Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
4001 Ptolemaeus	13.6	X	162.32722	204.21226	130.65782	5.45780	0.1721944	0.28492096	2.2872823	20	1 13.2	16.8
4002 Shinagawa	11.7	X	133.18618	185.63559	116.84570	14.68837	0.0289011	0.24692918	2.5162538	20	—	—
4003 Schumann	11.3	X	138.16643	116.99124	189.29329	5.05721	0.0944132	0.15522112	3.4290107	20	—	—
4004 List′ev	12.0	X	339.01392	347.60766	18.53953	15.65478	0.1980178	0.18019110	3.1044201	20	10 3.1	15.1
4005 Dyagilev	12.8	X	187.78711	266.01616	74.14002	6.84296	0.1484084	0.25678956	2.4514205	20	2 17.9	16.7
4006 Sandler	12.7	X	350.86606	124.24074	293.70223	2.39155	0.1836878	0.24712956	2.5148934	20	—	—
4007 Euryalos	10.3	X	281.39073	77.15177	6.75199	11.00083	0.0560802	0.08363083	5.1787519	20	10 2.3	17.0
4008 Corbin	13.2	X	340.03843	327.19965	167.19035	25.51140	0.2101478	0.27201035	2.3590968	20	—	—
4009 Drobyshevskij	12.6	X	233.40346	181.38992	72.29529	2.29114	0.1323948	0.17709652	3.1404800	20	—	—
4010 Nikol′skij	13.4	X	219.25875	340.06022	318.90544	5.41574	0.1261581	0.24215904	2.5491903	20	1 27.2	17.3
4011 Bakharev	14.3	X	237.48847	47.30605	34.77124	1.17090	0.0500340	0.30293452	2.1956859	20	9 6.5	16.8
4012 Geballe	13.4	X	152.45105	133.78323	244.94725	4.57171	0.1633827	0.29265181	2.2468215	20	2 24.3	16.6
4013 Ogiria	12.6	X	88.83171	159.08778	191.89318	0.58121	0.1747319	0.17613074	3.1519497	20	—	—
4014 Heizman	12.3	X	156.40946	106.31695	270.63536	1.10701	0.0317925	0.15572985	3.4215388	20	3 1.4	17.4
4015 Wilson–Harrington	15.99	X	171.01773	95.36995	266.81788	2.79830	0.6311869	0.23162384	2.6259143	20	3 13.4	21.8
4016 Sambre	14.1	X	254.10523	35.81977	103.79908	0.78966	0.2292946	0.26371195	2.4083310	20	11 14.4	16.8
4017 Disneya	12.9	X	72.52048	312.98200	32.44029	3.01803	0.0981840	0.23694452	2.5864551	20	—	—
4018 Bratislava	13.5	X	227.52089	158.16516	252.28932	3.43231	0.1640448	0.23775272	2.5805902	20	6 20.9	17.3
4019 Klavetter	14.7	X	109.06625	146.07853	262.52966	2.48601	0.1284881	0.27581003	2.3373801	20	2 10.9	17.6
4020 Dominique	12.9	X	336.08315	178.12898	194.79894	9.54805	0.1567713	0.21299053	2.7769146	20	10 13.1	15.7
4021 Dancey	13.5	X	59.97416	327.04374	49.56476	3.54215	0.1694768	0.28578010	2.2826959	20	—	—
4022 Nonna	13.1	X	317.60844	33.91652	278.34338	5.09183	0.1279532	0.27219640	2.3580217	20	6 14.2	15.3
4023 Jarník	13.5	X	223.95834	127.60435	244.71969	1.85281	0.0933797	0.29523247	2.2337092	20	5 2.1	16.3
4024 Ronan	13.1	X	357.96939	75.33650	54.44182	7.76416	0.1555113	0.28598233	2.2816196	20	—	—
4025 Ridley	13.8	X	159.30220	245.78977	147.32009	3.12876	0.1676714	0.29176993	2.2513466	20	3 24.6	17.0
4026 Beet	13.6	X	22.10231	351.76972	137.43498	3.18417	0.1188639	0.25808762	2.4431939	20	1 12.3	15.8
4027 Mitton	13.2	X	152.89638	15.72623	193.75428	1.78756	0.1674596	0.27214586	2.3583137	20	11 3.2	16.9
4028 Pancratz	12.9	X	184.73891	267.24584	177.34547	2.80629	0.1485936	0.24140903	2.5544675	20	6 23.7	16.9
4029 Bridges	12.8	X	173.70699	16.39736	214.77694	5.43746	0.1314469	0.24559627	2.5253498	20	12 16.7	16.7
4030 Archenhold	13.1	X	29.82248	302.80474	342.29667	6.53112	0.0932007	0.25536833	2.4605075	20	9 13.5	15.9
4031 Mueller	13.1	X	106.54249	69.53846	355.85009	18.90452	0.1011238	0.36643995	1.9340492	20	2 20.8	15.0
4032 Chaplygin	14.4	X	284.38451	206.48120	167.23910	2.13207	0.1416971	0.30558447	2.1829739	20	7 20.5	16.3
4033 Yatsugatake	13.6	X	51.83800	163.69801	46.43657	5.12136	0.0915846	0.29386157	2.2406508	20	7 3.6	15.9
4034 Vishnu	18.4	X	254.55919	296.66575	157.93001	11.17030	0.4441282	0.90339736	1.0597827	20	—	—
4035 1986 *WD*	9.6	X	278.29144	197.57147	233.71513	12.12912	0.0569871	0.08117808	5.2825489	20	9 9.9	16.6
4036 Whitehouse	13.0	X	46.04176	336.12674	157.95344	4.68072	0.1515345	0.21046704	2.7990672	20	3 15.1	16.0
4037 Ikeya	12.6	X	133.22500	74.39649	13.49149	8.45301	0.1601900	0.21373948	2.7704239	20	5 7.5	17.0
4038 Kristina	13.4	X	318.15124	46.56132	334.27485	6.00317	0.1298977	0.27076037	2.3663518	20	10 1.0	15.5
4039 Souseki	12.8	X	213.79590	125.89181	275.46023	5.04397	0.0619098	0.26227827	2.4170994	20	6 2.1	16.0
4040 Purcell	12.8	X	202.45094	271.97248	55.70390	2.33712	0.0685376	0.22561683	2.6723196	20	2 17.2	16.7
4041 Miyamotoyohko	11.2	X	331.09711	160.19298	101.50707	11.24348	0.0529218	0.18850127	3.0124964	20	5 8.8	15.3
4042 Okhotsk	14.2	X	138.52494	19.44671	69.32946	3.52589	0.1362557	0.26141132	2.4224405	20	5 13.6	17.6
4043 Perolof	12.4	X	323.66182	12.77575	303.14664	6.57037	0.0985570	0.17916825	3.1162241	20	6 30.5	16.2
4044 Erikhøg	11.8	X	44.07397	251.81045	94.41170	10.69158	0.0845733	0.18587511	3.0408050	20	12 8.1	16.0
4045 Lowengrub	11.2	X	94.37594	245.30458	224.28325	21.32943	0.1012934	0.16990310	3.2285078	20	4 16.6	15.9
4046 Swain	12.3	X	286.38989	79.51935	207.40266	7.85333	0.0658302	0.23043879	2.6349093	20	3 31.6	15.9
4047 Chang′E	13.5	X	71.57064	309.98576	31.89002	3.01568	0.2051747	0.23250107	2.6193051	20	—	—
4048 Samwestfall	14.0	X	232.58613	22.39659	355.91611	3.21137	0.1878149	0.29503855	2.2346879	20	5 11.5	17.2
4049 Noragal′	12.3	X	256.76358	217.58853	97.32261	2.38314	0.2741922	0.18336739	3.0684660	20	3 15.6	17.3
4050 Mebailey	12.6	X	232.58902	246.72520	146.19035	1.47484	0.1391741	0.17348192	3.1839524	20	6 5.6	17.5
4051 Hatanaka	12.6	X	2.33428	86.94430	285.54563	2.72416	0.1092422	0.21157796	2.7892607	20	11 22.6	16.0
4052 Crovisier	12.0	X	265.36111	130.59624	305.70848	9.16070	0.0666503	0.18741130	3.0241654	20	9 13.2	16.3
4053 Cherkasov	13.4	X	337.26637	8.45926	334.02140	4.60103	0.0777951	0.27556113	2.3387874	20	9 11.2	15.6
4054 Turnov	13.0	X	310.86623	27.30222	11.92438	4.82799	0.1705344	0.18514867	3.0487535	20	9 23.7	16.4
4055 Magellan	14.7	X	345.20351	154.36624	164.82978	23.25374	0.3263363	0.40127439	1.8204346	20	11 13.9	16.3
4056 Timwarner	12.5	X	100.49499	354.56672	142.36310	13.17756	0.1056631	0.22895308	2.6462958	20	6 1.9	16.4
4057 Demophon	10.1	X	262.99748	59.01331	24.30301	2.87131	0.1195262	0.08176252	5.2573456	20	9 3.7	17.1
4058 Cecilgreen	11.5	X	110.61574	251.31072	61.71188	10.79813	0.0927240	0.18841102	3.0134582	20	—	—
4059 Balder	11.4	X	169.05602	30.30701	238.07568	9.46525	0.0686381	0.18793697	3.0185236	20	—	—
4060 Deipylos	9.3	X	232.72192	307.20024	168.19787	16.15477	0.1541817	0.08198633	5.2477737	20	9 3.9	16.7
4061 Martelli	12.2	X	249.48457	250.20693	23.40161	1.66935	0.1316103	0.17883460	3.1200988	20	2 1.9	16.9
4062 Schiaparelli	13.5	X	183.61564	70.70506	340.04293	6.90114	0.1501140	0.29357530	2.2421072	20	5 6.3	17.0
4063 Euforbo	8.7	X	291.58177	318.33864	113.51224	18.94101	0.1186316	0.08346699	5.1855269	20	9 30.9	15.6
4064 Marjorie	13.5	X	73.06751	110.81711	341.50746	7.19323	0.0424957	0.25458203	2.4655712	20	2 11.7	16.4
4065 Meinel	14.1	X	62.46269	102.23216	22.77787	5.16348	0.0762530	0.28878851	2.2668151	20	3 12.0	16.3
4066 Haapavesi	13.4	X	277.67158	89.24312	241.12699	5.27939	0.2230267	0.29354640	2.2422544	20	4 21.2	16.2
4067 Mikhel′son	12.7	X	190.45889	90.33994	328.41511	6.34092	0.1855358	0.23148012	2.6270011	20	5 24.9	17.1
4068 Menestheus	9.5	X	210.60994	316.44336	177.65883	17.56390	0.0729158	0.08442155	5.1463640	20	9 10.2	16.6
4069 Blakee	14.2	X	177.57869	5.80834	235.71276	2.18188	0.0739103	0.30799388	2.1715741	20	—	—
4070 Rozov	13.3	X	259.97806	123.89868	253.16522	3.78415	0.1675251	0.29174677	2.2514658	20	6 13.5	16.0
4071 Rostovdon	11.9	X	252.32985	126.29961	267.45176	10.99241	0.1607164	0.17161759	3.2069697	20	6 24.7	16.7
4072 Yayoi	13.4	X	7.66479	126.12542	21.29267	2.16115	0.0645135	0.31374535	2.1449533	20	1 5.7	15.4
4073 Ruianzhongxue	12.2	X	342.73071	189.84935	144.21715	2.06989	0.1766312	0.17420679	3.1751140	20	8 23.4	15.5
4074 Sharkov	12.3	X	264.79976	61.57533	188.96354	9.84487	0.0356622	0.18742964	3.0239681	20	1 27.4	16.8
4075 Sviridov	12.4	X	357.03701	82.13981	10.91747	7.76971	0.0485408	0.18729468	3.0254205	20	—	—
4076 Dörffel	12.2	X	254.73885	62.57180	346.41018	1.35452	0.0685220	0.20434237	2.8547216	20	7 31.9	16.0
4077 Asuka	11.1	X	144.70942	242.93696	70.51381	11.41034	0.0851484	0.18765948	3.0214985	20	—	—
4078 Polakis	11.2	X	194.78602	228.91564	83.13101	11.60203	0.1043502	0.18784590	3.0194991	20	1 27.2	16.0
4079 Britten	12.7	X	183.24771	66.55906	74.26203	2.38726	0.1153601	0.17344808	3.1843665	20	8 30.2	17.6
4080 Galinskij	13.3	X	118.06017	96.16162	222.03885	3.79862	0.2106440	0.30335624	2.1936504	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
4081 Tippett	12.8	X	47.18293	49.94126	253.70088	1.79799	0.0919904	0.26866838	2.3786197	20	11 6.0	15.9
4082 Swann	13.5	X	224.24461	100.15369	294.35015	9.59876	0.2581988	0.26674914	2.3900154	20	5 19.7	17.7
4083 Jody	12.3	X	229.23756	270.51931	143.19703	12.82419	0.1932707	0.23520591	2.5991853	20	6 24.9	16.6
4084 Hollis	12.2	X	295.03505	215.30018	87.77955	3.21304	0.0131549	0.19859538	2.9095330	20	5 14.6	16.1
4085 Weir	12.2	X	136.31636	135.86102	68.66551	14.21712	0.1074444	0.23434788	2.6055257	20	10 13.6	16.4
4086 Podalirius	9.2	X	320.16963	356.57015	54.96240	21.69539	0.1213133	0.08162609	5.2632020	20	10 16.2	15.8
4087 Pärt	13.4	X	104.16475	303.94780	24.66832	4.42284	0.1173690	0.30690747	2.1766958	20	—	—
4088 Baggesen	12.6	X	216.15238	282.26049	35.50368	7.39898	0.0576770	0.25785027	2.4446930	20	2 18.7	16.1
4089 Galbraith	13.1	X	158.26756	321.34742	316.59680	1.14397	0.1318416	0.30497814	2.1858662	20	—	—
4090 Říšehvězd	13.1	X	165.18741	4.38642	266.52315	1.32931	0.2091986	0.27218005	2.3581162	20	—	—
4091 Lowe	11.5	X	101.73642	195.11254	49.78088	12.21337	0.1179456	0.17375747	3.1805854	20	10 16.9	16.4
4092 Tyr	13.2	X	321.90445	108.60262	253.82492	4.02583	0.2506055	0.23077266	2.6323672	20	8 21.8	15.2
4093 Bennett	12.3	X	75.02532	208.61425	260.43195	9.35218	0.0326021	0.18812425	3.0165199	20	3 7.9	16.7
4094 Aoshima	12.8	X	242.63209	107.67225	252.94187	2.04632	0.3355354	0.20230353	2.8738697	20	4 19.9	18.0
4095 Ishizuchisan	14.0	X	225.34649	89.79432	255.92465	2.51605	0.1182879	0.31934483	2.1198060	20	3 24.0	16.8
4096 Kushiro	12.7	X	36.96035	303.85020	18.73245	9.07603	0.1510791	0.20934681	2.8090437	20	11 11.8	16.5
4097 Tsurugisan	13.6	X	314.33749	322.12986	19.99278	3.97136	0.1422515	0.29406061	2.2396396	20	7 28.4	15.5
4098 Thraen	12.9	X	194.89996	10.10820	99.37980	2.93552	0.1254102	0.16981860	3.2295787	20	8 2.2	17.9
4099 Wiggins	12.7	X	342.08078	301.02567	135.78747	15.60033	0.0775748	0.23889795	2.5723364	20	—	—
4100 Sumiko	11.7	X	142.50177	307.45889	89.87540	11.12446	0.1104375	0.18900892	3.0070999	20	3 20.6	16.4
4101 Ruikou	12.3	X	277.31887	340.67751	338.89511	8.74668	0.1148661	0.22253383	2.6969445	20	4 22.2	16.1
4102 Gergana	12.2	X	284.93751	284.71810	184.79140	9.59446	0.0685578	0.18810687	3.0167057	20	11 25.8	16.3
4103 Chahine	11.4	X	352.55610	328.99600	23.14762	26.98351	0.1915851	0.26838438	2.3802974	20	10 28.8	13.6
4104 Alu	12.4	X	132.54938	242.42534	52.06004	15.70079	0.1057890	0.24298141	2.5434353	20	—	—
4105 Tsia	12.8	X	299.08678	63.70327	204.11577	6.35828	0.1910864	0.22176010	2.7032141	20	3 4.5	16.5
4106 Nada	11.9	X	258.84420	190.29468	44.82496	9.73647	0.1798351	0.21565734	2.7539744	20	—	—
4107 Rufino	12.2	X	330.99308	312.45597	148.98983	17.52993	0.2025610	0.24130122	2.5552283	20	—	—
4108 Rakos	13.9	X	183.18709	340.20291	195.22820	1.46189	0.1260244	0.22951797	2.6419520	20	10 16.3	18.0
4109 Anokhin	13.7	X	338.05179	117.05810	176.65621	1.51756	0.1600935	0.28911779	2.2650937	20	6 24.2	15.2
4110 Keats	11.9	X	241.99687	69.88017	193.95759	2.10656	0.1164406	0.18068976	3.0987059	20	1 14.4	16.7
4111 Lamy	14.8	X	53.96845	334.52118	248.14255	2.67170	0.1283148	0.28260393	2.2997674	20	7 30.7	17.2
4112 Hrabal	11.0	X	18.73674	176.71851	175.55598	16.59756	0.0386691	0.17913705	3.1165859	20	11 8.0	15.5
4113 Rascana	13.5	X	54.94784	48.50876	128.71925	6.35180	0.0952932	0.28988769	2.2610814	20	5 20.7	15.9
4114 Jasnorzewska	13.6	X	100.41560	45.58346	322.62619	7.30460	0.2014244	0.24351878	2.5396922	20	—	—
4115 Peternorton	12.2	X	309.89951	290.74692	206.54573	9.56919	0.0395991	0.18952292	3.0016604	20	—	—
4116 Elachi	13.7	X	113.88409	322.78655	185.08398	24.11142	0.0804148	0.38464944	1.8725179	20	7 1.1	16.5
4117 Wilke	12.5	X	351.72090	140.24795	168.90071	13.39377	0.1736243	0.20588884	2.8404087	20	8 8.9	15.6
4118 Sveta	12.0	X	51.12672	85.61968	306.56344	8.76330	0.1059172	0.18780593	3.0199275	20	—	—
4119 Miles	11.7	X	158.99684	77.34402	115.27860	13.01751	0.1314031	0.20153421	2.8811787	20	10 16.2	16.5
4120 Denoyelle	12.9	X	192.55681	61.07853	154.84822	6.72585	0.0857168	0.17562811	3.1579605	20	12 8.2	17.7
4121 Carlin	12.7	X	46.43637	280.58358	46.55488	23.07993	0.2548384	0.26941990	2.3741944	20	12 25.2	16.6
4122 Ferrari	12.0	X	188.99421	311.10633	262.49480	13.46743	0.0506201	0.24102070	2.5572105	20	12 18.0	15.3
4123 Tarsila	13.1	X	314.63928	0.73129	55.14573	2.74744	0.0639687	0.20671364	2.8328482	20	11 3.6	16.6
4124 Herriot	12.6	X	2.52214	119.68870	330.85449	3.59396	0.0327646	0.21186480	2.7867425	20	—	—
4125 Lew Allen	13.5	X	123.65554	33.87602	276.04349	20.44474	0.1179968	0.37002984	1.9215199	20	—	—
4126 Mashu	12.3	X	232.94166	357.12350	101.61763	3.18618	0.1407169	0.17178996	3.2048241	20	8 26.9	17.2
4127 Kyogoku	12.6	X	355.91863	222.27779	153.81302	2.26784	0.0375601	0.20312841	2.8660841	20	11 10.2	16.3
4128 UKSTU	14.0	X	242.80219	328.29295	292.40928	12.79058	0.1404659	0.24132023	2.5550941	20	1 2.9	17.9
4129 Richelen	13.4	X	159.41164	71.05126	245.27441	7.12393	0.2500293	0.23976554	2.5661273	20	—	—
4130 Ramanujan	12.3	X	303.24544	46.61778	175.18225	9.79849	0.0363511	0.18460771	3.0547065	20	2 8.3	16.7
4131 Stasik	11.7	X	24.94216	100.04308	282.50160	12.42320	0.1043846	0.17503811	3.1650529	20	12 27.3	15.8
4132 Bartók	12.1	X	297.53320	255.06694	172.80580	23.31377	0.2866535	0.26381226	2.4077205	20	10 17.4	13.9
4133 Heureka	12.4	X	255.40322	247.20871	324.58275	12.05410	0.1206360	0.23755785	2.5820013	20	—	—
4134 Schütz	13.9	X	285.63995	77.77828	135.09896	4.18230	0.0970295	0.28223258	2.3017843	20	—	—
4135 Svetlanov	12.4	X	170.47572	175.78192	199.85895	7.94551	0.2337743	0.21184784	2.7868912	20	3 18.9	17.3
4136 Artmane	13.9	X	151.99831	56.00162	155.17081	3.25504	0.1363618	0.27313353	2.3526250	20	11 6.2	17.5
4137 Crabtree	13.1	X	69.03273	214.93190	352.87634	3.79982	0.0178337	0.27093067	2.3653601	20	7 13.4	15.9
4138 Kalchas	10.1	X	350.26785	164.60021	208.01687	2.09920	0.0441952	0.08395130	5.1655644	20	10 6.7	16.8
4139 Ul′yanin	12.2	X	54.44053	180.92554	134.06945	1.59198	0.1651999	0.17678051	3.1442214	20	11 21.6	16.6
4140 Branham	11.3	X	154.45790	219.85786	127.13232	7.72339	0.1201796	0.18906604	3.0064941	20	1 28.2	15.9
4141 Nintanlena	13.0	X	162.40606	263.82559	326.22400	8.96387	0.0118515	0.23963776	2.5670395	20	12 9.2	16.6
4142 Dersu–Uzala	13.1	X	10.27567	55.32331	60.65906	26.49361	0.1515037	0.37293021	1.9115442	20	—	—
4143 Huziak	12.6	X	43.91726	245.87840	103.33044	2.03472	0.1814336	0.18102535	3.0948751	20	12 22.9	16.9
4144 Vladvasil′ev	11.8	X	301.53207	227.50055	171.52176	9.26295	0.0330075	0.17579084	3.1560113	20	9 21.2	16.0
4145 Maximova	13.5	X	144.43596	35.58771	292.67708	4.86607	0.1995312	0.28772657	2.2723893	20	—	—
4146 Rudolfinum	13.8	X	115.68291	321.03657	169.77650	4.70341	0.1060579	0.29023344	2.2592853	20	6 10.6	16.7
4147 Lennon	13.0	X	359.81339	303.37814	288.55218	5.73334	0.0806919	0.27156648	2.3616667	20	4 30.5	15.6
4148 McCartney	12.7	X	104.74862	215.65227	325.65725	5.19817	0.0973733	0.29293490	2.2453737	20	8 7.3	15.6
4149 Harrison	12.4	X	71.53688	76.59770	154.67287	12.93036	0.1246970	0.22647997	2.6655255	20	8 31.1	15.9
4150 Starr	12.8	X	268.17296	197.44305	122.91047	3.19525	0.1666106	0.29548898	2.2324163	20	4 6.5	15.8
4151 Alanhale	12.3	X	161.81350	75.92095	66.93510	1.00229	0.1455068	0.17654229	3.1470493	20	8 11.6	17.3
4152 Weber	12.0	X	105.58287	336.64651	201.36775	17.55459	0.0865614	0.17381141	3.1799274	20	7 20.4	17.0
4153 Roburnham	12.3	X	75.32295	207.16729	66.04093	1.42531	0.1673739	0.17695838	3.1421142	20	10 26.0	17.0
4154 Rumsey	13.1	X	253.94753	244.14072	358.71020	6.74079	0.1994180	0.24370886	2.5383714	20	—	—
4155 Watanabe	13.2	X	224.24906	355.53875	17.56861	6.01693	0.2426847	0.25992842	2.4316452	20	4 24.6	17.2
4156 Okadanoboru	12.5	X	140.47081	129.82382	308.14717	14.26221	0.1921674	0.22241883	2.6978741	20	4 30.9	17.2
4157 Izu	12.4	X	213.57660	206.35289	66.93857	12.79795	0.1599803	0.22524701	2.6752438	20	—	—
4158 Santini	11.6	X	215.74792	272.83065	4.07686	6.16751	0.0197199	0.15702849	3.4026485	20	1 12.3	16.5
4159 Freeman	11.2	X	33.16943	313.50964	91.23119	15.20099	0.0736432	0.24206168	2.5498738	20	—	—
4160 Sabrina–John	12.9	X	56.64924	25.32534	187.48625	5.05090	0.0905808	0.25629251	2.4545889	20	7 11.5	15.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
4161 Amasis	13.3	X	3.07024	229.03837	172.43539	3.26617	0.0924989	0.18336785	3.0684609	20	12 21.3	17.2
4162 SAF	11.6	X	240.89647	156.90804	254.19377	14.23468	0.1328452	0.20585417	2.8407277	20	7 6.6	15.9
4163 Saaremaa	11.4	X	86.63224	4.01274	129.00260	11.10552	0.0475776	0.18766046	3.0214879	20	5 3.8	15.8
4164 Shilov	12.2	X	269.19408	221.21847	218.06727	12.80890	0.1506790	0.23037604	2.6353877	20	9 16.4	15.8
4165 Didkovskij	13.6	X	112.17357	108.47038	179.93655	11.88658	0.1783767	0.25656397	2.4528572	20	12 30.0	17.8
4166 Pontryagin	12.8	X	259.66545	126.08804	311.27511	3.10753	0.0294724	0.23404977	2.6077377	20	9 22.3	16.2
4167 Riemann	12.0	X	117.50623	114.03660	160.51416	14.99422	0.0923593	0.23749718	2.5824410	20	12 14.6	16.2
4168 Millan	14.4	X	41.30594	153.27495	328.12658	12.33096	0.2365204	0.23969563	2.5666263	20	2 18.2	16.3
4169 Celsius	11.0	X	296.87546	31.65161	355.18177	9.98741	0.1636182	0.15695396	3.4037255	20	8 13.9	15.4
4170 Semmelweis	11.6	X	229.22427	119.43040	171.66114	10.36477	0.0844216	0.18749124	3.0233057	20	2 2.3	16.3
4171 Carrasco	13.6	X	100.39738	29.61869	185.14028	4.03391	0.0800843	0.29337110	2.2431475	20	9 15.4	16.5
4172 Rochefort	14.4	X	47.57514	211.07407	332.30453	2.18096	0.0929496	0.28753808	2.2733823	20	5 13.9	16.6
4173 Thicksten	13.7	X	274.26052	18.45088	107.26224	4.14681	0.1222433	0.27219554	2.3580267	20	12 18.4	15.8
4174 Pikulia	12.0	X	264.05209	173.58309	127.02147	2.31758	0.1388649	0.17363904	3.1820314	20	3 19.0	16.8
4175 Billbaum	12.4	X	59.03282	316.65895	163.40229	13.61124	0.1857336	0.22421452	2.6834503	20	3 22.6	15.3
4176 Sudek	12.0	X	60.23851	355.87330	114.32085	2.59967	0.1423303	0.18058956	3.0998520	20	3 10.1	15.9
4177 Kohman	13.0	X	154.68314	157.77217	210.67037	17.17613	0.2865818	0.16442688	3.2997992	20	3 1.2	19.0
4178 Mimeev	12.6	X	237.55946	164.35812	34.00991	1.03604	0.1737740	0.17336155	3.1854261	20	12 23.7	17.2
4179 Toutatis	15.30	0.10	311.28336	277.99017	125.19915	0.44795	0.6242486	0.24270042	2.5453980	20	7 11.6	17.2
4180 Anaxagoras	13.7	X	165.90869	29.74738	196.27956	10.89143	0.1916484	0.23372686	2.6101390	20	11 28.8	18.1
4181 Kivi	12.5	X	207.53852	338.95265	151.81505	14.39895	0.1331923	0.23365004	2.6107111	20	9 17.1	16.5
4182 Mount Locke	12.2	X	209.51396	30.86412	261.52488	8.04825	0.1312516	0.21027998	2.8007269	20	1 12.7	16.6
4183 Cuno	14.4	X	331.35053	236.34912	294.86739	6.70408	0.6341388	0.35293627	1.9830722	20	—	—
4184 Berdyayev	13.0	X	45.67303	34.99214	28.47242	9.45596	0.0361478	0.23803202	2.5785712	20	—	—
4185 Phystech	13.3	X	190.77852	320.68451	265.77262	2.23118	0.0975532	0.29848219	2.2174667	20	—	—
4186 Tamashima	11.5	X	43.21191	275.72040	144.70610	24.08412	0.0673714	0.17985503	3.1082861	20	—	—
4187 Shulnazaria	12.8	X	342.20520	20.13309	174.76865	1.27694	0.1109014	0.18515902	3.0486400	20	2 19.0	16.7
4188 Kitezh	12.9	X	53.64850	228.22779	136.22988	6.12450	0.1498431	0.27614206	2.3355061	20	—	—
4189 Sayany	13.5	X	274.60689	127.11050	194.13566	5.35245	0.1358916	0.28226791	2.3015922	20	4 19.5	16.5
4190 Kvasnica	12.6	X	111.59718	115.64017	198.80434	12.95340	0.1660969	0.23325675	2.6136448	20	—	—
4191 Assesse	12.7	X	106.68915	39.64053	231.72574	12.07092	0.1460965	0.23105731	2.6302048	20	11 30.0	16.8
4192 Breysacher	11.9	X	124.40047	128.46949	208.07748	0.54825	0.1675489	0.17149157	3.2085405	20	—	—
4193 Salanave	12.1	X	334.09953	249.78927	127.35108	1.89330	0.1661530	0.17590522	3.1546431	20	10 6.2	15.6
4194 Sweitzer	12.1	X	23.65248	353.55008	156.06949	7.52951	0.0442228	0.22246387	2.6975099	20	2 20.2	15.6
4195 Esambaev	12.6	X	297.44187	218.57343	178.22347	2.05335	0.0665835	0.20647966	2.8349878	20	9 13.1	16.2
4196 Shuya	10.9	X	291.85866	217.74684	166.04641	1.50750	0.0294868	0.12757880	3.9079623	20	8 14.8	16.3
4197 Morpheus	14.6	X	263.27022	122.51109	7.04465	12.59411	0.7724194	0.28346185	2.2951248	20	9 2.6	18.8
4198 Panthera	13.1	X	258.02223	49.00070	108.36478	2.37507	0.1198426	0.17871425	3.1214994	20	12 8.3	17.2
4199 Andreev	13.1	X	178.72684	278.47209	71.98306	6.11881	0.1340764	0.25593425	2.4568791	20	2 21.4	16.9
4200 Shizukagozen	13.7	X	0.67299	242.40485	241.65364	7.77376	0.2246499	0.21903204	2.7256136	20	—	—
4201 Orosz	11.5	X	142.29405	13.62230	238.12583	8.87980	0.2279674	0.17556504	3.1587168	20	11 30.4	16.9
4202 Minitti	11.7	X	138.85096	136.78506	144.35696	10.24790	0.0846427	0.18770823	3.0209753	20	12 31.9	16.4
4203 Brucato	12.4	X	78.13854	261.32582	341.18191	28.59595	0.1345888	0.23441052	2.6050615	20	9 17.0	16.3
4204 Barsig	13.1	X	128.43832	323.46749	222.69260	3.81551	0.0859664	0.28837146	2.2690002	20	9 8.1	16.1
4205 David Hughes	14.4	X	119.96820	110.08075	276.53220	16.48223	0.1492469	0.43447258	1.7264783	20	—	—
4206 Verulamium	12.3	X	30.62956	30.23922	249.76419	1.16983	0.0193044	0.20346338	2.8629376	20	8 21.6	16.0
4207 Chernova	11.6	X	23.35850	215.88081	261.27295	9.02614	0.0567095	0.18791676	3.0187400	20	1 14.1	15.5
4208 Kiselev	11.4	X	302.49409	217.87059	147.44829	16.78107	0.0735044	0.17127771	3.2112109	20	8 4.0	15.7
4209 Briggs	11.3	X	11.08138	12.95788	330.17070	21.61085	0.0818420	0.17584689	3.1553407	20	10 6.1	15.9
4210 Isobelthompson	12.5	X	210.57065	287.83299	159.65198	10.44807	0.0749312	0.19019880	2.9945452	20	7 25.0	17.0
4211 Rosniblett	11.8	X	265.91127	316.63366	24.30233	0.58704	0.2042128	0.17306246	3.1890951	20	4 29.9	16.7
4212 Sansyu–Asuke	11.2	X	314.38392	343.12198	22.12875	14.82447	0.2456766	0.17568653	3.1572604	20	8 9.3	14.9
4213 Njord	13.6	X	189.98660	220.14157	253.20671	3.41055	0.0758296	0.26680067	2.3897076	20	8 9.8	16.8
4214 Veralynn	12.9	X	191.28448	83.99054	13.84688	3.54571	0.1284882	0.26169468	2.4206915	20	7 20.2	16.5
4215 Kamo	12.6	X	107.55279	280.10805	246.73305	5.75108	0.0622067	0.26210491	2.4181651	20	7 13.2	15.8
4216 Neunkirchen	14.0	X	225.46169	49.58755	202.57401	4.45614	0.1701091	0.27230857	2.3573741	20	—	—
4217 Engelhardt	12.3	X	192.12551	348.86186	355.41259	23.13059	0.2120905	0.28000994	2.3139488	20	2 29.4	16.3
4218 Demottoni	13.8	X	121.32231	36.91426	209.56144	4.90197	0.1445970	0.29265563	2.2468020	20	11 23.8	17.2
4219 Nakamura	13.6	X	78.62138	64.91243	140.60907	3.08824	0.1235799	0.25421210	2.4679626	20	8 7.6	16.9
4220 Flood	13.5	X	358.38387	232.95994	220.97115	6.99798	0.1945126	0.21006296	2.8026556	20	—	—
4221 Picasso	12.7	X	183.30289	38.74933	187.94195	17.18770	0.1268925	0.23252115	2.6191542	20	12 18.4	17.0
4222 Nancita	12.3	X	14.86396	217.95926	206.81496	3.74077	0.2961733	0.27071790	2.3665993	20	—	—
4223 Shikoku	10.8	X	299.81294	83.01035	269.21712	9.24783	0.1082624	0.18871897	3.0101792	20	7 10.4	14.6
4224 Susa	11.3	X	27.09272	181.75315	200.82320	12.11588	0.1863328	0.19776824	2.9176398	20	—	—
4225 Hobart	13.0	X	295.25480	258.79264	61.98136	3.48297	0.1078197	0.29370345	2.2414550	20	5 22.5	15.2
4226 Damiaan	11.6	X	116.83661	132.88808	211.92155	5.40902	0.2555512	0.20311727	2.8661889	20	—	—
4227 Kaali	13.5	X	36.12674	20.13733	133.00962	2.70754	0.1518650	0.26580878	2.3956489	20	3 16.1	15.4
4228 Nemiro	14.1	X	273.53189	113.33120	223.17013	5.27177	0.1370591	0.28187782	2.3037152	20	5 9.0	17.0
4229 Plevitskaya	13.7	X	190.25256	323.72649	161.07710	5.17063	0.1778421	0.26944392	2.3740533	20	8 20.4	17.3
4230 van den Bergh	11.8	X	166.88838	20.19645	160.43798	3.10108	0.1336669	0.12582053	3.9442857	20	9 25.3	18.0
4231 Fireman	13.3	X	30.54091	76.69192	261.04441	8.59138	0.0654962	0.29018865	2.2595178	20	12 1.1	15.9
4232 Aparicio	13.7	X	69.76019	277.72561	182.51938	21.70144	0.0836061	0.36587797	1.9360291	20	1 26.7	15.8
4233 Pal′chikov	13.7	X	228.15563	112.47407	184.82694	3.83128	0.1869949	0.26511591	2.3998210	20	1 27.9	17.7
4234 Evtushenko	12.5	X	94.91234	226.50872	43.74531	1.68224	0.1682664	0.17184893	3.2040909	20	11 9.7	17.4
4235 Tatishchev	12.1	X	137.56631	300.55096	331.28431	1.21894	0.0345296	0.19134740	2.9825496	20	12 20.2	16.3
4236 Lidov	11.3	X	204.34174	145.65329	348.55965	7.27378	0.0383054	0.15451859	3.4393963	20	9 14.7	16.3
4237 Raushenbakh	13.0	X	151.05212	346.48107	29.21068	3.16139	0.0946196	0.22906001	2.6454722	20	2 22.6	16.7
4238 Audrey	13.2	X	269.84093	40.76424	144.96844	1.84811	0.0742605	0.26388878	2.4072550	20	—	—
4239 Goodman	14.1	X	158.65909	20.04603	294.76815	1.27928	0.1862767	0.30739373	2.1743997	20	—	—
4240 Grün	13.5	X	117.98582	23.56808	320.85562	1.14238	0.1057828	0.19556596	2.9395027	20	—	—

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
4241	Pappalardo	14.8	X	74.83958	123.32743	246.57469	0.97807	0.0721864	0.19469613	2.9482514	20	—	—
4242	Brecher	12.8	X	352.33877	212.17107	29.18438	0.28315	0.1487428	0.17918504	3.1160295	20	5 4.8	16.3
4243	Nankivell	12.6	X	14.68133	355.85879	344.91491	8.99737	0.1154539	0.18706966	3.0278462	20	10 22.7	16.5
4244	Zakharchenko	12.9	X	282.94137	269.13997	86.03634	1.76773	0.1680928	0.17169477	3.2060085	20	6 11.6	17.2
4245	Nairc	13.9	X	212.57153	26.12686	359.04422	1.94336	0.1689989	0.26942711	2.3741520	20	5 3.2	17.5
4246	Telemann	13.6	X	217.24754	239.79831	37.37111	3.07051	0.1750101	0.29885613	2.2156166	20	—	—
4247	Grahamsmith	13.4	X	166.63459	288.34027	124.53985	2.07472	0.2272549	0.17382893	3.1797137	20	5 1.8	18.8
4248	Ranald	14.1	X	266.68976	118.88190	305.65760	5.82861	0.1028261	0.28172631	2.3045410	20	9 9.2	16.6
4249	Křemže	12.3	X	259.66636	165.22782	319.71178	4.70374	0.1057215	0.19290119	2.9665121	20	11 3.7	16.4
4250	Perun	12.0	X	177.01135	265.51196	59.29002	2.52102	0.1178437	0.17502779	3.1651774	20	1 26.2	16.9
4251	Kavasch	14.0	X	136.15075	132.81954	115.38437	3.34098	0.1753433	0.26447148	2.4037179	20	12 4.7	17.9
4252	Godwin	12.7	X	112.91429	59.00394	163.96604	13.50251	0.1394223	0.22812952	2.6526608	20	10 9.6	16.9
4253	Märker	12.7	X	98.95635	341.75327	345.12226	14.52060	0.1743350	0.23228456	2.6209324	20	—	—
4254	Kamél	12.0	X	33.40471	227.50256	201.94632	13.02169	0.1593880	0.23293500	2.6160511	20	—	—
4255	Spacewatch	13.2	X	73.77680	72.95459	183.73512	2.61008	0.1494608	0.12436986	3.9748977	20	9 24.8	18.9
4256	Kagamigawa	13.1	X	193.92691	227.51124	72.50271	3.04329	0.0697171	0.27336421	2.3513013	20	—	—
4257	Ubasti	15.9	X	134.95991	278.93317	169.18668	40.71246	0.4683923	0.46626133	1.6470867	20	6 3.4	19.9
4258	Ryazanov	12.1	X	160.37654	277.35455	62.19929	3.95315	0.0680685	0.19353600	2.9600215	20	1 21.4	16.6
4259	McCoy	12.4	X	89.25405	16.20727	59.69513	2.91471	0.0509041	0.20052537	2.8908341	20	2 21.3	16.2
4260	Yanai	12.2	X	239.39805	324.56222	90.94550	3.26721	0.0607598	0.20500919	2.8485280	20	7 22.1	16.1
4261	Gekko	13.0	X	359.37394	102.20502	265.46773	2.66162	0.1101621	0.21113762	2.7931374	20	11 11.6	16.3
4262	DeVorkin	12.8	X	178.72034	184.10885	129.19412	7.32619	0.2197100	0.28224144	2.3017361	20	1 5.8	16.4
4263	Abashiri	12.7	X	164.31102	307.52213	298.04654	5.80724	0.1384835	0.29498457	2.2349605	20	—	—
4264	Karljosephine	13.4	X	47.75840	197.82154	184.67969	3.50471	0.2808627	0.26149782	2.4219063	20	—	—
4265	Kani	13.0	X	40.65768	243.11265	127.14153	4.35798	0.1991345	0.26044694	2.4284167	20	—	—
4266	Waltari	12.0	X	330.21549	156.33488	322.48885	16.49063	0.1767458	0.17445987	3.1720427	20	—	—
4267	Basner	14.1	X	258.94223	92.31564	244.45390	2.28105	0.2037970	0.27776358	2.3264078	20	4 12.5	17.4
4268	Grebenikov	13.5	X	39.37223	20.06055	359.46456	4.22893	0.2597342	0.22988810	2.6391155	20	—	—
4269	Bogado	13.5	X	214.87370	322.88880	337.65019	3.44647	0.1652242	0.29578206	2.2309414	20	1 18.6	16.9
4270	Juanvictoria	14.1	X	25.75638	321.10069	125.45677	12.15829	0.1834796	0.27065872	2.3669443	20	—	—
4271	Novosibirsk	11.6	X	89.60555	129.26804	159.94462	10.91234	0.0920512	0.18843398	3.0132135	20	11 24.7	16.3
4272	Entsuji	12.8	X	104.86828	183.98491	184.37886	9.26883	0.2487558	0.27036633	2.3686505	20	1 1.6	15.7
4273	Dunhuang	13.7	X	102.01890	241.41858	127.13756	3.02980	0.2251079	0.26591791	2.3949934	20	—	—
4274	Karamanov	12.8	X	344.05644	12.90479	7.25581	7.34386	0.2339176	0.22324811	2.6911889	20	11 15.9	15.3
4275	Bogustafson	14.2	X	172.76540	47.53015	335.95242	13.02578	0.1780923	0.22788080	2.6545906	20	3 24.2	18.6
4276	Clifford	14.6	X	172.68412	3.50798	76.88130	21.03078	0.2037700	0.34589235	2.0099045	20	6 7.8	17.6
4277	Holubov	12.7	X	257.29432	94.32607	300.07984	10.64647	0.1394063	0.21896597	2.7261619	20	7 6.7	16.6
4278	Harvey	13.7	X	356.88883	235.29743	146.42349	5.47684	0.1764717	0.28879905	2.2667600	20	12 30.9	16.0
4279	De Gasparis	14.5	X	112.08127	161.37610	265.62470	4.28050	0.2085528	0.27122029	2.3636759	20	3 21.5	17.8
4280	Simonenko	13.3	X	109.54679	356.47648	51.33519	4.62759	0.0105318	0.26894049	2.3770150	20	1 26.7	16.2
4281	Pounds	13.8	X	331.25252	209.60675	187.89334	0.72991	0.1101913	0.25496911	2.4630752	20	11 18.6	16.1
4282	Endate	13.6	X	272.11054	102.08016	325.66516	2.72273	0.1441005	0.26639053	2.3921599	20	9 15.0	16.3
4283	Stöffler	12.7	X	324.87958	167.14374	327.91959	24.22571	0.1719675	0.27312184	2.3526921	20	—	—
4284	Kaho	13.3	X	133.30519	167.96937	137.44637	11.77132	0.2741186	0.26494211	2.4008704	20	—	—
4285	Hulkower	12.6	X	190.61600	78.10027	155.05298	13.14584	0.1620162	0.22931108	2.6435408	20	12 29.8	16.8
4286	Rubtsov	12.0	X	87.24342	255.21285	134.63065	2.90486	0.0779701	0.19773650	2.9179521	20	—	—
4287	Třísov	13.3	X	158.87362	257.49298	52.91410	5.48217	0.1865502	0.30032725	2.2083753	20	—	—
4288	Tokyotech	11.6	X	73.51644	325.40869	44.58475	14.02389	0.1763387	0.23119217	2.6291819	20	—	—
4289	Biwako	12.8	X	275.16714	340.75549	75.89577	5.46174	0.1556165	0.28301919	2.2975173	20	9 8.7	15.2
4290	Heisei	11.5	X	336.92584	87.21723	243.89100	8.49734	0.0974817	0.18722418	3.0261801	20	8 8.5	15.4
4291	Kodaihasu	11.7	X	123.80385	9.49186	245.80314	13.65917	0.0770012	0.19153579	2.9805936	20	11 16.7	16.3
4292	Aoba	12.2	X	203.53781	145.84287	321.46096	3.54949	0.0478603	0.21594024	2.7515685	20	8 16.9	16.1
4293	Masumi	12.1	X	258.59238	53.24308	58.03900	9.37125	0.2236133	0.21965237	2.7204795	20	10 9.2	15.7
4294	Horatius	12.9	X	259.47341	25.36948	339.68481	4.87090	0.0239100	0.20999825	2.8032313	20	6 16.0	16.8
4295	Wisse	14.2	X	212.55568	29.62783	315.76032	2.33531	0.1570301	0.25700662	2.4500400	20	3 14.5	18.0
4296	van Woerkom	13.2	X	17.74239	27.18464	13.03362	6.14070	0.1652421	0.29224975	2.2488817	20	—	—
4297	Eichhorn	13.1	X	272.34376	181.20493	121.70579	5.86097	0.1930034	0.27626834	2.3347944	20	3 17.9	16.4
4298	Jorgenúnez	12.3	X	286.94851	312.08868	88.03566	3.29488	0.2856982	0.18402807	3.0611175	20	7 28.4	16.3
4299	WIYN	12.8	X	32.81644	272.74372	104.40049	5.08647	0.1710882	0.29334517	2.2432797	20	—	—
4300	Marg Edmondson	13.1	X	69.20970	148.20799	208.54332	3.79106	0.0968917	0.27660219	2.3329153	20	—	—
4301	Boyden	12.5	X	99.60217	101.73413	52.12578	2.28280	0.1117407	0.17923832	3.1154119	20	6 20.2	16.9
4302	Markeev	12.7	X	148.63443	101.92669	152.02322	5.70193	0.1311158	0.25579028	2.4578008	20	12 22.2	16.5
4303	Savitskij	14.2	X	183.52539	15.35550	32.45494	2.41407	0.1322409	0.30783532	2.1723197	20	5 4.3	17.2
4304	Geichenko	14.1	X	60.82959	62.55610	312.45872	3.06608	0.1485230	0.25663093	2.4524305	20	—	—
4305	Clapton	12.7	X	322.22251	327.48595	180.00490	1.80785	0.0711156	0.19819493	2.9134508	20	—	—
4306	Dunaevskij	12.7	X	0.32153	173.87549	153.09768	1.79837	0.1654835	0.17780999	3.1320735	20	9 17.8	16.3
4307	Cherepashchuk	13.0	X	279.64532	309.74026	24.23491	5.17979	0.0778392	0.26307323	2.4122276	20	5 22.7	15.9
4308	Magarach	12.6	X	145.92820	92.91082	303.98759	10.93760	0.1981675	0.22469503	2.6796233	20	3 16.9	17.1
4309	Marvin	13.7	X	323.51848	209.96141	191.23293	1.56017	0.2606824	0.18860841	3.0113554	20	10 16.3	16.4
4310	Strömholm	14.0	X	217.98238	351.66891	178.45281	3.52028	0.0558058	0.31035549	2.1605439	20	12 15.2	16.5
4311	Zguridi	13.9	X	348.38059	125.38964	222.76869	5.48034	0.1470206	0.25830875	2.4417994	20	10 11.0	16.1
4312	Knacke	13.4	X	135.77683	287.24627	91.17787	4.42983	0.1520735	0.26774756	2.3840701	20	2 11.1	16.6
4313	Bouchet	12.8	X	213.85813	159.71856	44.17487	9.27324	0.0136289	0.22807292	2.6530996	20	—	—
4314	Dervan	13.5	X	324.56000	21.76719	225.46882	3.20394	0.0941963	0.23597459	2.5935376	20	3 27.2	16.6
4315	Pronik	12.4	X	24.12568	265.83936	28.49454	16.68539	0.2958324	0.19219958	2.9737270	20	10 11.2	15.8
4316	Babinkova	12.6	X	313.23044	178.81068	340.12189	1.24094	0.0215145	0.19968809	2.8989092	20	—	—
4317	Garibaldi	10.9	X	45.29205	94.94918	38.44950	9.81923	0.1606498	0.12358215	3.9917704	20	3 27.1	15.9
4318	Baťa	11.8	X	22.14151	96.77333	33.13063	9.54073	0.1036403	0.17040137	3.2222111	20	2 5.7	15.9
4319	Jackierobinson	13.9	X	243.20899	340.13214	325.04008	9.08863	0.2225247	0.27540867	2.3396505	20	2 17.4	17.7
4320	Jarosewich	14.9	X	71.66517	277.41861	191.00042	6.44669	0.1138199	0.30275305	2.1965632	20	3 2.4	16.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
4321 Zero	13.2	X	253.99748	244.43713	135.13298	2.40921	0.2850318	0.18371374	3.0646081	20	5 27.0	18.2
4322 Billjackson	13.9	X	355.89268	319.39973	19.53903	4.51702	0.1825939	0.28704182	2.2760018	20	10 25.6	15.8
4323 Hortulus	13.4	X	167.07631	102.73879	259.79529	4.42248	0.2028985	0.29285045	2.2458054	20	2 21.2	16.8
4324 Bickel	12.0	X	203.42289	108.53763	292.78531	7.77705	0.1993757	0.24272084	2.5452553	20	5 13.5	16.3
4325 Guest	12.5	X	159.31907	109.99362	60.01952	5.75890	0.0963408	0.21610695	2.7501532	20	9 17.6	16.8
4326 McNally	12.6	X	357.42871	153.34279	109.99731	4.28739	0.2152627	0.18370645	3.0646892	20	6 14.6	15.5
4327 Ries	11.7	X	13.88736	276.57567	55.73535	16.66767	0.2247190	0.21366881	2.7710347	20	11 7.2	14.7
4328 Valina	14.1	X	314.88199	130.10555	194.26240	5.69790	0.1738104	0.28186338	2.3037938	20	6 21.6	16.1
4329 Miró	13.6	X	1.28439	33.33860	7.33673	5.85895	0.1031062	0.29058018	2.2574877	20	—	—
4330 Vivaldi	13.9	X	32.30031	210.95198	199.54351	2.66743	0.0379421	0.29355022	2.2422349	20	—	—
4331 Hubbard	13.3	X	359.99797	213.57100	72.12857	5.71902	0.2069465	0.29632856	2.2281977	20	8 13.8	14.6
4332 Milton	12.8	X	297.86197	198.24177	165.96392	19.16504	0.3147746	0.23698273	2.5861770	20	6 23.8	16.2
4333 Sinton	13.6	X	6.68366	178.57364	143.41806	4.16162	0.1488330	0.29471206	2.2363380	20	10 19.2	15.6
4334 Foo	13.1	X	159.29138	348.58946	61.79291	1.63369	0.1954313	0.17727609	3.1383589	20	4 21.4	18.2
4335 Verona	13.3	X	64.89678	324.74229	37.62838	3.10027	0.2193546	0.29960289	2.2119334	20	—	—
4336 Jasniewicz	13.5	X	347.63773	32.83262	348.07749	7.94808	0.2257213	0.27694691	2.3309790	20	12 17.2	15.7
4337 Arecibo	12.3	X	331.62184	181.53555	41.20741	2.21310	0.0905499	0.16746818	3.2597267	20	3 15.2	16.5
4338 Velez	13.8	X	147.01290	82.53118	198.30472	5.83834	0.1786609	0.29180849	2.2511483	20	—	—
4339 Almamater	14.0	X	242.16442	73.07144	300.33233	2.16574	0.1781412	0.30322615	2.1942778	20	5 16.0	17.1
4340 Dence	12.6	X	65.48621	175.72913	81.00972	25.15411	0.2313869	0.26614045	2.3936581	20	10 28.9	16.7
4341 Poseidon	15.9	X	129.59944	15.67939	108.10026	11.85379	0.6795655	0.39619277	1.8359676	20	7 18.1	20.1
4342 Freud	12.5	X	63.72040	181.15526	133.36272	6.08056	0.0905786	0.21440110	2.7647214	20	11 30.4	16.4
4343 Tetsuya	12.5	X	324.31094	280.36008	221.20863	6.93981	0.1727803	0.21201006	2.7854695	20	—	—
4344 Buxtehude	12.8	X	251.65368	92.80733	114.52074	2.39202	0.1206451	0.17973585	3.1096600	20	—	—
4345 Rachmaninoff	12.6	X	188.82682	349.28973	136.29456	2.86178	0.0355665	0.19907408	2.9048669	20	8 22.5	16.7
4346 Whitney	12.6	X	276.02105	75.09337	224.55138	10.23277	0.0914045	0.18816143	3.0161226	20	4 2.1	16.9
4347 Reger	12.4	X	109.01356	127.38339	88.68478	0.55477	0.0687246	0.18500491	3.0503327	20	9 13.2	16.8
4348 Poulydamas	9.6	X	208.39279	159.67792	220.10425	7.95847	0.0970800	0.08216745	5.2400588	20	5 1.6	16.8
4349 Tibúrcio	11.8	X	102.82810	281.28666	90.23637	10.74736	0.2418680	0.23251911	2.6191696	20	1 10.6	15.2
4350 Shibecha	12.2	X	344.74246	109.59947	32.37237	13.69322	0.1929661	0.23147789	2.6270179	20	—	—
4351 Nobuhisa	12.6	X	125.11434	244.48006	159.33981	2.42723	0.0703780	0.20460445	2.8522833	20	2 26.6	16.6
4352 Kyoto	11.7	X	232.01597	348.54747	68.62554	11.07932	0.1955914	0.21443708	2.7644122	20	6 30.6	16.1
4353 Onizaki	12.3	X	325.13346	197.03911	79.05665	9.00290	0.1093707	0.27438227	2.3454815	20	5 7.9	14.8
4354 Euclides	13.5	X	229.55559	243.67989	192.61095	7.40592	0.2058972	0.21011993	2.8021490	20	7 19.7	18.2
4355 Memphis	12.9	X	300.83233	251.58691	345.73129	14.08304	0.0420759	0.23906594	2.5711312	20	2 20.8	16.4
4356 Marathon	13.0	X	334.49391	265.21642	1.89450	7.45886	0.1913241	0.21020354	2.8014058	20	4 28.6	16.1
4357 Korinthos	11.7	X	99.28898	46.42153	201.09718	10.50818	0.0682521	0.18953112	3.0015738	20	10 11.2	16.0
4358 Lynn	12.2	X	171.00612	260.44158	15.22775	13.07772	0.1721728	0.23411032	2.6072880	20	—	—
4359 Berlage	13.7	X	292.71086	185.56414	173.40782	1.14670	0.1658088	0.31177557	2.1539783	20	7 7.9	15.6
4360 Xuyi	13.1	X	79.43434	77.70861	331.07926	2.50633	0.1600548	0.23524806	2.5988747	20	1 11.8	16.1
4361 Nezhdanova	12.4	X	203.85730	356.92222	74.81361	2.72411	0.1611083	0.17607114	3.1526610	20	6 23.7	17.4
4362 Carlisle	13.0	X	265.11057	171.88963	34.38675	4.71344	0.1013544	0.29426428	2.2386061	20	—	—
4363 Sergej	13.4	X	137.89974	293.85634	83.95604	8.73545	0.2283128	0.26913571	2.3758654	20	2 23.3	17.1
4364 Shkodrov	13.7	X	143.38029	46.92752	139.72131	1.74111	0.1397916	0.27762345	2.3271906	20	9 27.5	17.3
4365 Ivanova	12.6	X	349.80869	55.07500	244.62444	1.04222	0.0550932	0.20453914	2.8528904	20	7 22.9	16.1
4366 Venikagan	12.3	X	70.91024	87.83603	38.56731	1.72944	0.1380458	0.17568560	3.1572716	20	4 14.1	16.4
4367 Meech	12.8	X	85.80762	68.65709	6.13507	11.13177	0.2344966	0.20180547	2.8785963	20	3 13.6	16.5
4368 Pillmore	11.5	X	197.30345	115.65207	225.47727	20.91675	0.0225915	0.17337936	3.1852079	20	2 25.1	16.5
4369 Seifert	12.0	X	311.68392	76.72116	299.32275	11.82905	0.2515499	0.23362598	2.6108903	20	8 16.9	14.4
4370 Dickens	14.3	X	199.46125	153.33528	218.36010	2.55855	0.1998094	0.30288658	2.1959175	20	4 1.9	17.6
4371 Fyodorov	13.2	X	308.12167	168.54817	54.86904	2.32615	0.1900184	0.26206528	2.4184089	20	1 15.7	16.3
4372 Quincy	13.0	X	23.89564	16.74336	14.69632	1.50480	0.1237215	0.19642326	2.9309435	20	—	—
4373 Crespo	13.5	X	105.70947	240.49742	154.37132	4.96024	0.1758452	0.29570619	2.2313230	20	1 22.6	15.7
4374 Tadamori	13.3	X	24.01338	339.00476	152.54759	4.84593	0.1708404	0.29738689	2.2229081	20	1 4.3	14.8
4375 Kiyomori	13.1	X	159.28831	69.88815	137.51909	5.86524	0.1048976	0.28394509	2.2925200	20	11 12.9	16.4
4376 Shigemori	13.4	X	82.80114	193.32209	222.26507	0.87470	0.1584401	0.29567557	2.2314770	20	1 11.8	15.4
4377 Koremori	13.5	X	11.32627	335.01787	227.77244	2.60375	0.0736402	0.26910909	2.3760221	20	4 8.8	16.0
4378 Voigt	11.7	X	144.95518	128.40961	98.22697	10.99001	0.2452867	0.22514809	2.6760273	20	11 13.2	16.5
4379 Snelling	11.8	X	192.38469	171.24114	211.21385	21.65894	0.1234609	0.17540809	3.1606007	20	4 15.3	16.8
4380 Geyer	11.8	X	321.98305	48.57206	345.57297	9.87735	0.0623041	0.18612334	3.0381006	20	10 9.2	15.8
4381 Uenohara	11.3	X	7.12617	227.98490	108.00215	11.23878	0.0760946	0.18724122	3.0259964	20	10 10.7	15.4
4382 Stravinsky	12.4	X	257.78048	251.17576	120.99540	6.24184	0.1950931	0.24318237	2.5420338	20	5 31.9	16.1
4383 Suruga	13.0	X	51.07144	318.54478	88.50635	7.15781	0.0638860	0.26104055	2.4247338	20	—	—
4384 Henrybuhl	12.4	X	143.42347	45.14975	316.33717	13.25770	0.1811214	0.23236692	2.6203130	20	2 4.3	16.3
4385 Elsässer	13.0	X	182.85054	310.75877	61.04542	0.57624	0.1841124	0.17504119	3.1650158	20	3 26.4	18.2
4386 Lüst	12.9	X	111.13431	130.17074	24.35551	11.49400	0.1913769	0.17469946	3.1691418	20	7 14.5	18.1
4387 Tanaka	12.7	X	319.04021	17.93506	120.84915	4.27288	0.0139186	0.25880014	2.4387075	20	—	—
4388 Jürgenstock	13.4	X	176.81636	194.83952	213.82509	24.58796	0.2789201	0.27551754	2.3390341	20	5 2.8	17.5
4389 Durbin	12.3	X	168.63851	222.23063	132.16917	2.77072	0.0759262	0.19817049	2.9136904	20	2 16.3	16.6
4390 Madreteresa	13.3	X	274.04964	267.91439	347.95335	10.72243	0.2385930	0.26510467	2.3998888	20	1 17.7	17.3
4391 Balodis	14.1	X	237.28538	108.41035	190.28084	5.35182	0.2137105	0.26690062	2.3891110	20	2 4.7	18.1
4392 Agita	13.7	X	358.27496	293.84923	31.79970	5.88674	0.1239998	0.28116010	2.3076340	20	10 1.7	15.7
4393 Dawe	12.7	X	307.98984	86.95105	125.10944	2.21104	0.1197853	0.17029494	3.2235535	20	1 25.7	17.1
4394 Fritzheide	14.9	X	110.49580	140.90720	168.72989	1.68496	0.2310773	0.29215885	2.2493482	20	—	—
4395 Danbritt	12.8	X	100.49563	101.73312	189.42217	10.04552	0.0853220	0.19019926	2.9945403	20	12 6.6	17.5
4396 Gressmann	13.7	X	238.33971	251.08961	46.93074	3.74658	0.1920264	0.29810594	2.2193321	20	2 5.4	17.2
4397 Jalopez	13.9	X	92.83983	208.57438	323.29982	5.46737	0.1189231	0.28034442	2.3121080	20	7 11.8	16.8
4398 Chiara	12.8	X	88.11917	326.42459	113.46771	4.97065	0.0655092	0.27093213	2.3653516	20	2 16.9	15.5
4399 Ashizuri	12.5	X	297.46505	54.09468	244.04346	12.08231	0.1719268	0.23842659	2.5757256	20	4 11.2	15.9
4400 Bagryana	13.8	X	154.06791	27.25775	352.10576	4.37737	0.1389754	0.27052254	2.3677385	20	2 29.5	17.3

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
4401 Aditi	16.0	X	113.41923	68.15068	22.88807	26.63803	0.5644002	0.23774016	2.5806811	20	5 19.2	21.4
4402 Tsunemori	11.9	X	32.27101	228.09925	177.85935	7.71397	0.0215891	0.20040101	2.8920299	20	—	—
4403 Kuniharu	13.6	X	306.97812	142.01616	34.01090	3.08540	0.0941979	0.29333809	2.2433158	20	—	—
4404 Enirac	13.0	X	255.10749	64.43174	145.61578	30.31971	0.3187186	0.22952165	2.6419238	20	—	—
4405 Otava	11.6	X	244.12111	199.39050	139.98586	9.44948	0.1603218	0.17228379	3.1986970	20	4 14.7	16.7
4406 Mahler	12.9	X	197.57893	90.23522	100.59421	1.90425	0.1299898	0.17623455	3.1507118	20	11 10.2	17.7
4407 Taihaku	12.5	X	65.87241	89.41635	256.97740	4.71797	0.0577471	0.22059901	2.7126911	20	—	—
4408 Zlatá Koruna	12.9	X	57.52086	64.06938	219.89910	4.36243	0.1051355	0.27854829	2.3220365	20	10 27.9	15.9
4409 Kissling	12.4	X	249.49948	336.62382	348.89278	5.36155	0.1013569	0.18682047	3.0305380	20	4 3.5	16.9
4410 Kamuimintara	12.0	X	307.32165	320.89863	44.48036	11.10701	0.0910615	0.18437801	3.0572430	20	8 16.7	16.1
4411 Kochibunkyo	13.9	X	204.12138	10.68545	88.44737	2.25526	0.0918414	0.30878582	2.1678596	20	8 11.7	16.5
4412 Chephren	12.9	X	276.97839	212.50069	136.90778	2.17766	0.1718593	0.17797539	3.1301327	20	5 27.6	17.4
4413 Mycerinos	13.8	X	118.12757	183.60475	212.40947	2.26530	0.0724738	0.27093987	2.3653066	20	1 29.4	16.8
4414 Sesostris	14.3	X	170.44185	120.21991	350.53572	7.74701	0.1167461	0.27609072	2.3357956	20	7 17.4	17.8
4415 Echnaton	15.2	X	117.15808	175.36030	328.96202	2.01204	0.0642843	0.27559147	2.3386157	20	6 25.9	18.2
4416 Ramses	15.3	X	312.29186	163.41257	208.31173	1.17756	0.1722035	0.31178984	2.1539126	20	9 12.4	16.4
4417 Lecar	12.0	X	134.48385	224.87418	356.21154	9.00729	0.1066166	0.21528064	2.7571860	20	10 19.9	16.3
4418 Fredfranklin	12.8	X	210.48812	82.63100	203.81770	12.66287	0.1541216	0.23755876	2.5819947	20	1 2.6	17.2
4419 Allancook	12.5	X	190.61168	295.48031	231.72031	0.40985	0.2154092	0.18457782	3.0550363	20	10 2.7	17.6
4420 Alandreev	12.5	X	67.96528	1.29986	302.43671	6.90720	0.3177151	0.22548059	2.6733959	20	12 16.4	17.1
4421 Kayor	12.3	X	34.73151	1.60206	96.04637	16.24098	0.1947600	0.22698776	2.6615487	20	—	—
4422 Jarre	12.6	X	74.39028	214.19682	149.91365	4.80431	0.1791740	0.29435214	2.2381606	20	—	—
4423 Golden	11.6	X	61.30831	106.48204	193.55625	19.27410	0.0855175	0.15789716	3.3901571	20	10 29.7	16.5
4424 Arkhipova	11.7	X	229.76556	15.65227	138.38526	14.72415	0.0789119	0.21535596	2.7565431	20	11 17.6	15.8
4425 Bilk	14.0	X	145.47391	51.73169	67.87557	3.30991	0.1625562	0.27162867	2.3613062	20	7 2.5	17.5
4426 Roerich	12.2	X	112.40313	55.21108	236.97339	2.09334	0.0671594	0.21578936	2.7528510	20	12 23.6	16.3
4427 Burnashev	12.4	X	57.84508	76.73737	318.00542	8.84001	0.1042652	0.18723952	3.0260147	20	—	—
4428 Khotinok	13.3	X	298.35935	212.71833	84.79630	4.80316	0.2378505	0.27070153	2.3666947	20	4 4.9	16.2
4429 Chinmoy	14.6	X	104.19666	68.09031	326.90091	1.45943	0.2135227	0.26845572	2.3798757	20	2 1.5	17.2
4430 Govorukhin	13.1	X	338.89950	78.46843	352.38538	12.70382	0.1720504	0.19066233	2.9896897	20	12 31.9	16.6
4431 Holeungholee	11.7	X	252.75043	221.88458	222.94879	10.88020	0.1001681	0.18396885	3.0617744	20	9 2.5	16.2
4432 McGraw–Hill	14.5	X	41.98355	246.28980	115.23569	0.46135	0.2131796	0.26736155	2.3863643	20	—	—
4433 Goldstone	13.0	X	103.22414	250.03345	78.88900	9.35049	0.1363480	0.25987019	2.4320084	20	—	—
4434 Nikulin	13.1	X	41.89837	209.48737	165.73804	5.70915	0.1319599	0.25840495	2.4411933	20	—	—
4435 Holt	13.4	X	238.30614	110.39244	330.76775	21.92414	0.3341074	0.27914603	2.3187206	20	8 1.2	17.2
4436 Ortizmoreno	11.3	X	177.29063	32.75141	90.45555	17.32834	0.0562806	0.16791572	3.2539320	20	8 4.9	16.3
4437 Yaroshenko	12.8	X	330.88701	352.81480	221.13464	4.51915	0.1368592	0.26322415	2.4113055	20	2 8.9	15.7
4438 Sykes	11.7	X	217.07331	291.92431	56.86710	13.30595	0.2531584	0.17520504	3.1630422	20	3 30.9	17.4
4439 Muroto	13.3	X	207.97815	17.66884	52.21585	2.29996	0.2711127	0.18205473	3.0831979	20	6 20.1	18.6
4440 Tchantchès	13.7	X	70.81464	224.82193	283.32335	21.35246	0.0769064	0.37017419	1.9210203	20	4 8.5	16.2
4441 Toshie	13.4	X	164.44116	243.89853	62.28848	2.30689	0.0402659	0.19360278	2.9593409	20	—	—
4442 Garcia	12.9	X	56.69327	265.65203	286.33978	15.13042	0.2410180	0.18877852	3.0095461	20	7 4.7	16.7
4443 Paulet	13.7	X	70.19584	85.17592	346.88846	3.61360	0.1182846	0.29490797	2.2353475	20	1 8.9	15.7
4444 Escher	13.7	X	319.34540	181.85889	121.25573	7.39204	0.1355204	0.27823886	2.3237578	20	6 3.5	16.0
4445 Jimstratton	13.8	X	58.72132	156.55516	215.55748	2.85913	0.1893929	0.28867306	2.2674195	20	—	—
4446 Carolyn	11.2	X	175.19911	117.10906	188.97860	7.23851	0.2815149	0.12367573	3.9897564	20	1 13.1	18.0
4447 Kirov	12.5	X	98.48760	192.95502	147.70542	2.69533	0.0716886	0.20409940	2.8569868	20	—	—
4448 Phildavis	11.8	X	188.85186	46.99189	83.30304	16.80367	0.0839429	0.24237105	2.5477035	20	9 7.2	15.9
4449 Sobinov	11.7	X	63.33524	310.26326	299.04932	4.90616	0.0965860	0.17711831	3.1402224	20	9 1.0	16.0
4450 Pan	17.1	X	1.70917	291.83634	311.80680	5.52056	0.5866724	0.56889561	1.4424950	20	1 1.6*	18.7
4451 Grieve	12.0	X	175.81192	110.24854	219.35712	27.79666	0.3836635	0.23448315	2.6045236	20	1 26.7	17.5
4452 Ullacharles	12.2	X	89.01136	137.27607	322.80727	14.19166	0.1320391	0.23314662	2.6144678	20	3 23.3	15.8
4453 Bornholm	12.4	X	30.32343	78.93857	335.54363	9.34481	0.1088840	0.19081494	2.9880954	20	—	—
4454 Kumiko	12.9	X	193.13434	125.94891	277.07481	0.70780	0.0960250	0.17273654	3.1931052	20	5 11.5	17.7
4455 Ruriko	11.7	X	328.16983	230.47756	243.67224	9.40386	0.0517699	0.18839670	3.0136110	20	—	—
4456 Mawson	13.7	X	132.08868	346.01106	358.16300	15.00592	0.2769139	0.26921949	2.3753724	20	1 11.9	17.4
4457 van Gogh	12.0	X	211.60947	340.31117	187.10055	13.81407	0.1278483	0.22693158	2.6619880	20	11 6.5	16.0
4458 Oizumi	13.3	X	16.59624	345.41980	98.64987	4.29959	0.1517718	0.25830591	2.4418172	20	—	—
4459 Nusamaibashi	13.8	X	32.98936	283.21454	157.24624	2.79306	0.1185796	0.29116570	2.2544602	20	—	—
4460 Bihoro	10.9	X	171.97699	30.84330	326.33835	27.05517	0.1837113	0.19736310	2.9216313	20	2 24.1	15.8
4461 Sayama	11.4	X	359.15998	150.63501	133.17282	16.02536	0.1311514	0.20450956	2.8531656	20	7 17.7	14.7
4462 Vaughan	12.4	X	185.69674	199.06894	58.16260	1.00303	0.1413724	0.18253066	3.0778362	20	—	—
4463 Marschwarzschild	13.0	X	181.25633	251.64437	157.92933	1.83686	0.1795484	0.17326602	3.1865968	20	5 8.6	18.3
4464 Vulcano	13.6	X	290.77386	314.32732	11.75282	20.20804	0.0680080	0.36128740	1.9523942	20	5 21.3	15.9
4465 Rodita	13.6	X	28.24299	62.57715	51.24039	3.28758	0.1318073	0.25888913	2.4381486	20	—	—
4466 Abai	12.2	X	239.93302	199.14437	170.63367	2.10422	0.0344056	0.19542247	2.9409415	20	5 27.1	16.3
4467 Kaidanovskij	12.1	X	103.77905	41.21414	33.93136	14.13719	0.1488050	0.23010865	2.6374288	20	3 25.1	15.8
4468 Pogrebetskij	14.0	X	299.52344	51.58453	48.97447	0.59692	0.1647754	0.27185224	2.3600114	20	12 27.6	15.6
4469 Utting	13.7	X	18.63631	20.31256	325.07466	11.85265	0.1875620	0.23862785	2.5742771	20	11 28.5	17.0
4470 Sergeev–Censkij	12.6	X	199.66457	202.62058	119.98982	2.46074	0.1735043	0.17784994	3.1316044	20	2 12.8	17.7
4471 Graculus	12.1	X	221.29428	42.60303	345.51428	13.87333	0.1619074	0.20391030	2.8587528	20	5 12.4	16.9
4472 Navashin	13.4	X	284.31445	43.17726	5.09452	5.83043	0.1459416	0.29374670	2.2412349	20	9 13.6	15.4
4473 Sears	12.7	X	205.36429	187.79159	319.20142	8.78892	0.0381818	0.18816297	3.0161061	20	10 2.2	17.2
4474 Proust	12.8	X	319.73182	157.49124	131.45071	2.05415	0.1749201	0.17411791	3.1761945	20	5 9.8	16.7
4475 Voitkevich	13.7	X	313.47655	151.10844	336.49794	2.19726	0.0685215	0.29143473	2.2530726	20	—	—
4476 Bernstein	14.0	X	100.49493	345.20503	94.79592	3.36992	0.1914204	0.26774778	2.3840689	20	3 26.9	17.0
4477 Kelley	13.4	X	36.26275	127.23551	224.05811	2.94172	0.1611102	0.29795204	2.2200963	20	—	—
4478 Blanco	14.1	X	200.86561	4.97294	266.99509	3.28198	0.1343479	0.29229317	2.2486590	20	—	—
4479 Charlieparker	12.9	X	196.01625	55.24328	157.32344	5.30960	0.1016297	0.21560975	2.7543795	20	12 13.9	17.0
4480 Nikitibotania	14.0	X	16.35166	351.12210	50.30975	3.39363	0.1674314	0.25990062	2.4318186	20	—	—

* The additional oppositios: 10 16.5, $V = 18.3$

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
4481	Herbelin	14.2	X	253.72354	265.03881	87.45689	1.48967	0.2443489	0.27553118	2.3389569	20	4 25.2	17.7
4482	Frèrebasile	12.9	X	130.36292	37.23846	334.27111	24.92421	0.2588945	0.27487420	2.3426823	20	2 11.7	16.4
4483	Petöfi	13.3	X	209.69364	186.31990	184.17733	26.72458	0.0837923	0.36977165	1.9224142	20	4 10.9	15.6
4484	Sif	12.4	X	341.72119	0.20652	84.96810	29.81232	0.1017357	0.23062087	2.6335221	20	—	—
4485	Radonezhskij	11.9	X	347.47132	142.36571	316.26345	10.13581	0.0731639	0.18888274	3.0084389	20	—	—
4486	Mithra	15.6	X	33.94873	168.90717	82.23561	3.03969	0.6630233	0.30218861	2.1992975	20	11 2.3	19.4
4487	Pocahontas	17.3	X	123.07059	173.96666	198.11761	16.40455	0.2964622	0.43299566	1.7304021	20	1 4.5	18.7
4488	Tokitada	13.7	X	37.70649	184.61234	218.38410	4.35236	0.1439580	0.30601025	2.1809485	20	—	—
4489	1988 *AK*	9.0	X	241.31102	6.48215	86.53446	22.22593	0.0603128	0.08295050	5.2070296	20	9 6.2	16.3
4490	Bambery	13.2	X	226.40956	267.85187	134.80041	26.11908	0.0922336	0.36726921	1.9311368	20	6 23.7	15.9
4491	Otaru	13.6	X	291.98690	71.49969	313.57107	3.67255	0.0285099	0.30751915	2.1738085	20	9 7.1	16.0
4492	Debussy	12.9	X	289.84953	53.36595	349.72596	8.01658	0.1767492	0.21388700	2.7691498	20	8 28.2	16.2
4493	Naitomitsu	11.2	X	331.01973	160.47401	264.41759	9.03005	0.0733875	0.18756603	3.0225019	20	12 3.8	15.1
4494	Marimo	13.5	X	172.96146	216.89854	294.31463	2.47210	0.1197012	0.27478753	2.3431749	20	9 9.4	16.8
4495	Dassanowsky	11.6	X	2.34276	209.99207	223.44058	5.28151	0.1449482	0.12491308	3.9633653	20	—	—
4496	Kamimachi	13.0	X	190.28570	326.24653	162.83775	4.79412	0.0559223	0.20882685	2.8137045	20	8 27.9	17.2
4497	Taguchi	12.5	X	156.70656	302.95951	93.13025	9.76266	0.2705506	0.26100007	2.4249845	20	4 7.2	16.8
4498	Shinkoyama	11.7	X	126.88158	74.11018	280.64296	8.87526	0.1228935	0.18956318	3.0012354	20	1 8.8	16.1
4499	Davidallen	12.5	X	258.45680	89.25674	317.61646	6.55896	0.1542354	0.17299757	3.1898925	20	7 19.9	17.2
4500	Pascal	12.6	X	235.26724	309.73134	136.34045	2.95927	0.1638254	0.17450465	3.1715000	20	8 10.4	17.3
4501	Eurypylos	10.4	X	308.17655	179.61167	244.26424	8.30082	0.0528401	0.08280382	5.2131768	20	10 9.8	17.1
4502	Elizabethann	11.8	X	154.56631	334.12212	169.60705	13.30992	0.0941808	0.22899794	2.6459502	20	8 6.1	16.0
4503	Cleobulus	15.6	X	292.99909	76.31519	45.95838	2.51292	0.5240915	0.22160380	2.7044851	20	10 22.4	17.6
4504	Jenkinson	13.2	X	117.51702	227.13165	180.73580	14.85063	0.1338913	0.23509927	2.5999712	20	2 25.7	16.9
4505	Okamura	11.4	X	303.51303	18.64413	119.07248	11.83409	0.0525198	0.18870251	3.0103542	20	—	—
4506	Hendrie	12.6	X	353.88142	174.25257	63.72676	3.00428	0.0123000	0.20141833	2.8822837	20	5 7.5	16.5
4507	Petercollins	11.9	X	127.28835	84.64511	47.51291	2.66235	0.0082846	0.20267979	2.8703118	20	6 13.7	15.8
4508	Takatsuki	13.6	X	56.81101	147.58123	92.92000	1.98093	0.0850047	0.30285103	2.1960894	20	8 27.7	16.1
4509	Gorbatskij	11.9	X	132.71211	176.58612	184.31211	10.94450	0.2716536	0.21465789	2.7625161	20	2 1.9	16.4
4510	Shawna	12.9	X	312.01011	338.36097	3.42690	7.04462	0.1391619	0.27172811	2.3607301	20	7 21.6	15.2
4511	Rembrandt	12.2	X	318.22769	303.00253	0.32555	22.76427	0.2509723	0.26512392	2.3997727	20	4 28.4	15.2
4512	Sinuhe	11.6	X	241.74077	357.47828	119.40114	10.33386	0.2077400	0.21432663	2.7653618	20	9 27.9	15.8
4513	Louvre	12.0	X	41.19224	205.93613	208.83804	9.94903	0.0804388	0.18735894	3.0247287	20	—	—
4514	Vilen	13.7	X	161.25138	88.47541	110.36192	7.96306	0.1531936	0.27466362	2.3438795	20	11 1.5	17.4
4515	Khrennikov	13.7	X	97.90223	102.77343	337.81836	1.96102	0.1545272	0.26288891	2.4133550	20	3 16.5	16.6
4516	Pugovkin	12.4	X	262.83453	316.61511	174.72637	4.68082	0.0118195	0.21299475	2.7768779	20	12 5.7	16.3
4517	Ralpharvey	13.3	X	74.62510	284.52171	32.08561	4.19504	0.1743874	0.31102011	2.1574649	20	—	—
4518	Raikin	13.7	X	133.76810	97.59553	167.89994	7.00471	0.0985158	0.27946433	2.3169596	20	12 27.3	17.1
4519	Voronezh	13.6	X	177.25310	185.76660	162.54349	3.20769	0.0599797	0.30139728	2.2031454	20	2 3.4	16.3
4520	Dovzhenko	13.2	X	160.62469	258.58307	94.36719	4.26333	0.2197567	0.28738095	2.2742109	20	2 8.3	16.7
4521	Akimov	12.1	X	124.16870	211.84542	48.07248	14.38139	0.0866316	0.17908526	3.1171868	20	11 20.1	16.8
4522	Britastra	12.2	X	193.20674	228.76534	131.90501	12.51499	0.2067322	0.22611495	2.6683934	20	3 22.8	16.9
4523	MIT	12.9	X	342.73468	316.44453	210.06295	11.07283	0.1395141	0.22437344	2.6821831	20	1 1.8	16.4
4524	Barklajdetolli	12.9	X	6.83849	149.13177	177.15550	7.28593	0.1326508	0.27880359	2.3206188	20	10 19.1	15.1
4525	Johnbauer	13.4	X	186.69529	31.18185	72.95564	13.51029	0.2002396	0.23840007	2.5759166	20	7 20.6	17.8
4526	Konko	12.4	X	353.82039	100.38017	101.52673	14.15062	0.1147802	0.23102142	2.6304773	20	3 18.6	15.6
4527	Schoenberg	13.9	X	112.19966	172.13516	146.02472	4.24180	0.2112417	0.29451686	2.2373260	20	—	—
4528	Berg	12.1	X	241.22494	316.35871	161.35060	8.71221	0.1361942	0.24203084	2.5500904	20	10 10.3	15.5
4529	Webern	12.4	X	350.10441	5.31059	131.76255	10.99623	0.0594092	0.18828984	3.0147511	20	—	—
4530	Smoluchowski	12.5	X	190.69293	15.11799	164.70979	5.21252	0.1004500	0.17931219	3.1145563	20	10 25.1	17.3
4531	Asaro	14.2	X	324.87774	142.95321	15.08293	23.97243	0.0406102	0.38784829	1.8622077	20	—	—
4532	Copland	12.0	X	308.48827	348.51166	199.82901	10.13908	0.0430231	0.19020274	2.9945038	20	1 3.9	16.3
4533	Orth	12.9	X	162.43182	292.33330	178.50495	22.65924	0.2430892	0.26991041	2.3713171	20	7 6.8	17.5
4534	Rimskij–Korsakov	12.7	X	128.98952	311.09992	313.24007	7.23934	0.1777247	0.21068096	2.7971721	20	12 8.2	17.4
4535	Adamcarolla	12.4	X	168.34514	98.45369	137.81026	7.75159	0.1609551	0.21187969	2.7866120	20	12 10.7	17.0
4536	Drewpinsky	13.6	X	46.80315	237.51080	313.50717	4.17443	0.0827130	0.30301720	2.1952865	20	5 22.5	15.7
4537	Valgrirasp	11.6	X	293.67610	295.88315	227.91581	8.77319	0.0349209	0.18878127	3.0095168	20	—	—
4538	Vishyanand	13.0	X	139.63652	163.58901	219.24778	3.95559	0.1539963	0.26115898	2.4240007	20	2 18.9	16.6
4539	Miyagino	13.0	X	127.67458	111.07936	256.05434	5.70539	0.0694213	0.22559364	2.6725027	20	1 11.3	16.8
4540	Oriani	12.5	X	6.67991	260.73271	246.55752	6.35300	0.1758555	0.22628343	2.6670688	20	1 11.9	15.4
4541	Mizuno	12.9	X	217.13927	25.52733	65.95399	4.77821	0.0193286	0.26848696	2.3796911	20	8 24.5	15.9
4542	Mossotti	11.5	X	247.00522	145.42840	104.30758	11.28981	0.0522097	0.18845644	3.0129741	20	1 6.9	15.9
4543	Phoinix	9.7	X	328.79918	84.64070	325.37760	14.70710	0.0962071	0.08485274	5.1289146	20	10 13.1	16.3
4544	Xanthus	17.1	X	311.75197	333.83948	23.98483	14.14494	0.2501657	0.92648958	1.0420991	20	—	—
4545	Primolevi	12.3	X	117.52167	71.25406	36.71097	1.80459	0.1352302	0.17682460	3.1436987	20	5 16.5	17.0
4546	Franck	13.4	X	190.26122	268.07756	194.70849	6.10865	0.0615293	0.27239058	2.3569009	20	7 27.4	16.7
4547	Massachusetts	11.7	X	220.53942	37.35978	358.28655	18.01497	0.0696223	0.23328704	2.6134186	20	5 27.9	15.9
4548	Wielen	13.9	X	234.33247	201.21974	26.21605	8.28216	0.0636252	0.28526557	2.2854399	20	—	—
4549	Burkhardt	14.2	X	31.54922	52.13308	32.52841	2.82768	0.1549744	0.25915745	2.4364654	20	—	—
4550	Royclarke	12.8	X	205.32856	311.95255	17.28667	0.24933	0.2189187	0.17945154	3.1129436	20	2 23.9	18.1
4551	Cochran	14.4	X	279.56079	161.01278	148.25220	12.12061	0.2654117	0.26023755	2.4297192	20	3 27.0	18.1
4552	Nabelek	13.6	X	166.86286	319.33706	350.16818	2.23083	0.1553297	0.31190882	2.1533648	20	—	—
4553	Doncampbell	12.4	X	18.40215	115.09301	168.60040	12.91613	0.1410136	0.23271197	2.6177223	20	8 26.2	15.3
4554	Fanynka	11.8	X	94.30601	4.40593	255.61999	9.22468	0.1191259	0.17342455	3.1846545	20	10 21.3	16.7
4555	Josefapérez	14.0	X	264.15548	142.03079	158.27199	7.39254	0.1992676	0.29063014	2.2572290	20	3 1.9	17.5
4556	Gumilyov	13.6	X	131.65608	213.70844	111.84886	4.75261	0.1446643	0.28052865	2.3110956	20	—	—
4557	Mika	12.0	X	355.31682	35.04763	113.06008	11.28283	0.0485340	0.18744744	3.0237767	20	1 15.9	15.9
4558	Janesick	12.6	X	268.44872	94.36042	254.83720	22.18634	0.3625918	0.30253883	2.1975999	20	4 16.1	16.6
4559	Strauss	12.4	X	101.64793	244.07997	120.01767	11.12346	0.1046737	0.18743054	3.0239584	20	—	—
4560	Klyuchevskij	12.2	X	218.40753	69.90721	285.58479	9.04917	0.0574134	0.19015879	2.9949652	20	4 6.6	16.8

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
4561	Lemeshev	13.5	X	355.83024	54.98893	10.14857	9.48760	0.1572379	0.23868702	2.5738517	20	—	—
4562	Poleungkuk	12.9	X	240.49722	36.18774	263.97324	3.42093	0.1409462	0.25359286	2.4719786	20	2 14.3	16.7
4563	Kahnia	13.3	X	252.42229	228.98360	131.93561	4.76432	0.1625263	0.29139392	2.2532829	20	5 14.7	16.4
4564	Clayton	13.7	X	107.27781	94.87323	194.07109	13.27368	0.2022957	0.23998599	2.5645556	20	12 24.4	18.2
4565	Grossman	12.9	X	159.54625	37.82728	174.41291	14.72697	0.1276303	0.23943976	2.5684545	20	11 11.7	17.1
4566	Chaokuangpiu	12.2	X	46.22852	121.70272	252.42650	10.80335	0.2115414	0.20633656	2.8362985	20	—	—
4567	Bečvář	13.5	X	54.33423	140.99834	181.55335	13.09084	0.2006605	0.23727668	2.5840407	20	12 17.4	17.6
4568	Menkaure	11.8	X	79.38602	231.14470	6.85987	10.66562	0.0628102	0.18653593	3.0336191	20	9 7.6	16.2
4569	Baerbel	12.1	X	125.03127	32.54087	205.56581	14.47991	0.0630458	0.23717054	2.5848116	20	11 5.9	15.9
4570	Runcorn	13.3	X	5.28482	208.97497	349.19098	5.01400	0.1082356	0.30238568	2.1983419	20	3 16.4	15.1
4571	Grumiaux	12.3	X	73.17231	175.23653	166.98348	1.50836	0.1645256	0.17448985	3.1716794	20	—	—
4572	Brage	12.7	X	87.40306	76.90883	192.58238	11.98925	0.1594200	0.23604019	2.5930571	20	11 12.6	16.7
4573	Piešťany	11.7	X	348.26946	247.24294	299.33254	9.41464	0.0661617	0.18599515	3.0394964	20	2 18.9	15.8
4574	Yoshinaka	12.3	X	191.18194	103.77693	280.06530	8.71060	0.1005671	0.18990776	2.9976039	20	4 11.9	17.1
4575	Broman	11.6	X	179.50365	60.25141	148.72283	10.90871	0.0480417	0.18985929	2.9981141	20	11 23.6	16.2
4576	Yanotoyohiko	11.5	X	179.87546	219.84379	167.88771	10.43770	0.1241421	0.19048323	2.9915635	20	4 11.8	16.3
4577	Chikako	12.4	X	119.24503	64.34841	58.12956	9.38500	0.2907172	0.23198252	2.6232069	20	6 19.4	16.9
4578	Kurashiki	13.9	X	330.46313	4.99384	129.65804	5.25837	0.2429368	0.22010765	2.7167268	20	—	—
4579	Puccini	13.8	X	49.21568	139.74438	111.40950	2.21388	0.1536942	0.26513138	2.3997277	20	9 7.6	16.7
4580	Child	12.2	X	108.11564	15.54999	169.46301	13.89667	0.1031875	0.22983491	2.6395226	20	8 9.2	16.1
4581	Asclepius	20.7	X	127.27591	255.34125	180.21840	4.91733	0.3570526	0.95306354	1.0226369	20	—	—
4582	Hank	12.7	X	3.21898	121.40057	108.52225	12.49456	0.1459870	0.22512014	2.6762487	20	5 12.8	15.7
4583	Lugo	13.3	X	218.71344	142.32907	164.46231	3.74521	0.1922713	0.27314595	2.3525537	20	1 30.9	17.2
4584	Akan	13.1	X	230.94343	65.75403	25.23972	7.66485	0.1996124	0.21110567	2.7934192	20	8 14.2	17.5
4585	Ainonai	12.9	X	220.84405	184.23059	82.96635	10.54933	0.2362244	0.21783270	2.7356089	20	—	—
4586	Gunvor	13.9	X	237.83179	305.36877	200.22895	5.15803	0.0787189	0.28158764	2.3052976	20	11 28.3	16.5
4587	Rees	15.3	X	323.40008	84.03649	180.35683	24.63088	0.5089607	0.22745350	2.6579143	20	2 10.1	19.5
4588	Wislicenus	12.0	X	282.29552	125.10779	333.51985	9.75363	0.0961933	0.19507843	2.9443982	20	11 1.0	16.0
4589	McDowell	14.0	X	288.03221	151.88961	199.89945	2.27406	0.1870130	0.25951431	2.4342313	20	6 12.7	16.7
4590	Dimashchegolev	13.2	X	140.71628	44.52142	168.25694	12.46772	0.1823442	0.26987009	2.3715532	20	10 29.6	17.2
4591	Bryantsev	14.0	X	223.28211	248.01675	141.85215	2.61576	0.2381989	0.25642840	2.4537217	20	5 16.9	18.1
4592	Alkissia	12.6	X	48.17939	305.95546	74.99050	0.42553	0.1660941	0.17326349	3.1866279	20	—	—
4593	Reipurth	12.0	X	346.65200	51.27071	351.60596	9.46697	0.1075385	0.18687178	3.0299833	20	11 28.7	15.9
4594	Dashkova	14.1	X	118.25237	82.92217	161.44830	4.53719	0.1422542	0.30348529	2.1930286	20	11 20.6	17.3
4595	Prinz	13.9	X	231.88886	347.70849	219.20086	8.65130	0.1015118	0.24420555	2.5349284	20	—	—
4596	1981 *QB*	16.3	X	179.64335	248.40244	154.23011	37.07691	0.5199543	0.29424017	2.2387284	20	5 6.4	21.8
4597	Consolmagno	12.7	X	44.16067	164.17530	70.21724	4.86663	0.1202782	0.23376271	2.6098721	20	7 28.7	15.9
4598	Coradini	12.2	X	227.25659	185.98428	191.22143	9.92166	0.1079868	0.18995141	2.9971447	20	5 15.6	16.8
4599	Rowan	13.1	X	136.88809	260.65976	109.67996	3.45226	0.1720048	0.18330168	3.0691992	20	2 13.4	17.8
4600	Meadows	11.9	X	237.81519	193.46527	138.44229	11.22222	0.0966432	0.18867881	3.0106062	20	4 4.4	16.6
4601	Ludkewycz	12.6	X	332.08410	358.93883	177.61168	13.29877	0.1003538	0.22527797	2.6749987	20	1 5.2	16.3
4602	Heudier	12.4	X	302.66588	164.21455	237.22838	12.39206	0.1640906	0.23250564	2.6192707	20	9 15.7	15.5
4603	Bertaud	12.3	X	47.07757	290.43043	338.41081	12.52181	0.2394253	0.23121854	2.6289820	20	10 1.5	15.9
4604	Stekarstrom	14.0	X	76.25342	355.51155	359.96901	1.40843	0.1287155	0.30725627	2.1750482	20	—	—
4605	Nikitin	13.6	X	289.36820	99.25003	284.24142	2.14273	0.1535602	0.29619385	2.2288732	20	8 11.3	15.5
4606	Saheki	13.0	X	134.08432	252.21509	241.24477	2.63309	0.1010720	0.29148646	2.2528060	20	7 5.7	16.0
4607	Seilandfarm	13.2	X	154.69993	220.20143	250.49185	2.25214	0.0189810	0.28924077	2.2644516	20	6 24.4	15.8
4608	Wodehouse	12.8	X	14.35061	203.21649	203.10992	7.44057	0.2182260	0.27153886	2.3618268	20	—	—
4609	Pizarro	11.8	X	169.03405	119.46097	188.62204	13.38807	0.1053391	0.17956121	3.1116760	20	—	—
4610	Kájov	13.0	X	359.87601	204.32748	116.84047	3.59061	0.0361401	0.26473091	2.4021472	20	9 15.4	15.8
4611	Vulkaneifel	11.9	X	321.90895	274.18313	116.21687	13.79677	0.1918531	0.23309732	2.6148364	20	10 22.2	14.6
4612	Greenstein	12.8	X	288.89784	40.54283	105.42317	9.61781	0.1395620	0.24108905	2.5567272	20	—	—
4613	Mamoru	11.7	X	270.49515	255.26531	144.83817	6.65686	0.3011082	0.22626127	2.6672429	20	7 6.4	15.6
4614	Masamura	13.4	X	299.96506	143.15585	179.74541	4.81016	0.2126078	0.29213395	2.2494760	20	5 15.9	15.7
4615	Zinner	12.3	X	37.85853	342.52049	1.63070	14.70552	0.1631895	0.23525008	2.5988599	20	12 19.7	16.1
4616	Batalov	12.7	X	61.59695	257.05154	175.50478	1.19291	0.1782673	0.17659892	3.1463764	20	1 28.4	16.5
4617	Zadunaisky	11.3	X	242.41996	271.49062	234.51587	18.69877	0.0703672	0.17147782	3.2087121	20	11 10.4	15.8
4618	Shakhovskoj	13.4	X	340.95511	62.00690	342.82958	11.48130	0.2922630	0.23174512	2.6249980	20	—	—
4619	Polyakhova	12.9	X	159.51736	195.66708	266.81252	1.81810	0.0294044	0.22334109	2.6904420	20	6 17.9	16.7
4620	Bickley	13.8	X	309.56830	287.53527	94.47526	4.49584	0.2192260	0.28282262	2.2985818	20	9 14.7	15.2
4621	Tambov	13.6	X	57.81115	105.87894	193.31408	3.04724	0.2111730	0.26727484	2.3868804	20	11 29.2	17.0
4622	Solovjova	12.8	X	31.17432	216.31171	170.49444	1.74437	0.1442192	0.17220985	3.1996126	20	—	—
4623	Obraztsova	12.6	X	48.12347	1.94234	3.85151	1.73680	0.0776265	0.20511614	2.8475378	20	—	—
4624	Stefani	12.9	X	110.89508	9.57826	94.42026	2.63558	0.2089291	0.18489975	3.0514892	20	5 13.4	17.5
4625	Shchedrin	13.7	X	322.12258	14.31603	53.39801	1.59543	0.2366922	0.23475597	2.6025053	20	12 13.0	15.6
4626	Plisetskaya	13.4	X	27.96873	164.92343	19.68302	2.82049	0.0811068	0.28779605	2.2720236	20	4 9.9	15.6
4627	Pinomogavero	12.6	X	351.28760	225.36057	105.59160	3.33715	0.0606766	0.19781286	2.9172011	20	9 6.8	16.3
4628	Laplace	11.1	X	165.07744	248.69344	275.59698	11.80474	0.1173335	0.22925470	2.6439742	20	9 7.9	15.5
4629	Walford	13.5	X	316.25860	291.46384	32.10200	11.89742	0.2066473	0.22719617	2.6599209	20	6 14.0	16.5
4630	Chaonis	13.0	X	201.78241	304.84820	62.76480	5.90963	0.1293733	0.22610386	2.6684807	20	4 6.6	17.2
4631	Yabu	13.3	X	240.79566	51.36562	25.70209	7.40882	0.1232807	0.29498723	2.2349470	20	8 25.0	16.1
4632	Udagawa	13.6	X	344.63848	315.99934	85.29165	6.48955	0.1720543	0.30087735	2.2056828	20	—	—
4633	Marinbica	13.0	X	181.13211	61.70794	168.22703	1.14883	0.1619140	0.17347358	3.1840545	20	12 7.3	18.0
4634	Shibuya	13.3	X	266.29122	54.37903	18.02963	5.84578	0.0295462	0.26173463	2.4204452	20	10 1.5	16.1
4635	Rimbaud	13.0	X	83.11163	137.10453	24.43995	5.33823	0.1490480	0.25379385	2.4706733	20	6 16.5	16.3
4636	Chile	12.7	X	347.78907	203.25362	176.85334	13.76179	0.1583507	0.23326098	2.6136132	20	11 23.7	15.7
4637	Odorico	13.5	X	18.39091	310.65682	271.27801	1.71531	0.1507989	0.26020086	2.4299475	20	5 26.2	15.6
4638	Estens	13.7	X	210.21263	260.00626	277.21221	3.50706	0.0908716	0.30352976	2.1928144	20	12 6.5	16.4
4639	Minox	13.0	X	150.31658	250.66986	33.29677	7.91813	0.1827225	0.24111141	2.5565691	20	—	—
4640	Hara	13.2	X	143.97113	138.17868	347.73231	4.20826	0.1071894	0.29148090	2.2528347	20	7 8.1	16.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
4641 Ayako	13.9	X	35.83922	284.12688	101.95466	1.65252	0.1708015	0.30434144	2.1889138	20	—	—
4642 Murchie	12.3	X	140.87359	129.34252	149.83630	1.01246	0.1472886	0.17381720	3.1798567	20	12 28.9	17.4
4643 Cisneros	13.5	X	98.96975	188.06343	106.83529	1.77598	0.1996448	0.27122120	2.3636707	20	12 30.6	17.3
4644 Oumu	12.4	X	105.40324	206.89739	48.18389	14.12865	0.1444430	0.23429407	2.6059247	20	11 9.5	16.3
4645 Tentaikojo	12.7	X	188.87033	293.88722	179.55261	9.45753	0.1337008	0.22534833	2.6744418	20	8 1.8	17.0
4646 Kwee	14.3	X	300.35164	351.47463	332.04284	1.90856	0.1910595	0.26009890	2.4305826	20	5 20.2	17.2
4647 Syuji	12.8	X	40.97268	128.09788	180.52237	6.93436	0.2601497	0.20042253	2.8918228	20	11 17.0	16.8
4648 Tirion	13.3	X	290.54739	123.73831	319.54809	9.80477	0.1858254	0.26610351	2.3938797	20	11 1.0	15.7
4649 Sumoto	11.5	X	177.63908	313.51113	80.82799	15.42272	0.1221206	0.21705979	2.7420990	20	4 21.4	16.0
4650 Mori	13.5	X	273.15240	91.86988	306.75773	4.74538	0.1473235	0.29440241	2.2379058	20	8 7.6	15.9
4651 Wongkwancheng	13.0	X	351.54322	239.95825	181.63480	1.73228	0.0596276	0.20515769	2.8471533	20	—	—
4652 Iannini	13.5	X	111.47639	51.01675	327.73463	11.04879	0.3136465	0.22935216	2.6432252	20	2 9.6	17.4
4653 Tommaso	12.7	X	328.20781	55.19903	204.79114	11.25639	0.1738956	0.22404153	2.6848315	20	4 10.4	15.8
4654 Gor′kavyj	14.0	X	99.49341	245.51971	23.86001	5.52953	0.1643802	0.30111070	2.2045431	20	12 2.7	17.4
4655 Marjoriika	13.3	X	114.24632	47.31255	313.81415	1.91569	0.1901847	0.29116615	2.2544579	20	—	—
4656 Huchra	13.4	X	234.38368	47.88741	6.21826	1.71702	0.0722060	0.20420385	2.8560125	20	7 12.6	17.4
4657 Lopez	12.7	X	133.55348	38.90903	358.17151	0.28119	0.1809428	0.18044518	3.1015053	20	3 12.8	17.4
4658 Gavrilov	12.9	X	103.01437	210.42116	153.37605	1.16643	0.2036965	0.17629832	3.1499519	20	1 5.5	17.2
4659 Roddenberry	14.4	X	43.81884	5.51171	19.54336	2.46267	0.2233837	0.27007015	2.3703819	20	—	—
4660 Nereus	18.2	X	41.94651	158.07022	314.40560	1.43211	0.3603360	0.54259331	1.4887431	20	—	—
4661 Yebes	13.4	X	308.58139	286.24989	102.49363	4.70578	0.1592612	0.25931912	2.4354527	20	9 24.2	15.6
4662 Runk	13.2	X	307.14145	356.26886	158.07116	6.07651	0.1098970	0.21111289	2.7933555	20	—	—
4663 Falta	11.6	X	69.23087	11.93516	353.08659	14.89799	0.0616506	0.17128305	3.2111441	20	—	—
4664 Hanner	12.5	X	28.37490	2.10840	335.01049	1.49494	0.0672203	0.20136041	2.8828364	20	11 6.4	16.4
4665 Muinonen	12.4	X	320.76744	76.59139	236.79264	7.35545	0.2054665	0.19300309	2.9654678	20	6 8.9	15.8
4666 Dietz	12.9	X	172.37629	42.00286	230.22361	24.49472	0.2333715	0.27522959	2.3406652	20	—	—
4667 Robbiesh	13.2	X	261.81209	24.09458	5.92899	11.21690	0.0897229	0.22616804	2.6679758	20	7 16.8	17.0
4668 Rayjay	12.1	X	245.32193	69.46101	308.88638	9.23383	0.1218168	0.18839358	3.0136443	20	6 1.7	16.7
4669 Høder	13.7	X	16.37156	261.90055	104.36549	4.48715	0.1886832	0.30230578	2.1987292	20	—	—
4670 Yoshinogawa	13.8	X	213.68382	181.65666	314.82918	5.01843	0.0929364	0.29392760	2.2403152	20	10 10.5	16.6
4671 Drtikol	13.2	X	75.10327	332.63106	349.26699	4.81352	0.0617626	0.26751229	2.3854678	20	12 31.2	16.4
4672 Takuboku	11.4	X	183.29653	176.55485	91.65662	15.52933	0.0483527	0.17309077	3.1887473	20	—	—
4673 Bortle	11.8	X	67.62791	344.38816	104.38571	16.20239	0.0568216	0.24198643	2.5504024	20	2 3.2	15.0
4674 Pauling	13.9	X	185.38367	239.82184	232.92431	19.43898	0.0701813	0.38883654	1.8590511	20	8 6.5	16.6
4675 Ohboke	13.0	X	100.66404	294.20229	294.47057	4.47259	0.1754708	0.26330810	2.4107929	20	10 6.8	16.8
4676 Uedaseiji	13.0	X	118.37485	350.88753	222.07830	8.98523	0.0776015	0.26481458	2.4016412	20	9 28.4	16.4
4677 Hiroshi	12.8	X	78.68474	54.31568	11.95116	0.48146	0.1945086	0.17784349	3.1316802	20	2 17.7	16.8
4678 Ninian	13.6	X	249.82766	323.31687	30.45251	3.74237	0.2144557	0.28926725	2.2643134	20	4 24.7	16.9
4679 Sybil	12.1	X	172.88159	259.86558	178.73159	17.37083	0.0431723	0.18578582	3.0417791	20	6 4.6	16.9
4680 Lohrmann	13.9	X	145.69514	115.98182	302.39664	4.62273	0.1713273	0.28092848	2.3089022	20	4 10.5	17.5
4681 Ermak	12.1	X	258.13541	318.60412	37.83734	11.52123	0.1268596	0.18816961	3.0160351	20	5 18.1	16.6
4682 Bykov	14.3	X	210.28803	88.77950	321.27116	3.82169	0.1956515	0.28804107	2.2707349	20	6 1.1	17.8
4683 Veratar	12.2	X	69.17661	297.46068	164.38452	1.22533	0.1602589	0.17956080	3.1116808	20	3 14.3	16.0
4684 Bendjoya	13.3	X	78.72639	50.36686	220.23618	5.27406	0.1097071	0.26547399	2.3976626	20	11 3.2	16.6
4685 Karetnikov	12.3	X	101.59326	16.77571	47.86852	1.62222	0.1798542	0.17470915	3.1690247	20	3 13.9	16.7
4686 Maisica	13.5	X	76.48858	115.56125	237.01249	4.46835	0.1582893	0.27088408	2.3656313	20	—	—
4687 Brunsandrej	12.7	X	103.78625	174.50472	267.85773	3.88669	0.1497814	0.17997543	3.1068997	20	3 30.8	17.3
4688 1980 *WF*	19.4	X	292.48211	213.83925	241.24102	6.37320	0.5174139	0.29544293	2.2326483	20	9 28.6	20.0
4689 Donn	13.2	X	110.19583	31.72906	105.70379	5.16095	0.0711913	0.28490445	2.2873707	20	6 8.2	16.1
4690 Strasbourg	13.6	X	7.63007	105.72598	295.77165	16.91502	0.1085343	0.36549684	1.9373747	20	—	—
4691 Toyen	13.5	X	298.84976	298.98931	42.80148	5.87420	0.1949859	0.28922287	2.2645450	20	6 14.2	15.7
4692 SIMBAD	13.5	X	291.78060	322.65340	65.47090	3.70029	0.1476021	0.29067248	2.2570098	20	8 26.8	15.6
4693 Drummond	13.6	X	193.70452	209.53915	245.41745	4.86311	0.0825282	0.28611093	2.2809359	20	7 20.7	16.6
4694 Festou	12.7	X	282.68646	339.81093	332.32151	5.67778	0.1916072	0.21998637	2.7177252	20	4 9.8	16.7
4695 Mediolanum	11.9	X	271.79763	274.72277	177.06513	12.53862	0.1389190	0.22620464	2.6676881	20	10 14.5	15.2
4696 Arpigny	12.4	X	126.59430	131.77128	178.58269	1.89490	0.0551254	0.20415542	2.8564642	20	—	—
4697 Novara	14.0	X	327.92443	53.51514	262.74715	1.73445	0.1741701	0.25950072	2.4343163	20	7 5.6	16.0
4698 Jizera	13.5	X	174.47239	285.59252	291.17181	2.12080	0.0764018	0.29699786	2.2248488	20	12 15.3	16.4
4699 Sootan	13.9	X	88.04594	143.70671	244.66345	12.71204	0.1860440	0.24166252	2.5526808	20	—	—
4700 Carusi	12.7	X	39.18973	11.27319	76.77625	5.43141	0.2005117	0.24017704	2.5631954	20	—	—
4701 Milani	13.1	X	208.45742	288.03714	104.63366	3.67469	0.1402221	0.22174915	2.7033031	20	5 12.8	17.3
4702 Berounka	12.5	X	78.25579	134.33482	20.92491	9.34352	0.0910364	0.21102116	2.7941650	20	5 20.9	16.4
4703 Kagoshima	13.3	X	251.98017	296.21663	136.17312	5.40055	0.1147169	0.29177864	2.2513018	20	9 1.5	15.8
4704 Sheena	13.6	X	223.95190	281.12465	220.81843	12.16831	0.1311409	0.23177121	2.6248011	20	10 16.2	17.5
4705 Secchi	13.2	X	77.91917	120.19647	328.61161	8.63754	0.1278085	0.27718062	2.3296686	20	2 20.6	15.7
4706 Dennisreuter	13.5	X	192.26490	283.95506	178.32849	8.26022	0.1740894	0.28831069	2.2693190	20	7 23.7	17.1
4707 Khryses	10.6	X	223.77344	66.38346	310.16312	7.09285	0.1210857	0.08322820	5.1954406	20	5 8.6	18.0
4708 Polydoros	9.9	X	190.33736	102.95782	281.17873	6.98614	0.0595909	0.08188067	5.2522871	20	4 17.6	17.2
4709 Ennomos	8.6	X	278.30091	78.23862	253.12016	25.44488	0.0211814	0.08174765	5.2579832	20	5 28.3	15.6
4710 Wade	13.1	X	95.07087	234.10791	274.71399	4.99987	0.0917337	0.29298121	2.2451371	20	6 6.5	15.8
4711 Kathy	12.5	X	74.59109	243.06039	113.79149	10.23483	0.2561336	0.26799212	2.3826195	20	—	—
4712 Iwaizumi	11.4	X	190.14030	350.15447	334.06771	12.22798	0.1369724	0.17645486	3.1480888	20	2 7.8	16.5
4713 Steel	13.2	X	245.04477	152.49081	101.42050	22.67391	0.0735241	0.36859531	1.9265022	20	—	—
4714 Toyohiro	11.5	X	308.22530	36.51453	336.22276	9.84267	0.1215575	0.18739190	3.0243741	20	8 20.4	15.0
4715 1989 TS_1	9.7	X	250.32360	344.20854	1.60687	18.65619	0.0493293	0.08531276	5.1104609	20	5 2.9	16.8
4716 Urey	11.6	X	65.44000	100.92615	20.13782	10.13674	0.1337741	0.17370246	3.1812569	20	3 31.1	15.8
4717 Kaneko	11.3	X	33.13332	241.95957	73.26392	10.78779	0.0953142	0.18821673	3.0155317	20	10 22.3	15.4
4718 Araki	13.1	X	302.94192	220.41059	334.54025	8.04201	0.1585041	0.27171208	2.3608230	20	—	—
4719 Burnaby	12.5	X	220.63211	116.19241	1.51179	7.46010	0.1752176	0.22245300	2.6975979	20	9 8.1	16.5
4720 Tottori	13.1	X	357.01792	287.46360	121.28746	5.87444	0.1449342	0.29695646	2.2250556	20	—	—

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
4721	Atahualpa	13.8	X	23.05719	215.85028	39.36075	4.36618	0.1227458	0.29117436	2.2544155	20	7 30.2	15.9
4722	Agelaos	10.0	X	208.38782	315.17726	64.98170	8.81526	0.1111046	0.08295772	5.2067274	20	5 2.9	17.3
4723	Wolfgangmattig	13.8	X	314.89164	356.56521	25.19989	3.04855	0.1943513	0.22497400	2.6774076	20	9 13.4	16.2
4724	Brocken	13.1	X	124.56270	193.75868	94.59628	8.48222	0.1924529	0.29727825	2.2234496	20	—	—
4725	Milone	12.1	X	53.62293	255.05991	185.82122	13.78905	0.2350781	0.20158276	2.8807161	20	1 24.0	15.2
4726	Federer	12.8	X	312.90877	9.12123	294.18476	2.04164	0.0751633	0.21798432	2.7343402	20	5 30.4	16.3
4727	Ravel	12.9	X	100.46873	229.15774	133.15132	3.19931	0.0922362	0.19974908	2.8983190	20	—	—
4728	Lyapidevskij	13.8	X	191.83241	21.10834	24.18934	5.95611	0.1126811	0.28113183	2.3077887	20	5 9.6	17.2
4729	Mikhailmil′	12.6	X	344.71439	128.03063	251.75214	2.28355	0.1739534	0.29793687	2.2201716	20	12 9.5	14.2
4730	Xingmingzhou	11.4	X	196.18732	205.96107	80.58213	11.98560	0.0441118	0.17840329	3.1251256	20	—	—
4731	Monicagrady	13.8	X	130.69700	139.41292	282.11681	5.85123	0.2788305	0.17969123	3.1101748	20	4 13.5	19.1
4732	Froeschlé	11.4	X	194.91149	144.21287	226.41314	16.85600	0.0720874	0.17566756	3.1574877	20	4 1.4	16.3
4733	ORO	13.7	X	298.86061	157.91900	43.03545	4.71516	0.0730808	0.30503608	2.1855894	20	—	—
4734	Rameau	14.6	X	352.03580	24.53068	4.85546	0.97326	0.1904659	0.26246525	2.4159513	20	12 26.9	17.1
4735	Gary	12.8	X	33.11466	351.58581	88.36865	7.24951	0.1199207	0.26420503	2.4053337	20	—	—
4736	Johnwood	13.6	X	289.82111	106.58208	310.41652	21.96862	0.1391355	0.35982367	1.9576854	20	10 9.6	15.7
4737	Kiladze	12.8	X	351.54213	155.25549	138.34259	4.59641	0.0787221	0.22258555	2.6965268	20	7 18.6	16.0
4738	Jimihendrix	12.6	X	6.81356	330.03495	352.84203	13.21306	0.1700214	0.22440818	2.6819062	20	10 1.5	15.5
4739	Tomahrens	13.1	X	175.20263	269.55927	172.61811	1.74932	0.0662246	0.21715638	2.7412858	20	6 10.9	17.0
4740	Veniamina	13.4	X	238.98228	262.26649	180.49324	8.00432	0.2104634	0.22009023	2.7168701	20	8 6.3	17.7
4741	Leskov	12.4	X	54.88017	279.16526	64.56436	1.56882	0.1709244	0.17009802	3.2260409	20	12 24.8	17.1
4742	Caliumi	13.0	X	299.40164	253.81154	242.20073	22.26684	0.2683591	0.26359634	2.4090352	20	—	—
4743	Kikuchi	13.8	X	149.56003	169.86719	5.45840	4.87178	0.1002013	0.28874976	2.2670180	20	9 20.0	16.8
4744	Rovereto	11.9	X	71.67359	186.26337	348.19100	10.16865	0.1838870	0.21031846	2.8003853	20	6 24.1	15.8
4745	Nancymarie	12.1	X	314.64957	66.64383	238.75362	8.68800	0.0609357	0.18817675	3.0159588	20	6 6.8	16.1
4746	Doi	12.2	X	99.00124	211.05541	185.20246	0.88500	0.1733479	0.17114313	3.2128941	20	2 4.7	16.7
4747	Jujo	12.2	X	316.14267	351.94734	62.36859	11.80409	0.1106862	0.18937848	3.0031864	20	10 31.3	15.8
4748	Tokiwagozen	11.6	X	47.49443	185.26685	85.31199	16.31551	0.0579726	0.21691039	2.7433580	20	9 18.0	15.6
4749	Ledzeppelin	11.8	X	343.80709	286.95950	92.92023	10.77548	0.1007302	0.18890018	3.0082538	20	11 1.6	15.6
4750	Mukai	13.9	X	69.54806	140.35290	294.92541	4.90568	0.0905847	0.30537696	2.1839626	20	1 6.6	15.8
4751	Alicemanning	12.3	X	300.36039	130.85706	136.73010	2.61004	0.1735709	0.17482468	3.1676283	20	3 15.8	16.6
4752	Myron	12.8	X	165.01089	7.95777	55.37597	2.03721	0.1664177	0.18160608	3.0882738	20	5 10.2	17.9
4753	Phidias	13.1	X	301.67548	189.17463	59.51050	4.31267	0.0677043	0.24266872	2.5456196	20	3 3.3	16.3
4754	Panthoos	10.0	X	271.96913	181.34961	154.97970	12.30877	0.0078404	0.08169916	5.2600637	20	5 30.6	17.1
4755	Nicky	13.9	X	241.03059	275.97222	102.07603	3.08592	0.2504338	0.28562616	2.2835160	20	5 16.0	17.4
4756	Asaramas	12.1	X	92.28346	0.20759	239.37744	9.19961	0.0651142	0.18799190	3.0179355	20	9 18.9	16.6
4757	Liselotte	12.3	X	179.63636	79.93776	91.18893	0.17352	0.0832718	0.12613012	3.9378289	20	9 26.5	18.3
4758	Hermitage	12.3	X	103.17919	288.18314	60.45512	1.62286	0.1735560	0.17136816	3.2100808	20	—	—
4759	Åretta	12.5	X	168.78805	204.79065	142.63907	0.80620	0.1816508	0.17421555	3.1750076	20	2 15.9	17.7
4760	Jia–xiang	14.0	X	259.23352	130.55630	177.80382	9.85216	0.1285422	0.27795157	2.3253587	20	3 15.0	17.1
4761	Urrutia	14.1	X	266.65998	332.54580	66.00253	25.57410	0.2156987	0.27526800	2.3404475	20	7 15.8	17.5
4762	Dobrynya	13.4	X	81.87479	76.10671	11.66060	6.90963	0.2020360	0.27227515	2.3575670	20	3 11.8	15.9
4763	Ride	12.2	X	183.10550	213.79196	333.09550	11.40267	0.1014634	0.22752531	2.6573550	20	10 26.5	16.5
4764	Joneberhart	14.1	X	152.09283	176.67407	134.24623	24.83785	0.0469388	0.36707122	1.9318311	20	—	—
4765	Wasserburg	13.8	X	240.92028	108.16437	76.54426	23.71207	0.0602147	0.36324519	1.9453726	20	—	—
4766	Malin	12.7	X	55.83338	357.92825	96.40037	14.21270	0.1371034	0.23630419	2.5911254	20	2 1.7	15.6
4767	Sutoku	12.8	X	161.63927	26.34850	193.91679	13.31225	0.1096548	0.22335890	2.6902989	20	11 20.2	17.1
4768	Hartley	11.3	X	203.44861	26.45752	320.48411	20.09145	0.2378706	0.17439536	3.1728249	20	3 6.7	17.0
4769	Castalia	16.9	X	325.56633	121.40981	325.54130	8.88552	0.4832323	0.89911153	1.0631479	20	—	—
4770	Lane	12.1	X	114.93357	202.50369	129.36093	25.01356	0.3017731	0.20268099	2.8703006	20	—	—
4771	Hayashi	12.6	X	9.14271	43.80195	288.94165	4.80111	0.1555568	0.22409330	2.6844179	20	10 18.1	15.6
4772	Frankdrake	11.9	X	164.33092	185.37293	209.87505	11.51455	0.0690916	0.17539516	3.1607560	20	3 31.6	16.8
4773	Hayakawa	13.0	X	27.87643	62.10638	60.18345	5.01732	0.1169393	0.23378269	2.6097234	20	1 20.3	15.9
4774	Hobetsu	12.8	X	274.85140	236.95933	285.80720	3.63052	0.0858011	0.29453248	2.2372469	20	—	—
4775	Hansen	13.8	X	3.52344	7.78245	336.49399	9.27060	0.4525530	0.26604878	2.3942079	20	12 30.0	16.7
4776	Luyi	14.3	X	264.65295	349.03139	3.23016	5.39358	0.2328333	0.27996598	2.3141910	20	5 4.9	17.6
4777	Aksenov	14.1	X	222.43058	168.36431	194.85965	1.32524	0.1302702	0.30735112	2.1746006	20	4 15.3	17.1
4778	Fuss	13.1	X	129.19572	39.27683	35.19548	1.58105	0.1770562	0.17582378	3.1556171	20	4 21.9	17.9
4779	Whitley	12.4	X	27.08543	328.17565	185.33792	0.92929	0.1193189	0.17293869	3.1906165	20	3 10.4	16.3
4780	Polina	14.1	X	301.67513	119.52445	108.15007	4.68089	0.0595442	0.30825772	2.1703348	20	1 24.4	16.4
4781	Sládkovič	14.2	X	207.36931	190.23150	158.66638	1.67475	0.1900813	0.31124803	2.1564115	20	3 10.9	17.6
4782	Gembloux	12.2	X	147.38086	348.51926	339.16125	1.33652	0.0718090	0.20601933	2.8392093	20	—	—
4783	Wasson	13.5	X	65.22164	357.65464	109.24771	16.56799	0.2052487	0.24148527	2.5539298	20	3 22.3	16.7
4784	Samcarin	13.2	X	104.00257	169.27559	348.95521	3.54157	0.1126174	0.22454075	2.6808505	20	7 3.1	17.0
4785	Petrov	13.5	X	72.19817	115.78445	301.50497	2.67524	0.0621917	0.22659436	2.6646284	20	1 1.4	16.9
4786	Tatianina	13.3	X	301.46034	118.42271	115.76232	7.25667	0.1934442	0.27219440	2.3580333	20	1 19.3	16.5
4787	Shul′zhenko	13.7	X	333.55631	9.23253	349.55144	5.04619	0.1127424	0.29053164	2.2577391	20	10 3.6	15.6
4788	Simpson	13.7	X	316.51345	110.31825	277.17677	4.31878	0.1294431	0.28959268	2.2626168	20	10 13.4	15.6
4789	Sprattia	13.9	X	281.17508	152.60779	209.71686	1.27562	0.1245036	0.29417881	2.2390397	20	6 29.7	16.4
4790	Petrpravec	13.0	X	265.40020	84.95116	131.46362	12.71988	0.0851708	0.23156773	2.6263385	20	—	—
4791	Iphidamas	10.1	X	160.28839	164.83310	261.46412	25.96991	0.0451120	0.08409990	5.1594774	20	5 4.7	17.3
4792	Lykaon	10.1	X	240.35267	283.24248	61.91897	9.33624	0.0916007	0.08177769	5.2566954	20	4 26.2	17.3
4793	Slessor	13.2	X	205.91844	62.82037	155.91908	4.36363	0.1580888	0.22627623	2.6671254	20	12 27.6	17.1
4794	Bogard	13.7	X	285.46327	353.46414	174.02436	5.40203	0.1161216	0.28780501	2.2719764	20	—	—
4795	Kihara	13.8	X	102.32983	132.11227	133.88929	5.10758	0.1524870	0.30210677	2.1996947	20	12 2.6	17.1
4796	Lewis	13.6	X	148.13588	35.80529	296.37166	2.27413	0.1796001	0.27264615	2.3554279	20	—	—
4797	Ako	14.2	X	48.89135	78.80817	320.57728	1.81092	0.1836105	0.26307586	2.4122115	20	—	—
4798	Mercator	13.5	X	257.19675	161.23049	93.59364	3.65912	0.1093628	0.30253708	2.1976084	20	1 1.9	16.6
4799	Hirasawa	13.8	X	5.27029	81.99033	241.53882	0.61657	0.1281398	0.25383428	2.4704109	20	10 3.6	16.3
4800	Veveri	11.8	X	325.73594	179.94944	179.41157	10.28760	0.1027696	0.18880027	3.0093149	20	8 30.5	15.4

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		°	°	°	°		°				
4801 Ohře	12.9	X	343.38692	44.82062	66.59194	2.25410	0.1627978	0.22939756	2.6428764	20	—	—
4802 Khatchaturian	14.7	X	153.76199	213.50057	103.09001	0.74408	0.2118570	0.29825473	2.2185940	20	—	—
4803 Birkle	12.3	X	258.52018	182.64342	46.09938	2.91876	0.0351978	0.19929706	2.9026998	20	—	—
4804 Pasteur	12.0	X	352.45188	271.83455	103.46436	8.63863	0.1155169	0.22326777	2.6910309	20	11 17.6	15.1
4805 Asteropaios	10.0	X	212.06655	89.80673	278.39779	12.01469	0.0906518	0.08299033	5.2053634	20	4 18.3	17.4
4806 Miho	13.3	X	306.75026	291.48657	169.20293	5.24728	0.0975841	0.29604750	2.2296077	20	—	—
4807 Noboru	13.6	X	162.15865	93.73886	329.97694	0.49076	0.2117296	0.27761356	2.3272458	20	5 7.7	17.4
4808 Ballaero	12.2	X	341.79484	139.71387	302.06051	10.78628	0.1614277	0.22608424	2.6686351	20	—	—
4809 Robertball	12.9	X	105.74681	173.63705	169.23184	13.65693	0.2466606	0.23937027	2.5689515	20	—	—
4810 Ruslanova	13.3	X	154.14133	133.15431	48.08031	7.75773	0.1032454	0.29438547	2.2379917	20	10 6.3	16.5
4811 Semashko	14.0	X	8.58604	275.28843	8.98291	5.05859	0.1831360	0.29265973	2.2467810	20	8 27.6	15.7
4812 Hakuhou	14.5	X	6.16837	73.83974	3.59416	4.66865	0.2087414	0.27057409	2.3674378	20	—	—
4813 Terebizh	12.2	X	310.07320	295.25736	20.92948	11.85358	0.1034968	0.17854668	3.1234522	20	6 6.7	16.5
4814 Casacci	12.9	X	93.00434	199.63343	134.37250	1.45045	0.1847721	0.16945889	3.2341473	20	—	—
4815 Anders	13.8	X	110.21950	355.95348	7.16408	7.55275	0.1355210	0.27183690	2.3601002	20	—	—
4816 Connelly	12.8	X	91.16014	84.41281	274.54203	11.83156	0.2722521	0.23640771	2.5903689	20	—	—
4817 Gliba	13.7	X	118.04460	252.64446	163.33251	2.16044	0.2095975	0.27426107	2.3461725	20	3 16.3	16.8
4818 Elgar	13.7	X	153.12796	82.77904	169.06196	2.54359	0.1296446	0.28921338	2.2645946	20	12 30.7	16.9
4819 Gifford	14.1	X	207.84368	303.45255	344.00656	5.80209	0.0303376	0.30138918	2.2031849	20	—	—
4820 Fay	11.9	X	41.76841	96.60526	331.53991	12.44468	0.3522624	0.20401146	2.8578077	20	—	—
4821 Bianucci	12.7	X	89.15221	327.72404	153.82961	1.18026	0.1578690	0.17733653	3.1376457	20	5 4.7	17.1
4822 Karge	13.7	X	322.33911	264.71746	141.31914	4.05237	0.1847948	0.29154975	2.2524799	20	12 2.9	15.2
4823 Libenice	14.2	X	210.02398	52.85725	333.91152	1.11585	0.1074793	0.31068806	2.1590018	20	5 4.4	17.0
4824 Stradonice	13.6	X	231.38367	42.12263	40.28348	6.46932	0.0557159	0.28451288	2.2894690	20	8 28.9	16.5
4825 Ventura	14.0	X	299.48297	65.44786	306.01601	3.95952	0.1660546	0.29164732	2.2519776	20	8 9.2	15.6
4826 Wilhelms	12.6	X	202.31693	223.49877	95.52998	25.31892	0.1924122	0.26861052	2.3789613	20	2 4.4	16.8
4827 Dares	10.5	X	188.09903	169.78559	242.04268	7.70423	0.0433481	0.08489075	5.1273835	20	5 19.0	17.5
4828 Misenus	10.4	X	101.88764	130.47178	352.98665	14.90205	0.0416356	0.08396655	5.1649388	20	5 3.1	17.4
4829 Sergestus	11.1	X	269.44141	120.46566	221.91310	8.59458	0.0477194	0.08391535	5.1670394	20	5 27.6	18.0
4830 Thomascooley	13.1	X	329.56105	84.09179	119.54563	6.41554	0.0676878	0.26630430	2.3926762	20	2 5.4	15.8
4831 Baldwin	12.4	X	61.74550	146.42263	65.84494	0.26360	0.1166033	0.18103745	3.0947372	20	7 18.4	16.6
4832 Palinurus	10.0	X	250.52125	209.46962	135.13753	19.06296	0.1406662	0.08156877	5.2656675	20	5 5.1	17.5
4833 Meges	9.0	X	320.13173	280.54351	101.74503	34.72967	0.0931628	0.08232512	5.2333661	20	9 18.4	16.0
4834 Thoas	9.1	X	276.26515	351.99625	76.01899	28.46183	0.1370982	0.08283224	5.2119844	20	9 11.7	16.3
4835 1989 *BQ*	10.6	X	242.94714	355.15437	125.47199	19.56624	0.2506925	0.08316676	5.1979989	20	9 15.1	18.2
4836 Medon	9.5	X	252.11322	34.22786	82.04493	19.39811	0.1078965	0.08288117	5.2099330	20	10 9.4	16.7
4837 Bickerton	11.7	X	75.81902	45.39474	327.10332	28.20084	0.1374047	0.17237486	3.1975702	20	—	—
4838 Billmclaughlin	13.0	X	224.57559	40.64922	217.80404	8.87580	0.1428244	0.27303572	2.3531868	20	—	—
4839 Daisetsuzan	13.0	X	23.04799	180.28275	176.97068	7.57618	0.0697352	0.25950052	2.4343176	20	12 10.9	16.1
4840 Otaynang	11.9	X	111.71821	193.73385	247.45019	15.16728	0.0993881	0.17360518	3.1824452	20	3 28.9	16.8
4841 Manjiro	13.6	X	232.03538	288.31145	145.41032	3.88097	0.1020981	0.28067888	2.3102708	20	8 6.1	16.6
4842 Atsushi	13.5	X	117.02587	77.93533	225.46914	2.46855	0.1567145	0.29184345	2.2509685	20	—	—
4843 Mégantic	11.8	X	320.17295	222.58791	162.24589	10.99714	0.1174661	0.18143398	3.0902264	20	9 25.5	15.5
4844 Matsuyama	12.5	X	0.23486	355.56857	248.17697	5.95759	0.2181944	0.24139136	2.5545921	20	5 20.9	14.5
4845 Tsubetsu	13.1	X	231.49555	223.28190	28.19416	7.57894	0.0667492	0.26487188	2.4012948	20	—	—
4846 Tuthmosis	12.8	X	28.91007	78.06497	22.74625	5.27763	0.1360816	0.17086390	3.2163935	20	1 8.4	16.7
4847 Amenhotep	14.7	X	21.72219	103.18355	125.47390	0.85680	0.0886996	0.30899859	2.1668643	20	6 8.2	16.6
4848 Tutenchamun	12.0	X	61.61830	309.50339	132.62460	6.37996	0.1286572	0.17698215	3.1418328	20	2 3.6	15.8
4849 Ardenne	13.8	X	101.39360	171.81538	190.85832	2.99651	0.1109722	0.28643742	2.2792023	20	—	—
4850 Palestrina	12.9	X	194.71053	195.82646	188.31937	1.88331	0.0768991	0.20193494	2.8773657	20	4 19.8	17.3
4851 Vodop′yanova	12.7	X	59.19237	91.09203	27.05318	15.50917	0.0612961	0.23504282	2.6003874	20	3 8.6	16.1
4852 Pamjones	13.8	X	62.53410	232.02776	43.06607	6.77447	0.1029465	0.28190691	2.3035567	20	10 23.7	16.7
4853 Marielukac	13.1	X	46.09071	137.94688	145.47595	8.36898	0.2559848	0.24419747	2.5349843	20	10 31.8	16.7
4854 Edscott	12.9	X	168.46062	61.79441	174.53390	10.67829	0.0625559	0.19138973	2.9821098	20	12 11.8	17.5
4855 Tenpyou	14.0	X	207.94778	52.21463	229.26001	4.74895	0.1842545	0.29536757	2.2330280	20	—	—
4856 Seaborg	12.0	X	161.07261	268.68136	189.99536	15.00529	0.0680227	0.24052111	2.5607504	20	6 16.6	16.0
4857 Altgamia	13.1	X	13.98451	139.09817	31.69973	24.47142	0.2280026	0.27238686	2.3569224	20	3 8.2	15.4
4858 Vorobjov	14.2	X	205.06174	125.43015	329.92738	3.27509	0.1088953	0.30554873	2.1831440	20	8 5.1	17.0
4859 Fraknoi	13.6	X	251.42604	314.35767	122.21017	6.41610	0.1347334	0.28762714	2.2729130	20	9 3.9	16.2
4860 Gubbio	12.4	X	88.62173	15.60632	338.25882	14.52051	0.1450314	0.23068856	2.6330070	20	—	—
4861 Nemirovskij	12.9	X	247.39992	233.80042	96.83623	3.54198	0.2271624	0.20086465	2.8875779	20	3 29.5	17.7
4862 Loke	12.9	X	251.00642	100.88013	199.72492	8.65073	0.2385668	0.19801464	2.9152190	20	2 21.7	17.8
4863 Yasutani	12.2	X	55.45037	232.98083	25.09783	2.17834	0.0221268	0.20484779	2.8500241	20	8 28.0	16.1
4864 Nimoy	13.4	X	62.97270	241.70646	94.12634	3.61933	0.1765183	0.25408091	2.4688120	20	—	—
4865 Sor	12.4	X	269.06831	68.92402	43.23354	10.09761	0.0615507	0.18533550	3.0467043	20	11 6.6	16.6
4866 Badillo	12.0	X	93.31115	121.32547	213.86378	9.37792	0.0781113	0.18936465	3.0033327	20	—	—
4867 Polites	9.8	X	348.61923	276.76445	335.19351	27.16012	0.0187113	0.08395956	5.1652255	20	5 9.6	17.0
4868 Knushevia	14.8	X	155.50696	94.49083	187.49833	22.10347	0.0679249	0.35900220	1.9606706	20	—	—
4869 Piotrovsky	13.1	X	125.38882	217.62123	96.25862	3.54620	0.1739290	0.29496550	2.2350568	20	—	—
4870 Shcherban′	11.6	X	89.52842	344.64696	83.50502	9.73549	0.0801937	0.17122752	3.2118383	20	2 22.4	16.2
4871 Riverside	13.4	X	11.52985	142.49300	263.63603	2.89398	0.1077267	0.29051203	2.2578407	20	—	—
4872 Grieg	13.1	X	252.64121	9.44896	111.10741	10.71115	0.0576408	0.21892828	2.7264747	20	11 7.6	16.9
4873 Fukaya	12.1	X	145.91297	155.25371	145.89343	10.78690	0.0889692	0.18725997	3.0257944	20	—	—
4874 Burke	12.2	X	24.83834	325.42657	127.51086	14.65176	0.1239632	0.23473659	2.6026485	20	—	—
4875 Ingalls	13.1	X	150.82015	159.41073	123.83003	5.25588	0.1787143	0.29324660	2.2437824	20	—	—
4876 Strabo	12.8	X	74.11636	226.37079	214.89127	1.30371	0.0267963	0.19890786	2.9064850	20	2 3.8	16.6
4877 Humboldt	13.0	X	281.32034	202.68825	228.82198	12.38758	0.1341514	0.23082932	2.6319365	20	9 27.1	16.4
4878 Gilhutton	14.8	X	320.36053	120.22454	224.00012	6.18120	0.1540121	0.28440862	2.2900284	20	8 6.9	16.9
4879 Zykina	12.0	X	4.90715	22.63580	49.12187	10.30786	0.0984240	0.17523277	3.1627085	20	—	—
4880 Tovstonogov	12.2	X	65.82879	192.78152	218.35686	21.18397	0.0350281	0.22576634	2.6711396	20	—	—

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
4881	Robmackintosh	14.4	X	161.50399	350.05858	141.24653	8.08132	0.0452524	0.27978704	2.3151776	20	8 2.4	17.3
4882	Divari	13.1	X	268.44778	216.22591	200.08345	4.77448	0.0997830	0.25132870	2.4868027	20	8 27.9	16.3
4883	Korolirina	13.7	X	104.67925	117.02541	186.74009	5.85791	0.2372825	0.21719307	2.7409771	20	—	—
4884	Bragaria	13.8	X	130.05986	132.57361	154.88189	4.70664	0.1677343	0.29711918	2.2242432	20	—	—
4885	Grange	14.0	X	186.02812	101.44458	169.56221	3.16939	0.1717676	0.26004202	2.4309370	20	—	—
4886	Kojima	14.4	X	30.56042	141.27283	293.91614	4.83300	0.2074919	0.19751590	2.9201243	20	—	—
4887	Takihiroi	13.5	X	101.77121	97.75213	288.60091	0.99958	0.0248864	0.19749188	2.9203611	20	1 2.6	17.3
4888	Doreen	13.8	X	277.45109	215.17621	33.27569	4.05498	0.0165628	0.27358326	2.3500460	20	2 2.7	16.7
4889	Praetorius	12.3	X	255.62066	276.14780	185.58514	13.92649	0.1973992	0.18152604	3.0891815	20	9 16.5	16.9
4890	Shikanosima	13.6	X	281.55505	185.49006	100.27700	3.65566	0.1500294	0.30118801	2.2041658	20	3 8.0	16.4
4891	Blaga	12.3	X	116.83047	253.54504	338.41104	2.30292	0.0620290	0.17530678	3.1618182	20	10 8.5	16.9
4892	Chrispollas	12.9	X	121.84987	307.97500	211.71922	8.57192	0.0988055	0.27608546	2.3358253	20	7 24.4	16.3
4893	Seitter	12.3	X	80.00577	100.15605	151.05908	13.77377	0.0885619	0.17653623	3.1471213	20	9 27.2	16.9
4894	Ask	13.4	X	212.17228	47.23105	263.61149	2.63899	0.1950045	0.30749072	2.1739424	20	1 26.8	16.8
4895	Embla	13.5	X	113.09638	342.11389	38.47874	7.12654	0.2365275	0.27280426	2.3545176	20	1 30.3	16.6
4896	Tomoegozen	11.6	X	89.16669	98.36602	260.91079	16.56452	0.1700702	0.17996795	3.1069858	20	—	—
4897	Tomhamilton	12.0	X	86.77168	107.00949	188.41421	11.05566	0.1219044	0.18447248	3.0561992	20	11 30.2	16.8
4898	Nishiizumi	14.0	X	304.04243	146.21526	3.60201	18.62162	0.0816474	0.36095413	1.9535958	20	—	—
4899	Candace	12.9	X	240.95133	74.36571	190.17774	22.55902	0.1851697	0.26975315	2.3722386	20	—	—
4900	Maymelou	13.4	X	232.88293	91.34826	209.74650	5.93467	0.1288198	0.26858050	2.3791385	20	2 6.3	17.1
4901	Ó Briain	13.6	X	133.90472	94.31954	227.14584	4.64111	0.1902000	0.28729786	2.2746493	20	—	—
4902	Thessandrus	9.8	X	271.16837	270.24817	170.27754	9.07494	0.0430111	0.08304101	5.2032454	20	9 19.1	16.5
4903	Ichikawa	12.6	X	203.24838	250.91628	90.76690	2.54302	0.1842813	0.17676514	3.1444038	20	3 9.2	17.9
4904	Makio	12.6	X	36.42307	266.41793	228.93497	10.12080	0.1293568	0.26694875	2.3888238	20	2 10.7	15.2
4905	Hiromi	12.2	X	215.06334	176.15553	198.40338	12.42747	0.1696593	0.23511805	2.5998327	20	4 24.6	16.3
4906	Seneferu	15.0	X	240.87017	199.08781	120.00522	1.65160	0.2152706	0.30698165	2.1763451	20	3 2.3	18.2
4907	Zoser	12.3	X	126.72154	301.51136	136.50089	5.99495	0.0924282	0.17404659	3.1770621	20	4 17.8	17.1
4908	Ward	13.7	X	278.36220	165.96600	190.16726	4.57186	0.2338062	0.30434677	2.1888882	20	5 28.9	16.4
4909	Couteau	13.4	X	237.21728	235.13622	114.10520	2.40866	0.2465494	0.28765287	2.2727774	20	4 6.3	17.1
4910	Kawasato	13.4	X	187.39583	155.04271	180.01029	4.99780	0.3250481	0.25843175	2.4410245	20	2 12.5	17.9
4911	Rosenzweig	12.1	X	217.63455	157.54662	209.77930	13.03987	0.1809817	0.23024368	2.6363976	20	4 16.4	16.4
4912	Emilhaury	13.1	X	29.81321	206.25909	191.99679	3.66851	0.1377878	0.28213238	2.3023292	20	—	—
4913	Wangxuan	13.2	X	147.06324	277.54971	41.67162	3.04535	0.1890771	0.25809560	2.4431435	20	—	—
4914	Pardina	11.6	X	150.52305	151.79905	255.32890	12.53195	0.1583786	0.23171856	2.6251987	20	3 30.7	16.0
4915	Solzhenitsyn	13.0	X	106.49218	318.18366	118.33839	3.84460	0.2883620	0.18352312	3.0667299	20	4 15.7	17.8
4916	Brumberg	11.6	X	53.61406	274.88433	148.00135	10.77457	0.0960163	0.18555823	3.0442658	20	—	—
4917	Yurilvovia	12.8	X	86.39843	198.07181	180.67344	3.71207	0.1088758	0.21704178	2.7422507	20	—	—
4918	Rostropovich	13.7	X	204.90701	195.33660	205.31689	1.76974	0.2335824	0.22995790	2.6385814	20	5 15.2	18.2
4919	Vishnevskaya	13.8	X	153.55962	327.32792	350.12295	5.01248	0.2425911	0.28805368	2.2706686	20	—	—
4920	Gromov	13.1	X	117.37178	210.01349	190.01226	2.42899	0.0878135	0.22369875	2.6875735	20	2 11.9	16.6
4921	Volonté	13.5	X	199.31391	145.62017	233.13389	5.20828	0.1429789	0.26315335	2.4117379	20	4 12.5	17.2
4922	Leshin	13.5	X	249.43788	138.33346	229.55893	8.16670	0.2305714	0.23226066	2.6211122	20	5 12.8	17.5
4923	Clarke	14.3	X	78.70058	108.56157	188.48852	6.67504	0.2016288	0.31377761	2.1448063	20	12 23.4	17.7
4924	Hiltner	15.1	X	7.82074	148.71510	180.05436	1.73120	0.2144550	0.31181751	2.1537852	20	11 15.6	17.0
4925	Zhoushan	11.9	X	106.51135	140.23465	243.22214	8.34371	0.2490796	0.18541138	3.0458730	20	2 3.3	16.5
4926	Smoktunovskij	13.0	X	32.60186	327.71724	332.87537	1.29663	0.0525303	0.20696403	2.8305629	20	9 25.3	16.7
4927	O'Connell	13.2	X	264.38779	39.97776	328.99524	1.16372	0.0868172	0.20069401	2.8892144	20	6 18.2	17.3
4928	Vermeer	14.3	X	31.49526	131.72854	207.46852	2.46019	0.1892499	0.31325568	2.1471880	20	12 28.8	16.9
4929	Yamatai	13.8	X	347.85310	89.78948	127.48231	2.48720	0.0581326	0.29993549	2.2102979	20	3 21.3	16.1
4930	Rephiltim	11.2	X	260.37444	358.98990	122.10305	15.53495	0.0512685	0.17878556	3.1206694	20	11 12.4	15.8
4931	Tomsk	12.6	X	63.92783	281.43996	154.95666	23.17239	0.2820891	0.23794435	2.5792045	20	2 8.4	15.0
4932	Texstapa	12.0	X	313.34283	291.42139	141.48990	12.91640	0.0152183	0.17961992	3.1109979	20	11 22.4	16.5
4933	Tylerlinder	13.7	X	355.44095	87.72569	151.11417	1.86508	0.1201427	0.27693641	2.3310380	20	5 4.4	15.6
4934	Rhôneranger	12.4	X	170.79482	152.51562	187.53856	10.96057	0.1108325	0.18959209	3.0009303	20	2 1.9	17.2
4935	Maslachkova	13.2	X	204.77327	275.05972	122.61893	5.72732	0.1468354	0.30316676	2.1945644	20	5 14.8	16.4
4936	Butakov	13.6	X	357.05165	284.38339	155.69270	5.91216	0.1262790	0.28700253	2.2762095	20	—	—
4937	Lintott	12.4	X	350.94545	336.67409	275.43913	16.92977	0.1604095	0.23532605	2.5983005	20	5 11.9	15.2
4938	Papadopoulos	13.7	X	249.07995	195.22115	222.25780	4.56543	0.0756807	0.27292048	2.3538492	20	8 7.7	16.8
4939	Scovil	13.3	X	31.21696	93.43947	9.70924	5.37885	0.1560672	0.24508334	2.5288721	20	—	—
4940	Polenov	12.2	X	29.51527	273.01651	118.24573	2.28473	0.1746072	0.18032651	3.1028658	20	—	—
4941	Yahagi	12.6	X	330.07661	266.32548	129.32227	1.87493	0.1739109	0.17336946	3.1853292	20	10 22.6	16.0
4942	Munroe	13.5	X	310.85030	11.36987	278.08660	3.83385	0.1361783	0.30178954	2.2012359	20	4 22.9	15.7
4943	Lac d'Orient	13.0	X	182.75532	135.57847	241.37673	11.97529	0.1770581	0.22882714	2.6472667	20	3 24.9	17.6
4944	Kozlovskij	13.3	X	64.99795	85.49790	279.40225	4.49231	0.0629197	0.21678124	2.7444474	20	—	—
4945	Ikenozenni	13.0	X	347.41962	137.49747	193.79585	4.89784	0.3176046	0.23894366	2.5720083	20	9 23.8	14.2
4946	Askalaphus	10.2	X	83.90219	206.24646	59.03272	21.86039	0.0499119	0.08035446	5.3185843	20	10 8.0	17.4
4947	Ninkasi	18.0	X	241.23234	192.90989	215.44653	15.65100	0.1683453	0.61458249	1.3700905	20	7 20.9	18.7
4948	Hideonishimura	14.0	X	342.01897	124.88731	246.49482	3.09589	0.1928958	0.30854432	2.1689907	20	11 27.7	15.2
4949	Akasofu	13.4	X	90.64140	275.79000	108.64163	4.81333	0.1684138	0.28775524	2.2723437	20	—	—
4950	House	12.6	X	331.38082	251.34666	189.86394	12.70072	0.1833492	0.21649906	2.7468316	20	—	—
4951	Iwamoto	13.3	X	9.50966	340.22151	101.03096	7.53267	0.1670905	0.29073974	2.2566617	20	—	—
4952	Kibeshigemaro	11.8	X	100.81916	101.66249	121.85505	17.00031	0.1132477	0.17586466	3.1551282	20	9 22.3	16.8
4953	1990 *MU*	14.1	X	241.21122	77.75348	77.70393	24.39060	0.6576261	0.47755831	1.6210078	20	11 1.4	15.4
4954	Eric	12.5	X	150.95339	52.58950	358.44366	17.42945	0.4493837	0.34824151	2.0008554	20	4 16.4	16.5
4955	Gold	11.7	X	131.07050	250.14896	89.44897	7.40484	0.1328863	0.17596036	3.1539840	20	—	—
4956	Noymer	13.3	X	300.01188	201.29979	169.28477	24.24457	0.2038024	0.25778856	2.4450831	20	7 26.8	16.3
4957	Brucemurray	14.9	X	65.36827	97.46016	254.90019	35.01083	0.2187913	0.50318475	1.5654928	20	—	—
4958	Wellnitz	11.5	X	34.27459	216.23307	252.97881	9.08755	0.0781689	0.18868557	3.0105344	20	1 19.2	15.4
4959	Niinoama	10.9	X	307.89571	318.69109	128.70930	8.99801	0.0097064	0.17653874	3.1470915	20	11 30.9	15.4
4960	Mayo	13.3	X	103.75499	277.45175	120.53016	0.94182	0.0947642	0.18794563	3.0184308	20	1 30.5	17.5

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
4961	Timherder	12.1	X	28.92978	54.65757	313.73591	7.79962	0.2192445	0.17569286	3.1571846	20	—	—
4962	Vecherka	12.3	X	44.39124	141.82602	206.98656	15.09577	0.1439869	0.23417130	2.6068353	20	12 29.0	16.2
4963	Kanroku	11.9	X	6.96976	302.91310	332.37315	11.77789	0.1647955	0.23505548	2.6002941	20	7 29.4	14.5
4964	Kourovka	13.6	X	310.61018	204.72564	167.40793	4.91851	0.1235545	0.28955243	2.2628264	20	9 8.6	15.2
4965	Takeda	13.9	X	175.24094	67.48188	255.71617	0.89634	0.0583980	0.19768033	2.9185048	20	1 15.7	18.1
4966	Edolsen	13.7	X	234.17108	183.61175	175.92854	9.94839	0.2125827	0.23085459	2.6317444	20	4 21.9	18.0
4967	Glia	11.3	X	30.51843	228.23164	124.77570	16.97844	0.0378483	0.17638967	3.1488644	20	11 25.0	16.0
4968	Suzamur	12.9	X	75.78062	281.34675	132.20207	5.41521	0.1124188	0.24570278	2.5246199	20	1 2.9	15.6
4969	Lawrence	12.8	X	84.40072	245.26703	186.50487	31.44689	0.3625380	0.21538931	2.7562585	20	3 23.7	16.4
4970	Druyan	13.4	X	175.87124	130.10364	292.12986	7.22974	0.1453031	0.26583370	2.3954992	20	5 15.3	17.2
4971	Hoshinohiroba	13.1	X	211.80015	343.08312	104.72136	3.20318	0.1758779	0.26728450	2.3868229	20	7 24.5	16.7
4972	Pachelbel	13.3	X	218.23599	194.77571	175.03304	1.22900	0.1907496	0.17906307	3.1174442	20	4 21.9	18.3
4973	Showa	11.5	X	326.02974	130.71368	352.82513	18.91564	0.0764868	0.15516733	3.4298032	20	—	—
4974	Elford	12.8	X	81.87355	24.89686	176.01963	13.79180	0.1080517	0.23413059	2.6071375	20	7 30.1	16.5
4975	Dohmoto	12.3	X	142.84789	227.69114	179.66733	14.99525	0.2308866	0.18249598	3.0782261	20	4 7.2	17.4
4976	Choukyongchol	11.6	X	176.51166	65.55043	260.73342	8.62294	0.1009495	0.18753869	3.0227957	20	1 22.6	16.3
4977	Rauthgundis	14.0	X	144.12165	294.57090	349.76979	5.88373	0.1112001	0.28394061	2.2925441	20	—	—
4978	Seitz	13.4	X	319.42959	244.58512	155.39366	6.02212	0.2098685	0.23132183	2.6281993	20	10 24.4	15.6
4979	Otawara	14.3	X	103.14719	206.73331	69.77043	0.91024	0.1444118	0.30883983	2.1676068	20	12 16.8	17.6
4980	Magomaev	12.4	X	298.61073	7.28905	60.37516	1.82833	0.1444055	0.17264617	3.1942195	20	10 11.0	16.2
4981	Sinyavskaya	12.3	X	174.18190	300.40879	50.02669	2.70371	0.0799088	0.20225240	2.8743541	20	2 18.1	16.6
4982	Bartini	13.1	X	60.57895	129.43797	230.76778	4.63590	0.1777190	0.21239085	2.7821392	20	—	—
4983	Schroeteria	13.4	X	197.94672	251.56698	306.08502	1.89749	0.0291296	0.27859187	2.3217944	20	12 20.9	16.2
4984	Patrickmiller	14.5	X	178.97892	66.63833	257.00433	1.97736	0.2091580	0.29131290	2.2537007	20	1 16.8	18.0
4985	Fitzsimmons	13.0	X	306.01014	25.33745	12.10007	0.79952	0.1401950	0.16863863	3.2446262	20	9 12.9	16.9
4986	Osipovia	13.3	X	266.15075	234.60006	214.33701	5.61000	0.2140770	0.24006019	2.5640271	20	9 18.6	16.4
4987	Flamsteed	13.9	X	239.39042	272.43258	313.12334	7.58634	0.0638952	0.28776854	2.2721684	20	—	—
4988	Chushuho	13.8	X	234.35515	186.09536	185.70564	2.13691	0.2150734	0.26418760	2.4054394	20	5 4.7	17.5
4989	Joegoldstein	13.9	X	313.78479	80.92898	316.54741	12.35222	0.1814730	0.23875409	2.5733696	20	9 30.8	16.6
4990	Trombka	14.1	X	199.73641	278.71583	353.30229	3.88659	0.1777077	0.29544746	2.2326255	20	—	—
4991	Hansuess	12.7	X	37.76317	6.11402	343.40713	10.48455	0.1026417	0.18984793	2.9982336	20	12 5.4	17.0
4992	Kálmán	12.9	X	134.10394	57.60642	233.56052	14.48285	0.1126330	0.23853388	2.5749531	20	—	—
4993	Cossard	13.3	X	58.23563	186.42042	36.61368	6.93765	0.0613269	0.27012773	2.3700450	20	7 28.7	16.2
4994	Kisala	13.6	X	106.49844	5.28833	31.33611	1.71469	0.1979372	0.19887341	2.9068206	20	2 14.5	17.6
4995	Griffin	13.5	X	323.19208	88.99841	321.97429	20.60684	0.3114128	0.27517463	2.3409769	20	12 23.2	15.2
4996	Veisberg	13.3	X	82.56627	275.95775	112.24172	5.09706	0.2421738	0.24262408	2.5459319	20	—	—
4997	Ksana	13.0	X	299.87493	57.85907	10.65647	32.73954	0.3304194	0.20275481	2.8696038	20	9 27.9	15.9
4998	Kabashima	11.9	X	106.63080	100.65351	352.22486	9.90581	0.0732581	0.18907974	3.0063490	20	4 4.6	16.2
4999	MPC	12.1	X	145.16546	347.36551	155.78656	10.48236	0.0405628	0.18783265	3.0196411	20	7 21.7	16.5
5000	IAU	14.4	X	19.74917	232.90642	150.90984	6.26673	0.2638455	0.24392052	2.5369028	20	—	—
5001	EMP	12.2	X	216.75326	151.37655	169.89518	13.71236	0.1708379	0.22668583	2.6639115	20	2 19.5	16.7
5002	Marnix	13.7	X	121.31823	172.29939	108.02651	1.59247	0.2055446	0.27751800	2.3277800	20	—	—
5003	Silvanominuto	14.0	X	207.65020	281.10770	255.71433	1.85010	0.0921188	0.29187388	2.2508120	20	11 29.6	16.6
5004	Bruch	14.2	X	61.52698	86.29168	21.57116	3.34261	0.0698122	0.29392693	2.2403187	20	2 12.3	16.3
5005	Kegler	14.6	X	93.78655	109.01536	320.49518	1.30725	0.1722665	0.29169534	2.2517304	20	2 23.5	16.8
5006	Teller	11.7	X	229.30615	30.52060	102.65995	7.65188	0.0757478	0.17392545	3.1785372	20	10 14.5	16.4
5007	Keay	13.1	X	319.13187	161.47415	169.00108	13.35474	0.1893828	0.22483413	2.6785179	20	7 3.8	16.2
5008	Miyazawakenji	12.8	X	298.36658	41.81017	142.40127	5.26996	0.0607838	0.29897744	2.2150172	20	—	—
5009	Sethos	13.8	X	191.41654	140.52307	44.08332	1.47988	0.1571759	0.28111661	2.3078719	20	11 10.6	17.0
5010	Amenemhêt	12.5	X	255.65519	43.20655	173.34309	14.65542	0.2033020	0.22027676	2.7153362	20	—	—
5011	Ptah	16.4	X	140.14047	105.81404	10.72717	7.40538	0.5000774	0.47085267	1.6363619	20	7 12.1	19.5
5012	Eurymedon	10.5	X	340.76745	334.52826	34.77699	4.99470	0.0866501	0.08160974	5.2639050	20	9 21.7	17.0
5013	Suzhousanzhong	12.7	X	38.52279	15.32211	45.30598	3.70007	0.0677198	0.21467112	2.7624026	20	—	—
5014	Gorchakov	12.2	X	77.80536	190.00925	104.98535	2.36047	0.2233711	0.17422936	3.1748399	20	11 28.3	17.1
5015	Litke	14.0	X	306.66681	262.72846	145.11148	3.35587	0.1241953	0.30731126	2.1747887	20	11 4.9	15.7
5016	Migirenko	13.6	X	188.48908	97.81490	187.14011	3.64463	0.1315996	0.28325781	2.2962268	20	—	—
5017	Tenchi	12.2	X	16.04216	251.79827	140.90677	16.13819	0.0780136	0.17626623	3.1503342	20	12 25.5	16.7
5018	Tenmu	14.2	X	356.70747	352.85264	30.65485	3.40693	0.0588331	0.31086266	2.1581933	20	12 21.5	16.4
5019	Erfjord	13.1	X	72.73637	273.63082	243.65177	5.57209	0.0743938	0.26096900	2.4251770	20	5 14.2	15.9
5020	Asimov	14.6	X	2.76690	131.59132	197.15070	1.10246	0.2124142	0.31169223	2.1543622	20	11 5.7	16.3
5021	Krylania	12.5	X	216.07221	321.81620	103.22143	2.34811	0.1342741	0.17144984	3.2090611	20	6 28.6	17.6
5022	Roccapalumba	11.7	X	88.75998	67.90361	223.00402	11.06053	0.0855232	0.17649410	3.1476221	20	11 20.9	16.3
5023	Agapenor	10.4	X	309.72966	85.94087	308.33502	11.78979	0.0529999	0.08390870	5.1673125	20	9 6.7	17.2
5024	Bechmann	11.8	X	256.85522	121.09600	352.40890	14.61011	0.0544784	0.17030762	3.2233935	20	10 16.7	16.5
5025	1986 TS_6	10.3	X	288.07364	73.32016	347.76155	11.02776	0.0758607	0.08321894	5.1958260	20	9 12.1	17.0
5026	Martes	13.9	X	344.15971	17.48788	304.75837	4.28477	0.2426169	0.26874345	2.3781767	20	8 28.1	15.3
5027	Androgeos	9.6	X	284.46987	344.64129	78.22078	31.44518	0.0660467	0.08073620	5.3018063	20	9 28.5	16.9
5028	Halaesus	10.2	X	297.83237	11.47500	44.02001	21.47659	0.1310941	0.08166931	5.2613451	20	9 22.1	17.0
5029	Ireland	12.3	X	261.88973	331.94584	28.70823	19.35394	0.0935835	0.19602648	2.9348972	20	5 29.2	16.8
5030	Gyldenkerne	13.7	X	278.50440	208.53444	25.84889	8.87906	0.0912397	0.28959023	2.2626295	20	1 3.7	16.8
5031	Švejcar	14.1	X	296.45087	166.23777	64.57387	2.34127	0.1254539	0.25925546	2.4358513	20	1 20.7	17.4
5032	Conradhirsh	12.7	X	187.55658	208.08853	183.60992	10.57219	0.1073615	0.18938907	3.0030746	20	4 23.4	17.4
5033	Mistral	12.4	X	24.28637	140.24912	143.05110	2.51354	0.0551923	0.19734633	2.9217968	20	8 21.1	16.0
5034	Joeharrington	13.5	X	128.63593	328.84560	309.51703	4.30602	0.1811956	0.28178291	2.3042324	20	—	—
5035	Swift	12.3	X	229.06767	53.03810	51.88245	13.49080	0.1567783	0.23376662	2.6098430	20	9 10.4	16.4
5036	Tuttle	12.0	X	316.44713	56.92722	105.07391	2.92952	0.1827648	0.17671410	3.1450092	20	—	—
5037	Habing	13.3	X	75.62773	280.46873	165.94488	7.02871	0.1118028	0.28762139	2.2729433	20	2 7.9	15.6
5038	Overbeek	13.8	X	155.79139	219.57644	65.65819	10.92673	0.2813713	0.28040626	2.3117680	20	—	—
5039	Rosenkavalier	12.3	X	346.53389	178.27869	83.97911	11.41940	0.0557568	0.18826314	3.0150361	20	5 28.8	16.3
5040	Rabinowitz	12.9	X	269.35784	149.69709	175.67201	24.36556	0.2268746	0.26233900	2.4167263	20	4 9.9	16.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5041 Theotes	10.7	X	240.00788	105.64971	29.88849	10.58299	0.0348777	0.08336464	5.1897702	20	10 17.2	17.7
5042 Colpa	11.5	X	292.46854	179.38271	86.46559	11.05497	0.0473428	0.18901694	3.0070148	20	3 25.8	15.9
5043 Zadornov	12.8	X	127.55942	295.31378	50.79913	1.86588	0.1639276	0.17956880	3.1115883	20	1 6.2	17.4
5044 Shestaka	13.1	X	214.99036	43.40351	344.55309	5.84227	0.1059872	0.29383869	2.2407672	20	5 10.6	16.4
5045 Hoyin	12.9	X	179.92715	261.89907	130.65433	2.57007	0.1929395	0.17787139	3.1313527	20	4 18.0	18.2
5046 Carletonmoore	13.1	X	294.47930	189.53541	221.78424	13.36867	0.0660987	0.23821081	2.5772808	20	10 1.0	16.3
5047 Zanda	13.4	X	39.84192	28.53968	6.42992	5.47536	0.1368363	0.24467929	2.5316553	20	—	—
5048 Moriarty	13.2	X	55.06416	272.98338	301.61474	1.39238	0.1723847	0.23122321	2.6289466	20	7 24.5	16.3
5049 Sherlock	13.6	X	313.82758	316.48363	50.11684	2.94113	0.1608440	0.30215733	2.1994493	20	9 8.0	15.0
5050 Doctorwatson	13.6	X	276.80227	138.99407	263.87412	0.86584	0.1180609	0.26483362	2.4015261	20	8 21.4	16.2
5051 Ralph	13.4	X	129.65319	48.76850	269.90177	5.87297	0.1429245	0.28364188	2.2941535	20	—	—
5052 Nancyruth	14.5	X	195.60388	35.93362	327.52065	5.75528	0.1969789	0.29065652	2.2570924	20	3 18.5	18.2
5053 Chladni	13.2	X	183.93954	11.84853	150.14271	11.51408	0.1689560	0.26545138	2.3977987	20	10 5.2	17.0
5054 Keil	14.2	X	9.71792	86.40466	355.00621	7.45657	0.1485374	0.25639281	2.4539487	20	—	—
5055 Opekushin	12.5	X	102.77047	174.42583	132.66538	2.90110	0.1641796	0.18093955	3.0958533	20	12 29.9	17.4
5056 Rahua	13.3	X	239.22204	21.68794	64.83238	7.24580	0.2003913	0.22999658	2.6382855	20	8 18.5	17.3
5057 Weeks	12.4	X	65.03564	283.42710	157.15836	7.00605	0.1478312	0.17841878	3.1249448	20	2 8.1	16.3
5058 Tarrega	13.8	X	228.14345	245.06011	108.94040	7.17668	0.2319846	0.29136125	2.2534514	20	4 7.8	17.6
5059 Saroma	12.4	X	292.87721	158.38060	295.20792	12.65730	0.1347302	0.23619575	2.5919185	20	11 19.5	15.4
5060 Yoneta	14.0	X	271.84981	88.91841	355.25331	1.96926	0.1902826	0.23340113	2.6125668	20	9 25.1	17.1
5061 McIntosh	12.7	X	60.02355	212.44865	240.67572	8.73164	0.0692001	0.18375290	3.0641727	20	2 3.8	16.9
5062 Glennmiller	13.8	X	152.93529	14.99708	19.28284	3.29924	0.1676692	0.29020981	2.2594079	20	3 19.6	17.1
5063 Monteverdi	14.0	X	260.01924	55.87843	326.61144	1.53578	0.2280849	0.26650828	2.3914552	20	6 12.1	17.2
5064 Tanchozuru	13.3	X	246.81914	118.45035	156.99490	6.55746	0.1847378	0.29147822	2.2528484	20	1 14.8	16.8
5065 Johnstone	13.2	X	228.59690	174.32501	359.35095	6.53875	0.0465758	0.24719471	2.5144515	20	12 18.3	16.5
5066 Garradd	14.1	X	33.22052	184.71921	82.30250	41.44447	0.1545958	0.36575736	1.9364547	20	10 28.3	17.5
5067 Occidental	12.6	X	202.48748	24.72074	203.91669	7.38169	0.0773823	0.20996013	2.8035706	20	—	—
5068 Cragg	12.1	X	150.72740	216.84375	208.55850	11.62068	0.0625827	0.18669114	3.0319375	20	4 23.3	16.4
5069 Tokeidai	13.0	X	240.02587	81.56182	178.86905	5.00015	0.1317212	0.29176399	2.2513771	20	—	—
5070 Arai	11.7	X	17.60021	188.39225	339.89120	6.03525	0.0653149	0.18000213	3.1065924	20	3 11.7	15.8
5071 Schoenmaker	12.7	X	339.81740	297.65082	168.47924	10.08877	0.1817486	0.17348136	3.1839593	20	—	—
5072 Hioki	12.7	X	312.90307	0.82177	10.87303	2.01382	0.0839947	0.19847682	2.9106915	20	8 31.6	16.2
5073 Junttura	13.2	X	59.13440	184.68463	14.60304	6.61123	0.1004589	0.29660717	2.2268021	20	6 30.7	15.7
5074 Goetzoertel	12.0	X	187.88985	86.95052	309.64486	8.56564	0.1040286	0.19058959	2.9904504	20	4 24.2	16.8
5075 Goryachev	13.7	X	134.64780	183.97085	261.74261	1.32592	0.1737747	0.26283998	2.4136545	20	5 8.1	17.3
5076 Lebedev–Kumach	13.3	X	128.49268	220.04802	189.48642	9.48606	0.2357405	0.26265336	2.4147976	20	3 22.1	16.8
5077 Favaloro	13.8	X	269.40810	337.90534	324.07776	5.49314	0.1838044	0.29599685	2.2298620	20	3 8.9	17.0
5078 Solovjev–Sedoj	13.8	X	178.27096	124.74386	224.39340	2.84878	0.2146746	0.22616614	2.6679908	20	2 21.4	18.2
5079 Brubeck	12.8	X	201.79024	246.08153	268.98153	10.77574	0.2048673	0.22960606	2.6412762	20	9 27.8	17.4
5080 Oja	12.6	X	130.56739	89.12767	344.78380	5.45029	0.1248111	0.29367783	2.2415853	20	4 9.6	15.7
5081 Sanguin	12.6	X	257.79993	163.49968	83.26418	13.19782	0.1135326	0.27909285	2.3190151	20	—	—
5082 Nihonsyoki	13.0	X	281.32362	55.12093	103.21894	2.95164	0.1277706	0.17781132	3.1320579	20	—	—
5083 Irinara	12.6	X	186.17656	239.69975	321.26708	14.75368	0.0788140	0.24171454	2.5523146	20	11 22.6	16.6
5084 Gnedin	12.3	X	298.01459	114.87408	41.92889	7.43316	0.1018133	0.17628765	3.1500791	20	—	—
5085 Hippocrene	14.2	X	229.22476	354.68210	317.07878	4.85614	0.1795238	0.29087790	2.2559471	20	2 13.9	17.6
5086 Demin	13.9	X	73.10650	82.07004	183.14831	3.39386	0.1139759	0.30695870	2.1764536	20	10 29.1	16.5
5087 Emel′yanov	13.1	X	84.75177	147.62157	190.88956	4.90745	0.0054405	0.21673929	2.7448016	20	—	—
5088 Tancredi	12.6	X	46.18225	84.47814	5.72691	0.58404	0.1572038	0.18007526	3.1057513	20	1 22.6	15.9
5089 Nádherná	12.5	X	150.99131	128.07509	345.09038	13.00885	0.0778236	0.21085228	2.7956568	20	6 24.8	16.9
5090 Wyeth	12.9	X	80.59284	231.21839	144.39934	9.58474	0.2923164	0.24477156	2.5310190	20	—	—
5091 Isakovskij	12.6	X	243.87852	317.04836	270.00491	3.19852	0.0117829	0.21221552	2.7836713	20	—	—
5092 Manara	11.8	X	237.86059	195.62232	359.13244	16.09643	0.0584294	0.17220920	3.1996206	20	—	—
5093 Svirelia	12.6	X	224.74045	191.68773	216.02429	12.71293	0.1679105	0.22673038	2.6635626	20	6 13.8	16.9
5094 Seryozha	13.1	X	358.89056	349.09848	357.75396	1.65469	0.0840996	0.20605363	2.8388942	20	10 10.7	16.5
5095 Escalante	13.3	X	242.39237	188.15868	146.81885	14.59431	0.2172164	0.26007410	2.4307370	20	3 29.8	17.4
5096 Luzin	12.9	X	9.62804	110.05219	323.31507	7.24915	0.1497368	0.27339875	2.3511032	20	—	—
5097 Axford	13.3	X	321.69687	182.47174	123.93873	3.89733	0.2283518	0.23543644	2.5974882	20	5 28.8	15.9
5098 Tomsolomon	13.4	X	218.35169	327.99413	153.10780	9.65155	0.0737495	0.23912510	2.5707072	20	9 24.3	16.9
5099 Iainbanks	13.2	X	157.68116	289.54886	81.07347	1.18259	0.0523595	0.25168917	2.4844277	20	2 16.1	16.5
5100 Pasachoff	13.7	X	67.28768	37.93060	101.45351	7.71811	0.1317183	0.25377526	2.4707939	20	4 23.9	16.6
5101 Akhmerov	12.4	X	250.67776	173.54107	205.88218	10.69143	0.1151659	0.18903248	3.0068500	20	6 11.1	16.9
5102 Benfranklin	12.7	X	50.67068	53.16371	317.24736	8.10346	0.1941008	0.21019447	2.8014864	20	—	—
5103 Diviš	13.2	X	181.35308	116.32771	185.74297	4.89050	0.0130264	0.21616878	2.7496288	20	—	—
5104 Skripnichenko	12.0	X	138.02787	10.30049	198.13413	14.32193	0.1133391	0.23298931	2.6156445	20	10 13.4	16.0
5105 Westerhout	12.2	X	352.59038	190.47079	226.70823	11.66281	0.1585367	0.23577722	2.5949848	20	—	—
5106 Mortensen	12.2	X	261.58946	279.60056	82.91719	10.86956	0.1247682	0.18781044	3.0198792	20	6 1.5	16.5
5107 Laurenbacall	12.1	X	61.48793	271.36344	178.63507	9.05916	0.0826904	0.17782270	3.1319242	20	2 5.9	16.3
5108 Lübeck	13.8	X	63.41512	78.53446	327.42325	6.42942	0.1098878	0.28161217	2.3051637	20	—	—
5109 Robertmiller	13.7	X	28.53475	84.07581	146.69787	3.57569	0.0661013	0.29389608	2.2404754	20	6 21.5	15.9
5110 Belgirate	12.9	X	284.44864	76.73970	313.41748	3.81324	0.1087383	0.26702053	2.3883957	20	8 16.9	15.6
5111 Jacliff	12.7	X	29.01952	99.65140	247.23241	5.80385	0.1259450	0.27287777	2.3540948	20	12 16.6	15.7
5112 Kusaji	13.9	X	39.27313	342.03589	62.68677	5.76396	0.1298757	0.30731077	2.1747910	20	—	—
5113 Kohno	12.5	X	132.07862	217.93173	319.66989	31.61249	0.2244154	0.22642394	2.6659652	20	8 25.4	17.2
5114 Yezo	13.4	X	19.50664	212.54025	24.33735	4.16795	0.0131437	0.25373745	2.4710394	20	6 9.8	16.6
5115 Frimout	12.2	X	202.23889	97.60659	258.20135	8.66903	0.1347484	0.18800729	3.0177708	20	3 19.3	17.3
5116 Korsør	11.9	X	327.59144	39.35190	30.49224	5.23468	0.1306074	0.17351408	3.1835590	20	11 30.5	15.6
5117 Mokotoyama	12.4	X	30.49661	147.81156	22.89313	9.76185	0.0673670	0.18421363	3.0590616	20	4 3.9	16.2
5118 Elnapoul	12.4	X	218.35052	62.67144	252.39344	12.07457	0.2141722	0.23423322	2.6063759	20	2 8.4	17.1
5119 1988 RA_1	10.3	X	261.62374	16.58439	316.98945	15.95155	0.1091612	0.08312444	5.1997630	20	4 24.2	17.5
5120 Bitias	10.2	X	263.37506	23.65130	295.90935	25.00427	0.1117350	0.08144706	5.2709123	20	4 4.6	17.7

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
5121	Numazawa	13.0	X	232.22281	20.93042	358.28429	6.45349	0.1710763	0.29587523	2.2304730	20	5 12.6	16.3
5122	Mucha	12.3	X	263.02209	259.42098	112.85761	12.75506	0.2003194	0.23661308	2.5888698	20	6 7.2	16.2
5123	1989 *BL*	10.0	X	239.41647	31.92842	78.21416	8.52540	0.1018705	0.08238260	5.2309316	20	9 14.4	17.2
5124	Muraoka	13.7	X	334.56280	282.23192	322.90003	0.87659	0.0795056	0.28933036	2.2639841	20	4 6.9	16.0
5125	Okushiri	13.9	X	57.70472	84.39444	23.48614	3.86282	0.1581753	0.25454709	2.4657968	20	2 22.9	16.2
5126	Achaemenides	10.6	X	247.82151	351.31356	116.49587	29.86209	0.0251873	0.08209777	5.2430237	20	10 5.9	17.9
5127	Bruhns	14.2	X	269.66238	202.40219	205.01865	6.16058	0.1522727	0.26874624	2.3781603	20	8 9.4	17.0
5128	Wakabayashi	12.8	X	294.41834	123.63483	39.31300	6.96436	0.1465449	0.21438989	2.7648178	20	—	—
5129	Groom	12.7	X	214.45535	351.63041	167.41230	10.36290	0.0868272	0.26870088	2.3784279	20	11 12.9	16.0
5130	Ilioneus	9.7	X	223.52748	102.36374	242.52422	15.74090	0.0112624	0.08303882	5.2033368	20	4 10.1	16.8
5131	1990 *BG*	14.7	X	207.60317	135.84636	110.37531	36.43078	0.5691538	0.54402597	1.4861283	20	—	—
5132	Maynard	12.5	X	271.76218	144.66324	161.68252	11.37034	0.1147827	0.22547149	2.6734678	20	4 4.4	16.3
5133	Phillipadams	12.0	X	243.25481	279.68000	87.61740	12.01864	0.2254699	0.22078442	2.7111722	20	5 10.4	16.5
5134	Ebilson	11.8	X	213.24935	199.73390	90.31396	8.10346	0.0347287	0.21149143	2.7900214	20	1 15.5	15.7
5135	Nibutani	13.5	X	47.94713	229.89213	35.45827	3.30521	0.1283325	0.29417768	2.2390454	20	9 26.7	16.1
5136	Baggaley	12.0	X	230.79411	287.57250	109.22917	11.17464	0.1128121	0.18758882	3.0222572	20	6 11.9	16.6
5137	Frevert	13.0	X	211.06204	24.79020	229.84267	14.22973	0.0729785	0.24019896	2.5630395	20	—	—
5138	Gyoda	12.6	X	121.86909	261.39963	193.62344	0.80122	0.1684346	0.18068247	3.0987892	20	5 8.8	17.4
5139	Rumoi	12.0	X	169.03751	225.63820	57.04020	2.85008	0.0315419	0.20429222	2.8551888	20	—	—
5140	Kida	11.6	X	105.56345	216.13567	163.73856	11.46556	0.1219306	0.17427297	3.1743102	20	1 15.7	16.2
5141	Tachibana	12.7	X	164.69814	184.48304	137.34569	2.84783	0.0604890	0.20235092	2.8734210	20	1 2.0	16.7
5142	Okutama	12.9	X	124.05153	192.79624	205.32596	6.29057	0.2764726	0.24368771	2.5385183	20	3 8.1	16.9
5143	Heracles	14.0	X	130.72465	227.78599	309.49190	9.03056	0.7722008	0.39705603	1.8333055	20	9 15.4	18.8
5144	Achates	9.0	X	281.94111	331.54649	322.81716	8.91598	0.2733694	0.08329068	5.1928419	20	3 17.1	16.2
5145	Pholus	7.1	X	112.71441	354.91920	119.44537	24.61274	0.5692582	0.01071583	20.3759966	20	6 23.7	21.7
5146	Moiwa	12.7	X	358.35325	274.28660	338.41552	13.88557	0.1535678	0.21685542	2.7438216	20	5 28.5	15.9
5147	Maruyama	12.4	X	157.68874	274.92900	346.27517	8.31248	0.2065004	0.23269156	2.6178754	20	—	—
5148	Giordano	13.9	X	85.33363	227.17554	346.53679	1.12672	0.1475310	0.17918813	3.1159937	20	8 23.1	18.4
5149	Leibniz	12.8	X	133.37132	102.54946	11.34928	0.73337	0.1402166	0.17461787	3.1701289	20	6 9.6	17.8
5150	Fellini	13.2	X	326.19498	119.94638	35.02702	6.66009	0.1058028	0.25262220	2.4783067	20	—	—
5151	Weerstra	13.5	X	15.54075	8.37994	47.77157	0.94785	0.2092239	0.17340307	3.1849176	20	—	—
5152	Labs	13.1	X	310.46389	38.78241	338.59635	12.89016	0.1773879	0.23167169	2.6255527	20	8 30.6	15.4
5153	Gierasch	12.0	X	245.24243	39.89478	90.83994	12.81099	0.1735799	0.22773720	2.6557064	20	10 28.1	15.8
5154	Leonov	12.6	X	206.32060	228.52237	72.27367	2.87062	0.1042960	0.18212060	3.0824544	20	1 24.7	17.3
5155	Denisyuk	12.4	X	209.96517	236.95663	60.58857	6.11909	0.1352494	0.17867613	3.1219434	20	1 25.2	17.4
5156	Golant	13.9	X	311.71334	147.86931	132.73001	5.56857	0.1894870	0.26556029	2.3971431	20	4 9.1	16.6
5157	Hindemith	12.5	X	47.47996	75.21391	292.87287	0.19311	0.1490216	0.17119924	3.2121919	20	—	—
5158	Ogarev	14.4	X	229.31705	340.67702	34.17079	3.14697	0.1789531	0.26124394	2.4234751	20	5 5.9	18.1
5159	Burbine	13.1	X	142.81379	82.91381	167.15813	9.25019	0.1129822	0.21181217	2.7872041	20	12 5.3	17.6
5160	Camoes	13.4	X	114.67331	156.01670	129.09534	8.29336	0.0701072	0.26477559	2.4018770	20	12 28.6	16.8
5161	Wightman	12.7	X	102.61983	155.68965	202.13007	1.51791	0.0810993	0.20513850	2.8473308	20	—	—
5162	Piemonte	11.7	X	156.63079	358.00215	68.06458	11.23450	0.0672383	0.18802608	3.0175698	20	5 3.2	16.2
5163	Vollmayr–Lee	12.9	X	123.83049	238.35546	183.57830	7.53832	0.2027504	0.25441562	2.4666462	20	3 31.1	16.6
5164	Mullo	13.0	X	6.80533	67.57712	53.76242	19.26370	0.4976419	0.13853444	3.6991126	20	—	—
5165	Videnom	13.4	X	231.79522	352.03944	97.62773	3.37590	0.1686199	0.26646656	2.3917048	20	8 19.4	16.6
5166	Olson	13.6	X	283.42346	64.53414	134.07212	4.21995	0.1057097	0.27522041	2.3407173	20	—	—
5167	Joeharms	12.2	X	322.80893	273.99313	12.10355	14.99210	0.2075261	0.22646102	2.6656742	20	4 28.2	15.3
5168	Jenner	12.7	X	196.25912	201.55893	339.00594	23.49360	0.2070310	0.27558461	2.3386545	20	10 22.8	16.9
5169	Duffell	14.0	X	295.73147	62.40006	342.01152	2.61344	0.1478097	0.29000040	2.2604955	20	9 27.3	16.0
5170	Sissons	12.4	X	170.23975	290.58845	169.55968	10.33613	0.0534310	0.18694837	3.0291557	20	6 27.2	17.1
5171	Augustesen	13.3	X	223.33164	45.68640	322.09245	7.08591	0.1327665	0.26114852	2.4240654	20	4 20.6	17.2
5172	Yoshiyuki	14.0	X	107.07515	123.96040	254.63073	4.80426	0.1690405	0.28011686	2.3133600	20	1 4.1	16.4
5173	Stjerneborg	13.2	X	182.91030	329.10709	175.96161	11.75608	0.1947874	0.22753533	2.6572770	20	9 3.6	17.7
5174	Okugi	13.2	X	335.82232	352.73089	167.34351	8.03406	0.1342589	0.24052517	2.5607216	20	—	—
5175	Ables	13.3	X	7.24536	313.57531	234.50475	16.84750	0.0385661	0.35728568	1.9669454	20	2 20.9	15.8
5176	Yoichi	12.3	X	114.82018	269.83190	93.61380	7.70486	0.3101951	0.22375469	2.6871255	20	1 25.7	16.2
5177	Hugowolf	14.1	X	201.07473	284.14582	301.13934	2.68141	0.1308977	0.27561491	2.3384832	20	—	—
5178	Pattazhy	14.0	X	199.69620	102.96623	322.80534	3.98522	0.1374645	0.29607247	2.2294823	20	6 15.3	17.2
5179	Takeshima	13.6	X	300.41706	202.61006	331.09507	6.28419	0.0470567	0.28051977	2.3111443	20	—	—
5180	Ohno	13.5	X	207.32110	58.90184	79.84607	6.04365	0.0636729	0.26665149	2.3905989	20	10 10.8	16.7
5181	SURF	13.4	X	140.49018	112.38108	65.51523	3.14836	0.1369664	0.26371379	2.4083198	20	9 12.7	17.0
5182	Bray	12.5	X	156.43416	149.69140	139.72766	15.86329	0.1585009	0.23671313	2.5881403	20	—	—
5183	Robyn	12.3	X	131.00485	5.46638	264.25823	14.85331	0.1083439	0.23944600	2.5684098	20	12 21.2	16.2
5184	Cavaillé–Coll	13.7	X	312.98690	193.70640	331.98640	4.00031	0.0328502	0.31117476	2.1567500	20	—	—
5185	Alerossi	12.6	X	214.42203	216.91443	216.35984	8.36832	0.0817313	0.22472581	2.6793786	20	7 11.9	16.6
5186	Donalu	11.9	X	28.45507	75.94560	333.74017	14.87879	0.0841516	0.23796803	2.5790334	20	—	—
5187	Domon	12.5	X	314.95780	281.43452	128.90954	3.02454	0.0713768	0.19698156	2.9254028	20	10 26.4	16.2
5188	Paine	13.0	X	20.20738	282.23712	143.55869	13.51341	0.1372948	0.23770678	2.5809227	20	—	—
5189	1990 *UQ*	17.8	X	161.93812	159.77470	135.21727	3.57835	0.4783414	0.50956322	1.5524013	20	—	—
5190	Fry	12.0	X	74.30322	148.26064	312.05227	14.09243	0.2078390	0.17675951	3.1444705	20	3 19.7	16.4
5191	Paddack	12.0	X	285.13574	142.10368	232.84908	9.02053	0.1107964	0.18832878	3.0143354	20	7 17.5	16.2
5192	Yabuki	10.8	X	150.93535	300.82236	91.12478	14.91959	0.0872285	0.17298499	3.1900471	20	3 24.1	15.9
5193	Tanakawataru	11.9	X	44.17088	17.43697	90.95883	2.70901	0.1575216	0.17379457	3.1801327	20	2 13.5	15.5
5194	Böttger	14.3	X	262.11911	100.88859	140.74129	4.30913	0.0445104	0.22127706	2.7071467	20	1 9.2	18.2
5195	Kaendler	13.9	X	23.23663	130.91130	210.77345	3.89494	0.1308315	0.31003338	2.1620401	20	12 12.6	16.3
5196	Bustelli	12.8	X	86.14613	113.35531	6.81648	13.22591	0.1404459	0.22243380	2.6977531	20	4 20.5	16.5
5197	Rottmann	12.4	X	2.16858	309.98616	27.72358	11.09798	0.1140154	0.18895464	3.0076757	20	10 5.3	16.0
5198	Fongyunwah	12.6	X	125.23383	308.03059	150.75388	2.10422	0.1624562	0.17941226	3.1133980	20	5 16.6	17.4
5199	Dortmund	12.0	X	102.45056	342.82099	295.60320	12.27911	0.1806793	0.23275633	2.6173897	20	12 6.1	16.4
5200	Pamal	14.1	X	324.69843	208.96462	18.52329	5.94522	0.1441523	0.29324944	2.2437679	20	2 17.0	16.5

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
5201	Ferraz–Mello	14.7	X	95.65833	115.47090	17.14889	3.27430	0.4569943	0.15870341	3.3786657	20	6 26.9	20.6
5202	Charleseliot	13.2	X	300.88740	161.26773	262.60467	12.62070	0.1649477	0.26508463	2.4000098	20	10 27.1	15.7
5203	Pavarotti	13.5	X	283.61219	12.10234	293.26835	2.79885	0.1844827	0.29508491	2.2344538	20	3 29.7	16.5
5204	Herakleitos	12.9	X	290.54420	302.15192	175.29371	0.87001	0.1435894	0.17748908	3.1358477	20	12 1.5	16.7
5205	Servián	13.7	X	214.12162	302.65415	358.24042	6.37054	0.0437712	0.27567410	2.3381484	20	1 21.4	16.9
5206	Kodomonomori	13.0	X	278.26379	133.51017	337.77186	12.95640	0.1017677	0.23462234	2.6034934	20	11 21.0	16.4
5207	Hearnshaw	13.5	X	246.13590	346.96694	319.19208	12.76741	0.1878094	0.24183550	2.5514634	20	2 24.1	17.6
5208	Royer	12.6	X	171.99056	22.63622	124.51247	15.91746	0.0471634	0.23445131	2.6047594	20	9 6.1	16.4
5209	1989 CW_1	10.2	X	315.75033	104.64797	322.69569	9.04541	0.0500439	0.08319716	5.1967327	20	10 21.5	17.0
5210	Saint–Saëns	14.1	X	128.60392	74.20076	0.49503	2.13960	0.1494886	0.25874841	2.4390325	20	4 14.7	17.5
5211	Stevenson	13.3	X	305.00886	185.43233	133.88393	26.78805	0.2445735	0.28359885	2.2943856	20	5 22.9	16.5
5212	Celiacruz	12.2	X	215.38088	230.62707	229.83295	11.36652	0.0774566	0.18680488	3.0307067	20	8 11.9	16.9
5213	Takahashi	12.3	X	12.08905	258.91884	198.00670	9.48886	0.0522227	0.18977064	2.9990477	20	—	—
5214	Oozora	13.7	X	186.90050	262.82504	7.58394	6.06866	0.1035131	0.30443199	2.1884797	20	—	—
5215	Tsurui	11.6	X	101.27400	150.46162	125.21235	14.12359	0.1518035	0.22430995	2.6826892	20	12 2.2	16.0
5216	1941 HA	12.0	X	162.63489	192.30354	138.54262	14.06797	0.1591796	0.23370069	2.6103338	20	1 14.1	16.1
5217	Chaozhou	13.7	X	217.51474	100.33948	124.13471	2.92056	0.1642759	0.26781870	2.3836480	20	—	—
5218	Kutsak	14.1	X	32.80528	89.31591	255.80771	2.97594	0.1534001	0.27342354	2.3509611	20	12 23.3	17.1
5219	Zemka	12.6	X	272.48011	156.33144	55.07962	2.03345	0.1281075	0.17243590	3.1968156	20	—	—
5220	Vika	13.3	X	19.90740	272.09206	23.42179	5.40771	0.2044256	0.28848953	2.2683810	20	10 9.0	15.2
5221	Fabribudweis	12.5	X	281.92612	228.82593	28.14011	1.57094	0.0968977	0.17074335	3.2179072	20	2 20.9	17.2
5222	Ioffe	11.5	X	67.66923	331.38744	220.64225	34.52901	0.1431472	0.21308576	2.7760871	20	6 26.9	15.9
5223	McSween	13.1	X	123.99315	19.45403	341.66519	16.97014	0.1763595	0.17250769	3.1959286	20	1 26.8	18.1
5224	Abbe	14.4	X	205.61913	82.78665	359.39155	7.93377	0.0081387	0.29271278	2.2465095	20	7 29.5	17.2
5225	Loral	12.5	X	281.93569	282.82964	100.15952	2.34665	0.1841118	0.18155933	3.0888039	20	7 14.3	16.6
5226	Pollack	13.2	X	68.66972	21.00909	67.89534	10.48352	0.0924079	0.27656759	2.3331099	20	2 4.4	15.8
5227	Bocacara	13.4	X	254.85663	87.69171	253.89097	8.62577	0.0866192	0.28430090	2.2906069	20	4 26.7	16.5
5228	Máca	12.7	X	109.74854	130.81587	195.42820	1.27589	0.1553078	0.17970180	3.1100528	20	—	—
5229	Irurita	12.6	X	117.30657	74.01202	312.50807	5.72271	0.1610543	0.17933108	3.1143374	20	2 10.8	17.3
5230	Asahina	13.2	X	270.41583	266.41251	195.20321	20.67935	0.3744806	0.26531710	2.3986077	20	9 19.1	16.0
5231	Verne	11.9	X	26.76271	320.25285	91.09551	14.92000	0.1521375	0.23248114	2.6194548	20	—	—
5232	Jordaens	12.2	X	271.51040	97.48441	165.56610	12.22539	0.1566480	0.20453026	2.8529731	20	2 3.7	16.6
5233	1988 RL_{10}	11.5	X	44.21773	45.79875	142.51686	3.37767	0.0455867	0.08445469	5.1450176	20	5 16.6	18.2
5234	Sechenov	12.1	X	233.56575	176.47343	223.21611	35.83312	0.1630014	0.21478687	2.7614100	20	6 8.4	16.8
5235	Jean–Loup	12.7	X	252.91410	30.64078	257.60669	4.85523	0.1423577	0.28318435	2.2966239	20	2 7.9	16.2
5236	Yoko	13.2	X	98.81296	198.63687	206.22846	7.40366	0.1106583	0.27701134	2.3306175	20	1 17.9	16.0
5237	Yoshikawa	13.3	X	175.28102	145.37869	38.13015	5.13797	0.0957831	0.29401498	2.2398713	20	10 30.4	16.2
5238	Naozane	13.3	X	82.48630	331.86106	230.55180	5.88155	0.1176399	0.28720550	2.2751370	20	8 7.9	16.4
5239	Reiki	12.7	X	115.65709	353.75335	81.58101	8.50044	0.1390655	0.21220227	2.7837872	20	4 7.4	16.8
5240	Kwasan	12.6	X	18.59774	186.52356	241.93388	5.61495	0.1012226	0.26797766	2.3827053	20	—	—
5241	Beeson	12.4	X	143.38860	37.89801	47.19414	3.69692	0.1814076	0.17853766	3.1235574	20	5 17.7	17.5
5242	Kenreimonin	12.8	X	279.74147	68.61451	226.60879	2.87149	0.0675561	0.21039693	2.7996890	20	4 4.4	16.6
5243	Clasien	13.2	X	118.85836	60.91450	194.42188	7.48676	0.1793043	0.21330662	2.7741706	20	11 21.3	17.8
5244	Amphilochos	10.5	X	24.45353	126.34866	213.29362	6.15478	0.0287906	0.08370662	5.1756256	20	10 9.6	17.2
5245	Maslyakov	13.8	X	292.35906	87.94904	146.03959	3.25486	0.1032157	0.31013329	2.1615757	20	1 13.7	16.3
5246	Migliorini	14.3	X	110.19439	140.37694	180.93152	5.62440	0.2833417	0.29706955	2.2244908	20	—	—
5247	Krylov	12.2	X	332.16232	35.79549	221.32911	23.51813	0.1626512	0.27657094	2.3330910	20	4 7.7	14.8
5248	Scardia	13.9	X	26.80464	212.81036	72.45348	0.35204	0.1716716	0.29792316	2.2202397	20	9 30.9	15.9
5249	Giza	12.2	X	228.91501	55.81678	122.90338	2.16748	0.1448213	0.17476369	3.1683653	20	11 25.7	17.0
5250	Jas	12.8	X	44.46081	208.65087	134.16926	13.48588	0.1888303	0.22470340	2.6795567	20	12 27.6	16.7
5251	Bradwood	13.8	X	175.22673	80.28080	250.01258	22.18907	0.2942169	0.27174646	2.3606238	20	1 21.4	18.4
5252	Vikrymov	13.7	X	219.28705	146.54085	143.80763	8.60010	0.1483926	0.26955349	2.3734099	20	1 12.2	17.4
5253	Fredclifford	14.4	X	121.24431	69.33758	71.26544	28.76761	0.2246131	0.35524582	1.9744678	20	7 13.2	17.7
5254	Ulysses	9.2	X	287.34390	343.47524	76.02399	24.19178	0.1223244	0.08241743	5.2294579	20	9 15.8	16.2
5255	Johnsophie	13.3	X	137.34621	121.15195	99.58069	11.62211	0.0184431	0.22587832	2.6702567	20	10 30.2	17.2
5256	Farquhar	11.9	X	288.09776	88.83458	219.33716	14.95635	0.2006991	0.24174196	2.5521216	20	4 9.3	15.5
5257	1988 RS_{10}	11.9	X	7.67531	88.90212	126.99037	2.87025	0.0326631	0.08406432	5.1609333	20	5 2.7	18.5
5258	1989 AU_1	10.3	X	223.93297	229.57934	248.09460	5.91713	0.0764684	0.08378788	5.1722787	20	9 2.9	17.5
5259	Epeigeus	10.3	X	92.76710	200.91415	67.46299	15.91989	0.0731650	0.08300457	5.2047678	20	10 19.7	17.4
5260	Philvéron	12.9	X	355.89042	304.52679	175.63287	13.70361	0.1065268	0.23485684	2.6017601	20	—	—
5261	Eureka	16.1	X	263.83890	95.50191	245.04102	20.28238	0.0648128	0.52411173	1.5235386	20	4 30.7	17.0
5262	Brucegoldberg	11.2	X	99.20822	93.76673	91.06227	15.97235	0.1671433	0.18154926	3.0889181	20	8 7.2	16.1
5263	Arrius	11.7	X	39.83985	313.61400	226.25660	14.78474	0.0149429	0.17256338	3.1952410	20	4 23.4	16.1
5264	Telephus	9.5	X	234.02190	359.26053	121.90172	33.57454	0.1109833	0.08290342	5.2090006	20	9 24.0	17.0
5265	Schadow	13.2	X	319.83824	71.38835	175.07307	5.74328	0.1124121	0.17428483	3.1741662	20	3 24.2	17.2
5266	Rauch	13.7	X	40.15123	117.88406	11.51256	15.71439	0.1320595	0.22021948	2.7158069	20	2 29.8	16.9
5267	Zegmott	13.3	X	306.92158	42.00266	114.18621	9.02791	0.0864614	0.27007439	2.3703571	20	—	—
5268	Černohorský	13.2	X	139.75046	119.53459	220.10323	14.35412	0.2573134	0.22884110	2.6471591	20	1 10.4	17.7
5269	Paustovskij	14.4	X	238.17075	240.23146	91.82841	0.79598	0.1555837	0.29706498	2.2245137	20	3 20.6	17.7
5270	Kakabadze	12.8	X	301.20623	50.18396	200.04174	11.34823	0.1381930	0.23857108	2.5746855	20	2 17.9	16.5
5271	Kaylamaya	13.6	X	232.58951	54.74277	130.88969	14.02696	0.1178347	0.22612167	2.6683405	20	12 23.8	17.4
5272	Dickinson	14.4	X	265.43674	197.96384	155.21034	4.44781	0.1929690	0.29909263	2.2144484	20	5 14.9	17.3
5273	Peilisheng	14.0	X	9.46306	69.60903	18.20974	6.29392	0.0877458	0.28072032	2.3100434	20	—	—
5274	Degewij	12.6	X	103.92120	219.02842	359.53405	11.58032	0.1397352	0.22541058	2.6739494	20	9 22.1	16.6
5275	Zdislava	13.8	X	138.34736	108.55887	236.08774	6.05655	0.2541946	0.30211469	2.1996563	20	1 6.9	16.8
5276	Gulkis	13.9	X	334.23758	26.89024	167.54391	11.92536	0.1729170	0.23720190	2.5845837	20	1 18.1	17.2
5277	Brisbane	14.0	X	100.80819	188.08790	298.72561	8.57268	0.1401739	0.28161469	2.3051499	20	5 19.0	17.1
5278	Polly	13.6	X	270.04634	305.55518	225.30498	4.10185	0.0857215	0.29825644	2.2185854	20	—	—
5279	Arthuradel	12.6	X	37.07599	193.34325	100.99477	13.52797	0.2885298	0.25257685	2.4786033	20	11 12.2	16.1
5280	Andrewbecker	13.6	X	299.22288	41.33778	195.67897	12.87954	0.2084648	0.23674181	2.5879312	20	1 20.7	17.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5281 Lindstrom	11.6	X	356.77549	260.84924	121.19357	11.09945	0.1147518	0.18838404	3.0137460	20	11 24.3	15.5
5282 Yamatotakeru	13.0	X	41.52746	105.63207	226.69561	12.22316	0.1211877	0.21847562	2.7302394	20	11 30.1	16.6
5283 Pyrrhus	9.7	X	286.18506	356.33507	71.14136	17.47592	0.1499757	0.08315042	5.1986799	20	9 16.8	16.6
5284 Orsilocus	10.1	X	270.05527	343.03640	102.74651	20.22426	0.0836213	0.08252069	5.2250943	20	9 26.7	17.2
5285 Krethon	10.1	X	340.73926	256.52878	144.27800	25.15565	0.0497931	0.08361059	5.1795875	20	11 2.5	17.0
5286 Haruomukai	12.5	X	67.92509	273.35703	120.19513	2.95064	0.0202065	0.19776965	2.9176260	20	—	—
5287 Heishu	12.7	X	341.72109	262.73880	151.09692	6.45272	0.2073896	0.22419937	2.6835712	20	12 29.4	15.3
5288 Nankichi	12.6	X	77.51318	179.51434	274.82926	11.91989	0.1249637	0.23449956	2.6044021	20	2 27.2	16.0
5289 Niemela	12.5	X	220.06828	119.87254	189.69962	10.39972	0.0825122	0.18868204	3.0105719	20	2 14.0	17.2
5290 Langevin	12.5	X	187.36444	161.89167	189.05703	11.20219	0.0634644	0.21798588	2.7343272	20	2 27.0	16.6
5291 Yuuko	13.4	X	211.93186	350.70724	209.44734	2.04919	0.1564984	0.26166374	2.4208824	20	12 19.5	16.5
5292 Mackwell	12.0	X	162.61218	262.17697	94.54779	15.46767	0.1560104	0.23968965	2.5666690	20	2 17.9	16.2
5293 Bentengahama	11.8	X	284.70984	11.48075	110.84946	13.95580	0.1099937	0.22596879	2.6695440	20	12 17.9	14.9
5294 Onnetoh	12.1	X	52.29671	317.12736	127.89213	17.78078	0.1302866	0.20300615	2.8672348	20	1 18.4	15.5
5295 Masayo	11.9	X	70.34322	86.21131	82.23743	6.31750	0.0885219	0.17625268	3.1504958	20	5 30.0	16.2
5296 Friedrich	12.2	X	43.80330	133.77013	100.16924	2.83935	0.1163630	0.17852943	3.1236534	20	7 21.2	16.1
5297 Schinkel	13.4	X	176.67993	311.28617	149.79612	6.52787	0.1239311	0.28942757	2.2634771	20	7 8.9	16.8
5298 Paraskevopoulos	13.2	X	109.70637	300.34974	69.85118	2.17950	0.2158157	0.19075245	2.9887480	20	1 20.6	17.5
5299 Bittesini	12.1	X	308.57635	81.51036	325.55701	4.87999	0.0619881	0.17949737	3.1124138	20	10 6.5	16.3
5300 Sats	13.9	X	112.39056	351.02669	10.49427	6.43163	0.1614682	0.28719751	2.2751792	20	—	—
5301 Novobranets	12.1	X	152.07390	131.90516	243.81133	10.04829	0.1027128	0.15993292	3.3613273	20	2 25.4	17.4
5302 Romanoserra	14.0	X	122.38261	48.14131	337.31881	2.14364	0.0380625	0.27691510	2.3311575	20	1 15.7	16.7
5303 Parijskij	12.5	X	24.91816	144.30287	50.95986	2.76622	0.0160475	0.20233551	2.8735669	20	4 23.4	16.2
5304 Bazhenov	12.6	X	350.40992	321.88340	114.38343	8.97744	0.0736575	0.19158066	2.9801282	20	—	—
5305 Bernievolz	13.5	X	148.01840	15.02319	231.61704	1.78944	0.1537839	0.25872861	2.4391569	20	12 12.4	17.3
5306 Fangfen	12.6	X	273.09533	254.22907	80.15316	3.13126	0.0719934	0.20429277	2.8551837	20	5 17.6	16.5
5307 Paul–André	13.6	X	217.31642	9.52729	59.09463	7.05824	0.1201882	0.26237105	2.4165295	20	7 9.7	17.2
5308 Hutchison	13.4	X	249.92171	100.20367	224.71280	11.86873	0.2061858	0.22739238	2.6583905	20	3 19.7	17.9
5309 MacPherson	14.4	X	84.11020	125.21533	202.17721	4.04341	0.2343752	0.29158944	2.2522755	20	—	—
5310 Papike	14.2	X	188.10216	44.93186	171.67397	6.19046	0.0857537	0.26675467	2.3899824	20	12 23.0	17.5
5311 1981 GD_1	13.8	X	184.11703	265.17411	227.24031	3.45597	0.0896708	0.18578585	3.0417788	20	8 20.2	18.4
5312 Schott	13.5	X	313.85794	281.97868	96.04012	2.84231	0.2935795	0.17302312	3.1895784	20	8 11.9	16.7
5313 Nunes	13.5	X	226.31250	138.15144	111.96231	4.52620	0.1216479	0.29874849	2.2161487	20	—	—
5314 Wilkickia	12.1	X	18.00332	251.55985	205.61875	9.62882	0.0858530	0.18967972	3.0000060	20	—	—
5315 Bal′mont	14.1	X	11.53355	207.35426	172.48946	6.17831	0.1950866	0.28948007	2.2632035	20	—	—
5316 Filatov	11.8	X	185.10434	249.93754	230.08985	14.70561	0.0218973	0.17518919	3.1632329	20	8 3.5	16.7
5317 Verolacqua	12.2	X	203.77048	61.39807	121.97037	13.98559	0.1095279	0.22885883	2.6470223	20	11 22.3	16.3
5318 Dientzenhofer	13.5	X	89.92208	54.62809	107.62966	3.30984	0.1325437	0.28430561	2.2905816	20	6 25.4	16.3
5319 Petrovskaya	13.6	X	153.90949	81.55218	200.46447	6.23223	0.1534569	0.29064163	2.2571695	20	—	—
5320 Lisbeth	12.5	X	117.67376	218.24016	126.72723	5.61835	0.1552896	0.17674581	3.1446330	20	—	—
5321 Jagras	12.6	X	158.40058	139.78077	210.11483	13.61995	0.2203191	0.23764179	2.5813933	20	2 2.5	17.1
5322 1986 QB_1	12.2	X	70.40976	198.07153	57.82241	3.28918	0.0087774	0.20366611	2.8610374	20	9 12.5	16.1
5323 Fogh	13.6	X	2.66181	347.61230	61.64458	3.31152	0.1969644	0.26531594	2.3986147	20	—	—
5324 Lyapunov	15.5	X	156.21722	321.05915	352.26951	19.60650	0.6047917	0.19099515	2.9862156	20	1 24.2	21.9
5325 Silver	12.3	X	287.50774	120.62110	134.88104	23.49227	0.2187523	0.27124438	2.3635360	20	1 28.2	15.8
5326 Vittoriosacco	12.8	X	337.90232	124.30171	170.62939	15.04324	0.1240818	0.24314695	2.5422807	20	6 25.9	15.8
5327 1989 EX_1	13.5	X	207.89212	82.15443	137.18138	9.75612	0.1613886	0.27495070	2.3422477	20	—	—
5328 Nisiyamakoiti	13.7	X	80.09894	162.88419	217.48488	6.91733	0.1411220	0.26363778	2.4087827	20	—	—
5329 Decaro	13.0	X	106.20600	256.40219	141.97851	13.41486	0.2696988	0.23410096	2.6073575	20	2 21.9	16.5
5330 Senrikyu	12.3	X	16.29592	20.64148	307.64934	33.75239	0.1567300	0.21456272	2.7633329	20	9 28.8	16.5
5331 Erimomisaki	12.5	X	273.85302	283.06418	109.71938	12.10246	0.3888997	0.21389693	2.7690641	20	6 19.5	16.9
5332 Davidaguilar	14.7	X	204.32030	305.94552	142.82192	25.49024	0.4556499	0.30939269	2.1650239	20	7 7.0	19.4
5333 Kanaya	13.1	X	336.50434	308.80986	208.39586	10.97071	0.1677218	0.27435140	2.3456575	20	—	—
5334 Mishima	13.1	X	145.62351	55.15528	170.44578	7.41630	0.1258759	0.28910301	2.2651709	20	11 21.8	16.5
5335 Damocles	13.3	X	260.75095	191.24877	314.01369	61.60215	0.8660582	0.02419445	11.8392860	20	8 11.4	26.1
5336 1991 JE_1	11.9	X	85.12335	64.19338	178.46876	11.35519	0.1465343	0.17953606	3.1119665	20	9 27.7	16.6
5337 Aoki	11.6	X	23.61818	4.31420	237.78199	6.42964	0.0948204	0.17179860	3.2047167	20	6 27.3	15.7
5338 Michelblanc	12.6	X	299.89938	296.99674	89.59868	3.35745	0.0711068	0.20220363	2.8748162	20	9 3.8	16.2
5339 1992 CD	12.4	X	14.61583	156.51112	336.39138	2.38648	0.0751539	0.17350820	3.1836309	20	1 25.5	16.4
5340 Burton	12.8	X	116.61953	323.19034	272.08200	3.48405	0.1348236	0.18214256	3.0822067	20	10 17.7	17.8
5341 Purgathofer	15.0	X	205.83186	57.80764	303.07165	1.19950	0.2064105	0.30676818	2.1773547	20	3 24.3	18.4
5342 Le Poole	13.8	X	90.07183	107.31356	166.30667	14.34097	0.2350666	0.25496365	2.4631104	20	11 29.4	18.1
5343 Ryzhov	13.6	X	136.33307	339.10662	65.73219	8.34029	0.1286726	0.28748242	2.2736757	20	3 15.8	16.8
5344 Ryabov	13.2	X	106.09323	229.19603	173.87323	7.09684	0.1653397	0.22188823	2.7021733	20	2 12.6	16.8
5345 Boynton	14.0	X	341.98686	74.48522	304.08744	6.44859	0.2350729	0.21460256	2.7629909	20	11 4.9	16.6
5346 1981 QE_3	12.4	X	357.30614	260.66049	71.61228	2.44670	0.1785761	0.17690283	3.1427719	20	9 21.1	15.7
5347 Orestelesca	12.4	X	253.60278	9.10713	167.47647	11.09048	0.0392640	0.18873094	3.0100519	20	—	—
5348 Kennoguchi	12.7	X	327.06875	175.75573	301.43556	7.06479	0.1717970	0.21111874	2.7933039	20	—	—
5349 Paulharris	13.0	X	264.90998	81.04296	1.36710	28.46291	0.4678422	0.21185440	2.7868338	20	8 16.4	17.9
5350 Epetersen	13.2	X	59.47373	328.18242	308.25088	2.54246	0.1298382	0.29534657	2.2331339	20	10 25.7	16.1
5351 Diderot	13.2	X	194.86124	65.82119	155.30370	5.59546	0.1432761	0.26072299	2.4267023	20	12 28.1	16.6
5352 Fujita	13.1	X	117.34153	164.29517	258.36980	4.28042	0.1621882	0.26718631	2.3874077	20	3 16.0	16.3
5353 1989 YT	13.7	X	201.05540	302.93857	34.74273	3.85656	0.2908405	0.23955760	2.5676121	20	2 27.7	18.4
5354 Hisayo	12.0	X	50.58308	65.95642	133.17899	4.90830	0.0549035	0.17271723	3.1933432	20	6 7.2	16.4
5355 Akihiro	13.1	X	77.47408	13.14603	193.04095	0.74451	0.1677633	0.28033000	2.3121873	20	8 15.7	16.1
5356 Neagari	12.5	X	72.07727	266.68732	172.86969	14.31088	0.1570684	0.23408821	2.6074522	20	2 7.7	15.6
5357 Sekiguchi	11.7	X	263.85154	119.06689	301.72969	9.11004	0.1010696	0.19057967	2.9905542	20	8 19.4	15.8
5358 1992 QH	11.5	X	210.99219	84.49225	335.46792	11.08541	0.1890660	0.20391345	2.8587234	20	6 14.6	16.4
5359 Markzakharov	14.0	X	259.11296	310.68723	63.72026	1.59542	0.1992918	0.27523201	2.3406515	20	6 3.9	17.1
5360 Rozhdestvenskij	11.7	X	253.79396	15.89190	17.86004	21.72524	0.0157067	0.16869401	3.2439161	20	7 22.8	16.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5361 Goncharov	11.6	X	183.07921	128.48791	82.31950	7.23874	0.0892463	0.17808938	3.1287968	20	11 22.8	16.4
5362 Johnyoung	11.7	X	7.00770	272.54690	135.99518	6.14620	0.0265465	0.15818684	3.3860171	20	12 21.8	16.4
5363 Kupka	13.3	X	46.43068	136.45561	244.49082	2.76887	0.1746961	0.29372004	2.2413706	20	—	—
5364 1980 RC_1	13.3	X	91.26145	77.71459	281.21096	3.11391	0.1999222	0.25569063	2.4584394	20	—	—
5365 Fievez	14.4	X	223.24087	179.31656	80.69703	1.60245	0.0950901	0.29798997	2.2199079	20	—	—
5366 Rhianjones	14.0	X	107.62819	171.41206	158.33175	4.04689	0.2059990	0.29364004	2.2417776	20	—	—
5367 Sollenberger	12.0	X	34.61966	142.29024	251.32214	10.76596	0.1200584	0.18565794	3.0431757	20	—	—
5368 Vitagliano	11.0	X	54.66129	338.77845	159.53181	6.26456	0.0820852	0.12471703	3.9675178	20	4 4.2	16.3
5369 Virgiugum	13.9	X	92.38205	181.33665	166.74437	4.53020	0.2282848	0.29042660	2.2582835	20	—	—
5370 Taranis	15.1	X	190.39996	161.26484	177.80396	19.15017	0.6366392	0.16255095	3.3251383	20	2 25.5	22.3
5371 1987 VG_1	12.4	X	343.37537	74.25334	262.42145	9.58877	0.0969620	0.17478842	3.1680664	20	8 23.7	16.5
5372 Bikki	12.1	X	95.05364	293.27657	19.38471	12.20918	0.0748648	0.18236208	3.0797327	20	12 22.5	16.9
5373 1988 VV_3	13.2	X	174.11812	312.35300	37.56479	2.15630	0.0964119	0.22899736	2.6459546	20	2 15.1	17.1
5374 Hokutosei	11.4	X	125.39033	250.44869	299.88881	12.30893	0.1002164	0.17448774	3.1717048	20	8 27.2	16.4
5375 Siedentopf	13.4	X	349.64100	240.02371	89.81660	2.43885	0.1706542	0.17424331	3.1746704	20	9 1.5	16.8
5376 1990 DD	13.3	X	89.58431	98.85005	332.22525	12.46043	0.1767806	0.26296232	2.4129058	20	2 24.1	15.9
5377 Komori	13.7	X	15.53667	199.77693	337.30837	3.02531	0.0612745	0.30472572	2.1870731	20	3 4.8	15.6
5378 Ellyett	13.8	X	27.03464	206.73968	249.84556	19.11757	0.0828084	0.36640247	1.9341810	20	—	—
5379 Abehiroshi	12.9	X	271.02975	213.90285	34.03498	3.80087	0.0544939	0.26573254	2.3961071	20	1 20.8	16.2
5380 Sprigg	13.1	X	340.44016	359.08548	242.29838	9.30275	0.2108239	0.23804208	2.5784986	20	3 26.4	15.8
5381 Sekhmet	16.6	X	289.20082	37.42869	58.53869	48.96680	0.2963411	1.06872810	0.9474535	20	—	—
5382 McKay	12.5	X	338.49758	10.97920	169.06367	12.79076	0.0930888	0.23129550	2.6283988	20	1 18.2	16.0
5383 Leavitt	13.1	X	239.57762	272.13999	92.28135	3.28273	0.0930259	0.20418629	2.8561762	20	5 13.3	17.2
5384 Changjiangcun	14.2	X	3.08680	88.97368	48.84999	27.08818	0.1037546	0.36600818	1.9355699	20	—	—
5385 Kamenka	12.3	X	34.05218	302.08176	41.35567	9.78392	0.2266972	0.17607601	3.1526027	20	12 8.1	16.6
5386 Bajaja	13.1	X	163.48816	198.85592	90.82556	9.46342	0.1384667	0.29353277	2.2423238	20	—	—
5387 Casleo	13.4	X	175.61731	31.25597	239.03717	1.61013	0.1731154	0.25874203	2.4390726	20	—	—
5388 Mottola	13.6	X	58.64118	68.68744	359.39906	12.58657	0.1446937	0.22404641	2.6847925	20	1 5.2	16.8
5389 Choikaiyau	13.4	X	223.04049	312.80318	46.25139	8.09961	0.1557626	0.26868511	2.3785209	20	4 12.8	17.0
5390 Huichiming	13.6	X	113.26261	322.36330	85.62553	23.81674	0.0772794	0.36503153	1.9390208	20	1 25.5	15.7
5391 Emmons	13.5	X	92.60489	344.74926	336.35245	2.51154	0.2424611	0.29002437	2.2603710	20	—	—
5392 Parker	12.7	X	176.81549	96.72416	56.10773	22.05402	0.3434613	0.27384446	2.3485514	20	9 21.1	17.5
5393 Goldstein	13.7	X	240.57626	137.45435	348.75527	5.29650	0.1275483	0.27607512	2.3358836	20	10 24.3	16.6
5394 Jurgens	13.6	X	157.04225	188.12774	294.30396	1.73172	0.1633404	0.26856063	2.3792559	20	7 17.4	17.3
5395 Shosasaki	15.0	X	280.10436	220.95777	168.39167	6.93889	0.2698335	0.24346698	2.5400524	20	7 9.3	18.4
5396 1988 SH_1	13.7	X	140.54558	219.16891	204.89679	4.66985	0.1687635	0.26585960	2.3953436	20	4 15.6	17.2
5397 Vojislava	12.7	X	338.70372	138.89576	218.46244	12.38495	0.1854272	0.24498483	2.5295499	20	10 1.8	15.0
5398 1989 AK_1	12.4	X	48.73884	123.75060	307.56127	9.62863	0.0225766	0.18918752	3.0052070	20	—	—
5399 Awa	12.4	X	270.63207	177.87223	270.72548	3.75003	0.1874634	0.20995258	2.8036378	20	9 23.6	16.1
5400 1989 CM	13.4	X	342.37986	27.57354	26.19623	0.55304	0.1507744	0.18170502	3.0871526	20	12 9.2	16.8
5401 Minamioda	12.1	X	341.04529	14.88932	46.91197	10.06555	0.1511798	0.21088731	2.7953471	20	12 27.7	15.3
5402 Kejosmith	13.6	X	185.11981	133.34820	237.04204	16.70594	0.1369718	0.33684258	2.0457445	20	3 7.2	16.9
5403 Takachiho	11.7	X	262.89225	43.19772	123.45395	10.31623	0.0660766	0.18763149	3.0217990	20	—	—
5404 Uemura	12.9	X	64.64158	328.00804	14.77238	9.88738	0.0654174	0.29113103	2.2546392	20	—	—
5405 Neverland	12.5	X	217.12688	243.75435	15.01821	10.40112	0.2346206	0.22641284	2.6660524	20	—	—
5406 Jonjoseph	12.5	X	339.71710	342.21950	235.35473	6.11848	0.1185227	0.22616829	2.6679738	20	3 6.3	15.7
5407 1992 AX	14.0	X	62.04304	108.78263	117.73955	11.39060	0.2777264	0.39544246	1.8382893	20	9 29.4	16.5
5408 Thé	13.7	X	163.87207	341.64081	207.16426	4.08056	0.1393012	0.29001279	2.2604312	20	10 21.7	16.9
5409 Saale	13.0	X	268.73880	59.40835	285.17641	8.77139	0.1592809	0.23298476	2.6156785	20	5 9.6	16.9
5410 Spivakov	13.5	X	92.69364	339.33630	141.27405	4.02167	0.2788024	0.18923754	3.0046774	20	5 23.9	18.0
5411 Liia	12.3	X	215.52307	225.05893	317.76544	5.63265	0.0450744	0.18303963	3.0721279	20	11 27.9	16.7
5412 Rou	14.0	X	97.43905	305.32167	26.42761	2.40214	0.1882251	0.25794422	2.4440993	20	—	—
5413 Smyslov	12.2	X	254.61056	134.95456	41.95113	0.42473	0.1441428	0.17530355	3.1618571	20	12 23.0	16.5
5414 Sokolov	12.8	X	268.05094	328.99220	23.68938	2.09885	0.0859582	0.20090860	2.8871567	20	6 1.3	16.7
5415 Lyanzuridi	13.6	X	3.38829	244.53796	192.29657	4.29262	0.1242019	0.28737529	2.2742407	20	—	—
5416 Estremadoyro	12.9	X	30.38831	285.58984	66.67399	8.39473	0.2335874	0.21228733	2.7830435	20	12 25.3	16.7
5417 Solovaya	13.5	X	3.51830	93.79464	293.73702	1.46655	0.1326375	0.28295721	2.2978528	20	—	—
5418 Joyce	13.0	X	156.72845	244.27292	174.81774	17.46656	0.3103378	0.19270481	2.9685270	20	5 6.4	18.6
5419 Benua	12.9	X	55.10955	61.61417	296.93373	5.19071	0.1801906	0.18004270	3.1061258	20	—	—
5420 Jancis	13.6	X	155.25626	259.32526	85.12217	8.67717	0.2346132	0.22459496	2.6804191	20	2 1.6	18.1
5421 Ulanova	13.6	X	64.56554	92.49096	271.37909	3.20733	0.1500523	0.29111075	2.2547439	20	—	—
5422 Hodgkin	12.7	X	140.15947	9.16715	32.84732	6.61522	0.2411266	0.19272068	2.9683641	20	3 30.1	17.7
5423 Horahořejš	14.1	X	78.94917	138.91787	338.33545	2.68191	0.1610308	0.26828368	2.3808930	20	4 9.2	16.8
5424 Covington	13.2	X	334.78145	152.38804	237.88460	3.24326	0.0432416	0.29480466	2.2358697	20	11 20.7	15.4
5425 Vojtěch	13.1	X	89.97057	26.23422	355.85819	6.25979	0.1345880	0.25633968	2.4542878	20	—	—
5426 Sharp	14.0	X	320.28924	67.38496	88.17202	23.79939	0.1167455	0.36052548	1.9551440	20	—	—
5427 Jensmartin	13.7	X	197.39625	73.45685	219.83601	20.39274	0.0742997	0.36708185	1.9317938	20	—	—
5428 1987 RA_1	12.7	X	267.48539	18.96591	269.80877	0.93545	0.0360243	0.19927904	2.9028748	20	3 17.6	16.8
5429 1988 BZ_1	12.9	X	235.35304	299.53100	183.12628	0.77060	0.1588091	0.17267370	3.1938799	20	9 24.4	17.7
5430 Luu	12.8	X	290.96292	122.26633	122.97856	23.89598	0.2234099	0.27106993	2.3645499	20	1 18.6	16.3
5431 Maxinehelin	12.8	X	295.10167	100.69378	287.64363	23.29646	0.2536236	0.27728984	2.3290568	20	8 1.9	15.2
5432 Imakiire	13.3	X	166.69323	305.45222	95.11880	3.17991	0.1176253	0.23304484	2.6152290	20	4 11.7	17.2
5433 Kairen	12.4	X	271.78849	161.42033	269.75804	7.80548	0.2225018	0.24336812	2.5407402	20	8 29.7	15.6
5434 Tomwhitney	12.3	X	212.77859	316.65898	172.39116	17.05128	0.0849583	0.17371277	3.1811310	20	9 16.3	17.1
5435 Kameoka	11.9	X	173.92328	0.96382	109.08681	18.16252	0.1252441	0.17499004	3.1656325	20	7 13.5	16.9
5436 Eumelos	10.4	X	241.10140	220.84129	253.97056	7.43224	0.0771837	0.08306525	5.2022329	20	9 16.6	17.6
5437 1990 DU_3	13.4	X	108.97944	335.63087	319.31917	6.39904	0.1102059	0.28256518	2.2999777	20	—	—
5438 Lorre	11.6	X	343.90198	238.45038	298.48205	26.56958	0.2761824	0.21664839	2.7455693	20	1 3.3	14.7
5439 Couturier	11.8	X	296.38831	329.74055	351.53976	1.23345	0.1584596	0.12567068	3.9474206	20	5 19.0	17.2
5440 Terao	13.3	X	355.66248	149.03096	115.54380	4.56189	0.1422682	0.30794151	2.1718203	20	6 16.9	14.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5441 Andymurray	11.9	X	129.95641	137.60132	131.09693	10.99147	0.0798398	0.18495919	3.0508354	20	12 9.6	16.7
5442 Drossart	12.9	X	295.51665	346.44746	356.20930	1.48322	0.0771114	0.20087233	2.8875043	20	6 27.2	16.7
5443 Encrenaz	13.3	X	240.68058	232.26054	320.26220	10.73293	0.1084463	0.25360343	2.4719099	20	—	—
5444 Gautier	13.9	X	151.98173	337.38420	143.26013	0.75997	0.1550744	0.26854483	2.3793492	20	7 9.8	17.7
5445 Williwaw	12.3	X	107.36136	330.34589	259.74932	6.11537	0.2226754	0.24181777	2.5515881	20	10 15.1	16.7
5446 Heyler	12.3	X	269.17776	333.53526	100.53821	2.37399	0.1325998	0.17122357	3.2118877	20	9 8.8	16.6
5447 Lallement	12.5	X	87.92983	119.30290	343.72408	9.81241	0.0887012	0.19254587	2.9701605	20	3 26.9	16.6
5448 Siebold	12.8	X	349.66669	206.27603	321.16124	4.84194	0.1443978	0.29762841	2.2217053	20	—	—
5449 1992 US_5	12.6	X	96.26457	66.87068	326.81366	9.44162	0.1123554	0.18725338	3.0258654	20	1 20.1	16.8
5450 Sokrates	12.4	X	153.89707	319.09133	145.16813	5.23263	0.1216968	0.20869198	2.8149166	20	6 17.8	16.9
5451 Plato	14.2	X	15.71879	255.33475	10.73403	1.75919	0.1417864	0.24433650	2.5340226	20	7 29.2	16.8
5452 1937 NN	12.9	X	32.26841	312.80337	299.77290	6.15657	0.2226111	0.29752377	2.2222262	20	8 27.3	15.1
5453 Zakharchenya	13.8	X	62.59183	245.91416	167.07512	6.33525	0.1564407	0.29095111	2.2555686	20	—	—
5454 Kojiki	12.6	X	333.07953	89.41070	335.93344	5.43182	0.1286131	0.17524878	3.1625159	20	12 4.4	16.5
5455 Surkov	13.6	X	141.22885	1.12085	2.43699	3.38676	0.1154174	0.29254996	2.2473429	20	1 20.2	16.5
5456 Merman	13.2	X	147.26947	145.00608	44.05587	7.03127	0.0512932	0.27242358	2.3567106	20	10 5.9	16.4
5457 Queen′s	12.1	X	181.59518	50.11459	269.67980	3.93869	0.0242810	0.18291454	3.0735284	20	1 18.5	16.6
5458 Aizman	12.2	X	43.15905	129.95246	222.28122	9.19512	0.0234840	0.17458566	3.1705188	20	12 2.8	16.7
5459 Saraburger	12.8	X	11.54297	220.31364	75.73672	3.13501	0.0508089	0.20121694	2.8842065	20	8 20.9	16.4
5460 Tsénaat′a′í	14.4	X	72.30749	282.42827	193.87450	3.67347	0.1681617	0.29546416	2.2325414	20	3 27.1	16.4
5461 Autumn	11.8	X	138.32840	192.67410	111.83941	12.84617	0.1422228	0.17587742	3.1549755	20	—	—
5462 1984 SX_5	13.7	X	347.79698	253.65828	163.04119	6.51221	0.1061407	0.27886690	2.3202676	20	—	—
5463 Danwelcher	13.4	X	151.46919	312.98636	3.66727	3.80816	0.1407142	0.29257051	2.2472377	20	—	—
5464 Weller	12.5	X	329.20383	356.51725	36.35007	14.06093	0.1753541	0.22590160	2.6700732	20	10 31.5	14.9
5465 Chumakov	12.5	X	314.44527	186.00007	124.42497	3.19930	0.0695476	0.19790373	2.9163081	20	6 12.5	16.2
5466 Makibi	13.0	X	340.75028	334.77728	151.11972	2.13033	0.1359899	0.18001630	3.1064294	20	—	—
5467 1988 AG	12.9	X	309.48322	141.35154	339.02032	8.75408	0.1691997	0.20942309	2.8083615	20	—	—
5468 Hamatonbetsu	12.3	X	164.49978	69.39929	135.01844	11.96493	0.2240086	0.20241153	2.8728474	20	10 31.7	17.4
5469 1988 BK_4	13.2	X	355.65280	291.43082	143.70476	19.18645	0.1490857	0.17878949	3.1206237	20	—	—
5470 Kurtlindstrom	13.0	X	278.56495	149.20573	304.59550	18.30713	0.1496270	0.17267987	3.1938038	20	10 2.1	17.7
5471 Tunguska	11.5	X	90.74954	28.40306	250.26229	9.32259	0.0728220	0.19009299	2.9956563	20	11 8.3	15.9
5472 1988 RR	14.0	X	97.47393	325.02374	19.36761	1.54135	0.1069730	0.28746088	2.2737893	20	—	—
5473 Yamanashi	13.1	X	216.78390	326.18232	59.62356	7.95711	0.1626683	0.26781242	2.3836852	20	5 9.7	16.8
5474 Gingasen	13.1	X	126.63855	256.96371	246.96737	6.14275	0.0668881	0.26767161	2.3845211	20	7 6.7	16.3
5475 Hanskennedy	15.1	X	131.28337	307.85613	107.90394	24.15501	0.1205118	0.37110098	1.9178206	20	3 22.4	17.9
5476 1989 TO_{11}	10.6	X	303.80464	95.23302	198.55357	13.70334	0.0740444	0.08533725	5.1094829	20	5 9.9	17.3
5477 Holmes	14.0	X	232.19143	290.36892	49.10631	22.55065	0.0754275	0.37132268	1.9170572	20	4 4.9	16.6
5478 Wartburg	12.7	X	130.72095	252.77517	232.98046	8.02779	0.1427682	0.24259873	2.5461092	20	6 22.9	16.6
5479 Grahamryder	13.2	X	188.07816	125.66477	200.51719	13.46586	0.2177458	0.23839831	2.5759292	20	1 30.1	17.9
5480 1989 YK_8	11.3	X	336.11267	163.09428	120.45188	6.66899	0.0965077	0.17771073	3.1332397	20	6 7.5	15.3
5481 Kiuchi	13.3	X	109.94223	250.52677	326.04768	5.96016	0.0632560	0.27548977	2.3391912	20	9 23.8	16.5
5482 Korankei	13.3	X	146.64309	297.44360	302.77317	4.35362	0.1901445	0.24610606	2.5218612	20	11 29.8	17.5
5483 Cherkashin	11.6	X	255.34392	217.12782	60.01749	10.16943	0.0747397	0.17834578	3.1257974	20	2 21.2	16.4
5484 Inoda	13.0	X	212.25315	110.27175	48.37837	12.58317	0.1471914	0.26326144	2.4110778	20	10 30.5	16.3
5485 Kaula	13.2	X	4.87565	65.71355	50.93116	3.29517	0.1142832	0.21783614	2.7355800	20	—	—
5486 1991 UT_2	12.6	X	48.70845	221.55657	63.71900	10.19439	0.0633516	0.23472329	2.6027468	20	10 8.8	16.1
5487 1991 UM_4	13.9	X	17.93336	241.79499	355.83752	2.30677	0.1611812	0.26308772	2.4121390	20	6 21.4	15.9
5488 Kiyosato	11.2	X	220.34920	223.67336	96.61084	11.28167	0.0738926	0.18635958	3.0355326	20	3 5.6	15.9
5489 Oberkochen	11.5	X	246.40902	265.37517	102.16505	13.99908	0.1830607	0.23150317	2.6268267	20	5 18.3	15.7
5490 Burbidge	13.9	X	271.01975	273.20316	220.63246	3.23397	0.1195325	0.28200858	2.3030030	20	12 28.1	16.0
5491 Kaulbach	13.9	X	212.82974	88.60531	332.57463	4.81376	0.1264256	0.30596998	2.1811398	20	6 24.8	16.9
5492 Thoma	12.3	X	13.58838	192.65561	191.19756	17.59077	0.1359872	0.21226464	2.7832419	20	12 27.0	16.2
5493 Spitzweg	13.6	X	71.91194	234.07263	356.08982	3.84778	0.1443318	0.27189039	2.3597907	20	9 7.7	16.7
5494 Johanmohr	12.7	X	355.89597	61.82324	322.52147	1.14321	0.0773525	0.20492924	2.8492688	20	11 23.4	16.3
5495 Rumyantsev	11.6	X	246.83568	277.82948	32.95320	9.22569	0.0475348	0.15629416	3.4132981	20	3 25.6	16.6
5496 1973 NA	16.0	X	140.35808	118.02917	101.03081	68.01890	0.6357457	0.25943672	2.4347166	20	12 8.5	22.5
5497 Sararussell	12.5	X	93.53785	295.23777	195.35013	10.74015	0.0565695	0.18897712	3.0074372	20	5 7.8	16.7
5498 Gustafsson	14.1	X	174.79367	132.09831	210.82480	2.11086	0.1468939	0.29260089	2.2470821	20	2 1.3	17.2
5499 1981 SU_2	13.8	X	81.50829	84.96445	312.83987	2.12276	0.1344045	0.28836529	2.2690326	20	—	—
5500 Twilley	13.6	X	34.08070	341.10097	112.51175	4.39739	0.0896882	0.28628995	2.2799849	20	—	—
5501 1982 FF_2	13.6	X	27.39402	313.55735	232.97370	4.29999	0.1374500	0.26018135	2.4300690	20	4 16.7	15.8
5502 Brashear	12.9	X	52.33773	232.36242	352.45910	12.33004	0.1265907	0.22531746	2.6746861	20	7 31.1	16.4
5503 1985 CE_2	12.9	X	268.06428	325.73499	160.48015	5.43740	0.1013648	0.24231853	2.5480716	20	12 2.9	15.9
5504 Lanzerotti	12.6	X	108.53801	133.86898	60.18742	13.66513	0.0723177	0.23299093	2.6156324	20	8 27.9	16.6
5505 Rundetaarn	12.1	X	332.60748	57.44677	315.45300	11.03090	0.1414368	0.20228720	2.8740244	20	9 27.0	15.6
5506 Artiglio	13.6	X	184.22273	134.89138	18.50538	5.24739	0.1704573	0.26934769	2.3746187	20	9 22.7	17.2
5507 Niijima	13.6	X	338.12814	21.53984	337.45537	2.64347	0.1346123	0.23787619	2.5796972	20	10 1.2	16.1
5508 Gomyou	12.4	X	296.72735	70.90823	36.14177	6.76782	0.2235341	0.20553039	2.8437103	20	11 27.3	15.1
5509 Rennsteig	14.5	X	305.17674	89.60382	189.15958	2.19938	0.1378847	0.29942339	2.2128174	20	3 30.3	17.0
5510 1988 RF_7	13.5	X	279.46090	234.69101	109.22458	5.68474	0.2445719	0.30399787	2.1905627	20	5 12.2	16.2
5511 Cloanthus	10.3	X	306.27888	121.32133	172.67266	11.16744	0.1172991	0.08207540	5.2439760	20	5 8.9	17.0
5512 1988 VD_7	13.3	X	121.58417	263.98886	71.09633	6.18356	0.2097892	0.28642834	2.2792505	20	—	—
5513 Yukio	13.7	X	157.04065	184.37719	289.68660	1.60000	0.0543341	0.29961595	2.2118692	20	7 4.6	16.4
5514 Karelraška	13.4	X	251.98506	305.29868	149.75454	6.54250	0.1757884	0.24021549	2.5629219	20	9 16.7	16.8
5515 Naderi	12.9	X	38.56052	46.73935	170.94285	13.08201	0.2227137	0.22608754	2.6686091	20	7 8.6	16.1
5516 Jawilliamson	13.3	X	194.29514	38.11374	160.22117	12.97971	0.1683655	0.23720072	2.5845923	20	11 25.0	17.5
5517 Johnerogers	13.0	X	178.23182	118.78259	89.56909	14.42150	0.1186782	0.23630988	2.5910838	20	11 25.0	17.0
5518 Mariobotta	12.9	X	178.29705	140.61818	124.67334	7.76048	0.1838738	0.28775423	2.2722437	20	—	—
5519 Lellouch	12.4	X	354.73777	288.71850	157.39653	6.72083	0.0400346	0.17482176	3.1676636	20	—	—
5520 Natori	12.2	X	267.30326	58.19752	292.57758	8.88885	0.1127122	0.18995333	2.9971244	20	5 24.1	16.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5521 Morpurgo	12.5	X	332.06148	266.24835	90.83293	11.16199	0.1932754	0.23833605	2.5763779	20	9 24.5	15.0
5522 De Rop	13.4	X	150.11435	140.17264	291.22229	1.32732	0.1856256	0.26282017	2.4137757	20	5 5.4	17.1
5523 Luminet	12.9	X	69.66509	169.72917	88.05618	3.35917	0.0133175	0.20663582	2.8335593	20	9 15.2	16.8
5524 Lecacheux	12.9	X	65.88182	120.62752	108.18720	7.48829	0.0282136	0.27061804	2.3671815	20	8 10.8	15.7
5525 1991 TS_4	13.2	X	275.17125	343.44274	342.29687	7.61661	0.1511702	0.29785264	2.2205902	20	4 19.4	16.2
5526 Kenzo	12.6	X	265.01403	151.32141	224.07822	13.55133	0.1624335	0.22998872	2.6383457	20	6 16.5	16.4
5527 1991 UQ_3	13.7	X	313.94316	173.32425	108.87734	3.68547	0.1279949	0.29609116	2.2293885	20	4 22.7	15.9
5528 1992 AJ	11.3	X	315.65751	332.18482	140.47063	16.38086	0.0458157	0.16834804	3.2483588	20	—	—
5529 Perry	14.0	X	249.68092	235.13439	14.19477	4.80335	0.1708187	0.28746312	2.2737775	20	—	—
5530 Eisinga	13.9	X	311.49409	115.41093	16.40051	7.74703	0.1524167	0.28366860	2.2940095	20	—	—
5531 Carolientje	13.2	X	20.51387	306.34682	179.09034	13.16549	0.0983806	0.21916022	2.7245507	20	1 12.9	16.6
5532 Ichinohe	12.6	X	329.44295	66.80735	123.89264	1.17653	0.1326227	0.17847437	3.1242958	20	1 24.9	16.5
5533 Bagrov	14.0	X	89.53775	18.98050	349.05173	5.07325	0.1867905	0.29385777	2.2406702	20	—	—
5534 1941 UN	12.6	X	26.15193	50.53875	9.21501	7.48788	0.3371509	0.21511116	2.7586340	20	—	—
5535 Annefrank	13.7	X	322.70026	8.94305	120.60785	4.24842	0.0641886	0.29946815	2.2125969	20	—	—
5536 Honeycutt	12.8	X	31.73055	124.98456	250.63677	6.77934	0.0933950	0.29222078	2.2490304	20	—	—
5537 Sanya	14.0	X	95.80827	5.34440	339.61766	5.94637	0.1647760	0.28693160	2.2765846	20	—	—
5538 Luichewoo	14.4	X	19.19853	45.79192	335.29802	5.22712	0.1664027	0.28450582	2.2895068	20	—	—
5539 Limporyen	13.8	X	102.21945	122.29621	295.51362	1.82363	0.1575984	0.25930051	2.4355691	20	2 21.3	16.6
5540 Smirnova	14.2	X	227.47371	124.70161	223.02484	4.57551	0.3115657	0.23572713	2.5953524	20	3 24.8	18.9
5541 Seimei	12.2	X	251.20360	199.09964	193.28883	12.86747	0.1449804	0.17322970	3.1870422	20	6 23.3	17.2
5542 Moffatt	12.3	X	317.88388	263.27741	116.49876	15.88857	0.1583895	0.23663528	2.5887079	20	9 29.7	15.2
5543 Sharaf	14.0	X	33.88901	310.75802	154.06203	2.46082	0.0988576	0.29093517	2.2556510	20	—	—
5544 Kazakov	13.2	X	54.58368	122.03910	9.26396	13.15302	0.1045725	0.22366339	2.6878567	20	3 19.8	16.4
5545 Makarov	13.5	X	150.98164	62.24887	67.11282	3.41825	0.0196969	0.22848707	2.6498927	20	7 13.6	17.0
5546 Salavat	12.5	X	131.83505	242.09306	287.18817	12.19425	0.1136887	0.23197569	2.6232583	20	8 13.9	16.6
5547 Acadiau	12.4	X	193.05472	337.22572	240.54169	12.72138	0.1238190	0.23306321	2.6150916	20	12 17.7	16.3
5548 Thosharriot	12.4	X	157.98991	117.90203	334.78631	9.97026	0.0745962	0.19026962	2.9938021	20	6 3.5	17.1
5549 Bobstefanik	13.0	X	132.68155	179.10867	2.34437	13.93989	0.0951154	0.23571770	2.5954216	20	9 6.4	16.9
5550 1981 UB_1	12.2	X	2.77941	284.97689	145.76537	1.11413	0.1799163	0.18141285	3.0904664	20	—	—
5551 Glikson	13.3	X	296.90675	38.12837	117.14491	23.99606	0.1964593	0.27953982	2.3165425	20	—	—
5552 Studnička	12.8	X	12.81364	250.33047	174.42379	8.21686	0.2462079	0.21302580	2.7766081	20	—	—
5553 Chodas	13.4	X	6.80483	0.53636	161.97769	9.80772	0.2091957	0.21802477	2.7340020	20	2 1.6	16.0
5554 Keesey	13.9	X	104.55250	73.63274	311.81772	7.72012	0.1974732	0.29328987	2.2435617	20	1 13.1	16.1
5555 Wimberly	12.4	X	130.34088	56.01218	2.79753	10.14942	0.1092569	0.18883765	3.0089178	20	3 27.3	16.9
5556 1988 AL	13.6	X	304.56860	358.79442	167.92925	8.58846	0.1719930	0.21181005	2.7872227	20	—	—
5557 Chimikeppuko	12.9	X	189.98508	224.25136	10.57529	5.91413	0.1548264	0.24343291	2.5402894	20	—	—
5558 Johnnapier	14.2	X	138.64261	264.81842	138.86967	23.38125	0.1129025	0.36609960	1.9352476	20	3 4.6	16.4
5559 1990 MV	12.7	X	50.68309	177.72776	92.37948	11.31475	0.2298406	0.26752025	2.3854205	20	10 22.7	16.1
5560 Amytis	13.7	X	257.34865	178.08229	74.95268	5.61867	0.1079709	0.28512023	2.2862165	20	1 2.8	16.8
5561 Iguchi	13.3	X	295.84322	70.84947	304.39847	5.91873	0.1544004	0.30490899	2.1861967	20	8 11.4	14.9
5562 1991 VS	13.6	X	15.09645	50.28614	92.94668	7.62368	0.1130434	0.25158484	2.4851145	20	1 22.8	16.1
5563 1991 VZ_1	12.0	X	22.07441	48.13637	68.05034	10.47541	0.0642315	0.21448559	2.7639953	20	1 7.5	15.5
5564 1991 VH_2	13.3	X	242.28075	133.30234	82.69301	7.60114	0.1244609	0.24504312	2.5291488	20	—	—
5565 Ukyounodaibu	12.1	X	30.41945	266.10041	138.74656	10.30524	0.2159035	0.20912338	2.8110441	20	—	—
5566 1991 VY_3	12.8	X	334.15205	309.33204	153.59690	1.51973	0.1554564	0.17357049	3.1828692	20	—	—
5567 Durisen	11.4	X	2.75766	307.98079	8.99335	16.15760	0.2200775	0.19547324	2.9404322	20	9 20.5	14.3
5568 Mufson	13.4	X	239.13811	241.69035	81.12538	3.70458	0.1573310	0.28923496	2.2644819	20	3 11.6	16.9
5569 Colby	13.4	X	345.21887	283.15834	353.74478	5.26644	0.1595169	0.25938847	2.4350186	20	6 10.3	15.5
5570 Kirsan	12.5	X	270.22045	325.58514	174.02425	10.77150	0.0722079	0.16955419	3.2329354	20	12 7.8	17.1
5571 Lesliegreen	12.0	X	101.80616	205.46611	280.90796	9.70324	0.0637168	0.18775133	3.0205129	20	5 10.2	16.5
5572 Bliskunov	12.5	X	261.83620	75.53631	197.68371	8.93403	0.1572762	0.17803440	3.1294410	20	2 8.1	17.5
5573 Hilarydownes	13.8	X	131.46059	103.65696	178.32144	11.20246	0.2905096	0.23618540	2.5919941	20	—	—
5574 Seagrave	12.3	X	187.62531	346.82615	144.87873	14.00094	0.1122072	0.22941249	2.6427617	20	8 28.2	16.4
5575 Ryanpark	12.8	X	115.64477	231.09500	142.85821	0.59536	0.1881744	0.18197666	3.0840797	20	1 28.7	17.4
5576 Albanese	12.4	X	38.64699	69.59158	30.84002	5.61508	0.0729948	0.21506735	2.7590086	20	1 12.3	15.8
5577 Priestley	14.2	X	195.40794	228.10047	97.01078	22.27497	0.0443995	0.39348501	1.8443808	20	1 7.9	15.9
5578 Takakura	12.7	X	5.37324	186.10584	179.59798	1.98462	0.0752730	0.19809650	2.9144158	20	11 12.2	16.4
5579 Uhlherr	14.2	X	187.55828	247.91644	80.87813	23.54598	0.0975955	0.36220321	1.9491018	20	1 14.3	16.8
5580 Sharidake	13.8	X	87.96661	35.35219	17.22596	5.77855	0.1535066	0.29108990	2.2548515	20	1 19.0	16.0
5581 Mitsuko	14.1	X	142.60244	35.18989	165.44438	2.48735	0.1599458	0.26849421	2.3796482	20	10 13.6	17.8
5582 1989 CU_8	12.8	X	197.40420	61.90392	18.15202	2.09064	0.0177647	0.19976224	2.8981917	20	7 5.9	16.9
5583 Braunerová	12.6	X	191.41233	41.37747	60.28991	2.89823	0.0194446	0.20150841	2.8814246	20	7 27.2	16.7
5584 Izenberg	13.0	X	44.38786	37.14434	199.90506	12.82246	0.1239693	0.22542550	2.6738314	20	7 27.6	16.6
5585 Parks	14.0	X	230.34307	76.14778	264.83232	28.59277	0.3992793	0.22076838	2.7113035	20	3 3.0	19.8
5586 1990 RE_6	13.1	X	153.57334	52.82446	160.56645	3.77195	0.1461711	0.26940657	2.3742727	20	11 9.7	16.7
5587 1990 SB	13.8	X	39.27330	86.77351	189.95215	18.09775	0.5448121	0.26568322	2.3964036	20	11 21.7	18.1
5588 Jennabelle	12.6	X	160.01228	254.46609	93.60263	12.35403	0.1387741	0.21181424	2.7871860	20	2 4.8	17.0
5589 De Meis	13.4	X	275.79505	42.42954	218.75919	2.01890	0.0393724	0.21631398	2.7483982	20	2 19.6	17.3
5590 1990 VA	19.7	X	214.38048	34.49090	216.29168	14.18553	0.2795408	1.00712884	0.9857029	20	—	—
5591 Koyo	13.2	X	148.67911	191.77239	188.07019	4.23796	0.0869663	0.21272239	2.7792476	20	2 23.8	17.2
5592 Oshima	11.9	X	165.73422	99.98574	231.61812	8.49269	0.0671427	0.17443496	3.1723447	20	1 17.5	16.8
5593 Jonsujatha	13.3	X	247.37229	340.62482	167.48482	5.32248	0.0991012	0.28807211	2.2705718	20	12 14.5	15.8
5594 Jimmiller	11.8	X	117.67522	111.41279	128.46783	10.29854	0.0516680	0.17523472	3.1626850	20	10 23.3	16.6
5595 Roth	12.5	X	91.57532	262.89608	129.57318	9.82669	0.1634620	0.21913867	2.7247293	20	1 12.1	15.8
5596 Morbidelli	13.3	X	215.94614	220.81466	261.75153	4.23461	0.0840175	0.30726066	2.1750274	20	9 27.6	16.1
5597 Warren	13.4	X	213.44567	326.46500	328.43831	4.55851	0.2089810	0.25775661	2.4452851	20	1 15.2	17.4
5598 Carlmurray	13.0	X	210.40714	174.11996	283.45377	5.04423	0.1127200	0.30388047	2.1911269	20	8 12.2	15.8
5599 1991 SG_1	12.9	X	155.15180	196.76100	265.72819	6.44760	0.1317539	0.26157433	2.4214340	20	6 17.9	16.6
5600 1991 UY	13.3	X	119.47069	316.21762	74.29071	7.02919	0.1307663	0.28675137	2.2775384	20	2 2.0	16.1

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
5601	1991 *VR*	13.7	*X*	337.97362	359.69087	15.48208	4.83083	0.1241791	0.30636776	2.1792515	20	11 13.4	15.5
5602	1991 VM_1	14.1	*X*	156.97576	109.92581	123.65571	4.82281	0.0818342	0.30987798	2.1627629	20	12 19.7	16.8
5603	Rausudake	10.7	*X*	160.54744	9.73506	195.95685	4.37407	0.0532195	0.12419017	3.9787309	20	10 17.2	16.6
5604	1992 *FE*	17.2	*X*	307.60916	82.65284	311.90988	4.71535	0.4060068	1.10146412	0.9285867	20	—	—
5605	Kushida	13.3	*X*	335.24463	180.13449	10.30012	4.30098	0.1040581	0.28949795	2.2631103	20	1 17.2	15.8
5606	Muramatsu	13.5	*X*	55.01995	15.09953	178.14552	7.07579	0.1276382	0.29685104	2.2255824	20	6 18.7	15.9
5607	1993 *EN*	12.7	*X*	255.30443	205.80662	154.93451	8.13916	0.1295862	0.22500762	2.6771409	20	5 23.4	16.6
5608	Olmos	13.1	*X*	12.81367	255.24796	38.91504	3.07790	0.0468264	0.22941253	2.6427614	20	8 23.4	16.3
5609	Stroncone	12.8	*X*	264.21007	290.92878	3.94601	1.38525	0.1527558	0.18172798	3.0868926	20	3 9.5	17.5
5610	Balster	12.8	*X*	192.53030	330.45743	243.66974	3.35391	0.0443924	0.21002018	2.8030362	20	12 16.3	16.9
5611	1943 *DL*	12.8	*X*	202.26706	112.44008	353.95443	12.41772	0.1330135	0.23540066	2.5977514	20	8 13.2	16.8
5612	Nevskij	13.2	*X*	79.65488	39.69429	52.95164	7.75188	0.0992026	0.25156313	2.4852574	20	3 4.0	16.2
5613	Donskoj	12.9	*X*	350.81575	46.91835	10.22384	1.63102	0.1741926	0.18001374	3.1064589	20	12 29.8	16.3
5614	Yakovlev	13.4	*X*	152.64634	120.93184	212.58693	6.67121	0.3273638	0.20239628	2.8729917	20	1 22.9	18.5
5615	Iskander	14.2	*X*	260.34629	120.88696	209.37084	4.74541	0.1932492	0.28780847	2.2719582	20	4 6.3	17.4
5616	Vogtland	13.9	*X*	150.99766	28.84388	83.65807	3.21094	0.1955597	0.23053056	2.6342099	20	6 28.6	18.3
5617	Emelyanenko	13.7	*X*	123.47364	255.11416	243.29194	5.42784	0.1424196	0.26068956	2.4269098	20	7 2.4	17.2
5618	Saitama	14.3	*X*	26.70426	342.74217	142.12370	7.06984	0.1238104	0.29291589	2.2454709	20	1 4.7	16.2
5619	Shair	12.7	*X*	310.97465	142.04377	176.11024	25.26177	0.2159056	0.23201381	2.6229710	20	5 30.1	16.3
5620	Jasonwheeler	17.0	*X*	155.02884	153.78688	128.67917	7.87198	0.4224216	0.31053133	2.1597282	20	—	—
5621	Erb	14.0	*X*	213.16408	5.23265	278.93547	5.54580	0.3861107	0.28207254	2.3026548	20	—	—
5622	1990 TL_4	12.1	*X*	148.89918	53.28179	277.26269	8.09345	0.1696263	0.20990248	2.8040839	20	1 5.0	16.3
5623	Iwamori	11.9	*X*	268.81897	193.50300	168.05615	10.98778	0.1042262	0.18851715	3.0123272	20	6 12.4	16.3
5624	Shirley	12.3	*X*	278.39722	218.35378	154.62573	10.65825	0.0522756	0.18773132	3.0207276	20	7 15.8	16.6
5625	Jamesferguson	13.0	*X*	295.74477	217.15358	174.82987	11.96516	0.1926173	0.22520508	2.6755758	20	8 17.9	16.2
5626	1991 *FE*	14.2	*X*	74.92455	231.88144	173.09691	3.84855	0.4543918	0.30315805	2.1946064	20	2 3.2	15.1
5627	1991 *MA*	14.3	*X*	123.45130	169.66126	77.77191	26.35349	0.0211466	0.38306959	1.8776628	20	12 17.6	15.9
5628	Preussen	13.0	*X*	82.75937	128.13094	275.23408	3.69830	0.0445529	0.21545902	2.7556640	20	—	—
5629	Kuwana	11.8	*X*	119.47897	282.18051	145.57592	10.07666	0.0781977	0.18514629	3.0487797	20	3 26.0	16.2
5630	Billschaefer	13.7	*X*	340.92956	64.74895	182.82811	2.89876	0.1405366	0.29336037	2.2432022	20	4 15.1	15.5
5631	Sekihokutouge	13.5	*X*	133.69475	277.30366	7.09153	1.22954	0.0932365	0.27625522	2.3348683	20	—	—
5632	Ingelehmann	12.0	*X*	292.92301	192.39932	82.30946	18.19499	0.0834273	0.21690859	2.7433731	20	4 3.6	16.1
5633	1978 UL_7	13.4	*X*	197.94561	352.43033	258.03590	2.43327	0.1112203	0.31279244	2.1493075	20	—	—
5634	Victorborge	14.6	*X*	201.54315	31.04110	261.24071	3.36343	0.0832749	0.31342333	2.1464223	20	—	—
5635	Cole	14.0	*X*	102.80447	54.15423	274.05431	7.31334	0.2687090	0.26752268	2.3854060	20	—	—
5636	Jacobson	12.8	*X*	226.49568	195.51227	125.51634	2.40371	0.1343299	0.21470378	2.7621224	20	3 3.3	17.0
5637	Gyas	11.5	*X*	279.16648	331.26340	1.96081	22.42274	0.1183099	0.08404167	5.1618606	20	5 10.1	18.6
5638	Deikoon	10.5	*X*	325.32798	92.50288	156.02604	10.91411	0.1073994	0.08210879	5.2425543	20	4 13.8	17.1
5639	Ćuk	14.9	*X*	176.55270	87.73974	149.55590	26.60497	0.0229808	0.39120313	1.8515460	20	—	—
5640	Yoshino	13.5	*X*	71.42627	173.43084	166.69050	3.12474	0.2512838	0.22877343	2.6476810	20	—	—
5641	McCleese	14.0	*X*	66.48367	57.14260	151.29746	22.20176	0.1264187	0.40148254	1.8198054	20	8 8.8	15.8
5642	Bobbywilliams	14.1	*X*	154.73760	39.12959	310.07183	24.96091	0.3328883	0.27971822	2.3155574	20	2 5.1	18.0
5643	Roques	14.5	*X*	112.65241	114.63730	163.53395	5.00617	0.1716067	0.30400158	2.1905449	20	12 27.2	17.8
5644	Maureenbell	12.1	*X*	64.80746	263.15854	165.98386	14.33061	0.1115814	0.17839534	3.1252185	20	1 19.3	16.3
5645	1990 *SP*	17.1	*X*	244.26308	48.23350	45.74092	13.50255	0.3874349	0.62487810	1.3549996	20	—	—
5646	1990 *TR*	15.4	*X*	172.46764	335.72865	14.10770	7.90628	0.4359096	0.31407685	2.1434438	20	2 24.7	19.5
5647	1990 *TZ*	12.2	*X*	244.37728	228.03617	240.14741	21.91277	0.2694971	0.26109461	2.4243991	20	9 2.5	16.3
5648	1990 VU_1	9.7	*X*	245.67361	268.76364	71.04456	22.69476	0.1662317	0.08438106	5.1480103	20	4 25.2	17.1
5649	Donnashirley	14.6	*X*	193.36729	62.55357	3.43879	21.72284	0.3367847	0.28619096	2.2805107	20	5 29.1	19.3
5650	Mochihito–o	11.9	*X*	276.47893	280.58929	254.32786	12.26615	0.1099875	0.23271295	2.6177150	20	—	—
5651	Traversa	11.6	*X*	207.13263	229.16479	139.10269	14.65186	0.1579785	0.17719256	3.1393451	20	4 16.7	16.9
5652	Amphimachus	10.1	*X*	328.87125	108.29918	281.62638	1.89898	0.0767392	0.08289178	5.2094886	20	9 27.3	16.7
5653	Camarillo	16.2	*X*	127.81856	122.54355	9.94564	6.87238	0.3041422	0.40993897	1.7946919	20	7 17.7	19.0
5654	Terni	12.6	*X*	337.06903	130.85969	13.40084	8.81699	0.2005402	0.21297454	2.7770536	20	—	—
5655	Barney	13.1	*X*	243.13921	21.21604	193.48143	14.49374	0.0389907	0.23796618	2.5790468	20	—	—
5656	Oldfield	14.1	*X*	330.29730	83.55758	248.66743	4.01359	0.2638426	0.25541400	2.4602142	20	7 28.2	15.6
5657	Groombridge	12.8	*X*	21.34935	204.16532	166.60288	14.12437	0.1649450	0.23688794	2.5868669	20	—	—
5658	Clausbaader	13.1	*X*	244.80784	106.61277	285.43226	2.80495	0.0555353	0.21530452	2.7569821	20	6 28.7	17.0
5659	Vergara	15.0	*X*	146.82258	169.42006	210.95106	6.41083	0.1247259	0.27711919	2.3300128	20	2 17.8	18.4
5660	1974 *MA*	15.4	*X*	56.96948	127.02953	302.15520	38.13173	0.7621002	0.41322843	1.7851550	20	—	—
5661	Hildebrand	11.0	*X*	170.47157	1.65376	317.07339	13.31626	0.2351673	0.12479321	3.9659029	20	1 24.4	17.5
5662	Wendycalvin	12.9	*X*	177.54566	261.47941	307.70274	8.54093	0.0242639	0.19057195	2.9906349	20	11 18.5	17.3
5663	McKeegan	14.7	*X*	80.10260	95.50322	240.14849	6.45184	0.2692681	0.26671499	2.3902194	20	—	—
5664	Eugster	14.7	*X*	92.94857	158.22969	203.81845	5.84823	0.1374845	0.27063550	2.3670796	20	—	—
5665	Begemann	14.0	*X*	74.97568	261.19854	314.85542	5.15667	0.0930968	0.29343273	2.2428334	20	8 16.5	16.7
5666	Rabelais	13.3	*X*	129.43127	252.73115	241.70908	3.39646	0.1228681	0.25156397	2.4852519	20	7 1.9	16.8
5667	Nakhimovskaya	13.8	*X*	249.21524	174.70445	155.58008	4.10446	0.1879981	0.28685039	2.2770143	20	3 28.1	17.2
5668	Foucault	13.6	*X*	201.20980	157.97000	22.89519	6.10051	0.1082555	0.28759406	2.2730872	20	11 22.5	16.6
5669	1985 CC_2	13.6	*X*	62.08015	81.96484	119.93740	3.75051	0.0341635	0.28777158	2.2721523	20	6 26.9	16.2
5670	Rosstaylor	11.4	*X*	334.22039	197.84177	270.62676	19.84924	0.1105201	0.17399777	3.1776564	20	—	—
5671	Chanal	12.6	*X*	37.25533	281.19622	122.06624	3.68577	0.0866596	0.22950252	2.6420705	20	—	—
5672	Libby	13.1	*X*	60.12394	354.19487	171.77548	10.21855	0.0510944	0.26341448	2.4101438	20	5 7.1	16.1
5673	McAllister	13.5	*X*	178.54159	336.24915	338.41192	1.60128	0.0623626	0.27464507	2.3439851	20	—	—
5674	Wolff	13.4	*X*	115.46815	311.84244	39.81710	1.70118	0.1652198	0.27218386	2.3580941	20	—	—
5675	Evgenilebedev	13.7	*X*	138.75873	78.16553	227.50846	5.72065	0.1389265	0.27066334	2.3669174	20	—	—
5676	Voltaire	12.4	*X*	208.69247	149.32209	207.32952	14.01509	0.1770310	0.25166928	2.4845586	20	3 23.6	16.5
5677	Aberdonia	12.6	*X*	253.60510	218.48319	200.94719	1.49870	0.0581770	0.20624622	2.8371267	20	8 14.1	16.5
5678	DuBridge	13.9	*X*	309.99017	297.13827	48.03135	34.08648	0.2745905	0.21845301	2.7304278	20	6 13.9	17.5
5679	Akkado	13.0	*X*	168.40863	126.20407	182.57190	2.04877	0.0409706	0.19994791	2.8963973	20	—	—
5680	Nasmyth	12.7	*X*	196.32081	10.98773	46.70790	1.64492	0.1489957	0.17494165	3.1662162	20	5 31.1	17.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5681 Bakulev	13.8	X	63.32946	7.15388	322.86670	5.19701	0.1895779	0.30208170	2.1998164	20	—	—
5682 Beresford	13.7	X	190.61011	138.57585	212.77080	7.96122	0.2987991	0.28321320	2.2964680	20	2 29.9	18.0
5683 Bifukumonin	13.7	X	17.04495	297.07559	65.65589	4.78720	0.2157801	0.29958801	2.2120066	20	—	—
5684 Kogo	14.1	X	38.72122	221.79760	91.23200	5.55419	0.2174144	0.29789180	2.2203956	20	12 3.3	17.0
5685 Sanenobufukui	11.7	X	19.20520	267.07860	276.99211	7.71071	0.0913364	0.21036558	2.7999671	20	3 28.3	15.2
5686 Chiyonoura	14.1	X	35.74656	196.03998	207.34340	1.45540	0.2090263	0.26780641	2.3837209	20	—	—
5687 Yamamotoshinobu	11.2	X	324.98699	239.51954	130.20918	12.44564	0.1712786	0.18871813	3.0101881	20	9 13.4	14.5
5688 Kleewyck	13.2	X	59.19695	246.22515	141.52821	4.02816	0.1603176	0.23265788	2.6181280	20	—	—
5689 Rhön	13.8	X	21.10676	218.82114	234.19820	5.00621	0.1123660	0.21536812	2.7564394	20	—	—
5690 1992 *EU*	13.1	X	57.15701	81.90931	0.80563	29.00944	0.3801924	0.21042740	2.7994187	20	3 8.5	15.9
5691 Fredwatson	13.3	X	281.49502	34.42125	175.78068	26.20587	0.1161820	0.27634669	2.3343530	20	—	—
5692 Shirao	12.5	X	155.19451	44.02365	181.75409	11.92755	0.1816767	0.22784359	2.6548797	20	11 19.9	17.0
5693 1993 *EA*	16.6	X	182.30291	258.88514	97.03423	5.05470	0.5851484	0.68788134	1.2709458	20	2 24.9	17.9
5694 Berényi	13.2	X	109.39867	79.12093	227.56621	12.25403	0.1688373	0.23416641	2.6068716	20	—	—
5695 Remillieux	12.9	X	239.06520	273.06513	174.05081	12.70231	0.1374976	0.22867288	2.6484571	20	8 21.9	16.7
5696 Ibsen	12.3	X	199.38127	289.81979	18.19349	3.33815	0.1609152	0.17227561	3.1987982	20	1 28.2	17.6
5697 Arrhenius	12.5	X	316.25509	116.22791	170.51622	13.67863	0.0723511	0.17693928	3.1423403	20	5 17.2	16.9
5698 Nolde	12.6	X	308.38572	157.78439	74.11135	1.55293	0.1113538	0.17883830	3.1200558	20	2 19.7	16.9
5699 Munch	13.9	X	138.21448	148.67439	257.50357	4.33923	0.1751309	0.26460876	2.4028864	20	3 19.5	17.6
5700 Homerus	13.3	X	143.92197	123.87144	163.65136	12.92425	0.1649519	0.23559112	2.5963512	20	—	—
5701 Baltuck	12.5	X	306.21581	348.19974	34.93220	6.21769	0.1904411	0.21550934	2.7552350	20	8 29.1	15.4
5702 Morando	13.7	X	43.38115	224.74587	352.88923	5.32578	0.1259731	0.28972765	2.2619140	20	7 7.1	16.0
5703 Hevelius	13.0	X	129.23210	13.09610	36.66389	14.27380	0.1763160	0.23753034	2.5822007	20	3 24.9	17.0
5704 Schumacher	12.1	X	47.99108	40.50569	151.58488	11.59217	0.1128072	0.17066396	3.2189050	20	6 3.3	16.5
5705 Ericsterken	13.6	X	205.26346	351.60373	2.14700	4.68133	0.2253416	0.27996982	2.3141699	20	3 17.2	17.4
5706 Finkelstein	12.8	X	257.38698	359.71315	67.85167	1.55937	0.1836588	0.17727824	3.1383335	20	8 9.8	17.2
5707 Shevchenko	13.4	X	290.72109	318.16490	190.40297	4.34171	0.0655060	0.30479538	2.1867399	20	—	—
5708 Melancholia	14.4	X	118.31072	116.12507	223.94024	3.24168	0.2111995	0.30633613	2.1794014	20	—	—
5709 Tamyeunleung	12.3	X	326.93451	260.95090	113.58438	4.20573	0.2435183	0.18162601	3.0880478	20	9 16.2	15.2
5710 Silentium	14.0	X	115.92814	2.16002	358.11151	3.36777	0.1509937	0.30687404	2.1768539	20	—	—
5711 Eneev	11.1	X	167.47703	295.77149	14.16872	6.36810	0.1645927	0.12580965	3.9445132	20	1 9.6	17.4
5712 Funke	12.9	X	308.07337	128.87502	206.26904	8.57816	0.1693652	0.21353052	2.7722310	20	6 22.6	16.2
5713 1982 FF_3	13.7	X	309.62414	152.05830	276.42888	1.64446	0.1199448	0.29915622	2.2141347	20	12 9.6	15.3
5714 Krasinsky	12.1	X	276.19798	337.02245	30.52262	1.07643	0.2007637	0.17770542	3.1333021	20	6 14.1	16.5
5715 Kramer	12.5	X	216.58733	91.04453	283.62006	4.00401	0.1668875	0.17298947	3.1899921	20	4 25.8	17.7
5716 Pickard	14.0	X	78.30065	147.67900	257.14086	2.28810	0.1937182	0.26885840	2.3774988	20	—	—
5717 Damir	14.2	X	97.12000	335.98718	355.26512	2.27009	0.2167597	0.26570079	2.3962979	20	—	—
5718 1983 *PB*	15.1	X	65.15949	243.39625	73.27762	6.08420	0.2313559	0.29931359	2.2133585	20	—	—
5719 Křižík	13.5	X	78.43866	339.66027	319.68147	4.36816	0.1695454	0.29857983	2.2169832	20	12 21.4	16.8
5720 Halweaver	13.7	X	185.69456	82.18169	47.77998	23.46533	0.3067759	0.28372482	2.2937064	20	9 1.2	18.3
5721 1984 SO_5	13.4	X	6.77496	249.55019	141.63921	4.66590	0.1221895	0.22411843	2.6842173	20	12 29.4	16.6
5722 Johnscherrer	13.9	X	73.63425	141.75141	128.59848	6.39280	0.1543518	0.29812960	2.2192147	20	11 10.2	17.0
5723 Hudson	14.2	X	299.73670	194.24578	163.14086	5.58340	0.2447980	0.28757810	2.2731713	20	7 1.6	16.2
5724 1986 *WE*	13.5	X	233.81104	41.31892	100.41281	6.36910	0.1950307	0.25907699	2.4369698	20	10 27.8	16.9
5725 Nördlingen	12.9	X	115.72231	76.93169	55.25946	22.54169	0.0554330	0.22446084	2.6814867	20	6 1.9	16.7
5726 Rubin	13.5	X	260.54841	163.68245	69.07294	25.26363	0.1564307	0.27360483	2.3499225	20	—	—
5727 1988 BB_4	13.7	X	6.07385	256.23966	269.94178	6.21537	0.0753676	0.27725870	2.3292312	20	2 3.7	16.2
5728 1988 BJ_4	13.8	X	286.04467	226.97395	154.38739	4.24008	0.0936374	0.28951394	2.2630270	20	8 11.4	16.0
5729 1988 TA_1	12.8	X	296.84671	205.79466	203.23002	10.23318	0.0903091	0.18327306	3.0695187	20	9 20.1	16.8
5730 Yonosuke	12.5	X	145.86586	269.48623	90.07171	1.85466	0.1013690	0.19819955	2.9134055	20	1 31.8	16.9
5731 Zeus	15.6	X	65.37653	217.04434	281.66753	11.42320	0.6533794	0.28923988	2.2644562	20	7 5.3	19.3
5732 1988 *WC*	14.6	X	150.94189	253.26804	240.62602	22.45213	0.4039972	0.29732719	2.2232056	20	7 24.0	19.4
5733 1989 *AQ*	12.6	X	212.30868	335.15041	80.22285	1.97384	0.1558246	0.17138485	3.2098724	20	6 11.8	17.6
5734 Noguchi	13.9	X	267.11898	13.31829	98.40649	7.44603	0.0717678	0.27426508	2.3461496	20	11 24.7	16.6
5735 Loripaul	13.9	X	327.24193	357.07911	282.44891	5.07893	0.1492768	0.28516553	2.2859744	20	5 6.2	16.1
5736 Sanford	13.9	X	134.50303	91.09949	223.75894	21.58858	0.2760013	0.26905466	2.3763425	20	—	—
5737 Itoh	13.3	X	194.80227	104.95605	323.01366	5.84299	0.2122075	0.24478238	2.5309444	20	6 9.8	17.7
5738 Billpickering	15.0	X	239.76973	246.30103	239.31588	21.77500	0.4800368	0.21800464	2.7341703	20	8 25.8	20.4
5739 Robertburns	13.5	X	202.44983	300.25385	143.51477	25.25721	0.3221019	0.21210167	2.7846674	20	7 3.0	18.9
5740 Toutoumi	12.6	X	55.66192	19.25503	49.08416	13.54896	0.1920306	0.23137037	2.6278317	20	—	—
5741 Akanemaruta	12.8	X	149.69089	301.26468	83.31616	3.22988	0.1071187	0.20350700	2.8625285	20	3 6.9	17.1
5742 1990 TN_4	11.8	X	352.32107	116.50934	77.87639	14.39292	0.0742348	0.18003366	3.1062298	20	3 16.6	16.1
5743 Kato	13.4	X	266.69438	108.46798	333.76837	3.05078	0.1012258	0.29484821	2.2356495	20	10 9.9	15.6
5744 Yorimasa	13.7	X	358.01396	220.22344	188.68222	4.84008	0.1392121	0.29779063	2.2208984	20	—	—
5745 1991 *AN*	13.9	X	67.75510	28.50595	23.19339	4.88237	0.1595607	0.30389824	2.1910415	20	—	—
5746 1991 *CK*	13.4	X	195.15479	16.45577	356.48747	5.05319	0.2157376	0.27727404	2.3291453	20	3 31.9	17.4
5747 1991 CO_3	12.5	X	13.92344	171.02363	282.10026	24.63674	0.2416749	0.26558370	2.3970022	20	—	—
5748 Davebrin	13.6	X	108.01351	263.81437	176.48798	12.95028	0.1474407	0.24080735	2.5587207	20	3 31.8	17.1
5749 1991 *FV*	11.9	X	92.42631	36.88436	265.11755	9.60351	0.0769592	0.18901780	3.0070057	20	12 9.1	16.2
5750 Kandatai	12.0	X	305.41636	146.20429	333.00693	9.89170	0.0535603	0.19071380	2.9891517	20	—	—
5751 Zao	14.8	X	97.17953	25.30521	121.66604	16.07353	0.4234748	0.32295478	2.1039798	20	7 16.7	18.4
5752 1992 *CJ*	13.6	X	77.33367	39.91492	203.72448	5.51383	0.1235529	0.29324776	2.2437764	20	10 1.9	16.5
5753 Yoshidatadahiko	13.3	X	15.79639	305.81713	327.30890	8.60963	0.1644759	0.28875530	2.2669890	20	8 18.7	15.2
5754 1992 FR_2	12.9	X	320.52440	226.61247	105.38794	5.53742	0.1417031	0.28856318	2.2679951	20	7 22.7	14.6
5755 1992 OP_7	11.7	X	32.03554	83.70506	308.40936	9.26476	0.1117148	0.18767635	3.0213174	20	—	—
5756 Wassenbergh	14.1	X	149.82302	144.10327	197.98574	7.59958	0.2253172	0.23742674	2.5829518	20	1 19.6	18.4
5757 Tichá	12.2	X	165.85434	242.92291	38.18252	13.68759	0.1823562	0.19545543	2.9406109	20	—	—
5758 Brunini	14.0	X	351.69399	264.22078	62.44995	6.76383	0.0621108	0.29243864	2.2479133	20	9 19.9	16.4
5759 Zoshchenko	13.0	X	262.12958	246.62570	57.63668	2.98919	0.0312764	0.20104738	2.8858280	20	4 1.6	16.9
5760 Mittlefehldt	13.0	X	114.97908	102.47164	210.37042	9.57444	0.0925447	0.19243538	2.9712972	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5761 Andreivanov	13.9	X	284.07750	98.40389	345.00450	9.23201	0.3555763	0.21761247	2.7374542	20	9 11.8	16.9
5762 Wänke	14.0	X	183.63587	157.57989	191.71396	4.82882	0.1350484	0.27568298	2.3380982	20	2 18.7	17.6
5763 1982 *MA*	14.7	X	289.34988	129.79840	169.08389	0.26246	0.1654822	0.25610091	2.4558130	20	4 4.5	17.8
5764 1985 CS_1	13.4	X	21.26923	77.27134	172.83167	4.95202	0.2145870	0.28690397	2.2767308	20	7 29.5	15.2
5765 Izett	12.5	X	32.60729	59.06755	81.42770	31.32378	0.2712368	0.23019928	2.6367366	20	3 27.9	15.7
5766 1986 QR_3	13.7	X	289.20558	253.72900	28.56170	4.74434	0.0849915	0.28225638	2.3016549	20	3 24.1	16.3
5767 Moldun	14.2	X	351.23329	105.16421	187.94816	4.45692	0.1867009	0.28784046	2.2717899	20	7 25.9	15.7
5768 Pittich	12.9	X	320.90214	270.76041	235.54756	11.92247	0.0714766	0.26953933	2.3734930	20	—	—
5769 Michard	12.4	X	132.30633	26.70060	293.54854	9.01190	0.0919396	0.18990998	2.9975806	20	—	—
5770 1987 *RY*	12.7	X	253.21757	251.25718	63.10322	0.37462	0.1823405	0.17170279	3.2059086	20	3 19.5	17.8
5771 Somerville	12.3	X	310.87548	102.96244	287.91299	8.26752	0.2165116	0.17709829	3.1404591	20	8 31.3	15.9
5772 Johnlambert	13.0	X	279.73197	8.13201	275.25812	12.23729	0.1278858	0.24146064	2.5541034	20	3 2.9	16.8
5773 1989 *NO*	13.6	X	75.17946	264.11762	355.71279	4.76097	0.1532114	0.29160279	2.2522068	20	10 23.7	16.7
5774 Ratliff	14.0	X	116.60689	27.94491	311.38165	9.44224	0.0839440	0.30062072	2.2069379	20	—	—
5775 Inuyama	12.8	X	177.94929	136.57454	204.61552	11.25755	0.1866801	0.23912168	2.5707316	20	2 7.4	17.2
5776 1989 UT_2	13.0	X	235.65088	58.00593	224.27448	12.18977	0.1670752	0.23834703	2.5762987	20	1 17.8	17.4
5777 Hanaki	12.6	X	205.05203	255.33629	113.28566	8.70668	0.2094982	0.24059704	2.5602116	20	4 10.4	17.1
5778 Jurafrance	11.9	X	213.40198	59.23232	279.50899	14.01335	0.1296804	0.23710475	2.5852897	20	3 2.6	16.2
5779 Schupmann	12.4	X	312.73686	316.21443	147.73234	10.94352	0.0802225	0.18888332	3.0084328	20	12 26.7	16.4
5780 Lafontaine	12.2	X	154.52407	115.10952	233.28916	8.67648	0.1317985	0.16098275	3.3466977	20	1 31.2	17.6
5781 Barkhatova	13.6	X	132.88134	170.53860	259.09083	2.71135	0.0386548	0.31569296	2.1361223	20	3 24.6	16.0
5782 Akirafujiwara	13.9	X	214.41661	180.88920	247.39885	5.57989	0.0880630	0.28546074	2.2843981	20	7 8.5	17.0
5783 Kumagaya	13.4	X	235.08364	207.35876	300.21340	5.81004	0.0318840	0.29169022	2.2517567	20	12 5.9	16.1
5784 Yoron	13.0	X	290.54963	229.32349	289.94042	9.43041	0.1226262	0.22961526	2.6412057	20	—	—
5785 Fulton	12.9	X	33.15894	189.59774	310.92064	12.66398	0.1104143	0.23704462	2.5857269	20	2 19.2	15.8
5786 Talos	17.1	X	315.43663	8.35404	161.30142	23.22783	0.8267798	0.87636943	1.0814619	20	—	—
5787 1992 FA_1	13.6	X	65.67318	24.69237	242.91402	4.21091	0.1231351	0.29178323	2.2512782	20	10 19.8	16.4
5788 1992 *NJ*	12.3	X	224.11984	16.55356	26.65432	22.83872	0.0592479	0.17231146	3.1983546	20	6 12.1	17.4
5789 Sellin	14.2	X	141.20581	74.08977	353.36571	5.07125	0.2383728	0.23951059	2.5679481	20	4 25.3	18.5
5790 Nagasaki	13.9	X	182.10845	332.16622	15.50278	2.30995	0.1268010	0.23920738	2.5701176	20	2 20.6	17.9
5791 Comello	12.8	X	106.26553	305.40625	139.83011	2.83010	0.0246960	0.20100775	2.8862073	20	3 21.3	16.8
5792 Unstrut	13.3	X	69.88230	285.02503	105.20400	6.27196	0.2025795	0.26314450	2.4117920	20	—	—
5793 Ringuelet	12.5	X	127.84886	260.90240	78.04924	13.43663	0.1745786	0.22778771	2.6553138	20	—	—
5794 Irmina	12.9	X	299.92484	218.01213	172.93059	5.29592	0.1575257	0.17679134	3.1440930	20	8 23.4	16.8
5795 Roshchina	13.5	X	61.51347	334.37211	68.50305	8.39096	0.1552740	0.28974484	2.2618245	20	—	—
5796 Klemm	13.4	X	314.88530	61.60712	343.31004	1.97352	0.0613646	0.25697171	2.4502619	20	10 31.1	16.1
5797 Bivoj	18.7	X	184.32982	168.55760	298.94745	4.19016	0.4439525	0.37786931	1.8948506	20	7 20.2	22.0
5798 Burnett	12.5	X	195.96168	143.62585	247.19674	8.70662	0.0971271	0.23864015	2.5741887	20	4 25.9	16.4
5799 Brewington	13.4	X	136.94711	334.15203	14.02536	12.46322	0.1707828	0.23201567	2.6229570	20	1 14.1	17.5
5800 Pollock	13.0	X	344.59150	252.05466	112.75059	2.98523	0.1652079	0.18048002	3.1011061	20	10 11.4	16.3
5801 Vasarely	13.6	X	65.40230	82.06220	304.27774	4.24548	0.1021680	0.26975454	2.3722304	20	—	—
5802 Casteldelpiano	13.3	X	242.70950	123.67557	19.13145	2.39908	0.1564120	0.28799152	2.2709954	20	11 19.3	15.6
5803 Ötzi	12.6	X	99.70086	208.42693	133.36732	16.60489	0.2156543	0.22933738	2.6433387	20	—	—
5804 Bambinidipraga	13.3	X	81.13743	122.33885	213.26771	9.77245	0.1668145	0.26106075	2.4246087	20	—	—
5805 Glasgow	12.5	X	11.46935	253.49232	276.10518	11.86335	0.1169274	0.23480984	2.6021072	20	2 18.8	15.6
5806 Archieroy	12.9	X	256.10731	96.69579	300.85999	20.81890	0.0363901	0.35827699	1.9633155	20	8 2.6	14.7
5807 Mshatka	13.0	X	131.43190	201.62281	129.93774	2.09375	0.1078950	0.18488043	3.0517017	20	—	—
5808 Babel′	12.0	X	101.52583	211.88975	143.64307	10.86461	0.1059172	0.18942367	3.0027089	20	—	—
5809 Kulibin	12.9	X	301.16268	200.29700	110.10016	3.50131	0.0434389	0.20217354	2.8751015	20	5 28.2	16.8
5810 1988 *EN*	13.8	X	111.34743	103.04342	157.59599	5.07256	0.2278076	0.25937669	2.4350922	20	11 29.7	17.9
5811 Keck	12.9	X	185.44991	97.00978	227.26137	10.30251	0.3018980	0.23495875	2.6010077	20	1 28.8	17.9
5812 Jayewinkler	12.9	X	238.64061	341.13708	316.95182	14.60627	0.1149951	0.23524017	2.5989329	20	2 13.6	16.8
5813 Eizaburo	12.7	X	224.71582	162.14992	191.45948	11.26400	0.1725941	0.23523345	2.5989823	20	4 6.7	16.8
5814 1988 XW_1	11.8	X	38.01606	315.64841	69.08921	10.68743	0.1018962	0.18737232	3.0245848	20	—	—
5815 Shinsengumi	12.1	X	335.09092	221.81190	98.30623	22.83876	0.0397919	0.17271893	3.1933223	20	7 27.4	16.5
5816 Potsdam	12.6	X	15.25070	94.96368	316.76021	8.57665	0.0895607	0.18431495	3.0579404	20	—	—
5817 Robertfrazer	12.8	X	45.32744	82.83431	340.46562	21.10717	0.3404517	0.26376546	2.4080052	20	—	—
5818 1989 RC_1	13.2	X	123.99385	257.65831	114.47993	14.11999	0.2726881	0.26943775	2.3740895	20	2 4.7	16.5
5819 Lauretta	13.5	X	192.35323	277.97032	151.51039	5.62344	0.1608797	0.24487619	2.5302980	20	6 11.9	17.5
5820 Babelsberg	13.8	X	95.03856	228.35038	51.21128	2.51070	0.1105241	0.25627389	2.4547078	20	11 30.5	17.3
5821 Yukiomaeda	14.5	X	11.83661	292.31691	85.58215	1.69110	0.1380451	0.25721369	2.4487249	20	—	—
5822 Masakichi	13.7	X	40.36630	4.36695	81.71141	5.84427	0.1771318	0.26378016	2.4079158	20	—	—
5823 Oryo	12.6	X	273.22693	88.52476	308.49925	7.98169	0.1609326	0.21292820	2.7774564	20	7 26.9	16.3
5824 Inagaki	12.4	X	47.91413	173.50204	298.65069	12.66252	0.1215728	0.23117328	2.6293251	20	2 7.5	15.4
5825 Rakuyou	13.4	X	38.26608	293.06230	145.77624	12.09166	0.1684030	0.22737503	2.6585257	20	—	—
5826 Bradstreet	12.0	X	143.00117	90.86992	157.59185	2.48135	0.1395644	0.18310071	3.0714447	20	11 28.0	16.9
5827 Letunov	13.6	X	71.01376	284.13441	105.36932	3.70466	0.1300010	0.30522991	2.1846640	20	—	—
5828 1991 *AM*	16.0	X	64.80226	152.76306	125.42658	30.12732	0.6951778	0.44555758	1.6977230	20	12 27.3	20.3
5829 Ishidagoro	14.0	X	328.04895	146.88197	348.25097	5.78026	0.0883353	0.29838816	2.2179325	20	—	—
5830 Simohiro	15.0	X	214.98112	81.70984	48.21057	5.26546	0.2033526	0.28750852	2.2735381	20	9 23.4	18.2
5831 Dizzy	13.0	X	202.51643	165.47038	63.72748	12.79150	0.1436742	0.22371762	2.6874224	20	—	—
5832 Martaprincipe	12.3	X	195.23841	262.72149	110.63879	28.19017	0.1191650	0.23192611	2.6236322	20	4 18.9	17.0
5833 Peterson	11.0	X	50.91136	111.59675	306.64477	19.37757	0.0320864	0.15086889	3.4946438	20	—	—
5834 1992 SZ_{14}	12.0	X	281.23533	64.81413	229.34532	10.33191	0.0986823	0.20026029	2.8933845	20	3 30.1	16.3
5835 Mainfranken	12.7	X	212.30291	204.58493	251.93210	4.92382	0.1432552	0.17120236	3.2121530	20	7 31.3	17.7
5836 1993 *MF*	14.9	X	6.12071	77.93973	238.78408	7.94972	0.5369197	0.25863961	2.4397164	20	12 7.9	17.6
5837 Hedin	13.1	X	8.26000	155.11416	104.98738	2.18275	0.1441922	0.17827498	3.1266249	20	6 29.9	16.8
5838 Hamsun	13.5	X	273.19340	59.40333	186.50230	14.36842	0.1370845	0.24214996	2.5492541	20	1 12.3	17.5
5839 GOI	11.7	X	208.38178	143.17175	4.64213	16.94610	0.0842246	0.21504049	2.7592384	20	10 7.7	15.9
5840 Raybrown	12.6	X	14.97749	342.98826	25.42081	3.34702	0.1025251	0.21646904	2.7470856	20	12 6.4	16.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
5841 Stone	14.4	X	17.07098	45.38582	343.51870	20.09385	0.1043307	0.36881913	1.9257227	20	—	—
5842 Cancelli	13.0	X	227.85788	60.18397	295.46925	13.92440	0.1283513	0.23729426	2.5839131	20	4 6.9	17.3
5843 1986 *UG*	14.5	X	78.28461	266.81767	131.22032	2.38938	0.1471601	0.29984501	2.2107425	20	—	—
5844 1986 *UQ*	14.2	X	17.42568	94.04633	235.18040	2.23638	0.1239017	0.31982293	2.1176929	20	11 17.4	16.0
5845 Davidbrewster	12.3	X	112.34212	208.25020	293.22194	8.05872	0.0267735	0.17887465	3.1196331	20	6 8.6	16.8
5846 Hessen	14.6	X	97.32924	60.19401	58.16656	1.56994	0.1374500	0.25937587	2.4350974	20	5 4.9	17.6
5847 Wakiya	13.1	X	215.45065	101.30811	276.39353	6.57492	0.3047665	0.24322897	2.5417092	20	4 19.9	17.9
5848 Harutoriko	13.3	X	36.04316	229.21562	223.03063	2.76618	0.1614811	0.22772851	2.6557740	20	—	—
5849 Bhanji	11.0	X	92.80840	113.63349	129.60470	22.57047	0.0084964	0.17396331	3.1780760	20	9 25.3	15.8
5850 Masaharu	14.2	X	139.02008	258.38158	114.52527	2.34875	0.1736400	0.30987428	2.1627801	20	2 3.7	16.8
5851 Inagawa	12.4	X	256.87520	128.73274	164.11227	13.32478	0.1752717	0.23529997	2.5984925	20	2 20.8	16.6
5852 Nanette	12.1	X	106.85459	177.91138	78.54639	18.64828	0.2137471	0.21751876	2.7382403	20	11 17.6	16.8
5853 1992 *QG*	13.0	X	208.51710	110.33383	163.51174	7.35067	0.0688049	0.26323888	2.4112155	20	—	—
5854 1992 *UP*	12.4	X	108.58281	163.97478	69.33164	2.49746	0.1448671	0.17509959	3.1643120	20	10 9.9	17.3
5855 Yukitsuna	12.1	X	318.30602	323.57963	20.55683	15.50164	0.1548515	0.24150723	2.5537749	20	8 7.5	15.1
5856 1994 AL_2	13.1	X	172.43899	287.61505	105.67109	16.04953	0.1117595	0.23478693	2.6022765	20	4 14.8	17.4
5857 Neglinka	14.2	X	62.71081	193.40843	170.91637	2.20625	0.1339914	0.29015955	2.2596689	20	—	—
5858 Borovitskia	12.9	X	160.54553	306.03791	225.28854	5.86989	0.0461011	0.27988400	2.3146429	20	9 24.7	16.0
5859 Ostozhenka	13.5	X	320.80453	30.45769	142.13336	2.71327	0.1476828	0.25991062	2.4317562	20	—	—
5860 Deankoontz	14.0	X	46.84575	139.04666	263.84941	1.53529	0.1997426	0.26063366	2.4272567	20	—	—
5861 Glynjones	14.1	X	149.02296	354.09447	326.68066	2.11832	0.1877004	0.29715639	2.2240575	20	—	—
5862 Sakanoue	14.0	X	33.27345	63.87118	89.87769	3.39493	0.1494096	0.26742531	2.3859850	20	3 11.6	16.1
5863 Tara	15.7	X	51.00554	115.47233	168.90576	19.49278	0.5060072	0.29762556	2.2217195	20	12 8.3	20.2
5864 Montgolfier	14.0	X	11.28687	158.45719	148.86810	8.29210	0.3250958	0.24151023	2.5537538	20	10 24.7	16.5
5865 Qualytemocrina	13.7	X	183.24501	181.53441	197.03948	7.61915	0.1314879	0.26393873	2.4069513	20	3 28.1	17.4
5866 Sachsen	13.5	X	257.38557	248.31474	141.36928	5.09732	0.0795824	0.21124903	2.7921553	20	7 7.8	17.4
5867 1988 *RE*	15.2	X	0.70877	105.54869	202.14605	35.07024	0.2522403	0.40100306	1.8212557	20	11 1.8	16.4
5868 Ohta	14.2	X	79.28250	277.58263	101.37459	3.13060	0.2018731	0.22467861	2.6797538	20	—	—
5869 Tanith	17.2	X	305.90380	230.87771	227.87880	17.92338	0.3214689	0.40408332	1.8119885	20	—	—
5870 Baltimore	13.3	X	297.72443	272.16162	153.66009	28.95871	0.4195974	0.21120708	2.7925250	20	8 29.4	15.8
5871 Bobbell	14.1	X	234.80208	59.85598	320.12581	20.34959	0.0714226	0.38796886	1.8618219	20	5 23.8	16.7
5872 Sugano	13.6	X	38.72880	131.40019	242.36304	6.61004	0.1324769	0.29219995	2.2491372	20	—	—
5873 Archilochos	14.2	X	170.38965	203.63611	133.01373	4.78824	0.1859347	0.30216863	2.1993945	20	1 22.3	17.2
5874 1989 *XB*	13.6	X	99.19760	296.68221	135.24984	7.07824	0.2242570	0.26796222	2.3827968	20	3 19.8	16.6
5875 Kuga	12.5	X	110.26100	150.56727	287.11032	6.46815	0.0499968	0.26863806	2.3787986	20	3 9.2	15.6
5876 1990 DM_2	12.9	X	121.09017	307.12378	291.81474	2.68816	0.0404238	0.21416648	2.7667402	20	10 26.1	16.9
5877 Toshimaihara	13.0	X	118.63246	112.65762	92.58296	16.31176	0.1213503	0.24113654	2.5563915	20	9 29.9	17.3
5878 Charlene	13.2	X	97.75733	55.80655	148.09814	6.55992	0.1510154	0.28108170	2.3080630	20	9 4.4	16.4
5879 Almeria	17.5	X	241.57275	355.70826	145.84823	21.57960	0.2894536	0.47604804	1.6244345	20	—	—
5880 1992 *MA*	12.7	X	39.46242	88.62654	202.35046	0.39034	0.1614652	0.18225820	3.0809028	20	10 4.3	16.7
5881 Akashi	12.6	X	256.34355	337.73391	48.51154	2.68461	0.0819305	0.20431648	2.8549628	20	7 1.7	16.5
5882 1992 WW_5	13.8	X	316.23493	175.75821	177.86187	1.84957	0.0869915	0.20520875	2.8466810	20	8 11.6	17.2
5883 Josephblack	12.0	X	228.90300	14.70028	39.50085	17.46137	0.1690802	0.17406911	3.1767881	20	6 23.9	17.3
5884 Dolezal	13.3	X	277.87186	241.62383	204.46174	7.21588	0.1988307	0.21396843	2.7684472	20	10 1.3	16.6
5885 Apeldoorn	12.2	X	333.55518	39.80771	160.68804	5.68276	0.0493513	0.17899897	3.1181884	20	2 21.2	16.2
5886 Rutger	11.4	X	142.87098	277.23788	78.40426	11.47122	0.1027805	0.18849857	3.0125251	20	1 26.9	16.0
5887 Yauza	13.3	X	63.46501	235.10763	185.93288	5.67266	0.1267362	0.30024023	2.2088020	20	—	—
5888 Ruders	13.0	X	283.79202	54.56195	332.82720	1.25161	0.0933184	0.20605662	2.8388667	20	8 7.9	16.7
5889 Mickiewicz	12.2	X	240.82688	39.86355	182.06913	19.18314	0.1574130	0.18529926	3.0471015	20	—	—
5890 Carlsberg	12.2	X	48.31576	240.60477	124.13843	13.79569	0.1835350	0.22468058	2.6797381	20	—	—
5891 Gehrig	13.4	X	30.76108	111.42301	300.32861	3.34609	0.1321808	0.25949676	2.4343410	20	—	—
5892 Milesdavis	13.6	X	162.83833	290.81956	153.73379	4.58542	0.3014058	0.26745495	2.3858087	20	6 6.9	18.0
5893 Coltrane	13.0	X	10.96778	24.09256	171.83387	14.06770	0.0883899	0.23437201	2.6053469	20	4 4.3	15.9
5894 Telč	13.3	X	348.08591	279.03764	313.43718	5.17195	0.0944256	0.30436103	2.1888199	20	4 5.4	15.4
5895 1982 UF_2	13.9	X	323.09451	156.63374	225.12616	5.44650	0.1331960	0.28463942	2.2887904	20	10 18.4	15.6
5896 Narrenschiff	13.9	X	287.41493	337.98397	104.77176	3.09715	0.0116798	0.28542160	2.2846069	20	11 22.4	16.5
5897 Novotná	13.4	X	209.46651	88.84629	309.55600	3.17902	0.1806819	0.23820401	2.5773298	20	5 16.9	17.6
5898 1985 *KE*	13.0	X	208.83012	163.93305	228.54342	3.06004	0.1352368	0.19734927	2.9217678	20	5 12.6	17.5
5899 Jedicke	14.2	X	22.35872	263.79809	125.31611	24.01303	0.1166032	0.36801585	1.9285239	20	—	—
5900 Jensen	12.1	X	38.62403	35.41882	301.76914	9.06023	0.2099490	0.17613426	3.1519077	20	12 4.4	16.5
5901 1986 WB_1	14.1	X	305.82795	246.85830	247.90524	3.68573	0.1199345	0.29447298	2.2375483	20	—	—
5902 Talima	12.3	X	91.30654	242.78207	139.33042	11.18793	0.1188432	0.19028918	2.9935969	20	—	—
5903 1989 AN_1	13.0	X	301.43116	94.07338	45.91183	2.10052	0.0955995	0.21687872	2.7436250	20	—	—
5904 Württemberg	13.3	X	230.16737	141.16330	313.66376	3.06358	0.1131903	0.20577449	2.8414610	20	8 23.7	17.4
5905 Johnson	14.0	X	112.63978	208.95963	141.25171	27.52324	0.0717875	0.37327323	1.9103729	20	—	—
5906 1989 SN_5	14.5	X	284.74921	207.26588	209.83135	3.41904	0.2302201	0.28552482	2.2840563	20	9 9.2	16.3
5907 1989 TU_5	11.1	X	344.36003	141.34019	107.75414	1.92087	0.0980297	0.08453173	5.1418910	20	5 8.7	17.5
5908 Aichi	14.3	X	354.12720	206.82690	206.68331	5.98438	0.1752377	0.29119141	2.2543275	20	—	—
5909 Nagoya	13.7	X	37.16203	3.18056	32.94790	7.13860	0.1939097	0.29343967	2.2427980	20	—	—
5910 Zátopek	13.9	X	300.89822	291.24398	133.86115	5.00754	0.1368010	0.28622372	2.2803367	20	11 13.5	15.8
5911 1989 WO_7	14.0	X	264.37355	84.83992	92.74831	4.70284	0.0903546	0.29150133	2.2527294	20	—	—
5912 Oyatoshiyuki	14.2	X	58.94683	334.96959	116.02985	3.36779	0.1693672	0.26428152	2.4048696	20	1 28.9	16.3
5913 1990 *BU*	12.2	X	209.67586	30.27480	323.98678	12.11265	0.1904445	0.23510143	2.5999552	20	3 19.5	16.7
5914 Kathywhaler	10.9	X	217.05765	246.88281	73.23187	10.37627	0.0894851	0.14789848	3.5412798	20	3 5.3	16.4
5915 Yoshihiro	13.8	X	295.54776	359.60313	102.72650	4.79915	0.0992967	0.29168302	2.2517938	20	12 31.5	15.7
5916 van der Woude	13.0	X	33.15976	27.20527	256.18500	9.29200	0.1153903	0.27868683	2.3212669	20	9 19.1	15.8
5917 Chibasai	12.2	X	304.52763	39.25585	275.95978	14.26306	0.1403312	0.23580000	2.5948177	20	5 23.4	15.4
5918 1991 NV_3	12.9	X	319.33318	267.88722	85.65454	3.21203	0.0836318	0.20535409	2.8453377	20	8 18.6	16.4
5919 Patrickmartin	12.2	X	138.66664	188.03974	5.43484	0.66287	0.1250931	0.17271015	3.1934306	20	9 18.8	17.1
5920 1992 SX_{17}	11.0	X	326.48279	64.47721	347.56015	19.38914	0.1241054	0.17785610	3.1315321	20	10 29.5	15.1

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
5921	1992 UL	13.7	X	300.97601	294.78084	328.31116	3.44617	0.1271568	0.30438505	2.1887047	20	3 2.3	16.0
5922	Shouichi	11.8	X	117.86096	148.74632	232.07995	7.86487	0.1124951	0.18946642	3.0022571	20	1 26.2	16.2
5923	Liedeke	12.7	X	86.08970	126.55793	102.52546	3.27247	0.0156487	0.20437082	2.8544567	20	8 29.6	16.5
5924	Teruo	13.3	X	93.54237	69.90990	109.45094	4.08911	0.1091641	0.27412594	2.3469435	20	7 20.9	16.1
5925	1994 CP_1	13.2	X	34.92258	142.75266	66.56742	4.43039	0.1878018	0.26999056	2.3708477	20	6 15.7	15.2
5926	Schönfeld	14.5	X	47.59098	183.99208	159.39110	3.97638	0.2366062	0.27331616	2.3515768	20	—	—
5927	Krogh	12.9	X	190.37077	218.10979	39.72212	11.19026	0.2025957	0.17594881	3.1541220	20	—	—
5928	Pindarus	11.6	X	41.87964	105.49921	163.86852	9.26971	0.1202723	0.12421067	3.9782931	20	8 26.7	16.9
5929	Manzano	13.5	X	223.36132	277.89019	126.32581	23.01732	0.3041923	0.27223949	2.3577729	20	6 4.9	18.0
5930	Zhiganov	13.7	X	161.04697	148.72230	141.02251	4.81941	0.0905289	0.29209192	2.2496918	20	—	—
5931	Zhvanetskij	12.0	X	352.49391	265.83408	195.82381	16.90329	0.1944849	0.17364622	3.1819437	20	—	—
5932	Prutkov	13.5	X	110.41794	92.80354	112.78546	2.17773	0.0912060	0.23014135	2.6371791	20	9 9.6	17.2
5933	Kemurdzhian	14.2	X	323.00276	285.32498	12.32218	0.14697	0.1472917	0.31137963	2.1558039	20	5 29.4	15.9
5934	Mats	13.8	X	295.98757	208.02016	172.24275	2.31875	0.2163408	0.26739595	2.3861597	20	8 3.8	16.0
5935	Ostankino	12.9	X	66.31434	30.23128	186.42310	13.89692	0.0936854	0.23380931	2.6095253	20	7 27.9	16.6
5936	Khadzhinov	12.0	X	288.99349	189.14352	57.71591	10.78229	0.0460286	0.18947943	3.0021196	20	2 26.5	16.4
5937	Lodén	13.5	X	18.46823	327.24621	35.79284	3.61811	0.1298278	0.29010062	2.2599749	20	12 29.9	16.1
5938	Keller	14.1	X	312.31431	349.53106	328.21523	3.55503	0.0739148	0.27566068	2.3382243	20	6 21.0	16.5
5939	Toshimayeda	13.2	X	351.55138	81.95769	323.04170	9.34563	0.1386492	0.21733483	2.7397851	20	12 24.9	16.5
5940	Feliksobolev	11.9	X	167.31287	304.46045	27.18171	11.09816	0.1061463	0.18607501	3.0386267	20	1 25.6	16.8
5941	Valencia	13.0	X	234.18111	191.31952	217.03008	1.29777	0.0606655	0.20044545	2.8916025	20	7 5.5	17.1
5942	Denzilrobert	11.7	X	117.59805	296.80400	77.37718	11.11043	0.1313293	0.18710776	3.0274351	20	1 24.9	16.1
5943	Lovi	13.9	X	294.85852	87.38097	128.06083	5.93676	0.1095431	0.29760448	2.2218245	20	—	—
5944	Utesov	12.0	X	261.59384	223.45328	55.02077	10.81448	0.0525675	0.18766069	3.0214855	20	3 3.1	16.5
5945	Roachapproach	13.3	X	310.37908	298.12912	21.82421	4.89343	0.1446231	0.29675824	2.2260463	20	6 9.9	15.5
5946	Hrozný	14.3	X	274.12213	222.96025	252.80512	2.55841	0.1255256	0.27553675	2.3389253	20	12 4.2	16.6
5947	Bonnie	12.2	X	348.76973	143.52640	93.13191	14.90491	0.1442840	0.22698052	2.6616053	20	4 26.7	15.3
5948	Longo	13.4	X	282.77247	125.34492	76.32554	9.51058	0.2235102	0.21753742	2.7380838	20	—	—
5949	1985 RL_3	13.3	X	139.42731	175.89823	83.12069	7.31436	0.1048334	0.28871301	2.2672103	20	12 26.9	16.6
5950	Leukippos	12.6	X	182.34287	33.20971	317.31087	9.08061	0.1048116	0.19158714	2.9800610	20	2 25.4	17.3
5951	Alicemonet	13.3	X	118.24330	286.42021	88.34537	5.37374	0.2181221	0.30261032	2.1972538	20	1 19.3	15.8
5952	Davemonet	13.6	X	219.76303	270.15667	307.70640	4.06616	0.1112062	0.28810452	2.2704015	20	—	—
5953	Shelton	13.6	X	63.49406	163.55628	137.73962	24.03170	0.1672298	0.27919426	2.3184535	20	12 10.0	17.5
5954	Epikouros	13.6	X	267.78051	250.56004	328.29880	6.50870	0.1703555	0.25707945	2.4495773	20	—	—
5955	Khromchenko	12.6	X	208.19679	190.20312	317.88775	7.92814	0.0938375	0.20999753	2.8032377	20	10 4.7	16.9
5956	d′Alembert	13.2	X	196.55253	183.01234	188.61695	8.97337	0.2925189	0.22095557	2.7097720	20	4 3.7	18.1
5957	Irina	12.5	X	171.39763	101.11851	150.18667	22.85572	0.1084244	0.16950339	3.2335813	20	12 26.3	17.9
5958	Barrande	13.8	X	321.88809	75.91938	335.00187	2.57406	0.1285840	0.27389934	2.3482377	20	11 27.2	15.8
5959	Shaklan	12.2	X	166.17192	149.49230	135.39281	17.83008	0.0954836	0.17285461	3.1916511	20	—	—
5960	Wakkanai	13.8	X	173.23226	330.98769	43.49360	4.31810	0.1540949	0.30443054	2.1884867	20	3 13.4	16.9
5961	Watt	13.8	X	20.60072	202.58083	323.60941	1.62394	0.1437165	0.26453246	2.4033484	20	3 2.1	15.6
5962	Shikokutenkyo	12.7	X	158.93562	323.40548	197.58461	12.87683	0.1121939	0.23966377	2.5668537	20	9 2.1	16.8
5963	1990 QP_2	12.8	X	3.69112	62.92291	0.39527	1.70049	0.0517567	0.20526659	2.8461462	20	—	—
5964	1990 QN_4	12.8	X	170.97112	211.75352	173.09424	3.39514	0.3086972	0.18461006	3.0546806	20	4 3.9	18.3
5965	1990 SV_{15}	13.0	X	133.02092	190.05789	224.60274	3.34937	0.0518392	0.21787162	2.7352831	20	3 15.6	16.8
5966	Tomeko	12.6	X	292.44396	281.07244	53.37006	3.61281	0.0904308	0.18818093	3.0159141	20	6 9.2	16.7
5967	Edithlevy	13.8	X	199.30222	109.90361	125.77905	24.11170	0.0550670	0.36428210	1.9416793	20	—	—
5968	Trauger	14.3	X	36.14852	334.65322	188.87959	23.72269	0.0253793	0.37382485	1.9084932	20	3 6.4	16.2
5969	Ryuichiro	13.6	X	353.26540	291.25789	4.74989	7.45598	0.1242848	0.27827568	2.3235528	20	8 5.5	15.7
5970	Ohdohrikouen	13.8	X	285.56515	166.67514	122.53104	4.32854	0.1634614	0.30147022	2.2027900	20	3 15.8	16.5
5971	Tickell	12.4	X	336.27617	2.75222	290.37198	12.34453	0.1663402	0.23506091	2.6002540	20	6 16.7	15.0
5972	Harryatkinson	12.0	X	62.09616	323.21846	153.19564	13.89294	0.0822146	0.22480787	2.6787265	20	3 7.9	15.2
5973	Takimoto	13.2	X	43.41412	59.98563	229.22139	3.61668	0.1631190	0.24098318	2.5574759	20	10 17.7	16.6
5974	1991 UZ_2	12.6	X	263.41663	45.61387	158.19970	1.85833	0.1526606	0.17812079	3.1284290	20	—	—
5975	Otakemayumi	12.2	X	217.79351	86.21887	358.90668	14.96817	0.0928287	0.24174864	2.5520746	20	8 8.4	16.1
5976	Kalatajean	12.1	X	219.68333	234.63379	17.50758	13.38140	0.1395256	0.22435545	2.6823264	20	—	—
5977	1992 TH_1	11.8	X	286.38839	240.60316	143.67593	15.44573	0.1520400	0.24243474	2.5472573	20	7 31.9	14.7
5978	Kaminokuni	13.0	X	243.18487	205.41055	58.61994	6.66008	0.1120232	0.29598659	2.2299135	20	—	—
5979	1992 XF	12.3	X	17.11904	219.56482	277.87890	10.39396	0.0979937	0.18702990	3.0282753	20	1 29.1	16.1
5980	1993 FP_2	13.8	X	182.49074	25.50014	349.31425	3.77551	0.1517328	0.29153462	2.2525579	20	3 21.4	17.3
5981	Kresilas	12.8	X	3.69514	3.41204	354.62138	10.31167	0.2178444	0.21450167	2.7638571	20	11 17.8	15.9
5982	Polykletus	12.7	X	328.78232	293.53429	184.89798	11.38112	0.1977480	0.21585116	2.7523254	20	—	—
5983	Praxiteles	13.5	X	307.53291	45.99943	9.65789	9.04558	0.1305902	0.21033037	2.8002796	20	10 17.7	16.8
5984	Lysippus	13.8	X	0.02966	112.46708	115.43649	5.70739	0.1116499	0.26829853	2.3808051	20	4 29.3	16.2
5985	1942 RJ	13.3	X	202.04857	59.14602	284.94505	5.84026	0.2299018	0.29877692	2.2160081	20	2 27.7	17.1
5986	Xenophon	12.9	X	342.59046	95.02883	233.71023	7.45848	0.1206484	0.26992930	2.3712064	20	8 27.4	15.4
5987	Liviogratton	13.6	X	261.31158	144.53797	163.67022	5.41919	0.1559536	0.25989956	2.4318252	20	3 16.5	17.1
5988	Gorodnitskij	13.0	X	316.94128	95.48721	177.77754	12.91570	0.1550706	0.22425341	2.6831401	20	4 15.6	16.2
5989	Sorin	14.6	X	303.81129	340.95863	332.51050	1.86074	0.1860702	0.31056039	2.1595935	20	5 9.9	16.8
5990	Panticapaeon	13.6	X	264.08305	224.72223	344.40540	7.01924	0.0947678	0.29334059	2.2433030	20	—	—
5991	Ivavladis	14.1	X	358.58556	136.96907	57.93139	3.22566	0.1346827	0.26298217	2.4127844	20	3 4.8	16.3
5992	Nittler	13.8	X	326.21532	316.69013	241.25226	8.94328	0.0878350	0.22485647	2.6783405	20	1 24.8	17.4
5993	Tammydickinson	14.0	X	75.91219	197.76991	339.58011	1.92494	0.0678019	0.30692275	2.1766236	20	6 17.3	16.4
5994	Yakubovich	12.1	X	49.64792	302.30540	31.72501	13.57651	0.2265193	0.20459141	2.8524045	20	12 21.4	16.5
5995	Saint–Aignan	13.0	X	59.65153	82.82439	98.10044	12.23360	0.2625332	0.23600546	2.5933115	20	6 29.3	16.2
5996	Julioangel	12.5	X	5.37632	353.38656	312.78301	15.46357	0.1334636	0.24102779	2.5571604	20	8 31.4	15.3
5997	Dirac	13.9	X	51.26978	330.41741	48.22891	7.55003	0.1733744	0.30008489	2.2095642	20	—	—
5998	Sitenský	12.9	X	83.89450	226.94131	164.99507	4.59499	0.1222276	0.21452577	2.7636502	20	—	—
5999	Plescia	14.5	X	250.41490	71.44645	71.13070	23.17174	0.3060282	0.28641000	2.2793478	20	11 11.9	17.2
6000	United Nations	11.9	X	293.39914	315.59585	52.14804	14.40213	0.1854546	0.23470351	2.6028931	20	7 15.8	15.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6001 Thales	12.7	X	66.99424	177.18636	129.59135	3.00587	0.0522859	0.20442805	2.8539239	20	11 17.3	16.6
6002 1988 *RO*	10.5	X	229.99593	158.74241	209.71433	15.55342	0.0912296	0.08250058	5.2259437	20	5 10.8	17.8
6003 1988 VO_1	13.4	X	15.06322	71.66871	226.01692	5.71834	0.1200227	0.27452788	2.3446521	20	9 12.9	15.9
6004 1988 XY_1	13.7	X	29.74045	170.98976	307.62895	2.83297	0.0510279	0.28778209	2.2720970	20	1 6.5	16.0
6005 1989 *BD*	13.1	X	18.74808	108.77251	25.22465	7.63794	0.1517589	0.22226257	2.6991384	20	1 23.1	16.0
6006 Anaximandros	12.8	X	32.16025	9.61872	339.10372	1.41419	0.0772716	0.20632587	2.8363964	20	11 28.8	16.5
6007 Billevans	14.2	X	57.00783	105.41850	3.94573	4.36861	0.1946305	0.26378227	2.4079030	20	2 26.4	16.2
6008 1990 BF_2	14.0	X	76.44981	40.68973	78.52448	4.15562	0.0395153	0.29851466	2.2173059	20	3 20.3	16.4
6009 Yuzuruyoshii	12.8	X	260.35128	78.27538	213.26508	22.72849	0.1509038	0.25906845	2.4370234	20	2 16.5	17.0
6010 Lyzenga	13.2	X	41.79823	138.53265	228.86303	12.77930	0.1768721	0.23874373	2.5734440	20	—	—
6011 Tozzi	12.9	X	246.93977	116.81440	195.70502	2.50013	0.1507878	0.21997744	2.7177987	20	3 9.8	17.2
6012 Williammurdoch	13.1	X	346.15309	251.56966	62.64186	18.25327	0.3457908	0.23095415	2.6309880	20	8 31.1	15.0
6013 Andanike	13.9	X	37.90841	331.61607	254.48846	4.22099	0.1520802	0.26979307	2.3720046	20	7 11.9	16.2
6014 Chribrenmark	12.9	X	2.30781	130.33801	199.50641	6.42964	0.1453689	0.27344019	2.3508657	20	10 15.3	15.1
6015 Paularego	13.3	X	250.82715	90.23765	190.26687	7.30260	0.1430729	0.25910565	2.4367901	20	1 29.8	17.2
6016 Carnelli	13.3	X	20.97383	163.87742	189.26692	5.89812	0.2140612	0.27668667	2.3324404	20	12 28.5	16.2
6017 1991 PY_{11}	13.9	X	172.79399	25.17154	214.68723	4.70474	0.1361211	0.28279413	2.2987361	20	—	—
6018 Pierssac	13.3	X	243.45379	92.62303	138.64111	6.15111	0.1265789	0.28767847	2.2726426	20	—	—
6019 Telford	11.6	X	40.59123	187.38142	289.94851	8.57910	0.0440836	0.18899158	3.0072838	20	2 6.0	15.6
6020 Miyamoto	13.9	X	140.25043	290.94158	19.05034	5.00983	0.0948694	0.28320189	2.2965291	20	—	—
6021 1991 *TM*	13.1	X	295.85356	149.94867	140.40955	6.80292	0.1323480	0.26259087	2.4151807	20	4 9.3	16.2
6022 Jyuro	13.9	X	56.15418	3.15278	74.44844	4.62350	0.0568772	0.29476138	2.2360885	20	—	—
6023 Tsuyashima	13.6	X	211.19873	292.27018	124.57814	7.08739	0.1468053	0.27218469	2.3580894	20	6 15.1	17.2
6024 Ochanomizu	12.9	X	183.48809	355.88286	41.09746	9.17896	0.0878211	0.26764652	2.3846701	20	4 21.7	16.1
6025 Naotosato	11.5	X	104.90548	159.39330	280.22383	9.00012	0.0695121	0.18767941	3.0212845	20	3 14.3	15.9
6026 Xenophanes	12.6	X	196.64744	359.59226	202.97395	3.21989	0.0679803	0.20622915	2.8372832	20	12 3.9	16.7
6027 1993 SS_2	12.8	X	134.09758	169.30483	106.50999	5.64890	0.1555820	0.30152159	2.2025398	20	—	—
6028 1994 ER_1	12.9	X	75.88286	310.00422	300.91374	6.75954	0.1727356	0.23896399	2.5718625	20	10 4.9	16.8
6029 Edithrand	14.1	X	359.47789	42.90437	106.77431	24.27609	0.0758786	0.36839459	1.9272019	20	—	—
6030 Zolensky	12.6	X	153.77726	203.45288	172.00718	5.32051	0.0630159	0.17609046	3.1524303	20	2 26.1	17.3
6031 Ryokan	11.6	X	13.64777	147.03548	84.31516	10.88726	0.0235395	0.18818055	3.0159182	20	5 26.9	15.7
6032 Nobel	13.6	X	280.36593	131.99613	188.15887	7.55292	0.2621869	0.26185978	2.4196739	20	4 8.7	17.1
6033 1984 SQ_4	12.5	X	174.94657	75.07747	216.45619	16.31787	0.1174438	0.17375976	3.1805575	20	—	—
6034 1987 *JA*	14.4	X	208.80957	70.16074	29.20469	3.52569	0.1682266	0.27541074	2.3396387	20	8 8.3	18.0
6035 Citlaltépetl	13.9	X	156.62784	82.17039	171.55760	23.98635	0.2179011	0.27994970	2.3142807	20	12 29.4	18.2
6036 Weinberg	13.4	X	184.74677	151.77642	189.37570	13.89562	0.2003217	0.21546246	2.7556346	20	2 16.0	18.2
6037 1988 *EG*	18.7	X	229.52563	242.18781	182.37936	3.49968	0.4996136	0.68758147	1.2713153	20	6 22.6	19.6
6038 1989 *EQ*	12.6	X	10.76876	123.99783	313.41246	8.27149	0.1919424	0.18508865	3.0494126	20	—	—
6039 Parmenides	11.9	X	305.26436	174.97171	185.73588	13.08105	0.0523360	0.15583781	3.4199585	20	8 1.0	16.7
6040 1990 DK_3	14.7	X	17.98011	20.72510	164.76363	2.43089	0.1451677	0.26435815	2.4044048	20	3 27.7	16.7
6041 Juterkilian	14.3	X	278.91774	102.57423	199.45003	9.90519	0.3251104	0.25777947	2.4451405	20	3 5.8	18.3
6042 Cheshirecat	12.9	X	220.86149	286.17753	88.61012	15.88620	0.4572956	0.18612859	3.0380435	20	4 25.3	19.1
6043 Aurochs	13.2	X	309.64150	216.81118	146.08529	6.89289	0.1425242	0.27072794	2.3665408	20	8 16.9	15.4
6044 Hammer–Purgstall	13.4	X	119.94518	308.54473	1.19180	8.89088	0.1532740	0.21309158	2.7760366	20	—	—
6045 1991 RG_9	13.7	X	312.06544	86.54080	202.59170	3.09441	0.1386504	0.29873202	2.2162302	20	4 26.5	15.8
6046 1991 RF_{14}	13.6	X	134.71588	93.60644	200.50894	6.93446	0.1458141	0.28256158	2.2999972	20	—	—
6047 1991 TB_1	17.8	X	63.48252	103.77113	6.10225	23.47157	0.3523122	0.56187963	1.4544781	20	—	—
6048 1991 UC_1	13.1	X	194.95521	315.05284	187.36740	7.07615	0.0138688	0.23528708	2.5985874	20	9 27.1	16.6
6049 Toda	13.7	X	342.41547	136.43349	174.86007	2.45052	0.1345514	0.26628395	2.3927981	20	8 1.8	15.7
6050 Miwablock	14.9	X	270.81261	284.96777	88.19453	6.40562	0.4371698	0.30163923	2.2019672	20	5 17.8	18.4
6051 Anaximenes	12.4	X	249.71283	112.46609	133.86848	18.11196	0.1453929	0.17381816	3.1798450	20	1 1.6	17.7
6052 Junichi	11.2	X	9.81144	272.63810	169.77011	21.79220	0.0494828	0.16856318	3.2455944	20	—	—
6053 1993 BW_3	14.8	X	300.92911	74.87203	318.26455	21.58075	0.5282889	0.31313790	2.1477264	20	7 9.4	17.0
6054 Ghiberti	13.9	X	16.91388	55.62043	261.94505	2.16380	0.1033236	0.26320486	2.4114233	20	10 12.3	16.5
6055 Brunelleschi	14.5	X	173.84073	358.94716	284.10130	1.76097	0.1277815	0.30647321	2.1787515	20	—	—
6056 Donatello	13.6	X	321.14495	11.74927	224.06838	3.17653	0.2213868	0.22032445	2.7149442	20	2 17.7	17.0
6057 Robbia	11.8	X	27.74074	192.33477	170.72646	17.81542	0.1002375	0.16284914	3.3210780	20	12 5.7	16.6
6058 Carlnielsen	13.5	X	257.66814	53.70342	265.65503	4.59703	0.1703460	0.29613307	2.2291782	20	3 19.7	16.9
6059 Diefenbach	14.5	X	254.23076	53.05975	302.13224	2.34327	0.2189949	0.25941104	2.4348773	20	4 30.7	18.3
6060 Doudleby	12.9	X	47.26110	144.49979	155.59820	9.88906	0.0928986	0.23329788	2.6133376	20	10 29.1	16.5
6061 1981 SQ_2	13.7	X	96.50992	322.38270	20.68386	3.99144	0.1601509	0.28701221	2.2761583	20	—	—
6062 Vespa	12.4	X	138.16947	154.64264	116.71920	2.79371	0.1563420	0.17091529	3.2157487	20	12 17.6	17.5
6063 Jason	15.9	X	343.05926	337.13767	169.39672	4.91838	0.7662256	0.29938207	2.2130209	20	—	—
6064 Holašovice	13.7	X	354.41655	106.40672	158.80139	5.36719	0.1596549	0.30041796	2.2079308	20	6 14.8	15.2
6065 Chesneau	13.2	X	50.88430	47.97582	271.66956	23.82263	0.2087427	0.27490877	2.3424859	20	12 19.1	16.4
6066 Hendricks	13.6	X	346.08803	224.61277	126.12282	6.23103	0.2832192	0.26949002	2.3737825	20	11 5.9	15.1
6067 1990 QR_{11}	11.5	X	128.93693	70.58332	233.15036	10.47621	0.0492761	0.17508915	3.1644378	20	—	—
6068 Brandenburg	12.8	X	165.68268	217.92176	218.81491	9.03836	0.0784838	0.18614518	3.0378630	20	5 24.9	17.4
6069 Cevolani	14.0	X	14.67772	329.43841	192.52271	4.03245	0.0411064	0.29271243	2.2465113	20	2 11.8	16.3
6070 Rheinland	13.8	X	310.49305	292.52264	83.94588	3.12876	0.2101477	0.26699932	2.3885222	20	9 3.1	15.5
6071 Sakitama	12.1	X	182.31299	277.19494	152.43617	11.73158	0.1103420	0.22112910	2.7083542	20	6 4.3	16.5
6072 Hooghoudt	12.1	X	158.68022	124.88976	188.95155	9.16183	0.0193386	0.17597293	3.1538338	20	—	—
6073 1939 *UB*	12.2	X	288.40349	269.73863	212.13320	12.21243	0.1295265	0.23251993	2.6191634	20	12 21.9	15.3
6074 Bechtereva	13.6	X	356.91419	69.98271	267.23340	1.57082	0.2171195	0.26655006	2.3912053	20	10 24.2	15.5
6075 Zajtsev	12.7	X	220.65322	151.23145	166.16963	1.35635	0.1409444	0.17683703	3.1435514	20	2 24.8	17.7
6076 Plavec	12.7	X	84.46457	83.68936	142.69600	8.15935	0.1760856	0.22985509	2.6393681	20	9 17.8	16.7
6077 Messner	12.6	X	209.07231	322.84971	23.61690	4.29892	0.1116087	0.21151474	2.7898164	20	3 18.7	16.9
6078 Burt	12.8	X	159.56444	138.94851	228.46271	8.35950	0.1737751	0.20986877	2.8043841	20	2 24.3	17.5
6079 Gerokurat	12.2	X	269.47083	259.13493	328.07173	15.18858	0.0752889	0.17166604	3.2063662	20	1 7.9	17.1
6080 Lugmair	12.8	X	260.15178	275.66639	339.90013	5.24697	0.0836761	0.17294965	3.1904817	20	1 28.2	17.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6081 Cloutis	14.7	X	203.23611	170.80939	165.57984	7.33012	0.1901370	0.25103350	2.4887519	20	2 24.8	18.8
6082 Timiryazev	12.8	X	147.68018	37.38014	285.45176	5.40067	0.1108078	0.24250322	2.5467777	20	—	—
6083 Janeirabloom	14.4	X	218.57345	342.37462	32.23588	5.65683	0.1783105	0.29399434	2.2399762	20	4 24.4	17.7
6084 Bascom	12.9	X	83.44011	258.94955	147.17734	23.00247	0.2359288	0.28020366	2.3128822	20	1 15.7	15.3
6085 Fraethi	14.0	X	119.31878	145.65676	201.53519	6.64396	0.1377094	0.28119706	2.3074317	20	—	—
6086 Vrchlicky	12.3	X	99.54663	324.09104	65.17863	8.93985	0.1687810	0.21948447	2.7218667	20	1 21.6	15.9
6087 Lupo	14.8	X	337.82505	53.94927	152.52842	22.61379	0.0759517	0.36761164	1.9299374	20	1 31.8	16.8
6088 Hoshigakubo	12.7	X	158.33644	334.36718	202.22497	3.74943	0.1189532	0.18139996	3.0906127	20	9 17.1	17.7
6089 Izumi	14.0	X	328.22322	265.18897	123.98648	4.79304	0.1271485	0.30569247	2.1824596	20	11 19.5	15.7
6090 1989 *DJ*	9.4	X	301.65855	73.10467	328.47090	20.19692	0.0583923	0.08064653	5.3057353	20	9 4.6	16.3
6091 Mitsuru	13.4	X	326.20231	319.64717	337.19564	8.38709	0.2230393	0.30015966	2.2091973	20	5 18.5	15.3
6092 Johnmason	13.6	X	41.80458	200.93190	132.37337	9.51021	0.2513030	0.27045768	2.3681171	20	12 30.5	17.1
6093 Makoto	13.0	X	201.20566	192.50700	167.73435	6.24349	0.1354808	0.25249376	2.4791470	20	3 24.6	16.7
6094 Hisako	12.4	X	62.01245	57.08447	222.71565	12.12710	0.1412796	0.23017788	2.6369000	20	10 23.5	16.1
6095 1991 *UU*	13.6	X	280.21421	62.61525	231.43684	5.15843	0.1925132	0.29510001	2.2343776	20	3 8.4	16.8
6096 1991 UB_2	14.2	X	140.54811	22.57237	233.65905	6.22251	0.0994354	0.27642708	2.3339004	20	12 21.9	17.6
6097 Koishikawa	13.3	X	48.26130	205.64943	204.88467	6.13300	0.0933448	0.28117621	2.3075458	20	—	—
6098 Mutojunkyu	14.1	X	240.04247	56.77095	313.50402	4.96748	0.2357930	0.29687317	2.2254717	20	5 3.0	17.6
6099 Saarland	14.5	X	114.55349	102.54667	254.75588	5.60917	0.2302644	0.28300079	2.2976169	20	—	—
6100 Kunitomoikkansai	13.5	X	47.34537	69.32614	303.85825	3.39978	0.1340313	0.27716285	2.3297681	20	—	—
6101 Tomoki	13.8	X	328.63067	49.15615	195.80620	4.61691	0.1222070	0.29223702	2.2489470	20	3 20.6	16.1
6102 Visby	13.8	X	73.87252	358.28818	310.71004	1.76034	0.1636693	0.23523917	2.5989402	20	12 15.9	17.8
6103 1993 *HV*	11.7	X	26.24149	149.37135	182.71481	14.14143	0.1952489	0.15556603	3.4239404	20	11 7.6	16.2
6104 Takao	12.6	X	303.59450	25.06950	284.91186	2.41871	0.0955798	0.22154308	2.7049792	20	5 22.4	15.8
6105 Verrocchio	14.1	X	6.53906	151.55195	183.91958	11.63784	0.2001433	0.23068111	2.6330637	20	10 30.4	16.9
6106 Stoss	12.8	X	216.27623	204.15934	124.91241	2.56425	0.1699613	0.17520438	3.1630502	20	3 5.4	17.9
6107 Osterbrock	14.3	X	84.33364	85.86794	111.03137	26.22166	0.0827706	0.38673098	1.8657928	20	8 11.6	16.4
6108 Glebov	14.2	X	6.26044	57.03111	263.19672	2.88177	0.2031420	0.30331799	2.1938349	20	10 24.2	16.0
6109 Balseiro	13.6	X	140.83800	171.81429	166.04390	6.83865	0.1378430	0.27385720	2.3484786	20	—	—
6110 Kazak	14.1	X	55.88645	345.53323	281.76149	3.94686	0.2257880	0.30835543	2.1698763	20	10 23.4	17.0
6111 Davemckay	13.2	X	183.06659	310.43635	95.85375	4.01320	0.2005321	0.25688149	2.4508356	20	5 5.2	17.2
6112 Ludolfschultz	12.7	X	271.98426	126.99025	209.87916	14.26732	0.2621945	0.18056450	3.1001388	20	4 24.5	17.4
6113 Tsap	13.2	X	291.80035	353.07667	316.99624	2.17960	0.1993531	0.22804829	2.6532907	20	4 18.2	16.8
6114 Dalla–Degregori	14.1	X	239.90805	67.88154	219.61285	1.55294	0.1282498	0.29596711	2.2300114	20	1 25.5	17.3
6115 Martinduncan	13.9	X	251.15352	66.86446	316.12247	4.89011	0.1553168	0.29671502	2.2262625	20	6 12.3	16.8
6116 Still	12.4	X	324.71136	136.70457	254.39575	0.83816	0.0932963	0.19108607	2.9852682	20	10 12.4	16.0
6117 Brevardastro	13.3	X	354.77092	144.71559	305.48010	6.12748	0.0678328	0.27480750	2.3430614	20	—	—
6118 Mayuboshi	13.7	X	282.82280	162.77758	115.61961	3.56434	0.1559337	0.25294341	2.4762081	20	3 3.4	17.0
6119 Hjorth	12.9	X	316.93478	183.74446	266.72428	11.66668	0.1208211	0.23320881	2.6140030	20	12 30.1	15.6
6120 Anhalt	14.3	X	21.59512	153.38020	191.83527	3.03655	0.2214878	0.27278258	2.3546424	20	12 19.3	17.1
6121 Plachinda	13.3	X	218.22104	140.54350	224.34824	3.25695	0.1880555	0.28990967	2.2609671	20	4 10.7	17.0
6122 Henrard	13.7	X	48.02930	163.74148	215.19058	10.52098	0.1571555	0.27628507	2.3347001	20	—	—
6123 Aristoteles	13.4	X	74.56076	182.74623	172.84820	9.49511	0.0629434	0.27702590	2.3305359	20	—	—
6124 Mecklenburg	12.3	X	24.47443	243.13768	159.75795	9.36713	0.2408796	0.12391837	3.9845466	20	—	—
6125 Singto	13.8	X	288.07467	209.97402	150.30488	1.31006	0.1358606	0.29725739	2.2235537	20	7 6.2	16.0
6126 Hubelmatt	13.5	X	248.40778	35.23922	23.06269	2.85555	0.1215281	0.29852127	2.2172731	20	8 6.1	16.1
6127 Hetherington	13.3	X	118.50990	116.89760	143.24192	13.84314	0.1512478	0.23460799	2.6035995	20	11 30.9	17.7
6128 Lasorda	13.0	X	52.75148	145.64149	127.76679	4.18902	0.1878275	0.22895464	2.6462838	20	10 13.3	16.6
6129 Demokritos	12.9	X	310.26608	295.02344	294.05559	6.52053	0.1665360	0.21091133	2.7951349	20	2 4.4	16.6
6130 Hutton	16.6	X	351.99920	189.59157	139.33722	23.75123	0.5420580	0.19208093	2.9749515	20	11 14.4	19.0
6131 Towen	13.7	X	230.64435	279.12280	148.87030	6.19026	0.1246408	0.26099616	2.4250087	20	7 22.5	17.0
6132 Danielson	13.8	X	297.03532	296.02637	338.62761	2.95804	0.1617511	0.25455418	2.4657511	20	3 13.2	16.8
6133 Royaldutchastro	14.1	X	281.05891	67.22388	217.08627	2.59345	0.1777088	0.25329922	2.4738886	20	3 3.8	17.5
6134 Kamagari	13.8	X	158.87836	89.93734	183.73047	13.08678	0.1505879	0.24107390	2.5568343	20	—	—
6135 Billowen	13.0	X	67.37762	271.36361	291.47805	11.32093	0.1262103	0.26006399	2.4308001	20	7 19.8	16.1
6136 Gryphon	11.7	X	222.63802	324.72280	135.84936	11.20160	0.0587987	0.18737021	3.0246075	20	8 28.6	16.1
6137 Johnfletcher	11.3	X	109.63422	86.48700	336.97544	15.44043	0.0628511	0.17100786	3.2145881	20	3 4.4	15.8
6138 Miguelhernández	13.9	X	33.04988	84.48421	147.68827	2.66802	0.1929040	0.27443457	2.3451835	20	7 20.2	15.8
6139 Naomi	12.2	X	138.10222	281.54372	270.29040	12.42987	0.1501859	0.22711191	2.6605787	20	9 16.0	16.8
6140 Kubokawa	13.4	X	89.47229	243.67730	117.42422	5.62518	0.1425331	0.27668213	2.3324660	20	—	—
6141 Durda	14.3	X	97.82587	145.85965	284.78026	16.45888	0.1432930	0.40209666	1.8179520	20	1 31.3	15.5
6142 Tantawi	13.6	X	342.66153	44.17636	187.49814	2.94563	0.1380907	0.25574728	2.4580764	20	3 28.4	16.1
6143 Pythagoras	12.7	X	130.50557	342.12573	354.84974	1.56128	0.0684258	0.20403741	2.8575654	20	—	—
6144 Kondojiro	11.6	X	186.30466	96.46079	117.08612	5.88347	0.3608005	0.09478279	4.7641240	20	11 8.5	19.5
6145 Riemenschneider	14.5	X	259.49312	12.15512	33.55855	3.10776	0.1894518	0.26058353	2.4275680	20	7 19.9	17.8
6146 Adamkrafft	13.7	X	134.26488	253.31029	42.93050	3.40134	0.2645420	0.27993913	2.3143390	20	—	—
6147 Straub	12.9	X	85.27613	89.14339	233.71747	12.14481	0.2157060	0.23421874	2.6064833	20	—	—
6148 Ignazgünther	13.7	X	91.19397	282.23668	181.76275	22.68045	0.2346182	0.28698835	2.2762845	20	4 23.3	16.7
6149 Pelčák	14.3	X	12.81260	17.97327	334.91658	6.36593	0.1736531	0.26720175	2.3873157	20	12 7.2	17.0
6150 Neukum	12.9	X	194.01369	66.85663	326.25147	3.68298	0.1406136	0.17620873	3.1510195	20	4 28.3	18.1
6151 Viget	13.4	X	157.47488	64.70325	41.59055	7.24027	0.0881550	0.29003308	2.2603257	20	6 24.6	16.5
6152 Empedocles	12.8	X	163.23809	257.46185	5.54685	5.62986	0.2042080	0.23963867	2.5670330	20	—	—
6153 Hershey	12.9	X	27.65526	193.85545	198.60817	17.37348	0.2799257	0.20569585	2.8421851	20	—	—
6154 Stevesynnott	14.3	X	358.90697	323.61765	324.53903	2.29869	0.1813591	0.26111229	2.4242896	20	8 3.4	16.1
6155 Yokosugano	13.0	X	176.05313	340.51304	4.06244	4.08888	0.1781678	0.24512734	2.5285694	20	2 13.4	17.0
6156 Dall	12.4	X	261.61043	162.99105	298.63989	9.42622	0.0695240	0.19041785	2.9922481	20	10 9.6	16.7
6157 Prey	13.8	X	80.70973	225.03980	279.96346	3.96770	0.0841499	0.26094599	2.4253196	20	5 9.2	16.8
6158 Shosanbetsu	13.7	X	255.42176	210.99875	249.55561	5.53685	0.0701238	0.30420439	2.1895712	20	10 25.9	16.1
6159 Andréseloy	13.5	X	98.48100	56.30834	30.28179	6.85718	0.0624084	0.28421449	2.2910711	20	3 11.9	16.2
6160 Minakata	13.8	X	192.01687	59.32104	246.83337	4.82059	0.1882309	0.28187043	2.3037554	20	1 6.5	17.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6161 Vojno–Yasenetsky	12.7	X	119.85450	181.36060	280.25700	8.97700	0.2304002	0.21188632	2.7865538	20	5 19.0	17.3
6162 Prokhorov	13.1	X	59.75374	27.88067	23.71761	13.26213	0.1819081	0.23708274	2.5854497	20	—	—
6163 Reimers	14.3	X	232.98777	146.39190	214.49494	20.30988	0.1026548	0.36845119	1.9270045	20	4 23.1	16.3
6164 Gerhardmüller	13.5	X	274.12235	319.20663	352.82440	4.82297	0.1934823	0.29298949	2.2450948	20	3 27.3	16.6
6165 Frolova	14.0	X	165.61728	45.79259	326.85884	6.20027	0.1202677	0.27238388	2.3569396	20	2 29.9	17.5
6166 Univsima	12.1	X	298.63579	83.04991	17.97980	10.83897	0.0841183	0.19022024	2.9943201	20	11 29.8	16.0
6167 Narmanskij	14.1	X	6.85779	341.72234	347.29292	1.63472	0.2016080	0.26542188	2.3979764	20	10 28.5	16.2
6168 Isnello	12.8	X	305.50522	93.03118	133.83870	2.57097	0.0631300	0.17496503	3.1659342	20	2 16.8	17.2
6169 Sashakrot	12.8	X	292.30349	116.07565	207.65753	20.03669	0.1432017	0.18110606	3.0939555	20	5 19.3	17.2
6170 Levasseur	13.4	X	349.65388	103.73181	11.77164	22.57799	0.3197369	0.27328965	2.3517289	20	—	—
6171 Uttorp	14.0	X	245.69962	43.05476	353.10641	3.03674	0.0998033	0.29864652	2.2166531	20	7 3.1	16.6
6172 Prokofeana	15.2	X	25.20489	194.22367	218.50117	15.88572	0.4382293	0.23922614	2.5699833	20	—	—
6173 Jimwestphal	12.6	X	14.82298	66.78171	72.44964	10.00759	0.1220371	0.24029295	2.5623711	20	1 19.3	15.4
6174 Polybius	11.9	X	343.24365	300.54106	21.63207	14.68285	0.2215576	0.18468352	3.0538705	20	8 16.3	15.2
6175 Cori	12.7	X	168.22525	7.65859	35.07138	0.40255	0.2073536	0.17304532	3.1893057	20	4 19.9	18.2
6176 Horrigan	13.3	X	256.95130	262.13387	111.51703	5.66353	0.1550153	0.29150211	2.2527253	20	6 7.1	16.3
6177 Fécamp	13.5	X	185.80479	140.21833	1.06331	5.68161	0.0757332	0.30135853	2.2033343	20	9 18.3	16.1
6178 1986 *DA*	15.1	X	81.08578	127.35991	64.61714	4.30485	0.5819601	0.20803080	2.8208779	20	9 8.2	20.5
6179 Brett	13.6	X	341.60734	51.15279	155.32290	23.25888	0.2154080	0.26033095	2.4291380	20	2 4.6	16.2
6180 Bystritskaya	14.1	X	289.43936	313.99402	28.62247	1.15463	0.2141168	0.25806160	2.4433581	20	5 27.5	17.1
6181 Bobweber	13.6	X	290.62452	93.65984	303.57285	7.57467	0.2368369	0.25985547	2.4321003	20	8 14.3	16.0
6182 Katygord	14.2	X	240.59231	73.15510	284.24155	4.76273	0.2311597	0.29138427	2.2533327	20	4 17.1	17.9
6183 Viscome	13.7	X	100.50365	116.37246	274.67558	19.68598	0.2889347	0.28146981	2.3059409	20	1 25.8	16.5
6184 Nordlund	13.3	X	114.89472	258.23634	81.85978	6.29557	0.1233231	0.27864014	2.3215262	20	—	—
6185 Mitsuma	13.1	X	14.71600	43.15276	63.38321	8.75982	0.1730429	0.27519813	2.3408436	20	—	—
6186 Zenon	13.7	X	351.10205	87.14810	315.26608	4.21299	0.1831361	0.26857239	2.3791864	20	—	—
6187 Kagura	12.8	X	226.77700	327.01940	53.11461	1.93427	0.1791605	0.17768724	3.1335158	20	5 12.1	17.7
6188 Robertpepin	13.1	X	237.26233	285.75838	55.55966	2.15655	0.1839034	0.17569610	3.1571458	20	4 5.7	18.2
6189 Völk	13.6	X	164.96392	68.73586	245.32086	5.94228	0.1349173	0.28168616	2.3047600	20	—	—
6190 Rennes	13.5	X	170.50601	71.48608	312.31558	1.68019	0.0919076	0.20915154	2.8107917	20	3 23.7	17.7
6191 Eades	12.7	X	11.55354	285.06353	61.71561	10.20003	0.1198434	0.19016187	2.9949329	20	11 1.8	16.4
6192 Javiergorosabel	12.8	X	205.19648	169.05247	122.22093	10.33091	0.2660431	0.28390728	2.2927236	20	1 2.0	16.7
6193 Manabe	13.5	X	62.04169	303.55862	307.36374	8.56807	0.2162483	0.26534493	2.3984400	20	9 27.8	17.0
6194 Denali	12.9	X	318.01601	65.29162	38.25125	9.45365	0.0986144	0.26868263	2.3785356	20	—	—
6195 Nukariya	13.9	X	133.27310	306.76727	130.89134	3.36819	0.1141755	0.24751354	2.5122918	20	4 22.6	17.4
6196 Bernardbowen	13.8	X	355.12500	322.61552	336.74266	6.19724	0.0946263	0.30212930	2.1995853	20	8 14.2	15.6
6197 Taracho	13.8	X	7.02500	214.53266	252.12697	5.85514	0.0696826	0.27767602	2.3268969	20	—	—
6198 Shirakawa	13.7	X	141.85039	64.07530	25.61542	4.60028	0.1098505	0.28874050	2.2670664	20	5 14.5	16.7
6199 Yoshiokayayoi	12.3	X	297.88106	174.06921	308.60879	12.12465	0.1204221	0.23592562	2.5938965	20	—	—
6200 Hachinohe	13.4	X	222.86622	308.44635	53.75272	8.62475	0.1945478	0.29187994	2.2507809	20	4 14.3	16.9
6201 Ichiroshimizu	13.5	X	142.11792	178.03558	98.27682	5.01892	0.1741007	0.23758142	2.5818306	20	—	—
6202 Georgemiley	14.5	X	84.66759	119.68711	285.24863	1.55961	0.2184233	0.27818349	2.3240661	20	1 13.8	16.3
6203 Lyubamoroz	13.5	X	243.65919	63.93191	235.51624	0.94723	0.0513052	0.17625534	3.1504641	20	3 3.3	18.0
6204 MacKenzie	14.3	X	342.94327	188.63893	54.18381	5.15469	0.1152530	0.30255448	2.1975241	20	4 15.0	16.1
6205 Menottigalli	13.5	X	28.96849	215.63245	131.83481	13.81170	0.2324528	0.27118436	2.3638847	20	—	—
6206 Corradolamberti	13.1	X	41.20235	205.01501	237.70026	1.10351	0.0426094	0.20696356	2.8305671	20	—	—
6207 Bourvil	14.3	X	69.72545	351.12464	85.91953	2.97483	0.1996276	0.27686840	2.3314197	20	1 31.3	16.3
6208 Wakata	14.0	X	64.75933	242.06800	249.82632	0.85947	0.0952347	0.29143944	2.2530483	20	3 26.0	16.2
6209 Schwaben	14.0	X	256.17802	202.91984	281.77330	1.42012	0.1393764	0.26414266	2.4057123	20	11 11.1	16.6
6210 Hyunseop	12.6	X	8.60757	14.92248	125.85572	3.01873	0.0223583	0.20369369	2.8607791	20	1 23.1	16.2
6211 Tsubame	13.1	X	80.19287	248.73573	335.74559	8.53734	0.0938935	0.21529723	2.7570444	20	8 27.3	17.0
6212 Franzthaler	12.8	X	42.51597	349.97125	228.70105	11.33910	0.1345853	0.25304446	2.4755488	20	7 3.3	15.7
6213 Zwiers	15.1	X	76.01039	173.85925	283.52266	1.34397	0.1492142	0.28768743	2.2725954	20	3 2.2	17.1
6214 Mikhailgrinev	12.3	X	240.24222	260.28376	82.85320	2.36734	0.1863866	0.17580664	3.1558223	20	4 10.7	17.5
6215 Mehdia	13.4	X	222.17375	324.95531	197.32785	1.64386	0.0683624	0.22223007	2.6994016	20	11 17.1	16.9
6216 San Jose	13.0	X	240.32690	28.08284	30.36546	3.76422	0.0999904	0.21523703	2.7575584	20	7 23.4	16.9
6217 Kodai	14.2	X	249.55624	41.54556	94.30867	10.86351	0.2133819	0.26286702	2.4134890	20	11 8.8	17.2
6218 Mizushima	14.3	X	29.39433	163.65561	180.47459	5.82626	0.1514573	0.28608645	2.2810660	20	12 20.8	17.2
6219 Demalia	15.0	X	82.19663	14.16238	343.84514	2.19020	0.1976528	0.26592569	2.3949467	20	—	—
6220 Stepanmakarov	12.8	X	282.50452	211.89422	220.02223	9.85838	0.0856812	0.18736972	3.0246127	20	9 29.9	16.8
6221 Ducentesima	12.9	X	17.10783	67.77961	146.54464	1.79905	0.0995347	0.17404901	3.1770326	20	5 12.3	16.7
6222 1980 PB_3	11.6	X	42.75508	130.80981	54.38950	21.23921	0.1235270	0.16857470	3.2454465	20	5 16.2	15.7
6223 Dahl	12.6	X	257.14714	75.83797	294.30756	3.85754	0.1209676	0.21777989	2.7360511	20	6 5.8	16.5
6224 El Goresy	14.4	X	196.71971	354.86063	282.88172	5.38901	0.1412882	0.27098418	2.3650487	20	—	—
6225 Hiroko	15.1	X	333.03119	319.80190	218.51400	5.34085	0.0331909	0.29970817	2.2114154	20	1 3.9	17.6
6226 Paulwarren	14.7	X	68.75027	151.76852	279.14052	2.17650	0.1323941	0.30024938	2.2087572	20	1 3.6	16.2
6227 Alanrubin	13.1	X	202.13549	80.17593	200.98486	0.51186	0.1537585	0.16933359	3.2357426	20	—	—
6228 Yonezawa	12.9	X	249.83783	342.88252	142.19688	14.40846	0.1118645	0.22388522	2.6860809	20	11 3.7	16.7
6229 Tursachan	13.2	X	287.91938	233.99853	146.07561	1.65097	0.1800629	0.18144773	3.0900703	20	7 19.2	17.3
6230 Fram	13.4	X	230.02825	95.22389	287.06283	3.27870	0.0846087	0.21251969	2.7810146	20	5 24.8	17.4
6231 Hundertwasser	13.7	X	353.44180	33.63927	162.75208	9.41489	0.1413941	0.25336976	2.4734295	20	2 24.8	16.1
6232 Zubitskia	13.6	X	211.66965	287.46600	332.88142	5.95426	0.1460660	0.29322629	2.2438860	20	—	—
6233 Kimura	13.9	X	143.81269	205.24272	267.06696	6.81235	0.1771460	0.21075492	2.7965177	20	6 20.6	18.2
6234 Sheilawolfman	13.8	X	37.35642	280.71369	348.24091	4.00744	0.1830692	0.28974916	2.2618021	20	9 23.0	16.2
6235 Burney	13.9	X	235.58297	129.48052	283.49834	2.91555	0.1414323	0.29333414	2.2433359	20	7 7.8	16.9
6236 Mallard	13.3	X	263.53761	308.34409	89.95281	1.86395	0.1767049	0.17581409	3.1557331	20	7 11.4	17.7
6237 Chikushi	11.5	X	259.89399	206.84931	25.50368	5.35949	0.0728118	0.12621054	3.9361559	20	1 8.9	17.3
6238 1989 *NM*	12.6	X	177.79860	216.12050	98.84372	8.35249	0.1576628	0.24019786	2.5630473	20	1 8.8	16.6
6239 Minos	18.5	X	27.69512	239.71258	344.58263	3.94225	0.4126442	0.79774707	1.1513991	20	10 17.0	18.9
6240 Lucretius Carus	13.9	X	315.00444	37.24426	121.70673	4.72294	0.0558787	0.29785053	2.2206006	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6241 Galante	12.4	X	309.74219	50.06169	330.92189	9.13786	0.1080384	0.18940944	3.0028592	20	9 2.7	16.1
6242 1990 OJ_2	13.7	X	221.92605	328.61038	70.23557	4.48278	0.1446306	0.29087909	2.2559409	20	6 1.8	16.7
6243 Yoder	13.6	X	181.17494	236.35468	305.44465	3.87373	0.0520576	0.30196948	2.2003614	20	11 8.5	16.3
6244 Okamoto	13.6	X	96.64110	51.82562	331.27833	5.39636	0.1522640	0.31053270	2.1597219	20	—	—
6245 Ikufumi	13.3	X	198.71626	52.46538	299.72661	8.01604	0.1784367	0.28232446	2.3012849	20	3 5.8	17.1
6246 Komurotoru	13.3	X	234.39991	43.21690	52.86594	24.31218	0.2925052	0.25697812	2.4502212	20	8 27.8	17.7
6247 Amanogawa	13.4	X	20.77341	288.38277	105.53179	8.57817	0.0559823	0.26611734	2.3937967	20	—	—
6248 1991 BM_2	13.2	X	138.75343	87.92516	15.57126	0.51772	0.1502494	0.17928677	3.1148506	20	6 2.9	18.0
6249 Jennifer	13.0	X	184.43393	151.54439	221.68797	28.10783	0.1419925	0.37211275	1.9143427	20	3 7.2	16.2
6250 Saekohayashi	14.2	X	103.57871	299.29433	226.55413	19.78463	0.0709238	0.36674285	1.9329841	20	7 8.9	16.8
6251 Setsuko	13.6	X	39.91931	41.82763	126.49923	4.29244	0.0775188	0.28341732	2.2953652	20	4 8.9	15.9
6252 Montevideo	13.4	X	93.51116	216.95064	104.17283	3.13922	0.0617621	0.19893608	2.9062101	20	—	—
6253 1992 FJ	14.1	X	131.21580	293.13660	217.09488	4.22830	0.0916025	0.28888588	2.2663058	20	7 24.0	17.2
6254 1993 UM_3	12.1	X	168.09148	55.70559	199.63568	9.35268	0.0577361	0.18897953	3.0074116	20	12 31.7	16.7
6255 Kuma	12.9	X	251.67185	195.84186	275.30794	5.12760	0.0342094	0.21721929	2.7407565	20	10 21.7	16.6
6256 Canova	15.6	X	197.59456	108.23331	328.38037	4.18199	0.1700664	0.25884237	2.4384422	20	6 25.8	19.5
6257 Thorvaldsen	13.8	X	27.26526	22.95346	30.47941	7.91080	0.0899034	0.27524474	2.3405793	20	—	—
6258 Rodin	13.6	X	135.41110	5.34463	133.02114	4.05421	0.0816799	0.28991132	2.2609585	20	7 12.8	16.5
6259 Maillol	13.7	X	22.90388	149.52892	38.47533	6.70240	0.1358849	0.28679074	2.2773300	20	4 9.5	15.5
6260 Kelsey	12.1	X	54.38791	7.20391	325.54471	11.93739	0.1717302	0.22502504	2.6770028	20	12 24.5	16.2
6261 Chione	14.2	X	3.86018	293.39351	163.74363	21.85148	0.3502246	0.27269947	2.3551208	20	—	—
6262 Javid	12.7	X	139.20798	251.16424	121.98079	3.01169	0.0786013	0.19895369	2.9060387	20	2 7.3	16.9
6263 Druckmüller	14.6	X	99.67247	176.25286	160.15800	2.22489	0.2381590	0.30459347	2.1877061	20	—	—
6264 1980 SQ	14.0	X	325.95161	159.59046	223.47166	4.76617	0.1311719	0.29679356	2.2258697	20	10 31.1	15.6
6265 1985 TW_3	13.6	X	352.42181	281.46821	45.16052	4.11401	0.1929442	0.30912002	2.1662968	20	10 8.1	14.9
6266 Letzel	13.6	X	355.09013	124.48320	170.95729	5.17560	0.1820500	0.28766770	2.2726993	20	8 9.5	15.0
6267 Rozhen	14.3	X	22.28925	315.76713	136.71488	2.10359	0.0914493	0.31000023	2.1621942	20	—	—
6268 Versailles	14.6	X	114.72015	331.71712	100.10849	1.78871	0.1862086	0.28092062	2.3089452	20	3 30.7	17.7
6269 Kawasaki	14.2	X	33.63448	183.63021	157.76874	6.21823	0.1316956	0.26589182	2.3951501	20	12 14.9	17.3
6270 Kabukuri	14.0	X	100.84485	122.92426	282.65524	5.80576	0.0941638	0.27215665	2.3582513	20	1 21.6	16.8
6271 Farmer	13.6	X	191.10517	342.84566	285.82479	23.56250	0.0521026	0.35688939	1.9684012	20	—	—
6272 1992 EB	14.4	X	30.29744	72.38983	323.60967	0.90233	0.0820522	0.30516534	2.1849722	20	—	—
6273 Kiruna	14.3	X	159.32471	272.83053	148.26768	1.67598	0.2474214	0.25253869	2.4788530	20	5 4.7	18.5
6274 Taizaburo	13.7	X	279.25024	159.36362	95.91779	3.93559	0.1161515	0.31269105	2.1497721	20	1 25.6	16.4
6275 Kiryu	12.8	X	327.37619	193.95247	24.43440	2.54325	0.0100791	0.19939725	2.9017274	20	3 9.5	16.8
6276 Kurohone	13.2	X	261.64578	29.75411	298.48960	1.43581	0.0497591	0.20223220	2.8745454	20	4 27.3	17.2
6277 Siok	14.0	X	173.80084	359.70163	331.56226	6.68672	0.1968528	0.29918569	2.2139892	20	1 21.3	17.4
6278 Ametkhan	14.1	X	282.14748	35.57438	348.64632	2.10394	0.1780134	0.25905551	2.4371045	20	7 23.3	16.7
6279 1977 UO_5	12.6	X	241.88699	357.06929	68.20176	2.37843	0.1857320	0.17706487	3.1408542	20	7 20.7	17.3
6280 Sicardy	13.4	X	303.60082	49.92218	354.32725	6.55446	0.1440319	0.29745895	2.2225491	20	10 14.9	15.2
6281 Strnad	12.8	X	236.02047	280.94637	18.95989	12.63465	0.1745243	0.23653618	2.5894309	20	2 16.5	17.2
6282 Edwelda	14.3	X	72.20526	25.75847	34.02366	2.80711	0.2172482	0.28065038	2.3104272	20	1 10.9	16.1
6283 1980 VX_1	13.7	X	154.77517	84.94328	359.46602	7.29794	0.2066261	0.21171445	2.7880617	20	5 26.3	18.5
6284 Borisivanov	13.2	X	196.42156	49.11693	333.54935	1.24280	0.0132092	0.20434725	2.8546762	20	4 20.0	17.3
6285 Ingram	14.9	X	353.12963	293.88613	217.96954	1.98981	0.1907150	0.22470507	2.6795434	20	—	—
6286 1983 EU	13.6	X	358.72045	10.74646	183.49765	4.16873	0.0843688	0.29256495	2.2472662	20	3 1.3	15.9
6287 Lenham	12.9	X	182.74868	96.68704	24.36045	1.08277	0.1254738	0.17663026	3.1460043	20	8 4.9	17.9
6288 1984 ER_1	12.8	X	177.25678	296.71058	150.38252	2.30625	0.1613894	0.17094477	3.2153791	20	6 18.5	18.1
6289 Lanusei	12.8	X	131.45060	168.21000	41.56698	2.09853	0.1249825	0.17451437	3.1713823	20	10 2.1	17.7
6290 1985 CA_2	13.6	X	308.60847	301.60254	125.28763	5.12116	0.0915759	0.29767083	2.2214943	20	12 5.0	15.7
6291 Renzetti	13.2	X	283.82229	32.52945	21.14830	11.49587	0.2136483	0.25209258	2.4817765	20	9 6.0	16.0
6292 1986 QQ_2	14.2	X	79.47354	286.09515	134.67818	7.59837	0.0905786	0.27563183	2.3383874	20	1 8.9	16.7
6293 Oberpfalz	14.9	X	241.02508	267.41527	138.16955	0.93881	0.1591986	0.29083198	2.2561845	20	7 1.5	17.7
6294 Czerny	14.0	X	30.23147	308.26156	294.12947	2.57688	0.1050117	0.28606761	2.2811662	20	7 17.9	16.2
6295 Schmoll	14.1	X	105.44118	28.54412	333.52375	3.23144	0.1950945	0.27464535	2.3439835	20	—	—
6296 Cleveland	14.4	X	234.58563	36.96377	111.49253	27.05823	0.0622499	0.37908630	1.8907930	20	12 31.5	15.9
6297 1988 VZ_1	12.5	X	138.61782	133.71814	14.70129	0.25764	0.1243279	0.17553336	3.1590968	20	7 26.4	17.4
6298 Sawaoka	13.7	X	276.22762	63.80076	9.52459	3.77890	0.2758534	0.18069531	3.0986424	20	8 27.8	18.0
6299 Reizoutoyoko	12.4	X	294.13213	214.48363	81.51468	3.21637	0.0403175	0.20322743	2.8651531	20	4 30.4	16.3
6300 Hosamu	13.0	X	130.53836	51.45614	69.58862	1.85796	0.1218745	0.16821223	3.2501070	20	6 14.0	17.9
6301 1989 BR_1	12.2	X	85.08361	242.71887	15.94173	0.49166	0.1637474	0.17463964	3.1698655	20	10 17.6	17.1
6302 Tengukogen	13.3	X	111.15865	41.36656	128.18342	13.87285	0.1040056	0.23147172	2.6270646	20	7 25.3	17.1
6303 1989 EL_2	13.9	X	163.77677	224.10921	24.18194	4.49094	0.1027850	0.30436809	2.1887860	20	—	—
6304 Josephus Flavius	14.1	X	317.99989	90.72462	261.48588	0.95400	0.1428282	0.29351072	2.2424361	20	8 20.6	15.6
6305 Helgoland	14.7	X	206.20391	356.34119	130.17230	4.66265	0.1011183	0.29814165	2.2191549	20	9 21.3	17.5
6306 Nishimura	12.7	X	338.17585	352.57740	84.31174	14.60030	0.2348296	0.22562139	2.6722835	20	—	—
6307 Maiztegui	11.9	X	151.44705	274.86057	114.38633	15.59695	0.1203414	0.23767535	2.5811503	20	3 17.1	16.0
6308 Ebisuzaki	13.0	X	192.00337	345.60730	86.48657	2.67567	0.1633636	0.17508368	3.1645036	20	6 13.4	18.1
6309 Elsschot	12.1	X	228.02661	262.88109	334.69124	10.10106	0.0497933	0.18907593	3.0063893	20	—	—
6310 Jankonke	14.1	X	258.92738	23.02830	80.50300	23.59277	0.0313940	0.37243475	1.9132391	20	12 3.4	15.7
6311 Porubčan	13.8	X	170.61968	70.11010	344.08938	5.16810	0.2257644	0.28469090	2.2885145	20	5 1.2	17.6
6312 Robheinlein	14.1	X	358.35823	283.55164	157.19993	4.11561	0.0701733	0.30545603	2.1835857	20	—	—
6313 Tsurutani	15.0	X	316.81684	313.90658	134.83349	5.15726	0.0632906	0.30345019	2.1931977	20	—	—
6314 Reigber	13.5	X	228.02992	300.37572	95.77783	5.21970	0.1292171	0.29061350	2.2573151	20	6 6.7	16.6
6315 Barabash	14.1	X	272.59553	51.79528	3.28711	4.67792	0.1705044	0.29285645	2.2457747	20	8 29.7	16.2
6316 Mendez	14.5	X	101.63429	50.67610	306.38295	3.70202	0.1752306	0.30841824	2.1695817	20	—	—
6317 Dreyfus	13.9	X	147.81031	94.66544	94.04556	5.83547	0.0589330	0.29363274	2.2418148	20	10 10.2	16.9
6318 Cronkite	15.6	X	147.23541	12.24616	71.11132	25.87314	0.4620362	0.24723485	2.5141794	20	5 31.1	20.5
6319 Beregovoj	13.6	X	87.48409	12.32141	195.35820	4.09039	0.0838649	0.28877853	2.2668674	20	8 18.5	16.6
6320 Bremen	13.8	X	43.29923	348.76275	317.16109	2.32475	0.1743348	0.25852002	2.4404688	20	11 13.7	17.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6321 Namuratakao	12.5	X	16.09409	308.21480	143.51764	12.96632	0.1346320	0.23328968	2.6133989	20	—	—
6322 1991 *CQ*	16.2	X	126.57186	297.42174	173.88296	28.30183	0.4695832	0.24652695	2.5189900	20	6 22.9	21.7
6323 Karoji	13.6	X	310.98719	134.54041	11.00374	5.20193	0.1335694	0.23023648	2.6364525	20	—	—
6324 Kejonuma	13.4	X	37.07202	81.31273	71.23675	2.30518	0.1540772	0.23819166	2.5774189	20	3 21.7	16.0
6325 1991 EA_1	13.1	X	142.09279	161.98670	39.99354	9.99880	0.2004462	0.21763936	2.7372287	20	10 11.0	17.7
6326 Idamiyoshi	12.8	X	286.08534	281.64555	199.57012	12.58339	0.1295664	0.22437710	2.6821539	20	12 15.1	16.1
6327 Tijn	13.0	X	98.89001	105.81268	134.04966	14.44721	0.2282658	0.21518557	2.7579980	20	10 24.8	17.8
6328 1991 NL_1	12.5	X	98.16195	181.06476	72.82058	2.15933	0.0953225	0.17504039	3.1650255	20	10 19.2	17.1
6329 Hikonejyo	13.4	X	160.28845	57.31083	109.88640	7.08645	0.1329061	0.29321076	2.2439652	20	9 23.8	16.7
6330 Koen	14.3	X	203.56219	354.43840	188.77777	1.41865	0.1205951	0.29946090	2.2126326	20	12 1.1	17.0
6331 1992 FZ_1	13.2	X	160.38349	189.95286	129.46381	7.76458	0.1336262	0.27211094	2.3585154	20	—	—
6332 Vorarlberg	13.2	X	47.30882	227.60813	52.90121	1.84192	0.1548407	0.25699184	2.4501339	20	10 14.2	16.3
6333 Helenejacq	14.0	X	305.47029	83.37335	109.34220	3.05233	0.0515961	0.30717413	2.1754359	20	—	—
6334 Robleonard	13.4	X	282.03157	62.61037	70.84961	3.31585	0.0394302	0.26388108	2.4073018	20	—	—
6335 Nicolerappaport	13.2	X	234.14987	97.63611	143.44601	13.91865	0.1488280	0.23004054	2.6379494	20	—	—
6336 Dodo	13.1	X	42.62921	359.61217	24.28767	9.49349	0.0973227	0.25346349	2.4728196	20	—	—
6337 Shiota	13.1	X	328.96918	352.27481	120.84879	3.88143	0.1398658	0.18176494	3.0864741	20	—	—
6338 Isaosato	11.8	X	67.28747	209.72111	74.96993	15.32558	0.0900897	0.17507495	3.1646088	20	10 26.5	16.5
6339 Giliberti	14.0	X	104.88182	25.55708	347.06336	4.75819	0.2086718	0.26943329	2.3741157	20	1 2.5	16.6
6340 Kathmandu	12.3	X	113.14867	71.66626	77.88793	2.29193	0.1418295	0.16945448	3.2342035	20	7 3.1	17.2
6341 1993 UN_3	11.9	X	358.62843	224.08306	215.54341	10.26723	0.1000977	0.18927560	3.0042746	20	—	—
6342 1993 *VG*	13.4	X	125.81577	6.67602	42.65359	2.65518	0.0235924	0.19807985	2.9145791	20	3 1.1	17.5
6343 1993 *VK*	12.3	X	306.94735	26.29219	335.57954	8.67006	0.0932389	0.17447474	3.1718625	20	8 6.4	16.4
6344 1993 *VM*	13.8	X	100.89469	79.00295	184.59502	3.82300	0.1167778	0.29276313	2.2462519	20	11 24.6	17.0
6345 Hideo	12.0	X	160.10356	129.04657	106.10457	7.31058	0.0893292	0.17691668	3.1426078	20	11 28.5	16.8
6346 Syukumeguri	12.5	X	354.32944	231.55312	119.75381	7.38866	0.1278522	0.17993888	3.1073205	20	10 10.9	16.3
6347 1995 BM_4	13.6	X	85.11274	218.81696	353.58731	2.15614	0.0612005	0.28794553	2.2712372	20	8 20.8	16.2
6348 1995 CH_1	13.3	X	295.47350	96.93192	313.01298	4.93584	0.1348228	0.25684082	2.4510943	20	9 27.2	16.0
6349 Acapulco	12.4	X	250.11909	236.42906	328.07073	10.78590	0.1389941	0.22631579	2.6668145	20	—	—
6350 Schlüter	12.2	X	300.12623	49.16665	335.90328	11.46228	0.1006389	0.17902961	3.1178327	20	8 25.2	16.2
6351 Neumann	12.3	X	294.09273	220.12222	173.43626	8.12876	0.0034786	0.16815911	3.2507915	20	9 5.7	16.9
6352 Schlaun	14.0	X	290.67049	274.02977	317.33358	3.54684	0.0010031	0.26334671	2.4105573	20	1 30.9	17.1
6353 Semper	12.6	X	245.00985	61.32517	31.35006	2.50842	0.1586836	0.18082736	3.0971337	20	8 31.2	17.1
6354 Vangelis	12.3	X	353.53482	77.86474	68.28366	24.55221	0.2171287	0.22766090	2.6562997	20	—	—
6355 Univermoscow	11.6	X	51.35412	233.40086	23.96356	22.37714	0.0799798	0.17201183	3.2020676	20	9 6.3	16.3
6356 Tairov	12.8	X	69.57609	239.44902	160.72274	14.37853	0.1812974	0.23257983	2.6187137	20	—	—
6357 Glushko	12.4	X	203.67930	286.18340	14.25385	10.38140	0.0766549	0.18961126	3.0007280	20	1 23.2	17.1
6358 Chertok	12.2	X	215.86256	254.51496	79.26362	11.14320	0.1598962	0.23308865	2.6149013	20	3 11.5	16.6
6359 Dubinin	11.4	X	173.87535	38.72986	89.27166	10.73415	0.1032977	0.17094454	3.2153819	20	8 6.4	16.5
6360 1978 UA_7	13.2	X	239.43886	198.07003	22.53043	7.60893	0.0942579	0.26582196	2.3955697	20	—	—
6361 Koppel	13.2	X	243.51646	144.26133	75.18414	5.72055	0.1619924	0.26233445	2.4167543	20	—	—
6362 Tunis	11.9	X	307.90718	301.13513	104.87629	19.20045	0.1698767	0.17294619	3.1905242	20	10 4.7	16.1
6363 Doggett	13.4	X	99.92975	68.28024	36.04479	5.65373	0.1465098	0.28053829	2.3110426	20	4 19.4	16.3
6364 Casarini	12.0	X	94.62243	319.40517	358.74024	9.67030	0.2487503	0.21615050	2.7497838	20	—	—
6365 Nickschneider	13.0	X	39.36137	338.93514	208.92638	8.31858	0.2090833	0.20398980	2.8580101	20	5 26.3	16.1
6366 Rainerwieler	12.2	X	178.34261	15.03664	153.26449	3.67759	0.0690134	0.17500547	3.1654464	20	9 29.2	16.9
6367 1982 FY_2	13.8	X	122.22230	265.63800	29.54433	1.70167	0.0876532	0.30046589	2.2076959	20	—	—
6368 Richardmenendez	13.6	X	287.72092	130.20147	316.58620	6.74706	0.1448978	0.29651308	2.2272731	20	11 18.9	15.5
6369 1983 *UC*	14.2	X	195.06284	351.72714	35.51842	5.99067	0.1438705	0.28392640	2.2926206	20	4 19.9	17.7
6370 Malpais	13.3	X	293.43945	197.86261	31.75121	7.01504	0.0728668	0.27083620	2.3659101	20	1 22.4	16.4
6371 Heinlein	11.9	X	223.94319	31.82622	125.15833	15.62636	0.1367346	0.18364161	3.0654106	20	11 3.0	16.8
6372 Walker	11.3	X	32.12499	188.10726	64.05125	15.79118	0.1613143	0.17330101	3.1861678	20	8 6.9	15.5
6373 Stern	12.6	X	322.72597	182.65065	353.72654	12.68747	0.0890094	0.22798780	2.6537600	20	—	—
6374 Beslan	12.2	X	319.22088	216.13126	163.42263	9.73415	0.0769425	0.17478102	3.1681559	20	9 17.8	16.3
6375 Fredharris	12.8	X	53.92208	257.25880	42.15412	1.59745	0.1641920	0.17467831	3.1693976	20	11 1.5	17.2
6376 Schamp	12.9	X	335.68631	123.76088	159.74133	16.35737	0.2554823	0.23860938	2.5744100	20	5 23.7	15.5
6377 Cagney	12.6	X	297.77783	115.58460	125.30475	15.44530	0.1591954	0.23230018	2.6208149	20	2 3.4	16.1
6378 1987 SE_{13}	12.8	X	256.74347	303.08758	96.83554	2.85992	0.1725212	0.17363432	3.1820891	20	7 6.1	17.5
6379 Vrba	11.6	X	319.03957	174.46161	31.80206	13.90598	0.0781831	0.19087525	2.9874660	20	2 10.6	15.9
6380 Gardel	14.6	X	141.13444	8.44107	164.79725	5.37289	0.1365502	0.28871602	2.2671946	20	9 8.1	17.7
6381 Toyama	13.4	X	117.95807	119.05878	120.32512	6.08187	0.1121807	0.29051779	2.2578109	20	11 11.9	16.7
6382 1988 *EL*	13.8	X	29.56799	191.72392	350.58582	18.55363	0.0467756	0.39996258	1.8244129	20	3 21.9	15.1
6383 Tokushima	11.8	X	212.47962	166.20999	84.44565	11.13736	0.0562981	0.18985783	2.9981294	20	—	—
6384 Kervin	13.7	X	323.13975	265.43675	76.84484	26.28672	0.0770150	0.36566959	1.9367645	20	9 24.5	16.2
6385 Martindavid	12.8	X	167.01565	200.64744	22.92769	5.66760	0.1189388	0.17644771	3.1481738	20	11 18.6	17.7
6386 Keithnoll	12.6	X	306.61132	268.00699	119.81263	8.73470	0.3010071	0.28778344	2.2720899	20	9 5.2	13.7
6387 1989 *WC*	13.6	X	57.59581	154.33996	280.04807	1.61695	0.1547393	0.23204854	2.6227093	20	1 8.6	16.3
6388 1989 WL_1	12.6	X	125.75780	173.95981	234.33902	12.56790	0.1466725	0.23634432	2.5908321	20	3 4.8	16.6
6389 Ogawa	13.2	X	288.13198	304.53037	123.34479	6.52535	0.0607485	0.21613800	2.7498898	20	10 16.7	16.8
6390 Hirabayashi	12.8	X	56.33469	78.76368	75.24444	6.07250	0.1764079	0.20156240	2.8809101	20	5 4.3	16.2
6391 Africano	13.5	X	33.59233	18.57362	89.56949	14.25598	0.1333121	0.22913463	2.6448978	20	1 11.1	16.3
6392 Takashimizuno	11.5	X	20.46389	246.82073	53.15356	17.59578	0.1339520	0.17090158	3.2159207	20	9 22.0	15.9
6393 1990 HM_1	12.1	X	187.11059	65.20127	76.03390	10.71721	0.1341734	0.17647104	3.1478964	20	9 7.2	17.3
6394 1990 QM_2	13.8	X	359.06721	193.63273	161.67177	22.82069	0.0927266	0.36521604	1.9383677	20	12 9.4	16.3
6395 Hilliard	13.9	X	312.80725	179.76931	227.63215	1.49679	0.1991501	0.26283714	2.4136718	20	10 29.2	15.4
6396 Schleswig	13.9	X	91.06335	250.36541	89.18952	7.28844	0.1169650	0.26619694	2.3933195	20	—	—
6397 1991 *BJ*	13.1	X	116.48025	357.34677	60.09032	4.55496	0.0309260	0.27370654	2.3493403	20	2 21.4	16.0
6398 Timhunter	13.3	X	34.09963	67.81403	128.96440	23.85645	0.2238545	0.27475546	2.3433572	20	6 6.9	15.9
6399 Harada	13.0	X	213.55259	191.44793	38.42589	8.39880	0.1112836	0.26010268	2.4305590	20	—	—
6400 Georgealexander	12.0	X	126.53932	232.85923	87.53227	12.71582	0.1542049	0.18806906	3.0171100	20	—	—

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6401 Roentgen	12.8	X	225.23698	93.12662	136.32509	13.46354	0.1275855	0.22495014	2.6775970	20	—	—
6402 Holstein	12.7	X	335.04443	239.64722	131.67924	4.54375	0.1181330	0.21678239	2.7444378	20	10 11.1	15.7
6403 Steverin	13.0	X	320.75153	64.86475	228.67912	14.30739	0.1238361	0.23581872	2.5946803	20	5 23.2	15.8
6404 Vanavara	13.0	X	300.20041	42.57458	109.63652	4.27314	0.0936274	0.18371177	3.0646301	20	—	—
6405 Komiyama	13.2	X	69.80524	130.42732	117.40284	4.77145	0.1217365	0.28947422	2.2632340	20	9 30.9	16.1
6406 Mikejura	13.4	X	340.53711	205.50803	146.17630	8.17907	0.1780058	0.28711117	2.2756353	20	10 16.4	15.1
6407 1992 PF_2	13.8	X	99.95249	50.05088	209.89609	5.08627	0.1533370	0.28902613	2.2655725	20	11 20.0	17.1
6408 Saijo	12.3	X	343.57587	92.64275	206.07536	1.56909	0.0371503	0.20220558	2.8747978	20	7 12.1	15.9
6409 1992 VC	13.0	X	306.07480	251.63410	54.78443	13.92154	0.1939728	0.23707590	2.5854994	20	5 6.7	16.0
6410 Fujiwara	12.7	X	64.92073	250.01243	76.49269	8.68277	0.2247357	0.21354880	2.7720727	20	12 29.9	17.0
6411 Tamaga	13.1	X	266.18016	272.17373	157.25627	28.57454	0.4173182	0.21425168	2.7660067	20	7 23.9	17.8
6412 Kaifu	13.6	X	341.91662	165.17734	12.20594	6.82649	0.0465432	0.27228657	2.3575011	20	1 21.9	16.5
6413 Iye	13.6	X	272.05868	38.33200	32.06420	4.79376	0.1107347	0.29057885	2.2574946	20	10 1.4	15.8
6414 Mizunuma	13.9	X	9.94958	201.58428	23.05394	1.81812	0.0685887	0.31563940	2.1363640	20	5 7.8	15.8
6415 1993 VR_3	12.6	X	248.99418	133.89873	310.71667	4.10802	0.1413253	0.17657336	3.1466802	20	8 25.7	17.2
6416 Nyukasayama	13.2	X	340.33631	145.14190	258.24338	1.70388	0.1433772	0.18227956	3.0806621	20	11 21.8	16.7
6417 Liberati	13.9	X	205.62001	265.70702	89.55951	3.94594	0.1861544	0.23688756	2.5868696	20	3 24.1	18.1
6418 Hanamigahara	13.0	X	307.65900	179.37404	229.39485	6.14782	0.1063909	0.29013477	2.2597975	20	11 1.3	14.9
6419 Susono	10.9	X	1.63773	75.32259	274.51950	11.38252	0.0774578	0.17798751	3.1299906	20	10 7.2	15.3
6420 Riheijyaya	12.3	X	147.66746	53.39426	290.32168	8.89218	0.1017213	0.19050479	2.9913377	20	1 15.4	16.7
6421 1993 XS_1	13.3	X	335.33728	268.49789	140.39390	6.53705	0.1331511	0.25560673	2.4589773	20	12 14.9	15.9
6422 Akagi	12.6	X	289.81167	167.58925	126.50981	14.62447	0.1512661	0.23179797	2.6245990	20	4 9.2	16.4
6423 Harunasan	12.5	X	130.00234	37.30770	340.74912	11.14638	0.1967669	0.19010154	2.9955664	20	2 18.3	17.2
6424 Ando	12.2	X	126.41915	259.77158	143.94160	11.08090	0.1097417	0.18796736	3.0181982	20	3 7.1	16.6
6425 1994 WZ_3	12.3	X	156.12899	132.58552	210.10518	14.87325	0.2087374	0.24204942	2.5499599	20	1 21.8	16.7
6426 Vanýsek	13.7	X	183.15616	204.10493	45.21867	2.78059	0.1713917	0.26112408	2.4242167	20	—	—
6427 1995 FY	13.5	X	50.14339	322.45932	338.17088	4.67593	0.1282205	0.28977454	2.2616700	20	11 14.2	16.5
6428 Barlach	13.3	X	120.61448	91.25574	307.55931	9.21018	0.0739898	0.23786303	2.5797924	20	2 10.1	16.9
6429 Brancusi	14.3	X	47.06489	203.78207	142.29153	3.69293	0.1933098	0.31176372	2.1540329	20	—	—
6430 1964 UP	14.1	X	254.78642	357.60811	299.49129	3.21742	0.1476122	0.30997720	2.1623013	20	2 18.9	17.2
6431 1967 UT	13.4	X	184.71255	223.01455	96.75074	3.44386	0.0551136	0.26653657	2.3912860	20	1 11.4	16.7
6432 Temirkanov	12.4	X	159.23418	177.82785	132.27726	4.12277	0.1133414	0.18235989	3.0797573	20	—	—
6433 Enya	14.2	X	98.44409	317.34121	87.31925	8.63439	0.2187810	0.26731154	2.3866619	20	2 10.1	17.1
6434 Jewitt	13.5	X	324.94828	201.80749	139.31132	14.87531	0.2333789	0.27770181	2.3267528	20	8 6.7	14.9
6435 Daveross	15.1	X	214.60238	359.00231	159.17506	23.44311	0.0578600	0.37069344	1.9192260	20	12 13.4	17.7
6436 Coco	13.9	X	127.26253	135.61100	138.61862	3.42152	0.0912110	0.29413369	2.2392686	20	—	—
6437 Stroganov	12.8	X	339.58640	57.62317	165.91422	2.06348	0.0396771	0.19959884	2.8997733	20	3 28.7	16.6
6438 Suárez	13.8	X	159.54235	91.16216	161.14715	5.21968	0.1866600	0.29620128	2.2288359	20	—	—
6439 Tirol	11.9	X	144.25905	118.40690	147.89766	19.07825	0.0775334	0.17336831	3.1853433	20	12 19.1	17.1
6440 Ransome	13.9	X	82.78158	182.36330	171.93584	2.51080	0.1885429	0.25623638	2.4549474	20	—	—
6441 Milenajesenská	13.7	X	231.42782	132.08122	150.39368	2.72513	0.2054451	0.26495605	2.4007862	20	1 13.1	17.6
6442 Salzburg	13.7	X	153.41914	121.12897	152.06753	2.99675	0.0398997	0.22380521	2.6867211	20	—	—
6443 1988 RH_{12}	12.1	X	220.24371	199.46351	168.16243	9.49993	0.1256826	0.08209500	5.2431413	20	4 29.7	19.6
6444 Ryuzin	14.2	X	90.83676	269.14675	98.01179	6.05966	0.3045995	0.29599448	2.2298739	20	—	—
6445 Bellmore	12.7	X	93.33201	341.12621	125.64063	13.95348	0.1145048	0.23154515	2.6265092	20	4 18.1	16.5
6446 Lomberg	15.0	X	111.58026	253.56617	157.01842	23.57876	0.2963408	0.27956487	2.3164041	20	3 14.6	18.3
6447 Terrycole	14.4	X	300.89095	156.01959	230.79275	19.77014	0.0857016	0.36135624	1.9521462	20	9 25.9	16.4
6448 1991 CW	13.9	X	281.80290	308.70134	117.92564	4.93546	0.1598727	0.28966547	2.2622377	20	10 6.8	16.0
6449 Kudara	14.1	X	142.56669	162.06288	287.08387	2.46229	0.1417019	0.27803892	2.3248717	20	5 17.7	17.5
6450 Masahikohayashi	13.4	X	17.63411	150.44145	129.29231	8.50356	0.2454347	0.24371198	2.5383497	20	9 10.6	15.8
6451 Kärnten	14.3	X	149.09707	215.54351	115.77311	3.70339	0.0477087	0.22904317	2.6456018	20	—	—
6452 Johneuller	13.5	X	210.61900	29.32192	196.41669	1.67936	0.0650300	0.25878669	2.4387920	20	—	—
6453 1991 NY	13.7	X	15.73989	111.56373	196.34610	5.04303	0.3300646	0.24116202	2.5562115	20	10 31.6	16.2
6454 1991 UG_1	12.7	X	103.26499	276.87440	65.59720	29.72754	0.3931506	0.21520571	2.7578260	20	—	—
6455 1992 HE	13.9	X	119.88342	262.76195	26.94442	37.33708	0.5725464	0.29379578	2.2409854	20	—	—
6456 Golombek	15.9	X	209.27286	347.13401	313.58007	8.22528	0.4093296	0.30351279	2.1928961	20	1 16.9	20.2
6457 Kremsmünster	13.3	X	217.82969	257.46609	126.40856	2.94357	0.0749003	0.20162629	2.8803014	20	5 15.4	17.5
6458 Nouda	12.9	X	307.22962	150.11529	198.02623	14.86265	0.1494339	0.24151689	2.5537069	20	7 12.4	16.1
6459 Hidesan	12.4	X	101.70583	218.54591	168.65682	10.61332	0.1039014	0.18759912	3.0221465	20	1 15.0	16.7
6460 Bassano	13.7	X	333.82144	181.62204	298.96622	3.22885	0.1069906	0.29052183	2.2577900	20	—	—
6461 Adam	14.3	X	234.65335	266.23999	154.15769	23.41984	0.1018636	0.36113480	1.9529442	20	7 26.8	16.8
6462 Myougi	12.4	X	310.41647	269.57216	107.78422	16.41306	0.0586385	0.17180794	3.2046005	20	9 8.1	16.9
6463 Isoda	11.7	X	189.90664	78.93184	287.22132	11.92377	0.1860219	0.23348569	2.6119360	20	3 15.7	16.3
6464 Kaburaki	12.2	X	34.26580	8.06730	108.50824	11.65132	0.0584404	0.18914547	3.0056524	20	1 30.8	16.2
6465 Zvezdotchet	12.6	X	343.03432	97.65263	5.61996	11.37531	0.1575229	0.22545128	2.6736276	20	—	—
6466 Drewesquivel	13.6	X	80.21693	71.92142	125.78839	13.77404	0.1164970	0.24041192	2.5615257	20	7 27.7	17.0
6467 Prilepina	13.0	X	114.37636	232.42876	189.92563	4.62995	0.1150361	0.22799895	2.6536735	20	3 10.9	16.7
6468 Welzenbach	13.1	X	216.86718	143.38838	167.64715	2.30777	0.0733676	0.22533638	2.6745364	20	2 10.7	17.2
6469 Armstrong	14.5	X	164.39530	150.65560	159.37777	3.95862	0.2037146	0.29798271	2.2199439	20	—	—
6470 Aldrin	14.3	X	330.55027	152.67911	237.92272	2.79080	0.1510703	0.28721308	2.2750970	20	11 20.4	15.9
6471 Collins	13.8	X	318.38067	328.90834	165.84293	2.67383	0.1245182	0.25978862	2.4325175	20	—	—
6472 Rosema	13.2	X	149.58179	103.42666	223.21375	4.96214	0.1677233	0.17927906	3.1149399	20	1 4.8	18.1
6473 Winkler	13.0	X	287.05315	329.28954	204.02227	7.46380	0.1302842	0.22403808	2.6848590	20	—	—
6474 Choate	14.1	X	18.00528	120.04552	175.34795	12.27066	0.3000457	0.24000595	2.5644134	20	10 13.3	16.7
6475 Refugium	11.1	X	321.08941	74.94010	277.14571	8.93130	0.1618347	0.17668123	3.1453992	20	8 4.8	14.9
6476 1987 VT	12.0	X	61.02324	272.57409	54.36421	17.62903	0.1777483	0.21212615	2.7844532	20	12 19.7	16.3
6477 1988 AE_5	12.5	X	272.47458	106.95020	145.90322	10.30825	0.0233832	0.18622449	3.0370004	20	2 11.9	16.6
6478 Gault	14.4	X	42.03802	83.21281	183.53891	22.81121	0.1937266	0.28156181	2.3054386	20	9 27.9	17.1
6479 Leoconnolly	12.7	X	237.39973	51.71790	161.83564	13.28350	0.1860971	0.23356601	2.6113372	20	—	—
6480 Scarlatti	14.3	X	254.04418	164.76180	166.36131	2.44520	0.2272040	0.26993606	2.3711668	20	3 30.9	18.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6481 Tenzing	13.4	X	140.38024	311.40413	324.07473	6.29011	0.1816499	0.28644142	2.2791811	20	—	—
6482 Steiermark	13.5	X	183.60279	352.63975	155.87648	0.56467	0.1290319	0.17520099	3.1630909	20	9 7.4	18.6
6483 Nikolajvasil′ev	13.9	X	321.65634	182.02197	181.69767	5.32196	0.1520973	0.24243131	2.5472813	20	9 5.3	16.4
6484 Barthibbs	12.7	X	235.96024	302.59219	97.63094	13.62034	0.1902701	0.23825362	2.5769720	20	6 14.6	16.7
6485 Wendeesther	13.9	X	79.01560	151.20384	234.27266	20.46229	0.1472615	0.37327206	1.9103769	20	—	—
6486 1991 *FO*	14.2	X	86.56068	16.47568	187.11717	6.29182	0.0794594	0.27883580	2.3204401	20	8 9.3	17.1
6487 Tonyspear	13.6	X	329.02195	92.94506	187.47418	21.26920	0.3053343	0.27241403	2.3567657	20	4 17.8	15.6
6488 Drebach	12.9	X	7.81215	262.33848	96.10762	11.82953	0.0926684	0.25094197	2.4893570	20	11 23.8	15.9
6489 Golevka	19.2	X	109.68573	68.57290	209.55730	2.26645	0.6129662	0.25162051	2.4848797	20	12 24.2	24.8
6490 1991 NR_2	14.6	X	232.72061	29.14434	286.50145	17.17904	0.4066611	0.22696957	2.6616909	20	2 13.0	20.0
6491 1991 *OA*	18.9	X	104.38599	323.64230	301.88866	5.94880	0.5910939	0.24931322	2.5001871	20	12 8.2	24.4
6492 1991 OH_1	12.9	X	266.81478	245.54910	106.21212	3.21680	0.0790894	0.20023372	2.8936404	20	5 31.3	16.8
6493 Cathybennett	14.0	X	255.78020	240.63511	142.34789	24.71883	0.0834085	0.36214204	1.9493213	20	7 4.8	16.4
6494 1992 *NM*	13.7	X	47.56044	253.75528	117.85603	3.82768	0.1062259	0.29405422	2.2396721	20	—	—
6495 1992 UB_1	13.0	X	345.86710	45.94590	246.71706	6.64681	0.1338337	0.27611142	2.3356789	20	7 9.8	15.1
6496 Kazuko	12.8	X	348.27515	226.15632	33.04984	13.16829	0.1636931	0.23660189	2.5889515	20	5 16.9	15.4
6497 Yamasaki	14.0	X	329.20389	121.56895	234.07489	4.71109	0.2153303	0.27993646	2.3143537	20	9 15.6	15.5
6498 Ko	13.4	X	75.46410	156.58194	149.59956	7.99143	0.1686294	0.28613063	2.2808312	20	12 24.6	16.9
6499 Michiko	12.4	X	112.16138	221.15184	65.76349	10.06259	0.1416983	0.21468151	2.7623135	20	12 19.7	16.8
6500 Kodaira	12.6	X	37.10046	255.45674	186.10231	29.31996	0.4173403	0.21552026	2.7551419	20	—	—
6501 Isonzo	14.5	X	222.77398	227.94033	148.95535	6.51057	0.1217328	0.27887536	2.3202206	20	5 8.1	17.9
6502 1993 XR_1	13.8	X	248.64314	247.48186	153.61715	5.27567	0.1366585	0.28294205	2.2979349	20	7 7.1	16.9
6503 1994 *CP*	13.1	X	260.71686	263.04012	135.34842	2.93283	0.0335820	0.20496447	2.8489423	20	7 30.6	16.8
6504 Lehmbruck	14.2	X	273.22444	33.05605	10.55992	6.08602	0.1615851	0.26139705	2.4225287	20	8 11.9	17.0
6505 Muzzio	11.0	X	252.12370	254.36910	257.90832	17.64926	0.1907219	0.17242804	3.1969128	20	11 12.0	15.7
6506 Klausheide	13.9	X	164.98345	229.46055	350.37321	6.39889	0.0509376	0.27018540	2.3697078	20	12 2.9	17.2
6507 1982 *QD*	14.2	X	119.13399	96.85193	293.15899	4.12545	0.2371794	0.29838119	2.2179670	20	2 12.0	16.8
6508 Rolčík	13.7	X	164.00807	212.17584	151.27441	6.19795	0.2127294	0.22205117	2.7008513	20	2 28.5	18.2
6509 Giovannipratesi	12.7	X	75.81331	103.54188	288.15673	6.39076	0.2374603	0.21123179	2.7923072	20	—	—
6510 Tarry	12.9	X	359.44299	88.95580	159.82726	23.00478	0.2254494	0.27220087	2.3579959	20	6 2.5	15.3
6511 Furmanov	12.4	X	51.05840	270.69658	301.89362	8.07411	0.1234174	0.23474215	2.6026074	20	7 8.2	15.6
6512 de Bergh	13.3	X	17.82864	113.11290	184.58329	11.01822	0.1865694	0.23906601	2.5711307	20	9 23.7	16.0
6513 1987 UW_1	13.4	X	245.98947	168.10950	230.33968	8.72922	0.1309036	0.23230647	2.6207676	20	6 28.4	17.3
6514 Torahiko	12.8	X	281.51085	142.10984	231.52786	12.36017	0.2404772	0.23279493	2.6171003	20	6 23.3	16.3
6515 Giannigalli	14.1	X	65.10871	35.93032	270.85502	2.62223	0.1507468	0.28578400	2.2826751	20	12 13.1	17.3
6516 Gruss	14.6	X	315.05753	82.71011	279.82409	1.69443	0.2005419	0.27580844	2.3373891	20	8 21.6	16.1
6517 Buzzi	14.5	X	334.06461	151.07341	125.95916	23.41831	0.0478471	0.36869420	1.9261577	20	6 5.9	16.8
6518 Vernon	13.3	X	94.53688	58.04426	114.93525	13.75294	0.3037651	0.23621360	2.5917879	20	8 3.4	17.5
6519 Giono	14.0	X	246.74963	109.40929	165.72212	5.71687	0.1563567	0.30283493	2.1961672	20	1 14.1	17.3
6520 Sugawa	13.7	X	335.50492	63.42275	237.01574	4.79296	0.1965450	0.27477828	2.3432274	20	6 25.3	15.3
6521 Pina	13.6	X	222.13950	63.58710	211.26018	9.93218	0.2274536	0.25999215	2.4312478	20	—	—
6522 Aci	13.0	X	336.09887	314.36639	294.43137	22.11285	0.1989594	0.26762776	2.3847816	20	3 14.7	16.1
6523 Clube	15.1	X	264.27796	284.91298	354.75735	26.62556	0.4173671	0.22861131	2.6489326	20	2 6.6	20.4
6524 Baalke	13.2	X	3.73144	281.37976	127.00430	22.20823	0.0924382	0.27330525	2.3516394	20	—	—
6525 Ocastron	14.4	X	38.24148	142.91566	228.68993	3.25325	0.1026690	0.25157513	2.4851784	20	—	—
6526 Matogawa	13.5	X	195.37297	166.86747	133.68022	5.12320	0.1797721	0.29880946	2.2158473	20	—	—
6527 Takashiito	13.5	X	58.68450	107.73334	286.00770	4.64254	0.1495372	0.29057109	2.2575347	20	—	—
6528 Boden	14.1	X	210.77340	4.93446	350.14118	3.05743	0.1742808	0.29139774	2.2532632	20	3 22.8	17.4
6529 Rhoads	13.8	X	118.74761	266.90559	208.25889	6.51457	0.1304035	0.27438092	2.3454892	20	5 26.5	17.0
6530 Adry	12.9	X	298.39214	226.09210	64.17480	13.97224	0.1650700	0.22758319	2.6569044	20	4 13.6	16.5
6531 Subashiri	13.1	X	141.80480	34.76738	78.76086	2.42449	0.1453348	0.17009576	3.2260696	20	6 17.7	18.3
6532 Scarfe	12.5	X	299.83923	230.43588	102.86343	5.08296	0.1098937	0.17442301	3.1724896	20	6 15.5	16.7
6533 Giuseppina	12.9	X	14.02789	46.43388	48.10786	22.75476	0.0381733	0.23000861	2.6381935	20	—	—
6534 Carriepeterson	12.5	X	180.43783	55.27764	76.36759	23.27662	0.1175357	0.17450752	3.1714652	20	8 23.4	17.9
6535 Archipenko	13.0	X	43.31431	272.35297	338.75717	12.24576	0.1786558	0.26168990	2.4207210	20	9 1.3	15.6
6536 Vysochinska	13.6	X	8.41002	154.43909	131.60657	6.41665	0.1974908	0.27554033	2.3389051	20	8 28.4	15.4
6537 Adamovich	13.9	X	253.04112	200.71633	120.07637	4.02613	0.1963992	0.30659018	2.1781974	20	3 18.2	17.1
6538 Muraviov	12.5	X	16.89901	145.58096	195.08217	1.48789	0.0857517	0.20385320	2.8592867	20	10 29.8	16.0
6539 Nohavica	13.9	X	262.32431	25.17867	300.65045	2.27002	0.2024217	0.22746508	2.6578241	20	4 4.4	17.9
6540 Stepling	13.7	X	193.23053	182.63562	192.86142	4.67984	0.1713293	0.30296522	2.1955376	20	4 1.6	16.8
6541 Yuan	12.8	X	208.31628	138.00012	358.29949	0.70743	0.1430960	0.17809446	3.1287374	20	9 15.8	17.7
6542 Jacquescousteau	14.0	X	46.78785	117.24791	16.75865	3.73626	0.1191156	0.28208409	2.3025920	20	3 2.8	15.9
6543 Senna	14.3	X	36.53674	86.00006	283.35229	4.17392	0.2129897	0.28697575	2.2763511	20	—	—
6544 Stevendick	12.9	X	110.11209	22.94915	340.92002	3.38591	0.1098003	0.21384598	2.7695039	20	—	—
6545 1986 TR_6	10.1	X	309.27775	147.99256	278.00664	11.98615	0.0510813	0.08428027	5.1521138	20	10 11.2	16.9
6546 Kaye	11.9	X	250.52729	272.36719	274.79465	14.41251	0.1040585	0.17015884	3.2252721	20	—	—
6547 Vasilkarazin	14.6	X	31.40325	133.76128	214.47839	4.93532	0.2457529	0.24321357	2.5418164	20	12 30.6	18.1
6548 1988 BO_4	12.3	X	297.02942	355.97933	277.83314	9.31845	0.0637673	0.18803652	3.0174581	20	3 28.2	16.7
6549 Skryabin	13.6	X	301.92909	178.33718	159.60356	7.06113	0.1302167	0.27383772	2.3485900	20	6 25.3	16.2
6550 Parléř	13.6	X	111.95480	48.41566	55.71628	6.83311	0.1672307	0.26350173	2.4096117	20	5 7.9	16.9
6551 1988 *XP*	13.5	X	120.19895	255.21010	135.83646	8.54818	0.2092633	0.25835104	2.4415328	20	2 17.4	16.8
6552 Higginson	13.6	X	39.65409	84.07436	138.10290	12.01372	0.1400181	0.22589080	2.6701584	20	7 4.7	16.8
6553 Seehaus	12.5	X	246.08410	145.87051	134.88856	13.36035	0.0761838	0.18469023	3.0537966	20	2 10.4	17.1
6554 Takatsuguyoshida	14.4	X	195.25454	146.01195	194.06272	4.12707	0.2170824	0.30388050	2.1911267	20	2 17.9	18.0
6555 1989 UU_1	12.8	X	40.26906	182.34757	280.21185	6.68269	0.0961202	0.29812103	2.2192572	20	—	—
6556 Arcimboldo	13.5	X	161.38122	286.53706	103.40123	4.98722	0.1334645	0.30212881	2.1995878	20	3 21.1	16.6
6557 Yokonomura	12.4	X	90.76222	11.91619	43.00606	7.80890	0.1899853	0.17565720	3.1576119	20	2 22.8	16.8
6558 Norizuki	14.2	X	169.56181	6.96123	231.01966	3.97799	0.0624068	0.28933543	2.2639577	20	—	—
6559 Nomura	14.0	X	357.79045	57.58511	210.02573	9.72101	0.2433210	0.27388648	2.3483112	20	6 27.3	15.5
6560 Pravdo	12.8	X	15.05239	350.00462	285.03750	23.22875	0.1149244	0.27250751	2.3562267	20	8 2.1	15.4

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
6561	Gruppetta	13.2	X	344.04125	177.04947	163.07963	13.67033	0.1859235	0.23658323	2.5890876	20	9 19.0	15.3
6562	Takoyaki	14.0	X	144.72231	294.88837	110.93632	5.17222	0.2270366	0.28972601	2.2619225	20	4 2.5	17.5
6563	Steinheim	14.2	X	41.88660	98.84968	356.73159	5.88941	0.0685471	0.28337324	2.2956032	20	—	—
6564	Asher	16.1	X	323.76306	330.47809	194.57344	45.29089	0.2659330	0.38180562	1.8818045	20	—	—
6565	Reiji	14.2	X	269.58460	53.59369	156.09891	2.39677	0.0294694	0.30800597	2.1715173	20	—	—
6566	Shafter	14.0	X	31.06770	205.03341	156.51754	3.94400	0.1686700	0.28681203	2.2772173	20	—	—
6567	Shigemasa	13.8	X	68.98568	110.79753	235.03779	4.54057	0.1963176	0.28821921	2.2697992	20	—	—
6568	Serendip	14.1	X	338.33867	106.47878	308.28771	8.46201	0.1673967	0.24285778	2.5442984	20	12 27.9	16.6
6569	Ondaatje	16.4	X	348.56135	167.31009	111.48166	22.64127	0.2208908	0.47529002	1.6261612	20	7 25.4	14.8
6570	Tomohiro	12.1	X	288.44671	323.29986	215.36257	14.42997	0.1694130	0.17751198	3.1355779	20	—	—
6571	Sigmund	13.7	X	140.44676	24.08526	287.21125	6.30609	0.1542371	0.25241514	2.4796618	20	—	—
6572	Carson	12.6	X	79.22739	190.25521	141.03909	2.60388	0.2656246	0.24293202	2.5437800	20	—	—
6573	Magnitskij	13.4	X	349.74479	202.00798	170.07610	2.19576	0.1220435	0.23736421	2.5834054	20	11 11.3	16.1
6574	Gvishiani	11.5	X	94.61163	240.63965	349.28793	17.70955	0.1924246	0.15733757	3.3981908	20	9 21.5	16.8
6575	Slavov	13.1	X	130.75237	227.92891	189.20364	5.10650	0.1580975	0.17857319	3.1231431	20	3 31.9	18.0
6576	Kievtech	12.6	X	196.21521	268.34736	93.64383	2.62915	0.1844964	0.17961418	3.1110642	20	3 26.8	17.8
6577	Torbenwolff	13.6	X	35.97831	25.05687	245.21730	23.67566	0.2027521	0.27753909	2.3276621	20	9 13.1	16.9
6578	Zapesotskij	14.5	X	193.46516	240.98765	141.33869	3.58441	0.1886908	0.26167782	2.4207955	20	4 14.1	18.4
6579	Benedix	13.4	X	280.06190	35.83004	326.80453	15.86970	0.1816494	0.23343704	2.6122989	20	6 17.5	17.2
6580	Philbland	14.4	X	40.17619	1.99569	219.41714	1.08996	0.1216718	0.23127949	2.6285201	20	7 1.9	17.3
6581	Sobers	13.3	X	49.14445	357.80763	350.51576	6.00836	0.1189327	0.28270454	2.2992218	20	—	—
6582	Flagsymphony	12.8	X	111.81257	205.12015	206.40025	8.90653	0.2880449	0.21299562	2.7768703	20	3 16.3	17.1
6583	Destinn	12.8	X	187.21618	123.42838	315.94424	6.92107	0.1003403	0.22686076	2.6625420	20	6 20.5	16.8
6584	Ludekpesek	13.5	X	155.14189	80.91798	166.95863	4.74548	0.0956039	0.28765431	2.2727699	20	12 29.6	16.6
6585	O'Keefe	14.4	X	252.81701	60.19683	0.57515	22.35599	0.3578329	0.26967070	2.3727221	20	7 17.4	18.6
6586	Seydler	13.7	X	46.04644	244.88121	228.25214	3.62596	0.1535130	0.25760256	2.4462599	20	2 3.2	15.9
6587	Brassens	13.6	X	125.33373	32.31003	349.84575	4.91738	0.0658732	0.25621811	2.4550641	20	1 23.9	16.7
6588	1985 RC_4	12.6	X	43.27166	170.05007	140.71691	2.77973	0.0667099	0.19965013	2.8992766	20	10 25.0	16.5
6589	Jankovich	14.7	X	67.81505	27.44345	308.59762	5.30113	0.1872093	0.28761535	2.2729751	20	—	—
6590	Barolo	12.5	X	187.58978	100.46561	304.42922	8.99306	0.1031917	0.18761829	3.0219407	20	5 4.8	17.4
6591	Sabinin	13.4	X	129.31263	73.19275	288.32849	4.51338	0.1219734	0.21519167	2.7579459	20	1 15.7	17.2
6592	Goya	13.3	X	102.23777	88.37915	329.43031	4.21738	0.1608290	0.21533621	2.7567116	20	2 27.5	17.1
6593	1986 UV	13.5	X	124.31511	60.10014	344.81264	4.50017	0.0608193	0.21619005	2.7494485	20	2 24.8	17.2
6594	Tasman	12.6	X	6.16563	123.77682	194.82617	8.76523	0.1622477	0.21283215	2.7782920	20	9 22.6	15.6
6595	Munizbarreto	14.1	X	179.09912	79.51082	318.81791	5.43891	0.1548247	0.26035969	2.4289592	20	4 16.9	18.0
6596	Bittner	12.9	X	304.27368	7.17982	30.22949	4.89386	0.0811639	0.23671548	2.5881232	20	9 29.8	15.7
6597	Kreil	14.6	X	304.71499	22.69087	52.23610	3.27641	0.3003340	0.23789279	2.5795772	20	11 2.9	16.1
6598	Modugno	13.3	X	155.21246	98.98152	333.19048	10.18968	0.2386366	0.22249042	2.6972953	20	5 11.0	18.1
6599	Tsuko	14.2	X	103.95684	115.85339	223.18456	5.18277	0.2126068	0.28872026	2.2671724	20	—	—
6600	Qwerty	13.8	X	93.06168	87.73477	305.30683	2.82421	0.2093356	0.29112351	2.2546780	20	1 6.8	15.7
6601	Schmeer	13.7	X	291.64877	271.31374	71.85758	2.26147	0.2374056	0.26984510	2.3716996	20	5 27.8	16.5
6602	Gilclark	14.1	X	157.02765	98.11975	340.91951	22.66514	0.0737013	0.38523705	1.8706133	20	4 29.6	16.9
6603	Marycragg	13.3	X	355.92930	107.16592	114.12956	16.43636	0.2017725	0.22833250	2.6510885	20	4 15.4	16.2
6604	Ilias	13.3	X	10.84518	342.52309	139.18181	6.42971	0.0496779	0.21273880	2.7791047	20	—	—
6605	Carmontelle	12.8	X	335.25995	293.73970	108.08114	3.16983	0.0741774	0.20048122	2.8912584	20	11 15.2	16.4
6606	Makino	12.9	X	198.39994	115.08653	207.61441	5.03120	0.1737500	0.18076508	3.0978451	20	2 9.6	18.2
6607	Matsushima	12.6	X	264.01061	282.80054	117.11676	4.69068	0.1116759	0.23179817	2.6245975	20	7 27.4	16.1
6608	Davidecrespi	13.4	X	139.47758	194.86575	221.98888	11.12996	0.1936912	0.25702677	2.4499119	20	4 6.0	17.2
6609	1992 BN	12.0	X	294.54576	239.84214	121.36126	11.39233	0.1168399	0.18976534	2.9991035	20	7 14.2	15.8
6610	Burwitz	13.2	X	20.60178	351.22643	60.50300	7.89537	0.1715886	0.28420682	2.2911124	20	—	—
6611	1993 VW	16.9	X	321.34026	281.33467	230.94302	8.69682	0.4845960	0.44620604	1.6960777	20	—	—
6612	Hachioji	13.6	X	292.23864	160.14453	79.34994	3.84066	0.1459133	0.26150590	2.4218564	20	1 24.0	16.8
6613	Williamcarl	12.2	X	209.00713	91.48515	199.28194	25.49563	0.1741384	0.17561134	3.1581616	20	1 11.3	18.0
6614	Antisthenes	13.9	X	58.16838	229.70366	171.46914	5.58264	0.1578943	0.25182606	2.4835273	20	—	—
6615	Plutarchos	14.6	X	21.62567	81.27809	129.35743	1.79713	0.1262486	0.30838276	2.1697481	20	5 12.1	16.0
6616	Plotinos	13.9	X	167.16092	214.09580	188.27291	6.09685	0.1227678	0.26262003	2.4150020	20	4 12.3	17.3
6617	Boethius	14.4	X	185.51819	281.45648	68.31525	3.42409	0.1381406	0.30002276	2.2098693	20	2 21.9	17.5
6618	Jimsimons	13.4	X	140.80744	110.20601	334.63600	23.82704	0.0443484	0.38389248	1.8749786	20	4 8.8	16.0
6619	Kolya	11.5	X	12.02451	112.44186	17.97749	19.09120	0.1860671	0.17455588	3.1708795	20	1 19.3	15.4
6620	Peregrina	14.2	X	237.19656	350.47287	23.54310	7.61036	0.2797628	0.22488559	2.6781093	20	5 4.4	18.8
6621	Timchuk	13.8	X	20.96808	254.53444	124.35313	7.11950	0.2423677	0.24308588	2.5427064	20	—	—
6622	Matvienko	13.3	X	66.28754	208.57402	145.65167	1.78966	0.2313915	0.16918918	3.2375836	20	—	—
6623	Trioconbrio	14.8	X	235.69318	327.56877	238.74225	4.55380	0.1348685	0.25176251	2.4839452	20	—	—
6624	1980 SG	13.3	X	127.86529	345.14126	21.94733	7.06887	0.1563305	0.25705559	2.4497288	20	1 21.1	16.7
6625	Nyquist	13.5	X	103.80513	205.53087	200.33308	1.30730	0.1883865	0.17560985	3.1581794	20	2 22.9	17.9
6626	Mattgenge	14.2	X	247.37637	2.08242	43.33103	2.11155	0.3834030	0.18631167	3.0360530	20	6 12.4	19.4
6627	1981 FT	14.0	X	81.47681	117.86450	60.48429	3.97510	0.0825244	0.30773761	2.1727796	20	6 30.2	16.3
6628	Dondelia	12.7	X	314.74847	250.12491	127.35595	2.93071	0.0705739	0.19905695	2.9050335	20	9 12.9	16.3
6629	Kurtz	14.6	X	258.80066	162.17801	212.06431	2.12806	0.1387646	0.30649666	2.1786404	20	6 12.5	17.1
6630	Skepticus	13.4	X	148.50310	273.32943	61.52577	6.06021	0.2007649	0.29553439	2.2321876	20	—	—
6631	Pyatnitskij	13.2	X	121.60473	205.83471	192.11395	7.13968	0.1500125	0.25413282	2.4684758	20	2 17.9	16.7
6632	Scoon	13.8	X	156.58496	22.36513	42.47073	6.99590	0.1191355	0.26317130	2.4116282	20	4 29.9	17.4
6633	1986 TR_4	13.1	X	273.29042	109.39815	271.81500	4.06678	0.1866034	0.22775892	2.6555376	20	7 1.9	16.5
6634	1987 KB	12.6	X	334.41351	66.87450	243.27612	10.71437	0.2659208	0.26966618	2.3727486	20	6 30.4	13.9
6635	Zuber	14.1	X	128.18339	265.87531	189.88108	24.23619	0.1102602	0.37938325	1.8898062	20	5 7.3	16.4
6636	Kintanar	14.0	X	61.01361	215.25900	178.58407	2.34880	0.1174999	0.28790841	2.2714324	20	—	—
6637	Inoue	13.7	X	126.26537	220.70138	250.79877	4.68135	0.0517116	0.26418014	2.4054847	20	5 20.4	16.9
6638	1989 CA	13.7	X	128.90394	218.66389	216.69950	1.91110	0.1617781	0.25919869	2.4362069	20	4 17.6	17.2
6639	Marchis	12.8	X	210.88321	218.47653	69.11633	2.52014	0.1306346	0.17464617	3.1697864	20	1 14.2	17.8
6640	Falorni	14.0	X	288.80711	205.92357	338.16618	5.20761	0.0680400	0.28896034	2.2659164	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		°	°	°	°		°				
6641 Bobross	13.3	X	112.96360	294.77582	81.58336	4.87447	0.1883562	0.21264072	2.7799592	20	1 25.3	17.1
6642 Henze	12.4	X	71.72816	58.72972	30.64500	4.32054	0.2466813	0.17524307	3.1625846	20	3 17.1	16.4
6643 Morikubo	13.0	X	148.94963	0.01187	42.46346	2.84480	0.2676499	0.18060451	3.0996809	20	4 7.7	18.4
6644 Jugaku	12.8	X	118.77925	329.63471	32.07226	5.42011	0.1479701	0.17223182	3.1993405	20	1 15.2	17.5
6645 Arcetri	12.9	X	133.26546	29.84645	24.64673	0.78892	0.1998247	0.17804894	3.1292706	20	4 3.9	17.8
6646 Churanta	14.5	X	34.53721	106.02699	340.73277	17.58740	0.1006272	0.36901498	1.9250413	20	—	—
6647 Josse	15.0	X	177.64185	137.84839	217.82714	1.14358	0.1968190	0.30077796	2.2061687	20	2 22.6	18.3
6648 1991 PM_{11}	13.0	X	18.61670	34.01514	327.35116	4.78227	0.2388070	0.24229561	2.5482323	20	12 31.3	16.2
6649 Yokotatakao	13.1	X	67.54087	349.05867	325.29290	7.20316	0.2548581	0.24442813	2.5333893	20	12 26.9	17.3
6650 Morimoto	12.8	X	247.96464	92.78614	347.00378	12.49147	0.1722817	0.23553168	2.5967880	20	8 23.3	16.4
6651 1991 RV_9	13.8	X	349.41278	293.60454	11.68541	3.81329	0.0660310	0.26884570	2.3775737	20	8 7.7	16.4
6652 1991 SJ_1	12.7	X	158.03229	303.39403	167.50535	14.16302	0.1733125	0.22883489	2.6472069	20	7 1.7	17.3
6653 Feininger	12.8	X	276.47744	23.19764	31.51216	1.97001	0.0814725	0.19824001	2.9130091	20	9 4.6	16.6
6654 Luleå	13.3	X	93.58409	276.27518	149.51658	5.90098	0.1699107	0.17609225	3.1524090	20	3 4.4	17.6
6655 Nagahama	11.6	X	278.26510	331.71448	74.99496	10.75246	0.0775634	0.18997835	2.9968613	20	8 31.6	15.8
6656 Yokota	12.4	X	33.68087	88.55568	55.07203	1.89832	0.1508465	0.17483083	3.1675541	20	3 11.4	16.1
6657 Otukyo	14.8	X	48.94081	113.25545	233.51500	5.07136	0.2366561	0.28654692	2.2786216	20	—	—
6658 Akiraabe	13.4	X	62.62764	217.26490	112.82117	4.61441	0.0750887	0.28433614	2.2904176	20	—	—
6659 Pietsch	13.2	X	217.44734	159.07588	258.75954	5.21171	0.1080799	0.26968731	2.3726247	20	6 25.6	16.5
6660 Matsumoto	14.4	X	203.45814	163.02073	262.01809	1.64405	0.1885083	0.26704688	2.3882386	20	6 15.3	18.2
6661 Ikemura	13.7	X	239.78941	199.78949	194.55747	2.69614	0.1720104	0.26910300	2.3760579	20	6 12.6	17.0
6662 1993 BP_{13}	12.2	X	183.48201	234.88688	268.59723	12.52488	0.1043064	0.23519330	2.5992782	20	9 1.3	16.4
6663 Tatebayashi	12.4	X	33.69771	95.82683	131.60852	13.83371	0.1315199	0.22594672	2.6697178	20	7 1.2	15.5
6664 Tennyo	13.8	X	129.99762	142.63658	39.95901	4.84859	0.0775513	0.26860219	2.3790105	20	9 6.6	17.1
6665 Kagawa	12.2	X	159.91468	334.17882	101.13391	11.43604	0.0719558	0.18930737	3.0039385	20	5 19.1	16.8
6666 Frö	14.3	X	342.33472	161.74388	230.97664	2.98352	0.2354686	0.23817789	2.5775183	20	12 9.9	16.3
6667 Sannaimura	13.3	X	96.45092	357.44975	171.64661	5.62222	0.0744505	0.27221975	2.3578868	20	7 4.3	16.4
6668 1994 GY_8	12.6	X	204.01796	285.13819	351.84469	8.07744	0.1521591	0.21629039	2.7485980	20	—	—
6669 Obi	13.1	X	281.45335	255.08902	49.47026	6.21811	0.2139316	0.30176497	2.2013554	20	3 25.9	16.0
6670 Wallach	12.4	X	213.63044	201.86551	122.66414	20.15454	0.2924629	0.21921239	2.7241184	20	2 23.2	17.5
6671 Concari	12.7	X	104.67520	97.59904	180.30112	14.69890	0.1541231	0.20024450	2.8935366	20	12 2.5	17.6
6672 Corot	14.5	X	210.89640	166.40028	209.11498	4.81041	0.2157958	0.26330220	2.4108289	20	4 18.4	18.6
6673 Degas	13.5	X	216.62683	295.23803	39.36633	3.97273	0.2115287	0.26019773	2.4299670	20	3 5.9	17.5
6674 Cézanne	13.5	X	197.66082	178.46780	98.43232	3.74645	0.1530552	0.25575825	2.4580060	20	—	—
6675 Sisley	14.5	X	134.10424	56.64507	67.06974	1.56711	0.1745439	0.18159434	3.0884069	20	6 25.0	19.4
6676 Monet	13.2	X	346.40147	338.22598	165.29664	0.97228	0.1562306	0.17553434	3.1590851	20	—	—
6677 Renoir	12.3	X	122.92372	313.69489	32.06804	14.64704	0.0959070	0.16829924	3.2489868	20	—	—
6678 Seurat	12.7	X	191.70305	304.93713	28.54066	10.86388	0.0302951	0.21770047	2.7367164	20	2 16.6	16.7
6679 Gurzhij	13.8	X	155.91810	60.62100	39.77334	5.52382	0.0327494	0.30416038	2.1897824	20	6 11.4	16.4
6680 1970 WD	13.4	X	23.25150	126.00646	256.99530	7.31281	0.1215293	0.27864282	2.3215114	20	—	—
6681 Prokopovich	13.8	X	215.64946	302.41379	42.27587	4.77902	0.1456726	0.30112437	2.2044763	20	3 16.5	17.0
6682 Makarij	14.4	X	275.77473	50.40770	358.86500	5.89871	0.2297712	0.27101274	2.3648826	20	8 12.9	17.0
6683 Karachentsov	12.3	X	134.07539	66.45583	34.59930	14.55876	0.0892055	0.18137540	3.0908917	20	5 18.6	17.1
6684 Volodshevchenko	13.2	X	198.58069	167.53820	137.24285	2.79920	0.1343780	0.21789846	2.7350584	20	1 17.3	17.5
6685 Boitsov	14.3	X	233.07644	92.57225	189.08232	3.72771	0.1746237	0.29550696	2.2323258	20	1 10.2	17.9
6686 Hernius	12.7	X	301.23516	255.95555	160.77952	2.38334	0.0985535	0.19471509	2.9480600	20	10 10.7	16.2
6687 Lahulla	14.6	X	81.99177	312.03006	80.56205	0.53503	0.0205470	0.29018773	2.2595226	20	—	—
6688 Donmccarthy	13.1	X	177.28065	189.55162	207.60327	4.82819	0.1725127	0.18028706	3.1033185	20	4 19.8	18.3
6689 Floss	14.9	X	250.64578	77.70081	198.83441	4.41984	0.1727315	0.29950196	2.2124303	20	1 18.9	18.4
6690 Messick	13.5	X	188.52038	333.45054	319.27352	3.75859	0.1534701	0.28998645	2.2605680	20	—	—
6691 Trussoni	14.2	X	323.32862	291.94531	143.89706	3.91786	0.2485910	0.23868299	2.5738806	20	—	—
6692 Antonínholý	14.1	X	213.69449	16.40676	172.34497	6.84444	0.2446449	0.23987602	2.5653394	20	11 23.5	18.1
6693 1986 CC_2	13.8	X	248.86071	55.90547	317.04091	9.46611	0.2825872	0.26918057	2.3756014	20	5 9.7	17.9
6694 1986 PF	12.9	X	327.73843	69.75662	245.54789	5.53625	0.0551392	0.22960859	2.6412568	20	7 11.4	16.1
6695 Barrettduff	14.2	X	309.47029	268.29799	138.94425	15.75145	0.2035538	0.23420871	2.6065578	20	10 18.0	16.9
6696 Eubanks	13.7	X	291.38529	297.29205	4.59657	1.73728	0.1927766	0.22509622	2.6764383	20	4 8.9	17.4
6697 Celentano	11.9	X	181.13098	261.61053	34.64079	11.57813	0.0619208	0.16982988	3.2294357	20	—	—
6698 Malhotra	14.2	X	168.26639	52.82272	359.10447	2.47351	0.1679604	0.25858586	2.4400545	20	4 26.4	18.1
6699 Igaueno	13.0	X	14.26479	299.48715	66.06095	4.89183	0.2008183	0.23776441	2.5805057	20	12 22.9	16.1
6700 Kubišová	13.3	X	231.82601	6.44423	91.03297	6.07073	0.0954503	0.23127415	2.6285606	20	9 6.7	17.0
6701 Warhol	12.5	X	18.68877	37.59686	311.41011	12.75839	0.1432855	0.23543792	2.5974774	20	11 25.6	16.0
6702 1988 BP_3	13.4	X	314.93820	129.92287	161.01060	7.77336	0.1350104	0.22240162	2.6980133	20	5 10.5	16.8
6703 1988 CH	13.2	X	358.38989	275.28253	166.41752	4.95399	0.2325902	0.24083778	2.5585052	20	—	—
6704 1988 CJ	13.0	X	301.83223	314.26675	266.86017	3.13721	0.0404331	0.21504221	2.7592237	20	2 1.7	16.6
6705 Rinaketty	14.2	X	272.04036	85.21175	178.74032	1.64628	0.1152874	0.29758108	2.2219409	20	1 30.1	17.3
6706 1988 VD_3	13.8	X	227.23760	42.37688	340.07196	1.79518	0.2184903	0.26801089	2.3825083	20	5 10.5	17.8
6707 Shigeru	14.2	X	36.46108	151.10522	272.41543	6.18514	0.1781134	0.28498732	2.2869273	20	—	—
6708 Bobbievaile	13.1	X	246.80924	193.59879	115.80473	12.07819	0.1809187	0.25776468	2.4452341	20	3 4.7	17.0
6709 Hiromiyuki	13.9	X	291.20044	343.96059	98.97201	1.82726	0.1605704	0.27390081	2.3482293	20	11 13.5	15.9
6710 Apostel	13.1	X	149.71765	82.75251	217.72002	6.57699	0.2218256	0.21018847	2.8015398	20	—	—
6711 Holliman	13.4	X	238.26684	347.34160	191.47010	14.70919	0.1176447	0.23984827	2.5655372	20	12 24.6	17.0
6712 Hornstein	14.1	X	354.31649	322.72175	264.13967	0.96903	0.1231048	0.26531863	2.3985985	20	4 12.4	16.2
6713 Coggie	13.5	X	123.81554	46.05426	209.74117	19.46620	0.0791913	0.27475298	2.3433713	20	12 3.7	17.1
6714 Montréal	12.3	X	82.28362	232.94235	117.54379	14.56171	0.1348980	0.24134855	2.5548942	20	—	—
6715 Sheldonmarks	13.8	X	39.75083	236.96621	1.77295	3.44929	0.0053203	0.22564473	2.6720993	20	7 10.7	17.3
6716 1990 RO_1	13.2	X	70.40695	261.59621	162.13091	4.64951	0.0588599	0.21144601	2.7904209	20	1 9.2	16.9
6717 Antal	13.7	X	137.92208	99.31602	233.28410	6.37496	0.2369411	0.20920984	2.8102696	20	1 3.3	18.1
6718 Beiglböck	12.8	X	69.87588	320.37666	0.43296	1.54584	0.0629507	0.19829972	2.9124243	20	12 6.8	17.0
6719 Gallaj	13.0	X	174.45312	314.62776	76.52978	3.22412	0.0818329	0.21531913	2.7568574	20	4 7.4	17.1
6720 Gifu	12.2	X	145.34799	10.51677	50.38566	14.85764	0.1506560	0.18138776	3.0907513	20	4 21.7	17.1

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6721 Minamiawaji	12.6	X	13.29917	272.28426	55.89736	17.00158	0.2145111	0.19682596	2.9269443	20	10 28.0	16.0
6722 Bunichi	12.8	X	83.95018	55.56644	63.26680	2.81763	0.1850662	0.17442734	3.1724370	20	4 29.0	17.3
6723 Chrisclark	12.4	X	90.26019	74.42493	23.38140	17.72372	0.1411918	0.17242580	3.1969404	20	4 5.9	16.8
6724 1991 CX_5	11.9	X	172.45513	25.09625	103.67343	9.57540	0.1424903	0.18377362	3.0639424	20	8 5.6	16.9
6725 Engyoji	12.5	X	119.16814	2.59508	116.47302	2.33781	0.1170242	0.17622481	3.1508279	20	5 30.6	17.3
6726 Suthers	13.9	X	20.64884	146.93781	277.64251	4.30345	0.0938672	0.28493991	2.2871809	20	—	—
6727 1991 TF_4	13.9	X	245.18177	22.65874	15.97012	3.19674	0.2121201	0.23005830	2.6378136	20	6 18.7	18.0
6728 1991 UM	14.7	X	236.33536	20.63907	10.58574	1.95771	0.0990204	0.29834671	2.2181379	20	6 12.9	17.4
6729 Emiko	12.4	X	274.53397	69.68925	16.40213	13.94779	0.1757247	0.23555050	2.5966497	20	10 5.8	15.4
6730 Ikeda	12.3	X	21.58405	18.89990	140.29910	18.27285	0.1492242	0.17847510	3.1242872	20	3 12.1	16.0
6731 Hiei	13.9	X	237.66427	106.07630	352.78048	4.16674	0.2319421	0.23002777	2.6380471	20	8 26.6	17.9
6732 1992 CG_1	12.8	X	12.12127	113.50940	113.04275	3.41967	0.1237007	0.18123345	3.0925055	20	5 21.5	16.3
6733 1992 EF	12.0	X	105.74341	285.39941	271.32790	9.17871	0.0418705	0.18780751	3.0199105	20	8 9.7	16.4
6734 Benzenberg	11.8	X	342.08631	308.23639	58.30944	11.34662	0.1111644	0.19001385	2.9964880	20	10 13.1	15.5
6735 Madhatter	14.0	X	243.31415	357.87063	75.08917	2.90132	0.0785706	0.31064520	2.1592004	20	8 29.8	16.3
6736 Marchare	14.3	X	150.24016	58.26181	63.26731	3.09551	0.1644780	0.26437120	2.4043256	20	7 9.8	18.1
6737 Okabayashi	13.7	X	284.96643	67.81500	53.40897	0.80965	0.1258222	0.27760642	2.3272858	20	—	—
6738 Tanabe	14.6	X	276.59602	5.33495	99.82521	0.47886	0.1595258	0.27567582	2.3381387	20	11 18.6	16.5
6739 Tärendö	12.8	X	111.50591	250.36866	81.83837	2.45673	0.1195242	0.16946662	3.2340491	20	—	—
6740 Goff	13.1	X	247.32759	89.79354	64.11448	14.80266	0.1077437	0.24012935	2.5635348	20	12 5.9	16.4
6741 Liyuan	13.5	X	103.49013	127.28654	164.82139	5.70781	0.1945948	0.28219869	2.3019685	20	—	—
6742 Biandepei	13.3	X	85.55272	150.21056	103.05180	5.46120	0.1717416	0.27650191	2.3334793	20	10 29.5	16.8
6743 Liu	13.5	X	248.03725	207.57592	69.76394	8.11962	0.2071118	0.29500624	2.2348511	20	1 18.6	17.1
6744 Komoda	14.0	X	211.94458	187.15049	85.16581	6.66911	0.1885560	0.29023407	2.2592821	20	—	—
6745 Nishiyama	14.6	X	310.58769	86.90464	127.27409	6.06944	0.1382484	0.29647155	2.2274811	20	1 7.3	17.3
6746 Zagar	12.7	X	51.63556	44.89607	258.83769	12.72370	0.1602032	0.23525149	2.5988495	20	11 13.9	16.4
6747 Ozegahara	13.2	X	317.85905	344.64752	12.91578	4.01674	0.1377418	0.19189517	2.9768710	20	8 15.3	16.7
6748 Bratton	14.0	X	237.09379	192.11885	80.54101	4.11242	0.1612708	0.25388814	2.4700616	20	1 9.3	18.0
6749 Ireentje	13.8	X	210.99924	155.26326	209.52235	8.28395	0.2522074	0.22472285	2.6794021	20	4 5.2	18.5
6750 Katgert	12.5	X	230.87349	114.09547	338.10240	9.25369	0.0969612	0.18858324	3.0116233	20	8 22.8	16.8
6751 van Genderen	13.8	X	252.90110	109.31340	206.01004	4.64832	0.1621816	0.26117538	2.4238992	20	3 14.4	17.4
6752 Ashley	13.7	X	208.92065	290.04593	176.61523	13.01193	0.0814020	0.26815919	2.3816298	20	8 22.6	17.0
6753 Fursenko	13.5	X	249.26336	352.48204	300.03022	3.00372	0.1392725	0.29250896	2.2475530	20	2 10.2	16.9
6754 Burdenko	13.7	X	151.54124	242.44191	170.62762	2.48082	0.1854897	0.25859164	2.4400182	20	4 14.5	17.4
6755 Solov′yanenko	13.2	X	151.31582	144.05173	279.64581	4.73525	0.0431588	0.25832715	2.4416834	20	4 13.9	16.5
6756 Williamfeldman	13.9	X	52.20093	304.76604	253.19302	3.64515	0.1813366	0.22424046	2.6832434	20	6 27.3	17.1
6757 Addibischoff	13.2	X	73.48816	262.73494	112.45510	3.36213	0.0859323	0.19968920	2.8988984	20	—	—
6758 Jesseowens	13.2	X	82.23093	219.73651	14.97503	11.77676	0.1344189	0.22856859	2.6492626	20	9 21.4	17.0
6759 1980 KD	12.5	X	357.86777	79.10604	131.48029	8.71988	0.1872390	0.16976667	3.2302374	20	4 6.2	16.1
6760 1980 KM	13.4	X	239.83427	48.42757	228.13686	5.73905	0.1010760	0.21558301	2.7546073	20	1 22.5	17.6
6761 Haroldconnolly	14.0	X	112.76768	215.43683	188.52229	4.42941	0.1543729	0.17615427	3.1516689	20	2 25.5	18.6
6762 Cyrenagoodrich	14.5	X	296.07232	331.62528	7.34284	3.69825	0.1750374	0.30790519	2.1719911	20	6 8.8	16.7
6763 Kochiny	13.4	X	265.65597	84.97348	252.14636	11.47359	0.2468452	0.22228613	2.6989477	20	4 15.2	17.8
6764 Kirillavrov	13.2	X	233.26430	242.54220	18.12130	7.04629	0.1389336	0.29023414	2.2592817	20	—	—
6765 Fibonacci	14.6	X	33.28137	297.20232	142.23946	4.08572	0.1538739	0.28290713	2.2981240	20	—	—
6766 Kharms	14.4	X	203.10614	62.33795	308.64092	3.19196	0.1742075	0.22324318	2.6912286	20	4 7.3	18.9
6767 Shirvindt	13.1	X	181.49467	97.25216	22.93685	9.38957	0.1408178	0.22516788	2.6758705	20	8 8.7	17.5
6768 Mathiasbraun	13.9	X	355.93019	63.40388	289.67439	2.19570	0.1975143	0.26843225	2.3800144	20	11 13.1	16.0
6769 Brokoff	13.7	X	169.36609	55.48684	58.97608	3.89586	0.1225364	0.26212065	2.4180683	20	7 19.4	17.4
6770 Fugate	12.4	X	169.77552	260.52574	155.41351	10.10298	0.1077827	0.18780034	3.0199874	20	5 6.9	17.2
6771 Foerster	14.4	X	261.88540	129.75327	3.79232	0.84224	0.1856010	0.27815110	2.3242466	20	11 30.1	16.5
6772 1988 BG_4	13.2	X	231.97866	103.34290	295.94976	12.71656	0.1913281	0.22665457	2.6641564	20	6 8.4	17.6
6773 Kellaway	12.8	X	58.82975	110.95342	147.35202	11.36115	0.0681386	0.19054867	2.9908784	20	9 7.3	16.9
6774 Vladheinrich	14.6	X	162.67416	83.75709	60.62286	0.97131	0.0907652	0.30301215	2.1953108	20	8 25.1	17.5
6775 Giorgini	13.2	X	342.13416	141.83990	141.57475	14.09184	0.1785090	0.22513169	2.6761572	20	6 14.5	16.1
6776 Dix	13.5	X	215.35666	82.18683	72.15147	4.69616	0.1562662	0.23808581	2.5781828	20	10 23.3	17.2
6777 Balakirev	13.1	X	134.40634	272.24169	126.35159	2.69989	0.2259943	0.17449964	3.1715607	20	3 20.7	18.3
6778 Tosamakoto	12.8	X	78.75638	318.68463	119.87125	3.11262	0.0448622	0.20634437	2.8362269	20	2 8.3	16.6
6779 Perrine	14.0	X	331.71833	200.03233	314.11417	1.84737	0.1080131	0.29086111	2.2560339	20	—	—
6780 Borodin	14.0	X	224.84752	344.00860	323.13145	4.94574	0.1759533	0.29215310	2.2493777	20	2 4.8	17.4
6781 1990 OD	14.0	X	8.83039	61.31523	231.75097	11.87122	0.2464206	0.23126659	2.6286178	20	8 31.2	16.6
6782 1990 SU_{10}	13.0	X	82.76859	127.07608	288.21339	3.28791	0.0618764	0.21149879	2.7899566	20	1 16.2	16.6
6783 Gulyaev	13.0	X	172.14522	330.50428	20.12234	10.41505	0.1467036	0.21449530	2.7639119	20	2 21.6	17.5
6784 Bogatikov	13.0	X	138.64522	324.30565	62.24295	5.10699	0.1141243	0.21122836	2.7923375	20	2 27.6	17.2
6785 1990 VA_7	11.2	X	334.96984	119.74966	46.23882	20.06028	0.0965135	0.17314993	3.1880209	20	1 9.1	15.8
6786 Doudantsutsuji	13.1	X	106.22036	54.09167	103.21784	2.55631	0.0975957	0.17779977	3.1322170	20	6 30.5	17.5
6787 1991 PF_{15}	13.4	X	249.43044	32.73155	263.70245	3.29101	0.1471866	0.29554508	2.2321338	20	2 13.6	16.6
6788 1991 PH_{15}	14.0	X	33.35553	99.30846	175.99237	0.69122	0.1845809	0.27307515	2.3529603	20	9 23.9	16.5
6789 Milkey	13.9	X	313.88248	284.39337	137.98537	6.17145	0.1401527	0.27574607	2.3377415	20	12 1.8	16.0
6790 Pingouin	13.4	X	47.94693	93.80248	204.02531	11.11444	0.2057900	0.27509484	2.3414295	20	11 18.4	16.6
6791 1991 UC_2	15.0	X	161.69022	191.38464	238.75807	1.45336	0.1287826	0.25925337	2.4358644	20	5 12.6	18.5
6792 Akiyamatakashi	13.1	X	326.63662	277.77123	86.94570	3.69755	0.2439390	0.26914312	2.3758218	20	9 26.9	14.4
6793 Palazzolo	13.7	X	137.58171	46.70184	106.36324	4.92675	0.1578963	0.22445773	2.6815115	20	8 5.5	18.0
6794 Masuisakura	11.3	X	199.94924	348.72371	41.06636	16.33237	0.2129118	0.18217067	3.0818896	20	4 29.7	16.6
6795 Örnsköldsvik	13.7	X	352.03770	192.74300	133.88759	5.06242	0.1246485	0.22973001	2.6403260	20	9 10.2	16.4
6796 Sundsvall	13.6	X	241.68317	106.33618	204.76202	5.03407	0.0605676	0.21746270	2.7387109	20	3 9.6	17.6
6797 Östersund	12.5	X	34.70873	3.60994	321.44428	1.12936	0.0673379	0.19792863	2.9160635	20	10 29.9	16.3
6798 Couperin	12.6	X	358.96004	82.17508	305.98349	0.91311	0.1007308	0.19572202	2.9379400	20	12 2.8	16.2
6799 Citfiftythree	14.0	X	295.23348	84.37670	172.49675	20.04095	0.3459585	0.17621916	3.1508952	20	1 31.9	19.2
6800 Saragamine	13.0	X	302.16038	71.26594	339.08205	8.51794	0.1607663	0.22707330	2.6608803	20	9 29.9	15.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6801 Střekov	13.6	X	188.41419	334.68482	44.01330	5.21236	0.1305208	0.30061664	2.2069578	20	4 2.4	16.7
6802 Černovice	13.3	X	240.92610	0.75149	352.61797	2.10002	0.2518332	0.18542326	3.0457429	20	4 16.5	18.4
6803 1995 UK_7	13.5	X	188.45755	288.68462	73.82328	8.09792	0.2115823	0.21850780	2.7299713	20	3 21.9	18.3
6804 Maruseppu	13.7	X	59.52552	239.63654	246.59933	3.20898	0.1054223	0.29367866	2.2415811	20	3 7.8	15.9
6805 Abstracta	13.0	X	95.08423	338.19731	136.67486	1.89521	0.1550123	0.17327236	3.1865191	20	5 3.5	17.5
6806 Kaufmann	14.0	X	131.36966	86.78669	340.85032	4.66990	0.0928960	0.25636273	2.4541407	20	4 1.1	17.2
6807 Brünnow	14.5	X	48.07122	82.61932	359.63912	4.22681	0.1220597	0.28615982	2.2806761	20	—	—
6808 Plantin	13.3	X	9.75486	195.11266	21.84764	7.56261	0.0938296	0.29245965	2.2478056	20	4 25.4	15.3
6809 Sakuma	13.4	X	184.99381	220.43616	358.07846	6.09168	0.1055059	0.27135688	2.3628827	20	12 20.6	16.7
6810 Juanclariá	11.8	X	352.90824	343.19336	294.31870	10.38861	0.0693484	0.17703108	3.1412539	20	6 26.7	15.9
6811 Kashcheev	14.5	X	306.88495	84.80835	224.68463	1.65731	0.2144755	0.26596459	2.3947132	20	5 6.4	17.0
6812 Robertnelson	13.2	X	332.92432	80.66459	185.69831	0.87780	0.1151706	0.17795779	3.1303390	20	5 8.0	17.1
6813 Amandahendrix	12.8	X	12.01507	328.08096	268.32932	2.57877	0.1118460	0.17768747	3.1335131	20	6 2.3	16.4
6814 Steffl	13.0	X	210.35099	104.79690	194.90280	2.16913	0.0360550	0.20721435	2.8282828	20	1 23.5	17.0
6815 Mutchler	14.7	X	218.09210	127.61306	251.11823	1.56970	0.1919635	0.25995229	2.4314963	20	4 29.5	18.7
6816 Barbcohen	14.9	X	60.82405	109.96883	138.64731	2.10075	0.1645550	0.28444954	2.2898088	20	9 24.2	17.7
6817 Pest	14.1	X	359.10780	205.98543	246.85399	2.38385	0.0817765	0.28099015	2.3085643	20	—	—
6818 Sessyu	14.0	X	141.83877	118.22873	18.55537	4.24711	0.0821084	0.29862779	2.2167458	20	7 20.5	16.9
6819 McGarvey	13.9	X	210.82693	12.86913	275.88302	4.99669	0.1232657	0.28370484	2.2938141	20	—	—
6820 Buil	12.7	X	166.59649	150.30798	164.26095	2.49351	0.0755023	0.20427952	2.8553071	20	—	—
6821 Ranevskaya	12.6	X	314.46714	197.85516	256.78770	12.62064	0.1519155	0.23795708	2.5791126	20	—	—
6822 Horálek	14.6	X	47.41141	337.32127	15.49520	2.73144	0.2475372	0.23636655	2.5906696	20	—	—
6823 1988 ED_1	12.2	X	30.22753	335.76560	86.64302	16.67807	0.1392121	0.23955115	2.5676582	20	—	—
6824 Mallory	12.9	X	234.91986	281.52273	117.94028	2.00104	0.1917294	0.17831221	3.1261897	20	6 11.2	17.7
6825 Irvine	13.8	X	28.45703	307.79502	6.75954	5.40484	0.0147308	0.30891778	2.1672422	20	10 21.2	16.1
6826 Lavoisier	12.9	X	2.14979	346.85701	101.34702	3.49437	0.0343156	0.19926448	2.9030161	20	—	—
6827 Wombat	12.6	X	350.22656	82.50800	356.55551	12.89682	0.1559833	0.23557981	2.5964343	20	—	—
6828 Elbsteel	13.0	X	233.02552	305.31761	108.68465	11.90189	0.2252707	0.22276376	2.6950884	20	6 25.4	17.3
6829 Charmawidor	13.1	X	148.69038	181.11291	169.33037	2.09772	0.0687503	0.20385121	2.8593052	20	1 19.0	17.3
6830 Johnbackus	12.6	X	34.28003	154.09963	79.12513	5.08439	0.1426893	0.17425338	3.1745481	20	7 8.8	16.6
6831 1991 UM_1	13.8	X	323.12306	353.92781	335.72557	4.59182	0.2056734	0.30265281	2.1970482	20	7 19.5	15.1
6832 Kawabata	13.0	X	290.37061	179.64855	52.15266	1.88705	0.1482506	0.17048148	3.2212016	20	1 25.1	17.6
6833 1993 FC_1	13.0	X	165.23830	8.83432	210.76018	12.99358	0.1129083	0.23606808	2.5928528	20	11 24.3	17.0
6834 Hunfeld	13.9	X	11.68568	226.28221	46.04396	4.26429	0.2331089	0.25825283	2.4421518	20	8 16.5	15.8
6835 Molfino	14.0	X	284.60468	150.26535	220.53465	4.00665	0.1702141	0.23351886	2.6116887	20	7 6.1	17.3
6836 Paranal	13.1	X	107.64134	70.39805	254.98957	0.94708	0.0595450	0.20185726	2.8781039	20	—	—
6837 Bressi	12.6	X	146.22083	94.04150	348.25407	12.80883	0.2163405	0.20430734	2.8550480	20	5 14.4	17.6
6838 Okuda	12.0	X	187.56121	242.66650	248.21240	13.60352	0.1729635	0.22837193	2.6507833	20	8 16.8	16.7
6839 Ozenuma	12.3	X	95.79944	89.44002	251.11923	0.97339	0.0736401	0.20259473	2.8711153	20	—	—
6840 1995 WW_5	14.4	X	162.95266	296.36444	126.06013	3.36234	0.1529010	0.26041478	2.4286166	20	5 6.2	18.1
6841 Gottfriedkirch	14.5	X	299.85411	283.25670	271.62038	3.67138	0.1354658	0.28652822	2.2787208	20	—	—
6842 Krosigk	13.8	X	275.19734	147.71615	233.48626	10.95877	0.0954916	0.22770164	2.6559829	20	7 16.3	17.5
6843 Heremon	13.1	X	120.81237	136.95850	23.65760	9.29049	0.1779101	0.25814615	2.4428246	20	8 5.3	17.0
6844 Shpak	14.0	X	170.16766	283.35920	133.76237	5.30890	0.1005078	0.29781964	2.2207542	20	5 4.5	17.1
6845 Mansurova	13.7	X	280.55220	149.62470	102.33356	6.68688	0.1466363	0.28707851	2.2758079	20	1 22.9	16.7
6846 Kansazan	14.3	X	311.16442	228.41865	137.80032	2.85935	0.2238036	0.26726925	2.3869137	20	8 14.0	16.0
6847 Kunz–Hallstein	14.3	X	301.11970	53.32182	48.46748	24.58024	0.2894221	0.27877755	2.3207633	20	—	—
6848 1978 VG_5	13.1	X	151.94618	176.36508	318.98347	0.52032	0.1276646	0.17849758	3.1240249	20	7 23.6	18.0
6849 1979 MX_6	13.7	X	112.93444	1.59810	253.81740	6.38522	0.0874068	0.27059227	2.3673318	20	11 20.2	17.0
6850 1981 QT_3	12.3	X	47.04773	247.19104	359.54539	5.90605	0.0937287	0.17624788	3.1505529	20	8 9.9	16.5
6851 Chianti	14.4	X	242.55915	309.92675	125.98584	3.81255	0.1244705	0.30279652	2.1963529	20	8 23.5	16.9
6852 Nannibignami	13.7	X	229.99696	304.98351	154.27352	2.50156	0.1732358	0.26578926	2.3957662	20	8 28.5	17.2
6853 Silvanomassaglia	14.5	X	65.21498	105.87205	3.57809	5.89356	0.1182630	0.28984675	2.2612943	20	2 27.6	16.6
6854 1987 UG	13.7	X	232.83055	184.54224	209.95600	1.83096	0.2159323	0.26121210	2.4236720	20	6 1.4	17.3
6855 Armellini	13.8	X	264.76269	279.85335	330.21779	7.57062	0.0640333	0.28455938	2.2892196	20	1 12.2	16.8
6856 Bethemmons	13.9	X	153.96511	301.24844	293.75614	1.32927	0.1710818	0.26976206	2.3721863	20	12 4.7	17.7
6857 Castelli	14.0	X	228.67082	302.21978	307.36259	9.20050	0.1960190	0.28006677	2.3136358	20	—	—
6858 1990 ST_{10}	13.0	X	8.65450	74.35121	343.74037	13.60589	0.1887690	0.23707402	2.5855131	20	—	—
6859 Datemasamune	13.9	X	148.62077	129.07560	154.03246	23.20104	0.0137512	0.39696428	1.8335880	20	—	—
6860 Sims	13.3	X	117.76846	14.73401	137.56370	2.01433	0.1153557	0.17816791	3.1278774	20	7 8.9	18.1
6861 1991 FA_3	12.3	X	10.56502	256.69096	21.60858	10.70555	0.1394962	0.17690790	3.1427118	20	8 2.5	16.2
6862 Virgiliomarcon	11.3	X	192.30749	36.06783	17.64550	12.09443	0.0163819	0.17422570	3.1748843	20	5 22.7	16.0
6863 1991 PX_8	13.8	X	8.67599	167.67175	251.31722	4.18347	0.0769940	0.28323680	2.2963404	20	—	—
6864 Starkenburg	14.2	X	78.72785	212.76795	229.09478	2.79850	0.1024019	0.28850704	2.2682893	20	2 5.0	16.5
6865 Dunkerley	14.4	X	56.37468	308.84503	101.12399	3.10023	0.1406100	0.28308615	2.2971550	20	—	—
6866 Kukai	12.0	X	23.16653	161.09593	111.31661	11.05321	0.0583921	0.18751235	3.0230788	20	8 5.2	15.9
6867 Kuwano	13.0	X	234.39911	79.36707	178.94270	11.83588	0.2593550	0.23639193	2.5904842	20	—	—
6868 Seiyauyeda	12.8	X	180.34858	84.60581	120.03902	3.37863	0.1505599	0.22725321	2.6594758	20	11 17.2	16.9
6869 Funada	12.1	X	354.20805	77.05145	127.71789	17.04250	0.0520018	0.17308232	3.1888511	20	4 1.7	16.6
6870 Pauldavies	14.0	X	97.19431	251.41942	146.85438	24.90876	0.1132073	0.36839231	1.9272099	20	—	—
6871 Verlaine	14.7	X	238.76603	207.71288	186.12119	3.77534	0.0471598	0.30273172	2.1966663	20	6 27.3	17.3
6872 1993 CN_1	13.8	X	96.30039	2.25190	228.55527	3.35811	0.0177383	0.30628391	2.1796492	20	9 27.0	16.4
6873 Tasaka	13.9	X	138.85542	53.02381	199.56013	4.78923	0.1356997	0.30795939	2.1717363	20	12 20.9	17.0
6874 1994 JO_1	13.8	X	255.57349	224.20742	78.20161	7.57986	0.2816890	0.29394949	2.2402041	20	2 22.6	17.6
6875 Golgi	13.9	X	5.49817	268.44062	96.66588	3.97197	0.1925238	0.31105079	2.1573230	20	12 30.7	16.0
6876 Beppeforti	13.9	X	155.77060	128.64073	228.30645	6.19798	0.1442318	0.28531324	2.2851854	20	1 29.7	17.3
6877 Giada	13.5	X	108.35732	99.84314	236.74847	6.17763	0.1342052	0.27841547	2.3227750	20	—	—
6878 Isamu	13.8	X	270.47491	225.63563	93.85966	4.03477	0.1832228	0.25519800	2.4616022	20	4 8.8	17.4
6879 Hyogo	12.6	X	231.41729	307.09275	103.02130	8.57291	0.1724046	0.17826901	3.1266947	20	6 22.6	17.4
6880 Hayamiyu	12.2	X	91.45447	111.96552	349.33207	5.24976	0.0695220	0.21024878	2.8010040	20	3 26.6	15.9

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6881 Shifutsu	13.5	X	148.12867	245.99736	71.96108	2.88701	0.0517937	0.19871121	2.9084023	20	—	—
6882 Sormano	12.7	X	208.70030	16.34640	284.17816	14.39188	0.0991505	0.24171091	2.5523401	20	1 17.3	16.6
6883 Hiuchigatake	13.0	X	204.99498	316.85247	79.81091	1.99968	0.1859277	0.17870369	3.1216224	20	5 12.8	18.1
6884 Takeshisato	14.2	X	80.95253	298.45515	123.50844	1.96331	0.1262115	0.28688358	2.2768386	20	1 15.6	16.2
6885 Nitardy	14.6	X	357.55297	210.39261	93.51380	3.80162	0.0615078	0.22869682	2.6482722	20	8 14.0	17.7
6886 Grote	12.4	X	47.47884	358.24747	97.85178	9.14274	0.1578210	0.23960418	2.5672794	20	1 19.0	14.9
6887 Hasuo	13.6	X	225.36409	337.40451	48.21286	5.33486	0.1758068	0.29601510	2.2297704	20	5 15.7	16.9
6888 1971 BD_3	13.4	X	72.43268	171.89631	248.66107	3.76006	0.1497184	0.24035483	2.5619313	20	1 12.5	16.0
6889 1971 RA	13.8	X	351.55398	233.44409	86.58315	4.83644	0.1961978	0.30145494	2.2028645	20	9 24.4	15.2
6890 Savinykh	12.0	X	273.73843	114.56117	194.99617	0.90685	0.1654623	0.17140250	3.2096520	20	4 5.2	16.7
6891 Triconia	13.2	X	323.50777	206.40945	160.57413	5.97742	0.0618574	0.22395883	2.6854924	20	9 16.3	16.5
6892 Lana	15.1	X	85.58594	285.36121	62.25524	4.25825	0.2686220	0.23938476	2.5688479	20	—	—
6893 Sanderson	13.7	X	278.03920	105.83900	314.47200	5.79033	0.0896368	0.26741609	2.3860398	20	9 20.7	16.4
6894 Macreid	12.9	X	266.40874	105.34127	296.66877	21.21976	0.0734607	0.22828753	2.6514366	20	8 4.0	16.5
6895 1987 DG_6	13.5	X	135.30634	328.35994	296.02862	1.13090	0.1646275	0.22606502	2.6687863	20	12 16.5	18.0
6896 1987 RE_1	14.2	X	129.35514	34.01143	342.98177	4.96234	0.2175202	0.28367217	2.2939902	20	2 7.9	17.3
6897 Tabei	14.2	X	271.00400	263.27318	190.94231	1.61699	0.1740355	0.26815348	2.3816636	20	10 18.6	16.3
6898 Saint–Marys	12.5	X	109.52736	136.02546	97.04899	14.18896	0.1237708	0.22671088	2.6637153	20	10 21.9	16.8
6899 Nancychabot	13.4	X	51.55665	133.96037	277.90441	0.93720	0.0195900	0.19672817	2.9279142	20	—	—
6900 1988 XD_1	14.6	X	173.32008	11.10050	55.16439	4.20733	0.1629056	0.29654712	2.2271027	20	5 19.7	18.0
6901 Roybishop	13.6	X	51.58487	124.92990	285.30204	23.15122	0.1115777	0.36399391	1.9427040	20	—	—
6902 Hideoasada	13.0	X	299.02034	128.04593	214.17886	2.09363	0.1029332	0.21592254	2.7517188	20	6 28.5	16.5
6903 1989 XM	12.9	X	120.61456	276.56952	58.34676	2.90131	0.0316158	0.19662317	2.9289565	20	—	—
6904 McGill	14.2	X	154.52722	79.88179	344.04182	5.73594	0.1059320	0.25235160	2.4800780	20	4 23.5	17.8
6905 Miyazaki	11.6	X	26.69908	306.88053	48.43360	13.44697	0.1926846	0.23291399	2.6162083	20	12 23.2	15.2
6906 Johnmills	13.1	X	171.41767	346.91318	68.15580	10.44658	0.2721346	0.21764809	2.7371555	20	5 8.9	18.1
6907 Harryford	12.9	X	137.97015	3.39770	90.94994	9.08960	0.1971492	0.21738634	2.7393523	20	5 26.4	17.4
6908 Kunimoto	13.2	X	198.38378	313.08018	74.31817	5.60571	0.0942155	0.21640145	2.7476576	20	4 28.2	17.4
6909 Levison	13.8	X	236.58470	75.54733	308.28193	38.01570	0.4671000	0.21941424	2.7224475	20	4 17.9	19.9
6910 Ikeguchi	12.4	X	140.67435	227.77298	347.78748	9.08251	0.0442334	0.18531139	3.0469686	20	10 13.2	17.0
6911 Nancygreen	14.1	X	130.25741	168.67234	207.83609	22.89754	0.0898530	0.36705840	1.9318761	20	—	—
6912 Grimm	12.9	X	170.61652	350.91114	179.14719	2.07794	0.1185981	0.18397658	3.0616886	20	9 22.1	17.7
6913 Yukawa	14.3	X	220.08608	273.76306	102.44225	4.40862	0.1397516	0.29487965	2.2354906	20	5 2.0	17.5
6914 Becquerel	12.9	X	270.26175	249.82743	355.15846	2.21673	0.2422924	0.23834863	2.5762872	20	1 2.1	17.0
6915 1992 HH	13.0	X	251.21744	116.80396	97.61554	12.02555	0.1249613	0.23459280	2.6037119	20	—	—
6916 Lewispearce	11.8	X	303.94032	310.73036	314.58065	18.24079	0.2592598	0.20498858	2.8487190	20	2 24.9	15.9
6917 1993 FR_2	13.5	X	92.28675	19.94372	167.03981	3.79950	0.0811669	0.29868945	2.2164407	20	7 27.1	16.2
6918 Manaslu	13.6	X	114.57038	346.98923	183.48639	1.86427	0.1397861	0.26352856	2.4094482	20	8 4.8	17.1
6919 Tomonaga	14.0	X	37.91882	12.46895	137.04610	5.16441	0.1030755	0.28970624	2.2620254	20	3 7.4	16.0
6920 Esaki	13.2	X	204.36337	60.70832	79.72212	6.71459	0.0797622	0.26729349	2.3867694	20	10 7.9	16.5
6921 Janejacobs	13.4	X	210.25129	249.29117	89.20160	5.32140	0.0820483	0.28653787	2.2786696	20	3 5.7	16.5
6922 Yasushi	13.8	X	283.79391	97.36754	132.15273	4.76962	0.1171945	0.28265056	2.2995145	20	—	—
6923 Borzacchini	13.8	X	67.09418	151.04124	195.07320	10.53829	0.0739851	0.19027994	2.9936938	20	—	—
6924 Fukui	11.7	X	137.11176	289.30317	25.28971	12.22494	0.0996966	0.15780142	3.3915283	20	—	—
6925 Susumu	12.2	X	312.99349	85.52716	207.49681	14.20714	0.1012135	0.20659779	2.8339071	20	5 14.4	15.8
6926 1994 RO_{11}	13.0	X	288.32922	66.22260	344.71801	12.82459	0.1711613	0.22747907	2.6577151	20	9 7.3	16.1
6927 Tonegawa	13.4	X	265.30874	37.94712	135.31115	4.82865	0.0097167	0.27524761	2.3405630	20	—	—
6928 Lanna	13.6	X	290.26092	196.25880	211.24877	6.53814	0.2339995	0.22447755	2.6813537	20	8 22.9	16.7
6929 Misto	12.7	X	188.15047	3.77976	56.06055	10.34901	0.1461229	0.21431774	2.7654383	20	5 25.7	17.1
6930 1994 VJ_3	13.0	X	111.09269	321.77292	151.92986	0.58291	0.1472782	0.17154203	3.2079113	20	5 18.4	17.8
6931 Kenzaburo	12.6	X	339.30852	328.11405	43.86218	10.85809	0.0946111	0.18662500	3.0326538	20	10 12.9	16.3
6932 Tanigawadake	13.8	X	210.63770	181.21578	113.90294	3.72416	0.2497184	0.27719907	2.3295652	20	1 10.9	17.9
6933 Azumayasan	13.4	X	12.63930	50.88948	289.90730	2.57365	0.1678032	0.22245118	2.6976126	20	11 7.0	16.4
6934 1994 YN_2	12.8	X	39.49634	260.86134	86.84953	8.30472	0.1866829	0.22728752	2.6592081	20	12 27.8	16.3
6935 Morisot	14.6	X	116.82931	156.37211	227.26216	0.54765	0.0862913	0.28690393	2.2767310	20	1 10.8	17.3
6936 Cassatt	13.3	X	288.98031	32.76832	126.71001	3.65980	0.0781852	0.23517086	2.5994435	20	—	—
6937 Valadon	12.4	X	178.17239	324.47264	203.27614	9.51473	0.0912843	0.18920584	3.0050130	20	9 26.9	17.1
6938 Soniaterk	12.5	X	54.19536	20.21828	279.18455	9.10197	0.0915933	0.18997234	2.9969245	20	10 21.6	16.8
6939 Lestone	13.7	X	259.95230	184.83536	36.49152	14.10176	0.1024532	0.23657679	2.5891346	20	—	—
6940 1972 HL_1	14.5	X	302.57576	244.37474	13.81621	2.85649	0.1266139	0.28601626	2.2814392	20	3 1.4	17.3
6941 Dalgarno	12.5	X	127.59572	195.99145	241.32173	15.42345	0.1941714	0.21293306	2.7774142	20	4 21.8	16.9
6942 Yurigulyaev	14.0	X	141.39087	290.42979	56.44517	3.69341	0.1196698	0.27570169	2.3379924	20	1 1.1	17.1
6943 Moretto	14.0	X	236.41912	240.38797	227.44369	4.09947	0.1145732	0.30272893	2.1966799	20	9 30.0	16.5
6944 Elaineowens	14.3	X	213.78773	174.69482	122.26391	7.66212	0.1381409	0.27960240	2.3161968	20	1 14.2	17.7
6945 Dahlgren	13.8	X	45.00536	86.71595	350.02419	7.54930	0.1743013	0.29184835	2.2509433	20	—	—
6946 1980 RX_1	13.5	X	203.07535	245.84997	143.85909	4.56155	0.1397577	0.28871665	2.2671913	20	5 2.7	16.8
6947 Andrewdavis	14.3	X	173.67715	351.86445	213.17286	3.87844	0.0631899	0.26541421	2.3980226	20	11 23.6	17.6
6948 Gounelle	14.5	X	249.11946	90.87458	26.37468	2.58385	0.1597294	0.26595939	2.3947444	20	10 18.8	17.1
6949 Zissell	13.7	X	203.98583	112.38103	144.65296	13.22893	0.1624492	0.27126212	2.3634329	20	—	—
6950 Simonek	12.8	X	262.48972	112.98482	88.42559	14.22030	0.0975065	0.23633041	2.5909337	20	—	—
6951 1985 DW_1	13.0	X	235.95632	109.90552	42.46077	1.07975	0.1002847	0.18544838	3.0454679	20	11 9.3	17.2
6952 Niccolò	13.0	X	285.46111	69.16285	207.56556	7.47697	0.2635945	0.19888524	2.9067054	20	2 21.6	17.5
6953 Davepierce	12.7	X	76.93983	131.79852	157.32262	1.74786	0.1754916	0.17905713	3.1175133	20	11 16.8	17.5
6954 Potemkin	14.2	X	113.70796	217.78879	60.66484	3.13824	0.1372635	0.30551152	2.1833213	20	12 28.9	17.3
6955 Ekaterina	12.4	X	8.31930	320.48093	31.54740	0.94406	0.1633871	0.17926425	3.1151114	20	11 3.8	16.1
6956 Holbach	13.9	X	207.90837	213.45386	243.86340	5.46576	0.0921791	0.25790319	2.4443585	20	8 6.3	17.5
6957 1988 HA	13.5	X	329.97081	19.32142	206.87163	1.20820	0.0835298	0.24473320	2.5312835	20	3 7.7	16.5
6958 1988 TX_1	13.0	X	78.49594	92.61412	205.87335	9.15033	0.0933585	0.18756087	3.0225574	20	11 22.3	17.4
6959 Mikkelkocha	12.2	X	211.14884	331.44483	357.08623	13.50389	0.1132447	0.20029260	2.8930734	20	3 1.6	16.8
6960 1989 AL_5	12.6	X	3.65811	276.04926	25.94591	1.39689	0.1447206	0.17254420	3.1954778	20	8 18.6	16.4

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
6961 Ashitaka	13.4	X	299.48317	356.24898	224.78671	4.75888	0.1910056	0.27908577	2.3190543	20	—	—
6962 Summerscience	14.4	X	203.08526	70.96468	278.84205	6.72429	0.1486991	0.28532062	2.2851459	20	3 6.4	18.0
6963 1990 OQ_3	13.7	X	303.53173	17.51161	292.63767	4.38580	0.1899448	0.29188543	2.2507526	20	5 3.2	16.0
6964 Kunihiko	13.7	X	64.85361	181.05363	192.50273	5.42475	0.1751389	0.27101933	2.3648442	20	—	—
6965 Niyodogawa	13.5	X	23.20036	105.81204	130.49316	6.14208	0.0117918	0.25210843	2.4816725	20	6 15.3	16.6
6966 Vietoris	14.7	X	155.70455	248.14810	328.95139	2.91206	0.1068330	0.31008540	2.1617983	20	11 23.5	17.7
6967 1991 VJ_3	13.9	X	157.83410	19.76726	53.27352	4.49043	0.1404192	0.29240684	2.2480762	20	5 12.5	17.0
6968 1991 VX_3	14.0	X	115.07229	61.76199	53.28464	1.83854	0.0767041	0.29199992	2.2501643	20	5 13.6	16.6
6969 Santaro	13.4	X	228.11511	306.43758	148.62353	7.11074	0.0313485	0.30230688	2.1987239	20	9 16.1	15.9
6970 Saigusa	13.5	X	338.35408	343.22573	111.68367	6.73070	0.0626535	0.27410704	2.3470513	20	—	—
6971 Omogokei	13.2	X	80.26921	327.22427	67.90680	3.05619	0.0725060	0.20652378	2.8345841	20	—	—
6972 Helvetius	13.0	X	0.23828	284.30078	213.76118	6.35045	0.1289660	0.23947034	2.5682358	20	—	—
6973 Karajan	14.1	X	166.05323	91.16574	144.10218	2.92356	0.1530219	0.22785449	2.6547950	20	12 9.9	18.3
6974 Solti	11.9	X	156.78517	202.62092	165.99590	15.79594	0.1417860	0.23517140	2.5994395	20	2 20.9	16.0
6975 Hiroaki	12.3	X	276.11961	335.92356	322.10897	4.86325	0.2899034	0.20309796	2.8663706	20	3 7.2	16.9
6976 Kanatsu	13.1	X	121.81138	251.45279	91.43712	8.25192	0.1685762	0.27645833	2.3337245	20	—	—
6977 Jaucourt	14.0	X	329.57806	162.80698	129.01768	3.41788	0.1443412	0.28997036	2.2606516	20	6 3.8	15.8
6978 Hironaka	13.4	X	241.17015	301.54058	339.19027	7.46416	0.1714934	0.24006879	2.5639659	20	1 25.1	17.5
6979 Shigefumi	12.4	X	76.75413	339.09816	359.19766	14.87960	0.2217408	0.22794901	2.6540611	20	—	—
6980 Kyusakamoto	12.4	X	268.50316	211.69542	97.45729	3.29134	0.0472189	0.20668809	2.8330816	20	4 13.7	16.3
6981 Chirman	13.0	X	127.80226	253.84392	22.08932	13.31967	0.1568376	0.22567933	2.6718261	20	12 23.0	17.6
6982 1993 UA_3	12.8	X	92.01332	123.56376	204.72290	12.53823	0.1824086	0.22937071	2.6430827	20	—	—
6983 Komatsusakyo	12.3	X	315.33095	228.33969	110.08447	7.78729	0.1253811	0.17055419	3.2202860	20	7 13.6	16.2
6984 Lewiscarroll	10.6	X	118.02594	248.11578	206.20014	16.79679	0.1873199	0.12445780	3.9730250	20	5 8.2	16.7
6985 1994 UF_2	13.6	X	274.53835	15.62851	51.17414	6.68767	0.0925342	0.26259325	2.4151661	20	9 29.4	16.3
6986 Asamayama	13.7	X	343.55243	305.89890	163.00104	2.33002	0.0629286	0.19656328	2.9295514	20	—	—
6987 Onioshidashi	13.6	X	9.25415	326.85426	264.38130	2.96921	0.0455922	0.21152850	2.7896954	20	5 19.2	17.2
6988 1994 WE_3	13.6	X	70.31344	334.76586	220.02711	3.20329	0.0327507	0.25292011	2.4763602	20	6 26.9	16.7
6989 Hoshinosato	12.4	X	339.24785	135.22586	292.50547	9.40098	0.0973407	0.18895573	3.0076641	20	12 21.5	16.1
6990 Toya	12.9	X	176.87647	6.51308	116.39008	2.89396	0.1237103	0.17578100	3.1561291	20	8 1.3	17.8
6991 Chichibu	12.7	X	38.12052	229.13610	131.55170	5.76162	0.2028292	0.26484320	2.4014681	20	—	—
6992 Minano–machi	12.1	X	135.14652	184.96611	126.26991	10.47907	0.0672647	0.18845089	3.0130332	20	—	—
6993 1995 BJ_4	12.3	X	287.75596	292.60926	128.08989	2.40014	0.0814087	0.17989088	3.1078731	20	9 25.6	16.4
6994 1995 BV_4	13.0	X	235.65573	158.21560	12.53443	0.77453	0.0279087	0.18493580	3.0510926	20	12 10.9	17.2
6995 Minoyama	13.2	X	290.21779	187.65832	57.33290	4.50221	0.1767591	0.24470295	2.5314921	20	1 27.8	16.8
6996 Alvensleben	12.2	X	204.45706	117.78431	157.82603	4.09839	0.0983434	0.15524735	3.4286245	20	—	—
6997 Laomedon	10.5	X	338.22479	58.14331	195.30578	19.12011	0.1019806	0.08371971	5.1750858	20	5 6.0	17.0
6998 Tithonus	11.5	X	292.07992	258.79169	35.24365	1.72984	0.0711570	0.08360614	5.1797715	20	4 25.2	18.2
6999 Meitner	14.3	X	35.42816	337.91662	155.40845	5.57149	0.0987040	0.28617290	2.2806066	20	2 5.3	16.4
7000 Curie	12.8	X	313.97409	305.60773	60.33386	9.86719	0.2624264	0.25465089	2.4651267	20	8 17.9	14.8
7001 Noether	13.3	X	343.42603	279.15748	151.64515	7.02600	0.1511066	0.26853455	2.3794099	20	—	—
7002 Bronshten	14.8	X	165.92733	144.07107	193.19877	4.58198	0.3324207	0.27231401	2.3573427	20	1 31.1	19.1
7003 Zoyamironova	12.8	X	218.15734	17.74009	11.77056	3.77508	0.2042554	0.17256204	3.1952576	20	5 13.4	18.1
7004 Markthiemens	14.0	X	123.20305	173.85587	212.48556	5.02120	0.1787375	0.27819931	2.3239780	20	2 5.6	17.1
7005 Henninghaack	14.2	X	57.91029	101.15788	182.54954	6.17524	0.0992161	0.26195353	2.4190966	20	10 25.5	17.3
7006 Folco	15.6	X	122.91587	356.88308	159.12541	4.70873	0.1237544	0.25860549	2.4399311	20	7 23.6	19.1
7007 Timjull	15.0	X	131.47752	264.08076	349.20769	0.72657	0.1549909	0.26483606	2.4015113	20	12 6.4	18.9
7008 Pavlov	13.5	X	281.77497	249.42066	176.36595	1.91349	0.2377403	0.22480637	2.6787384	20	9 5.6	16.7
7009 Hume	14.9	X	255.04964	195.79631	180.00762	0.85003	0.1762283	0.29492069	2.2352832	20	6 4.3	17.8
7010 Locke	13.9	X	130.87955	39.42120	355.92979	6.30178	0.1403638	0.28556953	2.2838179	20	2 23.9	16.8
7011 Worley	14.3	X	156.54942	32.45984	12.16967	5.70996	0.1554819	0.28742095	2.2739999	20	4 4.2	17.5
7012 Hobbes	13.6	X	166.46844	239.16688	132.75457	7.18656	0.1319448	0.28038702	2.3118737	20	3 3.5	16.9
7013 Trachet	13.2	X	22.59127	309.38927	357.11542	1.11322	0.0749205	0.21689830	2.7434599	20	9 23.8	16.6
7014 Nietzsche	13.7	X	342.48470	120.57255	188.43779	3.16140	0.1819955	0.29085830	2.2560484	20	8 1.3	15.0
7015 Schopenhauer	14.0	X	310.97257	24.26633	140.92788	5.47801	0.1696975	0.27803065	2.3249178	20	—	—
7016 Conandoyle	14.1	X	96.82070	259.50788	235.94767	4.33913	0.1738927	0.28908245	2.2652783	20	6 2.3	16.8
7017 Uradowan	13.9	X	166.19708	28.72536	124.23678	7.35437	0.1179844	0.26052214	2.4279494	20	9 6.5	17.6
7018 1992 DF	14.2	X	99.22095	285.99628	122.93963	4.33154	0.1120975	0.27955311	2.3164690	20	1 25.9	16.7
7019 Tagayuichan	13.5	X	317.23368	26.61088	100.54347	11.42187	0.1575626	0.27107762	2.3645052	20	—	—
7020 Yourcenar	14.0	X	72.66025	130.02617	180.60761	2.46398	0.1690445	0.26063790	2.4272304	20	12 22.2	17.6
7021 Tomiokamachi	12.5	X	209.66040	218.70863	90.44363	13.50407	0.1712955	0.23612212	2.5924572	20	2 1.6	16.9
7022 1992 JN_4	13.0	X	355.15747	239.46456	215.19996	14.07532	0.0704590	0.23310409	2.6147858	20	—	—
7023 Heiankyo	13.0	X	63.00884	185.87632	106.41826	7.57360	0.1369111	0.25628870	2.4546133	20	11 17.0	16.5
7024 1992 PA_4	12.3	X	351.55650	116.88298	252.69444	0.32453	0.1682222	0.17905491	3.1175390	20	10 28.9	15.6
7025 1993 QA	18.3	X	215.12939	323.45311	146.60915	12.60994	0.3150670	0.54970683	1.4758718	20	9 11.9	18.8
7026 1993 QB_1	14.6	X	336.79387	200.08994	94.69843	3.91252	0.1756494	0.28983903	2.2613345	20	6 21.7	15.9
7027 Toshihanda	11.8	X	132.07568	12.87509	77.18284	12.38024	0.1946506	0.12482260	3.9652805	20	5 17.2	18.0
7028 Tachikawa	12.8	X	251.24073	213.06611	116.75644	3.12570	0.0690606	0.20262892	2.8707923	20	4 16.3	16.9
7029 1993 XT_2	12.2	X	32.31256	95.99631	163.28438	10.64960	0.0537035	0.16863068	3.2447282	20	7 27.3	16.7
7030 Colombini	13.8	X	57.10703	44.81869	248.40883	9.33457	0.2378110	0.25865121	2.4396435	20	11 21.8	17.3
7031 Kazumiyoshioka	14.0	X	83.99370	108.37671	3.98818	5.47918	0.0970799	0.28588211	2.2821529	20	3 29.4	16.5
7032 Hitchcock	13.8	X	110.71603	202.45975	250.10503	3.29904	0.0929440	0.28475598	2.2881657	20	4 6.9	16.6
7033 1994 WN_2	13.7	X	152.44862	353.01346	137.25597	6.92449	0.0438113	0.29339946	2.2430029	20	7 20.9	16.4
7034 1994 YT_2	14.0	X	130.65078	247.33686	204.55798	6.37252	0.0618430	0.28617258	2.2806083	20	4 30.1	16.9
7035 Gomi	12.8	X	183.84180	104.92819	9.69544	0.60678	0.1368886	0.17336245	3.1854151	20	7 28.4	18.0
7036 Kentarohirata	12.3	X	167.40822	294.20811	273.47965	8.94695	0.2017860	0.18089196	3.0963963	20	10 28.6	17.6
7037 Davidlean	11.9	X	147.74972	294.21741	278.82366	11.09252	0.1082056	0.18041319	3.1018720	20	10 16.4	17.0
7038 Tokorozawa	12.8	X	242.34597	4.95298	44.38305	0.52621	0.1672651	0.17121154	3.2120382	20	7 2.8	17.6
7039 Yamagata	13.7	X	77.67156	152.61258	185.83762	6.55473	0.1450827	0.26569429	2.3963370	20	—	—
7040 Harwood	14.1	X	74.98672	54.12573	181.41584	6.74502	0.1314920	0.29511653	2.2342942	20	9 19.5	16.8

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7041 Nantucket	14.3	X	303.95843	162.58035	199.53308	7.07011	0.1453977	0.29454723	2.2371722	20	8 4.2	16.4
7042 Carver	14.1	X	39.38139	312.13373	261.75198	2.20927	0.2201295	0.28455110	2.2892639	20	7 9.3	16.1
7043 Godart	13.2	X	210.59879	129.99638	163.40769	5.99624	0.1860919	0.29304743	2.2447989	20	1 5.5	16.8
7044 1971 *UK*	14.1	X	151.52509	117.01939	222.43251	5.35087	0.1688054	0.26993979	2.3711450	20	1 8.9	17.6
7045 1974 *FJ*	14.0	X	168.09030	188.94562	352.57934	4.83189	0.1321342	0.26611617	2.3938038	20	10 12.2	17.6
7046 Reshetnev	12.2	X	99.02949	279.94023	11.12091	10.11696	0.0882983	0.18752010	3.0229955	20	12 1.8	16.9
7047 Lundström	14.0	X	200.00581	109.75129	162.66292	23.08956	0.2174096	0.26973929	2.3723199	20	—	—
7048 Chaussidon	13.5	X	64.39160	82.27691	350.75909	1.74041	0.0217774	0.19876971	2.9078316	20	1 12.5	17.3
7049 Meibom	14.3	X	137.75330	359.22576	93.68227	2.78725	0.1181778	0.29377516	2.2410902	20	5 16.4	17.3
7050 1982 FE_3	12.8	X	4.18798	246.31619	20.68893	7.75807	0.1870201	0.21061015	2.7977991	20	7 7.8	15.7
7051 Sean	12.6	X	339.17533	180.05342	57.34296	3.11937	0.1134288	0.16929631	3.2362177	20	4 11.5	16.5
7052 1988 VQ_2	13.0	X	59.03258	288.28203	56.98287	17.56150	0.2817741	0.22004212	2.7172661	20	—	—
7053 1989 *FA*	13.8	X	84.84661	350.98364	147.78222	3.70710	0.0865918	0.28888245	2.2663237	20	5 8.4	16.4
7054 Brehm	14.3	X	186.41391	15.52838	58.16424	6.94572	0.1169094	0.29189048	2.2507267	20	6 12.1	17.4
7055 Fabiopagan	13.0	X	167.62261	241.45892	79.95959	23.07730	0.2442740	0.27366550	2.3495752	20	1 8.5	17.0
7056 Kierkegaard	12.9	X	314.70915	165.06653	75.82246	5.25093	0.0478205	0.20932644	2.8092258	20	3 17.9	16.7
7057 Al–Farabi	13.7	X	237.09213	224.65514	159.99340	5.12472	0.1304482	0.28966595	2.2622352	20	6 1.8	16.8
7058 Al-T	13.5	X	281.63829	173.18164	225.74617	4.32787	0.1433115	0.29358055	2.2420805	20	8 21.4	15.7
7059 Van Dokkum	14.2	X	68.61234	244.34920	68.16405	3.80622	0.1697012	0.30137175	2.2032699	20	12 29.1	17.3
7060 Al–′Ijliya	13.7	X	137.91703	165.36871	308.92487	1.87362	0.0254967	0.25612265	2.4556741	20	6 5.9	16.9
7061 Pieri	12.6	X	81.31556	173.64955	137.37880	18.93390	0.2508411	0.17793646	3.1305893	20	12 23.7	18.0
7062 Meslier	13.2	X	154.54205	116.16993	140.64853	17.21893	0.2026939	0.18114978	3.0934577	20	12 17.6	18.7
7063 Johnmichell	14.4	X	233.34236	144.54175	264.39690	2.11100	0.1342841	0.26472224	2.4021996	20	6 29.2	17.9
7064 Montesquieu	12.8	X	70.17663	20.16928	204.29143	0.56226	0.1507298	0.17687053	3.1431545	20	8 18.6	17.3
7065 Fredschaaf	12.8	X	320.76339	176.19234	199.18944	7.52637	0.0357515	0.21293539	2.7773939	20	9 20.9	16.3
7066 Nessus	9.6	X	83.19121	171.05552	31.24571	15.64995	0.5175999	0.00804308	24.6710555	20	9 9.1	24.3
7067 Kiyose	11.8	X	64.39223	341.54666	55.14570	11.65508	0.0989321	0.18967694	3.0000352	20	—	—
7068 Minowa	13.4	X	250.98827	331.15949	104.08463	6.28423	0.0874360	0.29795574	2.2200779	20	9 12.1	15.9
7069 1994 YG_2	13.6	X	183.50464	56.96765	66.37707	5.37172	0.0242959	0.25376045	2.4708901	20	8 21.5	16.9
7070 1994 YO_2	13.6	X	230.16801	289.01131	127.91397	6.99227	0.1462844	0.29219695	2.2491526	20	7 6.1	16.7
7071 1995 BH_4	12.9	X	116.04033	86.21926	129.81549	11.35130	0.1905942	0.17533342	3.1614980	20	10 2.9	18.2
7072 Beijingdaxue	14.0	X	121.15903	91.62122	146.00039	0.10028	0.1499705	0.26252454	2.4155875	20	11 7.3	17.5
7073 Rudbelia	14.5	X	287.76139	119.57706	209.01474	4.64350	0.1763192	0.28365103	2.2941042	20	5 11.5	17.0
7074 Muckea	14.7	X	359.96632	295.57949	61.17062	3.87644	0.1854189	0.30011043	2.2094388	20	12 4.8	16.8
7075 Sadovnichij	12.5	X	119.50901	165.46042	176.08425	12.55713	0.1736312	0.22489948	2.6779991	20	—	—
7076 1980 *UC*	12.8	X	68.68249	229.70008	109.44259	2.67789	0.2069085	0.17577058	3.1562539	20	—	—
7077 Shermanschultz	12.9	X	205.33121	296.25092	128.68565	1.83793	0.1707035	0.17179355	3.2047794	20	6 16.4	18.1
7078 Unojönsson	14.0	X	70.00076	191.37027	147.24209	3.07952	0.2249340	0.25946408	2.4345455	20	—	—
7079 Baghdad	14.9	X	278.36523	121.57510	202.68805	3.88583	0.2952746	0.28515274	2.2860428	20	4 5.8	18.2
7080 1986 RS_1	14.7	X	307.77577	176.27855	163.43098	5.98302	0.1990117	0.28770365	2.2725100	20	6 27.9	16.8
7081 Ludibunda	12.8	X	56.21015	131.80925	230.71388	6.71160	0.2385536	0.21652584	2.7466052	20	—	—
7082 La Serena	12.5	X	101.87905	160.09220	141.18743	15.79402	0.1383196	0.17908137	3.1172319	20	12 21.8	17.6
7083 Kant	12.9	X	320.81722	148.25235	241.67347	6.82183	0.2228944	0.20946563	2.8079812	20	9 28.3	15.5
7084 1991 *BR*	13.6	X	355.04210	42.26296	176.46979	7.47506	0.2081896	0.24101291	2.5572656	20	3 28.8	15.7
7085 1991 *PE*	12.7	X	118.99736	195.91964	121.33989	2.74128	0.2533190	0.18119700	3.0929202	20	—	—
7086 Bopp	13.9	X	305.07066	173.92199	204.71666	25.61600	0.0870997	0.37361563	1.9092056	20	9 27.7	15.5
7087 Lewotsky	14.1	X	67.62288	270.36910	222.57445	19.54457	0.1011503	0.36027583	1.9560471	20	3 19.6	16.1
7088 Ishtar	16.8	X	66.30167	354.71885	102.64909	8.30451	0.3911477	0.35366800	1.9803359	20	3 27.6	17.6
7089 1992 FX_1	13.6	X	325.82772	44.57587	178.19690	7.54019	0.1467577	0.27989695	2.3145715	20	2 9.3	16.4
7090 1992 HY_4	13.6	X	299.47889	135.62680	285.23436	3.94051	0.1366110	0.29543487	2.2326889	20	11 2.9	15.4
7091 1992 *JA*	13.3	X	310.24311	326.90304	234.70445	24.07773	0.1993674	0.27426244	2.3461647	20	—	—
7092 Cadmus	15.1	X	1.50286	93.80596	57.69918	17.80904	0.6975311	0.24407952	2.5358009	20	—	—
7093 Jonleake	14.0	X	89.43805	166.62310	158.79887	12.85308	0.2079136	0.25906241	2.4370613	20	—	—
7094 Godaisan	12.7	X	311.96092	223.80571	167.17894	9.51576	0.1628302	0.21236385	2.7823750	20	9 21.1	15.5
7095 Lamettrie	14.1	X	99.16417	199.08034	120.06968	2.99040	0.1027524	0.18470590	3.0536239	20	—	—
7096 Napier	15.1	X	343.18156	257.98144	146.50356	11.14957	0.5020350	0.21288660	2.7778182	20	—	—
7097 Yatsuka	13.7	X	70.02640	325.09689	87.37912	1.76634	0.1885129	0.26846821	2.3798019	20	—	—
7098 Réaumur	13.7	X	270.10481	84.45768	115.59783	5.72823	0.2145619	0.23009526	2.6375311	20	—	—
7099 Feuerbach	12.9	X	101.88247	146.70856	90.54752	2.23043	0.1304945	0.17635339	3.1492962	20	10 7.1	17.8
7100 Martin Luther	14.1	X	261.76174	115.79607	200.97648	1.26675	0.0905993	0.20318765	2.8655271	20	4 7.9	18.2
7101 Haritina	14.0	X	241.41864	57.72630	333.89344	4.72846	0.2038538	0.28258603	2.2998646	20	6 6.6	17.5
7102 Neilbone	12.1	X	169.88301	345.66107	298.06332	18.59322	0.2468066	0.18110081	3.0940153	20	—	—
7103 Wichmann	12.8	X	229.18356	96.19957	183.35784	10.16891	0.0765659	0.18821681	3.0155309	20	1 19.9	17.6
7104 Manyousyu	13.2	X	32.11057	151.78763	341.16836	6.26184	0.0760225	0.25173788	2.4841072	20	2 7.7	15.9
7105 Yousyozan	14.5	X	230.06984	332.49753	139.40863	2.94884	0.1737421	0.26360891	2.4089585	20	9 15.2	17.8
7106 Kondakov	12.5	X	321.99805	204.20812	147.92971	9.92387	0.1799806	0.21040162	2.7996474	20	8 11.6	15.2
7107 Peiser	14.0	X	130.75326	169.72472	168.80510	9.16687	0.1470011	0.28240245	2.3008611	20	—	—
7108 Nefedov	13.3	X	166.45505	197.94508	197.22360	3.05287	0.1873176	0.19245527	2.9710925	20	4 8.2	18.3
7109 Heine	12.9	X	164.60514	154.23290	201.17501	9.93660	0.1502327	0.22776478	2.6554921	20	2 11.9	17.2
7110 Johnpearse	12.8	X	272.77537	268.79264	173.22963	7.65405	0.2068648	0.21078698	2.7962341	20	9 17.2	16.4
7111 1985 QA_1	13.6	X	268.30142	323.02555	207.86155	7.54462	0.0760240	0.26411708	2.4058676	20	—	—
7112 Ghislaine	13.3	X	106.11245	126.74851	111.36711	16.44868	0.1493926	0.21501819	2.7594291	20	10 25.6	17.9
7113 Ostapbender	12.2	X	189.54191	78.67760	303.86345	12.66397	0.0529483	0.19369081	2.9584441	20	4 5.5	16.9
7114 Weinek	12.9	X	27.73382	93.06629	310.31420	5.17060	0.1422477	0.17761485	3.1343672	20	—	—
7115 Franciscuszeno	13.6	X	323.40929	136.73293	319.14572	4.28960	0.1519551	0.17582748	3.1555729	20	12 28.5	17.1
7116 Mentall	13.3	X	92.68445	101.43560	68.81426	8.69860	0.0518457	0.27989078	2.3146055	20	6 27.9	16.2
7117 Claudius	14.7	X	335.98714	58.18505	131.62827	4.89150	0.0573168	0.30604143	2.1808003	20	1 20.0	17.1
7118 Kuklov	12.5	X	31.41735	278.70181	199.06192	12.52723	0.1280201	0.22781503	2.6551015	20	1 17.5	15.7
7119 Hiera	9.7	X	292.75068	122.22028	285.50936	19.34224	0.1041709	0.08461950	5.1383349	20	8 22.1	16.5
7120 Davidgavine	13.2	X	244.25963	90.30114	314.12001	1.16185	0.0535647	0.20306739	2.8666583	20	7 14.3	17.1

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
7121	Busch	13.3	X	277.61403	200.31694	150.15314	2.55190	0.0933315	0.20044314	2.8916246	20	6 10.4	17.1
7122	Iwasaki	14.6	X	177.14103	283.85431	342.44109	1.62285	0.1836241	0.30513976	2.1850943	20	—	—
7123	1989 TT_1	13.6	X	39.14255	206.51105	223.58745	5.11613	0.1042665	0.26427198	2.4049274	20	—	—
7124	Glinos	11.2	X	95.39528	69.74947	273.56256	17.92461	0.0365543	0.17708288	3.1406412	20	—	—
7125	Eitarodate	14.2	X	289.26611	326.88424	189.96588	2.25476	0.1156854	0.26294967	2.4129832	20	—	—
7126	Cureau	13.6	X	264.62248	109.41786	219.68391	1.25981	0.0718172	0.20556067	2.8434310	20	4 29.5	17.7
7127	Stifter	13.3	X	215.23547	31.77784	209.45014	8.64838	0.2277517	0.18229285	3.0805124	20	—	—
7128	Misawa	12.8	X	85.57897	105.22454	236.18419	2.75549	0.1977330	0.17736111	3.1373559	20	—	—
7129	1991 VE_1	13.2	X	162.78804	111.76614	241.49746	11.94232	0.1389897	0.21899695	2.7259047	20	2 5.9	17.7
7130	Klepper	14.2	X	22.05429	131.47237	132.33328	5.40469	0.1548840	0.28559941	2.2836586	20	8 14.3	16.1
7131	Longtom	11.7	X	13.50927	290.26548	78.50902	16.14525	0.1679373	0.17417032	3.1755573	20	12 3.3	15.6
7132	Casulli	13.6	X	357.92288	245.66501	321.13798	5.48989	0.2094394	0.28090840	2.3090122	20	3 6.3	15.2
7133	Kasahara	12.9	X	213.41717	42.91689	193.47403	14.66288	0.1138017	0.26537074	2.3982845	20	—	—
7134	Ikeuchisatoru	13.0	X	165.96435	26.17316	228.22504	11.96833	0.1774903	0.26129333	2.4231697	20	—	—
7135	1993 VO	14.1	X	279.55606	177.99311	207.56733	6.71829	0.2163357	0.25088975	2.4897024	20	7 11.9	17.2
7136	Yokohasuo	12.9	X	198.38680	256.93499	81.25284	15.50651	0.1404480	0.23603942	2.5930627	20	3 2.2	17.3
7137	Ageo	12.9	X	225.82999	162.13103	292.76250	2.63999	0.0630951	0.20909940	2.8112590	20	8 24.7	16.9
7138	1994 AK_{15}	13.4	X	177.62111	95.28666	314.09899	7.35265	0.1354049	0.23646529	2.5899485	20	4 29.5	17.7
7139	Tsubokawa	12.8	X	347.94901	356.76512	175.94200	9.80238	0.0258326	0.18991259	2.9975531	20	2 5.1	17.0
7140	Osaki	13.6	X	95.73269	271.83701	67.52655	4.58765	0.2185736	0.28880269	2.2667410	20	—	—
7141	Bettarini	13.5	X	218.31698	155.99490	47.46340	9.88219	0.0946840	0.21203830	2.7852221	20	12 27.3	17.5
7142	Spinoza	12.9	X	309.24063	116.00788	114.30566	0.32928	0.1054795	0.17522346	3.1628205	20	2 19.6	17.3
7143	Haramura	11.8	X	227.39732	148.00951	213.32241	14.77561	0.1618652	0.18169173	3.0873032	20	4 20.9	16.9
7144	Dossobuono	13.8	X	57.38592	167.84011	154.76735	6.27056	0.1419923	0.26259843	2.4151344	20	12 19.3	17.2
7145	Linzexu	12.6	X	155.29259	248.86325	179.45150	9.03534	0.1765590	0.24030070	2.5623160	20	5 8.7	16.8
7146	Konradin	13.4	X	166.40562	116.57348	236.47805	9.41300	0.1204997	0.18897108	3.0075013	20	2 12.0	18.2
7147	Feijth	14.9	X	321.71193	6.32501	312.46627	1.81441	0.1912230	0.26090214	2.4255913	20	6 23.6	16.9
7148	Reinholdbien	13.3	X	113.43443	284.96762	224.28811	5.01794	0.0528207	0.28505861	2.2865460	20	6 26.4	16.2
7149	Bernie	13.7	X	326.78525	101.70417	178.30564	1.01446	0.1423933	0.17816075	3.1279612	20	5 13.2	17.3
7150	McKellar	14.3	X	51.55484	291.05971	46.87294	3.35882	0.1856249	0.26182571	2.4198838	20	—	—
7151	1971 SX_3	12.4	X	112.29424	285.73557	192.09737	12.62050	0.1093541	0.23430715	2.6058277	20	5 21.2	16.2
7152	Euneus	10.3	X	295.19868	306.34314	113.04173	3.71247	0.0641615	0.08423391	5.1540038	20	9 22.1	16.9
7153	Vladzakharov	14.5	X	128.26130	59.70142	5.58570	2.90784	0.1317964	0.27355660	2.3501987	20	3 30.2	17.7
7154	1979 MJ_5	14.6	X	226.17618	303.49311	171.09013	4.20113	0.0698683	0.29224060	2.2489287	20	10 3.0	17.2
7155	1979 YN	12.9	X	253.49253	342.91106	119.87007	11.40080	0.0602138	0.18868986	3.0104888	20	10 12.1	17.3
7156	Flaviofusipecci	13.6	X	24.01509	155.11343	320.49889	11.07700	0.1431568	0.22512267	2.6762288	20	1 6.2	16.5
7157	Lofgren	14.4	X	213.34790	100.27673	237.55003	4.14244	0.2266701	0.30213299	2.1995675	20	2 29.3	18.2
7158	IRTF	12.7	X	343.53597	159.31388	206.95008	9.64523	0.1035614	0.18817171	3.0160127	20	10 8.9	16.2
7159	Bobjoseph	14.2	X	271.60706	157.89291	211.04243	4.57938	0.1734826	0.28374592	2.2935927	20	6 16.4	17.0
7160	Tokunaga	13.4	X	314.43572	181.35701	251.13955	1.26289	0.2028454	0.25448336	2.4662085	20	12 9.8	15.0
7161	Golitsyn	14.9	X	75.49427	147.24315	219.08469	1.84861	0.1983622	0.26591263	2.3950251	20	—	—
7162	Sidwell	14.4	X	200.95531	145.08846	222.41320	5.74932	0.1385060	0.27481749	2.3430046	20	3 29.8	18.1
7163	Barenboim	14.9	X	220.60767	310.76758	154.54051	20.75706	0.1870796	0.28650189	2.2788604	20	8 26.4	18.2
7164	Babadzhanov	13.7	X	214.36990	104.11095	126.54330	4.19966	0.1600364	0.26439153	2.4042024	20	—	—
7165	Pendleton	12.8	X	179.08032	256.95233	350.83015	13.89273	0.1565090	0.23452559	2.6042093	20	—	—
7166	Kennedy	13.7	X	5.00319	64.33372	14.01322	3.70138	0.1359328	0.26026433	2.4295525	20	—	—
7167	Laupheim	12.1	X	62.94652	181.46907	219.56653	23.49141	0.2088930	0.17825168	3.1268974	20	—	—
7168	1986 QE_2	14.2	X	350.09640	232.59928	117.21276	3.91513	0.1419261	0.29238151	2.2482060	20	10 29.5	16.1
7169	Linda	14.1	X	28.45382	51.85021	277.80327	4.80921	0.2007453	0.29233331	2.2484532	20	12 8.9	16.7
7170	Livesey	12.6	X	117.54168	29.42430	330.57011	12.47648	0.1823824	0.22224188	2.6993060	20	1 9.6	16.5
7171	Arthurkraus	13.9	X	332.40663	251.29048	306.31203	2.75483	0.1420192	0.27677795	2.3319276	20	1 18.3	16.5
7172	Multatuli	13.9	X	186.88609	54.31953	95.15806	3.30425	0.1475080	0.26166601	2.4208684	20	9 21.6	17.5
7173	Sepkoski	14.0	X	208.96281	95.08139	247.06024	19.58629	0.0133961	0.36025486	1.9561230	20	2 15.2	16.7
7174	Semois	11.6	X	37.97667	290.23102	354.35913	12.64839	0.1764618	0.12341034	3.9954744	20	9 16.7	16.8
7175	Janegoodall	13.2	X	311.37662	152.41205	193.96354	16.03068	0.1708489	0.24302806	2.5431097	20	7 14.3	16.3
7176	Kuniji	12.9	X	242.95181	173.83693	246.74562	7.93954	0.1374746	0.21438893	2.7648260	20	7 21.2	17.0
7177	1990 TF	13.1	X	249.34566	41.32771	332.96810	12.72884	0.1939975	0.22367044	2.6878002	20	5 21.1	17.5
7178	Ikuookamoto	14.0	X	302.97818	2.50169	338.36068	1.88451	0.1977723	0.28990181	2.2610080	20	6 20.6	15.8
7179	Gassendi	13.0	X	66.51635	212.80001	200.83624	1.12576	0.1296436	0.19596319	2.9355290	20	1 2.2	16.4
7180	1991 NG_1	13.1	X	162.11824	43.38709	307.48572	9.03925	0.1129846	0.18890056	3.0082497	20	2 7.9	17.8
7181	1991 PH_{12}	12.4	X	25.40133	147.48595	291.05571	11.63800	0.1374363	0.18157309	3.0886479	20	—	—
7182	Robinvaughan	12.8	X	33.07400	169.25619	223.14409	14.34973	0.1654545	0.17747954	3.1359600	20	—	—
7183	1991 RE_{16}	12.1	X	345.10170	54.47322	152.52877	11.04410	0.0359465	0.19050702	2.9913144	20	3 17.8	16.1
7184	1991 RB_{25}	13.0	X	18.09858	273.47141	61.04143	9.86384	0.0840035	0.23920440	2.5701390	20	11 1.9	16.1
7185	1991 VN_1	13.7	X	62.12113	137.73400	115.09268	5.70828	0.0967446	0.30298535	2.1954403	20	9 26.8	16.3
7186	Tomioka	13.0	X	220.49012	236.25658	295.13186	9.25917	0.1404290	0.26923870	2.3752595	20	11 25.1	16.3
7187	Isobe	13.9	X	257.60790	86.19103	315.29917	21.78669	0.0860851	0.36532662	1.9379765	20	8 6.5	15.6
7188	Yoshii	13.9	X	170.55825	330.31677	60.91035	3.94863	0.1552093	0.30373592	2.1918220	20	4 1.6	17.0
7189	Kuniko	13.7	X	109.24051	199.32728	165.39614	3.52088	0.1531107	0.29528784	2.2334300	20	—	—
7190	1993 GB_1	14.4	X	141.15094	106.70045	174.15518	1.96179	0.1457122	0.31098131	2.1576443	20	—	—
7191	1993 MA_1	12.5	X	322.27575	209.99240	54.93702	9.27052	0.1181421	0.21698283	2.7427473	20	4 18.9	15.9
7192	Cieletespace	12.0	X	293.36299	136.02355	186.42145	10.82709	0.0967082	0.17479140	3.1680305	20	5 26.7	16.4
7193	Yamaoka	12.2	X	311.69544	334.80292	358.82267	10.19067	0.0582328	0.17719360	3.1393329	20	7 12.0	16.5
7194	Susanrose	12.8	X	172.94079	161.41866	189.03411	15.56093	0.2055854	0.23798352	2.5789216	20	2 15.4	17.3
7195	Danboice	13.5	X	96.96874	219.58347	125.23592	9.05676	0.2314549	0.26156033	2.4215204	20	—	—
7196	Baroni	13.7	X	196.51901	299.29799	139.81947	7.86468	0.1906441	0.27807718	2.3246584	20	6 27.5	17.5
7197	Pieroangela	13.4	X	84.66772	349.35865	121.60212	7.20059	0.2302616	0.23203819	2.6227873	20	4 26.8	16.9
7198	Montelupo	12.3	X	213.17216	240.15684	131.71142	13.64614	0.1892471	0.23588499	2.5941944	20	4 23.4	16.8
7199	Brianza	13.6	X	309.43130	37.89944	309.95198	1.21712	0.0804140	0.20087863	2.8874439	20	7 24.7	17.2
7200	1994 NO	13.7	X	202.28862	89.01814	236.20945	20.61772	0.3456400	0.17634348	3.1494142	20	2 9.0	20.0

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7201 Kuritariku	13.3	X	24.86794	353.70784	47.83588	7.68229	0.1118354	0.27295276	2.3536636	20	—	—
7202 Kigoshi	13.5	X	299.72341	50.57162	322.94132	6.62348	0.2377109	0.21489685	2.7604678	20	7 23.5	16.5
7203 Sigeki	13.2	X	222.33257	203.07250	325.20816	2.56437	0.1621321	0.25892449	2.4379266	20	11 18.6	16.4
7204 Ondřejov	13.7	X	33.79896	236.32886	172.27046	4.85832	0.1226923	0.22617412	2.6679280	20	—	—
7205 Sadanori	13.1	X	126.83089	336.93634	274.57028	1.68281	0.1240600	0.23155731	2.6264173	20	11 23.8	17.2
7206 Shiki	12.6	X	185.71957	226.11794	120.07242	10.87725	0.0897977	0.18756492	3.0225139	20	2 27.8	17.3
7207 Hammurabi	14.3	X	94.70433	92.43369	355.85349	14.12735	0.1869954	0.23828755	2.5767274	20	3 27.9	17.7
7208 Ashurbanipal	14.2	X	25.50699	124.60056	105.05433	2.19407	0.0720355	0.30875026	2.1680260	20	6 15.4	16.1
7209 Cyrus	13.1	X	96.03958	51.57183	329.96072	8.85886	0.0469123	0.23598831	2.5934371	20	—	—
7210 Darius	12.8	X	17.03378	36.90228	124.53934	3.01223	0.0050588	0.20654423	2.8343970	20	2 29.7	16.7
7211 Xerxes	13.1	X	31.30864	339.55829	1.67582	9.10341	0.1613458	0.21044051	2.7993024	20	11 29.7	16.9
7212 Artaxerxes	14.7	X	225.68196	73.25531	184.08704	4.06699	0.1117954	0.28199310	2.3030873	20	—	—
7213 Conae	13.9	X	338.16090	293.66931	359.03080	3.03884	0.2514614	0.24198332	2.5504243	20	6 10.6	15.6
7214 Anticlus	11.7	X	330.40844	215.53498	195.54605	13.45168	0.0340215	0.08347352	5.1852561	20	10 26.9	18.5
7215 Gerhard	11.8	X	27.58593	25.31645	317.75985	20.69915	0.0067353	0.17151766	3.2082151	20	10 19.8	16.8
7216 Ishkov	14.4	X	211.38239	20.55192	277.49490	2.01868	0.1790378	0.31111030	2.1570479	20	1 10.0	17.8
7217 Dacke	11.4	X	46.75148	354.63611	325.49272	10.14810	0.1657600	0.17117248	3.2125267	20	11 13.9	16.1
7218 Skácel	14.6	X	341.79050	54.74743	297.66028	3.04114	0.2004056	0.28923397	2.2644871	20	10 17.9	16.2
7219 Satterwhite	14.3	X	170.70641	48.35338	1.80055	2.09754	0.2418645	0.23144658	2.6272548	20	4 29.3	18.9
7220 Philnicholson	14.1	X	96.28097	165.12614	206.63863	1.08753	0.2157804	0.26213590	2.4179745	20	—	—
7221 Sallaba	14.9	X	133.15650	22.95983	318.03512	1.26753	0.2174256	0.26336671	2.4104352	20	—	—
7222 Alekperov	12.7	X	267.95038	281.60739	112.57821	2.87987	0.2054671	0.17006845	3.2264149	20	7 7.1	17.4
7223 Dolgorukij	13.7	X	189.53248	60.03852	290.79674	1.55699	0.1753010	0.27346070	2.3507482	20	2 28.5	17.5
7224 Vesnina	13.6	X	38.75724	76.07489	319.64260	8.86333	0.1328852	0.21325978	2.7745768	20	—	—
7225 Huntress	13.2	X	157.16096	203.78630	275.72238	6.86910	0.2026149	0.27485888	2.3427694	20	7 14.1	17.0
7226 Kryl	12.6	X	14.77222	267.67146	124.88948	2.41895	0.1748331	0.17092681	3.2156042	20	—	—
7227 1984 SH_6	14.4	X	13.18586	254.40187	135.32477	3.57422	0.1221898	0.25141526	2.4862318	20	—	—
7228 MacGillivray	13.7	X	133.48189	123.73335	101.02822	4.41550	0.1044585	0.29265784	2.2467906	20	11 8.9	16.8
7229 Tonimoore	15.5	X	126.38605	42.81508	259.75131	9.94708	0.2604366	0.26277515	2.4140514	20	—	—
7230 Lutz	13.8	X	158.32545	0.25884	22.01795	3.14142	0.2407266	0.26967636	2.3726889	20	3 16.2	17.6
7231 Porco	12.3	X	73.74968	322.52996	21.28243	9.43121	0.0719368	0.17456824	3.1707298	20	—	—
7232 Nabokov	14.5	X	245.49925	245.22555	88.90140	4.48801	0.1847831	0.27295116	2.3536728	20	3 31.9	18.2
7233 Majella	12.3	X	281.72114	212.96713	18.55723	12.25610	0.1296518	0.22621937	2.6675722	20	1 11.2	16.5
7234 1986 QV_3	13.5	X	345.30522	237.53006	122.46425	5.16433	0.2190893	0.29167589	2.2518305	20	11 16.2	15.2
7235 Hitsuzan	14.1	X	4.87710	45.88860	351.95384	4.96671	0.1643501	0.29361440	2.2419081	20	—	—
7236 1987 PA	18.3	X	116.63709	337.89414	308.51250	16.33666	0.5596642	0.21918084	2.7243798	20	—	—
7237 Vickyhamilton	12.9	X	272.61319	100.70976	242.58727	12.27111	0.1698932	0.23806189	2.5783555	20	5 12.8	16.4
7238 Kobori	13.3	X	276.92834	47.91634	243.71277	4.35361	0.1337793	0.27912483	2.3188380	20	3 10.5	16.6
7239 Mobberley	14.9	X	265.87001	73.98149	268.64435	3.59512	0.2636517	0.27990272	2.3145397	20	4 19.9	18.5
7240 Hasebe	14.1	X	186.60932	36.16815	11.47808	5.49583	0.1598670	0.27285093	2.3542492	20	5 6.9	17.8
7241 Kuroda	13.8	X	65.08702	236.21927	105.90493	4.33345	0.1360076	0.30069786	2.2065604	20	—	—
7242 Okyudo	14.9	X	122.77310	262.02442	117.96956	4.51016	0.1491869	0.30910134	2.1663841	20	1 20.0	17.3
7243 1990 VV_3	13.8	X	73.42851	297.94266	345.68691	1.94155	0.0725772	0.29604170	2.2296368	20	11 15.2	16.7
7244 Villa–Lobos	12.8	X	316.18456	184.28115	148.50243	2.60931	0.0819545	0.20214756	2.8753477	20	7 14.1	16.3
7245 1991 RN_{10}	12.6	X	83.96635	6.14358	3.27566	5.70046	0.1141387	0.21406533	2.7676117	20	—	—
7246 1991 RP_{25}	13.1	X	56.96172	39.29941	39.06154	12.05313	0.1735666	0.18238207	3.0795076	20	1 31.0	16.9
7247 Robertstirling	14.4	X	289.33477	194.01891	190.81251	22.91779	0.1182413	0.37121869	1.9174152	20	8 28.5	16.3
7248 Älvsjö	14.1	X	104.39565	175.57264	122.22561	5.44154	0.1757719	0.30103002	2.2049370	20	—	—
7249 1992 SN	13.4	X	136.45623	78.20671	307.50715	5.53008	0.1776510	0.22790895	2.6543720	20	2 25.3	17.4
7250 Kinoshita	13.6	X	258.31919	218.31774	162.19693	14.76937	0.1736456	0.24013388	2.5635026	20	6 15.7	17.6
7251 Kuwabara	13.7	X	191.09931	261.47467	194.43321	3.63063	0.0780121	0.24034477	2.5620028	20	7 16.9	17.5
7252 Kakegawa	13.4	X	247.15915	282.45418	59.39209	13.44421	0.2915640	0.23618669	2.5919847	20	4 9.1	18.0
7253 Nara	11.9	X	8.49279	349.42206	82.68057	4.69392	0.0502137	0.17350478	3.1836728	20	—	—
7254 Kuratani	14.7	X	165.30316	238.29730	117.17737	3.01367	0.2061490	0.31111940	2.1570058	20	2 11.7	17.7
7255 1993 VY_1	13.8	X	61.99408	225.55507	30.90268	5.69014	0.1398601	0.28830433	2.2693524	20	10 4.1	16.6
7256 Bonhoeffer	14.0	X	226.96099	343.00788	103.33914	4.08915	0.1168688	0.25008842	2.4950179	20	8 14.0	17.4
7257 Yoshiya	13.5	X	137.17126	171.47127	260.99331	3.71571	0.1045520	0.27173521	2.3606890	20	4 14.9	16.7
7258 Pettarin	13.8	X	55.49980	212.41324	301.96121	12.13515	0.0998446	0.23474371	2.6025959	20	4 11.6	17.2
7259 Gaithersburg	13.2	X	44.99467	332.53379	166.31987	13.75118	0.1157287	0.22887862	2.6468697	20	3 13.7	16.0
7260 Metelli	13.1	X	134.02325	94.45507	56.15882	2.83254	0.0079028	0.19967144	2.8990703	20	7 17.5	17.1
7261 Yokootakeo	12.7	X	116.97645	278.11199	187.36938	13.03634	0.1738763	0.22905316	2.6455249	20	5 18.4	16.8
7262 Sofue	13.2	X	9.56987	169.40570	121.43133	10.21214	0.2610994	0.28779535	2.2720272	20	9 27.1	15.1
7263 Takayamada	14.5	X	280.67896	268.24601	0.88456	3.30156	0.1049198	0.31395308	2.1440071	20	2 16.7	17.1
7264 Hirohatanaka	14.6	X	3.07966	88.34572	150.95321	1.28607	0.1703348	0.27897727	2.3196555	20	5 20.8	16.3
7265 Edithmüller	13.9	X	280.55922	344.82232	194.86447	5.93733	0.0809000	0.25847050	2.4407805	20	—	—
7266 Trefftz	14.5	X	206.74850	175.22465	50.68754	2.87504	0.1402191	0.25763212	2.4460728	20	—	—
7267 Victormeen	13.7	X	157.43783	130.05921	359.35949	22.55903	0.3357304	0.27278773	2.3546128	20	8 7.6	18.5
7268 Chigorin	14.1	X	358.43961	189.80560	179.22122	4.50862	0.1874497	0.28937485	2.2637521	20	12 17.5	16.3
7269 Alprokhorov	12.8	X	222.48008	280.26606	84.16193	2.93499	0.1084860	0.19008156	2.9957764	20	4 24.3	17.3
7270 Punkin	12.7	X	98.56766	218.82898	95.82899	2.73106	0.1747240	0.17114620	3.2128556	20	—	—
7271 Doroguntsov	13.4	X	134.02481	59.66189	318.59683	2.99693	0.2745191	0.18036754	3.1023953	20	2 27.9	18.6
7272 Darbydyar	12.6	X	184.40953	208.28479	30.26889	9.63673	0.1015804	0.21260945	2.7802318	20	—	—
7273 Garyhuss	13.8	X	160.55227	67.71152	321.44409	12.07201	0.1923766	0.22800104	2.6536573	20	3 20.3	18.4
7274 Washioyama	14.0	X	254.07680	181.34719	25.12922	10.73993	0.1404953	0.27774686	2.3265012	20	—	—
7275 1983 CY_2	12.2	X	149.49930	110.56651	326.11207	9.18296	0.0656576	0.19042519	2.9921713	20	5 1.9	16.8
7276 Maymie	13.9	X	161.75533	338.19472	289.47633	5.52763	0.1540440	0.30324327	2.1941953	20	—	—
7277 Klass	13.9	X	241.18319	240.80909	97.05179	3.78883	0.2256586	0.23296047	2.6158604	20	3 31.4	18.3
7278 Shtokolov	12.3	X	114.71055	237.52304	103.08742	6.93026	0.1923885	0.17616035	3.1515965	20	—	—
7279 Hagfors	13.0	X	116.17706	2.04891	12.48649	5.33908	0.1774950	0.18015088	3.1048822	20	1 30.6	17.6
7280 Bergengruen	14.5	X	262.14462	166.73161	174.29341	1.84206	0.2448003	0.23899810	2.5716178	20	4 19.9	18.6

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7281 1988 RX_4	13.9	X	154.51649	244.37566	103.76656	3.57444	0.2111819	0.26251619	2.4156388	20	1 29.2	17.6
7282 1989 BC	12.7	X	251.66510	98.46540	99.53078	13.11820	0.1358176	0.21543755	2.7558471	20	—	—
7283 1989 TX_{15}	14.1	X	208.61962	147.52183	15.92853	5.69710	0.0853987	0.28934731	2.2638957	20	11 11.7	16.9
7284 1989 VW	11.6	X	276.10059	40.12998	47.07900	6.36328	0.1655956	0.12431860	3.9759903	20	9 24.0	17.0
7285 Seggewiss	13.0	X	282.01094	172.70905	185.34697	12.03997	0.1956401	0.23853979	2.5749106	20	6 11.6	16.5
7286 1990 QZ_4	12.2	X	103.17565	238.57269	137.63558	15.15585	0.2074369	0.17794719	3.1304634	20	1 20.3	16.7
7287 Yokokurayama	13.3	X	306.69087	303.41964	141.07252	14.00901	0.2460658	0.19786141	2.9167239	20	11 17.6	16.4
7288 1991 FE_1	13.2	X	317.91802	103.27077	308.25685	3.18809	0.1464627	0.28910454	2.2651629	20	11 26.4	15.1
7289 Kamegamori	13.6	X	30.71025	239.70616	54.22531	8.39948	0.1351245	0.27916626	2.3186085	20	10 13.0	16.2
7290 Johnrather	13.9	X	339.11983	116.90268	212.80913	24.74436	0.2299841	0.24115185	2.5562833	20	8 10.1	16.7
7291 Hyakutake	12.0	X	79.93641	302.97252	83.96146	8.40685	0.2316991	0.17833003	3.1259814	20	1 7.4	15.9
7292 Prosperin	13.7	X	80.89179	288.56526	30.03957	7.62660	0.1056728	0.26671596	2.3902136	20	—	—
7293 Kazuyuki	13.6	X	176.27098	254.90524	36.93111	3.86019	0.1601375	0.30534723	2.1841044	20	—	—
7294 Barbaraakey	12.9	X	249.07154	72.53178	74.12131	6.71163	0.0917446	0.22738546	2.6584444	20	11 29.2	16.2
7295 Brozovic	13.6	X	47.62742	146.95780	186.12475	4.69103	0.1590027	0.29175459	2.2514255	20	12 29.9	16.6
7296 Lamarck	14.1	X	188.42817	293.65440	171.14038	1.56446	0.0479941	0.28040385	2.3117812	20	7 30.8	16.9
7297 1992 UG	13.4	X	218.39995	302.10270	83.20900	6.51221	0.2805038	0.23539054	2.5978259	20	5 6.4	18.0
7298 Matudaira–gou	13.4	X	273.00563	17.86628	88.72038	8.32283	0.1306183	0.24511910	2.5286261	20	11 11.9	16.3
7299 Indiawadkins	13.7	X	167.36918	186.51697	263.11444	13.98804	0.2245192	0.23263377	2.6183089	20	6 14.5	18.1
7300 Yoshisada	12.5	X	64.90256	147.09150	264.60053	11.80186	0.1376737	0.21787197	2.7352801	20	—	—
7301 Matsuitakafumi	14.2	X	201.18998	23.54135	77.92399	9.22682	0.2209835	0.23537394	2.5979481	20	7 29.1	18.7
7302 1993 CQ	12.3	X	5.63407	279.29180	123.09945	9.95920	0.1809170	0.20952753	2.8074282	20	—	—
7303 1993 FS_1	12.3	X	346.65383	100.63487	150.89606	11.61988	0.0971185	0.18597413	3.0397255	20	5 15.1	16.3
7304 Namiki	13.8	X	28.61568	114.86504	109.40793	9.60482	0.4235089	0.23225989	2.6211180	20	8 11.0	16.2
7305 Ossakajusto	12.1	X	159.76446	335.36223	314.88998	14.44623	0.2244104	0.21679408	2.7443391	20	—	—
7306 Panizon	13.4	X	323.89312	288.12612	351.65961	28.90068	0.3209701	0.22951538	2.6419718	20	3 26.7	16.6
7307 Takei	12.5	X	313.29678	119.98218	42.99392	6.99064	0.0872605	0.21723209	2.7406489	20	—	—
7308 Hattori	12.6	X	135.93680	332.19420	280.81902	8.13192	0.0411047	0.18365474	3.0652645	20	11 23.7	17.2
7309 Shinkawakami	13.6	X	222.99244	228.96493	40.77683	4.89193	0.1243695	0.30487946	2.1863378	20	—	—
7310 1995 OL_1	14.0	X	325.72155	288.17094	337.14069	3.10710	0.1777044	0.23098851	2.6307271	20	4 11.4	16.7
7311 Hildehan	13.6	X	131.25226	278.47236	23.48684	2.23556	0.0462890	0.20653097	2.8345183	20	—	—
7312 1996 AT_3	13.6	X	142.58039	293.17633	149.42084	3.20636	0.1358130	0.21462048	2.7628371	20	5 11.5	17.8
7313 Pisano	15.0	X	272.23584	3.67705	242.57075	2.57618	0.0659799	0.23877692	2.5732055	20	1 21.3	18.7
7314 Pevsner	12.9	X	3.33438	326.22058	163.69102	1.70084	0.1489035	0.17864272	3.1223326	20	—	—
7315 Kolbe	13.6	X	12.98056	347.06478	173.90520	3.11990	0.0710328	0.24228446	2.5483105	20	2 15.5	16.5
7316 Hajdu	14.1	X	295.74376	306.62619	127.14330	4.82028	0.1181865	0.21106271	2.7937982	20	10 27.8	17.5
7317 Cabot	14.0	X	145.31440	54.11691	182.61705	3.98389	0.1513618	0.27697729	2.3308086	20	12 1.6	17.6
7318 Dyukov	12.5	X	349.06428	210.88995	133.88997	13.82604	0.1795557	0.23351622	2.6117084	20	10 11.3	15.3
7319 Katterfeld	13.7	X	91.05572	236.81325	32.25882	2.55902	0.1080382	0.29289018	2.2456023	20	11 19.5	16.7
7320 Potter	13.3	X	140.79874	122.98487	332.84050	4.48601	0.1915221	0.17816655	3.1278933	20	5 28.3	18.5
7321 1979 MZ_2	13.6	X	220.83847	329.10386	154.35907	2.29046	0.0854350	0.24459829	2.5322142	20	9 28.3	16.9
7322 Lavrentina	12.1	X	58.70437	345.56673	3.26955	15.97901	0.1115231	0.17207048	3.2013400	20	12 29.1	17.0
7323 Robersomma	12.9	X	11.72181	357.10547	43.00505	2.57299	0.2625811	0.17322956	3.1870439	20	—	—
7324 Carret	14.7	X	198.13711	108.57764	332.80472	10.14079	0.2287597	0.26137850	2.4226433	20	7 1.1	18.9
7325 1981 QA_1	13.5	X	98.00235	241.01848	176.71244	7.92720	0.1198456	0.26574487	2.3960329	20	2 7.1	16.4
7326 Tedbunch	14.1	X	160.69912	143.29866	206.86864	11.01331	0.2091168	0.26433472	2.4045468	20	2 2.1	18.1
7327 Crawford	14.3	X	112.22707	297.42416	15.75694	3.85307	0.1911675	0.30194723	2.2004695	20	—	—
7328 Casanova	13.3	X	260.44643	342.21858	0.54773	13.69775	0.1887758	0.23985276	2.5655052	20	4 21.3	17.2
7329 Bettadotto	13.1	X	42.34660	317.24367	203.16121	12.43898	0.1133814	0.22481999	2.6786302	20	4 7.5	16.1
7330 Annelemaître	13.4	X	164.68567	252.88167	191.20081	21.62810	0.3019961	0.27238560	2.3569296	20	6 7.6	18.1
7331 Balindblad	11.7	X	33.87523	354.20745	24.24101	22.36881	0.0367974	0.17343332	3.1845472	20	12 22.0	16.6
7332 Ponrepo	14.0	X	317.63363	294.49600	228.13400	5.72338	0.0672207	0.29808320	2.2194450	20	—	—
7333 Bec–Borsenberger	12.7	X	329.33535	72.19351	289.81939	8.84873	0.1864248	0.23801323	2.5787069	20	9 12.3	15.2
7334 Sciurus	13.6	X	166.75001	177.68763	156.83154	6.51096	0.1447772	0.26300221	2.4126618	20	1 17.2	17.2
7335 1989 JA	17.0	X	40.19733	232.25969	61.31902	15.19559	0.4843280	0.41838907	1.7704452	20	12 21.9	20.2
7336 Saunders	18.8	X	275.44508	181.46781	174.48467	7.19725	0.4817050	0.28166411	2.3048803	20	4 26.1	22.7
7337 1990 QH_1	13.6	X	72.80188	343.13075	344.80751	5.65882	0.0813891	0.27063269	2.3670961	20	—	—
7338 1990 VJ_3	12.2	X	231.94650	161.20161	264.36272	8.73786	0.0737988	0.18833907	3.0142257	20	7 21.3	16.6
7339 1991 RA_{16}	13.4	X	97.03086	345.99168	117.04898	4.64116	0.1342650	0.22416901	2.6838135	20	4 17.2	17.0
7340 1991 UA_2	13.8	X	243.70696	213.31479	302.96383	1.08397	0.0304195	0.20691092	2.8310472	20	12 7.9	17.5
7341 1991 VK	16.7	X	127.06138	173.38337	294.80231	5.41751	0.5064886	0.39429538	1.8418528	20	6 22.2	20.1
7342 Uchinoura	13.1	X	155.33995	347.96621	160.56532	13.86859	0.1004950	0.22189852	2.7020898	20	8 13.4	17.3
7343 Ockeghem	14.0	X	30.40451	44.48184	4.31575	3.95545	0.1390725	0.30356714	2.1926343	20	—	—
7344 Summerfield	13.0	X	301.07323	17.48340	175.01405	14.31674	0.1128037	0.23679744	2.5875259	20	—	—
7345 Happer	14.7	X	83.83319	281.23178	68.36769	3.67876	0.3218681	0.25658989	2.4526921	20	—	—
7346 Boulanger	12.8	X	329.64986	254.90864	118.89629	3.18497	0.0774360	0.20211938	2.8756150	20	10 1.8	16.3
7347 1993 EW	13.1	X	325.26575	15.82527	205.42113	0.49949	0.1116093	0.18165753	3.0876906	20	2 27.9	17.1
7348 1993 FJ_{22}	12.9	X	28.04358	151.58410	10.97742	0.87121	0.1060705	0.18135203	3.0911573	20	3 22.1	16.4
7349 Ernestmaes	14.4	X	322.12945	302.39748	120.58095	2.89991	0.0554521	0.22462841	2.6801530	20	11 28.8	17.6
7350 1993 VA	17.2	X	265.07149	336.64994	133.11422	7.26278	0.3912370	0.62427998	1.3558650	20	—	—
7351 Yoshidamichi	13.5	X	61.45758	116.77615	82.37091	6.49356	0.0648847	0.23982589	2.5656968	20	6 25.0	16.6
7352 1994 CO	9.9	X	324.45740	126.91726	130.33439	8.18300	0.0378548	0.08485505	5.1288215	20	4 29.1	16.7
7353 Kazuya	12.3	X	193.10169	15.79187	316.69421	14.33405	0.1743203	0.23937339	2.5689292	20	2 11.9	16.4
7354 Ishiguro	12.9	X	135.16285	100.76410	69.18578	3.55867	0.1287767	0.17549484	3.1595591	20	8 19.9	17.8
7355 Bottke	13.2	X	18.68788	293.54577	59.20760	7.66263	0.1644812	0.29040784	2.2583807	20	12 21.1	15.8
7356 Casagrande	13.2	X	62.10379	259.59334	303.56358	11.70260	0.1346633	0.23301284	2.6154684	20	7 13.6	16.4
7357 1995 UJ_7	13.8	X	115.01934	194.60118	148.03723	4.10650	0.1820482	0.28855583	2.2680336	20	—	—
7358 Oze	14.6	X	228.09526	92.21107	265.48115	4.66202	0.5022794	0.30244811	2.1980394	20	3 27.3	19.3
7359 Messier	12.9	X	236.22142	278.14142	119.05823	3.66876	0.1744465	0.18030170	3.1031505	20	6 11.4	17.7
7360 Moberg	12.8	X	47.19932	253.56704	312.00071	5.37146	0.0972815	0.29176604	2.2513666	20	6 19.0	15.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7361 Endres	13.6	X	23.66225	329.24157	0.51421	2.76848	0.0875102	0.22568751	2.6717616	20	10 29.2	16.8
7362 Rogerbyrd	14.2	X	229.78741	101.39481	311.97840	1.63466	0.1872282	0.25842768	2.4410501	20	6 25.6	17.9
7363 Esquibel	12.7	X	188.46669	274.11855	188.23538	8.92221	0.1191935	0.21471507	2.7620256	20	7 18.4	17.2
7364 Otonkučera	15.3	X	324.67936	129.46325	182.68316	2.33954	0.1608127	0.28911942	2.2650852	20	6 24.8	17.0
7365 Sejong	13.6	X	79.30199	181.20386	161.02154	6.82329	0.2124806	0.30016009	2.2091951	20	—	—
7366 Agata	12.3	X	90.58418	337.23625	49.95401	6.34418	0.1442547	0.17624732	3.1505596	20	1 10.6	16.6
7367 Giotto	13.9	X	216.27817	170.83543	20.47104	0.72045	0.1243255	0.17270081	3.1935456	20	11 28.6	18.6
7368 Haldancohn	13.7	X	19.59984	37.20954	129.35757	6.69867	0.1344700	0.29296147	2.2452380	20	2 26.2	15.4
7369 Gavrilin	13.2	X	194.62318	113.21689	278.23976	21.81661	0.3197519	0.27029739	2.3690532	20	4 16.3	18.1
7370 Krasnogolovets	13.1	X	307.02709	210.49667	50.34734	4.01225	0.0303171	0.22550200	2.6732266	20	4 2.0	16.5
7371 1978 VA_6	13.7	X	223.61647	206.58885	60.63500	2.03567	0.1254358	0.16943608	3.2344376	20	1 2.9	18.7
7372 Emimar	12.7	X	130.46648	150.94338	141.04830	2.77939	0.0335845	0.20526742	2.8461385	20	—	—
7373 Stashis	13.2	X	128.62395	125.35465	203.50458	1.55032	0.1677462	0.17599933	3.1535184	20	—	—
7374 1980 DL	15.0	X	178.26465	152.51374	331.56663	3.94608	0.2711381	0.23162418	2.6259117	20	8 4.8	19.7
7375 1980 PZ	13.5	X	160.73401	353.46890	322.56565	10.07499	0.1915779	0.25797247	2.4439209	20	—	—
7376 Jefftaylor	13.5	X	198.67553	348.39314	314.49714	1.96658	0.1803503	0.25778026	2.4451356	20	1 11.7	17.6
7377 Pizzarello	15.5	X	197.71653	337.39598	320.60136	4.67717	0.1706529	0.29750105	2.2223394	20	—	—
7378 Herbertpalme	13.1	X	50.98035	275.74655	215.99225	1.30308	0.1255267	0.17693653	3.1423729	20	3 20.2	17.1
7379 Naoyaimae	14.7	X	233.41857	41.84200	278.26393	2.72947	0.1239219	0.22679088	2.6630889	20	3 6.4	18.8
7380 1981 RF	14.2	X	74.58989	239.08366	117.77450	3.41881	0.1885109	0.25996705	2.4314043	20	—	—
7381 Mamontov	13.4	X	249.51307	328.90494	20.01468	6.97160	0.1528777	0.27180687	2.3602740	20	4 24.0	16.7
7382 Bozhenkova	13.1	X	283.06117	266.68512	126.77250	2.04307	0.2295140	0.17194386	3.2029115	20	7 21.6	17.3
7383 Lassovszky	14.4	X	242.42420	336.34377	162.02329	1.61251	0.0706835	0.25607133	2.4560022	20	11 19.6	17.3
7384 1981 TJ	13.5	X	109.80149	127.46050	231.14948	4.34560	0.1071343	0.21100398	2.7943166	20	—	—
7385 Aktsynovia	14.0	X	129.67604	356.78992	77.92838	3.73377	0.1262164	0.26690802	2.3890669	20	4 15.0	17.2
7386 Paulpellas	13.7	X	141.44260	10.34083	78.18910	4.94364	0.0736293	0.26782666	2.3836008	20	5 11.4	16.8
7387 Malbil	13.3	X	36.28598	294.88206	151.03697	7.05545	0.1549350	0.25702805	2.4499038	20	—	—
7388 Marcomorelli	12.6	X	355.90718	330.21497	183.90416	11.53316	0.1081995	0.17794115	3.1305342	20	1 19.1	16.8
7389 Michelcombes	14.2	X	10.25970	292.84703	84.73326	4.30440	0.2232232	0.28931779	2.2640497	20	—	—
7390 Kundera	13.6	X	38.35421	139.34395	169.97801	13.91181	0.2099269	0.24330432	2.5411843	20	11 17.9	17.2
7391 Strouhal	14.3	X	176.09114	79.65098	15.89551	5.04259	0.2143523	0.23110645	2.6298320	20	6 29.3	18.9
7392 Kowalski	12.7	X	315.44028	204.72480	346.79956	4.95218	0.1275941	0.21547768	2.7555049	20	1 1.6	16.5
7393 Luginbuhl	13.2	X	240.37452	331.98371	23.51419	6.73053	0.1999901	0.29393185	2.2402937	20	4 18.6	16.6
7394 Xanthomalitia	11.1	X	150.98997	190.17123	174.65472	8.61152	0.0343085	0.12649989	3.9301514	20	2 13.1	16.8
7395 1985 RP_1	14.4	X	98.33638	126.78074	170.32187	5.71147	0.1747557	0.28832776	2.2692294	20	—	—
7396 Brusin	12.9	X	50.06495	226.90254	182.48175	1.66067	0.0880306	0.19721025	2.9231407	20	—	—
7397 1986 QS	12.8	X	38.48287	60.34297	348.44408	8.66428	0.1648819	0.21220694	2.7837464	20	—	—
7398 Walsh	14.2	X	9.93803	245.76861	267.62049	4.87508	0.0355317	0.30333738	2.1937414	20	1 21.9	16.7
7399 Somme	13.9	X	311.90359	120.46509	274.02811	3.86477	0.1968623	0.28625820	2.2801535	20	10 10.9	15.3
7400 Lenau	13.3	X	144.07854	184.43458	160.90103	1.97549	0.0984014	0.19373421	2.9580023	20	1 12.7	17.5
7401 Toynbee	14.4	X	180.64067	144.95946	225.32878	2.03955	0.1861787	0.25910181	2.4368142	20	3 16.9	18.3
7402 1987 YH	13.1	X	10.47876	292.90206	150.89112	8.23261	0.2035406	0.21259815	2.7803303	20	—	—
7403 Choustník	14.0	X	94.56669	338.46253	109.88709	8.59035	0.2728585	0.22000880	2.7175404	20	4 17.0	18.0
7404 1988 AA_5	13.7	X	2.23141	209.82381	192.42221	6.56204	0.2831348	0.21097102	2.7946077	20	—	—
7405 1988 FF	13.0	X	301.44679	170.22972	82.26349	9.13611	0.1680898	0.21402794	2.7679340	20	2 27.3	16.9
7406 1988 TD	14.3	X	116.12235	69.34925	282.81879	1.49319	0.1970271	0.25777634	2.4451604	20	—	—
7407 1988 TL	14.3	X	103.27082	141.47788	296.66406	1.52069	0.1736355	0.26208952	2.4182598	20	3 22.9	17.2
7408 Yoshihide	14.1	X	104.61251	331.04834	348.52123	3.18337	0.2212803	0.29604318	2.2296294	20	—	—
7409 1990 BS	13.5	X	160.61767	341.88980	58.18614	3.31942	0.2144874	0.26849614	2.3796368	20	4 8.1	17.4
7410 Kawazoe	14.1	X	223.44476	53.13980	327.14705	5.85575	0.3809840	0.18883274	3.0089700	20	4 26.6	19.8
7411 1990 QQ_1	12.7	X	62.42930	93.76532	340.87357	15.46622	0.2394599	0.17762010	3.1343054	20	2 13.2	16.3
7412 Linnaeus	13.0	X	166.92924	166.02064	99.17427	2.57375	0.1549472	0.17394497	3.1782993	20	—	—
7413 Galibina	13.4	X	174.43152	343.10610	25.18752	0.53467	0.2029820	0.18261592	3.0768781	20	3 15.5	18.5
7414 Bosch	13.1	X	88.36160	217.35301	160.05561	0.74028	0.2241093	0.17474737	3.1685625	20	1 6.8	17.2
7415 Susumuimoto	12.9	X	103.59053	247.93784	110.72795	2.63084	0.1599023	0.17403751	3.1771725	20	—	—
7416 Linnankoski	14.1	X	9.26950	288.66449	191.71624	4.37829	0.1427765	0.27190366	2.3597139	20	—	—
7417 1990 YE	13.3	X	126.13268	6.61950	93.51743	1.91336	0.1658815	0.17883801	3.1200592	20	5 19.2	18.2
7418 Akasegawa	13.3	X	24.36060	35.12036	141.04499	7.28040	0.0507282	0.27234646	2.3571554	20	3 25.4	15.9
7419 1991 PN_{13}	12.9	X	196.35265	47.55537	335.45441	12.47155	0.1887094	0.22777645	2.6554013	20	4 11.7	17.5
7420 Buffon	14.7	X	193.37510	208.10631	118.39244	1.41404	0.1525518	0.25873066	2.4391441	20	2 3.6	18.4
7421 Kusaka	13.5	X	226.17978	60.93265	187.26579	16.84211	0.2039301	0.23427283	2.6060821	20	—	—
7422 1992 LP	13.7	X	10.15283	243.91190	101.84471	2.93014	0.1825646	0.29059283	2.2574222	20	12 2.5	16.0
7423 1992 PT_2	14.1	X	311.29158	144.76588	238.88092	3.94254	0.1423349	0.28294697	2.2979082	20	9 23.8	16.1
7424 1992 PS_6	13.8	X	175.23661	180.95678	245.88752	5.53742	0.0957664	0.27372535	2.3492327	20	5 21.6	16.9
7425 Lessing	14.2	X	87.92594	343.43031	86.58783	3.52749	0.1802713	0.26351602	2.4095246	20	2 22.6	16.8
7426 1992 US_4	13.8	X	123.01554	140.02698	280.57644	1.49382	0.1899627	0.26353151	2.4094302	20	3 25.2	17.1
7427 1992 VD	13.4	X	191.60143	273.77140	78.46326	3.52414	0.0878415	0.22885871	2.6470232	20	3 7.6	17.3
7428 Abekuniomi	13.5	X	227.58630	351.62011	107.80437	14.77965	0.1160665	0.23841780	2.5757889	20	9 4.2	17.3
7429 Hoshikawa	12.6	X	127.53488	230.15440	354.15186	1.59821	0.0287526	0.20389301	2.8589145	20	10 13.7	16.6
7430 Kogure	12.9	X	218.25196	184.50062	281.76497	4.21925	0.2493225	0.23696140	2.5863322	20	8 14.1	17.2
7431 1993 FN_{41}	13.1	X	107.70344	221.08772	201.20317	1.82253	0.1267208	0.18098392	3.0953473	20	3 9.3	17.6
7432 1993 HL_5	13.1	X	233.89856	287.28023	42.82972	1.03855	0.1672770	0.18250922	3.0780773	20	3 21.0	18.1
7433 Pellegrini	14.5	X	152.86091	4.07686	197.43263	11.68718	0.1775495	0.26770923	2.3842977	20	10 23.9	18.3
7434 Osaka	13.7	X	333.19490	299.16835	116.11780	8.87173	0.1136670	0.29016936	2.2596180	20	12 30.4	15.8
7435 Sagamihara	13.9	X	209.70018	318.22345	212.33409	3.79335	0.1079547	0.28634098	2.2797141	20	11 20.7	16.7
7436 Kuroiwa	13.9	X	291.55402	289.10168	256.41629	2.20489	0.0964520	0.29601996	2.2297459	20	—	—
7437 Torricelli	14.2	X	235.15400	286.46233	126.26405	6.38276	0.0865527	0.27379833	2.3488152	20	7 12.9	17.2
7438 Misakatouge	14.7	X	111.47865	67.87524	66.13556	5.79759	0.1414209	0.27128769	2.3632844	20	6 13.3	17.9
7439 Tetsufuse	13.4	X	331.73906	65.20129	67.89466	4.48982	0.0665817	0.23267957	2.6179652	20	—	—
7440 Závist	13.5	X	62.66653	319.45948	147.87134	10.96674	0.1647127	0.23684541	2.5871765	20	3 5.8	16.2

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7441 Láska	14.9	X	135.11525	13.31921	191.18446	4.89582	0.0761656	0.27992892	2.3143953	20	10 11.4	18.0
7442 Inouehideo	13.3	X	197.39460	230.85326	43.40819	0.77116	0.1337963	0.17481425	3.1677543	20	—	—
7443 Tsumura	13.1	X	294.37094	176.13702	350.51579	1.36011	0.0377419	0.19741608	2.9211086	20	—	—
7444 1996 TM_{10}	13.2	X	49.59904	359.85451	355.53214	8.99629	0.1634546	0.21185192	2.7868555	20	—	—
7445 Trajanus	14.8	X	131.54320	109.73720	226.56695	1.18526	0.2433280	0.30253134	2.1976362	20	—	—
7446 Hadrianus	12.5	X	44.32356	324.92753	177.17841	1.77144	0.0779535	0.17894178	3.1188528	20	3 18.8	16.5
7447 Marcusaurelius	13.9	X	254.15035	9.29651	297.28625	6.65401	0.1001130	0.26668160	2.3904189	20	3 7.9	17.4
7448 Pöllath	13.6	X	167.69480	292.30624	273.34036	24.61397	0.1651066	0.28226367	2.3016153	20	11 10.6	17.6
7449 Döllen	14.3	X	107.97163	26.26127	335.68318	6.26491	0.1963833	0.29745127	2.2225873	20	—	—
7450 Shilling	13.2	X	156.78597	99.77913	67.78624	27.39848	0.1660966	0.23249097	2.6193809	20	9 28.0	18.1
7451 Verbitskaya	12.4	X	307.61421	197.79249	147.02456	10.30725	0.1713256	0.20930258	2.8094394	20	7 5.3	15.8
7452 Izabelyuria	13.3	X	190.76114	256.98522	118.10173	2.73812	0.2011349	0.18008032	3.1056932	20	4 6.4	18.6
7453 Slovtsov	14.8	X	102.23785	182.95492	128.19737	0.95445	0.2041904	0.28817049	2.2700550	20	—	—
7454 Kevinrighter	13.4	X	207.53506	308.67114	14.00056	0.89873	0.1466752	0.17537577	3.1609890	20	2 19.7	18.6
7455 Podosek	13.5	X	142.39221	284.70175	164.46201	2.40200	0.0141324	0.20492794	2.8492809	20	5 9.2	17.5
7456 Doressoundiram	13.2	X	320.09115	203.85766	119.92113	14.79705	0.3008389	0.23240829	2.6200021	20	6 10.2	15.7
7457 Veselov	13.1	X	127.91810	340.91173	8.30109	5.36550	0.0754212	0.21722889	2.7406758	20	—	—
7458 1984 DE_1	11.8	X	292.07352	239.73798	323.53509	1.76633	0.1731302	0.13654234	3.7350048	20	—	—
7459 Gilbertofranco	13.0	X	180.64146	234.14116	32.26442	5.33867	0.1501061	0.23539156	2.5978184	20	—	—
7460 Julienicoles	15.2	X	243.68428	57.83828	106.83578	3.21698	0.1260573	0.26066743	2.4270471	20	12 19.0	17.9
7461 Kachmokiam	13.3	X	44.74247	133.21038	261.98623	0.08875	0.1755327	0.17159199	3.2072886	20	—	—
7462 Grenoble	13.9	X	114.65048	122.31864	332.12963	5.76077	0.1107806	0.28866017	2.2674870	20	4 15.9	16.8
7463 Oukawamine	12.9	X	69.64960	348.77482	352.46582	6.18233	0.1694182	0.25974919	2.4327636	20	—	—
7464 Vipera	14.5	X	339.70056	16.53132	17.74244	5.60310	0.2653404	0.23978259	2.5660057	20	12 10.2	16.5
7465 Munkanber	15.3	X	39.21464	193.92834	190.66864	2.47906	0.1652673	0.29233217	2.2484590	20	—	—
7466 1989 VC_2	12.1	X	0.35222	0.94140	17.83580	6.37700	0.1386536	0.16095043	3.3471457	20	11 16.0	16.3
7467 1989 WQ_1	15.7	X	85.90351	41.59793	69.09077	15.90169	0.1267052	0.46335140	1.6539755	20	3 27.7	16.8
7468 Anfimov	12.3	X	221.59456	330.27066	59.18920	4.38132	0.1233684	0.18580873	3.0415291	20	5 22.2	16.9
7469 Krikalev	12.8	X	152.40231	15.39687	81.18047	7.77907	0.1028082	0.18408416	3.0604957	20	6 5.3	17.5
7470 Jabberwock	14.2	X	147.60025	158.95062	58.65964	7.78235	0.0669636	0.28478729	2.2879980	20	11 13.3	17.3
7471 1991 YD	14.0	X	120.83703	118.66863	352.49908	5.35203	0.1563303	0.25476233	2.4644078	20	5 24.4	17.6
7472 Kumakiri	12.2	X	139.02798	82.62007	83.42222	9.91824	0.1072026	0.18848156	3.0127064	20	8 20.9	17.0
7473 1992 EC_4	13.1	X	106.37326	246.96273	121.43726	3.11037	0.0819203	0.20590978	2.8402162	20	—	—
7474 1992 TC	18.0	X	44.59185	275.61299	88.62394	7.08827	0.2920795	0.50310630	1.5656555	20	—	—
7475 Kaizuka	13.6	X	288.93721	321.05481	160.10065	5.37189	0.0790607	0.28568530	2.2832009	20	—	—
7476 Ogilsbie	11.5	X	295.92753	145.55167	57.48240	25.77021	0.2277843	0.17606614	3.1527207	20	—	—
7477 1993 LC	13.1	X	116.23399	36.37575	228.12684	12.33262	0.1347012	0.23124138	2.6288089	20	11 30.3	17.2
7478 Hasse	13.9	X	156.73108	223.51930	121.84846	3.13920	0.0861514	0.20355355	2.8620920	20	1 23.8	18.0
7479 1994 EC_1	13.8	X	284.55316	334.65926	153.39254	5.16176	0.0913923	0.28920632	2.2646315	20	—	—
7480 Norwan	17.1	X	14.88488	256.84193	124.37752	9.45391	0.3168209	0.50209478	1.5677576	20	—	—
7481 San Marcello	12.5	X	246.29495	329.03195	173.97067	12.77545	0.0430117	0.19746739	2.9206025	20	11 23.3	16.7
7482 1994 PC_1	16.8	X	318.52605	47.60890	117.88497	33.48906	0.3283046	0.63104225	1.3461613	20	—	—
7483 Sekitakakazu	12.6	X	165.94702	347.87584	81.53776	3.93305	0.0727241	0.17332021	3.1859325	20	5 16.2	17.4
7484 Dogo Onsen	14.5	X	163.82261	96.79832	116.62946	7.05380	0.0402139	0.26429025	2.4048166	20	11 25.6	17.8
7485 Changchun	12.0	X	118.10088	307.69225	89.00252	13.33703	0.1969163	0.20375574	2.8601983	20	3 2.5	16.5
7486 Hamabe	14.7	X	300.41084	328.11365	61.52627	3.59677	0.1661602	0.29797281	2.2199931	20	9 15.6	16.3
7487 Toshitanaka	12.5	X	317.02273	300.60295	103.30333	13.48434	0.1652298	0.22333123	2.6905211	20	10 29.2	15.5
7488 Robertpaul	14.5	X	95.36901	55.03474	138.63705	24.10831	0.0483667	0.35942735	1.9591242	20	8 12.7	16.3
7489 Oribe	13.4	X	78.85631	143.71554	189.78983	17.01522	0.2727043	0.21029766	2.8005699	20	—	—
7490 Babička	15.3	X	5.96578	152.40217	341.42821	1.88627	0.0962954	0.29631274	2.2282769	20	—	—
7491 Linzerag	13.3	X	80.58408	127.14368	275.79872	4.45653	0.1190278	0.21259388	2.7803675	20	1 4.7	16.6
7492 Kačenka	14.8	X	206.28592	189.79620	182.63979	1.84474	0.2151595	0.26467443	2.4024889	20	4 11.0	18.6
7493 Hirzo	13.3	X	273.25286	178.22471	266.08318	5.40148	0.1068207	0.23561272	2.5961925	20	10 8.5	16.5
7494 Xiwanggongcheng	12.3	X	177.83529	258.75599	280.37908	8.12280	0.0549952	0.18772318	3.0208149	20	10 9.2	16.9
7495 Feynman	14.3	X	2.53346	243.83171	252.66672	6.77658	0.1629766	0.20991171	2.8040017	20	—	—
7496 Miroslavholub	12.1	X	184.69525	307.84602	95.18416	15.16381	0.3417119	0.18085977	3.0967637	20	5 8.2	18.1
7497 Guangcaishiye	13.8	X	148.51627	354.63133	10.22099	2.95348	0.1884124	0.25616101	2.4554289	20	2 12.2	17.4
7498 Blaník	12.1	X	225.26560	43.40941	319.80310	20.76736	0.0217316	0.17417943	3.1754465	20	4 21.4	17.1
7499 L′Aquila	12.6	X	96.39637	71.43454	324.87125	9.97372	0.1418140	0.17653087	3.1471850	20	1 29.0	17.0
7500 Sassi	13.7	X	306.63954	314.96685	45.09941	6.07232	0.0890415	0.28360584	2.2943479	20	8 18.5	16.1
7501 Farra	12.7	X	344.00231	198.37198	192.00288	1.56571	0.1101134	0.16251170	3.3256736	20	11 5.0	16.9
7502 Arakida	13.0	X	3.33394	194.01983	196.27856	1.84211	0.0682577	0.20640141	2.8357043	20	12 11.5	16.6
7503 1996 VJ_{38}	14.6	X	71.56253	41.85929	324.67955	1.95365	0.0436967	0.29587061	2.2304962	20	—	—
7504 Kawakita	13.5	X	43.52397	81.19794	51.28219	1.23960	0.1957244	0.17426082	3.1744577	20	3 18.3	17.0
7505 Furusho	12.3	X	224.67170	287.98405	86.49129	6.37713	0.3815517	0.23036484	2.6354731	20	4 24.4	17.3
7506 Lub	13.7	X	322.69399	181.95086	8.85683	0.37358	0.1356875	0.17105388	3.2140115	20	1 16.8	17.9
7507 Israel	14.5	X	296.78121	69.10117	243.25908	4.29724	0.2121789	0.27634886	2.3343408	20	4 23.7	17.2
7508 Icke	14.3	X	27.13734	141.90746	256.92949	2.63219	0.1006083	0.21077509	2.7963393	20	—	—
7509 Gamzatov	13.6	X	304.10400	122.18693	130.95082	6.15083	0.1484078	0.29828806	2.2184287	20	2 20.4	16.3
7510 1978 UF_6	14.0	X	151.75335	280.82991	3.21755	6.48418	0.1323636	0.28867490	2.2674098	20	—	—
7511 Patcassen	13.8	X	54.81431	261.02049	145.45518	1.28268	0.1637412	0.17223695	3.1992769	20	—	—
7512 Monicalazzarin	13.3	X	0.34358	180.84005	337.25683	7.46540	0.1569129	0.21232888	2.7826804	20	1 23.4	16.3
7513 1985 RU_2	14.5	X	93.78117	8.89501	16.74014	2.65922	0.1586999	0.29406765	2.2396039	20	—	—
7514 1986 ED	14.1	X	116.51074	173.18071	44.86711	3.75899	0.2038238	0.27119561	2.3638194	20	10 13.7	17.9
7515 Marrucino	13.7	X	60.10651	69.78101	175.30231	0.19366	0.0179375	0.26937711	2.3744458	20	8 22.7	16.5
7516 Kranjc	13.7	X	114.26364	126.25967	170.55847	7.60520	0.2405597	0.28023303	2.3127206	20	—	—
7517 Alisondoane	13.7	X	95.03899	55.66738	0.57614	6.05281	0.2630570	0.25774465	2.4453608	20	2 28.2	16.7
7518 1989 FG	13.3	X	275.76181	68.50121	53.49884	3.83997	0.1302770	0.24116242	2.5562086	20	12 3.9	16.1
7519 Paulcook	13.5	X	139.61105	219.33170	150.62270	2.32379	0.1926494	0.17222600	3.1994125	20	2 17.6	18.6
7520 1990 BV	13.6	X	169.31074	316.48332	99.45993	10.56287	0.2261187	0.27096290	2.3651725	20	5 8.4	17.7

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7521 1990 QS_2	12.9	X	203.17468	13.44185	143.14437	2.65082	0.0119491	0.19961090	2.8996565	20	10 21.4	16.9
7522 1991 AJ	12.6	X	54.68963	359.64096	111.96253	10.36082	0.1717176	0.17224841	3.1991350	20	3 11.1	16.6
7523 1991 PF_{18}	13.5	X	313.85645	149.54051	262.51658	3.79091	0.1288949	0.24140067	2.5545264	20	11 2.2	16.1
7524 1991 RW_{19}	14.5	X	350.83040	45.35727	246.82930	2.40142	0.1995419	0.26951881	2.3736135	20	7 21.6	15.9
7525 Kiyohira	14.0	X	3.47061	99.86219	300.35673	6.81463	0.1117303	0.28379679	2.2933186	20	—	—
7526 Ohtsuka	14.0	X	88.40863	151.75532	232.73095	4.21978	0.2655105	0.25462141	2.4653170	20	1 4.7	16.4
7527 Marples	13.9	X	79.06339	23.05851	325.94616	5.51746	0.1863457	0.28543145	2.2845544	20	—	—
7528 Huskvarna	13.1	X	32.64372	146.66525	170.72760	1.86072	0.1128331	0.19644767	2.9307006	20	10 24.6	16.9
7529 Vagnozzi	13.6	X	81.14153	139.06699	201.19861	3.76559	0.1159306	0.25579264	2.4577858	20	—	—
7530 Mizusawa	12.4	X	292.87401	192.11858	158.02894	15.14323	0.1709390	0.23195781	2.6233932	20	6 20.9	15.9
7531 Pecorelli	14.0	X	135.00052	45.52548	206.35696	3.63835	0.1237943	0.27532436	2.3401281	20	12 10.5	17.4
7532 Pelhřimov	13.4	X	307.52377	327.25262	32.47340	16.21840	0.1201527	0.23119534	2.6291579	20	8 14.4	16.8
7533 Seiraiji	13.2	X	252.98366	287.05059	128.75376	3.65063	0.0963897	0.18967326	3.0000740	20	8 2.1	17.3
7534 1995 UA_7	13.6	X	100.86152	204.04825	97.83727	5.67182	0.2499902	0.28351497	2.2948381	20	—	—
7535 1995 WU_2	12.8	X	205.30983	48.42739	39.66726	6.63771	0.0557017	0.18555591	3.0442911	20	7 24.1	17.3
7536 Fahrenheit	12.3	X	156.92907	353.45681	303.70543	12.59985	0.1515764	0.20470824	2.8513191	20	—	—
7537 Solvay	13.3	X	311.79681	320.04224	76.62889	1.82592	0.1549142	0.17804482	3.1293189	20	9 22.6	16.9
7538 Zenbei	14.0	X	203.98921	199.20634	184.33698	2.52288	0.1867193	0.27133546	2.3630070	20	4 23.6	17.7
7539 1996 XS_{32}	13.8	X	269.36822	296.18708	155.44948	5.67140	0.1999130	0.24256083	2.5463745	20	10 3.6	16.7
7540 1997 AK_{21}	13.3	X	347.63911	301.69980	216.40681	5.26901	0.0778225	0.25524793	2.4612812	20	—	—
7541 Nieuwenhuis	14.2	X	277.52030	177.03195	165.70913	4.85150	0.1149220	0.22412477	2.6841666	20	5 28.4	17.9
7542 Johnpond	14.3	X	275.65871	38.76652	165.14637	5.81280	0.1310583	0.29019696	2.2594747	20	—	—
7543 Prylis	10.6	X	328.17143	206.77595	195.56869	14.06391	0.0636370	0.08322723	5.1954809	20	10 12.3	17.1
7544 Tipografiyanauka	12.8	X	32.68746	7.31686	277.84517	0.96803	0.0418356	0.19921370	2.9035094	20	9 2.5	16.6
7545 Smaklösa	14.3	X	104.22570	199.99446	114.86340	6.52081	0.2327036	0.28965689	2.2622823	20	—	—
7546 1979 MB_4	15.2	X	255.64696	84.25662	161.51789	5.26932	0.1092928	0.27951072	2.3167032	20	—	—
7547 1979 MO_4	14.5	X	285.14513	44.64598	160.52684	2.25362	0.0313140	0.20600822	2.8393114	20	—	—
7548 Engström	13.4	X	328.26558	296.44519	346.58130	0.31742	0.1612467	0.17682080	3.1437438	20	5 17.2	17.1
7549 Woodard	13.1	X	196.27928	182.03202	225.70392	9.69043	0.0937006	0.18975166	2.9992477	20	5 20.9	17.8
7550 Woolum	14.5	X	305.39033	135.15422	212.14324	5.53252	0.1953991	0.28429317	2.2906484	20	7 5.3	16.6
7551 Edstolper	12.6	X	335.02363	312.45864	174.83154	6.96387	0.1056162	0.17115518	3.2127432	20	—	—
7552 Sephton	15.4	X	269.84009	323.38620	159.51301	3.48087	0.0624551	0.24161412	2.5530217	20	12 5.3	18.6
7553 Buie	14.4	X	228.92115	95.32788	74.69318	3.27874	0.1475446	0.26667645	2.3904497	20	12 3.9	17.4
7554 Johnspencer	12.8	X	42.51260	153.43914	13.77243	13.68066	0.2648510	0.17701200	3.1414796	20	5 7.2	16.4
7555 Venvolkov	14.5	X	259.98519	315.15807	72.81603	2.08183	0.2003551	0.27383672	2.3485957	20	6 23.8	17.5
7556 Perinaldo	12.8	X	23.73046	19.92068	15.93049	2.63355	0.1180112	0.19880146	2.9075219	20	—	—
7557 1982 FK_3	14.2	X	350.36203	298.25852	188.54190	4.45714	0.2198493	0.25442546	2.4665827	20	—	—
7558 Yurlov	13.4	X	280.60992	163.61378	263.67053	4.51698	0.0998257	0.28439959	2.2900769	20	10 7.7	15.9
7559 Kirstinemeyer	13.0	X	140.45787	231.90487	81.16874	8.37008	0.2394182	0.26262136	2.4149938	20	—	—
7560 Spudis	14.0	X	277.77524	91.09960	290.60256	16.85924	0.1046320	0.36044174	1.9554468	20	7 31.2	15.6
7561 Patrickmichel	12.8	X	75.73566	348.12953	66.60955	9.80730	0.2421126	0.21296898	2.7771019	20	2 2.9	16.1
7562 Kagiroino–Oka	12.9	X	56.11993	264.58858	194.22795	3.28646	0.0235494	0.21395662	2.7685491	20	1 30.2	16.7
7563 1988 BC	12.8	X	119.42206	53.24981	83.53327	12.67322	0.2274747	0.22444273	2.6816311	20	7 2.8	17.1
7564 Gokumenon	12.8	X	357.23586	350.51119	157.05643	10.86654	0.2047491	0.21442019	2.7645573	20	—	—
7565 Zipfel	13.0	X	127.54504	189.14878	359.43041	3.32253	0.1422634	0.18525958	3.0475366	20	9 4.9	17.8
7566 1988 SP	14.3	X	188.28050	333.65794	79.48322	1.71000	0.2149769	0.26899613	2.3766872	20	5 17.0	18.2
7567 1988 TC_1	14.2	X	340.88375	43.39459	12.14666	4.50183	0.1422918	0.28105516	2.3082083	20	—	—
7568 1988 VJ_2	15.2	X	303.35066	198.35803	211.84120	5.25034	0.3265978	0.24464070	2.5319215	20	9 11.9	17.0
7569 1989 BK	13.0	X	292.95636	316.47457	93.14415	8.76500	0.2982180	0.24150532	2.5537884	20	8 29.1	15.6
7570 1989 CP	13.9	X	85.69898	115.19854	350.39262	2.34934	0.1352627	0.25697375	2.4502489	20	3 31.1	16.9
7571 Weisse Rose	12.7	X	139.74136	155.25154	117.22146	2.18089	0.1451884	0.17987277	3.1080818	20	12 21.6	17.7
7572 Znokai	13.6	X	203.20084	92.79268	325.59151	3.74905	0.0882713	0.31074209	2.1587515	20	6 11.6	16.3
7573 Basfifty	13.3	X	228.77990	294.36464	91.87555	2.55838	0.1677840	0.18037567	3.1023020	20	5 22.4	18.1
7574 1989 WO_1	11.8	X	287.75583	349.50880	61.43655	11.11356	0.1703343	0.15457852	3.4385074	20	9 1.8	16.5
7575 Kimuraseiji	13.7	X	16.35385	185.52401	215.21739	2.56028	0.1601601	0.28893940	2.2660259	20	—	—
7576 1990 BN	12.7	X	181.31895	345.71891	152.51706	9.93038	0.0993167	0.21199662	2.7855872	20	8 28.2	17.0
7577 1990 QV_4	12.4	X	154.40532	282.89499	126.10942	11.16241	0.1148517	0.18532584	3.0468102	20	4 15.3	17.3
7578 Georgböhm	12.9	X	293.10850	135.35687	60.30990	3.26798	0.0805889	0.21133841	2.7913680	20	—	—
7579 1990 TN_1	13.8	X	101.05605	196.85925	317.47200	16.97602	0.0652170	0.35409981	1.9787257	20	6 23.2	16.2
7580 Schwabhausen	13.1	X	148.04323	287.33862	29.65834	6.55503	0.2108251	0.24139865	2.5545407	20	—	—
7581 Yudovich	12.6	X	110.36494	28.34870	60.95981	3.62190	0.1441123	0.17875186	3.1210616	20	4 17.9	17.2
7582 1990 WL	12.3	X	92.11245	269.30781	139.37275	9.26124	0.1513543	0.17668122	3.1453994	20	2 7.6	16.6
7583 Rosegger	13.0	X	87.36130	140.76720	139.65063	10.82705	0.0607577	0.18988079	2.9978877	20	11 9.9	17.5
7584 Ossietzky	13.2	X	78.82244	342.16988	108.44928	3.26256	0.0769023	0.20126585	2.8837393	20	2 29.4	17.0
7585 1991 PK_8	12.2	X	37.63068	180.04598	129.49878	13.04889	0.1126994	0.17391180	3.1787035	20	10 22.1	16.7
7586 Bismarck	13.8	X	148.61021	32.24644	249.38483	6.86177	0.1879208	0.21221720	2.7836566	20	—	—
7587 Weckmann	14.2	X	28.13342	63.42143	180.61994	5.52547	0.1588647	0.29086829	2.2559967	20	7 24.3	16.2
7588 1992 FJ_1	11.4	X	301.75029	260.61779	320.10233	20.72507	0.1462868	0.17120239	3.2121525	20	1 27.5	16.0
7589 1992 SR_1	14.3	X	318.28157	148.02430	289.81090	5.98853	0.1415619	0.28530106	2.2852504	20	—	—
7590 Aterui	14.0	X	43.25155	352.42556	127.10921	6.38447	0.0961975	0.29701953	2.2247406	20	1 28.2	15.9
7591 1992 WG_3	14.8	X	106.45114	237.39619	207.05517	1.50424	0.1774090	0.26297387	2.4128352	20	4 5.6	17.9
7592 Takinemachi	12.7	X	52.70213	28.53837	92.43186	14.02017	0.1129507	0.22474427	2.6792318	20	3 8.7	16.1
7593 1992 WP_4	12.3	X	282.41621	79.29121	323.91285	14.42909	0.1678360	0.24070600	2.5594390	20	8 19.3	15.0
7594 Shotaro	13.6	X	9.89419	125.81067	113.70624	3.78897	0.1846758	0.26233295	2.4167635	20	6 8.1	15.5
7595 Växjö	13.1	X	320.98764	236.28560	273.80995	3.03248	0.1483258	0.21077008	2.7963836	20	—	—
7596 Yumi	11.8	X	342.88112	260.83961	37.92123	11.00635	0.0839138	0.18850684	3.0124370	20	7 10.8	15.7
7597 Shigemi	12.8	X	238.54581	336.83997	125.46768	3.20717	0.0652039	0.19621040	2.9330628	20	9 19.2	16.8
7598 1994 CS	13.1	X	329.07599	34.85807	143.58887	8.05126	0.1820622	0.18616388	3.0376595	20	—	—
7599 Munari	13.0	X	193.82998	205.82381	232.61095	7.26143	0.1716163	0.18223030	3.0812172	20	6 22.3	18.1
7600 Vacchi	13.4	X	229.01506	181.30723	220.63977	8.56810	0.0235849	0.22067970	2.7120298	20	6 25.2	17.2

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		°	°	°	°		°				
7601	1994 US_1	13.0	X	108.13577	278.93039	41.29995	15.33595	0.1365845	0.23582003	2.5946708	20	—	—
7602	Yidaeam	12.7	X	154.32361	302.97292	301.76889	9.80302	0.0646287	0.18612350	3.0380989	20	12 4.3	17.4
7603	Salopia	13.0	X	339.45318	40.54400	216.33670	9.60097	0.0567532	0.19153897	2.9805605	20	5 10.4	16.9
7604	Kridsadaporn	13.3	X	156.94213	266.23335	147.23211	20.44801	0.5736560	0.17950644	3.1123089	20	5 9.9	20.1
7605	Cindygraber	11.4	X	280.30156	271.16157	311.68083	25.86816	0.0742907	0.17596992	3.1538698	20	1 15.6	16.1
7606	1995 SV_2	14.6	X	103.88636	24.49543	42.89379	2.64030	0.1553468	0.25716357	2.4490430	20	3 9.1	17.7
7607	Billmerline	13.0	X	115.79031	178.31496	174.20517	4.47554	0.0811973	0.21222263	2.7836091	20	—	—
7608	Telegramia	14.2	X	162.73147	4.53023	54.04959	3.60587	0.1753057	0.26063566	2.4272443	20	5 1.1	17.8
7609	1995 WX_3	12.6	X	36.77756	147.20208	21.89865	12.78703	0.0850922	0.21493392	2.7601504	20	4 9.4	16.0
7610	Sudbury	13.5	X	295.55873	45.10797	68.78614	2.82696	0.0239992	0.19879977	2.9075385	20	12 20.4	17.3
7611	Hashitatsu	12.1	X	133.39355	170.13614	109.23646	8.49329	0.1536777	0.19118399	2.9842488	20	12 26.2	17.1
7612	1996 CN_2	12.0	X	192.75040	262.99068	153.99398	9.80318	0.0788906	0.17480612	3.1678525	20	5 30.7	17.0
7613	`Akikiki	13.5	X	57.59968	16.28649	146.71395	2.10668	0.1316371	0.16941694	3.2346812	20	5 11.9	17.6
7614	Masatomi	13.6	X	204.24771	157.92142	75.02197	3.47565	0.0661245	0.27198473	2.3592449	20	—	—
7615	1996 TA_{11}	13.9	X	148.61404	235.18734	106.11807	3.55517	0.2106126	0.26373848	2.4081695	20	1 14.6	17.4
7616	Sadako	12.0	X	225.71892	143.06946	234.31085	9.39077	0.1119431	0.18992015	2.9974735	20	5 12.2	16.4
7617	1996 VF_{30}	13.3	X	41.39119	227.99624	163.53618	8.34991	0.2304194	0.21282832	2.7783254	20	—	—
7618	Gotoyukichi	13.5	X	146.64154	147.52470	234.65589	1.73277	0.1148836	0.21742063	2.7390642	20	2 26.9	17.6
7619	1997 AP_{21}	15.0	X	40.20271	43.11047	57.87194	2.03373	0.0944403	0.29767916	2.2214528	20	—	—
7620	Willaert	14.7	X	197.64995	214.24472	317.63748	1.36236	0.1471300	0.26451600	2.4034481	20	10 29.5	18.0
7621	Sweelinck	14.5	X	248.67024	125.54754	229.68270	0.30738	0.1876981	0.17734408	3.1375567	20	5 1.7	19.2
7622	Pergolesi	15.2	X	303.30766	334.24621	58.75143	3.07207	0.0912330	0.27942629	2.3171699	20	9 29.9	17.3
7623	Stamitz	13.0	X	359.68107	95.37898	96.23672	2.37156	0.1159145	0.17325960	3.1866756	20	3 15.9	16.8
7624	Gluck	12.9	X	237.49721	33.61094	349.62169	9.12530	0.1080471	0.18490860	3.0513918	20	5 30.8	17.7
7625	Louisspohr	13.9	X	19.41803	131.21947	192.94818	11.23287	0.2380047	0.21083772	2.7957855	20	11 6.3	17.2
7626	Iafe	12.5	X	212.06384	0.07622	35.48081	9.91290	0.0901949	0.17490064	3.1667112	20	5 20.7	17.5
7627	Wakenokiyomaro	13.2	X	187.13159	248.60848	40.86835	3.71575	0.1060672	0.20196601	2.8770706	20	—	—
7628	Evgenifedorov	12.7	X	254.62195	25.65485	341.90391	12.78610	0.1804185	0.22464330	2.6800346	20	5 19.0	17.0
7629	Foros	14.3	X	254.51039	25.46992	344.95349	1.88355	0.2349370	0.27092668	2.3653833	20	5 19.5	17.9
7630	1979 MR_2	13.1	X	101.11497	178.22031	215.32203	1.27261	0.0873908	0.20557228	2.8433240	20	1 17.6	16.9
7631	Vokrouhlický	13.9	X	194.84604	273.85765	136.14709	4.03093	0.2835442	0.26997920	2.3709142	20	5 18.4	18.2
7632	Stanislav	13.8	X	87.23796	203.10402	224.01497	3.38766	0.0907590	0.29691990	2.2252382	20	1 25.2	16.0
7633	Volodymyr	13.4	X	96.33823	139.34736	204.04640	6.96478	0.2087945	0.23943704	2.5684739	20	—	—
7634	Shizutani–Kou	13.6	X	261.07515	267.29028	92.93528	2.59549	0.1972808	0.17385164	3.1794368	20	5 19.8	18.5
7635	Carolinesmith	11.8	X	276.86961	317.19955	78.83353	11.08908	0.1007377	0.18160265	3.0883127	20	8 9.2	16.1
7636	Comba	13.3	X	278.10835	62.02294	26.42623	9.82988	0.0822738	0.23501862	2.6005660	20	10 26.8	16.5
7637	1984 DN	13.4	X	307.07994	4.39571	151.62513	7.50917	0.2110917	0.24079027	2.5588417	20	—	—
7638	Gladman	13.5	X	296.21987	22.55995	9.83296	6.80783	0.3110823	0.24328125	2.5413450	20	8 5.5	16.1
7639	Offutt	13.0	X	19.16734	25.66798	156.87408	0.66552	0.1165706	0.16943429	3.2344604	20	4 4.5	16.8
7640	Marzari	14.5	X	290.29397	143.49196	147.70063	5.21809	0.1789167	0.30402809	2.1904176	20	3 21.6	17.3
7641	1986 TT_6	9.5	X	239.08774	227.78674	242.05734	34.69133	0.0532639	0.08277478	5.2143961	20	9 2.3	17.0
7642	1988 TZ	14.7	X	33.20946	52.55945	17.84771	3.82390	0.1320355	0.28664754	2.2780884	20	—	—
7643	1988 VQ_1	14.5	X	357.48209	38.92451	44.24994	6.18608	0.1358559	0.28349093	2.2949678	20	—	—
7644	Cslewis	13.5	X	251.12113	139.74265	219.63825	13.82963	0.1350910	0.23733222	2.5836375	20	5 14.4	17.2
7645	Pons	14.3	X	217.20680	213.98649	247.96063	0.39217	0.1596810	0.26955579	2.3733964	20	8 19.5	17.5
7646	1989 KE	13.9	X	122.14783	96.01511	150.99373	13.98796	0.1378151	0.23400833	2.6080456	20	11 18.8	18.3
7647	Etrépigny	13.2	X	18.72561	344.32240	99.36735	3.37119	0.0435581	0.20004977	2.8954141	20	—	—
7648	Tomboles	14.3	X	205.48322	53.65445	11.72984	2.72022	0.1113272	0.31108064	2.1571850	20	6 23.3	17.1
7649	Bougainville	13.6	X	31.16548	280.53298	139.32464	5.88031	0.0977815	0.23964874	2.5669610	20	—	—
7650	Kaname	12.5	X	280.70403	220.88632	205.31833	11.57586	0.0338312	0.19581900	2.9369699	20	9 29.1	16.4
7651	Villeneuve	13.2	X	245.74106	127.81828	164.60785	9.23519	0.1378329	0.21207747	2.7848792	20	2 14.8	17.5
7652	1991 RL_5	12.9	X	112.20576	26.74363	20.48305	10.10228	0.2045712	0.18600026	3.0394407	20	3 9.3	17.5
7653	1991 UV	13.5	X	189.78431	87.39669	218.50812	1.88476	0.1611008	0.28711084	2.2756370	20	1 2.4	16.8
7654	1991 VV_3	14.4	X	287.92844	347.29475	49.36950	3.24484	0.2108132	0.26781988	2.3836410	20	8 17.6	16.8
7655	Adamries	14.1	X	191.13510	9.60713	103.39235	4.01676	0.1372517	0.26210470	2.4181664	20	8 8.7	17.8
7656	Joemontani	13.9	X	27.74015	271.29125	49.96065	1.50680	0.2017047	0.18605045	3.0388941	20	11 2.0	17.7
7657	Jefflarsen	13.4	X	117.84714	297.68022	39.44199	2.69715	0.0623937	0.19857850	2.9096978	20	—	—
7658	1993 BM_{12}	13.7	X	24.61417	231.57112	321.88451	1.78163	0.1284390	0.26006429	2.4307982	20	4 21.4	15.8
7659	1993 CP_1	13.4	X	164.23974	63.25355	164.40005	13.02788	0.1269818	0.23932207	2.5692964	20	12 4.1	17.6
7660	Alexanderwilson	14.4	X	5.42940	265.20380	170.47991	23.14769	0.1400647	0.37335957	1.9100784	20	—	—
7661	Reincken	14.7	X	190.65899	83.04720	154.12366	2.46994	0.0139806	0.20175803	2.8790475	20	—	—
7662	1994 RM_1	12.3	X	193.91197	107.94995	198.37921	16.72589	0.0994355	0.16932130	3.2358992	20	1 17.2	17.7
7663	1994 RX_1	13.4	X	55.74697	92.28655	171.99586	22.25910	0.2261865	0.26941914	2.3741988	20	10 18.2	16.9
7664	Namahage	13.4	X	40.53617	182.86988	187.51814	1.68051	0.1142077	0.19514950	2.9436833	20	—	—
7665	Putignano	13.4	X	164.40542	201.74077	111.43577	3.22038	0.0525530	0.20129419	2.8834686	20	—	—
7666	Keyaki	13.6	X	289.66710	345.68837	20.12588	3.67146	0.2139140	0.22006354	2.7170898	20	6 29.6	17.1
7667	1995 BL_3	12.4	X	16.62180	255.50402	146.23767	11.79073	0.1144357	0.18895997	3.0076192	20	—	—
7668	Mizunotakao	14.3	X	254.61995	75.98896	166.20846	2.35892	0.1724769	0.26961469	2.3730507	20	—	—
7669	Malše	13.7	X	52.71685	272.84304	187.86741	8.35760	0.1477227	0.21329975	2.7742301	20	2 6.4	16.9
7670	Kabeláč	15.6	X	198.94340	271.09922	147.84871	2.82964	0.1725232	0.26784103	2.3835155	20	6 4.2	19.3
7671	Albis	14.8	X	184.16159	29.30851	29.57156	1.09200	0.1381474	0.30345351	2.1931817	20	5 20.3	18.1
7672	Hawking	15.3	X	88.37559	27.99162	22.29673	6.88097	0.0727368	0.29159280	2.2522583	20	1 3.4	17.8
7673	Inohara	14.2	X	156.29307	203.59178	218.82212	1.87230	0.1803290	0.25984282	2.4321792	20	4 29.9	18.1
7674	Kasuga	12.7	X	31.68739	215.40560	139.42907	2.73977	0.0813286	0.19816843	2.9137105	20	12 5.1	16.7
7675	Gorizia	14.4	X	108.41823	128.23642	28.30385	4.74773	0.0930555	0.26249330	2.4157792	20	7 5.5	17.7
7676	1995 WN_8	13.2	X	51.32878	86.92003	149.68800	12.13847	0.1376728	0.26495223	2.4008093	20	8 16.5	16.0
7677	Sawa	13.9	X	260.95532	221.95062	133.58989	2.40220	0.1046526	0.25967963	2.4331981	20	5 24.9	17.0
7678	Onoda	13.5	X	303.83914	338.04254	344.43564	8.87152	0.0926698	0.17483189	3.1675413	20	6 8.4	17.9
7679	Asiago	13.1	X	347.94629	295.07126	169.29907	13.33520	0.1470229	0.23946142	2.5682996	20	—	—
7680	Cari	13.2	X	276.10294	173.51551	210.46303	8.69104	0.2095430	0.22194838	2.7016851	20	7 4.4	16.9

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7681 Chenjingrun	14.1	X	182.24102	127.70858	10.42247	7.60556	0.1526899	0.27584501	2.3371825	20	9 3.8	17.6
7682 Miura	13.8	X	164.75946	99.36796	5.30563	6.01147	0.2082474	0.22643451	2.6658823	20	7 1.3	18.3
7683 Wuwenjun	14.0	X	35.59623	348.13025	94.22165	7.06209	0.1228296	0.29047910	2.2580114	20	—	—
7684 Marioferrero	13.0	X	260.29345	284.72023	341.34403	3.05419	0.0526093	0.21089552	2.7952746	20	2 7.6	17.0
7685 1997 EP_{17}	13.5	X	262.89781	357.09806	198.83560	5.07829	0.1110064	0.28858346	2.2678888	20	—	—
7686 Wolfernst	13.9	X	1.61816	191.94979	354.80585	4.70307	0.0838574	0.28890164	2.2662234	20	2 26.6	16.1
7687 Matthias	14.2	X	2.29067	333.07399	199.12105	5.77681	0.1152128	0.28811730	2.2703344	20	1 30.8	16.6
7688 Lothar	14.1	X	136.85676	306.11250	21.43513	7.36033	0.1540736	0.28569303	2.2831597	20	—	—
7689 Reinerstoss	14.0	X	190.44547	109.90056	227.41108	1.14887	0.0774964	0.20589138	2.8403854	20	2 16.9	18.3
7690 Sackler	13.7	X	75.52595	245.52754	71.43195	3.97181	0.2158920	0.23092859	2.6311821	20	12 30.8	17.9
7691 Brady	14.3	X	217.87120	2.45746	54.79730	3.28394	0.1933880	0.26977350	2.3721193	20	6 18.4	18.1
7692 Edhenderson	12.7	X	95.51303	33.11550	354.27301	20.61607	0.2086657	0.17366953	3.1816590	20	2 2.5	17.4
7693 Hoshitakuhai	13.3	X	276.64113	33.25231	55.44412	13.79283	0.1670687	0.23206873	2.6225571	20	10 18.1	16.4
7694 Krasetín	12.2	X	335.90990	47.15873	291.97009	10.42441	0.1518447	0.18529647	3.0471322	20	8 15.9	15.7
7695 Přemysl	14.1	X	89.15542	323.32964	54.59330	26.01534	0.2604240	0.28277560	2.2988366	20	—	—
7696 Liebe	13.8	X	170.32315	343.83631	115.07199	3.65368	0.0306934	0.21912079	2.7248776	20	6 26.8	17.6
7697 1989 AE	14.3	X	160.93619	125.86800	293.81631	2.58962	0.1930881	0.26245635	2.4160059	20	4 30.2	18.3
7698 Schweitzer	15.2	X	130.66967	10.35603	122.54960	3.27783	0.1515535	0.26303432	2.4124655	20	7 4.0	18.7
7699 Božek	14.4	X	195.68230	288.56221	166.23393	5.71671	0.1631853	0.26592129	2.3949731	20	7 17.3	18.2
7700 Rote Kapelle	13.5	X	163.78132	94.55178	58.70297	3.03201	0.0743624	0.22479940	2.6787938	20	8 31.7	17.4
7701 Zrzavý	14.6	X	261.12101	1.08725	19.71183	3.30536	0.2431404	0.22357523	2.6885632	20	6 8.3	18.7
7702 1991 PO_{13}	14.4	X	141.23408	335.28959	348.27022	4.95281	0.1836274	0.28684802	2.2770268	20	—	—
7703 1991 RW	14.8	X	105.72622	141.25105	166.57316	21.57484	0.1795072	0.28144892	2.3060550	20	—	—
7704 Dellen	13.8	X	81.69088	185.63960	90.82523	6.71788	0.0627011	0.22794495	2.6540926	20	11 4.3	17.6
7705 Humeln	15.2	X	26.60440	224.51168	98.61231	3.36109	0.2299890	0.26863649	2.3788079	20	11 27.1	17.9
7706 Mien	14.4	X	207.83093	47.74532	38.84039	2.70413	0.1646326	0.26591729	2.3949971	20	7 20.1	17.9
7707 Yes	13.6	X	102.04215	78.64780	131.19410	15.69177	0.1420399	0.22815592	2.6524562	20	9 13.3	17.7
7708 Fennimore	14.0	X	350.68009	200.12029	25.44441	2.61347	0.1545826	0.26592812	2.3949321	20	4 1.0	15.9
7709 1994 RN_1	14.3	X	236.75993	206.42399	129.17798	4.73440	0.1863494	0.29307161	2.2446754	20	3 23.6	17.7
7710 Ishibashi	12.4	X	36.54758	12.14572	41.45896	6.27749	0.0581312	0.15607102	3.4165506	20	—	—
7711 Říp	12.7	X	273.21453	357.83354	60.93454	12.09431	0.2685484	0.18227025	3.0807670	20	8 9.7	17.2
7712 1995 TB_1	13.6	X	339.46085	255.47682	134.43530	4.85901	0.2332487	0.23967651	2.5667628	20	11 30.5	15.7
7713 Tsutomu	14.7	X	163.31390	259.09356	160.94261	2.37294	0.1910692	0.25828401	2.4419553	20	5 4.6	18.6
7714 Briccialdi	14.9	X	194.54622	249.91153	74.08231	1.48009	0.1506984	0.28737259	2.2742550	20	1 29.6	18.4
7715 Leonidarosino	13.1	X	103.44306	189.24977	146.69088	15.39000	0.1130753	0.23526754	2.5987313	20	—	—
7716 Ube	14.1	X	51.61054	186.71441	193.26070	6.44311	0.1448527	0.27791137	2.3255830	20	—	—
7717 Tabeisshi	13.8	X	47.37571	157.74725	334.94175	6.00374	0.2784948	0.25897223	2.4376270	20	3 23.1	15.4
7718 Desnoux	12.1	X	5.96804	212.59506	82.09017	12.63227	0.1147269	0.18605708	3.0388219	20	8 16.1	15.9
7719 1997 GT_{36}	13.8	X	63.32148	255.13524	173.37587	2.08998	0.0520348	0.20296422	2.8676296	20	1 6.8	17.5
7720 Lepaute	14.6	X	66.23624	191.46008	174.81399	0.62481	0.1643640	0.16878800	3.2427117	20	—	—
7721 Andrillat	14.4	X	96.01970	148.24053	171.91648	4.00105	0.1380012	0.23421872	2.6064835	20	—	—
7722 Firneis	14.1	X	155.86232	175.11693	16.18456	7.08803	0.0775876	0.27347883	2.3506443	20	10 15.7	17.4
7723 Lugger	13.9	X	153.91260	267.58621	110.98437	6.06338	0.3017988	0.28353789	2.2947144	20	3 12.8	17.8
7724 Moroso	13.8	X	248.95477	212.27698	82.87636	4.75391	0.2198693	0.29057087	2.2575359	20	2 10.6	17.5
7725 Sel′vinskij	14.2	X	163.22284	221.88666	178.12083	4.00964	0.1823672	0.25887424	2.4382421	20	4 8.6	18.1
7726 Olegbykov	14.1	X	256.89015	297.88388	341.53526	5.85963	0.1805379	0.29261628	2.2470034	20	1 30.9	17.6
7727 Chepurova	13.8	X	151.46637	175.81303	28.89359	3.54714	0.1472363	0.27224747	2.3577268	20	10 26.9	17.5
7728 Giblin	12.7	X	205.76892	6.60772	346.04563	3.40405	0.1096123	0.21102522	2.7941291	20	3 21.5	17.1
7729 Golovanov	13.5	X	248.50430	201.36789	96.12302	6.37657	0.1807559	0.29053451	2.2577243	20	2 15.7	16.9
7730 Sergerasimov	13.3	X	239.42530	173.60437	142.69250	8.02594	0.2904424	0.20543615	2.8445799	20	3 1.6	18.4
7731 1978 UV	12.9	X	187.74931	8.69671	46.13232	6.24506	0.2641696	0.22648814	2.6654615	20	5 18.2	17.7
7732 1978 VE_9	12.8	X	236.53460	350.47071	294.49462	1.13210	0.0937554	0.19626803	2.9324886	20	2 2.4	17.1
7733 1979 MH_4	16.0	X	69.46717	98.39153	193.02126	3.83887	0.1537327	0.26962876	2.3729681	20	11 25.9	19.4
7734 Kaltenegger	14.5	X	41.46041	101.08286	248.66445	3.87164	0.2139669	0.27048089	2.3679816	20	—	—
7735 Scorzelli	13.1	X	277.11865	95.16715	237.07910	8.25110	0.1684233	0.21543908	2.7558340	20	5 4.5	16.9
7736 Nizhnij Novgorod	12.6	X	137.63441	146.68727	175.52887	14.11239	0.1955889	0.23686517	2.5870327	20	—	—
7737 Sirrah	14.5	X	47.33490	208.07149	200.62274	1.98132	0.1927325	0.25935819	2.4352081	20	—	—
7738 Heyman	14.0	X	259.17029	220.65741	66.30061	5.95681	0.1825145	0.29206224	2.2498442	20	2 12.7	17.4
7739 Čech	14.6	X	269.11455	15.43680	158.49087	3.39184	0.1263580	0.27802392	2.3249553	20	—	—
7740 Petit	13.4	X	55.35388	290.46224	9.63087	7.21719	0.1146955	0.27023304	2.3694293	20	11 13.6	16.6
7741 Fedoseev	13.2	X	354.49672	196.77258	169.00579	13.90794	0.1840910	0.26992937	2.3712060	20	12 1.1	15.8
7742 Altamira	13.7	X	228.60519	293.51030	124.86512	4.14770	0.0795113	0.21930572	2.7233455	20	7 10.6	17.4
7743 1986 JA	13.5	X	88.25801	103.16207	159.39537	11.97913	0.1742055	0.26946056	2.3739555	20	11 13.0	17.3
7744 1986 QA_1	13.6	X	86.15818	121.23283	51.40670	3.31722	0.0312854	0.22723583	2.6596113	20	6 17.2	17.1
7745 1987 DB_6	13.5	X	100.70043	288.10558	151.98025	8.14022	0.2095352	0.21154535	2.7895473	20	4 3.6	17.5
7746 1987 RC_1	12.1	X	297.60402	255.26800	35.83272	1.22433	0.1552522	0.17363914	3.1820302	20	4 12.5	16.3
7747 Michałowski	13.7	X	170.06573	28.58706	289.30734	5.05369	0.2745113	0.28358718	2.2944485	20	1 7.9	17.5
7748 1987 TA	13.9	X	113.31804	18.04947	340.47322	4.54248	0.2413722	0.28007912	2.3135678	20	—	—
7749 Jackschmitt	12.2	X	96.15735	257.07061	79.03179	29.38910	0.3578597	0.23059249	2.6337382	20	—	—
7750 McEwen	13.0	X	335.59274	69.54576	249.32306	15.86087	0.3758368	0.21493155	2.7601706	20	6 27.0	14.7
7751 1988 UA	14.6	X	67.27828	92.68545	256.37255	1.09041	0.1872761	0.25320485	2.4745033	20	—	—
7752 Otauchunokai	13.4	X	60.08573	77.45075	280.32074	3.79415	0.1523567	0.28267522	2.2993808	20	—	—
7753 1988 XB	18.6	X	288.49926	280.07357	73.41879	3.12292	0.4817157	0.55426104	1.4677761	20	4 24.5*	19.7
7754 Gopalan	12.7	X	77.69039	177.57140	202.12493	1.55609	0.0745503	0.20031646	2.8928436	20	—	—
7755 Haute–Provence	12.3	X	38.85127	131.71109	93.01374	2.60693	0.1209660	0.17671955	3.1449445	20	7 1.7	16.1
7756 Scientia	12.6	X	351.88394	211.89230	107.24047	16.65135	0.0143414	0.17525945	3.1623875	20	8 21.1	17.1
7757 Kameya	13.4	X	197.44190	69.70328	235.40808	23.09121	0.2471755	0.28373448	2.2936543	20	1 6.8	17.7
7758 Poulanderson	14.2	X	50.19746	56.24482	203.43626	21.63685	0.1852929	0.26801809	2.3824656	20	9 22.7	17.4
7759 1990 QD_2	13.8	X	95.23484	198.56905	118.32311	1.75495	0.2101777	0.27224065	2.3577662	20	—	—
7760 1990 RW_3	13.5	X	355.99925	295.15410	39.58217	1.90112	0.1926380	0.26381865	2.4076816	20	10 14.8	15.5

* The additional opposition: 12 22.9, $V = 15.8$

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7761 1990 *SL*	14.0	*X*	87.50398	223.10494	76.91116	24.77354	0.2835276	0.27115153	2.3640755	20	12 29.6	18.2
7762 1990 SY_2	12.9	*X*	37.09483	295.70653	106.28278	3.23162	0.0703923	0.20516384	2.8470964	20	—	—
7763 Crabeels	13.0	*X*	289.84478	182.97359	110.81647	4.81157	0.0698563	0.21728383	2.7402138	20	4 18.0	16.7
7764 1991 *AB*	13.0	*X*	328.05662	270.57317	127.64669	12.27782	0.1978615	0.22632913	2.6667098	20	11 12.4	15.7
7765 1991 *AD*	12.7	*X*	294.83055	126.20509	261.58743	7.67439	0.1727021	0.22210749	2.7003947	20	8 11.8	15.9
7766 Jododaira	12.8	*X*	201.16821	119.23222	340.57618	10.99028	0.0742747	0.18354000	3.0665418	20	8 2.6	17.4
7767 Tomatic	14.1	*X*	305.20313	23.75429	348.38175	5.96459	0.1329779	0.26971238	2.3724776	20	8 25.1	16.3
7768 1991 SX_1	13.8	*X*	91.56229	154.77676	326.83384	1.85366	0.0297165	0.29641818	2.2277485	20	4 10.7	16.4
7769 Okuni	13.3	*X*	226.30524	264.74451	88.01704	7.14381	0.1470291	0.25958366	2.4337977	20	4 10.6	17.1
7770 Siljan	12.5	*X*	59.17556	269.90687	91.23010	3.34507	0.0769814	0.20007525	2.8951682	20	—	—
7771 Tvären	13.4	*X*	104.18170	64.38995	176.73541	4.22208	0.0231089	0.22740211	2.6583147	20	10 11.1	16.9
7772 1992 EQ_{15}	13.1	*X*	98.21161	169.20024	176.59194	3.95910	0.1747939	0.20124390	2.8839489	20	—	—
7773 Kyokuchiken	13.0	*X*	17.44643	246.15675	35.95345	5.69778	0.1440963	0.21935921	2.7229028	20	8 24.8	16.1
7774 1992 UU_2	13.6	*X*	25.84522	324.96607	73.73868	6.30296	0.1847578	0.28923379	2.2644880	20	—	—
7775 Taiko	13.4	*X*	131.35085	116.86815	278.61299	4.37754	0.1842461	0.22593425	2.6698160	20	3 3.3	17.4
7776 Takeishi	13.0	*X*	130.48754	40.16281	309.43788	9.49389	0.1571363	0.29038534	2.2584974	20	—	—
7777 Consadole	14.6	*X*	284.33409	269.66001	215.82479	4.02948	0.1039551	0.27925618	2.3181108	20	—	—
7778 Markrobinson	13.2	*X*	61.08891	97.29343	224.48801	19.54929	0.3288789	0.26788469	2.3832565	20	—	—
7779 Susanring	13.6	*X*	192.60891	149.85096	44.32796	25.63614	0.2198272	0.27313878	2.3525948	20	11 14.2	17.3
7780 Maren	13.8	*X*	269.90591	43.90480	201.47553	11.10626	0.1336437	0.24422264	2.5348101	20	1 8.5	17.8
7781 Townsend	14.6	*X*	294.00727	337.07036	341.98179	18.69201	0.0698313	0.36011210	1.9566399	20	5 14.4	17.1
7782 Mony	13.3	*X*	271.78378	113.18053	259.71650	14.46756	0.3148243	0.17491798	3.1665018	20	5 31.7	18.1
7783 1994 *JD*	14.3	*X*	353.60149	15.29448	96.20955	23.54107	0.0775533	0.36637495	1.9342779	20	—	—
7784 Watterson	13.5	*X*	208.91424	107.13565	220.65068	23.34930	0.2356009	0.28858687	2.2678709	20	2 8.6	18.0
7785 1994 *QW*	13.9	*X*	124.69111	215.43329	136.14468	8.39404	0.1104432	0.28204608	2.3027989	20	—	—
7786 1994 TB_{15}	14.2	*X*	134.81635	72.53099	326.03735	4.77483	0.2202470	0.24650015	2.5191726	20	3 13.3	18.0
7787 Annalaura	14.8	*X*	320.26864	228.13867	112.18159	4.25009	0.1155179	0.25864896	2.4396577	20	8 4.0	17.1
7788 Tsukuba	13.8	*X*	68.84678	204.75318	125.79462	7.92072	0.1112261	0.18880895	3.0092227	20	12 21.6	18.2
7789 Kwiatkowski	14.1	*X*	148.74794	61.16968	304.84104	4.79681	0.1624885	0.28290314	2.2981456	20	2 6.8	17.3
7790 Miselli	13.5	*X*	175.51557	47.84243	78.46921	7.23497	0.0891656	0.17703420	3.1412170	20	8 6.4	18.4
7791 Ebicykl	12.9	*X*	223.89927	335.68111	141.67820	10.04070	0.1700879	0.17811175	3.1285349	20	9 7.3	17.8
7792 1995 WZ_3	12.9	*X*	258.28678	142.81907	61.47857	7.19583	0.1483399	0.28300811	2.2975773	20	—	—
7793 1995 YC_3	13.0	*X*	196.57928	8.11431	109.13402	2.99429	0.1077814	0.18441168	3.0568709	20	8 15.5	17.7
7794 Sanvito	14.0	*X*	173.62561	86.37087	221.41860	5.67229	0.1474256	0.28219086	2.3020111	20	—	—
7795 1996 AN_{15}	15.0	*X*	5.25225	5.01350	131.61394	7.62394	0.0369054	0.28426019	2.2908256	20	—	—
7796 Járacimrman	13.4	*X*	206.64824	42.06272	93.80274	12.81987	0.1438905	0.22665024	2.6641904	20	9 25.7	17.7
7797 Morita	11.8	*X*	225.61810	201.11046	152.67211	12.95227	0.1500610	0.17363043	3.1821366	20	4 15.3	17.0
7798 1996 *CL*	13.6	*X*	147.85903	335.85267	98.42899	5.54863	0.1298978	0.25264233	2.4781750	20	5 5.8	17.3
7799 Martinšolc	14.0	*X*	152.01169	330.52117	51.10952	3.74347	0.0356268	0.28967116	2.2622080	20	2 18.1	16.8
7800 Zhongkeyuan	14.0	*X*	346.27067	306.23754	334.32970	3.28099	0.1305806	0.29577875	2.2309580	20	6 22.7	15.6
7801 Goretti	14.3	*X*	52.95056	65.88177	282.50682	1.15283	0.2499093	0.22893017	2.6464723	20	—	—
7802 Takiguchi	14.2	*X*	133.70965	140.62778	212.43658	2.19337	0.1881280	0.25995059	2.4315070	20	1 11.3	17.6
7803 Adachi	13.3	*X*	49.15216	8.37745	110.62500	4.99735	0.0497253	0.21202445	2.7853435	20	2 20.1	16.9
7804 Boesgaard	13.6	*X*	17.36617	348.12655	272.37895	6.72416	0.1445486	0.26080285	2.4262069	20	7 23.8	15.9
7805 Moons	14.2	*X*	311.08338	77.27901	115.62523	4.27232	0.1328265	0.28719782	2.2751776	20	—	—
7806 Umasslowell	14.4	*X*	333.05852	334.49736	29.60056	2.65802	0.1930309	0.26102509	2.4248295	20	10 8.0	15.9
7807 Grier	12.9	*X*	79.66548	50.45599	200.59943	13.22532	0.0982203	0.17462110	3.1700898	20	9 23.1	17.5
7808 Bagould	12.6	*X*	228.82882	354.46950	272.11250	6.53509	0.1564647	0.24064520	2.5598700	20	—	—
7809 1979 ML_1	14.2	*X*	110.55040	49.03245	274.72136	6.31196	0.1194256	0.27412785	2.3469325	20	—	—
7810 1981 *DE*	13.6	*X*	297.64994	192.49433	244.06689	5.47836	0.0754056	0.26753743	2.3853183	20	11 19.9	16.0
7811 Zhaojiuzhang	13.0	*X*	274.66260	20.42392	121.57276	13.54475	0.1042091	0.22495598	2.6775506	20	12 27.9	16.2
7812 Billward	12.8	*X*	217.95371	202.35283	232.11317	16.15445	0.2267971	0.21157933	2.7892486	20	7 3.9	17.7
7813 Anderserikson	13.1	*X*	95.92326	182.30844	194.76058	12.52565	0.1686134	0.23491912	2.6013002	20	—	—
7814 1986 CF_2	12.7	*X*	293.83860	65.24768	314.83582	16.95413	0.1665144	0.21584563	2.7523725	20	8 3.5	15.9
7815 Dolon	10.2	*X*	213.73017	218.29690	147.51561	20.36642	0.0590001	0.08143326	5.2715074	20	4 28.9	17.6
7816 Hanoi	15.0	*X*	103.95640	170.90791	222.96106	2.38611	0.2950356	0.28007557	2.3135873	20	2 9.5	17.8
7817 Zibiturtle	13.3	*X*	335.88911	178.00190	120.19644	0.55717	0.0456293	0.21196046	2.7859040	20	6 30.5	16.6
7818 Muirhead	13.9	*X*	66.95706	254.67467	160.45780	21.74662	0.3498820	0.27542894	2.3395357	20	1 14.1	15.7
7819 1990 RR_3	14.0	*X*	149.55708	233.72968	36.17066	2.73144	0.1686786	0.23997730	2.5646175	20	—	—
7820 Ianlyon	14.3	*X*	70.91743	322.38264	8.64927	2.29745	0.2322837	0.26977246	2.3721254	20	—	—
7821 1991 *AC*	12.9	*X*	340.49190	71.48051	57.83207	2.87797	0.0160798	0.20074646	2.8887112	20	—	—
7822 1991 *CS*	17.4	*X*	296.83357	249.43400	156.85256	37.12102	0.1646464	0.82828623	1.1229207	20	—	—
7823 1991 PF_{10}	14.5	*X*	34.47387	209.89280	144.72255	2.20738	0.0687904	0.31299703	2.1483708	20	—	—
7824 Lynch	13.7	*X*	164.81344	187.61299	167.84507	8.71693	0.2086346	0.29008581	2.2600518	20	2 11.8	17.1
7825 1991 TL_1	13.4	*X*	190.19235	239.90527	196.04246	19.89162	0.2777377	0.26143445	2.4222977	20	6 14.8	18.1
7826 Kinugasa	14.1	*X*	245.92433	270.36746	207.77866	6.20362	0.0594095	0.27128268	2.3633135	20	11 2.2	16.9
7827 1992 QE_2	13.0	*X*	87.42076	170.85859	179.55066	13.80962	0.2391073	0.18640471	3.0350426	20	—	—
7828 Noriyositosi	12.9	*X*	10.76798	118.87918	205.01119	11.76040	0.1484124	0.17523633	3.1626656	20	9 27.9	16.8
7829 Jaroff	14.3	*X*	12.38233	187.75879	267.30505	17.87425	0.0758191	0.36141420	1.9519375	20	—	—
7830 Akihikotago	14.1	*X*	74.06338	127.59256	128.11171	2.99524	0.1618627	0.26743262	2.3859415	20	10 17.2	17.5
7831 François–Xavier	13.7	*X*	119.45072	326.76131	220.23076	7.78774	0.1387372	0.26543918	2.3978722	20	8 29.4	17.4
7832 1993 FA_{27}	13.9	*X*	287.55136	116.77106	216.28840	5.36755	0.2124213	0.29544436	2.2326411	20	5 11.1	16.3
7833 Nilstamm	14.4	*X*	105.00570	207.94170	130.45307	2.79879	0.2025936	0.27789520	2.3256732	20	—	—
7834 1993 *JL*	12.3	*X*	159.87789	167.20920	78.12932	15.02480	0.1369341	0.23635547	2.5907506	20	12 17.9	16.2
7835 Myroncope	13.4	*X*	233.13790	37.32494	220.38873	12.96104	0.2344738	0.24170170	2.5524049	20	—	—
7836 1993 *TG*	12.4	*X*	162.69088	24.46793	198.31766	9.52541	0.1809801	0.18584991	3.0410798	20	11 15.9	17.6
7837 Mutsumi	13.3	*X*	110.13022	331.14921	41.76643	11.59963	0.2979565	0.23308214	2.6149500	20	2 1.9	17.2
7838 Feliceierman	12.8	*X*	301.23641	158.27662	206.54221	21.09646	0.0602547	0.17640008	3.1487405	20	7 29.6	17.6
7839 1994 *ND*	17.8	*X*	33.13190	228.26682	102.53934	27.11832	0.5185778	0.30932952	2.1653186	20	—	—
7840 Hendrika	15.1	*X*	173.10703	168.94533	221.80509	9.27722	0.1136439	0.28711966	2.2755904	20	3 29.6	18.5

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
7841 1994 UE_1	13.5	X	273.59687	148.22716	242.12883	6.60760	0.1089673	0.22030504	2.7151037	20	7 24.9	17.1
7842 Ishitsuka	14.3	X	173.28683	166.18431	187.58673	5.24516	0.2145223	0.28356062	2.2945918	20	2 18.0	18.1
7843 1994 YE_1	12.7	X	141.55455	115.33345	279.89894	11.39422	0.1048191	0.24285286	2.5443327	20	2 28.9	16.6
7844 Horikawa	14.3	X	42.16430	115.25415	248.30476	2.63040	0.2712383	0.23858571	2.5745802	20	—	—
7845 Mckim	13.3	X	86.08695	28.11780	118.83781	15.98528	0.2072343	0.17219279	3.1998238	20	6 10.8	18.1
7846 Setvák	14.6	X	251.68704	223.97013	291.26749	3.45702	0.1791701	0.27372312	2.3492455	20	12 13.7	17.1
7847 Mattiaorsi	12.9	X	73.37825	104.36506	128.35086	6.12330	0.1100277	0.17916401	3.1162733	20	8 28.8	17.4
7848 Bernasconi	14.2	X	230.38083	315.66141	321.94598	3.14524	0.1946182	0.24129445	2.5552761	20	1 10.1	18.5
7849 Janjosefrič	13.8	X	269.29163	347.56119	81.50788	6.02440	0.0950014	0.21822385	2.7323390	20	9 17.0	17.4
7850 Buenos Aires	14.8	X	127.87459	230.82200	358.68248	7.24898	0.1074390	0.26226847	2.4171596	20	10 31.2	18.4
7851 Azumino	13.4	X	228.44947	353.71980	297.01631	5.02700	0.1631035	0.30104390	2.2048692	20	1 17.5	16.7
7852 Itsukushima	13.5	X	183.69992	56.94498	83.91450	4.00575	0.0564362	0.26225779	2.4172252	20	9 13.3	16.8
7853 Confucius	13.1	X	137.36943	179.10666	349.60870	5.89839	0.2441870	0.18581545	3.0414557	20	8 25.8	18.4
7854 Laotse	13.9	X	221.59121	63.36222	308.48205	6.64997	0.1819121	0.29142868	2.2531038	20	4 20.4	17.6
7855 Tagore	13.2	X	117.37948	356.29258	180.31070	13.15190	0.0946033	0.22513722	2.6761134	20	8 6.9	17.4
7856 Viktorbykov	13.1	X	326.32384	295.96806	82.60484	6.16392	0.1322489	0.17255918	3.1952929	20	9 26.9	17.0
7857 Lagerros	11.8	X	178.40007	292.68398	133.35633	12.66004	0.1672419	0.20534241	2.8454456	20	5 28.1	16.7
7858 Bolotov	13.8	X	257.73987	39.07343	329.78882	4.18598	0.2153532	0.25396220	2.4695813	20	5 22.7	17.4
7859 Lhasa	13.4	X	296.38558	36.54462	7.97134	3.73959	0.1327960	0.21450350	2.7638415	20	9 15.9	16.7
7860 Zahnle	14.0	X	249.97792	17.99807	312.31252	8.30490	0.1617877	0.28972936	2.2619051	20	3 25.6	17.4
7861 Messenger	14.4	X	13.57169	345.47809	309.07422	1.95531	0.1738761	0.25885106	2.4383877	20	9 12.5	16.7
7862 Keikonakamura	13.4	X	219.60832	353.50263	33.13551	2.37827	0.0779721	0.20602713	2.8391376	20	5 19.4	17.7
7863 Turnbull	13.3	X	28.34195	327.33776	23.36271	0.72261	0.1761891	0.17762792	3.1342133	20	12 3.5	17.4
7864 1982 EE	12.8	X	242.99256	25.05539	109.83961	9.36509	0.0443663	0.22198100	2.7014205	20	11 14.8	16.6
7865 Françoisgros	14.0	X	177.72128	122.44269	302.38093	1.73633	0.1510510	0.28959641	2.2625973	20	5 21.7	17.3
7866 Sicoli	13.3	X	12.86680	252.96427	77.97466	3.47950	0.2101203	0.26050918	2.4280299	20	11 12.3	15.8
7867 Burian	14.6	X	337.58805	330.62045	351.71714	5.98092	0.1868226	0.29963675	2.2117668	20	8 18.2	15.9
7868 Barker	12.8	X	71.17560	324.09050	15.49500	11.98904	0.1983985	0.22412103	2.6841965	20	—	—
7869 Pradun	14.7	X	232.75641	106.28373	219.18310	3.64368	0.1851744	0.28880607	2.2667233	20	3 3.9	18.2
7870 1987 UP_2	13.8	X	250.90104	156.29140	240.04429	3.50485	0.2730617	0.29363781	2.2417890	20	6 15.9	17.1
7871 Tunder	14.0	X	94.98741	219.96092	150.67966	4.45910	0.0840706	0.27498158	2.3420724	20	—	—
7872 1990 UC	14.1	X	109.19765	191.08524	182.23039	8.12060	0.2132885	0.27536064	2.3399225	20	1 7.5	16.9
7873 Böll	13.1	X	71.66856	219.78309	137.24823	5.09125	0.1093224	0.23020279	2.6367098	20	—	—
7874 1991 BE	13.1	X	319.89010	247.01778	293.58583	26.84270	0.1696611	0.23551484	2.5969118	20	—	—
7875 1991 ES_1	12.3	X	3.20826	265.11506	165.33987	14.13111	0.1808206	0.22926818	2.6438706	20	—	—
7876 1991 VW_3	14.4	X	58.42257	101.77371	238.85553	1.10153	0.1909003	0.31092185	2.1579194	20	—	—
7877 1992 AH_1	14.2	X	89.65636	159.93052	339.25365	9.58248	0.2431968	0.21823821	2.7322191	20	6 6.7	18.4
7878 1992 DZ	13.1	X	241.12090	17.44058	141.15269	14.41688	0.0988213	0.23238653	2.6201656	20	12 6.7	16.9
7879 1992 EX_{17}	14.1	X	7.41584	232.15593	196.52229	7.83230	0.1731014	0.27317597	2.3523813	20	—	—
7880 1992 OM_7	12.9	X	358.55553	3.69485	292.15780	3.27056	0.0458911	0.21197185	2.7858042	20	7 31.3	16.3
7881 Schieferdecker	13.1	X	162.07242	246.71514	132.22395	2.79736	0.1212963	0.19615347	2.9336303	20	3 13.5	17.5
7882 1993 FL_6	15.0	X	186.94729	152.39714	97.86998	2.03332	0.0511852	0.31507425	2.1389179	20	—	—
7883 1993 GD_1	13.9	X	299.68258	194.86713	73.95676	6.08778	0.1784114	0.28949621	2.2631194	20	3 6.3	16.7
7884 1993 HH_7	14.3	X	205.09545	345.41114	353.32835	2.48600	0.1073897	0.28769203	2.2725712	20	2 26.8	17.5
7885 Levine	14.5	X	204.57026	86.22562	131.30081	24.11090	0.2503334	0.27440755	2.3453375	20	12 26.9	18.3
7886 Redman	14.1	X	85.74214	77.58218	266.86115	3.92887	0.0993504	0.26818487	2.3814778	20	—	—
7887 Bratfest	12.2	X	136.32862	102.48927	295.08209	13.74093	0.0998256	0.23798188	2.5789334	20	2 25.8	16.1
7888 1993 UC	15.1	X	329.31540	323.03966	165.91134	26.08463	0.6641475	0.25931672	2.4354677	20	—	—
7889 1994 LX	15.2	X	304.14322	349.17840	111.27580	36.91252	0.3463152	0.69572126	1.2613798	20	—	—
7890 Yasuofukui	15.3	X	20.85392	141.56125	212.78512	0.98519	0.1906417	0.30775416	2.1727017	20	—	—
7891 Fuchie	13.6	X	194.81466	62.80535	303.39868	1.90243	0.1464284	0.28649577	2.2788929	20	3 21.9	17.2
7892 Musamurahigashi	13.4	X	200.01282	201.93111	167.85974	1.41765	0.1835882	0.17255101	3.1953938	20	4 7.3	18.7
7893 1994 XY	14.6	X	193.95586	270.50217	91.75557	7.31650	0.1340958	0.28598408	2.2816103	20	3 20.9	18.1
7894 Rogers	13.6	X	318.13472	123.17899	91.42014	14.06542	0.1288040	0.23909229	2.5709423	20	1 31.8	17.0
7895 Kaseda	11.4	X	172.98888	37.39832	133.43595	13.23345	0.1511869	0.17654463	3.1470215	20	9 27.9	16.7
7896 Švejk	12.6	X	164.69828	139.96289	52.32274	1.90716	0.1388779	0.17749857	3.1357359	20	10 12.4	17.6
7897 Bohuška	13.8	X	152.34851	116.39858	170.76202	4.01464	0.1952456	0.18241784	3.0791051	20	—	—
7898 Ohkuma	13.7	X	258.41866	250.85339	92.29417	7.05898	0.2187362	0.30085658	2.2057843	20	4 21.9	16.9
7899 Joya	13.5	X	130.71818	217.74724	83.38676	6.25474	0.1402939	0.27470585	2.3436393	20	—	—
7900 Portule	14.2	X	293.28775	230.89301	41.56392	4.23986	0.1380965	0.28874642	2.2670354	20	3 7.8	17.0
7901 Konnai	14.1	X	251.02576	95.24162	134.08159	1.34390	0.1159995	0.23773426	2.5807239	20	—	—
7902 Hanff	13.1	X	120.50225	296.49824	143.72731	2.66864	0.0423124	0.20268356	2.8702763	20	4 4.1	17.0
7903 Albinoni	13.5	X	342.88724	229.11337	217.85198	7.72035	0.0285479	0.18697166	3.0289042	20	—	—
7904 Morrow	13.7	X	182.99800	67.35238	259.85977	2.28796	0.1308082	0.24586022	2.5235420	20	1 25.7	17.5
7905 Juzoitami	11.8	X	331.10838	296.02448	94.10686	12.24005	0.0799701	0.17955810	3.1117119	20	10 25.1	15.9
7906 Melanchton	12.8	X	77.12307	136.97122	227.83725	10.02985	0.1447100	0.18494323	3.0510109	20	—	—
7907 Erasmus	14.1	X	11.07504	315.65433	339.31236	2.06888	0.0204077	0.21192538	2.7862114	20	8 16.5	17.8
7908 Zwingli	14.2	X	91.63836	278.46706	57.62917	3.62042	0.1265592	0.27352176	2.3503983	20	—	—
7909 Ziffer	13.5	X	322.41237	329.40167	69.45489	2.38928	0.1770172	0.17459114	3.1704525	20	10 12.4	16.9
7910 Aleksola	13.6	X	13.44054	23.17962	202.78835	8.36520	0.1379868	0.29239017	2.2481617	20	5 22.0	15.4
7911 Carlpilcher	12.8	X	295.74020	277.58566	340.79789	15.33960	0.1566456	0.19930867	2.9025871	20	2 27.4	16.9
7912 Lapovok	14.2	X	5.35016	273.78885	26.21212	0.93911	0.1300755	0.25784822	2.4447059	20	8 30.9	16.4
7913 Parfenov	12.9	X	174.33065	179.53335	214.37337	1.59786	0.0654736	0.20063079	2.8898214	20	4 9.3	17.3
7914 1978 UW_7	13.6	X	26.78327	72.58529	218.11422	11.88041	0.2151440	0.25765856	2.4459055	20	10 5.8	16.4
7915 1979 MA_6	14.6	X	62.57093	329.09103	136.83961	5.84437	0.0601991	0.28062578	2.3105622	20	2 11.3	16.8
7916 1981 EN	14.2	X	293.42778	350.40169	163.90001	9.58677	0.1634199	0.27091160	2.3654711	20	—	—
7917 Hammergren	14.4	X	19.15294	12.47022	320.85756	8.68374	0.1280777	0.26302773	2.4125057	20	11 8.3	17.3
7918 Berrilli	14.7	X	4.83755	105.35310	187.86617	5.85965	0.2231533	0.25778106	2.4451305	20	8 29.1	16.5
7919 Prime	14.5	X	354.58352	239.57104	59.47586	1.18294	0.1173569	0.25821712	2.4423769	20	8 7.2	16.9
7920 1981 XM_2	13.1	X	73.88859	173.68532	258.10535	10.80014	0.1078084	0.23517472	2.5994150	20	1 23.3	16.3

Planet		H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
		m		°	°	°	°		°				
7921	Huebner	14.0	X	26.49623	188.37458	174.19522	2.30403	0.2267478	0.26386458	2.4074022	20	—	—
7922	Violalaurenti	12.8	X	305.38270	223.11448	282.74300	14.15954	0.1701412	0.18195468	3.0843281	20	—	—
7923	Chyba	13.1	X	156.08289	326.53107	97.17801	3.26991	0.0917128	0.20069546	2.8892005	20	4 29.4	17.5
7924	Simbirsk	12.9	X	90.50641	114.26364	191.01323	1.16285	0.1608536	0.18033144	3.1028093	20	12 16.7	17.9
7925	Shelus	13.4	X	23.22319	18.51631	342.58920	1.57405	0.1833308	0.17666440	3.1455990	20	12 9.9	17.4
7926	1986 RD_5	13.0	X	85.31394	2.45058	348.36828	3.59339	0.1213971	0.18287749	3.0739435	20	—	—
7927	Jamiegilmour	13.1	X	346.01380	296.95235	156.55910	1.67725	0.1735294	0.17753405	3.1353181	20	—	—
7928	Bijaoui	12.8	X	114.28973	358.74943	293.58087	12.04840	0.1771970	0.18109538	3.0940772	20	12 24.3	18.0
7929	1987 SK_{12}	14.0	X	105.40049	95.52300	79.65253	1.53535	0.0966114	0.29588787	2.2304095	20	7 30.4	16.7
7930	1987 VD	14.5	X	260.30196	67.25599	277.72165	5.14098	0.2533649	0.29115321	2.2545247	20	4 17.3	18.0
7931	Kristianpedersen	14.4	X	174.91107	128.11937	54.96706	3.08291	0.1401072	0.26015161	2.4302542	20	10 21.7	18.0
7932	Plimpton	14.3	X	122.15474	119.57276	141.58526	2.92911	0.1738219	0.26719071	2.3873814	20	12 8.6	18.0
7933	Magritte	14.4	X	223.98933	51.53355	203.17061	6.39869	0.0823735	0.27734237	2.3287627	20	—	—
7934	Sinatra	14.4	X	40.48809	332.16775	166.30352	7.86390	0.1462368	0.23847323	2.5753897	20	3 5.5	16.8
7935	Beppefenoglio	13.0	X	151.24728	339.28765	259.83669	0.14976	0.1306768	0.18185182	3.0854909	20	11 23.9	18.0
7936	Mikemagee	13.9	X	106.11778	301.53858	81.63567	8.34556	0.1347458	0.27876897	2.3208109	20	1 4.3	16.4
7937	1990 QA_2	13.3	X	267.26096	115.26352	319.67277	1.58902	0.0616065	0.23095499	2.6309816	20	9 25.0	16.7
7938	1990 SL_2	13.7	X	169.28931	251.66225	73.81117	6.33768	0.2041112	0.27848397	2.3223940	20	1 12.5	17.2
7939	Asphaug	14.5	X	66.10252	85.94320	331.67077	1.49873	0.2146206	0.27154428	2.3617954	20	—	—
7940	Erichmeyer	13.7	X	77.29645	279.54072	117.38472	3.72137	0.0877096	0.23011863	2.6373526	20	—	—
7941	1991 NE_1	12.7	X	327.56716	84.56896	304.40795	8.55021	0.0432100	0.17426614	3.1743931	20	10 7.7	17.2
7942	1991 OK_1	11.9	X	109.67262	282.32354	305.43625	9.54844	0.0454462	0.17467090	3.1694872	20	9 19.8	16.6
7943	1991 PQ_{12}	12.7	X	117.92448	84.56050	173.41346	1.08878	0.1230461	0.17667459	3.1454780	20	11 14.6	17.7
7944	1991 PR_{12}	13.2	X	19.83284	76.01215	238.91269	0.40882	0.1418550	0.17159648	3.2072326	20	9 30.9	17.1
7945	Kreisau	14.1	X	101.14944	321.39618	288.73892	4.00805	0.1222051	0.30719982	2.1753146	20	11 8.0	17.1
7946	1991 RV_{13}	13.8	X	289.74028	171.09529	216.43284	5.82812	0.1197015	0.27000166	2.3707827	20	8 18.2	16.5
7947	Toland	15.4	X	203.92315	263.85649	193.44584	5.18503	0.0749618	0.29582342	2.2307335	20	8 6.8	18.4
7948	Whitaker	13.7	X	203.52711	306.76292	192.09968	0.53660	0.0491776	0.25849878	2.4406025	20	10 3.3	16.9
7949	1992 SU	12.5	X	105.47824	263.16439	176.42659	17.60315	0.2724512	0.19272394	2.9683307	20	4 17.1	17.2
7950	Berezov	12.1	X	64.00151	335.00839	351.41541	11.62482	0.0978152	0.18024202	3.1038354	20	12 5.7	16.8
7951	1992 WC_2	13.6	X	337.91666	329.99272	78.80826	0.35427	0.1678606	0.17689438	3.1428720	20	11 24.1	17.1
7952	1992 XB	13.0	X	103.58823	142.98355	257.45339	10.28003	0.2534755	0.18810944	3.0166782	20	2 18.9	17.6
7953	Kawaguchi	13.8	X	110.43639	79.12538	184.78893	3.60840	0.1882093	0.26803442	2.3823688	20	12 2.5	17.6
7954	Kitao	13.2	X	146.37055	141.07295	178.02765	13.95644	0.1855033	0.23364099	2.6107785	20	—	—
7955	Ogiwara	13.8	X	214.44691	211.78479	289.61468	1.56798	0.1208639	0.21507869	2.7589117	20	10 4.1	17.9
7956	Yaji	13.4	X	187.61505	139.95605	97.39377	2.47461	0.1099551	0.18114507	3.0935113	20	12 26.3	18.2
7957	Antonella	13.6	X	269.93372	111.50468	6.25961	9.01529	0.1153219	0.21352188	2.7723058	20	11 11.1	17.2
7958	Leakey	14.3	X	319.80060	153.96200	195.71567	21.96963	0.0768803	0.38317465	1.8773195	20	9 6.8	16.0
7959	Alysecherri	14.6	X	173.26029	100.54335	235.78269	19.26349	0.0855189	0.36394202	1.9428887	20	1 1.5	17.1
7960	Condorcet	14.0	X	91.07594	296.46503	293.89442	3.24394	0.0736757	0.30519678	2.1848221	20	9 25.1	16.8
7961	Ercolepoli	14.0	X	23.95756	277.82374	59.79647	5.04048	0.1902368	0.30605198	2.1807502	20	12 15.7	16.6
7962	1994 WG_3	14.8	X	7.86587	256.26218	103.45963	4.06754	0.2211921	0.30530954	2.1842841	20	12 29.5	17.0
7963	Falcinelli	13.3	X	209.85311	62.87062	251.69819	12.75228	0.1779275	0.23643411	2.5901761	20	2 1.5	17.8
7964	1995 DD_2	12.5	X	99.13955	81.98824	163.29959	10.24597	0.0889194	0.21507999	2.7589006	20	10 16.9	16.6
7965	Katsuhiko	12.5	X	75.34261	280.43358	310.02926	25.02510	0.2890186	0.25903237	2.4372497	20	9 12.9	16.8
7966	Richardbaum	14.1	X	154.53344	161.12079	97.68599	3.25728	0.1841633	0.26965971	2.3727866	20	—	—
7967	Beny	14.5	X	36.11578	150.61176	150.40395	3.48613	0.1853558	0.30218341	2.1993228	20	11 10.9	17.0
7968	Elst–Pizarro	15.6	X	108.18504	131.67454	160.12788	1.38911	0.1572216	0.17517587	3.1633934	20	12 16.0	20.8
7969	1997 RP_3	12.9	X	312.84705	284.52810	132.27780	2.44052	0.1692291	0.17328770	3.1863310	20	10 18.9	16.4
7970	Lichtenberg	14.2	X	216.73035	289.20566	348.17239	4.15100	0.2424476	0.23818986	2.5774319	20	—	—
7971	Meckbach	13.7	X	300.41473	10.97804	199.55122	14.01438	0.1085538	0.23866419	2.5740158	20	1 3.0	17.5
7972	Mariotti	13.6	X	237.28541	149.13065	297.44932	0.47422	0.1274504	0.16916619	3.2378770	20	8 16.7	18.5
7973	Koppeschaar	14.2	X	137.13355	315.13856	137.71210	2.32710	0.0870590	0.20282300	2.8689606	20	5 14.6	18.4
7974	Vermeesch	14.9	X	251.74288	196.59613	163.83844	0.16787	0.0986807	0.28899879	2.2657155	20	5 19.8	17.9
7975	1974 FD	12.6	X	243.46141	275.37847	355.81864	10.22168	0.0675320	0.18967122	3.0000956	20	1 30.2	17.2
7976	Pinigin	14.2	X	272.04500	91.21877	306.83100	2.20308	0.0968425	0.29668932	2.2263910	20	8 14.3	16.5
7977	1977 QQ_5	15.1	X	298.65605	248.03466	134.16432	25.16448	0.4661023	0.29666848	2.2264953	20	6 27.8	17.8
7978	Niknesterov	15.0	X	80.55488	145.67239	213.77422	1.03251	0.1493070	0.31203918	2.1527650	20	—	—
7979	Pozharskij	13.7	X	240.14100	35.14513	342.93851	6.76202	0.0762151	0.20519309	2.8468258	20	5 31.3	17.9
7980	Senkevich	13.6	X	305.42265	357.14201	2.53545	1.63587	0.0804977	0.20809903	2.8202613	20	8 4.9	17.1
7981	1978 VL_{10}	13.6	X	184.82443	243.52114	161.23521	1.96905	0.1080994	0.20098501	2.8864249	20	5 5.3	18.0
7982	1979 MX_5	14.7	X	36.21265	38.87008	164.92210	2.46227	0.1006036	0.28625019	2.2801961	20	5 28.2	16.9
7983	Festin	14.2	X	176.84748	276.98063	320.83478	1.89691	0.0383369	0.31027774	2.1609048	20	—	—
7984	Marius	13.5	X	98.64013	28.76396	340.23463	9.04330	0.1991823	0.23060073	2.6336755	20	—	—
7985	Nedelcu	14.9	X	57.59136	158.73248	309.39165	3.03926	0.1455040	0.27685845	2.3314755	20	2 14.8	16.9
7986	Romania	15.6	X	195.25778	19.23034	253.69053	1.99568	0.1262223	0.32065838	2.1140130	20	—	—
7987	Walshkevin	13.8	X	311.76042	221.37245	168.32341	3.30276	0.2031174	0.21338231	2.7735145	20	9 13.8	16.5
7988	Pucacco	15.1	X	87.99063	224.77006	150.23271	2.93785	0.2164860	0.27174802	2.3606148	20	—	—
7989	Pernadavide	15.3	X	117.77743	154.00411	153.43981	1.57367	0.1956534	0.26719316	2.3873668	20	—	—
7990	1981 SN_1	13.9	X	85.66433	231.09889	144.92356	2.34316	0.3140229	0.18479386	3.0526547	20	1 12.9	17.7
7991	Kaguyahime	12.6	X	28.27425	206.76246	136.89901	1.74135	0.1893304	0.17664772	3.1457970	20	11 26.9	16.8
7992	Yozan	12.7	X	61.17874	310.85488	63.45811	9.62578	0.3277462	0.18199171	3.0839096	20	—	—
7993	Johnbridges	12.5	X	205.46540	329.12232	42.58231	2.59471	0.1350102	0.19723790	2.9228676	20	4 14.4	17.1
7994	Bethellen	12.8	X	348.23174	280.33047	234.40092	0.04478	0.1078604	0.18441492	3.0568351	20	1 9.2	16.7
7995	Khvorostovsky	13.4	X	322.63409	112.78317	198.64936	8.83222	0.2710237	0.21118455	2.7927236	20	5 31.3	16.2
7996	Vedernikov	12.9	X	209.85515	137.54735	170.10872	14.17503	0.3158525	0.20241864	2.8727801	20	1 29.6	18.4
7997	1985 CN_1	14.1	X	41.71951	143.89294	12.89400	3.17044	0.0991460	0.28273836	2.2990384	20	3 25.3	16.1
7998	Gonczi	14.2	X	256.60785	136.95528	108.53443	5.58023	0.1181927	0.27396027	2.3478895	20	—	—
7999	Nesvorný	12.3	X	33.38687	165.02832	281.71024	11.68744	0.0874452	0.18491961	3.0512707	20	—	—
8000	Isaac Newton	12.5	X	124.51876	303.68706	10.17633	9.73494	0.0808135	0.18346189	3.0674122	20	—	—