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		°	°	°	°		°				
268001 2004 JQ_{14}	16.9	X	131.58770	119.10201	86.25003	5.85076	0.2036489	0.26479456	2.4017622	20	10 12.1	20.9
268002 2004 JY_{15}	16.6	X	195.68731	176.61512	75.03377	5.93827	0.1264619	0.28031825	2.3122519	20	—	—
268003 2004 JQ_{23}	16.9	X	55.81450	24.69693	252.40342	2.62590	0.1973471	0.25976304	2.4326772	20	10 25.5	20.3
268004 2004 JH_{24}	17.0	X	203.77773	109.19377	65.16836	5.11301	0.1051541	0.27202625	2.3590049	20	11 15.8	20.2
268005 2004 JT_{28}	17.2	X	59.61060	156.05558	106.95562	3.20235	0.1530887	0.26058106	2.4275834	20	10 7.9	20.5
268006 2004 JU_{29}	17.0	X	70.44769	216.00138	71.13715	5.53872	0.1760878	0.26416709	2.4055639	20	11 22.5	20.5
268007 2004 JJ_{41}	17.2	X	68.77519	228.45910	29.48640	4.49666	0.1367011	0.26106019	2.4246122	20	10 9.1	20.3
268008 2004 JK_{41}	17.2	X	148.48084	225.74532	42.81765	6.14577	0.2053774	0.27539394	2.3397339	20	—	—
268009 2004 JV_{48}	16.8	X	102.66909	145.50260	103.18433	6.99412	0.0987624	0.26567398	2.3964592	20	11 3.4	20.3
268010 2004 KH_{4}	17.2	X	66.14652	296.48261	337.28701	0.88305	0.1607054	0.26163033	2.4210885	20	10 28.9	20.4
268011 2004 KX_{5}	17.4	X	167.33429	152.39302	88.96699	3.51283	0.1893115	0.27420981	2.3464649	20	12 24.4	21.1
268012 2004 LL	17.6	X	136.45236	34.58614	226.35392	1.71637	0.1679985	0.27180749	2.3602705	20	12 21.3	21.3
268013 2004 MF_{7}	16.2	X	62.21429	311.26530	272.29358	8.09911	0.0448744	0.24639486	2.5198902	20	7 26.2	19.5
268014 2004 NR	16.4	X	303.69012	167.91118	156.02172	2.29730	0.1430402	0.24254448	2.5464889	20	6 4.7	19.3
268015 2004 NR_{7}	15.9	X	268.21657	168.91799	153.50571	15.81878	0.2764398	0.23325248	2.6136767	20	4 2.6	20.2
268016 2004 NC_{8}	16.7	X	319.91711	87.59679	226.47228	1.71551	0.1573568	0.24210679	2.5495570	20	6 16.5	19.3
268017 2004 NO_{10}	17.0	X	8.59238	201.02019	116.91599	3.55512	0.1824254	0.25259720	2.4784701	20	10 11.5	19.4
268018 2004 NU_{12}	16.7	X	293.49683	163.49813	122.93028	6.29696	0.2187645	0.23617397	2.5920778	20	3 20.7	20.3
268019 2004 NC_{15}	17.8	X	326.87258	90.76512	292.26028	17.24807	0.0853121	0.37968039	1.8888201	20	11 23.6	19.6
268020 2004 NV_{21}	16.0	X	210.15383	198.72462	132.99518	15.22489	0.2574847	0.22441942	2.6818167	20	2 28.7	20.8
268021 2004 NU_{24}	16.0	X	252.50688	341.38999	331.77587	13.12895	0.1645226	0.22763012	2.6565392	20	3 11.6	20.3
268022 2004 NL_{26}	16.4	X	261.85528	223.84358	134.83761	7.84480	0.0878999	0.23992809	2.5649682	20	6 2.9	19.9
268023 2004 NA_{28}	16.3	X	89.24397	126.92860	135.18116	10.06034	0.1724398	0.25827105	2.4420370	20	11 11.8	20.2
268024 2004 NP_{30}	16.7	X	67.31651	181.52775	121.21966	3.02271	0.1820364	0.26094000	2.4253567	20	12 8.8	20.2
268025 2004 NS_{32}	17.7	X	80.67731	323.78027	321.90945	19.23826	0.0865942	0.38135953	1.8832717	20	12 20.4	20.3
268026 2004 NF_{33}	17.4	X	69.34281	164.70377	160.01342	23.83822	0.0785895	0.38649617	1.8665484	20	—	—
268027 2004 OJ_{5}	16.8	X	339.67521	175.17344	128.27761	7.26105	0.2091476	0.24469582	2.5315413	20	7 8.2	18.8
268028 2004 OD_{11}	15.5	X	250.90199	182.97474	125.09554	34.03990	0.1656304	0.22903110	2.6456948	20	3 12.7	20.1
268029 2004 PB_{5}	15.9	X	283.76145	181.86357	164.26449	14.60616	0.1469782	0.24070015	2.5594804	20	6 6.8	19.5
268030 2004 PE_{9}	16.6	X	251.35064	234.04970	112.67081	2.64853	0.1981106	0.23256859	2.6187980	20	4 22.2	20.5
268031 2004 PL_{13}	16.6	X	27.13559	168.43015	130.38841	3.94611	0.1938020	0.25143189	2.4861222	20	10 17.2	19.5
268032 2004 PL_{16}	15.9	X	254.10590	165.57055	153.58141	13.08596	0.1652709	0.22910652	2.6451141	20	3 26.3	20.0
268033 2004 PT_{19}	15.8	X	197.79753	192.18623	164.23455	12.67458	0.1950590	0.22238662	2.6981346	20	3 18.8	20.4
268034 2004 PQ_{36}	16.2	X	107.05542	202.61508	178.14560	8.87390	0.3104655	0.21175129	2.7877384	20	2 6.6	20.4
268035 2004 PF_{40}	16.0	X	319.87835	143.84190	161.07379	14.41685	0.2070671	0.23853147	2.5749705	20	5 28.9	19.0
268036 2004 PS_{68}	15.8	X	285.78084	353.11779	283.75844	10.79697	0.1553981	0.22996211	2.6385492	20	2 29.6	19.8
268037 2004 PL_{75}	16.8	X	332.82244	183.88821	176.98561	22.29351	0.0713665	0.37137334	1.9168828	20	10 30.6	18.6
268038 2004 PZ_{88}	15.7	X	213.36681	354.34129	354.21696	14.00514	0.2172515	0.22391593	2.6858353	20	3 19.6	20.4
268039 2004 PD_{91}	16.3	X	342.76715	325.24556	305.06591	6.46322	0.1246966	0.23740587	2.5831031	20	5 27.3	19.1
268040 2004 PJ_{94}	16.5	X	304.78810	197.33454	98.79885	3.40309	0.2027376	0.23534222	2.5981815	20	4 19.3	19.7
268041 2004 PY_{105}	16.4	X	284.40050	296.94466	7.81554	5.94243	0.2818527	0.23210049	2.6223179	20	3 23.5	20.1
268042 2004 QX	15.9	X	332.97196	335.72154	332.01818	20.16592	0.3148848	0.24101672	2.5572387	20	6 12.2	18.3
268043 2004 QM_{3}	15.9	X	175.51416	255.37338	174.57728	12.05364	0.0262143	0.23494510	2.6011084	20	5 27.6	19.7
268044 2004 QS_{4}	17.3	X	216.91509	30.55896	135.77444	21.44158	0.0484830	0.38257698	1.8792742	20	—	—
268045 2004 QZ_{9}	16.0	X	126.69569	247.97619	133.96346	15.85064	0.1820825	0.21504411	2.7592074	20	2 14.8	20.0
268046 2004 QJ_{11}	16.4	X	290.01033	270.45920	58.92966	5.43256	0.0992372	0.23735304	2.5834864	20	5 28.7	19.7
268047 2004 QM_{21}	16.6	X	315.63628	137.52251	150.12355	4.84061	0.1725835	0.23653045	2.5894727	20	4 29.9	19.6
268048 2004 QZ_{21}	15.3	X	182.87961	340.26536	1.50660	9.68647	0.1983201	0.21632155	2.7483341	20	2 20.7	20.0
268049 2004 QK_{24}	15.9	X	261.90971	162.14174	170.46489	27.81698	0.0543398	0.23224789	2.6212083	20	5 6.7	20.0
268050 2004 QZ_{24}	15.5	X	291.89143	285.06792	34.53866	23.13471	0.1823894	0.23873127	2.5735336	20	5 1.9	18.7
268051 2004 QZ_{28}	15.6	X	310.75421	261.98896	84.46604	9.83393	0.1555985	0.18028880	3.1032985	20	7 14.2	19.4
268052 2004 RH	16.4	X	127.01120	137.75740	242.66740	2.83006	0.1101535	0.21536212	2.7564905	20	2 2.8	20.2
268053 2004 RV_{1}	16.8	X	217.50795	183.55501	159.05502	2.19928	0.0897538	0.22545328	2.6736118	20	3 21.6	20.9
268054 2004 RV_{18}	16.8	X	330.91488	113.05116	165.02658	7.51047	0.0822337	0.23546028	2.5973129	20	5 24.5	19.9
268055 2004 RO_{19}	16.2	X	208.26377	168.78035	155.90235	5.96355	0.0545675	0.22119564	2.7078110	20	2 19.1	20.2
268056 2004 RS_{19}	16.6	X	304.31444	166.67707	149.71638	4.85132	0.0610511	0.23660014	2.5889643	20	6 7.7	19.9
268057 Michaelkaschke	15.7	X	101.97533	113.42202	270.57534	3.26508	0.0824025	0.20955650	2.8071694	20	1 5.6	19.3
268058 2004 RA_{32}	16.7	X	112.74599	264.94131	346.86647	20.38882	0.3085577	0.26071833	2.4267312	20	11 14.3	21.6
268059 2004 RO_{32}	16.4	X	153.33362	251.98072	114.07920	6.31819	0.1349723	0.21867681	2.7285645	20	2 17.9	20.6
268060 2004 RH_{45}	16.0	X	341.15844	258.31796	339.41512	13.67706	0.0683451	0.22988252	2.6391581	20	4 7.1	19.5
268061 2004 RP_{47}	16.5	X	10.53342	272.54268	167.25414	13.00551	0.3237995	0.19967398	2.8990457	20	—	—
268062 2004 RS_{48}	16.9	X	171.15113	325.95671	34.33785	3.25955	0.1486481	0.21953153	2.7214777	20	2 28.9	21.3
268063 2004 RP_{50}	16.6	X	265.92435	265.13630	49.66040	2.70242	0.2023250	0.23050782	2.6343831	20	3 27.3	20.6
268064 2004 RZ_{50}	16.1	X	254.25326	149.51848	149.29160	8.66351	0.0973514	0.22501027	2.6771199	20	3 6.5	19.9
268065 2004 RA_{53}	16.5	X	153.16435	185.45017	141.75436	4.10727	0.1178647	0.21112179	2.7932770	20	—	—
268066 2004 RP_{59}	15.7	X	237.69101	302.84368	18.66791	13.25948	0.1880767	0.22540941	2.6739587	20	3 13.7	20.1
268067 2004 RG_{63}	15.7	X	202.79664	357.72416	350.52560	13.30399	0.0822732	0.22284135	2.6944629	20	3 12.8	19.5
268068 2004 RM_{64}	16.9	X	93.49759	94.32567	182.26811	5.83472	0.2549214	0.25835184	2.4415278	20	12 5.5	21.1
268069 2004 RG_{65}	16.0	X	223.42298	158.40222	168.18347	14.24584	0.0963226	0.22295901	2.6935148	20	3 7.3	20.0
268070 2004 RH_{69}	16.3	X	278.59031	153.73602	166.18570	11.55121	0.1515496	0.23161518	2.6259798	20	4 25.6	20.0
268071 2004 RW_{69}	16.5	X	133.04776	206.86154	142.43777	2.49268	0.0978732	0.21106810	2.7937507	20	1 2.6	20.3
268072 2004 RF_{73}	16.7	X	277.82155	226.62577	105.29084	2.99865	0.1921134	0.23362426	2.6109031	20	5 2.6	20.2
268073 2004 RL_{78}	16.2	X	188.37617	314.41043	50.12860	6.09489	0.1794283	0.22138741	2.7062470	20	3 22.2	20.7
268074 2004 RR_{81}	16.6	X	136.92334	40.04769	329.32825	5.30445	0.1451530	0.21425528	2.7659757	20	2 5.9	20.7
268075 2004 RU_{85}	16.7	X	309.51067	130.99539	161.05711	14.15904	0.0751930	0.23471477	2.6028098	20	5 13.6	20.2
268076 2004 RF_{89}	17.1	X	78.95363	122.72996	161.44336	24.29111	0.0481160	0.38195417	1.8813166	20	12 15.0	19.9
268077 2004 RF_{104}	16.1	X	281.42391	11.56981	279.12177	6.96624	0.2005976	0.22880002	2.6474758	20	3 9.0	20.2
268078 2004 RH_{108}	16.5	X	122.56389	72.53897	290.30981	7.30058	0.1701380	0.21125686	2.7920863	20	1 16.4	20.5
268079 2004 RP_{110}	17.3	X	108.10568	71.33094	201.10274	18.92127	0.0476092	0.38181292	1.8817805	20	12 30.9	19.9
268080 2004 RB_{130}	16.9	X	131.62220	286.55918	79.57053	0.54035	0.0866774	0.21391412	2.7689158	20	1 19.8	20.8

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
268081 2004 RV_{135}	17.1	X	98.91067	15.60761	43.01643	2.52808	0.0766021	0.21646031	2.7471594	20	2 13.3	20.6
268082 2004 RL_{139}	17.4	X	61.63070	140.32169	251.90894	0.85976	0.2044930	0.20420414	2.8560097	20	—	—
268083 2004 RB_{147}	16.4	X	349.08784	281.00246	356.70738	8.77794	0.1580473	0.23849759	2.5752144	20	6 20.5	19.0
268084 2004 RZ_{148}	16.4	X	334.66711	111.50607	168.69125	10.68967	0.0234640	0.23461006	2.6035842	20	6 6.9	19.9
268085 2004 RS_{150}	16.1	X	140.92893	245.10653	180.54846	8.99746	0.0062474	0.22493391	2.6777257	20	4 4.9	19.6
268086 2004 RD_{158}	16.1	X	271.91510	299.83544	331.41868	12.64800	0.1701567	0.22398965	2.6852460	20	2 12.9	20.0
268087 2004 RL_{160}	16.9	X	119.97315	59.23753	303.96408	4.16699	0.1745936	0.20930970	2.8093756	20	1 15.2	20.8
268088 2004 RX_{182}	15.9	X	43.46829	77.76969	339.42299	14.26807	0.1475306	0.20354769	2.8621470	20	—	—
268089 2004 RV_{219}	15.5	X	280.53925	103.37371	294.73127	15.28325	0.1471299	0.17637503	3.1490386	20	8 3.7	19.8
268090 2004 RF_{229}	16.2	X	166.39777	345.13070	357.89313	5.94207	0.0608407	0.21205037	2.7851165	20	1 29.8	20.3
268091 2004 RK_{231}	17.1	X	295.19136	304.24964	4.15898	4.75481	0.2017950	0.23170348	2.6253125	20	4 19.8	20.6
268092 2004 RU_{233}	16.7	X	158.42035	167.41503	180.40614	4.65915	0.0795999	0.21198949	2.7856496	20	1 25.8	20.8
268093 2004 RD_{256}	15.9	X	280.16807	329.98061	353.65874	21.41646	0.0194505	0.23317086	2.6142866	20	5 9.9	19.9
268094 2004 RU_{256}	16.9	X	327.69903	359.16748	277.78032	2.01067	0.0964849	0.23393283	2.6086067	20	5 13.6	19.8
268095 2004 RJ_{257}	16.7	X	186.59076	226.82474	152.53576	3.08407	0.1459011	0.22608579	2.6686229	20	4 5.3	20.9
268096 2004 RY_{257}	15.9	X	336.93897	311.04480	298.43368	11.90894	0.1177888	0.23249247	2.6193696	20	4 10.8	19.3
268097 2004 RM_{258}	16.7	X	47.18433	288.42265	191.31503	5.65677	0.0515195	0.21766419	2.7370206	20	2 14.5	20.2
268098 2004 RH_{289}	15.0	X	253.16022	161.36056	269.44044	26.10812	0.1021379	0.17719330	3.1393364	20	8 7.2	20.0
268099 2004 RU_{307}	16.4	X	193.96463	353.87690	335.19433	2.65455	0.1891181	0.21778065	2.7360447	20	2 12.1	20.8
268100 2004 RK_{310}	16.5	X	187.29332	336.64771	2.11578	5.15553	0.0706979	0.21640201	2.7476528	20	2 16.1	20.5
268101 2004 RA_{321}	16.3	X	84.63463	149.09904	275.30667	4.53218	0.1033103	0.21341808	2.7732046	20	2 3.5	19.8
268102 2004 RQ_{337}	16.7	X	93.06732	60.50200	9.49624	3.00587	0.0790975	0.21273652	2.7791245	20	2 20.8	20.5
268103 2004 RA_{342}	16.2	X	168.76028	206.04320	143.59997	7.02788	0.0905197	0.21680148	2.7442766	20	2 9.1	20.4
268104 2004 RX_{343}	16.0	X	327.24513	266.50132	348.88146	9.48064	0.0489444	0.22642229	2.6659782	20	4 15.3	19.5
268105 2004 RJ_{355}	17.1	X	211.87507	331.72002	350.56010	4.42183	0.1087606	0.22113881	2.7082749	20	2 20.1	21.4
268106 2004 SG_{4}	16.2	X	58.42508	359.60366	194.18941	13.54284	0.1096457	0.23509384	2.6000111	20	6 19.5	19.7
268107 2004 SL_{11}	15.7	X	109.83635	306.62701	52.04736	9.91222	0.1686122	0.20846772	2.8169351	20	—	—
268108 2004 SC_{23}	16.3	X	146.81658	43.81985	328.87744	1.01665	0.1470369	0.21359026	2.7717140	20	2 19.7	20.6
268109 2004 SP_{27}	16.5	X	60.46099	350.58560	171.84488	13.01258	0.0935585	0.22837042	2.6507950	20	5 10.5	20.0
268110 2004 SC_{55}	15.2	X	6.31582	278.42513	155.99423	15.44702	0.2874214	0.19244403	2.9712082	20	—	—
268111 2004 SW_{56}	16.2	X	209.40284	297.37325	26.47569	7.52985	0.0733717	0.21951544	2.7216107	20	2 22.7	20.3
268112 2004 SW_{61}	16.4	X	181.38126	345.99480	1.19600	5.04120	0.0551827	0.21443446	2.7644347	20	2 19.5	20.5
268113 2004 TG_{1}	16.0	X	135.39620	174.72019	186.80355	4.75743	0.0854177	0.21172746	2.7879475	20	1 17.7	20.0
268114 2004 TM_{8}	17.1	X	92.26307	208.60360	20.27878	20.68048	0.0428511	0.36965441	1.9228207	20	10 6.6	19.0
268115 Williamalbrecht	15.3	X	244.49186	340.06923	11.79285	30.13285	0.1414374	0.22981619	2.6396659	20	4 17.1	19.6
268116 2004 TL_{12}	16.4	X	310.94922	325.13489	329.58746	12.08659	0.1602464	0.23309256	2.6148721	20	4 26.1	19.8
268117 2004 TW_{13}	16.3	X	193.54770	77.13498	282.77308	5.53939	0.0507047	0.22100182	2.7093939	20	3 14.7	20.3
268118 2004 TL_{22}	16.4	X	327.55897	314.07453	309.27840	2.90563	0.0809565	0.22877955	2.6476338	20	4 25.2	19.6
268119 2004 TN_{23}	16.6	X	19.86440	83.53341	1.44815	11.91905	0.2785447	0.20044096	2.8916456	20	—	—
268120 2004 TQ_{24}	16.0	X	179.13091	332.14336	359.55136	6.45575	0.0354384	0.21375702	2.7702723	20	1 28.5	20.0
268121 2004 TZ_{31}	16.7	X	158.63017	51.02938	309.59748	3.29949	0.0646997	0.21336410	2.7736723	20	2 9.9	20.8
268122 2004 TJ_{50}	16.0	X	260.51447	295.24332	8.78286	6.27208	0.1228480	0.22064950	2.7122773	20	3 17.4	20.0
268123 2004 TV_{64}	16.2	X	37.40786	87.59464	41.17084	4.27214	0.0479749	0.21324070	2.7747422	20	2 16.4	19.7
268124 2004 TG_{69}	16.3	X	21.55285	277.74100	156.89642	7.88938	0.2966000	0.19900829	2.9055071	20	—	—
268125 2004 TM_{85}	16.9	X	37.53805	264.19188	218.57830	1.68806	0.1393015	0.21178882	2.7874089	20	2 10.6	20.0
268126 2004 TW_{85}	16.8	X	185.18990	131.81152	191.60626	4.28542	0.0657686	0.21360161	2.7716158	20	1 23.8	20.9
268127 2004 TH_{93}	16.8	X	20.75626	140.54409	297.86608	0.99129	0.0696716	0.20083348	2.8878766	20	—	—
268128 2004 TJ_{94}	16.6	X	48.99580	43.44195	10.60203	2.32019	0.0363594	0.20241954	2.8727716	20	—	—
268129 2004 TM_{94}	17.0	X	103.61446	148.28696	221.90852	1.20439	0.0863030	0.20509763	2.8477091	20	—	—
268130 2004 TB_{109}	16.3	X	173.11136	236.80158	135.42179	4.29500	0.0769315	0.21963587	2.7206157	20	3 12.6	20.2
268131 2004 TX_{117}	15.5	X	6.53572	43.09295	54.90195	9.73110	0.1834126	0.19924057	2.9032484	20	—	—
268132 2004 TO_{118}	17.0	X	6.73338	102.52667	291.57910	2.95546	0.2547246	0.19247880	2.9708504	20	—	—
268133 2004 TZ_{121}	16.1	X	290.70601	267.80075	187.03641	11.11850	0.3379936	0.18474188	3.0532274	20	10 6.4	19.6
268134 2004 TS_{126}	16.0	X	252.74220	177.12346	169.71006	15.15546	0.1639081	0.22993011	2.6387940	20	4 29.7	20.2
268135 2004 TR_{147}	16.5	X	146.56035	320.91978	353.89575	5.42606	0.0628392	0.20408210	2.8571482	20	—	—
268136 2004 TY_{150}	16.9	X	355.50342	193.07801	271.27007	0.99857	0.0239525	0.20262988	2.8707832	20	—	—
268137 2004 TX_{151}	16.9	X	82.68801	234.27363	212.46690	2.34429	0.0643204	0.21410844	2.7672402	20	2 24.1	20.5
268138 2004 TO_{158}	16.5	X	259.81710	307.66028	16.12767	5.56563	0.0653248	0.22347073	2.6894013	20	4 16.1	20.2
268139 2004 TY_{177}	16.3	X	281.53088	287.45703	4.23448	8.56538	0.1048132	0.22670006	2.6638001	20	3 26.9	19.9
268140 2004 TD_{199}	16.4	X	17.74764	77.05016	42.26731	3.95286	0.0940881	0.20629539	2.8366758	20	1 5.8	19.8
268141 2004 TL_{209}	16.9	X	294.76489	264.08236	18.30021	3.45974	0.0374860	0.22574081	2.6713410	20	4 11.3	20.2
268142 2004 TN_{219}	16.6	X	150.75169	10.29144	26.51417	1.82576	0.0676705	0.21758432	2.7376903	20	3 17.4	20.5
268143 2004 TQ_{224}	16.7	X	316.72193	66.45363	213.83281	1.29046	0.0696395	0.22974671	2.6401981	20	5 5.0	19.9
268144 2004 TB_{225}	16.8	X	65.36069	245.88458	187.94537	4.25866	0.0491365	0.21040440	2.7996227	20	1 14.0	20.4
268145 2004 TX_{225}	16.6	X	116.81186	232.59716	175.97870	4.40387	0.0739786	0.21510784	2.7586624	20	2 21.1	20.3
268146 2004 TJ_{239}	16.3	X	129.82023	136.81165	213.18588	5.74422	0.0773721	0.20546932	2.8442738	20	—	—
268147 2004 TD_{244}	16.6	X	327.07587	272.61665	45.27048	5.70472	0.1712371	0.23762993	2.5814791	20	7 5.7	19.1
268148 2004 TY_{249}	15.8	X	14.74396	339.89981	38.94175	9.52218	0.1912026	0.18906688	3.0064852	20	12 24.4	19.7
268149 2004 TJ_{254}	16.8	X	189.50166	181.74972	187.91502	3.07398	0.0983652	0.22148640	2.7054406	20	3 25.8	20.8
268150 2004 TS_{278}	15.8	X	25.27432	83.50811	70.07971	5.13045	0.0102603	0.21311307	2.7758500	20	3 2.4	19.5
268151 2004 TT_{285}	15.2	X	350.91744	31.89770	14.42633	12.85055	0.1160644	0.18807606	3.0170352	20	12 11.1	19.1
268152 2004 TJ_{301}	15.5	X	46.01588	181.97697	258.91411	14.19197	0.1135327	0.20319130	2.8654927	20	—	—
268153 2004 TW_{323}	16.4	X	313.92431	283.67451	179.98417	2.08501	0.1417224	0.18939106	3.0030535	20	12 26.6	19.9
268154 2004 TW_{332}	16.8	X	72.99078	193.02567	213.60891	1.37836	0.0687742	0.20297315	2.8675455	20	—	—
268155 2004 TO_{333}	17.2	X	334.69594	239.93546	184.02518	0.76139	0.2300201	0.18812789	3.0164810	20	12 15.4	20.1
268156 2004 TF_{334}	16.7	X	80.31942	4.28629	72.29476	1.57629	0.0488127	0.20892279	2.8128431	20	2 8.2	20.4
268157 2004 TD_{351}	16.1	X	65.32694	53.00640	67.68179	4.56602	0.0450934	0.21351664	2.7723511	20	3 16.3	19.7
268158 2004 TR_{355}	16.3	X	269.36869	164.39217	152.61192	12.49665	0.2584808	0.22925551	2.6439680	20	3 29.3	20.5
268159 2004 TE_{356}	15.9	X	329.51052	258.99890	132.14769	12.19723	0.2616683	0.18412649	3.0600266	20	10 21.2	18.9
268160 2004 TN_{357}	16.4	X	330.98262	245.53280	28.78647	12.50050	0.1412559	0.22785244	2.6548109	20	5 8.2	19.4

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
268161 2004 TS_{358}	16.7	X	304.83064	133.38271	160.49448	3.25693	0.0884328	0.22834736	2.6509735	20	5 4.5	19.9
268162 2004 UF_{8}	16.8	X	309.79333	47.11064	15.04560	5.05351	0.3129660	0.18363080	3.0655309	20	10 4.4	19.6
268163 2004 VB_{1}	15.8	X	343.50035	29.53179	33.04190	9.65248	0.1709421	0.18985673	2.9981410	20	12 27.2	19.3
268164 2004 VC_{8}	16.6	X	281.62463	255.31666	84.92366	3.04232	0.2222025	0.23179754	2.6246022	20	5 13.5	20.0
268165 2004 VA_{12}	16.5	X	348.45374	299.51636	139.88910	3.14843	0.1706509	0.19249621	2.9706712	20	—	—
268166 2004 VN_{26}	15.8	X	213.84428	346.70219	8.52678	6.78204	0.0503844	0.21942840	2.7223304	20	4 3.8	19.6
268167 2004 VB_{55}	16.8	X	132.08674	23.88871	344.92168	0.55338	0.1223304	0.20868655	2.8149655	20	1 28.8	20.9
268168 2004 VR_{61}	15.7	X	272.73296	160.57573	171.87870	14.29301	0.2649152	0.22935451	2.6432071	20	4 20.1	19.9
268169 2004 VP_{72}	15.7	X	219.67869	71.49664	246.16904	3.89589	0.1502090	0.21419381	2.7665049	20	2 19.1	20.3
268170 2004 WK_{4}	16.2	X	151.53233	271.88049	70.86349	3.09582	0.1277996	0.20618203	2.8377154	20	1 19.3	20.5
268171 2004 WF_{5}	16.2	X	239.13584	293.35594	65.04912	5.40941	0.2351330	0.22620735	2.6676667	20	4 22.8	20.5
268172 2004 XN_{17}	15.7	X	330.34241	336.25123	81.64164	4.96619	0.2277174	0.18330640	3.0691465	20	11 25.3	18.7
268173 2004 XS_{20}	15.9	X	40.38687	143.15972	231.28658	2.01611	0.2913316	0.19113112	2.9847991	20	—	—
268174 2004 XN_{31}	15.2	X	204.33248	269.93606	281.38246	12.54018	0.2157151	0.17502951	3.1651565	20	11 6.8	20.7
268175 2004 XO_{34}	15.0	X	295.59184	348.18508	81.44652	12.69092	0.1027786	0.16825443	3.2495637	20	10 18.6	19.4
268176 2004 XO_{53}	15.4	X	34.05658	322.90737	87.34818	2.53293	0.0556557	0.19175766	2.9782940	20	—	—
268177 2004 XF_{59}	15.8	X	323.65070	80.15902	351.47852	4.02136	0.2241081	0.18282327	3.0745512	20	11 27.6	18.7
268178 2004 XW_{67}	16.3	X	307.85008	233.83799	193.18886	1.98840	0.2249682	0.17969369	3.1101464	20	10 18.1	19.3
268179 2004 XE_{89}	16.0	X	75.14827	26.66690	14.67856	5.18258	0.1167982	0.19948936	2.9008341	20	—	—
268180 2004 XK_{92}	15.6	X	313.82679	8.65648	61.76735	11.68550	0.1206925	0.18263759	3.0766347	20	11 13.3	19.3
268181 2004 XU_{99}	15.1	X	243.98232	73.70844	101.74038	27.04418	0.1507042	0.18082625	3.0971464	20	12 12.5	19.7
268182 2004 XE_{133}	15.4	X	237.53919	224.51964	301.43144	9.20201	0.0396467	0.18065792	3.0990699	20	12 4.2	19.9
268183 2004 XQ_{137}	14.7	X	241.56151	309.41910	118.91443	28.00683	0.1663688	0.16929769	3.2362001	20	7 25.4	19.6
268184 2004 XL_{146}	15.1	X	67.83882	272.94520	112.26628	12.03380	0.0934431	0.18994951	2.9971646	20	—	—
268185 2004 XC_{147}	15.9	X	332.96926	91.77813	315.04989	11.68385	0.3185246	0.18409252	3.0604030	20	11 13.4	18.5
268186 2004 XF_{179}	16.3	X	303.37699	11.42616	127.94350	3.39382	0.1613909	0.18516179	3.0486095	20	—	—
268187 2004 YR_{4}	15.6	X	263.50529	210.71886	279.82228	9.53052	0.1649345	0.18118420	3.0930659	20	11 3.9	20.0
268188 2004 YB_{6}	15.6	X	5.19967	64.40533	294.31540	9.35253	0.0728256	0.17479904	3.1679382	20	10 23.9	20.0
268189 2004 YP_{22}	15.9	X	57.85781	245.53253	135.20180	1.49439	0.0749970	0.18556550	3.0441863	20	—	—
268190 2004 YT_{22}	15.7	X	243.15292	358.27864	121.50924	7.41522	0.1226794	0.17126043	3.2114268	20	10 7.3	20.5
268191 2005 AQ_{7}	15.5	X	247.36740	43.43724	105.56217	9.98683	0.1290791	0.17596177	3.1539671	20	11 15.9	20.1
268192 2005 AU_{18}	15.8	X	354.55730	314.96545	97.93261	6.54408	0.1755398	0.18431905	3.0578949	20	—	—
268193 2005 AF_{19}	15.4	X	275.90363	275.24980	164.71823	25.32378	0.3235868	0.17677176	3.1443252	20	8 26.0	19.9
268194 2005 AC_{30}	15.1	X	246.14431	69.56222	65.13508	14.42064	0.1222853	0.17316960	3.1877796	20	10 29.9	19.7
268195 2005 AU_{34}	15.7	X	93.96144	272.62873	111.19154	7.01496	0.1010813	0.19570068	2.9381536	20	—	—
268196 2005 AB_{35}	15.5	X	334.10018	349.69821	127.24198	11.19261	0.0915835	0.18901905	3.0069924	20	—	—
268197 2005 AH_{36}	15.2	X	209.64139	287.62339	298.11166	23.67722	0.3104324	0.17676137	3.1444484	20	12 17.8	20.7
268198 2005 AD_{38}	15.9	X	302.52243	212.94696	225.10689	3.23388	0.1788618	0.17822288	3.1272342	20	10 27.4	19.6
268199 2005 AL_{40}	15.2	X	227.30368	66.86502	104.63513	17.76173	0.0675950	0.17711675	3.1402408	20	11 28.9	19.9
268200 2005 AD_{45}	15.2	X	63.73479	248.78228	117.78097	13.84198	0.0371898	0.18224832	3.0810141	20	—	—
268201 2005 AK_{45}	15.5	X	285.83242	100.53978	349.16313	26.11494	0.2059862	0.17440637	3.1726913	20	10 1.1	19.7
268202 2005 AS_{59}	16.0	X	334.11275	93.74341	309.77347	8.09961	0.0708750	0.17542747	3.1603679	20	11 5.5	20.3
268203 2005 AK_{65}	15.8	X	348.45193	94.61204	287.05994	8.19512	0.0781033	0.17463075	3.1699730	20	10 30.0	20.0
268204 2005 AG_{74}	15.9	X	32.25877	228.45014	120.79649	10.25970	0.0752692	0.17493345	3.1663152	20	11 24.9	20.4
268205 2005 AY_{81}	15.5	X	266.53857	17.97629	86.26873	16.61102	0.2289522	0.17459692	3.1703825	20	10 7.7	20.2
268206 2005 BF_{11}	15.5	X	253.82397	42.56770	125.18531	11.87086	0.0944832	0.17854030	3.1235266	20	12 19.7	19.9
268207 2005 BY_{16}	15.7	X	260.73257	116.80454	315.85397	10.23226	0.1217993	0.17018551	3.2249352	20	8 25.7	20.3
268208 2005 BR_{17}	16.3	X	279.59285	343.09283	138.83982	4.29432	0.0034525	0.17781135	3.1320575	20	12 7.5	20.6
268209 2005 BO_{21}	15.2	X	210.16798	121.81258	131.43688	13.23048	0.2664936	0.18348112	3.0671979	20	—	—
268210 2005 BP_{23}	15.2	X	322.22528	358.74743	117.04601	7.81190	0.1167000	0.18314469	3.0709530	20	—	—
268211 2005 BL_{48}	16.5	X	250.56701	341.58806	140.29451	6.07603	0.2019539	0.17287669	3.1913793	20	10 6.9	21.2
268212 2005 BQ_{49}	15.8	X	203.03553	61.03895	134.72715	9.82152	0.0534649	0.17423070	3.1748235	20	11 29.7	20.6
268213 2005 CY	15.3	X	201.80849	60.33191	129.17835	27.61369	0.1961786	0.17356304	3.1829602	20	11 16.3	21.0
268214 2005 CY_{8}	15.8	X	229.73119	199.61241	13.30025	5.32619	0.0941297	0.18206959	3.0830301	20	—	—
268215 2005 CG_{20}	15.1	X	228.66793	80.17163	132.00911	11.12557	0.0961920	0.18035724	3.1025134	20	—	—
268216 2005 CF_{32}	15.6	X	185.71227	219.56221	359.54735	4.02135	0.1386107	0.17219521	3.1997939	20	11 29.2	20.6
268217 2005 CR_{39}	15.3	X	237.64843	270.01921	135.94739	11.02168	0.0801079	0.15255401	3.4688615	20	7 2.5	20.5
268218 2005 CX_{39}	16.1	X	28.38954	244.09664	133.10770	1.92144	0.1518546	0.17986993	3.1081145	20	—	—
268219 2005 CK_{46}	15.7	X	218.03632	206.41072	341.81478	3.62208	0.1017978	0.17346984	3.1841002	20	11 28.8	20.4
268220 2005 CO_{67}	15.5	X	301.55031	22.84060	94.84971	10.46067	0.0848174	0.18224067	3.0811004	20	12 25.0	19.5
268221 2005 CD_{68}	15.3	X	238.44822	47.08187	133.63628	10.88735	0.0276565	0.17901137	3.1180445	20	12 25.2	19.8
268222 2005 CZ_{73}	15.6	X	49.97471	209.69130	144.16353	9.15776	0.0705067	0.17411361	3.1762467	20	12 19.4	20.2
268223 2005 EE_{3}	15.4	X	271.74545	346.91044	132.59685	7.14611	0.0521662	0.17532076	3.1616503	20	11 20.3	19.8
268224 2005 ET_{13}	15.2	X	242.81005	21.57133	137.82356	5.79276	0.1227106	0.17189020	3.2035780	20	11 21.7	19.8
268225 2005 EF_{22}	15.7	X	335.20231	280.53670	164.05722	9.38681	0.1240759	0.17810622	3.1285996	20	—	—
268226 2005 EF_{24}	15.8	X	110.11404	173.31109	6.46474	9.24276	0.2252333	0.21510291	2.7587046	20	8 19.9	20.3
268227 2005 ED_{30}	16.1	X	244.41834	322.72196	167.64878	4.90992	0.1437099	0.17111064	3.2133008	20	10 16.6	20.8
268228 2005 ES_{43}	15.8	X	275.00707	17.61478	135.57662	2.53615	0.1348609	0.17714620	3.1398928	20	12 23.6	19.8
268229 2005 EY_{50}	15.2	X	245.99288	336.73875	181.72209	7.74421	0.0504628	0.17185513	3.2040139	20	12 3.6	19.8
268230 2005 EL_{72}	15.0	X	221.14716	227.55230	354.57426	26.82709	0.1826320	0.17727308	3.1383945	20	—	—
268231 2005 EO_{89}	15.4	X	286.66178	306.52333	153.14314	27.43039	0.1586892	0.17435274	3.1733419	20	11 7.2	20.0
268232 2005 EH_{136}	14.8	X	76.96928	104.24040	178.29844	15.30555	0.1546980	0.15741364	3.3970959	20	11 5.4	20.0
268233 2005 EQ_{170}	15.0	X	183.29689	26.61936	197.92202	20.27297	0.1382242	0.17158485	3.2073776	20	12 4.4	20.4
268234 2005 EA_{220}	15.1	X	206.13927	266.20411	330.80657	24.26930	0.2613533	0.17269535	3.1936130	20	—	—
268235 2005 ER_{223}	15.8	X	216.37310	85.34123	169.86344	5.90744	0.1542454	0.17693033	3.1424462	20	—	—
268236 2005 EA_{228}	15.5	X	57.97756	358.84444	325.60834	10.24216	0.0809699	0.17288836	3.1912357	20	11 21.9	20.2
268237 2005 GQ_{50}	17.4	X	217.36804	217.11559	84.26301	2.00043	0.2113823	0.31155052	2.1550155	20	1 20.0	20.9
268238 2005 GA_{63}	15.6	X	181.59612	98.22958	182.95407	5.08225	0.1260522	0.17969440	3.1101382	20	—	—
268239 2005 GT_{107}	16.1	X	49.02806	228.04672	25.76113	5.38434	0.0465544	0.21300432	2.7767948	20	8 19.6	19.8
268240 2005 GW_{181}	15.2	X	162.69603	300.95051	25.92020	16.25588	0.3563326	0.17675643	3.1445070	20	2 1.9	21.2

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
268241 2005 HC_{6}	17.3	X	158.44352	152.71528	123.51612	6.29373	0.0588133	0.29714552	2.2241117	20	—	—
268242 Pebble	17.6	X	99.91611	235.94539	123.71507	4.43202	0.1866037	0.30829617	2.1701544	20	—	—
268243 2005 JH_{117}	17.3	X	213.07787	144.93033	101.18582	6.55969	0.1040527	0.30228339	2.1988378	20	—	—
268244 2005 JP_{143}	18.1	X	200.62036	118.83186	158.41689	2.71936	0.1430178	0.30381636	2.1914351	20	—	—
268245 2005 LR_{41}	16.9	X	322.00980	62.18175	281.99074	3.67359	0.2537849	0.26383639	2.4075737	20	7 28.7	18.5
268246 2005 MQ_{2}	16.6	X	290.65458	210.59689	119.31927	10.82764	0.2479227	0.25498774	2.4629552	20	5 10.4	20.0
268247 2005 MT_{5}	17.5	X	80.27327	185.45542	118.50461	3.61551	0.2024703	0.28069022	2.3102086	20	12 27.4	21.0
268248 2005 MU_{18}	17.6	X	194.79412	358.74668	253.82097	2.62581	0.1718714	0.29385946	2.2406616	20	—	—
268249 2005 ML_{20}	17.3	X	202.76593	316.29682	283.59792	2.86210	0.0930481	0.29280579	2.2460338	20	—	—
268250 2005 MS_{20}	17.3	X	63.76850	12.78888	297.63399	3.09303	0.0967960	0.27807736	2.3246574	20	12 8.5	20.3
268251 2005 MF_{24}	17.8	X	289.87144	106.02551	128.70040	4.15747	0.2798087	0.31141412	2.1556447	20	—	—
268252 2005 MD_{27}	17.2	X	298.52774	216.50771	168.41449	2.69340	0.2218659	0.26444979	2.4038492	20	8 15.2	19.3
268253 2005 MT_{33}	17.7	X	235.68972	287.06640	260.44650	4.24441	0.1312119	0.29079296	2.2563863	20	—	—
268254 2005 MO_{41}	16.9	X	197.04326	82.24733	300.73375	10.48488	0.2962234	0.24372617	2.5382512	20	4 11.1	21.7
268255 2005 NJ_{10}	17.4	X	220.55186	284.82772	275.97172	2.97514	0.0769827	0.28991824	2.2609226	20	—	—
268256 2005 NO_{19}	17.5	X	12.56356	145.44628	182.17331	1.00667	0.1981366	0.27034633	2.3687673	20	11 7.3	19.7
268257 2005 NA_{21}	16.6	X	355.23373	286.28332	75.21042	7.17230	0.2461185	0.27184679	2.3600429	20	12 4.8	18.7
268258 2005 NN_{35}	17.4	X	252.54541	70.92659	309.25328	2.15247	0.1907734	0.25584372	2.4574586	20	6 4.9	20.9
268259 2005 NG_{43}	17.5	X	142.59491	113.29353	153.57043	4.78311	0.1204373	0.28607154	2.2811453	20	—	—
268260 2005 NJ_{49}	17.2	X	216.33507	187.56985	79.23761	5.04761	0.1466642	0.29868767	2.2164496	20	—	—
268261 2005 NS_{60}	17.0	X	187.74487	12.86375	239.98530	5.52205	0.0670986	0.29049118	2.2579488	20	—	—
268262 2005 NM_{85}	17.2	X	268.95153	219.78635	158.52532	1.25264	0.2010362	0.25932056	2.4354436	20	6 21.1	20.2
268263 2005 NE_{123}	16.4	X	272.36089	352.85570	31.64810	7.71032	0.2230987	0.25806618	2.4433292	20	7 1.4	19.6
268264 2005 NS_{124}	17.2	X	108.50736	120.37694	161.04317	9.50861	0.0322840	0.27978141	2.3152087	20	12 19.6	20.4
268265 2005 OF_{5}	17.0	X	186.98782	145.76421	154.44108	4.52705	0.1789918	0.29846175	2.2175679	20	—	—
268266 2005 OJ_{8}	17.3	X	81.85777	139.08313	173.15044	5.91162	0.1253654	0.28146104	2.3059888	20	—	—
268267 2005 OQ_{9}	17.1	X	283.64758	226.59825	105.99877	3.61224	0.2146217	0.25355476	2.4722262	20	5 7.0	20.3
268268 2005 OJ_{18}	17.2	X	164.69942	133.44386	171.39835	5.14537	0.1970926	0.29362461	2.2418562	20	—	—
268269 2005 OB_{21}	17.1	X	86.36805	323.64367	340.16847	6.30853	0.1410671	0.27937202	2.3174700	20	12 29.5	20.6
268270 2005 OC_{22}	16.9	X	357.61302	230.84937	139.40480	7.01584	0.1179717	0.27221848	2.3578942	20	12 2.6	19.5
268271 2005 OF_{22}	16.6	X	101.80548	210.43189	92.13682	9.46761	0.1411957	0.28501450	2.2867819	20	—	—
268272 2005 OA_{29}	16.7	X	291.22785	69.29070	291.13951	4.86775	0.1317429	0.25782356	2.4448618	20	7 10.2	19.1
268273 2005 PA_{1}	16.5	X	289.37130	37.80965	353.59999	8.55690	0.1373286	0.26286807	2.4134825	20	8 24.8	19.0
268274 2005 PH_{6}	17.1	X	111.04567	267.38178	58.89149	6.44541	0.1045259	0.28798289	2.2710407	20	—	—
268275 2005 PP_{7}	16.8	X	317.08013	33.59163	333.79389	7.93435	0.0684636	0.26560778	2.3968574	20	9 11.0	19.3
268276 2005 PA_{11}	17.3	X	172.86678	125.93608	132.04629	6.35852	0.0996386	0.28770709	2.2724919	20	—	—
268277 2005 PB_{22}	16.9	X	61.41744	339.64810	316.01273	6.99062	0.1196965	0.27319362	2.3522800	20	11 16.2	20.3
268278 2005 PX_{23}	16.9	X	211.20926	147.32037	341.33793	6.55260	0.1448489	0.26581504	2.3956113	20	9 17.9	20.5
268279 2005 QL_{4}	17.4	X	148.89371	200.10853	106.94816	1.42490	0.2297009	0.29064561	2.2571489	20	—	—
268280 2005 QG_{5}	16.8	X	319.09983	19.96114	331.34612	7.41706	0.0980212	0.26342220	2.4100967	20	8 20.8	19.0
268281 2005 QW_{8}	17.1	X	5.51798	336.03528	344.04505	6.05504	0.1436157	0.26529714	2.3987280	20	10 2.1	19.4
268282 2005 QV_{26}	17.0	X	45.26308	225.34106	140.03347	4.73960	0.1281209	0.27721607	2.3294700	20	—	—
268283 2005 QF_{29}	17.0	X	240.94952	116.73919	284.09052	4.78226	0.1251153	0.25458154	2.4655744	20	6 28.0	20.5
268284 2005 QM_{31}	16.0	X	323.50059	93.98543	263.19561	8.92430	0.1914875	0.26416914	2.4055515	20	8 26.9	18.2
268285 2005 QH_{36}	16.3	X	65.20002	344.23152	350.85626	8.59203	0.1643887	0.27744829	2.3281699	20	—	—
268286 2005 QE_{41}	16.8	X	14.26858	23.15374	304.22202	3.99606	0.2006002	0.26790101	2.3831597	20	11 7.5	19.3
268287 2005 QW_{44}	16.8	X	302.15177	349.33817	26.89994	2.83807	0.2337794	0.26036897	2.4289015	20	8 8.1	19.0
268288 2005 QZ_{46}	17.6	X	38.95577	254.17201	60.98435	2.35333	0.1936896	0.27107071	2.3645454	20	11 26.8	20.7
268289 2005 QH_{53}	17.0	X	48.63770	148.95052	150.78778	4.06124	0.1869330	0.27126744	2.3634020	20	11 18.5	20.1
268290 2005 QE_{62}	17.2	X	225.68634	104.35062	352.44755	6.72398	0.0680441	0.26245417	2.4160193	20	9 3.4	20.3
268291 2005 QX_{71}	17.4	X	91.08390	58.41289	229.63606	1.89788	0.1946997	0.27683643	2.3315991	20	12 16.4	21.2
268292 2005 QN_{74}	17.1	X	18.67826	337.29292	355.67310	2.23617	0.2131237	0.26845958	2.3798529	20	11 25.6	19.8
268293 2005 QW_{79}	16.7	X	301.09716	7.05884	339.79157	9.38244	0.2315914	0.25914846	2.4365218	20	6 19.1	19.5
268294 2005 QE_{82}	17.2	X	293.67302	24.36783	359.54845	4.48313	0.1330992	0.26150811	2.4218428	20	8 20.7	19.6
268295 2005 QJ_{83}	17.1	X	76.53572	153.12146	169.34967	6.82062	0.1594865	0.27861468	2.3216676	20	—	—
268296 2005 QG_{86}	16.7	X	146.23143	39.56391	347.73300	6.48234	0.2296966	0.22855186	2.6493919	20	3 12.9	20.9
268297 2005 QL_{87}	16.8	X	225.13588	48.82634	202.14044	6.85757	0.1734505	0.29643709	2.2276538	20	—	—
268298 2005 QW_{88}	16.7	X	211.19192	88.22207	333.88921	6.22548	0.1268947	0.25455490	2.4657464	20	6 22.9	20.4
268299 2005 QJ_{92}	17.9	X	19.40430	154.20069	173.65396	1.15204	0.1917019	0.26850443	2.3795879	20	11 16.9	20.6
268300 2005 QN_{94}	17.2	X	60.62107	182.54987	148.00768	7.37034	0.1279791	0.27831265	2.3233470	20	—	—
268301 2005 QT_{97}	16.9	X	190.94456	139.12433	131.40325	5.72547	0.0987425	0.29181906	2.2510939	20	—	—
268302 2005 QT_{110}	17.2	X	262.23319	55.84360	315.77478	3.57328	0.1448200	0.25223183	2.4808630	20	6 11.2	20.4
268303 2005 QS_{111}	17.3	X	266.62738	127.97538	274.37817	0.87918	0.1382235	0.25751264	2.4468294	20	8 1.0	20.1
268304 2005 QM_{113}	16.8	X	135.56621	215.43073	104.37416	2.25104	0.1907815	0.28828476	2.2694551	20	—	—
268305 2005 QV_{114}	16.8	X	12.28204	347.67517	345.68374	6.30916	0.1308892	0.26625608	2.3929651	20	10 30.8	19.4
268306 2005 QJ_{123}	17.2	X	317.48157	146.43327	207.44359	1.04157	0.0841542	0.26084165	2.4259662	20	8 21.7	19.6
268307 2005 QX_{128}	17.3	X	192.48904	30.75351	78.30800	2.43266	0.1345336	0.25610117	2.4558114	20	8 4.5	21.0
268308 2005 QS_{135}	17.2	X	222.82303	279.39148	90.81503	1.43415	0.1086350	0.24457995	2.5323408	20	4 29.4	21.0
268309 2005 QR_{136}	17.2	X	158.45612	16.58094	124.02076	3.15529	0.1306664	0.25529196	2.4609982	20	8 10.8	20.8
268310 2005 QZ_{136}	16.5	X	94.63138	115.08807	357.70952	30.93496	0.2896923	0.23420865	2.6065582	20	4 28.9	20.9
268311 2005 QU_{140}	16.7	X	13.01397	166.55733	157.24630	7.03887	0.1368693	0.26772249	2.3842190	20	10 25.0	19.3
268312 2005 QV_{141}	17.1	X	93.04181	97.44869	191.62863	7.30526	0.1789885	0.27533900	2.3400451	20	12 18.3	20.8
268313 2005 QX_{146}	17.4	X	304.98992	291.76779	55.18140	3.11738	0.1902781	0.25916337	2.4364283	20	7 4.4	19.7
268314 2005 QK_{152}	17.1	X	273.00519	41.28316	338.34171	14.34594	0.1263641	0.25621939	2.4550559	20	7 14.6	20.4
268315 2005 QQ_{153}	16.6	X	208.19107	334.58760	100.15123	7.17717	0.0744276	0.25326229	2.4741291	20	7 10.4	19.8
268316 2005 QV_{159}	16.1	X	288.72349	11.08732	354.77096	22.78195	0.0748119	0.25832593	2.4416911	20	8 3.5	19.5
268317 2005 QO_{161}	16.5	X	74.75892	297.71044	54.54605	5.30509	0.1712654	0.28294992	2.2978923	20	—	—
268318 2005 QX_{161}	17.3	X	185.95862	215.76122	64.80990	4.35357	0.1339793	0.29349900	2.2424958	20	—	—
268319 2005 QR_{166}	15.0	X	224.93122	25.90137	285.18441	23.65673	0.1981149	0.17435102	3.1733628	20	2 10.3	20.7
268320 2005 RB_{30}	17.5	X	87.43128	294.07253	349.47644	2.18748	0.2134015	0.27487599	2.3426721	20	12 8.2	21.1

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
268321 2005 RP_{45}	16.9	X	224.30880	112.26877	343.09961	4.43037	0.0666634	0.26128730	2.4232070	20	8 30.0	19.8
268322 2005 RR_{45}	17.4	X	170.67131	2.80715	123.83705	2.00315	0.1343056	0.25390691	2.4699398	20	8 4.6	21.2
268323 2005 SN_{14}	16.4	X	102.15962	282.77353	31.88323	9.91024	0.2270172	0.28304145	2.2973968	20	—	—
268324 2005 SP_{17}	17.3	X	169.52407	223.02582	14.30786	2.20762	0.1243083	0.27771145	2.3266990	20	12 27.4	20.5
268325 2005 SS_{23}	16.1	X	115.10685	22.85364	142.87464	8.28576	0.0754978	0.25286624	2.4767119	20	7 22.7	19.5
268326 2005 SE_{26}	17.5	X	141.63361	117.00699	161.39638	2.71199	0.2397891	0.28331260	2.2959308	20	—	—
268327 2005 SU_{38}	17.3	X	74.26270	285.94534	12.11467	2.59698	0.1870332	0.27275403	2.3548067	20	12 11.9	20.8
268328 2005 SG_{74}	17.3	X	102.71771	76.35425	188.19174	5.69030	0.1677734	0.27262926	2.3555251	20	11 26.8	21.1
268329 2005 SH_{83}	17.3	X	199.35725	11.05022	206.70386	2.05281	0.0680466	0.27810500	2.3245034	20	—	—
268330 2005 SX_{87}	17.3	X	166.65870	271.16882	179.65386	5.95513	0.0796927	0.24580115	2.5239463	20	6 13.3	21.0
268331 2005 SL_{88}	17.4	X	185.36283	43.41885	353.39618	4.43452	0.1976152	0.23859301	2.5745277	20	4 23.1	21.7
268332 2005 SM_{96}	17.4	X	156.38104	249.63887	158.49514	3.59161	0.2452152	0.23612225	2.5924562	20	4 17.4	21.8
268333 2005 SD_{99}	17.1	X	138.91957	109.08730	299.32258	3.96588	0.2166156	0.23142656	2.6274064	20	3 29.1	21.4
268334 2005 SD_{101}	17.4	X	279.13686	20.07916	342.72617	5.43807	0.1312081	0.25139692	2.4863528	20	6 24.8	20.5
268335 2005 SA_{104}	16.2	X	98.99840	72.52602	241.08099	5.22665	0.1899461	0.27751958	2.3277712	20	—	—
268336 2005 ST_{114}	17.0	X	28.97378	63.76577	255.96534	1.55270	0.2276468	0.26784749	2.3834772	20	11 24.5	19.9
268337 2005 SK_{133}	16.3	X	152.25886	222.41600	206.58767	11.72608	0.1556400	0.23625054	2.5915176	20	5 4.6	20.3
268338 2005 SK_{150}	17.5	X	112.55158	79.49831	177.82295	4.78213	0.2015634	0.27056131	2.3675124	20	11 27.4	21.3
268339 2005 SQ_{150}	17.2	X	128.27111	226.30367	179.01164	3.71894	0.2244383	0.22897094	2.6461582	20	3 18.3	21.3
268340 2005 SF_{155}	16.4	X	196.71339	284.52091	103.26680	11.76414	0.2274436	0.24245731	2.5470992	20	4 27.7	21.0
268341 2005 SR_{162}	16.6	X	354.57606	320.24072	36.54286	7.03727	0.1589166	0.26766879	2.3845379	20	11 9.9	18.7
268342 2005 SW_{163}	16.7	X	345.48753	302.37859	64.35458	7.05969	0.1385902	0.26426382	2.4049769	20	11 6.1	19.0
268343 2005 SP_{176}	16.8	X	158.36607	240.83586	227.34631	4.73936	0.1301060	0.24585514	2.5235768	20	6 27.9	20.8
268344 2005 SD_{178}	17.3	X	115.80560	311.73706	298.03780	2.82091	0.0872689	0.26911960	2.3759602	20	11 15.4	20.8
268345 2005 SK_{212}	17.0	X	56.52462	153.76996	21.13621	6.70311	0.0668751	0.23954479	2.5677037	20	5 12.9	20.1
268346 2005 SV_{236}	17.7	X	35.57446	356.00182	307.26083	1.77790	0.1738458	0.26390196	2.4071749	20	11 1.2	20.6
268347 2005 SZ_{244}	17.9	X	96.51526	167.72677	275.87100	0.48331	0.1833492	0.22895007	2.6463190	20	3 26.4	21.4
268348 2005 SG_{246}	17.1	X	148.54339	196.17113	342.34191	0.48535	0.1618971	0.25658353	2.4527326	20	9 19.1	20.8
268349 2005 SU_{247}	17.3	X	234.21781	148.72980	219.27831	0.92832	0.0867800	0.24349703	2.5398434	20	5 10.8	21.0
268350 2005 SS_{251}	17.1	X	307.17775	324.71001	52.10209	3.14312	0.1807557	0.26111464	2.4242751	20	8 29.6	19.1
268351 2005 SV_{253}	17.2	X	17.89756	164.69379	146.90029	6.92187	0.1522310	0.26699420	2.3885527	20	10 18.0	19.8
268352 2005 SC_{256}	16.9	X	62.01938	343.04823	288.13409	2.31517	0.1621882	0.26726692	2.3869276	20	10 21.2	20.1
268353 2005 SS_{278}	17.4	X	161.84037	201.22000	312.86693	0.77617	0.1266181	0.25490350	2.4634978	20	8 31.4	21.0
268354 2005 TX_{4}	17.2	X	180.15197	19.46160	173.71270	2.53718	0.1618636	0.26713957	2.3876861	20	11 8.2	20.7
268355 2005 TK_{7}	16.2	X	128.81799	123.58099	332.47405	13.88988	0.1636258	0.23687120	2.5869888	20	5 10.0	20.5
268356 2005 TR_{23}	16.7	X	148.41005	182.56905	357.99669	6.33620	0.0590484	0.26183950	2.4197989	20	9 21.7	19.9
268357 2005 TD_{27}	17.3	X	149.13246	239.40561	194.54228	2.37403	0.1634950	0.23542563	2.5975678	20	5 7.9	21.4
268358 2005 TH_{29}	17.3	X	55.88527	78.75744	223.69466	1.95816	0.1271868	0.26898907	2.3767288	20	11 21.0	20.4
268359 2005 TO_{29}	16.2	X	82.77314	44.66746	25.99813	11.87897	0.1757007	0.22264061	2.6960822	20	2 25.4	19.7
268360 2005 TG_{32}	17.3	X	91.55941	176.04248	132.08677	3.14440	0.1154490	0.27600454	2.3362818	20	—	—
268361 2005 TD_{42}	16.5	X	112.55919	57.11547	231.70635	5.09351	0.2188541	0.27747995	2.3279929	20	—	—
268362 2005 TG_{85}	17.0	X	168.83384	262.59579	5.63281	3.80937	0.2180080	0.28432051	2.2905016	20	—	—
268363 2005 TX_{99}	16.1	X	109.07936	51.10920	23.30786	12.91762	0.1793726	0.22844180	2.6502428	20	3 31.5	19.9
268364 2005 TS_{114}	17.2	X	51.41587	21.56207	248.58223	2.08390	0.1665452	0.26295440	2.4129543	20	10 6.8	20.4
268365 2005 TB_{119}	17.7	X	38.85838	38.23149	256.73888	0.98766	0.1782470	0.26462757	2.4027725	20	10 26.7	20.7
268366 2005 TD_{119}	16.8	X	156.80108	178.60690	10.74928	5.48396	0.2303761	0.26218547	2.4176697	20	10 9.5	20.8
268367 2005 TO_{121}	17.5	X	63.78572	81.26105	224.04048	1.62848	0.2124815	0.27230088	2.3574185	20	12 13.4	21.0
268368 2005 TS_{125}	17.4	X	133.58829	277.98187	194.52186	2.06975	0.0960239	0.24134517	2.5549180	20	6 5.2	21.0
268369 2005 TE_{136}	17.6	X	131.65146	280.97514	168.53829	4.74643	0.1764522	0.23721284	2.5845042	20	5 12.4	21.6
268370 2005 TO_{141}	17.3	X	155.62012	37.69634	59.68516	4.07938	0.1259664	0.24249519	2.5468339	20	6 10.9	21.0
268371 2005 TF_{149}	17.2	X	46.15018	118.52502	156.83008	5.78627	0.1119424	0.26050627	2.4280480	20	9 30.3	20.1
268372 2005 TS_{150}	17.1	X	177.81085	104.75861	88.22104	3.39590	0.1099643	0.26741799	2.3860285	20	11 9.7	20.4
268373 2005 TD_{163}	17.3	X	132.60995	110.69904	348.46124	2.97366	0.1883967	0.23710951	2.5852551	20	5 24.6	21.3
268374 2005 TU_{164}	17.0	X	223.92940	29.82673	336.20533	2.36358	0.1551844	0.24099717	2.5573770	20	4 20.9	21.1
268375 2005 TJ_{165}	16.8	X	132.90955	25.19673	358.86204	2.18006	0.1564717	0.22626579	2.6672074	20	2 19.5	20.8
268376 2005 TC_{180}	16.5	X	114.38701	337.19469	326.72814	6.56334	0.1147266	0.28139119	2.3063704	20	—	—
268377 2005 TP_{193}	16.6	X	333.62990	202.80907	135.21360	7.54469	0.1334788	0.25564325	2.4587431	20	8 26.6	18.9
268378 2005 UH_{20}	16.2	X	67.13105	90.61725	43.35333	13.56411	0.1841833	0.22900138	2.6459237	20	4 23.8	19.2
268379 2005 UH_{21}	16.9	X	169.45849	182.94634	2.22821	3.39031	0.0760863	0.26166724	2.4208608	20	10 21.0	20.2
268380 2005 UN_{23}	16.9	X	95.16878	351.31529	309.87712	1.63699	0.2144273	0.27464313	2.3439961	20	—	—
268381 2005 US_{26}	16.8	X	98.86841	50.35275	358.84370	3.19562	0.1882404	0.22290432	2.6939553	20	2 16.6	20.3
268382 2005 UO_{50}	16.6	X	182.94721	136.65296	240.53807	4.00740	0.1897216	0.23433176	2.6056452	20	3 28.0	21.0
268383 2005 UU_{56}	16.4	X	205.61703	28.74087	9.91049	9.12946	0.0197036	0.24101453	2.5572542	20	5 19.5	20.0
268384 2005 UJ_{57}	16.3	X	105.18804	0.27492	64.12118	7.68759	0.1506890	0.22657271	2.6647982	20	3 12.4	20.0
268385 2005 UV_{60}	16.9	X	37.71488	115.90535	52.52376	5.69701	0.1443969	0.22941479	2.6427440	20	4 15.7	19.6
268386 2005 UE_{62}	17.0	X	242.13210	186.68224	163.22219	0.79428	0.1323889	0.23939858	2.5687490	20	4 21.9	20.6
268387 2005 UW_{88}	16.6	X	154.09636	102.88006	46.95435	7.27008	0.0779113	0.25141973	2.4862024	20	8 20.9	20.3
268388 2005 UK_{102}	17.0	X	229.20827	195.72806	171.42023	4.68803	0.1010860	0.24027366	2.5625083	20	5 4.0	20.7
268389 2005 US_{123}	17.2	X	144.86557	139.89170	287.14954	0.69956	0.0885386	0.23400407	2.6080772	20	4 18.1	21.0
268390 2005 UN_{129}	16.5	X	113.83101	40.83663	40.05888	12.14456	0.0904241	0.23001085	2.6381764	20	4 4.1	20.2
268391 2005 UO_{133}	16.9	X	109.38243	288.76664	1.72172	6.86683	0.1126705	0.27886686	2.3202678	20	—	—
268392 2005 UB_{143}	17.4	X	136.91135	149.76798	263.11707	1.39422	0.0997646	0.22843286	2.6503120	20	3 23.1	21.1
268393 2005 UU_{146}	16.7	X	196.42424	19.60753	7.03965	2.97215	0.0318223	0.23676026	2.5877968	20	4 23.1	20.1
268394 2005 UJ_{148}	17.2	X	101.01199	73.12989	8.68201	3.60694	0.2287506	0.22636030	2.6664649	20	4 5.1	20.9
268395 2005 UR_{155}	17.0	X	135.03844	145.43843	168.03166	11.26697	0.2337849	0.28576643	2.2827687	20	—	—
268396 2005 UR_{156}	17.0	X	159.79634	212.38136	175.65600	4.60931	0.2603158	0.23062255	2.6335094	20	3 27.1	21.5
268397 2005 UJ_{169}	16.8	X	134.54318	191.02858	251.19156	3.23084	0.1546810	0.23336756	2.6128174	20	5 2.2	20.7
268398 2005 UG_{174}	17.2	X	142.67733	115.44315	314.37177	3.03839	0.1644237	0.23229526	2.6208519	20	4 24.7	21.3
268399 2005 UW_{183}	17.1	X	225.67899	127.69039	217.41387	1.99382	0.0516390	0.23472532	2.6027319	20	4 3.6	20.6
268400 2005 UE_{193}	17.4	X	100.37506	299.83447	188.09400	3.15856	0.1491402	0.23698536	2.5861579	20	5 24.4	20.9

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	m		°	°	°	°		°				
268401 2005 UV_{193}	17.5	X	147.80416	96.68237	151.75380	1.84785	0.1568322	0.27389143	2.3482829	20	12 17.1	21.0
268402 2005 UN_{201}	17.2	X	143.73715	20.05712	91.29822	1.32786	0.0672661	0.24036690	2.5618456	20	6 12.9	20.7
268403 2005 UC_{202}	17.3	X	138.70685	202.27503	214.23655	4.12686	0.0751221	0.23030560	2.6359250	20	3 26.7	21.0
268404 2005 UU_{205}	17.0	X	120.61198	217.61470	208.33707	2.23339	0.1380750	0.22804433	2.6533214	20	3 26.1	20.7
268405 2005 UT_{226}	17.0	X	128.09050	33.50876	54.13982	3.17654	0.1582536	0.23294330	2.6159889	20	5 3.7	20.8
268406 2005 UK_{236}	17.4	X	52.73735	138.56169	132.38867	3.70570	0.1544940	0.25650725	2.4532188	20	10 9.5	20.5
268407 2005 UX_{239}	16.8	X	89.99958	347.79501	146.49269	5.33717	0.1765245	0.23198964	2.6231532	20	5 24.8	20.4
268408 2005 UO_{283}	17.3	X	181.87589	259.97364	175.39965	3.95047	0.1194368	0.24246276	2.5470610	20	6 9.7	21.3
268409 2005 UJ_{293}	17.1	X	87.37773	323.69284	291.47611	2.84169	0.1786708	0.26021040	2.4298882	20	10 28.3	20.7
268410 2005 UJ_{307}	16.9	X	120.63198	114.59364	33.36357	2.35495	0.0781724	0.24221391	2.5488053	20	7 5.9	20.4
268411 2005 UP_{308}	17.2	X	163.56464	133.36127	245.71435	0.76840	0.0891241	0.22836709	2.6508208	20	3 9.2	21.1
268412 2005 UN_{313}	16.5	X	184.61019	299.86110	115.13424	7.66454	0.1243478	0.24081361	2.5586764	20	5 18.8	20.6
268413 2005 UG_{314}	15.8	X	194.64976	204.93845	245.56451	13.73108	0.0592460	0.25321622	2.4744292	20	7 13.1	19.4
268414 2005 UR_{320}	16.7	X	139.11664	348.19613	78.29319	5.10325	0.0737773	0.23202772	2.6228662	20	4 12.1	20.4
268415 2005 UV_{352}	16.4	X	84.06645	115.99187	11.96577	11.88815	0.1410730	0.23203623	2.6228021	20	4 28.2	19.9
268416 2005 UO_{363}	17.5	X	179.41512	222.09636	160.31951	2.55325	0.1493338	0.23369568	2.6103711	20	4 1.7	21.5
268417 2005 UL_{373}	16.6	X	117.87777	104.97748	26.24311	4.68673	0.0656806	0.23774608	2.5806383	20	6 7.2	20.2
268418 2005 UH_{391}	17.3	X	167.31105	64.32038	346.73619	13.55691	0.2428014	0.24063008	2.5599772	20	4 22.5	21.9
268419 2005 UE_{399}	16.5	X	300.56818	273.32827	30.19135	5.28731	0.0449021	0.23889135	2.5723838	20	5 15.8	19.7
268420 2005 UO_{421}	17.3	X	307.91745	42.17546	262.37671	1.52951	0.1445487	0.24624315	2.5209251	20	5 13.4	20.0
268421 2005 UE_{470}	16.2	X	158.27746	307.64958	346.99009	4.27961	0.0435609	0.21232804	2.7826878	20	—	—
268422 2005 UM_{475}	16.2	X	56.55724	251.28337	241.63626	11.40225	0.2019422	0.22587341	2.6702954	20	4 1.7	19.2
268423 2005 UM_{483}	17.2	X	175.61654	251.33509	169.71952	5.24742	0.1967137	0.24039249	2.5616637	20	5 17.6	21.5
268424 2005 UF_{484}	17.1	X	182.30491	263.80176	145.43413	4.49254	0.1792486	0.23931367	2.5693565	20	5 8.8	21.4
268425 2005 UB_{491}	16.4	X	336.05506	338.57459	353.27156	5.57159	0.0813754	0.25279244	2.4771938	20	8 22.3	19.0
268426 2005 UZ_{493}	16.6	X	105.19930	85.59614	16.64271	11.84283	0.1356453	0.23068620	2.6330250	20	4 21.7	20.2
268427 2005 UJ_{506}	15.9	X	71.23189	346.42963	340.80825	7.91149	0.1222951	0.18246182	3.0786103	20	12 19.9	20.6
268428 2005 UU_{508}	17.3	X	80.71824	128.64696	55.71132	3.40285	0.0751565	0.24092597	2.5578808	20	7 3.7	20.6
268429 2005 UL_{511}	17.3	X	95.90829	177.85998	320.22305	0.88968	0.1398891	0.23292963	2.6160913	20	5 30.5	21.0
268430 2005 UM_{512}	16.6	X	213.25340	229.85480	130.40000	5.99562	0.1407097	0.23558910	2.5963660	20	4 7.9	20.7
268431 2005 VS_{6}	16.8	X	124.03500	101.01455	297.41123	4.85989	0.0672364	0.22296080	2.6935004	20	2 14.8	20.5
268432 2005 VN_{25}	16.9	X	95.08366	169.08145	293.00548	3.57139	0.1728474	0.22950023	2.6420881	20	4 14.6	20.5
268433 2005 VP_{42}	16.8	X	37.46352	279.92304	160.31649	4.29986	0.1799063	0.21336567	2.7736587	20	—	—
268434 2005 VG_{43}	16.4	X	191.82130	323.34075	112.01158	8.57808	0.1028500	0.24739136	2.5131188	20	6 20.6	20.1
268435 2005 VO_{43}	16.2	X	155.00516	1.45226	52.06658	9.93444	0.1232353	0.23062844	2.6334645	20	4 17.6	20.2
268436 2005 VE_{53}	16.7	X	195.54800	241.81251	161.76034	3.29200	0.2386288	0.23857277	2.5746733	20	5 11.9	21.1
268437 2005 VO_{82}	17.2	X	59.64050	145.27758	15.17860	4.32603	0.2143896	0.23089981	2.6314008	20	5 21.5	20.1
268438 2005 VJ_{89}	17.1	X	126.70508	307.53331	139.60528	3.98308	0.0872255	0.23234097	2.6205082	20	4 25.2	20.8
268439 2005 VH_{113}	17.4	X	89.55420	258.04051	185.99219	8.51984	0.2795666	0.22408035	2.6845213	20	4 2.5	20.9
268440 2005 VH_{124}	17.5	X	88.37568	143.20617	18.28166	3.14186	0.1535624	0.23436822	2.6053750	20	6 23.9	21.0
268441 2005 VH_{128}	16.9	X	129.32349	308.48498	163.72118	3.86104	0.1785778	0.24018742	2.5631216	20	6 7.6	20.9
268442 2005 WK_{23}	17.0	X	224.67873	27.84325	337.98493	1.85499	0.1167686	0.23743956	2.5828588	20	4 24.2	20.8
268443 2005 WY_{26}	16.4	X	199.29693	100.82229	266.15048	3.15073	0.1382879	0.23241611	2.6199433	20	3 29.9	20.7
268444 2005 WV_{28}	17.1	X	124.52928	63.64481	45.29280	4.48664	0.1231108	0.23367295	2.6105404	20	5 23.2	20.8
268445 2005 WU_{36}	16.6	X	159.90423	250.68716	126.49429	1.38282	0.1670720	0.22649724	2.6653901	20	3 9.4	20.9
268446 2005 WA_{45}	17.0	X	144.00893	125.42371	256.84373	2.37075	0.1568434	0.22507336	2.6766196	20	2 27.1	21.1
268447 2005 WB_{46}	17.1	X	70.06349	13.02351	65.84500	2.79217	0.1898786	0.21822500	2.7323294	20	2 14.8	20.1
268448 2005 WB_{51}	16.3	X	218.37498	327.92853	73.98970	6.73009	0.1403341	0.23999160	2.5645157	20	6 2.4	20.1
268449 2005 WP_{51}	16.8	X	179.97814	297.57717	64.00193	3.38463	0.2236401	0.22837185	2.6507840	20	3 11.3	21.4
268450 2005 WU_{51}	16.3	X	149.06360	139.67760	264.46918	4.98360	0.0777112	0.22685033	2.6626236	20	3 21.7	20.3
268451 2005 WU_{53}	16.8	X	68.04453	109.21226	72.66042	8.11148	0.1357701	0.23545730	2.5973348	20	6 21.5	20.0
268452 2005 WR_{69}	16.8	X	229.16695	248.20052	135.33436	1.36423	0.1503344	0.24011612	2.5636290	20	5 20.2	20.8
268453 2005 WA_{72}	16.0	X	187.74289	130.95185	286.50900	13.03351	0.0888906	0.24131705	2.5551165	20	5 21.8	19.9
268454 2005 WT_{72}	16.2	X	27.57209	217.14876	262.30737	6.42927	0.1506556	0.21623510	2.7490665	20	1 17.4	19.1
268455 2005 WE_{85}	14.5	X	12.70950	248.30532	41.56905	10.32521	0.2200303	0.12350268	3.9934825	20	8 22.9	19.2
268456 2005 WR_{93}	16.1	X	51.85060	333.02024	109.99187	11.59563	0.2568737	0.21201801	2.7853998	20	1 26.9	18.5
268457 2005 WT_{93}	14.5	X	175.50548	270.52054	281.90085	23.85488	0.2470973	0.18033096	3.1028148	20	10 8.2	20.4
268458 2005 WT_{111}	16.4	X	74.18602	8.26417	79.99637	10.25269	0.1684029	0.22067618	2.7120586	20	3 5.6	19.8
268459 2005 WN_{117}	16.1	X	61.72754	73.71033	42.95282	13.80415	0.1121693	0.22373128	2.6873129	20	3 17.8	19.5
268460 2005 WY_{120}	17.4	X	289.21921	255.91975	208.34925	1.64883	0.1787994	0.26302663	2.4125125	20	12 6.1	19.5
268461 2005 WD_{156}	16.1	X	16.12530	188.41633	149.93536	7.33885	0.1264968	0.26056081	2.4277092	20	11 16.0	19.0
268462 2005 WW_{165}	16.9	X	243.47512	206.19761	158.95720	0.69622	0.0880249	0.24052798	2.5607016	20	5 18.2	20.5
268463 2005 WS_{177}	16.9	X	25.80019	163.79120	52.62888	2.12866	0.0376315	0.23129930	2.6283700	20	5 23.1	20.0
268464 2005 WX_{180}	16.4	X	104.05428	315.12664	176.43270	11.89630	0.1585531	0.23287828	2.6164758	20	6 4.7	20.4
268465 2005 WG_{184}	16.7	X	113.64003	335.91936	158.91584	3.57002	0.1191511	0.23501035	2.6006269	20	6 14.2	20.4
268466 2005 WG_{190}	16.3	X	86.25325	38.30859	18.61799	9.73205	0.2264421	0.21893247	2.7264399	20	2 19.4	19.8
268467 2005 WV_{195}	16.3	X	346.87609	54.71224	124.29670	4.54547	0.0334780	0.21238147	2.7822210	20	2 9.8	20.0
268468 2005 WH_{205}	17.1	X	90.21151	230.47287	265.89419	1.18188	0.1450204	0.23163937	2.6257969	20	5 21.7	20.4
268469 2005 WU_{207}	16.0	X	242.39172	160.83318	130.83977	6.99357	0.0288690	0.21278607	2.7786931	20	2 20.9	20.0
268470 2005 XJ_{6}	16.2	X	292.81036	25.88585	297.49972	4.34232	0.1497640	0.24159894	2.5531286	20	5 15.1	19.4
268471 2005 XC_{22}	16.3	X	250.96878	17.63486	319.89954	4.04865	0.2602497	0.23938605	2.5688386	20	4 1.7	20.5
268472 2005 XK_{31}	16.7	X	233.13709	202.99646	159.84975	3.12435	0.1389797	0.23518384	2.5993478	20	4 29.5	20.7
268473 2005 XK_{51}	16.6	X	104.81409	83.08593	341.50066	4.51117	0.1036413	0.21970217	2.7200683	20	3 1.9	20.4
268474 2005 XC_{52}	16.3	X	137.18326	357.66824	37.86092	4.56305	0.1049407	0.22127478	2.7071653	20	3 5.6	20.2
268475 2005 XN_{52}	16.6	X	185.76766	47.29235	338.52818	3.73008	0.1494103	0.23002227	2.6380891	20	4 9.9	20.9
268476 2005 XV_{52}	17.1	X	76.10116	101.11109	321.07068	4.17141	0.0735372	0.21385981	2.7693845	20	1 17.4	20.6
268477 2005 XM_{59}	16.5	X	215.14592	54.38409	336.72060	1.91956	0.1254370	0.23726842	2.5841006	20	5 16.4	20.4
268478 2005 XV_{59}	16.3	X	149.56580	347.82859	77.23668	7.22097	0.0730276	0.22967704	2.6407320	20	4 22.9	20.1
268479 2005 XJ_{61}	17.2	X	63.26274	111.64301	316.34075	2.69168	0.0609450	0.21282024	2.7783957	20	1 5.4	20.6
268480 2005 XN_{63}	16.7	X	82.43100	66.80999	49.47662	3.26863	0.0320946	0.22637691	2.6663345	20	3 29.5	20.2

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	m		°	°	°	°		°				
268481 2005 XW_{65}	15.8	X	239.26649	168.46963	213.50252	4.56290	0.2297576	0.24158343	2.5532379	20	5 21.4	19.8
268482 2005 XH_{69}	16.6	X	16.12382	214.15611	48.91866	8.30378	0.1699675	0.24229143	2.5482616	20	7 31.3	19.2
268483 2005 XS_{72}	16.4	X	110.02644	140.18472	50.64186	4.85549	0.1017304	0.24167392	2.5526005	20	8 24.5	20.1
268484 2005 XZ_{73}	14.9	X	111.29626	106.32749	85.67977	23.73080	0.0888638	0.17356510	3.1829351	20	8 24.9	20.0
268485 2005 XM_{76}	16.2	X	64.69228	0.85482	104.02578	10.05036	0.1144118	0.21615031	2.7497854	20	3 4.6	19.7
268486 2005 XX_{82}	16.6	X	117.58945	80.03560	341.32278	6.81344	0.1684252	0.22648159	2.6655128	20	3 19.8	20.5
268487 2005 XJ_{84}	16.1	X	254.42848	200.15118	166.60511	6.07411	0.2133684	0.24282375	2.5445361	20	5 19.5	20.0
268488 2005 YO	16.4	X	286.64790	326.75888	261.37484	2.74409	0.0264012	0.21706889	2.7420223	20	1 24.5	20.1
268489 2005 YF_{3}	15.4	X	246.79379	347.51071	20.78930	15.31276	0.1948653	0.24214367	2.5492981	20	5 9.9	19.6
268490 2005 YW_{10}	17.0	X	186.31586	110.61325	268.01865	1.20121	0.0564088	0.22799850	2.6536770	20	4 1.1	20.6
268491 2005 YC_{16}	16.6	X	105.89086	291.81242	117.32682	4.74389	0.0778878	0.21413748	2.7669900	20	2 10.4	20.4
268492 2005 YE_{25}	17.1	X	302.90023	169.18273	126.02915	2.44575	0.0167698	0.22895660	2.6462687	20	5 13.7	20.5
268493 2005 YF_{29}	16.9	X	330.70099	302.10969	313.24013	3.29652	0.1628013	0.22527943	2.6749871	20	4 8.2	20.0
268494 2005 YG_{43}	16.5	X	181.31349	292.58353	125.10918	4.43233	0.0613192	0.23031799	2.6358304	20	5 17.9	20.3
268495 2005 YO_{44}	16.4	X	227.00443	242.86606	114.81917	9.04988	0.1365169	0.23062843	2.6334646	20	4 20.3	20.6
268496 2005 YR_{48}	16.4	X	65.64594	100.04285	301.76761	5.81760	0.1197532	0.20577802	2.8414285	20	—	—
268497 2005 YY_{56}	16.5	X	328.06678	262.93128	303.00107	5.43772	0.0542072	0.21819537	2.7325767	20	2 14.1	20.0
268498 2005 YC_{72}	17.0	X	98.96585	108.57211	324.65170	3.62237	0.0719409	0.22035046	2.7147306	20	2 29.1	20.7
268499 2005 YA_{83}	16.5	X	42.80689	197.92447	259.84992	1.93012	0.1578082	0.21142387	2.7906158	20	1 18.7	19.4
268500 2005 YF_{86}	16.4	X	172.41746	47.12989	294.44221	3.87079	0.0529238	0.21495034	2.7600098	20	1 31.6	20.5
268501 2005 YY_{105}	16.6	X	204.36222	14.62339	267.85329	2.46915	0.0569630	0.20927109	2.8097212	20	—	—
268502 2005 YU_{110}	16.9	X	143.86665	165.69234	217.32469	2.95034	0.1063085	0.21872454	2.7281675	20	2 23.6	20.9
268503 2005 YA_{113}	16.1	X	76.87709	262.05665	111.09348	2.97220	0.0832676	0.20438047	2.8543668	20	—	—
268504 2005 YM_{115}	16.5	X	146.10918	357.47008	10.88571	3.34396	0.1044673	0.21467107	2.7624030	20	2 10.7	20.6
268505 2005 YY_{119}	16.5	X	340.54637	149.00596	131.90121	3.03078	0.0979328	0.23360292	2.6110621	20	6 11.4	19.3
268506 2005 YW_{129}	16.2	X	107.13231	5.54619	87.28852	10.21791	0.0818595	0.22379729	2.6867845	20	4 12.1	20.0
268507 2005 YG_{132}	16.6	X	340.73321	149.37232	298.60590	0.84181	0.0398904	0.19582205	2.9369394	20	—	—
268508 2005 YE_{135}	16.9	X	27.14984	53.57059	68.36280	5.14034	0.1545607	0.21297716	2.7770308	20	1 23.2	19.7
268509 2005 YP_{149}	16.8	X	207.22278	348.33169	36.01798	3.09298	0.2253349	0.23277423	2.6172555	20	4 26.9	21.3
268510 2005 YK_{150}	16.4	X	322.08078	158.38543	60.47486	3.59728	0.0132011	0.21787622	2.7352445	20	3 1.9	20.1
268511 2005 YK_{153}	16.5	X	182.00593	36.71618	343.87051	3.09720	0.1757483	0.23079613	2.6321888	20	4 1.0	20.7
268512 2005 YJ_{156}	16.3	X	83.08641	150.99248	265.56057	4.22125	0.0476827	0.21241852	2.7818975	20	1 15.8	19.9
268513 2005 YB_{159}	16.3	X	352.23768	51.11763	132.12922	6.02116	0.0572694	0.21744598	2.7388514	20	2 20.2	19.8
268514 2005 YV_{161}	16.9	X	102.94642	283.11879	142.54451	6.21173	0.0324871	0.21685631	2.7438141	20	2 20.2	20.7
268515 2005 YD_{178}	17.1	X	353.48295	154.38104	342.76054	0.65957	0.0255720	0.20849565	2.8166835	20	—	—
268516 2005 YR_{189}	17.1	X	149.76610	257.36208	139.84201	2.72194	0.0256385	0.22068289	2.7120037	20	3 12.6	20.7
268517 2005 YR_{191}	16.9	X	81.89914	124.05796	329.13482	2.68087	0.0636099	0.21612551	2.7499958	20	3 2.6	20.3
268518 2005 YW_{196}	17.4	X	94.58397	140.03083	306.09671	1.77902	0.0645621	0.21978085	2.7194191	20	3 9.8	21.1
268519 2005 YR_{199}	16.2	X	258.70284	188.59768	125.04201	5.00086	0.0023537	0.22281668	2.6946617	20	4 13.0	19.8
268520 2005 YR_{203}	16.4	X	245.08018	272.94707	296.15133	4.83523	0.0619062	0.19958986	2.8998602	20	—	—
268521 2005 YE_{209}	15.6	X	353.46940	37.93185	89.15666	16.03980	0.0959708	0.20477814	2.8506702	20	—	—
268522 2005 YW_{211}	16.4	X	349.82991	91.70746	19.01705	6.61411	0.2271212	0.20306392	2.8666909	20	—	—
268523 2005 YF_{212}	16.5	X	51.57601	259.87585	181.30198	7.58062	0.2134242	0.21110365	2.7934370	20	1 16.5	19.3
268524 2005 YO_{220}	16.0	X	43.71982	47.73035	80.11800	9.60989	0.0921862	0.21596263	2.7513783	20	2 29.7	19.4
268525 2005 YX_{221}	16.3	X	91.27557	349.33294	75.09770	6.03645	0.1029234	0.21844403	2.7305026	20	2 15.5	19.9
268526 2005 YZ_{227}	16.3	X	6.41848	251.62887	270.45769	3.96509	0.0562395	0.21662713	2.7457489	20	2 11.1	19.7
268527 2005 YU_{249}	16.4	X	55.14740	358.07861	91.46213	5.12830	0.0671421	0.21355321	2.7720346	20	1 22.1	19.7
268528 2005 YN_{254}	16.3	X	228.85651	356.16624	18.12845	5.21395	0.1323256	0.23440442	2.6051067	20	5 8.0	20.3
268529 2005 YY_{257}	16.8	X	174.77635	10.22194	36.86499	1.67018	0.1602898	0.23215038	2.6219422	20	4 27.6	21.0
268530 2005 YN_{264}	16.3	X	332.69060	232.62104	321.15770	6.74166	0.1546011	0.21150096	2.7899376	20	1 25.1	19.6
268531 2005 YX_{274}	16.2	X	32.94518	322.63739	145.78296	8.53874	0.1835754	0.21023166	2.8011561	20	1 15.0	19.0
268532 2005 YN_{282}	16.8	X	314.74748	46.86423	208.52890	1.44414	0.1401806	0.22093931	2.7099049	20	3 18.9	20.2
268533 2006 AT_{19}	16.1	X	82.47482	12.38951	55.20510	5.52621	0.0717300	0.21379033	2.7699845	20	2 3.4	19.7
268534 2006 AB_{28}	15.6	X	189.40097	135.78658	158.87684	12.92162	0.0232166	0.19712927	2.9239412	20	—	—
268535 2006 AR_{31}	16.3	X	353.44403	109.01524	39.40025	7.62620	0.1330481	0.21001227	2.8031065	20	—	—
268536 2006 AW_{31}	15.6	X	241.76904	47.00950	74.82090	2.61872	0.0380173	0.18354110	3.0665296	20	10 19.2	19.8
268537 2006 AH_{33}	16.4	X	42.02394	37.11874	81.41141	10.11591	0.1340838	0.21509298	2.7587895	20	2 16.6	19.6
268538 2006 AP_{36}	16.8	X	315.85990	248.27761	357.98407	2.26984	0.0247106	0.22019103	2.7160409	20	3 25.3	20.3
268539 2006 AL_{41}	16.9	X	292.24872	273.15693	324.43466	3.40154	0.0153741	0.21392902	2.7687872	20	2 14.9	20.6
268540 2006 AE_{44}	15.9	X	8.95678	298.14650	135.13479	10.97434	0.0612269	0.19914703	2.9041575	20	—	—
268541 2006 AU_{47}	17.0	X	37.26303	220.46996	250.89059	2.93476	0.0621383	0.21194448	2.7860441	20	1 22.9	20.4
268542 2006 AU_{48}	17.1	X	69.32757	45.66314	92.92373	2.69051	0.0478074	0.22474781	2.6792037	20	4 12.6	20.4
268543 2006 AT_{53}	16.6	X	120.05021	94.39903	236.80266	1.15078	0.0713947	0.20060012	2.8901159	20	—	—
268544 2006 AN_{60}	17.2	X	350.15227	278.69246	290.69710	0.75335	0.0154542	0.22120047	2.7077716	20	3 23.9	20.6
268545 2006 AP_{60}	16.8	X	327.80928	181.69825	116.74550	3.83041	0.1379187	0.23411518	2.6072519	20	6 10.5	19.4
268546 2006 AD_{73}	16.3	X	122.13825	255.06198	120.54829	2.93333	0.0892222	0.20956249	2.8071159	20	1 21.3	20.3
268547 2006 AD_{82}	15.8	X	262.76205	357.74476	168.89435	9.00029	0.2666248	0.18755213	3.0226513	20	12 7.7	19.8
268548 2006 AT_{82}	15.6	X	335.63299	225.92409	349.19802	11.45506	0.2634988	0.21365412	2.7711617	20	2 11.9	18.7
268549 2006 AU_{88}	15.8	X	290.81566	146.02577	128.75619	14.57688	0.0796463	0.21882516	2.7273312	20	3 26.9	19.7
268550 2006 AV_{89}	16.5	X	50.14218	312.01976	151.02674	3.89455	0.0519666	0.21218866	2.7839063	20	1 30.4	20.1
268551 2006 AD_{105}	16.3	X	335.47488	239.03624	214.26701	1.50293	0.1384449	0.19037389	2.9927088	20	—	—
268552 2006 BG_{8}	15.9	X	338.92919	285.38124	141.64726	4.97079	0.1515395	0.18978154	2.9989328	20	12 23.4	19.3
268553 2006 BN_{21}	16.1	X	174.19437	219.06205	135.33435	6.67373	0.0494233	0.21390040	2.7690341	20	2 19.3	20.1
268554 2006 BQ_{28}	16.3	X	184.94326	212.89495	135.70462	8.27205	0.1333186	0.21561796	2.7543097	20	2 27.2	20.7
268555 2006 BF_{31}	16.2	X	65.04123	352.56766	120.33793	3.72141	0.0472994	0.21480311	2.7612708	20	3 4.7	19.7
268556 2006 BQ_{31}	16.1	X	335.59446	98.72683	108.73082	5.14814	0.1328217	0.21154336	2.7895648	20	2 20.1	19.5
268557 2006 BH_{32}	15.6	X	197.13993	60.79470	139.74543	12.05200	0.0252073	0.18449226	3.0559807	20	12 3.9	20.2
268558 2006 BR_{33}	15.9	X	96.74418	327.67924	343.98471	9.27282	0.0364107	0.18488790	3.0516195	20	12 20.8	20.4
268559 2006 BH_{34}	16.2	X	78.46059	62.91484	334.39023	7.73183	0.0936418	0.20082574	2.8879508	20	—	—
268560 2006 BB_{38}	16.1	X	90.26213	356.63031	341.73273	9.85701	0.0456578	0.19106266	2.9855121	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		°	°	°	°		°				
268561 2006 BX_{38}	16.5	X	201.94972	247.70651	108.17673	4.16562	0.1319920	0.23126241	2.6286495	20	3 22.6	20.6
268562 2006 BA_{40}	16.2	X	115.72739	13.47131	347.34457	1.47446	0.0801578	0.20292691	2.8679811	20	—	—
268563 2006 BK_{46}	16.2	X	203.34468	211.53270	145.53812	5.64327	0.1353959	0.21754603	2.7380116	20	3 25.8	20.5
268564 2006 BY_{47}	16.9	X	310.18496	278.27459	22.61323	1.97046	0.0729935	0.22987717	2.6391991	20	5 22.9	20.0
268565 2006 BS_{52}	16.3	X	147.87795	30.19751	326.09350	3.10674	0.1138551	0.20944809	2.8081380	20	1 29.8	20.5
268566 2006 BT_{59}	15.9	X	134.00829	35.94416	330.07114	4.74623	0.0542517	0.20821944	2.8191739	20	1 19.9	19.9
268567 2006 BX_{64}	16.1	X	219.88070	6.43824	300.87707	4.26502	0.1537998	0.21267245	2.7796827	20	2 8.3	20.7
268568 2006 BF_{66}	16.3	X	182.23562	209.12763	89.33933	3.21221	0.0490297	0.20379362	2.8598438	20	—	—
268569 2006 BN_{88}	16.1	X	95.32024	232.07250	129.05080	6.94496	0.1097104	0.20005494	2.8953642	20	—	—
268570 2006 BZ_{88}	16.3	X	70.40807	282.35484	126.39683	6.15487	0.1076993	0.20518771	2.8468756	20	—	—
268571 2006 BW_{90}	15.9	X	29.65144	85.36343	118.20633	18.90472	0.1425286	0.22378642	2.6868715	20	5 27.0	19.2
268572 2006 BV_{92}	16.3	X	60.65775	125.45656	298.68217	1.04494	0.0554918	0.20278897	2.8692815	20	—	—
268573 2006 BY_{97}	16.1	X	60.55017	93.05523	36.17402	9.30223	0.1302723	0.21692308	2.7432510	20	3 31.6	19.4
268574 2006 BO_{99}	16.2	X	100.25090	333.20871	96.19105	4.81847	0.0829402	0.21334670	2.7738231	20	3 2.1	19.9
268575 2006 BP_{102}	15.8	X	167.16416	101.85578	150.61744	9.50758	0.0671618	0.18888595	3.0084048	20	12 27.8	20.4
268576 2006 BU_{102}	16.9	X	56.07677	128.81854	273.64486	1.01171	0.0799415	0.19982085	2.8976250	20	—	—
268577 2006 BY_{102}	16.9	X	80.34834	193.36386	160.42828	3.30619	0.0225645	0.19373467	2.9579976	20	—	—
268578 2006 BO_{116}	16.2	X	138.09171	235.83062	152.49454	5.04920	0.0813291	0.21156865	2.7893425	20	2 23.1	20.1
268579 2006 BY_{121}	16.0	X	207.86004	15.03743	319.94602	3.67842	0.0885513	0.21275812	2.7789365	20	3 2.1	20.1
268580 2006 BT_{125}	17.1	X	309.58025	345.68550	117.75365	2.03541	0.1478487	0.18986908	2.9980110	20	12 18.8	20.3
268581 2006 BB_{126}	16.6	X	90.26105	240.61120	167.92167	2.15289	0.0728069	0.20532427	2.8456131	20	1 20.0	20.4
268582 2006 BD_{126}	16.0	X	198.86481	167.39031	160.65994	4.66119	0.0680322	0.20880873	2.8138673	20	2 14.2	20.1
268583 2006 BU_{132}	16.2	X	327.66350	349.15448	183.21665	1.87838	0.0080962	0.20282361	2.8689549	20	1 11.5	20.2
268584 2006 BG_{144}	15.8	X	20.64025	349.19109	166.19783	17.74457	0.1898185	0.21318784	2.7752009	20	2 23.9	18.4
268585 2006 BR_{145}	17.0	X	231.19764	312.67933	142.79139	23.88986	0.0954573	0.37774245	1.8952748	20	9 27.9	19.1
268586 2006 BL_{149}	15.8	X	13.14972	0.43339	161.99375	12.87403	0.0870495	0.21132271	2.7915063	20	2 22.1	19.0
268587 2006 BM_{161}	16.2	X	151.73888	25.83881	296.70006	5.34220	0.0608421	0.19957201	2.9000331	20	—	—
268588 2006 BS_{169}	16.1	X	6.01686	35.90643	340.95919	5.11786	0.0732654	0.18231242	3.0802919	20	11 21.1	20.2
268589 2006 BC_{180}	15.7	X	139.89457	249.37392	126.15877	6.78501	0.0711382	0.21065980	2.7973594	20	2 8.8	19.7
268590 2006 BB_{191}	15.6	X	346.25054	108.02200	351.20866	12.23331	0.1691495	0.19237660	2.9719024	20	—	—
268591 2006 BM_{199}	16.5	X	302.86301	270.86393	276.45881	1.70335	0.1051511	0.20058680	2.8902439	20	—	—
268592 2006 BP_{200}	16.4	X	260.06951	155.76901	115.00682	5.58501	0.0215296	0.21306193	2.7762942	20	2 17.1	20.2
268593 2006 BO_{206}	16.5	X	93.42470	281.29029	138.96668	14.73885	0.0631223	0.21176132	2.7876503	20	2 5.7	20.2
268594 2006 BJ_{210}	15.8	X	319.32626	225.11364	311.76265	9.88963	0.1467640	0.20194678	2.8772532	20	—	—
268595 2006 BH_{221}	16.2	X	133.62740	210.64120	111.80159	2.90148	0.0718516	0.19834151	2.9120152	20	—	—
268596 2006 BG_{223}	16.1	X	204.01227	211.92703	145.31219	6.41521	0.0886893	0.21874541	2.7279941	20	3 27.7	20.2
268597 2006 BK_{242}	15.7	X	156.91951	5.53960	343.16976	8.94681	0.1628582	0.20893049	2.8127740	20	2 4.6	20.1
268598 2006 BQ_{242}	15.7	X	282.21840	293.77478	334.21816	14.00908	0.2258795	0.21096811	2.7946334	20	2 14.9	19.9
268599 2006 BB_{245}	16.3	X	148.51417	252.81185	99.86816	3.21243	0.0836477	0.20693616	2.8308169	20	1 23.4	20.3
268600 2006 BB_{247}	16.4	X	131.73501	247.75719	136.19368	3.17903	0.0695802	0.20968804	2.8059953	20	2 9.2	20.4
268601 2006 BN_{247}	15.8	X	94.18881	21.26710	331.86793	7.03088	0.0393223	0.19537738	2.9413940	20	—	—
268602 2006 BA_{251}	16.7	X	214.88587	137.68490	179.02485	3.39998	0.0598231	0.21466536	2.7624520	20	2 16.7	20.8
268603 2006 BJ_{253}	16.7	X	21.53072	308.94058	149.72339	2.38424	0.0299718	0.20196688	2.8770624	20	—	—
268604 2006 BO_{254}	15.9	X	154.45457	112.17363	149.49351	10.77194	0.0611956	0.18806468	3.0171568	20	12 25.6	20.6
268605 2006 BA_{256}	15.9	X	151.89812	177.12995	79.37208	2.09815	0.2543392	0.18115308	3.0934201	20	12 12.9	21.4
268606 2006 BK_{256}	16.3	X	156.94124	232.20499	100.33241	3.23567	0.0684072	0.20245727	2.8724147	20	1 7.2	20.5
268607 2006 BJ_{260}	16.0	X	271.65533	142.87725	136.24647	5.84193	0.1300825	0.21122887	2.7923329	20	2 27.9	20.1
268608 2006 BT_{265}	16.1	X	170.61905	149.03840	152.87199	2.47698	0.0885068	0.19689531	2.9262570	20	—	—
268609 2006 BS_{266}	16.1	X	20.86588	147.73410	10.38186	17.14068	0.1874796	0.21511400	2.7586098	20	3 6.8	18.9
268610 2006 BR_{283}	16.0	X	101.45259	40.39959	306.51798	7.20509	0.0940221	0.19839831	2.9114594	20	—	—
268611 2006 CY_{30}	16.0	X	217.02946	181.02851	169.57166	6.34176	0.0352867	0.21901803	2.7257298	20	4 4.1	19.7
268612 2006 CK_{42}	15.8	X	268.16035	347.00077	173.62793	13.21300	0.1059389	0.18936615	3.0033168	20	12 29.9	19.9
268613 2006 CZ_{43}	15.5	X	157.92595	98.33682	168.48116	11.70277	0.1217663	0.17738814	3.1370371	20	12 30.5	20.7
268614 2006 CT_{46}	16.5	X	222.08562	279.98617	7.46105	2.69436	0.0370876	0.20829562	2.8184865	20	1 23.0	20.4
268615 2006 CG_{51}	17.0	X	66.19883	145.53530	302.47933	1.86671	0.0632630	0.21111245	2.7933595	20	2 4.2	20.5
268616 2006 CK_{65}	15.8	X	216.02247	170.41542	167.09380	9.73403	0.1688853	0.21617607	2.7495669	20	3 11.6	20.4
268617 2006 CE_{67}	16.3	X	254.50610	32.63039	173.73439	3.63772	0.0195799	0.19602622	2.9348998	20	—	—
268618 2006 CF_{67}	16.0	X	241.22240	329.56112	179.63059	9.67709	0.1087397	0.17846770	3.1243736	20	11 11.2	20.5
268619 2006 CW_{67}	16.4	X	286.16285	276.76372	203.48811	0.83601	0.1259345	0.18501042	3.0502722	20	12 2.4	20.2
268620 2006 DZ_{3}	15.6	X	264.11141	186.90881	347.04629	9.64707	0.0279958	0.19061782	2.9901551	20	—	—
268621 2006 DA_{6}	15.6	X	264.21816	119.39683	78.73271	3.09545	0.0340269	0.19612587	2.9339056	20	—	—
268622 2006 DX_{20}	16.2	X	42.02864	281.99392	165.39484	7.58631	0.0737870	0.20391244	2.8587328	20	1 1.5	19.9
268623 2006 DT_{22}	15.7	X	132.78528	325.73436	40.25322	2.49838	0.0869703	0.20306391	2.8666911	20	1 23.3	19.7
268624 2006 DF_{23}	16.1	X	246.73883	37.41227	142.77479	6.14821	0.0564504	0.18812166	3.0165476	20	—	—
268625 2006 DD_{24}	15.7	X	14.78261	35.00921	355.43117	7.87049	0.1158735	0.18651943	3.0337980	20	12 28.4	19.7
268626 2006 DS_{28}	16.1	X	185.23433	162.28645	62.29837	2.11216	0.1364384	0.18152351	3.0892102	20	12 7.5	20.8
268627 2006 DR_{29}	15.1	X	179.42121	64.95867	171.09448	10.67864	0.0875164	0.18313453	3.0710665	20	12 19.1	19.9
268628 2006 DE_{30}	15.9	X	111.95797	206.61670	164.30970	2.43163	0.0956029	0.19827317	2.9126843	20	1 5.8	19.9
268629 2006 DK_{30}	16.5	X	183.07823	90.39490	170.51849	9.38118	0.0762395	0.18874320	3.0099215	20	—	—
268630 2006 DC_{36}	16.5	X	250.21026	55.94378	170.73989	1.83030	0.0870976	0.19398320	2.9554706	20	—	—
268631 2006 DK_{46}	17.0	X	77.43644	268.80179	140.98627	2.73284	0.0640381	0.20387220	2.8591090	20	1 3.8	20.6
268632 2006 DG_{58}	15.6	X	152.61664	278.70051	350.34547	10.05688	0.0619727	0.18422786	3.0589040	20	—	—
268633 2006 DG_{69}	15.8	X	118.12766	163.05094	161.52801	10.51886	0.0848267	0.18917461	3.0053438	20	—	—
268634 2006 DU_{88}	16.2	X	109.72224	301.71849	9.51459	2.46478	0.1658006	0.18267034	3.0762670	20	—	—
268635 2006 DG_{96}	16.1	X	349.29920	260.39754	186.03483	8.76003	0.0606851	0.18754182	3.0227621	20	—	—
268636 2006 DS_{101}	16.3	X	191.86079	220.46310	60.58963	2.90223	0.0502639	0.19554646	2.9396982	20	—	—
268637 2006 DL_{106}	15.3	X	139.86253	138.55616	165.34180	9.10757	0.0994321	0.18832321	3.0143949	20	—	—
268638 2006 DW_{109}	15.8	X	48.87384	64.66053	351.07116	16.19492	0.0778349	0.19475108	2.9476967	20	—	—
268639 2006 DE_{114}	17.6	X	282.31938	271.33599	160.85443	23.44861	0.0870914	0.38474660	1.8722027	20	11 28.4	19.7
268640 2006 DP_{115}	15.5	X	188.08506	73.02922	173.47945	16.20999	0.1728375	0.18348182	3.0671900	20	—	—

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
268641 2006 DR_{116}	15.3	X	321.97187	166.65278	62.03491	14.73322	0.1442392	0.21040382	2.7996278	20	3 3.8	19.1
268642 2006 DV_{119}	15.1	X	333.04909	85.31425	17.13342	14.90377	0.0265029	0.19320732	2.9633776	20	—	—
268643 2006 DR_{126}	16.2	X	192.73565	90.73751	163.77454	10.29622	0.0434862	0.19328636	2.9625697	20	—	—
268644 2006 DA_{132}	15.9	X	6.02707	330.89487	72.10920	4.26294	0.0979779	0.18745337	3.0237129	20	12 29.2	19.7
268645 2006 DS_{133}	15.9	X	32.47273	356.30521	21.76685	4.55704	0.1930977	0.18899456	3.0072521	20	—	—
268646 2006 DD_{141}	16.1	X	227.71176	161.15470	82.70173	3.67208	0.2711377	0.19067667	2.9895398	20	—	—
268647 2006 DS_{146}	16.2	X	317.88325	192.77580	346.55370	10.08997	0.0373277	0.20051326	2.8909505	20	1 6.5	20.3
268648 2006 DK_{156}	16.8	X	249.87171	209.24104	21.08065	1.93262	0.0394671	0.19745931	2.9206822	20	—	—
268649 2006 DN_{175}	15.5	X	239.71196	347.84402	150.47725	10.27601	0.0488185	0.17955724	3.1117219	20	11 6.0	20.1
268650 2006 DC_{189}	16.3	X	122.67176	110.77055	140.55710	2.21379	0.0621824	0.17503613	3.1650768	20	11 8.4	20.9
268651 2006 DG_{192}	15.7	X	72.35743	179.86549	163.14369	9.57086	0.1006524	0.18116822	3.0932477	20	—	—
268652 2006 DT_{203}	14.8	X	137.32730	266.31361	16.64668	21.57529	0.0941149	0.18302750	3.0722636	20	—	—
268653 2006 DT_{212}	16.3	X	82.41012	305.87473	138.94729	5.23696	0.0382318	0.21284841	2.7781505	20	2 19.3	20.0
268654 2006 DA_{215}	15.6	X	151.83341	109.60169	189.92221	10.28837	0.0881307	0.18835883	3.0140149	20	—	—
268655 2006 DW_{215}	15.4	X	143.45541	61.88650	196.64437	9.17936	0.0581823	0.17772604	3.1330597	20	12 8.7	20.2
268656 2006 DS_{216}	15.5	X	97.25136	277.22178	4.92925	4.79236	0.1503898	0.17297442	3.1901772	20	11 23.2	20.6
268657 2006 EB_{2}	15.8	X	344.41551	223.37235	157.37259	10.50642	0.1084415	0.17570901	3.1569911	20	10 30.7	19.8
268658 2006 EG_{6}	16.5	X	64.07997	309.31497	53.17659	1.61223	0.1069935	0.18970480	2.9997415	20	—	—
268659 2006 EL_{19}	15.1	X	196.80699	216.14989	6.37898	16.54450	0.0707997	0.18262336	3.0767945	20	12 22.0	20.0
268660 2006 EX_{20}	16.4	X	286.79189	203.05545	345.70117	6.95875	0.1461965	0.19761418	2.9191561	20	—	—
268661 2006 ES_{22}	16.5	X	166.34563	309.95988	28.63411	2.25566	0.0766931	0.20437488	2.8544189	20	1 25.7	20.7
268662 2006 EW_{29}	15.5	X	115.84379	346.68830	349.72983	10.16458	0.0876423	0.19255243	2.9700929	20	—	—
268663 2006 EE_{36}	16.4	X	278.71412	133.38771	6.68252	9.26063	0.1686855	0.18866363	3.0107678	20	12 10.4	20.2
268664 2006 ED_{43}	15.2	X	238.87602	359.14922	146.73376	18.11291	0.0844958	0.17796579	3.1302453	20	11 11.2	20.0
268665 2006 EC_{58}	15.4	X	97.53135	123.90731	184.46277	11.05434	0.0799189	0.18184355	3.0855845	20	12 20.7	20.2
268666 2006 EC_{60}	16.1	X	287.08199	306.20239	191.22582	10.38463	0.0289338	0.18611133	3.0382313	20	—	—
268667 2006 EQ_{65}	15.5	X	224.75449	358.89942	192.85672	9.89298	0.0614508	0.18264986	3.0764970	20	12 18.2	20.0
268668 2006 EZ_{71}	16.4	X	263.31388	157.26389	358.74056	1.08183	0.0654290	0.18477921	3.0528161	20	12 22.3	20.5
268669 Bunun	16.0	X	256.94217	355.62560	179.06983	10.52028	0.1851704	0.18764087	3.0216982	20	12 20.9	20.2
268670 2006 FS_{7}	16.2	X	230.56302	17.92500	141.12412	1.52393	0.1192781	0.17694021	3.1423293	20	11 7.8	20.7
268671 2006 FP_{10}	16.0	X	268.27795	331.29214	177.23599	10.87929	0.0851420	0.18635593	3.0355722	20	12 17.9	20.2
268672 2006 FT_{14}	15.9	X	277.07475	324.67391	183.53165	9.09259	0.0881771	0.18447035	3.0562227	20	12 27.7	20.0
268673 2006 FF_{15}	15.2	X	268.58038	107.46005	51.76789	9.90764	0.0222140	0.18706944	3.0278486	20	—	—
268674 2006 FJ_{17}	15.6	X	137.95582	271.89429	17.77302	9.42394	0.1155454	0.18066636	3.0989734	20	—	—
268675 2006 FM_{17}	15.8	X	220.25051	310.92281	193.41193	13.28365	0.1454782	0.17407331	3.1767369	20	10 6.5	20.7
268676 2006 FM_{31}	16.2	X	96.59101	184.63088	164.10200	2.20079	0.1044624	0.18805322	3.0172794	20	—	—
268677 2006 FO_{37}	15.2	X	297.74465	138.58960	16.27510	17.73053	0.2199108	0.18950747	3.0018235	20	—	—
268678 2006 FJ_{38}	15.8	X	245.77143	170.91249	13.49081	17.51027	0.0908992	0.18619200	3.0373537	20	—	—
268679 2006 FQ_{43}	15.3	X	25.78332	57.23886	9.49194	11.99454	0.0398849	0.19413036	2.9539768	20	—	—
268680 2006 FM_{44}	15.4	X	200.78320	4.51152	187.63105	12.46461	0.0536984	0.17832407	3.1260511	20	11 23.2	20.1
268681 2006 FF_{48}	15.8	X	327.89804	75.45303	39.13627	11.45821	0.0846025	0.19240639	2.9715957	20	—	—
268682 2006 FO_{50}	14.7	X	162.46964	129.62506	140.39049	27.51243	0.1790177	0.17740382	3.1368524	20	—	—
268683 2006 FF_{52}	15.4	X	191.63964	294.98565	297.68816	15.68147	0.2560268	0.17971884	3.1098563	20	12 14.8	20.9
268684 2006 FJ_{53}	15.9	X	220.21571	138.40256	38.32947	5.54479	0.1013113	0.17652401	3.1472666	20	11 18.4	20.4
268685 2006 FR_{54}	15.9	X	81.85493	142.44823	162.97545	3.74704	0.0610191	0.17333055	3.1858059	20	11 27.5	20.5
268686 Elenaaprile	15.7	X	249.11618	187.69320	351.82794	10.36717	0.0490600	0.18615584	3.0377471	20	—	—
268687 2006 GL_{21}	15.4	X	135.81398	125.74040	192.65204	8.94140	0.1162755	0.18880032	3.0093144	20	—	—
268688 2006 GO_{23}	15.9	X	257.84369	119.05793	38.02692	11.13886	0.1589934	0.18184813	3.0855328	20	12 1.0	20.1
268689 2006 GO_{26}	15.7	X	160.09456	231.51787	73.85391	3.57240	0.1170276	0.18567414	3.0429987	20	—	—
268690 2006 GF_{27}	16.1	X	144.07010	169.46883	129.36970	2.18911	0.1490473	0.18023883	3.1038721	20	—	—
268691 2006 GK_{31}	15.4	X	176.51070	3.61990	218.82503	4.51777	0.1043326	0.17408646	3.1765770	20	11 27.8	20.2
268692 2006 GZ_{40}	14.7	X	270.72654	59.91376	46.79714	23.13364	0.1630557	0.17876186	3.1209451	20	10 23.3	19.0
268693 2006 GN_{42}	15.5	X	210.20312	359.07695	191.68339	17.18692	0.1299639	0.17750558	3.1356534	20	11 23.8	20.5
268694 2006 GK_{46}	15.0	X	211.91073	167.57909	59.29214	9.20769	0.0886578	0.18137801	3.0908621	20	—	—
268695 2006 GO_{48}	16.3	X	161.31540	155.79990	118.55883	0.15681	0.1378038	0.17983977	3.1084620	20	—	—
268696 2006 GS_{50}	15.1	X	222.25144	141.57540	65.12917	24.95708	0.2204652	0.17934935	3.1141260	20	12 11.1	20.0
268697 2006 GP_{51}	15.6	X	148.99737	237.88477	12.09126	4.41002	0.1496130	0.17591409	3.1545370	20	12 2.6	20.8
268698 2006 GA_{52}	15.3	X	158.36541	309.96809	327.19276	15.38230	0.2608313	0.17841093	3.1250363	20	—	—
268699 2006 HW_{4}	16.1	X	74.17602	262.67061	156.10958	2.37917	0.0086647	0.19849610	2.9105031	20	1 5.6	20.0
268700 2006 HP_{6}	15.4	X	158.02401	241.00619	23.01441	11.56053	0.0611865	0.17983304	3.1085395	20	12 30.6	20.2
268701 2006 HG_{12}	15.5	X	331.12858	9.56236	68.11387	11.27274	0.0754641	0.17852403	3.1237163	20	12 16.9	19.6
268702 2006 HJ_{16}	16.5	X	319.61760	280.62348	174.62923	5.54735	0.1174773	0.18125746	3.0922324	20	12 23.0	20.3
268703 2006 HV_{17}	15.7	X	234.73452	116.76839	133.38081	7.74813	0.1553660	0.19183576	2.9774856	20	—	—
268704 2006 HZ_{19}	16.1	X	181.99523	76.11496	200.90977	2.92258	0.0760487	0.18769698	3.0210960	20	—	—
268705 2006 HB_{21}	15.6	X	232.98575	52.15862	78.49385	5.15706	0.0945350	0.17138324	3.2098925	20	10 11.5	20.3
268706 2006 HD_{23}	15.4	X	175.84977	267.97432	45.90248	10.84345	0.1091220	0.19116675	2.9844283	20	1 10.5	20.2
268707 2006 HD_{28}	15.4	X	103.32606	169.07984	162.08157	8.91061	0.1838720	0.17486427	3.1671502	20	—	—
268708 2006 HA_{32}	15.4	X	1.00158	294.56933	154.61666	8.93836	0.0979165	0.18838521	3.0137335	20	—	—
268709 2006 HM_{33}	15.4	X	282.28208	221.61809	206.51763	8.60149	0.1326185	0.16814305	3.2509985	20	9 15.3	19.8
268710 2006 HP_{40}	16.0	X	208.98806	247.20168	17.76287	1.03641	0.0427729	0.18987049	2.9979961	20	—	—
268711 2006 HH_{44}	15.5	X	142.51787	231.60831	58.93472	6.05116	0.1120279	0.17710053	3.1404326	20	—	—
268712 2006 HF_{46}	15.7	X	237.06278	50.35357	100.47896	10.28709	0.0560320	0.17455778	3.1708564	20	11 15.7	20.3
268713 2006 HK_{47}	15.3	X	337.60010	48.64371	47.36357	15.08110	0.0696191	0.18438189	3.0572002	20	—	—
268714 2006 HN_{51}	15.4	X	226.94631	162.64828	35.65825	13.86074	0.1322094	0.17997388	3.1069175	20	12 17.3	20.1
268715 2006 HT_{56}	15.0	X	105.67865	249.09323	52.20002	15.09812	0.1485934	0.17308945	3.1887636	20	12 22.6	20.2
268716 2006 HL_{57}	15.5	X	166.18353	87.00749	147.94327	26.16908	0.2581531	0.17225833	3.1990122	20	12 2.9	21.6
268717 2006 HT_{60}	15.7	X	194.41475	74.30747	167.92185	11.35035	0.1108786	0.18146753	3.0898455	20	—	—
268718 2006 HH_{61}	15.6	X	256.90644	86.23216	27.47015	15.28343	0.1777021	0.17686429	3.1432285	20	10 8.4	20.0
268719 2006 HS_{70}	16.2	X	283.80865	327.11445	161.48393	2.86483	0.0403439	0.18196989	3.0841562	20	12 17.7	20.3
268720 2006 HX_{71}	16.2	X	207.95434	86.22837	156.19248	5.49238	0.0763881	0.18257924	3.0772902	20	—	—

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	m		°	°	°	°		°				
268721 2006 HR_{75}	15.8	X	193.84153	114.90374	116.96429	10.82832	0.1774020	0.17739361	3.1369727	20	12 20.5	20.9
268722 2006 HG_{85}	16.1	X	174.06296	223.33437	31.55493	0.39823	0.1380454	0.18146486	3.0898758	20	12 31.9	21.0
268723 2006 HP_{105}	15.7	X	273.74013	65.21689	104.33297	17.97298	0.1805690	0.18487246	3.0517895	20	—	—
268724 2006 HW_{114}	15.9	X	265.91176	84.00045	40.79799	11.97323	0.1537806	0.17894371	3.1188304	20	11 3.8	20.1
268725 2006 HQ_{135}	16.5	X	256.47796	319.33192	178.69926	3.09671	0.1633345	0.18094006	3.0958475	20	11 7.7	20.6
268726 2006 HV_{137}	15.4	X	149.44850	275.68993	27.15813	10.80443	0.1043897	0.18350886	3.0668888	20	—	—
268727 2006 JK_{51}	15.0	X	227.14600	306.04231	118.49097	11.16158	0.0694368	0.15078596	3.4959250	20	7 14.5	20.1
268728 2006 JX_{52}	15.6	X	85.56869	130.08198	177.53936	3.46093	0.1623964	0.17208638	3.2011428	20	12 13.7	20.6
268729 2006 JF_{56}	17.4	X	196.83350	41.76588	88.18925	23.46796	0.0758029	0.37003571	1.9214996	20	10 13.2	20.2
268730 2006 KU_{5}	15.3	X	68.26029	290.16483	58.72614	12.16802	0.0732090	0.17430741	3.1738920	20	—	—
268731 2006 KQ_{6}	16.0	X	179.61068	200.78717	41.99734	0.48314	0.1318310	0.17620132	3.1511079	20	12 22.5	21.0
268732 2006 KZ_{14}	16.7	X	236.96755	147.97467	108.08420	16.16449	0.1665546	0.25976837	2.4326439	20	—	—
268733 2006 KJ_{17}	15.7	X	292.30048	349.24603	181.11530	10.20076	0.0974772	0.18657497	3.0331959	20	—	—
268734 2006 KR_{37}	15.9	X	217.54943	51.50302	119.59381	13.26429	0.1890577	0.17601763	3.1532998	20	11 5.6	21.1
268735 2006 KY_{53}	15.4	X	250.22871	276.23779	229.11658	14.79484	0.2014446	0.17502937	3.1651583	20	11 1.3	19.9
268736 2006 KC_{63}	15.4	X	313.71595	307.95864	135.82492	10.58035	0.0563489	0.17572865	3.1567559	20	12 2.2	19.7
268737 2006 KB_{73}	15.6	X	140.44703	93.99111	157.41742	9.87591	0.0304682	0.16972160	3.2308092	20	11 26.8	20.5
268738 2006 KQ_{101}	17.2	X	120.60479	26.63097	134.93329	24.82141	0.0534756	0.35168415	1.9877763	20	7 29.5	19.5
268739 2006 KZ_{104}	15.8	X	218.75742	353.57653	182.70880	16.04074	0.1640136	0.17305412	3.1891975	20	11 12.0	20.9
268740 2006 KF_{110}	15.2	X	242.94947	81.90610	30.87675	13.17542	0.1912893	0.17171016	3.2058169	20	9 21.5	20.1
268741 2006 KF_{114}	17.5	X	97.34973	134.46703	177.90578	22.62754	0.0915416	0.38389335	1.8749757	20	—	—
268742 2006 KT_{117}	16.1	X	155.73372	259.47376	24.98308	4.98533	0.1061040	0.17944889	3.1129742	20	—	—
268743 2006 LU_{1}	15.5	X	220.61651	320.25232	238.05502	24.06886	0.3329574	0.17796480	3.1302568	20	11 21.6	20.7
268744 2006 MA_{2}	15.8	X	233.55642	53.17043	179.41895	9.97677	0.0512289	0.18453529	3.0555057	20	—	—
268745 2006 PN_{29}	17.5	X	38.51182	285.69457	327.90934	18.05015	0.0867419	0.35447917	1.9773137	20	8 24.3	19.1
268746 2006 QS_{24}	16.5	X	37.06053	219.01952	152.14705	6.97339	0.1876312	0.29671522	2.2262614	20	—	—
268747 2006 QK_{48}	16.9	X	233.93653	77.82885	349.00611	21.28622	0.3039887	0.26956873	2.3733204	20	7 12.7	21.2
268748 2006 QB_{49}	17.0	X	76.75243	258.63895	356.46889	19.72764	0.0843748	0.35881510	1.9613522	20	10 16.2	19.5
268749 2006 QV_{64}	17.8	X	51.02526	280.17753	151.46392	3.80084	0.1212920	0.31294849	2.1485929	20	—	—
268750 2006 QW_{65}	18.4	X	174.24146	191.94307	143.61066	2.00432	0.0981784	0.32040512	2.1151269	20	1 14.5	20.9
268751 2006 QM_{77}	18.5	X	98.82014	58.71132	322.24100	7.76028	0.0788897	0.31483919	2.1399823	20	—	—
268752 2006 QX_{110}	16.4	X	257.95171	133.30771	354.67073	23.90069	0.1720911	0.28688754	2.2768177	20	11 6.9	19.5
268753 2006 QC_{137}	17.1	X	37.77885	25.69766	331.68740	6.78748	0.1717015	0.29451333	2.2373439	20	—	—
268754 2006 QK_{137}	17.6	X	350.61851	170.35611	252.75133	3.20247	0.1430871	0.29513680	2.2341919	20	—	—
268755 2006 QM_{142}	17.2	X	10.75601	240.45600	166.20173	4.58237	0.2131879	0.29534960	2.2331186	20	—	—
268756 2006 RV_{22}	16.9	X	28.75957	156.04595	222.19455	5.13971	0.1971714	0.29554092	2.2321548	20	—	—
268757 2006 RT_{52}	17.5	X	351.93096	53.43928	16.55717	6.03980	0.1584370	0.29480858	2.2358499	20	—	—
268758 2006 RL_{82}	17.6	X	19.32570	236.80797	193.34259	5.52587	0.0958507	0.30279984	2.1963369	20	—	—
268759 2006 RY_{90}	18.5	X	302.13284	57.90418	0.10329	1.39117	0.1829301	0.28329178	2.2960433	20	10 28.9	19.9
268760 2006 RO_{93}	17.9	X	10.50483	232.55232	228.55396	3.60257	0.0824625	0.30571273	2.1823632	20	—	—
268761 2006 SN_{5}	17.4	X	323.98387	24.42736	32.31935	3.89102	0.2117379	0.28706859	2.2758603	20	12 24.7	18.9
268762 2006 SS_{61}	17.4	X	12.26216	316.27268	72.91448	3.48587	0.1559869	0.29296445	2.2452227	20	—	—
268763 2006 ST_{61}	17.1	X	328.71726	250.88385	155.29137	5.95956	0.1233861	0.28696022	2.2764332	20	12 9.2	19.2
268764 2006 SU_{95}	18.4	X	189.40155	157.88790	167.32478	2.18554	0.1191426	0.31750912	2.1279688	20	1 19.7	21.3
268765 2006 SU_{118}	18.1	X	359.51528	158.26519	252.08321	2.12688	0.1593031	0.29298519	2.2451168	20	—	—
268766 2006 SS_{185}	18.0	X	39.01956	222.21903	186.59857	2.20328	0.1126452	0.30023406	2.2088323	20	—	—
268767 2006 SQ_{263}	17.6	X	320.56614	226.21908	266.27124	4.99091	0.0100808	0.30255672	2.1975133	20	—	—
268768 2006 SS_{279}	17.6	X	66.07029	73.05191	307.48910	3.58242	0.1913797	0.30180329	2.2011691	20	—	—
268769 2006 SH_{313}	17.4	X	23.06687	34.74912	32.54864	4.74265	0.0937245	0.30205005	2.1999701	20	—	—
268770 2006 SQ_{325}	17.9	X	317.98269	268.69132	180.69000	4.49845	0.1281485	0.29155984	2.2524280	20	—	—
268771 2006 SR_{327}	17.6	X	297.41139	298.39564	150.54820	3.16770	0.1032667	0.28739369	2.2741437	20	12 13.4	19.7
268772 2006 SO_{344}	16.8	X	9.56949	186.61375	221.28705	6.56772	0.1201781	0.29519219	2.2339124	20	—	—
268773 2006 SL_{363}	17.4	X	274.62252	278.89566	166.03174	4.12596	0.1360985	0.27885803	2.3203168	20	10 21.1	19.6
268774 2006 SS_{364}	17.0	X	349.28571	18.39173	6.59638	2.70740	0.1145340	0.28308086	2.2971836	20	12 10.9	19.2
268775 2006 SY_{387}	17.3	X	348.26441	358.86252	98.65581	7.84649	0.0720937	0.29956523	2.2121188	20	—	—
268776 2006 TQ_{13}	17.5	X	24.17536	277.69712	109.20794	3.34119	0.1210987	0.29537952	2.2329678	20	—	—
268777 2006 TP_{16}	17.7	X	50.82694	167.69890	206.54559	3.72414	0.1567505	0.29779687	2.2208674	20	—	—
268778 2006 TA_{18}	17.8	X	304.06354	95.78471	107.06121	2.76756	0.0953743	0.31254922	2.1504224	20	—	—
268779 2006 TP_{27}	17.6	X	293.84243	177.30219	35.14895	5.10647	0.0781837	0.31183934	2.1536847	20	—	—
268780 2006 TS_{27}	17.6	X	73.91259	296.22869	32.88360	2.02947	0.0987010	0.29329462	2.2435374	20	—	—
268781 2006 TJ_{46}	17.7	X	328.64035	245.41137	197.25070	2.58490	0.1180231	0.29015187	2.2597087	20	—	—
268782 2006 TB_{49}	17.7	X	312.99159	85.51700	302.81444	3.34902	0.2843456	0.27954643	2.3165059	20	9 22.1	18.6
268783 2006 TF_{58}	17.7	X	4.29722	138.85547	247.90153	2.18108	0.1725307	0.28881612	2.2666707	20	—	—
268784 2006 TK_{68}	17.6	X	302.33208	244.53253	213.00122	2.28443	0.1749426	0.28956485	2.2627617	20	—	—
268785 2006 TP_{85}	17.2	X	229.47891	185.66094	345.55066	3.82699	0.1359169	0.28763371	2.2728783	20	12 13.2	19.9
268786 2006 TZ_{86}	18.0	X	38.04234	44.05641	6.35773	2.12576	0.1016356	0.29918661	2.2139847	20	—	—
268787 2006 TD_{92}	17.2	X	281.65536	260.12322	229.57786	8.06845	0.1148333	0.28911029	2.2651329	20	—	—
268788 2006 TC_{94}	17.9	X	306.12226	81.26738	56.29390	4.79308	0.0943084	0.29724900	2.2235955	20	—	—
268789 2006 TZ_{94}	17.3	X	316.25661	270.44246	259.34920	4.78711	0.0720964	0.30823788	2.1704280	20	—	—
268790 2006 TH_{106}	17.5	X	335.68859	67.34901	346.64872	2.96168	0.1646705	0.28773307	2.2723551	20	—	—
268791 2006 UO_{4}	18.0	X	301.56556	2.06398	145.08241	2.37012	0.1207577	0.30009761	2.2095018	20	—	—
268792 2006 UO_{35}	17.6	X	304.59505	226.86462	254.13948	2.11459	0.1063052	0.29329204	2.2435506	20	—	—
268793 2006 UJ_{40}	17.6	X	266.28716	111.28636	21.29075	2.98489	0.1142632	0.28755672	2.2732840	20	12 20.6	19.7
268794 2006 UU_{103}	17.3	X	283.33631	72.94907	58.94800	6.16342	0.0922367	0.29050634	2.2578702	20	—	—
268795 2006 UB_{129}	17.7	X	278.40259	159.41197	28.01657	7.59703	0.1236670	0.30217942	2.1993421	20	—	—
268796 2006 UJ_{141}	18.1	X	267.95223	43.21209	79.07009	2.87625	0.1371519	0.28318032	2.2966457	20	12 3.9	20.3
268797 2006 UO_{177}	17.3	X	4.39355	298.33509	133.60679	5.04844	0.1147061	0.29768036	2.2214469	20	—	—
268798 2006 UC_{182}	17.4	X	67.08513	241.28342	136.29951	5.40244	0.1946361	0.30031880	2.2084168	20	—	—
268799 2006 UB_{187}	15.7	X	172.53769	24.42197	335.98850	15.49380	0.1120838	0.17640780	3.1486486	20	3 1.1	20.7
268800 2006 US_{192}	17.0	X	17.17693	118.62769	337.11024	7.28062	0.0441458	0.30427681	2.1892237	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		°	°	°	°		°				
268801 2006 UG_{212}	17.4	X	264.56729	160.54340	357.76598	3.66120	0.0916466	0.29066001	2.2570743	20	—	—
268802 2006 US_{223}	17.3	X	87.79910	26.20912	327.71141	6.13466	0.1475734	0.30233425	2.1985912	20	—	—
268803 2006 UJ_{233}	17.1	X	266.86310	246.87369	195.75866	9.33544	0.1710390	0.27770728	2.3267222	20	9 25.7	19.7
268804 2006 UF_{249}	18.4	X	288.62837	229.89426	206.78862	1.60973	0.1584262	0.28198596	2.3031262	20	10 31.8	20.2
268805 2006 UO_{265}	17.5	X	150.12943	354.66754	325.05658	4.69575	0.1461810	0.30766462	2.1731232	20	—	—
268806 2006 UZ_{359}	17.9	X	281.28119	136.84743	84.11501	4.36045	0.0971564	0.31106021	2.1572794	20	—	—
268807 2006 VP_{2}	16.4	X	148.85969	176.82654	264.64374	5.28605	0.0859469	0.25442941	2.4665571	20	5 10.2	20.0
268808 2006 VG_{4}	17.3	X	320.57152	241.48942	290.01098	1.43453	0.0833288	0.30542858	2.1837166	20	—	—
268809 2006 VV_{15}	18.1	X	203.71268	152.63323	333.14124	1.85933	0.1332646	0.27147741	2.3621832	20	9 8.4	21.2
268810 2006 VL_{17}	17.3	X	269.27379	285.22490	281.34469	1.92793	0.1033106	0.30272899	2.1966796	20	—	—
268811 2006 VC_{21}	17.4	X	258.36119	133.57633	31.59200	3.46844	0.0904422	0.29053268	2.2577337	20	—	—
268812 2006 VS_{27}	17.2	X	164.03883	88.92684	234.43376	3.65482	0.2404246	0.31105684	2.1572951	20	1 2.9	20.3
268813 2006 VO_{37}	17.7	X	33.61676	87.70664	291.00002	1.67111	0.1828406	0.29354445	2.2422643	20	—	—
268814 2006 VV_{45}	17.2	X	292.95105	17.76213	56.10435	7.38612	0.0798927	0.28023859	2.3126900	20	11 11.9	19.5
268815 2006 VC_{50}	17.7	X	286.51920	4.41900	47.02435	3.22123	0.2074979	0.27459015	2.3442976	20	9 9.2	19.7
268816 2006 VU_{60}	17.3	X	255.20214	255.52199	251.12501	2.43075	0.0856005	0.28571575	2.2830386	20	12 25.5	19.8
268817 2006 VQ_{68}	17.0	X	257.53291	74.99250	65.18488	8.69972	0.0836544	0.28378585	2.2933776	20	12 19.2	19.4
268818 2006 VB_{70}	17.2	X	288.20470	207.74177	226.31156	2.47706	0.2005228	0.27821229	2.3239057	20	10 18.9	18.8
268819 2006 VH_{75}	16.8	X	329.86450	117.89068	264.04893	5.61819	0.1160330	0.27687210	2.3313989	20	10 28.5	18.9
268820 2006 VP_{98}	16.0	X	176.59889	306.64110	22.49376	5.03251	0.1051897	0.16833440	3.2485343	20	1 31.9	21.2
268821 2006 VT_{99}	17.2	X	353.15103	125.25780	272.93764	2.55313	0.1601315	0.28688495	2.2768314	20	—	—
268822 2006 VQ_{101}	16.4	X	269.84891	0.94343	57.89803	8.34207	0.2261722	0.27141621	2.3625383	20	8 20.9	19.2
268823 2006 VT_{111}	16.8	X	264.05188	71.32794	35.71472	7.76130	0.0625532	0.28004043	2.3137809	20	11 13.5	19.4
268824 2006 VY_{111}	17.4	X	296.82275	115.11528	12.12803	4.02266	0.0805798	0.29001040	2.2604435	20	—	—
268825 2006 VP_{119}	17.7	X	303.49410	245.24734	233.91701	2.98189	0.1123262	0.28980405	2.2615164	20	—	—
268826 2006 VS_{144}	17.1	X	82.11896	327.43436	8.61741	8.65672	0.2281694	0.29735007	2.2230916	20	—	—
268827 2006 VF_{150}	17.8	X	284.81924	90.95298	58.09328	5.80687	0.0572134	0.29526087	2.2335660	20	—	—
268828 2006 VD_{172}	16.8	X	279.22942	327.38213	98.59788	7.46325	0.0945109	0.27063469	2.3670844	20	10 8.4	19.5
268829 2006 WN_{10}	17.6	X	267.57254	91.01612	356.29512	4.12813	0.2080121	0.27625627	2.3348624	20	9 27.6	20.2
268830 2006 WH_{11}	17.2	X	245.28849	193.30971	296.01716	4.37566	0.2509580	0.27680012	2.3318031	20	10 15.1	20.2
268831 2006 WM_{34}	17.7	X	224.60846	335.09943	186.94074	4.16154	0.0952062	0.28245672	2.3005664	20	11 29.9	20.4
268832 2006 WL_{39}	17.5	X	233.31069	301.56088	175.13786	2.20069	0.1286565	0.27430832	2.3459031	20	10 3.1	20.4
268833 2006 WA_{60}	17.5	X	66.73613	213.12853	163.19520	4.42122	0.1439726	0.29833556	2.2181932	20	—	—
268834 2006 WF_{68}	17.1	X	353.88529	264.51991	120.96406	4.05923	0.2342062	0.28477423	2.2880680	20	—	—
268835 2006 WY_{85}	16.9	X	268.79130	247.39344	228.88192	6.07262	0.0659911	0.28098248	2.3086064	20	12 5.1	19.4
268836 2006 WY_{100}	17.0	X	241.63738	196.19067	286.09848	4.49373	0.1782338	0.27703398	2.3304906	20	10 11.9	19.9
268837 2006 WS_{102}	17.8	X	69.63965	302.34838	50.58248	0.70560	0.1535059	0.29409690	2.2394554	20	—	—
268838 2006 WR_{103}	17.3	X	247.96802	354.56046	77.38005	2.32338	0.1606604	0.26938896	2.3743761	20	8 16.0	20.4
268839 2006 WN_{109}	17.6	X	250.40991	16.46585	82.69374	2.55245	0.1506129	0.27366804	2.3495607	20	9 29.6	20.3
268840 2006 WF_{126}	17.5	X	256.26945	119.92113	335.40121	5.30558	0.2015111	0.27486630	2.3427272	20	9 21.4	20.2
268841 2006 WN_{127}	15.7	X	66.19670	140.45121	328.12848	32.58231	0.2061744	0.23066415	2.6331927	20	3 5.7	19.0
268842 2006 WK_{128}	17.8	X	320.48853	132.20557	297.56213	1.61198	0.0713023	0.28416607	2.2913314	20	12 23.6	20.1
268843 2006 WA_{153}	17.0	X	137.46048	122.02815	50.46438	3.11767	0.1315377	0.25842898	2.4410420	20	9 1.8	20.6
268844 2006 WF_{158}	16.9	X	261.40424	81.17715	37.77400	7.12171	0.0553121	0.28160340	2.3052116	20	11 27.6	19.4
268845 2006 WE_{174}	17.8	X	228.99261	274.00136	204.12055	2.02865	0.1659269	0.27252511	2.3561252	20	9 23.2	20.9
268846 2006 WX_{198}	17.5	X	156.44301	161.98841	10.58779	2.56564	0.1287926	0.26223142	2.4173873	20	9 20.2	21.0
268847 2006 XZ_{4}	17.9	X	22.35315	49.97115	337.53978	2.61809	0.1393869	0.28881682	2.2666670	20	—	—
268848 2006 XL_{8}	15.8	X	193.64655	84.74245	268.59515	7.00290	0.1515326	0.24372610	2.5382517	20	3 5.2	20.0
268849 2006 XB_{15}	17.4	X	350.60323	198.89062	207.23040	2.12918	0.1007565	0.28454479	2.2892978	20	—	—
268850 2006 XE_{23}	17.1	X	20.46808	29.76782	354.45307	7.82310	0.1173691	0.28785284	2.2717247	20	—	—
268851 2006 XF_{28}	17.1	X	228.19273	55.39554	78.25410	3.06064	0.1489127	0.27272645	2.3549654	20	10 17.5	20.2
268852 2006 XT_{28}	17.4	X	251.28344	7.53481	97.82575	5.15849	0.1199752	0.27489261	2.3425777	20	10 16.4	20.2
268853 2006 XX_{42}	17.5	X	203.04588	59.93245	107.82931	2.31727	0.1250020	0.27154042	2.3618178	20	11 4.3	20.8
268854 2006 XZ_{47}	17.5	X	258.54696	181.93157	231.41165	4.37938	0.2193829	0.26830485	2.3807678	20	7 23.2	20.6
268855 2006 XM_{49}	17.2	X	19.00342	14.71192	274.92396	3.03486	0.0573728	0.26075718	2.4264901	20	8 28.8	20.1
268856 2006 XY_{59}	17.4	X	186.56643	98.30276	63.14580	3.65034	0.1164250	0.26748255	2.3856446	20	10 9.5	20.7
268857 2006 XC_{62}	17.1	X	238.56533	346.32935	111.67931	2.53479	0.1509457	0.26821161	2.3813195	20	9 10.8	20.1
268858 2006 XV_{64}	17.3	X	294.20242	159.39313	248.26897	3.94734	0.1255643	0.27465746	2.3439146	20	9 27.0	19.7
268859 2006 XX_{67}	17.7	X	66.22428	313.21925	98.90119	4.90447	0.0983594	0.30135038	2.2033740	20	—	—
268860 2006 XY_{68}	17.6	X	210.65484	154.90875	275.60297	1.63507	0.1465584	0.25792971	2.4441910	20	7 1.9	21.1
268861 2006 XC_{69}	16.3	X	151.75495	106.35663	55.55455	10.65443	0.0906656	0.26059243	2.4275128	20	9 6.9	20.0
268862 2006 YO_{2}	17.3	X	128.19618	310.31124	236.07817	1.65202	0.1276003	0.26033232	2.4291294	20	9 7.9	21.1
268863 2006 YJ_{6}	17.6	X	205.02118	271.45110	273.95230	3.24256	0.1140851	0.27927693	2.3179960	20	12 1.6	20.6
268864 2006 YL_{17}	17.0	X	209.72109	9.54454	112.85580	2.87644	0.1283420	0.26457489	2.4030915	20	9 11.9	20.3
268865 2006 YC_{19}	17.0	X	192.57692	82.47757	56.76020	2.94387	0.1306135	0.26411340	2.4058900	20	9 15.3	20.5
268866 2006 YY_{34}	17.7	X	200.54796	55.95454	32.90604	3.22005	0.1454437	0.25763884	2.4460302	20	7 16.6	21.4
268867 2006 YL_{38}	16.9	X	194.97405	211.64480	312.94604	4.97810	0.1167313	0.26845452	2.3798828	20	10 18.9	20.3
268868 2006 YF_{45}	17.5	X	161.97696	57.81525	120.61100	2.11514	0.1224882	0.26992017	2.3712599	20	10 5.2	21.0
268869 2006 YN_{49}	17.0	X	228.67597	114.70841	310.10264	5.95829	0.1522557	0.25852140	2.4404602	20	7 13.8	20.5
268870 2006 YC_{53}	17.7	X	164.36954	60.02036	140.85148	2.52611	0.1564303	0.26670379	2.3902863	20	11 3.3	21.4
268871 2007 AB_{10}	17.2	X	134.50333	224.59184	295.23226	1.36512	0.1219172	0.25568959	2.4584461	20	8 10.5	20.7
268872 2007 AJ_{10}	17.2	X	225.94359	301.87145	131.64800	2.13090	0.1627760	0.25966862	2.4332668	20	7 20.8	20.5
268873 2007 AK_{11}	17.1	X	290.01195	80.89789	301.82427	1.14326	0.2226758	0.26496123	2.4007550	20	7 26.4	19.5
268874 2007 AW_{17}	17.6	X	160.40030	226.97464	358.23810	6.86113	0.0541597	0.27647321	2.3336408	20	12 5.7	20.9
268875 2007 AZ_{20}	16.7	X	51.99412	49.11094	134.41091	4.41608	0.0956349	0.24024642	2.5627019	20	5 25.1	19.7
268876 2007 AU_{21}	17.6	X	214.57974	104.06247	12.26270	2.69035	0.1418315	0.26480933	2.4016729	20	9 7.2	21.1
268877 2007 AW_{23}	17.2	X	184.63074	302.04818	166.97389	3.21350	0.1412259	0.25721236	2.4487333	20	7 25.8	21.0
268878 2007 AZ_{23}	16.4	X	81.04081	303.33855	280.29325	4.90225	0.1095126	0.25529529	2.4609768	20	8 31.3	19.7
268879 2007 AK_{25}	16.1	X	320.21792	240.41263	303.36745	6.80805	0.1589207	0.22211321	2.7003483	20	—	—
268880 2007 AD_{31}	17.5	X	198.69307	310.03020	182.26795	1.88526	0.1154917	0.26275233	2.4141912	20	9 12.2	20.9

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
268881 2007 BY_2	17.3	X	309.51761	30.25024	336.58200	5.58189	0.0845665	0.26241788	2.4162420	20	8 28.1	19.9
268882 2007 BQ_3	17.2	X	241.34164	312.12050	123.63978	3.09955	0.1355367	0.26340662	2.4101918	20	8 15.4	20.4
268883 2007 BN_8	17.4	X	243.63642	347.14596	128.38695	2.20244	0.1326371	0.27063341	2.3670918	20	10 15.1	20.3
268884 2007 BU_8	17.3	X	189.94194	39.12167	92.15025	3.30959	0.1318448	0.26240151	2.4163425	20	9 1.8	20.8
268885 2007 BH_{10}	16.8	X	235.50315	79.09470	341.20546	5.60807	0.1143383	0.25779807	2.4450229	20	7 20.9	20.1
268886 2007 BV_{13}	17.3	X	164.50947	45.61606	95.00671	2.56345	0.1327179	0.25726389	2.4484063	20	8 17.7	21.1
268887 2007 BS_{18}	17.3	X	214.31801	50.81595	57.75932	1.90453	0.1414766	0.26062653	2.4273010	20	8 27.4	20.8
268888 2007 BS_{26}	16.9	X	111.40707	282.19117	314.79981	1.71060	0.1576669	0.26374957	2.4081020	20	10 28.1	20.5
268889 2007 BW_{26}	17.2	X	255.88783	68.56796	321.40722	1.79939	0.1680849	0.25818257	2.4425948	20	6 25.7	20.5
268890 2007 BM_{29}	17.6	X	192.12863	36.61153	118.41058	3.37313	0.1117594	0.26660509	2.3908762	20	10 7.7	21.1
268891 2007 BY_{29}	16.8	X	184.73985	103.29010	119.93148	4.95012	0.0242606	0.27751993	2.3277693	20	—	—
268892 2007 BD_{30}	16.6	X	288.71911	344.23041	118.34426	7.36713	0.0668446	0.27555513	2.3388213	20	12 15.9	19.2
268893 2007 BY_{31}	17.2	X	182.11854	159.69283	346.75462	2.49237	0.1493202	0.26347012	2.4098044	20	9 11.1	20.8
268894 2007 BG_{40}	16.4	X	110.44111	308.09599	307.80835	8.16041	0.2375373	0.26597351	2.3946597	20	11 21.9	20.6
268895 2007 BK_{41}	17.7	X	143.45598	112.73616	140.92212	2.60916	0.1483758	0.27430793	2.3459053	20	12 19.8	21.2
268896 2007 BS_{41}	17.0	X	155.38372	255.43545	307.08036	3.89508	0.1541033	0.26553418	2.3973002	20	10 25.0	20.8
268897 2007 BO_{42}	17.0	X	205.64659	324.57532	164.11666	2.26262	0.1748882	0.26373333	2.4082008	20	9 9.9	20.5
268898 2007 BT_{49}	16.9	X	159.29723	89.11680	130.19662	5.82424	0.0994667	0.27024943	2.3693335	20	11 25.3	20.4
268899 2007 BY_{49}	17.4	X	173.24165	299.40481	235.49769	1.38652	0.1260585	0.26383174	2.4076020	20	10 9.7	20.8
268900 2007 BF_{56}	16.5	X	223.97626	333.12407	88.79713	4.31109	0.1641104	0.25639021	2.4539654	20	7 3.0	20.1
268901 2007 BA_{57}	17.1	X	142.06325	123.29683	53.92770	3.14188	0.1480875	0.25817349	2.4426521	20	9 12.9	20.9
268902 2007 BH_{58}	17.0	X	153.08119	257.40730	315.42961	3.72152	0.1876302	0.26631639	2.3926038	20	11 4.4	21.0
268903 2007 BQ_{74}	17.6	X	155.13077	199.21547	24.64921	1.00736	0.1618519	0.26649733	2.3915207	20	11 21.8	21.3
268904 2007 BX_{77}	17.1	X	99.83622	261.83550	332.94506	5.87068	0.1124826	0.25968476	2.4331660	20	10 8.1	20.6
268905 2007 CP	16.7	X	165.61977	300.02760	150.45602	14.70861	0.2202292	0.25069164	2.4910139	20	6 15.8	21.2
268906 2007 CR_3	16.4	X	215.79852	186.03828	306.55363	5.76111	0.0815395	0.26653209	2.3913128	20	10 4.3	19.7
268907 2007 CW_3	16.9	X	222.06161	307.51281	149.07236	1.24186	0.1383638	0.26173588	2.4204375	20	8 19.5	20.1
268908 2007 CW_6	17.4	X	159.80052	84.25273	119.38576	2.03005	0.1330469	0.26842316	2.3800681	20	11 3.5	21.0
268909 2007 CQ_{10}	17.5	X	141.37612	205.09188	322.96718	0.57062	0.1221516	0.25627071	2.4547282	20	8 28.8	21.3
268910 2007 CS_{11}	16.7	X	206.28946	199.56988	253.05844	5.06156	0.1062183	0.25717242	2.4489868	20	7 28.4	20.3
268911 2007 CO_{13}	17.1	X	192.78870	230.74458	288.01933	2.09367	0.1116720	0.26667488	2.3904590	20	10 10.5	20.4
268912 2007 CS_{15}	17.1	X	223.05835	91.68554	359.51885	5.67581	0.0844603	0.26044753	2.4284131	20	8 21.6	20.3
268913 2007 CO_{17}	17.3	X	259.44760	18.33911	355.41878	5.21429	0.1145689	0.25103625	2.4887337	20	6 14.9	20.7
268914 2007 CM_{19}	17.3	X	159.18424	68.18089	123.69043	2.57658	0.1238216	0.26437806	2.4042840	20	10 19.0	20.8
268915 2007 CF_{23}	17.0	X	283.42406	288.04730	153.03233	5.26696	0.0866638	0.27320194	2.3522322	20	11 5.6	19.6
268916 2007 CB_{24}	17.6	X	99.50629	1.99921	209.46083	1.80986	0.1315248	0.25394969	2.4696624	20	9 10.1	21.1
268917 2007 CD_{27}	17.3	X	182.86654	149.12003	337.86311	1.91284	0.1443567	0.25711345	2.4493613	20	8 17.4	21.1
268918 2007 CW_{37}	17.1	X	54.27527	193.59436	347.51680	2.80994	0.0917531	0.24119478	2.5559799	20	5 22.6	20.0
268919 2007 CO_{41}	17.2	X	1.91349	275.11126	135.89725	5.28190	0.1478307	0.28439558	2.2900985	20	—	—
268920 2007 CH_{43}	16.3	X	171.88231	253.83608	269.42493	9.56968	0.1819781	0.26193675	2.4191999	20	9 16.0	20.5
268921 2007 CW_{44}	17.0	X	100.86620	3.82597	231.66728	1.66598	0.1679882	0.25907027	2.4370120	20	10 16.5	20.8
268922 2007 CK_{45}	16.6	X	178.19747	13.79179	91.27577	7.53862	0.0812091	0.25288101	2.4766154	20	7 16.2	20.1
268923 2007 CT_{45}	16.6	X	154.65840	185.20045	265.22775	5.16401	0.0692367	0.24488933	2.5302075	20	5 28.7	20.2
268924 2007 CO_{51}	16.9	X	273.85227	320.88548	103.93262	2.25046	0.1659005	0.26646143	2.3917355	20	9 11.9	19.4
268925 2007 CP_{51}	16.6	X	107.81809	61.26697	171.44889	10.02256	0.1144835	0.26014773	2.4302784	20	10 18.9	20.2
268926 2007 CA_{56}	17.4	X	262.39536	245.68746	211.58797	1.50673	0.1662424	0.26984337	2.3717098	20	10 9.9	19.8
268927 2007 DR_1	16.8	X	144.80506	268.22673	317.75594	7.82189	0.2272949	0.26669756	2.3903235	20	11 11.7	21.0
268928 2007 DE_4	17.0	X	206.15928	235.71422	227.13261	3.68266	0.1053271	0.25567063	2.4585676	20	8 10.9	20.5
268929 2007 DA_9	17.7	X	62.59667	265.26653	1.73124	1.85849	0.1818220	0.25403551	2.4691061	20	10 17.6	21.2
268930 2007 DT_9	15.9	X	17.74382	256.65520	324.66569	27.96435	0.1290242	0.23595792	2.5936598	20	5 10.7	19.6
268931 2007 DE_{10}	16.6	X	296.32672	329.18637	0.93713	3.40332	0.1851829	0.24326295	2.5414724	20	5 24.3	19.6
268932 2007 DJ_{10}	17.0	X	353.37954	101.20182	156.20173	9.74484	0.1743237	0.23628779	2.5912453	20	5 30.4	19.6
268933 2007 DT_{13}	16.7	X	260.32083	45.08957	317.52422	10.45765	0.1699757	0.25472935	2.4646205	20	5 21.6	20.3
268934 2007 DX_{13}	17.6	X	334.32460	353.51078	17.12162	3.99672	0.0691719	0.26836096	2.3804359	20	10 17.0	20.2
268935 2007 DW_{20}	16.4	X	204.92142	41.62971	341.98379	14.16731	0.0566428	0.23810892	2.5780160	20	4 22.5	20.3
268936 2007 DV_{21}	17.1	X	128.17571	76.54674	15.45734	3.17175	0.2020453	0.23961866	2.5671759	20	5 12.4	21.0
268937 2007 DX_{23}	17.3	X	341.07671	275.49561	335.25601	1.54414	0.1424958	0.23448611	2.6045016	20	4 23.6	19.9
268938 2007 DD_{27}	17.0	X	198.03381	242.87441	151.74104	12.85420	0.1784093	0.24090883	2.5580021	20	5 6.9	21.4
268939 2007 DC_{28}	16.3	X	69.90266	275.49339	0.75124	8.74344	0.0788347	0.25891266	2.4380009	20	10 23.4	19.6
268940 2007 DS_{28}	17.1	X	136.74547	334.26233	121.13862	3.00921	0.1709974	0.24074187	2.5591847	20	5 23.9	21.0
268941 2007 DN_{33}	16.9	X	346.40915	139.80002	152.85251	7.24915	0.1584921	0.24235404	2.5478227	20	7 8.2	19.4
268942 2007 DE_{37}	16.1	X	308.34538	288.05836	351.25994	13.84118	0.1558780	0.23068259	2.6330524	20	4 3.4	19.4
268943 2007 DF_{38}	17.1	X	127.83919	110.52485	340.09364	5.28154	0.1224329	0.23598580	2.5934555	20	5 1.0	20.9
268944 2007 DH_{39}	17.7	X	111.90689	37.83169	150.25698	6.57455	0.2072119	0.24800749	2.5089549	20	8 30.2	21.5
268945 2007 DR_{42}	16.6	X	103.57316	358.02342	116.58679	5.52269	0.1053190	0.24716098	2.5146803	20	5 5.6	20.0
268946 2007 DQ_{44}	17.1	X	242.84651	255.75637	185.58637	2.93027	0.1492910	0.26204412	2.4185390	20	8 21.6	20.2
268947 2007 DU_{44}	16.2	X	31.03132	152.35119	60.44720	17.78236	0.2864480	0.23173006	2.6251118	20	6 27.5	18.7
268948 2007 DS_{46}	17.6	X	318.36080	307.95834	126.66878	5.97600	0.0566987	0.27877454	2.3207800	20	12 24.5	20.2
268949 2007 DZ_{49}	17.2	X	136.67572	68.55846	152.74888	1.86548	0.1345003	0.26321256	2.4113762	20	11 2.2	20.9
268950 2007 DJ_{51}	16.8	X	34.09964	262.87093	325.39413	5.93888	0.1435642	0.24123214	2.5557161	20	7 6.4	19.6
268951 2007 DW_{53}	16.6	X	135.94607	106.86541	349.23880	15.28822	0.1074057	0.23740287	2.5831249	20	5 11.8	20.7
268952 2007 DG_{55}	17.1	X	203.56363	272.23234	165.87342	6.46846	0.1779726	0.25313171	2.4749799	20	7 2.2	21.1
268953 2007 DL_{74}	16.6	X	222.93891	4.28228	345.95438	5.18244	0.1025782	0.23377640	2.6097702	20	4 2.8	20.4
268954 2007 DU_{76}	16.9	X	195.56721	173.40879	14.56748	6.87526	0.0730461	0.26885132	2.3775406	20	11 25.1	20.2
268955 2007 DS_{77}	17.1	X	100.42403	178.86706	315.73700	5.39615	0.2320585	0.23998356	2.5645729	20	6 12.1	20.9
268956 2007 DU_{78}	16.7	X	152.02829	246.53979	145.18543	12.93364	0.2451693	0.23382030	2.6094435	20	3 27.4	21.2
268957 2007 DQ_{94}	16.7	X	146.78809	172.12652	12.65910	7.65586	0.1751628	0.25639780	2.4539169	20	9 26.3	20.7
268958 2007 DD_{98}	17.2	X	237.35952	312.23211	125.21012	2.89468	0.1570946	0.26050283	2.4280693	20	8 9.3	20.3
268959 2007 DG_{98}	16.5	X	304.80636	140.45249	138.46801	9.74831	0.0934241	0.23657147	2.5891734	20	4 15.7	19.9
268960 2007 DV_{105}	16.7	X	54.24513	62.48978	125.97114	3.79685	0.0459054	0.23734949	2.5835122	20	5 28.2	19.9

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	m		°	°	°	°		°				
268961 2007 DR_{109}	16.8	X	324.37696	44.56000	192.87575	2.13197	0.1450731	0.22554410	2.6728940	20	3 7.9	20.0
268962 2007 EL_{6}	17.2	X	322.36738	115.80397	169.28029	5.23157	0.1758139	0.23718904	2.5846772	20	5 7.2	20.0
268963 2007 EP_{11}	17.1	X	61.99626	194.44489	351.30981	4.32694	0.1767820	0.23811847	2.5779470	20	6 25.4	20.3
268964 2007 EB_{16}	17.4	X	172.44578	345.82243	165.60158	5.16029	0.0596273	0.25668928	2.4520589	20	9 10.9	20.6
268965 2007 EL_{17}	16.8	X	163.10097	191.91314	175.06339	7.14945	0.1308047	0.22384163	2.6864297	20	2 25.6	20.9
268966 2007 EJ_{18}	16.4	X	25.76294	332.29033	174.74866	5.37804	0.0564792	0.22114106	2.7082565	20	2 19.5	19.8
268967 2007 EY_{20}	16.9	X	38.78279	242.84934	10.27175	4.49622	0.1799153	0.24353802	2.5395584	20	8 27.4	19.8
268968 2007 EY_{23}	17.0	X	201.24238	333.35859	117.12452	3.76914	0.1813029	0.24965123	2.4979299	20	7 16.2	21.0
268969 2007 EZ_{24}	16.4	X	44.04500	147.21615	14.36314	11.67664	0.1217603	0.22759221	2.6568342	20	4 11.9	19.2
268970 2007 EC_{25}	15.2	X	119.23486	28.68308	189.43339	9.45579	0.0483973	0.17778923	3.1323173	20	9 23.8	19.8
268971 2007 ED_{28}	16.8	X	29.78521	16.05158	139.41251	5.72332	0.1132896	0.22702995	2.6612190	20	3 11.5	19.8
268972 2007 EQ_{31}	16.8	X	338.83729	138.63458	140.19244	8.57101	0.1732687	0.24077694	2.5589362	20	5 31.6	19.3
268973 2007 EZ_{31}	17.2	X	322.61118	244.33654	31.39396	2.67460	0.1447530	0.23468216	2.6030509	20	4 26.9	20.1
268974 2007 EQ_{40}	16.0	X	259.87176	111.30913	234.56900	2.73900	0.2428236	0.23961428	2.5672072	20	4 23.1	19.9
268975 2007 EK_{42}	16.4	X	325.12707	257.54236	5.38735	8.54121	0.0627266	0.23172877	2.6251215	20	4 21.9	19.6
268976 2007 EG_{45}	15.8	X	235.30090	13.10441	11.75472	15.18580	0.1702614	0.23951259	2.5679337	20	5 21.5	20.0
268977 2007 EM_{52}	17.1	X	98.88520	179.47099	331.97025	4.69512	0.1485961	0.24038199	2.5617383	20	6 22.8	20.7
268978 2007 EW_{53}	15.8	X	102.16633	237.54388	196.72644	14.98166	0.0818920	0.22013262	2.7165213	20	3 4.7	19.6
268979 2007 EG_{54}	16.6	X	4.00224	157.42975	40.31781	6.28537	0.0193010	0.22387362	2.6861738	20	3 29.5	20.1
268980 2007 EF_{65}	16.9	X	91.99329	34.82043	80.26693	3.10974	0.0090731	0.23002156	2.6380946	20	4 6.4	20.3
268981 2007 EU_{67}	16.5	X	233.57903	150.25063	154.57307	5.24852	0.1380869	0.22081837	2.7108943	20	2 17.9	20.8
268982 2007 EK_{69}	16.9	X	137.50822	16.12934	25.21838	6.35252	0.0631176	0.22409785	2.6843816	20	3 8.5	20.7
268983 2007 EO_{70}	16.6	X	37.20868	15.24419	160.75227	8.16762	0.1465678	0.23043987	2.6349010	20	4 27.3	19.4
268984 2007 EY_{78}	16.6	X	40.87755	225.56312	341.49166	11.20701	0.1291157	0.23668655	2.5883341	20	6 12.9	19.8
268985 2007 EH_{80}	16.5	X	270.84977	88.40772	188.99121	5.70678	0.0513212	0.22265645	2.6959543	20	3 2.3	20.1
268986 2007 EC_{83}	16.2	X	139.00158	11.33518	304.79341	4.54518	0.0152841	0.21212933	2.7844253	20	—	—
268987 2007 EG_{87}	16.4	X	15.46971	59.16658	167.50366	6.10361	0.2408653	0.23091941	2.6312519	20	6 5.7	18.5
268988 2007 EC_{89}	16.9	X	335.09870	176.96547	112.51673	3.28811	0.1203609	0.24347067	2.5400267	20	6 12.7	19.4
268989 2007 EM_{90}	17.6	X	16.87423	97.51659	175.81727	3.36112	0.1455473	0.24431579	2.5341658	20	8 10.5	20.1
268990 2007 EG_{91}	16.2	X	136.97887	331.19920	111.82845	13.79134	0.2390331	0.23891040	2.5722471	20	5 17.2	20.7
268991 2007 EE_{98}	16.5	X	256.09920	152.61066	166.00645	10.47991	0.0322327	0.23169381	2.6253856	20	4 11.6	20.1
268992 2007 EZ_{98}	16.7	X	306.98741	114.54471	160.18044	8.51001	0.1883410	0.22859276	2.6490759	20	3 27.3	20.0
268993 2007 ED_{101}	17.2	X	139.09014	10.78266	96.22766	3.64516	0.1727164	0.24105768	2.5569490	20	6 9.7	21.3
268994 2007 EE_{101}	16.7	X	343.31732	189.01272	63.16505	4.67344	0.1020037	0.23280138	2.6170520	20	5 5.2	19.5
268995 2007 ER_{101}	16.0	X	232.67101	136.35748	155.14856	9.25263	0.2721775	0.21258661	2.7804309	20	1 27.2	21.0
268996 2007 EG_{105}	17.1	X	135.45958	48.26920	13.67839	1.97880	0.0567625	0.22949173	2.6421533	20	3 28.9	20.8
268997 2007 EJ_{105}	16.7	X	283.29316	285.82898	6.79186	4.27864	0.1446593	0.22867503	2.6484405	20	3 24.9	20.2
268998 2007 ES_{108}	16.3	X	321.26064	168.33257	97.64916	3.29175	0.1599968	0.22821343	2.6520106	20	4 10.9	19.4
268999 2007 EL_{109}	16.6	X	83.11809	146.89454	28.66750	9.55083	0.0712093	0.23846407	2.5754557	20	6 23.6	20.1
269000 2007 EL_{113}	16.8	X	334.23680	219.51006	121.66733	4.84891	0.0761409	0.25671151	2.4519174	20	9 3.0	19.4
269001 2007 EQ_{115}	15.8	X	51.85815	195.70547	143.65921	5.46441	0.1538976	0.18548572	3.0450591	20	12 17.9	20.2
269002 2007 EP_{116}	16.1	X	4.45652	128.00559	42.86276	10.74269	0.0592770	0.21939181	2.7226331	20	2 26.3	19.7
269003 2007 EX_{118}	16.4	X	57.34894	62.83852	36.39745	6.96760	0.0921653	0.21733824	2.7397565	20	2 11.1	19.8
269004 2007 EO_{119}	16.3	X	325.52844	169.78385	72.53595	3.46482	0.0432617	0.22483069	2.6785452	20	4 1.6	19.6
269005 2007 EP_{125}	16.8	X	116.69230	229.06415	220.98988	4.68420	0.3181226	0.23583992	2.5945249	20	5 10.9	21.2
269006 2007 EV_{128}	17.2	X	103.98108	156.27383	357.04649	1.48465	0.0814040	0.24188116	2.5511423	20	6 22.5	20.5
269007 2007 EX_{130}	17.5	X	124.36124	298.15430	172.18501	3.44618	0.1680033	0.23915618	2.5704844	20	5 30.4	21.5
269008 2007 EM_{136}	16.8	X	103.75670	132.17628	6.25697	7.84421	0.1541351	0.23866908	2.5739807	20	6 10.6	20.6
269009 2007 EN_{137}	17.1	X	93.04039	346.17413	288.19561	1.44222	0.1532427	0.26344397	2.4099639	20	11 26.3	20.8
269010 2007 EU_{137}	16.0	X	358.18188	172.09617	25.36049	9.60983	0.1117866	0.22637085	2.6663821	20	3 16.8	19.0
269011 2007 EU_{138}	17.1	X	72.62665	253.82737	1.63048	2.35576	0.1497309	0.25659878	2.4526354	20	10 10.3	20.4
269012 2007 ET_{169}	16.5	X	77.00557	3.86362	50.99865	3.03702	0.0688937	0.21068289	2.7971551	20	1 9.3	20.1
269013 2007 EW_{180}	16.5	X	326.90065	37.73537	216.28085	4.35962	0.0816892	0.22719338	2.6599426	20	4 12.2	19.6
269014 2007 EX_{182}	16.9	X	99.36633	173.71867	58.24126	11.08535	0.0942901	0.25766514	2.4458638	20	10 9.4	20.5
269015 2007 EG_{199}	15.9	X	0.40535	113.04562	107.09221	30.51503	0.2893495	0.22705011	2.6610614	20	4 30.7	18.8
269016 2007 EQ_{200}	16.4	X	36.44277	125.31667	57.85892	6.83060	0.1369127	0.23020237	2.6367130	20	5 3.4	19.1
269017 2007 EL_{205}	15.2	X	351.87715	338.83795	22.87178	21.99518	0.1540061	0.18098681	3.0953143	20	10 17.9	18.8
269018 2007 EX_{207}	17.2	X	273.34510	69.57655	201.63751	2.09343	0.1129893	0.21933557	2.7230984	20	2 19.6	21.2
269019 2007 EU_{209}	15.4	X	19.08384	184.91666	30.72272	33.90981	0.1553607	0.22816944	2.6523514	20	5 7.2	18.4
269020 2007 EM_{213}	16.8	X	137.72879	51.79003	68.39106	6.02572	0.2167879	0.24161554	2.5530117	20	6 27.9	21.1
269021 2007 EQ_{213}	16.9	X	77.19189	312.26629	177.78237	3.16801	0.0114055	0.22963159	2.6410804	20	4 5.7	20.3
269022 2007 EU_{213}	17.1	X	281.70185	11.88741	303.28253	0.50716	0.0403053	0.23760838	2.5816352	20	5 6.7	20.4
269023 2007 EF_{219}	17.1	X	329.76081	262.68357	38.25061	3.73126	0.0531449	0.23739447	2.5831858	20	6 25.5	20.2
269024 2007 EW_{219}	16.6	X	73.02839	48.61134	24.72321	6.56847	0.0332730	0.21356117	2.7719657	20	1 24.4	20.3
269025 2007 ER_{222}	16.1	X	0.23839	344.13745	205.27990	10.62347	0.0583375	0.22494497	2.6776380	20	3 6.2	19.5
269026 2007 FN_{2}	16.4	X	68.85672	59.40358	100.67616	12.27389	0.1491413	0.23466794	2.6031561	20	5 28.0	19.7
269027 2007 FP_{4}	16.7	X	243.61829	117.24584	217.26359	1.73128	0.0116597	0.22982482	2.6395999	20	4 16.6	20.2
269028 2007 FH_{7}	16.9	X	140.36854	41.10365	347.50222	13.03415	0.2694710	0.22792644	2.6542363	20	3 12.2	21.2
269029 2007 FZ_{9}	15.9	X	338.69187	136.17402	146.12847	12.51609	0.2818877	0.22960449	2.6412882	20	5 25.3	18.2
269030 2007 FN_{10}	16.3	X	2.10787	243.98712	354.13289	7.10856	0.1189269	0.23082364	2.6319797	20	5 14.9	19.2
269031 2007 FM_{11}	16.8	X	104.81528	197.08819	312.42203	4.31921	0.2305064	0.23914050	2.5705968	20	7 6.5	20.8
269032 2007 FL_{15}	16.5	X	35.36924	26.89607	205.41273	7.24669	0.1461252	0.24014134	2.5634495	20	7 12.5	19.4
269033 2007 FK_{23}	16.7	X	85.31543	73.14928	21.91448	5.83350	0.0856493	0.22439370	2.6820217	20	3 14.1	20.1
269034 2007 FP_{26}	17.0	X	52.32459	242.04561	351.24510	0.72111	0.1340077	0.24238771	2.5475868	20	8 10.7	19.9
269035 2007 FP_{29}	17.0	X	7.79717	221.68512	37.35383	2.86652	0.0375153	0.24034084	2.5620307	20	6 25.5	20.1
269036 2007 FN_{30}	17.0	X	242.72429	139.83579	183.58023	2.51527	0.1064061	0.22519281	2.6756730	20	3 22.8	20.8
269037 2007 FN_{31}	16.3	X	129.05928	343.65072	28.04439	5.37762	0.0540875	0.21176325	2.7876334	20	1 21.1	20.3
269038 2007 FH_{32}	15.6	X	27.08454	82.97818	125.06207	13.59381	0.2149745	0.23090059	2.6313948	20	6 3.4	18.3
269039 2007 FJ_{32}	16.3	X	137.75549	59.59058	35.83991	12.00876	0.0978214	0.23232277	2.6206450	20	5 16.4	20.2
269040 2007 FO_{32}	16.2	X	332.28919	242.92617	50.72687	5.72836	0.0933038	0.23427477	2.6060678	20	6 15.3	19.1

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
269041 2007 FW_{32}	16.8	X	43.50232	134.37142	24.95079	15.07243	0.1501401	0.22651978	2.6652132	20	4 12.9	19.4
269042 2007 FC_{33}	16.2	X	307.02808	230.77018	32.60237	7.33427	0.0878999	0.22360757	2.6883040	20	3 28.7	19.7
269043 2007 FG_{33}	16.3	X	1.27851	126.38436	133.80648	15.72666	0.2275128	0.23272479	2.6176261	20	6 23.3	18.6
269044 2007 FG_{36}	16.5	X	174.31401	166.91152	187.67239	6.28885	0.0485044	0.22059159	2.7127519	20	2 16.6	20.5
269045 2007 FF_{38}	16.0	X	356.23626	268.78889	324.56468	13.29685	0.2618738	0.22868621	2.6483542	20	4 11.1	18.3
269046 2007 FQ_{38}	15.9	X	337.22800	176.03739	57.11713	12.49723	0.1229590	0.22491364	2.6778866	20	4 1.9	19.2
269047 2007 FH_{43}	16.1	X	141.70751	128.22838	344.66794	29.30329	0.1698701	0.24101513	2.5572499	20	6 22.5	20.8
269048 2007 FU_{43}	16.8	X	64.45503	171.23527	21.37094	5.65750	0.1073198	0.23557512	2.5964688	20	6 27.1	20.1
269049 2007 FR_{49}	15.8	X	331.90773	349.76183	221.71378	13.87937	0.0804794	0.22199719	2.7012891	20	2 18.1	19.6
269050 2007 GJ_{12}	16.9	X	176.52354	40.94026	138.98331	2.63142	0.0395351	0.26850520	2.3795833	20	10 28.3	19.9
269051 2007 GJ_{16}	15.3	X	88.39294	316.08252	21.99321	9.35643	0.0657866	0.19269274	2.9686510	20	—	—
269052 2007 GU_{18}	16.2	X	50.91872	118.95856	36.11693	14.19150	0.1127228	0.22521255	2.6755166	20	4 16.6	19.3
269053 2007 GT_{19}	15.9	X	3.40876	140.32388	33.16410	13.39694	0.0981173	0.21800635	2.7341560	20	2 27.7	19.3
269054 2007 GW_{20}	16.3	X	197.21632	149.61025	193.99248	2.94022	0.1875304	0.21336150	2.7736948	20	3 2.0	20.8
269055 2007 GZ_{23}	16.8	X	54.17803	168.26517	41.22805	2.78647	0.2092046	0.23496279	2.6009778	20	7 23.3	19.9
269056 2007 GS_{24}	15.8	X	23.00506	183.65724	71.16913	8.75354	0.1616615	0.23432859	2.6056687	20	7 29.3	18.6
269057 2007 GW_{24}	16.0	X	315.59612	18.95936	218.60622	12.74282	0.1352409	0.22038398	2.7144554	20	2 21.9	19.7
269058 2007 GO_{29}	15.5	X	333.98251	10.31590	248.44289	12.98188	0.1510584	0.22784450	2.6548726	20	4 18.9	18.7
269059 2007 GU_{30}	16.7	X	191.08935	275.23611	33.28826	3.92637	0.0832169	0.20833831	2.8181015	20	1 15.4	20.9
269060 2007 GZ_{32}	16.9	X	227.75815	331.32608	144.58733	5.60461	0.0633341	0.26720920	2.3872713	20	10 5.2	19.9
269061 2007 GF_{33}	15.7	X	5.09947	159.04701	84.24193	11.91624	0.2081039	0.23158122	2.6262365	20	6 3.4	17.8
269062 2007 GW_{33}	16.5	X	0.98075	100.23814	49.84832	9.56235	0.1030503	0.21240162	2.7820451	20	1 19.2	20.0
269063 2007 GV_{39}	16.5	X	234.59806	125.39186	197.11124	4.30029	0.1213442	0.21858752	2.7293076	20	3 11.8	20.8
269064 2007 GB_{40}	16.6	X	67.45917	245.36233	191.37270	3.34713	0.0753589	0.21119077	2.7926688	20	1 23.1	20.0
269065 2007 GB_{41}	16.3	X	76.15730	207.87947	220.87122	2.86035	0.0805778	0.21131428	2.7915804	20	1 25.8	19.8
269066 2007 GJ_{44}	16.5	X	31.54827	195.51239	183.49667	1.93054	0.1229060	0.19200646	2.9757206	20	—	—
269067 2007 GQ_{44}	16.2	X	52.77738	52.39505	53.86514	5.83848	0.0514120	0.21391498	2.7689084	20	2 9.8	19.8
269068 2007 GD_{46}	16.6	X	55.33475	26.04941	194.78492	4.13785	0.1838025	0.23680740	2.5874534	20	8 3.7	19.8
269069 2007 GT_{46}	16.0	X	172.48029	164.01709	189.54564	5.43702	0.1101363	0.21096568	2.7946548	20	2 18.2	20.4
269070 2007 GR_{48}	16.3	X	132.58930	324.22275	206.80920	8.73890	0.1467491	0.24475204	2.5311536	20	8 20.7	20.3
269071 2007 GZ_{48}	16.4	X	46.42283	15.53261	50.76018	10.21001	0.1444288	0.27920389	2.3184002	20	—	—
269072 2007 GF_{51}	16.6	X	70.17899	102.91837	113.93844	5.36371	0.1636389	0.24008402	2.5638575	20	8 18.1	20.1
269073 2007 GP_{61}	17.3	X	76.42689	144.75398	349.06617	3.68815	0.1452555	0.22798416	2.6537882	20	4 28.3	20.7
269074 2007 GW_{62}	17.0	X	191.64253	10.31600	303.11007	0.54107	0.0852125	0.20823714	2.8190141	20	1 21.1	21.4
269075 2007 GL_{67}	16.2	X	42.73120	80.01485	37.58591	4.41744	0.0516365	0.21359341	2.7716868	20	2 9.7	19.8
269076 2007 GF_{68}	16.3	X	299.52430	111.92579	147.14043	4.26989	0.0324311	0.22253534	2.6969324	20	3 20.3	19.9
269077 2007 GH_{73}	16.0	X	48.72036	261.83869	216.35310	11.71251	0.1330936	0.21732167	2.7398957	20	2 18.6	19.4
269078 2007 GT_{73}	17.0	X	46.57672	42.19915	165.22877	1.66861	0.1379709	0.23262213	2.6183962	20	6 25.0	20.0
269079 2007 HK_{6}	15.9	X	333.22254	141.30350	99.50012	8.39539	0.1764080	0.22511137	2.6763183	20	3 27.9	19.0
269080 2007 HF_{7}	15.7	X	343.23321	175.87565	70.52658	13.45419	0.1899803	0.22693467	2.6619638	20	4 23.3	18.5
269081 2007 HR_{11}	16.7	X	43.69750	263.77430	187.52937	4.15348	0.0382683	0.20917002	2.8106262	20	1 6.3	20.4
269082 2007 HG_{13}	16.7	X	47.55356	49.93395	143.19662	5.07126	0.1618977	0.23130152	2.6283532	20	6 10.3	19.6
269083 2007 HB_{16}	16.7	X	325.17397	105.58931	132.18954	3.35506	0.1623842	0.22100551	2.7093637	20	3 9.1	19.9
269084 2007 HE_{17}	16.3	X	346.56625	86.85060	154.75732	3.91021	0.1585208	0.22680638	2.6629675	20	4 22.0	18.9
269085 2007 HW_{26}	16.5	X	36.39293	155.19600	58.30251	4.38560	0.1253318	0.23163793	2.6258078	20	6 14.3	19.4
269086 2007 HA_{30}	16.7	X	356.72549	194.14925	61.39030	2.68930	0.1576441	0.23289441	2.6163550	20	6 1.8	19.0
269087 2007 HZ_{31}	16.9	X	291.62121	310.42626	334.52902	1.54617	0.1771394	0.22220869	2.6995747	20	3 20.6	20.7
269088 2007 HQ_{36}	16.6	X	14.20178	249.62507	29.66658	1.86724	0.1527377	0.23762063	2.5815465	20	8 16.3	19.2
269089 2007 HX_{38}	16.9	X	235.22849	167.82942	170.74841	3.24488	0.0279715	0.22983130	2.6395503	20	4 10.3	20.6
269090 2007 HA_{41}	16.3	X	47.49932	323.97413	200.57014	11.16745	0.1139976	0.22691085	2.6621501	20	4 23.3	19.2
269091 2007 HG_{46}	15.9	X	3.13471	37.92198	126.82743	13.61808	0.1377412	0.22168091	2.7038578	20	2 4.9	18.7
269092 2007 HK_{48}	16.9	X	81.91156	20.92594	153.66221	2.91416	0.1195082	0.23529707	2.5985139	20	6 28.2	20.4
269093 2007 HJ_{53}	16.4	X	39.37226	36.46441	175.74507	5.06504	0.1665496	0.23184896	2.6242142	20	6 23.9	19.3
269094 2007 HV_{57}	16.2	X	357.14691	120.29972	127.44897	4.39319	0.1667431	0.22963921	2.6410220	20	5 22.9	18.6
269095 2007 HP_{61}	16.5	X	106.47726	355.57050	180.23269	12.72290	0.1828995	0.24216768	2.5491297	20	8 3.8	20.6
269096 2007 HN_{65}	16.2	X	27.90169	136.88310	90.17974	8.82154	0.1569383	0.23161236	2.6260011	20	6 23.4	18.8
269097 2007 HV_{65}	16.0	X	294.18123	204.75473	68.65948	5.54311	0.1066748	0.22180769	2.7028275	20	3 22.8	19.6
269098 2007 HB_{66}	15.0	X	88.23468	139.37111	171.12197	14.00273	0.1646782	0.18006555	3.1058630	20	12 21.2	20.1
269099 2007 HM_{79}	16.6	X	306.70353	95.27577	133.44369	10.50453	0.1887605	0.21581378	2.7526433	20	1 27.4	20.4
269100 2007 HC_{80}	16.7	X	31.93709	87.09043	175.28026	4.51099	0.1563823	0.23804877	2.5784502	20	8 22.2	19.5
269101 2007 HB_{83}	15.9	X	141.07536	28.76777	55.04029	22.65789	0.0382060	0.22800927	2.6535934	20	5 4.7	19.6
269102 2007 HE_{83}	16.9	X	58.76644	252.11471	234.83201	5.35064	0.0684128	0.22088721	2.7103310	20	3 12.0	20.3
269103 2007 HM_{83}	16.1	X	316.24069	331.32313	236.71274	7.63725	0.1350983	0.21510019	2.7587278	20	1 19.7	19.9
269104 2007 HN_{86}	15.9	X	338.29234	170.68653	85.91485	6.67393	0.1252413	0.22602604	2.6690931	20	5 2.6	18.8
269105 2007 HF_{90}	16.6	X	50.82924	92.75003	76.69609	6.13903	0.1653156	0.23047215	2.6346550	20	5 13.5	19.4
269106 2007 HP_{97}	16.4	X	333.02614	310.88946	226.19414	7.06503	0.1587671	0.21050082	2.7987677	20	1 2.1	19.9
269107 2007 JO_{3}	15.9	X	85.95689	2.90386	193.23617	11.46778	0.1099392	0.23734591	2.5835382	20	7 28.8	19.7
269108 2007 JB_{9}	16.7	X	130.43847	320.29022	86.83292	1.33307	0.0708418	0.21479699	2.7613233	20	3 7.6	20.6
269109 2007 JS_{25}	16.7	X	352.35219	55.65269	93.87855	8.67919	0.1646480	0.21052536	2.7985502	20	—	—
269110 2007 JG_{27}	16.5	X	271.40741	98.00999	165.87568	4.44592	0.1594944	0.21180198	2.7872935	20	2 4.2	20.7
269111 2007 JR_{37}	16.7	X	226.76111	184.75975	154.21289	3.02941	0.0902265	0.22539998	2.6740333	20	3 27.3	20.6
269112 2007 JZ_{37}	16.8	X	247.25551	260.86367	19.40624	4.16756	0.1744838	0.21217720	2.7840065	20	2 1.7	21.2
269113 2007 JA_{38}	16.2	X	246.06308	251.37712	61.20505	5.88636	0.1087577	0.21909948	2.7250542	20	3 16.3	20.3
269114 2007 JL_{39}	16.2	X	132.21004	148.00885	261.10850	2.75705	0.0868096	0.22288336	2.6941243	20	3 11.2	20.2
269115 2007 JT_{39}	15.9	X	48.49174	203.16711	355.80057	6.52145	0.2093867	0.23201635	2.6229519	20	6 28.5	19.0
269116 2007 KO_{8}	15.3	X	317.22189	225.81611	92.83856	12.87391	0.1710690	0.23160616	2.6260479	20	6 16.3	18.1
269117 2007 LU_{11}	16.1	X	352.21697	10.74713	230.63313	8.30004	0.0768129	0.22537836	2.6742042	20	5 5.8	19.2
269118 2007 LH_{15}	16.0	X	19.83724	233.14016	11.02593	10.77418	0.2332089	0.22824247	2.6517856	20	7 17.0	18.6
269119 2007 LQ_{31}	15.6	X	253.89523	7.40831	263.24106	8.59977	0.1387249	0.20971371	2.8057663	20	1 26.7	20.0
269120 2007 LM_{33}	15.1	X	115.03470	117.28260	138.71292	23.57115	0.0370301	0.17715966	3.1397337	20	11 11.3	20.1

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	m		°	°	°	°		°				
269121 2007 MG_9	15.3	X	344.42620	278.45483	130.55313	10.57415	0.0509591	0.18214309	3.0822008	20	12 3.0	19.5
269122 2007 MD_{25}	16.5	X	241.98554	324.48772	313.17009	2.17415	0.2128749	0.20138509	2.8826009	20	1 22.9	21.2
269123 2007 NF_2	16.0	X	355.45050	107.87757	152.01387	12.43252	0.2324017	0.22732039	2.6589518	20	6 7.2	18.4
269124 2007 PC_{23}	15.0	X	19.64549	354.68331	317.64131	18.33900	0.1541677	0.15580986	3.4203674	20	9 17.0	19.6
269125 2007 PF_{37}	15.4	X	92.00133	27.57352	274.93296	3.66634	0.1354293	0.16958955	3.2324860	20	12 10.7	20.3
269126 2007 PP_{43}	15.3	X	166.34768	316.38012	295.95186	8.83562	0.0700558	0.17751254	3.1355714	20	12 24.6	20.1
269127 2007 PU_{47}	15.6	X	117.81012	219.19067	116.42546	5.89558	0.1349569	0.17990100	3.1077566	20	—	—
269128 2007 PU_{48}	15.6	X	199.14553	11.29308	18.09069	15.59838	0.1429672	0.20638498	2.8358548	20	4 25.9	20.2
269129 2007 RG_{22}	17.2	X	186.85543	116.62450	209.30377	5.98194	0.1454992	0.27055322	2.3675595	20	1 24.3	20.9
269130 2007 RL_{65}	16.2	X	139.12562	143.16733	165.88855	8.64832	0.0965236	0.17891536	3.1191599	20	—	—
269131 2007 RL_{108}	16.2	X	191.50626	63.60769	206.12352	1.90638	0.1487542	0.17994090	3.1072972	20	—	—
269132 2007 RZ_{133}	17.1	X	310.04741	226.55251	182.06542	22.65542	0.0955635	0.38167578	1.8822312	20	12 10.1	19.1
269133 2007 SP_3	15.5	X	135.11856	144.21306	189.21390	18.04417	0.2367157	0.17952036	3.1121480	20	1 4.6	20.8
269134 2007 TF_{89}	16.3	X	315.72931	212.56925	168.51671	5.62647	0.0893898	0.22164208	2.7041736	20	9 21.4	19.3
269135 2007 TL_{92}	16.2	X	221.26097	85.90514	139.69759	5.63199	0.1175576	0.18020793	3.1042269	20	—	—
269136 2007 TF_{161}	15.2	X	131.49093	117.68567	191.10870	17.32448	0.1009015	0.17436649	3.1731751	20	—	—
269137 2007 TM_{177}	16.0	X	0.48554	301.27381	210.60228	9.43379	0.1851912	0.17618805	3.1512661	20	1 17.1	19.7
269138 2007 TM_{225}	16.0	X	140.70402	271.58684	25.63464	1.58255	0.1676547	0.17771448	3.1331956	20	—	—
269139 2007 TJ_{284}	14.9	X	286.73595	48.09068	5.84163	17.50018	0.0959925	0.14771857	3.5441545	20	9 12.1	19.7
269140 2007 UA_{21}	15.9	X	51.48153	236.44814	220.84140	9.14881	0.2112912	0.17741496	3.1367210	20	2 12.5	19.6
269141 2007 UT_{60}	15.7	X	28.26360	78.94664	55.78725	16.94052	0.0669053	0.17884470	3.1199813	20	2 23.4	20.1
269142 2007 VY_{30}	17.7	X	35.64494	308.12274	299.78397	3.96249	0.0988864	0.28900729	2.2656710	20	8 4.2	20.0
269143 2007 WZ_{23}	16.1	X	62.21058	14.92925	92.70703	4.84328	0.0904421	0.18115083	3.0934457	20	3 4.3	20.1
269144 2008 AR_{31}	16.9	X	218.84145	327.67387	125.76176	24.62872	0.0740534	0.36237954	1.9484695	20	9 5.1	19.2
269145 2008 CZ_{31}	17.8	X	96.69893	211.69075	134.17787	5.08518	0.1436454	0.30735463	2.1745841	20	—	—
269146 2008 CE_{204}	16.9	X	27.83098	172.88280	148.57718	6.10369	0.1880434	0.27427881	2.3460714	20	11 22.5	19.8
269147 2008 DU_4	17.3	X	139.89122	138.83612	140.15811	5.08894	0.1819785	0.29029942	2.2589430	20	—	—
269148 2008 EL_{15}	18.1	X	352.80750	269.52036	166.70277	4.76850	0.1457817	0.30061203	2.2069804	20	—	—
269149 2008 EV_{18}	17.6	X	247.10560	299.57199	319.65680	4.82899	0.1594305	0.31363384	2.1454617	20	—	—
269150 2008 ET_{21}	17.3	X	219.34137	205.36334	17.11221	4.67756	0.1034184	0.29730547	2.2233139	20	—	—
269151 2008 EW_{28}	17.8	X	240.06997	78.91491	150.72397	4.66148	0.1138098	0.30243153	2.1981197	20	—	—
269152 2008 EM_{33}	17.4	X	73.21125	282.54689	34.35813	0.93034	0.2405007	0.28385742	2.2929920	20	—	—
269153 2008 ES_{54}	18.0	X	253.89204	66.04258	162.83674	7.25266	0.1242369	0.30567301	2.1825523	20	—	—
269154 2008 EM_{67}	17.5	X	103.75902	0.60627	327.13557	5.83093	0.1696779	0.29723929	2.2236439	20	—	—
269155 2008 EC_{77}	18.2	X	238.67077	203.50012	31.74200	4.79696	0.1055291	0.30524171	2.1846077	20	—	—
269156 2008 EO_{79}	17.0	X	171.09178	312.54740	304.69466	4.47504	0.1669877	0.29442421	2.2377954	20	—	—
269157 2008 ES_{92}	16.8	X	207.80930	139.21257	104.24265	24.71937	0.2126939	0.29495588	2.2351054	20	—	—
269158 2008 EQ_{114}	17.4	X	33.82102	147.10606	298.10562	3.45470	0.0514969	0.30924311	2.1657219	20	—	—
269159 2008 EZ_{114}	17.1	X	294.24829	142.52890	320.56119	6.96532	0.1009388	0.29264608	2.2468508	20	12 31.5	19.1
269160 2008 EF_{127}	17.6	X	3.49089	228.77965	179.79507	6.74423	0.0733439	0.29308505	2.2446068	20	—	—
269161 2008 EV_{150}	17.4	X	3.86405	196.23279	95.91722	3.60075	0.1871765	0.25724193	2.4485457	20	8 23.3	19.4
269162 2008 ET_{155}	17.7	X	104.38731	76.53481	156.71104	6.70321	0.1086339	0.26890456	2.3772268	20	10 16.8	21.2
269163 2008 EL_{168}	17.3	X	100.41688	1.78695	301.42938	2.62147	0.1716621	0.28624256	2.2802366	20	—	—
269164 2008 FL_{15}	17.1	X	199.98282	171.21344	87.16289	6.10683	0.1543336	0.29720370	2.2238214	20	—	—
269165 2008 FU_{25}	16.9	X	138.11925	204.42362	67.36843	3.64471	0.1357383	0.28637131	2.2795531	20	—	—
269166 2008 FO_{58}	17.1	X	317.26382	259.54720	182.85285	6.38424	0.0829265	0.28714210	2.2754719	20	—	—
269167 2008 FB_{59}	17.1	X	63.47613	223.86257	152.96082	7.30248	0.1800961	0.29726795	2.2235010	20	—	—
269168 2008 FJ_{59}	17.0	X	122.88359	183.51439	98.04722	3.95038	0.1495859	0.28455327	2.2892523	20	—	—
269169 2008 FM_{59}	17.8	X	173.81700	249.15614	11.64782	1.11991	0.1191642	0.29261137	2.2470285	20	—	—
269170 2008 FM_{60}	17.2	X	256.50880	24.55579	120.16834	5.53281	0.0685685	0.29071590	2.2567850	20	12 28.7	19.4
269171 2008 FS_{60}	17.1	X	231.81750	92.34718	139.16318	6.02685	0.1450660	0.29934148	2.2132210	20	—	—
269172 2008 FK_{61}	16.9	X	29.80877	227.21690	105.23252	3.49168	0.1832229	0.27823594	2.3237740	20	12 8.7	19.6
269173 2008 FX_{69}	17.6	X	124.92658	70.15982	215.38397	3.89740	0.1310719	0.28437228	2.2902235	20	—	—
269174 2008 FY_{75}	16.9	X	114.26375	124.27286	148.82320	6.03879	0.1595993	0.28559263	2.2836948	20	12 19.2	20.4
269175 2008 FK_{84}	18.1	X	56.29925	77.57736	348.38984	5.05928	0.0859300	0.31314192	2.1477081	20	—	—
269176 2008 FF_{93}	17.1	X	59.06878	283.80173	21.98752	2.62658	0.2204183	0.27919215	2.3184652	20	12 11.2	20.5
269177 2008 FA_{105}	17.2	X	153.61923	195.46601	52.46447	9.65874	0.0977742	0.28354646	2.2946682	20	12 27.0	20.5
269178 2008 FL_{117}	17.9	X	265.62558	271.02188	210.42560	3.59955	0.1055499	0.28666676	2.2779865	20	12 4.3	20.2
269179 2008 FD_{125}	17.6	X	91.74915	252.37655	83.23280	1.53839	0.0527326	0.28980041	2.2615354	20	—	—
269180 2008 FB_{129}	17.7	X	270.66161	316.54467	177.30540	5.28426	0.0723623	0.28873168	2.2671126	20	—	—
269181 2008 FR_{129}	17.6	X	51.30956	306.50166	31.44949	1.76192	0.1961955	0.27937165	2.3174720	20	—	—
269182 2008 GO_{11}	17.0	X	246.05566	201.31230	29.58391	6.95113	0.0963446	0.30182786	2.2010496	20	—	—
269183 2008 GJ_{18}	17.3	X	197.53173	190.79496	88.77411	4.62483	0.0322726	0.31001448	2.1621280	20	—	—
269184 2008 GH_{28}	17.7	X	293.68988	19.27350	64.74129	6.43715	0.1124042	0.28603993	2.2813133	20	11 27.7	19.4
269185 2008 GZ_{37}	17.4	X	110.30195	225.36231	60.16477	3.10817	0.1962927	0.27952238	2.3166388	20	12 30.2	21.1
269186 2008 GB_{42}	17.0	X	6.23780	260.80245	80.94730	4.31030	0.0918200	0.27300469	2.3533651	20	11 2.2	19.5
269187 2008 GO_{42}	16.9	X	187.90667	197.25920	81.46362	5.21230	0.1553148	0.29792621	2.2202246	20	—	—
269188 2008 GC_{45}	17.4	X	102.67435	279.99945	352.99064	1.66801	0.2030790	0.27602879	2.3361450	20	12 7.9	21.1
269189 2008 GZ_{50}	18.1	X	317.23017	20.52448	173.08279	4.52800	0.0695790	0.31420530	2.1428596	20	—	—
269190 2008 GQ_{66}	17.3	X	169.06819	201.41683	82.45816	4.93587	0.1401958	0.29432784	2.2382838	20	—	—
269191 2008 GR_{94}	16.8	X	122.68663	117.58914	151.91444	6.72664	0.0787536	0.28595490	2.2817656	20	12 22.6	20.0
269192 2008 GF_{98}	17.2	X	10.65270	129.66713	157.65601	6.17123	0.1031682	0.25949930	2.4343252	20	8 17.5	19.8
269193 2008 GY_{100}	17.8	X	183.79975	72.25778	168.43091	3.43427	0.1279084	0.28973263	2.2618880	20	—	—
269194 2008 GN_{138}	17.1	X	328.19246	181.20605	146.79118	6.60112	0.1258704	0.25552354	2.4595110	20	7 28.8	19.6
269195 2008 GP_{140}	17.8	X	13.52492	262.93392	167.27946	6.96820	0.0560709	0.29726849	2.2234983	20	—	—
269196 2008 GK_{145}	16.4	X	247.70012	197.20381	118.73722	3.72577	0.2203519	0.23459219	2.6037165	20	3 10.2	20.7
269197 2008 HN_2	17.9	X	194.26611	44.89323	206.53840	5.37535	0.1555014	0.29465136	2.2366451	20	—	—
269198 2008 HZ_{27}	16.8	X	35.17235	114.60501	220.84086	5.43963	0.1214686	0.27906935	2.3191453	20	12 10.5	19.6
269199 2008 HR_{34}	17.1	X	175.34952	112.06732	160.61208	6.50522	0.1049721	0.29182017	2.2510882	20	—	—
269200 2008 HF_{65}	17.3	X	203.02267	34.59107	193.33231	3.41378	0.1104064	0.28931595	2.2640593	20	—	—

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	m		°	°	°	°		°				
269201 2008 HD_{68}	17.5	X	323.96727	252.27399	172.60516	6.39068	0.0799643	0.28279316	2.2987414	20	12 22.4	19.9
269202 2008 JW_{4}	17.0	X	168.96584	248.04115	27.15336	6.38333	0.0979063	0.29433321	2.2382566	20	—	—
269203 2008 JL_{13}	17.0	X	94.83026	173.91173	135.67587	5.61154	0.2268401	0.28462407	2.2888727	20	—	—
269204 2008 JG_{14}	17.3	X	178.49684	64.16248	181.61653	6.53964	0.0780303	0.28627951	2.2800404	20	—	—
269205 2008 JG_{15}	17.7	X	102.76073	110.52966	158.69539	5.97222	0.1911966	0.27368890	2.3494413	20	12 3.8	21.5
269206 2008 JU_{21}	16.9	X	289.46315	271.25634	137.96803	7.37877	0.1680726	0.27058551	2.3673712	20	9 18.1	19.1
269207 2008 JJ_{37}	17.4	X	215.83965	195.97819	81.34661	4.49998	0.1374769	0.30139577	2.2031528	20	—	—
269208 2008 KA_{9}	17.4	X	203.84380	71.78287	75.05756	6.48171	0.0427259	0.27312739	2.3526602	20	10 20.7	20.4
269209 2008 KG_{20}	16.8	X	145.19599	217.36814	135.96941	4.27531	0.2062196	0.21803939	2.7338798	20	1 30.8	21.2
269210 2008 KU_{21}	16.9	X	208.95500	199.10873	148.11341	5.23245	0.1582862	0.23198777	2.6231673	20	3 17.1	21.1
269211 2008 KA_{31}	17.7	X	27.32209	141.42856	158.86378	7.65309	0.0501410	0.26481204	2.4016565	20	9 28.9	20.5
269212 2008 LK_{6}	17.3	X	228.20065	281.44154	171.76544	4.10409	0.0400864	0.26526304	2.3989336	20	9 4.9	20.4
269213 2008 LL_{10}	17.5	X	243.63465	38.35105	115.28003	5.81336	0.0879065	0.28311074	2.2970220	20	12 16.6	20.2
269214 2008 LW_{11}	17.6	X	121.23304	111.98467	164.57266	5.39342	0.1510603	0.27896756	2.3197094	20	12 28.1	21.2
269215 2008 LU_{14}	16.0	X	278.61796	173.57139	207.05897	6.01564	0.2275164	0.24334482	2.5409024	20	7 1.9	19.3
269216 2008 LG_{15}	16.3	X	65.11351	194.66381	102.14367	22.92383	0.1535812	0.26995220	2.3710723	20	12 2.7	20.0
269217 2008 ND_{1}	15.5	X	20.17348	235.31975	284.70691	32.90050	0.2737356	0.22851851	2.6496497	20	2 6.3	18.2
269218 2008 NP_{1}	15.7	X	12.11519	10.88362	165.24845	22.17165	0.0491405	0.22427253	2.6829876	20	3 9.9	19.0
269219 2008 NK_{2}	17.2	X	32.08162	104.37328	188.28812	3.13971	0.2301563	0.25509319	2.4622764	20	10 21.4	20.0
269220 2008 OE_{11}	16.4	X	195.43069	30.69774	287.11705	3.96392	0.1511725	0.21219158	2.7838807	20	1 30.3	21.0
269221 2008 OE_{20}	16.2	X	142.90101	202.48727	137.01959	2.52627	0.0883684	0.20080355	2.8881636	20	1 2.4	20.2
269222 2008 OX_{20}	15.6	X	298.83036	318.86156	162.28088	15.76580	0.2385248	0.18261619	3.0768751	20	12 13.3	19.2
269223 2008 OU_{21}	16.0	X	356.12544	359.01716	138.81264	2.81607	0.0122160	0.20289469	2.8682847	20	1 4.3	19.8
269224 2008 OV_{21}	15.9	X	51.84889	288.17041	136.71999	3.54640	0.1310890	0.19575773	2.9375827	20	—	—
269225 2008 OE_{24}	17.1	X	96.45029	5.18043	267.42616	1.60585	0.1547841	0.26320137	2.4114446	20	11 27.5	20.6
269226 2008 PO_{4}	15.5	X	26.76471	33.35842	10.19700	8.92109	0.1150055	0.18926679	3.0043679	20	—	—
269227 2008 PG_{9}	16.7	X	100.95764	285.64162	5.37022	5.67929	0.2260470	0.26744952	2.3858410	20	12 28.2	20.7
269228 2008 PT_{15}	16.0	X	319.61498	81.34351	334.81937	8.32680	0.0831835	0.17409778	3.1764393	20	10 30.1	20.2
269229 2008 PD_{17}	15.1	X	330.13445	73.37649	320.15406	21.65952	0.1080620	0.17454252	3.1710412	20	10 7.3	19.6
269230 2008 PP_{19}	17.4	X	90.20037	99.94783	138.54630	2.44524	0.1385247	0.25277323	2.4773193	20	10 7.4	21.0
269231 2008 PQ_{19}	16.0	X	303.23094	86.58174	345.19554	6.57927	0.0581180	0.17434117	3.1734823	20	10 28.9	20.2
269232 Tahin	16.1	X	349.07444	70.46332	10.38118	1.77900	0.0944338	0.18713333	3.0271594	20	—	—
269233 2008 QN_{5}	15.3	X	40.66763	353.32548	3.47617	9.18229	0.0954084	0.17654812	3.1469800	20	12 14.3	19.8
269234 2008 QP_{6}	15.7	X	244.92700	153.58287	178.80726	9.08090	0.1347655	0.22049790	2.7135203	20	4 4.1	19.7
269235 2008 QS_{6}	15.8	X	274.71648	264.50308	335.18751	8.34185	0.1119767	0.21108579	2.7935946	20	1 17.2	19.9
269236 2008 QL_{8}	16.4	X	304.74105	333.29851	324.60986	3.52355	0.1335101	0.23193103	2.6235951	20	4 29.9	19.8
269237 2008 QC_{9}	15.9	X	218.97086	148.57873	157.43191	13.52993	0.1993540	0.21332460	2.7740147	20	2 4.3	20.6
269238 2008 QM_{9}	15.7	X	20.47898	25.27150	339.22105	8.92237	0.0769383	0.17717210	3.1395868	20	11 23.9	20.1
269239 2008 QD_{10}	16.4	X	222.81337	148.09517	171.00593	2.29458	0.1833933	0.21574641	2.7532163	20	2 23.7	20.9
269240 2008 QM_{10}	15.6	X	66.02690	346.52495	341.08970	10.69585	0.1092690	0.17957919	3.1114683	20	12 11.7	20.3
269241 2008 QY_{10}	16.9	X	12.40435	103.04200	177.31141	3.79254	0.1850651	0.24281765	2.5445787	20	8 17.6	19.4
269242 2008 QO_{13}	15.5	X	14.47385	15.00279	351.35417	12.79752	0.2291347	0.17274047	3.1930569	20	12 7.4	19.6
269243 Charbonnel	15.9	X	297.02251	263.72751	180.14696	1.98494	0.1455208	0.17359439	3.1825770	20	10 29.2	19.6
269244 2008 QJ_{17}	16.9	X	245.62628	103.28471	198.74282	1.57980	0.2043001	0.21780520	2.7358391	20	2 21.4	21.2
269245 Catastini	15.5	X	80.32330	3.91022	333.37365	18.86154	0.1637211	0.18461967	3.0545746	20	—	—
269246 2008 QF_{20}	16.2	X	60.95618	305.91537	41.45014	2.99925	0.1326532	0.18061145	3.0996015	20	—	—
269247 2008 QN_{20}	15.4	X	303.82207	330.77482	346.83144	13.90821	0.2671396	0.23206862	2.6225580	20	4 28.7	19.0
269248 2008 QL_{23}	15.7	X	347.41988	223.13073	137.93603	16.92200	0.1737412	0.16982470	3.2295015	20	10 14.2	19.6
269249 2008 QO_{24}	16.6	X	207.07277	279.70889	340.71828	9.05018	0.0324435	0.19816842	2.9137106	20	—	—
269250 2008 QR_{26}	15.5	X	169.01263	292.09660	359.42193	7.47719	0.0703922	0.19792453	2.9161037	20	—	—
269251 Kolomna	15.9	X	238.79859	173.13719	164.01016	14.81194	0.2655220	0.22359936	2.6883698	20	3 26.5	20.5
269252 Bogdanstupka	14.9	X	348.77297	238.03078	163.39969	26.92873	0.1259716	0.17674286	3.1446680	20	12 4.9	19.3
269253 2008 QK_{35}	16.0	X	145.09076	118.72570	245.14833	5.12774	0.0982579	0.20507560	2.8479131	20	2 1.8	20.2
269254 2008 QN_{36}	16.0	X	58.53712	261.47435	169.30982	7.10831	0.0246665	0.20322560	2.8651703	20	—	—
269255 2008 QP_{36}	16.9	X	289.75680	135.65420	172.05942	2.93251	0.1559147	0.23019053	2.6368034	20	4 20.9	20.5
269256 2008 QK_{43}	15.5	X	253.74460	57.05433	255.94474	14.30796	0.1385053	0.22294835	2.6936006	20	3 11.5	20.0
269257 2008 RY_{1}	16.2	X	87.08656	162.54012	169.67073	3.64557	0.0286985	0.18280930	3.0747078	20	—	—
269258 2008 RH_{5}	16.2	X	347.80211	256.11659	142.53335	2.45036	0.0781796	0.17291072	3.1909606	20	11 22.5	20.3
269259 2008 RY_{17}	15.7	X	261.89355	345.89923	233.44301	4.65413	0.0691536	0.19837798	2.9116583	20	—	—
269260 2008 RE_{19}	16.1	X	322.61309	268.31595	347.12807	13.68274	0.2093750	0.22531742	2.6746864	20	3 17.9	19.3
269261 2008 RU_{27}	16.7	X	42.98092	138.60322	163.41369	12.07851	0.2754951	0.25681079	2.4512854	20	11 25.3	20.4
269262 2008 RM_{29}	15.0	X	274.21692	303.91690	177.90481	18.14666	0.1110244	0.17512198	3.1640423	20	11 19.4	19.5
269263 2008 RS_{47}	16.3	X	294.94318	291.83864	342.14784	13.01582	0.1391977	0.22533138	2.6745759	20	3 14.2	19.9
269264 2008 RY_{50}	15.8	X	242.48610	231.40905	256.43523	5.19613	0.1242077	0.17231831	3.1982698	20	10 10.8	20.5
269265 2008 RO_{58}	15.4	X	48.38298	24.92254	1.44877	17.15562	0.0336755	0.18554244	3.0444385	20	—	—
269266 2008 RL_{63}	15.6	X	312.99797	98.44679	46.21706	2.87548	0.0491108	0.19129497	2.9830945	20	—	—
269267 2008 RO_{65}	16.1	X	85.08173	229.28588	84.84465	2.98380	0.0216123	0.17892849	3.1190072	20	12 7.4	20.3
269268 2008 RP_{69}	16.4	X	292.50399	20.80764	212.05648	4.01412	0.0551024	0.21051711	2.7986233	20	2 2.7	20.2
269269 2008 RN_{70}	16.8	X	82.44916	193.95648	108.95436	3.55953	0.1903967	0.26470220	2.4023209	20	12 24.4	20.6
269270 2008 RW_{71}	16.3	X	266.01571	130.89582	167.83473	5.94218	0.1333483	0.22351924	2.6890122	20	3 14.8	20.1
269271 2008 RF_{72}	16.8	X	66.75019	191.65545	193.33793	1.06316	0.0861627	0.19333577	2.9620649	20	—	—
269272 2008 RJ_{82}	15.8	X	163.89723	208.83003	177.51701	12.50280	0.0720986	0.21551868	2.7551555	20	3 19.1	19.9
269273 2008 RO_{89}	15.6	X	241.48729	28.99933	210.18580	12.93839	0.1759456	0.19810265	2.9143555	20	—	—
269274 2008 RL_{90}	16.4	X	200.87198	185.60299	156.16709	6.95235	0.0352368	0.21529462	2.7570666	20	3 4.4	20.2
269275 2008 RY_{95}	15.5	X	154.23045	274.61214	318.82903	10.43957	0.0440900	0.18018534	3.1044863	20	11 17.8	20.2
269276 2008 RB_{102}	15.7	X	170.56873	100.03389	169.96635	11.01244	0.0764532	0.18968179	2.9999841	20	—	—
269277 2008 RN_{105}	16.3	X	148.71469	267.68070	31.49285	0.53825	0.1610970	0.18878883	3.0094365	20	—	—
269278 2008 RH_{108}	15.6	X	232.59691	82.74625	326.44891	2.44877	0.0827071	0.14348780	3.6134834	20	6 30.4	20.8
269279 2008 RK_{110}	16.3	X	251.11910	340.91368	218.67273	2.32811	0.0533900	0.18922527	3.0048074	20	—	—
269280 2008 RW_{115}	16.4	X	256.01076	322.98560	319.59237	2.89184	0.0622241	0.21331687	2.7740817	20	2 20.9	20.5

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		°	°	°	°		°				
269281 2008 RO_{117}	16.1	X	297.00515	346.98704	205.85688	4.35705	0.0465479	0.20088779	2.8873562	20	—	—
269282 2008 RN_{121}	16.4	X	54.27643	359.43693	33.26524	0.29828	0.0687257	0.18894171	3.0078129	20	—	—
269283 2008 RN_{136}	16.2	X	272.29021	122.73141	139.43827	5.01138	0.0608407	0.20960871	2.8067033	20	2 15.7	20.1
269284 2008 RK_{138}	15.4	X	357.45641	253.36278	129.71228	5.21174	0.1679697	0.17278857	3.1924643	20	11 25.6	19.2
269285 2008 RN_{141}	16.2	X	117.81325	17.65142	317.08578	0.81376	0.0966612	0.19258810	2.9697263	20	—	—
269286 2008 SA_{1}	16.3	X	274.88650	210.66775	126.76119	4.94843	0.2372696	0.23125772	2.6286850	20	5 1.3	20.1
269287 2008 SY_{4}	15.5	X	162.82906	197.44802	69.55340	6.52220	0.0730327	0.18512609	3.0490015	20	—	—
269288 2008 SV_{15}	16.5	X	351.24784	260.37850	178.59740	2.25326	0.1155889	0.18729645	3.0254015	20	—	—
269289 2008 SY_{18}	16.2	X	37.41734	19.34088	170.71853	13.64450	0.0810666	0.22737661	2.6585134	20	5 11.5	19.6
269290 2008 SV_{20}	17.0	X	59.28213	95.36281	132.00269	2.32864	0.1301823	0.24266160	2.5456695	20	8 11.9	20.1
269291 2008 SM_{21}	15.5	X	284.11199	286.39722	178.08004	11.60101	0.1435168	0.17608844	3.1524544	20	11 7.3	19.6
269292 2008 SC_{23}	16.6	X	80.81447	107.24829	286.92940	0.90636	0.0215237	0.19739505	2.9213160	20	—	—
269293 2008 SC_{36}	15.8	X	246.52313	147.42701	31.24596	5.60757	0.0308313	0.17952206	3.1121284	20	—	—
269294 2008 SJ_{37}	15.0	X	119.73750	48.12081	42.03718	1.90760	0.1359541	0.12673838	3.9252196	20	4 28.9	20.9
269295 2008 SZ_{50}	17.5	X	29.29060	89.59626	185.82495	6.34530	0.2294038	0.24504217	2.5291553	20	9 19.7	20.1
269296 2008 SU_{52}	16.1	X	250.17564	245.99566	12.46925	8.85366	0.1299830	0.20396520	2.8582398	20	1 14.3	20.7
269297 2008 SC_{68}	15.8	X	274.36292	139.67213	170.17903	10.01881	0.1643090	0.22177095	2.7031259	20	4 4.9	19.7
269298 2008 SB_{71}	15.4	X	200.98269	232.50983	22.00007	10.44762	0.0921640	0.18958951	3.0009575	20	—	—
269299 2008 SK_{74}	15.3	X	113.81791	331.23091	342.26127	11.37892	0.1808529	0.18414514	3.0598199	20	—	—
269300 Diego	15.8	X	285.87736	351.35236	108.27335	4.27132	0.0728759	0.17155940	3.2076947	20	11 10.5	20.0
269301 2008 SB_{88}	15.5	X	156.30991	57.39980	235.38560	3.73916	0.0589783	0.19240371	2.9716233	20	—	—
269302 2008 ST_{109}	15.6	X	322.67454	242.71171	183.22980	10.46165	0.0766258	0.17088135	3.2161746	20	11 20.6	19.8
269303 2008 SL_{110}	16.2	X	220.09117	185.67311	135.15750	2.62877	0.0854886	0.20968152	2.8060535	20	2 28.1	20.5
269304 2008 SV_{110}	16.0	X	78.85587	216.81806	174.13721	7.94524	0.0175396	0.19056365	2.9907217	20	—	—
269305 2008 SA_{114}	16.1	X	266.54493	22.57140	169.69548	9.25621	0.0257431	0.18807162	3.0170826	20	—	—
269306 2008 SD_{130}	15.6	X	202.25141	208.51561	10.67893	6.73282	0.0703473	0.17569455	3.1571643	20	12 22.7	20.3
269307 2008 SK_{139}	15.8	X	149.72546	288.68628	10.39959	9.88636	0.0238270	0.19124980	2.9835642	20	—	—
269308 2008 SW_{145}	15.7	X	337.02221	249.69848	157.56110	8.92543	0.0654161	0.17674514	3.1446409	20	11 19.9	19.9
269309 2008 SV_{151}	15.6	X	296.60013	46.70065	234.58476	9.39177	0.2355152	0.22394025	2.6856409	20	3 9.8	19.6
269310 2008 SA_{153}	16.8	X	340.08507	131.13987	163.78643	2.73180	0.1960523	0.23777891	2.5804008	20	6 25.3	19.0
269311 2008 SC_{154}	15.9	X	353.88771	244.73864	164.35476	7.80709	0.1393315	0.17618873	3.1512580	20	12 19.9	19.8
269312 2008 SK_{154}	16.2	X	220.53963	148.69000	168.99991	6.85461	0.0415890	0.21065372	2.7974132	20	2 25.4	20.2
269313 2008 SK_{155}	15.7	X	152.23518	247.72199	72.81715	4.99095	0.0617278	0.19352990	2.9600837	20	—	—
269314 2008 SD_{159}	15.6	X	107.43767	320.61019	350.11617	5.82285	0.1183564	0.18306106	3.0718882	20	—	—
269315 2008 SD_{166}	15.8	X	351.96941	320.69383	93.11150	2.67659	0.1435610	0.17469345	3.1692145	20	12 22.4	19.6
269316 2008 SJ_{166}	15.2	X	242.47798	137.97478	26.17547	19.17729	0.0069989	0.17583147	3.1555251	20	12 8.2	19.9
269317 2008 SG_{168}	15.9	X	293.95002	38.49381	235.81445	12.00400	0.1565049	0.22488726	2.6780960	20	3 7.7	19.9
269318 2008 SJ_{171}	15.6	X	282.82522	262.84090	231.09923	4.99645	0.0596449	0.18143207	3.0902481	20	12 20.7	19.7
269319 2008 SS_{172}	16.2	X	68.88504	50.89607	25.13844	14.89348	0.3466041	0.19023484	2.9941669	20	3 14.8	19.9
269320 2008 SL_{176}	17.0	X	310.53837	285.28017	38.54184	5.34359	0.2127821	0.23438266	2.6052679	20	6 3.4	19.7
269321 2008 SA_{177}	16.6	X	253.33511	198.79896	135.63958	6.47011	0.1460777	0.22080879	2.7109727	20	4 16.2	20.7
269322 2008 SR_{207}	15.2	X	352.22968	64.81954	341.91309	16.94303	0.1112856	0.17640828	3.1486429	20	12 10.2	19.5
269323 Madisonvillehigh	16.6	X	310.67315	192.40231	1.33162	10.73981	0.0199859	0.20086080	2.8876148	20	1 18.7	20.7
269324 2008 SL_{219}	15.7	X	226.02763	215.08899	357.68730	14.08873	0.0452974	0.18589567	3.0405807	20	—	—
269325 2008 SO_{221}	16.5	X	142.97860	347.25072	329.63201	1.28674	0.0573683	0.19339997	2.9614094	20	—	—
269326 2008 SH_{269}	15.8	X	172.03618	306.81149	126.47826	8.46913	0.1270726	0.21974199	2.7197397	20	5 29.5	20.2
269327 2008 SC_{278}	13.4	X	328.44963	95.30504	293.28881	6.29539	0.0698266	0.08100866	5.2899115	20	9 23.3	20.1
269328 2008 SY_{282}	16.0	X	96.14524	81.22652	231.85442	3.76274	0.1102951	0.18306413	3.0718538	20	12 27.3	20.6
269329 2008 SJ_{285}	16.0	X	338.15276	235.99947	179.91228	7.71680	0.0462528	0.17661278	3.1462119	20	11 30.5	20.3
269330 2008 TU_{1}	15.7	X	86.12006	192.75688	153.06614	8.85972	0.1651331	0.18837504	3.0138420	20	—	—
269331 2008 TV_{3}	15.0	X	156.59870	5.20985	321.85798	13.81420	0.1529312	0.19498605	2.9453282	20	1 11.2	19.8
269332 2008 TK_{6}	15.0	X	146.00376	14.26143	55.68147	10.47307	0.2480450	0.12422743	3.9779352	20	5 7.6	21.5
269333 2008 TA_{17}	16.3	X	170.19658	304.27082	326.10431	1.68974	0.1083619	0.18161371	3.0881873	20	—	—
269334 2008 TY_{17}	15.6	X	119.98499	305.48866	29.17946	7.36792	0.1818869	0.18695806	3.0290510	20	—	—
269335 2008 TD_{19}	16.0	X	134.72574	30.12637	250.79633	0.29796	0.1486909	0.17642762	3.1484128	20	12 26.3	21.2
269336 2008 TS_{27}	16.2	X	69.32649	151.53601	214.45414	2.39424	0.0992930	0.18405669	3.0608002	20	—	—
269337 2008 TC_{30}	16.4	X	95.88639	296.98718	14.51707	1.04775	0.1674158	0.18150388	3.0894329	20	12 29.4	21.3
269338 2008 TM_{30}	16.4	X	141.23418	176.69327	153.97423	0.74616	0.1062452	0.19216698	2.9740633	20	—	—
269339 2008 TJ_{37}	15.5	X	257.71698	1.30051	217.24271	5.58528	0.0865723	0.19506428	2.9445406	20	—	—
269340 2008 TB_{40}	15.0	X	179.76222	326.90533	269.63255	10.02113	0.0408782	0.17862013	3.1225958	20	12 21.9	19.5
269341 2008 TD_{52}	15.4	X	136.64679	3.42256	262.40560	9.14495	0.0512809	0.17604323	3.1529942	20	12 9.1	20.0
269342 2008 TU_{91}	16.1	X	268.91569	142.06755	166.02760	8.57074	0.1554899	0.21931743	2.7232486	20	3 28.5	20.1
269343 2008 TZ_{94}	14.7	X	74.83246	332.39933	317.24320	24.52841	0.1632382	0.17110465	3.2133757	20	11 1.9	20.0
269344 2008 TH_{95}	17.0	X	19.53636	44.23972	206.58728	1.75430	0.1652351	0.23896092	2.5718845	20	7 14.5	19.5
269345 2008 TG_{106}	15.1	X	132.66564	60.19110	16.65170	3.27799	0.1666371	0.12450383	3.9720458	20	4 28.2	21.3
269346 2008 TB_{110}	15.6	X	191.71563	68.16142	165.98988	11.94348	0.0339141	0.18006353	3.1058863	20	—	—
269347 2008 TV_{110}	14.8	X	249.73572	214.10996	215.10153	15.22642	0.0520474	0.15296255	3.4626822	20	8 12.7	20.0
269348 2008 TT_{134}	16.0	X	264.15304	199.95412	9.66135	8.32468	0.0680310	0.18871715	3.0101985	20	—	—
269349 2008 TT_{179}	15.3	X	188.79188	199.75112	118.98219	9.42565	0.0361218	0.20116083	2.8847429	20	1 23.8	19.3
269350 2008 US_{9}	16.1	X	250.09990	257.21123	306.47719	2.45544	0.0692403	0.18892149	3.0080275	20	—	—
269351 2008 UW_{11}	15.9	X	242.56239	224.16834	323.73656	2.60919	0.0646909	0.18239553	3.0793562	20	—	—
269352 2008 UM_{12}	16.2	X	236.71788	284.18736	339.01939	1.27554	0.0290236	0.19957675	2.8999872	20	1 11.6	20.4
269353 2008 UO_{36}	15.7	X	149.50095	300.53921	314.02800	2.81851	0.1290956	0.17055123	3.2203233	20	12 7.9	20.8
269354 2008 UW_{50}	15.4	X	140.10799	77.36619	208.95341	3.65638	0.1700740	0.18204133	3.0833492	20	—	—
269355 2008 UR_{61}	15.8	X	163.13296	246.06414	14.83537	6.53637	0.1704670	0.17683829	3.1435365	20	12 27.4	21.0
269356 2008 UF_{90}	13.4	X	0.45942	59.24242	299.57811	4.86956	0.1272605	0.08224507	5.2367617	20	10 3.9	19.7
269357 2008 UL_{97}	15.8	X	229.90697	352.41828	68.17335	11.62972	0.0799942	0.22763014	2.6565390	20	7 16.9	19.7
269358 2008 UN_{122}	16.7	X	104.05262	313.96245	310.59272	4.86288	0.0953839	0.24721795	2.5142939	20	11 17.3	20.4
269359 2008 UJ_{205}	14.5	X	100.07228	199.66326	91.52560	25.15868	0.1153867	0.17332425	3.1858830	20	12 7.5	19.5
269360 2008 UN_{249}	15.7	X	195.60905	253.77399	38.13334	10.53576	0.0531730	0.19800677	2.9152963	20	—	—

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
269361 2008 UN_{323}	15.1	X	145.12174	280.78109	27.85559	21.91816	0.1877150	0.18600200	3.0394218	20	—	—
269362 2008 UZ_{334}	15.3	X	152.03405	14.20783	256.14193	6.48676	0.1355046	0.17429174	3.1740822	20	12 28.5	20.3
269363 2008 UB_{338}	15.7	X	68.12143	294.35136	35.59382	5.75583	0.0515685	0.16711660	3.2642970	20	12 6.9	20.5
269364 2008 US_{354}	15.5	X	177.04604	206.72649	64.24849	14.68110	0.2286004	0.18163153	3.0879853	20	—	—
269365 2008 VA_{43}	15.6	X	128.84014	157.10999	166.73443	14.33742	0.1782572	0.18682292	3.0305116	20	—	—
269366 2008 WB_{6}	17.0	X	357.29617	272.78552	358.86261	3.36027	0.2478289	0.22908060	2.6453136	20	7 1.1	18.8
269367 2008 WL_{6}	17.3	X	305.21391	209.78711	15.41195	2.84428	0.1185147	0.28557884	2.2837683	20	1 21.2	20.2
269368 2008 WL_{49}	14.7	X	183.37788	231.27552	152.82740	4.96878	0.1735544	0.12392600	3.9843831	20	4 13.5	21.0
269369 2008 WK_{140}	16.0	X	89.60508	70.87840	332.10690	1.68171	0.0508852	0.19047094	2.9916921	20	1 12.6	19.9
269370 2008 YX_{40}	16.4	X	353.32592	331.60028	110.89410	11.06659	0.1248878	0.25306620	2.4754071	20	—	—
269371 2008 YE_{168}	15.8	X	149.17485	156.77102	63.55091	12.88125	0.0721316	0.23153721	2.6265692	20	11 10.1	19.6
269372 2008 YS_{169}	15.4	X	50.52470	334.41614	96.64278	17.44220	0.0437160	0.18221547	3.0813845	20	—	—
269373 2008 YT_{172}	16.9	X	350.47324	215.62622	119.15180	5.96313	0.0546481	0.22304662	2.6928094	20	9 15.4	20.2
269374 2009 AF_{17}	14.9	X	110.29088	251.45382	88.15038	13.15197	0.0568072	0.17465121	3.1697255	20	—	—
269375 2009 DV_{46}	15.3	X	331.02101	16.37387	173.41309	9.62189	0.1416553	0.17461749	3.1701335	20	1 23.8	19.5
269376 2009 DP_{57}	15.5	X	280.22163	278.09576	357.18302	9.76524	0.1946314	0.17757573	3.1348275	20	2 29.0	20.2
269377 2009 NB_{1}	15.4	X	69.40053	87.48832	285.90806	29.92964	0.1305966	0.21315972	2.7754450	20	—	—
269378 2009 NH_{2}	16.1	X	231.46780	339.51334	278.79438	12.32854	0.1323576	0.22660507	2.6645444	20	—	—
269379 2009 OW_{3}	15.1	X	319.81128	65.95007	305.38470	24.54420	0.2960812	0.17570498	3.1570394	20	8 10.0	18.2
269380 2009 PM_{10}	17.4	X	347.77073	52.27448	331.87755	0.18040	0.1972887	0.28127769	2.3069908	20	12 19.5	19.3
269381 2009 PG_{20}	16.7	X	155.22188	242.40358	168.09482	13.96494	0.1324000	0.23510533	2.5999265	20	4 14.7	20.8
269382 2009 QW	15.6	X	183.16893	315.72118	33.17944	8.39648	0.3612986	0.22789307	2.6544954	20	3 3.8	20.7
269383 2009 QG_{1}	17.6	X	347.81192	251.54259	123.74101	4.10997	0.1814003	0.27970159	2.3156492	20	12 3.8	19.6
269384 2009 QX_{2}	16.7	X	133.02690	55.64155	316.63773	5.52357	0.0639529	0.22341674	2.6898346	20	1 25.0	20.3
269385 2009 QY_{3}	16.6	X	111.71105	224.91491	150.14495	9.25858	0.2169094	0.21533448	2.7567264	20	1 24.0	20.5
269386 2009 QY_{14}	17.0	X	246.94579	270.59171	189.38820	4.03866	0.1192175	0.27035202	2.3687340	20	9 28.8	19.6
269387 2009 QT_{22}	17.4	X	302.77106	254.50887	103.03510	2.51370	0.2053079	0.26245876	2.4159911	20	7 14.2	19.6
269388 2009 QX_{22}	16.6	X	263.93886	50.21963	354.61067	8.30757	0.1157482	0.26157738	2.4214152	20	8 7.9	19.7
269389 2009 QH_{28}	17.2	X	260.18952	118.44816	330.31344	5.87966	0.1354945	0.27609312	2.3357821	20	9 28.4	19.8
269390 Igortkachenko	17.2	X	145.09404	53.24684	333.42358	5.60148	0.2664960	0.22747299	2.6577624	20	3 13.2	21.6
269391 2009 QM_{37}	16.8	X	309.96975	230.26427	158.55963	6.70700	0.1019437	0.26663001	2.3907272	20	10 2.4	19.1
269392 2009 QX_{37}	17.6	X	115.91104	164.13286	157.70433	4.81198	0.1102548	0.29983265	2.2108033	20	—	—
269393 2009 QS_{44}	16.6	X	2.80438	194.50030	128.17994	10.54936	0.2366251	0.27063244	2.3670975	20	10 24.9	18.9
269394 2009 QC_{45}	17.7	X	259.47700	177.28737	224.60021	1.55993	0.2067074	0.25903886	2.4372090	20	7 10.8	20.8
269395 2009 QX_{50}	17.3	X	70.01869	11.82657	356.60531	7.41118	0.1434790	0.29800182	2.2198490	20	—	—
269396 2009 QQ_{60}	16.0	X	106.37107	51.42080	352.33776	24.50882	0.2780771	0.21487574	2.7606485	20	3 5.3	20.0
269397 2009 RB	15.4	X	253.02615	290.78150	52.20454	14.19146	0.2182145	0.23801368	2.5787037	20	4 19.5	19.5
269398 2009 RE_{3}	16.5	X	160.08089	83.73168	309.85990	10.51317	0.1919510	0.23179069	2.6246540	20	3 24.8	21.0
269399 2009 RZ_{5}	16.9	X	50.85222	19.22966	319.21155	7.23768	0.1465556	0.28552794	2.2840396	20	—	—
269400 2009 RN_{8}	17.4	X	85.75355	249.09409	342.27013	3.76726	0.0461495	0.26435502	2.4044237	20	9 11.6	20.4
269401 2009 RO_{8}	16.8	X	290.47228	213.36740	238.02037	1.76320	0.2982677	0.18030378	3.1031266	20	10 6.1	20.5
269402 2009 RH_{12}	16.9	X	134.00777	353.94133	175.37263	2.59365	0.1467013	0.25748732	2.4469897	20	8 23.6	20.6
269403 2009 RT_{13}	17.0	X	171.81556	185.68136	191.91352	2.17445	0.1351636	0.23000791	2.6381989	20	3 18.4	21.1
269404 2009 RL_{15}	17.4	X	225.51170	257.07668	182.08575	6.04490	0.1018086	0.25631716	2.4544315	20	8 2.2	20.8
269405 2009 RN_{28}	17.7	X	312.03165	330.89186	15.06619	3.19526	0.1762155	0.25957258	2.4338670	20	7 20.3	19.8
269406 2009 RK_{29}	16.5	X	234.34511	217.02986	213.06308	6.80689	0.0623231	0.25831274	2.4417742	20	8 5.3	19.9
269407 2009 RS_{30}	17.4	X	227.44974	209.95203	343.93273	4.57940	0.0660765	0.28949412	2.2631302	20	—	—
269408 2009 RD_{46}	15.1	X	276.62076	254.06569	198.89212	15.76605	0.2530293	0.17645589	3.1480765	20	9 22.3	19.3
269409 2009 RQ_{52}	16.9	X	12.59727	78.94101	150.73865	2.83277	0.0820857	0.24255141	2.5464404	20	5 24.1	19.6
269410 2009 RB_{54}	15.8	X	336.25697	57.32037	33.38240	9.44163	0.0869087	0.19314773	2.9639871	20	—	—
269411 2009 RZ_{55}	16.6	X	141.14298	252.92393	89.80419	2.82561	0.0540470	0.21127263	2.7919474	20	—	—
269412 2009 RM_{69}	17.2	X	341.04682	115.53133	251.00073	2.90469	0.1897751	0.27137954	2.3627511	20	11 2.4	19.0
269413 2009 SK_{20}	17.8	X	50.85830	42.69559	246.06200	0.92110	0.1843131	0.27675392	2.3320626	20	11 5.9	20.9
269414 2009 SX_{20}	16.6	X	308.65200	66.78683	329.57645	6.52885	0.1264722	0.26846165	2.3798407	20	10 5.0	19.0
269415 2009 SV_{32}	15.8	X	268.07867	230.77162	234.60945	5.04148	0.2015026	0.17806853	3.1290411	20	10 4.7	20.1
269416 2009 SL_{39}	15.7	X	46.23477	109.19444	9.99928	7.44969	0.1036835	0.21850009	2.7300356	20	2 20.6	19.0
269417 2009 SF_{46}	17.0	X	110.45189	117.38414	279.79650	2.91041	0.1204764	0.21619101	2.7494403	20	2 5.5	20.7
269418 2009 SM_{52}	17.0	X	161.09114	355.72446	160.75165	2.84443	0.1391007	0.26036460	2.4289286	20	9 3.3	20.7
269419 2009 ST_{66}	16.2	X	71.41328	49.22991	50.47519	5.20783	0.1077135	0.21992520	2.7182291	20	3 5.1	19.5
269420 2009 SD_{107}	12.9	X	266.59846	254.68442	183.83921	25.05043	0.0812722	0.08276183	5.2149402	20	9 4.4	19.9
269421 2009 SB_{119}	17.2	X	23.27347	276.04011	343.07415	4.19345	0.0574045	0.25489857	2.4635296	20	7 23.7	20.0
269422 2009 SX_{121}	17.2	X	234.99216	231.20253	332.82693	3.11347	0.1244755	0.29478622	2.2359629	20	—	—
269423 2009 SQ_{128}	16.7	X	326.40722	176.03438	277.87499	1.79885	0.2318933	0.18964236	3.0004000	20	—	—
269424 2009 SE_{131}	17.1	X	74.90145	270.05841	32.60734	6.73461	0.1342199	0.28054004	2.3110330	20	12 14.9	20.5
269425 2009 SE_{132}	16.4	X	81.66755	265.21225	155.69218	4.94934	0.0729403	0.21533738	2.7567017	20	1 22.0	19.8
269426 2009 SW_{132}	17.5	X	192.42716	27.01161	163.50284	5.89722	0.0779673	0.27800802	2.3250440	20	11 28.9	20.6
269427 2009 SU_{134}	17.3	X	146.79756	191.18339	334.67907	2.40788	0.0416150	0.25857811	2.4401033	20	8 30.1	20.4
269428 2009 SD_{135}	17.5	X	115.72924	165.48058	222.54946	4.61492	0.1025033	0.21582348	2.7525608	20	1 28.3	21.4
269429 2009 SG_{135}	17.7	X	132.92757	303.55147	327.27482	2.53673	0.0582870	0.28448387	2.2896246	20	—	—
269430 2009 SB_{147}	16.1	X	281.86454	292.35286	173.96424	6.82554	0.1831765	0.18041429	3.1018594	20	11 1.1	19.9
269431 2009 SP_{148}	15.4	X	270.97447	269.71417	221.96057	14.56257	0.0899183	0.18094968	3.0957378	20	11 28.9	19.5
269432 2009 SN_{150}	16.7	X	81.18156	289.45393	347.63729	6.46291	0.0995618	0.27740565	2.3284085	20	11 13.3	20.0
269433 2009 SL_{163}	17.5	X	253.68398	341.54150	84.81382	2.46077	0.1612190	0.26067475	2.4270017	20	8 14.8	20.6
269434 2009 SR_{164}	15.5	X	336.75414	355.06585	40.63575	10.20437	0.0950921	0.18032121	3.1029266	20	11 4.0	19.4
269435 2009 SO_{165}	18.2	X	240.63112	29.71123	223.99760	4.11240	0.1083421	0.31097617	2.1576681	20	—	—
269436 2009 SP_{174}	17.6	X	64.51181	213.38712	165.35979	4.28473	0.1387822	0.29552111	2.2322545	20	—	—
269437 2009 SP_{200}	17.5	X	356.39763	71.44235	254.10557	2.36188	0.1416022	0.26613581	2.3936859	20	9 23.2	19.7
269438 2009 SY_{202}	16.3	X	68.98729	79.56033	37.50089	10.88246	0.1072716	0.22427194	2.6829923	20	3 25.6	19.6
269439 2009 SV_{204}	17.3	X	181.69024	354.77396	222.43232	1.85486	0.1204763	0.28163548	2.3050365	20	12 16.1	20.6
269440 2009 SE_{206}	17.0	X	234.60768	227.30810	342.76663	6.85664	0.0694765	0.29797027	2.2200057	20	—	—

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
269441 2009 SJ_{212}	17.0	X	131.30471	171.14775	22.91660	6.79917	0.1307961	0.26241666	2.4162495	20	9 24.0	20.6
269442 2009 SC_{220}	17.1	X	287.64162	199.53941	153.75742	6.96208	0.1072456	0.25536281	2.4605430	20	6 27.7	20.2
269443 2009 SP_{224}	15.9	X	16.60887	67.08217	30.68901	15.21534	0.1222871	0.20515811	2.8471494	20	—	—
269444 2009 SR_{230}	15.4	X	292.41614	31.77686	36.55376	17.31386	0.1945391	0.17425191	3.1745660	20	10 1.7	19.4
269445 2009 SZ_{233}	17.3	X	57.56061	223.02732	149.95422	5.06942	0.1076469	0.29330376	2.2434908	20	—	—
269446 2009 SJ_{238}	16.9	X	295.81505	261.08732	133.17367	6.71702	0.1377876	0.26528243	2.3988167	20	9 10.1	19.2
269447 2009 SH_{245}	17.4	X	312.87394	52.58681	320.97618	5.08813	0.1613439	0.26916239	2.3757084	20	9 6.4	19.5
269448 2009 SA_{250}	16.5	X	308.25710	234.91926	220.59010	2.13783	0.1879528	0.18521942	3.0479771	20	12 1.9	19.7
269449 2009 SC_{253}	16.7	X	202.05005	173.32465	182.57856	1.75005	0.0502263	0.22235820	2.6983645	20	3 22.3	20.3
269450 2009 SD_{253}	16.1	X	173.80766	303.24897	70.40066	6.50903	0.0525583	0.21936307	2.7228708	20	3 16.3	20.1
269451 2009 SE_{256}	17.4	X	348.75519	212.76679	195.25036	4.32172	0.1499025	0.28304406	2.2973827	20	—	—
269452 2009 SM_{267}	15.7	X	302.03281	253.28775	216.90668	14.67806	0.1918351	0.18520012	3.0481889	20	12 9.0	19.2
269453 2009 SY_{270}	16.9	X	129.74937	239.61838	347.31340	6.26375	0.0671841	0.27144554	2.3623681	20	10 30.6	20.2
269454 2009 SC_{272}	16.7	X	18.61916	278.29274	229.08116	6.22532	0.1782446	0.21638179	2.7478239	20	2 5.9	19.5
269455 2009 SA_{276}	16.6	X	143.10267	232.08440	159.13881	4.74147	0.1326541	0.22508006	2.6765665	20	3 7.4	20.6
269456 2009 SB_{277}	16.4	X	63.20689	290.62857	132.03600	3.10543	0.0840800	0.21247010	2.7814473	20	—	—
269457 2009 SQ_{289}	17.4	X	305.80776	246.60787	131.18857	3.53643	0.0633284	0.26243420	2.4161419	20	9 10.2	19.9
269458 2009 SW_{297}	16.8	X	40.78572	29.19555	68.81499	5.63197	0.1256841	0.21293401	2.7774060	20	1 14.4	19.8
269459 2009 SJ_{333}	17.7	X	275.02310	0.19500	6.63501	2.46832	0.1970107	0.25554874	2.4593493	20	6 13.4	20.8
269460 2009 SB_{336}	16.7	X	118.94574	106.79962	14.74973	13.87291	0.2029217	0.23610366	2.5925924	20	6 8.8	21.0
269461 2009 SA_{345}	17.2	X	125.32375	310.30613	140.49055	3.37355	0.0839224	0.23326625	2.6135739	20	4 27.6	20.9
269462 2009 SE_{346}	17.1	X	328.81626	186.14905	238.11350	2.51752	0.1623326	0.18656362	3.0333189	20	11 30.7	20.3
269463 2009 SZ_{347}	17.8	X	227.41631	9.46113	174.88272	5.03794	0.0944034	0.28627162	2.2800823	20	—	—
269464 2009 SK_{348}	12.9	X	285.78703	284.36729	145.76405	17.44013	0.1535434	0.08110704	5.2856330	20	9 11.5	19.7
269465 2009 SF_{350}	16.1	X	321.15742	303.39470	189.45210	5.71724	0.0758133	0.19850575	2.9104087	20	—	—
269466 2009 SR_{360}	17.5	X	246.77671	195.68102	33.48254	5.72378	0.1505870	0.30076453	2.2062343	20	—	—
269467 2009 SM_{361}	15.5	X	320.38903	105.90294	308.57579	7.20415	0.1553209	0.18016923	3.1046714	20	10 27.7	19.3
269468 2009 SP_{363}	17.4	X	194.50263	224.05221	357.10008	3.82293	0.0866612	0.28973442	2.2618788	20	—	—
269469 2009 TB_{18}	15.4	X	37.46561	21.83092	328.11350	11.30989	0.1499344	0.18609999	3.0383548	20	12 12.5	19.7
269470 2009 TF_{20}	17.2	X	349.18293	319.74756	46.33462	2.19421	0.2013317	0.26998696	2.3708688	20	11 21.1	19.1
269471 2009 TP_{21}	16.1	X	222.02960	241.28873	108.58544	5.40290	0.1138657	0.23302450	2.6153812	20	4 5.1	20.1
269472 2009 TB_{24}	16.2	X	132.98599	49.37398	15.38906	12.62762	0.1105553	0.22883129	2.6472346	20	4 4.7	19.9
269473 2009 TR_{25}	16.2	X	97.23009	104.03639	290.46678	4.92762	0.0271546	0.21271612	2.7793023	20	1 4.5	19.8
269474 2009 TG_{27}	16.0	X	177.08797	271.02670	91.78479	12.15323	0.0806639	0.22407993	2.6845247	20	3 9.5	20.2
269475 2009 TQ_{32}	15.9	X	19.67479	65.90472	319.38716	7.79047	0.1121894	0.18756101	3.0225559	20	12 28.6	19.9
269476 2009 TR_{34}	15.5	X	345.66733	262.10701	124.28076	7.29007	0.2572633	0.18099274	3.0952468	20	11 19.3	18.5
269477 2009 TM_{35}	16.5	X	180.09766	198.75608	177.57040	2.37447	0.1674268	0.22790803	2.6543792	20	3 26.1	20.8
269478 2009 TP_{35}	16.7	X	81.60588	235.06897	185.46553	4.46566	0.1900478	0.21020756	2.8013701	20	2 7.6	20.2
269479 2009 TH_{36}	17.5	X	357.11384	215.12638	149.55343	1.56781	0.2018818	0.27205352	2.3588472	20	12 5.6	19.8
269480 2009 TC_{39}	15.8	X	358.07836	258.72170	154.87462	13.91674	0.1312154	0.18803481	3.0174764	20	—	—
269481 2009 TC_{42}	15.4	X	320.67902	128.93033	354.58101	7.14335	0.1881432	0.19064463	2.9898748	20	—	—
269482 2009 TO_{42}	15.8	X	312.78480	81.79810	4.71879	7.68715	0.1310790	0.18235250	3.0798406	20	11 28.8	19.5
269483 2009 TB_{44}	16.9	X	146.41258	112.67869	131.82737	6.87737	0.1141160	0.27554686	2.3388681	20	12 13.4	20.4
269484 Marcia	16.7	X	90.27258	182.44878	224.31694	4.04615	0.0518049	0.21048357	2.7989207	20	1 13.6	20.4
269485 Bisikalo	15.9	X	323.04386	346.92989	240.82848	7.33835	0.0737609	0.21934108	2.7230528	20	2 29.9	19.6
269486 2009 UW_{15}	15.6	X	262.73639	228.26794	235.13439	4.72444	0.1897420	0.17490850	3.1666162	20	9 26.5	20.2
269487 2009 UW_{17}	16.5	X	185.44312	326.95470	136.03028	6.85164	0.1057904	0.24550325	2.5259876	20	7 19.5	20.4
269488 2009 UJ_{18}	16.0	X	359.89768	124.95623	8.94961	4.14493	0.0547904	0.20944053	2.8082055	20	—	—
269489 2009 UY_{20}	16.0	X	342.31638	103.63864	12.38927	10.87936	0.1615845	0.19703958	2.9248285	20	—	—
269490 2009 UH_{23}	16.8	X	154.95707	253.00909	156.00264	1.81616	0.1938579	0.22816756	2.6523660	20	4 14.4	21.0
269491 2009 UR_{25}	16.4	X	167.80036	245.75831	152.41126	5.75704	0.1142359	0.22983915	2.6394901	20	4 10.2	20.5
269492 2009 UG_{30}	16.8	X	297.43906	250.38783	199.46278	0.58766	0.1399042	0.17934273	3.1142027	20	11 8.2	20.4
269493 2009 UF_{31}	15.3	X	300.91937	240.18284	224.26000	9.38470	0.0643387	0.18494476	3.0509941	20	12 9.9	19.3
269494 2009 UU_{31}	15.6	X	260.61751	268.28795	227.31825	7.95445	0.1601486	0.17911309	3.1168638	20	11 9.3	19.7
269495 2009 UB_{32}	16.3	X	295.95828	129.94080	313.59240	0.27357	0.1472181	0.17750368	3.1356757	20	10 27.2	20.2
269496 2009 UC_{35}	15.9	X	333.29556	56.05240	56.28140	4.39161	0.0715805	0.19199234	2.9758665	20	—	—
269497 2009 UR_{37}	16.7	X	207.89152	92.37383	207.24407	5.44731	0.0339622	0.21257976	2.7804907	20	1 19.1	20.8
269498 2009 US_{51}	17.0	X	112.65606	92.86335	358.37659	0.91068	0.0623047	0.22724857	2.6595119	20	4 8.4	20.6
269499 2009 UD_{53}	16.2	X	212.47246	344.05653	17.31189	6.97232	0.0125596	0.23003683	2.6379778	20	4 11.4	19.5
269500 2009 UT_{59}	17.4	X	63.25357	59.75377	265.05322	2.36018	0.1794855	0.27888575	2.3201630	20	—	—
269501 2009 UG_{72}	15.3	X	268.79017	274.70593	213.25697	11.31969	0.1016533	0.18143922	3.0901669	20	11 20.3	19.4
269502 2009 UZ_{72}	15.5	X	6.62833	341.12809	48.46271	14.53541	0.1533815	0.18377372	3.0639413	20	12 17.6	19.4
269503 2009 UX_{80}	16.7	X	159.18563	15.21808	4.89334	2.44723	0.1599440	0.22490825	2.6779294	20	3 11.8	21.0
269504 2009 UT_{88}	15.5	X	7.30871	13.73843	26.91542	9.90489	0.1011662	0.18666716	3.0321972	20	12 28.4	19.5
269505 2009 UA_{89}	16.9	X	214.35757	215.06362	170.12130	4.22868	0.1150376	0.23789765	2.5795421	20	5 10.3	20.9
269506 2009 UY_{89}	16.1	X	323.15165	195.10293	242.36214	3.64523	0.1123331	0.18570750	3.0426343	20	12 7.7	19.5
269507 2009 UU_{91}	16.7	X	275.49575	346.40458	81.64742	6.18042	0.0841344	0.26379793	2.4078077	20	10 4.6	19.5
269508 2009 UX_{95}	16.7	X	169.12093	294.10970	176.44694	3.46142	0.0553670	0.24769384	2.5110725	20	7 11.8	20.1
269509 2009 UQ_{98}	15.4	X	78.09631	26.44307	81.09326	3.95963	0.1930611	0.12455591	3.9709384	20	4 12.9	20.8
269510 2009 UE_{99}	16.5	X	43.55656	307.67954	76.29628	3.18813	0.0908715	0.19304259	2.9650633	20	—	—
269511 2009 UH_{108}	16.3	X	184.06261	62.80943	198.62897	1.33658	0.0815615	0.19621446	2.9330224	20	—	—
269512 2009 UL_{109}	16.3	X	295.78658	73.16050	331.75878	1.48623	0.1179238	0.16835736	3.2482390	20	9 9.1	20.3
269513 2009 UV_{109}	16.2	X	207.91353	262.69859	64.15018	6.09440	0.0457812	0.21950484	2.7216983	20	2 24.9	20.1
269514 2009 UL_{110}	16.6	X	198.25325	262.16260	46.29298	5.01791	0.0512240	0.21102572	2.7941248	20	1 22.1	20.7
269515 2009 UA_{115}	17.4	X	174.95173	355.48148	197.85654	6.84236	0.0535332	0.27492741	2.3423800	20	11 13.2	20.5
269516 2009 UN_{127}	15.7	X	314.52845	309.39679	140.08781	15.20688	0.1780119	0.18174673	3.0866803	20	12 8.1	19.4
269517 2009 UD_{129}	14.8	X	296.49000	178.60966	254.89067	16.10713	0.1774952	0.17687021	3.1431583	20	10 4.8	19.0
269518 2009 UQ_{132}	15.3	X	297.33485	172.26975	267.10078	16.51288	0.1822386	0.17749861	3.1357354	20	10 13.2	19.4
269519 2009 US_{146}	16.5	X	307.14086	177.51527	69.67951	3.78803	0.0461457	0.22342807	2.6897437	20	3 13.8	20.0
269520 2009 UC_{147}	17.0	X	1.32320	12.37755	244.71173	1.13471	0.0589026	0.23672232	2.5880733	20	6 12.8	19.9

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		°	°	°	°		°				
269521 2009 UU_{147}	16.8	X	77.27667	231.77050	27.31514	3.27660	0.1405327	0.25904965	2.4371413	20	10 19.9	20.1
269522 2009 UP_{152}	15.7	X	98.91780	117.98616	333.07963	7.74507	0.2806003	0.12467148	3.9684840	20	4 22.3	21.8
269523 2009 VR_{7}	15.0	X	304.41803	221.98061	242.86713	10.42404	0.0894878	0.18408011	3.0605406	20	12 13.4	18.9
269524 2009 VX_{16}	14.9	X	124.19611	301.67837	264.56873	7.44415	0.0769358	0.15942439	3.3684714	20	9 11.5	20.1
269525 2009 VB_{27}	15.9	X	96.08399	138.83800	313.11958	1.69186	0.2017479	0.12588330	3.9429745	20	4 13.7	21.6
269526 2009 VQ_{41}	16.4	X	188.15852	277.23163	104.33775	3.39242	0.1549625	0.22923744	2.6441070	20	4 10.0	20.7
269527 2009 VY_{42}	16.1	X	31.63457	116.23978	265.85958	4.07316	0.0666162	0.18781329	3.0198486	20	—	—
269528 2009 VN_{44}	15.5	X	300.70001	238.25835	71.24582	15.80928	0.1387316	0.23725572	2.5841929	20	5 13.6	18.7
269529 2009 VG_{48}	17.3	X	88.81980	48.29042	146.75262	3.63366	0.0743321	0.24361455	2.5390265	20	7 28.9	20.8
269530 2009 VF_{60}	15.2	X	268.74193	299.90715	171.09584	26.83307	0.2070305	0.17585963	3.1551883	20	10 16.1	19.7
269531 2009 VR_{65}	16.5	X	110.26643	6.18264	326.91494	2.86484	0.0626057	0.19453206	2.9499088	20	—	—
269532 2009 VU_{66}	15.3	X	185.16444	143.06380	47.17508	9.62223	0.0513763	0.17435083	3.1733650	20	11 2.3	20.0
269533 2009 VH_{69}	16.8	X	66.46329	216.83283	171.33850	2.18174	0.0823153	0.19687496	2.9264586	20	—	—
269534 2009 VA_{82}	16.9	X	189.97127	209.83986	62.73062	5.33325	0.1152345	0.29357912	2.2420878	20	—	—
269535 2009 VK_{82}	16.1	X	31.65876	65.67339	67.18348	5.35025	0.0444410	0.21246934	2.7814540	20	2 13.9	19.7
269536 2009 VG_{83}	15.9	X	346.28136	304.74318	261.01705	8.88485	0.1262955	0.22194260	2.7017320	20	2 27.7	19.3
269537 2009 VF_{84}	16.3	X	72.87955	48.64572	42.72869	5.29172	0.1381965	0.21165559	2.7885786	20	3 1.7	19.8
269538 2009 VZ_{85}	17.2	X	53.66366	77.71606	191.17682	1.85175	0.1408829	0.25626357	2.4547737	20	10 3.9	20.3
269539 2009 VD_{92}	16.1	X	351.70791	82.57732	1.02017	1.88423	0.1123113	0.18999841	2.9966503	20	—	—
269540 2009 VJ_{92}	15.3	X	235.83260	248.99575	230.47926	14.37232	0.1317913	0.17008529	3.2262019	20	9 19.3	20.3
269541 2009 VT_{93}	17.2	X	153.44027	41.45995	59.65721	3.08786	0.0901093	0.23734919	2.5835144	20	6 11.8	20.8
269542 2009 VK_{94}	16.2	X	133.72247	256.52062	56.72904	9.90765	0.1924095	0.19912340	2.9043872	20	—	—
269543 2009 VQ_{95}	15.9	X	232.62077	51.95167	154.18335	4.89272	0.1051990	0.18598092	3.0396515	20	—	—
269544 2009 VC_{104}	16.4	X	198.89390	143.34499	205.03484	5.51035	0.0291359	0.22265809	2.6959411	20	3 7.6	20.2
269545 2009 VN_{106}	14.8	X	42.74672	340.73072	54.96544	18.76419	0.2371966	0.19049261	2.9914653	20	—	—
269546 2009 VE_{108}	14.7	X	193.37392	53.65347	68.00702	15.49993	0.1156732	0.15614414	3.4154840	20	8 20.5	20.3
269547 2009 VG_{111}	16.4	X	52.74174	186.06376	183.88886	1.46152	0.1227560	0.19279509	2.9676003	20	—	—
269548 2009 WR	17.2	X	265.63276	181.22917	159.70805	4.93040	0.2174866	0.24419206	2.5350218	20	4 27.4	21.0
269549 2009 WS_{5}	13.5	X	350.04348	275.03831	97.28821	4.29193	0.0626753	0.08215840	5.2404436	20	10 8.1	20.1
269550 Chur	16.3	X	336.55936	160.87762	67.17706	14.29067	0.0958194	0.22170406	2.7036696	20	3 30.5	19.8
269551 2009 WU_{8}	15.7	X	179.08805	133.22779	265.98078	14.02621	0.0454655	0.22935738	2.6431850	20	4 14.5	19.7
269552 2009 WZ_{14}	16.0	X	317.83995	314.00092	132.24645	3.92786	0.0458554	0.18019481	3.1043775	20	12 10.5	20.1
269553 2009 WX_{15}	16.8	X	15.83514	287.98595	80.71076	4.62594	0.0572110	0.27279609	2.3545647	20	12 17.2	19.3
269554 2009 WD_{25}	16.3	X	71.48273	235.18545	129.42130	2.40717	0.0985548	0.19829001	2.9125194	20	—	—
269555 2009 WF_{27}	16.9	X	275.60773	20.07685	287.74838	1.74332	0.0705023	0.23195980	2.6233782	20	4 13.5	20.3
269556 2009 WM_{33}	15.8	X	211.27798	293.04410	240.56938	4.19271	0.1138601	0.17122983	3.2118095	20	11 3.3	20.7
269557 2009 WW_{33}	16.5	X	294.64616	298.59517	160.17158	1.29664	0.1578951	0.17596191	3.1539655	20	11 12.5	20.3
269558 2009 WM_{41}	15.8	X	293.07248	249.78412	201.88720	7.99824	0.0971958	0.17726579	3.1384804	20	11 8.8	19.8
269559 2009 WY_{46}	15.5	X	316.02335	246.16022	193.51362	9.33289	0.0717440	0.18189551	3.0849969	20	11 30.3	19.5
269560 2009 WQ_{50}	15.5	X	326.51374	229.44383	148.94819	6.13835	0.0512139	0.17077441	3.2175170	20	9 28.4	19.7
269561 2009 WK_{68}	16.4	X	157.54346	187.66061	160.29171	4.45044	0.0768455	0.21180022	2.7873090	20	1 25.2	20.4
269562 2009 WM_{68}	16.4	X	100.52106	222.83431	185.80678	5.44934	0.0518866	0.21087720	2.7954365	20	1 28.6	20.3
269563 2009 WR_{73}	16.2	X	328.73487	9.43440	109.70293	3.24000	0.0437644	0.19245257	2.9711203	20	—	—
269564 2009 WW_{73}	16.3	X	307.45238	325.87772	111.16814	2.23623	0.1534410	0.17664618	3.1458153	20	11 6.9	20.1
269565 2009 WT_{82}	16.1	X	258.69054	196.79252	291.76320	7.57208	0.0437612	0.17761428	3.1343738	20	11 12.4	20.6
269566 2009 WT_{85}	15.1	X	216.73064	259.44320	272.59962	12.47297	0.1440622	0.17379052	3.1801821	20	11 1.8	20.2
269567 Bakhtinov	16.2	X	218.61988	315.38808	49.02847	11.35626	0.1996070	0.23178832	2.6246719	20	4 15.9	20.6
269568 2009 WS_{105}	15.6	X	264.03762	10.34898	108.71398	6.58862	0.1261329	0.17387987	3.1790927	20	10 31.1	20.0
269569 2009 WO_{123}	16.5	X	92.18244	148.70991	205.43527	1.30997	0.0965577	0.19569022	2.9382583	20	—	—
269570 2009 WQ_{125}	16.7	X	63.19621	349.03846	114.64701	1.66468	0.0323931	0.21278739	2.7786817	20	2 17.1	20.3
269571 2009 WP_{161}	16.0	X	173.55397	299.61641	57.84503	12.63366	0.0783306	0.21643379	2.7473839	20	2 29.7	20.3
269572 2009 WF_{176}	16.2	X	297.84341	77.02908	3.99286	4.50051	0.1621554	0.17565553	3.1576319	20	10 23.8	20.0
269573 2009 WC_{179}	16.1	X	215.01717	307.67317	24.63843	5.93810	0.0310792	0.21962972	2.7206665	20	3 10.5	20.0
269574 2009 WN_{182}	15.9	X	169.44284	325.46414	49.09032	6.95170	0.0513002	0.21754972	2.7379806	20	3 12.5	19.9
269575 2009 WE_{197}	16.6	X	260.92341	159.32540	193.17189	3.99007	0.2031518	0.24217769	2.5490595	20	5 8.2	20.4
269576 2009 WT_{198}	15.4	X	108.01275	286.46951	165.96012	5.08403	0.2647449	0.12576363	3.9454754	20	5 4.8	21.5
269577 2009 WM_{199}	16.6	X	112.83158	324.63409	114.14618	6.29568	0.0401622	0.21955456	2.7212873	20	3 24.1	20.3
269578 2009 WR_{203}	16.5	X	90.96586	162.72814	211.75732	1.51022	0.1120322	0.19995256	2.8963524	20	—	—
269579 2009 WS_{204}	16.7	X	206.35794	355.65563	307.65037	3.37380	0.0416469	0.21155414	2.7894700	20	1 23.5	20.5
269580 2009 WL_{215}	15.9	X	174.89112	326.88138	121.98574	13.83795	0.2426250	0.22990400	2.6389938	20	6 20.6	20.6
269581 2009 WN_{217}	16.1	X	291.79997	268.12343	177.22361	5.66978	0.1491096	0.17647274	3.1478761	20	10 23.9	20.0
269582 2009 WX_{222}	17.0	X	205.10040	120.87053	180.62638	4.10327	0.0460165	0.21268016	2.7796155	20	1 18.8	21.1
269583 2009 WO_{230}	16.5	X	76.70601	290.21722	50.11081	3.31078	0.0998545	0.18578696	3.0417667	20	—	—
269584 2009 WR_{250}	15.1	X	251.89067	112.09867	82.34081	12.49087	0.0217093	0.19027483	2.9937474	20	—	—
269585 2009 WO_{251}	16.8	X	47.15105	229.80753	237.07065	0.87179	0.0647396	0.20842471	2.8173226	20	2 1.6	20.1
269586 2009 WJ_{254}	16.1	X	84.83913	11.72740	82.81310	5.45239	0.0341503	0.21238020	2.7822321	20	3 7.8	19.8
269587 2009 WB_{260}	15.9	X	173.58806	221.79632	75.48369	3.04098	0.1105158	0.19806829	2.9146925	20	—	—
269588 2009 WR_{260}	16.4	X	8.27826	90.18976	42.67597	2.45194	0.0175982	0.20461457	2.8521893	20	1 13.5	20.1
269589 Kryachko	15.6	X	231.76451	161.95404	37.55159	10.96381	0.0265741	0.18735604	3.0247599	20	—	—
269590 2009 XC_{4}	16.4	X	47.20739	238.61504	104.00256	2.57923	0.1680379	0.18136929	3.0909612	20	12 17.2	20.6
269591 2009 XO_{7}	16.2	X	223.39668	163.22232	207.43388	3.74185	0.2490276	0.23504840	2.6003463	20	4 22.3	20.5
269592 2009 XA_{13}	16.6	X	8.67327	122.67551	44.67156	3.95273	0.0706621	0.21265987	2.7797924	20	2 24.7	20.0
269593 2009 YU_{2}	15.0	X	225.59700	75.20779	115.93663	10.42961	0.0501140	0.17456607	3.1707560	20	12 18.6	19.5
269594 2010 AM_{36}	15.4	X	4.56783	239.78073	148.56146	9.59355	0.1153922	0.16775695	3.2559848	20	12 6.8	19.7
269595 2010 AZ_{79}	16.1	X	63.89696	49.41365	114.75906	5.19477	0.0632999	0.21188623	2.7865546	20	5 12.6	19.7
269596 2010 AY_{96}	15.8	X	175.69907	229.09854	141.74746	25.79021	0.1018327	0.22802172	2.6534968	20	3 16.8	20.1
269597 2010 AC_{99}	16.2	X	340.28870	304.20666	143.78788	6.61506	0.2281135	0.19145695	2.9814118	20	—	—
269598 2010 BF_{70}	15.3	X	280.00940	318.65290	115.49559	12.08000	0.0733320	0.17368650	3.1814518	20	10 6.8	19.8
269599 2010 BR_{80}	16.8	X	12.52492	179.95281	349.79797	3.65295	0.1169825	0.21960876	2.7208396	20	2 29.9	19.9
269600 2010 BR_{85}	15.6	X	40.24871	100.70316	298.59000	11.09321	0.0403064	0.19620261	2.9331404	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		°	°	°	°		°				
269601 2010 CX_1	16.2	X	25.76816	95.39164	132.37744	10.99098	0.0857745	0.22054434	2.7131394	20	6 13.6	19.6
269602 2010 CY_{18}	16.1	X	171.43178	167.73971	330.25751	5.26793	0.0496525	0.23336491	2.6128372	20	8 20.4	19.6
269603 2010 CH_{22}	15.4	X	200.43771	237.02721	358.88963	10.00910	0.0598605	0.17140530	3.2096170	20	—	—
269604 2010 CF_{32}	17.0	X	318.81040	141.85362	347.29367	6.66212	0.2304936	0.27035151	2.3687370	20	—	—
269605 2010 CG_{32}	15.2	X	339.36104	150.12881	352.58531	18.01971	0.1805401	0.18057651	3.1000013	20	—	—
269606 2010 CU_{52}	15.6	X	248.04817	98.03828	186.52288	10.72290	0.2049215	0.17565049	3.1576922	20	2 5.2	20.9
269607 2010 CG_{89}	16.9	X	267.03409	244.52933	158.93878	10.87964	0.2178543	0.24207650	2.5497697	20	7 19.0	20.5
269608 2010 CF_{108}	15.4	X	36.84096	346.93897	144.94666	9.82411	0.0649763	0.19136105	2.9824077	20	2 22.1	19.0
269609 2010 CH_{139}	15.8	X	324.82200	141.70841	7.79272	5.64740	0.1553601	0.17922923	3.1155173	20	—	—
269610 2010 CQ_{143}	15.8	X	326.16840	69.51565	117.42343	4.14771	0.0562813	0.18841223	3.0134454	20	1 24.3	19.7
269611 2010 CQ_{191}	15.8	X	99.85975	119.93036	334.25955	1.92198	0.1660299	0.12586590	3.9433379	20	4 15.9	21.5
269612 2010 CJ_{198}	15.7	X	352.04792	271.87790	152.97155	16.39888	0.1109193	0.18590685	3.0404588	20	—	—
269613 2010 DE_{14}	16.4	X	333.72956	131.29389	203.06623	11.61103	0.0802897	0.21320187	2.7750792	20	8 11.2	20.0
269614 2010 DU_{52}	15.7	X	88.94952	274.69204	160.68036	13.90736	0.0535895	0.17639449	3.1488070	20	2 21.7	19.9
269615 2010 DB_{76}	15.8	X	313.19831	13.20592	3.09567	8.57747	0.0875131	0.23293082	2.6160824	20	9 13.5	18.7
269616 2010 EO_{111}	16.8	X	244.79841	141.96086	145.39595	3.33260	0.1635120	0.28193737	2.3033908	20	1 30.3	20.4
269617 2010 JY_{122}	15.7	X	210.53889	154.01459	226.93152	14.55807	0.1304551	0.19330588	2.9623703	20	4 29.9	20.5
269618 2010 KU_{117}	16.8	X	347.41452	347.54523	188.90761	9.80551	0.2350989	0.27937311	2.3174639	20	—	—
269619 2010 SL_{16}	15.0	X	293.23263	319.04846	110.57929	12.98517	0.0551469	0.17637001	3.1490983	20	10 22.2	19.5
269620 2010 UJ_{58}	13.3	X	248.15005	210.17195	268.29570	7.89245	0.1558201	0.08172482	5.2589625	20	9 18.5	20.6
269621 2010 UX_{96}	12.6	X	249.51871	28.04368	81.19730	15.62778	0.0683919	0.08158847	5.2648199	20	10 1.4	19.8
269622 2010 VF_{38}	12.8	X	238.47842	50.33157	65.80377	17.31935	0.1608562	0.08275843	5.2150830	20	9 19.0	20.3
269623 2010 VA_{173}	13.4	X	250.31973	24.26159	84.98134	3.58832	0.0560087	0.08121913	5.2807687	20	9 27.5	20.5
269624 2010 VQ_{180}	14.8	X	177.08659	242.44353	73.01476	3.83560	0.1187387	0.12704405	3.9189209	20	1 21.4	20.9
269625 2010 XE_{51}	17.0	X	64.60182	189.04687	310.90812	4.12736	0.1273166	0.23080237	2.6321413	20	4 15.0	20.2
269626 2010 XZ_{75}	16.3	X	8.14744	271.92552	118.39947	2.71597	0.1659196	0.19996403	2.8962416	20	12 29.1	19.7
269627 2011 AV	15.4	X	353.64913	218.48631	117.62502	12.05862	0.0461182	0.16905782	3.2392605	20	9 15.1	19.9
269628 2011 AN_{23}	15.8	X	31.57193	321.27574	141.45430	9.79128	0.2472302	0.21236037	2.7824054	20	1 3.9	18.1
269629 2011 AD_{27}	15.5	X	300.80383	312.97455	128.25516	12.24498	0.0566988	0.18304365	3.0720830	20	11 15.2	19.8
269630 2011 AO_{28}	14.8	X	283.00357	298.91381	126.02988	22.61959	0.0534095	0.17377829	3.1803313	20	10 4.1	19.5
269631 2011 AG_{29}	17.6	X	81.48898	90.05002	116.91081	9.84681	0.1601563	0.35421715	1.9782887	20	9 1.0	20.0
269632 2011 AK_{34}	15.8	X	282.51779	216.97895	297.45765	7.27724	0.0504921	0.19337250	2.9616898	20	—	—
269633 2011 AJ_{44}	16.0	X	210.31499	113.35299	51.30007	0.49512	0.1310558	0.17571381	3.1569336	20	10 22.4	20.8
269634 2011 AE_{45}	17.9	X	267.67656	127.53368	351.43742	0.30152	0.1399010	0.28724842	2.2749103	20	11 29.2	19.8
269635 2011 AS_{45}	16.8	X	228.95048	287.40902	136.63949	6.49901	0.1299543	0.26192799	2.4192539	20	7 14.8	20.2
269636 2011 AU_{45}	17.2	X	281.33281	316.81585	188.10119	0.97902	0.1685679	0.19013967	2.9951660	20	12 22.5	20.7
269637 2011 AF_{46}	16.2	X	331.72815	37.51815	136.66158	8.80179	0.0692309	0.21233940	2.7825886	20	1 9.4	19.9
269638 2011 AM_{53}	16.3	X	336.79852	175.09933	80.19493	3.02091	0.1176732	0.23931948	2.5693150	20	4 26.7	19.0
269639 2011 AV_{59}	16.4	X	104.07222	219.42071	124.84580	7.67952	0.1080116	0.20369811	2.8607378	20	—	—
269640 2011 AM_{74}	14.9	X	304.09466	310.30492	122.10090	13.80074	0.0428914	0.17953261	3.1120064	20	11 10.0	19.3
269641 4245 P–L	17.9	X	12.71912	359.80525	344.36036	2.39307	0.2625949	0.28088100	2.3091624	20	12 14.3	20.5
269642 6215 P–L	17.3	X	24.62874	67.09586	341.23994	6.57356	0.1630465	0.29996622	2.2101469	20	—	—
269643 6765 P–L	17.7	X	354.69344	358.17409	17.01594	3.05393	0.1720738	0.28100332	2.3084922	20	12 14.2	20.0
269644 2642 T–3	16.1	X	62.30015	174.86566	206.15217	7.71492	0.1600864	0.18888302	3.0084360	20	—	—
269645 1991 VX_8	15.6	X	105.07756	261.72459	54.98304	10.17913	0.1162738	0.17532751	3.1615691	20	—	—
269646 1991 VR_9	16.1	X	214.76745	295.79312	53.95701	12.31941	0.2090413	0.22433406	2.6824970	20	3 28.9	20.8
269647 1992 HF_2	16.6	X	65.96808	219.21741	64.52186	7.12954	0.1189141	0.25729767	2.4481920	20	11 6.3	20.0
269648 1992 QE_3	16.6	X	252.09278	81.51983	262.71557	1.59588	0.2563611	0.23797079	2.5790135	20	4 12.4	20.7
269649 1993 BG_{11}	17.2	X	275.34274	4.96038	93.85517	4.26280	0.1743724	0.27781834	2.3261021	20	11 6.5	19.4
269650 1994 GR_4	16.8	X	146.49731	264.57497	201.70038	7.08638	0.1574923	0.23362784	2.6108764	20	6 14.9	21.0
269651 1994 GS_7	15.9	X	157.11901	220.35983	202.83718	32.19350	0.2478466	0.23049214	2.6345026	20	5 5.9	20.6
269652 1994 PE_{31}	16.0	X	292.63889	128.62862	174.31054	9.09537	0.1657308	0.21993201	2.7181729	20	4 18.6	19.7
269653 1994 RR_7	17.7	X	148.35992	102.09346	185.73097	5.31268	0.1669856	0.27836917	2.3230326	20	—	—
269654 1994 SS_2	16.7	X	79.07430	211.22807	231.80655	2.36051	0.0585126	0.20850564	2.8165935	20	2 14.4	20.4
269655 1995 BU_9	17.6	X	86.57229	310.93902	119.51832	4.38336	0.2455222	0.23861658	2.5743582	20	3 6.4	20.6
269656 1995 CD_5	17.1	X	243.17702	114.84007	307.09345	5.94704	0.0965233	0.25258602	2.4785433	20	8 2.6	20.3
269657 1995 FP_3	16.2	X	298.13769	150.73503	27.99824	5.46009	0.1116625	0.18934024	3.0035908	20	—	—
269658 1995 FQ_3	15.6	X	148.83673	161.92032	138.91080	6.24005	0.1325683	0.18472775	3.0533831	20	—	—
269659 1995 FK_5	16.7	X	286.87051	244.12338	40.49247	3.69700	0.1795344	0.23664636	2.5886271	20	3 14.8	20.2
269660 1995 GU_5	16.2	X	138.20062	96.31495	173.33513	8.62138	0.1047338	0.17856936	3.1231877	20	12 16.8	21.3
269661 1995 MJ_1	15.6	X	187.38799	135.85041	132.70869	9.40899	0.0071840	0.18100207	3.0951404	20	—	—
269662 1995 MR_5	15.7	X	70.83864	175.31512	195.75733	11.16897	0.0182009	0.17918305	3.1160525	20	—	—
269663 1995 MP_7	15.5	X	270.62964	56.06859	91.74229	17.48690	0.0822308	0.17842693	3.1248496	20	12 18.4	19.5
269664 1995 OB_{13}	17.4	X	276.43527	97.91786	322.38929	4.86270	0.0804603	0.27805446	2.3247851	20	9 22.2	20.0
269665 1995 SV_{25}	17.9	X	295.94452	147.19831	355.68785	2.81565	0.0293141	0.28656612	2.2785199	20	—	—
269666 1995 SU_{28}	16.9	X	343.40400	299.11094	344.25941	2.83703	0.1251025	0.23215274	2.6219244	20	6 18.5	19.7
269667 1995 SW_{38}	16.2	X	167.30724	101.37815	195.80930	13.15681	0.2606835	0.17210317	3.2009347	20	—	—
269668 1995 SB_{46}	18.7	X	267.84322	207.64246	161.46068	1.59010	0.1876757	0.27072999	2.3665289	20	6 9.2	21.9
269669 1995 SV_{51}	16.7	X	81.51174	114.10637	14.01946	2.40765	0.0187523	0.22090889	2.7101537	20	4 9.9	20.4
269670 1995 SM_{61}	17.2	X	354.36184	101.65759	152.76737	3.82129	0.1581037	0.22820303	2.6520911	20	5 27.1	19.8
269671 1995 SH_{78}	16.5	X	16.07923	187.85727	45.78963	3.95941	0.0409224	0.22677420	2.6632195	20	6 1.5	19.7
269672 1995 UR_{15}	16.3	X	94.78728	349.03470	80.20549	5.36696	0.0476750	0.21348778	2.7726009	20	2 18.7	20.1
269673 1995 UE_{22}	17.3	X	219.72817	359.48282	211.16325	2.72579	0.1155509	0.28540620	2.2846891	20	—	—
269674 1995 UH_{24}	16.9	X	278.80548	329.13100	358.04445	2.61113	0.1918871	0.22596288	2.6695905	20	4 25.9	20.6
269675 1995 UX_{56}	16.8	X	327.44362	6.21891	62.26129	7.07472	0.0850946	0.27929021	2.3179225	20	—	—
269676 1995 UB_{62}	17.4	X	237.67120	234.55625	255.64788	2.48064	0.0773110	0.27633914	2.3343956	20	11 4.4	20.2
269677 1995 UK_{65}	15.9	X	315.04095	221.70526	29.24456	14.95003	0.0715791	0.22096066	2.7097304	20	3 28.5	19.4
269678 1995 UF_{80}	16.0	X	357.90188	192.16657	24.36320	12.93861	0.1631320	0.22153238	2.7050662	20	4 7.5	18.7
269679 1995 VZ_8	17.1	X	136.41686	274.86859	59.63658	4.58712	0.2009342	0.28979186	2.2615799	20	—	—
269680 1995 WA_{12}	16.9	X	196.75702	108.28681	93.49031	7.38363	0.1176732	0.27840981	2.3228065	20	12 13.1	20.0

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		°	°	°	°		°				
269681 1995 WB_{12}	17.5	X	165.78571	176.33351	108.24237	5.56029	0.1054319	0.28599282	2.2815639	20	—	—
269682 1995 WD_{17}	17.8	X	293.95015	124.99285	300.97552	2.08043	0.1595049	0.27564965	2.3382866	20	10 22.4	19.8
269683 1995 WD_{33}	17.5	X	118.89797	222.63451	111.37504	3.16364	0.2569890	0.28954832	2.2628478	20	—	—
269684 1995 YF_{18}	15.6	X	339.97471	196.79715	82.19479	15.21319	0.2310871	0.22466786	2.6798393	20	5 28.1	18.0
269685 1996 BQ_{10}	17.4	X	227.91487	267.32733	181.06043	6.43740	0.1294809	0.26453742	2.4033184	20	8 15.0	20.8
269686 1996 EH_8	15.7	X	129.87041	184.58937	352.30133	7.73911	0.0474124	0.17950669	3.1123060	20	8 18.3	20.3
269687 1996 GR_6	17.0	X	151.90596	161.95107	73.85360	3.02982	0.1315420	0.26562514	2.3967529	20	12 4.7	20.7
269688 1996 JJ_{11}	16.9	X	158.09665	36.05946	137.27585	6.53836	0.0670119	0.25795550	2.4440281	20	9 25.3	20.4
269689 1996 LL_2	16.5	X	352.44830	200.94292	140.85095	7.12601	0.1383589	0.25548351	2.4597679	20	10 12.4	18.9
269690 1996 RG_3	18.4	X	100.37398	300.11518	158.18675	3.57170	0.6050109	0.34847761	1.9999515	20	6 2.1	22.0
269691 1996 RR_7	16.6	X	194.52959	25.73221	359.33428	3.29235	0.1772988	0.23289775	2.6163300	20	4 17.4	20.9
269692 1996 TN_{16}	16.1	X	33.52117	106.24296	267.32735	5.78012	0.1458264	0.17215155	3.2003348	20	12 31.9	20.4
269693 1996 TY_{30}	17.6	X	85.40146	123.82965	191.06108	23.39526	0.1169374	0.37899946	1.8910818	20	—	—
269694 1996 UF_3	17.2	X	217.70411	79.04224	23.44407	21.13242	0.0681988	0.36772664	1.9295350	20	9 24.1	19.3
269695 1996 VW_1	17.6	X	87.22940	350.60126	31.75198	6.70499	0.1842879	0.30181920	2.2010917	20	—	—
269696 1997 GE_{10}	16.4	X	330.71793	34.77892	178.76270	5.46447	0.1749604	0.21108778	2.7935771	20	2 11.8	19.7
269697 1997 HS_9	17.5	X	169.72832	222.88257	47.22062	6.92375	0.1571937	0.28061931	2.3105978	20	—	—
269698 1997 MV_9	15.9	X	111.07385	147.04570	217.38579	10.50540	0.1629865	0.19076924	2.9885726	20	1 6.1	20.3
269699 1997 NO_2	16.9	X	187.44051	335.76475	204.64823	9.35070	0.1704841	0.26749563	2.3855668	20	10 29.5	20.4
269700 1997 PZ_3	15.9	X	145.07720	168.48436	172.30161	10.29835	0.1061957	0.19135532	2.9824672	20	1 8.8	20.5
269701 1997 TA_{11}	15.7	X	200.16957	128.26696	176.53018	9.98246	0.1037874	0.19319786	2.9634744	20	1 19.9	20.5
269702 1997 TP_{21}	17.4	X	74.14088	273.98754	22.81933	1.60558	0.2047791	0.26202080	2.4186825	20	12 9.9	21.0
269703 1997 UR_7	16.6	X	40.84709	315.31285	39.85221	9.87755	0.2509989	0.26335944	2.4104796	20	—	—
269704 1997 UR_{17}	15.3	X	153.45379	252.25652	60.46767	11.00803	0.0690027	0.18268002	3.0761583	20	—	—
269705 1997 UR_{24}	15.5	X	131.03229	355.04055	353.72480	10.14159	0.1065646	0.18923987	3.0046528	20	1 6.2	20.0
269706 1997 WX_7	15.8	X	33.20391	88.97717	246.32160	8.10335	0.2647708	0.25925336	2.4358645	20	12 22.8	19.2
269707 1998 BB_{22}	16.2	X	140.63745	161.66431	301.00638	11.92052	0.1208755	0.23621859	2.5917514	20	5 31.9	20.2
269708 1998 DO_{12}	16.3	X	101.91882	354.06428	145.63704	6.48921	0.1628409	0.23364976	2.6107131	20	6 12.8	20.1
269709 1998 DF_{23}	17.0	X	42.08079	117.51019	139.51520	3.75312	0.1678862	0.23804777	2.5784575	20	9 3.4	20.0
269710 1998 FM_2	15.9	X	40.02639	236.09098	0.88929	31.20748	0.2562781	0.23093501	2.6311334	20	8 31.6	19.5
269711 1998 FM_6	16.9	X	6.16391	238.97794	15.29508	13.77790	0.1391960	0.22944806	2.6424886	20	6 18.5	20.0
269712 1998 FZ_{120}	16.2	X	78.07201	158.87924	8.20809	11.67734	0.1149299	0.23027808	2.6361350	20	6 10.1	19.9
269713 1998 HU_{42}	16.7	X	75.11519	333.20992	170.99398	7.49427	0.1531937	0.22956617	2.6415822	20	5 15.3	20.1
269714 1998 HG_{142}	16.3	X	345.00495	65.71565	217.01938	10.41595	0.2664889	0.22678644	2.6631237	20	6 11.6	18.3
269715 1998 KN_{40}	16.9	X	142.99047	156.28407	97.36261	6.97034	0.1856190	0.28713147	2.2755280	20	12 20.5	20.4
269716 1998 MM_{16}	17.7	X	307.11846	245.40403	108.28273	4.57001	0.2576581	0.26773094	2.3841689	20	7 7.4	19.7
269717 1998 QO	16.4	X	290.81227	15.32813	319.05770	12.97802	0.2945032	0.26295756	2.4129349	20	4 28.4	20.0
269718 1998 QG_3	16.8	X	17.12414	358.49335	314.60589	12.68526	0.2271788	0.27231888	2.3573146	20	10 22.7	19.6
269719 1998 QH_{56}	17.7	X	11.49895	266.37622	176.43297	32.22391	0.0308571	0.51037508	1.5507546	20	—	—
269720 1998 QK_{58}	17.5	X	316.57866	53.58625	352.20051	1.88894	0.1790927	0.27143772	2.3624135	20	11 7.9	19.1
269721 1998 QE_{96}	16.4	X	93.19455	115.22646	225.54031	5.46499	0.1311384	0.28344881	2.2951952	20	—	—
269722 1998 RY_4	16.1	X	130.89087	308.28105	357.81448	24.20396	0.2397506	0.28417808	2.2912668	20	—	—
269723 1998 RU_9	17.8	X	204.24335	239.97692	350.78545	2.43238	0.1218334	0.28424808	2.2908906	20	—	—
269724 1998 RP_{23}	16.1	X	244.80894	345.13442	338.39659	8.82895	0.2752038	0.21132331	2.7915010	20	3 12.1	20.8
269725 1998 RQ_{43}	17.3	X	66.15427	14.69311	323.57114	2.70879	0.2606443	0.27972917	2.3154970	20	—	—
269726 1998 RQ_{65}	14.8	X	276.72148	131.15638	215.94615	1.76865	0.3608817	0.12487094	3.9642570	20	5 1.3	20.7
269727 1998 SL_3	16.1	X	204.46714	283.58895	57.25919	6.81891	0.0719715	0.20525864	2.8462197	20	3 10.9	20.5
269728 1998 SM_{29}	16.9	X	123.73756	272.22926	35.91325	4.79534	0.1584966	0.28244988	2.3006035	20	—	—
269729 1998 SH_{40}	16.6	X	90.53708	42.27420	347.75622	1.59414	0.0351883	0.19692653	2.9259477	20	—	—
269730 1998 SQ_{60}	16.8	X	77.36228	303.34561	29.53610	5.31517	0.2001656	0.27987622	2.3146858	20	—	—
269731 1998 SG_{63}	17.0	X	22.72326	304.84931	81.54955	4.31585	0.1838702	0.27805332	2.3247914	20	—	—
269732 1998 SG_{86}	17.5	X	322.86473	167.62606	191.99207	1.84841	0.2328106	0.26773795	2.3841272	20	9 1.8	18.8
269733 1998 SW_{93}	16.9	X	100.81022	178.62152	171.90019	6.17054	0.1363842	0.28427795	2.2907302	20	—	—
269734 1998 SP_{110}	16.6	X	47.91603	171.09683	210.10211	6.99329	0.1224938	0.27975998	2.3153269	20	—	—
269735 1998 SS_{124}	16.5	X	90.80643	149.15632	181.41525	6.95067	0.1243224	0.28000105	2.3139978	20	—	—
269736 1998 SH_{162}	17.3	X	76.27378	47.39852	305.51721	1.12038	0.2324562	0.28066280	2.3103590	20	—	—
269737 1998 SR_{165}	16.8	X	313.63078	53.63632	335.31654	5.46002	0.1826838	0.26935174	2.3745949	20	10 1.2	18.6
269738 1998 TF_{10}	16.1	X	86.62258	330.63416	42.23365	3.93813	0.1004183	0.19131458	2.9828907	20	—	—
269739 1998 TB_{11}	17.3	X	260.27927	6.89668	46.09898	3.98972	0.2532880	0.26174522	2.4203799	20	7 21.8	20.5
269740 1998 TF_{36}	15.0	X	49.06237	169.45481	215.42397	11.08023	0.1083546	0.18784386	3.0195209	20	—	—
269741 1998 UY_8	17.4	X	43.25947	51.65270	311.42337	1.38854	0.2194414	0.27668902	2.3324272	20	—	—
269742 Kroónorbert	17.3	X	76.75049	51.03968	284.67662	4.58661	0.1756015	0.27915995	2.3186435	20	—	—
269743 1998 VX_{42}	16.1	X	12.64098	280.85918	62.55556	1.41055	0.2231945	0.17911811	3.1168056	20	11 8.2	19.5
269744 1998 WB_5	16.5	X	343.86617	200.05661	210.40551	24.31999	0.2080079	0.27213470	2.3583781	20	—	—
269745 1998 WU_8	16.0	X	80.87341	248.64914	112.94241	8.37608	0.2872736	0.28079603	2.3096282	20	—	—
269746 1998 WW_{25}	17.7	X	216.07182	45.18745	53.20606	1.98129	0.1417598	0.26128686	2.4232097	20	8 15.7	21.2
269747 1998 WL_{29}	16.5	X	276.15378	8.97286	51.28561	1.32862	0.1473968	0.17392076	3.1785943	20	8 29.2	20.6
269748 1998 WO_{40}	16.7	X	337.90963	200.42085	236.05472	7.85857	0.2354751	0.18296903	3.0729182	20	—	—
269749 1998 XT_5	15.3	X	203.28199	34.73275	69.43750	10.72615	0.1206330	0.16820322	3.2502231	20	8 6.7	20.5
269750 1998 XA_{23}	16.7	X	31.12099	126.44178	242.52981	2.74008	0.2052068	0.27430930	2.3458975	20	—	—
269751 1999 AC_{32}	17.4	X	242.70530	299.26810	102.72995	2.29337	0.1790373	0.25397833	2.4694768	20	6 24.9	20.9
269752 1999 BW_{31}	16.2	X	277.75633	153.91374	321.25267	3.34086	0.1003246	0.17396113	3.1781025	20	11 13.2	20.5
269753 1999 RS_{73}	15.8	X	331.18027	302.39106	338.23842	10.79604	0.1630359	0.22728056	2.6592624	20	5 13.2	18.9
269754 1999 RW_{104}	16.1	X	278.52796	58.84973	282.25584	5.08614	0.2733031	0.22697747	2.6616292	20	5 1.7	20.0
269755 1999 RH_{147}	16.0	X	26.30016	348.79758	281.96664	7.28887	0.2220861	0.23479638	2.6022067	20	9 1.0	18.9
269756 1999 RM_{169}	16.5	X	254.46921	31.01439	311.85635	4.40518	0.2227833	0.22362148	2.6881925	20	4 15.1	20.8
269757 1999 RR_{189}	15.7	X	134.19848	10.04976	3.29161	15.76081	0.1554997	0.21028990	2.8006389	20	2 14.9	20.1
269758 1999 RJ_{220}	18.0	X	72.48036	121.75038	214.26170	4.69310	0.2177767	0.29378889	2.2410203	20	—	—
269759 1999 RJ_{239}	15.7	X	353.01592	265.88385	26.33111	13.07335	0.2639584	0.23123448	2.6288612	20	8 1.3	17.9
269760 1999 SS_5	16.3	X	307.75568	28.17179	11.36379	23.91584	0.2124614	0.28264185	2.2995617	20	10 7.2	17.8

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
269761 1999 SN_{21}	16.4	X	130.69615	27.59288	9.24347	4.22812	0.1114716	0.20988591	2.8042315	20	2 29.9	20.5
269762 Nocentini	17.0	X	146.67834	309.21384	21.45494	8.17483	0.1951629	0.30171928	2.2015777	20	—	—
269763 1999 TD_{32}	15.9	X	157.21864	161.12251	207.35214	7.79996	0.2047706	0.21101052	2.7942589	20	2 26.4	20.6
269764 1999 TZ_{38}	15.9	X	124.42926	201.32516	218.90527	16.06129	0.2244701	0.21186710	2.7867224	20	3 31.5	20.5
269765 1999 TL_{46}	16.4	X	136.02178	7.96604	33.19556	4.66106	0.0749754	0.21244526	2.7816641	20	3 8.6	20.4
269766 1999 TW_{58}	15.2	X	90.92708	345.57280	216.70084	14.67078	0.1788399	0.17506222	3.1647623	20	8 13.1	20.3
269767 1999 TK_{59}	16.0	X	155.53022	200.97815	189.17210	13.26517	0.1756126	0.21457118	2.7632603	20	3 21.3	20.6
269768 1999 TM_{61}	16.8	X	178.47123	52.09595	334.33525	2.62793	0.0512565	0.21765947	2.7370601	20	4 2.3	20.6
269769 1999 TP_{62}	16.1	X	282.84226	297.39333	30.82032	8.35944	0.1817680	0.22236569	2.6983039	20	5 3.7	19.7
269770 1999 TV_{66}	17.7	X	334.72785	150.32060	230.82449	2.01564	0.2192246	0.28306829	2.2972516	20	11 20.6	19.0
269771 1999 TW_{71}	16.7	X	93.98321	64.25914	26.02555	1.71913	0.0254537	0.21158412	2.7892065	20	3 10.8	20.5
269772 1999 TJ_{76}	16.6	X	226.46261	288.19156	30.31322	4.00596	0.0903152	0.21218400	2.7839470	20	3 3.5	20.7
269773 1999 TL_{87}	16.5	X	50.58080	359.60686	110.15124	3.14973	0.0455880	0.20577367	2.8414685	20	2 10.2	20.3
269774 1999 TE_{103}	16.2	X	62.11154	253.25917	149.85335	11.34721	0.3839382	0.20007844	2.8951374	20	1 16.2	18.8
269775 1999 TJ_{111}	16.1	X	255.58128	128.90007	231.95660	7.21748	0.2302438	0.22432255	2.6825887	20	5 9.9	20.4
269776 1999 TT_{113}	17.9	X	146.61355	29.09003	327.07273	2.75476	0.2119318	0.30455233	2.1879032	20	1 26.4	20.8
269777 1999 TO_{132}	17.5	X	287.12487	317.19240	349.38649	3.76949	0.2050787	0.27087033	2.3657114	20	4 4.1	20.5
269778 1999 TE_{135}	16.4	X	284.27433	304.06970	11.84528	13.33384	0.1580158	0.22256827	2.6966664	20	4 20.8	20.3
269779 1999 TK_{140}	17.7	X	16.72480	28.14201	318.90447	0.88224	0.2513304	0.28564138	2.2834349	20	12 23.3	20.4
269780 1999 TF_{145}	17.6	X	264.47090	318.39484	353.90433	3.11295	0.2699418	0.31680282	2.1311304	20	3 9.3	20.9
269781 1999 TN_{145}	15.6	X	307.11233	287.82545	18.18784	12.40315	0.1790878	0.22555148	2.6728357	20	5 5.9	18.9
269782 1999 TV_{153}	17.5	X	63.14598	339.71254	42.71806	8.05110	0.2120734	0.29519511	2.2338977	20	—	—
269783 1999 TT_{182}	16.9	X	341.92212	245.67005	207.28610	21.97878	0.2375940	0.28941578	2.2635386	20	—	—
269784 1999 TZ_{210}	15.8	X	148.74141	14.24604	349.71428	13.55575	0.2977972	0.21223323	2.7835165	20	2 24.9	20.6
269785 1999 TZ_{211}	16.3	X	19.77437	94.54827	213.67384	26.68342	0.3341046	0.23562513	2.5961014	20	11 6.5	19.2
269786 1999 TV_{229}	16.9	X	223.78669	151.67804	193.83545	5.72841	0.0816649	0.21881086	2.7274500	20	4 1.3	20.7
269787 1999 TK_{237}	16.2	X	184.07144	324.81246	41.41796	4.63143	0.1155497	0.21476967	2.7615575	20	3 18.9	20.5
269788 1999 TE_{258}	15.3	X	276.53803	268.50801	39.35170	14.00584	0.1520592	0.22004711	2.7172250	20	4 8.6	19.2
269789 1999 TX_{260}	15.8	X	294.54989	273.28278	34.33287	16.32722	0.2038553	0.22177412	2.7031002	20	4 20.2	19.5
269790 1999 TV_{268}	15.4	X	282.87420	123.93483	255.84572	9.88256	0.1188836	0.18083377	3.0970605	20	7 19.0	19.8
269791 1999 TF_{313}	16.9	X	198.42146	150.58877	214.77304	1.08962	0.0998838	0.21786357	2.7353504	20	3 29.7	21.1
269792 1999 TW_{314}	15.9	X	304.38214	267.73636	72.56915	12.39671	0.2601499	0.22661296	2.6644826	20	6 8.6	19.0
269793 1999 TV_{332}	16.5	X	13.96737	164.82948	2.46388	3.93507	0.0398925	0.21125001	2.7921466	20	3 3.1	19.9
269794 1999 UE_{12}	17.5	X	351.97352	60.71899	37.84220	6.91315	0.1469818	0.29416564	2.2391065	20	—	—
269795 1999 UL_{21}	15.7	X	28.37157	287.30062	213.06682	16.67504	0.0775501	0.20862359	2.8155318	20	2 12.1	19.5
269796 1999 UN_{32}	16.0	X	106.14837	286.10298	45.37764	5.23690	0.1682978	0.19902265	2.9053673	20	—	—
269797 1999 UR_{37}	15.9	X	49.15939	321.47551	186.60221	11.75576	0.0801833	0.21435239	2.7651402	20	3 30.7	19.3
269798 1999 UR_{47}	15.9	X	84.16865	159.79312	240.49182	7.73087	0.3309806	0.20400272	2.8578894	20	2 6.4	19.6
269799 1999 VZ_{12}	16.5	X	340.49414	39.57892	14.39948	25.32538	0.1855457	0.28570724	2.2830840	20	—	—
269800 1999 VY_{16}	15.7	X	42.74005	122.04451	23.80934	13.17927	0.0517073	0.21174262	2.7878144	20	3 19.9	19.3
269801 1999 VC_{42}	16.6	X	240.54424	71.80438	262.13848	3.51142	0.1160220	0.21733541	2.7397802	20	3 31.7	20.9
269802 1999 VV_{58}	17.4	X	291.08558	178.55436	225.20629	4.03668	0.2327264	0.27790915	2.3255953	20	8 28.8	19.6
269803 1999 VJ_{82}	16.1	X	139.73357	356.66655	34.61027	10.79735	0.2194516	0.21067276	2.7972447	20	3 17.0	20.7
269804 1999 VJ_{84}	16.8	X	288.58933	44.04922	234.75941	2.33381	0.0544857	0.21422918	2.7662003	20	3 26.9	20.5
269805 1999 VK_{88}	17.0	X	243.65167	265.74385	228.73390	20.17916	0.0413679	0.37890759	1.8913875	20	12 22.8	18.9
269806 1999 VM_{95}	15.3	X	359.34638	81.40423	210.38961	27.67780	0.3700797	0.23188007	2.6239795	20	8 18.8	17.7
269807 1999 VN_{96}	17.4	X	235.43727	149.71643	200.24721	1.24786	0.2556089	0.26719894	2.3873324	20	4 4.9	21.3
269808 1999 VZ_{102}	17.5	X	316.51684	23.18478	52.35125	4.05335	0.1548623	0.28468067	2.2885693	20	12 31.2	19.3
269809 1999 VK_{104}	17.2	X	15.40937	185.69305	234.73552	7.18119	0.0815448	0.29064803	2.2571364	20	—	—
269810 1999 VZ_{108}	15.7	X	104.46759	4.37984	57.69093	10.17839	0.1221697	0.20621636	2.8374004	20	3 7.9	19.8
269811 1999 VN_{115}	16.3	X	217.94826	216.55457	81.00154	3.02551	0.0605295	0.20640056	2.8357121	20	1 30.2	20.5
269812 1999 VW_{132}	17.2	X	333.25118	105.39181	210.23325	4.33252	0.3000473	0.23213694	2.6220434	20	6 29.4	19.0
269813 1999 VF_{133}	15.9	X	54.30996	20.80137	219.79298	10.15394	0.0692955	0.17872857	3.1213327	20	8 3.2	20.3
269814 1999 VV_{143}	15.7	X	177.05944	334.60039	28.87944	8.45008	0.1515843	0.21149458	2.7899937	20	3 11.6	20.3
269815 1999 VL_{150}	17.6	X	359.10351	203.34945	222.68611	6.00100	0.0899850	0.28886185	2.2664315	20	—	—
269816 1999 VS_{180}	15.5	X	347.65771	263.02341	53.53979	28.81237	0.3560440	0.23278490	2.6171755	20	9 29.1	18.0
269817 1999 VZ_{193}	16.9	X	357.91538	83.80035	279.19291	3.81624	0.2416956	0.28327226	2.2961487	20	12 15.0	19.1
269818 1999 VX_{211}	17.5	X	323.49927	0.34160	62.78684	2.69983	0.2110679	0.18884621	3.0088269	20	11 19.1	20.3
269819 1999 VN_{213}	15.9	X	284.38496	330.79880	107.58873	7.66046	0.3297884	0.18480013	3.0525857	20	9 8.6	19.8
269820 1999 WQ_{18}	16.1	X	155.23032	330.42642	51.91035	6.21581	0.0913827	0.20999231	2.8032842	20	3 9.7	20.3
269821 1999 XA_{6}	16.4	X	108.94244	234.77287	247.21934	21.80030	0.2887556	0.25901242	2.4373748	20	6 9.9	20.4
269822 1999 XO_{251}	16.2	X	207.97345	290.76144	72.26502	12.81656	0.1769331	0.21458182	2.7631689	20	4 9.9	20.9
269823 1999 XW_{254}	15.7	X	311.13509	317.01460	100.49548	8.47810	0.1432242	0.18184781	3.0855364	20	10 24.3	19.4
269824 2000 AY_{43}	16.0	X	292.71344	8.94979	109.94653	13.22424	0.1845185	0.18533157	3.0467473	20	12 6.5	19.7
269825 2000 AZ_{44}	15.7	X	342.37048	60.25609	310.94180	6.88459	0.0717331	0.17823329	3.1271125	20	10 7.9	19.9
269826 2000 AN_{94}	15.0	X	176.74753	76.17729	86.43047	7.48011	0.1848556	0.17489793	3.1667439	20	9 20.1	20.3
269827 2000 AU_{158}	17.1	X	271.36018	171.24562	301.47277	5.32584	0.1827602	0.27846594	2.3224943	20	11 15.5	19.4
269828 2000 AR_{207}	15.9	X	194.76948	60.09569	146.15919	10.93967	0.1656236	0.17762735	3.1342201	20	11 25.1	21.1
269829 2000 AM_{209}	15.6	X	200.53495	329.69458	245.96372	9.95045	0.0653439	0.19126085	2.9834493	20	12 20.4	19.9
269830 2000 AA_{249}	15.8	X	167.77215	273.10746	90.36294	13.48115	0.1201913	0.20653410	2.8344896	20	3 4.5	20.4
269831 2000 AQ_{253}	16.9	X	321.08671	157.54786	293.30070	2.37412	0.1285313	0.18602657	3.0391542	20	12 21.4	20.4
269832 2000 BK_{6}	17.0	X	314.49732	310.86253	98.12595	24.71301	0.1097586	0.37297393	1.9113948	20	12 18.8	18.1
269833 2000 BN_{12}	17.1	X	11.49876	177.22721	133.51546	6.59006	0.1593309	0.26672838	2.3901394	20	10 6.9	19.5
269834 2000 BG_{13}	17.7	X	205.10266	173.74134	298.04092	1.82890	0.1504013	0.26801369	2.3824917	20	8 20.0	21.0
269835 2000 BG_{22}	17.6	X	217.55859	322.95997	125.09609	2.87225	0.1485172	0.26646157	2.3917346	20	8 2.3	20.9
269836 2000 BG_{29}	15.2	X	284.30011	156.13344	314.77201	14.26879	0.0886402	0.18249770	3.0782068	20	11 17.8	19.5
269837 2000 BP_{37}	17.3	X	314.67009	124.84894	304.78903	3.68329	0.1239908	0.27896848	2.3197043	20	12 13.7	19.4
269838 2000 CY_{20}	17.3	X	202.63529	289.58642	189.26825	2.05405	0.1451131	0.26824475	2.3811233	20	8 27.2	20.9
269839 2000 CR_{23}	15.4	X	11.82690	268.66360	148.63465	15.50601	0.0665194	0.18582534	3.0413478	20	—	—
269840 2000 CA_{43}	16.5	X	185.18597	261.34602	296.46037	8.70863	0.1549839	0.27373891	2.3491551	20	11 18.1	20.1

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
269841 2000 CS_{54}	15.1	X	275.94981	355.91939	165.89984	19.58665	0.1331740	0.18296345	3.0729807	20	—	—
269842 2000 CU_{69}	17.1	X	3.19557	90.01239	313.38599	4.29980	0.1860996	0.28198585	2.3031268	20	—	—
269843 2000 CD_{118}	15.2	X	16.71695	305.87432	128.60022	11.68253	0.0882280	0.19024038	2.9941088	20	—	—
269844 2000 CH_{130}	17.0	X	166.93957	111.59886	146.20031	7.19085	0.0224575	0.28069627	2.3101754	20	—	—
269845 2000 CL_{141}	15.6	X	158.66951	283.38650	314.01181	8.22930	0.0722884	0.18039437	3.1020877	20	11 28.2	20.4
269846 2000 DQ_{9}	18.3	X	210.32411	17.24045	157.42156	0.25826	0.1550055	0.27422503	2.3463781	20	11 17.7	21.2
269847 2000 DU_{21}	15.5	X	196.73652	21.37150	156.71709	15.70529	0.2171176	0.17541150	3.1605598	20	10 23.2	20.9
269848 2000 DE_{34}	15.6	X	249.89974	291.69704	156.78295	16.26335	0.2757481	0.17526782	3.1622868	20	8 14.6	20.6
269849 2000 DY_{38}	17.2	X	255.52007	249.36272	230.45615	1.32128	0.1499272	0.27439288	2.3454211	20	11 4.4	19.8
269850 2000 DM_{53}	16.6	X	153.96535	204.18987	319.80290	6.35320	0.0548446	0.26462131	2.4028104	20	9 4.8	19.9
269851 2000 DV_{58}	17.1	X	175.07634	348.27005	176.26528	3.00994	0.1305844	0.26742842	2.3859665	20	9 29.2	20.4
269852 2000 DK_{61}	17.6	X	273.57624	115.66092	350.36537	2.99296	0.1894007	0.27516109	2.3410537	20	11 8.0	19.6
269853 2000 DB_{67}	17.5	X	230.29998	262.25850	177.86121	4.68800	0.2640243	0.26698632	2.3885997	20	7 23.3	21.3
269854 2000 DF_{97}	16.8	X	303.01278	321.91453	154.31572	5.86221	0.0453143	0.28002025	2.3138920	20	—	—
269855 2000 DK_{108}	17.4	X	84.34510	133.14842	152.05715	23.31058	0.0550860	0.37019214	1.9209582	20	12 20.8	20.2
269856 2000 DT_{108}	15.4	X	258.69636	323.43934	127.24743	13.46198	0.2315403	0.17674785	3.1446088	20	9 4.9	20.1
269857 2000 DD_{115}	16.0	X	355.28966	258.35852	146.16495	10.99813	0.2828278	0.18515584	3.0486748	20	—	—
269858 2000 EB_{4}	17.2	X	252.10287	5.46341	101.67737	3.25188	0.1629209	0.27248567	2.3563526	20	10 11.5	19.9
269859 2000 EQ_{4}	17.9	X	250.51079	146.35665	334.93359	0.97663	0.1359784	0.27429276	2.3459918	20	10 31.7	20.5
269860 2000 EM_{5}	15.5	X	147.85302	109.46335	160.53200	8.91753	0.1227151	0.17857647	3.1231048	20	12 25.7	20.6
269861 2000 EJ_{6}	15.8	X	330.43391	74.03658	3.97127	13.23800	0.0755030	0.17814175	3.1281836	20	12 15.8	20.1
269862 2000 EN_{15}	17.0	X	9.27908	205.67225	143.00318	23.72061	0.0705726	0.36765195	1.9297963	20	12 13.5	19.6
269863 2000 ER_{22}	15.9	X	193.96967	144.01227	147.33261	10.56155	0.0619403	0.19134589	2.9825653	20	—	—
269864 2000 EY_{22}	16.6	X	240.02761	62.73687	171.20363	7.49557	0.0984059	0.18604520	3.0389513	20	—	—
269865 2000 ER_{52}	18.0	X	178.44739	6.79342	170.55370	1.33469	0.1258790	0.26882819	2.3776770	20	10 19.8	21.3
269866 2000 EY_{59}	16.5	X	294.70448	141.74000	0.97760	1.48422	0.2659774	0.18356070	3.0663113	20	12 29.3	19.4
269867 2000 ES_{65}	17.3	X	181.33750	290.33391	178.28596	23.01657	0.0927316	0.35747304	1.9662581	20	7 27.7	20.3
269868 2000 EM_{90}	15.8	X	279.71640	334.62234	195.84790	12.57177	0.2595930	0.18392952	3.0622109	20	—	—
269869 2000 ER_{135}	15.5	X	238.84022	171.49729	14.43624	21.09615	0.2173868	0.17881191	3.1203628	20	11 30.6	20.5
269870 2000 EN_{171}	15.4	X	307.70756	90.86734	30.21391	13.85615	0.2763842	0.18457985	3.0550139	20	12 28.8	18.4
269871 2000 EC_{189}	15.7	X	318.19493	295.37096	157.89411	17.14098	0.0706260	0.18059058	3.0998403	20	12 20.1	20.0
269872 2000 EB_{196}	17.6	X	156.00816	209.25932	15.19317	2.72227	0.1741198	0.26994775	2.3710984	20	11 23.1	21.4
269873 2000 EJ_{196}	15.4	X	288.73143	161.94434	359.65798	12.07028	0.0288270	0.18376729	3.0640128	20	—	—
269874 2000 EJ_{207}	16.5	X	231.08717	22.94359	177.21333	21.07615	0.1911498	0.27838689	2.3229340	20	—	—
269875 2000 FK_{2}	15.5	X	210.71683	47.55317	193.26672	22.74756	0.1860667	0.17903558	3.1177634	20	—	—
269876 2000 FW_{57}	15.2	X	180.96872	61.94691	174.27679	26.58098	0.1562846	0.17606550	3.1527283	20	12 16.1	20.8
269877 2000 FV_{73}	14.9	X	228.78199	16.39217	146.75197	23.88176	0.1458058	0.17637024	3.1490956	20	11 13.7	20.1
269878 2000 GK_{4}	16.6	X	210.80675	99.09313	41.76542	21.99524	0.2682623	0.26937070	2.3744835	20	10 3.0	20.7
269879 2000 GP_{11}	15.6	X	196.15037	84.28712	180.89129	13.50958	0.1683623	0.18133412	3.0913608	20	—	—
269880 2000 GK_{13}	15.2	X	198.86465	259.02234	3.23934	10.49930	0.0482938	0.18271795	3.0757325	20	—	—
269881 2000 GF_{15}	16.7	X	99.79457	248.82770	36.58847	5.34844	0.3126448	0.26586249	2.3953262	20	12 22.8	21.1
269882 2000 GM_{21}	15.2	X	87.93670	309.93010	13.80632	8.64957	0.0708005	0.17513754	3.1638549	20	12 26.5	20.0
269883 2000 GP_{26}	17.2	X	175.84599	160.83480	40.46021	2.00677	0.1325288	0.26906917	2.3762571	20	11 15.8	20.8
269884 2000 GH_{27}	17.0	X	201.84651	177.16251	31.80907	5.10000	0.1765578	0.27312026	2.3527012	20	12 19.1	20.2
269885 2000 GG_{34}	17.5	X	113.30624	217.72024	24.38109	1.66045	0.1354616	0.26460325	2.4029197	20	11 4.9	21.2
269886 2000 GT_{35}	17.4	X	166.79075	258.90046	309.56084	0.83788	0.1327910	0.26822000	2.3812698	20	11 15.4	21.0
269887 2000 GV_{36}	16.0	X	210.12752	223.90116	15.63502	4.98367	0.1006942	0.18007384	3.1057677	20	—	—
269888 2000 GX_{38}	17.0	X	134.85069	42.88157	191.71024	4.71755	0.1794401	0.26630608	2.3926655	20	11 17.7	20.8
269889 2000 GU_{43}	17.1	X	106.69047	237.31214	28.74476	3.27835	0.1615921	0.26584302	2.3954432	20	11 29.5	20.8
269890 2000 GA_{48}	16.1	X	207.25628	176.20397	41.28027	0.95407	0.1376403	0.17622434	3.1508335	20	12 19.2	20.8
269891 2000 GJ_{52}	15.4	X	287.45747	307.04955	203.45206	15.28828	0.0647208	0.17924571	3.1153262	20	—	—
269892 2000 GZ_{69}	15.2	X	215.72496	13.86226	212.42576	18.73622	0.1032389	0.17756710	3.1349290	20	—	—
269893 2000 GO_{77}	17.1	X	184.93014	178.74559	33.81701	8.43100	0.1250318	0.27041383	2.3683731	20	12 9.6	20.5
269894 2000 GQ_{77}	15.3	X	252.43295	346.54950	206.25534	16.25345	0.1475020	0.17935114	3.1141053	20	—	—
269895 2000 GX_{115}	17.1	X	180.62470	110.56764	99.30022	2.18553	0.2390384	0.27015861	2.3698644	20	11 23.9	21.0
269896 2000 GA_{119}	17.6	X	121.74041	334.27441	295.63524	0.70574	0.1598201	0.27026684	2.3692317	20	12 18.9	21.2
269897 2000 GH_{119}	15.9	X	5.68807	253.39631	187.85776	11.11283	0.0234870	0.18148814	3.0896116	20	—	—
269898 2000 GD_{129}	17.0	X	19.68748	186.34336	192.66856	6.17096	0.1206478	0.27217275	2.3581583	20	—	—
269899 2000 GM_{129}	17.7	X	100.26346	300.72430	11.77913	1.42632	0.1958845	0.27138552	2.3627164	20	—	—
269900 2000 GB_{131}	17.5	X	234.26053	248.31192	223.51085	1.97477	0.1847817	0.26677650	2.3898520	20	9 17.3	20.9
269901 2000 HP	15.8	X	229.57032	309.64167	200.42618	13.07475	0.1632007	0.17251305	3.1958624	20	10 21.2	20.5
269902 2000 HU_{3}	17.3	X	81.15329	251.32341	66.44757	0.70449	0.3185676	0.26670122	2.3903017	20	—	—
269903 2000 HQ_{15}	15.3	X	261.74151	129.64963	36.29313	27.93048	0.1402267	0.17929138	3.1147972	20	12 15.0	19.9
269904 2000 HW_{17}	17.3	X	115.47200	20.14067	232.08585	1.60219	0.1302657	0.26458619	2.4030231	20	11 19.8	20.8
269905 2000 HA_{18}	17.8	X	142.66786	165.52604	29.88736	1.43557	0.1415034	0.26238194	2.4164627	20	10 5.8	21.6
269906 2000 HV_{18}	15.5	X	349.76291	64.10078	47.34651	10.41571	0.0533460	0.18198459	3.0839901	20	—	—
269907 2000 HC_{19}	17.3	X	130.75200	201.74670	27.08698	2.28661	0.1317538	0.26424029	2.4051197	20	11 5.1	21.0
269908 2000 HW_{37}	14.9	X	212.15776	203.94668	57.74603	25.61162	0.2324600	0.17898024	3.1184060	20	—	—
269909 2000 HX_{43}	15.8	X	259.72567	104.60212	100.76048	9.11883	0.1874715	0.17994596	3.1072389	20	—	—
269910 2000 HY_{43}	15.5	X	259.60626	90.40501	78.44449	13.40441	0.2263845	0.17726377	3.1385043	20	12 8.6	19.5
269911 2000 HF_{49}	14.9	X	150.45150	271.47018	47.93809	20.04606	0.2908764	0.17582753	3.1555723	20	1 8.3	20.6
269912 2000 HR_{77}	15.3	X	288.55193	271.58065	237.61959	14.40513	0.2681804	0.18226067	3.0808750	20	12 23.1	18.7
269913 2000 HS_{79}	15.3	X	233.35481	69.21625	166.25271	17.73594	0.1474759	0.18030997	3.1030556	20	—	—
269914 2000 JV_{8}	17.3	X	124.72604	149.57914	67.10204	3.04318	0.1609448	0.26095900	2.4252389	20	10 16.8	21.2
269915 2000 JA_{42}	17.1	X	184.06593	76.29436	103.34852	2.04197	0.1240275	0.26615964	2.3935431	20	10 28.9	20.4
269916 2000 JM_{42}	16.5	X	34.14784	259.64573	56.74255	5.43774	0.1350030	0.26088795	2.4256792	20	11 11.4	19.4
269917 2000 JN_{48}	16.6	X	121.10539	18.94659	239.30997	5.02949	0.1022940	0.26563080	2.3967189	20	12 2.5	20.1
269918 2000 JN_{64}	16.3	X	191.01633	244.95117	259.25598	9.44118	0.2396342	0.26615557	2.3935675	20	9 6.6	20.6
269919 2000 JZ_{84}	15.6	X	197.70454	183.25970	46.81802	10.59877	0.0622087	0.17618762	3.1512713	20	12 31.7	20.3
269920 2000 KB_{9}	15.6	X	248.02871	118.07547	51.27393	10.74548	0.1821558	0.17562043	3.1580526	20	11 29.8	20.0

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		°	°	°	°		°				
269921 2000 KJ_{37}	16.5	X	184.40169	188.56546	40.58934	1.17874	0.1536802	0.17254917	3.1954164	20	12 9.3	21.5
269922 2000 KA_{49}	16.8	X	116.48876	188.71888	100.58985	6.59869	0.1696540	0.26695614	2.3887797	20	—	—
269923 2000 KE_{74}	17.1	X	152.48357	116.91005	132.02672	5.33247	0.1984028	0.26825813	2.3810442	20	12 19.3	20.9
269924 2000 LC_{6}	15.6	X	154.51380	102.80009	186.20616	9.12520	0.0539644	0.17495703	3.1660307	20	—	—
269925 2000 NS_{12}	16.7	X	72.46605	133.16028	161.82321	12.35507	0.2890351	0.25742513	2.4473838	20	12 13.5	21.0
269926 2000 NR_{28}	17.4	X	104.97675	167.44650	121.51163	5.18240	0.2915747	0.26203263	2.4186098	20	12 29.3	21.7
269927 2000 OM_{22}	16.2	X	278.11950	20.82746	341.33056	12.74635	0.3824461	0.23905329	2.5712219	20	5 11.0	20.4
269928 2000 OO_{59}	16.0	X	352.11329	330.63823	316.63117	12.84272	0.1415784	0.24417409	2.5351461	20	7 15.3	18.5
269929 2000 QV_{19}	17.0	X	265.53048	9.44603	338.16751	3.01129	0.2174373	0.23717324	2.5847919	20	5 3.3	20.8
269930 2000 QG_{156}	16.6	X	294.19662	133.98812	212.37860	5.86868	0.2542557	0.24140194	2.5545175	20	6 2.8	19.6
269931 2000 QV_{168}	16.9	X	214.40601	40.31347	289.31538	3.05898	0.2273140	0.22832305	2.6511617	20	2 26.4	21.5
269932 2000 QU_{205}	16.5	X	332.47863	164.20825	166.56048	15.27815	0.2164755	0.24409452	2.5356970	20	8 2.4	18.7
269933 2000 QG_{214}	16.2	X	209.59944	15.94422	359.17520	14.13025	0.1309426	0.23188538	2.6239394	20	4 16.3	20.5
269934 2000 QP_{227}	16.7	X	185.20374	134.21796	218.35461	2.98058	0.2280363	0.22581032	2.6707927	20	3 2.2	21.2
269935 2000 QY_{247}	17.3	X	314.11666	130.20270	159.82720	3.54030	0.1829552	0.23916510	2.5704205	20	4 28.2	20.2
269936 2000 RK_{27}	16.1	X	136.45358	124.95494	233.40369	6.63998	0.2985559	0.21920462	2.7241828	20	2 3.9	20.7
269937 2000 RY_{39}	16.5	X	145.63255	76.34301	313.79544	10.82809	0.2009371	0.22442859	2.6817437	20	3 10.1	21.0
269938 2000 RU_{80}	16.0	X	253.63142	22.01366	334.67381	11.10863	0.0900269	0.23501804	2.6005702	20	5 14.9	19.9
269939 2000 RV_{80}	16.3	X	281.09247	8.50050	343.02799	18.07214	0.1998754	0.23842899	2.5757083	20	5 25.8	20.2
269940 2000 RO_{81}	16.1	X	257.39054	13.55501	307.77467	10.99507	0.0786755	0.23200194	2.6230605	20	4 2.1	20.0
269941 2000 RQ_{98}	15.9	X	17.77643	53.68890	252.79369	11.28760	0.1514060	0.24737298	2.5132433	20	9 27.1	19.0
269942 2000 RK_{103}	15.6	X	326.47684	116.09083	219.93805	12.23578	0.2121220	0.24311440	2.5425076	20	7 24.4	18.1
269943 2000 SV_{10}	18.0	X	128.10464	317.86450	7.17207	2.91760	0.1154830	0.31262605	2.1500710	20	—	—
269944 2000 SR_{14}	16.0	X	156.02817	19.41392	329.47902	13.97704	0.1321321	0.22185594	2.7024355	20	1 31.4	20.2
269945 2000 ST_{15}	16.1	X	164.48072	257.49150	193.05748	13.11478	0.1371915	0.23370294	2.6103171	20	6 11.8	20.4
269946 2000 SO_{31}	16.3	X	233.56605	179.64792	185.91894	13.49335	0.1681859	0.23365365	2.6106842	20	5 2.1	20.5
269947 2000 SB_{36}	17.3	X	292.94586	39.22758	304.42343	2.19112	0.2601020	0.23978305	2.5660024	20	5 26.2	20.5
269948 2000 SN_{58}	16.7	X	222.81446	206.18759	196.98935	3.88780	0.1452191	0.23540325	2.5977324	20	6 8.6	20.8
269949 2000 ST_{61}	16.4	X	244.51036	2.58884	5.06655	8.05794	0.2039730	0.23478396	2.6022984	20	5 7.7	20.6
269950 2000 SX_{98}	16.2	X	195.91787	64.63812	339.78831	9.06203	0.1598077	0.23150948	2.6267789	20	5 10.5	20.7
269951 2000 SZ_{103}	16.9	X	233.97382	135.49496	239.75159	1.43347	0.2649132	0.23350864	2.6117649	20	5 5.3	21.3
269952 2000 SS_{110}	16.5	X	324.41182	318.18786	18.27063	5.85707	0.1544150	0.24153866	2.5535534	20	8 2.6	19.0
269953 2000 SH_{163}	16.7	X	326.01604	69.21782	232.96609	2.86794	0.2457946	0.23989682	2.5651911	20	5 27.8	18.9
269954 2000 SB_{192}	16.4	X	236.03937	35.11117	352.28683	6.50123	0.0630884	0.23601104	2.5932706	20	6 10.1	20.0
269955 2000 SR_{218}	16.1	X	203.89632	180.31921	166.14826	14.14086	0.2630152	0.22615736	2.6680599	20	3 10.4	20.9
269956 2000 SV_{231}	15.9	X	218.10779	351.21446	24.96678	28.09251	0.0963046	0.23117217	2.6293335	20	4 26.9	20.0
269957 2000 SJ_{232}	16.1	X	244.67830	346.81533	35.98292	34.93115	0.2164751	0.23414221	2.6070513	20	5 17.5	20.6
269958 2000 SR_{232}	15.9	X	192.51988	212.66517	194.07879	31.65268	0.1498344	0.23341890	2.6124343	20	5 14.6	20.5
269959 2000 SH_{241}	16.8	X	201.53679	166.68452	230.37041	2.86609	0.2015954	0.23072974	2.6326937	20	5 8.6	21.3
269960 2000 SK_{243}	16.5	X	280.53907	10.41914	343.39394	8.63165	0.1767021	0.23937864	2.5688917	20	6 4.6	20.0
269961 2000 SF_{251}	16.8	X	243.00116	230.96107	148.46693	7.88478	0.2000519	0.23521826	2.5990942	20	5 26.0	20.9
269962 2000 SP_{257}	16.8	X	239.56545	196.14039	166.57965	5.05185	0.2111758	0.23309350	2.6148650	20	4 30.2	21.1
269963 2000 SE_{259}	16.1	X	332.32455	268.43377	41.01420	12.23399	0.2795933	0.24068605	2.5595803	20	6 18.2	18.2
269964 2000 SC_{291}	18.0	X	59.25135	56.59446	328.21037	3.14543	0.1754866	0.31034567	2.1605895	20	—	—
269965 2000 SM_{292}	16.4	X	225.32245	4.83243	348.28314	12.57393	0.3077173	0.23009112	2.6375628	20	3 28.4	21.3
269966 2000 SL_{297}	16.2	X	319.31768	1.98391	334.83234	9.63223	0.1107992	0.24112148	2.5564979	20	7 28.2	19.0
269967 2000 SB_{309}	16.4	X	86.97804	77.45392	347.83892	9.03601	0.2408155	0.21636288	2.7479841	20	3 1.3	19.9
269968 2000 SC_{335}	16.9	X	281.62507	320.70442	19.25419	17.21971	0.1651612	0.23724085	2.5843009	20	5 15.6	20.6
269969 2000 SG_{345}	16.6	X	98.73250	290.82632	85.53864	5.94912	0.2077700	0.21387086	2.7692892	20	1 9.7	20.2
269970 2000 SH_{359}	16.6	X	273.98817	346.49194	355.72236	16.87146	0.1965482	0.23631598	2.5910392	20	5 2.4	20.6
269971 2000 TQ_{3}	17.2	X	189.47049	133.23433	219.11538	1.42262	0.2226566	0.22618543	2.6678391	20	3 5.7	21.8
269972 2000 TV_{5}	16.6	X	187.33705	213.77424	181.78401	3.30957	0.1301451	0.22957175	2.6415394	20	4 25.6	20.7
269973 2000 TB_{6}	16.0	X	91.06600	302.66653	195.14250	9.23094	0.1351057	0.22937875	2.6430209	20	5 24.7	19.6
269974 2000 TU_{7}	16.6	X	108.01734	232.99937	183.52438	3.82674	0.2063318	0.21994017	2.7181057	20	3 9.4	20.5
269975 2000 TO_{8}	16.4	X	270.17377	328.16133	11.04611	7.25031	0.0752413	0.23417082	2.6068389	20	5 16.7	20.0
269976 2000 TV_{14}	16.9	X	101.19426	155.98587	230.28542	1.65694	0.1897026	0.21516596	2.7581656	20	1 21.8	20.6
269977 2000 TK_{22}	15.7	X	339.10683	58.81769	230.63549	13.75364	0.0665284	0.23579347	2.5948656	20	6 21.8	18.9
269978 2000 TK_{23}	16.9	X	127.19532	234.68870	184.05050	4.78855	0.2112874	0.22215667	2.6999962	20	4 2.3	20.9
269979 2000 TH_{43}	16.8	X	2.03071	203.45128	110.04107	7.32886	0.2752302	0.24668323	2.5179260	20	10 7.3	18.9
269980 2000 TK_{52}	16.6	X	171.86307	2.48698	17.87275	3.98638	0.1426022	0.22462650	2.6801683	20	3 23.4	20.7
269981 2000 TD_{60}	15.9	X	288.56063	291.20697	75.88271	14.70134	0.2125625	0.23925188	2.5697989	20	6 30.1	19.0
269982 2000 TU_{67}	16.7	X	339.37247	302.23242	31.69911	8.36021	0.1505286	0.24306686	2.5428391	20	9 2.5	19.2
269983 2000 UH_{29}	15.7	X	209.94038	5.67388	48.96410	18.42535	0.1718763	0.23148350	2.6269755	20	6 5.6	20.1
269984 2000 UV_{33}	17.1	X	79.29195	314.15116	226.00690	20.90995	0.0213745	0.38189185	1.8815212	20	6 18.3	19.1
269985 2000 UK_{44}	16.7	X	234.74524	127.84055	237.89713	2.93226	0.2971764	0.23138103	2.6277511	20	4 21.9	21.2
269986 2000 UD_{59}	16.5	X	189.04563	353.57250	17.27973	13.64118	0.2022695	0.22584904	2.6704875	20	3 29.1	21.0
269987 2000 UK_{59}	16.2	X	227.65589	121.86299	256.15141	4.91484	0.2511645	0.23200382	2.6230463	20	5 3.7	20.6
269988 2000 UF_{87}	16.6	X	209.79707	181.69085	208.85396	14.02992	0.1921539	0.22939962	2.6428606	20	5 8.9	21.0
269989 2000 UX_{97}	16.2	X	158.01062	46.40625	15.74900	7.82816	0.1882148	0.22499157	2.6772682	20	4 30.8	20.7
269990 2000 VF_{3}	16.1	X	245.63114	310.20698	42.23264	13.57524	0.1190226	0.23014059	2.6371848	20	4 30.7	20.1
269991 2000 VB_{29}	15.7	X	197.68311	165.31270	223.12442	12.33075	0.1579430	0.22583834	2.6705719	20	4 25.1	20.0
269992 2000 VY_{51}	16.4	X	147.74582	34.03570	13.01141	8.87550	0.1714846	0.22232410	2.6986404	20	4 3.5	20.5
269993 2000 WJ_{67}	17.5	X	89.07944	250.05092	93.27761	6.84634	0.3335696	0.30907839	2.1664913	20	—	—
269994 2000 WV_{68}	15.4	X	345.49873	105.08230	287.83106	9.44865	0.1476616	0.19907671	2.9048413	20	11 21.1	18.8
269995 2000 WV_{79}	16.7	X	187.75055	126.33916	261.61176	5.01935	0.2163204	0.22541427	2.6739202	20	4 14.4	21.3
269996 2000 WH_{129}	16.4	X	313.42433	298.95052	47.30584	6.17209	0.1829086	0.23859801	2.5744918	20	7 21.2	19.0
269997 2000 XH_{39}	16.6	X	72.28294	56.35143	1.74887	10.15385	0.3351570	0.21121537	2.7924520	20	2 18.1	19.7
269998 2000 XO_{41}	15.8	X	161.50979	53.93322	342.69747	13.66940	0.1636235	0.22130226	2.7069412	20	3 29.7	20.3
269999 2000 YG_{6}	15.8	X	354.10263	292.21384	67.29407	9.81519	0.2417189	0.24396933	2.5365644	20	11 19.5	17.9
270000 2000 YQ_{19}	16.0	X	52.30687	79.63487	32.61610	25.20366	0.2513646	0.21143552	2.7905132	20	3 23.0	19.3

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
270001 2001 AH	16.0	X	90.29631	308.75571	109.62243	9.60106	0.2001052	0.20985642	2.8044941	20	2 22.4	19.7
270002 2001 AT_{8}	15.5	X	235.74351	227.16693	256.08791	6.80088	0.2251382	0.18774584	3.0205718	20	9 16.4	20.4
270003 2001 AF_{32}	16.1	X	36.66267	183.73287	294.14169	12.89847	0.1837055	0.21013196	2.8020420	20	2 3.1	18.9
270004 2001 BR_{23}	16.9	X	116.44261	94.04367	326.56922	2.02248	0.1219776	0.31528550	2.1379623	20	3 3.1	19.1
270005 2001 BB_{55}	16.3	X	24.27556	139.00587	308.72260	9.36269	0.2905614	0.20514795	2.8472434	20	—	—
270006 2001 BN_{65}	15.6	X	253.88865	197.65687	290.70547	11.49685	0.1848169	0.18867454	3.0106517	20	10 15.7	20.1
270007 2001 DT_{17}	17.1	X	305.96906	50.11703	115.62520	6.62190	0.1093099	0.30003431	2.2098125	20	—	—
270008 2001 DO_{34}	15.8	X	46.10922	24.95384	136.22653	17.15623	0.1546138	0.21421391	2.7663318	20	4 28.8	19.3
270009 2001 DD_{58}	17.0	X	1.51001	164.87914	328.65339	7.32316	0.2586767	0.20413058	2.8566959	20	—	—
270010 2001 DD_{73}	15.4	X	160.33219	101.84801	159.08104	15.70477	0.2581740	0.18579496	3.0416793	20	12 24.6	21.0
270011 2001 DB_{76}	16.1	X	156.12112	190.82895	334.04165	4.00393	0.2211234	0.17843005	3.1248132	20	9 2.4	21.4
270012 2001 DG_{111}	16.8	X	299.27672	330.41023	242.04891	5.46349	0.0608706	0.30575256	2.1821737	20	—	—
270013 2001 EH_{24}	15.8	X	316.21156	204.56805	321.53964	11.13691	0.1607302	0.19811016	2.9142819	20	—	—
270014 2001 EO_{25}	16.0	X	229.84420	147.20276	108.82429	3.27489	0.0741751	0.19586753	2.9364848	20	—	—
270015 2001 FV_{23}	17.2	X	269.19722	146.17061	49.14809	4.27196	0.1156958	0.29595957	2.2300493	20	—	—
270016 2001 FV_{47}	16.8	X	269.06752	314.48053	191.39739	22.88008	0.1641195	0.29031665	2.2588536	20	—	—
270017 2001 FU_{83}	17.7	X	181.27089	71.40871	174.17467	7.52899	0.0852311	0.29112871	2.2546511	20	—	—
270018 2001 FX_{84}	16.3	X	209.37723	188.70119	136.14704	2.82570	0.0664913	0.20411742	2.8568186	20	2 22.8	20.4
270019 2001 FA_{86}	17.6	X	124.44011	222.72598	27.40816	3.23653	0.2134113	0.27948908	2.3168228	20	11 28.6	21.3
270020 2001 FZ_{90}	17.0	X	235.18866	336.30181	265.09531	5.04076	0.2109008	0.29544109	2.2326576	20	—	—
270021 2001 FS_{119}	15.6	X	146.67647	316.74446	23.63281	9.56522	0.0799031	0.19345209	2.9608775	20	1 9.4	20.1
270022 2001 FF_{173}	16.2	X	67.57906	271.39894	171.21816	2.17007	0.0740071	0.20213227	2.8754928	20	2 1.6	19.7
270023 2001 FO_{187}	16.4	X	241.96266	250.70032	3.10207	16.52194	0.0679504	0.19769145	2.9183954	20	1 6.5	21.1
270024 2001 HW_{17}	16.8	X	169.25048	90.90351	207.69315	5.47736	0.2022173	0.29098266	2.2554056	20	—	—
270025 2001 HP_{21}	17.1	X	285.67438	352.81397	215.10455	12.39302	0.3799931	0.19491218	2.9460722	20	—	—
270026 2001 HD_{47}	15.7	X	320.43875	325.67296	213.84782	27.13120	0.1955057	0.19633261	2.9318455	20	—	—
270027 2001 JS	17.5	X	243.69501	354.83943	204.38141	6.89009	0.1875487	0.29231499	2.2485471	20	—	—
270028 2001 JU_{7}	15.5	X	135.96776	179.90702	62.46117	9.53773	0.1950091	0.17648720	3.1477041	20	11 15.3	20.9
270029 2001 JF_{8}	17.4	X	143.07884	46.86242	219.70135	4.16641	0.1778327	0.28284727	2.2984482	20	—	—
270030 2001 KT	16.2	X	190.52730	352.27128	236.05913	21.81193	0.1405511	0.28536470	2.2849106	20	—	—
270031 2001 KW_{13}	16.6	X	154.85584	239.05194	61.80160	8.53924	0.2121342	0.28697911	2.2763334	20	—	—
270032 2001 KA_{19}	16.1	X	179.29124	9.30730	237.70417	25.12896	0.2350153	0.28400125	2.2922178	20	—	—
270033 2001 KN_{30}	15.5	X	119.91417	60.17006	226.94904	7.73627	0.1993802	0.17642809	3.1484071	20	12 22.1	20.8
270034 2001 KR_{31}	15.4	X	154.87651	213.73400	79.47747	32.10211	0.2809035	0.18103299	3.0947880	20	—	—
270035 2001 KF_{33}	16.1	X	107.60486	140.94185	123.82882	2.96510	0.0978023	0.17601909	3.1532824	20	11 11.4	20.9
270036 2001 KR_{41}	16.9	X	162.26422	99.18559	204.79876	6.21227	0.1431864	0.29075494	2.2565830	20	—	—
270037 2001 KR_{57}	17.1	X	124.15477	100.01440	213.38491	7.15875	0.3064067	0.28215874	2.3021858	20	—	—
270038 2001 KW_{65}	16.9	X	165.02933	184.24951	120.29660	11.59752	0.2711885	0.28891100	2.2661744	20	—	—
270039 2001 KC_{74}	17.3	X	130.45200	141.05698	90.82277	5.11180	0.1170472	0.27702477	2.3305423	20	11 12.2	20.7
270040 2001 LG_{7}	15.2	X	201.65815	20.68065	281.40900	29.36203	0.1513984	0.23714993	2.5849613	20	1 12.1	19.4
270041 2001 LU_{7}	15.4	X	193.41125	28.69591	248.76812	10.22824	0.1988480	0.18219010	3.0816704	20	—	—
270042 2001 LB_{18}	16.5	X	74.25615	224.61196	93.66513	13.06506	0.2087188	0.27397538	2.3478032	20	—	—
270043 2001 MM_{2}	15.8	X	133.48271	76.82110	206.55622	20.09336	0.2092795	0.27762250	2.3271959	20	—	—
270044 2001 ML_{3}	16.7	X	79.40832	158.68707	172.02436	3.76285	0.3056735	0.27368792	2.3494469	20	—	—
270045 2001 MK_{16}	17.3	X	173.19372	301.01214	347.80416	2.43216	0.1799178	0.28536310	2.2849192	20	—	—
270046 2001 MS_{16}	17.7	X	151.02103	298.09011	342.67727	6.14760	0.2280595	0.28155263	2.3054887	20	—	—
270047 2001 MY_{21}	17.1	X	109.43391	272.53143	62.11097	7.31988	0.1431630	0.28099859	2.3085181	20	—	—
270048 2001 MX_{25}	16.4	X	91.03308	77.21848	243.49011	4.36236	0.1784969	0.27694909	2.3309668	20	—	—
270049 2001 NT_{11}	15.4	X	159.75126	168.82351	109.73251	16.81001	0.0655204	0.17684587	3.1434467	20	—	—
270050 2001 OR	17.2	X	126.75116	127.74983	107.65596	24.52896	0.0827195	0.37532473	1.9034052	20	12 6.9	19.9
270051 2001 OF_{11}	17.4	X	119.43671	280.54009	35.13441	3.70191	0.2791747	0.27930866	2.3178204	20	—	—
270052 2001 OG_{16}	16.8	X	71.02999	297.13886	47.79940	6.87772	0.2715812	0.27337246	2.3512540	20	—	—
270053 2001 OY_{29}	16.7	X	4.28618	348.11565	356.85431	7.15913	0.1325650	0.26750482	2.3855122	20	11 3.8	19.3
270054 2001 OM_{37}	15.7	X	199.80696	217.83607	73.29322	11.27369	0.2398416	0.18354180	3.0665218	20	1 8.4	21.1
270055 2001 OB_{39}	16.8	X	158.76165	287.30959	94.18571	5.50177	0.2672357	0.23722870	2.5843891	20	3 20.9	21.3
270056 2001 OJ_{41}	16.9	X	87.36913	265.47800	33.70935	6.84678	0.1429367	0.27384692	2.3485374	20	12 22.9	20.5
270057 2001 OG_{54}	17.1	X	342.00789	329.83178	10.54828	19.28224	0.0993229	0.36484948	1.9396657	20	10 8.2	18.1
270058 2001 OY_{54}	16.7	X	155.16826	36.91969	332.05982	5.87952	0.3186490	0.23707583	2.5855000	20	3 3.0	21.2
270059 2001 OA_{76}	17.6	X	91.90115	325.71676	337.76896	1.55764	0.2219926	0.27520495	2.3408049	20	—	—
270060 2001 OY_{78}	16.5	X	147.11314	298.55542	336.99505	23.92141	0.2193822	0.27814182	2.3242983	20	—	—
270061 2001 OQ_{83}	16.9	X	81.77891	316.95827	8.62216	6.05248	0.2578901	0.27446516	2.3450093	20	—	—
270062 2001 OY_{86}	16.9	X	52.37866	168.77198	153.63568	8.27272	0.1775524	0.26823763	2.3811655	20	12 19.2	20.4
270063 2001 OF_{90}	17.3	X	1.21021	244.29815	99.18323	3.06029	0.2488162	0.26435941	2.4043971	20	11 17.9	19.3
270064 2001 OJ_{90}	16.4	X	346.44172	344.36751	305.81636	15.77808	0.1836468	0.25770324	2.4456227	20	7 8.0	18.5
270065 2001 OG_{91}	15.6	X	128.97631	283.45927	40.97500	14.67324	0.3356584	0.17505213	3.1648839	20	—	—
270066 2001 OQ_{92}	16.6	X	207.23021	172.59176	96.26099	5.65121	0.1402774	0.28728638	2.2747099	20	—	—
270067 2001 PU_{14}	17.1	X	81.48258	203.00666	139.58605	4.58768	0.1873436	0.27662128	2.3328079	20	—	—
270068 2001 PS_{18}	17.0	X	104.30189	264.23338	80.94385	5.95515	0.1789409	0.27941636	2.3172248	20	—	—
270069 2001 PQ_{25}	16.6	X	201.10841	322.52338	41.71157	6.52396	0.1695746	0.24246007	2.5470798	20	3 31.0	20.8
270070 2001 PS_{30}	15.3	X	113.79794	212.62854	91.54047	15.58114	0.1978633	0.17205828	3.2014914	20	—	—
270071 2001 PM_{44}	17.9	X	80.03641	81.68373	206.69355	2.23773	0.2255663	0.27057656	2.3674234	20	12 8.3	21.5
270072 2001 PR_{47}	16.8	X	108.23123	208.34671	110.25125	6.99215	0.2456680	0.27608808	2.3358105	20	—	—
270073 2001 PR_{49}	18.1	X	82.98059	172.92344	224.16364	13.77243	0.1452853	0.43970585	1.7127523	20	—	—
270074 2001 PV_{49}	16.4	X	43.72234	305.09495	63.41682	9.55236	0.1693509	0.27230254	2.3574089	20	—	—
270075 2001 PQ_{57}	17.1	X	337.72845	2.20457	353.42864	3.15143	0.1592212	0.26123222	2.4235476	20	10 2.6	19.1
270076 2001 PU_{57}	17.9	X	89.97746	154.87764	154.45663	3.27761	0.2367903	0.27334103	2.3514342	20	—	—
270077 2001 QS	17.1	X	53.44587	12.01301	315.52129	6.09781	0.1259394	0.27031533	2.3689484	20	12 20.9	20.3
270078 2001 QG_{1}	16.7	X	15.49494	128.92903	220.62692	1.73855	0.2056735	0.26647619	2.3916472	20	12 12.6	19.4
270079 2001 QX_{20}	14.4	X	145.63105	294.42291	346.30853	25.22274	0.1941700	0.17091200	3.2157900	20	—	—
270080 2001 QL_{24}	16.3	X	15.66716	15.05121	337.47112	6.23391	0.1538816	0.26574104	2.3960560	20	12 7.3	19.1

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
270081 2001 QY_{39}	15.8	X	145.88544	34.31320	287.92721	2.36434	0.1923205	0.17942860	3.1132089	20	—	—
270082 2001 QG_{56}	17.0	X	123.41023	171.26624	117.65412	2.89839	0.2102851	0.27681908	2.3316966	20	—	—
270083 2001 QJ_{61}	15.4	X	111.45480	183.79796	151.05199	9.19617	0.1636040	0.17520394	3.1630555	20	—	—
270084 2001 QY_{90}	16.1	X	143.85480	330.93397	294.30093	23.84727	0.1795541	0.27509463	2.3414307	20	—	—
270085 2001 QQ_{98}	17.4	X	130.14590	51.04747	264.77723	2.19542	0.2860787	0.28071357	2.3100805	20	—	—
270086 2001 QN_{113}	16.5	X	273.04461	48.99113	330.85616	6.34857	0.2220906	0.25132359	2.4868364	20	6 25.6	19.8
270087 2001 QM_{124}	17.2	X	93.21244	251.91731	52.63596	2.87308	0.2082725	0.27418561	2.3466030	20	—	—
270088 2001 QQ_{132}	17.7	X	134.51521	31.22825	274.52816	3.93105	0.2440601	0.27948868	2.3168250	20	—	—
270089 2001 QQ_{135}	16.8	X	128.76708	134.05167	196.74263	21.70503	0.2437172	0.27873864	2.3209793	20	—	—
270090 2001 QE_{156}	17.3	X	193.88558	44.71451	309.65160	6.39817	0.2710895	0.24013673	2.5634823	20	3 9.2	22.0
270091 2001 QG_{195}	17.5	X	77.63698	272.05182	32.78258	1.65374	0.1884631	0.27198914	2.3592194	20	12 23.6	21.1
270092 2001 QC_{214}	17.4	X	33.31085	350.74324	339.24288	18.97807	0.0872172	0.37140870	1.9167612	20	12 20.5	20.0
270093 2001 QA_{216}	16.3	X	2.70577	3.62570	0.11293	6.56323	0.1446577	0.26509786	2.3999299	20	11 30.4	18.9
270094 2001 QO_{224}	16.8	X	51.12275	335.59742	348.25130	1.76637	0.2207057	0.27064596	2.3670187	20	12 24.6	20.3
270095 2001 QH_{228}	15.2	X	73.76896	165.40725	190.93828	14.91004	0.1544700	0.17078274	3.2174123	20	—	—
270096 2001 QP_{231}	16.8	X	350.97487	105.54206	271.30232	5.50824	0.1621927	0.26559049	2.3969614	20	12 3.2	19.1
270097 2001 QP_{233}	16.6	X	315.49766	209.26556	174.81047	4.98375	0.2216489	0.25948384	2.4344219	20	9 24.4	18.2
270098 2001 QD_{255}	15.7	X	162.70717	123.09723	184.05709	15.99751	0.2280471	0.17881843	3.1202869	20	—	—
270099 2001 QZ_{255}	16.4	X	90.24824	121.51581	197.44413	6.10607	0.1273937	0.27407532	2.3472324	20	—	—
270100 2001 QH_{259}	14.8	X	108.42969	111.87433	205.22487	15.85662	0.1034208	0.16900158	3.2399791	20	—	—
270101 2001 QC_{267}	16.9	X	91.04891	162.55455	179.50258	3.41649	0.2540766	0.27670717	2.3323252	20	—	—
270102 2001 QR_{273}	16.6	X	79.27843	252.16509	76.98035	6.81502	0.1289089	0.27385670	2.3484814	20	—	—
270103 2001 QU_{284}	16.4	X	340.13945	6.76723	353.93235	5.69615	0.2030953	0.26169737	2.4206750	20	10 18.3	18.1
270104 2001 QP_{294}	17.3	X	63.14240	88.96027	230.37743	4.42526	0.1929782	0.26978667	2.3720421	20	12 27.5	20.8
270105 2001 QQ_{329}	16.8	X	60.88052	182.62071	146.26586	8.16042	0.0853224	0.26996312	2.3710084	20	12 26.2	20.1
270106 2001 QQ_{334}	15.5	X	55.28759	317.70120	79.36863	9.97312	0.0715853	0.17456945	3.1707150	20	—	—
270107 2001 RM_{1}	17.4	X	80.19635	144.35305	161.42666	1.47592	0.1931804	0.27098986	2.3650157	20	12 27.2	20.9
270108 2001 RG_{4}	16.3	X	23.66399	55.66467	300.50683	5.54220	0.1604263	0.26878089	2.3779559	20	12 26.3	19.3
270109 2001 RA_{8}	16.3	X	179.56697	291.73873	311.21342	7.58416	0.1648734	0.27637520	2.3341925	20	—	—
270110 2001 RQ_{19}	16.9	X	90.76536	154.98500	150.35242	7.75299	0.1192551	0.27255526	2.3559515	20	—	—
270111 2001 RL_{20}	16.8	X	95.93525	330.90974	330.40794	2.36343	0.2046119	0.27339031	2.3511516	20	—	—
270112 2001 RS_{22}	17.4	X	325.80542	51.18315	271.77035	1.55448	0.2059468	0.25623213	2.4549746	20	7 7.7	19.4
270113 2001 RU_{28}	15.1	X	168.21915	98.83501	161.47094	16.82210	0.1314918	0.17236015	3.1977522	20	12 31.4	20.5
270114 2001 RH_{29}	17.2	X	44.92436	326.63680	11.35316	2.71454	0.2340996	0.26920895	2.3754345	20	—	—
270115 2001 RR_{43}	16.5	X	61.49020	118.73267	199.05619	5.84438	0.1294272	0.26828275	2.3808985	20	12 17.3	19.8
270116 2001 RO_{47}	17.4	X	276.38022	28.39229	13.62287	20.71546	0.0709945	0.36250417	1.9480228	20	9 20.3	19.0
270117 2001 RC_{62}	16.8	X	141.46367	313.39133	85.70596	3.31985	0.1887017	0.23598083	2.5934919	20	3 21.2	20.9
270118 2001 RD_{73}	16.1	X	355.22063	31.88961	339.95479	6.38454	0.1109327	0.26240376	2.4163287	20	11 23.5	18.8
270119 2001 RN_{74}	16.6	X	233.34228	18.14589	333.13139	10.42143	0.1835282	0.24350483	2.5397891	20	4 5.8	20.8
270120 2001 RJ_{84}	15.3	X	103.82497	151.61794	178.11971	16.91006	0.1996864	0.17107696	3.2137224	20	—	—
270121 2001 RW_{95}	17.2	X	15.27067	205.30571	137.32604	2.06963	0.2350884	0.26380579	2.4077598	20	12 7.1	19.8
270122 2001 RN_{100}	16.5	X	59.91490	341.97592	357.66790	6.97273	0.1326467	0.27162214	2.3613441	20	—	—
270123 2001 RC_{102}	17.3	X	20.12487	166.27821	167.21180	4.43991	0.1191936	0.26553091	2.3973199	20	11 14.3	20.1
270124 2001 RD_{103}	17.3	X	97.78574	167.56630	164.80111	6.10782	0.1483071	0.27652413	2.3333544	20	—	—
270125 2001 RM_{105}	16.2	X	110.27173	280.75204	61.58381	1.74856	0.1615899	0.17440408	3.1727190	20	—	—
270126 2001 RQ_{110}	17.4	X	27.28435	232.15353	107.59858	2.24425	0.1952652	0.26670651	2.3902700	20	12 13.9	20.4
270127 2001 RR_{115}	16.9	X	90.35408	161.56249	146.34917	3.81839	0.1821886	0.27226508	2.3576251	20	—	—
270128 2001 RS_{115}	17.8	X	161.58581	169.48026	133.42759	2.69525	0.2512084	0.28281131	2.2986431	20	—	—
270129 2001 RT_{115}	16.6	X	67.85967	5.42268	31.06641	3.45189	0.0950823	0.22623630	2.6674392	20	—	—
270130 2001 RW_{116}	17.7	X	356.48209	165.78723	146.59448	3.95159	0.1867811	0.25889485	2.4381127	20	9 8.0	19.5
270131 2001 RJ_{120}	15.1	X	110.53995	208.83637	119.41063	6.75748	0.1766530	0.17160506	3.2071258	20	—	—
270132 2001 RF_{124}	17.4	X	24.65844	190.23472	145.97011	2.55601	0.2077327	0.26547865	2.3976345	20	12 7.6	20.2
270133 2001 RQ_{127}	17.2	X	102.20404	196.02142	94.82178	2.64588	0.1877399	0.27180813	2.3602667	20	12 28.1	20.8
270134 2001 RS_{127}	16.9	X	91.73451	159.88047	157.17990	7.85659	0.2735510	0.27390289	2.3482174	20	—	—
270135 2001 RB_{128}	16.7	X	130.53551	273.22451	24.79512	6.56368	0.1322386	0.27602602	2.3361606	20	—	—
270136 2001 RR_{129}	17.4	X	164.63842	342.58521	45.98963	2.94549	0.2202315	0.23812652	2.5778890	20	3 29.9	21.8
270137 2001 RH_{133}	16.8	X	124.87953	348.76326	65.71400	4.31016	0.2207606	0.23470559	2.6028777	20	3 27.7	20.8
270138 2001 RE_{139}	17.6	X	300.89474	214.58659	163.60675	7.26403	0.0931613	0.25769264	2.4456898	20	8 27.8	20.3
270139 2001 SP_{1}	16.8	X	30.43902	351.60468	350.58113	3.21632	0.1438988	0.26557394	2.3970609	20	12 12.8	19.8
270140 2001 SV_{5}	17.2	X	220.23946	116.66307	344.37436	18.77990	0.0860907	0.36169425	1.9509298	20	9 10.7	19.0
270141 2001 SN_{9}	17.3	X	233.63825	145.32321	221.31486	3.50257	0.2656162	0.24353931	2.5395494	20	4 24.1	21.5
270142 2001 SQ_{19}	15.3	X	141.60072	153.79741	165.78724	9.51191	0.0724264	0.17384181	3.1795566	20	—	—
270143 2001 SQ_{21}	17.5	X	190.36756	201.77988	179.77376	6.67989	0.3336720	0.23991393	2.5650691	20	4 11.3	22.2
270144 2001 SM_{23}	16.9	X	345.79752	179.71741	180.13866	3.70063	0.1327424	0.26125797	2.4233884	20	10 25.4	19.2
270145 2001 SN_{23}	17.4	X	79.78303	293.08105	19.61306	1.42645	0.1957439	0.27039176	2.3685020	20	—	—
270146 2001 SX_{36}	17.0	X	147.52705	4.12522	19.51991	5.21331	0.2201311	0.23386299	2.6091260	20	3 10.3	21.3
270147 2001 SL_{62}	16.9	X	75.38929	314.70138	12.54268	8.08881	0.2997748	0.27115528	2.3640537	20	—	—
270148 2001 SO_{65}	16.7	X	1.13011	182.38655	189.59106	15.31625	0.1853432	0.26283754	2.4136694	20	12 16.9	19.7
270149 2001 SF_{73}	17.8	X	10.45490	187.09375	175.17672	22.63388	0.0727732	0.37065966	1.9193426	20	12 31.6	20.4
270150 2001 SG_{73}	17.1	X	125.60895	16.81949	277.84917	5.03713	0.2063703	0.27529029	2.3403211	20	—	—
270151 2001 ST_{89}	17.7	X	89.81992	28.34727	282.00099	1.98567	0.1885185	0.27247845	2.3563942	20	—	—
270152 2001 SZ_{90}	17.4	X	317.23604	58.27719	319.39236	2.79602	0.1481656	0.25980730	2.4324008	20	9 21.7	19.5
270153 2001 ST_{94}	17.1	X	59.64005	91.78092	234.20980	1.93641	0.1077274	0.26879038	2.3778999	20	12 23.2	20.3
270154 2001 SH_{95}	17.5	X	354.63921	144.31242	203.30293	2.86054	0.1427281	0.26190572	2.4193910	20	10 24.4	19.8
270155 2001 SN_{106}	16.0	X	95.06064	95.04449	219.60198	8.72895	0.2749166	0.27196716	2.3593466	20	—	—
270156 2001 SN_{112}	17.5	X	38.21054	101.00852	187.32319	21.86705	0.0581717	0.36381772	1.9433312	20	10 19.0	19.4
270157 2001 SR_{131}	17.3	X	223.26453	0.53381	330.70622	2.47065	0.2315297	0.24101335	2.5572626	20	3 5.9	21.6
270158 2001 SP_{137}	17.4	X	45.14245	58.37279	276.69902	0.51209	0.1995554	0.26754274	2.3852868	20	12 29.4	20.6
270159 2001 SH_{140}	17.0	X	300.26025	198.91574	184.89467	2.72894	0.1861656	0.25639718	2.4539209	20	8 21.6	19.2
270160 2001 SH_{143}	15.8	X	169.80922	93.73278	189.59963	15.28761	0.2024067	0.17467804	3.1694009	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		°	°	°	°		°				
270161 2001 SU_{157}	15.1	X	287.59261	151.88350	208.51293	9.30832	0.1063225	0.14625829	3.5677060	20	7 1.6	20.1
270162 2001 ST_{161}	17.0	X	46.64437	117.63854	207.42680	3.30510	0.1215226	0.26511691	2.3998150	20	12 7.9	20.0
270163 2001 SE_{171}	17.2	X	168.47096	328.71030	293.12935	5.86161	0.2018335	0.27773480	2.3265686	20	—	—
270164 2001 SN_{171}	17.0	X	308.13552	23.13229	24.63740	2.26584	0.1838599	0.26076616	2.4264344	20	10 18.8	18.6
270165 2001 SG_{176}	16.5	X	78.34120	266.11063	48.02201	5.51822	0.1665958	0.26865178	2.3787177	20	—	—
270166 2001 SR_{177}	16.4	X	89.28110	262.56264	58.61524	8.51676	0.1388157	0.27025707	2.3692888	20	—	—
270167 2001 SU_{185}	17.1	X	118.00092	291.34514	23.75058	6.35980	0.2164012	0.27764571	2.3270662	20	—	—
270168 2001 SN_{195}	16.2	X	93.46038	272.97836	61.98201	2.13336	0.1609874	0.16976516	3.2302564	20	—	—
270169 2001 SS_{199}	17.2	X	56.38889	154.79730	133.45704	1.90332	0.1772354	0.26446560	2.4037535	20	11 9.4	20.4
270170 2001 SH_{218}	17.4	X	107.22114	254.68319	32.71579	2.69560	0.2040597	0.27150492	2.3620237	20	12 28.7	21.2
270171 2001 SQ_{221}	17.4	X	20.15444	289.87995	37.76498	2.49572	0.2206691	0.26330653	2.4108025	20	11 20.6	20.0
270172 2001 SK_{225}	17.2	X	343.77303	352.76256	26.76383	4.00156	0.1420726	0.26257096	2.4153028	20	11 19.5	19.4
270173 2001 SA_{226}	17.1	X	73.29499	279.28236	34.81780	2.72575	0.2087257	0.26913738	2.3758556	20	—	—
270174 2001 ST_{240}	17.5	X	93.40444	277.45717	19.17963	2.33180	0.2171896	0.26982846	2.3717972	20	12 28.7	21.3
270175 2001 SX_{242}	16.8	X	315.39876	336.96715	57.57065	6.00312	0.1635257	0.26001806	2.4310863	20	10 17.5	18.9
270176 2001 SZ_{251}	16.7	X	9.17855	155.10106	188.12830	7.96629	0.0563138	0.25998988	2.4312620	20	10 31.9	19.5
270177 2001 SQ_{255}	17.1	X	68.44505	103.16776	190.31737	5.86940	0.1620108	0.26389157	2.4072380	20	11 27.5	20.6
270178 2001 SQ_{259}	17.1	X	123.65198	282.98343	357.55500	2.84497	0.1592520	0.27267716	2.3552492	20	—	—
270179 2001 SH_{263}	17.3	X	23.54688	157.57491	208.41984	20.76581	0.0770714	0.37200545	1.9147108	20	—	—
270180 2001 SP_{264}	17.3	X	91.20035	281.27360	30.12593	23.96575	0.1599238	0.37428131	1.9069411	20	—	—
270181 2001 SH_{273}	17.6	X	36.07108	126.78695	218.75788	0.58892	0.1996055	0.26841828	2.3800970	20	—	—
270182 2001 SY_{273}	17.8	X	299.01821	199.45301	177.59831	5.85634	0.1274001	0.25755482	2.4465622	20	8 17.2	20.5
270183 2001 SC_{275}	16.6	X	4.80968	139.46429	349.56700	10.12334	0.1689627	0.22884876	2.6471000	20	—	—
270184 2001 SZ_{275}	17.1	X	133.36440	309.32493	199.54666	21.25481	0.0669466	0.35647257	1.9699353	20	7 23.6	20.0
270185 2001 SP_{277}	16.5	X	203.30351	132.19391	283.35813	6.49405	0.3101585	0.24299387	2.5433483	20	5 29.0	21.2
270186 2001 SO_{288}	16.5	X	8.96251	35.54232	318.75918	6.09567	0.1405962	0.26353789	2.4093913	20	11 26.2	19.3
270187 2001 SY_{301}	17.6	X	75.01466	1.31797	304.21953	1.82992	0.1866621	0.26890951	2.3771975	20	12 21.3	21.2
270188 2001 SD_{307}	17.2	X	269.18050	56.47263	10.22379	2.81990	0.0873201	0.25899856	2.4374618	20	9 18.2	19.8
270189 2001 SM_{313}	16.7	X	34.52065	286.85468	57.19489	8.56168	0.1385684	0.26626004	2.3929413	20	12 19.7	19.7
270190 2001 SM_{320}	17.1	X	120.31255	252.57255	36.82221	4.11040	0.2329012	0.27321411	2.3521624	20	—	—
270191 2001 SC_{334}	17.7	X	315.36482	160.58852	177.40005	6.67546	0.1024604	0.25295097	2.4761588	20	7 20.9	20.4
270192 2001 SX_{341}	16.9	X	97.01168	55.36492	247.11832	5.98657	0.1202573	0.27132477	2.3630691	20	—	—
270193 2001 SK_{347}	17.1	X	94.89883	273.93458	16.26150	23.15941	0.2478425	0.27067855	2.3668287	20	12 22.1	21.6
270194 2001 SE_{350}	17.9	X	123.58300	10.39875	298.35353	1.17416	0.2495865	0.27603533	2.3361081	20	—	—
270195 2001 SO_{353}	16.6	X	176.43249	280.86058	121.43371	14.16345	0.1952238	0.23829424	2.5766792	20	4 29.8	21.2
270196 2001 SK_{355}	15.2	X	164.26653	9.50352	262.84480	14.69502	0.1800720	0.17364594	3.1819471	20	—	—
270197 2001 TN_{2}	16.9	X	59.24642	84.10251	214.08596	5.53505	0.1120474	0.26414724	2.4056844	20	11 16.8	20.2
270198 2001 TE_{13}	17.9	X	260.45765	232.38055	195.96807	20.55498	0.1256621	0.36086351	1.9539228	20	9 14.3	19.8
270199 2001 TH_{13}	16.9	X	170.92396	13.18125	208.53550	22.26175	0.1273131	0.37417838	1.9072909	20	12 27.7	19.7
270200 2001 TZ_{29}	17.2	X	23.95936	6.72878	319.58579	1.58352	0.2208576	0.26256610	2.4153326	20	11 23.9	20.1
270201 2001 TS_{32}	16.3	X	35.52181	72.34130	277.00166	4.65870	0.3526836	0.26626561	2.3929080	20	—	—
270202 2001 TK_{42}	15.4	X	143.05991	130.80322	293.97838	11.55193	0.2281755	0.23221319	2.6214694	20	4 19.6	20.0
270203 2001 TA_{54}	16.5	X	51.12106	292.46611	35.87698	7.39327	0.1278176	0.26630585	2.3926669	20	12 17.8	19.8
270204 2001 TJ_{68}	16.4	X	349.15915	170.01589	190.68816	2.75082	0.1909521	0.25956698	2.4339020	20	11 8.5	18.3
270205 2001 TF_{86}	16.9	X	59.40921	168.99197	212.94577	9.99243	0.1378265	0.22086761	2.7104913	20	—	—
270206 2001 TT_{90}	16.6	X	29.28801	16.15838	314.81936	4.64058	0.1529776	0.26327329	2.4110054	20	11 26.4	19.7
270207 2001 TB_{92}	16.7	X	159.12391	84.24222	16.33987	13.40682	0.1085316	0.24466030	2.5317863	20	6 17.2	20.8
270208 2001 TM_{92}	17.0	X	172.85064	153.00361	222.64243	4.24131	0.2867301	0.23686397	2.5870414	20	3 20.9	21.8
270209 2001 TB_{97}	16.3	X	152.96609	229.29196	259.47936	2.58781	0.0673973	0.24715605	2.5147137	20	7 17.5	19.9
270210 2001 TC_{97}	17.0	X	152.37758	67.14347	6.30009	5.12200	0.2723200	0.23769928	2.5809770	20	5 13.8	21.5
270211 2001 TJ_{99}	15.0	X	345.75436	17.94932	0.78388	9.58489	0.1011842	0.15709425	3.4016988	20	10 19.8	19.3
270212 2001 TO_{120}	16.4	X	133.38208	340.85082	307.83841	10.16051	0.2254414	0.27345604	2.3507749	20	—	—
270213 2001 TN_{139}	17.1	X	76.09377	258.67807	56.41537	4.18250	0.1970249	0.27091928	2.3654264	20	—	—
270214 2001 TO_{139}	16.5	X	86.28383	257.76963	44.92120	7.11370	0.1340490	0.27038894	2.3685184	20	12 24.9	20.1
270215 2001 TY_{142}	15.1	X	169.59557	222.47259	55.08612	10.29217	0.1229298	0.17115186	3.2127848	20	—	—
270216 2001 TA_{146}	17.0	X	286.91366	300.11297	94.48100	4.22397	0.1483609	0.25507419	2.4623987	20	8 21.8	19.6
270217 2001 TB_{149}	16.7	X	119.06313	339.22747	82.20130	5.63784	0.1819665	0.23301179	2.6154763	20	3 27.1	20.5
270218 2001 TD_{151}	17.0	X	152.82031	263.77011	97.11858	5.22383	0.2830267	0.23224908	2.6211993	20	2 21.5	21.5
270219 2001 TK_{154}	16.1	X	35.92594	301.57633	67.89835	7.87499	0.1355379	0.26938215	2.3744162	20	—	—
270220 2001 TZ_{168}	16.9	X	171.49374	43.03442	6.38612	10.73472	0.3406806	0.23746542	2.5826713	20	4 28.5	21.9
270221 2001 TN_{169}	16.2	X	239.18122	73.79908	355.46497	13.60001	0.0587772	0.25078403	2.4904021	20	8 17.9	19.6
270222 2001 TF_{173}	17.3	X	164.50514	178.64290	213.47327	3.66892	0.2642720	0.23568334	2.5956739	20	4 3.5	21.8
270223 2001 TM_{173}	17.9	X	1.93769	167.34743	146.12507	1.68312	0.1949661	0.25768344	2.4457480	20	9 22.8	19.9
270224 2001 TE_{180}	16.6	X	69.86414	96.46779	256.61690	6.97288	0.2032400	0.21846173	2.7303551	20	—	—
270225 2001 TN_{183}	17.4	X	280.05263	11.53766	26.86430	5.47833	0.1049604	0.25450158	2.4660908	20	8 24.0	20.3
270226 2001 TD_{189}	16.3	X	190.14469	194.31101	248.51787	5.51803	0.1816713	0.24383961	2.5374639	20	6 25.6	20.4
270227 2001 TD_{191}	16.0	X	301.54193	66.46269	293.45758	4.51389	0.1209320	0.25075506	2.4905939	20	7 27.9	18.8
270228 2001 TF_{196}	16.6	X	8.42996	11.65216	319.83893	10.11584	0.2078769	0.26193002	2.4192413	20	10 30.5	19.3
270229 2001 TX_{198}	16.7	X	9.90148	192.89595	134.99787	5.62007	0.0601675	0.26010574	2.4305399	20	10 13.2	19.5
270230 2001 TG_{203}	17.0	X	344.43302	264.27803	116.88646	7.71185	0.1983836	0.26203151	2.4186166	20	12 2.8	19.2
270231 2001 TT_{206}	16.5	X	100.79061	331.08670	14.32250	9.90696	0.0728160	0.22249846	2.6972303	20	—	—
270232 2001 TV_{210}	16.7	X	54.40672	344.05584	313.33343	5.86421	0.1218329	0.26293891	2.4130490	20	11 8.2	19.9
270233 2001 TP_{213}	15.8	X	345.35634	125.05056	308.20030	8.07784	0.1423430	0.21528802	2.7571230	20	—	—
270234 2001 TU_{214}	17.1	X	15.71426	158.56618	274.48580	8.27603	0.2335731	0.21804242	2.7338544	20	—	—
270235 2001 TC_{229}	17.1	X	112.56186	64.47122	208.40640	3.60116	0.0209939	0.26599942	2.3945041	20	12 9.4	20.1
270236 2001 TB_{240}	16.5	X	346.93586	257.80590	92.88917	6.02592	0.1276837	0.25795924	2.4440044	20	10 15.1	18.9
270237 2001 TM_{245}	18.0	X	131.92340	288.56368	339.27977	1.71182	0.1920405	0.27240506	2.3568174	20	12 25.6	21.9
270238 2001 TD_{252}	17.3	X	144.83102	187.65395	57.48792	6.17879	0.1313180	0.26831654	2.3806986	20	12 9.6	20.8
270239 2001 TD_{260}	17.3	X	118.37461	234.43460	54.06395	4.57039	0.1271739	0.27133793	2.3629927	20	—	—
270240 2001 UH_{10}	17.3	X	203.83000	261.83189	78.61558	5.50258	0.3119036	0.23972184	2.5664392	20	3 4.7	22.1

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	m		°	°	°	°		°				
270241 2001 UL_{11}	17.7	X	138.54175	10.82942	212.18061	20.57366	0.0303609	0.36604444	1.9354420	20	11 29.1	20.0
270242 2001 US_{13}	16.6	X	203.39528	234.35514	178.84314	4.61813	0.2565339	0.24145570	2.5541383	20	5 29.2	21.1
270243 2001 UA_{18}	16.2	X	30.02144	319.02765	26.19857	7.00229	0.1661217	0.26342978	2.4100504	20	12 18.9	19.3
270244 2001 UL_{18}	17.3	X	280.34096	348.24819	55.73965	5.42269	0.1090823	0.25406775	2.4688973	20	9 1.4	20.2
270245 2001 UR_{21}	17.3	X	317.49039	208.48266	210.97376	20.91128	0.0928959	0.36976402	1.9224407	20	—	—
270246 2001 UE_{22}	16.4	X	170.04697	124.45816	310.06189	6.91336	0.2598251	0.24167703	2.5525787	20	5 28.4	21.0
270247 2001 UG_{25}	16.2	X	209.44744	88.21585	346.86729	9.10031	0.2478011	0.24585216	2.5235972	20	7 1.1	20.6
270248 2001 UJ_{25}	16.0	X	210.46148	102.85748	326.15973	7.48750	0.1489685	0.24624680	2.5209002	20	6 29.9	20.0
270249 2001 UC_{29}	17.0	X	145.69769	239.16392	174.64121	4.83270	0.2881509	0.23537627	2.5979309	20	4 18.3	21.5
270250 2001 UR_{30}	16.7	X	92.55562	264.83783	35.93734	8.86497	0.0716106	0.26804500	2.3823062	20	12 24.4	20.1
270251 2001 UV_{30}	16.8	X	19.25972	132.48344	196.15839	5.72581	0.1219531	0.26147729	2.4220330	20	11 5.3	19.6
270252 2001 US_{34}	16.2	X	32.65426	219.89604	104.93144	8.30066	0.1865423	0.26209382	2.4182333	20	11 30.0	19.3
270253 2001 UE_{36}	16.3	X	355.68822	204.32208	172.43242	10.07966	0.2176564	0.26137690	2.4226532	20	12 19.6	18.9
270254 2001 UU_{39}	17.1	X	79.29483	120.27937	205.00536	5.76171	0.2062211	0.27002260	2.3706602	20	—	—
270255 2001 UC_{51}	16.1	X	137.48311	43.49407	57.79375	30.53044	0.3179266	0.23626903	2.5913825	20	6 4.8	20.9
270256 2001 UW_{97}	17.1	X	330.84454	160.54639	191.98248	1.99429	0.2224231	0.25675378	2.4516482	20	9 9.9	18.5
270257 2001 UD_{100}	17.0	X	258.23217	351.30391	48.23004	3.29032	0.1328060	0.25023977	2.4940117	20	7 17.6	20.3
270258 2001 UZ_{101}	17.3	X	262.42691	210.06674	198.72331	2.59558	0.0870295	0.25310898	2.4751281	20	8 11.4	20.3
270259 2001 UQ_{106}	16.4	X	45.28271	273.23932	40.60307	6.77042	0.1453542	0.26178942	2.4201075	20	11 23.1	19.6
270260 2001 UD_{116}	16.9	X	284.29124	341.67775	46.14962	6.79744	0.0976548	0.25180531	2.4836637	20	8 17.0	19.9
270261 2001 UO_{117}	16.8	X	23.60866	273.42091	55.05812	5.46721	0.2048136	0.26061682	2.4273613	20	11 23.5	19.6
270262 2001 UY_{137}	16.7	X	291.34406	254.16475	52.59317	3.58721	0.0394773	0.24335130	2.5408572	20	5 8.8	20.0
270263 2001 UF_{139}	14.9	X	272.20047	38.87772	38.22797	10.51393	0.0757533	0.15433013	3.4421957	20	9 25.3	19.7
270264 2001 UH_{144}	16.7	X	53.86614	164.91385	155.77463	2.75760	0.1924518	0.26435519	2.4044227	20	12 19.1	20.1
270265 2001 UB_{147}	17.1	X	204.61014	13.00823	43.85171	3.52801	0.1220609	0.24472091	2.5313682	20	6 8.4	21.0
270266 2001 UB_{166}	17.2	X	96.68959	200.59852	81.17114	3.06872	0.1796246	0.26736128	2.3863659	20	12 11.2	20.9
270267 2001 UP_{166}	17.4	X	145.84225	212.43402	71.58689	2.84264	0.2153067	0.27522165	2.3407102	20	—	—
270268 2001 UH_{171}	17.2	X	202.24823	44.60023	2.80571	4.22531	0.2620603	0.24163597	2.5528678	20	5 19.1	21.8
270269 2001 UX_{171}	16.6	X	51.65433	339.96312	43.97216	5.43635	0.1120825	0.21974638	2.7197035	20	—	—
270270 2001 UT_{172}	17.0	X	140.11561	99.36913	198.67495	7.79870	0.2283836	0.27517208	2.3409913	20	—	—
270271 2001 UM_{175}	16.6	X	36.87607	240.54081	78.04774	5.21668	0.1859555	0.26208154	2.4183088	20	11 26.0	19.7
270272 2001 UK_{182}	16.8	X	247.26295	357.11104	326.88061	10.38378	0.1811580	0.24212271	2.5494453	20	3 17.1	20.9
270273 2001 UG_{187}	17.1	X	71.08451	280.77419	34.59646	7.17847	0.1387296	0.26832322	2.3806591	20	12 25.4	20.7
270274 2001 UJ_{194}	16.6	X	112.27847	132.19989	198.54765	8.47979	0.0389094	0.22098446	2.7095358	20	—	—
270275 2001 UB_{211}	17.0	X	36.36099	315.79346	11.03759	2.72919	0.1790865	0.26341088	2.4101657	20	12 4.6	20.2
270276 2001 US_{215}	16.5	X	113.83596	91.46493	51.03646	15.36849	0.0510726	0.24244185	2.5472075	20	6 14.4	20.1
270277 2001 UC_{227}	17.1	X	19.70693	170.93341	138.77432	3.85475	0.1314232	0.25909336	2.4368672	20	10 11.9	19.7
270278 2001 VP_{5}	16.2	X	185.00339	119.68300	316.61305	6.37709	0.2326888	0.24291821	2.5438763	20	6 11.9	20.6
270279 2001 VT_{7}	16.8	X	173.80621	174.77782	224.15248	3.01501	0.1236447	0.23729743	2.5838900	20	4 14.8	20.7
270280 2001 VH_{11}	16.9	X	153.11078	108.69564	275.78736	9.72834	0.2902102	0.23323440	2.6138118	20	3 13.9	21.6
270281 2001 VX_{19}	16.4	X	60.84916	113.06926	228.96371	5.40672	0.1604747	0.26697688	2.3886560	20	—	—
270282 2001 VV_{47}	15.4	X	279.24071	295.76525	60.43576	2.66705	0.1775481	0.24525175	2.5277142	20	6 7.3	18.7
270283 2001 VX_{63}	16.9	X	10.19712	85.37490	267.32655	2.28876	0.2300773	0.26140644	2.4224706	20	12 11.4	19.5
270284 2001 VV_{69}	16.7	X	148.74057	35.66758	350.20540	8.01622	0.2324570	0.23201764	2.6229422	20	3 13.4	20.9
270285 2001 VD_{70}	15.6	X	256.97160	285.24814	246.84713	23.84799	0.1237816	0.21328410	2.7743658	20	12 29.9	19.4
270286 2001 VY_{76}	16.8	X	285.77803	293.56530	89.35595	24.37762	0.0830025	0.35664439	1.9693026	20	9 9.3	19.3
270287 2001 VK_{79}	16.8	X	159.96079	31.58506	317.75859	1.73135	0.3301862	0.23106416	2.6301529	20	2 14.2	21.5
270288 2001 VV_{82}	16.7	X	287.81301	306.30181	63.96064	8.08150	0.1196888	0.25066696	2.4911774	20	7 22.3	19.7
270289 2001 VG_{88}	16.6	X	2.66538	276.15214	86.19801	4.82326	0.1676022	0.26154294	2.4216277	20	12 2.8	19.1
270290 2001 VP_{103}	17.5	X	106.85778	169.03574	265.81453	3.81856	0.2608342	0.23016274	2.6370156	20	4 4.9	21.4
270291 2001 VH_{106}	16.1	X	108.39674	285.80496	247.95410	11.64402	0.1980780	0.24356941	2.5393402	20	8 2.6	20.3
270292 2001 VM_{110}	16.8	X	128.48963	233.16995	260.22121	8.45057	0.1564817	0.23988538	2.5652726	20	7 1.5	20.7
270293 2001 VE_{112}	16.5	X	135.35475	183.07961	286.35959	3.36735	0.1741089	0.23772578	2.5807852	20	6 9.0	20.6
270294 2001 VH_{115}	16.1	X	158.93527	234.37513	254.73136	8.49984	0.1008643	0.24384084	2.5374554	20	7 23.5	20.0
270295 2001 VK_{115}	14.5	X	85.54552	233.21427	252.22836	10.78108	0.1948471	0.12499128	3.9617121	20	5 10.4	20.2
270296 2001 VH_{117}	16.6	X	104.82158	157.68120	308.47631	2.85699	0.2560865	0.23172811	2.6251265	20	5 12.9	20.5
270297 2001 VE_{120}	16.9	X	280.56263	36.67194	337.58196	2.63949	0.1010165	0.24798556	2.5091028	20	7 18.5	20.0
270298 2001 VQ_{127}	17.1	X	25.76279	161.36422	163.37986	7.01706	0.1877787	0.26199413	2.4188467	20	11 21.2	20.1
270299 2001 VS_{127}	17.1	X	154.63837	94.18749	129.65378	7.15964	0.0392402	0.26360866	2.4089601	20	11 27.9	20.4
270300 2001 VU_{129}	17.7	X	175.72418	239.64143	182.89727	13.13681	0.1772175	0.24035274	2.5619462	20	5 20.2	22.1
270301 2001 VX_{132}	16.3	X	181.81734	95.34332	331.13008	11.55166	0.2386387	0.23878724	2.5731315	20	5 25.9	21.0
270302 2001 WA_{2}	17.2	X	332.07950	167.79842	211.57203	22.60643	0.0471398	0.36358903	1.9441460	20	11 20.4	19.0
270303 2001 WB_{2}	16.6	X	159.92836	121.69934	209.80167	21.04460	0.3092944	0.28091917	2.3089532	20	1 14.3	20.9
270304 2001 WW_{2}	16.8	X	103.46625	241.45428	34.24514	6.58032	0.1114889	0.26449753	2.4035600	20	12 5.4	20.4
270305 2001 WQ_{10}	17.7	X	175.52899	233.08371	211.30856	3.99269	0.2201976	0.24122906	2.5557378	20	6 14.8	22.0
270306 2001 WS_{42}	17.4	X	343.23723	175.06100	197.08562	1.57901	0.1651581	0.25918890	2.4362683	20	11 10.0	19.4
270307 2001 WQ_{44}	17.0	X	76.21070	161.35301	160.22505	2.24094	0.1984495	0.26619387	2.3933379	20	—	—
270308 2001 WS_{53}	16.1	X	338.61865	193.83479	45.39413	11.38234	0.1159937	0.23833151	2.5764105	20	4 9.6	19.0
270309 2001 WL_{70}	16.8	X	50.90180	240.14777	62.90185	6.55880	0.1251756	0.25977001	2.4326336	20	11 13.9	20.0
270310 2001 WD_{78}	16.8	X	242.86630	144.52442	211.17537	2.71724	0.0800121	0.24071583	2.5593693	20	5 5.8	20.3
270311 2001 WE_{82}	17.1	X	51.55855	220.12001	82.64214	3.19632	0.2035704	0.26071339	2.4267618	20	11 24.8	20.5
270312 2001 WP_{84}	17.5	X	120.04366	219.12717	218.05177	4.37414	0.1579677	0.23264849	2.6181984	20	4 10.7	21.4
270313 2001 XJ	16.2	X	101.00183	73.91610	25.40017	28.28755	0.3605653	0.22874849	2.6478735	20	5 5.1	20.7
270314 2001 XY_{8}	17.1	X	126.57781	106.02167	15.15784	4.72794	0.2311256	0.23645055	2.5900561	20	6 20.0	21.3
270315 2001 XV_{12}	15.5	X	298.80984	220.24440	298.36336	12.80852	0.1446312	0.21360073	2.7716235	20	—	—
270316 2001 XG_{15}	15.9	X	151.91939	117.80501	334.83426	14.31835	0.1257851	0.23795069	2.5791587	20	5 29.1	20.2
270317 2001 XO_{19}	16.6	X	93.12939	15.72837	34.21490	5.42396	0.1795090	0.22296225	2.6934887	20	2 10.2	20.1
270318 2001 XD_{29}	15.5	X	207.41621	284.82199	127.90646	12.80130	0.2110915	0.23936455	2.5689924	20	6 4.3	20.0
270319 2001 XJ_{32}	17.3	X	160.05455	155.47504	245.80041	3.12495	0.1964301	0.23486523	2.6016981	20	4 7.5	21.6
270320 2001 XS_{38}	16.7	X	105.07290	87.47335	45.10694	12.85838	0.2825491	0.23344707	2.6122241	20	6 18.5	21.0

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
270321 2001 XT_{39}	16.2	X	102.45473	199.34727	295.63120	12.97580	0.1868366	0.23415338	2.6069684	20	6 9.6	20.2
270322 2001 XB_{60}	16.3	X	171.01343	336.97769	93.97146	13.96538	0.2112820	0.23741735	2.5830199	20	5 27.4	20.8
270323 2001 XU_{90}	17.5	X	148.40164	109.46370	338.32551	1.54609	0.2168234	0.23747430	2.5826069	20	5 26.8	21.8
270324 2001 XV_{96}	16.2	X	234.40114	85.34453	276.52465	6.31290	0.3220346	0.24264355	2.5457957	20	4 13.1	20.8
270325 2001 XC_{104}	17.3	X	73.97103	80.36381	82.92425	6.49803	0.1790034	0.33984370	2.0336829	20	6 13.2	19.1
270326 2001 XU_{109}	15.1	X	101.11430	331.47673	87.53578	10.51392	0.0855734	0.17531131	3.1617638	20	2 26.2	19.7
270327 2001 XK_{113}	16.7	X	125.74658	355.91438	108.99050	5.71730	0.1939853	0.23505008	2.6003338	20	5 27.6	20.8
270328 2001 XG_{116}	16.3	X	206.70636	357.12248	73.41575	7.58155	0.2044878	0.24067738	2.5596419	20	6 23.9	20.5
270329 2001 XU_{116}	16.0	X	101.72090	247.45532	296.11156	14.15514	0.0468188	0.24168201	2.5525436	20	7 25.6	19.4
270330 2001 XS_{121}	16.2	X	101.44482	71.99143	235.74222	11.14963	0.2446382	0.26879929	2.3778473	20	—	—
270331 2001 XX_{134}	16.5	X	103.04731	235.03505	253.73171	11.41262	0.1013613	0.23532711	2.5982927	20	5 21.1	19.9
270332 2001 XD_{155}	16.4	X	227.96229	248.46436	138.52166	3.09236	0.2365943	0.24184831	2.5513733	20	5 17.6	20.7
270333 2001 XT_{169}	15.4	X	306.42553	89.18244	256.38994	10.81354	0.2158583	0.24677062	2.5173316	20	6 28.6	18.1
270334 2001 XU_{172}	17.0	X	99.18343	217.21362	249.77805	4.77453	0.2737288	0.22966705	2.6408086	20	5 10.8	21.0
270335 2001 XW_{180}	16.0	X	62.45580	264.85398	274.68691	13.51558	0.1697028	0.23156160	2.6263848	20	6 15.9	19.2
270336 2001 XH_{183}	16.7	X	107.84959	248.64540	249.60676	1.52433	0.1313055	0.23349861	2.6118397	20	6 13.2	20.3
270337 2001 XU_{185}	16.7	X	190.36305	309.72142	110.70225	5.11466	0.1843036	0.23840901	2.5758522	20	5 29.3	21.0
270338 2001 XZ_{194}	16.7	X	142.33134	139.48591	268.87931	5.56951	0.3000077	0.22987199	2.6392388	20	4 6.5	21.4
270339 2001 XN_{195}	16.4	X	83.40565	39.74346	111.34048	13.70633	0.1792373	0.23030648	2.6359183	20	6 9.1	20.1
270340 2001 XM_{211}	16.6	X	188.35333	289.92188	142.81722	5.13243	0.2376089	0.23990910	2.5651035	20	6 10.9	21.0
270341 2001 XG_{219}	16.3	X	305.36309	290.37203	47.10036	2.49526	0.1051317	0.24766549	2.5112641	20	7 3.5	19.0
270342 2001 XP_{219}	16.4	X	223.34401	352.35715	55.86567	15.56868	0.0907275	0.24435606	2.5338874	20	6 19.1	20.2
270343 2001 XG_{220}	16.3	X	286.25937	245.92801	255.14705	7.53734	0.1000543	0.21214501	2.7842881	20	—	—
270344 2001 XP_{223}	17.2	X	220.27926	351.89075	36.85987	5.91318	0.1781050	0.24176285	2.5519745	20	5 15.1	21.2
270345 2001 XU_{223}	17.0	X	98.64134	94.54223	62.92937	12.28812	0.2075688	0.23747382	2.5826104	20	7 8.0	21.0
270346 2001 XC_{249}	16.8	X	251.23097	282.67544	102.50531	3.62668	0.1999500	0.24223415	2.5486633	20	6 9.4	20.7
270347 2001 XX_{252}	16.9	X	91.52917	358.95028	115.59852	5.51086	0.3021155	0.22836455	2.6508405	20	5 18.1	20.8
270348 2001 XZ_{262}	16.3	X	78.59378	233.50904	275.56786	11.61234	0.0291703	0.23265486	2.6181507	20	5 1.9	19.9
270349 2001 XE_{267}	16.1	X	235.28213	313.71467	64.64798	14.70716	0.1486522	0.23805211	2.5784261	20	5 20.4	20.1
270350 2001 YX_{4}	15.8	X	185.78823	26.85290	62.37384	22.84188	0.1040394	0.23907110	2.5710942	20	6 30.1	19.9
270351 2001 YM_{20}	16.6	X	237.29719	170.73491	247.33408	2.05498	0.0500654	0.24785348	2.5099941	20	7 26.4	19.9
270352 2001 YR_{23}	16.6	X	141.97070	213.70016	265.45722	6.91079	0.1443219	0.23976874	2.5661046	20	6 26.3	20.6
270353 2001 YB_{40}	16.0	X	246.84107	74.96280	297.45128	5.24831	0.1679328	0.24245754	2.5470976	20	5 21.2	19.7
270354 2001 YX_{40}	16.8	X	174.72210	154.24721	289.33750	3.22445	0.1564781	0.23953208	2.5677945	20	6 12.7	20.8
270355 2001 YD_{45}	16.6	X	206.53329	29.98495	53.30336	3.78233	0.1072028	0.24385528	2.5373552	20	7 17.6	20.4
270356 2001 YU_{49}	14.5	X	119.05281	170.64474	285.85789	7.57679	0.2428516	0.12534020	3.9543562	20	5 14.1	20.8
270357 2001 YA_{51}	16.6	X	78.84453	275.69597	288.86470	4.15976	0.0915778	0.24117237	2.5561383	20	7 31.1	19.8
270358 2001 YN_{54}	15.8	X	116.55059	157.62970	282.18546	2.87781	0.2786514	0.12448598	3.9724254	20	4 26.5	22.1
270359 2001 YU_{62}	16.5	X	175.33131	109.29706	316.89187	3.69899	0.2426007	0.23741121	2.5830644	20	5 22.1	21.0
270360 2001 YS_{73}	16.6	X	172.82676	330.47952	97.00414	6.04175	0.1776246	0.23589928	2.5940896	20	5 22.8	20.8
270361 2001 YK_{86}	16.6	X	133.26957	14.01352	102.18078	7.86301	0.1428834	0.23449520	2.6044343	20	6 13.8	20.5
270362 2001 YL_{91}	15.9	X	93.72191	166.77639	292.93167	12.98257	0.2052409	0.22699026	2.6615292	20	4 9.6	19.9
270363 2001 YQ_{98}	17.2	X	153.21181	8.82300	94.50365	5.71648	0.1812424	0.23855610	2.5747933	20	6 18.6	21.4
270364 2001 YY_{105}	15.8	X	287.95099	235.18216	111.68169	10.77863	0.2792243	0.24436328	2.5338374	20	5 24.0	19.2
270365 2001 YU_{117}	15.8	X	176.46555	302.93524	95.00173	10.07622	0.1921059	0.23216715	2.6218160	20	4 23.1	20.3
270366 2001 YN_{126}	16.0	X	108.00494	9.68543	81.15057	23.07508	0.1406961	0.22982562	2.6395938	20	4 25.1	20.2
270367 2001 YQ_{127}	16.9	X	211.72725	349.62938	64.01107	6.83499	0.2560411	0.24135076	2.5548786	20	6 4.2	21.3
270368 2001 YC_{130}	17.0	X	164.19864	52.66658	13.80147	3.98728	0.2782723	0.23552545	2.5968338	20	5 14.8	21.6
270369 2001 YY_{138}	17.6	X	42.76208	72.95889	77.31315	5.86166	0.2535462	0.22409708	2.6843878	20	4 15.3	20.0
270370 2001 YF_{139}	16.4	X	104.98555	332.61685	125.21407	11.55059	0.1536517	0.22804804	2.6532927	20	4 25.7	20.3
270371 2001 YR_{159}	16.2	X	310.72922	276.99084	57.94011	14.96831	0.0394743	0.24052748	2.5607052	20	7 18.3	19.7
270372 2001 YJ_{160}	16.3	X	243.87124	0.75715	26.86681	15.45177	0.1185154	0.23985238	2.5655080	20	6 11.4	20.2
270373 William	17.3	X	254.03371	359.12005	35.76301	21.10889	0.0812483	0.35104979	1.9901703	20	7 27.8	20.0
270374 2002 AB_{12}	16.2	X	160.36445	102.31116	318.66508	5.48760	0.1536937	0.23229041	2.6208884	20	4 28.9	20.5
270375 2002 AD_{25}	16.6	X	157.27836	289.13025	165.09505	4.76722	0.2355242	0.23560089	2.5962795	20	6 12.7	21.1
270376 2002 AM_{42}	15.8	X	96.05170	82.05971	132.31418	4.88910	0.1788356	0.24143407	2.5542909	20	9 15.7	19.7
270377 2002 AP_{45}	17.1	X	72.56185	305.87974	148.33240	4.28748	0.1895661	0.22354162	2.6888327	20	3 9.2	20.2
270378 2002 AQ_{53}	16.9	X	104.12409	344.81371	122.70656	7.47328	0.1026934	0.23006115	2.6377919	20	4 28.2	20.6
270379 2002 AW_{55}	16.7	X	113.01101	234.82870	296.75324	5.84524	0.0503852	0.23829055	2.5767058	20	7 24.7	20.2
270380 2002 AH_{56}	16.5	X	63.33618	328.86242	135.67522	9.06341	0.1362045	0.22245266	2.6976006	20	3 1.5	19.7
270381 2002 AK_{61}	16.2	X	59.95082	51.72103	142.12021	13.07045	0.1359162	0.23012541	2.6373008	20	6 26.9	19.7
270382 2002 AA_{81}	16.9	X	95.32502	5.82347	118.84256	8.75431	0.3009668	0.23134559	2.6280194	20	6 3.7	21.0
270383 2002 AH_{103}	16.6	X	203.14266	95.27016	312.46376	3.13577	0.1780953	0.23755812	2.5819994	20	5 23.3	20.7
270384 2002 AW_{107}	17.0	X	142.60639	334.46865	113.32960	5.22169	0.1825602	0.23253970	2.6190149	20	5 21.3	21.2
270385 2002 AY_{112}	16.4	X	196.98548	65.42314	334.11721	4.85555	0.2945242	0.23601162	2.5932663	20	5 4.5	21.2
270386 2002 AR_{113}	16.7	X	201.24398	88.49719	304.36279	3.27935	0.3036077	0.23707211	2.5855269	20	4 29.7	21.6
270387 2002 AY_{129}	14.8	X	108.63917	126.44221	47.53657	30.52626	0.2016103	0.23716442	2.5848560	20	8 24.2	19.6
270388 2002 AV_{138}	16.7	X	206.95510	238.80827	165.06567	4.76704	0.2228812	0.23756101	2.5819784	20	5 21.9	21.1
270389 2002 AY_{139}	16.3	X	12.60814	253.56809	103.03255	7.76046	0.1321336	0.26045145	2.4283887	20	12 5.2	19.1
270390 2002 AQ_{141}	16.1	X	203.64695	248.69393	111.99131	11.09839	0.1140944	0.23072230	2.6327503	20	4 2.8	20.4
270391 2002 AH_{143}	17.0	X	112.22814	326.21177	198.71507	1.47025	0.0953988	0.23753315	2.5821803	20	7 19.6	20.8
270392 2002 AT_{147}	16.0	X	129.66287	140.45659	319.31460	11.68629	0.0687224	0.23089763	2.6314173	20	5 6.9	20.0
270393 2002 AP_{156}	17.1	X	125.69955	275.71829	172.55096	3.35341	0.1990415	0.23093820	2.6311091	20	5 6.8	21.2
270394 2002 AC_{160}	16.9	X	188.23745	270.30920	150.96439	5.04408	0.2548928	0.23609434	2.5926606	20	5 27.9	21.5
270395 2002 AB_{164}	16.1	X	154.91765	287.68190	157.67788	7.75366	0.1726614	0.23255889	2.6188709	20	5 29.5	20.5
270396 2002 AF_{188}	14.9	X	158.05634	112.70506	315.34985	1.68700	0.2135626	0.12595145	3.9415520	20	5 11.9	21.2
270397 2002 AV_{188}	17.2	X	121.91411	239.56175	223.59716	2.35008	0.1866866	0.23085126	2.6317697	20	5 19.9	21.3
270398 2002 AE_{189}	16.6	X	90.33863	318.11818	177.81365	13.22141	0.2003667	0.22944596	2.6425047	20	5 31.4	20.6
270399 2002 AP_{189}	15.7	X	11.18911	285.70248	287.03210	26.66624	0.2070268	0.22448789	2.6812713	20	4 15.0	19.0
270400 2002 AH_{190}	16.8	X	38.85435	101.01190	103.54700	13.11856	0.0779615	0.23299781	2.6155809	20	6 2.0	20.0

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		°	°	°	°		°				
270401 2002 AM_{190}	16.9	X	199.58512	355.89547	62.29784	4.35585	0.1940151	0.23911293	2.5707944	20	6 2.4	21.0
270402 2002 AV_{193}	16.7	X	71.86560	345.52491	111.18963	6.06023	0.0153284	0.22246262	2.6975201	20	2 17.5	20.3
270403 2002 AF_{198}	16.7	X	184.11916	263.52022	150.30338	6.39052	0.3179007	0.23759002	2.5817682	20	5 16.4	21.6
270404 2002 AZ_{201}	15.9	X	256.05239	326.72235	66.85592	11.15287	0.1845865	0.24346351	2.5400765	20	6 27.7	19.6
270405 2002 AA_{202}	16.9	X	161.95379	217.91760	203.74673	3.28955	0.2840118	0.23341985	2.6124272	20	5 8.9	21.6
270406 2002 AC_{205}	16.1	X	98.64864	149.98252	16.28407	4.23567	0.1725724	0.23494638	2.6010990	20	7 15.9	19.9
270407 2002 BE_{5}	16.1	X	175.76622	46.89796	73.93557	14.76696	0.1541282	0.24037229	2.5618072	20	8 4.2	20.4
270408 2002 BK_{31}	16.5	X	34.87126	321.53977	153.67282	9.65406	0.1318772	0.21775257	2.7362799	20	1 24.6	19.5
270409 2002 CF_{2}	15.7	X	129.78268	263.71024	108.93907	15.80361	0.0456754	0.21768036	2.7368850	20	1 19.8	19.5
270410 2002 CR_{3}	16.8	X	126.87259	93.65739	24.48855	4.89563	0.2015148	0.23186562	2.6240885	20	6 13.8	21.0
270411 2002 CO_{13}	16.1	X	12.84740	55.85948	143.77950	9.60944	0.0614292	0.22600482	2.6692602	20	4 15.1	19.4
270412 2002 CX_{14}	15.9	X	55.71410	124.06536	142.86650	12.41532	0.1641524	0.24102440	2.5571844	20	10 9.4	19.5
270413 2002 CN_{16}	16.4	X	93.21864	201.44419	321.75933	7.79378	0.0909706	0.23511987	2.5998193	20	6 23.8	20.0
270414 2002 CF_{18}	16.3	X	56.80815	196.25481	23.23802	7.91732	0.1484894	0.23382094	2.6094388	20	8 2.5	19.7
270415 2002 CV_{19}	15.5	X	244.06070	32.64079	9.44738	5.06127	0.2834681	0.24265235	2.5457342	20	6 14.7	19.7
270416 2002 CC_{20}	16.5	X	59.60416	128.97622	75.78043	5.43410	0.1339428	0.23144881	2.6272380	20	7 11.5	19.7
270417 2002 CA_{22}	16.5	X	70.65219	350.85417	143.03756	12.52830	0.1389386	0.22501132	2.6771116	20	4 25.5	20.0
270418 2002 CM_{22}	16.1	X	313.46724	243.09374	323.71238	15.14015	0.2575233	0.21408270	2.7674620	20	1 1.7	20.3
270419 2002 CB_{24}	15.4	X	208.63177	117.26644	272.68429	9.33082	0.1431388	0.17965584	3.1105832	20	5 7.4	20.5
270420 2002 CA_{36}	16.8	X	60.31805	224.82961	313.52976	7.00464	0.1090371	0.22975751	2.6401154	20	5 30.6	20.2
270421 2002 CR_{36}	16.9	X	27.91645	128.34471	332.55624	7.16809	0.1800915	0.21601895	2.7509001	20	—	—
270422 2002 CA_{40}	15.5	X	316.91723	47.16418	168.62367	26.08498	0.1516499	0.21706008	2.7420966	20	1 27.9	19.5
270423 2002 CG_{61}	16.6	X	189.87988	331.00147	87.63513	9.69682	0.1699187	0.23470640	2.6028717	20	5 27.2	20.9
270424 2002 CR_{62}	16.0	X	23.00289	151.38265	76.86488	9.98810	0.1915628	0.22822392	2.6519293	20	6 19.2	18.6
270425 2002 CD_{65}	16.4	X	78.69414	155.23366	21.85196	8.31681	0.1450774	0.23108862	2.6299672	20	7 1.9	20.0
270426 2002 CM_{71}	16.4	X	46.20895	210.34940	349.34150	4.23088	0.0781843	0.23043739	2.6349199	20	6 3.6	19.6
270427 2002 CR_{71}	15.6	X	173.56819	157.67544	338.59574	8.09898	0.0370115	0.18735191	3.0248045	20	8 17.6	20.0
270428 2002 CP_{73}	16.7	X	152.59809	91.19529	326.91514	4.25595	0.2503899	0.23008784	2.6375878	20	4 24.0	21.2
270429 2002 CA_{74}	16.1	X	299.99774	216.65205	339.30781	7.25287	0.1571355	0.21263564	2.7800035	20	—	—
270430 2002 CD_{75}	16.3	X	357.21157	147.90962	131.66308	12.80343	0.1811998	0.23309107	2.6148832	20	7 11.7	18.6
270431 2002 CT_{76}	17.2	X	80.92723	1.06030	130.69287	3.14143	0.1531888	0.22646454	2.6656466	20	5 5.8	20.6
270432 2002 CR_{87}	16.5	X	103.46146	148.88301	326.83157	9.24436	0.0722332	0.22775187	2.6555924	20	4 26.1	20.3
270433 2002 CX_{90}	17.2	X	219.40494	13.86435	140.43765	6.86285	0.0505348	0.30287310	2.1959827	20	11 25.5	19.9
270434 2002 CG_{91}	16.6	X	108.21312	336.39788	117.10879	3.98503	0.1365316	0.22519979	2.6756177	20	4 18.4	20.4
270435 2002 CA_{92}	16.3	X	119.64169	107.42242	345.78968	7.15718	0.0934246	0.22607844	2.6686807	20	4 21.2	20.1
270436 2002 CB_{92}	16.8	X	81.79667	337.59522	131.16921	6.19407	0.2374592	0.22410716	2.6843073	20	4 21.1	20.4
270437 2002 CR_{100}	16.0	X	357.38875	21.41360	149.87088	5.65051	0.0966647	0.21669697	2.7451589	20	2 7.8	19.3
270438 2002 CQ_{113}	16.4	X	51.89417	212.71492	330.89531	12.72178	0.1887663	0.22799820	2.6536793	20	6 6.3	19.7
270439 2002 CZ_{115}	15.6	X	46.54171	153.96377	49.18357	27.69445	0.2319126	0.22646152	2.6656703	20	7 1.9	19.2
270440 2002 CJ_{117}	16.9	X	110.11685	80.49662	82.14723	2.01061	0.0867832	0.23504540	2.6003684	20	7 13.5	20.4
270441 2002 CS_{124}	16.7	X	99.01230	308.35938	175.82957	4.00561	0.1593802	0.22813595	2.6526110	20	5 19.6	20.5
270442 2002 CD_{125}	16.4	X	127.21898	290.95812	168.85478	6.57928	0.2080245	0.23004470	2.6379176	20	5 24.2	20.6
270443 2002 CN_{142}	16.8	X	123.03916	110.44272	288.96392	6.30599	0.3461656	0.22686681	2.6624946	20	3 15.2	21.3
270444 2002 CG_{145}	16.2	X	107.53843	330.95414	166.33412	10.68579	0.1722282	0.22946693	2.6423437	20	6 17.0	20.3
270445 2002 CL_{154}	16.1	X	250.72060	150.21872	125.93883	16.19638	0.0783903	0.22044968	2.7139160	20	2 5.6	20.0
270446 2002 CD_{156}	16.2	X	348.78127	214.07563	358.41017	9.52817	0.1412630	0.22249750	2.6972382	20	3 16.1	19.0
270447 2002 CE_{157}	16.1	X	11.28684	100.13189	121.65228	11.10610	0.1497536	0.22694733	2.6618648	20	5 16.3	19.0
270448 2002 CQ_{166}	16.0	X	126.19608	120.60074	348.77157	12.49540	0.1099941	0.22980537	2.6397488	20	5 20.7	20.2
270449 2002 CT_{175}	15.8	X	66.88344	249.94861	335.38165	6.81877	0.1478811	0.23816808	2.5775890	20	8 22.1	19.1
270450 2002 CO_{178}	16.5	X	222.93868	42.93422	352.46683	3.83906	0.1933361	0.23773426	2.5807239	20	5 24.8	20.7
270451 2002 CN_{182}	16.9	X	80.88905	134.00207	314.69391	4.31346	0.0906393	0.22153575	2.7050388	20	2 26.9	20.3
270452 2002 CN_{186}	17.0	X	120.15489	343.21024	132.87151	5.17495	0.1718930	0.23092071	2.6312420	20	6 3.1	21.0
270453 2002 CK_{225}	16.4	X	308.39384	81.17500	165.71827	5.46363	0.0642092	0.21842510	2.7306604	20	3 11.1	20.1
270454 2002 CC_{229}	16.7	X	261.61376	114.01174	149.71811	3.71639	0.0218914	0.21885548	2.7270793	20	2 7.9	20.5
270455 2002 CR_{229}	17.6	X	40.94820	3.67405	156.83123	3.78326	0.1378339	0.22222575	2.6994366	20	4 9.9	20.6
270456 2002 CO_{237}	15.9	X	18.67084	66.13332	165.76635	12.58518	0.1216419	0.22546620	2.6735096	20	6 10.5	19.1
270457 2002 CW_{246}	16.6	X	33.94777	77.19386	151.00693	7.04700	0.1636411	0.22769649	2.6560230	20	7 6.8	19.6
270458 2002 CC_{252}	15.8	X	61.80154	32.19632	197.92869	13.13666	0.1310338	0.23591770	2.5939546	20	8 14.5	19.4
270459 2002 CK_{256}	16.0	X	50.17251	131.21810	91.96527	5.22995	0.1760904	0.23263527	2.6182976	20	7 30.9	19.1
270460 2002 CF_{270}	16.6	X	324.72952	257.85791	331.23093	7.68703	0.1313733	0.22021719	2.7158257	20	2 28.8	20.0
270461 2002 CR_{273}	15.4	X	289.10984	222.09886	284.17472	13.81689	0.0895496	0.20447683	2.8534700	20	—	—
270462 2002 CH_{276}	16.6	X	80.73703	129.26916	324.82787	4.37361	0.0779097	0.22051468	2.7133826	20	3 3.2	19.9
270463 2002 CE_{278}	16.6	X	180.64331	208.21269	205.26105	6.62552	0.3170906	0.23483809	2.6018985	20	5 12.7	21.4
270464 2002 CJ_{280}	16.7	X	19.55074	227.88121	291.39715	7.35737	0.2347344	0.21943009	2.7223164	20	2 23.4	19.0
270465 2002 CJ_{285}	16.4	X	284.97350	50.66067	320.40871	4.36326	0.2804819	0.24485178	2.5304662	20	6 19.5	19.7
270466 2002 CG_{287}	16.5	X	289.77104	219.04349	136.04215	13.67515	0.1958580	0.23811364	2.5779819	20	6 19.4	19.9
270467 2002 CZ_{289}	15.9	X	23.02394	151.08362	88.75947	14.86646	0.2129836	0.23071791	2.6327837	20	7 11.2	18.4
270468 2002 CB_{295}	15.8	X	45.44644	180.88973	80.08411	10.44310	0.0903228	0.23994767	2.5648287	20	9 6.8	19.2
270469 2002 CV_{296}	15.4	X	29.72177	248.49852	352.81405	10.24240	0.0397227	0.17690004	3.1428050	20	7 2.2	19.8
270470 2002 CA_{302}	16.7	X	77.68546	16.94519	109.31827	7.07620	0.2068429	0.22549364	2.6732927	20	5 4.2	20.2
270471 2002 CU_{309}	16.7	X	144.20074	268.57972	155.03552	13.49834	0.2581572	0.23009474	2.6375351	20	4 30.3	21.4
270472 Csörgei	16.6	X	105.02223	325.16388	160.27844	10.82978	0.0977653	0.22914213	2.6448401	20	5 21.9	20.5
270473 2002 DV_{4}	15.4	X	305.95141	52.63332	274.35924	8.31042	0.2328703	0.17717283	3.1395782	20	5 27.9	19.4
270474 2002 DG_{14}	16.7	X	175.38491	35.78283	23.49719	2.55146	0.0606915	0.22914575	2.6448122	20	5 11.4	20.3
270475 2002 DD_{17}	15.9	X	44.05621	96.48433	85.39950	12.74242	0.1498637	0.22511559	2.6762848	20	5 19.2	19.0
270476 2002 DU_{19}	16.3	X	9.68665	94.16646	180.58838	10.86200	0.1227422	0.23363064	2.6108556	20	7 24.5	19.3
270477 2002 EK_{5}	16.6	X	359.80558	152.25417	348.05873	5.48545	0.0141465	0.21436372	2.7650428	20	1 10.9	20.4
270478 2002 EM_{21}	17.0	X	54.53490	102.69055	70.28650	4.13440	0.2536781	0.22490099	2.6779870	20	6 7.9	20.0
270479 2002 EG_{42}	17.2	X	73.04695	307.42861	170.10582	9.18027	0.2685298	0.22383984	2.6864440	20	4 25.4	20.6
270480 2002 ER_{45}	16.4	X	39.53216	124.91287	81.22020	6.13584	0.0806616	0.22729874	2.6591206	20	6 3.5	19.5

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	m		°	°	°	°		°				
270481 2002 EJ_{52}	16.6	X	73.49133	311.10021	156.49869	16.89236	0.2496491	0.22260691	2.6963543	20	4 11.5	20.1
270482 2002 ER_{56}	16.5	X	54.32854	205.67576	302.93212	4.32263	0.1446638	0.22331613	2.6906424	20	4 13.4	19.6
270483 2002 EE_{63}	16.0	X	222.16438	288.98937	173.61848	9.82224	0.0329386	0.18593672	3.0401332	20	8 31.2	20.3
270484 2002 EQ_{68}	16.1	X	306.83898	217.23469	355.87222	9.16284	0.0869870	0.21268188	2.7796005	20	1 26.2	19.9
270485 2002 ET_{68}	16.1	X	335.75608	268.42312	357.22891	10.95464	0.1608593	0.22294073	2.6936620	20	4 30.1	19.3
270486 2002 EH_{75}	15.7	X	352.91749	142.40861	156.04468	28.24257	0.0696222	0.23693680	2.5865113	20	7 28.8	19.2
270487 2002 EH_{83}	16.6	X	31.10086	345.85428	188.79934	7.61543	0.1399435	0.22043701	2.7140200	20	4 11.8	19.3
270488 2002 EJ_{84}	16.1	X	32.15312	106.48617	163.04455	11.17806	0.1637800	0.23310184	2.6148026	20	9 3.1	19.0
270489 2002 EJ_{93}	16.5	X	108.25267	108.30449	353.06203	11.40800	0.1622522	0.22617540	2.6679180	20	4 25.6	20.5
270490 2002 EZ_{113}	16.9	X	32.59649	339.70957	106.85518	1.79695	0.1300576	0.21080824	2.7960461	20	—	—
270491 2002 ET_{115}	16.5	X	346.12199	140.63396	57.76681	7.20942	0.1833791	0.21616942	2.7496233	20	2 20.0	19.6
270492 2002 EQ_{131}	16.8	X	292.04318	114.35769	169.20902	6.31455	0.0118750	0.22232053	2.6986693	20	4 15.1	20.4
270493 2002 ER_{132}	16.0	X	297.91051	290.15587	8.98296	10.15462	0.0417901	0.22463872	2.6800711	20	5 4.5	19.6
270494 2002 ET_{132}	16.6	X	3.83179	55.92690	170.10680	8.92133	0.1396757	0.22419895	2.6835745	20	5 5.8	19.5
270495 2002 ED_{136}	16.4	X	323.10280	285.36746	357.43739	6.26748	0.1242697	0.22547659	2.6734275	20	5 9.2	19.7
270496 2002 EU_{136}	16.4	X	99.29098	110.78844	1.06050	8.75181	0.1029202	0.22399685	2.6851885	20	4 21.9	20.1
270497 2002 EK_{137}	17.1	X	41.58285	345.99396	150.40246	3.41289	0.1901961	0.21913770	2.7247374	20	3 12.9	19.6
270498 2002 ES_{142}	16.4	X	323.40996	221.16903	25.19342	4.46182	0.2262402	0.21873116	2.7281125	20	3 8.7	19.6
270499 2002 EY_{146}	16.3	X	187.51735	153.05871	161.06898	6.70500	0.0081210	0.21253814	2.7808537	20	1 12.8	20.1
270500 2002 EY_{149}	16.9	X	25.02191	133.42578	16.53729	3.52263	0.1350612	0.21708058	2.7419240	20	2 26.3	19.8
270501 2002 EV_{155}	16.2	X	3.70736	211.51968	26.99871	4.36371	0.1228996	0.22414539	2.6840020	20	5 20.5	19.2
270502 2002 ES_{159}	16.3	X	68.03157	61.93774	111.84357	3.94928	0.0850803	0.22700660	2.6614015	20	6 2.6	19.6
270503 2002 EA_{161}	16.6	X	55.82722	333.89205	224.91490	2.65226	0.0713288	0.22736443	2.6586084	20	6 16.9	19.9
270504 2002 EY_{161}	13.7	X	233.55610	15.31381	117.99596	9.51108	0.0253847	0.08438291	5.1479351	20	10 12.4	20.7
270505 2002 ED_{163}	16.9	X	109.48726	93.45018	6.94306	10.42787	0.2626347	0.22667717	2.6639794	20	5 8.7	21.2
270506 2002 FP_{2}	17.2	X	136.27919	25.75200	179.37849	4.84810	0.1060055	0.29318240	2.2441099	20	10 16.5	20.4
270507 2002 FL_{9}	16.0	X	43.04793	11.38718	189.51789	13.77539	0.1777885	0.22513863	2.6761023	20	6 15.7	19.3
270508 2002 FF_{25}	15.6	X	45.27158	196.33723	63.89298	16.82950	0.1316059	0.23558596	2.5963891	20	9 16.5	19.3
270509 2002 FQ_{26}	16.5	X	67.43131	175.34106	15.67347	13.78258	0.1778509	0.23056252	2.6339665	20	7 13.4	20.2
270510 2002 FF_{27}	16.2	X	98.07910	6.34124	138.71935	14.97554	0.1019225	0.22896364	2.6462144	20	6 9.0	20.2
270511 2002 FA_{29}	16.1	X	30.44411	10.64844	135.70999	10.36034	0.1798713	0.21725790	2.7404318	20	3 5.3	18.7
270512 2002 FD_{30}	16.2	X	82.64609	111.75134	39.88678	13.08894	0.1265731	0.22749471	2.6575933	20	5 27.4	19.8
270513 2002 FF_{32}	16.0	X	92.25772	117.77776	15.03393	11.82603	0.1406566	0.22614785	2.6681346	20	5 15.6	19.8
270514 2002 FP_{38}	16.1	X	76.02968	90.92543	32.73786	9.04971	0.1956941	0.22284285	2.6944507	20	4 23.5	19.3
270515 2002 GJ_{23}	16.0	X	65.64239	312.32613	195.63627	14.43030	0.1088329	0.22071560	2.7117357	20	4 29.3	19.4
270516 2002 GZ_{25}	16.7	X	347.91071	125.57976	149.78464	2.62038	0.1701334	0.22512483	2.6762116	20	6 13.4	19.2
270517 2002 GS_{26}	15.8	X	62.65693	122.01947	64.16449	19.11824	0.1139345	0.22496117	2.6775094	20	6 14.0	19.2
270518 2002 GW_{26}	16.3	X	356.87025	77.63008	198.98176	12.02645	0.2540277	0.22392478	2.6857646	20	7 5.5	18.6
270519 2002 GN_{30}	16.0	X	43.59515	88.67456	62.95152	5.56121	0.0979458	0.21835538	2.7312416	20	3 30.7	19.3
270520 2002 GC_{41}	16.5	X	63.78888	113.48483	19.81825	9.14885	0.0785698	0.21853836	2.7297168	20	4 1.8	19.7
270521 2002 GY_{43}	16.0	X	336.80185	50.87545	201.93295	11.46934	0.2155984	0.21909973	2.7250522	20	4 10.7	18.9
270522 2002 GY_{47}	15.9	X	189.45952	6.33240	7.78343	6.46584	0.0311729	0.21865979	2.7287061	20	3 30.8	19.8
270523 2002 GL_{49}	16.2	X	346.62271	305.14178	277.12349	9.07838	0.2420826	0.21930811	2.7233257	20	3 7.6	19.1
270524 2002 GH_{62}	16.3	X	50.97264	313.95777	202.40171	13.94061	0.1066316	0.21877572	2.7277421	20	4 16.6	19.5
270525 2002 GJ_{67}	16.0	X	258.91338	235.02257	43.95112	7.68051	0.1391809	0.21099228	2.7944200	20	2 15.9	20.3
270526 2002 GC_{69}	16.4	X	75.67009	90.53438	40.67260	5.51247	0.0614687	0.21971902	2.7199293	20	4 13.5	19.8
270527 2002 GP_{69}	16.6	X	322.91487	70.18191	184.45145	8.97099	0.1708166	0.21704645	2.7422113	20	3 26.6	19.8
270528 2002 GC_{70}	16.4	X	59.81839	49.79608	80.93360	4.25802	0.2781741	0.21957219	2.7211417	20	4 23.9	19.3
270529 2002 GO_{75}	16.2	X	331.44344	104.47682	167.36304	13.56384	0.1509418	0.22086577	2.7105064	20	5 10.8	19.5
270530 2002 GT_{79}	16.2	X	337.34873	133.47887	76.92497	15.44555	0.1017514	0.21574781	2.7532044	20	3 8.1	19.9
270531 2002 GU_{81}	16.2	X	290.25369	184.47280	69.01878	5.31873	0.1564452	0.21223996	2.7834576	20	2 15.0	20.2
270532 2002 GL_{82}	15.8	X	57.19751	328.02215	182.17718	14.98700	0.0310445	0.21841191	2.7307703	20	4 9.7	19.4
270533 2002 GU_{86}	15.7	X	3.33460	102.72086	128.90438	14.74481	0.1137711	0.22176650	2.7031621	20	5 16.5	19.0
270534 2002 GV_{88}	15.9	X	34.92223	28.59778	131.80660	12.46967	0.0939620	0.21520288	2.7578501	20	3 30.9	19.3
270535 2002 GJ_{92}	16.0	X	284.48452	124.93470	198.56319	6.49003	0.1554816	0.22274874	2.6952096	20	5 5.5	19.6
270536 2002 GO_{99}	16.4	X	246.97772	86.22075	207.73316	5.26032	0.0529630	0.21345859	2.7728537	20	2 23.9	20.4
270537 2002 GN_{101}	16.1	X	95.61667	285.65995	197.26891	8.10239	0.1663186	0.22297848	2.6933580	20	5 15.2	19.9
270538 2002 GX_{113}	16.2	X	72.95014	68.69219	87.52611	6.97844	0.0996893	0.22388159	2.6861100	20	5 19.5	19.7
270539 2002 GE_{114}	15.7	X	342.07235	232.14627	33.43366	14.39666	0.1430210	0.22334173	2.6904368	20	5 15.7	18.6
270540 2002 GV_{118}	15.5	X	29.33187	341.58210	46.12541	10.26246	0.0928668	0.19817853	2.9136115	20	—	—
270541 2002 GY_{122}	16.7	X	15.53464	85.85126	97.36016	3.31686	0.1402620	0.21798071	2.7343703	20	3 26.9	19.5
270542 2002 GU_{125}	17.4	X	174.64273	296.45498	343.17868	3.41213	0.1432976	0.30882757	2.1676642	20	—	—
270543 2002 GY_{128}	15.9	X	279.63069	87.36123	201.94777	7.84457	0.0966858	0.21769441	2.7367672	20	3 22.5	19.6
270544 2002 GO_{134}	16.1	X	42.07881	300.26511	206.57370	12.10925	0.0754257	0.21717908	2.7410948	20	3 14.4	19.5
270545 2002 GT_{136}	15.9	X	187.26385	223.74093	201.95263	12.52709	0.1238880	0.22638776	2.6662493	20	6 2.9	20.2
270546 2002 GY_{139}	16.5	X	221.38368	203.26691	35.46931	2.20420	0.0519431	0.20142506	2.8822194	20	—	—
270547 2002 GD_{154}	16.2	X	359.96558	111.82982	98.65819	10.01533	0.1789193	0.21663542	2.7456789	20	4 7.5	19.1
270548 2002 GC_{161}	16.4	X	21.17245	80.28803	115.97691	8.49708	0.1883006	0.21976027	2.7195889	20	4 30.9	19.1
270549 2002 GF_{163}	16.5	X	72.43010	101.14224	42.55600	7.62544	0.1876822	0.22234367	2.6984821	20	5 13.8	19.8
270550 2002 GV_{165}	16.4	X	265.31769	85.00224	123.22733	2.95055	0.1851968	0.20437375	2.8544294	20	—	—
270551 2002 GV_{166}	15.6	X	186.59423	318.93362	36.36547	10.76151	0.1911546	0.21087118	2.7954897	20	3 12.6	20.4
270552 2002 GW_{172}	16.4	X	22.84388	22.76276	167.50314	12.43422	0.1207731	0.21908453	2.7251782	20	4 20.4	19.5
270553 Loureed	16.0	X	148.77472	11.27682	41.81167	6.73666	0.0130175	0.21610059	2.7502072	20	4 1.2	19.7
270554 2002 GP_{179}	15.9	X	299.54726	152.98608	99.62640	13.50249	0.1240614	0.21409611	2.7673465	20	3 3.6	19.9
270555 2002 GC_{180}	16.5	X	352.01941	76.44399	167.13798	2.14038	0.0331754	0.22133722	2.7066561	20	5 11.5	19.8
270556 2002 GX_{182}	16.8	X	2.04987	179.78114	46.34857	3.27052	0.1261182	0.21972632	2.7198690	20	4 30.3	19.8
270557 2002 GS_{183}	16.7	X	346.28524	194.32941	45.98621	4.63185	0.0171622	0.22006561	2.7170727	20	4 29.3	20.3
270558 2002 GB_{185}	16.3	X	13.08134	119.44899	30.43493	11.98778	0.1195969	0.21212812	2.7844359	20	2 10.5	19.7
270559 2002 GY_{185}	15.7	X	102.93451	168.77339	22.28684	5.92438	0.0746283	0.17647631	3.1478336	20	8 7.7	20.4
270560 2002 GL_{187}	16.2	X	178.82097	176.61623	187.30838	11.36225	0.0991142	0.21378369	2.7700419	20	3 7.1	20.5

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	m		°	°	°	°		°				
270561 2002 GF_{188}	16.1	X	200.31826	327.40990	57.44237	7.13810	0.0507073	0.22346698	2.6894315	20	4 27.6	19.9
270562 2002 GC_{189}	16.2	X	245.83320	257.17511	51.38933	5.04745	0.0596616	0.21459807	2.7630294	20	3 15.4	20.1
270563 2002 HS_{7}	15.8	X	236.82471	259.02086	52.32454	8.13867	0.2158205	0.21011161	2.8022229	20	2 29.4	20.6
270564 2002 HU_{9}	16.2	X	36.16235	88.24727	44.04198	4.10776	0.1641384	0.21497737	2.7597784	20	2 25.1	19.0
270565 2002 HO_{12}	15.8	X	327.66559	146.11648	87.31118	18.98597	0.1760161	0.21685426	2.7438313	20	3 15.1	19.5
270566 2002 JD_{7}	16.1	X	310.65068	123.75449	109.79484	5.27785	0.1480085	0.21203809	2.7852240	20	2 15.5	19.7
270567 2002 JF_{16}	15.4	X	74.37502	187.70869	29.50378	16.63839	0.1816627	0.17467835	3.1693971	20	8 27.4	20.3
270568 2002 JR_{17}	16.6	X	18.36176	185.56339	16.81456	2.36192	0.1222701	0.21876570	2.7278254	20	4 25.9	19.5
270569 2002 JH_{41}	16.1	X	7.18500	169.70175	25.54250	3.72267	0.1261962	0.21724920	2.7405050	20	3 27.4	19.0
270570 2002 JV_{41}	16.0	X	325.29342	247.54658	29.04905	10.75308	0.1040119	0.22108264	2.7087336	20	5 7.2	19.3
270571 2002 JS_{68}	15.5	X	29.74311	155.97937	51.90562	15.60256	0.1233949	0.22377395	2.6869713	20	5 23.5	18.4
270572 2002 JC_{69}	16.3	X	43.55894	60.97801	100.89412	8.93770	0.2424938	0.22018379	2.7161004	20	5 4.3	19.1
270573 2002 JD_{76}	15.9	X	79.02600	303.34199	207.43304	12.10994	0.1001635	0.22342410	2.6897755	20	5 20.5	19.5
270574 2002 JL_{77}	16.9	X	101.98034	201.21788	24.85420	6.61163	0.0735798	0.29025044	2.2591971	20	10 3.6	19.8
270575 2002 JY_{78}	17.1	X	12.16721	24.47887	243.83957	5.03488	0.1460154	0.28080442	2.3095822	20	7 27.8	19.2
270576 2002 JQ_{81}	16.4	X	306.41428	208.78657	22.73289	10.29987	0.1694659	0.21186413	2.7867484	20	2 7.4	20.3
270577 2002 JD_{89}	17.8	X	142.12432	249.88506	41.10351	5.94043	0.1800778	0.30173484	2.2015019	20	—	—
270578 2002 JE_{91}	16.4	X	8.50511	274.32473	233.41803	5.34570	0.2471339	0.21132791	2.7914604	20	1 13.1	18.9
270579 2002 JM_{99}	15.7	X	28.08205	67.35341	139.89690	13.98140	0.1363112	0.22131210	2.7068610	20	5 26.7	19.0
270580 2002 JR_{113}	15.8	X	325.55471	324.98077	248.37029	12.54178	0.1272056	0.21279567	2.7786096	20	2 6.5	19.6
270581 2002 JT_{115}	16.4	X	303.59224	211.63991	64.80516	16.07286	0.1608056	0.21515054	2.7582974	20	4 6.3	20.3
270582 2002 JY_{144}	15.5	X	11.91861	32.42345	146.48873	14.46900	0.0690879	0.21292262	2.7775050	20	3 16.7	19.0
270583 2002 JK_{145}	16.8	X	340.00211	205.93065	76.86294	9.31850	0.2306089	0.22026254	2.7154530	20	6 1.7	18.9
270584 2002 JG_{150}	16.7	X	320.33232	170.25937	105.04478	4.16766	0.1313558	0.21865926	2.7287105	20	4 27.5	20.0
270585 2002 KM	16.5	X	285.92227	106.09971	176.63922	19.79682	0.2918981	0.21005107	2.8027614	20	2 25.6	21.0
270586 2002 KA_{3}	16.3	X	4.01141	338.36941	222.45669	12.35755	0.1421018	0.21635084	2.7480861	20	3 24.6	19.4
270587 2002 LJ_{1}	16.1	X	269.00828	86.49156	215.13492	6.80894	0.2087138	0.21135071	2.7912596	20	3 11.7	20.6
270588 2002 LA_{6}	17.0	X	358.44976	28.52507	292.46767	6.10376	0.3537240	0.27648709	2.3335627	20	10 28.7	18.7
270589 2002 LN_{8}	15.9	X	150.63536	196.86215	86.69081	8.15919	0.2274602	0.19028191	2.9936731	20	—	—
270590 2002 LP_{22}	15.9	X	352.95819	127.43859	63.09103	16.46057	0.1263353	0.21093652	2.7949124	20	3 5.8	19.5
270591 2002 LN_{42}	16.4	X	264.24099	129.89543	183.94454	7.95760	0.2275105	0.21033768	2.8002147	20	3 22.0	20.6
270592 2002 LP_{48}	15.4	X	243.62885	145.29557	209.17930	13.46080	0.1789103	0.21421287	2.7663408	20	4 26.1	19.7
270593 2002 LO_{49}	15.7	X	41.15911	81.70188	81.16722	12.86016	0.0886358	0.21538703	2.7562780	20	4 14.7	19.3
270594 2002 LQ_{51}	16.3	X	293.39980	101.36079	191.72533	7.94888	0.2529973	0.21386807	2.7693133	20	3 22.9	20.0
270595 2002 LZ_{61}	17.7	X	129.43835	120.79321	187.07246	5.14585	0.1833328	0.30046664	2.2076923	20	—	—
270596 2002 NS_{15}	15.5	X	75.07509	300.18631	56.59256	5.51681	0.2633307	0.18254380	3.0776885	20	—	—
270597 2002 NK_{29}	15.7	X	164.20321	339.55671	298.84366	5.61192	0.1897415	0.18768338	3.0212419	20	—	—
270598 2002 NS_{35}	17.3	X	246.84640	124.19471	178.56010	5.66360	0.1745736	0.31336183	2.1467031	20	2 15.8	20.5
270599 2002 NK_{36}	15.2	X	201.72181	28.03858	247.25701	8.02337	0.0626095	0.19248575	2.9707788	20	—	—
270600 2002 NC_{47}	16.0	X	226.21376	231.23808	87.00012	12.11346	0.1936773	0.20267603	2.8703474	20	3 2.5	21.0
270601 Frauenstein	16.5	X	257.90328	189.62173	114.09831	3.55881	0.1989190	0.20485311	2.8499747	20	3 8.6	21.0
270602 2002 NH_{59}	15.4	X	174.59265	171.68187	109.89631	11.11263	0.0765944	0.18981685	2.9985609	20	—	—
270603 2002 NZ_{60}	17.5	X	74.85677	32.75818	301.80358	5.81125	0.2374460	0.29089647	2.2558510	20	—	—
270604 2002 NL_{65}	15.9	X	75.88170	58.45633	321.25944	3.74370	0.1924821	0.18585564	3.0410172	20	—	—
270605 2002 NF_{66}	17.8	X	279.84488	262.61629	328.58303	2.22959	0.0895637	0.30979865	2.1631321	20	—	—
270606 2002 NF_{68}	15.5	X	89.22087	197.72825	159.83399	13.15980	0.1339822	0.18537545	3.0462666	20	—	—
270607 2002 NO_{68}	16.1	X	107.57156	263.68916	123.59134	10.95284	0.0892640	0.19421143	2.9531547	20	1 20.3	20.2
270608 2002 NP_{74}	15.6	X	137.39730	179.61670	184.62183	9.43772	0.0807650	0.19308065	2.9646736	20	1 24.4	20.0
270609 2002 NR_{74}	17.8	X	141.76904	352.45962	304.66968	2.05791	0.0999419	0.29647203	2.2274787	20	—	—
270610 2002 OS_{19}	15.5	X	38.76564	215.34450	159.51807	19.51144	0.1840126	0.17974391	3.1095670	20	—	—
270611 2002 OO_{22}	15.9	X	135.62715	23.43874	303.55814	7.31339	0.1243404	0.18660430	3.0328781	20	—	—
270612 2002 OK_{24}	15.2	X	78.70456	354.16446	313.60136	17.13066	0.2282551	0.17572471	3.1568031	20	12 14.6	20.5
270613 2002 OY_{29}	16.9	X	151.23146	130.83898	167.06759	2.95611	0.2225010	0.18758453	3.0223032	20	—	—
270614 2002 OX_{30}	16.4	X	211.39239	86.20293	213.69180	7.70765	0.1975100	0.19623477	2.9328200	20	1 23.1	21.5
270615 2002 OY_{34}	15.5	X	323.38034	277.88923	131.65543	16.30896	0.0429082	0.17456309	3.1707922	20	11 7.5	20.1
270616 2002 PC_{3}	15.5	X	87.79796	172.97357	175.69596	18.44964	0.2987908	0.18131946	3.0915274	20	—	—
270617 2002 PA_{9}	16.4	X	175.30366	25.03250	251.38699	4.63392	0.1905797	0.18879072	3.0094164	20	—	—
270618 2002 PL_{23}	17.8	X	151.64251	156.09294	180.28506	3.55660	0.1746019	0.30217242	2.1993761	20	1 1.3	20.8
270619 2002 PM_{26}	15.4	X	135.40673	151.24904	152.10352	9.57463	0.1149407	0.18486654	3.0518546	20	—	—
270620 2002 PD_{27}	17.5	X	53.65204	187.75074	142.36107	6.02300	0.1392792	0.28644856	2.2791432	20	12 29.5	20.6
270621 2002 PE_{27}	15.9	X	69.83763	206.64106	142.36212	7.99255	0.1486280	0.18014037	3.1050029	20	—	—
270622 2002 PK_{28}	17.3	X	216.43439	125.15936	154.94778	7.25699	0.0438582	0.30449862	2.1881605	20	—	—
270623 2002 PF_{29}	15.8	X	85.99367	217.07671	144.98837	11.27903	0.1051483	0.18467947	3.0539151	20	—	—
270624 2002 PU_{29}	15.5	X	102.12158	186.41638	144.45170	9.17171	0.0710325	0.18307261	3.0717589	20	—	—
270625 2002 PO_{30}	15.3	X	42.00837	234.23332	149.15764	9.79902	0.0793337	0.18106222	3.0944549	20	—	—
270626 2002 PA_{34}	15.5	X	75.57582	15.06541	333.33880	11.48006	0.1860989	0.17927000	3.1150448	20	—	—
270627 2002 PE_{34}	16.8	X	179.33878	337.69313	319.31771	7.25015	0.1663470	0.30186076	2.2008897	20	—	—
270628 2002 PU_{34}	17.5	X	277.29181	252.19409	297.58385	6.97190	0.0982250	0.30036401	2.2081952	20	—	—
270629 2002 PB_{35}	15.9	X	220.43063	98.87430	160.35625	9.43468	0.1219477	0.19167669	2.9791327	20	—	—
270630 2002 PB_{51}	15.9	X	138.61285	117.88250	142.14818	10.09574	0.0510360	0.17937603	3.1138172	20	12 6.7	20.7
270631 2002 PC_{61}	16.0	X	159.44707	137.56051	194.09642	14.43955	0.2237966	0.19249202	2.9707143	20	1 19.4	21.2
270632 2002 PY_{64}	15.2	X	1.15215	176.21613	266.02374	10.42104	0.1078414	0.18577898	3.0418538	20	—	—
270633 2002 PG_{70}	15.4	X	154.71993	153.73446	183.71480	14.86094	0.1956613	0.19121676	2.9839079	20	1 20.7	20.5
270634 2002 PW_{71}	15.8	X	78.22561	200.96502	163.96686	12.93382	0.2369068	0.18306084	3.0718906	20	—	—
270635 2002 PF_{73}	15.7	X	142.75710	145.66338	196.68519	11.22721	0.1199108	0.19104386	2.9857080	20	1 9.0	20.4
270636 2002 PA_{76}	15.8	X	160.58276	213.71954	119.32862	11.71741	0.1026525	0.19295574	2.9659529	20	1 15.9	20.3
270637 2002 PO_{78}	17.7	X	247.39426	173.26782	98.02017	3.68621	0.1696735	0.30939549	2.1650108	20	1 9.3	21.0
270638 2002 PP_{78}	17.0	X	47.18669	323.60556	352.80519	6.02436	0.2101724	0.28384299	2.2930698	20	12 12.1	20.3
270639 2002 PG_{87}	15.4	X	187.73105	104.83288	136.84533	27.15263	0.1717120	0.18523123	3.0478476	20	12 30.0	20.6
270640 2002 PO_{88}	15.9	X	161.35837	321.20287	339.96929	8.27423	0.2299818	0.18712852	3.0272112	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		°	°	°	°		°				
270641 2002 PP_{95}	17.0	X	301.95181	140.78227	129.48808	4.62184	0.1772842	0.31807672	2.1254365	20	3 6.2	19.3
270642 2002 PC_{102}	17.3	X	127.84735	134.37389	195.34047	5.44671	0.1297824	0.29765525	2.2215718	20	—	—
270643 2002 PM_{107}	15.7	X	122.69843	187.37411	188.69072	9.81207	0.0942190	0.19278264	2.9677281	20	1 23.5	20.1
270644 2002 PH_{112}	15.2	X	98.85327	235.07304	155.14327	22.78547	0.2030434	0.18902421	3.0069376	20	1 29.1	19.6
270645 2002 PR_{112}	15.3	X	115.04242	341.42366	349.06586	14.61621	0.2882341	0.18094236	3.0958213	20	—	—
270646 2002 PD_{122}	17.3	X	275.64642	33.47307	230.18475	5.34689	0.1607882	0.31160890	2.1547463	20	1 25.8	20.3
270647 2002 PD_{125}	15.7	X	158.03498	140.08884	148.49054	10.51970	0.0892244	0.18608374	3.0385316	20	—	—
270648 2002 PK_{130}	15.8	X	66.89867	145.23077	235.58589	11.03041	0.2033425	0.18314837	3.0709118	20	—	—
270649 2002 PM_{140}	16.2	X	95.88475	151.44407	171.90469	16.58111	0.2200584	0.18157601	3.0886147	20	—	—
270650 2002 PA_{145}	15.7	X	48.74837	255.65063	127.52563	10.17607	0.0918408	0.18308258	3.0716474	20	—	—
270651 2002 PX_{159}	16.4	X	207.02635	283.84483	341.46514	6.44721	0.2285553	0.19241262	2.9715315	20	—	—
270652 2002 PT_{160}	15.6	X	153.66171	330.56212	326.85768	9.57009	0.0870858	0.18727034	3.0256827	20	—	—
270653 2002 PX_{161}	16.0	X	156.89360	302.38268	327.35609	16.00003	0.1770446	0.18432781	3.0577981	20	—	—
270654 2002 PX_{165}	15.9	X	358.55692	239.34325	137.43633	6.14432	0.1713789	0.17126753	3.2113380	20	11 19.9	19.7
270655 2002 PQ_{166}	15.6	X	341.26232	344.60089	117.57267	10.13953	0.0184893	0.18599815	3.0394638	20	—	—
270656 2002 PJ_{168}	15.2	X	39.74316	258.30649	121.60455	10.72282	0.0674869	0.17975273	3.1094653	20	—	—
270657 2002 PE_{169}	15.6	X	307.94390	123.41936	328.62378	8.50612	0.0603902	0.17651365	3.1473897	20	11 30.8	19.9
270658 2002 PG_{169}	17.4	X	322.34463	47.52781	25.33789	2.95047	0.2089240	0.28376751	2.2934764	20	—	—
270659 2002 PU_{178}	18.0	X	212.27796	234.73138	78.10952	6.15394	0.2473963	0.30853875	2.1690168	20	1 31.8	21.8
270660 2002 PC_{186}	15.6	X	129.93641	303.35511	26.31729	9.26375	0.1174235	0.18622893	3.0369522	20	—	—
270661 2002 PF_{186}	15.4	X	104.61205	16.30953	313.65441	7.78357	0.1710832	0.18205241	3.0832242	20	—	—
270662 2002 PA_{187}	15.6	X	230.02046	236.16928	5.73911	8.68392	0.0392658	0.18982468	2.9984785	20	—	—
270663 2002 PY_{187}	17.6	X	59.11469	351.52996	324.38468	8.34051	0.1568398	0.28621604	2.2803775	20	12 19.4	20.9
270664 2002 PQ_{188}	15.5	X	19.34541	55.63786	340.09810	10.32001	0.0400519	0.17994793	3.1072162	20	12 29.9	19.9
270665 2002 PH_{189}	17.3	X	17.24888	258.37079	145.28396	7.85032	0.1294340	0.29164011	2.2520147	20	—	—
270666 2002 PQ_{189}	15.9	X	38.54792	19.73677	320.27511	15.16155	0.1034648	0.17470114	3.1691215	20	11 19.0	20.5
270667 2002 PF_{190}	14.9	X	359.82866	279.20022	113.60643	16.98612	0.1584356	0.17505764	3.1648175	20	12 12.7	18.9
270668 2002 PV_{190}	16.0	X	156.55942	197.88436	102.34035	11.00407	0.0411192	0.18778436	3.0201587	20	—	—
270669 2002 PG_{194}	15.3	X	125.54482	218.91412	65.78172	10.75920	0.0631796	0.17873595	3.1212467	20	12 19.9	20.0
270670 2002 PT_{194}	16.6	X	248.75240	345.49774	303.91790	4.60997	0.0412542	0.20100525	2.8862311	20	2 23.6	20.7
270671 2002 QT	16.3	X	127.89899	167.76348	145.08183	2.07649	0.0965058	0.18476960	3.0529220	20	—	—
270672 2002 QB_{7}	15.0	X	10.33067	201.84702	180.64956	28.11879	0.1613889	0.17212724	3.2006362	20	12 14.1	19.6
270673 2002 QF_{8}	15.5	X	117.58006	321.25389	4.56378	16.13812	0.1229120	0.18310289	3.0714202	20	—	—
270674 2002 QP_{9}	17.3	X	293.09242	200.41551	195.93519	3.96128	0.2534284	0.27206056	2.3588065	20	8 16.5	19.5
270675 2002 QB_{10}	15.8	X	132.29351	158.53765	202.19078	11.64942	0.0918950	0.18890691	3.0081823	20	1 15.9	20.4
270676 2002 QJ_{25}	16.6	X	186.73168	138.58369	172.14554	3.25655	0.1789248	0.19233611	2.9723195	20	1 17.6	21.6
270677 2002 QU_{26}	15.8	X	69.84346	17.47170	347.40138	8.85243	0.0995625	0.18037155	3.1023492	20	—	—
270678 2002 QE_{30}	16.9	X	236.81870	132.86857	132.40622	6.33087	0.1421711	0.30623453	2.1798834	20	—	—
270679 2002 QV_{31}	15.9	X	50.33430	232.13378	134.08693	11.93546	0.1024797	0.17840319	3.1251268	20	—	—
270680 2002 QW_{32}	15.2	X	108.19590	285.33469	348.91682	9.76309	0.1917469	0.17520823	3.1630038	20	11 25.8	20.6
270681 2002 QU_{36}	17.2	X	85.41235	354.49362	356.32586	6.14791	0.1294500	0.29132061	2.2536609	20	—	—
270682 2002 QH_{37}	15.9	X	240.40716	353.84305	156.38964	6.54603	0.0371208	0.17277054	3.1926864	20	11 19.9	20.5
270683 2002 QG_{38}	15.4	X	25.55530	5.65821	353.26784	16.86565	0.1815754	0.17096128	3.2151720	20	12 6.0	20.0
270684 2002 QY_{38}	16.3	X	236.80158	220.70886	23.54002	1.82723	0.1950834	0.18909867	3.0061483	20	—	—
270685 2002 QW_{39}	15.2	X	291.94116	139.31774	324.03089	27.03963	0.1174321	0.17503582	3.1650804	20	11 6.6	20.0
270686 2002 QK_{45}	15.9	X	85.36697	138.32432	205.12951	0.89612	0.2397999	0.17988302	3.1079636	20	—	—
270687 2002 QO_{47}	15.3	X	69.94293	317.87017	28.06265	14.08602	0.1841364	0.17727550	3.1383659	20	—	—
270688 2002 QK_{49}	15.8	X	59.97422	3.13476	331.98334	9.08907	0.0900818	0.17696252	3.1420651	20	12 10.9	20.4
270689 2002 QW_{51}	16.1	X	170.05101	106.72946	151.64700	7.72505	0.1223750	0.18263807	3.0766293	20	—	—
270690 2002 QF_{52}	16.8	X	74.73459	1.31626	150.81892	6.38937	0.0550877	0.26069248	2.4268916	20	5 9.4	19.8
270691 2002 QK_{53}	17.3	X	309.71316	326.69295	29.38380	1.91991	0.2104479	0.27184354	2.3600618	20	7 27.6	19.2
270692 2002 QB_{54}	17.9	X	159.44334	134.67874	145.11975	5.91745	0.2077224	0.29621916	2.2287462	20	—	—
270693 2002 QO_{55}	15.8	X	143.70209	306.62562	4.28355	6.74244	0.0851368	0.18544223	3.0455352	20	—	—
270694 2002 QQ_{59}	16.0	X	148.35292	171.75646	189.71660	9.71726	0.0357201	0.19365756	2.9587828	20	1 27.9	20.4
270695 2002 QF_{61}	16.5	X	113.86619	151.75241	191.36489	6.95658	0.0786480	0.18541245	3.0458612	20	—	—
270696 2002 QX_{63}	15.9	X	33.69048	56.58122	348.63847	8.97572	0.0881073	0.18193362	3.0845661	20	—	—
270697 2002 QP_{65}	15.3	X	309.82790	327.98515	154.06458	11.27065	0.0730315	0.18151493	3.0893076	20	—	—
270698 2002 QK_{69}	18.0	X	118.93962	315.61814	17.26788	3.06016	0.1879510	0.29599020	2.2298954	20	—	—
270699 2002 QE_{70}	16.4	X	241.34847	257.26297	347.01833	0.20859	0.1651869	0.19300210	2.9654779	20	—	—
270700 2002 QB_{76}	16.1	X	2.25299	231.47472	161.89347	7.46733	0.0744030	0.17579167	3.1560015	20	12 7.2	20.3
270701 2002 QJ_{76}	16.3	X	146.42468	260.50143	32.65670	4.13176	0.0685994	0.18352400	3.0667201	20	—	—
270702 2002 QU_{77}	15.0	X	138.61507	265.37843	293.60168	13.65855	0.1566702	0.17374307	3.1807611	20	9 19.2	20.4
270703 2002 QA_{79}	16.0	X	203.18587	293.90061	348.16457	4.00642	0.1385744	0.19055919	2.9907684	20	—	—
270704 2002 QM_{82}	16.1	X	168.00819	98.50320	164.60342	13.50307	0.1368908	0.18420530	3.0591537	20	—	—
270705 2002 QK_{84}	16.0	X	87.64797	212.69212	167.13555	10.41455	0.0851039	0.18657625	3.0331820	20	—	—
270706 2002 QD_{85}	15.8	X	7.13626	218.29068	165.37228	9.41345	0.0783846	0.17503363	3.1651069	20	12 2.8	20.1
270707 2002 QU_{88}	15.6	X	278.70101	327.37275	162.87584	10.01763	0.0365798	0.17778303	3.1323901	20	12 13.3	20.1
270708 2002 QO_{92}	16.1	X	190.97660	292.55520	352.91642	8.85960	0.0635094	0.18868423	3.0105486	20	—	—
270709 2002 QB_{93}	15.7	X	31.42824	45.82100	359.96659	10.10626	0.0781497	0.18092609	3.0960069	20	—	—
270710 2002 QT_{93}	15.5	X	289.23226	338.03961	152.52519	11.98698	0.0416373	0.17905724	3.1175120	20	12 26.4	20.0
270711 2002 QU_{96}	15.7	X	1.99763	306.15094	116.88593	10.27548	0.0566839	0.18131431	3.0915860	20	—	—
270712 2002 QO_{97}	16.3	X	2.21964	342.54718	46.47272	2.69584	0.1748310	0.17463839	3.1698806	20	12 11.0	20.0
270713 2002 QP_{99}	15.8	X	28.05638	43.76738	359.71829	9.65075	0.0586347	0.18055591	3.1002371	20	—	—
270714 2002 QQ_{104}	15.5	X	183.90582	307.49955	287.14656	7.44310	0.1521829	0.18251006	3.0780677	20	12 17.1	20.3
270715 2002 QU_{104}	17.2	X	351.33012	189.79171	275.79931	5.65458	0.1020234	0.29554650	2.2321267	20	—	—
270716 2002 QW_{108}	16.5	X	356.21461	249.22702	144.24096	1.88734	0.1692864	0.17448965	3.1716817	20	12 6.4	20.3
270717 2002 QU_{111}	17.0	X	50.95883	248.81017	303.33746	5.77176	0.0557752	0.26457014	2.4031202	20	5 27.8	19.9
270718 2002 QV_{111}	15.8	X	261.49269	208.24487	319.24460	17.24392	0.1150616	0.18223007	3.0812198	20	12 28.9	20.1
270719 2002 QZ_{111}	17.6	X	184.72228	335.35731	273.75639	3.98008	0.1232636	0.29529057	2.2334162	20	—	—
270720 2002 QN_{113}	15.1	X	71.20701	351.05376	307.40982	16.29190	0.1941150	0.17327639	3.1864696	20	11 19.4	20.2

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	m		°	°	°	°		°				
270721 2002 QZ_{113}	15.7	X	98.90952	14.92171	271.33800	7.96567	0.0494749	0.17486707	3.1671164	20	11 21.3	20.4
270722 2002 QE_{116}	15.9	X	358.99328	30.30168	1.58802	9.63656	0.1178483	0.17464547	3.1697949	20	12 1.4	20.0
270723 2002 QJ_{116}	15.7	X	117.19369	177.44311	142.59028	11.51502	0.0393416	0.18250271	3.0781504	20	—	—
270724 2002 QQ_{117}	17.7	X	5.42096	172.87019	179.47512	5.67725	0.1866696	0.28096490	2.3087027	20	12 2.9	20.1
270725 2002 QL_{122}	15.8	X	92.34838	321.65860	25.67020	2.14046	0.1350762	0.18155332	3.0888720	20	—	—
270726 2002 QS_{122}	15.6	X	178.89034	268.35299	323.11333	11.21618	0.1241671	0.17911447	3.1168479	20	12 9.3	20.7
270727 2002 QY_{122}	17.3	X	108.66195	316.05281	44.53149	4.11886	0.2148755	0.29711463	2.2242658	20	—	—
270728 2002 QP_{123}	16.4	X	183.92909	234.44251	63.56628	2.47100	0.2007588	0.19088681	2.9873454	20	1 2.5	21.3
270729 2002 QF_{127}	15.7	X	34.84567	26.73456	5.48722	4.75931	0.1910465	0.17971693	3.1098783	20	—	—
270730 2002 QE_{130}	16.6	X	196.15638	95.68909	219.69992	1.83708	0.1516387	0.19492228	2.9459705	20	1 29.9	21.5
270731 2002 QO_{130}	17.4	X	56.78103	336.64461	2.95819	7.65439	0.1529318	0.28728388	2.2747231	20	—	—
270732 2002 QO_{132}	16.0	X	260.61517	68.82364	114.76622	7.27547	0.2067892	0.18787835	3.0191514	20	—	—
270733 2002 QA_{135}	16.1	X	127.07608	242.17522	106.39728	3.73752	0.1129945	0.18821534	3.0155466	20	—	—
270734 2002 QC_{144}	17.2	X	336.17618	320.31686	5.06566	2.36529	0.0619130	0.21750808	2.7383300	20	8 8.5	20.6
270735 2002 QE_{144}	15.9	X	326.03631	272.63728	157.05353	10.01439	0.0704652	0.17558263	3.1585059	20	12 1.5	20.1
270736 2002 QS_{144}	17.0	X	63.55723	153.74967	145.18171	5.93833	0.1570971	0.22855670	2.6493545	20	11 22.5	20.9
270737 2002 QX_{144}	16.2	X	42.57221	293.98005	14.37918	5.01237	0.1655057	0.17154330	3.2078954	20	10 27.9	20.6
270738 2002 RL_{9}	17.3	X	337.96400	7.99266	335.03065	5.30923	0.1609698	0.27493255	2.3423508	20	9 15.4	19.1
270739 2002 RC_{10}	17.2	X	319.05484	28.95457	341.25594	6.69693	0.1332493	0.27527872	2.3403867	20	9 18.1	19.0
270740 2002 RD_{13}	17.0	X	334.62923	344.91493	352.70745	4.98323	0.2103740	0.27221777	2.3578983	20	8 30.9	18.2
270741 2002 RR_{17}	15.7	X	113.19509	344.64900	352.07311	8.82107	0.1322552	0.18273449	3.0755470	20	—	—
270742 2002 RV_{28}	17.0	X	20.05075	135.05778	304.25824	6.70497	0.0416585	0.29492404	2.2352663	20	—	—
270743 2002 RD_{33}	16.8	X	185.66657	9.69799	342.01175	6.86613	0.1866850	0.25094988	2.4893047	20	2 29.1	20.9
270744 2002 RG_{36}	15.6	X	81.29574	18.17955	312.42796	8.80033	0.0929768	0.17764244	3.1340426	20	12 30.8	20.3
270745 2002 RF_{46}	15.2	X	123.01198	324.70763	10.90111	9.53162	0.0912275	0.18439019	3.0571084	20	—	—
270746 2002 RP_{48}	17.2	X	5.71128	311.59040	11.00631	5.32795	0.2554534	0.27645792	2.3337269	20	10 28.7	19.1
270747 2002 RH_{51}	15.3	X	108.60351	333.37926	12.37626	13.91423	0.2046377	0.18244654	3.0787822	20	—	—
270748 2002 RV_{52}	15.9	X	119.08459	233.46491	113.52505	4.65326	0.1596890	0.18577764	3.0418684	20	—	—
270749 2002 RE_{53}	15.3	X	116.82188	304.03490	6.63742	10.80181	0.0979890	0.18046286	3.1013027	20	—	—
270750 2002 RP_{57}	16.9	X	122.36164	158.75839	203.28527	3.77128	0.1768090	0.29781853	2.2207597	20	—	—
270751 2002 RS_{58}	17.2	X	173.99658	194.26593	146.64343	6.38099	0.1205704	0.30368001	2.1920910	20	1 25.5	20.1
270752 2002 RG_{59}	17.3	X	162.53358	61.66997	278.27893	3.50218	0.1731232	0.30193595	2.2005243	20	1 17.5	20.4
270753 2002 RJ_{61}	17.0	X	76.89761	327.76754	29.42484	6.66323	0.2097381	0.28952949	2.2629460	20	—	—
270754 2002 RH_{62}	16.2	X	72.27475	320.51741	27.82381	11.73996	0.2098763	0.28702740	2.2760780	20	—	—
270755 2002 RR_{68}	17.4	X	99.53518	3.14160	344.70691	3.25671	0.1498487	0.29285961	2.2457586	20	—	—
270756 2002 RW_{78}	15.8	X	80.99835	178.24726	173.48978	4.83391	0.1573890	0.17963629	3.1108089	20	—	—
270757 2002 RL_{79}	17.2	X	269.32518	21.21256	346.34392	2.49745	0.2351998	0.26577264	2.3958661	20	6 1.2	20.3
270758 2002 RT_{79}	17.2	X	115.03620	355.16442	333.82518	3.98624	0.1729355	0.29343732	2.2428100	20	—	—
270759 2002 RE_{91}	15.1	X	72.47278	355.65585	358.40253	16.33623	0.0638399	0.17712133	3.1401867	20	—	—
270760 2002 RY_{94}	17.1	X	358.11313	321.63924	11.12920	5.75539	0.2531273	0.27528192	2.3403686	20	10 28.1	18.8
270761 2002 RS_{109}	15.3	X	157.59896	117.21790	203.97734	10.56059	0.0895813	0.18661423	3.0327705	20	—	—
270762 2002 RZ_{124}	17.2	X	48.90847	76.54766	251.05771	5.69678	0.1288622	0.28210983	2.3024519	20	12 18.6	20.1
270763 2002 RE_{129}	15.3	X	66.08366	162.93801	189.13793	9.25426	0.0779068	0.17714632	3.1398913	20	—	—
270764 2002 RG_{136}	15.8	X	49.87185	330.07109	26.59583	10.66509	0.2019172	0.17522595	3.1627906	20	—	—
270765 2002 RQ_{136}	15.7	X	185.56102	204.69104	104.40808	5.56400	0.2020269	0.19095774	2.9866056	20	1 16.4	20.7
270766 2002 RK_{141}	18.2	X	71.78973	15.30583	308.76492	3.95705	0.1667743	0.28627357	2.2800719	20	—	—
270767 2002 RE_{143}	17.5	X	313.48250	182.35069	210.16229	5.63829	0.1453414	0.27560346	2.3385479	20	10 12.6	19.4
270768 2002 RR_{145}	16.0	X	100.77086	238.81709	84.07118	2.24119	0.1849491	0.17887944	3.1195774	20	—	—
270769 2002 RP_{151}	15.7	X	353.05434	214.49027	190.76557	18.57387	0.1786218	0.17295566	3.1904078	20	12 16.2	19.8
270770 2002 RK_{152}	16.8	X	310.31387	153.21401	255.63509	5.62149	0.1436727	0.27704616	2.3304223	20	10 31.4	18.7
270771 2002 RA_{153}	16.1	X	24.59406	173.41999	215.84344	10.13552	0.2142574	0.17491733	3.1665097	20	—	—
270772 2002 RK_{158}	17.0	X	237.39955	206.27629	335.27278	6.75556	0.0352560	0.28811540	2.2703443	20	—	—
270773 2002 RY_{160}	15.6	X	5.70556	259.25766	171.26550	15.96931	0.0232644	0.18020499	3.1042607	20	—	—
270774 2002 RZ_{165}	17.4	X	310.25954	231.89414	172.99029	5.84591	0.2206430	0.27586569	2.3370657	20	10 24.3	18.8
270775 2002 RR_{168}	15.5	X	60.32753	28.69005	354.53068	10.91512	0.0082304	0.18055612	3.1002347	20	—	—
270776 2002 RU_{170}	15.6	X	97.58418	36.60083	312.08343	6.94906	0.0428091	0.18299056	3.0726771	20	—	—
270777 2002 RS_{176}	16.5	X	83.22792	145.86651	218.95693	4.35915	0.1626093	0.18158510	3.0885116	20	—	—
270778 2002 RM_{184}	15.7	X	116.90221	134.66802	203.84165	17.18048	0.1006909	0.18313975	3.0710081	20	—	—
270779 2002 RR_{189}	15.5	X	127.80167	104.54561	186.71946	10.05394	0.0879757	0.17883324	3.1201147	20	12 30.3	20.5
270780 2002 RX_{196}	17.0	X	18.22720	317.07439	58.73778	7.89884	0.1334210	0.28389029	2.2928151	20	—	—
270781 2002 RT_{200}	16.0	X	232.81387	213.40433	91.99162	6.31219	0.3262641	0.19937239	2.9019686	20	2 13.6	21.3
270782 2002 RG_{201}	15.4	X	88.57048	194.39108	144.19723	12.05113	0.1024865	0.17874482	3.1211436	20	—	—
270783 2002 RU_{203}	15.7	X	39.09954	211.64567	155.12944	18.01819	0.1149087	0.17689423	3.1428738	20	12 28.5	20.4
270784 2002 RR_{205}	15.7	X	30.72248	171.61967	192.38996	8.68425	0.1925079	0.17271470	3.1933745	20	12 23.7	20.1
270785 2002 RN_{212}	15.2	X	108.63854	166.06434	155.62337	15.27443	0.1588797	0.17816944	3.1278595	20	—	—
270786 2002 RL_{218}	15.7	X	348.29547	24.33572	5.12481	13.20494	0.0846102	0.17097008	3.2150616	20	11 6.6	20.1
270787 2002 RV_{218}	15.3	X	91.06465	206.54524	136.47160	11.23307	0.0881706	0.18179203	3.0861675	20	—	—
270788 2002 RP_{219}	15.7	X	49.26366	201.15715	150.60544	13.66580	0.1487203	0.17562440	3.1580049	20	12 26.8	20.4
270789 2002 RA_{220}	16.0	X	89.70828	145.40097	146.87200	11.19167	0.2333179	0.17527963	3.1621448	20	12 7.8	21.3
270790 2002 RP_{224}	17.2	X	208.00303	238.36436	55.00475	8.51068	0.1462204	0.30327297	2.1940520	20	1 1.4	20.6
270791 2002 RB_{225}	15.7	X	75.03547	55.46417	238.80070	4.29535	0.1477237	0.17181874	3.2044663	20	11 15.9	20.6
270792 2002 RK_{225}	17.2	X	16.20592	117.53163	322.13075	6.94745	0.0275726	0.29371924	2.2413747	20	—	—
270793 2002 RO_{226}	17.1	X	297.30487	55.50490	334.98342	4.89660	0.0696724	0.27412453	2.3469515	20	9 14.1	19.6
270794 2002 RK_{231}	16.0	X	74.81308	149.81088	207.00096	2.04236	0.1406504	0.17958608	3.1113887	20	—	—
270795 2002 RX_{231}	15.6	X	60.49184	148.18198	192.80079	10.07092	0.1218118	0.17461367	3.1701798	20	12 22.3	20.4
270796 2002 RX_{232}	15.7	X	135.40757	174.67780	134.09909	11.24172	0.1277000	0.18571991	3.0424987	20	—	—
270797 2002 RF_{234}	15.3	X	223.98714	38.54629	160.93313	14.08833	0.1426834	0.18125305	3.0922826	20	12 16.9	20.2
270798 2002 RN_{234}	15.3	X	348.52256	236.43087	160.64694	12.24354	0.0064354	0.17381931	3.1798310	20	11 20.6	19.9
270799 2002 RZ_{234}	15.9	X	127.61409	153.58155	172.36628	10.98114	0.0773228	0.18438343	3.0571832	20	—	—
270800 2002 RL_{237}	18.0	X	200.41331	257.81732	28.14835	3.17607	0.1726499	0.30220316	2.1992269	20	—	—

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	m		°	°	°	°		°				
270801 2002 RG_{243}	15.8	X	353.69871	36.40336	11.46142	27.50046	0.1780238	0.17257790	3.1950618	20	12 17.1	20.1
270802 2002 RQ_{248}	15.9	X	174.06473	105.74821	161.04786	13.18698	0.0842790	0.18306539	3.0718397	20	—	—
270803 2002 RD_{249}	16.3	X	133.45545	127.76113	161.91426	2.76925	0.1794844	0.18116864	3.0932430	20	—	—
270804 2002 RB_{250}	17.4	X	194.73062	262.18276	312.22306	5.71790	0.0534569	0.28767415	2.2726654	20	—	—
270805 2002 RA_{254}	16.2	X	34.07870	180.78191	189.34154	4.44388	0.0383335	0.17570387	3.1570526	20	12 15.2	20.7
270806 2002 RW_{257}	18.0	X	218.85307	281.28290	317.29693	1.69539	0.1063293	0.29592485	2.2302237	20	—	—
270807 2002 RW_{261}	15.3	X	355.36386	350.00914	38.21997	15.24580	0.1673874	0.16861905	3.2448773	20	11 23.3	19.2
270808 2002 RS_{264}	17.5	X	306.18967	98.18606	311.94107	5.43763	0.0885315	0.27705124	2.3303938	20	10 26.1	20.0
270809 2002 RN_{266}	17.5	X	280.16416	3.99518	22.45635	1.59740	0.1915402	0.27033842	2.3688135	20	7 21.9	20.0
270810 2002 RC_{267}	16.3	X	209.66901	81.02725	176.87368	3.77263	0.0385977	0.18401016	3.0613161	20	—	—
270811 2002 RY_{267}	17.4	X	328.09123	274.63434	181.46571	7.10279	0.1331423	0.28556906	2.2838204	20	—	—
270812 2002 RG_{268}	15.8	X	227.90337	281.12130	336.23992	9.40457	0.0797271	0.19075112	2.9887619	20	—	—
270813 2002 RR_{269}	17.5	X	260.82381	229.44530	345.95428	4.84730	0.0737941	0.30034521	2.2082873	20	—	—
270814 2002 RP_{270}	16.3	X	165.76940	88.07002	188.82177	2.67909	0.1842205	0.18521208	3.0480577	20	—	—
270815 2002 RS_{272}	18.2	X	9.39135	20.41466	301.44392	0.56816	0.1978203	0.27755685	2.3275628	20	10 25.5	20.4
270816 2002 RR_{277}	15.2	X	130.74070	296.61017	308.59083	12.83623	0.2456017	0.17556187	3.1587549	20	11 11.4	20.9
270817 2002 SB_{1}	17.0	X	261.88730	98.52008	166.33145	4.85341	0.1912690	0.30740678	2.1743381	20	1 12.9	20.2
270818 2002 SU_{1}	15.7	X	348.11192	48.15532	11.48866	5.20030	0.1606734	0.17271138	3.1934154	20	12 24.4	19.5
270819 2002 SW_{3}	15.9	X	335.54188	249.18297	183.18234	16.36787	0.1248950	0.17212341	3.2006837	20	12 17.3	20.1
270820 2002 SF_{4}	15.0	X	116.06199	321.81440	302.21818	26.21346	0.3428713	0.17595291	3.1540730	20	11 28.2	21.1
270821 2002 SU_{14}	16.7	X	136.18872	16.56794	319.92341	7.30412	0.1789171	0.29697941	2.2249410	20	—	—
270822 2002 SY_{17}	17.0	X	91.96812	51.80397	10.26709	11.68718	0.1902802	0.24319165	2.5419692	20	2 25.3	20.2
270823 2002 SL_{20}	15.3	X	168.14759	233.49102	18.18180	10.76398	0.0575331	0.17669895	3.1451890	20	12 25.8	20.2
270824 2002 SV_{21}	17.1	X	81.76669	0.05857	13.32600	5.80054	0.1686944	0.29222068	2.2490309	20	—	—
270825 2002 SG_{22}	15.5	X	344.73418	27.52839	9.75803	27.24884	0.1675642	0.16861234	3.2449635	20	11 6.8	19.7
270826 2002 SJ_{26}	16.7	X	46.55614	324.77887	33.67304	8.48411	0.2383395	0.28492064	2.2872841	20	—	—
270827 2002 SM_{26}	17.4	X	27.74485	194.86227	186.54737	5.14915	0.1132182	0.28554927	2.2839259	20	—	—
270828 2002 SS_{26}	16.9	X	35.05407	239.35920	192.74265	6.58629	0.0817957	0.29356570	2.2421561	20	—	—
270829 2002 SJ_{28}	15.5	X	162.81066	228.71972	73.63207	10.92729	0.0437422	0.17954291	3.1118874	20	—	—
270830 2002 SE_{35}	15.2	X	6.50722	229.94574	154.07927	5.86679	0.1862484	0.17111496	3.2132466	20	12 12.8	19.1
270831 2002 SQ_{35}	15.5	X	142.33620	125.03037	195.84742	21.50718	0.1515634	0.18271843	3.0757272	20	—	—
270832 2002 SF_{44}	17.1	X	160.44825	317.39532	22.11309	5.17257	0.1728051	0.29855428	2.2171097	20	1 16.8	20.2
270833 2002 SS_{48}	17.2	X	276.63197	316.25791	64.03396	3.52523	0.2011953	0.26671887	2.3901962	20	7 5.2	20.0
270834 2002 SH_{66}	17.3	X	351.77499	6.11014	52.05534	6.90998	0.0892244	0.28676496	2.2774665	20	—	—
270835 2002 SE_{69}	18.2	X	263.54167	193.60372	241.82463	0.51099	0.1547177	0.27230200	2.3574120	20	9 12.3	20.8
270836 2002 SA_{70}	15.8	X	140.49999	115.91223	187.25286	9.94870	0.0721913	0.18044918	3.1014595	20	—	—
270837 2002 SY_{72}	15.6	X	115.30530	304.57767	12.84334	8.68273	0.0885868	0.18116928	3.0932356	20	—	—
270838 2002 TF_{2}	16.6	X	23.22139	9.78685	11.47424	9.28606	0.1235307	0.28321606	2.2964525	20	—	—
270839 2002 TH_{2}	16.9	X	73.99519	132.43309	213.25581	3.87024	0.2198386	0.28751924	2.2734816	20	—	—
270840 2002 TH_{7}	14.9	X	207.83741	233.51718	9.19100	19.96706	0.0415755	0.17975758	3.1094094	20	—	—
270841 2002 TW_{9}	17.1	X	260.04973	303.88284	83.84545	3.49236	0.1843606	0.26472355	2.4021917	20	6 25.5	20.3
270842 2002 TZ_{11}	17.5	X	2.77398	4.80251	19.72353	5.57302	0.2302562	0.28190401	2.3035725	20	—	—
270843 2002 TS_{15}	17.1	X	313.82714	332.29799	71.96585	3.46991	0.1903216	0.27588167	2.3369754	20	11 2.2	18.6
270844 2002 TC_{18}	14.9	X	134.71097	262.45895	32.40283	14.36024	0.0383407	0.17694441	3.1422795	20	—	—
270845 2002 TF_{19}	15.0	X	238.01976	209.60083	5.18428	12.55981	0.0593902	0.18043446	3.1016282	20	—	—
270846 2002 TD_{21}	16.1	X	73.86719	341.40325	4.20759	6.04317	0.2080223	0.17596455	3.1539340	20	—	—
270847 2002 TA_{22}	17.4	X	292.00627	32.50363	24.55099	1.59356	0.1690204	0.27325857	2.3519073	20	10 3.8	19.4
270848 2002 TJ_{22}	16.8	X	284.90680	71.64914	13.31246	21.93128	0.2856196	0.27393338	2.3480432	20	10 11.0	18.4
270849 2002 TA_{29}	17.2	X	234.14423	8.23980	38.40019	2.98782	0.2007496	0.26198047	2.4189308	20	6 19.8	21.0
270850 2002 TN_{32}	15.7	X	99.56681	317.56892	22.57165	16.59168	0.3425615	0.17920996	3.1157406	20	—	—
270851 2002 TC_{33}	15.7	X	121.05050	294.21967	9.24386	4.45141	0.1463003	0.17832813	3.1260036	20	—	—
270852 2002 TB_{35}	17.0	X	163.88823	356.83305	10.76048	4.19030	0.1492055	0.24770411	2.5110031	20	2 28.3	20.9
270853 2002 TG_{37}	17.2	X	203.46599	120.63030	210.14629	5.39095	0.2215568	0.30536002	2.1840434	20	2 12.4	20.8
270854 2002 TW_{41}	17.5	X	95.72123	20.24509	31.13358	8.65763	0.3490678	0.24046110	2.5611764	20	3 10.7	21.1
270855 2002 TO_{44}	16.8	X	15.40013	359.65921	40.03502	7.58847	0.1220428	0.28323106	2.2963714	20	—	—
270856 2002 TC_{51}	14.7	X	94.78626	302.05755	49.14794	16.58312	0.2103834	0.17748949	3.1358429	20	—	—
270857 2002 TX_{63}	17.5	X	93.37200	5.03576	340.27274	5.29915	0.1870811	0.29082173	2.2562375	20	—	—
270858 2002 TZ_{69}	16.8	X	128.09942	3.99738	40.91852	16.28435	0.1744709	0.24576505	2.5241934	20	3 19.3	20.7
270859 2002 TA_{76}	17.1	X	154.62264	37.13054	287.98145	3.17388	0.1987394	0.29767287	2.2214841	20	—	—
270860 2002 TT_{76}	16.8	X	235.61770	52.22121	345.28186	5.94043	0.1783181	0.26182429	2.4198926	20	6 10.9	20.4
270861 2002 TF_{78}	15.2	X	59.66663	327.34107	3.64766	8.59692	0.1494513	0.17131368	3.2107614	20	12 11.8	20.0
270862 2002 TP_{80}	15.4	X	128.59469	155.71412	203.58384	13.68327	0.1637035	0.18607082	3.0386723	20	1 18.5	20.2
270863 2002 TH_{86}	16.5	X	89.54264	165.32358	205.97432	6.79437	0.1913014	0.29279648	2.2460814	20	—	—
270864 2002 TM_{88}	14.8	X	69.99792	127.19790	225.16703	10.36764	0.1551636	0.17563126	3.1579227	20	—	—
270865 2002 TK_{92}	17.6	X	344.22679	194.49403	184.30796	3.64822	0.1364514	0.27736902	2.3286135	20	11 25.1	19.8
270866 2002 TD_{93}	15.7	X	7.32456	37.40933	11.01375	4.43439	0.1521550	0.17454187	3.1710491	20	—	—
270867 2002 TK_{97}	15.4	X	134.62345	118.36047	196.14748	8.76218	0.0666058	0.18046878	3.1012349	20	—	—
270868 2002 TH_{98}	17.6	X	346.85177	206.80217	187.39642	5.57962	0.1149824	0.28019191	2.3129469	20	12 19.7	20.0
270869 2002 TE_{99}	15.8	X	103.34686	330.76119	337.03896	6.62103	0.1386504	0.17509355	3.1643848	20	12 29.2	20.8
270870 2002 TE_{123}	15.2	X	15.26537	238.94784	213.07674	15.16440	0.1159923	0.18206619	3.0830685	20	—	—
270871 2002 TA_{125}	17.4	X	28.78013	78.28047	322.34648	6.89276	0.1603260	0.28731993	2.2745329	20	—	—
270872 2002 TJ_{129}	15.6	X	59.54144	158.79835	206.73531	26.46606	0.0498241	0.17640727	3.1486549	20	—	—
270873 2002 TM_{131}	17.5	X	274.89124	94.10802	331.07530	5.29183	0.2192404	0.27119613	2.3638163	20	9 3.6	20.0
270874 2002 TQ_{134}	15.1	X	43.32255	27.85804	347.65337	13.94941	0.0269460	0.17465228	3.1697125	20	—	—
270875 2002 TF_{156}	14.8	X	83.85515	88.84856	278.04757	9.38647	0.1642692	0.12529915	3.9552200	20	—	—
270876 2002 TQ_{156}	15.7	X	56.62735	137.02660	230.28637	8.95463	0.0936696	0.17771689	3.1331673	20	—	—
270877 2002 TN_{185}	15.4	X	125.03851	352.38923	333.89686	10.08482	0.1951643	0.18215070	3.0821149	20	—	—
270878 2002 TC_{186}	17.1	X	183.64908	117.87378	212.76817	6.19986	0.1361815	0.30291472	2.1957816	20	1 22.4	20.3
270879 2002 TH_{187}	17.2	X	302.64018	22.35243	340.25674	6.22086	0.2036227	0.26927521	2.3750448	20	7 24.8	19.3
270880 2002 TC_{190}	17.0	X	216.33090	69.51540	325.66967	9.93341	0.2543477	0.25916055	2.4364460	20	5 12.8	21.3

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		°	°	°	°		°				
270881 2002 TN_{190}	15.4	X	77.46075	154.29991	155.23744	6.30429	0.1301964	0.17112337	3.2131414	20	12 5.2	20.3
270882 2002 TT_{193}	17.3	X	149.51252	286.74407	29.44786	4.23049	0.1440554	0.29569522	2.2313782	20	—	—
270883 2002 TE_{197}	16.8	X	120.44362	307.80646	333.91698	7.66919	0.1526097	0.28730489	2.2746123	20	—	—
270884 2002 TQ_{199}	15.1	X	114.96312	38.66447	274.73333	10.21946	0.1301443	0.17735117	3.1374731	20	—	—
270885 2002 TU_{200}	16.8	X	129.76983	30.71645	300.30800	4.49391	0.2090896	0.29567187	2.2314957	20	—	—
270886 2002 TR_{209}	15.3	X	14.75098	297.51742	83.08065	10.86480	0.1282768	0.17075506	3.2177602	20	12 12.9	19.4
270887 2002 TE_{210}	16.9	X	318.18777	353.35898	44.81928	4.26623	0.1734819	0.27400049	2.3476598	20	11 1.3	18.5
270888 2002 TE_{214}	17.2	X	138.82318	187.41043	138.71402	6.90163	0.1919368	0.29487482	2.2355150	20	—	—
270889 2002 TV_{224}	17.0	X	219.54502	249.16845	55.39844	5.49697	0.2101282	0.30376772	2.1916690	20	1 27.8	20.6
270890 2002 TC_{230}	16.4	X	107.70765	249.33572	64.09201	1.72414	0.1474385	0.17531908	3.1616704	20	—	—
270891 2002 TV_{236}	16.1	X	87.86424	100.45881	314.24561	10.45541	0.2385263	0.24000252	2.5644379	20	2 12.3	19.0
270892 2002 TQ_{245}	17.1	X	6.54128	346.00561	37.05710	8.03192	0.1374698	0.28042084	2.3116879	20	—	—
270893 2002 TO_{247}	17.7	X	222.55696	266.26137	53.24716	6.47232	0.2426721	0.30789575	2.1720355	20	2 18.3	21.4
270894 2002 TC_{249}	17.3	X	92.95945	352.18424	31.86972	1.25062	0.1320368	0.29427533	2.2385501	20	—	—
270895 2002 TE_{252}	17.2	X	260.76919	343.43739	107.79548	3.61516	0.2035971	0.27246723	2.3564589	20	9 25.1	19.9
270896 2002 TY_{255}	15.1	X	113.07903	284.44536	19.69901	14.80370	0.0333500	0.17381859	3.1798398	20	12 27.4	20.0
270897 2002 TR_{267}	15.4	X	80.67398	147.45361	227.71194	9.22184	0.1387844	0.17814806	3.1281097	20	—	—
270898 2002 TW_{268}	15.7	X	52.52837	151.51728	218.61392	9.77050	0.2191433	0.17627337	3.1502492	20	—	—
270899 2002 TV_{270}	17.1	X	331.03022	132.23437	269.76048	3.38474	0.1342265	0.27767361	3.2269103	20	12 3.9	19.2
270900 2002 TH_{273}	17.3	X	95.35582	345.71897	351.71523	7.05482	0.1556711	0.28937910	2.2637299	20	—	—
270901 2002 TQ_{273}	16.7	X	41.81236	185.35887	217.77496	8.73649	0.0818197	0.28885722	2.2664557	20	—	—
270902 2002 TG_{294}	15.4	X	149.57481	299.02953	9.73450	15.55226	0.2569765	0.18180608	3.0860085	20	—	—
270903 2002 TO_{303}	16.0	X	310.98804	45.07932	16.40245	9.69231	0.0267667	0.16827912	3.2492458	20	10 28.3	20.4
270904 2002 TT_{305}	15.8	X	2.91322	285.72391	104.58674	6.04023	0.1239978	0.17018177	3.2249825	20	12 7.4	19.8
270905 2002 TW_{311}	17.0	X	101.98789	226.96855	90.77429	8.11584	0.0085303	0.28522646	2.2856489	20	—	—
270906 2002 TN_{313}	15.5	X	159.42564	152.78481	151.86843	11.23873	0.0650482	0.18032505	3.1028825	20	—	—
270907 2002 TZ_{319}	17.4	X	350.67507	98.96825	348.79079	6.27158	0.0479472	0.29011469	2.2599018	20	—	—
270908 2002 TE_{320}	16.4	X	231.45027	290.23650	329.10654	2.23500	0.1647441	0.19038272	2.9926163	20	—	—
270909 2002 TE_{339}	17.1	X	103.03797	111.12967	162.34314	6.77729	0.0945102	0.28110155	2.3079544	20	12 6.5	20.5
270910 2002 TD_{345}	15.8	X	160.55400	189.87080	135.29191	8.12056	0.1762629	0.18622977	3.0369431	20	1 12.9	20.6
270911 2002 TF_{350}	15.8	X	343.89713	192.15694	242.80877	8.89438	0.1008897	0.17786276	3.1314539	20	—	—
270912 2002 TE_{358}	15.8	X	146.16554	270.43691	1.30562	9.65469	0.0511022	0.17671747	3.1449692	20	12 26.7	20.7
270913 2002 TU_{369}	15.5	X	196.32685	122.30554	120.50036	10.40351	0.0433706	0.17519093	3.1632120	20	—	—
270914 2002 TJ_{377}	15.6	X	177.15126	281.74359	20.25453	9.97920	0.0959331	0.18412250	3.0600708	20	—	—
270915 2002 TL_{377}	16.0	X	133.37302	126.42997	202.09706	15.75408	0.2773333	0.18230784	3.0803435	20	—	—
270916 2002 TA_{378}	15.3	X	194.21950	52.09714	226.57117	9.71811	0.0808683	0.18291467	3.0735270	20	—	—
270917 2002 TP_{380}	16.4	X	205.30366	119.57765	187.81526	3.00731	0.1653515	0.19235534	2.9721215	20	1 28.6	21.4
270918 2002 TG_{383}	15.5	X	223.76126	180.60530	50.38391	11.87251	0.1540570	0.18073681	3.0981680	20	—	—
270919 2002 TB_{385}	17.3	X	314.54482	83.59106	18.07794	7.54298	0.0557363	0.28571921	2.2830202	20	—	—
270920 2002 UT	16.8	X	287.16480	7.72766	265.79375	5.53579	0.0871702	0.25543926	2.4600520	20	3 7.2	20.1
270921 2002 UC_{10}	16.1	X	106.05090	122.19722	210.60692	10.32168	0.2114223	0.17811496	3.1284972	20	—	—
270922 2002 UP_{13}	15.0	X	127.92059	257.61337	75.37133	17.56816	0.1958117	0.18056445	3.1001394	20	—	—
270923 2002 UA_{16}	15.5	X	37.92271	193.60321	187.07534	10.47028	0.0660075	0.17248076	3.1962613	20	—	—
270924 2002 UZ_{17}	15.8	X	114.98167	299.93887	41.33641	4.51837	0.0834075	0.17939722	3.1135720	20	—	—
270925 2002 UC_{28}	17.5	X	125.30139	200.84724	133.39060	1.69266	0.2404403	0.29335054	2.2432523	20	—	—
270926 2002 UG_{30}	17.5	X	291.45685	97.47170	26.18792	3.59733	0.0765318	0.28223637	2.3017636	20	—	—
270927 2002 US_{31}	15.3	X	118.47379	90.79652	250.64482	10.01401	0.0707806	0.17980969	3.1088086	20	—	—
270928 2002 UD_{37}	17.4	X	337.52113	60.74312	346.83216	2.47857	0.2059313	0.27797358	2.3252360	20	—	—
270929 2002 UQ_{39}	15.9	X	113.00411	121.76033	225.31919	11.87300	0.3423637	0.18181477	3.0859102	20	1 10.6	20.9
270930 2002 UW_{43}	15.9	X	194.58520	114.01096	185.17029	1.07142	0.1583409	0.18511932	3.0490757	20	1 11.7	21.0
270931 2002 UB_{52}	15.4	X	136.78778	36.11869	252.31721	9.56008	0.0770928	0.18106258	3.0944508	20	—	—
270932 2002 UQ_{56}	17.0	X	274.17858	349.19458	89.19001	6.23516	0.1748635	0.27217632	2.3581377	20	10 5.1	19.5
270933 2002 UK_{60}	16.6	X	124.11874	139.94156	154.51135	11.49758	0.1181726	0.17393975	3.1783629	20	12 30.9	21.8
270934 2002 UX_{61}	15.1	X	10.32791	188.51468	201.56216	14.67295	0.2530586	0.17375625	3.1806003	20	—	—
270935 2002 UP_{64}	15.7	X	337.40478	274.60675	187.52069	15.76524	0.1266483	0.17651237	3.1474049	20	—	—
270936 2002 UE_{70}	17.5	X	321.22339	346.47647	79.20352	5.03359	0.1390061	0.27789340	2.3256832	20	12 21.2	19.4
270937 2002 UR_{70}	17.1	X	347.28080	264.99050	172.79040	6.84808	0.0705527	0.28584925	2.2823278	20	—	—
270938 2002 US_{70}	17.0	X	17.39673	17.44329	41.89044	11.08050	0.0523836	0.28815303	2.2701467	20	—	—
270939 2002 UG_{71}	15.3	X	84.48318	113.98662	223.30823	6.62906	0.0840513	0.17355307	3.1830821	20	—	—
270940 2002 VS_{4}	17.3	X	22.12901	343.81507	46.15597	10.02681	0.0895804	0.28184364	2.3039014	20	—	—
270941 2002 VR_{5}	17.7	X	54.06853	308.66666	65.82149	2.93293	0.2064829	0.28582368	2.2824639	20	—	—
270942 2002 VA_{17}	16.8	X	171.54922	69.03271	236.68216	8.66230	0.1132308	0.29426769	2.2385888	20	—	—
270943 2002 VV_{18}	17.4	X	304.68403	1.56074	61.64030	2.26110	0.1764915	0.27415252	2.3467917	20	11 10.4	19.0
270944 2002 VT_{36}	16.5	X	6.43539	339.61833	74.29789	9.17439	0.2159525	0.27898339	2.3196216	20	—	—
270945 2002 VV_{38}	16.9	X	302.88597	292.60542	104.01398	5.77080	0.2334713	0.27051560	2.3677791	20	9 17.9	18.7
270946 2002 VK_{42}	17.8	X	322.47183	156.14149	207.23958	0.71493	0.2009264	0.27045364	2.3681407	20	9 10.9	19.2
270947 2002 VJ_{44}	17.4	X	9.12847	268.66376	120.37532	3.57997	0.2218902	0.27997513	2.3141406	20	—	—
270948 2002 VU_{45}	17.8	X	259.61522	44.18331	22.46284	1.48870	0.1673903	0.26640420	2.3920780	20	8 22.7	20.6
270949 2002 VS_{51}	16.0	X	135.99458	238.31944	97.08295	6.13181	0.3454928	0.18422816	3.0589007	20	1 18.4	21.2
270950 2002 VY_{53}	17.5	X	75.74001	149.25259	206.56134	6.02076	0.1229657	0.28659436	2.2783702	20	—	—
270951 2002 VL_{56}	17.0	X	275.81788	342.44650	80.92362	7.13447	0.2268124	0.26887856	2.3773800	20	9 5.6	19.6
270952 2002 VG_{62}	17.3	X	355.19693	28.85954	3.17342	3.05543	0.1915984	0.27798076	2.3251960	20	—	—
270953 2002 VZ_{62}	17.1	X	126.57460	25.99181	315.33805	3.49361	0.1848845	0.29290584	2.2455222	20	—	—
270954 2002 VQ_{63}	15.1	X	79.48328	88.94205	258.96438	8.88611	0.1501478	0.17317386	3.1877273	20	—	—
270955 2002 VT_{70}	15.3	X	50.38614	337.18773	62.94581	10.22782	0.0718062	0.17612311	3.1520408	20	—	—
270956 2002 VP_{71}	17.0	X	358.45375	322.12511	80.92535	6.27178	0.1547191	0.28022114	2.3127860	20	—	—
270957 2002 VN_{72}	17.1	X	92.83492	168.12344	203.18184	6.22779	0.1209019	0.29048560	2.2579777	20	—	—
270958 2002 VU_{76}	17.1	X	290.92572	346.92952	88.64465	3.54676	0.1541895	0.27275851	2.3547809	20	11 2.7	19.1
270959 2002 VJ_{78}	15.6	X	52.23121	186.17144	228.21349	21.51949	0.0570601	0.23239091	2.6201327	20	—	—
270960 2002 VK_{81}	17.1	X	315.66629	277.12203	119.68486	3.24541	0.2387108	0.27150043	2.3620497	20	10 22.9	18.3

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
270961 2002 VH_{86}	15.9	X	34.04903	358.90989	16.40759	7.18774	0.1716922	0.17181148	3.2045565	20	—	—
270962 2002 VF_{93}	17.4	X	329.04939	273.21226	129.18146	3.16271	0.1728458	0.27473596	2.3434681	20	12 3.7	19.3
270963 2002 VO_{95}	17.1	X	118.93333	295.34208	67.27072	6.69490	0.1688632	0.29300899	2.2449952	20	—	—
270964 2002 VX_{96}	16.8	X	277.28475	121.78976	322.95563	5.82012	0.2280874	0.27119845	2.3638028	20	10 3.7	19.2
270965 2002 VJ_{97}	17.1	X	255.69503	150.50259	273.98449	5.83154	0.1185094	0.26655543	2.3911731	20	8 18.8	20.3
270966 2002 VL_{100}	16.9	X	197.60224	83.72302	340.71085	6.12724	0.1589876	0.25707910	2.4495794	20	6 9.4	20.9
270967 2002 VV_{101}	16.7	X	299.50136	25.19471	77.76046	8.73453	0.1588520	0.27604845	2.3360341	20	—	—
270968 2002 VU_{102}	17.4	X	312.13452	64.85128	343.52494	2.35924	0.1665497	0.27331652	2.3515748	20	11 2.2	19.2
270969 2002 VK_{104}	15.4	X	33.97843	127.90392	246.32215	8.25375	0.1814061	0.16998082	3.2275236	20	—	—
270970 2002 VS_{104}	16.6	X	171.56245	283.00287	34.05067	5.86583	0.2088474	0.29562916	2.2317106	20	1 2.1	20.0
270971 2002 VW_{106}	17.3	X	304.70133	149.87243	243.76198	5.99558	0.1192457	0.27030179	2.3690275	20	9 24.0	19.7
270972 2002 VM_{107}	17.1	X	92.79176	129.14363	256.01628	6.60602	0.1982256	0.23617756	2.5920515	20	1 5.7	20.1
270973 2002 VL_{116}	15.3	X	175.23539	228.26104	70.38240	11.74659	0.2802391	0.18310556	3.0713904	20	—	—
270974 2002 VB_{129}	17.3	X	149.23208	82.59587	240.00813	5.00435	0.2497857	0.29421262	2.2388681	20	—	—
270975 2002 VW_{133}	17.2	X	295.53968	334.98563	117.75853	5.56237	0.1568386	0.27658106	2.3330341	20	12 9.6	19.0
270976 2002 VV_{141}	17.8	X	320.54530	181.55584	179.14420	1.22671	0.2053498	0.26993923	2.3711483	20	8 31.5	19.2
270977 2002 VC_{142}	15.4	X	120.69971	257.06703	43.45015	9.28261	0.0601135	0.17041352	3.2220580	20	—	—
270978 2002 VN_{144}	15.7	X	66.27342	215.97633	117.20794	2.81636	0.1794452	0.17003992	3.2267758	20	12 25.4	20.6
270979 2002 VP_{146}	17.1	X	24.68327	193.06701	126.30568	3.38151	0.2289837	0.27523433	2.3406384	20	11 21.3	19.8
270980 2002 WJ_{11}	17.3	X	210.56105	285.87405	123.94115	3.01876	0.2107524	0.25619401	2.4552180	20	6 1.4	21.2
270981 2002 WN_{11}	17.1	X	301.15243	27.85987	28.75906	6.87475	0.1045986	0.27020791	2.3695762	20	10 26.5	19.5
270982 2002 WS_{19}	17.3	X	188.00424	98.87413	60.08616	4.14246	0.2777556	0.26495326	2.4008031	20	9 27.3	21.5
270983 2002 WO_{26}	17.5	X	323.92074	145.30686	209.24167	5.62099	0.2649879	0.26948557	2.3738086	20	8 21.2	18.8
270984 2002 WF_{28}	17.9	X	232.39224	299.14481	157.49944	2.43081	0.1813244	0.26525516	2.3989811	20	8 26.6	21.3
270985 2002 WD_{29}	17.5	X	316.67294	220.14572	208.30684	4.63123	0.1427179	0.27621659	2.3350860	20	12 15.9	19.6
270986 2002 XA_{5}	17.5	X	233.24078	67.82754	79.87572	20.21336	0.0957278	0.38632876	1.8670876	20	12 22.7	18.7
270987 2002 XW_{6}	16.2	X	206.63271	23.85226	101.10225	10.25425	0.1897300	0.26074889	2.4265416	20	9 8.8	20.1
270988 2002 XC_{16}	15.6	X	30.63205	46.47586	321.93667	9.99721	0.1150770	0.16784817	3.2548050	20	12 17.1	20.1
270989 2002 XT_{17}	17.4	X	272.71673	206.28956	233.68177	0.49229	0.1574922	0.26902035	2.3765446	20	10 2.9	19.8
270990 2002 XW_{22}	17.1	X	272.18116	62.03961	42.73038	4.29018	0.1071996	0.27232794	2.3572623	20	11 15.8	19.6
270991 2002 XU_{25}	16.9	X	219.21141	191.02298	263.11905	5.10834	0.0951679	0.26213960	2.4179517	20	8 15.7	20.3
270992 2002 XA_{28}	16.5	X	7.98373	136.61838	240.86783	4.79375	0.0856258	0.27605073	2.3360212	20	12 23.2	19.2
270993 2002 XQ_{37}	16.6	X	87.91875	210.65329	218.85170	14.90525	0.1609114	0.23917103	2.5703781	20	2 14.9	20.1
270994 2002 XV_{39}	17.5	X	252.12581	355.64461	85.94941	2.57324	0.1587110	0.26620139	2.3932928	20	9 4.6	20.5
270995 2002 XP_{47}	17.4	X	197.70471	302.26541	59.65770	22.79679	0.0965662	0.36055134	1.9550505	20	3 29.3	20.4
270996 2002 XX_{57}	17.0	X	256.67835	311.69385	155.80964	2.86101	0.1747970	0.26946961	2.3739024	20	10 15.5	19.7
270997 2002 XQ_{60}	16.9	X	18.78773	298.42190	76.86968	3.85632	0.1703330	0.27793625	2.3254442	20	—	—
270998 2002 XQ_{62}	17.7	X	264.06222	37.50793	86.43049	23.30574	0.0816064	0.38620613	1.8674828	20	—	—
270999 2002 XY_{65}	15.3	X	336.10201	95.17485	22.96455	20.66548	0.3390748	0.16698703	3.2659853	20	—	—
271000 2002 XK_{73}	16.4	X	70.55012	121.16128	275.41295	6.25663	0.1464092	0.23206182	2.6226092	20	—	—
271001 2002 XK_{74}	17.2	X	310.74553	340.50986	44.57259	3.58337	0.2433383	0.26893606	2.3770411	20	9 15.2	18.7
271002 2002 XB_{75}	16.6	X	123.25717	22.15436	57.52954	7.53712	0.1199150	0.24477086	2.5310239	20	4 15.4	20.1
271003 2002 XC_{86}	16.1	X	103.68732	349.43777	66.22259	15.65262	0.1732598	0.23868951	2.5738338	20	3 5.8	19.9
271004 2002 XE_{87}	17.0	X	276.75520	350.50817	60.12763	8.08874	0.2215368	0.26494620	2.4008457	20	8 19.5	19.8
271005 2002 XN_{94}	17.4	X	237.02125	141.57164	327.39922	3.14312	0.1953480	0.26782809	2.3835922	20	9 15.4	20.7
271006 2002 XA_{115}	17.1	X	26.65976	148.56844	229.48631	6.31681	0.1191550	0.27937913	2.3174306	20	—	—
271007 2002 XF_{117}	17.0	X	284.19609	239.98123	107.95805	3.37276	0.2320701	0.26187228	2.4195970	20	5 25.5	20.0
271008 2002 YM_{2}	17.1	X	204.63278	347.25142	133.71064	5.40337	0.2579563	0.25973483	2.4328533	20	8 23.8	21.1
271009 Reitterferenc	17.4	X	278.64327	114.83006	299.84887	0.66709	0.1806770	0.26458405	2.4030360	20	8 31.5	19.8
271010 2002 YE_{6}	17.0	X	251.10774	4.65522	88.28481	8.02883	0.1618225	0.26647875	2.3916318	20	9 22.2	20.1
271011 2002 YT_{9}	15.9	X	43.30340	226.79069	275.53719	13.82149	0.1818770	0.23786754	2.5797598	20	3 11.2	18.9
271012 2002 YR_{17}	16.9	X	290.33073	319.72226	78.66875	6.35935	0.2088977	0.26652144	2.3913765	20	8 26.9	19.3
271013 2002 YN_{29}	16.0	X	81.53030	113.74273	299.28900	14.73374	0.1305928	0.23184387	2.6242526	20	1 17.3	19.0
271014 2002 YO_{30}	17.4	X	193.31102	31.15676	112.10001	5.75963	0.1710542	0.26172387	2.4205115	20	9 19.2	21.1
271015 2003 AW	16.5	X	108.67746	265.23137	141.32463	8.60166	0.2313183	0.23760769	2.5816402	20	2 29.8	20.1
271016 2003 AF_{2}	15.7	X	352.51169	239.26876	290.69188	16.21118	0.1538787	0.22949591	2.6421213	20	1 19.5	18.7
271017 2003 AV_{10}	16.3	X	128.80581	65.92761	344.36775	2.08435	0.2174038	0.24234873	2.5478599	20	3 23.0	20.0
271018 2003 AV_{15}	16.8	X	282.09091	24.62550	58.73388	7.07777	0.0870035	0.26852113	2.3794892	20	11 4.4	19.4
271019 2003 AY_{16}	17.3	X	121.92937	107.65949	83.95783	24.46282	0.0440425	0.37267096	1.9124306	20	10 7.4	20.2
271020 2003 AT_{20}	16.5	X	206.90303	63.51266	87.15704	9.48239	0.1751311	0.26479730	2.4017456	20	10 14.8	20.2
271021 2003 AB_{40}	16.8	X	208.49460	223.44008	250.81987	4.89023	0.1423068	0.25898418	2.4375520	20	8 24.8	20.5
271022 2003 AP_{44}	16.6	X	291.77199	359.36708	70.13091	6.80450	0.0863129	0.26821698	2.3812877	20	11 1.4	19.1
271023 2003 AD_{46}	16.6	X	248.90129	20.85299	80.90906	8.48484	0.1369366	0.26556390	2.3971214	20	10 5.5	19.7
271024 2003 AL_{54}	16.5	X	216.76321	47.98985	102.84244	10.57567	0.0952918	0.26543568	2.3978933	20	11 4.8	19.8
271025 2003 AQ_{64}	16.7	X	212.65115	270.36409	214.76344	5.89201	0.0984244	0.26211874	2.4180800	20	9 18.9	20.0
271026 2003 AP_{73}	17.3	X	217.45975	126.73943	317.80723	3.27889	0.1969220	0.25761372	2.4461893	20	7 23.7	21.0
271027 2003 AJ_{81}	16.6	X	42.26827	327.97040	46.57705	13.74935	0.2143020	0.27967817	2.3157784	20	—	—
271028 2003 AC_{88}	17.0	X	262.17454	348.18980	136.42973	6.83158	0.1399523	0.27235940	2.3570808	20	11 25.3	19.6
271029 2003 BU_{30}	17.1	X	265.04372	316.12455	129.66420	5.72457	0.0867497	0.26369599	2.4084282	20	10 12.5	19.9
271030 2003 BX_{30}	17.4	X	205.42745	24.74621	124.19289	2.80658	0.1305637	0.26252224	2.4156017	20	10 11.8	20.7
271031 2003 BD_{31}	16.6	X	349.32223	98.86927	284.78233	5.12049	0.2237656	0.26992651	2.3712228	20	12 21.9	18.6
271032 2003 BW_{34}	17.0	X	211.64239	317.78245	141.75642	4.12245	0.1348927	0.25798007	2.4438729	20	8 11.7	20.4
271033 2003 BO_{49}	16.9	X	17.14355	80.66047	105.74195	5.87622	0.2222834	0.23653231	2.5894592	20	4 4.6	18.9
271034 2003 BZ_{49}	16.5	X	131.87676	252.69284	297.84026	5.44464	0.0787401	0.25754603	2.4466178	20	9 13.0	20.0
271035 2003 BY_{56}	17.3	X	173.77097	240.00309	267.63129	1.54264	0.1432381	0.25800092	2.4437412	20	9 3.3	21.1
271036 2003 BV_{78}	16.7	X	182.18981	35.84936	85.72058	6.91171	0.0759436	0.25519060	2.4616498	20	8 14.4	20.2
271037 2003 CQ_{3}	16.7	X	253.19386	357.47425	136.12388	27.16628	0.0851168	0.37901343	1.8910354	20	—	—
271038 2003 CT_{10}	17.0	X	205.71814	40.63904	49.74086	4.25515	0.1925405	0.25467955	2.4649418	20	7 20.9	20.9
271039 2003 DD_{5}	16.4	X	126.78945	304.11365	301.23468	7.92712	0.1671114	0.26171547	2.4205633	20	11 20.5	20.4
271040 2003 DA_{17}	16.6	X	358.19208	132.77281	343.71709	4.47250	0.1544561	0.22409398	2.6844126	20	—	—

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271041 2003 EY_3	17.3	X	283.16494	98.29625	353.67750	19.81940	0.0641064	0.37827201	1.8935055	20	12 29.6	19.4
271042 2003 FC_3	17.2	X	196.85510	134.95316	58.84118	22.03619	0.0688561	0.37753539	1.8959677	20	—	—
271043 2003 FP_4	17.0	X	172.60603	173.01011	55.95801	23.71917	0.0482470	0.37758344	1.8958069	20	—	—
271044 2003 FK_6	16.2	X	14.43461	196.87739	11.87244	13.66841	0.1167113	0.23375224	2.6099500	20	4 23.2	19.0
271045 2003 FR_8	17.7	X	116.27348	263.73058	352.75184	18.57311	0.0443375	0.37430128	1.9068733	20	12 18.9	20.3
271046 2003 FT_8	17.2	X	260.96002	79.19224	3.36617	18.29972	0.0855749	0.37003886	1.9214887	20	10 16.0	18.9
271047 2003 FU_8	16.8	X	253.25384	226.69949	202.01575	20.91335	0.1034224	0.36590916	1.9359191	20	9 4.9	19.0
271048 2003 FN_9	16.0	X	250.00122	88.68540	101.68308	9.69416	0.2017803	0.21448254	2.7640215	20	—	—
271049 2003 FW_{25}	16.6	X	0.83473	238.45142	350.73397	3.45800	0.1554363	0.23582829	2.5946102	20	4 29.1	19.2
271050 2003 FW_{33}	16.6	X	241.79169	271.85535	30.31254	6.56054	0.1425454	0.22650151	2.6653565	20	2 24.8	20.8
271051 2003 FY_{68}	17.1	X	71.21195	57.07368	91.24790	6.21250	0.1452784	0.23592829	2.5938769	20	5 13.5	20.2
271052 2003 FQ_{74}	16.6	X	18.05047	82.28571	155.09635	9.78517	0.1604720	0.23672261	2.5880712	20	6 20.5	19.3
271053 2003 FW_{131}	16.4	X	304.49113	356.71997	13.96816	7.61234	0.0331770	0.25062674	2.4914439	20	8 31.7	19.4
271054 2003 GU	17.6	X	133.19650	52.99671	189.21204	22.44561	0.0447689	0.37314636	1.9108059	20	12 19.9	20.3
271055 2003 GB_5	16.7	X	53.66788	25.32857	184.77111	8.48436	0.1339063	0.23992493	2.5649907	20	7 8.8	20.0
271056 2003 GP_8	17.1	X	228.63337	89.16387	31.39923	21.43667	0.0677289	0.36860876	1.9264554	20	10 29.5	18.6
271057 2003 GH_{34}	16.1	X	312.68263	100.55797	152.86732	16.40348	0.1559866	0.22753868	2.6572509	20	3 12.4	19.4
271058 2003 GC_{36}	15.6	X	45.53516	12.55748	99.09561	13.27612	0.2322037	0.22886887	2.6469449	20	2 20.4	18.1
271059 2003 GG_{45}	16.7	X	299.15482	187.39710	52.31289	4.98695	0.1236465	0.22573674	2.6713731	20	2 11.2	20.3
271060 2003 GZ_{48}	16.3	X	202.89779	224.85634	161.41170	15.44797	0.0334150	0.23880595	2.5729970	20	5 5.6	20.1
271061 2003 GR_{56}	17.0	X	280.95415	233.95829	80.19559	5.35972	0.0522744	0.23272764	2.6176047	20	5 4.3	20.4
271062 2003 HF_{13}	17.1	X	59.04547	31.98465	195.09962	11.74517	0.1233372	0.24134312	2.5549325	20	8 6.2	20.6
271063 2003 HX_{15}	16.3	X	3.98378	93.81345	163.87684	28.28694	0.3336456	0.23249187	2.6193741	20	7 5.8	18.7
271064 2003 HJ_{17}	16.1	X	355.86808	232.76894	54.90517	13.34011	0.1733297	0.24011998	2.5636015	20	7 26.4	18.7
271065 2003 HF_{19}	17.5	X	357.48938	93.62944	201.52324	7.55005	0.2164972	0.23909362	2.5709328	20	8 7.4	19.8
271066 2003 HP_{27}	17.0	X	122.18635	149.73210	83.00445	23.42024	0.0440733	0.37152463	1.9163624	20	11 26.2	19.3
271067 2003 HF_{44}	17.4	X	359.76774	218.36486	58.21388	6.13965	0.2591748	0.23659521	2.5890002	20	7 20.5	19.2
271068 2003 JN_2	17.3	X	288.57991	31.03378	46.95159	22.26565	0.0783610	0.37040331	1.9202280	20	12 4.4	18.9
271069 2003 JH_4	16.9	X	227.80677	79.00008	66.19336	22.97476	0.0749017	0.37107687	1.9179037	20	12 6.1	18.6
271070 2003 JC_5	17.1	X	18.14900	111.24832	176.47497	4.22996	0.3138928	0.24009955	2.5637469	20	10 3.4	19.5
271071 2003 JN_8	16.0	X	46.36916	171.03001	71.45574	15.95854	0.0563722	0.23996407	2.5647118	20	8 6.5	19.5
271072 2003 KZ_6	16.3	X	3.01990	137.03414	172.98335	10.98730	0.1764125	0.24036266	2.5618757	20	9 12.2	18.6
271073 2003 KU_{13}	16.1	X	351.96890	282.97398	34.76312	17.42417	0.3653263	0.23911899	2.5707509	20	10 3.1	17.6
271074 2003 KB_{32}	14.9	X	345.96058	171.26716	149.95949	9.64121	0.2432000	0.12377148	3.9876987	20	8 2.2	19.1
271075 2003 LS_4	16.1	X	53.06503	152.25087	91.35408	16.07356	0.0750550	0.24177385	2.5518972	20	8 21.8	19.6
271076 2003 ML_3	15.4	X	59.13129	222.03594	64.71565	4.79444	0.2769952	0.24308327	2.5427247	20	11 17.9	19.1
271077 2003 MW_4	16.6	X	37.33506	143.50069	144.74294	4.88082	0.2798834	0.23949442	2.5680636	20	10 28.8	19.9
271078 2003 NU_4	16.3	X	267.84202	118.08731	160.74965	15.91535	0.2708794	0.21952337	2.7215452	20	2 6.8	20.9
271079 2003 OO_1	15.9	X	357.22921	332.14884	289.97761	10.84352	0.1635510	0.22923862	2.6440979	20	6 13.6	18.4
271080 2003 OU_7	16.1	X	37.28906	88.98919	149.53534	13.59544	0.2331618	0.23213153	2.6220842	20	8 8.9	19.1
271081 2003 OF_{10}	17.1	X	283.64135	29.17085	327.15955	6.34102	0.1468752	0.28463335	2.2888229	20	6 20.4	19.7
271082 2003 OB_{12}	16.4	X	353.15400	119.24920	197.85039	14.39883	0.1876010	0.23335175	2.6129354	20	8 28.1	19.1
271083 2003 ON_{23}	16.5	X	221.73725	102.69907	213.02988	3.35014	0.0936473	0.21126012	2.7920576	20	2 21.4	20.7
271084 2003 PE_8	15.5	X	86.20778	349.32664	318.40152	12.89666	0.1487076	0.18698027	3.0288111	20	12 15.9	20.4
271085 2003 QB_3	16.1	X	266.16911	318.57517	303.68555	5.75804	0.1165531	0.21018538	2.8015672	20	2 1.9	20.1
271086 2003 QD_4	16.4	X	226.11593	171.29236	169.18483	9.20341	0.1304959	0.21492958	2.7601876	20	3 27.1	20.7
271087 2003 QL_7	16.7	X	280.39656	349.79051	316.14386	1.96332	0.2825466	0.22002970	2.7173684	20	3 20.6	21.0
271088 2003 QR_7	15.7	X	355.12667	217.72445	154.96025	16.08304	0.2270458	0.17897252	3.1184957	20	11 19.2	19.4
271089 2003 QO_{13}	15.8	X	236.71095	174.54703	150.41485	14.03298	0.3247760	0.21362546	2.7714095	20	3 7.8	20.8
271090 2003 QC_{16}	16.5	X	197.34238	148.29134	192.48669	8.92612	0.1695345	0.20875995	2.8143057	20	2 26.9	21.3
271091 2003 QA_{20}	16.0	X	266.10607	325.84550	351.18823	11.47919	0.2511637	0.21773263	2.7364470	20	3 23.3	20.3
271092 2003 QE_{21}	15.7	X	13.72865	34.79952	355.62239	15.28460	0.2475644	0.18294548	3.0731819	20	—	—
271093 2003 QR_{22}	15.8	X	325.85426	143.71775	235.80136	4.37957	0.2276680	0.17370848	3.1811834	20	9 15.7	19.1
271094 2003 QT_{26}	15.6	X	3.08890	58.64717	334.47637	15.88331	0.2637651	0.18127058	3.0920831	20	—	—
271095 2003 QD_{27}	17.5	X	32.94012	90.59197	306.66469	6.16800	0.1758730	0.30620985	2.1800006	20	—	—
271096 2003 QH_{31}	16.0	X	348.77021	205.69424	180.76720	10.66623	0.2302269	0.18022937	3.1039807	20	11 23.1	19.3
271097 2003 QA_{72}	16.0	X	286.86205	231.81566	88.17280	5.15159	0.0927557	0.22187304	2.7022967	20	5 14.0	19.5
271098 2003 QJ_{75}	15.8	X	215.68554	145.09904	194.26978	9.14132	0.1685021	0.21153152	2.7896689	20	3 12.2	20.3
271099 2003 QB_{78}	15.7	X	265.02824	152.91463	200.64588	9.84186	0.3194306	0.21914069	2.7247126	20	5 1.6	20.0
271100 2003 QZ_{92}	15.7	X	190.03825	298.02155	30.63461	9.72099	0.1049333	0.20584739	2.8407901	20	2 11.4	20.2
271101 2003 QF_{94}	16.4	X	239.81188	168.99623	144.28397	6.10349	0.2000152	0.21386129	2.7693718	20	3 2.6	20.8
271102 2003 QD_{96}	16.2	X	9.49602	251.57177	26.95880	11.65123	0.2924492	0.23069939	2.6329245	20	8 30.8	18.5
271103 2003 QZ_{98}	16.1	X	175.45980	285.51569	340.87093	9.87519	0.1089232	0.19539767	2.9411904	20	—	—
271104 2003 QV_{100}	17.1	X	312.18109	110.16905	260.74279	3.91251	0.1097828	0.29134113	2.2535551	20	9 8.7	19.1
271105 2003 QT_{101}	16.0	X	205.82746	212.51838	128.24285	10.11060	0.2822657	0.20974008	2.8055312	20	3 8.1	21.1
271106 2003 QL_{114}	16.0	X	67.35777	334.14687	339.39819	7.37386	0.0783384	0.18186690	3.0853204	20	11 21.9	20.5
271107 2003 RK	15.7	X	311.88952	143.16024	181.42073	27.02889	0.3427597	0.22772821	2.6557763	20	5 17.9	19.2
271108 2003 RP_4	15.5	X	26.61862	267.92345	134.13464	16.18972	0.1732697	0.18636836	3.0354373	20	—	—
271109 2003 RV_{10}	16.1	X	1.08057	119.27765	185.50518	29.89648	0.2881313	0.23304503	2.6152276	20	9 11.5	18.3
271110 2003 RO_{11}	16.5	X	260.57275	141.20119	167.38684	3.45095	0.0788441	0.21370754	2.7706999	20	3 28.6	20.4
271111 2003 RH_{17}	16.4	X	284.86718	297.00526	336.08489	8.11134	0.1029385	0.21278832	2.7786735	20	3 8.0	20.3
271112 2003 RK_{18}	16.2	X	239.32393	177.02270	167.18466	9.89661	0.2099791	0.21767377	2.7369402	20	4 8.4	20.7
271113 2003 RR_{22}	15.5	X	274.01269	54.13305	257.90976	11.82519	0.2031210	0.21727814	2.7402616	20	3 26.6	19.9
271114 2003 RV_{25}	15.7	X	39.45736	13.16072	318.84002	17.15747	0.3036682	0.18051815	3.1006694	20	12 14.2	20.4
271115 2003 SQ_2	16.7	X	46.93427	82.90981	293.52843	1.43547	0.0909155	0.18748014	3.0234250	20	—	—
271116 2003 ST_2	15.9	X	258.61080	115.39287	187.85676	5.86850	0.0888740	0.15289690	3.4636734	20	3 22.4	20.8
271117 2003 SP_5	16.6	X	239.29941	297.65522	359.52699	4.19908	0.0614181	0.20839076	2.8176286	20	2 21.9	20.6
271118 2003 SB_6	16.1	X	49.26054	276.53518	49.22317	3.93409	0.1811170	0.17931263	3.1145512	20	11 30.5	20.4
271119 2003 SE_8	17.5	X	285.67068	187.61633	185.89757	6.05901	0.1359709	0.28428893	2.2906712	20	7 20.5	19.9
271120 2003 ST_{15}	16.5	X	239.70708	121.65423	177.53186	9.26860	0.2085535	0.21024077	2.8010751	20	2 12.4	21.2

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		°	°	°	°		°				
271121 2003 SB_{22}	16.3	X	64.60754	42.01742	343.85309	9.67183	0.1189074	0.19199142	2.9758760	20	—	—
271122 2003 SB_{30}	16.2	X	237.38584	157.62952	178.49710	6.52077	0.0515574	0.21410695	2.7672530	20	4 8.7	20.2
271123 2003 SN_{42}	15.8	X	137.89740	168.85504	198.43823	15.09665	0.1462284	0.20359620	2.8616923	20	2 1.6	20.4
271124 2003 SM_{43}	15.9	X	77.98442	40.91136	317.87357	6.89360	0.1774885	0.19113756	2.9847321	20	—	—
271125 2003 SK_{47}	15.7	X	150.67659	154.28237	227.33663	4.17216	0.1017413	0.20472006	2.8512094	20	2 29.4	20.1
271126 2003 SE_{53}	17.2	X	18.44643	64.94709	317.20974	8.14196	0.1559226	0.29906395	2.2145900	20	—	—
271127 2003 SQ_{57}	16.0	X	322.86096	297.57223	11.82764	11.30384	0.3176587	0.22480086	2.6787822	20	5 14.7	18.7
271128 2003 SM_{62}	16.1	X	240.44101	284.27890	63.47619	5.57515	0.1276705	0.21580469	2.7527206	20	4 20.2	20.3
271129 2003 SU_{62}	15.7	X	266.32712	331.78122	311.31230	9.39731	0.1611049	0.21184651	2.7869030	20	2 20.8	20.1
271130 2003 SV_{63}	15.8	X	330.73173	55.41840	302.91227	16.30264	0.1506878	0.17255061	3.1953987	20	8 27.4	19.8
271131 2003 SA_{71}	16.3	X	5.53566	109.29236	293.42531	8.47555	0.1079251	0.18439123	3.0570970	20	12 28.7	20.1
271132 2003 SJ_{74}	17.7	X	49.81215	34.40031	334.47641	4.38095	0.1446187	0.30424292	2.1893863	20	—	—
271133 2003 SU_{76}	15.9	X	95.57135	160.01459	201.00560	9.95666	0.1133593	0.19181434	2.9777072	20	—	—
271134 2003 SL_{78}	16.8	X	265.38540	107.08701	211.51671	6.67922	0.2798145	0.21742225	2.7390506	20	3 21.9	21.4
271135 2003 SB_{106}	15.5	X	46.00583	80.46084	290.48048	8.44410	0.1055820	0.18581276	3.0414851	20	—	—
271136 2003 SW_{111}	16.4	X	233.70943	99.41901	206.12150	8.28886	0.1469069	0.20967491	2.8061124	20	2 17.0	21.0
271137 2003 SS_{113}	16.1	X	349.30802	353.01257	259.00345	8.71077	0.1906819	0.22331068	2.6906862	20	5 7.9	18.7
271138 2003 ST_{118}	16.6	X	170.90798	334.55483	13.11272	5.48693	0.0764742	0.20255604	2.8714808	20	2 11.8	20.9
271139 2003 SX_{123}	15.6	X	339.41679	92.46556	308.47794	8.56049	0.0995792	0.18073332	3.0982079	20	11 12.4	19.6
271140 2003 SG_{132}	15.3	X	254.90838	332.13213	199.16410	11.24183	0.0149932	0.18463863	3.0543654	20	—	—
271141 2003 SN_{134}	16.0	X	40.31506	200.25734	255.99209	4.62676	0.0279112	0.20073996	2.8887736	20	1 9.3	19.9
271142 2003 SL_{139}	15.7	X	246.96309	78.05534	208.14782	5.65532	0.0355088	0.20536126	2.8452714	20	2 16.8	19.8
271143 2003 SM_{144}	14.6	X	323.19840	97.05803	306.04502	12.07263	0.2865920	0.17498969	3.1656367	20	10 3.3	17.8
271144 2003 SB_{155}	18.3	X	170.78220	47.90198	289.08490	1.77210	0.2087048	0.32019165	2.1160669	20	1 22.8	21.2
271145 2003 SV_{158}	15.8	X	133.17238	214.67178	177.81753	15.36926	0.1488140	0.20456742	2.8526276	20	2 29.4	20.2
271146 2003 ST_{161}	16.0	X	77.07963	212.83953	168.79406	15.76265	0.0937335	0.19288484	2.9666796	20	—	—
271147 2003 SF_{162}	15.6	X	25.48518	9.11542	24.81846	17.09313	0.1211250	0.18300878	3.0724731	20	—	—
271148 2003 SW_{164}	15.6	X	9.31251	229.16622	181.77530	10.73543	0.0826415	0.18338267	3.0682956	20	—	—
271149 2003 SS_{166}	15.8	X	49.15397	170.12971	239.84652	8.43562	0.1844647	0.19056166	2.9907425	20	—	—
271150 2003 SL_{169}	15.6	X	230.80971	311.48761	25.17421	8.30767	0.2342920	0.21280189	2.7785554	20	3 22.2	20.3
271151 2003 SZ_{169}	15.6	X	259.05742	106.69621	206.41361	13.43348	0.0744395	0.21328101	2.7743927	20	3 31.2	19.7
271152 2003 SO_{170}	17.5	X	321.98219	322.13625	7.99006	3.42862	0.1364692	0.28366572	2.2940250	20	7 23.6	19.4
271153 2003 SV_{176}	15.8	X	53.67918	225.70276	171.57151	10.29705	0.0847998	0.19068844	2.9894168	20	—	—
271154 2003 SL_{178}	16.1	X	34.19855	115.40799	238.03720	5.43338	0.1357342	0.18061061	3.0996111	20	12 9.7	20.2
271155 2003 SE_{195}	17.7	X	128.70834	334.02432	339.39879	4.75306	0.1867499	0.30927720	2.1655628	20	—	—
271156 2003 SV_{197}	17.6	X	287.15621	304.20301	116.61587	2.24593	0.1847359	0.28986998	2.2611735	20	10 2.8	19.3
271157 2003 SE_{210}	15.7	X	97.88245	142.27692	195.83405	7.67011	0.1030395	0.19018119	2.9947300	20	—	—
271158 2003 SY_{211}	16.3	X	225.11371	196.59372	113.96240	9.62642	0.2108242	0.20967635	2.8060996	20	2 17.2	21.1
271159 2003 SY_{225}	15.4	X	160.16871	137.29155	204.82431	7.83280	0.0738260	0.19741567	2.9211126	20	1 21.4	19.9
271160 2003 SQ_{228}	16.3	X	132.75176	331.10116	6.65213	3.68883	0.1443023	0.19590927	2.9360676	20	—	—
271161 2003 SC_{229}	16.1	X	65.90447	1.02146	27.91840	11.78877	0.0309924	0.18920898	3.0049798	20	—	—
271162 2003 SS_{230}	15.5	X	9.64066	220.62299	160.33706	10.97703	0.0918174	0.18290531	3.0736317	20	12 6.5	19.7
271163 2003 SK_{231}	16.1	X	182.31087	320.39393	63.21123	5.24285	0.0821693	0.21088476	2.7953697	20	4 7.3	20.3
271164 2003 SW_{235}	15.5	X	324.38125	77.64994	3.80682	25.24431	0.2494547	0.17949839	3.1124020	20	12 5.8	19.1
271165 2003 SV_{238}	15.8	X	120.61369	293.08915	344.33573	8.01822	0.0356369	0.18412156	3.0600812	20	12 5.3	20.4
271166 2003 SE_{243}	17.2	X	332.06495	331.72870	299.57783	1.05541	0.1715999	0.22033578	2.7148512	20	5 4.3	20.0
271167 2003 SS_{250}	15.4	X	52.80881	5.84040	35.78005	14.93543	0.2028002	0.18737277	3.0245799	20	—	—
271168 2003 SV_{254}	16.0	X	17.39974	26.67623	10.77626	11.84075	0.1324362	0.18410529	3.0602615	20	—	—
271169 2003 SW_{254}	15.5	X	5.74264	249.13009	187.66893	10.73010	0.0784189	0.18853039	3.0121861	20	—	—
271170 2003 SM_{260}	16.1	X	321.62364	327.92045	224.77926	4.57372	0.0513354	0.20346879	2.8628869	20	1 22.3	19.9
271171 2003 SF_{264}	15.9	X	16.49138	251.63640	101.63989	2.42833	0.1270758	0.17829937	3.1263397	20	11 14.0	19.9
271172 2003 SA_{265}	16.0	X	61.85380	281.04042	101.07733	5.52486	0.0752947	0.18986754	2.9980272	20	—	—
271173 2003 SM_{265}	16.6	X	278.04486	195.31452	256.84227	2.97953	0.1236251	0.17732518	3.1377797	20	10 13.5	20.8
271174 2003 SW_{269}	17.1	X	1.59124	301.82118	101.66936	6.69579	0.1314409	0.29951360	2.2123730	20	—	—
271175 2003 SZ_{269}	17.9	X	45.08738	221.39362	157.24641	8.44716	0.2088794	0.30343056	2.1932922	20	—	—
271176 2003 SO_{273}	15.8	X	57.19172	188.40618	199.91995	4.80902	0.1580032	0.18865798	3.0108279	20	—	—
271177 2003 SJ_{275}	15.9	X	246.11709	284.96218	35.98852	4.86399	0.0917529	0.21049724	2.7987994	20	3 27.3	20.0
271178 2003 SX_{278}	16.2	X	236.22890	329.35168	346.45263	8.57756	0.2497618	0.20975991	2.8053543	20	2 29.1	21.1
271179 2003 SH_{281}	15.5	X	261.03252	110.79917	141.67342	6.57936	0.0441741	0.20094498	2.8868083	20	1 24.3	19.5
271180 2003 SM_{282}	15.7	X	59.33875	15.80932	20.87442	10.44137	0.1090708	0.19029934	2.9934903	20	—	—
271181 2003 SZ_{284}	15.9	X	242.18584	355.41103	307.86042	5.95280	0.1233794	0.20906060	2.8116068	20	2 25.1	20.2
271182 2003 SA_{285}	16.4	X	281.68222	307.76519	336.90928	8.05863	0.2300215	0.21461437	2.7628895	20	3 2.8	20.4
271183 2003 SW_{297}	16.8	X	237.20612	118.87172	215.22610	19.49966	0.2483583	0.21397014	2.7684324	20	3 17.5	21.8
271184 2003 SF_{298}	15.9	X	171.60503	321.52315	41.28873	7.08640	0.0785525	0.20579350	2.8412860	20	3 2.9	20.2
271185 2003 SP_{300}	16.0	X	120.48656	329.03787	310.49176	7.23886	0.0484499	0.18464909	3.0542501	20	12 9.2	20.5
271186 2003 ST_{303}	16.2	X	249.53704	134.87805	175.86987	8.81970	0.2113691	0.21137160	2.7910758	20	3 5.9	20.7
271187 2003 SJ_{304}	15.2	X	303.80824	258.33898	186.79439	15.96926	0.2122232	0.17642804	3.1484078	20	11 6.4	18.8
271188 2003 SK_{305}	15.4	X	86.26537	133.69546	250.29403	9.58519	0.0715971	0.19195673	2.9762346	20	—	—
271189 2003 SC_{309}	15.1	X	142.97291	350.25453	317.92630	12.40729	0.0984396	0.19089634	2.9872459	20	—	—
271190 2003 SN_{309}	18.4	X	103.24821	59.92447	302.51149	1.77101	0.1687033	0.31229606	2.1515844	20	—	—
271191 2003 SQ_{310}	15.4	X	46.95299	303.86802	84.67890	11.62065	0.1379865	0.18718463	3.0266063	20	—	—
271192 2003 SG_{315}	15.5	X	189.27075	225.85191	113.52669	16.15349	0.1532112	0.20496047	2.8489794	20	2 23.6	20.3
271193 2003 SH_{320}	15.5	X	151.38848	275.61630	308.64437	8.77302	0.0602963	0.18152857	3.0891528	20	11 3.5	20.3
271194 2003 SA_{321}	16.5	X	316.03175	236.37714	61.51593	7.57234	0.2201729	0.22052158	2.7133261	20	5 7.1	19.5
271195 2003 SF_{321}	16.7	X	145.86225	293.96952	46.50862	2.67292	0.0929784	0.19804802	2.9148914	20	1 8.2	21.0
271196 2003 SM_{321}	15.5	X	135.54528	328.18128	348.08874	9.13650	0.0900641	0.18974197	2.9993497	20	—	—
271197 2003 SB_{325}	16.2	X	329.63261	58.56336	205.29575	10.49879	0.0693317	0.21785050	2.7354599	20	5 3.4	19.5
271198 2003 SE_{328}	16.4	X	151.42504	351.55729	315.37055	6.87757	0.0371010	0.19501915	2.9449949	20	—	—
271199 2003 SM_{329}	16.1	X	194.30285	71.08605	225.84588	6.81813	0.0591992	0.19552083	2.9399551	20	1 4.4	20.5
271200 2003 SO_{329}	15.8	X	44.26459	233.22946	173.78108	10.70620	0.0930997	0.18789929	3.0189271	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		°	°	°	°		°				
271201 2003 SE_{335}	16.0	X	96.45634	253.17493	174.66460	11.10185	0.0885450	0.20178013	2.8788372	20	2 22.9	19.9
271202 2003 SS_{352}	16.3	X	69.81363	167.64466	168.29512	2.60499	0.2037892	0.18524871	3.0476558	20	—	—
271203 2003 SX_{354}	16.2	X	323.47187	70.04091	328.23140	10.92779	0.0967786	0.17792102	3.1307703	20	10 11.7	20.3
271204 2003 SB_{365}	16.3	X	172.49382	105.45281	273.46891	2.68957	0.1119530	0.20910290	2.8112276	20	3 19.9	20.8
271205 2003 SZ_{376}	15.9	X	93.00619	137.86777	178.30332	9.46787	0.0735824	0.18581354	3.0414766	20	12 25.2	20.6
271206 2003 SU_{385}	15.9	X	336.14374	358.66829	166.74036	10.15223	0.1014270	0.19821841	2.9132207	20	1 2.7	19.8
271207 2003 SQ_{389}	16.1	X	216.46896	53.22787	65.38686	5.44668	0.1130892	0.16989517	3.2286083	20	9 7.1	21.1
271208 2003 SR_{392}	16.0	X	52.78477	232.94511	162.36504	10.37096	0.1116181	0.18891394	3.0081077	20	—	—
271209 2003 SW_{395}	15.6	X	91.65796	184.81679	81.57889	10.37331	0.0594957	0.17493767	3.1662643	20	10 26.5	20.3
271210 2003 SW_{410}	16.4	X	21.90899	322.16381	208.49429	3.49058	0.0416191	0.20931724	2.8093082	20	3 17.1	20.0
271211 2003 SY_{428}	16.3	X	292.09201	33.41576	219.73787	3.44084	0.1507034	0.21176423	2.7876248	20	2 13.9	20.2
271212 2003 TC	16.1	X	27.85941	173.34368	213.08397	5.18089	0.0625102	0.18158010	3.0885683	20	12 31.0	20.4
271213 2003 TL_{6}	15.7	X	239.64711	280.82818	40.85450	20.85938	0.1379881	0.21066603	2.7973043	20	3 26.1	20.3
271214 2003 TX_{8}	15.7	X	216.19594	310.04673	51.00468	14.40164	0.2075126	0.21298013	2.7770049	20	4 12.1	20.5
271215 2003 TT_{12}	16.3	X	25.38099	3.73612	29.57517	0.56890	0.1740091	0.18401405	3.0612730	20	—	—
271216 2003 TO_{13}	15.9	X	124.33228	206.70061	161.42620	5.21037	0.1397327	0.19662466	2.9289417	20	1 22.4	20.1
271217 2003 TR_{15}	15.7	X	54.87140	283.71607	85.54579	9.99076	0.1405291	0.18490347	3.0514483	20	—	—
271218 2003 TV_{18}	15.6	X	19.17830	66.42341	4.58984	8.43538	0.1278291	0.18854863	3.0119919	20	—	—
271219 2003 TH_{20}	15.8	X	107.86723	17.53882	327.17468	9.22291	0.0968792	0.19125116	2.9835500	20	—	—
271220 2003 TA_{29}	16.5	X	32.85833	103.37439	331.28700	1.65873	0.0653512	0.19132628	2.9827690	20	—	—
271221 2003 TM_{35}	16.4	X	20.46214	184.84912	229.22929	8.42442	0.1329031	0.18554559	3.0444040	20	—	—
271222 2003 TY_{37}	15.4	X	353.37244	214.24229	261.69710	8.41839	0.0443438	0.19157987	2.9801363	20	—	—
271223 2003 TP_{38}	16.4	X	311.70262	94.94829	318.76522	8.01367	0.0685962	0.17516166	3.1635644	20	10 16.2	20.7
271224 2003 TE_{45}	16.0	X	194.51907	215.35725	316.25217	8.15332	0.1479136	0.17376982	3.1804346	20	10 9.9	21.2
271225 2003 TN_{47}	15.8	X	335.24156	110.64425	285.19347	8.55046	0.0930298	0.17841780	3.1249562	20	10 29.3	19.8
271226 2003 TL_{48}	16.8	X	159.11527	48.38645	319.64435	4.95519	0.0862725	0.20481391	2.8503384	20	2 21.8	20.9
271227 2003 TY_{52}	15.6	X	199.68316	256.45431	35.58207	15.50597	0.1139308	0.19809829	2.9143983	20	1 6.9	20.4
271228 2003 TU_{54}	15.7	X	130.89860	188.94172	63.65739	8.38819	0.1096772	0.17993914	3.1073174	20	11 20.5	20.5
271229 2003 TQ_{55}	16.0	X	14.46027	261.19492	167.67417	11.84311	0.0929339	0.18699100	3.0286953	20	—	—
271230 2003 TA_{59}	15.9	X	132.22436	265.45350	40.10779	9.89222	0.0603789	0.18610726	3.0382757	20	—	—
271231 2003 UE_{13}	15.0	X	44.66830	329.36380	62.34807	17.48911	0.1722570	0.18499054	3.0504907	20	—	—
271232 2003 UZ_{13}	15.8	X	319.51502	40.34814	226.73094	12.58951	0.1218866	0.21444099	2.7643785	20	4 12.7	19.2
271233 2003 UM_{16}	15.4	X	98.78286	156.87250	204.76633	10.80719	0.1454928	0.18981567	2.9985734	20	—	—
271234 2003 UM_{17}	15.3	X	156.87755	68.91588	271.42304	9.92711	0.0512867	0.19517986	2.9433781	20	1 14.7	19.6
271235 Bellay	16.2	X	221.28223	304.93448	359.34284	1.59414	0.0390044	0.20112953	2.8850421	20	2 12.1	20.2
271236 2003 UQ_{30}	16.3	X	118.23283	43.51633	325.16739	5.19594	0.0914326	0.19720486	2.9231940	20	1 11.2	20.5
271237 2003 UZ_{43}	16.7	X	117.91832	57.23128	279.50342	0.40723	0.0522249	0.19069760	2.9893211	20	—	—
271238 2003 UY_{53}	15.5	X	57.40095	46.74403	357.21760	10.51334	0.1523914	0.18843202	3.0132344	20	—	—
271239 2003 UU_{61}	15.5	X	67.73366	218.26183	153.22137	9.15287	0.1235689	0.18830261	3.0146148	20	—	—
271240 2003 UR_{62}	15.7	X	37.10734	214.65129	166.73655	13.38976	0.1965767	0.18474771	3.0531631	20	—	—
271241 2003 UM_{64}	15.8	X	18.22502	309.63488	70.05568	9.83455	0.2776636	0.18090849	3.0962077	20	—	—
271242 2003 UP_{65}	15.9	X	76.09815	227.91449	147.39308	9.35627	0.1034008	0.18896212	3.0075964	20	—	—
271243 2003 UK_{71}	15.9	X	57.25138	354.86960	47.09099	2.77636	0.0327105	0.19137911	2.9822201	20	—	—
271244 2003 UM_{71}	16.4	X	67.00960	222.62572	163.56722	2.37073	0.0795642	0.19042316	2.9921925	20	—	—
271245 2003 UM_{73}	15.1	X	9.74679	181.69186	218.40373	9.09852	0.0954685	0.17986918	3.1081232	20	12 27.4	19.2
271246 2003 UT_{75}	15.5	X	46.35636	154.51568	247.38328	7.76075	0.1263099	0.18836852	3.0139115	20	—	—
271247 2003 UB_{77}	15.7	X	87.23545	36.04586	348.49220	11.11316	0.0756076	0.19132997	2.9827307	20	—	—
271248 2003 UZ_{77}	15.9	X	90.93210	146.32768	232.94868	8.04239	0.1065023	0.19168933	2.9790017	20	—	—
271249 2003 UN_{78}	15.8	X	3.59959	93.67752	277.50463	8.57463	0.0628627	0.17843594	3.1247444	20	11 8.3	20.0
271250 2003 UG_{80}	15.7	X	47.64726	358.73952	48.13600	9.42046	0.0921612	0.18979767	2.9987629	20	—	—
271251 2003 UE_{92}	16.1	X	353.23446	227.45357	122.32685	6.38178	0.1349127	0.17202536	3.2018997	20	10 5.1	19.9
271252 2003 UH_{93}	16.0	X	210.40095	97.66250	251.49619	3.80101	0.1301698	0.20873594	2.8145215	20	3 20.0	20.6
271253 2003 UP_{97}	15.4	X	162.68334	265.55234	36.99496	11.73582	0.0862486	0.19156907	2.9802483	20	—	—
271254 2003 UT_{102}	15.2	X	1.27382	357.36746	38.91695	11.41879	0.0707550	0.17984686	3.1083802	20	12 7.5	19.3
271255 2003 UW_{104}	15.4	X	276.27165	298.70036	211.18776	16.59228	0.1451090	0.18218784	3.0816960	20	12 20.3	19.6
271256 2003 UK_{106}	15.7	X	246.17991	181.53092	40.95027	10.53730	0.0247886	0.19174987	2.9783747	20	—	—
271257 2003 UA_{109}	16.2	X	291.20700	247.51404	226.00393	3.36576	0.0406069	0.17823346	3.1271104	20	12 8.1	20.3
271258 2003 UH_{110}	15.4	X	312.66775	42.79078	47.85014	17.19970	0.1080134	0.17765508	3.1338939	20	12 2.8	19.4
271259 2003 UQ_{122}	15.3	X	25.96628	258.63415	130.43144	15.73287	0.1965488	0.18066799	3.0989547	20	—	—
271260 2003 UD_{128}	15.6	X	338.05869	92.28657	15.26685	15.80065	0.0723818	0.18519273	3.0482699	20	—	—
271261 2003 UP_{141}	15.8	X	130.61314	245.77115	107.44424	6.73228	0.0805122	0.19666987	2.9284928	20	1 4.9	19.9
271262 2003 UR_{142}	15.2	X	21.61714	140.21511	249.54261	10.17627	0.0723052	0.18039170	3.1021183	20	12 27.9	19.4
271263 2003 UU_{147}	16.1	X	359.14629	301.61721	96.18763	6.70231	0.1313271	0.17837483	3.1254580	20	12 13.8	19.9
271264 2003 UW_{150}	16.1	X	13.08764	315.51927	83.82984	3.13631	0.1787558	0.18256794	3.0774172	20	—	—
271265 2003 UU_{158}	15.7	X	186.88809	263.51337	44.68664	9.29028	0.2026572	0.19636647	2.9315085	20	1 17.3	20.8
271266 2003 UA_{168}	15.5	X	59.81730	343.09187	56.15027	12.02667	0.0459915	0.18836807	3.0139163	20	—	—
271267 2003 UC_{171}	16.1	X	104.83150	197.33551	201.14465	8.33378	0.1001850	0.19646484	2.9305299	20	1 29.5	20.3
271268 2003 UR_{172}	15.5	X	172.94322	156.74574	169.94891	10.37964	0.0637975	0.19588187	2.9363414	20	1 16.8	20.0
271269 2003 UG_{183}	15.5	X	306.83424	54.75391	39.55662	16.78286	0.2163726	0.17703120	3.1412524	20	11 19.1	18.9
271270 2003 UT_{188}	15.4	X	16.31454	36.15138	9.56217	11.47335	0.1008817	0.18213955	3.0822407	20	—	—
271271 2003 UW_{190}	17.6	X	128.81551	154.96463	184.36988	3.95458	0.2425571	0.31199262	2.1529792	20	—	—
271272 2003 UD_{192}	15.3	X	0.29053	175.27345	228.72821	8.81099	0.0975240	0.17950486	3.1123272	20	12 19.5	19.3
271273 2003 UG_{198}	15.9	X	336.05853	236.46222	194.50573	8.36004	0.1069700	0.18006312	3.1058909	20	12 18.0	19.8
271274 2003 UQ_{200}	15.4	X	276.02916	243.48813	210.21110	15.51198	0.0962432	0.17461259	3.1701928	20	10 16.6	19.7
271275 2003 UN_{201}	16.1	X	134.62925	160.78315	204.69253	9.99644	0.2048628	0.19722293	2.9230154	20	2 3.7	20.8
271276 2003 UD_{209}	16.0	X	47.62104	87.07716	268.19442	2.79172	0.2511567	0.18129873	3.0917631	20	—	—
271277 2003 UY_{210}	15.8	X	303.67257	84.15929	35.63943	10.32099	0.1958846	0.17768498	3.1335424	20	12 21.0	19.3
271278 2003 UC_{217}	16.6	X	244.70619	94.07583	224.85601	8.26393	0.1930262	0.21058430	2.7980280	20	3 10.5	21.3
271279 2003 UQ_{225}	14.7	X	46.62318	319.54323	52.65694	18.05369	0.2105075	0.18000774	3.1065279	20	—	—
271280 2003 UB_{229}	17.4	X	32.16689	354.11184	9.30526	4.20972	0.1415639	0.29759389	2.2218771	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		°	°	°	°		°				
271281 2003 UD_{232}	15.8	X	2.83979	63.71543	31.86159	9.59488	0.1245841	0.18751927	3.0230045	20	—	—
271282 2003 US_{233}	15.8	X	47.69987	34.85898	27.16506	8.41764	0.0912634	0.18865597	3.0108493	20	—	—
271283 2003 UU_{238}	16.0	X	11.92321	218.12640	212.53780	5.00858	0.1175054	0.18680547	3.0307003	20	—	—
271284 2003 UP_{240}	15.6	X	130.44007	52.54268	299.36196	4.06553	0.1387610	0.19352976	2.9600852	20	1 10.9	20.0
271285 2003 UU_{244}	16.2	X	325.77514	245.80313	192.21987	9.69093	0.2078579	0.17761499	3.1343655	20	12 10.6	19.5
271286 2003 UF_{245}	15.5	X	129.89527	319.46681	18.08449	12.27020	0.0657650	0.19137984	2.9822125	20	—	—
271287 2003 UM_{247}	15.8	X	230.62791	269.04820	62.98455	8.20505	0.2311542	0.21011739	2.8021716	20	3 18.9	20.7
271288 2003 UD_{257}	15.5	X	306.58244	43.14003	78.42898	6.46617	0.2019134	0.17918122	3.1160737	20	12 29.9	18.7
271289 2003 UW_{264}	17.4	X	104.59314	276.15448	110.45799	5.82190	0.1602407	0.31198801	2.1530004	20	1 3.1	19.2
271290 2003 UT_{268}	16.2	X	101.72725	276.78215	78.79915	1.03979	0.2614577	0.18993913	2.9972739	20	—	—
271291 2003 UA_{270}	16.3	X	307.85249	187.75846	279.82453	4.51991	0.1115014	0.17939264	3.1136250	20	12 19.5	20.0
271292 2003 UA_{271}	15.9	X	355.01547	93.09637	351.22442	10.96378	0.1347741	0.18430948	3.0580008	20	—	—
271293 2003 UB_{272}	15.7	X	125.95594	305.71170	38.22773	10.38009	0.0990559	0.19161399	2.9797826	20	—	—
271294 2003 UQ_{273}	15.4	X	359.72254	353.93543	70.89284	10.81765	0.1152039	0.18133010	3.0914065	20	—	—
271295 2003 US_{277}	15.6	X	329.67971	64.38336	31.50971	15.60083	0.2094321	0.18277082	3.0751394	20	—	—
271296 2003 UD_{278}	15.8	X	58.24795	34.19645	14.42665	10.08683	0.1002356	0.19033844	2.9930804	20	—	—
271297 2003 UE_{298}	16.5	X	240.11604	48.33222	243.96064	0.94306	0.0378015	0.20236177	2.8733183	20	2 18.1	20.7
271298 2003 UD_{299}	16.5	X	81.51708	118.27678	221.36077	1.64692	0.1288422	0.18496966	3.0507203	20	—	—
271299 2003 UC_{304}	16.2	X	79.04348	51.70095	304.21950	3.24235	0.1194602	0.18658342	3.0331043	20	—	—
271300 2003 UC_{318}	17.1	X	282.36008	17.55085	272.96037	0.59619	0.2190422	0.21537448	2.7563851	20	3 12.1	21.0
271301 2003 UY_{321}	17.8	X	32.45486	41.19273	21.73347	3.66608	0.0419358	0.30777010	2.1726266	20	—	—
271302 2003 UA_{337}	16.7	X	270.00283	70.91157	182.48045	4.63805	0.0561071	0.20419524	2.8560928	20	2 2.2	20.7
271303 2003 UH_{338}	16.8	X	209.54548	237.89763	35.45253	2.34858	0.0452261	0.19726800	2.9225703	20	—	—
271304 2003 UX_{346}	16.2	X	53.17556	274.06371	30.67360	2.69798	0.1554024	0.17812293	3.1284040	20	11 6.1	20.7
271305 2003 UJ_{348}	16.5	X	321.26289	134.97505	83.65705	3.22371	0.0659167	0.20578806	2.8413360	20	2 23.7	20.2
271306 2003 UZ_{350}	16.5	X	279.33547	84.74220	39.38127	10.94008	0.1283156	0.18042411	3.1017467	20	11 23.9	20.6
271307 2003 UJ_{353}	15.6	X	177.94686	111.16322	172.02736	9.62475	0.1101569	0.19324464	2.9629961	20	—	—
271308 2003 UB_{354}	17.1	X	325.51756	217.45768	75.81652	5.08727	0.2631547	0.22215963	2.6999722	20	5 11.0	19.6
271309 2003 UZ_{356}	16.8	X	229.46665	358.58664	297.27318	0.99160	0.0418111	0.20093154	2.8869370	20	2 10.5	21.1
271310 2003 UH_{402}	16.3	X	352.60073	271.06570	192.40781	10.99505	0.0764842	0.19157574	2.9801792	20	—	—
271311 2003 UW_{414}	15.8	X	37.93193	31.51853	349.47179	9.14913	0.0515176	0.18083149	3.0970865	20	—	—
271312 2003 VO_{3}	15.8	X	113.43412	264.29104	49.19610	9.71008	0.0862248	0.18261779	3.0768571	20	—	—
271313 2003 VP_{6}	16.3	X	177.20228	283.69434	26.51964	2.44367	0.0194241	0.19145769	2.9814041	20	1 1.1	20.6
271314 2003 WE_{1}	17.8	X	326.07615	356.70998	64.64831	5.29999	0.1347705	0.29315150	2.2442676	20	12 30.2	19.6
271315 2003 WJ_{4}	17.3	X	326.17744	325.15773	334.29342	7.13853	0.1138299	0.27563513	2.3383688	20	6 11.8	19.7
271316 2003 WW_{4}	15.9	X	355.37869	38.22384	8.59038	7.74878	0.0615588	0.17763023	3.1341863	20	12 11.7	20.1
271317 2003 WG_{5}	16.4	X	340.94553	62.50593	2.48309	3.80421	0.2136236	0.17813575	3.1282539	20	12 24.7	19.7
271318 2003 WR_{6}	15.3	X	317.04942	56.74625	45.63594	20.41710	0.0987069	0.17851368	3.1238371	20	12 25.7	19.5
271319 2003 WV_{9}	17.1	X	277.58326	37.82456	311.80628	6.20910	0.1450388	0.27593652	2.3366658	20	5 31.2	20.0
271320 2003 WE_{12}	14.7	X	15.62790	320.00764	40.81994	19.49313	0.1272174	0.17328754	3.1863330	20	11 17.5	18.8
271321 2003 WE_{21}	16.0	X	123.09522	309.85394	29.13751	10.84745	0.0756019	0.18737211	3.0245870	20	—	—
271322 2003 WQ_{27}	15.6	X	73.03399	352.57746	28.02246	10.11322	0.0777418	0.18651065	3.0338933	20	—	—
271323 2003 WT_{28}	15.8	X	268.67641	293.66375	16.08655	11.08420	0.2463448	0.21059946	2.7978937	20	3 21.5	20.3
271324 2003 WY_{30}	16.0	X	317.53591	58.06196	10.87138	5.06896	0.1291035	0.17419965	3.1752009	20	11 12.3	19.8
271325 2003 WD_{31}	15.5	X	12.88726	168.95470	248.85691	8.54924	0.0864019	0.18370329	3.0647244	20	—	—
271326 2003 WC_{33}	17.4	X	180.82261	194.23756	287.82737	2.42134	0.1767453	0.27717970	2.3296737	20	8 8.4	21.2
271327 2003 WQ_{33}	15.8	X	38.09380	11.99403	41.90560	5.14027	0.2524765	0.18498963	3.0505007	20	—	—
271328 2003 WV_{35}	16.0	X	69.24882	339.05797	32.05047	7.28595	0.0949521	0.18469313	3.0537646	20	—	—
271329 2003 WL_{39}	15.5	X	84.45044	328.46994	26.34260	12.05141	0.0693576	0.18474915	3.0531472	20	—	—
271330 2003 WS_{41}	14.9	X	255.09410	246.96782	264.35801	16.03694	0.1641746	0.17326417	3.1866195	20	11 18.7	19.4
271331 2003 WU_{43}	15.6	X	63.58376	42.48816	299.70799	10.68948	0.1937278	0.18058759	3.0998745	20	—	—
271332 2003 WS_{46}	15.5	X	357.68697	206.37454	237.44285	9.64052	0.0626275	0.18434647	3.0575917	20	—	—
271333 2003 WZ_{48}	16.2	X	150.96858	255.77631	47.90803	5.98102	0.1019090	0.18915247	3.0055782	20	—	—
271334 2003 WP_{57}	15.9	X	93.02452	82.89975	262.80360	2.32275	0.2419572	0.18622308	3.0370158	20	—	—
271335 2003 WK_{58}	15.8	X	85.77739	295.32729	50.21065	1.83629	0.1511919	0.18369183	3.0648519	20	—	—
271336 2003 WS_{66}	15.8	X	95.26238	330.85211	55.09182	10.04721	0.0584095	0.18931976	3.0038074	20	—	—
271337 2003 WM_{69}	15.6	X	144.90291	131.78335	227.58015	5.31705	0.2389739	0.19646979	2.9304807	20	2 9.6	20.6
271338 2003 WU_{69}	15.1	X	275.33716	54.65806	75.81050	10.45564	0.0567580	0.17501966	3.1652753	20	12 5.5	19.5
271339 2003 WJ_{70}	16.0	X	357.44834	349.09368	70.18813	4.01928	0.1262955	0.18069604	3.0986340	20	—	—
271340 2003 WL_{86}	16.1	X	307.83198	233.27179	215.44701	3.94985	0.1829215	0.17537802	3.1609620	20	11 19.4	19.5
271341 2003 WH_{94}	15.6	X	333.38299	184.14253	250.25257	9.20451	0.1133990	0.17885919	3.1198128	20	12 17.8	19.3
271342 2003 WE_{99}	15.8	X	19.47861	48.21948	34.49616	10.77969	0.1001812	0.18560497	3.0437547	20	—	—
271343 2003 WJ_{111}	15.5	X	108.23053	101.80601	260.24951	7.28545	0.1135635	0.18938560	3.0031111	20	—	—
271344 2003 WB_{112}	15.5	X	306.04211	196.13343	274.38987	9.29459	0.0576460	0.17762440	3.1342548	20	12 22.7	19.6
271345 2003 WL_{134}	15.5	X	213.87106	281.87161	64.09728	15.58463	0.1680494	0.20458356	2.8524775	20	3 28.6	20.4
271346 2003 WV_{135}	16.9	X	3.64389	304.98837	59.00568	6.80656	0.1943756	0.29145836	2.2529508	20	12 20.1	19.2
271347 2003 WC_{138}	15.4	X	44.81500	301.19724	67.43461	15.71225	0.3306337	0.18108653	3.0941780	20	—	—
271348 2003 WQ_{146}	15.5	X	53.93747	231.14990	148.07185	15.51069	0.2103028	0.18453324	3.0555283	20	—	—
271349 2003 WY_{151}	17.1	X	221.86733	335.39110	61.82211	5.36082	0.2203547	0.27190719	2.3596935	20	5 25.1	20.8
271350 2003 WU_{154}	15.1	X	5.29045	203.03626	224.44066	18.27614	0.0837528	0.18077539	3.0977272	20	—	—
271351 2003 WY_{157}	15.1	X	342.26673	327.32011	122.58875	13.32133	0.1165147	0.18049242	3.1009641	20	—	—
271352 2003 WE_{160}	15.5	X	165.67653	247.30068	67.77947	9.55546	0.1695331	0.19139382	2.9820673	20	1 5.3	20.3
271353 2003 WT_{160}	16.7	X	181.26868	204.56040	235.62597	3.43016	0.0349171	0.21124788	2.7921654	20	6 15.4	20.6
271354 2003 WS_{164}	16.4	X	267.41263	327.17310	159.46295	0.73662	0.1279192	0.17201923	3.2019758	20	11 10.6	20.6
271355 2003 WF_{192}	16.5	X	320.84015	119.74804	320.41915	4.39254	0.1379521	0.17587369	3.1550201	20	12 3.1	20.2
271356 2003 WR_{192}	15.5	X	34.83748	316.90807	83.15328	11.09779	0.0219572	0.18095607	3.0956649	20	—	—
271357 2003 XT_{6}	15.0	X	11.91357	282.53672	92.59273	14.60572	0.1885123	0.17378763	3.1802173	20	12 11.6	18.9
271358 2003 XZ_{8}	15.4	X	22.09169	38.61424	357.89305	15.56357	0.2236791	0.17989040	3.1078787	20	—	—
271359 2003 XW_{9}	14.9	X	287.53864	130.72706	333.78126	16.36141	0.1092021	0.17069583	3.2185044	20	11 5.9	19.5
271360 2003 XB_{16}	16.4	X	7.58219	100.98339	295.71324	3.85833	0.1587830	0.17677074	3.1443373	20	12 28.0	20.1

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271361 2003 XJ_{18}	15.1	X	56.95912	334.57300	33.61362	22.43315	0.1293013	0.18042811	3.1017009	20	—	—
271362 2003 XK_{29}	15.4	X	197.84467	337.55450	249.05347	15.01853	0.0453194	0.17861604	3.1226436	20	12 28.4	20.0
271363 2003 XV_{32}	16.3	X	294.26591	233.62083	218.66341	4.11711	0.1542253	0.17245136	3.1966245	20	11 2.8	20.2
271364 2003 XW_{34}	15.2	X	50.65804	12.49817	11.35897	12.69305	0.1569663	0.18308308	3.0716418	20	—	—
271365 2003 XP_{39}	15.4	X	356.14095	324.71518	96.31600	17.63923	0.2291294	0.17837413	3.1254662	20	—	—
271366 2003 YE	17.5	X	14.57673	256.93289	203.31006	23.33267	0.3228935	0.30369348	2.1920262	20	—	—
271367 2003 YP_{11}	15.5	X	6.65091	8.40351	60.82589	10.91602	0.0491393	0.17758822	3.1346805	20	—	—
271368 2003 YU_{17}	17.4	X	16.68887	269.04796	92.62155	5.83840	0.3041387	0.29498406	2.2349631	20	—	—
271369 2003 YQ_{31}	17.5	X	73.90088	138.27489	279.88390	4.08538	0.1004270	0.30824876	2.1703769	20	—	—
271370 2003 YQ_{39}	17.4	X	323.39211	306.23903	80.70589	6.69125	0.1983383	0.28398539	2.2923032	20	11 2.3	18.8
271371 2003 YS_{59}	15.0	X	201.92553	2.47857	262.29034	14.94429	0.1840846	0.18565351	3.0432241	20	—	—
271372 2003 YP_{71}	15.6	X	299.98857	43.78203	64.69674	12.55258	0.1445049	0.17357739	3.1827848	20	12 3.3	19.4
271373 2003 YA_{82}	16.8	X	73.97379	85.03785	305.55782	5.41971	0.0457068	0.30087172	2.2057103	20	—	—
271374 2003 YV_{84}	15.3	X	315.73022	47.88479	71.37747	18.11185	0.0771115	0.17883833	3.1200554	20	—	—
271375 2003 YK_{93}	15.1	X	172.60364	223.13750	69.80092	15.96444	0.0737097	0.18430062	3.0580989	20	—	—
271376 2003 YO_{114}	15.6	X	357.66397	310.17806	112.66834	11.82969	0.2809770	0.17618720	3.1512763	20	—	—
271377 2003 YR_{116}	15.0	X	203.60044	111.79723	96.33565	13.62173	0.0503804	0.16956160	3.2328413	20	12 12.8	19.7
271378 2003 YW_{138}	15.8	X	305.85114	357.22019	124.41062	25.92560	0.2226673	0.28863716	2.2676075	20	—	—
271379 2003 YS_{152}	15.3	X	328.78895	333.78564	112.88358	9.18833	0.0343118	0.17206058	3.2014628	20	12 23.1	19.7
271380 2003 YK_{160}	17.6	X	10.48428	103.02659	325.42245	5.14332	0.1609861	0.29876958	2.2160444	20	—	—
271381 2003 YM_{161}	15.2	X	319.95591	101.69053	9.46757	10.65943	0.0232589	0.17718158	3.1394748	20	—	—
271382 2004 BN	17.3	X	358.78078	358.16624	5.69047	3.00517	0.1974515	0.28615311	2.2807118	20	12 10.6	19.4
271383 2004 BH_{6}	17.6	X	41.69973	270.58666	127.99281	5.54273	0.1738264	0.29740728	2.2228065	20	—	—
271384 2004 BM_{12}	17.7	X	85.86045	276.43727	120.38341	5.48595	0.1618615	0.30424913	2.1893565	20	—	—
271385 2004 BQ_{15}	17.4	X	17.78441	322.15434	121.37471	5.98129	0.1095110	0.29908929	2.2144649	20	—	—
271386 2004 BU_{40}	17.4	X	91.13746	201.62825	302.94396	1.13554	0.1540536	0.25816936	2.4426782	20	6 4.5	20.5
271387 2004 BG_{43}	17.3	X	338.58821	133.68379	326.10392	5.16739	0.0931915	0.29282853	2.2459175	20	—	—
271388 2004 BW_{55}	17.9	X	95.04373	285.63875	120.13332	1.86321	0.0889152	0.30498791	2.1858195	20	1 5.8	19.9
271389 2004 BL_{73}	17.6	X	37.25385	151.98104	286.81289	3.42647	0.0964994	0.30072263	2.2064393	20	—	—
271390 2004 BL_{85}	17.1	X	97.30668	28.40442	8.09757	2.72597	0.2008884	0.30522236	2.1847001	20	1 15.0	18.9
271391 2004 BR_{87}	17.7	X	289.26821	324.95507	207.40744	1.73215	0.1643029	0.29407674	2.2395577	20	—	—
271392 2004 BQ_{98}	17.4	X	311.62688	267.28664	156.62321	5.88002	0.1199144	0.27988515	2.3146366	20	11 30.8	19.5
271393 2004 BQ_{151}	17.2	X	245.83817	326.21137	259.51243	5.15334	0.0159075	0.29914035	2.2142129	20	—	—
271394 2004 BS_{160}	18.2	X	155.12088	304.00415	348.46734	2.02236	0.0959637	0.28786685	2.2716510	20	—	—
271395 2004 CU	17.3	X	328.73119	107.81806	18.15353	3.76509	0.1234619	0.29491735	2.2353001	20	—	—
271396 2004 CX_{4}	17.1	X	24.09182	343.42427	91.30677	6.31371	0.1539405	0.29800492	2.2198337	20	—	—
271397 2004 CA_{6}	17.0	X	292.23527	67.66882	133.18733	5.75049	0.0719097	0.29912197	2.2143037	20	—	—
271398 2004 CE_{6}	17.3	X	290.43594	67.89286	87.92293	6.54710	0.0791660	0.29250467	2.2475749	20	—	—
271399 2004 CQ_{9}	17.1	X	52.56731	11.76167	333.01848	7.36382	0.1899601	0.28838135	2.2689483	20	—	—
271400 2004 CE_{12}	17.2	X	254.39253	267.56185	279.37588	2.93768	0.1598488	0.28948296	2.2631884	20	—	—
271401 2004 CZ_{16}	17.9	X	214.92202	153.74602	63.53978	0.97663	0.1714143	0.28673975	2.2776000	20	—	—
271402 2004 CU_{44}	18.2	X	8.53174	168.12415	292.84775	3.96430	0.0741330	0.29989040	2.2105195	20	—	—
271403 2004 CK_{61}	17.7	X	39.38529	45.18886	34.49626	3.72514	0.2162990	0.30259097	2.1973475	20	—	—
271404 2004 CA_{84}	17.6	X	220.58291	352.17825	146.89774	11.38572	0.1285611	0.27807443	2.3246737	20	10 22.2	20.8
271405 2004 CK_{85}	17.7	X	178.51459	63.95878	127.79068	5.73971	0.1339481	0.27760295	2.3273051	20	11 10.0	21.1
271406 2004 CN_{85}	17.6	X	312.83604	19.05734	140.92028	3.95713	0.0618463	0.29617255	2.2289800	20	—	—
271407 2004 CQ_{85}	16.9	X	193.76476	228.57840	10.17036	1.69503	0.1809584	0.28589558	2.2820812	20	—	—
271408 2004 CN_{93}	16.9	X	316.93778	177.47665	275.68387	7.99642	0.1648578	0.28948489	2.2631784	20	—	—
271409 2004 CS_{95}	17.1	X	227.49541	218.72133	5.96321	3.95349	0.1937238	0.28764656	2.2728107	20	—	—
271410 2004 CF_{96}	17.1	X	155.26846	259.94713	314.68303	4.28242	0.1441769	0.27656716	2.3331123	20	11 11.4	20.7
271411 2004 CF_{97}	17.4	X	259.58551	352.70932	147.52274	2.56935	0.1411872	0.28351697	2.2948273	20	12 15.2	19.7
271412 2004 CQ_{107}	17.5	X	228.13069	71.39169	164.84028	2.37666	0.1170394	0.29248902	2.2476551	20	—	—
271413 2004 CO_{108}	17.5	X	324.90539	306.31871	188.35235	5.79093	0.1040269	0.29404656	2.2397110	20	—	—
271414 2004 CQ_{108}	17.2	X	272.44945	220.07540	289.88070	4.53632	0.0738150	0.28742644	2.2739709	20	—	—
271415 2004 CR_{108}	17.3	X	300.25563	335.23056	196.74261	5.10836	0.1037528	0.29505723	2.2345936	20	—	—
271416 2004 CK_{111}	16.7	X	296.57056	277.92008	301.40029	3.40693	0.0762968	0.24147434	2.5540069	20	1 15.4	20.0
271417 2004 CT_{111}	17.5	X	255.03206	111.82579	111.51647	2.32415	0.1195482	0.29484906	2.2356452	20	—	—
271418 2004 CU_{112}	17.8	X	11.61812	89.82966	0.16452	6.94899	0.1221188	0.29859636	2.2169014	20	—	—
271419 2004 CR_{114}	16.2	X	299.97946	176.14387	53.32003	15.88672	0.0640569	0.24510465	2.5287255	20	2 9.3	19.9
271420 2004 CZ_{127}	17.4	X	354.68160	271.49456	134.34745	11.13349	0.1777985	0.28510444	2.2863009	20	—	—
271421 2004 CP_{128}	18.0	X	267.31686	267.93719	214.52607	4.29141	0.1957992	0.28309343	2.2971156	20	11 24.3	20.0
271422 2004 DZ_{1}	17.3	X	236.52382	167.22362	6.55649	2.67552	0.0939489	0.28480685	2.2878933	20	—	—
271423 2004 DF_{7}	17.2	X	144.68718	84.89595	117.62122	4.11883	0.1946689	0.27231270	2.3573503	20	10 19.6	21.0
271424 2004 DQ_{9}	16.8	X	285.56501	151.62166	354.48891	9.66610	0.0738162	0.28889336	2.2662667	20	—	—
271425 2004 DF_{12}	16.6	X	359.62903	319.25047	136.81344	5.92203	0.1336930	0.29342793	2.2428578	20	—	—
271426 2004 DU_{12}	16.3	X	211.26129	71.41467	151.66818	8.67447	0.1248927	0.28530298	2.2852402	20	—	—
271427 2004 DN_{15}	17.4	X	344.08359	327.82822	159.59217	4.36642	0.0614973	0.29727802	2.2234508	20	—	—
271428 2004 DL_{19}	17.6	X	288.95562	144.75703	350.10587	2.47044	0.1084766	0.28870096	2.2672734	20	—	—
271429 2004 DT_{23}	17.0	X	49.97455	274.28719	149.79294	7.10685	0.0941495	0.29976579	2.2111320	20	—	—
271430 2004 DT_{31}	17.5	X	301.75798	13.44950	92.76492	4.39535	0.1443692	0.28654817	2.2786150	20	—	—
271431 2004 DL_{38}	17.1	X	165.64007	156.53163	10.93209	5.22437	0.0768888	0.27143043	2.3624558	20	9 25.9	20.4
271432 2004 DV_{38}	17.2	X	257.35050	79.55318	342.81210	5.68388	0.1003201	0.27262244	2.3555644	20	8 25.2	20.0
271433 2004 DG_{39}	17.3	X	340.71718	297.12239	143.90060	6.73625	0.0958316	0.28949761	2.2631121	20	—	—
271434 2004 DX_{40}	17.1	X	140.70551	93.82422	97.88321	3.51966	0.1831337	0.26891653	2.3771562	20	10 2.1	20.9
271435 2004 DT_{44}	17.1	X	238.76243	250.54612	330.54612	7.41035	0.1204366	0.29146327	2.2529255	20	—	—
271436 2004 DR_{50}	17.9	X	296.98804	347.55254	145.15373	3.54040	0.1392181	0.28956548	2.2627584	20	—	—
271437 2004 DH_{51}	17.2	X	308.53113	14.59358	138.97133	2.91967	0.0930804	0.29267060	2.2467253	20	—	—
271438 2004 DA_{56}	17.8	X	127.84436	35.51263	217.98244	1.97378	0.1787316	0.27759950	2.3273244	20	12 5.8	21.6
271439 2004 DU_{60}	18.3	X	271.27164	227.71147	269.14245	0.74579	0.1502349	0.28580506	2.2825630	20	12 31.5	20.1
271440 2004 DS_{61}	15.5	X	19.79525	164.37964	17.71213	3.08038	0.1546299	0.12584437	3.9437877	20	4 10.2	20.3

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271441 2004 DH_{66}	17.7	X	183.78275	118.76900	137.48854	4.48322	0.2712307	0.28352161	2.2948023	20	—	—
271442 2004 DW_{74}	17.2	X	121.61451	337.82703	322.44885	6.99958	0.1236767	0.28567287	2.2832671	20	—	—
271443 2004 EA_{6}	16.9	X	189.78722	148.95480	90.09003	6.60238	0.1250760	0.28410986	2.2916336	20	—	—
271444 2004 EC_{10}	16.9	X	160.45253	203.10164	341.54845	6.25126	0.0573625	0.27257640	2.3558296	20	10 10.9	20.1
271445 2004 EC_{12}	16.7	X	283.39098	27.52794	155.90887	7.03384	0.1049902	0.29327009	2.2436625	20	—	—
271446 2004 EU_{14}	17.0	X	237.22093	143.44193	74.15382	6.59128	0.1565705	0.28811447	2.2703492	20	—	—
271447 2004 EX_{16}	16.9	X	214.56911	135.08863	82.41786	6.04635	0.1137355	0.28431547	2.2905286	20	—	—
271448 2004 ET_{22}	17.1	X	326.09905	76.50255	22.54826	7.26670	0.0578164	0.28628486	2.2800120	20	—	—
271449 2004 EY_{26}	17.3	X	212.58913	81.30084	175.86796	3.76993	0.1294637	0.29093696	2.2556417	20	—	—
271450 2004 EF_{36}	17.2	X	191.17992	37.69777	204.37886	5.91516	0.1756624	0.28423427	2.2909649	20	—	—
271451 2004 EF_{39}	17.2	X	336.13324	322.70801	129.82396	2.92098	0.1249399	0.28880195	2.2667449	20	—	—
271452 2004 EU_{40}	17.0	X	275.38927	337.96897	184.01926	6.16636	0.0239397	0.28736894	2.2742742	20	—	—
271453 2004 EL_{41}	17.4	X	181.91494	342.60127	199.60224	3.09797	0.1609307	0.27474295	2.3434284	20	10 27.9	21.0
271454 2004 ET_{41}	16.6	X	165.09331	223.36865	31.44411	4.99998	0.0998844	0.28316313	2.2967387	20	—	—
271455 2004 EY_{47}	17.0	X	263.64796	322.48018	205.36607	1.95284	0.0910874	0.28620125	2.2804560	20	—	—
271456 2004 EP_{52}	16.9	X	213.69223	212.50001	34.00028	6.40120	0.0823388	0.28962972	2.2624238	20	—	—
271457 2004 EN_{62}	17.7	X	293.43561	36.47574	130.90872	0.74860	0.1265147	0.29113351	2.2546264	20	—	—
271458 2004 EY_{63}	16.5	X	169.25903	87.84820	190.80626	3.86542	0.1445619	0.28461022	2.2889469	20	—	—
271459 2004 EA_{67}	17.3	X	238.60190	189.34245	8.31246	2.47541	0.1117393	0.28691716	2.2766610	20	—	—
271460 2004 EZ_{69}	17.6	X	250.62755	342.01351	171.86172	6.07027	0.0799705	0.28250750	2.3002907	20	12 28.0	20.1
271461 2004 EG_{73}	16.9	X	177.75320	169.35095	343.73863	4.07891	0.1567417	0.26988061	2.3714916	20	9 15.3	20.6
271462 2004 EM_{76}	17.0	X	250.96711	169.67165	11.85711	6.78916	0.0618786	0.28653966	2.2786601	20	—	—
271463 2004 ES_{80}	16.9	X	211.61820	136.66846	128.98726	6.66978	0.0667124	0.29457702	2.2370214	20	—	—
271464 2004 EB_{81}	16.8	X	245.50272	133.34009	36.28084	11.08838	0.0488377	0.28388973	2.2928181	20	—	—
271465 2004 EU_{81}	17.1	X	163.57780	236.52602	31.74970	6.25787	0.1822109	0.28245761	2.3005616	20	—	—
271466 2004 EB_{82}	16.6	X	334.03877	65.50736	43.28671	6.70157	0.0922363	0.28941984	2.2635175	20	—	—
271467 2004 EG_{84}	17.2	X	240.81903	31.79944	176.81805	5.76511	0.1241095	0.28846830	2.2684924	20	—	—
271468 2004 EF_{86}	16.1	X	114.49511	246.65566	60.65110	6.53612	0.2373025	0.27986922	2.3147244	20	—	—
271469 2004 EZ_{86}	16.9	X	252.35309	89.50493	119.37743	5.59987	0.1042959	0.28773713	2.2723337	20	—	—
271470 2004 EA_{90}	16.0	X	276.87795	166.59049	99.68173	3.65031	0.0928787	0.18012657	3.1051615	20	2 26.5	20.5
271471 2004 EM_{93}	17.6	X	220.63425	153.50969	27.84174	4.01651	0.0699364	0.28149570	2.3057995	20	12 23.9	20.4
271472 2004 EE_{116}	17.8	X	171.24839	67.23439	192.51395	6.06192	0.2377991	0.28158853	2.3052927	20	—	—
271473 2004 FW_{3}	17.2	X	265.58934	279.84697	179.98131	23.30436	0.2438445	0.27882787	2.3204841	20	10 9.3	19.6
271474 2004 FG_{6}	16.8	X	267.87462	151.04188	5.66294	9.48983	0.0349395	0.28489548	2.2874187	20	—	—
271475 2004 FW_{12}	16.5	X	154.58172	57.39083	222.46405	7.06757	0.1517659	0.28299680	2.2976385	20	—	—
271476 2004 FD_{13}	16.8	X	144.81404	184.55212	327.51585	7.27944	0.0503054	0.26290659	2.4132468	20	8 10.1	19.9
271477 2004 FN_{20}	17.0	X	245.22468	154.99117	353.07597	6.35772	0.1344282	0.28004130	2.3137761	20	12 1.2	19.7
271478 2004 FD_{24}	17.7	X	194.05480	15.89344	200.39531	3.74853	0.1536160	0.28065588	2.3103971	20	12 24.5	20.9
271479 2004 FV_{27}	17.6	X	257.30589	174.04653	339.82602	1.63130	0.1442753	0.28340755	2.2954179	20	12 30.7	19.7
271480 2004 FX_{31}	17.6	X	196.50039	285.79361	169.15369	24.75051	0.4419575	0.69617080	1.2608367	20	7 19.0	19.7
271481 2004 FD_{35}	17.5	X	224.66942	230.62457	305.05227	5.23080	0.1347779	0.28110436	2.3079390	20	12 11.1	20.3
271482 2004 FE_{36}	17.0	X	248.42016	147.10147	29.16674	7.72608	0.0497589	0.28416771	2.2913226	20	—	—
271483 2004 FZ_{40}	17.5	X	229.57604	155.50147	32.15169	3.05940	0.0960136	0.28208820	2.3025696	20	—	—
271484 2004 FD_{41}	16.9	X	287.04664	325.13950	185.97782	7.01436	0.0681701	0.28715617	2.2753975	20	—	—
271485 2004 FA_{49}	17.2	X	158.60159	5.41582	238.04468	2.09931	0.1302288	0.27939794	2.3173266	20	12 23.6	20.6
271486 2004 FV_{49}	18.0	X	278.70260	312.83716	210.06254	4.75447	0.1868646	0.28809271	2.2704636	20	—	—
271487 2004 FL_{50}	17.6	X	231.45023	288.41420	289.43834	2.00079	0.1530046	0.28666486	2.2779967	20	—	—
271488 2004 FA_{51}	17.5	X	220.08793	129.77969	94.14927	3.73916	0.1584713	0.28482844	2.2877777	20	—	—
271489 2004 FW_{55}	17.2	X	269.28376	27.07200	145.28750	6.39974	0.0644990	0.28661744	2.2782479	20	—	—
271490 2004 FP_{62}	16.9	X	169.13105	48.40546	164.42620	5.66552	0.0772597	0.27622623	2.3350317	20	11 30.2	20.1
271491 2004 FB_{72}	17.6	X	170.31815	254.83459	18.96044	2.35915	0.1029566	0.28630127	2.2799248	20	—	—
271492 2004 FV_{80}	15.9	X	351.15633	116.64726	43.33384	13.47275	0.1462237	0.17695526	3.1421511	20	1 20.8	20.0
271493 2004 FE_{88}	17.9	X	167.94599	59.08058	109.05339	5.66629	0.1583047	0.27053938	2.3676403	20	9 28.6	21.6
271494 2004 FS_{92}	17.3	X	197.77611	348.04722	191.18806	4.94747	0.0856963	0.27571485	2.3379180	20	11 18.8	20.3
271495 2004 FC_{94}	16.4	X	281.23658	295.31666	198.64381	22.39022	0.1344060	0.28181587	2.3040528	20	—	—
271496 2004 FP_{98}	16.0	X	287.89139	185.00182	74.05791	2.54402	0.1185540	0.18120139	3.0928702	20	2 26.8	20.4
271497 2004 FY_{98}	17.1	X	256.23210	315.57767	182.17442	5.17796	0.1364706	0.28091074	2.3089994	20	12 6.2	19.6
271498 2004 FL_{101}	17.1	X	333.96540	343.01653	117.11828	6.02779	0.1389255	0.28954477	2.2628663	20	—	—
271499 2004 FA_{111}	16.4	X	89.49812	273.94096	17.18245	8.61604	0.1197060	0.27286055	2.3541938	20	12 12.4	20.0
271500 2004 FN_{111}	16.8	X	113.10083	105.72894	209.71578	7.04851	0.1170372	0.28336239	2.2956618	20	—	—
271501 2004 FR_{111}	17.3	X	302.94012	302.86062	187.26906	5.93616	0.0972391	0.28686607	2.2769313	20	—	—
271502 2004 FJ_{117}	17.8	X	189.58087	48.09702	206.81288	5.22552	0.1619990	0.28512291	2.2862022	20	—	—
271503 2004 FE_{120}	17.8	X	273.62713	271.00728	168.51934	6.66115	0.0589764	0.27441505	2.3452947	20	10 22.2	20.4
271504 2004 FF_{122}	17.0	X	206.85896	51.60943	184.95323	6.24834	0.1978096	0.28226884	2.3015871	20	—	—
271505 2004 FS_{125}	16.9	X	114.75356	121.36838	187.02730	7.34771	0.1303829	0.28094490	2.3088122	20	—	—
271506 2004 FZ_{125}	16.7	X	197.65377	355.72039	194.04028	3.95859	0.0776492	0.27719204	2.3296046	20	12 3.5	19.7
271507 2004 FW_{126}	16.8	X	233.96224	348.57370	179.16175	4.08196	0.1282773	0.28018242	2.3129991	20	12 14.6	19.5
271508 2004 FL_{134}	16.6	X	244.46256	247.11694	266.51811	5.38887	0.1427548	0.28030537	2.3123227	20	12 7.9	18.9
271509 2004 FP_{134}	16.6	X	37.58555	281.64031	216.70617	14.55715	0.1159959	0.24294377	2.5436979	20	2 20.3	19.8
271510 2004 FO_{141}	17.0	X	258.51489	165.54141	9.62524	5.70485	0.1718217	0.28526157	2.2854613	20	—	—
271511 2004 FA_{146}	18.3	X	263.19389	95.79928	49.82543	3.24272	0.1018911	0.28334814	2.2957388	20	—	—
271512 2004 GO_{5}	17.0	X	201.40314	191.69639	17.25615	8.14597	0.1307298	0.27892642	2.3199375	20	12 26.3	20.3
271513 2004 GX_{13}	17.4	X	192.38498	274.28899	263.54659	4.08377	0.1120523	0.27292066	2.3538481	20	11 5.1	20.8
271514 2004 GV_{15}	17.9	X	207.56189	100.27234	147.68156	2.99465	0.2051180	0.28461785	2.2889060	20	—	—
271515 2004 GQ_{22}	17.3	X	221.34634	176.65222	40.15053	5.40994	0.1047387	0.28321241	2.2964722	20	—	—
271516 2004 GX_{22}	17.4	X	219.05754	326.09427	253.67157	1.45340	0.1570843	0.28299270	2.2976607	20	—	—
271517 2004 GF_{24}	16.9	X	167.51325	169.49297	81.15917	7.72941	0.0702173	0.27862790	2.3215942	20	—	—
271518 2004 GT_{28}	17.1	X	246.48887	79.42891	40.42972	21.83410	0.3013075	0.27700516	2.3306522	20	10 7.8	20.4
271519 2004 GL_{39}	16.7	X	120.44519	257.04774	39.40632	8.14031	0.3127777	0.27274177	2.3548773	20	—	—
271520 2004 GE_{46}	17.1	X	170.65715	239.95943	41.77253	5.99285	0.1575653	0.28365108	2.2941039	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		°	°	°	°		°				
271521 2004 GF_{49}	17.0	X	65.74135	110.31561	219.55586	4.84865	0.1769147	0.27392418	2.3480957	20	—	—
271522 2004 GD_{50}	17.0	X	343.68123	23.86413	11.98966	9.58722	0.1364036	0.27462663	2.3440900	20	12 16.8	19.6
271523 2004 GY_{56}	16.9	X	64.54630	296.31492	19.56674	5.74953	0.1439273	0.27398859	2.3477277	20	12 20.8	20.3
271524 2004 GP_{60}	17.4	X	249.10244	121.97744	61.95345	3.68974	0.1612576	0.28402967	2.2920649	20	—	—
271525 2004 GJ_{63}	17.6	X	117.78143	276.01967	23.06193	5.84672	0.2387641	0.27635961	2.3342803	20	—	—
271526 2004 GB_{79}	17.1	X	305.10840	66.08760	41.12222	7.11209	0.1352418	0.28305841	2.2973051	20	—	—
271527 2004 GP_{87}	16.7	X	218.64044	74.10106	93.35795	7.61506	0.0559889	0.27610328	2.3357248	20	12 3.8	19.6
271528 2004 HS_{5}	16.9	X	157.89774	263.81416	354.77171	5.40597	0.1405960	0.27800958	2.3250352	20	—	—
271529 2004 HL_{6}	16.5	X	223.84359	109.25397	70.13659	5.62246	0.1730849	0.27683701	2.3315959	20	12 8.2	19.2
271530 2004 HS_{18}	17.3	X	200.16840	212.57423	319.92456	3.94774	0.1730873	0.27426823	2.3461316	20	10 30.8	20.7
271531 2004 HH_{25}	16.2	X	69.61050	154.16131	201.67911	11.60914	0.2103233	0.27810542	2.3245010	20	—	—
271532 2004 HW_{27}	17.2	X	161.54457	162.41630	116.79662	4.00413	0.1450893	0.28032020	2.3122411	20	—	—
271533 2004 HY_{32}	17.0	X	139.13327	249.84153	58.16306	11.93722	0.2844102	0.27960665	2.3161733	20	—	—
271534 2004 HQ_{45}	17.0	X	148.97740	224.78855	50.39525	7.06358	0.1103496	0.27764039	2.3270959	20	—	—
271535 2004 HH_{56}	16.7	X	78.55504	343.57278	263.14658	6.71200	0.0708309	0.26229745	2.4169815	20	9 22.9	20.0
271536 2004 HV_{57}	17.1	X	107.65206	210.80159	41.33397	7.77459	0.0950942	0.26689410	2.3891499	20	11 9.9	20.4
271537 2004 HA_{60}	17.1	X	199.98565	124.52399	110.37423	5.58583	0.2284567	0.28011593	2.3133651	20	—	—
271538 2004 JN_{3}	16.8	X	163.70760	136.47160	54.81471	8.09429	0.1483322	0.26812415	2.3818373	20	10 23.2	20.4
271539 2004 JK_{4}	17.7	X	88.50520	71.82005	172.96636	1.71672	0.2238153	0.26218769	2.4176561	20	10 22.1	21.4
271540 2004 JQ_{4}	17.3	X	217.11022	340.47369	223.61994	5.00073	0.1338614	0.28054054	2.3110302	20	—	—
271541 2004 JG_{10}	16.2	X	170.52400	157.40943	116.95559	13.43871	0.1767847	0.27845789	2.3225391	20	—	—
271542 2004 JC_{14}	17.8	X	181.56949	295.98362	300.32066	2.04650	0.1947029	0.27686574	2.3314346	20	12 31.7	21.2
271543 2004 JW_{14}	17.0	X	187.48175	119.81698	87.26461	7.11272	0.0976274	0.27418553	2.3466034	20	12 10.5	20.1
271544 2004 JB_{16}	16.3	X	117.17025	286.97066	14.84241	7.02863	0.1217462	0.27749768	2.3278937	20	—	—
271545 2004 JT_{16}	17.3	X	190.96560	11.03791	215.20301	1.89303	0.1387742	0.27771566	2.3266754	20	—	—
271546 2004 JN_{17}	16.7	X	220.57246	307.16211	235.83261	4.67035	0.0884333	0.27613054	2.3355711	20	12 21.5	19.5
271547 2004 JU_{17}	17.2	X	138.86671	347.54219	268.92505	2.74170	0.2075621	0.27220372	2.3579794	20	12 17.2	20.9
271548 2004 JV_{17}	16.9	X	199.54512	213.15365	16.08704	4.09412	0.0822771	0.27938026	2.3174244	20	—	—
271549 2004 JD_{19}	17.5	X	190.24002	302.52420	269.29598	3.26339	0.1648078	0.27574778	2.3377319	20	12 12.4	20.8
271550 2004 JU_{21}	17.3	X	218.71720	287.85987	225.48061	2.32368	0.1606284	0.27342319	2.3509631	20	10 29.3	20.3
271551 2004 JB_{25}	17.6	X	167.96952	234.12644	359.71560	1.84371	0.1726238	0.27426791	2.3461335	20	12 16.8	21.3
271552 2004 JW_{25}	16.5	X	189.42260	323.62954	236.20572	5.45476	0.0473646	0.27249890	2.3562763	20	12 8.9	19.4
271553 2004 JC_{27}	16.9	X	233.84288	122.20815	62.91094	7.63640	0.2419012	0.27947146	2.3169202	20	12 19.0	19.5
271554 2004 JC_{30}	17.1	X	147.32256	171.72791	80.46092	3.42242	0.1578126	0.27260322	2.3556751	20	12 20.8	20.7
271555 2004 JK_{30}	17.1	X	181.50258	13.99965	224.01006	5.60775	0.1796699	0.27660265	2.3329127	20	—	—
271556 2004 JV_{30}	16.8	X	120.59005	174.77906	72.23745	15.24478	0.1414489	0.26709691	2.3879404	20	11 20.7	20.4
271557 2004 JR_{31}	17.0	X	61.96640	158.40296	79.45693	5.44928	0.1569176	0.25669256	2.4520380	20	9 8.1	20.2
271558 2004 JQ_{32}	16.4	X	27.93798	243.62547	73.14150	10.72212	0.2575297	0.26071040	2.4267804	20	11 23.2	19.4
271559 2004 JV_{32}	16.9	X	149.56577	135.04907	125.55622	4.77810	0.1074416	0.27497863	2.3420891	20	—	—
271560 2004 JJ_{34}	16.7	X	259.30582	199.38512	107.20529	6.91671	0.2481338	0.23565415	2.5958882	20	3 8.1	21.0
271561 2004 JE_{35}	16.7	X	131.35244	174.40411	112.32749	4.79476	0.2103808	0.27294377	2.3537152	20	—	—
271562 2004 JW_{37}	17.1	X	116.97884	111.71342	127.64665	12.95964	0.1717575	0.26571408	2.3962181	20	11 11.6	21.2
271563 2004 JQ_{44}	17.1	X	155.34598	192.38998	92.33544	7.69546	0.1688538	0.27830100	2.3234119	20	—	—
271564 2004 JP_{45}	16.8	X	126.84142	224.76345	61.72798	7.13831	0.1158584	0.27536150	2.3399176	20	—	—
271565 2004 JJ_{53}	17.3	X	223.30380	108.01404	47.01623	2.31314	0.0665660	0.27272913	2.3549500	20	11 19.9	20.1
271566 2004 KQ	17.1	X	169.15596	202.21983	47.97279	7.95654	0.1674205	0.27604032	2.3360799	20	—	—
271567 2004 KL_{3}	16.8	X	111.74048	341.30091	238.97686	5.67559	0.0754618	0.26227691	2.4171078	20	9 30.0	20.2
271568 2004 KU_{6}	17.1	X	24.60947	232.93787	103.51969	3.75387	0.1036422	0.26574182	2.3960513	20	11 21.9	19.9
271569 2004 KP_{8}	17.1	X	156.27825	197.12092	14.66202	6.41146	0.1859048	0.26979325	2.3720035	20	11 6.4	21.1
271570 2004 KY_{10}	16.9	X	112.34651	123.63589	150.62937	7.19207	0.1065125	0.27061363	2.3672072	20	12 15.2	20.5
271571 2004 KC_{16}	16.8	X	343.61487	180.69282	143.51164	10.19556	0.1859780	0.25272834	2.4776127	20	8 26.1	18.7
271572 2004 LE_{1}	17.2	X	126.50776	213.54776	60.72240	7.13346	0.1033612	0.27268223	2.3552201	20	12 29.5	20.6
271573 2004 LC_{8}	16.2	X	323.35399	73.96325	259.21538	2.26948	0.1817751	0.24677524	2.5173001	20	7 20.6	18.2
271574 2004 LJ_{8}	16.6	X	84.07684	196.64284	92.55006	6.01560	0.1801448	0.26244397	2.4160819	20	12 8.3	20.2
271575 2004 LQ_{12}	17.4	X	183.42800	84.00909	107.92268	5.51378	0.1556745	0.27193227	2.3595484	20	11 12.2	20.9
271576 2004 LZ_{14}	16.6	X	76.63945	186.90649	105.07350	8.35496	0.2306377	0.26175243	2.4203355	20	12 9.2	20.4
271577 2004 LT_{15}	17.2	X	140.36778	31.31170	203.21778	5.27353	0.1716635	0.26806937	2.3821618	20	11 22.6	21.0
271578 2004 LF_{25}	16.7	X	37.12331	83.59079	233.28528	3.72064	0.1878576	0.25756071	2.4465249	20	11 23.1	19.8
271579 2004 LD_{31}	16.4	X	80.29287	40.91098	262.40288	5.93774	0.2870922	0.26088664	2.4256874	20	12 28.2	20.4
271580 2004 ML_{3}	17.3	X	132.40461	176.57150	107.28098	2.16056	0.1665542	0.27038690	2.3685303	20	—	—
271581 2004 MQ_{3}	16.9	X	52.42899	200.87004	127.78744	5.89419	0.2479552	0.26476696	2.4019291	20	—	—
271582 2004 MZ_{4}	16.6	X	104.79488	259.22689	55.03872	6.33912	0.2453025	0.26899161	2.3767138	20	—	—
271583 2004 MU_{6}	16.7	X	15.82114	328.37921	359.77063	6.35407	0.2601386	0.25501751	2.4627636	20	11 17.5	19.4
271584 2004 MP_{8}	15.7	X	351.71417	257.27013	13.91474	12.64598	0.1516214	0.24263972	2.5458225	20	6 14.5	18.4
271585 2004 NR_{2}	16.5	X	72.62762	106.36011	216.95232	6.67654	0.2482564	0.26150992	2.4218316	20	—	—
271586 2004 NU_{4}	16.8	X	350.88933	151.28988	198.14150	5.55272	0.1517057	0.25197991	2.4825163	20	10 18.3	18.9
271587 2004 NU_{5}	16.6	X	44.92338	243.85684	82.35129	5.69913	0.1970324	0.26009286	2.4306202	20	12 15.9	20.0
271588 2004 NZ_{5}	16.9	X	67.14936	167.18445	140.40431	6.90688	0.1280395	0.26178431	2.4201390	20	12 9.9	20.4
271589 2004 NA_{9}	16.4	X	121.37769	296.57101	323.33561	11.95213	0.2280122	0.26615333	2.3935809	20	12 5.4	20.7
271590 2004 NS_{14}	15.5	X	335.82009	64.25911	285.06069	7.41917	0.1341679	0.18841958	3.0133670	20	8 30.8	19.0
271591 2004 NW_{15}	16.6	X	315.29330	89.00693	219.16801	2.95166	0.1844718	0.24131777	2.5551114	20	5 25.6	19.2
271592 2004 NZ_{18}	14.9	X	355.45625	131.63874	180.87940	5.02539	0.2807380	0.12420328	3.9784510	20	8 12.6	18.8
271593 2004 NF_{22}	16.7	X	81.57195	289.92619	354.84328	4.10037	0.2250514	0.26160380	2.4212521	20	12 2.8	20.6
271594 2004 NK_{31}	16.6	X	87.26037	253.31328	39.90788	7.39437	0.1360343	0.26187937	2.4195533	20	12 11.9	20.2
271595 2004 NT_{32}	17.1	X	6.49241	274.35269	56.22051	3.37009	0.1971711	0.25388310	2.4700942	20	10 27.6	19.6
271596 2004 ND_{33}	16.6	X	83.61661	2.70773	293.65799	4.23385	0.1920342	0.26128856	2.4231992	20	12 16.9	20.5
271597 2004 OD	16.3	X	262.46202	211.08862	139.42523	17.22439	0.1144618	0.23871468	2.5736528	20	5 23.5	20.2
271598 2004 OA_{4}	14.9	X	3.57928	144.37935	166.94987	8.43935	0.2136814	0.12342745	3.9951052	20	8 26.3	19.4
271599 2004 OL_{5}	17.0	X	84.60122	317.33203	352.78793	3.01772	0.2084470	0.26335896	2.4104825	20	—	—
271600 2004 OX_{5}	16.9	X	62.60265	255.80926	66.93806	6.42899	0.2064431	0.26235414	2.4166334	20	12 31.3	20.6

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271601 2004 OC_6	16.1	X	217.95389	244.85273	85.32479	12.32037	0.1558005	0.22809754	2.6529088	20	3 9.8	20.6
271602 2004 OV_9	16.6	X	312.11080	259.02477	71.83732	5.20377	0.1910894	0.24399210	2.5364066	20	6 21.8	19.0
271603 2004 PL_6	16.7	X	75.69735	113.87863	190.64451	5.15973	0.1629517	0.26055587	2.4277398	20	12 17.3	20.3
271604 2004 PR_6	16.0	X	284.67656	314.71358	312.12402	12.90487	0.1735583	0.22907308	2.6453716	20	2 16.7	19.9
271605 2004 PU_7	17.6	X	81.09183	87.60459	213.77798	3.80875	0.1877360	0.26078872	2.4262945	20	12 20.4	21.3
271606 2004 PP_9	17.5	X	101.81379	122.30777	179.45121	1.90920	0.2111820	0.26522966	2.3991348	20	—	—
271607 2004 PW_{10}	15.9	X	68.59307	326.92868	298.63931	6.05794	0.1036429	0.25461786	2.4653399	20	10 9.4	19.3
271608 2004 PK_{12}	16.7	X	42.58013	262.99496	117.00821	2.36623	0.1942142	0.20148565	2.8816416	20	—	—
271609 2004 PM_{18}	16.5	X	118.46236	77.95873	201.31184	2.64370	0.2096140	0.26477052	2.4019076	20	12 26.7	20.6
271610 2004 PZ_{20}	16.9	X	249.23114	136.66313	221.90881	2.29965	0.1690314	0.23562128	2.5961296	20	5 6.9	20.8
271611 2004 PK_{21}	17.3	X	178.57375	187.99272	344.45218	20.94359	0.0449983	0.37740444	1.8964063	20	10 28.8	19.8
271612 2004 PP_{24}	16.5	X	72.06935	179.05710	119.19341	5.95780	0.1904307	0.25950273	2.4343037	20	12 8.8	20.2
271613 2004 PQ_{27}	17.2	X	67.91431	309.67748	17.95037	4.42401	0.2820207	0.26229588	2.4169912	20	—	—
271614 2004 PD_{37}	16.0	X	0.95204	262.33641	323.50456	14.25980	0.0544670	0.23342988	2.6123523	20	4 20.6	19.6
271615 2004 PR_{37}	17.6	X	94.49145	297.15548	352.14476	1.39643	0.2366194	0.26201914	2.4186928	20	12 20.2	21.6
271616 2004 PT_{40}	16.1	X	167.25573	68.95788	319.37582	10.92515	0.2249252	0.22212381	2.7002624	20	3 26.8	20.9
271617 2004 PC_{45}	16.4	X	253.48288	22.29690	359.58906	10.39438	0.1105870	0.23796061	2.5790871	20	6 18.7	20.2
271618 2004 PT_{46}	17.1	X	321.48665	147.15711	192.56910	3.83275	0.1961275	0.24410147	2.5356489	20	7 24.2	19.3
271619 2004 PX_{50}	17.1	X	82.83929	190.42044	111.35615	4.46605	0.2937904	0.26191978	2.4193044	20	12 28.9	21.2
271620 2004 PD_{51}	16.2	X	127.39824	319.26138	13.29301	4.82129	0.1513444	0.21075952	2.7964770	20	—	—
271621 2004 PH_{52}	16.6	X	332.26924	195.41236	115.44377	7.34637	0.1427939	0.24312439	2.5424379	20	7 8.1	19.1
271622 2004 PP_{52}	17.0	X	338.06712	190.34409	125.41986	9.26854	0.2114790	0.24407823	2.5358099	20	7 25.2	18.8
271623 2004 PQ_{55}	17.1	X	46.79924	232.67087	47.80606	2.98709	0.2345048	0.25202078	2.4822479	20	10 24.4	20.4
271624 2004 PR_{55}	16.3	X	227.48136	217.62575	111.27541	4.40619	0.1931571	0.22642167	2.6659831	20	3 11.1	20.8
271625 2004 PH_{57}	16.7	X	166.81962	178.06301	163.86197	8.19458	0.2577679	0.21812421	2.7331710	20	2 6.9	21.5
271626 2004 PO_{60}	16.3	X	304.91925	337.44974	320.82249	13.09849	0.1600160	0.23560515	2.5962482	20	4 20.6	19.9
271627 2004 PC_{64}	16.5	X	304.98911	272.39747	113.07775	6.82407	0.0412864	0.25036333	2.4931911	20	9 22.2	19.5
271628 2004 PY_{65}	16.3	X	243.56500	190.41036	161.69886	14.36399	0.1040377	0.23231803	2.6206807	20	5 3.3	20.3
271629 2004 PJ_{67}	17.0	X	125.18676	69.71241	209.44454	4.42987	0.2334108	0.26605276	2.3941841	20	12 31.8	21.1
271630 2004 PH_{68}	16.6	X	115.60433	101.96982	185.84072	8.25863	0.2096663	0.26459717	2.4029566	20	—	—
271631 2004 PM_{69}	16.5	X	18.97284	39.97828	257.84476	4.42919	0.1404940	0.24783510	2.5101182	20	9 18.1	19.2
271632 2004 PK_{70}	16.3	X	80.35795	304.65194	306.70401	10.08235	0.1891899	0.25357706	2.4720812	20	10 12.4	20.2
271633 2004 PU_{73}	17.0	X	310.46054	15.02745	341.71866	7.04776	0.1972974	0.24449664	2.5329160	20	7 30.3	19.3
271634 2004 PG_{76}	16.7	X	340.95299	141.37603	130.95922	3.93273	0.1862909	0.24003266	2.5642232	20	5 23.7	18.9
271635 2004 PS_{77}	16.6	X	77.65881	19.26180	254.36610	3.52279	0.1723738	0.25714656	2.4491510	20	11 10.5	20.2
271636 2004 PJ_{79}	15.9	X	286.98727	139.50770	203.52916	5.79590	0.2065068	0.17559320	3.1583791	20	5 27.2	20.3
271637 2004 PV_{81}	17.0	X	277.47291	230.35504	117.79079	3.31417	0.2063851	0.23723463	2.5843460	20	5 21.4	20.4
271638 2004 PP_{85}	16.7	X	297.65371	200.44889	132.82678	4.82353	0.2371521	0.23641584	2.5903096	20	5 24.3	19.8
271639 2004 PC_{90}	15.9	X	287.51061	325.95817	355.31745	8.97380	0.2527861	0.23364271	2.6107656	20	4 17.5	19.7
271640 2004 PS_{93}	16.4	X	98.53841	303.12196	358.79240	8.03655	0.3001173	0.26392049	2.4070622	20	—	—
271641 2004 PF_{98}	16.2	X	266.22270	297.22096	59.72692	7.97778	0.1836526	0.23804866	2.5784510	20	5 21.8	19.6
271642 2004 PZ_{100}	15.6	X	214.76474	182.29011	170.50731	17.30076	0.1713954	0.22584702	2.6705034	20	3 29.7	20.0
271643 2004 PJ_{101}	15.7	X	266.85049	353.83363	343.68539	12.70511	0.1469812	0.23162949	2.6258715	20	4 26.2	19.7
271644 2004 PQ_{101}	15.9	X	162.26518	10.75007	347.56122	9.66046	0.2814067	0.21474406	2.7617770	20	2 25.9	20.7
271645 2004 PW_{101}	16.6	X	276.84055	64.46008	289.86006	3.37227	0.3517920	0.23438398	2.6052582	20	5 7.4	20.7
271646 2004 PZ_{103}	16.4	X	252.63099	3.62129	342.74533	12.90865	0.2990523	0.22997830	2.6384254	20	4 7.9	21.1
271647 2004 PM_{105}	15.7	X	219.21720	12.88708	276.20542	14.16524	0.0764077	0.21920457	2.7241832	20	1 16.7	19.8
271648 2004 PC_{109}	17.3	X	57.72508	218.10326	104.49819	3.71420	0.1998284	0.25840367	2.4412013	20	12 24.9	21.0
271649 2004 QO_6	16.1	X	20.80357	251.70460	350.92808	11.65731	0.0760109	0.23897366	2.5717931	20	6 26.1	19.3
271650 2004 QF_8	16.0	X	294.29049	302.87904	36.89028	13.94280	0.1610760	0.24043257	2.5613791	20	6 6.4	19.3
271651 2004 QU_{12}	17.0	X	70.58748	211.33051	96.32687	8.79943	0.2085611	0.25952421	2.4341694	20	12 19.9	20.7
271652 2004 QQ_{14}	16.3	X	204.94515	168.09921	172.56756	14.45211	0.2615712	0.22405254	2.6847435	20	3 3.5	21.0
271653 2004 QL_{18}	15.7	X	207.22781	341.99855	22.24063	13.35612	0.2003476	0.22322008	2.6914142	20	4 4.8	20.2
271654 2004 QP_{25}	17.8	X	131.39116	103.54358	157.63983	22.22792	0.0937185	0.38672904	1.8657990	20	—	—
271655 2004 QR_{25}	15.9	X	324.45799	310.72517	308.99143	31.20768	0.2486952	0.23480345	2.6021545	20	3 1.8	19.7
271656 2004 RO_1	16.2	X	356.92654	158.01882	137.72266	19.14605	0.2190985	0.24347752	2.5399791	20	8 11.3	17.9
271657 2004 RP_5	16.3	X	160.34983	303.83266	71.67230	8.32163	0.1649465	0.21903455	2.7255927	20	3 12.2	20.8
271658 2004 RP_{18}	16.7	X	240.12833	35.14219	334.88528	4.37023	0.1347415	0.23327508	2.6135079	20	5 14.0	20.6
271659 2004 RJ_{21}	16.8	X	301.23789	168.68531	169.06659	9.05146	0.1763202	0.23939187	2.5687970	20	6 15.5	19.9
271660 2004 RG_{23}	16.6	X	74.71160	95.51103	144.07428	4.81587	0.0848824	0.24668430	2.5179187	20	9 12.9	19.9
271661 2004 RH_{39}	16.7	X	205.87496	293.41855	96.27588	3.27856	0.1043652	0.23001107	2.6381747	20	5 7.6	20.7
271662 2004 RM_{40}	16.6	X	115.05275	123.54941	306.67732	3.44803	0.1132707	0.22045626	2.7138620	20	3 21.3	20.5
271663 2004 RB_{50}	15.9	X	174.56293	267.97920	154.61887	22.04886	0.0670242	0.23145714	2.6271749	20	5 20.9	20.2
271664 2004 RD_{52}	16.4	X	167.89905	213.64474	160.53299	11.29583	0.1583288	0.22034243	2.7147966	20	3 13.5	20.6
271665 2004 RA_{55}	16.6	X	357.41257	285.91776	6.84592	7.66337	0.1336115	0.24178931	2.5517884	20	8 4.5	19.2
271666 2004 RC_{55}	16.0	X	333.81559	322.95249	357.41996	26.83040	0.0970669	0.24134782	2.5548994	20	8 12.6	19.4
271667 2004 RO_{57}	16.9	X	317.13989	178.88223	148.48865	8.39490	0.2069669	0.24022569	2.5628494	20	6 24.1	19.5
271668 2004 RX_{59}	16.4	X	176.14514	21.88060	344.22914	13.12761	0.1966480	0.22094131	2.7098886	20	3 10.6	21.0
271669 2004 RZ_{59}	17.2	X	326.79899	15.53111	321.08695	1.26580	0.2023599	0.24352170	2.5396718	20	8 1.4	19.1
271670 2004 RP_{62}	15.8	X	182.95885	186.80572	178.70908	13.86277	0.1236124	0.22193896	2.7017616	20	3 14.3	19.9
271671 2004 RO_{63}	16.4	X	200.94362	220.61755	170.62533	12.00379	0.1439355	0.22825046	2.6517237	20	5 5.3	20.7
271672 2004 RF_{67}	15.9	X	196.25745	214.23263	171.77553	8.93861	0.0757354	0.22660029	2.6645819	20	4 24.7	19.9
271673 2004 RZ_{67}	16.8	X	251.70963	350.78677	4.77706	4.15079	0.2336003	0.23199431	2.6231180	20	4 27.9	21.0
271674 2004 RG_{73}	16.4	X	257.07640	139.01863	167.46576	17.27511	0.1990540	0.22667762	2.6639759	20	3 8.1	20.6
271675 2004 RW_{73}	16.6	X	247.70718	80.43342	290.67268	4.46087	0.0741913	0.23452073	2.6042453	20	6 1.6	20.1
271676 2004 RT_{76}	16.2	X	224.91600	340.87475	21.08724	6.80154	0.1697369	0.22736743	2.6585850	20	4 16.9	20.5
271677 2004 RF_{77}	16.2	X	193.95689	162.38553	162.18409	9.89087	0.2266076	0.21749919	2.7384046	20	2 6.1	21.0
271678 2004 RO_{77}	16.2	X	222.62536	311.53010	41.51935	6.57261	0.1941978	0.22589238	2.6701459	20	4 4.9	20.6
271679 2004 RB_{79}	16.4	X	278.82626	155.32138	195.48180	7.69270	0.1900060	0.23487256	2.6016439	20	5 29.4	20.0
271680 2004 RY_{80}	17.1	X	358.52776	85.86887	228.66702	2.63402	0.1511688	0.24566315	2.5248914	20	9 6.9	19.6

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271681 2004 RZ_{81}	17.1	X	312.44539	34.85712	296.08010	1.39040	0.1744223	0.23773958	2.5806854	20	6 25.1	19.7
271682 2004 RO_{83}	16.8	X	278.84486	331.89873	8.17195	4.14840	0.1834706	0.23339655	2.6126010	20	5 13.8	20.3
271683 2004 RW_{83}	17.2	X	118.66002	67.03755	191.81558	19.79080	0.0461048	0.38114837	1.8839672	20	12 26.2	19.8
271684 2004 RW_{85}	17.3	X	340.38791	112.29691	225.24220	2.58835	0.1782298	0.24683385	2.5169016	20	9 5.5	19.5
271685 2004 RF_{90}	17.0	X	106.30653	117.24014	189.70473	7.10673	0.2436204	0.26585434	2.3953752	20	—	—
271686 2004 RS_{92}	16.9	X	352.89063	128.11195	195.39937	7.88722	0.1906847	0.24752008	2.5122475	20	9 12.8	19.1
271687 2004 RY_{96}	16.3	X	91.78717	107.08270	286.08157	7.92992	0.1750659	0.20914073	2.8108887	20	1 16.8	19.8
271688 2004 RB_{100}	16.3	X	266.48027	144.72838	185.60503	10.59421	0.0942025	0.23181902	2.6244402	20	5 1.3	19.9
271689 2004 RF_{100}	16.7	X	160.79471	144.79439	215.43098	2.75722	0.2092989	0.21746515	2.7386904	20	2 20.8	21.4
271690 2004 RS_{101}	16.7	X	240.40375	25.22688	301.73550	3.04598	0.1912180	0.22704604	2.6610933	20	3 16.9	21.0
271691 2004 RW_{106}	16.9	X	256.15055	91.43959	287.14193	2.32043	0.1169154	0.23796310	2.5790690	20	6 16.9	20.5
271692 2004 RY_{107}	16.8	X	293.24111	336.77703	350.44060	2.11314	0.1520317	0.23516379	2.5994956	20	5 21.5	19.9
271693 2004 RX_{114}	16.3	X	237.74346	341.92562	2.76335	13.18275	0.2999965	0.22971733	2.6404232	20	3 29.5	21.0
271694 2004 RW_{134}	17.0	X	152.06774	11.14765	51.66697	2.01027	0.0358169	0.22735748	2.6586625	20	4 17.6	20.7
271695 2004 RH_{140}	16.9	X	161.18093	223.21033	194.01989	5.52142	0.0558422	0.22738045	2.6584835	20	4 23.1	20.6
271696 2004 RN_{144}	15.7	X	253.61232	165.22765	247.90965	9.57159	0.2033896	0.17425200	3.1745648	20	7 13.4	20.6
271697 2004 RD_{145}	17.3	X	88.81335	354.68849	290.92656	0.79476	0.1778207	0.25864725	2.4396684	20	12 7.1	20.9
271698 2004 RL_{146}	16.0	X	225.38421	75.52655	347.82646	9.14725	0.2097178	0.17217507	3.2000434	20	6 30.8	21.3
271699 2004 RJ_{147}	16.7	X	270.66387	337.39992	0.79903	4.93855	0.1927938	0.23356534	2.6113422	20	4 29.6	20.6
271700 2004 RQ_{148}	17.4	X	79.66226	93.98390	194.91772	4.26977	0.1833870	0.25718796	2.4488882	20	12 3.4	21.2
271701 2004 RU_{148}	16.2	X	263.03600	170.80654	169.07651	11.94606	0.1933353	0.23160280	2.6260733	20	4 27.9	20.2
271702 2004 RG_{154}	16.7	X	7.50924	44.13991	226.59714	3.56386	0.1122476	0.24063756	2.5599242	20	7 15.7	19.4
271703 2004 RT_{154}	16.5	X	208.52466	62.44495	325.79188	10.26980	0.1669898	0.22939239	2.6429161	20	4 30.5	21.1
271704 2004 RB_{156}	17.1	X	13.51277	7.31019	282.00921	3.17966	0.0810013	0.24350981	2.5397545	20	8 20.1	19.9
271705 2004 RL_{158}	16.1	X	88.56634	101.17056	335.63950	8.73303	0.1409450	0.21587081	2.7521585	20	3 1.7	19.7
271706 2004 RP_{172}	16.5	X	253.82310	71.27598	231.38274	6.29206	0.1975347	0.22693533	2.6619587	20	2 26.8	20.9
271707 2004 RW_{180}	16.2	X	140.95066	168.55851	232.36233	7.91049	0.2400064	0.21755100	2.7379698	20	3 23.8	20.8
271708 2004 RG_{182}	16.3	X	145.00875	43.58522	335.07286	7.25689	0.2227864	0.21613848	2.7498858	20	3 1.8	20.9
271709 2004 RT_{184}	16.5	X	78.00165	208.13296	210.91180	6.49562	0.1849738	0.21089432	2.7952852	20	1 29.4	20.0
271710 2004 RV_{185}	16.9	X	7.09886	306.18377	345.58270	9.54877	0.1731202	0.24354739	2.5394933	20	8 25.5	19.2
271711 2004 RN_{191}	15.7	X	162.91309	45.07578	337.19674	8.97230	0.1431683	0.21926166	2.7237103	20	3 15.2	20.0
271712 2004 RR_{193}	16.1	X	293.45980	358.98325	341.62162	11.64603	0.1948041	0.23552437	2.5968418	20	5 31.7	19.5
271713 2004 RU_{200}	15.8	X	264.36835	64.24118	292.70919	5.30650	0.3005881	0.23156482	2.6263604	20	5 4.0	20.0
271714 2004 RE_{203}	17.3	X	335.70370	271.02060	43.95603	1.38985	0.0155841	0.24030054	2.5623172	20	7 27.3	20.5
271715 2004 RK_{204}	15.7	X	152.60248	79.73944	276.89166	6.50932	0.3114201	0.21485729	2.7608066	20	2 15.5	20.6
271716 2004 RY_{212}	14.9	X	357.78779	41.46727	241.70864	17.63931	0.0907211	0.17558521	3.1584749	20	7 7.5	19.1
271717 2004 RY_{215}	15.2	X	212.56100	326.15769	324.27852	16.47734	0.2636100	0.21664977	2.7455576	20	1 15.9	20.2
271718 2004 RA_{217}	16.1	X	340.67960	341.79195	320.57867	10.57536	0.2049254	0.23967859	2.5667479	20	7 11.2	18.2
271719 2004 RT_{219}	16.2	X	188.02890	18.20367	340.07247	15.93179	0.2417659	0.21966375	2.7203855	20	3 10.6	21.1
271720 2004 RD_{226}	16.0	X	124.51581	227.79130	187.77415	9.59020	0.1908202	0.21607909	2.7503896	20	3 24.4	20.1
271721 2004 RV_{228}	16.5	X	120.10431	140.30523	334.98601	2.94465	0.0364595	0.22569791	2.6716795	20	5 15.5	20.1
271722 2004 RH_{233}	16.9	X	326.06928	318.91546	14.73583	5.09122	0.2483861	0.24105753	2.5569501	20	7 21.3	18.8
271723 2004 RP_{234}	16.7	X	100.02749	281.81254	161.70703	14.77930	0.1111874	0.22241480	2.6979067	20	3 22.9	20.3
271724 2004 RX_{238}	16.7	X	41.91547	35.69006	177.42668	17.67586	0.1538388	0.23579601	2.5948469	20	6 27.6	20.1
271725 2004 RF_{240}	15.9	X	168.07452	317.51210	175.57860	11.23439	0.0279288	0.17813523	3.1282600	20	8 3.1	20.6
271726 2004 RD_{241}	16.2	X	101.14361	350.26192	172.83728	14.16435	0.0965007	0.23483567	2.6019164	20	7 3.2	20.1
271727 2004 RO_{246}	16.2	X	121.80350	223.83930	194.39274	5.87581	0.0658585	0.21672557	2.7449174	20	3 8.6	20.1
271728 2004 RC_{251}	16.1	X	193.92972	17.58157	288.95613	5.41517	0.0453962	0.21320982	2.7750102	20	1 13.2	19.9
271729 2004 RL_{256}	17.4	X	336.17383	51.07132	5.50479	20.76046	0.0423726	0.38123059	1.8836963	20	—	—
271730 2004 RB_{260}	17.0	X	0.07679	239.03261	183.48524	6.36019	0.2130507	0.19693215	2.9258921	20	—	—
271731 2004 RC_{269}	16.6	X	169.25137	191.61514	176.04183	6.60213	0.0914772	0.22015923	2.7163024	20	3 1.7	20.8
271732 2004 RG_{273}	16.6	X	334.06784	197.57620	43.12138	2.43078	0.2431363	0.23224867	2.6212024	20	3 13.9	19.1
271733 2004 RN_{288}	14.4	X	224.15989	72.78138	31.47298	25.78126	0.2390131	0.17412990	3.1760487	20	8 29.4	20.1
271734 2004 RC_{292}	16.3	X	339.40855	94.56653	233.58214	5.08542	0.1287598	0.24169019	2.5524860	20	8 16.7	19.0
271735 2004 RD_{292}	15.8	X	210.50468	359.52671	4.60819	18.81143	0.0640598	0.22346108	2.6894788	20	4 7.2	19.8
271736 2004 RB_{293}	16.3	X	184.51249	88.75401	311.01901	8.30313	0.0613567	0.22739943	2.6583355	20	4 23.0	20.3
271737 2004 RD_{293}	16.8	X	40.33153	296.29711	326.18728	1.77595	0.0806220	0.24391253	2.5369582	20	8 25.3	19.9
271738 2004 RV_{298}	16.3	X	207.14917	291.00466	358.62160	6.45658	0.0453535	0.21325793	2.7745928	20	1 8.5	20.4
271739 2004 RB_{302}	16.5	X	209.80583	271.48842	25.60675	4.81032	0.0573955	0.21552383	2.7551116	20	1 20.3	20.6
271740 2004 RQ_{308}	16.4	X	274.51033	354.97600	302.60827	5.58352	0.1953695	0.22760563	2.6567297	20	3 12.2	20.3
271741 2004 RF_{310}	16.9	X	296.40205	101.16849	222.80063	3.77479	0.1918764	0.23507399	2.6001575	20	5 15.9	20.0
271742 2004 RG_{317}	16.6	X	10.73657	80.52058	200.39491	9.41331	0.2046710	0.24263757	2.5458375	20	8 14.9	19.1
271743 2004 RJ_{317}	16.4	X	311.71326	86.58314	202.84167	10.73096	0.1819690	0.23304563	2.6152231	20	4 23.2	19.3
271744 2004 RB_{324}	16.3	X	228.23284	9.39332	345.77031	14.92332	0.1445740	0.22530834	2.6747582	20	4 7.9	20.7
271745 2004 RM_{324}	16.5	X	124.95079	104.01595	310.59384	7.35272	0.1367518	0.21709866	2.7417717	20	3 14.6	20.6
271746 2004 RT_{325}	16.3	X	257.82159	20.18591	334.42520	6.80500	0.2715397	0.23087163	2.6316149	20	4 27.0	20.7
271747 2004 RN_{330}	16.9	X	248.15098	188.50298	167.67752	1.46788	0.0788591	0.23120532	2.6290822	20	5 13.4	20.4
271748 2004 RC_{336}	16.3	X	196.47043	303.99731	354.87421	7.43465	0.2069085	0.21258283	2.7804639	20	1 12.3	21.1
271749 2004 RF_{337}	16.4	X	128.61163	99.41428	5.24561	4.92707	0.0700592	0.22486924	2.6782391	20	5 15.7	20.2
271750 2004 RG_{338}	16.4	X	201.32846	3.52282	21.19732	3.75971	0.1205985	0.22487654	2.6781812	20	4 24.8	20.5
271751 2004 RQ_{340}	15.6	X	137.04388	237.98783	148.21440	27.09371	0.1655974	0.21518436	2.7580084	20	2 28.9	19.8
271752 2004 RS_{341}	15.6	X	234.84721	329.45266	29.53436	14.45490	0.2749522	0.22611964	2.6683566	20	4 16.5	20.2
271753 2004 RD_{344}	16.7	X	24.74714	156.31675	139.55064	6.74393	0.1313159	0.24771249	2.5109464	20	9 28.8	19.6
271754 2004 RB_{345}	17.1	X	271.35586	12.37086	340.02736	4.83590	0.1901578	0.23456002	2.6039545	20	5 19.6	20.9
271755 2004 RA_{346}	17.6	X	59.40098	312.29811	357.68701	20.95419	0.0435809	0.37718244	1.8971503	20	12 21.8	20.2
271756 2004 RQ_{346}	16.1	X	351.28785	62.76252	259.36982	5.16989	0.2814360	0.24205662	2.5499093	20	9 12.9	17.8
271757 2004 RZ_{355}	16.7	X	210.53366	324.31386	50.11725	7.10816	0.1676322	0.22847718	2.6499692	20	4 20.9	21.1
271758 2004 SF_{1}	16.2	X	212.85446	214.80001	164.08215	8.49142	0.1525202	0.23056225	2.6339685	20	4 30.4	20.5
271759 2004 SE_{3}	16.3	X	156.59700	128.59319	220.52786	4.01676	0.0790917	0.21290487	2.7776594	20	1 25.1	20.4
271760 2004 SH_{4}	16.5	X	118.57588	65.37855	310.62690	8.08455	0.1721501	0.21217550	2.7840214	20	1 28.4	20.5

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		°	°	°	°		°				
271761 2004 SV_{7}	16.8	X	111.49188	328.20127	34.49310	2.40058	0.0829310	0.20843005	2.8172744	20	—	—
271762 2004 SC_{14}	16.6	X	321.64306	166.20801	192.14459	6.01128	0.1893835	0.24188784	2.5510953	20	8 23.6	18.9
271763 Hebrewu	16.3	X	45.79383	256.50975	164.44466	13.37307	0.2513982	0.20333007	2.8641888	20	—	—
271764 2004 SZ_{31}	16.4	X	250.00107	347.35921	10.48298	8.34525	0.0577620	0.23040811	2.6351431	20	5 17.9	20.2
271765 2004 SX_{32}	16.4	X	278.47071	176.12616	175.09773	10.61477	0.1538412	0.23389348	2.6088992	20	6 4.6	20.0
271766 2004 SV_{35}	16.5	X	34.17014	258.69153	310.50382	7.43122	0.0783026	0.23375562	2.6099249	20	5 28.4	19.7
271767 2004 SP_{39}	15.6	X	194.88169	148.32836	190.84457	7.40037	0.2439128	0.21811284	2.7332660	20	2 23.1	20.4
271768 2004 SK_{42}	16.1	X	254.40425	115.03285	263.77797	3.93427	0.1436620	0.17221122	3.1995956	20	6 10.6	20.7
271769 2004 SM_{48}	15.9	X	326.17552	312.15967	9.95086	14.42601	0.2093770	0.23740382	2.5831180	20	7 8.3	18.6
271770 2004 SA_{51}	16.5	X	350.89637	61.81627	210.61025	2.85291	0.1537991	0.23465228	2.6032719	20	6 16.1	19.0
271771 2004 SR_{55}	16.5	X	170.92379	106.61729	244.64200	3.28140	0.0988621	0.21496394	2.7598934	20	2 12.8	20.6
271772 2004 TA	16.5	X	152.25430	219.38985	106.53880	4.66578	0.0921623	0.20942496	2.8083448	20	—	—
271773 2004 TL_{8}	17.4	X	43.95505	292.24796	42.33111	23.89383	0.1006498	0.37860372	1.8923994	20	—	—
271774 2004 TO_{12}	18.8	X	189.64938	352.00439	294.18657	1.55703	0.1480242	0.39854065	1.8287498	20	—	—
271775 2004 TZ_{12}	16.0	X	209.75718	253.61338	99.82027	6.14111	0.1854359	0.22226441	2.6991235	20	3 27.3	20.5
271776 2004 TC_{13}	15.9	X	171.55112	307.27071	58.24795	17.46402	0.2798661	0.21806143	2.7336956	20	3 19.8	21.1
271777 2004 TN_{15}	17.1	X	350.53207	317.76066	30.93958	21.17086	0.0842094	0.36963287	1.9228954	20	11 5.1	18.6
271778 2004 TF_{20}	17.7	X	140.27719	57.98444	214.18534	24.48688	0.0496998	0.38576203	1.8689158	20	—	—
271779 2004 TG_{22}	16.3	X	35.77143	207.88887	213.40815	5.68398	0.0901113	0.20266404	2.8704606	20	—	—
271780 2004 TH_{22}	17.0	X	236.52206	173.47016	226.29381	3.62613	0.0359253	0.23465464	2.6032545	20	7 1.4	20.4
271781 2004 TZ_{26}	16.9	X	20.90258	86.83860	195.86100	3.62288	0.1175311	0.24230897	2.5481386	20	8 27.4	19.8
271782 2004 TE_{28}	16.5	X	135.70701	62.44400	20.28282	5.09344	0.0295486	0.22455102	2.6807688	20	4 21.8	20.0
271783 2004 TY_{28}	17.0	X	324.64421	166.05747	143.95821	1.46755	0.1915905	0.23791889	2.5793886	20	6 14.8	19.4
271784 2004 TP_{33}	17.1	X	74.91613	178.65738	257.57085	1.87692	0.1282015	0.20973470	2.8055792	20	2 9.4	20.6
271785 2004 TQ_{37}	16.8	X	280.15688	133.15048	190.78277	4.20942	0.1567455	0.23054133	2.6341279	20	4 29.8	20.4
271786 2004 TV_{37}	17.5	X	20.13331	268.95953	27.75733	2.73022	0.1352385	0.24320450	2.5418796	20	9 20.4	20.1
271787 2004 TF_{41}	16.3	X	248.96402	295.42352	41.19719	13.34195	0.2851050	0.22825135	2.6517168	20	4 3.6	20.9
271788 2004 TR_{42}	16.8	X	351.00921	323.90098	328.86208	2.75650	0.2191934	0.23759989	2.5816967	20	7 20.4	18.5
271789 2004 TS_{45}	16.8	X	262.05523	299.62063	22.37742	11.64681	0.1557210	0.22610736	2.6684532	20	4 6.5	20.7
271790 2004 TZ_{47}	16.7	X	121.89526	281.29490	44.55223	3.04357	0.0639638	0.20023092	2.8936675	20	—	—
271791 2004 TB_{48}	16.7	X	277.84977	296.84263	31.50105	9.69016	0.1945753	0.23046920	2.6346774	20	4 26.1	20.4
271792 2004 TT_{48}	16.3	X	228.30482	320.26411	38.70115	6.50189	0.0508570	0.22449724	2.6811969	20	4 25.9	20.0
271793 2004 TQ_{50}	15.7	X	262.65070	323.15875	20.54734	8.80471	0.1596576	0.22811898	2.6527425	20	5 1.9	19.5
271794 2004 TX_{54}	16.0	X	183.09669	343.34517	42.18221	6.50428	0.0356486	0.21948117	2.7218940	20	4 8.6	19.9
271795 2004 TP_{56}	16.3	X	161.53262	250.02195	202.28837	11.05182	0.0933449	0.22914481	2.6448195	20	6 9.7	20.5
271796 2004 TN_{57}	16.6	X	249.48416	280.01768	327.98269	1.64976	0.0449073	0.21139053	2.7909091	20	1 4.6	20.5
271797 2004 TJ_{61}	16.5	X	267.15954	167.35589	180.39015	14.40513	0.1928790	0.23321210	2.6139784	20	5 12.3	20.5
271798 2004 TX_{62}	17.4	X	343.56026	264.97403	16.84799	11.27859	0.1910524	0.23497057	2.6009204	20	6 10.5	19.9
271799 2004 TE_{68}	16.0	X	175.17175	292.58086	75.85385	8.41835	0.1633238	0.21817314	2.7327623	20	3 17.1	20.5
271800 2004 TQ_{69}	16.3	X	225.19106	324.09525	44.80844	6.92713	0.1517784	0.22794144	2.6541198	20	4 27.8	20.5
271801 2004 TD_{78}	16.5	X	212.78016	109.80828	273.43161	3.35517	0.0581769	0.22813365	2.6526288	20	5 7.5	20.3
271802 2004 TC_{82}	17.1	X	359.06672	296.12655	276.10502	1.88759	0.0457624	0.22369340	2.6876163	20	4 6.8	20.5
271803 2004 TB_{86}	16.4	X	82.11512	220.40755	186.76192	3.62119	0.0978863	0.20832160	2.8182522	20	1 9.9	20.1
271804 2004 TE_{88}	17.0	X	35.00852	352.28184	69.96338	1.45993	0.2451727	0.20061675	2.8899562	20	—	—
271805 2004 TU_{90}	16.0	X	22.60662	134.23442	15.03902	12.83016	0.1652364	0.21150593	2.7898939	20	2 26.6	19.0
271806 2004 TZ_{93}	16.4	X	290.10712	105.83417	202.81364	9.62397	0.0885884	0.22836794	2.6508142	20	5 3.4	19.8
271807 2004 TB_{95}	15.5	X	145.55568	280.88328	201.63703	6.01153	0.0592228	0.16676833	3.2688399	20	6 26.9	20.4
271808 2004 TJ_{97}	16.5	X	243.33761	151.53303	198.84706	8.87101	0.0697262	0.22654635	2.6650048	20	5 1.8	20.2
271809 2004 TL_{101}	16.4	X	203.69046	318.66675	27.00187	5.96124	0.0675107	0.21828400	2.7318370	20	3 13.4	20.4
271810 2004 TX_{102}	16.5	X	344.01980	332.43854	0.54420	13.58486	0.3080048	0.24263424	2.5458608	20	9 17.3	17.7
271811 2004 TV_{106}	15.8	X	217.48497	311.83568	38.96669	15.31072	0.1188157	0.22439094	2.6820436	20	4 3.9	20.0
271812 2004 TR_{117}	16.6	X	202.87230	304.36963	70.00132	5.50517	0.1169375	0.22396805	2.6854186	20	4 16.0	20.7
271813 2004 TH_{118}	16.4	X	236.87498	257.05174	39.32988	7.16624	0.2565165	0.22157463	2.7047224	20	2 8.1	21.2
271814 2004 TW_{119}	16.4	X	245.88625	119.12681	247.39219	9.03749	0.1418336	0.23113671	2.6296025	20	5 16.2	20.3
271815 2004 TO_{123}	16.6	X	303.43039	244.19899	93.54427	3.82633	0.2288323	0.23636609	2.5906730	20	6 9.5	19.6
271816 2004 TU_{123}	16.4	X	109.08120	259.97371	146.02185	5.58955	0.1705112	0.21190927	2.7863526	20	2 23.4	20.2
271817 2004 TR_{124}	16.1	X	19.02091	40.10817	1.81605	5.27319	0.0820175	0.19731996	2.9220571	20	—	—
271818 2004 TB_{128}	16.4	X	322.85670	151.44043	165.33845	10.28818	0.1522781	0.23730942	2.5838030	20	6 26.7	19.3
271819 2004 TZ_{129}	16.6	X	191.47603	221.06418	151.32313	9.12332	0.1362632	0.22310905	2.6923071	20	4 2.9	20.9
271820 2004 TN_{137}	16.0	X	297.83315	144.94711	197.79701	14.23299	0.1232501	0.23482078	2.6020264	20	6 24.1	19.5
271821 2004 TF_{138}	15.8	X	187.51844	228.98925	218.82400	21.03030	0.0330879	0.23356554	2.6113407	20	6 30.2	19.9
271822 2004 TE_{145}	16.3	X	120.77729	2.29627	51.67115	3.93022	0.0923737	0.21302704	2.7765973	20	3 9.0	20.2
271823 2004 TD_{146}	16.6	X	344.33237	280.85086	22.31759	13.48159	0.1890718	0.23856230	2.5747486	20	7 25.9	19.2
271824 2004 TL_{146}	15.9	X	113.49338	33.32813	48.76399	4.58924	0.0968938	0.21780319	2.7358559	20	4 4.7	19.7
271825 2004 TN_{154}	17.1	X	81.20576	224.62431	198.50788	3.28129	0.0846085	0.20980620	2.8049417	20	1 26.4	20.7
271826 2004 TN_{156}	16.5	X	121.09829	265.95310	189.52355	5.54112	0.0241001	0.22316583	2.6918504	20	4 20.6	20.2
271827 2004 TG_{160}	15.8	X	242.50897	83.89128	240.21604	3.91089	0.0483613	0.21984808	2.7188647	20	3 27.8	19.7
271828 2004 TO_{167}	16.6	X	55.91056	255.97778	350.87772	3.33503	0.1582340	0.24314991	2.5422601	20	9 7.8	19.9
271829 2004 TS_{167}	17.0	X	55.57595	264.06027	204.14037	3.59696	0.1694983	0.21291769	2.7775478	20	2 25.2	20.0
271830 2004 TO_{169}	15.8	X	207.00093	313.83992	39.46228	11.38629	0.1185824	0.22118256	2.7079177	20	3 27.3	20.1
271831 2004 TW_{170}	16.0	X	149.38381	324.39953	57.58864	7.05134	0.1135362	0.21491211	2.7603371	20	3 5.0	20.2
271832 2004 TT_{171}	16.3	X	146.32406	336.54009	82.66040	6.34993	0.1549665	0.21977357	2.7194792	20	4 18.8	20.6
271833 2004 TG_{173}	17.4	X	61.11518	288.99127	15.93489	20.03634	0.0894722	0.37485273	1.9050027	20	12 18.1	20.1
271834 2004 TE_{185}	16.7	X	251.21426	125.06086	225.89245	3.20748	0.0959002	0.22919966	2.6443975	20	5 7.7	20.5
271835 2004 TH_{187}	17.0	X	259.17826	108.64978	228.87208	2.16006	0.0893821	0.22860376	2.6489909	20	4 30.4	20.8
271836 2004 TM_{187}	16.3	X	203.15135	352.67042	12.58564	6.40498	0.0497569	0.22278217	2.6949399	20	4 4.3	20.1
271837 2004 TH_{197}	16.3	X	73.54900	50.79077	23.64787	5.15182	0.0995223	0.20877692	2.8141532	20	2 4.1	19.8
271838 2004 TC_{198}	16.0	X	87.22217	42.84521	32.05146	6.70614	0.0649743	0.21191718	2.7862833	20	2 19.5	19.8
271839 2004 TG_{199}	16.5	X	143.50716	199.35650	196.31948	3.75774	0.1956782	0.21544973	2.7557432	20	3 18.6	20.9
271840 2004 TE_{206}	15.8	X	288.51428	122.87253	218.93892	6.23794	0.1991171	0.23229380	2.6208629	20	5 28.3	19.2

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271841 2004 TW_{206}	15.9	X	359.04854	325.82740	221.49970	12.76357	0.1356831	0.21151077	2.7898513	20	2 24.9	19.3
271842 2004 TP_{215}	16.4	X	34.66451	241.93732	11.76923	10.97385	0.1044902	0.23951519	2.5679152	20	8 12.2	19.6
271843 2004 TG_{217}	16.5	X	30.33089	249.13222	5.58378	8.71674	0.1287716	0.23863216	2.5742461	20	8 8.5	19.5
271844 2004 TP_{222}	16.2	X	67.19052	73.69596	340.90609	14.27782	0.1515650	0.20514066	2.8473108	20	1 8.1	19.8
271845 2004 TV_{227}	16.8	X	340.92073	285.36047	349.06869	4.32051	0.1480339	0.23249692	2.6193362	20	5 28.2	19.5
271846 2004 TU_{228}	17.0	X	49.94168	174.76617	214.29360	4.56572	0.1538215	0.19862537	2.9092402	20	—	—
271847 2004 TS_{235}	17.3	X	339.42347	234.27730	66.45693	2.27963	0.1439587	0.23572133	2.5953950	20	7 6.8	19.8
271848 2004 TC_{241}	16.4	X	212.62351	159.20689	214.86804	15.56743	0.1533621	0.22528419	2.6749494	20	4 21.6	20.5
271849 2004 TX_{242}	15.3	X	259.95802	307.34284	112.19562	18.44298	0.1428467	0.17667952	3.1454196	20	8 9.3	19.9
271850 2004 TE_{243}	15.7	X	195.80207	265.21467	108.32109	15.56027	0.1708845	0.22144019	2.7058170	20	4 13.4	20.5
271851 2004 TD_{247}	16.2	X	346.70124	175.77403	164.34991	13.64045	0.1958814	0.24413803	2.5353958	20	9 28.9	18.3
271852 2004 TR_{248}	16.6	X	296.28779	353.08762	320.17337	2.15185	0.1496364	0.23085132	2.6317692	20	5 6.7	19.9
271853 2004 TP_{253}	16.3	X	89.88013	230.95008	197.20303	24.90647	0.1569230	0.21173310	2.7878980	20	2 20.2	20.4
271854 2004 TA_{258}	16.1	X	305.02924	274.23930	17.73476	6.36760	0.1068825	0.22813764	2.6525979	20	4 26.9	19.4
271855 2004 TJ_{265}	16.3	X	124.24194	20.38719	23.78826	3.47087	0.0945762	0.21257906	2.7804968	20	2 29.6	20.3
271856 2004 TR_{270}	16.6	X	136.55282	336.68763	41.32899	9.27056	0.1637271	0.21157734	2.7892661	20	2 22.1	21.0
271857 2004 TH_{272}	16.3	X	137.62382	14.49813	7.90001	4.34080	0.1315881	0.21102239	2.7941542	20	2 22.1	20.4
271858 2004 TO_{273}	15.9	X	313.28373	86.80777	224.21637	11.44331	0.1422223	0.23120367	2.6290947	20	6 2.1	18.9
271859 2004 TN_{277}	16.5	X	123.08815	195.31504	212.87540	11.08424	0.0901054	0.21190202	2.7864162	20	2 27.7	20.7
271860 2004 TG_{278}	17.6	X	23.28068	252.00948	57.27448	4.44508	0.2643258	0.24601053	2.5225140	20	11 4.0	20.5
271861 2004 TX_{279}	16.4	X	92.09451	29.91470	38.40969	4.88655	0.0518955	0.21074800	2.7965789	20	2 15.0	20.1
271862 2004 TE_{286}	16.5	X	330.78527	78.13909	214.11889	10.41898	0.1595125	0.23180201	2.6245686	20	6 4.5	19.3
271863 2004 TS_{291}	17.2	X	188.21491	188.93543	198.80451	1.22621	0.1363617	0.22320667	2.6915221	20	4 16.3	21.4
271864 2004 TV_{299}	16.9	X	118.20073	55.14727	2.41157	3.08431	0.0845635	0.21405599	2.7676922	20	3 7.8	20.7
271865 2004 TM_{305}	16.3	X	27.66068	245.04028	16.16347	4.65968	0.0417504	0.23833622	2.5763766	20	7 30.9	19.5
271866 2004 TF_{310}	15.7	X	61.66139	33.87179	312.13199	9.65265	0.1152740	0.19374882	2.9578536	20	—	—
271867 2004 TN_{311}	16.6	X	0.40730	280.93379	359.82092	5.84176	0.1665972	0.23979194	2.5659390	20	7 23.3	19.0
271868 2004 TC_{326}	16.0	X	293.95031	106.43229	337.83904	13.28051	0.1494990	0.18649067	3.0341099	20	10 20.5	19.9
271869 2004 TN_{330}	16.5	X	9.34183	69.80472	199.63013	6.66152	0.1065010	0.23518246	2.5993580	20	7 15.5	19.5
271870 2004 TP_{332}	16.7	X	246.86318	118.99073	229.02647	3.59772	0.1099577	0.22519802	2.6756317	20	4 27.0	20.6
271871 2004 TR_{332}	16.6	X	310.54093	227.74571	30.42791	2.41823	0.0212899	0.21895362	2.7262644	20	4 3.9	20.1
271872 2004 TU_{335}	16.2	X	354.82604	345.94091	206.31529	2.38165	0.0476313	0.21382051	2.7697239	20	3 6.2	19.7
271873 2004 TU_{336}	16.4	X	201.55029	33.11397	4.82336	15.41198	0.1217965	0.23006974	2.6377262	20	5 6.5	20.7
271874 2004 TM_{337}	16.5	X	183.82609	113.90149	198.39242	4.26507	0.0703185	0.21170116	2.7881784	20	1 9.8	20.7
271875 2004 TO_{343}	16.0	X	198.93897	308.23549	52.88007	11.19057	0.1701101	0.21909321	2.7251063	20	3 29.5	20.6
271876 2004 TY_{350}	16.4	X	85.59134	15.60179	59.01210	5.25149	0.0940923	0.20913253	2.8109621	20	2 20.9	20.2
271877 2004 TE_{354}	16.2	X	275.61569	178.12253	59.20247	10.29024	0.0733800	0.20703696	2.8298981	20	1 20.6	20.4
271878 2004 TQ_{359}	16.2	X	191.11792	11.24005	345.46713	7.07539	0.0629220	0.21981293	2.7191546	20	3 10.8	20.3
271879 2004 UL_{7}	15.9	X	249.54507	311.25239	25.63235	15.80091	0.1609669	0.22594656	2.6697190	20	4 11.6	19.8
271880 2004 UO_{7}	15.9	X	192.48353	344.69793	17.99292	9.33107	0.1564685	0.21842601	2.7306528	20	3 22.6	20.3
271881 2004 UO_{9}	17.0	X	322.20554	42.92686	346.18932	20.92295	0.1190901	0.37141288	1.9167468	20	11 17.3	19.0
271882 2004 US_{9}	16.1	X	249.36916	150.96201	215.32372	13.00688	0.2819441	0.22873590	2.6479706	20	5 6.5	20.5
271883 2004 VA_{2}	15.5	X	160.66932	341.75475	15.40842	13.09760	0.1449132	0.21216369	2.7841246	20	2 19.9	20.0
271884 2004 VX_{2}	16.2	X	322.14551	242.15042	46.91886	17.81157	0.1135714	0.22840546	2.6505239	20	5 18.2	19.3
271885 2004 VT_{3}	16.1	X	88.69335	7.76307	69.44523	4.58477	0.0728344	0.21066003	2.7973574	20	2 24.9	19.8
271886 2004 VF_{6}	16.0	X	137.11742	11.27785	70.95100	6.21171	0.1299880	0.21880946	2.7274616	20	5 5.0	20.1
271887 2004 VN_{12}	15.6	X	118.79016	3.21090	76.98151	13.73153	0.1222788	0.21531063	2.7569300	20	4 16.9	19.8
271888 2004 VG_{14}	15.5	X	304.06429	280.49618	58.21862	14.89293	0.2057028	0.23352522	2.6116413	20	6 14.3	18.5
271889 2004 VX_{15}	16.1	X	155.59571	288.58487	133.89997	9.14846	0.1637157	0.22047665	2.7136946	20	5 3.1	20.6
271890 2004 VW_{22}	16.0	X	149.87482	28.60633	54.22779	10.01127	0.1315476	0.22031179	2.7150483	20	5 17.5	20.2
271891 2004 VK_{24}	16.3	X	353.52856	259.55856	141.97647	14.96277	0.1530916	0.18793881	3.0185039	20	12 16.5	20.1
271892 2004 VU_{28}	16.7	X	199.23601	189.24299	197.81035	5.27476	0.0489477	0.22206019	2.7007782	20	4 28.7	20.6
271893 2004 VA_{34}	16.7	X	77.15142	303.02771	112.38486	3.14599	0.0557328	0.20469745	2.8514194	20	1 9.4	20.5
271894 2004 VL_{37}	16.4	X	108.17731	218.53652	238.48122	2.83600	0.0714842	0.21640055	2.7476652	20	4 11.6	20.0
271895 2004 VA_{43}	17.0	X	200.42285	160.90146	196.39033	1.10494	0.0203908	0.21674182	2.7447802	20	3 22.8	20.6
271896 2004 VK_{43}	16.6	X	171.64136	179.26408	190.07856	4.47596	0.0874930	0.21390437	2.7690000	20	3 6.5	20.7
271897 2004 VM_{45}	16.6	X	151.14814	309.94965	90.67303	5.57617	0.1062030	0.21489937	2.7604462	20	3 28.5	20.8
271898 2004 VH_{57}	16.2	X	178.51667	340.30517	40.86827	7.85548	0.1541802	0.21707251	2.7419918	20	4 2.0	20.6
271899 2004 VQ_{66}	16.3	X	240.34988	84.97053	233.93130	4.22681	0.0742676	0.21842994	2.7306201	20	3 16.1	20.3
271900 2004 VS_{71}	16.6	X	243.48394	107.27497	227.56854	3.91417	0.1256853	0.22142424	2.7059469	20	4 4.5	20.6
271901 2004 VP_{73}	16.2	X	5.68528	250.78863	147.16144	10.35896	0.2818363	0.18987686	2.9979291	20	—	—
271902 2004 VK_{79}	16.6	X	0.31593	157.28497	79.37613	3.72236	0.0531596	0.22372858	2.6873346	20	5 13.8	19.8
271903 2004 WB_{5}	16.1	X	230.78063	6.76309	43.50572	15.57706	0.0929443	0.23202484	2.6228879	20	7 1.5	20.1
271904 2004 WS_{5}	16.8	X	72.24811	257.15241	208.70085	3.44901	0.0643913	0.21100269	2.7943281	20	3 5.6	20.4
271905 2004 XR_{4}	15.8	X	293.24884	290.13581	63.70305	12.87413	0.1391177	0.23154710	2.6264945	20	6 30.8	19.1
271906 2004 XB_{6}	16.1	X	148.74279	179.54488	215.83758	9.16577	0.1565832	0.21369453	2.7708124	20	3 18.3	20.6
271907 2004 XB_{7}	15.9	X	296.00700	180.58030	275.42489	15.86024	0.3108500	0.18275963	3.0752650	20	10 14.4	19.6
271908 2004 XA_{8}	15.4	X	212.40329	33.70053	95.46201	16.91416	0.0451605	0.17239457	3.1973266	20	9 28.4	20.4
271909 2004 XY_{15}	16.6	X	289.17284	49.51121	280.47601	3.18537	0.2789089	0.22902104	2.6457723	20	4 29.2	20.4
271910 2004 XX_{22}	15.4	X	355.09776	196.63763	260.11585	9.08649	0.0793508	0.19335822	2.9618356	20	—	—
271911 2004 XA_{27}	16.1	X	32.36223	323.14666	115.36321	2.21440	0.1718301	0.19724756	2.9227722	20	—	—
271912 2004 XU_{28}	15.6	X	271.89294	75.74234	123.65056	11.37500	0.0210290	0.19099757	2.9861903	20	—	—
271913 2004 XU_{30}	17.1	X	11.13154	309.32301	32.76278	21.13980	0.0847649	0.36948009	1.9234254	20	11 27.5	19.2
271914 2004 XB_{35}	15.2	X	353.03947	12.38987	91.13579	14.26538	0.0465629	0.19068389	2.9894643	20	—	—
271915 2004 XV_{37}	16.1	X	213.79428	187.78525	175.08856	14.43992	0.2609994	0.22273170	2.6953471	20	4 7.4	20.9
271916 2004 XZ_{37}	15.3	X	49.47398	201.03008	159.48768	12.32643	0.1529593	0.19059866	2.9903555	20	—	—
271917 2004 XT_{43}	16.5	X	339.41193	313.75602	57.46150	1.96998	0.1894430	0.17851952	3.1237690	20	10 9.1	19.6
271918 2004 XB_{44}	16.3	X	35.38438	136.61840	249.09935	2.90692	0.1201096	0.19098639	2.9863069	20	—	—
271919 2004 XM_{45}	16.3	X	267.77758	262.90297	93.23351	10.08817	0.2054543	0.22777792	2.6553899	20	5 21.9	20.1
271920 2004 XM_{58}	16.1	X	349.34357	101.84729	316.50756	10.22208	0.0765163	0.18296857	3.0729233	20	12 21.6	20.2

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V
	m		°	°	°	°		°				
271921 2004 XY_{64}	16.1	X	211.58477	331.68839	33.26783	8.13404	0.2307442	0.22047156	2.7137365	20	4 8.6	20.8
271922 2004 XA_{70}	16.3	X	329.02236	309.75216	11.16317	4.03863	0.2933625	0.23462440	2.6034782	20	6 27.9	18.2
271923 2004 XK_{75}	16.4	X	309.62151	358.42078	97.83314	4.97754	0.2592506	0.18434253	3.0576353	20	11 30.0	19.1
271924 2004 XA_{88}	15.2	X	250.52225	254.69199	272.98015	18.63976	0.2445509	0.17962589	3.1109289	20	11 23.2	19.8
271925 2004 XO_{100}	15.3	X	280.11931	342.25604	77.63838	6.90612	0.1054153	0.17424504	3.1746494	20	9 12.5	19.6
271926 2004 XY_{101}	15.7	X	315.93020	69.68052	357.33299	15.77559	0.2421411	0.18174429	3.0867079	20	10 27.2	19.1
271927 2004 XX_{108}	16.0	X	71.66395	341.17980	66.69848	11.76538	0.1134205	0.19904688	2.9051315	20	—	—
271928 2004 XH_{110}	15.8	X	298.93060	199.38934	266.22152	7.90003	0.1025200	0.18489682	3.0515214	20	12 5.4	19.7
271929 2004 XX_{110}	15.6	X	184.78972	347.34993	50.43033	10.54371	0.1947261	0.21990549	2.7183915	20	4 27.2	20.2
271930 2004 XW_{116}	16.2	X	355.72023	226.46475	214.90532	3.18729	0.0892089	0.18974624	2.9993048	20	—	—
271931 2004 XS_{117}	15.4	X	285.57044	167.45480	282.99026	12.46415	0.0497806	0.17788697	3.1311699	20	10 28.0	19.8
271932 2004 XV_{125}	15.9	X	300.02076	127.87676	333.59383	16.02392	0.3058182	0.18147832	3.0897230	20	10 29.7	19.4
271933 2004 XA_{129}	15.7	X	199.31595	311.93234	52.00522	9.37677	0.1744625	0.21763769	2.7372427	20	4 1.1	20.3
271934 2004 XR_{134}	15.1	X	53.55808	276.65653	69.64334	13.00509	0.1478875	0.18677492	3.0310308	20	12 26.8	19.6
271935 2004 XX_{145}	16.0	X	114.78397	357.39017	85.01463	4.06732	0.0675770	0.21414679	2.7669098	20	4 3.5	19.8
271936 2004 XY_{147}	16.2	X	139.23583	324.94691	86.31260	4.49848	0.0723169	0.21387436	2.7692589	20	3 25.0	20.2
271937 2004 XR_{167}	15.9	X	70.91215	354.38185	70.50692	3.34920	0.0561412	0.20059902	2.8901265	20	1 14.1	19.6
271938 2004 XG_{169}	15.9	X	283.68170	291.93548	300.99301	5.47516	0.0061593	0.20478045	2.8506489	20	1 31.7	19.9
271939 2004 XQ_{176}	16.8	X	61.67131	95.90126	312.86805	1.16615	0.0820296	0.19644411	2.9307360	20	—	—
271940 2004 XE_{191}	16.2	X	183.80035	327.02572	37.70837	8.72682	0.2349445	0.21557941	2.7546380	20	3 20.5	21.1
271941 2004 YY	15.6	X	333.24100	78.57405	358.24345	20.59427	0.3303344	0.18537914	3.0462261	20	—	—
271942 2004 YW_{19}	15.7	X	28.76539	59.69059	290.65024	8.24577	0.0901377	0.17589012	3.1548237	20	11 19.8	20.0
271943 2004 YJ_{29}	16.1	X	178.13740	273.06931	122.02458	5.24923	0.0836640	0.21453275	2.7635902	20	4 17.4	20.3
271944 2004 YG_{32}	15.5	X	267.68934	87.37791	25.51998	25.29143	0.3300458	0.17539339	3.1607774	20	10 3.0	20.1
271945 2005 AU_{2}	15.4	X	356.41782	348.77596	107.43597	9.81881	0.0783544	0.18753759	3.0228076	20	—	—
271946 2005 AF_{4}	15.3	X	270.99296	21.02098	103.18715	28.96557	0.1296246	0.17785726	3.1315186	20	11 23.7	19.9
271947 2005 AO_{5}	15.3	X	294.02801	25.88190	79.95516	10.67903	0.0597120	0.17884533	3.1199740	20	12 1.4	19.4
271948 2005 AW_{17}	15.3	X	323.24028	318.02538	120.89576	18.12975	0.2019402	0.18120560	3.0928223	20	12 10.8	18.8
271949 2005 AZ_{19}	15.6	X	244.65819	217.52117	287.25503	9.32603	0.1079232	0.17454072	3.1710630	20	11 4.5	20.3
271950 2005 AF_{23}	15.7	X	26.51813	322.84844	100.09138	10.58565	0.1511610	0.18916011	3.0054973	20	—	—
271951 2005 AR_{23}	15.4	X	316.45863	123.44164	338.48921	7.52973	0.1796040	0.18094783	3.0957589	20	12 25.4	18.9
271952 2005 AN_{25}	15.7	X	308.97244	9.97402	111.26891	8.12484	0.0772571	0.18472171	3.0534496	20	—	—
271953 2005 AB_{31}	15.6	X	300.70284	234.46909	287.12349	5.23245	0.1576063	0.18908188	3.0063262	20	—	—
271954 2005 AK_{35}	16.3	X	312.53829	15.84781	133.84152	8.44718	0.1428716	0.18853492	3.0121379	20	—	—
271955 2005 AN_{37}	16.0	X	30.39539	108.57181	326.82119	9.39451	0.0532512	0.19031793	2.9932954	20	—	—
271956 2005 AC_{38}	15.8	X	101.63760	301.18117	89.40896	8.57234	0.0324472	0.19379680	2.9573654	20	1 9.5	19.9
271957 2005 AQ_{38}	16.4	X	322.85186	217.95477	244.31054	4.19813	0.2481591	0.18426827	3.0584568	20	—	—
271958 2005 AT_{47}	16.5	X	258.99368	192.07790	293.26847	0.16072	0.2273412	0.17552523	3.1591944	20	10 15.4	21.0
271959 2005 AW_{48}	16.4	X	11.44574	343.74765	114.76624	3.23906	0.0704063	0.19253715	2.9702501	20	—	—
271960 2005 AW_{49}	15.5	X	86.18099	36.97337	313.36026	7.43408	0.0779383	0.18594382	3.0400558	20	—	—
271961 2005 AS_{57}	15.9	X	250.34852	71.53987	74.42533	14.16855	0.2522721	0.17516672	3.1635034	20	10 31.8	20.6
271962 2005 AW_{57}	15.9	X	314.45666	79.01963	35.95198	10.42070	0.2479735	0.18388720	3.0626807	20	—	—
271963 2005 AR_{58}	15.6	X	300.52370	169.67157	297.39790	10.30222	0.0972374	0.18014313	3.1049713	20	12 8.5	19.6
271964 2005 AW_{60}	16.3	X	343.29215	20.84077	49.68692	1.49227	0.1947447	0.18340063	3.0680953	20	—	—
271965 2005 AV_{69}	16.2	X	77.05882	4.66731	318.56680	8.76549	0.0455232	0.17768275	3.1335686	20	12 11.1	20.8
271966 2005 AJ_{77}	16.0	X	254.59629	86.42458	75.37810	5.41896	0.2059643	0.17701162	3.1414841	20	11 26.9	20.5
271967 2005 AP_{77}	15.7	X	276.66902	178.13637	339.22703	6.73843	0.1011175	0.18108222	3.0942270	20	—	—
271968 2005 AX_{77}	15.4	X	54.62968	41.60341	338.86646	9.37307	0.0904954	0.18371396	3.0646058	20	—	—
271969 2005 AT_{78}	15.4	X	270.43058	182.07078	326.20825	14.14809	0.0232136	0.17909867	3.1170311	20	12 27.1	19.9
271970 2005 AB_{79}	15.7	X	151.59086	319.38442	335.09732	9.48157	0.0829517	0.18307451	3.0717378	20	—	—
271971 2005 AE_{81}	15.5	X	113.87001	276.32638	123.55493	18.48840	0.0943371	0.19940908	2.9016127	20	2 13.8	19.6
271972 2005 AU_{82}	15.5	X	321.41177	184.10421	281.33000	11.71152	0.1282243	0.18226226	3.0808570	20	—	—
271973 2005 BJ_{2}	15.1	X	251.35732	76.33891	78.56849	26.33104	0.1930380	0.17612619	3.1520040	20	11 21.5	19.7
271974 2005 BA_{9}	16.2	X	300.74819	114.84844	333.29226	11.94283	0.1721464	0.17783132	3.1318230	20	11 1.9	20.1
271975 2005 BC_{14}	15.9	X	269.60957	100.06282	20.76523	25.43276	0.2610156	0.17486117	3.1671876	20	10 16.8	20.3
271976 2005 BZ_{24}	16.5	X	326.89264	2.27608	116.22358	2.46547	0.2077858	0.18598059	3.0396551	20	—	—
271977 2005 BB_{29}	15.6	X	324.97235	321.26095	107.52182	8.94911	0.0860795	0.17683600	3.1435637	20	11 28.8	19.6
271978 2005 BN_{35}	16.6	X	331.82697	182.89938	284.33287	3.37806	0.1079819	0.18527902	3.0473234	20	—	—
271979 2005 BX_{36}	16.6	X	308.50754	19.56424	116.00976	3.10446	0.0419741	0.18517087	3.0485099	20	—	—
271980 2005 BP_{43}	15.8	X	173.73461	170.31721	129.50097	11.23092	0.0721757	0.18973557	2.9994172	20	—	—
271981 2005 CG_{6}	15.6	X	259.80073	165.33321	327.30957	4.01455	0.1386849	0.17267681	3.1938416	20	11 4.9	20.1
271982 2005 CV_{9}	16.4	X	262.90589	131.38514	70.58986	3.73508	0.0954024	0.18375581	3.0641404	20	—	—
271983 2005 CV_{12}	15.0	X	263.19255	255.80968	256.21326	14.92338	0.1869608	0.17881460	3.1203315	20	11 28.7	19.1
271984 2005 CN_{14}	15.1	X	150.74836	102.94232	132.33739	16.21611	0.0737008	0.17154752	3.2078429	20	11 22.2	20.3
271985 2005 CG_{15}	16.5	X	307.66638	339.40452	99.41753	2.24175	0.1513965	0.17628885	3.1500648	20	11 9.5	20.1
271986 2005 CH_{16}	16.1	X	306.38164	216.73153	289.10339	2.89115	0.1863877	0.18464429	3.0543031	20	—	—
271987 2005 CY_{16}	15.4	X	225.74062	287.43687	311.44363	11.10719	0.1376976	0.18386665	3.0629088	20	—	—
271988 2005 CD_{17}	15.7	X	186.71534	280.55683	314.79542	7.98198	0.0398984	0.17983412	3.1085270	20	12 29.2	20.2
271989 2005 CH_{22}	15.0	X	191.73556	241.50646	349.55640	19.05590	0.1109344	0.17435710	3.1732890	20	12 22.5	20.2
271990 2005 CX_{25}	15.5	X	277.35511	187.09309	333.42591	10.11287	0.0310874	0.18109588	3.0940714	20	—	—
271991 2005 CL_{26}	15.6	X	141.51004	236.94880	110.91200	12.82979	0.0285381	0.19232849	2.9723981	20	1 5.3	19.7
271992 2005 CV_{27}	15.5	X	270.86596	127.92139	341.71904	15.54323	0.2162914	0.17242756	3.1969187	20	10 6.1	20.1
271993 2005 CC_{31}	15.9	X	355.82431	308.29774	121.86129	6.45808	0.1305484	0.18136009	3.0910657	20	—	—
271994 2005 CV_{31}	15.8	X	285.66128	335.98222	125.85313	7.32748	0.1541919	0.17443342	3.1723633	20	11 5.0	19.9
271995 2005 CB_{34}	15.6	X	160.02475	280.09233	333.64354	10.53714	0.0529847	0.17660461	3.1463088	20	12 20.0	20.4
271996 2005 CW_{34}	15.5	X	164.73929	138.44842	127.35255	10.09972	0.0319766	0.18009306	3.1055467	20	—	—
271997 2005 CL_{38}	14.9	X	267.51373	186.68963	276.26568	28.27492	0.2526518	0.17323883	3.1869302	20	9 7.1	20.1
271998 2005 CT_{38}	15.9	X	265.45261	41.01306	155.53565	10.74115	0.0615818	0.18697859	3.0288292	20	—	—
271999 2005 CC_{43}	16.3	X	254.08499	5.23448	144.96138	11.83600	0.1859841	0.17538614	3.1608644	20	11 17.9	20.9
272000 2005 CX_{46}	16.4	X	256.15548	207.86328	8.24416	2.00717	0.0260813	0.18575896	3.0420723	20	—	—