

EPHEMERIDES

11 7.9

11 8.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
515053	2010 GZ ₁₀₁		11 7.9 157°93	1.3°/ 7.2 18			206704	2004 BJ ₃₁		11 7.9 35°52	5.5°/ 4.6 18		
10 8	3 20.55	+12 36.6	2.141	3.003	11.4	21.9	10 8	3 16.33	- 0 20.3	2.162	3.029	11.1	19.2
10 18	3 13.23	+12 34.8	2.077	3.009	8.1	21.7	10 18	3 10.17	- 0 41.2	2.109	3.033	8.4	19.0
10 28	3 4.14	+12 30.5	2.039	3.015	4.3	21.5	10 28	3 2.47	- 0 54.4	2.082	3.038	6.2	18.9
11 7	2 54.11	+12 25.6	2.031	3.020	1.3	21.3	11 7	2 53.98	- 0 56.1	2.082	3.043	5.5	18.9
11 17	2 44.06	+12 22.6	2.052	3.024	4.2	21.5	11 17	2 45.53	- 0 43.9	2.111	3.048	7.1	19.0
11 27	2 34.98	+12 24.1	2.104	3.028	7.8	21.8	11 27	2 37.98	- 0 16.4	2.168	3.054	9.7	19.1
12 7	2 27.65	+12 32.4	2.182	3.032	11.1	22.0	12 7	2 32.01	+ 0 25.7	2.249	3.059	12.3	19.3
12 17	2 22.55	+12 49.0	2.284	3.035	13.9	22.2	12 17	2 28.04	+ 1 20.7	2.351	3.065	14.5	19.5
259552	2003 UR ₁₃₉		11 7.9 18°86	1.7°/ 7.3 18			1271	Isergina		11 7.9 3°72	3.7°/ 5.5 18		
10 8	3 19.95	+13 3.8	1.054	1.950	17.7	19.6	10 8	3 13.82	+ 7 46.1	1.880	2.761	11.8	14.6
10 18	3 14.00	+13 5.5	1.006	1.954	12.6	19.3	10 18	3 8.65	+ 7 5.0	1.821	2.761	8.5	14.4
10 28	3 4.95	+13 3.0	0.979	1.959	6.8	19.0	10 28	3 1.75	+ 6 24.6	1.788	2.761	5.1	14.2
11 7	2 54.18	+12 59.7	0.975	1.965	1.8	18.7	11 7	2 53.92	+ 5 49.5	1.782	2.762	3.7	14.1
11 17	2 43.45	+12 59.8	0.996	1.972	6.3	19.1	11 17	2 46.08	+ 5 24.0	1.804	2.763	6.1	14.3
11 27	2 34.52	+13 8.1	1.040	1.980	11.9	19.4	11 27	2 39.20	+ 5 12.0	1.852	2.765	9.5	14.5
12 7	2 28.65	+13 27.9	1.105	1.989	16.9	19.7	12 7	2 34.03	+ 5 14.9	1.925	2.767	12.7	14.7
12 17	2 26.41	+14 0.4	1.189	1.999	20.9	20.0	12 17	2 31.04	+ 5 33.0	2.019	2.770	15.5	14.9
517464	2014 OQ ₄₀₂		11 7.9 87°42	2.6°/ 9.9 18			366260	2013 AM ₇		11 7.9 21°31	4.7°/ 5.0 18		
10 8	3 17.67	+25 2.9	2.141	2.983	12.2	21.4	10 8	3 16.13	+ 6 9.1	1.693	2.576	12.9	20.4
10 18	3 11.35	+25 12.3	2.074	2.988	9.1	21.2	10 18	3 10.40	+ 5 18.9	1.638	2.577	9.3	20.1
10 28	3 3.20	+25 9.7	2.031	2.993	5.7	21.0	10 28	3 2.72	+ 4 30.7	1.608	2.578	6.0	20.0
11 7	2 54.03	+24 55.4	2.015	2.999	2.9	20.8	11 7	2 54.01	+ 3 50.2	1.604	2.580	4.8	19.9
11 17	2 44.81	+24 31.6	2.029	3.004	3.9	20.9	11 17	2 45.33	+ 3 22.8	1.627	2.582	7.2	20.0
11 27	2 36.57	+24 2.2	2.072	3.009	7.1	21.1	11 27	2 37.74	+ 3 12.1	1.677	2.584	10.7	20.3
12 7	2 30.11	+23 32.3	2.141	3.014	10.3	21.3	12 7	2 32.10	+ 3 19.6	1.750	2.586	14.1	20.5
12 17	2 25.94	+23 6.3	2.234	3.019	13.1	21.5	12 17	2 28.88	+ 3 44.5	1.843	2.589	16.9	20.7
469278	1994 RF ₃		11 7.9 46°75	1.8°/ 8.9 18			308124	2004 XN ₁₀₃		11 7.9 10°09	0.7°/ 8.3 18		
10 8	3 20.75	+21 56.6	1.134	2.013	18.1	20.5	10 8	3 16.78	+18 39.8	1.207	2.094	16.6	19.3
10 18	3 14.19	+21 45.5	1.100	2.037	13.0	20.3	10 18	3 11.59	+18 40.1	1.154	2.096	11.9	19.0
10 28	3 4.83	+21 17.9	1.086	2.061	7.4	20.1	10 28	3 3.63	+18 29.1	1.121	2.099	6.6	18.8
11 7	2 54.17	+20 37.0	1.097	2.086	2.1	19.8	11 7	2 54.11	+18 9.3	1.113	2.104	1.1	18.4
11 17	2 43.89	+19 49.3	1.132	2.112	5.1	20.1	11 17	2 44.56	+17 45.0	1.130	2.109	5.0	18.7
11 27	2 35.59	+19 3.0	1.193	2.137	10.3	20.5	11 27	2 36.57	+17 22.7	1.171	2.115	10.4	19.0
12 7	2 30.25	+18 25.7	1.276	2.164	14.8	20.8	12 7	2 31.28	+17 8.2	1.235	2.123	15.1	19.3
12 17	2 28.28	+18 1.9	1.379	2.190	18.4	21.1	12 17	2 29.27	+17 5.5	1.317	2.132	19.0	19.6
516735	2009 FB ₅₉		11 7.9 310°08	4.9°/ 4.1 18			21312	1996 XF ₁₄		11 7.9 102°64	0.4°/ 7.7 18		
10 8	3 14.31	+ 7 8.6	1.763	2.647	12.4	21.2	10 8	3 21.65	+17 46.5	1.603	2.470	14.3	18.8
10 18	3 9.07	+ 5 38.7	1.704	2.644	9.0	21.0	10 18	3 14.23	+17 9.6	1.558	2.492	10.1	18.6
10 28	3 1.99	+ 4 8.1	1.670	2.641	5.8	20.8	10 28	3 4.71	+16 23.4	1.537	2.513	5.4	18.4
11 7	2 53.93	+ 2 44.3	1.664	2.638	5.1	20.7	11 7	2 54.20	+15 31.8	1.543	2.534	0.6	18.1
11 17	2 45.86	+ 1 34.6	1.686	2.635	7.5	20.9	11 17	2 43.94	+14 40.6	1.578	2.554	4.5	18.4
11 27	2 38.82	+ 0 44.6	1.734	2.632	11.0	21.1	11 27	2 35.15	+13 55.8	1.642	2.574	9.0	18.7
12 7	2 33.59	+ 0 17.0	1.805	2.629	14.2	21.3	12 7	2 28.67	+13 22.3	1.730	2.593	12.9	19.0
12 17	2 30.67	+ 0 11.6	1.896	2.627	17.0	21.5	12 17	2 24.92	+13 2.8	1.840	2.611	16.0	19.3
512009	2015 LE ₁₂		11 7.9 112°46	6.5°/ 4.4 18			363349	2002 QX ₁₂₉		11 7.9 68°11	0.3°/ 8.2 14 C		
10 8	3 20.74	- 1 20.9	1.892	2.755	12.6	20.7	10 8	3 17.12	+19 17.4	2.232	3.088	11.3	22.0
10 18	3 13.28	- 1 57.3	1.852	2.773	9.6	20.6	10 18	3 10.56	+18 49.7	2.194	3.123	7.9	21.8
10 28	3 4.10	- 2 24.2	1.837	2.790	7.2	20.5	10 28	3 2.59	+18 14.3	2.183	3.157	4.3	21.7
11 7	2 54.11	- 2 36.8	1.850	2.806	6.6	20.5	11 7	2 54.01	+17 34.1	2.200	3.191	0.5	21.4
11 17	2 44.32	- 2 31.8	1.891	2.822	8.3	20.6	11 17	2 45.66	+16 52.6	2.248	3.225	3.3	21.7
11 27	2 35.72	- 2 8.3	1.960	2.838	10.9	20.8	11 27	2 38.37	+16 14.1	2.325	3.258	6.7	22.0
12 7	2 29.04	- 1 27.5	2.052	2.853	13.6	21.0	12 7	2 32.73	+15 42.2	2.429	3.291	9.7	22.2
12 17	2 24.67	- 0 31.8	2.165	2.868	15.9	21.2	12 17	2 29.10	+15 19.5	2.557	3.323	12.2	22.5
448575	2010 TA ₉		11 7.9 47°11	0.1°/ 8.1 18			495046	2011 BT ₃₈		11 8.0 259°65	6.4°/ 13.3 18		
10 8	3 16.02	+18 37.8	1.835	2.703	12.8	21.2	10 8	3 19.32	+38 46.3	2.604	3.372	12.4	21.6
10 18	3 10.27	+18 12.6	1.774	2.709	9.1	21.0	10 18	3 12.69	+39 19.9	2.511	3.358	10.4	21.4
10 28	3 2.63	+17 38.3	1.738	2.714	4.9	20.8	10 28	3 4.06	+39 35.9	2.441	3.344	8.3	21.2
11 7	2 53.99	+16 57.9	1.730	2.721	0.5	20.5	11 7	2 54.17	+39 32.0	2.397	3.330	6.8	21.1
11 17	2 45.37	+16 15.7	1.750	2.727	3.9	20.8	11 17	2 44.01	+39 8.0	2.381	3.316	6.5	21.1
11 27	2 37.83	+15 36.8	1.798	2.733	8.1	21.0	11 27	2 34.68	+38 26.9	2.393	3.301	7.8	21.1
12 7	2 32.19	+15 5.9	1.871	2.740	11.8	21.3	12 7	2 27.08	+37 34.1	2.431	3.287	9.9	21.3
12 17	2 28.93	+14 46.2	1.966	2.747	14.8	21.5	12 17	2 21.84	+36 36.1	2.494	3.272	12.1	21.4
245834	2006 KD ₁₃		11 7.9 108°50	6.3°/ 3.5 18			407065	2009 SC ₁₆₇		11 8.0 333°61	2.4°/ 9.3 17		
10 8	3 17.19	+ 0 39.9	1.907	2.779	12.2	20.5	10 8	3 15.16	+22 41.0	1.625	2.491	14.2	20.7
10 18	3 10.80	- 0 28.8	1.868	2.795	9.2	20.3	10 18	3 10.23	+22 53.1	1.542	2.472	10.6	20.5
10 28	3 2.79	- 1 30.3	1.855	2.810	6.8	20.2	10 28	3 2.91	+22 52.8	1.483	2.453	6.4	20.2
11 7	2 54.00	- 2 18.4	1.868	2.825	6.4	20.2	11 7	2 54.07	+22 40.4	1.449	2.436	2.6	19.9
11 17	2 45.37	- 2 48.5	1.910	2.840	8.3	20.3	11 17	2 44.90	+22 18.2	1.442	2.419	4.5	20.0
11 27	2 37.84	- 2 58.1	1.978	2.854	10.9	20.5	11 27	2 36.75	+21 51.1	1.461	2.404	8.9	20.2
12 7	2 32.09	- 2 47.3	2.069	2.868	13.6	20.8	12 7	2 30.73	+21 25.1	1.504	2.389	13.1	20.4
12 17	2 28.52	- 2 18.1	2.180	2.882	15.8	21.0	12 17	2 27.54	+21 5.6	1.569	2.376	16.8	20.7
495789	2017 FM ₅₁		11 7.9 242°85	2.7°/ 5.8 18			371359	2006 OT ₈		11 8.0 51°22	4.8°/ 5.8 16		
10 8	3 14.97	+ 7 56.7	2.										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
333963	2000 <i>EZ</i> ₃₅		11 8.0 126°14	5°3/ 4.4 17			480179	2015 <i>FD</i> ₃₁₉		11 8.0 117°27	1°8/ 7.2 18		
10 8	3 17.71	+ 6 8.5	1.618	2.500	13.4	20.8	10 8	3 22.51	+12 7.2	1.600	2.472	14.1	21.0
10 18	3 11.50	+ 4 46.4	1.570	2.508	9.7	20.6	10 18	3 15.04	+12 4.0	1.544	2.481	9.9	20.8
10 28	3 3.30	+ 3 25.9	1.546	2.515	6.4	20.4	10 28	3 5.30	+11 58.2	1.513	2.490	5.4	20.5
11 7	2 54.10	+ 2 14.6	1.550	2.522	5.5	20.4	11 7	2 54.35	+11 52.5	1.510	2.499	1.8	20.3
11 17	2 45.02	+ 1 19.5	1.581	2.529	8.0	20.6	11 17	2 43.44	+11 50.1	1.535	2.507	5.2	20.6
11 27	2 37.17	+ 0 45.4	1.638	2.536	11.5	20.8	11 27	2 33.87	+11 54.4	1.587	2.515	9.6	20.8
12 7	2 31.37	+ 0 33.9	1.718	2.543	14.8	21.0	12 7	2 26.59	+12 7.8	1.665	2.523	13.5	21.1
12 17	2 28.10	+ 0 43.9	1.817	2.549	17.6	21.3	12 17	2 22.14	+12 31.8	1.763	2.531	16.8	21.3
78085	2002 <i>LV</i> ₂₃		11 8.0 85°37	12°7/ 20.7 18			52559	1997 <i>FN</i> ₃		11 8.0 76°13	1°1/ 8.6 18		
10 8	3 31.77	+53 12.4	1.601	2.302	21.4	18.8	10 8	3 23.41	+19 49.5	1.417	2.284	15.9	18.2
10 18	3 22.40	+53 30.1	1.551	2.328	18.9	18.7	10 18	3 15.75	+19 48.5	1.376	2.308	11.3	18.0
10 28	3 9.35	+53 7.0	1.516	2.352	16.3	18.5	10 28	3 5.65	+19 35.7	1.358	2.332	6.3	17.8
11 7	2 54.64	+51 58.0	1.501	2.377	14.1	18.5	11 7	2 54.37	+19 13.4	1.366	2.356	1.4	17.5
11 17	2 40.64	+50 4.9	1.508	2.401	12.8	18.5	11 17	2 43.38	+18 45.8	1.401	2.379	4.5	17.8
11 27	2 29.44	+47 38.2	1.540	2.425	13.0	18.5	11 27	2 34.07	+18 18.6	1.464	2.403	9.3	18.1
12 7	2 22.17	+44 54.0	1.597	2.448	14.4	18.7	12 7	2 27.39	+17 57.7	1.551	2.426	13.4	18.5
12 17	2 19.08	+42 8.2	1.677	2.470	16.4	18.9	12 17	2 23.79	+17 46.7	1.659	2.448	16.8	18.7
375656	2009 <i>BA</i> ₁₈₂		11 8.0 159°09	2°5/ 9.4 16			179028	2001 <i>RB</i> ₁₀₇		11 8.0 40°76	0°9/ 7.4 18		
10 8	3 24.49	+23 34.1	1.706	2.553	14.6	21.9	10 8	3 17.07	+15 11.0	1.717	2.592	13.1	20.0
10 18	3 16.54	+23 43.9	1.641	2.560	10.8	21.7	10 18	3 11.12	+14 52.3	1.660	2.598	9.3	19.8
10 28	3 6.15	+23 40.0	1.599	2.566	6.5	21.5	10 28	3 3.18	+14 27.7	1.627	2.604	4.9	19.6
11 7	2 54.39	+23 22.5	1.585	2.572	2.8	21.2	11 7	2 54.15	+14 0.4	1.621	2.611	1.0	19.3
11 17	2 42.59	+22 54.1	1.600	2.576	4.5	21.4	11 17	2 45.16	+13 34.4	1.643	2.618	4.5	19.6
11 27	2 32.14	+22 20.3	1.644	2.581	8.7	21.6	11 27	2 37.31	+13 14.1	1.692	2.625	8.8	19.8
12 7	2 24.09	+21 47.5	1.714	2.584	12.6	21.9	12 7	2 31.46	+13 3.3	1.767	2.633	12.5	20.1
12 17	2 19.00	+21 21.3	1.805	2.587	15.9	22.1	12 17	2 28.11	+13 4.1	1.863	2.640	15.6	20.3
4112	Hrabal		11 8.0 47°18	5°7/ 2.8 18			236441	2006 <i>DB</i> ₁₉₇		11 8.0 186°14	6°1/ 12.8 18		
10 8	3 12.72	+ 1 46.4	2.153	3.029	10.8	15.8	10 8	3 21.43	+35 55.1	2.074	2.868	14.3	20.5
10 18	3 7.67	+ 0 22.1	2.102	3.032	8.2	15.6	10 18	3 14.34	+36 6.3	1.997	2.868	11.6	20.3
10 28	3 1.18	- 0 57.6	2.078	3.035	6.1	15.5	10 28	3 4.98	+35 56.3	1.942	2.868	8.7	20.1
11 7	2 53.93	- 2 6.5	2.081	3.038	5.9	15.5	11 7	2 54.34	+35 23.7	1.912	2.867	6.5	20.0
11 17	2 46.72	- 2 59.3	2.112	3.041	7.7	15.6	11 17	2 43.61	+34 29.9	1.911	2.866	6.3	20.0
11 27	2 40.36	- 3 32.5	2.170	3.044	10.3	15.8	11 27	2 34.07	+33 20.5	1.938	2.864	8.3	20.1
12 7	2 35.46	- 3 45.1	2.252	3.047	12.8	15.9	12 7	2 26.69	+32 3.6	1.992	2.861	11.1	20.3
12 17	2 32.46	- 3 38.1	2.353	3.050	14.9	16.1	12 17	2 22.05	+30 47.2	2.069	2.859	13.9	20.5
354390	2003 <i>SM</i> ₃₀₅		11 8.0 80°04	15°1/ 14.9 17			482737	2013 <i>EZ</i> ₁₀₂		11 8.0 303°10	6°7/ 3.5 17		
10 8	3 35.36	+44 2.0	1.162	1.945	23.8	20.6	10 8	3 15.72	+ 2 12.3	1.657	2.539	13.2	21.0
10 18	3 26.58	+46 19.0	1.113	1.956	20.8	20.4	10 18	3 10.47	+ 1 3.3	1.576	2.510	10.0	20.7
10 28	3 12.57	+47 59.7	1.082	1.967	17.8	20.3	10 28	3 3.02	- 0 2.5	1.519	2.481	7.3	20.5
11 7	2 55.04	+48 50.8	1.069	1.977	15.7	20.2	11 7	2 54.17	- 0 57.4	1.488	2.452	6.9	20.4
11 17	2 36.94	+48 46.5	1.078	1.988	15.1	20.2	11 17	2 45.00	- 1 34.4	1.483	2.423	9.3	20.5
11 27	2 21.58	+47 53.9	1.107	1.999	16.3	20.3	11 27	2 36.72	- 1 48.2	1.504	2.394	12.8	20.6
12 7	2 11.20	+46 30.3	1.157	2.009	18.6	20.5	12 7	2 30.36	- 1 37.1	1.546	2.366	16.4	20.8
12 17	2 6.59	+44 54.5	1.224	2.020	21.2	20.7	12 17	2 26.59	- 1 2.4	1.607	2.338	19.6	21.0
308776	2006 <i>PE</i> ₂₂		11 8.0 52°07	4°6/ 4.8 18			43216	2000 <i>AB</i> ₁₃₉		11 8.0 95°46	5°0/ 5.5 18		
10 8	3 15.44	+ 7 30.3	1.610	2.496	13.3	19.7	10 8	3 21.05	+ 6 9.0	1.438	2.319	14.8	18.4
10 18	3 9.88	+ 6 18.7	1.568	2.509	9.5	19.5	10 18	3 14.01	+ 5 25.4	1.394	2.333	10.7	18.2
10 28	3 2.43	+ 5 8.1	1.549	2.522	5.9	19.3	10 28	3 4.72	+ 4 45.1	1.375	2.346	6.7	18.0
11 7	2 54.05	+ 4 5.4	1.558	2.535	4.8	19.3	11 7	2 54.31	+ 4 14.1	1.381	2.359	5.0	18.0
11 17	2 45.83	+ 3 17.0	1.593	2.548	7.3	19.5	11 17	2 44.08	+ 3 57.4	1.414	2.372	7.7	18.2
11 27	2 38.82	+ 2 47.2	1.655	2.562	10.8	19.7	11 27	2 35.33	+ 3 58.5	1.473	2.385	11.6	18.4
12 7	2 33.79	+ 2 37.9	1.739	2.576	14.1	20.0	12 7	2 28.96	+ 4 17.9	1.555	2.397	15.2	18.7
12 17	2 31.18	+ 2 48.0	1.844	2.590	16.9	20.2	12 17	2 25.44	+ 4 54.2	1.657	2.409	18.3	18.9
481038	2005 <i>CP</i> ₆₈		11 8.0 259°00	2°0/ 9.4 18			128856	2004 <i>SD</i> ₁₈		11 8.0 45°57	2°8/ 6.5 18		
10 8	3 18.48	+23 42.2	2.004	2.852	12.7	21.7	10 8	3 18.19	+ 8 25.5	1.905	2.779	12.1	19.1
10 18	3 12.22	+23 29.4	1.913	2.834	9.4	21.5	10 18	3 11.71	+ 8 21.4	1.850	2.787	8.6	19.0
10 28	3 3.86	+23 3.4	1.847	2.815	5.7	21.2	10 28	3 3.43	+ 8 18.4	1.821	2.795	4.9	18.8
11 7	2 54.21	+22 25.2	1.809	2.796	2.2	21.0	11 7	2 54.19	+ 8 19.4	1.819	2.804	2.8	18.6
11 17	2 44.31	+21 37.8	1.800	2.777	3.9	21.1	11 17	2 44.99	+ 8 27.0	1.846	2.812	5.3	18.8
11 27	2 35.30	+20 46.6	1.820	2.757	7.9	21.3	11 27	2 36.84	+ 8 43.2	1.901	2.821	8.8	19.0
12 7	2 28.16	+19 57.7	1.866	2.737	11.7	21.5	12 7	2 30.51	+ 9 9.2	1.982	2.831	12.1	19.3
12 17	2 23.51	+19 16.4	1.935	2.716	15.0	21.6	12 17	2 26.48	+ 9 45.1	2.085	2.840	14.9	19.5
365390	2009 <i>VC</i> ₈₅		11 8.0 193°20	2°0/ 6.5 18			349278	2007 <i>TF</i> ₃₂₄		11 8.0 36°15	3°4/ 10.1 18		
10 8	3 15.63	+10 30.0	2.372	3.241	10.2	21.0	10 8	3 18.05	+26 11.6	1.492	2.349	15.8	20.7
10 18	3 9.70	+10 14.3	2.305	3.241	7.2	20.8	10 18	3 12.18	+26 9.2	1.436	2.358	11.8	20.5
10 28	3 2.28	+ 9 57.6	2.265	3.240	4.0	20.6	10 28	3 3.86	+25 48.8	1.403	2.368	7.4	20.2
11 7	2 54.06	+ 9 42.5	2.253	3.240	2.0	20.5	11 7	2 54.24	+25 11.6	1.394	2.378	3.7	20.1
11 17	2 45.79	+ 9 31.6	2.271	3.239	4.3	20.6	11 17	2 44.67	+24 21.6	1.412	2.389	4.8	20.2
11 27	2 38.31	+ 9 27.7	2.319	3.238	7.5	20.8	11 27	2 36.54	+23 26.3	1.457	2.400	8.9	20.4
12 7	2 32.26	+ 9 32.6	2.393	3.238	10.4	21.0	12 7	2 30.85	+22 33.4	1.526	2.412	12.9	20.7
12 17	2 28.10	+ 9 47.3	2.490	3.237	13.0	21.2	12 17	2 28.13	+21 49.4	1.617	2.424	16.4	20.9
269852	2000 <i>DK</i> ₆₁		11 8.0 317°62	2°3/ 9.1 18			114664	2003 <i>FO</i> ₁₅		11 8.0 28			

EPHEMERIDES

11 8.0

11 8.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
329621	2003 <i>QW</i> ₁₃		11 8.0 113°05'	3°5'/10.9	18		223367	2003 <i>SK</i> ₂₇		11 8.0 340°11'	6°4'/2.5	18	
10 8	3 17.50	+29 18.1	2.382	3.204	11.8	20.8	10 8	3 12.50	+0 56.3	1.993	2.872	11.4	19.6
10 18	3 11.14	+29 21.9	2.316	3.214	9.1	20.7	10 18	3 7.69	-0 32.1	1.938	2.868	8.7	19.4
10 28	3 3.11	+29 11.4	2.274	3.224	6.1	20.5	10 28	3 1.30	-1 55.3	1.909	2.864	6.7	19.3
11 7	2 54.18	+28 47.1	2.259	3.234	3.8	20.4	11 7	2 54.06	-3 6.4	1.907	2.861	6.6	19.3
11 17	2 45.25	+28 10.9	2.274	3.243	4.2	20.4	11 17	2 46.80	-3 59.6	1.932	2.858	8.5	19.4
11 27	2 37.27	+27 27.2	2.318	3.252	6.6	20.6	11 27	2 40.42	-4 30.9	1.983	2.855	11.2	19.6
12 7	2 30.96	+26 41.1	2.390	3.261	9.4	20.8	12 7	2 35.60	-4 39.5	2.057	2.852	13.8	19.7
12 17	2 26.79	+25 57.7	2.486	3.270	12.0	21.0	12 17	2 32.79	-4 26.6	2.150	2.850	16.1	19.9
402484	2006 <i>CY</i> ₂₄		11 8.0 22°28'	5°2'/11.7	17		376590	2013 <i>PB</i> ₂₆		11 8.0 7°86'	6°6'/13.9	17	
10 8	3 17.21	+31 32.6	1.825	2.653	14.6	20.2	10 8	3 16.32	+38 34.3	2.187	2.972	13.9	19.7
10 18	3 11.43	+31 48.5	1.760	2.658	11.5	20.1	10 18	3 10.69	+38 47.2	2.113	2.973	11.5	19.5
10 28	3 3.44	+31 45.3	1.718	2.664	8.2	19.9	10 28	3 3.02	+38 38.8	2.061	2.974	9.1	19.3
11 7	2 54.22	+31 22.3	1.701	2.670	5.6	19.7	11 7	2 54.22	+38 7.6	2.034	2.976	7.1	19.2
11 17	2 44.96	+30 41.7	1.711	2.677	5.7	19.8	11 17	2 45.36	+37 15.3	2.033	2.978	6.7	19.2
11 27	2 36.89	+29 49.2	1.748	2.684	8.3	19.9	11 27	2 37.59	+36 6.8	2.060	2.981	8.2	19.3
12 7	2 30.98	+28 52.1	1.811	2.692	11.5	20.1	12 7	2 31.78	+34 49.3	2.112	2.984	10.5	19.5
12 17	2 27.76	+27 57.6	1.896	2.700	14.4	20.4	12 17	2 28.46	+33 30.6	2.189	2.987	12.9	19.6
127397	2002 <i>LQ</i> ₁₈		11 8.0 112°61'	0°8'/7.4	18		278144	2007 <i>CX</i> ₆₄		11 8.0 223°10'	0°4'/8.3	18	
10 8	3 15.17	+15 30.4	2.442	3.305	10.2	20.4	10 8	3 20.11	+19 0.9	1.790	2.652	13.3	22.0
10 18	3 9.30	+15 2.3	2.384	3.317	7.1	20.2	10 18	3 13.44	+18 45.5	1.714	2.645	9.6	21.7
10 28	3 2.04	+14 29.4	2.352	3.329	3.8	20.0	10 28	3 4.56	+18 20.3	1.663	2.638	5.3	21.4
11 7	2 54.08	+13 54.3	2.350	3.340	0.8	19.8	11 7	2 54.38	+17 47.2	1.639	2.630	0.7	21.1
11 17	2 46.18	+13 20.4	2.378	3.352	3.5	20.0	11 17	2 44.05	+17 10.0	1.644	2.622	4.1	21.3
11 27	2 39.11	+12 51.1	2.436	3.363	6.8	20.3	11 27	2 34.79	+16 34.2	1.678	2.613	8.6	21.6
12 7	2 33.47	+12 29.3	2.520	3.374	9.7	20.5	12 7	2 27.60	+16 5.0	1.737	2.604	12.6	21.8
12 17	2 29.66	+12 17.1	2.628	3.385	12.1	20.7	12 17	2 23.06	+15 46.3	1.818	2.595	16.0	22.0
219279	2000 <i>CX</i> ₅₈		11 8.0 155°37'	11°3'/16.5	18		7945	Kreisau		11 8.0 150°30'	2°4'/9.5	18	
10 8	3 29.62	+45 38.0	1.358	2.124	21.7	20.1	10 8	3 22.73	+24 35.0	1.541	2.393	15.6	17.8
10 18	3 21.28	+45 46.3	1.292	2.131	18.6	19.9	10 18	3 15.47	+24 18.4	1.478	2.400	11.5	17.6
10 28	3 9.06	+45 13.8	1.243	2.137	15.3	19.7	10 28	3 5.66	+23 44.7	1.439	2.407	6.9	17.3
11 7	2 54.75	+43 54.6	1.215	2.142	12.4	19.5	11 7	2 54.48	+22 55.5	1.426	2.413	2.8	17.1
11 17	2 40.67	+41 50.9	1.210	2.147	11.3	19.5	11 17	2 43.34	+21 55.6	1.441	2.418	4.6	17.2
11 27	2 29.08	+39 14.9	1.231	2.151	12.6	19.6	11 27	2 33.68	+20 52.8	1.484	2.423	9.1	17.5
12 7	2 21.40	+36 25.6	1.277	2.154	15.6	19.7	12 7	2 26.56	+19 55.2	1.552	2.428	13.3	17.8
12 17	2 18.06	+33 41.0	1.344	2.156	18.8	20.0	12 17	2 22.51	+19 8.9	1.641	2.431	16.9	18.0
440867	2006 <i>SV</i> ₃₉₄		11 8.0 23°67'	8°0'/13.9	17		333773	2011 <i>EP</i> ₅₀		11 8.0 280°91'	4°3'/4.8	17	
10 8	3 16.80	+37 5.4	1.350	2.175	18.9	20.4	10 8	3 14.56	+3 31.3	2.340	3.211	10.3	20.6
10 18	3 11.69	+37 15.3	1.299	2.187	15.4	20.2	10 18	3 8.98	+2 57.5	2.276	3.206	7.6	20.5
10 28	3 3.71	+36 54.6	1.268	2.201	11.7	20.0	10 28	3 1.95	+2 27.4	2.237	3.202	5.1	20.3
11 7	2 54.24	+36 2.0	1.258	2.216	8.7	19.9	11 7	2 54.13	+2 4.9	2.227	3.197	4.4	20.2
11 17	2 44.92	+34 42.0	1.273	2.232	8.1	19.9	11 17	2 46.27	+1 53.2	2.246	3.192	6.1	20.4
11 27	2 37.37	+33 4.2	1.312	2.249	10.3	20.1	11 27	2 39.16	+1 54.6	2.292	3.188	8.8	20.5
12 7	2 32.68	+31 21.3	1.376	2.268	13.6	20.4	12 7	2 33.46	+2 10.1	2.364	3.183	11.5	20.7
12 17	2 31.30	+29 44.3	1.460	2.287	16.8	20.6	12 17	2 29.61	+2 39.1	2.458	3.178	13.8	20.9
128176	2003 <i>RB</i> ₁₀		11 8.0 61°56'	1°5'/9.1	18		9837	Jerryhorow		11 8.0 227°86'	3°1'/5.9	18	R
10 8	3 16.78	+22 4.4	2.071	2.924	12.1	19.4	10 8	3 16.76	+9 32.7	1.882	2.758	12.1	17.2
10 18	3 10.67	+21 59.7	2.016	2.940	8.8	19.3	10 18	3 10.82	+8 54.8	1.819	2.757	8.6	17.0
10 28	3 2.86	+21 44.6	1.986	2.956	5.1	19.1	10 28	3 3.03	+8 15.8	1.780	2.755	5.0	16.8
11 7	2 54.17	+21 20.8	1.983	2.971	1.7	18.9	11 7	2 54.24	+7 39.9	1.770	2.753	3.1	16.7
11 17	2 45.55	+20 51.1	2.010	2.987	3.5	19.0	11 17	2 45.41	+7 11.7	1.787	2.751	5.7	16.8
11 27	2 37.96	+20 20.0	2.066	3.004	7.1	19.3	11 27	2 37.56	+6 55.0	1.833	2.750	9.3	17.0
12 7	2 32.14	+19 51.9	2.148	3.020	10.3	19.5	12 7	2 31.52	+6 52.3	1.903	2.748	12.7	17.2
12 17	2 28.53	+19 30.4	2.253	3.036	13.1	19.7	12 17	2 27.76	+7 4.2	1.995	2.746	15.6	17.4
490352	2009 <i>EY</i> ₁₅		11 8.0 148°71'	4°8'/11.8	18		156199	2001 <i>UA</i> ₃₅		11 8.0 335°87'	4°4'/5.9	18	
10 8	3 21.63	+32 38.7	2.394	3.195	12.4	21.6	10 8	3 18.23	+7 36.2	1.344	2.233	15.1	19.1
10 18	3 14.17	+33 2.2	2.324	3.204	9.8	21.4	10 18	3 12.46	+7 6.5	1.283	2.226	10.9	18.9
10 28	3 4.80	+33 9.6	2.278	3.213	7.1	21.2	10 28	3 4.15	+6 38.1	1.245	2.220	6.6	18.6
11 7	2 54.37	+32 59.9	2.259	3.221	5.1	21.1	11 7	2 54.35	+6 16.8	1.232	2.214	4.5	18.5
11 17	2 43.89	+32 34.1	2.270	3.228	5.2	21.2	11 17	2 44.44	+6 7.8	1.244	2.209	7.5	18.6
11 27	2 34.41	+31 56.1	2.310	3.235	7.2	21.3	11 27	2 35.84	+6 15.1	1.282	2.204	12.0	18.9
12 7	2 26.77	+31 11.6	2.378	3.242	9.8	21.5	12 7	2 29.66	+6 40.3	1.342	2.200	16.2	19.1
12 17	2 21.51	+30 26.6	2.470	3.248	12.2	21.7	12 17	2 26.52	+7 22.6	1.420	2.197	19.7	19.4
207432	2006 <i>DE</i> ₁₈₇		11 8.0 47°89'	0°8'/8.6	18		511846	2015 <i>FZ</i> ₃₃₂		11 8.0 78°87'	3°7'/6.6	18	
10 8	3 16.33	+19 38.3	2.028	2.889	12.0	20.1	10 8	3 24.39	+6 38.9	1.510	2.384	14.7	20.1
10 18	3 10.40	+19 34.5	1.971	2.901	8.6	19.9	10 18	3 16.33	+6 43.4	1.466	2.402	10.5	19.9
10 28	3 2.74	+19 22.3	1.939	2.913	4.8	19.7	10 28	3 5.99	+6 51.6	1.446	2.419	6.2	19.7
11 7	2 54.17	+19 3.5	1.935	2.925	1.0	19.4	11 7	2 54.52	+7 6.3	1.453	2.437	3.7	19.6
11 17	2 45.64	+18 40.9	1.960	2.938	3.5	19.6	11 17	2 43.25	+7 29.9	1.489	2.454	6.4	19.8
11 27	2 38.12	+18 18.4	2.014	2.951	7.3	19.9	11 27	2 33.49	+8 3.6	1.552	2.472	10.5	20.1
12 7	2 32.35	+18 0.1	2.093	2.964	10.6	20.1	12 7	2 26.15	+8 47.8	1.639	2.489	14.2	20.4
12 17	2 28.80	+17 48.9	2.196	2.977	13.4	20.4	12 17	2 21.72	+9 41.7	1.748	2.506	17.2	20.6
374207	2005 <i>EZ</i> ₁₈₁		11 8.0 264°95'	4°7'/5.4	17		153676	2001 <i>TY</i> ₁₉₁		11 8.0 54°90'	2°9'/9.5	18	
10 8	3 18.89	+8 19.7											

EPHEMERIDES

11 8.0

11 8.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
362596	2010 VC ₂₁₇	11	8.0 52°07'	4.8/11.7	18		90810	1995 DY ₂	11	8.1 304°85'	0.3/7.8	17	
10 8	3 18.14	+31 34.9	1.951	2.774	14.0	20.7	10 8	3 17.17	+25 46.7	0.967	1.851	20.0	19.6
10 18	3 12.00	+31 42.8	1.883	2.778	11.0	20.5	10 18	3 12.56	+23 16.4	0.898	1.839	14.6	19.2
10 28	3 3.74	+31 32.2	1.837	2.783	7.8	20.3	10 28	3 4.50	+20 4.0	0.850	1.828	8.0	18.8
11 7	2 54.31	+31 2.6	1.818	2.787	5.2	20.2	11 7	2 54.47	+16 21.4	0.826	1.817	0.7	18.3
11 17	2 44.85	+30 16.5	1.826	2.792	5.3	20.2	11 17	2 44.39	+12 30.9	0.828	1.806	6.9	18.7
11 27	2 36.52	+29 19.2	1.862	2.797	7.9	20.3	11 27	2 36.23	+8 59.2	0.856	1.795	14.0	19.0
12 7	2 30.26	+28 18.1	1.924	2.802	11.1	20.5	12 7	2 31.33	+6 6.6	0.905	1.785	20.0	19.3
12 17	2 26.59	+27 19.9	2.009	2.807	13.9	20.8	12 17	2 30.29	+4 1.4	0.971	1.776	24.9	19.6
448947	2011 WL ₅₂	11	8.0 355°34'	0.2/8.1	18		515649	2014 OU ₃₀	11	8.1 107°11'	1.3/7.1	18	
10 8	3 16.77	+18 16.2	1.713	2.584	13.4	21.4	10 8	3 16.38	+14 9.1	2.116	2.985	11.3	21.8
10 18	3 11.07	+17 59.8	1.647	2.583	9.6	21.2	10 18	3 10.38	+13 41.9	2.057	2.993	7.9	21.6
10 28	3 3.28	+17 34.3	1.605	2.582	5.2	20.9	10 28	3 2.76	+13 10.3	2.024	3.000	4.2	21.4
11 7	2 54.30	+17 2.3	1.590	2.581	0.6	20.6	11 7	2 54.30	+12 37.5	2.019	3.008	1.3	21.2
11 17	2 45.26	+16 27.9	1.603	2.580	4.2	20.9	11 17	2 45.86	+12 7.0	2.043	3.016	4.1	21.4
11 27	2 37.32	+15 56.2	1.643	2.580	8.6	21.1	11 27	2 38.36	+11 42.7	2.097	3.023	7.7	21.7
12 7	2 31.40	+15 32.2	1.708	2.580	12.5	21.4	12 7	2 32.51	+11 27.6	2.176	3.031	10.9	21.9
12 17	2 28.04	+15 19.1	1.794	2.581	15.8	21.6	12 17	2 28.73	+11 23.4	2.278	3.038	13.6	22.1
478734	2012 UP ₆₆	11	8.0 248°23'	1.0/7.3	18		22036	1999 XL ₁₈₁	11	8.1 71°15'	4.5/11.5	18	
10 8	3 16.35	+17 54.3	1.686	2.559	13.5	21.0	10 8	3 18.97	+30 51.3	2.098	2.918	13.3	18.2
10 18	3 10.73	+16 43.6	1.619	2.557	9.5	20.7	10 18	3 12.43	+31 8.6	2.037	2.931	10.3	18.0
10 28	3 3.06	+15 21.1	1.577	2.555	5.1	20.4	10 28	3 3.95	+31 9.4	1.999	2.945	7.2	17.9
11 7	2 54.28	+13 52.5	1.562	2.553	1.0	20.2	11 7	2 54.42	+30 53.2	1.989	2.958	4.9	17.8
11 17	2 45.51	+12 25.3	1.576	2.551	4.8	20.4	11 17	2 44.91	+30 21.8	2.007	2.972	5.0	17.8
11 27	2 37.88	+11 7.3	1.618	2.548	9.3	20.7	11 27	2 36.50	+29 40.0	2.053	2.985	7.5	18.0
12 7	2 32.27	+10 4.7	1.685	2.546	13.3	20.9	12 7	2 30.03	+28 53.9	2.125	2.999	10.3	18.2
12 17	2 29.19	+9 21.1	1.773	2.544	16.6	21.2	12 17	2 26.01	+28 9.5	2.222	3.013	13.0	18.4
409759	2006 DT ₉₃	11	8.0 287°61'	3.2/5.3	17		332176	2006 BG ₅₄	11	8.1 263°21'	0.6/7.5	17	
10 8	3 13.28	+9 4.7	2.204	3.080	10.6	21.1	10 8	3 15.17	+16 0.0	2.464	3.326	10.1	21.8
10 18	3 8.21	+8 5.8	2.133	3.071	7.5	20.9	10 18	3 9.55	+15 33.6	2.376	3.308	7.2	21.6
10 28	3 1.61	+7 5.2	2.088	3.061	4.5	20.7	10 28	3 2.38	+15 1.3	2.314	3.290	3.9	21.4
11 7	2 54.15	+6 7.6	2.072	3.052	3.3	20.6	11 7	2 54.29	+14 25.5	2.281	3.271	0.7	21.1
11 17	2 46.63	+5 17.9	2.085	3.043	5.5	20.8	11 17	2 46.04	+13 49.5	2.278	3.252	3.5	21.3
11 27	2 39.87	+4 40.4	2.126	3.034	8.7	20.9	11 27	2 38.46	+13 17.0	2.305	3.233	7.0	21.5
12 7	2 34.58	+4 17.8	2.192	3.025	11.7	21.1	12 7	2 32.26	+12 51.6	2.358	3.213	10.2	21.7
12 17	2 31.22	+4 11.0	2.279	3.016	14.3	21.3	12 17	2 27.94	+12 35.8	2.436	3.194	12.9	21.8
30641	6349 P-L	11	8.1 347°99'	0.4/8.3	18		442366	2011 SP ₂₅₀	11	8.1 9°52'	1.7/8.9	17	
10 8	3 15.90	+19 38.9	1.698	2.567	13.5	19.6	10 8	3 17.65	+20 45.7	1.392	2.267	15.6	20.8
10 18	3 10.49	+19 9.9	1.630	2.565	9.7	19.3	10 18	3 12.11	+20 55.1	1.333	2.268	11.4	20.5
10 28	3 2.99	+18 29.6	1.587	2.562	5.3	19.1	10 28	3 4.01	+20 52.3	1.296	2.271	6.5	20.2
11 7	2 54.31	+17 41.3	1.570	2.560	0.7	18.7	11 7	2 54.45	+20 38.6	1.285	2.274	2.0	20.0
11 17	2 45.57	+16 49.8	1.581	2.559	4.1	19.0	11 17	2 44.81	+20 17.3	1.299	2.278	4.6	20.2
11 27	2 37.94	+16 1.2	1.619	2.557	8.6	19.3	11 27	2 36.55	+19 54.0	1.339	2.283	9.5	20.5
12 7	2 32.33	+15 21.3	1.682	2.556	12.6	19.5	12 7	2 30.76	+19 34.8	1.403	2.289	13.8	20.7
12 17	2 29.28	+14 53.9	1.767	2.556	15.9	19.7	12 17	2 28.04	+19 24.2	1.487	2.296	17.5	21.0
304319	2006 SE ₁₇₁	11	8.1 279°85'	1.8/9.2	18		387338	2012 VN ₁₀₅	11	8.1 108°47'	6.2/5.0	18	
10 8	3 17.79	+22 37.0	1.879	2.734	13.1	21.1	10 8	3 21.49	+0 6.5	1.751	2.619	13.3	20.2
10 18	3 11.76	+22 31.4	1.806	2.730	9.6	20.9	10 18	3 14.13	-0 17.1	1.703	2.629	10.0	20.0
10 28	3 3.67	+22 13.7	1.756	2.726	5.7	20.7	10 28	3 4.81	-0 31.7	1.681	2.639	7.1	19.9
11 7	2 54.38	+21 45.3	1.734	2.722	2.0	20.4	11 7	2 54.52	-0 32.9	1.685	2.649	6.2	19.8
11 17	2 44.97	+21 9.1	1.740	2.718	3.9	20.5	11 17	2 44.35	-0 17.5	1.717	2.658	8.1	20.0
11 27	2 36.60	+20 30.3	1.775	2.714	7.9	20.8	11 27	2 35.39	+0 15.5	1.776	2.668	11.1	20.2
12 7	2 30.17	+19 54.5	1.835	2.710	11.7	21.0	12 7	2 28.48	+1 4.8	1.859	2.677	14.1	20.4
12 17	2 26.26	+19 26.4	1.918	2.706	14.9	21.2	12 17	2 24.07	+2 8.2	1.963	2.686	16.7	20.6
358691	2008 AS ₇	11	8.1 299°10'	2.7/6.3	18		43399	2000 WO ₉₅	11	8.1 306°17'	2.4/9.5	18	
10 8	3 16.14	+11 10.2	1.760	2.639	12.6	21.0	10 8	3 17.20	+24 2.5	1.515	2.378	15.2	18.5
10 18	3 10.64	+10 33.1	1.685	2.625	9.0	20.7	10 18	3 11.96	+23 50.2	1.429	2.356	11.4	18.2
10 28	3 3.09	+9 52.7	1.635	2.612	5.1	20.5	10 28	3 4.07	+23 20.9	1.365	2.335	6.9	17.9
11 7	2 54.33	+9 13.4	1.612	2.598	2.7	20.3	11 7	2 54.48	+22 35.6	1.326	2.313	2.8	17.6
11 17	2 45.40	+8 40.1	1.617	2.585	5.6	20.5	11 17	2 44.50	+21 38.2	1.313	2.292	4.7	17.7
11 27	2 37.43	+8 17.7	1.649	2.571	9.7	20.7	11 27	2 35.64	+20 36.0	1.327	2.271	9.6	17.9
12 7	2 31.33	+8 9.5	1.705	2.558	13.5	20.9	12 7	2 29.11	+19 37.7	1.365	2.250	14.2	18.1
12 17	2 27.70	+8 16.8	1.782	2.546	16.7	21.1	12 17	2 25.69	+18 50.2	1.424	2.230	18.2	18.4
48179	2001 HY ₃₁	11	8.1 217°70'	0.6/7.5	18		159527	2001 FQ ₁₇₂	11	8.1 129°37'	6.4/1.7	18	
10 8	3 13.85	+16 52.1	2.647	3.507	9.6	19.9	10 8	3 13.68	-6 5.2	2.782	3.633	9.5	20.3
10 18	3 8.43	+16 11.3	2.570	3.502	6.8	19.7	10 18	3 8.11	-7 9.9	2.743	3.645	7.7	20.2
10 28	3 1.67	+15 24.1	2.520	3.496	3.6	19.5	10 28	3 1.43	-8 5.3	2.732	3.658	6.5	20.2
11 7	2 54.18	+14 33.4	2.499	3.489	0.6	19.2	11 7	2 54.20	-8 47.0	2.748	3.670	6.6	20.2
11 17	2 46.65	+13 42.7	2.508	3.483	3.3	19.4	11 17	2 47.04	-9 12.0	2.793	3.682	7.7	20.3
11 27	2 39.80	+12 56.0	2.548	3.476	6.5	19.6	11 27	2 40.59	-9 18.8	2.863	3.693	9.4	20.4
12 7	2 34.24	+12 16.9	2.616	3.469	9.4	19.8	12 7	2 35.35	-9 7.8	2.958	3.704	11.2	20.6
12 17	2 30.39	+11 47.9	2.707	3.461	11.8	20.0	12 17	2 31.66	-8 40.7	3.072	3.714	12.7	20.7
440760	2006 EX ₄₁	11	8.1 143°68'	9.0/17.3	18		103851	2000 DW ₃₅	11	8.1 202°48'	0.6/7.5	17	
10 8	3 31.37	+50 22.1	2.813	3.482	13.6	22.1	10 8	3 14.43	+15 54.2				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
216371	2008 AB ₁₁₈	11	8.1	7°50	3°0/ 5.9	18	281416	2008 RB ₁₁₆	11	8.1	126°91	1°2/ 8.8	18
10 8	3 15.29	+10 48.4	1.785	2.665	12.4	20.6	10 8	3 19.89	+21 5.1	1.715	2.575	13.9	21.3
10 18	3 9.87	+9 56.2	1.725	2.665	8.8	20.4	10 18	3 13.30	+20 52.2	1.653	2.581	10.1	21.1
10 28	3 2.60	+9 1.2	1.689	2.665	5.0	20.2	10 28	3 4.52	+20 27.5	1.614	2.587	5.7	20.9
11 7	2 54.32	+8 8.5	1.682	2.666	3.0	20.1	11 7	2 54.55	+19 52.9	1.603	2.592	1.5	20.6
11 17	2 46.04	+7 23.7	1.702	2.667	5.8	20.2	11 17	2 44.58	+19 12.6	1.620	2.598	4.0	20.8
11 27	2 38.79	+6 51.6	1.749	2.668	9.5	20.5	11 27	2 35.83	+18 32.1	1.664	2.603	8.4	21.1
12 7	2 33.37	+6 35.1	1.821	2.669	13.0	20.7	12 7	2 29.25	+17 57.2	1.735	2.608	12.3	21.3
12 17	2 30.28	+6 35.2	1.913	2.670	16.0	20.9	12 17	2 25.35	+17 32.3	1.827	2.612	15.6	21.5
475941	2007 ES ₁₆₂	11	8.1	10°87	4°1/ 5.7	18	186799	2004 ER ₅₁	11	8.1	164°14	1°2/ 7.2	17
10 8	3 15.82	+10 59.4	1.220	2.116	15.8	20.6	10 8	3 19.93	+15 25.8	1.854	2.720	12.7	21.0
10 18	3 10.83	+9 48.5	1.169	2.117	11.2	20.4	10 18	3 13.11	+14 44.6	1.791	2.726	9.0	20.7
10 28	3 3.30	+8 33.3	1.141	2.119	6.5	20.1	10 28	3 4.34	+13 56.4	1.754	2.730	4.8	20.5
11 7	2 54.39	+7 22.1	1.137	2.122	4.2	20.0	11 7	2 54.53	+13 5.2	1.745	2.734	1.2	20.3
11 17	2 45.53	+6 23.5	1.159	2.125	7.6	20.2	11 17	2 44.75	+12 16.0	1.765	2.738	4.6	20.5
11 27	2 38.14	+5 44.9	1.204	2.129	12.3	20.5	11 27	2 36.09	+11 34.1	1.814	2.741	8.7	20.8
12 7	2 33.26	+5 29.6	1.271	2.134	16.6	20.8	12 7	2 29.39	+11 3.8	1.888	2.743	12.4	21.0
12 17	2 31.40	+5 37.4	1.356	2.139	20.2	21.0	12 17	2 25.14	+10 47.5	1.985	2.744	15.4	21.2
144092	2004 BX ₅₆	11	8.1	173°77	0°8/ 7.5	18	274835	2009 QC ₁₁	11	8.1	325°23	4°1/ 10.0	18
10 8	3 20.42	+16 20.4	1.969	2.831	12.3	21.0	10 8	3 18.81	+25 34.5	1.244	2.112	17.6	19.8
10 18	3 13.39	+15 46.7	1.902	2.834	8.7	20.8	10 18	3 13.53	+25 52.7	1.172	2.099	13.3	19.5
10 28	3 4.46	+15 5.6	1.861	2.837	4.6	20.5	10 28	3 5.09	+25 52.0	1.120	2.087	8.6	19.2
11 7	2 54.51	+14 20.3	1.849	2.839	0.8	20.2	11 7	2 54.63	+25 31.5	1.091	2.075	4.5	19.0
11 17	2 44.55	+13 35.4	1.866	2.841	4.2	20.5	11 17	2 43.77	+24 53.8	1.087	2.064	5.8	19.0
11 27	2 35.66	+12 55.8	1.913	2.841	8.2	20.8	11 27	2 34.37	+24 6.1	1.108	2.054	10.7	19.3
12 7	2 28.65	+12 25.8	1.986	2.841	11.8	21.0	12 7	2 27.84	+23 18.1	1.151	2.044	15.6	19.5
12 17	2 24.02	+12 8.1	2.082	2.840	14.8	21.2	12 17	2 24.99	+22 38.3	1.213	2.035	19.8	19.8
46019	2001 DT ₉	11	8.1	98°10	8°1/ 3.0	18	126219	2002 AR ₄₈	11	8.1	71°00	0°5/ 8.4	18
10 8	3 17.74	-3 46.4	1.744	2.612	13.3	18.5	10 8	3 16.53	+19 33.4	1.971	2.833	12.3	19.9
10 18	3 11.54	-4 46.8	1.697	2.615	10.5	18.3	10 18	3 10.66	+19 11.7	1.910	2.840	8.8	19.7
10 28	3 3.47	-5 35.5	1.674	2.618	8.5	18.2	10 28	3 3.01	+18 40.8	1.873	2.848	4.8	19.4
11 7	2 54.42	-6 5.8	1.678	2.621	8.3	18.2	11 7	2 54.41	+18 3.1	1.864	2.855	0.8	19.2
11 17	2 45.43	-6 13.3	1.707	2.624	10.0	18.3	11 17	2 45.83	+17 22.5	1.885	2.862	3.6	19.4
11 27	2 37.56	-5 56.2	1.761	2.627	12.6	18.5	11 27	2 38.27	+16 43.9	1.933	2.870	7.6	19.7
12 7	2 31.61	-5 16.1	1.838	2.630	15.3	18.7	12 7	2 32.51	+16 11.9	2.008	2.877	11.1	19.9
12 17	2 28.04	-4 16.3	1.933	2.633	17.6	18.9	12 17	2 29.00	+15 49.6	2.106	2.885	14.0	20.1
182367	2001 QY ₁₄₃	11	8.1	350°96	5°4/ 4.7	18	44430	1998 TZ ₆	11	8.1	55°69	5°5/ 4.1	18
10 8	3 12.02	+7 41.6	1.314	2.213	14.7	19.2	10 8	3 15.87	+6 37.0	1.530	2.417	13.7	18.4
10 18	3 8.09	+6 27.2	1.257	2.205	10.6	19.0	10 18	3 10.26	+4 58.2	1.496	2.436	9.9	18.3
10 28	3 1.84	+5 11.8	1.222	2.197	6.7	18.8	10 28	3 2.75	+3 22.1	1.486	2.456	6.5	18.1
11 7	2 54.27	+4 4.3	1.212	2.190	5.5	18.7	11 7	2 54.37	+1 57.1	1.504	2.476	5.7	18.1
11 17	2 46.62	+3 12.7	1.226	2.185	8.5	18.8	11 17	2 46.24	+0 50.7	1.548	2.496	8.2	18.3
11 27	2 40.19	+2 43.5	1.265	2.181	12.6	19.1	11 27	2 39.41	+0 7.8	1.618	2.516	11.6	18.6
12 7	2 35.98	+2 39.1	1.325	2.179	16.6	19.3	12 7	2 34.63	-0 10.6	1.710	2.537	14.8	18.8
12 17	2 34.54	+2 58.6	1.402	2.178	19.9	19.5	12 17	2 32.28	-0 6.1	1.822	2.558	17.4	19.1
137657	1999 XZ ₈	11	8.1	354°22	15°7/ 8.3	18	111497	2001 YO ₅₉	11	8.1	343°38	1°0/ 7.4	18
10 8	3 32.66	-17 34.7	0.954	1.802	23.3	17.8	10 8	3 16.58	+14 51.0	1.886	2.758	12.3	19.4
10 18	3 23.56	-16 50.4	0.900	1.792	20.1	17.5	10 18	3 10.81	+14 30.9	1.819	2.756	8.7	19.2
10 28	3 10.49	-15 18.5	0.863	1.785	17.2	17.3	10 28	3 3.15	+14 5.4	1.777	2.754	4.6	19.0
11 7	2 55.12	-12 50.4	0.847	1.779	15.7	17.2	11 7	2 54.44	+13 37.5	1.763	2.753	1.1	18.7
11 17	2 39.73	-9 28.8	0.854	1.776	16.7	17.3	11 17	2 45.66	+13 10.9	1.777	2.752	4.3	18.9
11 27	2 26.65	-5 27.4	0.884	1.775	19.6	17.5	11 27	2 37.87	+12 49.9	1.819	2.751	8.4	19.2
12 7	2 17.45	-1 6.5	0.937	1.775	23.1	17.7	12 7	2 31.88	+12 38.0	1.887	2.750	12.0	19.4
12 17	2 12.75	+3 16.2	1.009	1.779	26.5	18.0	12 17	2 28.23	+12 37.3	1.977	2.749	15.0	19.6
408062	2012 GB ₄	11	8.1	275°11	0°5/ 7.6	17	362458	2010 RS ₁₃₄	11	8.1	38°22	1°2/ 7.3	18
10 8	3 15.01	+16 59.0	2.204	3.069	11.0	21.5	10 8	3 16.02	+15 23.1	1.731	2.607	13.0	20.8
10 18	3 9.57	+16 25.0	2.121	3.054	7.8	21.3	10 18	3 10.44	+14 49.2	1.675	2.614	9.1	20.6
10 28	3 2.45	+15 43.5	2.063	3.039	4.2	21.1	10 28	3 2.94	+14 8.8	1.643	2.621	4.9	20.4
11 7	2 54.34	+14 57.4	2.033	3.024	0.6	20.8	11 7	2 54.42	+13 25.8	1.639	2.629	1.2	20.1
11 17	2 46.09	+14 10.5	2.033	3.008	3.8	21.0	11 17	2 45.94	+12 45.1	1.663	2.637	4.6	20.4
11 27	2 38.60	+13 27.6	2.062	2.993	7.6	21.2	11 27	2 38.59	+12 11.8	1.714	2.646	8.7	20.7
12 7	2 32.66	+12 52.9	2.118	2.977	11.0	21.4	12 7	2 33.17	+11 49.8	1.789	2.654	12.4	20.9
12 17	2 28.78	+12 29.5	2.196	2.962	13.9	21.6	12 17	2 30.17	+11 41.1	1.887	2.663	15.5	21.2
473381	2015 UQ ₇₂	11	8.1	351°43	0°3/ 7.9	18	514049	2014 OK ₇₀	11	8.1	103°61	6°3/ 2.8	18
10 8	3 15.94	+17 38.1	1.802	2.673	12.8	20.9	10 8	3 15.59	-3 7.5	2.391	3.250	10.5	21.2
10 18	3 10.43	+17 9.7	1.735	2.671	9.1	20.6	10 18	3 9.56	-4 10.6	2.357	3.271	8.2	21.1
10 28	3 2.95	+16 32.5	1.693	2.670	4.9	20.4	10 28	3 2.25	-5 4.6	2.350	3.291	6.6	21.0
11 7	2 54.39	+15 50.0	1.678	2.669	0.5	20.1	11 7	2 54.35	-5 45.0	2.371	3.310	6.5	21.1
11 17	2 45.77	+15 6.5	1.691	2.668	4.1	20.3	11 17	2 46.59	-6 8.3	2.419	3.329	7.8	21.2
11 27	2 38.19	+14 27.4	1.732	2.667	8.4	20.6	11 27	2 39.70	-6 12.9	2.495	3.348	9.8	21.4
12 7	2 32.51	+13 57.4	1.798	2.667	12.2	20.8	12 7	2 34.23	-5 59.3	2.594	3.366	11.9	21.5
12 17	2 29.24	+13 39.6	1.886	2.667	15.4	21.1	12 17	2 30.55	-5 29.4	2.714	3.384	13.7	21.7
470467	2008 AE ₆₇	11	8.1	89°85	3°8/ 10.4	17	3676	Hahn	11	8.1	172°91	1°8/ 8.9	18
10 8	3 22.62	+27 22.2	1.421	2.271	16.8	20.9	10 8	3 22.90					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
509913	2009 <i>FC</i> ₄₀		11 8.1 176°88	1.4°/ 7.1	18		518435	2003 <i>SP</i> ₂₅₈		11 8.1 337°26	5°0'/11.7	18	
10 8	3 17.98	+13 20.6	2.137	3.003	11.3	21.4	10 8	3 15.06	+31 39.8	1.401	2.247	17.2	19.8
10 18	3 11.59	+12 59.6	2.070	3.004	8.0	21.2	10 18	3 10.56	+31 9.8	1.325	2.236	13.5	19.5
10 28	3 3.50	+12 34.8	2.029	3.005	4.3	21.0	10 28	3 3.34	+30 12.0	1.270	2.226	9.2	19.3
11 7	2 54.49	+12 9.1	2.017	3.006	1.4	20.8	11 7	2 54.51	+28 47.2	1.238	2.216	5.6	19.0
11 17	2 45.43	+11 45.8	2.034	3.006	4.2	21.0	11 17	2 45.54	+27 0.8	1.232	2.207	5.8	19.0
11 27	2 37.28	+11 28.5	2.081	3.006	7.9	21.2	11 27	2 37.97	+25 4.0	1.252	2.199	9.6	19.2
12 7	2 30.79	+11 20.0	2.154	3.006	11.2	21.4	12 7	2 32.99	+23 9.4	1.297	2.192	14.0	19.5
12 17	2 26.43	+11 22.1	2.249	3.005	13.9	21.6	12 17	2 31.19	+21 27.7	1.362	2.185	18.0	19.7
42739	1998 <i>RJ</i> ₅₇		11 8.1 37°47	1°0'/ 7.3	18		60059	1999 <i>TG</i> ₁₁₈		11 8.1 119°60	0°9'/ 8.7	18	
10 8	3 15.10	+15 19.4	1.953	2.826	11.9	18.9	10 8	3 21.42	+21 33.1	1.590	2.450	14.8	19.5
10 18	3 9.64	+14 48.6	1.895	2.832	8.4	18.7	10 18	3 14.39	+20 56.3	1.535	2.464	10.6	19.3
10 28	3 2.46	+14 12.0	1.861	2.838	4.5	18.5	10 28	3 5.11	+20 5.5	1.504	2.477	5.9	19.0
11 7	2 54.38	+13 33.1	1.855	2.845	1.0	18.3	11 7	2 54.68	+19 4.4	1.500	2.490	1.2	18.7
11 17	2 46.32	+12 56.0	1.878	2.852	4.2	18.5	11 17	2 44.41	+17 58.8	1.524	2.502	4.2	19.0
11 27	2 39.24	+12 25.1	1.929	2.860	8.0	18.8	11 27	2 35.57	+16 56.0	1.576	2.514	8.9	19.3
12 7	2 33.88	+12 4.1	2.005	2.867	11.4	19.0	12 7	2 29.07	+16 3.0	1.654	2.525	12.9	19.6
12 17	2 30.70	+11 54.9	2.104	2.875	14.3	19.2	12 17	2 25.39	+15 23.9	1.753	2.536	16.3	19.8
69554	1997 <i>SZ</i> ₄		11 8.1 73°37	6°7'/12.8	18		163996	2003 <i>UT</i> ₁₅₀		11 8.1 71°75	1°6'/ 7.0	18	
10 8	3 22.90	+36 48.2	2.313	3.094	13.4	18.9	10 8	3 17.36	+14 42.9	1.670	2.546	13.4	20.0
10 18	3 15.44	+37 47.7	2.243	3.101	11.0	18.8	10 18	3 11.44	+13 59.7	1.614	2.554	9.4	19.8
10 28	3 5.76	+38 29.4	2.197	3.108	8.7	18.7	10 28	3 3.51	+13 10.1	1.583	2.561	5.0	19.6
11 7	2 54.73	+38 50.2	2.177	3.115	7.0	18.6	11 7	2 54.53	+12 18.7	1.579	2.569	1.6	19.3
11 17	2 43.48	+38 49.5	2.184	3.122	6.9	18.6	11 17	2 45.61	+11 31.0	1.604	2.577	5.0	19.6
11 27	2 33.24	+38 30.3	2.220	3.129	8.3	18.7	11 27	2 37.88	+10 52.5	1.655	2.584	9.2	19.9
12 7	2 25.02	+37 58.4	2.282	3.136	10.5	18.8	12 7	2 32.18	+10 27.3	1.731	2.592	13.0	20.1
12 17	2 19.43	+37 20.7	2.367	3.144	12.7	19.0	12 17	2 29.00	+10 17.3	1.828	2.600	16.1	20.4
231176	2005 <i>UU</i> ₁₇₀		11 8.1 355°51	1°2'/ 8.7	18		21833	1999 <i>TE</i> ₉₅		11 8.1 28°21	6°7'/ 5.1	18	
10 8	3 18.19	+20 27.0	1.301	2.179	16.3	20.5	10 8	3 18.60	+ 4 21.9	1.124	2.020	16.8	17.9
10 18	3 12.69	+20 19.0	1.239	2.176	11.8	20.3	10 18	3 12.87	+ 3 28.6	1.083	2.027	12.4	17.6
10 28	3 4.45	+19 57.4	1.199	2.174	6.7	20.0	10 28	3 4.44	+ 2 41.6	1.064	2.035	8.2	17.4
11 7	2 54.60	+19 24.5	1.183	2.173	1.6	19.7	11 7	2 54.62	+ 2 9.3	1.068	2.043	6.8	17.4
11 17	2 44.63	+18 45.0	1.193	2.172	4.8	19.9	11 17	2 44.95	+ 1 57.9	1.096	2.052	9.6	17.6
11 27	2 36.12	+18 6.1	1.228	2.172	10.1	20.2	11 27	2 36.94	+ 2 10.7	1.147	2.062	13.8	17.9
12 7	2 30.22	+17 34.8	1.287	2.173	14.8	20.5	12 7	2 31.65	+ 2 47.1	1.219	2.073	17.8	18.1
12 17	2 27.57	+17 16.0	1.365	2.174	18.7	20.7	12 17	2 29.57	+ 3 43.7	1.308	2.084	21.1	18.4
154480	2003 <i>ED</i> ₁₈		11 8.1 136°69	3°4'/ 5.9	18		300753	2007 <i>VL</i> ₂₁₅		11 8.1 53°43	3°8'/11.3	18	
10 8	3 19.04	+ 9 36.2	1.703	2.579	13.1	20.0	10 8	3 17.66	+31 1.4	1.629	2.465	15.7	20.0
10 18	3 12.56	+ 8 49.7	1.648	2.586	9.3	19.8	10 18	3 11.79	+30 7.9	1.570	2.477	12.0	19.8
10 28	3 4.09	+ 8 1.9	1.617	2.592	5.4	19.6	10 28	3 3.71	+28 50.5	1.533	2.489	7.9	19.6
11 7	2 54.56	+ 7 18.0	1.614	2.598	3.4	19.4	11 7	2 54.55	+27 12.3	1.522	2.502	4.3	19.4
11 17	2 45.09	+ 6 43.1	1.639	2.603	6.2	19.6	11 17	2 45.58	+25 20.4	1.539	2.514	4.7	19.4
11 27	2 36.79	+ 6 21.6	1.692	2.608	10.0	19.9	11 27	2 38.06	+23 24.8	1.584	2.527	8.3	19.7
12 7	2 30.51	+ 6 16.1	1.769	2.613	13.6	20.1	12 7	2 32.84	+21 35.9	1.656	2.540	12.2	20.0
12 17	2 26.75	+ 6 26.8	1.866	2.618	16.5	20.3	12 17	2 30.36	+20 1.5	1.751	2.553	15.5	20.2
245707	2006 <i>BG</i> ₂₇₅		11 8.1 21°52	4°8'/ 4.3	18		372786	2010 <i>NA</i> ₁₁₄		11 8.1 354°87	0°3'/ 8.2	18	
10 8	3 13.54	+ 4 58.0	1.978	2.858	11.4	20.2	10 8	3 18.66	+17 15.8	1.028	1.922	18.2	20.5
10 18	3 8.48	+ 3 53.6	1.925	2.861	8.4	20.0	10 18	3 13.54	+17 21.7	0.971	1.918	13.1	20.2
10 28	3 1.83	+ 2 51.8	1.897	2.864	5.6	19.8	10 28	3 5.12	+17 17.2	0.935	1.914	7.2	19.9
11 7	2 54.34	+ 1 58.2	1.897	2.867	4.9	19.8	11 7	2 54.72	+17 4.7	0.921	1.912	0.8	19.5
11 17	2 46.88	+ 1 17.9	1.924	2.871	6.9	19.9	11 17	2 44.12	+16 48.7	0.930	1.910	5.7	19.8
11 27	2 40.33	+ 0 54.6	1.979	2.875	9.9	20.1	11 27	2 35.23	+16 35.7	0.963	1.910	11.8	20.1
12 7	2 35.38	+ 0 49.5	2.057	2.880	12.8	20.3	12 7	2 29.47	+16 31.9	1.017	1.911	17.1	20.4
12 17	2 32.47	+ 1 2.2	2.156	2.884	15.2	20.5	12 17	2 27.51	+16 41.2	1.088	1.913	21.5	20.7
339020	2004 <i>HJ</i> ₂		11 8.1 201°70	0°4'/ 7.8	18		222142	1999 <i>VY</i> ₂₁₂		11 8.1 324°42	0°2'/ 7.9	18	
10 8	3 19.43	+18 11.8	1.823	2.687	13.0	21.7	10 8	3 15.18	+17 33.6	1.911	2.780	12.3	20.9
10 18	3 12.91	+17 30.4	1.751	2.684	9.3	21.5	10 18	3 9.90	+17 10.9	1.836	2.772	8.7	20.6
10 28	3 4.34	+16 38.7	1.704	2.680	5.0	21.2	10 28	3 2.73	+16 40.2	1.787	2.763	4.7	20.4
11 7	2 54.60	+15 40.5	1.685	2.676	0.5	20.9	11 7	2 54.47	+16 4.1	1.765	2.756	0.5	20.0
11 17	2 44.80	+14 40.8	1.695	2.671	4.3	21.2	11 17	2 46.08	+15 26.6	1.771	2.748	3.9	20.3
11 27	2 36.08	+13 46.0	1.734	2.666	8.6	21.4	11 27	2 38.62	+14 52.5	1.805	2.741	8.1	20.5
12 7	2 29.35	+13 1.5	1.798	2.660	12.5	21.6	12 7	2 32.92	+14 26.4	1.865	2.734	11.8	20.8
12 17	2 25.16	+12 31.0	1.884	2.653	15.8	21.9	12 17	2 29.53	+14 11.2	1.946	2.727	14.9	21.0
479417	2013 <i>YG</i> ₇₃		11 8.1 289°18	1°0'/ 8.7	18		320132	2007 <i>EU</i> ₁₉₆		11 8.1 114°79	1°7'/ 9.3	18	
10 8	3 18.11	+21 22.2	1.509	2.377	15.0	21.2	10 8	3 17.94	+22 21.8	2.367	3.212	11.1	20.9
10 18	3 12.52	+20 53.7	1.429	2.362	10.9	20.9	10 18	3 11.51	+22 28.5	2.301	3.220	8.1	20.7
10 28	3 4.35	+20 10.0	1.372	2.346	6.2	20.6	10 28	3 3.47	+22 26.1	2.261	3.228	4.8	20.5
11 7	2 54.61	+19 13.7	1.340	2.331	1.4	20.3	11 7	2 54.54	+22 15.2	2.249	3.236	1.9	20.3
11 17	2 44.60	+18 10.2	1.336	2.315	4.6	20.4	11 17	2 45.59	+21 57.8	2.268	3.244	3.3	20.5
11 27	2 35.76	+17 7.2	1.359	2.299	9.7	20.7	11 27	2 37.50	+21 37.4	2.316	3.252	6.5	20.7
12 7	2 29.26	+16 12.6	1.405	2.284	14.3	20.9	12 7	2 31.01	+21 17.7	2.392	3.260	9.6	20.9
12 17	2 25.76	+15 32.3	1.472	2.269	18.2	21.2	12 17	2 26.57	+21 2.2	2.491	3.267	12.2	21.1
345492	2006 <i>JY</i> ₁		11 8.1 205°52	0°8'/ 7.4	18		308799	2006 <i>QR</i> ₅₉		11 8			

EPHEMERIDES

11 8.1

11 8.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
436450	2011 <i>CQ</i> ₇₂	11	8.1 305°78	2°7/ 6.8 18			156782	2003 <i>AR</i> ₈₇	11	8.1 330°45	3°2/ 6.3 18		
10 8	3 18.92	+12 13.0	1.275	2.164	15.8	20.9	10 8	3 14.45	+13 19.5	1.166	2.064	16.2	19.9
10 18	3 13.43	+11 47.6	1.199	2.144	11.3	20.6	10 18	3 10.27	+12 17.8	1.099	2.048	11.5	19.6
10 28	3 5.02	+11 17.1	1.145	2.124	6.3	20.2	10 28	3 3.28	+11 6.5	1.053	2.033	6.4	19.2
11 7	2 54.73	+10 46.3	1.115	2.104	2.7	19.9	11 7	2 54.57	+9 53.4	1.030	2.018	3.2	19.0
11 17	2 44.00	+10 21.0	1.111	2.084	6.6	20.1	11 17	2 45.59	+8 47.6	1.033	2.004	7.2	19.2
11 27	2 34.50	+10 7.6	1.131	2.065	12.0	20.4	11 27	2 37.97	+7 58.5	1.058	1.992	12.6	19.5
12 7	2 27.58	+10 10.4	1.174	2.046	17.0	20.6	12 7	2 32.94	+7 31.9	1.105	1.981	17.6	19.7
12 17	2 24.03	+10 31.1	1.234	2.028	21.2	20.8	12 17	2 31.20	+7 29.8	1.169	1.970	21.7	20.0
332298	2006 <i>UP</i> ₁₆₅	11	8.1 176°91	3°0/ 6.2 16			147380	2003 <i>EC</i> ₂₆	11	8.1 213°56	1°4/ 6.9 18		
10 8	3 18.98	+12 18.3	1.556	2.435	14.0	21.5	10 8	3 16.21	+13 21.1	2.505	3.368	9.9	21.1
10 18	3 12.74	+11 13.8	1.496	2.437	9.9	21.3	10 18	3 10.23	+12 50.4	2.429	3.362	7.0	20.9
10 28	3 4.29	+10 3.7	1.461	2.437	5.5	21.0	10 28	3 2.78	+12 15.9	2.379	3.354	3.8	20.7
11 7	2 54.63	+8 54.3	1.452	2.438	3.0	20.9	11 7	2 54.51	+11 40.4	2.358	3.346	1.4	20.5
11 17	2 44.98	+7 52.8	1.471	2.438	6.2	21.1	11 17	2 46.15	+11 7.1	2.368	3.338	3.9	20.6
11 27	2 36.59	+7 5.8	1.517	2.438	10.6	21.3	11 27	2 38.52	+10 39.7	2.407	3.329	7.1	20.8
12 7	2 30.38	+6 37.3	1.587	2.438	14.5	21.6	12 7	2 32.26	+10 20.9	2.474	3.320	10.1	21.0
12 17	2 26.89	+6 28.4	1.676	2.437	17.8	21.8	12 17	2 27.84	+10 12.6	2.564	3.311	12.6	21.2
9698	<i>Idzerda</i>	11	8.1 217°16	3°2/ 9.8 18			69531	1997 <i>GV</i> ₁₃	11	8.1 227°02	0°1/ 8.0 18		
10 8	3 22.38	+24 42.4	1.626	2.475	15.1	17.9	10 8	3 17.66	+18 21.0	1.969	2.832	12.3	20.9
10 18	3 15.44	+25 0.2	1.554	2.473	11.3	17.6	10 18	3 11.61	+17 47.7	1.894	2.826	8.7	20.6
10 28	3 5.90	+25 3.4	1.505	2.470	7.1	17.4	10 28	3 3.65	+17 5.0	1.843	2.819	4.7	20.4
11 7	2 54.81	+24 51.5	1.482	2.467	3.5	17.2	11 7	2 54.60	+16 15.9	1.821	2.812	0.5	20.0
11 17	2 43.51	+24 26.5	1.488	2.463	4.8	17.2	11 17	2 45.46	+15 24.9	1.828	2.804	3.9	20.3
11 27	2 33.47	+23 53.8	1.520	2.460	9.0	17.5	11 27	2 37.26	+14 37.5	1.863	2.796	8.1	20.5
12 7	2 25.84	+23 20.3	1.578	2.456	13.1	17.7	12 7	2 30.87	+13 58.4	1.925	2.788	11.8	20.8
12 17	2 21.27	+22 52.2	1.658	2.452	16.6	17.9	12 17	2 26.82	+13 31.3	2.009	2.780	14.9	21.0
228002	2007 <i>MP</i> ₇	11	8.1 42°89	2°1/ 6.6 18			149656	2004 <i>FP</i> ₆₄	11	8.1 136°82	0°7/ 7.7 17		
10 8	3 16.01	+10 47.7	2.178	3.049	10.9	20.7	10 8	3 21.36	+16 11.4	1.854	2.717	12.9	21.4
10 18	3 10.18	+10 29.8	2.115	3.051	7.7	20.5	10 18	3 14.12	+15 48.1	1.797	2.729	9.1	21.2
10 28	3 2.76	+10 10.4	2.078	3.054	4.3	20.3	10 28	3 4.93	+15 17.9	1.765	2.741	4.9	20.9
11 7	2 54.48	+9 52.7	2.069	3.056	2.1	20.2	11 7	2 54.73	+14 43.8	1.762	2.753	0.7	20.7
11 17	2 46.17	+9 39.5	2.090	3.058	4.5	20.3	11 17	2 44.61	+14 10.0	1.788	2.763	4.2	20.9
11 27	2 38.72	+9 33.9	2.139	3.061	7.9	20.5	11 27	2 35.67	+13 41.0	1.843	2.773	8.3	21.2
12 7	2 32.83	+9 37.8	2.214	3.063	11.0	20.7	12 7	2 28.74	+13 20.8	1.924	2.782	12.0	21.5
12 17	2 28.95	+9 52.2	2.312	3.066	13.6	20.9	12 17	2 24.30	+13 11.9	2.027	2.791	15.0	21.7
46680	1996 <i>YV</i>	11	8.1 282°51	3°7/ 6.1 18			439748	2015 <i>FZ</i> ₃₀₃	11	8.1 219°60	6°4/ 3.9 18		
10 8	3 19.04	+9 57.6	1.416	2.301	14.8	18.8	10 8	3 19.86	+0 48.6	1.819	2.688	12.8	21.7
10 18	3 13.08	+9 12.3	1.350	2.292	10.6	18.5	10 18	3 13.19	+0 8.7	1.755	2.681	9.7	21.5
10 28	3 4.61	+8 24.2	1.308	2.284	6.1	18.3	10 28	3 4.52	+0 59.9	1.715	2.672	7.1	21.3
11 7	2 54.68	+7 39.5	1.291	2.276	3.8	18.1	11 7	2 54.71	+1 38.6	1.703	2.664	6.6	21.3
11 17	2 44.59	+7 4.5	1.301	2.267	7.0	18.3	11 17	2 44.83	+1 59.5	1.719	2.654	8.6	21.4
11 27	2 35.76	+6 44.9	1.336	2.259	11.6	18.5	11 27	2 35.96	+1 59.6	1.761	2.645	11.7	21.6
12 7	2 29.28	+6 43.8	1.394	2.250	15.8	18.7	12 7	2 28.99	+1 38.4	1.827	2.634	14.8	21.7
12 17	2 25.78	+7 1.7	1.471	2.242	19.4	19.0	12 17	2 24.46	+0 57.9	1.912	2.623	17.5	21.9
408089	2012 <i>HF</i> ₅₈	11	8.1 261°72	2°3/ 9.7 17			161116	2002 <i>RL</i> ₅	11	8.1 226°18	9°1/ 17.3 18		
10 8	3 17.87	+23 46.8	2.252	3.095	11.7	20.7	10 8	3 24.57	+50 41.5	2.871	3.545	13.3	20.1
10 18	3 11.66	+23 59.2	2.175	3.091	8.6	20.5	10 18	3 16.84	+51 35.1	2.784	3.538	11.9	20.0
10 28	3 3.65	+24 1.3	2.123	3.088	5.3	20.3	10 28	3 6.66	+52 7.4	2.717	3.530	10.6	19.9
11 7	2 54.58	+23 53.2	2.100	3.085	2.5	20.1	11 7	2 54.94	+52 14.3	2.672	3.523	9.5	19.8
11 17	2 45.39	+23 36.7	2.106	3.081	3.6	20.2	11 17	2 42.89	+51 54.5	2.653	3.515	9.1	19.8
11 27	2 37.04	+23 15.2	2.141	3.078	6.9	20.4	11 27	2 31.84	+51 10.1	2.659	3.507	9.5	19.8
12 7	2 30.34	+22 53.1	2.203	3.075	10.1	20.6	12 7	2 22.92	+50 6.8	2.690	3.498	10.5	19.8
12 17	2 25.84	+22 34.4	2.289	3.071	12.9	20.8	12 17	2 16.81	+48 52.0	2.744	3.490	11.9	19.9
494605	2017 <i>BG</i> ₁₂₁	11	8.1 125°75	2°8/ 5.4 18			72960	2002 <i>CZ</i> ₁₁₀	11	8.1 121°27	3°9/ 5.9 17		
10 8	3 13.57	+9 25.5	2.517	3.387	9.6	21.1	10 8	3 20.31	+9 59.1	1.409	2.292	14.9	19.7
10 18	3 8.23	+8 23.8	2.460	3.396	6.8	20.9	10 18	3 13.78	+9 1.1	1.358	2.299	10.6	19.4
10 28	3 1.62	+7 21.0	2.431	3.404	4.0	20.8	10 28	3 4.89	+8 0.8	1.330	2.305	6.2	19.2
11 7	2 54.37	+6 21.3	2.431	3.412	2.9	20.7	11 7	2 54.75	+7 4.9	1.328	2.311	4.0	19.1
11 17	2 47.17	+5 29.0	2.462	3.419	4.9	20.8	11 17	2 44.69	+6 20.4	1.353	2.317	7.1	19.3
11 27	2 40.71	+4 47.7	2.521	3.427	7.6	21.0	11 27	2 36.06	+5 52.7	1.404	2.323	11.4	19.6
12 7	2 35.58	+4 19.7	2.607	3.434	10.3	21.2	12 7	2 29.82	+5 44.7	1.478	2.329	15.4	19.8
12 17	2 32.13	+4 5.9	2.715	3.441	12.5	21.4	12 17	2 26.49	+5 56.3	1.571	2.334	18.7	20.1
422845	2002 <i>GX</i> ₂₃	11	8.1 167°70	2°3/ 9.3 16			205428	2001 <i>HD</i> ₆₆	11	8.1 184°79	5°9/ 3.7 18		
10 8	3 24.78	+22 48.2	1.756	2.603	14.3	21.9	10 8	3 17.80	+1 6.9	2.288	3.149	10.8	21.2
10 18	3 16.88	+23 1.0	1.688	2.608	10.5	21.7	10 18	3 11.35	+1 55.4	2.231	3.149	8.4	21.0
10 28	3 6.57	+23 1.3	1.645	2.612	6.3	21.4	10 28	3 3.38	+2 36.8	2.199	3.149	6.4	20.9
11 7	2 54.88	+22 49.2	1.628	2.615	2.5	21.2	11 7	2 54.60	+3 6.5	2.196	3.148	6.0	20.9
11 17	2 43.10	+22 27.0	1.642	2.618	4.3	21.3	11 17	2 45.83	+3 20.7	2.222	3.147	7.6	21.0
11 27	2 32.59	+21 59.6	1.683	2.620	8.5	21.6	11 27	2 37.90	+3 17.3	2.275	3.145	10.0	21.1
12 7	2 24.38	+21 33.0	1.751	2.621	12.4	21.8	12 7	2 31.49	+2 56.4	2.352	3.142	12.4	21.3
12 17	2 19.08	+21 12.3	1.842	2.622	15.7	22.1	12 17	2 27.02	+2 19.4	2.450	3.139	14.6	21.4
411997	2012 <i>JH</i> ₆₁	11	8.1 358°59	1°8/ 7.3 18			35812	1999 <i>JD</i> ₄₆	11	8.1 82°23	2°7/ 6.5 18		
10 8	3 19.52												

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
401106	2011 <i>UQ</i> ₂₄₂	11	8.1 118°27'	1°2/ 9.1	18		67635	2000 <i>SE</i> ₂₁₁	11	8.1 36°37'	7°1/ 4.7	18	R
10 8	3 17.30	+23 27.6	2.088	2.937	12.2	20.9	10 8	3 17.94	+ 5 30.2	1.011	1.914	17.7	18.6
10 18	3 11.14	+22 39.8	2.026	2.948	8.9	20.7	10 18	3 12.51	+ 4 11.0	0.979	1.927	12.9	18.3
10 28	3 3.29	+21 39.0	1.990	2.959	5.1	20.5	10 28	3 4.31	+ 2 57.2	0.968	1.940	8.5	18.2
11 7	2 54.60	+20 28.3	1.981	2.970	1.5	20.2	11 7	2 54.75	+ 1 59.4	0.979	1.954	7.2	18.1
11 17	2 46.01	+19 12.9	2.003	2.981	3.4	20.4	11 17	2 45.47	+ 1 25.6	1.013	1.970	10.2	18.4
11 27	2 38.46	+17 58.9	2.054	2.991	7.2	20.7	11 27	2 38.03	+ 1 20.4	1.070	1.986	14.5	18.7
12 7	2 32.69	+16 52.3	2.133	3.001	10.6	20.9	12 7	2 33.43	+ 1 42.7	1.146	2.002	18.5	19.0
12 17	2 29.12	+15 57.4	2.235	3.011	13.4	21.1	12 17	2 32.09	+ 2 28.8	1.239	2.019	21.9	19.2
446083	2013 <i>CT</i> ₁₇₇	11	8.1 285°27'	1°2/ 7.3	18		145785	1998 <i>MO</i> ₃₃	11	8.1 38°71'	6°2/ 5.9	18	
10 8	3 16.61	+15 25.9	1.803	2.676	12.7	21.3	10 8	3 21.17	+ 5 8.1	0.978	1.878	18.4	18.0
10 18	3 11.03	+14 49.7	1.728	2.666	9.0	21.0	10 18	3 14.64	+ 4 34.7	0.956	1.903	13.3	17.8
10 28	3 3.42	+14 6.2	1.677	2.655	4.8	20.8	10 28	3 5.35	+ 4 9.0	0.955	1.929	8.3	17.6
11 7	2 54.63	+13 19.0	1.654	2.644	1.2	20.5	11 7	2 54.85	+ 3 57.8	0.976	1.956	6.2	17.6
11 17	2 45.69	+12 33.2	1.659	2.633	4.6	20.7	11 17	2 44.88	+ 4 5.5	1.021	1.984	9.1	17.8
11 27	2 37.72	+11 54.1	1.692	2.623	8.9	20.9	11 27	2 36.97	+ 4 33.6	1.089	2.012	13.5	18.2
12 7	2 31.63	+11 26.4	1.750	2.612	12.8	21.2	12 7	2 32.07	+ 5 20.6	1.177	2.042	17.5	18.5
12 17	2 27.99	+11 12.7	1.829	2.601	16.1	21.4	12 17	2 30.49	+ 6 22.9	1.283	2.072	20.8	18.8
399659	2004 <i>RG</i> ₁₈₈	11	8.1 40°70'	0°5/ 8.5	18		173370	2000 <i>AX</i> ₁₅₂	11	8.1 92°31'	12°5/ 17.4	17	
10 8	3 15.09	+21 1.5	1.815	2.680	13.0	20.1	10 8	3 27.03	+46 18.3	1.134	1.918	24.3	19.4
10 18	3 9.77	+20 16.6	1.759	2.691	9.3	19.9	10 18	3 20.06	+46 26.7	1.075	1.925	20.9	19.2
10 28	3 2.62	+19 19.8	1.727	2.702	5.1	19.7	10 28	3 8.81	+45 48.3	1.032	1.931	17.2	19.0
11 7	2 54.53	+18 15.0	1.723	2.713	0.9	19.4	11 7	2 55.23	+44 16.5	1.006	1.938	13.9	18.8
11 17	2 46.54	+17 7.7	1.747	2.725	3.8	19.6	11 17	2 41.92	+41 54.1	1.003	1.944	12.5	18.8
11 27	2 39.65	+16 4.3	1.799	2.737	7.9	19.9	11 27	2 31.37	+38 56.4	1.024	1.951	13.7	18.9
12 7	2 34.65	+15 10.5	1.877	2.750	11.5	20.2	12 7	2 25.05	+35 45.7	1.067	1.957	16.8	19.1
12 17	2 31.96	+14 30.0	1.977	2.762	14.6	20.4	12 17	2 23.34	+32 43.2	1.131	1.963	20.3	19.3
429765	2012 <i>DF</i> ₄₅	11	8.1 133°01'	1°5/ 8.9	17		138992	2001 <i>DS</i> ₁₆	11	8.1 299°88'	4°4/ 5.9	18	
10 8	3 23.78	+20 43.1	1.493	2.354	15.5	21.5	10 8	3 19.44	+ 8 23.5	1.324	2.212	15.4	19.7
10 18	3 16.39	+20 49.2	1.433	2.362	11.3	21.2	10 18	3 13.58	+ 7 44.2	1.258	2.201	11.1	19.4
10 28	3 6.40	+20 43.2	1.396	2.368	6.4	21.0	10 28	3 5.04	+ 7 4.2	1.214	2.189	6.7	19.1
11 7	2 54.94	+20 26.2	1.385	2.375	1.8	20.7	11 7	2 54.86	+ 6 29.9	1.195	2.178	4.5	19.0
11 17	2 43.45	+20 1.4	1.403	2.381	4.5	20.9	11 17	2 44.46	+ 6 7.6	1.202	2.167	7.6	19.1
11 27	2 33.42	+19 34.5	1.447	2.387	9.3	21.2	11 27	2 35.36	+ 6 2.5	1.233	2.156	12.3	19.4
12 7	2 25.95	+19 11.7	1.517	2.392	13.6	21.5	12 7	2 28.73	+ 6 17.0	1.287	2.145	16.7	19.6
12 17	2 21.62	+18 57.7	1.607	2.397	17.2	21.7	12 17	2 25.25	+ 6 50.7	1.359	2.135	20.5	19.8
75693	2000 <i>AJ</i> ₁₀₄	11	8.1 308°99'	2°6/ 6.4	18		482969	2014 <i>KY</i> ₇₉	11	8.1 79°09'	1°4/ 7.3	18	
10 8	3 15.86	+12 39.5	1.580	2.463	13.6	19.4	10 8	3 18.68	+13 35.1	1.836	2.708	12.6	21.0
10 18	3 10.72	+11 48.8	1.506	2.448	9.7	19.2	10 18	3 12.33	+13 21.7	1.778	2.714	8.9	20.8
10 28	3 3.35	+10 51.9	1.456	2.434	5.4	18.9	10 28	3 4.06	+13 4.3	1.744	2.721	4.8	20.6
11 7	2 54.64	+ 9 54.4	1.432	2.420	2.7	18.7	11 7	2 54.75	+12 45.8	1.738	2.727	1.4	20.4
11 17	2 45.74	+ 9 2.4	1.436	2.406	5.9	18.9	11 17	2 45.45	+12 29.6	1.760	2.734	4.5	20.6
11 27	2 37.89	+ 8 22.6	1.466	2.392	10.4	19.1	11 27	2 37.23	+12 19.4	1.811	2.741	8.5	20.9
12 7	2 32.09	+ 7 59.3	1.519	2.379	14.5	19.3	12 7	2 30.91	+12 18.2	1.887	2.747	12.1	21.1
12 17	2 28.96	+ 7 54.4	1.592	2.366	18.0	19.5	12 17	2 26.99	+12 27.5	1.985	2.754	15.1	21.3
371236	2006 <i>BV</i> ₈₉	11	8.1 210°91'	5°8/ 13.7	18		178990	2001 <i>QZ</i> ₃₂₉	11	8.1 340°48'	9°5/ 1.6	18	
10 8	3 19.40	+39 0.3	2.834	3.596	11.6	21.8	10 8	3 13.42	- 3 23.0	1.457	2.341	14.5	19.1
10 18	3 12.71	+39 20.8	2.747	3.590	9.7	21.6	10 18	3 8.99	- 4 54.7	1.404	2.330	11.7	18.9
10 28	3 4.24	+39 24.2	2.682	3.584	7.7	21.5	10 28	3 2.41	- 6 15.0	1.373	2.319	9.8	18.8
11 7	2 54.73	+39 9.0	2.644	3.578	6.2	21.4	11 7	2 54.60	- 7 14.4	1.366	2.309	9.9	18.7
11 17	2 45.07	+38 35.5	2.634	3.571	5.9	21.3	11 17	2 46.70	- 7 45.5	1.383	2.300	11.9	18.8
11 27	2 36.22	+37 47.0	2.654	3.564	7.1	21.4	11 27	2 39.92	- 7 44.7	1.423	2.292	14.9	19.0
12 7	2 28.99	+36 48.8	2.700	3.556	9.0	21.5	12 7	2 35.19	- 7 13.2	1.483	2.285	17.9	19.2
12 17	2 23.90	+35 46.7	2.772	3.548	11.1	21.7	12 17	2 33.06	- 6 15.0	1.559	2.279	20.5	19.4
349208	2007 <i>RY</i> ₂₇₈	11	8.1 59°56'	0°1/ 8.1	18		458560	2011 <i>ER</i> ₅₁	11	8.1 280°29'	4°7/ 11.3	18	
10 8	3 24.43	+15 7.3	1.538	2.407	14.8	20.1	10 8	3 19.39	+31 3.1	2.363	3.175	12.2	21.2
10 18	3 16.67	+15 40.9	1.486	2.420	10.5	19.8	10 18	3 12.96	+31 36.7	2.273	3.161	9.7	21.0
10 28	3 6.48	+16 9.9	1.459	2.434	5.7	19.6	10 28	3 4.53	+31 56.4	2.207	3.147	7.0	20.8
11 7	2 54.97	+16 34.4	1.458	2.449	0.6	19.3	11 7	2 54.83	+32 0.4	2.168	3.133	4.9	20.7
11 17	2 43.50	+16 55.7	1.486	2.463	4.5	19.6	11 17	2 44.82	+31 49.1	2.157	3.119	5.1	20.7
11 27	2 33.46	+17 16.4	1.542	2.478	9.1	19.9	11 27	2 35.59	+31 25.2	2.176	3.104	7.4	20.8
12 7	2 25.87	+17 39.5	1.623	2.493	13.2	20.2	12 7	2 28.06	+30 53.8	2.222	3.090	10.2	20.9
12 17	2 21.27	+18 7.6	1.725	2.508	16.5	20.5	12 17	2 22.86	+30 20.6	2.291	3.076	12.8	21.1
300782	2007 <i>VX</i> ₂₈₆	11	8.1 312°90'	8°4/ 2.9	18		236876	2007 <i>RD</i> ₂₈₀	11	8.1 80°69'	5°0/ 5.8	18	
10 8	3 16.46	- 2 42.4	1.593	2.469	13.9	19.6	10 8	3 21.83	+ 3 29.2	1.667	2.540	13.6	19.7
10 18	3 11.06	- 3 47.7	1.530	2.454	11.0	19.4	10 18	3 14.52	+ 3 13.9	1.622	2.554	9.9	19.5
10 28	3 3.50	- 4 42.6	1.491	2.439	8.9	19.2	10 28	3 5.20	+ 3 4.7	1.602	2.568	6.5	19.4
11 7	2 54.68	- 5 19.5	1.476	2.425	8.7	19.2	11 7	2 54.88	+ 3 5.7	1.608	2.583	5.0	19.3
11 17	2 45.71	- 5 32.3	1.487	2.411	10.7	19.2	11 17	2 44.70	+ 3 19.7	1.643	2.597	7.2	19.5
11 27	2 37.79	- 5 18.0	1.522	2.397	13.7	19.4	11 27	2 35.82	+ 3 48.3	1.705	2.611	10.6	19.7
12 7	2 31.87	- 4 37.3	1.578	2.384	16.8	19.6	12 7	2 29.05	+ 4 30.9	1.791	2.626	13.9	20.0
12 17	2 28.53	- 3 33.6	1.652	2.371	19.5	19.7	12 17	2 24.87	+ 5 25.9	1.897	2.640	16.6	20.2
487528	2014 <i>UH</i> ₁₁₂	11	8.1 354°34'	1°6/ 7.2	17		259098	2002 <i>VW</i>					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
216096	2006 <i>RT</i> ₁₃	11	8.1 288°46	3°7/ 5.2 18			236594	2006 <i>JS</i> ₄	11	8.1 122°55	1°2/ 7.2 18		
10 8	3 15.36	+10 40.2	1.789	2.669	12.4	20.3	10 8	3 18.61	+15 11.0	2.053	2.917	11.8	21.7
10 18	3 10.20	+9 17.9	1.708	2.648	8.9	20.1	10 18	3 12.05	+14 28.6	1.999	2.933	8.2	21.5
10 28	3 3.05	+7 49.6	1.652	2.626	5.3	19.8	10 28	3 3.83	+13 40.5	1.972	2.948	4.4	21.3
11 7	2 54.69	+6 22.0	1.623	2.605	3.8	19.7	11 7	2 54.79	+12 50.5	1.973	2.962	1.2	21.1
11 17	2 46.12	+5 2.5	1.623	2.583	6.6	19.8	11 17	2 45.86	+12 3.0	2.003	2.976	4.2	21.4
11 27	2 38.44	+3 58.5	1.651	2.562	10.6	20.0	11 27	2 37.97	+11 22.8	2.063	2.989	7.9	21.6
12 7	2 32.57	+3 14.5	1.702	2.540	14.3	20.2	12 7	2 31.83	+10 53.3	2.150	3.002	11.2	21.8
12 17	2 29.09	+2 52.3	1.773	2.519	17.5	20.4	12 17	2 27.86	+10 36.6	2.259	3.015	13.9	22.1
104192	2000 <i>EE</i> ₁₀₂	11	8.1 26°80	0°3/ 7.9 18			226094	2002 <i>OS</i> ₁₅	11	8.1 154°14	3°7/ 11.7 17		
10 8	3 16.84	+17 57.6	1.592	2.467	14.0	19.7	10 8	3 16.15	+31 31.3	2.452	3.265	11.8	20.2
10 18	3 11.30	+17 27.7	1.534	2.471	10.0	19.4	10 18	3 10.38	+31 12.6	2.376	3.267	9.2	20.1
10 28	3 3.60	+16 48.0	1.499	2.476	5.4	19.2	10 28	3 2.98	+30 37.7	2.323	3.269	6.4	19.9
11 7	2 54.74	+16 2.4	1.490	2.481	0.5	18.8	11 7	2 54.71	+29 47.4	2.299	3.270	4.1	19.8
11 17	2 45.89	+15 15.9	1.509	2.487	4.4	19.2	11 17	2 46.43	+28 44.5	2.303	3.272	4.2	19.8
11 27	2 38.25	+14 34.6	1.555	2.493	9.0	19.4	11 27	2 39.05	+27 34.0	2.338	3.273	6.5	19.9
12 7	2 32.73	+14 3.6	1.626	2.499	13.0	19.7	12 7	2 33.28	+26 22.0	2.400	3.274	9.3	20.1
12 17	2 29.85	+13 46.0	1.717	2.506	16.3	19.9	12 17	2 29.56	+25 14.0	2.487	3.276	11.8	20.3
482582	2012 <i>XA</i> ₄₆	11	8.1 338°99	6°9/ 11.6 18			189039	2000 <i>LA</i> ₂₅	11	8.1 46°22	9°8/ 1.7 18		
10 8	3 21.18	+31 50.5	1.478	2.312	17.1	19.9	10 8	3 16.38	- 0 31.2	1.217	2.109	16.1	18.8
10 18	3 15.11	+32 40.6	1.407	2.306	13.7	19.6	10 18	3 10.95	- 2 49.8	1.198	2.132	12.5	18.7
10 28	3 6.02	+33 9.8	1.356	2.300	10.0	19.4	10 28	3 3.32	- 4 53.8	1.202	2.155	10.1	18.6
11 7	2 55.02	+33 14.5	1.329	2.295	7.3	19.3	11 7	2 54.74	- 6 31.0	1.231	2.178	10.2	18.7
11 17	2 43.65	+32 54.6	1.327	2.290	7.4	19.2	11 17	2 46.51	- 7 33.5	1.283	2.202	12.4	18.9
11 27	2 33.65	+32 15.2	1.351	2.285	10.3	19.4	11 27	2 39.88	- 7 58.7	1.357	2.227	15.4	19.1
12 7	2 26.40	+31 25.6	1.398	2.282	14.0	19.6	12 7	2 35.62	- 7 49.6	1.451	2.252	18.3	19.4
12 17	2 22.65	+30 35.3	1.466	2.279	17.5	19.8	12 17	2 34.08	- 7 11.9	1.560	2.277	20.6	19.7
82822	2001 <i>QW</i> ₄₀	11	8.1 5°44	3°7/ 10.6 18			128765	2004 <i>RQ</i> ₁₉₁	11	8.2 0°21	5°2/ 11.6 18		
10 8	3 18.69	+27 45.6	1.838	2.677	14.0	19.4	10 8	3 17.82	+31 4.0	1.811	2.640	14.6	19.4
10 18	3 12.62	+27 48.4	1.767	2.677	10.7	19.1	10 18	3 12.15	+31 26.7	1.740	2.639	11.5	19.2
10 28	3 4.35	+27 34.9	1.719	2.677	7.0	18.9	10 28	3 4.18	+31 31.1	1.692	2.638	8.2	19.0
11 7	2 54.83	+27 5.0	1.698	2.677	4.0	18.8	11 7	2 54.86	+31 15.9	1.668	2.638	5.6	18.9
11 17	2 45.21	+26 21.6	1.704	2.678	4.6	18.8	11 17	2 45.39	+30 42.8	1.672	2.638	5.7	18.9
11 27	2 36.72	+25 30.2	1.738	2.678	8.0	19.0	11 27	2 37.06	+29 56.8	1.703	2.639	8.4	19.0
12 7	2 30.32	+24 37.9	1.799	2.678	11.6	19.2	12 7	2 30.87	+29 5.3	1.759	2.640	11.7	19.2
12 17	2 26.57	+23 50.9	1.881	2.679	14.8	19.4	12 17	2 27.44	+28 15.4	1.837	2.642	14.8	19.5
50092	2000 <i>AR</i> ₉₆	11	8.1 271°66	3°6/ 10.1 18			15749	1991 <i>VT</i> ₁	11	8.2 359°40	1°8/ 9.1 18		
10 8	3 21.39	+26 1.1	1.592	2.441	15.4	19.0	10 8	3 17.66	+22 24.4	1.050	1.937	18.6	16.9
10 18	3 15.02	+26 11.1	1.507	2.425	11.7	18.7	10 18	3 12.85	+22 3.4	0.994	1.934	13.6	16.6
10 28	3 5.90	+26 4.3	1.445	2.408	7.5	18.5	10 28	3 4.83	+21 22.7	0.957	1.933	7.9	16.3
11 7	2 55.01	+25 40.2	1.409	2.392	3.9	18.2	11 7	2 54.94	+20 25.5	0.942	1.932	2.2	16.0
11 17	2 43.73	+25 0.7	1.399	2.375	5.1	18.2	11 17	2 44.94	+19 18.9	0.952	1.932	5.4	16.2
11 27	2 33.59	+24 12.1	1.417	2.358	9.4	18.4	11 27	2 36.70	+18 13.6	0.985	1.934	11.3	16.5
12 7	2 25.87	+23 22.3	1.460	2.341	13.7	18.7	12 7	2 31.52	+17 19.5	1.039	1.936	16.6	16.8
12 17	2 21.33	+22 38.9	1.523	2.323	17.5	18.9	12 17	2 30.03	+16 42.9	1.112	1.939	20.9	17.1
167139	2003 <i>SU</i> ₁₉₅	11	8.1 24°93	2°9/ 9.7 18			384432	2009 <i>YQ</i> ₂	11	8.2 216°10	1°8/ 6.9 18		
10 8	3 17.55	+23 51.0	1.189	2.066	17.6	18.6	10 8	3 18.91	+13 48.3	1.873	2.743	12.5	21.5
10 18	3 12.31	+23 53.9	1.145	2.079	13.0	18.3	10 18	3 12.59	+13 8.8	1.801	2.737	8.8	21.3
10 28	3 4.30	+23 38.7	1.122	2.093	7.8	18.1	10 28	3 4.30	+12 23.7	1.755	2.731	4.8	21.0
11 7	2 54.82	+23 7.4	1.122	2.109	3.3	17.9	11 7	2 54.88	+11 36.8	1.736	2.725	1.8	20.8
11 17	2 45.48	+22 25.0	1.146	2.125	5.1	18.1	11 17	2 45.36	+10 53.0	1.747	2.718	4.8	21.0
11 27	2 37.83	+21 39.4	1.196	2.143	9.9	18.4	11 27	2 36.84	+10 17.5	1.785	2.711	8.9	21.2
12 7	2 32.97	+20 58.8	1.268	2.162	14.3	18.7	12 7	2 30.18	+9 54.2	1.849	2.703	12.6	21.4
12 17	2 31.37	+20 29.1	1.360	2.182	18.1	19.0	12 17	2 25.94	+9 45.1	1.935	2.695	15.7	21.6
501575	2014 <i>OB</i> ₂₃₂	11	8.1 25°73	1°8/ 8.9 17			223541	2004 <i>ER</i> ₄₀	11	8.2 142°02	0°9/ 8.8 18		
10 8	3 17.00	+21 28.1	0.723	1.632	22.0	21.1	10 8	3 21.65	+20 54.5	1.859	2.713	13.3	21.3
10 18	3 12.77	+21 17.2	0.693	1.644	15.9	20.8	10 18	3 14.46	+20 33.6	1.798	2.724	9.6	21.1
10 28	3 4.78	+20 44.8	0.679	1.659	9.0	20.6	10 28	3 5.25	+20 1.5	1.762	2.734	5.4	20.9
11 7	2 54.88	+19 56.0	0.685	1.675	2.3	20.3	11 7	2 54.98	+19 20.5	1.754	2.744	1.2	20.6
11 17	2 45.29	+18 59.9	0.711	1.693	6.1	20.6	11 17	2 44.76	+18 34.6	1.776	2.753	3.8	20.8
11 27	2 38.15	+18 8.5	0.758	1.713	12.6	21.0	11 27	2 35.74	+17 49.4	1.826	2.762	8.0	21.1
12 7	2 34.70	+17 31.5	0.824	1.734	18.2	21.4	12 7	2 28.78	+17 10.3	1.903	2.770	11.7	21.3
12 17	2 35.29	+17 13.3	0.905	1.756	22.6	21.8	12 17	2 24.37	+16 41.5	2.002	2.777	14.8	21.6
376427	2012 <i>HO</i> ₇	11	8.1 170°26	0°3/ 7.9 16			331068	2009 <i>WZ</i> ₄₄	11	8.2 203°03	2°2/ 6.4 17		
10 8	3 21.12	+18 10.3	1.605	2.472	14.3	22.1	10 8	3 16.73	+8 44.0	2.835	3.696	9.0	21.6
10 18	3 14.36	+17 35.5	1.541	2.475	10.2	21.9	10 18	3 10.50	+8 33.5	2.761	3.692	6.4	21.4
10 28	3 5.29	+16 50.0	1.501	2.477	5.5	21.6	10 28	3 2.99	+8 23.3	2.715	3.688	3.7	21.3
11 7	2 54.94	+15 57.5	1.488	2.479	0.6	21.2	11 7	2 54.74	+8 15.5	2.699	3.683	2.2	21.1
11 17	2 44.59	+15 3.6	1.504	2.480	4.6	21.6	11 17	2 46.44	+8 12.2	2.714	3.678	4.0	21.3
11 27	2 35.51	+14 14.8	1.547	2.481	9.3	21.8	11 27	2 38.76	+8 15.4	2.759	3.673	6.7	21.4
12 7	2 28.70	+13 36.8	1.615	2.482	13.4	22.1	12 7	2 32.29	+8 26.5	2.832	3.667	9.3	21.6
12 17	2 24.70	+13 13.3	1.704	2.482	16.9	22.3	12 17	2 27.46	+8 46.0	2.929	3.661	11.5	21.8
21864	1999 <i>TD</i> ₂₃₈	11	8.1 128°44	3°2/ 6.4 18			446879	2002 <i>CJ</i> ₄	11	8.2 301			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
346439	2008 <i>SC</i> ₂₈₂	11	8.2	28°42'	0°2'/ 8.3	17	208162	2000 <i>KG</i> ₇₄	11	8.2	174°36'	4°7'/ 3.9	18
10 8	3 14.95	+21 33.7	1.021	1.914	18.5	19.7	10 8	3 15.87	+3 15.9	2.385	3.253	10.2	21.0
10 18	3 10.46	+20 21.7	0.989	1.934	13.1	19.5	10 18	3 10.00	+2 7.6	2.328	3.255	7.6	20.8
10 28	3 3.24	+18 51.6	0.977	1.956	7.1	19.2	10 28	3 2.74	+1 2.3	2.297	3.258	5.3	20.7
11 7	2 54.75	+17 12.1	0.989	1.980	0.8	18.9	11 7	2 54.74	+0 5.3	2.296	3.259	4.9	20.7
11 17	2 46.63	+15 34.3	1.025	2.004	5.3	19.3	11 17	2 46.76	-0 39.2	2.324	3.260	6.6	20.8
11 27	2 40.38	+14 9.8	1.084	2.030	10.9	19.7	11 27	2 39.56	-1 7.7	2.380	3.261	9.1	21.0
12 7	2 36.92	+13 6.2	1.166	2.057	15.6	20.1	12 7	2 33.77	-1 19.1	2.461	3.261	11.6	21.1
12 17	2 36.58	+12 26.4	1.267	2.085	19.3	20.4	12 17	2 29.80	-1 13.8	2.563	3.260	13.8	21.3
296622	2009 <i>SE</i> ₄₆	11	8.2	24°29'	1°2'/ 9.1	18	270232	2001 <i>TV</i> ₂₁₀	11	8.2	96°44'	3°8'/ 10.6	18
10 8	3 15.82	+21 52.7	2.071	2.926	12.0	21.0	10 8	3 22.16	+27 46.0	1.599	2.441	15.6	20.5
10 18	3 10.29	+21 34.8	2.002	2.928	8.7	20.8	10 18	3 15.19	+27 45.9	1.543	2.455	11.8	20.3
10 28	3 3.00	+21 6.2	1.959	2.930	5.0	20.6	10 28	3 5.78	+27 27.0	1.508	2.468	7.7	20.1
11 7	2 54.74	+20 28.8	1.943	2.932	1.5	20.4	11 7	2 55.06	+26 49.8	1.500	2.480	4.2	19.9
11 17	2 46.45	+19 46.1	1.957	2.935	3.4	20.5	11 17	2 44.43	+25 58.2	1.519	2.493	5.0	20.0
11 27	2 39.10	+19 2.9	1.998	2.937	7.2	20.8	11 27	2 35.26	+24 59.3	1.565	2.506	8.7	20.3
12 7	2 33.45	+18 24.2	2.067	2.940	10.6	21.0	12 7	2 28.56	+24 1.1	1.637	2.518	12.5	20.5
12 17	2 29.99	+17 53.8	2.158	2.943	13.5	21.2	12 17	2 24.84	+23 10.6	1.731	2.530	15.8	20.8
319178	2005 <i>YU</i> ₁₁₈	11	8.2	228°60'	2°3'/ 6.3	18	240376	2003 <i>SG</i> ₂₅₁	11	8.2	109°66'	2°5'/ 9.5	18
10 8	3 15.45	+10 30.8	2.361	3.230	10.2	21.1	10 8	3 21.65	+23 1.5	1.768	2.618	14.0	20.0
10 18	3 9.81	+9 57.6	2.290	3.225	7.3	20.9	10 18	3 14.78	+23 24.0	1.699	2.620	10.3	19.8
10 28	3 2.68	+9 22.7	2.245	3.220	4.1	20.7	10 28	3 5.60	+23 34.6	1.655	2.622	6.3	19.6
11 7	2 54.72	+8 49.3	2.229	3.214	2.3	20.5	11 7	2 55.06	+23 33.3	1.638	2.623	2.8	19.4
11 17	2 46.69	+8 20.9	2.243	3.209	4.5	20.7	11 17	2 44.38	+23 21.7	1.649	2.625	4.3	19.5
11 27	2 39.41	+8 1.0	2.286	3.203	7.7	20.9	11 27	2 34.85	+23 4.0	1.688	2.627	8.3	19.7
12 7	2 33.54	+7 51.8	2.355	3.196	10.7	21.1	12 7	2 27.49	+22 45.7	1.753	2.628	12.1	19.9
12 17	2 29.54	+7 54.5	2.446	3.190	13.2	21.2	12 17	2 22.91	+22 31.6	1.840	2.630	15.3	20.2
266724	2009 <i>RN</i> ₁₈	11	8.2	192°24'	2°0'/ 6.9	18	191261	2003 <i>BK</i> ₅₃	11	8.2	221°48'	0°6'/ 8.5	18
10 8	3 20.16	+13 27.6	1.677	2.550	13.5	21.3	10 8	3 20.09	+19 57.5	1.896	2.754	12.9	21.0
10 18	3 13.62	+12 50.4	1.612	2.550	9.6	21.1	10 18	3 13.53	+19 33.8	1.818	2.746	9.3	20.8
10 28	3 4.90	+12 7.8	1.572	2.548	5.2	20.8	10 28	3 4.88	+18 59.3	1.764	2.737	5.2	20.5
11 7	2 54.96	+11 24.0	1.558	2.547	2.0	20.6	11 7	2 54.99	+18 16.3	1.738	2.728	0.9	20.2
11 17	2 44.96	+10 44.1	1.573	2.545	5.2	20.8	11 17	2 44.95	+17 28.6	1.741	2.719	3.9	20.4
11 27	2 36.12	+10 13.5	1.616	2.542	9.6	21.1	11 27	2 35.92	+16 42.1	1.773	2.709	8.2	20.7
12 7	2 29.38	+9 56.1	1.683	2.540	13.5	21.3	12 7	2 28.83	+16 2.1	1.831	2.698	12.1	20.9
12 17	2 25.29	+9 53.7	1.771	2.537	16.8	21.6	12 17	2 24.26	+15 32.9	1.912	2.687	15.4	21.1
322997	2002 <i>OQ</i> ₃₂	11	8.2	141°91'	3°5'/ 6.0	16	302798	2002 <i>YU</i> ₁₈	11	8.2	299°41'	2°3'/ 9.8	18
10 8	3 21.03	+9 36.7	1.656	2.531	13.5	21.5	10 8	3 16.63	+25 1.5	1.789	2.642	13.8	20.5
10 18	3 14.08	+8 47.2	1.603	2.540	9.6	21.3	10 18	3 11.36	+24 36.1	1.698	2.620	10.3	20.2
10 28	3 5.06	+7 56.3	1.575	2.549	5.6	21.1	10 28	3 3.83	+23 54.2	1.631	2.598	6.3	19.9
11 7	2 54.97	+7 9.5	1.574	2.557	3.6	21.0	11 7	2 54.89	+22 57.0	1.590	2.577	2.6	19.6
11 17	2 44.96	+6 32.1	1.602	2.565	6.3	21.2	11 17	2 45.67	+21 48.5	1.577	2.555	4.1	19.7
11 27	2 36.20	+6 8.9	1.656	2.572	10.2	21.4	11 27	2 37.41	+20 35.9	1.592	2.533	8.4	19.9
12 7	2 29.57	+6 2.2	1.736	2.578	13.8	21.6	12 7	2 31.15	+19 26.7	1.632	2.512	12.6	20.1
12 17	2 25.55	+6 12.2	1.835	2.584	16.8	21.9	12 17	2 27.54	+18 27.8	1.694	2.491	16.2	20.3
482593	2012 <i>XJ</i> ₁₀₉	11	8.2	284°52'	1°5'/ 9.1	18	273688	2007 <i>EE</i> ₃₀	11	8.2	147°40'	3°9'/ 5.6	18
10 8	3 18.22	+22 17.1	1.721	2.580	13.9	21.6	10 8	3 19.07	+8 23.7	1.742	2.618	12.9	20.7
10 18	3 12.48	+21 59.8	1.637	2.564	10.2	21.4	10 18	3 12.67	+7 28.7	1.687	2.624	9.2	20.4
10 28	3 4.42	+21 28.6	1.576	2.548	6.0	21.1	10 28	3 4.31	+6 33.3	1.656	2.629	5.6	20.2
11 7	2 54.93	+20 45.4	1.542	2.531	1.8	20.8	11 7	2 54.94	+5 43.2	1.654	2.634	4.0	20.2
11 17	2 45.16	+19 54.0	1.536	2.515	4.1	20.9	11 17	2 45.60	+5 3.7	1.679	2.639	6.5	20.3
11 27	2 36.42	+19 0.7	1.558	2.498	8.7	21.1	11 27	2 37.40	+4 39.4	1.732	2.643	10.2	20.6
12 7	2 29.76	+18 12.4	1.605	2.482	12.9	21.4	12 7	2 31.16	+4 32.4	1.809	2.647	13.6	20.8
12 17	2 25.84	+17 34.5	1.674	2.466	16.5	21.6	12 17	2 27.37	+4 42.7	1.906	2.650	16.5	21.0
402442	2006 <i>BQ</i> ₃₄	11	8.2	45°63'	0°2'/ 8.3	16	220232	2002 <i>WA</i> ₁₀	11	8.2	14°76'	1°4'/ 7.6	18
10 8	3 16.26	+18 30.0	2.043	2.906	11.9	21.6	10 8	3 16.52	+14 27.5	0.916	1.822	18.7	19.4
10 18	3 10.57	+18 12.8	1.979	2.910	8.5	21.4	10 18	3 12.04	+14 23.7	0.876	1.828	13.3	19.1
10 28	3 3.15	+17 47.7	1.940	2.915	4.6	21.2	10 28	3 4.36	+14 12.8	0.855	1.836	7.1	18.8
11 7	2 54.78	+17 17.0	1.929	2.920	0.6	20.9	11 7	2 54.95	+13 59.4	0.855	1.846	1.4	18.5
11 17	2 46.40	+16 44.2	1.947	2.925	3.6	21.1	11 17	2 45.62	+13 48.8	0.879	1.857	6.2	18.8
11 27	2 38.96	+16 13.5	1.994	2.930	7.4	21.4	11 27	2 38.18	+13 47.0	0.924	1.871	12.1	19.2
12 7	2 33.23	+15 49.1	2.067	2.935	10.8	21.6	12 7	2 33.88	+13 58.0	0.989	1.886	17.2	19.6
12 17	2 29.67	+15 33.8	2.163	2.941	13.7	21.8	12 17	2 33.21	+14 23.3	1.072	1.902	21.3	19.9
382723	2002 <i>XK</i> ₁₁₉	11	8.2	316°81'	0°3'/ 8.3	18	26666	Justinto	11	8.2	42°42'	3°8'/ 6.4	18
10 8	3 16.33	+20 36.7	1.292	2.172	16.2	20.7	10 8	3 19.51	+10 58.9	1.107	2.003	17.1	17.4
10 18	3 11.59	+19 47.1	1.218	2.157	11.7	20.4	10 18	3 13.62	+10 11.0	1.069	2.016	12.1	17.2
10 28	3 4.09	+18 39.7	1.166	2.143	6.5	20.1	10 28	3 5.00	+9 20.4	1.051	2.029	6.8	17.0
11 7	2 54.90	+17 19.1	1.138	2.129	0.8	19.7	11 7	2 55.01	+8 34.5	1.058	2.044	3.8	16.8
11 17	2 45.45	+15 53.2	1.136	2.115	5.1	19.9	11 17	2 45.24	+8 0.4	1.089	2.059	7.3	17.1
11 27	2 37.34	+14 32.4	1.160	2.102	10.7	20.2	11 27	2 37.23	+7 43.8	1.144	2.074	12.2	17.4
12 7	2 31.76	+13 26.0	1.206	2.090	15.8	20.5	12 7	2 32.01	+7 47.1	1.220	2.090	16.6	17.7
12 17	2 29.42	+12 39.7	1.272	2.079	20.0	20.7	12 17	2 30.04	+8 9.6	1.315	2.107	20.2	18.0
350883	2002 <i>QF</i> ₉₃	11	8.2	20°63'	4°3'/ 5.6	18	449359	2013 <i>GH</i> ₅₆	11	8.2	299°08'	2°5'/ 6.4	18

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V		
259421	2003 <i>QU</i> ₁₀₅	11	8.2	16°94'	7°8'	3.6	17	418201	2008 <i>CZ</i> ₈₈	11	8.2	186°78'	3°9'	10.5	16
10 8	3 14.26	+ 6 10.8	0.982	1.891	17.5	19.1	10 8	3 24.70	+27 38.9	1.893	2.722	14.1	21.6		
10 18	3 10.13	+ 4 10.9	0.945	1.896	12.8	18.8	10 18	3 16.96	+27 58.0	1.818	2.722	10.8	21.4		
10 28	3 3.20	+ 2 13.6	0.929	1.901	8.8	18.6	10 28	3 6.83	+28 1.4	1.766	2.721	7.2	21.1		
11 7	2 54.83	+ 0 32.9	0.935	1.908	8.1	18.6	11 7	2 55.26	+27 48.1	1.742	2.720	4.2	21.0		
11 17	2 46.60	- 0 39.4	0.964	1.916	11.3	18.8	11 17	2 43.52	+27 19.6	1.747	2.718	4.9	21.0		
11 27	2 40.08	- 1 16.2	1.015	1.926	15.6	19.1	11 27	2 32.94	+26 40.9	1.780	2.715	8.2	21.2		
12 7	2 36.29	- 1 17.5	1.084	1.936	19.7	19.4	12 7	2 24.58	+25 58.8	1.840	2.711	11.8	21.4		
12 17	2 35.71	- 0 47.4	1.169	1.947	23.0	19.7	12 17	2 19.08	+25 19.8	1.923	2.707	15.0	21.6		
323264	2003 <i>SS</i> ₃₂₅	11	8.2	306°23'	0°7'	7.5	18	458618	2011 <i>FR</i> ₈₃	11	8.2	316°66'	2°9'	9.6	16
10 8	3 14.37	+17 1.7	2.176	3.042	11.1	20.5	10 8	3 19.76	+23 4.8	1.856	2.707	13.4	21.4		
10 18	3 9.19	+16 14.5	2.105	3.039	7.8	20.3	10 18	3 13.73	+23 43.6	1.760	2.680	10.1	21.1		
10 28	3 2.41	+15 19.6	2.059	3.036	4.2	20.1	10 28	3 5.26	+24 13.1	1.687	2.653	6.3	20.8		
11 7	2 54.76	+14 20.7	2.042	3.033	0.8	19.8	11 7	2 55.12	+24 31.8	1.641	2.626	3.2	20.6		
11 17	2 47.07	+13 22.2	2.055	3.030	3.8	20.0	11 17	2 44.42	+24 39.8	1.624	2.599	4.5	20.6		
11 27	2 40.21	+12 29.4	2.096	3.027	7.5	20.3	11 27	2 34.49	+24 39.7	1.634	2.573	8.5	20.8		
12 7	2 34.89	+11 46.5	2.164	3.024	10.8	20.5	12 7	2 26.51	+24 36.1	1.670	2.548	12.5	21.0		
12 17	2 31.58	+11 16.2	2.255	3.021	13.6	20.6	12 17	2 21.29	+24 34.0	1.729	2.523	16.0	21.2		
360887	2005 <i>SB</i> ₉₄	11	8.2	34°39'	3°0'	6.0	18	274669	2008 <i>TH</i> ₁₇₇	11	8.2	75°88'	6°4'	2.2	18
10 8	3 15.51	+10 54.4	1.813	2.692	12.3	20.7	10 8	3 13.20	- 1 42.2	2.313	3.180	10.5	20.1		
10 18	3 10.14	+ 9 58.9	1.756	2.696	8.7	20.5	10 18	3 8.16	- 3 4.8	2.268	3.187	8.2	20.0		
10 28	3 2.96	+ 9 0.6	1.724	2.700	5.0	20.3	10 28	3 1.78	- 4 20.2	2.249	3.193	6.6	19.9		
11 7	2 54.82	+ 8 4.8	1.719	2.703	3.0	20.1	11 7	2 54.72	- 5 22.5	2.258	3.200	6.6	19.9		
11 17	2 46.70	+ 7 16.9	1.742	2.707	5.7	20.3	11 17	2 47.69	- 6 7.3	2.294	3.206	8.1	20.0		
11 27	2 39.60	+ 6 41.9	1.793	2.712	9.4	20.6	11 27	2 41.46	- 6 31.7	2.357	3.212	10.3	20.2		
12 7	2 34.30	+ 6 22.6	1.868	2.716	12.8	20.8	12 7	2 36.59	- 6 35.6	2.443	3.219	12.4	20.3		
12 17	2 31.26	+ 6 19.9	1.964	2.721	15.6	21.0	12 17	2 33.49	- 6 20.4	2.549	3.225	14.3	20.5		
118140	4042 <i>T</i> ₋₃	11	8.2	66°41'	0°8'	7.7	18	476455	2008 <i>EV</i> ₇₀	11	8.2	237°67'	3°8'	10.4	18
10 8	3 19.95	+15 22.4	1.619	2.492	13.9	19.4	10 8	3 22.50	+27 25.5	1.659	2.499	15.3	21.7		
10 18	3 13.41	+15 8.8	1.569	2.506	9.8	19.2	10 18	3 15.73	+27 29.4	1.578	2.489	11.7	21.5		
10 28	3 4.75	+14 49.2	1.543	2.520	5.3	19.0	10 28	3 6.30	+27 15.4	1.519	2.479	7.6	21.2		
11 7	2 55.01	+14 26.5	1.544	2.535	0.9	18.7	11 7	2 55.23	+26 42.8	1.487	2.468	4.2	21.0		
11 17	2 45.36	+14 4.6	1.574	2.550	4.5	19.0	11 17	2 43.87	+25 54.1	1.482	2.456	5.1	21.0		
11 27	2 37.01	+13 48.1	1.630	2.564	8.9	19.3	11 27	2 33.73	+24 55.8	1.505	2.445	9.0	21.2		
12 7	2 30.82	+13 40.6	1.711	2.579	12.8	19.6	12 7	2 25.98	+23 56.4	1.553	2.432	13.1	21.5		
12 17	2 27.29	+13 44.1	1.814	2.594	15.9	19.8	12 17	2 21.32	+23 3.4	1.623	2.420	16.8	21.7		
182270	2001 <i>HK</i> ₄₂	11	8.2	229°67'	2°6'	6.4	18	305296	2008 <i>AA</i> ₁₁	11	8.2	3°53'	4°1'	5.4	18
10 8	3 19.98	+12 7.7	1.748	2.621	13.1	21.2	10 8	3 16.34	+ 7 30.2	1.774	2.654	12.5	20.8		
10 18	3 13.53	+11 17.7	1.673	2.610	9.3	20.9	10 18	3 10.78	+ 6 39.1	1.715	2.654	9.0	20.6		
10 28	3 4.92	+10 22.4	1.624	2.600	5.2	20.7	10 28	3 3.35	+ 5 48.6	1.682	2.654	5.6	20.4		
11 7	2 55.04	+ 9 26.9	1.602	2.588	2.7	20.5	11 7	2 54.90	+ 5 4.0	1.675	2.654	4.2	20.3		
11 17	2 45.01	+ 8 37.0	1.608	2.576	5.7	20.6	11 17	2 46.42	+ 4 30.5	1.696	2.654	6.6	20.5		
11 27	2 36.01	+ 7 58.3	1.643	2.564	9.9	20.9	11 27	2 38.98	+ 4 12.2	1.744	2.655	10.1	20.7		
12 7	2 29.00	+ 7 35.0	1.702	2.550	13.8	21.1	12 7	2 33.36	+ 4 11.1	1.816	2.655	13.5	20.9		
12 17	2 24.58	+ 7 28.8	1.782	2.537	17.1	21.3	12 17	2 30.08	+ 4 27.0	1.908	2.656	16.3	21.1		
453487	2009 <i>SS</i> ₂₈₉	11	8.2	16°72'	1°1'	7.6	17	512331	2016 <i>LX</i> ₂₅	11	8.2	111°31'	2°7'	6.7	17
10 8	3 16.11	+14 25.0	1.583	2.464	13.7	20.6	10 8	3 22.82	+12 29.7	1.434	2.311	15.1	22.1		
10 18	3 10.80	+14 15.4	1.530	2.471	9.7	20.4	10 18	3 15.55	+11 44.0	1.388	2.327	10.6	21.9		
10 28	3 3.40	+14 0.9	1.500	2.478	5.2	20.2	10 28	3 5.94	+10 53.9	1.366	2.343	5.8	21.7		
11 7	2 54.87	+13 44.6	1.497	2.487	1.1	19.9	11 7	2 55.16	+10 5.0	1.370	2.358	2.7	21.5		
11 17	2 46.36	+13 30.1	1.521	2.497	4.6	20.2	11 17	2 44.58	+ 9 23.3	1.402	2.372	6.0	21.8		
11 27	2 39.03	+13 21.6	1.571	2.507	9.0	20.5	11 27	2 35.53	+ 8 54.4	1.461	2.386	10.5	22.1		
12 7	2 33.76	+13 22.2	1.646	2.518	12.9	20.7	12 7	2 28.93	+ 8 41.7	1.543	2.400	14.5	22.4		
12 17	2 31.05	+13 33.8	1.741	2.531	16.1	21.0	12 17	2 25.26	+ 8 45.9	1.646	2.412	17.8	22.6		
176999	2003 <i>AG</i> ₃₆	11	8.2	14°75'	9°9'	13.7	18	304252	2006 <i>RP</i> ₅₀	11	8.2	81°22'	1°2'	8.9	18
10 8	3 20.29	+37 21.8	1.306	2.128	19.6	18.3	10 8	3 19.07	+20 53.1	1.864	2.722	13.1	20.9		
10 18	3 14.81	+38 35.1	1.253	2.134	16.3	18.1	10 18	3 12.75	+20 49.6	1.802	2.729	9.5	20.7		
10 28	3 6.00	+39 19.9	1.218	2.142	13.0	17.9	10 28	3 4.43	+20 35.7	1.764	2.736	5.4	20.5		
11 7	2 55.16	+39 30.9	1.205	2.151	10.5	17.8	11 7	2 55.01	+20 13.0	1.754	2.743	1.5	20.2		
11 17	2 44.15	+39 7.8	1.215	2.162	10.1	17.8	11 17	2 45.58	+19 44.7	1.772	2.751	3.7	20.4		
11 27	2 34.90	+38 17.1	1.248	2.174	11.9	18.0	11 27	2 37.25	+19 15.4	1.819	2.758	7.8	20.7		
12 7	2 28.84	+37 10.5	1.303	2.187	14.8	18.2	12 7	2 30.88	+18 49.9	1.892	2.765	11.4	20.9		
12 17	2 26.62	+35 59.6	1.378	2.201	17.8	18.4	12 17	2 26.99	+18 32.2	1.987	2.772	14.5	21.1		
229789	2008 <i>RH</i> ₁₀	11	8.2	239°43'	3°8'	4.8	18	269743	1998 <i>VX</i> ₄₂	11	8.2	41°27'	0°2'	8.0	18
10 8	3 13.67	+ 6 28.5	2.366	3.239	10.1	19.8	10 8	3 16.83	+17 16.4	1.753	2.625	13.1	20.2		
10 18	3 8.54	+ 5 30.5	2.303	3.237	7.3	19.6	10 18	3 11.07	+16 57.4	1.707	2.643	9.2	20.0		
10 28	3 2.01	+ 4 33.3	2.266	3.235	4.7	19.4	10 28	3 3.45	+16 30.9	1.686	2.662	5.0	19.8		
11 7	2 54.73	+ 3 41.4	2.258	3.232	3.8	19.4	11 7	2 54.91	+16 0.0	1.691	2.682	0.5	19.5		
11 17	2 47.43	+ 2 59.1	2.279	3.230	5.7	19.5	11 17	2 46.49	+15 28.8	1.724	2.701	4.0	19.8		
11 27	2 40.86	+ 2 29.9	2.329	3.228	8.5	19.7	11 27	2 39.24	+15 1.8	1.785	2.722	8.1	20.1		
12 7	2 35.66	+ 2 15.7	2.403	3.225	11.2	19.8	12 7	2 33.93	+14 43.1	1.872	2.742	11.7	20.4		
12 17	2 32.23	+ 2 16.7	2.500	3.223	13.5	20.0	12 17	2 30.99	+14 34.9	1.980	2.763	14.6	20.6		
176389	2001 <i>UO</i> ₆₀	11	8.2	93°61'											

EPHEMERIDES

11 8.2

11 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
394285	2006 <i>UA</i> ₂₈₅	11	8.2 61°33	0°1/ 8.1 15			267945	2004 <i>EF</i> ₄₄	11	8.2 184°42	3°1/10.1 18		
10 8	3 18.13	+18 49.6	1.685	2.554	13.7	21.2	10 8	3 23.00	+25 42.8	1.847	2.686	14.0	21.2
10 18	3 12.01	+18 13.1	1.640	2.574	9.7	21.0	10 18	3 15.75	+25 50.0	1.774	2.686	10.5	21.0
10 28	3 3.95	+17 26.9	1.619	2.595	5.2	20.7	10 28	3 6.18	+25 42.4	1.725	2.686	6.7	20.7
11 7	2 54.96	+16 34.9	1.625	2.616	0.5	20.4	11 7	2 55.26	+25 20.1	1.703	2.686	3.4	20.5
11 17	2 46.15	+15 42.3	1.659	2.637	4.1	20.8	11 17	2 44.21	+24 45.4	1.710	2.684	4.4	20.6
11 27	2 38.62	+14 55.2	1.722	2.658	8.3	21.1	11 27	2 34.32	+24 3.6	1.745	2.683	8.2	20.8
12 7	2 33.15	+14 18.3	1.809	2.679	12.0	21.4	12 7	2 26.60	+23 21.3	1.807	2.680	11.9	21.0
12 17	2 30.16	+13 54.5	1.918	2.700	15.1	21.6	12 17	2 21.65	+22 44.5	1.891	2.677	15.1	21.3
216326	2007 <i>UP</i> ₁₂₃	11	8.2 229°66	0°7/ 8.5 18			269492	2009 <i>UG</i> ₃₀	11	8.2 326°18	0°2/ 8.1 16		
10 8	3 23.12	+18 53.6	1.506	2.372	15.2	20.8	10 8	3 15.05	+17 45.8	1.937	2.806	12.2	21.2
10 18	3 16.17	+18 50.6	1.434	2.366	11.0	20.5	10 18	3 9.95	+17 23.1	1.860	2.795	8.7	21.0
10 28	3 6.54	+18 37.2	1.384	2.359	6.1	20.2	10 28	3 2.98	+16 52.2	1.809	2.785	4.7	20.7
11 7	2 55.27	+18 14.9	1.361	2.351	1.0	19.9	11 7	2 54.91	+16 15.8	1.784	2.775	0.5	20.4
11 17	2 43.75	+17 47.1	1.365	2.343	4.6	20.1	11 17	2 46.70	+15 37.8	1.788	2.766	3.8	20.6
11 27	2 33.51	+17 19.8	1.397	2.335	9.7	20.4	11 27	2 39.37	+15 2.9	1.820	2.757	8.0	20.9
12 7	2 25.73	+16 58.7	1.453	2.326	14.2	20.7	12 7	2 33.76	+14 35.7	1.878	2.748	11.7	21.1
12 17	2 21.09	+16 48.3	1.529	2.317	18.0	20.9	12 17	2 30.43	+14 19.3	1.957	2.740	14.8	21.3
44540	1999 <i>AH</i> ₆	11	8.2 13°70	5°2/12.0 18			411065	2009 <i>VT</i> ₆₀	11	8.2 58°04	1°6/ 7.2 18		
10 8	3 15.47	+32 10.5	1.334	2.182	17.9	17.3	10 8	3 17.39	+12 9.6	2.135	3.003	11.2	21.0
10 18	3 10.90	+31 42.6	1.275	2.186	13.9	17.0	10 18	3 11.31	+12 1.7	2.075	3.010	7.9	20.8
10 28	3 3.65	+30 46.6	1.236	2.191	9.6	16.8	10 28	3 3.58	+11 51.6	2.041	3.017	4.3	20.6
11 7	2 54.94	+29 24.3	1.221	2.197	5.9	16.6	11 7	2 54.98	+11 41.9	2.035	3.024	1.6	20.4
11 17	2 46.30	+27 42.1	1.231	2.205	5.9	16.6	11 17	2 46.37	+11 35.0	2.058	3.031	4.1	20.6
11 27	2 39.23	+25 51.2	1.266	2.213	9.5	16.9	11 27	2 38.65	+11 33.9	2.111	3.038	7.7	20.9
12 7	2 34.79	+24 4.0	1.326	2.223	13.6	17.1	12 7	2 32.55	+11 40.5	2.190	3.045	10.9	21.1
12 17	2 33.48	+22 30.0	1.407	2.233	17.3	17.4	12 17	2 28.53	+11 56.2	2.291	3.052	13.5	21.3
442970	2013 <i>CH</i> ₁₃₆	11	8.2 289°94	5°8/11.1 18			138094	2000 <i>DR</i> ₇₂	11	8.2 156°51	1°9/ 6.7 18		
10 8	3 23.06	+30 26.4	1.811	2.635	14.9	20.4	10 8	3 17.50	+12 32.8	2.160	3.028	11.1	20.6
10 18	3 16.20	+31 19.9	1.727	2.622	11.8	20.2	10 18	3 11.35	+11 53.8	2.098	3.033	7.8	20.4
10 28	3 6.64	+31 57.5	1.665	2.609	8.5	20.0	10 28	3 3.60	+11 11.3	2.062	3.038	4.3	20.2
11 7	2 55.30	+32 15.8	1.630	2.597	6.1	19.8	11 7	2 54.98	+10 28.9	2.055	3.042	1.9	20.0
11 17	2 43.48	+32 14.0	1.622	2.584	6.4	19.8	11 17	2 46.38	+9 50.7	2.077	3.046	4.5	20.2
11 27	2 32.68	+31 55.3	1.641	2.571	9.2	19.9	11 27	2 38.68	+9 20.8	2.128	3.050	8.0	20.4
12 7	2 24.18	+31 26.3	1.686	2.559	12.6	20.1	12 7	2 32.58	+9 2.1	2.206	3.053	11.1	20.6
12 17	2 18.76	+30 54.8	1.753	2.547	15.8	20.3	12 17	2 28.54	+8 55.9	2.306	3.056	13.8	20.8
42995	1999 <i>TR</i> ₂₈₄	11	8.2 127°09	4°8/ 5.3 18			115558	2003 <i>UD</i> ₇₈	11	8.2 173°05	4°1/ 11.3 17		
10 8	3 19.56	+4 8.9	1.894	2.765	12.3	18.6	10 8	3 18.95	+30 8.2	2.408	3.224	11.9	20.0
10 18	3 12.89	+3 33.3	1.842	2.773	9.0	18.4	10 18	3 12.56	+30 31.7	2.332	3.224	9.3	19.8
10 28	3 4.42	+3 1.8	1.816	2.781	5.9	18.3	10 28	3 4.35	+30 41.4	2.280	3.225	6.5	19.6
11 7	2 55.03	+2 39.2	1.817	2.790	4.8	18.2	11 7	2 55.07	+30 36.5	2.256	3.225	4.4	19.5
11 17	2 45.69	+2 29.2	1.847	2.797	6.8	18.4	11 17	2 45.66	+30 18.0	2.260	3.225	4.6	19.5
11 27	2 37.43	+2 34.3	1.904	2.805	10.0	18.6	11 27	2 37.10	+29 49.3	2.294	3.225	6.9	19.7
12 7	2 30.99	+2 55.1	1.986	2.812	13.0	18.8	12 7	2 30.21	+29 15.3	2.355	3.225	9.6	19.8
12 17	2 26.85	+3 30.4	2.088	2.819	15.6	19.0	12 17	2 25.51	+28 41.2	2.440	3.225	12.1	20.0
284749	2008 <i>UP</i> ₃₆₀	11	8.2 188°59	1°4/ 9.0 18			36169	Grosseteste	11	8.2 107°30	5°7/ 3.9 18		
10 8	3 20.51	+21 17.2	1.839	2.694	13.3	21.2	10 8	3 16.16	+0 13.2	2.180	3.048	11.0	18.6
10 18	3 13.89	+21 14.7	1.768	2.693	9.7	21.0	10 18	3 10.32	-0 36.1	2.131	3.055	8.4	18.4
10 28	3 5.12	+21 1.2	1.722	2.693	5.6	20.8	10 28	3 3.00	-1 18.7	2.108	3.063	6.2	18.3
11 7	2 55.12	+20 38.0	1.703	2.692	1.7	20.5	11 7	2 54.92	-1 50.0	2.113	3.070	5.8	18.3
11 17	2 45.01	+20 8.1	1.713	2.691	3.9	20.7	11 17	2 46.89	-2 6.2	2.146	3.078	7.4	18.4
11 27	2 35.98	+19 36.3	1.752	2.690	8.1	20.9	11 27	2 39.74	-2 5.1	2.206	3.085	9.9	18.6
12 7	2 28.98	+19 7.9	1.816	2.688	11.9	21.2	12 7	2 34.12	-1 46.8	2.290	3.092	12.3	18.8
12 17	2 24.58	+18 47.4	1.903	2.686	15.1	21.4	12 17	2 30.43	-1 12.8	2.395	3.099	14.5	19.0
347877	2002 <i>TW</i> ₅₂	11	8.2 16°31	0°3/ 8.3 18			58911	1998 <i>KO</i> ₃₃	11	8.2 115°97	0°7/ 8.7 18		
10 8	3 17.21	+15 47.8	0.981	1.882	18.3	18.4	10 8	3 19.83	+20 58.5	1.985	2.839	12.6	20.2
10 18	3 12.37	+16 20.0	0.946	1.895	13.0	18.1	10 18	3 13.08	+20 28.1	1.930	2.855	9.0	20.0
10 28	3 4.50	+16 44.7	0.931	1.911	7.1	17.9	10 28	3 4.53	+19 46.9	1.899	2.872	5.0	19.8
11 7	2 55.05	+17 3.1	0.938	1.929	0.8	17.5	11 7	2 55.08	+18 57.9	1.897	2.887	1.0	19.6
11 17	2 45.75	+17 17.9	0.969	1.949	5.4	17.9	11 17	2 45.75	+18 5.3	1.925	2.903	3.6	19.8
11 27	2 38.34	+17 33.2	1.022	1.971	11.0	18.3	11 27	2 37.55	+17 14.5	1.982	2.917	7.5	20.0
12 7	2 33.93	+17 53.3	1.097	1.995	15.8	18.7	12 7	2 31.24	+16 30.7	2.065	2.932	10.9	20.3
12 17	2 33.00	+18 20.6	1.191	2.021	19.6	19.0	12 17	2 27.24	+15 57.3	2.172	2.945	13.8	20.5
113423	2002 <i>SS</i> ₃₆	11	8.2 63°04	2°2/ 6.7 18			515343	2013 <i>BK</i> ₁₄	11	8.2 186°29	3°9/ 11.4 18		
10 8	3 17.61	+13 16.7	1.643	2.522	13.4	19.5	10 8	3 19.66	+30 49.3	2.129	2.947	13.1	21.7
10 18	3 11.67	+12 26.1	1.598	2.538	9.4	19.3	10 18	3 13.14	+30 31.2	2.051	2.947	10.2	21.5
10 28	3 3.80	+11 30.9	1.577	2.555	5.1	19.1	10 28	3 4.67	+29 55.1	1.998	2.947	7.0	21.3
11 7	2 54.97	+10 36.4	1.583	2.571	2.2	18.9	11 7	2 55.11	+29 1.3	1.971	2.946	4.3	21.1
11 17	2 46.31	+9 48.2	1.618	2.588	5.3	19.1	11 17	2 45.51	+27 53.2	1.974	2.944	4.5	21.1
11 27	2 38.88	+9 11.5	1.679	2.605	9.3	19.4	11 27	2 36.97	+26 36.8	2.006	2.943	7.3	21.3
12 7	2 33.48	+8 49.8	1.765	2.622	13.0	19.7	12 7	2 30.34	+25 19.3	2.065	2.940	10.5	21.5
12 17	2 30.54	+8 44.0	1.871	2.639	15.9	19.9	12 17	2 26.12	+24 7.6	2.149	2.938	13.4	21.7
266569	2008 <i>GD</i> ₁₂₂	11	8.2 142°15	2°0/ 6.9 17			357446	2004 <i>CY</i> ₃₉	11	8.2 309°69	7°7/ 12.7 17		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
431730	2008 <i>FG</i> ₅₂		11 8.2 211°75	0°6/ 8.5 17			307594	2003 <i>OF</i> ₁₉		11 8.2 60°38	2°6/10.5 18		
10 8	3 22.30	+19 21.8	1.843	2.699	13.3	22.2	10 8	3 16.42	+27 11.6	2.054	2.893	12.8	19.8
10 18	3 15.22	+19 10.5	1.766	2.693	9.6	21.9	10 18	3 10.77	+26 43.3	1.992	2.904	9.6	19.6
10 28	3 5.90	+18 49.2	1.713	2.686	5.4	21.7	10 28	3 3.34	+25 59.5	1.954	2.915	6.0	19.5
11 7	2 55.26	+18 19.8	1.688	2.678	0.9	21.3	11 7	2 55.01	+25 2.4	1.943	2.926	3.0	19.3
11 17	2 44.43	+17 45.5	1.692	2.670	4.0	21.5	11 17	2 46.75	+23 56.0	1.962	2.938	3.7	19.4
11 27	2 34.66	+17 11.6	1.725	2.661	8.4	21.8	11 27	2 39.54	+22 46.4	2.009	2.949	7.0	19.6
12 7	2 26.93	+16 43.3	1.785	2.651	12.4	22.0	12 7	2 34.12	+21 40.0	2.083	2.961	10.3	19.8
12 17	2 21.86	+16 24.5	1.866	2.640	15.7	22.2	12 17	2 30.95	+20 42.0	2.181	2.973	13.2	20.0
453528	2009 <i>VT</i> ₆₈		11 8.2 252°93	0°6/ 7.7 18			136286	2003 <i>YG</i> ₁₄₆		11 8.2 329°89	6°0/ 5.1 18		
10 8	3 16.63	+15 3.9	2.678	3.535	9.6	21.8	10 8	3 20.13	+ 0 33.6	1.788	2.658	13.0	19.6
10 18	3 10.68	+14 56.3	2.590	3.520	6.8	21.6	10 18	3 13.50	+ 0 10.9	1.730	2.656	9.8	19.5
10 28	3 3.27	+14 44.8	2.529	3.504	3.7	21.4	10 28	3 4.89	- 0 3.7	1.696	2.655	7.0	19.3
11 7	2 54.98	+14 30.9	2.498	3.489	0.6	21.1	11 7	2 55.20	- 0 5.5	1.688	2.654	6.1	19.2
11 17	2 46.53	+14 17.0	2.498	3.472	3.2	21.3	11 17	2 45.47	+ 0 8.9	1.709	2.653	7.9	19.3
11 27	2 38.69	+14 5.6	2.527	3.456	6.5	21.5	11 27	2 36.80	+ 0 40.8	1.756	2.652	11.0	19.5
12 7	2 32.12	+13 59.4	2.585	3.439	9.4	21.7	12 7	2 30.05	+ 1 29.5	1.827	2.651	14.1	19.7
12 17	2 27.31	+14 0.3	2.666	3.422	12.0	21.8	12 17	2 25.74	+ 2 32.8	1.919	2.650	16.8	19.9
116040	2003 <i>WQ</i> ₁₀₀		11 8.2 314°62	6°9/14.6 18			480298	2015 <i>HF</i> ₁₅₆		11 8.2 159°81	2°6/ 9.9 18		
10 8	3 17.37	+40 1.3	2.128	2.905	14.5	18.6	10 8	3 22.44	+24 54.3	1.840	2.682	13.9	22.0
10 18	3 11.82	+39 56.7	2.038	2.892	12.1	18.4	10 18	3 15.29	+24 54.2	1.772	2.687	10.3	21.7
10 28	3 4.08	+39 28.0	1.969	2.879	9.6	18.2	10 28	3 5.93	+24 39.8	1.728	2.692	6.4	21.5
11 7	2 55.07	+38 33.5	1.925	2.867	7.5	18.1	11 7	2 55.32	+24 11.8	1.712	2.696	3.0	21.3
11 17	2 45.93	+37 14.9	1.908	2.855	7.0	18.0	11 17	2 44.66	+23 33.0	1.724	2.700	4.2	21.4
11 27	2 37.88	+35 38.0	1.919	2.843	8.5	18.1	11 27	2 35.19	+22 48.9	1.765	2.703	8.0	21.7
12 7	2 31.88	+33 51.4	1.956	2.832	11.0	18.2	12 7	2 27.86	+22 5.9	1.832	2.706	11.7	21.9
12 17	2 28.50	+32 4.4	2.017	2.820	13.7	18.4	12 17	2 23.23	+21 29.7	1.922	2.708	14.9	22.1
102151	1999 <i>RA</i> ₁₉₈		11 8.2 79°66	0°7/ 8.6 18			268354	2005 <i>TX</i> ₄		11 8.2 222°94	1°2/ 7.4 18		
10 8	3 22.14	+21 36.3	1.357	2.224	16.4	19.5	10 8	3 19.88	+15 37.8	1.855	2.722	12.7	21.5
10 18	3 15.18	+20 47.7	1.315	2.247	11.7	19.3	10 18	3 13.44	+15 0.2	1.779	2.713	9.1	21.2
10 28	3 5.77	+19 43.8	1.295	2.270	6.5	19.0	10 28	3 4.93	+14 15.1	1.728	2.705	4.9	21.0
11 7	2 55.23	+18 29.6	1.302	2.292	1.2	18.7	11 7	2 55.22	+13 25.9	1.705	2.695	1.2	20.7
11 17	2 45.02	+17 12.6	1.336	2.314	4.6	19.0	11 17	2 45.36	+12 37.6	1.711	2.685	4.5	20.9
11 27	2 36.50	+16 1.9	1.396	2.336	9.6	19.4	11 27	2 36.50	+11 55.8	1.746	2.675	8.8	21.1
12 7	2 30.61	+15 4.5	1.481	2.358	13.8	19.7	12 7	2 29.55	+11 24.9	1.806	2.664	12.7	21.4
12 17	2 27.73	+14 24.4	1.587	2.379	17.3	20.0	12 17	2 25.09	+11 8.0	1.888	2.652	15.9	21.6
236286	2006 <i>AY</i> ₃₇		11 8.2 193°72	1°4/ 9.3 18			330849	2009 <i>PO</i> ₈		11 8.2 31°66	3°3/ 6.7 18		
10 8	3 20.03	+22 32.8	2.343	3.184	11.3	21.6	10 8	3 18.22	+12 9.7	1.005	1.907	17.9	19.6
10 18	3 13.22	+22 21.3	2.264	3.182	8.3	21.4	10 18	3 12.91	+11 26.5	0.972	1.922	12.6	19.4
10 28	3 4.68	+21 59.4	2.211	3.179	4.9	21.1	10 28	3 4.74	+10 39.3	0.959	1.939	6.9	19.2
11 7	2 55.14	+21 28.3	2.187	3.175	1.7	20.9	11 7	2 55.18	+ 9 55.6	0.969	1.957	3.3	19.0
11 17	2 45.51	+20 50.7	2.193	3.171	3.3	21.0	11 17	2 45.89	+ 9 22.5	1.002	1.976	7.1	19.3
11 27	2 36.74	+20 10.9	2.230	3.165	6.8	21.3	11 27	2 38.48	+ 9 6.2	1.059	1.996	12.3	19.7
12 7	2 29.60	+19 33.4	2.294	3.160	10.0	21.5	12 7	2 33.96	+ 9 9.2	1.137	2.016	16.8	20.0
12 17	2 24.60	+19 2.4	2.383	3.153	12.8	21.6	12 17	2 32.76	+ 9 31.1	1.232	2.038	20.5	20.3
516789	2010 <i>BH</i> ₁₂₀		11 8.2 1°65	7°3/ 2.3 18			241054	2006 <i>SH</i> ₇₅		11 8.2 51°04	0°2/ 8.1 18		
10 8	3 13.88	- 2 50.8	2.010	2.881	11.7	20.4	10 8	3 18.89	+16 48.2	1.754	2.623	13.2	20.2
10 18	3 8.88	- 4 5.9	1.961	2.880	9.3	20.3	10 18	3 12.71	+16 40.8	1.695	2.630	9.4	20.0
10 28	3 2.30	- 5 12.0	1.937	2.880	7.6	20.2	10 28	3 4.50	+16 26.3	1.660	2.636	5.1	19.7
11 7	2 54.88	- 6 2.7	1.939	2.880	7.5	20.2	11 7	2 55.17	+16 7.1	1.652	2.643	0.5	19.4
11 17	2 47.47	- 6 33.1	1.968	2.881	9.1	20.3	11 17	2 45.82	+15 46.6	1.673	2.650	4.1	19.7
11 27	2 40.94	- 6 40.8	2.022	2.881	11.5	20.4	11 27	2 37.60	+15 29.2	1.721	2.658	8.4	20.0
12 7	2 35.96	- 6 25.9	2.098	2.882	13.9	20.6	12 7	2 31.38	+15 18.7	1.795	2.665	12.1	20.2
12 17	2 32.99	- 5 50.8	2.193	2.884	16.0	20.8	12 17	2 27.68	+15 17.7	1.891	2.672	15.3	20.5
2525	<i>O</i> 'Steen		11 8.2 22°17	1°1/ 7.5 18			404246	2013 <i>ES</i> ₁₇		11 8.2 223°34	1°8/ 6.9 18		
10 8	3 15.70	+14 50.1	1.749	2.626	12.8	15.1	10 8	3 17.21	+12 30.8	2.178	3.046	11.0	21.5
10 18	3 10.40	+14 29.8	1.694	2.633	9.1	14.9	10 18	3 11.26	+11 59.9	2.105	3.040	7.8	21.3
10 28	3 3.20	+14 4.2	1.664	2.642	4.9	14.6	10 28	3 3.65	+11 25.5	2.058	3.034	4.3	21.1
11 7	2 54.98	+13 36.6	1.660	2.650	1.1	14.4	11 7	2 55.08	+10 50.8	2.040	3.028	1.8	20.9
11 17	2 46.79	+13 11.0	1.685	2.660	4.4	14.6	11 17	2 46.42	+10 19.7	2.051	3.021	4.4	21.0
11 27	2 39.68	+12 51.6	1.736	2.670	8.5	14.9	11 27	2 38.58	+ 9 55.9	2.091	3.014	8.0	21.3
12 7	2 34.44	+12 41.8	1.812	2.681	12.1	15.2	12 7	2 32.31	+ 9 42.4	2.158	3.007	11.2	21.5
12 17	2 31.56	+12 43.5	1.910	2.692	15.1	15.4	12 17	2 28.11	+ 9 40.9	2.246	3.000	14.0	21.6
363649	2004 <i>RT</i> ₂₅₃		11 8.2 70°32	4°4/10.9 18			425035	2009 <i>HK</i> ₉₈		11 8.2 177°99	2°1/ 7.1 17		
10 8	3 21.70	+28 44.9	2.056	2.881	13.3	20.0	10 8	3 22.56	+13 5.9	1.593	2.465	14.2	22.0
10 18	3 14.70	+29 23.9	1.991	2.890	10.3	19.9	10 18	3 15.48	+12 34.5	1.530	2.466	10.0	21.7
10 28	3 5.59	+29 48.5	1.949	2.898	7.1	19.7	10 28	3 6.07	+11 58.1	1.491	2.468	5.5	21.5
11 7	2 55.26	+29 57.3	1.935	2.907	4.7	19.6	11 7	2 55.34	+11 20.9	1.480	2.468	2.1	21.3
11 17	2 44.81	+29 50.9	1.950	2.916	5.0	19.6	11 17	2 44.58	+10 47.7	1.497	2.468	5.4	21.5
11 27	2 35.42	+29 32.9	1.993	2.925	7.7	19.8	11 27	2 35.07	+10 23.9	1.541	2.468	9.9	21.7
12 7	2 28.02	+29 8.9	2.062	2.934	10.7	20.0	12 7	2 27.83	+10 13.2	1.610	2.467	14.0	22.0
12 17	2 23.18	+28 44.4	2.155	2.943	13.4	20.2	12 17	2 23.41	+10 17.2	1.699	2.465	17.4	22.2
180844	2005 <i>GX</i> ₁₁₃		11 8.2 85°66	3°7/ 6.6 18			513920	2014 <i>BY</i> ₁₆		11 8.2 280°23	0°		

EPHEMERIDES

11 8.2

11 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
486268	2013 CR ₁₅	11	8.2 329°45	12°4/17.4	17		441218	2007 VU ₄₆	11	8.2 287°19	2°1/ 9.6	18	
10 8	3 27.05	+49 32.5	1.864	2.580	18.3	20.8	10 8	3 17.93	+24 3.3	1.786	2.640	13.7	20.9
10 18	3 19.76	+50 51.2	1.791	2.577	16.4	20.6	10 18	3 12.29	+23 46.3	1.704	2.627	10.2	20.6
10 28	3 8.90	+51 40.9	1.736	2.574	14.5	20.5	10 28	3 4.41	+23 14.5	1.646	2.614	6.2	20.3
11 7	2 55.68	+51 54.5	1.701	2.571	13.0	20.4	11 7	2 55.19	+22 29.3	1.614	2.601	2.4	20.1
11 17	2 41.97	+51 28.9	1.688	2.569	12.4	20.3	11 17	2 45.76	+21 34.3	1.610	2.589	4.0	20.2
11 27	2 29.85	+50 27.8	1.698	2.566	12.9	20.4	11 27	2 37.35	+20 36.0	1.635	2.576	8.3	20.4
12 7	2 20.96	+49 1.0	1.732	2.564	14.4	20.4	12 7	2 30.95	+19 41.3	1.684	2.563	12.3	20.6
12 17	2 16.13	+47 20.5	1.785	2.562	16.2	20.6	12 17	2 27.20	+18 55.9	1.756	2.551	15.8	20.8
385339	2002 JH ₄₄	11	8.2 189°31	2°1/ 9.9	18		488210	2015 XN ₂₉₂	11	8.2 1°09	0°8/ 8.8	18	
10 8	3 19.11	+26 1.3	2.095	2.933	12.6	21.4	10 8	3 14.98	+21 18.5	1.765	2.631	13.3	20.2
10 18	3 12.71	+25 23.3	2.018	2.932	9.4	21.2	10 18	3 10.02	+20 44.5	1.699	2.630	9.6	20.0
10 28	3 4.45	+24 29.8	1.967	2.931	5.8	21.0	10 28	3 3.08	+19 57.9	1.656	2.630	5.4	19.7
11 7	2 55.17	+23 22.8	1.943	2.929	2.5	20.7	11 7	2 55.05	+19 2.0	1.639	2.630	1.2	19.4
11 17	2 45.86	+22 6.9	1.950	2.927	3.6	20.8	11 17	2 46.97	+18 1.6	1.651	2.630	3.8	19.6
11 27	2 37.57	+20 48.4	1.986	2.924	7.3	21.0	11 27	2 39.94	+17 3.3	1.691	2.631	8.1	19.9
12 7	2 31.11	+19 34.2	2.049	2.921	10.8	21.3	12 7	2 34.82	+16 13.1	1.755	2.633	12.0	20.1
12 17	2 26.98	+18 29.9	2.137	2.917	13.8	21.5	12 17	2 32.12	+15 35.1	1.842	2.635	15.2	20.4
413811	2006 KA ₇₆	11	8.2 249°86	1°6/ 9.8	18		37714	1996 RK ₂₉	11	8.2 45°95	1°0/ 7.1	18	
10 8	3 15.33	+25 6.9	2.708	3.543	10.2	21.5	10 8	3 9.91	+12 58.5	3.689	4.552	7.1	18.8
10 18	3 9.80	+24 32.1	2.616	3.528	7.5	21.3	10 18	3 5.56	+12 39.0	3.631	4.564	4.9	18.7
10 28	3 2.81	+23 45.5	2.549	3.513	4.6	21.1	10 28	3 0.37	+12 17.7	3.602	4.577	2.7	18.6
11 7	2 54.99	+22 48.6	2.511	3.497	1.9	20.8	11 7	2 54.74	+11 56.4	3.602	4.590	1.0	18.4
11 17	2 47.07	+21 44.6	2.504	3.481	2.9	20.9	11 17	2 49.13	+11 36.9	3.632	4.603	2.6	18.6
11 27	2 39.82	+20 38.1	2.528	3.465	6.0	21.1	11 27	2 43.98	+11 21.3	3.693	4.616	4.8	18.8
12 7	2 33.91	+19 34.0	2.580	3.448	9.0	21.2	12 7	2 39.70	+11 10.9	3.782	4.630	6.9	18.9
12 17	2 29.79	+18 36.6	2.657	3.431	11.5	21.4	12 17	2 36.57	+11 7.0	3.896	4.643	8.6	19.1
366569	2002 RP ₂₆₉	11	8.2 104°92	2°7/ 5.9	18		310138	2011 HT ₇₉	11	8.2 301°79	4°5/ 5.9	18	
10 8	3 14.82	+ 9 23.4	2.415	3.285	10.0	21.5	10 8	3 19.59	+ 7 17.8	1.476	2.359	14.4	20.5
10 18	3 9.33	+ 8 41.3	2.359	3.294	7.1	21.4	10 18	3 13.56	+ 6 43.0	1.412	2.351	10.4	20.3
10 28	3 2.49	+ 7 58.5	2.330	3.303	4.1	21.2	10 28	3 5.13	+ 6 9.3	1.371	2.344	6.4	20.0
11 7	2 54.95	+ 7 18.7	2.330	3.312	2.7	21.1	11 7	2 55.29	+ 5 42.4	1.355	2.336	4.5	19.9
11 17	2 47.45	+ 6 45.6	2.359	3.321	4.7	21.3	11 17	2 45.29	+ 5 27.4	1.367	2.329	7.3	20.0
11 27	2 40.73	+ 6 22.2	2.418	3.330	7.6	21.5	11 27	2 36.49	+ 5 28.6	1.404	2.322	11.5	20.3
12 7	2 35.39	+ 6 10.5	2.502	3.338	10.3	21.7	12 7	2 29.93	+ 5 47.6	1.464	2.315	15.5	20.5
12 17	2 31.81	+ 6 11.3	2.609	3.347	12.7	21.9	12 17	2 26.24	+ 6 23.8	1.543	2.309	18.9	20.7
358191	2006 SE ₉₉	11	8.2 23°23	1°6/ 9.1	18		303517	2005 EV ₂₀₂	11	8.2 184°66	1°8/ 6.9	18	
10 8	3 19.16	+21 3.8	1.691	2.553	14.0	20.7	10 8	3 17.84	+13 30.9	1.932	2.802	12.1	21.3
10 18	3 13.08	+21 10.7	1.628	2.556	10.2	20.4	10 18	3 11.85	+12 53.4	1.866	2.802	8.6	21.1
10 28	3 4.78	+21 6.8	1.588	2.560	5.9	20.2	10 28	3 4.01	+12 11.0	1.826	2.802	4.7	20.8
11 7	2 55.22	+20 53.1	1.574	2.563	1.9	20.0	11 7	2 55.16	+11 27.6	1.813	2.802	1.8	20.7
11 17	2 45.57	+20 32.4	1.589	2.567	4.0	20.1	11 17	2 46.28	+10 47.7	1.830	2.801	4.7	20.9
11 27	2 37.08	+20 9.4	1.631	2.572	8.3	20.4	11 27	2 38.36	+10 16.1	1.875	2.801	8.5	21.1
12 7	2 30.72	+19 49.4	1.698	2.577	12.2	20.6	12 7	2 32.22	+ 9 56.1	1.945	2.800	12.1	21.3
12 17	2 27.05	+19 36.5	1.787	2.582	15.5	20.9	12 17	2 28.36	+ 9 49.7	2.038	2.799	15.0	21.5
138406	2000 HN ₂₇	11	8.2 228°81	5°0/ 2.9	18		517500	2014 QU ₃₀₇	11	8.2 61°02	0°4/ 7.9	18	
10 8	3 17.28	+ 7 26.1	2.130	3.000	11.1	19.5	10 8	3 16.69	+16 46.3	2.067	2.932	11.7	21.3
10 18	3 11.27	+ 5 6.2	2.060	2.992	8.1	19.3	10 18	3 10.85	+16 26.0	2.014	2.947	8.2	21.1
10 28	3 3.63	+ 2 42.7	2.019	2.984	5.5	19.1	10 28	3 3.38	+15 59.5	1.987	2.963	4.4	20.9
11 7	2 55.09	+ 0 24.4	2.010	2.975	5.2	19.1	11 7	2 55.09	+15 29.4	1.988	2.979	0.5	20.7
11 17	2 46.52	- 1 39.8	2.032	2.966	7.5	19.2	11 17	2 46.86	+14 59.3	2.018	2.994	3.6	20.9
11 27	2 38.81	- 3 22.6	2.083	2.957	10.6	19.4	11 27	2 39.62	+14 33.0	2.077	3.010	7.3	21.2
12 7	2 32.69	- 4 40.0	2.160	2.947	13.5	19.6	12 7	2 34.05	+14 14.1	2.162	3.026	10.6	21.4
12 17	2 28.62	- 5 31.6	2.256	2.937	15.9	19.8	12 17	2 30.58	+14 4.8	2.270	3.042	13.3	21.7
192225	2007 WT ₂₀	11	8.2 71°67	4°5/11.6	18		265086	2003 SS ₂₀₉	11	8.2 8°60	5°3/12.0	17	
10 8	3 20.23	+30 44.1	1.851	2.677	14.5	19.9	10 8	3 19.17	+32 36.2	2.137	2.948	13.3	20.3
10 18	3 13.68	+30 46.3	1.795	2.694	11.2	19.7	10 18	3 12.99	+33 4.0	2.063	2.948	10.6	20.1
10 28	3 5.01	+30 29.6	1.762	2.711	7.7	19.5	10 28	3 4.73	+33 14.9	2.012	2.949	7.8	19.9
11 7	2 55.24	+29 54.2	1.756	2.728	4.9	19.4	11 7	2 55.25	+33 7.5	1.988	2.950	5.6	19.8
11 17	2 45.56	+29 3.4	1.776	2.746	5.1	19.5	11 17	2 45.62	+32 42.8	1.991	2.951	5.6	19.8
11 27	2 37.17	+28 3.3	1.825	2.763	7.9	19.7	11 27	2 36.97	+32 4.7	2.022	2.952	7.8	19.9
12 7	2 30.94	+27 1.4	1.901	2.780	11.1	19.9	12 7	2 30.23	+31 19.4	2.080	2.953	10.5	20.1
12 17	2 27.36	+26 4.2	1.999	2.797	14.0	20.1	12 17	2 25.98	+30 33.4	2.160	2.955	13.2	20.3
503940	2003 UA ₃	11	8.2 255°26	6°8/ 9.6	17		275370	2011 AT ₅₃	11	8.2 316°74	1°8/ 7.0	17	
10 8	3 35.39	+25 25.7	1.223	2.069	19.3	21.4	10 8	3 15.05	+13 38.9	1.821	2.699	12.4	20.2
10 18	3 26.32	+27 24.0	1.148	2.060	15.0	21.1	10 18	3 10.17	+13 5.4	1.736	2.676	8.8	19.9
10 28	3 12.86	+29 11.7	1.095	2.051	10.3	20.8	10 28	3 3.26	+12 26.1	1.675	2.653	4.8	19.7
11 7	2 56.18	+30 39.0	1.068	2.042	7.0	20.6	11 7	2 55.10	+11 44.9	1.641	2.630	1.8	19.4
11 17	2 38.42	+31 38.5	1.067	2.033	8.3	20.7	11 17	2 46.67	+11 6.3	1.635	2.608	4.9	19.6
11 27	2 22.20	+32 10.8	1.093	2.024	12.7	20.9	11 27	2 39.06	+10 35.7	1.657	2.587	9.1	19.8
12 7	2 9.66	+32 24.2	1.142	2.014	17.4	21.1	12 7	2 33.22	+10 17.1	1.703	2.566	13.1	20.0
12 17	2 1.96	+32 29.5	1.210	2.004	21.5	21.4	12 17	2 29.78	+10 12.9	1.770	2.545	16.4	20.2
24684	1990 EU ₄	11	8.2 258°78	2°7/ 9.7	18		176136	2001 FN ₃₈	11	8.2 194°98	10°4/14.9	18	
10 8	3 21.53	+24 2.1	1.538										

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11 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
164541	2006 <i>JR</i> ₁₀		11 8.2 105°56	0°7/ 8.7 18			318339	2004 <i>TS</i> ₂₁₉		11 8.2 129°23	1°6/ 9.5 18		
10 8	3 19.43	+20 14.2	1.807	2.667	13.3	20.2	10 8	3 19.22	+22 34.1	2.527	3.366	10.7	20.7
10 18	3 13.06	+19 53.7	1.747	2.676	9.6	20.0	10 18	3 12.53	+22 40.6	2.462	3.378	7.8	20.6
10 28	3 4.69	+19 22.5	1.711	2.685	5.3	19.7	10 28	3 4.30	+22 38.2	2.423	3.389	4.7	20.4
11 7	2 55.25	+18 43.3	1.703	2.694	1.1	19.5	11 7	2 55.24	+22 27.5	2.414	3.400	1.9	20.2
11 17	2 45.83	+18 0.0	1.724	2.702	3.8	19.7	11 17	2 46.17	+22 10.6	2.434	3.411	3.1	20.3
11 27	2 37.57	+17 18.3	1.773	2.711	8.0	20.0	11 27	2 37.92	+21 50.4	2.486	3.421	6.2	20.5
12 7	2 31.31	+16 43.2	1.848	2.719	11.8	20.2	12 7	2 31.20	+21 30.6	2.565	3.431	9.1	20.7
12 17	2 27.55	+16 18.6	1.945	2.727	14.9	20.5	12 17	2 26.43	+21 14.7	2.668	3.441	11.5	20.9
106837	2000 <i>YW</i> ₈		11 8.2 173°68	2°5/ 6.8 18			208749	2002 <i>OD</i> ₅		11 8.2 51°03	5°2/ 4.7 18		
10 8	3 21.29	+12 19.9	1.598	2.472	14.0	20.3	10 8	3 16.53	+ 6 17.6	1.607	2.491	13.4	19.7
10 18	3 14.57	+11 40.0	1.536	2.474	9.9	20.0	10 18	3 11.03	+ 5 4.0	1.561	2.499	9.7	19.5
10 28	3 5.58	+10 55.6	1.499	2.476	5.5	19.8	10 28	3 3.59	+ 3 52.4	1.539	2.508	6.3	19.3
11 7	2 55.35	+10 11.6	1.489	2.477	2.5	19.6	11 7	2 55.16	+ 2 49.8	1.543	2.518	5.3	19.3
11 17	2 45.09	+ 9 33.3	1.508	2.478	5.7	19.8	11 17	2 46.82	+ 2 2.7	1.575	2.527	7.7	19.4
11 27	2 36.07	+ 9 6.0	1.553	2.478	10.1	20.1	11 27	2 39.65	+ 1 35.5	1.633	2.537	11.1	19.7
12 7	2 29.24	+ 8 53.4	1.623	2.478	14.0	20.3	12 7	2 34.46	+ 1 29.7	1.713	2.547	14.4	19.9
12 17	2 25.17	+ 8 56.7	1.713	2.477	17.3	20.6	12 17	2 31.71	+ 1 44.2	1.813	2.557	17.2	20.1
188178	2002 <i>JL</i> ₇₃		11 8.2 97°27	0°2/ 8.1 18			165696	2001 <i>PQ</i> ₃₄		11 8.2 35°77	2°9/ 10.9 18		
10 8	3 16.32	+19 56.9	2.556	3.407	10.2	20.0	10 8	3 15.22	+28 18.6	2.154	2.989	12.4	19.2
10 18	3 10.26	+18 49.7	2.505	3.431	7.2	19.8	10 18	3 9.94	+27 52.8	2.089	2.997	9.4	19.0
10 28	3 2.94	+17 34.2	2.480	3.454	3.9	19.6	10 28	3 2.97	+27 11.5	2.047	3.005	6.1	18.8
11 7	2 55.05	+16 14.2	2.486	3.477	0.4	19.4	11 7	2 55.11	+26 16.3	2.033	3.014	3.3	18.7
11 17	2 47.33	+14 54.6	2.524	3.500	3.1	19.6	11 17	2 47.28	+25 11.1	2.048	3.023	3.8	18.7
11 27	2 40.48	+13 40.3	2.592	3.522	6.3	19.9	11 27	2 40.43	+24 1.4	2.092	3.032	6.8	18.9
12 7	2 35.06	+12 35.6	2.689	3.543	9.1	20.1	12 7	2 35.28	+22 53.7	2.162	3.042	9.9	19.1
12 17	2 31.40	+11 43.2	2.810	3.565	11.5	20.3	12 17	2 32.27	+21 53.2	2.257	3.052	12.7	19.3
276585	2003 <i>SB</i> ₃₂₀		11 8.2 225°94	4°3/ 11.6 17			147470	2004 <i>BX</i> ₁₁₇		11 8.2 292°63	0°8/ 8.8 18		
10 8	3 18.94	+30 59.9	2.379	3.191	12.1	21.1	10 8	3 18.71	+21 40.0	1.398	2.269	15.8	19.8
10 18	3 12.64	+31 19.5	2.299	3.189	9.5	21.0	10 18	3 13.25	+20 58.6	1.324	2.258	11.5	19.5
10 28	3 4.49	+31 24.5	2.244	3.186	6.8	20.8	10 28	3 5.12	+20 0.1	1.273	2.248	6.5	19.2
11 7	2 55.24	+31 14.1	2.215	3.183	4.6	20.6	11 7	2 55.38	+18 47.9	1.247	2.237	1.3	18.8
11 17	2 45.83	+30 49.2	2.216	3.180	4.8	20.6	11 17	2 45.43	+17 28.9	1.248	2.227	4.7	19.0
11 27	2 37.28	+30 13.6	2.246	3.177	7.0	20.8	11 27	2 36.79	+16 12.4	1.275	2.217	10.0	19.3
12 7	2 30.42	+29 32.5	2.302	3.174	9.8	21.0	12 7	2 30.61	+15 7.2	1.325	2.207	14.8	19.6
12 17	2 25.80	+28 51.3	2.383	3.170	12.3	21.1	12 17	2 27.57	+14 19.2	1.396	2.197	18.8	19.8
48626	1995 <i>QJ</i> ₄		11 8.2 51°46	4°8/ 10.8 18			34336	2000 <i>QT</i> ₂₁₄		11 8.2 121°01	1°5/ 7.1 18		
10 8	3 22.77	+27 55.7	1.270	2.125	18.1	18.3	10 8	3 17.11	+13 35.3	2.053	2.922	11.6	19.3
10 18	3 16.22	+28 15.1	1.220	2.137	13.8	18.1	10 18	3 11.25	+13 5.5	1.990	2.925	8.2	19.1
10 28	3 6.68	+28 12.8	1.190	2.150	9.1	17.9	10 28	3 3.69	+12 31.5	1.952	2.928	4.4	18.9
11 7	2 55.49	+27 48.3	1.183	2.163	5.3	17.7	11 7	2 55.20	+11 56.6	1.943	2.932	1.5	18.7
11 17	2 44.35	+27 5.1	1.202	2.176	6.0	17.8	11 17	2 46.70	+11 24.7	1.963	2.935	4.3	18.9
11 27	2 34.99	+26 11.4	1.246	2.190	10.0	18.0	11 27	2 39.12	+10 59.8	2.011	2.938	8.0	19.1
12 7	2 28.60	+25 17.0	1.314	2.204	14.3	18.3	12 7	2 33.21	+10 45.0	2.086	2.941	11.3	19.3
12 17	2 25.72	+24 30.1	1.402	2.218	17.9	18.6	12 17	2 29.43	+10 42.0	2.183	2.944	14.1	19.5
521396	2015 <i>MS</i> ₁₄₃		11 8.2 147°03	3°2/ 5.9 18			77292	2001 <i>FN</i> ₇₁		11 8.2 266°76	1°2/ 7.6 18		
10 8	3 18.28	+ 9 47.4	1.947	2.819	11.9	21.9	10 8	3 21.75	+14 29.4	1.477	2.353	14.8	19.2
10 18	3 12.05	+ 8 53.3	1.890	2.826	8.5	21.7	10 18	3 15.28	+14 17.7	1.406	2.343	10.6	19.0
10 28	3 4.08	+ 7 57.5	1.859	2.832	5.0	21.5	10 28	3 6.19	+13 59.9	1.357	2.334	5.8	18.7
11 7	2 55.20	+ 7 5.1	1.856	2.838	3.2	21.4	11 7	2 55.50	+13 39.1	1.334	2.324	1.3	18.3
11 17	2 46.36	+ 6 21.0	1.882	2.844	5.7	21.6	11 17	2 44.56	+13 19.4	1.339	2.314	5.2	18.6
11 27	2 38.52	+ 5 49.6	1.936	2.849	9.1	21.8	11 27	2 34.82	+13 5.9	1.370	2.304	10.2	18.9
12 7	2 32.45	+ 5 33.4	2.015	2.854	12.4	22.0	12 7	2 27.45	+13 2.8	1.425	2.295	14.7	19.1
12 17	2 28.59	+ 5 33.1	2.116	2.858	15.1	22.2	12 17	2 23.15	+13 12.8	1.500	2.285	18.5	19.3
78153	2002 <i>NX</i> ₂₄		11 8.2 124°88	4°5/ 12.1 18			130809	2000 <i>UJ</i> ₅		11 8.2 58°08	0°6/ 8.6 18	R	
10 8	3 21.49	+32 49.6	2.179	2.985	13.3	20.2	10 8	3 22.49	+21 22.0	1.103	1.982	18.5	18.6
10 18	3 14.37	+32 42.1	2.116	3.000	10.4	20.1	10 18	3 15.74	+20 30.3	1.071	2.009	13.1	18.4
10 28	3 5.34	+32 16.1	2.076	3.015	7.4	19.9	10 28	3 6.21	+19 22.0	1.060	2.037	7.2	18.2
11 7	2 55.34	+31 31.8	2.063	3.030	5.0	19.8	11 7	2 55.46	+18 3.3	1.074	2.064	1.1	17.9
11 17	2 45.42	+30 31.9	2.079	3.044	4.9	19.8	11 17	2 45.20	+16 43.7	1.113	2.092	5.1	18.3
11 27	2 36.67	+29 22.3	2.124	3.057	7.2	20.0	11 27	2 36.98	+15 33.0	1.177	2.120	10.6	18.7
12 7	2 29.89	+28 10.1	2.197	3.070	10.1	20.2	12 7	2 31.73	+14 38.9	1.264	2.148	15.2	19.0
12 17	2 25.54	+27 1.7	2.295	3.082	12.7	20.4	12 17	2 29.80	+14 4.7	1.370	2.176	18.8	19.3
211766	2004 <i>BP</i> ₅₂		11 8.2 301°86	0°6/ 7.8 18			329555	2002 <i>UB</i> ₃		11 8.2 5°92	24°3/ 12.6 18		
10 8	3 17.27	+16 47.1	1.692	2.565	13.4	20.9	10 8	3 25.66	-30 35.5	0.778	1.605	29.1	18.0
10 18	3 11.85	+16 19.9	1.614	2.550	9.6	20.6	10 18	3 18.80	-30 15.8	0.752	1.604	27.2	17.8
10 28	3 4.22	+15 44.0	1.559	2.536	5.2	20.3	10 28	3 8.11	-28 50.4	0.737	1.606	25.6	17.7
11 7	2 55.24	+15 2.5	1.531	2.522	0.7	20.0	11 7	2 55.69	-26 9.7	0.736	1.612	24.5	17.7
11 17	2 46.03	+14 20.1	1.531	2.507	4.5	20.2	11 17	2 43.91	-22 16.9	0.751	1.622	24.4	17.8
11 27	2 37.81	+13 42.7	1.558	2.493	9.1	20.5	11 27	2 34.85	-17 28.4	0.783	1.635	25.4	17.9
12 7	2 31.58	+13 15.3	1.610	2.480	13.3	20.7	12 7	2 29.70	-12 9.4	0.834	1.651	27.1	18.1
12 17	2 27.97	+13 1.2	1.682	2.466	16.8	20.9	12 17	2 28.73	- 6 43.7	0.902	1.671	29.0	18.4
448481	2010 <i>GM</i> ₁₄₅		11 8.2 17°60	4°2/ 5.3 18			84332	2002 <i>TC</i> ₅₃					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
453778	2011 <i>JK</i>		11 8.2 206°23	1.4/ 7.3	15		5471	Tunguska		11 8.3 121°05	1.7/ 9.7	18	
10 8	3 26.32	+15 50.3	1.930	2.783	12.9	22.8	10 8	3 16.61	+24 33.1	2.259	3.102	11.6	16.4
10 18	3 18.01	+14 55.4	1.847	2.775	9.2	22.6	10 18	3 10.86	+24 1.8	2.191	3.108	8.6	16.3
10 28	3 7.48	+13 51.0	1.791	2.765	5.0	22.3	10 28	3 3.48	+23 18.1	2.148	3.114	5.1	16.1
11 7	2 55.66	+12 41.5	1.764	2.754	1.4	22.0	11 7	2 55.25	+22 23.9	2.133	3.119	2.0	15.9
11 17	2 43.69	+11 32.5	1.769	2.741	4.8	22.2	11 17	2 47.04	+21 23.2	2.147	3.125	3.2	16.0
11 27	2 32.78	+10 30.7	1.804	2.726	9.1	22.5	11 27	2 39.74	+20 21.2	2.192	3.131	6.6	16.2
12 7	2 23.91	+9 41.6	1.867	2.709	13.1	22.7	12 7	2 34.05	+19 23.2	2.264	3.136	9.9	16.4
12 17	2 17.69	+9 8.6	1.951	2.690	16.3	22.9	12 17	2 30.43	+18 33.7	2.359	3.141	12.6	16.6
104684	2000 <i>GG</i> ₁₅₄		11 8.2 72°06	3.7/10.6	18		68206	2001 <i>CX</i> ₂		11 8.3 180°34	4.4/12.0	18	
10 8	3 21.39	+27 36.1	1.462	2.311	16.5	19.3	10 8	3 19.45	+32 37.7	2.655	3.454	11.4	19.3
10 18	3 14.92	+27 25.9	1.407	2.323	12.4	19.1	10 18	3 12.89	+32 55.0	2.576	3.455	9.0	19.2
10 28	3 5.87	+26 55.4	1.374	2.336	8.0	18.9	10 28	3 4.64	+32 58.0	2.521	3.455	6.6	19.0
11 7	2 55.47	+26 5.8	1.366	2.349	4.2	18.7	11 7	2 55.40	+32 45.6	2.494	3.455	4.7	18.9
11 17	2 45.16	+25 2.0	1.385	2.361	5.0	18.8	11 17	2 46.04	+32 19.1	2.496	3.455	4.7	18.9
11 27	2 36.40	+23 52.2	1.431	2.374	9.0	19.1	11 27	2 37.49	+31 41.7	2.528	3.455	6.6	19.0
12 7	2 30.22	+22 45.6	1.501	2.387	13.1	19.3	12 7	2 30.50	+30 58.2	2.587	3.454	9.0	19.2
12 17	2 27.13	+21 49.2	1.593	2.399	16.6	19.6	12 17	2 25.58	+30 14.0	2.671	3.453	11.3	19.3
518758	2009 <i>TJ</i> ₄₆		11 8.2 59°42	1.8/ 9.3	18		489919	2008 <i>QC</i> ₂₁		11 8.3 65°54	10.1/29.5	18	
10 8	3 21.63	+21 2.6	1.986	2.836	12.7	20.8	10 8	3 14.86	-12 48.8	2.139	2.978	12.3	20.8
10 18	3 14.56	+21 33.0	1.930	2.852	9.3	20.6	10 18	3 9.45	-14 45.9	2.124	3.000	10.8	20.7
10 28	3 5.53	+21 54.5	1.899	2.867	5.5	20.4	10 28	3 2.63	-16 24.4	2.135	3.022	10.1	20.7
11 7	2 55.44	+22 6.9	1.896	2.883	2.1	20.2	11 7	2 55.16	-17 37.8	2.171	3.044	10.5	20.8
11 17	2 45.33	+22 11.6	1.922	2.899	3.7	20.4	11 17	2 47.85	-18 22.2	2.231	3.066	11.6	20.9
11 27	2 36.31	+22 11.6	1.977	2.915	7.4	20.6	11 27	2 41.48	-18 36.7	2.314	3.087	13.2	21.0
12 7	2 29.22	+22 10.7	2.059	2.931	10.7	20.9	12 7	2 36.65	-18 23.9	2.417	3.109	14.7	21.2
12 17	2 24.57	+22 12.5	2.164	2.947	13.6	21.1	12 17	2 33.73	-17 47.7	2.535	3.131	16.0	21.4
158766	2003 <i>SD</i> ₅		11 8.3 14°59	3.5/ 5.3	18		290035	2005 <i>QF</i> ₃₂		11 8.3 74°37	0.5/ 8.5	18	
10 8	3 13.24	+10 48.7	1.845	2.728	12.0	18.6	10 8	3 22.61	+19 32.4	1.403	2.273	15.9	20.9
10 18	3 8.61	+9 21.8	1.790	2.731	8.5	18.4	10 18	3 15.61	+19 10.7	1.360	2.294	11.3	20.7
10 28	3 2.28	+7 51.4	1.760	2.734	5.0	18.2	10 28	3 6.18	+18 37.1	1.340	2.315	6.2	20.4
11 7	2 55.07	+6 24.2	1.757	2.739	3.6	18.2	11 7	2 55.58	+17 55.2	1.346	2.337	1.0	20.1
11 17	2 47.89	+5 7.3	1.783	2.743	6.1	18.3	11 17	2 45.21	+17 10.3	1.379	2.358	4.5	20.5
11 27	2 41.68	+4 6.4	1.836	2.748	9.6	18.5	11 27	2 36.45	+16 29.2	1.440	2.379	9.3	20.8
12 7	2 37.14	+3 24.9	1.914	2.754	12.9	18.8	12 7	2 30.24	+15 57.6	1.524	2.400	13.5	21.1
12 17	2 34.73	+3 3.8	2.012	2.760	15.6	19.0	12 17	2 27.01	+15 39.1	1.629	2.421	16.9	21.4
298111	2002 <i>RJ</i> ₁₅₂		11 8.3 335°18	8.5/13.8	17		163258	2002 <i>GT</i> ₃₇		11 8.3 124°41	8.3/ 3.1	18	
10 8	3 22.42	+38 51.4	1.769	2.559	16.6	20.2	10 8	3 20.96	-7 32.8	2.028	2.876	12.6	19.8
10 18	3 15.95	+39 37.9	1.695	2.556	13.9	20.0	10 18	3 13.80	-8 24.5	1.992	2.891	10.3	19.7
10 28	3 6.65	+40 0.3	1.641	2.553	11.1	19.8	10 28	3 5.01	-9 2.1	1.980	2.905	8.6	19.6
11 7	2 55.59	+39 54.5	1.611	2.550	9.0	19.7	11 7	2 55.45	-9 20.4	1.994	2.919	8.4	19.6
11 17	2 44.25	+39 20.1	1.606	2.547	8.6	19.6	11 17	2 46.05	-9 16.3	2.036	2.933	9.8	19.7
11 27	2 34.23	+38 22.2	1.627	2.545	10.2	19.7	11 27	2 37.73	-8 49.2	2.104	2.946	11.9	19.9
12 7	2 26.78	+37 9.9	1.673	2.543	12.8	19.9	12 7	2 31.19	-8 1.3	2.194	2.959	14.0	20.1
12 17	2 22.62	+35 53.3	1.740	2.541	15.6	20.1	12 17	2 26.83	-6 56.2	2.305	2.970	15.9	20.2
282778	2006 <i>KH</i> ₁₂		11 8.3 53°55	7.5/ 3.4	18		271249	2003 <i>UN</i> ₇₈		11 8.3 32°04	3.2/10.9	17	
10 8	3 17.21	+1 5.1	1.479	2.363	14.3	19.3	10 8	3 16.55	+28 25.8	2.119	2.952	12.7	20.5
10 18	3 11.52	-0 24.2	1.448	2.381	10.9	19.2	10 18	3 11.01	+28 12.1	2.049	2.955	9.6	20.3
10 28	3 3.85	-1 44.6	1.441	2.399	8.1	19.1	10 28	3 3.66	+27 42.8	2.003	2.959	6.4	20.2
11 7	2 55.25	-2 47.5	1.459	2.417	7.7	19.1	11 7	2 55.31	+26 59.0	1.983	2.962	3.6	20.0
11 17	2 46.87	-3 26.7	1.502	2.435	9.8	19.3	11 17	2 46.93	+26 3.7	1.992	2.966	4.0	20.0
11 27	2 39.81	-3 39.4	1.570	2.454	12.8	19.5	11 27	2 39.53	+25 2.4	2.030	2.970	7.0	20.2
12 7	2 34.86	-3 26.5	1.660	2.473	15.8	19.7	12 7	2 33.89	+24 1.4	2.095	2.974	10.2	20.4
12 17	2 32.41	-2 51.2	1.767	2.492	18.2	20.0	12 17	2 30.50	+23 6.1	2.183	2.978	13.1	20.6
237376	1995 <i>SW</i> ₅₀		11 8.3 208°05	3.0/10.1	18		282388	2003 <i>SM</i> ₈₁		11 8.3 44°56	6.2/12.8	18	
10 8	3 21.87	+25 33.1	1.987	2.825	13.2	20.7	10 8	3 20.10	+34 15.3	1.538	2.362	17.1	20.3
10 18	3 14.97	+25 47.8	1.910	2.821	10.0	20.5	10 18	3 14.13	+34 13.2	1.479	2.371	13.6	20.1
10 28	3 5.90	+25 49.3	1.857	2.817	6.4	20.3	10 28	3 5.54	+33 45.4	1.440	2.381	9.9	19.9
11 7	2 55.52	+25 37.3	1.831	2.813	3.3	20.1	11 7	2 55.54	+32 51.5	1.425	2.391	6.8	19.8
11 17	2 44.95	+25 13.6	1.834	2.808	4.2	20.1	11 17	2 45.60	+31 35.3	1.436	2.402	6.5	19.8
11 27	2 35.38	+24 42.4	1.866	2.803	7.7	20.3	11 27	2 37.19	+30 5.5	1.474	2.413	9.2	20.0
12 7	2 27.79	+24 9.4	1.925	2.798	11.3	20.6	12 7	2 31.37	+28 32.9	1.537	2.424	12.7	20.2
12 17	2 22.78	+23 40.1	2.006	2.792	14.4	20.8	12 17	2 28.66	+27 6.9	1.621	2.435	16.0	20.5
483207	2015 <i>PO</i> ₃₁₀		11 8.3 79°06	1.5/ 9.1	18		209759	2005 <i>EO</i> ₂₃₅		11 8.3 287°72	1.8/ 7.1	18	
10 8	3 21.22	+20 49.8	1.823	2.679	13.4	20.8	10 8	3 17.88	+13 51.8	1.757	2.631	12.9	20.9
10 18	3 14.38	+20 59.7	1.767	2.692	9.7	20.6	10 18	3 12.11	+13 14.6	1.692	2.629	9.2	20.7
10 28	3 5.48	+20 59.6	1.735	2.706	5.6	20.4	10 28	3 4.33	+12 31.8	1.650	2.627	5.0	20.4
11 7	2 55.47	+20 50.3	1.730	2.719	1.8	20.2	11 7	2 55.41	+11 47.5	1.636	2.625	1.8	20.2
11 17	2 45.48	+20 34.5	1.754	2.732	3.8	20.4	11 17	2 46.43	+11 6.8	1.651	2.623	4.9	20.4
11 27	2 36.66	+20 16.4	1.807	2.746	7.8	20.6	11 27	2 38.48	+10 34.7	1.693	2.621	9.1	20.6
12 7	2 29.90	+20 0.5	1.885	2.759	11.5	20.9	12 7	2 32.46	+10 15.1	1.759	2.619	12.8	20.9
12 17	2 25.70	+19 50.7	1.987	2.772	14.5	21.1	12 17	2 28.89	+10 9.9	1.847	2.618	16.0	21.1
130311	2000 <i>EW</i> ₁₀₅		11 8.3 221°20	7.7/30.4	18 R		261746	2006 <i>BE</i> ₁₀		11 8.3 209°56	5.4/ 4.2	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
116206	2003 XZ ₃₂	11	8.3 279°78	1°1/ 7.4	17		88057	2000 VQ ₃₅	11	8.3 343°44	2°3/ 7.1	18	
10 8	3 15.29	+14 31.0	2.357	3.223	10.4	20.5	10 8	3 19.04	+10 17.4	1.740	2.616	13.0	18.6
10 18	3 9.96	+14 4.3	2.277	3.211	7.4	20.3	10 18	3 13.02	+10 19.3	1.672	2.610	9.3	18.3
10 28	3 3.07	+13 32.9	2.223	3.199	4.0	20.0	10 28	3 4.89	+10 20.9	1.629	2.605	5.2	18.1
11 7	2 55.27	+12 59.6	2.197	3.186	1.1	19.8	11 7	2 55.52	+10 25.0	1.612	2.600	2.3	17.9
11 17	2 47.34	+12 27.5	2.201	3.174	3.7	20.0	11 17	2 46.00	+10 34.1	1.624	2.596	5.1	18.1
11 27	2 40.12	+12 0.5	2.234	3.162	7.2	20.2	11 27	2 37.48	+10 50.8	1.663	2.592	9.2	18.3
12 7	2 34.29	+11 41.7	2.293	3.149	10.4	20.4	12 7	2 30.91	+11 16.8	1.727	2.589	13.0	18.5
12 17	2 30.37	+11 33.2	2.376	3.137	13.1	20.5	12 17	2 26.86	+11 52.9	1.813	2.586	16.2	18.7
484042	2006 EB ₃₇	11	8.3 206°40	0°2/ 8.1	17		248856	2006 TL ₈₅	11	8.3 27°51	2°0/ 9.6	18	
10 8	3 15.89	+17 16.8	2.661	3.516	9.7	22.6	10 8	3 18.00	+23 25.2	1.706	2.564	14.1	20.6
10 18	3 10.21	+16 57.0	2.584	3.512	6.9	22.4	10 18	3 12.33	+23 13.7	1.643	2.568	10.4	20.4
10 28	3 3.13	+16 31.4	2.534	3.509	3.7	22.2	10 28	3 4.50	+22 48.5	1.603	2.572	6.2	20.2
11 7	2 55.28	+16 2.1	2.514	3.504	0.4	21.9	11 7	2 55.47	+22 11.1	1.589	2.577	2.3	19.9
11 17	2 47.35	+15 31.7	2.523	3.500	3.0	22.1	11 17	2 46.41	+21 25.6	1.603	2.582	4.0	20.1
11 27	2 40.09	+15 3.5	2.563	3.495	6.2	22.3	11 27	2 38.51	+20 37.8	1.645	2.587	8.1	20.3
12 7	2 34.14	+14 40.6	2.631	3.490	9.1	22.5	12 7	2 32.69	+19 54.2	1.712	2.593	12.0	20.6
12 17	2 29.91	+14 25.3	2.723	3.484	11.6	22.7	12 17	2 29.49	+19 19.6	1.801	2.599	15.3	20.8
72422	2001 CF ₃₈	11	8.3 82°26	9°8/ 1.3	18		374756	2006 SK ₂₃₇	11	8.3 299°12	3°2/ 9.7	18	
10 8	3 18.04	-15 40.5	2.299	3.119	12.3	18.5	10 8	3 21.98	+23 34.7	1.326	2.190	16.9	21.1
10 18	3 11.64	-16 28.9	2.270	3.132	10.8	18.4	10 18	3 16.08	+23 56.2	1.245	2.173	12.7	20.8
10 28	3 3.82	-16 59.0	2.264	3.145	9.9	18.4	10 28	3 7.01	+24 2.6	1.186	2.155	7.9	20.5
11 7	2 55.35	-17 6.2	2.283	3.158	9.9	18.4	11 7	2 55.80	+23 52.7	1.151	2.138	3.6	20.2
11 17	2 47.02	-16 48.3	2.327	3.171	10.9	18.5	11 17	2 44.03	+23 28.3	1.142	2.120	5.4	20.3
11 27	2 39.64	-16 5.7	2.395	3.183	12.3	18.6	11 27	2 33.53	+22 55.4	1.159	2.103	10.5	20.5
12 7	2 33.82	-15 1.3	2.484	3.196	13.9	18.8	12 7	2 25.78	+22 22.3	1.198	2.087	15.5	20.7
12 17	2 29.93	-13 39.3	2.592	3.209	15.3	18.9	12 17	2 21.67	+21 56.5	1.257	2.070	19.8	21.0
449900	2015 MQ ₁₁₁	11	8.3 111°85	5°9/ 4.7	18		447555	2006 SP ₃₆₂	11	8.3 117°59	0°3/ 8.5	18	
10 8	3 19.29	+ 1 48.3	1.821	2.693	12.7	21.0	10 8	3 21.99	+17 10.9	2.112	2.967	11.9	21.3
10 18	3 12.87	+ 1 0.9	1.773	2.702	9.5	20.8	10 18	3 14.75	+17 23.8	2.051	2.978	8.5	21.1
10 28	3 4.62	+ 0 19.9	1.750	2.710	6.7	20.7	10 28	3 5.68	+17 30.8	2.016	2.989	4.7	20.9
11 7	2 55.44	- 0 9.1	1.754	2.719	5.9	20.7	11 7	2 55.61	+17 32.8	2.010	3.000	0.7	20.6
11 17	2 46.34	- 0 22.2	1.786	2.727	7.8	20.8	11 17	2 45.53	+17 31.9	2.033	3.011	3.5	20.9
11 27	2 38.32	- 0 16.7	1.844	2.735	10.8	21.0	11 27	2 36.44	+17 30.7	2.087	3.021	7.3	21.1
12 7	2 32.16	+ 0 7.2	1.926	2.743	13.7	21.2	12 7	2 29.14	+17 32.4	2.168	3.031	10.6	21.4
12 17	2 28.32	+ 0 47.6	2.028	2.751	16.2	21.4	12 17	2 24.13	+17 39.6	2.272	3.041	13.4	21.6
514190	2015 MM ₉₈	11	8.3 24°85	7°1/ 3.7	18		167776	2005 AR ₁₅	11	8.3 261°18	4°3/ 11.1	18	
10 8	3 16.53	+ 1 30.1	1.538	2.422	13.9	20.4	10 8	3 20.46	+29 24.5	1.845	2.675	14.4	20.4
10 18	3 11.19	+ 0 12.2	1.492	2.425	10.5	20.2	10 18	3 14.24	+29 31.5	1.763	2.666	11.1	20.2
10 28	3 3.81	- 0 58.6	1.469	2.429	7.8	20.0	10 28	3 5.65	+29 20.7	1.704	2.657	7.6	19.9
11 7	2 55.35	- 1 54.6	1.472	2.433	7.3	20.0	11 7	2 55.63	+28 51.4	1.672	2.647	4.7	19.7
11 17	2 46.94	- 2 29.3	1.501	2.438	9.5	20.1	11 17	2 45.36	+28 5.7	1.667	2.638	5.1	19.7
11 27	2 39.71	- 2 39.1	1.554	2.443	12.6	20.3	11 27	2 36.17	+27 9.3	1.690	2.628	8.3	19.9
12 7	2 34.51	- 2 24.2	1.629	2.448	15.8	20.6	12 7	2 29.12	+26 9.6	1.739	2.618	11.9	20.1
12 17	2 31.82	- 1 47.2	1.722	2.454	18.4	20.8	12 17	2 24.84	+25 13.9	1.810	2.609	15.2	20.3
363443	2003 SS ₁₁₈	11	8.3 53°40	0°8/ 7.7	18		74065	1998 KS ₆₁	11	8.3 163°27	0°8/ 7.6	18	
10 8	3 16.47	+15 58.1	1.972	2.841	12.0	21.0	10 8	3 18.45	+17 12.9	2.212	3.071	11.3	20.1
10 18	3 10.82	+15 29.0	1.922	2.857	8.4	20.8	10 18	3 12.13	+16 15.1	2.146	3.077	8.0	19.9
10 28	3 3.50	+14 54.0	1.896	2.872	4.5	20.6	10 28	3 4.20	+15 9.2	2.107	3.082	4.3	19.6
11 7	2 55.33	+14 16.3	1.898	2.888	0.9	20.3	11 7	2 55.44	+13 59.4	2.097	3.087	0.9	19.4
11 17	2 47.25	+13 40.0	1.929	2.904	3.9	20.6	11 17	2 46.71	+12 50.5	2.117	3.091	3.8	19.6
11 27	2 40.18	+13 9.3	1.988	2.921	7.7	20.9	11 27	2 38.91	+11 48.1	2.167	3.094	7.5	19.9
12 7	2 34.82	+12 47.7	2.073	2.937	11.0	21.1	12 7	2 32.72	+10 56.5	2.245	3.097	10.7	20.1
12 17	2 31.61	+12 37.3	2.181	2.953	13.8	21.3	12 17	2 28.60	+10 18.7	2.345	3.099	13.5	20.3
188385	2004 CX ₁₀₃	11	8.3 254°69	1°4/ 7.3	18		266751	2009 SD ₆₉	11	8.3 355°11	3°4/ 5.8	18	
10 8	3 18.97	+17 16.4	1.592	2.465	14.1	20.5	10 8	3 14.15	+ 9 55.1	1.792	2.674	12.3	19.8
10 18	3 13.17	+16 4.4	1.515	2.452	10.1	20.2	10 18	3 9.42	+ 8 57.9	1.731	2.672	8.8	19.6
10 28	3 5.04	+14 39.4	1.462	2.440	5.4	19.9	10 28	3 2.86	+ 7 58.6	1.694	2.669	5.2	19.4
11 7	2 55.53	+13 7.2	1.437	2.427	1.4	19.6	11 7	2 55.31	+ 7 2.6	1.685	2.667	3.5	19.3
11 17	2 45.85	+11 35.8	1.439	2.413	5.2	19.8	11 17	2 47.71	+ 6 15.6	1.703	2.666	6.0	19.5
11 27	2 37.30	+10 14.1	1.470	2.400	10.1	20.1	11 27	2 41.06	+ 5 42.4	1.748	2.665	9.6	19.7
12 7	2 30.91	+ 9 9.2	1.524	2.386	14.4	20.3	12 7	2 36.15	+ 5 26.0	1.816	2.665	13.1	19.9
12 17	2 27.27	+ 8 25.1	1.600	2.372	18.0	20.5	12 17	2 33.48	+ 5 27.0	1.906	2.666	16.0	20.1
42087	2001 AB ₁₄	11	8.3 327°62	5°1/ 4.6	18		243914	2001 HY ₂₂	11	8.3 210°57	4°7/ 4.2	18	
10 8	3 15.60	+ 3 32.7	1.968	2.844	11.7	18.9	10 8	3 16.56	- 1 1.8	2.951	3.804	8.9	20.6
10 18	3 10.29	+ 2 41.6	1.907	2.840	8.7	18.7	10 18	3 10.51	- 1 31.4	2.883	3.798	6.8	20.4
10 28	3 3.28	+ 1 54.2	1.871	2.835	6.0	18.5	10 28	3 3.27	- 1 55.2	2.842	3.791	5.1	20.3
11 7	2 55.32	+ 1 15.9	1.863	2.831	5.2	18.4	11 7	2 55.36	- 2 10.1	2.830	3.783	4.8	20.3
11 17	2 47.31	+ 0 51.2	1.882	2.827	7.2	18.6	11 17	2 47.39	- 2 13.7	2.848	3.775	6.0	20.3
11 27	2 40.18	+ 0 43.4	1.927	2.824	10.1	18.7	11 27	2 40.02	- 2 4.2	2.895	3.767	8.0	20.5
12 7	2 34.67	+ 0 53.5	1.997	2.820	13.1	18.9	12 7	2 33.79	- 1 41.5	2.968	3.758	10.1	20.6
12 17	2 31.27	+ 1 20.6	2.087	2.817	15.6	19.1	12 17	2 29.09	- 1 6.5	3.064	3.748	12.0	20.7
108529	2001 LV ₂	11	8.3 179°10	2°3/ 9.9	18		379596	2011 CF ₁₉	11	8.3 319°85	2°0/ 9.4	18	
10 8	3 22.00	+25 26.5	1.950										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
99646	2002 <i>GE</i> ₁₇₀	11	8.3 301°28	1°2/ 9.0	18		410623	2008 <i>QX</i> ₂₃	11	8.3 126°49	5°3/ 3.1	18	
10 8	3 18.90	+21 16.5	1.615	2.479	14.4	19.9	10 8	3 14.73	- 0 45.7	2.703	3.564	9.4	21.8
10 18	3 13.18	+21 0.2	1.542	2.472	10.5	19.7	10 18	3 9.22	- 1 51.4	2.659	3.577	7.2	21.7
10 28	3 5.09	+20 31.0	1.492	2.465	6.0	19.4	10 28	3 2.55	- 2 51.1	2.643	3.590	5.6	21.6
11 7	2 55.59	+19 50.8	1.468	2.458	1.6	19.1	11 7	2 55.31	- 3 40.3	2.655	3.603	5.4	21.6
11 17	2 45.90	+19 4.0	1.471	2.450	4.2	19.3	11 17	2 48.13	- 4 15.5	2.697	3.615	6.7	21.8
11 27	2 37.36	+18 16.9	1.502	2.444	8.9	19.5	11 27	2 41.65	- 4 34.6	2.766	3.627	8.7	21.9
12 7	2 30.99	+17 35.9	1.558	2.437	13.1	19.8	12 7	2 36.40	- 4 37.2	2.860	3.638	10.7	22.1
12 17	2 27.43	+17 6.2	1.635	2.430	16.7	20.0	12 17	2 32.72	- 4 24.3	2.974	3.649	12.5	22.2
248798	2006 <i>SR</i> ₁₁₄	11	8.3 104°82	0°2/ 8.2	18		45437	2000 <i>AF</i> ₁₇₇	11	8.3 257°08	0°5/ 7.9	18	
10 8	3 18.37	+17 39.0	1.926	2.790	12.4	21.3	10 8	3 17.32	+18 43.2	1.904	2.768	12.5	19.1
10 18	3 12.33	+17 17.4	1.863	2.795	8.9	21.1	10 18	3 11.73	+17 46.0	1.825	2.757	9.0	18.8
10 28	3 4.43	+16 48.0	1.824	2.800	4.8	20.9	10 28	3 4.19	+16 37.3	1.770	2.746	4.9	18.5
11 7	2 55.50	+16 13.4	1.814	2.804	0.5	20.5	11 7	2 55.52	+15 21.4	1.744	2.735	0.6	18.2
11 17	2 46.55	+15 37.6	1.832	2.809	3.8	20.8	11 17	2 46.72	+14 3.9	1.747	2.723	4.1	18.5
11 27	2 38.62	+15 5.2	1.879	2.814	7.9	21.1	11 27	2 38.87	+12 51.9	1.779	2.711	8.4	18.7
12 7	2 32.51	+14 40.3	1.951	2.818	11.4	21.3	12 7	2 32.83	+11 51.5	1.836	2.699	12.2	18.9
12 17	2 28.72	+14 26.0	2.046	2.823	14.5	21.5	12 17	2 29.14	+11 6.4	1.916	2.687	15.5	19.1
388654	2007 <i>TY</i> ₂₆₀	11	8.3 139°25	0°1/ 8.3	18		394516	2007 <i>TF</i> ₃₀₂	11	8.3 137°73	1°5/ 9.2	18	
10 8	3 22.06	+16 56.5	2.227	3.079	11.4	20.9	10 8	3 21.35	+20 59.8	1.866	2.719	13.2	21.4
10 18	3 14.71	+16 58.1	2.165	3.091	8.1	20.7	10 18	3 14.63	+21 9.6	1.798	2.722	9.7	21.2
10 28	3 5.64	+16 53.8	2.129	3.103	4.4	20.5	10 28	3 5.77	+21 9.4	1.755	2.725	5.6	21.0
11 7	2 55.64	+16 45.2	2.123	3.114	0.5	20.2	11 7	2 55.70	+21 0.0	1.739	2.728	1.8	20.7
11 17	2 45.65	+16 34.4	2.147	3.124	3.4	20.5	11 17	2 45.52	+20 43.6	1.753	2.731	3.8	20.9
11 27	2 36.61	+16 24.5	2.202	3.134	7.1	20.7	11 27	2 36.42	+20 24.4	1.795	2.733	7.9	21.1
12 7	2 29.29	+16 18.7	2.284	3.143	10.3	20.9	12 7	2 29.31	+20 7.2	1.863	2.736	11.6	21.3
12 17	2 24.15	+16 19.4	2.390	3.152	13.0	21.1	12 17	2 24.78	+19 55.9	1.953	2.738	14.7	21.6
48791	1997 <i>SD</i> ₃₃	11	8.3 282°39	0°1/ 8.4	17		89413	2001 <i>WM</i> ₂₁	11	8.3 206°70	4°6/ 5.5	18	
10 8	3 15.73	+18 26.6	2.341	3.199	10.7	19.7	10 8	3 19.62	+ 6 43.2	1.693	2.570	13.2	19.4
10 18	3 10.35	+18 6.4	2.256	3.185	7.7	19.5	10 18	3 13.39	+ 5 52.8	1.632	2.568	9.6	19.1
10 28	3 3.35	+17 38.6	2.196	3.170	4.2	19.3	10 28	3 5.09	+ 5 3.5	1.595	2.566	6.1	18.9
11 7	2 55.38	+17 5.4	2.165	3.156	0.5	19.0	11 7	2 55.63	+ 4 21.0	1.586	2.563	4.6	18.8
11 17	2 47.25	+16 29.8	2.164	3.141	3.3	19.2	11 17	2 46.10	+ 3 50.7	1.603	2.560	7.0	19.0
11 27	2 39.83	+15 55.7	2.191	3.126	6.9	19.4	11 27	2 37.67	+ 3 36.8	1.648	2.557	10.7	19.2
12 7	2 33.85	+15 27.2	2.246	3.112	10.2	19.6	12 7	2 31.22	+ 3 41.1	1.717	2.554	14.2	19.4
12 17	2 29.84	+15 7.2	2.324	3.097	13.0	19.7	12 17	2 27.30	+ 4 3.1	1.805	2.551	17.2	19.6
516638	2008 <i>GD</i> ₂₉	11	8.3 202°42	0°4/ 8.0	18		124097	2001 <i>HZ</i> ₄₀	11	8.3 81°78	7°9/ 2.8	18	
10 8	3 17.09	+17 19.9	2.028	2.892	11.9	22.2	10 8	3 17.64	- 9 8.5	2.323	3.165	11.4	19.0
10 18	3 11.39	+16 51.1	1.959	2.892	8.5	21.9	10 18	3 11.39	- 9 48.3	2.285	3.178	9.4	18.9
10 28	3 3.91	+16 14.7	1.916	2.892	4.6	21.7	10 28	3 3.77	-10 14.7	2.273	3.191	8.1	18.9
11 7	2 55.45	+15 33.6	1.900	2.891	0.6	21.4	11 7	2 55.47	-10 23.2	2.287	3.203	8.0	18.9
11 17	2 46.93	+14 51.9	1.914	2.891	3.8	21.7	11 17	2 47.28	-10 11.5	2.328	3.216	9.1	19.0
11 27	2 39.33	+14 14.2	1.956	2.890	7.7	21.9	11 27	2 39.98	- 9 39.1	2.394	3.228	10.9	19.1
12 7	2 33.43	+13 44.7	2.025	2.890	11.2	22.1	12 7	2 34.17	- 8 48.1	2.484	3.241	12.8	19.3
12 17	2 29.72	+13 26.2	2.116	2.889	14.1	22.3	12 17	2 30.23	- 7 41.4	2.594	3.253	14.5	19.4
228912	2003 <i>SH</i> ₁₆₉	11	8.3 47°40	3°3/ 5.9	18		42220	2001 <i>DC</i> ₆₀	11	8.3 26°06	4°6/ 4.8	18	
10 8	3 15.80	+ 8 48.4	1.967	2.844	11.6	20.0	10 8	3 15.24	+ 5 19.1	2.009	2.886	11.4	19.1
10 18	3 10.35	+ 8 6.4	1.917	2.855	8.3	19.8	10 18	3 9.99	+ 4 21.0	1.953	2.888	8.4	18.9
10 28	3 3.28	+ 7 24.3	1.893	2.866	4.9	19.6	10 28	3 3.13	+ 3 25.1	1.923	2.890	5.6	18.8
11 7	2 55.37	+ 6 46.7	1.896	2.878	3.3	19.5	11 7	2 55.40	+ 2 36.8	1.920	2.892	4.7	18.7
11 17	2 47.53	+ 6 17.7	1.928	2.890	5.5	19.7	11 17	2 47.68	+ 2 0.8	1.945	2.894	6.7	18.9
11 27	2 40.65	+ 6 0.8	1.987	2.902	8.8	19.9	11 27	2 40.83	+ 1 40.8	1.997	2.897	9.7	19.0
12 7	2 35.42	+ 5 57.8	2.071	2.915	11.9	20.1	12 7	2 35.58	+ 1 38.0	2.074	2.900	12.6	19.2
12 17	2 32.27	+ 6 8.8	2.176	2.927	14.5	20.3	12 17	2 32.37	+ 1 52.2	2.171	2.903	15.1	19.4
130347	2000 <i>FV</i> ₆₃	11	8.3 295°68	0°2/ 8.2	17		282564	2004 <i>XE</i> ₈₀	11	8.3 345°31	9°4/ 14.6	18	
10 8	3 17.69	+16 10.1	2.253	3.114	11.0	19.5	10 8	3 17.55	+39 4.5	1.329	2.145	19.7	19.4
10 18	3 11.74	+16 10.9	2.177	3.108	7.8	19.3	10 18	3 13.12	+39 28.5	1.257	2.136	16.5	19.1
10 28	3 4.11	+16 6.8	2.128	3.103	4.3	19.1	10 28	3 5.42	+39 20.1	1.202	2.127	13.1	18.9
11 7	2 55.48	+15 59.2	2.107	3.097	0.5	18.8	11 7	2 55.70	+38 35.2	1.169	2.119	10.3	18.7
11 17	2 46.72	+15 50.5	2.115	3.092	3.4	19.0	11 17	2 45.69	+37 14.9	1.159	2.113	9.5	18.7
11 27	2 38.74	+15 43.6	2.153	3.087	7.1	19.2	11 27	2 37.29	+35 28.0	1.172	2.107	11.5	18.8
12 7	2 32.30	+15 41.3	2.218	3.082	10.4	19.4	12 7	2 31.93	+33 28.6	1.208	2.103	14.9	19.0
12 17	2 27.90	+15 46.0	2.305	3.076	13.2	19.6	12 17	2 30.30	+31 30.5	1.265	2.100	18.4	19.2
46097	2001 <i>FN</i> ₁	11	8.3 60°00	5°5/ 11.2	18		161344	2003 <i>SU</i> ₆₄	11	8.3 38°14	2°8/ 6.9	18	
10 8	3 24.65	+29 7.9	1.297	2.144	18.3	17.9	10 8	3 19.76	+10 56.2	1.354	2.240	15.3	19.6
10 18	3 17.64	+29 38.0	1.248	2.160	14.1	17.7	10 18	3 13.71	+10 35.3	1.311	2.253	10.8	19.3
10 28	3 7.60	+29 45.8	1.220	2.176	9.6	17.4	10 28	3 5.29	+10 12.8	1.290	2.268	6.0	19.1
11 7	2 55.90	+29 29.8	1.215	2.192	6.0	17.3	11 7	2 55.65	+ 9 53.2	1.295	2.282	2.8	18.9
11 17	2 44.27	+28 52.8	1.237	2.208	6.4	17.4	11 17	2 46.14	+ 9 40.9	1.326	2.298	6.0	19.2
11 27	2 34.46	+28 2.6	1.283	2.225	10.0	17.6	11 27	2 38.09	+ 9 40.0	1.383	2.313	10.5	19.5
12 7	2 27.67	+27 9.3	1.353	2.241	14.1	17.9	12 7	2 32.44	+ 9 52.7	1.462	2.330	14.5	19.8
12 17	2 24.44	+26 21.4	1.444	2.258	17.6	18.2	12 17	2 29.67	+10 19.0	1.562	2.347	17.8	20.1
376435	2012 <i>HL</i> ₁₉	11	8.3 185°27	3°4/ 6.3	18		428637	2008 <i>FB</i> ₁₂₁	11	8.3			

EPHEMERIDES

11 8.3

11 8.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
235376	2003 <i>WK</i> ₄₄	11	8.3 288°70	5°2/12.7	17		38488	1999 <i>TP</i> ₁₁₃	11	8.3 136°70	1°3/7.2	18	
10 8	3 18.17	+34 35.8	2.347	3.145	12.7	20.3	10 8	3 15.82	+15 17.4	2.267	3.132	10.8	18.7
10 18	3 12.28	+34 47.1	2.265	3.140	10.2	20.1	10 18	3 10.30	+14 24.6	2.203	3.137	7.6	18.5
10 28	3 4.49	+34 40.9	2.206	3.136	7.7	19.9	10 28	3 3.28	+13 25.8	2.166	3.142	4.1	18.3
11 7	2 55.58	+34 16.3	2.174	3.131	5.6	19.8	11 7	2 55.47	+12 25.1	2.158	3.147	1.3	18.1
11 17	2 46.53	+33 34.4	2.170	3.127	5.5	19.8	11 17	2 47.67	+11 26.8	2.179	3.151	3.9	18.3
11 27	2 38.38	+32 39.5	2.194	3.122	7.3	19.9	11 27	2 40.71	+10 35.9	2.230	3.156	7.4	18.6
12 7	2 31.98	+31 37.8	2.244	3.118	9.9	20.1	12 7	2 35.25	+9 56.0	2.308	3.160	10.5	18.8
12 17	2 27.87	+30 35.8	2.319	3.113	12.4	20.2	12 17	2 31.70	+9 29.1	2.408	3.164	13.1	19.0
407170	2009 <i>UU</i> ₄₆	11	8.3 137°39	0°3/8.1	18		289360	2005 <i>BB</i> ₃₉	11	8.3 80°67	4°1/6.3	18	
10 8	3 18.36	+15 41.5	2.367	3.225	10.6	21.0	10 8	3 23.06	+9 40.2	1.300	2.183	16.0	20.6
10 18	3 12.12	+15 43.0	2.298	3.228	7.5	20.8	10 18	3 15.98	+8 48.1	1.263	2.204	11.3	20.4
10 28	3 4.29	+15 40.2	2.256	3.230	4.1	20.6	10 28	3 6.48	+7 55.3	1.250	2.225	6.6	20.2
11 7	2 55.57	+15 34.4	2.242	3.233	0.5	20.3	11 7	2 55.83	+7 8.7	1.262	2.246	4.1	20.1
11 17	2 46.78	+15 27.8	2.259	3.235	3.3	20.5	11 17	2 45.48	+6 34.4	1.301	2.266	7.1	20.4
11 27	2 38.79	+15 23.2	2.305	3.238	6.8	20.8	11 27	2 36.79	+6 17.3	1.365	2.287	11.4	20.7
12 7	2 32.28	+15 23.0	2.379	3.240	9.9	21.0	12 7	2 30.68	+6 19.0	1.452	2.307	15.4	21.0
12 17	2 27.75	+15 29.4	2.477	3.242	12.5	21.2	12 17	2 27.57	+6 38.8	1.558	2.326	18.6	21.3
513992	2014 <i>HK</i> ₅₄	11	8.3 132°53	0°2/8.1	18		267620	2002 <i>RK</i> ₂₁₇	11	8.3 51°18	1°7/9.6	18	
10 8	3 20.26	+16 45.8	2.295	3.149	11.1	22.3	10 8	3 17.07	+22 57.3	2.091	2.941	12.2	20.4
10 18	3 13.39	+16 33.5	2.235	3.163	7.8	22.1	10 18	3 11.35	+22 48.8	2.032	2.953	8.9	20.2
10 28	3 4.93	+16 15.3	2.202	3.176	4.2	21.9	10 28	3 3.90	+22 29.3	1.997	2.965	5.3	20.0
11 7	2 55.64	+15 53.4	2.198	3.189	0.5	21.6	11 7	2 55.55	+22 0.4	1.991	2.978	2.0	19.8
11 17	2 46.39	+15 30.5	2.225	3.201	3.4	21.9	11 17	2 47.21	+21 25.1	2.013	2.991	3.4	19.9
11 27	2 38.05	+15 10.0	2.282	3.213	6.9	22.1	11 27	2 39.85	+20 48.0	2.064	3.004	6.9	20.2
12 7	2 31.33	+14 55.1	2.366	3.224	10.0	22.4	12 7	2 34.21	+20 13.7	2.141	3.017	10.2	20.4
12 17	2 26.66	+14 48.2	2.473	3.235	12.7	22.6	12 17	2 30.74	+19 46.2	2.242	3.030	13.0	20.6
215921	2005 <i>JV</i> ₉₈	11	8.3 232°22	3°6/5.1	18		175004	2004 <i>ER</i> ₇₁	11	8.3 11°72	3°0/10.1	18	
10 8	3 16.74	+8 56.1	2.192	3.062	10.9	20.4	10 8	3 19.76	+25 5.1	1.739	2.589	14.3	19.9
10 18	3 11.06	+7 37.4	2.117	3.051	7.8	20.2	10 18	3 13.72	+25 16.4	1.671	2.589	10.7	19.7
10 28	3 3.75	+6 15.9	2.069	3.040	4.8	20.0	10 28	3 5.39	+25 13.5	1.627	2.590	6.7	19.4
11 7	2 55.51	+4 57.2	2.050	3.028	3.7	19.9	11 7	2 55.74	+24 56.6	1.608	2.592	3.4	19.2
11 17	2 47.18	+3 47.3	2.061	3.015	5.9	20.0	11 17	2 45.95	+24 28.0	1.617	2.593	4.4	19.3
11 27	2 39.63	+2 51.3	2.100	3.002	9.1	20.2	11 27	2 37.30	+23 52.9	1.654	2.595	8.2	19.5
12 7	2 33.59	+2 12.7	2.165	2.989	12.2	20.4	12 7	2 30.78	+23 17.6	1.716	2.597	12.0	19.8
12 17	2 29.55	+1 52.4	2.252	2.975	14.8	20.6	12 17	2 26.99	+22 47.6	1.800	2.599	15.2	20.0
127367	2002 <i>JZ</i> ₁₃₅	11	8.3 77°12	0°4/8.6	18		165655	2001 <i>KB</i> ₂	11	8.3 130°71	1°5/7.5	18	
10 8	3 17.61	+19 6.6	2.155	3.012	11.6	20.1	10 8	3 20.88	+12 41.2	1.885	2.752	12.5	19.8
10 18	3 11.60	+18 49.8	2.100	3.028	8.2	19.9	10 18	3 14.17	+12 35.3	1.822	2.756	8.9	19.6
10 28	3 3.98	+18 25.2	2.070	3.044	4.5	19.7	10 28	3 5.51	+12 26.5	1.785	2.760	4.8	19.4
11 7	2 55.53	+17 55.0	2.069	3.059	0.7	19.4	11 7	2 55.75	+12 17.3	1.775	2.764	1.5	19.2
11 17	2 47.14	+17 22.3	2.097	3.075	3.3	19.7	11 17	2 45.94	+12 10.6	1.795	2.768	4.5	19.4
11 27	2 39.70	+16 51.4	2.154	3.090	6.9	19.9	11 27	2 37.16	+12 9.7	1.843	2.772	8.4	19.6
12 7	2 33.91	+16 26.0	2.238	3.106	10.2	20.2	12 7	2 30.27	+12 16.9	1.917	2.775	12.0	19.9
12 17	2 30.20	+16 8.9	2.345	3.121	12.8	20.4	12 17	2 25.80	+12 33.8	2.013	2.779	15.0	20.1
133776	2003 <i>WV</i> ₉₂	11	8.3 144°86	0°1/8.3	18		91791	1999 <i>TD</i> ₂₂₃	11	8.3 81°87	1°1/9.2	18	
10 8	3 19.23	+16 5.2	2.482	3.336	10.3	19.7	10 8	3 16.58	+22 31.3	2.090	2.942	12.1	19.1
10 18	3 12.69	+16 16.3	2.412	3.339	7.4	19.5	10 18	3 11.00	+21 54.5	2.024	2.948	8.8	18.9
10 28	3 4.59	+16 23.1	2.368	3.342	4.0	19.3	10 28	3 3.72	+21 5.7	1.983	2.954	5.0	18.7
11 7	2 55.62	+16 26.8	2.354	3.345	0.5	19.0	11 7	2 55.53	+20 7.9	1.971	2.960	1.4	18.4
11 17	2 46.56	+16 28.8	2.371	3.348	3.1	19.2	11 17	2 47.36	+19 5.4	1.987	2.966	3.3	18.6
11 27	2 38.25	+16 31.5	2.418	3.350	6.5	19.4	11 27	2 40.14	+18 3.8	2.033	2.972	7.1	18.8
12 7	2 31.41	+16 37.2	2.492	3.353	9.5	19.6	12 7	2 34.62	+17 8.5	2.105	2.978	10.5	19.1
12 17	2 26.48	+16 48.0	2.591	3.355	12.1	19.8	12 17	2 31.24	+16 23.6	2.201	2.984	13.4	19.3
342067	2008 <i>SD</i> ₂₄	11	8.3 341°12	0°9/7.8	18		265204	2004 <i>BE</i> ₁₀₇	11	8.3 274°60	2°5/9.5	18	
10 8	3 15.51	+16 37.1	1.167	2.061	16.6	20.5	10 8	3 23.21	+22 22.5	1.498	2.357	15.6	20.4
10 18	3 11.39	+16 10.1	1.101	2.047	11.9	20.2	10 18	3 16.66	+22 41.2	1.418	2.344	11.6	20.1
10 28	3 4.40	+15 32.0	1.055	2.035	6.5	19.9	10 28	3 7.25	+22 47.1	1.361	2.331	7.0	19.8
11 7	2 55.62	+14 47.3	1.033	2.023	1.1	19.5	11 7	2 55.98	+22 39.8	1.330	2.317	2.8	19.5
11 17	2 46.54	+14 2.6	1.035	2.013	5.6	19.7	11 17	2 44.29	+22 21.1	1.326	2.304	4.8	19.6
11 27	2 38.82	+13 25.9	1.061	2.005	11.3	20.0	11 27	2 33.78	+21 56.2	1.349	2.291	9.6	19.9
12 7	2 33.73	+13 3.5	1.108	1.997	16.4	20.3	12 7	2 25.77	+21 31.9	1.396	2.277	14.2	20.1
12 17	2 31.99	+12 59.0	1.174	1.992	20.6	20.6	12 17	2 21.03	+21 14.2	1.463	2.264	18.1	20.3
236630	2006 <i>KY</i> ₁₉	11	8.3 97°60	1°4/9.2	18		191496	2003 <i>UU</i> ₂₁	11	8.3 358°05	6°4/12.9	17	
10 8	3 22.00	+21 33.2	1.880	2.731	13.3	20.5	10 8	3 15.49	+34 16.2	1.611	2.438	16.3	18.8
10 18	3 14.89	+21 29.3	1.828	2.751	9.6	20.3	10 18	3 11.00	+34 27.4	1.541	2.434	13.1	18.6
10 28	3 5.83	+21 14.5	1.800	2.770	5.5	20.1	10 28	3 4.02	+34 14.8	1.491	2.431	9.7	18.4
11 7	2 55.76	+20 50.4	1.800	2.788	1.7	19.9	11 7	2 55.58	+33 37.3	1.465	2.429	7.0	18.3
11 17	2 45.78	+20 20.1	1.829	2.807	3.7	20.1	11 17	2 46.99	+32 37.1	1.464	2.428	6.7	18.3
11 27	2 37.02	+19 48.5	1.886	2.825	7.6	20.4	11 27	2 39.65	+31 21.3	1.490	2.429	9.1	18.4
12 7	2 30.28	+19 20.4	1.971	2.842	11.1	20.6	12 7	2 34.64	+29 59.4	1.539	2.430	12.5	18.6
12 17	2 26.03	+18 59.9	2.078	2.859	14.1	20.9	12 17	2 32.56	+28 40.5	1.611	2.433	15.7	18.8
443370	2014 <i>HO</i>	11	8.3 127°66	0°6/7.9	18		48124	2001 <i>FZ</i> ₁₀₁	11	8.3 162°17	5°2/11.8	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
296807	2009 <i>VF</i> ₇₂		11 8.3 17°68'	3°6'	6.1	18	515627	2014 <i>LW</i> ₃		11 8.3 61°09'	3°3'	6.3	18
10 8	3 17.06	+ 6 53.0	1.988	2.862	11.7	20.0	10 8	3 18.72	+ 8 46.3	1.793	2.668	12.6	21.1
10 18	3 11.35	+ 6 31.1	1.929	2.864	8.4	19.8	10 18	3 12.67	+ 8 16.7	1.736	2.672	9.0	20.9
10 28	3 3.93	+ 6 11.1	1.896	2.867	5.1	19.6	10 28	3 4.71	+ 7 47.2	1.703	2.677	5.3	20.7
11 7	2 55.58	+ 5 56.8	1.890	2.870	3.6	19.5	11 7	2 55.71	+ 7 22.0	1.698	2.681	3.3	20.6
11 17	2 47.20	+ 5 51.3	1.912	2.873	5.7	19.7	11 17	2 46.69	+ 7 5.0	1.720	2.685	5.8	20.8
11 27	2 39.73	+ 5 57.3	1.962	2.877	8.9	19.9	11 27	2 38.72	+ 6 59.9	1.771	2.690	9.4	21.0
12 7	2 33.93	+ 6 15.8	2.038	2.881	12.1	20.1	12 7	2 32.63	+ 7 8.3	1.845	2.694	12.9	21.2
12 17	2 30.25	+ 6 46.7	2.135	2.885	14.7	20.3	12 17	2 28.90	+ 7 30.5	1.941	2.699	15.8	21.5
443524	2014 <i>JL</i> ₆₂		11 8.3 64°93'	3°2'	6.2	18	486551	2013 <i>HO</i> ₄₈		11 8.3 275°19'	0°3'	8.6	17
10 8	3 17.55	+ 9 54.5	1.775	2.652	12.7	20.7	10 8	3 17.02	+20 15.8	1.985	2.844	12.3	21.8
10 18	3 11.77	+ 9 7.2	1.724	2.662	9.0	20.5	10 18	3 11.56	+19 37.1	1.901	2.830	8.9	21.6
10 28	3 4.17	+ 8 18.6	1.698	2.673	5.2	20.3	10 28	3 4.18	+18 46.9	1.843	2.817	5.0	21.3
11 7	2 55.61	+ 7 33.8	1.700	2.683	3.3	20.2	11 7	2 55.66	+17 48.1	1.812	2.803	0.8	21.0
11 17	2 47.12	+ 6 57.6	1.729	2.694	5.8	20.4	11 17	2 46.96	+16 45.3	1.810	2.789	3.7	21.2
11 27	2 39.71	+ 6 34.4	1.786	2.705	9.4	20.6	11 27	2 39.15	+15 44.5	1.838	2.774	7.9	21.4
12 7	2 34.17	+ 6 26.4	1.868	2.716	12.8	20.9	12 7	2 33.07	+14 51.5	1.891	2.760	11.6	21.6
12 17	2 30.93	+ 6 34.0	1.970	2.726	15.6	21.1	12 17	2 29.30	+14 10.6	1.967	2.746	14.9	21.8
361953	2008 <i>JY</i> ₅		11 8.3 110°34'	1°0'	7.5	18	285495	2000 <i>CX</i> ₁₄₉		11 8.3 345°08'	6°2'	3.3	18
10 8	3 18.63	+13 50.3	2.632	3.488	9.8	21.4	10 8	3 14.80	- 0 37.8	2.154	3.023	11.1	20.6
10 18	3 12.04	+13 35.2	2.581	3.510	6.8	21.2	10 18	3 9.65	- 1 42.0	2.099	3.022	8.6	20.4
10 28	3 4.14	+13 17.0	2.557	3.532	3.7	21.0	10 28	3 2.99	- 2 39.6	2.070	3.021	6.6	20.3
11 7	2 55.61	+12 57.9	2.563	3.553	1.0	20.9	11 7	2 55.51	- 3 24.8	2.068	3.020	6.4	20.3
11 17	2 47.15	+12 40.3	2.600	3.573	3.3	21.1	11 17	2 48.02	- 3 53.4	2.094	3.019	8.0	20.4
11 27	2 39.51	+12 26.8	2.668	3.593	6.3	21.3	11 27	2 41.33	- 4 2.6	2.146	3.018	10.4	20.5
12 7	2 33.25	+12 19.6	2.763	3.612	9.1	21.5	12 7	2 36.11	- 3 52.1	2.221	3.017	12.9	20.7
12 17	2 28.75	+12 20.2	2.882	3.631	11.3	21.7	12 17	2 32.81	- 3 23.4	2.316	3.016	15.0	20.9
151682	2003 <i>AQ</i> ₂₈		11 8.3 275°44'	1°2'	7.6	18	348019	2003 <i>SQ</i> ₃₃₅		11 8.3 110°20'	3°2'	6.3	18
10 8	3 19.76	+15 48.8	1.570	2.444	14.2	20.1	10 8	3 20.04	+ 9 11.0	1.845	2.717	12.5	21.0
10 18	3 13.91	+15 16.1	1.492	2.429	10.2	19.9	10 18	3 13.49	+ 8 35.8	1.794	2.729	8.9	20.9
10 28	3 5.61	+14 34.8	1.438	2.415	5.6	19.6	10 28	3 5.10	+ 8 0.3	1.768	2.741	5.2	20.7
11 7	2 55.81	+13 48.5	1.410	2.400	1.2	19.2	11 7	2 55.76	+ 7 28.7	1.770	2.753	3.2	20.6
11 17	2 45.73	+13 2.6	1.410	2.385	5.0	19.5	11 17	2 46.50	+ 7 5.3	1.800	2.765	5.6	20.7
11 27	2 36.74	+12 23.5	1.436	2.370	9.9	19.7	11 27	2 38.33	+ 6 53.5	1.859	2.776	9.2	21.0
12 7	2 29.92	+11 56.5	1.487	2.355	14.3	19.9	12 7	2 32.05	+ 6 55.2	1.942	2.787	12.5	21.2
12 17	2 25.95	+11 45.1	1.558	2.341	18.0	20.1	12 17	2 28.09	+ 7 10.8	2.047	2.797	15.3	21.4
435474	2008 <i>FD</i> ₉₈		11 8.3 316°66'	7°6'	3.3	18	123732	2001 <i>AU</i> ₈		11 8.3 159°85'	2°2'	10.3	18
10 8	3 15.60	+ 5 27.6	1.184	2.083	16.0	21.0	10 8	3 17.10	+26 5.0	2.339	3.174	11.5	19.8
10 18	3 11.34	+ 3 35.3	1.120	2.064	12.0	20.7	10 18	3 11.33	+25 41.5	2.266	3.177	8.6	19.6
10 28	3 4.34	+ 1 41.1	1.077	2.046	8.5	20.5	10 28	3 3.93	+25 4.9	2.217	3.179	5.4	19.4
11 7	2 55.67	- 0 2.6	1.059	2.029	7.9	20.4	11 7	2 55.63	+24 16.8	2.197	3.181	2.5	19.2
11 17	2 46.71	- 1 23.7	1.064	2.012	11.0	20.5	11 17	2 47.31	+23 20.4	2.206	3.182	3.3	19.3
11 27	2 39.02	- 2 12.9	1.093	1.996	15.4	20.7	11 27	2 39.85	+22 20.6	2.245	3.184	6.5	19.5
12 7	2 33.81	- 2 27.2	1.140	1.981	19.7	21.0	12 7	2 33.98	+21 22.9	2.311	3.185	9.6	19.7
12 17	2 31.78	- 2 8.6	1.203	1.966	23.3	21.2	12 17	2 30.16	+20 31.8	2.402	3.187	12.3	19.9
24431	2000 <i>CR</i> ₄₅		11 8.3 150°59'	2°7'	5.9	18	366810	2005 <i>CO</i> ₃₉		11 8.3 313°52'	11°4'	28.4	18
10 8	3 14.72	+ 9 57.5	2.435	3.305	10.0	18.1	10 8	3 15.47	-19 34.7	2.248	3.056	12.9	19.7
10 18	3 9.45	+ 9 5.0	2.372	3.307	7.1	17.9	10 18	3 10.14	-20 54.5	2.209	3.050	11.8	19.7
10 28	3 2.82	+ 8 11.0	2.337	3.310	4.1	17.7	10 28	3 3.26	-21 53.9	2.193	3.043	11.4	19.6
11 7	2 55.47	+ 7 19.3	2.330	3.312	2.7	17.6	11 7	2 55.55	-22 27.0	2.199	3.036	11.8	19.6
11 17	2 48.10	+ 6 34.2	2.353	3.314	4.7	17.8	11 17	2 47.84	-22 30.3	2.228	3.030	12.8	19.7
11 27	2 41.48	+ 5 59.3	2.405	3.316	7.7	18.0	11 27	2 40.96	-22 3.3	2.278	3.024	14.2	19.8
12 7	2 36.19	+ 5 36.9	2.483	3.318	10.4	18.1	12 7	2 35.61	-21 8.7	2.347	3.018	15.6	19.9
12 17	2 32.66	+ 5 28.0	2.583	3.320	12.8	18.3	12 17	2 32.20	-19 51.0	2.432	3.012	16.9	20.0
318191	2004 <i>RN</i> ₁₀₃		11 8.3 57°84'	1°6'	9.6	18	53997	2000 <i>GD</i> ₈₈		11 8.3 302°74'	0°4'	8.1	18
10 8	3 17.27	+23 59.4	1.898	2.749	13.1	19.9	10 8	3 21.88	+14 44.0	1.728	2.596	13.5	18.2
10 18	3 11.56	+23 24.0	1.844	2.766	9.6	19.7	10 18	3 15.30	+15 2.3	1.650	2.584	9.7	18.0
10 28	3 4.04	+22 35.0	1.814	2.782	5.6	19.5	10 28	3 6.36	+15 17.0	1.597	2.572	5.3	17.7
11 7	2 55.60	+21 35.4	1.811	2.799	2.0	19.3	11 7	2 55.95	+15 29.0	1.570	2.561	0.7	17.3
11 17	2 47.28	+20 29.9	1.838	2.816	3.5	19.4	11 17	2 45.22	+15 40.0	1.573	2.550	4.3	17.6
11 27	2 40.09	+19 24.9	1.893	2.833	7.4	19.7	11 27	2 35.47	+15 53.0	1.603	2.539	8.9	17.8
12 7	2 34.77	+18 26.4	1.974	2.851	10.9	19.9	12 7	2 27.78	+16 10.6	1.659	2.528	13.0	18.1
12 17	2 31.75	+17 38.8	2.078	2.868	13.8	20.2	12 17	2 22.82	+16 35.4	1.737	2.518	16.4	18.3
161687	2006 <i>HC</i> ₁₇		11 8.3 122°94'	5°9'	3.5	18	275016	2009 <i>UV</i> ₁₅		11 8.3 7°06'	0°3'	8.2	18
10 8	3 17.81	+ 2 1.5	2.049	2.918	11.6	19.9	10 8	3 17.20	+16 35.6	1.857	2.726	12.6	20.1
10 18	3 11.70	+ 0 35.6	2.007	2.933	8.7	19.7	10 18	3 11.68	+16 27.8	1.792	2.726	9.0	19.8
10 28	3 4.03	- 0 45.1	1.991	2.947	6.4	19.6	10 28	3 4.22	+16 13.5	1.752	2.728	4.9	19.6
11 7	2 55.61	- 1 54.0	2.003	2.961	6.0	19.6	11 7	2 55.68	+15 55.1	1.738	2.729	0.6	19.3
11 17	2 47.30	- 2 46.0	2.044	2.974	7.8	19.8	11 17	2 47.05	+15 35.6	1.753	2.731	3.9	19.6
11 27	2 39.96	- 3 17.5	2.111	2.986	10.4	20.0	11 27	2 39.40	+15 19.3	1.796	2.733	8.0	19.8
12 7	2 34.26	- 3 27.9	2.203	2.999	13.0	20.2	12 7	2 33.58	+15 9.6	1.865	2.736	11.7	20.1
12 17	2 30.61	- 3 18.7	2.315	3.010	15.2	20.4	12 17	2 30.10	+15 9.1	1.955	2.740	14.8	20.3
25948	2001 <i>EW</i> ₁₅		11 8.3 59°31'	8°7'									

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
66461	1999 RQ ₁₁	11	8.3 128°98	0°8/ 8.9 18			445204	2009 DS ₈₀	11	8.3 198°50	4°7/11.5 18		
10 8	3 20.44	+21 9.9	1.978	2.830	12.7	19.8	10 8	3 22.83	+30 50.0	2.170	2.982	13.1	21.3
10 18	3 13.77	+20 38.2	1.918	2.843	9.1	19.6	10 18	3 15.76	+31 18.8	2.091	2.980	10.3	21.1
10 28	3 5.26	+19 55.5	1.884	2.855	5.1	19.4	10 28	3 6.53	+31 32.1	2.035	2.977	7.4	20.9
11 7	2 55.80	+19 4.4	1.877	2.867	1.1	19.1	11 7	2 55.99	+31 28.3	2.007	2.974	5.0	20.8
11 17	2 46.40	+18 9.4	1.901	2.879	3.5	19.3	11 17	2 45.23	+31 8.0	2.008	2.971	5.2	20.8
11 27	2 38.11	+17 16.1	1.953	2.890	7.5	19.6	11 27	2 35.43	+30 35.1	2.037	2.968	7.7	21.0
12 7	2 31.69	+16 29.6	2.032	2.900	11.0	19.8	12 7	2 27.55	+29 55.5	2.093	2.964	10.6	21.1
12 17	2 27.62	+15 54.0	2.134	2.910	14.0	20.1	12 17	2 22.23	+29 15.5	2.173	2.959	13.4	21.3
171253	2005 NJ ₁₂	11	8.3 13°99	0°4/ 7.8 18			37263	2000 XP ₁₂	11	8.3 176°70	3°7/10.5 18		
10 8	3 9.30	+15 39.6	4.143	5.000	6.5	20.4	10 8	3 24.38	+26 40.2	1.992	2.821	13.5	19.0
10 18	3 5.27	+15 18.9	4.071	5.000	4.6	20.2	10 18	3 16.91	+27 12.4	1.918	2.823	10.3	18.8
10 28	3 0.46	+14 55.3	4.027	5.001	2.4	20.1	10 28	3 7.17	+27 31.2	1.868	2.824	6.8	18.6
11 7	2 55.23	+14 30.3	4.012	5.003	0.5	19.9	11 7	2 56.07	+27 35.4	1.846	2.824	4.0	18.5
11 17	2 49.96	+14 5.6	4.029	5.004	2.1	20.1	11 17	2 44.75	+27 25.7	1.854	2.825	4.6	18.5
11 27	2 45.09	+13 43.2	4.076	5.005	4.2	20.2	11 27	2 34.49	+27 5.9	1.890	2.825	7.8	18.7
12 7	2 40.97	+13 24.7	4.152	5.006	6.2	20.4	12 7	2 26.27	+26 41.5	1.953	2.824	11.2	18.9
12 17	2 37.87	+13 11.6	4.253	5.007	7.9	20.5	12 17	2 20.75	+26 18.2	2.039	2.823	14.2	19.1
84363	2002 TO ₉₅	11	8.3 347°19	8°6/13.3 17			518797	2010 BP ₈₈	11	8.3 35°61	4°7/ 4.7 18		
10 8	3 18.25	+35 54.0	1.387	2.213	18.5	18.7	10 8	3 14.47	+ 7 32.7	1.734	2.618	12.5	20.4
10 18	3 13.55	+36 38.4	1.315	2.203	15.2	18.5	10 18	3 9.59	+ 6 6.9	1.693	2.633	9.0	20.3
10 28	3 5.73	+36 56.5	1.262	2.194	11.8	18.2	10 28	3 3.00	+ 4 41.9	1.677	2.647	5.8	20.1
11 7	2 55.89	+36 44.1	1.231	2.187	9.1	18.1	11 7	2 55.56	+ 3 25.0	1.688	2.663	4.8	20.1
11 17	2 45.67	+36 1.4	1.223	2.180	8.8	18.0	11 17	2 48.23	+ 2 22.7	1.726	2.679	7.1	20.2
11 27	2 36.89	+34 54.6	1.240	2.175	11.0	18.1	11 27	2 41.98	+ 1 39.6	1.791	2.695	10.3	20.5
12 7	2 30.96	+33 34.9	1.280	2.171	14.5	18.3	12 7	2 37.49	+ 1 17.7	1.880	2.712	13.4	20.7
12 17	2 28.65	+32 13.9	1.340	2.168	17.9	18.5	12 17	2 35.18	+ 1 16.2	1.988	2.729	16.0	20.9
7917	Hammergren	11	8.3 61°20	6°4/12.2 18			219209	1999 V7 ₅₉	11	8.3 353°82	0°5/ 7.9 18		
10 8	3 23.62	+32 36.1	1.426	2.256	17.8	17.9	10 8	3 15.19	+18 12.7	1.899	2.768	12.4	19.9
10 18	3 16.90	+33 0.2	1.372	2.270	14.1	17.7	10 18	3 10.21	+17 21.3	1.831	2.766	8.8	19.7
10 28	3 7.27	+32 59.8	1.339	2.283	10.1	17.5	10 28	3 3.41	+16 20.0	1.788	2.764	4.8	19.5
11 7	2 56.05	+32 33.2	1.329	2.297	7.0	17.3	11 7	2 55.62	+15 13.1	1.772	2.763	0.7	19.2
11 17	2 44.86	+31 43.1	1.345	2.311	6.9	17.4	11 17	2 47.78	+14 6.1	1.785	2.762	4.0	19.4
11 27	2 35.35	+30 37.4	1.387	2.325	9.8	17.6	11 27	2 40.90	+13 5.0	1.827	2.761	8.1	19.7
12 7	2 28.70	+29 26.8	1.453	2.339	13.4	17.8	12 7	2 35.75	+12 15.2	1.894	2.761	11.7	19.9
12 17	2 25.44	+28 20.4	1.541	2.353	16.8	18.1	12 17	2 32.84	+11 39.8	1.983	2.761	14.8	20.1
210331	2007 TE ₃₀₃	11	8.3 325°14	0°4/ 8.6 18			515909	2015 PM ₁₉₀	11	8.3 146°30	2°8/10.1 18		
10 8	3 18.64	+18 58.4	1.675	2.542	13.8	20.5	10 8	3 22.00	+24 44.5	1.897	2.739	13.6	22.1
10 18	3 12.93	+18 41.6	1.605	2.538	9.9	20.3	10 18	3 15.19	+24 59.2	1.828	2.743	10.1	21.9
10 28	3 5.01	+18 14.7	1.559	2.534	5.5	20.0	10 28	3 6.21	+25 1.0	1.783	2.746	6.4	21.6
11 7	2 55.79	+17 40.1	1.540	2.530	0.8	19.7	11 7	2 55.96	+24 49.9	1.766	2.749	3.1	21.4
11 17	2 46.43	+17 2.1	1.548	2.527	4.1	19.9	11 17	2 45.59	+24 27.7	1.777	2.752	4.2	21.5
11 27	2 38.17	+16 26.1	1.584	2.523	8.7	20.2	11 27	2 36.31	+23 58.9	1.816	2.755	7.8	21.7
12 7	2 31.96	+15 57.5	1.644	2.520	12.7	20.4	12 7	2 29.07	+23 29.3	1.882	2.758	11.4	22.0
12 17	2 28.41	+15 40.1	1.727	2.517	16.2	20.7	12 17	2 24.45	+23 4.0	1.971	2.760	14.5	22.2
470254	2006 YW ₃₅	11	8.3 337°67	0°5/ 8.1 18			349823	2009 BM ₁₈₄	11	8.3 342°37	2°1/ 9.4 18		
10 8	3 19.97	+16 5.8	1.233	2.118	16.5	21.1	10 8	3 17.18	+21 57.0	1.295	2.172	16.4	20.0
10 18	3 14.51	+16 1.8	1.168	2.110	11.9	20.8	10 18	3 12.54	+21 59.4	1.226	2.161	12.1	19.7
10 28	3 6.12	+15 49.6	1.125	2.103	6.5	20.5	10 28	3 5.07	+21 47.0	1.177	2.150	7.2	19.4
11 7	2 55.94	+15 31.9	1.105	2.096	0.8	20.1	11 7	2 55.84	+21 20.9	1.153	2.141	2.5	19.1
11 17	2 45.48	+15 13.3	1.112	2.090	5.3	20.4	11 17	2 46.31	+20 45.1	1.153	2.133	4.8	19.3
11 27	2 36.42	+14 59.4	1.143	2.085	10.9	20.7	11 27	2 38.08	+20 6.5	1.179	2.126	10.0	19.5
12 7	2 30.04	+14 55.5	1.196	2.081	15.8	20.9	12 7	2 32.41	+19 32.6	1.227	2.120	14.8	19.8
12 17	2 27.06	+15 4.7	1.268	2.077	19.9	21.2	12 17	2 30.03	+19 9.3	1.295	2.115	18.9	20.1
101257	1998 SE ₉₅	11	8.3 87°43	0°7/ 8.0 18			235926	2005 EL ₉₇	11	8.3 313°50	10°1/16.9 17		
10 8	3 23.91	+15 53.5	1.477	2.347	15.2	19.7	10 8	3 22.81	+48 6.4	2.246	2.961	15.6	19.9
10 18	3 16.59	+15 42.6	1.430	2.365	10.7	19.5	10 18	3 16.33	+48 59.5	2.160	2.950	13.8	19.7
10 28	3 6.90	+15 24.5	1.407	2.383	5.8	19.3	10 28	3 7.09	+49 28.0	2.094	2.939	12.1	19.6
11 7	2 56.00	+15 2.3	1.411	2.401	0.8	19.0	11 7	2 56.09	+49 27.2	2.049	2.929	10.7	19.5
11 17	2 45.26	+14 40.1	1.442	2.419	4.7	19.3	11 17	2 44.69	+48 55.5	2.028	2.919	10.1	19.4
11 27	2 36.01	+14 22.8	1.501	2.437	9.4	19.6	11 27	2 34.45	+47 55.7	2.032	2.908	10.7	19.4
12 7	2 29.22	+14 14.6	1.584	2.454	13.5	19.9	12 7	2 26.64	+46 35.4	2.060	2.899	12.2	19.5
12 17	2 25.35	+14 17.7	1.688	2.471	16.8	20.2	12 17	2 21.99	+45 3.9	2.111	2.889	14.0	19.6
473386	2015 UL ₈₃	11	8.3 11°98	7°4/ 5.2 18			415794	2001 BR ₃₂	11	8.3 183°56	8°4/29.8 18		
10 8	3 20.12	- 2 6.6	1.560	2.432	14.4	19.7	10 8	3 18.05	-16 58.4	3.102	3.902	9.9	22.2
10 18	3 13.84	- 2 24.7	1.510	2.435	11.1	19.5	10 18	3 11.58	-18 11.5	3.061	3.902	8.9	22.1
10 28	3 5.41	- 2 30.4	1.484	2.438	8.3	19.4	10 28	3 3.94	-19 10.5	3.046	3.902	8.4	22.1
11 7	2 55.83	- 2 18.7	1.482	2.442	7.5	19.3	11 7	2 55.68	-19 50.9	3.057	3.901	8.6	22.1
11 17	2 46.27	- 1 46.6	1.507	2.447	9.2	19.4	11 17	2 47.43	-20 9.9	3.094	3.900	9.5	22.1
11 27	2 37.94	- 0 53.7	1.558	2.452	12.2	19.6	11 27	2 39.83	-20 6.8	3.156	3.897	10.7	22.2
12 7	2 31.72	+ 0 17.4	1.631	2.458	15.4	19.9	12 7	2 33.41	-19 42.7	3.239	3.893	11.9	22.3
12 17	2 28.14	+ 1 43.1	1.725	2.465	18.1	20.1	12 17	2 28.54	-19 0.4	3.340	3.888	13.0	22.4
431689	2008 DP ₃₅	11	8.3 166°66	2°2/ 6.8 16			133497	2003 SE ₂₈₀	11	8.3 279°71	7°2/13.8 17		
10 8	3 20.67	+13 37.2	1.780										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
448713	2011 <i>AJ</i> ₂₃	11	8.4 232°14	6°5/ 2.5 17			200334	2000 <i>HO</i> ₁₁	11	8.4 179°12	2°0/ 7.2 17		
10 8	3 15.82	- 5 30.8	2.668	3.518	9.8	21.7	10 8	3 23.06	+14 5.8	1.523	2.395	14.7	20.7
10 18	3 10.20	- 6 22.3	2.605	3.509	8.0	21.6	10 18	3 16.15	+13 25.2	1.460	2.397	10.4	20.5
10 28	3 3.27	- 7 5.2	2.568	3.498	6.7	21.5	10 28	3 6.80	+12 37.7	1.421	2.398	5.7	20.2
11 7	2 55.62	- 7 34.9	2.559	3.488	6.6	21.5	11 7	2 56.09	+11 48.1	1.409	2.398	2.0	20.0
11 17	2 47.89	- 7 48.3	2.577	3.477	7.8	21.5	11 17	2 45.32	+11 2.3	1.425	2.398	5.5	20.2
11 27	2 40.81	- 7 43.5	2.623	3.466	9.7	21.6	11 27	2 35.85	+10 26.5	1.469	2.398	10.2	20.5
12 7	2 34.96	- 7 20.7	2.692	3.455	11.7	21.8	12 7	2 28.72	+10 5.1	1.536	2.396	14.4	20.7
12 17	2 30.75	- 6 41.5	2.782	3.443	13.5	21.9	12 17	2 24.50	+10 0.2	1.624	2.394	17.9	21.0
215694	2003 <i>YD</i> ₇₈	11	8.4 351°41	4°7/ 6.4 18			320218	2007 <i>HG</i> ₄₅	11	8.4 184°77	1°4/ 7.1 18		
10 8	3 20.91	+ 7 32.3	1.198	2.089	16.5	19.9	10 8	3 16.12	+13 10.7	2.603	3.465	9.7	21.7
10 18	3 15.05	+ 7 8.1	1.142	2.085	11.9	19.6	10 18	3 10.46	+12 40.5	2.533	3.465	6.8	21.5
10 28	3 6.36	+ 6 45.9	1.108	2.083	7.2	19.3	10 28	3 3.44	+12 7.0	2.490	3.465	3.7	21.3
11 7	2 56.01	+ 6 31.7	1.097	2.080	4.7	19.2	11 7	2 55.67	+11 32.9	2.476	3.464	1.4	21.2
11 17	2 45.52	+ 6 30.7	1.112	2.079	7.7	19.4	11 17	2 47.86	+11 1.3	2.492	3.463	3.6	21.3
11 27	2 36.51	+ 6 46.7	1.150	2.078	12.5	19.6	11 27	2 40.74	+10 35.6	2.539	3.462	6.7	21.5
12 7	2 30.18	+ 7 20.6	1.211	2.077	17.0	19.9	12 7	2 34.92	+10 18.2	2.612	3.460	9.6	21.7
12 17	2 27.15	+ 8 11.3	1.289	2.078	20.7	20.2	12 17	2 30.82	+10 10.7	2.709	3.459	12.0	21.9
57323	2001 <i>QN</i> ₂₄₀	11	8.4 315°19	5°5/ 11.6 18			172184	2002 <i>PT</i> ₈₃	11	8.4 39°42	9°2/ 3.1 18		
10 8	3 20.00	+30 44.0	1.746	2.575	15.1	17.9	10 8	3 17.58	- 3 16.2	1.416	2.295	15.1	19.1
10 18	3 14.25	+31 14.1	1.662	2.561	11.9	17.7	10 18	3 12.03	- 4 35.3	1.386	2.310	12.0	19.0
10 28	3 5.94	+31 26.2	1.601	2.548	8.5	17.4	10 28	3 4.40	- 5 40.1	1.380	2.326	9.7	18.9
11 7	2 55.98	+31 18.1	1.565	2.534	5.9	17.3	11 7	2 55.78	- 6 22.2	1.397	2.343	9.4	18.9
11 17	2 45.63	+30 50.5	1.555	2.521	6.0	17.2	11 17	2 47.36	- 6 36.7	1.439	2.360	11.2	19.0
11 27	2 36.33	+30 8.0	1.572	2.509	8.9	17.4	11 27	2 40.30	- 6 22.1	1.504	2.377	13.9	19.3
12 7	2 29.27	+29 18.2	1.614	2.497	12.5	17.6	12 7	2 35.40	- 5 41.1	1.590	2.395	16.7	19.5
12 17	2 25.17	+28 28.9	1.678	2.485	15.9	17.8	12 17	2 33.08	- 4 38.4	1.693	2.414	19.1	19.7
190929	2001 <i>VV</i> ₃	11	8.4 106°35	1°6/ 9.3 18			76089	2000 <i>DH</i> ₉₄	11	8.4 251°89	2°5/ 6.6 18		
10 8	3 23.05	+22 8.6	1.693	2.547	14.4	20.6	10 8	3 18.59	+11 2.3	2.108	2.976	11.4	19.6
10 18	3 15.90	+21 59.7	1.639	2.563	10.5	20.4	10 18	3 12.59	+10 25.9	2.026	2.960	8.1	19.4
10 28	3 6.53	+21 38.2	1.609	2.579	6.1	20.2	10 28	3 4.77	+ 9 46.4	1.969	2.944	4.6	19.1
11 7	2 56.02	+21 5.8	1.605	2.594	1.9	19.9	11 7	2 55.86	+ 9 7.6	1.941	2.927	2.5	18.9
11 17	2 45.59	+20 26.3	1.631	2.609	4.0	20.1	11 17	2 46.75	+ 8 33.8	1.943	2.910	5.0	19.1
11 27	2 36.49	+19 45.6	1.684	2.624	8.2	20.4	11 27	2 38.42	+ 8 9.1	1.973	2.892	8.6	19.3
12 7	2 29.64	+19 9.5	1.763	2.638	12.1	20.7	12 7	2 31.68	+ 7 56.5	2.029	2.874	12.0	19.5
12 17	2 25.53	+18 42.5	1.865	2.652	15.3	20.9	12 17	2 27.10	+ 7 57.6	2.106	2.856	14.9	19.6
255163	2005 <i>UT</i> ₁₉₂	11	8.4 345°66	2°9/ 5.9 18			138398	2000 <i>HG</i> ₁₁	11	8.4 114°65	0°9/ 7.7 18		
10 8	3 13.87	+13 55.9	1.630	2.514	13.2	20.1	10 8	3 19.28	+15 22.8	2.104	2.966	11.6	20.2
10 18	3 9.48	+12 22.0	1.565	2.507	9.3	19.9	10 18	3 12.87	+14 59.2	2.048	2.979	8.2	20.0
10 28	3 3.10	+10 39.4	1.524	2.501	5.2	19.6	10 28	3 4.79	+14 30.4	2.017	2.992	4.4	19.8
11 7	2 55.61	+ 8 55.5	1.510	2.496	3.0	19.5	11 7	2 55.85	+13 59.0	2.015	3.005	0.9	19.6
11 17	2 48.07	+ 7 19.2	1.524	2.491	6.1	19.7	11 17	2 46.96	+13 28.8	2.042	3.017	3.8	19.8
11 27	2 41.56	+ 5 58.6	1.566	2.487	10.2	19.9	11 27	2 39.03	+13 3.5	2.099	3.029	7.5	20.1
12 7	2 36.94	+ 4 59.1	1.631	2.484	14.0	20.1	12 7	2 32.80	+12 46.3	2.182	3.041	10.8	20.3
12 17	2 34.73	+ 4 22.8	1.716	2.481	17.2	20.4	12 17	2 28.70	+12 39.4	2.288	3.052	13.5	20.5
370519	2003 <i>SN</i> ₂₆₄	11	8.4 33°28	1°9/ 7.6 18			70885	1999 <i>VS</i> ₁₆₃	11	8.4 37°22	0°6/ 8.7 18		
10 8	3 21.44	+13 41.6	1.070	1.963	17.8	20.2	10 8	3 19.19	+19 40.8	1.422	2.295	15.4	19.2
10 18	3 15.51	+13 27.7	1.026	1.972	12.6	20.0	10 18	3 13.47	+19 22.6	1.370	2.306	11.1	19.0
10 28	3 6.58	+13 8.1	1.003	1.982	6.9	19.7	10 28	3 5.34	+18 52.5	1.341	2.316	6.2	18.7
11 7	2 56.03	+12 47.3	1.004	1.993	1.9	19.4	11 7	2 55.93	+18 13.8	1.337	2.328	1.1	18.4
11 17	2 45.57	+12 30.7	1.028	2.005	6.1	19.7	11 17	2 46.56	+17 31.4	1.360	2.340	4.4	18.7
11 27	2 36.91	+12 24.0	1.077	2.018	11.6	20.1	11 27	2 38.59	+16 52.0	1.410	2.352	9.2	19.0
12 7	2 31.21	+12 30.8	1.148	2.031	16.4	20.4	12 7	2 33.00	+16 21.2	1.483	2.365	13.5	19.3
12 17	2 29.00	+12 52.4	1.236	2.045	20.3	20.7	12 17	2 30.30	+16 3.0	1.577	2.378	17.0	19.6
444590	2006 <i>UQ</i> ₇₈	11	8.4 18°33	0°1/ 8.4 17			475894	2007 <i>DH</i> ₃₄	11	8.4 339°60	3°7/ 9.9 18		
10 8	3 14.76	+20 48.6	1.340	2.220	15.7	20.3	10 8	3 18.53	+23 38.3	1.121	2.000	18.3	20.5
10 18	3 10.37	+19 46.6	1.289	2.228	11.2	20.1	10 18	3 13.99	+24 7.2	1.052	1.986	13.8	20.2
10 28	3 3.64	+18 29.1	1.260	2.237	6.2	19.8	10 28	3 6.12	+24 19.5	1.003	1.973	8.7	19.9
11 7	2 55.68	+17 2.2	1.256	2.247	0.8	19.5	11 7	2 56.06	+24 14.1	0.976	1.962	4.1	19.6
11 17	2 47.80	+15 34.4	1.279	2.258	4.6	19.8	11 17	2 45.51	+23 52.9	0.973	1.952	5.8	19.7
11 27	2 41.30	+14 15.0	1.327	2.270	9.6	20.1	11 27	2 36.42	+23 22.7	0.993	1.943	11.1	19.9
12 7	2 37.11	+13 11.4	1.399	2.283	14.0	20.4	12 7	2 30.34	+22 52.3	1.035	1.935	16.2	20.2
12 17	2 35.70	+12 27.6	1.491	2.297	17.6	20.7	12 17	2 28.10	+22 29.5	1.095	1.929	20.7	20.4
474911	2005 <i>SC</i> ₂₁₃	11	8.4 349°33	1°7/ 9.1 16			260290	2004 <i>TN</i> ₆₅	11	8.4 1°32	5°1/ 5.4 18		
10 8	3 17.06	+20 15.9	1.075	1.965	18.0	20.7	10 8	3 17.81	+ 2 57.7	1.872	2.745	12.3	19.5
10 18	3 12.82	+20 27.6	1.013	1.955	13.2	20.4	10 18	3 12.03	+ 2 31.4	1.814	2.745	9.1	19.3
10 28	3 5.38	+20 25.6	0.970	1.946	7.7	20.0	10 28	3 4.42	+ 2 10.6	1.780	2.744	6.2	19.1
11 7	2 55.92	+20 10.9	0.950	1.939	2.2	19.7	11 7	2 55.82	+ 1 59.7	1.773	2.744	5.1	19.1
11 17	2 46.13	+19 47.5	0.953	1.934	5.3	19.9	11 17	2 47.17	+ 2 2.2	1.794	2.745	7.0	19.2
11 27	2 37.85	+19 22.4	0.979	1.930	11.1	20.2	11 27	2 39.48	+ 2 20.2	1.842	2.746	10.1	19.4
12 7	2 32.52	+19 3.1	1.027	1.927	16.4	20.5	12 7	2 33.53	+ 2 53.8	1.915	2.747	13.2	19.6
12 17	2 30.88	+18 55.2	1.093	1.926	20.8	20.7	12 17	2 29.84	+ 3 41.7	2.008	2.748	15.9	19.8
400488	2008 <i>HM</i> ₃₄	11	8.4 88°07	6°3/ 4.4 18			183663	2003 <i>WR</i> ₁₃₀	11				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
264880	2002 <i>RU</i> ₂₇₂		11 8.4 17 ^o 72	4.4/ 5.9	18		80470	2000 <i>AJ</i> ₂₉		11 8.4 332 ^o 92	1.8/ 7.6	18	
10 8	3 18.76	+ 9 58.3	1.275	2.165	15.7	20.4	10 8	3 18.03	+13 57.4	1.107	2.002	17.1	19.0
10 18	3 13.31	+ 8 52.5	1.223	2.167	11.2	20.1	10 18	3 13.48	+13 44.2	1.039	1.986	12.3	18.7
10 28	3 5.33	+ 7 44.0	1.193	2.169	6.7	19.9	10 28	3 5.79	+13 24.3	0.991	1.971	6.8	18.4
11 7	2 55.94	+ 6 40.4	1.188	2.171	4.4	19.7	11 7	2 56.08	+13 2.1	0.966	1.956	1.8	18.0
11 17	2 46.55	+ 5 49.8	1.209	2.174	7.6	19.9	11 17	2 45.93	+12 42.9	0.966	1.943	6.2	18.2
11 27	2 38.58	+ 5 18.6	1.254	2.177	12.1	20.2	11 27	2 37.16	+12 33.3	0.988	1.931	12.1	18.5
12 7	2 33.08	+ 5 9.8	1.321	2.181	16.3	20.5	12 7	2 31.20	+12 38.1	1.032	1.921	17.4	18.8
12 17	2 30.57	+ 5 23.0	1.407	2.184	19.8	20.7	12 17	2 28.86	+12 59.6	1.093	1.911	21.8	19.1
230726	2003 <i>US</i> ₂₆₆		11 8.4 89 ^o 58	0 ^o 8/ 7.8	18		239942	2001 <i>CS</i> ₁₂		11 8.4 337 ^o 86	2 ^o 6/ 7.2	18	
10 8	3 19.40	+13 42.4	2.313	3.173	10.8	19.9	10 8	3 17.12	+12 0.9	1.245	2.138	15.8	19.6
10 18	3 12.93	+13 48.7	2.248	3.179	7.6	19.7	10 18	3 12.50	+11 42.1	1.177	2.123	11.4	19.3
10 28	3 4.86	+13 52.3	2.210	3.185	4.1	19.5	10 28	3 5.11	+11 19.5	1.131	2.109	6.4	19.0
11 7	2 55.90	+13 54.5	2.201	3.191	0.9	19.3	11 7	2 55.99	+10 57.7	1.108	2.096	2.6	18.7
11 17	2 46.89	+13 57.3	2.222	3.197	3.5	19.5	11 17	2 46.53	+10 41.9	1.110	2.084	6.3	18.9
11 27	2 38.71	+14 2.9	2.273	3.204	7.0	19.7	11 27	2 38.31	+10 37.8	1.136	2.074	11.5	19.2
12 7	2 32.06	+14 13.5	2.352	3.210	10.1	19.9	12 7	2 32.59	+10 48.7	1.185	2.065	16.3	19.4
12 17	2 27.41	+14 30.6	2.453	3.216	12.7	20.1	12 17	2 30.09	+11 15.9	1.251	2.057	20.3	19.7
301669	2010 <i>EG</i> ₁₃₈		11 8.4 131 ^o 63	0 ^o 9/ 7.8	18		411974	2012 <i>HY</i> ₅₈		11 8.4 352 ^o 37	1 ^o 9/ 7.2	18	
10 8	3 19.92	+15 59.1	1.975	2.837	12.2	21.4	10 8	3 17.44	+11 36.8	2.021	2.891	11.6	20.3
10 18	3 13.44	+15 28.5	1.916	2.848	8.7	21.2	10 18	3 11.76	+11 23.2	1.954	2.890	8.3	20.1
10 28	3 5.17	+14 51.4	1.882	2.857	4.7	21.0	10 28	3 4.32	+11 7.6	1.913	2.888	4.6	19.9
11 7	2 55.94	+14 11.1	1.876	2.867	0.9	20.7	11 7	2 55.87	+10 52.9	1.899	2.887	1.9	19.7
11 17	2 46.74	+13 31.7	1.900	2.875	4.0	21.0	11 17	2 47.34	+10 42.0	1.915	2.886	4.5	19.9
11 27	2 38.57	+12 57.8	1.953	2.884	7.9	21.2	11 27	2 39.69	+10 38.3	1.958	2.885	8.1	20.1
12 7	2 32.21	+12 33.2	2.032	2.892	11.4	21.4	12 7	2 33.68	+10 43.9	2.027	2.885	11.5	20.3
12 17	2 28.13	+12 20.3	2.134	2.900	14.3	21.7	12 17	2 29.83	+10 59.9	2.119	2.885	14.4	20.5
242329	2003 <i>YL</i> ₃₃		11 8.4 355 ^o 47	16 ^o 4/28.5	18		76318	2000 <i>EY</i> ₁₄₁		11 8.4 206 ^o 18	6 ^o 1/ 2.4	18	
10 8	3 19.62	-24 55.2	1.584	2.382	17.8	19.1	10 8	3 14.32	- 3 11.4	2.610	3.469	9.7	18.8
10 18	3 13.58	-26 18.0	1.556	2.379	16.8	19.0	10 18	3 9.18	- 4 18.9	2.555	3.466	7.7	18.7
10 28	3 5.33	-27 8.0	1.548	2.377	16.4	19.0	10 28	3 2.77	- 5 19.2	2.525	3.464	6.3	18.6
11 7	2 55.96	-27 17.1	1.558	2.376	16.7	19.0	11 7	2 55.68	- 6 7.5	2.524	3.461	6.3	18.6
11 17	2 46.71	-26 42.3	1.587	2.375	17.7	19.1	11 17	2 48.57	- 6 40.0	2.551	3.458	7.6	18.7
11 27	2 38.81	-25 25.2	1.634	2.375	19.0	19.2	11 27	2 42.11	- 6 54.3	2.604	3.454	9.6	18.8
12 7	2 33.15	-23 32.7	1.697	2.375	20.5	19.3	12 7	2 36.87	- 6 50.1	2.682	3.451	11.6	18.9
12 17	2 30.18	-21 12.9	1.774	2.376	21.9	19.5	12 17	2 33.25	- 6 28.7	2.779	3.447	13.4	19.1
9135	Lacaille		11 8.4 118 ^o 91	0 ^o 1/ 8.4	18		68384	2001 <i>QS</i> ₁₂		11 8.4 177 ^o 95	5 ^o 2/12.4	18	
10 8	3 24.53	+17 21.3	1.585	2.449	14.7	18.8	10 8	3 22.30	+33 36.1	2.286	3.084	13.0	19.1
10 18	3 17.10	+17 17.5	1.530	2.461	10.5	18.5	10 18	3 15.35	+33 58.1	2.208	3.085	10.4	18.9
10 28	3 7.29	+17 5.5	1.498	2.473	5.7	18.3	10 28	3 6.35	+34 3.0	2.155	3.086	7.7	18.8
11 7	2 56.21	+16 47.4	1.494	2.485	0.7	18.0	11 7	2 56.14	+33 49.3	2.128	3.087	5.6	18.6
11 17	2 45.17	+16 26.6	1.518	2.496	4.3	18.3	11 17	2 45.77	+33 18.0	2.129	3.087	5.5	18.6
11 27	2 35.49	+16 8.0	1.570	2.507	9.0	18.6	11 27	2 36.38	+32 33.3	2.160	3.087	7.5	18.8
12 7	2 28.17	+15 56.2	1.647	2.517	13.0	18.9	12 7	2 28.87	+31 41.2	2.217	3.086	10.2	18.9
12 17	2 23.73	+15 54.3	1.745	2.527	16.4	19.1	12 17	2 23.81	+30 48.3	2.298	3.085	12.7	19.1
385851	2006 <i>LV</i> ₂		11 8.4 137 ^o 06	1 ^o 4/ 7.3	18		290934	2005 <i>WM</i> ₁₄₀		11 8.4 343 ^o 75	3 ^o 2/ 6.1	17	
10 8	3 19.85	+13 49.7	2.222	3.082	11.1	21.9	10 8	3 13.63	+ 7 37.8	2.217	3.092	10.5	19.2
10 18	3 13.19	+13 16.0	2.164	3.096	7.8	21.7	10 18	3 8.98	+ 7 13.7	2.145	3.081	7.6	19.0
10 28	3 4.97	+12 38.3	2.134	3.109	4.3	21.5	10 28	3 2.78	+ 6 50.4	2.098	3.070	4.6	18.8
11 7	2 55.93	+11 59.6	2.132	3.121	1.5	21.3	11 7	2 55.70	+ 6 31.4	2.079	3.060	3.2	18.7
11 17	2 46.94	+11 23.7	2.161	3.132	4.0	21.5	11 17	2 48.49	+ 6 20.0	2.089	3.051	5.2	18.9
11 27	2 38.89	+10 54.4	2.219	3.143	7.5	21.8	11 27	2 41.99	+ 6 18.9	2.126	3.042	8.3	19.0
12 7	2 32.45	+10 34.8	2.304	3.154	10.6	22.0	12 7	2 36.89	+ 6 29.7	2.189	3.034	11.3	19.2
12 17	2 28.07	+10 26.4	2.412	3.163	13.2	22.2	12 17	2 33.66	+ 6 52.9	2.273	3.027	13.9	19.4
299434	2006 <i>AT</i> ₄₆		11 8.4 350 ^o 35	0 ^o 2/ 8.2	16		354251	2002 <i>PR</i> ₁₈₆		11 8.4 11 ^o 33	1 ^o 8/ 7.4	18	
10 8	3 12.84	+17 38.9	2.259	3.125	10.7	20.0	10 8	3 18.43	+13 38.7	1.498	2.379	14.4	20.3
10 18	3 8.41	+17 14.5	2.185	3.119	7.7	19.8	10 18	3 12.91	+13 15.8	1.440	2.381	10.2	20.0
10 28	3 2.46	+16 43.2	2.137	3.112	4.2	19.6	10 28	3 5.09	+12 47.9	1.405	2.383	5.6	19.8
11 7	2 55.63	+16 7.6	2.116	3.107	0.5	19.3	11 7	2 55.98	+12 18.8	1.396	2.385	1.8	19.5
11 17	2 48.71	+15 31.0	2.124	3.102	3.3	19.5	11 17	2 46.82	+11 53.4	1.413	2.388	5.2	19.8
11 27	2 42.51	+14 57.4	2.161	3.098	6.9	19.7	11 27	2 38.87	+11 36.6	1.457	2.392	9.7	20.0
12 7	2 37.74	+14 30.6	2.224	3.094	10.1	19.9	12 7	2 33.10	+11 31.8	1.525	2.396	13.8	20.3
12 17	2 34.84	+14 13.1	2.310	3.091	12.9	20.1	12 17	2 30.08	+11 40.9	1.613	2.401	17.3	20.6
382194	2012 <i>LK</i> ₂₁		11 8.4 45 ^o 45	3 ^o 8/ 6.8	18		42254	2001 <i>NX</i> ₂₁		11 8.4 62 ^o 48	1 ^o 5/ 9.2	18	
10 8	3 22.64	+ 8 56.9	1.200	2.088	16.6	20.3	10 8	3 23.22	+21 40.9	1.335	2.202	16.7	19.6
10 18	3 16.09	+ 8 39.8	1.158	2.100	11.9	20.1	10 18	3 16.34	+21 29.8	1.294	2.224	12.0	19.4
10 28	3 6.83	+ 8 23.6	1.137	2.113	6.9	19.8	10 28	3 6.90	+21 4.2	1.275	2.247	6.9	19.2
11 7	2 56.16	+ 8 13.4	1.140	2.126	3.8	19.7	11 7	2 56.19	+20 26.9	1.281	2.270	2.0	19.0
11 17	2 45.62	+ 8 13.3	1.170	2.140	6.9	19.9	11 17	2 45.73	+19 42.9	1.313	2.293	4.5	19.2
11 27	2 36.73	+ 8 27.0	1.224	2.154	11.7	20.2	11 27	2 36.95	+18 59.6	1.373	2.316	9.3	19.5
12 7	2 30.57	+ 8 55.5	1.300	2.168	16.0	20.5	12 7	2 30.84	+18 23.7	1.456	2.339	13.6	19.8
12 17	2 27.63	+ 9 38.1	1.395	2.183	19.5	20.8	12 17	2 27.85	+17 59.5	1.560			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
30183	Murali	11	8.4 151°82	1.6/ 9.4	18		330910	2009 <i>SD</i> ₇₇	11	8.4 253°45	2.7/ 6.2	17	
10 8	3 22.97	+22 14.3	1.912	2.759	13.3	19.7	10 8	3 15.93	+ 9 36.8	2.319	3.189	10.4	21.3
10 18	3 15.80	+22 7.2	1.846	2.767	9.7	19.5	10 18	3 10.53	+ 8 58.1	2.247	3.182	7.4	21.1
10 28	3 6.56	+21 48.3	1.806	2.774	5.7	19.3	10 28	3 3.61	+ 8 18.2	2.202	3.175	4.4	20.9
11 7	2 56.17	+21 19.0	1.793	2.781	1.9	19.0	11 7	2 55.82	+ 7 40.5	2.185	3.168	2.7	20.8
11 17	2 45.75	+20 42.5	1.809	2.787	3.7	19.2	11 17	2 47.95	+ 7 9.1	2.198	3.161	4.8	20.9
11 27	2 36.46	+20 3.9	1.855	2.793	7.7	19.4	11 27	2 40.81	+ 6 47.3	2.239	3.154	8.0	21.1
12 7	2 29.19	+19 28.7	1.928	2.798	11.4	19.7	12 7	2 35.08	+ 6 37.4	2.306	3.147	10.9	21.3
12 17	2 24.47	+19 1.2	2.023	2.803	14.5	19.9	12 17	2 31.22	+ 6 40.4	2.395	3.139	13.5	21.5
305824	2009 <i>DA</i> ₁₂₇	11	8.4 115°89	0.9/ 7.7	18		520822	2014 <i>UJ</i> ₈	11	8.4 65°58	1.0/ 9.4	18	
10 8	3 18.25	+16 32.2	1.966	2.831	12.2	21.6	10 8	3 16.02	+24 6.3	2.211	3.057	11.7	20.0
10 18	3 12.29	+15 50.5	1.907	2.840	8.6	21.4	10 18	3 10.56	+23 1.5	2.149	3.069	8.5	19.8
10 28	3 4.58	+15 1.4	1.872	2.848	4.6	21.1	10 28	3 3.57	+21 43.5	2.112	3.081	4.9	19.6
11 7	2 55.93	+14 8.9	1.865	2.856	0.9	20.9	11 7	2 55.81	+20 16.1	2.105	3.094	1.4	19.4
11 17	2 47.30	+13 17.5	1.888	2.863	4.0	21.1	11 17	2 48.16	+18 44.8	2.128	3.106	3.1	19.5
11 27	2 39.68	+12 32.4	1.939	2.871	7.9	21.4	11 27	2 41.45	+17 16.0	2.181	3.119	6.7	19.8
12 7	2 33.82	+11 57.8	2.017	2.878	11.4	21.6	12 7	2 36.35	+15 55.8	2.261	3.131	10.0	20.0
12 17	2 30.19	+11 36.2	2.117	2.885	14.3	21.8	12 17	2 33.26	+14 48.5	2.366	3.144	12.7	20.2
300674	2007 <i>VL</i> ₁₂	11	8.4 198°04	0.8/ 8.9	18		268650	2006 <i>DC</i> ₁₈₉	11	8.4 150°61	0.9/ 7.6	18	
10 8	3 19.16	+21 2.1	1.934	2.789	12.8	20.8	10 8	3 16.06	+15 4.6	2.469	3.331	10.1	21.5
10 18	3 13.12	+20 35.4	1.862	2.788	9.3	20.6	10 18	3 10.52	+14 36.4	2.402	3.334	7.2	21.3
10 28	3 5.12	+19 57.3	1.814	2.786	5.3	20.4	10 28	3 3.56	+14 3.5	2.361	3.337	3.9	21.1
11 7	2 56.01	+19 10.3	1.795	2.785	1.2	20.1	11 7	2 55.82	+13 28.7	2.349	3.339	1.0	20.9
11 17	2 46.81	+18 18.5	1.804	2.783	3.6	20.2	11 17	2 48.05	+12 55.1	2.368	3.342	3.4	21.1
11 27	2 38.61	+17 27.4	1.842	2.781	7.7	20.5	11 27	2 41.02	+12 26.2	2.416	3.344	6.7	21.3
12 7	2 32.26	+16 42.8	1.907	2.778	11.5	20.7	12 7	2 35.37	+12 5.0	2.491	3.347	9.7	21.5
12 17	2 28.30	+16 8.5	1.994	2.776	14.6	20.9	12 17	2 31.51	+11 53.5	2.589	3.349	12.2	21.7
299086	2005 <i>EJ</i> ₆₀	11	8.4 229°97	2.2/ 6.7	18		386904	2011 <i>HF</i> ₄₄	11	8.4 155°56	2.7/ 6.5	18	
10 8	3 17.84	+13 6.4	2.038	2.907	11.6	21.2	10 8	3 19.38	+12 27.1	1.688	2.563	13.3	21.5
10 18	3 12.07	+12 9.9	1.963	2.899	8.3	21.0	10 18	3 13.33	+11 28.1	1.628	2.566	9.4	21.2
10 28	3 4.51	+11 7.8	1.915	2.890	4.6	20.7	10 28	3 5.24	+10 24.1	1.593	2.569	5.3	21.0
11 7	2 55.93	+10 4.7	1.894	2.881	2.2	20.5	11 7	2 56.03	+ 9 20.7	1.585	2.571	2.7	20.8
11 17	2 47.25	+ 9 6.0	1.903	2.872	4.9	20.7	11 17	2 46.82	+ 8 24.1	1.605	2.573	5.6	21.0
11 27	2 39.42	+ 8 17.0	1.941	2.862	8.6	20.9	11 27	2 38.73	+ 7 40.3	1.653	2.575	9.7	21.3
12 7	2 33.25	+ 7 41.6	2.004	2.852	12.0	21.1	12 7	2 32.64	+ 7 12.9	1.725	2.577	13.5	21.5
12 17	2 29.25	+ 7 21.9	2.090	2.842	15.0	21.3	12 17	2 29.07	+ 7 3.3	1.818	2.579	16.6	21.7
473292	2015 <i>PP</i> ₃₀₅	11	8.4 77°02	2.9/10.2	18		367032	2006 <i>CF</i> ₁₆	11	8.4 138°57	0.8/ 7.9	17	
10 8	3 21.84	+25 12.8	1.792	2.636	14.1	20.7	10 8	3 23.88	+16 48.9	1.408	2.279	15.7	21.5
10 18	3 15.10	+25 23.0	1.736	2.651	10.5	20.5	10 18	3 16.88	+16 17.8	1.351	2.287	11.2	21.2
10 28	3 6.20	+25 19.0	1.703	2.666	6.6	20.3	10 28	3 7.30	+15 36.9	1.317	2.294	6.1	21.0
11 7	2 56.13	+25 1.3	1.697	2.680	3.3	20.1	11 7	2 56.30	+14 50.4	1.310	2.300	1.0	20.6
11 17	2 46.09	+24 32.4	1.719	2.695	4.2	20.2	11 17	2 45.31	+14 4.1	1.330	2.306	5.0	21.0
11 27	2 37.28	+23 57.6	1.770	2.710	7.8	20.5	11 27	2 35.80	+13 24.7	1.376	2.312	10.1	21.3
12 7	2 30.61	+23 22.9	1.846	2.725	11.4	20.7	12 7	2 28.84	+12 57.8	1.447	2.317	14.5	21.5
12 17	2 26.60	+22 53.4	1.945	2.739	14.5	20.9	12 17	2 24.97	+12 46.2	1.538	2.322	18.1	21.8
410112	2007 <i>EJ</i> ₂₀₀	11	8.4 344°26	0.5/ 8.6	18		100110	1993 <i>FV</i> ₄₇	11	8.4 133°90	0.1/ 8.4	18	
10 8	3 20.16	+17 34.5	1.969	2.829	12.4	20.1	10 8	3 22.70	+18 24.8	1.817	2.675	13.3	20.9
10 18	3 13.85	+17 49.4	1.898	2.827	8.9	19.8	10 18	3 15.58	+18 1.4	1.759	2.688	9.5	20.7
10 28	3 5.55	+17 58.1	1.851	2.825	5.0	19.6	10 28	3 6.42	+17 28.9	1.726	2.700	5.2	20.5
11 7	2 56.07	+18 1.6	1.833	2.823	0.8	19.3	11 7	2 56.19	+16 50.1	1.721	2.712	0.7	20.2
11 17	2 46.42	+18 1.6	1.843	2.822	3.6	19.5	11 17	2 46.02	+16 9.3	1.745	2.722	3.9	20.4
11 27	2 37.70	+18 1.2	1.883	2.820	7.7	19.8	11 27	2 37.04	+15 31.6	1.798	2.733	8.2	20.7
12 7	2 30.79	+18 3.7	1.948	2.819	11.3	20.0	12 7	2 30.10	+15 1.8	1.877	2.743	11.9	21.0
12 17	2 26.26	+18 11.9	2.037	2.818	14.3	20.2	12 17	2 25.71	+14 43.1	1.978	2.752	15.0	21.2
146386	2001 <i>QO</i> ₇₀	11	8.4 49°22	5.6/12.1	18		310737	2002 <i>QG</i> ₂₄	11	8.4 136°20	2.5/ 6.5	16	
10 8	3 21.59	+31 51.4	1.656	2.483	15.9	19.1	10 8	3 23.57	+10 34.1	2.338	3.192	10.9	22.8
10 18	3 15.19	+32 13.0	1.602	2.498	12.5	19.0	10 18	3 15.68	+ 9 48.4	2.287	3.215	7.7	22.7
10 28	3 6.34	+32 13.7	1.570	2.514	8.9	18.8	10 28	3 6.29	+ 9 0.9	2.265	3.236	4.4	22.5
11 7	2 56.15	+31 52.5	1.562	2.531	6.1	18.7	11 7	2 56.19	+ 8 15.5	2.273	3.257	2.5	22.4
11 17	2 46.00	+31 11.8	1.581	2.547	6.0	18.7	11 17	2 46.23	+ 7 36.1	2.312	3.275	4.6	22.6
11 27	2 37.26	+30 18.1	1.627	2.564	8.7	18.9	11 27	2 37.28	+ 7 6.3	2.382	3.293	7.8	22.8
12 7	2 30.94	+29 19.6	1.699	2.581	12.0	19.1	12 7	2 29.97	+ 6 48.3	2.479	3.309	10.6	23.0
12 17	2 27.56	+28 24.1	1.792	2.599	15.0	19.4	12 17	2 24.71	+ 6 42.9	2.600	3.324	13.0	23.2
284868	2009 <i>CO</i> ₄₅	11	8.4 42°81	6.0/ 5.3	18		364488	2007 <i>DM</i> ₉₈	11	8.4 163°10	4.2/ 4.1	18	
10 8	3 19.34	+ 4 0.8	1.377	2.263	15.1	19.7	10 8	3 15.45	+ 1 52.3	2.990	3.849	8.6	22.7
10 18	3 13.39	+ 3 11.6	1.341	2.279	11.1	19.5	10 18	3 9.83	+ 0 59.8	2.934	3.855	6.5	22.6
10 28	3 5.24	+ 2 28.8	1.328	2.296	7.4	19.4	10 28	3 3.10	+ 0 11.0	2.906	3.861	4.7	22.5
11 7	2 56.01	+ 1 58.8	1.340	2.313	6.1	19.3	11 7	2 55.80	+ 0 30.5	2.907	3.866	4.3	22.4
11 17	2 46.97	+ 1 46.6	1.378	2.331	8.4	19.5	11 17	2 48.51	+ 1 1.6	2.939	3.871	5.6	22.5
11 27	2 39.35	+ 1 55.0	1.440	2.349	12.0	19.8	11 27	2 41.83	+ 1 20.0	2.999	3.875	7.6	22.7
12 7	2 34.01	+ 2 23.3	1.525	2.368	15.4	20.0	12 7	2 36.26	+ 1 24.8	3.085	3.879	9.7	22.8
12 17	2 31.40	+ 3 9.3	1.629	2.387	18.3	20.3	12 17	2 32.15	+ 1 16.4	3.194	3.882	11.5	23.0
207755	2007 <i>SR</i> ₆	11	8.4 61°52	3.2/10.3	18		350126	2011 <i>QM</i> ₉₁	11	8.4 296°93	0.5/ 8.0	18</	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
272404	2005 <i>TM</i> ₂₅	11	8.4 220°06	0°3/ 8.6 18			155010	2005 <i>PR</i> ₉	11	8.4 11°33	1°7/ 9.2 18		
10 8	3 21.79	+18 19.3	1.604	2.470	14.4	21.3	10 8	3 16.49	+20 51.7	0.962	1.857	19.1	19.7
10 18	3 15.34	+18 10.7	1.536	2.468	10.4	21.1	10 18	3 12.46	+20 50.8	0.915	1.860	13.9	19.5
10 28	3 6.50	+17 52.6	1.491	2.466	5.8	20.8	10 28	3 5.20	+20 33.3	0.888	1.865	8.0	19.2
11 7	2 56.24	+17 27.2	1.473	2.464	0.8	20.4	11 7	2 56.10	+20 1.9	0.883	1.872	2.2	18.8
11 17	2 45.84	+16 58.2	1.483	2.462	4.3	20.7	11 17	2 46.96	+19 22.6	0.900	1.881	5.3	19.1
11 27	2 36.61	+16 31.0	1.521	2.460	9.0	21.0	11 27	2 39.62	+18 44.3	0.939	1.891	11.2	19.4
12 7	2 29.62	+16 10.7	1.583	2.457	13.2	21.2	12 7	2 35.36	+18 15.0	1.000	1.904	16.3	19.8
12 17	2 25.47	+16 1.1	1.667	2.455	16.8	21.5	12 17	2 34.74	+17 59.9	1.078	1.917	20.6	20.1
104410	2000 <i>FF</i> ₅₆	11	8.4 320°61	5°0/ 5.7 18			479897	2014 <i>HY</i> ₂₇	11	8.4 265°89	2°7/ 6.6 18		
10 8	3 18.04	+ 8 17.9	1.291	2.183	15.5	19.1	10 8	3 18.66	+12 2.6	1.762	2.636	12.9	21.4
10 18	3 13.02	+ 7 19.2	1.227	2.170	11.2	18.8	10 18	3 12.95	+11 14.5	1.686	2.624	9.2	21.1
10 28	3 5.37	+ 6 18.9	1.184	2.158	7.0	18.6	10 28	3 5.15	+10 21.5	1.636	2.611	5.2	20.9
11 7	2 56.11	+ 5 24.6	1.166	2.147	5.0	18.4	11 7	2 56.10	+ 9 28.5	1.612	2.599	2.7	20.7
11 17	2 46.62	+ 4 44.2	1.173	2.136	8.1	18.6	11 17	2 46.86	+ 8 41.1	1.617	2.586	5.5	20.9
11 27	2 38.38	+ 4 23.9	1.204	2.126	12.7	18.8	11 27	2 38.58	+ 8 4.8	1.650	2.573	9.7	21.1
12 7	2 32.55	+ 4 26.5	1.257	2.116	17.0	19.0	12 7	2 32.18	+ 7 43.5	1.707	2.560	13.5	21.3
12 17	2 29.78	+ 4 51.8	1.328	2.107	20.7	19.3	12 17	2 28.27	+ 7 39.0	1.784	2.547	16.8	21.5
122048	2000 <i>GE</i> ₁₀₅	11	8.4 130°41	0°2/ 8.3 17			423384	2005 <i>JF</i> ₁₁₂	11	8.4 176°17	0°6/ 8.8 16		
10 8	3 23.47	+17 17.0	2.053	2.906	12.2	20.2	10 8	3 23.26	+19 54.8	1.889	2.741	13.2	21.9
10 18	3 15.90	+17 0.6	1.997	2.924	8.7	20.0	10 18	3 16.07	+19 34.2	1.819	2.744	9.5	21.7
10 28	3 6.53	+16 37.3	1.968	2.941	4.7	19.8	10 28	3 6.77	+19 3.2	1.774	2.746	5.3	21.5
11 7	2 56.23	+16 9.2	1.967	2.958	0.6	19.5	11 7	2 56.30	+18 23.9	1.758	2.748	1.0	21.2
11 17	2 46.03	+15 39.7	1.997	2.974	3.6	19.8	11 17	2 45.75	+17 40.2	1.771	2.749	3.8	21.4
11 27	2 36.92	+15 13.1	2.057	2.989	7.5	20.1	11 27	2 36.30	+16 57.6	1.813	2.748	8.0	21.7
12 7	2 29.69	+14 53.0	2.144	3.003	10.9	20.3	12 7	2 28.87	+16 21.3	1.881	2.747	11.8	21.9
12 17	2 24.78	+14 42.0	2.254	3.016	13.7	20.5	12 17	2 23.99	+15 55.2	1.972	2.746	15.0	22.1
254809	2005 <i>QK</i> ₁₁₂	11	8.4 9°98	0°4/ 8.1 18			131107	2001 <i>AV</i> ₃₀	11	8.4 265°41	5°8/ 5.3 18		
10 8	3 17.25	+17 26.2	1.790	2.660	13.0	20.6	10 8	3 21.44	+ 1 42.8	1.785	2.654	13.0	19.6
10 18	3 11.85	+16 57.6	1.726	2.660	9.2	20.4	10 18	3 14.87	+ 1 14.2	1.715	2.642	9.8	19.4
10 28	3 4.47	+16 20.6	1.685	2.661	5.0	20.2	10 28	3 6.18	+ 0 52.2	1.669	2.630	6.9	19.2
11 7	2 55.99	+15 38.6	1.672	2.663	0.7	19.9	11 7	2 56.23	+ 0 41.8	1.649	2.617	5.9	19.1
11 17	2 47.45	+14 55.8	1.687	2.664	4.0	20.1	11 17	2 46.09	+ 0 46.9	1.658	2.605	7.9	19.2
11 27	2 39.93	+14 17.8	1.730	2.666	8.3	20.4	11 27	2 36.91	+ 1 10.0	1.694	2.592	11.2	19.4
12 7	2 34.30	+13 49.0	1.797	2.668	12.1	20.6	12 7	2 29.64	+ 1 51.0	1.753	2.580	14.5	19.6
12 17	2 31.05	+13 32.4	1.887	2.671	15.2	20.9	12 17	2 24.87	+ 2 48.1	1.834	2.567	17.4	19.8
435743	2008 <i>UT</i> ₁₃₇	11	8.4 53°85	0°1/ 8.5 16			204184	2004 <i>BG</i> ₅₄	11	8.4 101°23	5°7/ 12.7 18		
10 8	3 23.14	+17 11.2	1.374	2.247	15.9	21.4	10 8	3 22.80	+34 17.3	2.007	2.808	14.4	20.1
10 18	3 16.28	+17 15.1	1.331	2.266	11.3	21.2	10 18	3 15.82	+34 34.4	1.944	2.822	11.5	19.9
10 28	3 6.92	+17 10.6	1.310	2.286	6.2	21.0	10 28	3 6.65	+34 31.5	1.904	2.836	8.5	19.7
11 7	2 56.29	+16 59.7	1.316	2.306	0.8	20.6	11 7	2 56.28	+34 7.5	1.890	2.849	6.1	19.6
11 17	2 45.81	+16 46.2	1.348	2.327	4.5	21.0	11 17	2 45.90	+33 24.3	1.904	2.863	5.9	19.7
11 27	2 36.90	+16 34.9	1.407	2.347	9.4	21.3	11 27	2 36.76	+32 27.1	1.946	2.876	8.0	19.8
12 7	2 30.54	+16 30.3	1.490	2.368	13.6	21.6	12 7	2 29.76	+31 23.7	2.014	2.888	10.8	20.0
12 17	2 27.22	+16 35.3	1.593	2.389	17.1	21.9	12 17	2 25.45	+30 21.2	2.106	2.901	13.5	20.2
108235	2001 <i>HS</i> ₄₀	11	8.4 126°17	6°0/ 4.2 18			373332	2012 <i>JJ</i> ₂₆	11	8.4 181°94	0°8/ 7.6 17		
10 8	3 19.05	+ 0 13.4	2.059	2.923	11.7	19.5	10 8	3 15.37	+15 23.4	2.936	3.792	8.9	22.2
10 18	3 12.70	- 0 41.7	2.013	2.935	8.9	19.4	10 18	3 9.88	+14 49.2	2.863	3.792	6.3	22.1
10 28	3 4.77	- 1 29.9	1.993	2.946	6.6	19.2	10 28	3 3.19	+14 10.6	2.818	3.793	3.4	21.9
11 7	2 56.02	- 2 5.8	2.000	2.957	6.1	19.2	11 7	2 55.85	+13 30.0	2.803	3.792	0.8	21.7
11 17	2 47.35	- 2 25.4	2.036	2.967	7.7	19.4	11 17	2 48.47	+12 50.2	2.818	3.792	3.0	21.9
11 27	2 39.65	- 2 26.5	2.099	2.978	10.3	19.5	11 27	2 41.71	+12 14.6	2.864	3.791	5.9	22.0
12 7	2 33.60	- 2 9.3	2.185	2.987	12.9	19.7	12 7	2 36.10	+11 45.8	2.938	3.789	8.5	22.2
12 17	2 29.62	- 1 35.3	2.293	2.996	15.1	19.9	12 17	2 32.03	+11 25.8	3.037	3.787	10.8	22.4
69845	1998 <i>SU</i> ₂₆	11	8.4 328°02	8°3/ 15.2 18			440815	2006 <i>QE</i> ₁₂₅	11	8.4 50°40	7°4/ 13.7 16		
10 8	3 20.02	+42 2.9	2.102	2.864	15.1	18.2	10 8	3 22.72	+36 37.5	1.593	2.400	17.3	20.9
10 18	3 14.20	+42 34.3	2.019	2.856	12.9	18.1	10 18	3 16.16	+37 0.2	1.542	2.419	14.1	20.8
10 28	3 5.95	+42 42.3	1.956	2.848	10.7	17.9	10 28	3 6.94	+36 56.8	1.512	2.439	10.7	20.6
11 7	2 56.20	+42 23.7	1.916	2.840	8.9	17.8	11 7	2 56.32	+36 25.8	1.506	2.459	8.0	20.5
11 17	2 46.19	+41 38.5	1.903	2.832	8.3	17.7	11 17	2 45.80	+35 29.6	1.525	2.480	7.5	20.5
11 27	2 37.28	+40 30.8	1.915	2.825	9.4	17.8	11 27	2 36.90	+34 15.9	1.570	2.501	9.5	20.7
12 7	2 30.57	+39 8.6	1.953	2.818	11.5	17.9	12 7	2 30.66	+32 54.8	1.640	2.522	12.4	20.9
12 17	2 26.70	+37 40.9	2.013	2.812	13.9	18.1	12 17	2 27.58	+31 35.9	1.733	2.543	15.3	21.2
486628	2013 <i>LE</i> ₂₄	11	8.4 221°89	3°6/ 5.4 18			115470	2003 <i>TE</i> ₅₇	11	8.4 259°35	3°1/ 10.9 18		
10 8	3 16.66	+ 6 26.6	2.414	3.281	10.1	22.1	10 8	3 19.15	+28 39.5	1.863	2.698	14.1	19.5
10 18	3 11.00	+ 5 39.8	2.343	3.274	7.4	22.0	10 18	3 13.35	+28 2.1	1.781	2.689	10.7	19.3
10 28	3 3.88	+ 4 53.7	2.299	3.267	4.7	21.8	10 28	3 5.38	+27 4.9	1.721	2.680	7.0	19.0
11 7	2 55.93	+ 4 12.5	2.283	3.259	3.7	21.7	11 7	2 56.14	+25 49.4	1.688	2.670	3.6	18.8
11 17	2 47.89	+ 3 40.0	2.297	3.250	5.5	21.8	11 17	2 46.78	+24 20.4	1.684	2.661	4.2	18.8
11 27	2 40.56	+ 3 19.5	2.340	3.242	8.3	22.0	11 27	2 38.49	+22 45.4	1.709	2.651	7.9	19.0
12 7	2 34.59	+ 3 12.8	2.408	3.233	11.1	22.1	12 7	2 32.24	+21 13.5	1.760	2.641	11.7	19.3
12 17	2 30.43	+ 3 20.3	2.499	3.224	13.5	22.3	12 17	2 28.57	+19 52.0	1.835	2.631	15.1	19.5
55360	2001 <i>SK</i> ₁₇₃	11	8.4 220°96	2°2/ 6.8 18			286622	2002 <i>EW</i> ₃ </					

EPHEMERIDES

11 8.4

11 8.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
119299	2001 <i>SX</i> ₁₉		11 8.4 301°76	3°0/ 6.8 18			328391	2008 <i>RT</i> ₁₀₅		11 8.4 30°60	3°2/ 6.3 18		
10 8	3 19.32	+11 41.6	1.449	2.331	14.6	19.8	10 8	3 16.21	+8 44.2	1.963	2.839	11.7	19.7
10 18	3 13.78	+11 1.1	1.379	2.320	10.5	19.5	10 18	3 10.87	+8 11.8	1.909	2.846	8.3	19.6
10 28	3 5.74	+10 16.1	1.333	2.310	6.0	19.2	10 28	3 3.86	+7 39.5	1.881	2.855	4.9	19.4
11 7	2 56.21	+9 31.8	1.312	2.299	3.0	19.0	11 7	2 55.97	+7 11.5	1.881	2.863	3.2	19.3
11 17	2 46.44	+8 54.4	1.318	2.288	6.2	19.2	11 17	2 48.09	+6 51.4	1.908	2.872	5.4	19.4
11 27	2 37.83	+8 29.8	1.350	2.278	10.9	19.4	11 27	2 41.15	+6 42.6	1.963	2.881	8.7	19.7
12 7	2 31.48	+8 21.9	1.404	2.268	15.2	19.7	12 7	2 35.85	+6 46.7	2.043	2.891	11.8	19.9
12 17	2 28.04	+8 32.0	1.479	2.259	18.9	19.9	12 17	2 32.64	+7 3.9	2.145	2.901	14.5	20.1
446192	2013 <i>FQ</i> ₂₅		11 8.4 305°43	3°8/ 6.6 18			114215	2002 <i>VM</i> ₁₁₀		11 8.4 9°90	7°2/ 11.7 18		
10 8	3 21.04	+6 56.2	1.689	2.564	13.4	20.7	10 8	3 16.21	+29 19.0	0.894	1.775	21.6	17.4
10 18	3 14.78	+6 49.6	1.613	2.548	9.7	20.4	10 18	3 12.74	+30 8.6	0.849	1.778	16.9	17.1
10 28	3 6.24	+6 45.8	1.561	2.533	5.9	20.2	10 28	3 5.57	+30 30.5	0.822	1.783	11.9	16.8
11 7	2 56.28	+6 48.3	1.535	2.517	3.8	20.0	11 7	2 56.21	+30 21.7	0.813	1.791	7.8	16.7
11 17	2 46.01	+7 0.3	1.537	2.502	6.3	20.1	11 17	2 46.71	+29 45.1	0.826	1.800	7.9	16.7
11 27	2 36.71	+7 24.4	1.567	2.488	10.3	20.3	11 27	2 39.23	+28 50.4	0.860	1.812	11.9	17.0
12 7	2 29.39	+8 1.6	1.621	2.473	14.2	20.5	12 7	2 35.24	+27 50.9	0.914	1.826	16.6	17.3
12 17	2 24.73	+8 51.6	1.695	2.459	17.5	20.7	12 17	2 35.34	+26 57.4	0.986	1.842	20.7	17.6
43496	2001 <i>CF</i> ₁₆		11 8.4 36°62	6°0/ 5.9 18			149936	2005 <i>SG</i> ₁₉₅		11 8.4 350°77	1°3/ 9.2 18		
10 8	3 21.25	+5 27.6	1.119	2.013	17.1	18.5	10 8	3 18.23	+22 30.3	1.282	2.156	16.7	19.1
10 18	3 15.24	+4 46.1	1.080	2.023	12.5	18.2	10 18	3 13.26	+21 54.7	1.218	2.153	12.2	18.8
10 28	3 6.48	+4 9.9	1.061	2.033	8.0	18.0	10 28	3 5.53	+21 0.9	1.176	2.150	7.1	18.5
11 7	2 56.28	+3 46.3	1.066	2.045	6.1	18.0	11 7	2 56.20	+19 52.5	1.158	2.147	1.8	18.2
11 17	2 46.22	+3 41.0	1.096	2.057	8.8	18.2	11 17	2 46.74	+18 36.6	1.165	2.146	4.7	18.4
11 27	2 37.86	+3 57.0	1.148	2.070	13.2	18.4	11 27	2 38.71	+17 22.6	1.198	2.144	10.0	18.7
12 7	2 32.25	+4 34.0	1.222	2.083	17.3	18.7	12 7	2 33.27	+16 19.8	1.255	2.144	14.9	19.0
12 17	2 29.88	+5 29.2	1.314	2.097	20.7	19.0	12 17	2 31.04	+15 34.0	1.330	2.144	18.9	19.2
389486	2010 <i>ED</i> ₁₃₀		11 8.4 356°70	5°3/ 11.3 18			379865	2012 <i>HA</i> ₅		11 8.4 84°39	0°7/ 8.1 17		
10 8	3 23.09	+29 30.8	1.622	2.456	15.9	20.5	10 8	3 27.49	+14 56.2	1.459	2.326	15.5	20.7
10 18	3 16.56	+30 8.5	1.552	2.455	12.4	20.2	10 18	3 19.15	+14 59.1	1.420	2.353	11.0	20.5
10 28	3 7.32	+30 28.3	1.504	2.454	8.7	20.0	10 28	3 8.43	+14 56.1	1.404	2.380	5.9	20.3
11 7	2 56.41	+30 27.7	1.481	2.454	5.7	19.9	11 7	2 56.54	+14 49.5	1.416	2.406	0.9	20.0
11 17	2 45.24	+30 7.7	1.485	2.454	6.0	19.9	11 17	2 44.94	+14 42.5	1.456	2.432	4.7	20.3
11 27	2 35.33	+29 33.2	1.516	2.454	9.2	20.1	11 27	2 34.98	+14 39.3	1.523	2.458	9.4	20.7
12 7	2 27.88	+28 51.9	1.572	2.454	12.8	20.3	12 7	2 27.60	+14 43.3	1.616	2.483	13.4	21.0
12 17	2 23.60	+28 11.8	1.649	2.454	16.2	20.5	12 17	2 23.24	+14 56.6	1.729	2.507	16.6	21.3
201054	2002 <i>ED</i> ₅₅		11 8.4 134°93	6°4/ 3.4 18			458499	2011 <i>CG</i> ₂₄		11 8.4 278°55	9°1/ 30.3 16		
10 8	3 18.31	+2 0.7	1.854	2.726	12.4	20.0	10 8	3 18.87	-16 12.9	2.746	3.552	10.8	21.8
10 18	3 12.36	+0 28.9	1.807	2.735	9.4	19.8	10 18	3 12.59	-17 8.1	2.669	3.520	9.7	21.7
10 28	3 4.65	-0 57.8	1.786	2.742	7.0	19.7	10 28	3 4.81	-17 49.0	2.616	3.486	9.1	21.6
11 7	2 56.05	-2 11.9	1.792	2.750	6.6	19.7	11 7	2 56.13	-18 10.2	2.590	3.453	9.4	21.6
11 17	2 47.52	-3 7.1	1.826	2.757	8.5	19.8	11 17	2 47.25	-18 8.2	2.589	3.418	10.4	21.6
11 27	2 40.01	-3 39.5	1.887	2.764	11.4	20.0	11 27	2 38.95	-17 41.5	2.613	3.383	11.9	21.7
12 7	2 34.28	-3 48.6	1.970	2.770	14.1	20.2	12 7	2 31.91	-16 51.3	2.658	3.348	13.5	21.7
12 17	2 30.77	-3 35.9	2.073	2.776	16.5	20.4	12 17	2 26.61	-15 40.6	2.722	3.312	15.1	21.8
359513	2010 <i>RG</i> ₄₉		11 8.4 75°35	3°6/ 5.7 18			523416	2017 <i>DU</i> ₁₂₂		11 8.4 24°62	0°4/ 8.7 17		
10 8	3 17.15	+9 16.1	1.871	2.747	12.2	20.7	10 8	3 19.08	+17 50.4	2.126	2.984	11.7	20.8
10 18	3 11.52	+8 11.3	1.823	2.760	8.7	20.5	10 18	3 12.97	+17 59.9	2.058	2.987	8.4	20.6
10 28	3 4.18	+7 5.6	1.800	2.773	5.2	20.3	10 28	3 5.07	+18 3.3	2.016	2.989	4.7	20.4
11 7	2 55.99	+6 4.8	1.806	2.786	3.7	20.3	11 7	2 56.16	+18 1.6	2.001	2.992	0.8	20.1
11 17	2 47.89	+5 14.1	1.840	2.800	6.0	20.4	11 17	2 47.14	+17 56.7	2.016	2.995	3.3	20.3
11 27	2 40.82	+4 38.2	1.901	2.813	9.3	20.7	11 27	2 38.98	+17 51.8	2.061	2.998	7.1	20.6
12 7	2 35.50	+4 19.3	1.987	2.826	12.5	20.9	12 7	2 32.49	+17 49.9	2.131	3.001	10.5	20.8
12 17	2 32.35	+4 17.6	2.094	2.839	15.1	21.1	12 17	2 28.18	+17 53.7	2.225	3.005	13.3	21.0
9665	Inastronoviny		11 8.4 232°35	0°2/ 8.2 18			407642	2011 <i>EQ</i> ₅₄		11 8.4 300°74	3°3/ 10.5 18		
10 8	3 15.97	+18 23.2	2.491	3.346	10.3	17.9	10 8	3 19.40	+26 22.6	2.132	2.967	12.5	20.7
10 18	3 10.56	+17 44.7	2.411	3.339	7.3	17.7	10 18	3 13.51	+26 44.8	2.041	2.949	9.6	20.4
10 28	3 3.67	+16 58.6	2.357	3.331	4.0	17.4	10 28	3 5.54	+26 54.9	1.973	2.931	6.3	20.2
11 7	2 55.94	+16 7.3	2.332	3.323	0.5	17.1	11 7	2 56.23	+26 52.1	1.933	2.913	3.6	20.0
11 17	2 48.13	+15 14.7	2.338	3.315	3.2	17.4	11 17	2 46.58	+26 37.2	1.922	2.895	4.3	20.0
11 27	2 41.02	+14 25.0	2.374	3.307	6.6	17.6	11 27	2 37.69	+26 13.7	1.939	2.877	7.4	20.2
12 7	2 35.28	+13 42.3	2.437	3.298	9.7	17.8	12 7	2 30.53	+25 46.6	1.982	2.859	10.8	20.3
12 17	2 31.36	+13 9.6	2.524	3.289	12.3	17.9	12 17	2 25.76	+25 20.9	2.049	2.842	13.9	20.5
408783	1999 <i>VQ</i> ₇₁		11 8.4 12°79	1°1/ 7.7 18			493921	2015 <i>XK</i> ₃₃₅		11 8.4 330°22	0°8/ 9.1 18		
10 8	3 19.10	+13 30.1	2.076	2.941	11.6	20.1	10 8	3 16.22	+21 42.1	2.202	3.055	11.5	20.8
10 18	3 12.97	+13 27.9	2.009	2.942	8.2	19.9	10 18	3 10.89	+21 8.4	2.129	3.054	8.4	20.6
10 28	3 5.05	+13 22.6	1.967	2.942	4.5	19.7	10 28	3 3.91	+20 23.8	2.082	3.053	4.8	20.4
11 7	2 56.12	+13 16.1	1.953	2.943	1.2	19.5	11 7	2 56.01	+19 31.1	2.063	3.052	1.2	20.2
11 17	2 47.10	+13 11.1	1.968	2.943	3.9	19.7	11 17	2 48.06	+18 34.0	2.073	3.052	3.2	20.3
11 27	2 38.95	+13 10.4	2.013	2.944	7.7	19.9	11 27	2 40.96	+17 37.8	2.112	3.051	6.9	20.6
12 7	2 32.46	+13 16.4	2.084	2.945	11.1	20.1	12 7	2 35.43	+16 47.3	2.179	3.050	10.2	20.8
12 17	2 28.16	+13 30.9	2.177	2.946	13.9	20.3	12 17	2 31.94	+16 6.6	2.268	3.050	13.1	21.0
215070	2009 <i>DD</i> ₁₃₀		11 8.4 89°01	1°2/ 7.7 17			80866	2000 <i>DN</i> ₂₈		11 8.4 131°97	1°2/ 7.7 18		
10													

EPHEMERIDES

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11 8.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
9032	Tanakami		11 8.4 261°85	3.4/ 6.6	18		512085	2015 NW ₂₃		11 8.4 74°04	8°3/ 2.9	18	
10 8	3 21.41	+10 27.4	1.496	2.374	14.5	18.0	10 8	3 18.49	- 2 57.5	1.678	2.549	13.6	20.7
10 18	3 15.23	+ 9 49.5	1.425	2.364	10.4	17.7	10 18	3 12.58	- 4 18.3	1.643	2.562	10.8	20.6
10 28	3 6.56	+ 9 8.5	1.378	2.353	6.0	17.4	10 28	3 4.83	- 5 27.3	1.631	2.575	8.7	20.5
11 7	2 56.37	+ 8 29.8	1.357	2.342	3.4	17.2	11 7	2 56.15	- 6 17.1	1.646	2.589	8.5	20.5
11 17	2 45.94	+ 7 59.1	1.363	2.331	6.4	17.4	11 17	2 47.62	- 6 42.8	1.686	2.602	10.2	20.7
11 27	2 36.66	+ 7 41.6	1.395	2.320	11.0	17.6	11 27	2 40.24	- 6 42.2	1.750	2.615	12.7	20.9
12 7	2 29.63	+ 7 40.7	1.451	2.308	15.2	17.9	12 7	2 34.80	- 6 16.7	1.837	2.629	15.3	21.1
12 17	2 25.52	+ 7 57.4	1.526	2.297	18.8	18.1	12 17	2 31.70	- 5 30.0	1.942	2.642	17.6	21.3
300491	2007 TQ ₁₄₂		11 8.4 35°78	4°0/10.4	18		236612	2006 JL ₄₄		11 8.4 208°47	1°8/ 7.0	17	
10 8	3 23.26	+25 41.1	1.598	2.444	15.4	20.0	10 8	3 17.66	+10 32.6	2.703	3.563	9.4	20.8
10 18	3 16.57	+26 19.4	1.535	2.450	11.7	19.8	10 18	3 11.64	+10 22.5	2.629	3.560	6.7	20.7
10 28	3 7.28	+26 43.0	1.495	2.455	7.6	19.6	10 28	3 4.26	+10 11.5	2.582	3.556	3.8	20.5
11 7	2 56.46	+26 50.5	1.481	2.461	4.3	19.4	11 7	2 56.10	+10 1.8	2.565	3.551	1.8	20.3
11 17	2 45.46	+26 43.0	1.494	2.468	5.1	19.5	11 17	2 47.85	+ 9 55.5	2.578	3.547	3.8	20.5
11 27	2 35.75	+26 24.9	1.534	2.474	8.8	19.7	11 27	2 40.23	+ 9 54.9	2.622	3.542	6.7	20.6
12 7	2 28.46	+26 2.8	1.599	2.481	12.6	19.9	12 7	2 33.87	+10 1.7	2.693	3.537	9.4	20.8
12 17	2 24.23	+25 42.9	1.686	2.488	16.0	20.2	12 17	2 29.21	+10 16.7	2.787	3.532	11.8	21.0
202530	2006 DZ ₁₆		11 8.4 165°99	0°7/ 7.8	18		449967	2015 PA ₈		11 8.4 10°93	11°7/16.8	17	
10 8	3 16.69	+15 8.6	2.728	3.584	9.4	21.4	10 8	3 17.18	+42 41.5	1.217	2.023	21.7	19.6
10 18	3 10.91	+14 47.6	2.659	3.588	6.7	21.2	10 18	3 13.24	+43 32.5	1.165	2.029	18.6	19.4
10 28	3 3.82	+14 22.4	2.616	3.591	3.6	21.0	10 28	3 5.80	+43 46.7	1.129	2.036	15.4	19.3
11 7	2 56.01	+13 55.2	2.604	3.594	0.8	20.8	11 7	2 56.30	+43 19.4	1.113	2.045	12.8	19.1
11 17	2 48.16	+13 28.6	2.622	3.596	3.1	21.0	11 17	2 46.70	+42 11.4	1.117	2.056	11.7	19.1
11 27	2 40.98	+13 5.7	2.670	3.599	6.2	21.2	11 27	2 39.03	+40 31.8	1.144	2.069	12.8	19.2
12 7	2 35.07	+12 49.1	2.746	3.600	9.0	21.4	12 7	2 34.66	+38 35.5	1.192	2.083	15.3	19.4
12 17	2 30.83	+12 40.5	2.846	3.602	11.3	21.6	12 17	2 34.16	+36 36.8	1.260	2.099	18.2	19.7
96848	1999 RL ₂₂₁		11 8.4 46°60	7°6/ 4.3	18		418720	2008 UT ₈₇		11 8.4 55°78	5°5/13.7	18	
10 8	3 19.24	+ 1 47.6	1.295	2.182	15.7	18.1	10 8	3 20.93	+36 26.1	2.082	2.874	14.3	19.9
10 18	3 13.33	+ 0 27.3	1.271	2.206	11.8	18.0	10 18	3 14.24	+36 14.5	2.037	2.907	11.4	19.8
10 28	3 5.24	- 0 42.9	1.269	2.231	8.5	17.8	10 28	3 5.67	+35 41.5	2.014	2.940	8.5	19.6
11 7	2 56.17	- 1 34.5	1.292	2.256	7.8	17.9	11 7	2 56.26	+34 47.7	2.017	2.973	6.1	19.6
11 17	2 47.42	- 2 1.7	1.340	2.281	9.9	18.1	11 17	2 47.09	+33 36.6	2.048	3.005	5.7	19.6
11 27	2 40.20	- 2 2.3	1.412	2.307	13.2	18.3	11 27	2 39.25	+32 15.0	2.107	3.038	7.4	19.8
12 7	2 35.33	- 1 37.8	1.505	2.333	16.3	18.6	12 7	2 33.45	+30 50.4	2.194	3.070	9.9	20.0
12 17	2 33.17	- 0 52.1	1.616	2.360	19.0	18.9	12 17	2 30.09	+29 30.0	2.305	3.103	12.4	20.2
96200	Oschin		11 8.4 83°13	1°6/ 9.8	18		157064	Sedona		11 8.4 297°44	0°9/ 7.6	18	
10 8	3 18.30	+23 35.7	2.270	3.112	11.6	20.4	10 8	3 15.42	+17 30.7	2.208	3.071	11.1	19.4
10 18	3 12.21	+23 16.9	2.215	3.132	8.5	20.2	10 18	3 10.27	+16 25.5	2.137	3.070	7.9	19.2
10 28	3 4.55	+22 47.1	2.186	3.152	5.0	20.0	10 28	3 3.56	+15 11.6	2.093	3.069	4.2	19.0
11 7	2 56.10	+22 8.2	2.185	3.172	1.9	19.8	11 7	2 56.01	+13 53.4	2.077	3.068	0.9	18.8
11 17	2 47.73	+21 23.6	2.213	3.191	3.1	20.0	11 17	2 48.43	+12 36.2	2.092	3.067	3.8	19.0
11 27	2 40.32	+20 37.7	2.272	3.211	6.4	20.2	11 27	2 41.68	+11 25.8	2.136	3.066	7.4	19.2
12 7	2 34.53	+19 55.2	2.357	3.230	9.5	20.4	12 7	2 36.45	+10 27.0	2.207	3.064	10.7	19.4
12 17	2 30.78	+19 19.8	2.467	3.249	12.1	20.6	12 17	2 33.16	+ 9 42.7	2.301	3.063	13.4	19.6
432946	2012 FJ ₂₈		11 8.4 115°98	4°3/ 5.9	16		353077	2009 DH ₉₅		11 8.4 241°55	2°6/ 6.7	18	
10 8	3 22.21	+ 8 32.5	1.506	2.384	14.5	21.6	10 8	3 18.66	+11 1.7	1.957	2.828	12.0	21.6
10 18	3 15.44	+ 7 33.8	1.459	2.396	10.4	21.4	10 18	3 12.78	+10 24.5	1.886	2.821	8.5	21.4
10 28	3 6.47	+ 6 35.0	1.436	2.408	6.3	21.2	10 28	3 5.04	+ 9 44.5	1.839	2.814	4.9	21.2
11 7	2 56.35	+ 5 42.4	1.439	2.420	4.4	21.1	11 7	2 56.21	+ 9 5.7	1.821	2.807	2.6	21.0
11 17	2 46.36	+ 5 2.4	1.470	2.431	7.0	21.3	11 17	2 47.26	+ 8 32.7	1.831	2.799	5.1	21.2
11 27	2 37.72	+ 4 39.6	1.527	2.442	11.0	21.5	11 27	2 39.20	+ 8 9.6	1.870	2.791	8.9	21.4
12 7	2 31.34	+ 4 35.9	1.608	2.452	14.7	21.8	12 7	2 32.85	+ 7 59.3	1.934	2.783	12.3	21.6
12 17	2 27.70	+ 4 51.0	1.708	2.462	17.7	22.0	12 17	2 28.75	+ 8 3.2	2.019	2.775	15.3	21.8
397794	2008 KH ₃₉		11 8.4 1°82	7°3/ 3.4	18		485319	2011 BL ₃₄		11 8.4 260°96	8°0/ 1.2	17	
10 8	3 16.95	- 2 54.5	1.944	2.810	12.2	20.1	10 8	3 16.80	- 9 52.8	2.509	3.347	10.8	22.5
10 18	3 11.44	- 3 49.8	1.892	2.810	9.6	20.0	10 18	3 11.14	-10 51.0	2.444	3.331	9.1	22.4
10 28	3 4.22	- 4 35.4	1.865	2.810	7.7	19.8	10 28	3 4.02	-11 37.3	2.405	3.314	8.1	22.3
11 7	2 56.08	- 5 5.4	1.864	2.810	7.4	19.8	11 7	2 56.08	-12 6.6	2.392	3.297	8.2	22.3
11 17	2 47.93	- 5 15.7	1.890	2.810	9.0	19.9	11 17	2 48.03	-12 15.3	2.406	3.280	9.4	22.3
11 27	2 40.70	- 5 4.3	1.941	2.811	11.4	20.1	11 27	2 40.65	-12 1.6	2.445	3.263	11.2	22.4
12 7	2 35.12	- 4 31.8	2.015	2.811	14.0	20.3	12 7	2 34.58	-11 26.5	2.506	3.245	13.1	22.5
12 17	2 31.67	- 3 40.9	2.109	2.812	16.2	20.4	12 17	2 30.28	-10 32.3	2.587	3.227	14.9	22.6
306241	2011 QV ₇₀		11 8.4 332°48	10°1/30.6	18		246166	2007 RQ ₅		11 8.4 56°19	4°9/10.8	18	
10 8	3 15.80	- 6 1.4	1.690	2.559	13.6	19.9	10 8	3 26.35	+27 26.2	1.542	2.381	16.3	19.3
10 18	3 10.83	- 8 12.2	1.646	2.556	11.4	19.7	10 18	3 18.76	+28 20.5	1.492	2.399	12.5	19.1
10 28	3 3.96	-10 10.4	1.627	2.553	10.1	19.6	10 28	3 8.46	+28 57.7	1.464	2.418	8.4	18.9
11 7	2 56.05	-11 45.8	1.633	2.550	10.5	19.7	11 7	2 56.65	+29 15.5	1.462	2.438	5.3	18.8
11 17	2 48.12	-12 50.8	1.664	2.548	12.3	19.8	11 17	2 44.82	+29 14.5	1.488	2.457	5.8	18.9
11 27	2 41.20	-13 22.0	1.717	2.545	14.7	19.9	11 27	2 34.52	+28 59.5	1.540	2.477	9.1	19.1
12 7	2 36.12	-13 20.5	1.791	2.543	17.1	20.1	12 7	2 26.86	+28 37.8	1.618	2.497	12.7	19.4
12 17	2 33.36	-12 50.1	1.880	2.541	19.2	20.3	12 17	2 22.44	+28 16.4	1.717	2.517	15.8	19.6
259988	2004 FY ₆₇		11 8.4 292°96	4°4/ 5.1	18		131749	2001 YE ₁₃₄		11 8.4 166°36	2°8/10.0	17	
10 8	3 16.59	+ 7 52.2	1.804	2.682	12								

EPHEMERIDES

11 8.4

11 8.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
225300	1995 <i>UX</i> ₇₆		11 8.4 319°85	0°8/ 7.9 18			279450	2010 <i>RP</i> ₇₀		11 8.5 349°24	8°0/ 4.8 18		
10 8	3 19.31	+17 34.6	1.342	2.222	15.8	20.6	10 8	3 13.68	+5 11.1	0.870	1.785	18.5	19.5
10 18	3 13.95	+16 52.0	1.276	2.216	11.3	20.4	10 18	3 10.68	+3 57.6	0.820	1.773	13.8	19.2
10 28	3 5.94	+15 57.2	1.232	2.210	6.2	20.1	10 28	3 4.44	+2 47.7	0.789	1.763	9.5	18.9
11 7	2 56.35	+14 55.0	1.213	2.204	1.0	19.7	11 7	2 56.23	+1 53.3	0.777	1.754	8.1	18.8
11 17	2 46.60	+13 52.5	1.221	2.199	5.2	20.0	11 17	2 47.76	+1 25.3	0.787	1.748	11.3	19.0
11 27	2 38.16	+12 57.8	1.254	2.193	10.5	20.3	11 27	2 40.92	+1 30.1	0.816	1.744	16.2	19.2
12 7	2 32.19	+12 17.6	1.311	2.189	15.2	20.5	12 7	2 37.06	+2 7.7	0.863	1.741	21.0	19.5
12 17	2 29.31	+11 55.7	1.386	2.184	19.1	20.8	12 17	2 36.86	+3 13.8	0.924	1.741	25.0	19.8
444153	2005 <i>ET</i> ₁₇₈		11 8.4 200°08	2°2/ 6.7 18			511717	2015 <i>CX</i> ₅₃		11 8.5 180°77	3°2/ 10.5 18		
10 8	3 18.25	+12 30.2	2.133	3.000	11.3	22.0	10 8	3 24.79	+26 22.9	1.895	2.728	14.0	22.3
10 18	3 12.33	+11 37.4	2.063	2.997	8.0	21.8	10 18	3 17.40	+26 30.8	1.821	2.729	10.6	22.1
10 28	3 4.73	+10 40.2	2.019	2.994	4.5	21.6	10 28	3 7.70	+26 23.7	1.772	2.730	6.8	21.8
11 7	2 56.19	+9 42.9	2.004	2.990	2.2	21.4	11 7	2 56.64	+26 1.4	1.749	2.730	3.6	21.6
11 17	2 47.59	+8 50.4	2.018	2.986	4.7	21.6	11 17	2 45.42	+25 26.1	1.755	2.730	4.4	21.7
11 27	2 39.83	+8 7.3	2.061	2.981	8.3	21.8	11 27	2 35.33	+24 43.1	1.791	2.729	8.0	21.9
12 7	2 33.67	+7 37.3	2.131	2.976	11.5	22.0	12 7	2 27.38	+23 58.8	1.853	2.727	11.6	22.1
12 17	2 29.59	+7 21.8	2.223	2.971	14.3	22.2	12 17	2 22.17	+23 19.4	1.938	2.724	14.8	22.3
142835	2002 <i>VK</i> ₁₂		11 8.4 316°20	2°4/ 9.9 18			103452	2000 <i>AY</i> ₁₉₃		11 8.5 256°51	7°5/ 2.3 18		
10 8	3 18.42	+24 15.7	1.676	2.532	14.4	19.7	10 8	3 17.89	-3 13.5	2.047	2.909	11.9	20.0
10 18	3 13.09	+24 6.6	1.598	2.520	10.7	19.4	10 18	3 12.20	-4 31.7	1.979	2.893	9.5	19.8
10 28	3 5.41	+23 42.3	1.542	2.509	6.6	19.1	10 28	3 4.75	-5 42.0	1.936	2.876	7.8	19.7
11 7	2 56.30	+23 4.1	1.512	2.499	2.8	18.9	11 7	2 56.26	-6 37.6	1.921	2.859	7.8	19.7
11 17	2 46.94	+22 15.3	1.510	2.489	4.2	19.0	11 17	2 47.61	-7 13.0	1.932	2.842	9.5	19.7
11 27	2 38.63	+21 22.2	1.535	2.479	8.5	19.2	11 27	2 39.75	-7 24.6	1.969	2.824	12.0	19.8
12 7	2 32.44	+20 32.0	1.585	2.469	12.6	19.4	12 7	2 33.48	-7 12.4	2.028	2.807	14.6	20.0
12 17	2 29.00	+19 50.6	1.656	2.460	16.2	19.6	12 17	2 29.32	-6 38.1	2.107	2.788	16.8	20.1
305907	2009 <i>FY</i> ₄₄		11 8.4 52°38	4°0/ 5.8 18			85477	1997 <i>MQ</i> ₂		11 8.5 50°95	1°0/ 7.9 18		
10 8	3 17.98	+8 3.3	1.769	2.647	12.7	21.1	10 8	3 21.54	+16 31.6	1.227	2.109	16.7	19.4
10 18	3 12.33	+7 12.3	1.713	2.649	9.1	20.9	10 18	3 15.31	+15 56.7	1.189	2.130	11.8	19.1
10 28	3 4.78	+6 21.5	1.680	2.652	5.6	20.7	10 28	3 6.51	+15 12.6	1.173	2.151	6.4	18.9
11 7	2 56.21	+5 36.0	1.675	2.655	4.0	20.6	11 7	2 56.46	+14 24.6	1.182	2.173	1.2	18.6
11 17	2 47.61	+5 1.2	1.698	2.658	6.4	20.8	11 17	2 46.66	+13 39.2	1.217	2.195	5.2	19.0
11 27	2 40.05	+4 41.2	1.748	2.662	9.9	21.0	11 27	2 38.56	+13 3.2	1.278	2.217	10.3	19.3
12 7	2 34.32	+4 37.9	1.822	2.665	13.3	21.2	12 7	2 33.10	+12 41.4	1.361	2.240	14.7	19.6
12 17	2 30.93	+4 51.5	1.916	2.668	16.1	21.4	12 17	2 30.73	+12 35.8	1.465	2.263	18.2	19.9
44914	1999 <i>VN</i> ₂₇		11 8.4 340°54	2°9/ 9.7 18 R			480448	2015 <i>KY</i> ₁₄₆		11 8.5 53°19	4°5/ 5.2 18		
10 8	3 21.22	+22 25.5	1.180	2.055	17.8	18.5	10 8	3 17.45	+10 29.8	1.470	2.356	14.3	20.0
10 18	3 15.84	+22 49.3	1.114	2.047	13.3	18.2	10 18	3 12.12	+8 45.0	1.425	2.367	10.2	19.8
10 28	3 7.23	+22 58.3	1.068	2.040	8.1	17.9	10 28	3 4.71	+6 56.9	1.404	2.378	6.1	19.6
11 7	2 56.56	+22 51.8	1.046	2.033	3.3	17.6	11 7	2 56.24	+5 14.6	1.410	2.390	4.6	19.5
11 17	2 45.50	+22 32.3	1.048	2.028	5.3	17.7	11 17	2 47.89	+3 47.2	1.443	2.402	7.4	19.7
11 27	2 35.93	+22 6.2	1.075	2.023	10.7	18.0	11 27	2 40.83	+2 42.0	1.502	2.414	11.4	20.0
12 7	2 29.29	+21 41.5	1.124	2.019	15.7	18.2	12 7	2 35.88	+2 2.0	1.584	2.426	15.0	20.3
12 17	2 26.36	+21 25.0	1.191	2.016	20.0	18.5	12 17	2 33.50	+1 46.9	1.685	2.439	18.0	20.5
472644	2015 <i>DG</i> ₂₁₂		11 8.4 290°68	4°9/ 5.9 18			127674	2003 <i>EX</i> ₄		11 8.5 243°92	0°3/ 8.6 18		
10 8	3 20.88	+7 7.3	1.416	2.299	14.9	20.6	10 8	3 21.83	+18 33.6	1.794	2.653	13.4	20.6
10 18	3 14.92	+6 24.5	1.352	2.291	10.9	20.3	10 18	3 15.38	+18 21.3	1.713	2.642	9.7	20.3
10 28	3 6.43	+5 42.6	1.310	2.282	6.8	20.1	10 28	3 6.65	+17 59.7	1.657	2.630	5.4	20.0
11 7	2 56.45	+5 8.0	1.294	2.275	4.9	20.0	11 7	2 56.52	+17 30.7	1.627	2.618	0.8	19.7
11 17	2 46.27	+4 46.6	1.305	2.267	7.6	20.1	11 17	2 46.12	+16 57.9	1.627	2.605	4.0	19.9
11 27	2 37.31	+4 43.0	1.341	2.259	11.9	20.3	11 27	2 36.71	+16 26.2	1.655	2.592	8.5	20.1
12 7	2 30.66	+4 59.0	1.399	2.251	16.0	20.6	12 7	2 29.29	+16 0.9	1.709	2.579	12.6	20.4
12 17	2 26.97	+5 34.0	1.476	2.244	19.5	20.8	12 17	2 24.53	+15 45.7	1.785	2.565	16.1	20.6
328850	2009 <i>WU</i> ₁₀₇		11 8.5 217°58	0°8/ 7.8 17			285331	1999 <i>FN</i> ₅₃		11 8.5 139°99	1°3/ 7.9 16		
10 8	3 15.96	+16 1.5	2.496	3.356	10.1	21.9	10 8	3 40.14	+13 14.6	1.522	2.366	16.2	22.0
10 18	3 10.57	+15 25.7	2.421	3.352	7.2	21.7	10 18	3 28.26	+13 24.3	1.469	2.391	11.6	21.7
10 28	3 3.74	+14 44.0	2.372	3.347	3.9	21.5	10 28	3 13.55	+13 29.4	1.442	2.414	6.3	21.5
11 7	2 56.10	+13 59.4	2.353	3.343	0.8	21.2	11 7	2 57.38	+13 31.2	1.445	2.435	1.4	21.2
11 17	2 48.40	+13 15.3	2.364	3.338	3.4	21.4	11 17	2 41.45	+13 32.2	1.480	2.453	5.1	21.5
11 27	2 41.39	+12 35.8	2.404	3.334	6.7	21.6	11 27	2 27.42	+13 36.1	1.545	2.470	10.1	21.9
12 7	2 35.73	+12 4.2	2.472	3.329	9.7	21.8	12 7	2 16.41	+13 46.7	1.637	2.484	14.3	22.2
12 17	2 31.86	+11 42.9	2.563	3.323	12.3	22.0	12 17	2 8.94	+14 6.1	1.751	2.497	17.7	22.4
87328	2000 <i>QC</i> ₁₇		11 8.5 66°38	1°8/ 9.5 18			214555	2006 <i>PR</i> ₂₃		11 8.5 96°26	4°3/ 6.5 18		
10 8	3 21.16	+22 50.2	1.518	2.378	15.4	19.4	10 8	3 24.59	+7 42.0	1.403	2.280	15.4	20.2
10 18	3 14.97	+22 35.2	1.460	2.387	11.3	19.2	10 18	3 17.27	+7 10.4	1.359	2.296	11.0	20.0
10 28	3 6.37	+22 5.4	1.426	2.396	6.6	19.0	10 28	3 7.55	+6 40.6	1.339	2.311	6.6	19.8
11 7	2 56.45	+21 23.1	1.417	2.406	2.2	18.7	11 7	2 56.61	+6 17.7	1.344	2.326	4.3	19.7
11 17	2 46.53	+20 32.8	1.436	2.415	4.2	18.9	11 17	2 45.83	+6 6.6	1.377	2.341	7.0	19.9
11 27	2 37.99	+19 41.5	1.482	2.425	8.8	19.2	11 27	2 36.55	+6 10.6	1.436	2.356	11.1	20.1
12 7	2 31.81	+18 56.3	1.552	2.434	12.9	19.4	12 7	2 29.75	+6 30.7	1.518	2.370	15.0	20.4
12 17	2 28.52	+18 22.0	1.644	2.444	16.4	19.7	12 17	2 25.89	+7 6.1	1.620	2.384	18.2	20.7
35571	1998 <i>HV</i> ₆		11 8.5 189°69	0°2/ 8.3 18			47302	1999 <i>WG</i> ₆		11 8.5 168°97	0°7/ 7.9 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
141569	2002 <i>GT</i> ₁₁₁	11	8.5	88°99	4.8/ 5.8	17	263171	2007 <i>WY</i> ₂₀	11	8.5	265°48	3.8/ 6.5	18
10 8	3 22.11	+ 8 23.5	1.371	2.253	15.3	20.3	10 8	3 21.78	+ 9 34.6	1.406	2.287	15.1	20.5
10 18	3 15.50	+ 7 16.6	1.330	2.269	11.0	20.1	10 18	3 15.59	+ 8 55.8	1.343	2.283	10.9	20.2
10 28	3 6.57	+ 6 9.9	1.313	2.285	6.7	19.9	10 28	3 6.85	+ 8 15.4	1.303	2.278	6.4	20.0
11 7	2 56.49	+ 5 11.1	1.321	2.301	4.8	19.8	11 7	2 56.59	+ 7 38.9	1.289	2.273	3.8	19.8
11 17	2 46.59	+ 4 26.9	1.356	2.316	7.6	20.0	11 17	2 46.18	+ 7 12.3	1.301	2.268	6.8	20.0
11 27	2 38.19	+ 4 2.4	1.416	2.332	11.6	20.3	11 27	2 37.04	+ 7 0.6	1.339	2.264	11.4	20.2
12 7	2 32.19	+ 3 59.2	1.499	2.347	15.4	20.6	12 7	2 30.28	+ 7 6.5	1.400	2.259	15.6	20.5
12 17	2 29.06	+ 4 16.3	1.602	2.361	18.5	20.8	12 17	2 26.51	+ 7 30.3	1.480	2.254	19.2	20.7
397920	2008 <i>VN</i> ₇₇	11	8.5	355°80	7.0/ 5.5	18	71646	2000 <i>EO</i> ₁₁₀	11	8.5	304°96	1.2/ 9.2	17
10 8	3 19.22	+ 2 8.7	1.237	2.127	16.1	19.9	10 8	3 18.51	+20 20.2	2.080	2.935	12.0	18.8
10 18	3 13.90	+ 1 37.9	1.184	2.122	12.1	19.6	10 18	3 12.86	+20 26.5	1.993	2.918	8.8	18.5
10 28	3 5.93	+ 1 16.1	1.152	2.119	8.4	19.4	10 28	3 5.25	+20 24.4	1.930	2.901	5.1	18.3
11 7	2 56.44	+ 1 10.1	1.144	2.116	7.1	19.3	11 7	2 56.40	+20 14.6	1.894	2.884	1.5	18.0
11 17	2 46.83	+ 1 24.6	1.160	2.115	9.4	19.5	11 17	2 47.26	+19 59.3	1.888	2.867	3.5	18.1
11 27	2 38.60	+ 2 2.0	1.200	2.115	13.4	19.7	11 27	2 38.87	+19 41.8	1.911	2.850	7.4	18.3
12 7	2 32.85	+ 3 0.6	1.261	2.115	17.3	19.9	12 7	2 32.15	+19 26.4	1.959	2.834	11.0	18.5
12 17	2 30.19	+ 4 17.1	1.340	2.117	20.7	20.2	12 17	2 27.71	+19 16.7	2.031	2.818	14.2	18.7
333210	2012 <i>HX</i> ₁₄	11	8.5	253°98	2.1/ 7.0	17	360526	2003 <i>QU</i> ₁₁₄	11	8.5	90°70	5.1/ 3.9	18
10 8	3 18.19	+10 40.9	2.292	3.157	10.7	20.4	10 8	3 16.18	+ 2 30.0	2.306	3.174	10.5	20.6
10 18	3 12.29	+10 25.2	2.217	3.150	7.6	20.2	10 18	3 10.61	+ 1 12.6	2.268	3.194	7.8	20.5
10 28	3 4.76	+10 8.2	2.169	3.142	4.3	20.0	10 28	3 3.71	- 0 0.1	2.256	3.213	5.7	20.4
11 7	2 56.28	+ 9 52.7	2.148	3.135	2.1	19.8	11 7	2 56.17	- 1 2.6	2.273	3.233	5.3	20.4
11 17	2 47.68	+ 9 41.3	2.158	3.127	4.3	19.9	11 17	2 48.74	- 1 50.6	2.319	3.252	6.9	20.5
11 27	2 39.81	+ 9 37.0	2.197	3.119	7.7	20.1	11 27	2 42.16	- 2 21.0	2.393	3.271	9.2	20.7
12 7	2 33.40	+ 9 41.8	2.262	3.111	10.8	20.3	12 7	2 37.00	- 2 33.2	2.491	3.289	11.6	20.9
12 17	2 28.96	+ 9 56.8	2.350	3.103	13.5	20.5	12 17	2 33.61	- 2 28.1	2.610	3.308	13.6	21.1
43944	1997 <i>AW</i> ₁	11	8.5	331°60	0.8/ 8.1	18	80131	1999 <i>ST</i> ₅	11	8.5	352°74	14.0/ 8.9	18
10 8	3 21.21	+15 20.1	1.208	2.093	16.7	17.3	10 8	3 38.74	+32 16.3	1.027	1.863	22.9	17.7
10 18	3 15.67	+15 19.9	1.142	2.084	12.1	17.0	10 18	3 30.73	+36 12.4	0.964	1.854	19.3	17.4
10 28	3 7.09	+15 12.6	1.097	2.075	6.7	16.7	10 28	3 16.88	+39 56.5	0.922	1.847	15.9	17.2
11 7	2 56.61	+15 1.0	1.076	2.067	1.0	16.3	11 7	2 58.10	+43 6.2	0.903	1.842	14.1	17.1
11 17	2 45.79	+14 49.1	1.081	2.059	5.4	16.6	11 17	2 36.93	+45 22.0	0.909	1.839	14.9	17.1
11 27	2 36.36	+14 42.4	1.110	2.053	11.1	16.9	11 27	2 17.22	+46 39.3	0.937	1.837	17.7	17.3
12 7	2 29.66	+14 45.6	1.161	2.047	16.1	17.2	12 7	2 2.35	+47 10.3	0.984	1.837	21.2	17.5
12 17	2 26.46	+15 1.8	1.231	2.041	20.3	17.4	12 17	1 54.13	+47 13.7	1.048	1.838	24.4	17.8
408780	1999 <i>VQ</i> ₁₇	11	8.5	0°34	2.3/ 9.8	18	442431	2011 <i>UJ</i> ₁₄₂	11	8.5	340°06	2.2/ 7.2	18
10 8	3 19.88	+22 48.6	1.906	2.757	13.1	21.2	10 8	3 17.45	+12 56.1	1.509	2.391	14.2	20.8
10 18	3 13.87	+23 7.1	1.835	2.756	9.7	21.0	10 18	3 12.42	+12 24.3	1.442	2.383	10.1	20.5
10 28	3 5.77	+23 14.9	1.789	2.755	5.9	20.7	10 28	3 5.09	+11 47.6	1.398	2.376	5.6	20.3
11 7	2 56.42	+23 12.0	1.769	2.755	2.6	20.5	11 7	2 56.39	+11 10.4	1.381	2.369	2.2	20.0
11 17	2 46.90	+23 0.3	1.778	2.756	3.9	20.6	11 17	2 47.51	+10 38.0	1.390	2.363	5.5	20.2
11 27	2 38.35	+22 43.5	1.815	2.756	7.6	20.8	11 27	2 39.73	+10 15.9	1.425	2.358	10.0	20.5
12 7	2 31.72	+22 26.4	1.878	2.757	11.2	21.1	12 7	2 34.07	+10 7.7	1.483	2.353	14.2	20.7
12 17	2 27.57	+22 13.3	1.964	2.758	14.3	21.3	12 17	2 31.13	+10 15.3	1.561	2.349	17.7	20.9
216550	2001 <i>TK</i> ₁₇₂	11	8.5	90°64	1.3/ 7.8	18	351146	2003 <i>YB</i> ₁₅	11	8.5	306°64	3.4/ 6.9	18
10 8	3 22.10	+12 36.7	1.924	2.789	12.4	20.1	10 8	3 22.15	+ 7 41.5	1.637	2.511	13.7	20.5
10 18	3 15.24	+12 43.9	1.862	2.794	8.8	19.9	10 18	3 15.76	+ 7 42.3	1.560	2.495	10.0	20.2
10 28	3 6.42	+12 48.9	1.825	2.800	4.8	19.7	10 28	3 6.96	+ 7 45.6	1.506	2.479	6.0	19.9
11 7	2 56.50	+12 53.4	1.816	2.805	1.3	19.4	11 7	2 56.65	+ 7 54.6	1.480	2.464	3.4	19.7
11 17	2 46.51	+12 59.6	1.836	2.811	4.2	19.6	11 17	2 45.99	+ 8 12.2	1.481	2.449	6.0	19.9
11 27	2 37.53	+13 10.0	1.885	2.816	8.1	19.9	11 27	2 36.31	+ 8 40.7	1.509	2.434	10.3	20.1
12 7	2 30.41	+13 26.8	1.961	2.822	11.7	20.1	12 7	2 28.71	+ 9 21.2	1.562	2.420	14.3	20.3
12 17	2 25.68	+13 51.3	2.059	2.827	14.6	20.3	12 17	2 23.87	+10 13.4	1.636	2.406	17.8	20.5
164882	1999 <i>VB</i> ₄₂	11	8.5	316°79	2.2/ 9.7	18	270204	2001 <i>TJ</i> ₆₈	11	8.5	30°67	1.4/ 7.7	18
10 8	3 19.91	+22 49.5	1.571	2.431	14.9	20.5	10 8	3 18.61	+16 14.3	1.132	2.024	17.2	19.1
10 18	3 14.32	+22 52.0	1.495	2.421	11.1	20.3	10 18	3 13.50	+15 30.6	1.091	2.036	12.2	18.9
10 28	3 6.19	+22 40.9	1.442	2.411	6.7	20.0	10 28	3 5.68	+14 37.0	1.071	2.050	6.6	18.6
11 7	2 56.49	+22 16.8	1.414	2.402	2.6	19.7	11 7	2 56.46	+13 39.8	1.074	2.064	1.5	18.3
11 17	2 46.51	+21 42.8	1.413	2.392	4.3	19.8	11 17	2 47.37	+12 46.8	1.102	2.080	5.6	18.7
11 27	2 37.64	+21 4.6	1.440	2.384	8.9	20.1	11 27	2 39.94	+12 5.5	1.155	2.096	10.9	19.0
12 7	2 31.03	+20 29.0	1.490	2.375	13.2	20.3	12 7	2 35.19	+11 41.1	1.230	2.113	15.5	19.3
12 17	2 27.36	+20 1.7	1.562	2.367	16.9	20.5	12 17	2 33.60	+11 35.5	1.323	2.131	19.3	19.6
401720	2013 <i>HK</i> ₁₂₂	11	8.5	126°26	0.5/ 8.8	18	155821	2000 <i>WM</i> ₁₂₆	11	8.5	33°94	1.4/ 7.6	18
10 8	3 18.53	+19 32.6	2.130	2.985	11.8	21.8	10 8	3 17.32	+14 58.8	1.761	2.635	12.9	19.9
10 18	3 12.60	+19 16.2	2.063	2.989	8.5	21.6	10 18	3 11.94	+14 24.0	1.705	2.642	9.1	19.7
10 28	3 4.94	+18 51.1	2.021	2.993	4.7	21.4	10 28	3 4.65	+13 43.1	1.673	2.649	5.0	19.5
11 7	2 56.32	+18 19.6	2.007	2.997	0.9	21.1	11 7	2 56.33	+13 0.3	1.668	2.657	1.4	19.2
11 17	2 47.64	+17 44.9	2.022	3.001	3.3	21.3	11 17	2 48.01	+12 20.1	1.691	2.666	4.4	19.5
11 27	2 39.87	+17 11.1	2.067	3.005	7.1	21.6	11 27	2 40.75	+11 47.6	1.741	2.674	8.5	19.7
12 7	2 33.75	+16 42.6	2.138	3.008	10.5	21.8	12 7	2 35.36	+11 26.4	1.817	2.683	12.2	20.0
12 17	2 29.77	+16 22.6	2.233	3.011	13.3	22.0	12 17	2 32.32	+11 18.7	1.914	2.692	15.2	20.2
69680	1998 <i>HC</i> ₁₆	11	8.5	96°79	1.5/ 7.6	18	266903	2009 <i>WO</i> ₁₅₆ </					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
216038	2006 <i>DH</i> ₅₉		11 8.5 90°18	1°5/ 7.6 17			398011	2009 <i>CU</i> ₂₆		11 8.5 163°66	4°9/12.1 18		
10 8	3 24.58	+15 57.3	1.333	2.207	16.2	20.9	10 8	3 23.24	+32 14.8	2.186	2.991	13.3	21.4
10 18	3 17.33	+15 9.1	1.292	2.229	11.4	20.7	10 18	3 16.20	+32 36.9	2.112	2.995	10.5	21.2
10 28	3 7.61	+14 12.4	1.274	2.251	6.2	20.5	10 28	3 7.06	+32 42.2	2.061	2.999	7.6	21.0
11 7	2 56.70	+13 12.9	1.282	2.272	1.5	20.2	11 7	2 56.68	+32 29.4	2.038	3.002	5.3	20.9
11 17	2 46.06	+12 17.4	1.318	2.293	5.3	20.5	11 17	2 46.16	+31 59.5	2.043	3.004	5.3	20.9
11 27	2 37.10	+11 32.9	1.380	2.314	10.2	20.9	11 27	2 36.65	+31 16.8	2.076	3.007	7.5	21.0
12 7	2 30.75	+11 4.1	1.466	2.334	14.5	21.2	12 7	2 29.08	+30 27.7	2.137	3.009	10.4	21.2
12 17	2 27.44	+10 52.8	1.572	2.353	17.9	21.5	12 17	2 24.02	+29 38.5	2.222	3.010	13.1	21.4
486486	2013 <i>GU</i> ₈₂		11 8.5 107°90	2°5/ 6.6 18			266635	2008 <i>RS</i> ₈₂		11 8.5 205°81	2°2/10.3 17		
10 8	3 17.94	+ 9 30.2	2.334	3.200	10.5	21.1	10 8	3 17.64	+25 20.9	2.392	3.228	11.3	21.3
10 18	3 11.95	+ 9 3.3	2.279	3.212	7.4	21.0	10 18	3 11.96	+25 12.1	2.316	3.227	8.5	21.2
10 28	3 4.51	+ 8 36.1	2.251	3.223	4.3	20.8	10 28	3 4.63	+24 51.6	2.264	3.226	5.3	21.0
11 7	2 56.31	+ 8 11.6	2.251	3.235	2.5	20.7	11 7	2 56.37	+24 20.3	2.241	3.225	2.5	20.8
11 17	2 48.14	+ 7 52.9	2.281	3.246	4.5	20.8	11 17	2 48.01	+23 40.8	2.247	3.223	3.3	20.8
11 27	2 40.79	+ 7 42.9	2.340	3.257	7.6	21.1	11 27	2 40.45	+22 57.2	2.282	3.222	6.4	21.0
12 7	2 34.89	+ 7 43.1	2.425	3.268	10.4	21.3	12 7	2 34.41	+22 14.2	2.345	3.221	9.4	21.2
12 17	2 30.87	+ 7 54.3	2.533	3.278	12.8	21.5	12 17	2 30.38	+21 36.1	2.433	3.219	12.1	21.4
109410	2001 <i>QR</i> ₁₈₄		11 8.5 68°73	1°0/ 7.7 18			223051	2002 <i>TS</i> ₉₅		11 8.5 119°77	2°3/10.0 18		
10 8	3 18.31	+17 51.0	1.751	2.619	13.3	19.2	10 8	3 22.35	+25 15.3	1.570	2.421	15.5	20.3
10 18	3 12.52	+16 43.6	1.703	2.637	9.4	19.0	10 18	3 15.82	+24 42.7	1.509	2.430	11.5	20.1
10 28	3 4.89	+15 26.8	1.679	2.655	5.0	18.8	10 28	3 6.89	+23 52.1	1.471	2.438	6.9	19.9
11 7	2 56.35	+14 6.1	1.683	2.674	1.0	18.5	11 7	2 56.66	+22 46.2	1.460	2.446	2.7	19.7
11 17	2 47.97	+12 48.2	1.716	2.692	4.3	18.8	11 17	2 46.47	+21 30.5	1.476	2.455	4.2	19.8
11 27	2 40.77	+11 39.8	1.778	2.710	8.4	19.1	11 27	2 37.68	+20 13.4	1.520	2.462	8.6	20.1
12 7	2 35.49	+10 45.9	1.864	2.728	12.1	19.4	12 7	2 31.25	+19 3.3	1.589	2.470	12.8	20.3
12 17	2 32.56	+10 9.0	1.973	2.746	15.0	19.6	12 17	2 27.72	+18 6.3	1.680	2.477	16.3	20.6
369627	2011 <i>DQ</i> ₁₈		11 8.5 297°79	3°5/ 5.4 17			13605	Nakamuraminoru		11 8.5 71°23	3°8/10.7 18		
10 8	3 14.80	+ 7 53.0	2.274	3.146	10.4	21.4	10 8	3 24.02	+26 45.1	1.423	2.272	16.8	17.2
10 18	3 9.86	+ 6 55.6	2.205	3.139	7.5	21.2	10 18	3 17.23	+26 53.0	1.371	2.287	12.7	17.0
10 28	3 3.44	+ 5 57.6	2.162	3.133	4.7	21.1	10 28	3 7.73	+26 41.9	1.341	2.302	8.2	16.8
11 7	2 56.18	+ 5 3.6	2.148	3.126	3.6	21.0	11 7	2 56.78	+26 12.2	1.335	2.317	4.3	16.6
11 17	2 48.84	+ 4 18.4	2.163	3.119	5.5	21.1	11 17	2 45.88	+25 27.6	1.356	2.332	5.1	16.7
11 27	2 42.23	+ 3 45.7	2.206	3.113	8.5	21.3	11 27	2 36.56	+24 35.4	1.404	2.347	9.1	17.0
12 7	2 37.00	+ 3 27.8	2.274	3.106	11.4	21.4	12 7	2 29.92	+23 44.2	1.476	2.362	13.2	17.3
12 17	2 33.61	+ 3 25.6	2.364	3.100	13.9	21.6	12 17	2 26.48	+23 0.9	1.569	2.377	16.7	17.6
243873	2000 <i>XM</i> ₂₉		11 8.5 307°06	2°0/ 9.3 18			20867	2000 <i>VT</i> ₃₇		11 8.5 155°82	3°6/11.4 18		
10 8	3 23.82	+19 54.5	1.544	2.405	15.1	19.4	10 8	3 21.27	+29 53.7	2.043	2.864	13.5	17.5
10 18	3 17.33	+20 33.1	1.462	2.390	11.2	19.1	10 18	3 14.73	+29 30.8	1.971	2.870	10.4	17.3
10 28	3 8.01	+21 3.6	1.403	2.374	6.6	18.8	10 28	3 6.19	+28 49.8	1.923	2.875	6.9	17.1
11 7	2 56.82	+21 25.0	1.371	2.359	2.3	18.5	11 7	2 56.57	+27 51.9	1.902	2.880	4.0	17.0
11 17	2 45.10	+21 37.7	1.366	2.344	4.5	18.6	11 17	2 46.95	+26 40.5	1.911	2.884	4.3	17.0
11 27	2 34.42	+21 44.7	1.388	2.330	9.4	18.9	11 27	2 38.43	+25 22.2	1.948	2.888	7.3	17.2
12 7	2 26.10	+21 50.7	1.435	2.316	13.9	19.1	12 7	2 31.86	+24 4.5	2.013	2.891	10.6	17.4
12 17	2 20.97	+22 0.5	1.503	2.302	17.8	19.3	12 17	2 27.74	+22 53.9	2.102	2.894	13.6	17.6
490537	2009 <i>VQ</i> ₃₇		11 8.5 0°14	1°1/ 9.4 17			438951	2010 <i>KT</i> ₃₈		11 8.5 86°07	0°1/ 8.4 15		
10 8	3 14.70	+23 45.8	1.735	2.596	13.7	20.0	10 8	3 22.08	+17 39.9	1.845	2.705	13.1	21.8
10 18	3 10.24	+22 47.7	1.666	2.594	10.0	19.7	10 18	3 15.15	+17 24.0	1.799	2.728	9.3	21.6
10 28	3 3.78	+21 33.2	1.622	2.593	5.8	19.5	10 28	3 6.34	+17 0.4	1.777	2.751	5.1	21.4
11 7	2 56.23	+20 6.4	1.603	2.593	1.6	19.2	11 7	2 56.59	+16 31.8	1.783	2.773	0.6	21.1
11 17	2 48.65	+18 33.9	1.613	2.593	3.7	19.4	11 17	2 46.98	+16 1.9	1.818	2.795	3.7	21.4
11 27	2 42.12	+17 3.8	1.651	2.594	8.0	19.6	11 27	2 38.57	+15 35.2	1.882	2.817	7.8	21.7
12 7	2 37.49	+15 43.8	1.715	2.596	12.0	19.9	12 7	2 32.14	+15 15.6	1.972	2.839	11.3	21.9
12 17	2 35.26	+14 39.1	1.801	2.599	15.3	20.1	12 17	2 28.12	+15 5.7	2.084	2.860	14.2	22.2
9383	Montélimar		11 8.5 109°19	0°9/ 7.7 18			353247	2010 <i>DF</i> ₅₄		11 8.5 117°08	3°6/ 6.3 18		
10 8	3 17.74	+15 6.6	2.378	3.238	10.5	19.2	10 8	3 20.51	+ 7 29.5	1.871	2.742	12.4	20.6
10 18	3 11.81	+14 38.3	2.321	3.252	7.4	19.0	10 18	3 14.09	+ 7 0.4	1.816	2.749	9.0	20.4
10 28	3 4.43	+14 5.3	2.291	3.266	4.0	18.8	10 28	3 5.81	+ 6 32.6	1.785	2.756	5.4	20.2
11 7	2 56.31	+13 30.5	2.289	3.279	1.0	18.6	11 7	2 56.53	+ 6 10.2	1.782	2.762	3.7	20.1
11 17	2 48.23	+12 57.2	2.318	3.292	3.5	18.8	11 17	2 47.26	+ 5 57.0	1.807	2.769	5.9	20.3
11 27	2 40.97	+12 28.9	2.376	3.305	6.8	19.1	11 27	2 39.00	+ 5 55.9	1.860	2.775	9.3	20.5
12 7	2 35.18	+12 8.5	2.461	3.318	9.8	19.3	12 7	2 32.58	+ 6 8.4	1.939	2.781	12.6	20.7
12 17	2 31.25	+11 57.9	2.570	3.330	12.3	19.5	12 17	2 28.47	+ 6 34.4	2.038	2.787	15.4	20.9
9291	Alanbuddick		11 8.5 17°68	4°9/ 4.8 18			127700	2003 <i>EE</i> ₂₄		11 8.5 262°91	1°7/ 9.4 18		
10 8	3 15.47	+ 5 15.2	1.888	2.766	12.0	17.3	10 8	3 22.39	+21 28.0	1.586	2.445	14.9	20.2
10 18	3 10.49	+ 4 10.2	1.834	2.769	8.8	17.1	10 18	3 16.02	+21 31.4	1.516	2.443	10.9	19.9
10 28	3 3.82	+ 3 7.6	1.806	2.772	5.9	17.0	10 28	3 7.13	+21 22.7	1.470	2.440	6.4	19.7
11 7	2 56.24	+ 2 13.2	1.804	2.776	5.0	16.9	11 7	2 56.73	+21 2.7	1.449	2.437	2.1	19.4
11 17	2 48.65	+ 1 32.5	1.830	2.779	7.0	17.1	11 17	2 46.12	+20 34.6	1.456	2.435	4.2	19.5
11 27	2 41.98	+ 1 9.2	1.883	2.784	10.1	17.2	11 27	2 36.71	+20 3.7	1.490	2.432	8.8	19.8
12 7	2 36.96	+ 1 4.8	1.959	2.788	13.1	17.5	12 7	2 29.60	+19 36.1	1.549	2.429	13.1	20.0
12 17	2 34.06	+ 1 18.7	2.056	2.793	15.6	17.7	12 17	2 25.43	+19 16.9	1.630	2.427	16.7	20.3
515534	2014 <i>GS</i> ₁₃		11 8.5 147°86	5°3/11.6 18			182286	2001 <i>KD</i> ₄₉		11 8.5 106°20	0°8/ 8.0 18		
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
239354	2007 <i>RD</i> ₁₇₀		11 8.5 198°74	1°3/ 7.6 18			234789	2002 <i>QV</i> ₂₂		11 8.5 134°59	4°3/ 4.9 18		
10 8	3 19.94	+14 41.4	1.871	2.738	12.6	20.9	10 8	3 16.00	+ 3 59.9	2.421	3.289	10.1	20.3
10 18	3 13.83	+14 10.6	1.803	2.737	9.0	20.7	10 18	3 10.59	+ 3 12.3	2.364	3.293	7.4	20.1
10 28	3 5.75	+13 34.0	1.760	2.735	4.9	20.4	10 28	3 3.82	+ 2 27.8	2.334	3.296	5.1	20.0
11 7	2 56.55	+12 55.0	1.744	2.734	1.4	20.2	11 7	2 56.31	+ 1 50.4	2.332	3.300	4.3	19.9
11 17	2 47.25	+12 17.9	1.757	2.732	4.4	20.4	11 17	2 48.80	+ 1 23.9	2.358	3.304	5.9	20.0
11 27	2 38.94	+11 47.5	1.799	2.729	8.5	20.6	11 27	2 42.02	+ 1 10.9	2.413	3.307	8.5	20.2
12 7	2 32.47	+11 27.6	1.866	2.727	12.2	20.9	12 7	2 36.58	+ 1 12.5	2.494	3.311	11.0	20.4
12 17	2 28.38	+11 20.5	1.955	2.724	15.3	21.1	12 17	2 32.88	+ 1 28.4	2.596	3.314	13.2	20.5
6243	Yoder		11 8.5 229°61	2°9/10.1 18			367851	2011 <i>CH</i> ₂₃		11 8.5 310°19	4°8/ 4.8 18		
10 8	3 23.50	+24 58.4	1.435	2.290	16.4	17.1	10 8	3 16.18	+ 3 9.3	2.210	3.080	10.8	20.5
10 18	3 17.08	+24 53.0	1.365	2.286	12.3	16.8	10 18	3 10.87	+ 2 22.8	2.148	3.077	8.1	20.4
10 28	3 7.82	+24 29.6	1.316	2.282	7.6	16.5	10 28	3 4.04	+ 1 40.1	2.112	3.074	5.6	20.2
11 7	2 56.84	+23 49.0	1.292	2.278	3.4	16.3	11 7	2 56.35	+ 1 5.8	2.104	3.071	4.9	20.2
11 17	2 45.63	+22 55.0	1.295	2.274	4.8	16.4	11 17	2 48.61	+ 0 43.9	2.124	3.068	6.6	20.3
11 27	2 35.80	+21 55.3	1.325	2.269	9.5	16.6	11 27	2 41.63	+ 0 37.1	2.171	3.065	9.3	20.4
12 7	2 28.58	+20 58.9	1.379	2.264	14.1	16.9	12 7	2 36.10	+ 0 46.4	2.243	3.062	12.0	20.6
12 17	2 24.64	+20 12.8	1.454	2.259	18.0	17.1	12 17	2 32.47	+ 1 11.2	2.337	3.060	14.3	20.8
356567	2011 <i>SW</i> ₂₁₈		11 8.5 87°01	3°7/ 6.6 18			112753	2002 <i>PC</i> ₁₃₅		11 8.5 115°69	0°2/ 8.4 16		
10 8	3 23.10	+ 6 32.3	1.810	2.677	12.9	20.3	10 8	3 24.44	+18 2.0	1.651	2.511	14.3	20.9
10 18	3 15.88	+ 6 21.9	1.763	2.694	9.3	20.1	10 18	3 17.06	+17 37.1	1.600	2.529	10.2	20.7
10 28	3 6.76	+ 6 14.4	1.740	2.711	5.7	19.9	10 28	3 7.49	+17 2.8	1.572	2.547	5.6	20.5
11 7	2 56.67	+ 6 13.1	1.746	2.727	3.7	19.8	11 7	2 56.80	+16 22.5	1.573	2.563	0.7	20.2
11 17	2 46.68	+ 6 20.7	1.781	2.744	5.8	20.0	11 17	2 46.23	+15 40.7	1.602	2.580	4.2	20.5
11 27	2 37.85	+ 6 39.1	1.844	2.760	9.3	20.3	11 27	2 37.02	+15 3.2	1.659	2.595	8.7	20.8
12 7	2 30.99	+ 7 8.9	1.932	2.776	12.6	20.5	12 7	2 30.06	+14 34.8	1.742	2.610	12.6	21.0
12 17	2 26.56	+ 7 49.7	2.042	2.791	15.3	20.7	12 17	2 25.82	+14 18.6	1.847	2.624	15.8	21.3
274940	2009 <i>SS</i> ₂₃₃		11 8.5 341°97	1°2/ 8.7 17			205997	2002 <i>PM</i> ₁₆		11 8.5 65°69	4°0/ 6.0 18		
10 8	3 29.55	+14 27.1	1.553	2.413	15.1	19.3	10 8	3 19.62	+ 8 28.8	1.615	2.493	13.6	20.0
10 18	3 21.59	+16 5.2	1.468	2.396	11.1	19.0	10 18	3 13.56	+ 7 36.5	1.573	2.511	9.7	19.8
10 28	3 10.52	+17 46.1	1.407	2.380	6.3	18.7	10 28	3 5.54	+ 6 44.8	1.555	2.528	5.9	19.6
11 7	2 57.24	+19 26.1	1.375	2.365	1.6	18.4	11 7	2 56.54	+ 5 59.3	1.564	2.545	4.0	19.6
11 17	2 43.18	+21 0.7	1.374	2.352	4.7	18.5	11 17	2 47.68	+ 5 25.3	1.601	2.563	6.5	19.8
11 27	2 30.05	+22 27.6	1.402	2.339	9.7	18.8	11 27	2 40.06	+ 5 6.8	1.664	2.580	10.1	20.0
12 7	2 19.36	+23 47.2	1.456	2.328	14.3	19.1	12 7	2 34.46	+ 5 5.6	1.751	2.598	13.6	20.3
12 17	2 12.07	+25 1.9	1.532	2.318	18.1	19.3	12 17	2 31.33	+ 5 21.1	1.858	2.615	16.4	20.5
385675	2005 <i>SY</i> ₁₈₇		11 8.5 341°87	1°2/ 7.9 18			422902	2002 <i>RH</i> ₁₅₅		11 8.5 21°94	1°9/ 7.1 17		
10 8	3 17.38	+16 13.7	1.174	2.065	16.7	20.8	10 8	3 15.40	+13 36.9	1.893	2.768	12.1	20.9
10 18	3 12.96	+15 43.1	1.110	2.055	12.0	20.5	10 18	3 10.50	+12 52.2	1.837	2.775	8.5	20.7
10 28	3 5.65	+15 1.9	1.067	2.046	6.6	20.2	10 28	3 3.88	+12 2.9	1.805	2.781	4.7	20.5
11 7	2 56.57	+14 14.9	1.047	2.037	1.3	19.8	11 7	2 56.34	+11 13.2	1.800	2.789	1.9	20.3
11 17	2 47.22	+13 28.8	1.052	2.030	5.6	20.1	11 17	2 48.80	+10 28.0	1.824	2.796	4.6	20.5
11 27	2 39.24	+12 51.6	1.081	2.024	11.3	20.4	11 27	2 42.20	+ 9 52.1	1.876	2.804	8.3	20.8
12 7	2 33.90	+12 29.5	1.131	2.019	16.3	20.7	12 7	2 37.28	+ 9 28.8	1.952	2.813	11.7	21.0
12 17	2 31.88	+12 25.6	1.200	2.015	20.4	20.9	12 17	2 34.50	+ 9 19.6	2.051	2.822	14.6	21.2
287939	2003 <i>UM</i> ₇₀		11 8.5 49°47	0°9/ 7.8 18			127938	2003 <i>HN</i> ₂		11 8.5 176°22	12°5/28.8 17		
10 8	3 17.48	+15 13.5	2.010	2.877	11.8	20.5	10 8	3 23.07	-17 53.1	1.963	2.774	14.4	21.0
10 18	3 11.88	+14 51.1	1.954	2.888	8.4	20.3	10 18	3 15.87	-19 49.5	1.932	2.778	13.0	20.9
10 28	3 4.59	+14 23.4	1.924	2.900	4.5	20.1	10 28	3 6.79	-21 23.7	1.924	2.781	12.5	20.9
11 7	2 56.40	+13 53.6	1.922	2.912	1.0	19.9	11 7	2 56.73	-22 27.4	1.940	2.783	12.9	20.9
11 17	2 48.24	+13 25.2	1.948	2.924	3.8	20.1	11 17	2 46.71	-22 55.9	1.979	2.783	14.1	21.0
11 27	2 41.02	+13 2.2	2.003	2.936	7.6	20.4	11 27	2 37.78	-22 48.7	2.040	2.783	15.7	21.1
12 7	2 35.47	+12 47.6	2.084	2.948	10.9	20.6	12 7	2 30.76	-22 9.4	2.119	2.782	17.3	21.3
12 17	2 32.05	+12 43.4	2.187	2.961	13.7	20.8	12 17	2 26.10	-21 3.6	2.212	2.779	18.7	21.4
452372	2001 <i>YW</i> ₁		11 8.5 100°45	10°6/16.4 17			35157	1993 <i>FQ</i> ₇₃		11 8.5 142°20	0°4/ 8.8 18		
10 8	3 27.20	+43 45.8	1.164	1.958	23.2	20.2	10 8	3 18.43	+19 36.2	2.126	2.982	11.8	20.0
10 18	3 20.55	+43 30.4	1.101	1.963	19.6	20.0	10 18	3 12.61	+19 16.2	2.057	2.984	8.5	19.8
10 28	3 9.92	+42 29.8	1.054	1.967	15.6	19.7	10 28	3 5.04	+18 47.4	2.014	2.986	4.8	19.6
11 7	2 57.11	+40 39.5	1.027	1.972	12.0	19.6	11 7	2 56.51	+18 12.0	1.998	2.989	0.9	19.3
11 17	2 44.48	+38 4.0	1.023	1.976	10.6	19.5	11 17	2 47.90	+17 33.5	2.012	2.991	3.3	19.5
11 27	2 34.31	+34 59.5	1.044	1.981	12.4	19.6	11 27	2 40.19	+16 56.2	2.055	2.993	7.1	19.8
12 7	2 28.01	+31 48.2	1.089	1.985	16.0	19.8	12 7	2 34.13	+16 24.5	2.125	2.995	10.5	20.0
12 17	2 26.01	+28 49.7	1.156	1.989	19.9	20.1	12 17	2 30.20	+16 1.8	2.218	2.996	13.4	20.2
31772	Asztalos		11 8.5 211°36	0°1/ 8.4 18			523251	2017 <i>AO</i> ₂₂		11 8.5 101°66	1°3/ 9.6 18		
10 8	3 17.54	+19 8.9	2.189	3.045	11.4	19.2	10 8	3 17.46	+23 24.5	2.209	3.055	11.8	21.0
10 18	3 11.93	+18 25.0	2.114	3.042	8.2	19.0	10 18	3 11.84	+22 49.2	2.142	3.062	8.6	20.8
10 28	3 4.64	+17 31.6	2.065	3.039	4.5	18.8	10 28	3 4.58	+22 2.0	2.101	3.069	5.1	20.6
11 7	2 56.42	+16 32.0	2.045	3.036	0.6	18.5	11 7	2 56.45	+21 5.4	2.088	3.076	1.7	20.3
11 17	2 48.13	+15 30.6	2.054	3.032	3.4	18.7	11 17	2 48.32	+20 3.4	2.104	3.083	3.1	20.5
11 27	2 40.68	+14 32.7	2.093	3.028	7.2	18.9	11 27	2 41.10	+19 1.3	2.150	3.089	6.7	20.7
12 7	2 34.80	+13 43.1	2.159	3.024	10.6	19.1	12 7	2 35.50	+18 4.5	2.223	3.096	10.0	20.9
12 17	2 30.99	+13 5.2	2.248	3.019	13.5	19.3	12 17	2 31.95	+17 17.1	2.320	3.103	12.8	21.1
76752	2000 <i>JB</i> ₈₂		11 8.5 186°24	3°5/11.9 18			199856	2007 <i>ER</i> ₉₁		11 8.5 106°74	1°3/ 7.7		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
351151	2003 YC ₄₈	11	8.5	22°23	6°0/12.9	18	430713	2004 EN ₉	11	8.5	176°60	5°6/ 6.5	17
10 8	3 18.58	+33 53.4	1.397	2.230	18.0	19.6	10 8	3 31.77	+ 7 43.9	1.025	1.908	19.2	21.9
10 18	3 13.57	+33 36.0	1.338	2.237	14.2	19.4	10 18	3 23.42	+ 6 58.9	0.973	1.912	14.0	21.6
10 28	3 5.84	+32 50.5	1.299	2.245	10.2	19.2	10 28	3 11.47	+ 6 14.6	0.941	1.914	8.6	21.4
11 7	2 56.62	+31 37.4	1.283	2.254	6.7	19.0	11 7	2 57.42	+ 5 39.0	0.933	1.916	5.6	21.2
11 17	2 47.44	+30 2.1	1.293	2.264	6.3	19.0	11 17	2 43.29	+ 5 19.6	0.950	1.916	9.0	21.4
11 27	2 39.83	+28 14.9	1.329	2.274	9.4	19.2	11 27	2 31.17	+ 5 21.9	0.992	1.915	14.5	21.7
12 7	2 34.85	+26 28.0	1.389	2.285	13.2	19.5	12 7	2 22.51	+ 5 47.2	1.054	1.913	19.5	22.0
12 17	2 33.02	+24 51.5	1.471	2.297	16.8	19.7	12 17	2 17.93	+ 6 33.6	1.132	1.910	23.6	22.3
109492	2001 QG ₂₂₈	11	8.5	139°74	0°5/ 8.8	18	187964	2001 PM ₅₁	11	8.5	112°01	2°5/ 6.9	18
10 8	3 21.28	+21 1.4	1.693	2.551	14.1	20.2	10 8	3 21.93	+12 25.3	1.630	2.502	13.9	20.5
10 18	3 14.91	+20 15.8	1.630	2.558	10.2	20.0	10 18	3 15.29	+11 38.8	1.579	2.516	9.8	20.3
10 28	3 6.39	+19 16.9	1.592	2.565	5.7	19.7	10 28	3 6.56	+10 48.2	1.553	2.528	5.5	20.1
11 7	2 56.70	+18 8.5	1.580	2.571	1.0	19.4	11 7	2 56.75	+ 9 58.6	1.554	2.541	2.5	20.0
11 17	2 47.02	+16 56.5	1.598	2.577	4.0	19.6	11 17	2 47.02	+ 9 15.6	1.583	2.553	5.5	20.2
11 27	2 38.57	+15 48.2	1.644	2.582	8.5	19.9	11 27	2 38.55	+ 8 44.2	1.640	2.565	9.6	20.4
12 7	2 32.24	+14 50.2	1.715	2.587	12.5	20.2	12 7	2 32.20	+ 8 27.8	1.721	2.576	13.3	20.7
12 17	2 28.54	+14 6.8	1.808	2.592	15.8	20.4	12 17	2 28.45	+ 8 27.3	1.823	2.587	16.4	20.9
304364	2006 SK ₃₄₀	11	8.5	81°88	0°2/ 8.4	18	521506	2015 OD ₉₆	11	8.5	61°66	3°1/10.5	17
10 8	3 20.67	+16 57.2	1.845	2.708	12.9	20.7	10 8	3 20.84	+25 50.5	1.826	2.668	14.0	21.3
10 18	3 14.32	+16 47.0	1.788	2.719	9.2	20.4	10 18	3 14.65	+25 56.8	1.761	2.675	10.5	21.1
10 28	3 6.01	+16 30.0	1.755	2.730	5.0	20.2	10 28	3 6.30	+25 48.6	1.721	2.682	6.7	20.9
11 7	2 56.65	+16 8.3	1.750	2.740	0.7	19.9	11 7	2 56.72	+25 26.2	1.706	2.689	3.4	20.7
11 17	2 47.28	+15 45.4	1.773	2.751	3.8	20.2	11 17	2 47.07	+24 52.3	1.720	2.696	4.2	20.8
11 27	2 39.00	+15 25.5	1.825	2.762	7.9	20.5	11 27	2 38.54	+24 12.2	1.761	2.703	7.8	21.0
12 7	2 32.63	+15 12.3	1.903	2.772	11.6	20.7	12 7	2 32.07	+23 31.8	1.829	2.710	11.4	21.3
12 17	2 28.67	+15 8.5	2.003	2.783	14.6	21.0	12 17	2 28.20	+22 56.9	1.919	2.717	14.5	21.5
85264	1993 TN ₄₆	11	8.5	112°20	1°8/ 7.3	18	309279	2007 RQ ₁₄₁	11	8.5	39°55	2°3/ 7.1	18
10 8	3 22.09	+13 49.5	1.756	2.624	13.3	20.2	10 8	3 18.48	+14 18.1	1.356	2.241	15.3	20.2
10 18	3 15.27	+13 9.9	1.706	2.640	9.4	20.0	10 18	3 13.10	+13 22.8	1.314	2.256	10.8	19.9
10 28	3 6.48	+12 25.3	1.681	2.656	5.1	19.8	10 28	3 5.42	+12 21.1	1.295	2.272	5.9	19.7
11 7	2 56.70	+11 40.0	1.683	2.672	1.8	19.6	11 7	2 56.59	+11 19.2	1.300	2.289	2.3	19.5
11 17	2 47.03	+10 58.8	1.714	2.687	4.8	19.8	11 17	2 47.91	+10 24.3	1.333	2.306	5.6	19.8
11 27	2 38.57	+10 26.8	1.774	2.702	8.8	20.1	11 27	2 40.64	+ 9 42.7	1.391	2.324	10.2	20.1
12 7	2 32.12	+10 7.3	1.859	2.716	12.4	20.4	12 7	2 35.69	+ 9 18.3	1.472	2.342	14.3	20.4
12 17	2 28.14	+10 1.7	1.966	2.730	15.4	20.6	12 17	2 33.49	+ 9 12.4	1.573	2.361	17.6	20.7
267918	2004 CT ₁₀₇	11	8.5	145°28	2°3/10.0	18	454056	2012 HE ₇₀	11	8.5	202°42	4°5/ 4.4	18
10 8	3 24.20	+24 36.2	1.895	2.734	13.7	21.5	10 8	3 16.83	- 0 29.4	3.044	3.897	8.7	21.7
10 18	3 16.88	+24 26.9	1.831	2.745	10.2	21.3	10 18	3 11.01	- 1 2.3	2.977	3.892	6.6	21.5
10 28	3 7.44	+24 3.7	1.791	2.755	6.2	21.0	10 28	3 4.04	- 1 30.1	2.938	3.887	5.0	21.4
11 7	2 56.84	+23 27.6	1.779	2.764	2.7	20.8	11 7	2 56.42	- 1 49.6	2.927	3.881	4.6	21.4
11 17	2 46.24	+22 42.0	1.796	2.773	3.8	20.9	11 17	2 48.75	- 1 58.3	2.947	3.875	5.8	21.4
11 27	2 36.82	+21 52.5	1.842	2.781	7.7	21.2	11 27	2 41.65	- 1 54.4	2.996	3.869	7.7	21.6
12 7	2 29.48	+21 5.4	1.915	2.789	11.3	21.4	12 7	2 35.62	- 1 37.6	3.070	3.862	9.8	21.7
12 17	2 24.76	+20 26.0	2.011	2.795	14.4	21.7	12 17	2 31.07	- 1 8.6	3.168	3.854	11.6	21.8
72967	2002 CH ₁₄₁	11	8.5	96°56	4°1/11.2	18	69539	1997 GO ₄₀	11	8.5	252°62	0°6/ 8.1	18
10 8	3 27.17	+29 14.9	1.518	2.351	16.8	18.9	10 8	3 20.54	+16 9.4	1.926	2.789	12.5	20.2
10 18	3 19.22	+29 1.3	1.472	2.377	12.7	18.7	10 18	3 14.39	+15 52.5	1.846	2.777	9.0	20.0
10 28	3 8.73	+28 26.0	1.447	2.403	8.3	18.5	10 28	3 6.19	+15 28.8	1.790	2.765	4.9	19.7
11 7	2 57.00	+27 30.4	1.448	2.427	4.6	18.3	11 7	2 56.73	+15 0.8	1.762	2.753	0.8	19.4
11 17	2 45.55	+26 19.7	1.477	2.451	5.0	18.4	11 17	2 47.04	+14 32.0	1.763	2.740	4.0	19.6
11 27	2 35.83	+25 2.4	1.534	2.475	8.7	18.7	11 27	2 38.23	+14 7.0	1.793	2.727	8.2	19.8
12 7	2 28.80	+23 48.1	1.616	2.498	12.6	19.0	12 7	2 31.23	+13 49.7	1.849	2.714	12.1	20.0
12 17	2 24.91	+22 44.1	1.721	2.520	15.9	19.2	12 17	2 26.64	+13 43.0	1.927	2.701	15.3	20.2
105077	2000 KT ₇₀	11	8.5	271°25	1°4/ 7.6	18	324157	2005 YC ₁₉₀	11	8.5	58°13	4°4/11.9	17
10 8	3 18.76	+12 9.0	2.440	3.301	10.3	19.9	10 8	3 19.53	+31 10.5	2.071	2.890	13.4	20.9
10 18	3 12.75	+12 5.9	2.357	3.287	7.3	19.7	10 18	3 13.59	+31 14.6	2.004	2.897	10.5	20.7
10 28	3 5.13	+12 1.0	2.300	3.274	4.1	19.5	10 28	3 5.68	+31 1.5	1.960	2.905	7.4	20.5
11 7	2 56.55	+11 56.0	2.272	3.260	1.4	19.2	11 7	2 56.65	+30 31.0	1.942	2.912	4.8	20.4
11 17	2 47.78	+11 53.4	2.274	3.247	3.7	19.4	11 17	2 47.58	+29 45.5	1.952	2.920	4.8	20.4
11 27	2 39.65	+11 55.3	2.306	3.233	7.1	19.6	11 27	2 39.54	+28 50.1	1.990	2.927	7.3	20.6
12 7	2 32.90	+12 4.0	2.365	3.219	10.2	19.8	12 7	2 33.39	+27 51.4	2.055	2.935	10.3	20.8
12 17	2 28.05	+12 20.8	2.448	3.205	12.9	19.9	12 17	2 29.66	+26 55.6	2.144	2.943	13.1	21.0
27692	1981 EC ₃₄	11	8.5	36°47	4°6/11.3	18	6144	Kondojiro	11	8.5	201°48	1°0/ 6.8	18
10 8	3 20.80	+28 46.1	1.537	2.380	16.1	18.2	10 8	3 9.30	+10 53.9	5.578	6.434	4.9	19.8
10 18	3 14.90	+29 0.2	1.483	2.393	12.4	18.0	10 18	3 5.36	+10 32.9	5.500	6.429	3.5	19.7
10 28	3 6.50	+28 55.0	1.451	2.406	8.3	17.8	10 28	3 0.84	+10 11.2	5.451	6.423	2.0	19.6
11 7	2 56.73	+28 30.3	1.443	2.420	5.0	17.6	11 7	2 56.01	+ 9 50.0	5.432	6.418	1.0	19.5
11 17	2 46.95	+27 49.1	1.461	2.434	5.3	17.7	11 17	2 51.14	+ 9 30.6	5.446	6.412	2.0	19.6
11 27	2 38.58	+26 58.1	1.507	2.449	8.7	17.9	11 27	2 46.53	+ 9 14.3	5.490	6.406	3.6	19.7
12 7	2 32.64	+26 5.4	1.577	2.465	12.4	18.2	12 7	2 42.45	+ 9 2.3	5.564	6.399	5.0	19.8
12 17	2 29.66	+25 18.1	1.668	2.481	15.7	18.4	12 17	2 39.13	+ 8 55.1	5.663	6.393	6.3	19.9
352876	2008 XR ₄₃	11	8.5	274°69	8°0/ 2.8	18	425719	2011 BD ₃₁	11	8.5	228°31	3°2/ 6.7	18
10 8	3 18.44	- 3 4.8	1.821	2.688	1								

EPHEMERIDES

11 8.5

11 8.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
207363	2005 <i>JE</i> ₁₄₈	11	8.5 212°11	6°4/ 3.4	18		138097	2000 <i>DZ</i> ₈₀	11	8.5 316°29	0°6/ 8.3	18	
10 8	3 17.27	+ 1 15.6	1.922	2.794	12.1	20.6	10 8	3 21.03	+16 10.1	1.301	2.182	16.1	19.2
10 18	3 11.83	- 0 7.3	1.867	2.793	9.2	20.4	10 18	3 15.55	+16 2.2	1.229	2.169	11.6	18.9
10 28	3 4.65	- 1 25.1	1.836	2.791	7.0	20.3	10 28	3 7.18	+15 46.0	1.179	2.156	6.5	18.6
11 7	2 56.53	- 2 30.8	1.833	2.789	6.6	20.2	11 7	2 56.96	+15 24.2	1.154	2.144	1.0	18.2
11 17	2 48.36	- 3 18.6	1.858	2.788	8.5	20.4	11 17	2 46.36	+15 1.2	1.154	2.133	5.1	18.5
11 27	2 41.10	- 3 44.5	1.908	2.786	11.2	20.5	11 27	2 37.00	+14 42.9	1.179	2.121	10.7	18.8
12 7	2 35.51	- 3 47.8	1.981	2.783	14.0	20.7	12 7	2 30.20	+14 34.8	1.228	2.111	15.6	19.0
12 17	2 32.05	- 3 29.9	2.074	2.781	16.4	20.9	12 17	2 26.73	+14 40.2	1.295	2.101	19.7	19.3
212899	2007 <i>WH</i> ₁₁	11	8.5 252°28	3°2/ 6.2	18		469374	2001 <i>RU</i> ₂₅	11	8.5 45°71	1°0/ 9.0	16	
10 8	3 17.97	+10 29.5	1.894	2.768	12.2	20.6	10 8	3 23.48	+20 10.3	1.134	2.013	18.1	20.7
10 18	3 12.44	+ 9 33.0	1.825	2.761	8.7	20.4	10 18	3 16.97	+20 0.4	1.101	2.038	13.0	20.5
10 28	3 5.04	+ 8 33.4	1.781	2.755	5.1	20.2	10 28	3 7.66	+19 36.6	1.089	2.064	7.3	20.3
11 7	2 56.59	+ 7 35.8	1.765	2.749	3.2	20.0	11 7	2 56.99	+19 2.2	1.101	2.091	1.6	20.0
11 17	2 48.02	+ 6 45.7	1.778	2.742	5.7	20.2	11 17	2 46.66	+18 23.2	1.138	2.118	4.8	20.3
11 27	2 40.36	+ 6 8.2	1.818	2.735	9.3	20.4	11 27	2 38.22	+17 46.9	1.200	2.146	10.0	20.7
12 7	2 34.42	+ 5 46.6	1.883	2.729	12.8	20.6	12 7	2 32.69	+17 20.0	1.285	2.174	14.6	21.1
12 17	2 30.74	+ 5 41.9	1.969	2.722	15.7	20.8	12 17	2 30.48	+17 6.1	1.390	2.203	18.3	21.4
482542	2012 <i>UF</i> ₈₄	11	8.5 6°14	4°6/ 6.3	18		169488	2002 <i>CS</i> ₁₆₈	11	8.5 332°14	0°2/ 8.6	18	
10 8	3 18.58	+ 8 2.6	1.244	2.137	15.8	20.5	10 8	3 22.16	+17 16.4	1.138	2.023	17.6	19.0
10 18	3 13.50	+ 7 26.5	1.193	2.137	11.5	20.2	10 18	3 16.64	+17 20.6	1.073	2.014	12.8	18.7
10 28	3 5.83	+ 6 51.4	1.163	2.138	7.0	20.0	10 28	3 7.89	+17 15.1	1.029	2.006	7.2	18.4
11 7	2 56.70	+ 6 23.8	1.157	2.140	4.6	19.9	11 7	2 57.09	+17 1.9	1.009	1.999	1.0	18.0
11 17	2 47.49	+ 6 9.3	1.176	2.142	7.5	20.0	11 17	2 45.91	+16 44.9	1.013	1.993	5.3	18.3
11 27	2 39.67	+ 6 12.4	1.219	2.146	12.0	20.3	11 27	2 36.22	+16 30.4	1.041	1.987	11.2	18.6
12 7	2 34.30	+ 6 34.3	1.284	2.151	16.2	20.6	12 7	2 29.45	+16 24.5	1.091	1.982	16.5	18.9
12 17	2 31.96	+ 7 14.0	1.368	2.157	19.7	20.8	12 17	2 26.37	+16 31.1	1.160	1.977	20.8	19.1
296676	2009 <i>ST</i> ₁₉₁	11	8.5 342°11	1°0/ 9.2	18		513981	2014 <i>GH</i> ₄₇	11	8.5 169°00	5°4/ 4.2	18	
10 8	3 16.56	+21 0.7	1.787	2.650	13.3	19.8	10 8	3 18.94	+ 1 55.0	2.198	3.062	11.1	22.2
10 18	3 11.67	+20 41.7	1.713	2.643	9.7	19.6	10 18	3 12.83	+ 0 50.1	2.142	3.066	8.4	22.1
10 28	3 4.72	+20 11.1	1.664	2.636	5.6	19.4	10 28	3 5.17	- 0 10.2	2.113	3.069	6.1	21.9
11 7	2 56.55	+19 31.3	1.640	2.630	1.4	19.1	11 7	2 56.69	- 1 0.5	2.112	3.072	5.5	21.9
11 17	2 48.22	+18 46.1	1.644	2.624	3.7	19.2	11 17	2 48.19	- 1 36.4	2.140	3.074	7.2	22.0
11 27	2 40.85	+18 1.3	1.676	2.619	8.0	19.5	11 27	2 40.55	- 1 54.6	2.195	3.076	9.8	22.2
12 7	2 35.35	+17 22.3	1.733	2.614	11.9	19.7	12 7	2 34.42	- 1 54.5	2.275	3.077	12.4	22.4
12 17	2 32.30	+16 53.5	1.813	2.610	15.2	19.9	12 17	2 30.27	- 1 37.0	2.376	3.078	14.6	22.5
171273	2006 <i>FR</i>	11	8.5 152°58	2°0/ 9.6	18		425293	2009 <i>WU</i> ₂₂₄	11	8.5 164°02	3°4/ 5.9	18	
10 8	3 26.61	+22 32.2	1.634	2.483	15.1	20.0	10 8	3 17.20	+ 5 44.9	2.513	3.378	9.9	20.9
10 18	3 18.92	+22 34.0	1.571	2.491	11.1	19.8	10 18	3 11.49	+ 5 17.2	2.450	3.379	7.2	20.7
10 28	3 8.72	+22 22.4	1.531	2.499	6.6	19.5	10 28	3 4.42	+ 4 51.5	2.414	3.381	4.6	20.6
11 7	2 57.09	+21 58.3	1.518	2.506	2.4	19.3	11 7	2 56.59	+ 4 31.2	2.407	3.383	3.5	20.5
11 17	2 45.39	+21 24.8	1.534	2.512	4.2	19.4	11 17	2 48.71	+ 4 19.1	2.429	3.384	5.1	20.6
11 27	2 35.04	+20 47.7	1.578	2.517	8.7	19.7	11 27	2 41.54	+ 4 17.4	2.480	3.385	7.8	20.8
12 7	2 27.11	+20 13.5	1.647	2.522	12.8	19.9	12 7	2 35.68	+ 4 27.4	2.557	3.386	10.4	20.9
12 17	2 22.16	+19 47.5	1.739	2.526	16.2	20.2	12 17	2 31.56	+ 4 49.0	2.657	3.387	12.6	21.1
292422	2006 <i>SP</i> ₃₀₆	11	8.5 303°07	0°4/ 8.3	18		148250	2000 <i>EC</i> ₁₂₇	11	8.5 161°98	4°5/ 5.7	18	
10 8	3 20.78	+15 39.7	1.798	2.665	13.1	20.5	10 8	3 21.02	+ 7 18.2	1.696	2.570	13.3	20.4
10 18	3 14.72	+15 44.9	1.720	2.652	9.4	20.2	10 18	3 14.70	+ 6 20.2	1.639	2.574	9.7	20.2
10 28	3 6.45	+15 45.0	1.665	2.640	5.2	19.9	10 28	3 6.34	+ 5 22.6	1.607	2.577	6.1	20.0
11 7	2 56.80	+15 41.4	1.638	2.629	0.7	19.6	11 7	2 56.85	+ 4 31.5	1.602	2.580	4.5	19.9
11 17	2 46.86	+15 36.6	1.639	2.617	4.1	19.8	11 17	2 47.35	+ 3 52.6	1.624	2.582	6.9	20.0
11 27	2 37.83	+15 34.2	1.668	2.605	8.5	20.1	11 27	2 38.95	+ 3 30.4	1.674	2.584	10.5	20.2
12 7	2 30.72	+15 37.6	1.723	2.594	12.5	20.3	12 7	2 32.54	+ 3 26.9	1.748	2.585	14.0	20.5
12 17	2 26.18	+15 49.3	1.799	2.583	15.9	20.5	12 17	2 28.63	+ 3 41.6	1.842	2.587	16.9	20.7
265149	2003 <i>WC</i> ₁₂	11	8.5 63°92	1°3/ 9.3	18		388933	2008 <i>SZ</i> ₂₀₃	11	8.5 24°19	1°9/ 7.5	18	
10 8	3 21.10	+20 12.0	2.165	3.014	11.9	19.3	10 8	3 20.45	+13 36.2	1.488	2.366	14.6	20.9
10 18	3 14.48	+20 31.5	2.106	3.028	8.6	19.1	10 18	3 14.60	+13 10.7	1.429	2.368	10.4	20.6
10 28	3 6.09	+20 43.1	2.073	3.042	5.0	18.9	10 28	3 6.40	+12 40.0	1.394	2.371	5.7	20.4
11 7	2 56.73	+20 47.5	2.068	3.057	1.6	18.7	11 7	2 56.87	+12 8.2	1.384	2.374	1.9	20.1
11 17	2 47.34	+20 46.1	2.093	3.072	3.3	18.9	11 17	2 47.26	+11 40.2	1.402	2.377	5.2	20.3
11 27	2 38.89	+20 41.9	2.148	3.086	6.8	19.1	11 27	2 38.89	+11 21.1	1.446	2.380	9.8	20.6
12 7	2 32.15	+20 38.3	2.229	3.101	10.0	19.3	12 7	2 32.75	+11 14.5	1.514	2.384	14.0	20.9
12 17	2 27.61	+20 38.4	2.335	3.116	12.7	19.6	12 17	2 29.42	+11 22.3	1.603	2.388	17.4	21.1
521429	2015 <i>MO</i> ₁₄₉	11	8.5 131°35	2°8/ 10.8	18		38761	2000 <i>RH</i> ₃	11	8.5 343°43	6°9/ 3.4	18	
10 8	3 21.31	+27 30.4	1.992	2.824	13.4	21.7	10 8	3 11.48	+ 6 6.7	1.297	2.197	14.7	17.3
10 18	3 14.79	+27 6.9	1.926	2.834	10.1	21.5	10 18	3 8.50	+ 4 15.2	1.233	2.178	11.0	17.0
10 28	3 6.31	+26 27.2	1.885	2.843	6.5	21.3	10 28	3 3.18	+ 2 21.6	1.191	2.161	7.7	16.8
11 7	2 56.78	+25 32.8	1.870	2.852	3.3	21.2	11 7	2 56.45	+ 0 37.1	1.174	2.145	7.2	16.7
11 17	2 47.27	+24 27.6	1.885	2.861	3.9	21.2	11 17	2 49.49	- 0 47.2	1.182	2.131	10.1	16.9
11 27	2 38.88	+23 17.8	1.929	2.870	7.3	21.4	11 27	2 43.61	- 1 42.6	1.213	2.118	14.1	17.0
12 7	2 32.44	+22 10.4	2.000	2.878	10.7	21.7	12 7	2 39.84	- 2 5.8	1.263	2.107	17.9	17.3
12 17	2 28.43	+21 11.1	2.095	2.885	13.7	21.9	12 17	2 38.81	- 1 58.0	1.331	2.098	21.3	17.5
521591	2015 <i>PV</i> ₃₁₆	11	8.5 73°50	2°6/ 7.3	18		354442	2003 <i>YS</i> ₁₀₈					

EPHEMERIDES

11 8.6

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V	
374802	2006 <i>UP</i> ₁₁	11	8.6	46°45'	2°1'/ 7.4	17	227216	2005 <i>QA</i> ₁₇₉	11	8.6	1°14'	2°8'/ 9.9	18	
10 8	3 21.00	+15 52.1	1.079	1.970	17.9	20.3	10 8	3 20.23	+23 22.0	1.194	2.067	17.7	19.9	
10 18	3 15.24	+14 49.9	1.046	1.991	12.6	20.0	10 18	3 15.15	+23 29.5	1.133	2.065	13.2	19.6	
10 28	3 6.73	+13 38.3	1.033	2.012	6.8	19.8	10 28	3 7.00	+23 19.8	1.094	2.065	8.1	19.3	
11 7	2 56.90	+12 25.3	1.045	2.034	2.1	19.6	11 7	2 57.02	+22 53.6	1.077	2.064	3.3	19.1	
11 17	2 47.38	+11 19.8	1.081	2.057	6.1	19.9	11 17	2 46.82	+22 15.0	1.085	2.065	5.0	19.2	
11 27	2 39.70	+10 30.1	1.142	2.080	11.4	20.3	11 27	2 38.14	+21 31.6	1.118	2.067	10.2	19.5	
12 7	2 34.83	+10 0.7	1.224	2.103	15.9	20.6	12 7	2 32.30	+20 52.0	1.173	2.070	15.1	19.8	
12 17	2 33.17	+ 9 52.7	1.325	2.127	19.5	20.9	12 17	2 29.94	+20 23.0	1.248	2.073	19.2	20.0	
11903	1991 <i>RD</i> ₇	11	8.6	37°43'	9°3'/12.8	18	452719	2005 <i>YD</i> ₁₉₉	11	8.6	36°17'	4°8'/ 5.4	17	
10 8	3 28.92	+35 13.4	1.375	2.190	19.2	16.3	10 8	3 18.01	+ 3 45.3	1.970	2.842	11.8	21.4	
10 18	3 21.51	+36 50.4	1.324	2.204	15.7	16.1	10 18	3 12.35	+ 3 8.0	1.915	2.846	8.8	21.2	
10 28	3 10.58	+38 2.6	1.294	2.219	12.3	15.9	10 28	3 5.00	+ 2 35.0	1.885	2.850	5.9	21.0	
11 7	2 57.47	+38 43.1	1.286	2.234	9.8	15.8	11 7	2 56.73	+ 2 10.8	1.883	2.854	4.9	21.0	
11 17	2 44.08	+38 50.2	1.304	2.250	9.6	15.9	11 17	2 48.45	+ 1 59.4	1.909	2.859	6.7	21.1	
11 27	2 32.47	+38 28.8	1.346	2.267	11.6	16.0	11 27	2 41.07	+ 2 3.2	1.961	2.863	9.7	21.3	
12 7	2 24.13	+37 49.4	1.410	2.284	14.6	16.3	12 7	2 35.35	+ 2 22.8	2.039	2.868	12.6	21.5	
12 17	2 19.79	+37 3.4	1.495	2.302	17.5	16.5	12 17	2 31.74	+ 2 57.2	2.137	2.873	15.1	21.7	
372826	2010 <i>UU</i> ₄₅	11	8.6	55°27'	4°1'/10.5	17	381157	2007 <i>GE</i> ₃₉	11	8.6	217°18'	0°1'/ 8.5	18	
10 8	3 25.45	+25 55.9	1.161	2.023	19.0	20.5	10 8	3 22.06	+17 56.6	1.945	2.801	12.7	22.0	
10 18	3 18.74	+26 15.3	1.116	2.039	14.3	20.3	10 18	3 15.50	+17 35.8	1.866	2.794	9.1	21.8	
10 28	3 8.84	+26 14.1	1.091	2.055	9.1	20.1	10 28	3 6.87	+17 6.4	1.813	2.786	5.1	21.5	
11 7	2 57.21	+25 52.1	1.089	2.072	4.7	19.9	11 7	2 57.01	+16 30.8	1.788	2.778	0.7	21.2	
11 17	2 45.67	+25 13.2	1.112	2.089	5.6	20.0	11 17	2 46.96	+15 52.7	1.792	2.769	3.8	21.4	
11 27	2 36.04	+24 25.9	1.160	2.106	10.2	20.3	11 27	2 37.84	+15 17.1	1.825	2.760	8.0	21.7	
12 7	2 29.55	+23 39.9	1.231	2.124	14.8	20.6	12 7	2 30.57	+14 48.5	1.884	2.750	11.9	21.9	
12 17	2 26.73	+23 2.6	1.322	2.141	18.6	20.9	12 17	2 25.74	+14 30.6	1.966	2.739	15.1	22.1	
285845	2001 <i>FP</i> ₁₀₇	11	8.6	235°28'	3°1'/ 6.3	18	410647	2008 <i>RE</i> ₁₃₈	11	8.6	40°40'	5°0'/12.3	17	
10 8	3 18.74	+10 38.8	1.981	2.851	11.9	20.7	10 8	3 20.49	+32 11.1	2.159	2.969	13.3	20.4	
10 18	3 12.99	+ 9 41.3	1.908	2.843	8.5	20.5	10 18	3 14.38	+32 35.8	2.089	2.974	10.5	20.2	
10 28	3 5.41	+ 8 40.3	1.860	2.833	5.0	20.2	10 28	3 6.24	+32 44.0	2.041	2.979	7.6	20.1	
11 7	2 56.75	+ 7 40.8	1.840	2.824	3.1	20.1	11 7	2 56.92	+32 34.5	2.021	2.984	5.4	19.9	
11 17	2 47.97	+ 6 48.2	1.850	2.814	5.5	20.2	11 17	2 47.46	+32 8.6	2.028	2.990	5.3	19.9	
11 27	2 40.04	+ 6 7.6	1.887	2.804	9.1	20.4	11 27	2 38.97	+31 30.2	2.063	2.995	7.5	20.1	
12 7	2 33.78	+ 5 42.4	1.950	2.793	12.6	20.6	12 7	2 32.34	+30 45.2	2.125	3.001	10.2	20.3	
12 17	2 29.74	+ 5 33.9	2.034	2.782	15.5	20.8	12 17	2 28.13	+30 0.0	2.210	3.006	12.9	20.5	
215478	2002 <i>RC</i> ₁₉₂	11	8.6	250°08'	3°2'/10.2	18	173545	2000 <i>WF</i> ₁₇₉	11	8.6	21°44'	8°0'/ 5.4	18	
10 8	3 24.60	+24 27.3	1.514	2.365	15.9	20.3	10 8	3 18.07	+ 3 58.0	0.860	1.770	19.2	18.3	
10 18	3 17.93	+24 47.6	1.441	2.360	12.0	20.1	10 18	3 13.63	+ 2 57.2	0.830	1.780	14.3	18.1	
10 28	3 8.44	+24 53.1	1.391	2.355	7.6	19.8	10 28	3 6.06	+ 2 5.8	0.819	1.791	9.7	17.9	
11 7	2 57.20	+24 42.9	1.366	2.350	3.6	19.6	11 7	2 56.88	+ 1 33.9	0.828	1.804	8.1	17.8	
11 17	2 45.62	+24 18.9	1.368	2.345	4.9	19.6	11 17	2 47.90	+ 1 28.7	0.859	1.819	10.9	18.1	
11 27	2 35.32	+23 46.7	1.397	2.340	9.3	19.9	11 27	2 40.85	+ 1 52.7	0.911	1.836	15.3	18.4	
12 7	2 27.52	+23 13.6	1.451	2.335	13.6	20.1	12 7	2 36.83	+ 2 43.4	0.981	1.854	19.5	18.7	
12 17	2 22.97	+22 46.2	1.526	2.329	17.4	20.4	12 17	2 36.29	+ 3 55.6	1.067	1.873	23.1	19.0	
425006	2009 <i>DF</i> ₆₄	11	8.6	91°32'	4°0'/ 6.6	18	198732	2005 <i>EQ</i> ₂₃	11	8.6	318°97'	5°0'/12.2	17	
10 8	3 24.62	+ 9 29.5	1.341	2.220	15.8	21.0	10 8	3 19.69	+32 7.9	2.191	3.002	13.1	20.2	
10 18	3 17.48	+ 8 45.3	1.300	2.238	11.3	20.8	10 18	3 13.89	+32 33.1	2.108	2.994	10.4	20.0	
10 28	3 7.90	+ 8 0.6	1.282	2.256	6.6	20.6	10 28	3 6.03	+32 42.2	2.049	2.987	7.6	19.8	
11 7	2 57.08	+ 7 21.4	1.289	2.273	4.0	20.5	11 7	2 56.90	+32 33.8	2.015	2.979	5.4	19.6	
11 17	2 46.47	+ 6 53.5	1.324	2.290	6.8	20.7	11 17	2 47.52	+32 8.9	2.010	2.972	5.3	19.6	
11 27	2 37.42	+ 6 41.4	1.384	2.307	11.2	21.0	11 27	2 38.99	+31 30.9	2.032	2.965	7.5	19.7	
12 7	2 30.92	+ 6 47.0	1.467	2.324	15.2	21.3	12 7	2 32.26	+30 45.9	2.081	2.958	10.4	19.9	
12 17	2 27.41	+ 7 9.7	1.570	2.340	18.4	21.6	12 17	2 27.93	+30 0.0	2.154	2.952	13.1	20.1	
1973	Colocolo	11	8.6	50°04'	3°3'/ 5.7	18	459583	2013 <i>GU</i> ₁₁₈	11	8.6	75°61'	4°9'/ 5.5	18	
10 8	3 15.50	+ 9 7.5	2.145	3.019	10.9	16.9	10 8	3 20.55	+ 1 10.1	2.231	3.091	11.1	20.9	
10 18	3 10.45	+ 8 5.1	2.089	3.024	7.8	16.8	10 18	3 13.82	+ 0 47.6	2.195	3.116	8.3	20.8	
10 28	3 3.91	+ 7 1.7	2.059	3.031	4.7	16.6	10 28	3 5.66	+ 0 31.5	2.184	3.141	5.8	20.6	
11 7	2 56.56	+ 6 2.3	2.057	3.037	3.4	16.5	11 7	2 56.83	+ 0 25.4	2.202	3.166	4.9	20.6	
11 17	2 49.21	+ 5 11.6	2.084	3.043	5.4	16.7	11 17	2 48.15	+ 0 31.5	2.249	3.191	6.4	20.8	
11 27	2 42.69	+ 4 33.8	2.139	3.050	8.5	16.9	11 27	2 40.42	+ 0 51.0	2.324	3.216	8.9	21.0	
12 7	2 37.66	+ 4 11.3	2.219	3.056	11.4	17.1	12 7	2 34.26	+ 1 23.5	2.425	3.240	11.3	21.2	
12 17	2 34.53	+ 4 4.8	2.321	3.063	13.9	17.3	12 17	2 30.06	+ 2 7.7	2.547	3.264	13.4	21.4	
322928	2002 <i>ET</i> ₆	11	8.6	42°71'	1°2'/ 7.7	18	12117	Meagmessina	11	8.6	244°34'	1°6'/ 7.5	18	R
10 8	3 17.43	+15 19.8	1.861	2.732	12.5	20.4	10 8	3 20.73	+14 22.5	1.885	2.751	12.6	18.8	
10 18	3 12.04	+14 43.3	1.805	2.741	8.8	20.2	10 18	3 14.61	+13 44.1	1.804	2.738	9.0	18.6	
10 28	3 4.85	+14 0.7	1.774	2.750	4.8	20.0	10 28	3 6.42	+12 59.1	1.748	2.724	5.0	18.3	
11 7	2 56.70	+13 15.9	1.770	2.760	1.3	19.7	11 7	2 56.96	+12 11.3	1.720	2.709	1.6	18.1	
11 17	2 48.56	+12 33.5	1.794	2.770	4.2	20.0	11 17	2 47.28	+11 25.6	1.721	2.695	4.6	18.2	
11 27	2 41.42	+11 58.3	1.847	2.780	8.1	20.2	11 27	2 38.49	+10 47.1	1.751	2.679	8.8	18.5	
12 7	2 36.06	+11 33.9	1.925	2.790	11.7	20.5	12 7	2 31.51	+10 20.4	1.806	2.664	12.7	18.7	
12 17	2 32.93	+11 22.5	2.024	2.801	14.6	20.7	12 17	2 26.96	+10 7.9	1.882	2.647	15.9	18.9	
395872	2013 <i>AA</i> ₂₄	11	8.6	289°26'	10°3'/ 3.5	18	64981	2002 <i>AR</i> ₂₄	11	8.6	6°58'	1°5		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
191542	2003 <i>UM</i> ₂₄₄		11 8.6 196°82	1°5/ 7.1 18			396891	2004 <i>VF</i> ₇₉		11 8.6 54°52	0°4/ 8.5 16		
10 8	3 15.65	+14 17.1	2.565	3.427	9.8	20.4	10 8	3 41.02	+ 9 41.3	0.968	1.841	21.0	20.4
10 18	3 10.45	+13 23.5	2.494	3.426	6.9	20.2	10 18	3 30.78	+11 36.1	0.912	1.847	15.3	20.1
10 28	3 3.89	+12 25.1	2.449	3.424	3.8	20.0	10 28	3 16.02	+13 39.7	0.878	1.853	8.5	19.7
11 7	2 56.60	+11 25.3	2.434	3.422	1.5	19.8	11 7	2 58.35	+15 45.5	0.869	1.859	1.2	19.3
11 17	2 49.26	+10 28.3	2.450	3.420	3.7	20.0	11 17	2 40.23	+17 45.2	0.887	1.866	6.2	19.7
11 27	2 42.61	+ 9 38.2	2.495	3.418	6.8	20.2	11 27	2 24.37	+19 34.1	0.933	1.873	13.0	20.1
12 7	2 37.23	+ 8 58.4	2.567	3.416	9.7	20.3	12 7	2 12.70	+21 12.4	1.001	1.880	18.6	20.4
12 17	2 33.56	+ 8 30.9	2.663	3.413	12.1	20.5	12 17	2 6.04	+22 43.3	1.088	1.888	23.1	20.8
70605	1999 <i>TN</i> ₁₉₁		11 8.6 49°38	2°6/10.4 18			81778	2000 <i>JB</i> ₇₃		11 8.6 189°25	3°6/ 5.7 18		
10 8	3 20.06	+26 56.4	1.425	2.279	16.5	19.0	10 8	3 17.96	+ 8 12.9	2.127	2.996	11.2	19.9
10 18	3 14.33	+26 6.8	1.377	2.298	12.3	18.8	10 18	3 12.29	+ 7 14.6	2.063	2.996	8.1	19.7
10 28	3 6.21	+24 56.3	1.351	2.317	7.5	18.6	10 28	3 4.99	+ 6 15.6	2.025	2.995	5.0	19.5
11 7	2 56.91	+23 29.1	1.350	2.336	3.2	18.4	11 7	2 56.79	+ 5 20.8	2.015	2.994	3.6	19.4
11 17	2 47.82	+21 52.7	1.376	2.356	4.3	18.5	11 17	2 48.54	+ 4 35.1	2.035	2.992	5.7	19.6
11 27	2 40.25	+20 17.2	1.430	2.376	8.7	18.9	11 27	2 41.12	+ 4 2.6	2.083	2.991	8.9	19.8
12 7	2 35.13	+18 51.9	1.509	2.397	12.9	19.1	12 7	2 35.25	+ 3 45.6	2.156	2.989	11.9	20.0
12 17	2 32.88	+17 42.9	1.609	2.417	16.4	19.4	12 17	2 31.39	+ 3 44.7	2.251	2.987	14.5	20.2
258786	2002 <i>JV</i> ₁₃₄		11 8.6 202°25	0°9/ 9.0 18			476486	2008 <i>FV</i> ₆₃		11 8.6 150°89	1°0/ 7.9 16		
10 8	3 24.76	+19 40.9	1.575	2.435	15.0	21.3	10 8	3 22.01	+16 53.1	1.750	2.614	13.5	22.0
10 18	3 17.82	+19 37.7	1.505	2.433	10.9	21.0	10 18	3 15.44	+16 5.4	1.689	2.621	9.6	21.8
10 28	3 8.31	+19 23.7	1.458	2.430	6.2	20.7	10 28	3 6.80	+15 8.8	1.653	2.628	5.2	21.5
11 7	2 57.24	+19 0.3	1.437	2.427	1.4	20.4	11 7	2 57.04	+14 7.6	1.644	2.634	1.1	21.2
11 17	2 45.95	+18 30.8	1.444	2.423	4.2	20.6	11 17	2 47.28	+13 7.5	1.664	2.639	4.4	21.5
11 27	2 35.89	+18 0.9	1.479	2.419	9.1	20.9	11 27	2 38.69	+12 14.7	1.712	2.644	8.7	21.8
12 7	2 28.17	+17 36.4	1.539	2.415	13.5	21.1	12 7	2 32.12	+11 34.2	1.786	2.649	12.6	22.0
12 17	2 23.46	+17 21.8	1.621	2.410	17.1	21.4	12 17	2 28.09	+11 8.8	1.882	2.653	15.7	22.3
482983	2014 <i>NP</i> ₆₂		11 8.6 114°02	3°0/10.9 18			487686	2015 <i>PH</i> ₂₉₀		11 8.6 349°34	5°8/ 5.9 18		
10 8	3 20.65	+27 41.7	2.215	3.042	12.4	21.3	10 8	3 20.83	+ 2 21.5	1.574	2.450	14.1	20.5
10 18	3 14.25	+27 36.7	2.151	3.054	9.4	21.1	10 18	3 14.81	+ 2 2.3	1.514	2.446	10.5	20.3
10 28	3 6.07	+27 17.6	2.111	3.066	6.2	20.9	10 28	3 6.56	+ 1 50.5	1.478	2.442	7.2	20.1
11 7	2 56.91	+26 45.0	2.098	3.077	3.4	20.8	11 7	2 57.02	+ 1 51.1	1.467	2.439	5.9	20.0
11 17	2 47.75	+26 1.7	2.115	3.089	3.8	20.8	11 17	2 47.35	+ 2 7.5	1.483	2.437	7.9	20.1
11 27	2 39.57	+25 12.3	2.161	3.100	6.7	21.0	11 27	2 38.80	+ 2 41.6	1.525	2.435	11.4	20.4
12 7	2 33.15	+24 22.6	2.234	3.111	9.8	21.2	12 7	2 32.32	+ 3 32.7	1.591	2.433	14.9	20.6
12 17	2 28.95	+23 37.4	2.332	3.121	12.5	21.5	12 17	2 28.50	+ 4 38.8	1.676	2.433	17.9	20.8
522009	2015 <i>XS</i> ₁₈₈		11 8.6 175°98	4°8/ 4.5 18			438399	2006 <i>UE</i> ₁₄₃		11 8.6 63°62	2°2/ 6.8 18		
10 8	3 17.72	- 0 52.9	2.865	3.718	9.2	21.5	10 8	3 21.56	+15 58.6	1.680	2.548	13.8	20.5
10 18	3 11.74	- 1 24.3	2.806	3.720	7.0	21.3	10 18	3 14.73	+14 16.5	1.651	2.586	9.6	20.4
10 28	3 4.55	- 1 49.9	2.773	3.722	5.3	21.2	10 28	3 6.17	+12 28.2	1.649	2.624	5.2	20.2
11 7	2 56.71	- 2 6.4	2.769	3.723	4.8	21.2	11 7	2 56.93	+10 41.3	1.675	2.662	2.2	20.1
11 17	2 48.84	- 2 11.2	2.795	3.723	6.1	21.3	11 17	2 48.08	+ 9 4.0	1.730	2.700	5.1	20.4
11 27	2 41.61	- 2 2.8	2.850	3.724	8.1	21.4	11 27	2 40.62	+ 7 43.1	1.815	2.737	9.0	20.7
12 7	2 35.54	- 1 41.0	2.931	3.724	10.2	21.5	12 7	2 35.20	+ 6 42.5	1.925	2.774	12.4	21.0
12 17	2 31.03	- 1 6.8	3.034	3.723	12.0	21.7	12 17	2 32.16	+ 6 3.0	2.056	2.810	15.1	21.2
260041	2004 <i>GV</i> ₅₂		11 8.6 78°21	0°1/ 8.6 18			327398	2005 <i>UL</i> ₅₀₅		11 8.6 93°04	5°0/ 4.5 18		
10 8	3 19.93	+18 7.8	1.896	2.757	12.7	21.0	10 8	3 16.42	+ 2 2.1	2.294	3.161	10.6	20.7
10 18	3 13.87	+17 52.8	1.836	2.766	9.1	20.8	10 18	3 11.04	+ 1 8.9	2.242	3.167	7.9	20.5
10 28	3 5.91	+17 29.7	1.800	2.774	5.0	20.6	10 28	3 4.24	+ 0 20.5	2.216	3.174	5.7	20.4
11 7	2 56.90	+17 1.1	1.792	2.783	0.7	20.3	11 7	2 56.69	- 0 18.5	2.219	3.181	5.1	20.4
11 17	2 47.86	+16 30.4	1.813	2.792	3.6	20.6	11 17	2 49.15	- 0 44.3	2.250	3.188	6.7	20.5
11 27	2 39.86	+16 2.2	1.863	2.800	7.7	20.8	11 27	2 42.39	- 0 54.2	2.308	3.194	9.2	20.7
12 7	2 33.70	+15 40.5	1.938	2.809	11.3	21.1	12 7	2 37.03	- 0 47.8	2.391	3.201	11.6	20.8
12 17	2 29.89	+15 28.4	2.036	2.818	14.3	21.3	12 17	2 33.49	- 0 25.7	2.495	3.207	13.8	21.0
459319	2012 <i>HV</i> ₅		11 8.6 253°81	4°0/ 5.9 17			486660	2013 <i>QU</i> ₅₁		11 8.6 193°24	4°2/ 4.4 17		
10 8	3 19.94	+ 3 36.2	2.456	3.315	10.3	21.5	10 8	3 16.23	+ 1 18.9	3.006	3.863	8.7	22.2
10 18	3 13.61	+ 3 20.3	2.377	3.301	7.6	21.3	10 18	3 10.68	+ 0 34.3	2.941	3.861	6.5	22.1
10 28	3 5.71	+ 3 8.2	2.324	3.287	5.1	21.1	10 28	3 3.98	- 0 6.5	2.904	3.858	4.8	22.0
11 7	2 56.88	+ 3 3.1	2.300	3.272	4.0	21.0	11 7	2 56.66	- 0 39.8	2.896	3.854	4.3	21.9
11 17	2 47.88	+ 3 7.5	2.306	3.257	5.6	21.1	11 17	2 49.29	- 1 3.0	2.918	3.851	5.6	22.0
11 27	2 39.54	+ 3 23.5	2.341	3.242	8.4	21.3	11 27	2 42.48	- 1 13.6	2.969	3.846	7.6	22.1
12 7	2 32.56	+ 3 51.6	2.403	3.227	11.1	21.4	12 7	2 36.76	- 1 11.1	3.045	3.841	9.7	22.3
12 17	2 27.44	+ 4 31.4	2.488	3.211	13.5	21.6	12 17	2 32.49	- 0 55.6	3.145	3.836	11.6	22.4
130490	2000 <i>QY</i> ₁₁₆		11 8.6 64°82	6°7/ 5.5 18			383038	2005 <i>QX</i> ₁₂		11 8.6 98°67	2°8/10.4 18		
10 8	3 23.87	+ 4 38.3	1.160	2.048	17.1	19.1	10 8	3 24.42	+25 46.5	1.587	2.432	15.6	21.2
10 18	3 17.07	+ 3 34.5	1.131	2.070	12.5	18.9	10 18	3 17.35	+25 31.7	1.534	2.450	11.6	21.0
10 28	3 7.70	+ 2 37.4	1.123	2.092	8.3	18.7	10 28	3 7.89	+24 59.7	1.504	2.468	7.2	20.8
11 7	2 57.12	+ 1 55.2	1.140	2.114	6.7	18.7	11 7	2 57.19	+24 12.1	1.500	2.485	3.2	20.6
11 17	2 46.88	+ 1 34.1	1.181	2.136	9.3	18.9	11 17	2 46.61	+23 13.5	1.524	2.502	4.3	20.7
11 27	2 38.42	+ 1 37.3	1.247	2.159	13.2	19.2	11 27	2 37.48	+22 11.3	1.576	2.518	8.4	21.0
12 7	2 32.66	+ 2 3.8	1.333	2.181	16.9	19.5	12 7	2 30.78	+21 13.3	1.653	2.534	12.4	21.2
12 17	2 30.03	+ 2 50.1	1.438	2.203	20.0	19.8	12 17	2 26.98	+20 25.5	1.753	2.550	15.7	21.5
274749	2008 <i>UO</i> ₂₇₀		11 8.6 337°85	8°2/11.7 17			40723	1999 <i>SF</i> ₇		11 8.6 55°76</			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
481717	2008 <i>EF</i> ₇₀	11	8.6 245°81	3°8/10.9	17		220064	2002 <i>RX</i> ₁₄₅	11	8.6 352°48	2°4/ 7.5	18	
10 8	3 22.94	+27 50.8	2.200	3.022	12.6	22.1	10 8	3 16.95	+13 32.3	1.003	1.905	17.9	19.2
10 18	3 16.22	+28 19.0	2.113	3.012	9.8	21.9	10 18	3 13.05	+13 6.4	0.947	1.897	12.8	18.9
10 28	3 7.36	+28 34.2	2.050	3.001	6.6	21.6	10 28	3 6.00	+12 33.6	0.910	1.890	7.1	18.6
11 7	2 57.16	+28 35.4	2.015	2.990	4.1	21.5	11 7	2 57.02	+11 59.6	0.896	1.885	2.5	18.3
11 17	2 46.64	+28 23.0	2.009	2.979	4.5	21.5	11 17	2 47.77	+11 31.5	0.904	1.882	6.6	18.6
11 27	2 36.92	+28 0.2	2.032	2.967	7.3	21.6	11 27	2 40.07	+11 16.2	0.935	1.880	12.4	18.9
12 7	2 28.99	+27 32.2	2.082	2.955	10.6	21.8	12 7	2 35.25	+11 18.6	0.987	1.879	17.6	19.2
12 17	2 23.49	+27 4.4	2.156	2.943	13.5	22.0	12 17	2 34.01	+11 39.8	1.055	1.881	21.9	19.4
266535	2008 <i>FV</i> ₆₄	11	8.6 195°34	1°0/ 7.9	18		119418	2001 <i>TX</i> ₈₈	11	8.6 267°77	0°5/ 8.9	18	
10 8	3 22.82	+15 43.0	1.657	2.523	14.0	21.6	10 8	3 21.17	+20 0.9	1.643	2.505	14.3	20.0
10 18	3 16.24	+15 17.1	1.589	2.522	10.0	21.4	10 18	3 15.29	+19 36.8	1.562	2.492	10.4	19.7
10 28	3 7.37	+14 43.7	1.545	2.521	5.5	21.1	10 28	3 6.98	+19 0.4	1.505	2.478	5.9	19.4
11 7	2 57.16	+14 6.2	1.528	2.519	1.1	20.8	11 7	2 57.16	+18 14.2	1.475	2.465	1.1	19.1
11 17	2 46.81	+13 29.3	1.540	2.516	4.6	21.0	11 17	2 47.04	+17 22.7	1.472	2.451	4.1	19.3
11 27	2 37.60	+12 58.4	1.579	2.513	9.2	21.3	11 27	2 37.97	+16 32.3	1.497	2.437	9.0	19.5
12 7	2 30.52	+12 38.0	1.644	2.510	13.3	21.5	12 7	2 31.02	+15 49.7	1.547	2.423	13.3	19.7
12 17	2 26.17	+12 30.9	1.729	2.507	16.7	21.8	12 17	2 26.89	+15 19.7	1.618	2.409	17.0	20.0
145582	2006 <i>PP</i> ₁₁	11	8.6 99°81	3°1/10.7	18		72072	2000 <i>YS</i> ₃₄	11	8.6 316°24	7°5/ 3.9	18	
10 8	3 21.97	+26 39.3	1.909	2.745	13.7	20.2	10 8	3 17.44	+2 14.8	1.427	2.313	14.6	18.3
10 18	3 15.45	+26 41.9	1.846	2.755	10.4	20.0	10 18	3 12.76	+0 59.3	1.356	2.291	11.2	18.1
10 28	3 6.84	+26 29.5	1.807	2.765	6.7	19.8	10 28	3 5.64	-0 12.3	1.307	2.269	8.3	17.8
11 7	2 57.08	+26 2.7	1.794	2.776	3.5	19.6	11 7	2 56.99	-1 10.9	1.284	2.249	7.6	17.7
11 17	2 47.28	+25 24.2	1.810	2.786	4.1	19.7	11 17	2 48.01	-1 48.6	1.285	2.228	10.1	17.8
11 27	2 38.60	+24 39.2	1.855	2.796	7.5	19.9	11 27	2 40.04	-1 59.6	1.310	2.209	13.8	18.0
12 7	2 31.94	+23 54.0	1.926	2.805	11.0	20.1	12 7	2 34.20	-1 42.6	1.356	2.190	17.5	18.2
12 17	2 27.82	+23 14.1	2.020	2.815	14.0	20.4	12 17	2 31.17	-0 59.9	1.420	2.171	20.8	18.4
349611	2008 <i>UV</i> ₅₁	11	8.6 10°90	0°1/ 8.6	18		198458	2004 <i>XN</i> ₁₂	11	8.6 265°27	1°8/10.2	17	
10 8	3 20.56	+17 12.6	1.299	2.179	16.2	20.2	10 8	3 17.36	+25 0.7	2.401	3.238	11.2	20.0
10 18	3 15.08	+17 14.0	1.242	2.181	11.6	20.0	10 18	3 11.97	+24 34.1	2.312	3.225	8.4	19.8
10 28	3 6.88	+17 6.6	1.207	2.183	6.5	19.7	10 28	3 4.91	+23 54.9	2.249	3.212	5.2	19.6
11 7	2 57.10	+16 52.8	1.196	2.187	0.9	19.3	11 7	2 56.87	+23 4.6	2.213	3.199	2.2	19.4
11 17	2 47.18	+16 36.3	1.211	2.191	4.7	19.6	11 17	2 48.68	+22 6.4	2.208	3.186	3.1	19.4
11 27	2 38.66	+16 22.5	1.252	2.196	9.9	19.9	11 27	2 41.23	+21 5.1	2.232	3.172	6.4	19.6
12 7	2 32.68	+16 16.5	1.316	2.202	14.5	20.2	12 7	2 35.25	+20 6.1	2.284	3.159	9.7	19.8
12 17	2 29.86	+16 21.5	1.399	2.209	18.3	20.5	12 17	2 31.25	+19 14.0	2.360	3.145	12.5	20.0
53244	1999 <i>CY</i> ₁₄₅	11	8.6 4°25	0°8/ 9.1	18		288319	2004 <i>BK</i> ₅₁	11	8.6 234°37	3°0/ 6.5	18	
10 8	3 19.15	+20 23.7	1.743	2.605	13.6	19.0	10 8	3 18.82	+10 12.7	1.925	2.796	12.1	20.8
10 18	3 13.58	+20 8.4	1.676	2.605	9.9	18.7	10 18	3 13.12	+9 28.5	1.858	2.793	8.7	20.6
10 28	3 5.88	+19 42.2	1.632	2.605	5.6	18.5	10 28	3 5.57	+8 42.1	1.816	2.789	5.1	20.3
11 7	2 56.95	+19 7.3	1.615	2.605	1.3	18.2	11 7	2 56.97	+7 58.1	1.802	2.786	3.0	20.2
11 17	2 47.91	+18 27.5	1.627	2.606	3.8	18.4	11 17	2 48.27	+7 21.2	1.816	2.782	5.4	20.4
11 27	2 39.93	+17 48.5	1.665	2.607	8.1	18.7	11 27	2 40.47	+6 55.8	1.859	2.778	9.0	20.6
12 7	2 33.93	+17 15.4	1.729	2.608	12.0	18.9	12 7	2 34.39	+6 44.5	1.926	2.774	12.5	20.8
12 17	2 30.46	+16 52.4	1.816	2.610	15.3	19.1	12 17	2 30.54	+6 48.5	2.015	2.770	15.3	21.0
250490	2004 <i>EF</i> ₇₁	11	8.6 207°82	2°5/ 6.7	18		490899	2011 <i>BZ</i> ₉₈	11	8.6 114°44	5°6/13.6	17	
10 8	3 18.22	+11 52.7	1.990	2.860	11.8	20.8	10 8	3 20.87	+36 44.3	2.539	3.317	12.4	21.0
10 18	3 12.61	+11 3.9	1.924	2.859	8.4	20.6	10 18	3 14.52	+37 6.5	2.465	3.323	10.1	20.8
10 28	3 5.23	+10 11.4	1.882	2.857	4.8	20.4	10 28	3 6.33	+37 11.4	2.414	3.329	7.8	20.7
11 7	2 56.86	+9 19.7	1.869	2.855	2.5	20.2	11 7	2 57.07	+36 57.7	2.390	3.335	6.1	20.6
11 17	2 48.42	+8 33.6	1.885	2.853	5.0	20.4	11 17	2 47.70	+36 26.3	2.394	3.341	5.7	20.6
11 27	2 40.86	+7 57.8	1.929	2.851	8.6	20.6	11 27	2 39.22	+35 40.8	2.426	3.346	7.1	20.7
12 7	2 34.97	+7 35.6	1.999	2.849	12.0	20.8	12 7	2 32.44	+34 46.7	2.485	3.352	9.3	20.8
12 17	2 31.24	+7 28.2	2.090	2.847	14.8	21.0	12 17	2 27.88	+33 50.2	2.569	3.357	11.5	21.0
209887	2005 <i>LB</i> ₁	11	8.6 223°65	1°4/ 7.5	18		460556	2014 <i>TZ</i> ₆₄	11	8.6 2°71	6°4/10.9	17	
10 8	3 19.12	+14 43.6	2.137	3.000	11.4	20.6	10 8	3 29.86	+30 4.6	1.875	2.687	14.9	20.0
10 18	3 13.23	+14 4.7	2.061	2.993	8.1	20.4	10 18	3 21.75	+31 49.0	1.800	2.686	11.9	19.8
10 28	3 5.59	+13 20.0	2.010	2.985	4.5	20.2	10 28	3 10.73	+33 20.2	1.751	2.686	8.8	19.7
11 7	2 56.92	+12 32.7	1.988	2.977	1.4	19.9	11 7	2 57.74	+34 32.3	1.728	2.687	6.7	19.5
11 17	2 48.12	+11 47.2	1.995	2.968	4.1	20.1	11 17	2 44.13	+35 21.9	1.735	2.688	7.0	19.6
11 27	2 40.14	+11 8.1	2.031	2.959	7.8	20.4	11 27	2 31.50	+35 50.0	1.770	2.690	9.4	19.7
12 7	2 33.75	+10 39.3	2.094	2.950	11.3	20.6	12 7	2 21.20	+36 1.6	1.832	2.693	12.4	19.9
12 17	2 29.47	+10 23.0	2.180	2.941	14.2	20.7	12 17	2 14.11	+36 4.1	1.915	2.696	15.2	20.1
255088	2005 <i>UV</i> ₄₁	11	8.6 13°63	2°3/ 7.1	18		171308	2006 <i>HE</i> ₃₈	11	8.6 94°06	1°0/ 7.9	18	
10 8	3 14.85	+14 49.8	1.380	2.269	14.8	19.7	10 8	3 23.87	+14 29.8	1.919	2.778	12.7	21.1
10 18	3 10.69	+13 44.8	1.330	2.274	10.5	19.5	10 18	3 16.49	+14 17.4	1.874	2.803	9.0	20.9
10 28	3 4.31	+12 32.0	1.303	2.281	5.7	19.2	10 28	3 7.30	+14 0.5	1.854	2.828	4.9	20.7
11 7	2 56.74	+11 18.0	1.301	2.290	2.3	19.0	11 7	2 57.22	+13 41.7	1.863	2.853	1.1	20.5
11 17	2 49.18	+10 10.6	1.325	2.299	5.6	19.3	11 17	2 47.28	+13 24.1	1.901	2.877	4.0	20.8
11 27	2 42.87	+9 17.3	1.375	2.310	10.2	19.6	11 27	2 38.51	+13 11.4	1.969	2.900	7.8	21.0
12 7	2 38.70	+8 42.5	1.448	2.321	14.3	19.8	12 7	2 31.66	+13 6.3	2.063	2.923	11.2	21.3
12 17	2 37.16	+8 27.8	1.540	2.334	17.6	20.1	12 17	2 27.18	+13 10.7	2.180	2.945	14.0	21.5
45013	1999 <i>WK</i>	11	8.6 303°24	0°8/ 8.2	18		48787	1997 <i>SY</i> ₄	11	8.6 89°96	3°9/11.1	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
151537	2002 <i>RD</i> ₁₃₂	11 8.6 102°50	3°6/10.9	18			288179	2003 <i>WR</i> ₁₉₀	11 8.6 344°20	8°6/1.5	18		
10 8	3 23.94	+27 37.6	1.515	2.358	16.3	19.9	10 8	3 10.86	+5 44.7	1.134	2.041	15.8	19.0
10 18	3 17.27	+27 24.9	1.456	2.369	12.4	19.7	10 18	3 8.35	+2 59.8	1.076	2.024	11.9	18.7
10 28	3 8.02	+26 52.3	1.419	2.379	8.0	19.5	10 28	3 3.32	+0 10.4	1.041	2.008	9.0	18.5
11 7	2 57.35	+26 0.8	1.408	2.390	4.1	19.3	11 7	2 56.76	-2 26.9	1.030	1.994	9.2	18.5
11 17	2 46.70	+24 55.1	1.423	2.400	4.8	19.4	11 17	2 49.98	-4 36.0	1.043	1.981	12.4	18.6
11 27	2 37.52	+23 43.2	1.466	2.410	8.8	19.6	11 27	2 44.41	-6 5.4	1.078	1.971	16.5	18.8
12 7	2 30.87	+22 34.3	1.535	2.420	12.9	19.9	12 7	2 41.14	-6 51.6	1.131	1.962	20.4	19.0
12 17	2 27.29	+21 35.5	1.625	2.429	16.4	20.2	12 17	2 40.78	-6 57.0	1.199	1.955	23.7	19.3
293612	2007 <i>LS</i> ₇	11 8.6 105°64	7°2/2.5	18			449569	2014 <i>JG</i> ₉	11 8.6 153°21	1°4/7.4	18		
10 8	3 16.52	-5 51.4	2.353	3.206	10.9	20.2	10 8	3 18.66	+16 38.2	2.042	2.905	11.9	21.8
10 18	3 11.12	-6 54.2	2.308	3.211	8.8	20.0	10 18	3 12.89	+15 26.1	1.977	2.909	8.4	21.6
10 28	3 4.34	-7 46.6	2.288	3.217	7.5	20.0	10 28	3 5.41	+14 5.5	1.938	2.913	4.6	21.4
11 7	2 56.83	-8 23.5	2.296	3.222	7.4	20.0	11 7	2 57.03	+12 41.4	1.928	2.917	1.4	21.1
11 17	2 49.33	-8 41.4	2.330	3.228	8.6	20.1	11 17	2 48.66	+11 19.8	1.948	2.921	4.2	21.4
11 27	2 42.61	-8 38.4	2.390	3.233	10.6	20.2	11 27	2 41.23	+10 7.0	1.997	2.924	8.0	21.6
12 7	2 37.26	-8 15.5	2.473	3.238	12.6	20.4	12 7	2 35.47	+9 8.1	2.072	2.927	11.4	21.8
12 17	2 33.69	-7 34.7	2.576	3.243	14.4	20.5	12 17	2 31.83	+8 25.5	2.171	2.930	14.3	22.0
40336	1999 <i>NG</i> ₆	11 8.6 57°26	6°5/5.6	18			517527	2014 <i>RB</i> ₂₂	11 8.6 66°15	2°4/10.2	18		
10 8	3 22.64	+4 52.3	1.183	2.072	16.8	17.7	10 8	3 21.34	+23 48.8	2.104	2.945	12.5	21.2
10 18	3 16.32	+3 51.3	1.149	2.088	12.3	17.5	10 18	3 14.89	+24 6.7	2.043	2.957	9.3	21.0
10 28	3 7.42	+2 56.1	1.137	2.106	8.1	17.4	10 28	3 6.57	+24 13.7	2.007	2.970	5.7	20.8
11 7	2 57.26	+2 15.0	1.149	2.123	6.6	17.3	11 7	2 57.20	+24 10.1	1.999	2.983	2.7	20.7
11 17	2 47.33	+1 54.1	1.185	2.141	9.1	17.5	11 17	2 47.79	+23 57.5	2.020	2.996	3.6	20.8
11 27	2 39.06	+1 56.8	1.246	2.160	13.1	17.8	11 27	2 39.34	+23 39.5	2.070	3.009	6.9	21.0
12 7	2 33.43	+2 22.6	1.328	2.178	16.8	18.1	12 7	2 32.68	+23 20.7	2.146	3.023	10.1	21.2
12 17	2 30.86	+3 8.5	1.428	2.196	20.0	18.4	12 17	2 28.31	+23 5.0	2.247	3.036	12.9	21.4
313329	2002 <i>FH</i> ₅	11 8.6 189°57	3°7/6.1	17			54987	2001 <i>QT</i> ₄	11 8.6 354°09	5°9/4.8	18		
10 8	3 23.83	+7 19.7	2.129	2.988	11.6	21.6	10 8	3 16.07	+5 26.7	1.470	2.358	14.1	18.7
10 18	3 16.53	+6 35.2	2.060	2.987	8.4	21.4	10 18	3 11.56	+4 12.0	1.414	2.354	10.4	18.5
10 28	3 7.42	+5 50.9	2.017	2.985	5.2	21.2	10 28	3 4.88	+2 59.3	1.382	2.350	7.1	18.3
11 7	2 57.29	+5 11.1	2.004	2.982	3.7	21.1	11 7	2 56.97	+1 56.6	1.375	2.348	6.0	18.2
11 17	2 47.07	+4 40.2	2.021	2.978	5.8	21.3	11 17	2 48.98	+1 11.2	1.394	2.346	8.4	18.4
11 27	2 37.75	+4 21.8	2.067	2.973	9.1	21.5	11 27	2 42.09	+0 48.1	1.437	2.345	12.1	18.6
12 7	2 30.12	+4 17.9	2.140	2.966	12.2	21.6	12 7	2 37.22	+0 49.0	1.503	2.345	15.7	18.8
12 17	2 24.70	+4 28.7	2.234	2.959	14.9	21.8	12 17	2 34.93	+1 12.6	1.587	2.345	18.7	19.0
369480	2010 <i>TT</i> ₁₃₉	11 8.6 59°95	3°8/7.3	18			219046	1995 <i>UL</i> ₅₇	11 8.6 14°19	1°4/9.2	18		
10 8	3 27.32	+8 46.4	1.128	2.012	17.8	19.9	10 8	3 17.34	+20 8.4	0.891	1.790	19.8	19.5
10 18	3 19.76	+8 39.9	1.093	2.034	12.7	19.7	10 18	3 13.51	+20 8.8	0.849	1.796	14.4	19.2
10 28	3 9.35	+8 35.2	1.081	2.056	7.3	19.5	10 28	3 6.30	+19 53.1	0.826	1.804	8.3	18.9
11 7	2 57.54	+8 36.2	1.092	2.078	3.8	19.3	11 7	2 57.19	+19 24.4	0.823	1.813	2.0	18.6
11 17	2 46.02	+8 46.7	1.130	2.101	6.9	19.6	11 17	2 48.05	+18 48.9	0.843	1.825	5.3	18.9
11 27	2 36.41	+9 9.4	1.192	2.124	11.7	19.9	11 27	2 40.80	+18 15.3	0.885	1.838	11.4	19.3
12 7	2 29.77	+9 44.9	1.277	2.147	16.1	20.3	12 7	2 36.75	+17 51.6	0.947	1.854	16.7	19.6
12 17	2 26.53	+10 32.5	1.380	2.170	19.6	20.6	12 17	2 36.42	+17 42.5	1.026	1.870	21.0	19.9
521957	2015 <i>VA</i> ₁₅₇	11 8.6 112°57	0°3/8.3	18			440792	2006 <i>MA</i> ₁₁	11 8.6 115°90	5°3/13.3	18		
10 8	3 17.31	+18 51.5	2.187	3.045	11.4	21.4	10 8	3 24.01	+35 22.7	2.198	2.987	13.7	21.7
10 18	3 11.86	+17 58.9	2.121	3.050	8.1	21.2	10 18	3 16.78	+35 19.0	2.136	3.006	11.0	21.5
10 28	3 4.82	+16 57.2	2.081	3.056	4.5	21.0	10 28	3 7.58	+34 55.2	2.097	3.024	8.1	21.4
11 7	2 56.93	+15 50.2	2.070	3.061	0.6	20.7	11 7	2 57.35	+34 11.1	2.084	3.042	5.8	21.3
11 17	2 49.04	+14 42.7	2.089	3.066	3.4	21.0	11 17	2 47.21	+33 9.3	2.100	3.059	5.4	21.3
11 27	2 42.01	+13 40.1	2.137	3.071	7.1	21.2	11 27	2 38.26	+31 55.5	2.145	3.075	7.3	21.4
12 7	2 36.54	+12 47.1	2.212	3.076	10.4	21.4	12 7	2 31.32	+30 37.2	2.218	3.091	10.0	21.6
12 17	2 33.08	+12 6.8	2.310	3.081	13.2	21.6	12 17	2 26.87	+29 21.5	2.315	3.107	12.5	21.8
97240	1999 <i>XP</i> ₈₄	11 8.6 263°13	4°0/5.5	18			131450	2001 <i>QH</i> ₁₅₁	11 8.6 303°10	16°7/20.6	17		
10 8	3 17.90	+4 22.0	2.453	3.316	10.1	19.2	10 8	3 29.24	+52 5.2	1.147	1.896	25.9	19.1
10 18	3 12.24	+3 48.3	2.372	3.299	7.5	19.0	10 18	3 23.55	+53 5.1	1.079	1.889	23.4	18.9
10 28	3 5.06	+3 17.0	2.319	3.283	5.0	18.8	10 28	3 12.58	+53 18.9	1.023	1.882	20.7	18.6
11 7	2 56.98	+2 51.9	2.294	3.265	4.1	18.7	11 7	2 58.13	+52 33.7	0.982	1.875	18.3	18.5
11 17	2 48.72	+2 36.4	2.298	3.248	5.7	18.8	11 17	2 43.20	+50 44.3	0.960	1.868	16.8	18.4
11 27	2 41.09	+2 33.3	2.331	3.230	8.5	19.0	11 27	2 31.09	+47 58.7	0.958	1.862	17.1	18.4
12 7	2 34.77	+2 43.8	2.390	3.213	11.2	19.1	12 7	2 23.89	+44 38.0	0.977	1.856	19.0	18.5
12 17	2 30.26	+3 7.9	2.471	3.194	13.6	19.3	12 17	2 22.20	+41 6.7	1.015	1.850	21.9	18.6
278183	2007 <i>DV</i> ₉₇	11 8.6 220°45	0°6/8.2	18			211272	2002 <i>RV</i> ₈₇	11 8.6 45°83	1°6/7.6	18		
10 8	3 21.54	+17 14.6	1.781	2.644	13.3	21.7	10 8	3 19.67	+15 23.6	1.440	2.319	15.0	19.2
10 18	3 15.31	+16 41.9	1.707	2.639	9.6	21.5	10 18	3 13.98	+14 37.0	1.399	2.339	10.5	18.9
10 28	3 6.92	+16 0.1	1.658	2.632	5.3	21.2	10 28	3 6.11	+13 43.4	1.382	2.359	5.7	18.7
11 7	2 57.25	+15 12.6	1.635	2.626	0.8	20.9	11 7	2 57.15	+12 48.2	1.390	2.380	1.6	18.5
11 17	2 47.41	+14 24.0	1.642	2.619	4.2	21.1	11 17	2 48.35	+11 57.5	1.426	2.401	5.0	18.8
11 27	2 38.58	+13 40.3	1.677	2.612	8.6	21.4	11 27	2 40.94	+11 17.5	1.487	2.423	9.5	19.1
12 7	2 31.72	+13 6.4	1.737	2.604	12.6	21.6	12 7	2 35.77	+10 52.2	1.573	2.445	13.4	19.4
12 17	2 27.43	+12 45.8	1.819	2.596	16.0	21.8	12 17	2 33.27	+10 43.2	1.679	2.467	16.7	19.7
135013	2001 <i>KY</i> ₁₆	11 8.6 66°60	0°5/8.2	18			98509	2000 <i>VK</i> ₂₀	11 8.6 279°78	1°7/7.8	18		
10 8	3 20												

EPHEMERIDES

11 8.6

11 8.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
349774	2009 <i>BG</i> ₁₀	11	8.6 215°75	6°2/13.2	18		513899	2013 <i>WD</i> ₃₄	11	8.6 333°07	0°4/ 8.9	18	
10 8	3 24.36	+36 11.6	2.196	2.981	13.9	21.6	10 8	3 19.55	+19 31.1	1.218	2.099	16.9	21.2
10 18	3 17.42	+36 38.8	2.111	2.975	11.4	21.4	10 18	3 14.73	+19 10.0	1.150	2.089	12.3	20.9
10 28	3 8.16	+36 46.8	2.049	2.968	8.8	21.2	10 28	3 6.96	+18 34.8	1.104	2.080	7.0	20.6
11 7	2 57.48	+36 33.2	2.012	2.962	6.7	21.1	11 7	2 57.34	+17 48.7	1.081	2.071	1.2	20.2
11 17	2 46.51	+35 58.5	2.004	2.954	6.4	21.1	11 17	2 47.41	+16 57.4	1.083	2.064	4.9	20.5
11 27	2 36.52	+35 6.5	2.024	2.947	8.2	21.1	11 27	2 38.84	+16 9.3	1.110	2.057	10.6	20.8
12 7	2 28.55	+34 4.3	2.070	2.939	10.8	21.3	12 7	2 32.93	+15 32.1	1.159	2.050	15.7	21.0
12 17	2 23.25	+32 59.5	2.140	2.930	13.5	21.5	12 17	2 30.41	+15 10.8	1.228	2.045	19.9	21.3
211269	2002 <i>RU</i> ₇₃	11	8.6 64°08	1°9/ 9.9	18		76393	2000 <i>FM</i> ₁₁	11	8.6 201°45	6°0/ 4.3	18	
10 8	3 21.01	+23 15.4	1.715	2.568	14.2	20.4	10 8	3 20.08	- 0 54.3	2.232	3.090	11.2	19.7
10 18	3 14.96	+23 6.4	1.654	2.576	10.5	20.2	10 18	3 13.81	- 1 40.2	2.170	3.087	8.7	19.5
10 28	3 6.72	+22 43.9	1.616	2.584	6.3	20.0	10 28	3 5.94	- 2 19.1	2.134	3.083	6.6	19.4
11 7	2 57.26	+22 9.6	1.605	2.593	2.4	19.8	11 7	2 57.17	- 2 46.3	2.126	3.079	6.1	19.4
11 17	2 47.75	+21 27.1	1.622	2.601	3.8	19.9	11 17	2 48.33	- 2 57.9	2.146	3.074	7.6	19.4
11 27	2 39.42	+20 42.2	1.667	2.610	8.0	20.2	11 27	2 40.29	- 2 51.9	2.193	3.069	10.0	19.6
12 7	2 33.20	+20 1.2	1.737	2.618	11.8	20.4	12 7	2 33.76	- 2 28.1	2.265	3.064	12.6	19.8
12 17	2 29.61	+19 28.8	1.829	2.627	15.1	20.6	12 17	2 29.20	- 1 48.1	2.359	3.058	14.8	19.9
57974	2002 <i>OX</i> ₃	11	8.6 356°80	6°8/13.3	18		45630	2000 <i>DO</i> ₁₀₁	11	8.6 290°64	5°3/ 4.4	18	
10 8	3 20.49	+34 56.1	1.592	2.409	16.9	18.3	10 8	3 16.60	+ 1 21.5	2.260	3.127	10.7	18.6
10 18	3 15.12	+35 11.8	1.521	2.407	13.7	18.1	10 18	3 11.34	+ 0 30.7	2.199	3.123	8.1	18.5
10 28	3 7.03	+35 3.0	1.470	2.406	10.2	17.9	10 28	3 4.58	- 0 15.1	2.164	3.120	6.0	18.3
11 7	2 57.32	+34 27.7	1.443	2.404	7.4	17.7	11 7	2 56.98	- 0 51.1	2.156	3.117	5.4	18.3
11 17	2 47.40	+33 27.9	1.442	2.404	7.0	17.7	11 17	2 49.32	- 1 13.4	2.177	3.113	7.0	18.4
11 27	2 38.80	+32 10.5	1.467	2.404	9.4	17.9	11 27	2 42.40	- 1 19.3	2.225	3.110	9.5	18.5
12 7	2 32.70	+30 45.7	1.516	2.404	12.8	18.1	12 7	2 36.89	- 1 8.1	2.297	3.107	12.1	18.7
12 17	2 29.73	+29 23.4	1.587	2.406	16.1	18.3	12 17	2 33.22	- 0 40.9	2.390	3.104	14.3	18.9
164935	1999 <i>XR</i> ₁₂₆	11	8.6 330°95	2°5/ 9.8	18		37969	1998 <i>HW</i> ₉₇	11	8.6 192°28	1°1/ 9.5	18	
10 8	3 19.48	+22 27.3	1.366	2.235	16.2	19.6	10 8	3 20.93	+22 35.0	2.075	2.920	12.4	19.9
10 18	3 14.64	+22 42.7	1.288	2.218	12.1	19.3	10 18	3 14.66	+22 2.7	1.999	2.919	9.1	19.6
10 28	3 6.93	+22 44.4	1.232	2.202	7.4	19.0	10 28	3 6.50	+21 18.0	1.948	2.917	5.3	19.4
11 7	2 57.33	+22 32.5	1.200	2.187	3.0	18.7	11 7	2 57.26	+20 23.2	1.926	2.915	1.5	19.1
11 17	2 47.25	+22 9.2	1.193	2.173	4.7	18.8	11 17	2 47.93	+19 22.4	1.933	2.912	3.3	19.3
11 27	2 38.32	+21 40.3	1.212	2.159	9.8	19.0	11 27	2 39.54	+18 21.2	1.970	2.909	7.3	19.5
12 7	2 31.86	+21 12.9	1.254	2.147	14.5	19.3	12 7	2 32.92	+17 25.6	2.033	2.905	10.8	19.7
12 17	2 28.71	+20 53.3	1.315	2.136	18.7	19.5	12 17	2 28.59	+16 40.0	2.121	2.901	13.9	19.9
243074	2007 <i>HE</i> ₉	11	8.6 262°64	0°3/ 8.4	18		239196	2006 <i>LW</i> ₂	11	8.6 103°86	6°4/ 4.9	18	
10 8	3 21.08	+18 33.6	1.705	2.568	13.8	21.8	10 8	3 22.12	- 0 56.9	1.925	2.785	12.6	19.9
10 18	3 15.21	+17 54.9	1.621	2.552	10.0	21.5	10 18	3 15.29	- 1 34.9	1.882	2.800	9.6	19.7
10 28	3 7.00	+17 4.4	1.561	2.535	5.6	21.2	10 28	3 6.72	- 2 4.0	1.864	2.815	7.2	19.6
11 7	2 57.33	+16 5.7	1.527	2.518	0.8	20.9	11 7	2 57.28	- 2 19.3	1.873	2.829	6.4	19.6
11 17	2 47.35	+15 3.8	1.522	2.500	4.3	21.1	11 17	2 47.95	- 2 17.6	1.910	2.844	8.0	19.7
11 27	2 38.35	+14 5.9	1.546	2.482	9.1	21.3	11 27	2 39.68	- 1 57.5	1.974	2.858	10.6	19.9
12 7	2 31.37	+13 18.2	1.594	2.464	13.4	21.5	12 7	2 33.20	- 1 20.0	2.063	2.871	13.3	20.1
12 17	2 27.09	+12 45.2	1.663	2.446	17.0	21.7	12 17	2 28.96	- 0 27.2	2.172	2.884	15.6	20.3
179257	2001 <i>UO</i> ₁₄₀	11	8.6 64°16	1°9/ 7.3	18		137125	1999 <i>CT</i> ₃	11	8.6 187°93	34°4/12.1	18	
10 8	3 18.80	+13 39.2	1.821	2.692	12.7	20.8	10 8	5 10.75	+78 23.0	1.092	1.613	37.5	21.4
10 18	3 13.14	+12 58.5	1.765	2.701	9.0	20.6	10 18	5 31.45	+82 7.2	1.059	1.615	36.9	21.4
10 28	3 5.62	+12 13.1	1.735	2.710	5.0	20.4	10 28	5 32.51	+85 26.5	1.029	1.615	36.3	21.3
11 7	2 57.11	+11 27.2	1.731	2.720	1.9	20.2	11 7	3 43.04	+87 56.7	1.000	1.613	35.7	21.2
11 17	2 48.61	+10 45.5	1.757	2.729	4.6	20.4	11 17	23 24.83	+87 12.5	0.974	1.611	35.2	21.1
11 27	2 41.14	+10 12.9	1.810	2.739	8.5	20.7	11 27	22 51.68	+84 32.1	0.951	1.606	34.7	21.1
12 7	2 35.50	+ 9 52.7	1.888	2.749	12.1	20.9	12 7	23 15.75	+81 29.3	0.933	1.601	34.5	21.0
12 17	2 32.16	+ 9 46.6	1.988	2.758	15.0	21.1	12 17	23 53.28	+78 6.7	0.920	1.594	34.5	21.0
204079	2003 <i>WA</i> ₁₉	11	8.6 234°13	0°9/ 8.2	18		512501	2016 <i>RR</i> ₆	11	8.6 68°71	3°9/11.0	18	
10 8	3 29.09	+12 14.4	2.256	3.100	11.6	20.1	10 8	3 23.57	+27 56.5	1.374	2.223	17.4	21.0
10 18	3 20.51	+12 46.4	2.165	3.087	8.4	19.9	10 18	3 17.22	+27 46.2	1.320	2.236	13.2	20.8
10 28	3 9.81	+13 17.9	2.102	3.074	4.7	19.7	10 28	3 8.10	+27 14.3	1.288	2.248	8.5	20.6
11 7	2 57.74	+13 49.2	2.070	3.060	1.0	19.4	11 7	2 57.49	+26 22.0	1.279	2.261	4.5	20.4
11 17	2 45.30	+14 20.6	2.070	3.045	3.7	19.5	11 17	2 46.94	+25 14.3	1.298	2.275	5.1	20.5
11 27	2 33.61	+14 53.4	2.102	3.030	7.7	19.8	11 27	2 37.99	+24 0.2	1.342	2.288	9.2	20.8
12 7	2 23.62	+15 29.0	2.164	3.014	11.2	20.0	12 7	2 31.75	+22 49.5	1.411	2.301	13.5	21.0
12 17	2 15.98	+16 8.8	2.250	2.998	14.1	20.1	12 17	2 28.73	+21 49.7	1.501	2.314	17.1	21.3
340138	2005 <i>YK</i> ₂₄	11	8.6 303°53	5°7/ 5.7	18		205063	1999 <i>RD</i> ₃₉	11	8.6 11°45	9°7/ 2.8	18	
10 8	3 20.65	+ 4 51.7	1.464	2.345	14.6	20.4	10 8	3 15.71	- 0 46.7	1.200	2.093	16.2	19.0
10 18	3 15.05	+ 4 8.4	1.394	2.330	10.9	20.1	10 18	3 11.53	- 2 29.4	1.162	2.096	12.7	18.8
10 28	3 6.97	+ 3 28.3	1.346	2.314	7.2	19.9	10 28	3 4.94	- 4 0.4	1.146	2.101	10.2	18.7
11 7	2 57.33	+ 2 58.0	1.324	2.299	5.8	19.8	11 7	2 57.04	- 5 8.6	1.152	2.106	9.9	18.7
11 17	2 47.40	+ 2 43.2	1.328	2.285	8.2	19.9	11 17	2 49.18	- 5 45.8	1.182	2.113	12.1	18.8
11 27	2 38.53	+ 2 48.4	1.357	2.270	12.2	20.1	11 27	2 42.69	- 5 48.6	1.234	2.121	15.4	19.0
12 7	2 31.85	+ 3 14.6	1.409	2.256	16.2	20.3	12 7	2 38.51	- 5 19.1	1.305	2.130	18.6	19.3
12 17	2 28.04	+ 4 0.6	1.479	2.242	19.6	20.5	12 17	2 37.15	- 4 22.2	1.392	2.140	21.3	19.5
109574	2001 <i>QV</i> ₂₆₉	11	8.6 79°04	2°9/ 6.9	18		378058	2006 <i>TY</i> ₈₄ </					

EPHEMERIDES

11 8.6

11 8.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
37997	1998 <i>KW</i> ₃₀		11 8.6 38°10'	1.8°/ 7.7 18			23666	1997 <i>FT</i> ₁		11 8.7 358°96'	9.2°/ 4.0 18		
10 8	3 20.93	+11 54.0	1.745	2.616	13.2	18.4	10 8	3 19.03	- 3 3.6	1.358	2.238	15.6	17.7
10 18	3 14.74	+11 53.2	1.691	2.627	9.4	18.2	10 18	3 13.82	- 4 1.0	1.310	2.235	12.4	17.5
10 28	3 6.56	+11 50.6	1.663	2.638	5.2	17.9	10 28	3 6.23	- 4 44.9	1.284	2.233	9.9	17.3
11 7	2 57.29	+11 48.6	1.661	2.650	1.8	17.7	11 7	2 57.30	- 5 7.2	1.281	2.233	9.4	17.3
11 17	2 48.01	+11 49.9	1.688	2.662	4.6	18.0	11 17	2 48.32	- 5 2.4	1.302	2.233	11.2	17.4
11 27	2 39.82	+11 57.4	1.742	2.674	8.6	18.2	11 27	2 40.59	- 4 28.8	1.346	2.234	14.3	17.6
12 7	2 33.58	+12 13.3	1.822	2.687	12.2	18.5	12 7	2 35.11	- 3 28.8	1.411	2.235	17.5	17.8
12 17	2 29.79	+12 38.4	1.923	2.700	15.2	18.7	12 17	2 32.44	- 2 7.3	1.494	2.238	20.3	18.0
469808	2005 <i>SP</i> ₈₃		11 8.6 56°64'	1.5°/ 9.4 18			93272	2000 <i>ST</i> ₁₇₆		11 8.7 95°33'	5.3°/11.8 18		
10 8	3 24.47	+21 25.7	1.268	2.136	17.3	20.7	10 8	3 25.58	+30 35.7	1.702	2.526	15.7	18.9
10 18	3 17.74	+21 19.0	1.228	2.159	12.5	20.5	10 18	3 18.49	+31 5.8	1.641	2.536	12.3	18.7
10 28	3 8.32	+20 57.8	1.209	2.182	7.2	20.2	10 28	3 8.83	+31 16.8	1.601	2.547	8.6	18.5
11 7	2 57.53	+20 24.6	1.215	2.205	2.1	20.0	11 7	2 57.68	+31 7.1	1.587	2.558	5.8	18.4
11 17	2 46.96	+19 44.6	1.248	2.228	4.5	20.2	11 17	2 46.42	+30 38.1	1.601	2.568	5.8	18.4
11 27	2 38.11	+19 4.8	1.306	2.251	9.5	20.6	11 27	2 36.49	+29 55.4	1.642	2.578	8.7	18.6
12 7	2 32.02	+18 32.3	1.389	2.275	13.9	20.9	12 7	2 28.99	+29 6.8	1.708	2.588	12.1	18.9
12 17	2 29.13	+18 11.4	1.491	2.299	17.5	21.2	12 17	2 24.52	+28 20.0	1.797	2.598	15.2	19.1
350035	2010 <i>JW</i> ₁₆₉		11 8.6 221°94'	3.8°/ 6.6 18			518845	2010 <i>CA</i> ₂₅₁		11 8.7 326°05'	1.2°/ 8.1 18		
10 8	3 23.81	+ 5 48.2	2.029	2.890	12.0	21.3	10 8	3 22.34	+13 55.2	1.388	2.266	15.4	20.6
10 18	3 16.72	+ 5 37.3	1.955	2.882	8.8	21.1	10 18	3 16.48	+13 57.6	1.319	2.257	11.1	20.4
10 28	3 7.68	+ 5 29.4	1.907	2.875	5.5	20.8	10 28	3 7.88	+13 55.6	1.272	2.248	6.2	20.1
11 7	2 57.48	+ 5 27.8	1.888	2.867	3.8	20.7	11 7	2 57.57	+13 51.6	1.250	2.240	1.4	19.7
11 17	2 47.09	+ 5 35.2	1.898	2.858	5.8	20.8	11 17	2 46.92	+13 49.0	1.255	2.232	5.1	20.0
11 27	2 37.57	+ 5 53.8	1.937	2.849	9.2	21.0	11 27	2 37.47	+13 51.9	1.285	2.225	10.2	20.2
12 7	2 29.79	+ 6 24.4	2.002	2.840	12.5	21.2	12 7	2 30.44	+14 3.9	1.339	2.218	14.9	20.5
12 17	2 24.31	+ 7 6.8	2.090	2.830	15.3	21.4	12 17	2 26.55	+14 27.2	1.414	2.212	18.7	20.7
518866	2010 <i>DV</i> ₈₇		11 8.6 145°98'	2.1°/ 6.9 18			243957	2001 <i>QZ</i> ₂₀₆		11 8.7 99°51'	8.2°/ 2.2 18		
10 8	3 19.27	+13 22.9	2.165	3.028	11.3	21.8	10 8	3 18.20	- 4 47.3	1.948	2.809	12.5	20.3
10 18	3 13.24	+12 19.5	2.104	3.037	8.0	21.6	10 18	3 12.56	- 6 16.2	1.910	2.819	10.1	20.2
10 28	3 5.62	+11 11.2	2.071	3.045	4.4	21.4	10 28	3 5.28	- 7 33.6	1.897	2.829	8.5	20.1
11 7	2 57.17	+10 2.8	2.066	3.053	2.1	21.2	11 7	2 57.16	- 8 32.6	1.909	2.839	8.4	20.2
11 17	2 48.74	+ 8 59.4	2.092	3.060	4.5	21.4	11 17	2 49.10	- 9 8.1	1.949	2.849	9.9	20.3
11 27	2 41.21	+ 8 5.9	2.147	3.067	7.9	21.7	11 27	2 42.00	- 9 18.0	2.013	2.859	12.1	20.4
12 7	2 35.26	+ 7 26.0	2.228	3.073	11.1	21.9	12 7	2 36.57	- 9 3.3	2.099	2.869	14.4	20.6
12 17	2 31.33	+ 7 1.3	2.332	3.079	13.7	22.1	12 17	2 33.21	- 8 27.0	2.204	2.878	16.4	20.8
248634	2006 <i>FU</i> ₄₈		11 8.6 253°68'	8.6°/31.2 18			8686	Akenside		11 8.7 358°63'	7.0°/ 5.1 18		
10 8	3 17.41	-13 31.9	2.649	3.471	10.7	20.5	10 8	3 19.83	+ 4 38.8	1.177	2.070	16.5	17.1
10 18	3 11.81	-14 33.3	2.590	3.456	9.4	20.4	10 18	3 14.69	+ 3 29.6	1.127	2.068	12.3	16.9
10 28	3 4.83	-15 21.2	2.555	3.441	8.7	20.3	10 28	3 6.82	+ 2 24.7	1.098	2.066	8.4	16.7
11 7	2 57.07	-15 10.5	2.546	3.426	8.9	20.3	11 7	2 57.40	+ 1 33.1	1.092	2.066	7.1	16.6
11 17	2 49.21	-15 57.8	2.563	3.411	9.9	20.4	11 17	2 47.90	+ 1 2.9	1.111	2.066	9.7	16.7
11 27	2 41.99	-15 41.8	2.605	3.395	11.4	20.4	11 27	2 39.82	+ 0 59.0	1.153	2.066	13.9	17.0
12 7	2 36.02	-15 3.6	2.668	3.379	13.1	20.5	12 7	2 34.31	+ 1 21.8	1.215	2.068	17.9	17.2
12 17	2 31.75	-14 6.1	2.750	3.363	14.6	20.6	12 17	2 31.93	+ 2 8.3	1.295	2.070	21.4	17.5
447649	2006 <i>VX</i> ₇₆		11 8.7 175°76'	1.6°/ 7.6 18			441927	2010 <i>JQ</i> ₃₀		11 8.7 281°39'	7.6°/ 3.7 18		
10 8	3 19.70	+13 10.8	2.060	2.925	11.7	21.4	10 8	3 19.54	- 1 6.7	1.722	2.592	13.3	21.0
10 18	3 13.73	+12 47.3	1.993	2.925	8.3	21.2	10 18	3 13.93	- 2 14.1	1.656	2.579	10.5	20.8
10 28	3 5.99	+12 20.0	1.951	2.926	4.6	21.0	10 28	3 6.24	- 3 13.8	1.615	2.565	8.2	20.7
11 7	2 57.24	+11 52.0	1.938	2.926	1.6	20.8	11 7	2 57.32	- 3 58.3	1.600	2.552	7.8	20.6
11 17	2 48.41	+11 26.9	1.953	2.927	4.2	21.0	11 17	2 48.21	- 4 21.9	1.610	2.539	9.6	20.7
11 27	2 40.45	+11 8.4	1.998	2.927	7.9	21.2	11 27	2 40.05	- 4 20.8	1.646	2.526	12.6	20.8
12 7	2 34.14	+10 59.4	2.069	2.927	11.3	21.4	12 7	2 33.74	- 3 55.3	1.705	2.512	15.7	21.0
12 17	2 29.98	+11 1.6	2.162	2.926	14.1	21.6	12 17	2 29.87	- 3 7.6	1.782	2.499	18.4	21.2
441322	2008 <i>BK</i> ₃₉		11 8.7 346°68'	10.7°/14.4 17			362558	2010 <i>VP</i> ₃₈		11 8.7 2°15'	2.2°/ 6.9 18		
10 8	3 20.12	+38 50.6	1.333	2.147	19.7	20.3	10 8	3 16.66	+14 0.4	1.925	2.797	12.1	20.5
10 18	3 15.73	+40 3.0	1.261	2.134	16.8	20.0	10 18	3 11.64	+12 51.8	1.860	2.797	8.6	20.3
10 28	3 7.84	+40 47.7	1.206	2.123	13.7	19.8	10 28	3 4.86	+11 36.9	1.821	2.797	4.8	20.0
11 7	2 57.56	+40 58.2	1.173	2.114	11.3	19.7	11 7	2 57.11	+10 21.0	1.810	2.797	2.2	19.9
11 17	2 46.66	+40 32.0	1.161	2.105	10.8	19.6	11 17	2 49.32	+ 9 10.1	1.827	2.797	4.9	20.1
11 27	2 37.21	+39 34.1	1.172	2.098	12.5	19.7	11 27	2 42.44	+ 8 10.2	1.873	2.798	8.6	20.3
12 7	2 30.87	+38 15.8	1.205	2.093	15.5	19.9	12 7	2 37.22	+ 7 25.6	1.944	2.798	12.1	20.5
12 17	2 28.53	+36 50.0	1.258	2.089	18.7	20.1	12 17	2 34.15	+ 6 58.3	2.036	2.799	15.0	20.7
422064	2014 <i>QQ</i> ₃₇₈		11 8.7 6°28'	3.8°/11.3 17			144021	2004 <i>BX</i> ₁₂		11 8.7 263°18'	1.4°/ 9.4 18		
10 8	3 19.92	+28 27.7	2.079	2.908	13.1	21.1	10 8	3 22.96	+21 47.2	1.601	2.458	14.9	20.4
10 18	3 14.11	+28 43.0	2.006	2.908	10.1	20.9	10 18	3 16.82	+21 31.5	1.516	2.442	11.0	20.1
10 28	3 6.30	+28 43.8	1.956	2.908	6.8	20.7	10 28	3 8.06	+21 1.8	1.454	2.425	6.5	19.8
11 7	2 57.31	+28 29.7	1.933	2.909	4.2	20.5	11 7	2 57.61	+20 19.4	1.418	2.408	1.9	19.5
11 17	2 48.14	+28 2.3	1.938	2.910	4.4	20.5	11 17	2 46.76	+19 28.4	1.411	2.390	4.2	19.6
11 27	2 39.91	+27 25.8	1.972	2.911	7.2	20.7	11 27	2 36.96	+18 35.5	1.430	2.372	9.1	19.9
12 7	2 33.48	+26 45.8	2.032	2.912	10.4	20.9	12 7	2 29.40	+17 47.9	1.475	2.354	13.7	20.1
12 17	2 29.44	+26 8.0	2.115	2.914	13.3	21.1	12 17	2 24.84	+17 11.7	1.540	2.336	17.6	20.3
312406	2008 <i>FJ</i> ₅₆		11										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
331211	2011 <i>BX</i> ₃₆	11	8.7 220°61	7.1/ 1.7	17		484567	2008 <i>KB</i> ₄₂	11	8.7 80°09	5.8/ 4.5	17	
10 8	3 16.23	- 7 34.0	2.688	3.532	10.0	21.5	10 8	3 18.49	+ 0 17.2	2.145	3.010	11.3	21.6
10 18	3 10.92	- 8 38.3	2.632	3.526	8.3	21.4	10 18	3 12.61	- 0 36.7	2.108	3.029	8.6	21.5
10 28	3 4.34	- 9 32.7	2.601	3.519	7.2	21.3	10 28	3 5.26	- 1 23.4	2.096	3.048	6.4	21.4
11 7	2 57.04	-10 12.7	2.598	3.512	7.2	21.3	11 7	2 57.21	- 1 58.3	2.111	3.068	5.8	21.4
11 17	2 49.68	-10 34.6	2.622	3.505	8.4	21.4	11 17	2 49.26	- 2 17.6	2.155	3.087	7.3	21.5
11 27	2 42.95	-10 36.6	2.672	3.498	10.1	21.5	11 27	2 42.22	- 2 19.4	2.225	3.106	9.7	21.7
12 7	2 37.42	-10 19.1	2.745	3.490	11.9	21.6	12 7	2 36.72	- 2 3.8	2.320	3.124	12.1	21.9
12 17	2 33.48	- 9 43.9	2.837	3.483	13.6	21.8	12 17	2 33.14	- 1 32.5	2.436	3.143	14.2	22.1
452710	2005 <i>YA</i> ₁₂₂	11	8.7 273°02	4.6/ 5.4	18		339212	2004 <i>TN</i> ₂₇₄	11	8.7 59°07	1.8/ 9.4	18	
10 8	3 18.37	+ 3 22.7	2.193	3.059	11.0	20.7	10 8	3 26.73	+19 39.8	1.571	2.427	15.1	19.9
10 18	3 12.71	+ 2 47.7	2.124	3.051	8.2	20.5	10 18	3 19.39	+20 20.7	1.508	2.433	11.1	19.7
10 28	3 5.43	+ 2 16.6	2.081	3.043	5.6	20.4	10 28	3 9.40	+20 53.0	1.470	2.439	6.5	19.5
11 7	2 57.21	+ 1 53.6	2.065	3.035	4.7	20.3	11 7	2 57.84	+21 15.8	1.457	2.446	2.2	19.2
11 17	2 48.86	+ 1 42.2	2.078	3.026	6.4	20.4	11 17	2 46.08	+21 29.8	1.473	2.452	4.2	19.4
11 27	2 41.25	+ 1 45.1	2.119	3.018	9.2	20.5	11 27	2 35.58	+21 38.1	1.517	2.458	8.8	19.7
12 7	2 35.13	+ 2 3.2	2.185	3.010	12.1	20.7	12 7	2 27.50	+21 45.3	1.587	2.465	12.9	19.9
12 17	2 30.98	+ 2 35.7	2.272	3.001	14.5	20.9	12 17	2 22.49	+21 55.6	1.677	2.472	16.4	20.2
308255	2005 <i>GT</i> ₇₆	11	8.7 36°09	1.1/ 9.2	18		410894	2009 <i>SM</i> ₇₄	11	8.7 64°85	0.3/ 8.8	18	
10 8	3 21.98	+19 49.7	1.740	2.598	13.8	21.3	10 8	3 21.42	+17 16.0	2.070	2.926	12.0	20.7
10 18	3 15.74	+19 55.1	1.673	2.600	10.1	21.0	10 18	3 14.97	+17 26.4	2.010	2.937	8.6	20.5
10 28	3 7.26	+19 51.0	1.631	2.602	5.8	20.8	10 28	3 6.71	+17 30.9	1.976	2.949	4.8	20.3
11 7	2 57.48	+19 38.6	1.615	2.604	1.5	20.5	11 7	2 57.44	+17 30.7	1.970	2.960	0.8	20.1
11 17	2 47.55	+19 20.6	1.627	2.607	3.8	20.7	11 17	2 48.13	+17 27.8	1.993	2.972	3.3	20.3
11 27	2 38.69	+19 1.3	1.668	2.609	8.1	21.0	11 27	2 39.75	+17 25.1	2.046	2.983	7.1	20.6
12 7	2 31.90	+18 45.5	1.734	2.611	12.1	21.2	12 7	2 33.11	+17 25.6	2.125	2.995	10.5	20.8
12 17	2 27.74	+18 37.1	1.822	2.614	15.4	21.4	12 17	2 28.70	+17 31.9	2.228	3.007	13.3	21.0
1119	<i>Euboea</i>	11	8.7 101°75	0.9/ 8.1	18 R		265160	2003 <i>WA</i> ₇₆	11	8.7 83°29	3.7/ 11.8	18	
10 8	3 23.36	+14 52.1	1.843	2.705	13.0	15.6	10 8	3 19.54	+29 57.0	2.321	3.139	12.2	20.2
10 18	3 16.40	+14 43.8	1.790	2.720	9.3	15.4	10 18	3 13.65	+29 59.9	2.251	3.146	9.5	20.1
10 28	3 7.48	+14 30.4	1.761	2.735	5.1	15.1	10 28	3 5.99	+29 48.1	2.205	3.153	6.5	19.9
11 7	2 57.50	+14 14.6	1.760	2.750	1.0	14.9	11 7	2 57.34	+29 21.6	2.187	3.160	4.1	19.8
11 17	2 47.56	+13 59.3	1.788	2.765	4.0	15.1	11 17	2 48.63	+28 42.6	2.197	3.167	4.2	19.8
11 27	2 38.74	+13 48.3	1.846	2.779	8.1	15.4	11 27	2 40.80	+27 55.3	2.236	3.173	6.6	20.0
12 7	2 31.89	+13 44.8	1.929	2.793	11.7	15.7	12 7	2 34.63	+27 5.1	2.302	3.180	9.5	20.1
12 17	2 27.48	+13 50.6	2.034	2.807	14.7	15.9	12 17	2 30.61	+26 17.5	2.393	3.187	12.1	20.3
212870	2007 <i>VX</i> ₁₆₆	11	8.7 223°16	0.5/ 8.9	18		68211	2001 <i>CH</i> ₁₂	11	8.7 109°40	5.0/ 4.9	18	
10 8	3 20.49	+19 29.7	1.879	2.737	13.0	21.1	10 8	3 17.76	+ 2 33.2	2.215	3.082	10.9	19.4
10 18	3 14.54	+19 13.4	1.808	2.736	9.4	20.9	10 18	3 12.19	+ 1 46.8	2.160	3.086	8.2	19.2
10 28	3 6.56	+18 47.5	1.762	2.734	5.3	20.7	10 28	3 5.11	+ 1 4.9	2.131	3.090	5.8	19.1
11 7	2 57.40	+18 14.2	1.742	2.732	1.0	20.3	11 7	2 57.21	+ 0 32.1	2.129	3.094	5.0	19.0
11 17	2 48.10	+17 37.1	1.752	2.731	3.6	20.5	11 17	2 49.30	+ 0 12.1	2.156	3.098	6.6	19.1
11 27	2 39.77	+17 1.0	1.789	2.729	7.8	20.8	11 27	2 42.18	+ 0 7.5	2.210	3.102	9.2	19.3
12 7	2 33.30	+16 31.0	1.853	2.727	11.6	21.0	12 7	2 36.53	+ 0 19.0	2.289	3.106	11.9	19.5
12 17	2 29.27	+16 10.7	1.939	2.725	14.8	21.2	12 17	2 32.77	+ 0 45.6	2.389	3.109	14.1	19.7
50113	2000 <i>AL</i> ₁₁₆	11	8.7 109°12	7.0/ 3.8	18		304272	2006 <i>RG</i> ₁₀₄	11	8.7 82°96	0.3/ 8.5	18	
10 8	3 20.28	- 2 22.3	2.009	2.869	12.2	19.2	10 8	3 22.03	+16 39.4	1.854	2.715	13.0	21.3
10 18	3 13.95	- 3 26.7	1.971	2.885	9.5	19.1	10 18	3 15.48	+16 29.9	1.801	2.731	9.2	21.1
10 28	3 6.03	- 4 21.6	1.958	2.901	7.5	19.0	10 28	3 7.00	+16 13.9	1.773	2.747	5.1	20.9
11 7	2 57.30	- 5 1.1	1.972	2.917	7.1	19.0	11 7	2 57.49	+15 53.7	1.772	2.762	0.7	20.6
11 17	2 48.68	- 5 21.4	2.013	2.932	8.6	19.1	11 17	2 48.01	+15 32.5	1.800	2.778	3.7	20.8
11 27	2 41.06	- 5 20.4	2.081	2.947	11.0	19.3	11 27	2 39.64	+15 14.5	1.857	2.793	7.8	21.1
12 7	2 35.12	- 4 59.0	2.172	2.961	13.3	19.5	12 7	2 33.19	+15 3.1	1.939	2.809	11.4	21.4
12 17	2 31.26	- 4 19.5	2.283	2.975	15.4	19.7	12 17	2 29.14	+15 0.9	2.045	2.824	14.4	21.6
411819	2012 <i>DO</i> ₃₄	11	8.7 201°73	2.5/ 6.4	18		71858	2000 <i>VM</i> ₁₂	11	8.7 33°14	1.8/ 7.9	18	
10 8	3 16.57	+11 12.8	2.347	3.213	10.4	21.1	10 8	3 24.13	+13 40.3	1.293	2.172	16.3	19.7
10 18	3 11.34	+10 16.4	2.279	3.212	7.4	21.0	10 18	3 17.75	+13 27.4	1.235	2.174	11.7	19.5
10 28	3 4.64	+ 9 17.0	2.237	3.210	4.3	20.8	10 28	3 8.57	+13 9.2	1.199	2.175	6.5	19.2
11 7	2 57.12	+ 8 18.9	2.225	3.209	2.5	20.6	11 7	2 57.74	+12 49.3	1.188	2.177	1.8	18.9
11 17	2 49.55	+ 7 26.5	2.242	3.207	4.6	20.8	11 17	2 46.77	+12 32.4	1.203	2.179	5.5	19.1
11 27	2 42.71	+ 6 44.1	2.288	3.205	7.7	21.0	11 27	2 37.23	+12 23.7	1.244	2.181	10.7	19.4
12 7	2 37.25	+ 6 14.5	2.361	3.203	10.7	21.2	12 7	2 30.32	+12 26.9	1.308	2.184	15.3	19.7
12 17	2 33.61	+ 5 59.1	2.456	3.200	13.2	21.3	12 17	2 26.66	+12 44.0	1.391	2.186	19.1	20.0
214683	2006 <i>SA</i> ₂₁₂	11	8.7 149°72	0.2/ 8.8	18		408575	2013 <i>LG</i> ₈	11	8.7 95°85	1.8/ 10.2	18	
10 8	3 20.83	+18 9.1	2.026	2.883	12.2	20.8	10 8	3 18.58	+24 48.7	2.315	3.152	11.6	20.6
10 18	3 14.63	+17 59.1	1.958	2.886	8.8	20.6	10 18	3 12.81	+24 21.5	2.252	3.165	8.6	20.5
10 28	3 6.55	+17 41.5	1.915	2.888	4.9	20.3	10 28	3 5.45	+23 42.3	2.214	3.178	5.2	20.3
11 7	2 57.41	+17 18.4	1.900	2.891	0.8	20.0	11 7	2 57.27	+22 53.1	2.204	3.190	2.1	20.1
11 17	2 48.17	+16 52.7	1.915	2.893	3.4	20.3	11 17	2 49.11	+21 57.2	2.224	3.203	3.1	20.2
11 27	2 39.85	+16 28.5	1.958	2.895	7.4	20.5	11 27	2 41.83	+20 59.8	2.274	3.215	6.3	20.4
12 7	2 33.28	+16 9.7	2.028	2.897	11.0	20.7	12 7	2 36.14	+20 5.7	2.352	3.227	9.4	20.6
12 17	2 28.97	+15 59.4	2.120	2.899	13.9	20.9	12 17	2 32.44	+19 19.2	2.453	3.239	12.1	20.8
169497	2002 <i>CM</i> ₂₁₅	11	8.7 237°28	2.4/ 7.3	17		236368	2006 <i>BY</i> ₂₅₆	11	8.7 123°			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
317467	2002 <i>RL</i> ₁₄₂		11 8.7 15°12	8°9/15.4	17		358647	2007 <i>VV</i> ₃₀₅		11 8.7 337°26	1°7/ 7.7	18	
10 8	3 23.74	+42 22.2	2.081	2.837	15.4	19.9	10 8	3 19.53	+13 51.4	1.706	2.579	13.3	21.0
10 18	3 17.34	+43 21.0	2.010	2.840	13.3	19.8	10 18	3 13.99	+13 25.5	1.639	2.576	9.5	20.8
10 28	3 8.34	+43 57.2	1.960	2.844	11.1	19.6	10 28	3 6.34	+12 54.4	1.596	2.572	5.3	20.5
11 7	2 57.72	+44 6.7	1.933	2.847	9.4	19.5	11 7	2 57.45	+12 21.8	1.580	2.569	1.7	20.3
11 17	2 46.78	+43 48.5	1.932	2.851	8.9	19.5	11 17	2 48.41	+11 52.2	1.592	2.567	4.7	20.5
11 27	2 36.98	+43 6.2	1.956	2.856	9.8	19.6	11 27	2 40.39	+11 30.1	1.631	2.564	9.0	20.7
12 7	2 29.48	+42 7.2	2.005	2.861	11.7	19.7	12 7	2 34.30	+11 19.4	1.695	2.562	12.9	20.9
12 17	2 24.97	+41 0.0	2.076	2.866	13.8	19.9	12 17	2 30.71	+11 21.8	1.779	2.560	16.1	21.2
406992	2009 <i>RT</i> ₄₀		11 8.7 322°89	4°1/11.6	17		268	<i>Adorea</i>		11 8.7 225°99	1°0/ 7.9	18	
10 8	3 19.76	+29 19.1	2.030	2.857	13.4	21.0	10 8	3 17.62	+14 54.5	2.577	3.435	9.9	13.7
10 18	3 14.15	+29 31.7	1.950	2.850	10.4	20.8	10 18	3 12.07	+14 27.7	2.498	3.427	7.0	13.5
10 28	3 6.44	+29 28.6	1.894	2.844	7.2	20.6	10 28	3 5.09	+13 56.3	2.446	3.420	3.9	13.3
11 7	2 57.44	+29 9.4	1.863	2.837	4.5	20.4	11 7	2 57.26	+13 22.9	2.422	3.412	1.0	13.0
11 17	2 48.21	+28 35.6	1.860	2.831	4.7	20.4	11 17	2 49.32	+12 50.3	2.429	3.404	3.3	13.2
11 27	2 39.90	+27 51.7	1.886	2.825	7.5	20.6	11 27	2 42.02	+12 22.0	2.466	3.396	6.6	13.4
12 7	2 33.43	+27 3.9	1.938	2.820	10.8	20.8	12 7	2 36.01	+12 1.0	2.531	3.387	9.5	13.6
12 17	2 29.43	+26 18.3	2.013	2.815	13.8	21.0	12 17	2 31.75	+11 49.3	2.619	3.378	12.1	13.7
398064	2009 <i>HT</i> ₆₂		11 8.7 95°14	1°6/ 7.7	18		477537	2010 <i>EJ</i> ₁₃₈		11 8.7 211°22	2°3/ 9.8	18	
10 8	3 20.87	+13 24.1	1.902	2.768	12.5	21.2	10 8	3 26.24	+21 46.0	1.867	2.711	13.7	21.4
10 18	3 14.65	+13 4.2	1.844	2.777	8.9	21.0	10 18	3 18.88	+22 22.0	1.792	2.708	10.2	21.2
10 28	3 6.56	+12 40.5	1.810	2.785	4.9	20.8	10 28	3 9.13	+22 48.8	1.740	2.706	6.2	20.9
11 7	2 57.45	+12 16.1	1.805	2.794	1.6	20.6	11 7	2 57.88	+23 5.3	1.717	2.703	2.6	20.7
11 17	2 48.31	+11 54.5	1.828	2.802	4.3	20.8	11 17	2 46.31	+23 12.0	1.723	2.700	4.0	20.8
11 27	2 40.18	+11 39.4	1.880	2.811	8.2	21.1	11 27	2 35.75	+23 11.9	1.757	2.696	8.0	21.0
12 7	2 33.86	+11 33.9	1.958	2.819	11.7	21.3	12 7	2 27.25	+23 9.6	1.819	2.693	11.8	21.3
12 17	2 29.84	+11 39.4	2.058	2.827	14.6	21.5	12 17	2 21.50	+23 9.5	1.903	2.689	15.0	21.5
411740	2012 <i>BV</i> ₇₂		11 8.7 106°07	4°7/12.6	18		220204	2002 <i>VP</i> ₂₆		11 8.7 3°64	1°3/ 9.3	18	
10 8	3 21.13	+32 50.9	2.267	3.071	12.9	20.9	10 8	3 15.43	+21 10.6	0.933	1.831	19.3	19.6
10 18	3 14.85	+32 56.8	2.198	3.080	10.2	20.7	10 18	3 12.26	+20 53.6	0.883	1.829	14.2	19.3
10 28	3 6.68	+32 45.6	2.153	3.089	7.4	20.5	10 28	3 5.81	+20 17.9	0.851	1.828	8.2	19.0
11 7	2 57.47	+32 17.0	2.134	3.098	5.1	20.4	11 7	2 57.40	+19 27.5	0.840	1.830	2.0	18.7
11 17	2 48.19	+31 32.7	2.143	3.107	4.9	20.4	11 17	2 48.82	+18 29.9	0.851	1.833	5.2	18.9
11 27	2 39.90	+30 37.6	2.182	3.116	7.0	20.6	11 27	2 41.94	+17 35.3	0.885	1.839	11.3	19.3
12 7	2 33.41	+29 37.8	2.248	3.124	9.7	20.8	12 7	2 38.10	+16 53.2	0.939	1.846	16.7	19.6
12 17	2 29.22	+28 39.5	2.338	3.132	12.3	21.0	12 17	2 37.90	+16 28.8	1.010	1.856	21.2	19.9
383037	2005 <i>QC</i> ₈		11 8.7 18°53	1°8/ 7.8	18		369226	2008 <i>UW</i> ₁₆₀		11 8.7 26°53	5°4/14.0	17	
10 8	3 18.44	+15 15.6	1.027	1.925	18.0	20.1	10 8	3 18.96	+37 1.4	2.263	3.050	13.5	19.9
10 18	3 13.96	+14 42.2	0.984	1.932	12.8	19.8	10 18	3 13.36	+36 42.5	2.187	3.053	10.9	19.7
10 28	3 6.52	+13 59.9	0.961	1.940	7.0	19.6	10 28	3 5.89	+36 2.6	2.132	3.056	8.2	19.5
11 7	2 57.45	+13 14.9	0.960	1.950	1.8	19.3	11 7	2 57.38	+35 1.5	2.104	3.059	6.0	19.4
11 17	2 48.40	+12 34.3	0.983	1.961	5.9	19.6	11 17	2 48.87	+33 42.1	2.104	3.062	5.5	19.4
11 27	2 41.03	+12 5.8	1.030	1.974	11.5	19.9	11 27	2 41.37	+32 10.3	2.133	3.066	7.2	19.5
12 7	2 36.49	+11 54.1	1.097	1.988	16.4	20.3	12 7	2 35.69	+30 33.8	2.189	3.069	9.8	19.7
12 17	2 35.30	+12 0.7	1.183	2.003	20.3	20.6	12 17	2 32.30	+29 0.0	2.271	3.073	12.4	19.9
223600	2004 <i>GF</i> ₇₅		11 8.7 250°45	1°9/ 9.7	18		163231	2002 <i>EH</i> ₁₂₉		11 8.7 126°26	5°0/12.0	18	
10 8	3 24.01	+22 30.9	1.728	2.577	14.3	21.2	10 8	3 26.49	+31 23.3	2.028	2.836	14.1	21.0
10 18	3 17.48	+22 28.8	1.642	2.563	10.7	20.9	10 18	3 18.88	+31 52.8	1.963	2.849	11.1	20.8
10 28	3 8.42	+22 13.8	1.580	2.548	6.4	20.6	10 28	3 9.01	+32 5.2	1.922	2.862	7.9	20.7
11 7	2 57.75	+21 46.5	1.544	2.532	2.3	20.3	11 7	2 57.85	+31 58.7	1.908	2.874	5.4	20.5
11 17	2 46.69	+21 9.6	1.537	2.516	4.1	20.4	11 17	2 46.59	+31 34.6	1.923	2.886	5.4	20.6
11 27	2 36.62	+20 28.6	1.558	2.499	8.6	20.6	11 27	2 36.49	+30 57.2	1.966	2.898	7.8	20.7
12 7	2 28.69	+19 50.0	1.605	2.482	12.9	20.9	12 7	2 28.53	+30 13.3	2.036	2.909	10.8	20.9
12 17	2 23.62	+19 19.6	1.673	2.465	16.5	21.1	12 17	2 23.26	+29 29.6	2.130	2.919	13.5	21.1
54670	2000 <i>WW</i> ₉₂		11 8.7 77°64	1°9/ 9.8	18		447231	2005 <i>UQ</i> ₁₀₂		11 8.7 329°63	0°9/ 7.9	18	
10 8	3 24.60	+23 47.2	1.308	2.169	17.3	18.9	10 8	3 16.80	+17 47.3	1.865	2.733	12.6	21.4
10 18	3 17.91	+23 17.1	1.261	2.188	12.7	18.7	10 18	3 11.91	+16 48.0	1.793	2.727	9.0	21.2
10 28	3 8.51	+22 29.0	1.236	2.206	7.5	18.4	10 28	3 5.14	+15 38.6	1.746	2.722	4.9	20.9
11 7	2 57.72	+21 26.2	1.236	2.224	2.5	18.2	11 7	2 57.29	+14 23.5	1.726	2.716	1.0	20.6
11 17	2 47.12	+20 15.4	1.263	2.243	4.4	18.4	11 17	2 49.33	+13 8.8	1.735	2.711	4.1	20.8
11 27	2 38.20	+19 5.8	1.316	2.261	9.4	18.7	11 27	2 42.30	+12 1.0	1.772	2.707	8.3	21.1
12 7	2 32.02	+18 5.7	1.393	2.279	13.9	19.0	12 7	2 37.01	+11 5.8	1.835	2.702	12.0	21.3
12 17	2 29.03	+17 20.7	1.490	2.296	17.6	19.3	12 17	2 33.97	+10 26.5	1.919	2.698	15.2	21.5
241454	2008 <i>YA</i> ₁₁₂		11 8.7 321°95	0°1/ 8.7	18		244412	2002 <i>PQ</i> ₁₈₅		11 8.7 108°33	2°0/ 7.4	18	
10 8	3 19.31	+18 48.8	1.489	2.361	14.9	20.6	10 8	3 20.89	+12 41.5	1.837	2.705	12.7	21.0
10 18	3 14.19	+18 20.6	1.416	2.351	10.8	20.3	10 18	3 14.73	+12 11.1	1.778	2.713	9.1	20.8
10 28	3 6.60	+17 40.6	1.366	2.342	6.1	20.0	10 28	3 6.64	+11 37.0	1.745	2.720	5.0	20.6
11 7	2 57.48	+16 52.2	1.342	2.333	0.9	19.6	11 7	2 57.50	+11 3.0	1.739	2.727	2.0	20.4
11 17	2 48.11	+16 0.5	1.344	2.324	4.4	19.9	11 17	2 48.34	+10 33.4	1.762	2.735	4.7	20.6
11 27	2 39.87	+15 12.7	1.373	2.315	9.4	20.1	11 27	2 40.22	+10 12.3	1.813	2.742	8.6	20.9
12 7	2 33.84	+14 35.0	1.426	2.308	13.9	20.4	12 7	2 33.96	+10 2.6	1.890	2.749	12.2	21.1
12 17	2 30.70	+14 11.8	1.499	2.300	17.7	20.6	12 17	2 30.04	+10 5.9	1.988	2.755	15.1	21.3
326500	2002 <i>JJ</i> ₈₅		11 8.7 146°25	0°1/ 8.7	16		477772	2011 <i>AK</i> ₆₂		11 8.7 149°17			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
123855	2001 <i>CE</i> ₃₈		11 8.7 146°46'	8°0'/31.2	18		222019	1998 <i>ST</i> ₄₄		11 8.7 280°99'	0°3'/8.9	18	
10 8	3 17.68	-16 35.9	3.156	3.957	9.7	20.0	10 8	3 21.33	+19 47.2	1.544	2.410	14.9	20.4
10 18	3 11.76	-17 31.2	3.124	3.968	8.6	20.0	10 18	3 15.74	+19 16.4	1.461	2.392	10.9	20.1
10 28	3 4.76	-18 12.6	3.117	3.979	8.0	19.9	10 28	3 7.55	+18 32.3	1.400	2.374	6.2	19.8
11 7	2 57.22	-18 36.4	3.136	3.989	8.2	20.0	11 7	2 57.71	+17 37.6	1.365	2.356	1.0	19.4
11 17	2 49.74	-18 40.3	3.181	3.998	8.9	20.0	11 17	2 47.47	+16 37.4	1.358	2.337	4.4	19.6
11 27	2 42.89	-18 23.9	3.250	4.008	10.0	20.1	11 27	2 38.28	+15 39.4	1.377	2.319	9.5	19.8
12 7	2 37.17	-17 48.8	3.341	4.016	11.2	20.2	12 7	2 31.31	+14 50.7	1.421	2.300	14.2	20.1
12 17	2 32.90	-16 57.3	3.451	4.024	12.3	20.4	12 17	2 27.29	+14 16.6	1.486	2.281	18.1	20.3
92180	1999 <i>XO</i> ₂₀₀		11 8.7 237°12'	3°9'/11.9	18		361183	Tandon		11 8.7 353°83'	6°2'/12.2	17	
10 8	3 19.85	+30 37.9	2.360	3.173	12.2	19.3	10 8	3 21.46	+31 26.1	1.520	2.353	16.8	20.6
10 18	3 13.97	+30 42.7	2.278	3.169	9.5	19.1	10 18	3 16.03	+32 3.5	1.450	2.349	13.3	20.3
10 28	3 6.26	+30 32.4	2.221	3.165	6.7	18.9	10 28	3 7.77	+32 20.3	1.400	2.346	9.7	20.1
11 7	2 57.46	+30 6.9	2.191	3.161	4.3	18.8	11 7	2 57.74	+32 14.0	1.375	2.343	6.7	19.9
11 17	2 48.50	+29 27.8	2.189	3.157	4.4	18.8	11 17	2 47.38	+31 45.3	1.375	2.342	6.7	19.9
11 27	2 40.37	+28 39.2	2.217	3.153	6.7	18.9	11 27	2 38.28	+30 59.8	1.401	2.341	9.5	20.1
12 7	2 33.87	+27 46.7	2.271	3.149	9.6	19.1	12 7	2 31.70	+30 6.3	1.451	2.340	13.2	20.3
12 17	2 29.55	+26 55.8	2.351	3.144	12.3	19.3	12 17	2 28.37	+29 13.4	1.522	2.341	16.6	20.5
282664	2005 <i>UL</i> ₄₃₆		11 8.7 221°10'	0°3'/8.5	18		204472	2005 <i>AK</i> ₃₂		11 8.7 196°95'	4°2'/11.9	18	
10 8	3 21.81	+18 18.6	1.941	2.798	12.7	21.7	10 8	3 22.42	+31 5.4	2.075	2.889	13.6	20.4
10 18	3 15.50	+17 41.4	1.862	2.789	9.1	21.5	10 18	3 15.98	+30 56.9	1.996	2.888	10.6	20.2
10 28	3 7.16	+16 54.4	1.807	2.780	5.1	21.2	10 28	3 7.44	+30 30.2	1.939	2.885	7.4	20.0
11 7	2 57.60	+16 0.7	1.780	2.771	0.7	20.9	11 7	2 57.67	+29 45.3	1.910	2.882	4.6	19.8
11 17	2 47.85	+15 4.8	1.783	2.761	3.8	21.1	11 17	2 47.77	+28 44.7	1.909	2.879	4.7	19.8
11 27	2 39.03	+14 12.5	1.815	2.750	8.1	21.4	11 27	2 38.88	+27 34.3	1.937	2.876	7.4	20.0
12 7	2 32.03	+13 29.2	1.873	2.738	11.9	21.6	12 7	2 31.93	+26 21.4	1.993	2.872	10.7	20.2
12 17	2 27.44	+12 58.5	1.954	2.727	15.2	21.8	12 17	2 27.48	+25 12.8	2.072	2.867	13.7	20.4
260310	2004 <i>TN</i> ₁₂₉		11 8.7 358°03'	3°2'/6.9	18		143972	2003 <i>YK</i> ₁₄₂		11 8.7 109°71'	5°7'/12.8	18	
10 8	3 20.17	+ 8 7.4	1.819	2.691	12.6	19.7	10 8	3 25.44	+34 1.5	2.055	2.853	14.3	20.5
10 18	3 14.31	+ 7 59.1	1.755	2.690	9.1	19.5	10 18	3 18.15	+34 29.2	1.992	2.868	11.4	20.4
10 28	3 6.48	+ 7 52.2	1.716	2.689	5.4	19.3	10 28	3 8.63	+34 37.9	1.952	2.882	8.5	20.2
11 7	2 57.50	+ 7 49.9	1.704	2.688	3.2	19.1	11 7	2 57.84	+34 26.0	1.938	2.896	6.2	20.1
11 17	2 48.40	+ 7 55.3	1.720	2.688	5.4	19.3	11 17	2 46.99	+33 54.6	1.952	2.910	5.9	20.1
11 27	2 40.25	+ 8 10.6	1.764	2.688	9.1	19.5	11 27	2 37.31	+33 8.5	1.995	2.923	7.9	20.3
12 7	2 33.92	+ 8 37.3	1.833	2.689	12.6	19.7	12 7	2 29.76	+32 14.8	2.064	2.936	10.7	20.5
12 17	2 29.94	+ 9 15.2	1.923	2.690	15.6	19.9	12 17	2 24.89	+31 20.5	2.156	2.949	13.3	20.7
471247	2011 <i>BT</i> ₇₄		11 8.7 0°90'	3°6'/6.7	18		176270	2001 <i>RM</i> ₁₀₆		11 8.7 42°94'	1°4'/7.7	18	
10 8	3 17.01	+13 14.7	1.058	1.957	17.4	20.2	10 8	3 19.15	+14 50.1	1.866	2.734	12.6	20.3
10 18	3 12.99	+12 5.4	1.006	1.955	12.4	19.9	10 18	3 13.55	+14 13.9	1.801	2.735	9.0	20.1
10 28	3 6.06	+10 47.6	0.974	1.953	7.0	19.6	10 28	3 6.04	+13 31.5	1.761	2.736	4.9	19.8
11 7	2 57.46	+ 9 30.1	0.966	1.953	3.6	19.4	11 7	2 57.46	+12 46.9	1.748	2.737	1.5	19.6
11 17	2 48.74	+ 8 23.1	0.981	1.954	7.3	19.6	11 17	2 48.80	+12 4.7	1.763	2.738	4.3	19.8
11 27	2 41.54	+ 7 35.5	1.020	1.956	12.6	19.9	11 27	2 41.10	+11 29.8	1.807	2.739	8.3	20.1
12 7	2 37.04	+ 7 12.5	1.079	1.960	17.4	20.2	12 7	2 35.18	+11 6.0	1.876	2.740	12.0	20.3
12 17	2 35.83	+ 7 14.5	1.155	1.964	21.4	20.5	12 17	2 31.57	+10 55.5	1.967	2.741	15.0	20.5
40015	1998 <i>HB</i> ₁₂₅		11 8.7 95°15'	8°6'/2.8	18		321464	2009 <i>RO</i> ₄₁		11 8.7 131°33'	1°3'/9.9	18	
10 8	3 20.07	- 4 7.5	1.745	2.609	13.5	19.0	10 8	3 18.88	+23 11.4	2.514	3.352	10.8	20.9
10 18	3 14.06	- 5 32.8	1.709	2.622	10.8	18.8	10 18	3 12.96	+22 46.9	2.447	3.363	7.9	20.7
10 28	3 6.22	- 6 45.7	1.697	2.635	8.9	18.8	10 28	3 5.57	+22 12.4	2.407	3.373	4.7	20.6
11 7	2 57.46	- 7 39.0	1.711	2.647	8.8	18.8	11 7	2 57.39	+21 29.6	2.395	3.383	1.6	20.4
11 17	2 48.80	- 8 7.3	1.751	2.660	10.4	18.9	11 17	2 49.20	+20 41.5	2.413	3.392	2.8	20.5
11 27	2 41.25	- 8 8.8	1.815	2.672	12.8	19.1	11 27	2 41.81	+19 52.5	2.462	3.401	6.0	20.7
12 7	2 35.57	- 7 44.9	1.901	2.684	15.2	19.3	12 7	2 35.87	+19 6.8	2.539	3.410	9.0	20.9
12 17	2 32.19	- 6 59.3	2.006	2.696	17.4	19.5	12 17	2 31.80	+18 28.1	2.640	3.418	11.5	21.1
318350	2004 <i>TL</i> ₃₀₉		11 8.7 53°03'	1°9'/10.1	17		217352	2004 <i>RK</i> ₂₅₆		11 8.7 83°12'	0°9'/9.4	18	
10 8	3 19.00	+24 9.1	1.968	2.815	12.9	20.7	10 8	3 20.19	+21 15.1	2.120	2.968	12.1	21.0
10 18	3 13.40	+23 51.9	1.907	2.825	9.6	20.5	10 18	3 14.03	+20 55.6	2.066	2.988	8.7	20.8
10 28	3 5.92	+23 21.8	1.869	2.835	5.8	20.3	10 28	3 6.18	+20 26.3	2.037	3.007	5.0	20.7
11 7	2 57.43	+22 40.7	1.858	2.845	2.3	20.1	11 7	2 57.47	+19 49.5	2.037	3.026	1.3	20.4
11 17	2 48.91	+21 52.1	1.876	2.855	3.5	20.2	11 17	2 48.83	+19 8.6	2.066	3.045	3.1	20.6
11 27	2 41.41	+21 1.4	1.923	2.865	7.1	20.4	11 27	2 41.17	+18 28.1	2.125	3.064	6.8	20.9
12 7	2 35.71	+20 14.2	1.995	2.876	10.6	20.7	12 7	2 35.22	+17 52.6	2.210	3.083	10.0	21.1
12 17	2 32.30	+19 35.0	2.092	2.887	13.6	20.9	12 17	2 31.40	+17 25.4	2.319	3.101	12.8	21.3
214776	2006 <i>UD</i> ₇₅		11 8.7 122°94'	1°9'/9.9	18		222170	2000 <i>AC</i> ₁₇₇		11 8.7 295°55'	2°9'/11.2	18	
10 8	3 22.77	+22 27.0	1.991	2.835	12.9	20.6	10 8	3 18.06	+28 36.8	2.137	2.966	12.7	19.9
10 18	3 16.15	+22 38.5	1.923	2.841	9.5	20.4	10 18	3 12.88	+28 3.0	2.041	2.946	9.8	19.6
10 28	3 7.50	+22 39.5	1.880	2.846	5.8	20.2	10 28	3 5.76	+27 11.5	1.969	2.926	6.4	19.4
11 7	2 57.67	+22 30.5	1.865	2.851	2.3	20.0	11 7	2 57.45	+26 3.6	1.925	2.906	3.4	19.2
11 17	2 47.72	+22 13.4	1.878	2.857	3.6	20.1	11 17	2 48.91	+24 42.8	1.909	2.885	3.8	19.2
11 27	2 38.76	+21 52.2	1.921	2.862	7.3	20.3	11 27	2 41.20	+23 15.4	1.923	2.865	7.1	19.3
12 7	2 31.67	+21 31.6	1.991	2.866	10.8	20.6	12 7	2 35.18	+21 48.9	1.964	2.845	10.7	19.5
12 17	2 27.01	+21 15.7	2.083	2.871	13.8	20.8	12 17	2 31.43	+20 30.0	2.029	2.825	13.9	19.7
225457	2000 <i>EG</i> ₂₇		11 8.7 343°91'	3°2'/10.6	17		172251	2002 <i>RR</i> ₂₃₇		11 8.7 112°07'	0°5'/8		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
194789	2001 YU ₈₉	11	8.7 355°41	1°6/ 7.9 18			234739	2002 LO ₅₄	11	8.7 157°96	1°1/ 7.9 18		
10 8	3 19.32	+14 28.5	1.196	2.085	16.6	19.8	10 8	3 22.24	+14 31.8	2.059	2.918	12.0	21.1
10 18	3 14.56	+14 11.6	1.137	2.081	11.9	19.5	10 18	3 15.61	+14 12.7	1.994	2.923	8.5	20.9
10 28	3 6.96	+13 48.0	1.099	2.077	6.6	19.2	10 28	3 7.16	+13 48.9	1.954	2.928	4.7	20.7
11 7	2 57.65	+13 21.7	1.085	2.075	1.7	18.9	11 7	2 57.69	+13 23.0	1.943	2.933	1.2	20.5
11 17	2 48.12	+12 58.2	1.095	2.073	5.5	19.1	11 17	2 48.15	+12 58.3	1.962	2.937	3.9	20.7
11 27	2 39.96	+12 43.5	1.130	2.073	10.9	19.4	11 27	2 39.55	+12 38.7	2.010	2.941	7.7	20.9
12 7	2 34.40	+12 42.0	1.187	2.074	15.7	19.7	12 7	2 32.67	+12 27.4	2.085	2.944	11.2	21.1
12 17	2 32.10	+12 55.8	1.263	2.076	19.7	20.0	12 17	2 28.03	+12 26.2	2.182	2.947	14.0	21.3
79367	1997 EJ ₁₃	11	8.7 249°79	0°2/ 8.6 18			266859	2009 UJ ₁₀₉	11	8.7 138°61	0°5/ 9.1 18		
10 8	3 22.69	+18 26.1	1.666	2.528	14.1	21.2	10 8	3 18.48	+19 44.3	2.408	3.258	10.8	21.0
10 18	3 16.52	+17 56.0	1.584	2.514	10.3	21.0	10 18	3 12.79	+19 30.4	2.338	3.261	7.8	20.8
10 28	3 7.91	+17 14.9	1.526	2.500	5.7	20.7	10 28	3 5.56	+19 8.8	2.293	3.264	4.4	20.6
11 7	2 57.79	+16 25.7	1.495	2.486	0.8	20.3	11 7	2 57.45	+18 41.2	2.277	3.267	0.9	20.3
11 17	2 47.36	+15 33.3	1.493	2.471	4.3	20.5	11 17	2 49.26	+18 10.4	2.292	3.270	2.9	20.5
11 27	2 37.94	+14 44.1	1.518	2.456	9.1	20.8	11 27	2 41.84	+17 40.0	2.335	3.273	6.3	20.7
12 7	2 30.63	+14 4.3	1.569	2.440	13.5	21.0	12 7	2 35.86	+17 13.7	2.406	3.276	9.4	20.9
12 17	2 26.11	+13 38.3	1.640	2.425	17.1	21.2	12 17	2 31.78	+16 54.4	2.501	3.279	12.1	21.1
151696	2003 AX ₆₅	11	8.7 291°84	4°7/11.0 18			159542	2001 QN ₂₉₄	11	8.7 139°91	1°3/ 9.5 17		
10 8	3 24.93	+27 26.9	1.518	2.360	16.3	19.8	10 8	3 27.39	+22 22.6	1.641	2.488	15.1	20.9
10 18	3 18.53	+28 0.5	1.444	2.354	12.6	19.5	10 18	3 19.61	+21 54.6	1.583	2.503	11.0	20.7
10 28	3 9.20	+28 17.3	1.390	2.347	8.5	19.3	10 28	3 9.45	+21 12.2	1.548	2.517	6.4	20.4
11 7	2 58.00	+28 14.9	1.362	2.340	5.1	19.0	11 7	2 58.02	+20 18.1	1.541	2.530	1.8	20.2
11 17	2 46.38	+27 54.3	1.361	2.334	5.6	19.1	11 17	2 46.67	+19 17.3	1.563	2.542	3.9	20.4
11 27	2 35.98	+27 20.6	1.386	2.327	9.4	19.3	11 27	2 36.73	+18 17.1	1.614	2.553	8.5	20.7
12 7	2 28.14	+26 41.8	1.435	2.321	13.6	19.5	12 7	2 29.16	+17 24.3	1.691	2.564	12.6	20.9
12 17	2 23.61	+26 5.6	1.506	2.315	17.2	19.7	12 17	2 24.49	+16 43.8	1.790	2.573	16.0	21.2
379594	2011 CS ₁₅	11	8.7 274°80	3°0/10.2 18			117487	2005 CM ₁₃	11	8.7 320°41	1°3/ 9.7 18		
10 8	3 24.39	+24 20.4	1.545	2.395	15.7	21.8	10 8	3 17.79	+24 4.1	1.467	2.331	15.6	18.9
10 18	3 18.16	+24 31.8	1.458	2.377	11.9	21.5	10 18	3 13.25	+23 9.4	1.387	2.316	11.6	18.6
10 28	3 9.04	+24 28.2	1.393	2.358	7.5	21.2	10 28	3 6.19	+21 54.2	1.330	2.301	6.9	18.3
11 7	2 57.99	+24 8.8	1.354	2.339	3.4	20.9	11 7	2 57.57	+20 22.1	1.298	2.287	2.0	18.0
11 17	2 46.38	+23 35.7	1.341	2.319	4.7	21.0	11 17	2 48.69	+18 40.5	1.293	2.274	4.2	18.1
11 27	2 35.83	+22 54.6	1.356	2.300	9.4	21.2	11 27	2 40.96	+16 59.6	1.315	2.261	9.3	18.4
12 7	2 27.67	+22 13.1	1.396	2.280	14.0	21.4	12 7	2 35.50	+15 29.5	1.362	2.249	14.1	18.6
12 17	2 22.75	+21 38.3	1.456	2.260	18.0	21.6	12 17	2 32.96	+14 17.5	1.429	2.237	18.1	18.9
404734	2014 JE ₂₃	11	8.7 261°91	4°5/ 6.3 18			477270	2009 SF ₁₀₇	11	8.7 349°21	0°9/ 8.2 18		
10 8	3 22.73	+ 4 51.6	1.865	2.731	12.7	20.5	10 8	3 17.46	+18 12.8	1.149	2.039	17.1	20.4
10 18	3 16.21	+ 4 33.1	1.791	2.720	9.4	20.3	10 18	3 13.33	+17 20.6	1.088	2.032	12.3	20.1
10 28	3 7.61	+ 4 18.3	1.742	2.709	6.1	20.0	10 28	3 6.33	+16 13.5	1.048	2.026	6.8	19.7
11 7	2 57.75	+ 4 11.4	1.721	2.698	4.5	19.9	11 7	2 57.59	+14 57.6	1.031	2.021	1.2	19.4
11 17	2 47.66	+ 4 15.8	1.728	2.686	6.5	20.0	11 17	2 48.65	+13 41.7	1.039	2.018	5.5	19.7
11 27	2 38.47	+ 4 33.9	1.763	2.675	10.0	20.2	11 27	2 41.13	+12 35.8	1.070	2.015	11.2	20.0
12 7	2 31.09	+ 5 6.5	1.823	2.663	13.4	20.4	12 7	2 36.24	+11 47.8	1.124	2.013	16.2	20.2
12 17	2 26.13	+ 5 52.9	1.905	2.651	16.4	20.6	12 17	2 34.63	+11 21.6	1.196	2.013	20.4	20.5
220989	2005 NF ₃₄	11	8.7 178°67	3°0/10.6 18			189146	2002 GQ ₆₈	11	8.7 175°37	4°7/ 4.5 18		
10 8	3 24.87	+26 16.3	1.807	2.643	14.4	21.5	10 8	3 17.43	+ 1 19.5	2.631	3.490	9.7	20.6
10 18	3 17.90	+26 10.8	1.735	2.644	10.9	21.3	10 18	3 11.85	+ 0 30.1	2.572	3.492	7.3	20.5
10 28	3 8.58	+25 49.4	1.685	2.646	6.9	21.1	10 28	3 4.97	- 0 14.7	2.540	3.494	5.3	20.4
11 7	2 57.90	+25 12.4	1.663	2.646	3.4	20.8	11 7	2 57.38	- 0 51.0	2.536	3.495	4.8	20.3
11 17	2 47.06	+24 23.0	1.670	2.646	4.2	20.9	11 17	2 49.77	- 1 15.5	2.561	3.495	6.2	20.4
11 27	2 37.38	+23 27.1	1.705	2.646	8.0	21.1	11 27	2 42.81	- 1 25.6	2.615	3.496	8.4	20.6
12 7	2 29.87	+22 32.1	1.766	2.644	11.8	21.4	12 7	2 37.09	- 1 20.8	2.694	3.496	10.7	20.7
12 17	2 25.12	+21 44.3	1.850	2.643	15.2	21.6	12 17	2 33.00	- 1 1.5	2.795	3.495	12.7	20.9
485979	2012 JZ ₂₆	11	8.7 202°34	7°9/30.9 18			81031	2000 EG ₄₈	11	8.7 102°10	0°6/ 9.1 18		
10 8	3 17.54	-16 1.1	3.180	3.984	9.6	22.0	10 8	3 21.80	+19 47.6	2.027	2.879	12.4	19.7
10 18	3 11.76	-16 56.5	3.131	3.979	8.5	22.0	10 18	3 15.28	+19 33.7	1.971	2.895	9.0	19.5
10 28	3 4.86	-17 38.8	3.107	3.973	8.0	21.9	10 28	3 9.96	+19 10.9	1.939	2.910	5.1	19.3
11 7	2 57.34	-18 4.0	3.109	3.967	8.1	21.9	11 7	2 57.68	+18 41.3	1.936	2.926	1.1	19.0
11 17	2 49.78	-18 9.7	3.138	3.960	8.9	22.0	11 17	2 48.43	+18 8.1	1.962	2.941	3.3	19.2
11 27	2 42.80	-17 55.0	3.190	3.953	10.1	22.1	11 27	2 40.20	+17 35.8	2.017	2.956	7.1	19.5
12 7	2 36.90	-17 21.0	3.265	3.945	11.4	22.2	12 7	2 33.76	+17 8.6	2.099	2.970	10.6	19.7
12 17	2 32.45	-16 30.0	3.359	3.937	12.6	22.3	12 17	2 29.59	+16 49.8	2.205	2.985	13.4	20.0
447612	2006 UH ₁₄₀	11	8.7 305°37	2°8/10.2 17			458554	2011 EM ₃₃	11	8.7 302°63	20°2/20.8 17		
10 8	3 21.51	+23 50.0	1.782	2.631	14.0	21.7	10 8	3 18.21	-16 10.6	0.963	1.833	21.3	20.6
10 18	3 15.75	+24 9.5	1.695	2.613	10.6	21.4	10 18	3 14.22	-20 19.3	0.934	1.819	20.2	20.5
10 28	3 7.57	+24 17.1	1.630	2.594	6.7	21.1	10 28	3 6.96	-23 54.7	0.924	1.804	20.5	20.4
11 7	2 57.78	+24 12.2	1.592	2.576	3.1	20.9	11 7	2 57.72	-26 34.6	0.932	1.790	22.1	20.5
11 17	2 47.54	+23 56.0	1.581	2.559	4.2	20.9	11 17	2 48.21	-28 5.8	0.957	1.776	24.5	20.6
11 27	2 38.18	+23 32.7	1.598	2.541	8.3	21.1	11 27	2 40.27	-28 26.5	0.994	1.763	27.0	20.7
12 7	2 30.82	+23 8.0	1.641	2.524	12.3	21.3	12 7	2 35.26	-27 44.6	1.042	1.750	29.4	20.9
12 17	2 26.22	+22 47.3	1.705	2.507	15.9	21.5	12 17	2 33.87	-26 12.1	1.096	1.738	31.4	21.0
402209	2004 XL ₄₂	11	8.7 10°13	1°0/ 8.3 16			429458	2010 VR ₂₁₅	11	8.7 74°69	3°6/10.9 16		
10 8	3 16.77												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
88727	2001 SX ₃₂		11 8.7 339°94	1.4°/ 7.8 18			64815	2001 XS ₂₂₉		11 8.7 358°20	0.7°/ 9.2 18		
10 8	3 17.93	+15 12.4	1.607	2.484	13.8	18.7	10 8	3 19.52	+19 51.0	1.796	2.657	13.3	20.2
10 18	3 13.04	+14 37.5	1.538	2.477	9.9	18.4	10 18	3 14.02	+19 37.5	1.727	2.656	9.7	19.9
10 28	3 5.95	+13 55.3	1.493	2.470	5.4	18.2	10 28	3 6.44	+19 14.1	1.682	2.655	5.5	19.7
11 7	2 57.56	+13 9.9	1.474	2.463	1.5	17.9	11 7	2 57.65	+18 42.7	1.665	2.655	1.2	19.4
11 17	2 48.97	+12 26.5	1.482	2.458	4.7	18.1	11 17	2 48.73	+18 7.1	1.675	2.654	3.6	19.6
11 27	2 41.42	+11 51.0	1.516	2.453	9.2	18.4	11 27	2 40.79	+17 32.3	1.713	2.655	7.9	19.8
12 7	2 35.85	+11 27.9	1.575	2.448	13.3	18.6	12 7	2 34.77	+17 3.3	1.777	2.655	11.8	20.1
12 17	2 32.86	+11 19.8	1.655	2.444	16.8	18.8	12 17	2 31.20	+16 43.9	1.862	2.656	15.0	20.3
326624	2002 RG ₂₀₄		11 8.7 61°66	0°6/ 8.4 13 C			84378	2002 TX ₁₃₇		11 8.7 43°95	5°8/ 11.7 18		
10 8	3 25.09	+17 58.2	1.217	2.093	17.3	20.9	10 8	3 24.98	+29 38.1	1.263	2.110	18.7	19.2
10 18	3 18.17	+17 18.7	1.184	2.121	12.3	20.7	10 18	3 18.72	+30 8.1	1.211	2.121	14.5	19.0
10 28	3 8.65	+16 28.3	1.173	2.149	6.7	20.5	10 28	3 9.31	+30 15.2	1.179	2.133	10.0	18.8
11 7	2 57.92	+15 32.4	1.187	2.178	1.0	20.2	11 7	2 58.09	+29 57.6	1.170	2.145	6.4	18.6
11 17	2 47.55	+14 38.0	1.227	2.206	4.9	20.6	11 17	2 46.79	+29 17.8	1.185	2.158	6.5	18.6
11 27	2 38.98	+13 52.7	1.294	2.234	10.0	21.0	11 27	2 37.22	+28 23.8	1.227	2.171	10.1	18.9
12 7	2 33.17	+13 21.6	1.383	2.263	14.4	21.3	12 7	2 30.64	+27 26.0	1.291	2.184	14.2	19.2
12 17	2 30.49	+13 7.2	1.493	2.291	17.9	21.6	12 17	2 27.66	+26 33.6	1.376	2.198	17.9	19.4
356812	2011 UE ₃₆₉		11 8.7 83°33	0°1/ 8.7 18			168090	2006 DO ₉₆		11 8.7 89°28	2°8/ 6.8 18		
10 8	3 20.21	+18 54.9	1.852	2.712	13.0	21.1	10 8	3 21.13	+11 56.2	1.758	2.629	13.1	20.9
10 18	3 14.31	+18 25.0	1.793	2.722	9.3	20.9	10 18	3 14.85	+10 55.4	1.714	2.649	9.3	20.7
10 28	3 6.49	+17 45.6	1.759	2.732	5.2	20.6	10 28	3 6.72	+9 51.3	1.694	2.669	5.3	20.5
11 7	2 57.62	+17 0.1	1.751	2.742	0.8	20.3	11 7	2 57.68	+8 49.6	1.703	2.688	2.8	20.4
11 17	2 48.76	+16 12.7	1.773	2.752	3.6	20.6	11 17	2 48.77	+7 56.0	1.740	2.707	5.4	20.6
11 27	2 40.95	+15 28.8	1.823	2.762	7.8	20.9	11 27	2 41.03	+7 15.4	1.805	2.726	9.1	20.9
12 7	2 35.01	+14 53.3	1.899	2.771	11.5	21.1	12 7	2 35.21	+6 50.8	1.895	2.745	12.5	21.1
12 17	2 31.43	+14 29.3	1.997	2.781	14.5	21.3	12 17	2 31.73	+6 42.9	2.006	2.763	15.3	21.4
381714	2009 QU ₈		11 8.7 18°98	12°7/ 15.0 18			102609	1999 VJ ₁₄		11 8.7 312°37	4°6/ 7.9 18		
10 8	3 24.20	+38 47.9	0.983	1.817	23.8	19.2	10 8	3 32.29	+3 42.3	1.251	2.121	17.4	17.5
10 18	3 19.33	+40 32.6	0.941	1.826	20.1	19.0	10 18	3 24.51	+4 31.5	1.163	2.093	13.1	17.2
10 28	3 10.13	+41 41.5	0.915	1.837	16.4	18.8	10 28	3 13.00	+5 35.3	1.096	2.066	8.2	16.8
11 7	2 58.21	+42 5.9	0.907	1.850	13.5	18.7	11 7	2 58.75	+6 56.2	1.055	2.039	4.7	16.6
11 17	2 46.00	+41 44.0	0.919	1.864	12.8	18.7	11 17	2 43.39	+8 33.7	1.042	2.012	7.5	16.6
11 27	2 36.09	+40 44.3	0.952	1.880	14.4	18.9	11 27	2 29.03	+10 25.0	1.056	1.986	13.0	16.9
12 7	2 30.24	+39 22.8	1.005	1.898	17.3	19.1	12 7	2 17.49	+12 26.0	1.094	1.961	18.3	17.1
12 17	2 29.10	+37 55.2	1.075	1.917	20.4	19.4	12 17	2 9.94	+14 33.1	1.152	1.937	22.9	17.3
458447	2011 BW ₃		11 8.7 3°69	4°7/ 5.4 18			74378	1998 XH ₁₁		11 8.7 316°45	4°5/ 6.7 18		
10 8	3 17.92	+3 44.1	2.093	2.963	11.4	21.2	10 8	3 22.43	+5 16.8	1.626	2.500	13.8	18.0
10 18	3 12.49	+3 3.3	2.034	2.963	8.4	21.0	10 18	3 16.29	+5 8.0	1.554	2.487	10.2	17.8
10 28	3 5.43	+2 26.3	2.000	2.963	5.8	20.8	10 28	3 7.81	+5 3.7	1.506	2.475	6.5	17.6
11 7	2 57.47	+1 57.6	1.993	2.963	4.8	20.8	11 7	2 57.89	+5 7.9	1.484	2.463	4.5	17.4
11 17	2 49.45	+1 41.2	2.014	2.963	6.5	20.9	11 17	2 47.68	+5 24.0	1.489	2.452	6.8	17.5
11 27	2 42.25	+1 39.7	2.063	2.964	9.4	21.1	11 27	2 38.45	+5 54.3	1.521	2.441	10.7	17.7
12 7	2 36.57	+1 53.9	2.137	2.964	12.2	21.2	12 7	2 31.26	+6 39.1	1.577	2.430	14.5	17.9
12 17	2 32.89	+2 23.2	2.232	2.965	14.7	21.4	12 17	2 26.76	+7 37.4	1.654	2.420	17.8	18.1
327065	2004 TA ₂₀₆		11 8.7 334°04	0°6/ 8.2 18			486013	2012 RZ ₁₆		11 8.7 7°46	2°9/ 7.0 18		
10 8	3 16.67	+17 52.6	1.933	2.799	12.3	20.4	10 8	3 17.74	+14 3.1	1.205	2.097	16.3	19.7
10 18	3 11.84	+17 5.2	1.860	2.792	8.8	20.2	10 18	3 13.29	+12 57.4	1.152	2.097	11.6	19.4
10 28	3 5.17	+16 8.4	1.811	2.787	4.8	19.9	10 28	3 6.21	+11 43.2	1.120	2.099	6.5	19.2
11 7	2 57.44	+15 6.1	1.791	2.781	0.8	19.6	11 7	2 57.64	+10 28.2	1.113	2.101	2.9	18.9
11 17	2 49.59	+14 3.4	1.799	2.776	3.8	19.8	11 17	2 49.00	+9 21.1	1.131	2.104	6.4	19.2
11 27	2 42.62	+13 6.2	1.835	2.771	7.9	20.1	11 27	2 41.75	+8 30.3	1.173	2.108	11.5	19.5
12 7	2 37.32	+12 19.6	1.897	2.767	11.6	20.3	12 7	2 36.97	+8 0.9	1.237	2.114	16.0	19.8
12 17	2 34.22	+11 46.9	1.981	2.763	14.7	20.5	12 17	2 35.22	+7 54.1	1.320	2.119	19.7	20.0
103459	2000 AB ₂₀₁		11 8.7 352°92	7°1/ 15.7 18			389481	2010 EA ₁₀₀		11 8.7 225°72	1°7/ 9.9 18		
10 8	3 22.58	+42 42.8	1.486	2.269	19.5	17.8	10 8	3 23.01	+22 43.7	2.095	2.936	12.5	22.1
10 18	3 16.77	+41 14.7	1.403	2.264	16.1	17.6	10 18	3 16.43	+22 41.3	2.010	2.926	9.3	21.9
10 28	3 8.05	+39 3.0	1.340	2.261	12.3	17.3	10 28	3 7.79	+22 27.8	1.950	2.916	5.6	21.6
11 7	2 57.85	+36 7.9	1.301	2.258	8.6	17.1	11 7	2 57.89	+22 4.0	1.919	2.906	2.1	21.4
11 17	2 47.86	+32 37.8	1.290	2.256	7.2	17.0	11 17	2 47.73	+21 32.1	1.916	2.895	3.5	21.5
11 27	2 39.67	+28 50.1	1.310	2.254	9.5	17.2	11 27	2 38.42	+20 56.5	1.943	2.883	7.3	21.7
12 7	2 34.34	+25 5.8	1.358	2.254	13.5	17.4	12 7	2 30.88	+20 22.5	1.998	2.871	10.9	21.9
12 17	2 32.28	+21 42.0	1.432	2.254	17.3	17.7	12 17	2 25.72	+19 54.5	2.075	2.858	14.1	22.1
157781	3077 T-2		11 8.7 333°83	6°4/ 3.6 18			499136	2009 QO ₃₃		11 8.7 68°81	19°9/ 26.0 17		
10 8	3 15.27	+3 33.2	1.736	2.617	12.7	19.0	10 8	3 22.21	-19 11.9	1.029	1.880	21.7	20.2
10 18	3 10.93	+1 59.3	1.673	2.606	9.6	18.8	10 18	3 16.59	-22 20.6	1.018	1.887	20.3	20.1
10 28	3 4.70	+0 27.6	1.635	2.596	7.0	18.7	10 28	3 8.00	-24 47.0	1.025	1.894	19.9	20.1
11 7	2 57.38	-0 53.7	1.624	2.587	6.5	18.6	11 7	2 57.89	-26 16.5	1.049	1.901	20.7	20.2
11 17	2 49.92	-1 57.3	1.639	2.578	8.7	18.7	11 17	2 48.00	-26 43.2	1.090	1.908	22.2	20.4
11 27	2 43.35	-2 37.8	1.680	2.569	11.8	18.9	11 27	2 39.95	-26 10.3	1.145	1.915	24.0	20.5
12 7	2 38.50	-2 53.3	1.743	2.562	14.9	19.1	12 7	2 34.82	-24 47.7	1.213	1.923	25.9	20.7
12 17	2 35.88	-2 44.8	1.825	2.554	17.6	19.3	12 17	2 33.07	-22 47.4	1.291	1.930	27.4	20.9
76110	2000 DD ₁₀₆		11 8.7 102°84	6°4/ 4.3 18			373	Melusia		11 8.7 45°53	5°9/ 12.5 18		
10 8	3 19.79	+0 12.0	1.914	2.781	12.4	19.0							

EPHEMERIDES

11 8.7

11 8.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
396895	2004 <i>XJ</i> ₃₃		11 8.7 310°61	6°0/ 6.2 18			132843	2002 <i>RG</i> ₃₇		11 8.7 81°01	7°3/ 2.5 18		
10 8	3 24.25	+ 1 43.8	1.589	2.458	14.3	20.5	10 8	3 16.79	- 5 29.8	2.301	3.155	11.0	19.7
10 18	3 17.54	+ 1 30.8	1.524	2.452	10.8	20.2	10 18	3 11.52	- 6 38.0	2.259	3.163	9.0	19.6
10 28	3 8.48	+ 1 26.1	1.483	2.445	7.5	20.0	10 28	3 4.86	- 7 35.8	2.242	3.171	7.5	19.5
11 7	2 58.00	+ 1 34.3	1.468	2.439	6.0	19.9	11 7	2 57.46	- 8 17.8	2.252	3.179	7.5	19.5
11 17	2 47.32	+ 1 58.8	1.480	2.433	8.0	20.0	11 17	2 50.09	- 8 40.3	2.289	3.188	8.7	19.6
11 27	2 37.75	+ 2 41.0	1.519	2.427	11.5	20.2	11 27	2 43.50	- 8 41.6	2.351	3.196	10.7	19.8
12 7	2 30.31	+ 3 39.9	1.581	2.422	15.1	20.5	12 7	2 38.30	- 8 22.3	2.436	3.204	12.7	19.9
12 17	2 25.63	+ 4 53.1	1.664	2.416	18.2	20.7	12 17	2 34.89	- 7 44.7	2.541	3.212	14.5	20.1
46822	1998 <i>MQ</i> ₃₂		11 8.7 53°35	6°4/13.6 18			49374	1998 <i>WD</i> ₃₆		11 8.7 122°04	0°4/ 8.5 18		
10 8	3 23.24	+35 36.7	1.523	2.337	17.7	17.8	10 8	3 21.46	+16 41.9	1.865	2.727	12.9	19.6
10 18	3 16.99	+35 27.4	1.472	2.357	14.1	17.6	10 18	3 15.30	+16 27.4	1.800	2.730	9.2	19.4
10 28	3 8.13	+34 51.0	1.441	2.377	10.3	17.4	10 28	3 7.13	+16 6.1	1.759	2.734	5.1	19.1
11 7	2 57.93	+33 47.5	1.435	2.398	7.2	17.3	11 7	2 57.83	+15 40.3	1.746	2.737	0.8	18.8
11 17	2 47.90	+32 21.6	1.454	2.419	6.6	17.3	11 17	2 48.43	+15 13.7	1.762	2.740	3.8	19.1
11 27	2 39.50	+30 42.6	1.501	2.440	9.0	17.5	11 27	2 40.03	+14 50.4	1.806	2.743	8.0	19.3
12 7	2 33.72	+29 1.7	1.572	2.462	12.4	17.8	12 7	2 33.49	+14 34.5	1.876	2.746	11.7	19.6
12 17	2 31.03	+27 28.6	1.667	2.484	15.5	18.0	12 17	2 29.36	+14 28.6	1.969	2.749	14.8	19.8
288305	2004 <i>BE</i> ₂₃		11 8.7 283°79	8°3/ 3.1 18			148944	2001 <i>XW</i> ₁₄₁		11 8.8 319°05	1°3/ 7.9 18		
10 8	3 19.39	- 4 14.5	1.822	2.685	13.1	20.4	10 8	3 19.42	+14 26.9	1.905	2.773	12.4	20.1
10 18	3 13.78	- 5 22.6	1.766	2.679	10.5	20.2	10 18	3 13.84	+14 2.8	1.836	2.770	8.9	19.8
10 28	3 6.26	- 6 19.9	1.734	2.673	8.7	20.1	10 28	3 6.33	+13 33.4	1.791	2.767	4.9	19.6
11 7	2 57.67	- 6 59.3	1.728	2.667	8.5	20.1	11 7	2 57.72	+13 2.1	1.774	2.764	1.4	19.3
11 17	2 48.97	- 7 15.9	1.747	2.661	10.1	20.2	11 17	2 48.96	+12 32.6	1.785	2.761	4.2	19.5
11 27	2 41.22	- 7 7.0	1.792	2.655	12.6	20.3	11 27	2 41.10	+12 9.3	1.825	2.758	8.2	19.8
12 7	2 35.23	- 6 33.6	1.859	2.649	15.2	20.5	12 7	2 34.99	+11 55.6	1.890	2.756	11.8	20.0
12 17	2 31.52	- 5 38.8	1.944	2.643	17.6	20.7	12 17	2 31.17	+11 53.7	1.977	2.753	14.9	20.2
408451	2013 <i>HT</i> ₂₆		11 8.7 184°46	4°7/ 5.4 18			373025	2011 <i>DG</i> ₄₁		11 8.8 38°43	2°7/10.8 17		
10 8	3 19.11	+ 3 2.0	2.239	3.103	10.9	20.6	10 8	3 19.52	+26 7.2	2.361	3.192	11.6	21.5
10 18	3 13.27	+ 2 26.5	2.178	3.103	8.1	20.4	10 18	3 13.73	+26 14.8	2.286	3.193	8.8	21.3
10 28	3 5.87	+ 1 55.2	2.142	3.103	5.6	20.3	10 28	3 6.22	+26 10.7	2.237	3.194	5.7	21.1
11 7	2 57.60	+ 1 32.3	2.135	3.103	4.7	20.2	11 7	2 57.70	+25 55.4	2.214	3.195	3.0	21.0
11 17	2 49.27	+ 1 21.0	2.156	3.103	6.3	20.3	11 17	2 49.04	+25 30.4	2.221	3.196	3.5	21.0
11 27	2 41.71	+ 1 23.9	2.205	3.102	9.0	20.5	11 27	2 41.17	+24 59.3	2.257	3.197	6.4	21.2
12 7	2 35.63	+ 1 41.6	2.280	3.101	11.7	20.7	12 7	2 34.85	+24 26.8	2.321	3.199	9.4	21.4
12 17	2 31.46	+ 2 13.3	2.376	3.101	14.1	20.8	12 17	2 30.61	+23 57.2	2.409	3.200	12.1	21.6
291532	2006 <i>EA</i> ₂₂		11 8.7 140°31	2°7/ 7.2 17			260191	2004 <i>RP</i> ₁₅₄		11 8.8 21°77	3°4/ 5.9 18		
10 8	3 25.22	+12 33.2	1.578	2.446	14.5	21.7	10 8	3 16.58	+10 48.6	1.910	2.785	12.0	20.1
10 18	3 18.07	+11 43.6	1.524	2.458	10.3	21.5	10 18	3 11.68	+ 9 30.4	1.851	2.788	8.6	19.9
10 28	3 8.64	+10 49.2	1.494	2.469	5.8	21.3	10 28	3 5.07	+ 8 8.7	1.817	2.790	5.1	19.7
11 7	2 58.02	+ 9 55.5	1.492	2.479	2.7	21.1	11 7	2 57.52	+ 6 49.8	1.811	2.793	3.4	19.6
11 17	2 47.43	+ 9 8.4	1.518	2.488	5.6	21.3	11 17	2 49.94	+ 5 39.8	1.834	2.796	5.8	19.7
11 27	2 38.16	+ 8 33.4	1.572	2.497	9.9	21.6	11 27	2 43.27	+ 4 44.5	1.885	2.800	9.2	19.9
12 7	2 31.14	+ 8 14.2	1.650	2.505	13.8	21.9	12 7	2 38.24	+ 4 7.2	1.960	2.803	12.5	20.1
12 17	2 26.88	+ 8 11.9	1.749	2.512	17.0	22.1	12 17	2 35.31	+ 3 48.9	2.056	2.807	15.2	20.3
279000	2008 <i>UF</i> ₂₄₁		11 8.7 74°31	3°1/10.7 18			358670	2007 <i>XJ</i> ₂₁		11 8.8 335°44	0°9/ 9.2 17		
10 8	3 24.99	+26 7.6	1.582	2.425	15.7	20.1	10 8	3 17.78	+19 51.6	1.329	2.207	16.0	20.3
10 18	3 17.97	+26 3.0	1.535	2.449	11.7	19.9	10 18	3 13.55	+19 43.4	1.253	2.190	11.7	20.0
10 28	3 8.58	+25 41.4	1.511	2.473	7.4	19.7	10 28	3 6.57	+19 22.6	1.198	2.173	6.8	19.7
11 7	2 58.00	+25 4.1	1.513	2.497	3.6	19.5	11 7	2 57.79	+18 51.0	1.167	2.157	1.5	19.3
11 17	2 47.58	+24 15.1	1.543	2.521	4.3	19.6	11 17	2 48.58	+18 13.1	1.162	2.142	4.5	19.5
11 27	2 38.63	+23 21.4	1.601	2.544	8.2	19.9	11 27	2 40.49	+17 35.7	1.181	2.129	9.9	19.7
12 7	2 32.10	+22 30.3	1.684	2.568	12.0	20.2	12 7	2 34.80	+17 5.7	1.224	2.117	14.8	20.0
12 17	2 28.44	+21 47.7	1.790	2.591	15.3	20.5	12 17	2 32.28	+16 48.3	1.285	2.106	19.0	20.2
430334	2013 <i>YX</i> ₄₁		11 8.7 59°50	1°1/ 8.2 18			409107	2003 <i>ST</i> ₄₃₂		11 8.8 28°37	4°5/11.9 17		
10 8	3 24.61	+14 53.9	1.314	2.190	16.3	20.4	10 8	3 20.45	+30 28.1	2.008	2.829	13.7	21.0
10 18	3 18.00	+14 45.8	1.266	2.204	11.6	20.1	10 18	3 14.69	+30 44.9	1.940	2.835	10.7	20.8
10 28	3 8.74	+14 31.4	1.241	2.217	6.4	19.9	10 28	3 6.85	+30 45.2	1.895	2.840	7.5	20.6
11 7	2 58.04	+14 13.8	1.240	2.231	1.3	19.6	11 7	2 57.80	+30 28.4	1.876	2.846	5.0	20.5
11 17	2 47.38	+13 57.4	1.267	2.244	5.0	19.9	11 17	2 48.62	+29 56.2	1.884	2.853	4.9	20.5
11 27	2 38.25	+13 47.2	1.319	2.258	10.0	20.2	11 27	2 40.45	+29 13.2	1.921	2.859	7.5	20.6
12 7	2 31.71	+13 47.0	1.395	2.273	14.4	20.5	12 7	2 34.19	+28 25.7	1.984	2.866	10.6	20.8
12 17	2 28.29	+13 59.0	1.491	2.287	18.0	20.8	12 17	2 30.40	+27 39.9	2.070	2.873	13.4	21.0
453698	2010 <i>WP</i> ₅₂		11 8.7 133°90	1°4/ 7.8 18			72341	2001 <i>BJ</i> ₆₅		11 8.8 329°50	7°3/ 3.7 18		
10 8	3 20.57	+12 47.0	2.214	3.074	11.2	21.1	10 8	3 16.08	+ 4 33.0	1.339	2.231	15.0	18.5
10 18	3 14.38	+12 39.3	2.147	3.078	8.0	20.9	10 18	3 12.04	+ 2 49.4	1.275	2.215	11.3	18.3
10 28	3 6.52	+12 29.0	2.107	3.081	4.4	20.7	10 28	3 5.57	+ 1 6.2	1.235	2.200	8.1	18.0
11 7	2 57.71	+12 18.4	2.095	3.084	1.4	20.4	11 7	2 57.63	- 0 25.8	1.219	2.186	7.5	18.0
11 17	2 48.82	+12 9.9	2.113	3.087	3.8	20.6	11 17	2 49.44	- 1 36.5	1.228	2.173	10.2	18.1
11 27	2 40.73	+12 6.3	2.161	3.090	7.3	20.9	11 27	2 42.35	- 2 18.5	1.260	2.160	14.0	18.3
12 7	2 34.21	+12 10.1	2.235	3.093	10.5	21.1	12 7	2 37.42	- 2 29.3	1.312	2.149	17.8	18.5
12 17	2 29.72	+12 22.5	2.332	3.096	13.3	21.3	12 17	2 35.29	- 2 10.8	1.382	2.138	21.1	18.7
494643	2017 <i>DU</i> ₇₀		11 8.7 293°13	4°2/11.7 17			390577	2001 <i>OU</i> ₈₂	</				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
327609	2006 <i>EN</i> ₄₇	11	8.8 335°87	5°0/ 4.9	18		164248	2004 <i>TS</i> ₁₃₃	11	8.8 67°40	2°7/ 7.4	18	
10 8	3 16.82	+ 3 59.4	2.081	2.952	11.3	21.0	10 8	3 25.54	+14 15.9	1.124	2.008	17.8	19.6
10 18	3 11.78	+ 3 1.0	2.020	2.950	8.4	20.9	10 18	3 18.63	+13 13.2	1.093	2.034	12.6	19.4
10 28	3 5.11	+ 2 5.6	1.984	2.947	5.8	20.7	10 28	3 9.02	+12 3.9	1.083	2.061	6.9	19.2
11 7	2 57.55	+ 1 18.5	1.976	2.945	5.0	20.6	11 7	2 58.15	+10 55.6	1.098	2.087	2.7	19.0
11 17	2 49.91	+ 0 44.3	1.997	2.942	6.8	20.8	11 17	2 47.65	+ 9 56.8	1.139	2.113	6.3	19.3
11 27	2 43.06	+ 0 26.6	2.044	2.940	9.6	20.9	11 27	2 39.06	+ 9 14.6	1.205	2.139	11.4	19.7
12 7	2 37.71	+ 0 26.6	2.115	2.938	12.5	21.1	12 7	2 33.31	+ 8 52.7	1.293	2.165	15.8	20.0
12 17	2 34.33	+ 0 43.9	2.207	2.936	14.9	21.3	12 17	2 30.80	+ 8 51.5	1.400	2.190	19.3	20.3
122139	2000 <i>JF</i> ₃₉	11	8.8 108°84	0°4/ 9.0	18 R		306182	2011 <i>DF</i> ₁₉	11	8.8 189°94	2°1/10.1	18	
10 8	3 24.11	+19 44.1	1.725	2.580	14.0	20.2	10 8	3 23.42	+24 25.7	1.720	2.566	14.5	20.8
10 18	3 17.19	+19 21.3	1.671	2.597	10.1	20.0	10 18	3 16.99	+24 5.1	1.647	2.565	10.8	20.6
10 28	3 8.16	+18 48.1	1.641	2.613	5.7	19.8	10 28	3 8.22	+23 28.9	1.598	2.564	6.6	20.4
11 7	2 58.01	+18 7.0	1.639	2.629	1.1	19.5	11 7	2 58.07	+22 38.7	1.576	2.563	2.6	20.1
11 17	2 47.92	+17 22.7	1.665	2.644	3.8	19.8	11 17	2 47.77	+21 38.5	1.582	2.561	3.9	20.2
11 27	2 39.07	+16 40.7	1.720	2.659	8.1	20.1	11 27	2 38.63	+20 35.4	1.617	2.559	8.2	20.5
12 7	2 32.35	+16 6.3	1.801	2.674	12.0	20.3	12 7	2 31.65	+19 36.6	1.677	2.557	12.3	20.7
12 17	2 28.25	+15 43.0	1.904	2.688	15.1	20.6	12 17	2 27.43	+18 48.0	1.760	2.554	15.7	20.9
60754	2000 <i>GH</i> ₁₀₁	11	8.8 159°50	4°3/11.4	18		332949	2011 <i>DP</i> ₄₂	11	8.8 310°72	6°4/ 3.4	18	
10 8	3 25.54	+28 41.1	1.733	2.562	15.2	19.4	10 8	3 16.48	- 2 15.3	2.292	3.153	10.8	20.2
10 18	3 18.61	+28 56.1	1.664	2.566	11.7	19.2	10 18	3 11.42	- 3 16.2	2.235	3.150	8.5	20.0
10 28	3 9.14	+28 53.5	1.616	2.569	7.9	19.0	10 28	3 4.89	- 4 9.6	2.203	3.146	6.8	19.9
11 7	2 58.18	+28 32.3	1.595	2.572	4.8	18.8	11 7	2 57.55	- 4 50.4	2.199	3.143	6.5	19.9
11 17	2 47.03	+27 54.6	1.602	2.574	5.1	18.8	11 17	2 50.15	- 5 14.3	2.221	3.140	8.0	20.0
11 27	2 37.10	+27 6.0	1.637	2.577	8.4	19.0	11 27	2 43.47	- 5 19.0	2.271	3.136	10.2	20.1
12 7	2 29.49	+26 14.2	1.697	2.579	12.1	19.2	12 7	2 38.15	- 5 4.4	2.344	3.133	12.5	20.3
12 17	2 24.82	+25 26.5	1.780	2.580	15.4	19.5	12 17	2 34.63	- 4 31.9	2.437	3.130	14.5	20.4
32553	2001 <i>QC</i> ₂₇	11	8.8 38°31	3°1/ 6.4	18		57782	2001 <i>VN</i> ₇₉	11	8.8 103°28	4°0/ 6.4	18	
10 8	3 17.02	+ 8 8.2	2.285	3.153	10.6	18.1	10 8	3 21.73	+ 8 39.9	1.580	2.456	14.0	18.8
10 18	3 11.78	+ 7 34.5	2.225	3.157	7.6	17.9	10 18	3 15.67	+ 7 52.9	1.524	2.460	10.1	18.6
10 28	3 5.07	+ 7 1.2	2.191	3.161	4.6	17.7	10 28	3 7.42	+ 7 5.5	1.492	2.464	6.1	18.4
11 7	2 57.55	+ 6 32.0	2.185	3.166	3.1	17.6	11 7	2 57.94	+ 6 23.3	1.486	2.468	4.0	18.3
11 17	2 49.98	+ 6 10.1	2.209	3.171	4.9	17.7	11 17	2 48.42	+ 5 51.8	1.508	2.472	6.5	18.5
11 27	2 43.17	+ 5 58.6	2.261	3.175	7.9	17.9	11 27	2 40.06	+ 5 35.5	1.556	2.475	10.5	18.7
12 7	2 37.76	+ 5 59.0	2.338	3.180	10.8	18.1	12 7	2 33.79	+ 5 36.5	1.628	2.479	14.2	18.9
12 17	2 34.18	+ 6 11.9	2.438	3.185	13.2	18.3	12 17	2 30.14	+ 5 54.9	1.720	2.483	17.3	19.2
56656	2000 <i>KW</i> ₅₂	11	8.8 261°82	1°7/ 7.7	18		510282	2011 <i>KJ</i> ₃₇	11	8.8 203°99	1°3/ 7.9	18	
10 8	3 21.19	+15 16.4	1.602	2.474	14.1	19.4	10 8	3 22.43	+14 53.0	1.901	2.763	12.7	22.4
10 18	3 15.47	+14 30.1	1.528	2.464	10.1	19.1	10 18	3 16.03	+14 20.5	1.829	2.759	9.1	22.1
10 28	3 7.41	+13 35.3	1.478	2.454	5.6	18.9	10 28	3 7.60	+13 41.7	1.781	2.755	5.0	21.9
11 7	2 57.92	+12 36.4	1.454	2.444	1.7	18.6	11 7	2 57.98	+13 0.0	1.761	2.751	1.4	21.6
11 17	2 48.20	+11 39.6	1.458	2.433	5.0	18.8	11 17	2 48.21	+12 19.9	1.771	2.745	4.3	21.8
11 27	2 39.53	+10 51.6	1.490	2.423	9.7	19.0	11 27	2 39.38	+11 46.2	1.809	2.740	8.4	22.1
12 7	2 32.95	+10 17.7	1.545	2.412	13.9	19.3	12 7	2 32.40	+11 23.0	1.873	2.733	12.2	22.3
12 17	2 29.09	+10 0.9	1.622	2.402	17.5	19.5	12 17	2 27.81	+11 12.7	1.959	2.727	15.3	22.5
107812	2001 <i>FR</i> ₅₉	11	8.8 20°67	6°8/11.7	18		68817	2002 <i>GV</i> ₇₀	11	8.8 11°65	6°1/ 4.5	18	
10 8	3 25.46	+29 46.3	1.317	2.160	18.3	17.6	10 8	3 15.83	+ 8 32.4	1.236	2.132	15.6	18.2
10 18	3 19.24	+30 59.0	1.261	2.167	14.4	17.4	10 18	3 11.80	+ 6 35.0	1.190	2.135	11.3	17.9
10 28	3 9.77	+31 51.7	1.227	2.175	10.4	17.2	10 28	3 5.37	+ 4 35.4	1.166	2.139	7.4	17.7
11 7	2 58.30	+32 20.0	1.215	2.184	7.3	17.1	11 7	2 57.64	+ 2 45.2	1.168	2.143	6.3	17.7
11 17	2 46.53	+32 23.2	1.228	2.194	7.4	17.1	11 17	2 49.91	+ 1 15.6	1.194	2.149	9.2	17.9
11 27	2 36.33	+32 6.0	1.267	2.205	10.5	17.3	11 27	2 43.49	+ 0 14.4	1.244	2.156	13.2	18.1
12 7	2 29.09	+31 37.6	1.328	2.217	14.2	17.6	12 7	2 39.35	- 0 15.6	1.315	2.164	17.1	18.4
12 17	2 25.53	+31 6.8	1.410	2.230	17.6	17.8	12 17	2 37.98	- 0 16.2	1.404	2.172	20.3	18.6
2856	Röser	11	8.8 187°86	2°5/10.4	18 R		127456	2002 <i>QV</i> ₂₆	11	8.8 119°27	0°1/ 8.8	18	
10 8	3 21.35	+24 34.2	2.218	3.054	12.1	16.0	10 8	3 18.49	+18 28.1	2.677	3.525	9.9	21.0
10 18	3 15.15	+24 49.5	2.143	3.054	9.1	15.8	10 18	3 12.67	+18 8.0	2.616	3.539	7.1	20.9
10 28	3 7.07	+24 54.0	2.093	3.054	5.7	15.6	10 28	3 5.52	+17 41.8	2.581	3.552	3.9	20.7
11 7	2 57.88	+24 47.6	2.070	3.053	2.8	15.4	11 7	2 57.65	+17 11.2	2.575	3.565	0.6	20.4
11 17	2 48.50	+24 31.9	2.077	3.053	3.6	15.5	11 17	2 49.79	+16 39.1	2.600	3.578	2.7	20.6
11 27	2 39.95	+24 10.2	2.113	3.053	6.8	15.7	11 27	2 42.65	+16 8.7	2.655	3.590	5.8	20.9
12 7	2 33.08	+23 47.0	2.176	3.053	10.0	15.9	12 7	2 36.81	+15 43.1	2.738	3.602	8.6	21.1
12 17	2 28.42	+23 26.7	2.263	3.053	12.8	16.1	12 17	2 32.69	+15 24.6	2.846	3.614	11.0	21.2
447659	2006 <i>WN</i> ₁₇	11	8.8 343°45	1°5/ 9.7	17		469820	2005 <i>SB</i> ₁₆₃	11	8.8 22°52	2°3/ 9.7	16	
10 8	3 20.31	+21 37.6	1.732	2.590	13.9	21.5	10 8	3 23.08	+21 10.0	1.156	2.033	18.0	20.9
10 18	3 14.76	+21 34.3	1.661	2.586	10.2	21.2	10 18	3 17.44	+21 32.9	1.105	2.039	13.3	20.6
10 28	3 6.99	+21 19.4	1.613	2.583	6.1	21.0	10 28	3 8.71	+21 42.2	1.075	2.047	7.9	20.4
11 7	2 57.87	+20 54.4	1.592	2.580	2.0	20.7	11 7	2 58.17	+21 38.0	1.068	2.056	2.8	20.1
11 17	2 48.56	+20 22.2	1.598	2.578	3.7	20.8	11 17	2 47.50	+21 23.3	1.085	2.066	4.9	20.3
11 27	2 40.27	+19 48.0	1.632	2.576	8.1	21.1	11 27	2 38.47	+21 4.3	1.128	2.076	10.1	20.6
12 7	2 33.98	+19 17.5	1.691	2.574	12.0	21.3	12 7	2 32.34	+20 48.1	1.192	2.088	14.9	20.9
12 17	2 30.31	+18 55.1	1.773	2.572	15.4	21.5	12 17	2 29.74	+20 40.1	1.276	2.100	18.9	21.2
398710	2012 <i>XA</i> ₅₇	11	8.8 294°09	0°8/ 8.3	18		243447	2009 <i>GE</i>	11	8.8 179°93	0		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
438357	2006 <i>SH</i> ₂₁₂	11 8.8	62°22	1.7/ 7.4	17		342812	2008 <i>XR</i> ₄	11 8.8	290°05	0°3/ 8.7	18	
10 8	3 21.96	+17 30.0	1.654	2.519	14.1	20.5	10 8	3 22.85	+16 28.7	1.661	2.527	14.0	20.4
10 18	3 15.38	+15 48.6	1.622	2.555	9.8	20.3	10 18	3 16.85	+16 28.9	1.576	2.507	10.2	20.1
10 28	3 7.00	+13 58.9	1.615	2.590	5.3	20.1	10 28	3 8.34	+16 22.4	1.513	2.488	5.7	19.8
11 7	2 57.87	+12 8.5	1.636	2.625	1.7	20.0	11 7	2 58.19	+16 10.7	1.477	2.468	0.9	19.5
11 17	2 49.10	+10 26.0	1.688	2.660	4.8	20.3	11 17	2 47.57	+15 56.9	1.470	2.448	4.2	19.7
11 27	2 41.69	+8 58.8	1.768	2.695	8.9	20.6	11 27	2 37.84	+15 45.1	1.489	2.429	9.1	19.9
12 7	2 36.35	+7 51.6	1.873	2.729	12.4	20.9	12 7	2 30.18	+15 39.8	1.534	2.409	13.5	20.1
12 17	2 33.39	+7 5.9	2.001	2.763	15.2	21.2	12 17	2 25.34	+15 44.4	1.600	2.390	17.3	20.3
113471	2002 <i>SY</i> ₅₅	11 8.8	28°88	1°8/ 7.8	18		307921	2004 <i>ET</i> ₂₅	11 8.8	238°41	0°8/ 9.4	18	
10 8	3 21.68	+12 44.9	1.695	2.566	13.5	19.8	10 8	3 20.15	+21 14.9	2.062	2.913	12.3	21.1
10 18	3 15.62	+12 33.6	1.633	2.568	9.7	19.5	10 18	3 14.39	+20 49.3	1.983	2.905	9.0	20.9
10 28	3 7.42	+12 18.9	1.596	2.571	5.4	19.3	10 28	3 6.71	+20 12.6	1.928	2.898	5.2	20.7
11 7	2 57.99	+12 4.1	1.585	2.574	1.8	19.1	11 7	2 57.91	+19 27.1	1.901	2.890	1.3	20.4
11 17	2 48.45	+11 52.5	1.602	2.577	4.7	19.3	11 17	2 48.94	+18 36.5	1.903	2.882	3.3	20.5
11 27	2 39.98	+11 47.9	1.647	2.580	8.9	19.5	11 27	2 40.82	+17 45.8	1.934	2.874	7.3	20.8
12 7	2 33.49	+11 53.0	1.717	2.584	12.7	19.8	12 7	2 34.40	+17 0.6	1.992	2.866	10.9	21.0
12 17	2 29.55	+12 9.3	1.808	2.588	16.0	20.0	12 17	2 30.23	+16 24.9	2.073	2.857	14.0	21.2
39782	1997 <i>JR</i> ₁₅	11 8.8	205°37	1°3/ 7.8	18		175278	2005 <i>KM</i> ₃	11 8.8	22°82	1°5/ 7.9	18	
10 8	3 18.59	+14 21.0	2.258	3.120	10.9	19.3	10 8	3 19.88	+14 36.2	1.619	2.493	13.9	20.2
10 18	3 13.02	+13 53.1	2.187	3.118	7.8	19.1	10 18	3 14.41	+14 5.6	1.559	2.496	9.9	20.0
10 28	3 5.84	+13 20.6	2.143	3.117	4.3	18.9	10 28	3 6.78	+13 28.9	1.523	2.499	5.5	19.7
11 7	2 57.75	+12 46.5	2.126	3.116	1.3	18.7	11 7	2 57.93	+12 50.1	1.513	2.503	1.6	19.5
11 17	2 49.56	+12 14.2	2.140	3.114	3.7	18.9	11 17	2 49.00	+12 14.1	1.531	2.507	4.7	19.7
11 27	2 42.13	+11 47.5	2.182	3.112	7.2	19.1	11 27	2 41.17	+11 46.2	1.576	2.512	9.1	20.0
12 7	2 36.17	+11 29.4	2.251	3.110	10.4	19.3	12 7	2 35.36	+11 30.1	1.646	2.516	13.0	20.2
12 17	2 32.17	+11 22.0	2.343	3.109	13.2	19.5	12 17	2 32.12	+11 28.0	1.736	2.521	16.3	20.5
60140	1999 <i>TA</i> ₂₈₈	11 8.8	20°38	1°3/ 7.9	18		24094	1999 <i>UN</i> ₆₀	11 8.8	140°38	1°7/ 9.5	18	
10 8	3 18.17	+14 54.1	1.860	2.730	12.5	19.1	10 8	3 33.23	+19 21.5	1.845	2.682	14.1	17.7
10 18	3 12.96	+14 21.3	1.798	2.733	8.9	18.9	10 18	3 23.92	+20 12.4	1.779	2.694	10.3	17.5
10 28	3 5.88	+13 42.7	1.761	2.736	4.9	18.6	10 28	3 12.09	+20 55.9	1.738	2.705	6.1	17.2
11 7	2 57.76	+13 2.0	1.751	2.740	1.4	18.4	11 7	2 58.76	+21 30.3	1.727	2.715	2.1	17.0
11 17	2 49.58	+12 23.7	1.769	2.744	4.2	18.6	11 17	2 45.23	+21 55.2	1.748	2.725	3.9	17.2
11 27	2 42.34	+11 52.4	1.815	2.749	8.2	18.9	11 27	2 32.91	+22 13.1	1.799	2.734	8.1	17.4
12 7	2 36.85	+11 31.7	1.886	2.754	11.8	19.1	12 7	2 22.89	+22 27.6	1.877	2.743	11.9	17.7
12 17	2 33.61	+11 23.8	1.980	2.759	14.8	19.3	12 17	2 15.81	+22 43.1	1.979	2.751	15.0	17.9
455906	2005 <i>UY</i> ₁₉₆	11 8.8	6°25	1°0/ 7.9	18		312889	2011 <i>UV</i> ₂₆₂	11 8.8	112°46	0°5/ 8.5	18	
10 8	3 17.65	+16 53.3	1.845	2.714	12.7	21.2	10 8	3 21.58	+16 21.2	1.981	2.840	12.3	21.3
10 18	3 12.62	+16 1.5	1.780	2.714	9.1	21.0	10 18	3 15.31	+16 9.3	1.918	2.847	8.8	21.1
10 28	3 5.70	+15 1.2	1.739	2.714	5.0	20.8	10 28	3 7.17	+15 51.4	1.881	2.854	4.9	20.9
11 7	2 57.74	+13 56.6	1.725	2.715	1.1	20.5	11 7	2 57.99	+15 29.7	1.871	2.861	0.8	20.6
11 17	2 49.70	+12 53.3	1.740	2.716	4.1	20.7	11 17	2 48.74	+15 7.3	1.890	2.868	3.6	20.8
11 27	2 42.61	+11 57.3	1.783	2.717	8.2	21.0	11 27	2 40.45	+14 48.1	1.939	2.875	7.6	21.1
12 7	2 37.28	+11 13.5	1.851	2.719	11.9	21.2	12 7	2 33.92	+14 35.7	2.014	2.881	11.1	21.3
12 17	2 34.22	+10 44.7	1.941	2.721	15.0	21.4	12 17	2 29.68	+14 32.4	2.111	2.888	14.1	21.5
226464	2003 <i>SW</i> ₁₄₄	11 8.8	114°58	4°7/ 13.5	18		232206	2002 <i>GN</i> ₁₀₇	11 8.8	163°17	5°0/ 4.7	18	
10 8	3 20.71	+35 26.4	2.478	3.265	12.4	20.2	10 8	3 20.41	+ 3 31.9	2.195	3.058	11.2	21.3
10 18	3 14.54	+35 12.9	2.407	3.276	10.0	20.0	10 18	3 14.23	+ 2 23.8	2.139	3.064	8.3	21.2
10 28	3 6.66	+34 41.2	2.360	3.286	7.4	19.9	10 28	3 6.48	+ 1 19.0	2.110	3.069	5.8	21.0
11 7	2 57.88	+33 51.5	2.339	3.297	5.2	19.8	11 7	2 57.89	+ 0 22.8	2.109	3.074	5.1	21.0
11 17	2 49.10	+32 46.2	2.347	3.307	4.9	19.8	11 17	2 49.28	+ 0 20.0	2.138	3.078	6.8	21.1
11 27	2 41.28	+31 30.4	2.384	3.316	6.6	19.9	11 27	2 41.53	+ 0 45.9	2.194	3.082	9.5	21.3
12 7	2 35.14	+30 10.5	2.450	3.326	9.1	20.1	12 7	2 35.30	+ 0 53.8	2.275	3.084	12.2	21.5
12 17	2 31.14	+28 52.8	2.541	3.335	11.5	20.2	12 17	2 31.05	+ 0 44.2	2.378	3.087	14.5	21.6
283096	2008 <i>UB</i> ₁₂₈	11 8.8	63°85	0°6/ 8.4	18		227114	2005 <i>NP</i> ₅₇	11 8.8	17°50	4°8/ 6.6	18	
10 8	3 21.64	+17 53.4	1.501	2.371	15.0	20.0	10 8	3 19.79	+ 8 52.9	1.071	1.969	17.4	19.8
10 18	3 15.63	+17 10.5	1.454	2.388	10.7	19.8	10 18	3 14.97	+ 8 9.4	1.028	1.974	12.6	19.6
10 28	3 7.38	+16 17.7	1.430	2.406	5.8	19.5	10 28	3 7.29	+ 7 26.2	1.005	1.981	7.6	19.3
11 7	2 57.98	+15 19.6	1.432	2.423	1.0	19.3	11 7	2 58.03	+ 6 50.5	1.005	1.988	4.8	19.2
11 17	2 48.70	+14 22.4	1.462	2.440	4.4	19.5	11 17	2 48.76	+ 6 29.4	1.028	1.997	7.8	19.4
11 27	2 40.75	+13 32.6	1.519	2.458	9.0	19.9	11 27	2 41.07	+ 6 27.6	1.075	2.007	12.6	19.7
12 7	2 35.05	+12 55.6	1.600	2.475	13.1	20.2	12 7	2 36.10	+ 6 46.8	1.143	2.018	17.1	20.0
12 17	2 32.05	+12 34.1	1.703	2.493	16.4	20.4	12 17	2 34.39	+ 7 25.3	1.228	2.031	20.8	20.3
214789	2006 <i>US</i> ₁₃₇	11 8.8	159°08	1°8/ 9.7	18		220460	2004 <i>BE</i> ₃₀	11 8.8	296°38	2°8/ 10.2	18	
10 8	3 25.96	+21 57.0	1.676	2.525	14.7	20.7	10 8	3 23.70	+23 51.8	1.412	2.270	16.4	20.2
10 18	3 18.85	+22 0.1	1.609	2.530	10.8	20.4	10 18	3 17.79	+23 58.4	1.339	2.262	12.4	19.9
10 28	3 9.30	+21 51.0	1.566	2.534	6.4	20.2	10 28	3 8.97	+23 49.3	1.287	2.254	7.7	19.7
11 7	2 58.30	+21 30.4	1.550	2.538	2.2	19.9	11 7	2 58.32	+23 24.4	1.261	2.247	3.3	19.4
11 17	2 47.16	+21 1.4	1.562	2.541	4.0	20.1	11 17	2 47.30	+22 46.8	1.260	2.240	4.7	19.5
11 27	2 37.22	+20 29.0	1.602	2.544	8.4	20.3	11 27	2 37.55	+22 3.0	1.286	2.232	9.5	19.7
12 7	2 29.55	+19 59.5	1.669	2.546	12.5	20.6	12 7	2 30.35	+21 21.0	1.336	2.225	14.1	20.0
12 17	2 24.75	+19 37.6	1.757	2.548	15.9	20.8	12 17	2 26.44	+20 47.8	1.407	2.218	18.1	20.2
478476	2012 <i>QA</i> ₃₂	11 8.8	356°54	1°4/ 7.9	18		118037	3041 <i>T</i> - ₂	11 8.8</				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
185928	2000 <i>TJ</i> ₄₃		11 8.8	8°80	3°1/ 7.2	18	483283	2015 <i>TR</i> ₂₈₉		11 8.8	353°73	3°1/10.9	18
10 8	3 20.66	+ 8 58.0	1.712	2.586	13.2	19.6	10 8	3 21.37	+26 26.3	1.877	2.715	13.8	21.0
10 18	3 14.88	+ 8 45.1	1.651	2.587	9.5	19.4	10 18	3 15.49	+26 26.2	1.804	2.715	10.5	20.8
10 28	3 7.04	+ 8 32.7	1.615	2.588	5.6	19.2	10 28	3 7.45	+26 11.0	1.755	2.715	6.8	20.6
11 7	2 58.01	+ 8 24.4	1.605	2.590	3.1	19.0	11 7	2 58.13	+25 41.3	1.732	2.714	3.5	20.4
11 17	2 48.87	+ 8 23.5	1.623	2.592	5.5	19.2	11 17	2 48.64	+24 59.8	1.738	2.714	4.1	20.4
11 27	2 40.75	+ 8 32.8	1.668	2.595	9.4	19.4	11 27	2 40.16	+24 11.7	1.771	2.714	7.6	20.7
12 7	2 34.54	+ 8 54.1	1.738	2.598	13.0	19.6	12 7	2 33.66	+23 23.4	1.831	2.714	11.2	20.9
12 17	2 30.79	+ 9 27.3	1.829	2.602	16.1	19.9	12 17	2 29.70	+22 40.8	1.914	2.714	14.4	21.1
24742	1992 <i>GN</i> ₂		11 8.8	169°86	0°6/ 9.2	18	160628	1999 <i>UU</i> ₂₉		11 8.8	48°91	0°4/ 8.9	18
10 8	3 21.60	+20 8.1	2.206	3.053	11.7	19.3	10 8	3 23.24	+18 28.0	1.410	2.280	15.8	19.6
10 18	3 15.25	+19 50.4	2.134	3.056	8.5	19.1	10 18	3 16.98	+18 22.6	1.364	2.297	11.3	19.4
10 28	3 7.14	+19 23.7	2.089	3.059	4.9	18.8	10 28	3 8.27	+18 7.3	1.341	2.315	6.3	19.1
11 7	2 58.03	+18 50.0	2.071	3.061	1.1	18.6	11 7	2 58.25	+17 44.6	1.343	2.333	1.1	18.8
11 17	2 48.83	+18 12.3	2.084	3.063	3.1	18.7	11 17	2 48.30	+17 18.8	1.372	2.352	4.2	19.1
11 27	2 40.50	+17 35.0	2.126	3.064	6.9	19.0	11 27	2 39.79	+16 55.2	1.428	2.371	9.0	19.5
12 7	2 33.80	+17 2.4	2.196	3.065	10.2	19.2	12 7	2 33.71	+16 38.9	1.508	2.390	13.2	19.8
12 17	2 29.24	+16 38.0	2.289	3.066	13.1	19.4	12 17	2 30.55	+16 33.2	1.608	2.410	16.7	20.0
414604	2009 <i>UM</i> ₁₀₆		11 8.8	285°89	1°1/ 8.1	18	404702	2014 <i>JM</i> ₂		11 8.8	135°68	14°0/ 6.6	15
10 8	3 21.41	+12 54.3	2.304	3.161	10.9	20.8	10 8	3 38.06	-13 35.0	1.112	1.951	21.2	20.4
10 18	3 15.21	+13 0.3	2.213	3.142	7.9	20.6	10 18	3 28.10	-13 45.9	1.066	1.955	17.9	20.2
10 28	3 7.22	+13 4.4	2.149	3.122	4.4	20.3	10 28	3 14.63	-13 23.8	1.039	1.958	15.1	20.1
11 7	2 58.07	+13 7.9	2.114	3.103	1.2	20.1	11 7	2 59.24	-12 20.1	1.034	1.962	14.0	20.0
11 17	2 48.61	+13 12.8	2.108	3.084	3.6	20.2	11 17	2 43.96	-10 33.4	1.053	1.965	15.3	20.1
11 27	2 39.77	+13 21.3	2.133	3.064	7.3	20.4	11 27	2 30.80	- 8 9.8	1.096	1.968	18.1	20.3
12 7	2 32.39	+13 35.6	2.184	3.044	10.7	20.6	12 7	2 21.11	- 5 21.0	1.161	1.970	21.4	20.5
12 17	2 27.05	+13 57.3	2.260	3.025	13.6	20.8	12 17	2 15.46	- 2 18.9	1.243	1.972	24.4	20.8
197419	2003 <i>YB</i> ₆₀		11 8.8	39°22	1°5/ 9.9	18	1914	Hartbeespoortdam		11 8.8	110°07	3°4/ 6.8	18
10 8	3 18.35	+23 51.0	1.801	2.654	13.7	19.6	10 8	3 23.63	+ 9 41.0	1.657	2.527	13.8	15.9
10 18	3 13.08	+23 14.7	1.752	2.674	10.0	19.4	10 18	3 16.90	+ 8 58.0	1.608	2.542	9.9	15.7
10 28	3 5.94	+22 24.6	1.726	2.694	5.9	19.2	10 28	3 8.11	+ 8 14.0	1.583	2.556	5.8	15.5
11 7	2 57.84	+21 24.0	1.726	2.714	2.0	19.0	11 7	2 58.23	+ 7 34.0	1.586	2.569	3.4	15.4
11 17	2 49.83	+20 18.0	1.755	2.735	3.4	19.1	11 17	2 48.41	+ 7 3.1	1.617	2.583	5.9	15.6
11 27	2 42.95	+19 12.9	1.812	2.757	7.3	19.4	11 27	2 39.81	+ 6 45.5	1.675	2.596	9.8	15.8
12 7	2 37.97	+18 15.0	1.896	2.778	10.9	19.7	12 7	2 33.28	+ 6 43.2	1.758	2.608	13.3	16.1
12 17	2 35.30	+17 28.4	2.002	2.801	13.9	19.9	12 17	2 29.31	+ 6 56.5	1.861	2.620	16.3	16.3
392391	2010 <i>JQ</i> ₁₁₆		11 8.8	121°45	1°9/ 7.2	18	247979	2004 <i>CM</i> ₅		11 8.8	339°22	2°1/ 7.6	18
10 8	3 20.77	+13 39.4	2.241	3.100	11.1	22.0	10 8	3 21.16	+12 12.2	1.739	2.610	13.2	20.0
10 18	3 14.42	+12 41.1	2.189	3.119	7.9	21.8	10 18	3 15.31	+11 54.4	1.673	2.608	9.5	19.7
10 28	3 6.56	+11 38.4	2.163	3.137	4.4	21.6	10 28	3 7.34	+11 33.6	1.631	2.606	5.3	19.5
11 7	2 57.94	+10 35.8	2.167	3.154	1.9	21.5	11 7	2 58.15	+11 13.2	1.616	2.604	2.1	19.3
11 17	2 49.41	+ 9 37.8	2.202	3.171	4.2	21.7	11 17	2 48.79	+10 56.9	1.629	2.603	4.8	19.4
11 27	2 41.79	+ 8 49.0	2.266	3.188	7.5	21.9	11 27	2 40.42	+10 48.5	1.670	2.601	9.0	19.7
12 7	2 35.74	+ 8 12.6	2.357	3.203	10.5	22.2	12 7	2 33.97	+10 51.0	1.735	2.600	12.8	19.9
12 17	2 31.66	+ 7 50.1	2.471	3.218	13.0	22.4	12 17	2 30.01	+11 5.6	1.822	2.599	16.0	20.1
50197	2000 <i>AS</i> ₁₉₈		11 8.8	159°25	4°6/ 5.1	18	6217	Kodai		11 8.8	291°65	6°2/ 5.7	18
10 8	3 19.25	+ 5 30.6	2.137	3.004	11.3	19.3	10 8	3 23.09	+ 3 17.6	1.526	2.400	14.5	17.8
10 18	3 13.47	+ 4 20.9	2.080	3.008	8.3	19.2	10 18	3 17.14	+ 2 38.4	1.445	2.376	11.0	17.6
10 28	3 6.11	+ 3 12.8	2.049	3.013	5.6	19.0	10 28	3 8.60	+ 2 3.8	1.388	2.352	7.6	17.3
11 7	2 57.88	+ 2 11.7	2.046	3.017	4.6	19.0	11 7	2 58.37	+ 1 40.3	1.356	2.328	6.2	17.2
11 17	2 49.64	+ 1 22.8	2.073	3.020	6.5	19.1	11 17	2 47.66	+ 1 33.5	1.351	2.304	8.5	17.3
11 27	2 42.24	+ 0 50.0	2.127	3.023	9.3	19.3	11 27	2 37.89	+ 1 47.7	1.371	2.280	12.5	17.4
12 7	2 36.37	+ 0 35.0	2.206	3.026	12.1	19.5	12 7	2 30.23	+ 2 23.6	1.414	2.255	16.5	17.6
12 17	2 32.48	+ 0 37.5	2.307	3.028	14.5	19.6	12 17	2 25.46	+ 3 19.7	1.476	2.231	20.0	17.8
117088	2004 <i>LG</i> ₃₀		11 8.8	88°90	0°4/ 9.1	18	394616	2007 <i>VA</i> ₃₃₀		11 8.8	12°26	7°8/ 5.7	18
10 8	3 23.38	+22 6.7	1.632	2.487	14.8	19.3	10 8	3 23.20	- 2 27.2	1.515	2.383	14.9	19.9
10 18	3 16.70	+21 2.1	1.585	2.510	10.6	19.1	10 18	3 16.83	- 2 46.5	1.464	2.385	11.7	19.7
10 28	3 7.93	+19 43.3	1.561	2.533	6.0	18.9	10 28	3 8.18	- 2 52.9	1.436	2.388	8.8	19.6
11 7	2 58.15	+18 15.2	1.565	2.555	1.1	18.6	11 7	2 58.27	- 2 40.8	1.432	2.391	7.8	19.5
11 17	2 48.59	+16 45.2	1.598	2.577	3.8	18.8	11 17	2 48.32	- 2 7.3	1.455	2.395	9.4	19.6
11 27	2 40.41	+15 21.5	1.659	2.599	8.3	19.2	11 27	2 39.58	- 1 12.0	1.503	2.400	12.5	19.8
12 7	2 34.43	+14 10.9	1.747	2.620	12.2	19.4	12 7	2 33.02	+ 0 2.4	1.575	2.405	15.7	20.0
12 17	2 31.06	+13 17.5	1.857	2.641	15.4	19.7	12 17	2 29.17	+ 1 31.9	1.666	2.410	18.5	20.3
481609	2007 <i>TD</i> ₄₄₅		11 8.8	36°03	3°1/ 7.3	16	193481	2000 <i>XU</i> ₄₂		11 8.8	343°37	6°0/10.5	18
10 8	3 21.29	+11 6.9	1.284	2.170	15.9	20.5	10 8	3 25.03	+25 24.1	1.214	2.075	18.4	18.2
10 18	3 15.59	+10 37.6	1.246	2.188	11.3	20.3	10 18	3 19.50	+26 54.1	1.141	2.062	14.3	17.9
10 28	3 7.46	+ 9 6.5	1.230	2.207	6.4	20.1	10 28	3 10.37	+28 12.0	1.090	2.050	9.8	17.6
11 7	2 58.10	+ 9 38.7	1.239	2.226	3.1	19.9	11 7	2 58.69	+29 11.8	1.061	2.039	6.3	17.4
11 17	2 48.87	+ 9 19.4	1.274	2.246	6.0	20.2	11 17	2 46.18	+29 49.9	1.058	2.030	7.1	17.4
11 27	2 41.13	+ 9 12.9	1.334	2.267	10.5	20.5	11 27	2 34.94	+30 8.1	1.078	2.022	11.3	17.6
12 7	2 35.81	+ 9 21.4	1.417	2.289	14.6	20.8	12 7	2 26.73	+30 13.2	1.121	2.015	15.8	17.8
12 17	2 33.38	+ 9 44.8	1.519	2.311	17.9	21.1	12 17	2 22.58	+30 13.6	1.183	2.010	19.9	18.1
28699	2000 <i>GN</i> ₃₉		11 8.8	132°77	1°8/ 7.6	18	485608	2011 <i>UK</i> ₃₀₅		11 8.8	358°77		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
157676	2005 <i>YJ</i> ₁₂₈	11 8.8	90°90	6°5/ 4.0	18		511934	2015 <i>HA</i> ₁₆₇	11 8.8	158°17	2°5/ 7.5	18	
10 8	3 18.87	- 2 56.4	2.233	3.090	11.2	19.5	10 8	3 24.49	+11 5.0	1.722	2.588	13.5	21.6
10 18	3 13.12	- 3 45.1	2.187	3.099	8.8	19.4	10 18	3 17.65	+10 45.1	1.660	2.592	9.7	21.4
10 28	3 5.90	- 4 24.7	2.167	3.109	7.0	19.3	10 28	3 8.63	+10 23.2	1.622	2.596	5.5	21.2
11 7	2 57.91	- 4 50.7	2.174	3.119	6.6	19.3	11 7	2 58.38	+10 2.8	1.612	2.599	2.5	21.0
11 17	2 49.95	- 4 59.6	2.209	3.128	7.9	19.4	11 17	2 48.03	+ 9 47.7	1.631	2.602	5.1	21.2
11 27	2 42.81	- 4 49.8	2.270	3.138	10.1	19.5	11 27	2 38.77	+ 9 41.7	1.677	2.605	9.3	21.4
12 7	2 37.14	- 4 21.9	2.355	3.147	12.4	19.7	12 7	2 31.56	+ 9 47.3	1.749	2.607	13.0	21.7
12 17	2 33.34	- 3 37.9	2.461	3.156	14.4	19.9	12 17	2 26.94	+10 5.4	1.842	2.609	16.2	21.9
127607	2003 <i>BW</i> ₃₀	11 8.8	139°05	4°6/12.0	18		275440	2011 <i>CC</i> ₄₈	11 8.8	318°77	6°1/ 4.5	18	
10 8	3 25.37	+30 50.8	1.825	2.644	15.0	19.8	10 8	3 18.57	- 0 59.5	2.141	3.004	11.4	20.0
10 18	3 18.42	+30 52.1	1.758	2.652	11.7	19.6	10 18	3 13.08	- 1 42.7	2.081	3.000	8.9	19.9
10 28	3 9.09	+30 33.9	1.714	2.661	8.1	19.4	10 28	3 5.98	- 2 18.6	2.046	2.996	6.8	19.7
11 7	2 58.42	+29 56.0	1.696	2.668	5.1	19.2	11 7	2 57.97	- 2 42.1	2.039	2.993	6.2	19.7
11 17	2 47.68	+29 1.0	1.705	2.676	5.1	19.2	11 17	2 49.87	- 2 49.7	2.058	2.989	7.7	19.8
11 27	2 38.19	+27 55.3	1.744	2.683	8.0	19.4	11 27	2 42.56	- 2 39.1	2.105	2.986	10.2	19.9
12 7	2 30.94	+26 47.0	1.808	2.689	11.5	19.6	12 7	2 36.74	- 2 10.6	2.175	2.982	12.7	20.1
12 17	2 26.49	+25 43.6	1.896	2.695	14.6	19.9	12 17	2 32.88	- 1 25.7	2.267	2.979	15.0	20.3
161363	2003 <i>SF</i> ₁₉₂	11 8.8	83°63	7°8/13.6	18		318977	2005 <i>UP</i> ₃₁₀	11 8.8	293°32	1°3/ 7.9	18	
10 8	3 28.19	+36 42.7	1.774	2.565	16.5	19.6	10 8	3 19.55	+14 15.2	2.035	2.899	11.8	21.7
10 18	3 20.82	+37 40.3	1.710	2.575	13.6	19.4	10 18	3 13.92	+13 50.4	1.966	2.898	8.5	21.5
10 28	3 10.62	+38 15.5	1.669	2.585	10.6	19.2	10 28	3 6.51	+13 21.0	1.922	2.897	4.7	21.2
11 7	2 58.68	+38 24.3	1.651	2.596	8.3	19.1	11 7	2 58.06	+12 49.8	1.906	2.896	1.4	21.0
11 17	2 46.49	+38 6.4	1.660	2.606	7.9	19.1	11 17	2 49.49	+12 20.6	1.919	2.895	4.0	21.2
11 27	2 35.65	+37 26.4	1.696	2.616	9.7	19.3	11 27	2 41.76	+11 57.4	1.961	2.893	7.8	21.4
12 7	2 27.39	+36 32.8	1.756	2.627	12.3	19.5	12 7	2 35.68	+11 43.4	2.029	2.892	11.2	21.6
12 17	2 22.39	+35 34.9	1.839	2.637	15.0	19.7	12 17	2 31.75	+11 40.7	2.119	2.891	14.2	21.8
442281	2011 <i>RL</i> ₃	11 8.8	315°42	9°8/ 2.2	18		31416	Petwarden	11 8.8	251°47	2°0/ 7.6	18	
10 8	3 18.49	- 5 3.4	1.565	2.435	14.5	20.3	10 8	3 22.06	+13 42.6	1.746	2.614	13.3	19.4
10 18	3 13.64	- 6 25.5	1.499	2.414	11.9	20.1	10 18	3 16.07	+13 5.1	1.668	2.602	9.6	19.1
10 28	3 6.54	- 7 36.0	1.456	2.393	10.1	20.0	10 28	3 7.86	+12 21.5	1.615	2.589	5.4	18.8
11 7	2 58.05	- 8 25.9	1.437	2.373	10.1	19.9	11 7	2 58.29	+11 35.7	1.588	2.577	2.0	18.6
11 17	2 49.26	- 8 47.8	1.442	2.353	11.9	20.0	11 17	2 48.44	+10 53.0	1.590	2.563	4.9	18.8
11 27	2 41.42	- 8 38.2	1.470	2.334	14.8	20.1	11 27	2 39.54	+10 18.8	1.620	2.550	9.3	19.0
12 7	2 35.52	- 7 57.8	1.519	2.315	17.8	20.3	12 7	2 32.56	+ 9 57.4	1.674	2.536	13.3	19.2
12 17	2 32.22	- 6 50.7	1.584	2.297	20.5	20.4	12 17	2 28.15	+ 9 51.1	1.750	2.522	16.7	19.4
324439	2006 <i>TU</i> ₃₀	11 8.8	80°85	0°6/ 8.5	17		141659	2002 <i>JB</i> ₇₉	11 8.8	126°72	0°8/ 9.3	17	
10 8	3 25.58	+17 42.1	1.378	2.247	16.1	20.5	10 8	3 24.29	+21 43.9	1.523	2.380	15.5	20.3
10 18	3 18.55	+17 4.4	1.337	2.271	11.5	20.3	10 18	3 17.73	+21 1.9	1.464	2.390	11.3	20.1
10 28	3 9.08	+16 16.6	1.319	2.294	6.3	20.1	10 28	3 8.73	+20 4.9	1.427	2.399	6.4	19.9
11 7	2 58.40	+15 23.3	1.326	2.317	1.0	19.8	11 7	2 58.40	+18 56.7	1.418	2.408	1.4	19.6
11 17	2 47.94	+14 30.9	1.361	2.340	4.6	20.1	11 17	2 48.09	+17 43.6	1.436	2.416	4.1	19.8
11 27	2 39.07	+13 46.2	1.423	2.362	9.5	20.5	11 27	2 39.13	+16 33.7	1.482	2.424	8.9	20.1
12 7	2 32.74	+13 14.4	1.509	2.384	13.7	20.8	12 7	2 32.55	+15 34.4	1.554	2.432	13.2	20.4
12 17	2 29.37	+12 58.1	1.616	2.406	17.1	21.1	12 17	2 28.85	+14 50.5	1.646	2.439	16.7	20.6
474683	2005 <i>EB</i> ₈₆	11 8.8	306°75	4°1/ 6.4	18		443634	2014 <i>NR</i> ₅₅	11 8.8	147°09	3°4/ 6.6	18	
10 8	3 20.01	+ 9 23.9	1.522	2.402	14.2	20.8	10 8	3 20.09	+ 7 14.6	2.134	3.000	11.3	20.8
10 18	3 15.02	+ 8 35.8	1.433	2.371	10.4	20.5	10 18	3 14.18	+ 6 50.8	2.070	3.000	8.2	20.6
10 28	3 7.48	+ 7 44.0	1.367	2.340	6.4	20.2	10 28	3 6.60	+ 6 28.4	2.032	3.001	5.1	20.4
11 7	2 58.23	+ 6 54.5	1.326	2.309	4.1	20.0	11 7	2 58.07	+ 6 10.8	2.022	3.002	3.4	20.3
11 17	2 48.42	+ 6 14.0	1.312	2.278	7.0	20.1	11 17	2 49.46	+ 6 1.3	2.041	3.003	5.3	20.5
11 27	2 39.44	+ 5 48.8	1.324	2.248	11.5	20.3	11 27	2 41.66	+ 6 2.4	2.088	3.003	8.4	20.7
12 7	2 32.50	+ 5 43.1	1.358	2.217	16.0	20.5	12 7	2 35.41	+ 6 15.6	2.161	3.004	11.5	20.9
12 17	2 28.42	+ 5 58.2	1.412	2.187	19.8	20.6	12 17	2 31.19	+ 6 41.0	2.256	3.004	14.1	21.1
67793	2000 <i>UE</i> ₁₀₂	11 8.8	37°59	4°1/10.9	18		81067	2000 <i>EV</i> ₇₄	11 8.8	343°83	4°5/ 6.0	18	
10 8	3 23.09	+26 57.8	0.961	1.836	21.0	18.2	10 8	3 13.38	+11 24.6	1.144	2.046	16.1	18.8
10 18	3 17.71	+26 50.1	0.925	1.855	15.8	17.9	10 18	3 10.58	+10 7.1	1.078	2.028	11.7	18.5
10 28	3 8.93	+26 16.6	0.907	1.875	10.0	17.7	10 28	3 5.07	+ 8 41.7	1.033	2.011	7.0	18.2
11 7	2 58.40	+25 19.8	0.911	1.896	4.9	17.5	11 7	2 57.87	+ 7 17.7	1.011	1.996	4.6	18.0
11 17	2 48.10	+24 7.2	0.938	1.918	5.6	17.6	11 17	2 50.33	+ 6 5.3	1.013	1.983	7.9	18.2
11 27	2 39.93	+22 50.8	0.989	1.941	10.7	18.0	11 27	2 43.98	+ 5 14.3	1.038	1.971	12.9	18.4
12 7	2 35.06	+21 42.2	1.061	1.965	15.6	18.3	12 7	2 40.03	+ 4 50.0	1.084	1.961	17.7	18.7
12 17	2 33.93	+20 49.0	1.151	1.989	19.6	18.7	12 17	2 39.16	+ 4 53.1	1.146	1.954	21.7	18.9
300483	2007 <i>TC</i> ₁₂₇	11 8.8	55°97	1°2/ 8.1	18		442368	2011 <i>SO</i> ₂₅₆	11 8.8	97°39	1°5/ 9.9	18	
10 8	3 21.91	+15 58.7	1.499	2.371	14.8	20.7	10 8	3 24.13	+22 26.8	1.920	2.764	13.3	21.9
10 18	3 15.82	+15 22.7	1.457	2.392	10.5	20.5	10 18	3 17.16	+22 17.6	1.867	2.785	9.7	21.7
10 28	3 7.55	+14 39.5	1.438	2.414	5.7	20.3	10 28	3 8.25	+21 56.8	1.839	2.806	5.8	21.5
11 7	2 58.18	+13 53.4	1.445	2.435	1.3	20.0	11 7	2 58.33	+21 26.1	1.839	2.827	2.0	21.3
11 17	2 48.96	+13 10.0	1.480	2.457	4.6	20.3	11 17	2 48.47	+20 49.0	1.868	2.847	3.4	21.5
11 27	2 41.09	+12 34.9	1.542	2.479	9.1	20.6	11 27	2 39.77	+20 10.3	1.926	2.867	7.3	21.7
12 7	2 35.44	+12 12.2	1.628	2.501	13.0	20.9	12 7	2 33.04	+19 35.3	2.011	2.886	10.8	22.0
12 17	2 32.46	+12 3.9	1.736	2.524	16.2	21.2	12 17	2 28.74	+19 8.0	2.118	2.905	13.7	22.2
361456	2007 <i>CN</i> ₁₉	11 8.8	296°86	7°6/ 4.2	18		66681	1999 <i>TN</i> ₃₃	11 8.8				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
444520	2006 SR ₉₀	11 8.8	7°35	1.3°/ 9.6	18		489927	2008 RV ₄	11 8.8	7°38	4.4°/12.0	17	
10 8	3 20.77	+20 59.7	1.646	2.506	14.3	20.9	10 8	3 21.39	+30 32.9	2.218	3.033	12.8	21.6
10 18	3 15.23	+20 57.3	1.580	2.507	10.5	20.7	10 18	3 15.41	+30 57.6	2.143	3.033	10.1	21.4
10 28	3 7.41	+20 43.6	1.537	2.508	6.2	20.4	10 28	3 7.45	+31 7.6	2.091	3.033	7.2	21.2
11 7	2 58.23	+20 20.1	1.520	2.509	1.8	20.1	11 7	2 58.29	+31 1.8	2.066	3.034	4.8	21.1
11 17	2 48.88	+19 50.1	1.531	2.511	3.8	20.3	11 17	2 48.91	+30 41.1	2.069	3.035	4.8	21.1
11 27	2 40.63	+19 18.9	1.569	2.513	8.3	20.6	11 27	2 40.40	+30 9.1	2.100	3.036	7.1	21.2
12 7	2 34.47	+18 51.9	1.632	2.516	12.3	20.8	12 7	2 33.64	+29 31.3	2.159	3.037	10.0	21.4
12 17	2 30.99	+18 33.5	1.716	2.519	15.7	21.0	12 17	2 29.21	+28 53.3	2.241	3.038	12.7	21.6
55146	2001 QO ₁₉₉	11 8.8	3°41	1°0/ 9.3	18		299591	2006 HC ₁₃	11 8.8	123°04	2°6/ 7.0	18	
10 8	3 23.78	+18 43.3	1.875	2.729	13.2	18.6	10 8	3 21.81	+11 14.0	2.005	2.869	12.0	21.3
10 18	3 17.21	+19 7.5	1.805	2.729	9.6	18.4	10 18	3 15.41	+10 30.3	1.951	2.883	8.6	21.1
10 28	3 8.47	+19 24.6	1.758	2.729	5.5	18.2	10 28	3 7.29	+9 44.3	1.924	2.896	4.9	20.9
11 7	2 58.40	+19 35.1	1.740	2.729	1.4	17.9	11 7	2 58.26	+9 0.0	1.924	2.909	2.6	20.8
11 17	2 48.11	+19 40.1	1.750	2.730	3.6	18.0	11 17	2 49.27	+8 22.0	1.954	2.922	4.8	21.0
11 27	2 38.77	+19 42.7	1.789	2.730	7.7	18.3	11 27	2 41.26	+7 54.3	2.013	2.934	8.3	21.2
12 7	2 31.36	+19 46.4	1.855	2.731	11.5	18.5	12 7	2 34.97	+7 39.5	2.097	2.946	11.6	21.5
12 17	2 26.48	+19 54.5	1.943	2.732	14.7	18.7	12 17	2 30.84	+7 38.4	2.204	2.957	14.3	21.7
71465	2000 BX ₇	11 8.8	241°17	4°3/12.2	18		384681	2011 GJ ₃₀	11 8.9	257°96	1°0/ 8.3	18	
10 8	3 21.01	+31 10.3	2.305	3.116	12.5	19.4	10 8	3 23.48	+15 38.4	1.627	2.493	14.2	22.0
10 18	3 15.05	+31 23.4	2.227	3.114	9.9	19.2	10 18	3 17.32	+15 17.0	1.548	2.481	10.3	21.8
10 28	3 7.19	+31 21.2	2.172	3.113	7.0	19.1	10 28	3 8.70	+14 48.0	1.493	2.468	5.7	21.5
11 7	2 58.20	+31 3.1	2.144	3.112	4.7	18.9	11 7	2 58.53	+14 14.5	1.465	2.455	1.2	21.2
11 17	2 49.02	+30 30.5	2.144	3.111	4.7	18.9	11 17	2 48.02	+13 41.0	1.465	2.442	4.6	21.4
11 27	2 40.69	+29 47.2	2.174	3.109	6.9	19.1	11 27	2 38.51	+13 12.8	1.492	2.428	9.4	21.6
12 7	2 34.05	+28 58.9	2.230	3.108	9.7	19.2	12 7	2 31.12	+12 54.8	1.544	2.414	13.7	21.8
12 17	2 29.65	+28 11.3	2.311	3.107	12.4	19.4	12 17	2 26.53	+12 50.2	1.616	2.400	17.4	22.1
35136	1992 RU ₁	11 8.8	170°82	1°5/ 7.8	18		453712	2011 AE ₇	11 8.9	301°51	2°6/10.9	17	
10 8	3 21.81	+15 6.5	1.856	2.719	12.8	19.1	10 8	3 19.18	+26 38.6	2.140	2.974	12.5	21.6
10 18	3 15.64	+14 22.5	1.790	2.722	9.2	18.9	10 18	3 13.80	+26 24.8	2.060	2.969	9.5	21.4
10 28	3 7.50	+13 31.8	1.749	2.724	5.1	18.6	10 28	3 6.53	+25 56.8	2.004	2.963	6.1	21.1
11 7	2 58.25	+12 38.4	1.736	2.725	1.5	18.4	11 7	2 58.16	+25 15.5	1.975	2.958	3.1	20.9
11 17	2 48.92	+11 47.4	1.752	2.726	4.4	18.6	11 17	2 49.63	+24 24.0	1.975	2.953	3.6	21.0
11 27	2 40.59	+11 4.1	1.796	2.727	8.5	18.8	11 27	2 41.95	+23 27.2	2.005	2.947	6.9	21.2
12 7	2 34.11	+10 33.0	1.867	2.728	12.2	19.1	12 7	2 35.94	+22 31.0	2.060	2.942	10.2	21.4
12 17	2 30.01	+10 16.1	1.959	2.728	15.3	19.3	12 17	2 32.15	+21 40.9	2.140	2.937	13.2	21.6
267637	2002 SN ₂₀	11 8.8	42°39	1°1/ 9.6	18		94656	2001 WJ ₇₆	11 8.9	194°86	0°8/ 8.3	18	
10 8	3 19.79	+20 31.5	2.121	2.972	12.0	20.3	10 8	3 22.67	+16 39.9	1.924	2.782	12.7	20.7
10 18	3 14.07	+20 32.8	2.058	2.980	8.7	20.1	10 18	3 16.30	+16 6.9	1.851	2.780	9.1	20.5
10 28	3 6.58	+20 25.5	2.019	2.989	5.1	19.9	10 28	3 7.93	+15 26.0	1.804	2.778	5.1	20.2
11 7	2 58.10	+20 11.0	2.008	2.997	1.5	19.7	11 7	2 58.39	+14 40.5	1.785	2.775	1.0	19.9
11 17	2 49.54	+19 51.5	2.026	3.006	3.1	19.8	11 17	2 48.71	+13 54.8	1.795	2.772	3.9	20.1
11 27	2 41.86	+19 30.8	2.073	3.015	6.8	20.1	11 27	2 39.98	+13 14.0	1.834	2.768	8.1	20.4
12 7	2 35.83	+19 12.8	2.147	3.024	10.1	20.3	12 7	2 33.08	+12 42.7	1.899	2.764	11.8	20.6
12 17	2 31.93	+19 0.7	2.244	3.033	12.9	20.5	12 17	2 28.56	+12 23.7	1.987	2.759	15.0	20.8
269558	2009 WM ₄₁	11 8.8	321°50	1°6/ 7.5	17		324267	2006 BC ₂₆₅	11 8.9	188°23	2°4/ 6.8	18	
10 8	3 16.79	+14 38.8	2.066	2.934	11.5	20.4	10 8	3 17.69	+10 15.2	2.539	3.402	9.8	21.8
10 18	3 11.97	+13 48.0	1.993	2.927	8.2	20.2	10 18	3 12.31	+9 35.5	2.471	3.401	7.0	21.6
10 28	3 5.45	+12 50.9	1.945	2.920	4.6	20.0	10 28	3 5.54	+8 54.2	2.429	3.400	4.1	21.5
11 7	2 57.93	+11 51.6	1.924	2.913	1.7	19.8	11 7	2 58.01	+8 14.7	2.416	3.399	2.4	21.3
11 17	2 50.29	+10 55.1	1.933	2.906	4.2	19.9	11 17	2 50.39	+7 40.5	2.433	3.398	4.3	21.5
11 27	2 43.44	+10 6.6	1.970	2.900	7.9	20.1	11 27	2 43.44	+7 14.8	2.479	3.397	7.2	21.7
12 7	2 38.12	+9 30.0	2.033	2.893	11.3	20.3	12 7	2 37.77	+6 59.9	2.553	3.395	9.9	21.8
12 17	2 34.84	+9 7.7	2.118	2.887	14.2	20.5	12 17	2 33.81	+6 56.9	2.649	3.393	12.3	22.0
438583	2007 UH ₁₀₉	11 8.8	22°83	0°1/ 8.8	18		248941	2006 WP ₁₁₅	11 8.9	348°10	7°7/13.8	17	
10 8	3 20.88	+17 42.1	1.407	2.281	15.5	20.8	10 8	3 18.44	+35 34.3	1.414	2.240	18.2	19.5
10 18	3 15.47	+17 32.2	1.352	2.288	11.2	20.5	10 18	3 14.34	+35 56.1	1.340	2.230	14.9	19.3
10 28	3 7.57	+17 13.0	1.319	2.295	6.2	20.3	10 28	3 7.27	+35 50.8	1.285	2.220	11.4	19.1
11 7	2 58.27	+16 47.5	1.312	2.303	1.0	20.0	11 7	2 58.32	+35 15.7	1.252	2.212	8.4	18.9
11 17	2 48.89	+16 19.9	1.331	2.311	4.3	20.2	11 17	2 48.99	+34 12.1	1.243	2.205	7.8	18.8
11 27	2 40.81	+15 55.8	1.377	2.321	9.2	20.5	11 27	2 40.99	+32 47.4	1.259	2.200	10.2	19.0
12 7	2 35.06	+15 40.2	1.446	2.331	13.6	20.8	12 7	2 35.64	+31 13.2	1.298	2.196	13.8	19.2
12 17	2 32.21	+15 36.2	1.536	2.341	17.1	21.1	12 17	2 33.65	+29 40.8	1.358	2.193	17.4	19.4
283853	2003 UQ ₂₅₆	11 8.8	39°09	2°9/ 7.9	18		341020	2007 GS ₂	11 8.9	106°57	0°8/ 8.3	17	
10 8	3 27.10	+8 54.3	1.241	2.120	16.8	18.9	10 8	3 23.54	+16 55.1	1.726	2.587	13.8	21.6
10 18	3 19.81	+9 16.8	1.206	2.144	12.0	18.7	10 18	3 16.89	+16 18.3	1.674	2.604	9.8	21.4
10 28	3 9.88	+9 41.1	1.193	2.168	6.9	18.5	10 28	3 8.19	+15 33.4	1.646	2.620	5.4	21.2
11 7	2 58.62	+10 9.3	1.205	2.193	2.9	18.3	11 7	2 58.42	+14 44.4	1.645	2.636	1.0	20.9
11 17	2 47.57	+10 42.9	1.244	2.219	5.8	18.6	11 17	2 48.72	+13 56.2	1.674	2.651	4.1	21.2
11 27	2 38.22	+11 23.2	1.309	2.245	10.5	18.9	11 27	2 40.22	+13 14.3	1.731	2.666	8.4	21.5
12 7	2 31.58	+12 11.0	1.398	2.272	14.6	19.2	12 7	2 33.77	+12 43.3	1.813	2.680	12.2	21.8
12 17	2 28.13	+13 5.9	1.507	2.300	18.0	19.5	12 17	2 29.85	+12 25.7	1.917	2.694	15.3	22.0
209157	2003 UN ₁₆	11 8.8	14°98	0°4/ 8.7	18		90854	1996 G7 ₈	11 8.9	5°66	3°6/ 7.1	18	
10 8	3 22.43	+15 45.1	1.359	2.236	15.								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
395605	2011 <i>UV</i> ₃₂₉	11	8.9 105°45	2°6/ 7.1 18			207268	2005 <i>EH</i> ₂₈₁	11	8.9 289°40	2°9/ 7.1 18		
10 8	3 20.50	+11 38.8	1.901	2.769	12.4	21.6	10 8	3 20.62	+10 56.6	1.726	2.599	13.2	20.3
10 18	3 14.61	+10 53.8	1.845	2.778	8.8	21.4	10 18	3 15.04	+10 20.2	1.655	2.590	9.5	20.1
10 28	3 6.91	+10 5.9	1.813	2.787	5.0	21.2	10 28	3 7.33	+9 40.9	1.607	2.581	5.5	19.8
11 7	2 58.23	+9 19.5	1.810	2.796	2.6	21.1	11 7	2 58.34	+9 3.1	1.587	2.573	2.9	19.7
11 17	2 49.54	+8 39.3	1.835	2.804	5.0	21.3	11 17	2 49.14	+8 31.8	1.595	2.564	5.5	19.8
11 27	2 41.83	+8 9.6	1.889	2.813	8.6	21.5	11 27	2 40.88	+8 11.7	1.629	2.556	9.6	20.0
12 7	2 35.88	+7 53.5	1.968	2.821	12.0	21.7	12 7	2 34.50	+8 5.8	1.689	2.547	13.4	20.2
12 17	2 32.16	+7 51.8	2.068	2.829	14.8	22.0	12 17	2 30.61	+8 15.3	1.769	2.539	16.6	20.5
159078	2004 <i>TM</i> ₂₀₇	11	8.9 353°34	0°3/ 8.7 18			354662	2005 <i>LX</i> ₁₇	11	8.9 138°36	2°6/ 7.1 18		
10 8	3 19.67	+16 8.5	1.705	2.574	13.5	19.3	10 8	3 20.69	+10 48.6	1.976	2.843	12.0	21.1
10 18	3 14.42	+16 9.7	1.636	2.570	9.7	19.1	10 18	3 14.75	+10 12.2	1.915	2.847	8.6	20.9
10 28	3 6.99	+16 4.9	1.591	2.566	5.4	18.8	10 28	3 7.01	+9 33.7	1.878	2.851	5.0	20.7
11 7	2 58.26	+15 56.1	1.573	2.563	0.9	18.5	11 7	2 58.28	+8 57.2	1.870	2.855	2.6	20.5
11 17	2 49.32	+15 46.2	1.582	2.561	3.9	18.7	11 17	2 49.49	+8 26.7	1.891	2.859	4.9	20.7
11 27	2 41.35	+15 39.1	1.618	2.559	8.4	19.0	11 27	2 41.61	+8 6.2	1.940	2.863	8.5	20.9
12 7	2 35.30	+15 38.2	1.680	2.559	12.3	19.2	12 7	2 35.42	+7 58.1	2.014	2.866	11.8	21.1
12 17	2 31.78	+15 46.3	1.763	2.558	15.7	19.4	12 17	2 31.41	+8 3.6	2.111	2.869	14.6	21.3
521869	2015 <i>TD</i> ₃₇₈	11	8.9 26°76	0°7/ 9.3 18			7228	MacGillivray	11	8.9 180°33	2°4/ 7.5 18		
10 8	3 20.25	+20 0.6	1.800	2.659	13.4	21.4	10 8	3 24.88	+12 24.5	1.611	2.479	14.2	17.5
10 18	3 14.68	+19 47.6	1.735	2.663	9.7	21.2	10 18	3 18.14	+11 51.2	1.547	2.481	10.2	17.3
10 28	3 7.06	+19 24.6	1.694	2.666	5.6	20.9	10 28	3 9.06	+11 13.6	1.507	2.481	5.8	17.0
11 7	2 58.27	+18 53.7	1.680	2.670	1.3	20.6	11 7	2 58.62	+10 36.0	1.494	2.481	2.4	16.8
11 17	2 49.36	+18 18.5	1.695	2.675	3.5	20.8	11 17	2 48.05	+10 3.4	1.509	2.481	5.3	17.0
11 27	2 41.47	+17 44.1	1.737	2.679	7.8	21.1	11 27	2 38.63	+9 40.9	1.552	2.480	9.7	17.3
12 7	2 35.48	+17 15.3	1.805	2.684	11.6	21.3	12 7	2 31.38	+9 31.9	1.619	2.479	13.8	17.5
12 17	2 31.94	+16 55.9	1.895	2.689	14.8	21.6	12 17	2 26.88	+9 37.9	1.707	2.477	17.1	17.7
195862	2002 <i>QR</i> ₉₀	11	8.9 83°43	1°3/ 9.8 18			54707	2001 <i>HL</i> ₆	11	8.9 68°67	2°2/ 10.7 17		
10 8	3 20.29	+21 25.0	2.336	3.180	11.3	20.3	10 8	3 24.41	+29 14.8	1.378	2.221	17.6	17.8
10 18	3 14.37	+21 29.8	2.265	3.184	8.3	20.1	10 18	3 17.80	+27 33.9	1.329	2.244	13.1	17.5
10 28	3 6.78	+21 26.2	2.220	3.187	4.9	19.9	10 28	3 8.72	+25 26.7	1.302	2.266	8.0	17.3
11 7	2 58.23	+21 15.0	2.203	3.191	1.7	19.6	11 7	2 58.52	+23 0.2	1.302	2.289	3.1	17.1
11 17	2 49.55	+20 58.2	2.215	3.194	3.0	19.8	11 17	2 48.69	+20 26.0	1.331	2.312	4.2	17.2
11 27	2 41.64	+20 38.9	2.257	3.198	6.4	20.0	11 27	2 40.59	+17 58.5	1.389	2.334	9.0	17.6
12 7	2 35.25	+20 21.0	2.326	3.201	9.5	20.2	12 7	2 35.11	+15 49.4	1.473	2.357	13.4	17.9
12 17	2 30.88	+20 7.7	2.420	3.205	12.2	20.4	12 17	2 32.60	+14 5.5	1.579	2.379	17.0	18.2
219127	1998 <i>UQ</i> ₁₉	11	8.9 350°38	4°7/ 9.7 17			192392	1996 <i>TM</i> ₁₈	11	8.9 117°98	0°8/ 9.3 18		
10 8	3 25.54	+21 8.5	1.273	2.140	17.3	18.8	10 8	3 23.56	+19 56.4	1.714	2.570	14.1	19.9
10 18	3 19.83	+23 3.9	1.197	2.124	13.2	18.5	10 18	3 17.15	+19 49.4	1.649	2.575	10.3	19.7
10 28	3 10.64	+24 55.7	1.143	2.109	8.6	18.2	10 28	3 8.49	+19 32.2	1.609	2.580	5.9	19.5
11 7	2 58.93	+26 37.4	1.114	2.096	5.0	18.0	11 7	2 58.53	+19 6.4	1.596	2.585	1.4	19.2
11 17	2 46.26	+28 3.1	1.111	2.085	6.3	18.0	11 17	2 48.45	+18 35.6	1.610	2.590	3.7	19.4
11 27	2 34.65	+29 11.1	1.133	2.076	10.9	18.2	11 27	2 39.50	+18 4.8	1.653	2.595	8.2	19.6
12 7	2 25.83	+30 4.4	1.179	2.070	15.5	18.5	12 7	2 32.65	+17 39.2	1.722	2.599	12.1	19.9
12 17	2 20.91	+30 48.9	1.244	2.066	19.5	18.7	12 17	2 28.45	+17 22.8	1.812	2.604	15.5	20.1
468866	2013 <i>PB</i> ₅₁	11	8.9 65°97	3°3/ 10.9 16			410910	2009 <i>SN</i> ₁₆₅	11	8.9 323°78	2°4/ 10.5 17		
10 8	3 24.43	+28 3.0	1.223	2.078	18.7	21.0	10 8	3 19.67	+24 24.9	1.939	2.785	13.2	21.6
10 18	3 18.26	+27 19.5	1.175	2.094	14.1	20.8	10 18	3 14.38	+24 27.7	1.859	2.775	9.9	21.4
10 28	3 9.18	+26 11.0	1.147	2.111	8.9	20.5	10 28	3 6.99	+24 18.0	1.801	2.765	6.2	21.2
11 7	2 58.60	+24 41.1	1.143	2.128	4.0	20.3	11 7	2 58.31	+23 56.1	1.771	2.756	2.9	20.9
11 17	2 48.20	+22 58.2	1.166	2.145	4.8	20.4	11 17	2 49.37	+23 24.5	1.768	2.747	3.7	21.0
11 27	2 39.61	+21 14.3	1.214	2.163	9.6	20.7	11 27	2 41.28	+22 47.6	1.794	2.738	7.4	21.2
12 7	2 33.91	+19 40.9	1.286	2.180	14.2	21.0	12 7	2 35.00	+22 11.0	1.846	2.730	11.1	21.4
12 17	2 31.53	+18 25.7	1.379	2.197	18.1	21.3	12 17	2 31.14	+21 39.9	1.920	2.722	14.3	21.6
400521	2008 <i>SH</i> ₂₃₆	11	8.9 105°19	9°2/ 17.3 18			406320	2007 <i>LZ</i> ₁₀	11	8.9 274°92	3°2/ 6.7 18		
10 8	3 30.87	+48 20.0	2.605	3.295	14.2	20.8	10 8	3 19.93	+7 21.2	2.224	3.089	11.0	20.6
10 18	3 22.56	+49 28.8	2.539	3.309	12.5	20.7	10 18	3 14.14	+7 1.8	2.153	3.082	8.0	20.4
10 28	3 11.62	+50 15.3	2.494	3.323	10.9	20.6	10 28	3 6.69	+6 43.6	2.106	3.076	4.9	20.2
11 7	2 59.03	+50 35.3	2.472	3.337	9.7	20.5	11 7	2 58.26	+6 29.9	2.088	3.069	3.2	20.1
11 17	2 46.11	+50 27.3	2.476	3.351	9.2	20.5	11 17	2 49.68	+6 23.5	2.100	3.062	5.1	20.2
11 27	2 34.30	+49 53.9	2.505	3.364	9.6	20.6	11 27	2 41.84	+6 27.2	2.140	3.056	8.2	20.3
12 7	2 24.77	+49 1.4	2.560	3.378	10.7	20.7	12 7	2 35.46	+6 42.3	2.206	3.049	11.3	20.5
12 17	2 18.22	+47 57.9	2.638	3.390	12.2	20.8	12 17	2 31.06	+7 9.0	2.294	3.043	13.9	20.7
347034	2010 <i>EJ</i> ₈₈	11	8.9 101°17	7°5/ 13.4 18			383842	2008 <i>JY</i> ₂	11	8.9 152°53	4°8/ 6.8 17		
10 8	3 28.18	+36 1.9	1.749	2.544	16.5	20.5	10 8	3 30.18	+2 24.9	1.914	2.764	13.1	20.6
10 18	3 20.90	+36 53.5	1.683	2.552	13.5	20.3	10 18	3 21.52	+2 25.3	1.855	2.773	9.8	20.4
10 28	3 10.77	+37 22.9	1.639	2.560	10.4	20.2	10 28	3 10.79	+2 32.5	1.821	2.782	6.5	20.2
11 7	2 58.90	+37 26.4	1.619	2.568	8.1	20.1	11 7	2 58.91	+2 49.4	1.817	2.789	4.8	20.1
11 17	2 46.75	+37 3.7	1.626	2.576	7.7	20.1	11 17	2 47.01	+3 18.1	1.842	2.796	6.6	20.3
11 27	2 35.95	+36 19.6	1.659	2.583	9.6	20.2	11 27	2 36.22	+3 59.3	1.898	2.802	9.8	20.5
12 7	2 27.72	+35 22.9	1.717	2.591	12.4	20.4	12 7	2 27.44	+4 52.3	1.979	2.808	13.0	20.7
12 17	2 22.75	+34 22.8	1.798	2.598	15.2	20.6	12 17	2 21.20	+5 55.6	2.084	2.813	15.7	20.9
315136	2007 <i>EK</i> ₁₁₃	11	8.9 140°21	4°3/ 5.6 18			167920	2005 <i>ED</i> ₁₁₈	11	8.9 186°89	1°8/ 7.4 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
272249	2005 <i>QL</i> ₁₃₆	11	8.9 319°12	5°6/ 5.5 18			368027	2012 <i>GD</i> ₁₉	11	8.9 240°15	1°1/ 8.1 18		
10 8	3 20.36	+ 6 51.8	1.407	2.291	14.9	20.0	10 8	3 18.90	+14 44.5	2.312	3.171	10.8	21.3
10 18	3 15.12	+ 5 37.7	1.347	2.285	11.0	19.7	10 18	3 13.39	+14 21.4	2.238	3.168	7.7	21.1
10 28	3 7.47	+ 4 23.5	1.310	2.280	7.2	19.5	10 28	3 6.28	+13 53.7	2.190	3.164	4.3	20.9
11 7	2 58.40	+ 3 17.4	1.299	2.275	5.7	19.4	11 7	2 58.25	+13 24.0	2.170	3.160	1.1	20.6
11 17	2 49.17	+ 2 27.2	1.314	2.270	8.3	19.5	11 17	2 50.08	+12 55.5	2.181	3.156	3.5	20.8
11 27	2 41.11	+ 1 59.0	1.353	2.266	12.3	19.8	11 27	2 42.63	+12 31.6	2.220	3.152	7.0	21.0
12 7	2 35.26	+ 1 55.0	1.415	2.262	16.2	20.0	12 7	2 36.62	+12 15.6	2.286	3.148	10.2	21.2
12 17	2 32.21	+ 2 14.3	1.495	2.258	19.5	20.2	12 17	2 32.53	+12 9.3	2.376	3.144	12.9	21.4
211625	2003 <i>UL</i> ₁₁₉	11	8.9 321°37	1°0/ 9.5 18			307467	2002 <i>WD</i> ₂₁	11	8.9 11°84	5°5/ 6.9 17		
10 8	3 18.59	+21 32.7	1.433	2.303	15.5	20.0	10 8	3 23.25	+ 3 25.6	1.334	2.215	15.8	19.9
10 18	3 14.19	+21 2.9	1.351	2.283	11.5	19.8	10 18	3 17.23	+ 3 27.5	1.284	2.219	11.7	19.7
10 28	3 7.14	+20 17.0	1.291	2.264	6.7	19.4	10 28	3 8.66	+ 3 37.8	1.255	2.223	7.7	19.5
11 7	2 58.38	+19 17.8	1.255	2.245	1.7	19.1	11 7	2 58.64	+ 4 0.5	1.251	2.229	5.5	19.4
11 17	2 49.20	+18 10.7	1.246	2.227	4.3	19.2	11 17	2 48.54	+ 4 38.0	1.273	2.235	7.7	19.5
11 27	2 41.08	+17 3.9	1.263	2.210	9.5	19.5	11 27	2 39.76	+ 5 31.1	1.320	2.243	11.6	19.8
12 7	2 35.21	+16 6.0	1.303	2.193	14.4	19.7	12 7	2 33.39	+ 6 38.3	1.390	2.252	15.5	20.0
12 17	2 32.37	+15 22.9	1.364	2.177	18.5	19.9	12 17	2 30.00	+ 7 57.0	1.480	2.262	18.8	20.3
77371	2001 <i>FF</i> ₁₃₆	11	8.9 115°39	7°0/ 3.9 18			404105	2012 <i>GX</i> ₂₀	11	8.9 99°26	2°9/ 6.4 18		
10 8	3 20.46	- 1 3.8	1.887	2.751	12.6	19.5	10 8	3 17.62	+ 9 41.6	2.331	3.197	10.5	21.1
10 18	3 14.55	- 2 13.8	1.841	2.759	9.8	19.4	10 18	3 12.33	+ 8 47.8	2.275	3.207	7.5	21.0
10 28	3 6.89	- 3 15.5	1.820	2.768	7.6	19.3	10 28	3 5.61	+ 7 52.8	2.245	3.216	4.5	20.8
11 7	2 58.30	- 4 2.4	1.825	2.776	7.2	19.2	11 7	2 58.14	+ 7 0.8	2.244	3.225	2.9	20.7
11 17	2 49.73	- 4 29.6	1.858	2.783	8.8	19.4	11 17	2 50.66	+ 6 16.1	2.272	3.235	4.8	20.8
11 27	2 42.13	- 4 34.6	1.917	2.791	11.3	19.5	11 27	2 43.95	+ 5 42.3	2.329	3.244	7.7	21.0
12 7	2 36.26	- 4 17.7	1.998	2.798	14.0	19.7	12 7	2 38.62	+ 5 21.6	2.413	3.253	10.5	21.2
12 17	2 32.58	- 3 41.3	2.100	2.806	16.2	19.9	12 17	2 35.09	+ 5 15.0	2.518	3.261	12.9	21.4
482640	2013 <i>AZ</i> ₁₁₀	11	8.9 9°00	2°1/ 7.9 18			238147	2003 <i>SS</i> ₃₈	11	8.9 168°89	2°2/ 10.4 18		
10 8	3 18.35	+13 31.3	1.111	2.007	17.1	20.1	10 8	3 22.29	+24 50.3	1.875	2.717	13.7	20.2
10 18	3 14.11	+13 13.3	1.062	2.009	12.2	19.9	10 18	3 16.20	+24 32.8	1.804	2.718	10.2	20.0
10 28	3 7.05	+12 50.0	1.034	2.013	6.8	19.6	10 28	3 7.98	+24 0.8	1.756	2.720	6.3	19.8
11 7	2 58.35	+12 26.0	1.029	2.018	2.2	19.3	11 7	2 58.53	+23 15.6	1.735	2.721	2.7	19.6
11 17	2 49.54	+12 7.0	1.048	2.025	5.8	19.6	11 17	2 48.96	+22 21.1	1.743	2.722	3.7	19.6
11 27	2 42.20	+11 58.6	1.090	2.034	11.1	19.9	11 27	2 40.43	+21 23.2	1.779	2.722	7.6	19.9
12 7	2 37.49	+12 4.4	1.154	2.044	15.8	20.2	12 7	2 33.85	+20 28.3	1.842	2.723	11.3	20.1
12 17	2 35.98	+12 25.5	1.237	2.056	19.7	20.5	12 17	2 29.79	+19 42.0	1.928	2.723	14.5	20.3
99968	1979 <i>QQ</i> ₂	11	8.9 14°51	9°2/ 4.6 18			151478	2002 <i>JR</i>	11	8.9 126°12	2°8/ 6.5 18		
10 8	3 11.97	+ 3 41.7	0.784	1.706	19.2	17.0	10 8	3 18.12	+ 9 37.1	2.428	3.291	10.2	20.4
10 18	3 9.80	+ 2 7.9	0.764	1.718	14.4	16.8	10 18	3 12.65	+ 8 48.9	2.370	3.300	7.3	20.2
10 28	3 4.63	+ 0 45.6	0.762	1.733	10.4	16.7	10 28	3 5.78	+ 7 59.7	2.338	3.309	4.4	20.0
11 7	2 57.94	- 0 12.1	0.779	1.751	9.3	16.7	11 7	2 58.17	+ 7 13.2	2.335	3.317	2.8	19.9
11 17	2 51.41	- 0 36.7	0.816	1.772	11.9	16.9	11 17	2 50.55	+ 6 33.5	2.362	3.325	4.6	20.1
11 27	2 46.64	- 0 25.6	0.872	1.796	15.9	17.2	11 27	2 43.66	+ 6 3.8	2.419	3.333	7.5	20.3
12 7	2 44.61	+ 0 17.6	0.946	1.822	19.8	17.6	12 7	2 38.13	+ 5 46.3	2.501	3.340	10.2	20.5
12 17	2 45.70	+ 1 26.2	1.036	1.850	23.0	17.9	12 17	2 34.34	+ 5 41.9	2.607	3.348	12.6	20.7
345811	2007 <i>GG</i> ₇₅	11	8.9 84°87	1°5/ 7.8 16			125796	2001 <i>XH</i> ₁₅₄	11	8.9 74°64	1°6/ 9.9 18		
10 8	3 23.32	+17 2.2	1.699	2.562	13.9	21.5	10 8	3 22.66	+23 2.4	1.553	2.409	15.3	19.7
10 18	3 16.60	+15 46.4	1.659	2.590	9.8	21.3	10 18	3 16.69	+22 38.5	1.492	2.416	11.3	19.5
10 28	3 7.97	+14 22.2	1.643	2.618	5.3	21.1	10 28	3 8.32	+21 59.4	1.454	2.423	6.7	19.2
11 7	2 58.47	+12 55.8	1.655	2.645	1.5	20.9	11 7	2 58.60	+21 7.6	1.442	2.430	2.2	19.0
11 17	2 49.21	+11 34.2	1.697	2.672	4.5	21.2	11 17	2 48.81	+20 8.2	1.457	2.437	3.9	19.1
11 27	2 41.26	+10 24.3	1.768	2.698	8.6	21.5	11 27	2 40.30	+19 8.4	1.500	2.444	8.5	19.4
12 7	2 35.36	+ 9 30.6	1.864	2.724	12.2	21.8	12 7	2 34.07	+18 15.4	1.567	2.451	12.7	19.7
12 17	2 31.90	+ 8 55.3	1.982	2.749	15.2	22.0	12 17	2 30.66	+17 34.5	1.657	2.459	16.2	19.9
72711	2001 <i>FW</i> ₈₂	11	8.9 193°96	3°5/ 11.7 18			300720	2007 <i>VS</i> ₁₂₁	11	8.9 320°57	1°9/ 9.9 18		
10 8	3 20.71	+29 23.1	2.480	3.295	11.6	19.9	10 8	3 21.61	+22 11.1	1.629	2.486	14.7	20.7
10 18	3 14.75	+29 28.2	2.401	3.294	9.0	19.7	10 18	3 16.09	+22 14.1	1.553	2.477	10.9	20.4
10 28	3 7.06	+29 19.9	2.346	3.293	6.2	19.5	10 28	3 8.12	+22 4.6	1.500	2.469	6.6	20.1
11 7	2 58.36	+28 58.0	2.318	3.291	3.8	19.4	11 7	2 58.61	+21 43.4	1.472	2.460	2.4	19.9
11 17	2 49.50	+28 24.2	2.319	3.290	3.9	19.4	11 17	2 48.77	+21 13.5	1.472	2.452	4.0	20.0
11 27	2 41.41	+27 42.2	2.351	3.288	6.3	19.5	11 27	2 39.97	+20 40.0	1.499	2.445	8.5	20.2
12 7	2 34.85	+26 56.9	2.409	3.286	9.1	19.7	12 7	2 33.30	+20 9.1	1.551	2.437	12.7	20.4
12 17	2 30.36	+26 13.3	2.493	3.284	11.7	19.9	12 17	2 29.45	+19 46.1	1.625	2.430	16.4	20.7
169085	2001 <i>HH</i> ₅₀	11	8.9 204°08	6°3/ 13.6 18			214017	2004 <i>DJ</i> ₃	11	8.9 220°37	0°3/ 8.7 18		
10 8	3 25.84	+36 40.2	2.212	2.992	14.0	20.3	10 8	3 20.69	+17 47.5	1.968	2.827	12.4	21.2
10 18	3 18.84	+37 7.3	2.128	2.988	11.5	20.1	10 18	3 14.93	+17 21.5	1.896	2.825	9.0	20.9
10 28	3 9.53	+37 15.0	2.067	2.984	8.9	20.0	10 28	3 7.25	+16 47.4	1.849	2.822	5.0	20.7
11 7	2 58.78	+37 1.0	2.032	2.979	6.8	19.8	11 7	2 58.45	+16 7.8	1.829	2.820	0.8	20.4
11 17	2 47.74	+36 25.5	2.025	2.974	6.5	19.8	11 17	2 49.50	+15 26.6	1.839	2.817	3.6	20.6
11 27	2 37.68	+35 32.5	2.045	2.968	8.1	19.9	11 27	2 41.45	+14 48.9	1.877	2.814	7.7	20.9
12 7	2 29.63	+34 29.0	2.093	2.962	10.7	20.0	12 7	2 35.14	+14 18.9	1.941	2.811	11.3	21.1
12 17	2 24.24	+33 22.7	2.165	2.956	13.3	20.2	12 17	2 31.10	+13 59.7	2.028	2.809	14.4	21.3
409213	2003 <i>WJ</i> ₇₁	11	8.9 330°17	1°4/ 10.3 18			216596	2002 <i>PE</i> ₁₀₅	11	8			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
301671	2010 <i>FQ</i> ₁₂		11 8.9 122°66	0°1/ 8.9 18			394123	2006 <i>FA</i> ₁₆		11 8.9 180°02	1°4/ 7.9 18		
10 8	3 22.78	+18 58.0	2.009	2.860	12.5	21.6	10 8	3 21.65	+14 58.7	2.091	2.949	11.8	22.6
10 18	3 16.25	+18 32.1	1.950	2.874	9.0	21.4	10 18	3 15.46	+14 16.6	2.021	2.951	8.4	22.4
10 28	3 7.89	+17 57.4	1.916	2.887	5.0	21.2	10 28	3 7.49	+13 28.5	1.978	2.951	4.7	22.1
11 7	2 58.55	+17 16.7	1.910	2.900	0.8	21.0	11 7	2 58.51	+12 37.9	1.962	2.952	1.4	21.9
11 17	2 49.21	+16 33.7	1.934	2.913	3.4	21.2	11 17	2 49.45	+11 49.4	1.977	2.951	4.0	22.1
11 27	2 40.88	+15 53.5	1.987	2.925	7.3	21.5	11 27	2 41.26	+11 7.6	2.021	2.950	7.8	22.3
12 7	2 34.36	+15 20.3	2.067	2.936	10.8	21.7	12 7	2 34.72	+10 36.4	2.092	2.949	11.2	22.5
12 17	2 30.10	+14 57.3	2.170	2.947	13.7	21.9	12 17	2 30.34	+10 18.2	2.185	2.947	14.1	22.7
286843	2002 <i>NU</i> ₅₈		11 8.9 101°17	4°0/ 5.4 18			172232	2002 <i>RL</i> ₁₃₁		11 8.9 330°41	5°7/12.8 18		
10 8	3 17.25	+ 5 56.7	2.342	3.209	10.4	20.6	10 8	3 20.02	+32 58.8	1.545	2.374	16.8	19.3
10 18	3 12.08	+ 4 57.2	2.286	3.215	7.6	20.5	10 18	3 15.26	+32 54.3	1.465	2.362	13.4	19.1
10 28	3 5.50	+ 3 59.1	2.257	3.222	5.0	20.3	10 28	3 7.77	+32 25.1	1.406	2.351	9.7	18.8
11 7	2 58.17	+ 3 7.2	2.256	3.229	4.1	20.3	11 7	2 58.59	+31 30.0	1.370	2.340	6.5	18.6
11 17	2 50.81	+ 2 25.7	2.285	3.235	5.7	20.4	11 17	2 49.08	+30 12.0	1.360	2.330	6.1	18.6
11 27	2 44.20	+ 1 57.9	2.341	3.242	8.4	20.6	11 27	2 40.79	+28 39.0	1.377	2.321	9.1	18.7
12 7	2 38.94	+ 1 45.4	2.423	3.248	11.0	20.8	12 7	2 34.90	+27 2.0	1.418	2.313	13.1	18.9
12 17	2 35.45	+ 1 48.2	2.527	3.254	13.3	20.9	12 17	2 32.12	+25 31.0	1.481	2.305	16.7	19.2
436542	2011 <i>GZ</i> ₄₂		11 8.9 164°64	0°2/ 8.8 18			115237	2003 <i>SG</i> ₁₄₇		11 8.9 174°48	4°1/11.2 18		
10 8	3 24.40	+17 45.4	1.853	2.708	13.2	22.2	10 8	3 27.16	+27 46.6	1.599	2.434	16.0	19.6
10 18	3 17.63	+17 25.2	1.786	2.713	9.5	22.0	10 18	3 20.16	+27 59.9	1.529	2.435	12.3	19.4
10 28	3 8.77	+16 56.7	1.744	2.717	5.3	21.7	10 28	3 10.42	+27 55.1	1.481	2.437	8.2	19.2
11 7	2 58.71	+16 22.4	1.730	2.721	0.8	21.4	11 7	2 59.01	+27 31.4	1.459	2.438	4.6	19.0
11 17	2 48.54	+15 46.2	1.745	2.723	3.7	21.6	11 17	2 47.36	+26 50.8	1.464	2.438	5.1	19.0
11 27	2 39.42	+15 12.9	1.789	2.726	8.0	21.9	11 27	2 37.00	+25 59.8	1.497	2.439	8.8	19.2
12 7	2 32.25	+14 47.1	1.859	2.728	11.8	22.1	12 7	2 29.13	+25 6.5	1.555	2.438	12.8	19.4
12 17	2 27.59	+14 32.1	1.951	2.729	15.0	22.4	12 17	2 24.40	+24 18.6	1.635	2.438	16.4	19.7
184024	2004 <i>FO</i> ₄₂		11 8.9 119°16	0°1/ 8.9 16			470405	2007 <i>UT</i> ₈₁		11 8.9 55°22	2°4/ 7.8 17		
10 8	3 25.39	+19 0.3	1.796	2.649	13.7	21.2	10 8	3 24.88	+14 6.9	1.083	1.970	18.1	21.0
10 18	3 18.22	+18 29.6	1.743	2.668	9.8	21.0	10 18	3 18.65	+13 27.3	1.045	1.987	12.9	20.7
10 28	3 9.00	+17 49.3	1.714	2.686	5.5	20.8	10 28	3 9.49	+12 40.9	1.028	2.005	7.1	20.5
11 7	2 58.73	+17 2.3	1.713	2.703	0.9	20.5	11 7	2 58.83	+11 54.0	1.034	2.023	2.4	20.3
11 17	2 48.54	+16 13.4	1.741	2.720	3.7	20.7	11 17	2 48.35	+11 13.7	1.066	2.042	6.1	20.6
11 27	2 39.56	+15 28.1	1.799	2.736	8.0	21.0	11 27	2 39.68	+10 46.8	1.122	2.061	11.4	20.9
12 7	2 32.64	+14 51.5	1.882	2.751	11.7	21.3	12 7	2 33.92	+10 37.3	1.199	2.080	16.1	21.3
12 17	2 28.26	+14 26.7	1.989	2.766	14.8	21.5	12 17	2 31.52	+10 46.0	1.296	2.099	19.8	21.6
458472	2011 <i>BV</i> ₈₆		11 8.9 320°88	3°6/ 6.5 17			328364	2008 <i>OH</i> ₂₄		11 8.9 62°85	4°9/ 4.9 18		
10 8	3 17.87	+ 8 49.2	1.868	2.743	12.2	21.6	10 8	3 17.34	+ 3 45.0	2.186	3.054	11.0	20.6
10 18	3 13.01	+ 8 6.6	1.794	2.729	8.9	21.3	10 18	3 12.23	+ 2 43.3	2.133	3.060	8.2	20.4
10 28	3 6.24	+ 7 22.8	1.744	2.716	5.4	21.1	10 28	3 5.63	+ 1 44.9	2.105	3.066	5.7	20.3
11 7	2 58.31	+ 6 42.6	1.721	2.702	3.6	21.0	11 7	2 58.22	+ 0 55.1	2.106	3.072	4.9	20.3
11 17	2 50.16	+ 6 10.8	1.725	2.690	5.8	21.1	11 17	2 50.78	+ 0 18.3	2.135	3.078	6.6	20.4
11 27	2 42.82	+ 5 51.9	1.757	2.677	9.4	21.3	11 27	2 44.13	+ 0 2.5	2.191	3.085	9.2	20.6
12 7	2 37.13	+ 5 48.4	1.814	2.665	12.9	21.5	12 7	2 38.92	+ 0 6.0	2.272	3.091	11.9	20.8
12 17	2 33.67	+ 6 0.9	1.891	2.654	15.9	21.7	12 17	2 35.57	+ 0 7.2	2.374	3.097	14.1	20.9
146285	2001 <i>FZ</i> ₁₄₅		11 8.9 95°35	0°9/ 8.2 17			30593	Dangovski		11 8.9 23°86	3°6/ 6.8 18		
10 8	3 24.57	+19 10.0	1.567	2.428	14.9	19.6	10 8	3 20.32	+ 8 57.9	1.700	2.575	13.2	18.6
10 18	3 17.70	+17 50.6	1.521	2.451	10.6	19.4	10 18	3 14.77	+ 8 22.2	1.642	2.578	9.6	18.4
10 28	3 8.69	+16 19.2	1.500	2.475	5.8	19.2	10 28	3 7.20	+ 7 46.1	1.609	2.581	5.7	18.1
11 7	2 58.67	+14 42.4	1.507	2.497	1.1	18.9	11 7	2 58.48	+ 7 14.5	1.601	2.584	3.6	18.0
11 17	2 48.89	+13 8.4	1.543	2.520	4.5	19.2	11 17	2 49.68	+ 6 51.9	1.622	2.588	5.9	18.2
11 27	2 40.52	+11 45.5	1.607	2.541	9.0	19.6	11 27	2 41.91	+ 6 42.2	1.669	2.592	9.6	18.4
12 7	2 34.41	+10 39.7	1.697	2.563	12.9	19.9	12 7	2 36.03	+ 6 47.3	1.741	2.596	13.2	18.6
12 17	2 30.96	+ 9 53.9	1.808	2.583	16.1	20.1	12 17	2 32.57	+ 7 7.5	1.834	2.601	16.2	18.9
189926	2003 <i>SP</i> ₁₈₃		11 8.9 2°60	1°3/ 9.9 18			516288	2016 <i>WL</i> ₃₆		11 8.9 317°08	3°1/11.2 18		
10 8	3 18.46	+23 1.7	2.162	3.008	12.0	19.5	10 8	3 21.19	+28 2.6	1.687	2.527	15.1	21.4
10 18	3 13.23	+22 34.7	2.089	3.008	8.8	19.3	10 18	3 15.68	+27 30.8	1.613	2.524	11.5	21.2
10 28	3 6.26	+21 56.1	2.041	3.008	5.2	19.1	10 28	3 7.81	+26 39.0	1.562	2.522	7.4	20.9
11 7	2 58.31	+21 7.9	2.020	3.008	1.8	18.8	11 7	2 58.59	+25 28.9	1.536	2.519	3.7	20.7
11 17	2 50.26	+20 13.9	2.029	3.008	3.1	18.9	11 17	2 49.22	+24 5.3	1.539	2.517	4.2	20.7
11 27	2 43.04	+19 19.0	2.066	3.009	6.7	19.2	11 27	2 41.01	+22 36.5	1.569	2.515	8.1	20.9
12 7	2 37.41	+18 28.5	2.131	3.009	10.1	19.4	12 7	2 34.95	+21 11.4	1.625	2.513	12.1	21.2
12 17	2 33.87	+17 46.6	2.219	3.010	13.0	19.6	12 17	2 31.63	+19 57.3	1.704	2.511	15.7	21.4
42723	1998 <i>QL</i> ₇₃		11 8.9 306°00	0°8/ 9.6 18			426671	2013 <i>TX</i> ₁₃		11 8.9 107°46	0°5/ 8.7 16		
10 8	3 18.19	+22 1.9	2.102	2.952	12.1	18.3	10 8	3 26.30	+16 43.2	1.454	2.320	15.6	21.2
10 18	3 13.09	+21 22.6	2.024	2.946	8.8	18.1	10 18	3 19.35	+16 30.0	1.399	2.331	11.2	21.0
10 28	3 6.22	+20 31.4	1.970	2.940	5.1	17.8	10 28	3 9.84	+16 8.5	1.368	2.342	6.2	20.7
11 7	2 58.31	+19 31.0	1.945	2.935	1.3	17.6	11 7	2 58.92	+15 41.6	1.362	2.352	1.0	20.4
11 17	2 50.27	+18 25.6	1.949	2.929	3.2	17.7	11 17	2 47.96	+15 13.6	1.384	2.363	4.4	20.7
11 27	2 43.05	+17 21.1	1.982	2.923	7.0	17.9	11 27	2 38.40	+14 50.0	1.433	2.373	9.4	21.0
12 7	2 37.45	+16 23.0	2.042	2.918	10.6	18.1	12 7	2 31.28	+14 35.5	1.507	2.383	13.7	21.3
12 17	2 33.97	+15 35.6	2.125	2.913	13.6	18.3	12 17	2 27.18	+14 33.2	1.602	2.392	17.2	21.5
442210	2011 <i>GK</i> ₈₅		11 8.9 238°14	3°9/ 6.6 18			162007	1993 <i>FC</i> ₃₂		11 8.9 83°22	2		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
491484	2012 <i>HM</i> ₄₅		11 8.9 255°52	1.4°/ 7.7	17		512126	2015 <i>PQ</i> ₁₇		11 8.9 67°12	6°8/13.5	18	
10 8	3 19.08	+13 42.0	2.555	3.411	10.0	22.8	10 8	3 25.37	+35 22.0	1.706	2.510	16.5	20.6
10 18	3 13.52	+13 10.8	2.464	3.392	7.2	22.6	10 18	3 18.86	+35 49.9	1.643	2.519	13.4	20.5
10 28	3 6.42	+12 35.3	2.400	3.373	4.0	22.4	10 28	3 9.68	+35 54.8	1.601	2.529	10.1	20.3
11 7	2 58.38	+11 58.1	2.365	3.354	1.4	22.2	11 7	2 58.95	+35 34.4	1.583	2.539	7.5	20.2
11 17	2 50.12	+11 22.6	2.361	3.333	3.6	22.3	11 17	2 48.07	+34 50.0	1.591	2.548	7.0	20.2
11 27	2 42.44	+10 52.4	2.386	3.313	6.9	22.5	11 27	2 38.54	+33 47.7	1.626	2.558	9.1	20.3
12 7	2 36.03	+10 30.5	2.439	3.292	10.0	22.7	12 7	2 31.49	+32 36.7	1.686	2.568	12.1	20.5
12 17	2 31.40	+10 19.0	2.515	3.271	12.6	22.8	12 17	2 27.52	+31 25.9	1.769	2.578	15.1	20.7
222123	1999 <i>VG</i> ₆₄		11 8.9 6°85	0°5/ 8.6	17		481922	2009 <i>BW</i> ₈₁		11 8.9 288°70	0°2/ 8.9	16	
10 8	3 20.75	+15 32.2	1.697	2.566	13.6	19.9	10 8	3 24.60	+17 1.2	1.756	2.615	13.7	21.5
10 18	3 15.22	+15 36.5	1.633	2.567	9.8	19.6	10 18	3 18.33	+17 11.3	1.661	2.589	10.0	21.2
10 28	3 7.52	+15 35.7	1.593	2.568	5.4	19.4	10 28	3 9.52	+17 15.1	1.590	2.563	5.7	20.9
11 7	2 58.56	+15 31.5	1.580	2.570	0.9	19.1	11 7	2 58.97	+17 13.5	1.546	2.536	1.0	20.5
11 17	2 49.42	+15 26.6	1.594	2.573	3.9	19.3	11 17	2 47.82	+17 8.5	1.530	2.509	4.0	20.7
11 27	2 41.29	+15 24.7	1.636	2.576	8.3	19.6	11 27	2 37.43	+17 3.7	1.543	2.482	8.8	20.9
12 7	2 35.13	+15 28.9	1.703	2.581	12.2	19.8	12 7	2 28.98	+17 3.3	1.581	2.456	13.2	21.1
12 17	2 31.50	+15 41.5	1.791	2.585	15.5	20.1	12 17	2 23.32	+17 10.8	1.641	2.428	17.0	21.3
283643	2002 <i>GJ</i> ₇₁		11 8.9 163°58	0°3/ 9.1	18		422474	2014 <i>SR</i> ₃₂₅		11 8.9 292°90	5°1/ 3.7	17	
10 8	3 24.48	+18 6.2	1.950	2.802	12.8	20.8	10 8	3 16.78	+ 5 50.9	2.217	3.087	10.8	20.5
10 18	3 17.68	+18 5.6	1.881	2.806	9.3	20.6	10 18	3 12.01	+ 3 59.3	2.138	3.067	8.0	20.2
10 28	3 8.82	+17 57.6	1.838	2.809	5.3	20.4	10 28	3 5.63	+ 2 5.4	2.085	3.047	5.7	20.1
11 7	2 58.77	+17 43.6	1.822	2.812	1.0	20.1	11 7	2 58.30	+ 0 16.5	2.062	3.027	5.2	20.0
11 17	2 48.57	+17 26.2	1.835	2.814	3.5	20.3	11 17	2 50.77	- 1 20.0	2.069	3.007	7.2	20.1
11 27	2 39.34	+17 9.3	1.878	2.816	7.6	20.6	11 27	2 43.91	- 2 38.0	2.104	2.987	10.1	20.2
12 7	2 31.97	+16 56.8	1.947	2.818	11.3	20.8	12 7	2 38.42	- 3 34.0	2.164	2.966	12.9	20.4
12 17	2 27.04	+16 51.9	2.040	2.819	14.4	21.0	12 17	2 34.81	- 4 7.0	2.244	2.946	15.4	20.5
313687	2003 <i>SK</i> ₃₄₄		11 8.9 143°15	0°8/ 8.2	18		103944	2000 <i>DE</i> ₇₁		11 8.9 152°26	1°6/ 9.9	18	
10 8	3 18.55	+15 54.1	2.678	3.531	9.7	21.8	10 8	3 25.00	+22 46.1	1.845	2.689	13.8	20.5
10 18	3 12.91	+15 17.7	2.613	3.540	6.9	21.6	10 18	3 18.15	+22 32.0	1.779	2.696	10.2	20.3
10 28	3 5.96	+14 36.2	2.575	3.549	3.8	21.5	10 28	3 9.13	+22 5.2	1.736	2.703	6.1	20.0
11 7	2 58.29	+13 52.5	2.567	3.557	0.9	21.2	11 7	2 58.88	+21 27.2	1.721	2.709	2.1	19.8
11 17	2 50.61	+13 9.7	2.589	3.565	3.0	21.4	11 17	2 48.54	+20 41.7	1.735	2.715	3.6	19.9
11 27	2 43.61	+12 31.4	2.642	3.572	6.1	21.7	11 27	2 39.32	+19 54.3	1.779	2.720	7.7	20.2
12 7	2 37.89	+12 0.5	2.722	3.579	8.9	21.8	12 7	2 32.13	+19 10.9	1.848	2.724	11.5	20.4
12 17	2 33.83	+11 39.2	2.827	3.586	11.3	22.0	12 17	2 27.53	+18 36.4	1.940	2.728	14.7	20.6
495605	2015 <i>BP</i> ₁₄₆		11 8.9 98°36	4°3/ 6.7	16		319157	2005 <i>YG</i> ₆₉		11 8.9 80°66	0°3/ 8.7	18	
10 8	3 25.86	+ 8 2.3	1.474	2.347	15.0	21.6	10 8	3 20.66	+17 16.3	2.137	2.993	11.7	20.5
10 18	3 18.77	+ 7 19.0	1.432	2.365	10.8	21.4	10 18	3 14.69	+16 59.2	2.081	3.008	8.4	20.4
10 28	3 9.40	+ 6 36.7	1.412	2.383	6.6	21.2	10 28	3 7.06	+16 35.7	2.051	3.024	4.6	20.2
11 7	2 58.85	+ 6 1.3	1.419	2.401	4.3	21.1	11 7	2 58.54	+16 8.1	2.048	3.039	0.7	19.9
11 17	2 48.43	+ 5 37.7	1.454	2.418	6.8	21.3	11 17	2 50.02	+15 39.7	2.076	3.054	3.2	20.1
11 27	2 39.42	+ 5 30.0	1.515	2.434	10.7	21.6	11 27	2 42.41	+15 14.2	2.132	3.069	6.9	20.4
12 7	2 32.73	+ 5 39.4	1.600	2.451	14.4	21.9	12 7	2 36.42	+14 55.1	2.215	3.084	10.2	20.6
12 17	2 28.83	+ 6 5.2	1.705	2.467	17.5	22.1	12 17	2 32.50	+14 44.8	2.322	3.099	12.9	20.8
225242	2009 <i>QL</i> ₁₄		11 8.9 58°90	0°4/ 8.6	18		523373	2017 <i>CU</i> ₃₅		11 8.9 247°32	3°6/ 12.3	18	
10 8	3 20.50	+17 34.3	1.887	2.748	12.8	20.6	10 8	3 20.21	+31 32.1	2.697	3.498	11.1	21.6
10 18	3 14.63	+17 2.8	1.841	2.771	9.1	20.4	10 18	3 14.43	+31 23.4	2.601	3.484	8.8	21.4
10 28	3 6.99	+16 23.8	1.820	2.794	5.0	20.3	10 28	3 6.99	+31 0.2	2.529	3.469	6.2	21.2
11 7	2 58.46	+15 40.7	1.827	2.817	0.8	20.0	11 7	2 58.55	+30 22.3	2.485	3.454	4.1	21.0
11 17	2 50.03	+14 57.9	1.862	2.840	3.6	20.3	11 17	2 49.90	+29 31.3	2.471	3.439	4.0	21.0
11 27	2 42.67	+14 20.1	1.926	2.863	7.5	20.5	11 27	2 41.93	+28 31.3	2.487	3.423	6.1	21.1
12 7	2 37.11	+13 51.3	2.016	2.887	10.9	20.8	12 7	2 35.38	+27 27.6	2.531	3.407	8.8	21.3
12 17	2 33.78	+13 33.9	2.128	2.910	13.8	21.1	12 17	2 30.76	+26 25.4	2.601	3.391	11.3	21.4
445627	2011 <i>SD</i> ₂₂₉		11 8.9 176°16	2°4/10.4	18		437918	2002 <i>JR</i> ₂		11 8.9 127°45	12°7/29.8	16	
10 8	3 23.00	+24 7.8	1.946	2.787	13.3	21.6	10 8	3 24.93	-27 0.5	2.389	3.137	13.9	21.6
10 18	3 16.74	+24 13.8	1.873	2.787	10.0	21.4	10 18	3 17.47	-28 15.8	2.378	3.156	13.1	21.5
10 28	3 8.36	+24 7.4	1.825	2.788	6.2	21.2	10 28	3 8.47	-29 5.7	2.388	3.174	12.7	21.5
11 7	2 58.72	+23 49.1	1.803	2.788	2.8	21.0	11 7	2 58.76	-29 25.3	2.420	3.191	12.8	21.6
11 17	2 48.89	+23 21.2	1.810	2.788	3.7	21.1	11 17	2 49.24	-29 12.8	2.473	3.208	13.5	21.7
11 27	2 40.02	+22 48.0	1.846	2.788	7.4	21.3	11 27	2 40.79	-28 29.4	2.547	3.224	14.4	21.8
12 7	2 33.04	+22 15.2	1.908	2.788	11.0	21.5	12 7	2 34.04	-27 19.4	2.638	3.239	15.3	21.9
12 17	2 28.55	+21 47.5	1.993	2.788	14.1	21.7	12 17	2 29.38	-25 48.1	2.744	3.254	16.2	22.0
453558	2010 <i>AD</i> ₁		11 8.9 313°45	3°7/11.9	17		308878	2006 <i>SC</i> ₇₈		11 8.9 20°07	0°5/ 8.7	18	
10 8	3 18.37	+30 0.3	2.006	2.833	13.5	20.8	10 8	3 21.65	+16 7.4	1.611	2.480	14.2	20.6
10 18	3 13.59	+29 36.7	1.909	2.810	10.5	20.5	10 18	3 15.95	+16 2.1	1.550	2.484	10.2	20.4
10 28	3 6.69	+28 54.1	1.834	2.786	7.2	20.3	10 28	3 7.99	+15 50.3	1.513	2.488	5.7	20.1
11 7	2 58.46	+27 52.8	1.785	2.763	4.2	20.0	11 7	2 58.73	+15 34.4	1.502	2.492	1.0	19.8
11 17	2 49.91	+26 35.8	1.765	2.740	4.3	20.0	11 17	2 49.33	+15 17.8	1.518	2.497	4.1	20.1
11 27	2 42.19	+25 9.6	1.773	2.717	7.5	20.2	11 27	2 41.03	+15 4.8	1.562	2.503	8.6	20.4
12 7	2 36.25	+23 42.1	1.808	2.695	11.1	20.3	12 7	2 34.82	+14 59.4	1.630	2.509	12.7	20.6
12 17	2 32.73	+22 20.8	1.866	2.673	14.5	20.5	12 17	2 31.25	+15 4.0	1.720	2.515	16.0	20.9
126732	2002 <i>CW</i> ₂₇₂		11 8.9 119°30	1°8/ 7.4	18		398969	2013 <i>EE</i> ₃₄		11 8.			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
22329	1991 <i>VT</i> ₅	11 8.9 38°96'	4.3/ 6.3 18				185294	2006 <i>UW</i> ₂₃₇	11 8.9 310°36'	1.5/ 7.9 17			
10 8	3 20.43	+ 8 42.3	1.555	2.434	14.0	18.3	10 8	3 19.13	+15 7.5	1.705	2.577	13.4	20.6
10 18	3 14.99	+ 7 43.5	1.502	2.439	10.2	18.1	10 18	3 14.22	+14 28.9	1.624	2.560	9.6	20.3
10 28	3 7.41	+ 6 44.0	1.472	2.444	6.2	17.9	10 28	3 7.12	+13 42.5	1.568	2.543	5.4	20.0
11 7	2 58.63	+ 5 50.2	1.468	2.449	4.3	17.8	11 7	2 58.64	+12 52.5	1.538	2.527	1.6	19.8
11 17	2 49.81	+ 5 8.2	1.491	2.454	6.7	17.9	11 17	2 49.86	+12 4.0	1.535	2.511	4.6	19.9
11 27	2 42.12	+ 4 43.0	1.541	2.460	10.6	18.2	11 27	2 41.96	+11 23.0	1.560	2.496	9.1	20.2
12 7	2 36.46	+ 4 36.8	1.613	2.465	14.2	18.4	12 7	2 35.92	+10 54.4	1.609	2.480	13.2	20.4
12 17	2 33.35	+ 4 49.6	1.706	2.471	17.3	18.6	12 17	2 32.40	+10 41.1	1.680	2.465	16.7	20.6
488445	2016 <i>YG</i> ₇	11 8.9 273°27'	1.0/ 9.6 18				515921	2015 <i>PC</i> ₃₁₅	11 8.9 7°99'	7.8/ 12.5 18			
10 8	3 20.98	+22 14.5	1.805	2.658	13.7	21.1	10 8	3 25.95	+32 34.4	1.415	2.243	18.1	20.5
10 18	3 15.49	+21 39.3	1.720	2.644	10.1	20.8	10 18	3 19.93	+33 49.7	1.351	2.244	14.6	20.3
10 28	3 7.79	+20 50.0	1.660	2.630	5.9	20.6	10 28	3 10.65	+34 44.1	1.308	2.245	11.0	20.1
11 7	2 58.72	+19 48.9	1.626	2.616	1.6	20.3	11 7	2 59.25	+35 12.6	1.288	2.248	8.3	20.0
11 17	2 49.37	+18 40.8	1.621	2.602	3.6	20.4	11 17	2 47.38	+35 13.4	1.293	2.252	8.1	20.0
11 27	2 40.95	+17 32.6	1.645	2.587	8.1	20.6	11 27	2 36.89	+34 50.9	1.323	2.256	10.6	20.1
12 7	2 34.45	+16 31.1	1.694	2.573	12.2	20.8	12 7	2 29.27	+34 14.0	1.376	2.261	14.1	20.4
12 17	2 30.50	+15 41.8	1.765	2.558	15.8	21.0	12 17	2 25.30	+33 32.6	1.449	2.267	17.4	20.6
206043	2002 <i>QU</i> ₆₈	11 8.9 264°09'	2.6/ 7.2 18				513331	2007 <i>GG</i> ₄₁	11 8.9 142°22'	0.1/ 8.9 18			
10 8	3 20.83	+11 37.8	1.810	2.680	12.8	20.8	10 8	3 23.67	+18 32.8	1.922	2.775	12.9	22.6
10 18	3 15.17	+10 59.4	1.742	2.676	9.2	20.6	10 18	3 17.06	+18 5.0	1.859	2.785	9.3	22.4
10 28	3 7.50	+10 17.5	1.698	2.672	5.3	20.3	10 28	3 8.49	+17 28.2	1.822	2.794	5.2	22.2
11 7	2 58.66	+ 9 36.6	1.682	2.668	2.6	20.1	11 7	2 58.85	+16 45.4	1.812	2.802	0.8	21.9
11 17	2 49.66	+ 9 1.4	1.694	2.664	5.1	20.3	11 17	2 49.16	+16 0.5	1.831	2.810	3.5	22.1
11 27	2 41.59	+ 8 36.5	1.734	2.661	9.0	20.5	11 27	2 40.51	+15 18.9	1.880	2.817	7.7	22.4
12 7	2 35.33	+ 8 25.0	1.799	2.657	12.7	20.7	12 7	2 33.74	+14 45.0	1.955	2.824	11.3	22.6
12 17	2 31.44	+ 8 28.3	1.885	2.653	15.8	21.0	12 17	2 29.34	+14 22.3	2.053	2.831	14.4	22.8
491378	2012 <i>BH</i> ₈₇	11 8.9 319°65'	3.7/ 10.7 17				30022	Kathibaker	11 8.9 199°00'	1.8/ 7.8 18			
10 8	3 21.45	+25 13.1	1.554	2.406	15.5	21.2	10 8	3 23.39	+14 14.5	1.795	2.658	13.2	20.2
10 18	3 16.52	+25 39.6	1.458	2.376	11.9	20.9	10 18	3 17.05	+13 36.0	1.725	2.656	9.5	19.9
10 28	3 8.74	+25 52.3	1.384	2.346	7.9	20.6	10 28	3 8.58	+12 51.4	1.679	2.653	5.3	19.7
11 7	2 58.93	+25 49.3	1.334	2.317	4.2	20.3	11 7	2 58.87	+12 4.6	1.661	2.650	1.8	19.4
11 17	2 48.38	+25 31.4	1.311	2.288	5.0	20.3	11 17	2 49.00	+11 20.5	1.672	2.646	4.6	19.6
11 27	2 38.64	+25 2.8	1.314	2.260	9.3	20.5	11 27	2 40.13	+10 44.5	1.712	2.642	8.8	19.9
12 7	2 31.14	+24 30.4	1.341	2.233	13.9	20.7	12 7	2 33.18	+10 20.6	1.776	2.637	12.7	20.1
12 17	2 26.81	+24 1.5	1.388	2.206	18.0	20.9	12 17	2 28.73	+10 11.1	1.863	2.632	15.9	20.3
70952	1999 <i>XE</i>	11 8.9 73°77'	0.6/ 8.5 18				173354	1999 <i>YD</i> ₁	11 8.9 334°06'	23.2/ 25.4 17			
10 8	3 23.12	+17 18.1	1.640	2.504	14.2	19.5	10 8	3 31.50	+58 22.7	1.021	1.745	29.9	18.8
10 18	3 16.75	+16 44.2	1.594	2.526	10.1	19.3	10 18	3 27.82	+60 42.6	0.963	1.735	28.2	18.6
10 28	3 8.29	+16 2.0	1.572	2.547	5.6	19.1	10 28	3 16.99	+62 15.9	0.915	1.726	26.4	18.4
11 7	2 58.78	+15 15.4	1.577	2.568	1.0	18.8	11 7	3 0.47	+62 44.8	0.879	1.718	24.7	18.2
11 17	2 49.38	+14 29.5	1.611	2.589	4.1	19.1	11 17	2 42.24	+61 56.5	0.854	1.711	23.6	18.1
11 27	2 41.25	+13 49.8	1.672	2.610	8.4	19.4	11 27	2 27.56	+59 52.6	0.845	1.705	23.2	18.1
12 7	2 35.21	+13 20.8	1.758	2.630	12.2	19.7	12 7	2 19.81	+56 50.7	0.850	1.700	23.9	18.1
12 17	2 31.74	+13 5.0	1.866	2.651	15.3	19.9	12 17	2 19.71	+53 15.2	0.871	1.696	25.5	18.2
8247	Cheryllhall	11 8.9 10°68'	1.2/ 8.1 18				405282	2003 <i>SQ</i> ₄₀₂	11 8.9 14°93'	3.4/ 6.2 18			
10 8	3 18.37	+14 30.9	2.040	2.906	11.7	17.1	10 8	3 16.86	+10 25.0	1.887	2.763	12.1	20.2
10 18	3 13.22	+14 6.3	1.974	2.907	8.4	16.9	10 18	3 12.18	+ 9 14.8	1.829	2.766	8.7	20.0
10 28	3 6.34	+13 37.0	1.934	2.909	4.7	16.7	10 28	3 5.77	+ 8 1.8	1.796	2.769	5.2	19.8
11 7	2 58.48	+13 5.9	1.921	2.911	1.3	16.4	11 7	2 58.41	+ 6 52.0	1.790	2.772	3.4	19.7
11 17	2 50.52	+12 36.8	1.937	2.913	3.8	16.6	11 17	2 50.99	+ 5 51.1	1.813	2.776	5.7	19.9
11 27	2 43.38	+12 13.6	1.981	2.916	7.6	16.9	11 27	2 44.46	+ 5 4.6	1.863	2.780	9.1	20.1
12 7	2 37.83	+11 59.4	2.052	2.919	11.0	17.1	12 7	2 39.56	+ 4 35.3	1.937	2.785	12.4	20.3
12 17	2 34.36	+11 56.2	2.144	2.922	13.8	17.3	12 17	2 36.76	+ 4 24.2	2.033	2.790	15.2	20.5
227939	2007 <i>GK</i> ₂₉	11 8.9 127°24'	1.0/ 9.8 18				82156	2001 <i>FJ</i> ₁₇₅	11 8.9 106°38'	5.9/ 5.8 17			
10 8	3 21.55	+20 57.3	2.667	3.504	10.2	21.3	10 8	3 26.03	+ 2 58.5	1.631	2.497	14.2	19.9
10 18	3 15.15	+21 0.2	2.602	3.517	7.5	21.1	10 18	3 18.72	+ 2 10.1	1.591	2.517	10.6	19.7
10 28	3 7.30	+20 55.6	2.563	3.529	4.4	21.0	10 28	3 9.37	+ 1 27.9	1.576	2.537	7.2	19.5
11 7	2 58.63	+20 44.7	2.553	3.541	1.4	20.8	11 7	2 58.99	+ 0 57.8	1.587	2.556	5.9	19.5
11 17	2 49.91	+20 29.0	2.574	3.552	2.6	20.9	11 17	2 48.76	+ 0 44.2	1.626	2.574	7.8	19.7
11 27	2 41.92	+20 11.4	2.625	3.564	5.7	21.1	11 27	2 39.82	+ 0 49.6	1.692	2.592	11.1	19.9
12 7	2 35.30	+19 55.2	2.705	3.574	8.5	21.3	12 7	2 33.01	+ 1 13.7	1.782	2.610	14.2	20.1
12 17	2 30.49	+19 43.1	2.810	3.585	11.0	21.5	12 17	2 28.78	+ 1 54.4	1.891	2.626	16.9	20.4
291624	2006 <i>HM</i> ₉	11 8.9 179°68'	2.3/ 6.6 18				200054	2008 <i>PV</i> ₈	11 8.9 52°71'	1.5/ 7.9 18			
10 8	3 16.99	+11 25.8	2.785	3.644	9.2	20.8	10 8	3 19.38	+13 59.3	2.004	2.870	11.9	19.9
10 18	3 11.82	+10 23.7	2.715	3.645	6.5	20.7	10 18	3 13.84	+13 30.3	1.954	2.886	8.5	19.7
10 28	3 5.41	+ 9 18.6	2.674	3.645	3.8	20.5	10 28	3 6.63	+12 57.3	1.928	2.903	4.7	19.5
11 7	2 58.33	+ 8 14.5	2.662	3.646	2.3	20.4	11 7	2 58.55	+12 23.5	1.931	2.920	1.5	19.4
11 17	2 51.19	+ 7 15.4	2.682	3.646	4.0	20.5	11 17	2 50.49	+11 52.8	1.962	2.937	4.0	19.6
11 27	2 44.67	+ 6 25.0	2.731	3.645	6.7	20.7	11 27	2 43.37	+11 29.0	2.022	2.954	7.6	19.8
12 7	2 39.31	+ 5 46.1	2.808	3.644	9.3	20.9	12 7	2 37.90	+11 15.0	2.108	2.972	10.9	20.1
12 17	2 35.49	+ 5 20.2	2.908	3.643	11.5	21.0	12 17	2 34.51	+11 12.3	2.216	2.989	13.6	20.3
322691	1999 <i>VZ</i> ₁₇₂	11 8.9 18°89'	0.6/ 9.4 18				488205	2015 <i>XU</i> ₂₆₂	11 8.9 77°20'	0.9/ 8.4 18			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
366999	2006 AS ₁	11 8.9	1°12'	3°0'	11.4	18	44466	1998 VT ₂₃	11 8.9	99°41'	0°6'	8.5	18
10 8	3 19.82	+28 2.9	2.075	2.905	13.0	20.6	10 8	3 19.96	+16 5.9	2.330	3.185	10.9	19.4
10 18	3 14.41	+27 46.3	2.000	2.905	9.9	20.4	10 18	3 14.16	+15 46.3	2.269	3.197	7.8	19.3
10 28	3 7.08	+27 14.1	1.949	2.905	6.5	20.2	10 28	3 6.83	+15 21.5	2.235	3.208	4.3	19.1
11 7	2 58.65	+26 27.2	1.925	2.905	3.5	20.0	11 7	2 58.67	+14 53.9	2.229	3.219	0.8	18.8
11 17	2 50.09	+25 28.8	1.929	2.905	3.8	20.0	11 17	2 50.47	+14 26.5	2.253	3.230	3.2	19.0
11 27	2 42.45	+24 24.3	1.962	2.905	6.9	20.2	11 27	2 43.07	+14 2.6	2.306	3.241	6.6	19.3
12 7	2 36.56	+23 20.4	2.022	2.906	10.3	20.4	12 7	2 37.13	+13 45.4	2.386	3.251	9.7	19.5
12 17	2 32.96	+22 22.7	2.106	2.906	13.3	20.6	12 17	2 33.11	+13 36.9	2.491	3.262	12.3	19.7
279227	2009 UZ ₁₀₄	11 8.9	271°72'	0°8'	8.5	17	73363	2002 KG ₆	11 8.9	47°03'	7°8'	17.4	18
10 8	3 21.50	+14 23.4	2.286	3.141	11.0	20.6	10 8	3 23.40	+45 18.4	2.256	2.988	15.0	17.8
10 18	3 15.45	+14 25.7	2.204	3.131	8.0	20.4	10 18	3 17.12	+45 8.6	2.179	2.993	12.9	17.6
10 28	3 7.64	+14 24.6	2.148	3.121	4.4	20.1	10 28	3 8.63	+44 32.5	2.122	2.999	10.6	17.5
11 7	2 58.75	+14 21.7	2.121	3.111	1.0	19.8	11 7	2 58.96	+43 28.6	2.089	3.004	8.7	17.4
11 17	2 49.62	+14 19.0	2.123	3.100	3.4	20.0	11 17	2 49.33	+41 58.5	2.083	3.010	7.8	17.3
11 27	2 41.18	+14 19.1	2.156	3.090	7.1	20.2	11 27	2 40.95	+40 8.2	2.104	3.016	8.6	17.4
12 7	2 34.22	+14 24.5	2.215	3.079	10.4	20.4	12 7	2 34.72	+38 6.8	2.153	3.022	10.4	17.5
12 17	2 29.28	+14 37.0	2.298	3.069	13.2	20.6	12 17	2 31.13	+36 3.9	2.227	3.028	12.6	17.7
309777	2008 YN ₁₃₃	11 8.9	213°36'	2°0'	10.4	18	160588	1999 RG ₁₇	11 8.9	56°70'	5°7'	12.5	18
10 8	3 22.51	+24 41.0	2.081	2.917	12.7	21.3	10 8	3 25.92	+31 27.6	1.510	2.338	17.1	19.9
10 18	3 16.35	+24 24.5	2.000	2.912	9.5	21.1	10 18	3 19.35	+31 52.3	1.458	2.355	13.5	19.8
10 28	3 8.20	+23 54.6	1.944	2.907	5.9	20.8	10 28	3 10.04	+31 55.1	1.427	2.373	9.5	19.6
11 7	2 58.86	+23 12.6	1.915	2.901	2.5	20.6	11 7	2 59.21	+31 34.5	1.421	2.390	6.4	19.4
11 17	2 49.33	+22 21.5	1.916	2.894	3.4	20.7	11 17	2 48.35	+30 53.1	1.440	2.408	6.2	19.5
11 27	2 40.68	+21 26.6	1.946	2.888	7.1	20.9	11 27	2 39.01	+29 57.7	1.486	2.427	9.0	19.7
12 7	2 33.80	+20 33.9	2.003	2.881	10.7	21.1	12 7	2 32.30	+28 57.6	1.557	2.445	12.6	19.9
12 17	2 29.26	+19 48.5	2.084	2.873	13.8	21.3	12 17	2 28.75	+28 0.9	1.650	2.464	15.8	20.2
111158	2001 VJ ₁₀₇	11 8.9	142°63'	1°3'	9.9	18	142589	2002 TY ₁₀₃	11 8.9	96°01'	1°6'	7.9	18
10 8	3 20.98	+22 45.3	2.123	2.967	12.3	20.3	10 8	3 21.30	+14 22.8	1.832	2.698	12.9	20.6
10 18	3 15.12	+22 25.1	2.053	2.971	9.0	20.1	10 18	3 15.46	+13 47.8	1.771	2.704	9.2	20.4
10 28	3 7.45	+21 53.5	2.008	2.975	5.4	19.9	10 28	3 7.68	+13 7.4	1.735	2.710	5.1	20.2
11 7	2 58.75	+21 12.4	1.990	2.978	1.8	19.7	11 7	2 58.82	+12 25.4	1.727	2.716	1.6	20.0
11 17	2 49.96	+20 25.2	2.002	2.982	3.1	19.8	11 17	2 49.89	+11 46.2	1.747	2.722	4.3	20.2
11 27	2 42.06	+19 36.8	2.043	2.985	6.8	20.0	11 27	2 41.97	+11 14.8	1.796	2.728	8.4	20.4
12 7	2 35.83	+18 52.3	2.111	2.988	10.3	20.3	12 7	2 35.88	+10 54.6	1.870	2.734	12.0	20.7
12 17	2 31.79	+18 15.8	2.203	2.991	13.2	20.5	12 17	2 32.12	+10 47.7	1.965	2.740	15.0	20.9
383604	2007 HA ₄₂	11 8.9	246°26'	0°7'	8.6	18	383550	2007 ET ₈	11 8.9	323°05'	1°0'	8.4	18
10 8	3 23.93	+16 23.2	1.773	2.634	13.5	22.1	10 8	3 20.76	+16 37.3	1.291	2.172	16.2	20.8
10 18	3 17.65	+16 4.2	1.692	2.621	9.8	21.9	10 18	3 15.99	+16 8.2	1.219	2.159	11.8	20.5
10 28	3 9.07	+15 37.6	1.635	2.609	5.5	21.6	10 28	3 8.39	+15 28.5	1.169	2.146	6.6	20.2
11 7	2 59.05	+15 6.0	1.606	2.596	1.0	21.3	11 7	2 58.98	+14 42.3	1.143	2.134	1.3	19.8
11 17	2 48.69	+14 33.3	1.605	2.583	4.1	21.5	11 17	2 49.17	+13 55.6	1.143	2.122	5.1	20.0
11 27	2 39.26	+14 4.4	1.632	2.569	8.7	21.7	11 27	2 40.55	+13 16.1	1.168	2.111	10.6	20.3
12 7	2 31.79	+13 44.1	1.685	2.555	12.8	21.9	12 7	2 34.39	+12 49.9	1.215	2.101	15.5	20.6
12 17	2 26.93	+13 35.5	1.760	2.540	16.3	22.1	12 17	2 31.44	+12 40.8	1.282	2.091	19.7	20.8
96574	1998 UJ ₂₃	11 8.9	15°73'	8°6'	15.9	17	49965	1999 XA ₂₃₁	11 8.9	19°19'	1°6'	9.5	18
10 8	3 20.33	+40 42.8	1.617	2.406	17.9	18.2	10 8	3 27.01	+17 49.6	1.343	2.211	16.5	16.1
10 18	3 15.50	+40 59.1	1.555	2.413	15.0	18.0	10 18	3 20.34	+18 47.4	1.286	2.217	12.1	15.9
10 28	3 7.95	+40 46.5	1.512	2.422	12.0	17.8	10 28	3 10.74	+19 38.6	1.252	2.224	7.1	15.6
11 7	2 58.85	+40 2.6	1.492	2.431	9.5	17.7	11 7	2 59.36	+20 21.8	1.244	2.233	2.1	15.4
11 17	2 49.65	+38 49.6	1.496	2.442	8.6	17.7	11 17	2 47.73	+20 56.3	1.262	2.242	4.4	15.5
11 27	2 41.89	+37 14.8	1.525	2.454	9.9	17.8	11 27	2 37.49	+21 24.6	1.307	2.252	9.4	15.9
12 7	2 36.67	+35 29.3	1.579	2.466	12.5	18.0	12 7	2 29.90	+21 50.6	1.375	2.263	13.9	16.2
12 17	2 34.53	+33 44.0	1.655	2.480	15.2	18.2	12 17	2 25.66	+22 18.0	1.465	2.275	17.6	16.4
394235	2006 SW ₃₉₃	11 8.9	75°28'	1°5'	9.9	15	383011	2005 MS ₁₇	11 8.9	88°87'	5°1'	6.2	18
10 8	3 23.77	+22 1.0	1.842	2.690	13.6	21.5	10 8	3 24.49	+ 6 18.5	1.470	2.345	14.9	20.6
10 18	3 17.19	+21 57.0	1.791	2.711	10.0	21.3	10 18	3 17.90	+ 5 27.1	1.427	2.360	10.9	20.4
10 28	3 8.59	+21 41.6	1.764	2.732	5.9	21.1	10 28	3 9.06	+ 4 38.4	1.407	2.375	7.0	20.2
11 7	2 58.94	+21 16.6	1.764	2.753	2.0	20.9	11 7	2 59.05	+ 3 59.0	1.413	2.390	5.2	20.2
11 17	2 49.34	+20 45.2	1.793	2.773	3.4	21.0	11 17	2 49.11	+ 3 34.3	1.446	2.405	7.4	20.3
11 27	2 40.88	+20 12.1	1.851	2.794	7.4	21.3	11 27	2 40.52	+ 3 27.8	1.505	2.419	11.2	20.6
12 7	2 34.42	+19 42.4	1.935	2.814	10.9	21.6	12 7	2 34.18	+ 3 40.6	1.587	2.433	14.8	20.9
12 17	2 30.42	+19 20.1	2.042	2.834	13.9	21.8	12 17	2 30.57	+ 4 11.1	1.689	2.447	17.8	21.1
73896	1997 EG ₃₅	11 8.9	220°88'	1°1'	8.3	18	493910	2015 XC ₃₁₁	11 8.9	313°10'	1°8'	7.7	18
10 8	3 24.44	+15 48.1	1.805	2.664	13.3	20.1	10 8	3 18.57	+13 35.9	2.040	2.907	11.7	21.0
10 18	3 17.92	+15 18.3	1.727	2.656	9.6	19.8	10 18	3 13.46	+12 59.7	1.967	2.900	8.4	20.8
10 28	3 9.18	+14 41.0	1.673	2.647	5.4	19.6	10 28	3 6.58	+12 18.9	1.919	2.893	4.7	20.5
11 7	2 59.07	+13 59.3	1.648	2.638	1.2	19.3	11 7	2 58.66	+11 36.9	1.899	2.887	1.8	20.3
11 17	2 48.71	+13 17.7	1.651	2.628	4.3	19.5	11 17	2 50.57	+10 58.0	1.907	2.881	4.2	20.5
11 27	2 39.30	+12 41.6	1.683	2.617	8.7	19.7	11 27	2 43.27	+10 26.5	1.944	2.874	8.0	20.7
12 7	2 31.83	+12 15.6	1.741	2.606	12.7	19.9	12 7	2 37.54	+10 6.0	2.006	2.868	11.4	20.9
12 17	2 26.93	+12 2.8	1.820	2.594	16.1	20.1	12 17	2 33.91	+ 9 58.4	2.091	2.863	14.3	21.1
480964	2003 UH ₁₄₆	11 8.9	356°10'	3°6'	7.9	18	229724	2007 GQ ₇	11 8.9	236°29'	0°9'	9.5	18
10 8	3 19.02	+ 8 35.5	1.001										

EPHEMERIDES

11 8.9

11 8.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
108728	2001 <i>OH</i> ₂₈		11 8.9 113°14'	3°0'	7.3	18	436158	2009 <i>VZ</i> ₂₈		11 8.9 48°47'	0°8'	8.5	18
10 8	3 25.32	+10 20.0	1.629	2.497	14.1	19.5	10 8	3 22.04	+18 13.7	1.347	2.222	16.1	20.8
10 18	3 18.43	+9 50.8	1.577	2.510	10.1	19.3	10 18	3 16.54	+17 22.3	1.292	2.228	11.5	20.5
10 28	3 9.36	+9 20.3	1.550	2.522	5.9	19.1	10 28	3 8.48	+16 18.6	1.260	2.236	6.4	20.2
11 7	2 59.11	+8 52.7	1.549	2.534	3.0	19.0	11 7	2 59.00	+15 8.0	1.253	2.243	1.2	19.9
11 17	2 48.87	+8 32.4	1.577	2.546	5.5	19.2	11 17	2 49.48	+13 58.1	1.272	2.251	4.8	20.2
11 27	2 39.85	+8 23.2	1.632	2.558	9.6	19.4	11 27	2 41.35	+12 57.0	1.318	2.259	9.9	20.5
12 7	2 32.95	+8 27.5	1.712	2.569	13.3	19.7	12 7	2 35.64	+12 11.2	1.387	2.267	14.3	20.8
12 17	2 28.70	+8 45.7	1.813	2.579	16.4	19.9	12 17	2 32.89	+11 44.1	1.476	2.275	18.0	21.1
11749	1999 <i>NZ</i> ₁₀		11 8.9 49°76'	0°4'	9.3	18	481871	2008 <i>YR</i> ₉₂		11 8.9 338°01'	0°9'	9.4	17
10 8	3 20.30	+19 35.9	1.950	2.806	12.6	17.8	10 8	3 20.05	+19 52.3	1.330	2.205	16.2	21.4
10 18	3 14.73	+19 16.7	1.885	2.811	9.2	17.6	10 18	3 15.47	+19 44.7	1.258	2.193	11.9	21.1
10 28	3 7.29	+18 48.3	1.845	2.817	5.2	17.4	10 28	3 8.11	+19 24.6	1.208	2.182	6.9	20.8
11 7	2 58.77	+18 13.1	1.832	2.822	1.1	17.1	11 7	2 58.97	+18 54.0	1.182	2.172	1.6	20.5
11 17	2 50.17	+17 34.6	1.848	2.828	3.3	17.3	11 17	2 49.45	+18 17.3	1.182	2.163	4.4	20.6
11 27	2 42.50	+16 57.7	1.893	2.834	7.3	17.6	11 27	2 41.10	+17 41.0	1.207	2.155	9.7	20.9
12 7	2 36.59	+16 26.8	1.963	2.840	10.9	17.8	12 7	2 35.17	+17 12.1	1.255	2.148	14.6	21.2
12 17	2 32.93	+16 5.4	2.057	2.846	14.0	18.0	12 17	2 32.40	+16 55.5	1.322	2.141	18.7	21.4
124067	2001 <i>FK</i> ₁₇₅		11 8.9 194°71'	0°9'	8.4	17	444504	2006 <i>RM</i> ₈₇		11 8.9 101°46'	1°6'	10.1	15
10 8	3 21.92	+13 39.1	2.702	3.551	9.8	19.8	10 8	3 24.98	+22 43.8	2.156	2.991	12.4	22.2
10 18	3 15.49	+13 41.4	2.625	3.550	7.0	19.7	10 18	3 17.82	+22 40.7	2.103	3.016	9.1	22.0
10 28	3 7.59	+13 41.2	2.575	3.547	3.9	19.5	10 28	3 8.90	+22 27.0	2.075	3.040	5.4	21.8
11 7	2 58.83	+13 39.8	2.555	3.545	1.0	19.2	11 7	2 59.06	+22 4.0	2.076	3.063	2.0	21.7
11 17	2 49.91	+13 38.9	2.566	3.542	3.0	19.4	11 17	2 49.27	+21 34.4	2.107	3.086	3.1	21.8
11 27	2 41.63	+13 40.8	2.608	3.538	6.2	19.6	11 27	2 40.53	+21 2.3	2.168	3.109	6.6	22.0
12 7	2 34.62	+13 47.3	2.678	3.535	9.1	19.8	12 7	2 33.58	+20 32.3	2.257	3.130	9.8	22.3
12 17	2 29.36	+13 59.9	2.772	3.530	11.5	20.0	12 17	2 28.86	+20 8.1	2.370	3.151	12.6	22.5
108992	2001 <i>PQ</i> ₅₆		11 8.9 293°17'	1°3'	9.7	18	445200	2009 <i>DX</i> ₆₀		11 8.9 157°01'	4°7'	11.8	18
10 8	3 22.77	+21 35.4	1.471	2.334	15.7	19.4	10 8	3 26.47	+29 56.5	2.024	2.838	13.9	21.1
10 18	3 17.28	+21 20.8	1.394	2.321	11.6	19.2	10 18	3 19.44	+30 34.5	1.950	2.841	10.9	20.9
10 28	3 9.06	+20 51.9	1.338	2.309	6.9	18.9	10 28	3 10.08	+30 57.3	1.900	2.843	7.7	20.7
11 7	2 59.10	+20 10.4	1.308	2.297	2.0	18.5	11 7	2 59.29	+31 2.8	1.877	2.845	5.2	20.6
11 17	2 48.76	+19 20.6	1.304	2.285	4.2	18.6	11 17	2 48.21	+30 51.5	1.881	2.848	5.2	20.6
11 27	2 39.53	+18 29.5	1.327	2.273	9.3	18.9	11 27	2 38.12	+30 27.0	1.915	2.849	7.8	20.7
12 7	2 32.65	+17 44.6	1.374	2.261	14.0	19.2	12 7	2 30.05	+29 55.1	1.975	2.851	10.9	20.9
12 17	2 28.83	+17 11.7	1.442	2.249	18.0	19.4	12 17	2 24.65	+29 22.2	2.059	2.853	13.8	21.1
480547	2015 <i>MY</i> ₅₅		11 8.9 84°90'	5°7'	13.5	18	235181	2003 <i>SW</i> ₇₇		11 8.9 197°45'	6°4'	13.7	18
10 8	3 27.10	+34 52.3	1.800	2.600	15.9	20.4	10 8	3 27.18	+36 50.6	2.221	2.998	14.0	20.4
10 18	3 19.75	+34 48.7	1.749	2.626	12.6	20.3	10 18	3 19.96	+37 19.7	2.138	2.995	11.5	20.2
10 28	3 10.08	+34 22.0	1.719	2.652	9.2	20.1	10 28	3 10.39	+37 29.4	2.077	2.992	8.9	20.1
11 7	2 59.23	+33 32.1	1.715	2.678	6.4	20.0	11 7	2 59.34	+37 17.2	2.042	2.988	6.9	19.9
11 17	2 48.54	+32 22.5	1.739	2.703	5.9	20.0	11 17	2 48.00	+36 43.2	2.035	2.983	6.5	19.9
11 27	2 39.33	+31 0.7	1.792	2.727	8.1	20.2	11 27	2 37.64	+35 51.3	2.056	2.978	8.1	20.0
12 7	2 32.50	+29 35.8	1.870	2.752	11.1	20.4	12 7	2 29.30	+34 48.6	2.104	2.973	10.7	20.2
12 17	2 28.52	+28 16.0	1.973	2.775	14.0	20.7	12 17	2 23.66	+33 42.7	2.177	2.967	13.3	20.3
401220	2011 <i>YG</i> ₆₄		11 8.9 20°39'	16°2'	31.6	18	144413	2004 <i>EF</i> ₁₁		11 8.9 341°34'	6°5'	11.1	18
10 8	3 23.66	-26 15.5	1.640	2.422	17.9	19.9	10 8	3 24.24	+26 50.6	1.083	1.949	19.8	19.2
10 18	3 17.20	-27 17.3	1.618	2.428	16.8	19.9	10 18	3 19.44	+28 6.5	1.015	1.936	15.5	18.9
10 28	3 8.60	-27 45.7	1.615	2.436	16.2	19.9	10 28	3 10.81	+29 5.7	0.965	1.925	10.8	18.6
11 7	2 58.98	-27 34.1	1.631	2.444	16.3	19.9	11 7	2 59.49	+29 42.7	0.937	1.914	7.0	18.4
11 17	2 49.55	-26 40.4	1.666	2.452	17.1	20.0	11 17	2 47.33	+29 54.7	0.932	1.905	7.5	18.4
11 27	2 41.49	-25 7.6	1.720	2.462	18.2	20.1	11 27	2 36.61	+29 45.7	0.950	1.898	11.8	18.6
12 7	2 35.63	-23 2.4	1.791	2.472	19.5	20.2	12 7	2 29.18	+29 25.1	0.990	1.892	16.6	18.9
12 17	2 32.38	-20 33.4	1.878	2.482	20.7	20.4	12 17	2 26.05	+29 2.8	1.047	1.887	21.0	19.1
67164	2000 <i>AJ</i> ₂₂₉		11 8.9 126°20'	6°1'	12.8	18	190507	2000 <i>HU</i> ₂₆		11 8.9 147°41'	0°4'	8.7	18
10 8	3 27.63	+33 34.0	1.915	2.715	15.1	18.4	10 8	3 24.20	+17 53.4	1.882	2.736	13.1	20.8
10 18	3 20.41	+34 15.6	1.846	2.722	12.1	18.2	10 18	3 17.53	+17 21.2	1.819	2.745	9.4	20.6
10 28	3 10.66	+34 38.2	1.799	2.729	9.0	18.1	10 28	3 8.85	+16 40.2	1.781	2.753	5.2	20.4
11 7	2 59.37	+34 39.2	1.778	2.736	6.6	17.9	11 7	2 59.07	+15 53.7	1.771	2.761	0.9	20.1
11 17	2 47.82	+34 18.8	1.785	2.743	6.4	17.9	11 17	2 49.25	+15 6.1	1.790	2.768	3.7	20.3
11 27	2 37.43	+33 41.4	1.820	2.749	8.5	18.1	11 27	2 40.48	+14 22.7	1.839	2.775	7.9	20.6
12 7	2 29.30	+32 54.1	1.881	2.755	11.4	18.3	12 7	2 33.62	+13 48.3	1.914	2.781	11.6	20.8
12 17	2 24.08	+32 4.8	1.964	2.761	14.2	18.5	12 17	2 29.18	+13 25.9	2.011	2.786	14.7	21.1
232594	2003 <i>UJ</i> ₉		11 8.9 357°74'	15°1'	31.7	18	440010	2002 <i>JZ</i> ₁₄₄		11 8.9 165°36'	5°7'	4.8	18
10 8	3 22.57	-24 26.3	1.716	2.506	17.0	18.8	10 8	3 22.14	+ 0 30.6	2.237	3.093	11.2	22.1
10 18	3 16.46	-25 16.0	1.681	2.502	15.8	18.7	10 18	3 15.73	- 0 22.7	2.182	3.099	8.6	21.9
10 28	3 8.24	-25 35.3	1.664	2.499	15.2	18.6	10 28	3 7.74	- 1 10.1	2.152	3.103	6.4	21.8
11 7	2 58.94	-25 17.6	1.668	2.497	15.3	18.6	11 7	2 58.89	- 1 46.6	2.151	3.108	5.7	21.8
11 17	2 49.69	-24 20.1	1.692	2.496	16.1	18.7	11 17	2 50.01	- 2 8.5	2.178	3.111	7.2	21.9
11 27	2 41.65	-22 44.8	1.736	2.497	17.4	18.8	11 27	2 41.96	- 2 13.1	2.234	3.114	9.7	22.0
12 7	2 35.69	-20 38.0	1.799	2.498	18.8	18.9	12 7	2 35.41	- 2 0.2	2.314	3.116	12.2	22.2
12 17	2 32.25	-18 7.5	1.878	2.500	20.3	19.1	12 17	2 30.84	- 1 31.0	2.415	3.118	14.4	22.4
352947	2009 <i>BU</i> ₁₂		11 8.9 324°73'	13°2'	30.4	18	439756	2015 <i>FJ</i> ₃₃₄	</				

EPHEMERIDES

11 8.9

11 9.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
320267	2007 <i>RL</i> ₁₇		11 8.9 128°94	7°5/ 1.0 18			380524	2004 <i>GY</i>		11 8.9 166°70	2°7/ 8.8 13 C		
10 8	3 17.16	- 5 48.7	2.447	3.297	10.6	20.5	10 8	3 57.26	+ 6 41.9	0.879	1.734	24.2	22.1
10 18	3 12.10	- 7 33.0	2.404	3.303	8.8	20.4	10 18	3 43.86	+ 8 8.1	0.820	1.744	17.9	21.8
10 28	3 5.69	- 9 7.7	2.388	3.308	7.6	20.3	10 28	3 24.79	+ 9 47.6	0.782	1.752	10.4	21.4
11 7	2 58.57	-10 26.6	2.399	3.314	7.8	20.4	11 7	3 1.92	+11 36.1	0.769	1.758	3.1	21.1
11 17	2 51.42	-11 24.8	2.438	3.319	9.0	20.4	11 17	2 38.43	+13 25.9	0.785	1.762	7.5	21.3
11 27	2 44.97	-11 59.6	2.502	3.324	10.9	20.6	11 27	2 17.84	+15 11.4	0.829	1.764	15.1	21.8
12 7	2 39.80	-12 11.1	2.589	3.329	12.7	20.7	12 7	2 2.50	+16 51.5	0.896	1.763	21.4	22.1
12 17	2 36.32	-12 1.2	2.694	3.334	14.3	20.9	12 17	1 53.20	+18 28.6	0.981	1.761	26.4	22.5
211659	2003 <i>UC</i> ₂₇₉		11 8.9 349°36	0°2/ 9.1 18			116198	2003 <i>XJ</i> ₁₄		11 8.9 326°80	5°9/ 10.9 18		
10 8	3 18.54	+19 29.5	1.322	2.200	16.0	19.6	10 8	3 31.27	+27 28.5	1.635	2.462	16.1	18.4
10 18	3 14.30	+19 1.4	1.256	2.193	11.7	19.3	10 18	3 23.69	+29 1.1	1.556	2.454	12.6	18.2
10 28	3 7.41	+18 20.0	1.211	2.186	6.7	19.0	10 28	3 12.91	+30 21.9	1.500	2.447	9.0	17.9
11 7	2 58.89	+17 28.8	1.190	2.181	1.2	18.6	11 7	2 59.90	+31 25.2	1.471	2.440	6.2	17.8
11 17	2 50.12	+16 33.8	1.195	2.176	4.4	18.9	11 17	2 46.12	+32 7.3	1.469	2.434	6.6	17.8
11 27	2 42.54	+15 42.7	1.226	2.173	9.7	19.2	11 27	2 33.34	+32 29.4	1.496	2.428	9.8	17.9
12 7	2 37.34	+15 2.7	1.279	2.170	14.5	19.4	12 7	2 23.08	+32 37.0	1.548	2.422	13.5	18.1
12 17	2 35.14	+14 38.3	1.352	2.169	18.4	19.7	12 17	2 16.30	+32 37.8	1.621	2.417	16.8	18.4
214060	2004 <i>FC</i> ₈₈		11 8.9 151°07	0°5/ 8.7 18			44948	1999 <i>VT</i> ₆₃		11 8.9 208°27	0°2/ 9.1 18		
10 8	3 22.72	+16 3.1	2.361	3.211	11.0	21.1	10 8	3 22.22	+19 16.3	1.991	2.843	12.6	19.8
10 18	3 16.19	+15 53.9	2.295	3.219	7.9	20.9	10 18	3 16.20	+18 51.1	1.915	2.840	9.1	19.6
10 28	3 8.04	+15 39.8	2.254	3.226	4.4	20.7	10 28	3 8.20	+18 16.5	1.865	2.836	5.2	19.3
11 7	2 58.98	+15 22.5	2.242	3.233	0.8	20.4	11 7	2 59.04	+17 34.8	1.842	2.832	0.9	19.0
11 17	2 49.83	+15 4.5	2.261	3.239	3.1	20.6	11 17	2 49.71	+16 49.8	1.849	2.828	3.4	19.2
11 27	2 41.48	+14 48.9	2.311	3.245	6.6	20.9	11 27	2 41.27	+16 6.7	1.884	2.823	7.5	19.5
12 7	2 34.63	+14 38.7	2.387	3.250	9.8	21.1	12 7	2 34.59	+15 30.2	1.946	2.818	11.2	19.7
12 17	2 29.77	+14 36.0	2.488	3.255	12.4	21.3	12 17	2 30.21	+15 4.2	2.031	2.813	14.4	19.9
51506	2001 <i>FE</i> ₉₁		11 8.9 68°59	0°9/ 9.3 18			523387	2017 <i>DY</i> ₄₁		11 8.9 165°24	7°6/ 2.8 18		
10 8	3 33.24	+16 58.8	1.721	2.566	14.6	18.6	10 8	3 18.76	- 6 5.0	2.253	3.103	11.4	21.3
10 18	3 24.00	+17 49.6	1.679	2.599	10.5	18.5	10 18	3 13.36	- 7 9.0	2.203	3.104	9.3	21.2
10 28	3 12.45	+18 33.9	1.662	2.631	6.0	18.3	10 28	3 6.47	- 8 2.4	2.177	3.104	7.9	21.1
11 7	2 59.70	+19 10.5	1.674	2.663	1.4	18.0	11 7	2 58.75	- 8 39.7	2.178	3.105	7.8	21.1
11 17	2 47.09	+19 39.8	1.716	2.695	3.7	18.3	11 17	2 50.97	- 8 56.8	2.206	3.105	9.0	21.2
11 27	2 35.92	+20 4.0	1.789	2.727	7.9	18.6	11 27	2 43.96	- 8 52.0	2.260	3.105	11.0	21.3
12 7	2 27.14	+20 26.5	1.888	2.758	11.6	18.9	12 7	2 38.37	- 8 26.0	2.336	3.106	13.1	21.5
12 17	2 21.25	+20 50.4	2.011	2.789	14.6	19.2	12 17	2 34.63	- 7 41.1	2.432	3.106	15.0	21.6
117330	2004 <i>XF</i> ₈		11 8.9 190°89	3°7/ 6.1 18			420953	2013 <i>PD</i> ₆		11 8.9 284°01	0°2/ 8.9 18		
10 8	3 19.12	+ 5 25.8	2.467	3.329	10.1	19.6	10 8	3 26.32	+17 2.1	1.281	2.154	16.9	20.8
10 18	3 13.54	+ 4 52.8	2.402	3.328	7.4	19.5	10 18	3 20.05	+17 0.7	1.215	2.149	12.3	20.5
10 28	3 6.54	+ 4 22.0	2.363	3.327	4.9	19.3	10 28	3 10.74	+16 50.2	1.170	2.145	7.0	20.2
11 7	2 58.73	+ 3 56.9	2.352	3.326	3.7	19.2	11 7	2 59.51	+16 32.8	1.150	2.140	1.2	19.8
11 17	2 50.83	+ 3 40.5	2.371	3.325	5.3	19.3	11 17	2 47.92	+16 12.4	1.156	2.136	4.8	20.1
11 27	2 43.60	+ 3 35.5	2.419	3.324	7.9	19.5	11 27	2 37.68	+15 54.8	1.187	2.131	10.4	20.4
12 7	2 37.68	+ 3 43.0	2.492	3.323	10.6	19.7	12 7	2 30.13	+15 45.6	1.242	2.127	15.3	20.7
12 17	2 33.51	+ 4 3.0	2.589	3.321	12.9	19.8	12 17	2 26.02	+15 48.6	1.317	2.123	19.4	20.9
287664	2003 <i>NS</i> ₁₂		11 8.9 16°20	9°4/ 15.3 18			324497	2006 <i>UN</i> ₃₇₁		11 9.0 101°66	0°2/ 8.9 16		
10 8	3 21.32	+38 36.5	1.233	2.052	20.7	19.4	10 8	3 28.68	+17 7.5	1.618	2.474	14.8	21.6
10 18	3 16.85	+39 6.0	1.178	2.059	17.2	19.2	10 18	3 20.85	+16 58.5	1.572	2.498	10.6	21.4
10 28	3 9.01	+39 2.4	1.140	2.066	13.5	19.0	10 28	3 10.74	+16 41.5	1.549	2.522	5.9	21.2
11 7	2 59.17	+38 22.3	1.124	2.075	10.4	18.9	11 7	2 59.46	+16 19.1	1.554	2.545	1.0	20.9
11 17	2 49.19	+37 7.9	1.129	2.085	9.4	18.9	11 17	2 48.30	+15 54.9	1.588	2.567	4.0	21.2
11 27	2 40.98	+35 28.9	1.159	2.097	11.3	19.0	11 27	2 38.54	+15 33.7	1.650	2.588	8.5	21.5
12 7	2 35.87	+33 39.5	1.211	2.110	14.5	19.3	12 7	2 31.10	+15 19.9	1.738	2.609	12.4	21.8
12 17	2 34.46	+31 52.8	1.284	2.123	17.9	19.5	12 17	2 26.46	+15 16.1	1.848	2.629	15.6	22.1
483224	2015 <i>RQ</i> ₅₂		11 8.9 343°43	1°9/ 10.2 17			81349	2000 <i>GV</i> ₄₇		11 9.0 94°32	1°6/ 7.9 18		
10 8	3 20.92	+23 4.2	1.696	2.551	14.3	21.2	10 8	3 24.46	+15 37.9	1.640	2.504	14.2	19.8
10 18	3 15.61	+22 57.0	1.624	2.546	10.6	21.0	10 18	3 17.75	+14 44.4	1.595	2.526	10.1	19.6
10 28	3 8.00	+22 36.5	1.575	2.543	6.5	20.7	10 28	3 8.97	+13 43.8	1.574	2.548	5.6	19.4
11 7	2 59.01	+22 3.9	1.552	2.539	2.4	20.4	11 7	2 59.16	+12 41.3	1.580	2.569	1.7	19.2
11 17	2 49.79	+21 22.6	1.556	2.537	3.8	20.5	11 17	2 49.50	+11 42.7	1.615	2.590	4.6	19.4
11 27	2 41.59	+20 38.4	1.588	2.534	8.0	20.8	11 27	2 41.13	+10 54.1	1.678	2.611	8.9	19.7
12 7	2 35.43	+19 57.6	1.645	2.532	12.1	21.0	12 7	2 34.87	+10 19.7	1.767	2.631	12.6	20.0
12 17	2 31.92	+19 25.2	1.725	2.530	15.6	21.3	12 17	2 31.18	+10 1.4	1.877	2.650	15.7	20.2
39213	2000 <i>XZ</i> ₄₀		11 8.9 26°53	8°7/ 13.9 18			129636	1998 <i>HF</i> ₈₉		11 9.0 309°88	0°3/ 9.1 18		
10 8	3 26.47	+36 42.2	1.574	2.377	17.7	16.6	10 8	3 23.41	+17 49.9	1.538	2.404	14.9	19.2
10 18	3 20.12	+37 57.0	1.519	2.389	14.7	16.4	10 18	3 17.66	+17 54.0	1.462	2.393	10.9	18.9
10 28	3 10.74	+38 48.1	1.484	2.402	11.6	16.3	10 28	3 9.30	+17 49.9	1.409	2.382	6.2	18.6
11 7	2 59.48	+39 10.7	1.473	2.416	9.2	16.2	11 7	2 59.27	+17 39.0	1.381	2.372	1.2	18.2
11 17	2 47.93	+39 3.8	1.486	2.431	8.8	16.2	11 17	2 48.85	+17 24.1	1.381	2.361	4.1	18.4
11 27	2 37.82	+38 32.3	1.524	2.446	10.4	16.3	11 27	2 39.46	+17 9.9	1.408	2.351	9.1	18.7
12 7	2 30.45	+37 45.1	1.586	2.463	13.1	16.5	12 7	2 32.28	+17 1.2	1.459	2.342	13.6	19.0
12 17	2 26.52	+36 51.9	1.670	2.480	15.8	16.7	12 17	2 28.04	+17 1.9	1.531	2.332	17.4	19.2
432916	2011 <i>RR</i> ₇		11 8.9 351°18	1°8/ 10.8 18			103971	2000 <i>DW</i> ₈₀		11			