

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316001 2009 <i>EN</i> ₄	17.3	X	75.49196	108.30150	113.86199	4.13363	0.1134728	0.29087486	2.2559628	20	8 30.9	20.0
316002 2009 <i>EK</i> ₁₃	17.5	X	138.97670	284.77469	327.65584	3.48918	0.1480680	0.31501797	2.1391726	20	12 21.9	20.6
316003 2009 <i>ED</i> ₁₆	18.2	X	154.90865	109.95985	57.82039	1.61304	0.0476665	0.30134594	2.2033957	20	9 18.7	20.8
316004 2009 <i>EV</i> ₁₇	18.2	X	74.78408	298.24428	333.01070	4.74507	0.1016881	0.30433439	2.1889476	20	11 3.6	21.1
316005 2009 <i>EC</i> ₂₁	17.2	X	192.62837	28.04818	105.84606	5.43804	0.1040753	0.30344832	2.1932066	20	9 16.4	20.2
316006 2009 <i>EN</i> ₂₂	17.5	X	159.37449	102.03426	45.81991	6.30550	0.0727506	0.29365262	2.2417136	20	8 28.3	20.6
316007 2009 <i>EU</i> ₂₅	17.6	X	130.13720	68.10082	95.31351	3.44714	0.0990318	0.29036541	2.2586007	20	8 13.3	20.6
316008 2009 <i>FQ</i> ₁	17.0	X	20.31018	24.51394	181.36880	6.48296	0.0935599	0.27429553	2.3459760	20	5 2.3	19.3
316009 2009 <i>FE</i> ₃	17.8	X	150.32052	22.33127	128.01601	2.95880	0.0843093	0.29456221	2.2370964	20	8 17.9	20.9
316010 Daviddubey	18.0	X	99.07955	171.59015	78.37647	6.33370	0.2351931	0.29760197	2.2218369	20	11 12.8	21.6
316011 2009 <i>FC</i> ₁₆	17.3	X	345.34485	174.58614	126.99426	5.14851	0.1788766	0.28269598	2.2992682	20	7 26.1	18.8
316012 2009 <i>FE</i> ₁₇	17.5	X	149.52880	70.73441	153.58054	18.18860	0.2235395	0.30885098	2.1675547	20	11 26.1	21.4
316013 2009 <i>FQ</i> ₁₇	17.3	X	70.47325	199.57674	20.22871	6.70768	0.0764567	0.28987221	2.2611619	20	8 16.2	20.0
316014 2009 <i>FJ</i> ₁₉	17.9	X	159.28576	61.63084	132.14021	4.94297	0.0672992	0.30617262	2.1801773	20	10 31.9	20.7
316015 2009 <i>FC</i> ₂₁	17.2	X	316.79486	120.16117	182.20045	4.36668	0.1454238	0.27883850	2.3204251	20	5 26.2	19.4
316016 2009 <i>FO</i> ₂₁	17.9	X	75.93993	120.02842	93.00014	4.48419	0.0644731	0.28884341	2.2665279	20	8 10.1	20.5
316017 2009 <i>FX</i> ₂₂	17.1	X	29.62428	137.44799	152.59128	4.11166	0.1349055	0.29016129	2.2596598	20	10 5.9	19.5
316018 2009 <i>FC</i> ₂₄	17.7	X	80.33534	26.75370	187.52672	4.03114	0.1276972	0.28946008	2.2633077	20	8 25.2	20.6
316019 2009 <i>FY</i> ₂₄	17.3	X	84.24401	53.38939	83.16125	5.30414	0.0881361	0.27727032	2.3291661	20	5 5.1	20.0
316020 Linshuhow	17.9	X	25.35837	253.87456	16.76072	1.46397	0.1868974	0.28651769	2.2787766	20	9 6.6	20.0
316021 2009 <i>FP</i> ₃₀	17.1	X	85.42388	148.47018	355.00097	9.06409	0.1395157	0.27749809	2.3278914	20	5 20.9	20.2
316022 2009 <i>FE</i> ₃₆	18.2	X	245.66242	345.42655	133.22794	3.83251	0.0542877	0.30995898	2.1623860	20	11 13.5	20.5
316023 2009 <i>FL</i> ₃₇	17.5	X	180.94782	24.17170	82.78458	3.55669	0.0862276	0.29106517	2.2549793	20	7 24.3	20.5
316024 2009 <i>FA</i> ₃₉	17.3	X	2.55554	122.80982	77.97286	5.64917	0.1326440	0.26926920	2.3750801	20	3 22.5	19.5
316025 2009 <i>FU</i> ₄₁	17.9	X	245.65472	17.58341	63.22947	4.94734	0.1255791	0.30105987	2.2047912	20	9 6.1	20.5
316026 2009 <i>FS</i> ₄₂	17.5	X	28.33549	106.49418	140.99634	6.08570	0.0794474	0.28321142	2.2964776	20	7 18.1	19.9
316027 2009 <i>FE</i> ₄₅	17.4	X	108.64898	2.69959	216.77465	3.28612	0.2109498	0.29393398	2.2402829	20	10 10.3	20.8
316028 Patrickwills	17.5	X	44.71424	155.86695	117.84937	6.75482	0.1023684	0.29484252	2.2356783	20	10 2.5	20.1
316029 2009 <i>FC</i> ₄₆	17.3	X	0.02203	111.78282	123.34547	1.94729	0.1433344	0.27007286	2.3703661	20	5 7.6	19.3
316030 2009 <i>FF</i> ₄₇	17.1	X	277.89989	172.16105	121.81538	2.94699	0.0887530	0.26562485	2.3967547	20	3 26.2	20.1
316031 2009 <i>FN</i> ₄₈	17.1	X	328.34373	184.08285	83.43448	5.39869	0.2140415	0.26941838	2.3742033	20	4 14.4	19.3
316032 2009 <i>FX</i> ₅₃	17.2	X	153.09725	320.51551	67.80434	6.85509	0.1828574	0.26355998	2.4092567	20	3 18.4	21.0
316033 2009 <i>FW</i> ₆₃	17.6	X	177.33193	43.32566	43.68691	6.95931	0.1622697	0.28451994	2.2894311	20	6 20.1	21.1
316034 2009 <i>FL</i> ₆₇	17.7	X	97.91944	294.88412	272.07420	1.82075	0.0443569	0.29395136	2.2401946	20	8 27.4	20.5
316035 2009 <i>FK</i> ₆₈	18.0	X	114.35119	10.22087	176.76191	3.13106	0.0786144	0.29224983	2.2488813	20	8 24.2	20.9
316036 2009 <i>FC</i> ₆₉	17.9	X	9.17488	111.86842	135.88734	1.35420	0.1856411	0.27497417	2.3421144	20	6 20.9	19.3
316037 2009 <i>FK</i> ₇₁	17.1	X	43.32991	127.40845	131.58972	6.14517	0.0746595	0.28478049	2.2880305	20	8 30.9	19.5
316038 2009 <i>FH</i> ₇₆	18.0	X	45.36234	250.23942	306.60937	0.69623	0.1261272	0.27376424	2.3490102	20	6 6.1	20.3
316039 2009 <i>GB</i> ₃	17.6	X	190.05066	88.21492	56.69995	6.64340	0.0962469	0.30142136	2.2030281	20	9 29.7	20.5
316040 2009 <i>HX</i> ₃	17.7	X	58.33975	15.04286	188.49880	2.00715	0.1521580	0.27940842	2.3172686	20	7 13.1	20.2
316041 2009 <i>HH</i> ₁	17.6	X	144.18045	77.08349	40.53925	4.80043	0.1057967	0.28439182	2.2901186	20	6 25.7	20.8
316042 Tilofranz	17.7	X	35.62951	87.95711	97.79418	5.81263	0.1633518	0.27212785	2.3584177	20	5 8.1	19.8
316043 2009 <i>HY</i> ₂	17.6	X	93.66934	127.49627	25.52733	2.48603	0.1381737	0.27951536	2.3166776	20	6 17.7	20.6
316044 2009 <i>HQ</i> ₇	17.6	X	140.70557	334.78861	144.52323	5.53094	0.1050389	0.28051057	2.3111949	20	6 23.9	20.8
316045 2009 <i>HA</i> ₈	17.8	X	94.43514	81.91903	103.82856	4.63021	0.1352282	0.28407025	2.2918466	20	8 4.9	20.8
316046 2009 <i>HC</i> ₁₆	17.6	X	201.83759	341.51567	79.85604	6.21759	0.1335496	0.28515083	2.2860530	20	6 11.6	20.7
316047 2009 <i>HN</i> ₂₅	17.2	X	102.17793	131.15512	70.90615	6.82334	0.1102022	0.28812680	2.2702845	20	9 6.8	20.4
316048 2009 <i>HO</i> ₄₁	17.9	X	150.36492	333.40949	162.64545	4.44119	0.1586020	0.28835211	2.2691017	20	7 29.1	21.5
316049 2009 <i>HT</i> ₄₁	17.4	X	49.82886	150.06646	115.44265	3.92265	0.0983349	0.28925715	2.2643661	20	9 24.8	20.0
316050 2009 <i>HQ</i> ₄₅	17.9	X	68.02237	38.74911	177.76192	6.83008	0.1576062	0.28403360	2.2920438	20	8 15.6	20.8
316051 2009 <i>HV</i> ₄₅	17.8	X	9.85326	73.66068	155.20083	0.47105	0.1554643	0.27173664	2.3606807	20	5 18.8	19.7
316052 2009 <i>HW</i> ₅₂	17.6	X	31.58194	14.19200	241.56365	1.87993	0.1503765	0.28064463	2.3104588	20	8 16.5	19.9
316053 2009 <i>HW</i> ₅₃	15.5	X	210.02497	0.15863	219.44433	35.47216	0.2063637	0.22783645	2.6549351	20	12 21.1	20.2
316054 2009 <i>HH</i> ₅₄	17.1	X	329.67629	117.89283	108.52389	7.20457	0.1085204	0.25932302	2.4354283	20	3 5.6	19.9
316055 2009 <i>HB</i> ₅₇	17.7	X	134.11260	104.89794	54.19525	6.38819	0.0933563	0.28792524	2.2713439	20	8 13.3	20.9
316056 2009 <i>HS</i> ₅₇	16.9	X	311.76896	134.61563	149.17417	7.11902	0.1199205	0.26924257	2.3752367	20	4 25.6	19.6
316057 2009 <i>HS</i> ₆₀	17.5	X	299.25564	257.06295	28.83041	2.04836	0.1666419	0.26696413	2.3887321	20	3 30.4	20.5
316058 2009 <i>HA</i> ₆₁	17.8	X	160.04544	244.26539	268.64805	2.74691	0.1003831	0.29415740	2.2391483	20	8 30.9	20.8
316059 2009 <i>HC</i> ₆₄	17.8	X	296.29171	208.73494	65.25617	2.52724	0.1587332	0.26021320	2.4298707	20	3 13.0	20.8
316060 2009 <i>HP</i> ₆₅	16.5	X	46.99535	263.00884	101.70993	7.27541	0.1556621	0.21992045	2.7182682	20	—	—
316061 2009 <i>HL</i> ₇₅	17.7	X	26.20178	142.01267	99.33664	3.79653	0.1571142	0.27800518	2.3250598	20	7 16.1	19.7
316062 2009 <i>HQ</i> ₇₇	17.8	X	28.09133	322.60359	262.71884	1.65379	0.1616054	0.27492496	2.3423939	20	6 23.7	19.7
316063 2009 <i>HT</i> ₇₇	17.5	X	109.63929	93.85819	114.75641	3.93370	0.1655473	0.29207095	2.2497995	20	9 26.8	20.9
316064 2009 <i>HB</i> ₈₀	16.3	X	190.37374	163.95795	137.03528	10.63840	0.1952160	0.23677853	2.5876637	20	1 5.2	20.6
316065 2009 <i>HR</i> ₈₀	17.2	X	35.75503	157.65118	110.51267	7.14978	0.0968673	0.28703352	2.2760457	20	9 7.7	19.7
316066 2009 <i>HA</i> ₈₃	17.4	X	339.05218	316.84567	291.99099	4.02618	0.1750509	0.26653016	2.3913243	20	4 7.8	19.7
316067 2009 <i>HC</i> ₈₃	18.3	X	114.13635	170.17674	60.97690	3.47143	0.1256046	0.30051789	2.3107441	20	10 28.9	21.3
316068 2009 <i>HO</i> ₉₄	17.3	X	118.70291	274.74043	232.42064	6.23788	0.2325999	0.28070140	2.3101473	20	7 16.6	21.0
316069 2009 <i>HG</i> ₉₈	17.9	X	59.74032	47.32752	162.10030	7.32528	0.1308943	0.27754480	2.3276302	20	7 19.6	20.7
316070 2009 <i>HR</i> ₉₈	17.7	X	35.47438	138.77975	71.86614	2.32548	0.1299831	0.27378926	2.3488671	20	6 10.0	19.6
316071 2009 <i>HZ</i> ₉₈	17.2	X	149.82106	258.21660	128.56364	6.82928	0.1262642	0.25687806	2.4508574	20	3 7.0	20.7
316072 2009 <i>HW</i> ₉₉	17.9	X</										

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316081 2009 KY	17.7	X	69.38372	38.78808	159.43997	6.11776	0.1379906	0.27968523	2.3157395	20	7 18.9	20.6
316082 2009 KB ₃	16.0	X	171.39358	181.10136	93.66360	15.42394	0.1944144	0.22534548	2.6744644	20	—	—
316083 2009 KZ ₃	17.2	X	44.21783	127.75715	88.62194	3.29935	0.1574747	0.27561341	2.3384916	20	7 10.4	19.4
316084 2009 Mykolapokropyvny	16.4	X	177.84807	192.81786	92.41968	15.66313	0.2354990	0.22986195	2.6393156	20	—	—
316085 2009 KT ₉	13.3	X	264.05432	233.81827	88.54532	10.06681	0.1545366	0.08225436	5.2363672	20	4 19.9	20.5
316086 2009 KU ₉	16.6	X	192.13748	188.97786	102.05903	5.64797	0.0691663	0.23786948	2.5797457	20	—	—
316087 2009 KB ₁₃	17.6	X	27.04289	113.99848	113.65766	2.12292	0.1446644	0.27302919	2.3532243	20	6 22.9	19.6
316088 2009 KH ₁₃	17.2	X	279.55036	173.01104	151.69992	6.85173	0.1350203	0.26714522	2.3876525	20	5 3.8	20.3
316089 2009 KH ₁₅	17.2	X	40.67172	136.57287	107.03634	3.93563	0.1922165	0.27805803	2.3247651	20	8 23.2	19.6
316090 2009 KW ₂₈	16.6	X	227.03817	340.24087	294.76405	2.90032	0.2158699	0.24133179	2.5550125	20	1 3.7	20.8
316091 2009 KC ₂₉	17.4	X	350.94476	105.41280	107.35615	2.20990	0.1169548	0.25964371	2.4334225	20	3 18.8	19.9
316092 2009 KT ₃₀	18.1	X	0.04006	154.75556	93.92961	4.04931	0.1955947	0.27105263	2.3646505	20	5 29.8	19.7
316093 2009 LB ₁	17.2	X	1.68752	86.93027	124.56874	7.22385	0.0885060	0.26322416	2.4113054	20	4 9.8	19.8
316094 2009 LA ₇	15.8	X	186.44696	175.97602	119.00413	16.85239	0.0722694	0.22583756	2.6705780	20	—	—
316095 2009 MX ₄	16.6	X	255.45963	132.95437	121.82353	15.21148	0.1772662	0.23731259	2.5837800	20	1 5.5	20.7
316096 2009 NQ ₁	15.8	X	330.49003	195.04076	119.00549	11.99740	0.2158552	0.17584117	3.1554091	20	6 27.6	19.3
316097 2009 OW	15.6	X	334.10010	344.12770	335.02924	4.77227	0.1736311	0.17382227	3.1797948	20	7 16.8	19.2
316098 2009 OO ₁	15.5	X	335.53820	13.09788	280.29356	10.98358	0.0408338	0.17154068	3.2079281	20	6 22.5	19.7
316099 2009 OU ₃	15.3	X	8.29545	341.33337	318.96126	15.83070	0.2269661	0.18186248	3.0853704	20	8 29.8	18.5
316100 2009 OG ₅	14.6	X	23.41773	334.13570	292.08492	21.54944	0.1617248	0.17312228	3.1883604	20	8 1.5	18.5
316101 2009 OP ₁₃	16.5	X	337.55513	200.75718	144.26143	3.33994	0.0887474	0.18090342	3.0962656	20	8 31.8	20.2
316102 2009 OE ₁₄	15.5	X	282.07528	252.79474	134.58615	11.94376	0.0660446	0.17656761	3.1467484	20	8 6.5	19.8
316103 2009 OQ ₁₇	15.9	X	17.70258	22.91612	275.26205	3.90004	0.1427037	0.18171863	3.0869984	20	9 5.4	19.7
316104 2009 OP ₁₈	16.2	X	249.63742	240.12293	316.57511	8.21211	0.1007858	0.21458053	2.7631800	20	—	—
316105 2009 OV ₂₄	15.0	X	307.91020	80.79647	276.56843	9.19500	0.0840321	0.17304658	3.1892902	20	7 30.1	19.2
316106 2009 PM	17.7	X	108.68809	315.70709	293.33345	1.76236	0.2098223	0.28817350	2.2700392	20	11 15.6	21.4
316107 2009 PM ₃	15.7	X	41.20169	359.20352	284.49793	8.74442	0.0923082	0.18385700	3.0630161	20	9 12.7	20.0
316108 2009 PO ₄	16.5	X	151.37916	342.28931	286.44506	7.14152	0.1870301	0.20960482	2.8067380	20	12 31.8	21.2
316109 2009 PL ₅	15.7	X	324.56800	188.23741	166.50960	13.40890	0.1623206	0.17628202	3.1501462	20	8 15.9	19.4
316110 2009 PF ₉	16.0	X	38.62736	270.09359	231.61805	1.34797	0.1698224	0.18203433	3.0834283	20	10 7.9	20.1
316111 2009 PY ₁₀	14.9	X	303.35411	211.84241	138.91657	22.44548	0.1343670	0.17199810	3.2022380	20	7 10.5	19.2
316112 2009 PA ₁₅	16.5	X	232.89914	297.66012	320.68298	12.05921	0.1942332	0.22839371	2.6506148	20	—	—
316113 2009 PV ₁₆	16.0	X	38.00088	112.43404	177.89171	11.23041	0.1250323	0.18449720	3.0559262	20	9 26.9	20.0
316114 2009 QY ₅	15.0	X	25.08464	307.92736	345.53540	16.45945	0.2302340	0.17882969	3.1201560	20	9 22.0	18.7
316115 2009 QL ₁₃	16.3	X	331.46238	237.67066	218.05443	3.96392	0.0988096	0.19958164	2.8999399	20	—	—
316116 2009 QN ₁₃	15.8	X	78.94165	202.18927	180.75497	14.28485	0.0932450	0.21013202	2.8020415	20	—	—
316117 2009 QT ₂₁	16.0	X	96.54649	170.81870	151.30090	15.86083	0.1377571	0.20452219	2.8530481	20	—	—
316118 2009 QY ₂₂	15.5	X	29.30592	290.15239	356.00446	11.94518	0.2037840	0.17970751	3.1099870	20	9 18.8	19.1
316119 2009 QL ₂₆	13.4	X	302.63572	232.48778	187.17864	31.28798	0.1271043	0.08381315	5.1712391	20	9 22.1	19.9
316120 2009 QM ₂₆	16.8	X	159.54747	286.98102	347.81265	2.99962	0.1471475	0.21049397	2.7988284	20	—	—
316121 2009 QN ₂₇	15.8	X	285.00139	228.85773	148.62576	9.69984	0.0862590	0.17376200	3.1805301	20	7 24.7	20.2
316122 2009 QP ₃₁	16.0	X	7.10634	231.42576	104.43743	2.48350	0.1759254	0.18378188	3.0638506	20	10 15.6	19.5
316123 2009 QT ₃₅	15.3	X	309.42758	18.97385	344.11508	10.11109	0.0516241	0.17474935	3.1685386	20	8 16.7	19.6
316124 2009 QH ₄₇	15.3	X	34.08391	178.77648	134.07443	11.66483	0.0922465	0.18402488	3.0611529	20	10 19.8	19.6
316125 2009 QB ₅₄	15.8	X	66.24353	297.72858	343.65406	6.81882	0.2538256	0.18790573	3.0188581	20	11 3.6	20.6
316126 2009 RG ₃₀	15.8	X	182.60427	310.86547	325.16527	24.61176	0.1062821	0.21397960	2.7683508	20	—	—
316127 2009 RY ₃₄	14.1	X	281.79174	251.89777	180.80102	1.23824	0.0578983	0.08195783	5.2489901	20	9 20.1	20.8
316128 2009 RB ₅₇	13.8	X	284.39894	329.97701	110.30212	4.04951	0.1209821	0.08252251	5.2250176	20	9 25.5	20.6
316129 2009 RH ₆₄	13.9	X	255.99174	84.11828	10.10876	4.45986	0.0976729	0.08109644	5.2860936	20	9 10.9	20.9
316130 2009 RA ₇₄	13.4	X	303.12254	14.92894	48.63565	8.15882	0.0927943	0.08421677	5.1547032	20	10 4.6	20.0
316131 2009 SW ₁₅	15.5	X	21.35062	351.88040	329.84018	6.78403	0.0856052	0.18009415	3.1055342	20	10 4.0	19.6
316132 2009 SO ₁₉	14.0	X	290.78252	268.33406	160.06677	8.87753	0.1462535	0.08384870	5.1697770	20	9 19.2	20.5
316133 2009 SX ₃₃	13.6	X	272.10613	104.87647	339.87335	5.19745	0.1551067	0.08128613	5.2778668	20	9 9.5	20.4
316134 2009 SV ₄₃	13.8	X	311.87155	158.26655	255.26748	5.53632	0.0462201	0.08513561	5.1175475	20	10 3.8	20.5
316135 2009 SX ₆₅	14.3	X	321.05494	267.83046	118.13546	3.11258	0.0999817	0.08233946	5.2327588	20	9 12.8	20.8
316136 2009 SC ₉₉	15.9	X	84.02529	321.64990	287.35727	7.95949	0.1138288	0.18202064	3.0835829	20	9 25.9	20.6
316137 2009 SM ₁₃₁	14.1	X	262.62321	293.11602	160.95583	5.11214	0.1190788	0.08143466	5.2714470	20	9 14.9	21.1
316138 Giorgione	15.8	X	122.31618	209.05185	2.74430	7.86048	0.1119232	0.17893050	3.1189839	20	9 24.9	20.6
316139 2009 SH ₂₃₇	15.2	X	74.50961	190.92725	82.09335	10.93284	0.0324432	0.18126288	3.0921708	20	10 13.4	19.7
316140 2009 SY ₂₃₉	15.3	X	28.25554	186.65761	132.04068	18.39095	0.2423984	0.18386599	3.0629162	20	11 12.0	19.6
316141 2009 SM ₂₄₈	13.6	X	275.25551	67.58788	14.67713	24.74606	0.0984093	0.08296631	5.2063681	20	9 23.8	20.5
316142 2009 SL ₂₈₀	15.9	X	41.23590	216.80618	61.17042	6.62273	0.1457501	0.17365474	3.1818397	20	9 20.0	20.1
316143 2009 SL ₂₈₇	15.2	X	270.14910	86.04618	6.14545	14.64277	0.0414418	0.17840915	3.1250571	20	10 13.1	19.6
316144 2009 SD ₃₀₄	13.8	X	332.49967	152.28459	234.54680	5.60838	0.0843793	0.08419536	5.1555771	20	9 27.4	20.4
316145 2009 SC ₃₃₀	14.4	X	166.42104	216.21300	99.33750	17.54144	0.2125188	0.12406594	3.9813865	20	1 16.2	20.9
316146 2009 SV ₃₄₇	14.1	X	279.37212	208.08538	241.05586	1.56383	0.0818132	0.08520775	5.1146588	20	10 2.6	20.8
316147 2009 SM ₃₄₈	13.1	X	332.27582	345.57991	45.69469	13.89144	0.0646277	0.08311256	5.2002585	20	10 9.2	19.7
316148 2009 SK ₃₅₂	14.1	X	290.34241	325.43952	104.06287	2.31130	0.0341510	0.08020867	5.3250274	20	9 30.2	20.9
316149 2009 ST ₃₅₅	13.5	X	295.35987	329.02342	76.74659	8.72979	0.0629564	0.07964186	5.3502629	20	9 9.1	20.4
316150 2009 SW ₃₅₅	13.5	X	299.11832	321.19057	95.35282	8.08580	0.1452604	0.08252954	5.2247211	20	9 15.9	20.1
316151 2009 SJ ₃₅₆	15.8	X	40.34659	346.67874	292.06109	3.82631	0.1135511	0.17003582	3.2268277	20	9 9.2	20.0
316152 2009 SV ₃₆₁	13.4	X	348.10170	82.83299	265.31461	14.39798	0.1542927	0.08263456	5.2202935	20	8 29.1	19.7
316153 2009 TZ ₂₄	13.4	X	296.45389	22.65825	45.84671	9.62280	0.0773365	0.08341456	5.1876993	20	10 3.9	20.1
316154 2009 TP ₃₉	15.7	X	3									

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316161 2009 <i>UT</i> ₇₆	13.6	X	304.49101	40.15104	16.54325	6.37426	0.1195929	0.08321665	5.1959212	20	9 23.7	20.1
316162 2009 <i>UE</i> ₁₀₈	13.4	X	316.13910	1.00838	56.13829	8.91570	0.1015307	0.08239038	5.2306023	20	10 13.2	19.9
316163 2009 <i>VE</i> ₄₆	13.9	X	15.54658	72.41073	281.76672	2.37106	0.0692928	0.08248237	5.2267128	20	10 17.4	20.6
316164 2009 <i>VM</i> ₇₁	14.2	X	275.63929	25.87090	83.22069	6.92097	0.0822337	0.08114712	5.2838926	20	10 22.9	21.1
316165 2009 <i>VP</i> ₁₁₀	13.2	X	250.26656	21.94160	104.71750	8.72645	0.0764126	0.08297826	5.2058680	20	10 16.7	20.3
316166 2009 <i>WQ</i> ₁	14.3	X	287.26526	182.24890	238.86073	4.80611	0.0918697	0.08107116	5.2871923	20	9 7.0	21.2
316167 2009 <i>WM</i> ₂₉	15.4	X	226.43291	319.62876	203.54440	10.10163	0.1805965	0.18239012	3.0794171	20	11 2.4	20.1
316168 2009 <i>WA</i> ₅₇	14.0	X	27.01089	231.37043	106.36634	3.83593	0.0651201	0.08170359	5.2598734	20	10 15.7	20.7
316169 2009 <i>WQ</i> ₉₆	14.1	X	251.01954	51.60611	67.41339	2.67957	0.0402600	0.07973067	5.3462892	20	10 10.1	21.1
316170 2009 <i>WV</i> ₁₄₉	13.1	X	335.66173	314.33122	81.39624	15.60571	0.0561480	0.08237260	5.2313553	20	10 21.1	19.9
316171 2009 <i>WV</i> ₁₉₇	15.3	X	28.50757	211.76917	109.41609	11.10055	0.1542330	0.17256630	3.1952050	20	10 29.1	19.6
316172 2009 <i>WJ</i> ₂₁₈	15.3	X	29.70962	225.73539	75.86324	10.67710	0.1325603	0.18339847	3.0681193	20	10 5.8	19.4
316173 2009 <i>WB</i> ₂₄₀	13.1	X	328.42896	314.00197	90.24441	15.41399	0.0867065	0.08066293	5.3050161	20	10 19.9	19.9
316174 2009 <i>WM</i> ₂₅₀	13.3	X	337.83359	322.83321	72.63638	8.38435	0.0905290	0.08270879	5.2171695	20	10 18.9	19.8
316175 2010 <i>BM</i> ₃₃	13.1	X	302.01071	264.36986	160.43500	11.82120	0.0720669	0.08385142	5.1696654	20	10 6.2	19.8
316176 2010 <i>BB</i> ₄₆	13.5	X	301.31618	353.49221	61.87931	13.29583	0.0818593	0.08149778	5.2687251	20	9 27.7	20.3
316177 2010 <i>WB</i> ₇₀	12.9	X	352.08358	236.55248	141.05920	11.83423	0.0123021	0.08443237	5.1459244	20	10 18.4	19.8
316178 2010 <i>CX</i> ₁₅₉	17.0	X	52.79755	68.64338	193.81770	3.21526	0.0470726	0.22786794	2.6546905	20	9 4.2	20.5
316179 2010 <i>EN</i> ₆₅	7.1	X	53.64114	224.97480	234.43090	19.22021	0.3104357	0.00583002	30.5742472	20	3 23.2	21.5
316180 2010 <i>GN</i> ₇₆	17.1	X	65.71101	56.46139	286.81546	11.61772	0.2859308	0.22494945	2.6776024	20	—	—
316181 2010 <i>GY</i> ₁₂₆	17.5	X	206.84368	331.96272	46.91114	26.44818	0.0479063	0.39202169	1.8489677	20	4 24.6	19.4
316182 2010 <i>GP</i> ₁₅₀	17.8	X	247.20122	223.57035	101.43769	6.34371	0.2523786	0.27178260	2.3604145	20	3 17.9	21.7
316183 2010 <i>HB</i> ₃₉	17.6	X	304.39877	358.07504	317.17960	1.77371	0.1869724	0.28589044	2.2821085	20	5 14.6	19.8
316184 2010 <i>JS</i> ₁₂₆	17.2	X	23.68113	48.25733	326.05960	8.11824	0.1824604	0.21790813	2.7349775	20	—	—
316185 2010 <i>JN</i> ₁₂₉	17.1	X	88.29214	42.47647	313.87566	5.40751	0.2282101	0.23095855	2.6309546	20	—	—
316186 Kathrynjoyce	16.9	X	92.01516	38.77380	316.93441	9.93565	0.2809872	0.23020284	2.6367094	20	—	—
316187 2010 <i>KD</i> ₄₇	16.2	X	344.46821	55.42698	281.95556	10.37235	0.1286421	0.19830022	2.9124194	20	8 29.8	19.7
316188 2010 <i>KH</i> ₆₂	15.8	X	99.74350	116.48565	221.84420	9.77348	0.2461536	0.24093051	2.5578487	20	—	—
316189 2010 <i>KY</i> ₇₄	16.1	X	235.56352	100.27514	269.63067	7.93336	0.1015403	0.17522704	3.1627774	20	5 13.5	20.9
316190 2010 <i>KE</i> ₁₂₉	17.0	X	62.35443	92.94341	178.08652	2.71105	0.2075704	0.21294340	2.7773243	20	10 20.2	20.9
316191 2010 <i>LK</i> ₁₂	16.0	X	344.79621	253.24300	85.30718	13.14294	0.0672954	0.19690526	2.9261584	20	9 12.7	19.9
316192 2010 <i>LO</i> ₅₃	17.1	X	248.20934	354.06044	342.92649	5.64913	0.1133598	0.26982423	2.3718220	20	4 9.8	20.6
316193 2010 <i>LJ</i> ₇₁	17.3	X	267.22408	173.74455	171.98870	2.77236	0.1407112	0.27666058	2.3325870	20	5 14.0	20.2
316194 2010 <i>LZ</i> ₈₀	17.5	X	287.24837	358.10255	296.33885	1.92825	0.1646999	0.27178880	2.3603787	20	3 24.6	20.5
316195 2010 <i>LN</i> ₁₀₀	16.4	X	40.20849	240.37101	128.35397	14.48078	0.1803008	0.21688965	2.7435329	20	—	—
316196 2010 <i>LF</i> ₁₁₉	16.0	X	270.82403	120.93123	326.62298	12.76545	0.1584084	0.20346872	2.8628875	20	10 5.7	19.9
316197 2010 <i>ME</i> ₁₀	16.9	X	143.86334	339.73447	345.12943	18.27930	0.2239873	0.23752890	2.5822111	20	—	—
316198 2010 <i>MP</i> ₃₃	16.0	X	243.16323	232.41249	179.12316	13.11825	0.1776659	0.18014560	3.1049429	20	7 4.5	21.0
316199 2010 <i>MA</i> ₃₇	16.2	X	265.42296	307.95822	55.15566	2.56125	0.2481905	0.17643019	3.1483822	20	5 21.3	20.8
316200 2010 <i>MT</i> ₄₁	15.9	X	173.76792	145.33400	302.06063	6.37543	0.0278250	0.17456901	3.1707204	20	6 14.9	20.5
316201 Malala	16.1	X	223.74118	78.58711	0.04209	15.70738	0.2074420	0.18006756	3.1058399	20	7 22.1	21.4
316202 Johnfowler	16.9	X	10.84440	59.49355	324.27774	3.82442	0.0795367	0.21336509	2.7736637	20	12 16.7	20.6
316203 2010 <i>MV</i> ₅₆	15.7	X	342.51584	18.40661	284.32088	3.82176	0.1383393	0.18514435	3.0488010	20	7 11.9	19.0
316204 2010 <i>ML</i> ₆₁	16.2	X	235.05759	224.98338	185.38622	5.89747	0.2547414	0.17511750	3.1640963	20	6 19.1	21.6
316205 2010 <i>MK</i> ₆₉	16.1	X	300.85426	313.61523	137.67484	8.40583	0.0825176	0.20939703	2.8085945	20	11 30.4	19.6
316206 2010 <i>MU</i> ₇₄	15.0	X	95.04967	262.31261	92.20797	10.59262	0.2436418	0.12670208	3.9259691	20	—	—
316207 2010 <i>MR</i> ₈₀	16.3	X	252.21785	138.10480	298.08894	10.93268	0.1962997	0.18765127	3.0215866	20	8 11.2	20.8
316208 2010 <i>MT</i> ₈₁	15.9	X	239.31256	271.64002	112.92319	6.51657	0.1825348	0.17272185	3.1932863	20	5 29.9	21.0
316209 2010 <i>MD</i> ₉₄	16.4	X	273.34826	47.83468	325.67423	4.92836	0.1663063	0.17978559	3.1090865	20	6 23.5	20.8
316210 2010 <i>MJ</i> ₉₅	16.2	X	116.39846	36.87625	319.36110	10.86400	0.2039568	0.23382825	2.6093844	20	1 3.6	19.8
316211 2010 <i>MB</i> ₉₉	17.0	X	144.06804	234.43789	206.54385	8.84751	0.2175167	0.25866330	2.4395675	20	5 15.6	20.9
316212 2010 <i>MG</i> ₁₀₃	16.5	X	54.67955	192.58331	151.34905	4.71847	0.0801133	0.21345652	2.7728716	20	12 23.2	20.4
316213 2010 <i>NB</i> ₅	17.3	X	88.37721	146.90363	105.45511	4.96472	0.1368098	0.31419882	2.1428890	20	11 2.9	20.2
316214 2010 <i>NU</i> ₆	16.8	X	77.79824	237.68873	117.55461	8.49487	0.3678525	0.22833464	2.6510719	20	—	—
316215 2010 <i>NV</i> ₁₃	16.2	X	260.95955	30.96660	13.19733	3.98858	0.0698152	0.18387022	3.0628692	20	8 1.8	20.4
316216 2010 <i>NE</i> ₁₇	17.6	X	301.97330	349.49351	278.82484	2.51991	0.1062189	0.26402061	2.4064536	20	3 17.9	20.6
316217 2010 <i>NV</i> ₂₃	16.4	X	342.93612	210.78329	160.56767	8.10051	0.0477362	0.19920083	2.9036345	20	10 18.5	20.2
316218 2010 <i>NF</i> ₂₇	15.9	X	206.16927	91.10204	356.50544	13.45686	0.1620321	0.17623803	3.1506703	20	7 18.8	21.2
316219 2010 <i>NJ</i> ₃₄	17.1	X	62.30741	49.53698	355.58636	11.53454	0.0225426	0.23050932	2.6343717	20	—	—
316220 2010 <i>NQ</i> ₃₈	15.8	X	291.02712	151.99160	202.80127	24.08039	0.1367627	0.18061536	3.0995568	20	6 24.3	20.4
316221 2010 <i>NX</i> ₃₈	16.5	X	45.44414	26.24697	323.11219	3.69499	0.2102751	0.21182189	2.7871189	20	—	—
316222 2010 <i>NG</i> ₄₄	16.0	X	290.22107	244.71089	117.12951	15.55313	0.2394121	0.18118840	3.0930180	20	6 20.4	20.2
316223 2010 <i>NL</i> ₅₆	15.5	X	256.59403	246.52974	130.67795	6.93390	0.1785211	0.17448657	3.1717191	20	6 7.7	20.4
316224 2010 <i>NO</i> ₅₇	16.8	X	49.74042	60.72707	285.35906	3.58960	0.0626360	0.21092373	2.7950253	20	12 16.9	20.7
316225 2010 <i>NG</i> ₆₇	16.3	X	71.71073	172.40364	217.83868	16.77846	0.0734320	0.22774154	2.6556727	20	—	—
316226 2010 <i>NJ</i> ₇₅	15.3	X	254.42791	277.03412	119.97994	16.83756	0.2432365	0.17597214	3.1538432	20	6 22.7	20.3
316227 2010 <i>NF</i> ₈₂	16.3	X	246.36066	313.54939	278.48759	6.26454	0.0849060	0.23718583	2.5847005	20	—	—
316228 2010 <i>NX</i> ₁₀₆	16.1	X	269.48468	357.22922	0.03509	3.99179	0.1832239	0.17412698	3.1760841	20	5 25.7	20.8
316229 2010 <i>NL</i> ₁₁₀	15.8	X	324.42397	58.10655	276.90245	9.11638	0.1077932	0.18386363	3.0629424	20	7 25.0	19.6
316230 2010 <i>NF</i> ₁₁₂	15.7	X	229.55451	201.80392	210.57169	10.80998	0.1614789	0.17347279	3.1840641	20	6 23.5	20.8
316231 2010 <i>NY</i> ₁₁₄	17.0	X	49.43559	277.82410	67.92618	0.51231	0.0798546	0.21035707	2.8000426	20	12 18.4	20.7
316232 2010 <i>OT</i> ₄	1											

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316241 2010 OX ₂₈	16.0 ^m	X	111.47835	50.90009	323.65797	5.76417	0.2423195	0.23386805	2.6090884	20	1 25.4	19.5
316242 2010 OA ₃₁	15.8	X	314.15005	42.38827	313.50901	9.95078	0.1872910	0.18507769	3.0495330	20	7 29.5	19.3
316243 2010 OG ₃₁	15.7	X	260.18738	307.01146	93.58098	6.27826	0.1871474	0.17795412	3.1303821	20	7 9.2	20.4
316244 2010 OL ₃₂	16.0	X	34.63991	239.30355	85.92461	11.98320	0.1666923	0.20185058	2.8781674	20	11 17.6	19.8
316245 2010 OS ₃₉	15.6	X	246.14863	100.31039	312.39851	9.12040	0.1092426	0.17754454	3.1351946	20	7 19.2	20.3
316246 2010 OZ ₄₀	15.5	X	168.58587	121.46476	2.78895	16.11514	0.0478507	0.17635894	3.1492301	20	7 31.6	20.4
316247 2010 OF ₄₂	15.5	X	334.90852	17.24334	320.07478	9.60296	0.1361744	0.18628660	3.0363254	20	8 15.4	19.0
316248 2010 OK ₅₀	16.5	X	246.82873	229.00376	307.98435	5.74904	0.0499069	0.21463507	2.7627119	20	—	—
316249 2010 OE ₅₅	15.9	X	282.71808	70.14037	314.17163	14.40738	0.2708198	0.18073452	3.0981942	20	7 5.6	20.3
316250 2010 ON ₆₅	15.5	X	239.65727	41.63930	339.22008	9.62304	0.0530718	0.16821434	3.2500799	20	6 5.9	20.4
316251 2010 OV ₆₆	15.9	X	305.50696	247.89434	135.58060	9.19406	0.0415088	0.18788963	3.0190306	20	9 9.2	19.9
316252 2010 OA ₇₀	16.6	X	246.71728	296.12930	241.18388	4.83800	0.0221475	0.21453262	2.7635913	20	—	—
316253 2010 OA ₇₂	14.9	X	324.65344	292.12688	359.82521	15.42165	0.0860232	0.16975063	3.2304406	20	5 27.6	19.4
316254 2010 OE ₈₆	16.5	X	102.48108	269.32660	88.94033	6.42700	0.0805749	0.22590968	2.6700098	20	—	—
316255 2010 OG ₈₈	15.4	X	153.49783	296.57805	21.81070	13.52042	0.1615097	0.23255652	2.6188886	20	—	—
316256 2010 OF ₈₉	16.0	X	304.72661	71.00936	300.23939	8.99091	0.1104754	0.18406906	3.0606631	20	8 11.2	19.8
316257 2010 OH ₉₇	16.3	X	41.61121	229.02653	148.83625	5.90345	0.0954292	0.21318644	2.7752131	20	—	—
316258 2010 OE ₁₀₀	16.2	X	117.27877	229.58103	83.61671	12.31227	0.1857959	0.23527485	2.5986774	20	—	—
316259 2010 OH ₁₀₀	17.7	X	289.75343	139.88413	185.11718	5.40908	0.2041619	0.28322478	2.2964053	20	5 5.2	20.4
316260 2010 OQ ₁₀₇	16.1	X	335.57208	89.84867	251.53775	8.00257	0.1558440	0.18654624	3.0335073	20	8 17.8	19.7
316261 2010 ON ₁₁₃	15.9	X	352.98384	37.12283	304.65896	8.15176	0.1036721	0.19057330	2.9906208	20	9 18.8	19.6
316262 2010 OI ₁₁₆	16.2	X	164.84798	188.05515	78.91940	9.89076	0.1068223	0.21901496	2.7257553	20	—	—
316263 2010 OT ₁₂₁	16.1	X	124.00920	345.65026	355.82016	5.32121	0.1387136	0.23179360	2.6246320	20	1 10.5	20.2
316264 2010 PV ₈	17.0	X	312.13017	358.24862	323.84854	7.08800	0.1515835	0.28758396	2.2731405	20	6 16.2	19.2
316265 2010 PT ₉	16.6	X	156.71468	191.36764	182.01191	3.02015	0.1803084	0.25657971	2.4527569	20	2 28.3	20.4
316266 2010 PE ₂₂	15.7	X	60.11460	341.80198	269.52016	7.20404	0.0634880	0.18240293	3.0792729	20	8 24.5	20.1
316267 2010 PW ₂₅	13.3	X	256.29685	13.76970	70.73584	8.58370	0.0947977	0.08388740	5.1681870	20	9 4.1	20.3
316268 2010 PJ ₂₆	16.7	X	226.51092	349.55459	323.73860	5.63246	0.1238892	0.26251515	2.4156451	20	2 17.9	20.4
316269 2010 PG ₃₀	16.2	X	264.60027	174.68317	236.80309	5.32396	0.1514645	0.18031542	3.1029930	20	7 31.4	20.6
316270 2010 PV ₃₃	16.5	X	86.75995	40.75197	311.013594	3.83000	0.1231396	0.21937138	2.7228021	20	—	—
316271 2010 PA ₃₅	16.0	X	285.71579	87.56225	273.45905	1.62545	0.0715190	0.17428174	3.1742037	20	7 7.3	20.4
316272 2010 PY ₃₉	15.8	X	304.10186	192.27188	181.83103	12.98711	0.0968198	0.18320569	3.0702712	20	8 14.5	19.9
316273 2010 PL ₄₂	15.8	X	279.01529	109.66206	312.79666	8.43730	0.1743098	0.18692704	3.0293861	20	8 30.6	19.7
316274 2010 PH ₄₉	15.9	X	212.47719	75.18183	34.56741	11.17591	0.1069184	0.18040359	3.1019819	20	8 27.3	20.8
316275 2010 PP ₅₀	15.8	X	271.72921	263.09372	123.68062	8.92998	0.0964765	0.17637141	3.1490817	20	7 18.3	20.2
316276 2010 PL ₅₁	16.0	X	241.40996	79.79327	351.72746	6.79842	0.0855132	0.17883382	3.1201080	20	8 10.5	20.5
316277 2010 PW ₅₂	16.0	X	131.60075	353.97826	351.48339	15.99598	0.2523011	0.23268094	2.6179550	20	1 16.1	20.2
316278 2010 PD ₅₅	16.8	X	134.04350	36.12833	298.64533	5.81537	0.0841188	0.22720164	2.6598782	20	—	—
316279 2010 PZ ₅₇	16.5	X	82.71917	208.16382	143.18612	11.85261	0.1967971	0.22834186	2.6510160	20	—	—
316280 2010 PO ₆₁	17.1	X	248.31764	159.92934	157.37111	1.40792	0.1998438	0.26736386	2.3863506	20	3 10.3	20.9
316281 2010 PR ₆₄	17.2	X	5.33536	228.08834	324.61420	5.90966	0.0539465	0.26369324	2.4084449	20	3 14.9	19.9
316282 2010 PC ₆₅	17.0	X	58.03153	254.90779	164.14566	4.44711	0.0885398	0.23732715	2.5836743	20	—	—
316283 2010 PG ₇₂	16.0	X	158.80741	293.50726	21.02061	11.87939	0.2061474	0.23206908	2.6225546	20	—	—
316284 2010 PY ₇₆	17.3	X	308.28709	351.94140	331.45426	6.01917	0.1286026	0.28547091	2.2843438	20	6 14.4	19.6
316285 2010 PB ₈₀	17.8	X	139.42451	225.56145	190.30962	2.12953	0.0796077	0.25890556	2.4380454	20	3 25.9	21.0
316286 2010 QK ₅	16.4	X	165.31111	154.12220	202.70456	13.48799	0.1295803	0.25425181	2.4677056	20	2 9.2	20.4
316287 2010 RG ₂	17.4	X	193.29700	186.01710	180.37570	1.75134	0.1824474	0.26182173	2.4199084	20	3 23.6	21.2
316288 2010 RC ₃	17.0	X	180.68858	278.18509	88.37410	2.38974	0.1924571	0.25758550	2.4463679	20	3 14.7	20.9
316289 2010 RM ₄	17.4	X	179.93465	8.38518	18.84174	5.85457	0.0887711	0.26255910	2.4153755	20	4 4.5	20.8
316290 2010 RD ₉	17.0	X	231.24147	223.89440	113.62269	2.99966	0.1855153	0.26649412	2.3915399	20	3 22.2	20.7
316291 2010 RJ ₁₀	17.0	X	14.41422	96.52378	318.13489	3.16267	0.1140084	0.21899467	2.7259236	20	—	—
316292 2010 RI ₂₀	16.4	X	341.92742	98.84066	283.75971	8.01662	0.1473298	0.20629615	2.8366689	20	11 1.3	19.6
316293 2010 RZ ₃₆	16.0	X	204.29776	279.89476	244.33913	5.06968	0.1018233	0.20399337	2.8579767	20	10 31.3	19.9
316294 2010 RD ₃₈	16.6	X	27.77346	29.57119	330.48519	2.56249	0.1013303	0.20900317	2.8121219	20	12 11.4	20.3
316295 2010 RD ₄₀	15.6	X	266.15508	49.05040	326.86385	15.85459	0.2333138	0.17967890	3.1103171	20	6 7.9	20.6
316296 2010 RH ₄₀	17.0	X	339.64640	2.81234	328.83799	9.30043	0.0756823	0.29259112	2.2471322	20	9 1.1	19.0
316297 2010 RB ₄₈	16.7	X	336.85031	148.87309	248.17777	0.81580	0.1087524	0.20380957	2.8596947	20	11 12.4	20.0
316298 2010 RV ₅₁	16.6	X	258.17091	200.08317	161.45099	1.75044	0.2124231	0.17268160	3.1937826	20	5 16.7	21.5
316299 2010 RP ₅₆	16.9	X	54.18036	176.96104	244.58050	4.56931	0.1052053	0.23422157	2.6064624	20	—	—
316300 2010 RX ₅₉	17.3	X	178.37050	112.48414	215.05771	4.68750	0.0865266	0.24429140	2.5343345	20	1 18.4	21.1
316301 2010 RY ₅₉	17.0	X	342.10320	58.12402	341.63245	4.93187	0.0755136	0.20612523	2.8382367	20	11 21.9	20.6
316302 2010 RY ₆₁	16.0	X	268.64069	13.85557	17.98737	10.38103	0.1007916	0.18032440	3.1028901	20	7 23.8	20.5
316303 2010 RV ₆₂	17.8	X	28.36910	338.22113	327.65530	6.12802	0.1053618	0.30265527	2.1970363	20	10 20.1	20.2
316304 2010 RY ₆₃	17.0	X	286.54195	134.75440	180.89450	6.54904	0.2158473	0.27475923	2.3433358	20	4 16.2	20.0
316305 2010 RR ₆₅	16.9	X	52.05033	47.44250	299.21494	9.74685	0.1994368	0.21888798	2.7268093	20	—	—
316306 2010 RG ₆₆	17.5	X	235.35007	359.54056	327.48418	3.00680	0.1219062	0.26397030	2.4067594	20	3 14.6	21.0
316307 2010 RD ₆₇	16.6	X	343.17469	241.09811	118.66261	6.85278	0.1711938	0.19603462	2.9348159	20	10 7.9	19.8
316308 2010 RH ₆₇	17.0	X	46.34740	3.06319	258.29204	4.76594	0.1473847	0.29197452	2.2502948	20	9 17.2	19.7
316309 2010 RU ₆₈	16.9	X	239.99470	88.95963	233.43892	7.50048	0.1113670	0.26467551	2.4024824	20	3 11.8	20.6
316310 2010 RX ₆₈	16.7	X	20.09051	156.65275	210.59665	8.71953	0.1697066	0.21121644	2.7924425	20	12 20.7	20.3
316311 2010 RE ₆₉	16.5	X	27.76839	103.76608	275.85202	7.37706	0.1583690	0.21565681	2.7539788	20	—	—
316312 2010 RH ₇₈	16.6	X	57.91433	301.42758	25.77477	9.32577	0.1485894	0.21048795	2.7988818	20	12 13.6	20.8
316313 2010 RH ₉₀	16.2	X	146.94252	350.55728	323.22734	14.69466	0.1486371	0.23618970	2.5919627	20	—	—
316314 2010 RK ₉₀	16.1	X	123.48897	61.43929								

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316321 2010 <i>RG</i> ₁₀₄	17.5	X	42.23514	207.23633	348.16673	3.06327	0.0716464	0.26660918	2.3908517	20	5 20.7	20.3
316322 2010 <i>RL</i> ₁₀₈	17.2	X	55.48659	302.79176	273.06152	4.79507	0.0511482	0.27952977	2.3165980	20	7 9.8	19.9
316323 2010 <i>RW</i> ₁₀₈	17.3	X	307.87070	271.86195	13.51309	1.43130	0.1867708	0.27394541	2.3479745	20	4 6.8	19.9
316324 2010 <i>RS</i> ₁₀₉	16.3	X	0.81603	276.03972	172.97116	14.08311	0.1720134	0.21853405	2.7297527	20	—	—
316325 2010 <i>RT</i> ₁₁₀	17.4	X	85.82927	171.52179	176.80869	5.63609	0.0793073	0.22300984	2.6931055	20	—	—
316326 2010 <i>RB</i> ₁₁₂	17.0	X	25.48172	268.10847	117.17440	1.19364	0.0797540	0.21506067	2.7590658	20	—	—
316327 2010 <i>RJ</i> ₁₁₂	16.6	X	56.80725	212.20649	170.36386	6.03941	0.0302751	0.22336274	2.6902681	20	—	—
316328 2010 <i>RW</i> ₁₁₄	17.5	X	322.82380	314.74171	339.79091	6.79246	0.1257021	0.27698606	2.3307594	20	5 25.3	19.9
316329 2010 <i>RB</i> ₁₁₅	16.9	X	102.25753	76.98755	230.17567	5.34392	0.0174116	0.21433088	2.7653253	20	12 26.8	20.9
316330 2010 <i>RM</i> ₁₁₆	17.5	X	0.33645	201.64547	83.92107	3.34650	0.2067489	0.28708548	2.2757710	20	8 10.9	18.8
316331 2010 <i>RB</i> ₁₁₉	16.2	X	4.69664	18.69295	13.91929	6.07787	0.0440948	0.21159128	2.7891436	20	12 14.2	20.0
316332 2010 <i>RG</i> ₁₂₃	16.8	X	36.94048	327.58176	65.80589	1.98013	0.0560870	0.21950504	2.7216966	20	—	—
316333 2010 <i>RP</i> ₁₂₃	16.8	X	300.59691	142.28472	345.42447	7.12952	0.0925968	0.21668743	2.7452395	20	—	—
316334 2010 <i>RS</i> ₁₂₄	17.1	X	14.26866	258.43302	129.74483	2.26852	0.1224466	0.21267601	2.7796517	20	—	—
316335 2010 <i>RP</i> ₁₂₅	16.2	X	263.59362	345.20665	34.23569	5.83519	0.1767882	0.17787890	3.1312645	20	6 17.3	20.9
316336 2010 <i>RZ</i> ₁₂₅	17.2	X	72.98502	81.83888	120.13503	3.93547	0.0701672	0.28005581	2.3136962	20	7 19.3	20.0
316337 2010 <i>RM</i> ₁₂₆	17.7	X	35.08499	127.42973	136.90786	5.64148	0.1325673	0.29003429	2.2603194	20	9 3.8	20.0
316338 2010 <i>RU</i> ₁₂₆	16.1	X	253.75845	103.33779	32.22187	8.73787	0.1198776	0.20445685	2.8536559	20	11 10.5	19.9
316339 2010 <i>RZ</i> ₁₂₈	16.3	X	189.99288	194.59829	277.06912	4.80234	0.0982552	0.17952411	3.1121047	20	7 31.3	21.0
316340 2010 <i>RA</i> ₁₂₉	16.2	X	152.93217	304.03358	310.88501	5.00057	0.0329274	0.21422199	2.7662622	20	12 22.7	20.1
316341 2010 <i>RG</i> ₁₃₆	16.8	X	170.31020	237.27906	68.65929	3.79862	0.0583326	0.23382933	2.6093763	20	—	—
316342 2010 <i>RH</i> ₁₄₁	17.6	X	259.34534	90.48444	214.11452	3.80441	0.1218704	0.26420589	2.4053284	20	3 11.0	21.1
316343 2010 <i>RL</i> ₁₄₃	17.1	X	44.22363	79.52311	335.75291	4.82726	0.0893124	0.22761551	2.6566529	20	—	—
316344 2010 <i>RH</i> ₁₄₆	17.4	X	81.48045	71.64919	267.44137	0.76064	0.1381007	0.21935874	2.7229066	20	—	—
316345 2010 <i>RL</i> ₁₄₆	17.5	X	350.16424	8.94897	190.60638	6.06042	0.0839494	0.25324446	2.4742453	20	2 28.9	20.4
316346 2010 <i>RR</i> ₁₄₇	16.4	X	315.70823	53.57369	32.16524	4.01996	0.0679136	0.20865514	2.8152480	20	12 13.6	19.9
316347 2010 <i>RE</i> ₁₅₁	17.3	X	24.06406	173.81017	348.40766	5.66864	0.0533478	0.25511378	2.4621439	20	3 4.8	20.0
316348 2010 <i>RF</i> ₁₅₁	17.1	X	69.65343	38.48518	335.32882	2.18687	0.1109547	0.22594466	2.6697340	20	—	—
316349 2010 <i>RW</i> ₁₅₂	16.6	X	182.79548	213.56409	15.39654	12.05140	0.0480545	0.21669667	2.7451614	20	12 24.4	20.8
316350 2010 <i>RG</i> ₁₅₆	16.5	X	231.97028	175.41141	74.02597	5.53356	0.1200803	0.23669414	2.5882787	20	—	—
316351 2010 <i>RV</i> ₁₆₀	15.5	X	296.75795	44.64136	303.18825	13.90675	0.1729690	0.18200577	3.0837508	20	6 21.8	19.6
316352 2010 <i>RJ</i> ₁₆₄	16.9	X	131.21148	7.89658	353.92766	4.36861	0.1061868	0.24119298	2.5559927	20	1 13.0	20.3
316353 2010 <i>RZ</i> ₁₆₄	15.9	X	259.85229	30.14114	353.23752	16.84279	0.2136433	0.17782582	3.1318876	20	6 12.3	21.0
316354 2010 <i>RZ</i> ₁₆₉	16.8	X	342.57560	110.35372	272.60553	0.98540	0.0769261	0.20311290	2.8662300	20	11 1.2	20.3
316355 2010 <i>RD</i> ₁₇₄	17.6	X	304.94121	1.21470	288.20335	4.02939	0.0000906	0.26593851	2.3948697	20	5 7.5	20.6
316356 2010 <i>RH</i> ₁₇₅	16.9	X	35.67684	354.28212	33.58375	6.74481	0.0775331	0.21620791	2.7492970	20	—	—
316357 2010 <i>RW</i> ₁₇₅	17.1	X	46.88991	123.36962	227.98840	5.19388	0.0616510	0.21249667	2.7812154	20	12 20.1	20.9
316358 2010 <i>RZ</i> ₁₇₆	16.8	X	18.53882	224.29759	2.33106	7.92962	0.1353678	0.27386777	2.3484182	20	5 30.9	19.1
316359 2010 <i>RV</i> ₁₇₇	16.8	X	255.19505	349.23410	102.24474	3.79143	0.0242585	0.19522986	2.9428755	20	10 2.9	20.8
316360 2010 <i>RO</i> ₁₈₀	17.1	X	292.64315	133.72950	291.92780	3.77341	0.0921400	0.29764631	2.2216162	20	10 31.8	19.2
316361 2010 <i>SM</i> ₂	16.5	X	73.92693	50.22426	266.62998	2.43494	0.1533028	0.20914536	2.8108471	20	12 19.2	20.6
316362 2010 <i>SB</i> ₁₁	17.7	X	115.35201	102.04386	340.87157	3.78282	0.0285949	0.26056831	2.4276625	20	3 23.4	20.6
316363 2010 <i>SU</i> ₁₈	16.6	X	86.51966	172.79620	165.22610	2.18833	0.0834378	0.21838713	2.7309768	20	—	—
316364 2010 <i>SJ</i> ₁₉	16.8	X	7.80150	317.94245	63.65428	3.05122	0.0760349	0.20713093	2.8290421	20	12 7.5	20.2
316365 2010 <i>SD</i> ₂₀	17.0	X	315.86572	197.55301	357.01465	4.89348	0.1271291	0.24308562	2.5427083	20	—	—
316366 2010 <i>SX</i> ₂₁	15.7	X	238.71548	53.19506	1.75734	10.42460	0.1580078	0.17786484	3.1314295	20	7 9.1	20.7
316367 2010 <i>SP</i> ₂₇	16.5	X	220.47870	231.37796	210.32850	4.55870	0.1105913	0.17796928	3.1302043	20	7 24.7	21.3
316368 2010 <i>SQ</i> ₂₇	17.0	X	6.51039	4.52726	4.23556	1.70593	0.0788670	0.20308179	2.8665228	20	11 18.3	20.5
316369 2010 <i>SO</i> ₂₇	16.4	X	216.62928	88.00068	15.80763	7.55972	0.1621783	0.18172901	3.0868809	20	8 17.1	21.4
316370 2010 <i>SZ</i> ₃₀	16.1	X	312.52445	93.76307	336.87575	14.35308	0.1286980	0.20636446	2.8360428	20	11 10.4	19.7
316371 2010 <i>SL</i> ₃₂	16.0	X	179.76409	309.66260	134.35564	5.97370	0.0968279	0.17085101	3.2165552	20	6 17.6	21.1
316372 2010 <i>SJ</i> ₃₆	16.7	X	20.02075	37.74348	350.94458	1.80710	0.0943700	0.21513242	2.7584523	20	—	—
316373 2010 <i>SL</i> ₃₇	16.1	X	139.77031	36.55169	317.61232	9.14226	0.1506181	0.23841746	2.5757914	20	1 19.4	19.9
316374 2010 <i>SK</i> ₃₉	17.1	X	47.83533	209.68320	160.16823	5.20171	0.1282295	0.21654868	2.7464120	20	—	—
316375 2010 <i>TJ</i> ₃	17.3	X	25.33968	228.83286	188.77921	1.53538	0.0708685	0.22104252	2.7090613	20	—	—
316376 2010 <i>TL</i> ₉	17.0	X	56.13883	184.31506	189.35743	4.48683	0.1224682	0.22085003	2.7106352	20	—	—
316377 2010 <i>TQ</i> ₉	17.3	X	96.22803	332.80876	5.69234	5.56295	0.0511832	0.22305213	2.6927650	20	—	—
316378 2010 <i>TG</i> ₁₂	16.9	X	18.09844	216.25302	335.03862	6.03169	0.0638275	0.25961699	2.4335895	20	4 2.3	19.6
316379 2010 <i>TA</i> ₁₄	17.1	X	70.26248	127.18280	224.55793	5.64948	0.0657652	0.21893021	2.7264587	20	—	—
316380 2010 <i>TE</i> ₁₅	17.5	X	323.71670	276.52755	329.34737	7.04847	0.0358497	0.26001868	2.4310824	20	3 27.9	20.6
316381 2010 <i>TJ</i> ₁₇	16.0	X	161.58742	171.36533	294.68805	4.57754	0.1267971	0.16837349	3.2480316	20	6 26.7	21.2
316382 2010 <i>TV</i> ₂₃	17.2	X	263.97289	101.80957	49.14511	2.97490	0.0360475	0.21395708	2.7685451	20	12 28.5	20.7
316383 2010 <i>TW</i> ₂₃	16.6	X	241.54738	34.54048	184.04389	7.32392	0.0724166	0.22827363	2.6515443	20	—	—
316384 2010 <i>TV</i> ₂₄	15.4	X	204.37380	56.35796	22.57735	16.08415	0.2273770	0.17248284	3.1962357	20	6 30.4	21.1
316385 2010 <i>TX</i> ₂₈	17.3	X	118.12723	7.72709	301.14162	2.09834	0.0343324	0.22112402	2.7083956	20	—	—
316386 2010 <i>TN</i> ₃₄	17.2	X	201.19906	58.36733	167.75022	4.46032	0.0076010	0.21791466	2.7349229	20	—	—
316387 2010 <i>TD</i> ₃₅	15.9	X	286.27332	346.28218	35.53183	10.52027	0.0709336	0.18330413	3.0691719	20	8 9.5	20.2
316388 2010 <i>TL</i> ₃₅	16.4	X	256.69425	23.33191	73.36269	2.94203	0.0885559	0.19404468	2.9548463	20	10 1.4	20.4
316389 2010 <i>TC</i> ₃₆	16.9	X	119.25693	238.80079	53.22492	5.01818	0.0494633	0.21405863	2.7676694	20	12 29.9	20.9
316390 2010 <i>TB</i> ₄₁	16.4	X	65.81860	127.57457	217.65615	5.65841	0.0519484	0.21442032	2.7645562	20	—	—
316391 2010 <i>TF</i> ₄₃	17.8	X	25.03219	103.63658	320.41543	2.10710	0.0943895	0.22275484	2.6951604	20	—	—
316392 2010 <i>TL</i> ₄₆	17.2	X	48.79407	353.16343	201.98267	2.12370	0.0902443	0.26739012				

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316401 2010 <i>TB</i> ₆₇	17.0	X	342.73055	61.92202	322.30985	1.18308	0.0743516	0.20376762	2.8600871	20	11 2.9	20.5
316402 2010 <i>TB</i> ₇₀	16.8	X	35.86612	25.79660	352.76556	5.69483	0.0482893	0.21624327	2.7489973	20	—	—
316403 2010 <i>TA</i> ₇₂	17.1	X	25.64194	74.16559	322.20403	1.24234	0.0813849	0.21738070	2.7393996	20	—	—
316404 2010 <i>TP</i> ₇₄	18.2	X	90.88104	52.83093	186.90617	2.93651	0.1219461	0.29569216	2.2313935	20	10 13.7	21.2
316405 2010 <i>TG</i> ₇₅	17.0	X	319.73409	285.36813	348.47902	6.47455	0.0981960	0.26756963	2.3851270	20	4 21.7	19.6
316406 2010 <i>TJ</i> ₈₁	16.7	X	280.70165	75.02962	238.95591	5.77078	0.1274830	0.27140162	2.3626230	20	4 17.2	19.8
316407 2010 <i>TM</i> ₈₄	17.0	X	326.85967	245.73112	159.04524	2.39475	0.0646369	0.20359195	2.8617322	20	11 7.0	20.5
316408 2010 <i>TY</i> ₈₉	17.0	X	235.47399	67.12001	67.96989	3.11963	0.0151055	0.20328803	2.8645837	20	11 3.4	20.9
316409 2010 <i>TS</i> ₉₁	17.0	X	292.84238	151.55039	13.52256	9.51823	0.0282766	0.22752968	2.6573209	20	—	—
316410 2010 <i>TG</i> ₉₅	16.9	X	0.00667	224.02172	141.45721	2.82323	0.0799410	0.20304262	2.8668914	20	11 6.3	20.5
316411 2010 <i>TY</i> ₉₉	17.0	X	44.53113	178.03024	172.41456	4.56631	0.0775221	0.21120631	2.7925318	20	12 18.3	20.8
316412 2010 <i>TT</i> ₁₀₀	16.4	X	284.07169	319.10186	128.07643	3.05309	0.0355162	0.20247970	2.8722025	20	11 3.2	20.2
316413 2010 <i>TV</i> ₁₀₀	17.3	X	25.14170	134.98467	76.34841	2.36494	0.1227650	0.26838070	2.3803192	20	5 21.1	19.3
316414 2010 <i>TY</i> ₁₀₃	16.9	X	332.27714	337.69657	144.89527	3.88521	0.0644019	0.22518569	2.6757294	20	—	—
316415 2010 <i>TB</i> ₁₀₉	17.3	X	234.89772	75.98720	110.83684	3.06614	0.0144454	0.21762727	2.7373301	20	—	—
316416 2010 <i>TF</i> ₁₁₁	17.2	X	295.10798	277.87208	212.69160	3.64456	0.0161226	0.21688172	2.7435997	20	—	—
316417 2010 <i>TI</i> ₁₁₅	15.8	X	170.71456	291.96171	193.17515	5.56284	0.0265784	0.17254000	3.1955297	20	7 27.2	21.4
316418 2010 <i>TU</i> ₁₁₆	16.7	X	103.06006	160.62045	149.03899	0.94895	0.0566932	0.21453229	2.7635942	20	—	—
316419 2010 <i>TW</i> ₁₁₆	17.2	X	342.98242	241.03961	193.79370	4.21876	0.0488562	0.21307889	2.7761468	20	—	—
316420 2010 <i>TE</i> ₁₂₀	16.8	X	355.52188	108.10947	342.98213	11.80560	0.1798288	0.22250641	2.6971661	20	—	—
316421 2010 <i>TA</i> ₁₂₂	16.7	X	28.02878	307.80217	78.45092	5.06901	0.1061418	0.21489990	2.7604417	20	—	—
316422 2010 <i>TZ</i> ₁₃₀	15.9	X	275.36159	48.79991	323.73852	10.18657	0.1044270	0.17777404	3.1324957	20	7 5.2	20.3
316423 2010 <i>TM</i> ₁₃₆	16.5	X	36.73910	358.12269	171.68558	12.37002	0.1906117	0.25547704	2.4598094	20	4 20.4	18.7
316424 2010 <i>TK</i> ₁₃₉	16.0	X	176.67913	307.65394	241.89908	7.90613	0.0436257	0.19691652	2.9260469	20	10 25.2	20.4
316425 2010 <i>TK</i> ₁₄₃	16.2	X	352.69830	134.16864	271.05498	4.68402	0.0567301	0.20613431	2.8381533	20	12 14.2	19.9
316426 2010 <i>TG</i> ₁₅₀	16.0	X	91.34658	202.30764	105.53412	5.41443	0.1950225	0.21332418	2.7740183	20	12 28.9	20.4
316427 2010 <i>TS</i> ₁₅₁	16.8	X	316.03031	61.16148	63.56593	3.24057	0.0508139	0.22210891	2.7003832	20	—	—
316428 2010 <i>TY</i> ₁₅₂	16.5	X	228.71335	311.54496	143.36562	4.17983	0.1038633	0.18667145	3.0321507	20	8 22.1	20.9
316429 2010 <i>TC</i> ₁₅₉	17.7	X	84.60862	204.10936	35.69852	5.28275	0.1432367	0.29494064	2.2351824	20	10 9.6	20.6
316430 2010 <i>TF</i> ₁₆₆	15.9	X	342.20060	286.71174	40.38956	10.38800	0.0514074	0.18210337	3.0826489	20	8 20.7	20.1
316431 2010 <i>TH</i> ₁₆₇	13.4	X	302.00558	349.93811	59.82803	29.49536	0.0920977	0.08508903	5.1194148	20	10 2.5	20.3
316432 2010 <i>TQ</i> ₁₆₇	17.0	X	70.13528	184.41147	347.15049	6.27765	0.0618712	0.26736548	2.3863410	20	5 27.6	20.0
316433 2010 <i>TP</i> ₁₆₈	15.4	X	0.90861	334.89747	21.95667	9.68757	0.0851838	0.19248281	2.9708091	20	10 23.5	19.1
316434 2010 <i>TL</i> ₁₇₂	17.4	X	321.10825	36.40379	219.24187	5.60943	0.1307117	0.26199363	2.4188498	20	3 24.8	20.1
316435 2010 <i>TR</i> ₁₇₅	16.8	X	308.20814	263.77405	73.89143	7.65363	0.1442818	0.28510895	2.2862768	20	7 5.4	18.9
316436 2010 <i>TX</i> ₁₈₂	17.1	X	299.98560	171.86025	37.92384	6.83278	0.0725235	0.24410586	2.5356185	20	1 8.3	20.6
316437 2010 <i>UA</i> ₁	15.4	X	243.34958	126.08078	312.76283	9.56131	0.0672607	0.18141370	3.0904566	20	8 21.4	19.8
316438 2010 <i>UN</i> ₄	15.6	X	135.58667	36.38647	238.10290	8.13422	0.1171217	0.21126747	2.7919928	20	12 25.4	20.1
316439 2010 <i>UT</i> ₁₁	16.4	X	348.17472	185.14486	45.85758	9.75354	0.0797526	0.25920506	2.4361671	20	4 14.7	19.0
316440 2010 <i>UL</i> ₁₇	15.8	X	151.68594	2.88613	234.36768	11.44023	0.0412518	0.19728319	2.9224204	20	11 25.9	20.1
316441 2010 <i>UY</i> ₂₁	16.6	X	288.71069	163.90661	70.11731	3.13955	0.1145758	0.24319390	2.5419535	20	1 19.6	20.2
316442 2010 <i>UJ</i> ₃₂	17.2	X	335.25749	317.35893	345.24309	5.14780	0.1712194	0.28004618	2.3137492	20	7 2.5	18.9
316443 2010 <i>UF</i> ₄₇	17.0	X	317.31663	268.13292	18.75034	7.06989	0.1072227	0.26862888	2.3788529	20	5 6.7	19.6
316444 2010 <i>UJ</i> ₄₉	16.2	X	225.01045	355.13349	109.74705	3.19864	0.0485919	0.18535465	3.0464945	20	9 6.9	20.6
316445 2010 <i>UQ</i> ₅₁	15.8	X	283.38410	262.59824	75.83113	6.16573	0.2061497	0.17358500	3.1826918	20	5 17.0	20.3
316446 2010 <i>UT</i> ₅₃	13.8	X	253.14407	193.58359	261.09345	6.25271	0.0836374	0.08542955	5.1058020	20	9 6.8	20.8
316447 2010 <i>UM</i> ₅₈	15.4	X	202.28250	40.24161	67.68619	17.11913	0.0567236	0.17884384	3.1199913	20	8 18.9	20.3
316448 2010 <i>UA</i> ₆₃	16.3	X	83.53735	49.72333	321.40481	5.33452	0.0936826	0.21127722	2.7919069	20	—	—
316449 2010 <i>UL</i> ₆₅	17.1	X	172.47838	250.36144	328.92442	1.84734	0.0131750	0.20566014	2.8425141	20	11 30.5	21.0
316450 2010 <i>UZ</i> ₇₁	16.8	X	106.01999	322.66046	349.94311	3.51239	0.1104121	0.21702929	2.7423559	20	—	—
316451 2010 <i>UQ</i> ₇₂	16.5	X	151.36173	195.30656	145.08648	8.06641	0.1263216	0.23662912	2.5887529	20	1 10.8	20.4
316452 2010 <i>UM</i> ₇₄	16.4	X	69.53521	53.79571	309.25585	5.38542	0.0595306	0.21752945	2.5781506	20	—	—
316453 2010 <i>US</i> ₇₆	15.2	X	167.80932	242.43311	250.80866	12.14182	0.1395719	0.16992457	3.2282359	20	7 31.5	20.6
316454 2010 <i>UY</i> ₇₈	15.8	X	75.41526	65.04481	307.07096	5.26097	0.0294401	0.21763082	2.7373003	20	—	—
316455 2010 <i>UW</i> ₈₁	16.1	X	296.22708	144.08195	236.40472	3.41135	0.1083604	0.18182073	3.0858427	20	8 10.7	20.0
316456 2010 <i>UK</i> ₈₂	16.7	X	353.10799	253.79191	157.22366	2.38580	0.0393470	0.20688479	2.8312855	20	12 20.7	20.4
316457 2010 <i>UC</i> ₈₄	16.7	X	137.07864	305.69940	351.66221	2.90989	0.0747219	0.21763884	2.7372331	20	—	—
316458 2010 <i>UA</i> ₈₈	16.0	X	85.21401	255.48912	141.16649	14.79723	0.0420582	0.22944500	2.6425121	20	—	—
316459 2010 <i>UN</i> ₈₉	17.3	X	46.33097	134.25616	48.24612	0.58339	0.1435881	0.26327823	2.4109752	20	5 19.4	19.7
316460 2010 <i>UP</i> ₉₁	15.6	X	313.87363	86.35354	314.37247	5.73800	0.0885873	0.18947916	3.0021225	20	10 5.3	19.5
316461 2010 <i>UQ</i> ₉₁	13.9	X	294.77972	105.10554	312.12624	7.79116	0.0747672	0.08364979	5.1779694	20	9 13.5	20.6
316462 2010 <i>UE</i> ₉₅	16.3	X	126.10704	341.82922	10.55183	8.51336	0.0565107	0.22850736	2.6497359	20	—	—
316463 2010 <i>UR</i> ₉₅	16.0	X	198.31108	66.05715	237.94967	13.79209	0.0202094	0.23346478	2.6120920	20	1 8.3	19.8
316464 2010 <i>UT</i> ₉₅	15.7	X	318.45869	224.37654	143.40927	8.12934	0.1573386	0.18507536	3.0495586	20	8 26.7	19.2
316465 2010 <i>UA</i> ₉₆	15.6	X	312.30387	285.09842	112.29568	10.19800	0.1160652	0.18933719	3.0036231	20	10 4.6	19.4
316466 2010 <i>UW</i> ₉₇	16.2	X	328.20599	262.14452	84.86924	9.09537	0.0639200	0.17957310	3.1115386	20	8 24.0	20.3
316467 2010 <i>UC</i> ₉₈	16.8	X	201.46888	156.84088	148.77297	5.36059	0.0250034	0.23904963	2.5712482	20	1 15.6	20.3
316468 2010 <i>UH</i> ₉₈	17.0	X	166.79871	204.23642	130.65555	5.28106	0.0400853	0.23764901	2.5813410	20	1 12.6	20.4
316469 2010 <i>UG</i> ₉₉	17.0	X	129.19557	328.55033	7.41275	1.42080	0.0796096	0.22458600	2.6804904	20	—	—
316470 2010 <i>VE</i> ₇	16.4	X	215.56114	111.00830	356.41562	4.72135	0.1447924	0.18089574	3.0963532	20	8 20.1	21.1
316471 2010 <i>VD</i> ₁₁	16.0	X	337.74901	54.98915	328.19254	11.02393	0.0632928	0.19367020	2.9586541	20	10 17.5	20.1
316472 2010 <i>VF</i> ₁₄	15.6	X										

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316481 2010 VN ₄₇	15.8	X	310.34699	299.69785	54.66002	9.61422	0.0949327	0.17452188	3.1712912	20	8 3.0	20.0
316482 2010 VP ₄₇	16.5	X	167.57892	318.03705	320.52788	2.77593	0.0609854	0.21337762	2.7735551	20	—	—
316483 2010 VD ₅₂	16.0	X	127.16872	78.83277	113.79837	2.17941	0.1224656	0.17814793	3.1281113	20	9 7.9	21.0
316484 2010 VM ₆₁	13.1	X	324.45734	93.59945	282.74731	5.99567	0.0519229	0.08467291	5.1361740	20	9 6.3	19.8
316485 2010 VV ₇₀	16.2	X	10.61084	243.40457	105.02650	10.08867	0.1104163	0.19723964	2.9228504	20	11 5.1	20.0
316486 2010 VK ₇₁	16.2	X	229.09962	203.30838	85.03215	13.31695	0.1604156	0.24078955	2.5588468	20	1 23.7	20.4
316487 2010 VT ₇₆	16.1	X	195.39952	312.85317	210.49813	10.60155	0.0602448	0.19170307	2.9788593	20	10 12.9	20.5
316488 2010 VD ₇₇	16.6	X	46.51905	322.59643	58.61596	6.78791	0.0644557	0.21329439	2.7742766	20	—	—
316489 2010 VB ₈₂	15.8	X	12.58156	284.74613	254.74825	9.68871	0.0835027	0.23841705	2.5757943	20	3 6.7	19.0
316490 2010 VE ₈₅	16.4	X	320.90794	144.90755	232.33569	3.01956	0.0731232	0.18437971	3.0572243	20	9 16.9	20.4
316491 2010 VZ ₈₆	16.5	X	141.46264	4.64884	301.51567	3.83747	0.0560959	0.21708234	2.7419091	20	—	—
316492 2010 VJ ₉₃	15.7	X	133.32752	353.53645	67.74256	4.70697	0.0722100	0.14403906	3.6042580	20	4 4.1	21.0
316493 2010 VM ₉₇	16.4	X	234.30641	30.94767	61.26581	1.98610	0.0438551	0.18182803	3.0857601	20	9 2.0	20.7
316494 2010 VX ₉₇	16.7	X	153.36140	82.77056	246.34810	3.13869	0.0501204	0.22972411	2.6403713	20	—	—
316495 2010 VV ₉₉	17.1	X	55.10719	310.61763	31.59950	6.93092	0.1127359	0.28993198	2.2608512	20	10 8.3	19.9
316496 2010 VT ₁₀₂	16.2	X	338.48404	165.28195	213.76491	2.35692	0.0307639	0.18912263	3.0058943	20	10 17.2	20.3
316497 2010 VG ₁₀₃	15.6	X	6.89347	254.09331	66.44231	11.20959	0.0684232	0.18161042	3.0882245	20	9 19.3	19.8
316498 2010 VK ₁₀₄	16.3	X	300.18292	195.80241	194.32142	1.81734	0.1944088	0.18452653	3.0556023	20	8 18.6	20.1
316499 2010 VC ₁₁₁	15.6	X	223.12689	269.08645	173.28868	11.34085	0.0773777	0.17821303	3.1273495	20	7 31.1	20.3
316500 2010 VF ₁₁₂	16.3	X	349.36416	195.81560	160.99429	1.64968	0.1756973	0.19053734	2.9909971	20	10 11.7	19.4
316501 2010 VB ₁₁₃	16.5	X	227.30199	165.46032	134.31221	3.00868	0.1673590	0.24285578	2.5443123	20	2 2.9	20.5
316502 2010 VC ₁₁₆	16.8	X	109.74257	52.14144	313.77448	5.06743	0.0669809	0.22551441	2.6731286	20	—	—
316503 2010 VN ₁₁₇	14.9	X	153.94062	241.54786	264.72690	14.72201	0.0698582	0.16972479	3.2307687	20	7 31.8	20.0
316504 2010 VU ₁₁₇	15.5	X	295.03706	334.90517	24.98768	8.92891	0.0452954	0.17057422	3.2200340	20	7 24.7	20.0
316505 2010 VY ₁₃₀	15.2	X	165.55577	82.05547	63.87283	17.86423	0.0744681	0.17812166	3.1284189	20	8 26.8	20.3
316506 2010 VC ₁₃₆	16.5	X	45.68597	114.98735	214.33113	1.08533	0.0681394	0.19752978	2.9199875	20	11 19.0	20.3
316507 2010 VK ₁₄₃	16.2	X	46.77432	183.84549	114.40690	5.94545	0.1117578	0.19156204	2.9803213	20	10 20.6	20.3
316508 2010 VD ₁₄₄	13.3	X	274.94293	343.73498	84.82217	10.68718	0.0972838	0.08353392	5.1827564	20	9 7.3	20.2
316509 2010 VV ₁₅₂	16.4	X	33.32137	258.51962	98.29308	3.24127	0.0745468	0.20107681	2.8855464	20	12 9.2	20.2
316510 2010 VT ₁₅₃	16.1	X	163.34313	228.81864	58.54682	9.48298	0.0683415	0.21983477	2.7189745	20	—	—
316511 2010 VT ₁₅₆	15.5	X	221.49001	68.19392	31.14442	9.66904	0.0602766	0.17856372	3.1232535	20	8 27.9	20.2
316512 2010 VL ₁₆₀	17.0	X	60.79776	240.04473	0.62288	6.45034	0.0996293	0.28230703	2.3013796	20	9 3.1	19.7
316513 2010 VT ₁₆₀	16.8	X	135.33274	314.54532	354.68259	2.00015	0.0469735	0.21716400	2.7412217	20	—	—
316514 2010 VM ₁₆₂	16.0	X	33.36188	62.35517	287.25651	4.67209	0.0733990	0.19847113	2.9107472	20	11 28.8	19.9
316515 2010 VX ₁₆₂	16.5	X	213.38325	315.21854	277.98072	3.76311	0.0987253	0.21441434	2.7646076	20	—	—
316516 2010 VL ₁₆₄	15.3	X	238.90757	146.18927	245.95014	19.84338	0.1219335	0.16448941	3.2989628	20	6 11.9	20.3
316517 2010 VD ₁₆₇	17.1	X	149.85885	213.50898	55.81624	5.52130	0.0202069	0.20944255	2.8081875	20	—	—
316518 2010 VR ₁₆₈	15.8	X	115.62710	181.65343	59.94304	11.55298	0.0417216	0.18843303	3.0132236	20	10 23.5	20.2
316519 2010 VO ₁₆₉	15.9	X	73.67197	77.62732	215.05364	1.26507	0.0666298	0.19212865	2.9744588	20	11 6.5	20.2
316520 2010 VO ₁₈₂	15.5	X	155.47308	305.86250	239.29887	14.50793	0.1633490	0.17736121	3.1373547	20	9 20.0	20.9
316521 2010 VZ ₁₉₂	16.2	X	43.49598	284.33368	63.91433	7.04467	0.0949637	0.20235597	2.8733732	20	12 14.1	20.2
316522 2010 VP ₁₉₃	15.3	X	141.61012	225.46729	123.80789	3.21777	0.0730681	0.12647813	3.9306022	20	1 21.7	21.1
316523 2010 VL ₁₉₅	15.8	X	240.77840	169.31964	300.96071	9.67892	0.0487672	0.18763554	3.0217554	20	9 26.6	20.3
316524 2010 VE ₁₉₆	15.2	X	311.41073	242.90988	120.43347	27.67032	0.2144137	0.18181322	3.0859276	20	7 30.0	18.6
316525 2010 VN ₂₀₀	15.6	X	231.10831	86.40277	346.70514	8.85270	0.0557968	0.17437182	3.1731104	20	8 4.2	20.2
316526 2010 VX ₂₀₀	15.9	X	232.95962	125.39224	324.74620	10.05725	0.1608106	0.17838098	3.1253862	20	8 13.9	20.6
316527 2010 VV ₂₀₁	15.0	X	230.90239	292.19440	167.46037	26.53028	0.1597627	0.17893838	3.1188923	20	8 21.9	19.9
316528 2010 VC ₂₀₂	13.0	X	17.52072	256.41067	81.43132	14.67791	0.0270147	0.08321057	5.1961744	20	10 7.3	19.9
316529 2010 WM	16.6	X	319.72865	292.42897	222.57716	1.42174	0.0070255	0.22340059	2.6899642	20	—	—
316530 2010 WK ₄	16.8	X	4.40570	211.48047	51.32185	7.44006	0.1041075	0.27202711	2.3589999	20	6 30.1	19.1
316531 2010 WL ₁₂	16.8	X	183.04257	208.23373	330.88832	9.17358	0.0255391	0.19101068	2.9860537	20	10 17.2	21.3
316532 2010 WC ₁₇	16.2	X	103.27208	258.13639	7.74759	3.01492	0.1308077	0.19237516	2.9719173	20	11 11.9	20.8
316533 2010 WB ₂₉	15.1	X	155.28368	342.27012	112.16542	10.17931	0.1119372	0.15686175	3.4050592	20	6 6.9	20.5
316534 2010 WF ₃₂	16.1	X	266.40136	327.80620	69.66675	2.17348	0.0334756	0.17219698	3.1997720	20	8 3.9	20.5
316535 2010 WA ₃₄	16.1	X	148.73613	154.21167	84.17148	3.05594	0.0623260	0.19550090	2.9401549	20	11 23.7	20.5
316536 2010 WT ₃₅	14.3	X	265.34445	350.62253	105.82112	2.97336	0.1217983	0.08305217	5.2027792	20	9 21.3	21.2
316537 2010 WP ₅₈	13.5	X	253.39523	31.46585	75.38123	10.15291	0.0527926	0.08204416	5.2453071	20	10 1.9	20.5
316538 2010 WG ₆₇	13.1	X	266.25906	41.93519	61.83464	12.64551	0.0789734	0.08388956	5.1680983	20	10 9.9	20.0
316539 2010 WN ₆₈	15.2	X	346.88700	179.34315	345.97896	2.26095	0.0978742	0.12295974	4.0052298	20	2 1.8	20.3
316540 2010 WZ ₇₀	16.6	X	112.61667	280.35595	31.34143	3.90869	0.0845337	0.21407417	2.7675355	20	—	—
316541 2010 WV ₇₂	16.0	X	352.84142	100.20532	218.35223	4.63103	0.1550007	0.18205168	3.0832324	20	8 20.5	19.4
316542 2010 XJ ₂₁	15.0	X	188.31244	2.33280	46.92205	12.31084	0.0391209	0.15219829	3.4742644	20	5 14.7	20.1
316543 2010 XG ₃₅	16.2	X	168.78920	44.97886	239.17890	9.91055	0.1413228	0.22462338	2.6801930	20	—	—
316544 2010 XJ ₄₇	16.7	X	74.77929	287.52130	60.72882	6.24295	0.0439906	0.21251868	2.7810234	20	—	—
316545 2010 XX ₄₇	16.9	X	166.79047	110.96774	174.34243	3.73887	0.0458147	0.22116962	2.7080234	20	—	—
316546 2010 XY ₆₆	15.9	X	87.31401	174.84957	120.76430	3.81814	0.0549306	0.19410821	2.9542015	20	11 25.5	20.2
316547 2010 XR ₆₈	15.0	X	242.02424	359.14409	59.82425	17.32536	0.0681223	0.16851421	3.2462231	20	7 29.9	20.0
316548 2010 XP ₇₂	14.9	X	335.56898	249.29467	93.02580	17.36155	0.0936643	0.17698645	3.1417819	20	8 30.4	19.1
316549 2010 XD ₇₈	15.5	X	240.75207	272.05297	175.01855	9.61073	0.0676958	0.17849523	3.1240523	20	8 28.6	20.1
316550 2010 XE ₈₁	12.9	X	246.35234	195.05821	286.98830	21.24795	0.0662122	0.08383738	5.1702424	20	9 23.7	20.2
316551 2010 XA ₈₄	13.8	X	260.00612	283.81039	191.11414	7.22095	0.0635500	0.08334371	5.1906392	20	10 12.4	20.6
316552 2010 XF ₈₇	13.6	X	217.11228	91.78256	64.70707	8.54586	0.0329691	0.08299678	5.2050936	20	10 18.3	20.6
316553 2010 YT ₁	12.9	X	278.04231	178.22978	262.25846	15.44710	0.0686085	0.08089830	5.2947213	20	9 15.7	20.1
316554 201												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316561 2011 EN ₂₈	16.9	X	338.20717	13.21397	100.25150	4.94479	0.0321217	0.29237027	2.2482637	20	—	—
316562 2011 FB ₄₅	16.7	X	286.05263	193.57676	111.31760	2.24978	0.2250869	0.21891901	2.7265517	20	4 3.5	20.5
316563 2011 FL ₅₆	16.3	X	343.59453	93.47850	115.48565	8.40199	0.1608097	0.21257793	2.7805066	20	3 3.8	19.4
316564 2011 FJ ₈₈	17.2	X	335.34795	39.90623	204.90909	1.65548	0.0548226	0.22314725	2.6919998	20	4 16.2	20.5
316565 2011 FG ₁₃₁	16.4	X	34.76315	218.66923	213.35581	1.00019	0.1274006	0.19749782	2.9203025	20	—	—
316566 2011 GN ₆₇	16.3	X	272.49643	163.99213	115.16412	5.46956	0.0283109	0.21168515	2.7883189	20	3 14.4	20.1
316567 2011 GY ₇₇	15.8	X	215.53668	335.32315	277.22248	6.02980	0.1211490	0.18264974	3.0764983	20	—	—
316568 2011 GZ ₇₇	17.1	X	186.46864	124.27912	80.43729	4.33506	0.0726220	0.27163207	2.3612865	20	12 8.4	20.0
316569 2011 MD ₄	17.7	X	250.02041	21.00114	267.98454	4.58451	0.1677268	0.29522055	2.2337693	20	2 3.4	21.0
316570 2011 QE ₆₇	17.2	X	355.17217	61.76668	309.05540	7.77290	0.1575156	0.23309046	2.6148877	20	11 18.9	20.1
316571 2011 RA ₁₉	16.9	X	7.92921	334.30015	343.37404	3.80577	0.1138762	0.21514046	2.7583836	20	9 19.8	20.0
316572 2011 SW ₂₄	16.3	X	143.45126	279.29400	179.80700	25.10944	0.2539309	0.17995381	3.1071485	20	6 8.9	22.1
316573 2011 SM ₄₇	15.4	X	263.32759	258.68293	90.20171	10.67814	0.0901949	0.19436901	2.9515583	20	5 23.1	19.6
316574 2011 SK ₁₀₅	15.4	X	235.67619	206.47941	233.79089	14.93890	0.2795213	0.20342262	2.8633200	20	7 20.4	20.4
316575 2011 SL ₁₁₆	16.2	X	210.12185	238.99230	137.00399	5.84523	0.1211067	0.18381495	3.0634832	20	4 26.9	21.1
316576 2011 SS ₁₁₆	17.1	X	152.16597	356.75011	336.53471	2.17347	0.2088853	0.26787425	2.3833184	20	1 7.6	20.6
316577 2011 SB ₂₁₀	17.4	X	154.08929	216.38420	139.86982	6.95535	0.1449503	0.27128806	2.3632822	20	1 30.8	20.9
316578 2011 SV ₂₅₄	17.3	X	66.23607	281.36562	170.42056	1.48031	0.0727346	0.27666280	2.3325746	20	1 29.4	19.8
316579 2011 TD ₅	16.7	X	312.75596	78.03289	324.18958	11.16553	0.1630749	0.21637790	2.7478569	20	10 2.9	19.8
316580 2011 TR ₄	16.4	X	307.66129	104.28430	247.17191	4.87932	0.0994680	0.20337437	2.8637729	20	7 24.1	20.0
316581 2011 TX ₁₄	15.7	X	192.30902	286.23011	124.21707	10.27880	0.3293237	0.18137336	3.0909149	20	5 19.2	21.6
316582 2011 US ₁₃	15.8	X	304.74354	288.26668	351.04262	10.66566	0.0608395	0.17777653	3.1324665	20	4 16.4	20.2
316583 2011 UY ₂₅	16.4	X	211.58561	253.38753	145.40524	0.88404	0.0380311	0.18131053	3.0916289	20	5 29.2	20.9
316584 2011 UJ ₆₁	16.4	X	236.12839	308.25237	228.74295	10.88102	0.1327285	0.22207034	2.7006958	20	12 13.2	20.1
316585 2011 UV ₈₀	15.8	X	292.44205	303.09255	44.50251	12.82330	0.1535086	0.19328119	2.9626225	20	6 16.0	19.8
316586 2011 UV ₁₄₆	15.8	X	143.86296	357.69345	245.74298	11.26895	0.1158164	0.21812739	2.7331444	20	11 28.2	19.9
316587 2011 UH ₁₅₇	16.7	X	313.97054	21.47254	65.93695	10.33094	0.1718918	0.22320817	2.6915099	20	12 16.7	19.4
316588 2011 UA ₁₅₉	16.5	X	80.20982	32.57638	16.51370	24.02629	0.1942584	0.26321404	2.4113672	20	1 20.4	19.6
316589 2011 UQ ₁₆₂	15.0	X	315.54345	213.61421	74.44693	12.44805	0.0382344	0.17558596	3.1584659	20	5 20.4	19.4
316590 2011 UX ₁₆₂	16.7	X	189.60074	310.45417	41.66083	7.61777	0.0672568	0.27782350	2.3260733	20	3 4.9	20.4
316591 2011 UA ₁₇₂	15.8	X	254.83487	357.11478	329.93420	8.96425	0.1933473	0.18307369	3.0717468	20	3 30.6	20.8
316592 2011 US ₁₇₃	15.5	X	93.17399	12.86157	194.93713	17.22296	0.0543789	0.19834848	2.9119470	20	8 10.1	19.9
316593 2011 UY ₁₈₆	17.9	X	293.45366	193.82502	131.25368	5.09354	0.1529257	0.30428061	2.1892055	20	5 19.7	20.3
316594 2011 UL ₁₉₀	16.1	X	350.83248	8.06782	53.81187	29.58149	0.1176031	0.22875660	2.6478109	20	—	—
316595 2011 UV ₁₉₈	16.6	X	170.40619	338.16983	103.07873	2.22537	0.1390418	0.17462696	3.1700190	20	6 5.2	21.7
316596 2011 UR ₂₀₀	15.5	X	161.12921	288.10511	261.04520	17.14698	0.1302156	0.20299320	2.8673567	20	9 30.8	20.4
316597 2011 UT ₂₀₆	15.5	X	25.70373	146.90962	231.22452	27.65903	0.1737731	0.23105975	2.6301863	20	—	—
316598 2011 UW ₂₈₉	15.8	X	93.42871	296.73105	190.92019	19.55904	0.0676443	0.17452963	3.1711973	20	5 6.6	20.4
316599 2011 UX ₃₁₁	16.7	X	277.77043	108.56629	226.72234	1.35171	0.1054762	0.18574814	3.0421905	20	5 19.8	21.0
316600 2011 UC ₃₃₁	16.4	X	138.42639	169.83105	79.09924	5.63432	0.0555381	0.22372875	2.6873332	20	11 30.8	20.2
316601 2011 UQ ₃₃₇	16.4	X	46.68055	247.16971	101.08221	6.75014	0.0389835	0.23676815	2.5877393	20	12 19.1	19.7
316602 2011 US ₃₃₈	15.9	X	355.00619	42.47779	209.42134	11.40959	0.0970055	0.18315407	3.0708481	20	5 26.5	19.7
316603 2011 UY ₃₅₉	16.4	X	49.93091	346.94574	325.57273	4.24978	0.0550881	0.21410942	2.7672317	20	11 3.0	20.2
316604 2011 VG ₅	14.5	X	130.70188	121.52225	253.19015	16.91878	0.0850142	0.14762500	3.5456519	20	1 31.5	20.0
316605 2011 VM ₁₆	16.3	X	199.57316	93.88709	48.17647	4.94533	0.0153471	0.21004291	2.8028339	20	9 30.7	20.1
316606 2011 VZ ₁₈	16.4	X	320.00641	212.74630	215.83931	4.87600	0.0286263	0.22439592	2.6820039	20	12 2.7	19.8
316607 2011 WC ₃	15.8	X	324.12707	250.26491	62.87819	4.27111	0.0771010	0.18381669	3.0634638	20	6 29.5	19.8
316608 2011 WC ₁₀	16.0	X	342.77743	248.73132	70.02748	3.04579	0.0756793	0.19603543	2.9348078	20	8 7.5	19.7
316609 2011 WU ₁₆	17.0	X	214.26770	308.72773	67.66081	8.40034	0.1473080	0.28797394	2.2710878	20	4 26.8	20.4
316610 2011 WK ₂₇	16.4	X	316.25674	197.28287	228.84162	11.92298	0.0842037	0.21887668	2.7269032	20	11 22.1	19.6
316611 2011 WA ₃₀	15.7	X	79.91848	315.07162	17.91599	13.26225	0.2873126	0.23909563	2.5709184	20	—	—
316612 2011 WY ₃₅	16.7	X	12.94945	69.41812	62.88102	7.58613	0.0681584	0.26021277	2.4298734	20	1 4.8	19.4
316613 2011 WV ₃₈	17.3	X	352.71683	162.57537	244.10905	1.14741	0.2041496	0.22522455	2.6754216	20	—	—
316614 2011 WX ₄₁	16.7	X	145.76383	282.93487	81.58041	9.45725	0.0768039	0.26287128	2.4134628	20	1 27.4	20.0
316615 2011 WO ₄₃	16.3	X	359.21795	334.10468	66.78322	13.16636	0.1680445	0.22727092	2.6593376	20	—	—
316616 2011 WT ₄₃	17.0	X	27.09599	175.19379	218.34085	3.97690	0.2281291	0.23343887	2.6122853	20	—	—
316617 2011 WJ ₄₆	13.0	X	261.85171	16.08002	60.64974	11.03649	0.0558470	0.08429484	5.1515198	20	9 7.9	20.0
316618 2011 WJ ₅₇	16.1	X	297.17561	75.85164	233.97640	9.26184	0.0716008	0.17644111	3.1482523	20	5 17.8	20.4
316619 2011 WU ₅₇	15.5	X	79.91727	300.71967	240.47173	16.01404	0.0477891	0.17623141	3.1507492	20	6 20.4	20.0
316620 2011 WY ₆₃	18.1	X	61.18299	90.32319	354.09512	1.88500	0.1908237	0.25448233	2.4662152	20	1 28.9	20.3
316621 2011 WN ₇₀	16.7	X	228.63448	61.70650	332.90157	0.63749	0.1683622	0.18124288	3.0923982	20	5 31.9	21.5
316622 2011 WB ₇₁	16.0	X	117.91006	5.87357	260.67460	8.00350	0.0992569	0.21891205	2.7266094	20	11 30.3	20.1
316623 2011 WH ₈₅	16.6	X	290.03961	7.73692	92.00409	5.44182	0.0746852	0.21785144	2.7354520	20	11 26.9	20.1
316624 2011 WM ₈₈	12.7	X	245.37252	184.33478	267.40203	13.57573	0.0567621	0.08275000	5.2154372	20	8 25.7	19.9
316625 2011 WF ₈₉	16.9	X	314.68588	140.28829	275.14727	4.77023	0.0604058	0.21030104	2.8005399	20	11 2.2	20.5
316626 2011 WT ₉₀	13.5	X	208.46713	254.48772	236.46588	5.00469	0.0465244	0.08391941	5.1668727	20	9 5.0	20.6
316627 2011 WH ₁₀₀	17.2	X	221.72540	260.18377	83.27614	8.14568	0.1537228	0.28266837	2.2994179	20	3 24.4	20.8
316628 2011 WL ₁₁₂	16.5	X	321.73982	18.59378	48.27236	10.57074	0.1941379	0.21939508	2.7226060	20	12 1.2	19.0
316629 2011 WR ₁₁₃	12.8	X	308.69024	123.24488	268.37827	8.52115	0.0497406	0.08469481	5.1352887	20	9 3.0	19.6
316630 2011 WF ₁₁₄	16.0	X	27.70277	289.43551	123.03259	14.28257	0.1501138	0.23931325	2.5693595	20	—	—
316631 2011 WY ₁₁₄	14.8	X	144.89848	287.18582	85.94973	11.03767	0.1134162	0.14907249	3.5226626	20	2 25.9	20.3
316632 2011 WS ₁₁₆	16.1	X	352.91966	273.46467	134.50046	15.47614	0.1449045	0.23014388	2.6371597	20	—	—
316633 2011 WR ₁₁₉	16.6	X	129.31306	163.78323	43.65815	2.58580	0.0059070	0.20448012	2.8534394	20		

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316641 2011 YF ₂₃	16.4	X	223.61785	355.01318	84.90465	8.07031	0.0572573	0.18075220	3.0979922	20	8 3.6	20.9
316642 2011 YU ₂₃	16.7	X	217.51544	231.40697	99.67059	14.71554	0.2129904	0.26608245	2.3940060	20	3 5.9	20.9
316643 2011 YV ₂₅	16.5	X	46.72599	54.68422	110.95596	6.25210	0.0674835	0.26398305	2.4066819	20	4 18.1	19.3
316644 2011 YE ₂₆	16.0	X	229.15732	238.25681	292.60214	11.87120	0.1271166	0.20583365	2.8409164	20	11 22.8	20.3
316645 2011 YF ₃₅	16.9	X	24.94202	32.88379	76.03930	3.57773	0.0950124	0.24112534	2.5564706	20	—	—
316646 2011 YS ₃₇	17.5	X	115.60099	335.71570	124.46211	4.58774	0.1386887	0.26746332	2.3857590	20	5 4.6	20.7
316647 2011 YU ₃₈	16.6	X	223.34858	302.59861	128.60670	11.79849	0.2930433	0.18029627	3.1032128	20	7 2.0	22.0
316648 2011 YU ₅₇	15.4	X	203.61181	319.41050	105.11548	11.94999	0.1244516	0.17006823	3.2264177	20	6 16.9	20.5
316649 1019 T ₋₂	17.0	X	351.86215	227.60894	163.61092	0.55866	0.3350480	0.21110123	2.7934584	20	—	—
316650 1987 UL	15.9	X	310.83590	301.45339	70.33184	8.07119	0.4099628	0.23707196	2.5855281	20	7 11.2	18.0
316651 1990 OL	15.8	X	276.03563	156.83761	150.31230	15.00024	0.4535295	0.22357672	2.6885513	20	3 3.9	20.5
316652 1992 EK ₁₃	17.0	X	288.27860	307.76287	203.57487	3.87059	0.1323821	0.27148069	2.3621642	20	—	—
316653 1993 BV ₈	16.9	X	307.57476	138.92684	115.33100	7.96006	0.0325242	0.25958612	2.4337823	20	3 24.0	20.0
316654 1993 NF ₁	15.8	X	195.50671	226.09393	115.45893	13.10324	0.2997618	0.24261949	2.5459640	20	3 1.1	20.6
316655 1993 TT ₇	15.7	X	337.57738	359.04632	22.18986	11.96889	0.0637610	0.18108319	3.0942160	20	10 17.4	19.8
316656 1993 TQ ₁₀	15.3	X	188.99158	194.39478	14.91495	11.79023	0.1751847	0.18656119	3.0333453	20	11 18.7	20.3
316657 1993 TQ ₂₂	17.3	X	241.43748	354.23477	28.81262	4.98977	0.1495942	0.28410304	2.2916702	20	5 26.7	20.7
316658 1993 TC ₄₆	15.8	X	150.39000	191.48768	185.16826	14.01845	0.2179921	0.23700320	2.5860281	20	2 29.6	20.2
316659 1993 UV ₁	17.0	X	294.96445	330.63161	221.50162	8.71866	0.0333970	0.23223584	2.6212990	20	—	—
316660 1993 YM ₁	17.0	X	96.20617	254.27491	188.01400	0.72846	0.1645834	0.23465128	2.6032793	20	3 21.2	20.5
316661 1994 JZ ₃	17.3	X	131.08943	68.28339	225.34053	6.54958	0.1295356	0.28421667	2.2910594	20	—	—
316662 1994 SZ ₁	17.2	X	286.73052	280.91476	43.77033	3.05507	0.1854916	0.25768740	2.4457230	20	5 3.2	20.1
316663 1994 SV ₁₁	16.1	X	6.89755	5.78355	31.03580	5.66747	0.0388107	0.19543762	2.9407895	20	12 17.8	20.0
316664 1995 BU ₁₁	18.3	X	70.80905	144.62618	350.92637	2.29038	0.1453089	0.27940353	2.3172957	20	4 19.7	20.8
316665 1995 DD ₆	18.0	X	179.46140	329.07020	157.54686	5.99024	0.1158992	0.28928115	2.2642409	20	8 16.4	21.3
316666 1995 DG ₁₀	15.8	X	108.24526	72.64207	163.95416	8.65075	0.1993828	0.17344939	3.1843505	20	10 18.5	21.0
316667 1995 FG ₄	15.5	X	159.57490	74.01412	163.48918	15.31722	0.0705990	0.18028383	3.1033555	20	12 2.9	20.5
316668 1995 OT ₁₀	17.4	X	275.15902	318.64008	319.06234	6.24790	0.1141131	0.30424327	2.1893846	20	2 20.0	20.3
316669 1995 OE ₁₆	16.8	X	252.50206	0.11423	232.61615	4.21772	0.1033878	0.21843554	2.7305734	20	—	—
316670 1995 QE ₁₄	16.8	X	190.88061	143.39065	238.52581	5.08608	0.0530753	0.22624176	2.6673963	20	4 9.8	20.8
316671 1995 RN	16.3	X	81.94237	27.89783	230.16917	6.53089	0.1423394	0.24050736	2.5608480	20	10 20.0	20.0
316672 1995 SD ₂₀	17.2	X	339.26957	192.54306	181.60913	1.92281	0.1242852	0.23733651	2.5836064	20	10 26.4	19.9
316673 1995 ST ₂₂	18.1	X	177.19227	36.90289	23.92831	6.52194	0.1268296	0.26413820	2.4057393	20	5 14.9	21.7
316674 1995 SH ₂₅	16.0	X	170.08899	52.92841	105.42967	3.23726	0.0434486	0.19496356	2.9455546	20	9 11.6	20.2
316675 1995 SO ₄₈	16.6	X	274.37819	221.66855	156.45738	3.78700	0.1943650	0.23066218	2.6332077	20	6 28.0	20.2
316676 1995 SM ₆₃	17.4	X	132.08918	343.27047	201.56919	4.57719	0.0955565	0.27295383	2.3536574	20	9 9.6	20.7
316677 1995 TU ₁₁	16.4	X	94.32642	313.70317	196.40649	5.12766	0.0850500	0.18316638	3.0707105	20	6 5.9	20.8
316678 1995 UO ₁₂	16.9	X	83.43804	251.09792	18.26343	6.81156	0.2161589	0.27955620	2.3164520	20	11 16.9	20.7
316679 1995 UD ₁₆	16.4	X	294.30181	285.46283	86.88486	3.56833	0.1963028	0.19012809	2.9952875	20	7 17.0	20.2
316680 1995 UM ₂₀	16.9	X	51.95224	9.39572	335.33493	1.34486	0.0765523	0.20220522	2.8748011	20	12 17.7	20.8
316681 1995 UO ₅₈	17.2	X	82.38890	100.45273	230.65072	3.91331	0.1863156	0.28444880	2.2898128	20	—	—
316682 1995 US ₆₁	17.7	X	272.21292	262.26500	353.87802	3.68083	0.0214912	0.29553652	2.2321769	20	2 1.5	20.2
316683 1995 UJ ₈₀	17.6	X	71.24684	108.36044	19.93260	1.59924	0.1172080	0.25802470	2.4435910	20	4 7.6	20.3
316684 1995 VT ₁₁	17.1	X	19.69053	213.61695	131.23708	3.55297	0.2243499	0.23899580	2.5716343	20	12 8.1	20.1
316685 1996 AS ₁₀	16.4	X	233.89868	252.92873	275.28804	3.67736	0.0552473	0.19272476	2.9683222	20	12 3.6	20.6
316686 1996 BX ₉	16.8	X	307.25397	142.27083	193.00909	5.80514	0.0499312	0.21901712	2.7257373	20	7 7.9	20.4
316687 1996 BX ₁₂	17.2	X	353.84967	42.86828	335.66361	25.15505	0.2390629	0.31263031	2.1500505	20	—	—
316688 1996 BE ₁₄	16.0	X	74.84703	93.80142	107.04118	8.73000	0.2426358	0.17616817	3.1515032	20	8 8.5	20.7
316689 1996 EX ₅	15.4	X	211.16712	192.92478	152.00596	3.47456	0.2057502	0.24643820	2.5194467	20	3 13.9	19.5
316690 1996 EA ₈	16.7	X	301.03506	205.59115	167.18625	6.66707	0.0216019	0.21951108	2.7216467	20	8 22.9	20.2
316691 1996 GQ ₅	18.0	X	106.01781	190.18248	77.34688	3.58828	0.1264062	0.30434718	2.1888862	20	12 6.8	21.2
316692 1996 GX ₅	13.2	X	56.81497	108.86140	48.22702	9.37364	0.0544533	0.08482010	5.1302305	20	4 27.2	19.9
316693 1996 JU ₄	13.3	X	105.99203	32.04886	91.90338	13.07898	0.0407038	0.08258082	5.2225577	20	5 16.6	20.3
316694 1996 TW ₁	16.8	X	65.84043	222.25302	131.68712	1.82777	0.2294894	0.25632712	2.4543680	20	—	—
316695 1996 TE ₉	18.8	X	300.96422	3.89438	13.88365	21.63191	0.3260004	0.41042851	1.7932646	20	9 16.6	18.5
316696 1996 TG ₁₇	17.0	X	182.25174	167.50163	233.80087	4.48055	0.2348388	0.27397319	2.3478157	20	4 26.3	21.0
316697 1996 TE ₂₆	15.7	X	3.94623	282.67060	239.80895	8.28664	0.0503015	0.18504014	3.0499455	20	2 11.0	19.8
316698 1996 TF ₃₀	17.7	X	252.25292	296.32670	35.47902	3.99940	0.2394810	0.27492299	2.3424051	20	3 29.4	21.4
316699 1996 TR ₄₆	15.9	X	281.48275	78.25425	222.38816	10.58549	0.1083285	0.19014362	2.9951245	20	4 8.0	20.2
316700 1996 VQ ₉	16.5	X	141.70974	226.65325	120.29695	7.51397	0.0676820	0.21866055	2.7286998	20	1 4.6	20.3
316701 1996 VQ ₁₄	18.2	X	126.87024	258.17119	212.63692	0.69722	0.1344471	0.27159328	2.3615113	20	5 29.8	21.6
316702 1996 VH ₁₈	16.9	X	217.71039	282.49644	130.78396	6.47283	0.0857813	0.27635161	2.3343253	20	6 22.2	20.0
316703 1996 VF ₂₆	16.8	X	319.98677	210.68485	105.01338	8.79200	0.1412423	0.23685877	2.5870792	20	6 21.3	19.4
316704 1996 XT ₃	17.2	X	329.94412	98.22918	47.30435	21.93749	0.0999728	0.38281309	1.8785014	20	—	—
316705 1996 XA ₁₆	17.6	X	259.02049	112.55277	251.29545	5.57314	0.1328351	0.27655377	2.3331876	20	5 29.2	20.7
316706 1996 XA ₂₀	17.4	X	165.94232	298.39616	133.12905	2.95775	0.1777614	0.27084897	2.3658358	20	5 21.1	21.1
316707 1997 CP ₁₁	17.6	X	151.00718	93.60124	313.81158	5.40281	0.2435376	0.26503407	2.4003151	20	4 7.1	21.7
316708 1997 EU ₂₆	17.2	X	211.72209	116.90200	7.68374	3.05714	0.0406172	0.23111128	2.6297954	20	9 20.8	20.7
316709 1997 EE ₆₀	16.0	X	126.60433	42.53952	166.79150	8.81691	0.2934714	0.18872139	3.0101534	20	10 6.9	21.4
316710 1997 GQ ₂	17.3	X	16.02242	237.06371	14.31567	2.20166	0.1796340	0.26266125	2.4147493	20	7 12.9	19.2
316711 1997 GA ₅	18.0	X	160.41798	27.55306	49.01149	22.12033	0.0866206	0.38797877	1.8617902	20	5 14.1	19.8
316712 1997 SD ₃	16.7	X	148.86622	19.61694	356.27775	7.52696	0.1971505	0.23616129	2.5921706	20	2 29.0	20.8
316713 1997 SA ₈	17.3	X	304.77370	85.70578	343.81374	5.46060	0.1674732	0.25916817	2.4363982	20	11 12.9	19.5
316714 1997 SB ₁₃	17.9	X	271.80870	231.798								

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316721 1998 <i>BB</i> ₂₀	17.1	X	89.99495	121.30986	292.44648	2.75267	0.0902172	0.22465808	2.6799171	20	1 25.5	20.4
316722 1998 <i>DQ</i> ₁₇	16.8	X	116.95122	46.27382	144.22517	6.58100	0.1086618	0.28357288	2.2945257	20	9 4.4	20.0
316723 1998 <i>DV</i> ₂₁	17.1	X	277.80295	186.09222	7.23188	2.81718	0.1883774	0.21446479	2.7641740	20	—	—
316724 1998 <i>FX</i> ₁₃₂	16.2	X	56.89988	287.07286	354.39145	24.37615	0.2479800	0.28263133	2.2996188	20	10 31.1	20.0
316725 1998 <i>HC</i> ₄	17.0	X	348.71866	207.41029	165.86788	7.00491	0.1254913	0.28605508	2.2812328	20	11 27.3	19.3
316726 1998 <i>HA</i> ₇	16.9	X	81.57189	29.33225	181.64305	24.44181	0.2108991	0.27799896	2.3250944	20	8 30.3	20.4
316727 1998 <i>QF</i> ₅₈	16.0	X	322.21444	343.79414	353.30449	8.67076	0.0900423	0.17422273	3.1749203	20	7 29.3	20.2
316728 1998 <i>QB</i> ₆₀	15.9	X	91.37907	139.88047	168.02688	10.14465	0.0904408	0.18780846	3.0199004	20	12 16.6	20.6
316729 1998 <i>QU</i> ₉₄	15.9	X	99.67757	140.41105	205.48544	12.79006	0.1643970	0.23963926	2.5670288	20	—	—
316730 1998 <i>RW</i> ₂	18.1	X	114.38273	37.68911	346.12315	0.86786	0.1293252	0.24434735	2.5339476	20	1 22.4	21.2
316731 1998 <i>RG</i> ₈₁	16.1	X	346.71085	351.10999	358.07146	9.63026	0.0335431	0.17898903	3.1183039	20	9 19.2	20.1
316732 1998 <i>SY</i> ₂₀	16.8	X	354.26354	274.43256	191.62070	4.96407	0.1605681	0.23638827	2.5905110	20	—	—
316733 1998 <i>ST</i> ₁₂₀	15.7	X	31.04367	187.00290	167.12867	9.57187	0.1361008	0.18402710	3.0611282	20	12 8.4	19.9
316734 1998 <i>SE</i> ₁₂₅	17.2	X	253.99059	173.97361	162.36936	4.25795	0.2295317	0.25670976	2.4519285	20	4 7.6	21.0
316735 1998 <i>SR</i> ₁₆₆	16.4	X	76.79971	332.89343	40.41865	6.78989	0.3550618	0.23749126	2.5824839	20	—	—
316736 1998 <i>UJ</i> ₀	15.5	X	307.20230	21.04719	11.15788	10.32363	0.0358496	0.17843153	3.1247958	20	9 21.4	19.6
316737 1998 <i>UW</i> ₉	15.7	X	287.38682	217.37928	189.23627	7.96778	0.0734000	0.17719330	3.1393363	20	9 5.1	20.0
316738 1998 <i>WB</i> ₃₅	16.9	X	189.82119	37.09917	308.52300	0.78308	0.1051156	0.20130818	2.8833350	20	2 27.6	21.4
316739 1998 <i>WM</i> ₃₈	16.6	X	255.87114	300.67706	60.10417	4.28663	0.1088121	0.21042939	2.7994010	20	5 24.8	20.5
316740 1998 <i>WG</i> ₃₉	16.5	X	359.79092	184.07600	176.68497	1.72041	0.0846805	0.22300303	2.6931603	20	11 4.3	19.7
316741 1998 <i>Jane</i> fletcher	15.0	X	6.02501	323.10188	333.98862	25.88149	0.1743999	0.17490073	3.1667100	20	8 21.1	18.5
316742 1998 <i>XQ</i> ₇	15.8	X	196.20497	113.20832	232.46095	9.78637	0.1592671	0.20102041	2.8860861	20	3 1.1	20.8
316743 1998 <i>AQ</i> ₇	15.8	X	14.61715	65.98074	75.10854	29.76196	0.3342730	0.23293716	2.6160349	20	—	—
316744 1998 <i>AC</i> ₃₁	17.3	X	55.71751	291.76653	127.76567	5.50473	0.2790569	0.23290921	2.6162442	20	—	—
316745 1999 <i>CG</i> ₁₃₄	16.0	X	149.38164	205.92575	143.11992	17.11233	0.2098472	0.23166536	2.6256005	20	1 27.9	20.2
316746 1999 <i>FT</i> ₈₁	17.4	X	49.38620	138.60018	128.15601	5.87760	0.2215810	0.29202091	2.2500565	20	10 16.6	20.3
316747 1999 <i>FC</i> ₈₈	16.6	X	12.54783	105.13131	30.31122	0.27557	0.0687349	0.18245255	3.0787146	20	1 23.9	20.4
316748 1999 <i>GV</i> ₆₂	17.1	X	324.79957	110.79363	12.43327	13.68337	0.1381051	0.22179152	2.7029588	20	—	—
316749 1999 <i>JQ</i> ₇	16.4	X	247.22484	157.24882	70.06705	16.62459	0.2286846	0.21973853	2.7197683	20	—	—
316750 1999 <i>JK</i> ₄₇	16.5	X	254.79696	353.72196	226.64564	9.42896	0.2769772	0.21956462	2.7212043	20	—	—
316751 1999 <i>JH</i> ₉₁	16.2	X	306.30497	97.90419	121.06767	11.60542	0.2923005	0.22657008	2.6648188	20	—	—
316752 1999 <i>QV</i> ₂	18.6	X	349.97771	337.08877	151.44799	8.37234	0.0463559	0.39900862	1.8273197	20	—	—
316753 1999 <i>RR</i> ₇	15.7	X	228.56046	127.40662	10.57312	9.83830	0.0318375	0.19046645	2.9917392	20	10 22.2	19.9
316754 1999 <i>RN</i> ₁₇	16.8	X	348.77789	349.76360	325.37348	5.32307	0.2081601	0.28094170	2.3088298	20	8 30.0	18.0
316755 1999 <i>RZ</i> ₃₅	16.9	X	207.49740	309.84858	43.08273	7.26654	0.1521328	0.26458800	2.4030121	20	3 22.6	20.7
316756 1999 <i>RW</i> ₄₄	17.2	X	21.43561	144.14554	214.20085	4.74289	0.1848036	0.28925521	2.2643762	20	—	—
316757 1999 <i>RK</i> ₂₁₉	17.0	X	193.12058	13.89452	332.53073	4.34036	0.1917095	0.31215060	2.1522527	20	2 23.9	20.2
316758 1999 <i>RY</i> ₂₄₆	15.9	X	185.90713	200.77487	178.43505	15.04028	0.1216458	0.21805349	2.7337619	20	4 5.0	20.1
316759 1999 <i>SV</i> ₃	14.9	X	1.48345	359.81098	343.41769	27.01403	0.3319021	0.19071372	2.9891526	20	10 20.1	18.3
316760 1999 <i>SI</i> ₁₉	17.2	X	248.53053	293.00971	9.02555	19.32966	0.0629772	0.35903899	1.9605367	20	2 29.2	19.7
316761 1999 <i>TB</i> ₂₃	16.2	X	341.44865	36.58085	23.53801	12.11787	0.0492572	0.19436407	2.9516084	20	12 11.9	20.3
316762 1999 <i>TK</i> ₃₃	16.5	X	10.61404	301.27821	9.31176	6.98579	0.1383749	0.28087555	2.3091923	20	10 1.7	18.6
316763 1999 <i>TG</i> ₄₁	16.1	X	187.40213	235.74731	214.35277	13.11389	0.2580621	0.17097875	3.2149530	20	6 27.9	21.9
316764 1999 <i>TG</i> ₄₄	17.5	X	202.95533	15.46649	350.93363	4.31112	0.1454892	0.26433161	2.4045657	20	3 31.6	21.3
316765 1999 <i>TY</i> ₄₄	15.8	X	220.72934	83.80376	14.59069	16.28834	0.0881192	0.18095402	3.0956883	20	8 25.8	20.6
316766 1999 <i>TW</i> ₄₅	17.6	X	195.25866	71.76029	294.90667	1.14370	0.1837793	0.26331660	2.4107410	20	3 24.9	21.4
316767 1999 <i>TZ</i> ₄₈	16.8	X	266.88216	237.83851	172.52173	5.66956	0.1491234	0.18139153	3.0907085	20	8 2.9	21.1
316768 1999 <i>TN</i> ₄₉	17.4	X	169.01255	246.18487	159.75527	3.05558	0.2302491	0.26393894	2.4069500	20	4 23.2	21.4
316769 1999 <i>TD</i> ₅₂	16.2	X	172.21052	259.04733	12.12929	10.30759	0.0878651	0.19984718	2.8973705	20	—	—
316770 1999 <i>TH</i> ₅₂	17.6	X	143.26583	180.22886	250.81561	2.00410	0.1721509	0.26235118	2.4166516	20	4 27.3	21.3
316771 1999 <i>TT</i> ₅₃	17.6	X	214.62888	8.73108	353.02301	3.15088	0.1451926	0.26538296	2.3982108	20	4 5.9	21.3
316772 1999 <i>TR</i> ₇₂	16.1	X	213.94086	46.06774	68.00134	6.98815	0.1275328	0.17960846	3.1111302	20	8 30.2	21.0
316773 1999 <i>TB</i> ₇₄	17.7	X	228.01603	18.76864	320.76754	1.63414	0.2057489	0.26695689	2.3887753	20	3 18.8	21.6
316774 1999 <i>TG</i> ₇₉	16.0	X	175.30746	313.29674	20.35203	9.37679	0.1862186	0.21059549	2.7982478	20	2 5.9	20.7
316775 1999 <i>TU</i> ₁₂₃	17.1	X	165.45479	13.76741	317.96370	0.73377	0.1983103	0.25636166	2.4541475	20	1 18.5	21.0
316776 1999 <i>TH</i> ₁₃₄	15.7	X	20.99210	187.66767	206.22443	8.43479	0.1386462	0.19555351	2.9396275	20	—	—
316777 1999 <i>TB</i> ₁₃₇	15.8	X	270.17654	198.71556	193.97774	3.64811	0.1937814	0.17980872	3.1088198	20	7 9.4	20.3
316778 1999 <i>TT</i> ₁₃₉	15.8	X	314.75172	42.98095	20.24253	10.15866	0.0869880	0.18909274	3.0062111	20	11 5.6	19.7
316779 1999 <i>TP</i> ₁₄₁	17.1	X	10.00632	61.19415	248.32048	1.91114	0.1752597	0.28015037	2.3131755	20	10 3.7	19.2
316780 1999 <i>TU</i> ₁₄₈	17.0	X	178.75603	227.62968	108.12036	2.43106	0.1985775	0.25885692	2.4383509	20	2 3.9	20.8
316781 1999 <i>TJ</i> ₁₅₀	17.8	X	173.92683	143.33937	191.77957	3.94915	0.2426019	0.30604143	2.1808003	20	1 26.3	21.3
316782 1999 <i>TL</i> ₁₅₃	16.7	X	157.70645	53.18743	1.55429	12.68229	0.1891052	0.26301403	2.4125895	20	4 17.9	20.7
316783 1999 <i>TM</i> ₁₅₄	17.0	X	3.23651	168.67595	157.19521	1.50529	0.2446557	0.28195034	2.3033201	20	10 30.6	18.7
316784 1999 <i>TV</i> ₁₆₀	15.7	X	138.43180	335.08625	359.17089	10.12468	0.1288297	0.20546069	2.8443534	20	—	—
316785 1999 <i>TA</i> ₁₆₆	16.5	X	15.76877	89.30804	247.20905	4.55181	0.1647542	0.23735786	2.5834514	20	11 10.0	19.4
316786 1999 <i>TV</i> ₁₇₀	15.7	X	219.05711	57.13239	22.86842	16.10042	0.2045252	0.17611498	3.1521377	20	7 18.7	21.1
316787 1999 <i>TA</i> ₁₇₂	16.0	X	228.29451	221.11172	198.03678	10.12148	0.2505804	0.17434195	3.1734728	20	6 23.7	21.4
316788 1999 <i>TP</i> ₁₇₃	17.3	X	218.89144	345.98308	326.84521	2.99013	0.2183665	0.30911113	2.1663384	20	2 4.6	20.7
316789 1999 <i>TW</i> ₁₇₉	15.7	X	282.10620	228.60956	216.26748	8.32715	0.1027969	0.18824691	3.0152095	20	10 15.4	19.7
316790 1999 <i>TS</i> ₁₉₇	15.4	X	216.27767	68.37075	34.13782	12.92907	0.2765342	0.17676431	3.1444136	20	8 8.8	21.0
316791 1999 <i>TS</i> ₂₀₁	16.8	X	175.14760	115.80112	233.70090	2.02451	0.1902096	0.26065601	2.4271180	20	2 15.6	20.7
316792 1999 <i>TU</i> ₂₂₉												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316801 1999 <i>UB</i> ₂₉	16.2	X	265.80598	292.96988	40.59991	5.48566	0.1837856	0.22254442	2.6968590	20	4 21.8	20.0
316802 1999 <i>UA</i> ₃₂	15.7	X	209.80206	129.92805	37.55300	10.81575	0.0436013	0.18906165	3.0065407	20	11 4.8	20.1
316803 1999 <i>UK</i> ₃₃	16.2	X	215.24356	234.88400	212.64069	6.63226	0.1211921	0.17719736	3.1392884	20	7 24.9	21.1
316804 1999 <i>UF</i> ₃₅	16.4	X	349.27646	301.35701	57.96907	2.18232	0.1209640	0.18610821	3.0382653	20	10 11.1	19.9
316805 1999 <i>VB</i> ₆₃	17.3	X	150.62715	342.77670	53.11422	3.44276	0.1834655	0.25910673	2.4367833	20	3 23.7	21.0
316806 1999 <i>VL</i> ₇₃	17.2	X	115.94329	282.45656	192.18446	5.56386	0.0852898	0.26583988	2.3954621	20	5 17.0	20.4
316807 1999 <i>VK</i> ₉₉	16.1	X	293.83617	150.25870	217.81447	5.38209	0.0641719	0.22577565	2.6710662	20	7 31.2	19.5
316808 1999 <i>VX</i> ₉₉	17.1	X	308.89731	159.34602	207.70301	2.67746	0.1532733	0.22882444	2.6472875	20	8 13.0	19.9
316809 1999 <i>VY</i> ₁₀₆	16.0	X	227.91095	184.39085	230.59443	7.31334	0.1663361	0.17302268	3.1895838	20	6 24.9	21.1
316810 1999 <i>VE</i> ₁₀₉	15.4	X	11.80849	86.41848	236.83683	8.91839	0.2064017	0.18304073	3.0721156	20	10 6.6	19.0
316811 1999 <i>VF</i> ₁₂₁	17.2	X	274.95056	301.05766	16.99324	1.96400	0.0431719	0.21871525	2.7282448	20	5 1.6	20.7
316812 1999 <i>VY</i> ₁₂₉	16.0	X	248.54333	199.06976	227.04609	9.31686	0.0893586	0.17975425	3.1094478	20	8 6.3	20.7
316813 1999 <i>VT</i> ₁₆₁	17.4	X	132.33045	12.36585	23.21097	3.65214	0.2799156	0.25678402	2.4514557	20	3 14.6	21.2
316814 1999 <i>VC</i> ₁₆₅	17.6	X	179.33573	351.21714	28.60712	5.67193	0.2404153	0.26145204	2.4221890	20	3 30.7	21.8
316815 1999 <i>VO</i> ₁₆₇	17.1	X	125.65138	340.22857	47.78311	8.07034	0.2678589	0.25465980	2.4650692	20	3 1.2	20.9
316816 1999 <i>VH</i> ₂₀₆	15.8	X	313.61084	141.79052	226.97046	8.83035	0.0232221	0.18076759	3.0978163	20	8 26.9	20.3
316817 1999 <i>VO</i> ₂₀₇	16.3	X	241.02716	188.60413	228.92971	11.68962	0.1408172	0.17567913	3.1573490	20	7 12.1	21.2
316818 1999 <i>VG</i> ₂₀₉	16.3	X	215.71921	3.51740	8.53488	4.14004	0.1121124	0.21824599	2.7321542	20	4 23.6	20.4
316819 1999 <i>VR</i> ₂₁₅	16.0	X	249.33524	30.73420	6.46855	9.98851	0.2220684	0.17543738	3.1602490	20	6 18.7	21.2
316820 1999 <i>VY</i> ₂₁₅	15.9	X	218.08562	150.96339	20.13568	13.73457	0.0847384	0.19272461	2.9683237	20	11 11.6	20.3
316821 1999 <i>VW</i> ₂₁₇	15.9	X	182.88668	307.91146	214.33894	8.41836	0.0238461	0.18502880	3.0500701	20	9 27.6	20.4
316822 1999 <i>WS</i> ₁₅	16.3	X	293.04689	18.63593	63.17644	3.21737	0.0716249	0.18737602	3.0245450	20	11 1.0	20.2
316823 1999 <i>WS</i> ₂₅	17.4	X	58.13399	163.17955	82.05728	1.91017	0.1879978	0.27306537	2.3530165	20	9 18.2	20.3
316824 1999 <i>XK</i> ₆₅	16.9	X	312.15753	174.98181	224.16499	4.08128	0.2794375	0.23159510	2.6261315	20	9 22.8	18.8
316825 1999 <i>XG</i> ₁₄₉	17.5	X	295.93963	280.04693	77.52581	0.60103	0.2378055	0.27422722	2.3463656	20	6 25.7	19.8
316826 1999 <i>XJ</i> ₁₅₂	15.5	X	271.87056	357.96134	64.78212	10.41032	0.0726788	0.18066267	3.0990156	20	9 12.7	19.9
316827 1999 <i>XL</i> ₂₂₅	17.2	X	240.61356	225.40714	96.89038	4.60655	0.2002387	0.30415382	2.1898139	20	3 8.9	20.6
316828 1999 <i>XZ</i> ₂₃₆	15.4	X	199.87626	33.18782	65.50231	17.37888	0.1761156	0.17373464	3.1808640	20	7 24.5	20.8
316829 1999 <i>YS</i>	14.6	X	319.51822	249.48978	261.02505	27.40166	0.3999057	0.23750583	2.5823783	20	—	—
316830 2000 <i>AS</i> ₁₄₆	14.8	X	191.39827	20.00531	117.77079	29.29705	0.1530969	0.17499295	3.1655974	20	9 5.9	20.2
316831 2000 <i>BP</i> ₉	16.2	X	205.78698	245.12904	134.82226	12.07773	0.2668646	0.21081854	2.7959551	20	4 24.9	21.4
316832 2000 <i>BM</i> ₂₀	16.6	X	4.52240	106.02053	311.84750	4.59392	0.1772396	0.18717026	3.0267611	20	—	—
316833 2000 <i>BC</i> ₅₂	13.8	X	300.51078	326.99516	119.66759	13.17878	0.0704247	0.08404299	5.1618066	20	10 31.8	20.6
316834 2000 <i>CO</i> ₇₄	16.4	X	171.28383	6.56407	158.16514	0.91537	0.1199356	0.17317022	3.1877719	20	9 15.3	21.5
316835 2000 <i>CB</i> ₁₀₁	13.5	X	309.55395	96.28702	306.88070	8.56233	0.0517913	0.08009890	5.3298911	20	9 16.8	20.5
316836 2000 <i>CQ</i> ₁₃₂	16.5	X	61.63743	126.13338	311.03078	3.85865	0.0337377	0.19504066	2.9447783	20	1 15.7	20.4
316837 2000 <i>CW</i> ₁₄₀	17.9	X	291.75318	231.66385	303.92298	2.40900	0.0832870	0.28725283	2.2748871	20	—	—
316838 2000 <i>CF</i> ₁₄₂	16.5	X	196.91230	55.49326	297.42753	0.95412	0.0868759	0.20128367	2.8835690	20	3 13.9	20.8
316839 2000 <i>DS</i> ₉	16.4	X	149.98680	81.50434	332.12847	1.27670	0.0628041	0.20316196	2.8657686	20	4 6.2	20.6
316840 2000 <i>DB</i> ₁₂	16.2	X	186.27487	340.72961	0.63843	12.66288	0.1729385	0.24091944	2.5579271	20	2 21.3	20.4
316841 2000 <i>DA</i> ₉₀	16.8	X	230.97212	268.54097	319.68960	6.78224	0.0395983	0.28512595	2.2861860	20	—	—
316842 2000 <i>ER</i> ₉₉	16.1	X	166.21712	30.72715	350.20466	14.02441	0.1287861	0.24734556	2.5134291	20	3 14.8	19.8
316843 2000 <i>EW</i> ₁₂₃	16.9	X	37.71193	158.36215	357.59814	11.38490	0.1053349	0.24756406	2.5119499	20	3 20.9	19.6
316844 2000 <i>EP</i> ₁₇₀	16.7	X	224.42911	139.11985	114.39332	6.46955	0.1644599	0.28347060	2.2950775	20	—	—
316845 2000 <i>FG</i> ₂	17.8	X	358.52934	335.75910	182.06274	2.76607	0.1531385	0.28929040	2.2641926	20	—	—
316846 2000 <i>FZ</i> ₇₂	16.4	X	340.02274	3.11678	142.98163	10.47351	0.1417912	0.23787730	2.5796892	20	—	—
316847 2000 <i>GQ</i> ₉	17.0	X	209.15517	202.07399	30.45575	2.57342	0.1707464	0.27758318	2.3274157	20	—	—
316848 2000 <i>GW</i> ₁₉	17.2	X	29.10301	319.91833	197.77350	5.55154	0.1606175	0.24509046	2.5288231	20	3 9.5	19.6
316849 2000 <i>GH</i> ₄₇	16.6	X	290.74898	218.90137	17.87383	12.15549	0.1401678	0.23878110	2.5731756	20	1 26.4	20.4
316850 2000 <i>GS</i> ₁₂₀	16.1	X	293.25368	173.09029	50.77038	1.81780	0.0592517	0.18984004	2.9983167	20	1 28.0	20.3
316851 2000 <i>GT</i> ₁₃₀	16.5	X	187.87065	305.64971	187.91436	8.87003	0.0487105	0.21377169	2.7701456	20	8 30.3	20.5
316852 2000 <i>GH</i> ₁₄₅	16.8	X	12.94027	333.89405	187.20155	19.05615	0.0547815	0.24346478	2.5400677	20	2 12.9	20.2
316853 2000 <i>HJ</i> ₈	16.8	X	59.20745	69.10906	205.44725	6.68262	0.1872994	0.25875660	2.4389911	20	10 25.7	20.2
316854 2000 <i>HA</i> ₈₃	16.6	X	315.93385	197.26347	52.75958	7.04100	0.1584887	0.24218734	2.5489917	20	3 14.4	19.7
316855 2000 <i>JK</i> ₇₂	15.3	X	235.42058	278.39719	65.38038	26.69753	0.4181767	0.23789293	2.5795762	20	4 6.2	20.7
316856 2000 <i>JU</i> ₇₈	16.4	X	262.40466	60.08487	205.78578	14.09915	0.0895660	0.23874064	2.5734663	20	1 28.7	20.5
316857 2000 <i>NH</i> ₁₀	17.2	X	276.33981	127.61564	242.16997	2.12267	0.3973739	0.28991826	2.2609225	20	5 21.7	20.2
316858 2000 <i>PW</i> ₆	17.2	X	202.57650	70.46014	291.74481	18.95983	0.1019900	0.38051765	1.8860485	20	3 5.6	20.0
316859 2000 <i>QN</i> ₄	16.5	X	238.07106	356.42454	346.52001	6.11532	0.2954100	0.23298313	2.6156908	20	3 27.5	21.1
316860 2000 <i>QX</i> ₁₇	16.1	X	192.37413	146.02189	147.36803	15.18291	0.1343814	0.22198288	2.7014052	20	—	—
316861 2000 <i>QA</i> ₄₃	16.1	X	227.80598	132.41475	156.96486	13.65132	0.1631811	0.22669334	2.6638527	20	1 22.8	20.5
316862 2000 <i>QV</i> ₅₆	16.3	X	221.72003	311.59525	335.38123	15.09686	0.1516935	0.22527074	2.6750559	20	1 19.8	20.8
316863 2000 <i>QF</i> ₇₀	17.2	X	121.01121	24.71833	343.22452	20.29444	0.0277386	0.37070275	1.9191939	20	—	—
316864 2000 <i>QB</i> ₈₁	17.2	X	327.33976	50.90108	330.57883	4.36794	0.1580620	0.29923318	2.2137550	20	10 31.8	18.8
316865 2000 <i>QT</i> ₁₁₃	17.3	X	78.91053	7.99360	344.59758	1.59901	0.2082953	0.26117856	2.4238795	20	—	—
316866 2000 <i>QD</i> ₁₂₄	17.2	X	12.48774	3.53786	320.32189	3.15664	0.2534023	0.29906660	2.2145769	20	11 17.8	19.3
316867 2000 <i>QH</i> ₁₄₄	17.2	X	249.04612	198.19385	139.43892	4.21576	0.2458390	0.28334679	2.2957461	20	4 2.5	20.8
316868 2000 <i>QY</i> ₁₄₇	17.3	X	128.43544	260.33111	160.13383	22.03815	0.1159724	0.37744360	1.8962751	20	3 13.5	19.1
316869 2000 <i>QW</i> ₁₅₃	16.9	X	114.38057	10.90470	297.53710	3.64928	0.2398422	0.26360355	2.4089912	20	—	—
316870 2000 <i>QE</i> ₁₇₄	17.4	X	270.80428	65.87248	308.92006	5.19135	0.2748717	0.29020711	2.2594220	20	6 7.6	20.5
316871 2000 <i>QD</i> ₁₈₀	17.3	X	175.54088	59.11270	346.42851	19.31780	0.1282350	0.38026625	1.8868796	20	4 9.7	20.

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
316881 2000 SB ₁₇	16.5	X	115.83172	132.64670	248.93122	6.27181	0.2581051	0.21810188	2.7333575	20	2 8.6	20.7
316882 2000 SC ₁₉	16.2	X	183.60305	338.51726	306.92307	10.08723	0.1575588	0.21700131	2.7425916	20	—	—
316883 2000 SA ₂₄	15.9	X	288.81634	265.11485	6.70580	27.45436	0.3986922	0.23331135	2.6132370	20	2 17.3	20.7
316884 2000 SL ₂₄	17.2	X	249.62963	113.31579	232.27396	19.66899	0.0649263	0.38343766	1.8764610	20	4 24.1	19.1
316885 2000 SO ₂₈	16.4	X	265.10710	159.59963	260.50495	8.55510	0.2184255	0.19143654	2.9816236	20	8 2.4	20.7
316886 2000 SZ ₃₁	17.0	X	109.42427	334.08802	342.79947	1.38611	0.2100861	0.26173774	2.4204260	20	—	—
316887 2000 SZ ₄₁	16.5	X	112.61796	287.84634	54.45913	8.39776	0.2355623	0.21319901	2.7751040	20	—	—
316888 2000 SG ₄₈	15.5	X	74.85800	187.58787	227.73373	10.85851	0.1078831	0.21851965	2.7298726	20	1 7.5	19.0
316889 2000 SF ₅₄	16.6	X	254.64135	230.42858	193.90495	4.42276	0.2646679	0.24073403	2.5592403	20	7 25.5	20.4
316890 2000 SY ₅₇	17.1	X	318.78349	337.25993	23.40851	0.42601	0.2149203	0.24436896	2.5337982	20	8 20.6	18.9
316891 2000 SN ₈₀	16.9	X	40.51093	218.08961	141.46403	3.40131	0.1932413	0.25507803	2.4623740	20	—	—
316892 2000 SJ ₉₃	16.1	X	342.11859	166.99204	263.50421	6.98116	0.3181055	0.20408312	2.8571387	20	—	—
316893 2000 SD ₁₀₀	16.1	X	305.94836	76.03719	326.93010	2.69020	0.1524258	0.24609925	2.5219077	20	10 3.8	18.6
316894 2000 SV ₁₃₅	16.1	X	225.45044	38.06483	335.51757	15.29860	0.1669257	0.23179850	2.6245950	20	4 25.1	20.6
316895 2000 SW ₁₃₈	16.5	X	199.21885	316.24060	356.80515	8.55902	0.2514499	0.22276859	2.6950495	20	1 31.1	21.4
316896 2000 SY ₁₄₀	16.2	X	88.98347	10.78754	351.15707	9.24314	0.2181677	0.21145237	2.7903650	20	—	—
316897 2000 SR ₁₉₀	16.3	X	154.06931	158.18833	149.50724	10.21089	0.1993626	0.21737653	2.7394347	20	—	—
316898 2000 SN ₁₉₅	16.2	X	83.22667	13.16629	354.45387	6.20440	0.0965961	0.21291204	2.7775970	20	—	—
316899 2000 SP ₂₁₄	16.3	X	201.34312	273.17304	2.45631	9.54680	0.2187592	0.21918688	2.7243298	20	—	—
316900 2000 SQ ₂₂₇	16.9	X	93.00532	81.11584	50.34130	22.12775	0.0882734	0.37633940	1.8999824	20	5 6.7	18.4
316901 2000 SV ₂₂₇	17.3	X	218.53316	251.94299	191.09945	5.27070	0.1248512	0.28990734	2.2609793	20	7 29.9	20.6
316902 2000 SW ₂₈₂	15.7	X	163.97706	17.83919	282.28202	9.02033	0.2117150	0.21653613	2.7465182	20	—	—
316903 2000 SD ₂₈₉	17.5	X	238.32141	78.90806	324.43052	3.80846	0.2421438	0.28683315	2.2771055	20	6 15.9	21.0
316904 2000 SC ₂₉₀	17.2	X	2.03300	333.43991	339.80994	5.95664	0.2057247	0.29573723	2.2311668	20	10 1.4	18.8
316905 2000 SO ₃₆₂	17.5	X	328.47872	210.75821	148.97737	5.95754	0.1869462	0.29647531	2.2274623	20	10 1.4	18.9
316906 2000 TJ ₂	16.0	X	189.83391	282.49793	65.67384	2.79742	0.1432014	0.17445065	3.1721544	20	3 5.8	21.1
316907 2000 TJ ₂₀	16.8	X	274.13892	294.85285	77.92887	6.75317	0.2203057	0.28886276	2.2664267	20	6 17.8	19.6
316908 2000 TG ₂₇	17.4	X	30.70751	296.32946	18.16532	6.21231	0.1805251	0.30036019	2.2082139	20	11 18.4	19.9
316909 2000 TK ₅₄	17.2	X	223.61404	279.09232	110.61702	7.42513	0.1900236	0.28295003	2.2978917	20	5 20.9	20.9
316910 2000 UY ₁₇	16.7	X	269.56499	299.42487	80.43260	5.83130	0.2322647	0.23766831	2.5812012	20	6 20.1	20.0
316911 2000 UN ₁₉	17.1	X	262.40342	314.67434	39.79560	10.09706	0.1682836	0.28431693	2.2905208	20	5 14.1	20.1
316912 2000 UG ₂₃	17.0	X	317.01326	186.46027	193.60160	8.76531	0.1506063	0.29368922	2.2415274	20	10 5.5	18.6
316913 2000 UY ₅₅	15.3	X	8.68557	191.40685	230.54485	12.42971	0.1787048	0.20272705	2.8698657	20	—	—
316914 2000 UT ₆₄	17.8	X	215.52812	75.26304	308.94403	2.62253	0.2462319	0.28132571	2.3067282	20	4 30.5	21.8
316915 2000 UG ₁₀₇	17.1	X	234.70871	320.05444	81.93396	7.50376	0.2138803	0.28450802	2.2894950	20	6 13.3	20.4
316916 2000 VB ₉	17.2	X	238.44170	352.81509	60.80556	3.51748	0.1990467	0.28596366	2.2817190	20	7 5.0	20.4
316917 2000 VL ₂₁	16.5	X	359.07499	208.10244	222.46986	5.65257	0.1126905	0.25442024	2.4666164	20	—	—
316918 2000 WZ ₁₇	17.1	X	210.11457	46.78056	57.16666	4.42534	0.1631349	0.28679716	2.2772960	20	8 17.9	20.5
316919 2000 WK ₂₅	15.9	X	177.23750	325.06264	61.83904	13.86043	0.2665453	0.22600274	2.6692766	20	4 13.1	20.8
316920 2000 WW ₇₅	17.4	X	277.89692	47.77226	339.41976	3.29169	0.1462573	0.28797730	2.2710701	20	7 29.4	19.9
316921 2000 WA ₁₀₄	16.2	X	228.85882	356.77361	116.02486	7.71580	0.0934272	0.23925124	2.5698035	20	9 25.3	19.8
316922 2000 WB ₁₆₅	14.8	X	89.61923	42.75751	101.49296	15.54908	0.4501297	0.21915039	2.7246322	20	7 7.1	19.5
316923 2000 XC ₄₆	16.6	X	145.80366	89.82358	15.25115	22.81897	0.2431556	0.27502111	2.3418480	20	6 13.9	21.0
316924 2000 YB ₅	16.5	X	125.80200	117.77165	32.04375	22.89435	0.2764218	0.27585520	2.3371250	20	8 9.7	21.1
316925 2000 YD ₃₄	16.4	X	137.26467	352.37528	131.77578	9.64353	0.2787728	0.27281840	2.3544363	20	7 6.3	20.5
316926 2000 YV ₄₄	16.0	X	280.71214	18.89223	108.07685	9.77695	0.0771165	0.24574338	2.5243419	20	12 26.3	19.0
316927 2000 YF ₄₅	16.3	X	107.51562	100.24138	100.10188	23.27411	0.1132207	0.28099741	2.3085246	20	9 16.7	20.1
316928 2000 YN ₅₁	16.7	X	249.54773	346.25719	99.45130	2.26165	0.3117425	0.18664373	3.0324509	20	8 9.2	21.4
316929 2000 YQ ₉₂	15.5	X	323.93178	129.70157	305.50327	9.69793	0.0891545	0.19443520	2.9508885	20	12 8.1	19.2
316930 2000 YK ₉₆	15.4	X	271.14297	343.39234	117.14513	12.31852	0.1406328	0.18966105	3.0002028	20	10 21.5	19.6
316931 2001 AE	16.6	X	250.22098	18.72297	52.96221	1.96340	0.2485744	0.18258522	3.0772230	20	7 30.5	21.2
316932 2001 AA ₁₃	17.0	X	78.36645	186.57273	292.08896	4.88185	0.1534500	0.26581194	2.3956299	20	4 7.4	19.8
316933 2001 AV ₅₀	15.3	X	199.38242	77.95805	117.08009	11.03446	0.0574317	0.19158844	2.9800475	20	11 28.2	19.7
316934 2001 AA ₅₂	16.9	X	206.60367	62.40052	349.81303	9.12616	0.2875216	0.27848904	2.3223659	20	5 26.2	21.2
316935 2001 BO ₅	17.3	X	31.35608	205.29798	309.19342	16.51088	0.0690504	0.36463868	1.9404132	20	2 12.4	18.6
316936 2001 BT ₁₂	16.3	X	200.16550	100.45184	127.08777	13.26193	0.0514345	0.24649605	2.5192005	20	—	—
316937 2001 BO ₈₃	17.9	X	65.81852	39.30086	129.49667	2.21622	0.1278446	0.26776693	2.3839552	20	5 30.0	20.6
316938 2001 CC ₂₀	17.6	X	81.74522	321.85969	132.70941	23.62446	0.0762356	0.36324057	1.9453891	20	2 14.0	19.0
316939 2001 CW ₂₀	16.1	X	136.76384	62.51917	107.73697	24.64147	0.2447604	0.27633620	2.3344121	20	9 9.0	20.6
316940 2001 CH ₃₃	15.1	X	95.12446	80.28389	90.77546	26.49558	0.2291161	0.17004714	3.2266844	20	7 20.5	20.3
316941 2001 CF ₄₅	15.3	X	158.80673	112.29312	33.90831	22.98054	0.1857019	0.17513049	3.1639398	20	8 25.2	21.0
316942 2001 CY ₄₉	15.8	X	233.24801	188.66133	320.64818	10.01926	0.1762607	0.18880506	3.0092640	20	10 19.8	20.5
316943 2001 DW ₁	17.1	X	228.47216	335.95675	139.22390	2.47269	0.1272639	0.18307210	3.0717647	20	9 13.5	21.7
316944 2001 DQ ₅	17.0	X	135.09925	35.51153	70.56113	5.75547	0.1443168	0.26981407	2.3718815	20	6 2.3	20.3
316945 2001 DF ₈	15.6	X	173.52409	195.50298	140.62216	16.19731	0.1931039	0.20633417	2.8363203	20	2 4.2	20.3
316946 2001 DK ₁₅	17.0	X	121.64783	130.74083	14.10395	5.83069	0.2011768	0.27215202	2.3582780	20	7 16.5	20.7
316947 2001 DN ₁₅	17.4	X	118.96281	52.20342	94.74255	4.66010	0.2504900	0.27188812	2.3598038	20	7 19.3	21.3
316948 2001 DP ₁₅	15.4	X	97.80300	230.37527	344.31903	26.62365	0.1678548	0.17441840	3.1725454	20	9 7.7	20.4
316949 2001 DW ₂₀	15.2	X	169.34521	81.98747	134.53826	17.31334	0.2367599	0.18209286	3.0827675	20	11 16.4	20.8
316950 2001 DT ₃₄	17.0	X	169.68812	288.85853	155.25297	6.30132	0.2149927	0.27442016	2.3452657	20	6 10.5	20.9
316951 2001 DB ₄₈	15.7	X	224.76395	313.01819	140.82253	11.65121	0.0448837	0.17829949	3.1263384	20	8 22.6	20.1
316952 2001 DS ₆₀	15.4	X	211.39141	190.92028	313.96239	10.00138	0.0862542	0.18413003	3.0599874	20	9 30.2	20.1
316953 2001 DX ₈₀	15.4	X	218.93348	195.33070	314.31903	10.35300	0.0849735	0.18383423	3.0632690	20	10 14.2	20.1
316954 2001 DS ₈₁	16											

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
316961	2001	FM ₃₀	15.4 ^m	X	148.01476	198.79280	272.16716	12.24908	0.1190377	0.21902493	2.7256726	20	6 20.2	19.4
316962	2001	FY ₅₆	14.9	X	124.90381	189.98597	28.72276	29.07676	0.1443651	0.17452760	3.1712220	20	10 12.2	20.0
316963	2001	FD ₅₇	15.4	X	124.31352	287.93655	305.32510	16.00975	0.2050446	0.17743812	3.1364481	20	10 19.0	21.0
316964	2001	FD ₇₁	15.4	X	147.86131	124.13083	100.42059	4.62153	0.2109050	0.17836991	3.1255155	20	11 5.6	20.8
316965	2001	FE ₇₁	15.6	X	136.17108	198.03760	9.20675	17.57427	0.1714915	0.17639628	3.1487857	20	10 4.3	20.8
316966	2001	FY ₇₃	15.6	X	188.11677	164.65841	10.75711	16.34594	0.1855763	0.18059393	3.0998019	20	10 10.0	20.7
316967	2001	FZ ₈₀	17.4	X	52.86161	334.08663	240.54928	7.31399	0.2928487	0.26733173	2.3865418	20	8 10.5	20.4
316968	2001	FR ₈₁	15.5	X	155.26487	252.39834	320.90194	15.02190	0.1818802	0.18024982	3.1037458	20	10 21.1	21.0
316969	2001	FQ ₈₃	15.5	X	276.73013	243.26651	174.85617	9.94632	0.0803922	0.17844038	3.1246926	20	9 5.2	19.8
316970	2001	FT ₁₂₀	17.0	X	95.34076	51.68812	153.15137	3.70725	0.2022011	0.27196571	2.3593549	20	9 6.8	20.6
316971	2001	FL ₁₃₀	16.7	X	90.98858	5.51632	184.99258	12.21386	0.1286088	0.27083986	2.3658888	20	8 1.7	20.1
316972	2001	FV ₁₃₁	15.3	X	166.94267	178.71603	1.39694	16.06286	0.0599935	0.17810992	3.1285563	20	9 29.8	19.9
316973	2001	FV ₁₄₀	17.3	X	8.62237	236.66030	27.13847	6.81056	0.1083206	0.26560673	2.3968637	20	7 11.1	19.7
316974	2001	FP ₁₄₇	16.4	X	16.38823	57.27837	207.90047	19.84371	0.2617524	0.26613369	2.3936987	20	8 11.9	18.9
316975	2001	FF ₁₅₄	15.9	X	164.69648	198.60551	17.41543	10.46366	0.0289320	0.18177361	3.0863759	20	11 9.7	20.4
316976	2001	FH ₁₅₉	17.4	X	97.15713	356.45796	194.74762	6.73954	0.1660875	0.27133453	2.3630124	20	8 15.3	20.9
316977	2001	FV ₁₅₉	17.1	X	68.25277	55.92371	157.90280	2.02606	0.2348981	0.26839200	2.3802524	20	8 24.8	20.3
316978	2001	FY ₁₈₀	15.4	X	154.92291	177.90627	11.32695	17.68034	0.1661220	0.17615170	3.1516996	20	9 30.5	20.5
316979	2001	FK ₁₈₄	16.4	X	177.57351	63.16344	178.49783	10.54574	0.0621039	0.18811261	3.0166443	20	12 25.9	21.1
316980	2001	GV ₃	15.3	X	140.20837	27.08753	181.33126	28.28025	0.1733615	0.17507351	3.1646262	20	10 10.9	20.6
316981	2001	GW ₁₁	14.9	X	116.99862	186.68656	71.04004	18.30164	0.1918260	0.17526892	3.1622736	20	11 18.9	20.1
316982	2001	HS ₁₃	15.2	X	112.91905	80.62495	172.30274	25.40753	0.2682628	0.17475855	3.1684274	20	11 15.3	21.0
316983	2001	HD ₅₇	17.0	X	306.03270	155.07733	49.33699	22.04715	0.0581154	0.35358757	1.9806362	20	—	—
316984	2001	JC	16.9	X	32.01839	38.73150	199.88509	4.27519	0.1808882	0.26428858	2.4048267	20	7 24.3	19.3
316985	2001	KV ₆₃	14.7	X	129.10906	159.39855	100.98017	30.85571	0.2306533	0.17685739	3.1433102	20	12 6.8	20.4
316986	2001	LJ	15.2	X	45.96953	178.51697	107.52558	26.05429	0.3655933	0.16257233	3.3248467	20	11 12.5	20.5
316987	2001	LU	15.6	X	43.34942	157.98490	102.71082	14.44840	0.1834135	0.16338241	3.1338475	20	9 7.1	20.1
316988	2001	MN ₂₆	15.6	X	154.78606	241.55652	113.85541	14.33752	0.2192911	0.23783750	2.5799770	20	2 11.7	19.8
316989	2001	NL ₅	16.3	X	37.92937	358.88801	356.78188	5.43483	0.0428467	0.22191837	2.7019287	20	12 13.6	20.0
316990	2001	NB ₁₁	16.2	X	110.27954	168.68051	120.60003	13.92056	0.1253242	0.22353343	2.6888984	20	12 22.9	20.5
316991	2001	OJ ₁₁	16.8	X	38.72971	299.58278	26.99351	2.30257	0.2576330	0.21680264	2.7442668	20	12 7.8	20.5
316992	2001	OP ₁₉	16.6	X	210.32308	155.68322	169.25689	14.28003	0.1415773	0.24196722	2.5505374	20	2 17.2	20.7
316993	2001	OQ ₆₃	17.0	X	120.92520	359.88109	336.67068	6.53343	0.2347586	0.22921914	2.6442476	20	—	—
316994	2001	OB ₉₃	16.6	X	202.02387	356.18822	352.18810	5.25590	0.0952004	0.24336104	2.5407895	20	3 10.7	20.5
316995	2001	OD ₁₁₁	16.5	X	180.44579	285.16143	58.53833	6.00336	0.2080905	0.23693733	2.5865074	20	2 19.5	20.9
316996	2001	OK ₁₁₁	16.5	X	217.74230	160.36992	139.02501	9.23768	0.1542886	0.23964979	2.5669536	20	1 25.3	20.6
316997	2001	OS ₁₁₁	16.4	X	128.87914	9.25173	318.27838	13.92608	0.1759773	0.22969687	2.6405800	20	—	—
316998	2001	PZ ₁₈	16.7	X	65.17995	197.61920	97.79832	7.41827	0.1299631	0.26933013	2.3747219	20	11 24.4	20.0
316999	2001	PR ₂₁	17.4	X	111.07739	211.02453	125.63927	2.91336	0.1711814	0.27961506	2.3161268	20	—	—
317000	2001	PY ₂₈	16.1	X	75.30132	52.15784	315.78883	12.22484	0.2813215	0.22383924	2.6864488	20	—	—
317001	2001	PP ₃₄	16.2	X	206.80501	94.17006	226.83390	6.51634	0.2114367	0.23831895	2.5765011	20	2 8.5	20.8
317002	2001	PV ₃₈	16.0	X	55.93796	284.42376	83.65034	14.02247	0.1829840	0.22178771	2.7029897	20	—	—
317003	2001	PN ₅₇	16.3	X	150.60373	187.94981	129.69608	13.66056	0.1657113	0.22996467	2.6385296	20	—	—
317004	2001	PV ₆₀	16.8	X	202.88702	164.91126	160.25626	5.04599	0.1319538	0.24005703	2.5640497	20	2 11.7	20.7
317005	2001	PK ₆₇	16.6	X	159.15402	110.26724	104.07530	8.85137	0.2579168	0.23058666	2.6337827	20	—	—
317006	2001	QK	16.0	X	104.76435	353.63620	340.81796	12.85865	0.2789854	0.22527350	2.6750341	20	—	—
317007	2001	QM ₂₁	16.3	X	134.85853	346.84793	339.45906	14.41060	0.2543711	0.22767783	2.6561681	20	—	—
317008	2001	QA ₄₆	16.9	X	81.77121	205.04847	153.57101	6.45844	0.2613326	0.22459982	2.6803804	20	—	—
317009	2001	QU ₅₀	16.6	X	96.65565	210.79089	149.13262	18.96641	0.2331395	0.22627094	2.6671669	20	—	—
317010	2001	QV ₉₂	16.2	X	133.07074	232.48692	108.46673	13.64627	0.2767408	0.22918407	2.6445174	20	1 10.9	20.4
317011	2001	QU ₉₆	15.9	X	177.60408	336.18747	346.19141	13.62723	0.2578787	0.23320861	2.6140045	20	1 26.8	20.6
317012	2001	QT ₁₀₀	15.9	X	233.83114	249.70077	163.8093	15.06686	0.2629064	0.23766550	2.5812216	20	—	—
317013	2001	QE ₁₂₅	16.4	X	155.10131	192.43368	144.93734	15.20756	0.1885580	0.23282130	2.6169027	20	1 17.2	20.6
317014	2001	QU ₁₂₉	16.3	X	114.59699	47.55530	310.54069	12.36831	0.1814017	0.22929487	2.6436654	20	1 1.3	20.0
317015	2001	QV ₁₅₉	17.2	X	91.60863	187.32139	143.22565	3.04287	0.2169896	0.27565571	2.3382524	20	—	—
317016	2001	QN ₁₆₄	16.2	X	164.88968	287.50205	64.90120	10.75658	0.1258945	0.23682529	2.5873231	20	2 13.0	20.3
317017	2001	QJ ₁₈₄	17.0	X	119.92472	43.09488	317.88793	2.14588	0.1581246	0.23078590	2.6322666	20	1 6.7	20.5
317018	2001	QB ₁₉₃	16.4	X	125.37692	54.75418	295.02646	10.83226	0.2719895	0.22819887	2.6521234	20	1 13.9	20.2
317019	2001	QH ₂₀₅	15.5	X	187.90772	166.02038	182.24339	9.52581	0.1145888	0.18606097	3.0387795	20	2 29.2	20.4
317020	2001	QW ₂₀₆	17.3	X	41.89494	238.13371	125.16065	3.07173	0.1547528	0.27154214	2.3618078	20	—	—
317021	2001	QL ₂₁₇	17.1	X	15.53296	294.03557	41.21244	2.07699	0.2021168	0.26431621	2.4046591	20	11 21.4	19.7
317022	2001	QW ₂₁₇	17.1	X	90.70133	219.93995	140.92483	3.76848	0.1921480	0.22505599	2.6767573	20	—	—
317023	2001	QD ₂₂₁	15.4	X	212.20633	156.26984	174.49369	10.98274	0.1069675	0.18984829	2.9982298	20	3 2.9	20.0
317024	2001	QC ₂₂₄	16.8	X	101.35561	61.35934	301.36702	11.73124	0.2823344	0.22754119	2.6572313	20	1 5.2	20.1
317025	2001	QP ₂₂₇	16.4	X	243.93322	351.42354	304.39951	12.45758	0.1346860	0.24025510	2.5626403	20	2 12.9	20.3
317026	2001	QH ₂₂₉	16.7	X	218.31554	33.22329	268.89408	4.48320	0.2917473	0.23872332	2.5735908	20	1 26.9	21.4
317027	2001	QJ ₂₂₉	16.8	X	148.69974	179.13566	189.58599	12.97684	0.1804940	0.23458213	2.6037909	20	2 14.7	21.0
317028	2001	QC ₂₃₀	17.4	X	75.69248	343.26650	348.31559	1.67995	0.1831548	0.27194178	2.3594934	20	—	—
317029	2001	QM ₂₄₅	16.1	X	141.33092	17.52114	357.20415	12.88438	0.1630719	0.23232668	2.6206156	20	2 20.0	20.1
317030	2001	QZ ₂₅₄	15.1	X	338.71301	263.82954	1							

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317041 2001 RX ₇₄	16.1	X	43.88885	172.35961	194.27630	7.69646	0.2525678	0.21636013	2.7480074	20	—	—
317042 2001 RJ ₉₁	15.7	X	173.57166	316.23434	14.25869	7.43247	0.2706126	0.18219108	3.0816595	20	2 5.8	21.2
317043 2001 RL ₁₁₃	16.7	X	230.69772	279.77264	358.15030	11.28322	0.1569955	0.23632333	2.5909855	20	1 14.7	21.0
317044 2001 RN ₁₂₅	16.7	X	40.09478	226.07397	153.68811	8.80215	0.2239582	0.21892700	2.7264853	20	—	—
317045 2001 RP ₁₃₀	17.4	X	345.96509	242.63601	59.28853	2.24873	0.1768926	0.25565740	2.4586524	20	7 25.3	19.3
317046 2001 RA ₁₃₈	15.9	X	146.85470	230.97714	161.60438	12.98875	0.1472767	0.18466073	3.0541218	20	3 18.2	20.7
317047 2001 RB ₁₄₂	16.1	X	37.50382	100.20843	296.80815	26.53471	0.1060814	0.21991356	2.7183250	20	—	—
317048 2001 SM ₈	16.9	X	88.88392	348.98343	5.74823	1.82670	0.1003819	0.22180628	2.7028839	20	—	—
317049 2001 SO ₄₉	16.1	X	171.95854	289.03918	28.29118	12.96000	0.1662472	0.23035646	2.6355370	20	1 9.8	20.5
317050 2001 SF ₅₁	16.6	X	86.74190	173.01201	169.43896	15.96485	0.2481851	0.22162520	2.7043110	20	—	—
317051 2001 SH ₆₀	14.6	X	164.09492	344.79551	336.87948	8.94040	0.1915608	0.12403931	3.9819563	20	1 21.7	21.0
317052 2001 SF ₆₁	17.5	X	28.91220	148.67621	188.88970	3.23373	0.2494086	0.26498883	2.4005882	20	12 20.4	20.6
317053 2001 SV ₈₄	16.5	X	34.46269	93.42811	339.78775	12.39523	0.1702291	0.22542901	2.6738037	20	—	—
317054 2001 SZ ₈₉	17.4	X	249.96144	76.72695	317.65778	2.30633	0.1504431	0.25180594	2.4836596	20	6 26.7	20.9
317055 2001 SC ₉₁	16.3	X	3.62848	174.30019	198.18113	5.86184	0.0453655	0.21402602	2.7679506	20	11 19.4	19.8
317056 2001 SL ₉₂	17.1	X	12.11554	252.08613	189.72738	5.32377	0.1206124	0.27617334	2.3353298	20	—	—
317057 2001 SE ₁₀₀	17.0	X	32.54850	64.41239	351.52546	13.69145	0.1029045	0.22244380	2.6976722	20	—	—
317058 2001 SM ₁₀₀	17.5	X	243.13442	92.72754	192.06676	8.43467	0.1496720	0.23786771	2.5797585	20	1 29.5	21.7
317059 2001 SM ₁₀₂	18.4	X	39.18768	14.92847	323.22889	2.58089	0.0965518	0.31943211	2.1194199	20	12 26.1	21.0
317060 2001 SP ₁₀₄	16.2	X	170.91488	112.91521	210.59844	12.57190	0.1942391	0.23168061	2.6254853	20	1 13.4	20.7
317061 2001 SK ₁₁₇	15.5	X	199.33076	24.58473	316.97607	9.56404	0.0979470	0.18646235	3.0344171	20	3 1.9	20.4
317062 2001 SM ₁₁₉	16.9	X	253.82208	50.63027	322.90339	4.69460	0.2217845	0.24075018	2.5591258	20	2 2.1	21.1
317063 2001 SO ₁₂₈	16.5	X	7.72686	20.35868	235.06607	9.01992	0.1617194	0.21074176	2.7966341	20	10 28.7	19.8
317064 2001 SW ₁₃₉	17.4	X	48.49578	308.41508	357.00619	2.20381	0.1819600	0.26432821	2.4045863	20	11 20.5	20.6
317065 2001 ST ₁₄₁	16.9	X	156.28255	54.96600	326.88025	3.86525	0.0789570	0.23699390	2.5860958	20	3 4.1	20.5
317066 2001 SL ₁₈₀	17.1	X	93.38343	346.54928	355.90534	6.15161	0.1221154	0.27783163	2.3260280	20	—	—
317067 2001 SO ₂₀₂	17.4	X	307.13384	54.73613	352.34809	1.95553	0.1764937	0.26084757	2.4259295	20	10 15.4	19.4
317068 2001 SY ₂₀₅	16.0	X	133.44791	36.06113	9.85262	15.77655	0.0751291	0.23657218	2.5891682	20	3 11.5	19.7
317069 2001 SB ₂₀₆	16.6	X	73.97288	238.98967	179.69687	8.79561	0.0803549	0.22926708	2.6438791	20	1 6.1	20.0
317070 2001 SM ₂₀₆	15.8	X	154.62137	215.35056	176.95340	10.38049	0.0858356	0.18507941	3.0495141	20	3 19.8	20.4
317071 2001 SP ₂₀₆	16.9	X	192.19706	146.86808	168.71708	2.45406	0.1474265	0.23412658	2.6071673	20	1 22.4	20.9
317072 2001 SR ₂₀₇	15.8	X	264.19573	261.55294	4.36173	9.36416	0.0521382	0.18378494	3.0638167	20	2 17.9	20.3
317073 2001 SM ₂₀₉	16.5	X	21.36896	49.27897	134.42627	2.04862	0.0588808	0.24088739	2.5581539	20	4 2.1	19.3
317074 2001 SS ₂₁₉	16.8	X	65.13876	335.75191	20.10229	3.47824	0.1666749	0.21947682	2.7219300	20	—	—
317075 2001 SY ₂₁₉	17.0	X	143.13249	154.09735	170.94759	5.07312	0.0968901	0.22699754	2.6614723	20	—	—
317076 2001 SG ₂₂₈	16.6	X	205.22861	317.96009	15.87530	14.02658	0.0918867	0.23629828	2.5911686	20	3 2.0	20.6
317077 2001 SU ₂₃₇	16.5	X	75.70410	23.91231	16.52373	7.53260	0.1063659	0.22597422	2.6695012	20	—	—
317078 2001 SE ₂₅₃	13.3	X	222.83260	330.86807	46.75591	11.01099	0.1117290	0.08342858	5.1871184	20	5 11.4	20.5
317079 2001 SU ₂₅₅	16.1	X	118.02596	330.89086	26.78803	14.38105	0.0871278	0.22521341	2.6755098	20	—	—
317080 2001 SZ ₂₅₈	17.1	X	305.76624	13.36442	265.78462	2.38667	0.0675028	0.24530657	2.5273376	20	4 15.5	20.2
317081 2001 SD ₂₇₈	15.6	X	354.45587	184.54813	237.45224	12.21326	0.1601276	0.21396439	2.7684821	20	—	—
317082 2001 SQ ₂₉₄	16.8	X	236.06218	109.78884	179.23407	14.33368	0.1753867	0.23899758	2.5716215	20	1 26.6	21.2
317083 2001 SQ ₃₀₃	16.8	X	68.59978	23.85497	357.75716	2.78430	0.0798515	0.22299759	2.6932041	20	—	—
317084 2001 SS ₃₀₃	16.4	X	213.40282	341.76253	356.27425	3.58499	0.0773729	0.23877248	2.5732375	20	3 10.6	20.2
317085 2001 SH ₃₀₉	17.0	X	40.53554	182.72256	210.27710	5.33268	0.1850600	0.22029540	2.7151829	20	—	—
317086 2001 SX ₃₂₂	16.3	X	192.16825	11.49858	313.02159	6.76067	0.2006527	0.23482572	2.6019899	20	2 3.6	20.6
317087 2001 SY ₃₃₇	15.9	X	156.61131	124.09834	196.98220	8.47032	0.0706915	0.17546960	3.1598621	20	—	—
317088 2001 SA ₃₄₂	16.5	X	228.59462	111.98318	230.29006	8.52519	0.0716916	0.24238681	2.5475931	20	3 30.2	20.3
317089 2001 SW ₃₄₄	15.4	X	199.19702	251.18879	89.97223	15.87061	0.1673859	0.18505272	3.0498073	20	3 10.7	20.7
317090 2001 SP ₃₄₉	16.7	X	64.37098	321.66924	57.66362	7.48843	0.1322036	0.27476580	2.3432984	20	—	—
317091 2001 SO ₃₅₁	16.7	X	357.51799	253.86568	153.30545	11.98043	0.2028772	0.21321443	2.7749702	20	—	—
317092 2001 TV ₁	16.2	X	116.36199	16.08628	6.75146	11.07472	0.2086112	0.23061913	2.6335354	20	2 9.7	20.1
317093 2001 TX ₁₁	17.6	X	62.22453	18.63966	309.08858	0.53208	0.1989708	0.26809163	2.3820299	20	—	—
317094 2001 TQ ₁₄	16.5	X	131.88936	16.52897	355.24238	9.13219	0.1334802	0.22957911	2.6414829	20	2 2.4	20.3
317095 2001 TP ₁₆	17.1	X	250.79314	295.30211	79.73483	23.65382	0.1193565	0.35180899	1.9873061	20	6 6.8	19.3
317096 2001 TD ₃₆	17.6	X	288.83537	20.80403	8.85798	7.21389	0.2672219	0.30566681	2.1825818	20	8 3.5	19.5
317097 2001 TR ₈₂	15.7	X	176.55194	107.65326	216.46334	9.19290	0.1399996	0.17942135	3.1132928	20	1 22.4	20.8
317098 2001 TT ₈₄	15.7	X	80.42897	260.59330	201.41522	8.77954	0.1015453	0.18026500	3.1035717	20	3 19.9	20.0
317099 2001 TB ₉₀	16.1	X	89.16029	101.01004	4.44551	13.41996	0.0396593	0.23647512	2.5898767	20	3 23.5	19.2
317100 2001 TF ₁₀₂	16.6	X	97.47124	10.95537	331.93372	13.79508	0.2052679	0.22152822	2.7051001	20	—	—
317101 2001 TQ ₁₂₇	17.3	X	35.56953	17.63056	358.99325	1.08890	0.1986345	0.26957534	2.3732816	20	—	—
317102 2001 TK ₁₃₀	16.7	X	45.00896	335.47876	46.17438	2.53081	0.1171761	0.21705013	2.7421804	20	—	—
317103 2001 TC ₁₄₁	17.4	X	94.28566	201.31085	96.70561	3.43489	0.2113125	0.27140377	2.3626105	20	12 30.9	21.2
317104 2001 TD ₁₄₅	18.2	X	315.97461	306.52563	82.41836	3.09209	0.1790434	0.31185302	2.1536217	20	10 26.4	19.3
317105 2001 TL ₁₅₆	16.7	X	14.28227	222.39693	201.19231	5.42811	0.0507270	0.21940190	2.7225496	20	—	—
317106 2001 TW ₁₆₆	16.6	X	124.93292	7.86402	338.33436	7.50784	0.2934036	0.22580317	2.6708492	20	1 13.2	20.7
317107 2001 TS ₁₇₇	16.7	X	95.84014	21.19484	0.94527	5.87057	0.0939896	0.22572743	2.6714466	20	—	—
317108 2001 TU ₁₇₈	15.8	X	128.06524	68.26888	348.67513	5.90371	0.1159602	0.18141783	3.0904098	20	3 23.5	20.3
317109 2001 TZ ₁₉₈	16.4	X	109.98053	263.78332	72.06431	7.66153	0.2789951	0.22466247	2.6798822	20	—	—
317110 2001 TR ₂₀₁	15.5	X	158.74637	288.25822	144.38315	10.40377	0.0737746	0.18880548	3.0092596	20	5 14.8	20.2
317111 2001 TE ₂₂₁	16.8	X	11.32256	148.84482	299.31664	4.96029	0.1676571	0.22009191	2.7168563	20	—	—
317112 2001 TY ₂₂₁	15.5	X	150.59841	140.34353	333.08463	9.80384	0.1043488	0.17909939	3.1170228	20	2 19.9	20.5
317113 2001 TQ ₂₂₂	16.2	X	310.63651	224.51709	258.41332	13.08126	0.0878274	0.23478175	2.6023148	20	2 10.9	19.8
317114 2001 TT ₂₂₆	16.6	X	329.63522	315.28965	91.25843	10.85492	0.2643110	0.20950492	2.8			

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317121 2001 <i>TF</i> ₂₅₈	13.4	X	242.92493	186.43900	145.45289	7.52623	0.0569602	0.08478515	5.1316402	20	4 17.9	20.4
317122 2001 <i>TJ</i> ₂₆₁	17.0	X	110.22238	169.51915	181.91323	10.56226	0.1236639	0.22393025	2.6857208	20	—	—
317123 2001 <i>US</i> ₁₅	16.8	X	11.81276	18.25627	309.51320	2.00900	0.2238360	0.26023388	2.4297420	20	11 6.7	19.4
317124 2001 <i>UW</i> ₂₈	16.0	X	111.50913	16.12027	57.51816	4.82952	0.1583442	0.18043449	3.1016278	20	4 2.7	20.5
317125 2001 <i>UA</i> ₃₆	15.0	X	141.77189	282.30182	88.19986	13.06216	0.1972075	0.17660364	3.1463204	20	2 24.8	20.2
317126 2001 <i>UG</i> ₃₉	16.5	X	224.64207	354.82790	35.74949	6.63173	0.0834961	0.19211455	2.9746044	20	5 29.1	21.0
317127 2001 <i>UW</i> ₄₀	17.1	X	143.48898	232.13216	98.39633	1.75753	0.1591123	0.27913164	2.3188003	20	—	—
317128 2001 <i>UQ</i> ₄₅	16.3	X	162.91098	281.01114	56.371072	5.81169	0.1640878	0.22944049	2.6425467	20	1 25.4	20.5
317129 2001 <i>JU</i> ₅₁	17.2	X	66.67029	218.60355	99.87048	3.50656	0.2276306	0.26724474	2.3870596	20	—	—
317130 2001 <i>UE</i> ₆₃	17.3	X	281.52883	323.19597	29.41667	7.88403	0.2177366	0.30212872	2.1995882	20	5 28.4	20.0
317131 2001 <i>UT</i> ₆₄	16.7	X	247.68380	160.80674	228.10330	19.09110	0.1100509	0.35328330	1.9817733	20	6 22.3	19.2
317132 2001 <i>UV</i> ₆₇	16.6	X	180.71052	189.89011	147.03320	3.50827	0.0464302	0.23157480	2.6262850	20	2 1.8	20.1
317133 2001 <i>UX</i> ₆₈	15.7	X	234.74932	95.95055	195.03495	10.10213	0.0300118	0.18029075	3.1032761	20	2 11.4	20.3
317134 2001 <i>UC</i> ₈₈	16.0	X	163.83098	171.79914	188.06323	6.51153	0.0723424	0.18009006	3.1055812	20	2 17.7	20.8
317135 2001 <i>UE</i> ₈₉	17.2	X	332.18499	321.51620	100.78315	10.06547	0.1528079	0.26379173	2.4078454	20	—	—
317136 2001 <i>UQ</i> ₉₇	17.6	X	337.91551	160.99012	192.83877	3.49776	0.1877742	0.31067709	2.1590526	20	10 19.3	18.5
317137 2001 <i>UR</i> ₁₀₁	15.8	X	314.87672	180.20216	33.16495	13.69112	0.1175400	0.23372231	2.6101728	20	1 31.5	19.5
317138 2001 <i>UZ</i> ₁₁₉	16.5	X	14.25856	206.61974	201.50920	12.28918	0.1289200	0.21552628	2.7550907	20	—	—
317139 2001 <i>UO</i> ₁₂₃	15.6	X	175.92910	232.07708	151.81054	15.30870	0.2621157	0.18540029	3.0459944	20	4 8.5	21.1
317140 2001 <i>UU</i> ₁₂₈	16.1	X	143.90104	28.22717	17.85978	15.77178	0.1157207	0.23736954	2.5833667	20	3 26.6	19.9
317141 2001 <i>UD</i> ₁₃₀	15.7	X	151.03404	357.24504	40.28474	11.31274	0.0624336	0.18263303	3.0766860	20	3 24.9	20.3
317142 2001 <i>UR</i> ₁₄₇	12.7	X	300.06990	243.28094	36.77138	30.05058	0.0683066	0.08137170	5.2741658	20	4 21.9	19.5
317143 2001 <i>UF</i> ₁₅₈	16.4	X	165.01254	302.60772	52.83488	6.20962	0.2352127	0.23125951	2.6286715	20	2 22.9	20.9
317144 2001 <i>UQ</i> ₁₇₁	15.9	X	36.53333	81.20274	23.26489	12.93375	0.0324165	0.22650161	2.6653558	20	1 12.9	19.6
317145 2001 <i>UN</i> ₁₈₂	16.0	X	194.06267	187.10064	146.74872	9.20114	0.1050978	0.23556170	2.5965674	20	2 14.3	19.9
317146 2001 <i>UG</i> ₁₉₀	17.1	X	313.71179	279.02432	343.42445	5.97697	0.0269901	0.29468396	2.2364802	20	4 4.9	19.6
317147 2001 <i>UT</i> ₂₀₃	16.5	X	10.61604	136.85580	255.69671	4.62809	0.1182979	0.21327759	2.7744223	20	—	—
317148 2001 <i>UZ</i> ₂₂₄	16.5	X	233.62419	177.27566	158.34512	10.83847	0.0881803	0.23868819	2.5738432	20	3 31.3	20.3
317149 2001 <i>UB</i> ₂₂₈	16.3	X	129.25685	31.79955	283.63279	1.20784	0.1092184	0.18136241	3.0910393	20	3 22.5	20.8
317150 2001 <i>UC</i> ₂₂₈	15.2	X	83.21917	93.02646	0.22786	8.23232	0.2146602	0.12512267	3.9589382	20	4 3.2	20.6
317151 2001 <i>UK</i> ₂₃₀	16.6	X	305.73415	32.81096	79.65546	5.78241	0.0653680	0.21490805	2.7603719	20	—	—
317152 2001 <i>UQ</i> ₂₃₀	17.3	X	78.58198	226.67716	129.13025	6.14848	0.1742776	0.21999744	2.7176340	20	—	—
317153 2001 <i>VY</i> ₁₃	15.4	X	125.24947	56.81489	37.06249	16.66616	0.2009130	0.18127832	3.0919952	20	5 11.3	20.3
317154 2001 <i>VB</i> ₃₉	16.7	X	280.89419	52.14701	50.74163	6.83146	0.0881909	0.25959086	2.4337527	20	11 25.9	19.5
317155 2001 <i>VC</i> ₆₉	16.2	X	136.56756	160.63010	221.73606	3.74514	0.1406104	0.17709703	3.1404740	20	2 22.5	21.0
317156 2001 <i>VT</i> ₇₁	15.9	X	170.60168	357.60251	119.78230	14.70304	0.1229409	0.23045313	2.6347999	20	2 3.5	20.0
317157 2001 <i>VS</i> ₇₅	16.9	X	180.69575	76.32198	234.83174	1.60105	0.2178430	0.28273127	2.2990769	20	1 4.7	20.5
317158 2001 <i>VK</i> ₈₇	16.1	X	344.48943	129.06423	17.42883	5.65718	0.0144093	0.22253921	2.6969011	20	—	—
317159 2001 <i>VZ</i> ₁₀₃	15.5	X	170.53679	332.82126	41.80792	10.11940	0.0630552	0.17938514	3.1137118	20	3 18.7	20.2
317160 2001 <i>VO</i> ₁₁₆	17.3	X	296.51516	354.19035	56.13684	3.57110	0.1689510	0.25492282	2.4633733	20	9 29.5	19.5
317161 2001 <i>VW</i> ₁₂₉	16.0	X	23.91404	30.55508	119.78230	10.88138	0.0300250	0.17833457	3.1259284	20	3 1.2	20.3
317162 2001 <i>VD</i> ₁₃₁	15.4	X	85.70631	348.03905	110.15151	15.18392	0.1228723	0.17764322	3.1340335	20	4 3.2	20.0
317163 2001 <i>VG</i> ₁₃₃	15.8	X	121.33278	346.46365	87.49679	7.50988	0.1133808	0.18241268	3.0791631	20	4 10.1	20.5
317164 2001 <i>WL</i> ₃₃	16.3	X	61.61025	297.59155	69.32906	12.08805	0.1033646	0.21563653	2.7541515	20	—	—
317165 2001 <i>WJ</i> ₄₃	16.9	X	1.05155	242.35086	70.41791	6.40632	0.0342757	0.30593510	2.1813056	20	9 13.9	19.2
317166 2001 <i>WF</i> ₅₃	16.0	X	134.46224	135.54538	262.96233	2.77508	0.1649659	0.17866138	3.1221152	20	3 12.6	20.8
317167 2001 <i>WP</i> ₅₆	15.6	X	262.44043	252.67341	38.52673	5.89350	0.0900699	0.18211723	3.0824925	20	3 12.5	20.1
317168 2001 <i>WX</i> ₅₆	16.4	X	353.87027	215.23651	232.12468	8.14668	0.1129108	0.21613504	2.7499149	20	—	—
317169 2001 <i>WR</i> ₅₈	16.3	X	306.95594	209.88191	24.40793	2.83343	0.1056519	0.23251920	2.6191689	20	2 14.9	19.6
317170 2001 <i>WS</i> ₆₉	17.0	X	144.00429	129.80348	227.59100	1.43661	0.1446767	0.22801348	2.6535608	20	1 27.1	20.9
317171 2001 <i>WX</i> ₇₁	16.3	X	212.83787	240.33374	73.88487	4.40412	0.1060321	0.23157039	2.6263184	20	2 11.1	20.3
317172 2001 <i>WU</i> ₇₂	17.7	X	166.93864	285.30720	58.14799	6.12348	0.1870586	0.28320351	2.2965203	20	2 1.1	21.2
317173 2001 <i>WR</i> ₈₁	16.7	X	48.16111	350.80543	73.36183	6.27750	0.0964966	0.21990088	2.7184295	20	—	—
317174 2001 <i>XH</i> ₇₁	16.2	X	131.50790	108.85188	230.85657	11.16521	0.1979620	0.22378240	2.6869037	20	—	—
317175 2001 <i>XF</i> ₁₁₁	15.9	X	316.48835	49.80455	85.47128	14.67446	0.1701549	0.21406193	2.7676410	20	—	—
317176 2001 <i>XO</i> ₁₂₃	15.2	X	134.35360	108.98655	234.44598	11.59681	0.1411460	0.17054621	3.2203866	20	1 6.7	20.2
317177 2001 <i>XU</i> ₁₂₃	15.9	X	79.45486	348.93899	101.14947	2.73938	0.1628230	0.17436276	3.1732203	20	3 16.1	20.1
317178 2001 <i>XX</i> ₁₃₂	16.5	X	347.33847	307.70882	100.66040	5.61702	0.1113246	0.20879757	2.8139676	20	12 16.3	19.9
317179 2001 <i>XS</i> ₁₄₉	16.5	X	91.38093	303.84605	86.83782	5.98275	0.0624830	0.22010347	2.7167611	20	—	—
317180 2001 <i>XD</i> ₁₇₈	15.7	X	169.99577	235.31042	269.66662	7.56962	0.0343531	0.19147167	2.9812590	20	8 20.4	20.1
317181 2001 <i>XT</i> ₂₂₅	16.7	X	39.52840	137.98856	251.39966	4.72398	0.0619726	0.21393140	2.7687667	20	—	—
317182 2001 <i>XY</i> ₂₂₈	17.4	X	36.30168	33.94706	30.23813	3.39827	0.1555995	0.27106455	2.3645812	20	—	—
317183 2001 <i>XA</i> ₂₃₅	17.0	X	351.67490	351.56719	20.52028	2.99642	0.1898190	0.25847487	2.4407530	20	11 28.8	19.2
317184 2001 <i>XP</i> ₂₄₈	16.6	X	192.83050	169.66701	106.48820	4.42948	0.0118668	0.21399179	2.7682458	20	—	—
317185 2001 <i>XQ</i> ₂₅₈	15.3	X	159.62226	338.03818	74.67227	18.54050	0.0918085	0.18278153	3.0750193	20	4 26.4	20.2
317186 2001 <i>XY</i> ₂₅₈	16.7	X	104.13488	256.76590	132.45188	7.37543	0.2055939	0.22531398	2.6747136	20	1 30.2	20.3
317187 2001 <i>XF</i> ₂₆₂	15.6	X	250.40906	3.53410	230.10149	17.51011	0.1058573	0.22258936	2.6964960	20	—	—
317188 2001 <i>XA</i> ₂₆₆	17.4	X	280.81636	11.39008	47.73703	3.48019	0.1533524	0.25460085	2.4654497	20	9 15.9	20.1
317189 2001 <i>YG</i> ₂	17.5	X	273.80048	288.68710	133.16864	7.18933	0.3088517	0.30760580	2.1734002	20	8 17.2	19.7
317190 2001 <i>YK</i> ₂	16.0	X	213.03969	63.53751	3.46409	15.28316	0.3346114	0.18873407	3.0100186	20	6 16.8	21.8
317191 2001 <i>YE</i> ₅₅	16.1	X	119.31839	92.55189	283.52251	6.68939	0.0277482	0.22223963	2.6993242	20	1 7.5	19.7
317192 2001 <i>YO</i> ₇₇	17.2											

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317201 2002 AU ₁₂₆	18.5	X	270.03259	258.55505	198.75145	2.24864	0.1116959	0.30649532	2.1786468	20	11 11.0	20.3
317202 2002 AN ₁₃₆	16.5	X	63.42255	282.81079	128.69525	7.02489	0.0533446	0.21605124	2.7506260	20	—	—
317203 2002 AD ₁₄₉	16.9	X	244.28449	77.99371	332.93961	1.02737	0.1398481	0.24386042	2.5373196	20	7 13.5	20.3
317204 2002 AM ₁₈₀	16.0	X	213.18445	318.93149	293.71686	3.50900	0.0198200	0.21356121	2.7719653	20	—	—
317205 2002 AN ₂₀₅	16.9	X	89.47631	286.92063	76.42566	0.55603	0.0870973	0.21303970	2.7764872	20	—	—
317206 2002 CY ₁	15.4	X	76.91118	249.81864	334.48071	12.75284	0.1800889	0.23806369	2.5783425	20	9 4.8	19.1
317207 2002 CH ₁₀	17.1	X	263.71518	35.52114	31.73252	7.79094	0.2711468	0.30147223	2.2027803	20	8 19.6	19.6
317208 2002 CE ₁₆	15.5	X	2.54652	51.87676	160.77308	14.69185	0.3651641	0.17041397	3.2220523	20	4 11.6	17.8
317209 2002 CV ₂₂	17.3	X	265.64731	119.83743	319.44750	7.33718	0.0940434	0.30007885	2.2095939	20	10 3.2	19.7
317210 2002 CE ₂₅	17.5	X	110.24847	283.27816	338.78511	4.81179	0.1601264	0.30054063	2.2073299	20	12 3.3	20.9
317211 2002 CT ₃₆	17.0	X	283.54570	146.56974	331.62480	7.60131	0.2744683	0.20268241	2.8702871	20	11 5.9	20.4
317212 2002 CW ₄₆	18.7	X	190.29967	71.11101	346.19417	12.23292	0.3444954	0.39661586	1.8346617	20	5 17.4	22.2
317213 2002 CW ₅₀	17.8	X	142.19390	202.11611	314.42116	2.48269	0.1881385	0.29180264	2.2511784	20	8 19.1	21.1
317214 2002 CD ₆₀	17.0	X	120.53597	189.06683	0.29039	2.61611	0.0716626	0.24188335	2.5511269	20	8 30.3	20.4
317215 2002 CL ₆₈	15.9	X	206.75081	164.20665	82.01226	3.04460	0.0550680	0.20875863	2.8143175	20	—	—
317216 2002 CT ₇₂	17.8	X	339.01607	338.02467	125.50676	1.59665	0.1363301	0.26197055	2.4189918	20	—	—
317217 2002 CE ₈₁	16.1	X	344.74570	341.58053	148.82478	7.53896	0.1881928	0.21164536	2.7886684	20	—	—
317218 2002 CJ ₈₇	17.2	X	85.13601	286.18190	134.22096	5.23653	0.2093503	0.27346131	2.3507447	20	2 6.0	19.4
317219 2002 CV ₈₇	16.1	X	333.03799	118.46672	332.81063	5.26647	0.0571629	0.20463860	2.8519660	20	—	—
317220 2002 CO ₈₈	17.5	X	258.08763	93.38526	339.07264	5.67003	0.1144197	0.29908504	2.2144859	20	9 10.4	19.7
317221 2002 CA ₉₀	17.7	X	169.05179	16.81114	136.78403	7.44639	0.1135312	0.29535778	2.2330774	20	9 14.2	20.8
317222 2002 CD ₁₀₁	15.3	X	284.10402	19.61624	148.05222	15.90791	0.0760906	0.20530088	2.8458293	20	—	—
317223 2002 CS ₁₁₅	16.7	X	165.79015	60.96642	167.38412	24.98119	0.1928787	0.30324049	2.1942086	20	12 14.3	20.7
317224 2002 CF ₁₂₁	17.3	X	252.07205	271.81066	148.99444	6.42076	0.1310677	0.29794322	2.2201401	20	8 11.8	19.7
317225 2002 CD ₁₅₃	17.9	X	8.05204	79.17913	159.25062	20.79609	0.0990260	0.38928817	1.8576130	20	6 2.9	19.8
317226 2002 CL ₁₅₈	17.8	X	214.59904	159.73356	351.84941	4.85097	0.0568768	0.30279468	2.1963619	20	11 10.1	20.4
317227 2002 CY ₁₆₂	16.8	X	241.78982	69.99350	18.52795	5.20234	0.1385297	0.24580818	2.5238981	20	9 1.7	20.2
317228 2002 CU ₁₆₆	16.6	X	97.78360	176.74089	37.42718	4.13074	0.1714292	0.23729271	2.5839243	20	9 16.2	20.6
317229 2002 CO ₁₇₁	16.3	X	289.24112	41.87757	96.78563	6.12286	0.1505586	0.20452877	2.8529869	20	—	—
317230 2002 CY ₁₇₉	15.6	X	164.04869	136.94997	313.89010	8.79578	0.0770916	0.18020346	3.1042781	20	6 8.8	20.5
317231 2002 CJ ₁₈₀	17.9	X	148.05481	75.57989	118.66856	5.91066	0.0768592	0.29935727	2.2131432	20	10 18.4	20.9
317232 2002 CS ₁₈₄	16.9	X	236.58982	76.46837	129.19876	7.11010	0.0837231	0.25936245	2.4351814	20	—	—
317233 2002 CB ₁₈₆	17.8	X	202.09395	180.42757	350.30681	4.68504	0.1008869	0.30346051	2.1931479	20	11 13.9	20.6
317234 2002 CD ₁₈₉	17.4	X	196.50170	202.96655	341.18459	5.44271	0.0710150	0.30439475	2.1886582	20	11 29.9	20.1
317235 2002 CZ ₁₉₀	16.3	X	154.54023	245.89033	132.26894	5.51549	0.0729928	0.22194665	2.7016991	20	2 27.9	20.2
317236 2002 CB ₂₀₁	18.3	X	164.40297	13.54514	132.56412	1.03403	0.1413886	0.29395407	2.2401808	20	8 27.2	21.6
317237 2002 CQ ₂₀₁	16.2	X	37.41504	263.72543	129.62258	5.36107	0.0738600	0.20530950	2.8457496	20	—	—
317238 2002 CZ ₂₀₅	16.5	X	268.80321	4.15127	145.67788	9.14669	0.1802012	0.20217478	2.8750896	20	12 21.7	20.3
317239 2002 CJ ₂₀₈	17.9	X	209.15304	339.06484	129.12633	2.10231	0.1169619	0.29562165	2.2317484	20	8 26.5	20.9
317240 2002 CO ₂₁₄	16.1	X	356.71544	226.86206	124.63227	5.05300	0.0550928	0.24491931	2.5300010	20	10 22.2	19.1
317241 2002 CJ ₂₂₀	16.8	X	162.07511	176.64095	17.18984	3.10851	0.1120947	0.24414974	2.5353147	20	10 20.4	20.5
317242 2002 CM ₂₃₀	17.8	X	254.83217	301.40000	147.31715	4.24389	0.1694824	0.29938030	2.2130297	20	9 22.1	20.1
317243 2002 CM ₂₃₄	17.2	X	307.51524	329.86920	130.73234	2.95967	0.0257203	0.20329355	2.8645318	20	12 20.7	21.0
317244 2002 CR ₂₅₂	17.6	X	215.84744	60.06447	84.68243	5.50493	0.0679967	0.30338310	2.1935210	20	11 4.3	20.2
317245 2002 CA ₂₅₈	17.1	X	91.76657	130.38764	135.07649	2.33214	0.1998955	0.24603077	2.5223757	20	11 15.6	21.2
317246 2002 CS ₂₇₂	15.5	X	178.29924	184.19378	34.46735	12.08879	0.1050047	0.19594629	2.9356979	20	11 26.5	20.2
317247 2002 CA ₂₇₃	15.0	X	123.40650	257.26211	267.12291	13.63602	0.0282775	0.18223413	3.0811741	20	7 19.5	19.6
317248 2002 CS ₂₇₄	16.6	X	13.91240	78.31252	141.39922	4.37268	0.0160973	0.22791829	2.6542995	20	5 11.1	20.0
317249 2002 CZ ₂₉₀	15.3	X	257.26847	350.43635	46.62499	9.80558	0.0984331	0.18736101	3.0247065	20	7 15.2	19.7
317250 2002 CA ₂₉₁	17.3	X	223.02357	59.20356	46.81229	7.97264	0.0843521	0.29846009	2.2175761	20	9 18.8	20.1
317251 2002 CU ₂₉₁	15.3	X	151.56431	289.62416	129.11958	9.91512	0.0688037	0.17555329	3.1588577	20	4 20.9	20.2
317252 2002 CT ₃₀₇	16.6	X	24.18220	93.12561	322.74460	11.99518	0.2024617	0.21147126	2.7901988	20	—	—
317253 2002 CM ₃₁₀	16.2	X	97.36156	296.19005	290.01461	6.40956	0.1456701	0.23811809	2.5779498	20	9 23.5	20.2
317254 2002 CH ₃₁₅	17.6	X	150.56874	73.33649	183.39364	4.10229	0.1035109	0.30756903	2.1735734	20	—	—
317255 2002 DJ ₅	19.8	X	289.77551	296.14224	347.93467	6.43887	0.5677710	0.59484437	1.4002336	20	1 15.9	22.3
317256 2002 DC ₁₂	15.9	X	12.67807	27.07593	348.77298	8.29274	0.0577176	0.20012940	2.8946460	20	12 1.4	19.9
317257 2002 EO ₅	17.3	X	248.94743	238.38122	170.46670	20.94463	0.0553611	0.39871572	1.8282145	20	8 10.9	19.0
317258 2002 EY ₁₄	18.2	X	130.65854	202.03072	14.44525	3.46467	0.1710256	0.29840474	2.2178504	20	10 25.5	21.7
317259 2002 EV ₁₇	15.8	X	16.57877	237.41203	165.00573	15.10596	0.1569293	0.20151890	2.8813246	20	—	—
317260 2002 EE ₂₃	17.0	X	108.80874	117.18568	141.78216	2.57758	0.0231970	0.19318106	2.9636462	20	11 2.6	21.2
317261 2002 EA ₂₅	15.7	X	49.51199	138.06285	169.08429	12.65443	0.1396979	0.18781994	3.0197773	20	11 7.6	20.1
317262 2002 EW ₃₆	16.4	X	351.81169	332.63874	39.89301	3.57995	0.0482010	0.19189083	2.9769159	20	10 28.7	20.1
317263 2002 EK ₃₇	16.1	X	91.51603	224.44140	100.80043	3.37240	0.0537175	0.19859906	2.9094971	20	—	—
317264 2002 EA ₅₁	15.7	X	225.28166	30.57271	170.00046	17.89392	0.0745566	0.20068591	2.8892922	20	12 31.6	20.1
317265 2002 EZ ₅₂	15.8	X	122.82588	153.46606	158.59866	12.55249	0.0315063	0.20193315	2.8773827	20	—	—
317266 2002 EQ ₆₃	17.7	X	333.24556	305.86131	274.64925	1.25963	0.1565760	0.27214085	2.3583426	20	2 18.8	20.3
317267 2002 EY ₆₃	17.4	X	268.43379	74.95689	352.00570	8.11253	0.0756414	0.29622884	2.2286977	20	9 24.4	19.8
317268 2002 EF ₆₉	16.8	X	66.89313	27.98417	188.26547	5.42317	0.1958064	0.23008803	2.6375864	20	8 14.2	20.4
317269 2002 EZ ₇₁	17.2	X	239.82348	299.41348	301.76345	0.61140	0.1550844	0.25954706	2.4340265	20	—	—
317270 2002 EJ ₇₆	16.7	X	342.64829	180.51883	179.13529	0.93860	0.0337566	0.20329241	2.8645425	20	—	—
317271 2002 EO ₉₆	17.8	X	199.81917	110.61854	352.06911	3.17823	0.1669085	0.29192140	2.2505678	20	8 4.1	21.1
317272 2002 EQ ₁₀₆	16.8	X	50.16181	107.31425	110.39326	6.17858	0.1125402	0.28352596	2.2947788	20	7 15.2	19.2
317273 2002 ED ₁₁₀	17.8	X	188.30527	70.35961	61.93147	2.51302	0.1327252	0.29411493	2.2393639	20	9 4.4	21.0
317274 2002 ED ₁₁₆												

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317281 2002 EC ₁₅₁	16.8 ^m	X	43.61026	75.07910	171.88293	6.78553	0.1036089	0.28562557	2.2835191	20	8 15.5	19.3
317282 2002 EB ₁₆₂	17.4	X	223.80854	76.60688	50.87168	7.39290	0.0791669	0.29790951	2.2203076	20	10 19.1	19.9
317283 2002 ED ₁₆₂	17.8	X	225.89347	309.05939	126.62053	1.90273	0.1454920	0.29268211	2.2466664	20	7 27.8	20.9
317284 2002 FQ ₇	16.3	X	209.70169	85.29161	151.26357	15.38627	0.1952797	0.20280193	2.8691593	20	—	—
317285 2002 FE ₉	17.1	X	156.41585	282.36446	268.70725	3.60076	0.1088287	0.29589980	2.2303495	20	10 17.4	20.4
317286 2002 FH ₃₄	16.1	X	154.41947	141.77786	63.73111	9.22069	0.1114228	0.24184677	2.5513842	20	10 29.6	20.0
317287 2002 FR ₃₆	13.2	X	171.17232	30.41751	159.12388	22.21210	0.0575436	0.08209708	5.2430531	20	10 7.2	20.5
317288 2002 GR ₁	15.8	X	126.46140	84.24765	107.21773	8.46994	0.0634320	0.18009409	3.1055349	20	9 4.1	20.5
317289 2002 GK ₁₃	15.7	X	105.01580	37.27322	201.56408	7.66763	0.1374837	0.18294914	3.0731409	20	10 12.4	20.4
317290 2002 GF ₄₇	16.9	X	350.56580	326.70427	24.79308	7.61283	0.1825006	0.29101251	2.2552513	20	11 4.1	18.7
317291 2002 GD ₄₈	17.7	X	99.54847	167.30207	12.87243	6.96611	0.0556762	0.28432965	2.2904525	20	7 25.6	20.6
317292 2002 GE ₅₂	17.7	X	92.59341	77.05913	198.17899	2.20949	0.2118255	0.29362302	2.2418643	20	12 5.9	21.3
317293 2002 GJ ₆₀	15.5	X	210.57166	14.44765	173.46053	18.03219	0.1914680	0.19178850	2.9779748	20	11 18.7	20.5
317294 2002 GK ₆₀	15.5	X	28.49670	87.28820	207.44929	10.56538	0.1522424	0.17692091	3.1425578	20	9 18.3	19.5
317295 2002 GG ₆₉	17.4	X	126.71148	47.45205	172.11447	7.65057	0.0767358	0.29360916	2.2419348	20	10 25.8	20.5
317296 2002 GJ ₇₃	15.2	X	154.14068	86.88523	159.13423	10.04951	0.0337969	0.19277764	2.9677794	20	12 9.5	19.7
317297 2002 GR ₇₃	16.9	X	116.15434	248.66369	41.39106	6.70919	0.0972794	0.30048301	2.2076121	20	—	—
317298 2002 GF ₇₇	17.2	X	95.40508	118.74172	155.67268	6.81618	0.1760839	0.29495234	2.2351233	20	12 6.6	20.8
317299 2002 GV ₈₄	17.4	X	86.18564	153.85109	82.12293	6.41692	0.1750514	0.28794403	2.2712450	20	10 10.7	20.7
317300 2002 GT ₈₅	15.4	X	120.82976	85.95366	164.20585	11.38251	0.0664991	0.18819952	3.0157155	20	11 9.7	20.0
317301 2002 GN ₈₉	16.6	X	122.81603	250.64493	343.05041	0.90093	0.1423384	0.18535856	3.0464516	20	10 23.6	21.5
317302 2002 GX ₉₁	16.0	X	121.04137	88.63324	132.07585	2.57969	0.1488941	0.18325351	3.0697370	20	10 8.1	20.8
317303 2002 GY ₉₈	16.4	X	151.64309	331.10848	221.70688	4.68106	0.1886105	0.24029457	2.5623596	20	10 6.9	20.8
317304 2002 GB ₁₀₀	17.4	X	175.62123	316.60401	208.29246	6.39465	0.1166204	0.29475944	2.2360983	20	10 3.4	20.5
317305 2002 GG ₁₀₈	15.8	X	130.34816	219.45569	42.22214	15.01695	0.0477267	0.24658853	2.5185707	20	12 9.9	19.5
317306 2002 GH ₁₁₀	17.0	X	80.14668	227.59570	27.99840	8.19033	0.1099726	0.29070215	2.2568562	20	10 20.4	19.8
317307 2002 GR ₁₁₀	17.2	X	350.61463	115.04257	114.64899	2.94031	0.1746702	0.27344520	2.3508370	20	4 5.7	19.0
317308 2002 GW ₁₂₇	17.3	X	61.72271	14.46563	279.68743	1.81260	0.1960544	0.29255132	2.2473360	20	11 29.2	20.4
317309 2002 GX ₁₃₁	15.7	X	319.80957	82.98409	19.37995	10.75212	0.0814681	0.19781112	2.9172182	20	—	—
317310 2002 GP ₁₄₁	17.5	X	85.32866	74.74485	189.38033	6.72158	0.1986760	0.29020156	2.2594508	20	11 15.3	21.0
317311 2002 GM ₁₅₃	16.8	X	14.47031	207.10984	111.70968	8.01715	0.1477031	0.28804712	2.2707031	20	10 28.5	19.3
317312 2002 GA ₁₇₀	17.8	X	6.16100	30.17481	232.83128	0.64703	0.1995890	0.27832770	2.3232633	20	7 12.1	19.1
317313 2002 GG ₁₇₉	15.7	X	93.25920	111.39040	178.60773	8.97502	0.0743863	0.18833592	3.0142593	20	11 26.9	20.3
317314 2002 GY ₁₈₃	15.7	X	117.26040	34.48058	200.80822	9.48394	0.0533059	0.18467254	3.0539915	20	10 14.5	20.2
317315 2002 GE ₁₈₅	17.6	X	171.52622	306.84127	206.63028	7.37005	0.0523610	0.29038150	2.2585173	20	9 15.1	20.6
317316 2002 GJ ₁₈₈	13.7	X	260.15887	345.84911	138.93086	7.48098	0.0565166	0.08466899	5.1363326	20	10 26.8	20.6
317317 2002 HU ₃	15.5	X	80.61410	184.95410	74.82724	12.71263	0.1774185	0.18044449	3.1015132	20	10 22.1	20.4
317318 2002 HG ₁₁	15.9	X	68.57538	130.37926	156.01112	17.83790	0.3009609	0.18016169	3.1047579	20	11 22.5	21.2
317319 2002 HH ₁₅	16.1	X	110.19993	208.92485	65.24630	13.95456	0.1448401	0.24380268	2.5377202	20	12 7.8	20.0
317320 2002 HY ₁₆	16.1	X	198.94500	160.26696	25.57059	9.16882	0.0863292	0.19203145	2.9754624	20	11 9.9	20.5
317321 2002 JZ ₁	16.6	X	327.09224	58.73969	144.40937	5.33370	0.1367173	0.26482956	2.4015506	20	1 20.7	19.5
317322 2002 JF ₄	17.0	X	50.77517	92.19395	159.16674	22.68730	0.2491859	0.28239462	2.3009036	20	9 30.0	20.2
317323 2002 JZ ₆	17.0	X	136.37282	125.61959	135.14510	5.36894	0.2100957	0.24308134	2.5427381	20	12 16.0	21.4
317324 2002 JC ₈	17.7	X	79.93606	82.87363	154.95577	5.65046	0.2598676	0.28675757	2.2775056	20	10 13.2	21.2
317325 2002 JH ₈	16.8	X	90.82653	81.16130	177.06719	8.74092	0.1781528	0.29075215	2.2565975	20	11 12.3	20.3
317326 2002 JG ₂₄	16.8	X	324.34563	175.90231	71.08914	5.19143	0.1710314	0.26987337	2.3715340	20	3 15.0	19.0
317327 2002 JV ₂₆	15.5	X	168.89032	143.21507	99.46145	6.53736	0.2158222	0.19089527	2.9872571	20	12 12.2	20.6
317328 2002 JT ₂₈	15.2	X	71.39421	227.79488	55.71959	10.63246	0.0657696	0.18215516	3.0820646	20	10 24.3	19.6
317329 2002 JS ₃₆	16.8	X	127.18412	117.21366	99.04040	8.05655	0.0777621	0.29094660	2.2555919	20	10 23.6	20.0
317330 2002 JJ ₅₈	16.8	X	208.98732	149.46842	50.14075	21.91255	0.0767589	0.35455187	1.9770434	20	—	—
317331 2002 JD ₆₇	17.4	X	312.15034	166.06359	69.85766	2.44839	0.1459751	0.26647232	2.3916703	20	2 12.8	20.2
317332 2002 JB ₇₂	15.1	X	82.92400	181.82458	66.80408	27.11785	0.1732228	0.17881208	3.1203607	20	10 18.6	20.3
317333 2002 JN ₈₄	17.3	X	74.96937	274.57168	6.82311	1.24756	0.1937082	0.29033717	2.2587472	20	11 25.4	20.7
317334 2002 JH ₈₇	17.2	X	96.90634	359.88593	233.21613	8.03620	0.0849072	0.28823944	2.2696930	20	10 4.1	20.3
317335 2002 JT ₉₄	16.0	X	155.81925	243.14652	231.11956	11.18708	0.0283606	0.22397993	2.6853237	20	6 27.9	19.9
317336 2002 JC ₁₀₁	15.7	X	98.83373	105.58146	153.39662	19.78213	0.2728440	0.18089686	3.0963403	20	11 14.2	21.3
317337 2002 JB ₁₀₃	15.8	X	172.83750	351.90571	232.68656	7.44632	0.2404429	0.18848986	3.0126179	20	11 23.5	21.0
317338 2002 JD ₁₀₃	17.3	X	325.20612	81.97781	144.45776	3.06501	0.1539324	0.26682333	2.3895723	20	2 16.3	20.0
317339 2002 JA ₁₀₄	15.0	X	48.80784	227.60438	69.59640	12.03260	0.0705476	0.17925991	3.1151617	20	10 16.3	19.4
317340 2002 JW ₁₂₀	17.8	X	300.94488	100.10768	194.58454	21.50397	0.0944410	0.38218160	1.8805701	20	4 20.3	19.3
317341 2002 JO ₁₂₂	15.2	X	78.24644	151.94918	106.17006	18.57505	0.1805072	0.17961400	3.1110663	20	10 21.7	20.3
317342 2002 JZ ₁₂₂	15.1	X	68.49157	205.20566	65.66717	18.38409	0.1918349	0.18023476	3.1039188	20	10 25.9	19.9
317343 2002 JA ₁₃₇	15.3	X	11.28407	89.37841	236.83999	8.90234	0.0592598	0.17949515	3.1124394	20	9 21.7	19.5
317344 2002 JN ₁₄₇	16.4	X	203.67738	138.89669	34.55242	12.63812	0.2577045	0.19042729	2.9921492	20	10 19.7	21.4
317345 2002 KB ₁	17.2	X	101.25411	258.38129	58.68081	22.42937	0.0965926	0.35454691	1.9770618	20	—	—
317346 2002 KK ₁₅	16.6	X	167.79206	124.36966	67.26411	17.13425	0.2224410	0.18544877	3.0454635	20	10 20.3	22.0
317347 2002 LF ₂₇	16.1	X	104.49239	38.44066	254.22369	3.67899	0.2768690	0.18327285	3.0695211	20	12 21.5	21.4
317348 2002 LC ₃₂	16.9	X	80.24487	127.36348	92.45455	6.11462	0.1143731	0.28306762	2.2972553	20	9 3.6	19.9
317349 2002 LB ₃₈	15.8	X	288.81683	147.08489	172.12459	12.33429	0.1476705	0.21696160	2.7429263	20	5 9.0	19.6
317350 2002 LV ₃₈	17.1	X	25.78814	98.04377	198.48568	4.68920	0.2897945	0.27986775	2.3147325	20	11 1.9	19.6
317351 2002 LX ₄₄	17.3	X	90.84956	110.11692	136.13552	10.71836	0.1822114	0.28783308	2.2718287	20	10 30.3	20.9
317352 2002 LT ₆₀	17.8	X	28.23557	198.59538	60.51949	2.99383	0.1924433	0.27964908	2.3159390	20	8 25.9	20.0
317353 2002 LL ₆₂	17.8	X	33.02739	176.34843	61.92377	3.06638	0.169					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317361 2002 <i>NF</i> ₁₃	17.3	X	17.61478	191.47635	108.25132	3.31369	0.2326694	0.27847847	2.3224247	20	10 15.7	19.5
317362 2002 <i>NZ</i> ₁₅	16.7	X	136.99349	177.55479	94.46268	4.38062	0.2186294	0.23984408	2.5655671	20	12 28.7	20.9
317363 2002 <i>NU</i> ₂₁	17.2	X	11.31058	150.50416	143.71392	4.68801	0.2448570	0.27671957	2.3322556	20	9 26.7	19.1
317364 2002 <i>NH</i> ₂₉	17.0	X	342.71925	359.65511	306.04346	5.16212	0.1340172	0.27324249	2.3519995	20	7 25.9	18.9
317365 2002 <i>NK</i> ₃₄	15.1	X	86.41706	141.05791	138.81545	17.84184	0.2167535	0.17642939	3.1483917	20	11 22.9	20.5
317366 2002 <i>NG</i> ₄₁	16.7	X	178.60464	279.36117	336.17796	7.20377	0.1355928	0.24244000	2.5472205	20	—	—
317367 2002 <i>NX</i> ₅₇	17.6	X	345.67402	167.93127	132.90758	3.00022	0.2011028	0.27318647	2.3523210	20	7 24.2	19.0
317368 2002 <i>NO</i> ₆₀	16.7	X	354.13235	182.66731	99.89237	7.55331	0.0968361	0.27272166	2.3549930	20	7 11.4	18.7
317369 2002 <i>NP</i> ₆₀	17.6	X	11.73700	11.29531	245.80715	1.93264	0.1798636	0.27203140	2.3589751	20	7 12.6	19.3
317370 2002 <i>NE</i> ₆₁	15.9	X	45.39074	44.72527	319.26405	11.43931	0.1065945	0.17951076	3.1122590	20	—	—
317371 2002 <i>NJ</i> ₆₁	17.7	X	16.22792	124.48082	119.44451	1.45554	0.1767411	0.27132066	2.3630930	20	6 30.4	19.3
317372 2002 <i>NS</i> ₆₃	16.6	X	215.42756	310.13725	24.78224	2.13819	0.0699269	0.20351044	2.8624962	20	3 12.7	20.7
317373 2002 <i>NE</i> ₆₆	16.5	X	112.61243	184.15870	95.44133	2.97568	0.2328083	0.18061564	3.0995535	20	12 10.6	21.7
317374 2002 <i>NP</i> ₇₀	16.7	X	85.07844	156.96615	234.92783	5.34099	0.2850772	0.24287740	2.5441613	20	1 14.9	19.4
317375 2002 <i>NH</i> ₇₄	16.4	X	337.14350	316.08513	293.57781	3.37605	0.0621771	0.20909678	2.8112825	20	4 24.0	19.9
317376 2002 <i>NS</i> ₇₄	16.1	X	224.94505	26.30959	305.21073	7.04488	0.0683927	0.20310987	2.8662585	20	3 15.1	20.4
317377 2002 <i>ND</i> ₇₉	17.2	X	104.51382	299.42404	103.01336	24.00470	0.0933637	0.36157149	1.9513714	20	1 3.4	18.4
317378 2002 <i>OT</i> ₂₂	15.4	X	317.37865	164.68643	222.17645	24.50536	0.2499954	0.27482818	2.3429438	20	10 2.7	17.2
317379 2002 <i>OW</i> ₂₂	15.9	X	282.35803	161.86974	189.20506	26.75621	0.3616287	0.26779980	2.3837601	20	5 9.9	19.7
317380 2002 <i>OM</i> ₂₇	16.5	X	101.88914	234.28083	121.35640	4.03795	0.1907027	0.24246994	2.5470108	20	—	—
317381 2002 <i>OQ</i> ₂₈	17.4	X	138.76261	217.37987	145.13526	20.63038	0.2832227	0.24609838	2.5219136	20	2 8.9	21.5
317382 2002 <i>OG</i> ₃₂	16.4	X	198.19868	189.49800	130.07485	2.97997	0.0803790	0.19760532	2.9192433	20	2 5.3	20.8
317383 2002 <i>OK</i> ₃₂	17.6	X	78.48216	51.49314	252.41217	6.52722	0.1370130	0.28699878	2.2762293	20	12 22.3	20.8
317384 2002 <i>OA</i> ₃₅	16.1	X	128.19274	120.68818	123.97516	2.28323	0.1749641	0.17787752	3.1312807	20	11 11.3	21.2
317385 2002 <i>OA</i> ₃₆	16.3	X	186.75296	116.65531	249.16532	0.72765	0.1176216	0.20028680	2.8931292	20	3 19.8	20.9
317386 2002 <i>OD</i> ₃₆	16.5	X	137.60751	26.59925	84.54774	2.56259	0.0212038	0.21152333	2.7897409	20	5 31.9	20.2
317387 2002 <i>OG</i> ₃₆	16.1	X	154.42046	250.64137	18.01538	2.47153	0.0851629	0.18386879	3.0628851	20	—	—
317388 2002 <i>OP</i> ₃₆	17.5	X	121.63296	226.16437	182.91347	4.11736	0.0816836	0.30730171	2.1748337	20	2 16.7	20.0
317389 2002 <i>PS</i> ₂	16.0	X	226.71357	85.02334	239.76731	11.04041	0.1371851	0.20141021	2.8823611	20	3 3.4	20.8
317390 2002 <i>PQ</i> ₃	16.0	X	51.60618	57.45714	242.22558	4.09746	0.1683861	0.17243800	3.1967897	20	10 29.5	20.4
317391 2002 <i>PK</i> ₇	17.7	X	278.75563	106.54118	136.11635	26.37559	0.1037652	0.36533737	1.9379385	20	1 2.0	20.4
317392 2002 <i>PQ</i> ₃₉	15.4	X	113.83258	182.25345	139.09330	10.19281	0.2018164	0.18363158	3.0655223	20	—	—
317393 2002 <i>PP</i> ₄₈	16.8	X	284.44155	27.52766	277.85390	7.14801	0.2350210	0.26213749	2.4179647	20	3 23.7	20.3
317394 2002 <i>PZ</i> ₄₈	16.6	X	6.62188	124.38613	172.04939	22.43098	0.2590728	0.27412047	2.3469747	20	9 20.8	18.1
317395 2002 <i>PN</i> ₈₁	16.2	X	201.85825	57.16652	194.74392	9.53352	0.0420075	0.18821973	3.0154997	20	—	—
317396 2002 <i>PX</i> ₈₃	17.2	X	351.53640	197.21666	115.85387	3.61989	0.2137147	0.27400809	2.3476164	20	9 4.4	18.6
317397 2002 <i>PP</i> ₈₉	16.0	X	122.45292	103.45956	202.54289	14.43511	0.1570461	0.23783899	2.5799662	20	—	—
317398 2002 <i>PY</i> ₉₆	16.3	X	260.78176	4.11704	354.89019	9.70135	0.2283871	0.26483241	2.4015334	20	5 8.7	20.1
317399 2002 <i>PC</i> ₁₁₃	17.3	X	287.75209	301.02832	316.36480	17.89813	0.0591525	0.36630279	1.9345319	20	2 6.8	19.2
317400 2002 <i>PE</i> ₁₁₄	17.9	X	6.18762	105.30210	170.52334	1.42644	0.1656042	0.27303277	2.3532038	20	7 30.1	19.5
317401 2002 <i>PG</i> ₁₁₄	17.1	X	341.88233	103.48274	143.84482	6.78074	0.0875690	0.26461231	2.4028649	20	4 27.5	19.7
317402 2002 <i>PF</i> ₁₂₂	16.9	X	321.74835	66.00627	251.36026	5.27429	0.1721289	0.26961509	2.3730483	20	6 24.3	18.9
317403 2002 <i>PV</i> ₁₃₁	16.6	X	283.03051	356.78767	346.07611	6.07011	0.1502075	0.26792817	2.3829986	20	5 27.9	19.6
317404 2002 <i>PT</i> ₁₃₂	17.8	X	39.35510	128.63411	135.76135	2.04614	0.3024852	0.27831994	2.3233064	20	10 8.7	20.5
317405 2002 <i>PW</i> ₁₃₅	15.4	X	33.04161	283.82375	48.39953	6.27937	0.1723981	0.17144792	3.2090851	20	11 15.2	19.7
317406 2002 <i>PE</i> ₁₃₆	16.8	X	340.52868	239.72851	80.48887	4.26561	0.1923781	0.27309769	2.3528308	20	8 16.9	18.4
317407 2002 <i>PY</i> ₁₅₀	17.1	X	276.88300	151.82090	146.11826	3.20947	0.0808212	0.26090825	2.4255534	20	3 31.5	20.3
317408 2002 <i>PM</i> ₁₅₈	16.2	X	102.56912	300.88413	318.66595	12.52455	0.2613416	0.17608325	3.1525163	20	11 6.9	21.8
317409 2002 <i>PW</i> ₁₅₉	17.7	X	114.38749	253.81428	110.81084	4.96870	0.2960145	0.24309806	2.5426216	20	1 21.7	21.3
317410 2002 <i>PV</i> ₁₇₄	16.5	X	41.25282	235.39068	49.48701	5.33566	0.0852393	0.22326153	2.6910811	20	9 26.8	20.0
317411 2002 <i>PP</i> ₁₇₅	15.7	X	65.91315	359.45382	342.18503	10.28709	0.0828880	0.17912994	3.1166684	20	12 26.3	20.4
317412 2002 <i>PG</i> ₁₇₆	16.2	X	200.79030	128.71744	236.12760	6.73999	0.0956524	0.20355767	2.8620534	20	3 30.4	20.8
317413 2002 <i>PG</i> ₁₉₀	15.3	X	166.48920	215.32729	44.40173	6.72702	0.1168573	0.18366319	3.0651705	20	—	—
317414 2002 <i>PM</i> ₁₉₄	16.6	X	131.53367	211.17413	104.41145	10.62343	0.1428082	0.23967781	2.5667535	20	—	—
317415 2002 <i>PV</i> ₁₉₄	15.4	X	109.59889	266.90553	309.78807	7.45810	0.0872408	0.16971135	3.2309392	20	9 11.5	20.3
317416 2002 <i>PB</i> ₁₉₅	18.0	X	30.20919	111.33380	145.67663	1.93956	0.1538704	0.27471584	2.3435825	20	8 16.8	20.3
317417 2002 <i>PE</i> ₁₉₅	16.8	X	227.71565	13.01089	280.91558	0.86470	0.0346765	0.19840034	2.9114395	20	2 6.8	21.0
317418 2002 <i>PG</i> ₁₉₆	16.8	X	9.58790	309.12551	67.12308	7.52802	0.1552308	0.22830411	2.6513083	20	12 20.0	19.9
317419 2002 <i>PD</i> ₁₉₇	17.0	X	173.62019	45.14178	201.11801	3.53613	0.1372840	0.24022985	2.5628198	20	—	—
317420 2002 <i>PG</i> ₁₉₇	16.5	X	65.80454	259.10288	148.04669	9.52917	0.1861578	0.24310546	2.5425699	20	—	—
317421 2002 <i>PM</i> ₁₉₈	17.8	X	68.96904	25.57818	212.89080	2.77700	0.1571194	0.27701329	2.3306066	20	9 16.5	20.9
317422 2002 <i>PE</i> ₁₉₉	16.5	X	197.44730	195.85992	138.66672	10.55767	0.1103791	0.19880285	2.9075084	20	2 23.1	21.0
317423 2002 <i>QA</i> ₈	17.8	X	5.21169	292.07490	43.50910	3.16632	0.2365861	0.27819229	2.3240171	20	11 14.7	20.0
317424 2002 <i>QV</i> ₁₀	17.0	X	96.53481	185.99605	178.60460	4.48692	0.2072505	0.24114796	2.5563108	20	—	—
317425 2002 <i>QW</i> ₁₀	16.6	X	67.79875	302.77895	289.89268	5.77147	0.0786564	0.27544736	2.3394313	20	8 24.3	19.5
317426 2002 <i>QT</i> ₁₅	17.2	X	162.20665	15.57385	339.80179	18.69219	0.0571054	0.35983590	1.9576410	20	1 21.7	19.6
317427 2002 <i>QX</i> ₁₇	17.3	X	330.51716	138.47703	157.31609	0.69845	0.2058624	0.26847282	2.3797747	20	6 3.3	19.0
317428 2002 <i>QX</i> ₁₈	17.4	X	38.62406	213.99033	61.95087	3.23717	0.1796839	0.27673122	2.3321901	20	10 4.3	20.0
317429 2002 <i>QH</i> ₂₃	16.9	X	63.14791	41.66642	340.82764	4.12041	0.1389307	0.23754082	2.5821247	20	—	—
317430 2002 <i>QE</i> ₂₅	17.4	X	346.30603	203.25434	145.31126	6.79734	0.1490586	0.27779026	2.3262588	20	10 17.6	19.5
317431 2002 <i>QW</i> ₂₅	16.1	X	54.79008	61.61454	315.42093	0.17181	0.1745203	0.17950791	3.1122919	20	—	—
31												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317441 2002 QR ₉₁	17.2	X	82.35423	212.39411	50.52947	6.35617	0.1293095	0.28058055	2.3108106	20	11 2.5	20.4
317442 2002 QY ₁₀₂	16.8	X	312.33697	194.37572	121.01841	7.26917	0.1099165	0.26748531	2.3856282	20	6 12.8	19.3
317443 2002 QC ₁₁₀	16.7	X	271.09306	32.27987	297.93027	2.81182	0.1009904	0.20905075	2.8116952	20	5 3.7	20.6
317444 2002 QZ ₁₁₀	17.2	X	290.51056	224.95306	165.34507	5.96299	0.1275352	0.27491280	2.3424630	20	8 25.5	19.6
317445 2002 QG ₁₁₂	16.0	X	92.71327	227.27460	167.40849	6.89966	0.1494932	0.18892370	3.0080041	20	1 19.2	20.1
317446 2002 QY ₁₁₃	17.5	X	127.27928	185.55431	229.30524	6.66959	0.1184190	0.25202833	2.4821983	20	3 12.7	21.0
317447 2002 QF ₁₂₄	16.2	X	31.64745	109.43819	260.74989	3.69813	0.0821859	0.17813559	3.1282557	20	12 18.5	20.3
317448 2002 QH ₁₂₅	14.8	X	167.63961	308.18357	154.21061	15.28754	0.1019371	0.15511167	3.4306236	20	6 27.6	20.4
317449 2002 QJ ₁₃₇	16.2	X	214.12477	128.31464	142.61357	6.00290	0.1156939	0.19038268	2.9926167	20	—	—
317450 2002 QM ₁₃₇	17.2	X	351.68912	345.43212	252.91342	2.24817	0.1313579	0.26465264	2.4026208	20	4 24.4	19.3
317451 2002 QR ₁₃₈	16.7	X	160.53192	80.49424	148.42380	6.63001	0.1250011	0.23462973	2.6034387	20	11 30.7	20.8
317452 2002 QT ₁₄₀	17.0	X	91.94450	90.53745	316.32363	15.93033	0.1729090	0.24405467	2.5359731	20	1 29.7	20.0
317453 2002 QK ₁₄₆	16.5	X	306.91013	259.04926	46.27904	1.98418	0.0496698	0.21070144	2.7969908	20	5 27.8	20.2
317454 2002 QT ₁₄₆	16.3	X	150.99928	193.99247	121.97504	3.96530	0.1010180	0.18805816	3.0172266	20	—	—
317455 2002 QE ₁₄₉	16.8	X	143.64225	337.90914	354.75861	9.03785	0.1824810	0.30042666	2.2078882	20	—	—
317456 2002 RP	18.5	X	301.37134	230.39601	72.82188	0.67223	0.1294464	0.31747557	2.1281187	20	4 30.8	20.7
317457 2002 RH ₁₁	16.2	X	165.77169	130.34779	162.34117	5.55351	0.1996556	0.18703968	3.0281698	20	—	—
317458 2002 RJ ₁₈	17.4	X	311.37367	167.63378	142.80223	3.57830	0.2413115	0.26666175	2.3905375	20	5 12.2	19.7
317459 2002 RY ₂₁	17.5	X	289.73726	170.41913	142.40878	1.95983	0.1994002	0.26363265	2.4088139	20	4 19.3	20.6
317460 2002 RF ₅₀	17.0	X	289.01547	163.18373	157.66066	5.43699	0.2503498	0.26403112	2.4063898	20	4 22.6	20.1
317461 2002 RG ₆₀	16.3	X	294.09848	329.03105	13.82733	9.33588	0.2510170	0.26657067	2.3910820	20	5 26.1	19.2
317462 2002 RS ₆₈	17.3	X	184.65059	197.49275	171.16085	22.09156	0.0572704	0.36444978	1.9410836	20	3 3.8	19.3
317463 2002 RF ₁₂₃	16.8	X	317.23150	312.11557	82.91153	6.40493	0.1696182	0.27583091	2.3372622	20	10 28.3	18.6
317464 2002 RL ₁₂₇	16.9	X	340.67029	151.26909	228.90926	9.09480	0.2509960	0.27876247	2.3208470	20	12 6.8	18.6
317465 2002 RY ₁₂₉	16.5	X	48.65884	332.19485	25.81385	12.89200	0.3618731	0.23011047	2.6374149	20	—	—
317466 2002 RK ₁₃₇	16.7	X	318.46193	353.01917	280.96437	6.62084	0.1293126	0.26222136	2.4174491	20	4 14.5	19.5
317467 2002 RL ₁₄₂	15.2	X	347.92129	54.42743	338.32851	18.06420	0.1226906	0.17016272	3.2252232	20	11 8.7	19.5
317468 2002 RM ₁₄₂	17.6	X	45.78731	290.16107	330.67724	9.87081	0.2384130	0.27531193	2.3401985	20	9 26.7	20.7
317469 2002 RJ ₁₄₃	17.0	X	49.37981	324.72155	305.69644	4.69843	0.1507205	0.27558101	2.3386749	20	10 2.5	19.9
317470 2002 RK ₁₄₇	16.8	X	271.56559	31.29608	353.06669	3.72630	0.1109052	0.21218000	2.7839820	20	7 15.9	20.5
317471 2002 RV ₁₅₈	14.9	X	279.54851	10.98007	345.25715	13.31858	0.0570508	0.15387071	3.4490441	20	6 25.5	20.0
317472 2002 RX ₁₆₃	16.9	X	31.57333	107.93399	171.51811	6.83562	0.1668000	0.27471736	2.3435739	20	9 25.1	19.4
317473 2002 RW ₁₇₃	16.5	X	81.45133	156.15016	191.39666	8.64923	0.0535724	0.23514608	2.5996261	20	—	—
317474 2002 RE ₁₇₅	16.3	X	282.23504	18.45126	322.49209	8.24042	0.1583283	0.20968579	2.8060154	20	5 22.6	20.2
317475 2002 RH ₁₉₂	17.2	X	336.99589	273.44567	8.10505	2.51058	0.1698885	0.26691123	2.3890477	20	5 29.4	19.3
317476 2002 RX ₁₉₂	17.3	X	54.21539	274.99358	6.09860	7.43871	0.1017856	0.27784332	2.3259627	20	10 17.7	20.3
317477 2002 RT ₁₉₈	16.5	X	298.45000	337.43301	9.96387	4.33496	0.0821275	0.21217714	2.7840070	20	7 8.6	20.1
317478 2002 RF ₂₁₆	17.4	X	96.32008	74.14359	359.82794	19.30199	0.0760232	0.36117278	1.9528072	20	2 15.6	19.4
317479 2002 RT ₂₁₉	16.0	X	160.35355	146.69435	159.61279	10.06025	0.1748274	0.18752168	3.0229785	20	—	—
317480 2002 RV ₂₃₉	18.0	X	321.42658	152.71550	142.67984	3.06156	0.1798635	0.26724512	2.3870574	20	5 18.8	20.3
317481 2002 RO ₂₄₈	16.4	X	136.67316	208.58418	171.72017	2.53492	0.1355947	0.19259137	2.9696926	20	2 19.3	21.0
317482 2002 RQ ₂₆₂	16.7	X	247.40404	340.82590	197.41730	9.03314	0.0381745	0.23347173	2.6120401	20	—	—
317483 2002 RX ₂₆₄	16.2	X	11.65136	356.78493	48.67930	2.24071	0.1135668	0.17593670	3.1542668	20	—	—
317484 2002 RS ₂₇₁	15.4	X	52.25716	83.68475	162.26484	14.88982	0.1676793	0.16362405	3.3105841	20	8 23.0	19.8
317485 2002 RD ₂₈₃	16.5	X	206.64131	209.23982	151.48969	2.91411	0.0702930	0.19860542	2.9094350	20	4 4.6	20.8
317486 2002 RH ₂₉₀	15.7	X	99.77574	178.27915	140.05033	17.33107	0.1214488	0.17800901	3.1297386	20	—	—
317487 2002 RM ₂₉₀	16.6	X	257.33620	215.97103	56.51353	7.50628	0.1054847	0.25353856	2.4723315	20	2 3.6	20.2
317488 2002 SX ₅	17.3	X	294.94655	119.62158	219.27652	1.00323	0.1846851	0.26547732	2.3976426	20	6 5.1	19.9
317489 2002 SD ₈	16.8	X	252.86214	301.55934	7.05482	4.62481	0.1818807	0.25532306	2.4607983	20	3 6.9	20.5
317490 2002 SJ ₉	16.1	X	64.57114	306.47961	52.66144	1.65190	0.1902301	0.17629634	3.1499756	20	—	—
317491 2002 SO ₁₁	17.0	X	204.32033	331.34141	32.41264	5.26885	0.0943173	0.25378873	2.4707065	20	4 1.9	20.5
317492 2002 SL ₁₇	17.0	X	42.90315	254.45671	192.75962	4.57282	0.2544765	0.23776746	2.5804836	20	—	—
317493 2002 SU ₃₄	16.3	X	37.16388	258.62932	9.14463	23.16371	0.2506180	0.27439772	2.3453935	20	10 1.0	18.9
317494 2002 SL ₃₉	15.2	X	140.19156	97.94712	180.63659	19.18779	0.1917416	0.17900949	3.1180663	20	12 28.2	20.8
317495 2002 SO ₅₁	17.6	X	200.09420	24.49246	289.60045	4.00169	0.1518987	0.30452500	2.1880341	20	1 19.7	20.9
317496 2002 SO ₅₂	17.6	X	154.66158	250.48454	112.24074	6.85002	0.2014941	0.30264276	2.1970968	20	2 12.0	20.7
317497 2002 SD ₆₉	17.5	X	54.80807	151.39974	291.74868	0.54741	0.0798686	0.24230734	2.5481501	20	1 7.5	20.4
317498 2002 SJ ₇₀	16.3	X	7.79366	61.98454	11.75365	7.48658	0.1135367	0.17775828	3.1326809	20	—	—
317499 2002 TW	16.7	X	81.67052	255.59661	171.04365	11.58827	0.2619772	0.24170223	2.5524012	20	2 22.3	19.5
317500 2002 TN ₁	17.2	X	76.02494	21.73809	8.47096	5.02084	0.2712698	0.23617495	2.5920706	20	—	—
317501 2002 TZ ₃	16.8	X	96.61282	308.77501	45.89311	3.70163	0.2086355	0.23569204	2.5956100	20	—	—
317502 2002 TK ₅	17.1	X	44.18312	256.60008	107.16312	2.94552	0.2286543	0.28433096	2.2904454	20	—	—
317503 2002 TS ₁₀	17.2	X	268.07986	274.08369	14.52738	19.60921	0.0511653	0.36551088	1.9373251	20	3 7.6	19.5
317504 2002 TJ ₁₅	16.8	X	276.18912	287.96206	36.66971	6.44174	0.2187092	0.26210404	2.4181704	20	4 15.7	20.1
317505 2002 TH ₁₈	17.2	X	261.32329	336.74819	338.24483	1.03927	0.1708805	0.25773206	2.4454404	20	3 22.9	20.6
317506 2002 TO ₂₂	16.8	X	286.34534	119.43044	218.32751	2.20125	0.1745506	0.26359356	2.4090521	20	5 23.1	19.5
317507 2002 TM ₃₁	16.9	X	283.87811	165.42163	177.54422	4.22314	0.2330019	0.26363815	2.4087804	20	5 18.3	20.0
317508 2002 TQ ₃₁	17.4	X	85.29426	196.21536	197.26055	22.28730	0.1210212	0.34950936	1.9960137	20	—	—
317509 2002 TO ₃₃	17.5	X	13.12119	116.72232	205.19681	4.95452	0.2598248	0.27693968	2.3310196	20	11 12.9	19.8
317510 2002 TJ ₅₄	16.1	X	329.95717	0.61615	34.78670	14.67697	0.1314538	0.21970978	2.7200055	20	11 2.3	19.0
317511 2002 TX ₆₇	16.2	X	125.86141	80.40316	288.23985	20.85888	0.1440634	0.24060852	2.5601302	20	1 17.9	19.7
317512 2002 TL ₇₁	16.8	X	76.93810	26.80359	352.59498	12.22192	0.2631106	0.23545591	2.5973451	20	—	—
317513 2002 TT ₇₂	16.7	X	294.14028	22.59303	297.48132	5.69363	0.1438803	0.26156266	2.4215060	20	5 12.3	19.6
317514 2002 TQ ₇₅	15.6	X	307.21674	337.88409								

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317521 2002 <i>TM</i> ₁₄₈	16.7	X	279.74000	5.01112	293.84749	12.16916	0.1660767	0.26055324	2.4277562	20	3 16.0	20.4
317522 2002 <i>TS</i> ₁₆₂	16.7	X	27.05733	321.91312	96.85738	15.33607	0.2495523	0.23076748	2.6324067	20	—	—
317523 2002 <i>TE</i> ₁₇₄	16.5	X	316.94865	236.62794	74.98770	8.17507	0.3034342	0.21210655	2.7846247	20	5 14.5	19.4
317524 2002 <i>TK</i> ₁₈₄	15.0	X	262.51450	18.14570	342.99731	10.89883	0.1360465	0.15120632	3.4894428	20	5 27.3	20.3
317525 2002 <i>TL</i> ₁₉₇	17.4	X	78.29388	67.20889	345.59299	3.13927	0.1311708	0.29592778	2.2302090	20	—	—
317526 2002 <i>TV</i> ₂₀₄	17.1	X	342.00400	197.99785	117.16947	6.08605	0.2422712	0.27038189	2.3685596	20	8 10.4	18.1
317527 2002 <i>TM</i> ₂₂₆	16.8	X	42.49635	244.86612	162.90268	5.46455	0.3591620	0.23121163	2.6290344	20	—	—
317528 2002 <i>TP</i> ₂₃₆	15.0	X	60.73129	73.81385	266.95498	12.26007	0.1430465	0.17179382	3.2047761	20	12 24.4	19.7
317529 2002 <i>TR</i> ₂₃₉	16.8	X	321.44459	106.64594	234.96631	7.07422	0.2151830	0.26895520	2.3769283	20	7 26.5	18.7
317530 2002 <i>TE</i> ₂₆₉	17.3	X	79.83302	101.45511	298.94561	3.44714	0.2989142	0.23830629	2.5765924	20	1 22.4	19.6
317531 2002 <i>TB</i> ₂₈₀	17.6	X	159.66158	115.58743	278.61019	3.99339	0.1344445	0.30520281	2.1847934	20	3 19.7	20.8
317532 2002 <i>TP</i> ₂₈₈	15.6	X	31.87036	214.06963	230.13477	32.06967	0.2275768	0.23298057	2.6157099	20	—	—
317533 2002 <i>TS</i> ₃₀₇	16.5	X	165.00241	151.63597	123.92848	5.64230	0.2499118	0.23739578	2.5831764	20	—	—
317534 2002 <i>TR</i> ₃₀₉	16.4	X	272.95272	263.47451	129.18641	6.53511	0.0839073	0.21111383	2.7933472	20	8 1.4	19.9
317535 2002 <i>TR</i> ₃₁₂	17.0	X	35.82972	28.42388	91.41088	8.73540	0.1400982	0.24112250	2.5564907	20	1 30.4	19.6
317536 2002 <i>TJ</i> ₃₂₄	17.9	X	7.72546	293.57927	181.13659	5.60195	0.2878307	0.23611338	2.5925212	20	—	—
317537 2002 <i>TK</i> ₃₂₆	16.7	X	315.99454	308.26746	39.27705	1.88224	0.0885017	0.21375986	2.7702478	20	8 4.8	20.0
317538 2002 <i>TS</i> ₃₅₀	15.6	X	221.91317	322.84092	191.52259	18.53564	0.1193642	0.17253947	3.1955362	20	10 24.1	20.4
317539 2002 <i>TG</i> ₃₅₁	17.6	X	21.41822	23.50781	265.67744	5.62384	0.1190654	0.27434374	2.3457011	20	9 10.2	20.1
317540 2002 <i>TR</i> ₃₅₆	17.3	X	29.97302	301.66342	333.32911	2.92510	0.1125339	0.27373046	2.3492035	20	9 22.2	19.7
317541 2002 <i>UC</i>	16.0	X	19.07489	264.91325	188.16482	27.81581	0.3541130	0.23112170	2.6297163	20	—	—
317542 2002 <i>UH</i> ₄	14.1	X	177.37563	205.33793	263.63047	34.74140	0.1255670	0.20354900	2.8621347	20	7 8.4	19.0
317543 2002 <i>UB</i> ₅	16.9	X	50.91077	209.07472	127.00581	7.86616	0.2078486	0.28173548	2.3044910	20	—	—
317544 2002 <i>UC</i> ₈	16.7	X	300.59879	206.61627	125.78685	9.37890	0.2329081	0.26437200	2.4043208	20	5 29.4	19.5
317545 2002 <i>UH</i> ₁₂	16.7	X	157.19739	262.38140	66.71680	23.78026	0.1124631	0.35062363	1.9917826	20	—	—
317546 2002 <i>UE</i> ₁₅	17.0	X	116.50273	46.97908	319.49050	13.99124	0.2790716	0.23983057	2.5656635	20	1 25.9	20.6
317547 2002 <i>UW</i> ₁₈	15.6	X	95.67070	181.84866	222.10462	6.14459	0.1173013	0.18467171	3.0539998	20	1 29.3	19.9
317548 2002 <i>UQ</i> ₃₀	17.6	X	182.19311	172.04201	230.29113	0.95481	0.0410772	0.25375085	2.4709524	20	4 26.2	20.9
317549 2002 <i>UM</i> ₃₄	17.1	X	84.94178	252.73914	131.33928	4.77506	0.2509385	0.23548111	2.5971598	20	1 1.0	19.9
317550 2002 <i>UE</i> ₃₉	16.1	X	78.63366	248.53921	151.61346	6.09387	0.1838760	0.18029164	3.1032659	20	1 14.1	19.9
317551 2002 <i>UP</i> ₄₀	16.1	X	45.64984	341.26399	78.66590	14.45865	0.2343382	0.23300013	2.6155635	20	—	—
317552 2002 <i>UD</i> ₄₁	15.8	X	102.13333	153.85584	217.38053	16.46695	0.1856134	0.18077823	3.0976948	20	1 7.0	20.4
317553 2002 <i>UM</i> ₄₅	15.4	X	132.34236	208.57658	117.10855	6.38434	0.2925317	0.18162438	3.0880663	20	—	—
317554 2002 <i>UD</i> ₆₀	16.6	X	71.79868	333.62527	84.56921	10.02212	0.1483316	0.23822601	2.5771712	20	1 9.5	19.4
317555 2002 <i>UH</i> ₇₂	15.7	X	178.01408	267.33662	74.55254	9.68306	0.1405352	0.18906274	3.0065292	20	2 18.2	20.6
317556 2002 <i>UA</i> ₇₈	16.5	X	221.75175	184.59653	224.23981	1.19576	0.0639008	0.20283542	2.8688434	20	6 21.1	20.5
317557 2002 <i>VF</i> ₃	16.5	X	94.42527	140.83547	241.54120	12.69983	0.1865803	0.23665664	2.5885521	20	1 1.4	19.7
317558 2002 <i>VD</i> ₇	17.2	X	95.18453	17.40128	7.60461	3.78524	0.2294296	0.23733072	2.5836484	20	1 15.4	20.2
317559 2002 <i>VC</i> ₁₉	16.7	X	52.87744	199.40788	224.67640	10.04704	0.1584039	0.23468213	2.6030511	20	—	—
317560 2002 <i>VN</i> ₁₉	17.4	X	113.92858	149.73146	240.62034	3.61899	0.1556131	0.29651839	2.2272466	20	1 24.3	19.8
317561 2002 <i>VY</i> ₄₄	16.8	X	37.30520	358.98508	75.40304	7.28169	0.2506536	0.23416841	2.6068568	20	—	—
317562 2002 <i>VE</i> ₄₇	17.3	X	36.02186	358.58530	79.56158	5.68309	0.2436403	0.23283634	2.6167900	20	—	—
317563 2002 <i>VD</i> ₆₂	16.2	X	117.09489	345.72565	39.06404	15.72692	0.1060211	0.24014659	2.5634121	20	1 29.5	20.0
317564 2002 <i>VG</i> ₇₂	16.6	X	272.27348	185.67368	138.21060	2.15276	0.1878168	0.25717735	2.4489556	20	4 14.8	19.9
317565 2002 <i>VR</i> ₇₃	17.0	X	288.51898	212.30574	144.73927	3.68890	0.2330484	0.26413535	2.4057567	20	6 13.4	19.7
317566 2002 <i>VS</i> ₁₀₇	17.1	X	54.81906	45.47949	24.53856	4.0838	0.2666917	0.23434199	2.6055694	20	1 8.6	19.1
317567 2002 <i>VV</i> ₁₀₉	16.7	X	109.40647	109.51776	288.46815	3.68496	0.2266016	0.23925576	2.5697711	20	2 16.7	20.2
317568 2002 <i>VL</i> ₁₁₄	17.4	X	336.38663	186.32229	188.28059	1.23194	0.1998034	0.27249837	2.3562794	20	11 7.3	18.8
317569 2002 <i>VY</i> ₁₁₅	17.5	X	53.73054	259.62911	150.79327	4.20656	0.2273615	0.23317545	2.6142523	20	—	—
317570 2002 <i>VO</i> ₁₁₈	16.0	X	85.98026	108.74649	280.32539	15.38181	0.2165859	0.23693333	2.5865365	20	1 3.5	18.6
317571 2002 <i>VB</i> ₁₂₀	15.9	X	139.61650	71.93706	269.43039	12.27174	0.2506281	0.23763252	2.5814604	20	1 12.1	19.9
317572 2002 <i>VG</i> ₁₂₅	16.6	X	36.78220	166.53684	262.81510	11.84022	0.1450738	0.23228765	2.6209092	20	—	—
317573 2002 <i>VE</i> ₁₂₆	15.2	X	67.53948	277.38159	68.08758	13.66460	0.1548408	0.17035444	3.2228029	20	—	—
317574 2002 <i>VE</i> ₁₄₀	17.5	X	65.98980	272.40451	103.59986	3.68279	0.1545598	0.28797673	2.2710731	20	—	—
317575 2002 <i>VZ</i> ₁₄₂	17.2	X	281.25709	174.30516	159.94267	4.92025	0.1981857	0.26009211	2.4306248	20	5 8.9	20.4
317576 2002 <i>VQ</i> ₁₄₃	15.1	X	267.67387	339.76398	76.87972	11.06278	0.0731186	0.15527145	3.4282696	20	8 26.5	20.1
317577 2002 <i>VX</i> ₁₄₃	16.5	X	257.95661	65.20209	52.37609	13.03099	0.1488536	0.21722367	2.7407197	20	10 26.4	20.1
317578 2002 <i>VB</i> ₁₄₅	16.2	X	82.59176	291.88105	114.92146	3.13539	0.1386504	0.18156657	3.0887217	20	1 21.4	20.3
317579 2002 <i>WD</i> ₁₁	17.1	X	356.96462	224.45216	254.92825	4.03161	0.2592923	0.22973010	2.6403254	20	—	—
317580 2002 <i>WV</i> ₁₃	17.4	X	22.12992	249.00277	211.23220	5.49195	0.3261545	0.23127652	2.6285426	20	—	—
317581 2002 <i>WX</i> ₁₄	17.3	X	304.90879	251.79156	173.55621	5.11385	0.2124691	0.27279807	2.3545533	20	11 13.4	18.8
317582 2002 <i>WL</i> ₁₅	16.6	X	229.56012	206.34182	181.67551	6.39812	0.1487476	0.25699404	2.4501200	20	5 27.3	20.3
317583 2002 <i>WW</i> ₁₉	18.2	X	64.61452	267.40099	154.01610	2.48155	0.1273582	0.29173249	2.2515392	20	—	—
317584 2002 <i>WH</i> ₂₆	17.1	X	94.53063	268.91025	159.61677	3.84976	0.1080432	0.24084643	2.5584440	20	2 20.2	20.4
317585 2002 <i>WW</i> ₂₇	15.5	X	345.94606	254.54757	230.92575	8.27915	0.0470629	0.17530064	3.1618921	20	—	—
317586 2002 <i>XG</i> ₉	16.2	X	76.63016	141.37762	261.34958	12.37280	0.1033576	0.23515960	2.5995264	20	—	—
317587 2002 <i>XN</i> ₁₁	17.0	X	31.59124	31.76917	36.08787	13.08143	0.2597231	0.23078555	2.6322693	20	—	—
317588 2002 <i>XO</i> ₁₃	17.0	X	102.86660	238.11893	150.21808	6.41915	0.1689522	0.23686547	2.5870305	20	1 19.5	20.3
317589 2002 <i>XA</i> ₂₀	16.3	X	78.81669	118.49087	300.65123	4.83582	0.2423195	0.23742166	2.5829886	20	2 5.5	19.0
317590 2002 <i>XW</i> ₂₀	16.4	X	306.69237	311.55920	34.74121	8.63616	0.1202146	0.26305343	2.4123486	20	7 20.6	19.1
317591 2002 <i>XX</i> ₂₃	16.8	X	117.72278	102.53279	288.71817	10.76870	0.1995314	0.24027875	2.5624721	20	2 11.8	20.4
317592 2002 <i>XK</i> ₂₉	15.9	X	15.37585	56.50464	95.40554	31.12824						

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317601 2002 XZ ₇₅	16.5	X	182.97070	55.42274	312.70777	2.98025	0.2710649	0.24667145	2.5180062	20	3 18.5	21.0
317602 2002 XM ₉₄	17.1	X	86.12406	56.41895	350.15976	3.01380	0.1838133	0.23748937	2.5824976	20	1 23.0	19.9
317603 2002 XA ₁₁₂	16.6	X	246.11031	172.25232	299.03647	3.51376	0.1597605	0.21176364	2.7876299	20	9 25.8	20.6
317604 2002 XZ ₁₁₃	15.8	X	185.59584	58.47600	295.08022	9.03191	0.1877237	0.24357290	2.5393160	20	2 28.1	20.2
317605 2002 YG ₁₂	16.9	X	37.04503	146.87656	269.44186	11.72731	0.2566175	0.22916532	2.6446617	20	—	—
317606 2002 YQ ₁₅	16.8	X	287.05304	326.12020	88.15850	7.94064	0.1145906	0.26781519	2.3836688	20	10 1.5	19.4
317607 2002 YA ₂₅	16.4	X	3.33552	350.02393	112.31512	5.85681	0.2098106	0.22696950	2.6616915	20	—	—
317608 2003 AS ₇	16.9	X	77.72696	130.90442	86.96648	5.45446	0.2465566	0.23199125	2.6231411	20	1 7.9	19.5
317609 2003 AW ₁₈	16.8	X	297.63833	327.36652	151.03784	6.34592	0.1189549	0.27332479	2.3515273	20	—	—
317610 2003 AO ₂₁	16.5	X	20.93330	180.53793	306.00660	7.56930	0.1100221	0.23231481	2.6207049	20	1 14.0	19.2
317611 2003 AY ₄₀	15.2	X	116.97988	187.95644	279.54262	9.37914	0.2146002	0.18629987	3.0361812	20	5 22.6	20.1
317612 2003 AV ₄₇	16.1	X	352.23660	198.92109	321.00456	9.35906	0.1112269	0.23240905	2.6199964	20	1 12.8	19.1
317613 2003 AW ₅₀	16.9	X	2.62025	22.26195	69.10880	4.88339	0.2229836	0.22512785	2.6761876	20	—	—
317614 2003 AZ ₅₅	16.2	X	46.82735	305.37447	146.49083	13.54210	0.1555187	0.23182366	2.6244052	20	1 12.4	18.9
317615 2003 AS ₅₆	15.9	X	287.79533	251.06707	324.07330	11.41744	0.2041702	0.22728015	2.6592656	20	—	—
317616 2003 AW ₆₈	16.0	X	65.98437	109.82457	319.68204	10.85331	0.1658027	0.23216993	2.6217950	20	1 20.0	18.8
317617 2003 AC ₇₃	16.7	X	23.80577	77.08261	22.13579	4.99934	0.2448005	0.22910241	2.6451458	20	—	—
317618 2003 BR ₁₃	16.5	X	128.82499	148.06713	275.62692	2.06679	0.0930363	0.23980455	2.5658490	20	3 25.5	20.0
317619 2003 BR ₁₆	15.9	X	344.74205	162.33417	344.29754	12.27133	0.1369252	0.22580089	2.6708671	20	—	—
317620 2003 BL ₃₁	16.0	X	335.14053	75.60144	150.44464	4.66166	0.1995681	0.23476075	2.6024700	20	2 29.9	18.9
317621 2003 BK ₃₅	16.9	X	81.67004	336.66671	44.42190	5.10751	0.0504364	0.28190614	2.3035609	20	—	—
317622 2003 BG ₄₂	17.1	X	350.50722	319.90160	183.70206	6.28030	0.2302249	0.22726800	2.6593603	20	—	—
317623 2003 BP ₆₄	16.0	X	172.78784	294.11547	134.25253	9.13962	0.1314752	0.18979402	2.9988013	20	5 24.8	20.9
317624 2003 BN ₇₃	15.7	X	17.02595	113.79716	35.27951	3.71545	0.1753212	0.17585372	3.1552590	20	2 18.4	19.2
317625 2003 BV ₇₅	16.5	X	331.93761	156.86352	351.44123	14.52087	0.0942866	0.22500121	2.6771917	20	—	—
317626 2003 BP ₇₆	16.3	X	23.95914	334.43513	89.38845	15.19285	0.2359531	0.22363082	2.6881177	20	—	—
317627 2003 BX ₇₈	16.5	X	86.06982	145.59623	327.80970	6.96950	0.1199056	0.23910855	2.5708258	20	4 7.4	19.9
317628 2003 BD ₈₃	16.6	X	302.83569	76.59930	359.06279	7.23066	0.2132481	0.21258665	2.7804306	20	10 28.4	19.3
317629 2003 CT ₂	16.2	X	326.54699	232.70484	297.19687	12.38783	0.1216364	0.22675056	2.6634046	20	—	—
317630 2003 CX ₁₄	16.4	X	292.94962	89.90307	121.76348	13.60859	0.2048723	0.22521776	2.6754754	20	—	—
317631 2003 CB ₂₀	16.7	X	308.19289	266.44953	280.77926	7.07348	0.1439078	0.22126949	2.7072084	20	—	—
317632 2003 CM ₂₀	16.0	X	190.82267	110.48965	102.89618	7.27693	0.1320988	0.21001618	2.8030717	20	12 5.9	20.4
317633 2003 CY ₂₀	17.0	X	143.93757	107.22904	208.51157	4.06142	0.1512424	0.20942551	2.8083399	20	—	—
317634 2003 CL ₂₅	15.8	X	301.51538	76.37118	105.01281	12.35013	0.1700877	0.22125717	2.7073089	20	—	—
317635 2003 DO ₆	16.2	X	280.77070	34.58638	149.02702	11.37210	0.2443301	0.21887008	2.7269580	20	—	—
317636 2003 DK ₁₁	16.0	X	341.53812	37.67723	178.78820	13.84929	0.1164473	0.23294180	2.6160001	20	2 10.7	19.3
317637 2003 EZ ₁	16.4	X	333.36891	157.32324	16.81618	6.65656	0.1097786	0.22658871	2.6646727	20	1 4.2	19.8
317638 2003 EQ ₁₁	16.8	X	279.98827	62.04722	178.67887	10.58126	0.3989423	0.22120752	2.7077140	20	—	—
317639 2003 EB ₂₃	16.0	X	294.07997	185.98641	9.35697	11.35457	0.1413390	0.22112383	2.7083971	20	—	—
317640 2003 ER ₂₃	17.1	X	197.29778	76.89973	113.61928	2.05644	0.1344067	0.26336272	2.4104595	20	11 24.2	20.5
317641 2003 EH ₃₀	16.5	X	335.95661	249.08276	329.69731	10.81276	0.1391666	0.23202625	2.6228772	20	2 28.9	19.6
317642 2003 EX ₄₀	15.8	X	354.78295	339.89253	115.01159	13.55460	0.1533416	0.21981720	2.7191193	20	—	—
317643 2003 FH ₁	18.2	X	186.11355	29.16306	40.21739	14.64080	0.4396662	0.76506358	1.1839618	20	5 31.5	19.3
317644 2003 FU ₁	16.7	X	285.43690	29.86364	181.67206	11.72604	0.0165468	0.22182548	2.7026829	20	1 2.5	20.6
317645 2003 FT ₁₁	16.7	X	311.21046	310.05659	192.88156	12.60380	0.1354474	0.21653765	2.7465053	20	—	—
317646 2003 FY ₂₁	17.3	X	232.26462	236.05602	349.62256	1.78083	0.1651506	0.27125387	2.3634808	20	—	—
317647 2003 FE ₂₇	16.5	X	227.02012	343.35201	265.78155	1.23962	0.1387185	0.21632070	2.7483413	20	—	—
317648 2003 FM ₃₀	16.0	X	249.40391	80.26993	144.12186	5.64345	0.1051289	0.21634852	2.7481057	20	—	—
317649 2003 FN ₃₄	17.5	X	0.78456	125.77524	11.77367	4.85029	0.1701179	0.28135601	2.3065626	20	—	—
317650 2003 FD ₄₆	16.1	X	260.33400	226.79175	18.05333	11.68459	0.1231286	0.22064635	2.7123031	20	1 5.8	20.4
317651 2003 FU ₆₁	16.1	X	248.13273	212.45668	34.10116	9.15543	0.2385160	0.21797670	2.7344039	20	—	—
317652 2003 FV ₆₂	16.9	X	274.92283	2.34178	167.14047	8.04180	0.1362687	0.27126813	2.3633980	20	—	—
317653 2003 FO ₇₆	16.8	X	316.46598	326.03369	189.47768	15.27224	0.1442937	0.21908667	2.7251603	20	—	—
317654 2003 FT ₇₉	15.8	X	260.53645	234.31967	20.89420	16.30653	0.2377252	0.21980869	2.7191897	20	1 11.1	20.7
317655 2003 FU ₈₅	15.8	X	251.06851	225.82718	359.46946	11.05101	0.1560542	0.21483907	2.7609627	20	—	—
317656 2003 FO ₁₀₅	16.5	X	164.20603	19.82758	167.76771	8.13813	0.1380709	0.19867304	2.9087747	20	10 10.1	21.1
317657 2003 FT ₁₀₆	16.2	X	315.14658	328.24902	199.05560	14.28202	0.1303674	0.21986293	2.7187423	20	—	—
317658 2003 FH ₁₁₂	17.8	X	251.60538	350.63319	255.65907	2.57416	0.2121887	0.27622845	2.3350191	20	—	—
317659 2003 FY ₁₁₇	16.3	X	301.11731	120.06187	31.70245	11.37325	0.1366726	0.21713176	2.7414930	20	—	—
317660 2003 FN ₁₁₈	16.5	X	252.82883	146.74542	37.66014	8.53020	0.1580700	0.21317979	2.7752708	20	—	—
317661 2003 FR ₁₂₀	16.7	X	14.35666	18.81305	198.01464	5.56311	0.1580676	0.23623176	2.5916550	20	5 11.6	19.0
317662 2003 FY ₁₂₂	15.8	X	18.03636	15.48786	201.64224	10.76366	0.0154922	0.17736648	3.1372926	20	5 14.3	20.1
317663 2003 FS ₁₂₄	16.5	X	278.59962	53.88490	153.78467	3.92391	0.1310430	0.21741389	2.7391208	20	—	—
317664 2003 FJ ₁₃₁	16.0	X	42.43579	346.51740	146.06129	12.01621	0.1219990	0.22819849	2.6521263	20	3 1.8	18.9
317665 2003 GF ₁₆	16.2	X	345.54651	183.49693	84.08930	6.69520	0.0967026	0.23888492	2.5724300	20	5 31.9	18.8
317666 2003 GV ₂₅	16.5	X	198.18266	214.58338	21.43851	9.26777	0.1072907	0.21207432	2.7849068	20	—	—
317667 2003 GW ₂₆	17.0	X	281.38615	341.69623	197.98823	2.86441	0.0290285	0.21461562	2.7628788	20	—	—
317668 2003 GA ₃₈	13.3	X	27.39748	147.36877	176.23506	13.56378	0.0163355	0.08052082	5.3112561	20	9 24.8	20.2
317669 2003 HE ₄	17.5	X	170.99903	257.63858	353.32427	1.77558	0.1672167	0.26221324	2.4174990	20	—	—
317670 2003 HZ ₁₃	17.6	X	323.09450	115.44320	116.51565	3.71311	0.1666165	0.28394882	2.2925000	20	2 16.9	20.1
317671 2003 HL ₁₉	16.4	X	32.02014	237.79769	195.88193	6.09522	0.0136891	0.21299617	2.7768655	20	—	—
317672 2003 HU ₃₉	15.5	X	198.62149	221.35315	52.78601	22.17312	0.1769102	0.20990960	2.8040205	20	—	—
317673 2003 HR ₄₂	15.7	X	294.50104	100.84353	38.09308	30.47525	0.3748794	0.21314227	2.7755965	20	12 12.7	18.4
317674 2003 HO ₅₀	15.8	X	299.62559	37.96904	164.87809	12.61870	0.1291194	0.21854850	2.7296324	20	—	—
317675 2003 HX ₅₈	17.2	X	177.14319	155.15805	63.12							

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317681 2003 KQ ₇	15.0	X	189.03444	343.15106	254.60390	15.81427	0.1128468	0.19774223	2.9178957	20	12 29.9	19.5
317682 2003 KX ₃₂	16.8	X	324.56210	170.96736	137.13191	4.35939	0.2787843	0.23413448	2.6071087	20	5 29.0	19.2
317683 2003 MS	17.3	X	60.43537	359.58222	306.76164	4.59735	0.3049726	0.30196112	2.2004020	20	12 24.8	20.9
317684 2003 MY ₅	15.6	X	215.36451	357.72825	261.36979	9.46364	0.2175943	0.20558303	2.8432248	20	—	—
317685 2003 NO ₄	18.1	X	184.27817	171.17209	135.37183	22.70156	0.3127899	0.43888743	1.7148809	20	—	—
317686 2003 NZ ₁₀	18.0	X	51.80573	141.49884	164.40391	5.45387	0.1401942	0.30066511	2.2067207	20	11 30.1	20.9
317687 2003 OD ₅	15.0	X	343.82163	210.84592	133.56719	9.82205	0.1702966	0.17572932	3.1567479	20	9 11.9	18.5
317688 2003 OD ₈	15.4	X	106.97381	190.57628	104.25052	14.13694	0.1598727	0.19193100	2.9765006	20	12 21.9	20.2
317689 2003 OY ₁₂	14.7	X	340.45528	100.50652	220.12220	17.66702	0.1538236	0.17055707	3.2202498	20	7 25.0	18.8
317690 2003 OA ₁₇	15.6	X	122.57177	150.08294	125.49613	10.81106	0.0546960	0.19095322	2.9866527	20	12 10.2	20.1
317691 2003 OG ₂₃	16.9	X	44.09333	24.38628	318.91401	3.83069	0.1955137	0.30084118	2.2058596	20	—	—
317692 2003 OF ₂₄	16.7	X	215.88654	255.97065	132.74199	21.61305	0.2614396	0.27813891	2.3243145	20	5 14.8	21.2
317693 2003 OP ₂₄	18.2	X	92.20670	338.69886	259.59979	3.50206	0.1244052	0.29863978	2.2166865	20	10 12.0	21.2
317694 2003 OQ ₂₆	15.6	X	4.76502	88.50159	265.09264	4.21000	0.2180965	0.18015338	3.1048534	20	11 7.0	18.9
317695 2003 OA ₃₃	17.3	X	340.54324	221.40803	136.05180	3.74690	0.1845150	0.29406882	2.2395980	20	10 27.5	18.9
317696 2003 PF ₅	17.3	X	19.13448	195.81118	130.47844	5.31753	0.2197552	0.29758709	2.2219110	20	11 27.5	19.8
317697 2003 PO ₅	17.1	X	47.65371	137.03888	188.35096	5.58586	0.1707994	0.30131564	2.2035433	20	12 23.8	20.1
317698 2003 PF ₆	17.0	X	101.56940	112.28403	177.08527	5.40841	0.1961956	0.30552805	2.1832426	20	12 31.7	20.5
317699 2003 PP ₉	17.8	X	29.03509	132.16652	166.14353	15.72970	0.1878858	0.41435049	1.7819307	20	11 25.4	20.0
317700 2003 QY	16.3	X	92.12127	134.63536	152.88449	6.91219	0.1743479	0.18715959	3.0268762	20	12 1.3	21.2
317701 2003 QZ ₂	15.8	X	64.12968	156.80460	169.30227	9.87617	0.0893356	0.18571753	3.0425247	20	12 8.5	20.3
317702 2003 QO ₃	17.8	X	228.93778	79.42693	288.02931	4.01660	0.2517922	0.27498405	2.3420584	20	4 19.5	21.9
317703 2003 QS ₆	15.3	X	54.17140	303.57076	333.17098	13.27780	0.2543013	0.17829717	3.1263655	20	10 12.2	20.0
317704 2003 QJ ₈	17.1	X	220.76714	130.48570	251.92540	5.60698	0.1234303	0.27662976	2.3327603	20	5 10.2	20.6
317705 2003 QW ₈	15.4	X	25.56646	190.43924	170.53179	13.14128	0.1385376	0.18366505	3.0651498	20	12 9.9	19.7
317706 2003 QP ₁₅	17.1	X	280.24600	146.49109	210.19559	5.55150	0.1374774	0.28313271	2.2969032	20	6 17.1	19.8
317707 2003 QO ₁₈	17.1	X	208.54720	245.25831	144.42435	5.75416	0.2519807	0.27451964	2.3446990	20	5 4.9	21.1
317708 2003 QL ₁₉	16.0	X	79.51595	304.08844	2.32047	9.79807	0.2165221	0.18659427	3.0329868	20	12 13.1	21.0
317709 2003 QM ₂₀	15.6	X	339.02505	349.10590	10.56985	9.44515	0.0807411	0.17446747	3.1719505	20	9 22.3	19.5
317710 2003 QM ₂₅	15.5	X	29.24898	12.89169	308.18916	8.97762	0.0813457	0.17922707	3.1155422	20	10 11.6	19.8
317711 2003 QK ₂₆	15.5	X	51.90995	11.06995	300.77585	7.04109	0.2080039	0.18233873	3.0799956	20	11 19.9	20.0
317712 2003 QO ₂₆	17.2	X	21.27515	11.72466	322.33791	6.59809	0.2074746	0.29640548	2.2278121	20	12 6.9	19.9
317713 2003 QG ₂₈	17.2	X	336.13331	357.53185	344.96578	4.07945	0.1820527	0.29094994	2.2555746	20	9 15.9	18.6
317714 2003 QN ₂₈	17.4	X	321.30134	20.13467	303.23166	5.17864	0.2073795	0.28639591	2.2794226	20	6 29.9	19.1
317715 Guydetienne	16.0	X	137.88485	156.37782	191.72238	9.31426	0.1044252	0.20129676	2.8834440	20	1 7.8	20.4
317716 2003 QR ₃₂	17.2	X	56.75946	311.03267	351.67043	3.36679	0.1865451	0.29948228	2.2125272	20	12 5.1	20.3
317717 2003 QB ₃₃	15.3	X	53.88099	324.24588	346.15287	12.87751	0.1855081	0.18060046	3.0997273	20	11 14.1	20.0
317718 2003 QJ ₄₀	16.9	X	55.76839	323.07245	345.48188	6.18015	0.2156437	0.29955218	2.2121830	20	12 14.8	20.2
317719 2003 QX ₄₀	17.9	X	6.84775	349.67215	327.34081	5.28543	0.1768918	0.29358626	2.2420514	20	10 11.2	19.9
317720 2003 QR ₄₁	14.8	X	10.40048	158.06957	166.81604	27.26424	0.1559749	0.17476991	3.1682902	20	10 3.6	18.7
317721 2003 QR ₄₃	15.8	X	23.35037	337.59194	34.76897	1.61018	0.2867944	0.18233681	3.0800172	20	—	—
317722 2003 QE ₄₈	15.1	X	10.00681	73.55209	253.36623	6.69374	0.1514128	0.17610555	3.1522502	20	9 29.6	18.9
317723 2003 QT ₄₈	15.8	X	90.01509	269.52205	349.06266	9.00973	0.2590873	0.18257017	3.0773921	20	10 28.9	20.9
317724 2003 QO ₄₉	18.0	X	248.19420	246.99140	100.64911	1.87053	0.2168328	0.27744960	2.3281626	20	4 16.4	21.5
317725 2003 QS ₅₄	15.7	X	67.29198	168.41748	151.80189	11.91523	0.2004258	0.18492116	3.0512536	20	12 17.7	20.5
317726 2003 QO ₆₇	16.3	X	15.96420	56.80408	245.35029	4.23655	0.1493529	0.23540166	2.5977441	20	9 18.3	19.1
317727 2003 QP ₈₆	17.8	X	225.06427	311.56522	162.29796	1.73395	0.0622522	0.29335543	2.2432273	20	10 1.5	20.3
317728 2003 QY ₉₃	16.9	X	157.85350	357.22708	17.63672	4.65116	0.1802645	0.26645002	2.3918038	20	3 3.4	20.5
317729 2003 QR ₁₁₉	15.9	X	170.77907	28.63747	319.84386	12.37831	0.2150927	0.20549034	2.8440798	20	2 12.3	20.2
317730 2003 RP	17.5	X	257.33655	24.63308	352.26407	2.08730	0.1790986	0.28144191	2.3060933	20	6 7.8	20.7
317731 2003 RO ₁	16.9	X	43.38371	228.95968	70.84073	8.65528	0.1577657	0.29681918	2.2257416	20	11 13.5	19.6
317732 2003 RG ₁₆	16.1	X	264.18592	31.20974	339.52677	4.75782	0.1779248	0.22223927	2.6993271	20	6 6.9	20.0
317733 2003 RF ₂₃	15.8	X	107.32591	132.76468	164.22590	10.91669	0.1509351	0.18826727	3.0149920	20	12 23.3	20.8
317734 2003 RV ₂₄	15.4	X	65.47841	88.35257	247.75161	8.83413	0.0649411	0.18598147	3.0396455	20	12 17.7	19.7
317735 2003 SF ₃	17.8	X	279.15979	140.46881	210.32982	2.06385	0.1737848	0.28053612	2.3110545	20	5 31.6	20.4
317736 2003 SD ₄	15.7	X	28.39152	134.99864	184.34741	14.13547	0.0823142	0.17513773	3.1638526	20	10 13.6	19.9
317737 2003 SN ₈	15.9	X	61.94135	88.55561	186.56454	9.47773	0.0537383	0.17374238	3.1807695	20	9 26.6	20.4
317738 2003 SM ₁₂	17.4	X	269.49388	315.16498	34.89290	4.27948	0.1421485	0.27975250	2.3153682	20	5 21.4	20.2
317739 2003 SR ₁₂	17.8	X	267.91716	342.76559	344.60565	3.09580	0.2456150	0.27736172	2.3286544	20	4 4.7	21.2
317740 2003 SY ₁₃	15.8	X	252.99323	74.86476	353.04798	15.08341	0.0983535	0.22905096	2.6455419	20	8 25.6	19.4
317741 2003 SS ₁₅	15.1	X	30.23386	3.81885	290.56038	16.62719	0.1948657	0.17664751	3.1457994	20	9 19.0	19.4
317742 2003 SN ₂₅	15.0	X	66.23711	268.58434	357.46262	15.56997	0.0270032	0.17190781	3.2033593	20	9 17.4	19.6
317743 2003 SM ₃₅	15.3	X	98.62595	218.67784	14.44848	10.39740	0.0709177	0.17356596	3.1829246	20	9 22.8	19.9
317744 2003 SY ₃₅	15.9	X	104.27491	264.08632	85.16243	6.25789	0.2231675	0.19246496	2.9709928	20	—	—
317745 2003 SF ₃₈	16.8	X	193.02302	115.94787	252.65824	7.77834	0.2334112	0.26915827	2.3757326	20	3 22.5	21.0
317746 2003 SS ₄₅	15.2	X	17.93363	332.64350	13.74307	23.72346	0.0659522	0.17810191	3.1286501	20	10 24.2	19.6
317747 2003 SW ₄₈	17.1	X	139.02122	17.66131	250.32024	6.54906	0.1663902	0.30559454	2.1829259	20	—	—
317748 2003 SY ₄₈	17.1	X	291.91357	95.78932	261.69357	5.98264	0.1223774	0.28324336	2.2963049	20	7 9.4	19.6
317749 2003 ST ₅₇	15.7	X	314.51140	1.04476	15.34061	18.16122	0.1328218	0.22903400	2.6456724	20	9 16.3	18.7
317750 2003 SD ₅₈	15.6	X	268.84318	137.38821	273.21159	13.64954	0.0968255	0.23084226	2.6318381	20	8 13.9	19.3
317751 2003 SK ₅₈	15.4	X	116.03923	60.18471	236.07397	12.15511	0.1371381	0.18964324	3.0003907	20	12 28.4	20.3
317752 2003 ST ₆₁	15.4	X	338.80153	186.57772	158.50211	20.12506	0.1362982	0.17209249	3.2010670	20	8 31.2	19.0
317753 2003 SS ₆₈	17.6	X	354.42524	147.73221	198.50435	6.03548	0.1355778	0.29331498	2.2434336	20	10 29.7	19.4

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317761 2003 SY ₈₁	15.7	X	54.99763	327.55270	4.85338	27.56804	0.1221890	0.18193586	3.0845407	20	11 29.7	20.6
317762 2003 SS ₈₈	16.9	X	239.90054	238.60192	61.25982	3.96774	0.1253771	0.26831772	2.3806916	20	2 15.8	20.4
317763 2003 SR ₈₉	16.8	X	210.92246	140.53380	240.27114	7.21714	0.1520118	0.27324580	2.3519805	20	4 25.9	20.4
317764 2003 SW ₉₁	15.3	X	194.94018	172.60945	335.42025	10.70588	0.0371374	0.17630041	3.1499271	20	9 21.0	19.9
317765 2003 SB ₉₃	17.0	X	295.94478	118.40754	209.27678	6.97912	0.1318791	0.27852216	2.3221818	20	5 30.8	19.7
317766 2003 SD ₉₆	17.6	X	95.20638	303.50455	347.38655	2.03047	0.2452515	0.30379718	2.1915273	20	12 29.9	21.2
317767 2003 SG ₁₀₄	15.3	X	15.85797	319.13762	15.86909	6.83184	0.0395561	0.17467580	3.1694279	20	10 9.9	19.5
317768 2003 SP ₁₀₄	17.2	X	219.26932	231.16724	137.33403	8.57256	0.1258505	0.27383477	2.3486069	20	4 24.4	20.8
317769 2003 SA ₁₀₅	15.0	X	44.10700	55.77361	218.38909	17.45565	0.1484529	0.17290960	3.1909743	20	9 10.8	19.5
317770 2003 SO ₁₁₇	17.2	X	293.91606	321.60399	2.11383	6.98056	0.2286556	0.27943958	2.3170964	20	5 1.5	19.9
317771 2003 SS ₁₁₇	15.3	X	332.47036	88.26436	262.27608	7.60073	0.1110077	0.16986519	3.2289882	20	8 24.3	19.4
317772 2003 SR ₁₂₄	16.6	X	198.91196	160.38345	179.93313	1.86462	0.0872618	0.20536326	2.8452529	20	2 29.6	21.0
317773 2003 SN ₁₂₆	17.0	X	58.71465	30.76480	264.45142	3.87304	0.2204001	0.29703442	2.2246662	20	11 30.9	20.1
317774 2003 SO ₁₂₇	15.5	X	30.26773	332.15028	341.01619	10.13084	0.0643201	0.17406148	3.1768809	20	10 1.5	19.8
317775 2003 SE ₁₂₈	16.2	X	7.78558	349.78949	301.63186	10.58949	0.2115714	0.23003589	2.6379849	20	8 23.3	18.7
317776 2003 ST ₁₃₀	15.1	X	103.73011	261.66753	12.47382	26.15793	0.1724197	0.18093623	3.0958913	20	11 14.2	20.5
317777 2003 SM ₁₃₁	17.0	X	349.13399	339.95114	12.81932	2.90498	0.1774669	0.29112055	2.2545632	20	11 3.1	18.7
317778 2003 SP ₁₃₃	15.8	X	335.59655	76.05681	275.64229	11.07774	0.1876919	0.23225722	2.6211381	20	9 7.4	18.5
317779 2003 SE ₁₃₈	16.0	X	190.98682	293.76387	83.88668	5.40408	0.2204128	0.20953931	2.8073230	20	4 9.6	20.9
317780 2003 SU ₁₄₇	15.5	X	211.54945	85.04502	239.31047	8.28305	0.1360920	0.20555854	2.8434507	20	2 18.9	20.3
317781 2003 ST ₁₅₃	17.4	X	290.34686	269.32486	70.79020	5.92113	0.1696485	0.28190194	2.3035838	20	6 2.1	19.7
317782 2003 SM ₁₅₄	15.2	X	57.46657	143.72003	206.24663	15.44305	0.0877274	0.18284630	3.0742931	20	12 25.9	19.9
317783 2003 SG ₁₅₇	17.2	X	271.31490	339.97757	13.88535	7.09834	0.1430848	0.27894644	2.3198265	20	5 28.1	20.2
317784 2003 SA ₁₆₁	17.5	X	51.00792	255.87264	29.27417	6.37429	0.1877464	0.29486103	2.2355847	20	11 4.6	20.4
317785 2003 SY ₁₆₁	15.1	X	82.78195	281.37719	15.21036	11.35585	0.0845163	0.17841424	3.1249977	20	11 18.1	19.8
317786 2003 SG ₁₆₂	17.3	X	237.28033	222.91530	125.43456	2.97440	0.2278687	0.27295810	2.3536329	20	4 7.3	21.1
317787 2003 SE ₁₆₃	17.4	X	193.31308	284.70364	37.61878	2.30536	0.2075767	0.26220810	2.4175306	20	1 31.3	21.5
317788 2003 SM ₁₆₄	16.7	X	208.10518	101.42737	217.60824	4.67239	0.2055898	0.26406935	2.4061575	20	2 5.7	20.8
317789 2003 SM ₁₆₅	17.0	X	208.94784	209.88648	184.07772	7.02043	0.2638009	0.27181038	2.3602537	20	5 9.7	21.2
317790 2003 SU ₁₇₁	17.1	X	34.79102	85.85248	206.83192	5.02291	0.1941098	0.23464840	2.6033006	20	10 14.6	20.3
317791 2003 SF ₁₇₂	17.3	X	199.91294	322.65526	65.00402	2.25025	0.1972497	0.27275534	2.3547992	20	4 25.0	21.1
317792 2003 ST ₁₇₃	15.5	X	99.15239	292.34833	353.32919	11.58139	0.1452804	0.18218852	3.0816883	20	11 28.7	20.5
317793 2003 SD ₁₇₆	15.7	X	312.67142	116.26501	172.35792	10.17832	0.0792136	0.17395941	3.1781235	20	9 18.9	19.6
317794 2003 SF ₁₇₉	17.1	X	313.94717	218.44503	114.56544	5.14113	0.1606684	0.28414804	2.2914283	20	7 6.5	19.0
317795 2003 SR ₁₈₂	17.4	X	265.14731	24.09934	319.26042	5.97535	0.1339102	0.27687217	2.3313985	20	5 5.6	20.6
317796 2003 SX ₁₈₂	16.8	X	5.14902	181.84817	165.65987	8.24929	0.1919268	0.23583726	2.5945444	20	11 14.4	19.7
317797 2003 SN ₁₈₃	17.3	X	295.05553	245.12438	133.01111	3.96089	0.1269243	0.28722609	2.2750283	20	8 17.8	19.5
317798 2003 SS ₁₈₈	17.1	X	208.98520	326.68182	50.76709	5.52474	0.1937274	0.27221359	2.3579224	20	4 20.6	21.0
317799 2003 SL ₁₉₅	16.1	X	333.18782	125.03221	225.16228	13.37522	0.1192261	0.22846693	2.6500485	20	9 1.2	19.3
317800 2003 ST ₁₉₈	17.2	X	77.36000	15.76303	284.51977	4.53755	0.2286868	0.29964209	2.2117405	20	12 25.5	20.8
317801 2003 SV ₂₀₆	15.6	X	50.96119	126.28032	180.31524	12.06622	0.1351143	0.17908232	3.1172208	20	11 5.6	20.0
317802 2003 SV ₂₀₆	17.6	X	243.77748	359.26310	348.36714	4.87861	0.2482517	0.27536775	2.3398822	20	4 7.7	21.5
317803 2003 SR ₂₀₇	17.3	X	244.02254	319.20741	34.75806	3.48364	0.2316087	0.27420595	2.3464869	20	4 18.8	21.1
317804 2003 ST ₂₁₂	14.8	X	23.26650	285.36285	2.80481	24.98481	0.2559644	0.17475578	3.1684609	20	9 20.9	18.3
317805 2003 SH ₂₁₆	15.1	X	58.09623	252.41839	14.56985	25.73592	0.2725038	0.17505628	3.1648339	20	10 11.2	19.7
317806 2003 ST ₂₁₉	16.6	X	236.26763	338.76612	37.62217	6.85220	0.0967446	0.27417372	2.3466708	20	5 22.0	19.7
317807 2003 SV ₂₂₁	16.3	X	217.51344	52.30787	319.74334	1.61878	0.0976563	0.21445989	2.7642161	20	4 26.6	20.5
317808 2003 SK ₂₂₅	15.6	X	90.10786	286.17246	12.69666	8.75784	0.1657189	0.18172714	3.0869020	20	12 8.4	20.5
317809 Marot	17.8	X	208.18790	37.85276	343.36797	2.11520	0.1342947	0.27318391	2.3523358	20	4 24.7	21.3
317810 2003 SR ₂₂₈	15.7	X	318.92649	9.30814	351.18257	6.27669	0.0897369	0.17015777	3.2252856	20	8 22.4	19.7
317811 2003 SR ₂₃₁	17.5	X	176.55442	281.77524	94.22577	3.54772	0.1966246	0.26707872	2.3880488	20	3 22.9	21.3
317812 2003 SX ₂₃₃	17.5	X	256.75672	225.71010	144.08386	3.04507	0.1080906	0.27865673	2.3214341	20	6 7.9	20.5
317813 2003 SF ₂₃₆	17.5	X	5.24851	349.85297	357.84656	4.93378	0.1597479	0.29490078	2.2353838	20	11 22.9	19.8
317814 2003 SX ₂₄₈	17.0	X	352.20332	144.30295	175.38205	5.24005	0.1639656	0.28778912	2.2720600	20	9 13.6	18.6
317815 2003 SD ₂₅₃	17.8	X	222.38273	35.71668	325.52294	3.30803	0.1614167	0.27327195	2.3518305	20	4 10.9	21.6
317816 2003 SH ₂₆₃	17.7	X	319.67518	210.27103	115.45938	3.76821	0.1834800	0.28415599	2.2913856	20	7 3.3	19.3
317817 2003 SO ₂₆₄	16.5	X	284.90538	328.87814	112.97170	5.16807	0.1736930	0.23377393	2.6097886	20	10 19.4	19.3
317818 2003 SO ₂₆₄	17.0	X	253.26458	180.05129	109.27723	3.03760	0.0947050	0.26696456	2.3887295	20	2 18.1	20.4
317819 2003 SB ₂₆₅	15.5	X	66.58149	107.82676	171.76091	9.30131	0.0696066	0.17496806	3.1658976	20	10 12.1	19.9
317820 2003 ST ₂₆₇	15.7	X	0.91582	154.15625	189.95408	9.33528	0.0762654	0.17427345	3.1743044	20	10 3.7	19.8
317821 2003 SP ₂₇₆	17.5	X	327.68860	140.28150	170.15969	4.46035	0.1569181	0.28224578	2.3017125	20	6 28.6	19.5
317822 2003 SV ₂₇₇	17.4	X	232.14381	32.61631	345.94985	10.02910	0.1409684	0.27537540	2.3398389	20	5 13.0	21.0
317823 2003 SP ₂₈₂	16.4	X	349.08842	68.53384	284.68102	2.93038	0.0835278	0.23301419	2.6154583	20	10 7.9	19.6
317824 2003 SF ₂₈₄	17.2	X	152.55051	213.91289	217.66007	5.47418	0.2352503	0.26912592	2.3759230	20	5 11.2	21.0
317825 2003 SX ₂₈₈	15.7	X	42.77344	135.04257	178.49863	13.94874	0.1582926	0.17716192	3.1397071	20	11 7.1	20.1
317826 2003 SZ ₂₈₈	16.7	X	181.39596	317.05432	79.83127	3.52089	0.2332207	0.26928701	2.3749754	20	4 22.0	20.6
317827 2003 SX ₃₀₇	15.4	X	46.73161	338.88771	342.75934	11.10640	0.0698503	0.17901962	3.1179486	20	11 2.7	19.9
317828 2003 SE ₃₀₈	15.9	X	70.44595	82.34891	254.43197	9.03565	0.1044627	0.18717665	3.0266923	20	12 28.7	20.3
317829 2003 SK ₃₂₀	16.4	X	228.43136	92.22799	223.83842	3.68837	0.1373047	0.20834593	2.8180328	20	2 26.4	20.9
317830 2003 SZ ₃₂₀	17.0	X	203.81396	309.05809	136.40990	6.44762	0.0669211	0.28015441	2.3131532	20	7 21.6	19.9
317831 2003 SC ₃₂₁	16.4	X	342.05275	187.61351	90.28636	6.18208	0.1302510	0.21958508	2.7210353	20	6 7.4	19.3
317832 2003 SO ₃₂₅	17.5	X	136.39101	284.31990	131.39033	2.08174	0.0632059	0.26614075	2.3936563	20	3 20.3	20.7
317833 2003 SJ ₃₂₆	16.8	X	136.47134	14.89								

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317841 2003 SH ₄₂₀	16.0	X	150.17688	149.28202	117.04403	15.19103	0.0735073	0.24045183	2.5612423	20	—	—
317842 2003 SM ₄₂₃	17.0	X	299.00201	28.23083	30.77988	2.09858	0.0983520	0.23166377	2.6256125	20	10 17.6	20.1
317843 2003 SH ₄₂₄	16.5	X	153.52506	76.74314	355.07979	4.46705	0.0666068	0.21345887	2.7728513	20	5 2.1	20.5
317844 2003 SU ₄₂₆	16.6	X	95.36151	76.84654	347.14779	1.42675	0.0513265	0.20305703	2.8667558	20	2 12.9	20.3
317845 2003 SG ₄₂₈	15.8	X	88.18090	90.37658	182.72331	18.15534	0.0876193	0.17933289	3.1143166	20	11 2.0	20.5
317846 2003 SK ₄₂₈	16.6	X	24.38312	345.82403	6.26846	2.87222	0.0640271	0.23970280	2.5665751	20	11 28.6	19.8
317847 2003 SW ₄₃₂	15.3	X	67.39660	297.99347	338.88238	8.45430	0.0654908	0.17519899	3.1631150	20	10 4.7	19.9
317848 2003 TG ₇	16.5	X	199.48319	332.16022	46.52226	13.20307	0.2831284	0.27064774	2.3670083	20	4 12.9	20.7
317849 2003 TT ₁₀	17.2	X	209.88870	173.09488	249.50038	6.14679	0.0965360	0.27802348	2.3249577	20	6 24.4	20.4
317850 2003 TE ₁₄	17.0	X	311.58975	91.79836	237.19564	6.40901	0.1228474	0.28125620	2.3071083	20	6 29.9	19.4
317851 2003 TC ₁₅	17.2	X	213.67424	197.65684	138.51609	3.26013	0.2067162	0.26894862	2.3769671	20	3 3.8	21.0
317852 2003 TQ ₁₅	16.8	X	298.94153	266.88055	73.58363	8.97531	0.1583692	0.28086636	2.3092426	20	6 19.0	19.2
317853 2003 TR ₁₇	17.6	X	201.61655	133.37637	273.68984	0.47111	0.1790599	0.27341156	2.3510298	20	5 21.4	21.1
317854 2003 TU ₁₇	15.4	X	44.76053	126.96401	239.78187	8.90230	0.0536117	0.18290791	3.0736027	20	12 27.1	19.7
317855 2003 TL ₂₇	15.5	X	130.50543	241.22559	322.90547	6.37689	0.0933055	0.17121050	3.2120512	20	9 19.7	20.4
317856 2003 TC ₃₄	15.2	X	90.29481	337.69862	266.91899	9.30466	0.0778208	0.17085701	3.2164800	20	9 21.2	20.1
317857 2003 TL ₃₆	17.4	X	115.69074	259.25466	228.47060	6.95654	0.0803160	0.27183746	2.3600970	20	6 2.6	20.4
317858 2003 TQ ₃₈	17.4	X	220.89188	119.18816	298.82261	5.46989	0.1016264	0.27840327	2.3228428	20	7 1.3	20.4
317859 2003 TM ₅₅	17.3	X	6.50535	214.14161	73.14312	7.21622	0.1255295	0.28437168	2.2902268	20	8 20.4	19.5
317860 2003 UT	16.6	X	320.47470	1.87617	344.40149	25.58628	0.2033672	0.28533355	2.2850769	20	8 19.5	18.4
317861 2003 UC ₂	17.0	X	198.84158	76.14281	237.03962	3.80709	0.1983099	0.26178717	2.4201214	20	1 22.9	20.9
317862 2003 UE ₁₈	16.6	X	319.16502	33.37590	231.28815	1.78862	0.1189352	0.22742994	2.6580978	20	8 18.6	19.6
317863 2003 UJ ₂₃	17.4	X	155.90027	47.01738	29.63952	2.48617	0.1674423	0.26762785	2.3847811	20	5 16.7	21.1
317864 2003 UC ₂₆	16.7	X	336.93381	171.21934	183.74897	11.54225	0.1510699	0.23005808	2.6378154	20	9 21.7	19.2
317865 2003 UU ₂₇	16.0	X	179.09809	249.64840	118.07509	6.53910	0.176247	0.20537618	2.8451336	20	3 19.4	20.8
317866 2003 UR ₂₈	17.7	X	185.11679	81.70735	323.59916	3.80654	0.2116868	0.26961822	2.3730300	20	5 2.6	21.6
317867 2003 UR ₃₄	17.0	X	106.96898	234.38758	238.62552	3.38050	0.0177381	0.21033023	2.8002808	20	4 23.6	20.7
317868 2003 UJ ₃₉	17.4	X	92.38130	93.93827	46.48113	7.58412	0.0632263	0.26806275	2.3822010	20	5 16.4	20.3
317869 2003 UO ₃₉	17.3	X	296.08670	279.43283	201.05414	3.36376	0.1522944	0.23736673	2.5833871	20	—	—
317870 2003 UQ ₄₇	17.2	X	288.60085	220.57269	216.08814	20.27528	0.0878881	0.35075199	1.9912966	20	11 30.3	18.9
317871 2003 UD ₅₂	17.2	X	185.70836	126.73680	270.65427	7.73454	0.1803037	0.26900358	2.3766433	20	4 21.8	21.1
317872 2003 UG ₅₅	15.3	X	280.04301	70.29351	260.41221	12.98575	0.0722863	0.21346155	2.7728281	20	5 20.6	19.2
317873 2003 UJ ₅₉	16.7	X	297.94093	49.86259	300.83335	2.14035	0.1226980	0.22295862	2.6935179	20	7 6.3	19.9
317874 2003 UJ ₆₇	15.7	X	15.00696	120.86582	180.45103	3.93528	0.1352168	0.17072169	3.2181794	20	9 3.9	19.6
317875 2003 UX ₇₅	16.5	X	212.23715	268.88538	1.49868	11.65504	0.1463584	0.25603031	2.4562645	20	—	—
317876 2003 UW ₇₈	16.5	X	230.68317	84.38428	305.24799	5.19548	0.0413872	0.21664753	2.7455765	20	6 9.1	20.4
317877 2003 UQ ₉₃	17.6	X	241.57825	359.83663	349.12438	2.74282	0.1821297	0.27337758	2.3512246	20	4 13.1	21.1
317878 2003 UY ₁₁₂	17.5	X	149.31438	287.72219	135.32121	4.57795	0.2358671	0.26535670	2.3983691	20	4 29.3	21.5
317879 2003 US ₁₁₃	16.9	X	161.50917	320.49853	132.40083	7.25221	0.1941464	0.27046236	2.3680898	20	6 14.2	20.8
317880 2003 UJ ₁₁₅	17.8	X	164.20940	117.42671	310.26157	4.16724	0.1706970	0.26845773	2.3798638	20	5 12.1	21.5
317881 2003 UT ₁₁₆	16.9	X	188.41224	286.75223	111.85541	3.34796	0.2053408	0.26940366	2.3742898	20	4 29.9	20.9
317882 2003 UA ₁₁₇	16.3	X	334.37378	279.35746	62.02604	6.17064	0.2075543	0.22735645	2.6586706	20	8 28.9	18.7
317883 2003 UB ₁₂₀	16.6	X	220.90138	14.36157	355.63998	4.07148	0.0912370	0.21221236	2.7836900	20	4 27.6	20.8
317884 2003 UK ₁₂₂	15.2	X	2.54444	182.52259	216.74505	9.79255	0.0960407	0.17994294	3.1072736	20	12 16.9	19.4
317885 2003 UU ₁₃₈	15.4	X	37.96818	323.98777	17.05671	9.95293	0.0697588	0.18042544	3.1017314	20	11 17.6	19.7
317886 2003 UR ₁₄₅	16.9	X	139.54774	19.02707	63.31255	6.24288	0.1451474	0.26500909	2.4004659	20	5 7.3	20.4
317887 2003 UM ₁₅₀	16.8	X	169.60683	182.36490	241.73835	5.36621	0.1475880	0.26789617	2.3831884	20	5 13.1	20.3
317888 2003 UD ₁₅₄	17.1	X	107.52638	277.28568	47.66720	4.25234	0.1687679	0.30524011	2.1846153	20	—	—
317889 2003 UZ ₁₅₉	17.8	X	97.03950	312.83613	326.65847	0.61909	0.1816102	0.29711891	2.2242445	20	12 13.9	21.3
317890 2003 UY ₁₆₀	17.6	X	100.33192	260.80134	257.31582	1.28744	0.1403391	0.27184837	2.3600338	20	7 3.4	20.7
317891 2003 UL ₁₆₃	17.1	X	160.40269	214.36603	177.32477	7.04083	0.1602302	0.26370070	2.4083995	20	3 24.7	20.6
317892 2003 UC ₁₆₅	17.6	X	157.21017	350.24587	47.33549	1.26932	0.1777456	0.26419728	2.4053807	20	3 30.2	21.4
317893 2003 UQ ₁₇₈	17.1	X	286.60591	135.66178	280.94423	1.80018	0.1195645	0.22941080	2.6427747	20	9 19.6	20.1
317894 2003 UP ₁₈₈	15.0	X	47.04629	307.79613	10.42279	17.74734	0.1411679	0.17565120	3.1576837	20	11 12.1	19.6
317895 2003 UD ₂₀₃	16.7	X	232.91186	93.34260	306.70170	2.26223	0.1812824	0.21680569	2.7442411	20	6 11.0	20.9
317896 2003 UE ₂₀₃	17.4	X	304.96069	80.08145	239.78226	3.88724	0.1167198	0.27714539	2.3298660	20	6 5.1	19.8
317897 2003 UK ₂₀₉	16.6	X	254.63484	12.86812	68.19122	3.44464	0.1383025	0.22757085	2.6570005	20	9 5.9	20.2
317898 2003 UQ ₂₁₁	16.5	X	248.50327	18.84240	29.50481	5.50519	0.1049277	0.21922404	2.7240521	20	7 19.9	20.4
317899 2003 US ₂₁₅	17.5	X	172.13858	319.06174	121.40014	2.89115	0.1687453	0.27159385	2.3615080	20	6 6.9	21.2
317900 2003 UU ₂₁₇	17.5	X	174.00196	199.71100	233.02886	3.87825	0.2000275	0.27179610	2.3603364	20	5 29.8	21.4
317901 2003 UM ₂₂₃	17.0	X	280.31281	241.45721	85.19440	4.58753	0.1534226	0.27483644	2.3428969	20	5 3.2	19.8
317902 2003 UU ₂₃₀	17.4	X	151.36819	79.10991	3.46506	3.18353	0.1964612	0.26671578	2.3902147	20	5 21.2	21.1
317903 2003 UP ₂₃₆	17.1	X	229.20400	236.53749	105.62223	3.34975	0.2023406	0.26910913	2.3760218	20	3 25.5	20.9
317904 2003 UO ₂₄₀	17.0	X	151.46131	83.93099	20.74519	9.05527	0.1220924	0.27099666	2.3649761	20	6 15.8	20.6
317905 2003 UM ₂₄₉	16.1	X	275.10163	292.05301	81.39544	6.15712	0.1312713	0.22009989	2.7167906	20	7 2.4	19.6
317906 2003 UW ₂₅₇	16.6	X	264.77634	329.24329	115.95303	3.29562	0.1822159	0.22648985	2.6654480	20	9 17.9	20.1
317907 2003 UU ₂₅₈	17.0	X	190.86183	303.38474	92.21857	4.07503	0.2109627	0.2681				

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
317921 2003 <i>UM</i> ₃₃₃	18.2	X	200.77551	82.04840	309.02874	0.84080	0.1876004	0.27298596	2.3534727	20	4 29.9	22.1
317922 2003 <i>UJ</i> ₃₃₇	15.3	X	85.30066	247.89336	11.37852	9.01947	0.0602874	0.17499513	3.1655711	20	10 6.4	19.9
317923 2003 <i>UJ</i> ₃₃₈	16.3	X	79.05295	93.79140	181.91556	4.37674	0.1117661	0.17737345	3.1372104	20	10 26.9	21.0
317924 2003 <i>UY</i> ₃₄₄	16.0	X	151.34273	19.99376	212.85497	4.40642	0.0818750	0.18276039	3.0752564	20	11 17.5	20.6
317925 2003 <i>UE</i> ₃₄₅	17.5	X	198.35129	234.42811	231.22890	2.35870	0.1150170	0.28363418	2.2941950	20	8 7.9	20.8
317926 2003 <i>UH</i> ₃₄₇	16.4	X	246.15905	84.80900	174.36800	5.65701	0.1015329	0.26074534	2.4265636	20	1 2.4	20.0
317927 2003 <i>UK</i> ₃₄₉	16.3	X	272.09932	312.97572	152.40099	5.20880	0.0877028	0.17725899	3.1385608	20	10 29.9	20.5
317928 2003 <i>UP</i> ₃₆₉	16.1	X	18.09337	35.30195	333.36352	5.11315	0.1066828	0.17799786	3.1298693	20	12 1.1	20.2
317929 2003 <i>US</i> ₃₇₄	15.8	X	314.73167	172.94379	208.27488	8.91869	0.0744973	0.17380513	3.1800039	20	9 9.8	20.0
317930 2003 <i>UW</i> ₃₈₈	18.1	X	111.49011	358.11010	103.16992	6.22113	0.1958167	0.26474360	2.4020704	20	5 8.9	21.6
317931 2003 <i>VW</i> ₁	16.8	X	38.84261	81.62916	253.92776	6.23191	0.1386246	0.29483488	2.2357169	20	12 21.4	19.5
317932 2003 <i>WC</i> ₂	17.6	X	139.89784	210.62503	238.43455	0.61738	0.1546799	0.26628880	2.3927691	20	5 16.5	21.1
317933 2003 <i>WM</i> ₄	15.8	X	241.25881	271.48524	320.17931	7.65586	0.0673140	0.18869558	3.0104279	20	—	—
317934 2003 <i>WJ</i> ₁₁	16.1	X	224.66184	68.43123	31.70062	17.89173	0.0951484	0.22343478	2.6896898	20	9 7.5	20.3
317935 2003 <i>WS</i> ₃₁	15.3	X	43.86296	119.29854	240.63739	9.89068	0.0814992	0.18001040	3.1064974	20	12 21.3	19.7
317936 2003 <i>WX</i> ₃₂	16.0	X	195.43337	107.75189	290.72651	4.55635	0.0641172	0.20978077	2.8051684	20	5 6.8	20.2
317937 2003 <i>WP</i> ₃₅	17.5	X	188.46644	94.45335	313.03064	6.21999	0.0954509	0.26853225	2.3794235	20	5 8.0	21.1
317938 2003 <i>WC</i> ₄₇	16.9	X	315.45715	51.60275	338.64047	2.97353	0.1103592	0.22864423	2.6486783	20	10 2.5	19.8
317939 2003 <i>WD</i> ₄₈	17.3	X	279.53179	204.29942	146.94803	4.68245	0.1675080	0.27697233	2.3308364	20	6 3.5	20.1
317940 2003 <i>WB</i> ₅₁	17.2	X	101.60560	131.11829	48.04538	5.65191	0.1663788	0.27472312	2.3435411	20	8 8.7	20.7
317941 2003 <i>WF</i> ₅₄	16.3	X	187.16942	163.44087	276.73780	2.07505	0.0449206	0.21473115	2.7618877	20	6 22.4	20.1
317942 2003 <i>WJ</i> ₅₇	17.4	X	264.19111	283.29439	49.87536	3.11829	0.1916800	0.27318770	2.3523140	20	4 16.4	20.7
317943 2003 <i>WT</i> ₅₉	17.2	X	349.64265	120.17713	200.28067	2.80798	0.2446493	0.28518597	2.2858652	20	9 17.2	18.4
317944 2003 <i>WS</i> ₆₃	16.7	X	97.79972	62.40321	60.11575	4.85305	0.1727082	0.26196510	2.4190253	20	5 16.4	19.9
317945 2003 <i>WP</i> ₆₇	16.0	X	98.45971	330.03715	26.60849	2.11948	0.1997506	0.18730968	3.0252590	20	—	—
317946 2003 <i>WS</i> ₇₅	15.9	X	181.15128	154.07163	313.83139	8.16945	0.0516068	0.21828281	2.7318469	20	7 22.5	19.7
317947 2003 <i>WX</i> ₈₀	16.5	X	348.21509	319.23284	19.08803	5.83892	0.2078586	0.28599939	2.2815289	20	10 11.5	17.8
317948 2003 <i>WU</i> ₈₄	17.0	X	182.06848	294.33352	100.81034	6.43441	0.2220810	0.26605569	2.3941665	20	4 22.0	21.1
317949 2003 <i>WO</i> ₉₃	15.8	X	7.62914	58.97412	31.11671	6.41465	0.0875739	0.18504042	3.0499244	20	—	—
317950 2003 <i>WO</i> ₁₁₃	18.1	X	168.63546	26.16758	16.61050	2.96762	0.1749846	0.26524554	2.3990391	20	4 15.6	21.8
317951 2003 <i>WV</i> ₁₃₂	17.8	X	160.08246	324.78061	66.37639	2.30084	0.2191456	0.26217551	2.4177309	20	3 28.0	21.7
317952 2003 <i>WM</i> ₁₃₅	16.8	X	116.89154	26.69166	91.49724	3.48153	0.1625062	0.26411944	2.4058533	20	5 31.8	20.5
317953 2003 <i>WT</i> ₁₅₀	17.6	X	164.75628	212.42939	190.24884	5.06027	0.2215811	0.26440736	2.4041065	20	4 14.8	21.5
317954 2003 <i>WP</i> ₁₆₀	15.8	X	123.73007	92.43565	240.51949	7.61677	0.0492634	0.18524807	3.0476628	20	—	—
317955 2003 <i>WC</i> ₁₆₁	16.4	X	265.97509	216.33442	82.52039	3.26132	0.0381847	0.20280413	2.8691385	20	3 30.0	20.4
317956 2003 <i>WV</i> ₁₇₅	17.9	X	106.39559	23.40934	117.90662	2.37511	0.1280552	0.26737835	2.3862644	20	6 15.9	21.1
317957 2003 <i>WW</i> ₁₉₄	16.3	X	191.15210	295.86173	189.12734	13.08475	0.1319829	0.22464829	2.6799950	20	8 17.9	20.7
317958 2003 <i>XG</i>	15.2	X	20.62938	55.11237	307.23506	7.11396	0.5124241	0.17597133	3.1538530	20	—	—
317959 2003 <i>XA</i> ₁₅	15.5	X	335.63340	14.32864	303.07873	25.42226	0.2355804	0.27583969	2.3372126	20	7 25.2	16.6
317960 2003 <i>XE</i> ₁₆	15.4	X	11.40811	346.26934	66.24601	11.32837	0.0992824	0.17851256	3.1238502	20	—	—
317961 2003 <i>YI</i> ₁₉	16.8	X	76.69527	131.14785	83.63572	7.64274	0.0437429	0.27469195	2.3437184	20	8 10.1	19.7
317962 2003 <i>YU</i> ₂₁	16.9	X	179.12029	87.12561	79.12202	3.63613	0.1438696	0.27746341	2.3280854	20	10 7.7	20.4
317963 2003 <i>YM</i> ₃₆	17.7	X	296.76696	198.90553	82.98939	23.67962	0.0486389	0.38217193	1.8806018	20	4 16.7	20.2
317964 2003 <i>YZ</i> ₄₇	16.5	X	173.54392	162.15151	299.87249	1.09041	0.1795493	0.21023050	2.8011663	20	7 4.4	21.1
317965 2003 <i>YQ</i> ₅₃	17.3	X	112.28314	24.60233	77.00361	3.29628	0.1700967	0.26129882	2.4231358	20	5 5.6	20.6
317966 2003 <i>YX</i> ₅₃	17.3	X	103.03313	164.71424	246.74526	3.67162	0.2231922	0.25421125	2.4679681	20	2 23.3	20.4
317967 2003 <i>YH</i> ₅₄	17.2	X	171.36370	309.77285	87.36816	7.28953	0.1535499	0.26424949	2.4050638	20	4 14.0	21.0
317968 2003 <i>YO</i> ₆₃	16.8	X	81.37029	20.81693	105.98891	11.86825	0.1420211	0.25677725	2.4514988	20	4 30.9	20.0
317969 2003 <i>YQ</i> ₆₇	17.1	X	142.60300	264.86950	94.81394	2.26909	0.1900028	0.25486500	2.4637459	20	1 30.7	20.8
317970 2003 <i>YQ</i> ₇₂	17.4	X	237.51663	95.66726	297.69329	3.83533	0.1048758	0.27205553	2.3588356	20	6 16.3	20.6
317971 2003 <i>YC</i> ₇₈	16.9	X	172.84870	333.15414	86.78836	7.44669	0.1058985	0.26342869	2.4100571	20	5 12.0	20.4
317972 2003 <i>YI</i> ₇₈	16.4	X	37.44003	154.09648	290.99014	8.18449	0.1048860	0.24414335	2.5353589	20	—	—
317973 2003 <i>YT</i> ₈₈	17.4	X	134.52507	350.08491	68.21490	3.48066	0.1898101	0.25692852	2.4505365	20	4 6.0	21.0
317974 2003 <i>YD</i> ₁₁₁	17.3	X	98.66211	29.65999	108.55707	2.50847	0.1355733	0.26007652	2.4307220	20	6 3.0	20.4
317975 2003 <i>YC</i> ₁₁₆	15.6	X	115.08383	91.13002	96.89032	14.93302	0.1258676	0.21019569	2.8014756	20	8 28.2	20.1
317976 2003 <i>YC</i> ₁₁₈	17.6	X	358.76843	288.76589	304.07915	15.97250	0.0481259	0.37997793	1.8878340	20	4 16.1	19.7
317977 2003 <i>YJ</i> ₁₄₁	16.2	X	159.54303	284.16729	42.48803	11.85116	0.0503168	0.24579323	2.5240005	20	—	—
317978 2003 <i>YA</i> ₁₄₆	16.2	X	320.32686	59.54054	78.86451	14.00321	0.1240984	0.23644550	2.5900930	20	—	—
317979 2003 <i>YU</i> ₁₄₆	15.2	X	331.24275	25.71847	87.53043	17.15803	0.0206221	0.17691192	3.1426643	20	—	—
317980 2003 <i>YU</i> ₁₄₉	14.8	X	282.93348	282.76045	70.38673	10.71156	0.0821225	0.15145239	3.4856622	20	6 20.8	19.6
317981 2003 <i>YM</i> ₁₇₂	17.3	X	21.85878	221.88403	6.45899	2.79030	0.1383731	0.26219891	2.4175871	20	6 11.7	19.4
317982 2004 <i>AV</i>	16.6	X	140.28115	318.11265	135.70434	12.62402	0.1211207	0.26413621	2.4057514	20	5 24.3	20.3
317983 2004 <i>AT</i> ₆	15.3	X	166.56504	14.34730	305.32611	10.01086	0.1098552	0.18296381	3.0729766	20	1 9.1	20.1
317984 2004 <i>BC</i> ₁₁	15.4	X	340.46204	106.72102	300.16903	25.83679	0.4932751	0.23010688	2.6374423	20	—	—
317985 2004 <i>BQ</i> ₁₆	16.5	X	3.63069	68.96185	52.28386	9.75172	0.1412542	0.24324469	2.5415996	20	—	—
317986 2004 <i>BB</i> ₂₅	15.2	X	56.40663	257.83080	131.66759	10.85571	0.0656292	0.17521088	3.1629719	20	—	—
317987 2004 <i>BQ</i> ₃₄	16.8	X	81.57527	118.29173	112.01209	9.26785	0.1106207	0.27013456	2.3700051	20	9 18.9	20.1
317988 2004 <i>BT</i> ₃₆	17.2	X	34.27249	259.78039	311.98462	5.63497	0.0829262	0.25949007	2.4343829	20	6 2.4	19.9
317989 2004 <i>BT</i> ₄₉	16.8	X	160.45152	27.06871	128.01483	5.99802	0.0764599	0.21224556	2.7834087	20	8 28.7	21.0
317990 2004 <i>BK</i> ₆₉	16.7	X	59.00706	182.23560	51.97853	4.74267	0.1653773	0.26551935	2.3973895	20	8 31.9	19.7
317991 2004 <i>BD</i> ₇₁	15.6	X	65.87925	290.01161	116.33357	10.64603	0.1047907	0.18042283	3.1017614	20	—	—
317992 2004 <i>BC</i> ₇₈	1											

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
318001	2004	CP ₂₄	17.5	X	196.23512	47.75505	345.64602	20.09126	0.0626917	0.37845701	1.8928884	20	4 14.3	20.0
318002	2004	CZ ₄₁	16.8	X	73.79034	333.15915	80.31966	8.43842	0.2200489	0.24417201	2.5351606	20	1 15.8	19.2
318003	2004	CM ₄₉	17.6	X	321.96070	77.06740	140.51471	25.25381	0.1054414	0.36805750	1.9283784	20	1 19.7	19.8
318004	2004	CQ ₅₄	16.5	X	265.58801	57.10283	164.31930	8.14652	0.1392337	0.23532115	2.5983366	20	—	—
318005	2004	CV ₅₈	15.4	X	68.85680	341.66923	108.81964	10.10105	0.0530493	0.18561837	3.0436082	20	2 15.9	19.5
318006	2004	CV ₆₀	16.3	X	297.30305	304.52794	358.43523	12.52799	0.1188645	0.25761310	2.4461932	20	4 23.7	19.4
318007	2004	CG ₇₅	17.5	X	145.72556	29.52285	171.08544	2.10168	0.1656287	0.27406480	2.3472925	20	10 17.0	21.3
318008	2004	CN ₈₃	15.0	X	10.11804	80.27648	95.98265	0.80667	0.1477510	0.12606057	3.9392771	20	3 18.1	19.7
318009	2004	CD ₉₂	14.5	X	356.10024	303.85208	240.57635	7.74149	0.1288439	0.12485248	3.9646477	20	3 2.2	19.5
318010	2004	CJ ₉₃	17.5	X	84.20795	86.47756	349.47244	21.11584	0.1031689	0.36670976	1.9331004	20	1 31.2	19.4
318011	2004	CV ₉₉	14.5	X	45.40976	122.95529	9.73010	10.85399	0.1600405	0.12460113	3.9699778	20	3 23.7	19.3
318012	2004	CN ₁₁₀	17.3	X	357.13443	254.22456	341.15213	19.19431	0.0626807	0.37541612	1.9030963	20	4 14.6	19.3
318013	2004	CY ₁₁₈	17.3	X	90.03702	312.00433	113.16402	2.23405	0.1044828	0.24506832	2.5289754	20	2 8.8	20.4
318014	2004	DE ₂	14.6	X	42.06956	160.44159	337.41305	8.85430	0.2015397	0.12568053	3.9472143	20	3 25.8	19.4
318015	2004	DG ₄	17.0	X	39.12873	161.88121	11.13712	19.85341	0.0431946	0.37152814	1.9163503	20	3 31.8	18.5
318016	2004	DZ ₂₂	16.5	X	359.50831	324.58320	201.25358	13.17574	0.1121065	0.24405501	2.5359707	20	1 24.8	19.6
318017	2004	DH ₂₇	17.0	X	17.55446	216.82130	14.05156	4.42636	0.1554411	0.25560731	2.4589736	20	6 7.8	19.3
318018	2004	DB ₃₄	16.4	X	350.75008	1.68080	166.93602	13.29370	0.0878132	0.23999399	2.5644987	20	1 20.2	19.7
318019	2004	DZ ₄₀	17.6	X	5.72444	104.04824	357.93446	19.96523	0.0858087	0.35498631	1.9754300	20	—	—
318020	2004	DD ₄₄	17.4	X	345.49823	140.80104	57.75661	5.91674	0.1993637	0.24495348	2.5297657	20	2 10.1	20.1
318021	2004	DM ₆₃	17.4	X	220.60576	275.05670	155.95086	3.46874	0.1028590	0.26714237	2.3876694	20	7 17.7	20.8
318022	2004	DE ₆₈	16.5	X	60.32568	283.75050	125.35607	15.03548	0.1060226	0.23929553	2.5694864	20	—	—
318023	2004	ET ₁	16.2	X	284.36604	94.09708	163.03070	15.29860	0.0350979	0.24456559	2.5324399	20	2 22.2	19.4
318024	2004	EE ₆	15.8	X	233.59017	70.14107	186.97423	9.07289	0.0379087	0.17441266	3.1726151	20	1 3.3	20.6
318025	2004	EO ₆	15.7	X	188.74120	352.76323	356.75560	15.47407	0.1490621	0.24343508	2.5402743	20	3 2.6	19.7
318026	2004	ES ₁₃	16.6	X	327.46033	75.08628	139.69766	7.71945	0.1558698	0.24285451	2.5443212	20	2 7.3	19.6
318027	2004	EW ₁₅	17.1	X	258.34414	352.78247	174.09412	14.07190	0.1831230	0.22601159	2.6692069	20	12 24.4	20.6
318028	2004	EB ₁₆	17.3	X	55.37860	280.61207	288.54080	0.88578	0.1712867	0.25729590	2.4482032	20	7 18.9	20.2
318029	2004	EN ₂₃	16.7	X	107.68332	231.08004	198.02663	20.67468	0.1028818	0.36451306	1.9408590	20	2 15.6	19.0
318030	2004	ET ₂₇	17.2	X	343.30427	340.56394	172.04178	9.71733	0.1386218	0.23786446	2.5797820	20	—	—
318031	2004	ES ₃₇	15.8	X	253.68250	232.89535	262.77991	7.86643	0.1754979	0.22118423	2.7079041	20	11 5.3	19.5
318032	2004	EX ₃₇	16.9	X	80.67589	291.36011	285.77698	1.77524	0.1641574	0.26233906	2.4167260	20	8 31.8	20.2
318033	2004	EN ₄₈	17.6	X	132.39810	147.60766	35.19656	3.45514	0.1259566	0.26706357	2.3881391	20	9 10.6	21.1
318034	2004	EW ₅₀	16.7	X	72.07049	341.93351	355.16482	7.56095	0.1676332	0.22224151	2.6993090	20	—	—
318035	2004	EC ₅₃	17.1	X	348.61660	80.50732	41.22610	5.16612	0.2519169	0.23544549	2.5974217	20	—	—
318036	2004	EU ₅₃	16.2	X	216.32932	25.25393	137.31277	8.97861	0.1500085	0.21591592	2.7517751	20	11 2.6	20.4
318037	2004	EY ₆₂	17.0	X	322.40531	299.55052	184.79355	7.63136	0.1364162	0.23076171	2.6324506	20	—	—
318038	2004	ED ₆₅	15.9	X	211.34351	74.80580	97.90304	14.22075	0.1075504	0.21833230	2.7314341	20	11 15.9	20.1
318039	2004	EK ₇₈	17.2	X	270.97568	179.29224	68.75659	2.76508	0.0581648	0.29898751	2.2149675	20	1 14.3	19.8
318040	2004	ED ₉₁	16.9	X	275.80155	194.66706	41.65330	2.93147	0.1397903	0.23762382	2.5815234	20	1 6.0	20.7
318041	2004	EN ₉₁	17.7	X	15.94108	163.38341	12.66744	3.37476	0.1647051	0.24658155	2.5186182	20	3 11.5	20.0
318042	2004	EF ₉₃	16.0	X	215.75904	156.70360	163.87064	9.56944	0.0750399	0.18299346	3.0726446	20	2 25.4	20.6
318043	2004	FG ₁₀	17.1	X	139.79830	243.65357	162.44050	10.94997	0.1247109	0.24664839	2.5181631	20	3 20.9	20.8
318044	2004	FQ ₁₇	15.9	X	42.76673	247.20630	126.25967	23.00885	0.3323400	0.24228335	2.5483182	20	1 22.7	18.1
318045	2004	FU ₁₇	17.1	X	82.60444	247.51776	189.47632	21.84088	0.1262081	0.36143223	1.9518726	20	1 18.9	19.3
318046	2004	FT ₂₃	16.8	X	331.63626	195.58306	352.79834	12.38785	0.0350501	0.24008626	2.5638416	20	1 31.5	20.3
318047	2004	FB ₂₆	16.6	X	340.66713	202.96360	15.17670	13.60729	0.1121857	0.24413050	2.5354479	20	3 14.3	19.5
318048	2004	FM ₃₀	16.9	X	292.19814	152.77795	70.57762	23.27045	0.0358315	0.35731796	1.9668270	20	—	—
318049	2004	FB ₃₁	16.5	X	307.60964	104.05478	116.39497	19.54004	0.2987222	0.23821533	2.5772482	20	2 16.4	20.2
318050	2004	FC ₃₂	18.7	X	350.77071	172.83145	80.83775	10.93468	0.3392324	0.36974529	1.9225056	20	4 15.2	18.9
318051	2004	FY ₅₀	17.2	X	267.46905	99.45819	126.11421	4.44089	0.1815075	0.23207805	2.6224869	20	—	—
318052	2004	FC ₅₂	17.4	X	251.80984	15.40242	147.91960	3.06897	0.0970260	0.28330170	2.2959896	20	—	—
318053	2004	FR ₅₂	16.3	X	207.37566	277.05452	339.11048	11.15595	0.2234133	0.22613164	2.6682621	20	—	—
318054	2004	FA ₅₅	17.2	X	18.67306	28.83840	125.75870	3.50080	0.0711441	0.24157862	2.5532718	20	2 17.1	20.1
318055	2004	FV ₆₀	15.9	X	171.56935	217.22542	156.94476	6.01947	0.1951528	0.24267484	2.5455769	20	3 16.9	20.0
318056	2004	FQ ₆₇	16.2	X	314.52661	275.75530	167.20505	9.15232	0.0269895	0.21923606	2.7239224	20	12 12.8	19.9
318057	2004	FF ₈₃	17.0	X	281.93103	277.04241	300.26901	13.59015	0.2545484	0.23305435	2.6151579	20	—	—
318058	2004	FE ₈₄	15.3	X	76.18062	281.25184	139.12579	11.84906	0.1791989	0.17876015	3.1209651	20	2 4.1	19.2
318059	2004	FY ₈₈	17.1	X	290.25661	156.27727	47.65541	8.15057	0.0853529	0.23504347	2.6003827	20	—	—
318060	2004	FT ₉₀	16.7	X	109.21846	30.00747	41.94382	22.75574	0.0721656	0.36284064	1.9468184	20	3 11.5	19.2
318061	2004	FR ₉₁	17.1	X	293.69107	195.74515	23.21128	4.75966	0.1859250	0.23607906	2.5927724	20	—	—
318062	2004	FX ₉₁	16.5	X	245.85051	224.65892	40.09926	7.91263	0.1307084	0.23335112	2.6129401	20	1 13.0	20.6
318063	2004	FM ₁₂₂	16.4	X	335.10212	300.44807	280.66981	11.34801	0.1804486	0.24333607	2.5409633	20	2 18.8	19.5
318064	2004	FS ₁₂₇	17.8	X	319.65712	352.98109	200.34982	3.19167	0.1329017	0.23744239	2.5828383	20	1 3.4	21.0
318065	2004	FQ ₁₂₈	16.5	X	324.54991	112.27743	106.08145	11.14291	0.1640833	0.24050612	2.5608568	20	2 8.9	19.7
318066	2004	FX ₁₃₆	15.9	X	275.63527	170.42150	115.60088	14.56171	0.0953636	0.24254527	2.5464834	20	3 18.4	19.6
318067	2004	FS ₁₄₀	17.9	X	302.77763	45.27340	177.34705	1.50358	0.1181790	0.30086701	2.2057333	20	1 10.9	20.7
318068	2004	FS ₁₄₃	16.0	X	288.04854	200.50104	41.35103	12.54639	0.1291209	0.23620854	2.5918249	20	1 31.7	19.9
318069	2004	FW ₁₄₇	15.9	X	273.70313	108.33043	127.52337	13.63218	0.1280883	0.23161842	2.6259553	20	1 5.1	19.8
318070	2004	FW ₁₄₈	16.6	X	234.80759	332.99774	299.24							

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
318081	2004	GG ₂₀	15.1	X	294.16599	264.76799	349.53021	22.01938	0.4529799	0.17535894	3.1611913	20	1 26.7	20.6
318082	2004	GP ₂₀	16.2	X	257.67989	222.18171	40.36657	15.29372	0.1001544	0.23528634	2.5985929	20	1 27.6	20.3
318083	2004	GE ₂₁	16.6	X	293.20663	132.56840	49.32292	15.28876	0.1207266	0.22901217	2.6458406	20	—	—
318084	2004	GP ₂₇	17.2	X	344.63705	78.20624	115.08218	9.30483	0.2892141	0.24017095	2.5632388	20	1 15.2	19.7
318085	2004	GO ₄₂	16.7	X	26.57326	2.06508	167.27507	5.44036	0.1930325	0.24437357	2.5337663	20	3 26.2	18.7
318086	2004	GQ ₄₈	17.9	X	35.37867	144.20630	11.88011	2.40373	0.1067391	0.30485314	2.1864637	20	3 9.7	19.7
318087	2004	GW ₄₈	17.0	X	194.14249	144.22909	206.53505	7.80441	0.0573815	0.24053859	2.5606263	20	3 2.7	20.7
318088	2004	GL ₆₀	16.9	X	359.35878	87.07444	63.37916	5.43309	0.1392724	0.23708811	2.5854106	20	1 5.9	19.7
318089	2004	GX ₆₆	17.0	X	119.69828	139.42229	10.58698	1.47173	0.1223250	0.25743907	2.4472955	20	7 12.7	20.4
318090	2004	GZ ₇₀	16.8	X	19.93220	179.63525	346.39066	3.62802	0.2339867	0.24342327	2.5403564	20	3 4.1	18.3
318091	2004	GD ₇₂	16.9	X	331.76342	337.36071	192.14009	13.82236	0.1981635	0.23577189	2.5950239	20	—	—
318092	2004	GA ₇₅	16.3	X	209.68252	167.16484	108.54162	15.01166	0.2236622	0.22489564	2.6780295	20	—	—
318093	2004	GJ ₇₆	17.5	X	275.86263	261.92099	342.77001	2.91733	0.1852737	0.23660812	2.5889060	20	1 12.1	21.3
318094	2004	GP ₇₇	16.1	X	290.26485	114.04448	122.41701	16.77150	0.1415548	0.23675649	2.5878243	20	1 21.4	19.9
318095	2004	GW ₇₇	16.1	X	8.63716	192.86477	134.47594	17.75105	0.2295474	0.25896441	2.4376761	20	11 9.7	19.1
318096	2004	GY ₈₈	16.0	X	331.58894	357.82329	102.14315	22.89576	0.0285067	0.22651659	2.6652383	20	—	—
318097	2004	GA ₁₂	16.5	X	236.84170	54.09138	206.47677	12.70258	0.1523190	0.228482897	2.6503421	20	—	—
318098	2004	HJ ₂₀	16.8	X	344.75122	115.36401	111.77721	6.56865	0.1864246	0.24447485	2.5330665	20	3 24.6	19.3
318099	2004	HZ ₂₈	15.8	X	215.63715	53.23094	213.39248	12.75815	0.1403133	0.22390576	2.6859167	20	—	—
318100	2004	HR ₃₃	16.6	X	250.92499	173.21533	62.72727	15.04285	0.2066783	0.22805487	2.6532396	20	—	—
318101	2004	HY ₄₀	13.1	X	356.00714	334.39208	19.69648	23.20893	0.0726347	0.08501671	5.1223179	20	9 28.8	19.6
318102	2004	HM ₄₃	16.6	X	286.71171	233.29015	5.15984	13.33779	0.2223830	0.23432067	2.6057274	20	1 14.3	20.8
318103	2004	HP ₄₅	16.9	X	233.82593	208.54257	44.57513	8.36452	0.1129142	0.28899881	2.2657154	20	—	—
318104	2004	HT ₄₅	16.3	X	284.26650	40.24461	218.73531	7.01981	0.1652459	0.23637025	2.5906426	20	2 6.3	20.2
318105	2004	HR ₅₀	16.5	X	303.71749	158.74259	61.67347	16.06912	0.1739352	0.23602854	2.5931424	20	1 18.9	20.3
318106	2004	HM ₅₄	15.8	X	198.29316	13.62728	124.38009	8.10255	0.0698460	0.20941136	2.8084663	20	9 19.9	19.9
318107	2004	HN ₇₄	17.6	X	135.88409	226.96394	215.19083	2.60992	0.0466878	0.30761157	2.1733730	20	4 19.4	20.2
318108	2004	HC ₇₅	16.5	X	290.42295	234.63456	358.86981	14.00003	0.2176120	0.23448246	2.6045287	20	1 12.5	20.7
318109	2004	JG ₂	16.4	X	265.56928	116.09849	169.32526	11.85033	0.2461104	0.23568686	2.5956480	20	2 13.1	20.6
318110	2004	JK ₂	17.1	X	309.87319	36.95488	202.06708	3.59065	0.1289897	0.24197831	2.5504594	20	3 28.9	20.3
318111	2004	JK ₁₂	16.0	X	347.41360	76.79816	109.73852	15.90906	0.1353927	0.23805611	2.5783972	20	2 6.2	18.9
318112	2004	JU ₁₂	15.9	X	224.60710	235.29195	19.03576	14.67937	0.1499741	0.22523631	2.6753285	20	—	—
318113	2004	JJ ₁₃	16.8	X	266.19728	108.92907	172.14802	27.44922	0.2476916	0.23383751	2.6093155	20	2 8.0	21.4
318114	2004	JE ₁₈	17.0	X	304.72776	175.08370	53.59821	5.67825	0.2299684	0.23573663	2.5952827	20	1 17.8	20.7
318115	2004	JD ₂₅	16.9	X	274.29885	132.76255	128.88824	5.34484	0.1499003	0.23450357	2.6043724	20	2 3.7	20.6
318116	2004	JY ₂₉	16.7	X	224.78005	335.98339	220.45803	9.87533	0.2108662	0.21853904	2.7297112	20	12 12.6	20.8
318117	2004	JH ₃₁	16.1	X	269.00689	186.98337	73.99178	15.48487	0.2183042	0.23197572	2.6232582	20	1 24.3	20.5
318118	2004	KB ₁₂	16.3	X	307.35275	93.24558	139.89079	8.31068	0.1568083	0.23628128	2.5912929	20	2 4.4	19.6
318119	2004	KC ₁₃	17.1	X	256.40679	161.54572	79.68558	24.01475	0.0399099	0.35104072	1.9902046	20	—	—
318120	2004	KG ₁₃	16.6	X	306.54546	20.53393	193.22422	13.05211	0.2253168	0.23332851	2.6131089	20	—	—
318121	2004	KL ₁₄	17.1	X	261.41265	77.57191	172.50226	11.12822	0.2282782	0.23005412	2.6378456	20	1 1.9	21.7
318122	2004	KH ₁₆	15.8	X	62.45838	69.35865	156.02958	10.47673	0.1415774	0.19289786	2.9665462	20	8 9.3	19.8
318123	2004	LD ₁₀	15.7	X	21.44683	359.24504	262.08113	13.89142	0.2752229	0.18990766	2.9976050	20	8 7.8	19.1
318124	2004	LA ₁₈	16.5	X	229.43868	109.01104	109.08262	7.85482	0.2058454	0.22114558	2.7082196	20	—	—
318125	2004	LZ ₂₀	16.9	X	205.64326	202.68368	156.45782	9.63090	0.1349683	0.23628672	2.5912531	20	3 29.9	21.0
318126	2004	NL ₉	16.3	X	257.12122	215.90830	122.14018	6.71826	0.1445919	0.23625960	2.5914515	20	4 24.7	20.1
318127	2004	NB ₁₃	16.4	X	305.90930	127.96017	121.93278	14.41034	0.1713547	0.23348750	2.6119225	20	2 25.4	19.9
318128	2004	NS ₂₂	15.8	X	122.75806	139.75811	157.01435	15.61181	0.1745860	0.20669197	2.8330461	20	—	—
318129	2004	NS ₃₃	15.1	X	280.83891	290.20365	67.16955	21.17765	0.2530431	0.17472130	3.1688777	20	5 30.1	19.7
318130	2004	OL ₃	16.1	X	237.83155	296.03571	309.51700	15.23636	0.2706419	0.22084089	2.7107100	20	—	—
318131	2004	OK ₇	17.1	X	117.25445	293.28016	324.04108	4.02114	0.1209816	0.26322875	2.4112774	20	11 26.4	20.9
318132	2004	ON ₁₀	16.0	X	276.23872	38.26296	329.46319	14.74830	0.3000560	0.17749236	3.1358091	20	5 29.3	21.0
318133	2004	PF ₂	16.0	X	239.04717	47.49083	117.17244	12.78789	0.1242313	0.23718037	2.5847401	20	5 17.4	20.1
318134	2004	PT ₁₅	16.6	X	263.67625	199.82849	322.86272	2.49788	0.2017626	0.23047353	2.6346444	20	3 22.7	20.5
318135	2004	PJ ₂₄	17.3	X	164.68011	328.49111	339.80865	1.73332	0.2327335	0.27675404	2.3320619	20	—	—
318136	2004	PM ₂₉	16.7	X	35.65697	194.68036	146.78757	0.89549	0.1545620	0.19509664	2.9442150	20	12 3.2	20.6
318137	2004	PS ₃₃	16.0	X	188.71833	302.25143	325.92519	12.40609	0.1821989	0.21162978	2.7888053	20	—	—
318138	2004	PK ₃₉	16.3	X	195.73208	134.25168	160.25684	13.33706	0.1492096	0.21576158	2.7530872	20	1 3.1	20.9
318139	2004	PB ₄₁	15.7	X	63.19157	332.69856	1.14359	12.31524	0.1152085	0.20140683	2.8823933	20	12 22.4	20.1
318140	2004	PL ₄₂	15.4	X	291.71530	47.74655	341.30051	14.71475	0.2286528	0.17998813	3.1067535	20	8 2.4	19.4
318141	2004	PD ₄₆	17.2	X	217.12525	197.40714	100.85848	7.42732	0.1435418	0.28567136	2.2832752	20	1 18.8	20.7
318142	2004	PO ₅₂	17.4	X	151.96287	310.82859	22.96786	2.86268	0.2174966	0.27624506	2.3349256	20	1 7.9	20.8
318143	2004	PO ₅₉	15.7	X	57.63382	135.69824	159.05834	11.65342	0.0800656	0.19300175	2.9654815	20	10 26.1	20.0
318144	2004	PR ₆₄	16.3	X	219.18964	284.40009	321.77346	6.24069	0.1985810	0.21425420	2.7659850	20	—	—
318145	2004	PQ ₆₆	15.9	X	242.40276	130.36804	173.48680	12.10489	0.3066569	0.22535634	2.6743784	20	2 13.7	20.8
318146	2004	PV ₆₉	16.0	X	344.91976	203.19353	155.56466	7.96803	0.2190818	0.18600313	3.0394095	20	10 8.2	19.0
318147	2004	PL ₇₂	16.4	X	312.18386	178.89893	115.71520	2.51595	0.1659609	0.23875983	2.5733284	20	5 4.2	19.2
318148	2004	PG ₈₀	16.0	X	190.74683	114.17256	168.79731	20.20562	0.2168707	0.21369160	2.7708376	20	—	—
318149	2004	PC ₈₉	16.4	X	187.42446	138.78492	189.64061	10.90765	0.1777145	0.22040050	2.7143197	20	2 2.7	21.0
318150	2004	PV ₉₁	16.6	X	287.61846	144.75705	254.04022	5.29750	0.1764029					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318161 2004 QZ ₃	15.5	X	229.90623	57.67196	335.96975	25.65119	0.2592941	0.17245691	3.1965560	20	5 17.4	21.4
318162 2004 QU ₄	16.1	X	229.84104	95.92053	242.92752	5.84098	0.0866290	0.22781576	2.6550959	20	3 27.3	20.1
318163 2004 QD ₁₃	16.0	X	267.69312	263.27650	132.75054	16.84981	0.2400443	0.17615289	3.1516855	20	7 4.9	20.8
318164 2004 QC ₁₅	15.7	X	22.29751	60.47331	293.90966	7.97159	0.1133741	0.19254015	2.9702193	20	11 23.4	19.7
318165 2004 QT ₁₈	15.7	X	149.18016	296.57737	345.09511	14.36800	0.1405077	0.20514487	2.8472719	20	—	—
318166 2004 QN ₂₁	17.3	X	36.26663	203.52913	146.04947	2.26824	0.1912668	0.25810817	2.4430642	20	—	—
318167 2004 QM ₂₄	14.7	X	274.26099	122.52365	254.84210	25.51842	0.2063044	0.17265060	3.1941648	20	6 21.3	19.3
318168 2004 RY	16.2	X	284.84181	70.89129	326.30782	16.00590	0.2115885	0.18166533	3.0876023	20	8 4.1	20.2
318169 2004 RZ ₃	16.7	X	315.35194	222.33373	103.24363	6.67702	0.1649486	0.24129182	2.5552946	20	6 24.2	19.2
318170 2004 RO ₈	15.2	X	17.85567	159.82040	224.83946	9.17461	0.0989533	0.19805953	2.9147785	20	12 25.2	19.1
318171 2004 RU ₁₁	16.1	X	73.45306	327.26594	345.47675	10.30577	0.0754541	0.19698607	2.9253581	20	11 30.5	20.5
318172 2004 RA ₁₅	15.7	X	286.40694	94.39243	334.01468	9.35472	0.0871158	0.18855260	3.0119496	20	9 29.8	19.7
318173 2004 RJ ₁₉	16.1	X	259.06774	235.42518	158.97228	6.05333	0.2592921	0.17447433	3.1718673	20	6 21.2	21.0
318174 2004 RW ₂₅	17.2	X	262.86653	207.71431	184.63766	6.60772	0.1585264	0.29962322	2.2118334	20	7 10.6	19.8
318175 2004 RD ₃₁	16.2	X	134.46496	320.58623	11.76281	5.45560	0.1511170	0.21132748	2.7914642	20	—	—
318176 2004 RK ₃₁	15.5	X	324.00914	65.09998	349.72847	10.31520	0.1017719	0.19302804	2.9652123	20	11 7.9	19.2
318177 2004 RA ₃₂	16.1	X	53.24514	39.67742	352.89113	14.64033	0.1480798	0.20380534	2.8597342	20	—	—
318178 2004 RZ ₃₅	17.4	X	169.82471	281.20387	86.52150	3.21937	0.2244586	0.28248242	2.3004269	20	3 6.9	21.1
318179 2004 RD ₅₆	16.2	X	220.01789	290.45245	325.84497	7.19408	0.1384309	0.21337431	2.7735838	20	—	—
318180 2004 RV ₅₉	16.7	X	311.65379	176.85479	181.50760	3.71180	0.2096243	0.17990679	3.1076900	20	7 23.0	20.2
318181 2004 RG ₆₀	17.8	X	315.23293	26.13514	340.41072	3.07415	0.1874917	0.30756015	2.1736152	20	9 8.3	18.6
318182 2004 RR ₆₂	16.0	X	339.60188	3.06707	343.04340	10.11259	0.1958432	0.18316262	3.0770525	20	9 4.4	19.1
318183 2004 RT ₆₆	16.1	X	231.95499	241.61912	175.81327	11.73253	0.2189329	0.17310742	3.1885428	20	6 27.4	21.5
318184 2004 RQ ₆₈	17.1	X	74.35420	297.17209	49.07692	2.13109	0.2014489	0.26240774	2.4163043	20	—	—
318185 2004 RD ₉₂	16.6	X	251.73201	104.61889	184.31703	12.39053	0.2537815	0.22647691	2.6655495	20	2 5.2	21.3
318186 2004 RP ₉₂	15.7	X	293.95723	62.58439	326.30796	9.31547	0.0958531	0.18262777	3.0767450	20	8 21.4	19.6
318187 2004 RQ ₉₉	15.7	X	11.95843	41.59605	331.56879	9.38004	0.1305572	0.19321776	2.9632709	20	12 4.8	19.6
318188 2004 RL ₁₀₀	16.7	X	327.08693	203.64927	187.96476	6.79877	0.1112662	0.25096364	2.4892137	20	11 2.6	19.2
318189 2004 RR ₁₀₀	16.1	X	182.30341	29.80109	324.55106	7.50975	0.1824665	0.22045894	2.7138400	20	3 1.2	20.7
318190 2004 RD ₁₀₂	16.2	X	48.96038	98.45993	269.26111	3.25381	0.0674084	0.19917704	2.9038658	20	—	—
318191 2004 RN ₁₀₃	15.5	X	27.57198	81.85128	248.13981	8.17973	0.1729614	0.18947458	3.0021709	20	11 8.3	19.3
318192 2004 RU ₁₀₃	15.6	X	12.92550	18.60553	305.93486	7.90346	0.0795556	0.18526076	3.0475237	20	9 24.3	19.7
318193 2004 RJ ₁₀₇	15.7	X	292.24956	39.50940	358.27973	14.78798	0.1997648	0.17997579	3.1068956	20	8 20.5	19.7
318194 2004 RB ₁₀₈	16.2	X	278.72337	184.20605	205.39272	7.39566	0.1512359	0.17828955	3.1264546	20	7 21.3	20.5
318195 2004 RK ₁₁₆	16.5	X	291.28213	175.68154	112.34886	5.96742	0.2204725	0.23134582	2.6280177	20	3 20.5	20.2
318196 2004 RG ₁₁₉	15.9	X	340.00384	276.44572	146.46424	2.50800	0.0874574	0.19671778	2.9280173	20	12 18.0	19.4
318197 2004 RH ₁₂₂	16.8	X	113.30440	306.52016	30.61086	2.32313	0.0719995	0.20681868	2.8318889	20	—	—
318198 2004 RJ ₁₂₅	17.4	X	86.52662	102.62668	324.50788	4.65710	0.1030436	0.27773415	2.3265722	20	1 31.4	20.0
318199 2004 RT ₁₃₁	16.9	X	118.78238	138.52048	148.18050	2.59752	0.0530665	0.19930046	2.9026668	20	12 19.7	21.1
318200 2004 RJ ₁₃₉	16.1	X	343.87366	187.84186	164.68462	10.59041	0.1129113	0.18598432	3.0396144	20	9 22.9	19.6
318201 2004 RW ₁₃₉	17.4	X	312.08087	185.35657	130.17570	2.44448	0.2158928	0.23870221	2.5737425	20	5 25.7	20.1
318202 2004 RX ₁₄₁	16.0	X	259.86065	242.06291	164.05649	8.24822	0.1977693	0.17609109	3.1524228	20	7 13.2	20.7
318203 2004 RE ₁₄₃	15.5	X	321.60621	46.95537	297.84134	15.08831	0.2499372	0.17913716	3.1165846	20	7 18.8	18.8
318204 2004 RQ ₁₆₀	17.1	X	282.74248	36.28103	319.41163	3.54493	0.1461961	0.23778791	2.5803357	20	6 16.6	20.4
318205 2004 RT ₁₆₈	16.1	X	342.44696	147.34105	182.12034	10.94612	0.2405825	0.18339157	3.0681963	20	8 13.8	19.1
318206 2004 RP ₁₇₄	16.5	X	225.80391	183.90849	197.62744	10.77419	0.1265215	0.23345876	2.6121369	20	5 17.2	20.5
318207 2004 RT ₁₇₄	16.2	X	221.82655	91.99354	177.05404	8.42407	0.1025745	0.21640974	2.7475874	20	—	—
318208 2004 RN ₁₇₅	15.9	X	136.42831	133.06159	204.73679	10.19170	0.2395609	0.21095183	2.7947771	20	1 7.2	20.4
318209 2004 RJ ₁₇₅	15.3	X	42.95347	51.59846	301.26233	10.52590	0.1275541	0.19615049	2.9336600	20	12 23.0	19.4
318210 2004 RA ₁₈₀	15.2	X	121.55719	337.53347	299.68734	9.58492	0.0749593	0.19630215	2.9321488	20	12 11.5	19.7
318211 2004 RK ₁₈₂	18.0	X	10.72783	33.10252	316.09909	2.78844	0.2092772	0.31487525	2.1398190	20	12 19.5	20.1
318212 2004 RR ₁₈₂	16.8	X	275.07114	173.19292	246.12008	4.47910	0.1383458	0.24454576	2.5325768	20	9 3.2	19.9
318213 2004 RZ ₁₈₃	15.2	X	301.24865	1.72358	356.89584	25.39195	0.0863184	0.17708046	3.1406698	20	8 5.0	19.8
318214 2004 RM ₁₈₇	15.4	X	57.12449	121.74937	216.34054	11.29917	0.0701365	0.19463250	2.9488939	20	12 13.1	19.7
318215 2004 RT ₁₈₇	15.9	X	3.62385	45.41984	335.51823	12.62505	0.1675523	0.19117873	2.9843036	20	12 5.8	19.7
318216 2004 RE ₁₉₀	15.8	X	19.67213	66.93342	246.01037	5.72734	0.2479305	0.18557556	3.0440763	20	10 14.5	19.4
318217 2004 RP ₁₉₆	14.9	X	311.47965	354.77032	14.94936	23.21200	0.1814393	0.17783704	3.1317559	20	8 25.3	19.0
318218 2004 RD ₂₀₃	16.3	X	328.84143	62.67271	357.90601	10.04485	0.0941623	0.19326161	2.9628226	20	11 24.2	20.1
318219 2004 RA ₂₀₆	15.1	X	344.86831	53.46879	307.98484	10.43145	0.1328055	0.18459220	3.0548776	20	9 29.6	18.8
318220 2004 RK ₂₀₇	16.0	X	128.03228	57.60877	247.31585	12.96837	0.2183543	0.20573016	2.8418691	20	—	—
318221 2004 RO ₂₀₈	15.7	X	337.64607	108.56374	236.26423	14.36627	0.2318658	0.18283428	3.0744278	20	8 20.2	19.0
318222 2004 RL ₂₁₂	15.8	X	96.32537	22.42412	283.10349	16.71397	0.1115564	0.19752765	2.9200085	20	12 22.6	20.3
318223 2004 RU ₂₁₂	15.1	X	284.53605	105.24866	256.98079	12.25597	0.3091873	0.17479058	3.1680403	20	6 1.8	19.5
318224 2004 RM ₂₁₄	15.9	X	2.34654	62.34509	307.82190	13.28278	0.1376297	0.18984345	2.9982808	20	11 13.4	19.8
318225 2004 RT ₂₁₅	15.3	X	287.71267	9.88565	346.01166	27.39993	0.1274552	0.17379448	3.1801338	20	6 30.3	20.2
318226 2004 RD ₂₁₈	15.6	X	336.28104	39.22403	315.62521	15.57688	0.1213022	0.18094785	3.0957587	20	9 5.0	19.5
318227 2004 RE ₂₁₈	15.8	X	286.25240	67.12512	316.94288	14.10757	0.2083087	0.17539776	3.1607249	20	7 19.5	20.1
318228 2004 RJ ₂₁₉	15.4	X	4.31562	56.92408	297.54161	13.08582	0.0579103	0.18776405	3.0203765	20	10 16.2	19.7
318229 2004 RL ₂₁₉	15.4	X	339.43491	102.19712	243.52193	10.46144	0.1122791	0.18188290	3.0851394	20	8 29.7	19.3
318230 2004 RO ₂₂₂	15.4	X	341.30838	16.45979	325.49064	24.32591	0.2881100	0.18081142	3.0973157	20	8 27.0	18.0
318231 2004 RF ₂₂₅	15.5	X	243.24640	260.99950	174.14573	25.70897	0.2406903	0.17621750	3.1509150	20	7 25.7	20.9
318232 2004 RQ ₂₂₉	16.1	X	320.33666	223.91311	208.47620	9.35302	0.0928433	0.18970412	2.9997487	20	11 28.8	19.8
318233 2004 RO ₂₃₃	17.2	X	231.55899	246.42938	127.36952	1.15313	0.2113527	0.22895214				

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318241 2004 <i>RS</i> ₂₇₂	16.1	X	273.05443	92.00337	357.83353	9.29384	0.2475031	0.18599701	3.0394762	20	9 17.9	20.2
318242 2004 <i>RW</i> ₂₇₅	16.7	X	27.78378	22.16088	332.20257	12.62400	0.1024908	0.19503252	2.9448603	20	11 28.7	20.8
318243 2004 <i>RO</i> ₂₈₃	17.3	X	231.49518	8.21824	39.24637	0.84951	0.1674265	0.23529896	2.5984999	20	6 20.9	21.1
318244 2004 <i>RR</i> ₂₈₅	16.7	X	146.28591	248.57022	40.21316	2.57057	0.0344533	0.20291628	2.8680813	20	—	—
318245 2004 <i>RP</i> ₂₉₂	16.0	X	116.40669	324.63547	3.23645	6.09510	0.0676885	0.20465881	2.8517783	20	—	—
318246 2004 <i>RJ</i> ₂₉₈	16.7	X	78.30970	153.06778	158.67416	2.19339	0.0327452	0.19444193	2.9508203	20	12 1.7	20.8
318247 2004 <i>RB</i> ₃₀₅	17.0	X	268.98118	110.09531	327.07612	9.31412	0.0732037	0.18636391	3.0354856	20	9 19.0	21.1
318248 2004 <i>RG</i> ₃₀₈	15.2	X	314.69646	201.98967	235.06707	10.74297	0.0769222	0.19179434	2.9779143	20	11 26.6	19.0
318249 2004 <i>RK</i> ₃₀₉	15.6	X	227.09065	229.45923	210.70530	13.69347	0.1692076	0.17413277	3.1760138	20	7 21.7	20.8
318250 2004 <i>RS</i> ₃₁₁	17.2	X	127.28033	315.57615	2.23636	3.61653	0.1871863	0.26714484	2.3876547	20	—	—
318251 2004 <i>RQ</i> ₃₁₅	15.5	X	289.35454	344.95956	29.07311	18.26886	0.2052259	0.17833769	3.1258919	20	7 12.2	20.0
318252 2004 <i>RZ</i> ₃₂₂	15.9	X	262.86287	85.34698	339.94817	11.30375	0.0529656	0.18026121	3.1036152	20	9 1.3	20.1
318253 2004 <i>RV</i> ₃₂₇	15.7	X	308.39279	18.26063	2.52551	10.94813	0.1136518	0.18038159	3.1022342	20	9 2.4	19.6
318254 2004 <i>RW</i> ₃₂₈	15.9	X	358.41703	336.01716	350.13960	10.33538	0.1850229	0.18213007	3.0823476	20	9 14.8	19.2
318255 2004 <i>RM</i> ₃₃₆	16.1	X	223.64309	258.27094	208.99483	9.25741	0.1956237	0.17717153	3.1395936	20	8 18.7	21.3
318256 2004 <i>RN</i> ₃₃₈	17.8	X	356.76991	302.19364	35.15514	2.31683	0.1664073	0.24612970	2.5216997	20	10 11.9	20.1
318257 2004 <i>RO</i> ₃₄₁	17.1	X	79.79564	182.44656	181.22137	7.75138	0.2292617	0.26384163	2.4075418	20	—	—
318258 2004 <i>RW</i> ₃₄₃	15.3	X	6.37215	303.02689	22.55559	22.48636	0.0702672	0.18313924	3.0710138	20	9 26.4	19.4
318259 2004 <i>RY</i> ₃₄₅	15.8	X	208.00710	112.64785	172.31463	11.85387	0.1189408	0.21347081	2.7727479	20	1 2.5	20.3
318260 2004 <i>SE</i> ₆	16.3	X	201.67508	81.61756	185.02446	10.55726	0.1961737	0.21105031	2.7939077	20	—	—
318261 2004 <i>SF</i> ₁₀	16.0	X	247.48823	279.36818	10.75564	12.75570	0.3060451	0.22637271	2.6663675	20	2 7.8	20.9
318262 2004 <i>SP</i> ₁₁	15.2	X	80.45664	296.49845	52.90729	14.20752	0.2091398	0.20131738	2.8832472	20	—	—
318263 2004 <i>SI</i> ₁₄	16.1	X	308.57511	198.20387	198.36087	14.74904	0.1124818	0.24439323	2.5336304	20	10 2.8	18.8
318264 2004 <i>ST</i> ₁₅	15.4	X	355.12777	313.88344	44.42006	10.49373	0.0566265	0.18742081	3.0240630	20	10 17.1	19.4
318265 2004 <i>SF</i> ₂₀	15.6	X	320.94451	10.53124	4.68572	11.21998	0.1449405	0.18208559	3.0828496	20	9 12.6	19.1
318266 2004 <i>SH</i> ₂₀	16.6	X	208.53989	34.66310	299.66944	1.06910	0.2473304	0.22035079	2.7147279	20	2 28.6	21.4
318267 2004 <i>SG</i> ₃₀	15.6	X	221.28151	75.74072	6.35024	8.31802	0.1804338	0.17263993	3.1942964	20	7 23.4	20.8
318268 2004 <i>SA</i> ₃₄	16.7	X	300.89752	104.65767	283.39450	7.16663	0.1321656	0.18261714	3.0768644	20	8 23.2	20.6
318269 2004 <i>ST</i> ₄₂	15.3	X	222.47256	238.42649	198.63865	8.55906	0.0989828	0.17497161	3.1658548	20	7 21.3	20.2
318270 2004 <i>SW</i> ₄₆	15.7	X	90.96112	90.39730	195.69071	9.55264	0.0610433	0.19177493	2.9781152	20	11 18.8	20.1
318271 2004 <i>SO</i> ₅₃	16.4	X	155.28774	183.81356	202.13606	2.68074	0.3050744	0.21763497	2.7372655	20	3 23.4	21.2
318272 2004 <i>SW</i> ₆₀	15.4	X	52.03208	212.08120	120.62165	9.13861	0.1095180	0.19101242	2.9860355	20	12 6.5	19.7
318273 2004 <i>TP</i> ₂	16.9	X	215.28919	21.63977	235.49443	3.72345	0.1046432	0.26968053	2.3726644	20	—	—
318274 2004 <i>TR</i> ₆	16.1	X	241.94510	196.98404	113.32649	5.91308	0.2773141	0.22535280	2.6744064	20	2 25.5	20.8
318275 2004 <i>TT</i> ₁₄	15.3	X	353.15711	40.94310	270.77516	21.27388	0.0358640	0.23798894	2.5788824	20	8 6.9	19.0
318276 2004 <i>TH</i> ₁₆	15.6	X	219.17885	73.31064	19.06400	25.62866	0.2476761	0.17107687	3.2137236	20	8 7.1	21.4
318277 2004 <i>TP</i> ₁₆	15.4	X	0.88090	69.85050	294.07689	6.18067	0.0510233	0.18517133	3.0485048	20	10 26.3	19.6
318278 2004 <i>TH</i> ₁₈	15.6	X	330.00077	210.80232	163.45489	10.54094	0.1171380	0.18173540	3.0868086	20	9 28.1	19.2
318279 2004 <i>TF</i> ₃₁	16.0	X	128.12136	213.75030	221.32882	8.32222	0.2470077	0.21756946	2.7378150	20	4 26.1	20.4
318280 2004 <i>TA</i> ₃₃	16.0	X	346.28398	348.60253	10.54602	10.87863	0.0624005	0.18299752	3.0725991	20	10 2.6	19.9
318281 2004 <i>TV</i> ₃₃	15.7	X	270.24721	0.12089	60.03937	3.94514	0.1984081	0.17712295	3.1401676	20	8 14.9	20.1
318282 2004 <i>TM</i> ₃₄	15.6	X	45.63925	121.37724	207.63321	9.48087	0.0707544	0.18881014	3.0092101	20	11 17.9	19.7
318283 2004 <i>TM</i> ₃₅	16.2	X	298.61968	69.25701	19.44503	10.32567	0.0248439	0.18949751	3.0019288	20	11 18.6	20.3
318284 2004 <i>TX</i> ₃₆	16.7	X	340.52851	177.35850	170.89682	0.67596	0.1772295	0.18110361	3.0939834	20	9 9.0	19.8
318285 2004 <i>TM</i> ₃₇	17.5	X	71.53417	344.78907	30.80935	1.91171	0.1828014	0.26391499	2.4070956	20	—	—
318286 2004 <i>TS</i> ₃₉	16.5	X	203.95316	85.28837	208.73170	2.38349	0.0668461	0.21150407	2.7899102	20	1 9.3	20.7
318287 2004 <i>TG</i> ₄₃	16.5	X	320.15735	103.98715	223.48073	6.71311	0.0610814	0.23515436	2.5995650	20	7 15.9	19.7
318288 2004 <i>TC</i> ₄₄	15.9	X	253.48950	152.39383	239.54872	3.90213	0.1618670	0.16967191	3.2314399	20	6 23.5	20.7
318289 2004 <i>TA</i> ₄₅	15.2	X	260.04200	188.86730	224.16652	7.90332	0.0541022	0.17457594	3.1706366	20	8 9.1	19.8
318290 2004 <i>TW</i> ₄₅	16.3	X	125.13738	38.21054	221.09460	4.00285	0.0496783	0.25204862	2.4820651	20	12 4.6	19.8
318291 2004 <i>TV</i> ₅₅	15.6	X	210.10334	251.93310	189.31652	4.43474	0.1288938	0.16765006	3.2573687	20	7 12.1	20.7
318292 2004 <i>TE</i> ₅₆	17.2	X	326.50402	304.20942	63.60614	2.77002	0.1297094	0.24239485	2.5475367	20	9 25.1	19.7
318293 2004 <i>TR</i> ₆₃	16.9	X	273.17253	33.50780	22.09240	6.31029	0.1188128	0.24131858	2.5551037	20	9 3.0	20.0
318294 2004 <i>TY</i> ₆₃	16.0	X	267.29961	335.44572	194.23042	5.44482	0.0721428	0.19759212	2.9193734	20	—	—
318295 2004 <i>TQ</i> ₆₈	15.6	X	87.39566	257.14954	81.40276	5.85666	0.1015872	0.19844989	2.9109549	20	—	—
318296 2004 <i>TE</i> ₇₀	16.1	X	95.28832	261.37987	83.16078	4.26422	0.2365968	0.20050914	2.8909901	20	—	—
318297 2004 <i>TK</i> ₇₁	15.7	X	216.09224	75.18833	6.74103	12.07700	0.0193088	0.17386893	3.1792260	20	8 3.3	20.4
318298 2004 <i>TF</i> ₇₂	15.7	X	282.15763	249.82518	193.86338	9.27293	0.0898364	0.18560999	3.0436998	20	10 16.5	19.7
318299 2004 <i>TD</i> ₇₆	16.2	X	204.79969	230.55668	199.33760	9.66711	0.1982873	0.16664975	3.2703904	20	6 20.3	21.7
318300 2004 <i>TW</i> ₈₂	18.0	X	321.48432	54.10285	344.49437	2.01039	0.1179598	0.31152313	2.1551418	20	11 19.8	19.5
318301 2004 <i>TG</i> ₈₄	16.3	X	200.45606	145.92776	10.80280	9.88740	0.0516815	0.18567298	3.0430114	20	10 10.3	20.6
318302 2004 <i>TA</i> ₈₇	16.9	X	88.73398	351.08927	74.80137	0.61014	0.0556911	0.21280126	2.7785609	20	2 5.8	20.5
318303 2004 <i>TP</i> ₈₇	16.8	X	179.11178	0.42064	188.12087	9.92689	0.0360809	0.18790255	3.0188922	20	10 28.6	21.2
318304 2004 <i>TY</i> ₈₇	16.3	X	216.40123	294.94448	168.24595	3.40392	0.2550071	0.17534449	3.1613650	20	8 5.3	21.7
318305 2004 <i>TR</i> ₉₀	15.6	X	306.17851	33.82219	11.18065	10.51326	0.1249267	0.18224850	3.0810121	20	9 27.9	19.4
318306 2004 <i>TO</i> ₉₉	16.3	X	317.24055	203.16588	150.04642	2.69942	0.0949734	0.17647717	3.1478235	20	8 8.9	20.4
318307 2004 <i>TF</i> ₁₀₉	15.8	X	132.50352	270.60418	86.66113	7.12564	0.2285624	0.20983174	2.8047141	20	1 28.1	20.2
318308 2004 <i>TV</i> ₁₁₁	15.5	X	255.58575	245.36919	203.76022	11.04889	0.0598184	0.18094064	3.0958409	20	9 19.1	19.8
318309 2004 <i>TN</i> ₁₁₇	18.0	X	274.50077	39.28854	2.70330	4.49983	0.1732035	0.30402755	2.1904201	20	8 13.7	20.1
318310 2004 <i>TQ</i> ₁₂₉	15.9	X	157.56794	316.07736	356.67161	11.63920	0.1118949	0.20879447	2.8139954	20	—	—
318311 2004 <i>TA</i> ₁₃₀	15.7	X	245.13805	20.79006	26.67408	9.83440	0.0704558	0.17375755	3.1805844	20	7 17.5	20.5
31831												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318321 2004 TE ₁₆₄	17.8	X	350.99574	23.89018	77.92242	2.34245	0.1303726	0.26023252	2.4297505	20	—	—
318322 2004 TX ₁₆₉	15.3	X	20.17820	210.41996	161.87237	9.61336	0.0471782	0.19077611	2.9885009	20	12 6.4	19.5
318323 2004 TE ₁₇₅	17.7	X	327.48061	342.33997	33.79631	4.85352	0.1611954	0.30842047	2.1695713	20	10 28.9	18.8
318324 2004 TW ₁₇₇	16.3	X	296.66307	154.61333	330.32563	1.37697	0.0290751	0.19777257	2.9175973	20	—	—
318325 2004 TN ₁₈₇	17.4	X	290.79641	322.30562	339.99504	1.30281	0.0571710	0.22789634	2.6544699	20	4 29.1	20.9
318326 2004 TQ ₁₈₉	17.2	X	28.52269	176.94291	174.85611	1.24815	0.1034388	0.25354903	2.4722634	20	12 14.0	20.3
318327 2004 TY ₁₉₀	16.3	X	274.82719	251.22113	184.48401	4.25868	0.1082770	0.18307222	3.0717633	20	9 22.4	20.3
318328 2004 TV ₁₉₅	15.7	X	355.79120	104.79735	220.11545	8.46858	0.0900058	0.17844058	3.1246902	20	8 29.8	19.7
318329 2004 TE ₁₉₈	15.6	X	82.44326	48.43812	203.16020	10.49210	0.0932531	0.18106693	3.0944012	20	9 27.6	20.2
318330 2004 TR ₁₉₈	16.9	X	224.62697	213.13157	185.53380	1.72359	0.1474985	0.22994824	2.6386553	20	6 4.3	20.9
318331 2004 TN ₂₀₀	15.5	X	319.03447	301.48697	41.23838	9.76767	0.0912674	0.17471624	3.1689389	20	8 1.7	19.7
318332 2004 TE ₂₀₃	15.5	X	332.16396	303.69199	21.61577	4.77142	0.1735358	0.17262842	3.1944384	20	7 22.1	19.1
318333 2004 TT ₂₀₄	16.3	X	15.95215	315.20080	23.63238	0.88913	0.1318846	0.24597400	2.5227637	20	11 10.9	19.1
318334 2004 TN ₂₀₅	15.9	X	334.13610	304.90239	46.06810	2.79923	0.1296826	0.17634458	3.1494011	20	9 2.3	19.5
318335 2004 TY ₂₀₅	15.9	X	231.10523	27.98185	48.61496	6.79201	0.0495325	0.17122685	3.2118467	20	8 9.4	20.6
318336 2004 TD ₂₁₄	15.5	X	271.84007	176.06492	240.54212	3.75714	0.1375736	0.17734182	3.1375833	20	8 18.2	19.9
318337 2004 TJ ₂₁₄	15.6	X	311.49279	168.26620	226.51221	7.52817	0.1733863	0.18054262	3.1003892	20	9 13.7	19.3
318338 2004 TY ₂₁₅	16.0	X	63.05635	105.52834	192.92324	9.53798	0.0991234	0.18794124	3.0184778	20	11 5.9	20.3
318339 2004 TS ₂₁₉	15.4	X	99.08460	237.18784	27.15605	11.37533	0.1787707	0.18865722	3.0108359	20	11 8.2	20.2
318340 2004 TW ₂₂₂	15.5	X	294.95619	79.54781	341.01677	11.30951	0.0495936	0.18333276	3.0688524	20	10 4.7	19.8
318341 2004 TQ ₂₃₁	16.9	X	143.56158	88.59573	284.35105	2.95307	0.0900664	0.21153802	2.7896118	20	2 10.5	21.1
318342 2004 TG ₂₄₉	16.1	X	267.23018	250.36763	177.66898	0.26799	0.1676857	0.17821557	3.1273198	20	8 24.1	20.4
318343 2004 TY ₂₆₂	16.5	X	129.82360	157.03586	253.37986	3.38271	0.0700930	0.21464823	2.7265990	20	3 8.5	20.5
318344 2004 TO ₂₆₄	15.6	X	71.68200	207.12970	28.32177	9.25953	0.0500595	0.17408861	3.1765508	20	8 24.1	20.1
318345 2004 TT ₂₆₅	15.2	X	271.49519	29.11845	33.55665	14.31689	0.0244920	0.17862294	3.1225632	20	9 19.2	19.7
318346 2004 TH ₂₆₇	15.1	X	164.29314	156.01655	34.28730	17.60568	0.1038470	0.18130695	3.0916696	20	10 13.5	19.9
318347 2004 TX ₂₈₅	16.1	X	305.07130	278.20365	101.91227	2.45059	0.1808141	0.17779463	3.1322539	20	8 15.8	19.8
318348 2004 TX ₂₈₉	15.5	X	296.43472	0.25477	345.75433	10.13450	0.1195809	0.17120640	3.2121025	20	6 26.4	19.9
318349 2004 TN ₂₉₄	15.6	X	318.19362	300.38932	52.49618	9.49669	0.0927623	0.17490164	3.1666991	20	8 14.5	19.8
318350 2004 TL ₃₀₉	16.2	X	23.09698	64.69092	278.04143	4.68553	0.1130907	0.18756048	3.0225616	20	11 8.7	20.1
318351 2004 TJ ₃₁₇	15.2	X	266.14221	165.81525	221.70818	14.36628	0.0968387	0.17161852	3.2069581	20	7 8.9	20.0
318352 2004 TJ ₃₁₈	16.4	X	275.32100	64.81551	233.74523	3.77263	0.0791442	0.22301961	2.6930269	20	3 30.9	20.2
318353 2004 TJ ₃₁₈	16.1	X	291.76250	30.38910	211.39037	8.45732	0.1416115	0.21594982	2.7514871	20	1 29.9	20.2
318354 2004 TN ₃₂₂	18.0	X	204.71195	73.90862	34.64192	8.36465	0.0280271	0.29860298	2.2168686	20	9 5.3	20.7
318355 2004 TJ ₃₂₇	16.0	X	282.89327	131.97894	287.67823	14.81643	0.0807781	0.18274880	3.0753864	20	9 8.6	20.4
318356 2004 TA ₃₃₁	15.3	X	15.65686	107.86385	224.09721	7.14995	0.1144089	0.18298074	3.0727870	20	10 14.3	19.2
318357 2004 TY ₃₃₇	16.5	X	351.44650	138.21784	208.90372	2.49896	0.0657668	0.18189838	3.0849644	20	9 23.8	20.5
318358 2004 TW ₃₄₄	15.0	X	222.81505	73.17147	47.13598	14.77570	0.1293705	0.17608717	3.1524696	20	9 19.7	20.0
318359 2004 TP ₃₄₉	15.7	X	9.11739	343.97859	25.75299	9.06218	0.1207949	0.19110770	2.9850430	20	11 23.8	19.5
318360 2004 TL ₃₅₄	17.9	X	212.64174	243.45898	120.98413	5.13084	0.1165329	0.29622849	2.2286994	20	8 8.9	21.1
318361 2004 TZ ₃₅₅	15.9	X	154.77950	304.28513	81.38932	10.44549	0.0822003	0.21679380	2.7443415	20	3 14.4	20.1
318362 2004 TO ₃₅₇	16.0	X	164.38249	146.87933	25.25708	9.81509	0.0272261	0.17806006	3.1291404	20	9 21.8	20.5
318363 2004 UC ₁	15.9	X	326.71087	29.44240	296.08960	4.26502	0.1864410	0.17432022	3.1737365	20	7 9.4	19.5
318364 2004 UK ₆	15.9	X	156.49245	290.28315	57.52475	10.06740	0.2090796	0.21009365	2.8023827	20	2 7.9	20.6
318365 2004 VQ ₇	15.8	X	347.24528	141.19873	206.85119	9.15755	0.1051302	0.17854014	3.1235285	20	9 17.5	19.8
318366 2004 VF ₈	17.3	X	15.00311	319.23399	107.18545	2.71426	0.1760730	0.25849683	2.4406147	20	—	—
318367 2004 VG ₁₉	17.3	X	94.42169	315.36591	65.43005	3.14615	0.1740121	0.26648025	2.3916229	20	—	—
318368 2004 VK ₃₅	15.7	X	103.69615	208.07051	74.60387	6.89092	0.1603915	0.18870571	3.1013202	20	12 4.1	20.5
318369 2004 VR ₃₉	15.6	X	270.07664	223.17021	212.99316	4.28257	0.0202243	0.17848166	3.1242107	20	9 27.6	20.1
318370 2004 VT ₅₀	15.2	X	48.86526	191.36312	69.34369	17.09113	0.0878856	0.17232147	3.1982307	20	9 5.5	19.9
318371 2004 VH ₅₁	18.3	X	270.26090	314.26114	129.31805	2.99361	0.1113012	0.30552149	2.1832738	20	10 22.2	20.2
318372 2004 VS ₅₃	16.4	X	176.72806	168.10370	234.97453	6.64966	0.1802910	0.22043387	2.7140458	20	4 24.4	20.9
318373 2004 VH ₆₀	16.5	X	262.84972	331.51872	29.63767	5.30480	0.1976887	0.22945804	2.6424120	20	5 20.8	20.5
318374 2004 VN ₆₃	16.6	X	276.28180	247.99970	145.04447	2.99661	0.1321796	0.23604908	2.5929920	20	7 31.9	19.7
318375 2004 VL ₇₁	15.3	X	314.09669	94.79494	243.52504	8.15558	0.1062859	0.16972191	3.2308052	20	7 12.1	19.5
318376 2004 VC ₇₄	15.8	X	287.68551	277.72488	94.22364	6.56520	0.1851553	0.17157942	3.2074452	20	7 7.1	20.1
318377 2004 VH ₇₄	15.3	X	322.36051	128.96445	212.00794	10.60623	0.1152224	0.17233528	3.1980599	20	7 26.3	19.5
318378 2004 VF ₈₅	15.9	X	201.70480	237.54605	236.67107	4.00330	0.0758352	0.17003656	3.2268183	20	8 15.6	20.8
318379 2004 VK ₉₈	17.4	X	339.71691	109.22750	234.75888	0.39520	0.0770867	0.24094788	2.5577258	20	9 12.0	20.2
318380 2004 VY ₁₀₉	15.7	X	64.29147	252.55945	40.69038	5.72793	0.1642220	0.18487152	3.0517998	20	11 7.5	20.0
318381 2004 WB ₇	15.6	X	240.68230	81.97158	26.70630	10.65089	0.0791622	0.17823722	3.1270665	20	9 26.9	20.1
318382 2004 WG ₉	17.3	X	354.01953	50.60113	89.78122	2.39280	0.1242498	0.26501062	2.4004566	20	—	—
318383 2004 WB ₁₁	17.8	X	286.48661	11.62388	23.64401	4.41813	0.1952179	0.30036859	2.2081727	20	8 21.1	19.6
318384 2004 XX ₇	15.8	X	335.48108	300.08547	88.63927	15.28384	0.0764953	0.24282826	2.5445045	20	11 13.2	18.9
318385 2004 XA ₁₀	15.6	X	80.11822	207.57979	293.13775	23.93322	0.2242721	0.27366585	2.3495732	20	5 25.2	19.0
318386 2004 XF ₂₂	16.8	X	354.38371	332.85351	98.36789	3.69602	0.2235477	0.25259185	2.4785052	20	—	—
318387 2004 XK ₂₈	17.8	X	200.51947	37.08229	65.88404	4.91919	0.2146753	0.29087238	2.2559756	20	8 2.6	21.3
318388 2004 XE ₃₀	16.9	X	338.28040	151.14342	206.30156	0.93249	0.2470124	0.24318253	2.5420327	20	10 6.8	18.6
318389 2004 XM ₃₆	15.4	X	176.52630	301.96829	250.74855	8.61143	0.0548604	0.17825426	3.1268672	20	10 24.7	20.2
318390 2004 XU ₄₃	17.9	X	7.99237	274.07680	71.55900	4.55969	0.1729968	0.30683110	2.1770570	20	12 1.7	19.9
318391 2004 XH ₄₉	16.5	X	301.65671	311.46895	66.98364	5.82360	0.1159212	0.23275596	2.6173924	20	8 26.6	19.5
318392 2004 XR ₆₁	15.0	X	323.75338	63.31285	289.19108	17.08306	0.1934673	0.17297385	3.1901841	20	8 4.8	18.7
318393 2004 XU ₆₁	16.7	X	237.88413	10.44021	35.86554	2.96611	0.0473304	0.22776368	2.6555			

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318401 2004 XT ₁₃₅	17.8	X	192.20175	90.54346	16.75717	4.65719	0.1800634	0.29117643	2.2544048	20	8 2.7	21.2
318402 2004 XJ ₁₆₃	17.6	X	213.83182	23.99377	52.76025	3.66839	0.1431529	0.28992803	2.2608717	20	7 16.2	20.8
318403 2004 XZ ₁₆₆	15.8	X	12.98634	124.36245	85.73211	22.81122	0.2665831	0.26596736	2.3946965	20	5 10.7	17.6
318404 2004 XO ₁₈₃	15.1	X	108.24628	194.05004	109.69889	17.14249	0.1398164	0.18344081	3.0676472	20	12 30.4	20.0
318405 2004 XF ₁₈₅	13.0	X	246.00005	232.82819	89.21579	14.42567	0.0607252	0.08254431	5.2240976	20	4 14.1	20.2
318406 2004 YS ₁₉	18.4	X	194.95281	139.88598	269.00791	0.92200	0.1988472	0.28245934	2.3005522	20	5 17.0	22.1
318407 2004 YF ₂₂	13.8	X	324.05933	149.99152	122.88223	6.64032	0.0795623	0.08189225	5.2517918	20	5 11.7	20.5
318408 2005 AO ₂	17.0	X	227.20272	138.49345	311.22617	6.95625	0.1156745	0.29239502	2.2481368	20	8 20.9	19.8
318409 2005 AM ₇	17.5	X	140.26037	195.16321	330.53072	6.29469	0.1566313	0.28734709	2.2743896	20	8 28.1	21.0
318410 2005 AF ₁₂	16.9	X	325.69220	73.24617	318.20751	7.59257	0.1144304	0.30090991	2.2055237	20	11 10.1	18.9
318411 2005 AH ₁₄	17.1	X	109.30259	192.44460	59.35059	12.83328	0.6084662	0.27986376	2.3147545	20	11 27.2	22.2
318412 2005 Tramelan	16.0	X	288.13334	280.74423	121.95729	15.59591	0.0797597	0.23015157	2.6371010	20	9 14.7	19.4
318413 2005 AK ₂₉	17.6	X	173.51097	160.90556	325.23505	2.81141	0.1235462	0.28730474	2.2746130	20	8 9.6	20.6
318414 2005 AD ₄₁	16.4	X	73.94903	240.16624	165.64156	1.79742	0.2156821	0.19758956	2.9193986	20	1 14.9	19.7
318415 2005 AO ₄₂	17.4	X	226.72724	83.95207	4.51139	6.66140	0.1867915	0.29368567	2.2415454	20	8 13.3	20.5
318416 2005 AC ₄₈	17.6	X	160.05271	332.05508	126.80116	4.08535	0.1168080	0.28210713	2.3024666	20	6 18.2	21.0
318417 2005 AB ₆₃	15.5	X	197.57217	148.24003	135.18825	9.78183	0.1941758	0.19184002	2.9774416	20	—	—
318418 2005 AU ₆₇	15.7	X	193.12173	324.16133	141.17422	9.71146	0.1265900	0.16148705	3.3397266	20	7 24.9	21.0
318419 2005 AB ₇₅	16.7	X	76.83154	118.95438	121.66863	3.89203	0.0366399	0.22616966	2.6679631	20	9 7.6	20.3
318420 2005 BM ₁₀	18.1	X	121.71802	264.95616	244.40834	1.15274	0.1778467	0.28132660	2.3067234	20	7 19.5	21.6
318421 2005 BE ₁₂	16.2	X	30.01549	112.59875	91.97404	4.75678	0.0396752	0.21291114	2.7776048	20	5 14.7	19.7
318422 2005 BG ₁₇	17.3	X	209.66686	219.30419	265.04900	0.91882	0.1553984	0.23015378	2.6370841	20	9 6.2	21.4
318423 2005 BS ₁₇	16.9	X	146.76061	320.95864	126.55509	3.27389	0.0711343	0.21301752	2.7766800	20	5 17.3	21.0
318424 2005 BD ₂₀	17.0	X	225.43245	331.62323	95.15637	3.81964	0.1527109	0.28829227	2.2694157	20	7 13.9	20.1
318425 2005 BZ ₂₂	16.6	X	178.45316	28.65711	77.48716	2.50641	0.0803902	0.22002159	2.7174352	20	7 16.1	20.6
318426 2005 BZ ₂₃	17.7	X	163.64922	104.64622	72.12374	2.79269	0.0901828	0.29498873	2.2349395	20	10 9.9	20.6
318427 2005 BA ₂₉	17.4	X	156.68610	130.58648	24.77841	5.25952	0.1633052	0.28828064	2.2694767	20	9 2.1	20.9
318428 2005 BY ₄₄	17.3	X	309.97785	282.90722	154.04154	1.72671	0.0453361	0.24030776	2.5622658	20	12 3.5	20.4
318429 2005 CG ₂	17.5	X	107.21630	85.24105	120.50901	5.43487	0.1632233	0.28509645	2.2863437	20	9 20.0	20.9
318430 2005 CL ₃	16.5	X	17.35080	251.76385	90.62285	4.81926	0.0340455	0.23139131	2.6276732	20	11 2.5	19.9
318431 2005 CS ₄	14.9	X	307.22069	265.34316	140.45427	19.43857	0.1216275	0.16856262	3.2456016	20	10 3.0	19.2
318432 2005 CP ₆	17.0	X	19.90043	268.13492	137.18023	25.41248	0.0744761	0.37345715	1.9097457	20	—	—
318433 2005 CA ₁₂	16.4	X	326.10645	310.29359	109.83514	6.85605	0.2332019	0.24151322	2.5537327	20	12 15.1	18.4
318434 2005 CR ₁₃	16.2	X	357.22490	183.28888	83.74489	5.84532	0.1148849	0.21270223	2.7794232	20	6 20.0	19.0
318435 2005 CD ₁₆	18.2	X	140.90766	215.38247	300.22713	2.10587	0.1481017	0.28530474	2.2852308	20	8 14.8	21.6
318436 2005 CU ₂₂	16.7	X	196.46104	70.40823	37.89142	4.20834	0.2025650	0.28871373	2.2672065	20	8 6.6	20.3
318437 2005 CY ₃₂	17.3	X	77.47170	315.77219	338.24377	6.95969	0.1492642	0.29799265	2.2198946	20	12 11.4	20.6
318438 2005 CD ₃₈	17.0	X	155.81305	165.12011	145.19743	23.93080	0.0840392	0.37837054	1.8931768	20	—	—
318439 2005 CL ₄₄	16.6	X	222.96365	53.29239	136.10766	7.60395	0.0819933	0.23945730	2.5683290	20	12 24.4	20.1
318440 2005 CS ₄₅	17.1	X	82.16699	17.11644	148.23778	11.83574	0.1580513	0.27545149	2.3394080	20	6 23.6	20.2
318441 2005 CY ₄₅	17.1	X	122.75862	92.12173	338.66681	4.44078	0.1124554	0.26783001	2.3835809	20	3 27.7	20.3
318442 2005 CL ₄₆	17.6	X	272.45052	162.95356	340.58427	1.95778	0.0955185	0.24127656	2.5554024	20	—	—
318443 2005 CO ₅₂	16.4	X	327.80993	25.72772	34.83107	4.69396	0.1939175	0.24134374	2.5549281	20	12 15.7	18.7
318444 2005 CT ₅₂	17.4	X	191.73216	28.91175	46.95041	3.60960	0.1928195	0.28299158	2.2976668	20	6 18.6	21.1
318445 2005 CF ₆₀	17.3	X	174.24635	127.92389	5.81153	5.54519	0.1359569	0.28716695	2.2753406	20	8 21.9	20.6
318446 2005 CY ₆₀	17.5	X	306.58586	44.41412	350.55184	5.00063	0.1560401	0.29708034	2.2244370	20	10 5.9	19.2
318447 2005 CX ₇₁	16.1	X	290.50807	245.94471	125.00485	9.14206	0.0500909	0.22138925	2.7062320	20	8 3.1	19.5
318448 2005 CN ₇₃	17.3	X	336.47469	22.54791	39.92059	1.35592	0.2081047	0.24288746	2.5440911	20	—	—
318449 2005 CR ₇₉	16.5	X	276.42856	259.47133	154.90368	9.61160	0.1547526	0.22838395	2.6506904	20	8 26.8	19.8
318450 2005 EJ	20.0	X	306.63812	92.13105	33.50460	12.45678	0.1542207	0.56740753	1.4450160	20	—	—
318451 2005 ET ₁	16.2	X	100.18585	258.34615	346.74186	24.54990	0.1274975	0.28955544	2.2628107	20	10 16.9	20.0
318452 2005 EA ₃	17.9	X	119.35188	215.13513	328.15800	5.20964	0.0980196	0.28611640	2.2809069	20	8 26.5	21.0
318453 2005 ET ₄	17.1	X	34.07181	70.79455	147.02341	5.42050	0.1118155	0.27204070	2.3589214	20	6 16.5	19.5
318454 2005 EP ₇	17.3	X	83.09925	308.71429	169.69748	5.38214	0.1791886	0.26601952	2.3933520	20	4 23.2	20.1
318455 2005 EW ₈	16.0	X	217.78387	344.18531	345.05372	1.34486	0.0391055	0.20266382	2.8704626	20	3 9.0	20.2
318456 2005 EV ₁₀	17.7	X	111.01891	226.20458	297.35451	1.95838	0.1673203	0.27805252	2.3247959	20	7 26.6	21.1
318457 2005 EH ₁₂	17.3	X	130.94201	130.33983	2.43787	6.04286	0.2172767	0.27885081	2.3203568	20	7 10.4	21.0
318458 2005 EF ₁₆	17.6	X	3.45512	229.60889	22.79893	1.42821	0.1491014	0.27209742	2.3585935	20	6 12.5	19.3
318459 2005 EC ₂₀	17.1	X	61.33621	87.78136	151.57515	3.03619	0.1309112	0.28119036	2.3074684	20	9 5.7	19.9
318460 2005 EF ₂₀	16.9	X	50.14776	289.99831	344.55076	7.30468	0.1159011	0.28584879	2.2823302	20	10 5.8	19.7
318461 2005 ET ₂₁	17.3	X	53.73753	100.06710	157.55765	5.42659	0.1412132	0.28262174	2.2996708	20	9 23.9	20.0
318462 2005 EN ₂₄	17.0	X	125.56178	70.31540	126.07552	5.54504	0.0951652	0.28572647	2.2829816	20	9 23.1	20.2
318463 2005 EB ₂₆	17.7	X	62.56883	182.26476	2.20632	1.85798	0.1283868	0.27246520	2.3564706	20	6 16.9	20.3
318464 2005 EH ₂₉	17.4	X	97.88640	47.10097	177.54103	6.59774	0.0751540	0.28603420	2.2813438	20	9 25.2	20.4
318465 2005 EK ₃₃	17.0	X	94.91582	239.18142	15.22406	5.78547	0.2299393	0.28832672	2.2692349	20	11 10.8	20.7
318466 2005 EU ₄₀	17.3	X	318.13253	95.02344	148.38442	4.60743	0.1997892	0.26068614	2.4269309	20	2 22.8	19.9
318467 2005 ES ₄₁	17.3	X	105.80693	146.17230	14.30584	3.68168	0.1517333	0.27530944	2.3402126	20	7 15.8	20.6
31846												

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318481 2005 EC ₈₉	17.3	X	37.25439	16.18310	254.71111	2.47560	0.1522070	0.28036741	2.3119815	20	9 17.8	20.0
318482 2005 EF ₈₉	17.8	X	187.39654	132.47336	328.90510	5.12537	0.1131162	0.28186180	2.3038024	20	7 22.6	21.0
318483 2005 ES ₉₄	16.9	X	177.80603	242.34390	321.45650	6.02010	0.1895594	0.23249040	2.6193852	20	11 9.3	21.2
318484 2005 EA ₉₈	16.7	X	94.17912	278.00734	293.64364	4.84925	0.1140065	0.28309593	2.2971021	20	9 4.1	19.9
318485 2005 EF ₉₉	17.9	X	65.10719	222.59572	277.02833	2.89327	0.1846111	0.26742467	2.3859888	20	4 23.3	20.3
318486 2005 ED ₁₀₄	17.2	X	335.24120	262.57215	25.45606	1.43911	0.1826605	0.27197371	2.3593087	20	6 4.2	18.9
318487 2005 EX ₁₁₀	17.5	X	38.51647	308.53364	268.12565	1.45891	0.1621713	0.27269587	2.3551415	20	6 30.7	19.5
318488 2005 ER ₁₁₄	16.9	X	200.68589	3.41291	51.01754	0.92911	0.0633671	0.21017618	2.8016490	20	6 3.8	20.9
318489 2005 EK ₁₁₇	17.2	X	215.20456	99.98025	170.52772	5.96692	0.1074075	0.24677124	2.5173273	20	—	—
318490 2005 EF ₁₁₉	17.2	X	136.00000	282.74268	211.38836	6.43049	0.1959431	0.27802877	2.3249282	20	7 13.1	20.9
318491 2005 EF ₁₂₀	17.4	X	154.63063	207.67225	211.25454	4.68357	0.1697165	0.27012911	2.3700370	20	4 22.9	20.9
318492 2005 EW ₁₂₀	17.2	X	355.57961	347.77082	220.55536	6.25363	0.1611521	0.26356589	2.4092206	20	3 11.6	19.6
318493 2005 EA ₁₂₁	17.2	X	120.32579	240.86353	295.75594	5.98428	0.1170205	0.28306927	2.2972463	20	8 18.1	20.6
318494 2005 EW ₁₂₈	17.6	X	6.69135	163.12512	278.42092	1.51557	0.1271884	0.24646839	2.5193890	20	—	—
318495 2005 EJ ₁₃₆	17.8	X	161.86832	265.63138	212.64759	5.87745	0.1665476	0.28035365	2.3120572	20	7 15.7	21.5
318496 2005 EK ₁₃₆	16.8	X	40.54701	74.64768	177.75228	22.29773	0.2266884	0.27566652	2.3381912	20	9 8.0	19.4
318497 2005 EP ₁₃₇	16.5	X	205.09976	82.28943	131.32324	9.40211	0.1274216	0.23710026	2.5853224	20	12 26.8	20.3
318498 2005 EZ ₁₃₈	17.5	X	74.35853	80.90547	147.91810	1.76757	0.1667125	0.27740254	2.3284259	20	9 12.5	20.5
318499 2005 EL ₁₄₅	17.8	X	124.02742	70.05870	11.67890	6.12805	0.2059846	0.26821582	2.3812946	20	4 23.9	21.3
318500 2005 EW ₁₄₅	18.2	X	78.13435	192.02690	14.42913	4.87419	0.1683903	0.27675069	2.3320807	20	8 18.9	21.4
318501 2005 EX ₁₄₇	17.7	X	25.50443	144.41222	111.85907	2.16616	0.1568041	0.27362385	2.3498136	20	8 7.5	19.9
318502 2005 ED ₁₄₉	17.6	X	67.67642	127.15293	105.44638	2.90434	0.1785492	0.27731175	2.3289341	20	9 12.3	20.6
318503 2005 ET ₁₄₉	17.3	X	8.71656	202.65919	96.11684	4.20612	0.1595128	0.27732618	2.3288533	20	9 14.8	19.4
318504 2005 EV ₁₅₀	15.8	X	290.22906	183.25189	75.15073	4.00244	0.0717640	0.19261517	2.9694480	20	3 5.9	19.9
318505 2005 EB ₁₅₅	17.6	X	46.70657	67.95447	172.70460	7.72054	0.1828551	0.27588415	2.3369615	20	9 7.6	20.4
318506 2005 ER ₁₅₅	16.9	X	83.54941	46.55968	34.76892	1.76891	0.1657123	0.25824179	2.4422214	20	2 29.2	19.6
318507 2005 EL ₁₅₆	17.1	X	96.10692	119.10007	56.82101	7.76257	0.1473440	0.27894384	2.3198409	20	7 26.7	20.3
318508 2005 EC ₁₆₁	18.0	X	20.26753	75.39748	156.60426	1.59233	0.1488472	0.26866288	2.3786522	20	6 16.1	20.0
318509 2005 ES ₁₆₁	17.4	X	71.27509	93.94674	170.10399	6.68596	0.1631702	0.28235852	2.3010998	20	10 28.0	20.6
318510 2005 EA ₁₆₇	17.8	X	149.46140	164.09353	330.90956	1.95187	0.1458326	0.28095432	2.3087606	20	8 2.9	21.2
318511 2005 EW ₁₇₀	16.9	X	122.46613	283.33023	221.95885	10.64664	0.1270542	0.27796767	2.3252689	20	7 8.4	20.4
318512 2005 EN ₁₇₃	17.3	X	21.10620	227.11611	300.90517	2.38713	0.0990654	0.26225813	2.4172232	20	3 5.9	19.7
318513 2005 EV ₁₇₆	17.4	X	59.21635	239.42465	6.81624	6.48352	0.0805603	0.27848075	2.3224120	20	9 5.5	20.2
318514 2005 EA ₁₈₀	18.1	X	158.09150	161.50541	275.16391	2.29521	0.2160740	0.27478576	2.3431850	20	5 20.8	22.0
318515 2005 EZ ₁₈₂	16.9	X	294.33006	331.52365	352.25660	4.09892	0.1861705	0.27047989	2.3679874	20	5 10.8	19.8
318516 2005 EB ₁₈₇	17.8	X	343.72326	273.75711	357.97410	2.38196	0.1709202	0.26749175	2.3855899	20	5 28.4	19.8
318517 2005 EM ₁₈₈	16.2	X	89.47486	358.91019	190.36476	25.32817	0.1616646	0.27509170	2.3414473	20	7 31.9	20.0
318518 2005 EU ₁₉₁	17.5	X	68.70224	84.44331	188.83464	6.11487	0.2273969	0.28536086	2.2849311	20	11 12.8	20.9
318519 2005 EE ₁₉₆	17.4	X	174.78054	227.80716	200.20282	3.44212	0.2189726	0.27445740	2.3450535	20	5 24.9	21.2
318520 2005 EW ₂₀₂	17.1	X	68.81493	50.06013	169.87939	8.54968	0.0909534	0.27714758	2.3298538	20	8 10.2	19.9
318521 2005 EC ₂₀₃	17.1	X	40.12350	111.70978	167.96347	5.80564	0.1120950	0.28124597	2.3071642	20	9 30.9	19.6
318522 2005 ED ₂₀₃	17.7	X	77.11657	210.05086	40.20428	2.62403	0.1784177	0.28194408	2.3033542	20	10 16.4	21.0
318523 2005 ED ₂₂₀	16.0	X	182.02801	311.89442	215.07250	10.99401	0.2035033	0.22534447	2.6744724	20	9 27.9	20.7
318524 2005 EV ₂₂₆	17.6	X	47.34187	87.46654	177.24951	6.72459	0.1774386	0.28006876	2.3136248	20	9 29.9	20.2
318525 2005 EA ₂₃₃	17.2	X	138.28357	43.24230	120.60610	7.05635	0.1384353	0.28335509	2.2957013	20	8 24.6	20.6
318526 2005 EX ₂₄₀	17.3	X	135.93452	178.46220	29.48961	6.30745	0.2190822	0.28903983	2.2655010	20	10 19.2	20.8
318527 2005 EY ₂₄₅	17.7	X	14.54453	111.04304	165.87016	2.88915	0.1590783	0.27638107	2.3341594	20	8 18.8	19.8
318528 2005 EB ₂₄₆	17.4	X	10.61906	232.12094	49.78540	1.07818	0.1985767	0.27568921	2.3380630	20	8 25.9	19.2
318529 2005 EF ₂₄₆	16.3	X	113.69165	182.70116	156.52625	0.84408	0.0392975	0.17842176	3.1249099	20	—	—
318530 2005 EQ ₂₅₀	17.2	X	27.54383	135.99879	340.47085	20.60339	0.0417539	0.38255984	1.8793304	20	—	—
318531 2005 EU ₂₅₀	17.1	X	113.12318	100.87370	107.29408	6.88042	0.0998844	0.28467279	2.2886115	20	9 26.3	20.4
318532 2005 EC ₂₆₄	17.9	X	162.87586	210.07049	242.95453	1.46104	0.1535898	0.27561758	2.3384681	20	6 14.1	21.4
318533 2005 ER ₂₆₈	16.5	X	99.35264	259.41215	278.17498	2.25984	0.0295861	0.20984185	2.8046240	20	7 10.7	20.1
318534 2005 EX ₂₆₉	17.4	X	107.27995	337.05770	162.99383	6.79565	0.1705152	0.27248855	2.3563359	20	6 20.7	20.8
318535 2005 EY ₂₆₉	17.3	X	201.66801	347.83612	154.07571	4.01963	0.1404976	0.28951372	2.2630281	20	9 30.7	20.3
318536 2005 EX ₃₂₂	16.0	X	265.19908	36.51652	73.73539	13.45572	0.1229840	0.23432683	2.6056818	20	11 4.9	19.3
318537 2005 FA ₆	14.9	X	282.47792	238.84687	284.13763	15.15075	0.2005836	0.17736258	3.1373386	20	—	—
318538 2005 FE ₆	16.3	X	90.86201	312.37458	310.86358	8.43503	0.1319014	0.29039540	2.2584452	20	11 10.4	19.7
318539 2005 FX ₆	17.3	X	56.88126	125.48456	70.95571	7.26477	0.1453483	0.27081675	2.3660234	20	6 28.7	20.0
318540 2005 GO ₂	17.2	X	35.10938	110.78046	51.87692	4.33780	0.1578073	0.26196672	2.4190154	20	3 30.9	19.3
318541 2005 GS ₂	17.7	X	93.39767	131.45191	80.42297	2.71980	0.1491675	0.27865285	2.3214556	20	9 10.6	20.9
318542 2005 GH ₃	17.2	X	65.44088	147.26683	74.54605	6.13116	0.1835491	0.27457799	2.3443668	20	8 27.6	20.3
318543 2005 GT ₃	17.5	X	34.67456	176.47101	97.17916	3.27067	0.1998395	0.27562365	2.3384337	20	9 28.8	20.0
318544 2005 GP ₅	17.0	X	27.58269	159.39695	51.15380	6.23325	0.1679801	0.26616877	2.3934884	20	5 29.1	19.1
318545 2005 GQ ₆	17.8	X	151.61978	348.06049	122.23918	3.01396	0.1641340	0.27395458	2.3479220	20	6 26.2	21.4
318546 2005 GG ₇	17.4	X	355.17336	54.81281	176.02376	5.63238	0.1935265	0.26276121	2.4141368	20	4 17.3	19.2
318547 Fidirich	18.0	X	155.31325	73.06034	41.54237	2.93860	0.1146248	0.27675180	2.3320745	20		

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318561 2005 GC ₁₁₃	17.0	X	65.75084	96.30985	139.34095	12.53168	0.1561634	0.27661163	2.3328623	20	9 11.9	20.0
318562 2005 GA ₁₁₆	17.6	X	303.50652	222.95092	69.24457	3.09719	0.1704885	0.26294211	2.4130294	20	4 14.9	20.3
318563 2005 GD ₁₁₇	17.7	X	354.80421	274.94301	352.58110	2.15088	0.1805375	0.26740319	2.3861166	20	6 17.9	19.5
318564 2005 GY ₁₁₇	17.6	X	214.63625	122.98017	129.50177	2.25996	0.0914622	0.24249084	2.5468644	20	—	—
318565 2005 GX ₁₁₈	17.7	X	195.97528	12.40055	77.37224	2.84343	0.1667401	0.27925037	2.3181429	20	7 12.5	21.1
318566 2005 GV ₁₂₃	17.4	X	206.95705	228.01748	195.07067	6.34403	0.0767389	0.27889235	2.3201264	20	6 23.1	20.6
318567 2005 GH ₁₃₂	17.6	X	129.85357	317.34820	179.43589	5.55340	0.0670456	0.27282997	2.3543697	20	7 1.3	20.8
318568 2005 GJ ₁₃₂	17.7	X	98.07114	346.72239	183.77228	7.15185	0.0458165	0.27241263	2.3567737	20	7 3.9	20.8
318569 2005 GA ₁₃₅	17.8	X	1.76819	55.04544	214.11702	2.22774	0.1713081	0.26827021	2.3809727	20	7 7.9	19.7
318570 2005 GT ₁₃₆	17.2	X	333.53564	184.63703	100.58987	5.49144	0.1738924	0.26541432	2.3980219	20	5 28.9	19.3
318571 2005 GO ₁₃₉	16.2	X	157.76018	301.40343	185.77110	8.84753	0.0997284	0.20984996	2.8045517	20	7 18.3	20.7
318572 2005 GL ₁₄₁	18.2	X	17.77015	83.33344	176.67059	2.39816	0.3169848	0.26827505	2.3809441	20	8 25.7	19.9
318573 2005 GO ₁₄₁	16.4	X	113.11973	340.79095	205.08801	7.61988	0.2333702	0.21240553	2.7820109	20	8 24.8	21.1
318574 2005 GL ₁₄₄	16.8	X	348.37013	246.91810	73.15476	8.06728	0.1408976	0.27476491	2.3433035	20	9 6.4	19.0
318575 2005 GY ₁₄₆	16.9	X	314.40112	99.17044	228.13354	4.30920	0.1507806	0.27084046	2.3658853	20	6 28.3	19.2
318576 2005 GY ₁₄₈	17.1	X	72.02140	133.20958	116.78506	3.89123	0.1775998	0.27815608	2.3242188	20	10 11.5	20.3
318577 2005 GL ₁₅₁	17.0	X	102.81578	287.41176	188.79145	6.55019	0.0745751	0.26255931	2.4153742	20	4 30.6	20.1
318578 2005 GG ₁₅₂	17.7	X	93.72418	256.39571	221.64256	3.11986	0.1101852	0.26361513	2.4089207	20	4 24.7	20.6
318579 2005 GH ₁₅₆	17.2	X	247.38183	26.40792	194.62767	4.88244	0.1578697	0.24158921	2.5531972	20	—	—
318580 2005 GL ₁₆₂	17.3	X	359.27695	93.90490	173.00579	5.90718	0.3624222	0.26452238	2.4034095	20	7 11.7	17.7
318581 2005 GE ₁₆₈	17.1	X	327.59084	38.75709	217.29915	1.81374	0.1803421	0.25943997	2.4346963	20	3 29.8	19.7
318582 2005 GT ₁₇₀	16.7	X	50.28929	167.56021	89.48691	7.87762	0.2005620	0.27464511	2.3439848	20	9 30.2	19.8
318583 2005 GP ₁₈₀	17.6	X	20.05569	115.52681	89.09925	2.39073	0.1307593	0.26493177	2.4009329	20	5 1.4	19.6
318584 2005 GV ₁₈₇	17.1	X	299.32843	219.35170	157.47386	4.75639	0.1793765	0.29029713	2.2589549	20	8 15.3	18.9
318585 2005 GA ₁₈₈	17.5	X	158.91182	83.64745	348.41602	6.67336	0.0749251	0.27393231	2.3480493	20	5 6.4	20.8
318586 2005 GR ₁₈₉	17.1	X	186.24516	343.67115	344.44993	2.22684	0.2051170	0.25710528	2.4494132	20	2 1.6	21.0
318587 2005 GS ₂₂₀	16.9	X	198.59728	33.45797	17.87774	6.79226	0.1273420	0.26960281	2.3731204	20	5 24.3	20.5
318588 2005 GK ₂₂₇	17.4	X	16.97282	172.68232	45.68330	6.92495	0.1448989	0.26584469	2.3954332	20	5 16.3	19.4
318589 2005 GU ₂₂₇	17.5	X	56.01345	348.80716	236.45228	4.26820	0.2604092	0.27416584	2.3467158	20	8 17.9	20.4
318590 2005 HF ₂	17.6	X	85.21175	82.48879	209.83845	5.57212	0.2240384	0.28542401	2.2845941	20	12 19.6	21.3
318591 2005 HM ₂	17.3	X	358.08959	80.90436	178.05214	2.08081	0.1883653	0.26682987	2.3895333	20	6 11.6	18.8
318592 2005 HB ₃	17.4	X	126.93319	4.87459	169.62776	5.64518	0.1070732	0.27960798	2.3161660	20	8 22.6	20.6
318593 2005 JH ₂	17.4	X	168.09883	262.79097	203.69522	1.92537	0.1371623	0.27720540	2.3295297	20	7 6.9	20.9
318594 2005 JG ₄	16.9	X	334.90476	187.44919	86.26098	5.73616	0.1530226	0.26196167	2.4190465	20	5 16.1	19.1
318595 2005 JA ₂₅	17.3	X	19.79221	114.09290	166.63117	1.34293	0.1708243	0.27241251	2.3567744	20	9 5.9	19.5
318596 2005 JN ₂₉	16.1	X	111.42520	164.60624	66.22616	25.04808	0.1892308	0.28127490	2.3070060	20	11 2.7	20.0
318597 2005 JH ₃₀	17.8	X	71.50574	228.31167	348.82057	1.21466	0.1401504	0.27829714	2.3234333	20	8 19.7	20.5
318598 2005 JB ₄₀	17.6	X	341.03804	247.33588	59.55689	3.04385	0.1918557	0.26877016	2.3780191	20	7 22.7	19.1
318599 2005 JM ₄₃	15.8	X	243.22808	79.28352	145.58158	1.54490	0.1165707	0.17439791	3.1727939	20	—	—
318600 2005 JL ₄₄	17.2	X	30.73417	126.88917	119.91728	2.03867	0.1526383	0.27028999	2.3690964	20	8 1.1	19.3
318601 2005 JX ₄₅	15.3	X	158.31112	234.33558	121.65939	27.77770	0.1087861	0.18081194	3.0973098	20	2 12.8	20.2
318602 2005 JL ₄₈	17.3	X	247.68337	181.06318	171.33853	6.03889	0.1177266	0.26056987	2.4276529	20	5 3.7	20.7
318603 2005 JW ₅₁	15.6	X	250.59563	20.24361	206.97742	8.64722	0.0507588	0.17675388	3.1445373	20	—	—
318604 2005 JN ₅₄	17.1	X	261.07557	206.41244	98.22544	6.45903	0.0880044	0.25598742	2.4565389	20	3 22.6	20.5
318605 2005 JB ₅₅	17.8	X	49.95470	15.26001	179.46498	6.83574	0.0608751	0.26415474	2.4056389	20	6 1.9	20.6
318606 2005 JN ₅₅	15.4	X	74.21988	319.88276	95.99703	10.90284	0.0837293	0.17674099	3.1446901	20	1 15.0	19.5
318607 2005 JC ₅₇	16.8	X	31.64016	320.16692	39.87136	6.45716	0.0450632	0.22575261	2.6712479	20	12 12.2	20.4
318608 2005 JH ₅₈	16.9	X	104.07180	17.62000	140.27990	5.08031	0.0618663	0.26933904	2.3746695	20	6 27.1	20.0
318609 2005 JM ₆₃	15.7	X	221.41275	69.14551	181.09638	26.15452	0.2314944	0.17269782	3.1935825	20	—	—
318610 2005 JS ₆₄	16.2	X	174.08350	175.23528	200.28265	9.87862	0.0778153	0.18939382	3.0030243	20	3 17.4	20.8
318611 2005 JY ₆₅	15.8	X	237.64514	61.46131	195.96976	13.13624	0.1755114	0.17728061	3.1383056	20	—	—
318612 2005 JT ₆₆	17.8	X	61.05409	315.93585	279.61497	2.28439	0.1873908	0.27372483	2.3492357	20	9 6.2	20.9
318613 2005 JH ₆₉	15.6	X	119.07922	251.15219	144.01293	16.75303	0.0403559	0.18016099	3.1047660	20	2 7.7	20.0
318614 2005 JD ₇₄	15.2	X	128.23467	324.95656	64.49558	10.76170	0.0748495	0.18282554	3.0745258	20	2 20.6	19.8
318615 2005 JS ₇₅	17.6	X	49.02991	148.89523	71.59839	3.08755	0.1562929	0.27044712	2.3681787	20	7 24.9	20.1
318616 2005 JA ₈₀	17.1	X	321.32162	269.35328	24.89165	1.00364	0.2175473	0.26226085	2.4172064	20	5 9.0	19.4
318617 2005 JP ₈₂	17.6	X	44.72382	54.86118	190.50616	0.75964	0.1439953	0.27199930	2.3591607	20	8 21.3	20.1
318618 2005 JK ₉₂	15.9	X	331.23542	258.95805	307.39081	7.23131	0.1370699	0.18813848	3.0163678	20	2 12.7	19.6
318619 2005 JV ₁₀₂	16.8	X	15.60547	110.25213	148.96520	7.57226	0.1080180	0.26785568	2.3834286	20	7 15.3	19.2
318620 2005 JJ ₁₁₀	17.6	X	329.10110	93.99174	200.69750	2.08530	0.1914338	0.26634936	2.3924063	20	5 31.5	19.4
318621 2005 JF ₁₁₄	15.4	X	23.27207	21.52226	55.03959	11.24604	0.0771313	0.17455557	3.1708831	20	—	—
318622 2005 JR ₁₃₁	15.8	X	153.89628	225.62608	177.30604	10.43306	0.0402798	0.18871351	3.0102372	20	3 28.8	20.2
318623 2005 JK ₁₃₇	18.0	X	54.09412	103.29196	136.73062	3.01877	0.1410049	0.27316540	2.3524420	20	8 28.1	20.8
318624 2005 JZ ₁₃₇	17.2	X	95.07513	281.71613	183.02419	9.25386	0.0970097	0.25707450	2.4496087	20	4 7.6	20.2
318625 2005 JU ₁₄₂	15.2	X	165.91133	223.43482	76.79850	11.33650	0.1879556	0.17213567	3.2005318	20	—	—
318626 2005 JU ₁₆₄	16.8	X	4.05818	314.63533	275.69253	0.73562	0.0468181	0.19726325	2.9226171	20	5 10.8	20.7
318627 2005 JH ₁₇₀	17.5	X	10.14833	188.21490	56.71660	5.76337	0.1789028	0.26705283	2.3882031	20	6 17.0	19.3
318628 2005 JB ₁₇₇	17.7	X	109.77222	213.66213	14.05498	1.34784	0.1438899	0.28033070	2.3121834	20	10 16.9	21.2
318629 2005 JH ₁₈₅	17.3	X	77.90265	279.57823	237.37558	5.79834	0.0498912	0.26464059	2.4026937	20	5 17.6	20.2
318630 2005 KS ₂	15.9	X	8.28389	327.36506	207.01408	8.29133	0.0610919	0.18785136	3.0194406	20	3 3.3	19.8
318631 2005 KE ₅	17.6	X	309.67693	170.56544	83.81079	2.63341	0.1488414	0.25541479	2.4602091	20	3 6.8	20.5
318632 2005 KP ₆	17.0	X	348.31789	33.12478	248.30546	2.44665	0.1786237	0.26553500	2.3972953	20	6 25.7	18.7
318633 2005 LG ₅	17.0	X	3.03404	107.14277	121.02712	6.29000	0.1524532	0.26072809	2.4266706	20	5 5.5	19.2</

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318641 2005 LZ ₃₈	13.4	X	94.58663	85.29825	170.22933	12.65273	0.0265108	0.08377362	5.1728656	20	9 26.8	20.3
318642 2005 LA ₄₁	17.5	X	306.18902	131.72445	139.41175	3.03360	0.1724019	0.25593577	2.4568693	20	3 20.5	20.6
318643 2005 LW ₄₉	16.5	X	345.10818	196.26053	104.96561	14.65379	0.0635456	0.26845222	2.3798964	20	7 23.8	19.0
318644 2005 MJ ₄	17.8	X	347.00014	23.90432	294.71854	1.22743	0.2265939	0.26556296	2.3971270	20	8 29.2	19.0
318645 2005 MW ₁₅	16.7	X	194.74809	181.44767	139.88155	16.14013	0.1959223	0.24196253	2.5505703	20	1 31.8	21.1
318646 2005 MH ₂₆	16.7	X	310.66930	149.15803	154.90197	2.57008	0.1984654	0.25703038	2.4498890	20	5 9.0	19.4
318647 2005 MJ ₂₆	16.4	X	243.34799	160.70443	118.45900	13.41022	0.1660067	0.24140462	2.5544986	20	1 23.9	20.3
318648 2005 MV ₂₇	15.7	X	157.75242	258.86270	165.62570	10.64918	0.0690169	0.18235185	3.0798479	20	5 3.1	20.4
318649 2005 MW ₃₇	17.4	X	13.22821	131.25508	134.71807	5.81465	0.2096451	0.26280533	2.4138666	20	8 3.7	19.2
318650 2005 MJ ₄₁	16.9	X	210.32300	342.34324	302.28934	8.00327	0.2332188	0.23494805	2.6010867	20	1 3.3	21.3
318651 2005 MF ₄₃	16.3	X	300.26156	153.46073	155.65263	8.00473	0.2219796	0.25489042	2.4635821	20	4 27.7	19.4
318652 2005 MR ₄₅	16.8	X	228.53105	70.96752	259.07920	2.29326	0.0968851	0.24471915	2.5313804	20	3 13.9	20.5
318653 2005 MC ₄₇	17.3	X	61.98346	232.52997	135.30676	5.80142	0.2133504	0.28433984	2.2903977	20	—	—
318654 2005 MJ ₄₈	16.9	X	240.37915	130.80984	163.63231	7.22419	0.0971926	0.24201124	2.5502281	20	2 11.5	20.6
318655 2005 MY ₄₉	17.6	X	21.81021	147.77209	101.69309	1.49242	0.1823288	0.26192461	2.4192747	20	7 22.5	19.5
318656 2005 NY ₃	17.5	X	62.15744	197.14307	147.54707	9.22277	0.2241411	0.28137731	2.3064462	20	—	—
318657 2005 NZ ₄	17.5	X	5.88002	319.24928	284.76440	1.61574	0.1584816	0.25809146	2.4431696	20	6 3.9	19.4
318658 2005 NF ₁₂	17.3	X	88.19168	288.04134	273.62307	5.54949	0.0733402	0.26515926	2.3995595	20	8 6.7	20.5
318659 2005 NU ₁₃	17.5	X	44.01093	16.94016	245.14978	1.61936	0.1661813	0.26419188	2.4054135	20	9 15.5	20.4
318660 2005 NE ₁₈	17.0	X	204.41620	58.14106	279.54853	2.42720	0.1274682	0.24155814	2.5534161	20	2 27.7	21.0
318661 2005 NK ₂₆	17.5	X	25.15830	36.17761	193.54895	2.75867	0.1218418	0.25992576	2.4316618	20	6 18.9	20.0
318662 2005 NC ₄₉	16.1	X	147.75329	237.58642	101.34047	15.75878	0.1361647	0.22990825	2.6389612	20	1 7.8	19.9
318663 2005 NN ₅₅	17.4	X	85.83288	255.90564	78.55702	7.35947	0.1642719	0.28591157	2.2819961	20	—	—
318664 2005 NO ₅₉	17.1	X	92.39016	243.46578	116.63084	3.45312	0.0854726	0.22524588	2.6752527	20	—	—
318665 2005 NT ₇₆	17.2	X	240.70244	129.64530	156.41883	5.86969	0.1774972	0.24073222	2.5592531	20	1 28.4	21.4
318666 2005 NJ ₁₂₄	16.8	X	3.73485	156.50506	291.23686	4.14510	0.1314611	0.21858357	2.7293404	20	—	—
318667 2005 ON ₉	16.5	X	263.43753	249.92911	45.11789	3.16464	0.1215493	0.24467357	2.5316948	20	3 7.9	20.1
318668 2005 OH ₁₃	17.5	X	283.63148	342.56142	340.24077	20.31792	0.0318270	0.38395057	1.8747895	20	5 6.7	19.9
318669 2005 OC ₁₆	16.4	X	307.19732	119.41157	180.34303	2.02001	0.2300357	0.18765582	3.0215377	20	4 24.9	20.1
318670 2005 OY ₁₉	16.7	X	76.67902	67.55762	316.08094	5.75575	0.0570129	0.22374351	2.6872150	20	—	—
318671 2005 OF ₂₁	17.2	X	12.84813	190.06651	84.03319	2.47170	0.1509179	0.26131149	2.4230574	20	8 8.7	19.5
318672 2005 PN	16.3	X	249.04932	69.80469	318.99163	21.36564	0.4570375	0.18170154	3.0871921	20	5 14.0	22.4
318673 2005 PY ₉	15.3	X	317.66720	147.35043	167.58218	0.03813	0.1820735	0.12372223	3.9887567	20	6 7.8	20.3
318674 2005 PE ₁₁	17.2	X	279.62351	154.07837	113.46266	3.00028	0.1286428	0.24289850	2.5440140	20	2 18.9	20.8
318675 2005 PA ₁₆	16.7	X	290.20301	278.37060	339.94519	13.84282	0.1098392	0.24242154	2.5473498	20	2 22.7	20.0
318676 Bellelay	16.1	X	123.36870	322.62503	342.10903	17.53845	0.2109165	0.21886844	2.7269716	20	—	—
318677 2005 PO ₁₉	16.3	X	354.73481	197.29333	338.37138	9.21951	0.1148959	0.23774279	2.5806621	20	2 6.1	19.2
318678 2005 QP ₁₆	16.5	X	69.58682	58.76285	1.53322	5.87447	0.0358250	0.22568360	2.6717924	20	—	—
318679 2005 QH ₁₇	16.9	X	15.51537	339.71115	21.03818	5.37007	0.2406450	0.27166191	2.3611136	20	—	—
318680 2005 QZ ₁₈	16.7	X	149.51852	187.03049	166.46871	9.50961	0.1347626	0.22847113	2.6500160	20	1 26.0	20.7
318681 2005 QD ₂₂	18.0	X	282.72721	188.07153	246.55077	1.45380	0.1584077	0.26733317	2.3865332	20	10 11.9	20.2
318682 Carpaccio	17.3	X	65.62792	357.58332	353.66397	3.58286	0.0798134	0.21347715	2.7726930	20	—	—
318683 2005 QD ₃₅	16.7	X	177.50633	312.08860	5.36869	7.06158	0.0834409	0.22827046	2.6480898	20	1 9.6	20.7
318684 2005 QM ₄₉	16.8	X	246.20163	243.67196	70.74799	3.58572	0.1922522	0.24133160	2.5550139	20	3 13.9	20.6
318685 2005 QG ₅₂	16.8	X	186.41761	324.80440	330.05152	12.89235	0.2517620	0.22980387	2.6397603	20	—	—
318686 2005 QH ₅₂	16.5	X	86.26482	38.22280	328.69514	11.36383	0.1994165	0.21961564	2.7207828	20	—	—
318687 2005 QP ₅₂	17.0	X	34.06186	292.53864	7.24087	4.75189	0.1920169	0.26744435	2.3858718	20	10 28.5	19.7
318688 2005 QC ₅₉	16.2	X	44.74818	217.11674	159.84402	9.71251	0.1714607	0.21220563	2.7837578	20	—	—
318689 2005 QC ₆₂	16.9	X	37.25300	27.04363	359.46587	3.66393	0.1090553	0.21417745	2.7666458	20	—	—
318690 2005 QV ₆₂	18.4	X	111.73702	15.72845	29.94803	1.25020	0.2181763	0.36303994	1.9461058	20	2 13.4	19.8
318691 2005 QV ₆₃	15.5	X	211.60336	334.05370	147.45921	11.74237	0.1092075	0.19676685	2.9275305	20	9 7.2	20.0
318692 2005 QG ₇₄	15.8	X	133.01451	9.87559	348.99132	10.54979	0.1488685	0.22552630	2.6730347	20	1 21.3	19.8
318693 2005 QG ₇₄	16.3	X	192.87390	134.74793	173.69499	15.29071	0.1920945	0.22986582	2.6392860	20	1 15.1	21.0
318694 Keszthelyi	16.9	X	199.69419	329.33063	323.67843	8.09995	0.0837295	0.23044964	2.6348266	20	1 2.4	20.8
318695 2005 QH ₇₆	15.8	X	182.90163	340.83257	4.60812	33.90294	0.2051235	0.23230795	2.6207564	20	3 5.9	20.6
318696 2005 QK ₈₀	16.9	X	28.08920	256.59246	174.36375	4.98150	0.1541782	0.21951729	2.7215954	20	—	—
318697 2005 QY ₈₄	15.9	X	16.50646	83.60625	346.49536	13.21758	0.1345374	0.21497986	2.7597571	20	—	—
318698 Barthalaajos	16.8	X	14.85926	70.85391	306.67103	3.25818	0.1665600	0.20768375	2.8240196	20	12 25.3	20.4
318699 2005 QN ₉₂	17.2	X	71.68555	24.76274	344.02037	8.92682	0.0880255	0.21815345	2.7329267	20	—	—
318700 2005 QU ₁₀₁	16.6	X	71.49098	37.25209	301.25792	4.61350	0.1151229	0.21279677	2.7786000	20	—	—
318701 2005 QS ₁₀₂	16.2	X	282.94817	276.23191	329.42609	13.27200	0.0581772	0.23556451	2.5965467	20	2 6.2	19.7
318702 2005 QY ₁₀₂	17.3	X	91.88740	89.95774	263.12681	3.52431	0.1128501	0.21853277	2.7297634	20	—	—
318703 2005 QK ₁₀₄	16.9	X	69.84310	53.55254	177.90501	4.43692	0.1375788	0.21712307	2.7415662	20	—	—
318704 2005 QS ₁₀₇	16.9	X	21.55312	247.71031	175.31013	8.60179	0.0905462	0.21684731	2.7438900	20	—	—
318705 2005 QF ₁₁₃	16.3	X	140.53091	162.91757	168.48231	10.64169	0.1385636	0.22301992	2.6930243	20	—	—
318706 2005 QX ₁₁₃	16.1	X	27.07124	29.82439	10.39164	13.71606	0.1975863	0.21113418	2.7931677	20	—	—
318707 2005 QD ₁₁₄	17.2	X	27.80784	303.77760	117.30570	1.68563	0.0931337	0.28297454	2.2977590	20	—	—
318708 2005 QM ₁₁₈	17.2	X	314.46139	256.37056	344.72095	1.84342	0.0810727	0.24259691	2.5461220	20	3 6.3	20.3
318709 2005 QD ₁₁₉	15.8	X	99.87539	36.58384	344.60901	8.63741	0.0656887	0.15931564	3.3700042	20	1 7.9	20.6
318710 2005 QK ₁₃₃	16.6	X	13.68743	174.50758	100.57729	0.34140	0.1989462	0.19274349	2.9681299	20	8 7.5	19.7
318711 2005 QA ₁₄₃	16.2	X	198.16814	17.65461	276.78305	11.00736	0.1797923	0.23018535	2.6368430	20	1 4.2	20.4
318712 2005 QW ₁₅₁	16.4	X	46.32731	28.12331	345.37247	7.58212	0.2292879	0.21325140	2.7746495	20	—	—
318713 2005 QP ₁₆₈	16.2	X	160.53988	349.23693	314.63647	11.23360	0.1763056	0.22370749	2.6875034	20	—	—
318714 2005 QP ₁₇₆	16.1	X	334.46345	7.12451	14.12668	5.76307	0.0725077	0.20117474	2.8846099	20	10 16.8	19.8
318715 2005 QE												

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318721 2005 QL ₁₈₈	17.2	X	335.38645	161.60546	239.96968	1.12389	0.0679656	0.20295776	2.8676905	20	11 14.5	20.8
318722 2005 RE ₃	15.5	X	48.62727	195.87071	176.01243	27.18388	0.1508897	0.21271374	2.7793230	20	—	—
318723 Bialas	16.7	X	144.09018	340.17434	337.39868	11.22612	0.0752992	0.22247529	2.6974177	20	—	—
318724 2005 RT ₈	16.2	X	60.08913	21.45576	5.61109	9.36161	0.1702238	0.21522280	2.7576800	20	—	—
318725 2005 RC ₁₁	17.2	X	198.75090	187.98640	184.89854	23.12785	0.1139850	0.37427460	1.9069639	20	3 30.3	19.5
318726 2005 RR ₁₅	17.2	X	279.68268	221.05828	6.83471	1.48620	0.1378737	0.23362603	2.6108900	20	—	—
318727 2005 RU ₁₈	17.2	X	53.70103	245.30527	169.24493	3.30988	0.1335062	0.21965757	2.7204365	20	—	—
318728 2005 RC ₂₀	17.1	X	279.75707	171.76153	1.52317	3.11755	0.0209630	0.21949308	2.7217955	20	—	—
318729 2005 RW ₂₂	16.4	X	114.81654	26.03817	277.68735	4.53706	0.2430754	0.21699862	2.7426142	20	—	—
318730 2005 RK ₂₅	16.0	X	71.07973	40.70250	329.21629	8.18617	0.1778726	0.21474668	2.7617545	20	—	—
318731 2005 RH ₂₇	16.1	X	85.54137	67.10624	284.21113	7.44506	0.2533420	0.21505993	2.7590721	20	—	—
318732 2005 RX ₂₈	15.5	X	101.12540	294.27510	41.63823	16.23906	0.2532031	0.21646937	2.7470828	20	—	—
318733 2005 RC ₂₉	17.7	X	200.66559	251.28943	102.59617	5.47670	0.1898810	0.30539044	2.1838984	20	3 14.3	21.1
318734 2005 RW ₃₉	16.1	X	40.98861	71.03985	284.06963	15.71656	0.2414364	0.20913233	2.8109639	20	—	—
318735 2005 RE ₄₄	17.7	X	104.29790	108.42613	350.72999	19.19316	0.0679174	0.36986978	1.9220742	20	3 23.3	19.4
318736 2005 RW ₄₇	15.9	X	220.01123	197.95951	43.93305	15.82659	0.1611049	0.21974999	2.7196738	20	—	—
318737 2005 SV ₂	17.2	X	0.99959	157.06778	220.86877	0.49701	0.1937987	0.26997303	2.7309504	20	12 28.8	19.5
318738 2005 SC ₄	16.9	X	226.12372	120.23176	200.05116	12.58322	0.2019102	0.23683697	2.5872380	20	2 22.6	21.4
318739 2005 SM ₆	16.9	X	206.34811	315.60949	327.17404	3.03641	0.1558706	0.22428644	2.6828766	20	—	—
318740 2005 SA ₇	16.6	X	142.82774	53.62133	300.11331	5.49839	0.1806000	0.22831500	2.6512239	20	1 25.4	20.5
318741 2005 SE ₇	17.3	X	20.24710	204.30961	194.73633	4.84041	0.1724805	0.27650821	2.3334439	20	—	—
318742 2005 SL ₈	15.8	X	69.05055	20.21448	10.02975	9.23539	0.1582958	0.21568535	2.7537359	20	—	—
318743 2005 SV ₁₀	16.7	X	95.73925	131.27371	214.31143	5.44087	0.0657387	0.21459807	2.7630294	20	—	—
318744 2005 SC ₁₁	16.4	X	72.92883	171.26429	193.79483	7.47931	0.1619414	0.21504527	2.7591975	20	—	—
318745 2005 SJ ₁₁	16.8	X	66.87196	215.83173	126.15083	1.03339	0.0792065	0.20881010	2.8138550	20	—	—
318746 2005 SC ₁₆	16.6	X	319.18288	306.82849	193.41449	14.60394	0.1487017	0.21592317	2.7517135	20	—	—
318747 2005 SM ₂₁	16.1	X	140.38528	317.66664	3.46008	9.15028	0.1052564	0.21828849	2.7317996	20	—	—
318748 2005 SE ₂₄	16.3	X	111.79362	204.93930	168.37469	15.34223	0.1335181	0.22371929	2.6874090	20	1 8.6	20.2
318749 2005 SK ₃₂	17.4	X	32.99452	200.80888	109.46422	2.51145	0.1989474	0.26608792	2.3939732	20	11 13.2	20.3
318750 2005 SA ₃₃	16.0	X	224.03909	223.39573	43.58801	7.26804	0.0815532	0.22372170	2.6873897	20	—	—
318751 2005 SS ₃₅	16.8	X	282.38458	17.33858	35.96850	10.36960	0.1546013	0.19180762	2.9777768	20	9 3.9	20.8
318752 2005 SG ₃₆	16.5	X	334.51836	93.34599	5.84746	10.53956	0.1007155	0.21181117	2.7872129	20	—	—
318753 2005 ST ₃₇	17.6	X	296.92603	343.95279	180.75299	5.30616	0.0976820	0.28495543	2.2870979	20	—	—
318754 2005 SK ₃₈	17.2	X	41.82831	204.67475	195.38267	4.55084	0.0790812	0.21400755	2.7681098	20	—	—
318755 2005 SX ₃₈	16.3	X	128.31838	41.36357	11.46060	7.22108	0.0196967	0.23302615	2.6153688	20	3 5.0	19.7
318756 2005 SC ₄₁	16.9	X	94.58647	218.40482	119.09613	0.61935	0.0774239	0.21373054	2.7705011	20	—	—
318757 2005 SN ₄₁	16.9	X	94.22973	32.65020	286.68549	3.15243	0.0537664	0.20942580	2.8083373	20	—	—
318758 2005 ST ₄₃	16.3	X	88.12884	32.96192	355.04627	6.06944	0.0578974	0.21957602	2.7211100	20	—	—
318759 2005 SA ₄₆	16.5	X	216.66194	325.52358	335.01384	2.16830	0.0580201	0.22862911	2.6487951	20	1 29.2	20.4
318760 2005 SA ₄₇	16.9	X	92.48473	6.09315	0.53238	3.86211	0.0587818	0.28445572	2.2897757	20	—	—
318761 2005 ST ₄₇	17.1	X	76.20209	33.87601	329.24963	2.87509	0.1097926	0.21385782	2.7694017	20	—	—
318762 2005 SZ ₄₈	16.6	X	174.11977	123.28550	194.02773	2.64933	0.0507326	0.22284055	2.6944692	20	1 2.6	20.3
318763 2005 SE ₅₅	15.7	X	93.13256	346.02466	22.57810	13.49716	0.1012756	0.21725992	2.7404148	20	—	—
318764 2005 SY ₆₀	17.5	X	17.81817	146.96102	192.65584	4.53336	0.0583121	0.26601915	2.3943857	20	11 9.7	20.2
318765 2005 SP ₆₂	16.5	X	310.27629	200.32215	22.59941	1.16550	0.1282616	0.23191798	2.6236936	20	1 31.6	20.0
318766 2005 SU ₆₂	16.8	X	12.95564	21.87598	26.67870	4.60185	0.0650679	0.20926116	2.8098100	20	—	—
318767 2005 SK ₇₂	17.3	X	183.61918	257.31802	49.12908	4.20956	0.1114189	0.29339131	2.2430445	20	—	—
318768 2005 SQ ₇₂	16.8	X	211.62333	139.18493	171.06843	12.94887	0.2359584	0.23477606	2.6023568	20	1 31.5	21.6
318769 2005 SV ₇₄	16.6	X	139.42422	142.39861	191.03020	4.45582	0.0561432	0.22198629	2.7013776	20	—	—
318770 2005 SL ₇₅	16.8	X	61.85716	41.06391	3.65663	5.66681	0.0178511	0.21989992	2.7184374	20	—	—
318771 2005 SM ₇₆	17.2	X	116.29269	143.86434	173.18407	2.01337	0.0766533	0.21493941	2.7601034	20	—	—
318772 2005 SO ₇₈	16.6	X	330.26785	300.69163	173.34670	7.99327	0.1779517	0.21206629	2.7849771	20	—	—
318773 2005 SW ₈₅	16.4	X	292.61908	146.27526	18.06925	8.40020	0.1562355	0.21514455	2.7583486	20	—	—
318774 2005 SW ₈₇	17.2	X	0.28309	333.78876	62.56881	1.35054	0.0919283	0.20560305	2.8430403	20	12 17.2	20.5
318775 2005 SF ₉₀	16.6	X	139.42843	343.67409	0.55131	1.99706	0.0918131	0.22148297	2.7054686	20	1 1.5	20.5
318776 2005 SC ₉₂	17.2	X	270.21022	281.24709	13.84495	18.85584	0.0833165	0.37281000	1.9119551	20	3 13.1	19.3
318777 2005 SS ₉₂	16.8	X	0.56956	29.94266	212.89770	3.27773	0.0885683	0.24469238	2.5315650	20	5 22.1	19.4
318778 2005 SC ₉₃	16.7	X	192.81096	317.31018	342.75821	1.69512	0.0960147	0.22458613	2.6804894	20	1 4.5	20.6
318779 2005 SR ₉₈	16.8	X	102.18673	34.22074	307.89722	5.33639	0.0276169	0.21415563	2.7668337	20	—	—
318780 2005 SL ₁₀₀	17.5	X	53.63813	212.12904	280.23646	2.46020	0.0909651	0.29813672	2.2191793	20	3 4.8	19.5
318781 2005 SC ₁₀₁	16.8	X	240.78697	108.28269	356.14273	8.65735	0.2039913	0.19118837	2.9842033	20	9 5.9	21.4
318782 2005 SG ₁₀₁	16.8	X	46.32758	149.21224	255.49185	3.52305	0.1102355	0.21410501	2.7672698	20	—	—
318783 2005 SP ₁₀₁	16.5	X	26.90512	87.91857	253.58080	4.77302	0.0819353	0.20082977	2.8879122	20	11 11.8	20.3
318784 2005 SJ ₁₀₃	17.2	X	291.79578	68.92725	351.50368	1.83048	0.2082225	0.26140109	2.4225037	20	9 28.9	19.1
318785 2005 SS ₁₀₈	15.9	X	348.55555	183.14182	14.65435	8.73571	0.1690519	0.23314405	2.6144871	20	2 22.4	18.7
318786 2005 SU ₁₁₆	17.9	X	298.00119	143.10898	164.99393	23.17469	0.1109341	0.38625513	1.8673248	20	5 9.7	20.1
318787 2005 SX ₁₁₇	15.7	X	272.20558	240.73005	146.08415	9.98200	0.0775426	0.18766589	3.0214296	20	7 21.9	19.8
318788 2005 SS ₁₁₈	16.1	X	45.47290	171.97862	158.84714	15.90503	0.1431791	0.20439245	2.8542553	20	12 5.3	20.4
318789 2005 SH ₁₂₅	17.0	X	235.19542	20.98086	187.28631	3.15935						

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318801 2005 <i>SH</i> ₁₄₇	16.9	X	212.58549	284.81158	150.26016	1.45035	0.1576924	0.18043284	3.1016467	20	7 6.1	21.9
318802 2005 <i>SN</i> ₁₅₁	17.3	X	77.78208	149.05812	141.22239	1.96982	0.1685583	0.27041059	2.3683920	20	12 4.2	20.9
318803 2005 <i>SC</i> ₁₅₅	17.2	X	220.68835	12.48011	263.59676	1.51991	0.0558170	0.22633583	2.6666571	20	1 3.6	20.9
318804 2005 <i>SL</i> ₁₅₆	17.1	X	315.60515	341.26239	183.47943	4.87456	0.0541293	0.21986475	2.7187273	20	—	—
318805 2005 <i>SH</i> ₁₅₈	16.0	X	111.11925	353.30187	10.36680	6.25115	0.0374248	0.22034336	2.7147889	20	—	—
318806 2005 <i>SJ</i> ₁₆₂	17.0	X	111.77459	350.93928	336.56083	1.17382	0.0926596	0.21498335	2.7597273	20	—	—
318807 2005 <i>SF</i> ₁₆₅	16.1	X	271.24094	265.64098	358.02890	15.35795	0.0291578	0.23545160	2.5973768	20	2 21.7	19.7
318808 2005 <i>SH</i> ₁₆₆	16.1	X	180.52192	166.56022	151.70264	14.18719	0.1744207	0.22798183	2.6538063	20	1 16.6	20.6
318809 2005 <i>SV</i> ₁₆₆	17.3	X	109.62322	27.36066	26.62551	21.34334	0.0942597	0.36333353	1.9450573	20	2 13.1	19.8
318810 2005 <i>SG</i> ₁₇₀	16.6	X	123.21216	16.29684	307.34919	2.99772	0.1999672	0.21832981	2.7314548	20	—	—
318811 2005 <i>SQ</i> ₁₇₀	16.7	X	299.69763	92.74894	355.66750	10.09030	0.1151262	0.20228965	2.8740012	20	11 14.9	20.4
318812 2005 <i>SD</i> ₁₇₃	16.5	X	90.91974	57.70298	333.95330	5.73606	0.0332621	0.22256158	2.6967204	20	—	—
318813 2005 <i>SO</i> ₁₇₃	17.2	X	21.03499	73.07970	321.87362	3.93153	0.0460648	0.20997234	2.8034619	20	—	—
318814 2005 <i>SS</i> ₁₇₄	16.3	X	142.48363	42.77296	294.27712	4.45817	0.0835887	0.22254015	2.6968935	20	—	—
318815 2005 <i>SE</i> ₁₇₇	15.2	X	153.53775	96.13840	8.82601	26.68558	0.2332922	0.17413594	3.1759753	20	6 20.1	21.1
318816 2005 <i>SR</i> ₁₈₁	16.5	X	177.28762	92.31077	249.13380	8.2021	0.0223005	0.22827961	2.6514980	20	2 1.7	20.0
318817 2005 <i>SL</i> ₁₈₈	16.5	X	252.75741	170.21783	21.16443	8.82356	0.1351109	0.21287832	2.7778903	20	—	—
318818 2005 <i>SE</i> ₁₉₁	17.2	X	107.31899	258.80283	185.35854	21.37159	0.1354623	0.36611378	1.9351977	20	3 21.2	19.0
318819 2005 <i>SH</i> ₁₉₃	16.4	X	95.53905	348.21393	4.86772	3.94360	0.2627844	0.21582843	2.7525188	20	—	—
318820 2005 <i>SW</i> ₁₉₅	16.6	X	312.03482	305.17919	184.47620	9.09534	0.1715317	0.21214989	2.7842453	20	—	—
318821 2005 <i>SA</i> ₂₀₃	16.1	X	145.16580	14.62621	297.81741	8.64885	0.1414800	0.22139353	2.7061972	20	—	—
318822 2005 <i>SM</i> ₂₀₅	16.6	X	75.96969	13.67483	328.94291	9.09320	0.2146965	0.21290652	2.7776450	20	—	—
318823 2005 <i>SR</i> ₂₁₁	17.6	X	293.46185	37.44203	15.28738	2.08034	0.1177172	0.19361799	2.9591859	20	9 20.5	21.1
318824 2005 <i>SO</i> ₂₁₃	16.9	X	42.16258	60.45622	359.10272	2.02083	0.0614435	0.21541138	2.7560703	20	—	—
318825 2005 <i>SB</i> ₂₁₅	15.9	X	123.36823	347.28197	355.06992	12.20677	0.1622140	0.21916061	2.7245475	20	—	—
318826 2005 <i>SB</i> ₂₁₈	16.9	X	19.32154	337.19773	64.42085	3.99920	0.2244033	0.27481967	2.3429922	20	—	—
318827 2005 <i>SK</i> ₂₂₀	15.9	X	197.97475	14.17162	293.03384	12.01525	0.1654877	0.22793663	2.6541572	20	1 18.8	20.3
318828 2005 <i>SP</i> ₂₂₇	17.5	X	282.28127	39.43676	35.86822	3.12754	0.1272798	0.19671667	2.9280283	20	10 3.1	21.1
318829 2005 <i>SV</i> ₂₃₂	16.6	X	195.96871	241.49571	25.69388	3.58135	0.1570219	0.21738109	2.7393964	20	—	—
318830 2005 <i>SO</i> ₂₃₃	16.6	X	40.10494	18.58368	46.21792	0.82400	0.0556721	0.21442663	2.7645020	20	—	—
318831 2005 <i>SK</i> ₂₄₀	16.6	X	333.34716	226.90310	259.90256	4.98526	0.0381857	0.21603942	2.7507263	20	—	—
318832 2005 <i>SO</i> ₂₄₀	16.5	X	119.30836	351.36193	318.67760	4.92871	0.0536425	0.21187693	2.7866362	20	—	—
318833 2005 <i>SP</i> ₂₄₇	16.6	X	115.41643	308.27438	7.92725	3.36079	0.0854699	0.21255628	2.7806954	20	—	—
318834 2005 <i>SK</i> ₂₄₉	17.2	X	359.96849	193.08187	209.35804	1.48152	0.0697143	0.20334368	2.8640610	20	12 21.3	20.8
318835 2005 <i>SO</i> ₂₅₃	16.6	X	114.09017	65.55983	277.41509	4.28453	0.1158506	0.28761356	2.2729845	20	—	—
318836 2005 <i>SD</i> ₂₅₇	16.2	X	167.05820	143.44305	158.31493	11.44596	0.0625408	0.22181368	2.7027787	20	—	—
318837 2005 <i>SQ</i> ₂₆₀	16.7	X	34.06875	308.77642	129.23948	3.33758	0.0678277	0.21760735	2.7374972	20	—	—
318838 2005 <i>SJ</i> ₂₆₁	15.9	X	130.62750	222.84218	114.67281	15.25912	0.1241053	0.22049500	2.7135441	20	—	—
318839 2005 <i>ST</i> ₂₆₂	17.2	X	36.06972	237.72090	180.57101	6.70213	0.0907611	0.28240535	2.3008454	20	—	—
318840 2005 <i>SW</i> ₂₆₆	16.5	X	69.88552	316.25615	29.53974	10.11682	0.0992173	0.21099224	2.7944152	20	—	—
318841 2005 <i>SZ</i> ₂₆₆	16.9	X	313.44343	62.44992	177.50362	15.18076	0.1153801	0.23996282	2.5647248	20	2 25.6	20.2
318842 2005 <i>SX</i> ₂₆₉	16.0	X	87.36720	215.84467	170.39494	12.78447	0.1058430	0.22003853	2.7172957	20	—	—
318843 2005 <i>SV</i> ₂₇₃	16.4	X	188.67109	270.65387	8.79166	9.66645	0.0314143	0.21981736	2.7191180	20	—	—
318844 2005 <i>SG</i> ₂₇₇	16.2	X	247.46083	210.27546	348.63680	6.47354	0.0631780	0.21387967	2.7692131	20	—	—
318845 2005 <i>SO</i> ₂₈₃	16.8	X	270.41749	314.50246	126.39867	11.39106	0.1170303	0.19300135	2.9654856	20	9 28.0	20.9
318846 2005 <i>SZ</i> ₂₉₁	16.9	X	78.67865	1.48800	357.14664	4.10792	0.0773807	0.21393110	2.7687693	20	—	—
318847 2005 <i>TZ</i> ₂	16.3	X	75.03791	45.99256	344.66129	6.33499	0.1086973	0.21859755	2.7292241	20	—	—
318848 2005 <i>TK</i> ₅	16.1	X	166.50279	335.17675	355.94319	12.10441	0.1918741	0.22649160	2.6654343	20	1 25.2	20.6
318849 2005 <i>TG</i> ₁₁	16.3	X	54.47280	258.70036	193.50584	21.77608	0.0597440	0.22626807	2.6671894	20	1 17.0	20.2
318850 2005 <i>TJ</i> ₁₅	17.4	X	100.41415	49.81872	23.25992	21.17716	0.0428039	0.36528027	1.9381404	20	2 19.2	19.8
318851 2005 <i>TX</i> ₁₆	16.5	X	137.81950	14.07326	355.91289	13.65995	0.2599643	0.22966458	2.6408275	20	2 20.5	20.9
318852 2005 <i>TX</i> ₁₇	16.6	X	46.64395	221.92001	99.56426	6.18530	0.1455771	0.27154409	2.3617965	20	12 8.2	19.6
318853 2005 <i>TS</i> ₃₁	17.5	X	27.82772	238.67211	168.92097	5.87907	0.0568223	0.21276683	2.7788606	20	—	—
318854 2005 <i>TV</i> ₃₆	16.6	X	115.08362	172.03713	184.48039	9.23755	0.0963527	0.22010727	2.7167299	20	—	—
318855 2005 <i>TS</i> ₃₉	16.2	X	262.61283	65.44199	196.18929	12.72627	0.1247856	0.22932406	2.6434411	20	1 22.7	20.4
318856 2005 <i>TQ</i> ₄₁	16.4	X	79.01408	97.60675	255.26595	5.29803	0.0649990	0.21358640	2.7717474	20	—	—
318857 2005 <i>TX</i> ₄₁	15.1	X	117.16058	297.56455	27.22441	24.14619	0.2573217	0.21445019	2.7642995	20	—	—
318858 2005 <i>TH</i> ₅₁	18.0	X	301.89411	280.77606	327.42626	17.85379	0.0739801	0.36891921	1.9253745	20	2 12.1	19.6
318859 2005 <i>TX</i> ₅₄	16.1	X	227.48388	229.85440	32.60251	13.74372	0.2370262	0.22572217	2.6714880	20	—	—
318860 2005 <i>TO</i> ₅₆	17.1	X	326.81743	359.95068	44.72425	2.54740	0.0928162	0.19974037	2.8984033	20	11 4.9	20.6
318861 2005 <i>TJ</i> ₅₇	16.4	X	281.86118	120.20404	26.50919	10.71703	0.0535084	0.20937224	2.8088162	20	—	—
318862 2005 <i>TD</i> ₆₀	16.5	X	283.08776	256.17003	285.60184	4.32237	0.0538188	0.21934677	2.7230057	20	—	—
318863 2005 <i>TR</i> ₆₁	16.2	X	351.05987	356.45649	293.11955	1.14559	0.1406950	0.18625261	3.0366948	20	7 9.5	19.7
318864 2005 <i>TC</i> ₆₃	17.0	X	128.17753	200.36098	63.88865	3.03890	0.0218442	0.20324325	2.8650044	20	12 2.7	21.0
318865 2005 <i>TC</i> ₇₁	16.4	X	183.81840	253.13671	28.25306	4.70181	0.0277893	0.21723693	2.7406081	20	—	—
318866 2005 <i>TO</i> ₇₃	15.5	X	253.10207	309.16756	62.17670	17.87318	0.2778751	0.17974080	3.1096029	20	5 17.5	20.6
318867 2005 <i>TP</i> ₇₆	16.7	X	193.68090	159.78002	146.11028	14.28713	0.2698007	0.23069584	2.6329516	20	1 15.7	21.5
318868 2005 <i>TY</i> ₇₉	17.3	X	166.59775	359.54716	320.62482	5.37996	0.2009224	0.29234703	2.2483828	20	1 1.2	20.7
318869 2005 <i>TF</i> ₈₁	16.5	X	175.65852	288.66330	356.07975	8.48653	0.1848639	0.22121835	2.7076257	20	—	—
318870 2005 <i>TX</i> ₈₁	16.4	X	5.60537	339.14848	214.00635	7.21694	0.1214768	0.23579649	2.5948434	20	3 16.2	19.2
318871 2005 <i>TV</i> ₈₄	16.1	X	259.34130	95.66076	265.83031	2.02529	0.1494930	0.18009996	3.1054674	20	5 24.6	20.6
318872 2005 <i>TZ</i> ₈₈	17.0	X	250.07525	246.02417	31.29630	6.90933	0.2656833	0.23705227	2.5856713	20	1 24.3	21.5
318873 2005 <i>TH</i> ₉₁												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
318881 2005 TZ ₁₁₄	16.9 ^m	X	117.79869	100.99128	207.41891	5.58954	0.0564585	0.21270891	2.7793651	20	—	—
318882 2005 TZ ₁₁₈	17.1	X	100.24190	356.54509	333.32554	1.23145	0.0894321	0.21280633	2.7785168	20	—	—
318883 2005 TJ ₁₂₃	16.7	X	228.81564	134.84727	10.43857	2.68764	0.0256085	0.20095549	2.8867076	20	11 4.7	20.8
318884 2005 TA ₁₂₆	16.9	X	329.40992	245.06288	179.07925	1.98344	0.0536331	0.20297141	2.8675619	20	12 4.7	20.6
318885 2005 TB ₁₂₇	16.6	X	2.80296	17.66338	198.55562	4.87021	0.1139700	0.23884804	2.5726948	20	4 16.3	19.2
318886 2005 TG ₁₂₈	17.0	X	190.77310	54.72670	222.94810	2.19915	0.1432989	0.22095271	2.7097953	20	—	—
318887 2005 TP ₁₃₅	16.8	X	120.66526	176.24548	179.36676	6.41974	0.0537102	0.22163990	2.7041913	20	—	—
318888 2005 TB ₁₄₀	16.8	X	218.17580	102.26131	156.53783	4.49336	0.0732153	0.22107664	2.7087826	20	—	—
318889 2005 TK ₁₄₅	16.9	X	256.24724	114.55607	182.58745	12.50519	0.1630108	0.23724905	2.5842413	20	2 25.3	21.0
318890 2005 TX ₁₅₄	17.0	X	286.81768	134.03414	315.53970	4.86238	0.0358921	0.20126613	2.8837366	20	11 6.4	21.0
318891 2005 TK ₁₆₃	16.8	X	198.01300	315.09837	330.08264	2.83594	0.0598218	0.22145555	2.7056918	20	—	—
318892 2005 TP ₁₆₃	16.5	X	111.72488	93.72765	235.73659	3.23444	0.0697622	0.21356976	2.7718914	20	—	—
318893 2005 TK ₁₆₄	16.3	X	271.86406	325.85404	265.33202	2.74039	0.0451486	0.22358528	2.6884827	20	1 7.4	20.0
318894 2005 TJ ₁₆₈	16.1	X	309.41060	137.20179	20.63786	8.51690	0.0712004	0.21527242	2.7572562	20	—	—
318895 2005 TK ₁₇₆	16.6	X	85.91302	247.05028	119.46357	7.64322	0.1412729	0.21794961	2.7346305	20	—	—
318896 2005 TM ₁₇₆	16.2	X	85.31466	336.23701	24.84324	6.26360	0.0719365	0.21515347	2.7582724	20	—	—
318897 2005 TA ₁₇₇	16.1	X	52.33083	236.83384	111.88045	10.75897	0.1344275	0.20667605	2.8331916	20	12 31.8	20.1
318898 2005 TB ₁₇₈	17.0	X	175.20825	227.84162	69.17300	3.30723	0.1388580	0.29222626	2.2490022	20	—	—
318899 2005 TE ₁₈₆	16.9	X	143.89941	276.06698	34.45247	2.66626	0.0653757	0.21732688	2.7398519	20	—	—
318900 2005 TP ₁₈₆	16.9	X	179.62227	13.75096	226.42453	5.50578	0.0192278	0.21030363	2.8005170	20	—	—
318901 2005 TN ₁₉₀	16.5	X	244.39517	131.88969	309.67736	9.27512	0.2666740	0.18531440	3.0469355	20	8 3.4	21.3
318902 2005 UR ₅	17.1	X	16.84155	278.12014	167.52566	18.56721	0.2002049	0.34547195	2.0115347	20	—	—
318903 2005 UQ ₈	17.1	X	353.61314	331.27589	103.93400	3.41502	0.1834090	0.27231138	2.3573579	20	—	—
318904 2005 UF ₉	17.0	X	159.95073	280.57398	91.42006	4.55683	0.1982245	0.23071846	2.6327795	20	3 6.5	21.3
318905 2005 UO ₁₈	16.5	X	19.49183	352.27171	77.92599	2.80236	0.1396830	0.20958963	2.8068736	20	—	—
318906 2005 UT ₂₁	16.1	X	111.46769	341.14800	24.10868	6.58822	0.0549154	0.21830876	2.7316304	20	—	—
318907 2005 UC ₂₄	16.2	X	192.89240	270.61949	231.46393	6.47064	0.0557193	0.18984071	2.9983096	20	9 11.8	20.7
318908 2005 UK ₂₄	17.9	X	213.30720	18.72725	21.16694	3.61859	0.0801526	0.31059472	2.1594343	20	5 28.6	20.7
318909 2005 UC ₃₂	17.4	X	249.38321	119.35447	43.86901	1.49936	0.1357438	0.27000865	2.3707419	20	12 27.2	19.7
318910 2005 US ₄₀	16.3	X	264.34839	198.87927	221.96091	3.77098	0.1502377	0.18520979	3.0480828	20	8 12.9	20.6
318911 2005 UE ₄₃	16.4	X	96.23262	319.62277	51.57159	3.22662	0.1225204	0.21728275	2.7402229	20	—	—
318912 2005 US ₄₅	16.0	X	214.03271	284.79873	35.65112	15.21252	0.1334916	0.23220837	2.6215057	20	2 25.4	20.4
318913 2005 UB ₄₆	16.0	X	106.34653	6.95512	356.95902	5.72845	0.0390881	0.21811974	2.7332083	20	—	—
318914 2005 UV ₄₆	16.3	X	303.66728	289.09060	162.18525	2.33882	0.0576873	0.19982080	2.8976255	20	12 1.9	20.0
318915 2005 UY ₄₉	16.1	X	50.27078	39.70576	3.21035	4.07716	0.0703350	0.21300777	2.7767648	20	—	—
318916 2005 UM ₅₇	16.4	X	58.00936	29.77474	8.60307	3.21671	0.0936210	0.21428664	2.7657059	20	—	—
318917 2005 UQ ₅₈	16.4	X	200.97743	83.52554	30.21000	4.93477	0.0959587	0.18385368	3.0630529	20	8 17.6	21.1
318918 2005 UH ₆₀	16.6	X	243.75757	174.96003	248.77473	4.99045	0.2713291	0.18112803	3.0937053	20	7 10.8	21.5
318919 2005 UC ₆₂	16.3	X	294.01414	214.32137	226.11771	11.61215	0.0852009	0.19531781	2.9419919	20	10 30.9	20.0
318920 2005 UC ₇₀	16.4	X	139.89234	1.85632	343.57421	12.72471	0.1814281	0.22274538	2.6952367	20	1 16.6	20.6
318921 2005 UM ₇₃	16.2	X	277.30943	207.82508	227.78063	12.22405	0.1711419	0.19132154	2.9828183	20	9 13.1	20.3
318922 2005 UP ₇₇	16.9	X	95.66174	279.22168	108.02741	6.71228	0.1887915	0.28578767	2.2826556	20	—	—
318923 2005 UT ₇₉	16.8	X	149.78395	240.74075	69.79292	0.71958	0.0557607	0.21412339	2.7671114	20	—	—
318924 2005 UV ₈₆	18.0	X	5.75795	114.39017	178.41387	1.96913	0.2131293	0.25643364	2.4536883	20	8 30.1	19.8
318925 2005 UF ₉₁	16.3	X	225.70463	256.59849	342.40245	5.41498	0.0180427	0.21429796	2.7656084	20	—	—
318926 2005 UY ₉₁	14.3	X	179.36290	165.93397	11.36393	8.59755	0.1320222	0.12364782	3.9903569	20	10 1.9	20.4
318927 2005 UB ₉₂	16.5	X	81.90378	352.87706	0.49083	5.75898	0.0543334	0.20937197	2.8088186	20	—	—
318928 2005 UJ ₉₄	16.0	X	209.10037	236.28608	17.49196	9.32631	0.1102846	0.21496827	2.7598564	20	—	—
318929 2005 UB ₉₅	16.4	X	359.88239	115.43874	272.27481	3.75305	0.1495529	0.20084572	2.8877594	20	12 10.8	19.7
318930 2005 UC ₁₀₄	16.6	X	275.62131	189.81497	197.16114	4.09113	0.1557186	0.18278167	3.0750177	20	7 14.5	20.9
318931 2005 UP ₁₀₄	16.9	X	214.07218	338.81600	147.81758	1.71927	0.1087040	0.18762985	3.0218166	20	9 14.3	21.5
318932 2005 UB ₁₀₅	17.0	X	201.49088	163.60394	131.72138	3.47412	0.1226157	0.22112488	2.7083886	20	1 8.2	21.3
318933 2005 UH ₁₀₇	16.6	X	344.01286	248.64803	175.65052	3.92875	0.0431818	0.20246438	2.8723474	20	12 24.1	20.4
318934 2005 UT ₁₁₁	16.9	X	140.39467	53.25130	286.85876	2.26454	0.1442810	0.21781780	2.7357336	20	1 4.2	20.8
318935 2005 UH ₁₂₃	16.0	X	235.91923	193.16421	34.79488	5.14455	0.0555922	0.21437167	2.7649745	20	—	—
318936 2005 UQ ₁₂₄	16.3	X	267.76382	221.08032	231.26952	9.61143	0.1003810	0.19298328	2.9656708	20	10 4.3	20.4
318937 2005 UC ₁₂₅	16.5	X	269.35481	217.90765	233.14929	9.32159	0.0748038	0.19321127	2.9633372	20	10 8.8	20.5
318938 2005 UR ₁₃₂	16.4	X	220.56884	269.73969	165.75110	11.66626	0.2739236	0.17739531	3.1369526	20	7 5.4	22.0
318939 2005 UD ₁₃₈	17.4	X	306.94970	6.86239	34.43652	1.98901	0.1002722	0.19390284	2.9562871	20	9 28.7	20.8
318940 2005 UH ₁₄₁	16.0	X	265.46809	206.51046	190.82756	7.15684	0.2696964	0.18309594	3.0714980	20	6 29.7	20.8
318941 2005 UR ₁₄₃	16.6	X	205.04731	132.31176	130.52475	1.34095	0.0225647	0.21403774	2.7678496	20	—	—
318942 2005 UL ₁₄₉	16.9	X	287.54333	151.56185	231.66143	3.18427	0.2053340	0.18578208	3.0418199	20	7 18.6	21.0
318943 2005 UM ₁₅₄	17.4	X	245.08493	88.47013	345.75222	0.29556	0.2280676	0.18324457	3.0698370	20	7 30.3	21.9
318944 2005 UD ₁₆₁	15.4	X	206.35666	10.47101	77.56082	10.28005	0.0458705	0.18201095	3.0836923	20	7 25.5	20.0
318945 2005 UB ₁₆₃	16.5	X	173.53691	325.62086	312.18443	2.09387	0.1431911	0.21555563	2.7548406	20	—	—
318946 2005 UA ₁₇₃	16.9	X	232.67246	109.63508	33.72477	2.32157	0.0576913	0.19610756	2.9340881	20	11 2.1	21.0
318947 2005 UL ₁₉₁	16.6	X	15.46769	186.32207	247.95012	3.31403	0.0481181	0.21049343	2.7988332	20	—	—
318948 2005 UD ₁₉₅	16.8	X	124.40945	218.43429	119.15152	1.56687	0.0734481	0.21396366	2.7684884	20	—	—
318949 2005 UD ₂₀₀	16.2	X	238.83366	20.37278	218.70203	8.68978	0.1043954	0.21639088	2.7477471	20	—	—
318950 2005 UY ₂₁₃	17.4	X	45.61016	205.11681	200.901919	22.01042	0.0909716	0.34762702	2.0032125	20	—	—
318951 2005 UP ₂₁₅	15.5	X	213.48091	146.25053	216.92874	8.45957	0.1340532	0.23499943	2.6007075	20	4 8.3	19.6
318952 2005 UX ₂₁₆	16.2	X	167.46282	134.61927	131.71073	7.26361	0.0637570	0.22225030	2.6992378	20	1 6.7	20.2
318953 2005 UT ₂₁₉	16.9	X	135.62623	333.68743	399.66346	3.57924	0.0620129	0.21324780	2.7746807	20	—	—
318954 2005 UV ₂₂₃	17.8	X	255.95283	298.08075	310.49075	2.16400	0.1287854	0.29168451	2.2517861	20	—	—

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
318961	2005	UV ₂₄₇	17.0	X	103.70180	239.25318	46.76397	2.71126	0.0329505	0.20344751	2.8630864	20	12 1.4	21.0
318962	2005	UB ₂₄₉	17.0	X	107.68861	129.17528	175.17801	1.99541	0.0535039	0.20449377	2.8533125	20	12 29.8	21.1
318963	2005	UW ₂₄₉	16.6	X	310.23094	230.25538	55.16617	2.63261	0.1050670	0.23607245	2.5928209	20	4 27.2	19.7
318964	2005	UK ₂₅₄	16.3	X	313.60324	77.84056	80.64409	4.74813	0.0374863	0.21393272	2.7687553	20	—	—
318965	2005	UY ₂₅₉	16.3	X	141.16955	83.09939	202.49798	7.13961	0.2003486	0.21178776	2.7874183	20	—	—
318966	2005	UR ₂₇₅	16.1	X	326.63512	139.54613	254.65545	10.86438	0.0592028	0.19517944	2.9433823	20	10 17.9	20.1
318967	2005	UO ₂₇₈	15.9	X	234.31904	194.51833	46.18882	13.29287	0.0715665	0.21668946	2.7452223	20	—	—
318968	2005	UX ₂₈₃	16.9	X	270.87871	328.72049	96.70134	3.48418	0.1162286	0.19015797	2.9949738	20	9 5.4	20.9
318969	2005	UF ₂₈₆	16.5	X	38.37288	293.62069	61.97466	9.85407	0.0527370	0.20288317	2.8683933	20	12 10.6	20.4
318970	2005	UD ₂₉₀	16.2	X	43.86967	328.81292	257.44181	7.02232	0.1367591	0.17649773	3.1475789	20	7 12.6	20.2
318971	2005	UN ₂₉₀	16.4	X	173.14194	321.14933	323.18348	3.80084	0.0245353	0.21283329	2.7782821	20	—	—
318972	2005	UK ₂₉₂	15.5	X	63.33965	197.04035	32.84749	11.56287	0.0614106	0.18121939	3.0926655	20	8 9.1	20.0
318973	2005	UQ ₂₉₃	15.9	X	274.09154	195.90007	241.48886	9.17411	0.0920990	0.19161803	2.9797407	20	9 23.5	20.1
318974	2005	UF ₂₉₆	16.8	X	271.89190	169.70708	238.64816	1.92390	0.1221343	0.18550086	3.0448935	20	8 11.7	20.9
318975	2005	UD ₂₉₇	17.1	X	17.62481	151.67701	261.70988	0.95519	0.0695490	0.20642627	2.8354766	20	—	—
318976	2005	UK ₃₀₂	17.4	X	100.87945	249.11581	135.21711	3.90959	0.1312151	0.28545292	2.2844399	20	—	—
318977	2005	UP ₃₁₀	17.1	X	260.85358	17.34197	96.77541	3.29457	0.0125822	0.19860638	2.9094256	20	11 8.8	21.0
318978	2005	UK ₃₁₂	15.7	X	286.40988	188.93425	51.30514	13.26038	0.1300663	0.22861605	2.6488960	20	1 28.1	19.7
318979	2005	UB ₃₁₉	17.3	X	217.68891	246.85232	18.38277	2.58064	0.1364558	0.21961780	2.7207650	20	—	—
318980	2005	UJ ₃₂₀	16.7	X	340.19193	76.37062	300.91524	0.76137	0.1182286	0.19490522	2.9461424	20	10 20.3	20.0
318981	2005	UA ₃₂₄	16.9	X	203.61506	219.03247	62.98029	2.47502	0.0458862	0.22359450	2.6884088	20	—	—
318982	2005	UJ ₃₃₇	16.3	X	316.70133	215.08501	215.84307	11.97630	0.0767037	0.19996615	2.8962212	20	11 24.5	20.0
318983	2005	UF ₃₄₅	16.5	X	231.32139	14.02471	90.26784	4.68459	0.0769670	0.18632755	3.0358804	20	9 11.3	20.9
318984	2005	UZ ₃₅₃	17.7	X	168.28107	46.92346	338.69034	3.15606	0.1527168	0.29962464	2.2118264	20	3 20.6	21.0
318985	2005	UB ₃₅₅	15.5	X	245.01189	271.84813	18.00340	12.88045	0.1818163	0.23105639	2.6302119	20	2 12.6	19.9
318986	2005	UR ₃₆₅	16.4	X	165.60893	84.64582	200.64973	8.82203	0.1423728	0.21353101	2.7722267	20	—	—
318987	2005	UJ ₃₇₂	17.0	X	339.57072	254.18283	9.18177	4.29465	0.0843721	0.23878444	2.5731515	20	5 14.3	19.9
318988	2005	UC ₃₇₈	17.0	X	61.30250	175.03728	179.71846	1.81007	0.0841888	0.20533280	2.8455343	20	—	—
318989	2005	UJ ₃₇₈	16.9	X	277.39542	310.45467	163.44552	2.23690	0.0202046	0.20303990	2.8669170	20	11 28.9	20.7
318990	2005	UD ₃₈₈	16.2	X	242.76987	247.72934	198.18733	8.18742	0.0545675	0.18919645	3.0051124	20	8 31.6	20.5
318991	2005	UT ₃₈₉	17.5	X	287.68452	338.28308	165.73369	2.45896	0.0232484	0.20926930	2.8097372	20	—	—
318992	2005	UD ₃₉₅	16.6	X	221.23204	200.16831	48.48273	6.06070	0.2040028	0.22262535	2.6962054	20	—	—
318993	2005	UU ₃₉₉	16.4	X	65.06108	196.77660	202.19631	3.72743	0.0785647	0.21238408	2.7821983	20	—	—
318994	2005	UP ₄₀₆	17.6	X	285.82709	300.58304	147.18003	2.51255	0.1911396	0.26300043	2.4126272	20	11 2.8	19.7
318995	2005	UJ ₄₁₃	16.4	X	121.20731	286.77623	57.77931	7.23238	0.0322728	0.21543866	2.7558376	20	—	—
318996	2005	UU ₄₁₄	16.6	X	224.76715	182.84278	59.05383	6.82645	0.1477316	0.28346877	2.2950874	20	—	—
318997	2005	UA ₄₁₇	16.6	X	313.73177	348.57418	92.24673	3.68220	0.0767898	0.20067141	2.8894314	20	12 2.5	20.1
318998	2005	UN ₄₁₉	16.2	X	63.26582	345.69317	59.74412	7.37802	0.0391665	0.21540721	2.7561058	20	—	—
318999	2005	UB ₄₂₁	17.1	X	256.55101	243.45397	232.74107	3.85951	0.0971868	0.19524619	2.9427114	20	10 22.7	21.1
319000	2005	UJ ₄₂₉	17.1	X	353.74196	118.04606	319.34470	1.17555	0.0463238	0.20600168	2.8393714	20	—	—
319001	2005	UG ₄₃₁	17.6	X	224.60637	26.53125	68.29236	1.81387	0.1719954	0.18362970	3.0655431	20	8 10.8	22.3
319002	2005	UR ₄₃₄	16.6	X	281.19778	1.96551	158.16951	1.69978	0.0140672	0.21010584	2.8022742	20	—	—
319003	2005	UE ₄₄₈	15.7	X	231.56183	263.00212	22.22078	14.38707	0.1084644	0.22677375	2.6632230	20	1 29.6	20.1
319004	2005	UB ₄₇₆	16.2	X	69.72600	140.51810	268.13769	4.68782	0.0283494	0.21868192	2.7285221	20	—	—
319005	2005	UY ₄₇₇	16.7	X	251.11079	161.86994	357.16364	1.51414	0.0118251	0.20395961	2.8582921	20	12 22.5	20.6
319006	2005	UT ₄₇₈	16.4	X	206.93159	28.57891	257.74461	1.96683	0.0799178	0.21941470	2.7224437	20	1 2.4	20.3
319007	2005	UN ₄₇₉	17.1	X	195.16604	318.38967	30.14950	21.13638	0.0846702	0.37107426	1.9179127	20	3 3.2	19.9
319008	2005	UR ₄₈₂	17.4	X	185.17703	344.39727	22.18329	21.24209	0.0741346	0.37183811	1.9152852	20	3 13.5	19.9
319009	2005	UP ₄₈₈	16.5	X	102.86060	34.23976	306.61316	3.44650	0.0814366	0.21342210	2.7731697	20	—	—
319010	2005	UX ₄₈₈	16.2	X	168.53447	328.38361	6.93820	14.74535	0.1063836	0.22518784	2.6757124	20	1 27.9	20.5
319011	2005	UE ₄₉₂	16.0	X	258.79062	280.27977	138.66968	10.92795	0.1603545	0.18481981	3.0523690	20	8 3.5	20.3
319012	2005	UM ₄₉₇	16.3	X	258.21261	342.50566	108.10277	7.16377	0.2335458	0.19141444	2.9818531	20	9 5.5	20.6
319013	2005	UR ₄₉₇	15.7	X	195.54694	176.10796	192.90175	22.02133	0.0272187	0.23373142	2.6101050	20	3 30.4	19.4
319014	2005	UF ₅₀₀	16.3	X	125.04426	250.83984	178.44445	14.09977	0.0521112	0.23093349	2.6311449	20	3 25.4	19.8
319015	2005	UE ₅₀₂	16.6	X	337.01641	41.37886	346.69778	7.01854	0.1317547	0.19721829	2.9230613	20	10 27.8	20.1
319016	2005	UK ₅₀₉	15.3	X	334.33475	333.89607	10.25497	11.63148	0.0662501	0.18588928	3.0406504	20	8 30.8	19.3
319017	2005	UU ₅₁₁	15.8	X	189.63329	208.21282	247.95817	7.61552	0.0872384	0.17584367	3.1553792	20	7 11.6	20.6
319018	2005	UC ₅₁₂	15.4	X	216.04071	206.35907	271.44985	11.41597	0.1509354	0.17987070	3.1081056	20	8 25.9	20.5
319019	2005	UT ₅₂₁	16.8	X	292.28535	10.18820	147.37256	5.48988	0.0980095	0.21360982	2.7715448	20	—	—
319020	2005	UN ₅₃₀	15.9	X	51.27316	80.10236	235.08052	7.36496	0.0521971	0.19743119	2.9209595	20	11 5.6	20.0
319021	2005	VA ₁	17.2	X	121.05648	9.44619	49.70900	21.78455	0.0987656	0.36296733	1.9463653	20	3 14.1	19.9
319022	2005	VA ₅	15.9	X	251.94229	67.30449	210.71213	9.91311	0.1873810	0.22972851	2.6403375	20	1 27.2	20.4
319023	2005	VF ₅	17.0	X	227.08410	118.43301	314.74611	4.74090	0.2315758	0.17857882	3.1230774	20	7 12.1	22.0
319024	2005	VZ ₅	16.7	X	9.35898	239.43654	270.32968	16.79970	0.0919680	0.35694321	1.9682033	20	—	—
319025	2005	VS ₁₄	16.2	X	288.57175	344.76275	89.49818	6.50014	0.0941749	0.19294923	2.9660196	20	10 17.2	20.1
319026	2005	VM ₁₈	17.3	X	142.05812	44.61784	228.09533	1.20619	0.0305899	0.20633930	2.8362734	20	12 29.8	21.2
319027	2005	VQ ₁₈	17.0	X	274.37869	34.73647	29.29412	2.69114	0.1141823	0.19042120	2.9922131	20	9 8.2	20.8
319028	2005	VL ₁₉	16.4	X	115.13890	131.78739	204.53198	4.82312	0.1711423	0.21503877	2.7592531	20	—	—
319029	2005	VL ₂₅	16.3	X	355.38068	37.85520	332.71807	4.96222	0.0763124	0.19739942	2.9212729	20	11 1.3	20.0
319030	2005	VF ₂₆	16.5	X	346.01507	231.55622	225.66430	3.97949						

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319041 2005 VY ₇₁	16.6	X	110.11811	131.03330	208.39744	5.39945	0.1287144	0.21158866	2.7891666	20	—	—
319042 2005 VU ₇₅	16.0	X	264.70474	57.51748	5.48512	8.76983	0.1042343	0.18856995	3.0117648	20	8 27.8	20.2
319043 2005 VT ₉₅	16.9	X	359.23610	262.95857	162.19777	2.29966	0.0527814	0.20323918	2.8650427	20	—	—
319044 2005 VZ ₉₈	16.1	X	286.20459	209.17621	157.25272	3.69781	0.1231817	0.18325944	3.0696709	20	7 7.5	20.3
319045 2005 VF ₁₀₄	17.0	X	130.68841	344.23374	311.51496	4.21696	0.1347562	0.21096575	2.7946542	20	—	—
319046 2005 VA ₁₀₉	16.8	X	5.73851	168.46674	229.55488	1.21076	0.0713666	0.20296218	2.8676489	20	12 23.8	20.5
319047 2005 VQ ₁₁₀	16.9	X	148.01401	174.31254	207.24315	3.59958	0.0776664	0.22687924	2.6623974	20	2 22.4	20.7
319048 2005 VH ₁₁₄	17.0	X	26.23820	229.87703	239.67725	4.57820	0.1134935	0.28332830	2.2958460	20	—	—
319049 2005 VS ₁₂₃	16.1	X	357.99530	17.07362	79.94602	5.47715	0.0291180	0.20960682	2.8067201	20	—	—
319050 2005 VM ₁₂₆	17.2	X	292.32731	55.31862	177.87335	3.59574	0.1305084	0.23308539	2.6149256	20	1 20.9	21.0
319051 2005 VO ₁₃₀	16.9	X	294.33122	78.86769	139.08580	6.17594	0.2656150	0.22856181	2.6493150	20	—	—
319052 2005 VT ₁₃₀	17.2	X	332.89145	298.71281	161.37945	6.54563	0.0147658	0.21131004	2.7916178	20	—	—
319053 2005 VB ₁₃₄	16.3	X	331.08335	196.56139	177.29168	15.55115	0.1031854	0.19210932	2.9746584	20	10 1.2	19.8
319054 2005 WT ₇	17.7	X	217.37966	229.69622	150.82963	4.70588	0.1618621	0.30678661	2.1772674	20	5 3.5	20.9
319055 2005 WZ ₇	15.8	X	233.78089	237.80900	246.92063	8.54700	0.0464047	0.19038269	2.9926166	20	10 9.1	20.1
319056 2005 WV ₁₁	16.4	X	153.75014	51.88111	232.52559	4.15529	0.0886492	0.20852982	2.8163758	20	—	—
319057 2005 WQ ₁₃	16.4	X	286.32172	347.40727	65.79784	3.50654	0.0793786	0.18822190	3.0154765	20	9 16.4	20.4
319058 2005 WE ₁₆	16.2	X	249.31266	237.94335	246.40354	9.19031	0.0588826	0.19269897	2.9685871	20	10 27.7	20.5
319059 2005 WF ₁₆	16.9	X	254.39196	188.38819	246.72577	5.60231	0.1826547	0.18470588	3.0536240	20	8 13.6	21.4
319060 2005 WZ ₁₇	16.0	X	348.43524	283.08966	261.63061	11.90503	0.0963936	0.18920194	3.0050543	20	10 10.1	19.9
319061 2005 WV ₂₀	16.3	X	25.36477	264.70230	51.55880	11.25602	0.0732581	0.18928948	3.0041278	20	10 10.0	20.3
319062 2005 WZ ₂₄	16.5	X	315.70555	93.33759	274.79751	6.16283	0.0637714	0.18523274	3.0478310	20	8 27.4	20.6
319063 2005 WT ₂₆	16.5	X	23.38686	314.39248	56.00998	2.83648	0.0766818	0.19828648	2.9125540	20	12 12.4	20.3
319064 2005 WL ₂₇	16.8	X	180.13111	180.98705	261.43876	3.49336	0.0489456	0.23997864	2.5646080	20	6 17.3	20.4
319065 2005 WE ₂₈	16.5	X	142.31630	39.41385	266.26836	3.15934	0.0883346	0.20905202	2.8116838	20	—	—
319066 2005 WC ₂₉	16.4	X	333.17960	294.78831	56.35885	10.82903	0.0854554	0.18595464	3.0399378	20	9 8.7	20.4
319067 2005 WF ₃₄	15.9	X	311.96895	42.47858	38.74777	5.30667	0.0942489	0.19705261	2.9246996	20	11 27.7	19.3
319068 2005 WP ₃₇	16.8	X	65.23895	277.53055	95.46222	3.20242	0.1047676	0.20610940	2.8383820	20	—	—
319069 2005 WA ₃₉	16.0	X	290.13755	178.47330	247.15995	9.05648	0.0822291	0.19035921	2.9928626	20	10 2.3	20.0
319070 2005 WO ₄₃	15.7	X	332.10979	32.76363	63.33413	7.11613	0.0600198	0.20271523	2.8699773	20	—	—
319071 2005 WT ₅₄	15.3	X	205.54253	16.25038	103.21536	18.30255	0.1892716	0.17936290	3.1139692	20	8 25.0	20.6
319072 2005 WY ₅₆	16.9	X	216.81418	292.02097	3.54786	2.71361	0.0350893	0.21969652	2.7201150	20	1 25.4	20.7
319073 2005 WC ₅₇	17.0	X	151.95559	352.21418	61.51255	23.05814	0.0973421	0.36936749	1.9238163	20	4 14.6	19.7
319074 2005 WD ₈₁	16.0	X	318.13741	313.14889	71.83050	11.10650	0.0889402	0.18777816	3.0202252	20	9 30.3	20.0
319075 2005 WE ₈₇	15.7	X	210.96828	186.96078	278.19416	8.32194	0.0313931	0.17787440	3.1313173	20	8 17.9	20.4
319076 2005 WR ₈₇	15.5	X	228.55269	319.28662	92.66089	28.01789	0.2227633	0.17333986	3.1856918	20	6 18.7	20.8
319077 2005 WQ ₈₉	15.3	X	183.35123	11.33007	79.86936	29.14275	0.1688424	0.17148707	3.2085967	20	6 26.6	20.7
319078 2005 WM ₉₃	17.2	X	227.98688	243.54069	250.49120	2.84001	0.1265249	0.25603290	2.4562479	20	10 15.7	20.6
319079 2005 WD ₉₄	16.7	X	39.46277	162.42057	220.89185	1.26402	0.0772395	0.20323005	2.8651284	20	—	—
319080 2005 WF ₉₈	16.9	X	183.65696	241.23959	93.34262	3.50825	0.1251117	0.22791503	2.6543186	20	2 7.4	21.0
319081 2005 WA ₁₁₃	15.5	X	280.60492	304.42222	95.41028	15.76828	0.2470912	0.18435049	3.0575473	20	7 25.9	19.7
319082 2005 WJ ₁₁₃	15.7	X	270.23580	254.35019	209.21711	12.12416	0.0496603	0.19358204	2.9595522	20	11 1.3	19.6
319083 2005 WH ₁₁₅	15.5	X	148.82769	323.71557	278.33831	11.08306	0.1589995	0.18943001	3.0026418	20	11 25.4	20.6
319084 2005 WZ ₁₁₈	16.0	X	263.22236	198.05515	241.65313	9.04677	0.0822125	0.18898898	3.0073114	20	9 12.6	20.3
319085 2005 WD ₁₂₇	16.9	X	254.84137	2.53063	75.54371	1.00750	0.0560095	0.18727080	3.0256777	20	9 8.2	20.9
319086 2005 WL ₁₂₇	16.0	X	68.24572	193.27371	65.16754	2.85823	0.1352253	0.18746630	3.0235738	20	9 28.6	20.2
319087 2005 WN ₁₂₇	16.8	X	50.74601	121.80802	236.60386	1.14095	0.0788216	0.20314198	2.8659565	20	—	—
319088 2005 WS ₁₃₅	16.5	X	232.40558	238.08428	65.90371	6.75961	0.2322401	0.22848387	2.6499175	20	2 13.8	21.1
319089 2005 WA ₁₄₀	15.8	X	9.08061	82.16771	262.16975	10.04639	0.0602867	0.18954302	3.0014481	20	10 13.3	19.9
319090 2005 WQ ₁₄₀	16.2	X	337.08961	74.55669	284.97961	7.37162	0.1126297	0.18304473	3.0720709	20	9 14.8	20.1
319091 2005 WR ₁₄₆	16.6	X	16.57734	348.89829	322.26672	2.50013	0.0383708	0.18493845	3.0510634	20	9 11.6	20.6
319092 2005 WE ₁₄₇	17.1	X	217.67630	178.34474	339.49007	1.11452	0.0792246	0.19166893	2.9792131	20	10 29.5	21.3
319093 2005 WH ₁₄₈	16.2	X	148.33344	240.45462	106.44650	7.03643	0.0600170	0.22076694	2.7113153	20	1 11.1	20.1
319094 2005 WU ₁₄₉	16.0	X	292.97466	220.06677	62.21179	15.63256	0.0918823	0.23164236	2.6257743	20	4 8.2	19.7
319095 2005 WG ₁₅₀	16.8	X	260.99300	258.25899	27.20565	4.25418	0.0433540	0.22586727	2.6703438	20	3 4.1	20.4
319096 2005 WD ₁₅₇	15.6	X	241.90435	160.01265	246.05162	9.64854	0.2118460	0.17621199	3.1509807	20	6 23.4	20.6
319097 2005 WK ₁₆₀	16.3	X	288.30977	68.33469	322.43238	4.07192	0.1632528	0.18415837	3.0596734	20	8 6.3	20.3
319098 2005 WS ₁₆₄	17.1	X	256.73952	270.38028	172.03244	0.75937	0.1138166	0.18810544	3.0167210	20	9 7.2	21.4
319099 2005 WZ ₁₆₅	16.2	X	239.81877	60.44786	74.51283	5.64020	0.0468971	0.19427360	2.9525246	20	11 3.2	20.3
319100 2005 WN ₁₆₆	16.1	X	293.72094	310.50129	111.89529	2.99260	0.0714117	0.18658206	3.0331191	20	10 9.1	20.0
319101 2005 WZ ₁₇₁	16.7	X	62.60698	115.48890	195.42821	1.62566	0.0674251	0.19632540	2.9319174	20	11 16.9	20.9
319102 2005 WP ₁₇₃	17.2	X	21.61872	234.38585	195.31929	2.13414	0.1549219	0.27519623	2.3408544	20	—	—
319103 2005 WE ₁₈₃	17.2	X	125.73525	72.56047	294.43307	5.17492	0.1300394	0.28741543	2.2740290	20	1 7.3	19.9
319104 2005 WJ ₁₉₁	15.8	X	117.75127	355.33861	351.21957	15.88405	0.1495743	0.21721063	2.7408294	20	—	—
319105 2005 WG ₁₉₇	15.0	X	162.96362	268.75713	274.70391	14.29882	0.1884653	0.17640008	3.1487404	20	9 22.1	20.6
319106 2005 WK ₂₀₁	16.3	X	68.44351	104.19936	266.87712	3.24167	0.0797718	0.20901027	2.8120581	20	—	—
319107 2005 WV ₂₀₂	16.6	X	185.55763	203.04654	335.92355	1.72355	0.0671163	0.18680034	3.0307558	20	10 19.9	21.0
319108 2005 WE ₂₁₁	15.5	X	331.78246	74.87334	302.82319	3.60387	0.0538171	0.17949518	3.1124390	20	10 2.8	19.6
319109 2005 XG	17.3	X	111.63414	274.50396	50.07453	3.26266	0.1882058	0.28042965	2.3116394	20	—	—
319110 2005 XW ₁₃	15.7	X	86.47773	40.41574	229.51353	8.40363	0.1004158	0.18877677	3.0095647	20	10 27.1	20.2
319111 2005 XU ₁₄	16.0	X	187.43610	56.00782	99.48880	16.15082	0.1156932	0.18336917	3.0684461	20	9 28.9	21.1
319112 2005 XA ₁₅	16.8	X	322.48204	283.43252	134.86791	5.98819	0.1132396	0.26143161	2.4223152	20	12 6.0	19.3
319113 2005 XY ₁₈	16.0	X	218.62939	6.40732	124.36405	3.80414	0.0485219	0.18468978	3.0538015	20	10 1.9	20.3
319114 2005 XC ₂₇	17.											

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319121 2005 XD ₇₆	16.6	X	184.87258	351.99502	299.06290	1.69370	0.0505537	0.21197745	2.7857551	20	—	—
319122 2005 XL ₇₆	15.1	X	208.43303	84.67174	62.76497	17.21709	0.0443914	0.18235438	3.0798194	20	10 16.6	19.8
319123 2005 XR ₇₇	16.0	X	286.18297	354.42487	50.29850	8.37950	0.0538830	0.18585833	3.0409880	20	9 10.8	20.2
319124 2005 XR ₈₀	15.9	X	222.95096	72.06872	10.58368	20.34581	0.3415162	0.17526381	3.1623350	20	7 17.4	21.9
319125 2005 XR ₈₃	15.6	X	231.38929	339.16816	82.35643	19.47062	0.1979991	0.17416106	3.1756699	20	7 3.4	20.7
319126 2005 XP ₉₀	16.6	X	249.23826	332.62944	69.69677	6.15316	0.2586210	0.17615007	3.1517191	20	6 21.3	21.5
319127 2005 XQ ₁₀₅	16.1	X	305.27575	307.20625	44.30681	1.01074	0.2153711	0.17181509	3.2045115	20	7 1.9	19.9
319128 2005 XR ₁₁₆	16.2	X	283.58578	208.23192	100.33452	12.86193	0.1420744	0.23271722	2.6176829	20	4 21.7	20.0
319129 2005 YC ₂	16.1	X	2.03335	312.04509	35.13969	5.75063	0.0871059	0.19074065	2.9888713	20	10 14.2	19.8
319130 2005 YZ ₂	15.8	X	232.34419	107.38267	340.91498	17.47815	0.2632169	0.17897864	3.1184246	20	8 5.6	21.1
319131 2005 YN ₆	16.3	X	226.49246	72.61188	51.06632	9.01019	0.2718702	0.18324994	3.0697770	20	9 11.4	21.5
319132 2005 YY ₇	16.0	X	323.76529	80.73178	293.50370	9.47915	0.0201960	0.17976914	3.1092761	20	9 15.3	20.5
319133 2005 YK ₈	16.2	X	129.22391	250.46101	300.49602	7.62644	0.0435098	0.17501638	3.1653149	20	8 29.9	20.8
319134 2005 YV ₈	16.0	X	288.40511	53.86513	17.70216	8.51229	0.1282721	0.18703424	3.0282284	20	10 5.2	19.8
319135 2005 YB ₁₁	15.9	X	300.06527	295.55807	84.87071	13.73203	0.1012465	0.18159665	3.0883806	20	8 23.9	20.1
319136 2005 YJ ₁₁	16.1	X	62.53387	22.83807	285.92737	6.82044	0.0052005	0.18965545	3.0002619	20	11 1.5	20.4
319137 2005 YM ₁₃	16.4	X	192.94652	276.91641	112.78576	6.56272	0.1428040	0.22894988	2.6463205	20	4 25.8	20.7
319138 2005 YR ₁₄	16.3	X	217.57379	166.06267	298.05159	3.98976	0.1072288	0.17676467	3.1444093	20	8 19.0	20.9
319139 2005 YP ₁₅	16.3	X	215.05773	201.86779	290.68683	3.75620	0.1186997	0.18061884	3.0995169	20	9 18.6	21.0
319140 2005 YX ₁₈	17.0	X	309.78185	219.60226	253.93094	1.03829	0.0203058	0.20266829	2.8704205	20	—	—
319141 2005 YJ ₂₁	18.0	X	275.34459	242.26406	290.50424	2.02199	0.1130502	0.26775173	2.3840454	20	—	—
319142 2005 YG ₂₃	16.6	X	200.86420	330.50094	109.96393	3.07068	0.1781643	0.17015945	3.2252645	20	6 30.7	21.7
319143 2005 YT ₂₃	15.7	X	123.63685	180.66606	104.50564	6.00254	0.1037513	0.19395918	2.9557146	20	12 20.6	19.8
319144 2005 YJ ₂₄	16.3	X	56.30299	237.41386	111.52375	3.38736	0.1432398	0.19629636	2.9322065	20	—	—
319145 2005 YZ ₂₆	17.1	X	247.93509	236.65899	303.93944	5.07213	0.0604692	0.26427999	2.4048788	20	—	—
319146 2005 YA ₂₈	16.2	X	212.02310	113.56912	55.69217	2.08945	0.1137962	0.18605808	3.0388111	20	11 1.9	20.7
319147 2005 YU ₂₈	17.5	X	82.72423	285.91763	108.79595	3.95292	0.0943260	0.27711800	2.3300195	20	—	—
319148 2005 YL ₃₀	15.6	X	245.04459	23.16511	83.65305	11.04406	0.0638271	0.18663512	3.0325442	20	10 6.5	20.0
319149 2005 YU ₃₉	15.3	X	12.50710	11.26964	299.79920	14.15429	0.0996020	0.17706907	3.1408046	20	9 4.1	19.5
319150 2005 YF ₅₃	15.3	X	77.34216	326.31718	298.27801	15.71062	0.1674916	0.17796697	3.3023134	20	10 9.4	20.3
319151 2005 YM ₅₆	16.2	X	287.77297	96.54798	315.00598	6.26069	0.0303934	0.18051827	3.1006681	20	9 16.9	20.6
319152 2005 YX ₅₆	16.5	X	217.85363	170.10456	284.85473	12.81446	0.1340728	0.17770056	3.1333592	20	8 3.6	21.4
319153 2005 YP ₆₁	17.2	X	347.65582	122.29646	292.78199	5.58909	0.1223440	0.26390899	2.4071321	20	—	—
319154 2005 YK ₆₅	16.2	X	285.53291	1.80211	88.40550	2.55029	0.1010676	0.18922720	3.0047868	20	10 29.3	19.9
319155 2005 YN ₆₆	15.2	X	27.89170	169.97157	103.28439	18.84860	0.0594194	0.17203776	3.2017459	20	8 13.4	19.6
319156 2005 YK ₆₇	16.7	X	227.61079	130.84461	298.25287	9.14174	0.2025150	0.17384150	3.1795603	20	7 9.8	21.9
319157 2005 YG ₆₉	15.8	X	51.00871	250.90593	56.84724	2.81587	0.1540526	0.18570611	3.0426495	20	11 8.9	19.9
319158 2005 YJ ₇₅	15.5	X	166.26112	105.60047	93.03055	18.14519	0.1716086	0.18529735	3.0471225	20	10 31.5	20.4
319159 2005 YT ₇₅	16.9	X	240.89177	120.06696	310.72977	5.02098	0.0712789	0.17711107	3.1403080	20	8 8.6	21.5
319160 2005 YV ₇₇	15.8	X	108.10949	163.83199	91.79325	7.01309	0.0951142	0.18518756	3.0483267	20	11 3.8	20.5
319161 2005 YB ₈₀	15.8	X	146.95623	314.26366	295.42280	8.32521	0.0809226	0.18994374	2.9972253	20	12 3.2	20.5
319162 2005 YX ₈₂	17.4	X	56.65593	117.95983	234.27064	1.34138	0.2129641	0.26555643	2.3971663	20	—	—
319163 2005 YQ ₈₃	15.8	X	161.52022	290.24725	271.41658	3.94204	0.1011071	0.18216272	3.0819793	20	10 19.6	20.6
319164 2005 YB ₈₄	16.2	X	120.63689	41.69473	179.61231	2.07938	0.0399015	0.17978229	3.1091245	20	9 29.6	20.6
319165 2005 YJ ₈₅	15.6	X	353.72928	210.86680	103.88376	10.57491	0.0809165	0.17512046	3.1640605	20	8 18.5	19.7
319166 2005 YJ ₈₈	16.0	X	258.73744	196.87743	116.07237	12.87087	0.1767332	0.22496197	2.6775031	20	3 25.3	20.3
319167 2005 YU ₉₂	15.3	X	112.90592	142.12357	117.80329	17.61266	0.1761698	0.18377707	3.0639040	20	11 21.5	20.6
319168 2005 YY ₉₉	16.5	X	208.59530	66.02268	13.85783	2.95545	0.1265670	0.17211808	3.2007498	20	7 10.5	21.4
319169 2005 YP ₁₀₈	15.8	X	301.06281	306.88358	116.58363	11.88270	0.0277025	0.18622278	3.0370190	20	10 28.5	20.7
319170 2005 YW ₁₀₈	16.2	X	293.50227	277.21257	132.09384	2.54375	0.1232553	0.18366855	3.0651108	20	9 14.1	20.1
319171 2005 YS ₁₁₀	16.5	X	288.52950	123.66149	263.05239	6.78776	0.1505815	0.17868759	3.1218099	20	7 31.4	20.6
319172 2005 YP ₁₁₁	15.9	X	60.15199	127.91467	129.42840	6.32510	0.1039760	0.17455854	3.1599949	20	9 11.6	20.2
319173 2005 YS ₁₁₁	15.9	X	94.72658	100.25860	164.32888	3.06898	0.0362492	0.18442421	3.0567324	20	10 23.6	20.2
319174 2005 YQ ₁₁₄	15.8	X	126.06790	240.05825	312.40761	7.90931	0.0408999	0.17474111	3.1686383	20	8 28.6	20.5
319175 2005 YE ₁₁₅	16.0	X	157.84045	73.05097	80.91112	5.39475	0.1187366	0.17309700	3.1886708	20	8 22.6	21.0
319176 2005 YR ₁₁₆	17.1	X	15.09263	288.80485	83.01348	3.83649	0.2137364	0.26096842	2.4251806	20	—	—
319177 2005 YW ₁₁₇	17.2	X	315.94130	270.38643	45.05627	1.14383	0.1157789	0.23568731	2.5956447	20	6 16.7	20.1
319178 2005 YU ₁₁₈	16.0	X	198.60594	66.51410	115.90843	5.47806	0.0856713	0.18680186	3.0307394	20	11 8.2	20.5
319179 2005 YH ₁₂₀	17.1	X	242.14128	206.00750	169.56665	1.60032	0.1105111	0.23625155	2.5915103	20	5 28.0	20.8
319180 2005 YU ₁₂₄	16.1	X	253.12321	37.11001	43.02466	4.00979	0.1968569	0.18221316	3.0814105	20	8 20.6	20.6
319181 2005 YH ₁₂₅	16.7	X	52.47256	26.49649	74.18193	4.66959	0.0549595	0.21421271	2.7663421	20	2 1.2	20.2
319182 2005 YO ₁₂₉	17.4	X	39.63781	215.68624	64.58003	0.88763	0.0760806	0.24671621	2.5177016	20	9 18.6	20.3
319183 2005 YD ₁₃₁	15.8	X	189.55819	357.21546	117.76453	7.63618	0.0951204	0.17173663	3.2054876	20	8 5.1	20.7
319184 2005 YJ ₁₃₁	15.7	X	126.97119	309.37848	302.55687	15.61929	0.1862511	0.18180320	3.0860411	20	11 15.4	21.2
319185 2005 YZ ₁₃₃	15.3	X	257.42426	322.56773	74.54793	10.39058	0.0679618	0.17340460	3.1848988	20	7 18.6	19.9
319186 2005 YW ₁₃₈	16.3	X	101.06072	338.85008	287.96339	3.20452	0.1121883	0.18472367	3.0534280	20	11 7.9	20.9
319187 2005 YL ₁₄₄	15.8	X	88.14281	278.80743	312.97858	8.79691	0.2285260	0.16951106	3.2334838	20	9 21.2	21.0
319188 2005 YS ₁₄₄	15.3	X	161.48745	75.72733	112.38654	11.74430	0.0490857	0.17934180	3.1142134	20	10 10.7	20.1
319189 2005 YZ ₁₄₄	16.6	X	187.97343	103.88520	74.16810	1.99210	0.1214713	0.18167384	3.0875058	20	10 18.6	21.3
319190 2005 YG ₁₄₅	15.3	X	172.65275	208.47920	302.69987	9.17000	0.0522106	0.17778963	3.1323126	20	8 29.8	20.0
319191 2005 YE ₁₄₉	16.2	X	224.00435	139.03596	311.43035	8.74978	0.1298778	0.17628239	3.1501417	20	8 7.4	21.1
319192 2005 YA ₁₅₀	17.7	X	165.93400	359.21124	21.65063	3.33404	0.1850679	0.29190936	2.2506297	20	3 16.3	21.0
319193 2005 YV ₁₅₄	14.9	X	315.44387	32.94862	55.07208	3.62409	0.122					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319201 2005 YK ₁₈₁	15.7	X	176.68490	100.09076	30.06899	13.58379	0.2325870	0.17360358	3.1824647	20	8 13.9	21.4
319202 2005 YM ₁₈₆	14.9	X	222.85960	344.54117	121.64219	28.27576	0.0989023	0.17565856	3.1575956	20	9 1.9	19.9
319203 2005 YC ₁₉₁	16.1	X	185.88793	221.05935	321.31528	3.86545	0.0956663	0.18241609	3.0791248	20	10 20.9	20.8
319204 2005 YH ₁₉₁	16.0	X	164.88071	234.11567	312.65574	6.87587	0.1286053	0.17852425	3.1237138	20	10 2.6	21.1
319205 2005 YU ₁₉₄	15.7	X	180.89929	228.45617	268.86869	8.68732	0.1836327	0.17634624	3.1493813	20	8 17.5	21.1
319206 2005 YH ₁₉₈	16.6	X	303.24276	182.58387	102.06288	3.02785	0.1898658	0.22754393	2.6572100	20	4 4.1	19.9
319207 2005 YR ₁₉₈	15.4	X	310.54953	239.38242	113.75321	17.19048	0.0776065	0.17498725	3.1656661	20	8 1.2	19.5
319208 2005 YY ₂₀₁	15.7	X	246.52992	294.91126	117.19637	9.94688	0.10718952	0.17295133	3.1904610	20	7 22.7	20.2
319209 2005 YK ₂₀₅	15.4	X	177.42253	64.06246	122.29131	10.88400	0.0671554	0.18249309	3.0782586	20	10 24.9	20.2
319210 2005 YU ₂₀₇	15.4	X	272.98107	292.73280	113.78140	10.62290	0.0645656	0.17583998	3.1554234	20	8 21.3	19.8
319211 2005 YN ₂₁₁	16.3	X	246.46430	202.07420	190.75104	14.95663	0.1386696	0.24355173	2.5394631	20	6 21.1	20.2
319212 2005 YH ₂₁₄	15.4	X	182.94133	191.06261	352.00976	11.53978	0.0680342	0.18492496	3.0512118	20	10 18.4	20.0
319213 2005 YA ₂₂₇	15.5	X	94.04130	169.79161	86.30075	10.59419	0.1033937	0.18632170	3.0359440	20	10 23.9	20.2
319214 2005 YF ₂₃₂	16.1	X	353.85572	76.03670	290.63669	8.40003	0.1167078	0.18990406	2.9976428	20	10 24.3	19.9
319215 2005 YP ₂₃₆	15.9	X	27.10135	31.56437	281.66236	7.79788	0.0656377	0.18084812	3.0968967	20	9 27.4	20.3
319216 2005 YM ₂₃₉	16.4	X	181.71142	73.07477	123.86287	3.80348	0.1024516	0.18618266	3.0374553	20	11 6.2	21.2
319217 2005 YX ₂₄₄	15.9	X	183.09794	238.97694	302.33243	14.77717	0.1662363	0.18167661	3.0874744	20	10 7.2	21.3
319218 2005 YY ₂₄₄	16.1	X	83.91711	154.43645	103.15297	2.75136	0.1472078	0.17833260	3.1259514	20	10 15.2	20.8
319219 2005 YM ₂₆₁	16.2	X	118.75376	172.53217	87.17486	4.66819	0.1212805	0.19016451	2.9949051	20	11 19.9	20.8
319220 2005 YF ₂₆₂	15.9	X	269.55523	336.98911	121.97872	3.46759	0.0496288	0.18734337	3.0248964	20	10 25.5	20.0
319221 2005 YD ₂₆₄	17.4	X	229.44698	209.44890	77.88441	4.22242	0.1904743	0.28169326	2.3047213	20	1 16.5	21.1
319222 2005 YZ ₂₇₂	15.8	X	333.70105	207.13254	146.35744	10.09983	0.1253631	0.17864061	3.1223572	20	9 5.2	19.5
319223 2005 YW ₂₇₄	15.5	X	243.04896	136.87406	329.01030	9.19211	0.0498974	0.18037894	3.1022645	20	9 24.5	20.0
319224 2005 YV ₂₈₁	16.5	X	252.13890	23.46439	94.82654	4.47533	0.0759415	0.19074826	2.9887918	20	10 24.5	20.6
319225 2005 YX ₂₉₀	16.0	X	174.13850	106.36137	149.56384	6.52584	0.0448417	0.19536195	2.9415488	20	—	—
319226 2006 AH ₈	15.1	X	199.29198	102.25989	50.73735	26.57273	0.3691117	0.17587744	3.1549753	20	9 29.7	21.3
319227 Erichbär	15.6	X	231.05293	110.37148	18.97484	10.35986	0.0902021	0.18305148	3.0719954	20	10 8.1	19.9
319228 2006 AS ₈	17.7	X	261.11523	319.50418	231.64112	1.78673	0.1421325	0.26662986	2.3907282	20	—	—
319229 2006 AD ₁₀	16.1	X	167.04425	175.71704	238.29641	7.38760	0.1258493	0.22858509	2.6491351	20	4 27.1	20.2
319230 2006 AH ₁₅	17.3	X	312.79658	234.19807	136.71330	2.46545	0.1352033	0.24641480	2.5197543	20	9 2.1	19.7
319231 2006 AN ₁₇	16.6	X	184.50735	304.06192	213.71060	1.07266	0.0429668	0.18016555	3.1047137	20	9 23.7	21.1
319232 2006 AO ₂₃	16.3	X	200.00842	137.19824	309.52346	11.03056	0.0872197	0.16846018	3.2469172	20	7 12.9	21.2
319233 2006 AV ₂₃	15.1	X	148.03185	63.06653	144.70405	26.40581	0.1281772	0.17472138	3.1688768	20	10 21.6	20.6
319234 2006 AT ₂₄	16.5	X	228.14810	138.15734	301.91724	3.68343	0.1250222	0.17631503	3.1497530	20	7 30.5	21.1
319235 2006 AE ₂₇	17.0	X	0.75467	325.38049	125.20450	7.35782	0.0956897	0.26866484	2.3786406	20	—	—
319236 2006 AM ₃₀	15.3	X	193.86535	351.00144	141.77648	16.20634	0.2156248	0.17431420	3.1738096	20	8 25.9	20.7
319237 2006 AO ₃₈	16.9	X	342.76770	223.51531	98.54844	5.48117	0.2220712	0.24585690	2.5235031	20	8 21.1	18.7
319238 2006 AV ₃₉	16.6	X	125.95420	291.90577	300.67164	3.21956	0.0979926	0.18160858	3.0882454	20	10 21.3	21.4
319239 2006 AY ₄₀	17.1	X	312.94450	253.94276	107.71058	5.79256	0.1854574	0.24664009	2.5182196	20	8 14.0	19.3
319240 2006 AE ₄₁	16.5	X	211.87249	86.89071	70.69073	2.61085	0.0775126	0.18337068	3.0684293	20	10 22.7	21.0
319241 2006 AE ₄₂	15.5	X	289.20206	110.76173	291.66618	9.06389	0.0714859	0.17832760	3.1260098	20	8 31.2	19.8
319242 2006 AG ₄₅	16.3	X	216.16387	233.36292	136.39653	5.43834	0.2151867	0.23297758	2.6157323	20	4 19.1	20.8
319243 2006 AL ₄₇	15.2	X	117.57404	145.55469	83.78414	9.95940	0.0423516	0.18087422	3.0965988	20	10 11.2	19.8
319244 2006 AY ₄₈	16.1	X	170.14651	59.10293	121.99670	2.81569	0.1011933	0.18127948	3.0919820	20	10 6.3	20.9
319245 2006 AK ₅₀	16.2	X	178.77726	18.69425	101.92568	10.62809	0.0390495	0.17246647	3.1964378	20	8 2.8	20.9
319246 2006 AB ₅₁	16.7	X	80.15025	146.38905	226.15426	1.16413	0.0789395	0.20347815	2.8627991	20	—	—
319247 2006 AE ₅₁	17.7	X	214.24157	51.92531	176.63515	1.93133	0.0985537	0.26560433	2.3968781	20	—	—
319248 2006 AY ₆₃	17.1	X	253.09202	250.26952	115.49788	2.38962	0.1266040	0.23625090	2.5915151	20	5 26.1	20.7
319249 2006 AL ₆₆	15.9	X	15.08586	209.36935	119.04930	4.06265	0.2046021	0.18301255	3.0724309	20	10 23.9	19.5
319250 2006 AZ ₆₇	16.1	X	115.77670	108.84404	123.41946	2.31137	0.1560418	0.17574671	3.1565396	20	10 16.4	21.2
319251 2006 AM ₇₁	15.6	X	328.07332	240.33919	135.55317	5.81297	0.1273270	0.18076103	3.0978913	20	9 26.9	19.3
319252 2006 AD ₈₁	15.3	X	178.61708	205.24226	323.78562	12.46974	0.0969252	0.17830345	3.1262921	20	9 23.6	20.3
319253 2006 AM ₈₃	15.0	X	177.07205	152.92597	359.51244	27.84725	0.1625910	0.17479796	3.1679511	20	9 10.9	20.3
319254 2006 AS ₈₃	15.7	X	242.57677	16.62310	73.43466	11.50289	0.1201167	0.17961808	3.1110191	20	9 3.7	20.4
319255 2006 AT ₈₃	15.3	X	234.52859	155.88478	315.77294	10.21527	0.0390286	0.18065342	3.0991214	20	9 21.6	19.8
319256 2006 AM ₈₄	15.4	X	226.11034	128.56179	341.75343	18.96347	0.1540750	0.17764042	3.1340664	20	9 1.6	20.1
319257 2006 AE ₈₇	16.5	X	213.09638	285.46999	196.27520	2.22245	0.0180932	0.17903150	3.1178108	20	9 14.6	20.9
319258 2006 AQ ₉₂	17.0	X	87.37924	148.92605	109.52826	1.62912	0.1510500	0.24479251	2.5308746	20	10 29.5	20.6
319259 2006 AY ₁₀₀	15.6	X	6.39465	26.33551	321.21516	9.96881	0.0615750	0.18055270	3.1002739	20	10 10.9	19.8
319260 2006 AB ₁₀₂	17.3	X	257.14185	280.27059	127.45510	3.27027	0.1128093	0.24058699	2.5602829	20	7 29.2	20.8
319261 2006 BQ ₄	15.6	X	298.94958	257.92226	123.67544	11.27839	0.0839014	0.17721350	3.1390978	20	8 21.9	19.7
319262 2006 BX ₅	15.5	X	221.11038	62.33142	21.10207	21.60584	0.2674569	0.17362442	3.1822101	20	7 22.4	21.3
319263 2006 BY ₁₀	16.0	X	166.75245	40.97948	140.39614	2.24770	0.1252278	0.17709428	3.1405065	20	10 1.9	20.9
319264 2006 BE ₁₂	16.1	X	28.42515	193.85297	134.89920	3.36804	0.0775966	0.18331529	3.0690474	20	10 26.6	20.2
319265 2006 BS ₂₁	15.6	X	322.57863	245.01214	128.08865	11.65438	0.1278195	0.17934317	3.1141976	20	9 14.8	19.4
319266 2006 BL ₂₂	16.4	X	168.22090	218.82277	7.18208	0.18018	0.1490789	0.18392791	3.0622287	20	11 23.7	21.4
319267 2006 BG ₂₃	15.4	X	328.25849	92.06518	308.89454	10.18240	0.0410356	0.18542523	3.0457214	20	10 25.7	19.7
319268 2006 BH ₂₇	15.8	X	222.91428	32.01695	109.35886	2.57154	0.1240670	0.18166928	3.0875574	20	10 10.3	20.3
319269 2006 BU ₄₁	16.5	X	10.36076	196.39402	153.25806	3.06986	0.0901832	0.24582017	2.5238161	20	11 12.3	19.4
319270 2006 BA ₄₂	16.1	X	94.48678	284.68273	312.82388	4.45137	0.1177420	0.17524569	3.1625530	20	9 25.3	20.9
319271 2006 BT ₄₂	15.9	X	231.78690	35.83295	85.08160	3.95236	0.0412954	0.18051216	3.1007380	20	10 6.0	20.3
319272 2006 BR ₄₄	17.5	X	104.52638	317.60100	145.35450	6.29176	0.1858004	0.28822601	2.2697635	20	5 1.2	20.5
319273 2006 BP ₄₅	15.4	X	144.10982	58.27130	154.172							

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319281 2006 BQ ₇₃	16.8	X	127.90558	230.71352	61.37196	3.25640	0.1741095	0.25862960	2.4397794	20	—	—
319282 2006 BY ₇₃	13.4	X	15.94171	82.06368	115.06849	9.77771	0.0257594	0.08266732	5.2189141	20	4 24.3	20.3
319283 2006 BO ₇₆	15.7	X	112.73608	160.79959	100.17392	4.90980	0.1059392	0.18132854	3.0914242	20	11 13.9	20.5
319284 2006 BW ₇₇	16.7	X	177.28427	138.86329	120.82636	7.74384	0.1369828	0.26190313	2.4194070	20	—	—
319285 2006 BS ₇₈	16.1	X	265.63178	301.08604	150.96366	4.02223	0.0853993	0.18318498	3.0705026	20	10 5.6	20.3
319286 2006 BU ₈₂	16.4	X	327.75625	284.53635	100.68594	10.26815	0.0725426	0.19099358	2.9862319	20	10 15.8	20.3
319287 2006 BN ₈₅	16.5	X	104.91660	329.05333	330.06644	5.24619	0.1893349	0.25647220	2.4534423	20	—	—
319288 2006 BD ₈₇	16.2	X	232.90224	104.74930	329.14771	9.50108	0.0554379	0.17099548	3.2147433	20	8 6.0	20.9
319289 2006 BV ₈₇	16.5	X	178.07649	81.22567	67.52754	1.93399	0.1137404	0.17379194	3.1801648	20	9 3.7	21.5
319290 2006 BM ₈₈	15.8	X	180.12085	25.21923	119.93902	6.77078	0.1162465	0.17385745	3.1793659	20	9 2.1	20.8
319291 2006 BM ₈₉	16.5	X	206.75016	86.89415	15.67978	1.59618	0.0913221	0.17196855	3.2026049	20	8 8.0	21.4
319292 2006 BX ₉₀	15.7	X	178.10896	26.18565	153.20064	10.98200	0.0344549	0.17778639	3.1323506	20	10 16.6	20.4
319293 2006 BG ₉₁	15.9	X	133.16239	51.05850	166.08708	4.79189	0.1444753	0.17346800	3.1841228	20	10 13.6	21.0
319294 2006 BN ₉₂	15.5	X	271.83220	93.91510	350.67709	9.22721	0.0983794	0.18166882	3.0875627	20	9 29.3	19.6
319295 2006 BG ₉₆	15.7	X	168.11006	135.84249	329.07904	6.97323	0.1548644	0.16174554	3.3361674	20	7 2.3	21.1
319296 2006 BC ₁₀₃	16.1	X	155.94662	60.46776	148.93353	9.71450	0.0121423	0.18014606	3.1049375	20	10 27.5	20.7
319297 2006 BX ₁₀₃	17.9	X	69.90447	152.25045	316.19386	1.45205	0.1269371	0.28365393	2.2940886	20	3 12.2	19.8
319298 2006 BK ₁₀₉	15.7	X	99.54812	301.12537	333.09044	8.95734	0.0629284	0.18202099	3.0835789	20	11 7.8	20.4
319299 2006 BE ₁₁₀	15.3	X	342.38962	203.28961	124.93525	11.05852	0.0491652	0.17064377	3.2191590	20	8 17.1	19.6
319300 2006 BK ₁₁₁	15.9	X	270.99642	72.68606	339.68422	6.55829	0.1129758	0.17539583	3.1607480	20	8 17.8	20.3
319301 2006 BD ₁₁₃	16.0	X	314.13025	33.58153	337.49316	3.28044	0.0879774	0.17503418	3.1651003	20	8 28.5	20.1
319302 2006 BV ₁₁₄	15.3	X	195.99386	249.93168	153.70710	12.95303	0.0731183	0.15811242	3.3870795	20	5 19.5	20.6
319303 2006 BY ₁₁₇	16.0	X	192.79207	167.22715	341.82009	3.88067	0.0563241	0.17835094	3.1257371	20	9 20.9	20.5
319304 2006 BA ₁₂₀	16.3	X	233.16867	336.02799	184.75846	3.96343	0.0740558	0.18433315	3.0577390	20	11 20.4	20.6
319305 2006 BB ₁₂₄	15.5	X	242.50260	153.66136	339.93560	10.64287	0.0591624	0.18017075	3.1046539	20	10 19.1	20.0
319306 2006 BC ₁₂₇	16.3	X	125.23819	96.51634	161.10762	5.54201	0.0729303	0.17996754	3.1069906	20	11 20.5	21.0
319307 2006 BA ₁₃₄	16.0	X	220.44950	137.64855	352.04376	4.27887	0.1191857	0.17951294	3.1122338	20	9 22.1	20.6
319308 2006 BG ₁₄₂	17.1	X	31.91397	238.21648	4.40575	1.32298	0.0572861	0.22834386	2.6510006	20	7 10.7	20.2
319309 2006 BR ₁₄₃	15.8	X	67.13733	335.87631	177.22024	5.01362	0.1292104	0.18073213	3.0982215	20	11 30.1	20.3
319310 2006 BT ₁₄₃	16.0	X	118.89182	242.97056	258.49921	9.06100	0.0603463	0.23039219	2.6352645	20	6 21.9	19.5
319311 2006 BW ₁₄₆	16.2	X	113.40743	261.62620	351.06124	4.83626	0.0945927	0.18018864	3.1044484	20	10 31.9	20.9
319312 2006 BD ₁₄₉	16.4	X	246.32264	203.15334	229.89821	7.11543	0.1733365	0.24436600	2.5338186	20	8 7.3	20.2
319313 2006 BD ₁₅₂	17.5	X	235.53967	147.52093	58.40397	2.30166	0.1267488	0.26136027	2.4227559	20	—	—
319314 2006 BJ ₁₅₆	16.8	X	236.55129	281.82807	111.21293	2.54519	0.1566794	0.23135508	2.6279475	20	6 8.6	20.8
319315 2006 BF ₁₅₇	16.2	X	146.34076	241.42659	351.03531	12.22477	0.1151773	0.17750600	3.1356483	20	11 6.7	21.4
319316 2006 BE ₁₅₉	15.6	X	223.95432	339.27721	151.72632	12.37826	0.0725100	0.17834363	3.1258225	20	10 6.2	20.3
319317 2006 BV ₁₆₃	15.4	X	92.01468	286.01761	321.48757	8.42569	0.0578782	0.17506700	3.1647046	20	9 26.3	20.1
319318 2006 BF ₁₆₄	15.8	X	197.62796	184.03244	321.19652	4.30421	0.0973157	0.17726596	3.1384784	20	9 17.8	20.7
319319 2006 BH ₁₆₆	15.8	X	64.12418	358.13959	328.60363	9.27058	0.0092963	0.18410782	3.0602334	20	11 25.1	20.3
319320 2006 BG ₁₆₇	15.6	X	86.14608	115.40103	144.47569	11.32345	0.0535045	0.17480669	3.1678457	20	10 11.2	20.3
319321 2006 BX ₁₆₇	15.6	X	202.00340	6.83294	138.57616	6.36548	0.0799305	0.17662353	3.1460842	20	9 27.4	20.4
319322 2006 BO ₁₇₂	15.6	X	286.37361	244.95960	135.30184	17.92902	0.2983027	0.17700472	3.1415658	20	6 29.6	20.2
319323 2006 BG ₁₇₄	16.7	X	239.19749	48.36346	1.69765	4.85010	0.1436391	0.23856746	2.5747115	20	7 6.2	20.5
319324 2006 BV ₁₇₄	15.6	X	213.94256	100.59276	336.16569	14.38557	0.1301737	0.16895577	3.2405647	20	7 14.3	20.8
319325 2006 BO ₁₇₇	15.8	X	340.87549	251.50589	148.97101	9.58079	0.1256341	0.18781772	3.0198011	20	11 22.6	19.5
319326 2006 BD ₁₇₈	17.3	X	127.55556	211.89028	88.45205	2.47956	0.1894417	0.26181227	2.4199666	20	—	—
319327 2006 BV ₁₈₀	15.7	X	353.90119	29.48709	331.11649	9.52071	0.0369959	0.17883911	3.1200464	20	10 9.0	20.0
319328 2006 BX ₁₈₃	15.8	X	146.69489	202.93740	324.59470	8.48140	0.0361739	0.17404024	3.1771394	20	8 22.6	20.4
319329 2006 BE ₁₉₃	16.6	X	127.18824	248.94260	212.54064	1.45742	0.0337274	0.22317181	2.6918023	20	5 6.9	20.3
319330 2006 BE ₂₀₄	16.6	X	238.05064	64.51569	348.63845	3.45759	0.1468123	0.16862804	3.2447620	20	7 5.6	21.6
319331 2006 BA ₂₀₆	17.2	X	13.11887	209.81854	147.69500	6.20426	0.2046949	0.25551784	2.4595476	20	12 16.9	20.2
319332 2006 BD ₂₁₀	15.3	X	55.40084	305.59669	350.88985	8.50870	0.0714911	0.17523848	3.1626398	20	10 15.1	19.8
319333 2006 BR ₂₂₄	15.6	X	105.43770	101.42128	151.07838	16.81871	0.1159453	0.17616431	3.1515493	20	10 31.3	20.7
319334 2006 BV ₂₃₉	15.7	X	74.44677	139.40577	125.78323	10.51406	0.0694049	0.17460476	3.1702879	20	10 6.6	20.4
319335 2006 BA ₂₄₃	15.3	X	46.41719	339.15287	333.72824	16.55147	0.1858363	0.17793164	3.1306457	20	11 5.3	20.0
319336 2006 BG ₂₄₇	16.1	X	65.93083	320.24491	333.01919	8.95265	0.0817835	0.17724886	3.1386804	20	10 24.5	20.7
319337 2006 BO ₂₅₇	15.6	X	253.20887	92.86199	347.69340	9.46523	0.0670809	0.17418215	3.1754135	20	9 5.9	20.1
319338 2006 BQ ₂₅₇	17.3	X	296.60774	56.21815	298.52273	3.68361	0.0841405	0.23421153	2.6065368	20	7 16.5	20.4
319339 2006 BX ₂₆₅	15.5	X	124.83386	290.99750	333.98201	7.93858	0.1133161	0.17978944	3.1090420	20	11 27.3	20.5
319340 2006 BG ₂₆₆	15.4	X	132.10449	60.17867	192.67280	11.23679	0.0842803	0.17051290	3.2208059	20	11 20.7	20.4
319341 2006 BB ₂₆₈	15.2	X	154.95623	69.91146	132.02212	26.17067	0.1791208	0.17467862	3.1693939	20	10 23.2	20.9
319342 2006 BY ₂₇₃	13.7	X	148.24774	80.47432	350.00202	2.79324	0.0795928	0.08209776	5.2430242	20	4 30.4	21.0
319343 2006 BD ₂₈₁	16.9	X	233.62047	260.91936	117.65428	3.19869	0.1580303	0.23060031	2.6336787	20	5 18.4	21.0
319344 2006 BQ ₂₈₃	15.3	X	335.65153	240.32964	140.40156	10.58684	0.0504611	0.18110881	3.0939241	20	10 18.4	19.5
319345 2006 CY ₈	15.7	X	232.00261	260.72938	163.02849	11.65528	0.2210186	0.16949260	3.2337185	20	7 4.6	21.1
319346 2006 CC ₁₃	16.5	X	174.70254	150.06446	141.45398	7.02012	0.0321499	0.19960978	2.8996673	20	—	—
319347 2006 CD ₁₇	15.7	X	34.34312	204.82639	143.49744	11.48780	0.1359754	0.18737210	3.0245871	20	12 7.2	20.0
319348 2006 CS ₂₁	15.6	X	179.33347	153.31707	14.16298	5.45594	0.1419650	0.17506073	3.1647802	20	9 26.2	20.7
319349 2006 CV ₂₃	16.1	X	128.74134	83.55541	127.54144	2.63608	0.1254372	0.17499850	3.1655305	20	10 1.7	21.0
319350 2006 CO ₂₄	15.5	X	105.50687	285.71225	318.74408	12.26287	0.1886207	0.17523101	3.1627296	20	10 16.7	20.9
319351 2006 CO ₃₆	17.9	X	343.32345	99.34463	13.53182	1.90501	0.1303889	0.26802908	2.3824005	20	—	—
319352 2006 CN ₃₉	15.6	X	148.87276	303.01649	241.85480	4.00783	0.1197804	0.17124665	3.2115991	20	9 16.0	20.8
319353 2006 CE ₄₉	15.6	X	21.48724	2.97532	319.68453	11.89461						

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319361 2006 DB ₁₉	16.5	X	11.79195	206.30448	102.45020	3.38677	0.2028089	0.23715481	2.5849259	20	10 3.4	19.0
319362 2006 DD ₁₉	17.7	X	25.31034	43.63896	25.16532	2.61021	0.1613629	0.26838324	2.3803041	20	—	—
319363 2006 DV ₂₄	17.7	X	32.34932	325.17637	117.50862	2.00842	0.1618651	0.27100931	2.3649025	20	—	—
319364 2006 DU ₂₉	16.5	X	331.51054	277.87626	349.86755	4.28400	0.0963943	0.21822360	2.7323411	20	5 6.2	19.8
319365 2006 DR ₄₄	16.3	X	165.22665	170.36895	18.85548	0.31067	0.1229729	0.17782339	3.1319162	20	10 9.1	21.1
319366 2006 DU ₅₄	17.0	X	87.17798	137.52080	158.10887	2.25163	0.0992968	0.24602305	2.5224284	20	12 9.8	20.6
319367 2006 DL ₆₄	15.6	X	234.98016	105.11337	15.04226	10.95999	0.1101123	0.17996973	3.1069653	20	9 29.1	20.0
319368 2006 DQ ₆₇	17.2	X	322.02004	249.14338	252.42631	6.85410	0.1471129	0.26702094	2.3883932	20	—	—
319369 2006 DA ₇₀	16.0	X	64.69084	289.54469	110.81167	2.79445	0.1128778	0.19466449	2.9485707	20	—	—
319370 2006 DL ₇₁	15.9	X	165.07369	199.40427	354.57621	8.78942	0.0442535	0.17502720	3.1651845	20	10 13.2	20.6
319371 2006 DG ₇₂	15.6	X	169.47527	147.18917	355.98992	14.10849	0.1331245	0.17025302	3.2240827	20	8 22.3	20.8
319372 2006 DG ₇₄	16.0	X	218.24116	312.33031	161.13722	9.29785	0.1533211	0.17465179	3.1697184	20	8 27.3	21.0
319373 2006 DT ₈₂	17.4	X	37.27116	54.84179	203.27622	0.77657	0.1511372	0.22816366	2.6523962	20	8 23.2	20.4
319374 2006 DX ₈₄	17.0	X	234.42873	160.47412	231.62065	1.99025	0.1301724	0.22832219	2.6511684	20	6 7.6	21.0
319375 2006 DW ₈₆	18.0	X	318.29153	119.49438	56.34476	1.43459	0.1195667	0.26930522	2.3748683	20	—	—
319376 2006 DV ₁₁₅	15.7	X	260.46314	64.09942	15.26175	11.83433	0.1249671	0.17156016	3.2076853	20	9 8.4	20.3
319377 2006 DP ₁₁₉	14.7	X	80.59505	156.47081	116.31895	18.02750	0.2088158	0.17346927	3.1841073	20	11 10.3	20.0
319378 2006 DS ₁₃₈	13.7	X	315.07411	148.66076	129.78282	7.23982	0.0206305	0.08072746	5.3021887	20	5 12.9	20.6
319379 2006 DC ₁₄₆	15.8	X	335.04904	16.30431	351.91563	10.71565	0.0825016	0.17245600	3.1965673	20	9 24.3	19.9
319380 2006 DR ₁₄₆	15.9	X	304.09918	206.08561	179.20978	17.38133	0.0812478	0.16912671	3.2383808	20	8 29.8	20.2
319381 2006 DL ₁₄₇	16.3	X	135.01329	238.64319	5.61196	2.20890	0.0833430	0.17688977	3.1429266	20	11 12.7	21.1
319382 2006 DC ₁₅₂	17.6	X	276.44093	73.86726	191.89653	1.82336	0.1325546	0.27488815	2.3426030	20	2 7.3	20.9
319383 2006 DS ₁₇₄	16.9	X	75.45796	61.29165	158.63457	9.61207	0.1022344	0.22962050	2.6411655	20	8 16.9	20.5
319384 2006 DH ₁₇₅	15.3	X	190.43045	164.05103	2.28727	27.86999	0.1245716	0.17772348	3.1330898	20	10 1.9	20.3
319385 2006 DJ ₁₇₈	15.8	X	219.95351	100.40583	358.10981	11.53405	0.0632674	0.16850114	3.2463910	20	8 22.6	20.6
319386 2006 DH ₂₀₂	15.3	X	145.99624	172.61064	357.68796	10.01638	0.0411693	0.16989277	3.2286387	20	8 27.9	20.1
319387 2006 EO ₁₉	15.7	X	156.79818	282.89795	7.97530	11.91943	0.1344887	0.18564440	3.0433237	20	—	—
319388 2006 EP ₂₆	16.3	X	209.02859	135.63078	342.42830	11.33023	0.0620663	0.17102612	3.2143593	20	8 31.9	20.9
319389 2006 EK ₃₃	16.4	X	198.85173	52.49844	314.59263	3.34806	0.0897247	0.21478947	2.7613877	20	3 31.2	20.7
319390 2006 EU ₃₇	15.1	X	180.09360	37.01941	147.75245	23.94213	0.1042015	0.17968778	3.1102146	20	10 25.3	20.3
319391 2006 EH ₄₆	15.8	X	85.16211	311.88409	321.72553	9.00564	0.0509127	0.17829418	3.1264004	20	10 18.9	20.4
319392 2006 EL ₆₈	16.7	X	300.22049	183.20214	165.68611	4.34809	0.2215089	0.23257646	2.6187389	20	6 21.4	19.6
319393 2006 EV ₆₈	16.3	X	123.29541	265.27373	332.90855	2.67178	0.1069367	0.17375589	3.1806047	20	10 25.1	21.3
319394 2006 ET ₆₉	15.2	X	157.85850	233.62011	7.61806	25.49022	0.0417033	0.17842483	3.1248741	20	11 19.3	21.6
319395 2006 FP ₇	16.7	X	318.92212	38.63040	165.16539	2.14424	0.0074303	0.20084773	2.8877401	20	2 8.7	20.7
319396 2006 FG ₁₄	17.9	X	171.85563	138.53541	43.61570	2.40184	0.0517199	0.30932866	2.1653226	20	10 31.2	20.4
319397 2006 GU ₁	17.4	X	90.83167	254.00474	185.04319	5.30497	0.1317383	0.28221724	2.3018677	20	2 26.1	19.9
319398 2006 GJ ₈	17.3	X	104.76130	71.38640	142.60707	4.83751	0.1016797	0.23222020	2.6214167	20	9 15.6	21.1
319399 2006 GF ₁₃	16.6	X	80.92043	227.40004	75.17878	4.76917	0.1092936	0.24190250	2.5509923	20	12 11.4	20.2
319400 2006 GG ₁₃	16.1	X	207.88993	333.30066	88.57105	3.97867	0.1010379	0.22336865	2.6902206	20	6 19.7	20.2
319401 2006 GG ₂₂	16.2	X	337.72096	134.11520	157.68626	5.37619	0.0891725	0.21897427	2.7260929	20	6 22.3	19.4
319402 2006 GZ ₂₃	16.3	X	99.18450	43.90055	150.62626	2.29805	0.1321676	0.22632013	2.6667804	20	8 16.3	20.2
319403 2006 GZ ₄₁	16.5	X	189.87373	93.34855	80.09051	5.74605	0.1158269	0.24133032	2.5550228	20	10 25.3	20.3
319404 2006 GT ₄₂	15.0	X	202.40638	305.50872	203.80193	23.16334	0.2118894	0.17426521	3.1744044	20	9 17.8	20.6
319405 2006 GG ₄₄	17.3	X	341.69536	182.14269	76.10533	3.71559	0.0377013	0.28368659	2.2939125	20	5 14.6	19.7
319406 2006 GG ₄₉	15.6	X	174.91245	81.83724	154.59145	25.95421	0.2204336	0.18006584	3.1058957	20	12 11.5	21.3
319407 2006 HJ ₈	15.5	X	319.14765	180.90717	192.36752	6.82257	0.0393844	0.16754200	3.2587690	20	9 8.8	19.8
319408 2006 HT ₉	16.2	X	333.74834	302.78465	61.73299	12.94706	0.2079249	0.23270412	2.6177811	20	10 9.2	18.6
319409 2006 HP ₁₈	16.8	X	64.93905	119.58666	104.76860	6.21503	0.2283479	0.22362339	2.6881773	20	8 30.5	20.5
319410 2006 HX ₁₉	15.6	X	152.64482	26.73926	202.17708	9.87729	0.0524427	0.17405495	3.1769603	20	11 13.5	20.4
319411 2006 HJ ₂₅	17.6	X	280.05418	309.09915	164.14937	3.60899	0.0645944	0.31338645	2.1465907	20	12 29.4	19.5
319412 2006 HJ ₂₇	18.0	X	138.48485	156.50202	26.59840	2.26793	0.0555543	0.29923228	2.2137594	20	9 19.5	20.6
319413 2006 HK ₃₄	16.5	X	16.35738	11.06621	41.96432	10.95923	0.1495858	0.25199028	2.4824482	20	—	—
319414 2006 HV ₃₅	16.9	X	73.35922	229.93961	89.98312	1.53865	0.0945111	0.24703969	2.5155033	20	12 24.5	20.5
319415 2006 HC ₃₇	15.5	X	64.11362	94.97232	211.36576	8.71541	0.2784071	0.16816435	3.2507239	20	12 3.7	20.6
319416 2006 HG ₃₈	17.8	X	100.57879	79.49207	103.31939	3.71352	0.1019983	0.29428206	2.2385159	20	8 5.0	20.6
319417 2006 HJ ₄₉	15.9	X	172.35320	253.39421	42.57926	7.74012	0.1424211	0.18863020	3.0111235	20	—	—
319418 2006 HY ₆₃	16.1	X	333.60793	208.75940	212.99446	12.03423	0.1815865	0.24458933	2.5322760	20	12 28.8	18.7
319419 2006 HC ₆₈	18.2	X	87.32258	236.70595	14.58503	2.34793	0.1224654	0.30093772	2.2053878	20	10 25.4	21.2
319420 2006 HQ ₇₁	16.2	X	121.97899	191.80213	121.96637	5.39876	0.1458874	0.17681667	3.1437927	20	—	—
319421 2006 HR ₇₇	17.7	X	169.07629	128.99655	166.60622	0.93101	0.2348781	0.32506287	2.0948735	20	—	—
319422 2006 HW ₈₀	17.1	X	50.23321	262.92328	36.84327	7.20302	0.0517198	0.23330111	2.6133135	20	10 23.5	20.5
319423 2006 HN ₈₆	16.2	X	202.86611	4.06267	134.43150	7.47558	0.2629304	0.23937056	2.5689495	20	9 12.5	20.5
319424 2006 HN ₈₈	16.6	X	209.98959	329.96224	19.83054	2.06587	0.0798765	0.20326675	2.8647836	20	3 24.4	20.8
319425 2006 HM ₉₈	18.0	X	239.55315	28.94545	38.71049	5.76753	0.0973845	0.29682299	2.2257225	20	8 12.9	20.7
319426 2006 HO ₉₈	16.8	X	306.22445	346.20120	272.77962	0.99375	0.0373514	0.20580738	2.8411582	20	3 28.1	20.6
319427 2006 HC ₁₀₂	14.8	X	199.00372	199.67156	121.34941	4.04161	0.0398307	0.12440472	3.1941551	20	2 16.7	20.6
319428 2006 HH ₁₀₃	15.7	X	66.66647	253.66228	124.22168	17.00222	0.2333588	0.17792195	3.1307594	20	—	—
319429 2006 HM ₁₂₀	17.3	X	150.39568	123.43986	53.86715	5.42145	0.0783280	0.23050279	2.6344215	20	9 18.7	21.2
319430 2006 HH ₁₄₀	15.2	X	263.11795	197.58821	59.03109	4.60793	0.0540902	0.12469614	3.9679609	20	2 11.5	20.9
319431 2006 JG ₇	15.0	X	139.24213	61.41761	213.80952	13.17299	0.1560313	0.17387995	3.1790916	20	12 22.4	20.4
319432 2006 JH ₁₁	17.9	X	246.26467	57.62987	26.52132	5.96655	0.1208252	0.30149335	2.2026774	20	9 12.3	20.3
319433 2006 JP ₁₈	16.9	X	276.51312	347.70044	106.64522	4.14020	0.1819687	0.24052327	2.5607351	20	10 22.2	19.7
3												

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319441 2006 <i>KW</i> ₅₂	18.2	X	167.50878	298.41347	200.66509	5.95790	0.0410608	0.29471039	2.2363464	20	8 21.2	21.0
319442 2006 <i>KA</i> ₅₃	16.3	X	313.80737	213.43631	101.75963	5.72854	0.1115494	0.21406708	2.7675966	20	6 13.1	19.5
319443 2006 <i>KW</i> ₅₉	15.8	X	79.58590	133.10727	203.11815	11.12094	0.1177347	0.17156774	3.2075908	20	—	—
319444 2006 <i>KL</i> ₆₁	18.2	X	122.58990	78.52632	186.35475	5.52104	0.1045354	0.30839207	2.1697044	20	12 21.1	21.2
319445 2006 <i>KU</i> ₆₁	16.3	X	328.12383	245.52636	113.40795	7.19359	0.0864793	0.22554805	2.6728628	20	9 14.6	19.4
319446 2006 <i>KV</i> ₆₃	16.2	X	332.92103	40.13868	216.16470	8.47688	0.1083055	0.21005566	2.8027205	20	4 23.1	19.4
319447 2006 <i>KJ</i> ₆₅	15.9	X	193.35336	189.72919	134.67647	13.44444	0.0941790	0.19618227	2.9333432	20	2 6.6	20.4
319448 2006 <i>KR</i> ₆₆	17.6	X	126.63039	334.35951	127.34475	3.56752	0.1450290	0.30064004	2.2068833	20	10 1.6	20.8
319449 2006 <i>KN</i> ₆₉	16.5	X	124.97874	82.97469	225.77333	5.26580	0.0800257	0.23061559	2.6335623	20	9 30.7	20.3
319450 2006 <i>KO</i> ₆₉	16.6	X	293.59886	221.68148	180.72125	7.05928	0.0845239	0.22961853	2.6411806	20	9 16.3	19.8
319451 2006 <i>KC</i> ₇₅	16.0	X	252.18298	220.86108	144.83838	14.56463	0.2044536	0.21459566	2.7630501	20	5 19.9	20.6
319452 2006 <i>KH</i> ₇₈	17.0	X	22.19655	66.63685	173.02177	5.31493	0.0414929	0.21482543	2.7610796	20	6 19.5	20.7
319453 2006 <i>KN</i> ₈₁	17.5	X	110.72939	131.88666	91.07792	7.13429	0.1488108	0.29971537	2.2113800	20	10 18.4	20.8
319454 2006 <i>KN</i> ₁₁₆	16.6	X	105.59115	286.46193	162.00577	2.35491	0.0323044	0.20311917	2.8661711	20	3 24.9	20.4
319455 2006 <i>KB</i> ₁₄₂	16.5	X	291.90495	287.87045	48.52458	3.06346	0.0839255	0.21384321	2.7695279	20	6 12.5	20.0
319456 2006 <i>KB</i> ₁₄₅	16.8	X	173.98057	182.94182	144.14538	2.82273	0.1953477	0.25622629	2.4550118	20	1 19.9	20.8
319457 2006 <i>LM</i> ₃	15.3	X	161.89455	46.69931	205.25726	13.07815	0.0480769	0.17279103	3.1924340	20	12 18.6	20.2
319458 2006 <i>LY</i> ₄	17.8	X	102.45880	109.26963	181.56774	5.03333	0.2804435	0.30301129	2.1953150	20	—	—
319459 2006 <i>MA</i> ₆	17.3	X	306.15678	62.98025	249.09296	1.25596	0.2023878	0.27588314	2.3369672	20	5 10.7	19.9
319460 2006 <i>NJ</i>	17.8	X	356.07927	302.33593	36.30413	3.79528	0.1942962	0.28772123	2.7274174	20	10 28.3	19.3
319461 2006 <i>OP</i> ₂	17.3	X	31.74196	312.38961	320.71363	9.47049	0.2678534	0.28671624	2.2777245	20	9 30.2	19.9
319462 2006 <i>OB</i> ₄	17.2	X	294.00985	169.64575	152.79900	6.52528	0.2175155	0.27001693	2.3706934	20	5 7.1	20.1
319463 2006 <i>OW</i> ₆	15.5	X	61.28444	180.46103	255.47635	9.50529	0.0759536	0.17702118	3.1413710	20	1 18.5	19.7
319464 2006 <i>OU</i> ₉	15.9	X	225.48499	198.17167	42.16601	1.67103	0.1178808	0.17446025	3.1720381	20	—	—
319465 2006 <i>OR</i> ₁₁	17.2	X	302.91876	213.22539	116.82659	6.65983	0.2510777	0.27568095	2.3381096	20	5 25.6	19.6
319466 2006 <i>OA</i> ₁₂	16.2	X	33.93711	58.13170	301.83146	10.07749	0.2789601	0.22446054	2.6814892	20	—	—
319467 2006 <i>OE</i> ₁₆	17.7	X	353.51274	205.40596	88.59603	6.10890	0.2374452	0.28228296	2.3015104	20	8 10.3	18.9
319468 2006 <i>PP</i> ₁	17.6	X	45.05237	161.18206	138.03267	3.15239	0.2470222	0.29323288	2.2438523	20	11 25.4	20.7
319469 2006 <i>PY</i> ₂	15.8	X	244.44926	152.20601	149.39413	11.29725	0.1051124	0.18984673	2.9982463	20	3 1.9	20.4
319470 2006 <i>PA</i> ₇	17.5	X	119.86900	337.91518	37.41674	2.74166	0.2339865	0.24536794	2.5269162	20	2 2.4	21.0
319471 2006 <i>PA</i> ₈	17.0	X	313.77945	175.12524	100.82275	11.05356	0.1180068	0.26956255	2.3733567	20	4 20.9	19.9
319472 2006 <i>PS</i> ₁₁	17.4	X	318.13990	139.48136	133.51664	6.10303	0.2237343	0.27055912	2.3675252	20	4 2.1	19.9
319473 2006 <i>PO</i> ₁₃	17.3	X	62.59151	343.98958	271.54065	6.26670	0.0918825	0.28715569	2.2754000	20	9 20.9	20.2
319474 2006 <i>PS</i> ₁₆	16.4	X	28.22647	40.63951	324.82787	8.49104	0.0864462	0.22480276	2.6787671	20	12 21.4	20.0
319475 2006 <i>PC</i> ₁₇	17.1	X	213.88956	36.80621	343.20672	5.11566	0.2191470	0.26260457	2.4150967	20	4 24.5	21.1
319476 2006 <i>PO</i> ₂₀	17.0	X	11.33250	299.44892	130.04307	24.04362	0.0906120	0.38151872	1.8827478	20	—	—
319477 2006 <i>PC</i> ₂₇	17.0	X	113.02447	174.07674	120.64277	9.19882	0.2509564	0.30362247	2.1923680	20	—	—
319478 2006 <i>PB</i> ₃₀	17.6	X	98.30291	53.37652	326.00537	5.27076	0.2373510	0.24080634	2.5587279	20	1 18.7	20.7
319479 2006 <i>PC</i> ₃₀	17.9	X	32.04381	357.09970	294.93290	3.76983	0.2014073	0.28792325	2.2713544	20	10 19.8	20.4
319480 2006 <i>QO</i> ₁	17.3	X	316.11052	198.21732	95.85314	7.64028	0.2110762	0.27326686	2.3518597	20	5 2.9	19.7
319481 2006 <i>QO</i> ₉	17.1	X	345.91589	1.31255	296.01077	6.40309	0.2592687	0.27840011	2.3228604	20	7 19.0	18.0
319482 2006 <i>QQ</i> ₁₁	17.8	X	334.36848	296.20194	351.54839	5.97183	0.2106448	0.27648623	2.3335675	20	5 27.0	19.6
319483 2006 <i>QV</i> ₁₄	17.7	X	258.56733	62.10143	242.20666	0.65301	0.1771440	0.26333219	2.4106459	20	3 5.5	21.2
319484 2006 <i>QU</i> ₁₈	17.6	X	285.89560	140.24850	154.32035	5.57020	0.2285650	0.26667266	2.3904723	20	3 16.8	20.9
319485 2006 <i>QH</i> ₁₉	17.4	X	37.93213	169.95126	143.03286	6.83293	0.1978018	0.29102797	2.2551175	20	11 29.2	20.3
319486 2006 <i>QF</i> ₂₀	17.3	X	90.11769	300.46989	342.00946	6.42157	0.2058910	0.29757806	2.2219559	20	12 12.3	20.9
319487 2006 <i>QX</i> ₂₂	16.7	X	303.89082	346.08697	357.44703	5.81095	0.2254141	0.27336796	2.3512798	20	6 20.7	19.0
319488 2006 <i>QK</i> ₂₄	17.3	X	73.02901	144.69395	138.85048	7.82117	0.1548307	0.29300586	2.2450112	20	11 25.5	20.6
319489 2006 <i>PZ</i> ₂₈	17.1	X	231.80768	6.17332	349.47500	6.90479	0.1420155	0.26371226	2.4083291	20	4 13.9	20.7
319490 2006 <i>QL</i> ₃₀	16.3	X	40.78706	327.85816	7.60875	7.86155	0.2096046	0.22254409	2.6968616	20	12 15.6	20.2
319491 2006 <i>QF</i> ₃₇	16.9	X	298.15671	296.74189	33.73080	4.08771	0.1946772	0.27489524	2.3425627	20	5 26.1	19.4
319492 2006 <i>QT</i> ₄₄	17.3	X	267.51266	344.82071	332.61671	9.30296	0.1820361	0.26643691	2.3918822	20	3 27.5	20.9
319493 2006 <i>QH</i> ₄₅	17.5	X	101.75342	81.01321	306.41707	3.79798	0.2025969	0.24178475	2.5518205	20	1 21.9	20.7
319494 2006 <i>QC</i> ₄₉	17.0	X	40.28252	227.09665	85.19422	5.51750	0.1607407	0.29058276	2.2574743	20	11 24.9	19.8
319495 2006 <i>QW</i> ₅₉	17.5	X	72.27183	83.37366	229.42039	4.24884	0.2716855	0.29799832	2.2198664	20	—	—
319496 2006 <i>QG</i> ₆₃	17.2	X	324.00114	357.94203	318.51155	5.72078	0.1383501	0.27619718	2.3351954	20	7 3.5	19.2
319497 2006 <i>QC</i> ₇₂	17.5	X	146.53002	69.40242	351.55967	6.20908	0.1133482	0.25747807	2.4470484	20	4 11.5	21.0
319498 2006 <i>QP</i> ₇₉	17.1	X	99.37814	16.22748	277.52484	3.24456	0.1320912	0.29993166	2.2103167	20	—	—
319499 2006 <i>QP</i> ₈₁	16.7	X	316.44816	346.95113	355.63874	9.63343	0.1252098	0.27733323	2.3288138	20	8 4.8	19.0
319500 2006 <i>QY</i> ₈₁	17.6	X	2.67294	132.91844	189.61744	2.84548	0.1936023	0.28370561	2.2938100	20	10 15.2	19.5
319501 2006 <i>QA</i> ₉₂	17.9	X	24.47902	141.47695	156.13833	5.71740	0.1745782	0.28735238	2.2743616	20	10 15.9	20.3
319502 2006 <i>QS</i> ₉₂	15.1	X	174.20578	46.50639	311.51889	15.91669	0.2290790	0.18237859	3.0795468	20	2 28.3	20.6
319503 2006 <i>QZ</i> ₁₀₀	14.9	X	99.30039	253.16729	176.60797	26.22077	0.2410896	0.17440063	3.1727609	20	3 25.6	19.5
319504 2006 <i>QU</i> ₁₁₃	17.5	X	339.12576	176.02849	164.14639	7.37225	0.2154786	0.28180303	2.3041228	20	9 20.8	18.6
319505 2006 <i>QO</i> ₁₁₇	17.5	X	48.37176	316.39746	341.87572	2.84609	0.1810654	0.28985407	2.2612562	20	11 16.9	20.6
319506 2006 <i>QN</i> ₁₂₃	15.5	X	315.90665	328.11853	22.80755	25.76924	0.2430627	0.27329114	2.3517204	20	8 17.5	18.1
319507 2006 <i>QO</i> ₁₂₃	16.9	X	44.93173	114.58248	212.47682	6.17421	0.1684638	0.29234378	2.2483995	20	12 20.6	19.9
319508 2006 <i>QR</i> ₁₂₆	16.8	X	128.82553	235.01462	93.03186	4.78550	0.1295011	0.23835299	2.5762558	20	—	—
319509 2006 <i>QA</i> ₁₄₃	17.1	X	354.27082	296.38247	341.22664	6.88412	0.1084558	0.27210643	2.3585414	20	7 4.9	19.4
319510 2006 <i>QM</i> ₁₄₄	16.2	X	62.98856	185.88476	199.90415	14.79612	0.2567328	0.22962673	2.6411177	20	—	—
319511 2006 <i>QM</i> ₁₄₅	17.7	X	78.08884	263.28450	126.48959	1.09892	0.1989468	0.23680413	2.5874772	20	—	—

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319521 2006 RC ₂₂	16.0	X	107.83841	332.60514	35.97705	16.37459	0.1653859	0.23565415	2.5958882	20	1 1.2	19.6
319522 2006 RX ₂₂	17.1	X	83.07361	346.77371	10.02984	4.61586	0.3162614	0.23060475	2.6336449	20	—	—
319523 2006 RB ₃₉	17.1	X	292.28028	327.44727	10.86478	6.87350	0.1565094	0.27007227	2.3703695	20	6 3.4	19.9
319524 2006 RN ₄₂	17.1	X	263.17485	23.41522	147.99178	1.07360	0.0718096	0.22817590	2.6523014	20	—	—
319525 2006 RC ₄₄	18.1	X	50.58808	293.01731	94.55496	0.86969	0.2385851	0.22827612	2.6515250	20	—	—
319526 2006 RB ₄₅	17.6	X	112.74407	269.49803	108.28259	0.99957	0.1468143	0.23948421	2.5681366	20	1 15.8	20.8
319527 2006 RE ₄₇	15.7	X	3.36542	138.61570	31.03199	4.27151	0.0602271	0.17557251	3.1586272	20	2 25.4	19.8
319528 2006 RC ₄₉	17.4	X	94.73156	18.26083	355.33891	2.58610	0.1798753	0.23509922	2.5999715	20	—	—
319529 2006 RF ₄₉	15.6	X	351.38541	152.44193	15.11799	5.17388	0.1104605	0.17084963	3.2165726	20	2 3.0	19.6
319530 2006 RS ₄₉	17.1	X	104.23787	22.18786	359.29494	2.35028	0.1571024	0.23805606	2.5783976	20	1 11.6	20.4
319531 2006 RN ₅₂	16.6	X	346.16599	121.22532	21.32934	13.81445	0.2009456	0.23401370	2.6080057	20	—	—
319532 2006 RE ₅₇	17.0	X	338.72012	180.54427	208.58019	8.92101	0.2915867	0.21325507	2.7746176	20	11 21.8	19.0
319533 2006 RC ₅₈	17.1	X	44.49428	233.93611	179.06125	13.57204	0.2860716	0.23073703	2.6326382	20	—	—
319534 2006 RJ ₆₀	17.2	X	34.37817	226.13686	186.28265	2.90895	0.2975646	0.22788155	2.6545848	20	—	—
319535 2006 RF ₆₃	15.9	X	253.90563	337.07177	20.82580	7.89386	0.1188402	0.19560077	2.9391540	20	5 15.9	20.3
319536 2006 RK ₇₂	17.8	X	77.59514	242.06651	185.71491	2.48664	0.1841753	0.24082414	2.5586018	20	2 5.1	20.5
319537 2006 RE ₇₉	16.1	X	59.68661	317.67077	149.78744	2.26033	0.0477704	0.17542566	3.1603897	20	2 23.4	20.2
319538 2006 RG ₈₃	16.6	X	237.06863	18.68145	299.50812	0.54171	0.0677802	0.18273300	3.0755637	20	3 16.7	21.1
319539 2006 RN ₈₃	17.5	X	32.56693	92.97719	194.48620	1.77288	0.1660103	0.28233665	2.3012186	20	10 9.0	19.8
319540 2006 RP ₈₄	17.7	X	48.70171	237.66471	6.62488	3.05522	0.2096043	0.27729171	2.3290463	20	9 7.8	20.5
319541 2006 RB ₈₆	17.3	X	175.04088	64.56683	5.73257	15.07042	0.0658301	0.26241762	2.4162436	20	5 20.7	21.0
319542 2006 RA ₈₇	17.4	X	109.69649	148.51782	13.19434	4.53285	0.1313732	0.26710624	2.3878848	20	7 19.6	20.8
319543 2006 RA ₈₈	16.9	X	282.60949	3.10791	168.74762	2.74937	0.1013678	0.23233232	2.6205732	20	—	—
319544 2006 RV ₉₀	17.6	X	55.02780	17.32469	21.60084	2.10793	0.2205511	0.23056910	2.6339164	20	—	—
319545 2006 RW ₉₄	17.2	X	16.21176	265.14318	321.87008	2.06709	0.1239354	0.26260279	2.4151076	20	5 28.1	19.4
319546 2006 RE ₉₉	17.7	X	191.15715	223.15613	173.23088	2.45778	0.1801312	0.25964370	2.4334226	20	4 29.1	21.7
319547 2006 RF ₁₀₄	17.4	X	240.46420	175.27425	161.68343	7.58281	0.1199216	0.25961190	2.4336212	20	4 5.1	20.9
319548 2006 RA ₁₀₅	17.3	X	92.81979	179.74073	2.30540	7.94990	0.0937243	0.27087430	2.3656883	20	7 23.8	20.5
319549 2006 RP ₁₀₅	17.9	X	95.50283	304.49916	260.92980	0.41485	0.1287346	0.27447866	2.3449324	20	8 30.8	21.0
319550 2006 RM ₁₀₆	17.8	X	74.93486	222.51802	334.88633	1.63212	0.1474626	0.26860221	2.3790103	20	7 27.5	20.8
319551 2006 RH ₁₁₆	17.6	X	30.72131	7.06867	202.88339	1.56907	0.1146152	0.26269736	2.4145280	20	5 29.0	20.0
319552 2006 RL ₁₂₀	17.4	X	28.24839	247.70093	21.70452	6.56236	0.1817138	0.27716547	2.3297535	20	9 9.6	19.7
319553 2006 SU ₁₁	17.0	X	302.05108	328.53866	337.95500	8.75916	0.2244174	0.26854244	2.3793633	20	4 18.1	20.0
319554 2006 SP ₁₄	16.8	X	77.91348	58.39001	352.05300	21.63254	0.0832099	0.23942665	2.5685482	20	1 4.7	20.4
319555 2006 SS ₁₄	17.1	X	138.83895	22.17533	252.03142	4.32718	0.1356220	0.30093221	2.2054147	20	—	—
319556 2006 SA ₂₀	17.6	X	100.99822	29.35969	357.94221	9.59634	0.2146410	0.23865433	2.5740867	20	1 26.1	20.9
319557 2006 SO ₂₈	17.7	X	53.57184	21.36274	245.19386	4.86712	0.1932121	0.28783390	2.2718244	20	10 11.9	20.6
319558 2006 SO ₃₃	16.7	X	60.21325	91.52859	262.31901	5.01152	0.1038877	0.22697637	2.6616378	20	—	—
319559 2006 SN ₃₄	17.4	X	327.82389	17.56982	285.30022	1.65471	0.2103929	0.27298908	2.3534548	20	6 8.1	19.2
319560 2006 ST ₃₅	16.5	X	64.46540	333.44976	40.49525	9.22512	0.2808783	0.23006481	2.6377639	20	—	—
319561 2006 SP ₃₉	17.5	X	2.25858	110.75087	204.51947	6.47266	0.1365567	0.28231007	2.3013630	20	9 21.6	19.6
319562 2006 SW ₄₂	16.1	X	32.45217	331.87047	61.75712	14.77411	0.2540286	0.22296353	2.6934784	20	—	—
319563 2006 SK ₄₄	16.7	X	242.80250	86.03323	291.52693	4.64911	0.0665187	0.26771194	2.3842817	20	6 5.5	19.8
319564 2006 SZ ₄₄	16.8	X	37.45399	203.44643	242.09416	8.99895	0.1468728	0.24140508	2.5544953	20	—	—
319565 2006 ST ₄₈	16.6	X	83.57677	187.13552	198.79403	6.26333	0.3134108	0.23261170	2.6184745	20	1 11.5	19.5
319566 2006 SH ₄₉	17.5	X	149.92619	47.71980	341.43419	5.39152	0.1479543	0.25089085	2.4896751	20	3 10.2	21.3
319567 2006 ST ₆₃	16.9	X	298.48740	210.78701	155.32101	5.64244	0.1120853	0.27534909	2.3399879	20	8 4.6	19.3
319568 2006 SO ₇₄	17.0	X	2.75712	184.41447	47.98258	6.56202	0.0568926	0.25968566	2.4331604	20	5 9.7	19.8
319569 2006 SF ₈₆	17.4	X	20.81705	5.03386	198.56020	3.18110	0.1135455	0.25846099	2.4408404	20	4 30.4	19.8
319570 2006 SW ₈₆	16.8	X	286.57712	275.09251	16.46519	8.53372	0.0569541	0.25806258	2.4433519	20	4 7.3	19.9
319571 2006 SQ ₈₇	17.7	X	245.89498	89.75730	188.03854	2.21373	0.0575404	0.24672825	2.5176197	20	1 30.2	21.3
319572 2006 SL ₈₈	16.7	X	269.63814	213.42454	23.46238	13.26263	0.1392937	0.24393000	2.5368370	20	—	—
319573 2006 SZ ₈₉	17.8	X	139.88619	349.23700	305.64844	1.96970	0.1008228	0.23841278	2.5758250	20	1 1.0	21.4
319574 2006 SA ₉₀	17.4	X	321.05934	68.06246	208.27365	5.66744	0.1089669	0.26218743	2.4176577	20	4 29.6	20.1
319575 2006 SD ₉₀	17.1	X	42.71142	69.81296	217.02877	2.61807	0.1777316	0.28244179	2.3006475	20	10 24.3	19.9
319576 2006 SY ₉₄	17.9	X	35.68622	239.04228	180.60579	2.50904	0.0933877	0.22965690	2.6408863	20	—	—
319577 2006 SC ₉₆	17.5	X	29.64525	275.61175	180.05255	2.06577	0.1681112	0.23322180	2.6139059	20	—	—
319578 2006 SW ₉₆	17.5	X	78.25345	75.91744	186.03511	2.40370	0.1516609	0.28356730	2.2945557	20	10 30.5	20.6
319579 2006 SS ₉₇	16.7	X	29.15149	54.42165	20.44759	22.30161	0.0801868	0.23132004	2.6282129	20	—	—
319580 2006 SG ₁₀₁	17.6	X	52.59265	139.47614	16.06512	1.28792	0.1191498	0.25501257	2.4627953	20	4 16.6	20.2
319581 2006 SL ₁₀₇	15.9	X	156.24549	181.18038	185.40100	1.75508	0.1016209	0.17551625	3.1593022	20	2 21.4	20.6
319582 2006 SW ₁₀₈	16.6	X	82.08992	14.92372	19.36877	13.66682	0.1540365	0.23497223	2.6009082	20	—	—
319583 2006 SB ₁₁₆	16.5	X	60.70392	234.80191	156.13558	18.38210	0.2218026	0.23058435	2.6338003	20	—	—
319584 2006 SD ₁₁₉	16.8	X	25.84442	65.51963	12.31884	18.11023	0.2410726	0.23221612	2.6214473	20	—	—
319585 2006 SG ₁₁₉	16.9	X	19.09616	258.51346	162.09275	11.53709	0.1762868	0.22870281	2.6482260	20	—	—
319586 2006 SQ ₁₂₂	15.8	X	53.45063	336.72560	346.75317	13.27917	0.0767144	0.21867433	2.7285852	20	11 23.2	19.9
319587 2006 SA ₁₂₆	17.0	X	166.25121	282.34239	120.61254	4.47973	0.1492334	0.25387648	2.4701372	20	4 15.4	20.8
319588 2006 SN ₁₃₀	17.2	X	312.57584	116.60498	216.25284	5.07175	0.2042722	0.27241035	2.3567869	20	6 24.8	19.3
319589 2006 SG ₁₄₉	17.8	X	66.88332	84.00237	4.82726	8.66232	0.0745830	0.24233311	2.5479694	20	2 5.6	20.9
319590 2006 SA ₁₅₇	17.2	X	47.42982	182.61105	218.79080	1.64236	0.1126246	0.23174212	2.6250207	20	—	—
319591 2006 SU ₁₆₂	18.1	X	102.44472	93.44881	188.10720	5.87531	0.3519786	0.29709802	2.2243487	20	12 24.9	22.4
319592 2006 SP ₁₆₃	16.0	X	198.87246	60.40900	276.13637	9.06158	0.1077878	0.18364318	3.0653931	20	2 23.3	20.9
319593 2006 SP ₁₆₅	17.4	X	64.38833	61.67280	336.97244	6.84176	0.1981819	0.23385455	2.6091888	20	—	—
319594 2006 ST ₁₇₃	17.0	X	19.18024	325.33081	338.04035	6.87385	0.1343104	0.28194292	2.3033605	20	10 2.6	19.4

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
319601	2006	SP ₁₉₇	17.1	X	55.47465	333.63464	103.55628	4.54772	0.2302758	0.23776138	2.5805276	20	1 14.9	19.0
319602	2006	SB ₂₀₀	17.1	X	135.97373	171.06845	6.46734	5.39757	0.0473125	0.27460189	2.3442308	20	9 5.1	20.2
319603	2006	SD ₂₀₁	17.2	X	43.57254	72.17131	18.58278	4.17155	0.0936081	0.23665059	2.5885963	20	1 2.1	20.0
319604	2006	SN ₂₁₂	15.2	X	196.84038	241.28966	117.97345	11.82285	0.0999524	0.17977948	3.1091569	20	3 28.4	20.2
319605	2006	SB ₂₁₇	17.3	X	117.05133	14.55007	345.65236	2.14159	0.2169611	0.23949327	2.5680719	20	1 9.1	20.8
319606	2006	SA ₂₂₆	17.5	X	318.23574	342.56549	304.63553	4.13571	0.1477128	0.26749227	2.3855868	20	5 2.2	19.9
319607	2006	SS ₂₂₆	17.5	X	35.48391	251.74021	292.32325	4.07212	0.0553697	0.25885280	2.4383767	20	4 20.3	20.5
319608	2006	SE ₂₃₅	17.4	X	115.66146	301.64157	162.66946	5.27241	0.0702483	0.26078267	2.4263321	20	5 1.3	20.6
319609	2006	SE ₂₃₈	16.4	X	109.17312	298.07312	147.32686	2.27071	0.1005398	0.17912140	3.1167675	20	4 6.1	20.8
319610	2006	SU ₂₄₁	17.7	X	52.54520	273.10884	159.15144	3.15914	0.2211379	0.23670970	2.5881653	20	—	—
319611	2006	SF ₂₅₃	16.0	X	27.90355	92.64795	60.38079	1.23181	0.0161548	0.17855201	3.1233900	20	3 7.1	20.3
319612	2006	SL ₂₆₁	16.2	X	73.09375	246.74728	217.30130	4.54142	0.1536471	0.17262607	3.1944674	20	3 20.9	20.5
319613	2006	SJ ₂₆₈	17.6	X	354.42665	16.81243	244.43632	5.59228	0.1369781	0.26538417	2.3982036	20	6 6.9	19.7
319614	2006	SE ₂₇₃	17.1	X	93.85326	193.84815	211.51506	3.39833	0.1074200	0.23557991	2.5964335	20	1 19.9	20.4
319615	2006	SW ₂₇₇	17.0	X	83.88624	5.69157	41.83228	5.74953	0.2322501	0.23866372	2.5740192	20	1 29.7	19.9
319616	2006	SN ₂₇₉	16.9	X	89.25542	44.53588	236.66739	6.62655	0.1189317	0.28939885	2.2636269	20	12 3.9	20.1
319617	2006	SS ₂₇₉	16.5	X	354.75711	87.36352	7.25014	12.55830	0.2366672	0.22310555	2.6923352	20	—	—
319618	2006	SG ₂₈₀	16.7	X	341.93382	220.20816	105.14532	4.31042	0.1849256	0.27592371	2.3367381	20	8 30.4	18.2
319619	2006	SY ₂₈₄	16.7	X	340.25427	236.82040	66.49257	6.52145	0.2386462	0.27360220	2.3499376	20	7 12.4	17.9
319620	2006	SP ₂₈₈	16.6	X	67.62843	32.67522	31.69443	13.41027	0.1455410	0.23913879	2.5706090	20	1 12.4	19.7
319621	2006	SC ₂₉₇	17.1	X	70.77837	227.65576	183.13873	9.26884	0.1256875	0.23631762	2.5910272	20	—	—
319622	2006	SM ₃₀₁	16.7	X	45.59836	334.13079	99.12159	14.04813	0.1648232	0.23291449	2.6162046	20	—	—
319623	2006	ST ₃₀₃	17.6	X	67.32349	294.79474	166.43184	3.37797	0.0831771	0.24520370	2.5280445	20	2 19.9	20.6
319624	2006	SU ₃₀₆	17.1	X	332.35636	203.73445	121.49387	2.98664	0.2118267	0.27454224	2.3445703	20	7 31.5	18.2
319625	2006	SV ₃₁₁	17.7	X	22.99178	162.70962	291.69240	7.20848	0.1460501	0.23369866	2.6103490	20	—	—
319626	2006	SC ₃₂₈	17.6	X	12.77934	204.81626	79.42968	3.16093	0.2077484	0.27644898	2.3337772	20	9 6.8	19.5
319627	2006	SE ₃₃₂	17.1	X	343.48558	345.29486	343.25414	2.15630	0.2307340	0.27749048	2.3279340	20	9 10.5	18.1
319628	2006	SR ₃₃₅	17.5	X	74.19598	325.66745	62.50585	4.48111	0.2379230	0.23309503	2.6148536	20	—	—
319629	2006	SG ₃₅₃	16.3	X	358.34931	332.96618	43.29174	10.25458	0.1525703	0.21557386	2.7546852	20	11 26.7	19.5
319630	2006	SA ₃₆₀	16.6	X	352.68492	205.63441	127.56867	7.86534	0.2179247	0.27981357	2.3150313	20	10 17.9	18.4
319631	2006	SS ₃₆₀	16.6	X	300.06160	155.81105	45.50983	9.70721	0.0754620	0.23728472	2.5839823	20	—	—
319632	2006	SN ₃₆₁	17.2	X	349.54130	74.09551	44.50450	13.43701	0.2246765	0.22612990	2.6682758	20	—	—
319633	2006	SV ₃₆₆	15.9	X	190.08684	287.93522	35.08585	16.58938	0.1745287	0.24233731	2.5479400	20	2 5.9	20.4
319634	2006	SR ₃₆₆	17.2	X	97.35171	74.98649	307.74051	7.80547	0.1780548	0.23828638	2.5767359	20	1 6.9	20.3
319635	2006	SC ₃₆₇	16.3	X	102.42344	99.28185	279.10337	12.09134	0.1917654	0.23609420	2.5926616	20	1 9.7	19.6
319636	2006	SE ₃₆₈	16.4	X	31.64450	62.54740	6.61145	18.48574	0.1694348	0.22913701	2.6448795	20	—	—
319637	2006	SM ₃₇₆	17.1	X	66.23162	308.74776	144.55963	7.85152	0.1166988	0.24243372	2.5472644	20	2 12.3	19.7
319638	2006	SL ₃₈₈	16.7	X	346.80189	84.53523	75.94685	12.64093	0.0820260	0.23910901	2.5708225	20	1 6.2	19.9
319639	2006	SU ₃₉₀	17.1	X	19.43200	68.50180	212.44594	4.44778	0.1997980	0.27899544	2.3195549	20	9 10.2	19.2
319640	2006	SV ₃₉₁	16.7	X	71.73805	105.83975	292.27529	13.35658	0.1644798	0.23349168	2.6118914	20	—	—
319641	2006	SY ₃₉₁	16.4	X	62.73335	319.26967	86.42463	16.73214	0.1771427	0.23196237	2.6233588	20	—	—
319642	2006	SO ₃₉₃	16.5	X	195.35653	64.29721	272.85999	2.41455	0.0709288	0.24270015	2.5453999	20	2 17.4	20.2
319643	2006	SM ₃₉₃	16.9	X	12.19527	230.67685	149.69550	3.58093	0.1007482	0.21909595	2.7250835	20	12 18.9	20.3
319644	2006	SB ₄₀₀	16.9	X	23.97704	95.25890	358.68375	8.00469	0.2830241	0.22409073	2.6844385	20	—	—
319645	2006	SN ₄₀₃	16.6	X	203.52108	259.33015	38.49725	14.94742	0.1064497	0.23868118	2.5738937	20	1 12.7	20.8
319646	2006	SL ₄₀₄	17.2	X	95.49839	349.39964	22.73233	5.92854	0.1068148	0.23156193	2.6263823	20	—	—
319647	2006	SW ₄₁₀	17.0	X	348.16535	6.11783	202.51735	5.87860	0.0606205	0.25273701	2.4775560	20	3 11.9	20.1
319648	2006	SA ₄₁₂	16.7	X	7.59869	194.35701	146.45770	11.16760	0.2346668	0.21099292	2.7944143	20	11 10.5	19.9
319649	2006	SC ₄₁₂	16.3	X	108.83036	268.19638	155.50482	12.22118	0.1557652	0.24224183	2.5486095	20	3 12.3	19.7
319650	2006	SR ₄₁₂	16.1	X	44.74221	339.19491	88.51709	17.12935	0.1555500	0.23255248	2.6189190	20	—	—
319651	2006	TO ₇	17.5	X	109.01709	270.45720	98.01002	1.84920	0.1796779	0.23865656	2.5740707	20	1 4.0	20.6
319652	2006	TE ₁₃	16.6	X	57.65755	192.80064	212.22422	11.46689	0.1636655	0.23232611	2.6206199	20	—	—
319653	2006	TG ₁₄	17.0	X	70.18402	255.61886	161.77635	12.87071	0.2521128	0.23509155	2.6000281	20	1 19.6	19.7
319654	2006	TA ₁₆	17.1	X	103.49217	202.09444	212.66047	4.49178	0.0356078	0.24417611	2.5351322	20	2 1.5	20.3
319655	2006	TR ₂₂	16.2	X	353.14074	91.67581	40.25205	21.78325	0.1782389	0.23087305	2.6316041	20	—	—
319656	2006	TO ₂₅	15.5	X	234.02888	305.80834	28.87711	12.82815	0.0312071	0.18039289	3.1021046	20	4 7.7	20.0
319657	2006	TZ ₂₅	17.3	X	133.17187	17.66333	4.73130	0.80015	0.1073918	0.24221427	2.5488027	20	2 9.7	20.9
319658	2006	TA ₂₆	17.9	X	76.73403	346.26521	29.06314	1.71465	0.1578663	0.22997086	2.6384822	20	—	—
319659	2006	TY ₂₇	16.8	X	40.03649	220.81755	214.43904	3.80861	0.1183987	0.23159177	2.6261567	20	—	—
319660	2006	TH ₃₀	17.1	X	347.62426	96.31516	33.02496	5.75614	0.1006150	0.23174692	2.6249844	20	—	—
319661	2006	TP ₃₂	18.0	X	45.17417	357.79197	96.14507	0.46476	0.1588524	0.23576236	2.5950939	20	1 11.9	20.6
319662	2006	TZ ₃₄	16.6	X	31.23401	87.08624	20.45864	4.96813	0.1510659	0.23442729	2.6049373	20	1 4.7	19.2
319663	2006	TS ₃₅	16.1	X	147.59504	333.78419	31.06807	15.37520	0.1197269	0.24170259	2.5523987	20	2 12.3	20.1
319664	2006	TA ₄₁	17.1	X	357.31392	66.18179	30.85685	12.79603	0.1731316	0.22548813	2.6733363	20	—	—
319665	2006	TJ ₄₂	17.2	X	248.41689	251.44578	38.62465	4.26030	0.0184277	0.24513883	2.5284904	20	2 24.4	20.5
319666	2006	TD ₄₃	16.4	X	5.51634	275.69226	37.10118	6.24868	0.2500951	0.27867191	2.3213498	20	10 15.2	18.2
319667	2006	TO ₄₅	17.2	X	79.72561	207.83676	181.23995	2.49877	0.1020423	0.23084904	2.6317866	20	—	—
319668	2006	TS ₄₆	17.2	X	46.83868	355.16660	41.83456	5.93511	0.1704446	0.22627795	2.6671118	20	—	—
319669	2006	TY ₄₇	17.2	X	65.30454	335.89705	48.87833	3.86362	0.0589510	0.22757348	2.6569800	20	—	—
319670	2006	TJ ₅₁	17.6	X	40.01859	114.58108	209.15072	5.70888	0.1580328	0.28471687	2.2883753	20	12 7.8	20.5

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319681 2006 TU ₈₆	17.2	X	351.04212	319.23326	359.69642	2.08392	0.2226224	0.27653012	2.3333206	20	9 13.9	18.5
319682 2006 TL ₈₈	16.8	X	10.87730	268.69770	251.65899	3.33813	0.2036982	0.23953505	2.5677733	20	2 2.4	18.9
319683 2006 TL ₈₉	17.3	X	306.33842	300.65408	351.64082	3.72779	0.1448764	0.26019332	2.4299945	20	4 21.3	20.0
319684 2006 TU ₈₉	16.9	X	15.42889	212.01635	20.55704	6.81744	0.0602663	0.25888174	2.4381950	20	5 29.8	19.8
319685 2006 TB ₉₁	16.8	X	27.54276	251.76253	228.78959	8.79658	0.0406015	0.23706847	2.5855534	20	1 14.4	20.1
319686 2006 TS ₉₂	17.8	X	25.75656	242.12602	186.59371	5.35992	0.1448004	0.22825771	2.6516676	20	—	—
319687 2006 TL ₉₄	16.9	X	326.69223	131.35228	132.51389	2.71701	0.1424892	0.25763915	2.4460283	20	4 17.0	19.4
319688 2006 TL ₉₅	17.3	X	96.93456	266.30344	120.59883	24.10021	0.1052249	0.38127033	1.8835654	20	—	—
319689 2006 TH ₁₀₀	17.2	X	42.03978	212.75859	293.49765	2.46563	0.1126699	0.24576710	2.5241794	20	3 14.5	19.8
319690 2006 TF ₁₀₂	16.9	X	336.72380	33.51551	223.80288	6.44287	0.0975594	0.25856134	2.4402088	20	4 29.4	19.6
319691 2006 TS ₁₀₃	17.3	X	70.93889	0.52753	44.43196	2.73789	0.0860823	0.23289763	2.6163309	20	—	—
319692 2006 TJ ₁₀₅	17.5	X	102.51784	219.05134	65.25699	3.29727	0.2069468	0.29256140	2.2472844	20	12 24.7	21.2
319693 2006 TL ₁₁₀	16.8	X	344.16544	276.88401	231.27930	10.89982	0.2411544	0.22932147	2.6434610	20	—	—
319694 2006 TH ₁₁₀	16.4	X	123.26513	84.24644	231.19394	7.84096	0.0691871	0.22532073	2.6746602	20	—	—
319695 2006 TF ₁₁₅	16.4	X	348.01849	101.90396	155.92044	14.13341	0.1267078	0.18893029	3.0079342	20	5 24.3	20.2
319696 2006 TC ₁₁₈	16.6	X	5.77742	252.47375	128.19358	10.48454	0.1660501	0.21600158	2.7510475	20	12 18.9	19.9
319697 2006 TJ ₁₂₅	16.9	X	115.36482	25.46565	321.15021	2.39198	0.1877078	0.23318520	2.6141794	20	—	—
319698 2006 TJ ₁₂₉	17.4	X	341.63380	344.80545	268.70172	2.41593	0.0789159	0.25747554	2.4470644	20	5 3.6	20.0
319699 2006 UF ₃	17.2	X	61.93321	283.08976	136.74916	2.64841	0.1115047	0.23440369	2.6051121	20	—	—
319700 2006 UZ ₄	17.2	X	10.86601	62.12546	45.92384	4.36147	0.1674519	0.23253498	2.6190504	20	—	—
319701 2006 UQ ₆	17.4	X	287.04650	165.54386	138.42412	3.22877	0.2387377	0.26228923	2.4170321	20	3 29.7	20.8
319702 2006 UQ ₂₂	17.0	X	24.20122	266.10568	181.58965	11.10231	0.1556654	0.23538252	2.5978849	20	—	—
319703 2006 UA ₂₃	17.4	X	316.14067	263.83379	183.69288	5.23549	0.3895150	0.21684306	2.7439258	20	12 19.4	18.3
319704 2006 UT ₂₄	17.4	X	104.73921	47.79439	317.48219	1.19837	0.1649572	0.23465883	2.6032235	20	—	—
319705 2006 UF ₂₅	17.0	X	13.74104	286.93315	7.89792	3.60993	0.1834229	0.27721162	2.3294949	20	9 20.2	18.9
319706 2006 UN ₂₇	17.4	X	31.46564	299.27360	213.10018	4.63160	0.1542610	0.24476165	2.5310874	20	3 5.7	19.8
319707 2006 UL ₂₈	17.0	X	118.75047	351.14920	14.23574	3.79294	0.2228346	0.23811943	2.5779401	20	1 19.3	20.6
319708 2006 UV ₃₀	17.0	X	317.14667	357.99513	214.80283	4.99673	0.1290560	0.24458448	2.5323095	20	1 23.4	20.2
319709 2006 UU ₃₄	17.4	X	142.81729	146.38401	39.62271	3.32971	0.1589288	0.27478472	2.3431908	20	9 26.4	21.1
319710 2006 UJ ₃₈	17.4	X	217.50345	258.72543	51.49592	1.93853	0.0698677	0.24473152	2.5312951	20	2 9.3	21.1
319711 2006 UD ₄₁	16.9	X	349.55038	254.21682	232.19346	2.89698	0.1762584	0.22808875	2.6529769	20	—	—
319712 2006 UN ₄₄	17.6	X	45.01985	222.21234	189.65678	0.95805	0.0726792	0.22750181	2.6575380	20	—	—
319713 2006 UJ ₄₅	16.9	X	82.86780	279.50834	70.59337	5.07332	0.2043969	0.29887521	2.2155223	20	—	—
319714 2006 UP ₄₈	16.7	X	74.57013	110.70616	296.94103	6.60742	0.1950760	0.23732948	2.5836574	20	1 6.4	19.2
319715 2006 UM ₅₀	17.6	X	222.14941	343.63618	351.93784	6.19779	0.0804320	0.25277769	2.4772902	20	3 15.3	21.1
319716 2006 UR ₅₂	17.3	X	322.32128	107.23736	211.82842	4.87641	0.1351405	0.27221287	2.3579266	20	7 2.9	19.5
319717 2006 UW ₅₆	16.8	X	1.50167	252.21137	284.94144	4.88046	0.0752574	0.25264300	2.4781706	20	2 16.5	19.6
319718 2006 UX ₅₆	17.1	X	168.41371	138.01854	239.86724	4.77976	0.0694930	0.25363103	2.4717305	20	3 7.4	20.7
319719 2006 UX ₆₀	16.8	X	171.28997	102.51913	267.56046	3.24199	0.0958174	0.24609768	2.5219184	20	3 3.7	20.5
319720 2006 UF ₆₁	17.2	X	354.26420	186.46318	263.54455	3.85512	0.1519645	0.22302673	2.6929695	20	—	—
319721 2006 UN ₇₁	17.0	X	16.99594	333.34677	135.62580	2.26741	0.2309270	0.23149962	2.6268535	20	—	—
319722 2006 UO ₇₅	17.2	X	331.55078	264.79139	167.89874	3.97470	0.0950207	0.21982405	2.7190629	20	12 25.2	20.5
319723 2006 UX ₈₀	17.3	X	79.04922	284.21555	126.48565	3.00781	0.0816491	0.23530521	2.5984539	20	1 2.8	20.2
319724 2006 UY ₈₀	17.5	X	20.32387	324.33348	106.62802	2.97519	0.0813160	0.22687187	2.6624551	20	—	—
319725 2006 UT ₈₁	17.3	X	62.11036	215.84259	171.41366	2.26307	0.1601290	0.22756966	2.6570097	20	—	—
319726 2006 UO ₈₇	16.9	X	175.08524	295.64943	36.61301	3.91301	0.1262625	0.23967196	2.5667953	20	1 26.3	20.8
319727 2006 UG ₉₃	17.7	X	22.49598	256.98050	179.62198	3.13940	0.1942720	0.22764250	2.6564429	20	—	—
319728 2006 UV ₉₅	16.9	X	12.03659	278.50012	192.00246	7.09063	0.0760155	0.23317295	2.6142710	20	—	—
319729 2006 UJ ₁₀₄	16.9	X	271.01898	73.91125	199.54294	5.99103	0.0592710	0.24652915	2.5189750	20	2 21.9	20.3
319730 2006 UP ₁₀₈	16.9	X	10.82886	352.10413	89.10707	4.53693	0.2605685	0.22392464	2.6857657	20	—	—
319731 2006 UF ₁₁₂	16.8	X	292.25953	289.67435	257.51748	2.80831	0.0892497	0.24027392	2.5625064	20	—	—
319732 2006 UB ₁₁₅	17.5	X	298.12025	154.61648	37.26366	1.08827	0.0368338	0.23782061	2.5800991	20	—	—
319733 2006 UA ₁₁₇	17.7	X	18.17476	262.91183	206.01145	7.81010	0.1655103	0.23329563	2.6133545	20	—	—
319734 2006 UN ₁₁₈	17.7	X	35.56101	90.56897	34.50557	4.60704	0.0809065	0.24161361	2.5530253	20	2 5.0	20.6
319735 2006 UU ₁₂₀	15.9	X	177.81421	278.02443	64.08313	4.13361	0.0788361	0.17196595	3.2026371	20	2 15.6	20.8
319736 2006 UV ₁₂₀	17.2	X	345.03261	19.30591	115.78333	2.54791	0.0187106	0.23458738	2.6037520	20	—	—
319737 2006 UP ₁₂₄	17.3	X	66.80998	205.65475	230.74978	2.85511	0.1163493	0.24091457	2.5579615	20	1 20.5	20.2
319738 2006 UY ₁₂₇	17.1	X	305.64435	258.33668	230.55046	8.92496	0.2710789	0.21868083	2.7285311	20	—	—
319739 2006 UU ₁₂₈	17.4	X	28.29688	108.51614	352.35711	1.38547	0.2047366	0.23207322	2.6225234	20	—	—
319740 2006 UP ₁₃₄	17.1	X	317.65400	132.53504	52.12868	8.81212	0.1064078	0.23663880	2.5886822	20	—	—
319741 2006 UP ₁₃₅	16.9	X	328.80032	151.04070	60.14838	5.48311	0.1013736	0.24546134	2.5262752	20	2 14.9	19.9
319742 2006 UU ₁₃₆	17.5	X	54.38958	64.38401	330.91277	3.80708	0.1440035	0.22724638	2.6595290	20	—	—
319743 2006 UA ₁₃₇	16.4	X	66.91563	76.57266	5.28102	6.92080	0.1988872	0.23612288	2.5924517	20	2 12.8	19.1
319744 2006 UT ₁₄₀	17.8	X	16.42935	37.66128	15.34387	5.93407	0.1123404	0.29460997	2.2368546	20	—	—
319745 2006 UL ₁₄₃	16.7	X	247.57673	157.52997	224.95700	6.43423	0.1284798	0.26573203	2.3961102	20	6 10.7	19.9
319746 2006 UO ₁₄₃	16.6	X	164.28284	123.52739	225.25579	6.67467	0.0812056	0.23843967	2.5756314	20	1 28.7	20.5
319747 2006 UP ₁₄₇	17.4	X	63.01298	128.35097	262.77007	2.89121	0.2315038	0.23035553	2.6355441	20	—	—
319748 2006 UP ₁₅₂	16.9	X	316.91830	142.27542	329.97224	11.47741	0.2144027	0.22467433	2.6797878	20	—	

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319761 2006 UY ₂₀₃	17.0	X	104.99935	103.64821	278.38441	5.77869	0.1695258	0.23653632	2.5894299	20	1 14.6	20.2
319762 2006 UG ₂₀₇	17.5	X	19.58553	77.49615	90.20846	0.67847	0.0950301	0.24775057	2.5106891	20	3 6.4	20.1
319763 2006 UQ ₂₀₈	17.9	X	104.81808	230.81417	44.93159	3.03095	0.1719457	0.28983674	2.2613464	20	12 14.5	21.5
319764 2006 UP ₂₁₁	16.7	X	92.37690	55.50955	340.74041	9.31093	0.2020212	0.23623915	2.5916010	20	1 23.4	19.8
319765 2006 UJ ₂₁₄	16.8	X	78.14816	145.86315	328.98904	2.88038	0.0964267	0.24458112	2.5323327	20	3 27.1	19.9
319766 2006 UT ₂₁₄	17.1	X	58.94351	141.69657	272.65159	12.81283	0.2349336	0.23282700	2.6168600	20	—	—
319767 2006 UZ ₂₁₄	17.7	X	21.94534	101.32354	17.56576	5.28506	0.1601209	0.23479044	2.6022505	20	1 2.1	20.2
319768 2006 UW ₂₂₆	17.5	X	29.80338	250.12256	155.67131	1.16587	0.2103230	0.22490097	2.6779872	20	—	—
319769 2006 UD ₂₂₉	16.8	X	78.08552	175.61013	198.30239	2.83097	0.2710122	0.22889764	2.6467231	20	—	—
319770 2006 UH ₂₂₉	16.9	X	129.02173	233.61549	139.98006	3.66101	0.2102777	0.23818341	2.5774785	20	2 6.8	20.7
319771 2006 UY ₂₅₅	17.0	X	136.88979	211.66242	52.12904	7.36167	0.1152676	0.28833552	2.2691887	20	12 30.1	20.3
319772 2006 UG ₂₅₈	17.3	X	14.52409	207.35411	16.06127	2.83522	0.1310279	0.25986326	2.4320516	20	5 18.5	19.6
319773 2006 UM ₂₆₄	17.6	X	320.64268	315.62467	337.36816	2.26438	0.1702849	0.26758502	2.3850355	20	5 12.9	19.8
319774 2006 UJ ₂₆₅	17.7	X	213.20652	76.09555	199.01235	5.18509	0.2228878	0.31404440	2.1435915	20	—	—
319775 2006 UC ₂₆₇	16.9	X	68.32841	84.42244	314.46279	3.74938	0.2180536	0.23078618	2.6322644	20	—	—
319776 2006 UH ₂₇₂	17.2	X	143.66128	184.84721	216.29169	0.39933	0.1372417	0.24450156	2.5328820	20	3 18.7	21.0
319777 2006 UF ₂₇₃	16.7	X	275.04787	214.77647	25.35192	7.33650	0.1466068	0.23857039	2.5746905	20	1 9.9	20.7
319778 2006 UX ₂₇₈	17.4	X	36.51156	15.82206	254.10151	3.10762	0.1885475	0.27581900	2.3373294	20	9 20.4	20.0
319779 2006 UZ ₂₈₂	17.2	X	294.26931	253.35070	25.07212	6.57605	0.1286247	0.25507331	2.4624043	20	3 21.8	20.4
319780 2006 UA ₂₈₃	17.4	X	320.69584	76.90719	33.20607	12.58629	0.2206044	0.21936212	2.7228787	20	—	—
319781 2006 UK ₂₈₄	16.6	X	332.17639	188.43206	228.59737	4.93648	0.0300830	0.21471554	2.7620216	20	12 1.9	20.1
319782 2006 UV ₂₈₆	16.7	X	76.55527	14.14113	55.44013	4.98909	0.2022307	0.23613894	2.5923341	20	2 12.7	19.5
319783 2006 UJ ₂₈₉	16.8	X	340.07967	69.40728	36.86350	12.71084	0.1680537	0.22203459	2.7009857	20	—	—
319784 2006 US ₃₀₅	17.2	X	113.04112	47.03924	169.65812	4.64214	0.2159495	0.28717011	2.2753239	20	10 11.6	20.8
319785 2006 UG ₃₂₈	17.1	X	333.42109	289.19630	166.52389	12.69246	0.2941682	0.21881747	2.7273951	20	—	—
319786 2006 UE ₃₃₂	16.9	X	29.13209	273.43288	173.96270	9.54136	0.0850719	0.23445364	2.6047421	20	—	—
319787 2006 UD ₃₃₃	16.7	X	12.74822	336.18257	147.43595	12.24558	0.0810859	0.23404002	2.6078101	20	—	—
319788 2006 UM ₃₃₃	15.7	X	33.02986	131.55928	32.31249	5.51466	0.0903401	0.18115632	3.0933832	20	3 31.9	19.7
319789 2006 UJ ₃₃₆	17.0	X	354.34925	241.56481	12.37245	1.99706	0.1731780	0.25716761	2.4490174	20	5 23.8	18.9
319790 2006 UL ₃₃₆	17.1	X	322.98213	203.40921	91.86236	3.65905	0.1786133	0.26357788	2.4091476	20	5 21.6	19.2
319791 2006 UB ₃₃₇	17.2	X	337.08207	20.72668	221.68057	5.08586	0.1692985	0.25472127	2.4646726	20	3 28.2	19.7
319792 2006 UG ₃₃₈	17.5	X	0.02971	299.05351	213.12085	3.75312	0.2257909	0.23627277	2.5913551	20	—	—
319793 2006 UL ₃₆₁	16.9	X	81.68542	59.72431	317.31182	6.99486	0.1869298	0.22999147	2.6383246	20	—	—
319794 2006 VW ₃	17.2	X	257.95626	348.68971	339.43753	2.09756	0.2015824	0.25821974	2.4423605	20	4 1.7	20.7
319795 2006 VJ ₅	17.5	X	47.67568	28.15120	55.87059	2.10397	0.1047017	0.23550238	2.5970034	20	—	—
319796 2006 VK ₆	16.8	X	182.06422	250.03538	223.21223	6.07303	0.0583474	0.26576455	2.3959147	20	7 30.9	20.1
319797 2006 VH ₁₄	17.3	X	24.71333	108.55084	313.26249	1.01781	0.1908047	0.22538293	2.6741681	20	—	—
319798 2006 VJ ₁₄	17.5	X	166.33324	75.49702	284.08316	1.21721	0.0866723	0.24383063	2.5375263	20	2 15.1	21.1
319799 2006 VS ₁₆	17.7	X	80.66517	109.52914	277.01911	1.80223	0.1244713	0.23041723	2.6350736	20	—	—
319800 2006 VE ₂₁	17.5	X	139.40868	69.08079	305.90740	1.86805	0.1741088	0.24376629	2.5379727	20	2 14.3	21.2
319801 2006 VS ₃₀	16.4	X	356.32702	243.89653	250.61405	8.34170	0.1319586	0.22987532	2.6392133	20	—	—
319802 2006 VY ₃₄	16.9	X	96.09021	139.06383	236.74609	3.54634	0.1927524	0.23273430	2.6175548	20	—	—
319803 2006 VJ ₃₆	17.0	X	36.25494	163.95254	259.58971	5.79807	0.1692164	0.22802374	2.6534812	20	—	—
319804 2006 VR ₄₅	17.3	X	61.63919	239.64429	152.99768	3.44914	0.1573230	0.22846882	2.6500338	20	—	—
319805 2006 VZ ₄₇	17.4	X	76.44171	129.66281	297.55557	1.32255	0.1485551	0.23868652	2.5738553	20	1 29.1	20.3
319806 2006 VJ ₄₈	16.6	X	80.33590	327.28556	47.08463	6.55751	0.0720448	0.22575298	2.6712450	20	—	—
319807 2006 VJ ₅₀	17.6	X	80.41146	90.56124	294.84032	1.11058	0.2202641	0.22971422	2.6404471	20	—	—
319808 2006 VN ₅₀	15.6	X	125.20501	321.15625	58.68184	15.40429	0.1977028	0.23722617	2.5844074	20	2 15.9	19.7
319809 2006 VX ₅₀	16.5	X	32.60639	351.24357	61.49027	10.39723	0.0875567	0.22198462	2.7013911	20	—	—
319810 2006 VQ ₅₂	16.6	X	230.49996	230.35112	29.02163	10.84897	0.1315368	0.23438314	2.6052644	20	—	—
319811 2006 VB ₅₄	17.2	X	206.49848	279.78955	25.28695	6.68710	0.0371413	0.23825745	2.5769444	20	1 23.8	20.8
319812 2006 VA ₆₀	17.2	X	12.72514	21.37013	102.53826	2.74145	0.1262765	0.23160934	2.6260239	20	—	—
319813 2006 VE ₆₁	16.8	X	302.79868	234.79989	58.38689	7.16197	0.1337450	0.25642247	2.4537595	20	4 22.5	19.6
319814 2006 VB ₆₆	17.2	X	91.64815	265.19602	133.85476	0.97578	0.1104769	0.23331398	2.6132174	20	1 10.2	20.4
319815 2006 VV ₆₇	16.7	X	34.89412	156.55981	243.70735	9.10732	0.1526885	0.22353564	2.6888807	20	—	—
319816 2006 VS ₈₀	17.0	X	91.90296	232.79666	194.38060	4.27551	0.1170085	0.23823101	2.5771351	20	2 15.3	20.2
319817 2006 VH ₈₃	18.1	X	11.81427	127.04285	296.13733	0.95370	0.1742243	0.22236388	2.6983185	20	—	—
319818 2006 VK ₈₃	17.2	X	56.11041	154.73979	267.26472	2.42181	0.0844185	0.23125719	2.6286891	20	—	—
319819 2006 VN ₉₂	16.6	X	252.10302	236.87356	113.21908	6.73340	0.1412126	0.25786056	2.4446279	20	5 4.1	20.1
319820 2006 VD ₉₉	17.0	X	331.86110	57.68371	94.09864	5.36287	0.1072365	0.23103102	2.6304044	20	—	—
319821 2006 VT ₁₀₄	16.7	X	68.01141	246.97879	128.61623	4.71150	0.2106296	0.22801993	2.6535107	20	—	—
319822 2006 VA ₁₀₅	16.4	X	79.50838	188.78762	39.90141	6.47074	0.2957703	0.26858489	2.3791126	20	10 2.7	20.2
319823 2006 VH ₁₀₅	16.7	X	126.31997	292.95535	47.56062	8.08251	0.2134745	0.23302885	2.6153486	20	—	—
319824 2006 VQ ₁₁₀	16.6	X	145.23531	329.40766	359.70361	5.32007	0.2815723	0.23545521	2.5973502	20	1 8.0	20.8
319825 2006 VC ₁₁₀	17.1	X	97.85644	28.45011	25.03380	6.59347	0.0116093	0.23596263	2.5936253	20	1 25.1	20.6
319826 2006 VM ₁₁₅	17.4	X	93.56032	298.46494	67.13066	3.00778	0.1038471	0.22896709	2.6461879	20	—	—
319827 2006 VW ₁₁₅	17.3	X	2.43526	273.68175	215.59270	4.24406	0.2371090	0.22887859	2.6468699	20	—	—
319828 2006 VU ₁₁₇	16.9	X	325.43514	226.95301	44.38761	5.34818	0.1801829	0.25684905	2.4510419	20	4 19.5	19.4
319829 2006 VT ₁₂₂	17.2	X	26.34341	125.07998	9.45318	3.62442	0.1638393	0.23499303	2.6007548	20	2 3.3	19.5
319830 2006 VO ₁₂₃	17.5	X	85.89911	5.44068	39.89164	5.30625	0.1194085	0.23297135	2.6157790	20	1 12.4	20.6
319831 2006 VE ₁₂₇	15.6	X	299.54080	317.38168	291.10578	7.12168	0.1679175	0.17309264	3.1887244	20	2 18.6	20.2
319832 2006 VN ₁₃₂	17.2	X	287.19932	74.40355	123.20744	3.16048	0.0947705	0.22994019	2.6387168	20	—	—
319833 2006 VU ₁₃₄	16.2	X	112.58355	345.14331	47.76838	15.14206	0.2147248	0.23699966	2.5860539	20	2 21.6	20.2
319834 2006 VD ₁₃₇	17.1	X	354.47814	210.73440	244.67820	4.39620	0.0602321	0.22311317	2.6922740	20	—	—
319835 2006 VO ₁												

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319841 2006 <i>WB</i> ₂	17.3	X	41.89190	237.86338	177.78253	2.72407	0.1157234	0.22581055	2.6707910	20	—	—
319842 2006 <i>WY</i> ₄	17.4	X	336.07258	225.33984	17.93253	7.02260	0.0916281	0.25659487	2.4526603	20	4 8.5	20.1
319843 2006 <i>WT</i> ₁₁	16.3	X	169.91420	305.19091	41.55086	6.37190	0.1682824	0.24062792	2.5599926	20	2 11.9	20.4
319844 2006 <i>WA</i> ₁₂	17.4	X	11.10323	269.09286	171.26804	2.69284	0.1717465	0.22288419	2.6941176	20	—	—
319845 2006 <i>WT</i> ₁₆	16.3	X	211.33377	224.79794	51.62689	15.96817	0.0854948	0.23349918	2.6118354	20	—	—
319846 2006 <i>WT</i> ₁₇	17.2	X	16.61162	241.74929	273.26434	3.25347	0.2231587	0.23868151	2.5738913	20	2 6.7	19.2
319847 2006 <i>WM</i> ₁₈	17.1	X	346.17355	223.61078	13.93289	6.86181	0.0742036	0.25535904	2.4605671	20	4 17.9	19.9
319848 2006 <i>WO</i> ₁₉	17.9	X	13.59371	82.82574	350.82697	3.68667	0.0999458	0.22594174	2.6697570	20	—	—
319849 2006 <i>WK</i> ₂₂	15.5	X	208.03251	136.24952	252.23499	15.16898	0.2214995	0.18156185	3.0887753	20	5 2.2	20.9
319850 2006 <i>WB</i> ₂₃	16.0	X	149.00066	225.11912	82.32383	15.78870	0.1179942	0.22552258	2.6730640	20	—	—
319851 2006 <i>WG</i> ₃₁	16.9	X	259.84584	84.90090	138.84804	2.30517	0.0322737	0.23189536	2.6238641	20	—	—
319852 2006 <i>WP</i> ₃₂	16.8	X	327.03010	289.28324	196.13263	6.27706	0.1201320	0.22307335	2.6925943	20	—	—
319853 2006 <i>WY</i> ₃₃	17.3	X	69.66191	232.20397	152.55028	2.89767	0.1309512	0.22724984	2.6595020	20	—	—
319854 2006 <i>WD</i> ₃₄	16.4	X	42.95566	229.27717	224.04739	10.88705	0.0032205	0.23389562	2.6088833	20	1 1.1	20.1
319855 2006 <i>WE</i> ₃₉	17.6	X	189.52355	0.04637	95.70564	2.38222	0.1423148	0.26146075	2.4221352	20	7 14.2	21.2
319856 2006 <i>WD</i> ₄₆	17.3	X	149.98800	167.35861	157.02388	4.73566	0.0580826	0.23335187	2.6129346	20	—	—
319857 2006 <i>WA</i> ₄₇	17.3	X	327.17686	148.07912	24.83090	2.72445	0.1015081	0.23109164	2.6299444	20	—	—
319858 2006 <i>WM</i> ₄₈	17.0	X	345.93703	263.70371	48.80067	6.01910	0.1664714	0.26859255	2.3790673	20	8 17.2	19.0
319859 2006 <i>WF</i> ₄₉	17.9	X	248.67057	335.01185	188.19902	2.90082	0.1345213	0.28566084	2.2833312	20	12 31.3	20.2
319860 2006 <i>WH</i> ₅₃	16.2	X	98.12840	243.65145	159.68254	13.62354	0.2212116	0.23622019	2.5917397	20	2 9.1	19.6
319861 2006 <i>WJ</i> ₅₄	16.7	X	138.34571	71.94607	297.91524	2.01581	0.2307693	0.23863032	2.5742593	20	2 13.1	20.6
319862 2006 <i>WS</i> ₅₄	16.4	X	256.81113	299.37456	255.50503	8.27515	0.0710184	0.22064688	2.7122987	20	—	—
319863 2006 <i>WJ</i> ₅₆	17.2	X	35.86612	328.13975	57.53344	5.45171	0.1888149	0.29220503	2.2491112	20	—	—
319864 2006 <i>WA</i> ₆₂	16.2	X	62.14405	289.83674	152.74103	15.74245	0.1748451	0.23524738	2.5988798	20	1 28.9	19.0
319865 2006 <i>WE</i> ₆₇	16.8	X	128.11280	215.32153	141.42031	4.32838	0.1510986	0.23357339	2.6111822	20	1 9.1	20.5
319866 2006 <i>WY</i> ₇₀	17.1	X	67.59767	124.49624	283.25553	2.45830	0.0150285	0.23054834	2.6340745	20	—	—
319867 2006 <i>WE</i> ₇₃	17.0	X	223.50182	51.47749	243.82725	3.89106	0.0986611	0.24120683	2.5558948	20	1 26.0	20.8
319868 2006 <i>WT</i> ₇₃	17.2	X	316.95851	314.98466	323.42216	1.78995	0.1861011	0.25760031	2.4462741	20	4 11.9	19.7
319869 2006 <i>WS</i> ₇₄	17.5	X	298.70678	353.29971	297.36900	1.03748	0.1355518	0.25548336	2.4597689	20	4 10.2	20.6
319870 2006 <i>WH</i> ₇₇	17.1	X	52.49194	345.32875	239.31281	3.41524	0.1541450	0.26149957	2.4218955	20	8 2.3	19.9
319871 2006 <i>WZ</i> ₈₉	16.8	X	273.83974	203.14779	93.89544	7.95442	0.0456284	0.24515168	2.5284021	20	4 5.1	20.2
319872 2006 <i>WV</i> ₉₁	17.2	X	344.34491	71.22297	210.54442	2.00297	0.1674157	0.26341236	2.4101567	20	6 16.9	19.1
319873 2006 <i>WC</i> ₁₀₁	16.8	X	123.35562	21.53168	27.60440	4.32745	0.2009124	0.24167789	2.5525726	20	3 16.1	20.5
319874 2006 <i>WF</i> ₁₀₂	17.3	X	347.44400	281.72836	116.66292	8.59851	0.2149966	0.28692591	2.2766147	20	—	—
319875 2006 <i>WE</i> ₁₀₆	17.6	X	50.11798	24.99926	75.68022	3.06332	0.0888220	0.23470413	2.6028885	20	1 26.8	20.5
319876 2006 <i>WA</i> ₁₀₈	15.7	X	182.04923	304.05111	92.72952	11.02451	0.1012891	0.17892424	3.1190567	20	4 27.4	20.7
319877 2006 <i>WD</i> ₁₀₉	17.1	X	37.75026	327.32605	81.12211	6.28389	0.0403587	0.22176457	2.7031778	20	—	—
319878 2006 <i>WN</i> ₁₁₁	17.6	X	50.71377	26.37637	86.16447	5.05772	0.0979981	0.23619263	2.5919413	20	2 14.5	20.5
319879 2006 <i>WV</i> ₁₁₁	16.5	X	20.86754	292.66280	135.85738	6.66429	0.3577184	0.22369887	2.6875725	20	—	—
319880 2006 <i>WV</i> ₁₁₂	17.0	X	242.87817	199.41359	30.67092	5.73965	0.1237454	0.22247322	2.6974344	20	—	—
319881 2006 <i>WQ</i> ₁₁₅	16.8	X	3.17822	85.65245	322.01553	8.66176	0.3080584	0.21836970	2.7311222	20	—	—
319882 2006 <i>WB</i> ₁₂₃	18.0	X	94.42863	58.56205	219.35003	1.88707	0.1134530	0.28614229	2.2807693	20	12 4.1	21.2
319883 2006 <i>WC</i> ₁₂₄	17.0	X	224.78090	245.50515	68.50446	3.85732	0.0898615	0.24428296	2.5343928	20	2 22.3	20.7
319884 2006 <i>WQ</i> ₁₂₆	16.6	X	23.05224	16.25875	46.66363	18.53873	0.1764652	0.22284200	2.6944576	20	—	—
319885 2006 <i>WH</i> ₁₂₉	18.2	X	268.61805	215.02943	261.64536	1.29127	0.1440396	0.28107136	2.3081196	20	11 24.8	20.4
319886 2006 <i>WX</i> ₁₃₂	17.4	X	44.29306	173.96724	248.86953	1.17891	0.0696063	0.22814194	2.6525645	20	—	—
319887 2006 <i>WO</i> ₁₄₈	16.3	X	40.78400	321.94775	3.88810	1.77311	0.0644728	0.20718777	2.8285247	20	11 9.4	20.0
319888 2006 <i>WX</i> ₁₅₆	16.6	X	185.12398	338.16039	349.94267	2.92232	0.2021503	0.24185908	2.5512976	20	2 2.2	20.7
319889 2006 <i>WE</i> ₁₅₇	16.5	X	9.01666	178.95525	259.75064	10.61107	0.1466691	0.22504573	2.6768387	20	—	—
319890 2006 <i>WN</i> ₁₅₇	17.2	X	44.68432	81.07892	352.51807	4.76294	0.2494673	0.23045936	2.6347525	20	—	—
319891 2006 <i>WH</i> ₁₆₄	16.9	X	23.28008	25.47540	85.86561	4.68423	0.1548042	0.23132256	2.6281938	20	—	—
319892 2006 <i>WK</i> ₁₇₄	17.3	X	70.09377	300.07570	103.45981	2.78098	0.0910765	0.22822586	2.6519143	20	—	—
319893 2006 <i>WB</i> ₁₇₆	16.7	X	216.43351	327.19002	154.81357	2.55199	0.0449369	0.19743712	2.9209010	20	9 19.3	20.7
319894 2006 <i>WG</i> ₁₈₅	16.4	X	52.45677	62.82681	336.22824	26.08149	0.3211912	0.22579339	2.6709263	20	—	—
319895 2006 <i>WJ</i> ₁₈₇	15.8	X	299.93207	204.35599	90.79906	12.69966	0.1163723	0.18430970	3.0579984	20	5 1.0	20.1
319896 2006 <i>WY</i> ₁₈₈	16.5	X	75.51115	294.56322	83.72316	7.27933	0.0506911	0.22451033	2.6810927	20	—	—
319897 2006 <i>WZ</i> ₁₉₂	16.7	X	349.96951	24.90416	84.94906	3.49244	0.0415834	0.22337470	2.6901721	20	—	—
319898 2006 <i>WL</i> ₁₉₃	17.1	X	155.58902	186.37606	168.18336	1.69240	0.2398858	0.23993929	2.5648884	20	2 10.6	21.4
319899 2006 <i>WR</i> ₂₀₁	17.1	X	110.21429	317.82569	188.58056	2.71534	0.0937005	0.24716109	2.5146795	20	6 22.6	20.5
319900 2006 <i>WB</i> ₂₀₂	16.3	X	321.29179	236.53197	274.50500	11.75740	0.1160111	0.22499121	2.6772711	20	—	—
319901 2006 <i>WV</i> ₂₀₃	16.7	X	338.24533	22.86654	111.42535	5.96660	0.0590042	0.21963112	2.7206550	20	—	—
319902 2006 <i>WE</i> ₂₀₄	16.6	X	85.05020	90.91290	314.92210	5.61942	0.0373705	0.22365347	2.6879362	20	1 2.5	20.0
319903 2006 <i>WK</i> ₂₀₅	16.4	X	82.90846	299.68645	68.29646	7.06885	0.0524682	0.22323812	2.6912692	20	—	—
319904 2006 <i>XC</i> ₄	16.4	X	83.57157	89.50733	280.22982	9.93859	0.3218736	0.22937992	2.6430119	20	—	—
319905 2006 <i>XR</i> ₆	16.1	X	348.46539	249.84221	221.93889	9.58941	0.1104093	0.22315289	2.6919545	20	—	—
319906 2006 <i>XN</i> ₈	16.2	X	74.65270	278.29485	104.56519	10.42262	0.1096615	0.22521971	2.6754599	20	—	—
319907 2006 <i>XP</i> ₁₅	16.8											

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
319921 2006 XO ₇₃	16.5	X	177.69036	345.51740	298.53195	4.54856	0.0557875	0.21923395	2.7239398	20	—	—
319922 2006 YV ₁₁	16.1	X	273.66888	250.49300	292.51104	7.99149	0.0883790	0.21669792	2.7451509	20	—	—
319923 2006 YE ₁₇	17.1	X	160.07105	185.46042	108.62638	6.61425	0.1430367	0.28897610	2.2658341	20	—	—
319924 2006 YR ₁₇	15.8	X	243.86568	282.24234	298.51588	4.47685	0.0479777	0.21270937	2.7793611	20	—	—
319925 2006 YZ ₁₉	16.5	X	293.32840	207.15265	306.39885	15.12739	0.1121806	0.21097155	2.7946030	20	—	—
319926 2006 YH ₂₀	16.9	X	49.62386	253.40459	193.81641	4.07612	0.0679817	0.23300062	2.6155599	20	1 5.8	20.0
319927 2006 YX ₂₂	17.2	X	25.43380	87.19197	311.34904	4.34828	0.0669150	0.21441924	2.7645655	20	—	—
319928 2006 YB ₂₆	16.3	X	347.07676	200.41887	295.00478	10.76490	0.1278186	0.22271171	2.6955084	20	—	—
319929 2006 YF ₂₆	17.2	X	89.38671	267.48557	69.91140	2.90790	0.0928196	0.21425040	2.7660177	20	—	—
319930 2006 YH ₃₅	16.8	X	244.19866	240.08563	355.06157	4.13014	0.0531899	0.22077296	2.7112660	20	—	—
319931 2006 YD ₃₈	16.9	X	78.98547	40.03162	2.80766	4.37367	0.1195611	0.22347384	2.6893764	20	—	—
319932 2006 YL ₄₁	16.1	X	121.44121	58.66331	272.22194	16.41576	0.1657902	0.22499506	2.6772406	20	—	—
319933 2006 YQ ₄₂	16.6	X	96.01223	88.59618	14.78358	5.14602	0.1445974	0.23959071	2.5673756	20	4 14.1	19.9
319934 2006 YS ₄₅	17.2	X	125.23322	155.50696	192.17317	1.50048	0.1004330	0.22853523	2.6495204	20	—	—
319935 2006 YS ₄₈	17.0	X	292.49995	271.57400	115.35142	6.30722	0.1350818	0.26633714	2.3924795	20	8 23.9	19.4
319936 2006 YE ₅₀	16.9	X	64.38366	119.29832	297.05544	4.40603	0.0568758	0.22194254	2.7017325	20	—	—
319937 2006 YU ₅₃	16.3	X	264.52302	277.96374	150.84488	11.03655	0.1064707	0.18774494	3.0205815	20	9 1.4	20.3
319938 2006 YD ₅₃	15.5	X	157.06690	259.31446	294.78299	20.36055	0.2610545	0.18568775	3.0428500	20	9 26.7	21.4
319939 2007 AR ₂	16.5	X	249.82701	243.40292	94.23640	2.97373	0.2133332	0.25311275	2.4751035	20	4 7.3	20.4
319940 2007 AQ ₁₅	16.5	X	118.08204	62.11331	280.24447	8.11523	0.1352697	0.22045370	2.7138830	20	—	—
319941 2007 BP ₈	15.7	X	312.22086	9.42736	114.67585	13.74926	0.1215009	0.21028031	2.8007239	20	—	—
319942 2007 BM ₉	16.5	X	304.20223	128.60575	33.49417	3.84532	0.1324747	0.21706610	2.7420458	20	—	—
319943 2007 BE ₁₁	17.0	X	20.90806	45.29221	353.81111	5.91102	0.0744132	0.20870319	2.8148158	20	—	—
319944 2007 BR ₁₆	16.7	X	333.88411	274.61185	181.08608	3.30599	0.1334225	0.21198627	2.7856779	20	—	—
319945 2007 BE ₁₇	16.4	X	295.10340	339.42062	128.44217	16.00797	0.0936512	0.20404391	2.8575047	20	12 11.5	20.2
319946 2007 BG ₂₀	16.3	X	273.00730	92.50348	91.60516	8.58887	0.1643265	0.21321033	2.7750058	20	—	—
319947 2007 BU ₂₆	16.5	X	69.86177	268.81706	120.67047	4.86377	0.1133249	0.21878152	2.7276939	20	—	—
319948 2007 BZ ₂₇	16.5	X	46.67060	20.15921	323.36317	5.57400	0.0745004	0.20294344	2.8678254	20	12 9.3	20.5
319949 2007 BC ₂₈	16.7	X	0.04200	136.23900	315.02481	8.20396	0.1095240	0.21580807	2.7526919	20	—	—
319950 2007 BJ ₃₂	18.1	X	293.78770	295.74141	134.60903	2.10551	0.1873143	0.27463775	2.3440267	20	10 27.9	20.0
319951 2007 BE ₃₄	16.7	X	288.21508	279.72483	297.43201	1.70217	0.1195619	0.22374707	2.6871865	20	—	—
319952 2007 BN ₃₆	15.9	X	98.14127	132.51802	80.90320	6.75269	0.0982830	0.18310929	3.0713488	20	9 3.7	20.5
319953 2007 BY ₃₇	18.3	X	80.69318	265.53630	157.10156	2.16776	0.0533424	0.30026193	2.2086956	20	1 3.7	20.4
319954 2007 BW ₃₉	16.9	X	293.09649	69.17498	113.78746	6.14281	0.0527968	0.21873158	2.7281091	20	—	—
319955 2007 BG ₄₇	16.2	X	176.70407	319.15049	354.64040	6.81258	0.0417042	0.21872749	2.7281430	20	1 2.3	20.1
319956 2007 BM ₅₇	16.1	X	233.54013	152.58762	97.52580	7.88949	0.0393042	0.22091059	2.7101398	20	—	—
319957 2007 BL ₆₄	16.8	X	322.47839	11.26185	144.56328	7.55841	0.0070578	0.21897970	2.7260479	20	—	—
319958 2007 BD ₆₅	16.8	X	146.98022	36.07748	152.22918	3.17689	0.1115968	0.18569341	3.0427882	20	9 22.2	21.5
319959 2007 BO ₇₀	15.8	X	136.51787	63.79742	177.77427	7.07073	0.1597560	0.18230995	3.0803197	20	11 15.7	20.9
319960 2007 BB ₇₄	16.4	X	79.30442	333.52369	332.15735	9.26091	0.0387522	0.19538225	2.9413451	20	11 23.7	20.8
319961 2007 BX ₇₄	15.7	X	55.45634	183.06056	148.96122	12.37427	0.2378466	0.20076242	2.8885580	20	12 26.6	20.3
319962 2007 BP ₇₅	16.8	X	116.94998	255.30597	116.59256	4.00599	0.0766541	0.22393114	2.6857138	20	1 6.1	20.3
319963 2007 BT ₇₆	17.1	X	57.75565	88.24004	302.95222	3.85599	0.1035192	0.21770392	2.7366876	20	—	—
319964 2007 BH ₇₈	16.6	X	247.15871	242.46608	328.43122	1.27665	0.1724404	0.21156828	2.7893457	20	—	—
319965 2007 BC ₉₉	16.9	X	72.72615	70.60693	259.22385	0.99124	0.0747305	0.20512168	2.8474865	20	12 24.1	21.0
319966 2007 BT ₉₉	16.2	X	230.65253	115.31922	99.35857	6.39297	0.0346315	0.21239110	2.7821370	20	—	—
319967 2007 BP ₁₀₀	17.2	X	351.29212	174.27696	286.71840	4.00127	0.1099504	0.21667933	2.7453079	20	—	—
319968 2007 BC ₁₀₂	15.5	X	196.27910	33.06932	80.24304	10.02753	0.0492647	0.18579371	3.0416930	20	8 16.7	20.1
319969 2007 CX ₂	17.4	X	13.63612	262.28753	163.61564	4.35068	0.0910171	0.21194181	2.7860674	20	—	—
319970 2007 CK ₃	16.5	X	59.45069	218.07475	163.57848	4.72311	0.0844479	0.21181332	2.7871940	20	—	—
319971 2007 CU ₆	17.2	X	11.69782	82.42653	344.70564	3.45736	0.0877758	0.21485121	2.7608587	20	—	—
319972 2007 CC ₉	16.2	X	181.73851	147.47929	130.05791	8.46340	0.1247125	0.21474507	2.7617684	20	—	—
319973 2007 CQ ₁₅	16.8	X	156.66215	258.31777	123.71204	2.82276	0.0898367	0.23621516	2.5917765	20	3 6.1	20.5
319974 2007 CB ₁₇	18.1	X	205.12925	70.16979	182.63107	3.90997	0.0855282	0.28613462	2.2808100	20	—	—
319975 2007 CB ₁₈	16.8	X	306.08074	6.02776	99.75827	3.27117	0.0218662	0.20356020	2.8620297	20	12 25.4	20.7
319976 2007 CA ₂₈	16.2	X	145.13593	338.30897	325.93974	7.22178	0.1478311	0.20967009	2.8061554	20	—	—
319977 2007 CP ₂₈	16.9	X	277.48174	221.71883	303.25189	13.30795	0.0933734	0.21258043	2.7804848	20	—	—
319978 2007 CH ₂₉	18.0	X	67.63472	260.28367	146.07938	1.90347	0.0701258	0.29431495	2.2383492	20	—	—
319979 2007 CV ₃₀	16.7	X	41.69834	295.93869	139.08011	7.22078	0.0437354	0.21918139	2.7243753	20	—	—
319980 2007 CX ₃₀	17.4	X	253.82587	98.73592	136.54956	8.37282	0.2730864	0.21406409	2.7676224	20	—	—
319981 2007 CW ₃₉	16.9	X	53.71215	42.16507	113.33617	5.45417	0.0693198	0.20393636	2.8585093	20	—	—
319982 2007 CN ₅₀	15.8	X	151.09221	61.71804	316.56139	12.99653	0.1744854	0.18637715	3.0353418	20	10 1.1	21.0
319983 2007 CL ₅₄	15.2	X	33.15318	314.71679	335.90435	15.68179	0.1490460	0.18126092	3.0921930	20	9 18.3	19.2
319984 2007 CB ₅₉	16.2	X	61.11771	345.36624	167.14041	13.61558	0.0483428	0.23730515	2.5838340	20	4 21.2	19.6
319985 2007 CU ₆₀	17.8	X	0.07325	68.29464	132.73592	23.80801	0.0688243	0.37968997	1.8887884	20	3 8.4	19.5
319986 2007 CW ₆₂	16.2	X	244.73955	45.25010	134.87710	16.78216	0.1771291	0.20380070	2.8597777	20	12 18.9	20.3
319987 2007 CY ₇₉	16.1	X	173.83425	57.17721	125.69667	2.84991	0.0154295	0.18797273	3.0181408	20	10 16.4	20.4
319988 2007 DK	19.5	X	303.71419	355.05900	290.84935	5.17927	0.5504482	0.59778912	1.3956313	20	1 23.3	21.4
319989 2007 DW ₁	15.4	X	155.36288	176.01721	300.13132	14.93291	0.0582481	0.17413530	3.1759830	20	7 1.8	20.1
319990 2007 DO ₂	15.8	X	84.66237	85.83907	139.25735	17.95937	0.1671488	0.17789332	3.1310954	20	9 10.3	20.6
319991 2007 DY ₇	17.9	X	53.03616	24.63090	157.55834	22.53940	0.0751193	0.38603577	1.8680322	20	5 24.8	20.1
319992 2007 DY ₉	16.3	X	136.72546	256.01102	354.18693	11.32069	0.0688204	0.19279597	2.7675913	20	11 21.1	21.0
319993 2007 DD ₁₇	16.6	X	159.22741	193.18185	119.62618	6.58405	0.0128214	0.21506445	2.9507335	20	—	—
319994 2007 DO ₂₁	16.7	X	101.26010	197.24415	127.54859	3.05153	0.0638151	0.20273515	2.8697893	20	—	—
319995 2007 DS ₂₁	16.0	X	297.00882	63.47976	349.27480	8.16839	0.0794176	0.189536				