

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>	
192001	Raynatedford	15.9	X	211.56732	96.12784	312.29576	4.77012	0.0255415	0.21486612	2.7607310	21	6 1.8	19.8
192002	2005 XB ₁₁₇	16.7	X	112.26713	1.05095	348.52961	1.63735	0.2095703	0.25737831	2.4476807	21	—	—
192003	2005 YH ₁	16.0	X	226.67049	191.87048	344.78842	6.99576	0.0880913	0.24586577	2.5235040	21	12 1.4	19.6
192004	2005 YH ₂₄	16.7	X	63.04573	150.17655	127.75149	2.72757	0.2005810	0.23118673	2.6292232	21	10 23.6	20.3
192005	2005 YZ ₂₄	16.6	X	6.85811	256.84434	143.54477	2.33502	0.0543591	0.24437824	2.5337340	21	12 26.7	19.7
192006	2005 YO ₂₉	16.8	X	96.24001	254.95519	353.55133	2.06145	0.0192285	0.23170889	2.6252716	21	9 29.8	20.3
192007	2005 YO ₃₃	16.7	X	51.22929	92.06990	137.88955	1.44157	0.1152102	0.21924213	2.7238721	21	7 18.3	19.9
192008	2005 YJ ₃₅	16.5	X	145.74218	188.28209	112.06208	3.19133	0.1994212	0.25697223	2.4502586	21	—	—
192009	2005 YG ₄₁	17.4	X	67.65901	147.63653	196.02308	2.18323	0.1794143	0.31522782	2.1382231	21	—	—
192010	2005 YA ₄₂	16.8	X	21.52070	294.49454	34.08010	1.07731	0.0557205	0.23332015	2.6131713	21	10 11.2	20.1
192011	2005 YP ₄₂	16.1	X	45.59272	248.72662	253.33002	1.79788	0.1276496	0.20331250	2.8643538	21	3 10.2	19.3
192012	2005 YT ₆₀	16.5	X	220.49796	81.39438	354.12221	1.32824	0.0360405	0.22338203	2.6901132	21	7 19.5	20.2
192013	2005 YR ₆₁	15.6	X	13.26158	341.17546	289.21707	12.94318	0.0377310	0.22196451	2.7015543	21	7 7.8	18.9
192014	2005 YV ₆₆	15.7	X	2.38782	209.96336	104.42199	10.98134	0.1867009	0.22735807	2.6586580	21	9 4.1	18.4
192015	2005 YU ₇₀	16.8	X	124.73020	303.19200	313.68380	2.24097	0.1117226	0.24304220	2.5430111	21	11 21.6	20.8
192016	2005 YP ₇₂	16.9	X	159.22075	47.85672	289.86446	5.96012	0.1380549	0.26348007	2.4097438	21	1 3.1	20.3
192017	2005 YT ₇₇	14.7	X	185.21995	300.56824	293.00956	21.18666	0.2062304	0.17903889	3.1177249	21	12 9.2	20.2
192018	2005 YV ₁₀₉	15.7	X	329.35313	14.93935	264.12524	4.07199	0.1396991	0.21406112	2.7676480	21	5 1.6	19.0
192019	2005 YA ₁₁₆	16.3	X	133.38224	313.27225	45.00431	2.88932	0.2323538	0.26130938	2.4230705	21	1 13.1	19.6
192020	2005 YJ ₁₄₈	16.6	X	33.50799	309.30068	38.68731	3.30315	0.0757549	0.23992679	2.5649774	21	11 26.5	19.8
192021	2005 YN ₁₄₈	16.6	X	162.69273	230.37614	27.63334	3.47985	0.0505487	0.24472928	2.5313105	21	—	—
192022	2005 YG ₁₅₈	16.2	X	117.91635	154.51070	184.26850	2.14080	0.2229224	0.25661543	2.4525293	21	—	—
192023	2005 YK ₁₇₅	16.0	X	344.03261	219.26742	66.61964	3.06724	0.1884657	0.21765684	2.7370822	21	6 2.8	18.7
192024	2005 YA ₁₇₆	16.1	X	133.63796	158.83798	306.99713	3.02055	0.0631053	0.21323034	2.7748322	21	5 14.5	20.1
192025	2005 YH ₁₉₃	16.0	X	11.09895	296.64221	298.52833	2.99404	0.0448807	0.21220153	2.7837936	21	5 16.0	19.4
192026	2005 YM ₁₉₃	16.4	X	246.61602	142.45340	306.32684	3.02221	0.0442468	0.22907582	2.6453505	21	9 6.9	19.9
192027	2005 YG ₂₀₁	15.7	X	30.80160	174.85925	117.92415	14.27295	0.1738939	0.22662963	2.6643519	21	9 28.5	19.0
192028	2005 YO ₂₁₁	15.8	X	245.59190	290.75428	192.91932	12.39473	0.1222311	0.23830493	2.5766022	21	10 13.1	19.1
192029	2005 YS ₂₁₁	16.1	X	319.78344	290.20734	95.36171	10.00739	0.0840408	0.23261743	2.6184315	21	9 29.3	19.3
192030	2005 YS ₂₂₄	16.0	X	337.23418	192.64053	60.60575	3.33110	0.1394966	0.21353464	2.7721953	21	4 11.4	19.2
192031	2005 YU ₂₂₅	16.0	X	57.05404	159.05274	103.26168	13.87407	0.0618731	0.22870709	2.6481930	21	9 8.1	19.7
192032	2005 YF ₂₄₇	15.8	X	278.07035	266.89174	93.87738	6.60379	0.0865366	0.21991632	2.7183022	21	6 16.1	19.3
192033	2005 YG ₂₄₇	16.6	X	124.72319	9.48263	1.89683	2.68612	0.2375203	0.26175717	2.4203062	21	1 20.6	19.7
192034	2005 YL ₂₆₉	16.2	X	323.46690	273.53533	136.70495	15.50234	0.1332464	0.23584775	2.5944675	21	11 8.5	19.3
192035	2005 YV ₂₇₃	16.9	X	301.36534	50.48408	0.48713	1.82576	0.0517918	0.23188212	2.6239640	21	10 2.4	20.2
192036	2005 YW ₂₇₃	15.3	X	255.20428	263.43586	322.19179	11.89214	0.0804066	0.18821983	3.0154986	21	—	—
192037	2005 YU ₂₇₄	16.1	X	200.95299	324.69197	146.35101	4.17831	0.1934703	0.22271360	2.6954931	21	8 2.0	20.6
192038	2005 YE ₂₇₅	15.3	X	11.77201	307.08579	305.03466	12.03955	0.0319766	0.21286500	2.7780062	21	6 9.8	19.1
192039	2005 YM ₂₈₆	15.9	X	289.30116	151.56015	154.72883	8.49434	0.1207667	0.21172467	2.7879720	21	4 17.5	19.8
192040	2005 YF ₂₈₇	15.6	X	294.02777	165.21128	299.60909	10.62637	0.0447314	0.23783014	2.5800302	21	12 4.0	18.9
192041	2005 YG ₂₈₇	15.6	X	45.83034	308.22690	170.57520	13.90798	0.1001126	0.22390494	2.6859233	21	8 15.4	18.8
192042	2006 AP ₄	16.3	X	87.89971	198.36365	112.77546	8.04354	0.2010368	0.24313383	2.5423721	21	12 28.7	20.4
192043	2006 AK ₁₄	17.1	X	69.30102	230.10824	177.94512	1.05665	0.1779151	0.25676258	2.4515922	21	—	—
192044	2006 AH ₃₂	15.0	X	320.20471	203.61767	348.04479	14.22623	0.0299065	0.19534171	2.9417520	21	1 19.5	19.2
192045	2006 AX ₄₅	15.4	X	5.25419	124.68358	121.54110	13.65748	0.0600932	0.21421332	2.7663369	21	5 26.9	19.1
192046	2006 AE ₇₃	16.1	X	73.77425	273.51779	164.99065	7.12150	0.2476973	0.26256446	2.4153427	21	1 31.0	18.0
192047	2006 AX ₇₈	16.4	X	311.03694	44.04939	278.19100	4.85283	0.1504628	0.21943575	2.7222695	21	5 30.9	19.7
192048	2006 AY ₈₅	14.6	X	252.44776	164.73070	10.56930	17.83328	0.1093579	0.17764780	3.1339795	21	12 14.3	19.3
192049	2006 AY ₉₂	16.7	X	155.86254	245.02456	121.51070	5.56213	0.2723470	0.26657633	2.3910481	21	2 18.2	20.5
192050	2006 AJ ₉₃	16.1	X	15.41894	320.27823	316.12963	2.50221	0.1461944	0.22042476	2.7141205	21	7 26.8	18.7
192051	2006 AT ₉₅	15.7	X	288.41374	205.41415	144.74757	10.07704	0.0562435	0.21868654	2.7284836	21	6 21.1	19.5
192052	2006 AO ₉₆	16.1	X	17.62657	269.02002	173.93559	13.22319	0.2143599	0.25298929	2.7590877	21	—	—
192053	2006 AV ₉₆	16.2	X	123.50729	144.85599	27.03461	1.30381	0.0427452	0.22009610	2.7168218	21	7 27.5	19.8
192054	2006 BO ₁₂	16.1	X	210.10501	169.26436	158.72327	2.28137	0.0578240	0.19549075	2.9402566	21	2 19.9	20.4
192055	2006 BA ₃₆	15.7	X	350.83626	199.51604	114.21011	4.82590	0.0917467	0.22237750	2.6982084	21	8 3.3	18.8
192056	2006 BR ₄₀	16.1	X	165.05498	339.23244	142.03389	3.87176	0.0150070	0.21528811	2.7571222	21	7 9.9	19.9
192057	2006 BC ₄₁	15.7	X	229.13519	300.36817	73.04397	4.00291	0.0307880	0.21147685	2.7901496	21	5 9.8	19.5
192058	2006 BT ₄₃	16.3	X	188.14056	232.24340	149.81827	2.37678	0.0844238	0.20391745	2.8586860	21	4 3.5	20.7
192059	2006 BA ₄₅	15.9	X	309.20176	277.34973	149.97815	10.01681	0.1086573	0.23391725	2.6087225	21	11 5.3	19.0
192060	2006 BW ₅₈	16.1	X	226.67272	256.07162	141.87017	4.33213	0.1005967	0.21341581	2.7732242	21	6 2.1	20.3
192061	2006 BE ₆₀	15.9	X	189.33854	102.74387	318.53847	5.89177	0.0256054	0.21049337	2.7988337	21	5 21.1	19.9
192062	2006 BY ₇₉	14.6	X	120.90549	209.41716	127.79944	11.83949	0.0216295	0.18106125	3.0944659	21	—	—
192063	2006 BF ₈₃	15.4	X	329.66021	33.80378	146.70058	13.16466	0.0490802	0.19303859	2.9651042	21	1 11.1	19.6
192064	2006 BX ₈₃	16.5	X	316.10954	342.97471	28.71994	1.97051	0.0665541	0.22767726	2.6561725	21	8 30.6	19.7
192065	2006 BY ₈₃	16.8	X	99.26694	354.42514	22.32714	1.92750	0.1966015	0.25681082	2.4512852	21	—	—
192066	2006 BF ₉₀	15.4	X	203.85926	158.29034	140.20709	11.27669	0.0911813	0.18948192	3.0020934	21	1 10.6	20.1
192067	2006 BT ₉₀	16.0	X	203.13726	266.19473	105.63170	3.08306	0.0972751	0.20362457	2.8614265	21	4 7.2	20.3
192068	2006 BA ₉₃	16.5	X	153.53955	265.28629	170.15581	1.86548	0.0418055	0.20662848	2.8336264	21	4 28.9	20.4
192069	2006 BU ₉₃	15.5	X	300.08230	209.57836	158.05809	6.67978	0.0387739	0.21982870	2.7190245	21	8 1.8	19.1
192070	2006 BH ₉₆	15.9	X	67.84298	269.01040	199.51336	1.20492	0.0555887	0.19569394	2.9382211	21	2 23.5	19.8
192071	2006 BW ₉₆	15.9	X	173.85388	225.32812	126.17822	2.81465	0.1213944	0.19537805	2.9413873	21	2 13.7	20.5
192072													

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
192081 2006 BW ₁₄₂	15.4	X	87.92783	170.33314	154.25970	11.37402	0.1147133	0.17168513	3.2061285	21	12 25.2	20.4
192082 2006 BX ₁₄₅	15.9	X	165.31764	334.59674	118.91972	5.11550	0.0380628	0.21292731	2.7774642	21	6 5.3	19.8
192083 2006 BS ₁₅₅	15.8	X	161.08491	339.29300	116.57122	5.53910	0.0307404	0.21114614	2.7930623	21	6 2.9	19.8
192084 2006 BV ₁₅₅	15.0	X	164.47775	117.99018	137.40263	10.65679	0.0495133	0.17419179	3.1752963	21	12 20.5	19.9
192085 2006 BY ₁₆₃	15.8	X	302.38336	226.36540	132.60864	7.10364	0.0460949	0.22122300	2.7075877	21	7 23.9	19.4
192086 2006 BL ₁₆₆	15.8	X	256.43233	67.23319	324.72565	5.40366	0.0289269	0.21725635	2.7404449	21	7 8.8	19.5
192087 2006 BM ₁₆₇	15.4	X	136.50433	173.16688	143.37098	12.72941	0.0647590	0.18179798	3.0861002	21	—	—
192088 2006 BG ₁₆₉	15.6	X	188.02985	160.57732	150.08157	9.43917	0.0096901	0.18847724	3.0127471	21	1 5.2	20.0
192089 2006 BM ₁₈₃	15.5	X	272.72344	226.87076	121.43781	8.37549	0.0537994	0.21337233	2.7699672	21	5 30.1	19.4
192090 2006 BQ ₁₉₂	16.1	X	40.02591	189.39290	155.72971	6.01215	0.2419824	0.23727952	2.5840201	21	12 25.9	19.6
192091 2006 BQ ₁₉₆	15.8	X	246.57566	196.55863	163.78512	6.91425	0.0318148	0.20950288	2.8076484	21	5 15.9	19.8
192092 2006 BD ₂₀₀	15.7	X	159.17774	163.97210	123.87256	2.45669	0.1296247	0.17664342	3.1458480	21	—	—
192093 2006 BG ₂₀₀	16.9	X	141.03745	355.72260	357.12974	0.88167	0.1980638	0.26222840	2.4174058	21	1 9.8	20.1
192094 2006 BH ₂₀₃	15.9	X	267.52609	234.85433	26.33781	1.97675	0.0790925	0.19461293	2.9490915	21	2 1.0	20.2
192095 2006 BJ ₂₀₇	16.0	X	281.22846	39.54435	277.47140	2.73305	0.0869736	0.21070625	2.7969483	21	4 22.2	19.9
192096 2006 BX ₂₀₇	16.0	X	252.16493	128.05843	316.50128	13.28162	0.0792259	0.22688416	2.6623589	21	8 31.6	19.8
192097 2006 BF ₂₁₀	14.8	X	260.04586	358.30862	158.69996	28.10159	0.125358	0.17509376	3.1643823	21	12 3.7	19.8
192098 2006 BT ₂₅₂	16.1	X	178.16755	211.20739	164.74939	2.22999	0.0843615	0.20178578	2.8787836	21	3 16.2	20.5
192099 2006 BS ₂₅₃	16.1	X	207.24439	8.71969	323.19692	1.31932	0.0518278	0.19758022	2.9194906	21	2 21.3	20.4
192100 2006 BA ₂₆₉	15.7	X	82.90085	5.32528	20.25792	11.51962	0.2579830	0.25443356	2.4665303	21	—	—
192101 2006 BO ₂₇₀	15.4	X	51.55573	141.43870	313.38462	10.24587	0.0219279	0.19218034	2.9739255	21	1 15.6	19.5
192102 2006 BY ₂₇₈	15.9	X	255.67725	28.38178	300.03254	1.06813	0.0646217	0.20315439	2.8658398	21	4 10.1	20.0
192103 2006 CL ₁₁	15.6	X	284.31883	184.04844	131.44342	6.19522	0.1103873	0.21161351	2.7889483	21	4 24.6	19.6
192104 2006 CK ₁₂	16.5	X	288.05332	95.78280	257.99999	0.54658	0.0746575	0.21838011	2.7310354	21	6 22.1	20.1
192105 2006 CL ₁₈	16.0	X	128.50209	138.25917	1.44648	3.68149	0.0441955	0.21335887	2.7731716	21	6 20.5	19.9
192106 2006 CE ₂₃	15.2	X	320.04267	337.12254	158.29890	4.49261	0.1188784	0.17471995	3.1688941	21	—	—
192107 2006 CD ₂₆	15.5	X	324.60984	189.15458	119.10951	4.89294	0.0820068	0.21611972	2.7500449	21	6 12.9	18.9
192108 2006 CO ₂₉	16.2	X	244.69207	265.25193	162.43942	4.09152	0.0718363	0.22320796	2.6915117	21	8 3.2	20.0
192109 2006 CK ₃₉	15.1	X	303.21131	210.96034	311.84715	8.40580	0.0661848	0.18283609	3.0744075	21	—	—
192110 2006 CR ₄₃	15.5	X	132.97771	296.68268	22.90075	6.16684	0.1987844	0.17688766	3.1429515	21	—	—
192111 2006 CT ₄₄	16.5	X	277.32610	346.18611	8.29651	4.60103	0.1199812	0.21830505	2.7316614	21	5 31.5	20.3
192112 2006 CX ₅₆	15.9	X	202.53343	128.00010	340.37257	10.50230	0.1155275	0.22129910	2.7069670	21	8 6.8	20.0
192113 2006 CB ₅₇	16.1	X	330.54281	124.34592	173.42457	2.18189	0.0107174	0.21232958	2.7826744	21	6 14.5	19.9
192114 2006 CR ₆₆	15.4	X	44.15901	276.58452	202.30698	3.82949	0.0250235	0.19323009	2.9631448	21	2 2.2	19.5
192115 2006 DG ₂	16.5	X	195.47946	267.12188	158.22040	1.83364	0.0857734	0.21292677	2.7774689	21	6 3.7	20.7
192116 2006 DM ₉	15.2	X	292.99948	227.82559	15.99347	12.90618	0.0225033	0.19541866	2.9409797	21	2 21.3	19.4
192117 2006 DF ₂₇	16.3	X	145.04998	185.73075	156.31744	3.54627	0.1064452	0.18392996	3.0622059	21	1 4.7	20.9
192118 2006 DN ₃₀	15.5	X	208.76389	94.18209	192.94604	1.37849	0.0557684	0.18518415	3.0487593	21	1 2.8	20.0
192119 2006 DG ₃₂	15.8	X	307.85709	233.12010	316.26953	0.83868	0.1124728	0.18594860	3.0400036	21	—	—
192120 2006 DB ₄₄	16.0	X	237.62995	122.93353	159.08826	10.55831	0.0231976	0.19238378	2.9718286	21	1 26.9	20.3
192121 2006 DG ₄₅	15.7	X	137.04002	313.53558	350.42283	4.35882	0.1114323	0.17653440	3.1471430	21	—	—
192122 2006 DB ₅₃	15.6	X	184.02379	297.97403	337.35032	8.82049	0.0643503	0.17895657	3.1186810	21	—	—
192123 2006 DJ ₅₉	15.9	X	245.05622	115.74306	323.34487	1.85955	0.0582581	0.22006065	2.7171136	21	8 21.3	19.7
192124 2006 DO ₅₉	16.1	X	85.87673	174.86977	275.62224	0.47870	0.0630589	0.19390766	2.9562381	21	2 26.5	19.9
192125 2006 DB ₆₉	15.4	X	57.74112	187.88531	303.03825	0.83450	0.0324032	0.19699332	2.9252863	21	3 7.7	19.1
192126 2006 DF ₇₄	14.9	X	82.83424	325.72205	110.87882	11.75488	0.0621599	0.19225620	2.9731431	21	2 6.9	19.9
192127 2006 DY ₇₇	16.1	X	339.92504	218.23612	153.29099	12.90169	0.2274799	0.22848485	2.6499099	21	10 11.9	18.3
192128 2006 DV ₉₄	16.4	X	72.19583	257.62783	103.58382	0.64156	0.0924790	0.23719534	2.5846314	21	—	—
192129 2006 DN ₉₈	15.7	X	156.10579	137.73041	159.81750	9.65163	0.1489357	0.17911156	3.1168816	21	—	—
192130 2006 DZ ₁₀₁	16.1	X	208.30045	267.44412	135.97303	4.92534	0.1136300	0.21001086	2.8031191	21	5 20.7	20.5
192131 2006 DD ₁₁₆	15.6	X	8.00790	242.40309	143.95624	3.61048	0.1666096	0.23198023	2.6232242	21	12 21.9	18.6
192132 2006 DJ ₁₂₀	15.2	X	185.41619	208.26472	74.98370	3.24627	0.0446679	0.18165524	3.0877166	21	—	—
192133 2006 DZ ₁₂₀	15.3	X	246.48795	193.37787	35.26418	7.27190	0.0334098	0.18547668	3.0451580	21	—	—
192134 2006 DJ ₁₂₄	16.5	X	21.52819	193.96149	172.67011	6.02249	0.2924130	0.23597937	2.5935026	21	—	—
192135 2006 DF ₁₅₉	16.1	X	252.27539	222.81727	5.42595	1.99280	0.0467769	0.18304262	3.0720944	21	—	—
192136 2006 DS ₁₆₀	15.9	X	123.25951	188.93160	165.65916	6.64747	0.0540178	0.18402129	3.0611927	21	—	—
192137 2006 DZ ₁₈₇	15.5	X	108.68195	198.03311	109.02395	3.23289	0.0653813	0.16937604	3.2352020	21	12 21.2	20.4
192138 2006 DX ₁₉₅	15.8	X	303.37518	35.09075	175.90658	1.22222	0.1485841	0.18660873	3.0328301	21	1 3.9	20.2
192139 2006 DC ₁₉₈	14.9	X	339.79215	14.14409	134.52636	11.43713	0.0496759	0.18346719	3.0673532	21	—	—
192140 2006 EV ₂₆	15.2	X	71.25274	270.34500	161.34295	3.29197	0.0626555	0.19009116	2.9956755	21	1 15.1	19.2
192141 2006 EB ₄₁	15.7	X	203.37877	328.28506	236.74004	2.41906	0.0224157	0.16940937	3.2347776	21	12 4.7	20.2
192142 2006 FB ₂	14.8	X	254.72403	8.61852	171.27641	24.37653	0.0743779	0.17700485	3.1415642	21	12 29.6	19.7
192143 2006 FC ₈	16.3	X	213.05023	256.67015	186.23877	2.78073	0.1207880	0.21319505	2.7751383	21	7 12.7	20.6
192144 2006 FR ₉	15.1	X	17.52805	320.81480	169.41075	9.98991	0.1051236	0.18744404	3.0238132	21	1 10.7	18.9
192145 2006 FG ₂₁	15.6	X	274.78813	341.68117	8.69240	3.65018	0.1063681	0.21094504	2.7948371	21	5 25.2	19.6
192146 2006 FP ₂₂	15.3	X	200.79790	82.62573	179.81581	15.51131	0.0479345	0.17747451	3.1360193	21	—	—
192147 2006 FS ₄₀	15.9	X	158.16100	29.59204	30.44232	2.25096	0.0653307	0.20357492	2.8618917	21	4 16.5	19.9
192148 2006 FK ₄₃	15.5	X	8.69816	358.96729	150.90992	3.72417	0.1462418	0.18835422	3.0140640	21	1 19.2	18.9
192149 2006 FV ₄₇	14.8	X	168.44147	205.86791	121.78325	12.41385	0.0381362	0.18582554	3.0413456	21	1 6.0	19.1
192150 2006 GC ₄₀	14.8	X	302.14843	183.78562	6.97030	14.66148	0.0898175	0.18206751	3.0830536	21	—	—
192151 2006 HD ₅	14.6	X	87.34028	218.44139	178.90588	21.94860	0.0382493	0.17973847	3.1096298	21	—	—
192152 2006 HC ₇	15.3	X	118.57027	289.76551	207.39988	14.45915	0.0917078	0.20912515	2.8110282	21	6 10.8	19.6
192153 2006 HH ₈	15.4	X	50.11167	111.23142	345.59675	1.79025	0.0549428	0.18766086	3.0214836	21	1 18.0	19.2
192154 2006 HN ₉	14.5	X	154.63593	94.65088	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>		
192161	2007	CY ₃	16.6 ^m	X	115.75323	106.97972	147.01609	3.93660	0.2399591	0.24354433	2.5395145	21	11 17.4	20.9
192162	2007	CN ₄₁	16.0	X	173.49458	278.47819	330.26138	3.70937	0.1471214	0.25486656	2.4637359	21	12 30.6	19.9
192163	2007	CM ₄₂	16.8	X	191.92501	105.54962	155.65695	2.56173	0.1813503	0.26029340	2.4293716	21	—	—
192164	2007	DB ₁₁	16.8	X	162.80994	159.33478	159.06136	6.13589	0.1285994	0.26419642	2.4053859	21	—	—
192165	2007	DG ₁₃	16.7	X	292.55682	294.01996	316.19066	6.86325	0.1050237	0.27732347	2.3288685	21	1 28.8	19.6
192166	2007	DJ ₁₈	17.1	X	224.56580	273.19620	8.43655	0.46059	0.1975864	0.26840135	2.3801971	21	—	—
192167	2007	DQ ₁₈	16.4	X	175.26797	287.81718	340.23813	4.37080	0.1147056	0.25790057	2.4443751	21	—	—
192168	2007	DT ₅₃	17.5	X	92.61946	56.77439	188.91981	3.55552	0.0897164	0.30457430	2.1877980	21	10 9.4	20.2
192169	2007	DR ₇₅	16.6	X	136.21490	141.02039	146.19703	3.37489	0.1847444	0.25087671	2.4897887	21	—	—
192170	2007	DV ₈₂	16.7	X	220.46986	312.38482	277.09411	1.68413	0.1679525	0.25694706	2.4504186	21	—	—
192171	2007	DC ₈₃	16.8	X	299.08696	214.49507	349.08544	4.44555	0.1588801	0.26813823	2.3817540	21	—	—
192172	2007	DO ₁₀₅	17.4	X	201.62249	334.21643	342.06320	5.40608	0.2296174	0.27193799	2.3595153	21	1 22.5	21.4
192173	2007	EF ₄₂	16.9	X	35.28950	227.70440	21.94024	0.63590	0.1751003	0.22272713	2.6953839	21	7 29.1	19.7
192174	2007	EG ₅₁	16.4	X	197.40620	52.28692	198.03221	10.55025	0.0757865	0.25695213	2.4503863	21	—	—
192175	2007	EL ₇₂	16.9	X	70.97392	37.42433	149.05813	3.33292	0.0430432	0.28992597	2.2608824	21	6 4.1	19.5
192176	2007	ER ₁₄₉	16.6	X	184.84277	166.72115	139.80335	6.65716	0.1107324	0.26487022	2.4013048	21	—	—
192177	2007	EB ₁₈₂	17.3	X	25.85028	297.30489	232.78031	1.75134	0.1080753	0.27637649	2.3341852	21	2 25.8	19.3
192178	2007	Lijieshou	16.8	X	83.64065	75.60770	176.74549	5.23934	0.1667209	0.23436473	2.6054008	21	10 9.8	20.6
192179	2007	EQ ₂₁₀	15.9	X	349.24556	341.90502	297.70516	4.52957	0.2319886	0.22156668	2.7047871	21	5 30.5	18.2
192180	2007	ED ₂₁₃	15.5	X	210.71532	210.32334	341.93125	11.76959	0.1098212	0.24564886	2.5249894	21	11 28.1	19.4
192181	2007	EC ₂₁₄	16.2	X	170.36024	136.53978	206.18459	9.03962	0.2514014	0.26706531	2.3881287	21	1 27.2	20.2
192182	2007	EP ₂₁₇	15.4	X	327.93031	114.54543	201.82012	14.70976	0.2807747	0.21637829	2.7478536	21	6 1.4	18.4
192183	2007	FG ₁₂	15.9	X	151.54608	150.45783	145.08473	9.34036	0.1087353	0.25592619	2.4569306	21	—	—
192184	2007	FW ₃₅	15.8	X	74.04537	23.47094	181.90395	15.06637	0.1450275	0.22227357	2.6990494	21	7 20.4	19.7
192185	2007	FS ₄₃	17.0	X	310.16777	277.23786	7.39420	3.68560	0.1098772	0.27968743	2.3157273	21	4 2.4	19.7
192186	2007	GA ₅	16.5	X	272.96582	85.98087	214.52956	3.65977	0.0398550	0.20810455	2.8202114	21	3 28.9	20.3
192187	2007	GF ₉	17.5	X	246.53046	57.75977	214.98195	1.23043	0.0560357	0.26750088	2.3855356	21	1 10.4	20.7
192188	2007	GR ₉	16.7	X	34.99223	201.97109	339.43549	5.59835	0.1462613	0.28014991	2.3131780	21	4 1.2	18.6
192189	2007	GT ₂₃	16.0	X	142.55671	174.61561	113.03895	1.77725	0.1529454	0.17507440	3.1646155	21	—	—
192190	2007	GG ₃₃	14.9	X	170.65909	157.20285	96.71287	16.67425	0.0949791	0.17918244	3.1160596	21	12 23.9	19.6
192191	2007	GH ₃₉	15.5	X	171.98634	196.97658	64.77366	1.86290	0.1634766	0.17807168	3.1290042	21	12 31.1	20.7
192192	2007	GX ₄₅	15.9	X	195.79625	126.38130	172.80085	4.63339	0.1192845	0.18807847	3.0170094	21	1 4.7	20.8
192193	2007	GP ₄₈	15.7	X	98.26048	315.70317	211.87166	11.62643	0.0766714	0.21742730	2.7390082	21	6 22.7	19.7
192194	2007	GW ₅₃	15.8	X	40.30815	193.03131	177.32495	6.28412	0.3455428	0.23742534	2.5829619	21	—	—
192195	2007	GM ₇₁	16.6	X	232.32250	177.32985	100.12825	6.89768	0.1102144	0.26828918	2.3808605	21	—	—
192196	2007	HU ₂	16.6	X	106.04884	81.45552	201.05209	3.86386	0.0374165	0.24135535	2.5548462	21	11 29.4	20.1
192197	2007	HR ₄	15.8	X	322.33819	117.98711	166.11139	5.12867	0.1343752	0.21068199	2.7971630	21	5 1.2	19.2
192198	2007	HJ ₁₂	16.5	X	9.36939	284.78766	17.51930	2.05936	0.1645576	0.22365425	2.6879300	21	8 25.3	19.0
192199	2007	HE ₂₅	15.9	X	73.48356	159.62775	191.30483	4.11290	0.2732463	0.24044106	2.5613187	21	—	—
192200	2007	HN ₅₂	15.2	X	113.21026	142.18907	187.37150	9.97169	0.2113686	0.17455332	3.1709105	21	—	—
192201	2007	HA ₆₁	16.7	X	188.94285	37.86615	161.36307	5.39815	0.0759328	0.24103637	2.5570997	21	11 19.5	20.4
192202	2007	HP ₇₀	16.2	X	306.32885	98.34043	213.03196	4.05488	0.1459284	0.21214821	2.7842601	21	5 10.8	19.7
192203	2007	HH ₉₀	14.1	X	269.17072	323.06784	296.60324	7.66983	0.1909087	0.12484426	3.9648216	21	1 30.1	20.1
192204	2007	JN ₂₁	16.0	X	184.54397	3.21260	288.53237	2.41446	0.0696779	0.18491338	3.0513392	21	—	—
192205	2007	JJ ₂₇	15.1	X	154.51636	137.11657	116.38638	5.85880	0.1233184	0.17143905	3.2091958	21	12 7.2	20.2
192206	2007	JR ₂₈	16.4	X	211.02220	43.83066	179.49073	9.69335	0.1632572	0.17893106	3.1189774	21	12 21.9	21.4
192207	2007	JB ₃₃	16.2	X	240.51760	242.55528	146.74839	6.73162	0.0487297	0.21541117	2.7560720	21	6 12.0	20.2
192208	2007	Tzu Chi	14.9	X	147.81001	225.48646	53.60676	10.73220	0.0351300	0.17515211	3.1636793	21	12 29.9	19.7
192209	2007	JL ₃₈	16.4	X	248.39071	181.75129	193.44003	4.38643	0.1252078	0.21513294	2.7584478	21	5 25.3	20.6
192210	2007	JY ₄₁	15.0	X	230.41478	83.49919	148.87742	21.10974	0.1142630	0.18295878	3.0730329	21	—	—
192211	2007	KO ₃	14.6	X	135.50179	241.49913	84.75640	10.43585	0.0868736	0.18206747	3.0830541	21	—	—
192212	2007	LM ₁	16.0	X	75.58200	36.71212	193.16961	13.21554	0.1442762	0.22184386	2.7025336	21	8 23.7	19.9
192213	2007	LE ₂₈	16.0	X	145.65168	131.01255	157.20345	9.54681	0.0647429	0.17491383	3.1665520	21	—	—
192214	2007	LA ₃₄	14.9	X	240.62712	148.64517	117.87828	11.46583	0.0513561	0.19125855	2.9834732	21	1 11.4	19.3
192215	2007	MH ₁₉	13.2	X	317.03814	200.25445	222.00261	3.04519	0.1058527	0.08292651	5.2080338	21	10 12.8	19.8
192216	2007	ML ₂₀	15.6	X	154.05535	210.98127	145.45722	8.46629	0.0746491	0.19201466	2.9756359	21	1 26.1	19.9
192217	2007	PT ₉	13.1	X	39.98375	131.89143	216.31546	4.42382	0.1245517	0.08220679	5.2383873	21	11 13.9	19.6
192218	2007	PX ₄₅	12.7	X	134.60828	69.38496	179.28355	5.18295	0.0626328	0.08126635	5.2787232	21	10 31.3	19.9
192219	2007	RO ₂₃	15.0	X	220.94629	319.47671	329.71874	10.68731	0.1552174	0.17671428	3.1450070	21	1 19.5	20.2
192220	2007	Oicles	13.3	X	11.37318	183.22646	211.17655	12.76957	0.0612078	0.08264897	5.2196865	21	11 23.5	19.9
192221	2007	RQ ₂₇₈	12.3	X	58.71778	225.80973	106.84548	27.34804	0.0468290	0.08329655	5.1925979	21	11 19.3	19.4
192222	2007	RZ ₂₈₁	11.9	X	49.75793	275.28114	83.89922	18.63791	0.0660641	0.08121694	5.2808640	21	12 1.9	18.8
192223	2007	VM ₆	12.8	X	326.52064	186.91518	223.34247	3.57617	0.0792702	0.08208399	5.2436103	21	10 13.7	19.3
192224	2007	VO ₆	12.8	X	26.57547	195.84129	152.98028	15.01461	0.0619753	0.08303278	5.2035891	21	10 26.5	19.6
192225	2007	WT ₂₀	15.6	X	122.04137	10.77992	306.89546	8.24541	0.1644686	0.21020926	2.8013551	21	—	—
192226	2008	AB ₁₁₂	16.1	X	182.01329	265.23587	348.98305	2.33508	0.0545307	0.20614459	2.8380590	21	—	—
192227	2008	AD ₁₁₈	15.2	X	147.00520	58.80806	75.63348	15.35255	0.0694689	0.17614566	3.1517717	21	7 8.3	20.0
192228	2008	BE ₃₃	16.1	X	15.32652	33.25353	340.97623	1.30585	0.1221821	0.19612361	2.9339280	21	12 2.1	19.6
192229	2008	CA ₁₂	16.6	X	238.43624	18.53896	343.12077	12.54096	0.1926093	0.24234352	2.5478965	21	4 14.6	21.0
192230	2008	CQ ₄₀	17.4	X	354.57118	240.54359	183.26003	6.24791	0.0856197	0.27710339	2.3301014	21		

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
192241 2008 <i>DA</i> ₇₀	15.1	X	148.47103	338.46614	151.66263	16.18680	0.0327006	0.17267489	3.1938652	21	7 2.1	20.0
192242 2008 <i>DF</i> ₈₅	16.7	X	319.34616	291.19573	46.37103	2.51977	0.0757349	0.24539355	2.5267404	21	7 17.3	19.5
192243 2008 <i>EY</i> ₃₂	15.6	X	183.15483	89.00841	53.64821	6.35569	0.0123308	0.17925567	3.1152108	21	8 31.9	20.1
192244 2008 <i>EP</i> ₃₉	16.1	X	278.22653	346.72212	241.45812	3.30705	0.1521415	0.21258699	2.7804276	21	—	—
192245 2008 <i>EG</i> ₅₀	16.6	X	153.52462	321.10131	8.88441	3.64910	0.0967293	0.21305182	2.7763820	21	—	—
192246 2008 <i>EY</i> ₅₇	16.7	X	90.99203	324.56565	289.65911	4.03497	0.1651483	0.25506428	2.4624625	21	10 19.3	20.4
192247 2008 <i>EJ</i> ₉₈	15.7	X	147.19647	342.38195	211.24213	5.53864	0.0562783	0.18521441	3.0480321	21	9 18.5	20.3
192248 2008 <i>EK</i> ₉₉	15.5	X	5.52860	351.10289	65.94507	12.93769	0.0337115	0.19724933	2.9227547	21	—	—
192249 2008 <i>EC</i> ₁₁₉	15.8	X	227.63015	264.35021	212.25772	7.50149	0.0725063	0.18584992	3.0410796	21	9 10.9	20.4
192250 2008 <i>FS</i> ₃₉	16.2	X	176.73263	141.84327	106.75179	3.00314	0.1692275	0.19282320	2.9673118	21	12 22.1	20.9
192251 2008 <i>FF</i> ₆₉	16.1	X	235.88345	154.34456	102.74379	2.84571	0.0903749	0.20561628	2.8429184	21	—	—
192252 2008 <i>FC</i> ₇₀	16.1	X	303.39322	217.24395	40.57733	8.01352	0.1489723	0.21762599	2.7373409	21	2 28.5	19.9
192253 2008 <i>FK</i> ₈₀	16.1	X	201.52216	312.77172	203.77105	3.71374	0.1465909	0.18534410	3.0466101	21	9 27.6	20.9
192254 2008 <i>GB</i> ₂₀	16.9	X	284.47160	212.72609	63.18741	6.37119	0.1145023	0.29217276	2.2492768	21	2 21.3	19.9
192255 2008 <i>GM</i> ₃₆	15.6	X	279.93916	2.34568	159.32205	6.11625	0.0194472	0.19642513	2.9309248	21	—	—
192256 2008 <i>GS</i> ₅₄	17.0	X	259.38225	149.55259	36.71016	7.24612	0.0503361	0.27468413	2.3437629	21	—	—
192257 2008 <i>GD</i> ₆₀	15.3	X	23.67073	217.73011	139.98274	10.17530	0.0902663	0.18439099	3.0570996	21	11 20.1	19.5
192258 2008 <i>GB</i> ₇₆	16.6	X	14.61229	202.57125	300.81937	0.75739	0.0342974	0.21525022	2.7574458	21	1 21.2	20.1
192259 2008 <i>GR</i> ₁₀₇	16.1	X	323.61876	7.27299	146.30984	8.94967	0.1522537	0.20943349	2.8082685	21	—	—
192260 2008 <i>GQ</i> ₁₃₄	15.9	X	331.62736	280.89153	319.52098	4.22659	0.1346596	0.22262533	2.6962055	21	3 12.4	19.2
192261 2008 <i>HB</i> ₆	16.4	X	105.83898	65.55455	168.28477	3.53168	0.0192293	0.17741139	3.1367631	21	9 18.0	20.8
192262 2008 <i>HO</i> ₈	13.1	X	265.58719	181.85201	186.35057	22.26907	0.1187806	0.08368796	5.1763949	21	6 9.9	20.4
192263 2008 <i>HZ</i> ₁₆	16.0	X	350.06333	156.39845	107.27768	7.42228	0.1908015	0.22839009	2.6506428	21	5 14.3	18.6
192264 2008 <i>HH</i> ₃₈	17.1	X	264.19284	42.88332	200.53820	1.75658	0.1814349	0.28300969	2.2975687	21	—	—
192265 2008 <i>KV</i> ₁₅	16.8	X	37.47891	165.74779	197.77750	13.32393	0.0604198	0.25624729	2.4548777	21	12 18.5	20.2
192266 2008 <i>KN</i> ₃₁	17.0	X	92.54153	272.79743	142.92459	6.75435	0.1230808	0.28164413	2.3049893	21	1 9.2	19.3
192267 2008 <i>KT</i> ₃₃	15.7	X	250.63080	351.25374	189.31867	10.59706	0.0466953	0.19109211	2.9852053	21	12 31.3	20.1
192268 2008 <i>LD</i> ₁₂	13.5	X	164.74134	16.33665	93.16026	13.60627	0.0542233	0.08228544	2.5285048	21	6 26.8	20.6
192269 2008 <i>OB</i> ₄	15.5	X	339.90031	351.86615	282.66561	6.19723	0.1719405	0.21695685	2.7429663	21	5 8.5	18.5
192270 7642 <i>P-L</i>	15.8	X	47.22076	0.69030	15.97635	18.83129	0.2152401	0.24565944	2.5249168	21	—	—
192271 3310 <i>T-1</i>	16.4	X	250.03230	256.06260	2.99795	26.64708	0.1860257	0.27124616	2.3635256	21	—	—
192272 1132 <i>T-2</i>	16.2	X	312.32150	188.34818	211.03285	2.74901	0.1964789	0.22540553	2.6739893	21	9 15.8	18.8
192273 2299 <i>T-2</i>	16.8	X	254.70585	333.41539	358.15858	2.33654	0.2035270	0.26091811	2.4254923	21	3 25.7	20.7
192274 1169 <i>T-3</i>	17.3	X	227.00230	65.22562	346.87432	8.62741	0.2097156	0.26365479	2.4086791	21	6 9.9	21.3
192275 2227 <i>T-3</i>	15.1	X	130.36915	14.95791	359.44379	11.38902	0.0891989	0.18800628	3.0177816	21	1 27.9	19.6
192276 2498 <i>T-3</i>	15.7	X	12.79303	270.57705	10.19378	8.50849	0.2406668	0.22163707	2.7042143	21	8 10.3	18.1
192277 3126 <i>T-3</i>	15.7	X	263.00091	14.97598	37.06996	5.62257	0.1587075	0.22061125	2.7125908	21	7 26.4	19.5
192278 3148 <i>T-3</i>	16.5	X	174.25628	68.00741	29.23610	6.42338	0.1656287	0.28514764	2.2860700	21	6 21.6	20.1
192279 3153 <i>T-3</i>	17.2	X	215.84738	285.54021	123.19638	1.49021	0.1997563	0.28535649	2.2849544	21	5 27.3	20.7
192280 3534 <i>T-3</i>	16.8	X	251.62151	340.85351	19.94045	3.35652	0.2413395	0.26309675	2.4120838	21	4 25.4	20.8
192281 1978 <i>UC</i> ₇	15.9	X	346.71309	42.01130	359.13874	2.65971	0.2163613	0.23065259	2.6332807	21	12 8.5	18.2
192282 1979 <i>MY</i> ₄	16.8	X	223.71198	64.87666	276.33472	11.12048	0.2549142	0.27467259	2.3438285	21	3 3.1	21.2
192283 1981 <i>EE</i> ₃	16.3	X	310.48022	149.41282	307.49317	8.74293	0.1773671	0.23735374	2.5834813	21	12 12.3	18.7
192284 1981 <i>EL</i> ₁₁	16.7	X	225.51792	267.03223	258.37018	4.39427	0.0726010	0.30825990	2.1703246	21	11 30.6	19.2
192285 1981 <i>EU</i> ₁₂	16.3	X	292.59919	297.24171	230.07671	2.90328	0.1529341	0.23925103	2.5698050	21	—	—
192286 1981 <i>ES</i> ₁₅	15.8	X	88.31077	263.28811	338.78867	10.33567	0.2386673	0.22853623	2.6495128	21	10 4.5	20.0
192287 1981 <i>EL</i> ₂₂	16.8	X	85.27834	176.23538	351.21121	5.10295	0.1631214	0.27434663	2.3456847	21	6 17.9	19.6
192288 1981 <i>EF</i> ₃₄	16.1	X	331.67870	217.85919	283.45094	2.95595	0.1498784	0.24067382	2.5596671	21	—	—
192289 1981 <i>EQ</i> ₄₅	16.6	X	312.17382	73.44773	191.77603	6.39834	0.0676201	0.27097525	2.3651007	21	3 21.4	19.4
192290 1989 <i>QT</i>	15.2	X	286.19174	337.87714	29.93070	18.69220	0.1526099	0.21347276	2.7727310	21	6 25.3	19.3
192291 1990 <i>QX</i> ₁₉	15.7	X	344.20702	45.24669	240.61674	8.00123	0.1301743	0.21895003	2.7262942	21	6 8.9	18.6
192292 1990 <i>RC</i> ₇	16.6	X	230.51353	209.55068	142.12649	2.61025	0.2282358	0.27671183	2.3319619	21	3 28.3	20.3
192293 Dominikbrunner	16.0	X	271.47990	166.61261	255.00312	4.23692	0.1534466	0.21910212	2.7250323	21	8 16.2	19.6
192294 1991 <i>TE</i> ₁₅	17.1	X	199.50233	238.65850	158.77217	2.63459	0.2627819	0.28406650	2.2918668	21	4 28.8	21.0
192295 1991 <i>TN</i> ₁₅	17.4	X	241.33023	198.39997	176.11045	4.28631	0.1362727	0.28623970	2.2802518	21	5 12.1	20.6
192296 1991 <i>TA</i> ₁₆	17.3	X	106.38474	228.11486	109.11963	3.10093	0.2255405	0.27160851	2.3614231	21	—	—
192297 1992 <i>DX</i> ₉	16.4	X	41.01770	17.49796	190.81016	6.79541	0.1031109	0.27630876	2.3345667	21	5 27.6	18.7
192298 1992 <i>ES</i> ₂	16.6	X	326.00841	223.03810	353.62117	5.42788	0.1468932	0.26928884	2.3749647	21	1 23.2	19.6
192299 1992 <i>EW</i> ₄	16.1	X	162.54546	186.05328	356.75812	9.17777	0.2470999	0.21828917	2.7317939	21	9 25.8	20.8
192300 1992 <i>SY</i> ₉	17.2	X	301.46204	43.16976	165.08742	0.88261	0.0289457	0.25371718	2.4711710	21	—	—
192301 1992 <i>SQ</i> ₁₀	18.3	X	91.67073	244.76581	36.86877	3.01758	0.1459093	0.31057010	2.1595484	21	12 1.5	21.4
192302 1993 <i>BL</i> ₈	17.1	X	291.61988	315.71701	119.24884	4.85182	0.1188858	0.30158116	2.2022498	21	10 27.9	19.1
192303 1993 <i>FJ</i> ₇	16.9	X	163.78440	86.05531	102.94842	3.28933	0.0858495	0.29518236	2.2339620	21	10 15.7	19.9
192304 1993 <i>FK</i> ₄₀	15.5	X	83.78587	49.65794	178.62398	12.18819	0.1637022	0.21982470	2.7190575	21	9 5.2	19.4
192305 1993 <i>FE</i> ₄₅	16.4	X	262.25361	149.50685	17.49852	2.73798	0.0805322	0.23314390	2.6144881	21	—	—
192306 1993 <i>FB</i> ₈₀	16.2	X	144.80433	189.67303	18.27894	7.25795	0.1979019	0.22482568	2.6785850	21	10 12.5	20.8
192307 1993 <i>RM</i> ₁₆	16.0	X	192.01774	217.43195	171.09870	4.15071	0.2144861	0.19848462	2.9106153	21	4 17.0	20.9
192308 1993 <i>TK</i> ₇	17.0	X	50.29838	213.91574	270.72286	4.23024	0.1030381	0.26150080	2.4218879	21	2 6.6	19.4
192309 1993 <i>TK</i> ₂₆	15.7	X	200.84281	338.48587	27.96107	14.60050	0.2042425	0.19681174	2.9270853	21	3 31.3	20.7
192310 1993 <i>TN</i> ₂₆	16.0	X	238.15329	331.35540	46.70278	6.11927	0.2589226	0.27236118	2.3570706	21	5 4.5	20.0
192311 1993 <i>TS</i> ₂₉	17.0	X	139.44065	291.77010	96.64393	2.73388	0.1900439	0.26298055	2.4127943	21	2 21.9	20.4
192312 1994 <i>AT</i> ₉	17.0	X	37.95474	97.30520	46.21186	2.03655	0.1360258	0.25651273	2.4531839			

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
192321 1994 SE ₁₁	16.6	X	7.26971	180.32589	110.18326	1.71066	0.0390986	0.21405098	2.7677354	21	7 26.5	19.9
192322 1994 SN ₁₁	16.4	X	222.67998	106.46482	29.47851	5.08380	0.0553761	0.21935687	2.7229221	21	10 7.9	20.1
192323 1994 SD ₁₂	17.5	X	329.09330	280.44963	13.93501	8.71805	0.1513000	0.28569016	2.2831750	21	5 13.2	19.8
192324 1994 TD ₇	17.4	X	273.42872	279.79020	20.25303	7.04948	0.1916266	0.28067869	2.3102719	21	3 5.4	20.9
192325 1994 UL ₈	16.8	X	83.01668	165.53414	0.53919	3.53573	0.1262157	0.27940106	2.3173094	21	6 5.6	19.4
192326 1994 UT ₈	15.9	X	341.77605	41.51582	251.66084	3.05493	0.0777504	0.21021930	2.8012658	21	6 19.4	19.2
192327 1994 VS ₃	15.8	X	35.20854	250.88041	14.59259	8.80283	0.0836508	0.21279457	2.7786192	21	8 11.2	19.4
192328 1994 WV ₅	16.5	X	307.95052	173.27319	204.64885	1.97761	0.0921416	0.21406864	2.7675832	21	8 20.7	19.9
192329 1995 BE ₁₄	17.3	X	93.86310	271.77980	248.83789	1.26615	0.1225709	0.27291604	2.3538747	21	6 13.8	20.2
192330 1995 BN ₁₅	16.9	X	35.14711	149.38344	358.48545	2.88055	0.1193872	0.26577672	2.3958415	21	2 14.4	19.2
192331 1995 CB ₆	17.8	X	146.86962	169.73121	232.60889	1.47865	0.2544752	0.26968038	2.3726653	21	3 23.0	21.5
192332 1995 FA	16.7	X	259.45193	357.42771	195.55345	5.82007	0.1018600	0.25318965	2.4746024	21	—	—
192333 1995 FG ₅	16.1	X	190.99730	6.53016	4.19030	13.02464	0.1987385	0.26640650	2.3920643	21	3 20.1	19.9
192334 1995 GU ₆	16.0	X	300.86223	10.97937	153.87999	6.02088	0.1044581	0.17907386	3.1173190	21	—	—
192335 1995 HD ₄	16.1	X	345.15439	41.90745	103.31476	3.95904	0.1260774	0.25565037	2.4586975	21	—	—
192336 1995 KK ₃	15.3	X	195.79859	245.99436	57.15571	3.61283	0.0458530	0.17869684	3.1217022	21	1 9.4	19.9
192337 1995 ME ₂	16.8	X	6.87643	135.53165	231.90259	5.54247	0.1540896	0.23322242	2.6139013	21	11 22.8	19.4
192338 1995 MM ₅	15.4	X	297.80696	7.02496	186.35831	9.49646	0.0322653	0.17749248	3.1358077	21	—	—
192339 1995 OD ₄	16.6	X	334.77594	77.44495	320.62260	4.03050	0.2710216	0.22998148	2.6384010	21	11 4.7	18.3
192340 1995 OE ₁₄	16.5	X	72.41294	58.51072	228.11295	3.48532	0.1999798	0.23397173	2.6083175	21	11 12.8	20.1
192341 1995 QF ₆	16.0	X	324.37526	184.64011	262.37209	5.23022	0.1871100	0.23606198	2.5928975	21	12 27.3	18.2
192342 1995 SP ₁₄	15.6	X	238.21536	186.04031	340.06843	6.37195	0.0997459	0.23488635	2.6015421	21	11 28.5	19.2
192343 1995 SU ₁₄	12.9	X	322.69442	239.79976	206.42607	2.20194	0.0641040	0.08070929	5.3029846	21	11 19.2	19.6
192344 1995 SY ₁₅	16.4	X	95.22078	72.63088	180.13210	3.93164	0.1608798	0.23067596	2.6331029	21	10 21.4	20.4
192345 1995 SG ₂₄	13.3	X	299.45546	52.05043	67.85659	2.90624	0.0206317	0.08054716	5.3100981	21	12 1.9	20.3
192346 1995 ST ₃₁	16.9	X	305.14256	251.03813	163.51783	12.97465	0.2563681	0.22758165	2.6569164	21	9 16.7	19.3
192347 1995 SK ₃₂	15.6	X	107.46032	300.32867	343.51044	14.74338	0.1255446	0.23568078	2.5956926	21	12 5.4	19.9
192348 1995 SY ₃₇	17.1	X	332.32581	208.54277	190.65824	0.98058	0.1385081	0.22990052	2.6390204	21	11 1.6	19.9
192349 1995 SV ₄₄	17.0	X	220.46932	308.72295	200.80219	1.26548	0.0451969	0.22845511	2.6501399	21	10 24.4	20.4
192350 1995 SW ₄₉	16.2	X	72.74166	103.83967	166.71815	7.93183	0.1266015	0.23042838	2.6349886	21	10 16.0	19.8
192351 1995 SM ₅₁	16.6	X	67.50195	272.29241	7.08600	2.48655	0.1158713	0.22769642	2.6560235	21	10 16.8	20.1
192352 1995 SE ₈₆	15.6	X	5.77933	209.21919	180.88931	14.10478	0.2567399	0.23137074	2.6278289	21	—	—
192353 1995 TS ₁	15.7	X	64.62580	280.23586	8.06175	10.16688	0.1617903	0.22989839	2.6390367	21	10 29.1	19.5
192354 1995 TV ₂	15.9	X	322.78438	37.18923	6.53248	13.26248	0.2455677	0.22771868	2.6558504	21	10 10.4	18.0
192355 1995 TL ₃	15.8	X	272.04780	356.30118	23.91331	9.87470	0.1926288	0.22054305	2.7131499	21	6 17.8	19.8
192356 1995 UB ₁₂	16.8	X	237.09707	110.50918	333.35749	1.02681	0.0650341	0.22240541	2.6979826	21	8 16.9	20.4
192357 1995 UY ₁₆	15.8	X	16.54213	317.03736	60.67480	8.66443	0.2070598	0.23012920	2.6372719	21	12 29.5	18.9
192358 1995 VT ₄	17.1	X	336.19791	315.94062	70.97962	5.81968	0.1560064	0.30385207	2.1912634	21	11 11.6	18.7
192359 1995 VY ₇	16.4	X	101.91058	204.19569	55.97569	3.56379	0.1233471	0.22588727	2.6701862	21	11 2.0	20.2
192360 1995 VN ₁₁	15.6	X	78.65969	172.00568	76.90160	6.89807	0.1477551	0.22378852	2.6868547	21	9 29.2	19.5
192361 1995 VB ₁₇	16.9	X	294.30824	37.00324	40.35245	1.87609	0.2192474	0.22504534	2.6768417	21	10 4.5	19.5
192362 1995 VC ₁₈	16.2	X	55.74312	16.81171	238.27898	3.90223	0.0626486	0.21937050	2.7228094	21	8 19.1	19.8
192363 1995 WR ₉	15.9	X	91.99222	241.81603	33.28945	6.15662	0.0976604	0.22802289	2.6534877	21	11 6.6	19.7
192364 1995 WB ₁₆	16.9	X	351.24083	349.02652	41.37842	5.99870	0.1657221	0.30593027	2.1813285	21	12 19.7	18.8
192365 1995 WU ₂₅	16.4	X	326.97800	17.31889	3.84743	5.45083	0.0878446	0.22443780	2.6816703	21	9 27.6	19.4
192366 1995 XP ₃	15.4	X	282.48966	257.96232	87.53934	13.38116	0.2664451	0.21754519	2.7380186	21	5 10.6	19.6
192367 1995 YF ₂₅	15.7	X	248.08560	43.61064	66.75742	12.68821	0.1557031	0.22311631	2.6922487	21	9 29.1	19.7
192368 1995 AT ₅	16.4	X	314.30839	200.28724	99.92528	6.64203	0.1755654	0.28532279	2.2851344	21	4 27.9	18.9
192369 1996 AC ₆	16.1	X	232.63843	24.70303	81.81553	3.65466	0.1405888	0.21690721	2.7433848	21	9 2.5	20.2
192370 1996 AG ₁₀	16.2	X	262.45643	124.81298	259.05322	2.65072	0.1097667	0.21249974	2.7811886	21	6 23.4	20.2
192371 1996 AD ₁₂	16.0	X	275.43834	65.12494	339.55675	12.87293	0.2239852	0.21568441	2.7537439	21	7 24.2	20.0
192372 1996 AB ₁₄	16.0	X	260.93714	0.43154	16.31803	6.22111	0.0666129	0.20895034	2.8125958	21	6 17.8	20.0
192373 1996 BL ₆	16.2	X	333.42586	328.45808	13.24317	3.14662	0.0821729	0.21451006	2.7637851	21	8 14.3	19.4
192374 1996 PB ₆	15.8	X	291.70583	21.10463	72.59082	15.58434	0.2269115	0.22890359	2.6466772	21	10 28.8	18.8
192375 1996 BR ₇	16.4	X	172.08666	38.92239	39.85729	2.68360	0.0217712	0.20749920	2.8256938	21	5 23.8	20.4
192376 1996 EH ₆	16.5	X	40.92040	184.85840	333.70073	1.55182	0.0791262	0.19823577	2.9130506	21	3 22.6	20.1
192377 1996 EL ₁₁	16.3	X	237.24945	48.49486	5.14600	4.15005	0.1028169	0.20984182	2.8046243	21	7 3.9	20.5
192378 1996 FZ ₁₀	16.9	X	109.19273	44.26402	77.02307	3.12812	0.1152958	0.27889439	2.3201151	21	5 8.6	19.6
192379 1996 GS ₅	15.9	X	300.16089	145.71014	165.53525	6.25974	0.0561801	0.20076493	2.8885340	21	5 17.9	19.8
192380 1996 GR ₁₁	15.3	X	243.24707	148.57711	166.25652	12.24422	0.0429227	0.19537906	2.9413771	21	3 14.0	19.6
192381 1996 HT ₄	16.7	X	157.98888	350.32234	52.40595	7.12881	0.1147172	0.27440724	2.3453393	21	3 25.3	20.0
192382 1996 JM ₈	17.4	X	280.39514	75.84451	145.81188	2.54413	0.1507393	0.26473502	2.4021223	21	—	—
192383 1996 JD ₁₀	17.0	X	156.37641	317.48183	173.05085	6.69964	0.1422938	0.28209657	2.3025241	21	7 16.9	20.5
192384 1996 KN ₂	16.6	X	187.28683	212.02066	150.10535	6.50192	0.1367124	0.26840514	2.3801747	21	3 3.3	20.2
192385 1996 RO ₁₂	16.4	X	234.02470	105.14769	170.11468	4.83896	0.1909469	0.25835390	2.4415148	21	—	—
192386 1996 RE ₁₄	13.3	X	304.62018	267.92264	174.74016	6.21262	0.0383667	0.08196447	5.2487063	21	10 28.2	20.1
192387 1996 RV ₁₅	16.0	X	189.95355	5.15120	302.72904	0.85936	0.1526170	0.17562914	3.1579482	21	1 12.9	21.2
192388 1996 RD ₂₉	12.9	X	286.16708	262.49489	192.53115	7.17671	0.0817072	0.08088020	5.2955112	21	10 14.3	19.6
192389 1996 RT ₂₉	12.4	X	226.68652	140.42724	21.18263	22.78426	0.0112110	0.08171983	5.2591765	21	10 26.8	19.4
192390 1996 RO ₃₀	12.9	X	280.67405	127.55858	326.23412	9.49878	0.0225578	0.08304841	5.2029360	21	10 9.8	19.9
192391 1996 TQ ₂	15.6	X	62.34145	264.59227	136.67358	3.34262	0.1969972	0.16956834	3.2327556	21	—	—
192392 1996 TM ₁₈	15.9	X	177.11293	258.16486	25.30089	3.52823	0.0539284	0.24689746	5.2164693	21	—	—
192393 1996 TT ₂₂	13.5	X	43.73836	339.76376	7.77412	4.18415	0.0318189	0.08027564	3.5220655	21	11 5.9	20.4
192394 1996 TJ ₃₅	16.5	X	76.27525	218.55139	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>
192401 1997 AR ₈	15.4	X	45.34037	60.79866	300.02232	10.62585	0.2055949	0.23468298	2.6030449	21	—	—
192402 1997 AW ₁₂	15.6	X	227.36094	197.18881	313.31992	12.26706	0.1391782	0.22938297	2.6429885	21	10 15.6	19.7
192403 1997 BQ ₄	16.1	X	37.11898	310.59667	298.24304	4.84218	0.0108283	0.21840140	2.7308579	21	7 10.4	19.7
192404 1997 EE ₁₉	16.6	X	10.47100	127.94789	197.98704	2.01994	0.1417405	0.22217704	2.6998311	21	9 27.5	19.4
192405 1997 EU ₂₁	16.6	X	78.25803	66.35399	198.58725	0.70851	0.0542826	0.22246676	2.6974866	21	10 2.4	20.3
192406 1997 EK ₂₆	16.7	X	294.13582	22.38895	353.10553	5.82588	0.0514883	0.21744734	2.7388399	21	8 4.9	20.2
192407 1997 EY ₃₀	16.4	X	193.73577	300.10067	191.67096	1.42432	0.0257593	0.21903978	2.7255493	21	8 29.5	20.2
192408 1997 GD ₁	16.5	X	22.72220	168.35235	189.58042	4.72881	0.0144012	0.22547921	2.6734068	21	11 15.2	20.0
192409 1997 GX ₁₃	16.4	X	291.67483	288.25719	211.07944	5.01495	0.2832351	0.23279239	2.6171193	21	12 19.9	18.6
192410 1997 GD ₂₅	16.2	X	284.52908	37.11505	9.47310	1.63245	0.0626817	0.21994603	2.7180574	21	8 30.8	19.7
192411 1997 GX ₃₁	17.4	X	139.80292	8.49071	184.07532	3.11767	0.0346967	0.30053094	2.2073774	21	9 19.3	20.1
192412 1997 HQ ₇	17.4	X	352.25967	266.55204	15.29217	3.93408	0.1710441	0.28963857	2.2623778	21	6 12.1	19.0
192413 1997 HN ₉	15.3	X	276.71516	244.87797	222.62869	16.31105	0.1555989	0.22435520	2.6823285	21	10 25.8	18.5
192414 1997 LG ₁₇	17.5	X	6.68917	61.73040	211.43533	5.22113	0.2164364	0.28921618	2.2645800	21	7 5.6	18.7
192415 1997 LM ₁₈	17.0	X	329.14472	132.91921	165.74647	6.51214	0.2443036	0.28664790	2.2780865	21	5 8.4	19.0
192416 1997 MA ₁	17.1	X	97.34396	199.06199	77.58757	23.16217	0.0639388	0.38232130	1.8801120	21	12 8.9	19.0
192417 1997 NS ₇	16.0	X	190.11197	141.92596	165.71208	3.56257	0.1209949	0.18561441	3.0436515	21	1 9.7	20.8
192418 1997 PC ₃	15.2	X	91.86378	237.58556	155.47550	14.34268	0.2330333	0.17982901	3.1085859	21	1 20.7	19.4
192419 1997 SM ₁₈	16.3	X	147.66889	83.19082	351.93358	10.52118	0.2095078	0.27275030	2.3548282	21	4 26.9	20.1
192420 1997 SP ₂₀	16.3	X	69.00435	53.63992	15.91909	6.99306	0.1401617	0.26111644	2.2426400	21	—	—
192421 1997 SU ₂₀	15.5	X	168.88024	297.64927	24.22847	6.39944	0.1151559	0.17905069	3.1175880	21	1 8.2	20.4
192422 1997 SH ₂₁	17.6	X	84.65597	146.18498	290.29944	0.80086	0.1687767	0.26340240	2.4102175	21	2 6.8	19.8
192423 1997 SM ₂₆	13.3	X	189.57133	205.21917	345.68021	8.38257	0.0448156	0.08287931	5.2100107	21	10 18.7	20.5
192424 1997 SL ₃₀	16.7	X	150.75708	37.86990	16.80874	6.38664	0.1227991	0.26922767	2.3753244	21	3 31.4	20.0
192425 1997 ST ₃₅	15.7	X	152.54879	80.48883	358.59424	11.92780	0.1623013	0.19171276	2.9787591	21	5 7.7	20.6
192426 1997 TJ ₃	15.5	X	68.41132	77.68646	6.82386	4.72927	0.1394985	0.18022686	3.1040094	21	2 8.9	19.3
192427 1997 TD ₄	17.3	X	110.98119	100.61594	313.56633	0.51333	0.1609048	0.26484339	2.4014670	21	2 15.3	19.9
192428 1997 TZ ₅	15.3	X	180.23369	252.66502	43.09701	6.14178	0.1256874	0.17904412	3.1176642	21	—	—
192429 1997 TO ₉	16.9	X	321.84526	353.84374	214.81860	5.81674	0.0951423	0.26538587	2.3981933	21	1 12.9	20.1
192430 1997 TD ₁₃	17.8	X	186.80425	43.56195	344.85287	2.36045	0.1872932	0.27305837	2.3530567	21	4 5.2	21.7
192431 1997 TS ₂₁	17.7	X	226.74055	305.67240	19.35398	1.05061	0.1932014	0.27023962	2.3693908	21	2 21.4	21.6
192432 1997 TA ₂₄	17.4	X	103.20582	63.03208	28.67457	2.62650	0.1716320	0.26663492	2.3906979	21	3 29.9	20.1
192433 1997 TL ₂₆	16.6	X	179.48796	41.39872	29.20516	7.07164	0.1094824	0.27392341	2.3481002	21	5 20.1	20.0
192434 1997 US ₁	15.4	X	23.59471	202.45945	216.68584	12.28835	0.0490668	0.17226338	3.1989497	21	—	—
192435 1997 UJ ₂	16.6	X	167.75869	308.96257	57.93979	8.05398	0.1342266	0.26587913	2.3952263	21	2 21.1	20.2
192436 1997 UU ₆	17.0	X	53.08729	103.23813	40.83421	3.40489	0.1259575	0.26674383	2.3900471	21	3 16.1	19.3
192437 1997 UA ₁₆	16.0	X	52.06712	98.31536	28.13382	7.70955	0.1260333	0.18165248	3.0877479	21	3 8.6	19.8
192438 1997 UN ₂₇	16.9	X	203.37338	54.00479	303.81368	2.35307	0.2174439	0.27063586	2.3670776	21	3 12.7	20.9
192439 Cilek	17.0	X	108.59481	203.07662	210.78108	1.58299	0.2029708	0.26291240	2.4132112	21	2 18.0	19.8
192440 1997 VH ₇	16.3	X	103.81115	30.13000	39.25344	6.61631	0.1348360	0.26402025	2.4064558	21	2 25.4	19.2
192441 1997 WH ₁	16.0	X	330.40495	93.97010	260.01382	4.03942	0.2300858	0.28533146	2.2850881	21	8 18.1	17.3
192442 1997 WJ ₃	12.6	X	35.02576	121.17216	223.70903	21.98206	0.0799435	0.08343283	5.1869419	21	10 29.7	19.3
192443 1997 WY ₅	16.2	X	308.24861	165.46873	75.05986	5.62271	0.172194	0.26596973	2.3946823	21	1 28.3	19.4
192444 1997 WY ₉	17.4	X	126.56736	294.41068	111.51355	2.36765	0.1692042	0.26431075	2.4046922	21	2 26.8	20.4
192445 1997 WG ₁₄	15.7	X	76.09287	341.22478	105.34740	2.52744	0.1599099	0.17883520	3.1200918	21	2 25.3	19.5
192446 1997 WA ₁₅	17.7	X	157.36846	63.57843	340.77912	0.48392	0.1700792	0.26845409	2.3798853	21	3 28.8	21.1
192447 1997 WR ₁₅	16.7	X	203.52019	173.95712	131.35799	1.96080	0.1881601	0.26357179	2.4091847	21	1 9.5	20.5
192448 1997 WY ₁₅	13.4	X	43.51690	182.47520	190.53847	4.11776	0.0700615	0.08309395	5.2010352	21	12 9.1	20.2
192449 1997 WG ₂₀	17.1	X	217.79077	120.49231	187.14898	1.93774	0.2172115	0.26600288	2.3944834	21	1 23.8	21.2
192450 Xinjiangdaxue	14.4	X	36.78311	321.74671	55.14079	23.23262	0.0533850	0.16794125	3.2536022	21	12 16.3	19.1
192451 1997 WQ ₄₂	16.1	X	21.27838	61.63791	16.41148	2.36911	0.1837438	0.25375320	2.4709371	21	—	—
192452 1997 YQ ₂	15.0	X	133.36885	126.75080	257.24021	10.53910	0.3154850	0.18080490	3.0973902	21	2 27.2	20.4
192453 1998 BV ₃	17.0	X	11.40733	41.96693	26.44354	0.39913	0.0779154	0.24733737	2.5134845	21	—	—
192454 1998 BQ ₅	15.7	X	139.37209	299.28627	128.10067	5.97099	0.1519110	0.17901413	3.1180125	21	4 17.7	20.6
192455 1998 BQ ₂₀	15.5	X	56.37535	285.18517	122.78681	2.17738	0.1693211	0.16908358	3.2389314	21	—	—
192456 1998 BU ₂₃	15.8	X	246.16121	51.76419	131.71194	1.37031	0.0566399	0.24465212	2.5318427	21	—	—
192457 1998 BM ₃₃	15.3	X	218.78826	105.05731	77.79040	5.78638	0.1952786	0.23913808	2.5706141	21	11 17.9	19.2
192458 1998 DG ₁	15.1	X	114.17790	54.49666	12.18465	16.67894	0.3383577	0.17811176	3.1285348	21	4 7.9	20.1
192459 1998 DS ₆	15.6	X	178.38681	335.09131	291.96027	12.95488	0.1403200	0.24528412	2.5274919	21	—	—
192460 1998 DT ₁₆	15.2	X	313.88947	327.56174	275.12824	8.03607	0.0338775	0.17505755	3.1648185	21	3 9.6	19.7
192461 1998 DE ₁₉	17.5	X	77.93156	299.28843	124.07908	3.09961	0.1963362	0.25425852	2.4676622	21	1 13.1	19.7
192462 1998 EZ ₇	16.2	X	232.58634	349.06724	170.71398	14.05686	0.1427915	0.23853741	2.5749278	21	11 12.8	20.0
192463 1998 FU ₄	16.4	X	193.80421	33.24702	199.26551	7.30266	0.1519158	0.23860565	2.5744368	21	12 26.7	20.4
192464 1998 FJ ₈	15.9	X	242.61555	188.80842	359.80384	8.73816	0.0490334	0.24253947	2.5465240	21	—	—
192465 1998 FM ₁₄	16.3	X	155.42729	236.24812	314.36747	3.26083	0.2476381	0.23052700	2.6342370	21	9 29.8	21.0
192466 1998 FJ ₁₆	16.4	X	273.45661	138.27221	24.51659	8.55896	0.1141832	0.24202038	2.5501639	21	—	—
192467 1998 FH ₂₈	15.8	X	121.20879	224.34603	349.41148	11.61598	0.2270906	0.22876932	2.6477127	21	9 29.3	20.3
192468 1998 FH ₄₀	15.2	X	243.71121	190.45302	4							

ELEMENTS AND OPPOSITION DATES IN 2021

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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>
192481 1998 GQ ₂	15.8 ^m	X	230.43760	162.49536	47.83051	13.77566	0.1788988	0.24151800	2.5536990	21	—	—
192482 1998 GS ₈	14.4	X	66.52422	82.75643	51.47560	25.91633	0.3327995	0.17377207	3.1804073	21	5 10.4	18.3
192483 1998 HS ₂	16.1	X	307.57117	332.97528	160.78517	4.09359	0.1965499	0.24094844	2.5577218	21	—	—
192484 1998 HE ₄	16.4	X	10.59547	182.97229	155.53594	6.55756	0.1088137	0.22779060	2.6552914	21	10 15.3	19.4
192485 1998 HM ₅	16.3	X	27.79878	260.64969	169.81222	7.13987	0.1507609	0.24367028	2.5386394	21	—	—
192486 1998 HP ₇	15.6	X	142.55527	75.88822	67.64693	21.43344	0.3328325	0.26661644	2.3908084	21	8 3.8	20.3
192487 1998 HG ₁₁	15.8	X	123.71242	207.25723	25.11033	18.44095	0.0833450	0.23055045	2.6340584	21	10 18.5	19.6
192488 1998 HK ₂₂	15.9	X	208.77238	146.82228	24.86383	6.16977	0.1423054	0.23479934	2.6021848	21	10 28.4	19.8
192489 1998 HU ₂₂	16.3	X	250.05575	131.98813	39.04419	10.70904	0.1929947	0.23987375	2.5653555	21	12 7.1	19.7
192490 1998 HU ₂₃	16.6	X	207.57320	228.15763	317.71057	3.35511	0.0963523	0.23606397	2.5928829	21	11 18.3	20.4
192491 1998 HU ₂₇	16.0	X	181.36570	275.48315	307.69812	2.37908	0.0364742	0.23675589	2.5878287	21	12 11.9	19.7
192492 1998 HA ₃₅	16.2	X	239.44802	69.93761	100.26895	5.25682	0.2002095	0.23835105	2.5762698	21	11 24.1	19.7
192493 1998 HG ₄₂	16.1	X	71.43953	171.64167	134.43120	4.98097	0.0156873	0.23211549	2.6222050	21	11 13.7	19.6
192494 1998 HF ₆₂	15.4	X	114.09892	228.00222	33.60011	13.53831	0.1493034	0.23079141	2.6322247	21	11 15.7	19.6
192495 1998 HJ ₆₄	16.1	X	173.85951	132.45160	45.07206	4.07326	0.1047793	0.22981889	2.6396452	21	10 3.9	20.0
192496 1998 HS ₆₆	16.2	X	284.26613	35.27304	102.01256	3.92924	0.0791932	0.23868552	2.5738625	21	12 30.6	19.3
192497 1998 HA ₈₉	17.4	X	167.66161	26.72204	205.18389	6.06260	0.2505762	0.31862233	2.1230094	21	12 8.3	20.8
192498 1998 KA ₇	15.7	X	101.18537	18.03091	229.93366	10.82423	0.2069662	0.22580962	2.6707983	21	10 22.8	20.1
192499 1998 KT ₁₀	16.0	X	317.11342	39.13651	94.52149	14.45416	0.0614969	0.23975757	2.5661842	21	—	—
192500 1998 KU ₁₅	15.5	X	192.20142	10.99161	216.03156	14.17302	0.1264302	0.23575503	2.5950743	21	12 19.8	19.6
192501 1998 KD ₁₇	16.1	X	290.13204	292.13916	219.51104	26.67975	0.2234935	0.23922371	2.5700007	21	—	—
192502 1998 KN ₂₆	16.0	X	6.77108	269.74185	36.90686	12.95279	0.2070187	0.22116926	2.7080263	21	9 6.4	18.8
192503 1998 KO ₃₂	16.2	X	332.04913	163.95840	125.97884	3.83206	0.3045560	0.21285370	2.7781045	21	4 28.4	18.9
192504 1998 MC ₁₄	16.1	X	354.98905	154.35592	168.04311	9.84890	0.1849439	0.21841743	2.7307243	21	8 23.2	18.8
192505 1998 MU ₁₄	16.2	X	81.05322	175.85470	66.90383	3.89225	0.0829041	0.22299014	2.6932553	21	9 13.3	19.8
192506 1998 MS ₁₅	16.1	X	357.81863	67.53437	243.39892	3.48079	0.0945107	0.21991558	2.7183084	21	8 9.3	19.2
192507 1998 MQ ₃₇	16.4	X	290.04772	43.66511	297.63805	5.92088	0.2904533	0.29481603	2.2358122	21	4 28.2	19.5
192508 1998 OP ₁₃	17.1	X	314.72446	207.78543	145.31180	5.37537	0.1901171	0.29813129	2.2192063	21	7 15.9	18.7
192509 1998 QL ₅	16.9	X	280.08426	140.30924	273.20724	3.83410	0.1367859	0.29984811	2.2107273	21	8 26.1	19.1
192510 1998 QR ₂₉	15.3	X	252.54357	43.73164	307.74995	14.06603	0.1565126	0.20433028	2.8548343	21	4 19.6	20.0
192511 1998 QR ₇₃	15.2	X	243.24937	146.33476	233.02127	9.51218	0.1533939	0.20532439	2.8456120	21	5 22.2	19.6
192512 1998 QB ₇₆	15.3	X	296.20379	358.24274	319.89753	14.81866	0.1375228	0.20532353	2.8456200	21	4 30.3	19.5
192513 1998 QZ ₁₀₃	17.0	X	323.12454	250.98399	68.73630	4.70965	0.2082249	0.29538340	2.2329483	21	6 3.7	18.9
192514 1998 RP ₁₂	16.2	X	193.86527	179.09289	189.79591	2.41452	0.0830218	0.19658233	2.9293622	21	3 24.1	20.7
192515 1998 RS ₁₅	17.0	X	69.25644	75.49625	234.58203	3.63576	0.1825653	0.30725485	2.1750549	21	12 18.5	20.0
192516 1998 RK ₁₆	17.2	X	48.16626	352.46022	301.04452	4.24379	0.1772532	0.30460605	2.1876459	21	10 29.5	19.8
192517 1998 RF ₂₀	15.0	X	229.76515	218.80919	157.34020	15.72788	0.1529550	0.20385286	2.8592898	21	5 9.1	19.8
192518 1998 RW ₂₉	15.0	X	293.70800	15.15840	356.95334	14.05076	0.1840703	0.21027811	2.8007436	21	7 11.3	18.9
192519 1998 RE ₄₈	16.9	X	10.25795	21.49309	301.97896	2.96000	0.1328380	0.30075714	2.2062705	21	10 3.7	18.7
192520 1998 RS ₆₃	17.0	X	275.07862	284.95077	101.41539	2.56689	0.2197704	0.29472185	2.2362885	21	6 25.7	19.5
192521 1998 RK ₆₇	16.6	X	347.10877	17.04652	341.27553	7.58434	0.1733369	0.30058051	2.2071347	21	10 14.7	18.1
192522 1998 RJ ₇₆	16.6	X	9.11971	200.32999	149.60709	4.60504	0.2305839	0.30302640	2.1952420	21	12 2.7	18.5
192523 1998 RT ₈₀	17.1	X	13.60755	347.48823	355.55305	2.26846	0.2012354	0.30332391	2.1938063	21	11 23.1	19.0
192524 1998 RY ₈₀	17.0	X	56.63163	56.92165	239.62742	4.57032	0.1432830	0.30486075	2.1864273	21	11 10.4	19.7
192525 1998 SM ₁₂	16.5	X	7.46952	160.21884	181.36168	4.77721	0.2195551	0.30172343	2.2015574	21	11 14.5	18.2
192526 1998 SP ₁₅	16.3	X	119.22834	267.14422	212.90385	1.34731	0.0092185	0.20255160	2.8715227	21	5 9.7	20.2
192527 1998 ST ₁₇	17.1	X	326.04049	202.63766	154.53836	3.72660	0.1646344	0.29780954	2.2208044	21	8 23.3	18.7
192528 1998 SG ₄₁	15.7	X	53.02555	158.06941	345.57495	2.70499	0.0294417	0.19655084	2.9296750	21	3 17.4	19.4
192529 1998 SU ₄₈	17.1	X	31.85800	205.73220	342.26254	1.96816	0.0420339	0.28328974	2.2960543	21	4 3.5	19.6
192530 1998 SE ₅₂	17.3	X	72.36744	227.09452	357.75727	4.53225	0.1567230	0.29659383	2.2268689	21	8 23.9	20.0
192531 1998 SC ₆₂	16.8	X	295.53004	41.18950	313.67870	5.93923	0.2155849	0.29452213	2.2372994	21	6 8.2	19.3
192532 1998 SZ ₆₃	16.5	X	312.69968	335.99327	27.86992	10.46111	0.1986941	0.29628874	2.2283973	21	8 3.6	18.6
192533 1998 SB ₇₀	16.9	X	265.39176	266.83535	81.60800	4.17853	0.2032605	0.29160267	2.2522074	21	4 26.2	20.0
192534 1998 SN ₈₀	16.7	X	282.03908	56.75452	304.96984	4.83492	0.1693373	0.29357307	2.2421186	21	6 6.7	19.3
192535 1998 SW ₈₅	17.6	X	277.41656	311.11525	17.59690	2.13952	0.2022715	0.29036736	2.2585906	21	4 11.2	20.7
192536 1998 SF ₈₈	17.4	X	252.95282	96.86242	286.71600	4.50078	0.1722372	0.29222140	2.2490272	21	6 1.0	20.6
192537 1998 SL ₈₉	17.4	X	308.88205	85.86361	305.86724	3.33585	0.1672334	0.29922630	2.2137889	21	9 10.8	19.2
192538 1998 SE ₉₇	17.2	X	323.04118	222.82375	133.02646	2.49451	0.1751406	0.29773809	2.2211597	21	8 12.6	18.8
192539 1998 SC ₁₁₉	16.6	X	283.23106	42.55335	14.15398	6.46779	0.1081975	0.29791619	2.2202744	21	9 14.4	18.7
192540 1998 SN ₁₂₀	17.1	X	321.94864	220.99511	181.52808	3.71162	0.1557553	0.30126506	2.2037900	21	11 3.9	18.4
192541 1998 SY ₁₂₄	16.8	X	324.34147	203.28030	173.46825	5.21834	0.1595721	0.29899777	2.2149168	21	9 24.4	18.0
192542 1998 SO ₁₄₄	17.3	X	333.24872	351.97010	16.29321	4.48828	0.1546854	0.29881830	2.2158036	21	10 1.4	18.8
192543 1998 SD ₁₄₆	15.2	X	108.26009	216.07763	192.10843	9.63931	0.0914564	0.18872237	3.0101430	21	2 5.5	19.5
192544 1998 SM ₁₅₇	17.3	X	306.63700	257.16062	118.89124	2.16069	0.1860858	0.29693205	2.2251775	21	8 8.5	19.0
192545 1998 SS ₁₆₀	16.7	X	233.19304	37.42366	22.70741	8.20018	0.1364707	0.29196350	2.2503514	21	7 4.7	20.0
192546 1998 TE ₁	17.0	X	67.24700	227.17485	36.53646	5.20818	0.1189719	0.29777770	2.2209627	21	10 6.4	19.5
192547 1998 TW ₆	17.8	X	13.06927	259.36018	20.39500	5.29677	0.3387180	0.29702620	2.2247073	21	9 5.5	18.5
192548 1998 TE ₇	16.4	X	297.29005	42.10875	18.30186	1.42616	0.2212132	0.21340724	2.7732985	21	9 13.5	19.2
192549 1998 TJ ₁₄	16.3	X	286.88109	126.39740	187.14604	1.35558	0.0629870	0.20123603	2.8840241	21	4 30.7	20.2
192550 1998 TC ₂₀	16.8	X	158.12956	77.82241	322.94994	0.56806	0.1661793	0.19392998	2.9560112	21	3 31.6	21.5
192551 1998 TY ₂₄	16.2	X	151.70222	225.33797	116.05222	0.28508	0.1397881	0.18803406	3.0174844	21	1 13.7	20.9
192552 1998 TP ₂₆	15.2	X	234.00045	277.86975	35.69994	12.03005	0.1237839	0.19307484	2.9647331	21	3 2.9	20.0
192553 1998 TH ₂₇	17.9	X	284.87205	19.11420	15.90922	3.25239	0.1715916	0.29659345	2.2268708	21	8 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>
192561 1998 VA ₉	17.3	X	268.96638	122.62723	276.62726	2.17227	0.2352040	0.29363544	2.2418010	21	7 4.1	20.3
192562 1998 VP ₁₇	16.6	X	239.82380	174.90607	225.32197	4.22481	0.1812251	0.28993580	2.2608313	21	6 9.4	19.9
192563 1998 WZ ₆	17.3	X	270.35914	110.68092	68.72202	24.75441	0.4080227	0.56334937	1.4519473	21	—	—
192564 1998 WL ₂₂	17.3	X	310.58063	128.98518	233.81948	3.88430	0.2474311	0.29487859	2.2354959	21	7 11.8	19.2
192565 1998 WS ₃₄	17.6	X	214.47723	312.57829	95.14290	4.24924	0.1504072	0.28303440	2.2974350	21	5 27.2	20.9
192566 1998 WA ₃₅	16.2	X	201.24425	93.32808	303.34800	0.78129	0.0952433	0.19826499	2.9127645	21	5 4.5	20.7
192567 1998 WD ₃₅	16.2	X	236.50906	350.32725	35.59240	2.61546	0.0984717	0.20130867	2.8833303	21	5 28.1	20.4
192568 1998 WZ ₃₅	16.7	X	299.24585	251.18215	45.82999	10.76423	0.1904670	0.28725052	2.2748992	21	3 31.5	19.7
192569 1998 WB ₃₆	16.0	X	28.69053	117.64802	49.35297	9.46420	0.0452017	0.19220963	2.9736233	21	3 20.3	20.0
192570 1998 WS ₃₆	16.6	X	123.77693	152.66991	272.75145	5.46876	0.0948469	0.27317891	2.3523645	21	3 5.1	19.7
192571 1998 WR ₃₈	15.2	X	271.08788	52.49721	229.06822	10.38870	0.0979460	0.19220169	2.9737052	21	2 22.6	19.9
192572 1998 WS ₄₀	15.1	X	207.89595	0.51994	235.78718	17.78824	0.1075341	0.17749148	3.1358194	21	—	—
192573 1998 XL	16.0	X	297.70518	286.26660	75.55189	9.01276	0.1945706	0.29168159	2.2518012	21	6 26.8	18.2
192574 1998 XQ ₆	15.2	X	194.13718	99.73783	233.206872	10.23732	0.0433367	0.18826172	3.0150513	21	2 5.5	19.8
192575 1998 XM ₂₀	15.2	X	356.01569	154.90714	269.05064	2.81044	0.1178220	0.17053934	3.2204731	21	12 28.8	19.2
192576 1998 XB ₂₂	15.4	X	11.83658	91.50454	108.81299	3.22707	0.1407926	0.18494349	3.0510080	21	4 4.8	18.9
192577 1998 XT ₂₅	16.3	X	158.12466	242.19279	232.21816	1.94046	0.0999588	0.19920646	2.9035799	21	6 26.6	20.6
192578 1998 XU ₆₁	17.2	X	209.70010	4.20791	80.77063	5.41381	0.1893833	0.28890190	2.2662220	21	7 9.1	20.7
192579 1998 XN ₆₂	14.4	X	50.00639	87.84569	335.49003	24.68566	0.2498594	0.17919843	3.1158742	21	—	—
192580 1998 XB ₉₈	14.9	X	135.04440	289.55586	62.62583	22.98662	0.0916386	0.18393962	3.0620987	21	1 3.2	19.6
192581 1998 YH ₁₆	15.3	X	323.97979	233.19112	285.34155	3.72577	0.1437408	0.17433248	3.1735877	21	—	—
192582 1998 YF ₁₈	15.6	X	169.69156	262.35431	125.29003	3.68364	0.1120295	0.19179673	2.9778895	21	3 25.6	20.3
192583 1998 AY ₉	17.2	X	220.96937	180.14233	287.55734	19.94713	0.0298018	0.37673586	1.9986492	21	9 1.5	19.7
192584 1998 AY ₁₄	16.3	X	200.06570	248.06403	116.43333	10.11966	0.1290810	0.27528601	2.3403454	21	3 21.7	19.9
192585 1999 AX ₂₂	14.9	X	27.94836	91.29147	38.83771	25.74168	0.2486022	0.17899702	3.1182112	21	2 14.0	18.5
192586 1999 AV ₂₉	16.5	X	175.33359	29.62775	123.65151	6.26074	0.1930684	0.28637051	2.2795573	21	9 6.9	20.1
192587 1999 AA ₃₁	15.6	X	81.71568	314.60868	127.08069	11.97213	0.1957197	0.18216098	3.0819989	21	3 5.9	19.6
192588 1999 BH ₁	16.8	X	223.17355	134.02977	275.47255	4.76099	0.2315060	0.28642786	2.2792530	21	6 1.8	20.5
192589 1999 BM ₁₁	15.1	X	301.49750	160.13348	41.65564	1.51162	0.1305184	0.17326238	3.1866414	21	—	—
192590 1999 BW ₁₁	16.7	X	318.88700	230.40708	325.68237	4.56219	0.1458120	0.26317543	2.4116030	21	—	—
192591 1999 CE ₈	15.1	X	26.43620	156.16846	317.31798	9.60875	0.1881359	0.17640150	3.1487235	21	1 7.3	18.5
192592 1999 CB ₁₁	16.4	X	140.90122	111.25223	305.47358	22.45140	0.2778438	0.27463140	2.3440629	21	3 24.1	20.7
192593 1999 CJ ₂₆	14.9	X	80.08358	293.93370	135.42195	13.90611	0.1244620	0.17899436	3.1182420	21	2 3.7	19.0
192594 1999 CO ₃₇	15.3	X	121.67103	94.54906	0.72658	4.53460	0.1795960	0.18674387	3.0313668	21	5 2.1	20.0
192595 1999 CS ₄₇	14.4	X	15.41274	341.07149	149.90713	15.68768	0.2409837	0.17649013	3.1476694	21	1 3.5	17.8
192596 1999 CU ₈₇	16.3	X	44.17127	218.79018	335.18162	5.17729	0.2045744	0.27422819	2.3463600	21	5 21.6	18.2
192597 1999 CW ₉₅	15.8	X	107.17511	22.56244	84.34400	3.24786	0.2012292	0.18681361	3.0306122	21	5 17.3	20.5
192598 1999 CV ₁₂₆	14.4	X	52.56086	28.63979	98.80050	25.36971	0.2224748	0.18049405	3.1009455	21	4 2.5	18.5
192599 1999 CT ₁₃₇	16.8	X	300.34176	104.54583	148.94429	6.64744	0.0786863	0.26869619	2.3784556	21	2 16.5	19.6
192600 1999 CE ₁₄₇	17.3	X	85.99391	148.00639	344.23830	0.99674	0.1253940	0.27215001	2.3582896	21	4 21.8	19.9
192601 1999 CK ₁₅₉	16.2	X	324.98177	46.63260	165.30340	2.64096	0.1541807	0.26587979	2.3952224	21	1 13.2	19.3
192602 1999 EQ ₂	17.4	X	53.80235	349.75044	154.62223	1.46520	0.1160616	0.26894278	2.3770015	21	3 15.1	19.7
192603 1999 EA ₉	17.2	X	180.01603	119.75187	340.05256	4.04310	0.1233763	0.28155919	2.3054528	21	7 1.2	20.6
192604 1999 EO ₁₃	15.3	X	220.95106	304.93630	338.06182	8.47847	0.0543496	0.17469579	3.1691863	21	1 14.5	20.1
192605 1999 FE ₁₂	14.7	X	99.23902	48.06240	350.01543	9.41812	0.2263094	0.17557759	3.1585663	21	2 8.5	19.1
192606 1999 FE ₄₂	15.3	X	303.39734	217.71217	298.36121	2.08552	0.3006318	0.16909703	3.2387597	21	—	—
192607 1999 FB ₆₀	16.4	X	99.33991	48.83044	28.55726	4.38256	0.0578154	0.26359913	2.4090181	21	2 16.6	19.2
192608 1999 FH ₆₀	16.4	X	60.39552	9.48994	148.33393	6.47200	0.1677762	0.27368342	2.3494726	21	4 26.2	18.6
192609 1999 GY ₃	15.9	X	51.42627	256.29633	8.35233	28.50094	0.3454545	0.23147302	2.6270548	21	10 8.2	19.5
192610 1999 GH ₁₀	16.4	X	50.32619	159.97269	12.48403	6.67029	0.1027121	0.27047778	2.3679997	21	4 17.2	18.6
192611 1999 GX ₂₆	16.3	X	92.91301	50.05548	120.54035	3.00030	0.1598995	0.27481492	2.3430192	21	7 2.7	19.3
192612 1999 GT ₃₉	16.0	X	68.07283	141.83925	43.96742	11.61684	0.1959552	0.27369918	2.3493824	21	6 24.2	18.8
192613 1999 GL ₄₆	16.1	X	47.66858	60.99211	94.02043	5.89409	0.1195245	0.26665423	2.3905825	21	3 23.9	18.5
192614 1999 GY ₅₄	15.5	X	15.75277	103.96193	8.01093	10.91393	0.1338190	0.21717577	3.2052270	21	—	—
192615 1999 GP ₅₆	17.2	X	279.82516	178.33191	16.92445	3.10940	0.0932242	0.25660011	2.4526269	21	—	—
192616 1999 GF ₅₈	16.4	X	6.65497	274.81789	271.56819	2.18177	0.1715498	0.26559386	2.3969411	21	2 10.3	18.6
192617 1999 HX ₉	16.2	X	358.88549	7.77869	213.99689	7.38172	0.1278734	0.26750363	2.3855193	21	3 24.5	18.7
192618 1999 JP ₄	16.8	X	36.48291	3.40722	233.46327	20.44529	0.0441591	0.36150672	1.9516044	21	6 20.6	18.7
192619 1999 JQ ₄	15.7	X	117.64987	112.49071	45.43588	23.87679	0.2353513	0.27557358	2.3387169	21	7 29.1	19.9
192620 1999 JV ₅	16.3	X	194.88916	71.59798	62.55344	21.46521	0.2593278	0.28269602	2.2992680	21	9 6.7	20.7
192621 1999 JN ₁₁	15.5	X	31.12482	88.57459	228.92921	27.28041	0.3509713	0.23141798	2.6274713	21	11 24.6	18.8
192622 1999 JW ₂₆	16.0	X	340.77378	312.96359	222.09921	10.70542	0.2041817	0.26028147	2.4294458	21	—	—
192623 1999 JR ₃₆	16.3	X	110.73881	210.84943	58.02900	4.95428	0.1893658	0.23972063	2.5664478	21	11 26.8	20.4
192624 1999 JJ ₄₄	16.2	X	235.76305	210.38786	42.35411	10.61130	0.1856671	0.25335295	2.4735389	21	—	—
192625 1999 JS ₁₀₁	16.4	X	282.49348	215.30862	47.77833	11.95719	0.2116918	0.26099770	2.4249991	21	1 28.9	20.4
192626 1999 JR ₁₃₃	16.3	X	94.37650	60.45835	167.41735	8.58737	0.2324509	0.23340532	2.6125356	21	9 27.2	20.3
192627 1999 KS ₃	16.7	X	104.90424	130.18732	158.91985	6.07241	0.2688036	0.24028829	2.5624042	21	12 20.2	21.3
192628 1999 KK ₃	16.9	X	284.87754	332.16805	202.40453	3.25403	0.1423019	0.25222820	2.4808869	21	—	—
192629 1999 KM ₁₁	16.2	X	154.24662	219.56657	83.08755	8.48104	0.2441591	0.24686126	2.5167153	21	—	—
192630 1999 LL	15.9	X	114.02151	78.48911	235.18347	15.14429	0.2011181	0.24126286	2.5554991	21	—	—
192631 1999 LG ₂₉	16.0	X	139.44453	176.90134	117.39856	7.85222	0.2266939	0.24436346	2.5338362	21	—	—
192632 1999 NL ₅₃	15.3	X	92.54519	59.69232	255.59029	12.26313	0.2576642	0.23672113	2.5880820	21	—	—
192633 1999 NT ₅₆	15.2	X	63.91391	87.85157	241.28722	12.02966	0.1925438	0.23283968	2.6167650	21	12 24.2	19.1
192634 1999 NF ₆₀	15.4	X	17.80265	92.48011	241.77424	11.03651	0.3171465	0.22				

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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>
192641 1999 <i>RG</i> ₂₃	15.8	X	355.76722	342.26136	11.02994	5.04070	0.1223514	0.22494895	2.6776064	21	10 8.6	18.7
192642 1999 <i>RD</i> ₃₂	16.3	X	49.77376	299.99757	309.95250	6.79784	0.7696340	0.22937002	2.6430880	21	11 5.5	21.4
192643 1999 <i>RG</i> ₃₉	15.7	X	352.80906	79.19892	322.73300	11.98215	0.2714335	0.22742088	2.6581684	21	12 31.9	18.3
192644 1999 <i>RS</i> ₃₉	15.5	X	4.22484	161.69235	213.00398	7.77430	0.2157622	0.22935513	2.6432023	21	12 6.3	18.2
192645 1999 <i>RJ</i> ₄₇	16.0	X	323.88575	25.97475	325.64288	13.10055	0.2686900	0.22337541	2.6901664	21	7 21.8	18.5
192646 1999 <i>RZ</i> ₆₇	16.5	X	329.25730	134.98009	190.08693	3.97135	0.2235460	0.22062135	2.7125080	21	6 26.2	19.1
192647 1999 <i>RU</i> ₇₁	16.0	X	83.09167	260.98230	54.58663	2.46751	0.1565923	0.23379239	2.6096512	21	12 24.3	19.8
192648 1999 <i>RO</i> ₇₆	16.1	X	323.30851	236.26225	159.05391	2.60002	0.0895211	0.22605923	2.6688319	21	10 12.3	19.2
192649 1999 <i>RV</i> ₇₈	15.3	X	325.82556	59.80238	329.80346	12.96693	0.1798739	0.22511294	2.6763058	21	9 26.3	18.1
192650 1999 <i>RF</i> ₈₀	15.8	X	296.17679	51.87074	324.20349	9.14035	0.0775342	0.22045238	2.7138938	21	8 4.3	19.1
192651 1999 <i>RS</i> ₈₀	16.1	X	303.86229	205.98197	230.03076	1.41274	0.1854581	0.22740083	2.6583247	21	10 25.5	18.6
192652 1999 <i>RM</i> ₈₁	15.5	X	27.37424	327.52657	346.44097	10.00709	0.0831476	0.22530188	2.6748094	21	9 29.7	18.9
192653 1999 <i>RD</i> ₁₀₃	15.6	X	41.52459	129.48786	211.62927	12.39066	0.2199174	0.23104107	2.6303281	21	12 17.9	19.3
192654 1999 <i>RZ</i> ₁₀₆	16.1	X	316.32141	49.25937	315.69796	2.73354	0.1776979	0.22115399	2.7081509	21	8 6.5	18.8
192655 1999 <i>RQ</i> ₁₀₇	15.7	X	239.68421	189.75177	185.72229	16.13706	0.2594445	0.21321433	2.7749711	21	5 7.7	20.6
192656 1999 <i>RF</i> ₁₂₁	15.9	X	359.31375	117.61617	187.76115	12.54559	0.2707130	0.22370546	2.6875198	21	8 8.3	18.1
192657 1999 <i>RD</i> ₁₂₅	15.8	X	36.25815	307.86747	339.31000	10.75344	0.1583673	0.22496509	2.6774783	21	9 17.8	18.9
192658 1999 <i>RU</i> ₁₃₀	15.7	X	319.38294	9.14558	319.46188	11.92738	0.1568207	0.22015246	2.7163581	21	6 23.6	19.0
192659 1999 <i>RJ</i> ₁₃₄	15.8	X	332.73707	208.92695	191.53989	7.59272	0.2394368	0.22715723	2.6602248	21	11 5.2	17.7
192660 1999 <i>RD</i> ₁₅₀	15.5	X	328.22953	57.50954	337.50964	11.95621	0.1767902	0.22654227	2.6650368	21	10 10.3	18.3
192661 1999 <i>RU</i> ₁₅₅	15.9	X	19.86034	171.09728	180.55888	14.96017	0.1672858	0.22897862	2.6460990	21	11 25.7	19.3
192662 1999 <i>RK</i> ₁₆₁	15.8	X	42.04216	130.26762	212.76811	6.41194	0.1012856	0.23125642	2.6268949	21	12 4.5	19.2
192663 1999 <i>RS</i> ₁₆₉	16.0	X	340.31139	100.15021	255.00677	2.71253	0.2168431	0.22379533	2.6868002	21	9 8.9	18.3
192664 1999 <i>RK</i> ₁₇₉	15.4	X	10.45993	11.97072	13.76863	10.59168	0.1992319	0.23031453	2.6358569	21	12 30.3	18.6
192665 1999 <i>RS</i> ₁₈₁	16.3	X	287.98267	63.93509	335.51905	1.14536	0.0902428	0.22183569	2.7025000	21	8 21.7	19.7
192666 1999 <i>RC</i> ₁₈₉	16.8	X	2.20003	149.42801	194.44308	1.59545	0.2155126	0.22556776	2.6727071	21	10 17.0	19.1
192667 1999 <i>RC</i> ₁₉₉	15.4	X	21.13160	30.40025	302.70400	11.82099	0.1976517	0.22770778	2.6559351	21	10 30.1	18.7
192668 1999 <i>RQ</i> ₁₉₉	15.6	X	32.78344	52.12171	296.70725	10.47331	0.2006548	0.22979345	2.6398401	21	12 14.0	19.0
192669 1999 <i>RD</i> ₂₀₃	15.4	X	263.39927	154.28692	247.08364	11.73210	0.1048057	0.21873951	2.7280431	21	7 15.8	19.3
192670 1999 <i>RR</i> ₂₀₆	15.6	X	340.37576	136.86670	233.45822	11.57400	0.3090858	0.22400935	2.6850886	21	9 30.9	17.5
192671 1999 <i>RF</i> ₂₁₃	15.3	X	196.15030	104.06889	328.85663	11.66521	0.1277462	0.21140659	2.7907678	21	6 12.6	19.9
192672 1999 <i>RW</i> ₂₁₉	15.7	X	29.87060	71.63081	250.52472	5.12986	0.2062789	0.22757806	2.6569443	21	11 4.2	18.7
192673 1999 <i>RD</i> ₂₂₂	15.4	X	33.09690	339.92814	289.85880	12.86973	0.2211358	0.22390934	2.6585881	21	8 24.8	18.5
192674 1999 <i>RB</i> ₂₂₄	15.6	X	338.93601	72.20328	288.24925	5.81352	0.2150231	0.22369102	2.6876354	21	9 12.1	18.1
192675 1999 <i>RG</i> ₂₂₆	15.5	X	255.16782	76.17220	321.97029	13.66996	0.1501870	0.21729130	2.7401509	21	6 29.9	19.7
192676 1999 <i>RK</i> ₂₃₉	15.8	X	354.76726	199.42675	157.06367	16.18752	0.2465630	0.22492927	2.6777625	21	10 28.0	18.4
192677 1999 <i>RR</i> ₂₅₂	16.0	X	21.63850	117.97168	211.18836	8.79029	0.2032614	0.22711788	2.6605321	21	11 18.4	18.9
192678 1999 <i>SM</i> ₁₀	15.5	X	353.53384	130.99009	239.81320	11.99549	0.2714278	0.22698740	2.6615561	21	11 14.1	17.4
192679 1999 <i>SO</i> ₁₂	15.8	X	46.63661	163.10709	182.27377	4.56130	0.2471311	0.23336512	2.6128356	21	—	—
192680 1999 <i>SE</i> ₁₇	15.7	X	2.25370	88.67604	294.35551	10.28285	0.2134081	0.22911252	2.6450680	21	12 13.6	18.4
192681 1999 <i>SJ</i> ₂₁	16.3	X	224.52474	56.72388	351.63516	3.19693	0.0811408	0.21255276	2.7807262	21	6 13.8	20.5
192682 1999 <i>SF</i> ₂₆	16.1	X	8.01466	80.29942	227.45357	4.10713	0.0342081	0.21863024	2.7289520	21	8 18.3	19.6
192683 1999 <i>SO</i> ₂₇	15.3	X	12.51506	126.59434	265.78342	15.57012	0.2031183	0.23023194	2.6364872	21	—	—
192684 1999 <i>TW</i> ₆	15.4	X	352.94608	309.08404	22.68823	14.62177	0.1754881	0.22109837	2.7086051	21	9 10.9	18.2
192685 1999 <i>TA</i> ₈	15.8	X	296.23805	225.60605	138.46884	5.01153	0.2728302	0.21779883	2.7358924	21	6 16.2	19.3
192686 Aijuroma	15.4	X	6.92706	76.73795	255.13871	11.28003	0.3809286	0.22587588	2.6702759	21	11 5.0	17.6
192687 1999 <i>TC</i> ₂₁	15.7	X	264.84357	153.82610	224.32354	6.20062	0.1429266	0.21435885	2.7650847	21	6 14.2	19.8
192688 1999 <i>TQ</i> ₂₂	16.2	X	358.70470	259.69652	85.18419	1.99056	0.1313140	0.22379206	2.6868264	21	10 3.8	18.9
192689 1999 <i>TF</i> ₂₅	15.8	X	14.29742	125.81495	225.80517	3.13579	0.1124381	0.22538372	2.6741619	21	11 5.9	18.8
192690 1999 <i>TO</i> ₃₅	15.4	X	18.94925	359.77203	19.03296	13.51792	0.2897420	0.22917663	2.6445746	21	—	—
192691 1999 <i>TY</i> ₃₉	15.5	X	319.54436	218.72187	153.42250	10.26952	0.1762760	0.21977682	2.7194524	21	8 23.4	18.4
192692 1999 <i>TH</i> ₄₁	15.6	X	5.19015	141.63763	212.35013	11.83038	0.2121199	0.22433775	2.6824675	21	11 7.0	18.1
192693 1999 <i>TH</i> ₄₂	16.6	X	109.28312	16.82226	296.85993	1.34393	0.0901542	0.23547634	2.5971949	21	—	—
192694 1999 <i>TM</i> ₄₄	16.3	X	254.08874	65.05883	325.13501	2.54690	0.1006145	0.21429026	2.7656747	21	6 22.8	20.3
192695 1999 <i>TB</i> ₄₈	16.4	X	10.21036	274.81659	41.55597	2.91793	0.2077071	0.22313058	2.6921339	21	9 22.6	19.0
192696 1999 <i>TO</i> ₅₄	16.0	X	166.75634	243.61083	230.74159	2.47401	0.0430136	0.21308746	2.7760724	21	7 3.8	20.0
192697 1999 <i>TB</i> ₆₀	16.6	X	280.85806	21.38178	336.87412	2.84374	0.1143469	0.21646869	2.7470886	21	6 11.8	20.4
192698 1999 <i>TF</i> ₆₀	16.5	X	355.86239	162.00866	192.38717	5.97708	0.0485513	0.22522594	2.6754106	21	10 6.4	19.7
192699 1999 <i>TL</i> ₆₀	16.2	X	244.34462	134.66770	323.74909	1.62526	0.0926466	0.22262069	2.6962430	21	9 10.0	20.0
192700 1999 <i>TJ</i> ₆₁	16.4	X	252.34065	55.03299	341.84792	4.60914	0.0087562	0.21742880	2.7389956	21	7 13.1	20.2
192701 1999 <i>TB</i> ₆₃	16.2	X	273.26984	350.15806	50.59230	1.51226	0.0779868	0.21606955	2.7504706	21	8 4.6	19.7
192702 1999 <i>TR</i> ₆₇	16.2	X	158.42192	248.20414	171.37434	2.07917	0.0583906	0.20343442	2.8632093	21	4 16.1	20.2
192703 1999 <i>TD</i> ₇₇	15.9	X	353.96701	96.71189	228.37721	4.17743	0.1179666	0.21863873	2.7288813	21	8 22.7	19.0
192704 1999 <i>TQ</i> ₇₈	16.4	X	279.68224	249.54200	177.88176	3.88389	0.0523136	0.22274454	2.6952435	21	9 22.5	20.0
192705 1999 <i>TN</i> ₈₁	16.6	X	248.69044	96.73124	351.99145	8.50620	0.0408772	0.22268407	2.6957314	21	9 11.0	20.3
192706 1999 <i>TX</i> ₉₀	15.5	X	312.93364	316.45223	43.32268	9.71558	0.1700630	0.22002811	2.7173814	21	7 27.8	18.7
192707 1999 <i>TM</i> ₉₄	15.7	X	31.74664	252.63792	51.00545	5.47253	0.2156400	0.22506983	2.6766476	21	10 22.2	18.8
192708 1999 <i>TW</i> ₁₀₂	15.9	X	161.04231	227.65769	87.93953	8.97185	0.2625265	0.24194194	2.5507150	21	—	—
192709 1999 <i>TM</i> ₁₀₅	16.6	X	305.13361	184.53619	191.60750	4.57270	0.3182805	0.21913257	2.7247799	21	7 7.7	19.7
192710 1999 <i>TF</i> ₁₀₇	15.9	X	342.24911	164.10762	256.48543	11.93765	0.2689593	0.22917490	2.6445880	21	—	—
192711 1999 <i>TJ</i> ₁₀₇	15.4	X	325.50356	70.30624	266.80709	4.37929	0.2185976	0				

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
192721 1999 TH ₁₄₅	15.7	X	274.39322	237.24368	185.94609	12.56307	0.2731416	0.21947475	2.7219471	21	8 2.9	19.8
192722 1999 TW ₁₄₅	15.4	X	301.25993	336.91179	35.55487	7.51453	0.1638789	0.21922698	2.7239976	21	7 26.1	18.7
192723 1999 TS ₁₄₉	16.4	X	283.01478	142.51912	197.51442	7.94387	0.2981487	0.21477422	2.7615184	21	4 27.3	20.5
192724 1999 TF ₁₅₇	15.8	X	18.56778	115.90880	200.74529	6.66028	0.0754106	0.22330250	2.6907519	21	9 19.9	19.1
192725 1999 TZ ₁₅₉	16.4	X	350.62684	114.88154	221.52273	3.27105	0.1229192	0.22260628	2.6963594	21	9 2.9	19.4
192726 1999 TJ ₁₆₁	16.0	X	337.15144	46.16721	285.44160	2.35068	0.1008287	0.21916812	2.7244852	21	8 3.7	19.2
192727 1999 TS ₁₆₉	16.2	X	249.52252	54.38023	328.16959	2.74523	0.1776571	0.21327293	2.7744627	21	5 29.2	20.4
192728 1999 TU ₁₆₉	15.9	X	283.25565	132.05533	279.97241	1.94316	0.0703374	0.22015019	2.7163768	21	9 2.8	19.5
192729 1999 TR ₁₈₂	16.1	X	317.93805	197.98306	257.84228	3.36832	0.1708015	0.23001763	2.6381245	21	12 24.2	18.4
192730 1999 TR ₁₈₈	16.2	X	312.12338	60.71511	323.72357	8.02796	0.2334744	0.22047436	2.7137135	21	8 18.4	18.8
192731 1999 TG ₁₉₀	15.6	X	325.88499	57.32809	301.11681	13.17525	0.1455709	0.22039147	2.7143939	21	8 15.6	18.5
192732 1999 TF ₁₉₂	15.8	X	247.97331	63.78336	314.33184	6.38650	0.2588087	0.21204992	2.7851204	21	5 13.6	20.6
192733 1999 TV ₁₉₂	15.2	X	7.41783	289.16903	23.90050	15.91073	0.1985043	0.22024828	2.7155701	21	9 16.3	18.0
192734 1999 TD ₁₉₃	15.4	X	15.63726	358.32635	353.19598	12.68867	0.0862583	0.22426490	2.6830484	21	10 30.1	18.9
192735 1999 TK ₁₉₃	15.6	X	244.60343	166.32222	262.09611	7.45937	0.2335161	0.21499916	2.7595920	21	7 15.4	19.9
192736 1999 TQ ₂₀₁	16.2	X	124.71728	47.72248	228.03721	4.36071	0.2873126	0.23574535	2.5952186	21	12 18.5	20.9
192737 1999 TR ₂₀₅	15.3	X	272.09314	323.42897	23.37946	9.21934	0.1619979	0.21104701	2.7939386	21	5 8.6	19.4
192738 1999 TU ₂₁₂	15.5	X	320.14012	275.52718	6.68272	9.13114	0.1639528	0.21159198	2.7891374	21	4 16.7	18.9
192739 1999 TZ ₂₁₃	15.5	X	211.64349	103.04595	27.85546	11.89396	0.0310588	0.22153628	2.7050345	21	9 24.1	19.3
192740 1999 TF ₂₁₄	15.8	X	330.47948	332.93555	38.83324	6.57960	0.0432264	0.22174485	2.7033380	21	9 24.4	19.2
192741 1999 TX ₂₁₄	15.7	X	339.03668	202.27204	180.63604	6.33229	0.0764126	0.22409249	2.6844244	21	10 21.1	18.9
192742 1999 TR ₂₁₅	16.1	X	264.70768	203.90310	191.02967	8.79997	0.1665591	0.21582791	2.7525232	21	7 1.9	20.2
192743 1999 TG ₂₂₅	16.6	X	319.55108	83.21535	199.89524	2.06670	0.1682138	0.21423332	2.7661647	21	4 18.3	19.8
192744 1999 TQ ₂₂₅	15.5	X	39.09628	303.98961	346.96632	8.26690	0.1296725	0.22456644	2.6806461	21	9 23.8	18.6
192745 1999 TO ₂₂₆	16.0	X	231.97775	32.50057	8.38301	5.77410	0.0325546	0.21255283	2.7807255	21	6 17.5	19.9
192746 1999 TT ₂₃₇	16.0	X	8.24968	81.41163	185.15325	15.48525	0.2540934	0.21795153	2.7346145	21	6 29.9	18.6
192747 1999 TX ₂₄₂	15.5	X	51.47841	295.88065	22.40203	9.05152	0.1423444	0.22684242	2.6626855	21	11 17.7	19.1
192748 1999 TX ₂₄₉	15.7	X	341.06647	22.92203	316.58207	5.29924	0.1186124	0.22072789	2.7116351	21	8 21.4	18.7
192749 1999 TN ₂₅₁	15.9	X	291.20002	101.92986	318.55074	4.64026	0.1582271	0.22228043	2.6989938	21	9 12.6	19.2
192750 1999 TR ₂₅₄	16.5	X	200.22802	71.45329	350.15011	3.89743	0.0600887	0.21089107	2.7953139	21	6 3.9	20.7
192751 1999 TF ₂₅₅	16.2	X	329.44556	104.85587	250.31961	0.93502	0.0889229	0.22220758	2.6995837	21	8 25.2	19.2
192752 1999 TH ₂₅₆	15.7	X	246.00832	246.59555	188.14694	24.48174	0.2322686	0.21821463	2.7324160	21	7 22.4	20.5
192753 1999 TD ₂₅₉	15.4	X	35.06138	128.43463	194.57747	14.80117	0.1760449	0.22608200	2.6686527	21	11 10.8	18.8
192754 1999 TU ₂₆₂	16.2	X	305.88724	113.05758	216.52671	5.26254	0.0969910	0.21408085	2.7674780	21	6 11.5	19.7
192755 1999 TR ₂₆₅	15.2	X	19.38381	78.20203	265.79821	12.72860	0.2006395	0.22775475	2.6555700	21	11 15.7	18.3
192756 1999 TQ ₂₆₈	15.7	X	298.06232	5.60335	287.39509	7.23101	0.1984099	0.21169858	2.7882011	21	3 24.2	19.8
192757 1999 TH ₂₇₀	15.9	X	330.33464	35.32573	335.42074	7.94946	0.1456334	0.22207195	2.7006828	21	9 13.7	18.6
192758 1999 TU ₂₇₁	15.4	X	217.86614	242.02388	234.73983	8.31908	0.1009435	0.21935507	2.7229370	21	8 28.8	19.6
192759 1999 TK ₂₈₀	15.6	X	299.13163	217.22450	181.26647	13.25560	0.2629311	0.22315905	2.6919049	21	8 6.6	18.9
192760 1999 TR ₂₈₉	15.6	X	247.50441	343.36568	52.11311	9.91736	0.1659470	0.21281113	2.7784749	21	6 13.6	20.0
192761 1999 TR ₂₉₂	15.4	X	273.28089	172.88903	246.97177	7.52939	0.2176029	0.21844332	2.7305085	21	8 5.3	19.2
192762 1999 TR ₂₉₃	15.9	X	275.48854	70.10468	14.07377	8.96190	0.1829327	0.22012976	2.7165448	21	9 20.4	19.4
192763 1999 TR ₂₉₇	16.0	X	237.20023	243.65579	186.66888	4.79268	0.1479443	0.21376537	2.7702002	21	7 19.1	20.2
192764 1999 TF ₃₀₂	15.5	X	19.38837	6.61979	307.29059	11.22045	0.0870818	0.22326285	2.6910704	21	9 14.3	18.9
192765 1999 TV ₃₁₃	16.0	X	78.90841	291.12923	347.55595	8.92992	0.0647666	0.22717810	2.6600619	21	10 19.8	19.8
192766 1999 TH ₃₁₅	16.3	X	62.03430	76.92421	43.63558	2.34679	0.0806913	0.24668266	2.5197299	21	2 25.2	19.0
192767 1999 TV ₃₁₉	16.5	X	217.82397	309.96461	201.59119	1.68100	0.1461865	0.22265597	2.6959582	21	10 11.6	20.6
192768 1999 TB ₃₂₀	15.5	X	324.10102	87.56330	253.05409	7.97795	0.1760689	0.21876639	2.7278196	21	7 14.7	18.6
192769 1999 TF ₃₂₁	15.8	X	203.42768	104.01269	316.39502	3.24603	0.0964359	0.21117534	2.7928048	21	6 5.0	20.0
192770 1999 TB ₃₂₂	15.9	X	256.58821	79.45902	338.79089	6.99441	0.2510414	0.21727608	2.7402789	21	7 14.9	20.3
192771 1999 UY ₆	16.0	X	15.37917	328.21528	12.66987	10.46200	0.0965733	0.22629350	2.6669896	21	10 20.5	19.2
192772 1999 UH ₁₁	15.9	X	314.95638	347.80070	313.99778	3.14235	0.0831552	0.20923193	2.7100718	21	5 19.0	19.5
192773 1999 UB ₁₂	16.0	X	149.46521	87.28672	51.69617	5.59071	0.1046572	0.21099885	2.7943620	21	7 20.3	20.3
192774 1999 UY ₁₂	16.2	X	316.08648	202.97153	207.45824	9.39066	0.2729638	0.22378407	2.6868903	21	9 29.7	18.5
192775 1999 UE ₁₆	16.3	X	293.65835	171.27036	257.46888	1.39482	0.1978056	0.22143626	2.7058490	21	9 22.6	19.5
192776 1999 UQ ₁₆	15.9	X	302.27363	186.01562	222.30631	10.08677	0.2612362	0.22054878	2.7131030	21	8 24.9	19.0
192777 1999 UO ₁₇	16.6	X	346.29906	274.60743	56.20865	2.80759	0.0823112	0.22005645	2.7171481	21	8 20.9	19.8
192778 1999 UW ₁₉	16.2	X	123.28726	72.60846	189.08892	10.53200	0.2940251	0.23410810	2.6073045	21	12 2.6	21.1
192779 1999 UO ₂₄	15.3	X	335.71186	305.68598	356.28536	8.29648	0.2747788	0.21671702	2.7449896	21	5 25.0	18.1
192780 1999 UY ₂₄	15.9	X	228.53498	28.40424	14.86409	13.75224	0.1973347	0.21179022	2.7873967	21	5 30.9	20.7
192781 1999 UG ₂₅	17.1	X	291.78758	31.03866	8.65395	6.98020	0.3619703	0.21886360	2.7270119	21	7 15.5	20.7
192782 1999 UU ₂₅	16.1	X	321.04194	42.02959	15.11617	4.06386	0.2411642	0.22452522	2.6809741	21	10 28.3	18.2
192783 1999 UV ₂₆	15.7	X	278.76313	70.14762	267.85863	3.86804	0.1688217	0.21234316	2.7825556	21	5 4.9	19.8
192784 1999 UH ₂₇	15.8	X	314.33865	69.62798	357.88019	5.63717	0.0911537	0.22804693	2.6533013	21	11 8.3	18.9
192785 1999 UK ₃₀	16.5	X	253.60985	218.56195	178.06816	4.21059	0.097013	0.21574912	2.7531932	21	7 12.8	20.3
192786 1999 UW ₃₀	16.7	X	318.81671	186.77613	181.50781	4.92824	0.1755695	0.22064299	2.7123306	21	8 15.1	19.5
192787 1999 UE ₃₄	17.0	X	204.16940	224.74900	210.40970	3.75123	0.0420201	0.21250141	2.7811741	21	6 27.6	20.9
192788 1999 UH ₃₄	16.4	X	176.93881	257.13716	199.84831	1.07170	0.0260061	0.21184531	2.7869134	21	6 23.2	20.4
192789 1999 UA ₃₅	16.1	X	208.77110	275.30557	200.06186	2.48279	0.1586586	0.21552578	2.7550949	21	8 15.8	20.4
192790 1999 UC ₃₅	16.6	X	313.82331	19.13639	48.34784	2.99320	0.0919728	0.22495592	2.6775511	21	11 8.8	19.7
192791 1999 UX ₄₁	15.4	X	330.15780	323.08254	26.32319	9.68273	0.1289767	0.21932643	2.7231740	21	8 20.5	18.5
192792 1999 UT ₄₅	15.6	X	211.99274	73.36987	8.78857	11.78125	0.1302220	0.21315650	2.7754729	21	7 13.1	20.1
192793 1999 UY ₅₄	16.3	X	48.44008									

ELEMENTS AND OPPOSITION DATES IN 2021

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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>
192801 1999 VG ₄	15.5	X	276.07466	192.12597	166.00269	5.46811	0.1784210	0.21454663	2.7634710	21	5 28.6	19.4
192802 1999 VO ₁₆	16.1	X	266.39676	344.64498	7.38100	4.33272	0.2150636	0.21252944	2.7809295	21	5 3.4	20.5
192803 1999 VF ₂₁	16.1	X	296.95700	291.87641	91.25741	4.53752	0.2059657	0.21763337	2.7372789	21	7 25.4	19.2
192804 1999 VZ ₃₁	16.0	X	2.64535	15.33308	331.08534	0.61037	0.1102236	0.22093126	2.7099707	21	10 9.4	19.1
192805 1999 VX ₄₄	15.6	X	6.06824	105.28976	231.64349	12.48269	0.3008657	0.22472003	2.6794245	21	10 26.5	17.8
192806 1999 VR ₄₅	15.3	X	309.01397	64.45149	5.07885	4.48643	0.2548760	0.22327303	2.6909887	21	10 15.7	17.5
192807 1999 VX ₅₆	15.9	X	327.61960	355.95492	53.79567	3.82231	0.0793729	0.22452643	2.6809645	21	11 7.5	19.0
192808 1999 VO ₅₉	16.4	X	303.60306	130.87465	244.88650	2.37238	0.2090882	0.21786578	2.7353319	21	7 24.0	19.7
192809 1999 VW ₆₁	16.3	X	322.73652	157.89097	228.08094	5.22489	0.2163212	0.22130898	2.7068863	21	9 13.3	18.7
192810 1999 VL ₆₃	15.3	X	358.84035	203.53430	227.60659	10.03633	0.2274866	0.22969699	2.6405791	21	—	—
192811 1999 VC ₆₈	15.4	X	348.15345	325.85505	57.62485	9.83170	0.1900932	0.22352981	2.6889275	21	11 11.9	18.0
192812 1999 VO ₆₉	16.5	X	306.26228	169.61523	226.98569	1.42147	0.1236025	0.21990787	2.7183718	21	9 9.7	19.7
192813 1999 VO ₇₀	15.8	X	181.24105	260.12275	206.22074	3.28503	0.1687552	0.21027819	2.8007428	21	7 9.8	20.4
192814 1999 VG ₇₁	15.3	X	195.33278	331.56614	62.51883	12.27427	0.0528722	0.20445323	2.8536896	21	4 28.2	19.5
192815 1999 VP ₇₆	16.2	X	255.22064	167.84923	167.48547	2.27266	0.0344855	0.20485243	2.8499811	21	4 23.0	20.2
192816 1999 VR ₇₆	16.3	X	31.57888	89.96040	177.03802	2.42615	0.0413109	0.21291026	2.7776125	21	7 29.5	19.8
192817 1999 VQ ₇₉	15.6	X	206.80124	69.77688	53.66179	13.19928	0.1622841	0.21417680	2.7665153	21	8 7.3	20.3
192818 1999 VK ₈₁	16.0	X	278.61474	239.68693	217.62758	8.71583	0.2799588	0.21961969	2.7207493	21	9 22.3	19.7
192819 1999 VK ₈₂	15.6	X	333.01239	313.04630	36.67415	5.67694	0.1277085	0.21977491	2.7194681	21	8 24.4	18.6
192820 1999 VO ₈₂	15.6	X	0.47804	256.57235	45.71041	16.02720	0.2955631	0.21934231	2.7230427	21	8 23.6	17.9
192821 1999 VU ₈₂	15.9	X	47.48325	120.83291	190.75610	11.14089	0.2052407	0.22847455	2.6499895	21	11 17.4	19.5
192822 1999 VP ₈₈	16.1	X	243.54037	297.07804	105.03563	1.70319	0.0766080	0.21302009	2.7766577	21	6 28.7	20.0
192823 1999 VD ₈₉	15.7	X	230.91938	179.99540	220.09317	8.68743	0.1655607	0.21075316	2.7965332	21	6 3.9	20.2
192824 1999 VD ₉₁	15.6	X	296.29879	189.84744	214.76257	8.81296	0.0696654	0.22082732	2.7108211	21	9 9.7	19.2
192825 1999 VT ₉₁	15.2	X	355.67397	227.16628	97.10728	15.09775	0.2146519	0.21996055	2.7179378	21	9 7.3	17.9
192826 1999 VO ₉₄	15.7	X	258.68465	232.00189	212.27099	8.81065	0.1420781	0.21960892	2.7208383	21	8 30.1	19.6
192827 1999 VJ ₉₇	15.9	X	336.04923	109.07864	221.90614	12.52680	0.1442305	0.21735195	2.7396412	21	7 24.5	19.2
192828 1999 VJ ₉₉	16.2	X	301.95626	282.52745	44.59896	8.65117	0.1744214	0.21357775	2.7718223	21	5 19.9	19.7
192829 1999 VL ₁₀₀	16.1	X	258.33423	239.86421	232.81583	8.95147	0.1521220	0.22092705	2.7100052	21	10 5.2	19.8
192830 1999 VU ₁₀₁	15.5	X	297.80908	144.49342	213.17308	4.93176	0.0521216	0.21529668	2.7570491	21	8 6.4	19.1
192831 1999 VY ₁₀₁	16.3	X	230.01706	202.08861	209.74454	1.77500	0.1128867	0.21132747	2.7914643	21	6 21.9	20.5
192832 1999 VF ₁₀₂	16.5	X	254.16129	6.95598	58.11734	5.51596	0.1374349	0.21546861	2.7555823	21	8 4.9	20.4
192833 1999 VP ₁₀₇	16.5	X	51.74820	345.43867	51.56528	2.84276	0.1140916	0.23218655	2.6216699	21	—	—
192834 1999 VZ ₁₁₇	15.5	X	89.07405	354.78213	197.67033	14.68271	0.0516543	0.21453370	2.7635821	21	7 8.7	19.6
192835 1999 VB ₁₁₈	15.9	X	359.66920	51.44314	193.43463	8.30880	0.0476454	0.21058925	2.7979842	21	5 14.5	19.5
192836 1999 VC ₁₂₁	16.4	X	286.14836	333.88630	25.14488	4.30002	0.1152241	0.21464585	2.7626194	21	6 20.1	20.1
192837 1999 VL ₁₂₅	15.9	X	172.48367	98.63215	44.57703	9.03003	0.0909848	0.21448808	2.7639740	21	8 22.2	20.2
192838 1999 VP ₁₃₀	16.7	X	202.99540	46.82119	35.76308	4.95636	0.0978787	0.21174194	2.7878204	21	7 3.8	21.0
192839 1999 VK ₁₃₂	16.5	X	196.03091	349.84803	118.29359	2.32972	0.0415058	0.21309072	2.7760441	21	7 31.5	20.4
192840 1999 VN ₁₃₇	15.7	X	177.44898	90.91017	32.97106	4.06612	0.0392127	0.21377670	2.7701023	21	7 31.0	19.7
192841 1999 VV ₁₃₈	16.1	X	336.11669	303.82775	75.99844	7.26097	0.0613276	0.22059158	2.7127520	21	10 14.2	19.5
192842 1999 VC ₁₄₃	16.4	X	270.21489	146.40255	241.61548	3.21608	0.1397141	0.21534967	2.7565968	21	7 4.0	20.3
192843 1999 VM ₁₄₈	15.6	X	283.42533	122.91574	241.63146	4.76272	0.0559207	0.21309666	2.7759925	21	7 2.8	19.4
192844 1999 VD ₁₅₂	16.4	X	253.57100	11.99237	74.95974	4.53381	0.1670766	0.21695570	2.7429760	21	8 29.2	20.3
192845 1999 VX ₁₅₄	16.2	X	353.81760	90.29578	304.26019	1.20246	0.2072197	0.22839921	2.6505722	21	12 12.3	18.5
192846 1999 VK ₁₅₅	16.0	X	22.67066	315.07026	312.51669	2.70219	0.0469568	0.21494326	2.7600704	21	7 18.5	19.4
192847 1999 VK ₁₅₆	15.3	X	193.98302	242.28102	236.97652	12.29126	0.1585123	0.21247048	2.7814440	21	8 2.8	20.1
192848 1999 VD ₁₅₇	15.5	X	300.72977	297.21550	50.80294	4.61422	0.1155132	0.21214693	2.7842713	21	6 26.2	18.9
192849 1999 VS ₁₆₁	15.8	X	308.55390	48.18102	40.41693	14.18250	0.2158653	0.22458465	2.6805012	21	11 16.7	18.2
192850 1999 VH ₁₆₆	16.0	X	44.92039	354.04402	300.11307	2.31662	0.0202109	0.21832973	2.7314555	21	9 20.2	19.7
192851 1999 VL ₁₇₅	15.5	X	42.17709	245.08624	30.85486	14.64782	0.2269308	0.22051518	2.7133785	21	9 29.7	18.9
192852 1999 VD ₁₇₆	15.2	X	340.36556	63.26106	41.04325	30.39620	0.2968934	0.23074491	2.6325783	21	—	—
192853 1999 VU ₁₇₆	15.8	X	238.17453	6.40971	34.84677	6.51912	0.10514897	0.21265975	2.7779394	21	6 23.8	19.8
192854 1999 VA ₁₇₈	15.5	X	332.51258	61.05427	36.81830	30.36246	0.2949759	0.22914189	2.6448419	21	—	—
192855 1999 VT ₁₈₇	15.7	X	293.53484	124.98488	204.33165	7.08580	0.2296251	0.21220704	2.7837455	21	5 4.6	19.6
192856 1999 VG ₁₉₀	15.6	X	242.32187	172.14509	225.04042	9.38621	0.2075979	0.21083807	2.7957824	21	6 7.6	20.1
192857 1999 VX ₁₉₈	15.4	X	258.91491	319.89897	85.67981	9.11089	0.1130570	0.21518119	2.7580355	21	7 18.0	19.3
192858 1999 VT ₂₀₁	15.9	X	217.91231	69.89551	24.85644	8.49643	0.2639802	0.21228742	2.7830427	21	7 26.1	20.8
192859 1999 VB ₂₁₃	16.6	X	207.48232	184.20318	203.14219	1.39251	0.0863703	0.20654501	2.8343898	21	4 29.5	20.8
192860 1999 VS ₂₁₉	15.9	X	220.63307	81.83656	10.02228	15.12904	0.0209729	0.21953908	2.7214153	21	8 18.7	19.9
192861 1999 VO ₂₂₀	15.2	X	219.21623	165.20220	247.34324	11.87368	0.1280259	0.21088305	2.7953848	21	6 10.2	19.5
192862 1999 VE ₂₂₃	15.6	X	221.28470	238.66135	194.75988	12.72222	0.1834631	0.21243615	2.7817436	21	7 3.6	20.4
192863 1999 WR ₅	16.1	X	254.31457	64.02611	33.73762	9.41522	0.2177885	0.21994345	2.7180787	21	9 8.7	20.1
192864 1999 WP ₉	15.3	X	300.59371	317.17906	90.04930	10.17900	0.1584968	0.22088417	2.7103559	21	9 17.0	18.6
192865 1999 WL ₁₅	15.8	X	25.96106	33.00696	226.97471	13.47083	0.1625472	0.21379477	2.7699462	21	7 19.8	19.1
192866 1999 WS ₁₆	15.5	X	267.40047	78.55411	25.62753	6.75107	0.1843812	0.22337526	2.6901676	21	10 5.2	18.8
192867 1999 WS ₁₈	16.3	X	43.55374	276.37763	52.76093	5.98728	0.0528975	0.22419439	2.6836109	21	11 9.9	19.9
192868 1999 WZ ₁₈	16.5	X	199.21697	169.81528	203.67127	1.48261	0.0806895	0.20366664	2.8610325	21	4 3.6	20.9
192869 1999 XB ₁₄	16.3	X	280.03434	284.04792	138.49511	8.05760	0.3361859	0.21756317	2.7378678	21	8 2.1	20.2
192870 1999 XE ₁₉	15.4	X	294.38753	344.67113	41.79028	10.49900	0.2162308	0.21957457	2.7211220	21	7 26.9	18.9
192871 1999 XV ₂₀	15.9	X	24.48268	144.26200	248.50139	2.66774	0.2542078	0.23118528	2.6292341	21	—	—
192872 1999 XK ₂₅	15.3	X	268.91351	323.46191	62.98017	14.78638	0.1662255	0.21394636	2.7686376	21	6 25.9	19.3
192873 1999 XJ ₂₇	15.0	X	279.56683	309.29425	69.37187	12.24192	0.1885525	0.21477618	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>
192881 1999 XR ₅₉	15.4	X	233.27346	234.01926	247.44919	10.94526	0.1147212	0.21739682	2.7392642	21	9 18.4	19.6
192882 1999 XT ₆₁	15.8	X	42.80236	302.38802	79.91099	15.92199	0.1413363	0.22900009	2.6459336	21	—	—
192883 1999 XT ₆₇	15.4	X	320.57277	269.44727	88.28948	10.32437	0.1414726	0.21558269	2.7546101	21	8 11.2	18.6
192884 1999 XJ ₇₅	15.4	X	271.33253	299.72718	87.28412	9.38965	0.2789048	0.21338298	2.7735087	21	6 15.5	19.4
192885 1999 XA ₉₄	15.1	X	328.63679	184.56620	290.51721	21.59027	0.1171872	0.22563403	2.6721837	21	—	—
192886 1999 XR ₁₀₀	15.0	X	336.47840	122.61503	283.35342	9.71122	0.1995969	0.22164792	2.7041261	21	11 16.7	17.6
192887 1999 XZ ₁₀₃	15.1	X	297.62818	132.55333	265.13637	11.82762	0.2079972	0.21751027	2.7383116	21	8 9.8	18.6
192888 1999 XB ₁₁₃	15.3	X	16.75488	11.97827	313.37829	13.46291	0.1496315	0.22197092	2.7015022	21	9 30.9	18.7
192889 1999 XA ₁₁₅	15.3	X	264.35754	132.35813	278.45234	13.20517	0.3405653	0.21579638	2.7527912	21	7 1.5	19.7
192890 1999 XP ₁₁₅	15.5	X	311.04554	155.34266	255.60315	13.69154	0.1571036	0.22220960	2.6995673	21	9 28.7	18.8
192891 1999 XK ₁₁₇	15.8	X	39.94240	75.40089	313.26631	4.21271	0.3147036	0.23113836	2.6295899	21	—	—
192892 1999 XZ ₁₁₈	16.5	X	280.45335	22.00977	32.89718	2.06872	0.2179417	0.21728205	2.7402288	21	8 11.9	20.1
192893 1999 XM ₁₂₂	15.6	X	14.43142	79.59934	315.10245	5.01818	0.2092292	0.22841108	2.6504804	21	—	—
192894 1999 XU ₁₃₀	15.6	X	81.57056	76.39447	288.52959	13.43134	0.2223942	0.23281050	2.6169836	21	—	—
192895 1999 XS ₁₃₄	15.8	X	10.72761	315.66252	101.76305	14.16685	0.2266879	0.22906948	2.6453993	21	—	—
192896 1999 XW ₁₃₇	16.0	X	257.26238	115.27136	240.62341	12.64776	0.1161453	0.20879239	2.8140142	21	5 10.6	20.1
192897 1999 XH ₁₄₂	14.7	X	358.32704	62.09778	275.24981	32.23708	0.195027	0.21680270	2.7442664	21	8 28.8	18.6
192898 1999 XB ₁₄₅	16.0	X	31.71268	104.33888	231.95635	6.01911	0.1345706	0.22458827	2.6804723	21	11 14.9	19.2
192899 1999 XE ₁₄₆	15.7	X	348.60740	254.44549	68.20567	7.66952	0.0346500	0.21455143	2.7634299	21	8 15.2	19.3
192900 1999 XN ₁₅₁	15.6	X	237.85026	225.94832	84.47671	2.90124	0.0191575	0.19350246	2.9603666	21	3 5.4	19.8
192901 1999 XR ₁₅₁	15.4	X	252.26172	177.61579	10.31714	1.79432	0.0851509	0.17837250	3.1254853	21	—	—
192902 1999 XC ₁₅₆	15.9	X	246.14579	179.52543	244.91936	8.48245	0.2590929	0.21300310	2.7768053	21	7 9.1	20.4
192903 1999 XX ₁₇₇	15.7	X	308.06668	8.08927	57.39223	4.35136	0.1667457	0.21852912	2.7297938	21	10 20.4	18.6
192904 1999 XG ₁₈₅	15.9	X	229.71841	61.90432	341.53078	6.49664	0.3207752	0.21040523	2.7996153	21	5 26.6	21.0
192905 1999 XU ₂₁₀	15.9	X	230.99367	115.47673	303.73756	14.95920	0.3034948	0.21063985	2.7975361	21	6 18.9	20.9
192906 1999 XJ ₂₁₃	15.7	X	231.90214	314.68790	133.14082	9.36027	0.2534587	0.21259873	2.7803252	21	7 27.1	20.2
192907 1999 XU ₂₁₃	15.7	X	181.33125	5.02680	116.26699	8.65976	0.1709109	0.20928250	2.8096191	21	7 29.4	20.3
192908 1999 XG ₂₂₃	16.8	X	253.18025	24.82962	63.86974	4.40099	0.1669214	0.21736128	2.7395628	21	8 31.1	20.7
192909 1999 XD ₂₂₇	15.8	X	196.78898	127.79481	288.98588	0.61591	0.1815840	0.20390114	2.8588385	21	5 23.7	20.6
192910 1999 XE ₂₃₃	15.3	X	259.85613	235.69954	131.44074	8.91850	0.3039945	0.21167740	2.7883871	21	5 11.4	20.1
192911 1999 XB ₂₃₇	15.8	X	131.27775	141.76039	315.08369	1.69574	0.1256865	0.20292915	2.8679600	21	5 8.1	20.0
192912 1999 XU ₂₄₅	16.1	X	290.30557	254.07089	121.91447	8.91293	0.3588889	0.21639789	2.7476877	21	6 11.9	20.1
192913 1999 XC ₂₄₇	16.1	X	342.14750	42.27118	264.73614	3.25595	0.0521514	0.21174166	2.7878229	21	7 10.7	19.6
192914 1999 XY ₂₄₇	15.7	X	259.91494	306.63287	103.28042	8.95381	0.2222213	0.21391970	2.7688676	21	7 9.8	19.8
192915 1999 XD ₂₅₁	16.4	X	157.37226	67.10786	345.29392	1.37052	0.0973335	0.19738245	2.9214404	21	4 8.7	20.7
192916 1999 XR ₂₅₆	15.5	X	280.04920	51.39247	49.52203	14.41464	0.1852859	0.22106424	2.7088838	21	10 21.6	18.9
192917 1999 YA ₄	15.0	X	268.12247	52.26774	94.86664	25.59717	0.1947389	0.21258693	2.7804281	21	7 19.2	19.5
192918 1999 YV ₉	15.6	X	218.04809	342.02620	34.04795	5.53530	0.0417961	0.21166258	2.7885171	21	7 16.4	19.4
192919 1999 YH ₁₀	16.5	X	184.55871	290.34111	206.80635	3.64522	0.0526160	0.21401250	2.7680671	21	8 22.8	20.6
192920 1999 YT ₁₀	16.4	X	253.36565	218.22210	204.48288	3.93206	0.0472112	0.21405017	2.7677424	21	8 10.1	20.3
192921 1999 YD ₁₁	16.4	X	192.46224	317.45825	160.26662	3.17734	0.1314704	0.21157279	2.7893061	21	8 4.5	20.7
192922 1999 YM ₁₄	15.0	X	178.89381	152.22095	328.55401	12.53699	0.1457052	0.21028942	2.8006431	21	7 28.7	19.5
192923 1999 YY ₁₄	15.5	X	248.80918	46.18089	55.92331	24.58849	0.2779137	0.21732389	2.7398770	21	9 11.4	20.3
192924 1999 YU ₂₀	15.2	X	344.61420	223.00605	302.74133	8.56999	0.0681257	0.18661939	3.0327146	21	1 12.5	19.2
192925 1999 YU ₂₅	16.3	X	102.78475	291.03834	173.62452	0.30211	0.0445987	0.19832531	2.9121738	21	4 4.3	20.4
192926 2000 AN ₅	15.7	X	291.12623	65.38466	99.01662	8.55806	0.2405447	0.22416740	2.6838264	21	—	—
192927 2000 AH ₆	15.2	X	220.39086	311.14377	85.45784	6.16867	0.1677109	0.20403322	2.8576045	21	5 21.3	19.8
192928 2000 AP ₆	16.0	X	250.89710	227.03090	199.37185	7.15408	0.2599464	0.21548146	2.7554727	21	7 15.8	20.4
192929 2000 AT ₄₄	12.5	X	296.22962	352.04325	102.55693	8.67113	0.0817755	0.08073902	5.3016827	21	10 28.7	19.3
192930 2000 AV ₅₂	15.8	X	303.19000	179.50138	252.37266	12.94896	0.2209371	0.22275414	2.6951660	21	10 6.7	18.8
192931 2000 AW ₇₁	15.3	X	216.14458	197.61136	258.70162	8.10149	0.1622149	0.21164125	2.7887046	21	7 28.2	19.8
192932 2000 AO ₉₂	15.0	X	257.94359	125.32060	283.88460	24.31636	0.1874513	0.21526222	2.7573433	21	7 10.1	19.1
192933 2000 AN ₁₁₁	15.8	X	252.43469	309.34173	127.92677	13.84486	0.1591096	0.21241891	2.7818941	21	8 14.7	19.7
192934 2000 AY ₁₂₁	14.7	X	278.78665	253.09125	281.72752	16.30474	0.1132620	0.18036689	3.1024027	21	—	—
192935 2000 AZ ₁₄₉	15.6	X	258.92837	235.29212	166.95453	7.79875	0.3066656	0.21150626	2.7898910	21	6 19.8	20.2
192936 2000 AV ₁₅₃	15.1	X	28.26513	138.95801	284.78617	14.57807	0.1104973	0.23055113	2.6340532	21	—	—
192937 2000 AS ₁₇₀	15.9	X	264.78184	256.13733	134.28347	9.15806	0.2926911	0.21341003	2.7732744	21	6 12.6	20.4
192938 2000 AJ ₁₈₅	12.8	X	311.59097	301.41970	154.49297	15.90989	0.1042272	0.08178674	5.2563078	21	11 16.4	19.5
192939 2000 AK ₁₈₈	15.3	X	294.34681	249.31124	140.20986	13.88413	0.2141337	0.21646302	2.7471365	21	7 27.5	18.6
192940 2000 AG ₂₀₆	15.5	X	281.98369	298.67713	104.52200	5.57792	0.0674619	0.21207499	2.7849009	21	8 22.6	19.2
192941 2000 AD ₂₀₇	15.6	X	99.64405	136.21481	288.83239	7.66133	0.0396578	0.19132662	2.9827656	21	2 8.3	19.7
192942 2000 AB ₂₁₉	13.3	X	353.66223	73.22209	327.14420	2.48343	0.0521707	0.08150686	5.2683336	21	11 6.3	20.0
192943 2000 AJ ₂₂₃	16.8	X	251.40049	144.81977	306.95991	1.16530	0.2649041	0.21367593	2.7709731	21	8 18.1	21.0
192944 2000 AC ₂₂₆	16.1	X	17.06694	208.08047	313.58847	1.46308	0.1009432	0.19160638	2.9798615	21	2 19.2	19.6
192945 2000 AD ₂₂₇	16.1	X	312.16978	288.80329	303.51904	1.37056	0.0868011	0.18731203	3.0252338	21	2 17.4	20.1
192946 2000 AQ ₂₃₀	15.6	X	300.33593	110.26726	317.16479	23.83932	0.2936261	0.21723369	2.7406354	21	9 5.5	18.9
192947 2000 AR ₂₅₀	16.2	X	342.65917	333.44063	181.74935	0.64066	0.1249595	0.18413479	3.0599347	21	—	—
192948 2000 BA	17.2	X	239.20390	269.89623	141.58918	3.71000	0.1407730	0.29828324	2.2184526	21	6 28.0	20.1
192949 2000 BP ₁	15.5	X	242.26854	163.95942	57.24846	0.84593	0.0802345	0.18027213	3.1034898	21	—	—
192950 2000 BQ ₂	14.9	X	197.76026	174.35192	320.36212	8.50222	0.3733044	0.20567816	2.8423481	21	8 20.9	20.4
192951 2000 BK ₇	15.2	X	147.03922	276.10065	111.10968	10.55697	0.0636616	0.19172997	2.9785807	21	2 26.7	19.6
192952 2000 BZ ₁₈	16.5	X	138.52690	211.62247	356.69327	5.45943	0.3014173	0.29951907	2.2123461	21	10 14.4	20.4
192953 2000 BJ ₂₁	17.1	X	189.89018	214.82030	304.53684	3.70542	0.0858342	0.30313549	2.1947153			

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
192961 2000 CH ₈₀	16.6	X	257.44598	190.15401	319.41902	4.62693	0.0618031	0.31041051	2.1602886	21	12 28.3	18.8
192962 2000 CF ₁₀₁	16.3	X	91.20303	42.14673	114.51851	3.43880	0.0691309	0.19934022	2.9022808	21	5 30.7	20.2
192963 2000 CO ₁₁₀	16.6	X	31.46689	290.32422	318.01058	8.22159	0.1453208	0.29177244	2.2513337	21	7 18.5	18.4
192964 2000 CF ₁₂₇	12.3	X	323.34538	139.04015	307.39885	23.67430	0.0867779	0.08116785	5.2829926	21	11 13.1	19.2
192965 2000 CP ₁₂₉	17.1	X	48.85238	284.86406	308.18639	3.10810	0.1492461	0.29214055	2.2494421	21	7 27.0	19.0
192966 2000 CS ₁₄₀	12.6	X	5.95551	74.85451	300.10406	5.29866	0.0566148	0.07937016	5.3624661	21	10 22.9	19.5
192967 2000 DF ₉	16.1	X	48.40347	352.84392	165.37833	1.17652	0.0183121	0.19217024	2.9740296	21	3 30.0	20.0
192968 2000 DP ₉	15.9	X	112.07555	85.24169	325.36429	9.99828	0.1085627	0.18821251	3.0155767	21	2 17.7	20.0
192969 2000 DH ₁₀	17.2	X	316.54890	232.78041	147.74524	7.10509	0.0989407	0.30187090	2.2008404	21	9 20.3	19.1
192970 2000 DV ₁₀	16.3	X	1.73793	214.15394	333.19093	1.04138	0.0714570	0.18914738	3.0056322	21	3 2.9	20.1
192971 2000 DE ₁₄	15.3	X	162.74479	152.26856	161.89440	5.68320	0.1459090	0.17758183	3.1347557	21	—	—
192972 2000 DH ₂₀	15.8	X	276.21452	190.25544	312.73006	4.07978	0.1026852	0.21983980	2.7189330	21	12 18.4	19.2
192973 2000 DL ₂₃	15.9	X	139.72127	149.83417	328.99562	7.93181	0.1252954	0.19977094	2.8981077	21	6 14.4	20.5
192974 2000 DF ₃₀	17.2	X	242.27283	241.20230	250.88408	1.54389	0.0476378	0.30558496	2.1829715	21	11 10.6	19.7
192975 2000 DC ₃₃	15.5	X	346.32175	163.30844	318.96343	6.45487	0.1208858	0.17997496	3.1069051	21	—	—
192976 2000 DB ₃₇	15.6	X	331.73845	353.58910	137.02646	2.59114	0.1524581	0.17902909	3.1178387	21	—	—
192977 2000 DM ₃₉	16.5	X	27.58400	292.70606	324.52043	7.84178	0.1295171	0.29150157	2.2527281	21	7 23.3	18.5
192978 2000 DO ₄₁	15.5	X	17.11426	281.45095	146.37404	5.42445	0.1563251	0.17835253	3.1257185	21	—	—
192979 2000 DG ₅₀	15.3	X	17.92311	326.18201	158.45485	10.56528	0.0859513	0.18337517	3.0683792	21	1 6.7	19.3
192980 2000 DF ₅₇	16.6	X	264.72980	179.16148	302.36951	1.08724	0.1907928	0.21542936	2.7559169	21	10 20.6	20.3
192981 2000 DK ₅₇	17.1	X	168.98729	221.30375	332.97270	4.56654	0.0659982	0.30241733	2.1981885	21	10 26.9	20.0
192982 2000 DX ₅₉	14.9	X	222.40491	241.20443	344.23150	12.40286	0.1660280	0.17293698	3.1906375	21	—	—
192983 2000 DK ₆₄	16.8	X	15.84456	321.08203	217.74110	1.83869	0.1010347	0.28053982	3.0110342	21	2 19.9	19.0
192984 2000 DM ₆₄	15.3	X	291.16643	19.49622	180.35104	5.85863	0.1919141	0.17871767	3.1214596	21	—	—
192985 2000 DA ₆₅	15.1	X	314.12417	205.96907	343.31480	9.52436	0.1308599	0.18102251	3.0949074	21	—	—
192986 2000 DM ₆₅	15.3	X	326.03727	43.00776	158.76805	13.78401	0.0394370	0.18523149	3.0478448	21	2 3.5	19.7
192987 2000 DD ₆₇	15.3	X	148.98722	73.29717	331.79504	10.74546	0.1763737	0.19149391	2.9810281	21	3 25.7	20.2
192988 2000 DN ₇₀	15.9	X	42.91075	342.30430	159.57927	5.80643	0.1791360	0.18807419	3.0170551	21	3 14.3	19.2
192989 2000 DX ₇₂	15.8	X	34.38336	163.23214	354.14694	3.60303	0.1345133	0.18804012	3.0174195	21	3 15.8	19.3
192990 2000 DK ₇₅	15.5	X	107.62206	99.06090	353.81554	8.44256	0.0597257	0.19037087	2.9927404	21	3 28.2	19.6
192991 2000 DG ₇₈	16.9	X	233.76713	253.61802	191.04995	3.65896	0.0863035	0.29753630	2.2221639	21	8 13.6	19.8
192992 2000 DR ₈₇	15.7	X	51.50437	60.43262	89.25963	6.23897	0.1103798	0.19098490	2.9863224	21	4 4.1	19.4
192993 2000 DF ₉₀	16.5	X	245.84855	236.45981	160.37742	2.37541	0.0736998	0.20371691	2.8605618	21	6 24.9	20.7
192994 2000 DQ ₉₀	15.9	X	158.08275	51.32230	321.24508	8.91444	0.1185203	0.18953484	3.0015346	21	2 22.2	20.6
192995 2000 DT ₉₂	18.0	X	272.12656	251.55903	169.84872	2.01966	0.1334242	0.30111969	2.2044992	21	8 27.7	20.2
192996 2000 DW ₁₀₈	16.7	X	48.86868	190.33689	16.86212	4.92510	0.0857340	0.28930421	2.2641205	21	6 4.0	19.1
192997 2000 DJ ₁₀₉	16.9	X	233.27434	173.16295	342.35543	5.90223	0.0490102	0.30660931	2.1781067	21	11 29.8	19.5
192998 2000 DP ₁₀₉	15.9	X	115.63056	309.85477	139.94176	5.82436	0.1523984	0.19278073	2.9677477	21	4 18.9	20.3
192999 2000 DG ₁₁₁	15.0	X	20.65376	280.32584	156.35927	17.37500	0.1117804	0.17897341	3.1184853	21	—	—
193000 2000 DW ₁₁₂	15.8	X	262.51372	58.57964	195.12871	1.42836	0.1333648	0.18153522	3.0890774	21	1 14.3	20.7
193001 2000 DZ ₁₁₄	16.1	X	175.09164	181.25876	142.30621	2.15439	0.0268626	0.18370983	3.0646516	21	1 8.0	20.4
193002 2000 DZ ₁₁₆	15.0	X	243.33249	92.14051	169.48385	11.12460	0.0286679	0.18175296	3.0866097	21	1 10.8	19.6
193003 2000 EO ₂	15.7	X	86.04084	350.50255	140.82764	3.76978	0.1507765	0.19301720	2.9653232	21	5 4.4	19.7
193004 2000 EJ ₅	15.4	X	127.10457	22.92053	338.27067	9.74165	0.1720038	0.18133259	3.0913782	21	1 18.6	20.0
193005 2000 ER ₅	15.9	X	132.78344	61.58166	359.37117	1.47334	0.1665625	0.19160624	2.9798629	21	3 31.9	20.4
193006 2000 ES ₉	16.6	X	3.63059	98.37995	173.76701	7.32372	0.1312226	0.28951762	2.2630078	21	6 24.4	18.6
193007 2000 ER ₁₁	14.5	X	281.23762	164.03501	345.74154	26.08759	0.1115708	0.17517727	3.1633765	21	12 24.9	19.2
193008 2000 EH ₁₆	17.0	X	225.53912	115.56324	338.56738	2.87097	0.1535601	0.30048033	2.2076253	21	8 10.6	20.0
193009 2000 EA ₁₈	15.0	X	346.56357	69.87483	112.11431	12.55602	0.1025613	0.18529807	3.0471145	21	2 1.1	18.9
193010 2000 EJ ₁₈	15.6	X	241.66875	7.64802	88.18821	10.22443	0.1119790	0.20863652	2.8154155	21	9 4.9	19.8
193011 2000 EO ₁₉	14.8	X	258.35927	205.05063	24.31423	17.37564	0.1674703	0.17701441	3.1414511	21	—	—
193012 2000 EF ₂₅	15.5	X	188.28774	99.47649	182.01967	15.62085	0.0546796	0.17421764	3.1749823	21	—	—
193013 2000 EP ₂₆	16.1	X	101.96096	167.61335	357.80719	22.50992	0.1250090	0.28916003	2.2648731	21	7 7.3	19.6
193014 2000 EC ₃₃	16.3	X	19.46768	286.93790	9.18073	6.23898	0.2029599	0.29437984	2.2380202	21	9 21.2	18.0
193015 2000 EN ₃₇	15.7	X	3.36994	331.49133	179.69424	12.83216	0.2620902	0.18337147	3.0684205	21	—	—
193016 2000 EQ ₃₈	14.9	X	275.18502	7.62781	182.48722	15.41557	0.2102816	0.17480427	3.1678750	21	—	—
193017 2000 EF ₄₂	15.3	X	357.08293	306.66237	180.97022	17.71610	0.1175087	0.17905279	3.1175636	21	—	—
193018 2000 EV ₄₂	14.7	X	192.17852	73.54772	177.15466	14.98044	0.1040970	0.17045591	3.2215238	21	—	—
193019 2000 EX ₄₂	16.9	X	177.01073	358.26446	175.66677	6.66337	0.1026557	0.29951288	2.2123765	21	10 9.4	19.9
193020 2000 EE ₅₁	15.2	X	210.94387	295.19447	338.91855	9.57121	0.0609419	0.17835963	3.1256356	21	—	—
193021 2000 EU ₅₂	16.7	X	210.79904	102.72535	347.69732	5.89667	0.1418244	0.29625265	2.2285783	21	7 21.9	19.9
193022 2000 EA ₅₇	15.4	X	157.76618	304.48414	185.58526	7.43780	0.2657642	0.20147644	2.8817295	21	7 20.0	20.6
193023 2000 ET ₅₇	15.3	X	19.84714	327.28421	201.05798	4.56601	0.2127315	0.18678299	3.0309435	21	3 2.6	18.3
193024 2000 ET ₆₀	16.8	X	139.84941	178.89617	346.20453	5.89023	0.1224742	0.29397000	2.2400998	21	8 17.2	19.9
193025 2000 EQ ₆₁	15.9	X	63.03522	165.01780	344.20946	3.83419	0.1128436	0.18994159	2.9972479	21	4 16.7	19.6
193026 2000 EJ ₆₆	15.5	X	350.44275	173.33439	19.38103	6.24596	0.1160107	0.18477639	3.0528471	21	2 20.5	19.3
193027 2000 EX ₆₇	16.2	X	74.46654	279.84259	201.82219	4.06665	0.2122685	0.18974386	2.9993298	21	4 14.1	20.0
193028 2000 EX ₇₀	14.7	X	327.31130	166.83171	19.09638	11.52541	0.1873345	0.18387175	3.0628523	21	—	—
193029 2000 EB ₇₄	15.6	X	169.50199	351.71336	329.93370	6.46605	0.1736793	0.18161611	3.0881600	21	1 12.1	20.6
193030 2000 EU ₇₄	15.7	X	168.92503	144.44562	182.62201	0.83655	0.1529520	0.17956518	3.1116301	21	1 15.6	20.7
193031 2000 EV ₇₆	16.6	X	118.58195	166.59049	41.92000	6.35532	0.1168273	0.29709615	2.2243581	21	9 23.5	19.7
193032 2000 ED ₈₀	17.4	X	239.20257	112.06518	4.08947	4.95272	0.0978518	0.30288406	2.1959297	21	10 5.2	19.8
193033 2000 EV ₉₁	15.5	X	275.64026	135.19306	344.24543	14.04919	0.2996542	0.21665635	2.7455020	21	10 10.7	19.2
193034 2000 ED ₁₁₅	16.8	X	3.77058	22								

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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>
193041 2000 ER ₁₆₀	15.6	X	23.43275	280.95994	167.38417	5.27312	0.1250324	0.17991807	3.1075600	21	—	—
193042 2000 EO ₁₆₂	17.3	X	70.46105	43.45769	168.09731	2.46688	0.1055212	0.29074296	2.2566450	21	7 21.2	19.8
193043 2000 EF ₁₇₄	14.9	X	257.35454	206.86790	50.49389	26.61448	0.2297139	0.17846851	3.1243642	21	1 7.9	20.5
193044 2000 FL ₂	17.6	X	4.85663	180.48121	81.67239	0.81043	0.0341383	0.28690095	2.2767467	21	6 10.9	20.0
193045 2000 FE ₆	16.8	X	303.22312	310.74607	17.77807	5.92722	0.2260959	0.28519245	2.2858305	21	5 9.1	19.4
193046 2000 FS ₈	15.3	X	110.67920	219.47912	190.24415	11.98346	0.1894893	0.18331664	3.0690323	21	2 24.7	19.9
193047 2000 FW ₁₁	14.5	X	88.04988	152.90407	4.64340	27.84933	0.1417664	0.19611713	2.9339927	21	5 29.1	19.2
193048 2000 FW ₁₄	15.4	X	261.72095	261.45562	41.24284	22.55941	0.2578378	0.27667044	2.3325317	21	3 4.2	19.7
193049 2000 FJ ₂₇	15.5	X	26.78276	311.43285	193.00507	16.06656	0.1146399	0.18368244	3.0649563	21	2 10.6	19.5
193050 2000 FS ₂₈	15.1	X	299.71894	9.53285	225.70663	6.46045	0.0676422	0.18234143	3.0799652	21	2 7.0	19.5
193051 2000 FB ₂₉	16.8	X	130.80873	256.54987	269.89993	1.45513	0.1689526	0.29210421	2.2496287	21	8 10.6	20.1
193052 2000 FE ₃₃	16.6	X	344.60261	200.32820	41.40724	7.31092	0.0746541	0.28205825	2.3027326	21	4 6.5	19.0
193053 2000 FE ₃₉	16.4	X	192.40108	97.76074	47.98316	5.62320	0.0987350	0.29746516	2.2225181	21	9 20.3	19.4
193054 2000 FR ₄₃	14.7	X	220.63079	57.60706	162.26530	14.04629	0.0527366	0.17106980	3.2138121	21	—	—
193055 2000 FJ ₄₅	16.5	X	283.17408	151.84854	106.49991	5.52557	0.2033819	0.27422761	2.3463633	21	1 19.1	20.0
193056 2000 FY ₅₀	17.1	X	238.52802	308.15794	1.10482	2.06275	0.2455437	0.27417993	2.3466353	21	2 10.4	21.1
193057 2000 FW ₅₁	17.3	X	226.86186	259.29087	28.98737	1.74090	0.1814571	0.27044021	2.3682191	21	1 7.9	21.0
193058 2000 FE ₆₄	14.9	X	252.39740	185.73216	25.80692	11.64015	0.0784792	0.17412838	3.1760672	21	—	—
193059 2000 FS ₆₆	15.7	X	352.31293	303.14422	181.31267	18.03946	0.1477927	0.17906176	3.1174594	21	—	—
193060 2000 GL	16.2	X	231.41781	268.79431	33.12614	4.36037	0.2087370	0.27137945	2.3627517	21	1 29.0	20.1
193061 2000 GP	15.9	X	11.60896	45.66922	169.14004	1.90684	0.1625185	0.18879822	3.0093367	21	4 22.2	19.1
193062 2000 GJ ₅	15.2	X	5.14500	160.59061	345.77487	8.82985	0.2272036	0.18222174	3.0813138	21	1 3.8	18.7
193063 2000 GF ₇	15.1	X	281.41379	216.43165	26.06661	7.79257	0.0722829	0.18074290	3.0980984	21	1 30.3	19.7
193064 2000 GD ₉	17.1	X	169.80306	141.92344	359.50939	5.24496	0.1231049	0.29553436	2.2321878	21	8 17.8	20.2
193065 2000 GB ₁₂	15.3	X	327.34924	147.43701	199.31857	5.07612	0.0662790	0.17811151	3.1285377	21	—	—
193066 2000 GW ₁₃	15.4	X	253.17888	76.32010	187.38771	9.34946	0.0424742	0.18052835	3.1005526	21	1 22.6	20.1
193067 2000 GZ ₁₃	15.7	X	19.63836	65.36445	48.80905	1.87016	0.1717004	0.18100119	3.0951505	21	—	—
193068 2000 GE ₁₅	16.4	X	207.71367	128.83271	12.61168	7.61743	0.0344366	0.29944387	2.2127164	21	10 7.5	19.0
193069 2000 GS ₁₇	17.0	X	262.41186	205.83528	57.38742	2.18272	0.1589545	0.27273104	2.3549391	21	1 9.2	20.5
193070 2000 GB ₂₁	17.2	X	69.88218	217.90245	8.43166	5.69583	0.1668077	0.29011321	2.2590905	21	8 24.7	19.8
193071 2000 GJ ₂₃	15.4	X	12.32771	140.86185	23.00379	6.12026	0.1231291	0.18388400	3.0627162	21	2 18.1	19.0
193072 2000 GF ₂₄	17.2	X	336.40024	23.74210	203.02016	1.71740	0.1615463	0.27811327	2.3244573	21	2 14.5	19.9
193073 2000 GN ₂₅	17.4	X	296.32269	256.95865	12.84426	4.88010	0.2203950	0.27669529	2.3323920	21	2 14.9	20.8
193074 2000 GF ₂₆	14.9	X	146.93271	351.57386	17.32860	17.98096	0.0763013	0.18022742	3.1040031	21	2 12.9	19.8
193075 2000 GX ₂₉	17.1	X	280.65134	250.14290	10.44910	0.53186	0.1748299	0.27401976	2.3475497	21	1 21.9	20.6
193076 2000 GT ₃₀	15.7	X	7.92870	333.94500	176.52791	0.74302	0.1056017	0.18153961	3.0890276	21	1 23.9	19.6
193077 2000 GV ₃₀	17.5	X	60.65311	190.90054	20.86871	2.78870	0.1715965	0.28737303	2.2742526	21	7 18.9	19.8
193078 2000 GB ₃₁	17.0	X	88.46788	37.46178	185.79574	5.20466	0.0888103	0.29245005	2.2478548	21	8 30.3	19.8
193079 2000 GD ₃₄	16.1	X	68.68292	137.24177	15.95965	2.77839	0.1451744	0.19002637	2.9963564	21	5 5.9	20.0
193080 2000 GW ₃₆	15.1	X	330.21076	138.00651	40.24681	2.86367	0.0367283	0.17949977	3.1123860	21	1 14.7	19.5
193081 2000 GZ ₃₆	17.9	X	54.01726	19.09575	178.18033	1.90786	0.1536411	0.28541031	2.2846672	21	6 9.8	19.9
193082 2000 GS ₃₇	17.1	X	210.23969	54.33473	226.64020	0.64521	0.1750022	0.26703857	2.3882881	21	—	—
193083 2000 GD ₄₄	17.4	X	12.96567	187.51087	35.71298	2.57805	0.1331979	0.28239517	2.3009007	21	4 23.7	19.3
193084 2000 GA ₅₃	16.8	X	231.98126	78.09662	212.21279	5.52662	0.2205187	0.26984164	2.3717200	21	1 13.1	20.9
193085 2000 GO ₆₃	15.8	X	319.75688	25.29238	182.67981	4.17937	0.1057992	0.18028902	3.1032960	21	1 26.4	20.0
193086 2000 GP ₆₄	16.4	X	230.92281	87.68007	194.45107	4.86675	0.2075520	0.26868763	2.3785061	21	1 3.4	20.5
193087 2000 GW ₇₃	14.9	X	264.75951	215.62560	27.68306	15.04571	0.2025392	0.17539345	3.1607766	21	—	—
193088 2000 GV ₇₄	14.8	X	273.91306	157.53458	41.46384	10.39022	0.0868637	0.17271343	3.1933901	21	—	—
193089 2000 GE ₇₆	15.2	X	272.04414	345.41224	213.70583	7.46728	0.1388987	0.17259110	3.1948989	21	—	—
193090 2000 GF ₈₀	17.1	X	2.20125	45.68178	214.67587	5.24090	0.1425326	0.28488296	2.2874857	21	6 1.3	18.9
193091 2000 GP ₈₀	15.1	X	292.25832	166.12038	21.08400	8.89647	0.0682767	0.17513976	3.1638282	21	—	—
193092 2000 GN ₉₉	16.6	X	306.45675	336.08366	254.61463	3.62659	0.1316353	0.27448507	2.3448959	21	1 15.9	19.9
193093 2000 GJ ₁₀₃	15.3	X	61.49933	92.45989	54.10866	4.57828	0.1944464	0.18877712	3.0095610	21	4 24.9	18.9
193094 2000 GT ₁₁₀	16.9	X	352.00581	244.81627	333.25501	3.44462	0.1515542	0.27915286	2.3186827	21	3 2.1	19.1
193095 2000 GB ₁₁₂	16.4	X	200.07105	68.45076	68.75415	4.21797	0.0730631	0.29750938	2.2222979	21	9 19.5	19.3
193096 2000 GD ₁₁₃	17.3	X	325.90250	246.94537	27.55892	7.73801	0.2086263	0.28087771	2.3091804	21	4 1.6	19.7
193097 2000 GE ₁₁₅	16.8	X	45.56490	81.00670	139.11245	3.57509	0.1342344	0.28725715	2.2748643	21	6 26.9	18.8
193098 2000 GM ₁₁₈	15.7	X	323.90973	271.50972	335.26567	4.20903	0.1194036	0.18769684	3.0210975	21	3 17.8	19.5
193099 2000 GW ₁₁₉	17.2	X	301.18169	12.05876	11.38430	6.91978	0.1596232	0.29542815	2.2327227	21	8 17.4	19.2
193100 2000 GN ₁₂₁	17.4	X	200.71342	271.59448	201.98976	2.38040	0.0853444	0.29457032	2.2370553	21	8 13.2	20.5
193101 2000 GT ₁₂₁	17.6	X	8.28765	187.93364	85.96413	0.73578	0.1308625	0.28795487	2.2711881	21	7 8.2	19.2
193102 2000 GT ₁₂₁	15.7	X	173.19714	132.20741	169.50054	2.38801	0.0740421	0.17408627	3.1765793	21	—	—
193103 2000 GD ₁₂₃	17.0	X	270.66681	149.63524	133.05292	1.20656	0.1994570	0.27328059	2.3517809	21	2 6.8	20.5
193104 2000 GL ₁₂₈	17.0	X	75.78935	33.59375	197.50754	7.07720	0.0813229	0.29208327	2.2497362	21	8 21.5	19.8
193105 2000 GD ₁₃₁	16.9	X	207.76442	318.75613	20.48474	4.60479	0.1373213	0.27433179	2.3457693	21	2 22.9	20.5
193106 2000 GT ₁₃₂	16.0	X	223.27160	243.03754	50.23036	23.16056	0.2560167	0.26842349	2.3800662	21	1 13.1	20.6
193107 2000 GE ₁₃₅	14.9	X	297.31257	168.82138	49.25063	16.96443	0.0652030	0.17905635	3.1175223	21	1 21.4	19.6
193108 2000 GB ₁₃₈	14.8	X	320.39771	132.73317	30.43104	22.73847	0.0281862	0.17555508	3.1588362	21	—	—
193109 2000 GP ₁₅₁	14.8	X	141.82454	292.58336	24.22749	9.70843	0.0508470	0.17050880	3.2208576	21	—	—
193110 2000 GZ ₁₅₁	15.6	X	258.89103	207.39023	348.33926	2.33068	0.1797029	0.17366270	3.1817424	21	—	—
193111 2000 GC ₁₅₃	16.8	X	7.71898	275.54238	301.59822	4.51979	0.1048629	0.28142468	2.3061874	21	4 1.9	19.1
193112 2000 GU ₁₅₅	15.0	X	290.10788	171.46932	24.01178	17.17281	0.0624157	0.17631284	3.1479791	21	—	—
193113 2000 GF ₁₅₉	14.6	X	310.73470	332.95540	208.19199	27.35155	0.1293176	0.17867836	3.1219174	21	—	—
193114 2000 GE ₁₆₆	15.2	X	196.42437	120.79933	204.75180	14.67793	0.0342335	0				

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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>
193121 2000 HG ₇	15.3	X	352.64110	308.64560	202.57072	17.27118	0.0549334	0.17848853	3.1241306	21	1 5.6	19.9
193122 2000 HT ₉	15.2	X	353.05260	161.02797	48.75566	17.93177	0.2053730	0.18402674	3.0611323	21	3 17.9	18.9
193123 2000 HC ₁₁	17.0	X	28.15188	188.79061	54.48263	5.51151	0.1992786	0.28466219	2.2886683	21	7 9.6	18.6
193124 2000 HK ₂₂	17.7	X	45.21462	38.62912	187.40338	1.22145	0.1642848	0.28621302	2.2803935	21	7 10.9	19.7
193125 2000 HL ₂₅	17.4	X	271.20658	236.22523	28.57573	2.92752	0.1960121	0.27184932	2.3600283	21	1 17.4	21.0
193126 2000 HN ₂₅	16.7	X	181.65321	242.38474	36.10563	3.31481	0.1872425	0.26170995	2.4205974	21	—	—
193127 2000 HQ ₂₅	17.6	X	339.26059	229.34042	27.60242	1.14878	0.2247286	0.27974093	2.3154320	21	3 25.6	19.8
193128 2000 HU ₂₅	15.6	X	316.53758	152.54239	43.05520	11.59102	0.0778616	0.17755824	3.1350333	21	1 14.8	20.1
193129 2000 HM ₂₈	17.3	X	18.25924	342.86074	251.88400	0.80732	0.1621364	0.28337121	2.2956142	21	5 25.6	19.0
193130 2000 HQ ₄₃	17.7	X	304.42072	9.24645	215.40551	0.81124	0.1295861	0.27184981	2.3600255	21	1 6.9	20.7
193131 2000 HZ ₄₄	16.8	X	61.73679	355.40944	161.97883	4.73956	0.1681685	0.28189066	2.3036452	21	4 26.0	18.8
193132 2000 HY ₄₇	15.1	X	294.29486	181.24737	61.87546	6.29344	0.1214360	0.17929172	3.1147933	21	2 8.2	19.6
193133 2000 HA ₅₀	16.8	X	214.67566	53.37416	236.97901	3.87700	0.2356698	0.26601405	2.3944163	21	1 1.3	20.9
193134 2000 HY ₅₆	15.1	X	343.74203	350.78806	202.23178	17.30424	0.2009271	0.18151899	3.0892615	21	1 24.5	19.3
193135 2000 HV ₅₉	17.3	X	7.91348	64.32909	206.45018	5.01957	0.1626672	0.28513437	2.2861409	21	7 2.4	19.0
193136 2000 HB ₆₂	15.3	X	323.35830	257.72143	231.84469	3.27117	0.1434058	0.17238813	3.1974062	21	—	—
193137 2000 HQ ₆₂	17.4	X	236.43748	60.63251	27.96666	1.97355	0.2142162	0.26906415	2.3762866	21	1 11.8	21.4
193138 2000 HE ₆₂	16.9	X	234.16972	255.29314	216.02516	5.71467	0.1163623	0.29688168	2.2254292	21	9 16.3	19.7
193139 2000 HR ₆₃	17.2	X	281.60157	226.00569	22.69170	1.71873	0.1484654	0.27226156	2.3576455	21	1 10.9	20.6
193140 2000 HQ ₆₇	15.3	X	316.44587	191.94093	48.78732	10.96444	0.0255471	0.18399467	3.0614879	21	3 19.9	19.7
193141 2000 HT ₆₈	15.2	X	301.08954	124.38429	76.92996	2.58939	0.1171049	0.17557904	3.1585489	21	—	—
193142 2000 HK ₇₂	17.3	X	9.69966	200.87505	61.32856	3.60717	0.1922952	0.28463196	2.2888304	21	6 23.3	18.7
193143 2000 HV ₈₁	17.4	X	256.73965	72.54134	196.76809	1.97950	0.1789373	0.27048569	2.3679536	21	1 10.2	21.1
193144 2000 HR ₈₉	16.6	X	232.04915	77.46039	220.46060	4.94989	0.1814272	0.26933305	2.3747047	21	1 22.5	20.5
193145 2000 HN ₉₀	15.6	X	267.19836	231.78149	48.78489	5.80359	0.1190852	0.17886356	3.1197621	21	1 30.6	20.4
193146 2000 HV ₉₇	17.0	X	326.84555	286.36829	24.26444	5.29196	0.2001305	0.28427483	2.2907469	21	5 28.5	18.9
193147 2000 HZ ₉₉	16.7	X	271.12085	72.25554	168.87177	7.50212	0.2486055	0.26867275	2.3785939	21	—	—
193148 2000 JX ₃	16.2	X	248.99480	65.91607	196.87322	23.29555	0.1732591	0.26773395	2.3841509	21	—	—
193149 2000 JY ₄	16.1	X	261.36911	295.45088	14.14894	11.97966	0.2599142	0.27817011	2.3241407	21	3 3.1	20.0
193150 2000 JU ₈	17.0	X	256.87552	347.35009	314.47608	1.43292	0.2145595	0.27249772	2.3562831	21	2 16.9	20.6
193151 2000 JU ₂₁	17.2	X	29.13230	359.74960	238.24007	5.04981	0.1252382	0.28467860	2.2885804	21	6 21.9	19.2
193152 2000 JS ₂₂	16.6	X	289.81286	44.73908	224.54712	5.71409	0.1378017	0.27561179	2.3385008	21	2 12.8	20.0
193153 2000 JU ₂₅	15.5	X	7.80030	303.94915	228.50136	6.53297	0.1441437	0.18219515	3.0816136	21	2 15.3	19.1
193154 2000 JP ₄₃	15.1	X	189.79255	251.03792	44.54686	11.75333	0.0894654	0.17110448	3.2133779	21	—	—
193155 2000 JZ ₄₄	17.0	X	263.47584	155.05298	117.40345	1.56070	0.1922202	0.27064884	2.3670019	21	1 19.6	20.7
193156 2000 JD ₆₄	16.8	X	268.71436	44.04436	229.79390	5.42074	0.1434621	0.27156585	2.3616703	21	1 27.7	20.3
193157 2000 JT ₈₂	17.0	X	222.51479	77.57687	234.59862	3.87167	0.2314549	0.27000806	2.3707453	21	1 31.5	21.1
193158 Haechan	15.2	X	242.07577	99.05945	122.84224	6.68049	0.0901440	0.17172729	3.2056037	21	—	—
193159 2000 KL ₇	16.8	X	139.05907	102.39657	109.90319	4.94766	0.1232630	0.29475029	2.2361446	21	10 20.4	20.1
193160 2000 KR ₈	16.8	X	204.81222	228.16447	73.52936	3.22034	0.2145429	0.26637066	2.3922788	21	1 7.0	20.6
193161 2000 KS ₈	17.1	X	357.94919	180.04531	63.30548	6.10388	0.1270121	0.28108923	2.3080218	21	4 27.2	19.0
193162 2000 KU ₈	15.1	X	285.90313	113.49535	64.32512	2.28238	0.1269811	0.17173702	3.2054827	21	—	—
193163 2000 KS ₉	15.4	X	320.18978	146.59696	45.93703	4.01240	0.1210220	0.17722091	3.1390103	21	1 8.3	19.6
193164 2000 KT ₉	14.9	X	6.96442	75.63950	54.94650	10.85886	0.0481661	0.17515801	3.1636084	21	1 3.9	19.3
193165 2000 KZ ₉	17.2	X	240.20607	33.12707	257.66241	1.11724	0.2077517	0.26946402	2.3739352	21	1 21.4	21.1
193166 2000 KM ₂₉	16.8	X	234.39699	335.22553	263.95666	2.32316	0.1589008	0.26280766	2.4138524	21	—	—
193167 2000 KK ₄₁	16.6	X	231.32003	161.15134	126.24515	2.10678	0.1818466	0.26695340	2.3887961	21	1 10.8	20.4
193168 2000 KU ₄₂	16.8	X	226.77796	274.74319	47.89906	7.40133	0.1499697	0.27274285	3.2548711	21	2 22.2	20.5
193169 2000 KN ₄₉	15.2	X	85.54573	203.07428	230.74476	5.44409	0.1317151	0.17872467	3.1213781	21	2 15.4	19.3
193170 2000 KT ₄₉	15.4	X	11.96016	81.65464	56.73509	2.28852	0.0963965	0.17712951	3.1400901	21	1 17.2	19.2
193171 2000 KT ₅₁	15.3	X	6.10377	106.05389	59.35969	19.17267	0.1051780	0.17967420	3.1103713	21	2 18.4	19.6
193172 2000 LN ₈	16.8	X	248.42805	187.41712	103.87278	7.13030	0.2189863	0.26947488	2.3738714	21	1 29.3	20.7
193173 2000 LE ₉	16.8	X	288.64604	32.67292	202.66981	3.50284	0.2830983	0.26954091	2.3734837	21	—	—
193174 2000 LF ₂₂	15.3	X	11.37591	301.79596	194.58637	10.79140	0.0497188	0.17550373	3.1594524	21	1 14.2	19.8
193175 2000 OV ₇	16.3	X	177.27421	107.46166	168.13530	10.58594	0.2514589	0.25615116	2.4554919	21	—	—
193176 2000 OV ₁₀	15.9	X	251.25515	75.13488	185.81510	6.44022	0.2322660	0.27391073	2.3481726	21	4 23.0	19.8
193177 2000 OS ₁₈	14.8	X	305.21137	173.31943	226.21676	19.46519	0.1525714	0.18070645	3.0985151	21	5 3.3	19.4
193178 2000 PK ₅	17.6	X	247.50422	191.81229	227.21198	13.12821	0.7012643	0.36640260	1.9341806	21	6 4.4	22.0
193179 2000 PP ₁₄	16.7	X	267.20393	92.73523	264.14534	1.85823	0.1848422	0.27516662	2.3410223	21	5 10.9	20.0
193180 2000 PU ₂₅	17.0	X	21.77006	115.18160	169.93429	23.38343	0.0501660	0.37520054	1.9038252	21	8 19.2	18.8
193181 2000 PK ₂₈	15.9	X	138.36687	307.43383	99.46900	7.45112	0.1704808	0.26089453	2.4256384	21	3 17.2	19.5
193182 2000 QR	17.0	X	189.16925	43.08306	290.74483	1.38488	0.2272232	0.26073319	2.4266390	21	2 2.6	21.1
193183 2000 QE ₁₆	17.2	X	136.86544	199.08974	162.36931	2.46077	0.2268408	0.25658253	2.4527389	21	1 20.2	20.6
193184 2000 QV ₃₇	17.2	X	138.32223	115.22565	235.21358	1.46152	0.2297628	0.25608368	2.4559232	21	1 8.6	20.5
193185 2000 QN ₄₂	15.8	X	199.91595	98.62076	325.98272	12.09149	0.1500589	0.27256078	2.3559196	21	6 2.2	19.7
193186 2000 QY ₄₅	16.9	X	195.21451	84.06115	310.20711	2.48869	0.1640669	0.26789885	2.3831725	21	4 19.7	20.6
193187 2000 QZ ₅₁	17.2	X	167.44759	113.89185	205.26568	0.63594	0.1904155	0.25715723	2.4490833	21	—	—
193188 2000 QQ ₅₆	17.2	X	123.62709	110.57380	248.85790	1.04494	0.1990617	0.25464124	2.4651890	21	—	—
193189 2000 QS ₅₆	17.2	X	203.64206	293.56903	348.89589	1.75032	0.2023067	0.25850252	2.4405790	21	—	—
193190 2000 QY ₅₉	16.9	X	114.16403	289.81159	106.27746	2.33801	0.1785843	0.25710580	2.4494099	21	1 31.2	19.8
193191 2000 QT ₈₅	16.8	X	161.97209	137.78132	230.14857	2.47785	0.1928686	0.26045139	2.4283890	21	2 17.3	20.5
193192 2000 QS ₉₃	16.4	X	141.70475	180.50509	209.07995	4.32414	0.0814615	0.26130614	2.4230905	21	2 9.7	19.6
193193 2000 QD ₁₁₂	17.1	X	50.58470	176.82543	137.79988	0.28036	0.3080350	0.24138144	2.5546621	21	12 8.9	20.8
193194 2000 QH ₁₁₈	16.3	X	18.96762	204.79926	181.57738	17.48890						

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
193201 2000 QR ₁₄₇	17.0	X	187.28953	144.78192	311.60702	19.19974	0.0487815	0.37127710	1.9172141	21	7 9.0	19.2
193202 2000 QE ₁₅₅	16.5	X	130.84111	56.74968	272.87756	3.44812	0.1248304	0.25370300	2.4712631	21	—	—
193203 2000 QF ₁₅₉	16.3	X	155.16863	109.35910	243.92925	5.50184	0.1398761	0.25820998	2.4424220	21	1 18.1	19.7
193204 2000 QE ₁₇₂	17.0	X	26.97993	32.00161	344.76359	12.64558	0.2981768	0.24167556	2.5525890	21	—	—
193205 2000 QC ₁₉₂	16.0	X	100.00681	1.13891	20.28954	11.35110	0.1612993	0.25368335	2.4713907	21	—	—
193206 2000 QL ₁₉₄	17.2	X	182.95645	85.38126	237.72504	5.23556	0.2237953	0.25907480	2.4369836	21	1 14.9	21.3
193207 2000 QU ₁₉₇	16.7	X	100.76701	343.29537	29.33651	1.80016	0.1854786	0.25274144	2.4775271	21	—	—
193208 2000 QJ ₂₀₄	16.2	X	159.80879	347.49763	21.59980	5.80529	0.1601710	0.25953041	2.4341306	21	2 17.4	19.8
193209 2000 QC ₂₀₆	15.8	X	94.34706	318.28039	349.79638	14.66808	0.1264283	0.24430418	2.5342461	21	12 26.8	19.9
193210 2000 QZ ₂₀₈	16.3	X	131.72363	145.12996	246.45393	1.47941	0.1985327	0.25855064	2.4402761	21	2 17.5	19.6
193211 2000 QC ₂₁₂	16.9	X	221.25991	21.48686	345.76817	0.69618	0.2037848	0.26773761	2.3841292	21	4 9.3	20.7
193212 2000 QE ₂₂₄	16.2	X	340.38057	91.32363	337.31085	10.48274	0.2843263	0.24008470	2.5638526	21	—	—
193213 2000 QZ ₂₂₆	16.0	X	150.38982	108.02926	262.80381	5.39812	0.1450224	0.26053233	2.4278860	21	2 3.7	19.6
193214 2000 QB ₂₃₀	17.0	X	141.25481	272.44517	63.75703	3.13858	0.2270720	0.25362038	2.4717997	21	—	—
193215 2000 QG ₂₃₂	16.3	X	31.19485	345.71678	356.88148	15.04998	0.1809686	0.23961776	2.5671824	21	11 28.5	19.8
193216 2000 RC	16.9	X	75.32215	68.42048	175.99214	23.28561	0.0437638	0.37677059	1.8985326	21	9 13.7	18.4
193217 2000 RM ₈	16.7	X	37.05658	87.65702	187.86628	22.00981	0.0759551	0.37430264	1.9068687	21	9 3.6	18.4
193218 2000 RP ₂₅	16.2	X	97.80827	120.71068	275.36395	3.19702	0.1972714	0.25313818	2.4749377	21	1 10.4	18.8
193219 2000 RG ₂₉	15.7	X	180.02105	148.54682	238.71540	6.56944	0.1493589	0.26349412	2.4096581	21	3 25.9	19.6
193220 2000 RP ₃₀	16.1	X	36.61685	14.69268	326.63953	11.76748	0.2552858	0.24039313	2.5616592	21	12 20.1	19.7
193221 2000 RZ ₃₄	16.3	X	343.36891	65.17101	322.05068	3.90015	0.2923379	0.23588582	2.5941883	21	11 17.4	17.9
193222 2000 RS ₃₆	17.2	X	317.07108	218.96047	177.34382	22.25940	0.1206818	0.37657210	1.8991996	21	11 6.6	18.7
193223 2000 RJ ₄₄	16.5	X	53.88982	34.47078	333.53055	7.13179	0.2887448	0.24290411	2.5439748	21	—	—
193224 2000 RK ₄₅	16.9	X	33.90660	203.17875	205.05162	7.52544	0.2830325	0.24365424	2.5387508	21	—	—
193225 2000 RG ₄₇	16.2	X	193.30619	104.24727	205.60584	1.99440	0.1972634	0.26117779	2.4238843	21	3 13.4	20.2
193226 2000 RM ₄₉	15.9	X	186.65312	49.06402	280.77114	5.14068	0.1044708	0.25726387	2.4484064	21	1 19.8	19.4
193227 2000 RP ₅₃	17.0	X	262.10090	220.01310	187.93949	22.66646	0.0478500	0.37136941	1.9168963	21	8 5.7	19.4
193228 2000 RZ ₅₇	16.3	X	116.56984	191.58181	205.57213	7.11770	0.1163067	0.25526320	2.4611830	21	1 24.1	19.5
193229 2000 RF ₆₀	16.1	X	185.75403	8.46837	276.55177	7.98768	0.2292815	0.25565831	2.4586466	21	—	—
193230 2000 RO ₈₂	16.0	X	74.65052	149.14285	207.48641	14.36005	0.1925816	0.24694778	2.5161274	21	—	—
193231 2000 RU ₈₃	15.9	X	125.30647	131.18367	288.92210	7.01436	0.0624401	0.26084288	2.4259586	21	2 24.9	19.2
193232 2000 RB ₉₁	16.4	X	58.05091	119.42396	268.41049	5.61102	0.2449325	0.24577935	2.5240955	21	—	—
193233 2000 RE ₁₀₃	15.5	X	67.95538	96.87428	243.45083	10.41509	0.2081465	0.24419979	2.5349683	21	—	—
193234 2000 SY	14.7	X	338.09152	142.03230	315.88354	27.17385	0.2870619	0.23897137	2.5718095	21	—	—
193235 2000 SE ₂	16.0	X	145.25224	29.84786	28.89554	9.53092	0.3586724	0.26171896	2.4205418	21	4 19.9	20.2
193236 2000 SY ₇	16.5	X	264.06728	251.69638	263.09817	5.76708	0.0703259	0.24232020	2.5480599	21	12 25.9	19.5
193237 2000 SB ₉	17.2	X	139.38002	292.46027	188.58201	21.43844	0.0907140	0.36635413	1.9343512	21	6 9.9	20.0
193238 2000 ST ₂₁	17.4	X	346.38952	139.30724	187.94681	24.70312	0.0858733	0.37325705	1.9104281	21	8 23.5	19.3
193239 2000 SB ₂₂	17.1	X	322.50561	294.47414	28.63581	25.19415	0.0918000	0.36859685	1.9264969	21	6 23.2	19.4
193240 2000 SC ₂₄	17.0	X	311.49388	287.40874	21.80297	20.38500	0.0768215	0.36562043	1.9369381	21	5 6.6	18.9
193241 2000 ST ₃₃	14.3	X	191.82922	277.19815	146.45709	7.36624	0.2686119	0.12541108	3.9528661	21	5 30.8	21.1
193242 2000 SC ₃₅	16.9	X	166.95369	292.43095	27.34166	2.56028	0.1854020	0.25552791	2.4594830	21	—	—
193243 2000 SS ₄₂	16.5	X	234.44034	91.91169	20.77312	21.14251	0.1067039	0.37232136	1.9136276	21	10 5.2	18.2
193244 2000 SP ₄₅	15.9	X	192.27595	125.60131	243.38733	12.01482	0.2013729	0.26497169	2.4006917	21	3 13.1	20.1
193245 2000 SZ ₅₁	16.8	X	1.47883	59.56176	349.50622	13.17618	0.1900139	0.24188192	2.5511370	21	—	—
193246 2000 SS ₅₉	16.9	X	118.34188	204.04333	207.54513	3.28013	0.1625333	0.25743637	2.4473126	21	2 22.0	20.1
193247 2000 SC ₆₂	16.5	X	146.79409	182.90647	177.84054	6.40755	0.1679495	0.25612087	2.4556854	21	1 22.0	20.1
193248 2000 SA ₇₅	14.0	X	209.90786	16.39580	42.94617	9.50315	0.2711315	0.12570570	3.9466874	21	6 4.8	20.7
193249 2000 SJ ₇₅	16.1	X	14.49356	313.92612	117.01254	4.40530	0.1647534	0.24462186	2.5320515	21	—	—
193250 2000 SV ₇₆	16.8	X	45.95684	132.06741	314.13322	3.15639	0.2045851	0.25174690	2.4840479	21	—	—
193251 2000 SF ₇₇	16.0	X	270.22197	173.72624	286.62782	1.96669	0.0969991	0.23699697	2.5860735	21	10 17.5	19.2
193252 2000 SZ ₇₇	17.0	X	195.19764	42.78924	18.82435	1.22124	0.1230586	0.26928182	2.3750059	21	5 26.3	20.3
193253 2000 SW ₇₈	17.2	X	206.96243	341.90573	334.35962	1.77797	0.2221416	0.26029570	2.4293573	21	1 27.1	21.1
193254 2000 SV ₇₉	16.8	X	143.09154	180.59066	156.85116	3.51490	0.1882153	0.25343682	2.4729931	21	—	—
193255 2000 SR ₈₅	15.5	X	79.76562	282.06555	96.28817	4.29770	0.0643797	0.24764935	2.5113732	21	—	—
193256 2000 SG ₁₀₄	16.4	X	125.31767	167.57613	207.59542	1.44729	0.1910861	0.25411609	2.4685842	21	1 19.9	19.5
193257 2000 SK ₁₀₆	16.2	X	65.84934	180.12738	192.52133	3.39606	0.1183321	0.24612268	2.5217477	21	—	—
193258 2000 SC ₁₂₀	16.4	X	28.74873	191.35742	188.19586	9.98854	0.1945449	0.24094145	2.5577713	21	—	—
193259 2000 SP ₁₂₀	15.4	X	31.63243	321.58393	102.83988	2.82410	0.1660320	0.24568571	2.5247369	21	—	—
193260 2000 SK ₁₂₃	15.6	X	14.34289	298.97728	128.55886	5.35753	0.1658986	0.24338426	2.5406279	21	—	—
193261 2000 SZ ₁₅₀	16.9	X	36.12176	33.50329	15.16174	3.22820	0.2694959	0.24410928	2.5355948	21	—	—
193262 2000 ST ₁₅₁	15.3	X	220.45608	177.88969	41.41862	4.56258	0.0481582	0.24494735	2.5298079	21	—	—
193263 2000 SJ ₁₅₅	15.5	X	56.81049	256.02743	159.57406	4.82183	0.1721802	0.24719342	2.5144603	21	—	—
193264 2000 SQ ₁₅₅	16.3	X	159.66862	276.55559	125.76176	3.63403	0.2549009	0.25968937	2.4331372	21	4 6.0	20.3
193265 2000 SH ₁₅₉	17.0	X	342.93183	19.86487	56.15457	1.27277	0.1606686	0.24130705	2.5551871	21	—	—
193266 2000 SN ₁₆₃	16.6	X	168.02584	188.08789	243.21727	1.30676	0.1669225	0.26303844	2.4124403	21	5 13.2	20.4
193267 2000 SY ₁₇₁	15.8	X	276.80913	97.65082	324.18838	13.47891	0.1607310	0.22988953	2.6391045	21	8 24.2	19.0
193268 2000 SQ ₁₇₄	14.1	X	190.51179	174.07022	272.44576	9.53247	0.2523182	0.12528154	3.9555905	21	6 23.7	20.8
193269 2000 SK ₁₈₀	15.7	X	87.39096	71.04718	237.57187	12.02420	0.1932322	0.24147657	2.5539911	21	12 23.5	19.8
193270 2000 SL ₁₈₃	16.9	X	42.51833	39.02062	302.60605	2.80464	0.2232497	0.24198436	2.5504170	21	12 22.8	20.2
193271 2000 SC ₁₈₄	16.0	X	15.55291	211.55055	221.14680	4.70517	0.1608443	0.24422830	2.5347710	21	—	—
193272 2000 SM ₁₈₈	16.6	X	359.20237	135.20705	298.19693	5.96464	0.2108190	0.24228658	2.5482957	21	—	—
193273 2000 ST ₁₉₀	16.1	X	304.52138	234.35568	31.89926	6.57841	0.0900677	0.26735739	2.3863891	21	3 12.6	19.1
193274 2000 SV ₁₉₂	16.9	X	246.78626	53.91130	230.02408	0.90370	0.1874366	0.26175361	2.4203282	21	1 20.3</	

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
193281 2000 <i>SD</i> ₂₁₄	16.7 ^m	X	34.72494	195.22585	187.81706	10.35878	0.1216858	0.24402678	2.5361663	21	—	—
193282 2000 <i>SU</i> ₂₁₅	15.6	X	323.41497	187.42263	191.35943	9.82521	0.0612259	0.18580982	3.0415171	21	9 14.2	19.5
193283 2000 <i>SP</i> ₂₂₀	15.8	X	99.36921	286.85606	124.26424	7.38010	0.1048996	0.25350208	2.4725687	21	1 19.0	18.6
193284 2000 <i>SU</i> ₂₂₆	16.1	X	145.79709	313.66557	108.34641	7.83306	0.2215423	0.25904259	2.4371856	21	4 18.3	20.0
193285 2000 <i>SC</i> ₂₂₇	15.6	X	146.92762	303.56041	73.23254	12.92093	0.2225579	0.25492140	2.4633825	21	2 24.5	19.6
193286 2000 <i>SX</i> ₂₃₁	16.1	X	10.85681	267.31350	184.15870	17.88542	0.2482394	0.24529457	2.5274201	21	—	—
193287 2000 <i>SY</i> ₂₃₁	16.7	X	195.55304	62.80206	38.19566	26.87173	0.1411957	0.36551496	1.9373107	21	7 29.1	20.1
193288 2000 <i>SD</i> ₂₃₂	17.0	X	252.71535	254.96135	185.99329	21.83506	0.2047148	0.36997091	1.9217239	21	8 17.1	19.5
193289 2000 <i>SL</i> ₂₃₂	15.0	X	84.96207	336.37047	64.63953	13.87127	0.2039724	0.24529412	2.5274232	21	—	—
193290 2000 <i>SO</i> ₂₃₂	17.2	X	310.74186	153.21986	199.23395	21.26046	0.0939249	0.37074974	1.9190317	21	7 19.9	19.5
193291 2000 <i>SU</i> ₂₃₆	14.5	X	209.86782	227.35861	191.11671	9.26143	0.3055856	0.12531810	3.9548212	21	6 4.6	21.4
193292 2000 <i>SL</i> ₂₃₈	16.0	X	266.12304	71.98507	191.05768	7.14922	0.0880922	0.25970664	2.4330293	21	1 18.2	19.5
193293 2000 <i>SO</i> ₂₃₉	14.7	X	204.94358	37.16487	26.74492	3.12043	0.2317996	0.12555939	3.9497529	21	6 8.4	21.2
193294 2000 <i>SO</i> ₂₄₀	16.2	X	244.59915	176.84055	229.34119	19.67744	0.0879656	0.36863902	1.9263499	21	6 29.5	18.7
193295 2000 <i>SK</i> ₂₄₂	16.9	X	345.08963	260.94869	150.20216	5.70156	0.2684218	0.23954902	2.5676734	21	12 30.5	19.0
193296 2000 <i>SR</i> ₂₄₅	17.1	X	43.46747	205.15938	166.40748	7.98153	0.2318042	0.24403179	2.5361316	21	—	—
193297 2000 <i>SY</i> ₂₄₉	17.0	X	158.71190	271.22843	73.81136	2.52080	0.2016406	0.25627819	2.4546804	21	1 20.1	20.6
193298 2000 <i>SG</i> ₂₆₄	16.5	X	144.88507	319.16114	21.90816	6.74184	0.1425731	0.25375124	2.4709499	21	—	—
193299 2000 <i>SB</i> ₂₇₃	16.0	X	99.62762	80.00460	220.26150	6.20633	0.2325620	0.24327702	2.5413744	21	12 27.1	20.3
193300 2000 <i>SO</i> ₂₇₅	15.5	X	14.47319	8.49355	50.74634	10.97647	0.2139677	0.24168436	2.5525270	21	—	—
193301 2000 <i>SN</i> ₂₇₆	15.7	X	34.46439	157.60740	254.82254	14.44840	0.0781405	0.24554678	2.5256891	21	—	—
193302 2000 <i>SO</i> ₂₇₇	16.3	X	74.16901	116.37918	243.33415	3.32913	0.2003300	0.24479305	2.5308709	21	—	—
193303 2000 <i>SF</i> ₂₇₈	15.9	X	141.95604	338.60983	16.43542	6.33163	0.1530761	0.25251885	2.4789828	21	1 10.8	19.4
193304 2000 <i>SO</i> ₂₇₉	16.0	X	64.02122	234.43230	95.31339	10.81334	0.1950652	0.24149019	2.5538951	21	12 27.7	19.7
193305 2000 <i>SS</i> ₂₈₁	16.1	X	47.83056	210.28303	255.74169	5.30076	0.0704605	0.25667252	2.4521656	21	1 8.5	18.7
193306 2000 <i>SD</i> ₂₈₅	13.4	X	164.79712	211.73196	247.20214	17.18171	0.2275832	0.12362490	3.9908501	21	6 18.3	20.0
193307 2000 <i>SD</i> ₂₉₄	15.5	X	24.54956	160.74622	229.97506	31.99431	0.1445978	0.23970801	2.5665379	21	—	—
193308 2000 <i>SG</i> ₃₀₀	16.3	X	16.03263	99.65819	284.59835	3.14847	0.0840690	0.24066525	2.5597278	21	12 21.6	19.5
193309 2000 <i>SP</i> ₃₀₃	16.1	X	293.32457	97.00091	325.61329	9.06274	0.2331570	0.23150662	2.6268006	21	9 7.2	19.0
193310 2000 <i>SR</i> ₃₀₃	16.2	X	127.21086	67.44639	293.27847	6.82708	0.1911967	0.25208474	2.4818280	21	1 4.8	19.5
193311 2000 <i>SY</i> ₃₀₄	13.9	X	177.58448	183.02075	259.97589	6.90572	0.2190348	0.12396188	3.9836142	21	6 10.4	20.4
193312 2000 <i>SK</i> ₃₀₅	16.2	X	32.75449	87.42691	324.38241	4.03113	0.2532464	0.24438162	2.5337107	21	—	—
193313 2000 <i>SR</i> ₃₀₈	16.3	X	278.19402	105.92422	304.02562	8.24592	0.1357040	0.22921209	2.6443019	21	8 13.6	19.8
193314 2000 <i>SK</i> ₃₀₉	16.4	X	338.15717	12.36262	9.99217	5.72706	0.3213749	0.23339233	2.6126325	21	10 22.8	17.7
193315 2000 <i>SO</i> ₃₁₇	15.7	X	106.55864	354.28597	280.98362	13.48072	0.0839813	0.24173694	2.5521569	21	11 22.9	19.5
193316 2000 <i>SW</i> ₃₁₇	16.1	X	131.40397	87.54604	258.46307	13.39798	0.1602911	0.25320323	2.4745138	21	—	—
193317 2000 <i>SS</i> ₃₂₂	16.1	X	291.21146	133.38617	320.97742	13.55208	0.1846876	0.23798767	2.5788916	21	10 22.7	19.3
193318 2000 <i>SW</i> ₃₂₂	14.7	X	210.98124	2.20780	310.19604	17.55869	0.0858648	0.16338949	3.3137518	21	2 5.8	19.7
193319 2000 <i>SA</i> ₃₂₅	16.3	X	307.23135	69.99787	63.36159	1.45623	0.0480448	0.24501669	2.5293307	21	—	—
193320 2000 <i>SE</i> ₃₂₈	15.9	X	309.08268	239.32461	232.34946	14.62368	0.1077746	0.23938792	2.5688252	21	12 20.7	18.9
193321 2000 <i>SN</i> ₃₃₄	16.1	X	255.59720	33.64331	223.30731	4.27325	0.1657189	0.25998310	2.4313042	21	1 7.1	19.9
193322 2000 <i>SM</i> ₃₆₆	16.8	X	151.98339	294.15196	25.18518	10.22176	0.2102614	0.25312738	2.4750082	21	—	—
193323 2000 <i>SS</i> ₃₆₇	14.1	X	161.33550	103.77325	356.03066	9.18676	0.2228539	0.12420824	3.9783450	21	6 17.1	20.7
193324 2000 <i>ST</i> ₃₇₆	16.2	X	86.66299	267.44668	68.97105	12.77394	0.2671862	0.24397817	2.5365031	21	—	—
193325 2000 <i>TE</i> ₃	17.4	X	142.82237	161.98976	172.99817	2.64945	0.1875632	0.25391424	2.4698922	21	—	—
193326 2000 <i>TA</i> ₁₀	16.6	X	111.19169	20.68184	12.16994	6.19296	0.0891969	0.25399038	2.4693986	21	1 10.5	19.7
193327 2000 <i>TO</i> ₁₁	16.5	X	312.58237	28.48315	41.02030	2.41910	0.1527337	0.23633869	2.5908733	21	11 7.8	19.0
193328 2000 <i>TW</i> ₁₄	16.1	X	297.91231	204.58212	215.66218	3.37561	0.1429481	0.23291292	2.6162164	21	9 27.8	19.0
193329 2000 <i>TZ</i> ₂₁	15.8	X	64.69371	310.58440	53.33044	15.07596	0.1977692	0.24307783	2.5427626	21	—	—
193330 2000 <i>TM</i> ₂₆	16.7	X	1.78022	218.03242	158.99375	3.48180	0.1575728	0.23836232	2.5761886	21	11 29.7	19.4
193331 2000 <i>TN</i> ₂₉	16.1	X	62.29101	121.32836	233.01110	25.15405	0.3645938	0.24332302	2.5410541	21	—	—
193332 2000 <i>TP</i> ₃₅	14.9	X	229.66949	102.75567	310.30933	1.17412	0.1671045	0.12767154	3.9060696	21	6 13.4	21.4
193333 2000 <i>TS</i> ₃₆	16.5	X	17.05378	319.07885	87.50311	3.04210	0.0661271	0.24236283	2.5477611	21	—	—
193334 2000 <i>TL</i> ₄₉	17.1	X	99.59087	38.03099	24.05632	5.82103	0.2142700	0.25568873	2.4584516	21	2 22.9	20.0
193335 2000 <i>TB</i> ₆₅	16.4	X	20.43415	31.56686	26.02517	4.09940	0.1180852	0.24416223	2.5352282	21	—	—
193336 2000 <i>TB</i> ₆₇	17.2	X	133.67253	215.01000	135.59743	3.69127	0.1949843	0.25348610	2.4726726	21	—	—
193337 2000 <i>TZ</i> ₆₇	16.6	X	130.98052	120.92932	222.03953	6.69201	0.1870341	0.25117908	2.4877902	21	—	—
193338 2000 <i>UR</i> ₄	15.7	X	94.57460	300.74660	46.38001	9.74367	0.1889980	0.24507562	2.5289252	21	—	—
193339 2000 <i>UU</i> ₅	15.5	X	26.66949	301.62570	52.12396	11.96640	0.1608084	0.23590797	2.5940259	21	12 5.7	18.6
193340 2000 <i>UU</i> ₅	15.6	X	89.33060	288.48406	93.95928	2.91036	0.1442535	0.24775755	2.5106420	21	—	—
193341 2000 <i>UE</i> ₇	16.0	X	20.60731	71.23707	20.05173	1.76942	0.1001079	0.24717646	2.5145753	21	—	—
193342 2000 <i>UG</i> ₇	16.8	X	189.83065	303.23805	77.60593	1.48891	0.2021685	0.26197560	2.4189607	21	4 1.0	20.7
193343 2000 <i>UZ</i> ₁₁	16.4	X	137.74876	270.46035	85.16891	8.07358	0.2531289	0.25506789	2.4624392	21	1 18.5	19.9
193344 2000 <i>UX</i> ₁₄	15.1	X	36.27662	138.43327	257.32217	12.30143	0.1380533	0.24247299	2.5469894	21	—	—
193345 2000 <i>UC</i> ₁₇	16.7	X	14.55264	231.08634	223.45695	12.35952	0.2616695	0.24488365	2.5302466	21	—	—
193346 2000 <i>UD</i> ₁₈	16.2	X	239.27548	320.78253	143.34306	5.07876	0.2381215	0.22756075	2.6570791	21	8 25.9	20.2
193347 2000 <i>UL</i> ₁₉	15.5	X	347.80142	263.22891	217.43095	27.09433	0.3160830	0.24238951	2.5475742	21	—	—
193348 2000 <i>US</i> ₂₁	16.2	X	125.62492	326.82447	83.68700	3.88670	0.2242649	0.25613004	2.4556268	21	3 13.4	19.7
193349 2000 <i>UU</i> ₂₂	16.1	X	138.23105	33.22431	91.93561	5.60416	0.1718786	0.26518523	2.3994028	21	6 23.9	19.8
193350 2000 <i>US</i> ₂₄	14.1	X	197.99624	16.24601	49.95983	11.88355	0.2334394	0.12430929	3.9761888	21	6 4.9	20.8
193351 2000 <i>UF</i> ₂₉	16.2	X	166.42878	163.45637	147.34509	5.61790	0.2439030	0.25182906	2.4835076	21	—	—
193352 2000 <i>UL</i> ₃₀	17.0	X	351.71855	291.03240	52.80801	24.36785	0.1701243</					

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
193361 2000 UC ₅₂	16.0	X	128.46816	345.93231	64.25288	3.26162	0.1927579	0.25565347	2.4586776	21	3 11.8	19.4
193362 2000 UT ₅₉	15.7	X	99.23616	181.28782	239.51208	11.86838	0.1821212	0.25401303	2.4692519	21	2 7.6	18.8
193363 2000 UL ₆₂	16.3	X	98.73948	335.18393	356.99996	5.95239	0.2454687	0.24589689	2.5232911	21	—	—
193364 2000 UC ₆₃	16.6	X	340.49715	73.26314	340.37772	3.04349	0.2847778	0.23666598	2.5884841	21	12 24.1	18.3
193365 2000 UV ₆₅	16.0	X	108.20631	65.86375	239.54717	7.22477	0.2939509	0.24555418	2.5256384	21	—	—
193366 2000 UJ ₆₇	16.3	X	62.58382	326.66528	3.56425	5.27537	0.1747146	0.24015113	2.5633798	21	12 24.4	20.0
193367 2000 UC ₇₁	16.4	X	216.68467	126.92339	241.46423	3.70729	0.2105535	0.26430336	2.4047371	21	4 5.8	20.6
193368 2000 UL ₇₁	16.1	X	88.35154	314.57120	8.07952	5.72238	0.2311383	0.24272582	2.5452204	21	—	—
193369 2000 UH ₇₃	15.4	X	325.01108	61.26442	61.89178	6.85321	0.2678752	0.23906886	2.5711103	21	—	—
193370 2000 UH ₈₃	15.8	X	186.33382	130.92689	138.07208	3.29973	0.0238597	0.24701966	2.5156393	21	—	—
193371 2000 UM ₈₈	15.1	X	170.29976	182.52473	58.36108	8.93243	0.1889976	0.24103375	2.5571182	21	12 12.9	19.2
193372 2000 UV ₉₈	15.9	X	264.65541	72.97355	268.12921	6.21666	0.1556200	0.26668484	2.3903995	21	4 18.8	19.4
193373 2000 UF ₁₀₅	16.5	X	109.65184	274.47259	108.36570	4.80140	0.2794697	0.25236457	2.4799930	21	1 24.3	19.5
193374 2000 UT ₁₀₇	16.1	X	192.57434	276.61206	115.07107	6.87613	0.1629775	0.26294279	2.4130253	21	4 18.8	20.0
193375 2000 UB ₁₀₈	16.4	X	196.62776	294.55875	114.38311	6.11920	0.1021991	0.26594471	2.3948325	21	5 13.6	20.0
193376 2000 UP ₁₀₉	15.5	X	342.88011	11.82430	95.00014	7.97257	0.2777318	0.24077924	2.5589199	21	—	—
193377 2000 VD ₁	15.9	X	68.56094	152.90920	222.53688	11.04300	0.1625274	0.24451371	2.5327981	21	—	—
193378 2000 VY ₁₆	15.7	X	315.34823	212.33779	214.57030	14.27998	0.1125570	0.23405811	2.6076757	21	11 12.1	18.5
193379 2000 VP ₁₉	16.2	X	284.12079	320.32948	160.36041	5.16776	0.1683469	0.23598092	2.5934913	21	11 27.4	19.0
193380 2000 VY ₂₃	16.1	X	57.82032	190.18508	199.56129	3.55167	0.1155425	0.24433345	2.5340437	21	—	—
193381 2000 VK ₂₄	15.8	X	52.89137	219.05528	206.18052	0.91108	0.1403773	0.24702943	2.5155730	21	—	—
193382 2000 VO ₂₄	15.9	X	57.65799	99.38082	319.13355	1.14613	0.1034545	0.24681113	2.5170560	21	—	—
193383 2000 VT ₂₇	15.8	X	340.92065	353.83892	74.66316	6.69672	0.2855032	0.23699137	2.5861142	21	—	—
193384 2000 VW ₂₈	15.8	X	26.39362	279.97989	122.91243	4.90285	0.2119421	0.24061243	2.5601025	21	—	—
193385 2000 VC ₃₀	15.9	X	6.67512	237.54907	179.88210	5.27305	0.2388484	0.23878291	2.5731625	21	—	—
193386 2000 VV ₃₀	16.1	X	118.34315	11.56992	73.35637	14.96063	0.2475639	0.25636013	2.4541573	21	4 25.7	19.9
193387 2000 VD ₃₅	15.8	X	300.72779	358.36610	67.45685	14.80285	0.2268659	0.23031296	2.6358688	21	10 8.2	18.7
193388 2000 VM ₃₅	16.2	X	219.34576	104.38667	241.53786	3.62313	0.2043449	0.26127178	2.4233029	21	3 11.3	20.3
193389 2000 VV ₄₄	16.9	X	237.30091	357.70914	54.82651	23.89705	0.0746938	0.36460528	1.9405531	21	7 3.5	19.5
193390 2000 VX ₄₄	14.9	X	206.27198	282.59081	236.58745	27.42632	0.1441578	0.23070484	2.6328831	21	10 4.8	19.4
193391 2000 VQ ₄₅	15.6	X	180.94172	258.76669	8.44195	5.82280	0.1368269	0.24563702	2.5250705	21	—	—
193392 2000 VA ₅₄	15.7	X	23.58099	192.17892	255.27559	11.02899	0.2226038	0.24511495	2.5286546	21	—	—
193393 2000 VX ₆₁	16.7	X	199.80251	107.17061	337.61642	18.22800	0.0904356	0.36274286	1.9471682	21	7 7.5	19.4
193394 2000 WX ₁	16.1	X	307.76729	178.59202	247.85481	4.11533	0.1955343	0.23148830	2.6269392	21	10 17.6	18.6
193395 2000 WU ₆	16.7	X	38.18506	27.29954	356.62976	5.59278	0.2688546	0.24112261	2.5564899	21	—	—
193396 2000 WH ₈	15.8	X	13.13458	25.77198	24.88707	4.98674	0.2142919	0.23871453	2.5736540	21	—	—
193397 2000 WQ ₉	15.9	X	275.02087	66.27795	82.48350	5.76885	0.1976197	0.23518346	2.5993506	21	12 14.7	18.5
193398 2000 WY ₁₃	14.6	X	229.19292	151.47767	249.84592	9.57357	0.2767668	0.12491600	3.9633036	21	5 29.8	21.1
193399 2000 WG ₁₅	16.1	X	323.65726	219.73938	252.70493	10.32161	0.1534136	0.23935162	2.5690850	21	—	—
193400 2000 WC ₁₈	15.9	X	275.43057	136.39944	46.58348	5.52618	0.0984416	0.24303791	2.5430411	21	—	—
193401 2000 WA ₂₀	15.8	X	36.62591	142.57697	247.85341	3.26433	0.1120852	0.23970749	2.5665416	21	—	—
193402 2000 WK ₂₅	16.7	X	304.32548	230.03785	235.94988	2.79429	0.2094484	0.23670998	2.5881633	21	12 10.0	19.0
193403 2000 WK ₂₉	17.1	X	183.50759	56.89799	47.54399	22.87035	0.0600238	0.36589301	1.9359760	21	7 14.9	19.9
193404 2000 WS ₂₉	16.5	X	14.77619	105.31391	206.60976	22.56663	0.1718424	0.37312478	1.9108796	21	10 16.2	17.5
193405 2000 WV ₃₀	16.1	X	358.87280	134.71767	214.51917	10.10514	0.2348936	0.23248236	2.6194455	21	10 21.1	18.3
193406 2000 WL ₃₆	15.7	X	54.48091	266.94817	96.70526	15.28227	0.1979339	0.23962462	2.5671333	21	—	—
193407 2000 WT ₃₇	15.7	X	315.05714	150.54637	178.79225	6.20188	0.1822587	0.22335833	2.6903035	21	6 12.3	18.9
193408 2000 WB ₃₈	16.4	X	32.38701	237.65302	122.12161	4.95711	0.2709585	0.23817941	2.5775073	21	—	—
193409 2000 WF ₃₈	15.9	X	2.36995	296.72345	133.03858	4.74891	0.1316282	0.23991593	2.5650549	21	—	—
193410 2000 WS ₅₀	15.3	X	345.40227	326.81163	91.52994	14.99104	0.1728537	0.23192972	2.6236050	21	12 26.7	17.8
193411 2000 WR ₅₃	16.6	X	338.92411	32.63332	66.10226	9.25737	0.1283543	0.24014201	2.5634447	21	—	—
193412 2000 WV ₅₉	15.5	X	300.82141	233.80976	259.37261	11.23447	0.2410941	0.23563523	2.5960272	21	—	—
193413 2000 WH ₆₁	15.2	X	23.93053	292.97511	97.95366	13.16027	0.2809477	0.23765184	2.5813205	21	—	—
193414 2000 WQ ₆₅	15.7	X	145.41444	234.61317	62.72527	7.32919	0.1249113	0.24326733	2.5414419	21	—	—
193415 2000 WB ₆₇	17.4	X	206.34417	259.40459	214.89761	19.80151	0.0910076	0.36834081	1.9273895	21	8 18.3	20.2
193416 2000 WZ ₆₇	15.7	X	97.03377	334.39238	1.26271	8.61715	0.1960775	0.24266072	2.5456756	21	—	—
193417 2000 WJ ₆₉	15.6	X	241.01836	250.05851	312.54465	7.73742	0.0435466	0.24372170	2.5382823	21	—	—
193418 2000 WY ₆₉	15.6	X	324.61386	132.09175	258.49416	14.35022	0.1996158	0.23253837	2.6190249	21	9 22.5	18.5
193419 2000 WG ₈₅	16.1	X	79.75722	203.12414	281.18044	4.70816	0.0952421	0.25585587	2.4573808	21	3 26.5	19.1
193420 2000 WX ₈₇	15.2	X	334.61257	138.11075	297.37132	13.21702	0.1756460	0.23377034	2.6098153	21	12 31.9	17.8
193421 2000 WD ₈₈	15.3	X	338.95813	164.29260	288.32617	17.50211	0.2667489	0.23641704	2.5903008	21	—	—
193422 2000 WT ₈₈	14.7	X	79.24988	76.73192	322.63627	11.46463	0.2776304	0.24400038	2.5363492	21	—	—
193423 2000 WS ₉₂	16.6	X	32.89498	136.04020	265.96495	0.40570	0.2038367	0.24111315	2.5565568	21	—	—
193424 2000 WZ ₉₂	16.2	X	162.11987	307.04246	74.12647	3.51286	0.2029027	0.25635730	2.4541754	21	3 10.0	20.0
193425 2000 WA ₉₃	15.4	X	8.60995	321.99433	69.71060	14.52771	0.0795397	0.23588831	2.5941700	21	12 18.1	18.6
193426 2000 WL ₉₃	15.8	X	44.40900	134.54250	278.56041	3.05701	0.0530909	0.24283554	2.5444537	21	—	—
193427 2000 WB ₉₇	15.8	X	353.54845	177.86686	244.98871	2.58147	0.1538476	0.23696402	2.5863132	21	—	—
193428 2000 WE ₁₀₁	15.2	X	315.41322	349.00879	82.90912	6.90264	0.2255299	0.23174786	2.6249774	21	11 12.6	17.3
193429 2000 WJ ₁₀₂	17.1	X	71.10081	315.66627	182.63533	9.72618	0.0328129	0.35414094	1.9785725	21	3 9.7	18.7
193430 2000 WP ₁₀₈	15.2	X	201.04175	207.48819	266.40104	13.20027	0.0646111	0.22359670	2.6883911	21	8 7.8	19.3
193431 2000 WX ₁₀₈	15.7	X	356.59783	165.51413	286.89773	6.69074	0.1588260	0.24154901	2.5534805	21	—	—
193432 2000 WA ₁₁₁	16.2	X	4.57875	103.98407	338.41245	3.36519	0.2276916	0.24126976	2.5554504	21	—	—
193433 2000 WE ₁₁₃	15.7	X	70.28147	7.29734	28.21226	3.97904	0.0795768	0.24446182	2.5331565	21	—	—
193434 2000 WZ ₁₁₅	15.9	X	10.98957	57.58270	9.54949	3.69741	0.2029599	0.23998288	2.5645778	21	—	—
193435 2000 WO ₁₁₆	16.2	X	67.33500	233								

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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>
193441 2000 WO ₁₂₇	16.1	X	2.89347	335.10532	74.22626	2.73356	0.1299793	0.23728163	2.5840047	21	—	—
193442 2000 WC ₁₂₉	16.3	X	312.29455	207.36584	266.08028	2.90323	0.1638444	0.23893076	2.5721009	21	—	—
193443 2000 WC ₁₃₁	16.3	X	60.77451	258.68103	72.18304	5.48289	0.3131958	0.23995907	2.5647474	21	—	—
193444 2000 WL ₁₃₅	15.0	X	85.71650	336.11769	26.99990	7.58694	0.2407594	0.24213399	2.5493661	21	—	—
193445 2000 WJ ₁₃₆	16.5	X	112.09191	105.57656	30.62369	5.18468	0.1658303	0.26225794	2.4172243	21	6 9.0	19.8
193446 2000 WR ₁₃₉	15.9	X	112.93113	234.39364	64.54444	4.34018	0.0604277	0.23935447	2.5690646	21	12 28.8	19.6
193447 2000 WS ₁₄₀	16.2	X	310.90658	69.62346	69.64367	6.03899	0.2069270	0.23881354	2.5729426	21	—	—
193448 2000 WG ₁₄₃	15.8	X	337.42086	274.41350	180.14568	14.32623	0.2446670	0.23766687	2.5732778	21	—	—
193449 2000 WW ₁₄₆	13.7	X	208.84154	321.28486	96.63630	13.68673	0.3443175	0.12455665	3.9709228	21	6 3.0	20.7
193450 2000 WQ ₁₅₁	16.1	X	357.56084	287.94974	114.94980	6.24072	0.3237059	0.23533263	2.5982521	21	—	—
193451 2000 WB ₁₅₈	15.2	X	53.63323	53.04332	34.75706	8.55960	0.2256703	0.24492808	2.5299406	21	1 3.1	17.3
193452 2000 WO ₁₆₈	15.7	X	6.35846	126.46753	276.15624	2.03431	0.2510433	0.23453644	2.6041290	21	—	—
193453 2000 WV ₁₆₉	15.3	X	282.76513	179.28365	268.25438	13.73273	0.0638364	0.23296421	2.6158324	21	10 18.2	18.9
193454 2000 WW ₁₇₄	15.7	X	81.20101	166.13516	201.22751	14.57633	0.1995286	0.24443498	2.5333419	21	—	—
193455 2000 WH ₁₈₁	15.6	X	344.14407	6.52561	26.68869	22.61597	0.1083634	0.23459293	2.6037109	21	11 8.6	18.7
193456 2000 XZ ₁	16.8	X	187.10776	228.42498	256.47932	18.15428	0.0908093	0.36752425	1.9302433	21	8 7.5	19.6
193457 2000 XJ ₂	17.0	X	155.02948	159.81264	122.33612	1.04901	0.0918456	0.23989561	2.5651997	21	—	—
193458 2000 XQ ₄	16.5	X	32.44869	22.55784	3.10807	8.97709	0.2054864	0.24010497	2.5637083	21	—	—
193459 2000 XK ₅	15.5	X	211.30615	221.15919	289.57200	13.25343	0.0472776	0.23136948	2.6278385	21	10 7.4	19.5
193460 2000 XE ₆	17.1	X	13.94632	96.23808	324.60619	4.42638	0.3306780	0.24057365	2.5603775	21	—	—
193461 2000 XZ ₆	16.6	X	44.77977	32.77975	38.58022	9.04543	0.2796208	0.24529949	2.5273862	21	—	—
193462 2000 XE ₇	15.7	X	316.33378	143.43053	311.86574	7.06495	0.1361468	0.23577307	2.5950153	21	12 23.1	18.3
193463 2000 XF ₁₀	15.3	X	40.99807	292.87725	63.59823	14.41904	0.2207241	0.23395728	2.6084249	21	—	—
193464 2000 XH ₁₂	15.4	X	116.46972	186.49719	326.97999	5.95983	0.2121804	0.214443762	2.7644075	21	7 13.7	19.8
193465 2000 XJ ₁₃	15.6	X	267.58779	76.81172	81.60709	3.99033	0.1879451	0.23393512	2.6085897	21	12 16.8	18.5
193466 2000 XA ₁₆	15.6	X	330.01906	98.52093	319.85554	11.35883	0.1491976	0.23577943	2.5949686	21	11 23.2	18.4
193467 2000 XK ₁₇	15.6	X	290.31767	154.94973	306.22341	9.28445	0.0990417	0.23288389	2.6164338	21	11 14.9	18.9
193468 2000 XL ₁₇	16.0	X	24.57616	63.63940	25.17465	7.23210	0.2603456	0.24378801	2.5378220	21	—	—
193469 2000 XL ₁₈	14.9	X	55.44610	105.59942	294.88496	12.83896	0.1908316	0.24444262	2.5332891	21	—	—
193470 2000 XJ ₁₉	15.4	X	347.47824	102.71770	311.41947	11.79104	0.1660399	0.23602663	2.5931564	21	12 28.6	18.1
193471 2000 XR ₂₀	15.8	X	319.16020	85.71568	303.11088	10.83105	0.0555516	0.22902439	2.6457465	21	9 21.9	19.4
193472 2000 XH ₂₂	16.0	X	42.26647	323.37221	39.31920	13.57269	0.2947451	0.23945715	2.5683301	21	—	—
193473 2000 XV ₂₄	15.3	X	51.70178	327.79729	44.42790	13.95263	0.1852110	0.23972272	2.5664329	21	—	—
193474 2000 XH ₂₅	15.7	X	283.02790	129.49692	308.17587	10.50135	0.2320463	0.22872037	2.6480905	21	9 8.9	19.1
193475 2000 XO ₂₇	15.4	X	58.94876	336.45031	57.43177	16.63240	0.1193682	0.24139533	2.5545641	21	—	—
193476 2000 XR ₃₁	16.2	X	356.06477	111.46628	281.38782	15.04786	0.2374657	0.23505843	2.6002723	21	12 21.6	18.7
193477 2000 XO ₃₆	15.4	X	288.97692	130.92982	332.44662	11.85409	0.1102518	0.23420872	2.6065577	21	11 12.9	18.7
193478 2000 XN ₃₇	14.3	X	92.66584	330.47870	41.42558	15.61050	0.2632771	0.24426644	2.5345071	21	—	—
193479 2000 XG ₄₁	15.8	X	294.45591	74.80154	345.77176	12.66868	0.1415296	0.22972275	2.6403817	21	9 20.9	19.0
193480 2000 XL ₄₁	15.4	X	79.20835	350.31141	22.57230	15.53654	0.1883702	0.24408850	2.5357387	21	—	—
193481 2000 XU ₄₂	15.2	X	41.96019	53.68017	20.43325	13.05551	0.2096265	0.24412201	2.5355067	21	—	—
193482 2000 XQ ₄₃	15.5	X	234.57207	119.08543	346.13024	15.27138	0.0742462	0.22482669	2.6785771	21	9 9.7	19.2
193483 2000 XN ₄₆	15.3	X	74.67455	11.73234	8.21370	13.27179	0.1868274	0.24437887	2.5337297	21	—	—
193484 2000 XY ₅₂	15.5	X	41.23004	341.56068	26.78958	10.42400	0.2118390	0.23748742	2.5825118	21	—	—
193485 2000 XD ₅₃	15.9	X	214.17773	110.95780	20.48444	11.66412	0.1293301	0.22375915	2.6870899	21	9 17.9	20.0
193486 2000 XF ₅₃	15.4	X	301.41407	324.72839	54.86205	15.10138	0.1210516	0.22303128	2.6629329	21	8 17.4	19.0
193487 2000 XL ₅₃	16.6	X	294.49010	172.29009	226.64724	1.96594	0.1372568	0.22650798	2.6653058	21	8 22.9	19.9
193488 2000 YQ	14.9	X	44.92343	330.44630	32.93301	20.34067	0.3084652	0.23816752	2.5775931	21	—	—
193489 2000 YT ₁	16.2	X	325.70930	87.78236	344.64752	11.19185	0.1408461	0.23551848	2.5968850	21	12 5.9	19.1
193490 2000 YW ₅	15.3	X	11.44388	56.24638	314.33060	13.31905	0.1311113	0.23148072	2.6269965	21	11 28.7	18.7
193491 2000 YE ₆	16.0	X	326.27636	78.18475	33.52984	4.95201	0.1941677	0.23817181	2.5775622	21	—	—
193492 2000 YH ₆	16.0	X	322.36044	47.59688	60.98019	6.28008	0.2471721	0.23702139	2.5858958	21	—	—
193493 2000 YZ ₇	16.9	X	330.00486	261.86116	181.24632	3.77739	0.2102213	0.23608107	2.5927577	21	—	—
193494 2000 YX ₉	15.6	X	76.19967	84.03119	293.54081	2.83174	0.1910544	0.24375659	2.5380401	21	—	—
193495 2000 YK ₁₀	15.4	X	317.74957	200.04458	269.16865	12.56247	0.2088463	0.23692006	2.5866331	21	—	—
193496 2000 YA ₁₆	15.6	X	258.54476	161.38888	2.32085	4.54875	0.1730362	0.23178990	2.6246600	21	12 11.7	19.0
193497 2000 YR ₁₆	16.7	X	248.17353	30.94956	268.56079	16.37032	0.0759828	0.35047288	1.9923537	21	1 26.1	19.3
193498 2000 YS ₁₇	16.0	X	354.65151	291.97486	88.67637	6.01213	0.1438319	0.23206536	2.6225825	21	11 19.2	18.8
193499 2000 YL ₂₀	15.3	X	275.11372	189.45818	275.57739	11.85715	0.1212724	0.22914210	2.6448403	21	10 22.2	18.9
193500 2000 YX ₂₂	16.2	X	8.62404	192.44605	173.21649	1.86684	0.2883119	0.23244524	2.6197244	21	12 14.4	18.7
193501 2000 YL ₂₃	14.7	X	240.17486	131.16487	284.05853	7.16447	0.2942144	0.12412850	3.9800486	21	6 21.9	21.2
193502 2000 YR ₂₄	15.9	X	30.37322	129.18922	291.23507	1.49096	0.1921171	0.24022958	2.5628217	21	—	—
193503 2000 YC ₂₇	15.6	X	294.98909	252.01776	215.12091	21.42599	0.0743308	0.22947153	2.6423084	21	12 4.5	19.1
193504 2000 YH ₃₆	15.9	X	31.90895	157.34142	250.50754	3.28591	0.2363757	0.24015110	2.5633800	21	—	—
193505 2000 YP ₃₆	15.5	X	291.59767	146.39186	293.36710	3.59987	0.2019028	0.22981804	2.6396518	21	10 3.9	18.3
193506 2000 YY ₃₈	16.2	X	247.78077	331.40715	128.17515	2.60830	0.0931505	0.22477244	2.6790080	21	9 17.4	19.8
193507 2000 YF ₄₀	15.6	X	244.81155	155.10681	277.59963	14.28972	0.1146725	0.22128331	2.7070957	21	8 1.0	19.7
193508 2000 YG ₄₆	16.2	X	332.46658	345.46529	109.80293	5.78109	0.2335090	0.23648128	2.5898316	21	—	—
193509 2000 YV ₄₆	15.7	X	311.22138	359.22680	89.23166	4.34434	0.1547809	0.23265239	2.6181691	21	12 1.9	18.4
193510 2000 YL ₅₀	16.2	X	5.54449	304.45407	132.95046	5.45571	0.2621440	0.23893426	2.5720758	21	—	—
193511 2000 YS ₅₀	15.3	X	20.30810	151.32592	293.23859	12.48923	0.1105529	0.24102364	2.5571897	21	—	—
193512 2000 YG ₅₂	15.4	X	48.99444	253.18477	99.58377	9.67984	0.0928146	0.23302698	2.6153626	21	12 24.6	18.8
193513 2000 YF ₅₃	15.7	X	7.16787	340.76935	99.86711	9.96969	0.1340196	0.23869181	2.5738172	21	—	—
193514 2000 YA ₅₅	15.4	X	262.45319	319.11153	106.17703	8.45017	0.0944584	0.22172397	2.7350578	21	8 22.7	19.1
193515 2000 YU ₅₅												

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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>
193521 2000 YG ₆₃	15.4	X	229.69079	6.10173	114.91617	14.87079	0.0953036	0.22315119	2.6919681	21	9 28.5	19.5
193522 2000 YL ₆₆	16.8	X	201.13878	309.88110	121.54352	24.76487	0.0867344	0.36264955	1.9475022	21	6 18.5	19.5
193523 2000 YE ₇₃	15.6	X	226.66348	53.43766	88.57293	6.82167	0.1247971	0.22890813	2.6466423	21	10 15.6	19.5
193524 2000 YZ ₇₄	16.5	X	330.85188	212.01391	224.63652	0.97010	0.1685916	0.23560666	2.5962370	21	12 25.0	18.8
193525 2000 YL ₈₀	15.5	X	70.08360	97.98301	270.76683	13.10864	0.2689925	0.24226861	2.5484216	21	—	—
193526 2000 YB ₈₃	15.4	X	230.25182	201.62951	261.87901	13.00289	0.0500171	0.22470905	2.6795118	21	8 29.2	19.5
193527 2000 YU ₈₃	16.3	X	2.66886	311.75309	111.90442	6.01095	0.3134129	0.23853352	2.5749557	21	—	—
193528 2000 YB ₈₆	16.3	X	20.73968	277.52726	132.38261	2.47532	0.2594665	0.23921390	2.5700709	21	—	—
193529 2000 YN ₈₆	16.3	X	305.79201	193.29555	258.02078	1.92792	0.1850460	0.23306342	2.6150900	21	11 22.2	18.5
193530 2000 YM ₉₁	15.2	X	28.65646	265.73149	94.36919	12.98634	0.3245148	0.23501430	2.6005978	21	—	—
193531 2000 YZ ₉₁	15.5	X	358.28398	201.82401	258.59449	7.77620	0.1302033	0.24076816	2.5589984	21	—	—
193532 2000 YC ₉₆	16.4	X	301.13139	310.01106	141.00153	3.00614	0.1750446	0.23075222	2.6325227	21	11 14.2	18.9
193533 2000 YD ₉₇	15.5	X	344.99203	100.71451	297.03219	11.98041	0.2058745	0.23073144	2.6326807	21	11 27.4	18.1
193534 2000 YQ ₁₀₉	15.9	X	204.77343	167.10434	302.96795	6.57716	0.0932968	0.21958057	2.7210725	21	8 9.5	20.0
193535 2000 YS ₁₀₉	12.7	X	250.17214	179.63912	306.52752	10.32902	0.0785202	0.08395659	5.1653470	21	10 4.3	19.8
193536 2000 YT ₁₀₉	15.9	X	313.23894	5.02482	94.54685	6.85806	0.1415070	0.23359408	2.6111280	21	12 22.2	18.3
193537 2000 YU ₁₁₂	16.3	X	326.71742	9.33048	84.62566	4.46335	0.2013413	0.23481172	2.6020933	21	—	—
193538 2000 YX ₁₁₂	16.6	X	296.35270	13.87669	73.29021	3.45929	0.1816271	0.22976972	2.6400218	21	10 29.6	19.3
193539 2000 YJ ₁₁₃	15.3	X	353.42727	277.06418	106.73623	14.11981	0.2105674	0.23068316	2.6330480	21	11 30.6	18.0
193540 2000 YN ₁₁₃	15.4	X	27.91624	299.17760	101.20747	13.82721	0.2050140	0.23730359	2.5838453	21	—	—
193541 2000 YO ₁₁₃	15.3	X	106.39237	281.65948	75.34952	4.72635	0.2811911	0.24307641	2.5427725	21	—	—
193542 2000 YC ₁₁₄	16.1	X	266.24662	186.19615	355.36411	2.65967	0.1213816	0.23641020	2.5903507	21	—	—
193543 2000 YT ₁₁₅	15.9	X	5.35720	347.81692	96.39381	6.46194	0.2644711	0.23885190	2.5726670	21	—	—
193544 2000 YL ₁₁₇	16.2	X	301.86826	138.52598	336.85436	2.94371	0.1581601	0.23264468	2.6182270	21	12 21.6	18.9
193545 2000 YN ₁₁₇	15.6	X	156.72559	196.39307	312.96487	7.67832	0.1399664	0.21577123	2.7530051	21	8 9.9	20.0
193546 2000 YJ ₁₂₀	15.5	X	292.18346	110.29514	324.53777	12.20501	0.2385356	0.22789019	2.6545177	21	9 18.5	18.6
193547 2000 YY ₁₂₀	15.9	X	267.29783	29.76443	75.67667	15.02652	0.1403703	0.22993146	2.6387837	21	10 20.9	19.5
193548 2000 YD ₁₂₁	16.3	X	283.96739	169.80112	215.01837	3.20844	0.2840187	0.22702762	2.6612372	21	8 4.4	19.6
193549 2000 YE ₁₂₂	15.9	X	357.00837	342.33208	70.90819	5.72596	0.0546294	0.23580803	2.5947587	21	12 27.6	19.1
193550 2000 YM ₁₂₅	15.5	X	255.68816	50.99967	351.96596	11.68353	0.2099862	0.21979618	2.7192927	21	6 28.8	19.8
193551 2000 YX ₁₂₅	15.9	X	310.26864	32.21501	60.70295	8.06251	0.1246589	0.23212236	2.6221532	21	12 7.0	18.6
193552 2000 YR ₁₂₆	16.6	X	316.96018	48.13652	29.80256	4.10456	0.2677131	0.23160197	2.6260796	21	11 20.2	18.5
193553 2000 YF ₁₃₂	15.9	X	308.22006	334.35985	89.15048	4.07864	0.0906136	0.22651505	2.6652503	21	10 27.4	19.0
193554 2000 YH ₁₃₃	16.4	X	11.35171	219.02257	173.03680	13.36126	0.3127515	0.23763989	2.5814070	21	—	—
193555 2000 YL ₁₃₆	16.3	X	307.10132	252.53106	193.23271	16.46975	0.2146479	0.23380705	2.6095422	21	11 16.4	18.8
193556 2000 YX ₁₃₉	15.7	X	236.30526	92.78175	9.55894	15.53467	0.1399428	0.22216524	2.6999267	21	9 5.3	19.8
193557 2001 AS ₃	15.7	X	259.30939	35.14402	125.76456	11.72818	0.0943233	0.23311614	2.6146957	21	12 22.5	19.0
193558 2001 AA ₄	15.4	X	301.66809	278.83057	124.11097	13.09000	0.1832674	0.22601992	2.6691414	21	9 7.4	18.4
193559 2001 AM ₄	16.3	X	313.68547	333.47914	126.46167	10.51518	0.2762421	0.23404232	2.6077930	21	12 19.6	18.2
193560 2001 AW ₁₀	15.7	X	343.31319	71.71763	289.79786	4.77381	0.0651200	0.22483223	2.6785330	21	9 24.5	18.9
193561 2001 AG ₁₁	16.3	X	336.37475	277.19717	159.86939	5.00080	0.3202776	0.23501179	2.6006163	21	—	—
193562 2001 AZ ₁₁	14.7	X	84.09544	66.45569	283.85126	11.57174	0.2813971	0.23842116	2.5757647	21	—	—
193563 2001 AO ₁₂	15.2	X	272.27792	155.16334	283.10988	10.67343	0.1586936	0.22454155	2.6808442	21	9 4.4	18.9
193564 2001 AW ₁₅	15.7	X	293.62131	343.88542	114.60583	13.06233	0.1214223	0.22994244	2.6386997	21	11 20.7	19.0
193565 2001 AR ₂₇	15.3	X	168.85308	149.83445	43.29653	7.53403	0.3673894	0.22103041	2.7091602	21	10 13.5	20.5
193566 2001 AJ ₃₀	16.2	X	311.35899	15.96879	74.87770	6.48599	0.2698253	0.23362642	2.6108870	21	11 27.3	17.9
193567 2001 AE ₃₂	15.6	X	359.45748	342.81862	80.01487	6.85639	0.1175335	0.23627932	2.5913072	21	—	—
193568 2001 AO ₃₃	15.6	X	350.80493	292.58407	79.07074	9.78654	0.2447904	0.22993761	2.6387366	21	11 9.6	17.8
193569 2001 AB ₃₄	16.1	X	294.38783	359.22088	70.87031	5.84653	0.1792234	0.22752803	2.6573338	21	10 3.8	19.0
193570 2001 AR ₃₆	12.2	X	256.35184	151.40916	323.61594	24.79401	0.0868092	0.08259914	5.2217856	21	9 20.7	19.5
193571 2001 AG ₄₀	16.4	X	343.10844	22.18907	68.33346	4.67790	0.1915719	0.23632594	2.5909664	21	—	—
193572 2001 AW ₄₀	15.9	X	336.73083	326.29253	132.78716	6.15859	0.2329211	0.23639402	2.5904690	21	—	—
193573 2001 AM ₄₂	16.5	X	19.59396	26.67967	36.54094	5.01596	0.2742761	0.23985421	2.5654949	21	—	—
193574 2001 BB	15.2	X	165.02283	43.99837	82.87672	6.03665	0.1097210	0.21392576	2.7688153	21	7 20.9	19.5
193575 2001 BF	15.4	X	141.75621	64.53854	104.38944	10.08631	0.0874351	0.21514095	2.7583793	21	8 19.9	19.6
193576 2001 BG	16.5	X	309.77986	1.77149	80.69198	5.70796	0.2493225	0.23018769	2.6368251	21	11 11.8	18.7
193577 2001 BY ₁	16.5	X	305.46133	317.15028	139.76291	5.40465	0.1921712	0.23224594	2.6212230	21	11 30.4	19.0
193578 2001 BH ₂	16.0	X	135.40362	297.82837	191.42986	11.48726	0.1052046	0.21142906	2.7905700	21	6 21.1	20.4
193579 2001 BS ₂	16.8	X	245.69111	123.73364	319.33764	18.59585	0.0250203	0.36555695	1.9371623	21	9 6.7	18.9
193580 2001 BM ₆	15.7	X	219.69217	39.95587	72.71402	6.61738	0.0888653	0.22155331	2.7048959	21	9 3.4	19.7
193581 2001 BW ₉	16.4	X	0.26871	264.41736	123.54422	17.78645	0.2878657	0.23318904	2.6141507	21	12 30.9	19.1
193582 2001 BF ₁₁	15.7	X	240.04368	196.57505	284.22371	12.75705	0.1964854	0.22330458	2.6907352	21	9 13.6	20.0
193583 2001 BG ₂₁	15.9	X	16.37983	26.66715	17.31269	4.34778	0.0894461	0.23405416	2.6077051	21	—	—
193584 2001 BL ₂₂	15.2	X	267.51680	201.41254	288.71266	11.66002	0.2188208	0.23118178	2.6292607	21	10 29.8	18.8
193585 2001 BB ₂₆	15.6	X	172.33487	222.32627	286.77147	4.97598	0.0773977	0.21790628	2.7349930	21	8 23.6	19.8
193586 2001 BT ₃₇	16.0	X	13.10967	113.92314	290.34189	0.81579	0.2168401	0.23537382	2.5979489	21	—	—
193587 2001 BQ ₃₈	16.0	X	290.23905	311.61970	127.25836	6.74182	0.2754844	0.22657748	2.6647607	21	9 22.2	19.0
193588 2001 BE ₄₀	15.0	X	78.14374	163.47188	80.74728	10.86190	0.1429951	0.21634531	2.7481328	21	9 23.6	19.1
193589 2001 BS ₄₂	15.6	X	309.26340	275.18645	161.44070	12.14115	0.2448086	0.22980090	2.6397830	21	11 4.6	18.0
193590 2001 BQ ₄₅	15.3	X	292.94938	208.90098	236.47478	11.04607	0.1584738	0.22919136	2.6444613	21	10 20.8	18.4
193591 2001 BV ₄₅	15.5	X	350.48653	253.84224	198.59754	9.51318	0.1335582	0.23734342	2.5835562	21	—	—
193592 2001 BN ₄₆	12.8	X	260.52525	295.88547	202.90051	11.67970	0.0741787	0.08416939	5.1566373	21	11 4.5	19.6
193593 2001 BR ₄₆	15.2	X	59.16243	330.41464	264.06689	12.35051	0.1527639	0.21223522	2.7384991	21	8 6.5	19.0
193594 2001 BQ ₄₉	15.6	X	8.68388									

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
193601 2001 BQ ₆₈	15.5 ^m	X	69.02595	76.62402	351.20572	10.28110	0.3114528	0.24431572	2.5341663	21	1 25.8	17.4
193602 2001 BL ₇₀	12.6	X	298.49307	156.27632	276.12221	4.42491	0.1014607	0.08278232	5.2140796	21	9 29.2	19.3
193603 2001 BU ₇₁	15.8	X	330.26026	176.11209	243.31148	2.51157	0.2881536	0.23133484	2.6281008	21	11 30.4	17.4
193604 2001 BG ₇₃	16.0	X	223.75596	304.45705	202.97493	12.50930	0.2042183	0.22409488	2.6844053	21	10 5.9	20.1
193605 2001 BX ₇₅	15.8	X	133.52404	294.62273	192.68295	7.15593	0.1764521	0.21020715	2.8013738	21	6 22.9	20.4
193606 2001 BF ₇₈	14.8	X	23.65806	90.46184	200.33833	8.97429	0.1761281	0.21657730	2.7461700	21	9 2.3	18.0
193607 2001 BH ₈₂	15.7	X	68.60993	34.59659	55.74099	7.73117	0.1849481	0.24548291	2.5261271	21	2 8.2	18.2
193608 2001 CD ₂	16.0	X	17.33070	58.53575	17.30786	4.87158	0.2582922	0.23835273	2.5762577	21	—	—
193609 2001 CA ₇	15.5	X	58.01205	75.63625	337.84020	10.89587	0.3032019	0.24199360	2.5503520	21	—	—
193610 2001 CS ₈	15.5	X	351.62321	359.35069	101.63570	4.98198	0.2082986	0.23623893	2.5916026	21	—	—
193611 2001 CQ ₁₂	15.8	X	232.95610	27.51581	111.93777	5.34844	0.2496388	0.22485246	2.6783724	21	10 3.9	20.0
193612 2001 CG ₁₃	15.6	X	88.99406	125.70766	76.47185	4.16870	0.1202961	0.21106172	2.7938070	21	8 4.4	19.5
193613 2001 CW ₁₃	15.0	X	73.82197	33.94839	337.60875	10.65873	0.2735042	0.23897850	2.5717584	21	—	—
193614 2001 CZ ₁₃	15.8	X	126.76195	168.08874	344.56997	7.63694	0.1580330	0.21199383	2.7856117	21	7 18.7	20.2
193615 2001 CY ₁₆	15.6	X	171.29233	35.14399	115.45711	9.60000	0.0337030	0.21699021	2.7426851	21	8 29.1	19.5
193616 2001 CZ ₁₇	15.5	X	224.76175	35.70956	137.21482	14.28225	0.1037327	0.22855662	2.6493552	21	11 24.7	19.5
193617 2001 CG ₁₈	16.0	X	299.11833	295.18713	156.11656	5.12627	0.1519458	0.22915806	2.6447175	21	11 13.8	18.8
193618 2001 CP ₁₉	16.0	X	261.82041	242.89608	223.32716	11.27315	0.2473925	0.22535741	2.6743700	21	9 16.3	19.9
193619 2001 CL ₂₁	15.5	X	334.62741	75.95853	338.22618	7.46667	0.1240046	0.23047146	2.6346602	21	11 24.7	18.4
193620 2001 CZ ₂₁	15.9	X	239.17905	117.60617	10.00553	2.14468	0.1509961	0.22550946	2.6731677	21	10 4.4	19.5
193621 2001 CU ₂₄	15.9	X	227.26975	143.49690	338.05534	7.63078	0.1871941	0.22171643	2.7035690	21	9 8.8	20.1
193622 2001 CR ₂₅	15.4	X	308.91786	273.12997	116.98892	12.40417	0.2114940	0.22264763	2.6960255	21	8 27.7	18.3
193623 2001 CC ₂₆	16.7	X	182.06092	173.13456	355.84652	1.91536	0.1207697	0.22085291	2.7106117	21	9 28.7	20.9
193624 2001 CW ₂₆	15.4	X	307.34133	55.75420	56.06797	13.48996	0.2113501	0.23084975	2.6317811	21	12 22.2	17.8
193625 2001 CD ₂₉	15.4	X	317.74206	320.30067	121.88360	13.99270	0.2341643	0.23083603	2.6318855	21	12 5.3	17.7
193626 2001 CV ₃₁	15.2	X	258.68804	87.54499	27.57448	27.43468	0.2196887	0.22543741	2.6737372	21	10 8.7	19.0
193627 2001 CD ₃₃	15.5	X	304.46095	353.89792	75.82770	15.22421	0.1314828	0.22696504	2.6617264	21	10 30.6	18.7
193628 2001 CQ ₃₃	15.4	X	224.71359	117.70571	44.28362	15.63203	0.1396195	0.22599359	2.6693487	21	11 2.8	19.1
193629 2001 CY ₃₃	15.6	X	351.97532	22.83162	63.75776	13.96126	0.2218916	0.23591390	2.5939831	21	—	—
193630 2001 CY ₃₄	15.6	X	354.84823	61.63744	91.07701	13.60786	0.0989010	0.24173194	2.5521921	21	—	—
193631 2001 CA ₃₇	17.0	X	328.68912	131.14904	337.47848	4.94717	0.2423721	0.23595676	2.5936683	21	—	—
193632 2001 CU ₃₇	16.3	X	351.56067	292.97831	106.18294	23.85064	0.1170129	0.37331346	1.9102357	21	—	—
193633 2001 CY ₃₉	15.1	X	4.16725	296.38789	87.85760	14.39124	0.1421359	0.22918121	2.6445394	21	12 9.3	18.1
193634 2001 CS ₄₄	15.4	X	261.57241	0.90634	82.74112	14.09740	0.1022799	0.22052788	2.7132744	21	9 19.6	19.3
193635 2001 CQ ₄₅	15.4	X	227.40916	349.49522	94.82793	15.05535	0.1349729	0.21609487	2.7502557	21	7 30.5	19.7
193636 2001 CS ₄₅	15.5	X	182.35990	104.38017	50.50423	13.76591	0.1491324	0.21771806	2.7365690	21	9 17.9	20.1
193637 2001 CQ ₄₈	16.1	X	299.90462	128.53781	308.87131	2.85701	0.1684537	0.22857700	2.6491976	21	10 21.1	19.0
193638 2001 DY ₂	16.1	X	174.99833	172.17027	339.91854	21.15868	0.0641376	0.36273629	1.9471917	21	9 10.5	18.2
193639 2001 DK ₁₃	15.3	X	145.85337	27.96904	115.20586	9.13872	0.1632970	0.21054908	2.7983400	21	7 24.1	19.9
193640 2001 DJ ₁₅	15.3	X	136.36388	66.98771	128.57142	13.82015	0.0278712	0.21718030	2.7410845	21	9 14.9	19.3
193641 2001 DH ₁₆	12.5	X	312.10660	355.96519	90.80756	7.34007	0.0449065	0.08084877	5.2968837	21	11 10.2	19.4
193642 2001 DH ₁₈	15.2	X	92.04766	194.62094	7.43989	12.00542	0.0708924	0.21051040	2.7986828	21	8 4.5	19.3
193643 2001 DK ₁₈	15.1	X	331.75542	353.65998	100.51649	7.74756	0.2745763	0.23336169	2.6128612	21	—	—
193644 2001 DL ₂₂	15.5	X	226.74919	23.19912	105.82349	11.01068	0.1733266	0.21990669	2.7183816	21	9 24.9	19.8
193645 2001 DL ₂₃	15.7	X	96.17374	198.58851	341.47714	8.86635	0.0872699	0.21034868	2.8001171	21	7 10.9	19.7
193646 2001 DF ₂₆	15.8	X	335.16385	76.47840	26.17295	5.03163	0.2478817	0.23502706	2.6005037	21	—	—
193647 2001 DB ₂₈	15.8	X	276.76592	342.10511	137.43931	5.76893	0.1078268	0.22717244	2.6601060	21	11 21.2	19.2
193648 2001 DT ₃₀	15.3	X	192.79210	336.47680	138.28772	13.73075	0.0980034	0.21432573	2.7653696	21	8 2.5	19.6
193649 2001 DA ₃₈	15.4	X	312.12808	171.47582	259.16752	3.44146	0.1929794	0.22928194	2.6437648	21	11 2.4	17.7
193650 2001 DU ₃₈	16.0	X	272.97991	219.24414	234.85107	4.39444	0.1864838	0.22588161	2.6702308	21	9 26.5	19.4
193651 2001 DL ₄₁	15.0	X	241.36279	30.62054	154.55146	13.78027	0.2135929	0.18137469	3.0908998	21	12 4.8	19.8
193652 2001 DX ₄₁	15.9	X	271.22725	122.77181	340.72141	2.31011	0.0713866	0.22490483	2.6779566	21	10 25.2	19.2
193653 2001 DB ₄₂	15.4	X	327.68858	30.51660	136.66411	3.18283	0.1679360	0.19105500	2.9855920	21	—	—
193654 2001 DV ₄₂	16.5	X	254.19811	325.84708	153.66427	2.35361	0.2631052	0.22546330	2.6735326	21	9 26.9	20.2
193655 2001 DV ₄₄	16.1	X	257.86385	297.30169	148.23588	2.41455	0.1275560	0.22023143	2.7157087	21	9 5.5	19.7
193656 2001 DK ₄₅	16.0	X	229.24007	157.43852	346.68813	1.77567	0.1433452	0.22339648	2.6899972	21	10 14.4	19.8
193657 2001 DP ₄₈	15.6	X	7.47637	47.65107	85.35300	8.36382	0.1066450	0.24208052	2.5497415	21	—	—
193658 2001 DH ₅₀	15.7	X	231.46937	44.31726	57.48200	8.34700	0.1000114	0.21964099	2.7205734	21	9 2.6	19.8
193659 2001 DX ₅₃	16.3	X	268.35947	131.91421	315.94355	2.95588	0.2955541	0.22403183	2.6849089	21	8 27.6	20.0
193660 2001 DB ₅₅	16.5	X	101.37408	305.01372	135.21576	2.86631	0.0649185	0.19913129	2.9043105	21	3 6.1	20.5
193661 2001 DH ₅₆	15.8	X	274.76958	216.05743	144.10823	4.29764	0.1080634	0.21087008	2.7954995	21	6 8.3	19.6
193662 2001 DA ₆₀	16.1	X	29.56650	307.97519	190.08017	1.94508	0.0595052	0.24577471	2.5241273	21	1 26.9	18.9
193663 2001 DG ₆₂	15.8	X	93.24913	22.07979	155.88085	8.84963	0.1494348	0.20900983	2.8120621	21	7 10.8	19.9
193664 2001 DR ₆₂	16.2	X	313.95617	287.16590	150.54602	2.62323	0.1881626	0.22905850	2.6454838	21	11 19.1	18.6
193665 2001 DU ₆₂	15.4	X	228.51254	273.75075	151.88447	9.91721	0.1382437	0.21528079	2.7571847	21	7 5.4	19.7
193666 2001 DE ₆₃	16.5	X	284.76091	338.28735	160.30085	2.20769	0.1159789	0.23083730	2.6318758	21	12 26.9	19.5
193667 2001 DU ₆₄	16.0	X	342.20217	291.57465	162.37483	8.42401	0.2788408	0.23545543	2.5973486	21	—	—
193668 2001 DJ ₆₆	15.6	X	187.41806	191.94699	326.08985	12.19055	0.1571949	0.21903638	2.7255776	21	9 15.1	20.1
193669 2001 DV ₆₆	15.8	X	148.89112	333.22541	146.64939	4.74753	0.0545985	0.20938438	2.8087076	21	6 20.6	19.9
193670 2001 DY ₇₆	13.2	X	6.77290	244.56413	157.71214	9.47577	0.0738416	0.08052500	5.3110723	21	11 27.7	19.9
193671 2001 DV ₈₄	16.5	X	170.10155	68.92173	194.06542	3.99166	0.1448968	0.17510754	3.1642162	21	12 30.7	21.7
193672 2001 DA ₉₁	16.2	X	46.98672	293.83914	258.21950	7.98863	0.2320136	0.20341050	2.8634338	21	6 5.5	19.0
193673 2001 DQ ₉₆	15.9	X	33.67156	266.52875	176.85184	7.76508	0.2611048	0.24248677	2.5468929	21	—	—
193674 2001 DT ₉₉	15.9	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>
193681 2001 <i>EE</i> ₈	15.8 ^m	X	347.05882	22.27487	63.25757	3.67644	0.2171078	0.23250798	2.6192531	21	—	—
193682 2001 <i>EH</i> ₁₄	14.5	X	223.67266	191.45612	27.92326	18.00833	0.2165954	0.17991645	3.1075786	21	12 22.9	19.6
193683 2001 <i>EO</i> ₁₄	15.6	X	43.41736	346.60297	108.06652	13.22056	0.2096872	0.24080574	2.5587322	21	—	—
193684 2001 <i>EP</i> ₁₅	15.0	X	6.21876	61.48198	20.67532	28.48030	0.1747201	0.23609228	2.5926757	21	—	—
193685 2001 <i>EG</i> ₁₆	16.4	X	321.20053	91.30669	48.83678	3.09430	0.2719595	0.23518746	2.5993212	21	—	—
193686 2001 <i>EP</i> ₂₅	15.7	X	256.43339	251.40455	209.72364	9.70629	0.1641349	0.22301564	2.6930588	21	9 16.2	19.5
193687 2001 <i>ET</i> ₂₇	16.4	X	109.99899	125.77225	359.84985	2.56433	0.1884316	0.20454495	2.8528364	21	5 28.7	20.6
193688 2001 <i>FY</i> ₂	15.9	X	151.88619	297.68647	199.47904	6.68189	0.2479736	0.21108901	2.7935662	21	7 23.6	20.9
193689 2001 <i>FQ</i> ₄	16.1	X	307.18102	255.89843	86.72685	2.80078	0.0472415	0.21010234	2.8023054	21	7 8.4	19.6
193690 2001 <i>FE</i> ₁₀	16.0	X	138.90035	337.75141	199.37095	8.06699	0.2508053	0.21222144	2.7836195	21	8 30.6	21.0
193691 2001 <i>FG</i> ₁₁	15.3	X	247.64298	272.36515	5.01786	10.92631	0.0399981	0.19122324	2.9838404	21	2 5.8	19.7
193692 2001 <i>FA</i> ₁₃	15.2	X	287.33173	162.29257	140.87224	2.84520	0.0528218	0.19974628	2.8983461	21	4 20.5	19.1
193693 2001 <i>FZ</i> ₂₄	15.6	X	140.23149	337.04250	172.45133	7.26273	0.1919789	0.21024183	2.8010657	21	7 26.9	20.2
193694 2001 <i>FK</i> ₂₅	15.0	X	220.99346	246.34789	354.98995	26.78068	0.2002158	0.18063910	3.0992852	21	—	—
193695 2001 <i>FU</i> ₂₉	15.6	X	221.01458	255.65846	229.16167	10.43690	0.2438572	0.22019301	2.7160246	21	8 29.2	20.3
193696 2001 <i>FN</i> ₃₇	15.5	X	228.88561	59.36157	178.32220	8.77223	0.2336266	0.18146455	3.0898794	21	—	—
193697 2001 <i>FA</i> ₄₂	15.5	X	110.63444	175.52677	8.17306	14.59805	0.1277279	0.20881050	2.8138514	21	8 11.6	19.9
193698 2001 <i>FR</i> ₄₅	15.5	X	181.54521	126.81273	7.42901	13.36224	0.1415675	0.21230346	2.7829025	21	8 20.2	20.1
193699 2001 <i>FQ</i> ₅₂	15.4	X	237.56707	118.64594	5.57952	9.63818	0.1636374	0.21894349	2.7263485	21	9 26.4	19.3
193700 2001 <i>FV</i> ₅₇	15.1	X	128.59372	191.24620	343.79669	12.25498	0.2660907	0.20933066	2.8091881	21	8 24.6	19.9
193701 2001 <i>FH</i> ₅₈	17.0	X	21.93115	222.85820	44.63708	6.81658	0.2225995	0.30270163	2.1968119	21	8 15.8	18.5
193702 2001 <i>FS</i> ₆₂	16.3	X	344.67497	43.43543	109.55035	4.80535	0.1515514	0.23896686	2.5718419	21	—	—
193703 2001 <i>FE</i> ₆₃	15.1	X	284.88095	188.56975	87.19139	3.22620	0.0643404	0.19594153	2.9357454	21	3 13.1	19.2
193704 2001 <i>FQ</i> ₆₅	15.2	X	268.83635	240.89156	18.92269	12.35201	0.1839655	0.18933989	3.0035945	21	1 25.9	20.2
193705 2001 <i>FT</i> ₆₉	15.2	X	275.00873	115.78159	157.71811	11.34562	0.0715775	0.19284616	2.9670763	21	2 24.5	19.6
193706 2001 <i>FB</i> ₇₅	14.6	X	226.57131	248.15662	17.51920	27.25179	0.1599482	0.18462760	3.0544871	21	—	—
193707 2001 <i>FK</i> ₇₉	15.5	X	13.12358	103.09304	96.34286	3.54287	0.0762822	0.19876029	2.9079234	21	4 4.9	19.1
193708 2001 <i>FE</i> ₈₀	15.7	X	177.53727	320.86986	231.20252	9.16050	0.2319970	0.21821878	2.7323813	21	10 17.3	20.5
193709 2001 <i>FG</i> ₈₂	16.1	X	174.77328	257.21462	246.59920	6.21013	0.2491112	0.21394268	2.7686693	21	8 17.0	21.1
193710 2001 <i>FT</i> ₈₂	15.3	X	51.74320	217.09138	314.51529	6.71229	0.0932069	0.19989017	2.8969551	21	4 23.7	19.1
193711 2001 <i>FC</i> ₈₃	14.8	X	266.85107	69.55056	191.01045	11.19782	0.0795196	0.19102608	2.9858932	21	1 27.9	19.4
193712 2001 <i>FO</i> ₈₄	15.6	X	169.15533	29.77688	8.93920	10.01761	0.0486360	0.19889695	2.9065913	21	4 1.2	19.8
193713 2001 <i>FG</i> ₈₇	15.1	X	297.14029	93.30120	148.23182	11.46039	0.0427323	0.19174256	2.9784503	21	2 15.8	19.1
193714 2001 <i>FA</i> ₉₀	16.1	X	180.76485	260.70785	44.26312	2.12247	0.0438463	0.18457288	3.0550908	21	—	—
193715 2001 <i>FP</i> ₉₁	15.6	X	70.79321	230.48800	1.09350	6.53157	0.0711360	0.21107788	2.7936644	21	8 13.3	19.4
193716 2001 <i>FF</i> ₁₀₀	15.1	X	220.78693	264.27042	315.79236	23.83202	0.2697667	0.18049636	3.1009190	21	12 19.9	20.5
193717 2001 <i>FP</i> ₁₀₂	16.0	X	78.80366	146.94675	95.08014	9.04778	0.1722940	0.20983603	2.8046758	21	9 23.5	20.2
193718 2001 <i>FW</i> ₁₀₆	15.8	X	330.03551	88.28861	356.57995	13.94630	0.1576681	0.22992290	2.6388491	21	—	—
193719 2001 <i>FY</i> ₁₀₆	15.9	X	23.06949	53.93501	26.59762	4.63369	0.2515265	0.23767358	2.5811631	21	—	—
193720 2001 <i>FE</i> ₁₀₇	15.8	X	41.19971	218.92534	73.88920	4.33299	0.0412980	0.21520460	2.7578354	21	9 19.5	19.4
193721 2001 <i>FN</i> ₁₀₇	15.5	X	210.89124	144.42914	10.51325	8.85567	0.0342641	0.22033775	2.7148350	21	10 18.3	19.3
193722 2001 <i>FR</i> ₁₁₁	15.5	X	211.63223	79.76042	172.98640	9.98353	0.0725475	0.18284570	3.0742998	21	—	—
193723 2001 <i>FP</i> ₁₁₂	15.8	X	25.38067	83.87039	112.38289	1.76873	0.0814595	0.20032257	2.8927848	21	4 18.7	19.2
193724 2001 <i>FT</i> ₁₁₃	15.7	X	183.97349	81.94032	186.10226	20.80232	0.2679117	0.17784266	3.1316899	21	—	—
193725 2001 <i>FR</i> ₁₁₄	15.7	X	189.30627	127.29986	35.48733	9.96548	0.1021747	0.21778136	2.7360387	21	10 2.2	19.9
193726 2001 <i>FQ</i> ₁₃₉	15.1	X	257.28590	218.95314	21.41389	13.18193	0.0913304	0.18492847	3.0511732	21	—	—
193727 2001 <i>FS</i> ₁₃₉	17.4	X	89.96785	62.29180	179.27571	4.56987	0.1361668	0.30823088	2.1704608	21	10 6.7	20.1
193728 2001 <i>FJ</i> ₁₄₉	15.7	X	159.89495	277.94055	183.63107	14.78713	0.1341464	0.20680379	2.8320248	21	6 14.2	20.5
193729 2001 <i>FZ</i> ₁₅₃	15.3	X	124.89557	266.35180	271.95751	6.74013	0.1892954	0.20922233	2.8101577	21	8 16.2	19.9
193730 2001 <i>FE</i> ₁₅₆	15.8	X	143.49463	177.03892	33.85807	9.60435	0.0968188	0.21822125	2.7323607	21	10 13.4	19.9
193731 2001 <i>FY</i> ₁₆₂	15.7	X	321.18097	264.24375	171.85606	10.23134	0.2303758	0.22816504	2.6523855	21	12 2.2	18.0
193732 2001 <i>FF</i> ₁₆₈	16.0	X	203.16441	239.31363	37.62222	1.12375	0.1730618	0.18284979	3.0742539	21	—	—
193733 2001 <i>FX</i> ₁₆₉	15.6	X	225.45877	127.25204	178.42200	10.54685	0.1453712	0.19114314	2.9846740	21	2 5.7	20.5
193734 2001 <i>FY</i> ₁₇₉	15.7	X	216.86398	60.70870	86.20770	9.83316	0.1467727	0.21825335	2.7320927	21	9 17.3	20.0
193735 2001 <i>FD</i> ₁₈₀	15.5	X	163.08038	85.16786	93.92632	10.63743	0.0771661	0.21634122	2.7481675	21	9 28.2	19.8
193736 Henrythroop	15.9	X	215.62935	302.32556	6.19714	2.82448	0.1279313	0.18980777	2.9986566	21	2 3.5	20.8
193737 2001 <i>FY</i> ₁₈₅	14.8	X	244.17311	239.78980	46.49355	7.50105	0.1584379	0.19195284	2.9762747	21	2 3.6	19.7
193738 2001 <i>FT</i> ₁₈₆	15.3	X	66.69966	315.67516	143.42245	10.59280	0.0411099	0.19380857	2.9572456	21	2 9.3	19.2
193739 2001 <i>FT</i> ₁₈₇	16.3	X	284.51306	146.28566	165.05106	2.31200	0.0753028	0.20072622	2.8889054	21	4 23.5	20.3
193740 2001 <i>FK</i> ₁₈₈	15.5	X	34.84205	342.63524	118.35324	13.69965	0.1701696	0.24097143	2.5575591	21	—	—
193741 2001 <i>HY</i> ₁₉	15.9	X	242.48814	70.60700	180.58609	16.97838	0.1429162	0.18613502	3.0379735	21	—	—
193742 2001 <i>HE</i> ₃₃	15.3	X	239.96115	207.09363	39.79042	10.80455	0.2609405	0.18062857	3.0994056	21	—	—
193743 2001 <i>HG</i> ₅₄	15.1	X	202.93211	197.33432	101.70017	14.44088	0.1611289	0.18196841	3.0841729	21	1 13.2	20.2
193744 2001 <i>HW</i> ₅₆	14.3	X	117.10847	290.79156	45.40732	27.21251	0.2302502	0.17388404	3.1790418	21	—	—
193745 2001 <i>HX</i> ₅₈	14.7	X	148.44421	194.91847	66.81417	21.93882	0.0972926	0.17236818	3.1976529	21	12 8.9	19.7
193746 2001 <i>JB</i> ₃	14.9	X	186.51862	36.91216	192.23861	13.82964	0.1159609					

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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>		
193761	2001	<i>KB</i> ₇₄	15.5	X	219.72515	97.61011	217.38511	9.12938	0.0969404	0.18557388	3.0440947	21	2 11.9	20.4
193762	2001	<i>KO</i> ₇₄	15.1	X	260.60698	338.58266	247.26212	11.01123	0.1269123	0.18093484	3.0959070	21	—	—
193763	2001	<i>LF</i> ₁₂	14.3	X	213.89905	359.17319	269.27315	21.81960	0.0898478	0.17339586	3.1850059	21	—	—
193764	2001	<i>LG</i> ₁₃	17.1	X	353.92853	193.91535	121.30679	6.30399	0.3028093	0.29826870	2.2185247	21	8 31.5	17.3
193765	2001	<i>MQ</i>	14.6	X	157.84599	84.31428	243.98537	26.38267	0.1903994	0.17848964	3.1241176	21	1 4.5	20.0
193766	2001	<i>MW</i> ₁	16.7	X	56.15435	332.54762	274.72771	5.80529	0.1116925	0.29789080	2.2204005	21	8 21.3	19.2
193767	2001	<i>ME</i> ₁₃	16.6	X	1.56031	148.72593	131.59048	8.01917	0.2216269	0.29310702	2.2444946	21	7 4.6	17.8
193768	2001	<i>MW</i> ₁₆	17.2	X	348.21548	247.58327	57.54381	6.30334	0.1922179	0.29529703	2.2333836	21	7 15.2	18.5
193769	2001	<i>MH</i> ₂₃	16.7	X	49.52311	209.02969	98.51643	5.67129	0.2343547	0.30351481	2.1928863	21	11 30.3	19.6
193770	2001	<i>NK</i>	17.1	X	24.57890	40.72265	234.07369	3.80687	0.1495579	0.29720837	2.2237981	21	8 15.2	18.9
193771	2001	<i>NW</i> ₂	14.9	X	249.16002	213.64149	1.36972	6.88954	0.0570547	0.17170241	3.2059134	21	—	—
193772	2001	<i>NK</i> ₄	14.2	X	34.77717	343.61434	114.85963	23.81699	0.0640574	0.17423978	3.1747133	21	1 2.8	18.4
193773	2001	<i>OX</i>	16.6	X	16.35584	189.77951	105.00435	6.14812	0.1499443	0.29801492	2.2197840	21	9 6.2	18.4
193774	2001	<i>OK</i> ₅	16.4	X	319.01589	120.32228	229.59724	6.93988	0.1515063	0.29361953	2.2418820	21	7 24.1	18.5
193775	2001	<i>OL</i> ₅	16.2	X	345.18760	33.92886	249.60713	7.00674	0.1969446	0.29100790	2.2552751	21	5 25.2	17.8
193776	2001	<i>OT</i> ₁₁	16.8	X	68.96877	278.09298	324.86234	7.41335	0.1712564	0.29971321	2.2113906	21	9 13.5	19.4
193777	2001	<i>OG</i> ₁₅	17.1	X	324.03966	238.19981	68.76108	6.59504	0.2103372	0.29178441	2.2512721	21	5 16.1	18.9
193778	2001	<i>OM</i> ₁₆	17.4	X	354.77656	129.53782	175.99062	7.08072	0.1898559	0.29588583	2.2304198	21	7 31.6	18.8
193779	2001	<i>OT</i> ₁₇	16.7	X	326.39738	89.59990	246.12502	4.53232	0.1803537	0.29514934	2.2341286	21	7 13.4	18.4
193780	2001	<i>OX</i> ₂₄	17.1	X	327.27251	157.92880	137.61159	6.33635	0.2151171	0.29067674	2.2569877	21	5 5.4	19.3
193781	2001	<i>OR</i> ₂₅	17.0	X	5.23878	78.14026	230.71107	4.53500	0.1806548	0.29749271	2.2223809	21	9 3.0	18.5
193782	2001	<i>OA</i> ₃₄	17.0	X	286.92630	309.56887	66.66136	6.96375	0.2488012	0.29244159	2.2478981	21	6 22.1	19.7
193783	2001	<i>OT</i> ₃₄	17.2	X	80.77237	229.62237	40.81309	6.00032	0.1642067	0.30377947	2.1916125	21	11 6.2	20.1
193784	2001	<i>OT</i> ₄₀	17.0	X	356.67291	216.13012	65.61144	8.19747	0.1756520	0.29191039	2.2506244	21	6 23.4	18.5
193785	2001	<i>OX</i> ₄₄	16.7	X	141.58533	1.01115	252.16293	5.41214	0.1438783	0.31022529	2.1611484	21	12 14.3	19.7
193786	2001	<i>OP</i> ₄₈	16.8	X	33.66456	9.72083	289.33037	6.91164	0.0927060	0.29865489	2.2166117	21	9 27.9	19.3
193787	2001	<i>OJ</i> ₅₁	17.4	X	16.21016	183.34146	88.72480	3.79609	0.1615091	0.29556346	2.2320413	21	7 27.1	18.8
193788	2001	<i>OZ</i> ₅₃	15.9	X	305.88939	139.74710	123.78941	22.92237	0.2013092	0.28255930	2.3000096	21	2 19.5	19.1
193789	2001	<i>OB</i> ₅₉	17.1	X	220.15874	248.90109	115.28070	3.51642	0.2590367	0.28294977	2.2978931	21	4 4.1	21.1
193790	2001	<i>OL</i> ₇₂	16.2	X	307.35414	353.92233	357.73816	5.05369	0.1761556	0.29041070	2.2583659	21	7 2.3	18.4
193791	2001	<i>OE</i> ₇₃	16.3	X	347.79810	174.28346	140.14642	8.88306	0.1972913	0.29296578	2.2452159	21	7 29.7	17.5
193792	2001	<i>OB</i> ₇₉	17.0	X	317.08928	295.09755	75.29290	4.90790	0.1755619	0.29480412	2.2358724	21	8 26.7	18.6
193793	2001	<i>OR</i> ₇₉	17.6	X	46.89452	240.66548	39.57645	5.80470	0.1752842	0.29983982	2.2107681	21	10 11.2	20.0
193794	2001	<i>OB</i> ₈₇	16.9	X	196.55825	202.52541	135.06738	6.92141	0.2412048	0.27485496	2.3427917	21	2 12.3	20.9
193795	2001	<i>OF</i> ₉₈	16.7	X	285.46564	266.34787	22.44272	5.91972	0.2340081	0.28398160	2.2923236	21	2 26.2	20.1
193796	2001	<i>OB</i> ₁₀₄	17.1	X	319.10165	204.64615	138.05230	5.77023	0.2131966	0.29398275	2.2400351	21	7 3.5	19.0
193797	2001	<i>OO</i> ₁₀₆	16.2	X	314.42583	57.29685	302.14002	6.25933	0.1654882	0.29301936	2.2449422	21	7 30.6	18.0
193798	2001	<i>PF</i> ₈	17.3	X	2.11136	248.93182	46.85044	6.80860	0.2202566	0.29499435	2.2349111	21	8 11.9	18.6
193799	2001	<i>PE</i> ₁₂	17.2	X	270.76822	248.86819	98.07012	7.28663	0.1997733	0.28576679	2.2827668	21	5 2.3	20.5
193800	2001	<i>PM</i> ₁₂	16.6	X	261.51856	345.63281	70.84080	9.89030	0.1482588	0.29168679	2.2517744	21	8 4.8	19.5
193801	2001	<i>PV</i> ₁₃	17.7	X	302.94945	79.14243	274.35293	3.77053	0.1983025	0.29230828	2.2485815	21	6 22.2	19.9
193802	2001	<i>PS</i> ₁₇	17.1	X	311.74830	249.13605	62.03058	7.59110	0.2023989	0.28981441	2.2614626	21	5 3.1	19.5
193803	2001	<i>PF</i> ₁₉	16.6	X	189.93180	46.94269	62.41734	7.10911	0.2064970	0.29454243	2.2371965	21	7 30.8	19.4
193804	2001	<i>PQ</i> ₂₀	16.5	X	294.17362	244.78554	44.51372	7.32002	0.1555046	0.28479076	2.2879794	21	3 18.9	19.5
193805	2001	<i>PA</i> ₂₁	16.8	X	107.79915	103.74494	156.25529	2.25607	0.1342491	0.30526557	2.1844939	21	11 19.5	19.9
193806	2001	<i>PO</i> ₂₁	17.1	X	117.67230	231.45375	46.00610	2.41706	0.1484703	0.30882938	2.1676557	21	12 22.0	20.1
193807	2001	<i>PM</i> ₂₂	16.5	X	179.07009	250.37939	136.82965	9.98811	0.2215559	0.27843618	2.3226598	21	4 2.1	20.4
193808	2001	<i>PK</i> ₂₃	16.9	X	264.91045	259.55666	44.40071	5.33547	0.1793226	0.28243055	2.3007085	21	3 2.9	20.4
193809	2001	<i>PQ</i> ₂₇	16.8	X	52.80926	6.92300	284.88819	4.57731	0.1564493	0.30013078	2.2093390	21	10 29.4	19.5
193810	2001	<i>PA</i> ₃₉	14.9	X	141.34117	246.36560	57.55620	16.51123	0.1591156	0.16537254	3.2872074	21	—	—
193811	2001	<i>PP</i> ₄₂	16.7	X	234.04965	282.89937	74.73423	8.64934	0.1417488	0.28290832	2.2981175	21	4 14.5	20.2
193812	2001	<i>PV</i> ₅₀	17.0	X	271.82380	343.49980	30.24089	4.69872	0.2465459	0.29011186	2.2599165	21	5 30.3	20.1
193813	2001	<i>PM</i> ₅₂	16.5	X	296.99589	263.32228	51.40648	7.87897	0.1288135	0.28682498	2.2771488	21	4 28.8	19.0
193814	2001	<i>PV</i> ₅₇	17.0	X	47.29060	107.05511	169.41275	5.56743	0.1442193	0.29757060	2.2219931	21	9 29.9	19.3
193815	2001	<i>PW</i> ₅₇	17.5	X	276.97707	190.99706	167.51399	4.68203	0.1842293	0.28831255	2.2693093	21	5 25.8	20.6
193816	2001	<i>PM</i> ₆₅	16.3	X	12.32760	298.74324	284.92112	11.13218	0.0600124	0.28289738	2.2981768	21	4 19.6	19.0
193817	2001	<i>PR</i> ₆₅	16.6	X	140.27445	90.87895	322.12361	5.99381	0.0802834	0.27689336	2.3312795	21	3 8.3	19.5
193818	2001	<i>QH</i>	16.5	X	11.04427	356.45187	313.15117	5.59813	0.1774652	0.29677788	2.2259481	21	9 17.4	18.2
193819	2001	<i>QE</i> ₈	16.6	X	24.24579	332.80077	319.71464	8.34383	0.1184289	0.29666545	2.2265104	21	9 7.0	18.7
193820	2001	<i>QV</i> ₉	17.6	X	15.06339	127.37183	167.08042	5.25136	0.1932233	0.29612375	2.2292249	21	9 5.8	19.0
193821	2001	<i>QN</i> ₁₇	17.5	X	302.99207	50.20935	291.24227	2.04143	0.1939331	0.29139750	2.2532645	21	6 3.9	20.0
193822	2001	<i>QD</i> ₂₀	17.0	X	300.46211	194.57939	141.36846	3.98829	0.2749379	0.28930584	2.2641121	21	5 10.6	19.7
193823	2001	<i>QL</i> ₂₆	16.7	X	281.64607	216.67338	118.33212	4.85628	0.2031980	0.28653812	2.2786683	21	4 27.3	19.7
193824	2001	<i>QO</i> ₂₆	16.5	X	259.18219	310.80905	11.43292	6.29439	0.1708238	0.28213733	2.3023023	21	3 19.7	19.8
193825	2001	<i>QT</i> ₂₇	16.3	X	299.46894	357.70821	343.68849	3.48872	0.1801748	0.28732222	2.2745208	21	5 31.3	18.8
193826	2001	<i>QM</i> ₃₂	15.1	X	162.82622	82.14022	294.88360	3.96762	0.1597547	0.17541419	3.1605274	21	3 7.9	20.1
193827	2001	<i>QX</i> ₃₄	17.1	X	310.33104	14.93697	289.60605	2.04608	0.1675762	0.28993380	2.2608417	21	4 24.7	19.7
193828	2001	<i>QC</i> ₃₅	17.3	X	266.39479	32.95291	315.45821	4.29289	0.2889024	0.28716919	2.2753287	21	4 15.	

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
193841	2001	<i>QJ</i> ₆₃	16.3	X	144.34945	179.56322	216.27076	2.07868	0.2040073	0.27300470	2.3533651	21	3 6.9	19.8
193842	2001	<i>QX</i> ₆₇	17.0	X	305.67647	214.07733	180.41595	4.84310	0.1305467	0.29686775	2.2254988	21	9 14.7	18.7
193843	2001	<i>QU</i> ₇₂	16.6	X	261.05212	54.80529	221.40774	22.78023	0.2521082	0.27813900	2.3243140	21	1 12.1	21.1
193844	2001	<i>QR</i> ₈₁	16.5	X	199.11248	144.37915	223.33793	6.94160	0.2510802	0.27627727	2.3347441	21	3 20.1	20.6
193845	2001	<i>QL</i> ₁₀₀	17.3	X	23.75013	249.12561	83.87674	5.26682	0.2013665	0.30249894	2.1977931	21	11 26.1	19.4
193846	2001	<i>QZ</i> ₁₀₃	16.2	X	310.15295	141.20752	249.09427	7.41259	0.3412930	0.29629596	2.2283611	21	8 4.9	17.7
193847	2001	<i>QG</i> ₁₀₉	16.7	X	322.52469	299.57778	49.58881	7.27680	0.1783327	0.29543803	2.2326730	21	8 1.9	18.5
193848	2001	<i>QK</i> ₁₀₉	17.4	X	353.28906	300.80153	39.80165	8.35875	0.1792530	0.29647432	2.2274672	21	10 5.9	18.9
193849	2001	<i>QJ</i> ₁₁₁	17.1	X	185.45044	23.36195	6.69124	1.37520	0.2494600	0.27849127	2.3223535	21	4 7.9	20.9
193850	2001	<i>QT</i> ₁₁₂	16.5	X	237.21973	139.37758	225.61819	7.82784	0.1503208	0.28273502	2.2990565	21	4 22.2	19.9
193851	2001	<i>QM</i> ₁₁₄	16.7	X	321.64623	71.96722	236.02384	4.43962	0.1459283	0.28932999	2.2639861	21	5 24.6	18.9
193852	2001	<i>QS</i> ₁₁₄	17.0	X	256.95934	129.06179	205.63559	7.44736	0.1473180	0.28297827	2.2977388	21	4 3.0	20.4
193853	2001	<i>QY</i> ₁₁₅	16.5	X	270.69088	66.04501	284.48731	5.16686	0.1618682	0.28602563	2.2813899	21	5 7.2	19.5
193854	2001	<i>QH</i> ₁₁₇	16.3	X	263.74879	7.06671	308.01692	6.37435	0.1347358	0.28025115	2.3126209	21	3 14.8	19.8
193855	2001	<i>QZ</i> ₁₂₀	17.0	X	308.82987	323.01126	347.21351	5.95870	0.1271671	0.28956526	2.2627596	21	5 6.5	19.5
193856	2001	<i>QX</i> ₁₂₃	17.0	X	229.99913	303.74523	43.95614	3.65226	0.2431937	0.28120459	2.3073906	21	3 22.6	20.9
193857	2001	<i>QY</i> ₁₂₅	17.5	X	229.94111	293.71069	70.81132	2.89639	0.2388683	0.28204949	2.3027803	21	4 12.2	21.3
193858	2001	<i>QD</i> ₁₂₇	17.0	X	299.49736	63.03448	249.13777	5.50238	0.2074871	0.28807639	2.2705493	21	4 12.6	19.9
193859	2001	<i>QZ</i> ₁₂₈	16.6	X	241.94616	201.12793	212.58437	5.71624	0.1587731	0.29053085	2.2577432	21	7 1.8	19.8
193860	2001	<i>QT</i> ₁₃₃	16.7	X	264.71359	120.50446	242.07496	5.60187	0.2290363	0.28681849	2.2771831	21	5 10.1	20.0
193861	2001	<i>QD</i> ₁₃₇	15.7	X	97.18670	217.94868	221.66092	10.74115	0.1702751	0.26890508	2.3772237	21	2 26.4	18.6
193862	2001	<i>QK</i> ₁₄₁	14.7	X	303.21629	317.44078	261.06874	15.43368	0.1786870	0.17708326	3.1406368	21	1 8.6	19.3
193863	2001	<i>QY</i> ₁₄₁	16.3	X	257.11681	178.43301	160.94253	11.10018	0.0891751	0.28226919	2.3015853	21	4 19.7	19.5
193864	2001	<i>QA</i> ₁₄₂	16.2	X	256.62181	293.93598	40.32485	5.05950	0.2044336	0.28066685	2.3103369	21	3 30.8	19.7
193865	2001	<i>QS</i> ₁₄₂	17.1	X	232.06899	145.50050	201.70841	6.53393	0.1397380	0.28101837	2.3084098	21	3 25.2	20.6
193866	2001	<i>QC</i> ₁₄₃	17.1	X	193.73806	220.06693	184.07599	2.39136	0.1598641	0.28156773	2.3054062	21	5 1.9	20.6
193867	2001	<i>QO</i> ₁₄₅	17.4	X	131.89400	290.27917	174.64128	4.11206	0.1830756	0.27960541	2.3161802	21	5 22.8	20.8
193868	2001	<i>QC</i> ₁₄₉	17.1	X	308.94457	341.79166	343.49674	5.91868	0.1255584	0.29093617	2.2556458	21	5 13.8	19.7
193869	2001	<i>QD</i> ₁₅₃	16.9	X	222.91577	92.32029	305.61611	3.26123	0.1634900	0.28401278	2.2921558	21	5 20.5	20.4
193870	2001	<i>QF</i> ₁₅₄	17.2	X	298.00083	201.36187	81.76011	4.98904	0.2648049	0.28365187	2.2940997	21	3 2.2	20.4
193871	2001	<i>QA</i> ₁₅₆	16.9	X	216.08886	98.89600	302.36165	4.14710	0.0892244	0.28581912	2.2824881	21	5 21.3	20.1
193872	2001	<i>QO</i> ₁₅₆	17.0	X	214.94078	180.69167	191.38833	5.67221	0.1853733	0.28146339	2.3059760	21	4 9.8	20.6
193873	2001	<i>QY</i> ₁₅₇	16.9	X	100.04038	59.37955	189.15361	1.84537	0.1724308	0.30241355	2.1982068	21	10 29.6	20.1
193874	2001	<i>QA</i> ₁₆₁	17.1	X	283.20019	60.15742	339.01310	1.94016	0.1509287	0.29428089	2.2385219	21	8 8.5	19.3
193875	2001	<i>QW</i> ₁₆₁	17.0	X	219.29778	347.45985	31.78417	3.50516	0.1794355	0.28289323	2.2981993	21	4 22.6	20.6
193876	2001	<i>QV</i> ₁₆₆	17.1	X	242.75761	340.26546	24.02637	6.74082	0.1714602	0.28505548	2.2865627	21	4 25.2	20.6
193877	2001	<i>QF</i> ₁₇₄	16.4	X	309.65279	328.73961	338.28570	6.02578	0.1314236	0.28494954	2.2871295	21	5 2.4	19.1
193878	2001	<i>QT</i> ₁₇₈	16.6	X	265.22648	214.55048	163.37040	3.08646	0.2520463	0.28602763	2.2813788	21	5 29.8	19.9
193879	2001	<i>QQ</i> ₁₇₉	17.4	X	304.82185	356.00180	10.31676	3.01495	0.2406596	0.29253800	2.2474042	21	7 8.8	19.4
193880	2001	<i>QE</i> ₁₈₀	16.8	X	223.63057	280.04802	80.56174	3.35519	0.2314053	0.28040928	2.3117514	21	4 3.1	20.7
193881	2001	<i>QT</i> ₁₈₀	16.9	X	252.05547	307.51810	52.31125	10.40201	0.2251566	0.28520619	2.2857571	21	4 26.6	20.4
193882	2001	<i>QW</i> ₁₈₂	16.3	X	208.01855	62.47494	352.29004	22.56575	0.1887281	0.28535922	2.2849399	21	5 19.7	20.5
193883	2001	<i>QC</i> ₁₈₃	16.4	X	246.25443	219.56623	140.05637	11.27173	0.2598884	0.28205613	2.3027441	21	4 21.6	20.4
193884	2001	<i>QZ</i> ₁₈₆	16.5	X	307.71842	320.58369	30.22721	3.19682	0.1822249	0.28994604	2.2607780	21	6 30.0	18.6
193885	2001	<i>QN</i> ₂₀₁	17.2	X	266.62732	14.64843	302.03592	3.53750	0.1781839	0.28209017	2.3025589	21	3 16.8	20.8
193886	2001	<i>QO</i> ₂₀₂	17.2	X	9.89716	304.68222	73.63500	2.55198	0.1024740	0.30550542	2.1833504	21	12 23.5	19.2
193887	2001	<i>QO</i> ₂₀₃	15.4	X	0.74149	18.09624	281.67532	8.30266	0.0481422	0.19609980	2.9341655	21	7 27.5	19.2
193888	2001	<i>QL</i> ₂₀₆	17.5	X	282.77922	209.36468	143.52033	3.95604	0.1516277	0.28893110	2.2660693	21	5 30.2	20.2
193889	2001	<i>QW</i> ₂₀₈	17.3	X	352.08401	336.38848	350.84386	2.79506	0.1405731	0.29636674	2.2280063	21	9 3.4	18.6
193890	2001	<i>QK</i> ₂₁₅	16.8	X	246.76029	207.91861	149.22091	3.90239	0.1852532	0.28357056	2.2945382	21	4 21.1	20.2
193891	2001	<i>QM</i> ₂₁₅	17.2	X	40.37868	124.57327	153.15316	3.32843	0.1485905	0.29611955	2.2292460	21	9 21.3	19.4
193892	2001	<i>QZ</i> ₂₁₅	16.9	X	172.14104	357.46982	27.79147	2.43639	0.2103796	0.27562372	2.3384333	21	3 21.4	20.6
193893	2001	<i>QF</i> ₂₁₈	16.7	X	196.74911	221.63142	150.19313	7.81496	0.1462163	0.27859133	2.3217974	21	3 25.4	20.3
193894	2001	<i>QH</i> ₂₂₅	16.9	X	224.24037	63.32439	338.81578	5.75629	0.1477632	0.28485222	2.2876503	21	5 27.9	20.3
193895	2001	<i>QJ</i> ₂₂₆	16.4	X	238.83554	120.46895	265.42226	4.66143	0.1710776	0.28508134	2.2864244	21	5 20.3	19.8
193896	2001	<i>QX</i> ₂₂₉	16.4	X	216.81533	160.32218	284.94663	5.13180	0.1206735	0.28956821	2.2627442	21	7 21.1	19.5
193897	2001	<i>QF</i> ₂₃₀	15.2	X	170.49538	82.77576	290.43917	8.37681	0.2423722	0.17614417	3.1517894	21	3 11.4	20.8
193898	2001	<i>QK</i> ₂₃₀	16.6	X	271.87430	123.87332	203.59291	6.98158	0.1590670	0.28462347	2.2888759	21	4 8.9	19.6
193899	2001	<i>QY</i> ₂₃₀	14.9	X	35.36938	153.90309	178.40647	17.46928	0.1040050	0.15296624	3.4626265	21	11 1.1	19.7
193900	2001	<i>QE</i> ₂₃₄	17.1	X	188.94588	189.21987	167.80586	5.84879	0.1751453	0.27522880	2.3406697	21	2 26.3	20.6
193901	2001	<i>QZ</i> ₂₃₇	16.5	X	170.06648	70.85597	344.44029	8.18836	0.1997580	0.27807527	2.3246690	21	4 21.9	20.3
193902	2001	<i>QJ</i> ₂₄₂	16.5	X	161.11094	209.96668	171.09340	5.35025	0.2424500	0.27290077	2.3539625	21	3 8.2	20.1
193903	2001	<i>QC</i> ₂₄₅	17.2	X	264.05276	163.25548	167.90138	6.69960	0.2132594	0.28268339	2.2993364	21	4 1.6	20.7
193904	2001	<i>QB</i> ₂₄₇	15.9	X	163.07531	24.79648	13.74399	11.65750	0.1600286	0.27437349	2.3455316	21	3 26.9	19.5
193905	2001	<i>QN</i> ₂₄₇	16.8	X	188.91642	287.57888	112.25093	2.73619	0.2233582	0.27755761	2.3275586	21	4 23.8	20.7
193906	2001	<i>QP</i> ₂₄₇	16.7	X	206.67160	322.01576	33.31329	3.12475	0.2542407	0.27620241	2.3351659	21	3 14.1	20.8
193907	2001	<i>QT</i> ₂₄₇	17.2	X	275.55675	239.11246	111.20443	2.11997	0.2297661	0.28528263	2.2853488			

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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>
193921 2001 QE ₂₈₇	16.3	X	210.99630	86.02768	300.03251	3.86121	0.1453404	0.28194206	2.3033652	21	4 22.7	19.9
193922 2001 QC ₂₈₈	16.8	X	181.81800	99.90809	297.74576	6.04004	0.1087006	0.27980139	2.3150985	21	4 6.0	20.2
193923 2001 QY ₂₉₁	16.6	X	291.86246	44.08678	300.02005	1.50829	0.2167756	0.28699554	2.2762465	21	5 18.2	19.2
193924 2001 QR ₂₉₃	17.4	X	355.43563	255.68180	15.96648	2.87869	0.2235679	0.28848986	2.2683793	21	5 27.6	18.5
193925 2001 QC ₃₃₀	16.8	X	270.06412	355.01842	44.75524	5.08918	0.2143147	0.29097326	2.2554541	21	7 10.2	19.7
193926 2001 RW ₂	17.1	X	348.35102	118.92830	212.09021	3.13157	0.0790491	0.29423309	2.2387643	21	8 28.6	19.2
193927 2001 RQ ₅	17.1	X	330.88592	36.75273	245.56123	2.10033	0.2076607	0.28790001	2.2714766	21	4 19.2	19.1
193928 2001 RJ ₁₅	16.9	X	261.79360	76.46863	240.24017	8.56366	0.2306033	0.28161058	2.3051723	21	3 5.6	20.9
193929 2001 RF ₂₁	17.2	X	276.25085	36.49408	359.18889	3.91581	0.1590155	0.29239915	2.2481156	21	7 22.4	19.8
193930 2001 RF ₂₂	17.4	X	168.94076	204.48922	171.62390	1.25011	0.1968870	0.27505888	2.3416336	21	3 5.6	21.1
193931 2001 RM ₂₅	16.6	X	220.68402	112.76403	325.26582	4.00157	0.0328249	0.29131302	2.2537001	21	7 25.5	19.1
193932 2001 RO ₂₅	16.8	X	164.33224	227.57079	161.73562	6.30852	0.1264875	0.27615915	2.3354098	21	3 12.7	20.1
193933 2001 RR ₂₅	17.0	X	298.73124	316.78250	0.64367	3.58827	0.1434605	0.28723325	2.2749904	21	4 30.5	19.6
193934 2001 RF ₂₇	16.8	X	309.69313	91.57013	165.21674	6.20392	0.1601362	0.28257757	2.2999105	21	2 17.8	19.6
193935 2001 RX ₂₇	17.9	X	311.78415	138.32530	191.24160	1.06718	0.2394069	0.29091829	2.2557382	21	5 23.4	20.2
193936 2001 RG ₂₈	17.3	X	309.93057	121.47991	177.29777	4.37716	0.0878414	0.28654018	2.2786574	21	5 2.0	19.8
193937 2001 RT ₂₈	17.7	X	233.48745	53.81336	344.80460	2.47365	0.1822380	0.28648412	2.2789546	21	5 30.9	21.1
193938 2001 RU ₃₀	17.2	X	189.99433	55.45886	335.51042	2.51500	0.1747866	0.28010442	2.3134285	21	4 10.1	20.8
193939 2001 RL ₃₂	17.0	X	241.91120	133.15922	180.60020	6.53927	0.1257516	0.27981135	2.3150436	21	2 20.6	20.5
193940 2001 RC ₃₄	17.8	X	8.64559	77.59538	228.15507	3.92101	0.2044874	0.29650160	2.2273306	21	9 9.8	19.3
193941 2001 RV ₃₄	16.8	X	235.87767	124.23576	290.67104	5.63850	0.1333287	0.28960935	2.2625299	21	6 30.1	19.9
193942 2001 RQ ₃₆	16.8	X	208.02824	153.35813	274.92422	2.80251	0.2142238	0.28521286	2.2857215	21	6 14.1	20.6
193943 2001 RV ₃₇	14.6	X	263.21095	305.23246	279.15827	4.83327	0.1334937	0.17179503	3.2047610	21	—	—
193944 2001 RY ₃₈	17.0	X	15.50961	81.92338	190.79690	6.06978	0.1497256	0.29290121	2.2454549	21	7 22.4	18.9
193945 2001 RT ₄₂	17.4	X	243.37846	88.96053	335.43110	6.04351	0.0555526	0.29119561	2.2543058	21	8 3.8	20.2
193946 2001 RH ₄₃	17.5	X	293.91436	63.22389	289.32344	6.10872	0.2309191	0.29014931	2.2597220	21	5 30.7	20.2
193947 2001 RA ₄₆	16.8	X	189.66386	262.92794	129.47812	3.06410	0.1726986	0.27900642	2.3194940	21	4 14.1	20.5
193948 2001 RQ ₄₇	16.1	X	335.60178	246.13654	10.62279	22.68515	0.2912506	0.28580279	2.2825751	21	3 13.1	18.6
193949 2001 RM ₅₂	16.8	X	32.64753	138.85329	133.96657	5.14869	0.0908655	0.29454745	2.2371711	21	8 22.3	19.0
193950 2001 RP ₅₆	17.4	X	3.96387	277.62430	357.16893	4.84760	0.1895745	0.29144992	2.2529943	21	7 1.5	18.8
193951 2001 RK ₅₈	15.2	X	239.49724	189.51825	75.51055	4.05906	0.1403400	0.17184440	3.2041472	21	1 7.8	20.2
193952 2001 RH ₆₂	17.2	X	267.34337	281.65872	126.16114	4.46203	0.1463515	0.29117848	2.2543942	21	7 28.4	19.7
193953 2001 RP ₆₄	16.4	X	139.99591	216.41806	249.87971	5.71415	0.1557533	0.28039792	2.3118138	21	5 29.6	19.6
193954 2001 RW ₆₅	16.9	X	164.41565	51.42521	301.46499	4.90595	0.1706168	0.27056022	2.3675187	21	1 29.4	20.3
193955 2001 RC ₆₈	16.8	X	7.95460	75.30047	223.50608	5.47968	0.2047187	0.29317049	2.2441707	21	8 24.8	18.3
193956 2001 RU ₆₈	16.4	X	4.79067	79.47187	232.96332	6.80946	0.1857114	0.29384199	2.2407504	21	9 6.9	18.1
193957 2001 RX ₇₂	16.6	X	242.51685	359.55762	353.40730	7.52059	0.1384823	0.28048817	2.3113179	21	4 11.3	20.0
193958 2001 RH ₇₄	16.6	X	232.70748	81.66744	205.78078	5.70235	0.2375075	0.27307694	2.3529500	21	1 9.9	20.7
193959 2001 RL ₈₀	17.1	X	254.12724	21.84611	298.78543	4.05420	0.1317020	0.28075672	2.3098438	21	3 12.9	20.5
193960 2001 RG ₈₁	16.5	X	175.18526	166.03991	221.27631	3.76502	0.1638343	0.27550453	2.3391077	21	3 22.2	20.1
193961 2001 RE ₈₃	16.6	X	191.01674	115.92303	315.01883	5.94252	0.1371136	0.28416460	2.2913393	21	6 2.3	20.1
193962 2001 RK ₈₆	17.4	X	321.79102	109.92694	223.10625	1.26320	0.2125743	0.29102616	2.2551808	21	6 23.1	19.2
193963 2001 RM ₈₈	17.0	X	270.57266	309.02182	30.23738	5.71568	0.1604362	0.28425991	2.2908271	21	4 23.3	20.2
193964 2001 RD ₉₀	17.6	X	283.12905	294.18327	64.57760	2.71345	0.2494282	0.28815992	2.2701105	21	5 23.2	20.6
193965 2001 RE ₉₀	17.3	X	280.97790	309.02616	32.09842	5.93477	0.1761895	0.28614867	2.2807354	21	5 5.7	20.4
193966 2001 RA ₉₂	16.9	X	43.22411	277.87891	21.42738	2.63312	0.1465172	0.29842684	2.2177409	21	10 26.5	19.2
193967 2001 RC ₉₃	16.9	X	227.93579	24.95607	33.07783	5.30555	0.1454765	0.28611125	2.2809342	21	6 24.0	20.3
193968 2001 RV ₉₃	16.7	X	284.27752	292.02107	44.66352	3.66757	0.1578520	0.28555856	2.2838764	21	5 7.1	19.3
193969 2001 RY ₉₄	16.2	X	204.94532	43.19129	333.54816	6.36382	0.1202599	0.27883185	2.3204620	21	4 4.0	19.8
193970 2001 RW ₉₈	17.2	X	296.63011	195.82378	162.79470	6.53706	0.1767319	0.29165000	2.2519638	21	6 23.5	19.8
193971 2001 RW ₉₉	17.2	X	261.91583	233.52020	99.35536	3.08930	0.1851057	0.28419635	2.2911686	21	4 4.6	20.6
193972 2001 RD ₁₀₂	17.1	X	290.00478	153.09274	164.88970	4.40018	0.0944283	0.28632887	2.2797784	21	4 29.7	19.8
193973 2001 RA ₁₀₃	17.7	X	256.82490	345.61707	336.63728	1.69365	0.2159894	0.28253885	2.3001206	21	3 12.9	21.3
193974 2001 RW ₁₀₄	17.2	X	179.73111	77.09361	351.46604	7.12711	0.1123821	0.28360523	2.2943512	21	5 16.1	20.6
193975 2001 RQ ₁₀₆	17.8	X	294.37868	262.67138	42.94963	3.98316	0.2191903	0.28565303	2.2833728	21	3 30.2	20.7
193976 2001 RV ₁₁₆	16.7	X	238.33359	63.04094	12.52952	4.94994	0.1170489	0.29138994	2.2533034	21	8 5.2	19.6
193977 2001 RG ₁₂₀	16.6	X	11.16020	139.83605	128.75286	6.82530	0.0928731	0.28989649	2.2610356	21	7 3.4	18.7
193978 2001 RD ₁₂₁	17.3	X	264.19743	275.72410	45.00057	2.92058	0.1991945	0.28252641	2.3001881	21	3 20.6	20.7
193979 2001 RK ₁₂₄	17.1	X	283.08808	272.58020	28.12195	2.09327	0.2229868	0.28328528	2.2960784	21	3 10.6	20.3
193980 2001 RL ₁₂₅	16.7	X	199.33122	349.11827	143.21179	6.09891	0.0590437	0.29473101	2.2362421	21	9 11.6	19.6
193981 2001 RB ₁₂₆	17.1	X	252.23830	316.68670	72.33840	3.24034	0.1717811	0.28736008	2.2743210	21	6 8.4	20.2
193982 2001 RK ₁₂₆	17.3	X	26.02135	159.85226	135.76400	5.92955	0.2354943	0.29723695	2.2236556	21	10 12.3	19.3
193983 2001 RE ₁₂₇	17.2	X	299.45750	253.65585	113.85598	4.14621	0.1276666	0.29172610	2.2515721	21	7 21.5	19.4
193984 2001 RU ₁₃₀	16.9	X	25.61250	222.33883	21.37014	4.51786	0.1869756	0.28947454	2.2623232	21	7 1.9	18.5
193985 2001 RQ ₁₃₂	15.4	X	169.37415	277.66811	85.55089	4.77274	0.1575845	0.17423424	3.1747805	21	3 1.5	20.5
193986 2001 RC ₁₃₄	16.2	X	158.54915	342.97290	156.21211	8.15446	0.1118265	0.28884540	2.2665175	21	7 30.3	19.5
193987 2001 RZ ₁₃₅	16.9	X	216.58352	10.83277	35.47754	5.38335	0.1293297	0.28406639	2.2918674	21	5 27.0	20.1
193988 2001 RC ₁₃₇	16.6	X	248.60079	250.83613	128.24440	5.79083	0.1531376	0.28529284	2.2852943	21	5 25.2	20.0
193989 2001 RC ₁₄₁	17.0	X	273.32076	289.28686	46.82150	5.80118	0.1983334	0.28456369	2.2891964	21	4 18.8	20.1
193990 2001 RQ ₁₄₇	16.8	X	292.52867	301.40136	29.26850	11.96295	0.1951897	0.28800326	2.2709337	21	5 1.9	19.7
193991 2001 RA ₁₄₉	16.5	X	204.04316	330.93344	34.01731	10.30255	0.1233961	0.27975603	2.3153487	21	3 24.9	20.0
193992 2001 RJ ₁₄₉	16.6	X	94.91687	216.24529	255.17532	5.23674	0.1179381	0.27496383	2.3421732	21	4 1.5	19.4
193993 2001 RX ₁₅₀	16.5	X	216.29206	318.90513	106.69485	6.44337	0.0716841	0.28667				

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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>		
194001	2001	RV ₁₅₅	17.4	X	111.17762	165.74105	298.91352	1.201915	0.0776650	0.27774120	2.3265328	21	4 10.4	20.2
194002	2001	SG ₁	17.3	X	170.83618	100.39784	308.12146	1.83405	0.1760099	0.27706116	2.3303382	21	4 15.1	21.0
194003	2001	SP ₂	16.7	X	269.16532	88.85819	187.67855	5.40753	0.2510403	0.27752235	2.3277557	21	1 23.5	20.7
194004	2001	SB ₅	16.2	X	275.04910	303.43153	354.56992	7.38278	0.2454860	0.28010984	2.3133986	21	2 26.4	19.7
194005	2001	SH ₅	16.6	X	98.97290	296.97805	173.93974	22.69105	0.1783504	0.27566474	2.3382013	21	4 23.3	19.7
194006	2001	SG ₁₀	20.3	X	156.53135	101.61691	184.96504	4.25727	0.4243106	0.56533841	1.4485396	21	—	—
194007	2001	SX ₁₂	16.6	X	310.27642	293.25463	359.74770	5.75123	0.1633890	0.28550971	2.2841369	21	4 8.6	19.1
194008	2001	SE ₁₇	17.5	X	223.61963	330.58057	10.35750	4.57608	0.1740803	0.27816194	2.3241862	21	3 10.4	21.1
194009	2001	SE ₁₈	17.4	X	234.86690	272.50994	88.74203	1.98149	0.2244471	0.28165663	2.3049211	21	4 12.6	21.2
194010	2001	SC ₁₉	15.6	X	155.30471	258.91658	108.89356	2.64091	0.1791547	0.17215696	3.2002679	21	2 22.8	20.8
194011	2001	SX ₂₀	16.7	X	288.71456	268.67468	58.18229	3.26434	0.2552471	0.28571155	2.2830610	21	4 16.1	19.7
194012	2001	SX ₂₅	16.9	X	139.92869	51.08789	24.34272	3.19584	0.1588227	0.27608021	2.3358549	21	4 18.4	20.1
194013	2001	SO ₂₇	17.5	X	271.63449	326.78782	26.66380	2.67597	0.1757058	0.28564377	2.2834222	21	5 11.8	20.6
194014	2001	SS ₂₈	16.9	X	241.89629	22.20919	19.14054	6.79245	0.0904814	0.28661534	2.2782590	21	6 22.9	20.0
194015	2001	SK ₂₉	17.4	X	291.82543	144.97412	178.96106	3.50446	0.2053579	0.28572416	2.2829939	21	4 22.7	20.3
194016	2001	SR ₃₀	16.4	X	234.90283	19.25132	20.96151	4.75964	0.1774224	0.28495771	2.2870857	21	6 3.7	19.9
194017	2001	SF ₃₃	17.3	X	306.75563	153.10108	172.32686	3.15200	0.1432182	0.28710714	2.2755666	21	5 27.0	19.6
194018	2001	SD ₃₄	17.5	X	238.69310	144.36759	180.03735	6.37425	0.1804172	0.27778408	2.3262934	21	3 1.2	21.2
194019	2001	SQ ₃₄	17.0	X	207.31588	21.71758	20.92355	5.54704	0.1599801	0.28133430	2.3066813	21	5 11.3	20.6
194020	2001	SF ₃₆	17.5	X	164.45933	255.05593	130.95687	2.25412	0.1914246	0.27338524	2.3511807	21	3 14.5	21.1
194021	2001	SG ₃₆	16.9	X	4.13514	190.56666	108.87746	1.37074	0.2374913	0.29312274	2.2444144	21	8 23.7	17.9
194022	2001	SC ₃₈	15.6	X	50.74984	197.23358	173.28084	9.73892	0.1242589	0.20584504	2.8408117	21	—	—
194023	2001	SW ₃₉	16.7	X	213.78357	205.02485	160.85377	7.67752	0.1299116	0.27810986	2.3244763	21	4 3.4	20.2
194024	2001	SJ ₄₀	16.6	X	302.37147	246.68810	36.20114	10.07852	0.1342078	0.28051856	2.3111509	21	3 24.9	19.5
194025	2001	SN ₅₀	17.4	X	255.73125	319.48239	56.45561	6.61475	0.1799238	0.28512966	2.2861661	21	5 24.2	20.7
194026	2001	SG ₅₁	17.4	X	227.33777	318.12885	38.73398	3.59877	0.1837303	0.27997837	2.3141228	21	4 2.3	21.0
194027	2001	SH ₅₈	16.6	X	234.88511	178.30527	190.03581	3.23170	0.1503078	0.28138683	2.3063942	21	4 25.6	20.1
194028	2001	SQ ₆₂	17.0	X	208.17365	211.91717	178.82677	0.95870	0.2439332	0.27896440	2.3197269	21	4 26.8	20.7
194029	2001	SK ₆₄	17.3	X	252.66554	182.08575	166.54341	3.46051	0.2616742	0.28180606	2.3041062	21	4 9.5	21.0
194030	2001	SN ₇₀	16.6	X	170.30471	301.25964	81.76444	8.40886	0.1936610	0.27164583	2.3612068	21	3 20.3	20.4
194031	2001	SQ ₇₅	16.9	X	268.49181	48.32691	280.13233	4.09934	0.1475111	0.28186705	2.3037738	21	4 5.9	20.3
194032	2001	SV ₇₇	16.3	X	341.55583	48.90492	175.59820	24.03622	0.2094756	0.28064858	2.3104371	21	2 8.6	19.2
194033	2001	SD ₇₈	16.9	X	150.23976	90.94712	3.25126	6.48524	0.1166545	0.28161338	2.3051571	21	5 19.0	20.2
194034	2001	SU ₇₈	16.9	X	229.28202	268.86730	176.68124	7.07693	0.1139616	0.29080204	2.2563393	21	8 4.8	19.9
194035	2001	SI ₈₁	16.6	X	118.48297	34.85562	182.60215	7.25415	0.0667796	0.29865160	2.2166280	21	9 29.3	19.4
194036	2001	SA ₈₄	16.8	X	60.07818	106.65893	199.10610	4.29042	0.0901988	0.30218392	2.1993203	21	11 20.5	19.5
194037	2001	SW ₈₄	17.3	X	337.33462	75.61688	206.33037	3.28397	0.1482168	0.28846521	2.2685086	21	5 13.1	19.3
194038	2001	SV ₈₇	15.1	X	34.72334	188.98867	174.24403	10.13098	0.1240008	0.15585491	3.4197082	21	12 8.6	19.8
194039	2001	SF ₈₈	16.3	X	202.20062	288.12506	181.37393	6.84726	0.0681358	0.29223987	2.2489324	21	8 9.6	19.3
194040	2001	SI ₉₁	16.3	X	247.29416	172.71993	315.67881	3.25177	0.1145917	0.30025996	2.2087053	21	10 30.1	18.9
194041	2001	SZ ₉₃	16.8	X	241.75393	343.34297	334.46332	3.89978	0.1116669	0.27827421	2.3235610	21	2 27.6	20.0
194042	2001	SL ₉₅	17.3	X	316.25923	90.90925	194.79149	2.93035	0.1630017	0.28541299	2.2846529	21	4 8.5	19.6
194043	2001	SI ₉₈	17.2	X	87.21017	38.16589	273.67527	1.61721	0.1966810	0.25674628	2.4516960	21	12 30.7	21.1
194044	2001	SV ₉₈	16.9	X	191.94236	305.05529	192.05404	4.84208	0.1129763	0.29318821	2.2440803	21	9 2.5	20.2
194045	2001	SV ₉₉	17.1	X	19.29329	2.14331	195.20836	6.27562	0.0407765	0.27925418	2.3181219	21	3 29.1	19.5
194046	2001	SB ₁₀₀	17.3	X	308.28293	41.42388	215.17070	3.67694	0.2004388	0.28057198	2.3108576	21	2 9.6	20.4
194047	2001	ST ₁₀₀	17.6	X	137.19822	152.56219	279.16269	2.14670	0.2122705	0.27515019	2.3411155	21	4 15.4	21.2
194048	2001	SK ₁₀₂	18.2	X	243.44118	113.12297	257.38709	1.21889	0.1869433	0.28382983	2.2931406	21	5 3.4	21.7
194049	2001	SD ₁₀₅	16.3	X	115.25814	151.04092	276.03709	5.02734	0.1024812	0.27151507	2.3619648	21	2 25.8	19.2
194050	2001	SF ₁₀₅	17.2	X	256.10789	97.62973	271.51927	2.91974	0.2269908	0.28466626	2.2886465	21	5 10.2	20.6
194051	2001	SV ₁₀₆	16.4	X	294.89905	25.55732	316.96520	5.37364	0.1928351	0.28620686	2.2804262	21	5 23.2	19.2
194052	2001	SI ₁₀₆	16.4	X	166.69623	113.71387	330.24629	6.11320	0.0809087	0.28095648	2.3087488	21	5 21.8	19.7
194053	2001	SX ₁₁₆	16.9	X	239.82473	80.52308	262.12363	4.92722	0.1344514	0.28146379	2.3059738	21	3 25.7	20.5
194054	2001	SK ₁₁₇	16.9	X	342.67181	346.07869	265.33626	4.37851	0.1510941	0.28463733	2.2888016	21	4 1.4	19.2
194055	2001	SS ₁₁₈	17.3	X	232.57609	57.28759	335.45005	8.38745	0.1079761	0.28551900	2.2840873	21	5 26.4	20.6
194056	2001	SW ₁₂₁	16.7	X	209.52055	144.54233	292.51249	4.77746	0.0617763	0.28794941	2.2712168	21	7 5.7	19.4
194057	2001	SX ₁₂₂	16.6	X	249.81098	125.83953	301.02609	5.65540	0.0845818	0.29318946	2.2440738	21	8 9.9	19.3
194058	2001	SA ₁₂₃	17.1	X	281.19830	53.36553	290.32800	3.81809	0.1355215	0.28756136	2.2732596	21	5 15.3	20.1
194059	2001	SY ₁₂₃	17.4	X	332.86875	13.73175	293.26932	3.45969	0.1423689	0.29046796	2.2580691	21	6 14.7	19.4
194060	2001	SQ ₁₂₅	16.7	X	217.92498	3.32580	329.85150	6.45351	0.1111945	0.27688762	2.3313118	21	2 22.7	20.2
194061	2001	SS ₁₂₅	17.2	X	14.72628	97.17263	190.67107	5.58504	0.2111038	0.29456155	2.2370997	21	8 25.0	18.6
194062	2001	SI ₁₂₆	16.8	X	197.73069	192.43113	339.75655	4.45230	0.0921205	0.30080637	2.2060298	21	10 29.2	19.7
194063	2001	SL ₁₂₈	17.1	X	168.19806	211.35514	201.09403	3.70976	0.2074057	0.27837516	2.3229992	21	4 20.5	20.7
194064	2001	SG ₁₂₉	17.2	X	306.55659	138.03918	204.93590	4.94703	0.2120841	0.29006611	2.2601541	21	6 9.7	19.5
194065	2001	SX ₁₂₉	17.0	X	312.94182	104.54039	193.94808	6.57735	0.1628895	0.28594292	2.2818293	21	4 23.0	19.5
194066	2001	SE ₁₃₀	16.9	X	121.03507	200.88934	338.23254	3.72081	0.0423524	0.29041494	2.2583439	21	8 6.1	19.5
194067	2001	SQ ₁₃₉	14.6	X	52.59237	320.42708	4.76066	9.64395	0.0686172	0.15168719	3.4820642	21	11 4.1	19.5
194068	2001	SB ₁₄₀	17.4	X	262.75050	131.09322	189.77314	5.18153	0.1807578	0.28109736	2.3079773	21	3 19.4	20.7
194069	2001	SP ₁₄₁	17.3	X	161.77394	187.75582	250.33301	1.85303	0.1508460	0.28043174	2.3116280	21	5 14.1	20.8

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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>
194081 2001 <i>SM</i> ₁₅₆	16.9	X	142.91488	104.83904	288.34224	3.60507	0.2390115	0.27157271	2.3616306	21	3 5.1	20.5
194082 2001 <i>SK</i> ₁₅₇	16.4	X	263.10918	37.94418	327.87930	6.54023	0.1480036	0.28566973	2.2832838	21	5 20.9	19.6
194083 2001 <i>SP</i> ₁₅₉	16.8	X	124.81132	146.08227	294.28913	2.23140	0.0748324	0.27528024	2.3403781	21	3 25.4	19.8
194084 2001 <i>SP</i> ₁₆₃	17.1	X	217.36410	164.98361	196.27746	7.53114	0.2267097	0.27828544	2.3234985	21	3 27.9	20.9
194085 2001 <i>SG</i> ₁₆₆	17.3	X	347.29137	71.73544	182.47530	4.39835	0.1592985	0.28546771	2.2843609	21	4 17.3	19.1
194086 2001 <i>SP</i> ₁₆₇	16.9	X	159.02930	177.98461	186.68292	6.86644	0.1312616	0.27121029	2.3637340	21	2 2.0	20.3
194087 2001 <i>ST</i> ₁₆₈	16.9	X	249.27483	138.42521	170.69051	3.15160	0.1793032	0.27619867	2.3351870	21	2 20.5	20.5
194088 2001 <i>SQ</i> ₁₇₁	16.6	X	273.70482	301.36556	28.38789	5.38089	0.1221163	0.28363420	2.2941949	21	4 19.2	19.5
194089 2001 <i>SE</i> ₁₇₄	16.7	X	293.13876	214.51387	74.58754	3.29738	0.2391722	0.28167521	2.3048197	21	3 5.4	20.1
194090 2001 <i>SH</i> ₁₇₆	17.1	X	174.13965	53.34156	28.04787	10.17961	0.1956618	0.27992705	2.3144056	21	5 30.5	20.9
194091 2001 <i>SH</i> ₁₈₂	17.7	X	280.46198	187.56924	142.35675	1.90861	0.1701460	0.28656306	2.2785361	21	4 21.9	20.7
194092 2001 <i>SG</i> ₁₈₆	17.2	X	288.81587	206.21709	107.96550	3.86537	0.2026875	0.28564787	2.2834003	21	4 7.3	20.2
194093 2001 <i>SA</i> ₁₉₉	17.6	X	259.46151	288.94190	100.23665	1.48298	0.2373773	0.28778995	2.2720556	21	6 9.1	20.8
194094 2001 <i>SG</i> ₂₀₁	16.4	X	265.42088	8.30579	40.70628	6.70071	0.0743980	0.29219351	2.2491703	21	8 12.0	19.1
194095 2001 <i>SS</i> ₂₀₄	16.7	X	240.73449	318.60670	18.51251	5.32615	0.1720304	0.28030987	2.3122979	21	3 21.1	20.2
194096 2001 <i>SS</i> ₂₀₆	16.9	X	227.88820	12.03889	47.17363	4.97834	0.1942845	0.28659402	2.2783720	21	6 21.5	20.4
194097 2001 <i>ST</i> ₂₀₇	16.9	X	49.85973	6.91024	170.94178	5.35576	0.0531284	0.28042475	2.3116664	21	4 21.1	19.3
194098 2001 <i>SV</i> ₂₀₈	17.2	X	296.06362	140.19317	145.03253	3.62736	0.1617660	0.28207138	2.3026611	21	3 12.6	20.2
194099 2001 <i>SW</i> ₂₀₈	17.1	X	227.90880	320.43699	60.38347	3.83570	0.1932120	0.28270863	2.2991996	21	5 2.6	20.7
194100 2001 <i>SG</i> ₂₁₀	17.0	X	187.33225	257.98313	129.68264	3.56744	0.2074521	0.27747080	2.3280441	21	4 7.2	20.7
194101 2001 <i>SE</i> ₂₁₂	18.0	X	290.70227	287.83892	24.08186	2.48806	0.2444795	0.28517351	2.2859318	21	3 30.2	21.0
194102 2001 <i>SX</i> ₂₁₂	17.4	X	292.84037	175.66052	169.26027	8.36415	0.1469914	0.28798818	2.2710129	21	6 3.5	20.2
194103 2001 <i>SW</i> ₂₁₄	17.0	X	303.42255	248.47451	117.99581	4.17454	0.1833486	0.29131503	2.2536897	21	7 16.8	18.9
194104 2001 <i>SF</i> ₂₁₅	16.9	X	260.57563	338.03053	29.23138	8.01715	0.1309010	0.28549201	2.2842313	21	5 22.4	20.0
194105 2001 <i>SJ</i> ₂₂₂	17.3	X	216.69316	351.04751	66.98650	2.46060	0.0818509	0.28535790	2.3249469	21	6 15.9	20.2
194106 2001 <i>SY</i> ₂₂₃	16.7	X	229.40456	25.38889	28.05252	4.74778	0.1183787	0.28608304	2.2810842	21	6 21.7	19.9
194107 2001 <i>SG</i> ₂₂₅	17.1	X	93.73174	266.33852	170.20110	4.78913	0.1806719	0.26909579	2.3761003	21	2 22.4	19.6
194108 2001 <i>SH</i> ₂₃₀	17.2	X	195.49224	200.37724	173.67937	2.36594	0.2329498	0.27645604	2.3337375	21	3 27.3	20.9
194109 2001 <i>SX</i> ₂₃₁	16.8	X	156.90655	268.03471	185.87858	1.20800	0.1747903	0.27926935	2.3180379	21	6 1.1	20.3
194110 2001 <i>SW</i> ₂₃₃	16.9	X	132.95900	301.22627	165.61781	4.48868	0.2002173	0.27697253	2.3380353	21	5 28.3	20.4
194111 2001 <i>SK</i> ₂₃₆	18.0	X	326.96066	169.67646	125.29526	1.33717	0.2417507	0.28833221	2.2692061	21	4 26.7	19.8
194112 2001 <i>SF</i> ₂₃₇	16.9	X	122.07215	177.83118	16.88498	7.36656	0.0614973	0.29213688	2.2494610	21	9 3.4	19.8
194113 2001 <i>SO</i> ₂₄₃	16.7	X	108.02882	354.73771	170.75634	6.99428	0.0475508	0.28566861	2.2832898	21	6 28.3	19.6
194114 2001 <i>SB</i> ₂₄₉	16.6	X	210.73021	346.82137	26.59855	9.60386	0.0752432	0.27764756	2.3270558	21	4 9.8	19.7
194115 2001 <i>SL</i> ₂₄₉	16.7	X	118.46263	329.55895	165.22166	3.18227	0.0964933	0.27980784	2.3150629	21	6 6.2	19.6
194116 2001 <i>SS</i> ₂₅₀	17.0	X	228.48249	199.14368	132.87910	2.82723	0.2314075	0.27674580	2.3321082	21	3 2.2	20.9
194117 2001 <i>SV</i> ₂₅₃	17.2	X	232.55216	207.32615	129.43851	3.33676	0.1722620	0.27696083	2.3309009	21	3 13.6	20.8
194118 2001 <i>SM</i> ₂₅₇	17.0	X	213.12929	228.28516	72.51246	2.37573	0.1735632	0.26992042	2.3712584	21	1 11.2	20.7
194119 2001 <i>SN</i> ₂₅₈	15.2	X	225.33761	61.30919	300.26260	7.99730	0.1089842	0.18164212	3.0878653	21	4 12.9	20.2
194120 2001 <i>SE</i> ₂₆₁	17.2	X	242.99722	106.99560	192.48732	2.44775	0.2535864	0.27606477	2.3359420	21	1 31.4	21.2
194121 2001 <i>SO</i> ₂₆₁	16.0	X	257.18749	65.33224	319.73645	6.83470	0.1121051	0.28340653	2.2954234	21	6 16.7	19.0
194122 2001 <i>SU</i> ₂₆₂	15.6	X	240.45227	24.04868	251.41992	23.43219	0.1604851	0.27129740	2.3632281	21	—	—
194123 2001 <i>SA</i> ₂₆₃	16.4	X	134.30857	326.98830	191.80762	25.00046	0.1691207	0.28733470	2.2744549	21	7 30.4	20.4
194124 2001 <i>SD</i> ₂₆₃	16.7	X	206.38025	262.99892	54.82951	10.29280	0.2071956	0.27187095	2.3599031	21	1 29.3	20.7
194125 2001 <i>SV</i> ₂₆₆	16.7	X	255.62583	316.30790	68.25653	3.08939	0.2273571	0.28442391	2.2899464	21	5 30.9	20.0
194126 2001 <i>SG</i> ₂₇₆	17.8	X	298.55027	200.37041	35.11201	26.67600	0.2476289	0.57470837	1.4327520	21	—	—
194127 2001 <i>SF</i> ₂₈₁	16.6	X	172.70475	69.13205	354.58271	5.15735	0.1563749	0.27768424	2.3268509	21	5 4.9	20.3
194128 2001 <i>SP</i> ₂₈₁	16.5	X	289.33284	102.09479	241.94027	7.54282	0.1439109	0.28546667	2.2843665	21	5 27.2	18.9
194129 2001 <i>SO</i> ₂₈₅	16.4	X	88.51936	108.80139	13.10835	6.71146	0.0810607	0.27440686	2.3453414	21	4 3.5	19.1
194130 2001 <i>SJ</i> ₂₉₃	16.8	X	97.66815	160.18304	350.99798	4.79329	0.0566931	0.28384648	2.2930510	21	5 23.5	19.6
194131 2001 <i>SE</i> ₂₉₉	15.6	X	342.76420	215.73263	192.89564	5.53383	0.1000592	0.15372732	3.4511885	21	11 15.9	19.9
194132 2001 <i>SK</i> ₃₀₀	17.2	X	222.83547	245.22724	248.73203	2.60785	0.0874533	0.29736622	2.2230111	21	10 8.6	20.0
194133 2001 <i>SG</i> ₃₀₁	17.4	X	76.47613	48.52402	191.12322	3.77050	0.1332182	0.29448430	2.2374910	21	9 14.1	20.0
194134 2001 <i>SI</i> ₃₁₂	16.7	X	50.89608	249.57066	30.70918	7.17053	0.1217397	0.29721467	2.2237667	21	10 7.7	19.1
194135 2001 <i>SJ</i> ₃₁₄	16.1	X	77.24475	144.37079	319.92031	7.04781	0.0592531	0.27010901	2.3701546	21	2 17.2	18.6
194136 2001 <i>SD</i> ₃₁₅	16.7	X	87.82975	341.54794	282.68751	6.68658	0.1440860	0.29877007	2.2160420	21	10 31.6	19.9
194137 2001 <i>SF</i> ₃₁₅	16.4	X	183.53829	105.36488	22.69279	23.50168	0.2242277	0.28800738	2.2709120	21	8 23.0	20.7
194138 2001 <i>SX</i> ₃₁₈	17.5	X	289.63641	294.42384	6.16783	7.50969	0.1209093	0.28244640	2.3006224	21	3 30.1	20.3
194139 2001 <i>SQ</i> ₃₂₁	16.6	X	299.68344	36.66138	257.70059	6.63413	0.1322831	0.28324892	2.2962749	21	3 29.7	19.5
194140 2001 <i>ST</i> ₃₂₃	16.4	X	270.95258	157.74138	122.96094	6.25537	0.0982141	0.27655000	2.3332088	21	2 13.9	19.7
194141 2001 <i>SB</i> ₃₂₄	16.6	X	151.41406	183.63786	284.10665	6.26697	0.0689386	0.28255441	2.3000361	21	6 5.9	19.5
194142 2001 <i>SW</i> ₃₂₄	15.1	X	315.85364	270.33761	262.40767	4.67424	0.0383459	0.16829907	3.2489890	21	—	—
194143 2001 <i>SP</i> ₃₂₆	16.5	X	348.24427	255.00918	315.97795	6.07853	0.0554587	0.27743681	2.3282342	21	2 26.2	19.0
194144 2001 <i>SE</i> ₃₂₈	17.6	X	303.17848	124.69587	168.46064	5.25293	0.1757630	0.28677762	2.2773994	21	3 29.9	20.2
194145 2001 <i>SC</i> ₃₃₇	17.7	X	352.35704	161.91927	186.27877	1.29728	0.0938916	0.29657608	2.2269577	21	10 5.4	19.5
194146 2001 <i>SE</i> ₃₃₇	17.6	X	181.22229	97.90974	339.70551	2.65189	0.2086164	0.28181857	2.3040380	21	6 2.6	21.4
194147 2001 <i>SW</i> ₃₄₉	15.2	X	30.09016	314.02550	53.65329	6.71925	0.1235559	0.15386511	3.4491278	21	12 5.7	19.7
194148 2001 <i>SP</i> ₃₅₀	17.1	X	332.38292	283.81084	16.36481	5.19302	0.1720306	0.28639779	2.2794126	21	5 27.5	19.0
194149 2001 <i>TJ</i>	17.4	X	186.36331	43.46970	20.57334	2.42962	0.1511427	0.28104177	2.3082817	21	5 19.8	20.9
194150 2001 <i>TF</i> ₄	16.7	X	306.29864	141.79784	194.10036	6.42457	0.1570744	0.28743882	2.2739056	21	6 8.8	19.1
194151 2001 <i>TT</i> ₆	17.0	X	194.87840	227.19193								

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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>
194161 2001 TQ ₁₉	16.3	X	265.02215	68.54207	316.86313	6.82037	0.1038686	0.28547427	2.2843259	21	6 29.6	19.1
194162 2001 TK ₂₂	17.5	X	209.45530	58.73724	327.16651	1.46522	0.2235521	0.27951251	2.3166933	21	4 21.1	21.4
194163 2001 TV ₂₂	17.1	X	251.19210	325.96034	37.38951	5.05967	0.1481870	0.28347876	2.2950335	21	5 5.4	20.5
194164 2001 TE ₂₃	17.1	X	90.38484	126.93677	276.79325	1.77003	0.1774179	0.26399133	2.4066316	21	1 2.0	19.4
194165 2001 TQ ₂₆	16.6	X	175.24168	355.66647	7.23259	8.77323	0.1276972	0.27164917	2.3611874	21	2 21.5	20.1
194166 2001 TC ₂₈	16.3	X	213.65437	340.50968	355.99142	6.57400	0.1663479	0.27395497	2.3479198	21	2 24.8	20.1
194167 2001 TC ₃₁	15.8	X	21.88776	236.70461	330.72318	6.47572	0.0809678	0.27540454	2.3396739	21	4 14.5	18.4
194168 2001 TA ₃₂	16.0	X	35.90964	62.26980	356.52601	7.81066	0.1094388	0.25656861	2.4528276	21	—	—
194169 2001 TC ₃₂	16.2	X	215.14512	122.31579	251.92954	9.04324	0.1032416	0.27665699	2.3326072	21	4 11.5	19.7
194170 2001 TG ₃₆	16.5	X	160.02734	81.35407	18.04274	9.23581	0.2357670	0.27655907	2.3331578	21	6 12.9	20.6
194171 2001 TW ₃₇	16.0	X	169.02130	316.42350	41.81491	14.73419	0.2514759	0.26809339	2.3820195	21	2 23.8	20.2
194172 2001 TU ₃₈	15.9	X	158.70568	3.56856	292.97030	7.05466	0.2482709	0.26032703	2.4291623	21	—	—
194173 2001 TM ₄₄	16.2	X	139.62602	39.18821	38.06327	9.07182	0.1859549	0.27044017	2.3682193	21	4 24.3	19.7
194174 2001 TY ₄₉	17.4	X	239.29309	333.74991	348.77150	2.57735	0.2298863	0.27833337	2.3232317	21	2 26.7	21.1
194175 2001 TB ₅₁	17.2	X	294.60844	130.68887	196.99915	4.45466	0.2773121	0.28677304	2.2742327	21	4 20.3	20.1
194176 2001 TR ₅₁	16.9	X	164.54199	312.98180	103.56184	3.09494	0.2138008	0.27563929	2.3383452	21	4 24.1	20.7
194177 2001 TD ₅₃	16.9	X	210.74080	278.74514	87.37681	3.23116	0.2210312	0.27768402	2.3268521	21	3 30.9	20.7
194178 2001 TF ₅₄	16.6	X	187.46502	189.49483	197.17408	23.61207	0.2124645	0.27768084	2.3268699	21	4 4.3	20.5
194179 2001 TY ₅₇	17.0	X	30.26295	30.86378	243.75335	1.42773	0.1225969	0.29104760	2.2550701	21	8 22.7	19.2
194180 2001 TF ₅₉	17.1	X	211.75828	157.95403	220.41833	1.71489	0.2343479	0.27901677	2.3194367	21	4 13.8	21.1
194181 2001 TN ₅₉	16.4	X	134.33887	229.78420	197.42840	9.91356	0.0486314	0.27425204	2.3462240	21	3 15.8	19.5
194182 2001 TC ₆₀	16.4	X	204.25847	277.76844	81.82549	3.61482	0.1884404	0.27545129	2.3394091	21	3 17.8	20.1
194183 2001 TJ ₆₂	16.6	X	201.25075	25.59653	51.19709	4.89665	0.1724359	0.28284811	2.2984436	21	6 20.4	20.2
194184 2001 TM ₆₃	16.9	X	201.20959	356.15407	45.57354	4.26528	0.1166038	0.27925704	2.3181060	21	5 5.8	20.4
194185 2001 TV ₆₅	16.4	X	229.54819	121.97258	240.88345	2.37882	0.1767016	0.27904985	2.3192533	21	4 10.6	20.0
194186 2001 TE ₆₆	16.8	X	176.74116	3.57677	9.48807	2.20025	0.1806454	0.27260666	2.3556553	21	3 8.7	20.3
194187 2001 TH ₆₉	16.7	X	133.36940	207.42254	194.31528	4.51492	0.0769754	0.27081929	2.3660086	21	2 13.0	19.8
194188 2001 TV ₆₉	17.1	X	124.67518	113.21878	343.42042	0.95260	0.1935447	0.27486291	2.3427464	21	5 3.8	20.4
194189 2001 TQ ₇₀	16.6	X	282.70763	315.05509	58.05455	6.83686	0.1127063	0.28739046	2.2741607	21	7 5.4	19.2
194190 2001 TU ₇₃	17.1	X	145.16002	245.74565	186.46261	2.30815	0.1924183	0.27394516	2.3479758	21	4 23.8	20.6
194191 2001 TG ₇₅	17.5	X	222.57902	199.19464	200.90295	1.52656	0.2142472	0.28148739	2.3058448	21	5 21.6	21.2
194192 2001 TE ₇₈	16.3	X	227.11038	243.54782	68.69285	5.64374	0.2487509	0.27311688	2.3527206	21	2 6.8	20.4
194193 2001 TA ₈₁	16.5	X	63.83491	170.99649	278.89037	5.58811	0.0815278	0.26847108	2.3797849	21	1 9.4	18.9
194194 2001 TL ₈₁	16.6	X	187.82173	227.64486	252.29668	6.59734	0.0265730	0.29031792	2.2588470	21	8 7.1	19.5
194195 2001 TK ₈₂	16.6	X	326.96293	321.63161	320.82536	6.52607	0.1078402	0.28412545	2.2915498	21	4 27.3	19.1
194196 2001 TV ₈₂	17.0	X	281.48555	130.89804	202.09505	22.73413	0.2165942	0.28515680	2.2860211	21	4 21.1	20.1
194197 2001 TN ₈₅	17.1	X	152.26676	149.28547	286.05325	3.85270	0.2089056	0.27654836	2.3332180	21	5 4.1	20.8
194198 2001 TX ₈₅	16.8	X	257.97634	72.90560	250.30534	4.46651	0.0988854	0.27943791	2.3171056	21	3 23.2	20.1
194199 2001 TE ₈₈	17.6	X	210.94410	60.77302	328.62030	3.83274	0.1704472	0.28024254	2.3126683	21	4 26.7	21.2
194200 2001 TS ₉₀	16.7	X	248.72223	350.49464	338.23788	6.26401	0.1174508	0.27842241	2.3227364	21	3 19.6	20.0
194201 2001 TQ ₉₁	17.5	X	212.08827	191.46674	257.21421	2.07713	0.2184890	0.28558423	2.2837395	21	7 14.1	21.2
194202 2001 TE ₉₃	16.7	X	213.06639	34.47956	333.08488	6.00508	0.1190290	0.27783734	2.3259961	21	3 31.8	20.2
194203 2001 TE ₉₇	16.7	X	245.07390	65.71797	273.05812	2.11316	0.1679905	0.27881712	2.3205437	21	3 25.6	20.4
194204 2001 TE ₉₈	16.3	X	255.39163	74.03296	233.18912	5.34292	0.2035131	0.27676796	2.3319837	21	2 20.2	20.1
194205 2001 TV ₉₈	16.6	X	265.90538	109.21648	204.87804	6.04517	0.1280813	0.27846677	2.3224897	21	3 18.3	19.8
194206 2001 TD ₉₉	17.2	X	176.72472	183.06817	245.23674	3.95922	0.1045855	0.28018272	2.3129974	21	5 14.6	20.6
194207 2001 TG ₉₉	14.0	X	285.96081	282.15327	338.71492	6.18892	0.0482554	0.12419023	3.9787296	21	3 6.6	19.7
194208 2001 TT ₁₀₁	17.2	X	140.42991	60.21519	34.36878	1.71910	0.1649709	0.27715769	2.3297971	21	5 15.1	20.6
194209 2001 TJ ₁₀₄	17.1	X	192.02923	248.48868	172.36906	2.13511	0.1873873	0.27867803	2.3213158	21	5 22.3	20.8
194210 2001 TW ₁₁₀	17.2	X	241.86379	107.70927	290.91499	2.39299	0.2445198	0.28438463	2.2901573	21	6 3.5	20.9
194211 2001 TE ₁₁₁	16.8	X	137.87877	50.49523	8.71754	6.40046	0.0939567	0.27228510	2.3575096	21	3 18.7	19.7
194212 2001 TH ₁₁₄	17.1	X	249.65992	38.13853	334.23049	3.77270	0.2929474	0.28290738	2.2981226	21	5 2.4	21.0
194213 2001 TA ₁₂₃	16.2	X	131.74997	205.74467	222.72935	24.78207	0.2029736	0.27150289	2.3620354	21	4 2.5	19.9
194214 2001 TD ₁₂₄	16.6	X	189.65585	141.43905	267.57874	7.79735	0.2031320	0.27925836	2.3180987	21	5 2.6	20.5
194215 2001 TE ₁₂₄	14.8	X	26.31621	327.51167	311.77173	11.71571	0.1166693	0.19168774	2.9790182	21	8 13.6	18.5
194216 2001 TM ₁₃₃	17.2	X	224.12093	288.09918	116.75974	6.79887	0.1128880	0.28288113	2.2982648	21	6 5.3	20.4
194217 2001 TW ₁₃₃	16.4	X	299.62122	217.84837	104.35347	7.17419	0.2013093	0.28503238	2.2866863	21	5 3.6	19.2
194218 2001 TU ₁₃₅	16.9	X	288.97739	45.19835	260.06827	6.37873	0.1341415	0.28189722	2.3036095	21	3 30.8	20.0
194219 2001 TD ₁₃₇	16.3	X	268.42207	234.03236	115.41906	8.44301	0.1866562	0.28462872	2.2888477	21	5 5.4	19.7
194220 2001 TK ₁₃₉	16.4	X	26.86088	234.08125	39.40110	7.63557	0.0758627	0.29254486	2.2473691	21	8 12.9	18.8
194221 2001 TN ₁₄₁	17.2	X	318.74743	249.97773	48.96096	5.93822	0.1808230	0.28620487	2.2804368	21	4 29.7	19.4
194222 2001 TX ₁₄₃	17.1	X	267.13688	148.78869	154.10728	6.81837	0.1364481	0.27857262	2.3219013	21	3 6.2	20.5
194223 2001 TE ₁₄₅	16.9	X	182.10483	26.04202	87.02666	5.17166	0.0983647	0.28642611	2.2792623	21	7 22.2	20.1
194224 2001 TR ₁₄₅	17.1	X	170.47255	267.92762	165.50616	5.48484	0.1342288	0.27939550	2.3173401	21	5 17.8	20.5
194225 2001 TX ₁₄₅	14.8	X	59.93786	272.15735	107.20703	6.44006	0.0170254	0.15840078	3.3829676	21	—	—
194226 2001 TQ ₁₄₇	16.7	X	132.72174	39.02652	81.47759	5.69613	0.0303523	0.28146528	2.3059656	21	5 26.8	19.3
194227 2001 TW ₁₄₇	17.0	X	301.46144	172.58081	138.73671	5.00159	0.2563874	0.28556052	2.2838659	21	4 11.1	19.9
194228 2001 TL ₁₅₀	17.3	X	184.69764	290.31074	70.02875	6.18379	0.1909524	0.27313258	2.3526304	21	3 3.2	21.1
194229 2001 TR ₁₅₀	17.4	X	201.53492	232.31321	162.77383	6.62674	0.1092801	0.27890085	2.3200793	21	4 29.6	20.8
194230 2001 TF ₁₅₂	16.8	X	200.15218	312.97616	56.79800	7.81027	0.1226619	0.27570799	2.3379568	21	3 27.8	20.3
194231 2001 TW ₁₅₄	16.6	X	227.23660	341.34349	121.06745	6.72309	0.1404353	0.28981524	2.2614582	21	8 26.2	19.6
194232 2001 TR ₁₅₇	16.6	X	243.32016	138.35749	159.59095	2.59472	0.2103774	0.27267662	2.3552524	21	1 31.9	20.5
194233 2001 TY ₁₅₇	16.8	X	202.52267	218.46949	131.65107	3.99094	0.1698039	0.27360980	2.			

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
194241 2001 <i>TO</i> ₁₇₉	16.9	X	154.71856	132.00904	326.62446	2.16329	0.1384145	0.27964637	2.3159540	21	6 2.4	20.3
194242 2001 <i>TG</i> ₁₈₉	16.9	X	204.86463	44.47066	324.99176	3.97105	0.1882912	0.27572462	2.3378628	21	3 27.1	20.6
194243 2001 <i>TQ</i> ₁₉₀	16.8	X	76.41054	160.81572	271.06945	2.59926	0.1955062	0.26367007	2.4085860	21	1 19.1	18.7
194244 2001 <i>TX</i> ₁₉₀	17.0	X	124.13328	139.23606	261.09835	4.40953	0.1236298	0.26709036	2.3879794	21	2 6.6	20.0
194245 2001 <i>TZ</i> ₁₉₀	16.6	X	225.23565	47.55780	7.29264	5.90882	0.1472617	0.28273960	2.2990317	21	6 16.3	20.0
194246 2001 <i>TG</i> ₁₉₂	16.5	X	270.82426	88.98711	319.87259	4.96191	0.1676488	0.28686078	2.2769593	21	7 31.7	19.2
194247 2001 <i>TM</i> ₁₉₅	16.5	X	205.39943	151.17869	158.76016	13.51057	0.0365239	0.26814345	2.3817230	21	1 9.1	19.9
194248 2001 <i>TA</i> ₁₉₉	15.9	X	282.68604	203.27546	104.63404	7.67689	0.1345484	0.28209693	2.3025221	21	4 3.2	19.1
194249 2001 <i>TL</i> ₁₉₉	16.9	X	224.18433	356.37864	79.20028	6.59178	0.1401492	0.28768224	2.2726227	21	7 15.2	20.0
194250 2001 <i>TB</i> ₂₀₄	16.5	X	181.52663	34.51732	64.37541	6.58993	0.1548932	0.28504269	2.2866311	21	7 1.2	20.0
194251 2001 <i>TS</i> ₂₀₄	16.8	X	211.18400	359.72678	93.21831	7.01398	0.1424600	0.28768474	2.2726096	21	7 24.9	20.2
194252 2001 <i>TX</i> ₂₀₅	16.3	X	148.42534	294.06950	139.93156	12.70108	0.2105212	0.27449556	2.3448361	21	5 5.1	20.2
194253 2001 <i>TW</i> ₂₁₂	16.4	X	132.05507	41.05288	342.52250	6.77973	0.1377394	0.26738881	2.3862021	21	1 30.9	19.4
194254 2001 <i>TF</i> ₂₂₄	16.8	X	259.22351	318.54325	10.68813	5.52099	0.1316594	0.27860208	2.3217376	21	3 31.9	20.0
194255 2001 <i>TU</i> ₂₂₇	17.1	X	276.89466	214.37852	107.18944	4.38539	0.1697378	0.28329703	2.2960149	21	4 8.2	20.2
194256 2001 <i>TH</i> ₂₃₀	16.4	X	325.96817	214.42168	118.70201	8.18907	0.1792620	0.29129039	2.2538168	21	7 8.8	18.0
194257 2001 <i>TV</i> ₂₃₁	17.6	X	170.56469	78.60728	339.42972	1.85883	0.1255196	0.27723191	2.3293812	21	4 24.7	21.1
194258 2001 <i>TG</i> ₂₃₅	16.9	X	352.07427	302.18030	81.89191	9.08354	0.1789264	0.29853158	2.2172221	21	12 11.6	18.7
194259 2001 <i>TQ</i> ₂₃₇	17.1	X	198.94321	276.76873	136.22195	4.83217	0.0808813	0.28312801	2.2969286	21	5 20.3	20.3
194260 2001 <i>TC</i> ₂₄₀	17.2	X	207.52787	226.55792	102.60926	3.45073	0.2330723	0.27303528	2.3531893	21	2 11.1	21.2
194261 2001 <i>TP</i> ₂₅₀	17.0	X	155.47035	115.82123	43.28297	6.54961	0.0501822	0.29076602	2.2565257	21	8 26.6	20.0
194262 2001 Nové Zámky	17.0	X	38.65049	110.33617	109.64970	5.32616	0.0122921	0.28363831	2.2941728	21	5 31.8	19.6
194263 2001 <i>UL</i>	16.3	X	227.19015	249.05054	190.10418	21.13394	0.3000873	0.28331950	2.2958935	21	7 7.2	20.7
194264 2001 <i>UY</i>	16.3	X	155.00703	245.65754	213.69626	23.85811	0.2913600	0.27876692	2.3208223	21	6 10.7	20.7
194265 2001 <i>UB</i> ₁	17.1	X	209.17441	180.34461	216.64196	2.23382	0.2123145	0.27896727	2.3197110	21	5 5.9	21.0
194266 2001 <i>UV</i> ₁	16.2	X	139.86835	143.21477	349.01698	24.47710	0.1976509	0.28328317	2.2960898	21	7 14.8	20.3
194267 2001 <i>UY</i> ₃	17.0	X	214.65373	238.11157	133.28940	5.35688	0.1673397	0.27808417	2.3426197	21	4 11.3	20.6
194268 2001 <i>UY</i> ₄	18.2	X	118.96197	107.76373	160.74893	5.43793	0.7874298	0.56284777	1.4528098	21	12 27.7	21.6
194269 2001 <i>UU</i> ₇	16.6	X	214.19274	125.84474	293.61948	5.23610	0.0966694	0.28419311	2.2911860	21	6 14.1	19.9
194270 2001 <i>UT</i> ₁₀	16.6	X	188.27268	153.38069	197.38640	5.89810	0.1289341	0.26871341	2.3783539	21	2 15.1	20.1
194271 2001 <i>UN</i> ₁₂	16.7	X	236.22378	168.41322	257.38371	6.21368	0.0735097	0.28684697	2.2770324	21	7 21.5	19.7
194272 2001 <i>UU</i> ₁₂	16.5	X	137.23369	233.84337	195.60612	5.44189	0.1116387	0.27165175	2.3611725	21	4 2.1	19.6
194273 2001 <i>UH</i> ₁₃	17.0	X	227.83320	183.74243	203.15696	2.54653	0.2566768	0.28060210	2.3106922	21	5 7.2	20.7
194274 2001 <i>UL</i> ₁₆	16.0	X	55.18329	138.41030	294.37767	5.93128	0.1089013	0.25681795	2.4512398	21	—	—
194275 2001 <i>UJ</i> ₂₁	16.1	X	188.17986	109.00016	224.24253	13.47444	0.1034980	0.27178060	2.3604261	21	1 19.6	19.8
194276 2001 <i>UJ</i> ₂₄	16.5	X	311.49819	21.90276	309.89436	6.33572	0.1314491	0.28753785	2.2733835	21	6 15.5	18.8
194277 2001 <i>UC</i> ₂₈	17.5	X	310.03714	304.19841	49.46477	5.51644	0.1255278	0.28990041	2.2610153	21	7 20.5	19.7
194278 2001 <i>UN</i> ₂₉	17.4	X	214.91966	207.73554	138.79989	5.48414	0.2511635	0.27637759	2.3341790	21	3 9.8	21.4
194279 2001 <i>UX</i> ₃₀	16.4	X	317.78605	221.08675	107.11827	7.07314	0.2207734	0.28889693	2.2662480	21	6 5.9	18.3
194280 2001 <i>UQ</i> ₃₃	17.1	X	235.63819	266.25021	116.53964	4.15079	0.2248747	0.28218114	2.3020640	21	5 11.3	20.8
194281 2001 <i>UP</i> ₃₅	16.4	X	223.82788	211.89857	112.96327	7.30035	0.1945247	0.27369409	2.3494116	21	2 19.7	20.2
194282 2001 <i>UE</i> ₄₂	16.3	X	102.67003	159.13678	43.88845	5.79130	0.1522008	0.28914658	2.2649433	21	8 31.9	19.5
194283 2001 <i>UZ</i> ₄₂	17.0	X	104.56108	263.88403	203.10449	1.06307	0.1143835	0.27372686	2.3492241	21	4 11.5	19.8
194284 2001 <i>UB</i> ₄₇	16.7	X	166.59436	319.16119	155.05226	2.57576	0.1784278	0.28113257	2.3077846	21	7 7.1	20.2
194285 2001 <i>UB</i> ₄₇	17.2	X	174.32706	196.52444	194.89171	6.99854	0.1240020	0.27365349	2.3496439	21	3 25.1	20.7
194286 2001 <i>UF</i> ₄₉	17.2	X	246.18584	205.53510	160.99610	2.63628	0.2401602	0.28143336	2.3061400	21	4 28.2	20.8
194287 2001 <i>UL</i> ₄₉	16.7	X	160.99523	257.51649	169.65346	6.87224	0.1762953	0.27497135	2.3421305	21	5 2.9	20.3
194288 2001 <i>UU</i> ₄₉	16.3	X	26.73172	262.84798	88.75155	7.70954	0.2353797	0.29944759	2.2126981	21	12 30.5	18.9
194289 2001 <i>UN</i> ₅₂	17.2	X	135.17548	208.17432	202.94539	1.69902	0.1909154	0.27022453	2.3694790	21	3 16.2	20.6
194290 2001 <i>UP</i> ₅₂	16.9	X	217.75654	293.09962	51.82619	7.80005	0.1627013	0.27493674	2.3423270	21	3 13.6	20.7
194291 2001 <i>UC</i> ₅₄	15.8	X	195.88108	295.57330	111.61563	10.21691	0.2158831	0.27654754	2.3332226	21	5 11.4	19.8
194292 2001 <i>UE</i> ₅₅	16.9	X	256.25494	224.01423	84.18628	3.44806	0.2386678	0.27834692	2.3231563	21	2 23.8	20.8
194293 2001 <i>UE</i> ₆₀	16.9	X	288.63038	155.55062	343.09953	7.28196	0.1248632	0.29263713	2.2468966	21	8 17.1	19.4
194294 2001 <i>UH</i> ₆₀	16.3	X	254.82485	346.66603	203.29756	6.48931	0.1085654	0.27508571	2.3414813	21	2 5.8	19.5
194295 2001 <i>UK</i> ₆₀	17.0	X	205.60826	88.63815	297.21242	5.79340	0.1210220	0.27954243	2.3165280	21	4 16.3	20.5
194296 2001 <i>US</i> ₆₁	17.0	X	190.70974	131.74210	15.92880	5.48171	0.0650832	0.29232385	2.2485017	21	9 21.3	19.9
194297 2001 <i>UG</i> ₆₂	17.3	X	270.44159	317.08586	10.43396	2.71740	0.2052088	0.28179223	2.3041816	21	4 2.8	20.7
194298 2001 <i>UA</i> ₆₃	17.0	X	198.87071	186.38240	217.33771	1.54709	0.1615639	0.27872467	2.3210568	21	5 5.9	20.7
194299 2001 <i>UJ</i> ₆₄	17.0	X	165.02739	146.91521	271.20193	5.26654	0.1899616	0.27586769	2.3370544	21	4 21.8	20.7
194300 2001 <i>UO</i> ₆₄	16.4	X	275.32522	344.73999	310.81228	8.49778	0.1647217	0.27845090	2.3225780	21	2 27.4	19.8
194301 2001 <i>UP</i> ₆₅	16.5	X	197.60986	24.76409	36.89374	7.24020	0.1859215	0.27893044	2.3199152	21	5 26.8	20.1
194302 2001 <i>UU</i> ₆₅	16.4	X	100.31625	63.68858	22.85455	5.23994	0.2017664	0.26736845	2.3863233	21	3 24.1	19.2
194303 2001 <i>UB</i> ₆₇	16.8	X	54.50984	185.82350	36.66463	4.84632	0.0867231	0.28495881	2.2870798	21	7 10.0	19.2
194304 2001 <i>UV</i> ₇₁	16.9	X	120.35112	211.06735	355.02526	5.30228	0.0816320	0.29318973	2.2440725	21	9 16.3	19.7
194305 2001 <i>UR</i> ₇₅	17.1	X	149.89430	9.64068	59.95537	8.09367	0.1373142	0.27402030	2.3475466	21	4 21.9	20.5
194306 2001 <i>UW</i> ₇₅	17.3	X	146.97449	223.37296	192.55805	3.98256	0.2409466	0.27186683	2.3599270	21	4 8.7	20.9
194307 2001 <i>UW</i> ₇₈	17.1	X	205.20067	173.35026	157.54566	2.76968	0.2188239	0.27270226	2.3551047	21	2 10.0	21.0
194308 2001 <i>UF</i> ₈₂	17.0	X	184.54989	160.82028	195.16930	4.45849	0.1635401	0.27132593	2.3630624	21	2 20.0	20.7
194309 2001 <i>UR</i> ₈₅	17.7	X	183.56075	218.41461	185.57360	2.27606	0.2037201	0.27688392	2.3313325	21	4 23.4	21.5
194310 2001 <i>UE</i> ₈₇	17.1	X	32.22397	264.63728	226.01997	2.59230	0.0789025	0.26589530	2.3951292	21	1 14.9	19.8
194311 2001 <i>UR</i> ₈₉	16.2	X	145.81293	116.94165	349.05567	22.98799	0					

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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>
194321 2001 <i>UH</i> ₁₁₇	16.9	X	113.23249	36.52646	51.78805	4.51578	0.1282195	0.27100828	2.3649085	21	4 1.8	19.8
194322 2001 <i>UR</i> ₁₁₇	17.1	X	225.52763	146.30712	218.10419	2.37225	0.1928998	0.27805917	2.3247588	21	4 8.8	20.7
194323 2001 <i>UV</i> ₁₁₇	16.7	X	148.68304	27.10434	43.90173	4.41064	0.2149776	0.27367510	2.3495202	21	4 27.4	20.2
194324 2001 <i>UL</i> ₁₁₈	17.0	X	148.03990	35.25709	59.97959	3.56732	0.1629721	0.27608101	2.3358504	21	5 24.0	20.5
194325 2001 <i>UP</i> ₁₂₀	17.3	X	222.04420	130.30976	203.57575	6.17647	0.1387098	0.27371447	2.3492949	21	2 26.2	20.9
194326 2001 <i>UA</i> ₁₂₂	16.4	X	199.90488	207.22942	223.14833	5.77334	0.0811854	0.28076923	2.3097752	21	6 13.3	19.6
194327 2001 <i>UJ</i> ₁₂₂	16.8	X	154.65195	17.13631	76.93335	3.26301	0.1731011	0.27647888	2.3336089	21	5 30.0	20.3
194328 2001 <i>UG</i> ₁₃₀	17.2	X	148.78225	318.15467	177.99888	2.49635	0.1099586	0.28382318	2.2931764	21	7 15.4	20.3
194329 2001 <i>UQ</i> ₁₃₁	17.0	X	244.12879	112.75768	196.88804	3.65848	0.2391447	0.27541752	2.3396003	21	2 13.5	21.1
194330 2001 <i>UN</i> ₁₃₃	17.0	X	323.47002	84.14398	213.42117	12.47350	0.0711873	0.28371387	2.2937655	21	5 24.7	19.6
194331 2001 <i>UZ</i> ₁₃₃	17.7	X	170.26783	253.09120	210.13276	1.22143	0.1814977	0.28130648	2.3068334	21	6 26.3	21.2
194332 2001 <i>UO</i> ₁₃₄	17.3	X	135.40243	29.60930	38.46713	1.89581	0.1635727	0.27189699	2.3597525	21	4 5.1	20.6
194333 2001 <i>UT</i> ₁₃₄	16.5	X	44.28565	305.34095	204.61834	5.58600	0.1072496	0.26984654	2.3716912	21	3 2.6	18.9
194334 2001 <i>UI</i> ₁₃₆	16.4	X	150.14516	14.40944	62.38329	6.06349	0.2318736	0.27317829	2.3523680	21	5 7.9	20.0
194335 2001 <i>UX</i> ₁₃₇	16.7	X	310.42428	226.60225	41.91749	4.44218	0.1379933	0.27849806	2.3223157	21	3 13.8	19.5
194336 2001 <i>UV</i> ₁₃₉	16.9	X	206.25872	77.67739	259.68167	3.60993	0.1868337	0.27136733	2.3628220	21	2 17.0	20.7
194337 2001 <i>UJ</i> ₁₄₀	17.1	X	207.99747	79.37603	38.69615	10.33280	0.1348693	0.28847868	2.2684379	21	8 30.4	20.5
194338 2001 <i>UZ</i> ₁₄₅	16.9	X	235.12881	214.02308	209.52035	6.91512	0.0791531	0.28525292	2.2855075	21	7 15.8	19.9
194339 2001 <i>UR</i> ₁₄₆	16.9	X	177.51186	159.13800	208.14994	6.15138	0.1177158	0.27084644	2.3658505	21	2 23.6	20.5
194340 2001 <i>UK</i> ₁₄₉	16.7	X	155.61915	345.40205	55.13736	7.62540	0.1117198	0.27129152	2.3632621	21	3 20.4	20.1
194341 2001 <i>UH</i> ₁₅₁	17.0	X	142.37569	319.29278	125.88812	2.99624	0.1897820	0.27371223	2.3493078	21	5 8.5	20.4
194342 2001 <i>UU</i> ₁₅₁	16.8	X	80.12490	206.90418	244.31167	0.72655	0.1691606	0.26563964	2.3966657	21	2 19.5	19.1
194343 2001 <i>UE</i> ₁₅₂	17.3	X	212.56511	290.90841	76.98751	4.04360	0.1747698	0.27527472	2.3378622	21	4 4.6	21.1
194344 2001 <i>UP</i> ₁₅₂	16.4	X	38.56917	303.00441	213.13110	5.28620	0.1645549	0.26727620	2.3868723	21	3 2.9	18.4
194345 2001 <i>UI</i> ₁₅₄	16.5	X	216.49618	209.79173	210.37641	5.94339	0.0829475	0.28104228	2.3082788	21	6 18.8	19.7
194346 2001 <i>US</i> ₁₅₅	17.2	X	189.20321	126.39931	218.00476	1.49784	0.2099326	0.27082228	2.3659912	21	2 12.9	21.1
194347 2001 <i>UA</i> ₁₅₆	17.5	X	188.59655	193.93505	192.57846	2.59046	0.1899980	0.27489955	2.3425383	21	4 4.9	21.3
194348 2001 <i>US</i> ₁₅₆	16.9	X	254.50023	181.75137	139.37997	2.69711	0.2477800	0.27761363	2.3272454	21	3 8.8	20.6
194349 2001 <i>UG</i> ₁₅₇	16.5	X	91.39812	164.44889	61.26302	4.16989	0.0984436	0.28710200	2.2756837	21	9 11.3	19.4
194350 2001 <i>UJ</i> ₁₅₇	17.2	X	233.17758	147.84561	222.15343	1.62874	0.2345065	0.27969665	2.3156764	21	4 20.8	21.0
194351 2001 <i>UY</i> ₁₅₇	16.6	X	135.02155	54.46237	49.24901	1.65263	0.1580682	0.27497162	2.3421290	21	5 21.1	19.9
194352 2001 <i>UT</i> ₁₅₉	17.2	X	152.43998	219.68311	211.48032	2.23823	0.1833415	0.27368180	2.3944819	21	4 28.5	20.6
194353 2001 <i>UJ</i> ₁₆₁	16.9	X	316.78591	302.97228	137.53002	3.05137	0.1149799	0.29763348	2.2216801	21	12 21.8	18.9
194354 2001 <i>UQ</i> ₁₆₄	17.0	X	192.64847	296.72767	101.11753	4.13752	0.1755818	0.27717485	2.3297009	21	4 24.4	20.7
194355 2001 <i>US</i> ₁₆₅	16.8	X	285.53557	222.29701	102.40998	6.24919	0.2045925	0.28436757	2.2902488	21	4 18.7	19.9
194356 2001 <i>UW</i> ₁₆₉	16.5	X	214.62148	285.41880	16.49036	6.86657	0.1273335	0.26942577	2.3741599	21	1 14.3	20.2
194357 2001 <i>UL</i> ₁₇₀	17.0	X	138.45129	84.03314	282.52194	1.02484	0.2010977	0.26651686	2.3914038	21	1 23.6	20.3
194358 2001 <i>UM</i> ₁₇₀	17.3	X	134.42650	210.96447	239.34395	2.33317	0.1957261	0.27414694	2.3468236	21	5 6.3	20.5
194359 2001 <i>UQ</i> ₁₇₀	16.6	X	68.47395	140.06880	7.09218	2.30478	0.1478462	0.27233414	2.3572266	21	4 18.3	18.8
194360 2001 <i>UB</i> ₁₇₂	17.2	X	222.86516	46.88617	40.19363	4.81062	0.0176496	0.28943398	2.2634437	21	8 14.6	19.9
194361 2001 <i>UC</i> ₁₇₅	17.6	X	169.34796	258.58262	133.08530	3.00883	0.1986190	0.27443417	2.3451858	21	3 26.9	21.4
194362 2001 <i>UX</i> ₁₇₅	17.0	X	54.86583	327.09377	194.06896	5.61878	0.1386077	0.27211391	2.3584982	21	4 14.0	19.2
194363 2001 <i>UC</i> ₁₇₇	16.3	X	48.93268	355.30727	219.21911	5.86080	0.1248215	0.28257243	2.2999383	21	6 22.7	18.6
194364 2001 <i>UX</i> ₁₇₇	17.2	X	114.13838	4.12347	63.60776	3.38073	0.1747537	0.26948800	2.3737943	21	3 13.3	20.1
194365 2001 <i>UG</i> ₁₇₈	16.7	X	256.96042	300.90546	91.34759	6.77644	0.1651106	0.28759990	2.2730565	21	6 19.4	19.7
194366 2001 <i>UW</i> ₁₈₃	17.1	X	289.57385	239.14214	97.87615	5.96088	0.2594470	0.28579735	2.2826041	21	5 1.8	20.2
194367 2001 <i>UR</i> ₁₈₇	17.4	X	15.10447	266.88806	37.76667	5.74789	0.1570757	0.29429827	2.2384338	21	9 20.3	19.3
194368 2001 <i>UQ</i> ₁₈₉	17.3	X	243.24660	111.40881	327.19895	1.84561	0.1189561	0.29107865	2.2549096	21	8 13.8	20.3
194369 2001 <i>UG</i> ₁₉₅	17.4	X	187.27970	272.51032	192.31466	4.45747	0.1186112	0.28510359	2.2863055	21	7 14.6	20.9
194370 2001 <i>UF</i> ₁₉₆	16.4	X	42.56792	82.41791	17.84540	6.53499	0.0988688	0.26293324	2.4130837	21	—	—
194371 2001 <i>UJ</i> ₁₉₆	16.8	X	324.05134	295.69375	6.34143	5.56218	0.0532664	0.28249858	2.3003391	21	6 2.0	19.4
194372 2001 <i>UW</i> ₂₀₁	17.5	X	257.19245	24.37840	265.49620	1.18420	0.2753483	0.27661972	2.3328168	21	1 30.1	21.5
194373 2001 <i>UE</i> ₂₀₅	16.6	X	195.80446	328.60441	9.02409	4.05673	0.0594259	0.26980044	2.3719614	21	2 5.8	19.7
194374 2001 <i>UM</i> ₂₁₀	17.0	X	12.68923	139.49129	344.75373	2.58097	0.0980910	0.26538316	2.3982097	21	—	—
194375 2001 <i>UY</i> ₂₁₁	17.1	X	347.61015	68.05670	219.93525	4.73166	0.1702631	0.28656829	2.2785084	21	6 12.4	18.8
194376 2001 <i>US</i> ₂₁₂	17.2	X	141.45191	94.05672	52.66502	7.40102	0.1240900	0.28274764	2.2989881	21	7 25.1	20.6
194377 2001 <i>UJ</i> ₂₁₃	17.3	X	136.31182	36.08236	77.60550	3.06547	0.1712429	0.27873986	2.3209725	21	6 6.2	20.5
194378 2001 <i>UE</i> ₂₁₅	16.8	X	6.49251	347.02794	193.32697	2.16051	0.1062739	0.26906282	2.3762945	21	2 8.2	19.2
194379 2001 <i>UH</i> ₂₁₇	17.0	X	65.64325	53.81326	95.94405	2.31679	0.0795446	0.27340289	2.3510795	21	4 9.0	19.4
194380 2001 <i>UO</i> ₂₂₁	17.1	X	194.05785	181.42471	210.25804	6.56427	0.1159244	0.27505517	2.3416546	21	4 14.9	20.6
194381 2001 <i>VY</i> ₁	16.2	X	89.58737	156.24442	315.07703	1.75417	0.1863441	0.27009539	2.3702342	21	4 7.2	18.7
194382 2001 <i>VL</i> ₂	16.2	X	147.21527	25.49881	71.47425	3.46824	0.1674081	0.27511460	2.3413174	21	5 26.0	19.5
194383 2001 <i>VE</i> ₃	17.1	X	258.21411	273.88710	32.65757	7.36078	0.1405112	0.27524229	2.3405932	21	3 4.3	20.6
194384 2001 <i>VK</i> ₃	14.8	X	135.63294	163.69572	297.19265	1.67241	0.1635640	0.12516597	3.9580251	21	5 24.9	21.0
194385 2001 <i>VD</i> ₄	16.6	X	128.83190	182.32798	241.76365	11.08306	0.2472057	0.26964426	2.3728772	21	3 29.3	20.2
194386 2001 <i>VG</i> ₅	16.9	X	184.07779	280.14092	248.45911	13.65577	0.6121532	0.28170197	2.3046738	21	9 13.6	22.3
194387 2001 <i>VY</i> ₆	16.6	X	127.02784	82.89168	30.65687	6.00190	0.0329862	0.27746806	2.3280594	21	5 8.0	19.3
194388 2001 <i>VG</i> ₇	16.4	X	109.47322	229.28189	222.83084	5.75406	0.0711400	0.27172438	2.3607517	21	3 19.7	19.3
194389 2001 <i>VR</i> ₉	17.1	X	148.03766	178.44318	272.64404	2.51472	0.1370490	0.27494869	2.3422592	21	5 15.9	20.6
194390 2001 <i>VG</i> ₁₀	16.4	X	21.10099	43.90431	193.59271	4.12397	0.1111261	0.28097390	2.3086534	21	6 4.2	18.5
194391 2001 <i>VB</i> ₁₄	16.6	X	90.00771	167.16784	322.36333</							

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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>		
194401	2001	VS ₂₄	16.7	X	153.34882	38.07323	21.22170	2.66690	0.1546581	0.27270820	2.3550706	21	4 11.5	20.1
194402	2001	VK ₂₆	16.2	X	113.60991	322.49009	43.28033	5.72432	0.2048179	0.26164037	2.4210265	21	—	—
194403	2001	VM ₂₇	16.5	X	219.29897	109.00164	219.09811	1.54694	0.2320612	0.27225681	2.3576729	21	2 17.5	20.4
194404	2001	VP ₃₀	16.6	X	190.14467	328.32025	30.93427	2.67001	0.2570101	0.27185563	2.3599918	21	3 6.9	20.7
194405	2001	VA ₃₃	16.7	X	192.09062	94.41890	286.07317	1.51643	0.1950841	0.27353618	2.3503157	21	3 30.9	20.5
194406	2001	VB ₃₃	16.2	X	271.95192	172.09511	258.68374	3.63495	0.1675914	0.28922862	2.2645150	21	9 1.6	18.9
194407	2001	VG ₃₃	16.9	X	158.29094	29.86455	37.69376	3.53950	0.2025595	0.27347449	2.3506691	21	4 30.6	20.5
194408	2001	VR ₃₅	16.1	X	103.50873	69.08860	60.97996	4.89795	0.1921264	0.27163585	2.3612646	21	5 24.9	19.2
194409	2001	VY ₃₅	16.5	X	189.39204	284.96719	63.49882	4.20815	0.2553913	0.27008277	2.3703081	21	2 22.5	20.6
194410	2001	VA ₃₈	17.4	X	182.29498	19.19998	90.35435	1.68558	0.1401157	0.28231915	2.3013137	21	7 16.5	20.7
194411	2001	VG ₄₀	16.5	X	166.75680	306.27825	91.43339	5.54909	0.1434597	0.27154146	2.3618118	21	3 30.6	20.0
194412	2001	VJ ₄₆	15.4	X	140.69833	175.74348	251.66488	12.23282	0.1481956	0.26926679	2.3750943	21	4 3.4	19.1
194413	2001	VS ₄₆	16.1	X	266.56102	163.43129	247.15551	4.49454	0.1801453	0.28479346	2.2879650	21	7 24.4	19.1
194414	2001	VZ ₅₀	16.3	X	275.38352	19.06686	261.54831	10.76493	0.0458580	0.27225273	2.3576964	21	2 19.2	19.6
194415	2001	VN ₅₃	16.6	X	189.30878	138.40261	269.06730	5.32806	0.21102700	0.27765073	2.3270381	21	4 29.2	20.0
194416	2001	VO ₅₆	16.7	X	133.49879	140.04825	263.19440	5.20009	0.1051185	0.26914470	2.3758125	21	2 18.5	19.8
194417	2001	VW ₅₆	17.5	X	198.32764	92.29894	320.05296	4.83779	0.1523646	0.27965507	2.3159059	21	5 15.1	21.2
194418	2001	VG ₅₇	17.1	X	95.22231	343.96766	138.44527	2.74665	0.1458976	0.27260538	2.3556627	21	4 26.7	19.8
194419	2001	VH ₅₉	16.4	X	146.59383	153.91256	263.03108	3.71359	0.1288954	0.27237338	2.3570001	21	3 27.5	19.6
194420	2001	VY ₅₉	16.7	X	272.38257	350.39081	330.10726	4.88303	0.2328218	0.28006287	2.3136573	21	3 22.5	20.3
194421	2001	VM ₆₁	17.0	X	149.23396	107.21132	0.72448	5.29538	0.1843437	0.27722191	2.3294373	21	6 12.2	20.7
194422	2001	VR ₆₁	17.0	X	188.94660	131.33733	267.69395	6.57920	0.1029411	0.27584669	2.3371730	21	4 16.4	20.4
194423	2001	VC ₆₂	16.9	X	190.16960	66.58053	29.34784	7.17631	0.1233890	0.28222289	2.3018369	21	7 7.3	20.3
194424	2001	VV ₆₂	16.6	X	286.83848	277.30727	40.27656	12.32711	0.1339833	0.27983102	2.3149351	21	4 19.5	19.5
194425	2001	VK ₆₅	16.5	X	90.29254	141.22865	293.74993	3.28721	0.2130305	0.26540066	2.3981042	21	2 20.2	18.9
194426	2001	VF ₆₆	16.6	X	205.43196	44.50030	324.78338	1.71530	0.2295649	0.27528641	2.3403431	21	3 28.4	20.4
194427	2001	VZ ₆₈	17.4	X	195.17417	109.81667	330.30414	1.29099	0.1919756	0.28117102	2.3075742	21	6 18.8	21.0
194428	2001	VY ₇₀	16.6	X	80.35369	68.54707	30.78194	6.92783	0.0932335	0.26682551	2.3895593	21	2 24.3	19.3
194429	2001	VR ₇₁	16.7	X	69.96212	199.34384	332.19047	3.76902	0.0557993	0.27845091	2.3225779	21	5 11.5	19.4
194430	2001	VO ₇₇	16.9	X	210.88923	330.42921	93.92870	4.93646	0.2110558	0.28228648	2.3014913	21	6 11.9	20.6
194431	2001	VP ₈₀	16.5	X	117.95496	61.41391	28.81156	6.77743	0.1123131	0.27235122	2.3571280	21	4 7.2	19.3
194432	2001	VJ ₈₂	16.5	X	109.89737	115.86513	347.69708	6.42765	0.1653945	0.27432416	2.3458127	21	4 19.4	19.5
194433	2001	VY ₈₂	17.2	X	196.23106	115.99566	305.19478	3.64126	0.1502778	0.28080942	2.3059548	21	5 25.6	20.9
194434	2001	VH ₈₃	17.3	X	122.52017	118.74448	307.71584	1.75477	0.2048491	0.27021487	2.3695355	21	3 23.4	20.5
194435	2001	VF ₈₆	16.5	X	28.78520	237.09632	284.54231	4.59453	0.0914841	0.26815568	2.3816506	21	2 20.0	19.0
194436	2001	VQ ₈₇	16.9	X	180.11580	311.27390	82.92282	6.37956	0.2367985	0.27574959	2.3377216	21	4 11.9	20.9
194437	2001	VP ₈₈	17.1	X	213.26114	286.18000	111.23107	3.46302	0.1715776	0.27992238	2.3144313	21	5 12.2	20.7
194438	2001	VF ₁₀₀	17.1	X	280.87941	25.42385	312.15820	2.14365	0.1843855	0.28144085	2.3060991	21	4 29.5	20.1
194439	2001	VD ₁₀₆	16.9	X	125.13697	157.03068	245.72948	6.73670	0.1065315	0.26801650	2.3824750	21	2 7.1	20.0
194440	2001	VU ₁₀₇	17.1	X	120.16686	112.70688	2.55246	3.38986	0.1382681	0.27410396	2.3470689	21	5 16.4	20.1
194441	2001	VV ₁₀₈	17.6	X	105.17023	184.19701	240.65454	2.34975	0.1610656	0.26684207	2.3894604	21	2 20.1	20.4
194442	2001	VB ₁₁₀	17.5	X	104.09664	76.70164	22.01464	1.69108	0.1424283	0.26988125	2.3714879	21	4 4.4	20.4
194443	2001	VN ₁₁₀	16.3	X	267.42519	104.42878	269.29975	5.24699	0.1266024	0.28337360	2.2956013	21	6 11.7	19.2
194444	2001	VY ₁₁₁	16.7	X	108.72323	35.77168	58.78917	4.68529	0.1235263	0.26994696	2.3711030	21	4 3.9	19.6
194445	2001	VX ₁₁₁	16.9	X	176.92204	343.22425	53.18624	8.00485	0.0945166	0.27292454	2.3538258	21	4 5.5	20.3
194446	2001	VX ₁₁₂	17.6	X	142.99801	70.93151	353.87194	2.39135	0.1800379	0.27146761	2.3622401	21	4 9.8	21.0
194447	2001	VP ₁₁₃	16.7	X	33.95615	83.94147	52.42281	2.07825	0.1268267	0.26422934	2.4051861	21	1 26.1	18.8
194448	2001	VA ₁₁₄	16.0	X	232.87972	207.74163	289.53444	3.88653	0.2078655	0.24080923	2.5587074	21	10 2.3	20.0
194449	2001	VP ₁₁₅	17.4	X	149.92887	70.76944	7.38300	2.46643	0.1607774	0.27353116	2.3503444	21	5 3.1	20.9
194450	2001	VF ₁₁₆	16.7	X	197.97401	327.39293	33.94877	4.93957	0.1661764	0.27186699	2.3599261	21	3 14.3	20.4
194451	2001	VC ₁₁₇	16.2	X	127.12751	125.81690	345.95028	2.31353	0.1406420	0.27359649	2.3499703	21	5 20.6	19.4
194452	2001	VP ₁₁₇	17.2	X	83.22585	125.02290	316.17651	1.40626	0.1917754	0.26415644	2.4056286	21	2 14.7	19.6
194453	2001	VK ₁₁₇	17.1	X	189.90984	120.34739	279.11342	3.71147	0.2276116	0.27533148	2.3400877	21	4 21.6	21.1
194454	2001	VW ₁₁₇	16.3	X	130.17841	3.40904	46.31847	5.92301	0.2523125	0.26770020	2.3843514	21	3 19.8	19.8
194455	2001	VO ₁₂₀	16.3	X	191.44850	2.88462	71.50881	5.81917	0.1898942	0.27744969	2.3281621	21	6 7.9	19.9
194456	2001	VT ₁₂₀	16.4	X	225.23116	13.48577	41.58662	4.31446	0.2173534	0.28026012	2.3125715	21	6 11.8	20.1
194457	2001	VX ₁₂₃	17.1	X	119.31532	275.51957	172.21050	3.75890	0.1668355	0.27088549	2.3656231	21	4 13.7	20.2
194458	2001	VX ₁₂₄	16.6	X	161.98271	123.30777	306.64103	5.72365	0.0819466	0.27470573	2.3436400	21	4 26.3	19.9
194459	2001	WE ₂	16.6	X	78.30023	158.25729	313.76008	4.11022	0.3730599	0.26373487	2.4081914	21	4 23.2	19.3
194460	2001	WO ₂	17.0	X	242.77803	117.96992	215.50459	10.44404	0.2808710	0.27736760	2.3286215	21	3 9.4	21.2
194461	2001	WF ₃	17.0	X	197.36793	146.67294	223.00936	0.90081	0.1753951	0.27518808	2.3409006	21	3 21.9	20.7
194462	2001	WZ ₃	17.8	X	126.13290	204.92222	320.92031	0.47332	0.1639022	0.27068351	2.3667998	21	4 4.3	21.0
194463	2001	WL ₇	16.4	X	359.69619	303.65082	206.81960	3.34227	0.1074123	0.26265357	2.4147963	21	—	—
194464	2001	WU ₉	16.4	X	64.82734	272.52500	193.57332	6.27488	0.1771864	0.26433967	2.4045168	21	2 11.8	18.6
194465	2001	WJ ₁₁	17.1	X	231.11133	299.81313	81.04209	6.00245	0.2207750	0.28043014	2.3116368	21	5 5.4	20.9
194466	2001	WO ₁₁	16.8	X	118.63987	345.13659	82.84097	5.40057	0.1582947	0.26899607	2.3766876	21	3 18.3	19.9
194467	2001	WU ₁₁	17.0	X	139.73800	359.24916	144.71775	3.33608	0.1065020	0.28080147	2.3095984	21	7 15.7	20.1
194468	2001	WY ₁₁	17.2	X	197.72793	196.34337	177.36780	2.93938	0.1528369	0.27405971	2.3473215	21	3 27.6	20.6
194469	2001	WB ₁₄	16.3	X	178.66425	196.67964	241.31718	6.50353	0.2132592	0.27528086	2.3403746	21	6 1.7	20.2
194470														

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
194481	2001	WA ₃₇	17.1	X	317.83572	100.86670	221.26138	9.04011	0.1802481	0.28565108	2.2833832	21	6 3.5	19.4
194482	2001	WG ₃₉	16.3	X	190.28458	296.88152	95.88740	10.35886	0.2358061	0.27467468	2.3438166	21	4 20.2	20.4
194483	2001	WR ₄₅	17.0	X	212.13666	139.66355	234.68849	2.65800	0.1363673	0.27656450	2.3331272	21	4 10.2	20.5
194484	2001	WT ₄₆	17.4	X	51.20319	247.08657	236.28221	2.30135	0.1703930	0.26481377	2.4016461	21	2 9.5	19.3
194485	2001	WW ₄₆	16.7	X	295.35372	344.44503	250.32125	5.57832	0.0913569	0.26657354	2.3910648	21	1 14.4	20.0
194486	2001	WN ₄₇	16.0	X	61.02339	85.83977	352.83998	7.30635	0.1440531	0.25863067	2.4397727	21	—	—
194487	2001	WM ₅₃	16.4	X	21.24473	324.88048	231.41321	6.09795	0.0658710	0.27425851	2.3461871	21	3 29.1	18.9
194488	2001	WC ₅₅	16.4	X	240.11257	46.78693	232.99757	6.36797	0.0936600	0.26766977	2.3845321	21	1 10.0	19.9
194489	2001	WS ₅₅	17.1	X	205.37470	3.71999	37.33084	3.69554	0.1945239	0.27894770	2.3198195	21	5 7.8	20.7
194490	2001	WJ ₅₉	16.6	X	269.92514	28.53245	265.85366	2.60209	0.1290490	0.27399367	2.3476987	21	2 25.6	19.8
194491	2001	WQ ₆₀	17.3	X	93.94898	101.74883	19.65447	1.15795	0.1620641	0.27129176	2.3632608	21	4 24.8	20.1
194492	2001	WV ₆₃	17.3	X	232.36714	75.61168	274.60691	1.42873	0.2041433	0.27648149	2.3335942	21	3 27.2	20.9
194493	2001	WY ₆₄	17.5	X	173.18089	234.36981	209.44018	2.64504	0.1505431	0.27980194	2.3150955	21	6 2.8	21.0
194494	2001	WN ₇₂	18.1	X	166.40299	202.94851	181.89395	1.84570	0.2212814	0.27181896	2.3602040	21	3 16.1	22.0
194495	2001	WS ₇₃	16.8	X	358.44296	46.53687	98.44450	2.50315	0.1216188	0.26333476	2.4106302	21	—	—
194496	2001	WY ₇₇	17.4	X	167.73137	41.39649	73.54657	1.35915	0.1465060	0.28063781	2.3104962	21	7 8.9	20.8
194497	2001	WO ₈₀	17.0	X	173.83882	223.96256	168.62560	1.91599	0.0790246	0.27193488	2.3595333	21	3 24.0	20.2
194498	2001	WO ₈₁	16.7	X	354.41135	93.21679	80.92570	2.54224	0.1255239	0.26375867	2.4080466	21	1 10.2	19.3
194499	2001	WX ₈₁	17.2	X	58.82825	8.45139	115.12374	2.24043	0.1308226	0.26601993	2.3943811	21	2 23.9	19.5
194500	2001	WF ₈₂	16.5	X	309.65963	165.12920	78.34919	5.11958	0.1488132	0.27088199	2.3656435	21	2 6.2	19.5
194501	2001	WJ ₈₅	15.0	X	168.36466	303.65284	152.68186	1.57575	0.2040108	0.12626354	3.9350545	21	6 18.4	21.4
194502	2001	WE ₈₇	16.8	X	237.25712	68.36156	267.77056	4.06326	0.1865038	0.27705747	2.3303589	21	3 13.1	20.6
194503	2001	WM ₈₇	17.2	X	106.62896	56.48484	359.78168	2.40139	0.1854299	0.26644722	2.3918205	21	2 16.4	19.8
194504	2001	WX ₈₇	16.3	X	55.40756	190.43860	1.83511	4.33036	0.1686724	0.27544270	2.3394577	21	6 6.5	18.5
194505	2001	WO ₈₈	17.1	X	279.09969	323.87285	17.47678	2.91339	0.2309686	0.28231870	2.3013161	21	4 26.9	20.1
194506	2001	WD ₉₀	16.8	X	254.80960	327.88327	20.48302	7.15943	0.1343743	0.27946731	2.3169431	21	4 20.4	20.0
194507	2001	WR ₉₂	16.9	X	61.19322	10.63933	126.18380	2.25941	0.0641416	0.27089888	2.3655452	21	3 12.2	19.4
194508	2001	WF ₉₉	17.4	X	152.81083	278.97995	129.57822	4.33687	0.2034699	0.27137609	2.3627121	21	4 3.4	21.0
194509	2001	WZ ₉₉	17.3	X	73.30999	281.57793	173.31662	1.42886	0.1505055	0.26447164	2.4055363	21	2 10.1	19.6
194510	2001	WY ₁₀₀	17.6	X	280.44325	291.89514	52.21991	3.23011	0.1513466	0.28222516	2.3018246	21	5 13.9	20.6
194511	2001	WY ₁₀₁	17.1	X	202.26283	163.27195	224.61093	1.68383	0.0546448	0.27561976	2.3384557	21	4 18.7	20.1
194512	2001	XR	14.6	X	201.13807	264.40668	150.09042	2.22906	0.1989649	0.12553314	3.9503035	21	5 27.4	20.9
194513	2001	XR ₂	15.1	X	272.12941	69.29530	304.96502	20.88866	0.3142146	0.28356105	2.2945895	21	5 20.7	19.1
194514	2001	XS ₆	17.5	X	128.72242	260.52724	195.56334	2.04890	0.1661732	0.27406566	2.3472876	21	5 5.1	20.8
194515	2001	XV ₆	15.5	X	66.24283	116.88630	70.88035	22.75439	0.3311988	0.26965934	2.3727887	21	7 20.2	18.8
194516	2001	XD ₈	17.3	X	151.98275	317.57348	98.07520	2.32325	0.1654224	0.27097092	2.3651258	21	4 7.7	20.7
194517	2001	XZ ₈	15.7	X	136.10916	141.43353	332.46311	4.02123	0.1046839	0.27536602	2.3398920	21	5 29.8	18.9
194518	2001	XC ₉	16.5	X	192.56602	5.68925	35.74338	6.50441	0.1226190	0.27515760	2.3410734	21	4 26.6	19.7
194519	2001	XD ₁₁	16.4	X	121.48676	296.88173	86.37374	7.82352	0.1245236	0.26248219	2.4158473	21	1 14.7	19.4
194520	2001	XL ₁₂	16.3	X	132.19707	346.79952	40.47083	7.03954	0.1241619	0.26502068	2.4003995	21	2 4.7	19.5
194521	2001	XA ₁₃	16.3	X	140.45244	358.73694	14.59123	8.85882	0.1197845	0.26296566	2.4128853	21	1 27.8	19.6
194522	2001	XF ₁₄	16.4	X	68.78417	28.81620	25.35592	7.00655	0.1498505	0.25800801	2.4436964	21	—	—
194523	2001	XC ₁₇	15.9	X	197.33800	339.44735	55.39281	7.46905	0.1433364	0.27447060	2.3449783	21	4 24.6	19.5
194524	2001	XO ₁₇	16.2	X	206.03403	15.00370	353.57280	6.04225	0.1022401	0.27161723	2.3613725	21	3 27.9	19.5
194525	2001	XV ₁₇	16.5	X	183.94368	48.45856	46.37503	5.68144	0.1378440	0.27863845	2.3215356	21	6 28.3	20.0
194526	2001	XJ ₂₀	16.5	X	106.37560	353.19449	53.29848	6.94808	0.1340075	0.26183044	2.4198547	21	1 27.9	19.4
194527	2001	XX ₂₀	15.6	X	68.99437	102.58612	338.68380	6.26318	0.1093117	0.26019978	2.4299542	21	1 11.9	18.1
194528	2001	XR ₂₅	16.1	X	228.79591	46.15885	64.14166	6.91281	0.1497545	0.28387670	2.2928882	21	9 8.9	19.3
194529	2001	XF ₃₂	16.8	X	152.16640	161.01991	232.66932	5.51852	0.1094925	0.26984778	2.3716840	21	2 28.8	20.1
194530	2001	XQ ₃₄	16.0	X	152.47601	40.51774	326.21240	9.34710	0.1648952	0.26596399	2.3947168	21	2 4.8	19.5
194531	2001	XD ₃₇	16.6	X	113.78948	79.42184	357.25491	7.34446	0.0815873	0.26794354	2.3829075	21	3 9.6	19.4
194532	2001	XD ₄₀	16.5	X	190.94481	68.61517	7.88322	6.69989	0.2053467	0.27814827	2.3242623	21	6 9.3	20.4
194533	2001	XP ₄₀	15.8	X	328.16934	225.46445	348.33039	9.50474	0.0499226	0.26449479	2.4035766	21	2 8.5	18.7
194534	2001	XT ₄₁	16.2	X	108.69638	10.61182	20.71327	8.07996	0.1175662	0.26039206	2.4285759	21	1 7.6	19.2
194535	2001	XN ₄₅	16.2	X	18.73091	122.21549	348.84645	8.15381	0.0832210	0.25612386	2.4556663	21	—	—
194536	2001	XO ₄₇	16.4	X	73.84483	82.08789	54.41603	8.72240	0.2393098	0.26497939	2.4006452	21	4 30.8	18.8
194537	2001	XB ₄₉	16.6	X	84.33090	43.66264	72.86659	2.36525	0.1376308	0.26930823	2.3748506	21	3 31.5	19.1
194538	2001	XC ₄₉	16.8	X	87.46249	101.84165	67.97922	3.94014	0.0991618	0.27724852	2.3292882	21	6 13.8	19.6
194539	2001	XP ₄₉	17.0	X	167.02975	324.86286	73.35392	4.84385	0.2351783	0.27272925	2.3549493	21	4 5.5	20.9
194540	2001	XP ₅₁	17.1	X	129.90663	280.78237	75.75070	2.67411	0.1773440	0.26229603	2.4169903	21	—	—
194541	2001	XU ₅₂	16.5	X	201.59563	150.82187	190.15192	8.92205	0.2344924	0.26986147	2.3716038	21	2 18.1	20.6
194542	2001	XZ ₆₀	16.6	X	191.51041	315.49588	84.40509	8.12877	0.1128653	0.27457090	2.3444072	21	4 26.7	20.1
194543	2001	XW ₆₃	16.2	X	273.76293	132.04348	261.94605	6.82086	0.1866081	0.28415275	2.2914030	21	7 9.5	19.0
194544	2001	XO ₆₅	16.6	X	94.66316	161.95325	271.73877	1.54369	0.1646554	0.26309475	2.4120960	21	2 18.4	19.2
194545	2001	XN ₆₆	16.4	X	71.63460	199.76920	248.09922	2.34750	0.1544304	0.26097162	2.4251608	21	1 28.5	18.6
194546	2001	XH ₆₇	16.9	X	143.52633	238.54577	248.25292	2.58724	0.1722497	0.27574766	2.3377326	21	7 1.3	20.4
194547	2001	XT ₆₇	16.6	X	135.90430	321.70021	113.25904	2.25304	0.1608248	0.26890791	2.3772070	21	4 15.5	20.0
194548	2001	XC ₇₂	16.2	X	148.64553	327.61553	161.54003	7.48262	0.2192471	0.27743900	2.3282220	21	7 11.3	20.1
194549	2001	XE ₇₂	16.8	X	150.47875	350.33745	97.26602	6.46534	0.1381570	0.27526927	2.3404403	21	5 16.2	20.2
194550	2001	XW ₇₃	16.8	X	93.14384	31								

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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>		
194561	2001	<i>XF</i> ₈₈	16.4	X	111.22894	331.57736	97.23892	6.18285	0.2092060	0.26463705	2.4027151	21	3 18.4	19.5
194562	2001	<i>XS</i> ₈₉	16.8	X	92.65437	94.82558	24.92066	1.73376	0.1414982	0.27106714	2.3645661	21	4 17.1	19.3
194563	2001	<i>XU</i> ₈₉	16.5	X	311.79212	63.12732	266.04961	6.83827	0.1415250	0.28465496	2.2887071	21	6 10.2	18.8
194564	2001	<i>XY</i> ₈₉	18.0	X	147.49988	94.90086	332.57605	1.05128	0.1674317	0.27296227	2.3536089	21	4 16.8	21.3
194565	2001	<i>XC</i> ₉₁	17.3	X	136.59353	88.61039	20.79895	2.71413	0.1592246	0.27544399	2.3394505	21	5 30.2	20.6
194566	2001	<i>XH</i> ₉₁	16.8	X	69.16622	91.39342	40.25218	2.88612	0.1637677	0.26856769	2.3792142	21	3 31.6	19.0
194567	2001	<i>XR</i> ₉₁	17.2	X	129.70729	30.32847	56.42247	2.26693	0.1526459	0.27216364	2.3582109	21	4 22.3	20.4
194568	2001	<i>XT</i> ₉₁	16.9	X	213.99253	89.17693	261.73271	3.88651	0.2209648	0.27496040	2.3421926	21	3 11.2	21.0
194569	2001	<i>XQ</i> ₉₂	17.2	X	180.53880	289.48319	66.38150	2.87352	0.2608286	0.27003050	2.3706139	21	2 22.2	21.1
194570	2001	<i>XS</i> ₉₂	16.7	X	282.94577	300.21650	54.04545	6.89778	0.1390369	0.28319755	2.2965525	21	6 2.3	19.5
194571	2001	<i>XL</i> ₉₃	16.5	X	47.50440	187.18708	355.25236	2.07576	0.1535205	0.27189047	2.3597902	21	5 3.6	18.6
194572	2001	<i>XR</i> ₉₄	16.3	X	321.17057	133.24648	53.72493	6.82822	0.0670418	0.26195748	2.4190723	21	—	—
194573	2001	<i>XY</i> ₉₄	16.7	X	143.29022	2.28643	57.22811	5.78931	0.1383710	0.27078722	2.3661954	21	4 1.9	20.0
194574	2001	<i>XH</i> ₉₅	17.3	X	125.36968	39.11262	67.38401	3.14705	0.1829860	0.27291023	2.3539081	21	5 17.3	20.4
194575	2001	<i>XR</i> ₉₅	16.9	X	181.13878	320.91895	42.94848	2.13132	0.1974189	0.27010970	2.3701505	21	3 2.9	20.7
194576	2001	<i>XP</i> ₉₇	16.8	X	199.45692	339.67829	63.27819	2.82845	0.1954143	0.27639815	2.3340633	21	5 5.8	20.7
194577	2001	<i>XR</i> ₉₈	16.4	X	126.17708	36.90091	40.43774	3.21323	0.1415622	0.26913831	2.3758501	21	4 4.6	19.6
194578	2001	<i>XQ</i> ₉₈	16.5	X	304.51349	311.00867	68.12417	7.76187	0.1133146	0.28750080	2.2735788	21	8 24.9	18.8
194579	2001	<i>XX</i> ₁₀₁	16.1	X	236.11728	114.47109	304.57217	5.03219	0.0954327	0.28039561	2.3118265	21	7 10.7	19.1
194580	2001	<i>XY</i> ₁₀₂	16.9	X	17.82755	240.63114	93.45649	8.77436	0.2439462	0.29424489	2.2387044	21	11 25.0	19.1
194581	2001	<i>XK</i> ₁₀₄	15.4	X	302.91168	37.36454	257.99757	27.00998	0.1775842	0.27707518	2.3302596	21	3 19.5	19.2
194582	2001	<i>XG</i> ₁₀₆	17.1	X	138.85361	152.79465	228.05621	2.55305	0.1369364	0.26595427	2.3947751	21	2 2.2	20.3
194583	2001	<i>XK</i> ₁₀₇	16.7	X	14.10378	301.67872	209.06746	1.92739	0.1218872	0.26242894	2.4161741	21	1 10.3	19.1
194584	2001	<i>XU</i> ₁₀₇	16.7	X	100.88187	99.80531	264.72368	3.38178	0.2035277	0.25843173	2.4410246	21	—	—
194585	2001	<i>XS</i> ₁₀₈	16.3	X	89.50134	40.39853	29.48833	4.79032	0.1697612	0.26166202	2.4208930	21	2 8.1	18.8
194586	2001	<i>XK</i> ₁₁₀	17.6	X	191.19129	176.36970	189.35675	1.99469	0.2589545	0.27329853	2.3516780	21	3 14.1	21.7
194587	2001	<i>XD</i> ₁₁₁	16.4	X	50.43212	241.69301	222.65776	5.86338	0.0165780	0.26330125	2.4108347	21	1 7.5	19.4
194588	2001	<i>XH</i> ₁₁₁	16.6	X	188.24792	348.52913	59.12459	7.70882	0.1048707	0.27445970	2.3450404	21	5 1.4	19.9
194589	2001	<i>XV</i> ₁₁₄	16.6	X	80.37524	127.36203	346.53172	3.70178	0.1096516	0.26579393	2.3957381	21	3 15.7	19.3
194590	2001	<i>XA</i> ₁₁₇	16.1	X	359.63506	71.37994	44.21048	6.44560	0.0930648	0.25348455	2.4726827	21	—	—
194591	2001	<i>XE</i> ₁₁₇	16.5	X	71.83192	27.64155	66.15181	5.31198	0.1642499	0.26106571	2.4245780	21	2 11.3	18.8
194592	2001	<i>XH</i> ₁₁₇	16.3	X	193.32277	51.44916	323.79116	6.67978	0.2292999	0.27012277	2.3700741	21	3 24.6	20.4
194593	2001	<i>XL</i> ₁₁₈	16.0	X	191.38533	326.78604	69.40544	5.57189	0.2509707	0.27218274	2.3581006	21	4 22.5	20.1
194594	2001	<i>XW</i> ₁₁₈	15.6	X	219.16666	56.01597	358.49042	5.83433	0.2636708	0.27688958	2.3313008	21	6 2.8	19.7
194595	2001	<i>XB</i> ₁₁₉	16.1	X	0.13249	83.87022	106.02388	6.03727	0.1423368	0.25554635	2.4593647	21	—	—
194596	2001	<i>XG</i> ₁₂₀	16.6	X	236.83161	233.88298	56.39277	3.41398	0.1795234	0.27773544	2.3265650	21	3 22.1	20.2
194597	2001	<i>XL</i> ₁₂₁	17.1	X	88.14889	217.20486	224.13956	4.11258	0.1135765	0.26629378	2.3927392	21	2 8.9	19.7
194598	2001	<i>XQ</i> ₁₂₄	16.6	X	38.36671	91.45061	84.45670	5.17182	0.0669942	0.27315376	2.3525088	21	4 2.6	19.1
194599	2001	<i>XT</i> ₁₂₄	17.0	X	72.19253	21.50152	87.91507	2.29325	0.1427250	0.26764259	2.3846935	21	3 1.2	19.2
194600	2001	<i>XW</i> ₁₂₇	16.8	X	104.03388	272.04030	105.27255	2.21612	0.2073506	0.26123726	2.4235164	21	—	—
194601	2001	<i>XC</i> ₁₂₉	17.2	X	147.47464	263.96111	190.41680	1.81391	0.1811045	0.27475916	2.3433362	21	5 24.2	20.8
194602	2001	<i>XR</i> ₁₂₉	16.7	X	101.01987	58.91773	81.06440	1.75834	0.1603024	0.27328227	2.3517712	21	5 30.9	19.6
194603	2001	<i>XX</i> ₁₂₉	17.2	X	232.77495	286.82566	86.88434	1.44455	0.2204169	0.27908910	2.3190359	21	4 26.6	20.8
194604	2001	<i>XU</i> ₁₃₀	16.7	X	89.77828	266.93330	215.06230	3.07004	0.1440640	0.26975565	2.3722239	21	4 16.4	19.1
194605	2001	<i>XX</i> ₁₃₀	16.8	X	45.88918	272.41525	220.38919	5.71287	0.0655414	0.26594847	2.3948099	21	2 7.5	19.5
194606	2001	<i>XG</i> ₁₃₁	16.3	X	330.14657	339.86708	232.22257	4.21497	0.1395839	0.26562294	2.3967662	21	1 21.9	19.3
194607	2001	<i>XZ</i> ₁₃₁	16.9	X	76.23513	56.26698	74.56013	2.26227	0.1366931	0.26890981	2.3771958	21	4 7.8	19.2
194608	2001	<i>XF</i> ₁₃₃	17.2	X	83.63201	345.67009	149.84878	2.75819	0.1891534	0.26987713	2.3715120	21	5 5.8	19.9
194609	2001	<i>XF</i> ₁₃₃	17.3	X	125.24594	354.27769	83.25067	2.37779	0.1568273	0.26984609	2.3716938	21	4 6.1	20.4
194610	2001	<i>XG</i> ₁₃₅	17.3	X	164.69127	175.86672	202.83075	1.87426	0.2129962	0.26958273	2.3732382	21	3 6.2	21.1
194611	2001	<i>XW</i> ₁₃₅	16.8	X	139.67025	274.91974	232.19221	6.51505	0.0865779	0.27990856	2.3145075	21	7 17.1	20.0
194612	2001	<i>XF</i> ₁₃₆	17.4	X	250.22420	145.69287	215.01446	1.99581	0.2387948	0.27985199	2.3148194	21	4 23.6	21.1
194613	2001	<i>XE</i> ₁₃₉	17.3	X	170.94835	296.26505	84.01013	2.28277	0.1994911	0.27021244	2.3695497	21	3 14.6	21.1
194614	2001	<i>XD</i> ₁₄₀	17.2	X	137.27542	37.81980	112.14550	0.30480	0.1453868	0.27858894	2.3218107	21	7 24.4	20.7
194615	2001	<i>XB</i> ₁₄₃	16.6	X	348.78883	348.68309	173.09251	0.94500	0.1370009	0.25995150	2.4315012	21	—	—
194616	2001	<i>XN</i> ₁₄₇	17.0	X	140.37776	230.62115	200.24292	2.04593	0.1677611	0.27075194	2.3664009	21	4 14.5	20.4
194617	2001	<i>XU</i> ₁₄₇	17.3	X	197.10826	204.22432	194.01578	1.76323	0.2065474	0.27567857	2.3381231	21	4 27.6	21.0
194618	2001	<i>XV</i> ₁₄₇	16.9	X	92.59691	184.81166	233.87338	3.02087	0.1666457	0.26267153	2.4146863	21	1 25.0	19.5
194619	2001	<i>XQ</i> ₁₄₉	16.5	X	127.55111	355.61877	101.08262	2.29274	0.1540381	0.27140230	2.3626190	21	5 3.8	19.8
194620	2001	<i>XW</i> ₁₄₉	16.6	X	209.49308	80.05314	261.81063	4.83554	0.1928122	0.27019441	2.3696551	21	2 24.7	20.7
194621	2001	<i>XP</i> ₁₅₀	16.7	X	210.90066	259.87225	93.60286	6.80991	0.2469222	0.27287686	2.3541000	21	3 17.7	20.8
194622	2001	<i>XE</i> ₁₅₁	16.8	X	46.59892	18.98923	123.72863	1.29096	0.1466324	0.26486720	2.4013231	21	3 1.9	18.8
194623	2001	<i>XG</i> ₁₅₁	17.0	X	37.02234	238.58741	252.44488	3.05450	0.1678208	0.26206531	2.4184087	21	1 22.1	19.0
194624	2001	<i>XV</i> ₁₅₂	17.5	X	214.08504	213.29795	180.85803	2.47664	0.2129491	0.27760007	2.3273213	21	5 7.1	21.2
194625	2001	<i>XM</i> ₁₅₄	16.1	X	225.56636	93.25052	256.61276	4.05201	0.2597364	0.27433472	2.3457525	21	3 18.5	20.2
194626	2001	<i>XR</i> ₁₅₄	17.3	X	146.19986	174.45835	283.81050	0.47750	0.1553387	0.27387685	2.3483663	21	5 25.6	20.8
194627	2001	<i>XV</i> ₁₅₆	16.9	X	146.51345	209.51527	269.24102	1.29603	0.1626891	0.27568649	2.3380783	21	6 23.1	20.5
194628	2001	<i>XJ</i> ₁₅₇	16.7	X	146.11460	295.34650	100.26584	3.93954	0.1940013	0				

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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>		
194641	2001	<i>XS</i> ₁₆₉	16.6	X	127.92629	342.07057	144.14446	2.68113	0.1623037	0.27359656	2.3499699	21	6 13.6	20.0
194642	2001	<i>XH</i> ₁₇₀	17.8	X	158.66674	227.07410	209.46816	1.37685	0.1627593	0.27377959	2.3489224	21	5 10.3	21.3
194643	2001	<i>XO</i> ₁₇₂	17.0	X	20.96925	336.74819	156.57701	2.07616	0.1478989	0.25920795	2.4361489	21	—	—
194644	2001	<i>XS</i> ₁₇₂	16.2	X	20.43003	310.55358	224.53631	2.64740	0.0696339	0.26497259	2.4006863	21	2 27.4	18.7
194645	2001	<i>XX</i> ₁₇₂	16.3	X	185.03244	123.65406	245.11973	4.83884	0.1588977	0.26833070	2.3806149	21	3 7.5	20.0
194646	2001	<i>XE</i> ₁₇₃	17.0	X	140.29543	259.16780	160.44231	1.37908	0.1789983	0.26844298	2.3799510	21	4 1.4	20.4
194647	2001	<i>XV</i> ₁₇₃	16.3	X	164.42637	308.18307	100.67520	7.64868	0.1069494	0.26977582	2.3721057	21	4 10.2	19.8
194648	2001	<i>XQ</i> ₁₇₅	17.0	X	99.82367	244.02625	232.26803	1.29977	0.1392955	0.26822634	2.3812323	21	4 22.4	19.9
194649	2001	<i>XS</i> ₁₇₅	17.3	X	159.48878	334.64052	116.32053	2.90475	0.1660270	0.27404190	2.3474232	21	5 30.7	20.8
194650	2001	<i>XB</i> ₁₇₆	17.0	X	49.93793	333.84620	137.95115	2.89378	0.1680353	0.26063322	2.4272595	21	1 21.9	19.0
194651	2001	<i>XE</i> ₁₇₇	17.0	X	141.54542	210.30281	206.46174	2.30725	0.2231553	0.26851436	2.3795292	21	4 2.8	20.6
194652	2001	<i>XL</i> ₁₇₇	16.7	X	57.94149	276.07868	167.25551	2.32721	0.1968974	0.25904360	2.4371792	21	—	—
194653	2001	<i>XS</i> ₁₇₇	16.8	X	171.42360	142.70295	259.46359	6.27858	0.2265150	0.27117520	2.3639380	21	4 8.9	20.8
194654	2001	<i>XY</i> ₁₇₇	16.7	X	159.93433	125.28257	268.96189	4.01413	0.2376940	0.26881730	2.3777412	21	3 21.6	20.6
194655	2001	<i>XG</i> ₁₈₀	16.1	X	338.08842	27.39374	149.17871	4.08102	0.0957832	0.25802135	2.4436122	21	—	—
194656	2001	<i>XK</i> ₁₈₀	16.4	X	151.99323	315.15070	146.11003	4.03680	0.1332899	0.27360435	2.3499253	21	6 3.9	19.9
194657	2001	<i>XL</i> ₁₈₀	16.9	X	62.71076	1.98045	157.23374	3.17245	0.0858564	0.26783762	2.3835357	21	4 19.7	19.4
194658	2001	<i>XR</i> ₁₈₀	16.6	X	144.44841	157.03502	245.14834	5.22536	0.1064983	0.26544619	2.3978300	21	3 3.1	20.0
194659	2001	<i>XX</i> ₁₈₀	16.9	X	105.02684	319.43065	116.00683	5.37070	0.2041357	0.26482736	2.4015639	21	3 17.5	19.8
194660	2001	<i>XA</i> ₁₈₁	16.4	X	9.89823	202.60161	253.87897	3.07811	0.1730840	0.25332375	2.4737289	21	—	—
194661	2001	<i>XH</i> ₁₈₁	16.7	X	82.60821	260.20417	260.24263	0.44987	0.1254776	0.27035228	2.3687325	21	5 28.6	19.3
194662	2001	<i>XL</i> ₁₈₃	16.8	X	98.20351	228.71519	218.96431	2.47467	0.1127375	0.26418267	2.4054694	21	3 6.3	19.7
194663	2001	<i>XP</i> ₁₈₄	16.7	X	110.18848	170.58955	272.37257	1.65694	0.1252358	0.26542053	2.3979845	21	3 18.8	19.5
194664	2001	<i>XV</i> ₁₈₅	16.9	X	114.24882	344.32963	143.43550	2.17126	0.1166574	0.27188493	2.3598223	21	5 25.1	20.0
194665	2001	<i>XN</i> ₁₈₆	17.2	X	136.00027	0.27468	89.13731	2.29935	0.1536261	0.27065770	2.3669503	21	5 3.5	20.6
194666	2001	<i>XL</i> ₁₈₇	16.5	X	359.92222	256.70078	242.84231	3.68392	0.1103160	0.25640756	2.4538546	21	—	—
194667	2001	<i>XB</i> ₁₉₀	16.6	X	96.85964	348.98802	164.46530	2.75521	0.1872226	0.27039921	2.3684584	21	6 17.8	19.6
194668	2001	<i>XL</i> ₁₉₀	16.3	X	200.04090	272.87731	117.04213	5.29223	0.2632687	0.27368260	2.3494773	21	4 21.9	20.4
194669	2001	<i>XW</i> ₁₉₂	16.3	X	104.99835	215.34291	270.58317	3.31208	0.1417253	0.26890924	2.3771992	21	5 12.9	19.4
194670	2001	<i>XN</i> ₁₉₃	15.6	X	9.34896	291.89874	257.73747	5.74615	0.1899660	0.26163524	2.4210581	21	2 17.3	17.7
194671	2001	<i>XT</i> ₁₉₃	16.8	X	86.91140	332.85473	130.38817	2.99728	0.1399694	0.26396671	2.4067812	21	3 17.7	19.3
194672	2001	<i>XA</i> ₁₉₄	16.7	X	240.55679	155.45586	261.14749	2.05712	0.1488343	0.28044815	2.3115378	21	7 5.9	19.7
194673	2001	<i>XQ</i> ₁₉₅	16.4	X	262.11160	126.16229	270.96054	3.13103	0.1432762	0.28073333	2.3099721	21	7 5.8	19.1
194674	2001	<i>XR</i> ₁₉₅	16.8	X	185.52481	152.94362	273.64999	3.62432	0.2136343	0.27451737	2.3447119	21	5 23.4	20.7
194675	2001	<i>XP</i> ₁₉₇	16.4	X	88.76973	342.06625	117.29586	10.30528	0.1416529	0.26315751	2.4117125	21	3 19.1	19.3
194676	2001	<i>XY</i> ₁₉₇	15.9	X	262.89226	128.84775	291.22611	5.22447	0.2097301	0.28380682	2.2932646	21	7 29.3	18.8
194677	2001	<i>XP</i> ₁₉₈	16.5	X	108.28894	298.06109	121.29965	6.45593	0.1239827	0.26216316	2.4178069	21	2 14.4	19.4
194678	2001	<i>XK</i> ₁₉₉	16.5	X	296.25577	316.15893	113.71229	7.56160	0.0743626	0.28891708	2.2661426	21	11 1.2	19.0
194679	2001	<i>XA</i> ₂₀₂	16.6	X	245.78337	331.00109	97.00966	6.30087	0.1425761	0.28259971	2.2997903	21	7 30.1	19.6
194680	2001	<i>XJ</i> ₂₀₄	16.9	X	118.85404	166.53657	329.30278	3.26102	0.1601234	0.27412163	2.3469680	21	6 15.9	20.1
194681	2001	<i>XX</i> ₂₀₄	16.9	X	49.96583	335.83248	165.26479	5.41071	0.1353526	0.26622819	2.3931322	21	3 4.6	19.1
194682	2001	<i>XG</i> ₂₁₄	16.1	X	227.02093	175.91427	253.33133	6.76216	0.1162349	0.28022378	2.3127715	21	7 10.3	19.3
194683	2001	<i>XA</i> ₂₁₅	15.9	X	117.83602	316.78713	118.53636	10.73017	0.1843396	0.26697292	2.3886797	21	4 2.4	19.3
194684	2001	<i>XR</i> ₂₁₅	17.1	X	76.27025	54.98246	74.16016	3.28802	0.1495580	0.26875273	2.3781220	21	4 8.0	19.5
194685	2001	<i>XQ</i> ₂₁₇	17.1	X	93.85321	298.17295	98.07313	1.66867	0.2132745	0.25869218	2.4393559	21	1 5.0	19.5
194686	2001	<i>XT</i> ₂₂₀	16.8	X	194.04400	64.71421	266.68741	5.52925	0.1508520	0.26800385	2.3825850	21	1 29.2	20.5
194687	2001	<i>XZ</i> ₂₂₀	17.5	X	130.86634	44.05663	64.31275	3.82304	0.1697571	0.27425018	2.3462346	21	5 24.2	20.9
194688	2001	<i>XK</i> ₂₂₁	16.2	X	324.23404	312.41964	243.28557	12.92838	0.1394207	0.26410954	2.4059134	21	—	—
194689	2001	<i>XE</i> ₂₂₄	16.9	X	234.79698	266.88969	65.15831	4.13119	0.2628286	0.27541003	2.3396428	21	3 7.8	20.9
194690	2001	<i>XY</i> ₂₂₄	16.6	X	232.27418	347.90209	326.79060	2.99028	0.0835640	0.26925863	2.3751423	21	2 16.1	19.7
194691	2001	<i>XU</i> ₂₂₅	17.1	X	40.17688	190.65148	270.19094	1.59601	0.1634798	0.26051500	2.4279937	21	—	—
194692	2001	<i>XS</i> ₂₂₆	16.8	X	210.45280	53.33781	342.52293	2.76469	0.1420514	0.27752957	2.3277154	21	5 6.2	20.2
194693	2001	<i>XB</i> ₂₂₇	16.4	X	71.20782	166.73955	49.34341	7.38203	0.0522542	0.28116861	2.3705874	21	7 22.2	19.2
194694	2001	<i>XF</i> ₂₂₇	17.3	X	221.97691	334.34447	53.81600	4.44349	0.1204967	0.27801749	2.3249911	21	5 10.0	20.6
194695	2001	<i>XW</i> ₂₂₇	16.9	X	109.25847	136.02314	1.35904	3.42923	0.1132512	0.27448032	2.3449230	21	5 30.2	19.9
194696	2001	<i>XG</i> ₂₂₈	16.9	X	259.46992	39.86826	305.03103	2.41373	0.1736918	0.27860204	2.3217379	21	4 16.5	20.2
194697	2001	<i>XO</i> ₂₂₉	16.3	X	143.36589	52.38627	266.14949	6.69997	0.0911474	0.25712546	2.4492850	21	—	—
194698	2001	<i>XD</i> ₂₃₁	16.6	X	193.45119	68.98243	275.10431	7.88741	0.1448760	0.26846602	2.3798148	21	2 11.5	20.4
194699	2001	<i>XZ</i> ₂₃₁	17.4	X	98.04102	76.44349	3.80097	1.21600	0.1452354	0.26614824	2.3936114	21	3 1.9	20.0
194700	2001	<i>XL</i> ₂₃₂	17.0	X	212.32517	21.65026	345.86506	2.30793	0.1984618	0.27481358	2.3430268	21	4 1.1	20.8
194701	2001	<i>XT</i> ₂₃₂	17.3	X	164.43583	48.18520	13.75079	2.78086	0.1894654	0.27370490	2.3493497	21	4 27.8	20.9
194702	2001	<i>XN</i> ₂₃₅	16.6	X	196.07771	92.48971	266.02525	3.08780	0.0598717	0.26906523	2.3762803	21	3 2.4	19.9
194703	2001	<i>XS</i> ₂₃₅	16.1	X	314.41265	162.08074	31.45584	3.01797	0.1610543	0.25891538	2.4379838	21	—	—
194704	2001	<i>XX</i> ₂₃₅	17.1	X	95.70482	78.66930	34.61240	1.93458	0.1350748	0.26900726	2.3766216	21	4 11.9	19.8
194705	2001	<i>XO</i> ₂₃₆	17.3	X	185.71564	48.47673	28.55433	2.67805	0.1840637	0.27779498	2.3262325	21	6 5.9	20.9
194706	2001	<i>XP</i> ₂₃₆	16.7	X	18.43060	174.81778	353.22758	2.33841	0.0881919	0.26537822	2.3982394	21	2 14.8	19.3
194707	2001	<i>XK</i> ₂₃₇	16.5	X	355.67932	118.36152	8.16438	2.85013	0.1231769	0.25648944	2.4533324	21	—	—
194708	2001	<i>XL</i> ₂₃₈	16.3	X	59.66781	46.19327	27.94182	1.69164	0.1671490					

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>		
194721	2001	XG ₂₄₈	16.0	X	189.83295	300.20473	286.93376	7.29330	0.0943912	0.24408064	2.5357932	21	12 22.9	19.5
194722	2001	XH ₂₅₀	16.5	X	69.83889	64.59298	94.09761	6.17469	0.1549476	0.26947114	2.3738934	21	5 12.4	19.0
194723	2001	XR ₂₅₃	16.6	X	157.79146	1.86705	96.00983	3.20421	0.1842894	0.27512853	2.3412384	21	6 7.8	20.1
194724	2001	XR ₂₅₇	14.2	X	129.02655	235.89314	241.54005	10.39630	0.1497215	0.12422170	3.9780577	21	6 6.2	20.2
194725	2001	XE ₂₅₈	16.4	X	345.90110	356.90322	215.14622	7.72865	0.0677756	0.26972621	2.3723965	21	2 22.2	19.3
194726	2001	XT ₂₅₈	17.4	X	186.34251	293.05414	132.30114	5.68612	0.1982752	0.27802907	2.3249266	21	5 24.1	21.3
194727	2001	XU ₂₅₉	16.4	X	276.12904	231.86514	88.38026	10.87078	0.2571036	0.28095407	2.3087620	21	3 30.9	20.1
194728	2001	XG ₂₆₃	17.3	X	198.43415	90.15116	238.30987	1.66717	0.2367823	0.26985293	2.3716538	21	2 2.4	21.4
194729	2001	XX ₂₆₃	17.2	X	155.64469	222.37539	230.51819	7.23437	0.1358676	0.27684973	2.3315245	21	5 27.2	20.5
194730	2001	XO ₂₆₅	16.9	X	197.66867	229.71847	146.36537	3.01880	0.1972238	0.27124343	2.3635415	21	4 1.2	20.7
194731	2001	YB	17.1	X	179.07096	214.83153	169.89348	2.18401	0.2119173	0.27112902	2.3642064	21	3 26.8	21.0
194732	2001	YL ₃	15.6	X	3.49979	33.04477	57.82177	13.68680	0.2037928	0.25145941	2.4859408	21	—	—
194733	2001	YH ₅	16.5	X	263.55342	280.24534	75.57206	6.64489	0.1630393	0.28449069	2.2895880	21	5 9.2	19.6
194734	2001	YS ₇	16.7	X	181.48104	13.53692	11.71739	5.55982	0.0889423	0.27163238	2.3612847	21	3 24.0	20.0
194735	2001	YQ ₈	16.7	X	172.90968	304.58244	93.96064	9.01223	0.1019313	0.26942066	2.3741899	21	4 6.5	20.3
194736	2001	YS ₁₄	16.7	X	218.18633	88.87607	241.06098	5.19676	0.2446649	0.27138350	2.3627282	21	2 17.3	20.8
194737	2001	YU ₁₆	17.4	X	129.14839	200.84298	265.07082	0.47493	0.1439712	0.27221126	2.3579359	21	5 16.0	20.4
194738	2001	YD ₁₈	16.8	X	134.37030	197.59448	271.30336	0.61279	0.1364673	0.27244758	2.3565722	21	5 25.3	20.2
194739	2001	YE ₂₀	17.6	X	99.10692	164.37947	285.14100	2.27107	0.1460842	0.26801653	2.3824749	21	3 14.8	20.4
194740	2001	YD ₂₀	16.5	X	34.99977	114.21981	341.75454	2.93979	0.1590094	0.25958360	2.4337981	21	—	—
194741	2001	YH ₂₀	14.9	X	111.03997	109.35047	13.66751	2.82906	0.1767346	0.12332866	3.9972383	21	5 28.4	20.8
194742	2001	YN ₂₀	14.7	X	134.55155	198.87216	279.29212	1.63171	0.1752593	0.12569265	3.9469606	21	6 14.1	20.9
194743	2001	YU ₂₁	14.6	X	130.43261	66.52581	69.01079	3.73295	0.1376006	0.12485390	3.9646176	21	6 27.7	20.5
194744	2001	YQ ₂₁	17.6	X	162.04566	71.68194	17.93668	3.09881	0.1919096	0.27672911	2.3322019	21	5 31.6	21.3
194745	2001	YF ₂₂	16.4	X	104.40750	2.45392	71.89209	2.35854	0.1594459	0.26605904	2.3941464	21	3 5.9	19.3
194746	2001	YJ ₂₅	16.1	X	342.91414	276.38326	304.48934	4.41738	0.1247672	0.26897558	2.3768083	21	2 23.8	18.8
194747	2001	YV ₂₅	17.7	X	161.37074	144.78897	294.79611	1.97012	0.1346325	0.27525261	2.3405347	21	5 14.5	21.2
194748	2001	YI ₂₈	17.1	X	232.71797	310.83822	37.78275	3.25045	0.2044313	0.27596861	2.3364846	21	3 27.3	20.7
194749	2001	YU ₃₁	16.6	X	134.73727	301.08495	22.69601	1.63418	0.1839487	0.25795738	2.4440162	21	—	—
194750	2001	YI ₃₃	17.0	X	34.06823	138.35820	359.70314	2.03019	0.1589417	0.26308381	2.4121629	21	1 28.1	18.9
194751	2001	YT ₃₈	16.6	X	93.15003	72.06806	32.59029	2.93571	0.0877240	0.26784522	2.3834906	21	3 20.1	19.2
194752	2001	YU ₄₁	16.3	X	260.28043	295.66419	321.05683	5.47541	0.0648466	0.25999142	2.4312524	21	1 7.6	19.6
194753	2001	YU ₄₃	16.6	X	336.57989	127.34507	32.59385	1.83750	0.1321430	0.25742542	2.4473820	21	—	—
194754	2001	YD ₄₄	16.7	X	155.30012	145.84435	317.43158	1.53124	0.1368207	0.27593206	2.3366909	21	6 9.5	20.1
194755	2001	YJ ₄₄	16.0	X	244.01175	221.02743	294.43560	5.64549	0.2648243	0.24263622	2.5458469	21	10 30.2	19.8
194756	2001	YZ ₄₄	16.5	X	162.07160	0.74013	48.42600	3.54605	0.1798068	0.27151384	2.3619720	21	4 10.2	20.0
194757	2001	YJ ₄₆	16.9	X	199.26894	325.82168	74.01903	5.87451	0.1946395	0.27587169	2.3370317	21	5 2.7	20.7
194758	2001	YX ₄₇	16.4	X	135.41065	86.35246	275.94194	4.49077	0.1101425	0.26110299	2.4243472	21	1 2.9	19.5
194759	2001	YC ₄₉	17.0	X	154.58668	60.54608	30.91235	2.96710	0.1877533	0.27447040	2.3449795	21	5 26.9	20.5
194760	2001	YU ₄₉	16.8	X	246.43976	352.81859	18.60366	2.00183	0.1827272	0.27893561	2.3198865	21	5 8.2	20.1
194761	2001	YF ₅₀	17.0	X	176.13277	151.31041	276.70569	3.32389	0.0575523	0.27459885	2.3442481	21	5 11.3	20.1
194762	2001	YK ₅₂	16.5	X	74.02687	245.05461	277.30548	3.90090	0.0305784	0.27261056	2.3556329	21	5 1.1	19.3
194763	2001	YS ₅₂	16.1	X	84.66018	150.71372	273.87319	7.32787	0.1030884	0.26142285	2.4223693	21	1 11.7	18.7
194764	2001	YV ₅₂	16.8	X	14.18048	180.07949	298.08845	1.73232	0.1586816	0.25732687	2.4480068	21	—	—
194765	2001	YK ₅₄	16.0	X	119.83013	100.69661	14.13526	2.24358	0.1647622	0.27156909	2.3616515	21	5 19.5	19.2
194766	2001	YI ₅₆	16.8	X	187.23595	295.94795	60.59548	6.27651	0.2405639	0.26998537	2.3708781	21	3 3.2	20.9
194767	2001	YR ₅₉	16.1	X	47.37841	6.97261	108.50674	3.76610	0.1289709	0.25957484	2.4338528	21	1 22.1	18.4
194768	2001	YZ ₅₉	17.0	X	136.18811	28.12313	29.83645	2.76778	0.2033928	0.26848898	2.3796791	21	3 28.8	20.3
194769	2001	YB ₆₄	17.1	X	103.69578	170.38485	286.08084	1.47504	0.1794176	0.26715876	2.3875718	21	4 5.9	20.1
194770	2001	YE ₆₄	16.6	X	146.43019	127.99565	337.97404	1.85593	0.1631442	0.27396452	2.3478652	21	6 5.6	20.0
194771	2001	YW ₆₄	17.3	X	132.16533	22.29279	41.71341	2.78679	0.1664404	0.26777857	2.3838861	21	3 28.3	20.4
194772	2001	YZ ₆₄	16.5	X	184.93251	99.69586	295.89028	2.76999	0.1611535	0.27205514	2.3588379	21	4 11.1	20.2
194773	2001	YC ₆₇	16.5	X	5.19769	144.46890	353.27895	3.30478	0.1090772	0.25766729	2.4458502	21	—	—
194774	2001	YD ₆₉	16.4	X	55.34751	82.85112	35.23764	1.41117	0.1426089	0.26215900	2.4178324	21	2 10.8	18.6
194775	2001	YD ₇₀	17.0	X	61.94597	105.52424	312.59470	5.25623	0.1167215	0.25637563	2.4540584	21	—	—
194776	2001	YG ₇₂	17.2	X	48.51930	93.46808	24.13015	2.67839	0.1359715	0.26094760	2.4253096	21	1 27.9	19.3
194777	2001	YA ₇₄	17.3	X	187.41231	48.23839	355.20324	1.96068	0.1650685	0.27264949	2.3554086	21	4 24.4	21.1
194778	2001	YP ₈₀	15.8	X	343.16483	37.88586	102.47789	7.50580	0.0757547	0.25427129	2.4675795	21	—	—
194779	2001	YW ₈₀	16.4	X	55.75164	195.80603	311.98219	1.58230	0.1411516	0.26482403	2.4015840	21	3 26.3	18.8
194780	2001	YV ₈₁	16.4	X	6.75878	166.63995	359.92188	1.50621	0.1251995	0.26008310	2.4306810	21	1 21.3	18.9
194781	2001	YA ₈₂	16.3	X	66.06988	171.00830	296.39326	8.67616	0.1809505	0.26214624	2.4179109	21	2 16.5	18.5
194782	2001	YN ₈₂	16.6	X	247.04470	324.45507	77.09488	7.23569	0.1633585	0.28052194	2.3111324	21	6 20.8	19.8
194783	2001	YZ ₈₂	16.9	X	94.88610	116.70054	13.05754	2.54605	0.1527371	0.26828190	2.3809035	21	5 6.3	19.6
194784	2001	YE ₈₃	16.2	X	328.87906	75.57403	288.50234	9.83261	0.1817803	0.28701580	2.2761394	21	9 2.4	18.1
194785	2001	YQ ₈₃	16.7	X	276.81488	317.77444	94.47203	2.90323	0.1730762	0.28560601	2.2836234	21	8 14.3	19.1
194786	2001	YR ₈₄	16.5	X	138.38389	9.49145	106.18536	4.74755	0.1345863	0.27277406	2.3546914	21	6 8.4	19.8
194787	2001	YD ₈₇	16.3	X	95.07277	72.71312	39.25798	2.95593	0.1382496	0.26620121	2.3932939	21	4 10.3	19.0
194788	2001	YG ₈₈	16.9	X	345.29569	108.84309	64.42585	2.09303	0.1257311	0.25798812	2.4438221	21	—	—
194789	2001	YU ₈₉	16.9	X	56.45205	327.62384	84.11244	2.81307	0.1596446	0.25440128	2.4667389	21	—	—
194790	2001	YV ₈₉	14.1	X	93.50064	44.22712	297.2212							

ELEMENTS AND OPPOSITION DATES IN 2021

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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>
194801 2001 YX ₁₀₁	16.3	X	183.33268	272.73606	66.91497	9.60448	0.2514442	0.26592855	2.3949295	21	2 8.9	20.5
194802 2001 YT ₁₀₂	16.9	X	138.95984	254.47252	194.64899	1.73330	0.1513090	0.27133934	2.3629845	21	5 5.7	20.3
194803 2001 YJ ₁₀₃	16.5	X	40.72384	250.77210	239.90593	1.42871	0.1135091	0.26173867	2.4204203	21	1 30.2	18.8
194804 2001 YL ₁₀₃	16.9	X	111.79261	309.27304	125.33351	2.87078	0.1419161	0.26571975	2.3961840	21	3 14.3	19.8
194805 2001 YS ₁₀₃	15.9	X	128.94283	249.43540	219.95229	3.38955	0.1640637	0.27163897	2.3612465	21	5 23.2	19.3
194806 2001 YA ₁₀₄	17.1	X	115.70464	246.96632	175.00218	1.40835	0.1521639	0.26474166	2.4020822	21	3 2.8	20.1
194807 2001 YH ₁₀₄	15.9	X	212.39668	329.28209	240.15399	1.09148	0.1418698	0.24454359	2.5325918	21	12 20.3	19.6
194808 2001 YC ₁₀₆	16.5	X	79.11773	228.10628	260.06328	3.47959	0.1358510	0.26591583	2.3950059	21	4 5.9	19.2
194809 2001 YD ₁₀₆	17.1	X	176.99308	236.86605	164.42141	2.60828	0.1791784	0.27077722	2.3662537	21	4 13.9	20.9
194810 2001 YQ ₁₀₆	16.5	X	34.53151	238.90134	242.04749	4.35199	0.0420240	0.25861960	2.4398423	21	1 8.4	19.3
194811 2001 YS ₁₀₆	17.2	X	155.28274	245.50395	168.52728	2.19449	0.2041560	0.26920130	2.3754795	21	4 11.5	20.9
194812 2001 YC ₁₀₇	16.6	X	151.86564	177.79943	246.96797	3.80846	0.2107866	0.26969553	2.3725765	21	4 20.9	20.3
194813 2001 YL ₁₀₉	16.1	X	66.05525	233.35748	239.26856	1.80104	0.1433724	0.26169128	2.4207125	21	2 21.8	18.5
194814 2001 YS ₁₀₉	16.4	X	33.53096	129.23634	17.17517	2.50040	0.1458295	0.26092338	2.4254597	21	2 10.2	18.5
194815 2001 YR ₁₁₂	15.4	X	224.87568	293.12673	273.15978	11.75691	0.1264730	0.24347264	2.4540130	21	—	—
194816 2001 YJ ₁₁₆	17.2	X	90.39550	314.58028	113.04002	2.95670	0.1856498	0.26115407	2.4240311	21	2 8.0	19.6
194817 2001 YL ₁₁₇	16.0	X	39.19813	65.72034	45.71503	2.68932	0.1306535	0.25816396	2.4427122	21	—	—
194818 2001 YP ₁₁₇	16.2	X	51.65691	130.03101	358.61807	1.88919	0.1624687	0.26146347	2.4221184	21	2 20.9	18.2
194819 2001 YQ ₁₁₇	16.0	X	18.23015	126.84586	70.59708	3.17895	0.1457646	0.26458588	2.4030249	21	3 29.1	18.0
194820 2001 YT ₁₁₇	16.5	X	43.19017	15.98178	74.82282	5.13637	0.1576941	0.25658813	2.4527032	21	—	—
194821 2001 YT ₁₂₀	15.5	X	110.57184	119.68425	295.30504	22.05897	0.2812833	0.26218511	2.4176719	21	2 23.4	19.1
194822 2001 YO ₁₂₃	16.5	X	183.23942	43.73614	354.52804	5.04102	0.1452071	0.27335727	2.3513411	21	4 12.3	20.1
194823 2001 YY ₁₂₃	16.4	X	194.65734	30.60122	40.02268	6.80549	0.1031105	0.27810909	2.3244806	21	6 6.2	19.7
194824 2001 YU ₁₂₄	17.1	X	140.63062	145.15555	356.23621	4.39786	0.1256770	0.27810943	2.3244787	21	7 15.9	20.4
194825 2001 YD ₁₂₇	16.3	X	24.55671	94.91312	4.63154	5.00432	0.0747814	0.25654132	2.4530016	21	—	—
194826 2001 YJ ₁₂₈	16.7	X	238.19457	312.81606	24.28670	4.81797	0.2474337	0.27449048	2.3448651	21	3 16.4	20.8
194827 2001 YS ₁₃₀	16.5	X	102.85540	65.92294	55.24775	6.60143	0.0980672	0.26880737	2.3777997	21	4 28.2	19.3
194828 2001 YM ₁₃₁	16.2	X	65.33252	130.53390	48.46974	5.10995	0.0887252	0.27145256	2.3623274	21	5 21.9	18.8
194829 2001 YX ₁₃₁	16.4	X	71.97292	201.57229	304.45339	6.69242	0.1568804	0.27009631	2.3702289	21	4 21.4	19.0
194830 2001 YL ₁₄₁	16.4	X	268.10707	7.16059	252.01735	5.69829	0.1001931	0.26505071	2.4002145	21	1 14.1	19.9
194831 2001 YO ₁₄₃	16.8	X	197.73709	354.03327	337.78969	3.95005	0.2443000	0.26878075	2.3779567	21	2 7.3	20.7
194832 2001 YY ₁₅₁	16.9	X	115.25339	8.82202	18.81027	4.47686	0.2216337	0.26192740	2.4192575	21	1 28.3	19.8
194833 2001 YL ₁₅₂	15.4	X	197.80053	179.37069	32.85228	8.48306	0.1527725	0.24328911	2.5412903	21	12 5.8	19.3
194834 2001 YY ₁₅₅	16.3	X	23.41261	93.65083	30.34143	10.51314	0.1047769	0.25920263	2.4361823	21	—	—
194835 2001 YZ ₁₅₇	16.8	X	286.36712	164.41157	39.87139	2.91590	0.1566401	0.25366111	2.4715351	21	—	—
194836 2001 YP ₁₆₁	17.0	X	112.87856	277.52491	142.15101	5.67915	0.1291540	0.26257031	2.4153068	21	2 21.3	19.9
194837 2002 AJ	16.8	X	285.94910	342.23883	85.18252	5.51273	0.1781363	0.28823342	2.2697246	21	9 24.3	19.0
194838 2002 AU ₃	16.3	X	230.64573	129.07562	284.55640	1.90483	0.2308517	0.27879914	2.3206435	21	6 14.3	20.1
194839 2002 AB ₄	14.8	X	273.48623	230.70238	264.44991	23.88411	0.2905638	0.24052016	2.5607572	21	11 5.9	18.1
194840 2002 AA ₆	16.4	X	44.75714	188.32628	299.35096	3.76076	0.0757454	0.26241252	2.4162749	21	2 1.6	19.0
194841 2002 AP ₁₀	16.9	X	70.05910	43.67385	94.00359	4.07689	0.1739438	0.26565141	2.3965949	21	4 14.9	19.3
194842 2002 AX ₁₀	16.6	X	80.04505	137.18073	308.88906	1.93675	0.1794448	0.26098592	2.4250721	21	2 14.7	19.0
194843 2002 AW ₁₂	16.6	X	62.64450	301.97225	145.73746	2.63948	0.1545260	0.25754463	2.4466267	21	1 12.4	18.8
194844 2002 AB ₁₃	17.2	X	121.23350	169.40729	293.04245	0.79107	0.1371740	0.26731749	2.3866265	21	5 1.0	20.3
194845 2002 AW ₁₅	16.4	X	103.14095	0.55877	142.64474	5.63303	0.1148771	0.27156725	2.3616623	21	6 1.6	19.4
194846 2002 AY ₁₆	16.2	X	188.28182	269.03777	138.82774	6.51139	0.1118177	0.27258663	2.3557707	21	5 3.3	19.7
194847 2002 AM ₁₇	16.7	X	197.61735	257.70067	102.01090	6.88745	0.1935071	0.26819999	2.3813883	21	3 14.3	20.7
194848 2002 AN ₁₈	15.3	X	194.18694	90.52551	336.23305	5.93563	0.1859607	0.27414273	2.3468476	21	5 30.4	19.2
194849 2002 AU ₂₀	16.8	X	125.14243	83.98089	351.16346	4.55589	0.2371684	0.26718330	2.3874256	21	4 10.6	20.2
194850 2002 AW ₂₃	16.9	X	36.21233	308.64510	186.36836	1.90061	0.1501730	0.26009852	2.4305849	21	1 27.9	18.9
194851 2002 AU ₂₄	15.9	X	97.27209	112.71001	274.33555	13.53355	0.1862189	0.25658352	2.4527326	21	—	—
194852 2002 AZ ₂₄	15.9	X	237.91549	316.46773	203.78535	3.77030	0.1956968	0.24012917	2.5635361	21	11 10.0	19.5
194853 2002 AB ₂₅	16.0	X	205.45117	329.82526	162.82778	5.76223	0.1545061	0.23243342	2.6198132	21	9 5.4	20.0
194854 2002 AC ₂₅	16.5	X	127.08492	194.30099	182.11244	4.73597	0.2178976	0.25974018	2.4328199	21	1 25.7	19.9
194855 2002 AE ₂₈	15.8	X	272.13231	181.38311	323.64784	4.71286	0.0919357	0.24373821	2.5381677	21	12 22.6	18.7
194856 2002 AM ₂₈	16.1	X	58.80819	79.27727	33.67072	7.33203	0.0820319	0.25993325	2.4316151	21	2 8.8	18.8
194857 2002 AL ₂₉	15.6	X	157.47911	195.09697	268.09926	23.79954	0.1624440	0.27855690	2.3219887	21	6 13.7	19.2
194858 2002 AB ₃₂	16.5	X	69.53131	274.10683	193.19364	1.88264	0.1664432	0.26028093	2.4294492	21	2 24.2	18.9
194859 2002 AQ ₃₅	16.9	X	18.77239	164.85025	298.80807	0.54356	0.1448368	0.25548248	2.4597745	21	—	—
194860 2002 AF ₃₆	14.1	X	159.49557	7.58476	93.30833	4.02294	0.1950030	0.12559988	3.9489039	21	6 16.4	20.3
194861 2002 AX ₃₈	16.4	X	89.06061	306.03673	142.20004	7.01010	0.1017269	0.26235612	2.4166212	21	2 21.5	19.1
194862 2002 AY ₃₉	16.3	X	49.76387	246.12093	268.26666	6.14920	0.0571194	0.26415331	2.4056476	21	3 14.9	19.2
194863 2002 AA ₄₀	16.8	X	89.05412	263.96882	190.35865	2.29511	0.1480286	0.26292734	2.4131198	21	3 8.1	19.3
194864 2002 AY ₄₀	16.7	X	287.77872	121.31033	261.65698	3.43650	0.1696819	0.28195690	2.3032844	21	7 17.2	19.1
194865 2002 AL ₄₂	16.9	X	76.94665	322.67669	213.13724	1.94315	0.1783634	0.27064242	2.3670393	21	6 20.8	19.6
194866 2002 AN ₄₂	16.7	X	34.07773	229.75807	175.44567	2.31741	0.2124406	0.25163486	2.4847852	21	—	—
194867 2002 AO ₄₂	17.8	X	139.63609	295.58396	138.78945	3.43847	0.1709944	0.26934526	2.3746330	21	4 20.2	21.2
194868 2002 AH ₄₅	16.1	X	287.51532	41.22771	166.88009	2.93488	0.1372152	0.25377152	2.4708182	21	—	—
194869 2002 AH ₅₀	16.1	X	150.57050	261.17185	291.48313	3.64980	0.1244601	0.23194124	2.6235181	21	9 26.3	20.2
194870 2002 AP ₅₀	16.8	X	192.98596	232.44160	281.17637	3.51393	0.0827693	0.28413452	2.2915010	21	9 26.8	19.9
194871 2002 AD ₅₁	16.4	X	55.99486	353.67041	146.77696	1.42788	0.1336182	0.26308474	2.4121572	21	3 16.4	18.8
194872 2002 AE ₅₆	17.3	X	111.17583	168.15340	302.18064	1.31192	0.1473650	0.26770909	2.3784298	21	4 30.4	20.3
194873 2002 AJ ₅₆	16.9	X	137.04418	322.02564	124.72460	2.84019	0.1819845	0.26892863	2.3770849	21	5 4.6	

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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>
194881 2002 AQ ₇₂	17.1	X	142.02123	59.08584	0.78000	1.25169	0.1755173	0.26863982	2.3787883	21	4 2.6	20.5
194882 2002 AA ₇₆	17.1	X	3.22340	85.21186	91.87605	2.28669	0.1213601	0.26118655	2.4238301	21	1 30.5	19.5
194883 2002 AU ₇₆	17.1	X	294.93616	170.10792	26.62236	3.23285	0.1435289	0.25367921	2.4714176	21	—	—
194884 2002 AW ₇₆	17.2	X	143.69628	69.23671	29.44195	2.71315	0.1708193	0.27223769	2.3577832	21	5 24.5	20.8
194885 2002 AJ ₇₇	16.6	X	321.23122	194.65452	13.37303	2.34624	0.1595071	0.25851959	2.4404715	21	1 4.9	19.9
194886 2002 AK ₇₈	17.1	X	103.98940	133.80701	324.78784	5.14506	0.1663531	0.26659060	2.3909628	21	4 5.7	20.2
194887 2002 AT ₇₉	16.7	X	183.46483	282.81599	86.59072	6.12131	0.1235039	0.26680357	2.3896903	21	3 10.8	20.3
194888 2002 AM ₈₁	16.8	X	110.71299	247.47236	191.27930	4.60918	0.2023173	0.26689944	2.3891180	21	3 26.2	19.9
194889 2002 AY ₈₁	16.8	X	114.62051	228.81287	219.07071	5.03871	0.2019203	0.26782200	2.3836284	21	4 11.7	20.0
194890 2002 AQ ₈₃	16.1	X	40.25894	276.18339	217.52181	4.09359	0.1413347	0.26144101	2.4222571	21	2 1.7	18.4
194891 2002 AW ₈₃	15.6	X	107.49334	78.97446	133.98480	12.93193	0.0945287	0.23042125	2.6350430	21	9 9.1	19.4
194892 2002 AP ₉₀	16.4	X	225.51413	220.29706	320.42240	3.87461	0.1146954	0.24157314	2.5533104	21	12 1.5	20.1
194893 2002 AX ₉₄	16.3	X	333.86430	161.07858	11.78727	2.43850	0.1470106	0.25580111	2.4577315	21	—	—
194894 2002 AM ₉₅	17.6	X	174.76177	104.49370	328.55924	1.64783	0.1528197	0.27359848	2.3499589	21	5 20.6	21.2
194895 2002 AR ₉₅	17.2	X	216.18352	151.55699	317.46376	1.52873	0.0716342	0.28262873	2.2996329	21	8 27.4	20.1
194896 2002 AW ₉₅	17.0	X	109.85723	57.82325	27.18548	2.65273	0.1992798	0.26610925	2.3938452	21	4 2.8	20.0
194897 2002 AF ₉₆	16.7	X	44.84743	85.13442	47.45639	2.66563	0.1126291	0.26139692	2.4225295	21	2 11.9	19.0
194898 2002 AB ₉₇	17.1	X	133.06595	327.87220	90.60028	2.37671	0.1746124	0.26610373	2.3938783	21	3 23.7	20.4
194899 2002 AG ₉₇	17.3	X	143.87835	24.74783	81.48182	2.25829	0.1502695	0.27242911	2.3566787	21	6 2.6	20.8
194900 2002 AB ₉₈	17.4	X	151.37053	79.12249	161.00497	1.48089	0.1428446	0.27232447	2.3572823	21	5 25.8	21.0
194901 2002 AY ₉₈	15.9	X	293.01331	122.73477	3.55630	3.09322	0.1428703	0.24496871	2.5296609	21	12 25.8	18.4
194902 2002 AG ₉₉	16.2	X	29.56836	74.21100	5.40700	3.63640	0.0634517	0.25246742	2.4793195	21	—	—
194903 2002 AP ₁₀₃	17.3	X	91.72354	43.41386	36.31541	2.51208	0.1952999	0.26244335	2.4160857	21	3 1.4	19.8
194904 2002 AR ₁₀₅	17.2	X	84.95000	298.74523	110.22857	2.51875	0.1975713	0.25784522	2.4447249	21	1 1.9	19.5
194905 2002 AU ₁₀₅	17.3	X	7.30328	180.85305	325.68209	0.91007	0.1383380	0.25706095	2.4496948	21	—	—
194906 2002 AM ₁₀₆	17.0	X	264.39545	295.18222	117.71024	3.76715	0.1269023	0.28266678	2.2994265	21	8 3.9	19.9
194907 2002 AC ₁₀₇	16.9	X	98.89769	314.91962	104.92243	5.80911	0.1766568	0.26093335	2.4253979	21	2 10.2	19.6
194908 2002 AV ₁₀₇	16.3	X	87.31399	287.13420	122.11882	3.30929	0.0922154	0.25664567	2.4523367	21	—	—
194909 2002 AC ₁₁₀	16.4	X	2.78041	68.26346	101.09560	2.54658	0.1220516	0.25848133	2.4407123	21	1 19.1	18.9
194910 2002 AD ₁₁₂	16.3	X	24.45599	39.53559	117.89901	7.96051	0.0261091	0.26074392	2.4265724	21	2 14.5	19.3
194911 2002 AE ₁₁₃	16.8	X	121.25988	345.08258	103.11588	3.21898	0.1807150	0.26672765	2.3901438	21	4 19.5	20.0
194912 2002 AG ₁₁₄	16.0	X	186.26585	80.67883	307.57179	5.73009	0.1223544	0.26834676	2.3805199	21	3 31.4	19.6
194913 2002 AT ₁₁₅	16.6	X	140.39425	356.35835	33.98775	2.83589	0.2089763	0.26298104	2.4127913	21	2 27.8	20.0
194914 2002 AT ₁₂₀	15.7	X	215.36377	80.93915	119.27214	6.38980	0.0622038	0.24192330	2.5508461	21	12 22.0	19.0
194915 2002 AD ₁₂₁	17.1	X	87.10414	81.49300	33.12013	2.55292	0.1565476	0.26432470	2.4046076	21	4 5.2	19.8
194916 2002 AS ₁₂₁	16.4	X	115.07488	92.50653	12.63516	2.91392	0.1349924	0.26696596	2.3887211	21	4 26.4	19.3
194917 2002 AY ₁₂₁	17.0	X	93.69319	123.07520	332.13447	5.29918	0.1490056	0.26293764	2.4130568	21	3 15.8	19.8
194918 2002 AC ₁₂₂	16.4	X	55.41847	55.96514	41.45217	2.74758	0.1292012	0.25755605	2.4465544	21	1 11.9	18.7
194919 2002 AU ₁₂₂	16.6	X	236.28449	318.71494	83.31497	3.60739	0.2306404	0.27775011	2.3264831	21	6 4.4	20.4
194920 2002 AB ₁₂₄	15.9	X	75.85049	85.64352	325.22781	9.21029	0.2511978	0.25585470	2.4573883	21	—	—
194921 2002 AO ₁₂₄	16.6	X	59.35478	27.01382	67.56980	3.03195	0.1400094	0.25788963	2.4444442	21	1 15.8	19.0
194922 2002 AK ₁₂₅	17.0	X	57.96337	270.34801	328.08489	17.30451	0.0433194	0.37525583	1.9036382	21	8 8.7	18.5
194923 2002 AH ₁₂₆	17.0	X	109.64652	108.47248	310.87375	5.77312	0.1269032	0.26201585	2.4187130	21	2 14.8	20.0
194924 2002 AP ₁₂₈	16.6	X	233.58437	351.08963	58.01208	3.92823	0.2176518	0.27809051	2.3245841	21	6 11.9	20.3
194925 2002 AS ₁₂₈	15.8	X	282.75091	161.80387	318.30541	28.43471	0.1106002	0.24133701	2.5549756	21	11 28.9	19.6
194926 2002 AM ₁₃₃	16.4	X	331.59509	262.90369	236.19161	6.32382	0.1051128	0.25307753	2.4753332	21	—	—
194927 2002 AL ₁₃₄	14.5	X	141.12249	5.81433	118.39565	3.86017	0.1740167	0.12358888	3.9916256	21	6 26.9	20.7
194928 2002 AQ ₁₃₄	16.7	X	23.27766	35.11543	132.66556	1.91172	0.1244251	0.26393799	2.4069558	21	2 21.2	18.9
194929 2002 AD ₁₃₇	16.6	X	341.18456	351.04749	232.15036	2.24295	0.1078335	0.26438728	2.4042281	21	2 28.0	19.2
194930 2002 AG ₁₃₇	17.3	X	160.88993	301.07266	123.68961	1.88218	0.1640642	0.27093308	2.3653461	21	4 28.0	20.8
194931 2002 AJ ₁₃₉	16.3	X	69.56883	55.33735	28.08161	4.06905	0.0929763	0.25760099	2.4462699	21	1 15.0	19.0
194932 2002 AQ ₁₃₉	17.2	X	353.35236	70.32350	117.12499	3.26181	0.0864597	0.26143269	2.4223085	21	2 2.3	20.0
194933 2002 AP ₁₄₁	16.6	X	43.27827	195.09978	266.80076	1.82941	0.0596141	0.25825429	2.4421426	21	—	—
194934 2002 AQ ₁₄₃	17.1	X	151.55839	139.52293	262.35350	0.95800	0.1837944	0.26711629	2.3878249	21	3 21.0	20.6
194935 2002 AP ₁₄₄	17.8	X	106.02857	171.28147	276.89444	0.47490	0.1455083	0.26523137	2.3991245	21	3 24.1	20.7
194936 2002 AE ₁₄₆	16.9	X	334.42088	289.87213	264.44441	1.48819	0.1163718	0.25873513	2.4391160	21	1 10.4	19.8
194937 2002 AH ₁₄₇	15.8	X	90.91042	237.18367	315.94288	7.72348	0.1576783	0.22491143	2.6779041	21	7 30.8	19.5
194938 2002 AG ₁₄₉	16.9	X	55.63322	72.26425	12.91492	2.45237	0.0733462	0.25754534	2.4466222	21	—	—
194939 2002 AH ₁₅₀	17.0	X	81.64372	32.09133	5.39606	1.34044	0.1904567	0.25633841	2.4542959	21	—	—
194940 2002 AU ₁₅₀	16.5	X	33.45577	53.77320	59.62702	2.99139	0.1700626	0.25635430	2.4541945	21	—	—
194941 2002 AW ₁₅₀	16.6	X	342.08340	205.97384	312.49435	2.02096	0.1445146	0.25346516	2.4728088	21	—	—
194942 2002 AE ₁₅₂	16.6	X	22.22790	150.94677	13.19815	2.41944	0.1670557	0.25944677	2.4346538	21	2 12.9	18.7
194943 2002 AF ₁₅₂	16.8	X	350.50445	91.50997	60.70650	2.69931	0.1583377	0.25379315	2.4706778	21	—	—
194944 2002 AB ₁₅₃	16.0	X	195.89481	173.94362	322.54834	7.82729	0.1257718	0.22993741	2.6387382	21	8 31.9	20.1
194945 2002 AM ₁₅₄	16.3	X	75.74324	53.36642	67.81716	2.51460	0.1604218	0.26233602	2.4167447	21	3 28.8	18.7
194946 2002 AD ₁₅₇	16.1	X	192.39944	293.52475	278.33308	4.31983	0.0715394	0.24019661	2.5630562	21	12 7.9	19.7
194947 2002 AR ₁₅₈	15.4	X	230.95235	294.17814	255.16279	3.54154	0.0993741	0.24219195	2.5489594	21	12 22.1	18.5
194948 2002 AE ₁₆₀	16.3	X	83.83716	210.86514	201.31326	1.68245	0.1747513	0.25656387	2.4528579	21	1 4.1	18.7
194949 2002 AW ₁₆₀	16.3	X	127.13249	322.49377	149.40575	7.22951	0.1554162	0.26937916	2.3744337	21	5 25.3	19.8
194950 2002 AX ₁₆₀	15.5	X	248.87851	203.82524	295.08047	11.63630	0.1776382	0.23873731	2.5734902	21	10 23.1	19.2
194951 2002 AV ₁₆₁	16.5	X	118.38263	183.70188	213.81952	1.35415	0.1798193	0.25941953	2.4348242	21	2 6.5	19.4
194952 2002 AT ₁₆₂	16.8	X	42.08247	4.78969	170.77952	3.80288	0.1446978	0.26375127	2.4080916	21	4 13.6	18.9
194953 2002 AA ₁₆₅	16.4	X	48.87945	197.84755	287.68074	5.73056	0.0844496	0.25861443	2.4398749	21	2 5.5	18.9
194954 2002 AS ₁₆₅	16.8	X	269.73143									

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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>
194961 2002 AS ₁₇₂	16.3	X	128.72111	277.86417	107.72096	10.20885	0.2467837	0.26177219	2.4202137	21	2 15.2	19.7
194962 2002 AM ₁₇₃	17.3	X	43.01566	107.20368	338.31221	1.58079	0.1804712	0.25578917	2.4578080	21	—	—
194963 2002 AD ₁₇₄	16.5	X	298.11606	148.85778	81.10089	3.16825	0.1495791	0.25692609	2.4505519	21	1 7.5	19.8
194964 2002 AV ₁₇₄	16.6	X	202.90948	253.37659	115.28732	3.35736	0.2305794	0.26982603	2.3718114	21	3 28.4	20.6
194965 2002 AX ₁₇₄	16.6	X	148.37887	41.88446	332.33277	1.08876	0.1897044	0.26204457	2.4185363	21	2 12.5	20.1
194966 2002 AU ₁₇₆	17.4	X	41.47787	41.40478	77.96446	3.17136	0.1809564	0.25835573	2.4415033	21	1 16.5	19.2
194967 2002 AN ₁₇₇	16.1	X	128.78709	353.73258	74.47450	2.16268	0.1507254	0.26482776	2.4015615	21	3 28.5	19.2
194968 2002 AQ ₁₇₈	16.2	X	284.05951	66.52532	86.31686	1.68373	0.1261442	0.24450808	2.5328370	21	—	—
194969 2002 AJ ₁₇₉	15.3	X	254.46677	140.69424	50.17362	3.17481	0.0882538	0.24472177	2.5313624	21	—	—
194970 Márai	16.6	X	64.87705	104.41156	146.36313	2.43462	0.1350852	0.22697605	2.6616403	21	9 9.3	20.1
194971 2002 AY ₁₈₀	16.5	X	118.31794	96.27637	326.72463	13.16863	0.2091291	0.26629424	2.3927364	21	3 11.6	19.8
194972 2002 AJ ₁₈₅	16.9	X	145.80431	337.96975	58.75382	2.28202	0.1819695	0.26604625	2.3942231	21	3 10.0	20.3
194973 2002 AF ₁₈₇	15.4	X	94.63198	187.35468	50.01351	8.75187	0.1861296	0.22874389	2.6479089	21	10 6.5	19.5
194974 2002 AL ₁₈₉	15.7	X	115.57325	38.17362	203.27015	12.99295	0.2108167	0.23136333	2.6278850	21	10 30.4	20.1
194975 2002 AO ₁₉₀	17.2	X	42.61731	257.80091	191.01510	0.68435	0.1575951	0.25629474	2.4545747	21	—	—
194976 2002 AW ₂₀₀	17.6	X	75.76885	304.79996	160.47041	1.71744	0.1676250	0.26250079	2.4157332	21	3 5.2	20.0
194977 2002 AT ₂₀₂	15.7	X	56.91445	327.03675	298.39002	13.18979	0.1657196	0.22641284	2.6660524	21	9 14.9	19.4
194978 2002 AU ₂₀₂	17.5	X	120.16068	197.66854	276.28075	0.66115	0.1337883	0.26902305	2.3765287	21	5 15.1	20.8
194979 2002 AE ₂₀₃	15.5	X	183.86131	280.85043	163.54156	12.84951	0.1592415	0.17673093	3.1448094	21	6 16.8	20.8
194980 2002 AS ₂₀₃	16.6	X	57.63825	10.84441	337.29701	4.48067	0.0851005	0.24082898	2.5585676	21	12 30.2	20.1
194981 2002 AU ₂₀₃	16.5	X	98.66582	291.71244	31.10195	0.70602	0.0724592	0.23925211	2.5697972	21	—	—
194982 Fúria	15.9	X	61.54345	45.49751	14.29330	10.18296	0.2322053	0.25609158	2.4558727	21	—	—
194983 2002 BK	15.7	X	158.31230	256.24383	17.73140	4.21391	0.1518090	0.24247706	2.5469609	21	—	—
194984 2002 BO ₁	15.7	X	162.05454	230.76583	0.50541	3.78473	0.1159921	0.23706264	2.5855958	21	11 25.8	19.7
194985 2002 BR ₁	16.6	X	84.94798	181.24396	302.94564	1.74199	0.1408068	0.26508960	2.3999798	21	4 11.4	19.3
194986 2002 BC ₂	17.2	X	111.46398	285.32947	172.42359	2.29092	0.1468150	0.26614594	2.3936252	21	4 14.6	20.3
194987 2002 BE ₆	16.1	X	192.73750	254.49401	105.42497	10.36544	0.1513607	0.26614319	2.3936417	21	3 10.4	20.0
194988 2002 BY ₆	15.9	X	218.86765	169.37385	347.52715	8.65274	0.1003239	0.23842018	2.5757718	21	10 23.0	19.6
194989 2002 BZ ₆	14.3	X	200.18503	14.60753	62.53506	9.96918	0.2547005	0.12595870	3.9414008	21	6 19.3	20.9
194990 2002 BS ₇	17.0	X	27.30065	4.83274	110.80919	4.04091	0.1391325	0.25547315	2.4598344	21	—	—
194991 2002 BW ₇	16.4	X	43.47650	131.83009	343.24523	2.10135	0.1595184	0.25778931	2.4450784	21	1 14.7	18.6
194992 2002 BH ₈	16.9	X	41.54411	95.01711	44.09444	2.01811	0.1367667	0.25987436	2.4319824	21	2 15.7	19.0
194993 2002 BJ ₁₁	16.5	X	70.55958	185.76971	280.88744	0.71708	0.1473487	0.26037561	2.4288602	21	2 22.9	18.9
194994 2002 BN ₁₄	15.7	X	252.10032	252.56646	290.26246	3.94845	0.0844930	0.24334696	2.5408875	21	—	—
194995 2002 BJ ₁₅	16.4	X	254.16037	264.68492	249.83071	1.76455	0.0990458	0.24134240	2.5549376	21	12 7.4	19.6
194996 2002 BH ₁₆	16.3	X	264.41682	263.84665	264.75284	3.17711	0.1778475	0.24280017	2.5447008	21	12 29.5	19.2
194997 2002 BJ ₁₇	17.3	X	353.91919	214.36326	302.16160	0.33485	0.1312256	0.25591731	2.4569875	21	—	—
194998 2002 BS ₁₈	16.2	X	96.32091	36.89546	88.88464	3.88533	0.0985474	0.26654467	2.3912375	21	4 26.2	19.0
194999 2002 BO ₂₇	16.6	X	165.75193	69.54898	343.59158	8.87755	0.1988857	0.27019180	2.3696704	21	4 15.5	20.6
195000 2002 BZ ₂₇	16.0	X	324.25610	168.80994	36.42942	7.46550	0.0639801	0.25867232	2.4395108	21	1 21.4	19.2
195001 2002 BA ₂₈	16.7	X	204.21969	344.92721	48.95702	6.14347	0.2538858	0.27344569	2.3508342	21	4 28.2	20.6
195002 2002 BS ₂₈	16.5	X	34.94160	97.07517	26.82750	10.02153	0.1533636	0.25867466	2.4394961	21	1 11.8	18.9
195003 2002 BA ₂₉	16.0	X	357.30338	122.41632	16.40844	9.68047	0.0881506	0.25462635	2.4652851	21	—	—
195004 2002 CX ₃	16.3	X	38.22277	99.06557	4.54669	6.11967	0.2084590	0.25579645	2.4577614	21	—	—
195005 2002 CA ₄	16.2	X	256.36929	136.84039	45.01459	4.92899	0.1636860	0.24315025	2.5422577	21	—	—
195006 2002 CW ₅	16.2	X	300.29307	153.12510	325.13810	3.22467	0.0559834	0.24289629	2.5440294	21	—	—
195007 2002 CW ₇	16.8	X	95.39280	257.15054	220.98263	0.46646	0.1351052	0.26412242	2.4058352	21	4 18.6	19.5
195008 2002 CQ ₁₂	16.5	X	241.99804	253.24967	297.07389	3.14891	0.1514898	0.24243826	2.5472326	21	12 30.0	19.8
195009 2002 CQ ₁₃	15.8	X	70.20937	309.93575	174.22503	23.47193	0.3335835	0.26114234	2.4241037	21	4 26.9	18.6
195010 2002 CF ₁₅	16.4	X	180.07026	246.53547	348.27809	2.41913	0.0502612	0.24159986	2.5531222	21	12 24.9	19.9
195011 2002 CB ₁₆	16.0	X	177.05431	93.18868	132.70088	5.21474	0.1020945	0.23916421	2.5704269	21	12 6.9	19.8
195012 2002 CF ₁₇	16.6	X	12.73363	135.59477	334.76307	5.79755	0.1031802	0.25400478	2.5409303	21	—	—
195013 2002 CL ₁₇	16.5	X	82.59789	97.13175	27.14992	2.77218	0.1469586	0.26517326	2.3994750	21	4 9.9	19.0
195014 2002 CM ₁₈	16.3	X	53.39782	83.37271	41.54300	6.57727	0.0537843	0.25925188	2.4358737	21	2 15.2	19.2
195015 2002 CR ₂₁	16.8	X	98.11894	265.35001	130.02212	4.35472	0.1599067	0.25635709	2.4541767	21	1 3.0	19.5
195016 2002 CU ₂₁	17.0	X	104.46880	152.85345	295.97579	0.93839	0.1528070	0.26387774	2.4073221	21	3 24.0	19.9
195017 2002 CW ₂₂	16.5	X	284.63751	160.11689	328.94843	3.95099	0.1407762	0.24161767	2.5529967	21	12 13.6	19.2
195018 2002 CW ₂₃	17.2	X	27.00135	298.79438	208.86893	4.41180	0.2314155	0.25907366	2.4369907	21	1 21.3	19.0
195019 2002 CX ₂₆	16.5	X	78.60790	94.73413	339.32382	7.88717	0.1935793	0.26011793	2.4304640	21	1 30.0	18.7
195020 2002 CE ₂₇	17.1	X	114.96847	47.73124	51.03568	3.41579	0.1565584	0.26715806	2.3875759	21	4 21.9	20.2
195021 2002 CG ₂₇	16.8	X	123.18096	67.60205	22.56515	4.53320	0.1429195	0.26739969	2.3861374	21	4 17.5	19.8
195022 2002 CZ ₂₇	15.3	X	127.65907	274.84096	326.18676	16.07984	0.1843369	0.23432266	2.6057127	21	10 31.1	20.0
195023 2002 CO ₂₈	15.9	X	182.75377	197.39282	326.65294	10.95677	0.0986585	0.23276024	2.6173603	21	9 21.3	20.0
195024 2002 CK ₃₁	15.9	X	127.31801	272.60017	349.88072	12.97081	0.0546276	0.23881080	2.5729622	21	11 25.4	19.8
195025 2002 CL ₃₁	16.8	X	94.75469	70.38535	0.20295	8.28432	0.2140263	0.26119481	2.4237790	21	2 25.8	19.4
195026 2002 CY ₃₆	16.7	X	230.65081	138.59424	274.09566	1.68250	0.2204724	0.27732086	2.3288831	21	6 13.9	20.5
195027 2002 CJ ₃₉	16.7	X	207.84258	229.10799	285.98458	0.65332	0.1878284	0.28412024	2.2915778	21	10 7.6	20.1
195028 2002 CD ₄₀	15.1	X	223.25779	205.77744	317.27328	13.39165	0.0901310	0.23538471	2.5978688	21	11 3.4	19.0
195029 2002 CD ₄₁	17.1	X	107.65418	267.60184	198.09374	7.59236	0.2896144	0.26671297	2.3902315	21	5 11.4	20.5
195030 2002 CP ₄₄	17.3	X	22.63131	19.62199	129.40201	2.10633	0.1372617	0.25974315	2.4328013	21	1 23.1	19.6
195031 2002 CE ₄₆	15.7	X	103.35606	8.77214	235.19191	12.80930	0.2075584	0.22778391	2.6553433	21	10 19.4	20.1
195032 2002 CO ₅₀	16.9	X	79.02480	89.02038	354.28122	1.23064	0.1632321	0.25899778	2.4374667	21	2 7.5	19.1
195033 2002 CP ₅₀	16.4	X	120.98761	77.36978	330.82020	5.55931	0.1811736	0.26069274	2.4268900	21	2 24.1	19.6
195034 2002 CK ₅₃	16.3	X	222.47086	12.58585	187.92191	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>
195041 2002 CV ₅₈	13.1	X	102.61628	145.01892	127.80370	9.00940	0.0358039	0.08370249	5.1757958	21	10 25.3	20.1
195042 2002 CM ₆₀	17.2	X	35.35765	58.82546	86.65227	4.14907	0.1294223	0.26038116	2.4288257	21	2 13.5	19.5
195043 2002 CP ₆₁	15.9	X	285.61509	122.82987	358.04801	11.21236	0.1584618	0.24207900	2.5497522	21	11 28.9	18.9
195044 2002 CX ₆₅	16.0	X	323.25442	50.03961	41.70850	10.21642	0.0407624	0.24160814	2.5530638	21	12 30.7	19.3
195045 2002 CU ₆₆	17.5	X	108.46552	73.64118	41.67371	3.05068	0.1553788	0.26789941	2.3831692	21	5 5.5	20.6
195046 2002 CS ₆₈	17.0	X	135.82774	92.13324	310.24745	0.86321	0.1939522	0.26344284	2.4099708	21	3 6.9	20.5
195047 2002 CF ₆₉	17.2	X	33.57283	40.21539	59.96283	1.97926	0.1505646	0.25526059	2.4611998	21	—	—
195048 2002 CW ₇₀	16.6	X	282.88910	241.48362	329.89283	2.31601	0.0714320	0.25234119	2.4801462	21	—	—
195049 2002 CL ₇₁	16.9	X	98.29389	358.49537	63.88714	2.22218	0.1752640	0.25994664	2.4315135	21	2 12.5	19.6
195050 2002 CH ₇₂	17.5	X	34.77634	105.70078	327.51875	2.97905	0.2104262	0.25267824	2.4779402	21	—	—
195051 2002 CB ₇₃	16.7	X	254.10552	290.86431	105.58317	3.10197	0.1585851	0.27793368	2.3254585	21	6 22.8	19.9
195052 2002 CJ ₇₃	16.1	X	71.72659	256.79925	351.62582	2.11336	0.0808679	0.22821298	2.6520141	21	8 26.8	19.5
195053 2002 CE ₇₄	15.6	X	153.88652	230.91777	332.37864	12.65364	0.0914040	0.23273850	2.6175233	21	10 8.8	19.8
195054 2002 CZ ₇₄	17.2	X	74.95920	140.74542	1.03291	0.98553	0.1289661	0.26460087	2.4029341	21	4 19.7	19.7
195055 2002 CU ₇₆	17.2	X	82.13418	339.19686	117.97766	1.65014	0.1783770	0.26119327	2.4237885	21	3 7.3	19.5
195056 2002 CN ₈₀	12.9	X	230.29118	38.50432	127.50013	3.22669	0.0088234	0.08539088	5.1073435	21	11 9.8	19.8
195057 2002 CF ₈₀	16.4	X	278.72585	155.16786	6.97521	3.12763	0.1397616	0.24434710	2.5339493	21	—	—
195058 2002 CK ₈₂	15.8	X	216.54784	298.87545	338.24700	7.23178	0.0827068	0.25057317	2.4917990	21	—	—
195059 2002 CZ ₈₂	16.2	X	192.44915	181.07832	81.80608	3.19396	0.0626558	0.24533963	2.5271106	21	—	—
195060 2002 CA ₈₄	17.3	X	55.24518	6.14879	136.81035	2.15105	0.1361932	0.26112902	2.4241861	21	3 19.9	19.5
195061 2002 CA ₈₆	16.5	X	221.80316	113.65330	93.00624	0.47907	0.0636605	0.24320450	2.5418796	21	—	—
195062 2002 CU ₈₆	16.3	X	185.60623	111.74734	149.40602	2.43982	0.1198376	0.24485116	2.5304705	21	—	—
195063 2002 CH ₈₇	16.9	X	135.71569	124.76258	70.82402	0.48084	0.1030319	0.22859844	2.6490320	21	9 16.0	20.8
195064 2002 CB ₈₈	16.1	X	130.05773	134.64789	108.16887	3.61280	0.1124564	0.23405156	2.6077244	21	11 10.2	20.1
195065 2002 CA ₉₁	16.4	X	88.25622	3.23233	57.57797	1.92685	0.1637475	0.25671351	2.4519046	21	1 23.5	18.9
195066 2002 CK ₉₁	16.6	X	343.85556	65.87781	30.09310	3.51644	0.1091890	0.24572080	2.5244965	21	—	—
195067 2002 CY ₉₁	16.7	X	126.89449	285.41468	144.34586	5.40790	0.2122072	0.26397359	2.4067394	21	4 6.2	20.1
195068 2002 CY ₉₄	16.4	X	61.59170	323.08455	12.21079	2.57275	0.0394985	0.23775929	2.5805427	21	12 11.1	19.9
195069 2002 CN ₉₅	16.1	X	184.27934	168.78550	338.79888	4.10147	0.1450843	0.22844968	2.6501818	21	9 3.9	20.1
195070 2002 CJ ₉₆	16.3	X	114.65243	319.23042	137.81391	3.09992	0.1562592	0.26443551	2.4039358	21	4 20.2	19.4
195071 2002 CV ₉₆	16.9	X	70.10972	78.81736	54.73941	1.48974	0.1455204	0.26196013	2.4190560	21	4 3.2	19.4
195072 2002 CW ₉₇	16.4	X	116.58287	43.34350	17.69991	2.83864	0.2106271	0.26085830	2.4258631	21	3 12.8	19.6
195073 2002 CP ₉₉	16.1	X	293.65702	82.32593	76.74717	3.24603	0.0580626	0.24516946	2.5282798	21	—	—
195074 2002 CQ ₉₉	16.8	X	106.79157	82.18056	38.04899	2.88628	0.1723696	0.26584489	2.3954319	21	5 12.6	19.9
195075 2002 CH ₁₀₀	16.9	X	17.73881	357.30765	138.22866	2.87279	0.1357194	0.25444653	2.4664465	21	—	—
195076 2002 CC ₁₀₅	16.4	X	306.80342	80.06236	70.70853	2.34741	0.0746100	0.24519905	2.5280764	21	—	—
195077 2002 CR ₁₀₅	16.3	X	285.00313	339.24871	154.70146	4.76203	0.1524995	0.24077353	2.5589604	21	12 19.8	19.1
195078 2002 CV ₁₀₅	15.5	X	14.59016	266.01059	2.27089	8.83719	0.1096430	0.21807978	2.7335422	21	7 12.4	18.7
195079 2002 CL ₁₀₇	16.7	X	223.50290	62.67432	129.63194	5.16251	0.1542949	0.23775552	2.5805700	21	12 9.2	20.4
195080 2002 CX ₁₀₇	16.3	X	202.65812	5.28140	82.29721	3.42727	0.1288841	0.27361732	2.3498510	21	7 8.4	19.7
195081 2002 CY ₁₀₇	16.9	X	166.96460	173.04481	350.90449	20.02999	0.0452698	0.37930977	1.8900503	21	9 20.2	18.8
195082 2002 CC ₁₀₈	16.2	X	348.32025	15.72352	143.15014	5.21168	0.1030532	0.25134723	2.4866804	21	—	—
195083 2002 CD ₁₀₈	15.8	X	181.55922	57.32796	155.38672	10.76039	0.1393952	0.23373377	2.6100875	21	11 24.0	20.0
195084 2002 CL ₁₀₉	12.9	X	309.76408	93.18486	346.41128	4.38579	0.1107304	0.08508714	5.1194907	21	10 21.6	19.4
195085 2002 CM ₁₀₉	16.3	X	96.08124	80.22558	146.52851	5.42849	0.1824306	0.22407458	2.6845675	21	9 21.9	20.4
195086 2002 CO ₁₀₉	16.6	X	177.22808	233.46847	18.36536	2.15724	0.1796994	0.23875675	2.5733505	21	—	—
195087 2002 CB ₁₁₂	15.3	X	235.02828	2.68083	171.31003	22.24002	0.0087030	0.23618493	2.5919976	21	12 20.6	19.3
195088 2002 CP ₁₁₂	16.2	X	267.33867	108.71093	34.20356	2.11581	0.0715039	0.24186833	2.5512325	21	12 14.6	19.2
195089 2002 CP ₁₁₅	16.7	X	97.16837	253.53295	144.98070	9.76028	0.1105033	0.25459364	2.4654963	21	—	—
195090 2002 CL ₁₁₆	16.3	X	53.44303	36.37399	113.20289	11.68739	0.2031540	0.26144944	2.4222051	21	4 10.3	18.7
195091 2002 CH ₁₁₈	16.6	X	346.10627	278.09734	174.04169	1.93342	0.1656458	0.24512726	2.5285700	21	—	—
195092 2002 CN ₁₁₈	16.8	X	133.22117	279.80367	119.57966	2.10923	0.1817964	0.26282013	2.4137760	21	2 27.7	20.0
195093 2002 CZ ₁₁₈	16.5	X	310.56076	279.09434	279.46742	1.11027	0.1374210	0.25492172	2.4633805	21	—	—
195094 2002 CR ₁₁₉	16.2	X	180.74883	8.67967	248.41784	3.00135	0.1066955	0.24647983	2.5193110	21	—	—
195095 2002 CG ₁₂₁	16.8	X	255.47186	267.51462	267.70533	1.72351	0.1433746	0.24391946	2.5369101	21	12 30.5	19.9
195096 2002 CU ₁₂₄	16.5	X	237.82131	13.20961	181.58184	2.61986	0.1064902	0.24266974	2.5456125	21	—	—
195097 2002 CW ₁₂₄	17.1	X	101.76045	170.77682	292.32535	1.35637	0.1682309	0.26430448	2.4047302	21	4 11.2	20.0
195098 2002 CE ₁₂₅	16.2	X	312.52483	294.64325	200.47871	2.96063	0.0702245	0.24605245	2.5222275	21	—	—
195099 2002 CF ₁₂₆	16.0	X	110.29831	269.75669	323.42870	10.65771	0.1598566	0.22839286	2.6506214	21	10 5.9	20.3
195100 2002 CX ₁₂₈	16.0	X	4.24221	2.45177	281.95011	3.25074	0.0184925	0.22341345	2.6898610	21	7 13.0	19.5
195101 2002 CY ₁₂₉	16.7	X	69.86036	265.66443	194.22780	2.67587	0.1309954	0.25875258	2.4390063	21	2 9.5	19.1
195102 2002 CB ₁₃₀	16.2	X	123.75282	56.15507	166.01282	8.25181	0.1222140	0.22925431	2.6439772	21	10 9.9	20.2
195103 2002 CE ₁₃₀	17.2	X	73.00621	242.72326	256.54261	0.70532	0.1353213	0.26370418	2.4083783	21	4 13.8	19.8
195104 2002 CN ₁₃₀	12.3	X	339.06974	72.03173	331.04189	31.33053	0.0887596	0.08424535	5.1535374	21	10 4.5	19.1
195105 2002 CC ₁₃₂	17.0	X	90.55616	223.67453	266.43101	1.36143	0.2051724	0.26493468	2.4009153	21	5 9.9	19.8
195106 2002 CN ₁₃₂	16.4	X	228.75691	32.14269	167.01229	1.85985	0.1236700	0.24052975	2.5606891	21	12 27.9	19.8
195107 2002 CL ₁₃₃	16.8	X	90.44524	272.32506	169.76685	2.09365	0.1928855	0.25891437	2.4379901	21	3 1.6	19.4
195108 2002 CN ₁₃₅	16.0	X	51.44232	26.54311	231.93711	2.54540	0.0384874	0.22696445	2.6617310	21	8 15.3	19.3
195109 2002 CN ₁₃₆	16.4	X	81.54726	292.29350	155.71442	8.84885	0.2135461	0.26176831	2.4202376	21	2 26.1	18.5
195110 2002 CN ₁₃₇	16.0	X	273.14072	19.08648	215.05784	4.81995	0.0326061	0.25528278	2.4610572	21	—	—
195111 2002 CQ ₁₃₇	16.7	X	18.88744	261.96407	246.26988	3.87572	0.1500570	0.25803709	2.4435128	21	1 13.4	19.1
195112 2002 CU ₁₃₇	17.1	X	112.72826	289.23285	184.72907	4.88685	0.1799089	0.26790316	2.3831469	21	5 13.7	20.3
195113 2002 CF ₁₃₉	16.5	X	266.85080	306.43038	192.93871	3.74505	0.1937869	0.24122349	2.5557722	21	11 21.5	19.6
195114 2002 CJ ₁₃₉	16.5	X	210.56205	265.41116	243.35289	3.71398	0.					

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
195121 2002 CB ₁₅₄	16.5	X	71.88098	154.36689	147.60206	2.09827	0.0208729	0.23277211	2.6172714	21	11 8.8	20.0
195122 2002 CZ ₁₅₆	16.3	X	357.20522	121.65769	69.64148	3.14607	0.1466715	0.25948268	2.4344291	21	2 7.2	18.7
195123 2002 CG ₁₅₇	16.0	X	125.59981	337.77648	313.64404	0.63214	0.1081373	0.24139191	2.5545882	21	—	—
195124 2002 CW ₁₅₇	15.8	X	136.67452	315.75264	356.14277	5.30356	0.1806361	0.24527094	2.5275824	21	—	—
195125 2002 CX ₁₅₈	16.9	X	105.95604	82.21310	326.70147	1.38989	0.2082357	0.25988492	2.4319165	21	2 9.8	19.7
195126 2002 CY ₁₅₈	12.9	X	306.77956	296.35618	137.91991	13.52317	0.0862424	0.08440397	5.1470787	21	10 20.3	19.6
195127 2002 CZ ₁₅₈	16.5	X	129.43156	109.82537	336.91291	8.78225	0.1817200	0.26579860	2.3957101	21	4 21.4	20.1
195128 2002 CH ₁₅₉	16.6	X	97.67080	14.00920	78.58817	3.10781	0.1518709	0.26133670	2.4229016	21	3 22.1	19.4
195129 2002 CJ ₁₅₉	15.7	X	179.85968	95.11406	121.30884	5.91723	0.0644211	0.23642576	2.5902371	21	11 30.7	19.5
195130 2002 CY ₁₅₉	16.4	X	28.34767	152.99377	11.83778	6.01142	0.1299558	0.26298603	2.4127608	21	2 28.6	18.6
195131 2002 CP ₁₆₃	16.0	X	240.30837	175.16517	29.73486	3.84245	0.1296878	0.24439077	2.5336474	21	—	—
195132 2002 CT ₁₆₃	15.4	X	77.64388	258.08030	340.54566	12.64420	0.2568794	0.22343830	2.6896616	21	9 21.9	19.5
195133 2002 CO ₁₆₈	16.4	X	270.17420	154.09784	8.93384	7.03129	0.1776717	0.24279138	2.5447622	21	—	—
195134 2002 CR ₁₆₈	16.5	X	113.30165	119.11067	108.62575	7.33484	0.2226642	0.27771495	2.3266794	21	10 19.5	20.3
195135 2002 CE ₁₇₁	16.0	X	178.47912	131.00103	43.21739	4.72001	0.1833991	0.23004077	2.6379476	21	10 2.1	20.4
195136 2002 CK ₁₇₂	16.6	X	327.28422	122.97578	77.10675	3.60224	0.1308779	0.25518085	2.4617125	21	1 7.3	19.5
195137 2002 CA ₁₇₇	16.5	X	351.89196	153.36915	47.32701	2.10052	0.1301503	0.26118735	2.4238251	21	2 13.2	19.1
195138 2002 CG ₁₇₉	16.6	X	223.58083	217.61720	337.93864	4.29235	0.0902436	0.24249315	2.5468482	21	12 22.3	20.0
195139 2002 CH ₁₈₁	17.3	X	162.80905	28.52667	15.87886	2.52389	0.2134536	0.26780959	2.3837020	21	4 6.4	20.9
195140 2002 CP ₁₈₇	17.2	X	124.29491	92.51042	356.90757	2.19518	0.1713828	0.26652601	2.3913491	21	4 21.3	20.5
195141 2002 CN ₁₈₉	16.6	X	185.79246	157.00520	82.22794	2.76744	0.1558757	0.24220789	2.5488475	21	12 27.7	20.5
195142 2002 CM ₁₉₂	16.7	X	160.27579	268.89259	341.45862	2.38268	0.0418104	0.24103263	2.5571261	21	12 21.9	20.4
195143 2002 CS ₁₉₄	16.3	X	179.36789	124.98533	137.98603	2.86656	0.0367997	0.24512651	2.5285751	21	—	—
195144 2002 CZ ₁₉₉	16.9	X	99.86020	42.95015	357.39736	4.57533	0.1513806	0.25588060	2.4572224	21	1 12.7	19.7
195145 2002 CX ₂₀₀	17.0	X	87.60887	288.96245	131.79732	1.88820	0.1709797	0.25727870	2.4483124	21	1 22.6	19.5
195146 2002 CS ₂₀₁	15.4	X	108.84970	349.71397	333.03433	14.91453	0.1366144	0.24342728	2.5403285	21	—	—
195147 2002 CX ₂₀₁	16.5	X	100.86917	312.12848	109.78033	4.66517	0.1453015	0.25889858	2.4380893	21	2 11.1	19.3
195148 2002 CM ₂₀₂	16.9	X	185.31253	198.21611	29.78843	2.35370	0.1133782	0.23923719	2.5699042	21	12 16.3	20.7
195149 2002 CW ₂₀₆	16.1	X	60.90331	336.30255	84.60946	3.54082	0.1603843	0.25300028	2.4758370	21	—	—
195150 2002 CA ₂₀₇	16.7	X	56.22609	88.72807	101.61024	1.80417	0.1333319	0.26008028	2.4306985	21	3 1.4	18.9
195151 2002 CQ ₂₀₈	17.0	X	146.11655	33.16272	32.76537	1.02007	0.1891248	0.26590301	2.3950829	21	4 16.5	20.4
195152 2002 CW ₂₁₀	12.9	X	303.25900	85.83218	1.68153	8.99421	0.0558143	0.08476628	5.1324015	21	10 26.9	19.6
195153 2002 CG ₂₁₃	12.8	X	67.56412	340.82382	347.46211	10.03076	0.0731678	0.08440772	5.1469261	21	11 15.1	19.7
195154 2002 CW ₂₁₅	15.8	X	24.71018	244.07094	350.45505	8.70657	0.1609670	0.21530845	2.7569485	21	6 12.6	18.9
195155 2002 CB ₂₁₆	17.4	X	106.47018	27.17144	75.40097	2.03661	0.1622850	0.26373926	2.4081648	21	4 17.5	20.3
195156 2002 CK ₂₁₇	16.4	X	155.77141	114.18800	124.49774	3.79047	0.0726107	0.23552811	2.5968143	21	11 30.9	20.3
195157 2002 CZ ₂₁₇	16.1	X	248.88233	92.43216	340.39432	21.66426	0.0527102	0.22695749	2.6617854	21	8 22.9	19.8
195158 2002 CG ₂₁₈	16.7	X	218.88348	69.86979	111.17947	2.46779	0.0755569	0.23702708	2.5858544	21	11 29.4	20.3
195159 2002 CY ₂₂₂	16.6	X	159.21298	1.95572	212.99213	1.98821	0.1244034	0.23388721	2.6089458	21	11 3.5	20.5
195160 2002 CE ₂₂₅	16.0	X	48.48530	293.47908	333.86903	11.93098	0.1446364	0.22377323	2.6869771	21	9 7.5	19.3
195161 2002 CA ₂₂₆	16.2	X	163.56654	1.66194	160.19560	8.65592	0.1181780	0.22905634	2.6455004	21	9 2.1	20.4
195162 2002 CY ₂₂₆	16.1	X	39.37458	271.11361	241.86965	5.33614	0.0789927	0.26171561	2.4205625	21	2 26.2	18.7
195163 2002 CR ₂₃₀	16.2	X	251.49592	79.96823	41.23109	3.64348	0.0850401	0.22877549	2.6476651	21	10 21.6	19.8
195164 2002 CJ ₂₃₃	16.4	X	320.03142	290.60544	281.77700	5.09065	0.0485575	0.25794242	2.4441107	21	1 24.8	19.6
195165 2002 CT ₂₃₄	16.6	X	173.00562	149.41551	116.29817	3.17811	0.0404091	0.19514583	2.9437202	21	—	—
195166 2002 CF ₂₃₅	16.1	X	40.05150	42.33340	321.17282	5.58598	0.2543736	0.24567105	2.5248373	21	—	—
195167 2002 CT ₂₃₅	12.5	X	326.05765	65.72205	350.10603	21.37060	0.0417403	0.08389815	5.1677454	21	10 14.3	19.3
195168 2002 CB ₂₃₇	16.1	X	303.70016	132.31630	58.15908	6.56397	0.0630068	0.25188234	2.4381573	21	—	—
195169 2002 CM ₂₃₇	16.0	X	99.06138	60.72985	160.35105	8.45271	0.1686302	0.22245110	2.6976132	21	9 15.7	19.9
195170 2002 CF ₂₄₀	16.2	X	167.83864	42.38881	178.14615	11.43888	0.1200957	0.23368351	2.6104618	21	11 20.8	20.4
195171 2002 CE ₂₄₂	15.4	X	52.57028	299.09072	339.62016	15.49018	0.1943632	0.22383883	2.6864521	21	10 2.2	19.1
195172 2002 CN ₂₄₂	15.7	X	64.76233	284.27879	307.38168	11.63881	0.1297038	0.22106718	2.7088598	21	8 11.1	19.2
195173 2002 CZ ₂₄₃	16.9	X	47.75618	215.32495	290.31194	2.22191	0.1564890	0.25890876	2.4380254	21	3 9.2	19.0
195174 2002 CF ₂₄₄	15.6	X	175.17280	25.36147	171.52663	13.01428	0.0354368	0.23178808	2.6246736	21	11 3.6	19.4
195175 2002 CA ₂₄₆	15.5	X	192.22410	276.05487	301.59087	11.99712	0.1043178	0.23772138	2.5808170	21	12 11.5	19.5
195176 2002 CT ₂₄₈	16.0	X	206.73663	133.88704	261.31944	3.82861	0.2353584	0.27070703	2.3666626	21	4 30.6	20.0
195177 2002 CE ₂₅₀	16.5	X	63.26415	144.73467	137.44822	2.90650	0.1712399	0.22854013	2.6494826	21	10 24.9	20.1
195178 2002 CS ₂₅₄	15.9	X	164.90337	156.12176	87.40509	7.04274	0.1521347	0.24109208	2.5567058	21	12 13.6	19.8
195179 2002 CR ₂₅₈	16.2	X	115.56765	195.80286	235.22899	4.74738	0.1283454	0.26376780	2.4079910	21	3 9.1	19.2
195180 2002 CL ₂₆₃	16.6	X	46.55191	226.04681	165.13347	3.58713	0.0917000	0.24410045	2.5356560	21	—	—
195181 2002 CQ ₂₆₃	16.4	X	63.23197	121.39084	158.37272	4.58703	0.1097421	0.22957971	2.6414783	21	10 13.1	19.8
195182 2002 CX ₂₆₃	17.2	X	174.70557	113.70115	145.09233	4.67979	0.1114295	0.24201545	2.5501985	21	—	—
195183 2002 CP ₂₆₆	16.1	X	265.59977	238.42483	144.59355	5.96084	0.0365364	0.22423400	2.6832949	21	7 6.8	19.7
195184 2002 CP ₂₆₇	15.6	X	32.29976	144.54790	140.50764	16.17360	0.2909333	0.22399540	2.6852000	21	10 8.6	18.9
195185 2002 CM ₂₆₉	16.3	X	143.17500	302.17261	86.18787	3.26723	0.1929367	0.25947404	2.4344832	21	2 27.1	19.8
195186 2002 CK ₂₇₂	16.2	X	64.08411	76.49193	63.16707	7.17241	0.1004181	0.26162538	2.4211190	21	3 29.8	18.9
195187 2002 CO ₂₇₃	16.6	X	113.74873	299.52806	338.43646	3.83031	0.0810903	0.23602607	2.5931605	21	12 3.5	20.4
195188 2002 CS ₂₇₃	13.2	X	55.73098	1.15784	329.70583	4.68818	0.0972264	0.08424133	5.1537012	21	11 9.1	20.0
195189 2002 CD ₂₇₄	16.2	X	204.39028	118.95594	129.65126	4.99996	0.1083665	0.24353025	2.5396124	21	—	—
195190 2002 CR ₂₇₇	16.3	X	103.58343	358.05768	293.55086	1.82988	0.1826425	0.23669655	2.5882612	21	12 16.9	20.4
195191 Constantine	17.3	X	68.11759	202.24674	226.38669	0.81417	0.1631566	0.25622023	2.4550505	21	—	—
195192 2002 CN ₂₈₄	17.0	X	84.68241	205.83489	229.22013	0.59142	0.1711717	0.25741273	2.4474624	21	2 6.7	19.3
195193 2002 CO ₂₈₄	16.9	X	109.88087	315.63390	291.26920	1.07685	0.0955920	0.22994242	2.6386998	21	10 22.1	20.8

ELEMENTS AND OPPOSITION DATES IN 2021

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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>
195201 2002 CR ₂₉₆	16.1	X	95.74913	198.75781	140.88678	3.56971	0.0593335	0.24243845	2.5472313	21	—	—
195202 2002 CF ₃₀₁	15.9	X	9.31555	293.90648	333.49816	5.62581	0.0522076	0.21905270	2.7254422	21	6 28.2	19.3
195203 2002 CN ₃₀₁	16.1	X	80.66879	314.58940	312.99650	4.11731	0.2188526	0.22727301	2.6593213	21	10 28.2	20.2
195204 2002 CR ₃₀₆	14.4	X	235.60758	297.64507	98.68679	8.66271	0.1783102	0.12561076	3.9486758	21	6 5.7	20.5
195205 2002 DH	17.4	X	342.02318	55.68481	328.96810	20.55213	0.0618720	0.38630702	1.8671576	21	11 25.3	19.6
195206 2002 DF ₁	15.8	X	267.10098	119.63532	55.67772	8.40291	0.0475863	0.24391659	2.5369301	21	—	—
195207 2002 DN ₂	14.9	X	309.64109	341.13712	114.94354	30.60473	0.1306721	0.24027446	2.5625026	21	12 18.8	18.0
195208 2002 DZ ₃	15.1	X	218.76357	345.22237	87.93457	25.81652	0.3022434	0.27478119	2.3432109	21	6 24.8	19.3
195209 2002 DC ₄	15.7	X	171.74740	101.36688	95.00380	23.39608	0.2732384	0.28080526	2.3095776	21	9 12.4	20.3
195210 2002 DV ₅	16.1	X	203.19067	157.91537	223.10654	5.52595	0.2078651	0.27060673	2.3672474	21	4 10.2	20.0
195211 2002 DQ ₆	16.9	X	229.92550	209.84862	196.45696	1.50151	0.2368248	0.27595269	2.3365745	21	6 3.9	20.8
195212 2002 DX ₈	15.7	X	214.18856	181.49637	43.33803	13.20505	0.1922810	0.24239337	2.5475471	21	—	—
195213 2002 DV ₉	15.9	X	177.15755	180.12565	21.72655	14.33811	0.1810789	0.23453664	2.6041275	21	10 30.9	20.3
195214 2002 DL ₁₁	16.4	X	89.86133	211.95798	215.93740	1.53216	0.1774349	0.25775645	2.4452862	21	2 5.8	18.8
195215 2002 DP ₁₁	16.7	X	173.01142	316.74211	135.68677	1.47645	0.1440065	0.27104094	2.3647185	21	6 14.0	20.4
195216 2002 DR ₁₁	16.1	X	83.58500	51.77710	165.47681	12.89272	0.2278593	0.22365527	2.6879218	21	8 30.9	20.1
195217 2002 DU ₁₁	13.1	X	242.35710	190.02436	116.32243	4.64803	0.0171966	0.08411085	5.1590299	21	10 28.4	20.0
195218 2002 DX ₁₂	12.7	X	327.95707	71.39129	358.60459	10.11113	0.0519644	0.08477997	5.1318492	21	11 5.8	19.4
195219 2002 DN ₁₃	16.5	X	72.15006	268.71451	350.75595	3.28356	0.1702102	0.22571619	2.6715353	21	10 3.9	20.1
195220 2002 DZ ₁₃	16.1	X	112.03793	270.82513	32.02357	3.02643	0.1720975	0.23926162	2.5697292	21	—	—
195221 2002 DD ₁₄	17.4	X	84.77518	246.89917	215.12927	0.72044	0.1485316	0.26101518	2.4248909	21	3 12.9	20.0
195222 2002 DL ₁₄	16.6	X	4.67713	334.32928	69.10228	1.97436	0.1218796	0.24159489	2.5531572	21	—	—
195223 2002 DE ₁₇	16.3	X	70.01081	25.02436	65.39774	10.76393	0.1924382	0.25819814	2.4424966	21	2 9.5	18.7
195224 2002 DS ₁₇	17.2	X	45.58363	59.79025	46.55089	2.00977	0.1447035	0.25567448	2.4585429	21	1 6.5	19.3
195225 2002 DZ ₁₇	16.9	X	48.02013	72.85320	31.20249	1.62638	0.1499954	0.25564447	2.4587354	21	1 8.1	18.9
195226 2002 DG ₁₈	16.0	X	334.25002	320.81719	335.94626	4.63554	0.0347874	0.21921517	2.7240954	21	6 15.8	19.5
195227 2002 DH ₁₈	17.2	X	106.79603	236.77839	210.66241	0.79535	0.1706667	0.26228881	2.4170346	21	3 28.7	20.0
195228 2002 DJ ₁₈	16.3	X	235.85606	144.41930	20.72882	13.68778	0.1051044	0.23753485	2.5821680	21	11 21.9	20.1
195229 2002 DT ₁₉	16.4	X	66.59832	60.98225	180.16672	11.89768	0.2170661	0.22198757	2.7013671	21	9 9.2	20.1
195230 2002 ER ₄	12.8	X	323.57936	57.08683	351.22085	7.50263	0.0924429	0.08156960	5.2656318	21	10 5.7	19.3
195231 2002 EU ₄	16.5	X	11.57653	66.09719	350.32828	22.20386	0.0805683	0.24209199	2.5496609	21	—	—
195232 2002 EB ₈	12.7	X	276.99413	274.65681	180.18933	12.58574	0.0678139	0.08032655	5.3198165	21	10 5.7	19.6
195233 2002 EK ₁₀	16.2	X	299.03069	292.89028	170.57675	22.50573	0.1728476	0.24003598	2.5641996	21	12 3.2	19.4
195234 2002 EG ₁₁	15.2	X	79.86709	234.60169	350.71985	8.50975	0.1030015	0.21991501	2.7183130	21	8 22.1	18.9
195235 2002 EU ₁₂	15.7	X	119.95893	179.89976	8.76286	16.92557	0.1057314	0.22246973	2.6974626	21	8 27.7	19.9
195236 2002 EL ₁₄	16.2	X	313.27490	295.69625	202.03770	6.33052	0.1600997	0.24544769	2.5263688	21	—	—
195237 2002 EV ₁₅	15.6	X	7.37069	21.15398	252.29882	7.54048	0.1721331	0.21774715	2.7363253	21	7 5.7	18.2
195238 2002 ET ₁₆	15.8	X	6.65785	89.77831	61.77379	7.09134	0.0624364	0.25496573	2.4630970	21	1 9.3	18.7
195239 2002 ES ₁₇	16.4	X	102.58534	103.66668	153.54183	4.78112	0.1142658	0.22893938	2.6464014	21	10 30.9	20.4
195240 2002 EG ₂₂	15.9	X	341.15546	261.92854	12.46829	12.91977	0.1838668	0.21333808	2.7178978	21	5 7.1	19.0
195241 2002 EM ₂₂	15.7	X	108.30872	248.49326	23.17142	10.25071	0.0969718	0.23266090	2.6181053	21	11 18.9	19.7
195242 2002 EY ₂₄	16.3	X	245.70153	145.37455	23.42007	1.33107	0.0271463	0.23845897	2.5754924	21	12 24.6	19.5
195243 2002 EF ₃₀	16.5	X	31.11725	36.42904	102.18300	3.20159	0.1629561	0.25564648	2.4587225	21	1 24.8	18.7
195244 2002 EP ₃₄	16.3	X	239.86208	181.94744	27.84572	8.58919	0.1922292	0.24220739	2.5488510	21	—	—
195245 2002 EN ₃₇	13.1	X	180.07703	157.57482	65.70747	4.10212	0.0697786	0.08231390	5.2338418	21	11 15.7	20.3
195246 2002 ES ₄₀	15.4	X	38.43617	209.56473	9.26402	8.89041	0.2132143	0.21222286	2.7836071	21	6 24.9	18.5
195247 2002 EE ₄₁	16.6	X	192.47044	135.96582	295.09895	2.29667	0.1004482	0.27106349	2.3645874	21	6 5.3	19.8
195248 2002 EQ ₄₁	16.4	X	342.71241	178.64632	251.86816	2.23543	0.2276321	0.24377772	2.5378934	21	—	—
195249 2002 EJ ₄₂	16.7	X	300.73028	174.84252	320.33338	3.92093	0.1921280	0.24336978	2.5407287	21	—	—
195250 2002 EG ₄₆	16.0	X	59.89652	264.24213	334.01226	5.34419	0.0783167	0.22052358	2.7133097	21	8 7.3	19.4
195251 2002 EL ₄₆	16.4	X	92.15517	359.51552	212.85345	4.69277	0.0708484	0.22172422	2.7035058	21	8 12.2	20.2
195252 2002 EK ₄₈	17.5	X	300.89934	305.77588	186.93961	3.48538	0.1440872	0.24260494	2.5460658	21	—	—
195253 2002 EA ₄₉	16.4	X	175.71901	189.96296	41.42333	2.52005	0.0698675	0.23821967	2.5772169	21	12 13.3	20.0
195254 2002 EM ₄₉	15.8	X	55.49380	317.24205	340.62214	7.57594	0.1195470	0.22968511	2.6406701	21	10 23.5	19.3
195255 2002 EU ₅₀	17.1	X	176.88029	102.75457	358.54264	0.67413	0.1884388	0.27256985	2.3558674	21	6 30.1	20.8
195256 2002 ER ₅₁	15.9	X	229.57252	311.16626	143.46227	13.58731	0.1454125	0.23032788	2.6357550	21	8 12.9	19.9
195257 2002 EM ₅₂	16.3	X	143.52193	119.24132	152.71149	4.69141	0.1605155	0.23679008	2.5875796	21	12 27.4	20.5
195258 2002 EN ₅₂	13.3	X	203.76899	69.76382	117.59626	0.82849	0.0982728	0.08205989	5.2446368	21	10 28.8	20.6
195259 2002 EY ₅₃	17.1	X	178.41981	189.33901	248.42057	0.86490	0.1539621	0.26976061	2.3721949	21	5 31.1	20.7
195260 2002 ED ₅₄	16.7	X	193.39167	266.72354	301.06930	1.48258	0.1270480	0.23553124	2.5967912	21	11 28.0	20.6
195261 2002 EW ₅₄	16.3	X	187.13523	230.97050	359.55421	7.21218	0.1576813	0.23694117	2.5864794	21	12 17.1	20.4
195262 2002 EB ₅₅	14.9	X	39.17633	200.67518	12.70199	12.01291	0.1580973	0.21204543	2.7851597	21	6 7.9	18.2
195263 2002 ET ₅₅	16.3	X	157.79722	291.79418	277.45075	3.59525	0.0832773	0.23319611	2.6140979	21	10 24.9	20.1
195264 2002 EN ₅₆	16.8	X	173.22935	44.71451	180.34498	4.37412	0.1865819	0.23542543	2.5975693	21	11 27.4	21.1
195265 2002 EX ₅₆	16.4	X	134.02464	19.04467	213.79070	2.62741	0.0711519	0.23236131	2.6203553	21	10 30.0	20.2
195266 2002 EQ ₆₀	17.0	X	327.07797	1.02256	206.79283	3.89207	0.1442993	0.25475543	2.4644523	21	1 14.1	20.2
195267 2002 ET ₆₀	16.4	X	253.86204	303.91317	206.22619	4.99697	0.0914645	0.23830323	2.5766144	21	12 2.3	19.6
195268 2002 EY ₆₀	16.5	X	230.57795	281.59019	200.34658	4.65089	0.0925851	0.23123854	2.6288304	21	9 24.4	20.1
195269 2002 EZ ₆₀	12.8	X	336.15670	84.28767	315.58913	5.10285	0.0503471	0.08165221	5.2620796	21	10 14.1	19.5
195270 2002 EG ₆₂	16.1	X	208.08048	176.69145	335.71446	4.39540	0.0489481	0.23141842	2.6274680	21	10 11.1	19.9
195271 2002 EX ₆₂	17.0	X	112.71929	274.17954	169.29993	0.57334	0.1757508	0.26177853	2.4201746	21	4 1.1	20.1
195272 2002 EP ₆₃	16.2	X	22.42423	101.88610	335.18471	4.89807	0.0519114	0.24591190	2.5231884	21	—	—
195273 2002 EW ₆₃	13.0	X	315.00743	243.45976	192.03926	8.89745	0.0682273	0.08278893	5.2138020	21	10 29.8	19.6
195274 2002 EY ₆₅	16.8	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>		
195281	2002	EU ₇₃	15.9	X	245.47340	354.60990	191.96406	8.56635	0.0983950	0.23906129	2.5711646	21	—	—
195282	2002	EA ₇₄	15.8	X	254.58982	92.70131	8.06177	22.19504	0.0269630	0.22809087	2.6529605	21	10 5.4	19.2
195283	2002	ES ₇₅	15.7	X	117.24628	307.87295	305.45190	7.94970	0.1933294	0.23024769	2.6363670	21	11 10.6	20.2
195284	2002	EC ₇₆	13.2	X	227.73580	349.87626	179.62821	13.35862	0.0370762	0.08218017	5.2395185	21	11 8.7	20.3
195285	2002	EY ₇₈	16.2	X	268.22595	236.22161	267.27102	4.16049	0.0972386	0.23905008	2.5712449	21	12 12.6	19.0
195286	2002	EC ₇₉	12.8	X	257.82922	278.14092	209.34800	11.49120	0.1067131	0.08214399	5.2410565	21	10 14.6	19.7
195287	2002	EV ₇₉	13.2	X	54.14849	193.82181	161.29467	8.07886	0.0448351	0.08352344	5.1831899	21	11 30.0	20.1
195288	2002	ET ₈₂	16.4	X	351.10860	224.00466	201.84855	2.71434	0.0341206	0.23880750	2.5729859	21	—	—
195289	2002	EZ ₈₂	15.8	X	286.75035	351.41670	350.98005	11.41909	0.0707640	0.21680542	2.7442434	21	6 3.2	19.8
195290	2002	EC ₈₃	15.7	X	312.87364	47.17736	356.10608	21.99309	0.0772625	0.23019781	2.6367478	21	10 1.8	19.0
195291	2002	EN ₈₃	15.9	X	5.78494	278.24579	17.30975	4.83252	0.0595522	0.22244062	2.6976979	21	8 3.1	19.3
195292	2002	EB ₈₅	16.1	X	18.52678	242.05670	166.03934	13.25580	0.0596832	0.24041577	2.5614984	21	—	—
195293	2002	EO ₈₅	16.2	X	264.82930	359.21599	151.98237	3.22391	0.0551989	0.23841556	2.5758050	21	12 23.5	19.3
195294	2002	EE ₈₆	15.9	X	62.97054	23.73725	174.70276	9.34230	0.1210944	0.21477879	2.7614792	21	6 23.3	19.6
195295	2002	ER ₈₇	15.5	X	52.58723	134.14326	143.31742	5.82200	0.0671270	0.22391560	2.6858380	21	9 18.4	18.9
195296	2002	EF ₈₈	16.6	X	256.62937	100.00172	47.20144	4.50771	0.1094858	0.23650669	2.5896462	21	11 28.2	19.9
195297	2002	EB ₈₈	16.0	X	161.68478	5.73151	178.84155	13.31189	0.0915640	0.22680045	2.6630139	21	9 29.4	20.0
195298	2002	EY ₉₀	16.2	X	114.35337	67.17407	160.97523	8.09832	0.1303337	0.22623406	2.6674567	21	10 8.2	20.2
195299	2002	EB ₉₂	16.7	X	178.26709	55.60811	160.28596	1.98207	0.1053434	0.23412002	2.6072160	21	11 24.6	20.5
195300	2002	EA ₉₃	16.5	X	177.10417	181.77272	37.85142	2.35117	0.1066420	0.23651445	2.5895895	21	11 27.6	20.4
195301	2002	EH ₉₄	16.4	X	73.75752	87.52160	153.11101	4.85198	0.0685647	0.22377256	2.6869825	21	8 27.7	19.9
195302	2002	EK ₉₄	17.6	X	85.82548	291.25112	165.07026	4.80130	0.2032454	0.26033224	2.4291300	21	3 16.5	20.2
195303	2002	EW ₉₅	15.7	X	82.86630	312.14585	3.09588	9.69663	0.0723868	0.23623664	2.5916194	21	12 14.7	19.5
195304	2002	EJ ₉₆	17.6	X	282.13055	135.00877	33.03942	1.68871	0.1226126	0.24393985	2.5367687	21	—	—
195305	2002	EZ ₉₆	16.3	X	76.00386	116.26046	161.16471	2.31928	0.1733496	0.22605368	2.6688756	21	11 1.8	20.3
195306	2002	EF ₁₀₀	15.4	X	225.33446	294.91046	178.73178	21.57547	0.0163664	0.22685912	2.6625548	21	9 16.6	18.9
195307	2002	EC ₁₀₂	15.8	X	215.84834	173.83847	40.53754	13.49194	0.0752652	0.24051480	2.5607952	21	—	—
195308	2002	EK ₁₀₆	12.5	X	293.96159	38.32659	63.42571	8.79282	0.0334582	0.08243719	5.2286222	21	11 6.4	19.3
195309	2002	EJ ₁₀₆	12.5	X	358.81872	286.26330	112.23018	13.02716	0.0088661	0.08217817	5.2396034	21	11 14.6	19.5
195310	2002	ES ₁₀₈	16.7	X	127.16619	2.10815	53.32895	2.01730	0.1775686	0.26003214	2.4309985	21	3 13.8	20.0
195311	2002	EN ₁₀₉	16.0	X	310.43493	0.81787	10.28071	5.41112	0.1159807	0.22619803	2.6677400	21	8 15.9	19.0
195312	2002	EW ₁₀₉	12.8	X	22.04848	224.06404	148.40543	8.07838	0.0366729	0.08233170	5.2330874	21	11 12.2	19.6
195313	2002	ED ₁₁₂	16.7	X	140.00486	135.92912	72.29570	2.59047	0.1413957	0.22792423	2.6542534	21	10 8.7	20.9
195314	2002	EU ₁₁₂	17.1	X	319.35403	89.33965	13.82950	4.65869	0.1009602	0.24136685	2.5547650	21	—	—
195315	2002	EF ₁₁₃	13.5	X	228.34276	46.57201	125.84462	4.68875	0.0099737	0.08269020	5.2179511	21	11 14.5	20.4
195316	2002	EL ₁₁₃	16.6	X	348.61047	307.09493	129.26061	4.02747	0.1496350	0.24241479	2.5473970	21	—	—
195317	2002	ES ₁₁₄	16.6	X	274.88538	86.54456	328.25080	2.28057	0.1015450	0.22743872	2.6580294	21	8 22.3	20.1
195318	2002	EE ₁₁₆	12.5	X	69.88722	301.89643	9.09804	14.76003	0.0492031	0.08285330	5.2111014	21	10 26.2	19.4
195319	2002	EV ₁₁₆	17.2	X	109.37535	17.26735	75.67690	2.09475	0.1635833	0.26233948	2.4167234	21	4 8.7	20.2
195320	2002	EJ ₁₁₆	16.8	X	47.99712	260.31210	38.64073	3.28100	0.0587590	0.22830554	2.6512972	21	10 9.4	20.2
195321	2002	EQ ₁₁₇	16.2	X	356.72135	14.09221	224.21241	2.14830	0.1123545	0.21354831	2.7720770	21	4 25.5	19.4
195322	2002	EF ₁₂₁	15.6	X	319.28746	357.05095	357.51953	14.11902	0.1225988	0.22320385	2.6915447	21	8 9.9	18.9
195323	2002	EL ₁₂₃	16.4	X	142.68797	298.85526	289.65514	3.75785	0.1665155	0.22988371	2.6391490	21	11 3.0	20.7
195324	2002	EO ₁₂₃	13.0	X	336.88800	55.12503	7.67661	6.44728	0.0873814	0.08347535	5.1851806	21	11 8.9	19.5
195325	2002	EH ₁₂₆	15.7	X	237.00720	159.91947	319.63892	21.57307	0.0473434	0.23305498	2.6151532	21	9 23.9	19.7
195326	2002	ES ₁₂₇	15.6	X	313.20386	324.15071	348.59232	11.22636	0.1181043	0.21845625	2.7304008	21	5 21.4	19.2
195327	2002	EY ₁₂₇	16.4	X	35.78159	142.17082	132.60445	4.09426	0.0642146	0.22432881	2.6825388	21	8 19.8	19.7
195328	2002	EG ₁₂₈	15.8	X	40.66609	354.20896	356.08934	9.90076	0.2127107	0.23777900	2.5804001	21	12 30.2	19.5
195329	2002	EN ₁₂₈	16.1	X	161.57833	172.06578	312.55502	2.89662	0.0369284	0.24607818	2.5220517	21	—	—
195330	2002	EO ₁₂₈	16.1	X	124.58535	5.85659	145.28758	4.28353	0.0394580	0.21977420	2.7194740	21	6 30.0	19.9
195331	2002	EP ₁₂₈	16.4	X	40.20116	43.34751	352.65682	5.88060	0.1157936	0.24381730	2.5376187	21	—	—
195332	2002	EZ ₁₃₂	16.4	X	286.25549	84.99554	339.31106	4.87772	0.0785742	0.23170607	2.6252930	21	9 23.7	19.5
195333	2002	EE ₁₃₅	16.4	X	271.43162	176.34977	355.74068	3.50921	0.0634343	0.24197731	2.5504665	21	—	—
195334	2002	EG ₁₃₅	16.5	X	307.28986	314.66484	178.21083	8.44872	0.1246525	0.24273647	2.5451460	21	—	—
195335	2002	EZ ₁₃₅	16.7	X	286.72793	286.93867	159.59804	2.36396	0.0645579	0.23399965	2.6081100	21	10 28.9	19.9
195336	2002	EV ₁₃₉	15.5	X	17.59714	123.86031	159.95212	6.54474	0.0487119	0.21854069	2.7296974	21	8 1.3	19.0
195337	2002	EG ₁₄₂	12.7	X	316.23932	18.51786	37.81564	4.47906	0.0810998	0.08204583	5.2452361	21	10 8.7	19.3
195338	2002	EW ₁₄₂	16.5	X	112.67271	204.77146	18.40860	3.47141	0.0880177	0.22656899	2.6648273	21	9 25.1	20.2
195339	2002	EF ₁₄₃	16.4	X	245.11626	108.80742	7.66924	2.80500	0.1115988	0.23222851	2.6213541	21	10 3.3	19.7
195340	2002	EM ₁₄₆	16.2	X	170.58300	106.29192	132.43818	2.62562	0.0695525	0.23638236	2.5905541	21	12 16.8	19.9
195341	2002	ER ₁₄₆	16.3	X	310.88075	79.12682	69.10935	2.02591	0.1014512	0.24454144	2.5326067	21	—	—
195342	2002	EQ ₁₄₇	17.1	X	229.65446	136.67442	3.79632	2.03679	0.1396781	0.23312014	2.6146658	21	10 12.0	21.0
195343	2002	EH ₁₄₈	16.7	X	268.69801	96.63827	66.28091	2.53267	0.0587580	0.24069132	2.5595430	21	—	—
195344	2002	ER ₁₅₀	16.4	X	211.76080	210.17790	50.72843	3.18269	0.0859320	0.24447398	2.5330725	21	—	—
195345	2002	EP ₁₅₁	16.3	X	156.38026	170.88774	22.34899	3.52652	0.1206008	0.22697946	2.6616136	21	10 4.6	20.3
195346	2002	ET ₁₅₁	16.2	X	79.87016	24.26017	197.39146	4.77027	0.1004541	0.21971727	2.7199438	21	8 13.2	20.0
195347	2002	EV ₁₅₁	15.4	X	312.28526	243.99263	3.22600	12.82566	0.1372073	0.20460267	2.8522999	21	3 1.6	19.2
195348	2002	EX ₁₅₂	15.3	X	249.88660	9.19550	202.88301	14.34820	0.1219999	0.24531702	2.5272658	21	—	—
195349	2002	EC ₁₅₄	15.8	X	25.61592	26.09226	358.00648	15.27496	0.0857458	0.23877173	2.5732429	21	—	—
195350	2002	EA ₁₅₅	16.0	X	172.94273	104.19691	12							

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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>		
195361	2002	FO ₁₃	16.7	X	247.65844	185.48329	16.57530	5.58902	0.1482051	0.24097949	2.5575021	21	—	—
195362	2002	FH ₁₅	15.6	X	206.76942	191.76233	45.96932	9.94510	0.0717591	0.24133438	2.5549942	21	—	—
195363	2002	FF ₂₄	15.5	X	33.88145	265.19645	3.76943	11.79907	0.1740460	0.21794245	2.7346904	21	8 27.4	18.6
195364	2002	FH ₂₅	15.7	X	125.97628	203.93709	38.41339	18.51257	0.1315657	0.23076978	2.6323892	21	11 4.1	19.7
195365	2002	FM ₂₅	15.7	X	118.52055	157.27566	72.66909	13.82039	0.2468880	0.22622428	2.6675337	21	10 25.1	20.4
195366	2002	FS ₂₆	15.9	X	166.35653	188.13436	17.41737	13.73356	0.0924021	0.23388852	2.6089361	21	10 28.0	19.9
195367	2002	FJ ₂₇	15.3	X	56.75841	184.27106	124.70514	13.08764	0.1896032	0.23029587	2.6359993	21	11 25.3	19.2
195368	2002	FR ₂₈	16.2	X	119.13002	161.05364	89.23377	6.12001	0.1804764	0.22924726	2.6440314	21	11 11.9	20.6
195369	2002	FZ ₂₉	16.2	X	212.11256	136.16028	347.62855	8.58359	0.0839485	0.22733637	2.6588272	21	9 6.9	20.0
195370	2002	FF ₃₀	15.9	X	36.86570	206.91828	61.63895	13.70548	0.1359405	0.22201033	2.7011825	21	8 30.0	19.4
195371	2002	FS ₃₁	16.9	X	206.83541	152.08594	46.89961	6.13289	0.1535666	0.23587181	2.5942910	21	11 28.2	20.8
195372	2002	FY ₃₁	16.2	X	182.49529	152.26190	99.60918	5.47692	0.1089987	0.24010522	2.5637066	21	—	—
195373	2002	FH ₃₂	16.0	X	188.73721	196.48678	40.65104	6.48226	0.0426797	0.23975604	2.5661952	21	—	—
195374	2002	FF ₃₂	16.2	X	26.33471	60.89501	64.52775	6.02493	0.0850050	0.25430090	2.4673880	21	1 1.8	18.9
195375	2002	FY ₃₂	15.4	X	187.93243	315.53229	326.88187	5.80324	0.2560315	0.18984798	2.9982331	21	—	—
195376	2002	FD ₃₄	15.9	X	128.51975	165.52497	56.44468	10.42919	0.1276501	0.22630680	2.6668851	21	10 16.3	20.1
195377	2002	FJ ₃₇	15.3	X	47.47045	214.02174	102.36035	13.27401	0.1659685	0.22971151	2.6404678	21	11 20.1	19.0
195378	2002	FV ₃₇	15.8	X	220.19356	194.97793	39.39884	14.22694	0.1193015	0.24238493	2.5476063	21	—	—
195379	2002	FD ₄₀	15.3	X	290.98045	226.65827	75.41975	7.68904	0.1239489	0.20885073	2.8134900	21	4 14.6	19.3
195380	2002	GY	15.5	X	195.38651	158.51730	3.98673	29.14830	0.0735010	0.23019946	2.6367352	21	10 4.1	19.3
195381	2002	GL ₁	16.5	X	14.53528	183.29562	309.29332	4.22286	0.1730014	0.25265771	2.4780744	21	—	—
195382	2002	GY ₄	15.4	X	25.02913	121.60581	172.13482	26.19521	0.0985265	0.21858531	2.7293259	21	8 31.4	18.8
195383	2002	GJ ₅	17.1	X	101.24107	233.33900	45.64866	21.04102	0.0827651	0.38234588	1.8800314	21	12 14.1	19.5
195384	2002	GP ₆	16.9	X	233.45574	31.46182	24.85882	21.27265	0.0904262	0.37091743	1.9184533	21	7 5.6	19.7
195385	2002	GN ₇	16.0	X	225.98138	162.87268	48.95077	7.80219	0.1997038	0.23770373	2.5809448	21	12 29.9	19.8
195386	2002	GY ₇	15.7	X	96.31549	50.98729	176.62936	13.41028	0.2160941	0.22122123	2.7076021	21	9 25.6	19.8
195387	2002	GN ₈	15.5	X	341.81473	286.08934	2.05306	19.96913	0.2026875	0.21274504	2.7790504	21	5 23.4	18.9
195388	2002	GK ₉	15.7	X	227.44375	9.44563	195.37671	16.63782	0.1422074	0.23731111	2.5837907	21	12 28.8	19.7
195389	2002	GQ ₉	16.8	X	253.19447	335.23875	53.50671	23.84258	0.1135596	0.36903669	1.9249658	21	6 9.5	19.2
195390	2002	GJ ₁₀	16.1	X	21.14108	312.24176	358.83214	5.92313	0.0453146	0.22712087	2.6605087	21	9 15.2	19.3
195391	2002	GV ₁₀	16.7	X	221.74583	14.84283	21.28643	20.38824	0.0868677	0.36797878	1.9286534	21	5 9.9	19.2
195392	2002	GJ ₁₁	15.7	X	57.77092	147.30212	94.56494	4.89190	0.0740181	0.21737050	2.7394853	21	8 8.7	19.2
195393	2002	GK ₁₂	15.8	X	110.97497	205.15490	16.91019	16.46363	0.1263131	0.22204493	2.7009019	21	9 27.5	19.8
195394	2002	GF ₁₄	15.5	X	19.66114	58.58410	205.05431	8.62137	0.1107248	0.21377171	2.7701454	21	7 10.8	18.9
195395	2002	GU ₁₄	16.6	X	202.86298	213.82025	20.94517	5.18262	0.1925371	0.23876828	2.5732676	21	—	—
195396	2002	GH ₁₅	15.8	X	292.58552	119.26588	40.48283	4.37122	0.0208164	0.24286468	2.5442502	21	—	—
195397	2002	GB ₁₆	15.5	X	353.12083	257.61124	15.61424	9.12577	0.1276409	0.21428652	2.7657069	21	6 5.7	18.7
195398	2002	GV ₁₇	15.6	X	219.73855	154.04429	48.02677	12.30091	0.1754722	0.23535978	2.5980523	21	12 12.1	19.4
195399	2002	GK ₂₀	14.9	X	269.22225	287.17909	32.96178	15.07752	0.1575195	0.20459618	2.8523602	21	4 7.8	19.2
195400	2002	GO ₂₀	16.1	X	215.11387	154.74418	14.30850	5.31331	0.1630279	0.23134749	2.6280501	21	10 28.8	20.1
195401	2002	GO ₂₁	15.8	X	258.22076	138.61728	33.60515	13.60549	0.2010397	0.23775274	2.5805901	21	12 18.5	19.2
195402	2002	GV ₂₁	16.2	X	222.94265	345.68944	222.00624	12.15852	0.2388026	0.23597522	2.5935331	21	12 16.0	20.2
195403	2002	GU ₂₂	16.3	X	236.95487	303.71470	274.80160	3.93544	0.2228812	0.23945537	2.5683429	21	—	—
195404	2002	GY ₂₃	15.6	X	70.10990	199.26131	24.13164	7.50070	0.2204920	0.21642702	2.7474411	21	8 25.8	19.4
195405	2002	Lentylar	17.5	X	358.35133	256.34404	166.60135	10.50825	0.1690063	0.24368718	2.5385220	21	—	—
195406	2002	GT ₃₅	16.4	X	7.79024	349.77274	1.09084	3.64538	0.0946572	0.22881096	2.6473915	21	10 23.2	19.3
195407	2002	GJ ₃₇	16.6	X	155.01411	352.69745	190.76082	2.13472	0.1289642	0.22659315	2.6646379	21	9 20.5	20.8
195408	2002	GW ₃₇	16.1	X	17.17050	247.13763	12.60044	3.36140	0.0433942	0.21461843	2.7628547	21	6 29.0	19.6
195409	2002	GK ₃₈	15.5	X	318.05322	336.15379	14.33466	6.12512	0.0564717	0.22131203	2.7068615	21	8 5.9	18.9
195410	2002	GO ₃₈	16.4	X	127.10781	50.65873	184.93321	3.81026	0.0914620	0.22749530	2.6575887	21	10 27.1	20.3
195411	2002	GX ₃₈	15.8	X	5.72957	67.05100	192.71034	14.72496	0.1590764	0.21190033	2.7864310	21	6 12.4	19.0
195412	2002	GF ₃₉	12.5	X	335.16111	151.52882	278.35630	6.09266	0.0866221	0.08498986	5.1230310	21	11 15.3	18.9
195413	2002	GC ₄₀	16.2	X	126.06246	244.59451	4.77570	6.89992	0.2004973	0.22883660	2.6471937	21	11 13.9	20.7
195414	2002	GF ₄₀	16.6	X	151.34052	314.38431	284.30722	1.05518	0.1521522	0.23174566	2.6249940	21	11 24.1	20.7
195415	2002	GJ ₄₀	12.5	X	317.10370	203.43495	225.61925	8.63735	0.0510981	0.07981460	5.3425407	21	10 24.5	19.3
195416	2002	GA ₄₁	15.9	X	161.17641	19.62531	220.96041	10.79846	0.1733104	0.23449948	2.6044026	21	12 5.4	20.2
195417	2002	GQ ₄₂	16.0	X	177.38173	160.85489	31.66887	8.61618	0.0692975	0.22965791	2.6408787	21	10 26.5	19.7
195418	2002	GU ₄₂	16.2	X	180.56068	153.85346	47.40423	2.68464	0.0792133	0.23113880	2.6295866	21	11 9.6	20.1
195419	2002	GL ₄₃	16.2	X	211.74793	115.25745	10.01180	3.42938	0.0667264	0.22577799	2.6710478	21	9 10.3	20.0
195420	2002	GT ₄₃	16.0	X	136.33016	224.64646	350.90444	7.58514	0.0806859	0.22640978	2.6660765	21	10 8.5	20.0
195421	2002	GW ₄₄	15.7	X	34.99081	351.04913	285.44173	5.43966	0.1341967	0.21942609	2.7223494	21	8 27.3	18.9
195422	2002	GN ₄₆	15.7	X	45.54477	127.02931	97.80523	6.31540	0.1060500	0.21441118	2.7646347	21	6 30.7	19.0
195423	2002	GQ ₄₆	16.5	X	177.33300	210.22459	22.72545	6.16776	0.0730947	0.23485389	2.6017819	21	12 15.9	20.3
195424	2002	GN ₄₉	16.2	X	217.91904	287.51664	262.04950	7.62843	0.1081299	0.23722267	2.5844329	21	12 4.4	19.7
195425	2002	GF ₅₀	15.8	X	191.66655	205.42934	331.03578	10.76687	0.1292192	0.23108046	2.6300292	21	10 13.3	20.0
195426	2002	GU ₅₁	16.0	X	15.07019	139.13870	142.82021	3.20737	0.0304967	0.21831327	2.7315928	21	7 25.5	19.3
195427	2002	GY ₅₁	16.0	X	84.91475	148.04702	158.37960	4.27094	0.0526640	0.23168834	2.6254269	21	12 4.5	19.6
195428	2002	GW ₅₄	16.5	X	161.65313	2.00702	207.35551	4.41956	0.1075023	0.22915583	2.6447347	21	10 29.9	20.6
195429	2002	GQ ₅₈	16.5	X	238.94450	166.57089	27.91358	4.82491	0.1250662	0.23807034	2.5782945	21	—	—
195430	2002	GP ₆₀	15.6	X	318.29179	232.48446	208.18168	12.2837						

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
195441 2002 GN ₇₃	15.6 ^m	X	34.11997	184.42711	87.05988	5.84787	0.0719368	0.21858324	2.7293432	21	8 14.9	19.0
195442 2002 GT ₇₅	16.3	X	325.18895	226.16817	265.46366	2.22771	0.1619635	0.24293000	2.5437940	21	—	—
195443 2002 GF ₇₆	15.8	X	90.26148	60.83921	108.05816	12.32893	0.0979770	0.26364337	2.4087486	21	6 17.7	18.8
195444 2002 GG ₇₇	15.8	X	339.71903	261.19999	37.81649	13.11330	0.1896633	0.21372337	2.7705631	21	6 11.7	18.8
195445 2002 GQ ₇₈	15.5	X	212.13090	52.06381	124.53754	14.99855	0.0372543	0.22990565	2.6389811	21	11 23.5	19.4
195446 2002 GH ₇₉	15.7	X	201.27077	301.98884	205.85543	11.61995	0.1369083	0.22878865	2.6475636	21	9 19.1	19.9
195447 2002 GY ₈₁	15.8	X	68.04219	80.59827	148.88584	5.72581	0.0583777	0.21782870	2.7356424	21	8 2.2	19.5
195448 2002 GD ₈₂	16.5	X	186.47678	103.78880	79.38510	4.91834	0.0895665	0.22925795	2.6439492	21	10 25.4	20.4
195449 2002 GZ ₈₄	15.5	X	65.35253	191.62445	60.75736	13.40486	0.1417113	0.21879093	2.7276156	21	9 19.9	19.4
195450 2002 GA ₈₅	15.7	X	287.78740	62.59973	98.78782	8.13443	0.0840090	0.24012614	2.5635577	21	—	—
195451 2002 GX ₈₅	15.7	X	283.25842	55.42793	35.12171	22.52875	0.0646159	0.23064574	2.6333329	21	10 29.7	19.1
195452 2002 GQ ₉₀	15.7	X	349.55220	269.47215	47.14109	5.86271	0.0511359	0.21972485	2.7198812	21	8 7.6	19.1
195453 2002 GA ₉₂	15.8	X	0.46571	295.00015	342.94387	7.01035	0.1887641	0.21391306	2.7689250	21	6 29.1	18.5
195454 2002 GP ₉₂	17.0	X	289.93997	125.33096	20.82732	5.59591	0.1160086	0.23961769	2.5671828	21	—	—
195455 2002 GH ₉₃	15.9	X	280.06980	190.54517	214.32787	4.72225	0.0550182	0.22307876	2.6925508	21	8 21.0	19.5
195456 2002 GR ₉₃	15.6	X	269.12059	80.51490	11.45213	22.04946	0.0541353	0.22847857	2.6499585	21	10 9.2	19.1
195457 2002 GE ₉₄	16.5	X	292.78725	263.24759	234.70611	2.94232	0.2160651	0.24050736	2.5608480	21	—	—
195458 2002 GC ₉₅	15.8	X	31.41327	76.82009	2.73883	7.77656	0.1133085	0.24468628	2.5316071	21	—	—
195459 2002 GE ₉₉	15.8	X	249.76403	263.33488	214.14806	8.66163	0.0290996	0.23022039	2.6365754	21	10 22.4	19.4
195460 2002 GA ₁₀₃	16.7	X	230.41339	298.17778	125.99914	3.30727	0.1290527	0.23306631	2.6150684	21	11 1.0	20.5
195461 2002 GD ₁₀₄	16.1	X	300.49687	21.34533	103.62578	5.46108	0.1257433	0.23761980	2.5815525	21	—	—
195462 2002 GL ₁₀₄	15.9	X	208.13945	354.74769	172.92375	13.97000	0.0953411	0.22931588	2.6435039	21	10 30.2	19.9
195463 2002 GS ₁₀₄	15.6	X	60.80718	122.80486	138.09696	9.55489	0.1180721	0.21834429	2.7313340	21	9 16.0	19.2
195464 2002 GT ₁₀₄	15.3	X	56.27804	99.98731	172.15595	12.07553	0.1051833	0.21901185	2.7257811	21	9 20.8	18.9
195465 2002 GH ₁₁₁	16.0	X	74.85999	109.12246	146.07397	4.75402	0.0861391	0.22219332	2.6996992	21	9 21.3	19.7
195466 2002 GR ₁₁₂	15.9	X	211.22767	41.75460	132.64850	6.78358	0.0838297	0.23060684	2.6336290	21	11 12.1	19.7
195467 2002 GT ₁₁₄	12.1	X	346.89366	355.47849	49.43354	10.46736	0.0443890	0.07913054	5.3732860	21	11 4.3	18.8
195468 2002 GM ₁₁₅	16.1	X	299.43409	9.77480	136.13945	7.65455	0.0861240	0.24146835	2.5540491	21	—	—
195469 2002 GY ₁₁₅	15.9	X	327.82302	136.24107	158.16252	5.63063	0.0593412	0.21247923	2.7813676	21	6 2.1	19.5
195470 2002 GJ ₁₁₈	16.8	X	290.78440	51.39216	140.94945	4.68404	0.0877617	0.24636303	2.5201072	21	—	—
195471 2002 GV ₁₁₉	15.9	X	130.89988	234.50560	40.16734	15.59019	0.0984774	0.23329565	2.6133543	21	12 16.3	20.1
195472 2002 GF ₁₂₄	16.0	X	135.38525	122.43785	182.61183	6.65456	0.1561244	0.24120712	2.5558928	21	—	—
195473 2002 GJ ₁₂₅	16.0	X	0.96987	73.78872	211.27364	7.36882	0.1851909	0.21361277	2.7715193	21	7 10.2	18.1
195474 2002 GL ₁₂₆	15.8	X	277.66128	72.30631	194.01996	13.33877	0.1990809	0.20072732	2.8888948	21	1 31.5	20.6
195475 2002 GQ ₁₂₆	16.9	X	239.54034	356.91527	169.32951	1.19069	0.1007423	0.23620629	2.5918413	21	12 2.2	20.1
195476 2002 GT ₁₂₇	16.2	X	100.87451	33.06674	257.64074	2.49727	0.0776070	0.23207390	2.6225182	21	12 5.0	19.9
195477 2002 GK ₁₂₉	16.3	X	10.14625	264.32196	350.88650	3.19439	0.0470226	0.21389919	2.7690446	21	6 11.7	19.8
195478 2002 GV ₁₂₉	16.3	X	254.02022	271.25663	217.25300	2.99514	0.1808179	0.23399744	2.6081265	21	10 20.2	19.8
195479 2002 GX ₁₃₀	16.3	X	345.45184	234.79925	230.27618	1.46940	0.0467153	0.24126073	2.5555141	21	—	—
195480 2002 GK ₁₃₂	16.4	X	77.09355	274.39004	270.69022	0.78584	0.1083060	0.21393742	2.7687148	21	6 23.6	20.1
195481 2002 GO ₁₃₂	16.4	X	17.71837	315.44524	334.70804	2.68310	0.1715940	0.21690479	2.7434052	21	8 23.3	19.3
195482 2002 GF ₁₃₄	15.9	X	312.73363	165.09997	219.51412	5.15559	0.0456348	0.22529568	2.6748584	21	9 11.0	19.4
195483 2002 GV ₁₃₇	15.6	X	228.08744	81.14497	61.72623	14.26863	0.0451794	0.22966754	2.6408048	21	10 29.5	19.3
195484 2002 GM ₁₃₉	15.8	X	42.44077	230.53782	5.18773	6.53462	0.0145134	0.21695548	2.7429778	21	6 30.7	19.5
195485 2002 GG ₁₄₂	15.5	X	36.90250	193.25494	51.85116	10.08479	0.0951347	0.21380669	2.7698432	21	7 15.5	19.0
195486 2002 GP ₁₄₅	16.3	X	320.97861	164.57854	218.03967	5.14038	0.0131872	0.22560696	2.6723975	21	9 22.9	20.0
195487 2002 GF ₁₄₆	15.9	X	82.03349	200.27570	90.90781	3.59062	0.0322023	0.23076347	2.6324371	21	11 9.3	19.5
195488 2002 GB ₁₄₉	15.8	X	270.03391	328.39790	17.65410	6.13172	0.0259415	0.21446395	2.7641812	21	5 24.5	19.7
195489 2002 GJ ₁₅₀	15.7	X	324.13189	202.72742	197.41368	13.10708	0.1787819	0.23023611	2.6364554	21	10 16.4	18.0
195490 2002 GO ₁₅₀	12.9	X	308.21315	225.72888	237.06142	2.04389	0.1044378	0.08263775	5.2201588	21	11 15.9	19.4
195491 2002 GR ₁₅₁	15.9	X	173.25032	87.81486	109.99385	3.92132	0.0256121	0.22835030	2.6509507	21	11 1.1	19.6
195492 2002 GO ₁₆₀	16.4	X	116.63156	147.22911	115.73363	6.54854	0.1563345	0.22946692	2.6423438	21	11 23.6	20.6
195493 2002 GK ₁₆₁	16.5	X	161.57234	141.98050	84.38132	5.44685	0.1112242	0.23004606	2.6379072	21	11 20.2	20.6
195494 2002 GP ₁₆₂	16.2	X	313.16903	289.54617	170.01335	1.66673	0.0345291	0.23609314	2.5926694	21	12 25.0	19.3
195495 2002 GY ₁₆₂	12.8	X	343.07012	261.54644	182.43426	9.75964	0.1114739	0.08461059	5.1386958	21	12 12.4	19.2
195496 2002 GM ₁₆₄	15.7	X	163.79929	14.25190	200.07739	13.19739	0.0117006	0.22945368	2.6424454	21	11 11.0	19.4
195497 2002 GL ₁₆₅	16.2	X	151.72969	34.19589	192.83763	4.21704	0.1255774	0.22794515	2.6540910	21	11 11.0	20.4
195498 2002 GX ₁₆₈	16.1	X	95.83786	262.55006	2.22774	10.66512	0.1031042	0.22560626	2.6724030	21	10 26.6	20.1
195499 2002 GJ ₁₆₉	16.3	X	321.48994	106.08295	4.95502	5.54147	0.0754971	0.23836460	2.5761721	21	—	—
195500 2002 GK ₁₇₀	16.5	X	266.70932	251.62113	251.06808	2.83872	0.2049139	0.23615991	2.5921806	21	11 22.1	19.3
195501 2002 GT ₁₇₀	16.4	X	248.21615	123.86190	16.71372	7.72919	0.1346935	0.23298748	2.6156582	21	11 2.7	19.8
195502 2002 GY ₁₇₂	15.4	X	34.75444	214.55182	77.89476	10.50145	0.0718087	0.22098242	2.7095525	21	9 18.3	19.0
195503 2002 GJ ₁₇₄	15.9	X	233.98173	312.03399	167.19810	9.63335	0.1179092	0.23014343	2.6371631	21	9 23.3	19.5
195504 2002 GM ₁₇₇	16.0	X	321.77603	264.04882	176.42104	21.76938	0.0651608	0.23440658	2.6050907	21	12 13.1	19.7
195505 2002 GT ₁₇₉	13.3	X	336.82445	264.22524	180.26657	4.28471	0.0625587	0.08312480	5.1997479	21	12 5.4	19.9
195506 2002 GW ₁₈₁	15.3	X	325.48583	222.82450	81.45032	10.22078	0.1390213	0.21030899	2.8004693	21	6 1.7	18.6
195507 2002 GN ₁₈₂	16.4	X	11.48808	202.21715	68.83193	5.14464	0.0558957	0.21663162	2.7457109	21	7 6.7	19.7
195508 2002 HJ	15.5	X	58.30327	73.62801	160.92045	7.38436	0.0757763	0.21731071	2.7399878	21	7 28.3	19.0
195509 2002 HT ₄	17.1	X	178.07930	295.92056	187.52243	23.68395	0.1576585	0.37438735	1.9065811	21	7 28.7	20.3
195510 2002 HX ₄	15.1	X	355.36366	250.44215	16.97159	7.71941	0.1938495	0.21054550	2.7983717	21	5 28.9	17.9
195511 2002 HV ₅	16.9	X	148.64040	282.05253	200.28540	1.97329	0.1596610	0.26826207	2.3810209	21	6 29.7	20.5
195512 2002 HH ₆	15.6	X	163.13453	336.26253	241.39492	11.77285	0.1212908	0.23247376	2.6195101	21	11 9.8	19.8
195513 2002 HY ₇	15.9	X	179.73397	15.32681	166.31220	1.97125	0.0223026	0.22953280	2.641838			

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
195521 2002 JV ₁₆	15.4	X	85.56389	27.43399	171.80984	9.38575	0.1797959	0.21519591	2.7579097	21	8 1.9	19.5
195522 2002 JW ₁₆	16.2	X	314.32165	105.02298	29.29557	9.95041	0.0444144	0.24150055	2.5538221	21	—	—
195523 2002 JW ₁₉	15.7	X	326.18965	192.30835	129.92498	6.92145	0.0502262	0.21346832	2.7727695	21	7 7.7	19.2
195524 2002 JN ₂₀	15.5	X	87.60458	123.66451	77.30927	6.43384	0.0188751	0.21548336	2.7554565	21	7 16.3	19.2
195525 2002 JN ₂₁	15.6	X	178.12355	356.34862	225.58220	13.28746	0.1087471	0.22958764	2.6414175	21	11 30.8	19.7
195526 2002 JF ₂₄	16.4	X	177.40307	100.82627	96.89938	3.61738	0.1357646	0.22831122	2.6512532	21	10 31.2	20.6
195527 2002 JC ₂₇	16.2	X	223.45109	166.54579	56.89052	5.91744	0.1698721	0.23778033	2.5803905	21	—	—
195528 2002 JT ₂₇	16.0	X	236.85982	1.06453	184.50680	7.49591	0.1417230	0.23403390	2.6078556	21	12 17.1	19.6
195529 2002 JQ ₂₈	15.2	X	303.84438	55.74348	203.77756	15.94624	0.0778111	0.20437293	2.8544370	21	4 12.7	19.2
195530 2002 JV ₂₈	16.0	X	170.34637	74.44870	210.75947	7.96974	0.2923135	0.18294770	3.0731570	21	—	—
195531 2002 JY ₂₉	15.5	X	64.07577	179.23398	61.02907	9.22155	0.0995988	0.21593389	2.7516224	21	8 22.8	19.3
195532 2002 JA ₃₅	15.6	X	203.88038	88.48737	64.52846	22.93321	0.0420091	0.22380533	2.6867201	21	10 19.9	19.7
195533 2002 JQ ₃₇	16.4	X	222.17672	272.30871	276.59706	3.59379	0.1582676	0.23392460	2.6086679	21	12 1.4	20.3
195534 2002 JB ₄₀	15.8	X	278.34457	283.10672	232.73042	10.79094	0.2310910	0.24201950	2.5501700	21	12 26.4	18.4
195535 2002 JJ ₄₁	15.3	X	191.43173	302.58340	219.99864	14.60221	0.1239066	0.22734279	2.6587771	21	9 27.4	19.6
195536 2002 JC ₄₄	15.4	X	62.17749	314.95245	244.95854	7.15804	0.2392777	0.21335610	2.7737416	21	7 12.3	18.9
195537 2002 JJ ₄₄	14.9	X	21.70173	279.02431	3.58116	9.23375	0.1759764	0.21587457	2.7521265	21	8 23.8	17.9
195538 2002 JO ₄₅	16.0	X	267.70952	260.82470	31.14766	20.31875	0.2566859	0.19890588	2.9065043	21	3 2.3	21.1
195539 2002 JQ ₄₅	16.3	X	180.60078	332.44936	252.99066	3.40537	0.0801044	0.23248927	2.6193937	21	12 9.8	20.2
195540 2002 JG ₄₆	16.4	X	171.52811	339.60108	270.28879	2.58022	0.0340940	0.23460018	2.6036573	21	—	—
195541 2002 JM ₄₆	16.0	X	181.98782	343.71577	232.59286	10.01406	0.1958621	0.23205401	2.6226681	21	11 23.0	20.2
195542 2002 JO ₄₈	15.9	X	127.70160	316.33545	249.96217	4.23594	0.1066643	0.22149774	2.7053483	21	9 18.4	20.0
195543 2002 JO ₅₆	15.9	X	24.23011	39.44151	310.27750	1.76368	0.1094328	0.22522450	2.6754220	21	11 17.6	19.2
195544 2002 JP ₅₇	15.5	X	347.62124	251.84584	49.25480	9.36901	0.1434174	0.21139126	2.7909027	21	7 8.2	18.6
195545 2002 JG ₆₀	15.6	X	27.74074	201.48002	55.88189	5.98398	0.0309875	0.21389681	2.7690651	21	7 11.1	19.2
195546 2002 JE ₆₂	15.7	X	30.45614	44.90443	197.72898	8.10607	0.1852814	0.21268059	2.7796118	21	7 8.7	18.8
195547 2002 JN ₆₂	16.0	X	255.79161	116.99343	71.04794	14.81704	0.0854520	0.23705594	2.5856446	21	—	—
195548 2002 JP ₆₅	15.6	X	230.06172	202.95032	78.27201	8.89109	0.2915577	0.18984508	2.9982636	21	1 11.7	21.1
195549 2002 JP ₆₆	15.8	X	99.89044	32.40734	193.37454	5.24120	0.0467760	0.21892678	2.7264871	21	9 5.9	19.5
195550 2002 JE ₆₇	15.5	X	17.93911	51.21779	204.20789	6.81134	0.0640322	0.21046312	2.7991019	21	6 24.7	19.1
195551 2002 JE ₆₇	15.5	X	60.15334	188.10653	56.50571	4.87226	0.0391594	0.21612438	2.7500053	21	8 11.4	19.2
195552 2002 JL ₆₇	15.1	X	151.15976	264.57476	70.41301	17.23300	0.3553796	0.18268903	3.0760572	21	1 26.3	20.8
195553 2002 JA ₆₈	16.2	X	247.18121	174.22103	28.83218	13.28667	0.0966043	0.24079758	2.5587899	21	—	—
195554 2002 JD ₆₈	17.7	X	241.60583	316.32818	207.86047	21.31313	0.0313760	0.38622732	1.8674145	21	—	—
195555 2002 JR ₆₈	16.0	X	239.89974	179.99178	53.60504	13.37392	0.2202683	0.24298191	2.5434317	21	—	—
195556 2002 JB ₆₉	14.9	X	32.05009	206.79763	68.98834	14.07652	0.1110448	0.21807597	2.7335740	21	8 27.9	18.5
195557 2002 JH ₆₉	15.5	X	38.38147	198.79451	86.14107	10.25180	0.1227120	0.21961070	2.7208236	21	9 20.3	19.0
195558 2002 JB ₇₁	15.8	X	240.38376	0.72122	162.48803	8.71215	0.1265603	0.23352682	2.6116294	21	11 26.8	19.4
195559 2002 JT ₇₁	15.6	X	229.11910	346.79062	186.63286	12.84665	0.2122686	0.23361905	2.6109419	21	11 15.4	19.6
195560 2002 JK ₇₂	15.6	X	102.55248	19.14774	146.97526	8.92109	0.1308852	0.21376299	2.7702207	21	7 4.4	19.7
195561 2002 JR ₇₃	15.8	X	87.35692	21.01081	189.28332	11.22088	0.2154055	0.21550069	2.7553087	21	8 22.1	20.1
195562 2002 JN ₇₆	16.3	X	175.31939	324.14845	221.72905	8.07842	0.1467499	0.22854620	2.6494357	21	10 11.7	20.6
195563 2002 JX ₇₆	16.2	X	225.66433	151.51476	26.22206	5.18610	0.1240188	0.23479454	2.6022203	21	11 25.2	19.8
195564 2002 JC ₇₇	15.6	X	80.17419	358.07642	213.88111	13.35128	0.0859392	0.21755843	2.7379075	21	7 26.6	19.6
195565 2002 JB ₇₈	16.4	X	204.58805	152.29149	25.34204	6.32406	0.1978265	0.23189792	2.6238448	21	10 26.7	20.5
195566 2002 JR ₈₀	16.3	X	73.99547	235.14312	38.90319	2.54484	0.1152046	0.22322415	2.6913815	21	10 17.9	20.0
195567 2002 JA ₈₁	16.5	X	86.35176	39.27549	226.39094	3.51142	0.1909024	0.22297339	2.6933990	21	10 29.6	20.6
195568 2002 JB ₈₁	15.5	X	307.35162	227.49707	217.85898	21.39731	0.0520140	0.23178274	2.6247140	21	11 26.7	18.9
195569 2002 JG ₈₂	16.0	X	6.45178	126.37173	213.53777	5.25293	0.0237789	0.22378950	2.6868468	21	9 29.2	19.5
195570 2002 JF ₈₄	15.2	X	329.68811	280.57292	41.55244	13.02203	0.1822021	0.21292171	2.7775129	21	6 28.7	18.4
195571 2002 JT ₈₄	15.6	X	359.39720	266.57644	30.58736	10.09527	0.1094291	0.21449645	2.7639021	21	7 28.5	18.9
195572 2002 JY ₈₄	16.3	X	275.84241	53.49863	249.64741	3.50277	0.2565790	0.20073422	2.8888286	21	3 9.9	20.9
195573 2002 JW ₉₂	15.7	X	336.62417	58.52185	258.20007	3.61827	0.0635343	0.21341256	2.7732524	21	7 14.7	19.2
195574 2002 JG ₉₇	15.7	X	62.38212	118.62745	85.14584	14.66405	0.0910224	0.22602065	2.6691356	21	11 11.9	19.5
195575 2002 JH ₉₇	15.3	X	343.70152	223.11825	82.65204	15.46820	0.1837147	0.21336119	2.7736975	21	7 3.2	18.1
195576 2002 JT ₉₉	16.7	X	125.60712	275.82060	247.62150	18.80531	0.0614310	0.36892971	1.9253379	21	7 17.1	19.1
195577 2002 JU ₉₉	15.3	X	253.32603	347.64212	64.29586	13.82559	0.0840012	0.21812440	2.7331694	21	7 25.5	19.3
195578 2002 JB ₁₀₀	15.1	X	109.82957	136.71038	176.46170	16.10516	0.2344452	0.17655243	3.1469288	21	—	—
195579 2002 JB ₁₀₁	14.9	X	131.69630	99.62630	173.01641	25.00294	0.2929518	0.17678665	3.1441486	21	12 14.8	21.0
195580 2002 JY ₁₀₁	15.7	X	17.06304	237.87768	62.88895	13.51114	0.1510815	0.21499380	2.7596379	21	9 12.5	19.0
195581 2002 JX ₁₀₃	16.0	X	121.33239	57.59374	196.76406	9.22203	0.1657430	0.22695744	2.6617858	21	11 17.4	20.3
195582 2002 JY ₁₀₉	16.3	X	109.30533	210.49879	9.60000	1.92064	0.1286060	0.21934177	2.7230471	21	9 20.4	20.4
195583 2002 JQ ₁₁₈	15.8	X	231.42481	111.40273	68.78751	15.13946	0.0932633	0.23652374	2.5895217	21	12 9.9	19.4
195584 2002 JG ₁₁₉	15.6	X	110.29384	346.13970	182.33810	17.50985	0.1453368	0.21502040	2.7594103	21	7 16.1	20.0
195585 2002 JS ₁₁₉	15.4	X	210.40470	54.05890	131.61063	12.48143	0.1118498	0.23303762	2.6152830	21	11 23.7	19.4
195586 2002 JE ₁₂₁	15.5	X	268.05061	323.34544	131.33169	14.95569	0.1400562	0.22777265	2.6554308	21	10 5.8	19.2
195587 2002 JF ₁₂₁	15.7	X	167.84023	210.74478	91.92604	16.07660	0.1699354	0.23867029	2.5739719	21	—	—
195588 2002 JR ₁₂₄	15.9	X	79.33035	59.35833	161.83077	9.91819	0.1070231	0.21574906	2.7531938	21	8 13.1	19.8
195589 2002 JL ₁₂₅	16.2	X	198.64689	92.04152	20.21767	3.50639	0.0388699	0.21913100	2.7247929	21	8 10.8	20.0
195590 2002 JC ₁₂₇	15.4	X	324.72290	279.45721	88.24387	7.41822	0.0541388	0.22023395	2.7156880	21	9 10.8	18.9
195591 2002 JU ₁₂₉	15.2	X	299.44916	210.56369	112.28858	7.61975	0.1116645	0.20964211	2.8064052	21	5 23.6	19.0
195592 2002 JW ₁₂₉	16.0	X	284.53301	34.53276	109.37967	6.83697	0.2312329	0.23860825	2.5744181	21	12 21.6	18.5
195593 2002 JZ ₁₃₀	15.7	X	158.34388	85.69299	104.25824	10.43201	0.0613777	0.22305592	2.6927346	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>		
195601	2002	<i>JU</i> ₁₄₈	15.9 ^m	X	350.19072	274.34411	354.44917	3.49738	0.0576192	0.21000121	2.8032049	21	5 30.3	19.4
195602	2002	<i>KN</i> ₁	16.3	X	188.94775	297.23488	276.67216	3.09196	0.1274987	0.23264880	2.6181961	21	11 30.5	20.4
195603	2002	<i>KO</i> ₂	15.8	X	150.59043	331.10073	204.25691	11.20750	0.1226817	0.22195601	2.7016232	21	9 2.7	20.2
195604	2002	<i>KX</i> ₂	15.9	X	228.43771	143.02075	47.36393	6.41243	0.0462106	0.23462532	2.6034713	21	12 26.3	19.4
195605	2002	<i>KY</i> ₉	15.7	X	282.83369	115.03590	58.23481	10.35529	0.0600347	0.24027380	2.5625073	21	—	—
195606	2002	<i>KO</i> ₁₀	15.4	X	311.21471	305.68921	62.80190	6.91051	0.0497859	0.21705028	2.7421791	21	8 22.1	19.0
195607	2002	<i>KS</i> ₁₀	16.4	X	205.30423	351.24673	220.84247	5.33201	0.0902880	0.23243750	2.6197826	21	12 19.4	20.2
195608	2002	<i>KO</i> ₁₁	16.4	X	323.04469	27.43016	243.49162	19.18478	0.0500019	0.36081881	1.9540842	21	3 28.9	18.7
195609	2002	<i>KM</i> ₁₃	15.9	X	200.14670	102.84659	49.67804	4.15559	0.0189143	0.22470885	2.6795134	21	10 6.8	19.5
195610	2002	<i>LS</i> ₁	16.3	X	252.68503	17.62830	151.25186	4.68764	0.1796994	0.23461021	2.6035831	21	12 10.9	19.7
195611	2002	<i>LP</i> ₁₂	15.3	X	337.49847	83.09393	231.86360	11.70794	0.1524562	0.20942721	2.8083247	21	7 4.9	18.6
195612	2002	<i>LB</i> ₁₄	15.1	X	274.21783	36.22265	258.51861	11.00095	0.1809206	0.19876354	2.9078917	21	3 2.6	19.8
195613	2002	<i>LQ</i> ₁₆	16.0	X	32.67166	251.53302	351.78561	0.55364	0.2191908	0.21008333	2.8024744	21	7 20.8	18.8
195614	2002	<i>LG</i> ₂₀	14.9	X	180.93222	225.06533	90.17705	12.22876	0.3427361	0.18278857	3.0749404	21	1 20.7	20.6
195615	2002	<i>LN</i> ₂₀	15.6	X	42.02540	30.22165	289.73067	8.74818	0.3261328	0.21640799	2.7476022	21	12 4.2	19.5
195616	2002	<i>LD</i> ₂₅	14.9	X	126.35264	102.41260	224.34270	14.92160	0.2137822	0.18022740	3.1040032	21	—	—
195617	2002	<i>LP</i> ₂₅	15.5	X	43.84096	223.51185	86.27002	14.44007	0.0718733	0.22019441	2.7160130	21	10 25.2	19.3
195618	2002	<i>LA</i> ₃₂	15.0	X	238.38797	137.68386	138.55501	5.95195	0.3036462	0.18756956	3.0224640	21	1 10.7	20.5
195619	2002	<i>LN</i> ₃₇	15.1	X	159.77655	154.71001	120.88929	24.58019	0.2572766	0.17834668	3.1257869	21	—	—
195620	2002	<i>LQ</i> ₄₁	15.2	X	128.76566	2.45991	191.45104	8.09610	0.1843768	0.21774524	2.7363413	21	9 9.3	19.7
195621	2002	<i>LN</i> ₄₄	15.9	X	276.93334	133.43304	38.60120	4.41501	0.1156070	0.23811527	2.5779701	21	—	—
195622	2002	<i>LC</i> ₄₅	15.3	X	93.47756	150.35832	97.70056	14.37527	0.0574222	0.22130334	2.7069324	21	10 7.9	19.4
195623	2002	<i>LO</i> ₄₆	14.8	X	225.48167	60.14413	239.53891	15.51914	0.1603384	0.18853192	3.0121698	21	1 26.5	20.0
195624	2002	<i>LZ</i> ₅₀	15.2	X	310.83637	219.07947	136.26059	9.99306	0.1731052	0.21369939	2.7707704	21	7 13.3	18.5
195625	2002	<i>LQ</i> ₅₄	14.6	X	112.41583	65.22887	241.95469	17.91103	0.1470045	0.17212633	3.2006675	21	12 28.8	19.9
195626	2002	<i>LA</i> ₅₈	15.1	X	175.11682	356.91509	98.09640	14.56753	0.0030893	0.21099761	2.7943729	21	6 18.4	18.9
195627	2002	<i>LS</i> ₆₀	16.1	X	284.22519	243.11251	258.93453	5.90439	0.1424619	0.23492599	2.6012495	21	12 28.7	18.9
195628	2002	<i>LA</i> ₆₂	15.0	X	190.76507	5.99393	271.63816	10.53926	0.0598122	0.18041871	3.1018087	21	—	—
195629	2002	<i>MB</i> ₅	16.1	X	216.97338	14.36650	248.72778	2.37488	0.2560948	0.18379450	3.0637103	21	—	—
195630	2002	<i>NE</i> ₃	15.5	X	155.17989	326.47394	344.72034	2.89117	0.1641527	0.17902827	3.1178482	21	—	—
195631	2002	<i>NG</i> ₃	16.0	X	150.09798	8.04127	310.16715	8.08325	0.1593433	0.17897672	3.1184469	21	—	—
195632	2002	<i>NQ</i> ₃	15.3	X	160.53144	111.80726	189.47344	18.12008	0.1654487	0.17778596	3.1323557	21	—	—
195633	2002	<i>NM</i> ₄	15.1	X	140.34728	219.22330	144.12534	11.40173	0.1286862	0.18294292	3.0732105	21	1 26.9	19.7
195634	2002	<i>NP</i> ₄	15.2	X	190.69028	79.47038	233.61277	3.13579	0.1097581	0.18534588	3.0465906	21	1 15.9	20.1
195635	2002	<i>NB</i> ₆	15.8	X	55.93652	43.95706	286.22606	6.05825	0.0541217	0.21962101	2.7207385	21	11 25.6	19.5
195636	2002	<i>ND</i> ₈	15.2	X	154.70947	108.81463	266.18306	7.87395	0.2304222	0.18547806	3.0451429	21	2 28.1	20.4
195637	2002	<i>NM</i> ₁₀	15.1	X	182.32736	230.79942	125.68867	9.55178	0.0852521	0.19021557	2.9943691	21	2 28.4	19.7
195638	2002	<i>NT</i> ₁₆	14.7	X	126.76290	94.70876	241.00601	20.60092	0.2141346	0.17533393	3.1614918	21	—	—
195639	2002	<i>NE</i> ₂₄	14.7	X	209.08149	3.49501	306.81979	12.07466	0.1142464	0.18526287	3.0475005	21	1 30.2	19.5
195640	2002	<i>NU</i> ₂₇	14.4	X	80.05951	249.83252	148.91216	26.42750	0.2513881	0.17413570	3.1759782	21	1 16.2	18.6
195641	2002	<i>NU</i> ₂₇	14.4	X	170.56531	326.91970	322.78295	23.44915	0.1948738	0.17606421	3.1527436	21	—	—
195642	2002	<i>NM</i> ₂₈	15.1	X	145.91349	74.79723	273.77361	8.96486	0.1053106	0.18198742	3.0839582	21	1 12.9	19.7
195643	2002	<i>NN</i> ₂₉	15.0	X	160.10466	223.85846	113.70982	13.67128	0.2393925	0.18165263	3.0877461	21	1 26.1	20.1
195644	2002	<i>NC</i> ₃₄	15.4	X	214.45780	332.16662	17.44628	3.11198	0.2567758	0.19139357	2.9820699	21	3 19.3	20.6
195645	2002	<i>NB</i> ₃₆	15.0	X	133.19687	134.50671	243.74369	8.47559	0.1696276	0.18248841	3.0783112	21	2 7.9	19.8
195646	2002	<i>NN</i> ₃₆	14.8	X	146.93056	231.98823	148.17307	17.48029	0.2287614	0.18520421	3.0481440	21	3 4.6	19.8
195647	2002	<i>NW</i> ₃₆	15.4	X	139.42811	183.29810	238.16025	8.29270	0.0683836	0.19192815	2.9765300	21	3 26.3	19.9
195648	2002	<i>NV</i> ₃₉	15.6	X	237.65068	206.99466	106.68008	5.34263	0.1217161	0.19113570	2.9847514	21	3 3.1	20.3
195649	2002	<i>NB</i> ₄₄	15.8	X	185.85410	178.06726	189.50120	1.33195	0.1938083	0.18961578	3.0006803	21	3 17.9	20.7
195650	2002	<i>NQ</i> ₄₅	15.8	X	190.87581	176.47042	142.40281	6.38554	0.2635298	0.18472084	3.0534592	21	1 27.4	21.1
195651	2002	<i>NR</i> ₅₈	15.4	X	79.51481	215.34404	162.64531	9.58954	0.1784064	0.17534722	3.1613321	21	—	—
195652	2002	<i>NV</i> ₅₈	15.9	X	106.88289	290.19696	162.25499	9.94410	0.0582360	0.19150066	2.9809581	21	3 29.6	20.0
195653	2002	<i>NX</i> ₅₈	15.8	X	112.27537	225.09161	161.43593	12.86815	0.2048216	0.18054569	3.1003541	21	2 2.3	20.4
195654	2002	<i>NZ</i> ₅₈	16.2	X	250.95090	186.17029	136.50335	2.94829	0.1124855	0.19453654	2.9498636	21	3 26.5	20.8
195655	2002	<i>NO</i> ₅₉	16.1	X	185.29786	187.74753	85.37005	5.70833	0.1424307	0.23139019	2.6276817	21	—	—
195656	2002	<i>NR</i> ₅₉	15.8	X	216.36194	237.51417	43.48898	0.31667	0.1695801	0.18496221	3.0508022	21	1 3.3	20.9
195657	2002	Zhuangqing	15.5	X	170.83958	49.81665	266.30244	9.59597	0.0681259	0.18099138	3.0952623	21	—	—
195658	2002	<i>NV</i> ₆₁	15.2	X	217.67258	161.40802	179.24348	12.65097	0.1408294	0.19207559	2.9750066	21	3 12.9	20.0
195659	2002	<i>NF</i> ₆₂	16.1	X	318.22291	260.30742	55.74432	2.63392	0.0438851	0.20506745	2.8479885	21	6 18.4	19.7
195660	2002	<i>NB</i> ₆₃	16.5	X	337.35183	252.66918	54.69074	2.81326	0.0745641	0.20572671	2.8419009	21	7 2.7	20.0
195661	2002	<i>NH</i> ₆₅	16.2	X	207.09420	298.47625	64.18711	3.46150	0.0832974	0.19332797	2.9621446	21	4 1.1	20.7
195662	2002	<i>NW</i> ₆₆	15.9	X	199.61461	47.79615	299.24170	9.53986	0.1207366	0.19034789	2.9929813	21	3 1.1	20.8
195663	2002	<i>NN</i> ₆₇	15.8	X	204.48659	235.26668	97.34619	3.69182	0.1571431	0.18825224	3.0151525	21	2 22.0	20.8
195664	2002	<i>OM</i>	14.9	X	191.86646	115.79966	250.99844	9.64896	0.2186418	0.18879382	3.0093835	21	3 18.1	20.2
195665	2002	<i>OU</i> ₄	14.8	X	165.68814	139.48620	255.68280	14.22940	0.0873852	0.19253044	2.9703192	21	3 21.0	19.6
195666	2002	<i>OT</i> ₅	16.0	X	160.06252	83.15327	209.13074	9.30235	0.2086266	0.17748666	3.1358762	21	—	—
195667	2002	<i>OJ</i> ₆	14.8	X	211.67460	0.40189	272.30763	13.87296	0.1429303	0.18137963	3.0908436	21	—	—
195668	2002	<i>OY</i> ₆	14.6	X	78.81944	129.05225	266.94040	10.17486	0.0800658	0.17679393	3.1440624	21	—	—
195669	2002	<i>OS</i> ₉	1											

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195681 2002 OD ₃₀	15.5	X	169.82069	141.79009	224.18946	7.60383	0.1559864	0.18565436	3.0432149	21	2 26.7	20.5
195682 2002 OE ₃₀	15.0	X	182.17762	351.34099	262.38680	7.51303	0.1068287	0.17363183	3.1821195	21	—	—
195683 2002 OL ₃₀	15.9	X	160.56413	226.86392	179.47583	2.10564	0.2630532	0.18950982	3.0017988	21	4 15.4	21.2
195684 2002 PY	14.4	X	93.51333	106.15693	238.89261	22.21007	0.1808007	0.17026867	3.2238851	21	—	—
195685 2002 PW ₂	15.1	X	237.96577	91.62699	227.61363	12.11919	0.1769646	0.19041209	2.9923086	21	2 28.3	20.2
195686 2002 PR ₄	15.2	X	111.71002	186.54925	191.15227	11.51296	0.1880581	0.17910313	3.1169794	21	1 19.3	19.8
195687 2002 PT ₄	15.3	X	262.14573	18.75019	223.44600	9.55184	0.0876477	0.18464332	3.0543137	21	1 2.9	20.1
195688 2002 PS ₅	15.3	X	225.17489	126.92689	195.72253	10.06451	0.1114944	0.18857651	3.0116950	21	2 26.2	20.1
195689 2002 PP ₈	14.8	X	259.93764	272.08644	278.82026	13.93088	0.1500431	0.17951037	3.1122635	21	—	—
195690 2002 PF ₁₀	15.4	X	62.15225	166.18901	287.66155	8.15103	0.0194015	0.18442649	3.0567073	21	1 27.0	19.5
195691 2002 PS ₁₀	14.6	X	67.25928	82.71648	305.89063	13.88894	0.0718142	0.17431800	3.1737635	21	—	—
195692 2002 PJ ₁₁	15.9	X	195.69205	196.54263	178.87795	3.52827	0.1954213	0.19132554	2.9827767	21	4 4.4	21.0
195693 2002 PC ₁₂	15.8	X	148.90581	141.56151	184.17503	4.69469	0.1531488	0.17968074	3.1102958	21	—	—
195694 2002 PJ ₁₂	15.2	X	68.18416	195.34836	291.47724	9.38025	0.0650932	0.19032101	2.9932631	21	3 16.3	19.4
195695 2002 PU ₁₆	15.0	X	143.64716	88.43558	264.99995	4.34172	0.1565861	0.18186775	3.0853108	21	1 21.7	19.7
195696 2002 PM ₁₈	15.4	X	191.74298	68.36206	201.11382	4.62983	0.0987434	0.17884787	3.1199445	21	—	—
195697 2002 PR ₂₃	15.5	X	69.46339	63.93694	309.35619	8.08415	0.0813110	0.17362557	3.1821960	21	—	—
195698 2002 PC ₂₅	15.1	X	133.13002	55.21547	300.48450	3.84808	0.1512226	0.17973544	3.1096647	21	1 14.4	19.8
195699 2002 PP ₂₅	15.9	X	263.64696	107.17648	172.79200	1.90817	0.1373805	0.19031924	2.9932816	21	2 13.2	20.6
195700 2002 PY ₂₆	15.0	X	129.42555	125.50257	287.41230	9.01286	0.1218598	0.18705899	3.0279614	21	3 9.9	19.6
195701 2002 PH ₂₈	14.8	X	3.52045	122.89666	289.95799	9.55127	0.1028492	0.16891320	3.2411092	21	12 24.9	18.9
195702 2002 PB ₃₀	15.3	X	96.89445	60.19008	306.10467	9.16452	0.0676167	0.17616056	3.1515940	21	—	—
195703 2002 PJ ₃₂	15.3	X	201.03651	155.28671	161.51256	11.39443	0.1002452	0.18457685	3.0550470	21	1 29.2	20.1
195704 2002 PH ₃₅	15.3	X	132.92142	89.61800	314.22177	9.33040	0.0476511	0.18728485	3.0255264	21	2 24.3	19.8
195705 2002 PY ₃₅	15.0	X	16.75783	191.77494	314.66374	9.95444	0.0384730	0.18486010	3.0519255	21	1 31.8	19.1
195706 2002 PO ₃₆	15.4	X	102.87256	170.58915	313.25765	9.56247	0.0550877	0.19421472	2.9531213	21	4 26.4	19.7
195707 2002 PQ ₃₆	14.5	X	58.04788	278.19699	155.39466	17.42939	0.2581237	0.17696202	3.1420711	21	1 21.1	18.0
195708 2002 PV ₃₈	15.8	X	154.07436	57.90071	244.18469	4.18028	0.1341826	0.17662450	3.1460727	21	—	—
195709 2002 PP ₄₀	14.5	X	93.63698	126.16100	240.68325	23.61353	0.1060473	0.17573588	3.1566693	21	—	—
195710 2002 PA ₄₇	15.1	X	119.18603	115.89408	278.96686	8.88185	0.1102183	0.18116746	3.0932564	21	2 6.2	19.6
195711 2002 PL ₄₇	15.0	X	122.56435	79.99616	287.53771	8.86547	0.1014363	0.17795855	3.1303301	21	1 10.6	19.4
195712 2002 PD ₄₉	15.0	X	156.24847	97.08425	260.46736	8.10244	0.0736908	0.18196067	3.0842604	21	1 29.6	19.7
195713 2002 PO ₄₉	14.9	X	187.04479	10.73759	315.43339	16.03478	0.1143282	0.18150432	3.0894279	21	1 29.8	19.7
195714 2002 PM ₅₃	15.2	X	187.39145	317.30536	337.75011	13.25104	0.1332287	0.17996179	3.1070567	21	—	—
195715 2002 PE ₅₇	15.0	X	124.91521	158.08037	169.48262	15.99238	0.2315259	0.17304170	3.1893501	21	—	—
195716 2002 PM ₅₇	14.6	X	104.88998	171.47719	167.62075	18.47296	0.1630639	0.17064005	3.2192058	21	—	—
195717 2002 PD ₅₈	14.3	X	114.08486	210.26908	168.15176	21.54462	0.1963391	0.17645580	3.1480775	21	1 24.9	19.2
195718 2002 PJ ₅₉	14.8	X	152.47697	38.95359	348.91668	9.06269	0.1527522	0.18438619	3.0571527	21	3 11.1	19.6
195719 2002 PV ₅₉	14.6	X	133.71209	218.43829	160.62597	18.11368	0.2129283	0.17957533	3.1115128	21	2 16.7	19.5
195720 2002 PF ₆₁	14.6	X	124.77337	150.95908	236.36560	11.84555	0.1001615	0.18142157	3.0903673	21	1 31.6	19.3
195721 2002 PG ₆₁	14.8	X	104.37084	30.73741	342.04760	26.09658	0.0665455	0.17497457	3.1658191	21	—	—
195722 2002 PK ₆₃	14.9	X	158.39645	41.21163	323.00165	9.41070	0.0973159	0.18497206	3.0506938	21	2 12.6	19.6
195723 2002 PL ₆₉	15.0	X	200.13366	63.30026	243.30516	9.32285	0.1451685	0.18202216	3.0835657	21	1 16.9	20.1
195724 2002 PM ₇₀	15.3	X	131.15711	98.27011	284.10556	14.95264	0.1418502	0.18133587	3.0913409	21	2 6.5	20.0
195725 2002 PM ₇₁	15.7	X	176.58966	36.87807	227.60169	9.18512	0.2494920	0.17772197	3.1331075	21	—	—
195726 2002 PY ₇₄	14.8	X	97.21752	215.36620	178.56743	4.58281	0.1670206	0.17730926	3.1379675	21	1 19.9	19.0
195727 2002 PP ₇₅	15.1	X	137.16119	67.03850	327.85954	10.55361	0.1273078	0.18627959	3.0364015	21	2 28.4	19.6
195728 2002 PY ₇₅	16.0	X	264.05068	304.18096	344.98499	4.64079	0.1591049	0.19178784	2.9779815	21	2 23.0	20.7
195729 2002 PO ₇₉	15.4	X	88.05331	31.43039	357.79642	12.36078	0.0918343	0.17734315	3.0571567	21	—	—
195730 2002 PL ₈₀	14.8	X	125.13728	165.04967	254.75444	10.85195	0.1653072	0.18311144	3.0713247	21	3 18.6	19.6
195731 2002 PB ₈₂	15.0	X	173.75972	142.80174	164.31206	4.63556	0.1857090	0.17941191	3.1134020	21	—	—
195732 2002 PG ₈₈	15.5	X	122.61938	158.25911	167.68897	3.94461	0.2141876	0.17319753	3.1874369	21	—	—
195733 2002 PB ₉₀	14.8	X	86.83663	148.00261	118.88853	15.46078	0.0850714	0.17432554	3.1736719	21	—	—
195734 2002 PU ₉₀	14.4	X	116.00652	252.71268	247.43039	17.83080	0.2809461	0.17963182	3.1108604	21	3 6.4	19.3
195735 2002 PE ₉₁	15.2	X	104.53878	354.92207	354.24447	10.24868	0.2065510	0.17350183	3.1837089	21	—	—
195736 2002 PA ₉₂	15.3	X	105.62700	156.08805	232.93414	14.60099	0.1364842	0.17939129	3.1136406	21	1 16.8	19.8
195737 2002 PQ ₉₂	14.8	X	33.99601	213.25710	243.02160	15.06920	0.0046359	0.17929377	3.1147696	21	—	—
195738 2002 PV ₉₂	14.9	X	186.48260	40.30444	226.98918	16.38751	0.1660249	0.17572568	3.1567915	21	—	—
195739 2002 PF ₉₃	14.7	X	154.74806	104.44186	261.50636	14.86064	0.1531284	0.18191184	3.0848122	21	2 9.9	19.8
195740 2002 PN ₉₅	15.2	X	202.71993	208.52290	142.98676	10.56063	0.0948009	0.19019884	2.9945448	21	3 15.2	19.9
195741 2002 PN ₉₈	15.4	X	103.00848	251.75188	157.49433	5.14902	0.2854651	0.18077352	3.0977487	21	3 3.1	19.9
195742 2002 PD ₁₀₁	15.6	X	91.35184	147.95114	226.92213	9.57111	0.2153843	0.17608696	3.1524721	21	—	—
195743 2002 PW ₁₀₁	15.1	X	199.83270	27.09042	259.33463	7.85262	0.0516645	0.18095309	3.0956989	21	—	—
195744 2002 PB ₁₀₂	15.2	X	164.94235	42.73323	284.74188	11.49728	0.1372115	0.18084129	3.0969746	21	1 10.9	20.0
195745 2002 PS ₁₀₂	15.6	X	143.37373	86.98858	254.53329	8.94578	0.1515943	0.17814840	3.1281058	21	—	—
195746 2002 PZ ₁₀₂	15.5	X	123.89799	189.26500	198.72297	12.03311	0.1499181	0.18318708	3.0704792	21	2 7.4	20.2
195747 2002 PD ₁₀₃	15.3	X	180.00129	49.35280	210.59975	5.82601	0.1587950	0.17552245	3.1592278	21	—	—
195748 2002 PK ₁₀₃	14.8	X	24.99756	161.48588	302.89677	20.73272	0.0809041	0.17951184	3.1122465	21	—	—
195749 2002 PZ ₁₀₃	14.9	X	359.47023	187.10927	277.93987	10.15736	0.0598963	0.17620461	3.1510687	21	—	—
195750 2002 PA ₁₀₄	14.6	X	23.43567	124.55859	296.24412	16.24078	0.1234659	0.17197717	3.2024979	21	—	—
195751 2002 PM ₁₀₄	15.4	X	203.61702	140.77080	202.59747	10.25538	0.1181438	0.18798725	3.0179853	21	3 1.9	20.3
195752 2002 PU ₁₀₄	15.2	X	166.89702	73.82906	197.42065	9.62233	0.0800284	0.17332231	3.1859068	21	—	—
195753 2002 PX ₁₀₄	15.4	X	197.11211	107.64745	190.06755	11.94006	0.1354567	0.18132655	3.0914469	21	1 4.8	20.6
195754 2002 PZ ₁₀₄	15.7	X	190.63102	145.41644	241.89472	7.82382	0.1026460	0.19144212	2.9815657	21	4 10.9</	

ELEMENTS AND OPPOSITION DATES IN 2021

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2021 JULY 5.0 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>
195761 2002 PZ ₁₁₁	15.2	X	178.04452	214.94255	138.14922	9.47259	0.1099277	0.18593610	3.0401400	21	2 20.6	19.9
195762 2002 PW ₁₁₇	15.4	X	124.01750	178.50986	184.98525	9.75075	0.1115658	0.17972700	3.1097621	21	1 7.4	20.0
195763 2002 PT ₁₁₈	15.4	X	163.75106	155.87099	182.16513	9.35580	0.1022248	0.18130767	3.0916614	21	1 17.9	20.2
195764 2002 PF ₁₂₁	15.2	X	187.48117	144.31447	181.87785	10.05719	0.0485769	0.18288200	3.0738930	21	1 24.6	19.9
195765 2002 PK ₁₂₁	14.7	X	358.43177	266.98639	169.54655	19.14708	0.1450043	0.16941461	3.2347110	21	—	—
195766 2002 PT ₁₂₂	15.0	X	285.60792	139.75262	278.96912	7.16585	0.0948485	0.20814048	2.8198869	21	9 7.5	18.8
195767 2002 PN ₁₂₅	15.1	X	119.25810	79.28074	318.21845	15.33748	0.2238207	0.18129820	3.0917691	21	2 23.2	19.9
195768 2002 PQ ₁₂₅	14.9	X	169.57215	194.43730	152.66665	14.95473	0.1220489	0.18333522	3.0688249	21	2 4.9	19.8
195769 2002 PO ₁₂₇	15.3	X	114.99650	261.18310	122.42694	6.08743	0.1660533	0.18007482	3.0575644	21	1 29.4	19.7
195770 2002 PG ₁₂₉	15.1	X	241.84214	221.99020	84.23683	7.37652	0.2263139	0.18814896	3.0162558	21	2 21.6	20.3
195771 2002 PK ₁₃₁	14.8	X	200.57078	28.00903	259.97945	17.30269	0.1102800	0.17866572	3.1220646	21	—	—
195772 2002 PG ₁₃₃	15.3	X	220.67211	359.64112	311.61109	9.96353	0.0901324	0.18706096	3.0279401	21	2 10.7	20.0
195773 2002 PD ₁₃₆	14.8	X	100.27485	302.88859	106.70685	11.27047	0.1640951	0.18049363	3.1009502	21	2 13.9	19.1
195774 2002 PL ₁₃₇	15.4	X	128.55437	193.77867	135.84123	6.20760	0.1574504	0.17473228	3.1687450	21	—	—
195775 2002 PF ₁₄₁	14.8	X	210.07784	24.05281	261.01741	17.62606	0.1291519	0.18132885	3.0914207	21	1 1.5	19.8
195776 2002 PJ ₁₅₁	15.3	X	155.76315	253.20936	128.59412	11.48930	0.0452679	0.18880039	3.0093137	21	2 27.7	19.7
195777 2002 Sheepman	15.1	X	233.70610	193.79989	112.66112	10.02129	0.0774248	0.18942228	3.0027235	21	2 21.7	19.7
195778 2002 PC ₁₅₆	15.8	X	227.64918	292.63125	71.85609	1.28548	0.0992577	0.19554565	2.9397063	21	4 22.7	20.3
195779 2002 PM ₁₅₇	15.4	X	217.78317	309.76799	324.52193	8.43289	0.0708569	0.18223226	3.0811952	21	—	—
195780 2002 PA ₁₆₀	15.9	X	173.93195	30.79731	62.14353	2.89375	0.0327614	0.20084706	2.8877465	21	6 14.4	20.1
195781 2002 PL ₁₆₂	16.1	X	160.06756	74.39689	338.02590	4.48074	0.1751345	0.19051598	2.9912206	21	4 15.6	21.1
195782 2002 PS ₁₆₂	15.5	X	184.84435	325.73264	357.09429	3.83886	0.0799128	0.18329869	3.0692327	21	1 22.1	20.2
195783 2002 PO ₁₆₃	16.7	X	163.87941	155.62136	123.52888	0.38105	0.2729882	0.17688057	3.1430356	21	—	—
195784 2002 PZ ₁₆₃	15.1	X	17.42591	309.31895	125.50242	11.39105	0.0631093	0.17560933	3.1581856	21	—	—
195785 2002 PA ₁₆₄	14.9	X	85.38956	74.25596	323.67317	9.87952	0.1334811	0.17893818	3.1188946	21	1 6.2	19.0
195786 2002 PY ₁₆₆	14.9	X	225.40598	0.16480	195.59454	12.54944	0.1002607	0.17106480	3.2138747	21	12 10.3	19.8
195787 2002 PN ₁₆₈	16.0	X	225.79971	2.62835	235.71667	0.37747	0.1306143	0.17830778	3.1262415	21	—	—
195788 2002 PH ₁₇₁	16.0	X	137.73940	238.37842	140.22574	6.72276	0.1312952	0.18369918	3.0647702	21	2 12.1	20.6
195789 2002 PM ₁₇₁	16.0	X	88.93699	139.77736	289.41955	3.99922	0.0164113	0.18667535	3.0321085	21	1 30.2	20.2
195790 2002 PC ₁₇₂	15.7	X	128.83319	255.73584	62.83452	2.78273	0.1522518	0.17376197	3.1805305	21	—	—
195791 2002 PU ₁₇₂	16.3	X	359.97423	273.47897	8.58830	1.59346	0.0354489	0.20333538	2.8641390	21	7 4.0	20.1
195792 2002 PS ₁₇₆	16.1	X	254.12616	121.70834	170.40177	3.18378	0.1295003	0.19031670	2.9933083	21	2 18.7	20.7
195793 2002 PR ₁₇₉	15.9	X	14.57435	108.15214	155.52106	2.47020	0.0528656	0.20272044	2.8699282	21	6 30.7	19.5
195794 2002 PJ ₁₈₁	15.9	X	310.86963	247.65876	349.25727	6.09347	0.0253426	0.19036092	2.9928447	21	3 2.3	20.0
195795 2002 QD ₂	15.7	X	113.39808	160.45898	217.11585	4.23098	0.1377450	0.17888520	3.1195104	21	1 15.7	20.2
195796 2002 QE ₃	15.2	X	247.14257	344.22791	288.40600	9.44666	0.0762995	0.18470840	3.0535962	21	1 24.2	19.9
195797 2002 QJ ₃	15.4	X	325.94784	357.35132	182.36566	6.83280	0.0550293	0.18231521	3.0802605	21	1 6.7	19.7
195798 2002 QF ₄	15.3	X	106.70876	260.39675	155.83959	11.37509	0.0175714	0.18441563	3.0568273	21	2 5.4	19.5
195799 2002 QW ₇	15.5	X	2.21949	255.83942	115.14130	11.14214	0.0964985	0.21341975	2.7731902	21	11 13.1	19.0
195800 2002 QD ₈	15.2	X	206.20527	273.09345	16.78439	12.08241	0.1312788	0.18104150	3.0946909	21	1 6.9	20.4
195801 2002 QE ₈	14.7	X	165.53896	199.27813	132.39106	18.34305	0.1867985	0.17972590	3.1097747	21	1 19.9	19.8
195802 2002 QG ₉	14.8	X	171.48012	279.95245	358.09914	17.00949	0.1220623	0.17489222	3.1668128	21	—	—
195803 2002 QC ₁₁	15.0	X	171.49893	274.25347	313.49923	24.12331	0.2759250	0.17332125	3.1859198	21	11 12.9	21.1
195804 2002 QB ₁₂	15.0	X	51.05801	149.53519	274.44301	4.52111	0.1859342	0.17573834	3.1566398	21	—	—
195805 2002 QN ₁₄	15.1	X	62.14854	133.12770	263.49614	8.01826	0.0744430	0.17390639	3.1787694	21	—	—
195806 2002 QP ₁₆	15.5	X	110.87616	100.68604	317.75026	12.65246	0.3207983	0.18090529	2.9624422	21	3 20.2	20.5
195807 2002 QF ₁₇	18.6	X	118.82678	308.84327	57.63176	4.82520	0.3375676	0.33213559	2.6050272	21	1 4.7	20.3
195808 2002 QN ₁₇	15.3	X	145.05451	14.68881	323.02157	8.27131	0.0694345	0.17981292	3.1087714	21	—	—
195809 2002 QL ₁₈	15.2	X	106.68052	220.95137	170.56571	16.43003	0.1478856	0.17777449	3.1324905	21	1 24.9	19.8
195810 2002 QP ₁₈	15.8	X	157.26244	358.29310	36.98217	2.68158	0.1275204	0.18692237	3.0294365	21	3 23.3	20.5
195811 2002 QA ₁₉	15.5	X	110.14903	288.40216	82.78351	3.54296	0.1015605	0.17701063	3.1414958	21	—	—
195812 2002 QL ₁₉	15.0	X	189.53266	239.94190	108.96437	4.62561	0.1189752	0.18578831	3.0417519	21	2 27.7	19.8
195813 2002 QY ₁₉	15.5	X	179.05714	99.73174	264.17348	4.30260	0.1393333	0.18552070	3.0446763	21	3 4.6	20.5
195814 2002 QB ₂₀	15.0	X	17.20802	130.81084	301.88830	9.01768	0.0743139	0.17130703	3.2108443	21	—	—
195815 2002 QJ ₂₁	15.3	X	171.87518	187.45867	168.69340	11.60705	0.1035582	0.18330053	3.0692121	21	2 16.2	20.0
195816 2002 QP ₂₁	15.7	X	156.56439	301.35888	27.29740	1.73943	0.1902482	0.17946875	3.1127447	21	1 9.7	20.6
195817 2002 QP ₂₂	15.6	X	125.96452	27.12898	318.49242	8.19250	0.2021140	0.17610324	3.1522778	21	1 2.7	20.3
195818 2002 QU ₂₇	15.1	X	181.26372	335.34550	356.96690	8.79943	0.0442256	0.18348833	3.0671173	21	1 29.2	19.7
195819 2002 QY ₃₀	15.8	X	137.21137	271.31429	76.79120	2.57154	0.1604515	0.17820943	3.1273915	21	1 11.2	20.5
195820 2002 QF ₃₁	15.6	X	170.72616	330.72257	30.22065	4.81671	0.0920473	0.18528462	3.0472621	21	2 22.9	20.3
195821 2002 QL ₃₅	15.7	X	111.38821	241.78767	129.04446	7.78699	0.1786671	0.17630157	3.1499133	21	1 12.2	20.2
195822 2002 QV ₃₆	15.7	X	80.63777	314.87485	134.66874	2.78668	0.1609931	0.18075149	3.0980004	21	3 7.1	19.6
195823 2002 QA ₃₇	15.0	X	72.24994	254.41031	164.99528	16.05745	0.1265217	0.17595170	3.1540875	21	1 11.1	19.3
195824 2002 QB ₃₇	16.0	X	102.95127	9.35534	114.38264	2.03572	0.1250392	0.18981080	2.9986246	21	5 11.8	20.2
195825 2002 QJ ₄₀	14.9	X	47.19724	271.42571	110.76400	6.31200	0.1474257	0.16874372	3.2432790	21	—	—
195826 2002 QQ ₄₅	14.8	X	99.08317	297.87734	31.77508	13.79587	0.2699619	0.17019242	3.2248479	21	—	—
195827 2002 QE ₄₈	15.8	X	106.82474	57.96677	311.34829	0.77159	0.1472869	0.17771821	3.1331571	21	—	—
195828 2002 QZ ₅₃	15.5	X	103.14521	37.32858	39.97431	1.28168	0.2087741	0.18360343	3.0658355	21	3 26.8	20.0
195829 2002 QH ₅₅	15.3	X	180.39283	174.88182	127.91744	9.40334	0.1079194	0.17895457	3.1187042	21	—	—
195830 2002 QX ₅₆	15.9	X	181.77566	208.11017	72.18249	1.90500	0.1421493	0.17715650	3.1397711	21	—	—
195831 2002 QN ₅₉	15.6	X	97.18331	266.93644	173.13120	9.94901	0.0634894	0.18581976	3.0414087	21	2 28.9	19.8
195832 2002 QO ₅₉	15.7	X	107.78449	272.74813	176.30249	9.21208	0.0230642	0.18920326	3.0050403	21	3 20.1	19.8
195833 2002 QE ₆₂	15.8	X	53.97917	67.17632	325.98760	7.51919	0.0450921	0.17265888	3.1940627	21	—	—
195834 2002 QJ ₆₂	15.9	X	175.24329									

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Planet	H	G	M	ω	Ω	i	e	μ	a	TE	Oppos.	V		
195841	2002	QF ₆₈	16.2	X	160.03203	229.37156	113.84962	2.30817	0.0860387	0.18117929	3.0931218	21	1 20.5	20.8
195842	2002	QD ₆₉	15.6	X	117.49323	255.67997	126.28977	10.23812	0.0852448	0.18026255	3.1035997	21	1 19.1	19.9
195843	2002	QA ₇₁	15.5	X	95.32306	32.40383	328.85357	9.14077	0.0566897	0.17454819	3.1709726	21	—	—
195844	2002	QA ₇₂	15.5	X	41.75353	130.20996	327.58630	9.22202	0.1385100	0.17960328	3.1111900	21	1 13.7	19.2
195845	2002	QB ₇₂	16.0	X	173.94574	172.22940	104.01862	1.68399	0.1492154	0.17575330	3.1564608	21	—	—
195846	2002	QM ₇₂	15.9	X	335.18476	51.22356	151.61898	10.63787	0.0375060	0.18732264	3.0251195	21	2 17.4	19.9
195847	2002	QJ ₇₅	15.6	X	100.33377	293.26869	133.45397	4.20359	0.1467261	0.18313664	3.0710429	21	3 2.5	19.8
195848	2002	QL ₇₇	16.1	X	229.93669	276.45897	77.19147	3.24753	0.0325838	0.19393286	2.9559819	21	4 17.4	20.2
195849	2002	QO ₇₇	15.3	X	55.67171	94.12402	337.21500	16.35116	0.0985944	0.17904344	3.1176721	21	1 1.7	19.5
195850	2002	QH ₇₈	16.2	X	198.05014	56.74569	185.31446	0.97411	0.1156370	0.17602169	3.1532514	21	—	—
195851	2002	QH ₇₉	15.3	X	335.41761	271.88293	281.43303	5.51055	0.1193222	0.18803622	3.0174613	21	1 25.9	19.4
195852	2002	QN ₇₉	15.7	X	114.29785	62.52559	282.86477	7.70523	0.0720684	0.17752740	3.1353964	21	—	—
195853	2002	QA ₈₀	15.8	X	177.31067	302.62188	355.95351	4.75738	0.1374213	0.17889616	3.1193830	21	—	—
195854	2002	QO ₈₀	15.6	X	219.39503	209.83276	33.62454	3.06782	0.0722829	0.17696292	3.1420605	21	—	—
195855	2002	QS ₈₀	15.9	X	227.07423	229.52890	28.72056	5.33040	0.1020685	0.17986044	3.1082238	21	—	—
195856	2002	QE ₈₃	16.4	X	282.66677	70.22346	186.57205	5.61154	0.1514260	0.18938861	3.0030794	21	2 2.7	21.0
195857	2002	QO ₈₅	16.1	X	184.17073	151.80762	183.59367	4.88853	0.0747755	0.18431695	3.0579182	21	2 2.6	20.8
195858	2002	QU ₈₆	16.0	X	176.87627	89.04419	178.81760	8.53901	0.1480944	0.17538571	3.1608696	21	—	—
195859	2002	QM ₈₈	16.1	X	202.39991	271.17935	10.64313	10.13457	0.0986891	0.17897645	3.1184500	21	—	—
195860	2002	QN ₈₉	15.2	X	140.10210	26.07458	309.73014	8.64439	0.0447943	0.17802333	3.1295708	21	—	—
195861	2002	QC ₉₀	15.2	X	238.15011	214.00417	122.67280	9.87329	0.0877872	0.19116833	2.9844119	21	4 4.8	19.8
195862	2002	QR ₉₀	15.2	X	124.30348	293.11991	27.06636	8.28824	0.0365673	0.17212659	3.2006443	21	—	—
195863	2002	QV ₉₀	15.2	X	182.71949	261.61065	27.21105	8.51168	0.0333876	0.17616039	3.1515960	21	—	—
195864	2002	QR ₉₂	16.1	X	257.89933	196.31889	78.99466	2.32021	0.1448184	0.18703908	3.0281762	21	2 3.0	20.9
195865	2002	QK ₉₆	15.5	X	108.29400	175.03482	280.14942	10.92197	0.0949015	0.19066181	2.9896952	21	4 1.5	20.0
195866	2002	QJ ₉₇	16.1	X	126.30770	21.85332	92.22094	3.16676	0.0522587	0.19672098	2.9279856	21	5 17.5	20.1
195867	2002	QN ₉₈	15.9	X	82.35229	86.98033	332.81680	8.48688	0.0908830	0.18140556	3.0905491	21	1 22.8	20.0
195868	2002	QW ₉₈	15.3	X	11.88463	86.73877	4.45018	15.41642	0.0796252	0.17419547	3.1725171	21	—	—
195869	2002	QK ₁₀₂	15.5	X	276.55351	194.59994	12.82502	1.48291	0.0502387	0.17750624	3.1356456	21	—	—
195870	2002	QZ ₁₁₆	16.0	X	154.72568	138.44612	184.44840	5.40361	0.1027820	0.17862519	3.1225370	21	—	—
195871	2002	QY ₁₂₄	16.2	X	153.03661	79.89335	272.37841	2.80436	0.1272717	0.18252493	3.0779006	21	1 26.9	20.8
195872	2002	QT ₁₂₅	16.2	X	224.03897	259.38230	52.57834	2.52428	0.0554650	0.18799105	3.0179446	21	2 18.1	20.6
195873	2002	RD	14.7	X	49.78673	325.00774	104.80393	13.14321	0.0696086	0.17440972	3.1726508	21	—	—
195874	2002	RC ₁	15.4	X	63.10460	252.10388	190.14092	13.35591	0.1077029	0.17750769	3.1356285	21	1 21.8	19.6
195875	2002	RQ ₃	14.6	X	50.42602	254.55894	156.56487	26.71302	0.2832499	0.17147924	3.2086943	21	—	—
195876	2002	RT ₃	15.1	X	91.50935	80.28335	331.84280	8.95575	0.1033421	0.17969924	3.1100823	21	1 27.6	19.2
195877	2002	RB ₆	14.9	X	54.90057	132.52856	326.03410	9.46672	0.0652935	0.18174558	3.0866933	21	1 29.6	18.9
195878	2002	RC ₆	15.7	X	156.94740	218.38566	175.32407	4.93427	0.2166874	0.18599122	3.0395393	21	3 26.7	20.8
195879	2002	RO ₇	15.0	X	121.40299	209.57653	130.43688	6.51048	0.1571134	0.17537286	3.1610240	21	—	—
195880	2002	RG ₁₁	15.3	X	187.96953	145.74903	164.48858	4.88350	0.1437061	0.18090165	3.0962857	21	1 12.1	20.3
195881	2002	RN ₁₂	14.9	X	129.90767	342.89633	343.55842	5.78091	0.1648816	0.17238265	3.1974740	21	—	—
195882	2002	RT ₁₂	15.7	X	148.04969	191.21838	156.88641	1.32758	0.2008192	0.17768663	3.1335229	21	1 24.9	20.8
195883	2002	RY ₁₂	14.6	X	75.70905	270.76757	181.62638	15.97620	0.2470938	0.17773347	3.1329724	21	3 15.7	18.6
195884	2002	RB ₁₅	15.2	X	144.96699	170.91006	179.03273	3.24698	0.1007523	0.17775039	3.1327736	21	1 14.1	19.9
195885	2002	RZ ₁₅	15.2	X	103.68185	96.22312	343.79974	12.43866	0.2802563	0.18108380	3.0942090	21	4 4.5	20.0
195886	2002	RG ₁₆	15.1	X	194.59323	275.14958	338.12889	12.76991	0.2116967	0.17505434	3.1648573	21	—	—
195887	2002	RU ₁₈	15.3	X	54.82860	264.50733	113.49516	2.92167	0.1305939	0.16784906	3.2547934	21	—	—
195888	2002	RE ₂₀	15.0	X	116.78307	338.49254	17.13703	10.62425	0.2058068	0.17402225	3.1773583	21	1 6.0	19.8
195889	2002	RC ₂₂	15.2	X	155.48248	32.36504	352.92868	10.22921	0.1167299	0.18435586	3.0574880	21	3 8.9	19.8
195890	2002	RJ ₂₂	14.7	X	179.56732	305.58514	347.24405	16.38003	0.2029999	0.17751312	3.1355645	21	—	—
195891	2002	RL ₂₄	15.3	X	74.55311	233.39525	192.09270	3.65632	0.1662482	0.17746374	3.1361461	21	1 26.9	19.1
195892	2002	RM ₂₄	15.0	X	106.96202	70.66365	334.01844	10.27028	0.0918659	0.18013946	3.1050134	21	2 5.4	19.3
195893	2002	RH ₃₀	14.8	X	138.92507	15.76930	333.13054	18.46969	0.0657347	0.17730842	3.1379774	21	1 6.7	19.6
195894	2002	RA ₃₁	15.0	X	167.39813	57.87280	218.15909	4.81204	0.0836792	0.17202120	3.2019514	21	—	—
195895	2002	RK ₃₃	14.9	X	93.65478	174.64218	184.43046	6.58953	0.1391365	0.17160761	3.2070940	21	—	—
195896	2002	RY ₃₄	15.8	X	60.34454	61.66463	299.10902	5.62992	0.0522947	0.22027403	2.1715586	21	—	—
195897	2002	RZ ₃₆	14.8	X	42.03247	110.90975	304.07024	4.92372	0.1316697	0.17219532	3.1997925	21	—	—
195898	2002	RH ₃₉	15.6	X	206.08112	291.22125	353.00744	10.14645	0.2430906	0.18171819	3.0870035	21	1 1.0	21.1
195899	2002	RP ₃₉	14.7	X	52.97755	274.45560	145.37091	13.78400	0.2955764	0.17320098	3.1873946	21	—	—
195900	2002	Rogersudbury	15.0	X	72.10609	240.08675	117.20811	6.73889	0.1155913	0.16923117	3.2370481	21	—	—
195901	2002	RU ₄₃	15.3	X	176.34635	335.07923	357.89627	9.47574	0.0742765	0.18109517	3.0940795	21	1 27.2	20.0
195902	2002	RY ₄₄	15.4	X	84.21862	295.47517	81.34941	2.21816	0.1647587	0.17263175	3.1943973	21	—	—
195903	2002	RP ₄₇	15.2	X	164.97176	244.00384	145.73646	11.19229	0.0438435	0.18657268	3.0332207	21	3 20.3	19.6
195904	2002	RB ₄₈	15.4	X	155.65170	291.00800	2.56523	9.43001	0.1865006	0.17347176	3.1840767	21	—	—
195905	2002	RB ₅₅	14.8	X	138.87061	47.42873	323.73004	10.63327	0.0276523	0.17938571	3.1137052	21	1 25.4	19.3
195906	2002	RG ₅₆	14.8	X	111.83305	238.40615	189.74576	22.61695	0.1648580	0.18138667	3.0907637	21	3 18.4	19.3
195907	2002	RC ₆₄	14.7	X	154.53172	322.24810	27.89685	17.73416	0.2137901	0.17762856	3.1342058	21	2 10.7	20.1
195908	2002	RK ₆₄	14.8	X	113.90746	0.26420	49.05884	10.73181	0.2121236	0.17607839	3.1525744	21	3 11.3	19.6
195909	2002	RF ₇₀	15.1	X	222.07322	120.56515	225.82049	8.09617	0.1084065	0.19066303	2.9896824	21	3 23.2	19.9
195910	2002	RS ₇₀	15.0	X	101.63548	238.02004	240.22592	9.56920	0.0450779	0.19123466	2.9837217	21	4 18.9	19.2
195911	2002	RD ₇₁	15.0	X	89.58532	145.87439								

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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>		
195921	2002	RZ ₈₅	15.1	X	115.85743	233.81989	174.67429	17.10306	0.2265990	0.17901527	3.1179992	21	3 7.6	19.7
195922	2002	RB ₈₆	16.0	X	137.33836	338.64150	30.45241	1.71753	0.2434212	0.17852676	3.1236845	21	2 13.1	21.1
195923	2002	RF ₉₂	15.8	X	135.89021	341.89331	7.08681	4.38338	0.1667045	0.17581718	3.1556961	21	1 12.6	20.6
195924	2002	RJ ₉₂	15.5	X	263.19420	74.47989	224.44805	1.69536	0.0382645	0.18712139	3.0272881	21	3 18.1	19.7
195925	2002	RQ ₉₄	14.7	X	102.33613	42.99682	13.50196	15.86186	0.0586598	0.17870008	3.1216644	21	2 14.9	19.3
195926	2002	RR ₉₅	15.5	X	147.34561	163.76059	198.09505	4.85200	0.1957882	0.17850928	3.1238885	21	2 7.3	20.5
195927	2002	RW ₁₀₉	15.0	X	24.81515	169.09982	285.71279	4.57092	0.1679765	0.17234132	3.1979852	21	—	—
195928	2002	RZ ₁₀₉	14.6	X	25.61858	122.16359	292.01065	5.46951	0.1122870	0.16811869	3.2513125	21	—	—
195929	2002	RJ ₁₁₀	15.5	X	176.85139	148.92450	195.94672	9.86874	0.0650717	0.18301064	3.0724524	21	2 4.4	20.3
195930	2002	RO ₁₁₃	15.0	X	135.27949	219.61173	172.57007	11.51174	0.0853523	0.18326045	3.0696596	21	2 18.9	19.5
195931	2002	RG ₁₁₅	15.2	X	61.15642	144.67321	259.72025	4.20876	0.1300376	0.17349783	3.1837578	21	—	—
195932	2002	RM ₁₁₇	14.8	X	121.13259	9.87966	21.30619	17.02189	0.0957635	0.17865487	3.1221911	21	2 12.9	19.6
195933	2002	RL ₁₁₉	15.6	X	345.23525	247.07944	132.03290	4.87706	0.1120521	0.21129977	2.7917083	21	10 25.7	18.8
195934	2002	RW ₁₂₁	14.8	X	141.95991	276.94615	111.76542	14.39329	0.1024258	0.18367213	3.0650710	21	3 1.2	19.5
195935	2002	RC ₁₂₂	15.1	X	173.85129	345.73447	56.34920	11.37890	0.0788585	0.18882837	3.0090164	21	4 16.9	19.7
195936	2002	RO ₁₂₃	15.1	X	55.69136	37.33474	51.35325	7.83477	0.1527484	0.17537059	3.1610513	21	1 28.5	18.9
195937	2002	RM ₁₂₇	14.6	X	59.01406	176.92226	265.64791	14.99164	0.0656331	0.17988403	3.1079521	21	1 12.4	18.8
195938	2002	RG ₁₂₈	15.0	X	51.13981	197.61502	241.60274	14.22288	0.2590778	0.17535076	3.1612896	21	1 12.2	18.4
195939	2002	RX ₁₂₈	14.9	X	93.80480	71.89241	20.10783	21.61624	0.1543425	0.18379012	3.0637591	21	3 29.6	19.1
195940	2002	RO ₁₃₀	14.5	X	111.82777	242.23976	118.73597	17.57671	0.1032522	0.17526866	3.1622768	21	—	—
195941	2002	RS ₁₃₀	15.4	X	99.81419	176.79367	233.60842	9.54295	0.1108119	0.18096524	3.0955604	21	1 31.9	19.8
195942	2002	RA ₁₃₂	14.9	X	89.16352	236.66652	227.26619	14.83060	0.1453455	0.18354200	3.0655196	21	3 29.8	19.2
195943	2002	RM ₁₃₃	14.4	X	95.38487	283.47655	141.15390	16.41579	0.2556800	0.17801173	3.1297066	21	3 11.9	18.8
195944	2002	RJ ₁₃₄	14.9	X	74.68859	251.04071	135.61543	14.39500	0.2830240	0.17105411	3.2140087	21	—	—
195945	2002	RV ₁₃₆	15.1	X	89.28491	36.41819	185.11511	16.74865	0.1259532	0.17802203	3.1295860	21	2 6.2	19.6
195946	2002	RB ₁₃₇	15.8	X	171.19882	156.42473	144.30443	2.85014	0.0967128	0.17609465	3.1523804	21	—	—
195947	2002	RL ₁₃₉	15.0	X	79.73977	343.57169	36.89975	15.70675	0.2503905	0.17158363	3.2073928	21	—	—
195948	2002	RG ₁₄₅	15.8	X	98.91032	316.87237	106.27183	2.57055	0.0595504	0.18098454	3.0953402	21	2 12.2	20.1
195949	2002	RE ₁₄₆	15.1	X	52.05885	123.09168	346.78294	16.34206	0.2061344	0.17791387	3.1308542	21	2 23.8	18.6
195950	2002	RO ₁₄₉	15.7	X	140.50180	186.65899	181.76329	6.54216	0.1449944	0.17955489	3.1117490	21	2 3.1	20.5
195951	2002	RJ ₁₅₃	15.1	X	11.32497	307.92016	236.23780	9.18748	0.0089028	0.18565122	3.0432492	21	3 11.3	19.5
195952	2002	RN ₁₅₃	15.4	X	196.88497	143.36235	208.29102	16.31361	0.0994447	0.18495659	3.0508640	21	3 4.2	20.4
195953	2002	RC ₁₅₇	15.3	X	254.45758	56.62564	183.62439	10.47263	0.1731410	0.18019009	3.1044317	21	—	—
195954	2002	RD ₁₆₂	15.8	X	188.41459	108.43394	180.38729	4.93603	0.1220072	0.17725438	3.1386151	21	—	—
195955	2002	RG ₁₆₃	15.6	X	78.90235	247.16862	169.57760	5.16609	0.1294525	0.17696600	3.1420239	21	1 17.8	19.6
195956	2002	RP ₁₆₄	15.8	X	152.73661	285.08174	355.60088	5.36604	0.1170405	0.17080244	3.2171650	21	—	—
195957	2002	RJ ₁₆₅	15.2	X	154.17547	64.71341	305.12457	7.89962	0.1489195	0.18409572	3.0603675	21	2 17.8	20.0
195958	2002	RO ₁₆₆	15.6	X	141.91186	358.47134	355.75690	2.31450	0.0613263	0.17814765	3.1281146	21	1 12.2	20.1
195959	2002	RP ₁₆₇	15.0	X	34.19120	266.41086	178.41752	11.55700	0.0647579	0.17458860	3.1704833	21	—	—
195960	2002	RA ₁₆₉	15.3	X	90.30844	69.47792	358.23376	9.36555	0.0801934	0.17993377	3.1073793	21	2 12.1	19.6
195961	2002	RV ₁₆₉	15.6	X	106.01634	70.83227	325.22878	14.79136	0.2523305	0.17845811	3.1244856	21	2 14.5	20.2
195962	2002	RF ₁₇₂	14.9	X	138.57789	311.62683	25.89414	10.24978	0.0543393	0.17615962	3.1516052	21	—	—
195963	2002	RD ₁₇₄	15.1	X	133.62758	196.83839	215.77741	8.86524	0.2061908	0.18367413	3.0650488	21	3 25.8	20.1
195964	2002	RO ₁₇₄	15.3	X	65.74062	111.59937	274.00993	3.54686	0.0258217	0.17198560	3.2023933	21	—	—
195965	2002	RW ₁₇₄	15.2	X	185.47836	20.35375	269.38218	4.76147	0.1578761	0.17716912	3.1396220	21	—	—
195966	2002	RC ₁₇₅	15.8	X	222.21384	88.41692	206.56866	9.50052	0.1123390	0.18268069	3.0761508	21	1 22.9	20.8
195967	2002	RZ ₁₇₆	14.7	X	87.10147	89.17089	329.22714	12.92672	0.2405787	0.17684814	3.1434198	21	2 17.3	18.7
195968	2002	RU ₁₇₆	15.7	X	139.69586	151.29642	189.34722	10.94984	0.0926337	0.17614130	3.1518237	21	—	—
195969	2002	RV ₁₇₈	16.2	X	110.49820	59.42472	22.56285	0.92621	0.1530100	0.18237981	3.0795331	21	4 2.3	20.7
195970	2002	RL ₁₈₄	14.8	X	195.64967	34.93948	264.66469	10.21518	0.0678628	0.17830038	3.1263280	21	1 4.8	19.6
195971	2002	RT ₁₈₄	15.5	X	319.32222	51.93549	222.78085	11.29152	0.0826296	0.19340128	2.9613960	21	4 20.8	19.4
195972	2002	RH ₁₈₅	14.8	X	96.87141	135.67357	205.46891	16.01507	0.1063990	0.16947869	3.2338956	21	—	—
195973	2002	RH ₁₈₆	14.8	X	124.35178	188.21170	214.54143	15.57090	0.1169031	0.18083382	3.0970599	21	2 19.9	19.6
195974	2002	RK ₁₈₆	15.0	X	51.19080	230.63878	222.72321	14.39803	0.1700759	0.17576126	3.1563654	21	1 21.3	18.9
195975	2002	RW ₁₈₆	15.3	X	179.08676	111.94331	231.30904	10.33442	0.0975155	0.18131652	3.0915609	21	2 5.5	20.2
195976	2002	RO ₁₉₀	15.0	X	113.24900	88.60287	345.70044	10.81901	0.1350813	0.18351622	3.0668068	21	3 22.4	19.5
195977	2002	RG ₁₉₂	15.3	X	40.49901	315.55894	98.85018	2.72350	0.1901035	0.17118294	3.2123959	21	—	—
195978	2002	RG ₁₉₃	15.4	X	159.91528	272.83967	356.88487	4.40910	0.1401033	0.17103390	3.2142618	21	12 29.7	20.7
195979	2002	RU ₁₉₃	15.4	X	9.66320	84.66432	349.85902	8.59425	0.1310724	0.16953056	3.2332358	21	—	—
195980	2002	RL ₁₉₆	15.2	X	75.35157	235.52422	218.45198	12.21079	0.1957644	0.17937736	3.1138018	21	3 5.5	19.4
195981	2002	RU ₁₉₆	15.8	X	144.95327	274.83923	72.23694	2.52645	0.1542345	0.17877761	3.1207619	21	1 17.0	20.5
195982	2002	RS ₁₉₇	15.2	X	67.60007	274.14168	167.47915	11.75917	0.0813694	0.17897524	3.1184641	21	1 25.6	19.5
195983	2002	RU ₂₀₀	15.3	X	160.57437	319.52646	62.04160	8.62978	0.1147777	0.18443807	3.0565793	21	3 13.2	20.1
195984	2002	RR ₂₀₄	15.3	X	194.06508	281.95218	348.83495	6.01813	0.1087227	0.17628458	3.1501156	21	—	—
195985	2002	RE ₂₁₁	15.1	X	193.03608	283.03418	3.25684	25.77867	0.2087948	0.17927007	3.1150440	21	—	—
195986	2002	RO ₂₁₆	15.0	X	179.63933	285.93879	11.17328	8.99726	0.0937796	0.17753067	3.1353579	21	—	—
195987	2002	RC ₂₁₉	15.3	X	194.87747	310.45786	349.22145	3.50515	0.1514421	0.18090368	3.0962626	21	1 7.5	20.3
195988	2002	RG ₂₁₉	15.7	X	115.66033	298.44025	87.73717	2.51324	0.1688470	0.17943959	3.1130819	21	2 3.1	20.2
195989	2002	RX ₂₁₉	15.8	X	146.28607	282.26863	45.58923	1.56149	0.1710310	0.17667124	3.1455178	21	—	—
195990	2002	RZ ₂₁₉	15.4	X	152.78620	256.72720	101.59115	4.13155</						