000 UE_{74}	16.6	X	250.38854	328.25035	101.25917	4.79176	0.2318533	0.23948270	2.5681474	20	8 2.8	20.2
230075 2000 UQ_{103}	16.3	X	153.62932	13.86975	39.72383	14.29541	0.2447600	0.22282869	2.6945649	20	4 22.3	20.8
230076 2000 UE_{111}	15.9	X	163.59765	33.89052	60.12095	15.41932	0.1229673	0.22903769	2.6456440	20	6 13.2	20.0
230077 2000 VG_{7}	16.5	X	139.22405	157.56830	224.60386	1.37215	0.0925517	0.21884473	2.7271686	20	2 16.6	20.4
230078 2000 VE_{51}	15.6	X	53.54900	208.68171	247.74442	12.23272	0.0524410	0.21567578	2.7538173	20	1 22.7	19.3
230079 2000 WW_{1}	15.9	X	97.47299	48.07601	73.03439	8.77427	0.0497072	0.22190018	2.7020763	20	4 29.4	19.6
230080 2000 WE_{11}	16.8	X	225.64038	185.43618	216.84917	3.22255	0.2233287	0.23409020	2.6074375	20	6 4.1	21.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230081 2000 WP_{38}	15.8	X	156.91770	342.82051	91.34097	14.11482	0.1014495	0.22492386	2.6778055	20	5 16.1	20.0
230082 2000 WO_{42}	16.5	X	229.73721	147.19584	230.77196	5.41291	0.1577875	0.23047129	2.6346615	20	5 12.9	20.4
230083 2000 WT_{53}	16.1	X	126.02373	265.55253	70.49063	3.54238	0.0688462	0.20837364	2.8177829	20	—	—
230084 2000 WG_{91}	15.9	X	223.91529	297.60972	59.19823	9.08828	0.1675373	0.22598651	2.6694044	20	4 13.4	20.2
230085 2000 WX_{106}	15.4	X	230.38175	89.81241	267.10816	14.26327	0.3486829	0.22886243	2.6469945	20	3 31.3	20.7
230086 2000 WR_{131}	16.3	X	161.96744	201.13557	181.08612	10.55323	0.3027442	0.22215533	2.7000070	20	3 23.9	21.0
230087 2000 WT_{132}	16.8	X	148.06160	82.58126	307.22143	8.59058	0.2891303	0.22114680	2.7082096	20	3 18.2	21.6
230088 2000 WJ_{140}	16.3	X	262.43592	292.88210	70.09664	6.13482	0.2104388	0.23342181	2.6124126	20	5 22.3	19.9
230089 2000 WP_{148}	19.3	X	272.39771	237.92525	252.01305	21.27872	0.2643644	0.65101906	1.3184801	20	—	—
230090 2000 WA_{157}	15.9	X	76.66049	86.76401	52.88965	12.21733	0.1700334	0.22029487	2.7151873	20	5 12.3	19.2
230091 2000 XH_{5}	16.0	X	151.94637	50.06915	3.25030	9.63471	0.2050640	0.22260934	2.6963347	20	4 15.0	20.5
230092 2000 XD_{11}	16.3	X	184.51423	128.06659	289.19954	16.25816	0.3222045	0.22871567	2.6481267	20	5 16.7	21.5
230093 2000 XG_{12}	16.1	X	117.98579	204.38602	278.93221	12.77248	0.1982455	0.22360158	2.6883520	20	6 12.0	20.3
230094 2000 XX_{30}	15.8	X	246.38917	66.50847	298.07618	11.45547	0.2815354	0.23104958	2.6302635	20	4 26.8	20.5
230095 2000 XJ_{41}	15.7	X	213.99492	352.85304	11.28476	13.73201	0.2593390	0.22656302	2.6648741	20	4 6.2	20.4
230096 2000 XA_{46}	15.8	X	188.59284	121.76968	312.16115	30.49297	0.2618290	0.22835751	2.6508949	20	6 15.4	21.0
230097 2000 YU_{13}	16.0	X	147.77707	144.08292	283.78681	10.68590	0.1351023	0.21932121	2.7232173	20	4 22.9	20.4
230098 2000 YL_{41}	15.7	X	209.63048	242.07156	124.50934	7.16431	0.0449930	0.21948017	2.7219023	20	4 17.5	19.7
230099 2000 YQ_{42}	16.5	X	105.12814	142.85555	263.77965	6.01181	0.2805510	0.21314788	2.7755478	20	3 1.7	20.7
230100 2000 YF_{46}	15.4	X	80.94437	251.61581	280.20441	12.28560	0.0538881	0.22326991	2.6910137	20	6 12.8	18.9
230101 2000 YK_{58}	16.1	X	168.82050	336.66493	93.92750	9.31613	0.1711783	0.22380858	2.6866941	20	5 23.7	20.5
230102 2000 YY_{73}	15.8	X	98.27566	52.95181	98.94402	12.79173	0.2263349	0.22238967	2.6981099	20	7 1.5	19.7
230103 2000 YH_{122}	16.1	X	113.78076	298.43139	144.11450	10.83782	0.2584318	0.21949341	2.7217928	20	4 27.5	20.5
230104 2000 YR_{135}	16.8	X	137.89826	53.22228	12.72891	4.89218	0.3389130	0.22012999	2.7165430	20	4 28.4	21.7
230105 2000 YW_{143}	16.0	X	42.21198	302.41126	249.15956	4.16207	0.0416910	0.21547788	2.7555032	20	5 13.4	19.4
230106 2001 AZ_{8}	15.9	X	177.02261	283.50904	129.11344	13.62045	0.1805825	0.22252229	2.6970378	20	5 12.0	20.6
230107 2001 AH_{22}	15.6	X	101.75761	7.08653	129.78069	14.16994	0.1153623	0.22099128	2.7094800	20	6 4.8	19.7
230108 2001 AB_{25}	15.1	X	21.62086	110.73814	129.96294	25.72574	0.2244345	0.22004867	2.7172122	20	7 11.1	17.9
230109 2001 AL_{27}	15.9	X	124.80850	15.16583	72.86694	11.09876	0.1720712	0.21898794	2.7259795	20	5 5.1	20.1
230110 2001 AL_{36}	15.5	X	180.36836	329.66964	90.83774	12.91690	0.1718187	0.22317112	2.6918079	20	5 22.3	20.0
230111 2001 BE_{10}	19.1	X	90.37465	30.56391	297.77803	17.50733	0.3691991	1.31983230	0.8231081	20	—	—
230112 2001 BX_{13}	16.4	X	113.28892	336.38551	147.72048	5.44682	0.0579454	0.21606320	2.7505244	20	5 23.9	20.2
230113 2001 BZ_{62}	15.6	X	140.69596	137.30513	332.31058	8.30469	0.1332135	0.21980497	2.7192202	20	6 11.2	19.9
230114 2001 BR_{71}	15.7	X	147.85917	310.31504	129.34641	5.88392	0.0955312	0.21876151	2.7278602	20	5 11.3	19.8
230115 2001 BO_{76}	15.2	X	41.16282	297.30599	253.13794	12.69162	0.1425167	0.21415622	2.7668286	20	5 22.3	18.3
230116 2001 CD_{45}	15.3	X	26.95700	115.51533	98.92954	14.43948	0.1929221	0.21373370	2.7704738	20	6 8.2	18.2
230117 2001 DA_{3}	16.8	X	237.09220	342.59476	76.52087	5.89774	0.0922282	0.32892779	2.0784313	20	7 29.9	19.2
230118 2001 DB_{3}	17.2	X	105.59496	264.53873	340.47348	24.51686	0.5615665	0.22467892	2.6797513	20	11 4.0	23.3
230119 2001 DQ_{38}	15.5	X	59.87503	15.43177	149.32331	13.83506	0.1347457	0.21582116	2.7525805	20	5 20.4	19.2
230120 2001 DU_{44}	15.3	X	40.67978	5.71470	150.25015	8.88293	0.1548954	0.21045475	2.7991762	20	4 7.8	18.4
230121 2001 DR_{83}	16.2	X	136.02942	300.73916	148.31874	5.35883	0.0811622	0.21419722	2.7664755	20	5 8.8	20.3
230122 2001 FC_{121}	15.6	X	93.43486	89.35496	54.94674	8.39651	0.2524572	0.21406538	2.7676112	20	6 19.1	19.9
230123 2001 KR_{3}	16.6	X	351.15555	86.92993	216.09742	6.24671	0.2004478	0.26437629	2.4042948	20	8 7.8	18.5
230124 2001 MO_{14}	16.7	X	77.01268	205.47418	139.85097	6.21581	0.2280874	0.27529792	2.3402779	20	—	—
230125 2001 MA_{15}	16.4	X	89.44047	218.90189	111.29844	10.23321	0.2392492	0.27591324	2.3367972	20	—	—
230126 2001 MQ_{23}	15.8	X	51.11826	261.59652	99.87963	9.61295	0.2392808	0.27262144	2.3555702	20	—	—
230127 2001 NK_{7}	15.6	X	217.88675	216.09374	108.40536	9.81329	0.0818017	0.19168192	2.9790785	20	3 6.2	20.2
230128 2001 OX_{19}	16.7	X	96.55985	257.53641	18.73325	6.32471	0.1467428	0.27147666	2.3621876	20	12 2.2	20.3
230129 2001 OX_{35}	16.8	X	73.99692	261.33157	87.19436	7.96675	0.1464026	0.27620736	2.3351380	20	—	—
230130 2001 OB_{40}	16.8	X	14.12571	228.20222	96.75077	8.52042	0.2285425	0.26371349	2.4083216	20	11 12.2	19.4
230131 2001 OK_{62}	16.7	X	94.73298	67.69444	279.38257	3.28297	0.1851790	0.27976539	2.3152971	20	—	—
230132 2001 OC_{78}	16.8	X	92.53792	292.10152	36.65273	7.55340	0.1425505	0.27678204	2.3319046	20	—	—
230133 2001 OD_{78}	14.7	X	248.86433	253.97938	115.07533	19.03153	0.1014598	0.14677093	3.5593936	20	6 1.7	20.2
230134 2001 ON_{79}	16.7	X	41.77594	320.17613	53.33613	5.76972	0.1675283	0.27385238	2.3485062	20	—	—
230135 2001 OD_{89}	17.3	X	176.20220	191.10607	96.94081	3.44743	0.1714247	0.28457794	2.2891200	20	—	—
230136 2001 PH_{10}	16.5	X	29.43863	238.69365	148.61084	5.09193	0.2945257	0.27222155	2.3578764	20	—	—
230137 2001 PR_{11}	16.6	X	3.56256	233.74829	161.36838	10.84985	0.2261746	0.27022627	2.3694688	20	—	—
230138 2001 PX_{12}	16.5	X	84.08138	20.27699	302.29227	6.09664	0.1323818	0.27558733	2.3386392	20	—	—
230139 2001 PY_{14}	17.3	X	105.40928	51.22360	266.65186	5.64712	0.2047755	0.27661547	2.3328406	20	—	—
230140 2001 PG_{31}	16.3	X	357.47906	161.47506	266.72856	11.96413	0.1523131	0.27371943	2.3492665	20	—	—
230141 2001 PW_{34}	15.5	X	97.83693	117.89772	285.62351	13.80572	0.1891683	0.17813039	3.1283166	20	2 9.2	20.1
230142 2001 PJ_{51}	16.7	X	27.25117	247.95939	117.38248	10.15542	0.2649884	0.27063573	2.3670783	20	—	—
230143 2001 QQ_{13}	16.3	X	341.78085	42.81248	344.68974	8.71527	0.2167015	0.26446905	2.4037326	20	12 7.5	18.5
230144 2001 QX_{35}	16.9	X	138.46352	358.75712	319.39653	5.25169	0.1845145	0.28273486	2.2990574	20	—	—
230145 2001 QH_{36}	16.6	X	320.42190	69.59989	302.59112	8.78374	0.2726214	0.26118762	2.4238235	20	9 7.1	18.2
230146 2001 QD_{44}	14.8	X	183.94249	322.74881	316.99911	10.58710	0.0851724	0.17893290	3.1189560	20	—	—
230147 2001 QG_{52}	17.0	X	45.55418	200.32680	163.63824	2.84222	0.1945032	0.27154110	2.3618139	20	—	—
230148 2001 QA_{54}	17.0	X	109.21364	186.40554	131.29730	5.20770	0.2079259	0.27718153	2.3296635	20	—	—
230149 2001 QX_{57}	16.7	X	341.60892	344.78551	46.27057	3.25889	0.1935676	0.26591498	2.3950110	20	12 10.9	18.7
230150 2001 QV_{70}	16.3	X	78.64788	4.58062	314.58183	6.20885	0.2346530	0.27139691	2.3626503	20	—	—
230151 Vachier	16.2	X	71.34673	193.22185	152.54573	10.47903	0.1533356	0.27461473	2.3441577	20	—	—
230152 2001 QO_{82}	15.8	X	19.19190	40.58652	312.95698	10.98268	0.2490034	0.26514746	2.3996307	20	12 30.5	18.9
230153 2001 QK_{96}	16.8	X	17.09566	299.88756	92.72708	3.88584	0.2166857	0.27093381	2.3653418	20	—	—
230154 2001 QV_{104}	16.4	X	0.47992	35.05513	343.00905	2.11238	0.2348221	0.26337618	2.4103774	20	—	—
230155 Francksallet	17.0	X	59.00284	2.78137	340.08473	2.12729	0.2034851	0.27201025	2.3590974	20	—	—
230156 2001 QW_{114}	16.8	X	16.05653	122.95406	258.62294	3.82056	0.2372365	0.26846326	2.3798311	20	—	—
230157 2001 QH_{149}	17.3	X	20.93297	260.29648	105.62475	6.35343	0.2295463	0.26950214	2.3737114	20	—	—
230158 2001 QJ_{151}	17.0	X	15.38887	176.33807	286.04112	19.59255	0.0135970	0.38607188	1.8679157	20	—	—
230159 2001 QN_{188}	16.7	X	17.00000	64.08306	340.77763	2.31519	0.1597300	0.27390343	2.3482144	20	—	—
230160 2001 QQ_{207}	17.2	X	85.02603	202.62269	129.42483	4.25966	0.1474657	0.27466468	2.3438735	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230161 2001 QD_{227}	16.4	X	320.61063	138.79214	268.12831	6.88091	0.1301541	0.26434386	2.4044914	20	11 14.8	18.7
230162 2001 QE_{244}	16.2	X	38.33575	191.43766	167.12508	6.33073	0.1299574	0.26874661	2.3781581	20	—	—
230163 2001 QZ_{245}	16.0	X	324.66145	31.72961	0.36027	6.54558	0.1585174	0.26083888	2.4259834	20	10 29.7	18.1
230164 2001 QC_{246}	16.5	X	36.62108	181.72938	177.08558	2.86111	0.2781510	0.26814740	2.3816996	20	—	—
230165 2001 QO_{247}	16.6	X	351.13163	351.28878	62.84902	3.19490	0.2086617	0.26619123	2.3933537	20	—	—
230166 2001 QD_{252}	17.0	X	3.61933	335.37347	47.41602	2.08894	0.1921008	0.26839281	2.3802476	20	—	—
230167 2001 QH_{253}	17.0	X	321.76700	308.28440	85.31153	2.40002	0.1821024	0.26290717	2.4132432	20	10 30.1	18.7
230168 2001 QO_{265}	17.1	X	67.50484	78.50039	234.42141	2.38339	0.1939683	0.26908039	2.3761910	20	12 23.9	20.7
230169 2001 QT_{289}	16.9	X	72.12236	39.57709	323.01827	2.38618	0.0486328	0.27789252	2.3256882	20	—	—
230170 2001 QH_{329}	17.2	X	57.51352	238.87534	98.87228	2.76084	0.1862450	0.27083779	2.3659009	20	—	—
230171 2001 QO_{333}	17.2	X	312.18499	167.82179	270.72423	8.14164	0.1765028	0.26754951	2.3852465	20	12 19.6	18.9
230172 2001 RO_{14}	16.8	X	15.76441	234.11655	181.27211	3.63292	0.1499577	0.27304444	2.3531367	20	—	—
230173 2001 RC_{27}	17.0	X	20.57964	45.53856	334.81674	2.44159	0.1872590	0.26949113	2.3737760	20	—	—
230174 2001 RX_{67}	16.1	X	358.15951	163.59534	229.15100	5.29000	0.0931908	0.26629005	2.3927616	20	12 27.5	18.8
230175 2001 RC_{69}	16.3	X	339.48375	41.07325	331.06702	6.28353	0.2358504	0.26086416	2.4258267	20	11 6.9	18.2
230176 2001 RX_{73}	16.6	X	341.89934	92.16992	323.54492	4.15991	0.1956401	0.26578004	2.3958216	20	—	—
230177 2001 RU_{80}	15.8	X	312.55170	335.11275	80.66546	11.71109	0.2433494	0.25897074	2.4376364	20	11 12.5	17.4
230178 2001 RV_{114}	16.6	X	325.00532	291.07022	159.36730	6.27134	0.1880253	0.26990654	2.3713397	20	—	—
230179 2001 RQ_{118}	17.0	X	35.48693	333.51540	25.44708	3.47726	0.1729433	0.26938559	2.3743959	20	—	—
230180 2001 RT_{129}	16.5	X	339.11907	40.72132	20.94561	5.30243	0.2099290	0.26716203	2.3875523	20	—	—
230181 2001 RA_{134}	16.3	X	300.27982	262.24780	151.83615	6.08275	0.2028757	0.26030782	2.4292818	20	10 11.1	18.2
230182 2001 RK_{138}	17.3	X	143.77635	266.06834	32.66950	2.72205	0.2150861	0.27945329	2.3170206	20	—	—
230183 2001 RN_{152}	16.8	X	276.95461	159.94857	124.69294	8.02363	0.2371582	0.29723961	2.2236423	20	2 20.3	20.2
230184 2001 RT_{155}	17.0	X	9.96539	272.94440	116.43240	5.37367	0.1613796	0.26866058	2.3786658	20	—	—
230185 2001 SF_{8}	15.3	X	198.75068	118.57413	148.05609	5.69200	0.0807383	0.17681215	3.1438464	20	—	—
230186 2001 SV_{17}	17.0	X	357.46450	229.97840	142.33157	3.40593	0.1885511	0.26443814	2.4039199	20	12 12.5	19.4
230187 2001 SD_{43}	17.3	X	2.62383	328.01226	51.66012	3.29304	0.2171909	0.26555694	2.3971633	20	—	—
230188 2001 SX_{55}	16.5	X	2.48779	224.95097	153.49082	7.59068	0.1866946	0.26362232	2.4088768	20	12 28.4	19.2
230189 2001 SD_{56}	16.6	X	42.33091	169.76118	148.22526	3.00084	0.2006925	0.26440572	2.4041163	20	12 4.5	19.9
230190 2001 SZ_{85}	14.7	X	282.76962	226.73730	328.80922	26.41751	0.1333651	0.18072561	3.0982960	20	—	—
230191 2001 SF_{103}	16.8	X	354.43153	50.30745	320.12669	3.72329	0.1947519	0.26324107	2.4112021	20	12 4.0	19.1
230192 2001 ST_{116}	16.5	X	52.47552	43.84348	272.10627	5.37861	0.1059505	0.26743933	2.3859016	20	11 30.9	19.6
230193 2001 SF_{119}	16.6	X	343.57039	142.37420	300.27709	6.71096	0.0758609	0.27256349	2.3559040	20	—	—
230194 2001 SH_{135}	17.4	X	64.52403	341.17943	314.27153	0.83330	0.1822236	0.26602634	2.3943426	20	11 27.4	20.7
230195 2001 SA_{145}	16.7	X	19.55268	352.77195	331.49265	4.76794	0.1183946	0.26242204	2.4162165	20	10 26.9	19.6
230196 2001 SR_{156}	16.7	X	327.27315	101.69660	316.06966	6.62429	0.1682912	0.26495796	2.4007746	20	12 18.8	18.8
230197 2001 SP_{162}	16.7	X	333.84360	355.94906	349.66592	3.34094	0.2178022	0.25724331	2.4485369	20	9 7.2	18.4
230198 2001 ST_{174}	16.3	X	328.14536	281.09175	84.26485	2.33404	0.1948695	0.25899497	2.4374843	20	9 28.2	18.0
230199 2001 SK_{214}	17.1	X	347.73354	220.32753	126.16839	3.00686	0.2178920	0.26033241	2.4291289	20	10 18.7	18.8
230200 2001 SY_{229}	16.4	X	357.56154	354.75125	43.12581	3.24280	0.1832906	0.26603768	2.3942746	20	—	—
230201 2001 SL_{233}	17.1	X	343.09070	347.85630	59.03995	3.19022	0.2085346	0.26446594	2.4037514	20	—	—
230202 2001 SY_{233}	16.9	X	332.04753	264.05210	164.67574	4.23586	0.1758663	0.26532225	2.3985766	20	—	—
230203 2001 SX_{259}	17.2	X	318.12871	266.71267	185.00802	2.74748	0.2007435	0.26894428	2.3769926	20	—	—
230204 2001 ST_{265}	17.3	X	305.87588	102.03434	326.11200	1.12348	0.2030135	0.26062820	2.4272906	20	11 13.7	19.1
230205 2001 SA_{285}	17.3	X	339.30231	54.26060	353.86848	3.17364	0.1245731	0.26555820	2.3971557	20	12 22.9	19.7
230206 2001 SL_{291}	14.5	X	212.30385	308.60996	325.89624	26.22999	0.1561784	0.17853559	3.1235815	20	1 5.4	20.0
230207 2001 SR_{295}	16.9	X	2.78509	225.87489	179.42412	5.74283	0.1016849	0.27061411	2.3672044	20	—	—
230208 2001 SU_{308}	17.5	X	19.11685	273.29529	103.73117	2.22167	0.1795000	0.26910315	2.3760570	20	—	—
230209 2001 SW_{346}	17.1	X	346.37540	118.83501	287.93269	5.33649	0.1233078	0.26612348	2.3937599	20	—	—
230210 2001 TK_{2}	17.5	X	328.59350	83.76609	303.34510	1.57951	0.1981470	0.26120934	2.4236891	20	11 3.1	19.3
230211 2001 TR_{25}	16.4	X	344.39445	190.33160	239.94561	6.42618	0.1094052	0.26795690	2.3828283	20	—	—
230212 2001 TM_{28}	16.5	X	234.49975	15.31499	314.24800	3.18977	0.1245516	0.23863280	2.5742415	20	3 18.3	20.5
230213 2001 TP_{31}	16.2	X	335.97775	112.37623	297.88560	4.58681	0.2223072	0.26210933	2.4181379	20	12 31.6	18.1
230214 2001 TY_{37}	16.2	X	313.64741	12.52162	23.80978	6.52933	0.1113636	0.25491404	2.4634299	20	10 15.4	18.7
230215 2001 TT_{38}	16.2	X	19.81491	36.04649	304.13831	5.92292	0.1400306	0.25991581	2.4317238	20	11 22.2	19.1
230216 2001 TL_{48}	17.1	X	295.70168	280.12535	151.58199	1.75818	0.1539683	0.25878583	2.4387974	20	11 1.4	19.2
230217 2001 TD_{62}	16.8	X	40.95136	296.87545	45.57987	2.62420	0.2251255	0.26638950	2.3921660	20	—	—
230218 2001 TM_{71}	16.7	X	5.89170	319.08149	45.52557	3.94955	0.0969490	0.26255026	2.4154297	20	11 29.9	19.3
230219 2001 TN_{78}	16.6	X	316.77028	337.03188	61.90062	3.82502	0.1772485	0.25815344	2.4427786	20	10 25.4	18.6
230220 2001 TD_{90}	16.8	X	356.09837	104.71342	299.23137	4.33323	0.2164833	0.26611770	2.3937945	20	—	—
230221 2001 TY_{108}	16.6	X	334.52361	86.42079	324.71611	5.80144	0.1401473	0.26371356	2.4083212	20	12 19.8	18.9
230222 2001 TV_{123}	16.9	X	68.91438	138.13334	262.97920	7.39304	0.0985810	0.27762879	2.3271608	20	—	—
230223 2001 TV_{125}	16.1	X	207.95124	77.67761	306.73513	7.86556	0.1663827	0.24223480	2.5486588	20	4 25.8	20.4
230224 2001 TS_{160}	17.5	X	226.19107	216.91591	321.00035	0.67166	0.1262774	0.26395559	2.4068488	20	12 13.2	20.5
230225 2001 TM_{161}	17.2	X	318.70496	192.86235	231.33276	1.98385	0.1809482	0.26385273	2.4074743	20	12 10.4	18.9
230226 2001 TQ_{188}	17.4	X	72.70960	32.08032	332.72125	1.56589	0.2218266	0.27232347	2.3572881	20	—	—
230227 2001 TH_{192}	16.8	X	308.34525	52.53777	17.99282	6.47456	0.1104194	0.26176739	2.4202433	20	11 25.3	19.3
230228 2001 TU_{195}	16.0	X	331.12545	225.74946	129.33300	10.30387	0.1333310	0.25580239	2.4577233	20	9 20.5	18.4
230229 2001 TH_{199}	16.5	X	86.47213	217.12046	138.17694	7.99700	0.1029682	0.27508631	2.3414779	20	—	—
230230 2001 TF_{200}	16.8	X	96.63161	237.81074	92.25015	5.03995	0.1415629	0.27363065	2.3497747	20	—	—
230231 2001 TD_{258}	17.0	X	37.03527	27.48156	52.33661	6.86670	0.1065088	0.27827732	2.3235437	20	—	—
230232 2001 TJ_{258}	16.7	X	123.44839	239.32490	55.34840	7.55978	0.1231558	0.27313797	2.3525995	20	—	—
230233 2001 UM_{43}	17.4	X	61.86402	281.07811	57.55092	4.61330	0.1475115	0.26793007	2.3829874	20	—	—
230234 2001 UP_{68}	16.2	X	322.80203	157.91289	260.01389	5.87744	0.1454974	0.26170605	2.4206214	20	12 6.6	18.5
230235 2001 UU_{71}	16.5	X	260.72440	121.75912	340.89973	4.57649	0.1033281	0.26151071	2.4218267	20	10 21.8	19.3
230236 2001 UR_{73}	16.7	X	327.03915	332.42040	52.96420	6.77929	0.1003506	0.25896033	2.4377017	20	10 26.4	19.2
230237 2001 US_{83}	16.7	X	286.37501	205.54349	221.16578	7.63719	0.1776258	0.25579197	2.4577900	20	9 29.3	19.1
230238 2001 UH_{86}	17.0	X	281.92092	350.11790	83.57209	2.43452	0.1649543	0.25763779	2.4460369	20	10 7.8	19.6
230239 2001 UT_{114}	17.0	X	260.84632	2.72753	48.07953	4.05432	0.2057325	0.25117585	2.4878114	20	7 26.1	20.3
230240 2001 UY_{114}	17.3	X	308.59709	1.68758	51.49904	2.99250	0.1616767	0.25894781	2.4377803	20	10 29.8	19.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230241 2001 UP_{128}	16.6	X	343.09926	321.88843	57.94345	6.74814	0.2284867	0.26264444	2.4148523	20	11 30.5	18.4
230242 2001 UD_{131}	16.5	X	251.92520	89.23999	51.70845	5.52380	0.1394800	0.26179314	2.4200846	20	11 26.6	19.4
230243 2001 UL_{134}	16.9	X	318.74193	220.28244	220.77403	6.48835	0.0494713	0.26454498	2.4032726	20	12 28.4	19.7
230244 2001 UD_{150}	16.6	X	47.71471	167.26828	174.33808	2.18733	0.2241950	0.26545839	2.3977565	20	—	—
230245 2001 UF_{177}	17.0	X	277.19500	74.15545	6.96803	0.98858	0.1598796	0.25828192	2.4419684	20	10 9.8	19.3
230246 2001 UO_{191}	16.9	X	291.34693	77.63518	17.06566	6.73547	0.1126066	0.26376364	2.4080164	20	11 30.2	19.4
230247 2001 VC_{4}	15.4	X	333.37421	353.41851	244.78844	16.79983	0.1338387	0.23481218	2.6020899	20	3 16.6	18.9
230248 2001 VT_{5}	17.0	X	133.76761	204.34159	264.05269	2.57706	0.2399951	0.23838510	2.5760245	20	6 10.9	21.1
230249 2001 VK_{23}	17.4	X	299.28179	25.50252	28.61996	2.53979	0.2075682	0.25662206	2.4524871	20	10 5.1	19.4
230250 2001 VU_{25}	16.6	X	19.92710	12.89831	50.73076	7.14831	0.1143012	0.26926534	2.3751028	20	—	—
230251 2001 VT_{31}	14.4	X	107.83852	17.08800	67.04780	16.86976	0.2684778	0.12356973	3.9920378	20	4 28.9	20.7
230252 2001 VN_{39}	15.7	X	184.68966	161.31580	239.22214	21.12986	0.0580128	0.23707708	2.5854908	20	4 25.9	19.6
230253 2001 VO_{61}	16.4	X	1.01827	80.39052	277.53240	5.42861	0.1324733	0.25961507	2.4336014	20	11 16.4	19.1
230254 2001 VA_{64}	16.2	X	22.11699	100.91603	247.64226	5.29140	0.1620570	0.26177362	2.4202048	20	12 12.2	19.1
230255 2001 VQ_{85}	17.2	X	279.53234	158.36387	308.80484	2.24157	0.1480552	0.26037942	2.4288365	20	11 22.9	19.6
230256 2001 VM_{104}	16.8	X	4.95476	23.36979	347.17982	2.65124	0.2145409	0.26209688	2.4182145	20	12 25.7	19.5
230257 2001 VA_{105}	16.8	X	253.33967	88.21992	35.44049	2.75575	0.1698594	0.25770347	2.4456213	20	10 30.3	19.5
230258 2001 WB_{8}	16.9	X	294.55821	290.90065	158.45622	4.60869	0.1238643	0.25997658	2.4313449	20	11 28.9	19.3
230259 2001 WZ_{23}	17.5	X	203.81951	191.32256	240.46576	3.33352	0.1134737	0.24434899	2.5339363	20	6 27.9	21.3
230260 2001 WT_{33}	16.5	X	249.41574	355.80507	148.54751	2.97233	0.1171204	0.26051729	2.4279795	20	12 1.7	19.3
230261 2001 WA_{45}	16.5	X	121.23850	279.39691	191.05050	10.95823	0.1595151	0.23736116	2.5834275	20	5 27.1	20.5
230262 2001 WL_{52}	16.7	X	348.98426	88.05863	32.72253	2.53193	0.1568975	0.27279943	2.3545455	20	—	—
230263 2001 WC_{61}	17.2	X	13.49603	3.66224	356.63204	1.56327	0.1910333	0.26221281	2.4175017	20	12 20.5	19.9
230264 2001 WD_{65}	16.8	X	200.31188	22.07856	53.20564	11.23477	0.1266249	0.24608870	2.5219798	20	6 28.0	20.8
230265 2001 WM_{70}	16.9	X	201.64612	354.39733	72.23431	4.61173	0.1119495	0.24421877	2.5348369	20	6 18.9	20.8
230266 2001 WZ_{72}	17.0	X	229.93193	32.86611	73.33091	5.75997	0.0656662	0.25386779	2.4701935	20	9 23.6	20.3
230267 2001 WD_{93}	16.7	X	343.56200	72.34031	344.69564	3.78474	0.1384009	0.26255069	2.4154271	20	—	—
230268 2001 XO_{4}	16.8	X	332.72608	237.86495	264.75757	19.43925	0.0630319	0.37808849	1.8941182	20	—	—
230269 2001 XZ_{6}	17.1	X	332.11065	284.47273	112.08531	26.88577	0.1834293	0.36241105	1.9483565	20	—	—
230270 2001 XE_{20}	16.7	X	204.71336	55.01116	345.62048	4.00821	0.2765429	0.23953464	2.5677762	20	5 12.1	21.2
230271 2001 XL_{24}	16.9	X	298.67914	98.56639	309.88696	6.35248	0.2557947	0.25347186	2.4727652	20	9 12.1	19.0
230272 2001 XQ_{38}	17.0	X	10.28905	120.56415	283.25227	16.96946	0.1070675	0.37096660	1.9182837	20	—	—
230273 2001 XU_{57}	17.1	X	295.21408	322.10536	129.67873	3.32733	0.1538909	0.25879765	2.4387232	20	11 30.7	19.2
230274 2001 XC_{58}	16.8	X	207.24005	342.64410	83.22150	4.97790	0.2466125	0.24271234	2.5453146	20	6 16.6	21.2
230275 2001 XD_{77}	17.0	X	4.14453	248.24926	117.23594	2.24875	0.1838319	0.26068267	2.4269525	20	12 11.9	19.5
230276 2001 XJ_{109}	16.7	X	319.11895	191.80545	204.76325	1.72610	0.1813599	0.25684613	2.4510605	20	10 25.5	18.6
230277 2001 XR_{124}	16.4	X	335.04721	253.52476	83.32767	7.22260	0.1658522	0.25409179	2.4687415	20	8 30.1	18.6
230278 2001 XW_{145}	16.6	X	122.66765	64.64136	84.71221	5.18481	0.1952565	0.23871622	2.5736418	20	7 20.5	20.6
230279 2001 XN_{158}	16.8	X	334.32367	217.15156	175.24566	1.45446	0.1862779	0.25727148	2.4483582	20	11 23.8	18.8
230280 2001 XT_{200}	17.2	X	132.19695	54.70023	39.44243	4.39339	0.2382068	0.23466042	2.6032117	20	5 21.9	21.4
230281 2001 XO_{210}	16.7	X	253.69606	349.06811	108.18959	8.15366	0.1736753	0.25262595	2.4782821	20	9 27.3	20.0
230282 2001 XH_{215}	15.9	X	214.79497	130.53363	299.28402	28.75993	0.0978430	0.24015019	2.5633865	20	7 11.8	19.6
230283 2001 XK_{216}	17.0	X	25.05773	288.60821	76.81798	3.42836	0.1918753	0.26228010	2.4170881	20	—	—
230284 2001 XP_{218}	15.9	X	84.36665	242.68568	250.48166	12.01747	0.0793663	0.23584121	2.5945154	20	4 26.9	19.4
230285 2001 XE_{225}	17.0	X	325.14100	37.40068	25.34963	1.77767	0.1587784	0.26081567	2.4261274	20	12 19.2	19.0
230286 2001 XA_{228}	17.0	X	345.53064	38.60085	5.27918	3.31475	0.1710545	0.26152969	2.4217095	20	—	—
230287 2001 XE_{228}	16.2	X	329.56896	99.89069	311.92041	3.75788	0.1334258	0.25985451	2.4321062	20	12 8.9	18.5
230288 2001 XL_{243}	16.8	X	286.34581	305.12785	102.41956	8.75211	0.1752577	0.25010147	2.4949311	20	9 6.3	19.6
230289 2001 XB_{254}	16.4	X	15.39771	140.06280	318.74470	17.90175	0.0802848	0.37412656	1.9074669	20	—	—
230290 2001 YQ_{13}	16.0	X	326.34950	66.16940	309.87679	4.17098	0.1175653	0.25572944	2.4581907	20	10 6.5	18.6
230291 2001 YB_{31}	16.5	X	146.14456	184.13058	57.87758	7.36621	0.0658895	0.26020453	2.4299247	20	12 7.4	19.8
230292 2001 YJ_{65}	15.6	X	131.96116	59.73845	25.06767	2.43240	0.2400970	0.12536312	3.9538743	20	5 12.1	21.9
230293 2001 YS_{66}	14.7	X	159.94080	358.54353	61.91980	6.36857	0.1974622	0.12696374	3.9205734	20	5 5.4	21.0
230294 2001 YW_{79}	14.5	X	151.19234	129.14289	293.97554	7.31269	0.1763183	0.12483627	3.9649909	20	4 27.1	20.9
230295 2001 YB_{121}	15.9	X	204.23139	339.95739	122.72128	14.30654	0.2104375	0.24358267	2.5392480	20	8 1.9	19.9
230296 2001 YJ_{154}	15.5	X	289.79125	350.88237	358.58751	7.55726	0.2675976	0.24427682	2.5344353	20	5 27.1	18.9
230297 2002 AT_{17}	17.1	X	37.46841	289.89890	119.35542	23.36922	0.0921573	0.37264938	1.9125044	20	—	—
230298 2002 AE_{18}	16.6	X	291.06517	280.37734	148.35937	7.05921	0.1362135	0.25618006	2.4553072	20	10 22.6	19.1
230299 2002 AZ_{30}	16.4	X	247.74726	289.17791	135.24061	12.21496	0.2192726	0.24526652	2.5276127	20	7 24.8	20.1
230300 2002 AB_{46}	16.9	X	188.47636	189.75076	275.29410	1.89827	0.1121184	0.24135476	2.5548504	20	7 25.2	20.7
230301 2002 AL_{52}	16.1	X	152.69466	193.92305	295.31216	7.96607	0.1086268	0.23777437	2.5804336	20	7 18.9	20.1
230302 2002 AF_{91}	16.5	X	264.37677	223.93134	138.11444	4.05076	0.1364856	0.24007648	2.5639112	20	6 2.8	20.0
230303 2002 AB_{105}	16.6	X	90.03284	34.86569	99.13566	3.23088	0.1509167	0.22994419	2.6386862	20	5 20.0	20.2
230304 2002 AA_{110}	17.1	X	354.54205	326.41384	98.25084	3.37880	0.2141924	0.26170808	2.4206089	20	—	—
230305 2002 AW_{115}	16.4	X	291.13304	286.90927	112.72992	11.61743	0.1423270	0.24724073	2.5141395	20	9 8.4	19.3
230306 2002 AC_{131}	15.4	X	59.27507	223.16673	315.49007	14.98789	0.0990340	0.22981482	2.6396764	20	5 26.3	19.0
230307 2002 AV_{144}	17.0	X	270.08794	317.55586	140.17115	3.87612	0.1451531	0.25294623	2.4761897	20	10 24.8	19.8
230308 2002 AJ_{161}	16.4	X	208.61934	277.54463	135.53630	10.09898	0.2736832	0.23839810	2.5759308	20	6 2.5	21.1
230309 2002 AT_{169}	15.3	X	139.09335	329.16929	110.04348	11.89806	0.2822342	0.12515622	3.9582306	20	5 17.4	22.0
230310 2002 AJ_{174}	16.2	X	236.03781	56.87605	331.39246	5.81767	0.1087337	0.23747866	2.5825753	20	6 5.9	20.0
230311 2002 BF_{1}	16.7	X	217.52765	121.35130	335.54177	4.21770	0.2389236	0.24394113	2.5367599	20	8 4.9	20.8
230312 2002 BF_{15}	16.3	X	114.06884	42.67065	165.40011	4.62684	0.0852030	0.24191394	2.5509119	20	9 17.3	20.0
230313 2002 CE_{2}	15.5	X	98.40426	82.38993	108.71621	14.21148	0.1115665	0.23720115	2.5845892	20	8 11.5	19.2
230314 2002 CL_{3}	15.9	X	196.72258	29.96608	107.67513	16.46887	0.1440336	0.24361413	2.5390295	20	9 19.9	20.1
230315 2002 CT_{26}	16.3	X	257.04883	54.93576	9.35189	3.71807	0.1559105	0.24659055	2.5185569	20	8 16.2	19.6
230316 2002 CW_{30}	16.3	X	107.56290	116.98005	80.08613	5.23473	0.0055111	0.24038564	2.5617124	20	8 18.7	19.7
230317 2002 CY_{32}	15.6	X	204.01684	351.84684	123.52700	22.88951	0.0225578	0.24218388	2.5490160	20	9 7.9	19.3
230318 2002 CG_{38}	16.9	X	174.79914	146.45747	344.71134	2.83223	0.1249166	0.24030098	2.5623140	20	8 14.3	20.8
230319 2002 CH_{40}	16.0	X	129.60861	245.89036	276.36905	11.26468	0.2324912	0.23457010	2.6038799	20	8 9.7	20.5
230320 2002 CJ_{52}	16.1	X	196.14248	317.56104	155.25792	13.60718	0.2371776	0.24037447	2.5617917	20	8 4.7	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230321 2002 CY_{53}	15.7	X	100.05222	221.80191	322.99210	12.13174	0.0855388	0.23437638	2.6053145	20	8 1.2	19.3
230322 2002 CQ_{77}	16.3	X	63.34044	106.50757	139.61392	6.61578	0.1042331	0.23826162	2.5769144	20	9 9.0	19.6
230323 2002 CW_{77}	16.4	X	82.57070	158.55594	349.26780	4.84565	0.0780621	0.22835554	2.6509102	20	5 15.1	19.9
230324 2002 CU_{83}	16.0	X	120.16000	77.16351	140.53312	6.22798	0.0781571	0.24222698	2.5487136	20	10 8.4	19.7
230325 2002 CR_{84}	16.1	X	92.99431	136.22378	128.59528	6.07034	0.0960005	0.24483753	2.5305644	20	11 9.0	19.8
230326 2002 CH_{86}	16.3	X	246.75480	259.22760	126.65327	14.96992	0.2293564	0.23946551	2.5682703	20	6 5.2	20.5
230327 2002 CV_{86}	16.4	X	186.80851	68.37356	320.10420	6.98168	0.1235790	0.22889062	2.6467772	20	4 12.0	20.6
230328 2002 CN_{91}	16.1	X	176.80109	287.21517	142.50124	13.84351	0.1527049	0.23228047	2.6209632	20	5 31.1	20.6
230329 2002 CA_{98}	16.4	X	136.68462	47.75881	149.26305	12.03873	0.1354453	0.24084636	2.5584445	20	10 2.3	20.5
230330 2002 CS_{100}	16.9	X	172.15391	355.56955	136.43697	4.72896	0.1761889	0.23861238	2.5743884	20	8 11.2	21.0
230331 2002 CC_{109}	16.9	X	176.92063	1.78568	114.37445	3.93027	0.1198900	0.23734385	2.5835531	20	7 27.6	20.9
230332 2002 CT_{119}	15.8	X	122.04520	77.86673	132.09583	15.62576	0.0773580	0.24455555	2.5325092	20	10 4.1	19.7
230333 2002 CD_{124}	17.0	X	140.39441	18.98262	171.64195	5.43635	0.2253173	0.24103990	2.5570747	20	9 26.9	21.4
230334 2002 CM_{142}	14.8	X	135.23505	305.37836	146.17567	9.47199	0.2020904	0.12499785	3.9615732	20	5 22.7	21.2
230335 2002 CD_{144}	16.4	X	195.21708	276.48776	162.05170	12.80024	0.3032078	0.23820151	2.5773479	20	6 21.6	21.3
230336 2002 CJ_{178}	16.3	X	101.02288	178.11580	98.65356	4.16881	0.0695983	0.25171284	2.4842719	20	11 30.4	19.7
230337 2002 CE_{180}	16.8	X	165.88737	43.06482	109.75088	4.06995	0.0806500	0.24253512	2.5465544	20	9 4.3	20.5
230338 2002 CC_{186}	16.8	X	193.43738	110.96910	347.78474	4.61261	0.1221729	0.23930540	2.5694158	20	7 22.9	20.7
230339 2002 CD_{200}	13.2	X	302.02226	62.12422	340.91685	13.72848	0.0448012	0.08504933	5.1210082	20	9 11.2	19.8
230340 2002 CH_{200}	15.9	X	338.88189	291.74073	343.58415	5.14160	0.1238758	0.22988912	2.6391076	20	5 27.4	18.8
230341 2002 CF_{215}	16.9	X	248.19350	97.25390	340.76709	6.57055	0.2445945	0.24500887	2.5293844	20	8 10.9	20.4
230342 2002 CO_{215}	16.4	X	222.84219	257.55253	149.63304	5.74173	0.3115386	0.23779332	2.5802965	20	6 3.1	21.0
230343 2002 CA_{220}	15.8	X	136.20551	131.30481	354.51371	12.73776	0.1190077	0.23104675	2.6302850	20	6 28.4	20.0
230344 2002 CR_{238}	16.8	X	140.27642	261.80481	294.09629	3.62789	0.1418415	0.24067721	2.5596430	20	9 29.3	20.8
230345 2002 CO_{252}	16.6	X	215.83036	98.40126	314.62776	11.49884	0.1808864	0.23669578	2.5882668	20	6 11.3	20.9
230346 2002 CN_{263}	14.6	X	145.96309	148.34968	301.24747	4.66159	0.1073702	0.12543786	3.9523036	20	5 20.7	20.7
230347 2002 CQ_{273}	15.8	X	150.04050	263.79597	251.91174	11.24527	0.1248241	0.23865016	2.5741167	20	8 15.0	20.0
230348 2002 CM_{277}	17.0	X	213.98831	148.86447	322.12157	3.36786	0.0746712	0.24305285	2.5429368	20	9 3.1	20.5
230349 2002 CL_{287}	16.2	X	123.22264	59.72417	74.89263	5.04158	0.0734821	0.23176611	2.6248396	20	6 19.8	20.0
230350 2002 CE_{288}	15.5	X	171.96217	200.65613	163.52804	16.09215	0.2181265	0.21837874	2.7310468	20	3 7.2	20.1
230351 2002 CN_{289}	16.0	X	235.27461	20.26987	2.02302	12.59611	0.1742937	0.23750506	2.5823839	20	5 18.4	20.3
230352 2002 CH_{297}	16.5	X	186.15748	84.49232	143.84697	3.71840	0.1085374	0.25620482	2.4551490	20	12 30.5	19.9
230353 2002 CK_{302}	15.7	X	124.56563	261.31107	303.60907	10.44062	0.2555541	0.23744043	2.5828525	20	9 26.4	20.5
230354 2002 CH_{310}	15.9	X	344.03020	336.86596	320.36782	14.27769	0.0910417	0.23414604	2.6070229	20	7 14.9	18.9
230355 2002 CW_{314}	17.2	X	201.75287	191.50554	274.36890	6.12013	0.2053431	0.24116367	2.5561998	20	8 2.1	21.4
230356 2002 DG_{1}	16.0	X	35.29544	134.36945	126.66165	9.44252	0.0749720	0.23546158	2.5973034	20	8 14.7	19.1
230357 2002 EJ_{32}	16.0	X	70.41651	139.45354	111.21575	3.88173	0.0675911	0.23952998	2.5678095	20	9 19.7	19.3
230358 2002 EZ_{36}	17.1	X	196.41192	67.20811	54.76454	2.64064	0.1587770	0.24050086	2.5608942	20	8 23.3	21.0
230359 2002 ER_{55}	16.7	X	46.47829	317.53532	179.33892	5.12412	0.1874623	0.22158251	2.7046582	20	3 22.0	19.1
230360 2002 EK_{56}	16.8	X	174.97684	285.10121	199.64549	3.70237	0.1146172	0.23846760	2.5754302	20	8 4.5	20.8
230361 2002 EA_{61}	16.5	X	296.20566	103.34168	180.61112	9.41620	0.1706884	0.27569877	2.3380089	20	3 21.7	19.5
230362 2002 EP_{84}	16.2	X	23.04796	257.77292	35.70479	2.83633	0.0748093	0.23687077	2.5869919	20	9 11.2	19.2
230363 2002 EU_{96}	17.3	X	73.94220	232.88786	1.60591	4.37209	0.1099991	0.28872220	2.2671622	20	9 13.7	20.1
230364 2002 EF_{101}	15.9	X	196.36478	212.83516	273.02453	13.22202	0.0437239	0.24144320	2.5542264	20	8 28.6	19.8
230365 2002 EX_{101}	15.6	X	219.61937	281.04725	131.97160	15.77689	0.1273568	0.23418387	2.6067421	20	6 20.6	19.7
230366 2002 EP_{113}	16.6	X	144.97632	181.29914	301.24217	12.42831	0.2194283	0.23409190	2.6074248	20	7 7.9	21.0
230367 2002 EK_{138}	16.2	X	231.66328	252.32690	147.84485	5.74254	0.0457087	0.23153918	2.6265543	20	6 24.6	19.8
230368 2002 EY_{152}	16.3	X	174.36770	77.05592	352.03730	5.86107	0.0270359	0.22676747	2.6632721	20	5 21.3	20.0
230369 2002 EU_{155}	16.7	X	150.83559	77.59053	10.16570	4.21710	0.1557070	0.22802799	2.6534482	20	5 25.3	20.9
230370 2002 FQ_{1}	15.8	X	38.96108	166.90967	92.81229	15.41487	0.2171079	0.23181926	2.6244383	20	9 17.5	19.3
230371 2002 FA_{15}	15.7	X	315.06943	171.47480	80.65756	11.47944	0.2581941	0.21724153	2.7405694	20	3 3.2	19.4
230372 2002 FC_{15}	15.7	X	17.43980	353.09517	122.37063	13.01814	0.1302219	0.21350400	2.7724606	20	—	—
230373 2002 FW_{15}	15.9	X	347.23517	133.16079	79.95153	7.80120	0.0297115	0.21955149	2.7213128	20	3 28.8	19.5
230374 2002 GD_{9}	15.7	X	106.53374	89.42672	71.43397	4.44316	0.2092095	0.22881360	2.6473711	20	7 20.6	19.8
230375 2002 GM_{14}	16.0	X	115.20767	304.70401	214.25725	11.95039	0.1821262	0.22806853	2.6531337	20	7 20.2	20.4
230376 2002 GV_{16}	15.8	X	295.76647	194.42070	61.50817	4.45917	0.1366323	0.21436585	2.7650245	20	2 27.1	19.6
230377 2002 GP_{18}	16.0	X	215.24721	68.80130	51.81676	11.94868	0.2178706	0.24145921	2.5541135	20	9 9.5	20.2
230378 2002 GA_{20}	15.8	X	71.52084	333.88688	216.31756	7.47704	0.1452983	0.22580495	2.6708351	20	7 7.9	19.5
230379 2002 GZ_{51}	16.3	X	69.65464	231.25675	57.61706	4.59467	0.1169018	0.23964219	2.5670078	20	11 12.6	19.9
230380 2002 GU_{52}	15.6	X	110.91001	37.06746	195.68035	9.77487	0.0900223	0.18331152	3.0690894	20	10 7.1	20.3
230381 2002 GV_{77}	16.7	X	328.56304	207.59623	60.19569	5.66496	0.2064335	0.27508249	2.3414996	20	4 15.3	18.7
230382 2002 GN_{78}	16.1	X	348.09916	110.25177	282.79766	2.85700	0.0488060	0.24406021	2.5359347	20	12 1.1	19.1
230383 2002 GH_{83}	16.0	X	47.19342	104.10524	115.52982	5.68444	0.1093459	0.22600393	2.6692672	20	7 8.7	19.3
230384 2002 GP_{103}	15.9	X	300.29807	145.28871	150.02671	10.37569	0.2257401	0.21764279	2.7372000	20	4 11.2	19.6
230385 2002 GX_{117}	16.2	X	151.57084	33.29621	91.74350	6.85650	0.1406906	0.23036919	2.6354399	20	7 13.4	20.3
230386 2002 GC_{120}	15.9	X	247.39126	229.20384	84.30981	8.29789	0.1550632	0.21468376	2.7622942	20	3 16.4	20.3
230387 2002 GH_{121}	15.9	X	216.64166	244.27417	72.01274	5.19959	0.0682382	0.21202781	2.7853140	20	2 21.2	20.0
230388 2002 GG_{122}	15.7	X	188.35742	309.77877	259.30336	2.22091	0.0285057	0.19337498	2.9616645	20	12 3.2	19.9
230389 2002 GR_{126}	17.0	X	159.72661	275.08147	244.34685	2.99945	0.2328535	0.23835363	2.5762512	20	9 1.9	21.5
230390 2002 GA_{144}	16.1	X	81.83407	73.69660	124.10190	8.64987	0.1156108	0.23071936	2.6327727	20	7 29.2	19.7
230391 2002 GV_{151}	16.5	X	92.18779	268.21563	325.87579	7.42038	0.1240359	0.23567360	2.5957454	20	9 26.1	20.4
230392 2002 GB_{166}	15.8	X	296.52898	177.18517	110.94697	10.28251	0.1670656	0.21780827	2.7358134	20	4 7.6	19.6
230393 2002 GP_{169}	16.8	X	114.98607	228.29483	297.50558	1.08962	0.1339450	0.22967088	2.6407792	20	7 27.7	20.8
230394 2002 GK_{176}	16.6	X	189.92932	220.54109	244.07100	2.89386	0.2334855	0.23642721	2.5902265	20	7 20.8	20.9
230395 2002 JW_{10}	15.8	X	331.09963	155.83299	103.20921	15.69117	0.1573873	0.21688941	2.7435348	20	4 25.9	19.2
230396 2002 JM_{14}	15.9	X	43.50189	122.35925	119.09309	8.28277	0.1522067	0.22710346	2.6606447	20	8 10.9	19.0
230397 2002 JB_{46}	15.1	X	53.09285	28.59954	225.29878	14.17645	0.2417037	0.17604972	3.1529166	20	9 11.8	19.7
230398 2002 JR_{64}	15.6	X	318.45066	162.63372	86.73404	8.67309	0.1738642	0.21338486	2.7734924	20	3 17.4	19.1
230399 2002 JD_{73}	15.5	X	27.84852	125.09024	99.21946	14.91793	0.1421666	0.22020945	2.7158894	20	6 17.6	18.5
230400 2002 JY_{87}	16.3	X	67.04214	131.82243	38.91941	5.48793	0.0612984	0.22042841	2.7140906	20	5 22.9	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230401 2002 JQ_{102}	15.7	X	324.91345	169.85635	71.64902	8.50144	0.1068935	0.21292625	2.7774734	20	3 26.5	19.3
230402 2002 JJ_{110}	16.3	X	110.44340	288.05352	252.98905	11.29972	0.2116884	0.22968791	2.6406487	20	8 13.5	20.8
230403 2002 JV_{121}	15.6	X	13.21800	132.72228	145.56728	14.15635	0.1513264	0.22613115	2.6682660	20	8 9.6	18.3
230404 2002 JW_{130}	15.5	X	162.86514	0.13380	60.58139	9.58982	0.0976436	0.21753548	2.7381001	20	5 2.9	19.6
230405 2002 JV_{141}	16.3	X	224.83298	291.40977	24.21083	1.87682	0.0575171	0.21011046	2.8022332	20	2 28.3	20.4
230406 2002 JM_{144}	15.8	X	113.59963	16.90267	136.21419	14.32394	0.1824876	0.22692616	2.6620304	20	7 13.9	20.0
230407 2002 KA_{2}	15.9	X	137.01217	56.69992	82.44715	5.81644	0.2397154	0.23065790	2.6332403	20	7 22.7	20.3
230408 2002 KY_{2}	16.6	X	136.97852	299.68673	217.31743	4.72912	0.2304315	0.23235801	2.6203800	20	8 10.9	21.1
230409 2002 KG_{9}	15.9	X	41.82911	113.78608	118.66641	13.52286	0.1271657	0.22647041	2.6656006	20	7 21.3	18.8
230410 2002 KM_{9}	15.3	X	76.21996	80.08710	117.69441	15.79976	0.3324153	0.22662860	2.6643600	20	8 22.1	19.5
230411 2002 LZ_{20}	15.2	X	36.12087	125.63123	102.18828	17.20137	0.2265223	0.21949129	2.7218103	20	7 20.9	18.1
230412 2002 LV_{24}	16.4	X	235.64749	196.03012	104.60720	15.43381	0.2127660	0.25997815	2.4313351	20	2 10.1	20.6
230413 2002 LE_{32}	14.7	X	118.49967	41.51540	276.22064	21.84599	0.2154613	0.18512200	3.0490463	20	—	—
230414 2002 LW_{44}	15.4	X	349.21825	61.80925	127.21814	12.36214	0.1293731	0.21127260	2.7919476	20	2 17.9	18.7
230415 Matthiasjung	16.8	X	232.26845	296.53099	1.95798	5.83395	0.1711110	0.31130287	2.1561582	20	1 31.2	20.2
230416 2002 NG_{26}	15.0	X	48.93060	59.77726	302.73729	15.41088	0.2499237	0.17634581	3.1493865	20	—	—
230417 2002 NV_{37}	15.5	X	124.20346	9.36032	282.01638	10.04453	0.1668991	0.18203020	3.0834749	20	12 30.7	20.5
230418 2002 NC_{52}	17.5	X	224.53187	47.28870	294.31198	3.42104	0.1474802	0.31442661	2.1418540	20	3 16.3	20.6
230419 2002 OE_{8}	15.4	X	84.60027	64.82392	285.37005	4.31057	0.1784477	0.18283640	3.0744040	20	—	—
230420 2002 PP_{6}	18.9	X	343.24304	272.89937	135.03820	20.11790	0.6515249	0.27743955	2.3282188	20	—	—
230421 2002 PD_{17}	15.5	X	60.65815	255.83265	144.58171	10.62568	0.1015354	0.18785953	3.0193530	20	—	—
230422 2002 PG_{20}	15.7	X	37.11808	64.35155	292.93382	8.87830	0.0915340	0.17736656	3.1372916	20	12 10.8	20.0
230423 2002 PZ_{28}	15.0	X	13.61686	84.79017	305.39591	14.48151	0.2418103	0.17557381	3.1586116	20	—	—
230424 2002 PD_{53}	15.8	X	111.69751	1.99042	328.98286	0.69546	0.1015525	0.18424169	3.0587509	20	—	—
230425 2002 PT_{67}	15.5	X	81.22287	221.21520	151.66609	10.46714	0.0833751	0.18619814	3.0372869	20	—	—
230426 2002 PD_{110}	17.7	X	138.62592	250.00143	113.62897	6.19651	0.1970196	0.30285343	2.1960778	20	1 25.9	20.5
230427 2002 PO_{110}	15.5	X	95.22699	50.24996	268.02796	9.20610	0.0476102	0.18028022	3.1033969	20	12 26.6	20.1
230428 2002 PY_{110}	15.6	X	8.79824	276.45405	112.99469	11.08312	0.2474089	0.17490535	3.1666543	20	—	—
230429 2002 PC_{118}	15.4	X	64.10615	92.65101	297.73182	10.33871	0.1186964	0.18408329	3.0605054	20	—	—
230430 2002 PD_{120}	17.4	X	80.02226	58.50403	249.03046	4.29250	0.1260162	0.28682539	2.2771466	20	12 27.6	20.5
230431 2002 PB_{123}	15.8	X	149.28922	73.78031	275.46525	9.41035	0.0888862	0.19299752	2.9655248	20	1 20.9	20.3
230432 2002 PC_{125}	14.5	X	47.85121	94.41697	286.23884	14.88661	0.2481997	0.18122213	3.0926343	20	—	—
230433 2002 PD_{132}	14.7	X	25.00677	239.63549	121.68128	16.53938	0.1826112	0.17392333	3.1785630	20	12 14.2	19.0
230434 2002 PV_{147}	15.7	X	176.67743	358.78877	335.54824	5.98263	0.1357941	0.19473503	2.9478586	20	2 4.7	20.3
230435 2002 PQ_{153}	17.6	X	179.88147	222.64417	120.50016	3.69295	0.1728374	0.30766264	2.1731325	20	2 7.7	20.8
230436 2002 PF_{156}	15.1	X	336.72887	102.56798	315.63555	15.18512	0.2420593	0.17464362	3.1698173	20	12 5.7	18.5
230437 2002 PO_{159}	15.7	X	61.34467	279.43795	114.58515	7.95376	0.1637947	0.18513016	3.0489568	20	—	—
230438 2002 PH_{161}	15.5	X	134.62173	169.09365	120.38449	7.89416	0.0629297	0.18254163	3.0777129	20	—	—
230439 2002 PG_{163}	15.6	X	164.89454	352.13765	313.40617	8.66189	0.0665830	0.19002407	2.9963806	20	—	—
230440 2002 PQ_{165}	15.7	X	15.99454	284.85643	141.52325	9.73499	0.0857747	0.18234995	3.0798692	20	—	—
230441 2002 QT_{51}	16.0	X	354.93873	246.67831	122.54312	1.75437	0.0930081	0.17017330	3.2250894	20	10 27.7	20.2
230442 2002 QH_{61}	15.5	X	42.60269	95.73554	297.47259	7.71267	0.0826974	0.18126650	3.0921295	20	—	—
230443 2002 QN_{86}	15.7	X	254.29429	261.45835	315.65379	9.13433	0.0517983	0.18899386	3.0072596	20	—	—
230444 2002 QJ_{91}	16.3	X	229.15608	359.84396	64.32639	6.13661	0.1595286	0.21151747	2.7897924	20	7 10.6	20.6
230445 2002 QF_{100}	15.3	X	347.38353	293.57696	142.15591	17.39888	0.2365054	0.17647405	3.1478605	20	—	—
230446 2002 QT_{102}	15.5	X	18.36307	110.98200	317.29864	9.25125	0.1036272	0.17991089	3.1076427	20	—	—
230447 2002 QF_{109}	16.1	X	29.35581	260.85845	146.39019	5.58575	0.1469340	0.18172409	3.0869366	20	—	—
230448 2002 QB_{117}	15.9	X	12.44145	0.17198	170.87512	8.94279	0.2423925	0.20240112	2.8729459	20	2 29.8	18.5
230449 2002 QZ_{135}	18.1	X	140.07501	249.96929	106.45353	5.98494	0.1943519	0.30248624	2.1978547	20	1 17.6	20.9
230450 2002 QT_{136}	15.5	X	351.83227	105.10305	288.57227	6.59690	0.0448988	0.17319674	3.1874465	20	11 18.3	19.8
230451 2002 RB_{10}	15.4	X	73.37975	229.45668	117.11248	2.06786	0.1643354	0.17895597	3.1186879	20	—	—
230452 2002 RF_{17}	16.8	X	90.67495	325.10232	350.43516	5.40129	0.1848164	0.28859239	2.2678420	20	—	—
230453 2002 RO_{80}	16.2	X	12.48992	353.29475	334.38983	4.57097	0.2593327	0.22232286	2.6986504	20	11 2.3	19.1
230454 2002 RB_{87}	17.4	X	199.05374	178.08074	178.47326	4.49589	0.1909268	0.30872284	2.1681544	20	3 13.1	20.6
230455 2002 RE_{92}	16.9	X	34.54379	91.54857	1.54141	6.31466	0.0897045	0.29674704	2.2261023	20	—	—
230456 2002 RZ_{114}	15.3	X	88.29706	79.59459	293.51613	6.35701	0.0861359	0.18443935	3.0565651	20	—	—
230457 2002 RS_{118}	15.5	X	163.44024	285.92493	96.58417	6.39608	0.0643782	0.19706177	2.9246089	20	3 18.0	19.9
230458 2002 RM_{120}	17.2	X	252.99993	174.51143	103.91642	4.89761	0.2260483	0.30982445	2.1630120	20	1 20.8	20.7
230459 2002 RF_{129}	15.3	X	9.92218	88.89934	324.48479	7.77899	0.1674895	0.17597334	3.1538289	20	—	—
230460 2002 RU_{141}	17.7	X	176.31476	82.50085	286.29332	4.12765	0.1620925	0.30727421	2.1749635	20	3 5.2	20.9
230461 2002 RW_{142}	15.7	X	167.22624	315.68759	325.58188	8.22430	0.1107385	0.18324271	3.0698577	20	—	—
230462 2002 RD_{144}	15.7	X	28.47835	122.04363	333.84696	10.65547	0.0456878	0.18603820	3.0390275	20	—	—
230463 2002 RV_{149}	15.5	X	140.23240	345.91066	310.67280	9.14770	0.2161889	0.18189558	3.0849961	20	—	—
230464 2002 RO_{151}	15.6	X	339.10644	133.95791	290.45123	8.23839	0.0712038	0.17438461	3.1729553	20	12 11.2	19.7
230465 2002 RC_{153}	15.5	X	55.53579	95.55983	327.35010	12.73795	0.0589341	0.18457329	3.0550863	20	—	—
230466 2002 RO_{172}	15.8	X	84.87989	101.62183	260.11525	3.31619	0.1395616	0.18221988	3.0813347	20	—	—
230467 2002 RR_{172}	15.1	X	47.88174	82.50537	276.28808	3.39426	0.1656944	0.17583839	3.1554424	20	—	—
230468 2002 RX_{173}	15.7	X	64.71786	104.12761	302.32202	4.63326	0.1086558	0.18476879	3.0529309	20	—	—
230469 2002 RM_{175}	17.5	X	67.20110	110.26360	303.21558	6.34590	0.2023339	0.29526405	2.2335499	20	—	—
230470 2002 RX_{223}	15.8	X	151.99373	298.51902	18.19964	4.99079	0.1220851	0.18582569	3.0413440	20	—	—
230471 2002 RH_{228}	16.6	X	348.81758	343.62817	51.52506	7.85726	0.0985611	0.28293750	2.2979595	20	12 22.6	19.0
230472 2002 RG_{241}	15.5	X	19.31509	142.00517	325.70535	9.62218	0.0594409	0.18816153	3.0161215	20	—	—
230473 2002 SG_{15}	14.9	X	115.52116	18.06803	293.66894	16.21948	0.1863976	0.17823743	3.1270641	20	—	—
230474 2002 SK_{20}	15.8	X	66.94181	220.16995	179.55735	9.29589	0.0714372	0.18249143	3.0782773	20	—	—
230475 2002 SH_{67}	14.9	X	140.30839	359.00730	319.21357	19.95426	0.2312316	0.18121585	3.0927057	20	—	—
230476 2002 TA_{3}	16.9	X	168.68157	344.51756	12.32776	3.99250	0.1786827	0.30327726	2.1940313	20	2 16.3	20.1
230477 2002 TF_{10}	14.7	X	55.43079	258.90971	105.13458	18.07635	0.1181863	0.17584799	3.1553275	20	—	—
230478 2002 TA_{14}	16.7	X	106.74986	251.36452	152.56661	5.07564	0.1379593	0.29834348	2.2181539	20	1 30.2	19.1
230479 2002 TT_{36}	16.8	X	300.52893	331.22447	28.99800	6.70619	0.1282573	0.26696546	2.3887241	20	7 30.3	19.3
230480 2002 TY_{45}	17.4	X	146.57271	337.30455	20.95603	3.88371	0.1827077	0.29865472	2.2166126	20	1 27.5	20.4

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230481 2002 TO_{51}	16.7	X	187.72056	141.85204	198.65359	5.47736	0.2146491	0.30248451	2.1978630	20	2 11.7	20.2
230482 2002 TL_{54}	16.6	X	85.60578	20.20879	45.34436	7.28607	0.0437729	0.29774727	2.2211140	20	1 16.7	19.1
230483 2002 TB_{65}	14.6	X	324.60166	167.95205	240.93407	14.02585	0.0408005	0.17070587	3.2183782	20	10 30.8	19.0
230484 2002 TJ_{73}	16.4	X	304.14449	148.39986	256.80995	6.12728	0.0932758	0.27359402	2.3499844	20	10 14.1	18.9
230485 2002 TH_{76}	17.2	X	107.54692	182.58489	243.30924	4.28702	0.1505416	0.30158059	2.2022526	20	3 2.4	19.7
230486 2002 TM_{86}	16.1	X	69.25868	190.35580	155.65424	1.09509	0.1838570	0.17660752	3.1462744	20	—	—
230487 2002 TT_{86}	15.3	X	330.75117	181.34505	11.65174	10.15887	0.0384389	0.19019870	2.9945462	20	2 12.4	19.5
230488 2002 TL_{91}	16.7	X	298.01367	166.18792	255.48563	5.60768	0.0985876	0.27449384	2.3448459	20	10 28.7	19.0
230489 2002 TG_{100}	18.1	X	153.76746	233.15524	150.42310	2.44308	0.1325530	0.30469666	2.1872122	20	3 1.4	21.1
230490 2002 TO_{128}	16.6	X	120.06649	119.01415	250.63926	5.07990	0.1835565	0.29775339	2.2210836	20	1 8.8	19.1
230491 2002 TF_{165}	16.6	X	282.94615	332.81547	94.99546	7.38619	0.2387071	0.27241354	2.3567685	20	9 24.8	18.8
230492 2002 TO_{195}	16.8	X	126.37451	341.24280	43.71638	7.56277	0.1399073	0.29810122	2.2193555	20	2 4.2	19.6
230493 2002 TP_{199}	15.1	X	78.52537	45.16474	290.59630	9.72087	0.0447515	0.17396106	3.1781034	20	12 27.3	19.6
230494 2002 TO_{214}	15.3	X	76.85680	201.34593	139.43135	9.12670	0.1981860	0.17505067	3.1649015	20	—	—
230495 2002 TE_{232}	15.0	X	105.21248	42.19358	326.55412	15.78631	0.1024299	0.18350072	3.0669795	20	1 1.3	19.5
230496 2002 TQ_{242}	17.0	X	62.75940	191.32606	232.73779	3.73020	0.1461408	0.29397882	2.2400550	20	—	—
230497 2002 TG_{258}	17.9	X	76.47842	347.16038	58.66331	1.74618	0.2062940	0.29275887	2.2462737	20	—	—
230498 2002 TJ_{268}	17.0	X	140.50103	96.08154	289.00084	4.16739	0.1698769	0.30268239	2.1969050	20	2 20.2	20.1
230499 2002 TH_{274}	17.2	X	98.38151	123.51366	282.06491	3.74860	0.1493815	0.29699944	2.2248409	20	1 22.0	19.2
230500 2002 TM_{279}	16.8	X	103.05479	73.37666	286.58481	6.08630	0.2108870	0.29285427	2.2457858	20	—	—
230501 2002 TR_{285}	16.7	X	202.85473	72.45651	251.64501	7.23022	0.1772343	0.30260502	2.1972795	20	2 2.4	20.2
230502 2002 TR_{288}	16.6	X	148.08666	28.37340	320.94868	4.99800	0.1833686	0.29706854	2.2244959	20	1 17.1	19.6
230503 2002 TC_{385}	15.6	X	50.74002	62.19679	33.63424	9.01127	0.1990543	0.18497825	3.0506258	20	2 14.4	19.1
230504 2002 UG_{2}	17.4	X	149.35827	247.06406	120.67483	7.62206	0.1824007	0.30127803	2.2037268	20	2 11.0	20.4
230505 2002 UH_{34}	15.0	X	280.79315	244.28621	218.39855	8.17352	0.0512653	0.16490750	3.2933846	20	11 7.6	19.3
230506 2002 UG_{49}	16.4	X	120.11994	69.37183	324.86504	6.90394	0.1453315	0.29612740	2.2292066	20	2 7.2	19.0
230507 2002 VQ_{9}	16.9	X	54.20864	180.66501	298.90425	4.65389	0.0932392	0.29933182	2.2132686	20	2 15.4	18.9
230508 2002 VP_{17}	17.1	X	105.19697	226.79850	164.22385	6.28153	0.2648704	0.29468477	2.2364760	20	1 31.1	19.7
230509 2002 VM_{19}	16.8	X	24.30902	108.57805	228.49573	6.35913	0.1358520	0.27569071	2.3380545	20	11 29.5	19.4
230510 2002 VW_{37}	17.0	X	92.33538	337.01898	84.13599	6.66732	0.1421139	0.29791579	2.2202764	20	2 4.9	19.2
230511 2002 VD_{38}	17.6	X	167.01777	42.84312	331.57648	4.15319	0.1451699	0.30350555	2.1929310	20	3 3.9	20.6
230512 2002 VT_{40}	17.5	X	83.55774	180.04210	248.37351	2.84044	0.0823096	0.29638969	2.2278913	20	1 20.5	19.8
230513 2002 VZ_{51}	16.6	X	68.02060	249.59448	73.03233	8.84066	0.1608500	0.28193321	2.3034134	20	—	—
230514 2002 VQ_{60}	17.5	X	148.86543	192.03684	153.93641	4.43990	0.1909544	0.29689935	2.2253409	20	1 13.4	20.5
230515 2002 VV_{94}	17.3	X	171.92005	34.39147	292.18050	4.28600	0.2227646	0.29767493	2.2214738	20	1 14.6	20.6
230516 2002 VQ_{106}	16.5	X	246.82503	305.41439	246.96065	6.41291	0.0512798	0.28566072	2.2833318	20	—	—
230517 2002 VC_{119}	16.8	X	351.93310	34.25359	329.98246	4.12848	0.2350995	0.27386695	2.3484229	20	11 30.2	18.8
230518 2002 VE_{126}	17.0	X	76.64760	100.75899	281.56157	6.03566	0.1161557	0.28859692	2.2678183	20	—	—
230519 2002 WY_{5}	16.9	X	89.56863	8.29184	335.65259	5.65648	0.1114372	0.28639063	2.2794506	20	—	—
230520 2002 WE_{8}	17.0	X	79.77406	171.12508	241.75831	6.82382	0.0858179	0.29229441	2.2486527	20	—	—
230521 2002 WM_{11}	16.3	X	26.16339	178.70959	280.75460	23.44949	0.1824305	0.28630484	2.2799059	20	—	—
230522 2002 WM_{19}	17.7	X	67.00769	7.46092	75.82054	3.23153	0.1045372	0.29458518	2.2369801	20	1 18.6	19.7
230523 2002 WN_{19}	17.4	X	130.35899	268.22590	78.97917	3.33092	0.1909932	0.29319011	2.2440705	20	—	—
230524 2002 WD_{20}	17.0	X	324.62808	315.09656	52.24848	3.10052	0.1942336	0.26978559	2.3720484	20	9 25.9	18.6
230525 2002 XW_{5}	16.9	X	48.11899	341.43700	81.87916	3.72241	0.1095643	0.28949531	2.2631240	20	—	—
230526 2002 XB_{11}	16.8	X	83.89192	313.46721	61.13368	6.84479	0.1281455	0.28770472	2.2725043	20	—	—
230527 2002 XF_{24}	16.4	X	116.63425	99.35314	280.66892	4.36565	0.2024470	0.29412374	2.2393192	20	1 22.2	18.8
230528 2002 XZ_{26}	17.2	X	58.15743	83.43878	1.17823	3.16030	0.1429435	0.29309639	2.2445489	20	1 7.2	18.9
230529 2002 XX_{28}	16.4	X	175.47304	269.52350	85.52247	5.16856	0.2101057	0.30011021	2.2094399	20	2 23.4	19.9
230530 2002 XO_{35}	15.6	X	295.99469	43.59497	104.31483	24.75747	0.2269922	0.27599541	2.3363334	20	—	—
230531 2002 XY_{66}	18.0	X	11.17541	238.43271	250.84821	1.18597	0.1861259	0.28963882	2.2623764	20	—	—
230532 2002 XE_{76}	16.3	X	70.80847	108.34717	308.15621	5.39434	0.1419575	0.28960648	2.2625449	20	—	—
230533 2002 XE_{95}	17.4	X	96.37217	354.07342	87.16897	3.90336	0.1319090	0.29930934	2.2133795	20	3 10.1	19.8
230534 2002 XK_{98}	15.4	X	36.97826	359.12843	65.15530	4.02448	0.0420672	0.17499847	3.1655308	20	—	—
230535 2002 XW_{99}	16.9	X	84.23346	354.10515	65.79021	5.97441	0.0923178	0.29338967	2.2430528	20	1 12.7	19.1
230536 2002 YX_{5}	17.3	X	48.41641	69.04357	0.49224	2.30823	0.1871211	0.28577079	2.2827455	20	—	—
230537 2002 YE_{15}	16.8	X	325.38919	15.86658	104.50013	5.08509	0.0803973	0.27878340	2.3207308	20	—	—
230538 2002 YG_{16}	16.9	X	187.85003	262.09230	71.83825	5.38815	0.2069878	0.29953192	2.2122828	20	2 7.2	20.4
230539 2002 YC_{23}	17.0	X	202.78425	185.00533	286.05746	4.19939	0.1556720	0.25956032	2.4339436	20	8 14.7	20.7
230540 2002 YX_{24}	17.1	X	58.62168	349.09364	96.49676	3.01010	0.1815025	0.29068477	2.2569461	20	1 13.3	18.4
230541 2002 YR_{25}	16.6	X	82.12087	271.55899	92.85624	7.80682	0.2066573	0.28432427	2.2904814	20	—	—
230542 2003 AC_{2}	16.7	X	25.95986	267.42115	134.70502	10.28176	0.1324772	0.27729386	2.3290343	20	—	—
230543 2003 AM_{3}	16.3	X	2.93080	194.73571	272.16522	25.49596	0.2065637	0.28061969	2.3105957	20	—	—
230544 2003 AC_{55}	17.2	X	295.02985	125.10270	34.84564	4.32038	0.1419659	0.27843739	2.3226531	20	—	—
230545 2003 AM_{61}	16.6	X	35.69346	203.03281	229.18176	5.00612	0.1372370	0.28404743	2.2919694	20	—	—
230546 2003 AQ_{69}	16.3	X	38.32521	98.25250	286.85387	6.22591	0.1322360	0.27837699	2.3229890	20	—	—
230547 2003 AY_{82}	17.2	X	23.37502	266.43353	133.00082	4.15102	0.2208912	0.27891190	2.3200180	20	—	—
230548 2003 AT_{90}	16.6	X	317.70054	77.28961	21.06580	6.82421	0.0913258	0.27363648	2.3497413	20	—	—
230549 2003 BH	20.6	X	341.37492	313.41663	119.77486	13.11458	0.3561179	0.56079127	1.4563594	20	—	—
230550 2003 BM	18.0	X	39.69219	298.13339	158.84822	1.28292	0.1730229	0.28817031	2.2700559	20	—	—
230551 2003 BD_{2}	16.7	X	82.93567	125.47763	268.21670	3.50411	0.1804412	0.28636270	2.2795988	20	—	—
230552 2003 BK_{8}	17.2	X	7.24749	288.20523	145.27352	5.94371	0.1911424	0.27983755	2.3148990	20	—	—
230553 2003 BS_{8}	17.1	X	353.31586	171.73171	258.12582	5.33933	0.1965841	0.27741020	2.3283830	20	—	—
230554 2003 BS_{10}	16.4	X	235.52609	73.55408	97.69318	5.58707	0.0655479	0.26963479	2.3729328	20	12 28.1	19.0
230555 2003 BY_{11}	16.6	X	6.23457	334.70396	127.24647	6.50404	0.1078695	0.28073970	2.3099372	20	—	—
230556 2003 BU_{15}	16.9	X	294.86893	106.78887	87.09188	4.49809	0.1688233	0.27976633	2.3152919	20	—	—
230557 2003 BC_{25}	16.3	X	275.36589	291.23145	229.91196	7.18781	0.1579856	0.27327945	2.3517874	20	—	—
230558 2003 BM_{27}	16.4	X	281.14980	233.64775	305.94623	8.81381	0.1345599	0.27596085	2.3365284	20	—	—
230559 2003 BC_{42}	17.1	X	36.53557	217.61783	201.22588	3.65742	0.2277340	0.28263678	2.2995892	20	—	—
230560 2003 BY_{43}	16.5	X	296.68343	140.87962	357.95187	7.67725	0.0847499	0.27457612	2.3443775	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230561 2003 BH_{47}	15.6	X	278.59823	292.41780	123.14726	15.82914	0.1363470	0.20453017	2.8529739	20	9 4.2	19.4
230562 2003 BW_{50}	17.6	X	344.97855	187.31545	316.31220	3.57132	0.1896123	0.28337110	2.2956148	20	—	—
230563 2003 BO_{51}	16.7	X	27.24387	61.18732	357.57839	3.31663	0.1569867	0.27946546	2.3169533	20	—	—
230564 2003 BK_{54}	16.9	X	279.39659	226.46495	250.92434	2.85364	0.0648295	0.26978144	2.3720728	20	12 19.7	19.3
230565 2003 BG_{55}	16.5	X	7.20571	65.49989	331.28504	5.33609	0.1951603	0.27435053	2.3456624	20	—	—
230566 2003 BH_{58}	17.0	X	282.09074	146.17235	49.41636	0.66318	0.1799182	0.27888306	2.3201779	20	—	—
230567 2003 BL_{58}	16.8	X	228.18141	51.66008	129.78791	4.21487	0.1444988	0.26912620	2.3759213	20	12 19.4	19.6
230568 2003 BN_{58}	17.1	X	282.62776	166.05255	325.54817	0.93022	0.1373500	0.27176513	2.3605157	20	—	—
230569 2003 BA_{60}	16.9	X	330.88517	87.26599	22.20712	6.54037	0.2025741	0.27614495	2.3354898	20	—	—
230570 2003 BQ_{64}	17.2	X	8.29307	124.23356	340.87141	2.39134	0.1582581	0.28376847	2.2934712	20	—	—
230571 2003 BS_{65}	17.6	X	294.93880	307.34940	217.32451	3.99907	0.1343045	0.27821270	2.3239035	20	—	—
230572 2003 BF_{70}	17.0	X	48.89413	348.15959	82.35929	3.89069	0.1340885	0.28432522	2.2904763	20	—	—
230573 2003 BR_{79}	17.5	X	357.57764	79.95001	34.54514	1.11765	0.1446057	0.28182127	2.3040233	20	—	—
230574 2003 BK_{81}	17.7	X	358.02082	274.91565	164.72511	2.35671	0.1982994	0.27812603	2.3243862	20	—	—
230575 2003 BN_{83}	16.7	X	259.47758	332.33192	138.10014	5.24408	0.1397108	0.26476693	2.4019293	20	10 30.1	19.4
230576 2003 BE_{88}	16.7	X	48.34229	146.46865	256.58280	6.20489	0.1506483	0.28080706	2.3095677	20	—	—
230577 2003 BZ_{88}	16.6	X	21.19991	169.48807	283.50828	7.58957	0.0995188	0.28166515	2.3048746	20	—	—
230578 2003 CA_{3}	16.8	X	2.59294	124.15067	27.97877	7.00578	0.1079761	0.28508240	2.2864188	20	1 6.4	19.2
230579 2003 CU_{3}	16.7	X	341.05314	250.77160	133.72832	11.81087	0.2003114	0.26718980	2.3873868	20	12 4.4	19.0
230580 2003 CH_{4}	16.8	X	18.53704	191.73634	229.27743	7.26632	0.1658109	0.27919094	2.3184719	20	—	—
230581 2003 CX_{5}	17.3	X	347.38024	99.02994	355.49505	4.88654	0.1873706	0.27848542	2.3223860	20	—	—
230582 2003 CQ_{9}	17.1	X	336.30365	248.52673	205.05245	4.61752	0.1938648	0.27578821	2.3375034	20	—	—
230583 2003 CU_{16}	17.7	X	8.48974	290.68699	145.00302	6.01012	0.1286279	0.27807886	2.3246491	20	—	—
230584 2003 DS_{16}	17.2	X	235.11603	333.26171	127.63959	2.08699	0.1435084	0.26012316	2.4304314	20	9 9.9	20.3
230585 2003 DY_{17}	17.0	X	193.80574	93.06575	100.54944	6.32945	0.1659734	0.26469666	2.4023544	20	11 22.2	20.5
230586 2003 DE_{19}	17.2	X	217.65509	272.25680	272.66405	1.31011	0.1784998	0.26568335	2.3964028	20	12 4.5	20.5
230587 2003 DW_{19}	16.9	X	333.28887	86.63426	329.97929	5.94223	0.1045262	0.26762956	2.3847709	20	12 23.5	19.4
230588 2003 DB_{24}	17.0	X	307.87051	341.46741	135.73026	3.18324	0.1417075	0.27239104	2.3568982	20	—	—
230589 2003 EM_{12}	16.8	X	267.05990	210.94925	324.99529	4.69877	0.1475220	0.27070176	2.3666934	20	—	—
230590 2003 EE_{13}	17.3	X	346.38245	314.26102	156.31166	2.73422	0.1188060	0.27823815	2.3237617	20	—	—
230591 2003 EO_{25}	17.1	X	250.35314	104.68458	75.29316	3.34085	0.1592406	0.26945852	2.3739675	20	—	—
230592 2003 EH_{27}	16.8	X	265.85545	119.85730	44.58616	3.20670	0.1571961	0.26983680	2.3717483	20	—	—
230593 2003 EF_{29}	16.9	X	246.98551	27.63634	147.96899	5.80348	0.1344180	0.26799429	2.3826067	20	—	—
230594 2003 EF_{33}	17.4	X	218.75143	209.75448	343.09959	1.66070	0.0943665	0.26736848	2.3863231	20	12 29.2	20.2
230595 2003 EM_{33}	17.5	X	279.40811	139.51506	21.51470	2.94771	0.1447830	0.27170710	2.3608518	20	—	—
230596 2003 EQ_{35}	17.3	X	276.30406	284.51995	244.07209	4.07901	0.1378590	0.27227797	2.3575507	20	—	—
230597 2003 ES_{45}	17.2	X	266.76036	213.00674	329.27140	4.51052	0.1652362	0.27153863	2.3618282	20	—	—
230598 2003 EH_{52}	16.7	X	279.15137	42.46822	124.81467	6.90859	0.1488582	0.27249376	2.3563059	20	—	—
230599 2003 FJ_{1}	17.7	X	108.87435	182.06786	128.59169	20.97335	0.8173591	0.30818915	2.1706568	20	1 6.5	21.5
230600 2003 FR_{7}	17.2	X	298.04173	117.35248	40.49221	3.23473	0.1599054	0.27264226	2.3554502	20	—	—
230601 2003 FQ_{12}	16.8	X	258.39009	147.24151	56.77263	5.33531	0.2288022	0.27350702	2.3504827	20	—	—
230602 2003 FW_{20}	16.6	X	190.54812	73.17879	136.70004	3.68210	0.1234744	0.26071135	2.4267745	20	12 11.9	20.0
230603 2003 FN_{22}	16.5	X	138.90503	234.30282	143.90006	6.41118	0.0507519	0.22308736	2.6924815	20	2 6.1	20.2
230604 2003 FV_{25}	15.9	X	3.13828	163.09122	178.07506	7.64769	0.1919561	0.25543537	2.4600769	20	11 6.9	18.4
230605 2003 FY_{38}	17.5	X	245.26635	224.10486	326.92949	2.82213	0.1260866	0.26895828	2.3769102	20	—	—
230606 2003 FP_{40}	16.5	X	332.19330	0.56897	127.23983	7.32495	0.0542413	0.27618678	2.3352540	20	—	—
230607 2003 FQ_{51}	16.3	X	97.53442	215.52716	36.16706	6.91019	0.0694924	0.25379872	2.4706417	20	10 25.4	19.7
230608 2003 FC_{54}	16.4	X	35.43756	218.94267	26.56376	7.32588	0.1777691	0.24062136	2.5600391	20	8 11.8	19.3
230609 2003 FP_{66}	16.8	X	175.72476	102.61338	109.44246	3.56775	0.0940030	0.26055189	2.4277646	20	12 1.4	20.2
230610 2003 FF_{73}	16.7	X	186.98780	87.56497	137.76644	2.97108	0.1697252	0.26297627	2.4128205	20	12 22.9	20.3
230611 2003 FV_{79}	16.8	X	310.11246	60.48138	49.94685	4.51288	0.1685883	0.26865336	2.3787083	20	—	—
230612 2003 FJ_{80}	16.5	X	305.84777	79.99753	83.68910	5.66277	0.1666309	0.27568661	2.3380777	20	—	—
230613 2003 FG_{81}	16.9	X	226.52086	107.52380	83.31611	6.75383	0.1205495	0.26597403	2.3946565	20	—	—
230614 2003 FX_{82}	16.9	X	329.51610	86.01981	32.55663	4.68987	0.1883227	0.27459600	2.3442643	20	—	—
230615 2003 FP_{88}	16.7	X	190.31020	127.95745	114.82861	3.28436	0.1564468	0.26554332	2.3972452	20	—	—
230616 2003 FN_{100}	16.5	X	212.63139	59.14469	144.12644	6.98339	0.0883591	0.26534066	2.3984657	20	—	—
230617 2003 FW_{104}	17.3	X	293.64357	354.86244	155.56318	6.54930	0.1742374	0.27222786	2.3578400	20	—	—
230618 2003 FW_{116}	17.0	X	324.02253	153.03231	341.90396	2.41294	0.1089580	0.27676596	2.3319949	20	—	—
230619 2003 FG_{119}	16.6	X	221.42483	172.99998	42.96304	3.13520	0.1439992	0.26716377	2.3875419	20	—	—
230620 2003 FH_{130}	17.3	X	161.70076	95.58779	151.43749	2.62907	0.1298555	0.26236030	2.4165955	20	12 27.6	20.8
230621 2003 FW_{130}	16.8	X	188.35159	229.62818	358.17631	4.17763	0.0937158	0.26511093	2.3998511	20	—	—
230622 2003 GO_{14}	16.6	X	180.94502	161.85674	74.66426	6.77632	0.0543992	0.26637309	2.3922642	20	—	—
230623 2003 GH_{27}	16.7	X	276.93104	308.71880	203.42001	3.62632	0.1561504	0.26851033	2.3795530	20	—	—
230624 2003 GU_{39}	16.8	X	258.99242	0.10100	137.48277	6.22567	0.1354874	0.26322386	2.4113072	20	12 5.6	19.6
230625 2003 HX_{14}	16.7	X	206.93824	67.59232	165.68234	3.43922	0.1757220	0.26588688	2.3951798	20	—	—
230626 2003 HY_{18}	17.2	X	247.01596	33.07119	154.83138	4.65949	0.1142034	0.26762177	2.3848172	20	—	—
230627 2003 HF_{45}	17.0	X	165.86701	137.51278	87.02489	2.48969	0.1440058	0.25769920	2.4456483	20	12 2.4	20.7
230628 2003 HB_{54}	17.1	X	192.35035	11.47102	202.91636	1.84742	0.1512391	0.26203715	2.4185820	20	12 16.5	20.7
230629 2003 HR_{55}	16.7	X	259.75185	121.48903	37.10768	5.02808	0.1753406	0.26619263	2.3933453	20	12 30.9	19.0
230630 2003 KP_{36}	15.8	X	44.59109	151.46520	85.61881	14.88337	0.1220732	0.23749106	2.5824854	20	8 4.6	19.1
230631 Justino	16.1	X	277.56693	208.88139	127.04642	5.76657	0.1497888	0.22948751	2.6421858	20	5 14.8	19.7
230632 2003 MO_{3}	15.8	X	78.54173	163.77812	104.72981	8.67587	0.2348063	0.24382831	2.5375423	20	11 12.1	19.9
230633 2003 MH_{5}	14.9	X	108.39742	64.53722	271.88659	14.65775	0.2258833	0.19618393	2.9333267	20	—	—
230634 2003 QR_{2}	16.0	X	92.84625	108.81397	282.25188	5.17572	0.0762284	0.19983574	2.8974811	20	1 3.6	19.7
230635 2003 QO_{3}	15.7	X	307.73733	311.17787	337.17628	9.32287	0.0313346	0.21754730	2.7380009	20	5 4.5	19.5
230636 2003 QG_{7}	16.5	X	228.96542	183.89982	158.11488	9.42970	0.2444387	0.21520775	2.7578085	20	3 26.1	21.2
230637 2003 QD_{24}	15.8	X	223.83704	27.66874	317.87873	10.96639	0.1243839	0.21511706	2.7585836	20	3 25.1	20.3
230638 2003 QO_{43}	15.6	X	226.97753	73.28766	347.67860	10.74526	0.1758679	0.22247301	2.6974361	20	7 4.3	20.0
230639 2003 QJ_{55}	15.4	X	234.84577	221.54329	122.86668	7.42021	0.0673781	0.21548573	2.7554363	20	4 17.3	19.5
230640 2003 QE_{89}	15.7	X	239.39840	262.08587	94.68319	4.52019	0.1101622	0.21800884	2.7341352	20	5 2.1	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230641 2003 QS_{114}	15.4	X	70.25574	304.65619	70.32001	5.79905	0.0884686	0.19110109	2.9851119	20	—	—
230642 2003 QW_{114}	16.5	X	134.22607	1.48955	320.83532	4.29822	0.0631660	0.19428547	2.9524043	20	—	—
230643 2003 RQ_{10}	15.5	X	225.96019	47.38243	297.81053	6.73535	0.2359323	0.21226050	2.7832780	20	3 22.9	20.3
230644 2003 RP_{12}	15.1	X	48.51198	76.14796	312.93253	11.82462	0.1727848	0.18943354	3.0026045	20	—	—
230645 2003 RZ_{15}	16.3	X	266.19504	83.15836	241.05702	2.37211	0.1981687	0.21820781	2.7324729	20	4 7.7	20.5
230646 2003 RF_{19}	15.9	X	167.52210	162.81146	222.08522	3.18538	0.1115855	0.20899126	2.8122287	20	3 22.7	20.1
230647 2003 SN_{11}	15.8	X	34.41954	92.24973	208.46930	2.49563	0.2699478	0.17758288	3.1347433	20	10 25.3	19.8
230648 Zikmund	16.2	X	215.29179	183.03875	166.11143	3.79254	0.1119778	0.21216904	2.7840779	20	3 27.6	20.5
230649 2003 SM_{27}	16.2	X	170.57578	91.64267	300.06410	3.02183	0.1103770	0.21074974	2.7965635	20	4 2.4	20.5
230650 2003 SC_{30}	16.0	X	247.54265	8.46234	329.01110	5.02258	0.0758184	0.21591869	2.7517516	20	4 16.4	20.0
230651 2003 SF_{30}	15.6	X	122.62082	101.11125	332.68744	3.63447	0.0901734	0.20967984	2.8060685	20	4 1.8	19.5
230652 2003 SH_{90}	15.0	X	55.39035	265.62215	19.46613	11.25977	0.1422338	0.17678021	3.1442251	20	10 13.9	19.4
230653 2003 SC_{95}	16.2	X	327.43759	1.73028	222.27279	6.15538	0.1466322	0.21080986	2.7960317	20	2 23.3	19.7
230654 2003 SD_{99}	16.4	X	331.92111	173.44121	62.40027	3.01503	0.0733563	0.20915543	2.8107569	20	3 30.6	20.0
230655 2003 SM_{101}	15.5	X	69.50027	96.36592	271.55480	9.09336	0.1179085	0.18968652	2.9999343	20	—	—
230656 Kovácspál	15.7	X	319.88538	99.30523	7.15271	10.62616	0.1409904	0.18653047	3.0336783	20	—	—
230657 2003 SQ_{115}	16.1	X	233.16186	354.54283	345.66235	4.75139	0.0669603	0.21434944	2.7651656	20	4 5.1	20.1
230658 2003 SC_{117}	15.4	X	0.35349	167.80555	242.46387	9.81413	0.1432691	0.18333823	3.0687914	20	—	—
230659 2003 SA_{119}	16.4	X	66.09624	31.56262	36.58904	1.91315	0.0153148	0.19765199	2.9187838	20	1 8.3	20.4
230660 2003 SO_{138}	15.3	X	150.82476	78.60017	265.50943	3.92348	0.1100111	0.19760410	2.9192553	20	1 18.6	19.7
230661 2003 ST_{159}	15.6	X	127.04804	114.39430	230.78167	4.00020	0.0564365	0.19755596	2.9197295	20	—	—
230662 2003 SX_{177}	15.6	X	229.18683	32.63627	331.58393	5.06275	0.1306386	0.21619292	2.7494241	20	4 25.2	19.9
230663 2003 SV_{188}	15.4	X	74.39986	308.22061	60.75543	6.53447	0.0837074	0.18987035	2.9979976	20	—	—
230664 2003 SX_{191}	15.3	X	71.10613	76.84377	267.29284	7.89465	0.1490000	0.18423389	3.0588372	20	—	—
230665 2003 SD_{198}	15.6	X	60.78722	120.36698	10.47183	7.87259	0.1511839	0.20469569	2.8514357	20	4 4.0	18.9
230666 2003 SL_{199}	15.7	X	343.41355	208.88585	243.40709	4.61568	0.2237512	0.18285909	3.0741497	20	—	—
230667 2003 SZ_{200}	15.9	X	253.96172	348.49159	305.60905	3.15089	0.0800533	0.20916866	2.8106384	20	3 1.7	20.1
230668 2003 SC_{201}	16.4	X	263.38216	305.18955	359.61853	6.25329	0.0336715	0.21288909	2.7777966	20	3 31.7	20.4
230669 2003 SJ_{222}	16.6	X	14.05654	287.64127	143.65318	1.35075	0.2603472	0.18475768	3.0530532	20	—	—
230670 2003 SU_{248}	15.8	X	349.55199	253.72820	156.77078	0.81085	0.1615910	0.18050102	3.1008656	20	12 17.9	19.2
230671 2003 SH_{253}	15.8	X	240.33037	129.11096	200.61653	4.36008	0.0727306	0.21307020	2.7762223	20	3 31.7	19.9
230672 2003 SC_{267}	16.1	X	41.80494	29.00951	43.59875	2.29877	0.1969592	0.19153192	2.9806337	20	—	—
230673 2003 ST_{269}	15.0	X	94.61277	330.10079	36.91022	13.83837	0.0945566	0.19176049	2.9782647	20	—	—
230674 2003 SV_{279}	15.8	X	321.62452	343.65770	259.84975	8.34838	0.2336281	0.21532655	2.7567941	20	2 24.3	19.3
230675 2003 SC_{286}	15.9	X	164.24172	5.38058	284.13258	6.61541	0.0597879	0.19093972	2.9867935	20	—	—
230676 2003 SP_{292}	15.7	X	112.52501	37.26088	321.76480	8.92887	0.0959600	0.19407897	2.9544982	20	—	—
230677 2003 SO_{297}	15.3	X	152.92939	106.03386	290.12227	15.16169	0.2295632	0.20630064	2.8366276	20	3 22.3	20.4
230678 2003 SK_{309}	15.0	X	72.43982	278.90654	340.74124	7.28165	0.1718336	0.17539180	3.1607965	20	10 4.4	19.7
230679 2003 SG_{325}	15.8	X	221.76993	245.14187	223.97213	4.50770	0.1347214	0.17194867	3.2028517	20	8 25.5	20.8
230680 2003 TD_{1}	15.4	X	349.86100	190.69730	246.40492	18.04792	0.2624252	0.18284800	3.0742740	20	—	—
230681 2003 TQ_{3}	16.1	X	350.21435	94.03113	335.51355	9.33278	0.2688051	0.18262871	3.0767344	20	—	—
230682 2003 TR_{20}	15.4	X	315.74385	85.02380	310.64586	7.89837	0.2111383	0.17171112	3.2058050	20	9 16.5	19.1
230683 2003 TD_{21}	15.8	X	41.88544	256.52264	131.98520	5.40354	0.2033941	0.18610516	3.0382985	20	—	—
230684 2003 TQ_{37}	16.2	X	320.47494	288.35566	314.31130	7.79157	0.1129800	0.20947399	2.8079065	20	3 12.9	19.8
230685 2003 TK_{39}	15.8	X	63.85054	174.05117	312.19758	5.18115	0.0084894	0.20592479	2.8400782	20	3 13.4	19.6
230686 2003 TC_{45}	15.7	X	14.21546	236.00156	249.00847	9.16576	0.0298587	0.19656995	2.9294852	20	1 10.4	19.8
230687 2003 TK_{51}	15.6	X	84.93068	81.08140	303.38699	8.02359	0.1661473	0.19214245	2.9743164	20	—	—
230688 2003 TH_{56}	16.7	X	83.47186	184.14054	110.02033	6.21013	0.1095731	0.23880850	2.5729787	20	12 4.0	20.5
230689 2003 UY_{15}	14.8	X	16.67165	170.70893	210.27431	17.70706	0.0754830	0.17790258	3.1309867	20	12 10.9	19.2
230690 2003 UX_{16}	15.3	X	102.30581	49.21439	311.00587	10.74246	0.1716858	0.19106745	2.9854622	20	—	—
230691 Van Vogt	16.2	X	79.54442	306.05999	36.07588	0.42757	0.0660514	0.18424669	3.0586955	20	—	—
230692 2003 UG_{35}	15.9	X	349.96476	199.68727	127.67949	6.39719	0.1331565	0.23015681	2.6370609	20	9 8.5	18.6
230693 2003 UF_{49}	15.3	X	0.93699	314.88501	80.07282	3.23851	0.2198652	0.17861966	3.1226013	20	12 23.8	18.8
230694 2003 US_{55}	15.1	X	339.02366	53.23272	32.00487	15.99251	0.2128715	0.17897701	3.1184435	20	—	—
230695 2003 UZ_{57}	15.8	X	41.90201	107.63529	249.55118	8.74947	0.1181539	0.18175168	3.0866242	20	12 21.3	20.1
230696 2003 UG_{60}	15.2	X	340.13034	142.97490	296.01737	10.96680	0.1999388	0.18083222	3.0970782	20	—	—
230697 2003 UT_{64}	15.2	X	22.56025	304.88412	86.46267	16.08680	0.2620838	0.18212246	3.0824335	20	—	—
230698 2003 UB_{72}	15.9	X	194.17714	239.47374	101.05038	6.90099	0.0606671	0.20357477	2.8618931	20	2 27.8	20.2
230699 2003 UO_{77}	15.4	X	49.10656	144.12574	255.61327	9.41958	0.1133108	0.18743356	3.0239259	20	—	—
230700 2003 UB_{78}	14.7	X	7.83309	104.90917	305.66218	6.28300	0.1745771	0.18173709	3.0867894	20	—	—
230701 2003 UP_{79}	15.1	X	314.33167	112.10659	313.97889	15.44492	0.0873211	0.17758031	3.1347736	20	11 1.2	19.5
230702 2003 UC_{93}	15.9	X	333.50867	32.00618	104.53364	21.22661	0.2057968	0.18289185	3.0737826	20	—	—
230703 2003 UJ_{100}	15.3	X	95.78992	241.12463	93.56036	8.84720	0.1906610	0.18540075	3.0459895	20	—	—
230704 2003 UX_{104}	15.9	X	204.13099	16.51605	257.01362	1.42628	0.0069772	0.19295186	2.9659927	20	—	—
230705 2003 UK_{120}	17.2	X	43.97483	327.15274	14.23632	2.17071	0.1384585	0.23892388	2.5721503	20	12 21.4	20.7
230706 2003 UQ_{130}	15.4	X	314.15003	171.32237	284.18124	16.58413	0.1802533	0.18004442	3.1061060	20	12 12.2	18.9
230707 2003 UW_{132}	15.4	X	29.86453	69.28473	314.08360	4.56884	0.1461492	0.18011507	3.1052937	20	—	—
230708 2003 UX_{133}	15.1	X	53.14016	61.36941	282.81205	9.09908	0.1738278	0.18155943	3.0888028	20	12 26.6	19.7
230709 2003 UK_{134}	15.5	X	68.73553	11.34052	349.82421	6.32137	0.1558179	0.18580347	3.0415865	20	—	—
230710 2003 UL_{138}	15.4	X	348.80741	300.41159	79.03454	6.07095	0.1624413	0.17422629	3.1748771	20	11 6.0	19.1
230711 2003 US_{141}	16.0	X	40.50850	306.00061	95.97697	4.42051	0.1952874	0.18796736	3.0181982	20	—	—
230712 2003 UJ_{147}	15.5	X	17.22973	10.05679	70.06893	15.02075	0.2234997	0.18465294	3.0542077	20	—	—
230713 2003 UY_{150}	16.1	X	16.94691	261.83414	160.82022	3.13126	0.1645915	0.18517629	3.0484503	20	—	—
230714 2003 UY_{152}	16.1	X	70.93594	106.44219	245.01895	2.98053	0.2498952	0.18493436	3.0511084	20	—	—
230715 2003 UC_{154}	16.0	X	5.15346	312.97037	54.54182	0.11556	0.1835616	0.17490927	3.1666070	20	11 19.8	19.6
230716 2003 UO_{168}	15.2	X	71.23378	146.99334	246.19418	5.98462	0.2074960	0.18925008	3.0045447	20	—	—
230717 2003 UG_{186}	15.6	X	11.85845	52.19719	60.19179	9.73322	0.0590854	0.19198973	2.9758934	20	—	—
230718 2003 UX_{187}	15.3	X	49.87702	142.93585	250.03139	8.28836	0.1492000	0.18590006	3.0405328	20	—	—
230719 2003 UF_{189}	15.0	X	30.23007	102.55504	267.57642	3.76649	0.1415539	0.18017467	3.1046089	20	12 25.4	19.2
230720 2003 UW_{192}	15.7	X	37.08163	9.97874	316.85918	4.18092	0.1418143	0.17926549	3.1150971	20	11 9.9	19.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230721 2003 UA_{199}	15.8	X	54.42668	159.59196	227.01145	5.70669	0.2745897	0.18729339	3.0254345	20	—	—
230722 2003 UD_{202}	15.1	X	325.33552	243.17625	175.67659	8.02249	0.2431079	0.17495830	3.1660154	20	11 13.1	18.2
230723 2003 UO_{203}	16.1	X	23.40494	187.40941	234.39636	3.23952	0.1307450	0.18531714	3.0469055	20	—	—
230724 2003 UO_{246}	15.2	X	40.15080	334.63049	66.98092	9.28498	0.2013514	0.18438664	3.0571477	20	—	—
230725 2003 UN_{247}	15.1	X	273.86449	123.94816	54.35585	11.84174	0.0249428	0.18777402	3.0202696	20	—	—
230726 2003 US_{266}	14.9	X	61.92066	255.86855	52.11170	15.59308	0.0645348	0.17388320	3.1790520	20	11 8.4	19.3
230727 2003 UJ_{279}	15.3	X	55.06308	348.49269	50.97483	10.08496	0.0804981	0.18993016	2.9973681	20	—	—
230728 2003 UE_{316}	16.7	X	30.56835	304.75432	84.16801	0.96772	0.2235960	0.18209529	3.0827401	20	—	—
230729 2003 US_{316}	16.0	X	324.72953	71.31139	30.70369	3.47582	0.1602730	0.17805079	3.1292490	20	—	—
230730 2003 UM_{320}	15.4	X	131.62740	17.87101	284.26890	8.30778	0.0925500	0.18639769	3.0351188	20	—	—
230731 2003 UO_{328}	15.6	X	243.19329	119.04244	327.89210	10.09043	0.1014457	0.17221393	3.1995620	20	8 26.8	20.3
230732 2003 VJ_{2}	14.6	X	61.48588	56.57105	267.47164	22.28607	0.3284218	0.18053076	3.1005251	20	12 27.2	19.6
230733 2003 VC_{4}	15.6	X	352.83813	176.30171	261.35469	8.33542	0.1721243	0.18108057	3.0942458	20	—	—
230734 2003 WF_{1}	15.9	X	39.05247	339.84878	78.50703	2.57586	0.2069997	0.18606747	3.0387088	20	—	—
230735 2003 WO_{1}	15.9	X	359.54223	182.20496	253.48698	3.14767	0.1519492	0.18148102	3.0896924	20	—	—
230736 Jalyhome	15.6	X	62.96315	314.09260	110.13491	11.06330	0.0818529	0.19032487	2.9932226	20	1 6.5	19.4
230737 2003 WX_{7}	16.1	X	346.99269	251.76069	234.98719	1.36369	0.1882529	0.18442363	3.0567388	20	—	—
230738 2003 WO_{10}	15.7	X	59.93007	107.20062	315.84039	6.27986	0.0409541	0.18999049	2.9967336	20	—	—
230739 2003 WU_{11}	15.9	X	340.35725	100.27468	293.76284	7.62603	0.1446055	0.17293674	3.1906405	20	11 4.4	19.8
230740 2003 WZ_{19}	15.0	X	297.52770	44.65848	29.57107	14.91499	0.2025708	0.17125407	3.2115063	20	10 11.5	18.7
230741 2003 WF_{27}	15.4	X	311.48176	231.44305	264.64715	8.78094	0.0250333	0.18409086	3.0604214	20	—	—
230742 2003 WO_{27}	15.5	X	329.89905	232.18327	245.78988	15.41417	0.1772653	0.18202813	3.0834983	20	—	—
230743 2003 WM_{30}	14.9	X	281.62660	100.86055	45.10007	16.72226	0.2006117	0.17708279	3.1406423	20	12 13.4	18.9
230744 2003 WW_{34}	15.4	X	2.07934	210.92462	259.28021	8.17009	0.0767298	0.18635129	3.0356226	20	—	—
230745 2003 WM_{57}	15.7	X	358.98816	130.54214	260.86128	3.03282	0.0872276	0.17547811	3.1597599	20	11 30.2	19.7
230746 2003 WA_{66}	15.5	X	65.09759	97.31233	308.32651	7.12934	0.1722407	0.18814945	3.0162506	20	—	—
230747 2003 WM_{75}	15.4	X	24.16786	265.95492	112.71297	11.58242	0.2151826	0.17777190	3.1325209	20	—	—
230748 2003 WF_{102}	15.4	X	328.64973	188.93096	201.65003	3.07540	0.1445627	0.17048035	3.2212159	20	10 12.3	19.1
230749 2003 WU_{111}	15.7	X	48.58522	11.72138	357.50358	3.24474	0.1406195	0.18067723	3.0988492	20	—	—
230750 2003 WM_{118}	15.2	X	319.52447	231.22095	271.73001	9.31019	0.1347768	0.18178836	3.0862091	20	—	—
230751 2003 WP_{132}	15.4	X	324.72551	232.89211	260.93069	9.21861	0.2167488	0.18054795	3.1003282	20	—	—
230752 2003 WP_{134}	15.7	X	302.11498	29.36346	57.18863	3.09056	0.1847263	0.17265369	3.1941267	20	11 5.2	19.4
230753 2003 WA_{159}	15.5	X	291.55997	71.04559	58.96193	2.31494	0.1317413	0.17795704	3.1303479	20	12 20.1	19.2
230754 2003 WW_{163}	16.6	X	315.08775	25.92882	66.70778	2.76559	0.2124133	0.17502487	3.1652125	20	12 6.0	19.9
230755 2003 WT_{169}	16.1	X	41.93876	260.67675	173.19467	9.72938	0.1261328	0.24672631	2.5176329	20	—	—
230756 2003 WV_{169}	15.5	X	30.48512	260.73059	114.81659	17.97760	0.1757426	0.17862142	3.1225808	20	—	—
230757 2003 WK_{170}	15.1	X	352.12725	21.61774	104.75927	18.08599	0.1334783	0.18705838	3.0279679	20	—	—
230758 2003 WP_{171}	15.6	X	33.76351	273.77561	104.04550	9.91242	0.2337752	0.18085787	3.0967853	20	—	—
230759 2003 WE_{183}	15.3	X	129.87158	217.92271	90.23205	7.67841	0.2236793	0.18546385	3.0452985	20	—	—
230760 2003 WG_{189}	15.2	X	10.90771	269.21010	123.01183	17.34574	0.2674360	0.18041900	3.1018053	20	—	—
230761 2003 WV_{189}	15.2	X	330.40701	301.90341	128.97692	17.90150	0.2037989	0.17654817	3.1469794	20	12 12.8	18.8
230762 2003 WP_{192}	14.2	X	20.36023	260.81201	99.51929	28.36745	0.2053889	0.16987071	3.2289182	20	12 10.8	18.5
230763 2003 XX_{1}	14.7	X	3.20893	313.56040	67.22338	25.68636	0.2071156	0.17569013	3.1572173	20	12 5.4	18.4
230764 2003 XW_{12}	16.5	X	201.79119	4.83151	108.89026	30.35073	0.0927308	0.33701445	2.0450489	20	9 11.3	19.7
230765 Alfbester	15.2	X	358.25361	194.75673	268.42502	8.19445	0.1279352	0.18200728	3.0837338	20	—	—
230766 2003 XQ_{19}	15.6	X	29.68039	126.33765	280.21921	9.97227	0.1171071	0.18102297	3.0949022	20	—	—
230767 2003 XH_{22}	16.3	X	230.80682	208.82582	299.82149	19.25672	0.0657566	0.34851037	1.9998262	20	12 14.0	18.6
230768 2003 XL_{35}	15.4	X	312.66339	203.02657	285.84606	11.61356	0.2032374	0.17830027	3.1263293	20	—	—
230769 2003 YU_{10}	15.5	X	39.98809	38.86095	3.62297	4.82352	0.1569811	0.18097554	3.0954429	20	—	—
230770 2003 YV_{10}	15.2	X	264.47758	128.43385	23.93876	5.22735	0.1255852	0.17218062	3.1999746	20	12 7.4	19.5
230771 2003 YY_{23}	14.9	X	250.49590	94.59555	72.29887	23.53632	0.1316295	0.17177254	3.2050407	20	12 6.5	19.5
230772 2003 YU_{25}	15.7	X	333.92699	118.48506	283.15201	19.17731	0.2588881	0.17105102	3.2140474	20	10 30.2	19.2
230773 2003 YW_{56}	15.1	X	318.66112	218.71113	259.76634	8.87103	0.0941626	0.17752595	3.1354134	20	—	—
230774 2003 YC_{63}	15.0	X	341.53685	340.43019	122.28798	7.22432	0.1787663	0.17737321	3.1372132	20	—	—
230775 2003 YX_{71}	15.1	X	300.84538	78.68035	79.56416	14.84199	0.1880005	0.17902908	3.1178388	20	—	—
230776 2003 YG_{74}	14.9	X	308.45159	254.50537	267.96953	13.46165	0.1023885	0.18212030	3.0824578	20	—	—
230777 2003 YX_{104}	15.2	X	346.02860	322.14359	116.88856	6.21930	0.1605586	0.17536446	3.1611250	20	—	—
230778 2003 YW_{118}	15.2	X	21.42906	91.38482	301.81710	14.81434	0.2554311	0.17692004	3.1425681	20	—	—
230779 2003 YG_{127}	15.4	X	39.48257	89.41612	315.21638	10.86544	0.1266156	0.18113014	3.0936813	20	—	—
230780 2003 YA_{139}	15.1	X	256.84683	46.41924	126.63634	9.03126	0.0902378	0.17090827	3.2158368	20	12 27.7	19.5
230781 2003 YE_{139}	15.2	X	28.28508	78.51754	297.89331	12.77047	0.2332329	0.18042641	3.1017204	20	—	—
230782 2003 YC_{145}	14.8	X	271.59880	200.93004	328.00130	16.74768	0.1113026	0.17253509	3.1955903	20	—	—
230783 2003 YK_{145}	14.8	X	266.79786	225.21338	319.84563	25.75127	0.1732254	0.17266243	3.1940189	20	—	—
230784 2003 YZ_{150}	15.1	X	310.13874	116.56346	313.55744	30.65881	0.2542594	0.16800840	3.2527353	20	9 27.2	19.5
230785 2003 YC_{152}	15.1	X	134.63497	351.85730	328.30650	15.21882	0.0812117	0.17900401	3.1181299	20	—	—
230786 2003 YO_{167}	16.0	X	36.87048	109.33075	314.76674	9.93653	0.2723190	0.18700096	3.0285878	20	—	—
230787 2004 BE_{13}	14.8	X	74.55490	141.12704	124.16213	16.35446	0.0644571	0.15526392	3.4283805	20	10 5.3	19.9
230788 2004 BV_{47}	15.4	X	6.66018	300.99453	115.39450	11.00848	0.0555497	0.17270441	3.1935013	20	—	—
230789 2004 BT_{81}	14.8	X	262.66811	214.36905	314.29930	21.24841	0.0804834	0.17098551	3.2148683	20	—	—
230790 2004 BT_{98}	16.6	X	157.04750	140.71007	104.79212	4.13033	0.2038475	0.27842417	2.3227266	20	12 20.3	20.2
230791 2004 BC_{107}	15.0	X	348.16127	124.34681	309.28429	17.99775	0.1051463	0.17181438	3.2045204	20	—	—
230792 2004 BL_{114}	16.5	X	211.70522	249.64815	310.98056	5.94049	0.0784499	0.28412407	2.2915572	20	—	—
230793 2004 BQ_{139}	15.4	X	256.93653	120.89979	120.23553	7.29546	0.1031391	0.18056286	3.1001575	20	1 4.1	20.0
230794 2004 BT_{148}	15.4	X	68.81591	270.94710	78.35333	3.91978	0.0589125	0.17103927	3.2141946	20	—	—
230795 2004 DW_{17}	15.4	X	355.62708	279.96291	169.12414	22.30759	0.2118618	0.17407987	3.1766572	20	—	—
230796 2004 EJ	16.5	X	200.73653	207.89163	325.21252	6.88290	0.0542092	0.27822518	2.3238340	20	11 15.6	19.7
230797 2004 ED_{13}	16.7	X	226.15919	220.47177	30.08961	5.81403	0.1181973	0.29254610	2.2473627	20	—	—
230798 2004 EF_{31}	17.2	X	322.90367	319.29226	235.38880	3.82446	0.1017612	0.30018874	2.2090546	20	1 1.8	19.9
230799 2004 EV_{59}	16.7	X	40.57360	185.53135	310.92852	4.59592	0.1489627	0.30423644	2.1894174	20	2 17.9	18.2
230800 2004 EO_{62}	15.6	X	323.42612	326.51438	168.50108	5.63167	0.1633925	0.17024928	3.2241299	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230801 2004 ES_{79}	16.6	X	318.71392	321.31219	242.61328	5.57314	0.1077658	0.29834212	2.2181607	20	1 7.8	19.2
230802 2004 FR_{13}	16.6	X	101.56500	358.79016	284.20403	5.88965	0.1093085	0.27600926	2.3362552	20	12 15.7	20.1
230803 2004 FO_{41}	16.1	X	95.41823	327.33562	30.79424	8.78276	0.1630325	0.28717478	2.2752992	20	—	—
230804 2004 FA_{68}	16.8	X	294.24751	178.52002	70.42180	6.46140	0.0529786	0.30087066	2.2057155	20	2 17.9	19.5
230805 2004 FX_{104}	16.6	X	214.61346	70.89055	88.46429	7.08936	0.1476517	0.27516493	2.3410319	20	11 6.0	19.8
230806 2004 FU_{116}	16.9	X	285.77751	142.23700	108.96383	6.65197	0.1580328	0.29855737	2.2170944	20	1 24.7	19.8
230807 2004 FO_{136}	16.7	X	181.65002	192.57923	59.89863	11.11304	0.1716170	0.28111698	2.3078700	20	—	—
230808 2004 GH_{21}	16.7	X	49.28744	342.11450	117.04289	6.38842	0.0804823	0.29635546	2.2280628	20	1 7.9	18.8
230809 2004 GF_{79}	16.9	X	40.53428	273.26523	277.29519	5.29705	0.0923787	0.31097981	2.1576513	20	5 11.1	18.8
230810 2004 HJ_{12}	16.7	X	208.93646	246.41898	275.35401	7.73244	0.0939915	0.27299609	2.3534145	20	11 4.4	20.0
230811 2004 HG_{16}	17.0	X	286.08356	333.60062	225.78166	4.18271	0.1100650	0.29003695	2.2603056	20	—	—
230812 2004 HN_{34}	16.7	X	266.38025	120.73539	115.73095	5.80252	0.0917119	0.29183075	2.2510338	20	—	—
230813 2004 HX_{37}	16.6	X	192.11165	216.94626	94.04076	4.78291	0.2304048	0.23057257	2.6338899	20	1 20.5	21.2
230814 2004 JK_{14}	17.2	X	319.74142	73.00423	140.58515	5.47968	0.0935290	0.29704731	2.2246019	20	1 25.6	19.6
230815 2004 JD_{23}	17.2	X	267.46081	312.33782	264.20405	2.59366	0.1140611	0.28940462	2.2635968	20	—	—
230816 2004 JN_{30}	16.9	X	264.28553	102.21940	107.85621	3.50431	0.0988743	0.28658238	2.2784337	20	—	—
230817 2004 JC_{31}	17.4	X	346.74087	112.92412	78.39698	5.74966	0.1032427	0.29846112	2.2175710	20	2 4.8	19.6
230818 2004 JZ_{33}	17.2	X	232.87277	166.34828	99.39115	6.18592	0.1341077	0.28918654	2.2647347	20	—	—
230819 2004 LZ_{6}	16.8	X	101.79803	191.36883	78.41944	7.32605	0.1511763	0.26637200	2.3922707	20	11 29.9	20.4
230820 2004 LY_{7}	15.8	X	295.52878	253.67076	86.99444	13.00814	0.2049292	0.24330760	2.5411615	20	6 5.7	18.8
230821 2004 LT_{11}	16.4	X	49.12355	63.03162	260.92080	8.58467	0.1207111	0.26633183	2.3925113	20	12 9.3	19.4
230822 2004 LO_{13}	15.6	X	300.43428	8.99309	246.60330	11.73688	0.1305773	0.23645822	2.5900001	20	2 22.7	19.3
230823 2004 MR_{4}	16.3	X	307.97049	278.46870	66.16624	9.33585	0.1974785	0.24591417	2.5231729	20	7 4.4	18.9
230824 2004 NO_{12}	16.7	X	225.84882	339.47837	345.08189	6.24392	0.2238271	0.22734959	2.6587241	20	3 1.8	21.3
230825 2004 NM_{13}	17.2	X	217.09438	122.06987	132.43946	5.96915	0.1388740	0.28039936	2.3118059	20	—	—
230826 2004 NX_{13}	16.9	X	49.07935	199.67918	137.37779	5.70032	0.1264940	0.26236083	2.4165923	20	12 26.0	20.3
230827 2004 NM_{14}	15.9	X	166.02092	168.52661	131.56934	13.73319	0.1531731	0.21484749	2.7608906	20	—	—
230828 2004 OE_{9}	17.0	X	46.37848	359.86925	342.59263	1.16372	0.1787901	0.26135609	2.4227818	20	—	—
230829 2004 PB_{21}	17.2	X	281.26730	91.30521	153.37612	6.84986	0.1392552	0.28785503	2.2717132	20	1 13.8	20.3
230830 2004 PE_{32}	16.6	X	145.25228	299.97724	345.40616	6.23511	0.1326028	0.26896825	2.3768514	20	—	—
230831 2004 PV_{38}	16.3	X	152.28952	224.62734	180.13548	7.99357	0.2797211	0.22138479	2.7062684	20	4 12.5	21.0
230832 2004 PB_{40}	15.2	X	191.00529	33.43946	329.59017	17.94064	0.2388999	0.22328602	2.6908843	20	3 14.4	20.1
230833 2004 PY_{44}	16.4	X	231.77791	288.12253	128.07500	11.18317	0.2192711	0.23758536	2.5818020	20	6 27.9	20.6
230834 2004 PD_{47}	16.2	X	249.53131	303.78695	74.45650	4.68480	0.2029800	0.23761741	2.5815698	20	5 29.1	20.2
230835 2004 PP_{49}	17.0	X	191.16288	294.23408	345.52681	5.41754	0.2298016	0.27800171	2.3250791	20	—	—
230836 2004 PO_{84}	15.7	X	73.78680	34.05788	289.83571	8.92962	0.0721540	0.19942066	2.9015003	20	12 16.7	20.0
230837 2004 PO_{88}	16.0	X	205.44617	67.59772	329.26355	11.66713	0.2084120	0.22865930	2.6485619	20	5 7.0	20.7
230838 2004 PU_{89}	16.4	X	205.87777	180.74415	178.21931	3.41435	0.2860582	0.22429489	2.6828093	20	3 26.0	21.2
230839 2004 PE_{103}	16.0	X	164.21076	43.48550	342.56027	16.39363	0.2377932	0.21888374	2.7268445	20	3 22.9	20.8
230840 2004 QV_{3}	16.8	X	190.56010	350.67494	279.33854	6.23473	0.1028958	0.27409148	2.3471402	20	—	—
230841 2004 QP_{6}	16.4	X	193.27213	49.61119	253.94603	2.71894	0.1642527	0.21917863	2.7243982	20	1 11.6	20.9
230842 2004 QD_{10}	15.8	X	170.06853	245.68440	87.50914	6.95251	0.0827801	0.21626791	2.7487885	20	1 22.1	19.8
230843 2004 QG_{25}	16.5	X	115.28343	145.75157	285.99449	12.70625	0.1786272	0.21861618	2.7290690	20	3 26.4	20.8
230844 2004 RR	15.6	X	285.21634	344.62143	359.41343	15.22097	0.0814319	0.23989567	2.5651993	20	6 12.9	19.2
230845 2004 RP_{20}	17.3	X	151.15345	346.32172	291.62718	1.48633	0.1953913	0.26834351	2.3805391	20	—	—
230846 2004 RZ_{36}	17.0	X	157.74986	275.26877	331.79309	1.63983	0.1810505	0.26486005	2.4013663	20	12 21.5	20.8
230847 2004 RQ_{37}	16.7	X	295.11934	349.52541	23.16818	4.17530	0.1765643	0.24335845	2.5408075	20	7 27.9	19.5
230848 2004 RF_{42}	16.7	X	119.82604	329.27250	116.74637	0.86102	0.1114227	0.21951432	2.7216199	20	4 17.9	20.6
230849 2004 RD_{53}	17.2	X	294.71303	211.46478	140.76164	3.20717	0.1828303	0.23930422	2.5694242	20	6 24.0	20.1
230850 2004 RV_{70}	16.4	X	112.10158	299.08279	315.48391	5.51943	0.0797637	0.25618299	2.4552885	20	11 13.7	20.0
230851 2004 RN_{80}	17.1	X	208.42276	246.76368	13.37735	2.43568	0.1827173	0.27484921	2.3428243	20	—	—
230852 2004 RU_{81}	17.1	X	247.99546	277.45590	108.30529	0.77659	0.1408013	0.23554397	2.5966977	20	6 13.5	20.7
230853 2004 RZ_{83}	16.4	X	229.20769	73.29564	302.14830	16.56308	0.2186797	0.23206793	2.6225632	20	4 28.3	21.2
230854 2004 RQ_{101}	16.4	X	209.80041	79.60068	342.59472	12.62196	0.1741067	0.23334177	2.6130099	20	6 17.8	20.9
230855 2004 RQ_{102}	16.2	X	148.38234	251.51342	330.77614	6.02355	0.0696123	0.25520777	2.4615394	20	11 11.9	19.8
230856 2004 RB_{105}	16.2	X	164.97225	109.31339	301.46229	7.46911	0.1914078	0.22316810	2.6918321	20	4 21.3	20.8
230857 2004 RU_{127}	17.0	X	193.36422	231.36862	186.02045	1.74124	0.0931070	0.23224863	2.6212027	20	5 29.7	21.0
230858 2004 RN_{156}	15.5	X	303.95215	173.76506	345.42048	24.79251	0.1889364	0.26831496	2.3807079	20	—	—
230859 2004 RG_{162}	15.7	X	214.40361	66.84835	299.21640	11.18808	0.1234998	0.22705223	2.6610449	20	4 8.8	20.1
230860 2004 RZ_{165}	16.9	X	270.94804	197.81416	18.34012	3.25339	0.2002007	0.28023274	2.3127222	20	—	—
230861 2004 RJ_{177}	15.9	X	174.38341	131.78905	314.82364	12.57634	0.1502433	0.23193749	2.6235464	20	6 16.7	20.3
230862 2004 RA_{178}	16.6	X	20.82027	48.88976	279.44345	7.86960	0.1419404	0.25147215	2.4858569	20	11 4.5	19.7
230863 2004 RS_{182}	17.0	X	249.02428	308.30928	308.69947	5.60850	0.2163024	0.28105663	2.3082003	20	—	—
230864 2004 RR_{183}	16.9	X	242.16280	62.19226	300.52729	3.54043	0.2425727	0.23099389	2.6306863	20	4 27.1	21.3
230865 2004 RN_{188}	16.4	X	217.67221	162.51443	227.91126	8.24303	0.1831188	0.22964445	2.6409818	20	5 15.5	20.6
230866 2004 RM_{189}	15.4	X	162.09712	112.88517	327.41535	12.50865	0.1424307	0.22666545	2.6640712	20	5 24.2	19.9
230867 2004 RE_{193}	15.2	X	12.30275	97.08205	277.10161	7.44716	0.0874488	0.19031320	2.9933450	20	12 1.2	19.1
230868 2004 RT_{193}	16.1	X	114.72258	97.86917	341.10701	7.72705	0.2283321	0.21709797	2.7417775	20	4 13.8	20.4
230869 2004 RJ_{196}	15.6	X	141.90195	234.43441	215.00134	14.02077	0.0239798	0.22714123	2.6603497	20	5 9.2	19.3
230870 2004 RW_{198}	16.9	X	15.41519	19.45202	327.34148	3.39719	0.0803498	0.25283706	2.4769024	20	11 13.9	19.9
230871 2004 RA_{199}	16.0	X	140.68096	145.09356	259.71513	6.99835	0.3066125	0.21536821	2.7564386	20	4 1.6	20.9
230872 2004 RG_{199}	16.1	X	173.03070	64.01035	317.83579	8.08533	0.2512596	0.21851246	2.7299325	20	3 26.0	21.0
230873 2004 RE_{208}	15.4	X	195.22218	55.97294	266.90606	13.42634	0.1066654	0.21798377	2.7343448	20	1 30.9	19.9
230874 2004 RM_{210}	16.4	X	240.95278	83.68926	291.74179	13.05596	0.1446738	0.23323566	2.6138024	20	5 20.5	20.6
230875 2004 RJ_{213}	15.8	X	307.44307	76.30078	278.90255	13.03017	0.1364668	0.24047476	2.5610795	20	7 25.6	18.7
230876 2004 RV_{214}	16.2	X	233.90094	70.66350	305.66147	10.78316	0.0907293	0.23130737	2.6283089	20	5 18.7	20.3
230877 2004 RC_{219}	15.9	X	226.64160	75.17167	306.58401	10.91205	0.1491657	0.22835910	2.6508826	20	5 12.0	20.2
230878 2004 RY_{244}	17.4	X	176.59870	65.62341	145.23672	3.69272	0.0420195	0.25768857	2.4457156	20	12 5.1	20.7
230879 2004 RV_{253}	16.5	X	174.46165	350.59484	262.40337	9.45043	0.2064013	0.26670599	2.3902732	20	—	—
230880 2004 RB_{255}	16.0	X	152.03929	273.44255	128.59324	13.76864	0.1561566	0.22027915	2.7153164	20	4 6.1	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230881 2004 RC_{303}	16.7	X	151.05597	146.87142	315.63917	11.35508	0.2377244	0.22923889	2.6440958	20	6 18.1	21.4
230882 2004 RQ_{306}	16.2	X	284.09182	255.51219	98.51239	6.21387	0.2456087	0.23396860	2.6083408	20	5 31.9	19.5
230883 2004 RK_{317}	16.3	X	171.78245	48.42673	334.67254	4.88763	0.0691878	0.22129586	2.7069934	20	3 21.6	20.4
230884 2004 RB_{320}	16.4	X	297.96084	92.48507	278.03127	8.68202	0.0519363	0.24248247	2.5469230	20	8 12.0	19.6
230885 2004 RF_{338}	16.4	X	287.42920	275.03057	23.18504	3.23279	0.0506092	0.22579843	2.6708865	20	4 20.4	20.0
230886 2004 RZ_{340}	16.2	X	263.46366	242.12530	123.72706	16.27416	0.1674913	0.23529796	2.5985073	20	6 5.2	20.1
230887 2004 RW_{345}	15.7	X	169.65216	285.87831	135.61934	14.87396	0.2176725	0.22357047	2.6886014	20	5 17.2	20.6
230888 2004 SD_{10}	16.4	X	219.32393	292.70698	99.28680	7.28917	0.1929383	0.23256469	2.6188273	20	5 19.9	20.8
230889 2004 SG_{26}	14.8	X	67.14940	235.33497	275.66218	26.35627	0.1122364	0.22361953	2.6882082	20	4 28.6	18.8
230890 2004 SP_{31}	16.5	X	199.92975	53.39820	352.78063	3.95822	0.1307049	0.22916178	2.6446889	20	5 19.6	20.7
230891 2004 SL_{32}	15.8	X	119.71002	29.19897	36.57020	8.39402	0.2968539	0.21476318	2.7616131	20	4 13.4	20.2
230892 2004 SV_{52}	16.3	X	50.05801	41.75256	287.64118	10.61699	0.2833276	0.25825370	2.4421463	20	—	—
230893 2004 TH_{2}	16.2	X	205.38419	18.32974	31.00972	4.99082	0.0790591	0.23037924	2.6353633	20	6 1.1	20.0
230894 2004 TV_{4}	15.4	X	332.19233	275.41020	34.70186	5.42839	0.1846089	0.17323738	3.1869480	20	6 28.6	19.1
230895 2004 TF_{12}	16.0	X	165.86274	307.39416	74.43432	5.35818	0.1263081	0.21851618	2.7299015	20	3 21.3	20.3
230896 2004 TN_{18}	15.3	X	250.57138	252.52165	101.66866	13.80372	0.2217439	0.22771061	2.6559131	20	5 3.3	19.7
230897 2004 TB_{23}	15.9	X	126.77189	36.54178	235.45515	3.61586	0.0333268	0.19423405	2.9529253	20	12 9.1	20.0
230898 2004 TK_{34}	17.1	X	178.13506	237.43603	232.71500	1.18071	0.0694618	0.23399559	2.6081402	20	7 21.4	20.7
230899 2004 TT_{46}	16.8	X	217.60458	210.01115	359.37384	1.26843	0.1338743	0.25821054	2.4424184	20	—	—
230900 2004 TT_{59}	16.2	X	189.38518	291.78496	26.96545	8.55727	0.2041486	0.21544307	2.7558000	20	1 30.6	21.0
230901 2004 TL_{63}	16.5	X	186.56818	26.89994	20.30337	6.14854	0.1258147	0.22511138	2.6763182	20	5 7.6	20.7
230902 2004 TW_{67}	15.9	X	146.83000	227.02805	151.58946	10.29314	0.1489764	0.21429869	2.7656021	20	2 27.3	20.1
230903 2004 TW_{69}	16.0	X	177.20181	167.66564	200.73746	5.50596	0.0335311	0.22020878	2.7158949	20	3 7.6	19.9
230904 2004 TG_{75}	16.8	X	313.18389	303.57325	43.54621	1.98718	0.1781831	0.23800383	2.5787748	20	7 21.6	19.2
230905 2004 TW_{88}	16.7	X	150.92381	99.45807	56.43341	2.73316	0.0853349	0.23885283	2.5726604	20	8 21.9	20.4
230906 2004 TX_{89}	16.9	X	185.79357	256.36217	146.70175	5.20661	0.1831246	0.22565524	2.6720163	20	5 4.8	21.3
230907 2004 TJ_{100}	16.3	X	217.78449	317.09154	109.38427	5.61034	0.1140641	0.23328285	2.6134499	20	7 5.9	20.2
230908 2004 TJ_{172}	16.2	X	218.95133	39.98153	316.87242	9.08704	0.1248539	0.22281598	2.6946674	20	4 3.4	20.5
230909 2004 TU_{175}	16.2	X	282.10071	265.47670	69.62699	4.23128	0.1203766	0.23134688	2.6280096	20	5 22.5	19.4
230910 2004 TE_{194}	16.8	X	166.22065	124.98094	346.68393	3.86776	0.1779476	0.22894186	2.6463823	20	7 11.2	21.1
230911 2004 TR_{201}	16.5	X	117.91079	157.95184	342.37326	2.69998	0.0875133	0.22422060	2.6834019	20	6 22.5	20.3
230912 2004 TB_{223}	15.8	X	271.46294	241.26777	144.76773	15.61534	0.1414532	0.23442354	2.6049651	20	7 13.3	19.3
230913 2004 TA_{243}	15.6	X	233.33366	233.69756	95.91444	15.23562	0.1906694	0.22343507	2.6896875	20	3 23.1	20.3
230914 2004 TD_{260}	16.5	X	239.45720	165.93299	200.46757	2.23648	0.1511089	0.22794578	2.6540861	20	5 8.9	20.6
230915 2004 TN_{261}	16.7	X	160.05707	259.46386	184.07286	4.22860	0.2285253	0.22403935	2.6848489	20	6 1.7	21.3
230916 2004 TA_{276}	16.7	X	110.15223	46.05558	41.90167	2.94936	0.1661054	0.21475828	2.7616551	20	4 16.4	20.7
230917 2004 TR_{276}	16.7	X	121.02533	237.83683	192.59234	2.36509	0.1716205	0.21457503	2.7632272	20	4 6.5	20.8
230918 2004 TK_{300}	15.6	X	29.01014	23.78915	259.54988	12.79816	0.0989142	0.23902168	2.5714486	20	8 31.9	19.0
230919 2004 TR_{300}	15.7	X	168.97090	74.18201	300.17415	7.05505	0.1174354	0.21548244	2.7554643	20	3 9.0	20.1
230920 2004 TZ_{323}	16.2	X	129.36368	33.28573	66.47434	3.77823	0.0438997	0.22058333	2.7128197	20	5 9.1	20.0
230921 2004 TA_{349}	16.0	X	252.81251	43.52458	69.04028	6.72171	0.0809896	0.18113990	3.0935701	20	10 16.6	20.4
230922 2004 TL_{355}	16.1	X	149.48067	331.95535	81.76549	9.43988	0.1679114	0.22006341	2.7170909	20	4 17.5	20.5
230923 2004 TL_{357}	15.9	X	301.83706	218.31064	123.32141	15.63303	0.1399695	0.23448988	2.6044738	20	6 28.2	19.1
230924 2004 TZ_{361}	15.5	X	305.26740	223.35085	234.84890	11.08980	0.0972579	0.19198874	2.9759038	20	12 8.3	19.1
230925 2004 TP_{366}	16.8	X	166.49412	76.94683	341.94936	3.89592	0.0916077	0.22141560	2.7060173	20	5 1.0	20.8
230926 2004 UW_{8}	16.5	X	257.56295	76.45133	315.72229	4.34808	0.1292802	0.23470142	2.6029085	20	7 5.9	20.0
230927 2004 VJ_{20}	16.0	X	187.65415	311.25636	65.57950	6.79082	0.0673134	0.21914427	2.7246829	20	4 4.8	20.0
230928 2004 VD_{54}	15.9	X	161.32254	72.34117	309.48086	10.50625	0.0562860	0.21595522	2.7514413	20	3 5.3	20.0
230929 2004 VJ_{55}	15.9	X	112.89670	23.04952	83.38475	9.88551	0.0965253	0.21727165	2.7403162	20	5 6.9	19.8
230930 2004 VL_{72}	16.0	X	210.20339	143.01363	233.78151	5.19580	0.0468914	0.22072595	2.7116510	20	4 27.2	19.9
230931 2004 VF_{73}	15.4	X	251.81319	309.02691	191.75066	14.41273	0.2928067	0.18127674	3.0920131	20	10 19.3	19.9
230932 2004 VQ_{78}	15.9	X	33.47225	18.16846	243.69936	8.57433	0.0572278	0.23607611	2.5927940	20	8 5.9	19.3
230933 2004 VQ_{83}	15.9	X	74.44609	116.59011	66.90702	7.22520	0.2162460	0.22189790	2.7020949	20	7 15.6	19.7
230934 2004 WX_{6}	14.9	X	9.29135	317.88566	55.80070	13.36890	0.2110005	0.18563748	3.0433993	20	12 10.3	18.5
230935 2004 WC_{8}	16.2	X	99.28885	204.33014	217.46777	3.40158	0.0947183	0.20890839	2.8129723	20	2 18.9	20.1
230936 2004 XC_{2}	15.8	X	143.67276	108.03511	321.42685	8.29033	0.1513287	0.21562753	2.7542282	20	4 22.3	20.2
230937 2004 XD_{2}	15.9	X	88.28591	185.98423	293.79942	8.24597	0.2334977	0.21215853	2.7841698	20	5 8.2	20.0
230938 2004 XR_{7}	15.0	X	251.07581	40.43516	64.77125	6.28816	0.1106951	0.17639955	3.1487467	20	9 30.8	19.5
230939 2004 XH_{10}	16.4	X	166.62440	265.31410	107.27489	3.16308	0.2435627	0.21411436	2.7671891	20	3 15.3	21.1
230940 2004 XP_{17}	15.6	X	45.42967	349.19658	80.45430	3.29090	0.0805871	0.19605368	2.9346257	20	—	—
230941 2004 XN_{22}	15.7	X	120.22271	308.43733	128.39889	2.67807	0.0460520	0.21364340	2.7712544	20	3 30.3	19.6
230942 2004 XX_{29}	16.0	X	139.54387	341.45905	86.79335	3.91920	0.1280751	0.21544878	2.7557513	20	4 20.2	20.2
230943 2004 XM_{33}	16.0	X	2.56110	151.28188	226.38642	0.46162	0.1925511	0.18425638	3.0585884	20	12 2.6	19.5
230944 2004 XA_{35}	16.4	X	156.18949	133.21265	296.42813	3.84563	0.1085847	0.21500699	2.7595250	20	5 4.9	20.6
230945 2004 XQ_{36}	16.3	X	84.55990	253.20673	285.79241	2.47818	0.0390543	0.22289406	2.6940380	20	6 24.9	19.8
230946 2004 XT_{45}	16.0	X	234.54869	228.99442	102.10056	8.15256	0.2800213	0.21856660	2.7294817	20	3 17.6	20.9
230947 2004 XY_{54}	15.5	X	53.01839	82.31373	85.58318	16.96982	0.2190361	0.21120827	2.7925145	20	5 26.1	18.8
230948 2004 XG_{58}	15.6	X	93.33223	96.66895	304.24186	11.52223	0.0971898	0.19905581	2.9050446	20	1 19.9	19.5
230949 2004 XY_{73}	16.3	X	130.76747	144.44167	265.04129	7.86961	0.2067416	0.21233976	2.7825854	20	3 21.2	20.9
230950 2004 XW_{80}	14.8	X	66.60695	286.30958	85.93017	14.75877	0.2882139	0.19480046	2.9471986	20	—	—
230951 2004 XJ_{82}	15.2	X	165.14678	267.33346	87.51561	11.89442	0.3539806	0.21287468	2.7779220	20	3 1.8	20.5
230952 2004 XM_{87}	15.9	X	286.92100	256.71319	79.91982	3.70655	0.0754731	0.22759592	2.6568054	20	6 7.4	19.3
230953 2004 XD_{94}	15.8	X	235.88475	104.59785	275.70684	5.07794	0.0269257	0.22072789	2.7116350	20	6 5.1	19.5
230954 2004 XV_{98}	15.9	X	153.32969	73.16292	311.51838	3.09044	0.2223343	0.20950208	2.8076555	20	3 15.6	20.6
230955 2004 XX_{111}	16.4	X	240.38974	90.20156	281.74337	5.23095	0.0500126	0.22336679	2.6902356	20	5 27.5	20.2
230956 2004 XT_{112}	16.4	X	134.11898	118.93345	292.34753	3.19150	0.0663962	0.21090531	2.7951881	20	3 14.7	20.4
230957 2004 XW_{120}	15.4	X	142.23328	318.12138	111.17510	6.61127	0.0797413	0.21343644	2.7730456	20	4 21.7	19.5
230958 2004 XP_{128}	16.0	X	122.73318	236.10274	233.96174	4.39303	0.1307041	0.21671616	2.7449969	20	5 24.1	20.0
230959 2004 XF_{135}	15.7	X	43.22301	172.20702	344.58766	3.83152	0.0078532	0.21161566	2.7889293	20	3 26.4	19.4
230960 2004 XY_{162}	16.0	X	231.80260	70.47341	298.61485	11.16342	0.2081792	0.22410542	2.6843211	20	4 25.5	20.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
230961 2004 XC_{174}	15.1	X	93.80012	228.51566	95.99959	13.16753	0.0955702	0.18578815	3.0417537	20	—	—
230962 2004 XJ_{177}	15.1	X	106.98042	223.65920	97.58373	17.62326	0.0618205	0.18555419	3.0443099	20	—	—
230963 2004 XH_{182}	16.4	X	141.46570	246.36978	162.73716	7.39183	0.2412291	0.21473772	2.7618314	20	4 7.7	21.0
230964 2004 XK_{191}	15.3	X	241.77976	316.15034	300.56117	5.13779	0.1237982	0.18752655	3.0229262	20	1 5.3	20.0
230965 2004 XA_{192}	4.2	X	1.55059	132.26515	328.56615	38.17674	0.2423493	0.00307752	46.8096634	20	1 15.7	19.8
230966 2004 YR_{15}	16.1	X	236.00609	285.07369	323.72644	3.23584	0.1728773	0.19003383	2.9962780	20	—	—
230967 2004 YA_{19}	14.9	X	329.16079	279.95498	114.08668	16.99984	0.0687844	0.17374719	3.1807108	20	10 28.3	19.4
230968 2004 YL_{20}	15.7	X	31.22566	308.31066	115.01067	4.71368	0.2144575	0.19175098	2.9783632	20	—	—
230969 2004 YJ_{21}	15.8	X	346.69509	0.70778	119.02114	11.88384	0.0549005	0.18924514	3.0045970	20	—	—
230970 2004 YA_{31}	14.7	X	135.26118	183.31559	88.00837	13.70252	0.1292880	0.18081569	3.0972670	20	12 16.5	19.7
230971 2005 AF_{2}	15.0	X	200.10390	129.17546	79.32911	17.66432	0.1888275	0.17791482	3.1308431	20	11 29.5	20.0
230972 2005 AG_{2}	17.2	X	205.57318	168.79250	96.45312	23.44973	0.0625906	0.38245662	1.8796685	20	—	—
230973 2005 AM_{5}	15.7	X	115.08034	91.58824	319.01175	13.66380	0.2829933	0.20636788	2.8360114	20	3 14.6	20.3
230974 2005 AZ_{14}	16.2	X	114.95014	147.84859	323.81584	2.43678	0.0465705	0.21224555	2.7834087	20	5 5.8	20.1
230975 Rogerfederer	15.7	X	71.72619	50.69414	105.83047	10.00955	0.0509172	0.21617017	2.7496170	20	5 13.1	19.4
230976 2005 AG_{28}	16.1	X	136.22489	101.01847	344.96930	9.93396	0.2331606	0.21272860	2.7791936	20	5 12.3	20.9
230977 2005 AW_{32}	16.8	X	277.51142	248.13426	298.62843	15.77967	0.0533029	0.37995344	1.8879151	20	—	—
230978 2005 AR_{41}	15.3	X	31.27070	110.94787	270.64937	9.81695	0.1153948	0.18304591	3.0720577	20	—	—
230979 2005 AT_{42}	16.5	X	41.18301	52.78773	157.00602	11.20436	0.6108249	0.20311533	2.8662072	20	9 4.4	20.7
230980 2005 AS_{47}	16.3	X	123.44198	81.05116	117.77572	9.41278	0.2030013	0.22449650	2.6812028	20	9 24.1	20.8
230981 2005 AA_{62}	15.0	X	359.69349	77.85802	318.73762	21.23207	0.1072658	0.17775577	3.1327104	20	12 10.4	19.4
230982 2005 AH_{76}	16.3	X	343.12048	117.09846	75.52594	3.51534	0.0451845	0.19980897	2.8977399	20	2 23.9	20.1
230983 2005 AQ_{77}	15.7	X	359.95602	342.13272	106.05007	7.38421	0.1490422	0.18661674	3.0327432	20	—	—
230984 2005 AP_{78}	15.7	X	147.46026	202.00672	102.77259	7.33880	0.0491796	0.18477057	3.0529113	20	—	—
230985 2005 BY_{19}	15.3	X	259.95159	119.69827	81.77255	8.02472	0.0789042	0.18619723	3.0372968	20	—	—
230986 2005 BF_{28}	17.3	X	199.16596	173.11961	100.62494	24.07149	0.0330726	0.38184769	1.8816663	20	—	—
230987 2005 BD_{48}	14.8	X	227.99713	105.43571	127.19902	22.22727	0.0912724	0.18303162	3.0722176	20	—	—
230988 2005 CJ_{4}	15.1	X	312.34306	299.95495	135.62306	17.06840	0.2039168	0.17639394	3.1488135	20	11 15.0	18.9
230989 2005 CR_{10}	15.4	X	349.21629	97.34685	346.31180	9.99389	0.0929687	0.18135217	3.0911557	20	—	—
230990 2005 CP_{13}	15.2	X	45.33843	259.64228	113.40013	10.73583	0.0773927	0.17923698	3.1154274	20	—	—
230991 2005 CO_{14}	16.2	X	292.34733	72.19606	113.07259	4.31228	0.0416310	0.18871754	3.0101944	20	—	—
230992 2005 CX_{14}	15.6	X	356.22381	6.99646	130.10668	10.26007	0.0679235	0.19214495	2.9742906	20	1 1.1	19.6
230993 2005 CK_{23}	15.6	X	299.91212	304.49434	254.36988	9.20662	0.0644052	0.19297627	2.9657426	20	1 3.2	19.7
230994 2005 CW_{42}	15.4	X	240.21712	266.42621	265.73973	8.51697	0.1771550	0.17776913	3.1325535	20	11 25.9	20.1
230995 2005 CX_{42}	15.2	X	310.48005	359.31258	140.87207	12.99725	0.0703121	0.18436271	3.0574122	20	—	—
230996 2005 CV_{56}	15.7	X	33.15324	126.30165	334.89239	6.07735	0.0539137	0.19284310	2.9671077	20	1 9.4	19.6
230997 2005 CS_{62}	16.2	X	321.56470	51.02864	89.93776	3.32465	0.1602486	0.18538777	3.0461316	20	—	—
230998 2005 CM_{65}	15.3	X	282.69234	61.98615	133.36907	11.94683	0.0293163	0.18593847	3.0401141	20	—	—
230999 2005 CX_{65}	15.6	X	37.30584	298.36203	141.10506	11.39934	0.0812568	0.18762053	3.0219166	20	—	—
231000 2005 CU_{70}	15.7	X	341.67084	223.36918	280.73165	8.57424	0.0247746	0.19268662	2.9687139	20	—	—
231001 2005 EV_{5}	15.4	X	346.91196	84.85561	60.13018	2.56485	0.0736213	0.18698386	3.0287724	20	—	—
231002 2005 ED_{10}	15.5	X	286.85474	223.89603	345.50223	6.38860	0.0559582	0.18695009	3.0291371	20	1 4.3	19.8
231003 2005 EJ_{15}	15.9	X	352.28937	330.37620	153.77440	2.80433	0.0395562	0.18588861	3.0406576	20	—	—
231004 2005 EK_{21}	15.3	X	244.95908	143.69051	59.21928	3.73019	0.0186376	0.17973504	3.1096693	20	—	—
231005 2005 EU_{22}	15.9	X	3.73650	277.39007	166.69166	16.44403	0.2097175	0.18454452	3.0554038	20	—	—
231006 2005 EE_{24}	15.3	X	346.51653	348.14219	150.67481	13.50774	0.1534972	0.18788514	3.0190787	20	—	—
231007 2005 EU_{33}	15.5	X	320.40210	90.29166	123.59287	12.25162	0.3849074	0.18778571	3.0201443	20	1 2.8	19.7
231008 2005 EP_{36}	15.2	X	294.21205	232.57435	284.81628	11.56774	0.1047449	0.18150799	3.0893863	20	—	—
231009 2005 ES_{40}	15.5	X	331.66857	288.72227	135.15387	2.33840	0.1454516	0.17285484	3.1916482	20	11 30.9	19.1
231010 2005 ET_{41}	16.0	X	336.91306	176.90089	319.29216	0.75176	0.2563845	0.18525939	3.0475387	20	—	—
231011 2005 EJ_{47}	16.3	X	299.50948	304.13348	277.32815	0.80336	0.2093010	0.18864418	3.0109747	20	1 11.9	20.8
231012 2005 ED_{61}	16.6	X	259.32193	287.47159	319.26014	6.99181	0.1339597	0.25176675	2.4839173	20	—	—
231013 2005 EV_{64}	16.0	X	291.91775	68.69195	64.88958	1.84682	0.1346007	0.17735210	3.1374621	20	12 24.7	19.9
231014 2005 EF_{68}	14.8	X	0.76411	117.24577	327.28802	12.01231	0.0227466	0.17821040	3.1273803	20	—	—
231015 2005 EN_{72}	15.2	X	264.68263	84.05839	111.84018	12.94931	0.0374481	0.18269485	3.0759918	20	—	—
231016 2005 EQ_{72}	15.2	X	304.69878	150.50321	32.92660	11.33334	0.0484289	0.18779608	3.0200331	20	—	—
231017 2005 EH_{80}	15.3	X	301.15865	74.12120	55.08172	10.35820	0.1916856	0.17718064	3.1394859	20	12 29.3	18.8
231018 2005 ER_{85}	15.2	X	339.83721	16.16002	139.87952	10.76797	0.0422827	0.18874561	3.0098960	20	1 5.5	19.3
231019 2005 EP_{86}	15.1	X	270.85814	117.81128	31.80997	6.70679	0.1206178	0.17344385	3.1844184	20	12 13.6	19.4
231020 2005 EW_{100}	14.9	X	287.92650	10.24261	130.68297	10.37208	0.0600073	0.17467651	3.1694194	20	—	—
231021 2005 EZ_{101}	14.9	X	315.94092	1.60343	146.84779	11.20810	0.0784497	0.18052684	3.1005699	20	—	—
231022 2005 EW_{131}	15.6	X	273.48992	17.37686	159.09062	5.39371	0.1316764	0.17850477	3.1239410	20	—	—
231023 2005 EP_{138}	15.3	X	306.27212	60.04266	119.15889	7.92795	0.0624664	0.18467336	3.0539826	20	—	—
231024 2005 EM_{149}	15.2	X	307.74649	318.59485	146.79194	6.51647	0.0721381	0.17107560	3.2137395	20	12 16.7	19.5
231025 2005 EU_{152}	16.0	X	323.26213	32.12051	102.46963	2.76873	0.1413329	0.17997732	3.1068780	20	—	—
231026 2005 EN_{189}	15.5	X	309.55137	210.79988	290.98572	7.42245	0.0314018	0.18855032	3.0119739	20	—	—
231027 2005 EZ_{196}	15.6	X	298.84990	298.88801	252.92800	7.40004	0.2084681	0.18474432	3.0532005	20	—	—
231028 2005 EZ_{215}	15.4	X	90.56999	334.45780	32.29248	1.60906	0.0267159	0.17964943	3.1106572	20	—	—
231029 2005 ET_{221}	15.0	X	334.31082	91.57885	324.98464	23.61759	0.2295765	0.17420792	3.1751003	20	11 22.1	18.8
231030 2005 EQ_{223}	15.7	X	309.86762	343.10991	140.37608	2.22819	0.1462088	0.17602286	3.1532373	20	—	—
231031 2005 EM_{225}	15.0	X	331.84518	353.41192	103.31799	14.27446	0.1703358	0.18252637	3.0778844	20	—	—
231032 2005 EL_{226}	15.0	X	260.47510	138.91143	56.38564	10.68692	0.0400550	0.18119860	3.0929020	20	—	—
231033 2005 EH_{238}	15.5	X	225.46735	155.77296	57.04088	2.22272	0.1533768	0.17429022	3.1741007	20	12 30.3	20.1
231034 2005 EG_{253}	15.0	X	287.36312	285.14898	264.88111	8.50334	0.1751636	0.18209867	3.0827020	20	—	—
231035 2005 EW_{253}	16.3	X	319.11525	156.71766	319.15514	4.67968	0.1237593	0.18108337	3.0942140	20	—	—
231036 2005 EY_{266}	15.5	X	272.39503	304.16368	211.23265	4.60049	0.1312961	0.17294306	3.1905627	20	12 21.7	19.7
231037 2005 ER_{275}	15.7	X	229.24702	343.89816	209.72739	4.22254	0.1298445	0.17249780	3.1960508	20	12 14.5	20.4
231038 2005 EJ_{279}	15.5	X	230.91736	107.11722	144.72392	16.62578	0.2056332	0.17854055	3.1235237	20	—	—
231039 2005 EL_{280}	16.2	X	290.20768	98.29794	72.54462	5.58943	0.1974414	0.17986275	3.1081971	20	—	—
231040 Kakaras	15.3	X	359.92529	289.22200	142.27595	15.98048	0.0348814	0.17663422	3.1459573	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231041 2005 EB_{291}	15.3	X	251.91085	24.85275	146.66962	12.10317	0.0976223	0.17221916	3.1994973	20	12 19.8	19.9
231042 2005 EF_{296}	16.0	X	101.78359	295.69249	144.54933	6.56721	0.0423679	0.20098226	2.8864513	20	3 12.4	19.9
231043 2005 FV_{6}	15.6	X	324.02111	49.51102	75.22058	10.10200	0.2752897	0.18127779	3.0920011	20	—	—
231044 2005 GG_{2}	15.1	X	273.54740	96.46796	62.80618	14.18637	0.1986957	0.17720032	3.1392534	20	12 19.2	19.0
231045 2005 GJ_{4}	15.4	X	279.83241	22.29419	157.48139	6.49294	0.0987912	0.17674562	3.1446352	20	—	—
231046 2005 GZ_{29}	15.3	X	238.15519	85.36722	99.37138	5.99229	0.1132754	0.17124894	3.2115704	20	12 15.9	20.0
231047 2005 GM_{31}	15.6	X	298.46761	68.82690	132.27135	6.51268	0.1401387	0.18461767	3.0545966	20	—	—
231048 2005 GT_{34}	14.8	X	246.50562	116.70654	124.69291	16.26529	0.2157846	0.17808959	3.1287945	20	—	—
231049 2005 GP_{43}	15.0	X	229.92211	297.53556	273.29034	8.34679	0.1318157	0.17376888	3.1804462	20	—	—
231050 2005 GH_{47}	15.7	X	213.93172	204.45803	5.90851	4.83790	0.1244050	0.17119439	3.2122526	20	12 17.8	20.5
231051 2005 GW_{60}	15.1	X	189.66374	111.43765	134.88343	9.05822	0.1076416	0.17350382	3.1836844	20	—	—
231052 2005 GV_{68}	15.0	X	253.73936	63.85434	104.44310	17.57584	0.1102111	0.17149680	3.2084754	20	12 16.8	19.6
231053 2005 GT_{119}	17.1	X	300.04080	247.28043	198.96053	21.42064	0.1123498	0.36110230	1.9530613	20	—	—
231054 2005 GN_{220}	15.0	X	230.07875	288.56445	353.70378	15.85910	0.0713030	0.18571741	3.0425260	20	1 31.6	19.8
231055 2005 GE_{222}	16.0	X	277.31973	289.51436	221.98047	4.23642	0.0401821	0.17173191	3.2055462	20	—	—
231056 2005 JG_{63}	17.0	X	12.56226	355.22312	103.52515	24.43097	0.0804323	0.37218514	1.9140944	20	—	—
231057 2005 JG_{167}	15.7	X	141.98061	47.38790	289.41201	5.02343	0.2886381	0.23421672	2.6064983	20	1 14.2	19.8
231058 2005 LJ_{34}	16.2	X	334.82795	351.92908	191.25309	1.83337	0.1399469	0.18382743	3.0633444	20	1 20.8	20.2
231059 2005 NP_{7}	17.0	X	37.65743	34.06440	295.57842	6.68546	0.1354661	0.27715546	2.3298095	20	12 6.9	20.1
231060 2005 NM_{46}	18.0	X	59.92246	158.10834	125.20879	2.19675	0.1814254	0.27310155	2.3528086	20	11 9.2	21.1
231061 2005 NF_{67}	17.1	X	164.58088	15.47533	300.28377	1.97077	0.1780022	0.29500979	2.2348331	20	—	—
231062 2005 OY_{5}	16.8	X	78.59181	5.42403	325.05044	5.97255	0.1337313	0.28151262	2.3057071	20	—	—
231063 2005 OC_{19}	17.4	X	52.41687	66.02268	300.86174	5.89068	0.2577802	0.27988361	2.3146451	20	—	—
231064 2005 OF_{19}	17.1	X	23.06795	255.62908	100.71550	3.33729	0.2511083	0.27273331	2.3549260	20	—	—
231065 2005 OG_{28}	16.9	X	79.42578	243.36080	141.17100	4.90860	0.1721397	0.28799427	2.2709809	20	—	—
231066 2005 OR_{28}	16.7	X	17.55511	123.35062	202.29497	5.74351	0.1140540	0.26843464	2.3800003	20	10 29.4	19.1
231067 2005 PD_{1}	17.2	X	64.31676	264.03011	111.07579	7.17169	0.1221731	0.28592423	2.2819287	20	—	—
231068 2005 PQ_{15}	17.4	X	157.22879	247.37605	127.98162	5.29065	0.0987845	0.30275221	2.1965672	20	2 20.8	20.3
231069 2005 QN_{9}	16.8	X	71.74699	354.95823	2.13979	4.87610	0.1823463	0.28189797	2.3036054	20	—	—
231070 2005 QN_{19}	17.4	X	67.56990	67.25161	330.03644	4.57228	0.1739397	0.28783862	2.2717995	20	—	—
231071 2005 QG_{22}	17.0	X	15.16640	269.39338	118.62691	2.84450	0.2077990	0.27597795	2.3364319	20	—	—
231072 2005 QK_{23}	16.9	X	351.71676	6.45696	35.78802	2.78895	0.2138870	0.27213498	2.3583765	20	—	—
231073 2005 QD_{37}	16.9	X	34.24418	223.99315	200.49996	5.90981	0.1492489	0.28420818	2.2911050	20	—	—
231074 2005 QQ_{46}	16.2	X	285.25232	187.69791	164.27959	6.54563	0.1444709	0.25556449	2.4592483	20	6 16.3	19.3
231075 2005 QD_{50}	16.7	X	49.98893	335.16695	51.34979	6.08303	0.1675481	0.28132092	2.3067544	20	—	—
231076 2005 QJ_{50}	16.5	X	118.74275	261.64767	137.60160	7.05172	0.1891917	0.29583613	2.2306695	20	2 19.1	19.2
231077 2005 QS_{50}	16.8	X	95.07843	338.24888	28.23323	3.63787	0.2304080	0.28674298	2.2775828	20	—	—
231078 2005 QS_{51}	16.7	X	72.56377	308.51574	313.77957	5.82468	0.1680353	0.27002513	2.3706454	20	10 20.9	20.1
231079 2005 QY_{70}	17.1	X	90.04295	55.51242	341.07995	4.52350	0.1150155	0.29151266	2.2526710	20	—	—
231080 2005 QN_{80}	17.1	X	319.75366	253.00664	80.62512	2.60099	0.1769377	0.25910324	2.4368052	20	7 16.1	19.2
231081 2005 QT_{82}	17.4	X	230.19348	100.42419	207.38113	2.78021	0.2142951	0.30562502	2.1827807	20	2 6.8	21.0
231082 2005 QK_{96}	17.0	X	48.25291	315.55074	1.34654	6.20488	0.2227061	0.27404143	2.3474260	20	12 13.3	20.4
231083 2005 QW_{113}	17.1	X	22.71473	278.49588	115.21834	3.07097	0.2305273	0.27623201	2.3349991	20	—	—
231084 2005 QJ_{165}	16.5	X	222.96328	202.55956	98.35529	5.25872	0.1505059	0.23371308	2.6102416	20	2 2.8	20.6
231085 2005 QX_{170}	16.6	X	175.97479	14.79652	288.79329	5.90740	0.1268715	0.29323645	2.2438341	20	—	—
231086 2005 QA_{178}	16.6	X	1.64273	294.68829	120.10294	7.34484	0.0950033	0.27589594	2.3368949	20	—	—
231087 2005 QO_{180}	17.9	X	191.83571	168.10602	154.87791	2.40895	0.0973303	0.29879603	2.2159137	20	1 20.9	21.0
231088 2005 RM_{8}	17.6	X	22.42197	77.25195	335.79757	2.99536	0.2248212	0.27939677	2.3173331	20	—	—
231089 2005 RZ_{10}	17.1	X	203.08936	45.61332	268.23638	4.63540	0.1320316	0.29933474	2.2132542	20	1 21.7	20.4
231090 2005 RJ_{11}	16.5	X	109.55527	160.66932	224.70626	4.58446	0.1672589	0.29156012	2.2524265	20	1 13.9	18.9
231091 2005 RQ_{14}	17.8	X	315.77314	215.51732	181.28423	1.11001	0.1885662	0.26600177	2.3944900	20	10 20.9	19.4
231092 2005 RB_{29}	16.9	X	120.17811	223.50093	104.58970	5.08458	0.1901730	0.28702997	2.2760644	20	—	—
231093 2005 RL_{31}	16.8	X	50.98126	261.37995	69.53189	4.84880	0.2533308	0.27370517	2.3493481	20	—	—
231094 2005 SO_{10}	16.5	X	62.77469	291.03907	85.64803	6.41446	0.1852536	0.28292951	2.2980028	20	—	—
231095 2005 SK_{22}	17.0	X	190.59912	276.96440	42.37243	4.06912	0.1911454	0.29826420	2.2185470	20	1 21.2	20.5
231096 2005 SN_{23}	16.9	X	2.39172	357.41918	49.02477	4.63846	0.1869757	0.27488230	2.3426363	20	—	—
231097 2005 SB_{25}	17.2	X	116.77911	263.55636	143.91826	6.52493	0.1335407	0.29652543	2.2272113	20	2 18.9	19.8
231098 2005 SW_{26}	17.7	X	191.39118	242.73244	103.52522	2.33772	0.1449888	0.30164208	2.2019533	20	2 22.5	20.8
231099 2005 SQ_{31}	16.8	X	319.22868	156.94543	36.79778	7.02137	0.1316650	0.29355491	2.2422110	20	—	—
231100 2005 SF_{41}	17.6	X	341.82245	306.65485	120.58375	0.46659	0.1915994	0.27295823	2.3536321	20	—	—
231101 2005 SV_{50}	16.3	X	198.08746	104.90568	198.14923	5.62308	0.0785067	0.22562555	2.6722507	20	1 11.6	20.4
231102 2005 SZ_{69}	17.3	X	49.11650	343.99394	85.09497	3.14186	0.1718974	0.28494576	2.2871496	20	—	—
231103 2005 SM_{70}	17.4	X	27.75450	18.48514	28.93441	2.41092	0.2368372	0.27975267	2.3153673	20	—	—
231104 2005 SF_{101}	16.6	X	233.50406	173.34067	351.10320	6.21322	0.0936847	0.27116111	2.3640198	20	12 11.5	19.5
231105 2005 SA_{102}	16.5	X	341.44385	119.55713	343.01969	6.48698	0.0619162	0.27989185	2.3145996	20	—	—
231106 2005 SZ_{116}	17.6	X	12.60604	92.92363	281.73773	1.74144	0.1959896	0.27332332	2.3515358	20	—	—
231107 2005 SO_{117}	16.9	X	96.27591	292.38316	72.44455	4.44880	0.1740266	0.28663402	2.2781600	20	—	—
231108 2005 SR_{124}	16.9	X	274.10705	86.89849	2.63970	6.40599	0.0849373	0.26482344	2.4015876	20	10 27.5	19.8
231109 2005 SB_{131}	17.1	X	58.91781	13.48808	20.93193	3.25142	0.2187825	0.28155509	2.3054752	20	—	—
231110 2005 SV_{132}	17.7	X	335.75200	94.18087	338.35767	0.88444	0.1537694	0.27106278	2.3645915	20	—	—
231111 2005 SD_{144}	16.9	X	346.30289	318.95539	132.68618	3.46435	0.0980245	0.27928183	2.3179688	20	—	—
231112 2005 SU_{147}	17.7	X	354.49867	245.34120	176.25186	2.25626	0.1388933	0.27383252	2.3486197	20	—	—
231113 2005 SA_{153}	16.6	X	176.12503	198.60903	36.19725	7.15042	0.0804481	0.27430181	2.3459402	20	—	—
231114 2005 SU_{156}	17.5	X	359.53171	79.59317	36.75775	2.81693	0.0927490	0.28519045	2.2858413	20	—	—
231115 2005 ST_{161}	17.3	X	242.61199	202.16056	233.26463	1.71867	0.1672025	0.25628373	2.4546450	20	8 10.2	20.5
231116 2005 SQ_{164}	16.5	X	303.99994	310.84888	108.95475	6.86648	0.1111849	0.26356127	2.4092488	20	11 6.7	19.0
231117 2005 SX_{187}	16.8	X	122.29723	151.54480	208.34222	5.28056	0.1716570	0.28921156	2.2646041	20	—	—
231118 2005 SY_{191}	17.1	X	343.36209	255.58444	189.28229	2.12622	0.2271254	0.27362876	2.3497855	20	—	—
231119 2005 SN_{193}	16.7	X	124.16494	107.50924	224.62334	2.55246	0.2080856	0.28529260	2.2852955	20	—	—
231120 2005 SF_{209}	16.8	X	206.78489	165.01959	221.05284	14.54601	0.1251503	0.24336544	2.5407588	20	5 1.8	20.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231121 2005 SA_{213}	16.7	X	353.42867	237.82291	203.84044	6.85246	0.2317665	0.27491980	2.3424232	20	—	—
231122 2005 SY_{214}	16.2	X	110.18978	137.96124	235.46732	7.43474	0.1871392	0.28889505	2.2662578	20	1 2.1	18.7
231123 2005 SD_{216}	17.2	X	355.04565	210.23988	154.20761	1.39574	0.1992843	0.26638433	2.3921970	20	11 29.1	19.3
231124 2005 SH_{231}	17.4	X	0.98371	170.44679	236.53178	0.59077	0.1779535	0.27197574	2.3592969	20	—	—
231125 2005 SP_{232}	17.3	X	329.56964	220.20006	220.55838	1.54015	0.1940480	0.27025009	2.3693296	20	—	—
231126 2005 SC_{234}	17.4	X	127.75644	140.99891	177.72588	1.89543	0.1486112	0.28550224	2.2841768	20	—	—
231127 2005 SX_{245}	17.7	X	337.24289	91.49006	16.76955	2.22070	0.0826014	0.27922184	2.3183008	20	—	—
231128 2005 SM_{251}	17.1	X	15.37388	241.40105	105.47971	3.08199	0.2601922	0.27076412	2.3663300	20	12 18.7	19.7
231129 2005 SN_{259}	17.2	X	38.24870	304.79699	97.52623	4.78256	0.2544846	0.28133255	2.3066909	20	—	—
231130 2005 SG_{264}	17.0	X	343.79588	268.52046	166.91794	2.92147	0.1619404	0.27581558	2.3373487	20	—	—
231131 2005 SM_{278}	17.1	X	175.31088	228.72577	11.42813	2.95469	0.0357086	0.27580324	2.3374185	20	—	—
231132 2005 TV_{13}	17.1	X	327.64206	168.26236	254.65560	1.89836	0.2320148	0.26856520	2.3792289	20	—	—
231133 2005 TW_{40}	16.4	X	247.68940	46.70861	113.95862	6.40581	0.0733347	0.25917295	2.4363682	20	12 26.9	19.4
231134 2005 TU_{45}	17.1	X	135.01426	76.91879	120.15194	28.54483	0.4955640	0.35541150	1.9738542	20	10 22.9	21.9
231135 2005 TE_{48}	17.6	X	47.09841	18.03712	8.70837	2.76464	0.1107716	0.27906509	2.3191689	20	—	—
231136 2005 TV_{71}	16.9	X	180.17706	243.66116	78.42498	4.94259	0.2078320	0.29841652	2.2177920	20	1 15.8	20.3
231137 2005 TM_{77}	17.3	X	321.33101	255.37361	119.03547	3.06672	0.2190877	0.26119836	2.4237571	20	9 25.9	18.9
231138 2005 TA_{104}	16.8	X	189.57362	46.72240	285.65524	5.21709	0.1915425	0.29791804	2.2202652	20	2 3.5	20.2
231139 2005 TF_{131}	17.6	X	308.64804	29.02942	64.07075	3.28076	0.1713333	0.26890248	2.3772390	20	—	—
231140 2005 TJ_{135}	16.6	X	134.93085	199.76971	249.52501	4.06670	0.2075673	0.22699152	2.6615194	20	5 16.4	20.9
231141 2005 TJ_{141}	17.6	X	9.62036	14.43020	137.59599	2.79783	0.0859308	0.29391777	2.2403652	20	1 17.5	19.7
231142 2005 TC_{151}	17.5	X	322.63466	73.11782	122.89493	3.57608	0.0815305	0.29512225	2.2342653	20	1 7.8	20.0
231143 2005 TP_{159}	16.8	X	307.60916	267.28864	238.91376	4.90390	0.1353141	0.27984599	2.3148525	20	—	—
231144 2005 UE_{4}	16.8	X	109.41682	289.65583	55.31507	5.22242	0.1611824	0.28335174	2.2957194	20	—	—
231145 2005 UF_{4}	17.1	X	359.94049	253.72194	142.24882	1.86172	0.1910536	0.26995662	2.3710465	20	—	—
231146 2005 UT_{14}	16.7	X	42.59496	2.80025	39.43691	4.03692	0.1625514	0.27892993	2.3199180	20	—	—
231147 2005 UH_{15}	17.9	X	248.33880	336.73160	169.19705	1.30055	0.1236893	0.26706342	2.3881400	20	12 2.7	20.6
231148 2005 UX_{15}	17.3	X	299.20911	110.77569	54.34282	5.22762	0.0832466	0.28106980	2.3081282	20	—	—
231149 2005 UV_{16}	16.8	X	2.17847	53.72628	45.85781	6.18472	0.0577731	0.28159400	2.3052629	20	—	—
231150 2005 UJ_{29}	17.2	X	321.49306	17.64853	35.94372	2.66879	0.2223967	0.26440503	2.4041206	20	12 2.1	18.7
231151 2005 UR_{41}	16.8	X	26.92597	278.03790	122.36977	2.79197	0.1974682	0.27576729	2.3376216	20	—	—
231152 2005 UM_{44}	17.2	X	182.62508	188.14001	91.58382	2.82428	0.0272649	0.28197279	2.3031979	20	—	—
231153 2005 UK_{48}	16.9	X	355.61235	49.97967	20.17955	6.90180	0.0850507	0.27354312	2.3502759	20	—	—
231154 2005 UQ_{48}	17.2	X	241.86492	195.73383	312.07451	2.59232	0.0693972	0.26587395	2.3952574	20	12 3.3	20.1
231155 2005 UF_{51}	16.6	X	203.89038	54.82324	278.75691	3.44365	0.2157064	0.23291366	2.6162108	20	2 22.5	21.0
231156 2005 UF_{61}	16.9	X	131.21926	324.16147	81.56368	6.09940	0.1537610	0.29452273	2.2372963	20	3 12.1	19.9
231157 2005 UO_{63}	17.5	X	163.38464	244.22151	214.44300	3.09772	0.2007428	0.23945102	2.5683740	20	6 22.1	21.7
231158 2005 UW_{66}	16.9	X	122.32126	239.28798	165.69213	10.14981	0.2048608	0.22753204	2.6573026	20	3 10.4	20.9
231159 2005 UG_{68}	16.4	X	355.48242	4.70972	67.83878	7.47010	0.0804877	0.27508162	2.3415045	20	—	—
231160 2005 UV_{68}	17.0	X	5.11708	136.28682	345.63788	6.01941	0.1014218	0.28591188	2.2819944	20	—	—
231161 2005 UT_{73}	16.7	X	292.02680	31.42658	78.62137	3.28810	0.1610194	0.26674783	2.3900232	20	12 23.8	18.7
231162 2005 UU_{73}	17.1	X	313.51491	36.88418	52.18420	2.94881	0.1876223	0.26736842	2.3863235	20	—	—
231163 2005 UJ_{76}	17.1	X	355.81069	151.84718	311.62555	8.42043	0.1655224	0.27868318	2.3212872	20	—	—
231164 2005 UZ_{78}	17.0	X	358.45377	297.71401	130.79845	2.89973	0.1780824	0.27293624	2.3537586	20	—	—
231165 2005 UA_{79}	16.5	X	152.13210	253.31887	90.41386	4.19436	0.1999643	0.29044755	2.2581749	20	1 16.7	19.7
231166 2005 UX_{102}	17.2	X	292.48991	100.24782	63.08255	5.92787	0.1602531	0.27584664	2.3371733	20	—	—
231167 2005 UB_{106}	17.0	X	230.39309	143.69288	88.86381	3.91623	0.1055265	0.28031845	2.3122507	20	—	—
231168 2005 UB_{109}	16.9	X	74.08862	240.07153	148.20474	7.14835	0.0970449	0.28379841	2.2933099	20	—	—
231169 2005 UT_{113}	17.6	X	324.96448	182.38679	236.03577	1.91999	0.2016033	0.26491134	2.4010563	20	12 17.7	19.1
231170 2005 UA_{122}	16.8	X	128.71631	41.18213	29.49127	4.27249	0.1469557	0.23124543	2.6287782	20	4 11.6	20.5
231171 2005 UQ_{142}	17.7	X	313.73685	250.43547	222.76340	0.56814	0.1380782	0.27197177	2.3593199	20	—	—
231172 2005 UZ_{143}	18.2	X	340.38704	101.20840	20.60312	4.31767	0.1789660	0.28049171	2.3112985	20	—	—
231173 2005 UX_{152}	16.3	X	132.72964	16.93661	41.02020	7.59609	0.1794655	0.22905919	2.6454785	20	4 4.9	20.3
231174 2005 UH_{153}	17.3	X	86.35087	301.14530	38.09032	3.18599	0.1892111	0.27709330	2.3301580	20	—	—
231175 2005 UG_{160}	17.4	X	143.35675	182.08032	142.80495	3.53745	0.1881558	0.28811606	2.2703409	20	—	—
231176 2005 UU_{170}	17.4	X	313.52014	63.91180	347.51852	1.68044	0.1006826	0.26257601	2.4152719	20	11 8.1	19.7
231177 2005 UK_{194}	17.4	X	256.15052	78.36681	68.18012	2.19974	0.1283048	0.26883580	2.3776321	20	12 15.2	20.0
231178 2005 UX_{206}	17.7	X	284.17592	49.18761	57.00307	2.14494	0.1362049	0.26669543	2.3903363	20	12 4.2	20.0
231179 2005 UQ_{214}	17.1	X	18.96148	315.96507	94.04853	5.33859	0.1524547	0.27665940	2.3325937	20	—	—
231180 2005 UU_{215}	17.2	X	13.19683	355.03447	64.17550	3.20120	0.1978861	0.27524317	2.3405882	20	—	—
231181 2005 UX_{226}	17.0	X	271.08717	91.36875	218.40099	7.54802	0.1676236	0.23944676	2.5684044	20	3 26.9	20.8
231182 2005 UF_{230}	17.5	X	258.25730	107.89478	120.71288	1.91636	0.1423980	0.28558323	2.2837448	20	—	—
231183 2005 UO_{230}	16.7	X	34.24247	11.08328	59.69090	7.42773	0.0635949	0.28115335	2.3076709	20	—	—
231184 2005 UL_{252}	16.6	X	355.91664	64.35272	19.88668	8.04800	0.0617561	0.27595180	2.3365795	20	—	—
231185 2005 UZ_{263}	17.4	X	202.81508	219.48208	48.49893	6.22598	0.0955860	0.28586436	2.2822473	20	—	—
231186 2005 UH_{273}	17.0	X	283.15718	41.75410	55.30069	7.21539	0.1281746	0.26133592	2.4229065	20	11 18.1	19.2
231187 2005 UG_{305}	17.2	X	296.82897	333.62790	155.82537	1.91636	0.0629326	0.27129265	2.3632556	20	—	—
231188 2005 UR_{354}	16.5	X	305.09042	176.01416	280.88079	5.86605	0.1610377	0.26701350	2.3884376	20	12 31.9	18.4
231189 2005 UH_{360}	15.6	X	157.36045	102.01292	312.74945	7.06131	0.0305228	0.21991592	2.7183056	20	4 9.5	19.6
231190 2005 UO_{368}	16.7	X	80.65338	199.66889	72.46730	7.13071	0.1248624	0.26126511	2.4233442	20	11 9.6	20.1
231191 2005 UW_{420}	16.5	X	207.98753	187.88828	63.46791	7.00240	0.0820895	0.27915581	2.3186664	20	—	—
231192 2005 UU_{432}	17.9	X	296.23155	351.38877	124.10917	1.95627	0.1296296	0.26809318	2.3820207	20	—	—
231193 2005 UL_{444}	16.7	X	330.75202	221.18939	252.84064	4.85057	0.0918712	0.27497440	2.3421131	20	—	—
231194 2005 UB_{445}	17.4	X	65.42859	237.16031	148.08589	3.24660	0.1432061	0.28197049	2.3032104	20	—	—
231195 2005 UL_{448}	17.4	X	314.88524	101.67184	299.29852	3.75590	0.1840397	0.26285823	2.4135428	20	10 22.1	19.3
231196 2005 UC_{451}	17.4	X	222.56909	107.93443	30.78499	6.51590	0.1299162	0.26024063	2.4297000	20	10 17.0	20.8
231197 2005 UL_{482}	16.9	X	110.73381	279.89350	144.67288	6.17534	0.0810875	0.29850993	2.2173293	20	2 26.1	19.3
231198 2005 UF_{492}	17.1	X	69.94443	215.85929	129.72545	7.76686	0.1405653	0.27453026	2.3446386	20	—	—
231199 2005 UO_{505}	16.1	X	15.86027	238.08483	343.75778	3.20720	0.0217101	0.22004704	2.7172256	20	5 14.4	19.6
231200 2005 UZ_{505}	16.0	X	231.06307	232.00531	120.45841	3.85479	0.0868823	0.21878989	2.7276243	20	4 19.7	20.1

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231201 2005 UH_{511}	17.0	X	29.19690	348.17529	75.06982	7.88890	0.0794445	0.27910270	2.3189605	20	—	—
231202 2005 VF_{42}	16.5	X	97.41407	244.34102	119.92310	6.20329	0.1824124	0.28273572	2.2990527	20	—	—
231203 2005 VR_{42}	16.7	X	323.54101	4.44660	105.48034	4.96298	0.1446040	0.27183610	2.3601048	20	—	—
231204 2005 VV_{42}	16.9	X	344.39321	316.59240	105.13205	4.64623	0.1663500	0.27021818	2.3695161	20	—	—
231205 2005 VR_{49}	17.1	X	79.49942	82.43399	302.31898	1.90286	0.2366946	0.28229620	2.3014384	20	—	—
231206 2005 VH_{99}	16.0	X	174.16173	51.84703	14.91545	14.31893	0.2055590	0.23407461	2.6075532	20	5 18.3	20.6
231207 2005 VW_{119}	15.7	X	57.48363	254.44736	324.12999	13.54068	0.1564287	0.22789800	2.6544571	20	8 1.7	19.0
231208 2005 VB_{124}	16.7	X	271.96640	90.67345	81.32623	7.97529	0.0468576	0.27507576	2.3415378	20	—	—
231209 2005 WD_{32}	17.2	X	211.59962	135.83974	52.61552	2.13606	0.1503065	0.26232547	2.4168095	20	12 4.9	20.6
231210 2005 WQ_{33}	17.2	X	320.32820	153.90018	278.34492	3.77290	0.1687639	0.26413585	2.4057536	20	12 25.8	19.3
231211 2005 WA_{36}	16.9	X	71.30903	256.42508	79.80233	8.07746	0.1205947	0.26948221	2.3738284	20	—	—
231212 2005 WK_{57}	17.3	X	307.11810	314.18414	104.82633	10.06092	0.2213468	0.26197570	2.4189601	20	11 6.8	19.2
231213 2005 WX_{87}	16.6	X	192.36217	111.10729	90.21119	3.78847	0.1374415	0.25817937	2.4426150	20	12 1.1	20.1
231214 2005 WD_{89}	16.6	X	291.72468	240.19197	243.95128	5.42630	0.0559629	0.26895548	2.3769267	20	—	—
231215 2005 WU_{93}	17.0	X	236.21883	144.62099	38.24410	2.97925	0.1473350	0.27213443	2.3583796	20	—	—
231216 2005 WM_{96}	17.1	X	232.43171	119.20879	81.19500	2.28406	0.1292779	0.26814078	2.3817389	20	—	—
231217 2005 WW_{126}	16.7	X	168.96140	247.56268	98.93196	5.47241	0.1745295	0.29276751	2.2462295	20	2 3.9	19.9
231218 2005 WY_{136}	17.7	X	308.75657	234.58836	236.50578	1.35884	0.1682293	0.26994781	2.3710980	20	—	—
231219 2005 WW_{149}	17.2	X	329.88288	23.67949	41.86718	4.68981	0.0560013	0.26506720	2.4001150	20	12 25.1	20.0
231220 2005 WS_{155}	16.8	X	136.80207	348.19060	73.29691	4.75598	0.2557597	0.22831300	2.6512395	20	4 19.2	21.2
231221 2005 WM_{157}	17.0	X	157.89138	137.77975	266.06417	2.70374	0.2330861	0.22803319	2.6534078	20	4 10.8	21.6
231222 2005 WR_{157}	15.7	X	120.35455	236.13650	278.49892	10.70776	0.1135319	0.23512140	2.5998080	20	7 16.4	19.5
231223 2005 WD_{159}	16.0	X	198.48583	34.05280	63.00179	17.24710	0.1310435	0.24120270	2.5559241	20	7 27.9	20.2
231224 2005 WW_{159}	16.9	X	17.42138	259.91414	90.00899	3.31334	0.2038669	0.26331461	2.4107532	20	12 14.6	19.7
231225 2005 WS_{171}	17.3	X	208.14576	14.02707	151.34455	1.54489	0.1175169	0.25740152	2.4475335	20	11 5.1	20.7
231226 2005 WZ_{174}	16.2	X	4.37211	108.05709	80.90164	7.83983	0.1104134	0.22107747	2.7087758	20	3 17.7	19.4
231227 2005 WZ_{177}	17.0	X	13.04551	281.89037	61.72382	2.93254	0.1937401	0.25834875	2.4415473	20	11 26.3	19.7
231228 2005 WV_{188}	16.9	X	288.43136	3.10122	99.16452	6.36971	0.1639537	0.26303869	2.4124388	20	12 3.5	19.1
231229 2005 WE_{196}	16.6	X	74.64718	183.23237	92.39885	8.19555	0.1093108	0.25232257	2.4802682	20	11 5.6	20.2
231230 2005 XA_{3}	17.5	X	358.93426	53.83506	5.96405	1.34161	0.1733955	0.27110974	2.3643184	20	—	—
231231 2005 XC_{12}	17.6	X	313.46649	293.44415	173.11544	1.36814	0.1260950	0.27049831	2.3678799	20	—	—
231232 2005 XB_{25}	16.8	X	261.59634	88.13358	68.23621	6.00829	0.1705809	0.26490118	2.4011178	20	12 31.0	19.1
231233 2005 XZ_{37}	16.0	X	150.03955	272.29652	78.02966	3.70032	0.0446830	0.21363682	2.7713113	20	1 17.1	19.9
231234 2005 XN_{38}	15.8	X	237.45646	213.18895	152.46659	6.61022	0.0493083	0.22206305	2.7007549	20	5 18.1	19.7
231235 2005 XR_{41}	16.4	X	273.74593	33.75107	122.15498	7.22982	0.1823825	0.26562430	2.3967580	20	—	—
231236 2005 XK_{54}	17.5	X	251.48062	125.19413	38.15443	1.74874	0.1288643	0.26614047	2.3936580	20	12 30.5	20.0
231237 2005 XW_{84}	16.5	X	338.36804	101.99548	301.84144	5.38839	0.0617190	0.26004026	2.4309479	20	12 6.7	19.4
231238 2005 YB_{7}	16.1	X	281.76711	142.18003	317.68452	9.10799	0.1582116	0.25875108	2.4390157	20	11 11.4	18.8
231239 2005 YK_{9}	17.7	X	262.76539	199.20410	305.87876	1.51882	0.1400564	0.26519787	2.3993266	20	12 21.3	20.1
231240 2005 YS_{25}	17.1	X	222.49458	103.45693	111.79505	3.56418	0.1323079	0.26380050	2.4077920	20	—	—
231241 2005 YW_{35}	16.6	X	158.02645	332.96838	275.16797	5.56395	0.1048296	0.26030788	2.4292815	20	12 26.5	20.2
231242 2005 YW_{47}	17.0	X	242.96753	43.40263	77.19068	1.86260	0.1281709	0.25287304	2.4766674	20	10 18.1	20.0
231243 2005 YJ_{50}	15.9	X	125.11877	340.10713	123.14357	15.12759	0.0635395	0.22772152	2.6558283	20	5 15.8	19.9
231244 2005 YW_{63}	16.6	X	139.24203	325.85874	83.11804	2.98786	0.2010352	0.22426097	2.6830798	20	4 1.7	20.8
231245 2005 YL_{116}	16.2	X	213.25482	272.69482	103.72320	10.51375	0.1081474	0.22875183	2.6478477	20	5 1.8	20.4
231246 2005 YN_{124}	16.2	X	300.57301	97.24679	318.32011	7.79026	0.1415813	0.25539057	2.4603647	20	10 12.4	18.8
231247 2005 YB_{131}	15.9	X	42.22356	150.79889	119.91012	12.43734	0.0969811	0.23997658	2.5646226	20	9 15.6	19.2
231248 2005 YJ_{131}	16.8	X	292.21607	249.74096	120.48360	7.11379	0.2081088	0.24389820	2.5370575	20	7 11.9	19.5
231249 2005 YO_{138}	16.7	X	135.83631	137.37796	100.92744	7.22514	0.1063744	0.25292980	2.4762969	20	11 21.8	20.4
231250 2005 YK_{141}	16.1	X	194.20894	358.71830	307.83632	6.96952	0.1269458	0.21129662	2.7917361	20	1 16.6	20.5
231251 2005 YN_{145}	16.0	X	273.93918	13.97437	341.80061	4.76056	0.3067957	0.24385737	2.5373408	20	5 11.0	19.7
231252 2005 YV_{152}	15.9	X	285.72299	281.47983	86.30371	14.69079	0.1245553	0.24141997	2.5543903	20	7 12.5	19.0
231253 2005 YX_{152}	15.8	X	172.01073	7.28877	91.22252	14.94300	0.1136890	0.23518353	2.5993501	20	6 29.0	19.8
231254 2005 YT_{158}	17.1	X	158.23650	309.30016	187.43947	2.31221	0.1232530	0.23968635	2.5666925	20	8 3.4	21.0
231255 2005 YL_{168}	15.7	X	308.91030	209.80850	172.64415	8.84404	0.2114455	0.25157670	2.4851681	20	9 2.5	17.7
231256 2005 YX_{191}	16.4	X	58.68293	191.96028	99.86363	5.88272	0.0837860	0.24826149	2.5072433	20	11 2.6	19.7
231257 2005 YE_{196}	15.8	X	175.67554	141.50793	311.89118	32.60879	0.2129202	0.23207870	2.6224821	20	7 3.8	20.6
231258 2005 YS_{199}	15.7	X	83.62316	242.75812	300.97704	11.48545	0.1149447	0.23035780	2.6355268	20	7 12.9	19.2
231259 2005 YW_{203}	16.6	X	225.36940	246.16486	132.93027	1.51518	0.0374956	0.23044873	2.6348335	20	5 20.4	20.3
231260 2005 YB_{211}	15.7	X	142.69021	250.25144	268.92646	12.33062	0.1060871	0.23637054	2.5906405	20	8 11.3	19.8
231261 2005 YM_{229}	15.1	X	129.72316	350.29932	100.16288	22.82951	0.0599051	0.21339432	2.7734104	20	5 9.3	19.5
231262 2005 YZ_{274}	16.0	X	126.04163	271.09544	298.75494	10.03628	0.2502008	0.23776952	2.5804687	20	10 3.4	20.7
231263 2005 YD_{275}	15.4	X	245.91449	9.64214	130.93100	4.98086	0.1787608	0.18377868	3.0638862	20	10 28.9	19.8
231264 2005 YJ_{289}	16.9	X	3.49322	238.85489	168.36963	3.35707	0.1202184	0.26488101	2.4012396	20	—	—
231265 Saulperlmutter	16.2	X	225.33053	303.63621	337.08512	5.87796	0.0392914	0.20820133	2.8193374	20	1 18.9	20.3
231266 2006 AW_{13}	16.2	X	294.77207	182.79171	124.35290	4.50619	0.1779111	0.22715001	2.6602812	20	4 24.9	19.6
231267 2006 AM_{16}	15.9	X	74.67922	261.11487	318.40428	11.34583	0.1172783	0.23136197	2.6278953	20	8 17.7	19.5
231268 2006 AG_{21}	15.6	X	39.00798	155.50442	87.32193	13.63203	0.1091680	0.23299998	2.6155647	20	7 31.7	18.9
231269 2006 AO_{21}	15.6	X	20.38670	140.63358	71.36774	9.85095	0.0819652	0.22433022	2.6825276	20	5 13.0	18.7
231270 2006 AF_{31}	16.2	X	114.31313	296.85817	87.05303	7.26725	0.0883386	0.21353534	2.7721893	20	1 22.2	19.9
231271 2006 AO_{42}	15.9	X	4.38536	357.31882	297.28627	15.78147	0.1365874	0.23766530	2.5812231	20	8 12.9	18.7
231272 2006 AK_{46}	17.0	X	137.04305	83.86527	172.52676	2.03817	0.1706508	0.25533423	2.4607265	20	12 13.6	21.0
231273 2006 AU_{63}	16.8	X	310.30627	289.15673	72.13941	3.40862	0.0496700	0.24434993	2.5339298	20	8 23.5	19.8
231274 2006 AY_{68}	16.6	X	293.71296	109.14294	107.42433	7.18494	0.0426445	0.28201138	2.3029877	20	1 5.6	19.3
231275 2006 AP_{71}	17.0	X	238.13041	123.63733	294.49720	5.24426	0.1213517	0.24025719	2.5626254	20	7 17.9	20.7
231276 2006 AL_{85}	16.4	X	157.16685	174.43408	273.15014	6.03620	0.1741190	0.22938703	2.6429573	20	6 1.6	20.6
231277 2006 BC_{13}	17.2	X	215.18960	283.66701	153.88535	2.66718	0.1203013	0.23793588	2.5792657	20	7 17.1	21.1
231278 Kárpáti	16.5	X	131.80302	104.67675	324.71882	11.65813	0.1712810	0.22134894	2.7065606	20	4 9.9	20.9
231279 2006 BV_{27}	16.5	X	350.04911	102.53869	109.10225	2.19315	0.0656744	0.21939737	2.7225870	20	3 24.9	19.7
231280 2006 BT_{31}	16.4	X	292.89488	278.27282	80.55244	3.46219	0.0292966	0.23491525	2.6013288	20	7 25.1	19.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231281 2006 BW_{32}	16.4	X	6.62751	252.59468	30.37099	2.43268	0.0330532	0.23132280	2.6281920	20	7 27.8	19.7
231282 2006 BF_{44}	16.4	X	84.32070	77.10897	338.93489	4.31069	0.1065494	0.20660613	2.8338308	20	1 27.1	20.0
231283 2006 BZ_{45}	16.8	X	104.32651	68.40068	150.57823	8.82686	0.0888441	0.23787387	2.5797140	20	9 21.7	20.5
231284 2006 BL_{57}	16.7	X	113.26081	222.19374	6.18919	3.19981	0.1799604	0.24238208	2.5476262	20	10 17.6	20.9
231285 2006 BJ_{58}	16.0	X	61.44497	107.48766	121.95663	14.26424	0.1399029	0.23200905	2.6230069	20	8 20.0	19.5
231286 2006 BN_{58}	15.9	X	285.19383	151.61417	109.98329	8.41965	0.0583620	0.21392823	2.7687940	20	3 4.2	19.8
231287 2006 BW_{60}	17.2	X	298.75659	191.06347	346.97090	4.65970	0.1859252	0.26992556	2.3712283	20	—	—
231288 2006 BZ_{80}	16.9	X	136.54155	80.48076	64.70358	2.91240	0.0477837	0.23058031	2.6338310	20	7 18.6	20.6
231289 2006 BK_{95}	17.0	X	158.50334	184.09807	278.22451	1.15306	0.1641325	0.22944603	2.6425042	20	6 21.4	21.1
231290 2006 BK_{99}	16.7	X	315.90265	9.70561	316.01705	6.49802	0.1010058	0.23428299	2.6060068	20	7 4.5	19.7
231291 2006 BZ_{102}	15.9	X	48.62765	311.26222	314.47426	14.16028	0.1093183	0.23735914	2.5834422	20	9 8.8	19.3
231292 2006 BZ_{107}	17.0	X	246.41544	32.07848	340.81511	2.46200	0.0702270	0.23155478	2.6264364	20	6 2.9	20.6
231293 2006 BL_{117}	16.3	X	200.36520	63.66035	205.33440	0.48356	0.0610322	0.19721442	2.9230995	20	—	—
231294 2006 BF_{124}	16.4	X	28.20731	243.63660	336.52423	3.82949	0.1623125	0.22157428	2.7047252	20	6 13.6	19.2
231295 2006 BM_{126}	16.1	X	181.79154	218.98160	153.55067	8.96891	0.2048011	0.21747424	2.7386141	20	3 26.2	20.7
231296 2006 BD_{128}	16.8	X	132.72421	249.46380	238.36575	1.25671	0.1467726	0.22854086	2.6494769	20	6 28.0	20.9
231297 2006 BT_{141}	16.7	X	305.95774	314.03531	5.26696	2.27647	0.0618895	0.22671834	2.6636569	20	6 13.1	20.0
231298 2006 BQ_{144}	15.7	X	86.16568	286.38949	289.50879	12.25524	0.1181583	0.23421823	2.6064871	20	8 23.3	19.5
231299 2006 BH_{145}	15.6	X	105.88408	163.20003	335.76107	13.84371	0.0655032	0.22475255	2.6791660	20	5 31.4	19.6
231300 2006 BF_{159}	16.4	X	85.37169	292.80165	313.46851	8.54514	0.1691683	0.23823078	2.5771368	20	10 7.9	20.5
231301 2006 BU_{161}	15.8	X	118.83987	260.58588	250.35984	10.22200	0.1313012	0.22942740	2.6426472	20	7 10.5	19.8
231302 2006 BM_{165}	16.5	X	218.37025	189.14728	137.64352	3.74707	0.1023668	0.21263530	2.7800065	20	3 3.9	20.6
231303 2006 BV_{167}	15.3	X	293.45375	298.21949	139.32824	11.49958	0.1084393	0.18331744	3.0690234	20	10 26.3	19.4
231304 2006 BK_{168}	16.0	X	195.31672	67.80429	44.16420	8.07596	0.1497708	0.23854885	2.5748455	20	8 11.9	20.1
231305 2006 BK_{169}	16.7	X	178.72039	318.66243	53.29227	0.47084	0.0871702	0.21477454	2.7615157	20	3 18.1	20.9
231306 2006 BQ_{178}	16.4	X	332.20691	353.41422	322.97907	6.09059	0.1633537	0.23573402	2.5953018	20	7 15.5	18.8
231307 Peterfalk	16.7	X	101.54605	68.50843	310.74521	1.06841	0.0808039	0.20295792	2.8676890	20	—	—
231308 2006 BD_{190}	17.2	X	158.04239	98.61603	29.38074	3.47327	0.1432461	0.23265955	2.6181154	20	7 24.5	21.3
231309 2006 BK_{190}	15.8	X	188.90200	251.90926	126.98097	5.98650	0.0648805	0.21770598	2.7366703	20	4 8.5	19.9
231310 2006 BC_{191}	16.0	X	28.26086	200.52947	349.71709	8.91896	0.1033131	0.21397020	2.7684319	20	4 22.0	19.3
231311 2006 BN_{214}	16.3	X	215.66515	205.05699	230.37381	4.93752	0.2200569	0.23826943	2.5768581	20	7 6.6	20.6
231312 2006 BH_{255}	16.4	X	86.53272	300.58067	167.11078	1.99265	0.0325115	0.21636289	2.7479840	20	3 23.7	19.9
231313 2006 BH_{263}	16.3	X	147.83075	143.18720	338.70589	14.23206	0.2004852	0.23055676	2.6340103	20	7 10.9	20.9
231314 2006 BV_{267}	16.3	X	195.95421	322.01010	116.40199	15.68381	0.1078109	0.23306015	2.6151145	20	6 28.8	20.4
231315 2006 BU_{268}	15.9	X	69.72601	43.37355	38.52518	11.52104	0.1180738	0.21080350	2.7960880	20	2 13.7	19.6
231316 2006 BP_{281}	16.4	X	299.68765	273.17347	22.68993	3.90829	0.0772524	0.22244551	2.6976584	20	4 29.9	20.0
231317 2006 CW_{5}	16.8	X	321.66348	208.30257	152.38546	7.70970	0.0683322	0.24208525	2.5497083	20	9 7.3	19.8
231318 2006 CO_{40}	16.3	X	227.44455	272.33049	87.85576	3.62026	0.0974188	0.22013900	2.7164688	20	4 24.2	20.3
231319 2006 CQ_{41}	16.5	X	290.12518	59.67883	241.48330	2.48901	0.0851907	0.21901569	2.7257492	20	4 22.7	20.0
231320 2006 CM_{55}	16.6	X	53.18790	335.69888	177.03705	1.92709	0.0415085	0.21843524	2.7305758	20	4 7.4	20.1
231321 2006 CL_{57}	16.5	X	184.93594	46.93414	340.96745	4.69833	0.1570610	0.22060050	2.7126789	20	4 11.9	20.9
231322 2006 DF_{1}	16.2	X	229.36289	107.62982	252.84852	5.65012	0.0514898	0.22234296	2.6984878	20	4 27.8	20.1
231323 2006 DM_{2}	16.7	X	158.38191	66.69563	355.53643	1.40116	0.0627917	0.22083647	2.7107462	20	4 25.9	20.6
231324 2006 DQ_{3}	16.3	X	177.90758	228.15635	190.02330	3.66701	0.0681744	0.22439243	2.6820318	20	5 14.3	20.1
231325 2006 DR_{7}	15.2	X	327.65303	20.19406	13.92504	10.73707	0.0721522	0.17960339	3.1111887	20	10 17.9	19.3
231326 2006 DC_{8}	16.4	X	142.91102	21.00456	15.26510	5.56151	0.0545342	0.20826539	2.8187593	20	3 8.3	20.4
231327 2006 DE_{33}	16.3	X	62.36780	5.64866	176.71034	3.62701	0.0273513	0.22072866	2.7116288	20	5 28.7	19.9
231328 2006 DW_{38}	16.3	X	94.85097	266.83400	35.29831	2.73483	0.1518062	0.18018035	3.1045436	20	12 16.2	21.3
231329 2006 DF_{53}	16.9	X	192.11855	33.22410	358.30576	2.42935	0.1255802	0.22011903	2.7166331	20	4 24.1	21.1
231330 2006 DE_{66}	16.1	X	139.68286	321.46571	123.26946	14.56443	0.2303950	0.22358335	2.6884982	20	5 21.3	20.8
231331 2006 DV_{86}	16.0	X	23.56637	353.30226	25.22439	5.01804	0.1825409	0.18395521	3.0619258	20	—	—
231332 2006 DY_{144}	16.8	X	176.01994	10.69489	4.65828	4.31157	0.0851977	0.21345138	2.7729161	20	3 19.5	21.0
231333 2006 DO_{179}	16.1	X	148.64109	21.12350	16.46952	4.44700	0.0771584	0.21211550	2.7845463	20	3 17.7	20.1
231334 2006 DJ_{184}	16.0	X	136.73013	37.91088	25.48824	7.01358	0.0729537	0.21328050	2.7743970	20	4 4.9	19.9
231335 2006 DF_{195}	15.7	X	10.52174	97.44550	92.17715	13.84160	0.1267551	0.21382350	2.7696981	20	4 2.8	19.1
231336 2006 DL_{197}	16.4	X	156.24211	240.07137	290.33840	9.98636	0.2251079	0.23802451	2.5786254	20	9 9.0	21.0
231337 2006 DE_{198}	15.8	X	58.64853	41.51081	140.18001	12.95350	0.0927327	0.21694548	2.7430622	20	6 3.2	19.5
231338 2006 DW_{200}	15.9	X	148.63397	25.43273	113.24455	12.70896	0.1269020	0.22936024	2.6431631	20	7 27.7	20.0
231339 2006 DS_{201}	15.8	X	108.37537	19.50636	67.73788	8.99590	0.0422603	0.21820322	2.7325111	20	3 31.4	19.6
231340 2006 DS_{207}	16.2	X	101.43896	96.65017	358.95279	11.78955	0.1596284	0.21344865	2.7729398	20	4 11.7	20.1
231341 2006 DP_{208}	16.3	X	23.38335	257.46283	327.88456	4.42445	0.0561975	0.21910012	2.7250489	20	6 1.6	19.7
231342 2006 EL_{25}	17.1	X	225.53034	203.55356	185.97714	2.04211	0.0933633	0.22778627	2.6553250	20	5 29.1	21.0
231343 2006 EF_{32}	16.0	X	117.39941	159.95043	329.72362	8.94720	0.0931154	0.22393491	2.6856836	20	6 7.5	20.0
231344 2006 EZ_{49}	16.5	X	178.54427	12.52748	35.41975	5.52841	0.0620555	0.22021352	2.7158559	20	4 30.7	20.6
231345 2006 EE_{52}	16.4	X	113.91815	123.46585	342.29297	3.88012	0.0707014	0.21750184	2.7383824	20	4 29.3	20.3
231346 Taofanlin	16.3	X	86.92806	78.88167	51.16327	3.29708	0.1474898	0.21649226	2.7468891	20	5 9.8	20.0
231347 2006 FE_{7}	16.0	X	213.70245	154.37887	64.22906	1.67982	0.0928044	0.18251760	3.0779830	20	—	—
231348 2006 FR_{15}	15.8	X	232.16160	237.05735	41.81310	11.71589	0.0571563	0.19742850	2.9209861	20	1 27.2	20.3
231349 2006 FV_{15}	16.1	X	103.26928	273.01344	185.34111	3.31157	0.0552767	0.21326881	2.7744984	20	4 6.1	19.8
231350 2006 FC_{26}	16.5	X	132.68626	43.08685	27.69187	3.14347	0.0685755	0.21108163	2.7936313	20	4 8.7	20.5
231351 2006 FM_{37}	15.9	X	130.99391	248.47284	264.34568	12.78311	0.1118211	0.22926381	2.6439042	20	7 23.1	20.0
231352 2006 FP_{39}	16.3	X	289.26727	268.21441	3.37702	3.51425	0.0553526	0.21318165	2.7752546	20	3 19.6	20.1
231353 2006 GW_{11}	15.9	X	353.30518	169.51726	56.53988	5.44793	0.1265728	0.21158623	2.7891880	20	4 16.1	19.0
231354 2006 GY_{16}	16.1	X	215.25701	103.24186	113.36394	3.03003	0.0244158	0.18346560	3.0673708	20	—	—
231355 2006 GC_{17}	15.8	X	28.26268	336.38380	48.08744	7.96907	0.1108713	0.18012147	3.1052202	20	—	—
231356 2006 GE_{23}	15.8	X	33.65699	305.75927	104.74582	3.15506	0.0709751	0.18544695	3.0454835	20	—	—
231357 2006 GL_{28}	16.3	X	103.17448	346.33286	67.67268	3.05271	0.0897140	0.19900419	2.9055469	20	2 17.4	20.3
231358 2006 GO_{35}	16.4	X	96.06616	14.04372	166.54034	4.60194	0.0661834	0.22441719	2.6818344	20	7 15.8	20.1
231359 2006 GB_{37}	16.3	X	150.81575	111.33750	41.93180	6.54217	0.0240104	0.22885548	2.6470481	20	8 17.7	20.0
231360 2006 GV_{40}	15.8	X	35.73396	160.26953	89.63192	6.61652	0.1912736	0.22378388	2.6868918	20	8 17.8	18.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231361 2006 GM_{42}	15.7	X	349.99288	139.93669	128.37285	9.85482	0.0573626	0.21919727	2.7242437	20	6 11.6	19.1
231362 2006 GO_{42}	16.2	X	44.05755	352.07195	182.17887	9.23488	0.1914313	0.21285442	2.7780983	20	5 13.8	19.3
231363 2006 GO_{49}	16.6	X	125.33976	278.64150	228.08336	1.46497	0.1899826	0.22740281	2.6583092	20	7 17.9	20.9
231364 2006 GA_{54}	15.8	X	157.74954	177.41420	90.82250	3.71084	0.0486016	0.17845399	3.1245337	20	—	—
231365 2006 HL_{2}	15.9	X	8.15325	155.25194	79.54908	5.70122	0.0636419	0.21598518	2.7511868	20	5 23.7	19.1
231366 2006 HQ_{7}	15.4	X	1.78759	85.50752	128.38801	8.09718	0.0965825	0.21107850	2.7936589	20	4 17.7	18.8
231367 2006 HM_{17}	15.0	X	338.61586	352.33820	128.02921	11.56834	0.0421351	0.19184965	2.9773419	20	—	—
231368 2006 HF_{18}	16.2	X	312.26462	100.97887	142.71837	4.53173	0.0446618	0.20912274	2.8110498	20	3 16.9	19.9
231369 2006 HD_{22}	15.8	X	296.03329	33.94094	127.27706	3.59066	0.1444045	0.18913138	3.0058017	20	—	—
231370 2006 HK_{24}	16.7	X	18.40636	142.68967	89.00050	3.62377	0.1585618	0.21433719	2.7652710	20	6 11.2	19.3
231371 2006 HR_{27}	15.6	X	351.10956	314.33318	133.10519	8.41532	0.1701670	0.18235267	3.0798386	20	—	—
231372 2006 HA_{36}	16.5	X	318.27220	59.08482	211.60703	2.99127	0.0217217	0.21612688	2.7499841	20	4 30.9	20.2
231373 2006 HA_{40}	15.3	X	137.73977	178.33186	84.63570	9.68936	0.0681549	0.17217679	3.2000221	20	12 6.9	20.2
231374 2006 HY_{41}	15.8	X	325.30300	39.15875	128.13638	10.19452	0.0238644	0.19160050	2.9799224	20	1 2.7	19.9
231375 2006 HW_{49}	16.2	X	112.90156	92.90826	31.49330	9.50874	0.1905240	0.22054910	2.7131004	20	6 5.8	20.5
231376 2006 HY_{61}	15.9	X	126.32942	261.47868	82.12161	4.90673	0.0708076	0.18837647	3.0138267	20	—	—
231377 2006 HG_{95}	15.3	X	15.00014	30.93036	65.65891	12.07320	0.0455211	0.18936282	3.0033520	20	—	—
231378 2006 HD_{107}	15.4	X	331.51291	66.13679	73.49211	12.04241	0.0567563	0.18974574	2.9993100	20	—	—
231379 2006 HV_{133}	15.8	X	27.57019	345.20770	9.91789	5.31286	0.0755086	0.17795425	3.1303805	20	11 22.9	20.1
231380 2006 JJ	15.7	X	342.47162	301.65911	242.38985	11.89653	0.1151870	0.20037330	2.8922966	20	1 29.4	19.6
231381 2006 JW_{12}	15.5	X	111.51761	217.26795	90.96129	10.47761	0.0613381	0.17466097	3.1696074	20	—	—
231382 2006 JB_{36}	15.7	X	193.27560	106.23441	73.05795	11.02888	0.0914035	0.16893238	3.2408638	20	10 28.3	20.7
231383 2006 JN_{42}	16.4	X	298.08144	87.95487	121.48625	2.91543	0.0554350	0.19480004	2.9472028	20	1 15.5	20.4
231384 2006 JJ_{47}	14.8	X	186.71067	333.04935	236.44749	16.21291	0.0886841	0.17311471	3.1884534	20	11 23.3	19.7
231385 2006 JN_{54}	17.0	X	55.56335	130.95335	96.10805	6.72435	0.1328339	0.28947206	2.2632453	20	8 13.3	19.5
231386 2006 JU_{54}	15.5	X	200.37267	337.65794	220.76314	4.34714	0.1117087	0.17257641	3.1950802	20	11 22.4	20.4
231387 2006 KW_{8}	15.9	X	267.43222	172.24208	52.79562	5.85222	0.1108103	0.19057630	2.9905894	20	—	—
231388 2006 KB_{17}	15.0	X	335.26631	323.55521	119.66094	11.11468	0.0734182	0.17609721	3.1523498	20	12 29.6	19.0
231389 2006 KO_{18}	15.2	X	115.59177	222.34870	118.01921	10.98401	0.1131581	0.18344800	3.0675670	20	—	—
231390 2006 KP_{33}	15.7	X	235.25565	79.02613	146.47886	1.95626	0.1447033	0.18429034	3.0582126	20	—	—
231391 2006 KA_{37}	16.1	X	234.13417	78.29986	104.14061	2.26972	0.1241148	0.17714300	3.1399306	20	12 8.6	20.5
231392 2006 KP_{64}	15.3	X	347.53767	82.48517	53.75777	10.97180	0.0520442	0.18897377	3.0074728	20	—	—
231393 2006 KM_{65}	16.1	X	284.87571	244.17461	16.47394	4.23981	0.0582511	0.20851431	2.8165155	20	3 1.6	20.1
231394 2006 KO_{66}	16.1	X	348.12347	288.46748	128.52432	1.43977	0.1575014	0.17407495	3.1767170	20	12 21.2	19.7
231395 2006 KM_{115}	15.6	X	189.21983	62.81524	205.99054	4.01942	0.1149557	0.18187334	3.0852476	20	—	—
231396 2006 KR_{116}	15.6	X	350.36489	333.65727	131.56713	4.13967	0.0580367	0.18357406	3.0661626	20	—	—
231397 2006 MB_{15}	16.9	X	81.12409	83.57391	282.94021	18.21096	0.1307307	0.37937722	1.8898263	20	—	—
231398 2006 PX_{9}	14.6	X	256.27032	164.41402	188.73156	0.23018	0.1283505	0.12624785	3.9353804	20	5 14.6	20.3
231399 2006 QH_{84}	15.8	X	145.78245	243.80088	152.59696	11.72102	0.1138426	0.18218288	3.0817520	20	3 19.9	20.6
231400 2006 SE_{32}	15.1	X	270.65611	159.39386	189.78105	2.55493	0.2558484	0.12423799	3.9777100	20	5 10.3	21.1
231401 2006 SM_{273}	17.0	X	125.78851	268.86424	31.20752	6.59638	0.2403647	0.22711840	2.6605280	20	—	—
231402 2006 TP_{107}	17.3	X	54.78954	39.92018	327.58005	19.67778	0.1062943	0.37136320	1.9169177	20	—	—
231403 2006 WR_{4}	17.1	X	289.46361	40.66655	51.63242	22.31474	0.0878556	0.35467354	1.9765912	20	12 27.1	19.1
231404 2006 WA_{151}	16.8	X	358.71958	265.31832	117.71284	24.74346	0.1137996	0.35881794	1.9613418	20	—	—
231405 2006 WZ_{201}	17.8	X	120.57335	269.07133	111.35871	5.28900	0.1604857	0.30292540	2.1957299	20	1 20.7	20.3
231406 2006 YH_{9}	18.2	X	15.23352	76.41745	310.59403	5.28865	0.2138128	0.28364429	2.2941405	20	—	—
231407 2006 YU_{10}	16.8	X	324.38176	333.43519	94.31962	7.56855	0.1107139	0.28048537	2.3113333	20	12 29.0	18.8
231408 2007 AO_{30}	16.3	X	185.00770	262.77234	227.37001	8.00481	0.0547572	0.25984302	2.4321780	20	8 25.0	19.8
231409 2007 BH_{9}	15.4	X	47.99445	225.48910	90.81591	13.16839	0.0468995	0.19664188	2.9287707	20	11 7.2	19.6
231410 2007 BC_{76}	17.0	X	281.87247	132.47215	134.95713	5.92055	0.1764107	0.30016483	2.2091719	20	2 8.0	20.1
231411 2007 CB_{26}	16.9	X	174.97775	158.19437	82.10729	5.52100	0.1753029	0.27495057	2.3422485	20	12 31.6	20.3
231412 2007 CL_{41}	16.9	X	252.24547	342.25581	141.50284	3.39412	0.1114441	0.27103682	2.3647425	20	11 11.8	19.6
231413 2007 CT_{41}	17.4	X	276.12084	280.19136	325.92164	5.57021	0.1223362	0.29670804	2.2262974	20	1 11.9	20.6
231414 2007 DH_{40}	16.5	X	271.46028	112.95749	106.46861	22.37619	0.1437079	0.28544560	2.2844789	20	—	—
231415 2007 DE_{42}	17.6	X	318.29872	181.60747	308.34458	4.91466	0.1524878	0.28494745	2.2871406	20	—	—
231416 2007 DB_{49}	17.6	X	255.94240	227.12394	255.76646	0.48783	0.1252755	0.26934339	2.3746439	20	11 12.2	20.2
231417 2007 DH_{63}	17.1	X	215.98345	174.15401	128.58317	8.19566	0.0756833	0.29822542	2.2187393	20	1 20.7	20.2
231418 2007 EE_{12}	16.8	X	225.56942	179.45480	8.22059	6.08813	0.1046171	0.27397310	2.3478162	20	—	—
231419 2007 EO_{38}	16.6	X	17.60670	215.24587	148.00437	5.99867	0.1157392	0.26209182	2.4182456	20	12 18.8	19.5
231420 2007 EO_{50}	17.9	X	49.46549	191.62233	234.10187	1.35505	0.1019156	0.28859957	2.2678044	20	—	—
231421 2007 EU_{55}	15.7	X	226.30470	345.30731	13.17218	13.27726	0.2953950	0.23470525	2.6028802	20	4 6.9	20.4
231422 2007 EG_{65}	17.1	X	35.61472	346.47106	151.24220	5.88456	0.0689398	0.29847173	2.2175185	20	2 9.8	19.3
231423 2007 EH_{76}	17.4	X	228.09315	31.96902	209.32376	3.37145	0.1100906	0.28053403	2.3110660	20	—	—
231424 2007 EG_{79}	16.2	X	48.98622	122.23798	203.65915	5.95409	0.1029156	0.26020295	2.4299345	20	12 8.3	19.4
231425 2007 EF_{105}	17.3	X	358.37281	51.63704	164.90287	4.12484	0.0501194	0.30574532	2.1822081	20	4 6.9	19.4
231426 2007 EU_{109}	17.0	X	278.67757	148.98483	51.42607	4.07977	0.1069126	0.28352891	2.2947629	20	—	—
231427 2007 EM_{112}	17.0	X	333.26244	351.43457	171.44255	6.30756	0.0714873	0.28574782	2.2828678	20	—	—
231428 2007 ET_{112}	16.5	X	67.39328	232.90899	223.79036	1.42061	0.0532410	0.21829221	2.7317685	20	2 14.3	19.9
231429 2007 ER_{122}	17.4	X	357.76350	267.04809	308.25572	3.95212	0.1643658	0.30279387	2.1963658	20	3 21.5	19.2
231430 2007 EC_{127}	16.8	X	208.08153	235.29916	14.20677	5.58446	0.1470661	0.28078167	2.3097069	20	—	—
231431 2007 ES_{130}	17.4	X	209.03895	225.21105	355.69291	2.24969	0.1434879	0.27393037	2.3480604	20	—	—
231432 2007 EJ_{142}	16.6	X	123.77342	288.78834	340.02702	6.22217	0.1113434	0.26426745	2.4049549	20	12 18.0	20.2
231433 2007 EV_{159}	16.6	X	228.87648	119.17819	138.66222	5.71200	0.1457004	0.28524047	2.2855740	20	—	—
231434 2007 EF_{180}	17.7	X	256.63135	350.33260	227.48318	4.65761	0.1071286	0.28132599	2.3067267	20	—	—
231435 2007 EW_{196}	17.7	X	39.25034	247.11895	205.79446	2.15857	0.1784474	0.28978912	2.2615941	20	—	—
231436 2007 FH_{2}	16.7	X	244.91031	162.69081	82.21613	8.38549	0.1862445	0.28514580	2.2860799	20	—	—
231437 2007 FG_{15}	17.1	X	295.98321	219.76750	318.22566	4.93273	0.0618480	0.28379366	2.2933355	20	—	—
231438 2007 FT_{15}	16.5	X	11.03274	197.25923	340.19004	5.80469	0.0629185	0.22563404	2.6721837	20	3 8.6	19.7
231439 2007 FU_{23}	16.3	X	228.75885	342.54722	26.60860	4.09992	0.1540224	0.23390301	2.6088284	20	4 30.4	20.5
231440 2007 GB_{19}	17.5	X	275.77848	8.50626	217.85343	3.24389	0.1244567	0.28438651	2.2901471	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231441 2007 GM_{29}	16.9	X	53.83709	275.44373	343.48171	2.29061	0.1466628	0.24581606	2.5238442	20	9 19.6	20.0
231442 2007 GS_{32}	16.9	X	255.81529	77.61448	102.82738	7.40490	0.0637065	0.27192532	2.3595886	20	—	—
231443 2007 GH_{40}	17.2	X	54.81423	221.97579	73.99852	2.61295	0.0927166	0.25126843	2.4872004	20	11 3.3	20.4
231444 2007 GR_{43}	17.5	X	110.33295	120.72678	194.43959	2.04590	0.2015327	0.26670449	2.3902821	20	—	—
231445 2007 GF_{60}	17.6	X	345.93055	54.02518	4.65768	3.80837	0.0371346	0.26527509	2.3988609	20	—	—
231446 2007 GE_{75}	16.0	X	334.25389	184.31245	84.49247	13.49708	0.1467635	0.23120513	2.6290837	20	5 12.2	18.9
231447 2007 HE_{1}	15.7	X	257.07397	229.22480	44.71213	12.85246	0.0860065	0.21710289	2.7417361	20	2 14.8	19.9
231448 2007 HL_{46}	17.3	X	327.34315	130.26741	112.22550	7.17442	0.1439057	0.30003256	2.2098212	20	3 14.4	19.5
231449 2007 HH_{51}	16.9	X	88.27702	121.90793	100.06979	3.20640	0.0900506	0.24423105	2.5347519	20	9 7.2	20.4
231450 2007 HK_{58}	14.9	X	86.31031	198.78550	68.81432	13.71871	0.1319786	0.17793309	3.1306287	20	10 30.7	19.7
231451 2007 HL_{72}	17.0	X	180.92242	8.57306	220.23213	3.89992	0.1387009	0.26555292	2.3971874	20	12 24.4	20.5
231452 2007 HC_{74}	16.3	X	235.08071	127.28425	110.70887	10.88844	0.1037034	0.27689748	2.3312564	20	—	—
231453 2007 HS_{82}	16.7	X	205.96842	108.23549	115.92158	7.13527	0.0826631	0.26903835	2.3764386	20	—	—
231454 2007 HK_{95}	17.1	X	219.44123	108.99674	145.01149	4.64512	0.1242346	0.27599114	2.3363575	20	—	—
231455 2007 JY_{8}	16.1	X	165.63587	330.35127	59.58952	5.94056	0.0635889	0.21826401	2.7320038	20	3 27.5	20.1
231456 2007 JC_{15}	17.4	X	244.90894	349.20819	239.85109	2.13935	0.1369071	0.27811364	2.3244552	20	—	—
231457 2007 JN_{31}	17.1	X	93.15672	191.07243	73.19175	5.92764	0.1661189	0.25174343	2.4840707	20	11 13.9	20.9
231458 2007 LN_{19}	15.6	X	31.43119	329.67067	260.58881	10.93855	0.1436239	0.23228468	2.6209315	20	7 2.1	18.4
231459 2007 LV_{24}	16.7	X	244.59870	71.36826	85.74003	6.14235	0.1303798	0.26335276	2.4105204	20	12 10.3	19.4
231460 2007 MG_{7}	16.6	X	332.47445	171.54966	124.05105	2.53524	0.1454218	0.22978963	2.6398694	20	6 14.1	19.2
231461 2007 MC_{26}	16.6	X	256.02886	218.70441	95.79036	11.04381	0.1745395	0.28603582	2.2813352	20	3 20.6	20.2
231462 2007 OL_{7}	15.4	X	108.02742	259.50433	109.34492	11.29498	0.0749745	0.18720655	3.0263700	20	—	—
231463 2007 PO	15.0	X	6.75750	294.70048	129.76293	17.95522	0.0958092	0.17765415	3.1339049	20	—	—
231464 2007 PR_{4}	13.4	X	325.56070	213.20826	173.96718	10.16860	0.0581281	0.08207080	5.2441719	20	9 22.2	20.0
231465 2007 PS_{4}	16.5	X	319.83775	51.41754	207.69812	4.39085	0.1213210	0.21170617	2.7881344	20	4 4.1	19.9
231466 2007 PJ_{13}	16.1	X	9.06678	165.78215	124.97349	12.59331	0.1922247	0.22930391	2.6435959	20	8 29.1	18.7
231467 2007 PZ_{19}	14.5	X	105.91514	8.82951	326.03250	15.44401	0.1397233	0.17749477	3.1357807	20	—	—
231468 2007 PT_{26}	14.8	X	259.03112	206.54247	307.04907	26.72777	0.1573098	0.17568088	3.1573282	20	11 26.8	19.7
231469 2007 PR_{34}	15.4	X	355.66487	109.79874	147.24551	13.82567	0.1365698	0.21892229	2.7265244	20	6 5.3	18.6
231470 Bedding	16.2	X	44.20068	64.32321	53.67458	2.62310	0.0653455	0.19582784	2.9368815	20	2 15.1	19.9
231471 2007 TP_{185}	15.2	X	334.50716	252.03126	135.50583	3.23860	0.0581232	0.15324834	3.4583758	20	10 17.2	19.9
231472 2007 TX_{241}	15.4	X	279.96918	266.07110	280.89180	3.86356	0.0943074	0.18049928	3.1008855	20	—	—
231473 2007 TL_{408}	15.5	X	147.58111	298.09594	77.23162	10.89806	0.0440607	0.18119470	3.0929463	20	2 21.9	20.2
231474 2007 UX_{82}	17.4	X	330.28287	16.41445	228.73273	2.01791	0.1439224	0.27303491	2.3531915	20	3 22.3	19.6
231475 2007 VO_{3}	15.2	X	245.01028	276.15784	93.20421	10.87312	0.1707351	0.20521647	2.8466096	20	5 19.1	19.7
231476 2007 VC_{261}	16.6	X	190.51858	143.19405	29.39655	9.60560	0.1549118	0.22116227	2.7080833	20	10 17.4	20.9
231477 2008 EH_{149}	17.0	X	85.32143	352.16493	342.35521	6.46333	0.2064488	0.29198096	2.2502617	20	—	—
231478 2008 GB_{63}	16.4	X	331.34942	286.84045	223.29510	3.10469	0.0477104	0.22668287	2.6639347	20	—	—
231479 2008 HQ_{45}	16.7	X	149.00681	118.08583	199.85275	7.96238	0.2171305	0.21490092	2.7604330	20	—	—
231480 2008 HO_{61}	16.6	X	249.70450	27.15386	234.82847	1.45115	0.1583259	0.22521722	2.6754796	20	1 11.3	20.9
231481 2008 JZ_{25}	17.2	X	223.19615	34.51579	230.51040	7.06747	0.1544606	0.30075604	2.2062759	20	—	—
231482 2008 KL	17.3	X	203.05516	52.85922	235.19994	1.45615	0.1849463	0.29941200	2.2128735	20	—	—
231483 2008 OD_{18}	14.8	X	79.63695	9.84235	268.21104	16.87391	0.1422602	0.17393754	3.1783899	20	10 28.6	19.8
231484 2008 OZ_{18}	15.0	X	40.34675	274.90391	49.29546	27.14186	0.1544124	0.17920477	3.1158008	20	11 13.5	19.2
231485 2008 OA_{22}	17.4	X	6.10400	358.90921	161.86539	3.28856	0.0392270	0.29591084	2.2302941	20	1 28.2	19.8
231486 Capefearrock	17.3	X	188.32563	170.06082	146.35781	4.86746	0.1943226	0.29249336	2.2476329	20	1 14.9	20.8
231487 2008 PQ_{3}	16.2	X	283.29952	117.84472	234.02690	9.05225	0.0844270	0.24178156	2.5518429	20	6 21.9	19.4
231488 2008 PO_{6}	15.8	X	355.66390	202.63707	159.57065	8.17506	0.1696738	0.25666700	2.4522008	20	11 21.2	18.4
231489 2008 PG_{15}	17.3	X	308.44810	203.74628	153.90062	4.00067	0.1909300	0.24412138	2.5355110	20	7 25.8	19.8
231490 2008 QO_{7}	16.3	X	207.70711	287.44012	138.57502	12.39737	0.1892058	0.23201419	2.6229681	20	6 20.7	20.7
231491 2008 QL_{17}	16.8	X	199.90645	182.75260	174.69846	4.05777	0.1080037	0.21560287	2.7544381	20	3 21.9	21.2
231492 2008 QD_{18}	15.6	X	54.48630	84.04363	274.88051	12.87652	0.2440733	0.18023987	3.1038601	20	—	—
231493 2008 QT_{19}	13.2	X	312.23024	198.18037	195.69727	17.63494	0.0682827	0.08457242	5.1402416	20	9 9.8	19.9
231494 2008 QL_{24}	15.5	X	158.27988	154.63849	304.03921	13.07803	0.0555000	0.22618092	2.6678746	20	6 12.8	19.5
231495 2008 QJ_{27}	16.2	X	171.27039	266.85986	107.37550	5.88016	0.1760550	0.21361435	2.7715057	20	3 19.6	20.8
231496 2008 QU_{29}	16.9	X	47.86540	350.70636	342.63895	4.77180	0.1178365	0.26263091	2.4149353	20	12 18.7	20.1
231497 2008 QU_{33}	16.4	X	274.95209	166.04399	161.76828	3.28648	0.1296266	0.22773401	2.6557312	20	5 2.8	19.9
231498 2008 QK_{38}	16.4	X	241.00331	263.34408	118.78730	12.30296	0.2062535	0.23061287	2.6335830	20	5 28.0	20.7
231499 2008 QQ_{40}	17.0	X	185.25325	12.00273	234.32276	2.17196	0.0501766	0.26976929	2.3721440	20	—	—
231500 2008 QY_{42}	15.0	X	101.83344	25.00868	245.53978	8.97436	0.0483381	0.17214540	3.2004112	20	11 5.2	19.8
231501 2008 QV_{43}	15.0	X	86.16103	333.38219	60.71050	11.30293	0.1513988	0.19761533	2.9191447	20	1 10.1	18.9
231502 2008 RD_{2}	16.2	X	209.09971	217.02546	154.40633	2.48577	0.0959092	0.21988724	2.7185419	20	4 18.4	20.3
231503 2008 RN_{12}	16.3	X	3.27098	270.03610	150.53813	6.08436	0.1461272	0.17888003	3.1195706	20	—	—
231504 2008 RZ_{14}	16.3	X	56.81141	72.67431	327.66240	8.31705	0.1285190	0.18937475	3.0032259	20	—	—
231505 2008 RV_{33}	16.2	X	342.31369	339.70271	210.95585	3.57701	0.0387672	0.20954912	2.8072353	20	2 16.5	19.9
231506 2008 RB_{43}	16.8	X	40.26556	104.61154	169.82033	4.20515	0.0362471	0.24181351	2.5516181	20	9 3.8	20.0
231507 2008 RN_{44}	16.1	X	58.83179	57.09510	24.38445	2.30717	0.0512606	0.19950616	2.9006713	20	1 18.3	19.9
231508 2008 RD_{51}	17.3	X	245.06020	283.95038	249.55166	4.10000	0.0626692	0.26959957	2.3731394	20	—	—
231509 2008 RT_{69}	13.0	X	280.86557	229.68311	195.80047	7.67941	0.0895275	0.08063600	5.3061975	20	9 5.1	19.9
231510 2008 RC_{84}	16.7	X	160.27249	168.68049	252.15802	2.54345	0.0992229	0.22131872	2.7068069	20	4 28.1	20.8
231511 2008 RK_{102}	16.1	X	62.67610	264.90664	134.04101	3.21691	0.1052572	0.18862496	3.0111793	20	—	—
231512 2008 RD_{109}	15.2	X	8.93423	323.08655	77.16302	14.19826	0.1614807	0.17687159	3.1431419	20	—	—
231513 2008 RA_{113}	16.0	X	117.86290	81.48624	320.02396	5.12872	0.0645178	0.20334655	2.8640341	20	2 14.3	19.9
231514 2008 RW_{113}	16.2	X	306.29929	240.05320	197.26378	1.07707	0.1470730	0.17286375	3.1915386	20	11 4.2	20.0
231515 2008 RD_{117}	16.0	X	197.69738	262.70213	127.71147	12.63979	0.1197097	0.21861670	2.7290646	20	5 4.1	20.5
231516 2008 RK_{124}	13.2	X	245.07349	118.52953	348.89512	3.13293	0.0709311	0.08193667	5.2498938	20	9 16.4	20.3
231517 2008 SH_{29}	15.9	X	172.97509	152.08159	242.97132	2.34900	0.0809551	0.21430405	2.7655560	20	4 8.4	20.1
231518 2008 SJ_{33}	17.1	X	208.40725	213.82034	155.27368	2.12300	0.1321195	0.22215222	2.7000322	20	4 13.3	21.2
231519 2008 SO_{35}	16.0	X	317.21205	52.25008	47.42703	1.45366	0.1420112	0.17465569	3.1696713	20	12 21.9	19.6
231520 2008 SK_{38}	16.0	X	150.48566	232.47544	177.27491	4.45524	0.0673896	0.21154183	2.7895782	20	4 2.8	19.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231521 2008 SF_{43}	16.8	X	6.07284	276.66056	157.25892	1.18761	0.1853606	0.18297814	3.0728162	20	—	—
231522 2008 SD_{44}	16.2	X	81.66684	26.40195	199.62414	4.96361	0.0600491	0.23675222	2.5878554	20	8 26.9	19.8
231523 2008 SX_{45}	16.5	X	309.89433	154.93183	183.77519	5.05031	0.2465360	0.23615595	2.5922096	20	6 19.6	19.3
231524 2008 SA_{56}	16.5	X	261.10481	159.62161	188.30821	3.99362	0.0838425	0.22349222	2.6892289	20	5 18.5	20.3
231525 2008 SX_{81}	16.2	X	168.07341	84.82201	15.86179	6.56882	0.1314328	0.22202457	2.7010670	20	6 28.0	20.6
231526 2008 SV_{82}	16.0	X	285.08170	47.39700	310.54127	12.17067	0.1797976	0.23235236	2.6204225	20	6 18.2	19.5
231527 2008 SU_{84}	15.6	X	39.82659	356.98110	44.07441	2.96027	0.0433103	0.18058050	3.0999557	20	—	—
231528 2008 SV_{103}	16.4	X	75.57021	97.22590	17.55703	2.08687	0.0247981	0.20648176	2.8349686	20	3 18.4	20.2
231529 2008 SG_{105}	16.2	X	144.72191	347.64851	50.17942	2.80168	0.0743104	0.20451484	2.8531165	20	3 14.4	20.3
231530 2008 SR_{105}	16.2	X	76.70440	28.13243	48.01886	2.57914	0.0884166	0.19680016	2.9272002	20	2 10.3	20.1
231531 2008 SL_{106}	16.4	X	197.32475	228.31501	152.13517	1.70495	0.0895656	0.21404207	2.7678122	20	4 17.6	20.6
231532 2008 SK_{126}	16.6	X	36.18387	143.58756	327.65933	2.50828	0.0806451	0.19575714	2.9375886	20	1 25.8	20.2
231533 2008 SR_{128}	16.6	X	65.18931	170.58731	0.39807	5.35701	0.0128872	0.21732554	2.7398631	20	5 12.8	20.3
231534 2008 SS_{134}	16.2	X	164.07876	255.43445	243.06165	4.65220	0.0937508	0.23581738	2.5946902	20	8 10.2	20.1
231535 2008 ST_{147}	16.7	X	234.95907	153.82512	193.84229	2.02661	0.1055446	0.21947124	2.7219761	20	4 14.6	20.7
231536 2008 SV_{156}	16.5	X	96.04180	57.18095	336.05106	0.98678	0.1453233	0.19840266	2.9114168	20	1 20.7	20.4
231537 2008 SB_{163}	15.7	X	23.38975	298.90973	79.07230	2.15705	0.1654713	0.17616548	3.1515353	20	12 28.3	19.7
231538 2008 SO_{164}	15.5	X	205.78317	219.39448	87.98344	3.28431	0.0464657	0.20279410	2.8692332	20	1 29.5	19.7
231539 2008 SG_{165}	15.6	X	61.77201	206.83731	167.88872	4.82689	0.1052190	0.18278736	3.0749539	20	—	—
231540 2008 SU_{173}	15.5	X	46.39966	97.36841	299.51611	12.77082	0.1133039	0.18636599	3.0354630	20	—	—
231541 2008 SF_{174}	16.6	X	111.87444	243.07952	180.08285	1.94253	0.0561185	0.20311891	2.8661735	20	3 3.6	20.4
231542 2008 SV_{179}	16.2	X	11.86181	85.69768	24.99981	3.13742	0.1316009	0.18889838	3.0082729	20	—	—
231543 2008 SR_{218}	16.1	X	171.59407	70.43615	295.26859	2.80139	0.1155646	0.20949061	2.8077580	20	3 3.6	20.4
231544 2008 SO_{219}	16.1	X	58.26288	15.21667	340.53474	4.73156	0.1543123	0.18062431	3.0994543	20	—	—
231545 2008 SR_{244}	16.3	X	249.98557	195.64050	163.10946	6.55970	0.0644075	0.22468742	2.6796838	20	5 22.3	20.1
231546 2008 SU_{244}	16.0	X	246.42173	319.28376	42.95339	6.74464	0.0350179	0.22423353	2.6832986	20	5 23.9	19.6
231547 2008 SU_{245}	15.9	X	165.58780	287.85253	122.76073	5.66383	0.0684451	0.21385275	2.7694455	20	4 22.9	20.0
231548 2008 SO_{248}	16.1	X	54.95430	102.32956	83.70827	2.80720	0.0067395	0.21976233	2.7195719	20	5 20.4	19.8
231549 2008 SS_{254}	16.1	X	31.75956	27.71978	252.80619	8.81231	0.0489554	0.24174819	2.5520777	20	8 28.1	19.6
231550 2008 SV_{258}	15.9	X	56.27933	264.33197	242.97182	6.41331	0.1645552	0.21121949	2.7924156	20	4 19.5	19.3
231551 2008 SJ_{266}	15.6	X	246.27645	64.97372	124.56818	4.44423	0.0642643	0.17791705	3.1308169	20	—	—
231552 2008 SB_{269}	15.4	X	69.41059	96.30470	278.28233	8.89486	0.0533934	0.18530284	3.0470622	20	—	—
231553 2008 SS_{274}	16.6	X	95.30675	230.05713	220.03655	2.96710	0.0091468	0.21005607	2.8027169	20	3 8.3	20.5
231554 2008 SP_{296}	16.8	X	29.37361	346.91383	124.68108	6.53085	0.0430912	0.28152160	2.3056581	20	—	—
231555 Christianeurda	15.9	X	143.11532	37.83173	328.18784	4.03123	0.0513104	0.19686184	2.9265887	20	1 31.5	20.2
231556 2008 TT_{4}	16.3	X	102.58985	262.42721	198.76780	4.28494	0.0194945	0.21340370	2.7733292	20	4 3.1	19.9
231557 2008 TQ_{27}	16.1	X	296.40999	84.05488	13.86717	6.33380	0.1447722	0.17062664	3.2193744	20	11 12.3	20.1
231558 2008 TQ_{41}	16.2	X	40.86661	77.77292	329.40424	9.86433	0.0831849	0.18417086	3.0595351	20	—	—
231559 2008 TC_{46}	15.6	X	299.31890	186.18480	77.81794	5.53946	0.0585870	0.21041191	2.7995561	20	3 25.6	19.4
231560 2008 TV_{50}	16.5	X	77.59282	251.17269	173.49638	2.01977	0.0735894	0.19701729	2.9250491	20	1 24.7	20.2
231561 2008 TH_{59}	15.3	X	336.71439	37.94990	31.27566	8.89684	0.0351115	0.17404793	3.1770458	20	12 11.6	19.7
231562 2008 TE_{63}	16.0	X	29.61187	106.52985	334.36240	0.29247	0.0292758	0.18854581	3.0120219	20	—	—
231563 2008 TR_{71}	16.0	X	168.96212	24.48270	89.02421	4.86570	0.0555757	0.22636995	2.6663891	20	7 15.4	19.8
231564 2008 TA_{74}	16.2	X	222.96458	340.20675	22.76635	6.06598	0.0563518	0.21496036	2.7599241	20	4 23.9	20.1
231565 2008 TP_{129}	15.4	X	296.39823	135.37802	358.83557	8.06143	0.0474160	0.17857044	3.1231751	20	—	—
231566 2008 TQ_{146}	16.2	X	309.84315	312.29265	141.75724	2.39311	0.1170876	0.17374814	3.1806993	20	12 3.9	20.1
231567 2008 TT_{163}	16.4	X	202.51166	49.98308	280.82414	0.95667	0.0628239	0.20430635	2.8550571	20	2 21.9	20.5
231568 2008 TJ_{164}	15.4	X	10.35551	200.78604	102.99134	16.21858	0.0947840	0.23678926	2.5875855	20	9 14.3	18.7
231569 2008 TU_{165}	15.2	X	103.07566	217.89149	295.74975	14.39262	0.0623660	0.22041673	2.7141865	20	6 19.4	19.1
231570 2008 TF_{180}	15.0	X	110.49632	235.75148	73.48659	12.04096	0.0766278	0.18312083	3.0712197	20	—	—
231571 2008 UP_{3}	16.5	X	96.27014	290.81210	131.93494	2.90326	0.0868065	0.20028756	2.8931219	20	2 18.0	20.4
231572 2008 UN_{9}	13.4	X	301.15709	42.16255	28.36180	4.57689	0.0225618	0.08482724	5.1299425	20	10 14.8	20.2
231573 2008 UK_{28}	16.2	X	40.55956	38.83316	183.49309	2.75117	0.0079395	0.22182367	2.7026976	20	6 18.8	19.9
231574 2008 UF_{57}	16.0	X	284.65035	118.87195	56.44643	6.87793	0.0896960	0.18319366	3.0704057	20	—	—
231575 2008 UO_{57}	16.5	X	138.83380	172.74177	77.42263	2.22170	0.1439901	0.25550721	2.4596158	20	12 7.9	20.1
231576 2008 UX_{68}	15.7	X	104.69565	305.29209	159.10326	7.76476	0.0279234	0.21207155	2.7849310	20	4 13.9	19.5
231577 2008 UQ_{94}	16.0	X	272.42099	60.24754	312.23451	13.30763	0.1074920	0.23312504	2.6146291	20	7 3.5	19.5
231578 2008 UC_{155}	16.1	X	266.16140	31.66737	181.92191	2.19721	0.0788766	0.18979533	2.9987875	20	—	—
231579 2008 UG_{170}	15.2	X	319.10258	173.14996	266.17579	4.05107	0.1078533	0.17108766	3.2135885	20	11 29.0	19.0
231580 2008 UV_{181}	16.0	X	109.71667	162.26524	172.24717	3.69814	0.0615203	0.18272792	3.0756208	20	—	—
231581 2008 UR_{196}	15.8	X	202.54098	87.98283	131.60957	2.96299	0.0802957	0.17499775	3.1655396	20	12 22.4	20.5
231582 2008 US_{216}	16.2	X	332.58357	348.71274	230.08795	1.06990	0.0182701	0.20737056	2.8268623	20	3 13.7	19.9
231583 2008 UY_{219}	15.7	X	178.54748	296.61500	1.00531	2.04183	0.0460631	0.18795902	3.0182875	20	—	—
231584 2008 UG_{255}	16.0	X	239.98524	178.19533	57.55144	4.05659	0.1294617	0.18597178	3.0397511	20	—	—
231585 2008 UH_{256}	16.4	X	118.95832	237.02317	192.07462	1.71241	0.0501948	0.20299386	2.8673505	20	3 18.9	20.4
231586 2008 UP_{266}	16.0	X	70.79457	312.34246	13.19977	4.51664	0.1119613	0.17175608	3.2052455	20	12 13.5	20.8
231587 2008 UL_{274}	15.7	X	74.68193	12.90121	3.62791	1.35541	0.0673971	0.18115144	3.0934388	20	—	—
231588 2008 UH_{277}	16.8	X	62.80594	210.37072	54.95689	0.70430	0.1759937	0.24239576	2.5475304	20	10 13.6	20.3
231589 2008 UZ_{311}	14.7	X	169.37593	1.24749	270.87362	13.08095	0.0762713	0.17832603	3.1260282	20	—	—
231590 2008 UZ_{315}	15.9	X	164.11509	81.91908	265.35275	4.98930	0.0772544	0.19927489	2.9029150	20	2 1.3	20.2
231591 2008 UP_{336}	16.0	X	220.81016	288.38510	10.20179	2.23708	0.0562182	0.19681575	2.9270456	20	2 4.9	20.3
231592 2008 UG_{346}	17.0	X	5.64260	341.03331	104.84296	3.68679	0.1686331	0.25628013	2.4546680	20	—	—
231593 2008 UW_{353}	15.9	X	187.03754	129.77271	134.06248	1.78622	0.1265017	0.17904746	3.1176255	20	—	—
231594 2008 US_{358}	15.1	X	18.57269	234.22495	149.81619	18.82132	0.1515365	0.17063782	3.2192338	20	12 26.5	19.6
231595 2008 VF_{70}	16.2	X	318.42651	357.11004	253.43742	4.17850	0.1062014	0.21398973	2.7682635	20	3 21.9	19.9
231596 2008 WQ	16.7	X	66.62984	278.80660	251.65073	2.44044	0.1332786	0.21484144	2.7609424	20	6 3.0	20.1
231597 2008 WV_{35}	15.9	X	188.61128	199.60312	53.50205	1.30815	0.1260272	0.17666850	3.1455503	20	—	—
231598 2008 YE_{135}	16.3	X	228.25252	179.28721	238.99557	4.94785	0.0397325	0.22231732	2.6986953	20	7 14.1	20.0
231599 2008 YJ_{149}	15.8	X	291.44041	279.39034	104.97786	16.48968	0.2042068	0.22825423	2.6516945	20	8 1.2	18.9
231600 2009 AA_{19}	16.8	X	147.62504	260.32018	110.01637	7.16415	0.1300827	0.27324570	2.3519811	20	2 10.6	20.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231601 2009 BW_{68}	17.2	X	60.90963	216.98341	178.26373	1.36746	0.1940798	0.25788177	2.4444939	20	—	—
231602 2009 BD_{131}	17.0	X	238.07178	304.46377	117.08195	6.95370	0.0841634	0.29871079	2.2163352	20	8 1.6	19.5
231603 2009 CD_{16}	17.1	X	36.38057	204.11775	218.59633	1.90906	0.1819765	0.25667715	2.4521361	20	—	—
231604 2009 FG_{74}	17.4	X	283.57663	293.46616	345.24509	3.20832	0.0728264	0.26139461	2.4225437	20	3 13.9	20.3
231605 2009 HN_{60}	16.2	X	250.46940	59.34269	153.59669	4.40558	0.1646324	0.23765628	2.5812883	20	—	—
231606 2009 HN_{102}	15.9	X	56.55248	127.79578	79.26603	10.36514	0.0813533	0.18626287	3.0365832	20	6 29.1	20.0
231607 2009 JQ_{12}	17.0	X	70.29799	128.73168	59.90937	2.66046	0.0515101	0.27586090	2.3370927	20	6 22.1	19.6
231608 2009 QK_4	17.3	X	305.21119	53.08192	312.01507	5.11276	0.1547861	0.26418184	2.4054744	20	8 8.6	19.7
231609 2009 RV	16.0	X	1.63948	190.34076	191.55249	9.35139	0.1186619	0.18814879	3.0162576	20	11 29.9	19.8
231610 2009 RK_{12}	14.1	X	282.28502	315.27405	109.42241	0.59879	0.1218183	0.08256098	5.2233945	20	9 3.7	20.9
231611 2009 RC_{62}	15.2	X	329.72829	217.31797	199.39185	11.87762	0.1642199	0.18324943	3.0697827	20	11 22.6	18.7
231612 2009 RO_{64}	13.5	X	189.27791	315.18293	205.96346	4.21072	0.0140595	0.08282108	5.2124524	20	9 21.4	20.4
231613 2009 SQ_{25}	12.8	X	263.47879	262.35158	196.40818	13.05170	0.1190410	0.08615912	5.0769384	20	9 19.7	19.6
231614 2009 SQ_{38}	17.2	X	343.34758	340.14418	2.98970	4.91519	0.1773098	0.26654517	2.3912345	20	9 28.2	18.7
231615 2009 SK_{78}	12.7	X	262.91859	241.78720	202.00454	25.42480	0.0973403	0.08393025	5.1664277	20	9 2.1	19.8
231616 2009 SR_{96}	17.6	X	171.46387	253.44983	48.67516	4.83457	0.2237525	0.30171914	2.2015783	20	—	—
231617 2009 SW_{102}	17.7	X	14.14720	152.71400	216.34881	19.64862	0.1699730	0.37482705	1.9050897	20	—	—
231618 2009 SF_{104}	17.5	X	27.96905	204.15898	88.54451	4.00706	0.2323383	0.26947511	2.3738701	20	10 20.2	20.1
231619 2009 SJ_{108}	17.6	X	120.15299	210.29648	161.58342	1.47557	0.2120967	0.30529655	2.1843461	20	1 15.6	20.0
231620 2009 SY_{128}	13.1	X	282.71679	6.27177	67.93790	3.10513	0.1240059	0.08298014	5.2057894	20	9 16.0	19.9
231621 2009 SB_{132}	13.5	X	189.97847	1.05392	165.35075	5.36380	0.0639220	0.08408132	5.1602378	20	9 27.7	20.7
231622 2009 SX_{159}	16.2	X	200.68803	307.07694	0.58476	8.27097	0.1172868	0.22022429	2.7157674	20	1 24.6	20.5
231623 2009 SR_{207}	12.9	X	276.72858	237.12265	205.95203	18.69107	0.0980593	0.08486452	5.1284398	20	9 18.3	19.7
231624 2009 SN_{232}	16.9	X	305.18358	357.19387	31.35916	11.54005	0.1787872	0.26718905	2.3873913	20	9 19.1	19.0
231625 2009 SO_{255}	14.7	X	290.58441	319.37696	106.08207	27.31689	0.1455611	0.17235798	3.1977791	20	10 8.7	19.4
231626 2009 SU_{258}	15.6	X	66.63591	223.53639	271.48877	11.35351	0.0663408	0.21317392	2.7753217	20	3 31.1	19.5
231627 2009 SU_{345}	16.9	X	209.81406	54.81208	29.21775	3.64791	0.1765839	0.25399789	2.4693500	20	7 17.5	20.8
231628 2009 SY_{351}	16.3	X	307.37748	197.03237	296.31452	3.18582	0.2076501	0.17940035	3.1135357	20	—	—
231629 2009 TH_{13}	16.2	X	288.64937	119.84263	118.88787	4.81548	0.0412950	0.22283210	2.6945374	20	2 7.4	19.9
231630 2009 TW_{24}	15.5	X	293.22891	228.83449	210.38808	8.99775	0.1964824	0.17880260	3.1204711	20	10 10.2	19.1
231631 2009 TV_{41}	12.8	X	299.03233	123.52161	314.94430	9.51952	0.0583078	0.08517591	5.1159333	20	10 12.9	19.6
231632 2009 UZ_{12}	15.8	X	27.30455	342.71989	55.90622	9.36022	0.0893264	0.19533862	2.9417830	20	—	—
231633 2009 UV_{26}	15.4	X	51.51690	269.76872	65.33077	11.09544	0.1336498	0.18387285	3.0628400	20	12 8.6	19.6
231634 2009 UD_{36}	15.1	X	178.71616	344.28858	210.83828	10.20838	0.0341737	0.17926108	3.1151482	20	11 2.7	19.6
231635 2009 UV_{71}	16.0	X	254.62467	251.40440	52.27040	4.33029	0.0448501	0.22815329	2.6524766	20	3 19.6	19.7
231636 2009 UP_{84}	13.4	X	265.20954	25.99964	84.67942	6.53622	0.0272687	0.08140432	5.2727568	20	10 19.9	20.3
231637 2009 UK_{88}	15.3	X	340.73995	214.54975	203.65600	11.27556	0.0788295	0.18439101	3.0570993	20	12 9.4	19.3
231638 2009 UY_{88}	15.9	X	59.12695	190.71597	143.69415	2.39117	0.1363784	0.18821702	3.0155286	20	12 18.3	20.2
231639 2009 UC_{127}	16.2	X	5.28236	284.47046	246.16585	6.43468	0.0849160	0.21797339	2.7344316	20	2 17.2	19.6
231640 2009 UJ_{129}	17.4	X	39.34582	333.55455	6.89804	5.52219	0.1771803	0.27755315	2.3275835	20	12 29.9	20.6
231641 2009 UO_{138}	16.2	X	299.91980	312.71204	82.25043	24.83181	0.2652125	0.26395148	2.4068738	20	9 13.6	19.0
231642 2009 UY_{140}	15.9	X	160.27194	280.38074	97.28860	13.76728	0.1746254	0.21158264	2.7892195	20	3 17.9	20.7
231643 2009 VJ_2	15.6	X	73.74839	222.83029	256.27258	24.28661	0.3267066	0.21535956	2.7565124	20	5 3.4	19.5
231644 2009 VV_{61}	16.6	X	287.20261	253.71123	64.18781	3.61391	0.0961816	0.23831302	2.5765439	20	5 9.8	20.0
231645 2009 VQ_{88}	16.2	X	214.52685	338.89645	304.67670	4.57588	0.0324371	0.20379060	2.8598721	20	1 10.2	20.4
231646 2009 VX_{103}	15.7	X	75.73361	252.28182	94.55611	11.67912	0.1237524	0.18821460	3.0155545	20	—	—
231647 2009 VD_{110}	15.5	X	22.55000	312.56734	61.85886	12.47377	0.1283418	0.18155919	3.0888054	20	12 18.2	19.6
231648 2009 VV_{112}	16.2	X	337.84781	171.01048	214.37725	1.05209	0.0735223	0.17138137	3.2099158	20	10 21.4	20.2
231649 Korotkiy	16.0	X	181.93015	188.79478	207.24733	9.49667	0.0190973	0.22950651	2.6420400	20	4 18.4	19.6
231650 2009 WZ_8	16.3	X	21.73089	85.16024	68.72461	7.14036	0.0069627	0.21790103	2.7350370	20	2 27.5	20.1
231651 2009 WE_9	17.0	X	253.05379	322.13214	139.91070	2.07971	0.1160162	0.26204343	2.4185433	20	10 10.5	19.8
231652 2009 WE_{24}	16.8	X	136.65006	119.76051	241.35891	4.26255	0.2025359	0.30393712	2.1908546	20	1 19.5	19.7
231653 2009 WH_{24}	16.7	X	242.14510	191.08876	175.76379	2.68727	0.2506615	0.23990576	2.5651274	20	5 3.5	20.8
231654 2009 WD_{163}	15.9	X	76.80441	254.14932	59.03264	5.75712	0.1819786	0.18243134	3.0789531	20	12 15.1	20.7
231655 2009 WW_{164}	15.5	X	61.48746	59.40242	260.59694	3.99199	0.1330372	0.17815883	3.1279837	20	12 1.1	20.0
231656 2009 WT_{165}	16.3	X	250.51781	206.18495	36.23741	2.50769	0.0137512	0.20119796	2.8843879	20	1 3.4	20.2
231657 2009 WE_{166}	15.8	X	147.95382	31.59690	265.54467	3.10058	0.0257606	0.18980228	2.9987143	20	—	—
231658 2009 WG_{183}	17.5	X	124.29210	309.02156	84.72238	7.40550	0.0964124	0.30719910	2.1753180	20	2 4.3	20.0
231659 2009 WE_{237}	15.4	X	325.31544	296.17858	200.39634	7.89738	0.0264857	0.19637862	2.9313876	20	—	—
231660 2009 XK_2	17.0	X	27.04975	221.93868	268.07154	5.36692	0.1014750	0.29512238	2.2342647	20	1 13.6	18.9
231661 2009 XQ_{19}	15.1	X	287.22973	45.28233	113.54895	10.08853	0.0927640	0.17972859	3.1097437	20	—	—
231662 2009 XO_{21}	15.4	X	20.20675	284.47635	281.90944	15.02005	0.0833362	0.21898154	2.7260326	20	4 28.3	19.0
231663 2009 XA_{22}	15.0	X	355.69102	24.46344	85.92415	12.35297	0.0634974	0.18926579	3.0043784	20	—	—
231664 2009 YL_6	13.2	X	303.07561	348.58898	48.69693	4.51617	0.0450792	0.08516308	5.1164471	20	9 9.3	19.8
231665 7602 $P\text{–}L$	15.6	X	18.63199	359.08734	28.52746	6.80081	0.2661614	0.18282609	3.0745196	20	—	—
231666 Aisymnos	12.7	X	262.53049	206.79838	237.22645	5.26718	0.0524941	0.08056665	5.3092420	20	9 9.2	19.7
231667 1981 EU_5	16.9	X	298.65746	251.93515	252.27912	6.03983	0.1348028	0.27057595	2.3674269	20	—	—
231668 1981 EK_{28}	15.9	X	191.17993	158.61864	351.73696	14.49918	0.1089536	0.23794745	2.5791821	20	9 23.4	19.8
231669 1993 FC_{50}	15.8	X	194.70252	1.86268	186.20169	17.68978	0.0978384	0.23745874	2.5827197	20	11 18.9	19.8
231670 1993 UN_5	15.7	X	334.91802	322.04016	74.75512	7.50649	0.1837995	0.18283966	3.0743675	20	11 6.5	19.0
231671 1994 AH_{10}	15.8	X	97.47197	54.82752	325.08161	7.72365	0.1116216	0.18743644	3.0238949	20	1 4.1	19.9
231672 1994 EN_4	15.9	X	95.48503	112.63767	172.13424	5.54385	0.1514060	0.24629289	2.5205857	20	12 9.1	19.8
231673 1994 LD_6	14.8	X	320.67754	125.47508	68.75023	16.46576	0.2551061	0.18133048	3.0914022	20	—	—
231674 1994 PG_6	16.4	X	11.25884	332.07390	328.85599	3.37325	0.2221720	0.22879514	2.6475135	20	9 18.6	18.8
231675 1994 RV_5	17.1	X	339.99480	338.33115	201.06611	3.67534	0.0945753	0.28539122	2.2847691	20	1 9.3	19.7
231676 1995 BU_{10}	17.0	X	5.65056	309.76298	92.25746	2.48703	0.1825391	0.26528058	2.3988278	20	—	—
231677 1995 FT_{19}	17.1	X	140.80007	270.48784	28.29836	1.93570	0.1861986	0.26194083	2.4191748	20	—	—
231678 1995 QC_1	17.2	X	128.28415	230.41117	160.27660	5.16320	0.1881091	0.29708304	2.2244235	20	2 17.7	20.1
231679 1995 QE_1	15.8	X	119.07889	146.37076	162.66377	5.23425	0.1400706	0.16962526	3.2320324	20	—	—
231680 1995 SW_6	16.2	X	196.91765	93.76877	353.57400	15.32224	0.1822550	0.22922882	2.6441733	20	7 10.8	20.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231681 1995 SX_{39}	15.7	X	140.80017	320.10443	9.80314	3.58576	0.1047419	0.17402311	3.1773479	20	—	—
231682 1995 UK_{16}	16.4	X	88.83650	53.80971	114.57521	3.28125	0.1368627	0.22214048	2.7001273	20	6 30.8	20.0
231683 1995 UD_{67}	18.0	X	310.56147	283.17293	331.52306	2.97971	0.1203698	0.30307147	2.1950244	20	3 5.3	20.3
231684 1996 BV_{7}	16.0	X	307.82345	354.61537	297.48344	7.91140	0.1140349	0.21480434	2.7612603	20	4 28.6	19.7
231685 1996 GL_{5}	15.8	X	30.20560	354.94437	161.96772	6.11020	0.0156360	0.20332053	2.8642784	20	3 12.1	19.5
231686 1996 TG_{16}	15.1	X	303.52659	203.57887	340.76425	15.60111	0.0316884	0.18132348	3.0914817	20	—	—
231687 1996 TV_{47}	16.2	X	100.13360	255.31658	27.35087	2.62907	0.2028699	0.25151017	2.4856064	20	12 13.5	20.3
231688 1996 VG_{1}	16.8	X	228.53523	37.36332	38.70532	4.03305	0.2243966	0.23744250	2.5828374	20	7 20.7	20.8
231689 1996 VV_{37}	17.1	X	255.34607	253.81888	159.50517	5.33930	0.2663491	0.23843193	2.5756871	20	7 11.9	20.9
231690 1997 GA_{29}	16.6	X	338.22849	92.62221	183.96471	5.37742	0.0156777	0.22050721	2.7134439	20	6 6.6	20.2
231691 1997 RX_{10}	15.8	X	304.00333	57.99807	180.31585	4.49207	0.0542936	0.19898562	2.9057278	20	2 26.1	19.8
231692 1997 WK_{14}	13.0	X	265.91415	32.38143	65.67082	13.05374	0.0374027	0.08044274	5.3146927	20	10 8.6	20.1
231693 1998 DR_{33}	15.7	X	164.73760	7.65469	163.50398	13.53330	0.1998239	0.24221831	2.5487744	20	9 23.9	19.9
231694 1998 HJ_{16}	16.4	X	116.66623	160.45555	87.10536	5.49100	0.1783639	0.24091226	2.5579779	20	11 14.3	20.6
231695 1998 HY_{41}	16.5	X	114.43417	158.01644	67.09949	5.98862	0.1654681	0.23856444	2.5747333	20	10 16.3	20.6
231696 1998 HV_{127}	15.9	X	91.84642	139.22230	15.22501	11.81025	0.1269392	0.22978800	2.6398818	20	6 13.3	19.7
231697 1998 MW_{23}	16.4	X	285.67663	10.69844	290.44799	3.37633	0.0837204	0.21584115	2.7524105	20	4 16.0	20.2
231698 1998 QC_{2}	15.1	X	264.82390	18.90573	305.85017	13.63063	0.2014064	0.21515433	2.7582650	20	3 30.9	19.7
231699 1998 QD_{85}	16.3	X	87.76615	136.35694	251.17484	4.49982	0.2584609	0.28644323	2.2791715	20	—	—
231700 1998 SU_{12}	16.4	X	29.46686	251.62496	156.21744	20.73767	0.3011383	0.27870629	2.3211589	20	—	—
231701 1998 SB_{21}	17.6	X	62.90038	172.35203	216.86703	0.29933	0.1230499	0.28276602	2.2988885	20	—	—
231702 1998 SJ_{45}	17.2	X	47.57970	234.78883	180.24260	4.80346	0.1504759	0.28343564	2.2952663	20	—	—
231703 1998 SE_{46}	16.1	X	263.47608	309.54299	16.99484	3.69537	0.0996603	0.20934563	2.8090542	20	4 20.4	20.2
231704 1998 SP_{103}	17.1	X	46.10118	14.50456	26.63250	6.54653	0.1922517	0.28179399	2.3041720	20	—	—
231705 1998 SX_{118}	15.1	X	5.27483	336.85109	16.24185	13.28416	0.1131851	0.18019746	3.1043470	20	10 23.8	19.0
231706 1998 SH_{132}	15.4	X	190.82116	12.61853	7.92339	15.50403	0.1443783	0.20628155	2.8368027	20	4 8.4	20.1
231707 1998 TP	15.5	X	55.73717	69.55171	44.78959	22.99198	0.2638690	0.28987365	2.2611544	20	3 24.8	17.7
231708 1998 UJ_{11}	16.9	X	102.03751	232.75425	169.20010	1.46419	0.1833230	0.19633105	2.9318611	20	2 13.2	20.9
231709 1998 UK_{41}	16.6	X	103.72483	290.78633	82.32375	4.39571	0.2562901	0.28574657	2.2828745	20	1 5.4	18.8
231710 1998 UL_{41}	15.8	X	328.67108	254.10983	180.40426	9.92582	0.2838490	0.18294717	3.0731629	20	12 16.2	18.6
231711 1998 VS_{56}	16.6	X	55.12131	188.04113	207.47275	5.86077	0.2171382	0.27974426	2.3154137	20	—	—
231712 1998 WZ_{4}	15.3	X	2.45670	259.48392	100.37431	28.16135	0.3236193	0.22463663	2.6800877	20	12 16.2	18.3
231713 1998 YQ_{20}	16.7	X	316.47794	56.53838	91.87027	4.76215	0.1148724	0.27423507	2.3463208	20	—	—
231714 1999 AZ_{12}	15.9	X	3.31555	167.15364	298.11289	10.82220	0.1963189	0.18371634	3.0645793	20	—	—
231715 1999 AB_{14}	17.7	X	245.43199	118.61595	102.65656	2.37989	0.1376841	0.27299509	2.3534203	20	—	—
231716 1999 BT_{2}	15.5	X	268.50407	144.73986	322.37234	23.85320	0.3405448	0.26412732	2.4058054	20	9 18.4	18.7
231717 1999 CK_{9}	15.5	X	279.21436	229.34571	313.53390	16.15746	0.1964303	0.17884318	3.1199991	20	—	—
231718 1999 CV_{11}	16.6	X	191.39351	266.74530	301.69382	17.73879	0.0593663	0.35530593	1.9742451	20	—	—
231719 1999 CS_{57}	16.0	X	246.00927	229.69632	346.28586	10.23309	0.2114717	0.26811761	2.3818760	20	—	—
231720 1999 CF_{78}	15.4	X	314.36984	237.66033	299.52078	8.61216	0.2280166	0.18100440	3.0951139	20	—	—
231721 1999 CW_{78}	14.9	X	206.06226	280.90662	325.06683	15.03137	0.1653019	0.17446983	3.1719219	20	—	—
231722 1999 CB_{115}	15.2	X	309.74972	248.62667	288.42750	8.03064	0.1708061	0.18073225	3.0982202	20	—	—
231723 1999 CH_{137}	16.3	X	191.34009	34.10403	215.73151	0.63681	0.1328575	0.17429549	3.1740367	20	—	—
231724 1999 CY_{146}	17.4	X	296.72986	272.43028	212.03551	0.62489	0.1427101	0.26645561	2.3917703	20	—	—
231725 1999 CL_{156}	17.4	X	200.54160	79.67473	154.88921	2.41299	0.1448736	0.26465322	2.4026173	20	—	—
231726 1999 EU	17.3	X	236.82194	267.71789	342.67353	2.28570	0.1548345	0.27258683	2.3557695	20	—	—
231727 1999 EO_{1}	16.7	X	102.83098	354.62939	337.14168	5.91901	0.1384024	0.26617755	2.3934357	20	—	—
231728 1999 EE_{7}	16.2	X	351.39240	126.87846	6.86110	26.29034	0.0927971	0.27307873	2.3529397	20	—	—
231729 1999 ER_{14}	15.4	X	59.33958	43.45643	330.02123	8.49464	0.0676708	0.17616752	3.1515110	20	—	—
231730 1999 FL_{12}	17.3	X	190.74325	19.80826	199.26801	0.79691	0.1326230	0.25969334	2.4331124	20	12 22.1	20.7
231731 1999 FT_{66}	17.1	X	203.89133	251.27393	329.23073	4.68907	0.0642659	0.26403224	2.4063830	20	—	—
231732 1999 GD_{7}	16.6	X	301.97721	268.45718	161.51087	6.39084	0.0969021	0.25662279	2.4524824	20	11 15.7	19.3
231733 1999 GU_{54}	17.0	X	175.93920	246.60597	5.55693	2.25057	0.1692874	0.26190573	2.4193909	20	—	—
231734 1999 KQ_{2}	17.4	X	211.37386	27.44748	164.93553	1.40270	0.1394469	0.25762744	2.4461024	20	12 10.4	20.6
231735 1999 LE_{15}	14.8	X	312.83923	53.32521	119.06976	16.86486	0.1714345	0.17476920	3.1682987	20	—	—
231736 1999 MD	15.8	X	242.78555	230.06281	75.83235	6.30465	0.1417835	0.18029880	3.1031837	20	3 5.5	20.7
231737 1999 NA_{54}	16.3	X	49.76473	128.19520	164.18289	12.66739	0.2927323	0.24198781	2.5503927	20	11 20.1	20.3
231738 1999 RK_{24}	15.8	X	351.15574	339.44145	359.33191	11.23771	0.1696737	0.23491662	2.6013187	20	9 28.5	18.1
231739 1999 RA_{106}	16.0	X	268.53161	50.31383	304.54233	7.85752	0.1712629	0.22594781	2.6697092	20	5 22.1	19.8
231740 1999 RD_{111}	15.7	X	212.88210	56.50211	339.65876	16.57897	0.1852553	0.22110382	2.7085605	20	5 11.9	20.5
231741 1999 RX_{141}	15.9	X	266.56839	86.69350	285.64201	1.68995	0.1796345	0.22834296	2.6510076	20	6 12.4	19.4
231742 1999 RC_{156}	16.2	X	26.47357	9.24242	304.26869	4.74436	0.3062468	0.23934485	2.5691334	20	11 17.4	19.4
231743 1999 RL_{168}	15.7	X	319.89459	9.88962	347.10260	10.38218	0.0797401	0.23340620	2.6125291	20	8 28.8	18.8
231744 1999 RT_{195}	15.6	X	337.39029	22.14171	305.48280	13.12824	0.1576083	0.23330636	2.6132743	20	8 10.5	18.0
231745 1999 RR_{214}	14.7	X	182.13637	266.26229	154.92494	8.94919	0.1748400	0.12483001	3.9651234	20	5 24.9	21.1
231746 1999 TO_{49}	16.7	X	19.51771	251.82494	43.30071	4.37415	0.0646931	0.23172412	2.6251567	20	9 7.0	19.9
231747 1999 TF_{52}	16.5	X	335.53982	23.77347	272.11842	1.91093	0.1616315	0.22610080	2.6685048	20	6 18.9	19.2
231748 1999 TR_{137}	17.4	X	305.68919	70.70289	355.51861	3.21971	0.2057162	0.23607796	2.5927805	20	10 30.8	19.6
231749 1999 TN_{152}	14.5	X	221.10584	331.27793	48.57449	6.66499	0.3151572	0.12434010	3.9755320	20	5 1.3	21.1
231750 1999 TE_{158}	17.6	X	190.16645	68.58763	320.06316	2.96935	0.1878560	0.31200571	2.1529190	20	4 14.2	20.9
231751 1999 TA_{167}	15.8	X	204.89990	147.02286	232.05824	7.91993	0.0646106	0.21908133	2.7252047	20	4 22.9	19.7
231752 1999 TF_{173}	16.2	X	129.75750	152.41796	262.75304	2.42905	0.1890259	0.21132421	2.7914930	20	3 28.3	20.6
231753 1999 TA_{199}	17.6	X	31.67458	20.49057	353.69493	2.97861	0.1830528	0.28926528	2.2643237	20	—	—
231754 1999 TL_{202}	15.9	X	143.47716	244.41253	214.26813	11.89135	0.1629492	0.21807195	2.7336076	20	6 2.9	20.3
231755 1999 TP_{249}	15.5	X	15.85183	334.16478	344.71212	13.81541	0.0541123	0.23454120	2.6040938	20	9 27.3	18.9
231756 1999 TP_{269}	15.8	X	200.04950	67.37408	300.40453	10.36324	0.1235491	0.21680794	2.7442221	20	3 28.7	20.4
231757 1999 TJ_{319}	16.2	X	198.05387	233.78049	176.04807	4.26834	0.1035392	0.22104573	2.7090351	20	5 25.3	20.3
231758 1999 TO_{320}	15.8	X	106.35842	107.43799	331.92521	5.58362	0.1843098	0.21057379	2.7981211	20	4 1.3	19.8
231759 1999 TX_{320}	15.6	X	120.36092	120.42168	354.46342	8.18013	0.2675683	0.21475664	2.7616692	20	6 8.4	20.4
231760 1999 UP_{11}	15.7	X	339.71567	340.18807	348.32473	13.24347	0.1859129	0.22976660	2.6400458	20	8 21.9	18.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231761 1999 UE_{21}	16.5	X	29.61667	209.89363	65.58835	3.79291	0.0440748	0.22965722	2.6408839	20	8 22.5	19.8
231762 1999 UT_{21}	16.9	X	14.15170	224.59439	46.60549	0.77953	0.0578510	0.22557305	2.6726653	20	7 23.4	20.0
231763 1999 UH_{36}	15.9	X	353.31185	316.84033	352.66698	12.00472	0.1564428	0.23266616	2.6180659	20	8 22.4	18.5
231764 1999 VB_{24}	15.8	X	153.89701	167.47875	244.24541	7.17951	0.2190922	0.21333517	2.7739231	20	4 16.3	20.5
231765 1999 VH_{44}	16.0	X	274.74922	357.60669	8.77780	4.46924	0.2916408	0.22618475	2.6678445	20	5 28.6	20.0
231766 1999 VL_{74}	17.8	X	151.62268	231.59764	211.33570	2.34822	0.0596937	0.31304913	2.1481324	20	5 13.4	20.2
231767 1999 VS_{98}	16.3	X	313.78107	72.70275	251.91690	0.87036	0.2335581	0.22631850	2.6667932	20	6 7.8	19.1
231768 1999 VR_{118}	16.5	X	69.88999	219.56380	187.01075	1.77688	0.0838436	0.20056324	2.8904702	20	—	—
231769 1999 VS_{150}	15.9	X	178.75947	87.71668	294.08120	1.36952	0.1493758	0.21377859	2.7700859	20	3 31.1	20.5
231770 1999 VX_{151}	16.6	X	168.48858	303.81995	107.70017	2.06012	0.0690122	0.21452381	2.7636670	20	4 25.5	20.6
231771 1999 VW_{154}	15.9	X	155.72629	61.76237	5.54342	12.54793	0.1430475	0.21848236	2.7301832	20	4 30.6	20.4
231772 1999 VY_{185}	16.2	X	165.51106	172.93676	211.29666	5.17655	0.2076104	0.21186418	2.7867480	20	3 24.2	20.8
231773 1999 VP_{189}	17.0	X	165.47281	184.30885	213.94949	5.33256	0.1602449	0.30787502	2.1721330	20	4 3.2	20.1
231774 1999 WH_{12}	17.5	X	0.98760	43.76696	82.18149	6.23619	0.0656838	0.29488864	2.2354452	20	—	—
231775 1999 XM_{10}	15.8	X	125.47597	79.90483	5.23929	7.93805	0.2746943	0.21185066	2.7868665	20	5 6.5	20.5
231776 1999 XM_{127}	16.9	X	133.98049	312.38873	95.71994	4.54302	0.2066182	0.30208505	2.1998001	20	3 23.0	20.0
231777 1999 XM_{128}	17.1	X	125.63634	13.57639	68.88240	7.05562	0.0990674	0.30667487	2.1777963	20	4 16.4	19.8
231778 1999 XQ_{217}	17.7	X	94.59329	192.49640	291.63067	3.42103	0.0803762	0.30417706	2.1897023	20	4 26.3	20.2
231779 2000 AT_{5}	16.3	X	312.28062	249.17659	313.81983	22.53102	0.1725576	0.29006343	2.2601681	20	—	—
231780 2000 BW_{40}	16.4	X	112.60264	279.34596	128.54564	2.93854	0.0719216	0.19855998	2.9098788	20	2 18.1	20.5
231781 2000 CO_{7}	16.4	X	152.60876	153.12403	331.19298	8.13702	0.2450934	0.21334020	2.7738795	20	7 16.9	21.3
231782 2000 CV_{14}	16.8	X	250.58157	340.16382	139.71875	2.72684	0.2231415	0.22711546	2.6605510	20	10 8.5	20.3
231783 2000 CR_{15}	15.8	X	22.49010	243.03078	286.76189	5.58464	0.1864607	0.20139621	2.8824947	20	3 19.5	18.9
231784 2000 CA_{24}	15.2	X	231.89341	232.01848	311.09992	9.84528	0.1367391	0.18156123	3.0887823	20	12 5.3	19.9
231785 2000 CF_{40}	16.9	X	127.85573	112.10353	288.33681	4.02307	0.1708385	0.29819691	2.2188807	20	2 26.6	19.8
231786 2000 CU_{97}	17.6	X	114.81097	262.20158	137.09873	3.80157	0.1878717	0.29592967	2.2301995	20	2 13.4	20.1
231787 2000 CW_{99}	17.1	X	100.17979	102.72319	323.08458	7.45985	0.0245238	0.29487926	2.2354926	20	2 4.2	19.5
231788 2000 CH_{101}	16.5	X	106.75810	305.42836	149.70632	2.61850	0.0261555	0.20303790	2.8669359	20	4 3.5	20.3
231789 2000 CA_{131}	16.2	X	146.20630	45.63549	325.70696	1.00895	0.0992167	0.19754642	2.9198236	20	2 14.7	20.5
231790 2000 CH_{134}	16.4	X	98.65903	318.99258	151.86897	2.63324	0.0761266	0.20402997	2.8576349	20	4 20.7	20.4
231791 2000 DB_{5}	15.2	X	327.29641	113.81910	129.42482	13.07714	0.1364698	0.20049180	2.8911568	20	3 30.2	18.9
231792 2000 DH_{8}	18.5	X	34.49064	25.36729	159.17629	37.58279	0.3050638	0.39538506	1.8384672	20	6 5.3	20.8
231793 2000 DX_{8}	16.0	X	84.84673	100.55817	323.60468	11.18699	0.0276764	0.19526615	2.9425109	20	1 29.8	20.1
231794 2000 DW_{13}	17.1	X	113.64612	224.30057	165.37343	4.28872	0.1781086	0.29223681	2.2489481	20	1 27.6	19.7
231795 2000 DT_{62}	17.6	X	9.86831	191.15740	329.47468	3.55718	0.1116603	0.29309856	2.2445378	20	1 29.2	19.6
231796 2000 DU_{63}	17.2	X	335.07750	39.80703	206.11955	2.44359	0.1873587	0.29708466	2.2244154	20	3 22.3	18.8
231797 2000 DB_{92}	16.7	X	54.10041	65.37782	343.91471	24.91561	0.2375097	0.28739693	2.2741266	20	—	—
231798 2000 EP_{2}	16.5	X	137.60248	59.33449	351.73918	7.46279	0.0910147	0.29716479	2.2240155	20	3 15.0	19.2
231799 2000 EW_{9}	14.8	X	240.09582	136.41893	44.51835	24.00875	0.2762408	0.17952542	3.1120895	20	11 21.0	19.6
231800 2000 ES_{19}	16.3	X	153.92255	345.41463	132.38704	5.24370	0.1502312	0.21057141	2.7981422	20	7 5.6	20.8
231801 2000 EB_{20}	15.7	X	307.88214	85.85945	177.11924	23.11005	0.2942153	0.29217750	2.2492525	20	2 14.0	19.0
231802 2000 ED_{52}	17.5	X	277.68181	242.89482	332.65886	1.30643	0.0425421	0.28710208	2.2756833	20	—	—
231803 2000 ES_{96}	15.9	X	313.71712	34.41067	134.02031	6.84403	0.1854707	0.18727400	3.0256433	20	—	—
231804 2000 EJ_{106}	14.9	X	225.65115	152.28527	21.01352	23.73224	0.1978274	0.17606660	3.1527151	20	11 3.7	20.0
231805 2000 EQ_{115}	15.4	X	131.03240	71.85023	170.51228	10.89714	0.0201525	0.17361951	3.1822700	20	11 6.3	20.1
231806 2000 EH_{123}	15.8	X	258.04837	36.48981	136.55381	3.80406	0.1230803	0.18181524	3.0859048	20	12 27.5	19.8
231807 2000 EZ_{146}	14.9	X	254.41511	46.78929	125.20898	17.00609	0.1419694	0.18099937	3.0951712	20	12 20.3	19.3
231808 2000 ES_{166}	15.1	X	272.00515	9.34647	113.74715	13.67336	0.1757337	0.18060201	3.0997096	20	11 12.4	19.3
231809 2000 FP_{22}	15.6	X	38.02423	34.04343	101.96813	9.90061	0.2434903	0.19604181	2.9347442	20	3 19.5	18.6
231810 2000 FX_{28}	16.2	X	326.10613	283.14910	334.92194	6.41713	0.1758122	0.29529527	2.2333925	20	3 24.9	18.3
231811 2000 GQ_{21}	15.6	X	176.74472	295.37870	16.07621	10.06052	0.0848792	0.18522582	3.0479069	20	1 8.5	20.4
231812 2000 GV_{25}	15.6	X	257.47563	80.41091	183.32641	1.28325	0.0958092	0.18945463	3.0023817	20	1 30.3	20.2
231813 2000 GJ_{43}	16.6	X	312.42175	153.37508	70.95268	0.68275	0.1727629	0.19117646	2.9843272	20	2 4.7	20.5
231814 2000 GT_{74}	16.6	X	0.99322	89.87237	188.83597	3.47536	0.3717588	0.20140009	2.8824577	20	7 31.8	18.0
231815 2000 GQ_{118}	18.1	X	302.93267	233.06870	321.86877	1.73716	0.1014768	0.28688869	2.2768116	20	—	—
231816 2000 GC_{145}	15.8	X	214.67631	87.13979	167.83504	0.35033	0.1293139	0.18049750	3.1009059	20	—	—
231817 2000 GH_{150}	15.3	X	266.27930	254.86166	195.52110	22.06377	0.0948089	0.17022873	3.2243894	20	9 28.7	19.7
231818 2000 GX_{150}	17.6	X	351.16589	289.12689	190.52922	5.99460	0.0620940	0.28255505	2.3000326	20	—	—
231819 2000 HH_{80}	15.1	X	91.64839	227.67617	125.99503	12.25816	0.0267866	0.17762387	3.1342610	20	—	—
231820 2000 HH_{96}	16.4	X	71.52040	188.27527	94.42793	6.98310	0.1333457	0.26163546	2.4210568	20	11 14.5	19.9
231821 2000 HS_{96}	16.0	X	287.39030	16.58413	133.32836	24.30894	0.1610960	0.27673243	2.3321833	20	—	—
231822 2000 HP_{103}	15.3	X	291.85135	62.76833	136.79533	10.24797	0.0480689	0.18478163	3.0527894	20	—	—
231823 2000 JL_{6}	14.9	X	250.32622	83.44652	126.05656	17.54846	0.0918636	0.17959514	3.1112840	20	—	—
231824 2000 JU_{44}	15.2	X	276.40038	315.83147	232.87990	8.11772	0.0367719	0.17932839	3.1143686	20	—	—
231825 2000 JW_{75}	16.6	X	300.75609	85.68168	157.59665	5.48921	0.1971078	0.28865137	2.2675331	20	1 26.5	19.6
231826 2000 JW_{91}	15.3	X	149.30132	175.98868	126.87208	10.41013	0.0713409	0.17831866	3.1261143	20	—	—
231827 2000 KG_{49}	16.0	X	176.96945	251.36186	27.13651	1.71975	0.1503732	0.17643631	3.1483093	20	—	—
231828 2000 KV_{59}	14.8	X	148.94027	212.52440	61.46261	18.48510	0.1574376	0.17163738	3.2067232	20	12 28.6	20.2
231829 2000 KZ_{65}	15.3	X	266.67100	66.42261	180.28599	15.71748	0.1284440	0.18459285	3.0548704	20	1 15.5	20.2
231830 2000 LW_{1}	16.0	X	247.58956	58.87827	244.73870	30.09070	0.3393091	0.23389348	2.6088992	20	2 3.5	21.4
231831 2000 OR_{10}	15.6	X	227.89480	30.26511	300.64897	11.75816	0.3252777	0.23254016	2.6190115	20	3 1.9	20.7
231832 2000 OG_{69}	17.2	X	57.71262	2.42402	333.04281	1.98466	0.2247064	0.25895258	2.4377503	20	—	—
231833 2000 PK_{27}	15.0	X	82.61091	87.90797	327.18819	11.31668	0.1507834	0.17070514	3.2183874	20	2 5.1	19.2
231834 2000 QC_{2}	16.9	X	63.57002	194.77078	156.56630	22.45014	0.0703654	0.35937267	1.9593229	20	—	—
231835 2000 QS_{11}	16.3	X	264.37280	217.11527	126.35283	4.43404	0.2295571	0.23816241	2.5776300	20	4 28.4	20.2
231836 2000 QV_{112}	16.4	X	140.03826	332.59666	351.80732	5.67222	0.1906893	0.26685987	2.3893542	20	—	—
231837 2000 QD_{117}	16.0	X	224.74109	51.14089	358.55896	15.00416	0.3152785	0.23571841	2.5954164	20	6 3.5	20.9
231838 2000 QA_{161}	15.5	X	236.57031	145.92542	216.47226	12.27451	0.1678693	0.23690285	2.5867583	20	4 28.9	19.6
231839 2000 QX_{164}	16.6	X	48.47696	56.55268	271.12629	5.80133	0.2070005	0.25520689	2.4615450	20	12 21.8	20.1
231840 2000 QZ_{225}	16.0	X	278.85364	96.87833	283.93763	10.77836	0.2719022	0.24075056	2.5591231	20	6 26.3	19.4

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231841 2000 QT_{232}	17.3	X	287.28218	80.15769	44.92443	2.16098	0.1471414	0.26142523	2.4223546	20	—	—
231842 2000 QW_{242}	17.1	X	220.86564	340.10603	188.93263	1.82157	0.1169353	0.25486735	2.4637308	20	11 24.4	20.4
231843 2000 RZ_{62}	16.4	X	121.98921	341.28334	354.20266	6.50558	0.1898032	0.26737238	2.3862999	20	—	—
231844 2000 RZ_{74}	14.9	X	246.89471	121.01375	183.76174	21.94713	0.1036758	0.17989608	3.1078133	20	3 6.8	19.7
231845 2000 RV_{81}	15.8	X	152.34534	244.50840	184.41019	29.47637	0.2632716	0.22848108	2.6499390	20	5 11.6	20.8
231846 2000 RC_{85}	16.2	X	10.52023	17.81129	351.97199	11.53113	0.2117801	0.25340441	2.4732040	20	12 31.3	19.3
231847 2000 RJ_{87}	16.7	X	220.26366	182.88343	170.10977	3.63306	0.2400942	0.23031816	2.6358292	20	3 30.6	21.3
231848 2000 SR_{31}	17.2	X	269.42819	74.16151	344.00753	4.25509	0.2723455	0.24225270	2.5485332	20	8 5.2	20.5
231849 2000 SB_{41}	15.2	X	196.82637	307.55318	31.41899	2.45071	0.1874176	0.17622126	3.1508703	20	2 29.7	20.5
231850 2000 SB_{48}	15.9	X	351.70965	27.77379	304.18595	14.84911	0.1005983	0.24779656	2.5103785	20	9 9.4	18.9
231851 2000 SV_{61}	16.8	X	171.47544	289.56471	19.86959	2.15521	0.2190339	0.26923164	2.3753010	20	—	—
231852 2000 SX_{94}	16.4	X	165.06176	129.82261	263.47048	5.34852	0.2027575	0.22643949	2.6658432	20	4 1.3	20.9
231853 2000 SK_{100}	16.6	X	251.19407	45.04758	309.76465	9.79846	0.2641584	0.23362695	2.6108831	20	4 20.1	21.2
231854 2000 SE_{130}	16.0	X	328.17029	42.84604	267.49428	12.87589	0.1382099	0.24126559	2.5554799	20	6 28.8	18.7
231855 2000 SF_{138}	16.6	X	193.29117	112.53483	267.57661	3.72207	0.2342065	0.22824167	2.6517918	20	4 9.4	21.3
231856 2000 SJ_{138}	16.2	X	239.89559	153.86228	284.34357	3.46124	0.2805982	0.23894050	2.5720311	20	7 27.3	20.3
231857 2000 SB_{154}	15.8	X	212.78002	23.28334	25.73401	11.74008	0.2233130	0.23214616	2.6219740	20	5 29.8	20.4
231858 2000 SZ_{165}	16.7	X	254.80373	83.76156	342.71875	12.73385	0.2433655	0.24035911	2.5619009	20	8 5.1	20.4
231859 2000 SM_{167}	16.4	X	240.28467	31.88460	349.74555	11.51710	0.2920502	0.23440232	2.6051223	20	5 12.4	21.0
231860 2000 SZ_{185}	17.1	X	72.04851	147.10737	196.70156	5.88404	0.1328459	0.25793214	2.4441756	20	—	—
231861 2000 SO_{236}	16.4	X	21.14378	343.68208	16.24224	6.93255	0.1254566	0.25191417	2.4829482	20	12 17.1	19.5
231862 2000 SC_{251}	16.9	X	332.52126	259.88759	91.37435	3.51882	0.2089212	0.24508604	2.5288535	20	9 12.3	18.7
231863 2000 SJ_{261}	16.9	X	297.06347	251.00956	96.56046	4.53829	0.2493849	0.23934249	2.5691503	20	6 9.6	20.0
231864 2000 SD_{272}	15.5	X	178.59585	82.52511	271.73482	11.94383	0.1629632	0.22352526	2.6889639	20	2 21.7	20.1
231865 2000 SY_{318}	15.3	X	233.32759	104.11044	315.00987	11.44765	0.2851132	0.23488978	2.6015168	20	6 28.2	19.8
231866 2000 SF_{319}	14.7	X	10.19590	355.15548	337.80258	14.57539	0.1176769	0.24510823	2.5287008	20	10 14.8	17.9
231867 2000 SW_{346}	16.0	X	228.89943	129.10658	270.86413	11.80580	0.2566356	0.23428107	2.6060210	20	6 1.2	20.3
231868 2000 SY_{354}	16.6	X	119.63806	167.00806	131.90512	11.98672	0.2434224	0.26096840	2.4251807	20	—	—
231869 2000 SG_{364}	16.4	X	267.75995	321.34309	84.97372	7.06417	0.2183946	0.24224905	2.5485588	20	7 26.2	19.8
231870 2000 SZ_{364}	14.4	X	24.88708	139.63646	167.22891	18.34300	0.0166079	0.14724431	3.5517607	20	9 10.8	19.3
231871 2000 TD_{13}	16.3	X	126.71147	235.29924	198.67884	14.46652	0.2193891	0.22347969	2.6893294	20	4 21.9	20.5
231872 2000 TJ_{25}	14.8	X	162.98509	350.38427	57.40353	12.76729	0.2567849	0.12520709	3.9571585	20	4 26.9	21.4
231873 2000 TB_{52}	17.0	X	235.23146	58.08044	355.67134	1.48110	0.2059332	0.23615844	2.5921915	20	6 29.2	21.1
231874 2000 UP_{3}	16.7	X	182.65988	182.80623	232.26705	4.48720	0.3284972	0.22817351	2.6523199	20	5 15.3	21.6
231875 2000 UZ_{15}	16.3	X	201.83749	150.13037	205.39128	27.95441	0.1744769	0.22568384	2.6717905	20	3 16.9	21.0
231876 2000 UV_{43}	16.4	X	205.97669	193.76092	238.99699	3.75588	0.2579384	0.23204139	2.6227632	20	6 23.4	20.9
231877 2000 UH_{66}	16.7	X	240.32752	158.10725	254.58261	3.26007	0.1956382	0.23632454	2.5909766	20	7 3.9	20.5
231878 2000 UC_{77}	16.5	X	207.88853	25.73907	29.95485	4.67584	0.2059254	0.23128076	2.6285105	20	6 5.6	20.9
231879 2000 UA_{93}	16.4	X	101.44388	334.95373	332.40667	5.60618	0.1427203	0.25567275	2.4585540	20	—	—
231880 2000 UU_{112}	16.6	X	260.84229	191.41470	205.90471	2.90058	0.1321293	0.23778627	2.5803475	20	7 15.9	20.1
231881 2000 UF_{114}	17.2	X	214.44839	98.63492	287.07645	3.53138	0.3102449	0.23012914	2.6372723	20	4 30.1	22.1
231882 2000 VO	17.1	X	276.98125	156.12470	216.83652	4.04809	0.2059618	0.23695273	2.5863953	20	6 22.8	20.4
231883 2000 VS_{2}	16.7	X	219.81583	43.29896	57.93345	4.18869	0.1180237	0.23781927	2.5801088	20	8 25.3	20.4
231884 2000 VE_{6}	15.7	X	309.31470	14.71886	35.22783	1.85600	0.0243019	0.24613498	2.5216636	20	10 29.0	18.6
231885 2000 VH_{15}	16.0	X	67.95896	137.49698	207.63225	5.38141	0.1500011	0.25430458	2.4673642	20	—	—
231886 2000 VK_{26}	16.9	X	186.28582	190.93739	252.11539	3.94764	0.2886399	0.22984132	2.6394735	20	6 20.5	21.5
231887 2000 VR_{48}	16.4	X	175.64582	43.39704	40.95582	6.41781	0.3299204	0.22789594	2.6544731	20	6 14.2	21.4
231888 2000 VR_{57}	15.6	X	334.75437	8.85185	11.01205	3.50224	0.1753999	0.24402400	2.5361855	20	10 29.4	17.7
231889 2000 WW_{14}	16.0	X	216.50824	122.00916	268.69702	8.05306	0.2110993	0.22903603	2.6456568	20	5 11.9	20.4
231890 2000 WM_{39}	16.1	X	201.60254	300.20579	99.51137	14.03469	0.2644999	0.22757288	2.6569846	20	5 14.8	21.0
231891 2000 WJ_{42}	16.5	X	266.29704	340.06657	71.41798	4.06039	0.1803434	0.23857479	2.5746588	20	8 6.5	19.9
231892 2000 WG_{70}	16.0	X	114.16678	183.92966	257.53793	13.17753	0.1761937	0.22124461	2.7074114	20	4 8.4	20.3
231893 2000 WS_{73}	15.8	X	221.74371	289.44292	32.77144	11.61714	0.1980290	0.22327269	2.6909914	20	3 2.0	20.5
231894 2000 WN_{85}	15.9	X	320.50309	351.97463	37.49357	3.37757	0.1406667	0.24256318	2.5463580	20	10 14.5	18.3
231895 2000 WU_{113}	16.1	X	183.71778	3.61937	47.64405	9.75083	0.2042444	0.22609231	2.6685716	20	5 11.0	20.4
231896 2000 WY_{117}	15.3	X	266.69654	67.87856	295.59930	10.09930	0.2331403	0.23146330	2.6271284	20	5 22.9	19.3
231897 2000 WM_{138}	16.1	X	64.81859	8.48660	55.55306	8.91605	0.2113356	0.21155021	2.7895046	20	1 21.9	19.2
231898 2000 WX_{147}	15.7	X	347.58290	266.59215	93.97850	3.38177	0.2318221	0.24240541	2.5474628	20	11 5.0	17.8
231899 2000 WX_{156}	15.8	X	247.03056	30.79378	45.81959	10.09582	0.1068415	0.23734126	2.5835719	20	8 30.6	19.4
231900 2000 WT_{180}	15.3	X	194.22833	222.19320	131.08436	15.90577	0.2925073	0.17610163	3.1522971	20	3 17.9	21.1
231901 2000 XV_{22}	15.9	X	164.90936	45.83180	49.18821	12.29163	0.1645176	0.22734328	2.6587733	20	6 16.9	20.3
231902 2000 XO_{26}	15.5	X	238.48742	104.27859	312.52368	14.17105	0.1082893	0.23255302	2.6189149	20	7 19.5	19.3
231903 2000 XT_{39}	15.9	X	210.46416	113.03971	1.54559	11.63484	0.1740546	0.23475654	2.6025010	20	8 28.3	20.0
231904 2000 XY_{50}	15.8	X	217.60928	115.58324	311.77829	10.88542	0.2505320	0.23223617	2.6212965	20	6 27.6	20.4
231905 2000 YL	16.0	X	358.78117	62.43405	5.82474	15.39042	0.1363661	0.25134395	2.4867021	20	—	—
231906 2000 YN_{9}	16.4	X	329.42712	22.67416	304.64205	2.81229	0.1156890	0.23539898	2.5977638	20	7 29.2	19.2
231907 2000 YX_{39}	15.9	X	158.15754	176.98483	270.67854	8.06159	0.1755313	0.22385098	2.6863548	20	6 2.7	20.2
231908 2000 YP_{47}	15.4	X	43.70274	214.51419	277.81840	13.28933	0.0492027	0.21217729	2.7840057	20	2 21.6	19.2
231909 2000 YY_{72}	14.5	X	172.98258	311.99219	116.45347	7.12936	0.2424428	0.12416241	3.9793239	20	5 25.9	21.2
231910 2000 YU_{91}	15.9	X	236.60090	70.09372	294.66264	12.57006	0.3005280	0.22709948	2.6606758	20	4 16.9	20.9
231911 2000 YW_{92}	15.6	X	252.98875	269.93946	115.10919	12.28017	0.2049885	0.23138580	2.6277149	20	6 11.7	19.6
231912 2000 YP_{108}	16.2	X	156.17372	39.96964	89.68368	9.02134	0.1476913	0.22748184	2.6576935	20	7 24.6	20.4
231913 2000 YH_{138}	14.9	X	179.54577	275.75568	134.85474	11.53868	0.3402145	0.12514761	3.9584120	20	5 12.9	22.0
231914 2000 YT_{140}	15.4	X	14.88160	162.33183	46.21261	10.54230	0.0467823	0.21693033	2.7431898	20	4 27.8	18.8
231915 2001 AJ	16.6	X	99.53713	143.41135	324.14681	5.55100	0.0351100	0.21532058	2.7568450	20	4 7.1	20.4
231916 2001 AS_{45}	16.0	X	200.88267	75.60590	327.14950	11.74847	0.2751222	0.22549156	2.6733091	20	5 9.2	21.1
231917 2001 BZ_{25}	15.6	X	90.76773	75.07718	134.73451	14.69149	0.2834424	0.22362750	2.6881443	20	9 14.7	20.1
231918 2001 BR_{56}	15.8	X	114.37791	52.29112	95.61471	4.50130	0.0229200	0.22151797	2.7051836	20	6 20.2	19.2
231919 2001 BA_{77}	15.5	X	65.26946	195.35955	332.08909	15.69434	0.1532224	0.21446831	2.7641438	20	5 27.6	19.4
231920 2001 BQ_{78}	15.8	X	154.11740	151.68804	334.00600	14.30849	0.1665733	0.22261777	2.6962666	20	7 20.3	20.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
231921 2001 CK_{16}	15.6	X	135.53770	191.69164	331.61087	10.96868	0.1287488	0.22589650	2.6701134	20	8 15.5	19.7
231922 2001 CX_{25}	16.0	X	73.67032	97.93490	121.01527	8.85952	0.2387181	0.22130930	2.7068837	20	9 3.8	20.0
231923 2001 CY_{32}	15.4	X	84.82315	171.09519	44.60459	14.86904	0.2344690	0.22432089	2.6826019	20	9 16.5	19.8
231924 2001 CL_{37}	15.8	X	235.86700	219.57377	132.25271	7.26884	0.0720958	0.21660743	2.7459153	20	4 27.0	19.9
231925 2001 CK_{39}	15.6	X	165.31440	143.68272	6.64199	11.45547	0.1975647	0.22923353	2.6441370	20	8 30.8	20.1
231926 2001 CQ_{49}	15.4	X	80.21571	24.81894	148.33994	26.03481	0.0834908	0.21694646	2.7430539	20	6 21.4	19.7
231927 2001 DU_{30}	15.8	X	71.34850	34.12876	129.92680	9.88156	0.2224100	0.21511323	2.7586164	20	6 16.2	19.6
231928 2001 DY_{34}	15.9	X	152.57528	153.74900	321.91342	5.86390	0.0428066	0.22292260	2.6938081	20	6 28.0	19.8
231929 2001 DP_{42}	16.2	X	128.89218	47.66317	151.61362	2.65057	0.1317052	0.22811011	2.6528113	20	9 23.4	20.3
231930 2001 DG_{67}	15.9	X	49.46509	228.90799	331.81687	7.97326	0.1487803	0.21603519	2.7507622	20	6 21.6	19.3
231931 2001 DF_{75}	15.5	X	230.79917	257.64369	148.69450	16.04025	0.1635593	0.22558550	2.6725670	20	6 20.3	19.9
231932 2001 DN_{76}	16.0	X	178.45579	123.46398	324.67729	5.37615	0.0726484	0.22165327	2.7040826	20	6 22.6	20.0
231933 2001 DO_{100}	15.7	X	55.71099	289.88995	321.74782	12.52723	0.1863481	0.22491945	2.6778405	20	9 11.3	19.4
231934 2001 EB_{11}	16.0	X	52.83823	54.18187	164.06317	13.58870	0.1859377	0.21613890	2.7498822	20	7 25.5	19.6
231935 2001 FO	15.7	X	68.56214	68.42773	120.73268	12.80244	0.1260907	0.21587577	2.7521163	20	6 30.5	19.3
231936 2001 FR_{7}	16.3	X	303.81445	121.07572	135.27893	6.19460	0.1234270	0.20583999	2.8408581	20	3 11.3	20.2
231937 2001 FO_{32}	17.7	X	210.33353	123.30096	181.74355	38.97422	0.8261163	0.44418416	1.7012207	20	1 19.6	22.8
231938 2001 FU_{104}	16.1	X	79.49655	73.18543	59.57022	8.41441	0.1772703	0.21239141	2.7821343	20	5 8.9	19.8
231939 2001 FB_{129}	15.3	X	53.49133	120.93850	134.76535	12.75428	0.2369203	0.21846530	2.7303254	20	9 29.2	19.2
231940 2001 FF_{141}	15.7	X	326.86194	326.11719	192.72094	1.42617	0.0421028	0.19752661	2.9200188	20	—	—
231941 2001 FD_{142}	16.2	X	51.38523	31.63289	182.59542	9.77237	0.1030584	0.21596080	2.7513939	20	7 4.9	19.9
231942 2001 FP_{170}	15.9	X	134.42717	13.28477	173.05455	14.24257	0.1840381	0.22351814	2.6890211	20	9 13.2	20.3
231943 2001 FM_{172}	15.0	X	111.55312	20.69923	155.68384	26.14503	0.1648794	0.21711931	2.7415979	20	8 7.9	19.5
231944 2001 HC_{44}	17.1	X	252.17092	336.56267	206.32264	6.06974	0.1158146	0.29053934	2.2576993	20	—	—
231945 2001 HY_{57}	16.0	X	90.05552	116.34467	117.13781	10.03515	0.1397765	0.22236451	2.6983134	20	9 30.5	20.2
231946 2001 KT_{1}	15.5	X	65.53675	183.30481	94.21974	16.62942	0.1700993	0.22204431	2.7009070	20	11 4.1	19.7
231947 2001 KU_{19}	15.8	X	63.57786	121.12380	169.00727	9.48857	0.3456416	0.22055483	2.7130534	20	11 30.5	20.4
231948 2001 KB_{66}	15.8	X	311.20748	145.47413	97.13457	12.82654	0.1874647	0.20136847	2.8827595	20	2 26.6	19.8
231949 2001 NY_{5}	15.1	X	109.01533	359.63340	341.16409	10.25433	0.0991890	0.17771511	3.1331882	20	—	—
231950 2001 NW_{11}	15.0	X	184.50718	39.37682	264.00910	7.96110	0.1136091	0.18386977	3.0628743	20	1 6.1	19.8
231951 2001 OY_{6}	14.8	X	139.53010	358.81817	306.31944	9.52058	0.1910403	0.17430881	3.1738751	20	—	—
231952 2001 OS_{15}	16.9	X	143.35465	8.00441	1.21533	6.68833	0.2114177	0.28851181	2.2682642	20	2 12.5	20.1
231953 2001 OT_{25}	15.3	X	194.14483	149.01741	145.00561	7.79452	0.2026886	0.18369103	3.0648608	20	1 6.3	20.6
231954 2001 OM_{42}	16.8	X	68.14220	135.22904	231.91005	2.92602	0.2081691	0.27380649	2.3487686	20	—	—
231955 2001 OY_{50}	15.3	X	140.09988	2.94262	324.35384	9.27643	0.0983346	0.18000143	3.1066006	20	—	—
231956 2001 OQ_{58}	16.0	X	333.66448	333.19102	344.71626	10.62038	0.2517247	0.25608094	2.4559407	20	7 18.8	17.8
231957 2001 ON_{87}	14.8	X	93.21409	358.23124	346.86868	19.17585	0.1382952	0.17117370	3.2125115	20	—	—
231958 2001 PF_{28}	14.9	X	269.92124	255.41632	318.69056	14.96009	0.1686102	0.18364225	3.0654035	20	—	—
231959 2001 PT_{57}	16.8	X	75.10401	206.06774	144.18997	7.65151	0.2364886	0.27464912	2.3439620	20	—	—
231960 2001 QA_{3}	16.9	X	157.55630	190.24742	146.92344	12.41373	0.2385734	0.28673320	2.2776347	20	1 16.8	20.5
231961 2001 QS_{5}	16.9	X	5.70852	241.47982	146.86943	3.63493	0.2421407	0.26895678	2.3769190	20	—	—
231962 2001 QX_{5}	15.1	X	154.34981	344.14853	308.29445	8.51271	0.1527030	0.17589840	3.1547246	20	—	—
231963 2001 QU_{6}	16.8	X	86.75221	72.10351	309.42365	6.33379	0.1506370	0.28089323	2.3090953	20	—	—
231964 2001 QT_{12}	16.7	X	87.08955	279.35934	76.17001	3.89065	0.1863679	0.27822183	2.3238526	20	—	—
231965 2001 QP_{44}	17.2	X	76.08532	227.79937	121.36953	4.15155	0.1757940	0.27621793	2.3350784	20	—	—
231966 2001 QZ_{45}	17.3	X	165.75671	176.99879	162.07313	3.81940	0.1550311	0.28811636	2.2703393	20	1 19.6	20.6
231967 2001 QP_{48}	15.1	X	182.88818	166.67298	143.72849	9.68646	0.1389345	0.18223202	3.0811979	20	1 13.9	20.1
231968 2001 QT_{80}	15.0	X	157.36919	320.89299	333.20354	14.12986	0.2388446	0.17335776	3.1854725	20	—	—
231969 Sebvauclair	15.1	X	126.13033	347.66570	327.10109	15.05678	0.0735863	0.17385468	3.1793997	20	—	—
231970 2001 QE_{101}	14.9	X	167.39060	30.68881	265.21951	18.32471	0.1173183	0.17794848	3.1304483	20	—	—
231971 2001 QA_{108}	17.3	X	112.68482	201.40558	143.77826	2.81271	0.2294622	0.27969594	2.3156803	20	—	—
231972 2001 QP_{108}	15.7	X	253.41051	282.60791	326.00807	10.16584	0.1690577	0.18548373	3.0450810	20	1 5.0	20.6
231973 2001 QP_{114}	14.7	X	270.99618	257.13329	319.20660	15.81531	0.0538337	0.17891047	3.1192166	20	—	—
231974 2001 QS_{124}	15.0	X	93.14539	248.32907	119.03584	10.00048	0.0842123	0.17615963	3.1516050	20	—	—
231975 2001 QX_{129}	17.2	X	295.97191	343.84032	302.08892	7.57781	0.2241164	0.30155923	2.2023565	20	3 9.8	20.2
231976 2001 QB_{131}	15.1	X	107.36996	178.16644	182.42521	12.02534	0.1725417	0.17643223	3.1483579	20	1 1.7	19.8
231977 2001 QH_{156}	15.2	X	249.80040	303.34130	322.93439	11.66600	0.1522865	0.18576053	3.0420552	20	1 23.5	20.0
231978 2001 QV_{173}	15.2	X	273.65289	56.67005	185.00643	16.59591	0.1536214	0.18563830	3.0433904	20	1 13.7	20.1
231979 2001 QO_{200}	16.9	X	48.77661	115.17934	330.58011	19.83322	0.1026196	0.38464687	1.8725262	20	—	—
231980 2001 QJ_{208}	16.6	X	41.65504	351.46502	47.21537	2.48872	0.1197284	0.27661811	2.3328258	20	—	—
231981 2001 QU_{219}	17.4	X	85.43390	75.09435	333.53093	18.24406	0.1388597	0.38460609	1.8726586	20	—	—
231982 2001 QP_{249}	16.5	X	17.39005	357.86615	30.88607	2.73308	0.2108101	0.26714050	2.3876806	20	—	—
231983 2001 QC_{296}	16.6	X	131.48772	194.64691	178.71220	8.44191	0.1553784	0.28242454	2.3007412	20	1 25.7	19.7
231984 2001 QX_{330}	16.6	X	135.99098	58.96899	266.69052	6.11754	0.1602514	0.27774115	2.3265331	20	—	—
231985 2001 QT_{333}	16.8	X	158.09820	172.49418	147.57316	9.86767	0.1633216	0.28052529	2.3111140	20	—	—
231986 2001 RY_{14}	15.1	X	203.35022	301.66918	331.07502	25.78179	0.1555673	0.17859617	3.1228751	20	—	—
231987 2001 RV_{29}	17.4	X	348.50640	64.34827	348.71659	1.94824	0.2325164	0.26793064	2.3829840	20	—	—
231988 2001 RC_{31}	15.8	X	102.28996	326.37557	2.38152	2.58090	0.1713683	0.17128681	3.2110971	20	—	—
231989 2001 RJ_{34}	17.0	X	28.85597	167.69836	229.86335	2.62081	0.2392435	0.27292618	2.3538164	20	—	—
231990 2001 RN_{79}	16.4	X	357.84616	359.52004	26.51181	2.82102	0.2236991	0.26354581	2.4093430	20	—	—
231991 2001 RE_{101}	17.3	X	271.36677	6.78536	12.46375	5.71838	0.2694427	0.25303860	2.4755870	20	6 14.6	20.8
231992 2001 RK_{102}	17.4	X	298.51472	269.09548	19.28281	6.46379	0.1919305	0.30109047	2.2046418	20	3 26.4	19.9
231993 2001 RQ_{105}	15.3	X	190.02227	322.41031	15.89489	9.62291	0.1412952	0.18572811	3.0424092	20	2 24.8	20.3
231994 2001 RC_{112}	15.7	X	145.71725	213.85918	69.02705	1.97756	0.1295845	0.17137775	3.2099610	20	—	—
231995 2001 RO_{151}	16.9	X	47.83661	306.09554	68.84374	6.28134	0.2297771	0.27173783	2.3606738	20	—	—
231996 2001 SE_{3}	16.2	X	250.55398	315.87585	105.91110	2.37432	0.1480254	0.25253389	2.4788843	20	8 4.9	19.5
231997 2001 SR_{31}	16.9	X	85.17340	211.75276	152.51407	3.39741	0.1355981	0.27574397	2.3377534	20	—	—
231998 2001 ST_{37}	16.9	X	236.24512	156.61203	161.95084	7.29707	0.1589919	0.29265198	2.2468206	20	2 29.8	20.4
231999 2001 SE_{52}	17.0	X	115.77836	234.48624	110.59272	3.56276	0.2080164	0.27794269	2.3254083	20	—	—
232000 2001 SC_{70}	16.1	X	354.66232	319.00057	69.29407	9.58595	0.2202170	0.26254285	2.4154752	20	—	—