

EPHEMERIDES

12 4.9

12 5.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
189222	2004 <i>FC</i> ₁₀	12	4.9 116°95	4.3/ 6.1	18		158865	2004 <i>PY</i> ₁₃	12	5.0 107°96	1.1/ 4.7	18	
10 28	5 24.09	+32 44.0	1.862	2.629	16.4	20.8	10 28	5 17.81	+19 50.8	1.718	2.517	16.3	20.5
11 7	5 17.74	+33 24.4	1.793	2.648	13.2	20.7	11 7	5 12.75	+19 45.2	1.646	2.528	12.8	20.2
11 17	5 8.26	+33 55.1	1.745	2.667	9.5	20.5	11 17	5 4.87	+19 38.4	1.596	2.539	8.5	20.0
11 27	4 56.49	+34 11.4	1.723	2.685	5.9	20.3	11 27	4 54.97	+19 30.4	1.572	2.549	3.9	19.8
12 7	4 43.76	+34 11.0	1.730	2.702	4.3	20.2	12 7	4 44.19	+19 22.3	1.576	2.560	1.6	19.6
12 17	4 31.57	+33 54.6	1.766	2.718	6.5	20.4	12 17	4 33.85	+19 15.5	1.609	2.570	6.0	20.0
12 27	4 21.32	+33 26.5	1.830	2.734	9.9	20.6	12 27	4 25.19	+19 12.3	1.669	2.580	10.3	20.2
1 6	4 13.93	+32 53.0	1.919	2.749	13.2	20.9	1 6	4 19.05	+19 14.6	1.753	2.589	13.9	20.5
180682	2004 <i>GK</i> ₈₇	12	4.9 179°07	0.9/ 4.8	18		161878	2007 <i>CL</i> ₃₆	12	5.0 216°44	1.3/ 5.3	18	
10 28	5 14.94	+19 37.9	2.027	2.821	14.4	20.9	10 28	5 18.26	+26 6.8	1.714	2.509	16.5	21.4
11 7	5 10.24	+19 41.2	1.942	2.821	11.2	20.7	11 7	5 13.48	+26 11.0	1.628	2.505	13.1	21.1
11 17	5 3.10	+19 44.0	1.880	2.821	7.5	20.5	11 17	5 5.63	+26 8.8	1.562	2.502	9.0	20.9
11 27	4 54.15	+19 46.2	1.844	2.821	3.5	20.2	11 27	4 55.41	+25 58.6	1.522	2.498	4.4	20.6
12 7	4 44.34	+19 48.2	1.838	2.821	1.3	20.1	12 7	4 44.06	+25 39.9	1.510	2.493	1.6	20.4
12 17	4 34.77	+19 50.8	1.860	2.821	5.3	20.3	12 17	4 32.99	+25 14.7	1.526	2.489	5.9	20.7
12 27	4 26.51	+19 55.6	1.911	2.821	9.2	20.6	12 27	4 23.63	+24 46.8	1.569	2.484	10.5	20.9
1 6	4 20.38	+20 4.0	1.987	2.821	12.6	20.8	1 6	4 16.99	+24 20.8	1.636	2.479	14.5	21.2
180749	2004 <i>LT</i> ₁₆	12	4.9 170°26	2.7/ 4.3	18		177844	2005 <i>NL</i> ₁₂₂	12	5.0 150°97	2.3/ 4.4	18	
10 28	5 13.82	+14 42.5	2.273	3.061	13.2	20.5	10 28	5 14.09	+16 3.7	2.127	2.919	13.8	20.4
11 7	5 8.99	+14 27.2	2.189	3.063	10.3	20.3	11 7	5 9.36	+15 49.5	2.045	2.922	10.8	20.2
11 17	5 2.07	+14 13.8	2.128	3.065	7.1	20.1	11 17	5 2.39	+15 36.5	1.986	2.925	7.4	20.0
11 27	4 53.63	+14 3.8	2.094	3.066	3.9	19.9	11 27	4 53.80	+15 25.8	1.954	2.928	3.8	19.7
12 7	4 44.49	+13 58.4	2.090	3.067	2.9	19.8	12 7	4 44.48	+15 18.9	1.951	2.930	2.6	19.7
12 17	4 35.58	+13 59.0	2.116	3.068	5.6	20.0	12 17	4 35.41	+15 17.1	1.978	2.933	5.6	19.9
12 27	4 27.81	+14 6.6	2.170	3.069	8.9	20.2	12 27	4 27.57	+15 21.7	2.032	2.935	9.2	20.1
1 6	4 21.86	+14 21.4	2.250	3.069	11.9	20.4	1 6	4 21.70	+15 33.3	2.112	2.937	12.4	20.3
141959	2002 <i>PV</i> ₁₁₇	12	4.9 133°01	1.2/ 4.7	17		71078	1999 <i>XF</i> ₁₁₈	12	5.0 247°49	0.2/ 4.9	18	
10 28	5 19.71	+20 45.2	1.743	2.537	16.3	21.3	10 28	5 15.86	+24 51.4	1.966	2.757	14.8	19.7
11 7	5 14.14	+20 25.2	1.671	2.549	12.7	21.1	11 7	5 11.13	+24 13.9	1.870	2.747	11.7	19.5
11 17	5 5.74	+20 2.2	1.620	2.561	8.5	20.9	11 17	5 3.79	+23 28.3	1.797	2.738	7.9	19.2
11 27	4 55.32	+19 36.7	1.596	2.573	3.9	20.6	11 27	4 54.50	+22 35.2	1.750	2.727	3.6	18.9
12 7	4 44.08	+19 10.4	1.600	2.583	1.6	20.5	12 7	4 44.30	+21 36.8	1.733	2.717	1.0	18.7
12 17	4 33.33	+18 45.9	1.633	2.593	6.0	20.8	12 17	4 34.37	+20 36.9	1.745	2.707	5.5	19.0
12 27	4 24.30	+18 26.2	1.695	2.603	10.3	21.1	12 27	4 25.87	+19 40.4	1.785	2.696	9.7	19.2
1 6	4 17.82	+18 14.0	1.780	2.612	14.0	21.3	1 6	4 19.67	+18 51.6	1.851	2.685	13.4	19.5
227659	2006 <i>BU</i> ₁₇₃	12	4.9 275°48	0.0/ 4.8	17		179600	2002 <i>NG</i> ₂₉	12	5.0 175°05	2.4/ 5.8	18	
10 28	5 12.96	+23 12.5	2.214	3.005	13.4	21.4	10 28	5 21.93	+29 53.9	1.985	2.757	15.4	21.1
11 7	5 8.53	+23 3.1	2.127	3.004	10.5	21.2	11 7	5 15.90	+29 58.0	1.898	2.761	12.2	20.9
11 17	5 1.85	+22 49.8	2.063	3.004	7.0	21.0	11 17	5 6.99	+29 53.3	1.833	2.763	8.6	20.7
11 27	4 53.56	+22 32.6	2.026	3.003	3.2	20.7	11 27	4 55.95	+29 37.1	1.795	2.765	4.6	20.5
12 7	4 44.51	+22 12.3	2.018	3.002	0.8	20.5	12 7	4 43.95	+29 9.0	1.786	2.766	2.5	20.3
12 17	4 35.71	+21 50.7	2.039	3.001	4.8	20.8	12 17	4 32.34	+28 30.9	1.807	2.766	5.6	20.5
12 27	4 28.13	+21 30.2	2.089	3.001	8.5	21.1	12 27	4 22.39	+27 47.3	1.857	2.766	9.5	20.8
1 6	4 22.51	+21 13.4	2.165	3.000	11.7	21.3	1 6	4 15.00	+27 3.6	1.932	2.764	13.0	21.0
43537	2001 <i>EF</i> ₂	12	4.9 85°16	7.8/ 4.2	18		265992	2006 <i>DY</i> ₈₉	12	5.0 321°12	4.8/ 3.3	17	
10 28	5 17.42	+ 0 47.9	1.851	2.622	16.4	18.3	10 28	5 10.70	+ 9 29.8	2.295	3.084	13.0	20.8
11 7	5 11.88	+ 0 22.4	1.795	2.643	13.5	18.2	11 7	5 6.52	+ 8 45.2	2.214	3.084	10.4	20.6
11 17	5 3.97	+ 0 10.8	1.760	2.664	10.6	18.0	11 17	5 0.39	+ 8 4.7	2.157	3.084	7.6	20.5
11 27	4 54.44	+ 0 17.0	1.750	2.685	8.4	17.9	11 27	4 52.87	+ 7 31.4	2.126	3.083	5.3	20.3
12 7	4 44.32	+ 0 43.2	1.767	2.706	7.9	18.0	12 7	4 44.73	+ 7 8.4	2.123	3.083	4.9	20.3
12 17	4 34.68	+ 1 28.7	1.812	2.726	9.4	18.1	12 17	4 36.80	+ 6 57.6	2.149	3.083	6.9	20.4
12 27	4 26.54	+ 2 31.2	1.883	2.746	11.9	18.3	12 27	4 29.94	+ 7 0.0	2.203	3.082	9.7	20.6
1 6	4 20.58	+ 3 46.5	1.978	2.766	14.4	18.5	1 6	4 24.77	+ 7 15.1	2.281	3.082	12.3	20.8
138162	2000 <i>EH</i> ₈₈	12	4.9 206°95	5.4/ 7.1	18		501562	2014 <i>MA</i> ₅₅	12	5.0 316°07	17.8/ 11.2	17	
10 28	5 19.79	+39 0.6	2.162	2.911	15.0	19.8	10 28	5 27.31	+54 17.5	1.066	1.816	27.1	20.9
11 7	5 14.35	+39 15.8	2.071	2.908	12.4	19.6	11 7	5 25.56	+55 51.5	0.996	1.805	24.7	20.7
11 17	5 6.00	+39 17.1	2.000	2.905	9.5	19.4	11 17	5 16.62	+56 55.0	0.938	1.794	22.0	20.5
11 27	4 55.50	+39 0.4	1.955	2.901	6.7	19.3	11 27	5 1.26	+57 9.4	0.895	1.784	19.5	20.3
12 7	4 44.03	+38 24.0	1.937	2.897	5.4	19.2	12 7	4 42.58	+56 19.2	0.869	1.774	18.0	20.2
12 17	4 32.94	+37 29.3	1.949	2.893	6.7	19.3	12 17	4 25.05	+54 20.9	0.861	1.765	18.1	20.1
12 27	4 23.53	+36 21.6	1.988	2.888	9.5	19.4	12 27	4 12.64	+51 28.7	0.873	1.757	20.0	20.2
1 6	4 16.71	+35 7.8	2.054	2.884	12.4	19.6	1 6	4 7.07	+48 7.6	0.902	1.749	23.0	20.4
391217	2006 <i>HR</i> ₉₂	12	5.0 261°68	1.4/ 4.7	18		152572	1993 <i>TE</i> ₂₃	12	5.0 131°53	1.7/ 5.4	18	
10 28	5 15.47	+18 54.5	1.807	2.607	15.6	21.6	10 28	5 19.52	+25 57.8	1.791	2.580	16.1	20.6
11 7	5 11.05	+18 49.2	1.717	2.599	12.3	21.4	11 7	5 14.23	+26 20.0	1.714	2.588	12.7	20.4
11 17	5 3.88	+18 43.3	1.648	2.591	8.3	21.1	11 17	5 5.98	+26 37.2	1.659	2.596	8.7	20.2
11 27	4 54.60	+18 37.4	1.605	2.582	3.9	20.8	11 27	4 55.53	+26 47.1	1.629	2.603	4.3	19.9
12 7	4 44.25	+18 32.4	1.590	2.573	1.8	20.7	12 7	4 44.08	+26 48.6	1.627	2.610	1.8	19.8
12 17	4 34.08	+18 29.6	1.604	2.564	6.0	20.9	12 17	4 33.00	+26 42.3	1.655	2.617	5.7	20.0
12 27	4 25.34	+18 31.0	1.645	2.556	10.4	21.2	12 27	4 23.62	+26 31.2	1.710	2.623	9.9	20.3
1 6	4 18.98	+18 38.3	1.710	2.547	14.2	21.4	1 6	4 16.87	+26 19.3	1.790	2.629	13.6	20.5
259892	2004 <i>DX</i> ₄₇	12	5.0 322°65	5.9/ 6.6	17		289883	2005 <i>MS</i> ₂₇	12	5.0 1			

EPHEMERIDES

12 5.0

12 5.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
44106	1998 <i>HT</i> ₃		12 5.0 91°00	1.5°/ 4.7 18			482990	2014 <i>OK</i> ₁₆₅		12 5.0 240°18	4.5°/ 4.1 18		
10 28	5 19.93	+18 57.7	1.494	2.298	18.1	19.9	10 28	5 15.03	+ 8 57.2	2.197	2.979	13.8	22.1
11 7	5 14.70	+18 54.9	1.431	2.315	14.1	19.7	11 7	5 10.13	+ 8 44.9	2.102	2.968	11.1	21.9
11 17	5 6.31	+18 51.8	1.388	2.331	9.5	19.5	11 17	5 3.00	+ 8 38.9	2.030	2.957	8.1	21.7
11 27	4 55.65	+18 48.7	1.371	2.348	4.4	19.2	11 27	4 54.17	+ 8 41.5	1.984	2.945	5.3	21.5
12 7	4 44.08	+18 46.3	1.380	2.363	1.9	19.1	12 7	4 44.48	+ 8 54.4	1.968	2.933	4.6	21.4
12 17	4 33.10	+18 46.1	1.418	2.379	6.6	19.4	12 17	4 34.89	+ 9 18.5	1.980	2.921	6.9	21.5
12 27	4 24.08	+18 50.0	1.482	2.394	11.2	19.7	12 27	4 26.38	+ 9 53.5	2.021	2.909	10.0	21.7
1 6	4 17.94	+18 59.8	1.570	2.409	15.1	20.0	1 6	4 19.76	+10 38.2	2.087	2.896	13.1	21.9
372370	2009 <i>LM</i> ₁		12 5.0 29°96	6°5/ 3.9 18			90516	2004 <i>EO</i> ₅₉		12 5.0 175°49	0°9/ 5.3 18		
10 28	5 14.75	+10 59.7	1.168	1.996	20.7	20.5	10 28	5 18.81	+26 41.0	1.744	2.535	16.4	20.1
11 7	5 11.35	+10 12.8	1.109	2.002	16.5	20.2	11 7	5 13.73	+26 22.4	1.661	2.537	13.0	19.9
11 17	5 4.43	+ 9 32.6	1.068	2.009	11.9	20.0	11 17	5 5.68	+25 55.3	1.599	2.538	8.8	19.6
11 27	4 54.90	+ 9 5.0	1.049	2.017	7.7	19.8	11 27	4 55.42	+25 18.8	1.563	2.539	4.2	19.4
12 7	4 44.27	+ 8 54.3	1.054	2.024	6.7	19.8	12 7	4 44.19	+24 34.3	1.555	2.539	1.2	19.2
12 17	4 34.20	+ 9 3.0	1.084	2.033	10.0	20.0	12 17	4 33.37	+23 44.9	1.576	2.539	5.8	19.5
12 27	4 26.28	+ 9 31.1	1.137	2.042	14.5	20.2	12 27	4 24.31	+22 55.9	1.625	2.539	10.3	19.7
1 6	4 21.51	+10 15.7	1.210	2.052	18.5	20.5	1 6	4 17.90	+22 12.2	1.699	2.538	14.1	20.0
96534	1998 <i>RO</i> ₇₉		12 5.0 35°91	1°9/ 5.5 18			207145	2005 <i>CT</i> ₁₃		12 5.0 276°58	5°3/ 6.4 18		
10 28	5 14.50	+26 39.1	1.918	2.711	15.1	19.4	10 28	5 18.47	+35 24.0	1.829	2.602	16.4	21.0
11 7	5 10.13	+27 4.4	1.844	2.720	11.9	19.2	11 7	5 13.95	+35 59.3	1.736	2.592	13.5	20.7
11 17	5 3.14	+27 24.7	1.792	2.730	8.1	19.0	11 17	5 6.16	+36 23.4	1.663	2.581	10.2	20.5
11 27	4 54.22	+27 37.9	1.766	2.740	4.2	18.8	11 27	4 55.79	+36 31.3	1.615	2.571	6.9	20.3
12 7	4 44.44	+27 42.9	1.768	2.750	2.0	18.7	12 7	4 44.07	+36 20.0	1.593	2.560	5.3	20.2
12 17	4 35.00	+27 40.4	1.799	2.761	5.3	18.9	12 17	4 32.55	+35 49.7	1.599	2.550	7.2	20.3
12 27	4 27.06	+27 33.0	1.858	2.772	9.1	19.2	12 27	4 22.79	+35 4.9	1.632	2.539	10.7	20.5
1 6	4 21.46	+27 23.8	1.941	2.784	12.5	19.4	1 6	4 15.91	+34 12.8	1.689	2.529	14.2	20.7
404497	2013 <i>HT</i> ₂₉		12 5.0 297°81	1°3/ 5.4 18			196417	2003 <i>HP</i> ₂		12 5.0 232°73	2°2/ 5.4 18		
10 28	5 14.92	+27 15.3	1.992	2.781	14.7	21.4	10 28	5 18.84	+26 49.0	1.772	2.562	16.2	20.4
11 7	5 10.39	+27 7.7	1.906	2.781	11.6	21.2	11 7	5 14.01	+27 19.5	1.683	2.557	12.9	20.1
11 17	5 3.28	+26 52.8	1.843	2.780	7.9	21.0	11 17	5 6.08	+27 45.3	1.615	2.551	9.0	19.9
11 27	4 54.29	+26 29.6	1.805	2.780	3.9	20.8	11 27	4 55.72	+28 3.4	1.573	2.546	4.7	19.6
12 7	4 44.43	+25 58.7	1.796	2.780	1.5	20.6	12 7	4 44.11	+28 11.7	1.558	2.540	2.4	19.5
12 17	4 34.89	+25 22.3	1.816	2.779	5.2	20.8	12 17	4 32.68	+28 10.4	1.572	2.534	6.0	19.7
12 27	4 26.80	+24 44.3	1.864	2.779	9.1	21.1	12 27	4 22.89	+28 2.0	1.614	2.527	10.4	19.9
1 6	4 20.99	+24 8.7	1.938	2.778	12.6	21.3	1 6	4 15.79	+27 50.9	1.680	2.521	14.2	20.1
407605	2011 <i>BB</i> ₆₀		12 5.0 346°08	0°1/ 5.0 17			6290	1985 <i>CA</i> ₂		12 5.0 2°19	3°9/ 4.4 18		
10 28	5 14.22	+21 14.0	2.049	2.843	14.2	20.5	10 28	5 14.82	+15 1.1	1.190	2.020	20.3	16.5
11 7	5 9.79	+21 38.6	1.962	2.841	11.1	20.3	11 7	5 11.63	+14 43.1	1.121	2.019	16.1	16.2
11 17	5 2.90	+22 2.8	1.898	2.839	7.5	20.1	11 17	5 4.82	+14 28.8	1.071	2.018	11.1	16.0
11 27	4 54.14	+22 25.5	1.860	2.837	3.4	19.8	11 27	4 55.21	+14 20.9	1.043	2.018	6.0	15.7
12 7	4 44.46	+22 46.0	1.851	2.835	0.9	19.6	12 7	4 44.25	+14 21.9	1.040	2.019	4.2	15.6
12 17	4 34.95	+23 4.0	1.871	2.834	5.1	19.9	12 17	4 33.71	+14 33.5	1.061	2.021	8.5	15.8
12 27	4 26.71	+23 20.6	1.920	2.833	9.0	20.2	12 27	4 25.29	+14 56.6	1.106	2.023	13.7	16.1
1 6	4 20.59	+23 37.2	1.994	2.832	12.4	20.4	1 6	4 20.12	+15 30.8	1.172	2.025	18.2	16.4
192624	1999 <i>JJ</i> ₄₄		12 5.0 180°03	2°8/ 5.6 18			160897	2001 <i>SB</i> ₂₅₇		12 5.0 75°74	3°0/ 4.4 18		
10 28	5 20.69	+29 13.5	2.160	2.930	14.3	21.0	10 28	5 21.32	+17 59.0	1.232	2.049	20.5	20.1
11 7	5 14.86	+29 49.1	2.071	2.932	11.5	20.8	11 7	5 16.09	+17 23.1	1.182	2.073	16.0	19.9
11 17	5 6.31	+30 18.9	2.005	2.933	8.1	20.6	11 17	5 7.32	+16 46.6	1.151	2.096	10.7	19.7
11 27	4 55.71	+30 39.8	1.965	2.933	4.6	20.4	11 27	4 56.11	+16 12.1	1.144	2.120	5.4	19.5
12 7	4 44.07	+30 49.5	1.955	2.933	2.9	20.3	12 7	4 44.09	+15 42.9	1.162	2.143	3.4	19.4
12 17	4 32.65	+30 48.1	1.975	2.932	5.5	20.5	12 17	4 32.96	+15 22.4	1.207	2.166	7.9	19.7
12 27	4 22.65	+30 38.0	2.024	2.930	9.0	20.7	12 27	4 24.22	+15 13.2	1.278	2.189	12.7	20.1
1 6	4 15.01	+30 23.3	2.099	2.928	12.3	20.9	1 6	4 18.72	+15 16.4	1.369	2.211	16.8	20.4
355421	2007 <i>UC</i> ₁₂₈		12 5.0 317°99	0°5/ 4.9 18			449944	2015 <i>OT</i> ₄₅		12 5.0 73°78	0°6/ 5.1 18		
10 28	5 12.89	+22 21.0	1.605	2.417	16.7	20.8	10 28	5 17.37	+22 50.8	1.687	2.487	16.5	20.8
11 7	5 9.52	+22 8.0	1.514	2.403	13.2	20.6	11 7	5 12.70	+23 10.2	1.610	2.491	13.0	20.6
11 17	5 3.12	+21 50.5	1.443	2.389	8.9	20.3	11 17	5 5.07	+23 27.3	1.554	2.496	8.8	20.3
11 27	4 54.37	+21 28.7	1.397	2.375	4.1	20.0	11 27	4 55.19	+23 40.5	1.524	2.501	4.1	20.1
12 7	4 44.41	+21 3.8	1.377	2.362	1.2	19.7	12 7	4 44.27	+23 49.0	1.521	2.506	1.1	19.9
12 17	4 34.61	+20 38.4	1.385	2.349	6.3	20.0	12 17	4 33.67	+23 53.1	1.547	2.511	5.8	20.2
12 27	4 26.40	+20 16.2	1.419	2.337	11.1	20.3	12 27	4 24.77	+23 55.2	1.600	2.516	10.3	20.5
1 6	4 20.83	+20 0.5	1.476	2.325	15.4	20.5	1 6	4 18.50	+23 58.0	1.678	2.521	14.1	20.7
57429	2001 <i>SX</i> ₃₃		12 5.0 14°58	0°5/ 4.9 18			517504	2014 <i>QS</i> ₃₄₃		12 5.0 153°55	6°7/ 2.9 18		
10 28	5 13.80	+21 42.2	1.797	2.600	15.5	18.6	10 28	5 12.60	+ 2 26.2	2.398	3.166	13.1	21.4
11 7	5 9.68	+21 35.0	1.718	2.602	12.2	18.4	11 7	5 7.84	+ 1 36.2	2.325	3.172	10.9	21.2
11 17	5 2.90	+21 24.7	1.660	2.603	8.2	18.1	11 17	5 1.21	+ 0 54.6	2.274	3.177	8.6	21.1
11 27	4 54.15	+21 11.6	1.627	2.605	3.7	17.9	11 27	4 53.27	+ 0 25.6	2.250	3.182	7.0	21.0
12 7	4 44.49	+20 56.6	1.622	2.607	1.1	17.7	12 7	4 44.77	+ 0 12.2	2.254	3.186	6.8	21.0
12 17	4 35.15	+20 41.5	1.646	2.609	5.6	18.0	12 17	4 36.52	+ 0 15.8	2.286	3.191	8.2	21.1
12 27	4 27.31	+20 29.0	1.697	2.612	9.9	18.3	12 27	4 29.31	+ 0 36.4	2.345	3.195	10.4	21.2
1 6	4 21.82	+20 21.5	1.773	2.614	13.5	18.5	1 6	4 23.74	+ 1 11.9	2.428	3.198	12.6	21.4
377232	2004 <i>BY</i> ₁₃		12 5.0 28°82	16°4/15.1 18			262161	2006 <i>SQ</i> ₉₂		12 5.0 103°9			

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12 5.0

12 5.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
145264	2005 <i>JF</i> ₁₃₃	12 5.0	80°07'	3°0'	4.2	18	55791	1993 <i>SA</i> ₂	12 5.0	60°50'	6°9'	7.2	18
10 28	5 14.66	+15 28.4	1.867	2.666	15.2	20.1	10 28	5 23.82	+38 11.5	1.425	2.203	20.1	17.8
11 7	5 10.00	+15 2.0	1.798	2.678	11.9	19.9	11 7	5 18.51	+38 52.0	1.372	2.227	16.5	17.6
11 17	5 2.91	+14 36.8	1.751	2.690	8.1	19.7	11 17	5 9.22	+39 15.0	1.337	2.251	12.5	17.4
11 27	4 54.10	+14 15.2	1.730	2.702	4.4	19.5	11 27	4 57.10	+39 14.0	1.325	2.276	8.8	17.3
12 7	4 44.59	+13 59.0	1.737	2.715	3.2	19.5	12 7	4 43.97	+38 46.5	1.338	2.300	6.9	17.3
12 17	4 35.48	+13 50.4	1.773	2.727	6.3	19.7	12 17	4 31.80	+37 55.5	1.377	2.325	8.5	17.4
12 27	4 27.81	+13 50.6	1.837	2.739	10.0	20.0	12 27	4 22.31	+36 49.4	1.442	2.349	11.8	17.7
1 6	4 22.33	+14 0.2	1.924	2.751	13.3	20.2	1 6	4 16.43	+35 38.0	1.530	2.374	15.2	17.9
73847	1996 <i>RA</i> ₁₉	12 5.0	26°21'	2°4'	5.7	17	151499	2002 <i>JL</i> ₉₇	12 5.0	135°64'	5°8'	2.8	18
10 28	5 13.39	+29 7.3	2.057	2.844	14.4	19.2	10 28	5 11.53	+ 2 28.0	2.850	3.610	11.4	20.7
11 7	5 9.18	+29 23.8	1.979	2.850	11.4	19.1	11 7	5 6.68	+ 1 40.0	2.781	3.623	9.4	20.5
11 17	5 2.48	+29 33.2	1.923	2.857	8.0	18.9	11 17	5 0.29	+ 0 59.3	2.736	3.635	7.5	20.4
11 27	4 53.96	+29 33.7	1.893	2.863	4.3	18.7	11 27	4 52.85	+ 0 29.4	2.718	3.647	6.0	20.4
12 7	4 44.63	+29 24.6	1.891	2.871	2.5	18.5	12 7	4 44.99	+ 0 12.5	2.729	3.659	5.9	20.4
12 17	4 35.61	+29 7.0	1.917	2.878	5.2	18.7	12 17	4 37.36	+ 0 9.9	2.769	3.670	7.1	20.5
12 27	4 28.01	+28 44.1	1.972	2.886	8.7	19.0	12 27	4 30.62	+ 0 21.8	2.837	3.680	9.0	20.6
1 6	4 22.61	+28 19.6	2.052	2.894	11.9	19.2	1 6	4 25.26	+ 0 46.7	2.929	3.690	10.9	20.8
38326	1999 <i>RU</i> ₁₂₈	12 5.0	103°80'	8°0'	2.5	18	308780	2006 <i>PO</i> ₃₁	12 5.0	82°87'	1°4'	5.3	18
10 28	5 12.08	- 0 35.1	2.247	3.011	14.0	18.9	10 28	5 20.44	+24 35.1	1.909	2.693	15.5	21.1
11 7	5 7.51	- 1 38.3	2.184	3.022	11.8	18.8	11 7	5 14.57	+25 7.6	1.846	2.718	12.1	20.9
11 17	5 1.02	- 2 30.5	2.143	3.033	9.7	18.7	11 17	5 6.00	+25 36.5	1.806	2.743	8.2	20.7
11 27	4 53.20	- 3 6.8	2.128	3.044	8.2	18.6	11 27	4 55.55	+25 59.5	1.793	2.768	3.9	20.5
12 7	4 44.84	- 3 23.7	2.139	3.055	8.2	18.6	12 7	4 44.33	+26 15.2	1.809	2.792	1.6	20.4
12 17	4 36.78	- 3 19.6	2.177	3.065	9.4	18.7	12 17	4 33.62	+26 23.8	1.855	2.816	5.2	20.7
12 27	4 29.85	- 2 55.2	2.241	3.075	11.4	18.9	12 27	4 24.56	+26 27.6	1.929	2.840	9.1	21.0
1 6	4 24.65	- 2 13.3	2.328	3.085	13.4	19.1	1 6	4 17.96	+26 29.5	2.028	2.863	12.4	21.3
517740	2015 <i>MX</i> ₁₀₉	12 5.0	61°24'	1°5'	5.4	18	520363	2014 <i>HQ</i> ₃₄	12 5.0	218°45'	5°9'	2.9	18
10 28	5 17.08	+26 2.5	1.646	2.446	16.9	21.5	10 28	5 14.11	+ 8 58.3	2.026	2.815	14.5	22.4
11 7	5 12.57	+26 13.9	1.572	2.453	13.3	21.3	11 7	5 9.51	+ 7 52.7	1.941	2.809	11.8	22.2
11 17	5 5.01	+26 19.2	1.520	2.460	9.1	21.1	11 17	5 2.62	+ 6 50.5	1.879	2.803	8.8	22.0
11 27	4 55.18	+26 16.8	1.492	2.467	4.4	20.8	11 27	4 54.05	+ 5 56.4	1.843	2.797	6.4	21.8
12 7	4 44.35	+26 6.2	1.491	2.474	1.7	20.6	12 7	4 44.69	+ 5 14.7	1.835	2.790	6.1	21.8
12 17	4 33.94	+25 48.9	1.518	2.482	5.9	20.9	12 17	4 35.55	+ 4 48.8	1.856	2.783	8.3	21.9
12 27	4 25.32	+25 28.6	1.572	2.489	10.3	21.2	12 27	4 27.63	+ 4 40.4	1.903	2.776	11.3	22.1
1 6	4 19.43	+25 9.5	1.650	2.497	14.2	21.5	1 6	4 21.71	+ 4 48.9	1.974	2.768	14.2	22.3
486164	2012 <i>XO</i> ₁₃₇	12 5.0	9°06'	5°8'	2.8	18	88960	2001 <i>TN</i> ₄₅	12 5.0	37°65'	0°8'	5.3	18
10 28	5 12.67	+14 52.2	1.434	2.254	17.9	20.2	10 28	5 14.58	+25 42.7	1.820	2.618	15.6	19.0
11 7	5 9.19	+13 13.1	1.364	2.255	14.2	19.9	11 7	5 10.31	+25 35.1	1.743	2.623	12.2	18.8
11 17	5 2.73	+11 31.3	1.315	2.256	10.1	19.7	11 17	5 3.34	+25 21.0	1.688	2.628	8.3	18.6
11 27	4 54.13	+ 9 53.8	1.291	2.258	6.6	19.5	11 27	4 54.41	+24 59.9	1.657	2.634	3.9	18.4
12 7	4 44.63	+ 8 28.3	1.293	2.261	6.2	19.5	12 7	4 44.62	+24 32.6	1.655	2.639	1.2	18.2
12 17	4 35.60	+ 7 21.6	1.322	2.264	9.4	19.7	12 17	4 35.22	+24 1.4	1.682	2.645	5.4	18.5
12 27	4 28.34	+ 6 38.0	1.375	2.268	13.4	19.9	12 27	4 27.38	+23 30.0	1.735	2.651	9.6	18.7
1 6	4 23.70	+ 6 17.9	1.450	2.272	17.1	20.2	1 6	4 21.94	+23 2.2	1.814	2.658	13.2	19.0
413158	2002 <i>GE</i> ₆₄	12 5.0	212°25'	0°5'	4.9	18	401175	2011 <i>WV</i> ₈₈	12 5.0	260°65'	0°6'	5.3	17
10 28	5 13.38	+21 6.3	2.786	3.564	11.3	22.3	10 28	5 15.47	+26 50.0	2.130	2.914	14.1	21.3
11 7	5 8.44	+21 0.9	2.687	3.557	8.8	22.1	11 7	5 10.78	+26 21.8	2.028	2.900	11.1	21.0
11 17	5 1.67	+20 53.5	2.612	3.550	5.9	21.9	11 17	5 3.59	+25 44.9	1.948	2.886	7.6	20.8
11 27	4 53.54	+20 44.3	2.566	3.542	2.7	21.7	11 27	4 54.54	+24 59.4	1.896	2.871	3.6	20.5
12 7	4 44.76	+20 33.8	2.550	3.534	0.9	21.5	12 7	4 44.58	+24 6.4	1.872	2.857	1.0	20.3
12 17	4 36.11	+20 23.1	2.565	3.525	4.1	21.8	12 17	4 34.83	+23 9.2	1.879	2.842	5.1	20.6
12 27	4 28.38	+20 13.7	2.611	3.516	7.3	21.9	12 27	4 26.40	+22 12.2	1.915	2.827	9.1	20.8
1 6	4 22.21	+20 7.3	2.683	3.506	10.1	22.1	1 6	4 20.12	+21 20.1	1.976	2.811	12.6	21.0
112893	2002 <i>QF</i> ₄₈	12 5.0	100°56'	0°6'	5.2	18	404135	2013 <i>CH</i> ₂	12 5.0	278°62'	4°2'	6.5	17
10 28	5 17.10	+24 46.9	1.897	2.688	15.3	20.5	10 28	5 18.06	+34 50.2	1.949	2.719	15.7	21.2
11 7	5 12.06	+24 44.3	1.824	2.700	12.0	20.3	11 7	5 13.45	+34 55.3	1.842	2.699	12.8	20.9
11 17	5 4.38	+24 36.4	1.773	2.712	8.1	20.1	11 17	5 5.77	+34 47.7	1.756	2.678	9.5	20.7
11 27	4 54.82	+24 22.7	1.747	2.724	3.8	19.8	11 27	4 55.67	+34 23.6	1.695	2.657	6.0	20.4
12 7	4 44.48	+24 3.5	1.751	2.735	1.0	19.7	12 7	4 44.30	+33 41.6	1.662	2.635	4.2	20.3
12 17	4 34.56	+23 40.8	1.783	2.746	5.3	20.0	12 17	4 33.08	+32 43.2	1.658	2.614	6.4	20.4
12 27	4 26.21	+23 17.7	1.844	2.757	9.3	20.2	12 27	4 23.47	+31 33.8	1.681	2.592	10.2	20.6
1 6	4 20.23	+22 57.7	1.930	2.768	12.8	20.5	1 6	4 16.52	+30 20.9	1.729	2.570	13.9	20.7
326585	2002 <i>QO</i> ₁₀₁	12 5.0	163°13'	1°2'	4.7	17	247568	2002 <i>SR</i> ₅₃	12 5.0	75°15'	7°9'	8.7	17
10 28	5 12.58	+18 22.4	2.637	3.421	11.7	21.9	10 28	5 21.06	+47 43.4	2.436	3.141	14.5	20.3
11 7	5 7.83	+18 17.4	2.551	3.424	9.1	21.7	11 7	5 15.42	+48 28.8	2.362	3.152	12.6	20.2
11 17	5 1.24	+18 12.2	2.488	3.427	6.1	21.5	11 17	5 6.80	+48 57.9	2.308	3.163	10.5	20.1
11 27	4 53.34	+18 7.2	2.453	3.429	2.9	21.3	11 27	4 55.99	+49 5.7	2.277	3.174	8.8	20.0
12 7	4 44.83	+18 3.2	2.449	3.431	1.5	21.2	12 7	4 44.25	+48 49.1	2.272	3.186	7.9	20.0
12 17	4 36.52	+18 1.2	2.475	3.433	4.4	21.4	12 17	4 33.00	+48 8.9	2.295	3.197	8.3	20.0
12 27	4 29.18	+18 2.3	2.531	3.435	7.5	21.6	12 27	4 23.56	+47 9.5	2.344	3.208	9.8	20.1
1 6	4 23.43	+18 7.4	2.613	3.436	10.3	21.8	1 6	4 16.82	+45 57.8	2.417	3.219	11.7	20.3
139855	2001 <i>RK</i> ₆₀	12 5.0	29°16'	0°1'	5.1	18	275236	2009 <i>WP</i> ₂₅₇	12 5.0	346°58'	0°7'	5.3	17

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12 5.1

12 5.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
243144	2007 <i>TL</i> ₁₃		12 5.1 110°54	5°1/ 3.1 18			295045	2008 <i>EB</i> ₁₀₀		12 5.1 187°51	10°5/ 6.5 18		
10 28	5 14.83	+11 55.6	1.918	2.712	15.0	19.8	10 28	5 34.70	+47 12.6	2.051	2.750	17.1	21.6
11 7	5 10.01	+10 42.6	1.848	2.723	11.9	19.6	11 7	5 27.70	+49 9.8	1.967	2.750	15.0	21.4
11 17	5 2.88	+9 31.5	1.802	2.733	8.6	19.5	11 17	5 16.22	+50 53.9	1.903	2.749	12.9	21.3
11 27	4 54.12	+8 26.9	1.782	2.743	5.8	19.3	11 27	5 0.82	+52 13.6	1.864	2.747	11.1	21.1
12 7	4 44.73	+7 33.4	1.790	2.753	5.4	19.3	12 7	4 43.05	+53 0.0	1.850	2.745	10.5	21.1
12 17	4 35.75	+6 54.6	1.827	2.763	7.8	19.5	12 17	4 25.17	+53 9.3	1.863	2.742	11.3	21.1
12 27	4 28.16	+6 32.7	1.891	2.772	11.0	19.7	12 27	4 9.57	+52 45.3	1.901	2.738	13.0	21.2
1 6	4 22.67	+6 27.3	1.979	2.781	13.9	19.9	1 6	3 57.96	+51 58.1	1.962	2.733	15.2	21.4
423796	2006 <i>HX</i> ₃₉		12 5.1 315°93	0°6/ 5.1 18			158586	2002 <i>LC</i> ₅₄		12 5.1 52°00	5°3/ 2.5 18		
10 28	5 14.47	+21 35.4	1.973	2.769	14.6	20.7	10 28	5 12.30	+11 55.9	2.052	2.848	14.1	19.4
11 7	5 10.39	+22 13.7	1.870	2.749	11.6	20.5	11 7	5 7.90	+10 23.7	1.984	2.858	11.2	19.3
11 17	5 3.62	+22 53.1	1.789	2.730	7.9	20.2	11 17	5 1.39	+8 52.5	1.939	2.869	8.2	19.1
11 27	4 54.70	+23 31.9	1.735	2.711	3.7	19.9	11 27	4 53.45	+7 27.5	1.921	2.879	5.7	19.0
12 7	4 44.54	+24 8.3	1.709	2.693	1.0	19.7	12 7	4 44.95	+6 13.9	1.932	2.890	5.6	19.0
12 17	4 34.32	+24 41.0	1.712	2.675	5.4	19.9	12 17	4 36.83	+5 16.1	1.972	2.901	7.8	19.1
12 27	4 25.31	+25 10.4	1.743	2.657	9.7	20.2	12 27	4 29.99	+4 36.6	2.039	2.913	10.6	19.3
1 6	4 18.52	+25 37.8	1.799	2.640	13.4	20.4	1 6	4 25.04	+4 15.3	2.130	2.924	13.3	19.5
486430	2013 <i>FX</i> ₆		12 5.1 339°54	7°0/ 3.7 18			174102	2002 <i>JS</i> ₃₇		12 5.1 206°07	0°9/ 5.3 18		
10 28	5 13.03	+5 7.1	1.761	2.555	16.2	21.3	10 28	5 19.98	+26 8.7	1.687	2.479	16.9	20.9
11 7	5 9.02	+4 30.9	1.684	2.551	13.3	21.1	11 7	5 14.91	+25 57.7	1.599	2.476	13.3	20.7
11 17	5 2.48	+4 4.5	1.628	2.548	10.2	20.9	11 17	5 6.69	+25 38.9	1.533	2.472	9.1	20.4
11 27	4 54.06	+3 52.4	1.596	2.545	7.6	20.8	11 27	4 56.06	+25 11.1	1.491	2.467	4.4	20.1
12 7	4 44.75	+3 58.1	1.590	2.543	7.2	20.8	12 7	4 44.29	+24 34.8	1.478	2.462	1.3	19.9
12 17	4 35.68	+4 22.8	1.611	2.540	9.2	20.9	12 17	4 32.84	+23 53.0	1.493	2.457	6.0	20.2
12 27	4 27.98	+5 5.7	1.658	2.538	12.3	21.1	12 27	4 23.17	+23 10.6	1.536	2.450	10.7	20.5
1 6	4 22.48	+6 3.9	1.728	2.537	15.3	21.3	1 6	4 16.29	+22 32.6	1.603	2.444	14.8	20.7
143477	2003 <i>CC</i> ₁₀		12 5.1 5°37	0°8/ 4.8 18			104031	2000 <i>EA</i>		12 5.1 289°83	2°3/ 5.7 18		
10 28	5 14.09	+22 16.8	1.291	2.117	19.3	19.6	10 28	5 16.34	+28 31.9	1.870	2.659	15.6	19.4
11 7	5 10.94	+21 55.8	1.220	2.116	15.1	19.3	11 7	5 11.86	+28 45.0	1.784	2.657	12.4	19.2
11 17	5 4.30	+21 29.5	1.168	2.117	10.2	19.0	11 17	5 4.53	+28 50.9	1.719	2.654	8.6	19.0
11 27	4 55.02	+20 58.6	1.139	2.118	4.7	18.7	11 27	4 55.05	+28 47.2	1.680	2.652	4.6	18.7
12 7	4 44.53	+20 25.3	1.135	2.120	1.5	18.5	12 7	4 44.54	+28 33.2	1.669	2.650	2.4	18.6
12 17	4 34.50	+19 53.3	1.157	2.122	7.1	18.9	12 17	4 34.30	+28 10.2	1.686	2.648	5.6	18.8
12 27	4 26.53	+19 27.3	1.204	2.125	12.3	19.2	12 27	4 25.62	+27 41.9	1.731	2.646	9.7	19.0
1 6	4 21.66	+19 10.7	1.272	2.129	16.8	19.5	1 6	4 19.45	+27 12.7	1.800	2.643	13.3	19.3
422387	2014 <i>SQ</i> ₂₆₅		12 5.1 78°16	4°4/ 3.5 18			492773	2014 <i>QA</i> ₂₀₅		12 5.1 26°44	2°2/ 5.8 17		
10 28	5 11.87	+10 52.2	2.238	3.027	13.3	21.0	10 28	5 14.57	+29 4.4	1.967	2.755	14.9	21.6
11 7	5 7.41	+10 3.8	2.170	3.041	10.5	20.9	11 7	5 10.25	+29 9.7	1.886	2.758	11.8	21.4
11 17	5 1.00	+9 18.9	2.125	3.054	7.6	20.7	11 17	5 3.31	+29 7.0	1.827	2.761	8.2	21.2
11 27	4 53.26	+8 40.7	2.107	3.068	5.1	20.6	11 27	4 54.44	+28 54.8	1.793	2.765	4.4	21.0
12 7	4 44.98	+8 12.0	2.118	3.081	4.6	20.6	12 7	4 44.70	+28 32.7	1.787	2.768	2.3	20.8
12 17	4 37.03	+7 55.1	2.158	3.095	6.7	20.7	12 17	4 35.30	+28 2.7	1.810	2.772	5.3	21.0
12 27	4 30.23	+7 50.9	2.225	3.108	9.5	20.9	12 27	4 27.40	+27 28.3	1.861	2.776	9.1	21.3
1 6	4 25.18	+7 59.0	2.317	3.121	12.1	21.1	1 6	4 21.81	+26 54.1	1.937	2.781	12.5	21.5
127806	2003 <i>FO</i> ₈₁		12 5.1 97°31	3°2/ 5.8 18			369525	2010 <i>WY</i> ₄₁		12 5.1 50°03	1°8/ 5.6 18		
10 28	5 20.17	+30 29.8	2.328	3.092	13.6	19.7	10 28	5 19.39	+28 9.5	1.149	1.970	21.5	20.6
11 7	5 14.15	+31 17.8	2.258	3.113	10.8	19.5	11 7	5 15.29	+27 56.4	1.096	1.987	16.9	20.4
11 17	5 5.69	+31 59.5	2.211	3.134	7.7	19.4	11 17	5 7.20	+27 31.4	1.060	2.005	11.5	20.1
11 27	4 55.45	+32 31.4	2.191	3.154	4.6	19.2	11 27	4 56.26	+26 53.0	1.047	2.023	5.7	19.9
12 7	4 44.44	+32 51.4	2.201	3.174	3.2	19.1	12 7	4 44.31	+26 3.1	1.058	2.042	2.0	19.7
12 17	4 33.76	+32 59.5	2.241	3.194	5.3	19.3	12 17	4 33.30	+25 6.9	1.095	2.061	7.1	20.1
12 27	4 24.49	+32 57.8	2.311	3.214	8.2	19.5	12 27	4 24.93	+24 12.0	1.157	2.081	12.4	20.4
1 6	4 17.41	+32 50.0	2.407	3.233	11.0	19.7	1 6	4 20.14	+23 25.2	1.240	2.101	16.9	20.8
489135	2006 <i>DA</i> ₁₀₇		12 5.1 260°49	1°1/ 4.7 18			249926	2001 <i>SQ</i> ₃₄₆		12 5.1 141°23	3°1/ 6.4 18		
10 28	5 12.27	+20 4.2	2.403	3.192	12.5	22.2	10 28	5 18.34	+33 27.4	2.269	3.032	13.9	20.7
11 7	5 7.91	+19 46.6	2.305	3.182	9.8	22.0	11 7	5 12.81	+33 25.4	2.187	3.040	11.2	20.5
11 17	5 1.50	+19 26.7	2.232	3.172	6.6	21.7	11 17	5 4.80	+33 12.7	2.126	3.048	8.0	20.3
11 27	4 53.57	+19 5.5	2.185	3.161	3.1	21.5	11 27	4 55.05	+32 47.2	2.092	3.055	4.8	20.1
12 7	4 44.89	+18 44.2	2.168	3.151	1.4	21.4	12 7	4 44.58	+32 8.9	2.087	3.062	3.1	20.0
12 17	4 36.35	+18 24.4	2.181	3.140	4.8	21.6	12 17	4 34.52	+31 19.9	2.112	3.069	5.2	20.2
12 27	4 28.86	+18 8.3	2.223	3.130	8.3	21.8	12 27	4 25.93	+30 24.7	2.167	3.075	8.4	20.4
1 6	4 23.12	+17 57.7	2.291	3.119	11.4	22.0	1 6	4 19.58	+29 28.3	2.248	3.081	11.4	20.6
454935	2015 <i>TG</i> ₁₇₁		12 5.1 40°32	1°2/ 5.2 18			317716	2003 <i>QR</i> ₃₂		12 5.1 110°62	2°3/ 5.6 18		
10 28	5 16.75	+23 20.1	1.714	2.514	16.3	20.5	10 28	5 23.59	+28 0.1	1.576	2.365	18.0	21.0
11 7	5 12.20	+23 58.5	1.643	2.524	12.8	20.2	11 7	5 17.69	+28 13.8	1.511	2.383	14.2	20.8
11 17	5 4.75	+24 35.2	1.594	2.535	8.7	20.0	11 17	5 8.45	+28 19.3	1.466	2.401	9.8	20.6
11 27	4 55.13	+25 7.6	1.570	2.546	4.1	19.8	11 27	4 56.79	+28 13.8	1.446	2.418	5.0	20.3
12 7	4 44.51	+25 34.0	1.574	2.558	1.5	19.6	12 7	4 44.17	+27 56.5	1.453	2.435	2.4	20.2
12 17	4 34.25	+25 53.8	1.606	2.570	5.7	19.9	12 17	4 32.21	+27 29.6	1.489	2.451	6.2	20.5
12 27	4 25.65	+26 8.7	1.666	2.582	9.9	20.2	12 27	4 22.37	+26 58.0	1.553	2.467	10.6	20.8
1 6	4 19.63	+26 21.1	1.750	2.594	13.6	20.5	1 6	4 15.59	+26 27.1	1.641	2.482	14.5	21.1
267111	2000 <i>CZ</i> ₂		12 5.1 291°44	8°3/ 3.1 18			452636	2005 <i>TM</i> ₁₂₆		12 5.1 354°60	1°0/ 4.8 18		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
282883	2007 EQ ₁₆₀	12	5.1 237°87	4.4/ 3.5	18		268835	2006 WY ₈₅	12	5.1 319°48	2°0/ 4.5	18	
10 28	5 16.00	+14 0.6	1.898	2.692	15.2	21.7	10 28	5 15.24	+20 59.2	1.397	2.215	18.4	20.3
11 7	5 11.29	+13 1.1	1.804	2.680	12.1	21.5	11 7	5 11.65	+20 16.3	1.317	2.209	14.5	20.0
11 17	5 4.02	+12 0.8	1.733	2.668	8.6	21.2	11 17	5 4.73	+19 27.4	1.256	2.203	9.8	19.8
11 27	4 54.81	+11 3.5	1.688	2.655	5.3	21.0	11 27	4 55.28	+18 34.5	1.220	2.198	4.7	19.4
12 7	4 44.63	+10 13.4	1.672	2.642	4.7	20.9	12 7	4 44.60	+17 41.5	1.210	2.192	2.5	19.3
12 17	4 34.63	+9 34.6	1.684	2.628	7.6	21.1	12 17	4 34.29	+16 53.3	1.226	2.187	7.4	19.6
12 27	4 25.96	+9 10.2	1.724	2.613	11.3	21.3	12 27	4 25.88	+16 14.9	1.268	2.183	12.4	19.9
1 6	4 19.50	+9 1.2	1.787	2.598	14.8	21.5	1 6	4 20.41	+15 50.0	1.331	2.179	16.8	20.1
72904	2001 KM ₇₄	12	5.1 8°90	4.5/ 2.8	18		489082	2006 AY ₇₆	12	5.1 145°64	5°1/ 3.5	18	
10 28	5 11.54	+12 49.6	2.286	3.077	13.0	19.1	10 28	5 12.32	+4 41.7	2.729	3.496	11.8	21.6
11 7	5 7.22	+11 30.0	2.204	3.077	10.3	18.9	11 7	5 7.46	+4 12.4	2.654	3.504	9.6	21.5
11 17	5 0.93	+10 10.2	2.147	3.078	7.4	18.7	11 17	5 0.94	+3 50.0	2.602	3.512	7.3	21.3
11 27	4 53.27	+8 54.4	2.117	3.078	5.0	18.6	11 27	4 53.27	+3 37.2	2.577	3.520	5.6	21.2
12 7	4 45.02	+7 47.1	2.116	3.078	4.8	18.6	12 7	4 45.11	+3 36.0	2.581	3.527	5.3	21.2
12 17	4 37.04	+6 52.1	2.145	3.079	6.9	18.7	12 17	4 37.16	+3 47.2	2.615	3.534	6.7	21.3
12 27	4 30.16	+6 12.2	2.202	3.079	9.8	18.9	12 27	4 30.13	+4 10.8	2.677	3.540	8.8	21.5
1 6	4 25.01	+5 48.0	2.284	3.080	12.5	19.1	1 6	4 24.55	+4 45.3	2.765	3.546	10.9	21.6
215746	2004 EH ₇₄	12	5.1 162°22	0°1/ 5.1	18		42164	2001 CT	12	5.1 83°51	3°9/ 6.6	18	
10 28	5 19.28	+24 8.0	1.857	2.646	15.7	20.9	10 28	5 17.80	+34 52.0	2.241	3.002	14.1	19.0
11 7	5 13.91	+23 55.1	1.775	2.651	12.3	20.7	11 7	5 12.44	+35 9.3	2.170	3.020	11.4	18.9
11 17	5 5.75	+23 36.6	1.716	2.655	8.3	20.5	11 17	5 4.60	+35 15.9	2.121	3.038	8.4	18.7
11 27	4 55.56	+23 12.1	1.683	2.659	3.8	20.2	11 27	4 55.00	+35 9.1	2.098	3.055	5.4	18.6
12 7	4 44.47	+22 42.7	1.678	2.663	0.9	20.0	12 7	4 44.70	+34 48.1	2.103	3.073	4.0	18.5
12 17	4 33.75	+22 10.7	1.703	2.665	5.5	20.3	12 17	4 34.86	+34 14.3	2.138	3.090	5.6	18.7
12 27	4 24.66	+21 39.9	1.756	2.668	9.8	20.6	12 27	4 26.55	+33 31.9	2.202	3.107	8.4	18.9
1 6	4 18.04	+21 14.0	1.834	2.669	13.5	20.8	1 6	4 20.50	+32 45.8	2.291	3.124	11.2	19.1
377557	2005 JD ₇₉	12	5.1 191°71	1°2/ 5.3	18		157747	Mandryka	12	5.1 91°74	7°4/ 2.9	18	
10 28	5 20.50	+25 14.3	1.746	2.535	16.5	21.9	10 28	5 12.13	-1 11.0	2.454	3.211	13.2	20.2
11 7	5 15.25	+25 27.9	1.660	2.534	13.0	21.7	11 7	5 7.39	-2 2.3	2.397	3.230	11.1	20.0
11 17	5 6.91	+25 36.6	1.595	2.533	8.9	21.4	11 17	5 0.90	-2 42.5	2.362	3.249	9.1	19.9
11 27	4 56.20	+25 38.5	1.556	2.531	4.3	21.2	11 27	4 53.24	-3 7.6	2.353	3.267	7.7	19.9
12 7	4 44.31	+25 32.7	1.545	2.529	1.5	21.0	12 7	4 45.13	-3 14.8	2.371	3.285	7.5	19.9
12 17	4 32.70	+25 20.2	1.563	2.526	5.9	21.2	12 17	4 37.34	-3 3.3	2.416	3.303	8.7	20.0
12 27	4 22.78	+25 4.1	1.609	2.522	10.4	21.5	12 27	4 30.59	-2 34.0	2.488	3.321	10.5	20.2
1 6	4 15.59	+24 48.8	1.679	2.518	14.3	21.7	1 6	4 25.44	-1 49.4	2.583	3.338	12.3	20.3
389425	2010 CZ ₁₁	12	5.1 287°29	0°0/ 4.9	18		292687	2006 UG ₉₇	12	5.1 35°27	2°3/ 4.5	18	
10 28	5 15.87	+24 21.6	1.625	2.430	16.9	21.4	10 28	5 13.77	+17 39.8	1.715	2.522	16.0	21.1
11 7	5 11.81	+23 58.8	1.538	2.422	13.3	21.1	11 7	5 9.71	+17 19.7	1.643	2.529	12.5	20.9
11 17	5 4.68	+23 28.8	1.471	2.414	9.0	20.9	11 17	5 2.99	+16 59.5	1.592	2.535	8.5	20.7
11 27	4 55.20	+22 51.6	1.428	2.406	4.2	20.6	11 27	4 54.34	+16 40.7	1.566	2.542	4.2	20.5
12 7	4 44.59	+22 8.9	1.413	2.398	1.0	20.3	12 7	4 44.85	+16 25.4	1.568	2.549	2.6	20.4
12 17	4 34.26	+21 24.1	1.426	2.390	6.2	20.6	12 17	4 35.73	+16 15.3	1.598	2.556	6.3	20.6
12 27	4 25.62	+20 42.2	1.466	2.382	11.0	20.9	12 27	4 28.15	+16 12.7	1.654	2.564	10.4	20.9
1 6	4 19.69	+20 7.5	1.529	2.375	15.1	21.1	1 6	4 22.92	+16 18.4	1.734	2.572	14.0	21.1
73219	2002 JB ₂₄	12	5.1 133°92	1°5/ 4.6	18		404677	2014 HU ₁₆₄	12	5.1 103°43	15°3/ 28.9	18	
10 28	5 17.08	+19 10.9	2.078	2.866	14.2	20.7	10 28	5 13.10	-17 6.1	1.907	2.613	18.0	20.6
11 7	5 11.75	+18 53.4	2.002	2.878	11.1	20.5	11 7	5 8.89	-19 10.9	1.859	2.615	16.7	20.5
11 17	5 4.08	+18 34.5	1.949	2.889	7.5	20.3	11 17	5 2.30	-20 52.5	1.829	2.616	15.7	20.5
11 27	4 54.75	+18 15.0	1.924	2.899	3.6	20.1	11 27	4 53.99	-22 1.9	1.819	2.617	15.3	20.4
12 7	4 44.72	+17 56.3	1.927	2.909	1.8	20.0	12 7	4 44.94	-22 33.0	1.829	2.618	15.5	20.5
12 17	4 35.05	+17 40.2	1.961	2.919	5.3	20.2	12 17	4 36.20	-22 24.0	1.859	2.620	16.3	20.5
12 27	4 26.76	+17 29.0	2.023	2.928	9.0	20.5	12 27	4 28.82	-21 37.2	1.908	2.621	17.4	20.6
1 6	4 20.56	+17 24.1	2.110	2.937	12.3	20.7	1 6	4 23.54	-20 18.8	1.972	2.622	18.7	20.7
126359	2002 AG ₁₇₄	12	5.1 201°73	0°6/ 5.2	18		191906	2005 EY ₃₅	12	5.1 339°64	4°3/ 6.6	18	
10 28	5 18.09	+24 5.4	1.994	2.780	14.8	20.3	10 28	5 14.10	+34 52.8	2.053	2.827	14.9	19.6
11 7	5 12.97	+24 12.2	1.904	2.778	11.7	20.1	11 7	5 10.10	+35 11.4	1.963	2.820	12.1	19.4
11 17	5 5.17	+24 15.2	1.836	2.774	7.9	19.9	11 17	5 3.36	+35 18.9	1.894	2.814	9.0	19.2
11 27	4 55.36	+24 13.1	1.794	2.770	3.7	19.6	11 27	4 54.57	+35 12.3	1.850	2.809	5.9	19.0
12 7	4 44.56	+24 5.7	1.782	2.766	1.0	19.4	12 7	4 44.80	+34 50.0	1.833	2.804	4.3	18.9
12 17	4 33.96	+23 54.1	1.799	2.761	5.3	19.7	12 17	4 35.28	+34 13.4	1.845	2.799	6.1	19.0
12 27	4 24.79	+23 40.8	1.845	2.756	9.4	20.0	12 27	4 27.25	+33 26.4	1.884	2.794	9.3	19.2
1 6	4 17.93	+23 29.0	1.915	2.751	13.0	20.2	1 6	4 21.61	+32 34.8	1.948	2.791	12.5	19.4
484360	2007 VC ₈₇	12	5.1 6°90	2°4/ 4.1	17		9116	Billhamilton	12	5.1 6°49	3°1/ 4.4	18	
10 28	5 7.81	+24 32.1	1.075	1.922	20.8	19.9	10 28	5 13.43	+18 26.6	1.208	2.040	19.9	17.9
11 7	5 6.43	+22 55.7	1.014	1.923	16.3	19.6	11 7	5 10.55	+17 47.9	1.141	2.040	15.7	17.6
11 17	5 1.39	+21 4.2	0.972	1.926	10.9	19.3	11 17	5 4.12	+17 6.8	1.092	2.041	10.7	17.3
11 27	4 53.70	+19 3.5	0.953	1.932	5.1	19.1	11 27	4 55.02	+16 26.5	1.066	2.042	5.4	17.0
12 7	4 44.99	+17 3.4	0.957	1.939	3.1	19.0	12 7	4 44.71	+15 51.0	1.064	2.045	3.5	16.9
12 17	4 36.98	+15 14.9	0.986	1.949	8.4	19.3	12 17	4 34.88	+15 24.3	1.087	2.048	8.1	17.2
12 27	4 31.21	+13 47.4	1.038	1.961	13.7	19.6	12 27	4 27.14	+15 10.3	1.134	2.052	13.3	17.5
1 6	4 28.58	+12 45.2	1.111	1.974	18.3	19.9	1 6	4 22.55	+15 10.4	1.202	2.057	17.7	17.8
148157	1999 XV ₁₄₂	12	5.1 290°79	10°1/ 9.4	18		367810	2011 AV ₄₆	12	5.1 289°75	5°1/ 3.6	17	
10 28	5 27.05	+48 11.3	1.573	2.305	20.3	19.1	10 28	5 11.48	+				

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
515116	2011 <i>CH</i> ₉₁	12	5.1 231°27	1°0/ 4.8 18			418752	2008 <i>UQ</i> ₁₆₉	12	5.1 233°27	2°1/ 5.5 17		
10 28	5 18.05	+20 59.3	1.750	2.547	16.2	22.4	10 28	5 15.83	+27 35.6	2.666	3.435	11.9	21.2
11 7	5 13.30	+20 46.0	1.659	2.539	12.7	22.2	11 7	5 10.72	+28 15.6	2.568	3.430	9.5	21.1
11 17	5 5.61	+20 29.5	1.589	2.530	8.6	21.9	11 17	5 3.48	+28 52.3	2.494	3.423	6.6	20.9
11 27	4 55.66	+20 10.1	1.544	2.521	4.0	21.6	11 27	4 54.60	+29 23.4	2.448	3.417	3.6	20.7
12 7	4 44.57	+19 49.1	1.527	2.511	1.5	21.4	12 7	4 44.87	+29 47.2	2.432	3.411	2.2	20.5
12 17	4 33.66	+19 28.5	1.540	2.501	6.1	21.7	12 17	4 35.19	+30 3.1	2.446	3.404	4.5	20.7
12 27	4 24.31	+19 11.6	1.579	2.491	10.7	21.9	12 27	4 26.51	+30 12.2	2.491	3.397	7.5	20.9
1 6	4 17.50	+19 1.1	1.643	2.480	14.7	22.2	1 6	4 19.59	+30 16.8	2.563	3.390	10.3	21.1
324896	2007 <i>VL</i> ₁₀₃	12	5.1 314°36	0°7/ 4.9 17			168192	2006 <i>JZ</i>	12	5.1 164°82	3°8/ 6.2 18		
10 28	5 18.12	+20 51.8	1.310	2.128	19.5	21.4	10 28	5 20.22	+32 52.5	2.104	2.870	14.8	20.9
11 7	5 14.23	+20 53.4	1.234	2.125	15.4	21.1	11 7	5 14.70	+33 21.9	2.019	2.874	12.0	20.7
11 17	5 6.68	+20 53.1	1.176	2.123	10.4	20.9	11 17	5 6.38	+33 42.4	1.956	2.877	8.7	20.5
11 27	4 56.27	+20 50.8	1.142	2.120	4.8	20.5	11 27	4 55.97	+33 50.3	1.919	2.880	5.4	20.4
12 7	4 44.43	+20 46.5	1.133	2.118	1.4	20.3	12 7	4 44.57	+33 43.8	1.910	2.883	3.9	20.3
12 17	4 32.92	+20 41.9	1.151	2.116	7.2	20.7	12 17	4 33.46	+33 23.4	1.931	2.885	5.9	20.4
12 27	4 23.48	+20 39.9	1.194	2.114	12.6	21.0	12 27	4 23.91	+32 52.8	1.981	2.887	9.2	20.6
1 6	4 17.31	+20 43.6	1.258	2.112	17.2	21.2	1 6	4 16.82	+32 17.3	2.056	2.888	12.3	20.8
186486	2002 <i>TQ</i> ₁₂₉	12	5.1 337°60	12°6/ 8.5 17			123884	2001 <i>DJ</i> ₄₂	12	5.1 4°74	5°3/ 6.8 17		
10 28	5 27.64	+52 28.9	1.851	2.548	18.8	20.0	10 28	5 15.93	+36 38.6	1.919	2.690	15.8	19.2
11 7	5 22.83	+54 12.8	1.775	2.545	16.9	19.9	11 7	5 11.75	+37 5.1	1.837	2.690	13.0	19.0
11 17	5 13.23	+55 37.8	1.716	2.542	14.9	19.7	11 17	5 4.58	+37 19.1	1.776	2.691	9.8	18.8
11 27	4 59.55	+56 33.1	1.678	2.540	13.4	19.6	11 27	4 55.19	+37 16.4	1.738	2.692	6.7	18.7
12 7	4 43.60	+56 50.2	1.663	2.538	12.6	19.6	12 7	4 44.76	+36 55.2	1.728	2.693	5.3	18.6
12 17	4 27.93	+56 26.8	1.670	2.536	13.0	19.6	12 17	4 34.68	+36 16.6	1.745	2.695	6.8	18.7
12 27	4 15.07	+55 28.1	1.700	2.534	14.4	19.7	12 27	4 26.31	+35 25.5	1.789	2.697	9.9	18.9
1 6	4 6.66	+54 5.2	1.751	2.532	16.3	19.8	1 6	4 20.57	+34 28.4	1.858	2.699	13.0	19.1
246538	2008 <i>QF</i> ₆	12	5.1 8°40	7°1/ 8.2 17			431761	2008 <i>HU</i> ₁	12	5.1 161°05	3°2/ 4.3 18		
10 28	5 16.35	+42 33.6	1.823	2.579	17.1	20.0	10 28	5 18.64	+14 30.2	1.967	2.754	15.0	22.5
11 7	5 12.35	+42 49.0	1.745	2.581	14.4	19.8	11 7	5 13.12	+14 6.3	1.888	2.760	11.8	22.3
11 17	5 5.06	+42 45.7	1.686	2.584	11.4	19.6	11 17	5 5.13	+13 44.3	1.831	2.766	8.2	22.1
11 27	4 55.37	+42 19.1	1.650	2.587	8.6	19.4	11 27	4 55.33	+13 26.1	1.801	2.772	4.6	21.9
12 7	4 44.68	+41 27.3	1.640	2.591	7.1	19.4	12 7	4 44.74	+13 13.7	1.800	2.777	3.4	21.8
12 17	4 34.57	+40 12.9	1.656	2.596	8.0	19.4	12 17	4 34.46	+13 8.7	1.829	2.780	6.4	22.0
12 27	4 26.48	+38 42.8	1.699	2.602	10.6	19.6	12 27	4 25.59	+13 12.6	1.886	2.784	10.1	22.3
1 6	4 21.33	+37 6.3	1.767	2.609	13.6	19.8	1 6	4 18.91	+13 25.6	1.968	2.786	13.4	22.5
212161	2005 <i>GW</i> ₁₂	12	5.1 73°49	4°5/ 6.0 18			523300	2017 <i>BE</i> ₁₀₀	12	5.1 157°20	0°1/ 5.1 18		
10 28	5 26.06	+32 28.5	1.948	2.709	16.0	19.4	10 28	5 15.86	+22 29.9	2.130	2.918	14.0	21.5
11 7	5 19.11	+33 33.6	1.895	2.746	12.8	19.2	11 7	5 10.99	+22 36.6	2.045	2.920	10.9	21.3
11 17	5 9.18	+34 29.4	1.865	2.783	9.3	19.1	11 17	5 3.74	+22 40.7	1.983	2.923	7.4	21.1
11 27	4 57.14	+35 10.8	1.861	2.819	5.9	19.0	11 27	4 54.72	+22 41.6	1.948	2.925	3.4	20.8
12 7	4 44.29	+35 34.8	1.886	2.854	4.5	18.9	12 7	4 44.88	+22 39.4	1.942	2.927	0.8	20.6
12 17	4 32.06	+35 41.4	1.941	2.889	6.4	19.1	12 17	4 35.27	+22 35.0	1.967	2.929	4.9	20.9
12 27	4 21.76	+35 34.2	2.024	2.923	9.4	19.4	12 27	4 26.96	+22 30.2	2.019	2.931	8.7	21.2
1 6	4 14.23	+35 18.8	2.133	2.957	12.3	19.6	1 6	4 20.73	+22 27.5	2.097	2.932	12.0	21.4
134939	2001 <i>BY</i> ₃₅	12	5.1 228°32	1°6/ 5.4 18			90077	2002 <i>VS</i> ₉₆	12	5.1 298°73	2°3/ 4.3 18		
10 28	5 18.78	+25 58.0	2.217	2.993	13.8	20.4	10 28	5 13.12	+19 18.4	1.816	2.620	15.4	19.8
11 7	5 13.45	+26 24.5	2.116	2.982	11.0	20.2	11 7	5 9.34	+18 36.1	1.720	2.605	12.1	19.6
11 17	5 5.54	+26 47.5	2.037	2.971	7.6	20.0	11 17	5 2.90	+17 49.8	1.646	2.589	8.3	19.3
11 27	4 55.61	+27 4.8	1.986	2.959	3.9	19.7	11 27	4 54.43	+17 1.4	1.598	2.574	4.1	19.0
12 7	4 44.60	+27 14.9	1.964	2.947	1.7	19.5	12 7	4 44.93	+16 14.3	1.578	2.558	2.6	18.9
12 17	4 33.65	+27 17.7	1.973	2.934	5.1	19.7	12 17	4 35.60	+15 32.0	1.586	2.543	6.5	19.1
12 27	4 23.94	+27 15.0	2.011	2.920	8.9	19.9	12 27	4 27.63	+14 58.5	1.621	2.528	10.7	19.3
1 6	4 16.38	+27 10.0	2.075	2.906	12.3	20.1	1 6	4 21.95	+14 36.5	1.679	2.514	14.5	19.5
286951	2002 <i>PJ</i> ₁₇₀	12	5.1 208°79	5°3/ 2.9 18			470126	2006 <i>UQ</i> ₁₆	12	5.1 40°55	0°6/ 5.0 18		
10 28	5 14.38	+11 4.9	2.056	2.845	14.3	21.0	10 28	5 18.25	+19 47.9	1.134	1.963	21.2	20.6
11 7	5 9.72	+9 52.4	1.971	2.842	11.5	20.8	11 7	5 14.41	+20 7.9	1.082	1.979	16.5	20.3
11 17	5 2.81	+8 41.2	1.910	2.838	8.4	20.7	11 17	5 6.72	+20 28.5	1.047	1.996	11.1	20.1
11 27	4 54.26	+7 35.9	1.875	2.834	5.8	20.5	11 27	4 56.21	+20 48.4	1.035	2.013	5.1	19.8
12 7	4 44.95	+6 41.1	1.870	2.829	5.5	20.5	12 7	4 44.55	+21 6.7	1.047	2.032	1.4	19.6
12 17	4 35.90	+6 0.6	1.893	2.824	7.8	20.6	12 17	4 33.62	+21 23.5	1.085	2.051	7.3	20.1
12 27	4 28.08	+5 36.8	1.943	2.819	10.9	20.8	12 27	4 25.13	+21 40.9	1.147	2.070	12.6	20.4
1 6	4 22.22	+5 29.8	2.017	2.814	13.9	21.0	1 6	4 20.09	+22 0.7	1.230	2.090	17.1	20.8
111029	2001 <i>VW</i> ₁₉	12	5.1 6°80	3°3/ 3.5 17			200547	2001 <i>FA</i> ₁₄₈	12	5.1 253°66	2°4/ 5.8 18		
10 28	5 10.22	+16 30.6	2.110	2.911	13.6	19.0	10 28	5 17.26	+29 8.6	1.930	2.714	15.3	20.7
11 7	5 6.44	+15 23.1	2.030	2.912	10.7	18.8	11 7	5 12.63	+29 17.5	1.835	2.705	12.2	20.5
11 17	5 0.56	+14 13.5	1.974	2.913	7.4	18.6	11 17	5 5.15	+29 18.6	1.762	2.695	8.6	20.3
11 27	4 53.20	+13 5.3	1.944	2.915	4.3	18.4	11 27	4 55.48	+29 9.5	1.714	2.686	4.6	20.0
12 7	4 45.22	+12 2.5	1.944	2.917	3.6	18.4	12 7	4 44.69	+28 49.4	1.695	2.676	2.4	19.9
12 17	4 37.54	+11 9.2	1.972	2.920	6.3	18.6	12 17	4 34.10	+28 19.7	1.704	2.666	5.6	20.0
12 27	4 31.05	+10 28.3	2.029	2.923	9.6	18.8	12 27	4 25.01	+27 44.2	1.742	2.655	9.7	20.3
1 6	4 26.40	+10 1.2	2.109	2.927	12.6	19.0	1 6	4 18.40	+27 7.9	1.804	2.645	13.4	20.5
302631	2002 <i>RZ</i> ₈₀	12	5.1 28°33	6°0/ 3.9 18			280568	2004 <i>TN</i> ₂₄	12	5.1 154°05	0°3/		

EPHEMERIDES

12 5.1

12 5.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
515115	2011 CS ₇₉	12	5.1 326°27	3°9/ 4.1 18			230878	2004 RY ₂₄₄	12	5.1 223°09	2°3/ 4.6 18		
10 28	5 12.95	+16 57.9	1.254	2.084	19.4	21.8	10 28	5 16.34	+17 41.6	1.730	2.531	16.1	21.5
11 7	5 10.26	+16 12.5	1.174	2.072	15.4	21.5	11 7	5 11.86	+17 22.8	1.646	2.528	12.7	21.2
11 17	5 4.08	+15 25.2	1.113	2.061	10.7	21.2	11 17	5 4.59	+17 3.7	1.584	2.526	8.7	21.0
11 27	4 55.14	+14 39.6	1.075	2.050	5.8	20.9	11 27	4 55.21	+16 45.7	1.547	2.523	4.3	20.7
12 7	4 44.78	+14 0.4	1.061	2.040	4.3	20.8	12 7	4 44.82	+16 30.4	1.539	2.520	2.6	20.6
12 17	4 34.67	+13 32.4	1.072	2.031	8.7	21.0	12 17	4 34.69	+16 20.1	1.558	2.517	6.4	20.9
12 27	4 26.50	+13 19.4	1.107	2.022	13.8	21.2	12 27	4 26.08	+16 16.8	1.605	2.513	10.7	21.1
1 6	4 21.42	+13 22.7	1.162	2.014	18.5	21.5	1 6	4 19.92	+16 22.0	1.675	2.510	14.6	21.3
205977	2002 NA ₂₃	12	5.1 67°10	9°1/ 3.8 18			338407	2003 BS ₂₁	12	5.1 33°13	22°0/ 8.2 17		
10 28	5 16.18	- 0 17.3	1.705	2.481	17.3	20.0	10 28	5 20.55	-19 5.2	0.978	1.734	28.7	19.7
11 7	5 11.17	- 1 10.9	1.658	2.506	14.5	19.9	11 7	5 16.48	-20 26.8	0.940	1.739	26.5	19.6
11 17	5 3.72	- 1 49.3	1.631	2.530	11.6	19.8	11 17	5 8.25	-21 4.7	0.912	1.745	24.4	19.4
11 27	4 54.62	- 2 7.1	1.628	2.554	9.6	19.7	11 27	4 56.96	-20 44.0	0.898	1.752	22.7	19.4
12 7	4 44.96	- 2 1.1	1.651	2.579	9.2	19.8	12 7	4 44.44	-19 17.1	0.900	1.760	22.0	19.4
12 17	4 35.84	- 1 31.0	1.699	2.603	10.6	19.9	12 17	4 32.73	-16 46.7	0.918	1.768	22.4	19.4
12 27	4 28.31	- 0 39.3	1.773	2.627	13.0	20.1	12 27	4 23.68	-13 25.2	0.955	1.777	23.9	19.6
1 6	4 23.03	+ 0 29.2	1.869	2.651	15.4	20.3	1 6	4 18.36	- 9 31.8	1.008	1.787	25.8	19.8
369220	2008 UC ₁₀₁	12	5.1 78°74	2°3/ 4.2 18			353330	2010 NT ₆	12	5.1 162°22	4°2/ 4.1 18		
10 28	5 11.79	+17 17.0	2.340	3.132	12.7	21.3	10 28	5 15.70	+ 9 27.6	2.308	3.086	13.3	21.5
11 7	5 7.45	+16 38.5	2.261	3.138	9.9	21.1	11 7	5 10.48	+ 9 8.7	2.227	3.091	10.6	21.4
11 17	5 1.15	+15 59.1	2.205	3.144	6.8	20.9	11 17	5 3.21	+ 8 55.1	2.170	3.096	7.7	21.2
11 27	4 53.47	+15 20.6	2.177	3.150	3.6	20.7	11 27	4 54.45	+ 8 49.1	2.140	3.100	5.0	21.0
12 7	4 45.22	+14 45.5	2.178	3.156	2.5	20.7	12 7	4 45.03	+ 8 52.3	2.138	3.104	4.4	21.0
12 17	4 37.24	+14 16.0	2.209	3.162	5.3	20.9	12 17	4 35.83	+ 9 5.7	2.167	3.107	6.5	21.1
12 27	4 30.36	+13 54.3	2.268	3.168	8.5	21.1	12 27	4 27.76	+ 9 29.3	2.225	3.110	9.4	21.3
1 6	4 25.22	+13 41.6	2.353	3.174	11.4	21.3	1 6	4 21.48	+10 2.3	2.308	3.112	12.1	21.5
40063	1998 KV ₄₉	12	5.1 269°43	7°5/ 3.3 18			474239	2001 RH ₃₀	12	5.1 92°38	2°8/ 5.8 18		
10 28	5 14.31	+ 4 21.8	1.797	2.585	16.1	18.9	10 28	5 22.86	+29 11.4	1.661	2.446	17.4	21.9
11 7	5 10.10	+ 3 34.0	1.713	2.575	13.4	18.7	11 7	5 17.02	+29 32.5	1.599	2.468	13.8	21.7
11 17	5 3.33	+ 2 55.4	1.650	2.565	10.4	18.5	11 17	5 7.99	+29 45.0	1.558	2.491	9.6	21.5
11 27	4 54.61	+ 2 31.2	1.611	2.556	8.1	18.3	11 27	4 56.69	+29 45.8	1.542	2.513	5.2	21.3
12 7	4 44.93	+ 2 25.6	1.599	2.546	7.7	18.3	12 7	4 44.53	+29 33.9	1.554	2.534	2.9	21.2
12 17	4 35.41	+ 2 40.8	1.614	2.536	9.7	18.4	12 17	4 33.02	+29 11.0	1.594	2.555	6.1	21.4
12 27	4 27.21	+ 3 16.4	1.654	2.526	12.7	18.6	12 27	4 23.54	+28 41.7	1.663	2.576	10.1	21.7
1 6	4 21.21	+ 4 9.8	1.716	2.516	15.8	18.7	1 6	4 16.98	+28 11.4	1.755	2.596	13.7	22.0
484138	2006 SM ₄₀₁	12	5.1 13°14	0°8/ 5.2 17			336772	2011 BU ₅₀	12	5.1 224°80	1°1/ 4.8 18		
10 28	5 14.38	+23 2.2	1.539	2.351	17.3	21.5	10 28	5 18.51	+21 28.2	1.860	2.652	15.5	21.6
11 7	5 10.77	+23 27.6	1.466	2.354	13.6	21.3	11 7	5 13.49	+21 2.2	1.765	2.643	12.2	21.4
11 17	5 4.07	+23 50.7	1.414	2.358	9.2	21.0	11 17	5 5.68	+20 31.7	1.693	2.633	8.3	21.1
11 27	4 55.01	+24 10.0	1.385	2.363	4.3	20.8	11 27	4 55.74	+19 57.3	1.646	2.623	3.9	20.8
12 7	4 44.84	+24 24.2	1.384	2.368	1.2	20.6	12 7	4 44.72	+19 20.8	1.628	2.611	1.5	20.6
12 17	4 35.01	+24 33.5	1.409	2.374	6.0	20.9	12 17	4 33.90	+18 45.0	1.639	2.600	5.9	20.9
12 27	4 26.92	+24 40.0	1.461	2.381	10.7	21.2	12 27	4 24.56	+18 13.9	1.679	2.587	10.4	21.2
1 6	4 21.58	+24 46.5	1.536	2.389	14.7	21.4	1 6	4 17.64	+17 50.5	1.743	2.575	14.2	21.4
97186	Tore	12	5.1 102°69	2°4/ 4.6 18			177997	2006 QZ ₈₈	12	5.1 78°65	4°3/ 6.0 18		
10 28	5 14.39	+14 26.1	2.276	3.062	13.2	19.4	10 28	5 22.86	+31 0.2	1.399	2.194	19.6	19.7
11 7	5 9.55	+14 28.9	2.197	3.070	10.4	19.2	11 7	5 17.82	+31 39.3	1.336	2.209	15.7	19.5
11 17	5 2.62	+14 34.6	2.141	3.077	7.1	19.0	11 17	5 8.97	+32 8.2	1.293	2.225	11.2	19.3
11 27	4 54.18	+14 44.2	2.112	3.084	3.8	18.8	11 27	4 57.28	+32 21.7	1.273	2.240	6.6	19.1
12 7	4 45.06	+14 58.2	2.113	3.092	2.5	18.8	12 7	4 44.39	+32 17.2	1.279	2.256	4.3	19.0
12 17	4 36.18	+15 16.9	2.144	3.099	5.3	18.9	12 17	4 32.16	+31 55.9	1.312	2.271	7.3	19.2
12 27	4 28.43	+15 40.7	2.204	3.106	8.6	19.2	12 27	4 22.33	+31 23.6	1.371	2.287	11.6	19.5
1 6	4 22.50	+16 9.4	2.289	3.113	11.6	19.4	1 6	4 15.96	+30 47.5	1.453	2.302	15.6	19.8
411115	2009 WL ₉₈	12	5.1 40°15	3°7/ 5.9 17			7674	Kasuga	12	5.1 67°22	1°3/ 4.7 18		
10 28	5 16.49	+31 12.9	1.966	2.746	15.2	20.7	10 28	5 14.01	+19 19.4	2.020	2.816	14.3	17.3
11 7	5 11.91	+31 55.6	1.892	2.756	12.2	20.5	11 7	5 9.56	+19 7.4	1.944	2.824	11.2	17.1
11 17	5 4.57	+32 30.8	1.839	2.766	8.7	20.3	11 17	5 2.76	+18 54.1	1.890	2.832	7.5	16.9
11 27	4 55.17	+32 54.8	1.812	2.777	5.4	20.1	11 27	4 54.29	+18 40.5	1.863	2.840	3.6	16.7
12 7	4 44.83	+33 5.6	1.813	2.787	3.8	20.1	12 7	4 45.09	+18 27.7	1.865	2.848	1.6	16.5
12 17	4 34.80	+33 3.3	1.843	2.798	6.0	20.2	12 17	4 36.20	+18 17.3	1.895	2.856	5.3	16.8
12 27	4 26.33	+32 50.7	1.900	2.810	9.3	20.5	12 27	4 28.64	+18 11.3	1.954	2.864	9.1	17.0
1 6	4 20.31	+32 32.3	1.982	2.821	12.4	20.7	1 6	4 23.15	+18 11.0	2.038	2.872	12.4	17.3
306156	2010 KX ₁₂₇	12	5.1 216°68	0°5/ 5.3 18			213330	2001 SX ₁₄₁	12	5.1 60°09	1°4/ 4.7 18		
10 28	5 17.11	+25 28.3	2.132	2.914	14.1	21.3	10 28	5 14.69	+20 20.8	1.813	2.614	15.5	20.7
11 7	5 12.06	+25 11.5	2.036	2.908	11.1	21.1	11 7	5 10.29	+19 54.1	1.742	2.625	12.1	20.5
11 17	5 4.51	+24 48.1	1.964	2.901	7.6	20.8	11 17	5 3.34	+19 24.5	1.692	2.635	8.1	20.3
11 27	4 55.12	+24 17.9	1.918	2.894	3.6	20.6	11 27	4 54.57	+18 53.4	1.668	2.645	3.8	20.1
12 7	4 44.84	+23 41.7	1.901	2.886	0.9	20.3	12 7	4 45.04	+18 22.9	1.673	2.656	1.8	20.0
12 17	4 34.79	+23 2.0	1.915	2.877	5.0	20.6	12 17	4 35.93	+17 55.6	1.706	2.666	5.7	20.2
12 27	4 26.07	+22 22.4	1.958	2.869	9.0	20.9	12 27	4 28.33	+17 34.5	1.766	2.677	9.8	20.5
1 6	4 19.52	+21 46.7	2.026	2.859	12.4	21.1	1 6	4 23.02	+17 21.4	1.851	2.688	13.3	20.8
490812	2010 VH ₁₂₇	12	5.1 281°34	1°4/ 4.7 18			392005	2008 YH ₁₄₀	12	5.1 192°90	5°1/ 3.9 18		
10 28	5 16.72	+22 11.2	1.428	2.241	18.4								

EPHEMERIDES

12 5.1

12 5.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
392381	2010 <i>JW</i> ₁	12	5.1 275°81	1°1/ 5.0 18			167869	2005 <i>EK</i> ₂₇	12	5.1 354°86	5°1/ 3.5 17		
10 28	5 18.67	+17 12.1	1.758	2.554	16.2	20.4	10 28	5 10.58	+8 34.0	2.221	3.011	13.4	19.5
11 7	5 13.87	+17 45.5	1.667	2.545	12.8	20.2	11 7	5 6.66	+7 52.5	2.141	3.009	10.8	19.3
11 17	5 6.13	+18 23.3	1.597	2.537	8.7	19.9	11 17	5 0.74	+7 16.0	2.083	3.008	8.0	19.1
11 27	4 56.03	+19 4.5	1.552	2.529	4.1	19.6	11 27	4 53.38	+6 47.9	2.052	3.008	5.7	19.0
12 7	4 44.66	+19 47.6	1.537	2.521	1.4	19.4	12 7	4 45.37	+6 31.1	2.049	3.007	5.3	19.0
12 17	4 33.34	+20 31.2	1.550	2.512	6.0	19.7	12 17	4 37.57	+6 27.5	2.074	3.007	7.2	19.1
12 27	4 23.48	+21 14.7	1.592	2.504	10.6	20.0	12 27	4 30.83	+6 37.7	2.126	3.007	9.9	19.3
1 6	4 16.12	+21 58.7	1.658	2.496	14.5	20.2	1 6	4 25.82	+7 0.7	2.202	3.007	12.6	19.5
370560	2003 <i>UL</i> ₁₃₆	12	5.1 23°76	1°8/ 5.4 18			517402	2014 <i>LN</i> ₁₀	12	5.1 221°35	1°4/ 5.6 18		
10 28	5 16.40	+24 47.6	1.080	1.913	21.7	20.4	10 28	5 18.20	+27 55.6	2.281	3.054	13.6	22.0
11 7	5 13.51	+25 16.3	1.021	1.920	17.1	20.2	11 7	5 12.86	+27 47.8	2.179	3.044	10.8	21.8
11 17	5 6.48	+25 40.1	0.980	1.928	11.7	19.9	11 17	5 5.07	+27 32.6	2.101	3.033	7.5	21.6
11 27	4 56.28	+25 55.8	0.959	1.937	5.7	19.6	11 27	4 55.43	+27 8.8	2.049	3.022	3.8	21.3
12 7	4 44.64	+26 1.5	0.963	1.947	2.1	19.4	12 7	4 44.89	+26 36.6	2.028	3.011	1.5	21.1
12 17	4 33.63	+25 58.3	0.991	1.958	7.5	19.8	12 17	4 34.53	+25 57.8	2.037	2.998	4.8	21.3
12 27	4 25.17	+25 50.5	1.042	1.970	13.1	20.1	12 27	4 25.44	+25 16.1	2.075	2.985	8.6	21.5
1 6	4 20.43	+25 43.1	1.114	1.983	17.8	20.5	1 6	4 18.47	+24 35.6	2.140	2.972	11.9	21.7
446843	2001 <i>SN</i> ₂₀₈	12	5.1 132°64	1°4/ 4.7 18			21779	1999 <i>RE</i> ₂₃₁	12	5.1 119°89	4°4/ 4.3 18		
10 28	5 15.74	+18 56.0	2.262	3.048	13.3	21.5	10 28	5 16.92	+10 41.1	1.911	2.700	15.3	18.9
11 7	5 10.60	+18 41.6	2.185	3.058	10.4	21.3	11 7	5 11.82	+10 22.5	1.839	2.710	12.2	18.7
11 17	5 3.32	+18 26.2	2.130	3.069	7.0	21.1	11 17	5 4.30	+10 9.4	1.790	2.720	8.7	18.5
11 27	4 54.52	+18 10.5	2.103	3.079	3.3	20.9	11 27	4 55.03	+10 4.4	1.766	2.730	5.4	18.4
12 7	4 45.08	+17 55.6	2.106	3.088	1.7	20.8	12 7	4 45.01	+10 9.1	1.770	2.740	4.5	18.3
12 17	4 35.94	+17 43.3	2.139	3.098	5.0	21.0	12 17	4 35.33	+10 24.6	1.804	2.749	7.0	18.5
12 27	4 28.03	+17 35.1	2.201	3.106	8.4	21.3	12 27	4 27.04	+10 50.7	1.865	2.758	10.4	18.7
1 6	4 22.02	+17 32.5	2.289	3.115	11.5	21.5	1 6	4 20.92	+11 26.5	1.951	2.767	13.5	18.9
374649	2006 <i>JS</i> ₂₆	12	5.1 167°36	1°5/ 5.7 18			154713	2004 <i>LA</i> ₂	12	5.1 130°63	2°1/ 5.8 18 R		
10 28	5 13.70	+28 27.5	2.955	3.722	10.9	21.4	10 28	5 21.16	+29 8.3	1.972	2.747	15.3	20.4
11 7	5 8.71	+28 29.8	2.865	3.725	8.6	21.2	11 7	5 15.29	+29 8.5	1.897	2.761	12.1	20.2
11 17	5 1.93	+28 26.6	2.798	3.728	6.0	21.1	11 17	5 6.68	+29 0.2	1.844	2.775	8.4	20.0
11 27	4 53.87	+28 16.9	2.760	3.731	3.1	20.9	11 27	4 56.12	+28 41.6	1.817	2.788	4.4	19.8
12 7	4 45.23	+28 0.8	2.752	3.733	1.5	20.8	12 7	4 44.77	+28 12.6	1.819	2.801	2.1	19.7
12 17	4 36.79	+27 39.4	2.775	3.735	3.8	20.9	12 17	4 33.90	+27 35.6	1.851	2.812	5.3	19.9
12 27	4 29.32	+27 14.6	2.829	3.737	6.6	21.1	12 27	4 24.70	+26 54.8	1.912	2.824	9.1	20.2
1 6	4 23.41	+26 49.3	2.909	3.738	9.2	21.3	1 6	4 17.99	+26 15.0	1.999	2.834	12.5	20.4
239158	2006 <i>KH</i> ₁₇	12	5.1 138°11	1°4/ 5.4 18			47498	2000 <i>AK</i> ₄₅	12	5.1 281°77	1°2/ 5.5 18		
10 28	5 20.34	+24 37.7	2.124	2.901	14.3	20.7	10 28	5 17.64	+27 6.3	1.510	2.314	18.0	18.6
11 7	5 14.56	+25 13.6	2.044	2.911	11.3	20.5	11 7	5 13.59	+26 51.0	1.424	2.307	14.3	18.3
11 17	5 6.20	+25 46.8	1.986	2.921	7.7	20.3	11 17	5 6.15	+26 26.0	1.359	2.300	9.8	18.0
11 27	4 55.93	+25 15.0	1.956	2.930	3.8	20.0	11 27	4 56.09	+25 50.1	1.317	2.293	4.8	17.7
12 7	4 44.75	+26 36.5	1.956	2.939	1.6	19.9	12 7	4 44.76	+25 4.1	1.301	2.286	1.5	17.5
12 17	4 33.83	+26 50.9	1.986	2.947	5.0	20.2	12 17	4 33.75	+24 11.8	1.314	2.279	6.4	17.8
12 27	4 24.32	+26 59.8	2.046	2.955	8.7	20.4	12 27	4 24.66	+23 19.0	1.352	2.272	11.4	18.0
1 6	4 17.05	+27 5.9	2.131	2.962	12.0	20.6	1 6	4 18.56	+22 31.9	1.414	2.265	15.8	18.3
211933	2004 <i>XN</i> ₄	12	5.1 86°26	1°4/ 5.5 18			486661	2013 <i>QL</i> ₅₅	12	5.1 125°74	5°2/ 7.3 17		
10 28	5 22.84	+27 15.7	1.346	2.149	19.8	20.0	10 28	5 18.80	+40 50.6	2.856	3.581	12.2	22.1
11 7	5 17.52	+27 2.3	1.287	2.168	15.6	19.8	11 7	5 13.04	+41 25.9	2.776	3.594	10.2	21.9
11 17	5 8.55	+26 38.9	1.247	2.188	10.6	19.5	11 17	5 5.01	+41 50.1	2.719	3.606	8.0	21.8
11 27	4 57.02	+26 4.3	1.231	2.207	5.1	19.3	11 27	4 55.35	+41 59.8	2.688	3.618	6.1	21.7
12 7	4 44.54	+25 19.9	1.241	2.226	1.6	19.1	12 7	4 44.97	+41 53.2	2.686	3.630	5.2	21.7
12 17	4 32.91	+24 30.0	1.279	2.244	6.6	19.5	12 17	4 34.89	+41 30.9	2.713	3.641	6.0	21.7
12 27	4 23.68	+23 41.0	1.344	2.262	11.5	19.8	12 27	4 26.09	+40 55.6	2.769	3.652	7.8	21.9
1 6	4 17.76	+22 58.8	1.431	2.280	15.8	20.1	1 6	4 19.30	+40 12.0	2.851	3.663	9.8	22.0
340243	2006 <i>BZ</i> ₁₀₉	12	5.1 27°07	2°1/ 5.5 18			351386	2005 <i>EB</i> ₁₃₃	12	5.1 275°07	9°2/ 3.4 18		
10 28	5 15.61	+26 25.9	1.191	2.017	20.5	20.1	10 28	5 14.92	- 1 16.5	1.854	2.624	16.4	20.8
11 7	5 12.47	+26 44.3	1.134	2.028	16.2	19.9	11 7	5 10.53	- 2 0.2	1.771	2.614	13.9	20.6
11 17	5 5.52	+26 55.2	1.095	2.041	11.1	19.6	11 17	5 3.63	- 2 30.0	1.709	2.604	11.4	20.4
11 27	4 55.76	+26 56.0	1.078	2.055	5.5	19.4	11 27	4 54.84	- 2 40.0	1.670	2.593	9.6	20.3
12 7	4 44.81	+26 46.0	1.086	2.069	2.3	19.2	12 7	4 45.10	- 2 26.2	1.657	2.583	9.3	20.3
12 17	4 34.54	+26 27.5	1.119	2.085	7.0	19.6	12 17	4 35.50	- 1 47.2	1.670	2.573	10.9	20.3
12 27	4 26.63	+26 5.2	1.176	2.102	12.1	19.9	12 27	4 27.19	- 0 44.6	1.709	2.563	13.4	20.5
1 6	4 22.12	+25 44.7	1.254	2.119	16.5	20.2	1 6	4 21.01	+ 0 37.2	1.770	2.552	16.1	20.6
383517	2007 <i>CJ</i> ₄₅	12	5.1 284°37	0°7/ 5.2 18			119303	2001 <i>SZ</i> ₂₆	12	5.1 310°39	3°8/ 5.8 18		
10 28	5 17.62	+23 6.9	1.553	2.358	17.5	20.8	10 28	5 16.64	+29 34.3	1.434	2.240	18.7	19.4
11 7	5 13.66	+23 24.3	1.458	2.342	13.9	20.6	11 7	5 13.42	+30 9.7	1.342	2.223	15.1	19.1
11 17	5 6.33	+23 39.5	1.383	2.326	9.5	20.3	11 17	5 6.48	+30 37.9	1.270	2.207	10.8	18.8
11 27	4 56.26	+23 50.7	1.332	2.309	4.5	19.9	11 27	4 56.46	+30 54.2	1.220	2.191	6.3	18.5
12 7	4 44.64	+23 56.6	1.308	2.293	1.2	19.7	12 7	4 44.70	+30 55.3	1.196	2.175	3.9	18.3
12 17	4 33.04	+23 57.6	1.312	2.276	6.5	20.0	12 17	4 32.97	+30 41.0	1.198	2.160	7.4	18.5
12 27	4 23.11	+23 56.1	1.341	2.260	11.6	20.2	12 27	4 23.18	+30 15.3	1.225	2.145	12.3	18.7
1 6	4 16.09	+23 55.8	1.394	2.243	16.1	20.4	1 6	4 16.70	+29 45.0	1.274	2.131	16.8	19.0
326101	2011 <i>BN</i> ₁₁₉	12	5.1 77°68	3°5/ 4.3 18			10907	Savalle	12	5.1 18°39	0°9/ 5.4 18		

EPHEMERIDES

12 5.1

12 5.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
482269	2011 <i>RG</i> ₁₆	12 5.1 51°21' 10 ³ / 8.8 18					415200	2012 <i>GS</i> ₃₉	12 5.1 193°28' 4 ⁰ / 6.4 18				
10 28	5 27.36	+45 40.0	1.520	2.264	20.4	19.8	10 28	5 17.29	+35 0.5	2.662	3.413	12.4	21.5
11 7	5 21.88	+46 59.6	1.473	2.292	17.5	19.7	11 7	5 12.03	+35 35.3	2.569	3.412	10.1	21.4
11 17	5 11.95	+47 57.7	1.444	2.320	14.4	19.5	11 17	5 4.47	+36 2.0	2.499	3.410	7.5	21.2
11 27	4 58.74	+48 24.9	1.436	2.349	11.7	19.5	11 27	4 55.20	+36 17.4	2.456	3.408	5.1	21.0
12 7	4 44.28	+48 16.3	1.452	2.378	10.4	19.5	12 7	4 45.08	+36 19.7	2.441	3.406	4.0	21.0
12 17	4 30.85	+47 33.6	1.492	2.407	11.0	19.6	12 17	4 35.11	+36 9.0	2.457	3.403	5.4	21.1
12 27	4 20.41	+46 25.4	1.556	2.436	13.0	19.8	12 27	4 26.31	+35 47.7	2.502	3.400	7.9	21.2
1 6	4 14.00	+45 3.6	1.643	2.465	15.4	20.0	1 6	4 19.46	+35 19.6	2.573	3.397	10.4	21.4
451796	2013 <i>HU</i> ₁₉	12 5.1 273°59' 4 ⁷ / 3.6 17					114401	2002 <i>YC</i> ₁₇	12 5.1 77°13' 0 ² / 5.2 18				
10 28	5 13.10	+11 44.7	2.003	2.798	14.5	21.9	10 28	5 18.88	+21 51.1	1.862	2.653	15.6	19.4
11 7	5 9.00	+10 55.5	1.910	2.785	11.6	21.6	11 7	5 13.54	+22 13.4	1.797	2.673	12.1	19.2
11 17	5 2.56	+10 8.3	1.840	2.772	8.4	21.4	11 17	5 5.54	+22 34.0	1.754	2.694	8.1	19.0
11 27	4 54.35	+9 26.6	1.795	2.759	5.5	21.2	11 27	4 55.66	+22 51.6	1.738	2.714	3.7	18.8
12 7	4 45.25	+8 54.2	1.779	2.746	4.9	21.2	12 7	4 45.00	+23 5.4	1.750	2.735	0.9	18.6
12 17	4 36.29	+8 34.1	1.791	2.732	7.4	21.3	12 17	4 34.78	+23 15.8	1.792	2.755	5.2	19.0
12 27	4 28.52	+8 28.1	1.830	2.719	10.8	21.5	12 27	4 26.16	+23 24.4	1.862	2.775	9.2	19.3
1 6	4 22.73	+8 36.3	1.893	2.706	14.0	21.6	1 6	4 19.92	+23 33.3	1.957	2.795	12.6	19.5
134049	2004 <i>XB</i> ₂₄	12 5.1 346°04' 2 ³ / 6.0 17					389581	2011 <i>DJ</i> ₁₇	12 5.1 67°18' 7 ³ / 7.0 18				
10 28	5 13.75	+30 24.9	1.969	2.756	14.9	19.4	10 28	5 23.89	+37 42.3	1.433	2.211	20.0	20.4
11 7	5 9.78	+30 16.2	1.881	2.752	11.9	19.2	11 7	5 19.00	+38 40.2	1.371	2.226	16.5	20.2
11 17	5 3.18	+29 57.5	1.815	2.748	8.4	19.0	11 17	5 10.01	+39 22.7	1.328	2.241	12.6	20.0
11 27	4 54.63	+29 27.5	1.774	2.745	4.6	18.7	11 27	4 57.92	+39 42.3	1.307	2.256	9.0	19.9
12 7	4 45.20	+28 46.6	1.761	2.742	2.4	18.6	12 7	4 44.48	+39 34.5	1.311	2.271	7.3	19.8
12 17	4 36.07	+27 57.3	1.777	2.740	5.3	18.8	12 17	4 31.76	+39 0.7	1.341	2.287	9.0	19.9
12 27	4 28.41	+27 4.2	1.821	2.737	9.1	19.0	12 27	4 21.62	+38 7.9	1.397	2.302	12.3	20.2
1 6	4 23.06	+26 12.5	1.889	2.736	12.6	19.2	1 6	4 15.20	+37 6.2	1.474	2.317	15.7	20.4
435493	2008 <i>GK</i> ₇₅	12 5.1 168°01' 0 ⁷ / 4.9 18					327573	2006 <i>DK</i> ₇₁	12 5.1 188°22' 5 ⁰ / 3.3 17				
10 28	5 20.20	+20 13.7	1.884	2.671	15.5	22.8	10 28	5 11.45	+6 41.5	2.605	3.381	12.0	20.9
11 7	5 14.70	+20 17.1	1.801	2.676	12.2	22.5	11 7	5 7.03	+6 0.5	2.522	3.380	9.7	20.8
11 17	5 6.44	+20 19.2	1.740	2.680	8.2	22.3	11 17	5 0.87	+5 24.9	2.463	3.379	7.4	20.6
11 27	4 56.14	+20 19.9	1.706	2.683	3.8	22.1	11 27	4 53.47	+4 57.7	2.430	3.378	5.5	20.5
12 7	4 44.86	+20 19.3	1.701	2.685	1.2	21.9	12 7	4 45.50	+4 41.4	2.427	3.377	5.2	20.5
12 17	4 33.87	+20 18.4	1.726	2.687	5.6	22.2	12 17	4 37.70	+4 37.8	2.452	3.376	6.8	20.6
12 27	4 24.39	+20 19.0	1.779	2.688	9.8	22.4	12 27	4 30.83	+4 47.2	2.506	3.374	9.1	20.7
1 6	4 17.33	+20 23.2	1.857	2.689	13.5	22.7	1 6	4 25.44	+5 8.8	2.584	3.372	11.4	20.9
115860	2003 <i>UT</i> ₂₇₃	12 5.1 312°15' 5 ⁸ / 3.1 18					272050	2005 <i>EM</i> ₁₃₃	12 5.1 236°57' 2 ⁹ / 4.2 18				
10 28	5 12.11	+12 21.0	1.609	2.421	16.7	19.4	10 28	5 11.92	+12 27.8	2.783	3.562	11.2	20.9
11 7	5 8.83	+11 9.3	1.521	2.405	13.4	19.2	11 7	5 7.40	+12 13.2	2.685	3.552	8.9	20.7
11 17	5 2.76	+9 57.7	1.453	2.390	9.8	18.9	11 17	5 1.15	+12 1.2	2.611	3.542	6.3	20.5
11 27	4 54.54	+8 51.4	1.411	2.375	6.6	18.7	11 27	4 53.62	+11 53.5	2.565	3.531	3.8	20.3
12 7	4 45.22	+7 56.6	1.394	2.360	6.1	18.7	12 7	4 45.46	+11 51.3	2.548	3.520	3.1	20.3
12 17	4 36.06	+7 18.0	1.404	2.346	9.1	18.8	12 17	4 37.39	+11 55.7	2.562	3.509	5.1	20.4
12 27	4 28.35	+6 59.2	1.440	2.332	13.0	19.0	12 27	4 30.15	+12 7.2	2.606	3.498	7.9	20.6
1 6	4 23.05	+7 0.3	1.496	2.318	16.7	19.2	1 6	4 24.35	+12 26.1	2.676	3.486	10.5	20.7
520594	2014 <i>OQ</i> ₃₈₅	12 5.1 150°65' 6 ³ / 3.4 18					361011	2005 <i>VQ</i> ₇₇	12 5.1 66°49' 2 ⁶ / 5.8 18				
10 28	5 13.82	+3 16.3	2.398	3.166	13.2	22.4	10 28	5 18.64	+28 59.9	1.928	2.709	15.4	20.7
11 7	5 8.93	+2 35.3	2.324	3.173	10.8	22.2	11 7	5 13.38	+29 24.2	1.865	2.733	12.2	20.6
11 17	5 2.15	+2 2.6	2.273	3.179	8.5	22.1	11 17	5 5.44	+29 41.3	1.825	2.757	8.5	20.4
11 27	4 54.04	+1 41.9	2.248	3.185	6.7	22.0	11 27	4 55.61	+29 48.5	1.810	2.780	4.6	20.2
12 7	4 45.36	+1 35.8	2.252	3.191	6.4	22.0	12 7	4 45.04	+29 45.1	1.824	2.804	2.6	20.1
12 17	4 36.91	+1 45.6	2.284	3.196	7.9	22.1	12 17	4 34.97	+29 32.1	1.867	2.827	5.4	20.4
12 27	4 29.51	+2 10.9	2.343	3.201	10.1	22.2	12 27	4 26.56	+29 13.0	1.938	2.851	8.9	20.6
1 6	4 23.77	+2 49.9	2.427	3.205	12.4	22.4	1 6	4 20.58	+28 51.7	2.034	2.874	12.2	20.9
442343	2011 <i>SR</i> ₂₀₇	12 5.1 41°09' 4 ³ / 6.3 16					216369	2008 <i>AC</i> ₁₁₂	12 5.1 205°78' 1 ⁶ / 4.7 18				
10 28	5 18.15	+32 18.0	1.497	2.293	18.5	21.4	10 28	5 15.02	+18 22.7	1.978	2.774	14.6	20.8
11 7	5 13.97	+32 45.2	1.433	2.306	14.8	21.2	11 7	5 10.53	+18 13.7	1.894	2.773	11.5	20.6
11 17	5 6.32	+33 0.7	1.389	2.320	10.7	21.0	11 17	5 3.59	+18 4.5	1.832	2.772	7.8	20.4
11 27	4 56.13	+33 0.7	1.368	2.334	6.5	20.8	11 27	4 54.82	+17 55.7	1.796	2.772	3.8	20.1
12 7	4 44.88	+32 43.5	1.373	2.349	4.3	20.7	12 7	4 45.19	+17 48.5	1.788	2.771	1.9	20.0
12 17	4 34.22	+32 11.1	1.405	2.364	6.9	20.9	12 17	4 35.79	+17 44.2	1.810	2.770	5.6	20.3
12 27	4 25.70	+31 29.1	1.462	2.379	10.9	21.2	12 27	4 27.71	+17 44.5	1.860	2.769	9.5	20.5
1 6	4 20.28	+30 44.5	1.543	2.395	14.7	21.5	1 6	4 21.76	+17 50.7	1.935	2.768	12.9	20.7
282351	2003 <i>DQ</i> ₂	12 5.1 260°48' 3 ⁰ / 4.4 18					99040	2001 <i>EF</i> ₅	12 5.2 202°66' 6 ⁹ / 3.1 18				
10 28	5 16.23	+16 21.4	1.675	2.479	16.5	21.2	10 28	5 14.60	+3 49.4	2.128	2.903	14.4	19.8
11 7	5 11.99	+15 56.6	1.587	2.470	13.1	20.9	11 7	5 9.88	+2 58.4	2.047	2.900	11.9	19.6
11 17	5 4.86	+15 32.1	1.519	2.460	9.0	20.7	11 17	5 2.99	+2 15.5	1.987	2.896	9.3	19.4
11 27	4 55.50	+15 9.9	1.477	2.451	4.8	20.4	11 27	4 54.51	+1 45.3	1.954	2.893	7.3	19.3
12 7	4 45.00	+14 52.4	1.462	2.441	3.3	20.3	12 7	4 45.28	+1 31.4	1.948	2.888	7.1	19.3
12 17	4 34.68	+14 42.0	1.475	2.432	7.0	20.5	12 17	4 36.24	+1 35.7	1.970	2.884	8.8	19.4
12 27	4 25.88	+14 40.8	1.515	2.422	11.4	20.7	12 27	4 28.36	+1 58.3	2.018	2.879	11.3	19.5
1 6	4 19.57	+14 50.0	1.578	2.412	15.3	20.9	1 6	4 22.35	+2 37.2	2.090	2.873	13.9	19.7
391218	2006 <i>HY</i> ₉₆	12 5.1 267°91' 3 ¹ / 3.6 17					368201						

EPHEMERIDES

12 5.2

12 5.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
443920	2002 <i>QW</i> ₃₈	12 5.2 61°21'	8°5'	3.3	15		290654	2005 <i>UQ</i> ₂₈₆	12 5.2 122°00'	1°0'	4.9	18	
10 28	5 15.51	+ 3 9.7	1.645	2.434	17.3	21.2	10 28	5 20.49	+20 13.2	1.855	2.643	15.7	21.7
11 7	5 10.80	+ 1 58.0	1.599	2.459	14.3	21.1	11 7	5 14.78	+20 7.7	1.784	2.659	12.3	21.5
11 17	5 3.59	+ 0 58.4	1.574	2.484	11.2	21.0	11 17	5 6.39	+20 0.6	1.736	2.675	8.2	21.3
11 27	4 54.72	+ 0 17.0	1.573	2.510	9.0	20.9	11 27	4 56.09	+19 51.9	1.714	2.691	3.8	21.1
12 7	4 45.28	- 0 2.0	1.598	2.535	8.6	20.9	12 7	4 45.02	+19 42.3	1.722	2.706	1.4	20.9
12 17	4 36.42	+ 0 2.7	1.648	2.560	10.3	21.1	12 17	4 34.39	+19 33.4	1.759	2.720	5.6	21.2
12 27	4 29.17	+ 0 29.9	1.724	2.585	12.9	21.3	12 27	4 25.37	+19 27.4	1.824	2.733	9.6	21.5
1 6	4 24.20	+ 1 15.5	1.821	2.611	15.5	21.5	1 6	4 18.77	+19 26.2	1.915	2.746	13.1	21.8
158483	2002 <i>DQ</i> ₁₃	12 5.2 6°76'	3°0'	4.3	18		369483	2010 <i>TO</i> ₁₇₃	12 5.2 15°40'	6°8'	4.3	18	
10 28	5 12.44	+16 4.7	1.794	2.601	15.4	20.1	10 28	5 14.01	+10 11.8	1.073	1.909	21.6	20.1
11 7	5 8.69	+15 34.1	1.717	2.601	12.1	19.9	11 7	5 11.30	+ 9 34.1	1.015	1.912	17.4	19.9
11 17	5 2.42	+15 3.9	1.661	2.602	8.3	19.7	11 17	5 4.87	+ 9 5.6	0.974	1.916	12.6	19.6
11 27	4 54.31	+14 36.6	1.630	2.603	4.5	19.4	11 27	4 55.63	+ 8 52.0	0.953	1.921	8.2	19.4
12 7	4 45.35	+14 14.7	1.627	2.605	3.3	19.4	12 7	4 45.11	+ 8 57.3	0.956	1.927	7.0	19.3
12 17	4 36.68	+14 0.5	1.651	2.607	6.5	19.6	12 17	4 35.11	+ 9 23.1	0.982	1.934	10.4	19.6
12 27	4 29.41	+13 55.9	1.703	2.609	10.4	19.8	12 27	4 27.33	+10 8.2	1.031	1.942	15.0	19.8
1 6	4 24.34	+14 1.7	1.778	2.612	13.9	20.0	1 6	4 22.86	+11 8.6	1.099	1.951	19.3	20.1
225485	2000 <i>GT</i> ₁₆₀	12 5.2 240°54'	1°7'	4.7	18		261648	2005 <i>YM</i> ₉₂	12 5.2 234°78'	0°4'	5.0	18	
10 28	5 17.65	+18 55.2	1.787	2.584	15.9	21.0	10 28	5 13.80	+21 34.2	2.819	3.595	11.2	21.8
11 7	5 13.02	+18 40.7	1.694	2.574	12.5	20.7	11 7	5 8.96	+21 26.4	2.712	3.582	8.8	21.6
11 17	5 5.53	+18 24.9	1.622	2.563	8.5	20.5	11 17	5 2.27	+21 16.1	2.630	3.567	5.9	21.4
11 27	4 55.84	+18 8.6	1.576	2.552	4.1	20.2	11 27	4 54.20	+21 3.5	2.576	3.553	2.7	21.2
12 7	4 45.00	+17 53.1	1.558	2.540	2.0	20.0	12 7	4 45.43	+20 49.3	2.553	3.537	0.8	21.0
12 17	4 34.31	+17 40.5	1.568	2.528	6.2	20.3	12 17	4 36.73	+20 34.5	2.561	3.522	4.1	21.2
12 27	4 25.07	+17 33.2	1.607	2.516	10.7	20.5	12 27	4 28.92	+20 21.0	2.599	3.505	7.2	21.4
1 6	4 18.27	+17 33.2	1.669	2.503	14.6	20.7	1 6	4 22.63	+20 10.4	2.664	3.489	10.1	21.6
86535	2000 <i>DK</i> ₉₉	12 5.2 10°59'	3°7'	5.9	18		8855	Miwa	12 5.2 206°94'	2°9'	4.3	18	
10 28	5 15.65	+28 59.3	1.175	1.999	20.9	18.8	10 28	5 18.53	+16 43.5	1.853	2.645	15.6	18.6
11 7	5 12.95	+29 31.2	1.109	2.001	16.7	18.5	11 7	5 13.45	+16 8.5	1.764	2.640	12.3	18.4
11 17	5 6.21	+29 53.8	1.061	2.003	11.8	18.3	11 17	5 5.67	+15 32.6	1.697	2.635	8.5	18.1
11 27	4 56.31	+30 2.9	1.034	2.007	6.5	18.0	11 27	4 55.86	+14 57.9	1.656	2.629	4.5	17.9
12 7	4 44.91	+29 55.9	1.031	2.011	3.8	17.8	12 7	4 45.05	+14 26.9	1.643	2.622	3.2	17.8
12 17	4 34.01	+29 34.4	1.052	2.017	7.6	18.1	12 17	4 34.47	+14 2.7	1.660	2.614	6.6	18.0
12 27	4 25.53	+29 4.1	1.098	2.024	12.7	18.4	12 27	4 25.33	+13 47.8	1.705	2.606	10.7	18.2
1 6	4 20.69	+28 32.1	1.164	2.031	17.3	18.7	1 6	4 18.53	+13 43.8	1.774	2.597	14.4	18.4
388151	2005 <i>WZ</i> ₂₁₀	12 5.2 305°08'	0°0'	5.0	18		472952	2015 <i>GV</i> ₃₁	12 5.2 319°15'	4°5'	3.9	18	
10 28	5 16.19	+21 43.2	1.509	2.319	17.7	21.4	10 28	5 13.62	+16 38.1	1.221	2.051	19.8	21.0
11 7	5 12.53	+21 53.6	1.420	2.307	14.0	21.2	11 7	5 10.97	+15 40.9	1.140	2.039	15.8	20.7
11 17	5 5.58	+22 2.3	1.351	2.295	9.5	20.9	11 17	5 4.73	+14 40.7	1.079	2.026	11.0	20.4
11 27	4 55.98	+22 8.5	1.306	2.283	4.4	20.6	11 27	4 55.64	+13 42.1	1.040	2.014	6.2	20.1
12 7	4 44.96	+22 11.6	1.287	2.272	1.0	20.3	12 7	4 45.09	+12 50.9	1.025	2.003	4.9	20.0
12 17	4 34.05	+22 12.5	1.296	2.261	6.5	20.6	12 17	4 34.77	+12 12.9	1.035	1.992	9.2	20.2
12 27	4 24.84	+22 13.6	1.331	2.250	11.6	20.9	12 27	4 26.42	+11 52.6	1.069	1.982	14.4	20.4
1 6	4 18.51	+22 17.7	1.388	2.239	16.0	21.1	1 6	4 21.24	+11 51.6	1.122	1.973	19.1	20.7
328697	2009 <i>SM</i> ₃₅₈	12 5.2 104°64'	2°9'	5.8	17		130412	2000 <i>OT</i> ₄₅	12 5.2 74°23'	0°7'	5.3	18	
10 28	5 17.24	+29 35.0	2.261	3.034	13.7	21.0	10 28	5 20.65	+25 48.1	1.302	2.113	19.9	19.4
11 7	5 12.20	+30 12.7	2.178	3.040	10.9	20.8	11 7	5 16.04	+25 30.9	1.240	2.127	15.7	19.2
11 17	5 4.70	+30 44.8	2.118	3.046	7.7	20.6	11 17	5 7.76	+25 5.0	1.197	2.141	10.6	18.9
11 27	4 55.36	+31 8.2	2.085	3.051	4.5	20.4	11 27	4 56.84	+24 29.7	1.178	2.155	5.0	18.6
12 7	4 45.14	+31 21.4	2.080	3.057	2.9	20.3	12 7	4 44.87	+23 46.7	1.185	2.169	1.2	18.4
12 17	4 35.13	+31 24.1	2.106	3.063	5.2	20.5	12 17	4 33.65	+23 0.3	1.218	2.184	6.7	18.8
12 27	4 26.43	+31 18.6	2.160	3.068	8.4	20.7	12 27	4 24.76	+22 16.5	1.277	2.198	11.9	19.2
1 6	4 19.86	+31 8.2	2.240	3.074	11.4	20.9	1 6	4 19.16	+21 40.6	1.359	2.212	16.2	19.5
70565	1999 <i>TC</i> ₁₅₀	12 5.2 322°64'	3°5'	4.4	18		481811	2008 <i>UN</i> ₅₁	12 5.2 22°33'	0°2'	5.1	17	
10 28	5 12.84	+15 30.1	1.507	2.324	17.4	18.9	10 28	5 13.76	+23 47.6	1.222	2.051	19.9	20.7
11 7	5 9.71	+15 4.2	1.420	2.310	13.8	18.7	11 7	5 10.86	+23 27.8	1.163	2.060	15.6	20.5
11 17	5 3.55	+14 39.6	1.353	2.296	9.6	18.4	11 17	5 4.39	+23 1.1	1.121	2.070	10.5	20.2
11 27	4 55.00	+14 19.0	1.310	2.283	5.3	18.1	11 27	4 55.34	+22 28.1	1.103	2.081	4.8	19.9
12 7	4 45.21	+14 5.2	1.292	2.271	3.8	18.0	12 7	4 45.21	+21 51.2	1.109	2.093	1.1	19.7
12 17	4 35.54	+14 0.6	1.302	2.259	7.6	18.2	12 17	4 35.71	+21 14.4	1.140	2.107	6.9	20.1
12 27	4 27.45	+14 7.4	1.336	2.248	12.2	18.4	12 27	4 28.39	+20 42.8	1.196	2.121	12.1	20.4
1 6	4 22.00	+14 25.9	1.393	2.237	16.4	18.6	1 6	4 24.22	+20 20.0	1.273	2.136	16.5	20.8
390635	2002 <i>GL</i> ₁₄₉	12 5.2 284°02'	7°7'	6.4	18		358359	2006 <i>WQ</i> ₁₇₆	12 5.2 93°49'	3°4'	4.3	18	
10 28	5 22.07	+38 23.2	1.736	2.500	17.6	21.4	10 28	5 14.48	+13 39.6	1.983	2.777	14.6	21.3
11 7	5 17.55	+39 40.8	1.647	2.490	14.8	21.2	11 7	5 9.98	+13 18.2	1.906	2.782	11.5	21.1
11 17	5 9.24	+40 48.1	1.577	2.480	11.7	21.0	11 17	5 3.15	+12 59.8	1.851	2.787	8.0	20.9
11 27	4 57.79	+41 37.0	1.531	2.471	8.9	20.8	11 27	4 54.63	+12 46.2	1.823	2.792	4.6	20.7
12 7	4 44.55	+42 1.3	1.511	2.461	7.7	20.7	12 7	4 45.36	+12 39.4	1.822	2.797	3.6	20.7
12 17	4 31.34	+41 58.7	1.517	2.452	9.2	20.8	12 17	4 36.35	+12 40.9	1.851	2.802	6.3	20.9
12 27	4 20.08	+41 32.7	1.549	2.442	12.1	20.9	12 27	4 28.65	+12 51.5	1.907	2.807	9.8	21.1
1 6	4 12.15	+40 51.4	1.604	2.433	15.4	21.1	1 6	4 22.99	+13 11.2	1.988	2.812	13.0	21.3
69684	1998 <i>HA</i> ₂₂	12 5.2 157°69'	1°1'	4.8	18		104836	2000 <i>HH</i> ₇₀	12 5.2 187°53'	1°7'	4.4	18	

EPHEMERIDES

12 5.2

12 5.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
254861	2005 <i>RS</i> ₅₁	12	5.2 327°93	5°7/ 2.7 18			141580	2002 <i>GU</i> ₁₆₄	12	5.2 312°65	2°6/ 4.5 18		
10 28	5 12.49	+11 21.8	1.914	2.713	14.9	20.2	10 28	5 15.06	+17 29.1	1.659	2.465	16.5	19.7
11 7	5 8.51	+9 57.9	1.834	2.709	11.9	20.0	11 7	5 11.07	+17 3.3	1.576	2.461	13.0	19.5
11 17	5 2.21	+8 34.8	1.776	2.706	8.8	19.8	11 17	5 4.24	+16 36.8	1.515	2.457	8.9	19.3
11 27	4 54.21	+7 17.8	1.744	2.702	6.2	19.6	11 27	4 55.27	+16 11.7	1.479	2.454	4.6	19.0
12 7	4 45.46	+6 12.4	1.740	2.699	6.0	19.6	12 7	4 45.26	+15 50.1	1.469	2.450	2.9	18.9
12 17	4 36.97	+5 23.1	1.765	2.696	8.3	19.8	12 17	4 35.51	+15 34.7	1.488	2.446	6.7	19.1
12 27	4 29.76	+4 52.7	1.815	2.694	11.5	20.0	12 27	4 27.30	+15 28.0	1.533	2.443	11.1	19.4
1 6	4 24.58	+4 41.2	1.889	2.691	14.5	20.1	1 6	4 21.57	+15 31.1	1.601	2.440	14.9	19.6
336076	2008 <i>FY</i> ₁₀₀	12	5.2 163°27	0°7/ 5.0 18			146588	2001 <i>TC</i> ₁₂₇	12	5.2 93°90	1°1/ 4.8 18		
10 28	5 20.59	+20 11.1	1.958	2.742	15.1	22.0	10 28	5 16.95	+20 3.3	2.121	2.908	14.0	20.9
11 7	5 14.90	+20 14.8	1.876	2.749	11.9	21.8	11 7	5 11.64	+19 49.3	2.055	2.930	10.9	20.7
11 17	5 6.55	+20 17.4	1.816	2.754	8.0	21.6	11 17	5 4.09	+19 33.7	2.012	2.951	7.3	20.5
11 27	4 56.24	+20 18.6	1.783	2.759	3.7	21.3	11 27	4 55.01	+19 16.9	1.996	2.972	3.4	20.3
12 7	4 45.00	+20 18.4	1.779	2.763	1.2	21.1	12 7	4 45.35	+19 0.2	2.009	2.993	1.4	20.2
12 17	4 34.05	+20 17.8	1.805	2.766	5.4	21.4	12 17	4 36.10	+18 45.2	2.053	3.013	5.0	20.5
12 27	4 24.58	+20 18.6	1.860	2.769	9.5	21.7	12 27	4 28.23	+18 34.0	2.125	3.033	8.5	20.7
1 6	4 17.44	+20 22.8	1.941	2.771	13.1	21.9	1 6	4 22.39	+18 28.2	2.223	3.052	11.6	21.0
402130	2004 <i>HS</i> ₄₂	12	5.2 183°29	1°1/ 4.7 18			147544	2004 <i>EN</i> ₃₆	12	5.2 324°03	3°0/ 5.8 18		
10 28	5 15.04	+20 19.3	2.609	3.388	11.9	21.6	10 28	5 15.41	+28 50.3	1.284	2.102	19.8	19.7
11 7	5 9.90	+19 52.5	2.518	3.388	9.3	21.4	11 7	5 12.72	+29 4.7	1.200	2.088	15.9	19.5
11 17	5 2.86	+19 22.9	2.451	3.388	6.3	21.2	11 17	5 6.15	+29 9.3	1.134	2.076	11.2	19.2
11 27	4 54.45	+18 51.6	2.412	3.387	3.0	21.0	11 27	4 56.42	+29 0.9	1.090	2.064	6.1	18.8
12 7	4 45.42	+18 20.1	2.404	3.386	1.4	20.8	12 7	4 44.99	+28 37.6	1.070	2.052	3.1	18.6
12 17	4 36.60	+17 50.3	2.427	3.385	4.5	21.1	12 17	4 33.78	+28 1.3	1.076	2.042	7.4	18.8
12 27	4 28.82	+17 24.5	2.479	3.382	7.7	21.3	12 27	4 24.70	+27 18.1	1.106	2.032	12.7	19.1
1 6	4 22.70	+17 4.6	2.559	3.380	10.6	21.5	1 6	4 19.10	+26 35.5	1.157	2.023	17.6	19.4
243036	2006 <i>VO</i> ₉₇	12	5.2 85°23	2°0/ 5.8 18			45504	2000 <i>BX</i> ₁₅	12	5.2 358°99	9°6/ 8.5 18		
10 28	5 16.86	+28 36.0	1.963	2.748	15.1	20.8	10 28	5 19.97	+44 38.2	1.543	2.300	19.7	17.6
11 7	5 12.09	+28 38.3	1.885	2.756	11.9	20.6	11 7	5 16.33	+45 27.5	1.467	2.298	16.9	17.4
11 17	5 4.68	+28 32.9	1.830	2.764	8.3	20.4	11 17	5 8.51	+45 56.7	1.408	2.297	13.8	17.2
11 27	4 55.36	+28 18.2	1.800	2.772	4.3	20.2	11 27	4 57.42	+45 57.3	1.371	2.296	11.1	17.1
12 7	4 45.21	+27 54.2	1.799	2.780	2.0	20.0	12 7	4 44.81	+45 24.6	1.356	2.296	9.6	17.0
12 17	4 35.44	+27 22.7	1.826	2.789	5.2	20.3	12 17	4 32.76	+44 19.5	1.367	2.297	10.4	17.0
12 27	4 27.21	+26 47.7	1.882	2.797	9.0	20.5	12 27	4 23.27	+42 50.0	1.402	2.298	12.9	17.2
1 6	4 21.33	+26 13.4	1.963	2.805	12.4	20.7	1 6	4 17.52	+41 7.7	1.459	2.300	16.0	17.4
78143	2002 <i>NB</i> ₂₀	12	5.2 131°19	6°3/ 3.8 18			20534	Bozeman	12	5.2 178°05	0°1/ 5.1 18		
10 28	5 15.82	+4 59.3	2.082	2.858	14.6	19.9	10 28	5 17.52	+21 46.8	1.843	2.637	15.6	19.5
11 7	5 10.78	+4 22.1	2.011	2.868	11.9	19.7	11 7	5 12.79	+21 52.8	1.759	2.638	12.2	19.3
11 17	5 3.55	+3 53.4	1.963	2.877	9.1	19.6	11 17	5 5.31	+21 56.7	1.698	2.638	8.3	19.0
11 27	4 54.79	+3 37.1	1.941	2.887	6.8	19.5	11 27	4 55.75	+21 57.8	1.661	2.638	3.8	18.8
12 7	4 45.36	+3 35.8	1.947	2.896	6.4	19.4	12 7	4 45.19	+21 56.1	1.654	2.638	0.9	18.5
12 17	4 36.24	+3 50.6	1.981	2.904	8.1	19.6	12 17	4 34.88	+21 52.7	1.675	2.638	5.5	18.9
12 27	4 28.37	+4 21.1	2.042	2.912	10.8	19.8	12 27	4 26.05	+21 49.6	1.724	2.638	9.8	19.1
1 6	4 22.43	+5 5.0	2.128	2.920	13.4	19.9	1 6	4 19.63	+21 49.4	1.798	2.638	13.5	19.4
189108	2001 <i>SW</i> ₃₃₇	12	5.2 145°66	0°2/ 5.1 18			153236	2000 <i>YF</i> ₁₃₈	12	5.2 7°64	0°3/ 5.1 18		
10 28	5 19.77	+23 1.4	1.923	2.709	15.3	21.5	10 28	5 14.11	+21 27.1	1.907	2.706	14.9	20.1
11 7	5 14.26	+22 49.4	1.845	2.719	12.0	21.3	11 7	5 10.02	+21 31.3	1.825	2.706	11.7	19.9
11 17	5 6.09	+22 33.0	1.789	2.728	8.1	21.1	11 17	5 3.38	+21 33.6	1.765	2.707	7.9	19.7
11 27	4 56.00	+22 12.0	1.760	2.736	3.7	20.9	11 27	4 54.84	+21 33.7	1.731	2.708	3.6	19.4
12 7	4 45.09	+21 47.5	1.760	2.744	0.9	20.7	12 7	4 45.40	+21 32.0	1.725	2.709	0.9	19.2
12 17	4 34.56	+21 21.6	1.789	2.751	5.3	21.0	12 17	4 36.20	+21 29.4	1.747	2.711	5.3	19.5
12 27	4 25.59	+20 57.4	1.847	2.758	9.4	21.3	12 27	4 28.37	+21 27.8	1.798	2.713	9.4	19.8
1 6	4 18.99	+20 38.1	1.931	2.764	13.0	21.5	1 6	4 22.76	+21 29.3	1.873	2.715	12.9	20.0
108860	2001 <i>OZ</i> ₉₆	12	5.2 128°52	2°6/ 5.9 18			52889	1998 <i>SH</i> ₆₁	12	5.2 185°10	0°2/ 5.1 18		
10 28	5 23.06	+29 29.3	1.962	2.734	15.5	20.1	10 28	5 18.93	+23 57.0	1.746	2.539	16.3	19.4
11 7	5 16.88	+29 47.0	1.889	2.751	12.3	19.9	11 7	5 14.00	+23 30.7	1.662	2.540	12.8	19.2
11 17	5 7.87	+29 56.8	1.838	2.767	8.6	19.7	11 17	5 6.15	+22 57.8	1.599	2.540	8.7	18.9
11 27	4 56.82	+29 55.9	1.813	2.782	4.7	19.5	11 27	4 56.14	+22 18.4	1.562	2.539	4.0	18.7
12 7	4 44.91	+29 43.4	1.818	2.797	2.6	19.4	12 7	4 45.14	+21 34.5	1.554	2.538	1.0	18.4
12 17	4 33.48	+29 20.7	1.852	2.811	5.5	19.6	12 17	4 34.50	+20 49.3	1.574	2.537	5.8	18.8
12 27	4 23.76	+28 51.5	1.915	2.825	9.2	19.9	12 27	4 25.51	+20 7.6	1.622	2.535	10.3	19.0
1 6	4 16.61	+28 20.9	2.003	2.837	12.6	20.1	1 6	4 19.11	+19 33.2	1.695	2.533	14.2	19.3
42817	1999 <i>NB</i> ₄	12	5.2 77°20	0°5/ 5.3 18			492202	2013 <i>RF</i> ₈₃	12	5.2 83°24	1°7/ 4.5 17		
10 28	5 22.50	+25 36.8	1.385	2.188	19.4	18.9	10 28	5 11.57	+18 39.8	2.535	3.322	12.0	21.6
11 7	5 17.05	+25 14.4	1.330	2.212	15.1	18.7	11 7	5 7.24	+18 5.7	2.453	3.329	9.3	21.4
11 17	5 8.17	+24 43.7	1.295	2.236	10.2	18.5	11 17	5 1.10	+17 30.0	2.396	3.335	6.3	21.2
11 27	4 56.94	+24 4.5	1.284	2.260	4.7	18.2	11 27	4 53.68	+16 54.1	2.366	3.341	3.2	21.0
12 7	4 44.92	+23 19.0	1.300	2.284	1.1	18.0	12 7	4 45.71	+16 20.0	2.367	3.347	2.0	20.9
12 17	4 33.76	+22 31.4	1.344	2.308	6.4	18.4	12 17	4 37.99	+15 49.9	2.397	3.353	4.7	21.1
12 27	4 24.89	+21 47.5	1.414	2.331	11.2	18.8	12 27	4 31.29	+15 25.9	2.457	3.359	7.8	21.3
1 6	4 19.16	+21 11.7	1.507	2.354	15.2	19.1	1 6	4 26.20	+15 9.3	2.542	3.366	10.5	21.5
265985	2006 <i>DL</i> ₆₆	12	5.2 265°65	0°5/ 4.9 18			436827	2012 <i>RB</i> ₃₆	12	5.2 52°81	3°2/ 5.7 18		

EPHEMERIDES

12 5.2

12 5.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
347802	2002 <i>JN</i> ₃₁	12 5.2 212°87'	1.4°/ 5.4	18			426127	2012 <i>GF</i> ₂₃	12 5.2 240°31'	3.2°/ 5.7	18		
10 28	5 20.62	+23 31.6	1.956	2.738	15.2	21.0	10 28	5 22.36	+28 19.0	1.590	2.380	17.8	21.4
11 7	5 15.30	+24 17.3	1.864	2.735	12.0	20.8	11 7	5 17.56	+28 57.9	1.498	2.370	14.3	21.2
11 17	5 7.11	+25 2.5	1.795	2.731	8.2	20.5	11 17	5 9.16	+29 31.6	1.425	2.359	10.2	20.9
11 27	4 56.67	+25 44.4	1.752	2.727	4.1	20.3	11 27	4 57.80	+29 55.5	1.377	2.348	5.7	20.6
12 7	4 45.02	+26 20.3	1.739	2.723	1.6	20.1	12 7	4 44.79	+30 6.1	1.356	2.336	3.3	20.4
12 17	4 33.45	+26 48.9	1.756	2.718	5.5	20.3	12 17	4 31.84	+30 2.7	1.363	2.324	6.9	20.6
12 27	4 23.28	+27 11.1	1.802	2.713	9.6	20.6	12 27	4 20.73	+29 48.6	1.397	2.311	11.6	20.9
1 6	4 15.54	+27 29.2	1.873	2.708	13.2	20.8	1 6	4 12.77	+29 29.7	1.454	2.298	15.9	21.1
440775	2006 <i>HX</i> ₆₉	12 5.2 117°33'	6.8°/ 3.5	18			366502	2002 <i>PB</i> ₅₂	12 5.2 98°50'	6.7°/ 3.6	18		
10 28	5 16.03	+3 41.5	2.091	2.863	14.7	21.3	10 28	5 12.88	+0 23.2	2.513	3.271	12.8	21.6
11 7	5 10.87	+2 52.2	2.027	2.879	12.0	21.2	11 7	5 8.11	+0 11.8	2.448	3.286	10.7	21.5
11 17	5 3.58	+2 12.1	1.986	2.894	9.4	21.0	11 17	5 1.61	+0 36.6	2.407	3.301	8.6	21.4
11 27	4 54.82	+1 45.5	1.971	2.909	7.3	20.9	11 27	4 53.90	+0 47.8	2.391	3.316	7.0	21.3
12 7	4 45.48	+1 35.4	1.983	2.923	7.0	20.9	12 7	4 45.72	+0 43.2	2.403	3.330	6.8	21.3
12 17	4 36.49	+1 43.2	2.023	2.937	8.6	21.1	12 17	4 37.80	+0 22.2	2.443	3.344	7.9	21.4
12 27	4 28.77	+2 8.3	2.090	2.951	11.0	21.2	12 27	4 30.89	+0 14.4	2.511	3.358	9.9	21.6
1 6	4 22.97	+2 48.4	2.181	2.964	13.4	21.4	1 6	4 25.54	+1 4.1	2.603	3.372	11.9	21.7
180756	2004 <i>NF</i> ₃₀	12 5.2 348°97'	19.2°/ 12.0	17			463001	2011 <i>FF</i> ₁₁₉	12 5.2 292°32'	3.8°/ 6.5	18		
10 28	5 26.72	+54 31.4	0.955	1.718	28.8	19.6	10 28	5 15.45	+34 7.7	2.384	3.147	13.3	21.2
11 7	5 25.99	+56 24.9	0.898	1.713	26.2	19.4	11 7	5 10.88	+34 29.9	2.291	3.143	10.8	21.1
11 17	5 17.64	+57 46.1	0.851	1.709	23.5	19.2	11 17	5 3.90	+34 43.1	2.220	3.139	8.0	20.9
11 27	5 2.44	+58 15.1	0.818	1.706	21.0	19.1	11 27	4 55.11	+34 44.5	2.176	3.134	5.2	20.7
12 7	4 43.73	+57 36.0	0.801	1.704	19.4	19.0	12 7	4 45.44	+34 32.8	2.160	3.130	3.8	20.6
12 17	4 26.37	+55 45.7	0.800	1.702	19.4	19.0	12 17	4 35.96	+34 8.6	2.173	3.126	5.4	20.7
12 27	4 14.56	+52 59.7	0.818	1.702	21.0	19.1	12 27	4 27.75	+33 34.9	2.215	3.122	8.3	20.9
1 6	4 9.94	+49 43.9	0.853	1.703	23.7	19.2	1 6	4 21.61	+32 56.3	2.283	3.118	11.2	21.1
286979	2002 <i>QS</i> ₂₆	12 5.2 53°68'	1.5°/ 4.8	18			309235	2007 <i>QB</i> ₁₈	12 5.2 214°08'	4.3°/ 6.4	18		
10 28	5 15.73	+19 33.5	1.678	2.483	16.4	20.9	10 28	5 21.03	+34 5.9	2.134	2.895	14.8	21.6
11 7	5 11.43	+19 19.7	1.608	2.492	12.8	20.7	11 7	5 15.62	+34 38.8	2.039	2.889	12.1	21.4
11 17	5 4.37	+19 4.5	1.559	2.502	8.6	20.4	11 17	5 7.32	+35 2.6	1.965	2.882	8.9	21.2
11 27	4 55.30	+18 48.7	1.536	2.512	4.1	20.2	11 27	4 56.77	+35 13.1	1.917	2.875	5.8	21.0
12 7	4 45.37	+18 33.9	1.540	2.523	1.8	20.1	12 7	4 45.06	+35 7.8	1.898	2.867	4.3	20.9
12 17	4 35.85	+18 21.9	1.572	2.533	6.0	20.4	12 17	4 33.52	+34 46.9	1.908	2.859	6.2	21.0
12 27	4 27.95	+18 15.1	1.631	2.544	10.3	20.6	12 27	4 23.47	+34 13.9	1.946	2.850	9.4	21.1
1 6	4 22.50	+18 15.1	1.713	2.555	14.0	20.9	1 6	4 15.91	+33 34.2	2.010	2.841	12.6	21.3
380519	2004 <i>FW</i> ₁₂₄	12 5.2 260°39'	0.1°/ 5.2	18			198677	2005 <i>CE</i> ₅	12 5.2 294°48'	5.3°/ 3.6	18		
10 28	5 18.28	+23 41.4	1.663	2.462	16.8	21.8	10 28	5 11.37	+7 42.9	2.278	3.063	13.2	19.8
11 7	5 13.94	+23 34.2	1.568	2.448	13.3	21.5	11 7	5 7.46	+7 7.0	2.181	3.046	10.8	19.6
11 17	5 6.44	+23 21.8	1.493	2.434	9.1	21.2	11 17	5 1.50	+6 36.4	2.106	3.029	8.1	19.4
11 27	4 56.44	+23 3.5	1.442	2.419	4.3	20.9	11 27	4 53.99	+6 14.5	2.058	3.012	5.8	19.2
12 7	4 45.10	+22 39.7	1.420	2.404	0.9	20.6	12 7	4 45.69	+6 4.2	2.038	2.995	5.4	19.2
12 17	4 33.87	+22 12.4	1.425	2.389	6.2	20.9	12 17	4 37.45	+6 7.4	2.046	2.978	7.3	19.3
12 27	4 24.26	+21 45.8	1.458	2.374	11.0	21.2	12 27	4 30.19	+6 24.6	2.082	2.962	10.2	19.4
1 6	4 17.37	+21 23.9	1.514	2.358	15.3	21.4	1 6	4 24.62	+6 55.1	2.142	2.945	13.0	19.6
343264	2009 <i>YZ</i> ₂₁	12 5.2 277°72'	4.1°/ 6.8	18			66665	1999 <i>TC</i> ₉	12 5.2 44°59'	2.5°/ 5.8	18		
10 28	5 20.23	+35 16.6	1.644	2.422	17.8	20.3	10 28	5 18.24	+27 48.1	1.450	2.255	18.5	18.5
11 7	5 15.62	+35 1.2	1.555	2.416	14.5	20.1	11 7	5 14.01	+28 10.5	1.389	2.270	14.7	18.3
11 17	5 7.54	+34 29.2	1.485	2.410	10.6	19.8	11 17	5 6.39	+28 25.3	1.348	2.286	10.1	18.1
11 27	4 56.88	+33 36.9	1.440	2.404	6.5	19.6	11 27	4 56.31	+28 29.5	1.330	2.303	5.3	17.9
12 7	4 45.03	+32 24.4	1.422	2.398	4.1	19.4	12 7	4 45.20	+28 22.0	1.339	2.320	2.6	17.7
12 17	4 33.65	+30 55.9	1.432	2.392	6.7	19.6	12 17	4 34.69	+28 4.6	1.374	2.338	6.4	18.0
12 27	4 24.32	+29 19.6	1.469	2.386	10.9	19.8	12 27	4 26.26	+27 41.6	1.436	2.356	10.8	18.3
1 6	4 18.06	+27 45.2	1.531	2.380	14.9	20.0	1 6	4 20.85	+27 18.2	1.521	2.374	14.8	18.6
437342	2013 <i>TU</i> ₁₃	12 5.2 11°37'	2.1°/ 4.6	18			232110	2001 <i>XH</i> ₂₅₈	12 5.2 15°40'	3.8°/ 4.6	18		
10 28	5 13.22	+21 40.2	1.080	1.920	21.2	20.6	10 28	5 12.21	+15 57.6	1.113	1.953	20.7	19.8
11 7	5 10.90	+20 52.8	1.018	1.922	16.7	20.3	11 7	5 9.86	+15 32.3	1.056	1.958	16.4	19.6
11 17	5 4.72	+19 58.1	0.973	1.925	11.3	20.1	11 17	5 3.91	+15 9.5	1.016	1.965	11.2	19.3
11 27	4 55.65	+18 59.2	0.950	1.929	5.3	19.8	11 27	4 55.26	+14 52.3	0.998	1.973	6.0	19.0
12 7	4 45.31	+18 1.0	0.951	1.934	2.6	19.6	12 7	4 45.43	+14 43.9	1.003	1.983	4.1	19.0
12 17	4 35.57	+17 9.8	0.976	1.940	8.1	20.0	12 17	4 36.16	+14 46.3	1.032	1.994	8.4	19.2
12 27	4 28.18	+16 31.5	1.024	1.948	13.7	20.3	12 27	4 29.05	+15 1.0	1.085	2.006	13.4	19.6
1 6	4 24.18	+16 9.3	1.092	1.956	18.4	20.6	1 6	4 25.13	+15 27.5	1.158	2.020	17.8	19.9
69899	1998 <i>SZ</i> ₁₃₇	12 5.2 5°73'	5.5°/ 6.3	17			182507	2001 <i>SN</i> ₂₅₁	12 5.2 344°65'	8.2°/ 6.2	17		
10 28	5 17.33	+34 50.5	1.929	2.702	15.7	18.2	10 28	5 19.63	+38 3.8	1.658	2.430	17.9	20.1
11 7	5 13.07	+35 52.2	1.848	2.702	12.9	18.1	11 7	5 15.83	+39 38.6	1.575	2.423	15.1	19.8
11 17	5 5.76	+36 45.2	1.787	2.703	9.7	17.9	11 17	5 8.24	+41 3.9	1.512	2.417	12.0	19.6
11 27	4 56.08	+37 24.2	1.752	2.704	6.8	17.7	11 27	4 57.48	+42 11.1	1.472	2.411	9.3	19.5
12 7	4 45.18	+37 45.5	1.743	2.706	5.5	17.6	12 7	4 44.89	+42 53.3	1.458	2.406	8.2	19.4
12 17	4 34.46	+37 48.2	1.763	2.708	7.1	17.7	12 17	4 32.31	+43 7.3	1.470	2.402	9.6	19.5
12 27	4 25.35	+37 35.2	1.809	2.711	10.1	17.9	12 27	4 21.71	+42 56.4	1.507	2.399	12.5	19.6
1 6	4 18.89	+37 11.9	1.879	2.714	13.2	18.1	1 6	4 14.48	+42 28.1	1.565	2.396	15.6	19.8
96513	1998 <i>QW</i> ₈₃	12 5.2 74°29'	1.9°/ 6.0	18			290569	2005 <i>UK</i> ₁₁₉	12 5.2 258°10'	0.			

EPHEMERIDES

12 5.2

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
360863	2005 <i>QQ</i> ₁₈₀	12 5.2 75°78	2°0/ 5.8 17				276790	2004 <i>NQ</i> ₅	12 5.2 106°67	2°0/ 5.7 18			
10 28	5 17.72	+27 52.0	1.972	2.756	15.1	21.4	10 28	5 21.48	+27 35.5	1.780	2.564	16.4	21.2
11 7	5 12.74	+28 8.9	1.902	2.771	11.9	21.2	11 7	5 15.91	+27 48.7	1.711	2.581	13.0	21.0
11 17	5 5.13	+28 19.3	1.853	2.787	8.2	21.0	11 17	5 7.38	+27 54.8	1.663	2.598	8.9	20.8
11 27	4 55.65	+28 21.4	1.831	2.803	4.3	20.8	11 27	4 56.73	+27 51.7	1.641	2.614	4.6	20.6
12 7	4 45.38	+28 14.5	1.837	2.819	2.1	20.7	12 7	4 45.19	+27 38.7	1.647	2.630	2.1	20.4
12 17	4 35.51	+27 59.6	1.873	2.834	5.2	21.0	12 17	4 34.16	+27 17.4	1.683	2.645	5.6	20.7
12 27	4 27.19	+27 40.1	1.936	2.850	8.9	21.2	12 27	4 24.93	+26 51.7	1.746	2.660	9.7	21.0
1 6	4 21.21	+27 19.5	2.025	2.866	12.2	21.4	1 6	4 18.36	+26 26.2	1.834	2.674	13.2	21.2
347391	2012 <i>RL</i> ₃₅	12 5.2 56°55	0°2/ 5.1 18				164448	2006 <i>DX</i> ₄₆	12 5.2 258°96	0°4/ 5.1 18			
10 28	5 17.31	+23 4.2	1.538	2.345	17.6	21.1	10 28	5 13.63	+21 44.1	2.558	3.340	12.0	21.3
11 7	5 13.07	+22 52.1	1.465	2.350	13.8	20.9	11 7	5 9.12	+21 34.7	2.452	3.324	9.5	21.1
11 17	5 5.70	+22 35.1	1.413	2.356	9.3	20.6	11 17	5 2.59	+21 22.5	2.369	3.307	6.4	20.9
11 27	4 56.02	+22 13.1	1.384	2.362	4.3	20.4	11 27	4 54.52	+21 7.8	2.314	3.290	3.0	20.6
12 7	4 45.30	+21 47.4	1.383	2.368	1.0	20.1	12 7	4 45.66	+20 51.2	2.288	3.273	0.8	20.4
12 17	4 35.01	+21 20.6	1.410	2.374	6.1	20.5	12 17	4 36.87	+20 34.1	2.294	3.255	4.4	20.7
12 27	4 26.56	+20 56.6	1.462	2.380	10.9	20.8	12 27	4 29.04	+20 18.4	2.329	3.237	7.8	20.8
1 6	4 20.87	+20 38.9	1.539	2.387	14.9	21.1	1 6	4 22.87	+20 6.3	2.390	3.219	10.9	21.0
77580	2001 <i>KO</i> ₁₂	12 5.2 194°37	1°5/ 4.4 18				482682	2013 <i>CD</i> ₆₇	12 5.2 344°72	9°2/ 2.9 18			
10 28	5 18.38	+22 26.8	2.309	3.086	13.3	19.4	10 28	5 11.57	+3 37.9	1.502	2.307	18.0	20.8
11 7	5 12.75	+21 19.9	2.215	3.084	10.4	19.2	11 7	5 8.51	+2 26.6	1.430	2.300	15.0	20.6
11 17	5 4.90	+20 5.9	2.145	3.082	7.0	19.0	11 17	5 2.64	+1 25.7	1.377	2.294	12.0	20.4
11 27	4 55.50	+18 46.6	2.103	3.079	3.4	18.8	11 27	4 54.65	+0 42.6	1.347	2.289	9.7	20.3
12 7	4 45.43	+17 25.8	2.093	3.075	1.8	18.7	12 7	4 45.65	+0 23.2	1.342	2.284	9.4	20.3
12 17	4 35.68	+16 7.8	2.115	3.071	5.2	18.9	12 17	4 36.91	+0 30.6	1.361	2.280	11.4	20.4
12 27	4 27.19	+14 57.5	2.167	3.067	8.8	19.1	12 27	4 29.68	+1 4.4	1.404	2.277	14.5	20.5
1 6	4 20.67	+13 58.2	2.246	3.061	12.0	19.3	1 6	4 24.89	+2 0.7	1.466	2.275	17.6	20.7
349766	2009 <i>AH</i> ₄₃	12 5.2 356°98	2°8/ 5.9 18				479404	2013 <i>YY</i> ₃₄	12 5.2 358°40	0°5/ 5.3 18			
10 28	5 12.11	+28 43.8	1.246	2.072	19.8	19.9	10 28	5 14.07	+22 54.0	1.167	2.000	20.5	20.6
11 7	5 10.03	+28 52.8	1.173	2.067	15.9	19.6	11 7	5 11.64	+23 6.4	1.097	1.996	16.2	20.3
11 17	5 4.22	+28 51.2	1.119	2.063	11.1	19.3	11 17	5 5.39	+23 15.5	1.045	1.994	11.0	20.0
11 27	4 55.51	+28 36.6	1.086	2.060	5.9	19.0	11 27	4 56.11	+23 20.0	1.015	1.993	5.2	19.7
12 7	4 45.40	+28 8.4	1.077	2.059	2.8	18.8	12 7	4 45.33	+23 19.3	1.008	1.993	1.2	19.4
12 17	4 35.68	+27 29.5	1.093	2.060	7.1	19.1	12 17	4 34.91	+23 14.8	1.026	1.994	7.2	19.8
12 27	4 28.12	+26 46.0	1.133	2.061	12.2	19.4	12 27	4 26.70	+23 10.0	1.068	1.996	12.8	20.1
1 6	4 23.87	+26 4.6	1.195	2.064	16.8	19.7	1 6	4 21.91	+23 8.6	1.131	1.999	17.7	20.4
69217	2135 <i>T</i> ₋₃	12 5.2 30°05	2°0/ 4.5 18				270881	2002 <i>TN</i> ₁₉₀	12 5.2 108°14	2°5/ 4.4 18			
10 28	5 12.74	+18 44.9	2.079	2.876	13.9	19.4	10 28	5 12.55	+14 43.8	2.573	3.357	11.9	20.8
11 7	5 8.62	+18 9.8	1.999	2.879	10.9	19.2	11 7	5 7.96	+14 21.6	2.497	3.368	9.3	20.6
11 17	5 2.28	+17 32.7	1.941	2.882	7.4	19.0	11 17	5 1.59	+14 0.7	2.445	3.379	6.4	20.5
11 27	4 54.33	+16 55.3	1.910	2.885	3.7	18.8	11 27	4 53.97	+13 42.9	2.420	3.390	3.6	20.3
12 7	4 45.68	+16 20.2	1.908	2.888	2.3	18.7	12 7	4 45.83	+13 29.5	2.425	3.401	2.7	20.3
12 17	4 37.31	+15 49.8	1.935	2.892	5.5	18.9	12 17	4 37.93	+13 21.9	2.460	3.411	5.0	20.4
12 27	4 30.19	+15 26.8	1.989	2.896	9.1	19.1	12 27	4 31.03	+13 21.2	2.525	3.422	7.9	20.6
1 6	4 25.01	+15 12.7	2.069	2.900	12.3	19.3	1 6	4 25.69	+13 27.7	2.615	3.432	10.5	20.8
404876	2014 <i>KZ</i> ₅₃	12 5.2 101°67	3°3/ 4.1 18				214341	2005 <i>JK</i> ₁₀₇	12 5.2 126°26	1°2/ 5.4 18			
10 28	5 15.71	+14 15.6	2.163	2.950	13.8	21.6	10 28	5 19.82	+24 20.0	2.181	2.958	14.0	20.8
11 7	5 10.61	+13 36.3	2.097	2.969	10.8	21.5	11 7	5 14.18	+24 54.1	2.102	2.970	11.0	20.7
11 17	5 3.41	+12 58.6	2.053	2.987	7.5	21.3	11 17	5 6.07	+25 25.8	2.046	2.981	7.5	20.5
11 27	4 54.79	+12 24.9	2.037	3.006	4.4	21.1	11 27	4 56.14	+25 52.8	2.018	2.992	3.7	20.3
12 7	4 45.61	+11 57.6	2.051	3.024	3.5	21.1	12 7	4 45.35	+26 13.7	2.019	3.002	1.4	20.1
12 17	4 36.82	+11 38.9	2.093	3.041	6.0	21.3	12 17	4 34.81	+26 28.2	2.051	3.012	4.8	20.4
12 27	4 29.30	+11 30.1	2.165	3.058	9.1	21.5	12 27	4 25.62	+26 37.7	2.112	3.022	8.5	20.6
1 6	4 23.68	+11 31.7	2.261	3.075	12.0	21.7	1 6	4 18.58	+26 44.7	2.199	3.031	11.6	20.8
46997	1998 <i>TL</i> ₂₉	12 5.2 128°04	2°0/ 4.4 18				390267	2012 <i>XS</i> ₁₃₈	12 5.2 46°91	4°1/ 4.5 18			
10 28	5 13.24	+17 38.1	2.525	3.309	12.1	19.7	10 28	5 16.09	+12 52.7	1.595	2.401	17.1	20.7
11 7	5 8.53	+17 2.2	2.445	3.318	9.5	19.6	11 7	5 11.86	+12 34.7	1.524	2.406	13.6	20.5
11 17	5 1.97	+16 25.2	2.390	3.327	6.4	19.4	11 17	5 4.79	+12 21.5	1.473	2.411	9.5	20.3
11 27	4 54.13	+15 48.8	2.362	3.335	3.3	19.2	11 27	4 55.61	+12 15.5	1.446	2.416	5.6	20.1
12 7	4 45.75	+15 15.0	2.364	3.343	2.3	19.1	12 7	4 45.47	+12 18.8	1.447	2.422	4.3	20.0
12 17	4 37.63	+14 46.0	2.397	3.351	4.9	19.3	12 17	4 35.67	+12 32.3	1.475	2.428	7.4	20.2
12 27	4 30.56	+14 23.7	2.459	3.359	7.9	19.5	12 27	4 27.49	+12 56.6	1.529	2.434	11.4	20.5
1 6	4 25.13	+14 9.5	2.547	3.366	10.7	19.7	1 6	4 21.81	+13 30.8	1.606	2.440	15.1	20.7
328079	2007 <i>XU</i> ₄₀	12 5.2 0°91	4°1/ 5.7 18				22957	<i>Vaintrob</i>	12 5.2 172°94	2°7/ 5.9 18			
10 28	5 18.47	+27 56.1	1.162	1.984	21.2	20.7	10 28	5 21.83	+29 50.5	1.726	2.508	16.9	20.0
11 7	5 15.46	+28 50.4	1.092	1.982	17.0	20.4	11 7	5 16.56	+29 56.8	1.643	2.511	13.5	19.8
11 17	5 8.20	+29 39.2	1.040	1.981	12.1	20.1	11 17	5 8.07	+29 53.7	1.581	2.513	9.5	19.5
11 27	4 57.48	+30 16.7	1.009	1.981	6.8	19.8	11 27	4 57.17	+29 38.3	1.544	2.514	5.2	19.3
12 7	4 44.97	+30 38.2	1.002	1.982	4.1	19.7	12 7	4 45.13	+29 9.8	1.535	2.515	2.7	19.1
12 17	4 32.80	+30 42.4	1.020	1.983	8.1	19.9	12 17	4 33.49	+28 30.4	1.554	2.516	6.0	19.3
12 27	4 23.09	+30 33.7	1.061	1.985	13.3	20.2	12 27	4 23.69	+27 45.1	1.601	2.516	10.3	19.6
1 6	4 17.24	+30 18.9	1.123	1.988	18.0	20.5	1 6	4 16.73	+27 0.1	1.673	2.515	14.2	19.8
442257	2011 <i>PF</i> ₈	12 5.2 113°37	2°0/ 5.9 15				315352	2007 <i>UY</i> ₂₈	12 5.2 154°78	0°7/ 5.0 18			</

EPHEMERIDES

12 5.2

12 5.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
514701	2006 <i>KL</i> ₁₁₃	12	5.2 165°25	1.8/ 4.9	18		256944	2008 <i>EZ</i> ₄₇	12	5.2 336°74	5°0/ 3.8	18	
10 28	5 18.77	+16 0.1	2.387	3.162	13.0	22.2	10 28	5 10.69	+13 20.4	1.538	2.357	17.0	20.5
11 7	5 13.03	+16 7.2	2.301	3.168	10.2	22.0	11 7	5 7.94	+12 28.0	1.454	2.344	13.6	20.2
11 17	5 5.14	+16 16.3	2.239	3.173	7.0	21.8	11 17	5 2.36	+11 36.7	1.391	2.332	9.7	20.0
11 27	4 55.68	+16 27.7	2.205	3.178	3.5	21.6	11 27	4 54.61	+10 51.1	1.352	2.320	6.1	19.8
12 7	4 45.48	+16 41.5	2.201	3.182	2.0	21.5	12 7	4 45.75	+10 15.9	1.338	2.310	5.3	19.7
12 17	4 35.47	+16 57.9	2.229	3.185	5.0	21.7	12 17	4 37.07	+9 55.0	1.350	2.300	8.4	19.8
12 27	4 26.59	+17 17.6	2.286	3.188	8.3	21.9	12 27	4 29.89	+9 50.8	1.388	2.291	12.5	20.1
1 6	4 19.56	+17 41.0	2.370	3.190	11.3	22.1	1 6	4 25.16	+10 3.2	1.447	2.283	16.3	20.3
15064	1999 <i>AC</i> ₄	12	5.2 279°90	0°7/ 5.4	18		196763	2003 <i>ST</i> ₁₆₂	12	5.2 64°51	0°5/ 5.1	18	
10 28	5 13.62	+24 42.0	2.426	3.208	12.6	18.9	10 28	5 14.55	+21 45.0	2.134	2.925	13.8	20.8
11 7	5 9.32	+24 44.6	2.320	3.192	9.9	18.7	11 7	5 9.94	+21 35.7	2.065	2.941	10.8	20.6
11 17	5 2.84	+24 43.3	2.238	3.175	6.8	18.5	11 17	5 3.11	+21 23.7	2.018	2.958	7.2	20.4
11 27	4 54.69	+24 37.4	2.183	3.159	3.3	18.2	11 27	4 54.75	+21 9.3	1.999	2.975	3.3	20.2
12 7	4 45.68	+24 26.8	2.158	3.142	0.9	18.0	12 7	4 45.75	+20 53.5	2.008	2.992	0.9	20.0
12 17	4 36.72	+24 12.7	2.162	3.125	4.5	18.2	12 17	4 37.12	+20 37.7	2.047	3.009	4.7	20.4
12 27	4 28.79	+23 57.0	2.196	3.108	8.0	18.4	12 27	4 29.80	+20 24.3	2.115	3.027	8.3	20.6
1 6	4 22.67	+23 42.3	2.255	3.091	11.2	18.6	1 6	4 24.45	+20 15.2	2.208	3.044	11.5	20.8
364952	2008 <i>GE</i> ₇₀	12	5.2 185°14	2°0/ 4.7	18		249503	2009 <i>YW</i> ₂₀	12	5.2 289°54	3°5/ 6.5	18	
10 28	5 15.16	+15 41.4	2.424	3.205	12.6	21.4	10 28	5 15.10	+33 43.3	2.386	3.151	13.3	20.7
11 7	5 10.25	+15 40.8	2.335	3.205	9.9	21.2	11 7	5 10.65	+33 56.6	2.289	3.143	10.8	20.5
11 17	5 3.29	+15 42.1	2.269	3.205	6.8	21.0	11 17	5 3.80	+34 0.6	2.214	3.134	7.9	20.3
11 27	4 54.84	+15 46.0	2.232	3.204	3.5	20.8	11 27	4 55.16	+33 53.0	2.165	3.125	5.0	20.1
12 7	4 45.67	+15 53.0	2.224	3.204	2.2	20.7	12 7	4 45.64	+33 32.6	2.145	3.117	3.5	20.0
12 17	4 36.65	+16 3.8	2.246	3.202	5.0	20.9	12 17	4 36.30	+33 0.5	2.154	3.108	5.3	20.1
12 27	4 28.67	+16 19.2	2.298	3.201	8.3	21.1	12 27	4 28.19	+32 19.9	2.191	3.100	8.3	20.2
1 6	4 22.43	+16 39.3	2.376	3.199	11.2	21.3	1 6	4 22.14	+31 35.3	2.255	3.092	11.2	20.4
403378	2009 <i>KC</i> ₁₁	12	5.2 201°72	3°7/ 4.4	18		85739	1998 <i>SF</i> ₁₀₅	12	5.2 69°64	0°0/ 5.1	18	
10 28	5 16.22	+10 24.7	2.357	3.133	13.1	21.7	10 28	5 21.09	+21 56.1	1.409	2.215	18.9	19.6
11 7	5 11.10	+10 17.7	2.266	3.130	10.5	21.5	11 7	5 16.10	+22 5.8	1.351	2.236	14.8	19.4
11 17	5 3.90	+10 15.9	2.198	3.126	7.5	21.3	11 17	5 7.75	+22 12.9	1.314	2.257	9.9	19.2
11 27	4 55.14	+10 20.9	2.158	3.122	4.7	21.1	11 27	4 57.00	+22 16.3	1.300	2.277	4.5	19.0
12 7	4 45.62	+10 34.1	2.147	3.117	3.8	21.1	12 7	4 45.29	+22 15.9	1.313	2.298	1.0	18.8
12 17	4 36.22	+10 55.8	2.167	3.112	6.0	21.2	12 17	4 34.24	+22 13.0	1.354	2.318	6.3	19.2
12 27	4 27.87	+11 26.1	2.215	3.106	9.1	21.4	12 27	4 25.30	+22 10.4	1.421	2.339	11.1	19.5
1 6	4 21.28	+12 4.1	2.290	3.100	12.0	21.6	1 6	4 19.40	+22 11.1	1.511	2.359	15.1	19.8
168565	1999 <i>XL</i> ₈₆	12	5.2 322°17	4°3/ 4.9	18		74377	1998 <i>XY</i> ₇	12	5.2 106°73	0°2/ 5.3	18	
10 28	5 15.65	+10 28.5	1.506	2.314	17.8	19.1	10 28	5 17.83	+22 55.0	1.951	2.740	15.0	20.0
11 7	5 12.13	+10 44.6	1.413	2.295	14.4	18.9	11 7	5 12.84	+23 1.5	1.875	2.750	11.7	19.8
11 17	5 5.45	+11 11.6	1.339	2.276	10.3	18.6	11 17	5 5.26	+23 5.0	1.822	2.761	7.9	19.6
11 27	4 56.16	+11 51.5	1.289	2.258	6.1	18.3	11 27	4 55.81	+23 4.6	1.795	2.771	3.7	19.3
12 7	4 45.36	+12 44.8	1.265	2.241	4.4	18.2	12 7	4 45.53	+23 0.4	1.796	2.781	0.8	19.1
12 17	4 34.48	+13 50.2	1.268	2.224	7.9	18.3	12 17	4 35.59	+22 53.5	1.827	2.791	5.1	19.5
12 27	4 25.08	+15 5.3	1.297	2.209	12.5	18.5	12 27	4 27.12	+22 46.1	1.887	2.800	9.1	19.7
1 6	4 18.38	+16 27.2	1.349	2.194	16.8	18.8	1 6	4 20.92	+22 40.9	1.971	2.810	12.5	20.0
112870	2002 <i>QC</i> ₃₆	12	5.2 141°43	0°8/ 5.0	18		514153	2015 <i>KD</i> ₁₁₆	12	5.2 182°78	2°6/ 4.5	18	
10 28	5 17.00	+20 25.6	1.983	2.774	14.7	20.0	10 28	5 18.63	+16 29.9	2.075	2.859	14.4	22.5
11 7	5 12.15	+20 24.5	1.902	2.779	11.5	19.8	11 7	5 13.25	+16 1.5	1.988	2.860	11.3	22.3
11 17	5 4.80	+20 22.0	1.843	2.783	7.8	19.6	11 17	5 5.46	+15 32.9	1.924	2.861	7.8	22.1
11 27	4 55.60	+20 18.1	1.811	2.787	3.6	19.4	11 27	4 55.90	+15 5.8	1.888	2.860	4.1	21.8
12 7	4 45.54	+20 13.2	1.807	2.791	1.1	19.2	12 7	4 45.51	+14 42.2	1.880	2.859	2.8	21.7
12 17	4 35.75	+20 8.5	1.833	2.795	5.2	19.5	12 17	4 35.37	+14 24.3	1.903	2.857	6.0	21.9
12 27	4 27.33	+20 5.9	1.887	2.798	9.2	19.7	12 27	4 26.53	+14 14.2	1.955	2.854	9.6	22.2
1 6	4 21.11	+20 7.4	1.966	2.802	12.7	20.0	1 6	4 19.79	+14 13.1	2.031	2.851	13.0	22.4
227248	2005 <i>SJ</i> ₅₄	12	5.2 287°14	0°9/ 5.4	18		409686	2006 <i>AE</i> ₅₄	12	5.2 339°25	2°1/ 4.7	17	
10 28	5 17.38	+24 38.3	1.556	2.360	17.5	20.7	10 28	5 12.24	+18 3.8	1.831	2.637	15.2	21.5
11 7	5 13.56	+24 43.7	1.463	2.346	13.9	20.5	11 7	5 8.72	+17 44.4	1.745	2.630	12.0	21.2
11 17	5 6.40	+24 44.1	1.390	2.332	9.6	20.2	11 17	5 2.66	+17 24.3	1.680	2.623	8.2	21.0
11 27	4 56.58	+24 37.9	1.341	2.318	4.6	19.9	11 27	4 54.69	+17 5.0	1.641	2.617	4.1	20.7
12 7	4 45.30	+24 24.6	1.319	2.303	1.2	19.6	12 7	4 45.77	+16 48.3	1.629	2.611	2.3	20.6
12 17	4 34.12	+24 5.7	1.324	2.289	6.3	19.9	12 17	4 37.04	+16 36.3	1.646	2.606	6.0	20.8
12 27	4 24.65	+23 45.0	1.356	2.275	11.4	20.1	12 27	4 29.64	+16 31.0	1.689	2.601	10.1	21.1
1 6	4 18.06	+23 26.7	1.410	2.262	15.8	20.4	1 6	4 24.44	+16 33.9	1.756	2.597	13.7	21.3
314787	2006 <i>TF</i> ₁₈	12	5.2 336°13	10°5/30.2	18		398538	2011 <i>UA</i> ₃₁₈	12	5.2 55°63	0°5/ 5.3	18	
10 28	5 10.85	+ 3 4.3	1.607	2.407	17.2	20.0	10 28	5 16.78	+23 30.8	1.759	2.557	16.1	21.0
11 7	5 7.77	+ 0 50.6	1.533	2.397	14.6	19.8	11 7	5 12.34	+23 40.5	1.685	2.565	12.6	20.8
11 17	5 2.07	- 1 17.1	1.481	2.387	12.1	19.7	11 17	5 5.10	+23 46.7	1.632	2.573	8.5	20.6
11 27	4 54.40	- 3 8.8	1.454	2.378	10.6	19.6	11 27	4 55.79	+23 48.3	1.605	2.581	4.0	20.4
12 7	4 45.80	- 4 35.3	1.451	2.370	11.0	19.6	12 7	4 45.55	+23 45.2	1.605	2.590	0.9	20.1
12 17	4 37.43	- 5 30.3	1.473	2.362	13.0	19.7	12 17	4 35.65	+23 38.5	1.634	2.599	5.5	20.5
12 27	4 30.47	- 5 51.7	1.517	2.355	15.6	19.8	12 27	4 27.36	+23 30.7	1.691	2.608	9.7	20.8
1 6	4 25.78	- 5 42.1	1.580	2.349	18.3	20.0	1 6	4 21.54	+23 24.8	1.772	2.617	13.4	21.0
444501	2006 <i>RQ</i> ₇₀	12	5.2 336°10	0°7/ 5.0	18		334605	2002 <i>TH</i> ₃₁₄	12	5.2 210°62	11		

EPHEMERIDES

12 5.2

12 5.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
172935	2005 <i>JF</i> ₄	12	5.2 225°73	2°3/ 4.3 18			188780	2005 <i>UH</i> ₅₁₆	12	5.2 151°14	0°7/ 5.1 18		
10 28	5 15.53	+18 28.7	2.167	2.956	13.7	20.8	10 28	5 15.35	+20 11.9	2.330	3.115	13.0	21.0
11 7	5 10.82	+17 42.7	2.073	2.948	10.8	20.6	11 7	5 10.52	+20 14.1	2.245	3.119	10.2	20.8
11 17	5 3.82	+16 53.5	2.002	2.941	7.4	20.4	11 17	5 3.55	+20 15.3	2.184	3.122	6.8	20.6
11 27	4 55.15	+16 3.3	1.959	2.932	3.8	20.2	11 27	4 55.02	+20 15.4	2.150	3.126	3.2	20.4
12 7	4 45.68	+15 15.0	1.945	2.924	2.6	20.1	12 7	4 45.76	+20 14.8	2.145	3.129	1.0	20.2
12 17	4 36.41	+14 31.8	1.960	2.915	5.7	20.2	12 17	4 36.70	+20 14.4	2.171	3.132	4.6	20.5
12 27	4 28.34	+13 56.9	2.005	2.906	9.4	20.4	12 27	4 28.78	+20 15.4	2.225	3.135	8.1	20.7
1 6	4 22.22	+13 32.4	2.075	2.896	12.7	20.6	1 6	4 22.71	+20 19.5	2.306	3.138	11.2	20.9
371328	2006 <i>JO</i> ₇	12	5.2 184°73	1°9/ 4.7 16			232482	2003 <i>LD</i> ₃	12	5.2 225°13	0°6/ 5.4 18		
10 28	5 20.20	+19 39.0	1.586	2.386	17.4	22.7	10 28	5 18.81	+24 27.5	1.932	2.719	15.2	21.8
11 7	5 15.29	+19 10.3	1.505	2.387	13.7	22.5	11 7	5 13.90	+24 29.1	1.838	2.711	12.0	21.6
11 17	5 7.24	+18 38.7	1.445	2.387	9.3	22.2	11 17	5 6.21	+24 26.2	1.766	2.703	8.2	21.4
11 27	4 56.84	+18 5.4	1.410	2.386	4.5	21.9	11 27	4 56.38	+24 17.5	1.719	2.695	3.9	21.1
12 7	4 45.32	+17 32.8	1.403	2.385	2.3	21.8	12 7	4 45.45	+24 3.1	1.701	2.686	1.0	20.9
12 17	4 34.14	+17 4.0	1.424	2.384	6.7	22.1	12 17	4 34.68	+23 44.2	1.713	2.676	5.4	21.1
12 27	4 24.73	+16 42.7	1.471	2.382	11.4	22.3	12 27	4 25.34	+23 23.9	1.753	2.666	9.7	21.4
1 6	4 18.07	+16 31.3	1.542	2.379	15.5	22.6	1 6	4 18.38	+23 5.8	1.818	2.656	13.4	21.6
522246	2016 <i>AA</i> ₂₇₃	12	5.2 254°74	5°8/ 4.0 18			279170	2009 <i>SW</i> ₂₀₄	12	5.2 93°39	1°3/ 5.5 18		
10 28	5 13.68	+2 0.8	2.643	3.402	12.3	21.6	10 28	5 23.34	+25 48.0	1.614	2.403	17.6	21.9
11 7	5 8.92	+1 48.0	2.549	3.391	10.2	21.4	11 7	5 17.49	+25 55.8	1.553	2.427	13.8	21.7
11 17	5 2.35	+1 44.7	2.478	3.381	8.0	21.3	11 17	5 8.51	+25 57.2	1.514	2.451	9.4	21.5
11 27	4 54.43	+1 53.6	2.434	3.370	6.3	21.2	11 27	4 57.32	+25 50.6	1.499	2.474	4.5	21.2
12 7	4 45.84	+2 16.4	2.418	3.359	5.9	21.1	12 7	4 45.29	+25 35.7	1.513	2.497	1.5	21.1
12 17	4 37.33	+2 53.5	2.432	3.348	7.2	21.2	12 17	4 33.92	+25 14.6	1.555	2.519	5.8	21.4
12 27	4 29.68	+3 44.1	2.474	3.337	9.4	21.3	12 27	4 24.56	+24 51.3	1.625	2.540	10.2	21.7
1 6	4 23.53	+4 46.1	2.542	3.325	11.7	21.4	1 6	4 18.07	+24 30.2	1.719	2.561	13.9	22.0
180834	2005 <i>GC</i> ₅₈	12	5.2 223°09	2°6/ 4.6 18			76551	2000 <i>GG</i> ₈₈	12	5.2 12°24	8°9/ 1.3 18		
10 28	5 18.20	+18 0.1	1.532	2.339	17.6	21.0	10 28	5 10.61	- 1 59.8	2.281	3.043	13.9	19.0
11 7	5 13.85	+17 32.8	1.451	2.336	13.9	20.7	11 7	5 6.71	- 3 29.0	2.212	3.044	11.9	18.9
11 17	5 6.36	+17 4.3	1.390	2.332	9.5	20.5	11 17	5 0.92	- 4 47.8	2.165	3.045	10.1	18.7
11 27	4 56.46	+16 36.4	1.354	2.329	4.8	20.2	11 27	4 53.78	- 5 50.3	2.144	3.046	9.0	18.7
12 7	4 45.39	+16 11.5	1.344	2.325	2.9	20.1	12 7	4 46.04	- 6 31.8	2.149	3.047	9.1	18.7
12 17	4 34.61	+15 52.5	1.362	2.322	7.1	20.3	12 17	4 38.51	- 6 49.6	2.179	3.048	10.3	18.8
12 27	4 25.56	+15 42.5	1.407	2.318	11.8	20.6	12 27	4 32.00	- 6 43.7	2.234	3.049	12.1	18.9
1 6	4 19.26	+15 43.0	1.474	2.314	15.9	20.8	1 6	4 27.14	- 6 16.6	2.311	3.051	14.0	19.0
405361	2003 <i>WW</i> ₉₈	12	5.2 31°26	4°5/ 4.6 18			191530	2003 <i>UX</i> ₁₉₇	12	5.2 193°18	0°9/ 5.5 18 R		
10 28	5 13.49	+10 19.4	1.750	2.552	16.0	20.2	10 28	5 14.79	+25 14.5	2.637	3.412	11.9	20.6
11 7	5 9.46	+10 10.0	1.689	2.567	12.7	20.0	11 7	5 9.96	+25 24.4	2.544	3.411	9.4	20.4
11 17	5 2.97	+10 7.7	1.649	2.583	9.0	19.9	11 17	5 3.12	+25 30.7	2.475	3.409	6.4	20.2
11 27	4 54.75	+10 14.8	1.634	2.599	5.6	19.7	11 27	4 54.82	+25 32.4	2.433	3.408	3.1	20.0
12 7	4 45.80	+10 32.5	1.646	2.617	4.6	19.7	12 7	4 45.81	+25 29.3	2.422	3.406	1.0	19.8
12 17	4 37.24	+11 0.9	1.685	2.635	7.1	19.9	12 17	4 36.94	+25 22.1	2.441	3.403	4.1	20.1
12 27	4 30.12	+11 39.5	1.752	2.653	10.5	20.1	12 27	4 29.09	+25 12.4	2.490	3.401	7.3	20.3
1 6	4 25.18	+12 26.4	1.842	2.672	13.7	20.3	1 6	4 22.93	+25 2.6	2.566	3.398	10.2	20.5
251245	2006 <i>VS</i> ₁₄	12	5.2 134°88	2°1/ 5.8 18			523456	2017 <i>FC</i> ₆₉	12	5.2 122°95	3°9/ 4.2 18		
10 28	5 17.42	+27 55.8	2.029	2.812	14.7	21.4	10 28	5 13.33	+10 3.4	2.429	3.209	12.6	21.0
11 7	5 12.67	+28 16.1	1.945	2.814	11.7	21.2	11 7	5 8.72	+9 44.6	2.350	3.216	10.1	20.8
11 17	5 5.26	+28 30.4	1.883	2.816	8.1	21.0	11 17	5 2.22	+9 30.6	2.295	3.222	7.2	20.7
11 27	4 55.88	+28 36.7	1.847	2.818	4.3	20.8	11 27	4 54.37	+9 23.3	2.267	3.228	4.7	20.5
12 7	4 45.54	+28 33.9	1.839	2.820	2.2	20.6	12 7	4 45.92	+9 24.5	2.267	3.234	4.0	20.5
12 17	4 35.45	+28 22.6	1.861	2.822	5.2	20.8	12 17	4 37.68	+9 35.0	2.298	3.240	6.0	20.6
12 27	4 26.79	+28 5.6	1.910	2.824	9.0	21.1	12 27	4 30.46	+9 55.0	2.357	3.245	8.7	20.8
1 6	4 20.42	+27 46.8	1.985	2.826	12.4	21.3	1 6	4 24.88	+10 23.9	2.442	3.251	11.4	21.0
265553	2005 <i>PO</i> ₂	12	5.2 129°32	2°2/ 5.9 18			170200	2003 <i>OP</i> ₁₉	12	5.2 81°20	2°4/ 4.5 18		
10 28	5 23.08	+28 51.5	1.879	2.654	16.0	21.5	10 28	5 19.01	+18 21.6	1.733	2.529	16.3	20.6
11 7	5 17.06	+28 57.1	1.806	2.670	12.7	21.3	11 7	5 13.66	+17 43.1	1.676	2.555	12.7	20.4
11 17	5 8.15	+28 54.5	1.754	2.685	8.8	21.1	11 17	5 5.70	+17 3.4	1.640	2.579	8.6	20.2
11 27	4 57.15	+28 41.4	1.729	2.700	4.6	20.8	11 27	4 55.96	+16 24.5	1.630	2.604	4.3	20.0
12 7	4 45.30	+28 17.5	1.732	2.714	2.2	20.7	12 7	4 45.61	+15 49.2	1.648	2.628	2.7	20.0
12 17	4 33.95	+27 44.8	1.765	2.727	5.5	21.0	12 17	4 35.85	+15 20.5	1.695	2.652	6.2	20.2
12 27	4 24.37	+27 7.7	1.827	2.739	9.4	21.2	12 27	4 27.78	+15 0.8	1.770	2.676	10.1	20.5
1 6	4 17.40	+26 31.2	1.914	2.751	12.9	21.5	1 6	4 22.12	+14 51.5	1.870	2.699	13.5	20.8
270389	2002 <i>AY</i> ₁₃₉	12	5.2 59°43	2°9/ 4.8 18			231784	2000 <i>CA</i> ₂₄	12	5.3 264°65	3°7/ 6.6 18		
10 28	5 18.54	+15 2.5	1.450	2.259	18.4	19.8	10 28	5 16.26	+34 38.9	2.463	3.222	13.1	20.5
11 7	5 14.00	+15 3.0	1.387	2.272	14.4	19.6	11 7	5 11.56	+34 51.2	2.360	3.209	10.7	20.3
11 17	5 6.34	+15 7.6	1.345	2.286	9.9	19.4	11 17	5 4.45	+34 53.8	2.280	3.197	7.9	20.1
11 27	4 56.39	+15 17.5	1.326	2.300	5.1	19.1	11 27	4 55.53	+34 44.1	2.226	3.184	5.1	19.9
12 7	4 45.46	+15 33.3	1.334	2.314	3.1	19.1	12 7	4 45.71	+34 20.9	2.201	3.172	3.7	19.8
12 17	4 35.01	+15 55.3	1.369	2.329	7.0	19.3	12 17	4 36.03	+33 45.3	2.206	3.159	5.3	19.9
12 27	4 26.43	+16 23.8	1.431	2.343	11.5	19.6	12 27	4 27.58	+33 0.5	2.239	3.146	8.2	20.0
1 6	4 20.65	+16 58.5	1.515	2.358	15.4	19.9	1 6	4 21.16	+32 11.2	2.299	3.133	11.1	20.2
178047	2006 <i>RB</i> ₉₅	12	5.2 293°30	2°7/ 4.3 17			355113	2006 <i>UY</i> ₆₁	12	5.3 86°84	2°7/ 4.3 18		

EPHEMERIDES

12 5.3

12 5.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
362272	2009 <i>QC</i> ₅	12 5.3 126°68	2°5/ 6.2 18				396716	2002 <i>VV</i> ₁₄₅	12 5.3 68°63	2°6/ 4.5 18			
10 28	5 18.51	+31 27.6	2.707	3.463	12.1	22.4	10 28	5 15.71	+17 4.6	1.789	2.589	15.7	20.9
11 7	5 12.72	+31 40.0	2.629	3.480	9.6	22.2	11 7	5 11.23	+16 35.3	1.721	2.602	12.3	20.7
11 17	5 4.88	+31 45.0	2.575	3.497	6.8	22.1	11 17	5 4.21	+16 5.9	1.674	2.615	8.4	20.5
11 27	4 55.60	+31 40.8	2.549	3.513	4.0	21.9	11 27	4 55.38	+15 38.5	1.653	2.627	4.4	20.3
12 7	4 45.73	+31 26.9	2.552	3.529	2.5	21.8	12 7	4 45.80	+15 15.3	1.660	2.640	2.9	20.2
12 17	4 36.17	+31 4.4	2.587	3.544	4.4	22.0	12 17	4 36.63	+14 58.8	1.696	2.653	6.2	20.4
12 27	4 27.81	+30 36.0	2.652	3.558	7.1	22.2	12 27	4 28.97	+14 50.8	1.759	2.666	10.1	20.7
1 6	4 21.29	+30 5.1	2.744	3.572	9.7	22.4	1 6	4 23.57	+14 52.2	1.846	2.679	13.5	21.0
360638	2004 <i>FJ</i> ₁₄₆	12 5.3 320°88	1°4/ 5.4 17				276430	2003 <i>BL</i> ₆₂	12 5.3 300°86	1°0/ 5.1 17			
10 28	5 15.16	+22 59.9	1.531	2.342	17.4	20.5	10 28	5 15.50	+18 44.0	1.850	2.649	15.3	20.1
11 7	5 12.12	+23 42.0	1.430	2.317	14.0	20.2	11 7	5 11.51	+18 57.0	1.751	2.632	12.1	19.8
11 17	5 5.72	+24 25.2	1.349	2.292	9.7	19.9	11 17	5 4.78	+19 11.4	1.673	2.615	8.3	19.6
11 27	4 56.47	+25 6.8	1.292	2.269	4.8	19.5	11 27	4 55.85	+19 26.9	1.621	2.598	3.9	19.3
12 7	4 45.47	+25 43.9	1.262	2.246	1.7	19.3	12 7	4 45.70	+19 43.5	1.597	2.581	1.4	19.1
12 17	4 34.27	+26 14.6	1.258	2.223	6.6	19.5	12 17	4 35.55	+20 1.1	1.602	2.564	5.8	19.3
12 27	4 24.58	+26 39.6	1.280	2.202	11.7	19.8	12 27	4 26.67	+20 20.8	1.634	2.548	10.2	19.6
1 6	4 17.79	+27 1.2	1.325	2.181	16.3	20.0	1 6	4 20.09	+20 43.5	1.690	2.532	14.1	19.8
277758	2006 <i>DF</i> ₁₄₁	12 5.3 9°15	1°9/ 5.7 17				389715	2011 <i>SH</i> ₁₀	12 5.3 132°86	1°4/ 5.7 18			
10 28	5 14.28	+26 34.4	1.790	2.589	15.8	20.4	10 28	5 19.65	+27 14.9	2.116	2.892	14.4	21.7
11 7	5 10.55	+26 57.7	1.712	2.590	12.5	20.2	11 7	5 14.11	+27 13.3	2.038	2.905	11.4	21.6
11 17	5 4.03	+27 15.9	1.654	2.593	8.6	20.0	11 17	5 6.08	+27 5.1	1.983	2.916	7.8	21.4
11 27	4 55.40	+27 27.0	1.622	2.596	4.4	19.7	11 27	4 56.26	+26 49.0	1.954	2.928	3.9	21.1
12 7	4 45.76	+27 29.8	1.617	2.599	2.0	19.6	12 7	4 45.68	+26 25.2	1.955	2.939	1.5	21.0
12 17	4 36.37	+27 25.1	1.640	2.603	5.5	19.8	12 17	4 35.48	+25 55.6	1.986	2.949	4.9	21.3
12 27	4 28.52	+27 15.3	1.690	2.608	9.6	20.1	12 27	4 26.75	+25 23.7	2.047	2.959	8.6	21.5
1 6	4 23.11	+27 4.2	1.764	2.614	13.2	20.3	1 6	4 20.24	+24 53.2	2.133	2.968	11.8	21.7
403968	2012 <i>BA</i> ₇₈	12 5.3 145°43	1°4/ 5.7 18				213598	2002 <i>PP</i> ₄₇	12 5.3 59°21	1°8/ 5.8 18			
10 28	5 16.28	+27 45.0	2.119	2.901	14.2	21.2	10 28	5 20.22	+28 39.2	1.332	2.139	19.8	19.7
11 7	5 11.59	+27 38.1	2.034	2.903	11.2	21.1	11 7	5 15.83	+28 21.9	1.270	2.153	15.6	19.4
11 17	5 4.44	+27 24.0	1.970	2.905	7.7	20.8	11 17	5 7.80	+27 52.9	1.227	2.168	10.7	19.2
11 27	4 55.50	+27 1.6	1.933	2.907	3.9	20.6	11 27	4 57.15	+27 10.9	1.208	2.183	5.4	18.9
12 7	4 45.75	+26 31.4	1.925	2.909	1.5	20.4	12 7	4 45.50	+26 17.6	1.214	2.198	1.9	18.8
12 17	4 36.29	+25 55.5	1.947	2.910	4.9	20.7	12 17	4 34.60	+25 17.8	1.247	2.213	6.5	19.1
12 27	4 28.19	+25 17.4	1.998	2.912	8.6	20.9	12 27	4 26.01	+24 18.6	1.306	2.228	11.5	19.4
1 6	4 22.25	+24 41.1	2.074	2.913	11.9	21.1	1 6	4 20.67	+23 26.4	1.388	2.244	15.8	19.7
513921	2014 <i>BO</i> ₃₄	12 5.3 225°14	1°2/ 5.6 18				133210	2003 <i>QZ</i> ₆₈	12 5.3 89°90	1°4/ 5.1 18			
10 28	5 19.39	+25 48.0	1.970	2.753	15.1	22.6	10 28	5 24.64	+18 31.1	1.461	2.259	18.8	20.0
11 7	5 14.37	+25 53.9	1.874	2.745	12.0	22.4	11 7	5 18.64	+18 38.8	1.406	2.285	14.6	19.8
11 17	5 6.56	+25 54.4	1.800	2.736	8.2	22.1	11 17	5 9.37	+18 47.3	1.371	2.311	9.8	19.5
11 27	4 56.59	+25 48.2	1.751	2.726	4.1	21.9	11 27	4 57.81	+18 56.0	1.360	2.337	4.6	19.3
12 7	4 45.50	+25 34.5	1.732	2.716	1.3	21.6	12 7	4 45.38	+19 5.0	1.378	2.362	1.7	19.2
12 17	4 34.56	+25 14.7	1.742	2.705	5.3	21.9	12 17	4 33.65	+19 14.7	1.424	2.386	6.4	19.5
12 27	4 25.04	+24 51.9	1.781	2.694	9.5	22.1	12 27	4 24.04	+19 27.0	1.497	2.410	11.1	19.9
1 6	4 17.90	+24 29.9	1.845	2.683	13.3	22.3	1 6	4 17.41	+19 43.3	1.593	2.433	15.0	20.2
285463	1999 <i>YQ</i> ₇	12 5.3 68°39	1°6/ 4.9 18				1270	<i>Datura</i>	12 5.3 51°59	2°4/ 5.0 18 R			
10 28	5 19.52	+17 26.4	1.639	2.438	17.0	20.0	10 28	5 21.07	+16 37.2	1.126	1.950	21.6	15.3
11 7	5 14.37	+17 35.2	1.580	2.460	13.3	19.8	11 7	5 16.64	+16 45.3	1.078	1.972	16.9	15.0
11 17	5 6.38	+17 45.8	1.542	2.482	8.9	19.6	11 17	5 8.41	+16 57.1	1.048	1.994	11.4	14.8
11 27	4 56.39	+17 58.1	1.529	2.505	4.3	19.4	11 27	4 57.45	+17 12.9	1.041	2.018	5.6	14.6
12 7	4 45.59	+18 12.1	1.544	2.527	1.9	19.3	12 7	4 45.46	+17 32.6	1.058	2.041	2.7	14.5
12 17	4 35.31	+18 28.2	1.587	2.549	6.0	19.6	12 17	4 34.29	+17 56.1	1.101	2.065	7.6	14.8
12 27	4 26.78	+18 47.3	1.658	2.571	10.2	19.9	12 27	4 25.58	+18 24.1	1.169	2.089	12.7	15.2
1 6	4 20.81	+19 10.1	1.754	2.593	13.8	20.2	1 6	4 20.30	+18 56.8	1.258	2.114	17.1	15.5
101095	1998 <i>RX</i> ₃₆	12 5.3 59°51	4°1/ 6.4 18				177537	2004 <i>FO</i> ₃₇	12 5.3 38°90	7°6/ 3.1 18			
10 28	5 21.28	+32 15.7	1.375	2.172	19.8	19.5	10 28	5 13.39	+ 4 29.3	1.857	2.645	15.7	20.2
11 7	5 16.77	+32 30.5	1.313	2.187	15.9	19.3	11 7	5 9.34	+ 3 24.7	1.786	2.648	12.9	20.0
11 17	5 8.50	+32 32.2	1.270	2.202	11.3	19.0	11 17	5 2.95	+ 2 28.6	1.737	2.650	10.1	19.9
11 27	4 57.49	+32 16.9	1.250	2.217	6.7	18.8	11 27	4 54.85	+ 1 46.5	1.712	2.653	8.0	19.7
12 7	4 45.36	+31 43.5	1.255	2.233	4.1	18.7	12 7	4 45.99	+ 1 22.7	1.713	2.655	7.8	19.7
12 17	4 33.96	+30 55.3	1.287	2.249	7.1	18.9	12 17	4 37.41	+ 1 19.8	1.742	2.658	9.6	19.9
12 27	4 24.95	+29 59.4	1.345	2.265	11.5	19.2	12 27	4 30.13	+ 1 37.8	1.795	2.661	12.2	20.0
1 6	4 19.30	+29 3.7	1.426	2.281	15.5	19.5	1 6	4 24.90	+ 2 14.3	1.871	2.664	15.0	20.2
186024	2001 <i>QG</i> ₂₀₇	12 5.3 40°59	1°0/ 4.9 16				30152	<i>Reneefallon</i>	12 5.3 158°70	0°9/ 5.5 18			
10 28	5 9.93	+19 6.6	2.771	3.558	11.1	20.2	10 28	5 20.72	+25 2.8	1.931	2.714	15.4	19.4
11 7	5 5.88	+18 57.2	2.702	3.576	8.6	20.0	11 7	5 15.27	+25 10.6	1.849	2.720	12.1	19.2
11 17	5 0.21	+18 47.1	2.657	3.595	5.8	19.9	11 17	5 7.07	+25 13.6	1.789	2.725	8.3	19.0
11 27	4 53.44	+18 37.0	2.639	3.615	2.7	19.7	11 27	4 56.80	+25 10.5	1.755	2.730	4.0	18.8
12 7	4 46.21	+18 27.8	2.652	3.634	1.3	19.6	12 7	4 45.58	+25 0.8	1.750	2.735	1.2	18.6
12 17	4 39.23	+18 20.5	2.694	3.654	4.0	19.8	12 17	4 34.67	+24 45.7	1.775	2.738	5.3	18.9
12 27	4 33.18	+18 16.3	2.766	3.674	6.8	20.0	12 27	4 25.30	+24 28.3	1.829	2.742	9.4	19.1
1 6	4 28.56	+18 16.2	2.865	3.694	9.3	20.2	1 6	4 18.36	+24 12.0	1.907	2.744	13.0	19.4
224816	2006 <i>VW</i> ₄₃	12 5.3 181°80	1°2/ 5.6 18				95876	2003 <i>GC</i> ₄₆	12 5.3 119°42	1°9/ 4.7 18			

EPHEMERIDES

12 5.3

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
218158	2002 <i>RL</i> ₁₆₄	12	5.3	251°70	5°0/ 3.9	18	110476	2001 <i>TJ</i> ₅₆	12	5.3	30°26	4°9/ 3.7	17
10 28	5 16.81	+13 0.6	1.551	2.357	17.5	20.6	10 28	5 10.91	+9 29.2	2.169	2.961	13.6	19.8
11 7	5 12.70	+12 11.1	1.470	2.352	14.0	20.4	11 7	5 7.10	+8 44.1	2.097	2.968	10.9	19.7
11 17	5 5.60	+11 23.5	1.409	2.346	10.0	20.1	11 17	5 1.29	+8 3.7	2.049	2.976	8.0	19.5
11 27	4 56.22	+10 42.0	1.373	2.340	6.2	19.9	11 27	4 54.07	+7 31.4	2.026	2.984	5.5	19.4
12 7	4 45.71	+10 10.9	1.363	2.335	5.3	19.8	12 7	4 46.25	+7 10.0	2.032	2.993	5.1	19.3
12 17	4 35.45	+9 53.8	1.380	2.329	8.4	20.0	12 17	4 38.70	+7 1.5	2.066	3.001	7.0	19.5
12 27	4 26.80	+9 52.7	1.423	2.323	12.6	20.2	12 27	4 32.25	+7 6.7	2.126	3.011	9.8	19.7
1 6	4 20.75	+10 7.6	1.488	2.316	16.4	20.5	1 6	4 27.54	+7 24.6	2.211	3.020	12.4	19.9
272626	2005 <i>WX</i> ₆₁	12	5.3	107°80	1°1/ 5.6	16	78619	2002 <i>TN</i> ₅	12	5.3	36°75	0°5/ 5.4	18
10 28	5 21.79	+25 58.4	1.806	2.590	16.2	21.6	10 28	5 14.28	+23 18.7	2.140	2.931	13.8	19.4
11 7	5 16.08	+25 58.7	1.738	2.609	12.7	21.4	11 7	5 9.98	+23 32.9	2.062	2.938	10.8	19.2
11 17	5 7.53	+25 52.7	1.692	2.628	8.7	21.2	11 17	5 3.38	+23 44.6	2.007	2.946	7.3	19.0
11 27	4 56.96	+25 39.2	1.672	2.646	4.2	21.0	11 27	4 55.10	+23 52.8	1.978	2.954	3.4	18.8
12 7	4 45.59	+25 18.2	1.680	2.664	1.3	20.8	12 7	4 46.04	+23 57.1	1.977	2.962	0.8	18.6
12 17	4 34.75	+24 52.1	1.718	2.681	5.4	21.2	12 17	4 37.22	+23 58.3	2.007	2.970	4.7	18.9
12 27	4 25.66	+24 24.4	1.784	2.698	9.5	21.4	12 27	4 29.66	+23 58.0	2.064	2.979	8.3	19.1
1 6	4 19.16	+23 59.2	1.875	2.714	13.1	21.7	1 6	4 24.10	+23 58.2	2.147	2.988	11.5	19.3
13496	1985 <i>RF</i> ₃	12	5.3	66°32	2°9/ 4.7	18	318788	2005 <i>SS</i> ₁₁₈	12	5.3	82°18	8°0/ 3.2	18
10 28	5 18.92	+15 23.6	1.659	2.457	16.8	18.2	10 28	5 14.13	+0 52.7	2.043	2.814	15.0	20.7
11 7	5 13.74	+15 10.3	1.605	2.484	13.2	18.1	11 7	5 9.58	-0 7.2	1.983	2.828	12.5	20.6
11 17	5 5.87	+14 59.7	1.572	2.511	9.0	17.9	11 17	5 2.93	-0 55.9	1.945	2.843	10.1	20.5
11 27	4 56.16	+14 53.1	1.565	2.538	4.7	17.7	11 27	4 54.81	-1 28.2	1.932	2.858	8.4	20.4
12 7	4 45.78	+14 52.0	1.585	2.565	3.1	17.7	12 7	4 46.11	-1 40.8	1.946	2.872	8.1	20.4
12 17	4 35.98	+14 57.3	1.634	2.591	6.4	17.9	12 17	4 37.76	-1 32.1	1.986	2.887	9.5	20.5
12 27	4 27.89	+15 10.1	1.711	2.618	10.3	18.2	12 27	4 30.65	-1 3.2	2.052	2.901	11.7	20.7
1 6	4 22.26	+15 30.2	1.811	2.644	13.7	18.5	1 6	4 25.41	-0 17.0	2.141	2.915	13.9	20.9
191449	2003 <i>ST</i> ₂₀₈	12	5.3	74°23	2°8/ 4.2	18	94882	2001 <i>XC</i> ₂₄₄	12	5.3	235°53	1°9/ 5.7	18
10 28	5 13.01	+16 24.5	2.217	3.009	13.3	20.2	10 28	5 19.99	+26 18.4	1.819	2.606	16.0	20.0
11 7	5 8.73	+15 42.6	2.137	3.014	10.5	20.0	11 7	5 15.20	+26 43.1	1.726	2.598	12.8	19.8
11 17	5 2.38	+15 0.1	2.081	3.019	7.2	19.8	11 17	5 7.36	+27 3.3	1.654	2.590	8.9	19.6
11 27	4 54.56	+14 19.3	2.052	3.023	4.0	19.6	11 27	4 57.12	+27 16.5	1.608	2.582	4.6	19.3
12 7	4 46.10	+13 43.0	2.052	3.028	3.0	19.6	12 7	4 45.60	+27 20.9	1.590	2.573	2.0	19.1
12 17	4 37.90	+13 13.5	2.081	3.033	5.7	19.8	12 17	4 34.19	+27 16.7	1.601	2.564	5.8	19.3
12 27	4 30.86	+12 53.2	2.139	3.038	8.9	20.0	12 27	4 24.32	+27 6.5	1.640	2.555	10.1	19.6
1 6	4 25.63	+12 42.9	2.221	3.043	11.9	20.2	1 6	4 17.06	+26 54.5	1.703	2.545	14.0	19.8
228003	2007 <i>MF</i> ₁₂	12	5.3	245°89	1°6/ 4.8	18	57299	2001 <i>QM</i> ₁₉₄	12	5.3	329°97	2°1/ 4.5	18
10 28	5 12.91	+17 51.1	2.464	3.251	12.3	21.2	10 28	5 13.61	+20 48.8	1.728	2.535	15.9	19.0
11 7	5 8.58	+17 37.8	2.372	3.246	9.7	21.0	11 7	5 10.00	+19 54.6	1.641	2.527	12.5	18.7
11 17	5 2.29	+17 24.2	2.303	3.241	6.6	20.8	11 17	5 3.67	+18 54.3	1.576	2.519	8.5	18.5
11 27	4 54.54	+17 11.3	2.261	3.236	3.3	20.5	11 27	4 55.32	+17 50.4	1.536	2.512	4.2	18.2
12 7	4 46.10	+17 0.1	2.249	3.231	1.8	20.4	12 7	4 46.01	+16 46.8	1.524	2.506	2.4	18.1
12 17	4 37.79	+16 52.0	2.267	3.225	4.8	20.6	12 17	4 36.96	+15 48.3	1.540	2.499	6.4	18.3
12 27	4 30.48	+16 48.4	2.314	3.220	8.0	20.8	12 27	4 29.40	+14 59.5	1.583	2.493	10.7	18.6
1 6	4 24.83	+16 50.5	2.387	3.215	11.0	21.0	1 6	4 24.19	+14 23.7	1.649	2.488	14.6	18.8
396242	2014 <i>BR</i> ₃₇	12	5.3	322°68	1°0/ 5.5	18	34471	2000 <i>SE</i> ₁₁₅	12	5.3	143°94	0°9/ 4.9	18
10 28	5 15.18	+25 28.2	1.382	2.198	18.7	21.2	10 28	5 15.53	+20 28.7	2.357	3.140	12.9	19.3
11 7	5 12.24	+25 26.1	1.295	2.185	14.9	20.9	11 7	5 10.64	+20 15.5	2.274	3.147	10.1	19.1
11 17	5 5.77	+25 16.8	1.228	2.173	10.3	20.6	11 17	5 3.66	+20 0.3	2.215	3.153	6.8	18.9
11 27	4 56.47	+24 59.1	1.184	2.161	5.0	20.3	11 27	4 55.19	+19 43.6	2.184	3.159	3.2	18.7
12 7	4 45.68	+24 32.9	1.165	2.150	1.3	20.0	12 7	4 46.05	+19 26.4	2.182	3.165	1.2	18.6
12 17	4 35.06	+24 0.9	1.172	2.139	6.7	20.3	12 17	4 37.16	+19 10.2	2.210	3.171	4.6	18.8
12 27	4 26.34	+23 28.0	1.205	2.129	12.0	20.6	12 27	4 29.42	+18 57.1	2.268	3.176	8.1	19.1
1 6	4 20.72	+22 59.4	1.259	2.120	16.7	20.8	1 6	4 23.49	+18 48.7	2.352	3.181	11.1	19.3
90999	1998 <i>BE</i> ₆	12	5.3	0°63	1°4/ 5.0	18	481548	2007 <i>RW</i> ₁₄₈	12	5.3	36°30	1°7/ 5.5	17
10 28	5 14.35	+19 3.9	1.292	2.118	19.2	19.5	10 28	5 19.54	+24 24.1	1.201	2.022	20.7	20.6
11 7	5 11.47	+19 6.2	1.220	2.116	15.2	19.2	11 7	5 15.41	+24 58.3	1.158	2.049	16.2	20.5
11 17	5 5.13	+19 9.0	1.167	2.115	10.3	18.9	11 17	5 7.56	+25 27.9	1.134	2.078	10.9	20.2
11 27	4 56.11	+19 12.6	1.137	2.114	4.9	18.6	11 27	4 57.09	+25 49.6	1.131	2.108	5.3	20.0
12 7	4 45.77	+19 17.7	1.131	2.115	1.8	18.4	12 7	4 45.69	+26 1.9	1.155	2.138	1.9	19.9
12 17	4 35.74	+19 25.3	1.151	2.117	7.0	18.8	12 17	4 35.14	+26 5.8	1.204	2.170	6.6	20.3
12 27	4 27.65	+19 37.1	1.196	2.119	12.2	19.1	12 27	4 27.02	+26 4.8	1.278	2.202	11.5	20.7
1 6	4 22.61	+19 54.8	1.263	2.123	16.7	19.3	1 6	4 22.22	+26 3.0	1.374	2.234	15.6	21.0
331276	2011 <i>CO</i> ₉₀	12	5.3	154°88	1°4/ 5.8	18	304181	2006 <i>QG</i> ₃₄	12	5.3	83°42	2°3/ 5.9	18
10 28	5 14.75	+27 58.4	2.707	3.477	11.8	21.5	10 28	5 19.43	+29 7.2	1.892	2.674	15.7	21.1
11 7	5 9.89	+27 58.7	2.619	3.481	9.3	21.3	11 7	5 14.26	+29 15.1	1.824	2.691	12.4	20.9
11 17	5 3.08	+27 53.3	2.555	3.486	6.4	21.1	11 17	5 6.34	+29 14.8	1.777	2.709	8.6	20.7
11 27	4 54.88	+27 41.2	2.518	3.489	3.3	20.9	11 27	4 56.46	+29 4.5	1.756	2.727	4.6	20.5
12 7	4 46.05	+27 22.7	2.511	3.493	1.5	20.8	12 7	4 45.80	+28 43.9	1.763	2.744	2.3	20.4
12 17	4 37.44	+26 58.9	2.535	3.496	4.0	21.0	12 17	4 35.62	+28 14.9	1.799	2.761	5.3	20.6
12 27	4 29.88	+26 32.2	2.589	3.500	7.1	21.2	12 27	4 27.10	+27 41.4	1.864	2.778	9.1	20.9
1 6	4 24.00	+26 5.4	2.669	3.502	9.8	21.4	1 6	4 21.06	+27 8.1	1.953	2.795	12.5	21.1
495296	2013 <i>TV</i> ₁₄₈	12	5.3	181°11	4°0/ 3.9	17	109362	2001 <i>QO</i> ₁₅₇	12	5.3	207°05	3°4/ 6.2	18

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
414964	2011 <i>CY</i> ₉	12 5.3 278°36	4°1/ 6.7 18				398174	2010 <i>HT</i> ₃₇	12 5.3 111°07	4°2/ 4.1 18			
10 28	5 16.64	+35 1.6	2.304	3.066	13.8	21.3	10 28	5 16.32	+11 4.7	2.167	2.949	13.9	21.7
11 7	5 12.04	+35 20.0	2.211	3.060	11.3	21.1	11 7	5 11.21	+10 31.4	2.099	2.966	11.0	21.6
11 17	5 4.91	+35 28.3	2.139	3.055	8.4	21.0	11 17	5 3.99	+10 2.1	2.055	2.983	7.9	21.4
11 27	4 55.87	+35 23.6	2.092	3.049	5.5	20.8	11 27	4 55.32	+9 39.6	2.037	2.999	5.0	21.3
12 7	4 45.90	+35 4.4	2.074	3.043	4.1	20.7	12 7	4 46.06	+9 26.0	2.048	3.015	4.3	21.2
12 17	4 36.14	+34 31.7	2.085	3.038	5.7	20.8	12 17	4 37.14	+9 22.8	2.088	3.030	6.5	21.4
12 27	4 27.71	+33 49.0	2.125	3.032	8.6	20.9	12 27	4 29.46	+9 30.7	2.157	3.045	9.4	21.6
1 6	4 21.46	+33 1.3	2.190	3.026	11.5	21.1	1 6	4 23.66	+9 49.2	2.251	3.060	12.2	21.8
406015	2006 <i>TN</i> ₃₅	12 5.3 141°50	1°8/ 4.6 18				415215	2012 <i>HV</i> ₄₉	12 5.3 145°63	1°8/ 5.8 17			
10 28	5 16.30	+18 57.3	2.343	3.126	13.0	21.6	10 28	5 16.37	+27 47.3	2.727	3.494	11.8	21.5
11 7	5 11.15	+18 22.7	2.264	3.136	10.2	21.4	11 7	5 11.20	+28 12.9	2.641	3.500	9.3	21.3
11 17	5 3.94	+17 46.2	2.208	3.145	6.9	21.2	11 17	5 4.02	+28 34.0	2.578	3.507	6.5	21.2
11 27	4 55.30	+17 9.0	2.180	3.154	3.4	21.0	11 27	4 55.38	+28 49.0	2.543	3.513	3.5	21.0
12 7	4 46.04	+16 33.4	2.182	3.163	2.0	20.9	12 7	4 46.04	+28 57.0	2.538	3.519	1.9	20.9
12 17	4 37.10	+16 1.7	2.215	3.171	5.0	21.2	12 17	4 36.87	+28 58.1	2.565	3.524	4.2	21.1
12 27	4 29.33	+15 36.2	2.276	3.179	8.3	21.4	12 27	4 28.73	+28 53.9	2.621	3.530	7.1	21.3
1 6	4 23.38	+15 18.6	2.364	3.186	11.3	21.6	1 6	4 22.30	+28 46.9	2.704	3.535	9.8	21.4
382891	2004 <i>PK</i> ₆₃	12 5.3 80°71	4°0/ 4.6 18				281874	2010 <i>ES</i> ₁₀₂	12 5.3 354°82	1°8/ 4.6 17			
10 28	5 18.13	+13 11.6	1.592	2.393	17.3	21.1	10 28	5 11.54	+17 37.8	2.462	3.252	12.2	21.0
11 7	5 13.46	+12 52.3	1.526	2.405	13.7	20.9	11 7	5 7.50	+17 16.2	2.376	3.251	9.6	20.8
11 17	5 5.93	+12 37.3	1.480	2.417	9.6	20.7	11 17	5 1.55	+16 54.1	2.312	3.251	6.5	20.6
11 27	4 56.32	+12 29.2	1.460	2.429	5.5	20.5	11 27	4 54.24	+16 32.9	2.276	3.250	3.3	20.4
12 7	4 45.83	+12 29.9	1.466	2.442	4.2	20.4	12 7	4 46.28	+16 13.9	2.269	3.250	2.0	20.3
12 17	4 35.76	+12 40.4	1.500	2.454	7.3	20.7	12 17	4 38.51	+15 58.9	2.292	3.250	4.8	20.5
12 27	4 27.38	+13 1.3	1.561	2.465	11.3	20.9	12 27	4 31.72	+15 49.4	2.344	3.249	8.0	20.7
1 6	4 21.53	+13 31.9	1.645	2.477	14.9	21.2	1 6	4 26.57	+15 46.6	2.422	3.249	10.9	20.9
120662	1996 <i>VK</i> ₉	12 5.3 8°04	2°1/ 4.9 17				254777	2005 <i>QP</i> ₄₈	12 5.3 127°77	2°0/ 4.8 18			
10 28	5 10.34	+15 28.3	2.160	2.959	13.4	18.6	10 28	5 15.65	+16 50.8	2.168	2.955	13.7	21.2
11 7	5 6.83	+15 33.4	2.082	2.962	10.5	18.4	11 7	5 10.89	+16 38.5	2.088	2.962	10.8	21.0
11 17	5 1.23	+15 41.2	2.027	2.967	7.2	18.2	11 17	5 3.92	+16 26.9	2.031	2.969	7.3	20.8
11 27	4 54.11	+15 52.5	1.998	2.972	3.7	18.0	11 27	4 55.35	+16 17.0	2.002	2.975	3.7	20.6
12 7	4 46.28	+16 7.8	1.997	2.978	2.2	17.9	12 7	4 46.07	+16 10.0	2.001	2.982	2.2	20.5
12 17	4 38.65	+16 27.5	2.026	2.985	5.1	18.1	12 17	4 37.03	+16 7.2	2.030	2.988	5.3	20.8
12 27	4 32.12	+16 51.7	2.082	2.992	8.5	18.4	12 27	4 29.21	+16 9.9	2.088	2.993	8.8	21.0
1 6	4 27.37	+17 20.6	2.164	3.001	11.6	18.6	1 6	4 23.31	+16 18.8	2.171	2.999	11.9	21.2
22017	1999 <i>XT</i> ₁₀₄	12 5.3 37°63	1°2/ 5.1 18				72205	2000 <i>YO</i> ₁₃₇	12 5.3 353°84	6°8/ 3.4 18			
10 28	5 15.45	+17 37.2	1.967	2.761	14.7	17.4	10 28	5 9.29	+14 41.5	1.003	1.854	21.6	18.1
11 7	5 11.02	+17 54.4	1.891	2.769	11.5	17.2	11 7	5 8.14	+13 13.7	0.938	1.847	17.3	17.8
11 17	5 4.15	+18 13.5	1.837	2.777	7.8	17.0	11 17	5 3.20	+11 43.8	0.892	1.841	12.4	17.5
11 27	4 55.49	+18 34.4	1.810	2.786	3.7	16.8	11 27	4 55.33	+10 20.1	0.866	1.837	8.0	17.3
12 7	4 46.00	+18 56.6	1.811	2.794	1.5	16.6	12 7	4 46.06	+9 12.0	0.862	1.834	7.2	17.2
12 17	4 36.75	+19 20.2	1.842	2.804	5.2	16.9	12 17	4 37.20	+8 27.3	0.880	1.833	11.1	17.4
12 27	4 28.82	+19 45.5	1.900	2.813	9.1	17.1	12 27	4 30.54	+8 10.3	0.919	1.833	16.0	17.7
1 6	4 23.01	+20 13.1	1.984	2.822	12.5	17.4	1 6	4 27.20	+8 19.8	0.977	1.836	20.6	18.0
76460	2000 <i>FQ</i> ₄₁	12 5.3 315°03	3°9/ 5.7 17				85391	1996 <i>RW</i> ₁₁	12 5.3 92°53	1°8/ 5.8 18			
10 28	5 18.54	+28 36.4	1.681	2.473	16.9	19.1	10 28	5 17.90	+27 27.4	2.008	2.791	14.9	20.4
11 7	5 14.61	+29 39.7	1.587	2.459	13.7	18.8	11 7	5 13.01	+27 41.4	1.932	2.801	11.7	20.2
11 17	5 7.33	+30 40.1	1.513	2.446	9.8	18.6	11 17	5 5.53	+27 49.3	1.877	2.811	8.1	20.0
11 27	4 57.27	+31 32.7	1.465	2.432	5.9	18.3	11 27	4 56.14	+27 49.3	1.849	2.821	4.2	19.8
12 7	4 45.58	+32 12.8	1.443	2.420	4.0	18.2	12 7	4 45.91	+27 40.8	1.849	2.831	1.9	19.6
12 17	4 33.82	+32 38.0	1.449	2.407	6.9	18.3	12 17	4 36.01	+27 25.0	1.878	2.841	5.1	19.9
12 27	4 23.64	+32 49.6	1.482	2.395	11.1	18.5	12 27	4 27.59	+27 5.0	1.936	2.851	8.8	20.1
1 6	4 16.34	+32 52.1	1.538	2.384	15.1	18.8	1 6	4 21.46	+26 44.3	2.019	2.860	12.2	20.3
520882	2014 <i>WR</i> ₅₂₂	12 5.3 86°07	3°9/ 4.9 18				95614	2002 <i>FQ</i> ₃₇	12 5.3 39°39	0°5/ 5.2 18			
10 28	5 18.75	+7 7.3	2.458	3.220	13.0	21.0	10 28	5 16.44	+19 29.6	1.911	2.705	15.1	18.9
11 7	5 12.82	+7 25.8	2.388	3.242	10.4	20.8	11 7	5 11.93	+19 53.6	1.833	2.712	11.8	18.7
11 17	5 4.95	+7 52.3	2.343	3.263	7.5	20.7	11 17	5 4.86	+20 18.5	1.778	2.719	8.0	18.5
11 27	4 55.74	+8 27.7	2.326	3.284	4.9	20.5	11 27	4 55.87	+20 43.5	1.749	2.726	3.7	18.2
12 7	4 45.97	+9 12.0	2.339	3.304	4.0	20.5	12 7	4 45.96	+21 7.7	1.749	2.733	0.9	18.0
12 17	4 36.48	+10 4.1	2.383	3.325	5.8	20.7	12 17	4 36.30	+21 30.8	1.778	2.741	5.2	18.4
12 27	4 28.11	+11 2.6	2.458	3.345	8.5	20.9	12 27	4 28.02	+21 53.6	1.834	2.749	9.2	18.6
1 6	4 21.47	+12 5.8	2.559	3.365	11.0	21.1	1 6	4 21.97	+22 17.1	1.916	2.757	12.7	18.9
411127	2009 <i>WF</i> ₁₉₃	12 5.3 76°86	2°2/ 5.8 18				422354	2014 <i>SK</i> ₂₂₉	12 5.3 2°53	3°8/ 3.9 17			
10 28	5 18.26	+27 37.9	2.218	2.993	13.9	21.0	10 28	5 12.17	+13 35.5	2.110	2.906	13.8	20.9
11 7	5 13.02	+28 12.1	2.148	3.012	10.9	20.8	11 7	5 8.24	+12 48.7	2.029	2.905	10.9	20.7
11 17	5 5.38	+28 41.2	2.100	3.031	7.6	20.7	11 17	5 2.17	+12 3.1	1.971	2.905	7.7	20.5
11 27	4 56.02	+29 3.1	2.079	3.049	4.1	20.5	11 27	4 54.56	+11 21.8	1.939	2.906	4.8	20.4
12 7	4 45.90	+29 16.2	2.087	3.067	2.2	20.4	12 7	4 46.24	+10 47.9	1.935	2.906	4.0	20.3
12 17	4 36.10	+29 20.7	2.126	3.086	4.8	20.6	12 17	4 38.15	+10 23.9	1.960	2.906	6.5	20.5
12 27	4 27.66	+29 18.7	2.193	3.104	8.1	20.8	12 27	4 31.22	+10 11.8	2.013	2.907	9.7	20.7
1 6	4 21.33	+29 13.2	2.287	3.122	11.1	21.1	1 6	4 26.14	+10 11.9	2.090	2.908	12.7	20.9
275651	2000 <i>GS</i> ₁₆₉	12 5.3 203°35	2°2/ 5.9 18				261335	2005 <i>UQ</i> ₂₄₇	12 5.3 178°67	0°8/ 5.5 18			

EPHEMERIDES

12 5.3

12 5.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
333259	2012 <i>JG</i> ₁₅	12 5.3 113°49'	1°9'	5.8	17		403492	2009 <i>UD</i> ₈₉	12 5.3 3°34'	1°9'	4.9	17	
10 28	5 16.13	+27 34.6	2.470	3.243	12.7	21.1	10 28	5 12.47	+17 46.3	1.781	2.588	15.5	20.4
11 7	5 11.24	+28 1.2	2.386	3.249	10.0	20.9	11 7	5 9.01	+17 37.9	1.702	2.587	12.2	20.2
11 17	5 4.17	+28 23.3	2.324	3.255	7.0	20.7	11 17	5 2.98	+17 30.0	1.645	2.588	8.3	19.9
11 27	4 55.49	+28 39.0	2.290	3.261	3.7	20.5	11 27	4 55.04	+17 23.7	1.613	2.588	4.1	19.7
12 7	4 46.05	+28 47.3	2.286	3.267	2.0	20.4	12 7	4 46.18	+17 20.2	1.608	2.590	2.2	19.5
12 17	4 36.79	+28 48.3	2.312	3.272	4.5	20.6	12 17	4 37.57	+17 20.8	1.631	2.592	5.9	19.8
12 27	4 28.67	+28 43.9	2.367	3.278	7.6	20.8	12 27	4 30.34	+17 27.1	1.681	2.595	9.9	20.0
1 6	4 22.41	+28 36.6	2.448	3.283	10.5	21.0	1 6	4 25.33	+17 39.8	1.755	2.599	13.6	20.3
275514	1996 <i>LU</i>	12 5.3 201°98'	4°5'	4.7	18		446700	2015 <i>OX</i> ₂₆	12 5.3 163°17'	0°7'	5.1	18	
10 28	5 19.55	+9 34.3	1.902	2.684	15.6	20.8	10 28	5 18.48	+22 33.0	2.111	2.894	14.2	21.5
11 7	5 14.33	+9 31.1	1.815	2.681	12.5	20.6	11 7	5 13.20	+22 3.7	2.027	2.899	11.1	21.3
11 17	5 6.49	+9 35.3	1.750	2.678	9.0	20.4	11 17	5 5.53	+21 29.7	1.966	2.903	7.5	21.1
11 27	4 56.66	+9 49.2	1.711	2.674	5.7	20.2	11 27	4 56.13	+20 51.6	1.931	2.907	3.5	20.9
12 7	4 45.81	+10 13.8	1.700	2.670	4.6	20.1	12 7	4 45.98	+20 11.2	1.927	2.911	1.1	20.7
12 17	4 35.12	+10 49.4	1.719	2.666	7.2	20.2	12 17	4 36.14	+19 31.2	1.953	2.914	5.1	21.0
12 27	4 25.75	+11 35.0	1.765	2.661	10.8	20.4	12 27	4 27.66	+18 55.1	2.007	2.916	8.9	21.2
1 6	4 18.61	+12 29.2	1.837	2.655	14.2	20.6	1 6	4 21.30	+18 25.8	2.088	2.918	12.3	21.5
253401	2003 <i>PB</i> ₃	12 5.3 54°70'	2°9'	6.0	18		315297	2007 <i>TB</i> ₁₅₈	12 5.3 30°17'	2°9'	5.9	17	
10 28	5 24.14	+29 27.6	1.118	1.932	22.4	20.1	10 28	5 20.73	+29 4.6	1.326	2.132	19.9	20.9
11 7	5 19.30	+29 33.6	1.075	1.960	17.6	19.9	11 7	5 16.74	+29 15.3	1.251	2.132	15.9	20.6
11 17	5 10.28	+29 27.2	1.048	1.989	12.2	19.7	11 17	5 8.86	+29 16.0	1.195	2.133	11.2	20.3
11 27	4 58.37	+29 5.4	1.044	2.017	6.4	19.5	11 27	4 57.95	+29 3.0	1.161	2.134	6.0	20.0
12 7	4 45.53	+28 28.5	1.064	2.046	3.0	19.4	12 7	4 45.59	+28 35.4	1.153	2.135	2.9	19.9
12 17	4 33.84	+27 41.3	1.110	2.076	7.2	19.7	12 17	4 33.68	+27 55.5	1.171	2.136	7.0	20.1
12 27	4 25.00	+26 51.3	1.181	2.105	12.2	20.1	12 27	4 24.04	+27 9.7	1.215	2.137	12.2	20.4
1 6	4 19.90	+26 6.1	1.273	2.134	16.6	20.5	1 6	4 17.86	+26 25.4	1.280	2.138	16.7	20.7
49724	1999 <i>VQ</i> ₆₆	12 5.3 232°98'	1°2'	5.5	18		97194	1999 <i>WR</i> ₂₀	12 5.3 269°49'	0°5'	5.2	18	
10 28	5 20.68	+24 47.8	1.686	2.478	16.9	19.4	10 28	5 16.95	+20 54.8	1.854	2.649	15.4	19.9
11 7	5 15.95	+25 6.2	1.595	2.471	13.4	19.2	11 7	5 12.62	+20 59.8	1.761	2.639	12.2	19.7
11 17	5 8.00	+25 20.7	1.524	2.463	9.2	18.9	11 17	5 5.54	+21 3.3	1.689	2.630	8.3	19.4
11 27	4 57.50	+25 29.2	1.479	2.454	4.5	18.6	11 27	4 56.30	+21 5.2	1.643	2.620	3.9	19.1
12 7	4 45.63	+25 30.3	1.461	2.445	1.5	18.4	12 7	4 45.93	+21 5.5	1.625	2.610	1.0	18.9
12 17	4 33.89	+25 24.4	1.472	2.436	6.0	18.6	12 17	4 35.66	+21 5.0	1.636	2.600	5.6	19.2
12 27	4 23.80	+25 14.5	1.511	2.427	10.7	18.9	12 27	4 26.76	+21 5.6	1.675	2.590	10.0	19.4
1 6	4 16.49	+25 4.6	1.573	2.417	14.9	19.1	1 6	4 20.22	+21 9.5	1.738	2.579	13.8	19.6
124302	2001 <i>QL</i> ₆₂	12 5.3 88°54'	0°9'	5.1	18		297977	2002 <i>JE</i> ₁₄₆	12 5.3 155°51'	7°0'	3.0	18	
10 28	5 21.47	+21 20.8	1.619	2.414	17.3	20.7	10 28	5 15.83	+3 37.3	2.204	2.973	14.1	21.7
11 7	5 15.96	+21 4.6	1.559	2.438	13.5	20.5	11 7	5 10.86	+2 35.0	2.132	2.980	11.7	21.5
11 17	5 7.52	+20 45.2	1.521	2.461	9.0	20.3	11 17	5 3.81	+1 40.5	2.082	2.987	9.2	21.4
11 27	4 57.03	+20 23.1	1.507	2.484	4.2	20.0	11 27	4 55.31	+0 58.6	2.058	2.993	7.3	21.3
12 7	4 45.79	+19 59.7	1.522	2.506	1.3	19.9	12 7	4 46.16	+0 33.0	2.063	2.998	7.1	21.3
12 17	4 35.16	+19 37.5	1.566	2.528	5.9	20.3	12 17	4 37.28	+0 25.8	2.095	3.003	8.7	21.4
12 27	4 26.42	+19 19.7	1.637	2.550	10.3	20.6	12 27	4 29.55	+0 37.2	2.154	3.007	11.0	21.5
1 6	4 20.34	+19 8.7	1.732	2.571	14.0	20.8	1 6	4 23.63	+1 5.3	2.237	3.011	13.4	21.7
420081	2011 <i>EL</i> ₃₉	12 5.3 356°56'	7°5'	7.5	17		43736	1981 <i>DL</i> ₂	12 5.3 176°05'	4°8'	6.7	18	
10 28	5 19.85	+42 56.9	2.204	2.938	15.1	21.0	10 28	5 24.18	+34 51.9	1.758	2.525	17.2	19.9
11 7	5 15.16	+43 57.7	2.120	2.937	12.9	20.8	11 7	5 18.71	+35 15.6	1.674	2.528	14.1	19.7
11 17	5 7.36	+44 45.4	2.056	2.936	10.5	20.7	11 17	5 9.82	+35 27.1	1.611	2.529	10.4	19.5
11 27	4 57.16	+45 14.1	2.016	2.935	8.4	20.5	11 27	4 58.30	+35 21.5	1.572	2.530	6.7	19.3
12 7	4 45.71	+45 19.9	2.002	2.935	7.5	20.5	12 7	4 45.54	+34 56.3	1.560	2.531	4.8	19.2
12 17	4 34.47	+45 2.3	2.015	2.935	8.3	20.5	12 17	4 33.17	+34 13.0	1.576	2.531	6.9	19.3
12 27	4 24.87	+44 24.6	2.055	2.935	10.3	20.7	12 27	4 22.77	+33 17.3	1.621	2.530	10.6	19.5
1 6	4 17.97	+43 33.6	2.119	2.935	12.6	20.8	1 6	4 15.40	+32 16.9	1.689	2.529	14.2	19.8
5159	Burbine	12 5.3 180°90'	4°2'	3.9	18		517367	2014 <i>KC</i> ₂₉	12 5.3 245°97'	3°3'	4.2	18	
10 28	5 14.47	+10 49.7	2.319	3.101	13.1	18.2	10 28	5 15.67	+16 6.5	1.936	2.731	14.9	21.6
11 7	5 9.81	+10 11.5	2.235	3.102	10.5	18.0	11 7	5 11.31	+15 19.9	1.845	2.723	11.8	21.4
11 17	5 3.13	+9 36.6	2.175	3.102	7.6	17.8	11 17	5 4.45	+14 32.0	1.776	2.714	8.2	21.2
11 27	4 55.00	+9 7.9	2.141	3.102	5.0	17.6	11 27	4 55.72	+13 45.6	1.734	2.705	4.6	21.0
12 7	4 46.19	+8 47.8	2.137	3.102	4.4	17.6	12 7	4 46.07	+13 4.0	1.719	2.695	3.6	20.9
12 17	4 37.58	+8 38.4	2.162	3.101	6.5	17.7	12 17	4 36.59	+12 30.6	1.734	2.686	6.6	21.0
12 27	4 30.03	+8 40.5	2.215	3.100	9.4	17.9	12 27	4 28.41	+12 8.1	1.776	2.676	10.4	21.2
1 6	4 24.22	+8 54.0	2.293	3.099	12.1	18.1	1 6	4 22.36	+11 58.1	1.843	2.666	13.9	21.5
440856	2006 <i>SZ</i> ₂₁₃	12 5.3 75°97'	0°3'	5.4	18		490392	2009 <i>QH</i> ₁₃	12 5.3 36°37'	6°1'	6.8	18	
10 28	5 18.95	+25 54.9	1.846	2.635	15.8	20.7	10 28	5 20.44	+34 40.5	1.247	2.050	21.1	20.7
11 7	5 13.70	+25 22.4	1.782	2.657	12.3	20.5	11 7	5 16.84	+35 19.1	1.186	2.059	17.2	20.4
11 17	5 5.85	+24 42.4	1.740	2.679	8.3	20.3	11 17	5 9.04	+35 42.8	1.142	2.070	12.8	20.2
11 27	4 56.22	+23 55.3	1.725	2.701	3.9	20.1	11 27	4 58.03	+35 45.3	1.119	2.081	8.3	20.0
12 7	4 45.97	+23 3.4	1.738	2.722	0.8	19.9	12 7	4 45.61	+35 23.6	1.121	2.093	6.1	19.9
12 17	4 36.30	+22 10.4	1.780	2.744	5.2	20.3	12 17	4 33.89	+34 39.9	1.147	2.105	8.4	20.1
12 27	4 28.30	+21 20.6	1.851	2.765	9.2	20.6	12 27	4 24.79	+33 42.0	1.198	2.118	12.6	20.4
1 6	4 22.69	+20 38.1	1.947	2.787	12.6	20.8	1 6	4 19.44	+32 39.9	1.271	2.131	16.6	20.7
422552	2014 <i>TX</i> ₃₃	12 5.3 43°06'	1°9'	5.3	17		153288	2001 <i>FG</i> ₄	12 5.3 100°37'	4°9'	6.6	18	
10 28	5 21.04	+1											

EPHEMERIDES

12 5.3

12 5.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
81090	2000 EG ₉₅	12	5.3 193°46	5°8/ 7.4 18			66964	1999 XC ₄₉	12	5.3 298°49	0°1/ 5.3 17		
10 28	5 22.92	+41 17.7	2.597	3.319	13.3	20.4	10 28	5 14.19	+24 17.9	2.154	2.943	13.8	19.4
11 7	5 16.90	+41 54.9	2.502	3.317	11.2	20.2	11 7	5 10.00	+23 50.7	2.062	2.937	10.8	19.2
11 17	5 8.20	+42 20.3	2.429	3.314	8.9	20.0	11 17	5 3.48	+23 17.5	1.992	2.931	7.3	19.0
11 27	4 57.46	+42 29.3	2.382	3.311	6.8	19.9	11 27	4 55.26	+22 38.8	1.949	2.925	3.4	18.7
12 7	4 45.73	+42 19.3	2.363	3.307	5.8	19.8	12 7	4 46.24	+21 56.2	1.935	2.920	0.7	18.5
12 17	4 34.20	+41 50.4	2.374	3.302	6.7	19.9	12 17	4 37.44	+21 12.3	1.951	2.914	4.8	18.8
12 27	4 24.09	+41 5.9	2.413	3.297	8.7	20.0	12 27	4 29.86	+20 30.9	1.995	2.908	8.7	19.0
1 6	4 16.30	+40 11.5	2.478	3.291	11.1	20.1	1 6	4 24.28	+19 55.1	2.065	2.903	12.0	19.2
324253	2006 BM ₁₈₅	12	5.3 74°96	4°2/ 6.8 18			271165	2003 SV ₂₃₈	12	5.3 153°46	3°6/ 6.5 17		
10 28	5 17.95	+35 0.7	2.198	2.960	14.4	20.8	10 28	5 17.10	+33 37.6	2.392	3.154	13.3	21.0
11 7	5 13.06	+35 23.1	2.120	2.970	11.7	20.6	11 7	5 12.26	+33 59.7	2.305	3.156	10.8	20.8
11 17	5 5.57	+35 35.0	2.065	2.980	8.6	20.4	11 17	5 5.01	+34 13.0	2.239	3.157	7.9	20.6
11 27	4 56.20	+35 33.4	2.035	2.991	5.7	20.3	11 27	4 55.99	+34 14.8	2.200	3.159	5.0	20.4
12 7	4 46.01	+35 17.0	2.032	3.001	4.2	20.2	12 7	4 46.13	+34 4.0	2.189	3.160	3.6	20.3
12 17	4 36.16	+34 47.0	2.059	3.011	5.7	20.3	12 17	4 36.48	+33 41.2	2.208	3.161	5.3	20.5
12 27	4 27.81	+34 7.1	2.115	3.022	8.6	20.5	12 27	4 28.12	+33 9.4	2.256	3.163	8.2	20.6
1 6	4 21.73	+33 22.4	2.196	3.032	11.5	20.7	1 6	4 21.83	+32 32.9	2.329	3.164	11.0	20.8
121295	1999 RW ₁₈₅	12	5.3 111°85	2°8/ 6.1 18			119825	2002 BZ ₈	12	5.3 355°80	0°4/ 5.2 18		
10 28	5 20.82	+29 58.4	1.888	2.665	15.8	20.6	10 28	5 14.93	+21 36.9	1.948	2.743	14.8	19.9
11 7	5 15.53	+30 16.1	1.813	2.678	12.6	20.4	11 7	5 10.81	+21 36.6	1.863	2.742	11.6	19.7
11 17	5 7.35	+30 25.6	1.760	2.690	8.9	20.2	11 17	5 4.17	+21 34.1	1.801	2.742	7.9	19.4
11 27	4 57.06	+30 24.2	1.733	2.701	5.0	20.0	11 27	4 55.64	+21 29.2	1.764	2.741	3.7	19.2
12 7	4 45.84	+30 10.7	1.734	2.713	2.8	19.9	12 7	4 46.20	+21 22.3	1.756	2.741	0.9	19.0
12 17	4 35.04	+29 46.6	1.763	2.724	5.6	20.1	12 17	4 36.97	+21 14.7	1.777	2.741	5.2	19.3
12 27	4 25.92	+29 15.7	1.821	2.735	9.4	20.3	12 27	4 29.07	+21 8.5	1.826	2.741	9.2	19.5
1 6	4 19.37	+28 43.1	1.905	2.745	12.8	20.5	1 6	4 23.35	+21 5.9	1.899	2.741	12.8	19.7
205931	2002 JD ₂₀	12	5.3 212°30	4°0/ 4.5 18			160035	1998 WQ ₂₇	12	5.3 293°65	1°0/ 5.5 18 R		
10 28	5 16.89	+12 7.2	1.857	2.649	15.5	20.4	10 28	5 17.78	+24 24.9	1.511	2.317	17.9	20.9
11 7	5 12.31	+11 49.9	1.773	2.647	12.4	20.2	11 7	5 14.16	+24 38.4	1.417	2.301	14.3	20.6
11 17	5 5.17	+11 37.1	1.711	2.645	8.8	20.0	11 17	5 7.12	+24 48.0	1.343	2.285	9.8	20.3
11 27	4 56.08	+11 31.2	1.675	2.642	5.3	19.8	11 27	4 57.27	+24 51.7	1.293	2.269	4.8	19.9
12 7	4 46.04	+11 34.0	1.666	2.640	4.2	19.7	12 7	4 45.84	+24 48.5	1.269	2.253	1.3	19.7
12 17	4 36.19	+11 46.8	1.687	2.637	7.0	19.9	12 17	4 34.43	+24 38.9	1.272	2.238	6.5	20.0
12 27	4 27.68	+12 9.9	1.734	2.634	10.7	20.1	12 27	4 24.73	+24 26.4	1.301	2.222	11.6	20.2
1 6	4 21.39	+12 42.7	1.806	2.631	14.1	20.3	1 6	4 18.00	+24 15.1	1.353	2.207	16.2	20.5
469759	2005 QM ₂₉	12	5.3 70°26	0°1/ 5.3 16			491549	2012 LU ₂₆	12	5.3 208°10	1°6/ 5.1 18		
10 28	5 24.13	+24 13.9	1.432	2.231	19.0	21.7	10 28	5 18.29	+14 44.9	2.694	3.462	11.8	21.1
11 7	5 18.20	+23 49.9	1.385	2.264	14.8	21.5	11 7	5 12.68	+15 14.3	2.595	3.458	9.3	20.9
11 17	5 9.03	+23 19.5	1.357	2.298	9.9	21.3	11 17	5 5.10	+15 47.7	2.521	3.453	6.4	20.7
11 27	4 57.72	+22 42.9	1.354	2.331	4.5	21.1	11 27	4 56.01	+16 24.5	2.476	3.449	3.3	20.5
12 7	4 45.77	+22 2.3	1.379	2.364	0.9	20.9	12 7	4 46.13	+17 4.3	2.462	3.443	1.7	20.4
12 17	4 34.74	+21 21.7	1.432	2.396	6.1	21.4	12 17	4 36.30	+17 46.2	2.480	3.438	4.4	20.5
12 27	4 25.95	+20 45.6	1.512	2.428	10.7	21.7	12 27	4 27.36	+18 29.6	2.530	3.432	7.6	20.7
1 6	4 20.16	+20 17.8	1.615	2.459	14.5	22.0	1 6	4 20.03	+19 14.4	2.607	3.426	10.4	20.9
278182	2007 DV ₉₆	12	5.3 309°83	4°3/ 6.4 18			411994	2012 JX ₄₅	12	5.3 260°12	0°6/ 5.5 18		
10 28	5 19.76	+32 12.4	1.539	2.330	18.3	20.7	10 28	5 15.95	+22 57.4	2.382	3.162	12.9	20.6
11 7	5 15.70	+32 37.0	1.456	2.326	14.8	20.5	11 7	5 11.29	+23 20.8	2.283	3.153	10.1	20.4
11 17	5 8.06	+32 50.7	1.392	2.322	10.8	20.2	11 17	5 4.37	+23 42.9	2.208	3.144	6.9	20.2
11 27	4 57.60	+32 49.2	1.352	2.318	6.5	20.0	11 27	4 55.74	+24 2.4	2.160	3.135	3.3	20.0
12 7	4 45.73	+32 30.1	1.338	2.315	4.3	19.8	12 7	4 46.19	+24 18.4	2.142	3.126	0.8	19.8
12 17	4 34.16	+31 54.5	1.351	2.311	7.0	20.0	12 17	4 36.69	+24 30.8	2.154	3.117	4.5	20.0
12 27	4 24.59	+31 8.1	1.391	2.308	11.3	20.2	12 27	4 28.24	+24 40.6	2.195	3.107	8.1	20.2
1 6	4 18.19	+30 18.2	1.453	2.305	15.4	20.5	1 6	4 21.64	+24 49.7	2.263	3.098	11.3	20.4
449713	2014 MQ ₃₈	12	5.3 92°41	5°3/ 4.2 18			109512	2001 QA ₂₃₆	12	5.3 318°33	4°4/ 4.5 18 R		
10 28	5 14.47	+ 7 5.7	2.126	2.908	14.2	21.2	10 28	5 13.74	+14 22.6	1.340	2.163	18.8	18.8
11 7	5 9.96	+ 6 39.7	2.052	2.914	11.5	21.0	11 7	5 11.08	+13 53.1	1.252	2.145	15.1	18.5
11 17	5 3.31	+ 6 21.1	1.999	2.920	8.5	20.8	11 17	5 5.07	+13 25.8	1.183	2.127	10.7	18.2
11 27	4 55.13	+ 6 12.9	1.973	2.926	6.0	20.7	11 27	4 56.32	+13 4.5	1.137	2.110	6.2	17.9
12 7	4 46.26	+ 6 17.2	1.974	2.932	5.5	20.7	12 7	4 46.05	+12 52.6	1.116	2.093	4.7	17.7
12 17	4 37.63	+ 6 34.9	2.004	2.938	7.3	20.8	12 17	4 35.82	+12 53.0	1.119	2.077	8.6	17.9
12 27	4 30.17	+ 7 5.8	2.062	2.944	10.1	21.0	12 27	4 27.27	+13 7.7	1.147	2.062	13.5	18.2
1 6	4 24.55	+ 7 48.0	2.144	2.950	12.8	21.2	1 6	4 21.64	+13 36.6	1.196	2.047	18.1	18.4
341929	2008 MC ₄	12	5.3 126°80	2°3/ 4.8 17			113692	2002 TH ₁₂₀	12	5.3 98°82	4°1/ 6.6 18		
10 28	5 21.03	+16 17.5	2.093	2.871	14.5	21.9	10 28	5 27.15	+33 20.9	1.718	2.485	17.6	19.7
11 7	5 15.00	+16 3.2	2.023	2.891	11.3	21.7	11 7	5 20.62	+33 42.7	1.657	2.512	14.1	19.5
11 17	5 6.64	+15 49.8	1.976	2.910	7.7	21.5	11 17	5 10.79	+33 52.4	1.618	2.539	10.2	19.3
11 27	4 56.63	+15 38.4	1.956	2.929	4.0	21.4	11 27	4 58.65	+33 46.0	1.603	2.565	6.2	19.2
12 7	4 45.97	+15 30.3	1.967	2.946	2.5	21.3	12 7	4 45.65	+33 22.3	1.616	2.590	4.2	19.1
12 17	4 35.71	+15 26.8	2.007	2.963	5.5	21.5	12 17	4 33.41	+32 43.5	1.658	2.614	6.4	19.3
12 27	4 26.84	+15 29.1	2.077	2.979	9.1	21.8	12 27	4 23.33	+31 55.4	1.728	2.638	10.0	19.5
1 6	4 20.09	+15 38.0	2.173	2.993	12.2	22.0	1 6	4 16.28	+31 5.1	1.823	2.661	13.4	19.8
263865	2009 DY ₂₃	12	5.3 211°64	3°2/ 4.3 18			484482	2008 CW ₁₅₅	12	5.3 340°47	9°3/ 2.9 18		
10 28	5 16.00	+12 28.8	2.62										

EPHEMERIDES

12 5.3

12 5.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
310365	2011 <i>UN</i> ₃₃₅	12 5.3 28 ^o 74	5 ^o 3/ 5.0	18			235716	2004 <i>TK</i> ₁₂₄	12 5.3 14 ^o 80	3 ^o 6/ 5.9	18		
10 28	5 17.05	+ 8 20.3	1.479	2.283	18.3	19.8	10 28	5 18.20	+28 4.4	1.366	2.176	19.3	19.9
11 7	5 12.91	+ 8 25.6	1.414	2.291	14.7	19.6	11 7	5 14.73	+28 52.9	1.295	2.178	15.4	19.7
11 17	5 5.79	+ 8 42.2	1.368	2.300	10.6	19.4	11 17	5 7.55	+29 35.7	1.243	2.181	10.9	19.4
11 27	4 56.44	+ 9 12.6	1.346	2.310	6.8	19.2	11 27	4 57.45	+30 8.1	1.214	2.185	6.1	19.2
12 7	4 46.07	+ 9 57.3	1.350	2.321	5.4	19.1	12 7	4 45.90	+30 26.5	1.211	2.190	3.6	19.1
12 17	4 36.08	+10 54.9	1.381	2.332	8.1	19.3	12 17	4 34.68	+30 30.4	1.233	2.196	7.1	19.3
12 27	4 27.78	+12 3.1	1.438	2.343	12.0	19.6	12 27	4 25.56	+30 23.3	1.281	2.202	11.8	19.6
1 6	4 22.12	+13 18.4	1.518	2.355	15.7	19.8	1 6	4 19.74	+30 10.8	1.350	2.209	16.0	19.8
481631	2007 <i>UM</i> ₁₄₁	12 5.3 288 ^o 92	2 ^o 6/ 4.3	17			103062	1999 <i>XU</i> ₁₃₉	12 5.3 317 ^o 59	2 ^o 3/ 4.9	18		
10 28	5 15.06	+19 24.8	1.832	2.632	15.4	21.3	10 28	5 14.44	+17 2.8	1.572	2.384	17.0	19.8
11 7	5 11.13	+18 26.9	1.733	2.615	12.2	21.0	11 7	5 11.19	+16 57.8	1.480	2.367	13.5	19.5
11 17	5 4.52	+17 23.3	1.657	2.598	8.4	20.7	11 17	5 4.91	+16 54.4	1.408	2.351	9.3	19.2
11 27	4 55.88	+16 16.7	1.607	2.581	4.4	20.5	11 27	4 56.19	+16 53.9	1.360	2.336	4.7	18.9
12 7	4 46.18	+15 11.1	1.584	2.564	3.0	20.3	12 7	4 46.14	+16 57.3	1.338	2.320	2.6	18.7
12 17	4 36.62	+14 11.3	1.591	2.547	6.6	20.5	12 17	4 36.12	+17 6.0	1.344	2.306	6.8	19.0
12 27	4 28.42	+13 22.0	1.625	2.530	10.9	20.8	12 27	4 27.58	+17 21.2	1.375	2.292	11.5	19.2
1 6	4 22.48	+12 46.3	1.683	2.514	14.7	21.0	1 6	4 21.64	+17 44.0	1.429	2.278	15.8	19.4
136119	2003 <i>KH</i> ₁₉	12 5.3 94 ^o 08	0 ^o 8/ 5.2	18			7552	Sephton	12 5.3 313 ^o 49	2 ^o 3/ 4.8	18		
10 28	5 21.24	+19 30.5	1.809	2.597	16.0	19.9	10 28	5 15.59	+17 53.6	1.660	2.466	16.5	19.3
11 7	5 15.62	+19 42.0	1.744	2.619	12.5	19.7	11 7	5 11.75	+17 32.0	1.576	2.460	13.0	19.1
11 17	5 7.29	+19 53.4	1.701	2.640	8.4	19.5	11 17	5 5.04	+17 9.7	1.513	2.455	8.9	18.9
11 27	4 57.03	+20 4.0	1.685	2.661	3.9	19.3	11 27	4 56.16	+16 48.4	1.474	2.449	4.5	18.6
12 7	4 45.98	+20 13.8	1.697	2.681	1.2	19.2	12 7	4 46.18	+16 30.0	1.463	2.444	2.6	18.4
12 17	4 35.38	+20 23.1	1.739	2.701	5.4	19.5	12 17	4 36.41	+16 17.0	1.479	2.439	6.5	18.7
12 27	4 26.42	+20 33.4	1.809	2.721	9.5	19.8	12 27	4 28.15	+16 11.6	1.522	2.434	10.9	18.9
1 6	4 19.91	+20 46.2	1.905	2.740	13.0	20.1	1 6	4 22.37	+16 15.4	1.588	2.430	14.9	19.2
294309	2007 <i>VV</i> ₂₇	12 5.3 91 ^o 09	1 ^o 0/ 5.5	18			363589	2004 <i>CV</i> ₉₈	12 5.3 272 ^o 85	7 ^o 0/ 7.3	18		
10 28	5 24.14	+23 11.9	1.374	2.176	19.5	20.8	10 28	5 21.81	+40 58.3	2.074	2.816	15.7	21.4
11 7	5 18.94	+23 42.6	1.310	2.192	15.4	20.5	11 7	5 17.01	+41 44.1	1.970	2.798	13.3	21.2
11 17	5 10.08	+24 10.9	1.267	2.208	10.4	20.3	11 17	5 8.89	+42 17.1	1.887	2.779	10.7	21.0
11 27	4 58.49	+24 33.8	1.247	2.223	5.0	20.0	11 27	4 58.08	+42 31.4	1.827	2.760	8.2	20.8
12 7	4 45.68	+24 49.4	1.254	2.238	1.4	19.8	12 7	4 45.77	+42 22.4	1.794	2.741	7.0	20.7
12 17	4 33.44	+24 57.7	1.289	2.254	6.5	20.2	12 17	4 33.50	+41 49.4	1.788	2.721	8.1	20.7
12 27	4 23.42	+25 1.5	1.350	2.268	11.5	20.5	12 27	4 22.89	+40 56.3	1.810	2.702	10.7	20.8
1 6	4 16.67	+25 4.8	1.433	2.283	15.7	20.8	1 6	4 15.12	+39 50.6	1.855	2.682	13.7	21.0
298421	2003 <i>SR</i> ₃₈₀	12 5.3 356 ^o 98	0 ^o 8/ 5.5	17			139140	2001 <i>FC</i> ₈₇	12 5.3 300 ^o 00	3 ^o 3/ 4.8	18		
10 28	5 13.97	+23 53.2	1.339	2.161	18.9	20.8	10 28	5 17.49	+15 24.0	1.426	2.238	18.4	19.8
11 7	5 11.29	+24 6.0	1.264	2.157	15.0	20.5	11 7	5 13.74	+15 11.2	1.344	2.231	14.7	19.5
11 17	5 5.16	+24 14.7	1.208	2.154	10.2	20.2	11 17	5 6.68	+15 1.3	1.282	2.224	10.2	19.2
11 27	4 56.31	+24 18.0	1.175	2.152	4.9	19.9	11 27	4 57.03	+14 56.3	1.243	2.217	5.5	18.9
12 7	4 46.11	+24 15.2	1.167	2.151	1.2	19.7	12 7	4 46.00	+14 58.0	1.230	2.210	3.5	18.8
12 17	4 36.19	+24 7.6	1.185	2.152	6.5	20.0	12 17	4 35.16	+15 7.9	1.244	2.203	7.6	19.0
12 27	4 28.20	+23 58.6	1.227	2.153	11.7	20.3	12 27	4 26.05	+15 27.1	1.283	2.197	12.4	19.3
1 6	4 23.27	+23 51.9	1.292	2.155	16.2	20.6	1 6	4 19.81	+15 55.9	1.345	2.191	16.8	19.5
355373	2007 <i>TE</i> ₃₃₂	12 5.3 346 ^o 00	6 ^o 6/ 6.2	18			490966	2011 <i>DT</i> ₄₆	12 5.3 236 ^o 50	0 ^o 2/ 5.4	18		
10 28	5 20.93	+34 50.6	1.648	2.426	17.8	20.6	10 28	5 14.19	+23 16.5	2.665	3.443	11.7	22.4
11 7	5 16.78	+36 10.9	1.566	2.423	14.7	20.4	11 7	5 9.62	+23 16.2	2.565	3.434	9.2	22.2
11 17	5 8.98	+37 23.0	1.504	2.420	11.2	20.2	11 17	5 3.09	+23 13.0	2.489	3.425	6.2	22.0
11 27	4 58.18	+38 19.9	1.466	2.417	8.0	20.0	11 27	4 55.11	+23 6.6	2.440	3.416	2.9	21.8
12 7	4 45.72	+38 55.4	1.454	2.415	6.6	19.9	12 7	4 46.40	+22 57.1	2.421	3.406	0.6	21.6
12 17	4 33.33	+39 7.2	1.468	2.413	8.4	20.0	12 17	4 37.79	+22 45.6	2.433	3.396	4.1	21.9
12 27	4 22.84	+38 58.3	1.509	2.411	11.8	20.2	12 27	4 30.12	+22 33.7	2.475	3.386	7.3	22.0
1 6	4 15.57	+38 35.8	1.572	2.410	15.2	20.4	1 6	4 24.06	+22 23.5	2.544	3.376	10.3	22.2
19495	Terentyeva	12 5.3 9 ^o 02	4 ^o 6/ 5.1	18			432621	2010 <i>VK</i> ₂₅	12 5.3 344 ^o 25	0 ^o 8/ 5.4	18		
10 28	5 18.40	+ 9 12.8	1.573	2.370	17.7	16.8	10 28	5 12.68	+22 29.6	1.029	1.873	21.8	21.0
11 7	5 13.98	+ 9 26.3	1.496	2.371	14.2	16.6	11 7	5 11.37	+22 55.6	0.955	1.861	17.4	20.7
11 17	5 6.57	+ 9 50.6	1.439	2.372	10.2	16.3	11 17	5 5.88	+23 20.4	0.899	1.850	11.9	20.3
11 27	4 56.87	+10 27.4	1.406	2.373	6.2	16.1	11 27	4 56.92	+23 42.0	0.862	1.841	5.7	20.0
12 7	4 46.01	+11 17.0	1.401	2.374	4.8	16.0	12 7	4 46.02	+23 58.6	0.849	1.833	1.3	19.6
12 17	4 35.37	+12 17.9	1.423	2.376	7.6	16.2	12 17	4 35.27	+24 9.9	0.858	1.827	7.8	20.0
12 27	4 26.31	+13 27.7	1.473	2.379	11.7	16.4	12 27	4 26.84	+24 18.6	0.890	1.823	14.0	20.3
1 6	4 19.85	+14 43.7	1.545	2.381	15.5	16.7	1 6	4 22.22	+24 28.3	0.940	1.820	19.4	20.6
45915	2000 <i>YN</i> ₆₈	12 5.3 295 ^o 01	5 ^o 6/ 3.9	18			4991	Hansuess	12 5.4 71 ^o 81	5 ^o 2/ 7.1	18		
10 28	5 15.84	+12 41.7	1.406	2.221	18.5	18.7	10 28	5 19.25	+37 17.7	2.147	2.902	14.9	17.5
11 7	5 12.45	+11 50.1	1.322	2.208	14.9	18.5	11 7	5 14.29	+37 51.5	2.071	2.912	12.2	17.3
11 17	5 5.81	+11 0.5	1.257	2.195	10.8	18.2	11 17	5 6.56	+38 13.6	2.015	2.922	9.3	17.2
11 27	4 56.61	+10 17.8	1.216	2.183	6.8	17.9	11 27	4 56.79	+38 20.1	1.985	2.933	6.5	17.0
12 7	4 46.05	+ 9 47.0	1.199	2.171	5.9	17.8	12 7	4 46.09	+38 9.0	1.982	2.943	5.2	17.0
12 17	4 35.64	+ 9 32.1	1.209	2.159	9.2	18.0	12 17	4 35.76	+37 41.1	2.008	2.953	6.5	17.1
12 27	4 26.91	+ 9 35.5	1.244	2.147	13.7	18.2	12 27	4 27.00	+37 0.4	2.062	2.963	9.1	17.2
1 6	4 20.99	+ 9 56.8	1.299	2.135	17.9	18.4	1 6	4 20.70	+36 12.6	2.140	2.974	11.9	17.4</

EPHEMERIDES

12 5.4

12 5.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
167089	2003 SA ₁₆	12	5.4	157°87	5°1/ 3.7	18	40655	1999 RM ₁₉₁	12	5.4	93°58	2°9/ 4.7	18
10 28	5 15.55	+11 47.2	1.825	2.621	15.6	21.5	10 28	5 18.91	+15 30.1	1.851	2.641	15.6	19.6
11 7	5 11.23	+10 48.4	1.748	2.622	12.5	21.2	11 7	5 13.66	+15 8.6	1.787	2.662	12.3	19.4
11 17	5 4.42	+9 52.0	1.692	2.624	9.0	21.0	11 17	5 5.92	+14 48.8	1.746	2.682	8.4	19.2
11 27	4 55.77	+9 2.3	1.662	2.625	6.0	20.9	11 27	4 56.43	+14 32.4	1.730	2.702	4.5	19.0
12 7	4 46.30	+8 23.3	1.660	2.626	5.3	20.8	12 7	4 46.26	+14 21.3	1.744	2.722	3.1	19.0
12 17	4 37.11	+7 58.4	1.685	2.626	7.9	21.0	12 17	4 36.53	+14 16.9	1.786	2.741	6.1	19.2
12 27	4 29.30	+7 49.4	1.738	2.627	11.3	21.2	12 27	4 28.33	+14 20.6	1.856	2.760	9.8	19.5
1 6	4 23.66	+7 56.2	1.813	2.628	14.5	21.4	1 6	4 22.37	+14 32.6	1.951	2.778	13.1	19.7
333349	2001 TU ₁₃₁	12	5.4	65°87	5°5/ 4.6	18	188451	2004 HR ₅₉	12	5.4	186°10	0°4/ 5.2	18
10 28	5 19.95	+10 12.5	1.417	2.221	19.0	20.2	10 28	5 19.57	+23 33.9	1.795	2.586	16.0	20.6
11 7	5 15.00	+9 43.2	1.367	2.245	15.1	20.0	11 7	5 14.65	+23 6.7	1.710	2.586	12.6	20.4
11 17	5 7.02	+9 21.9	1.336	2.269	10.8	19.8	11 17	5 6.89	+22 33.2	1.647	2.586	8.6	20.1
11 27	4 56.94	+9 12.1	1.329	2.293	6.9	19.6	11 27	4 57.01	+21 53.8	1.609	2.585	4.0	19.9
12 7	4 46.09	+9 16.2	1.348	2.317	5.7	19.6	12 7	4 46.14	+21 10.5	1.599	2.584	1.0	19.6
12 17	4 35.89	+9 34.8	1.394	2.341	8.4	19.9	12 17	4 35.59	+20 26.4	1.619	2.582	5.7	20.0
12 27	4 27.62	+10 7.3	1.465	2.365	12.2	20.1	12 27	4 26.63	+19 45.9	1.667	2.581	10.1	20.2
1 6	4 22.09	+10 51.3	1.559	2.389	15.7	20.4	1 6	4 20.16	+19 12.7	1.740	2.578	13.9	20.5
270304	2001 WW ₂	12	5.4	151°00	2°5/ 5.9	18	192211	2007 KO ₃	12	5.4	95°61	1°0/ 5.1	18
10 28	5 21.98	+28 2.6	1.848	2.627	16.1	21.1	10 28	5 15.64	+18 36.0	2.322	3.106	13.0	19.7
11 7	5 16.64	+28 30.9	1.767	2.633	12.8	20.9	11 7	5 10.86	+18 46.0	2.242	3.115	10.2	19.5
11 17	5 8.29	+28 53.2	1.707	2.639	8.9	20.7	11 17	5 3.98	+18 56.5	2.185	3.123	6.9	19.3
11 27	4 57.66	+29 6.5	1.674	2.644	4.8	20.4	11 27	4 55.56	+19 7.5	2.156	3.131	3.3	19.1
12 7	4 45.93	+29 8.9	1.668	2.649	2.5	20.3	12 7	4 46.43	+19 18.9	2.156	3.139	1.2	18.9
12 17	4 34.48	+29 0.8	1.692	2.653	5.7	20.5	12 17	4 37.51	+19 31.1	2.186	3.148	4.6	19.2
12 27	4 24.69	+28 45.5	1.744	2.657	9.7	20.8	12 27	4 29.71	+19 45.0	2.246	3.156	8.0	19.4
1 6	4 17.53	+28 27.3	1.821	2.661	13.3	21.0	1 6	4 23.73	+20 1.4	2.331	3.164	11.1	19.6
26976	1997 TF ₂₆	12	5.4	53°77	2°7/ 6.1	18	272055	2005 EG ₁₇₁	12	5.4	264°67	2°1/ 4.5	18
10 28	5 17.91	+29 38.7	1.823	2.609	16.0	18.4	10 28	5 12.57	+17 50.4	2.480	3.266	12.2	20.5
11 7	5 13.47	+29 54.1	1.746	2.615	12.8	18.2	11 7	5 8.40	+17 15.0	2.385	3.259	9.6	20.3
11 17	5 6.12	+30 1.4	1.689	2.622	9.0	17.9	11 17	5 2.30	+16 38.1	2.314	3.251	6.6	20.1
11 27	4 56.63	+29 58.1	1.658	2.628	5.0	17.7	11 27	4 54.78	+16 1.2	2.270	3.243	3.4	19.9
12 7	4 46.14	+29 43.2	1.654	2.634	2.8	17.6	12 7	4 46.59	+15 26.5	2.256	3.236	2.3	19.8
12 17	4 36.00	+29 18.2	1.679	2.641	5.7	17.8	12 17	4 38.54	+14 56.3	2.272	3.228	5.0	19.9
12 27	4 27.50	+28 46.9	1.731	2.648	9.6	18.0	12 27	4 31.47	+14 32.8	2.318	3.220	8.2	20.1
1 6	4 21.55	+28 14.4	1.808	2.655	13.1	18.3	1 6	4 26.03	+14 17.4	2.388	3.212	11.1	20.3
454418	2014 NJ ₅₇	12	5.4	116°28	2°8/ 4.8	18	355037	2006 RA ₆₇	12	5.4	170°62	7°6/ 2.9	18
10 28	5 16.58	+13 3.0	2.232	3.014	13.6	20.9	10 28	5 14.38	+4 29.6	1.928	2.711	15.4	20.5
11 7	5 11.59	+13 5.6	2.153	3.022	10.7	20.7	11 7	5 10.17	+3 19.1	1.853	2.711	12.7	20.4
11 17	5 4.45	+13 12.3	2.098	3.031	7.5	20.6	11 17	5 3.65	+2 16.1	1.801	2.712	10.0	20.2
11 27	4 55.74	+13 24.1	2.069	3.039	4.2	20.4	11 27	4 55.45	+1 26.4	1.773	2.712	8.0	20.1
12 7	4 46.32	+13 41.6	2.070	3.047	2.9	20.3	12 7	4 46.47	+0 54.7	1.773	2.712	7.7	20.1
12 17	4 37.12	+14 5.0	2.101	3.055	5.5	20.5	12 17	4 37.74	+0 43.7	1.799	2.713	9.5	20.2
12 27	4 29.08	+14 34.2	2.161	3.062	8.8	20.7	12 27	4 30.26	+0 53.9	1.851	2.713	12.1	20.3
1 6	4 22.89	+15 8.8	2.247	3.070	11.8	20.9	1 6	4 24.78	+1 23.3	1.925	2.713	14.8	20.5
395771	2012 VP ₆₀	12	5.4	292°55	0°4/ 5.4	18	283641	2002 GX ₅₅	12	5.4	113°98	6°7/ 7.2	18
10 28	5 17.87	+22 14.6	1.641	2.442	16.9	21.4	10 28	5 23.34	+38 37.1	1.825	2.582	17.1	19.9
11 7	5 13.92	+22 35.7	1.547	2.429	13.4	21.2	11 7	5 18.23	+39 28.2	1.747	2.587	14.2	19.7
11 17	5 6.79	+22 55.9	1.474	2.415	9.2	20.9	11 17	5 9.66	+40 6.3	1.690	2.593	11.0	19.5
11 27	4 57.12	+23 13.6	1.425	2.402	4.4	20.6	11 27	4 58.41	+40 25.1	1.656	2.599	8.1	19.3
12 7	4 46.01	+23 27.5	1.404	2.389	0.9	20.3	12 7	4 45.88	+40 20.9	1.649	2.604	6.7	19.3
12 17	4 34.92	+23 37.5	1.411	2.376	6.0	20.6	12 17	4 33.71	+39 53.6	1.669	2.610	8.0	19.4
12 27	4 25.38	+23 45.4	1.444	2.363	10.9	20.8	12 27	4 23.52	+39 8.4	1.716	2.615	10.8	19.5
1 6	4 18.53	+23 53.9	1.501	2.350	15.2	21.1	1 6	4 16.40	+38 13.1	1.787	2.620	13.9	19.7
159820	2003 SY ₂₈₆	12	5.4	61°51	1°6/ 4.7	18	99165	2001 FF ₁₄₈	12	5.4	15°70	8°8/ 8.3	18
10 28	5 13.82	+19 45.2	2.164	2.956	13.6	20.2	10 28	5 21.47	+43 0.6	1.574	2.333	19.3	18.2
11 7	5 9.52	+19 10.9	2.087	2.965	10.6	20.0	11 7	5 17.52	+43 49.9	1.501	2.335	16.4	18.0
11 17	5 3.06	+18 33.9	2.034	2.973	7.2	19.8	11 17	5 9.55	+44 20.7	1.445	2.338	13.2	17.8
11 27	4 55.09	+17 56.1	2.007	2.982	3.5	19.6	11 27	4 58.45	+44 25.3	1.411	2.342	10.3	17.7
12 7	4 46.48	+17 19.5	2.009	2.991	1.9	19.5	12 7	4 45.88	+43 59.2	1.401	2.346	8.8	17.6
12 17	4 38.17	+16 46.6	2.041	3.000	5.1	19.8	12 17	4 33.86	+43 3.3	1.416	2.350	9.8	17.6
12 27	4 31.08	+16 20.2	2.101	3.009	8.6	20.0	12 27	4 24.26	+41 44.9	1.456	2.355	12.4	17.8
1 6	4 25.88	+16 1.9	2.186	3.018	11.7	20.2	1 6	4 18.25	+40 14.9	1.519	2.360	15.5	18.0
511179	2013 YO ₈₃	12	5.4	90°80	0°9/ 5.1	18	290315	2005 ST ₁₉₅	12	5.4	11°79	0°9/ 5.6	18
10 28	5 19.64	+22 0.2	1.590	2.390	17.4	21.2	10 28	5 15.77	+25 9.6	1.871	2.665	15.4	21.3
11 7	5 14.82	+21 34.8	1.522	2.403	13.6	21.0	11 7	5 11.67	+25 14.1	1.789	2.666	12.1	21.1
11 17	5 6.99	+21 4.9	1.475	2.417	9.2	20.8	11 17	5 4.89	+25 13.7	1.728	2.667	8.3	20.9
11 27	4 57.00	+20 31.4	1.453	2.430	4.3	20.5	11 27	4 56.10	+25 7.3	1.693	2.668	4.0	20.6
12 7	4 46.13	+19 56.3	1.458	2.443	1.4	20.3	12 7	4 46.35	+24 55.0	1.686	2.670	1.1	20.4
12 17	4 35.77	+19 22.8	1.492	2.455	6.1	20.7	12 17	4 36.85	+24 38.0	1.707	2.672	5.2	20.7
12 27	4 27.23	+18 54.6	1.553	2.468	10.6	21.0	12 27	4 28.81	+24 19.4	1.756	2.674	9.3	21.0
1 6	4 21.38	+18 34.9	1.638	2.480	14.4	21.3	1 6	4 23.10	+24 2.5	1.830	2.676	13.0	21.2
383044	2005 QY ₅₁	12	5.4	78°54	2°5/ 6.1	18	373853	2003 OP ₂₃	12	5.4	92°81	0°5/ 5.2	15
10 28	5 24.49	+29 37.2	1.511	2.299	18.7	20.7							

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
241992	2002 <i>NE</i> ₂₁	12	5.4 204°91	1.2°/ 4.9 18			326273	1995 <i>DP</i> ₇	12	5.4 160°35	2.3°/ 4.6 17		
10 28	5 17.59	+20 5.2	2.318	3.098	13.2	21.4	10 28	5 13.55	+15 27.8	2.633	3.414	11.8	21.6
11 7	5 12.47	+19 42.9	2.222	3.093	10.4	21.2	11 7	5 8.98	+15 8.6	2.548	3.417	9.2	21.4
11 17	5 5.14	+19 17.9	2.150	3.087	7.0	21.0	11 17	5 2.61	+14 50.4	2.486	3.420	6.4	21.2
11 27	4 56.15	+18 51.2	2.105	3.080	3.4	20.8	11 27	4 54.94	+14 34.5	2.452	3.423	3.5	21.1
12 7	4 46.36	+18 24.2	2.091	3.074	1.5	20.6	12 7	4 46.69	+14 22.2	2.448	3.426	2.4	21.0
12 17	4 36.74	+17 58.7	2.107	3.066	4.9	20.9	12 17	4 38.60	+14 14.9	2.475	3.428	4.8	21.2
12 27	4 28.24	+17 37.4	2.152	3.058	8.6	21.1	12 27	4 31.46	+14 13.7	2.531	3.431	7.7	21.3
1 6	4 21.64	+17 22.3	2.223	3.049	11.8	21.3	1 6	4 25.86	+14 19.1	2.613	3.432	10.4	21.5
264275	1996 <i>YF</i> ₁	12	5.4 317°30	0.7°/ 5.3 18			223178	2003 <i>AA</i> ₄	12	5.4 323°93	16°3/ 24.3 18		
10 28	5 15.99	+18 17.9	1.181	2.011	20.4	20.0	10 28	5 9.02	+ 1 25.4	1.155	1.980	21.1	18.5
11 7	5 14.29	+18 50.6	1.067	1.965	16.7	19.6	11 7	5 7.86	- 2 14.3	1.070	1.944	18.7	18.2
11 17	5 8.45	+19 31.5	0.970	1.919	11.7	19.2	11 17	5 3.26	- 5 58.6	1.007	1.909	16.8	18.0
11 27	4 58.61	+20 20.7	0.895	1.873	5.7	18.7	11 27	4 55.74	- 9 28.6	0.965	1.875	16.4	17.9
12 7	4 45.74	+21 16.6	0.842	1.827	1.4	18.2	12 7	4 46.47	-12 23.7	0.946	1.841	17.9	17.8
12 17	4 31.68	+22 16.1	0.815	1.782	8.5	18.5	12 17	4 37.04	-14 27.6	0.946	1.810	20.8	17.9
12 27	4 18.94	+23 17.6	0.810	1.738	15.7	18.7	12 27	4 29.21	-15 32.6	0.963	1.779	24.2	18.0
1 6	4 9.78	+24 21.0	0.824	1.696	22.2	18.9	1 6	4 24.38	-15 41.7	0.993	1.751	27.5	18.1
192133	2006 <i>DZ</i> ₁₂₀	12	5.4 205°54	2.1°/ 5.9 17			310363	2011 <i>UX</i> ₃₃₄	12	5.4 74°94	4.5°/ 4.8 18		
10 28	5 16.48	+28 13.0	2.367	3.141	13.1	20.5	10 28	5 18.74	+10 14.9	1.751	2.541	16.4	21.0
11 7	5 11.78	+28 35.7	2.277	3.140	10.4	20.3	11 7	5 13.69	+10 5.5	1.689	2.560	13.0	20.8
11 17	5 4.76	+28 53.3	2.209	3.139	7.3	20.1	11 17	5 6.05	+10 3.3	1.649	2.580	9.3	20.7
11 27	4 56.01	+29 3.8	2.168	3.138	4.0	19.9	11 27	4 56.59	+10 10.3	1.634	2.599	5.8	20.5
12 7	4 46.40	+29 6.1	2.156	3.136	2.1	19.8	12 7	4 46.38	+10 27.7	1.647	2.618	4.6	20.5
12 17	4 36.94	+29 0.5	2.174	3.135	4.7	20.0	12 17	4 36.61	+10 55.7	1.688	2.637	7.1	20.7
12 27	4 28.64	+28 49.3	2.221	3.133	8.0	20.2	12 27	4 28.37	+11 33.6	1.757	2.656	10.6	20.9
1 6	4 22.30	+28 35.3	2.294	3.131	11.0	20.4	1 6	4 22.44	+12 19.7	1.850	2.675	13.8	21.2
481941	2009 <i>BZ</i> ₁₈₈	12	5.4 328°17	2°0/ 6.1 17			334063	2001 <i>PQ</i> ₂	12	5.4 75°43	3°4/ 6.3 18		
10 28	5 14.36	+30 33.4	1.416	2.225	18.7	20.0	10 28	5 25.59	+30 49.3	1.524	2.307	18.7	21.2
11 7	5 11.74	+29 59.9	1.323	2.207	15.1	19.8	11 7	5 19.67	+31 6.1	1.470	2.337	14.9	21.0
11 17	5 5.59	+29 10.2	1.249	2.190	10.6	19.5	11 17	5 10.31	+31 12.0	1.437	2.367	10.5	20.8
11 27	4 56.64	+28 2.8	1.199	2.173	5.6	19.1	11 27	4 58.58	+31 3.6	1.428	2.396	5.9	20.6
12 7	4 46.27	+26 39.5	1.174	2.157	2.1	18.9	12 7	4 46.02	+30 40.1	1.446	2.425	3.4	20.6
12 17	4 36.15	+25 6.0	1.176	2.143	6.6	19.1	12 17	4 34.29	+30 4.3	1.492	2.453	6.3	20.8
12 27	4 27.97	+23 31.4	1.203	2.129	11.9	19.4	12 27	4 24.84	+29 21.9	1.566	2.482	10.4	21.1
1 6	4 22.87	+22 4.8	1.253	2.116	16.6	19.6	1 6	4 18.52	+28 39.6	1.663	2.509	14.1	21.4
50217	2000 <i>AU</i> ₂₃₆	12	5.4 288°21	1°6/ 5.8 18			289959	2005 <i>NP</i> ₇₅	12	5.4 162°83	0°1/ 5.3 15		
10 28	5 18.76	+27 59.6	1.530	2.330	18.0	18.6	10 28	5 17.05	+22 40.7	2.215	2.998	13.6	22.5
11 7	5 14.77	+27 46.3	1.444	2.323	14.3	18.3	11 7	5 12.17	+22 34.3	2.129	3.001	10.7	22.3
11 17	5 7.40	+27 22.7	1.378	2.317	10.0	18.1	11 17	5 4.98	+22 24.6	2.067	3.004	7.2	22.1
11 27	4 57.42	+26 47.5	1.337	2.311	5.0	17.8	11 27	4 56.11	+22 11.4	2.031	3.007	3.4	21.9
12 7	4 46.14	+26 1.1	1.321	2.305	1.7	17.5	12 7	4 46.47	+21 55.3	2.025	3.009	0.7	21.6
12 17	4 35.17	+25 7.1	1.334	2.299	6.2	17.8	12 17	4 37.05	+21 37.9	2.048	3.011	4.7	22.0
12 27	4 26.09	+24 11.5	1.372	2.293	11.2	18.1	12 27	4 28.86	+21 21.5	2.101	3.013	8.4	22.2
1 6	4 19.96	+23 20.7	1.434	2.287	15.5	18.3	1 6	4 22.66	+21 8.5	2.180	3.014	11.6	22.4
172642	2003 <i>YA</i> ₄₇	12	5.4 57°80	0°6/ 5.2 18			363705	2004 <i>TT</i> ₃₃₃	12	5.4 73°29	1°9/ 4.7 18		
10 28	5 16.83	+22 5.3	1.731	2.531	16.2	20.3	10 28	5 14.88	+18 48.3	2.121	2.913	13.9	20.3
11 7	5 12.56	+21 49.9	1.655	2.536	12.7	20.1	11 7	5 10.35	+18 13.6	2.051	2.927	10.8	20.2
11 17	5 5.50	+21 30.5	1.601	2.542	8.6	19.8	11 17	5 3.65	+17 37.2	2.003	2.942	7.3	20.0
11 27	4 56.40	+21 7.7	1.571	2.548	4.0	19.6	11 27	4 55.43	+17 0.8	1.982	2.956	3.7	19.8
12 7	4 46.37	+20 42.9	1.569	2.554	1.1	19.4	12 7	4 46.61	+16 26.8	1.990	2.971	2.1	19.7
12 17	4 36.69	+20 18.3	1.596	2.560	5.6	19.7	12 17	4 38.14	+15 57.5	2.028	2.985	5.3	19.9
12 27	4 28.59	+19 57.2	1.650	2.566	10.0	20.0	12 27	4 30.94	+15 35.3	2.094	3.000	8.7	20.2
1 6	4 22.93	+19 42.3	1.728	2.572	13.7	20.2	1 6	4 25.66	+15 21.7	2.185	3.014	11.8	20.4
245313	2005 <i>EY</i> ₄₀	12	5.4 338°98	1°9/ 5.6 18			196738	2003 <i>SC</i> ₁₃₃	12	5.4 97°23	4°5/ 3.6 18		
10 28	5 16.77	+24 39.4	1.989	2.778	14.8	20.0	10 28	5 13.74	+10 11.4	2.469	3.248	12.5	20.5
11 7	5 12.55	+25 31.0	1.897	2.771	11.7	19.8	11 7	5 9.04	+ 9 14.0	2.402	3.265	10.0	20.3
11 17	5 5.62	+26 21.9	1.828	2.764	8.1	19.6	11 17	5 2.57	+ 8 20.0	2.359	3.283	7.3	20.2
11 27	4 56.56	+27 9.1	1.784	2.757	4.2	19.3	11 27	4 54.88	+ 7 32.6	2.344	3.300	5.0	20.1
12 7	4 46.31	+27 49.9	1.769	2.751	2.0	19.2	12 7	4 46.72	+ 6 54.8	2.358	3.316	4.6	20.1
12 17	4 36.09	+28 22.8	1.784	2.746	5.3	19.4	12 17	4 38.86	+ 6 28.8	2.401	3.333	6.4	20.2
12 27	4 27.14	+28 48.2	1.826	2.741	9.3	19.6	12 27	4 32.04	+ 6 15.8	2.473	3.349	8.9	20.4
1 6	4 20.45	+29 8.5	1.894	2.737	12.8	19.8	1 6	4 26.82	+ 6 15.6	2.570	3.365	11.3	20.6
495988	2007 <i>TX</i> ₄₃₂	12	5.4 73°65	3°6/ 4.3 15			396250	2014 <i>BF</i> ₅₆	12	5.4 246°69	0°6/ 5.2 18		
10 28	5 18.01	+15 37.8	1.712	2.510	16.4	21.3	10 28	5 18.74	+21 2.9	1.818	2.611	15.8	21.2
11 7	5 13.10	+14 49.3	1.654	2.533	12.9	21.2	11 7	5 14.20	+21 1.6	1.723	2.600	12.5	21.0
11 17	5 5.60	+14 1.5	1.617	2.555	8.9	21.0	11 17	5 6.79	+20 58.5	1.649	2.589	8.5	20.7
11 27	4 56.33	+13 17.8	1.607	2.577	5.0	20.8	11 27	4 57.13	+20 53.1	1.601	2.578	4.0	20.4
12 7	4 46.42	+12 41.3	1.624	2.599	3.8	20.8	12 7	4 46.26	+20 45.8	1.582	2.566	1.1	20.2
12 17	4 37.04	+12 15.1	1.669	2.621	6.8	21.0	12 17	4 35.49	+20 37.8	1.591	2.554	5.7	20.5
12 27	4 29.29	+12 1.1	1.742	2.643	10.5	21.3	12 27	4 26.14	+20 31.6	1.628	2.542	10.2	20.7
1 6	4 23.88	+11 59.7	1.838	2.665	13.8	21.5	1 6	4 19.21	+20 29.7	1.689	2.529	14.2	21.0
341930	2008 <i>NR</i> ₂	12	5.4 112°77	1°9/ 5.9 18			22251	1978 <i>RT</i> ₆	12	5.4 144			

EPHEMERIDES

12 5.4

12 5.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
139642	2001 <i>QM</i> ₁₆₆	12	5.4	321°05	5°9/ 4.2	18	391236	2006 <i>KT</i> ₈₀	12	5.4	114°35	1°4/ 5.2	18
10 28	5 13.87	+ 8 45.4	1.722	2.522	16.3	19.5	10 28	5 20.47	+17 4.9	2.036	2.817	14.7	21.3
11 7	5 10.29	+ 8 11.8	1.637	2.512	13.2	19.2	11 7	5 14.89	+17 20.6	1.962	2.833	11.5	21.1
11 17	5 4.07	+ 7 44.9	1.573	2.502	9.8	19.0	11 17	5 6.85	+17 38.2	1.912	2.848	7.8	20.9
11 27	4 55.82	+ 7 28.7	1.533	2.492	6.8	18.8	11 27	4 57.03	+17 57.5	1.888	2.862	3.8	20.7
12 7	4 46.54	+ 7 26.7	1.519	2.483	6.0	18.8	12 7	4 46.42	+18 18.2	1.894	2.877	1.6	20.6
12 17	4 37.38	+ 7 40.6	1.533	2.475	8.4	18.9	12 17	4 36.11	+18 40.2	1.930	2.890	5.2	20.9
12 27	4 29.55	+ 8 10.6	1.572	2.466	11.9	19.1	12 27	4 27.17	+19 4.1	1.995	2.904	9.0	21.1
1 6	4 23.97	+ 8 55.0	1.634	2.459	15.4	19.3	1 6	4 20.39	+19 30.3	2.086	2.917	12.3	21.4
230763	2003 <i>XX</i> ₁	12	5.4	34°80	1°8/ 5.4	18	515770	2015 <i>KW</i> ₂₅	12	5.4	296°54	0°5/ 5.5	18
10 28	5 22.68	+21 55.9	1.849	2.633	15.9	19.0	10 28	5 17.91	+24 44.9	1.407	2.218	18.7	21.3
11 7	5 17.16	+23 22.7	1.777	2.647	12.5	18.8	11 7	5 14.48	+24 37.4	1.319	2.205	14.9	21.0
11 17	5 8.71	+24 51.7	1.727	2.662	8.6	18.6	11 17	5 7.50	+24 23.1	1.250	2.193	10.3	20.7
11 27	4 58.00	+26 18.2	1.705	2.678	4.3	18.4	11 27	4 57.65	+24 0.9	1.204	2.181	4.9	20.4
12 7	4 46.13	+27 37.5	1.712	2.695	2.0	18.3	12 7	4 46.27	+23 31.2	1.184	2.169	1.0	20.1
12 17	4 34.45	+28 46.0	1.750	2.712	5.6	18.5	12 17	4 35.04	+22 56.9	1.191	2.157	6.7	20.5
12 27	4 24.31	+29 43.1	1.818	2.729	9.5	18.8	12 27	4 25.69	+22 22.8	1.223	2.146	12.1	20.7
1 6	4 16.71	+30 30.6	1.911	2.747	13.0	19.1	1 6	4 19.45	+21 54.3	1.278	2.135	16.8	21.0
170946	2005 <i>BP</i> ₂	12	5.4	14°77	3°3/ 5.7	18	219260	2000 <i>AR</i> ₈₈	12	5.4	331°82	1°3/ 5.7	18
10 28	5 25.76	+ 8 31.3	1.602	2.382	18.1	19.1	10 28	5 16.23	+26 4.2	1.302	2.120	19.5	20.1
11 7	5 19.92	+ 9 40.1	1.518	2.384	14.6	18.9	11 7	5 13.40	+26 2.5	1.221	2.111	15.6	19.8
11 17	5 10.81	+11 4.9	1.455	2.386	10.3	18.7	11 17	5 6.87	+25 52.8	1.158	2.102	10.8	19.5
11 27	4 59.07	+12 44.9	1.419	2.388	5.8	18.4	11 27	4 57.37	+25 33.5	1.118	2.095	5.3	19.2
12 7	4 45.91	+14 36.0	1.412	2.391	3.4	18.3	12 7	4 46.34	+25 4.6	1.103	2.087	1.5	18.9
12 17	4 32.83	+16 32.4	1.435	2.394	6.9	18.5	12 17	4 35.56	+24 28.9	1.113	2.081	6.8	19.2
12 27	4 21.40	+18 28.7	1.489	2.397	11.4	18.8	12 27	4 26.81	+23 51.9	1.149	2.075	12.3	19.5
1 6	4 12.76	+20 21.1	1.568	2.401	15.5	19.0	1 6	4 21.33	+23 19.5	1.205	2.070	17.1	19.8
398018	2009 <i>DD</i> ₁₃	12	5.4	353°66	12°6/30.9	18	513297	2007 <i>BF</i> ₇₁	12	5.4	234°40	4°9/ 4.1	18
10 28	5 13.34	- 6 35.8	1.762	2.522	17.5	20.9	10 28	5 17.92	+11 21.7	1.850	2.640	15.7	22.2
11 7	5 9.62	- 8 26.3	1.701	2.521	15.4	20.7	11 7	5 13.32	+10 42.7	1.759	2.630	12.6	22.0
11 17	5 3.43	-10 0.5	1.659	2.520	13.7	20.6	11 17	5 6.08	+10 7.2	1.689	2.619	9.1	21.7
11 27	4 55.45	-11 9.5	1.640	2.519	12.7	20.5	11 27	4 56.80	+ 9 38.4	1.645	2.608	5.9	21.5
12 7	4 46.64	-11 46.6	1.644	2.518	12.8	20.5	12 7	4 46.47	+ 9 19.8	1.628	2.597	5.1	21.5
12 17	4 38.09	-11 49.0	1.670	2.518	14.0	20.6	12 17	4 36.25	+ 9 13.7	1.640	2.584	7.7	21.6
12 27	4 30.88	-11 17.7	1.718	2.518	15.8	20.7	12 27	4 27.33	+ 9 21.7	1.679	2.572	11.4	21.8
1 6	4 25.79	-10 17.9	1.785	2.518	17.8	20.9	1 6	4 20.65	+ 9 43.4	1.742	2.559	14.9	22.0
149806	2005 <i>LL</i> ₂₂	12	5.4	274°90	2°7/ 4.8	18	253795	2003 <i>XN</i> ₂	12	5.4	41°99	1°3/ 5.3	18
10 28	5 17.95	+17 49.4	1.466	2.276	18.1	20.4	10 28	5 21.26	+16 50.5	1.260	2.075	20.2	19.8
11 7	5 14.10	+17 23.0	1.382	2.268	14.4	20.1	11 7	5 17.07	+17 27.9	1.194	2.083	16.0	19.5
11 17	5 6.97	+16 55.5	1.318	2.260	9.9	19.8	11 17	5 9.17	+18 11.0	1.147	2.091	10.9	19.3
11 27	4 57.29	+16 28.9	1.277	2.252	5.1	19.5	11 27	4 58.38	+18 58.6	1.123	2.100	5.2	19.0
12 7	4 46.28	+16 5.7	1.263	2.244	3.0	19.4	12 7	4 46.17	+19 48.0	1.125	2.109	1.6	18.8
12 17	4 35.46	+15 48.9	1.276	2.236	7.3	19.6	12 17	4 34.36	+20 37.0	1.154	2.119	7.0	19.2
12 27	4 26.37	+15 41.3	1.315	2.229	12.2	19.9	12 27	4 24.67	+21 25.1	1.207	2.129	12.3	19.5
1 6	4 20.12	+15 44.8	1.376	2.221	16.5	20.1	1 6	4 18.30	+22 12.7	1.284	2.139	16.8	19.8
296447	2009 <i>HG</i> ₅₈	12	5.4	172°01	0°1/ 5.4	18	97415	2000 <i>AZ</i> ₁₅₅	12	5.4	215°85	8°1/ 8.8	17
10 28	5 18.40	+22 13.4	2.380	3.156	13.0	21.1	10 28	5 31.63	+43 19.9	1.248	2.013	23.1	19.5
11 7	5 13.11	+22 27.0	2.291	3.158	10.2	21.0	11 7	5 26.43	+43 9.5	1.167	2.010	19.6	19.2
11 17	5 5.60	+22 38.8	2.225	3.161	6.9	20.8	11 17	5 16.04	+42 30.3	1.101	2.006	15.4	19.0
11 27	4 56.44	+22 48.0	2.188	3.163	3.2	20.5	11 27	5 1.66	+41 12.8	1.056	2.002	11.0	18.7
12 7	4 46.46	+22 54.2	2.180	3.164	0.6	20.3	12 7	4 45.58	+39 13.5	1.035	1.998	8.2	18.5
12 17	4 36.66	+22 57.8	2.203	3.165	4.4	20.6	12 17	4 30.54	+36 39.2	1.040	1.994	9.7	18.6
12 27	4 27.98	+23 0.3	2.255	3.166	8.0	20.8	12 27	4 18.89	+33 47.0	1.072	1.989	13.9	18.8
1 6	4 21.20	+23 3.4	2.335	3.166	11.1	21.0	1 6	4 11.86	+30 56.7	1.126	1.984	18.5	19.1
390682	2002 <i>TM</i> ₃₅₃	12	5.4	149°88	5°4/ 3.5	18	408770	1998 <i>TQ</i> ₃₈	12	5.4	46°74	3°8/ 6.3	17
10 28	5 16.09	+ 8 50.3	2.227	3.005	13.7	21.7	10 28	5 18.15	+31 46.0	2.155	2.925	14.4	21.1
11 7	5 11.16	+ 7 49.9	2.151	3.012	11.1	21.5	11 7	5 13.46	+32 30.7	2.073	2.930	11.6	20.9
11 17	5 4.17	+ 6 53.5	2.099	3.020	8.2	21.4	11 17	5 6.14	+33 8.5	2.014	2.936	8.4	20.7
11 27	4 55.72	+ 6 5.2	2.074	3.027	5.9	21.3	11 27	4 56.81	+33 35.9	1.980	2.941	5.3	20.6
12 7	4 46.63	+ 5 28.5	2.078	3.033	5.5	21.2	12 7	4 46.49	+33 50.4	1.974	2.947	3.8	20.5
12 17	4 37.82	+ 5 6.0	2.111	3.039	7.4	21.4	12 17	4 36.36	+33 51.8	1.998	2.952	5.7	20.6
12 27	4 30.16	+ 4 58.8	2.172	3.044	10.1	21.6	12 27	4 27.61	+33 42.5	2.050	2.958	8.8	20.8
1 6	4 24.31	+ 5 6.4	2.256	3.049	12.7	21.7	1 6	4 21.12	+33 26.5	2.127	2.964	11.8	21.0
271928	2004 <i>XH</i> ₁₁₀	12	5.4	332°31	0°9/ 5.7	17	230024	2000 <i>JK</i> ₆	12	5.4	295°22	5°4/ 4.4	18
10 28	5 14.31	+26 59.9	2.011	2.801	14.6	20.4	10 28	5 14.30	+ 5 46.8	2.274	3.049	13.6	19.9
11 7	5 10.44	+26 41.6	1.920	2.795	11.5	20.2	11 7	5 10.05	+ 5 34.2	2.173	3.030	11.1	19.7
11 17	5 4.05	+26 15.5	1.851	2.789	7.9	19.9	11 17	5 3.67	+ 5 30.0	2.095	3.012	8.4	19.5
11 27	4 55.78	+25 41.3	1.808	2.783	3.9	19.7	11 27	4 55.64	+ 5 37.0	2.042	2.993	6.1	19.3
12 7	4 46.63	+25 0.0	1.793	2.777	1.1	19.4	12 7	4 46.71	+ 5 57.2	2.017	2.974	5.5	19.2
12 17	4 37.70	+24 14.3	1.807	2.772	5.0	19.7	12 17	4 37.78	+ 6 31.3	2.022	2.956	7.3	19.3
12 27	4 30.11	+23 28.2	1.850	2.767	9.0	19.9	12 27	4 29.80	+ 7 18.7	2.054	2.937	10.1	19.5
1 6	4 24.69	+22 46.0	1.917	2.763	12.5	20.2	1 6	4 23.54	+ 8 17.5	2.112	2.919	13.0	19.6
72692	2001 <i>FN</i> ₇₂	12	5.4	147°34	0°3/ 5.5	18	361864	2008 <i>EZ</i> ₈₆	12				

EPHEMERIDES

12 5.4

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
450595	2006 RA ₇₈		12 5.4 74°35	2.5/ 6.0	18		196112	2002 TH ₁₆₉		12 5.4 23°00	3.1/ 6.7	17	
10 28	5 19.47	+28 30.3	1.848	2.632	15.9	21.4	10 28	5 15.46	+33 5.7	1.883	2.665	15.7	18.8
11 7	5 14.64	+28 54.5	1.776	2.645	12.6	21.2	11 7	5 11.49	+32 52.9	1.808	2.674	12.6	18.6
11 17	5 6.96	+29 11.8	1.725	2.658	8.8	21.0	11 17	5 4.79	+32 27.6	1.755	2.683	9.0	18.4
11 27	4 57.17	+29 19.9	1.700	2.671	4.8	20.8	11 27	4 56.15	+31 48.4	1.726	2.692	5.3	18.2
12 7	4 46.45	+29 17.3	1.703	2.684	2.6	20.7	12 7	4 46.71	+30 56.0	1.725	2.703	3.1	18.1
12 17	4 36.10	+29 5.0	1.735	2.697	5.5	20.9	12 17	4 37.73	+29 53.7	1.752	2.714	5.5	18.2
12 27	4 27.39	+28 46.3	1.794	2.709	9.3	21.2	12 27	4 30.37	+28 47.1	1.807	2.726	9.1	18.5
1 6	4 21.19	+28 25.4	1.878	2.722	12.8	21.4	1 6	4 25.42	+27 41.9	1.887	2.738	12.5	18.7
180739	Barbet		12 5.4 138°37	2.8/ 4.6	18		408354	2013 GC ₈₇		12 5.4 175°80	0.9/ 5.3	18	
10 28	5 15.51	+15 29.9	2.208	2.994	13.6	20.7	10 28	5 18.16	+18 2.4	2.367	3.144	13.0	21.0
11 7	5 10.86	+15 1.5	2.128	3.000	10.7	20.5	11 7	5 12.96	+18 23.2	2.277	3.145	10.2	20.8
11 17	5 4.07	+14 33.9	2.071	3.006	7.4	20.3	11 17	5 5.56	+18 45.5	2.211	3.146	6.9	20.6
11 27	4 55.74	+14 8.9	2.041	3.011	4.1	20.1	11 27	4 56.52	+19 8.9	2.172	3.147	3.3	20.4
12 7	4 46.72	+13 48.6	2.040	3.017	2.9	20.0	12 7	4 46.64	+19 32.9	2.164	3.148	1.1	20.2
12 17	4 37.95	+13 34.8	2.068	3.022	5.6	20.2	12 17	4 36.89	+19 57.1	2.187	3.148	4.6	20.5
12 27	4 30.34	+13 29.0	2.126	3.026	8.9	20.4	12 27	4 28.21	+20 22.1	2.239	3.148	8.1	20.7
1 6	4 24.59	+13 32.0	2.208	3.031	12.0	20.7	1 6	4 21.37	+20 48.3	2.318	3.147	11.2	20.9
302522	2002 JC ₁₄₇		12 5.4 95°59	7.4/ 3.5	18		59475	1999 HN ₂		12 5.4 78°12	1.0/ 5.6	18	
10 28	5 17.17	+4 7.2	1.896	2.673	15.8	20.7	10 28	5 20.74	+22 57.6	1.630	2.426	17.2	17.8
11 7	5 12.21	+3 3.6	1.838	2.692	13.0	20.5	11 7	5 16.05	+23 32.3	1.554	2.432	13.6	17.6
11 17	5 4.96	+2 9.6	1.802	2.711	10.1	20.4	11 17	5 8.19	+24 5.7	1.498	2.437	9.3	17.3
11 27	4 56.12	+1 30.1	1.791	2.730	7.9	20.3	11 27	4 57.90	+24 35.4	1.467	2.443	4.5	17.1
12 7	4 46.67	+1 9.1	1.807	2.748	7.6	20.3	12 7	4 46.40	+24 59.3	1.464	2.449	1.3	16.8
12 17	4 37.64	+1 8.3	1.851	2.765	9.2	20.5	12 17	4 35.15	+25 16.9	1.490	2.454	5.8	17.2
12 27	4 29.99	+1 27.2	1.921	2.783	11.7	20.7	12 27	4 25.63	+25 29.8	1.542	2.460	10.4	17.5
1 6	4 24.40	+2 3.2	2.013	2.800	14.3	20.9	1 6	4 18.87	+25 40.9	1.619	2.466	14.4	17.7
83606	2001 SS ₂₇₀		12 5.4 118°30	3.0/ 4.4	18		91755	1999 TQ ₁₈₉		12 5.4 353°11	5.2/ 7.0	17	
10 28	5 16.01	+15 20.4	2.200	2.986	13.6	19.3	10 28	5 17.81	+36 24.7	1.989	2.755	15.5	19.8
11 7	5 11.17	+14 39.6	2.126	2.998	10.7	19.1	11 7	5 13.60	+36 55.0	1.904	2.753	12.8	19.7
11 17	5 4.22	+13 59.2	2.075	3.010	7.4	18.9	11 17	5 6.45	+37 13.7	1.839	2.752	9.7	19.5
11 27	4 55.79	+13 21.6	2.051	3.021	4.2	18.7	11 27	4 57.05	+37 16.7	1.798	2.750	6.7	19.3
12 7	4 46.74	+12 49.3	2.057	3.032	3.2	18.7	12 7	4 46.56	+37 1.9	1.785	2.749	5.2	19.2
12 17	4 38.00	+12 24.7	2.092	3.043	5.8	18.9	12 17	4 36.32	+36 29.8	1.799	2.749	6.7	19.3
12 27	4 30.46	+12 9.7	2.156	3.053	9.0	19.1	12 27	4 27.68	+35 44.7	1.841	2.748	9.7	19.5
1 6	4 24.79	+12 4.8	2.245	3.063	11.9	19.3	1 6	4 21.59	+34 52.7	1.907	2.748	12.8	19.7
89614	2001 XZ ₁₈₅		12 5.4 67°96	0.4/ 5.5	18		124128	2001 KZ ₁₅		12 5.4 197°51	0.0/ 5.3	18	
10 28	5 19.56	+25 40.3	1.531	2.332	17.9	19.5	10 28	5 16.52	+21 8.4	2.929	3.698	11.0	20.3
11 7	5 15.01	+25 16.4	1.465	2.346	14.1	19.3	11 7	5 11.31	+21 29.8	2.831	3.695	8.6	20.1
11 17	5 7.30	+24 44.3	1.418	2.359	9.5	19.1	11 17	5 4.28	+21 50.6	2.757	3.691	5.8	19.9
11 27	4 57.34	+24 4.1	1.397	2.373	4.5	18.8	11 27	4 55.89	+22 10.2	2.713	3.688	2.7	19.7
12 7	4 46.46	+23 17.8	1.402	2.387	0.9	18.6	12 7	4 46.79	+22 28.1	2.699	3.683	0.5	19.5
12 17	4 36.16	+22 29.3	1.435	2.401	5.9	19.0	12 17	4 37.75	+22 44.1	2.717	3.679	3.7	19.8
12 27	4 27.79	+21 43.7	1.496	2.415	10.6	19.3	12 27	4 29.56	+22 58.8	2.766	3.674	6.8	19.9
1 6	4 22.22	+21 5.6	1.579	2.429	14.5	19.5	1 6	4 22.86	+23 13.4	2.842	3.669	9.5	20.1
22551	Adamsolomon		12 5.4 235°18	3.6/ 6.4	18		260665	2005 JM		12 5.4 227°62	6.0/ 3.9	18	
10 28	5 21.67	+31 21.5	1.549	2.338	18.3	19.8	10 28	5 15.96	+5 50.8	2.142	2.918	14.3	21.0
11 7	5 17.25	+31 34.0	1.464	2.334	14.8	19.6	11 7	5 11.37	+5 16.0	2.054	2.911	11.7	20.8
11 17	5 9.25	+31 35.6	1.399	2.330	10.6	19.3	11 17	5 4.56	+4 48.6	1.988	2.903	8.9	20.6
11 27	4 58.44	+31 22.4	1.357	2.326	6.1	19.1	11 27	4 56.08	+4 32.2	1.948	2.896	6.6	20.5
12 7	4 46.23	+30 52.6	1.342	2.321	3.6	18.9	12 7	4 46.76	+4 29.9	1.935	2.888	6.1	20.4
12 17	4 34.32	+30 8.3	1.354	2.316	6.7	19.1	12 17	4 37.57	+4 43.0	1.952	2.879	7.9	20.5
12 27	4 24.41	+29 15.4	1.393	2.312	11.2	19.3	12 27	4 29.47	+5 11.7	1.995	2.871	10.7	20.7
1 6	4 17.65	+28 21.3	1.456	2.307	15.4	19.6	1 6	4 23.23	+5 54.1	2.063	2.862	13.5	20.8
86748	2000 GP ₅₈		12 5.4 97°14	0.0/ 5.3	18		402156	2004 RE ₁₉₆		12 5.4 44°09	6.8/ 7.8	16	
10 28	5 21.73	+23 21.0	1.704	2.494	16.8	20.0	10 28	5 21.80	+39 47.4	1.731	2.491	17.7	20.7
11 7	5 16.30	+23 11.0	1.639	2.514	13.1	19.8	11 7	5 16.93	+40 28.6	1.676	2.516	14.7	20.5
11 17	5 7.98	+22 56.3	1.595	2.534	8.9	19.6	11 17	5 8.68	+40 53.6	1.639	2.542	11.4	20.4
11 27	4 57.61	+22 36.8	1.577	2.554	4.1	19.4	11 27	4 58.02	+40 57.4	1.626	2.568	8.3	20.3
12 7	4 46.43	+22 13.2	1.588	2.572	0.8	19.2	12 7	4 46.43	+40 37.6	1.639	2.594	6.8	20.3
12 17	4 35.80	+21 48.1	1.627	2.591	5.5	19.6	12 17	4 35.54	+39 56.2	1.679	2.620	7.9	20.4
12 27	4 26.94	+21 24.9	1.694	2.609	9.8	19.9	12 27	4 26.79	+38 59.4	1.745	2.647	10.5	20.6
1 6	4 20.70	+21 6.7	1.786	2.627	13.5	20.1	1 6	4 21.07	+37 55.1	1.836	2.674	13.3	20.8
276830	2004 PF ₁₁₃		12 5.4 138°06	2.8/ 6.4	18		74793	1999 SR ₁₀		12 5.4 69°61	3.7/ 4.5	18	
10 28	5 23.81	+31 16.7	2.165	2.924	14.6	22.1	10 28	5 19.44	+17 21.4	1.354	2.167	19.2	18.8
11 7	5 17.59	+31 27.4	2.087	2.940	11.7	22.0	11 7	5 15.06	+16 27.4	1.294	2.182	15.1	18.6
11 17	5 8.71	+31 29.1	2.031	2.954	8.3	21.8	11 17	5 7.41	+15 32.1	1.254	2.197	10.4	18.4
11 27	4 57.94	+31 19.4	2.003	2.968	4.8	21.6	11 27	4 57.44	+14 39.2	1.238	2.212	5.6	18.1
12 7	4 46.36	+30 57.6	2.004	2.981	2.8	21.5	12 7	4 46.55	+13 53.3	1.248	2.227	3.9	18.1
12 17	4 35.20	+30 25.2	2.035	2.994	5.2	21.7	12 17	4 36.27	+13 18.6	1.285	2.242	7.8	18.4
12 27	4 25.60	+29 46.2	2.096	3.005	8.6	21.9	12 27	4 28.01	+12 58.2	1.347	2.257	12.3	18.7
1 6	4 18.37	+29 5.4	2.183	3.016	11.7	22.1	1 6	4 22.65	+12 53.1	1.432	2.272	16.3	18.9
438561	2007 TC ₄₀₆		12 5.4 22°45	2.2/ 4.9	17		241445	2008 YE ₂₃		12 5.4 59°43	1.9/ 4.9	18	
10 28	5 14.07	+18 50.2	1.276	2.103	19.3	20.9	10 28	5 20.2					

EPHEMERIDES

12 5.4

12 5.5

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
69014	2002 <i>UD</i> ₁	12	5.4 316°68	6°5/ 2.6 18			66236	1999 <i>EP</i> ₃	12	5.5 188°20	5°1/ 6.6 18		
10 28	5 11.33	+ 6 50.1	2.176	2.963	13.7	17.7	10 28	5 25.36	+33 59.0	1.667	2.438	17.9	18.8
11 7	5 7.73	+ 5 32.6	2.090	2.952	11.3	17.5	11 7	5 20.13	+34 38.9	1.583	2.438	14.6	18.6
11 17	5 2.08	+ 4 19.2	2.026	2.942	8.7	17.4	11 17	5 11.25	+35 8.3	1.518	2.438	10.8	18.3
11 27	4 54.91	+ 3 14.8	1.988	2.932	6.8	17.2	11 27	4 59.48	+35 21.5	1.478	2.436	7.1	18.1
12 7	4 47.01	+ 2 24.3	1.978	2.922	6.7	17.2	12 7	4 46.24	+35 14.7	1.464	2.435	5.1	18.0
12 17	4 39.24	+ 1 51.1	1.995	2.912	8.5	17.3	12 17	4 33.26	+34 48.2	1.479	2.432	7.3	18.1
12 27	4 32.50	+ 1 37.0	2.039	2.903	11.1	17.5	12 27	4 22.29	+34 6.9	1.520	2.430	11.2	18.3
1 6	4 27.48	+ 1 41.4	2.106	2.894	13.7	17.6	1 6	4 14.53	+33 18.6	1.585	2.426	14.9	18.6
522944	2016 <i>PB</i> ₁₁₃	12	5.4 289°53	4°6/ 4.5 18			519023	2010 <i>JG</i> ₁₃₄	12	5.5 189°95	3°0/ 4.8 18		
10 28	5 17.20	+12 56.4	1.523	2.329	17.7	21.4	10 28	5 17.84	+12 26.3	2.449	3.222	12.8	22.3
11 7	5 13.34	+12 26.5	1.441	2.323	14.2	21.1	11 7	5 12.57	+12 19.4	2.358	3.221	10.1	22.2
11 17	5 6.42	+12 0.3	1.379	2.317	10.1	20.9	11 17	5 5.26	+12 16.2	2.290	3.219	7.2	22.0
11 27	4 57.12	+11 41.1	1.341	2.310	6.1	20.6	11 27	4 56.42	+12 17.9	2.250	3.217	4.2	21.8
12 7	4 46.61	+11 32.1	1.330	2.304	4.8	20.5	12 7	4 46.83	+12 25.6	2.240	3.214	3.2	21.7
12 17	4 36.29	+11 35.3	1.345	2.298	8.0	20.7	12 17	4 37.36	+12 39.9	2.260	3.210	5.5	21.8
12 27	4 27.56	+11 52.1	1.386	2.292	12.3	20.9	12 27	4 28.91	+13 1.2	2.311	3.206	8.6	22.0
1 6	4 21.47	+12 21.7	1.450	2.286	16.3	21.2	1 6	4 22.17	+13 29.2	2.387	3.201	11.4	22.2
66983	1999 <i>XB</i> ₉₂	12	5.4 81°27	2°6/ 4.9 18			398504	2011 <i>UK</i> ₂₀₂	12	5.5 93°39	0°9/ 5.2 18		
10 28	5 15.71	+14 5.3	2.216	3.002	13.6	18.6	10 28	5 17.49	+20 5.0	1.907	2.700	15.2	21.5
11 7	5 11.02	+14 3.7	2.141	3.013	10.7	18.4	11 7	5 12.90	+20 2.5	1.830	2.707	11.9	21.3
11 17	5 4.21	+14 5.4	2.089	3.024	7.4	18.2	11 17	5 5.75	+19 58.8	1.774	2.714	8.1	21.1
11 27	4 55.88	+14 11.3	2.064	3.035	4.1	18.1	11 27	4 56.71	+19 54.0	1.744	2.720	3.8	20.8
12 7	4 46.87	+14 22.2	2.068	3.046	2.7	18.0	12 7	4 46.80	+19 48.9	1.743	2.727	1.2	20.7
12 17	4 38.09	+14 38.5	2.102	3.057	5.3	18.2	12 17	4 37.17	+19 44.6	1.771	2.734	5.3	21.0
12 27	4 30.47	+15 0.6	2.164	3.068	8.6	18.4	12 27	4 28.94	+19 42.9	1.827	2.741	9.3	21.2
1 6	4 24.69	+15 28.2	2.252	3.079	11.6	18.6	1 6	4 22.94	+19 45.7	1.908	2.747	12.8	21.5
418442	2008 <i>QF</i> ₁₁	12	5.4 87°05	9°0/ 2.5 18			115320	2003 <i>SB</i> ₂₁₉	12	5.5 318°85	4°4/ 7.5 17		
10 28	5 14.06	- 7 10.3	2.568	3.295	13.4	21.1	10 28	5 20.38	+37 49.7	1.546	2.323	18.8	19.1
11 7	5 9.20	- 8 24.8	2.523	3.322	11.6	21.0	11 7	5 16.46	+37 7.2	1.447	2.306	15.5	18.9
11 17	5 2.69	- 9 25.4	2.501	3.348	10.1	21.0	11 17	5 8.83	+36 1.2	1.367	2.289	11.6	18.6
11 27	4 55.06	-10 7.1	2.503	3.373	9.2	20.9	11 27	4 58.33	+34 27.9	1.310	2.272	7.2	18.3
12 7	4 47.04	-10 27.0	2.530	3.399	9.1	21.0	12 7	4 46.50	+32 28.0	1.280	2.257	4.4	18.1
12 17	4 39.34	-10 24.1	2.584	3.423	9.9	21.1	12 17	4 35.12	+30 8.2	1.278	2.241	6.9	18.2
12 27	4 32.65	- 9 59.5	2.662	3.448	11.2	21.2	12 27	4 25.89	+27 40.6	1.304	2.227	11.5	18.4
1 6	4 27.49	- 9 16.5	2.763	3.472	12.6	21.4	1 6	4 19.93	+25 18.4	1.355	2.213	16.0	18.7
271589	2004 <i>NA</i> ₉	12	5.4 169°25	5°5/ 7.4 18			117777	2005 <i>GW</i> ₁₁₀	12	5.5 175°40	5°6/ 7.4 18		
10 28	5 26.02	+38 48.0	2.183	2.920	15.2	21.3	10 28	5 23.67	+39 45.2	2.454	3.184	13.8	20.6
11 7	5 19.76	+39 16.3	2.096	2.925	12.6	21.1	11 7	5 17.73	+40 23.3	2.365	3.187	11.6	20.4
11 17	5 10.48	+39 31.9	2.031	2.930	9.7	20.9	11 17	5 9.05	+40 49.8	2.297	3.189	9.0	20.2
11 27	4 58.92	+39 29.8	1.990	2.933	6.9	20.7	11 27	4 58.28	+41 0.4	2.255	3.190	6.7	20.1
12 7	4 46.31	+39 7.7	1.978	2.936	5.5	20.7	12 7	4 46.51	+40 52.3	2.241	3.191	5.6	20.0
12 17	4 34.06	+38 26.3	1.996	2.938	6.7	20.7	12 17	4 34.97	+40 25.7	2.257	3.191	6.6	20.1
12 27	4 23.53	+37 30.4	2.042	2.939	9.4	20.9	12 27	4 24.90	+39 44.1	2.301	3.191	8.8	20.2
1 6	4 15.67	+36 26.9	2.114	2.939	12.3	21.1	1 6	4 17.20	+38 53.3	2.371	3.190	11.3	20.4
305132	2007 <i>VK</i> ₁₄₇	12	5.4 37°07	1°3/ 5.2 18			282469	2004 <i>FE</i> ₁₄₁	12	5.5 202°12	2°0/ 4.8 18		
10 28	5 16.65	+19 25.6	1.612	2.417	16.9	20.9	10 28	5 19.77	+18 42.4	1.978	2.764	15.0	21.9
11 7	5 12.66	+19 21.5	1.540	2.425	13.3	20.6	11 7	5 14.65	+18 12.9	1.887	2.760	11.8	21.7
11 17	5 5.78	+19 16.8	1.490	2.432	9.0	20.4	11 17	5 6.95	+17 41.2	1.818	2.755	8.1	21.5
11 27	4 56.74	+19 12.0	1.464	2.440	4.3	20.1	11 27	4 57.30	+17 8.7	1.776	2.750	4.1	21.2
12 7	4 46.73	+19 7.8	1.465	2.449	1.6	20.0	12 7	4 46.70	+16 37.5	1.763	2.744	2.3	21.1
12 17	4 37.06	+19 5.7	1.494	2.458	6.0	20.3	12 17	4 36.28	+16 10.2	1.779	2.738	5.8	21.3
12 27	4 29.03	+19 7.6	1.550	2.467	10.4	20.6	12 27	4 27.21	+15 49.6	1.825	2.730	9.8	21.5
1 6	4 23.53	+19 15.1	1.629	2.476	14.3	20.8	1 6	4 20.35	+15 37.7	1.895	2.722	13.4	21.7
452927	2006 <i>WX</i> ₅₇	12	5.4 11°94	2°0/ 6.0 18			218192	2002 <i>TA</i> ₈₈	12	5.5 9°73	2°1/ 6.1 17		
10 28	5 17.07	+28 20.6	1.859	2.647	15.7	21.4	10 28	5 14.47	+28 20.3	1.949	2.739	15.0	20.3
11 7	5 12.88	+28 24.7	1.776	2.648	12.5	21.2	11 7	5 10.74	+28 33.0	1.868	2.741	11.9	20.1
11 17	5 5.89	+28 21.1	1.714	2.649	8.7	21.0	11 17	5 4.40	+28 38.9	1.809	2.743	8.3	19.9
11 27	4 56.80	+28 8.2	1.677	2.650	4.6	20.7	11 27	4 56.12	+28 36.3	1.775	2.746	4.5	19.6
12 7	4 46.72	+27 45.6	1.669	2.651	2.0	20.6	12 7	4 46.91	+28 24.7	1.768	2.750	2.2	19.5
12 17	4 36.91	+27 15.3	1.688	2.652	5.4	20.8	12 17	4 37.96	+28 5.3	1.790	2.754	5.2	19.7
12 27	4 28.63	+26 40.9	1.736	2.654	9.4	21.0	12 27	4 30.41	+27 41.2	1.840	2.759	8.9	19.9
1 6	4 22.79	+26 7.2	1.808	2.655	13.1	21.3	1 6	4 25.12	+27 16.3	1.915	2.764	12.4	20.2
217200	2002 <i>TR</i> ₁₆₇	12	5.4 92°03	5°9/ 7.5 18			177603	2004 <i>GD</i> ₇₅	12	5.5 128°92	2°6/ 6.3 18		
10 28	5 26.38	+37 56.2	1.561	2.327	19.1	19.7	10 28	5 19.20	+30 28.5	2.202	2.971	14.1	20.7
11 7	5 20.79	+38 11.1	1.495	2.344	15.7	19.5	11 7	5 14.08	+30 40.2	2.121	2.980	11.3	20.5
11 17	5 11.45	+38 8.9	1.448	2.361	11.8	19.3	11 17	5 6.46	+30 44.1	2.061	2.988	8.0	20.3
11 27	4 59.39	+37 44.3	1.425	2.378	8.0	19.1	11 27	4 57.02	+30 38.0	2.028	2.996	4.5	20.1
12 7	4 46.28	+36 55.8	1.427	2.394	5.9	19.0	12 7	4 46.76	+30 21.3	2.025	3.003	2.6	20.0
12 17	4 33.96	+35 46.9	1.458	2.410	7.6	19.2	12 17	4 36.79	+29 55.2	2.050	3.011	5.0	20.2
12 27	4 24.07	+34 25.7	1.515	2.426	11.1	19.4	12 27	4 28.22	+29 23.0	2.105	3.018	8.3	20.4
1 6	4 17.56	+33 2.0	1.596	2.441	14.6	19.7	1 6	4 21.82	+28 49.0	2.186	3.024	11.5	20.6
228471	2001 <i>SU</i> ₁₉	12	5.5 44°60	1°0/ 5.6 18			238149	2003 <i>SC</i> ₄₁	12	5.5 10°21			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
486266	2013 CZ ₁₂	12 5.5 15°52'	4°0'	6.4	17		404715	2014 JM ₈	12 5.5 225°15'	1°1'	5.2	18	
10 28	5 14.85	+30 18.3	1.198	2.020	20.7	20.8	10 28	5 17.85	+19 44.5	2.012	2.800	14.6	22.1
11 7	5 12.56	+30 46.9	1.138	2.027	16.6	20.6	11 7	5 13.20	+19 36.7	1.920	2.794	11.5	21.9
11 17	5 6.37	+31 4.3	1.095	2.035	11.8	20.4	11 17	5 6.02	+19 27.6	1.850	2.788	7.9	21.6
11 27	4 57.22	+31 6.7	1.074	2.045	6.8	20.1	11 27	4 56.91	+19 17.6	1.806	2.781	3.8	21.4
12 7	4 46.72	+30 52.3	1.077	2.056	4.1	20.0	12 7	4 46.81	+19 7.4	1.791	2.774	1.4	21.2
12 17	4 36.78	+30 23.1	1.104	2.069	7.3	20.2	12 17	4 36.84	+18 58.5	1.805	2.767	5.3	21.4
12 27	4 29.17	+29 45.3	1.155	2.083	12.1	20.5	12 27	4 28.14	+18 52.9	1.848	2.759	9.4	21.7
1 6	4 24.99	+29 6.0	1.228	2.098	16.4	20.8	1 6	4 21.59	+18 52.5	1.916	2.751	13.0	21.9
101302	1998 SA ₁₃₁	12 5.5 165°18'	5°2'	6.7	18		45599	2000 DJ ₃	12 5.5 118°54'	3°9'	4.3	18	
10 28	5 21.07	+34 51.7	1.891	2.658	16.2	19.6	10 28	5 13.35	+10 59.9	2.379	3.162	12.8	18.9
11 7	5 16.36	+35 37.1	1.806	2.658	13.3	19.4	11 7	5 9.10	+10 32.2	2.297	3.164	10.2	18.8
11 17	5 8.49	+36 12.7	1.743	2.658	10.0	19.2	11 17	5 2.91	+10 8.2	2.238	3.166	7.3	18.6
11 27	4 58.15	+36 33.5	1.704	2.659	6.7	19.0	11 27	4 55.33	+9 50.3	2.206	3.168	4.7	18.4
12 7	4 46.55	+36 36.2	1.692	2.659	5.2	18.9	12 7	4 47.11	+9 40.5	2.203	3.170	4.0	18.4
12 17	4 35.16	+36 20.7	1.709	2.659	6.9	19.0	12 17	4 39.06	+9 40.3	2.229	3.172	6.0	18.5
12 27	4 25.46	+35 50.8	1.752	2.659	10.1	19.2	12 27	4 32.01	+9 50.2	2.283	3.174	8.9	18.7
1 6	4 18.51	+35 12.6	1.820	2.659	13.4	19.4	1 6	4 26.61	+10 10.0	2.363	3.176	11.6	18.9
376224	2011 ET ₂₄	12 5.5 226°42'	2°8'	6.3	18		520385	2014 HO ₂₀₆	12 5.5 129°89'	5°1'	4.4	18	
10 28	5 16.62	+31 25.3	2.760	3.518	11.8	21.5	10 28	5 16.88	+9 53.5	1.843	2.634	15.7	21.6
11 7	5 11.77	+31 50.3	2.660	3.511	9.5	21.3	11 7	5 12.40	+9 22.8	1.767	2.637	12.6	21.4
11 17	5 4.81	+32 9.1	2.584	3.504	6.9	21.1	11 17	5 5.42	+8 57.8	1.712	2.640	9.2	21.2
11 27	4 56.26	+32 19.6	2.535	3.497	4.2	20.9	11 27	4 56.59	+8 41.8	1.682	2.643	6.1	21.0
12 7	4 46.90	+32 20.5	2.515	3.490	2.8	20.8	12 7	4 46.89	+8 37.5	1.680	2.646	5.2	21.0
12 17	4 37.62	+32 12.0	2.526	3.482	4.5	20.9	12 17	4 37.44	+8 46.3	1.706	2.649	7.6	21.1
12 27	4 29.33	+31 55.9	2.567	3.474	7.3	21.1	12 27	4 29.34	+9 8.6	1.759	2.652	10.9	21.3
1 6	4 22.77	+31 35.4	2.634	3.466	10.0	21.2	1 6	4 23.41	+9 43.1	1.835	2.654	14.2	21.5
278102	2007 BS ₅₃	12 5.5 322°21'	1°3'	5.7	18		206428	2003 SV ₁₇₀	12 5.5 70°47'	1°9'	5.0	18	
10 28	5 16.54	+25 10.7	1.327	2.144	19.3	20.9	10 28	5 18.67	+18 29.4	1.656	2.456	16.8	21.0
11 7	5 13.74	+25 20.3	1.242	2.131	15.4	20.7	11 7	5 14.00	+18 12.0	1.593	2.474	13.1	20.8
11 17	5 7.25	+25 24.3	1.175	2.119	10.7	20.4	11 17	5 6.53	+17 54.1	1.551	2.491	8.9	20.6
11 27	4 57.75	+25 20.7	1.131	2.108	5.3	20.0	11 27	4 57.08	+17 36.8	1.534	2.509	4.4	20.4
12 7	4 46.61	+25 8.6	1.112	2.097	1.5	19.7	12 7	4 46.82	+17 22.0	1.544	2.527	2.2	20.3
12 17	4 35.57	+24 49.6	1.119	2.086	6.8	20.1	12 17	4 37.03	+17 11.3	1.583	2.544	6.0	20.6
12 27	4 26.48	+24 27.7	1.151	2.076	12.3	20.3	12 27	4 28.92	+17 7.0	1.649	2.562	10.2	20.9
1 6	4 20.64	+24 8.4	1.204	2.067	17.1	20.6	1 6	4 23.28	+17 10.2	1.739	2.579	13.9	21.2
154977	2004 UG ₁	12 5.5 280°38'	3°1'	4.3	18		11415	1999 JG ₈₁	12 5.5 89°40'	4°6'	4.6	18	
10 28	5 13.70	+15 50.4	2.201	2.992	13.5	20.1	10 28	5 22.13	+13 5.6	1.477	2.276	18.5	17.8
11 7	5 9.60	+15 5.1	2.113	2.987	10.6	19.9	11 7	5 16.80	+12 29.3	1.421	2.298	14.6	17.6
11 17	5 3.36	+14 19.1	2.047	2.983	7.4	19.7	11 17	5 8.44	+11 57.3	1.386	2.321	10.3	17.4
11 27	4 55.57	+13 35.0	2.009	2.979	4.2	19.5	11 27	4 57.96	+11 32.7	1.375	2.343	6.1	17.2
12 7	4 47.04	+12 55.6	1.999	2.975	3.3	19.4	12 7	4 46.67	+11 18.5	1.391	2.364	4.8	17.2
12 17	4 38.69	+12 23.7	2.019	2.971	5.9	19.6	12 17	4 36.00	+11 16.6	1.434	2.385	7.8	17.4
12 27	4 31.45	+12 1.7	2.067	2.966	9.2	19.8	12 27	4 27.25	+11 27.8	1.504	2.406	11.8	17.7
1 6	4 26.02	+11 50.7	2.140	2.962	12.3	19.9	1 6	4 21.23	+11 51.1	1.597	2.426	15.4	18.0
307926	2004 EG ₃₇	12 5.5 295°00'	5°3'	6.0	17		491525	2012 KH ₁₇	12 5.5 178°70'	1°2'	4.9	17	
10 28	5 21.20	+32 42.9	1.873	2.645	16.1	20.2	10 28	5 13.79	+19 15.0	2.792	3.570	11.2	22.5
11 7	5 16.79	+33 55.0	1.775	2.631	13.3	20.0	11 7	5 9.21	+18 55.2	2.702	3.571	8.8	22.3
11 17	5 9.07	+35 1.9	1.698	2.616	9.9	19.8	11 17	5 2.88	+18 34.0	2.636	3.571	6.0	22.1
11 27	4 58.59	+35 57.8	1.646	2.602	6.7	19.6	11 27	4 55.30	+18 12.2	2.597	3.572	2.9	21.9
12 7	4 46.45	+36 37.5	1.621	2.588	5.3	19.5	12 7	4 47.14	+17 51.0	2.590	3.572	1.4	21.8
12 17	4 34.15	+36 58.2	1.625	2.574	7.3	19.5	12 17	4 39.13	+17 32.0	2.613	3.572	4.1	22.0
12 27	4 23.35	+37 1.6	1.656	2.560	10.8	19.7	12 27	4 32.03	+17 16.7	2.666	3.571	7.1	22.2
1 6	4 15.31	+36 52.7	1.711	2.546	14.3	19.9	1 6	4 26.40	+17 6.5	2.745	3.570	9.8	22.4
55728	1981 EV ₁₇	12 5.5 173°94'	0°3'	5.4	18 R		273331	2006 TM ₆₂	12 5.5 22°39'	0°4'	5.5	18	
10 28	5 20.31	+22 36.6	1.964	2.748	15.1	20.4	10 28	5 18.27	+20 38.6	1.079	1.911	21.8	19.8
11 7	5 15.11	+22 24.5	1.878	2.750	11.9	20.2	11 7	5 15.40	+21 19.8	1.020	1.918	17.2	19.6
11 17	5 7.26	+22 8.5	1.815	2.752	8.1	20.0	11 17	5 8.44	+22 2.9	0.978	1.926	11.7	19.3
11 27	4 57.45	+21 48.4	1.778	2.754	3.8	19.7	11 27	4 58.28	+22 45.0	0.958	1.936	5.5	19.0
12 7	4 46.71	+21 25.1	1.770	2.755	0.8	19.5	12 7	4 46.58	+23 23.0	0.961	1.946	1.1	18.7
12 17	4 36.23	+21 0.6	1.792	2.756	5.2	19.8	12 17	4 35.36	+23 55.5	0.989	1.957	7.3	19.2
12 27	4 27.19	+20 38.0	1.843	2.755	9.3	20.0	12 27	4 26.57	+24 23.5	1.041	1.970	13.0	19.5
1 6	4 20.45	+20 20.1	1.919	2.755	12.9	20.3	1 6	4 21.42	+24 49.7	1.114	1.983	17.8	19.8
106617	2000 WB ₁₂₃	12 5.5 311°26'	0°1'	5.4	18		54203	2000 HR ₈₀	12 5.5 19°13'	4°2'	4.7	18	
10 28	5 16.92	+21 26.8	1.271	2.093	19.7	18.9	10 28	5 16.39	+10 55.2	1.906	2.696	15.3	19.3
11 7	5 14.23	+21 39.0	1.181	2.075	15.8	18.6	11 7	5 12.02	+10 41.8	1.825	2.696	12.2	19.1
11 17	5 7.76	+21 50.3	1.111	2.057	10.9	18.3	11 17	5 5.18	+10 34.2	1.766	2.697	8.7	18.9
11 27	4 58.09	+21 59.7	1.062	2.040	5.2	17.9	11 27	4 56.49	+10 34.7	1.732	2.697	5.4	18.7
12 7	4 46.55	+22 6.4	1.038	2.023	1.0	17.6	12 7	4 46.91	+10 44.8	1.726	2.697	4.4	18.6
12 17	4 34.93	+22 10.8	1.040	2.007	7.2	17.9	12 17	4 37.52	+11 5.4	1.749	2.698	6.9	18.8
12 27	4 25.21	+22 15.5	1.065	1.991	13.1	18.2	12 27	4 29.41	+11 36.5	1.799	2.698	10.4	19.0
1 6	4 18.82	+22 23.8	1.112	1.976	18.2	18.5	1 6	4 23.41	+12 16.8	1.873	2.699	13.6	19.2
123901	2001 DB ₆₆	12 5.5 331°03'	4°3'	6.8	17		104829	2000 HX ₆₂	12 5.5 310°20'	6°4'	2.7	17	
10 28	5 16.84	+34 29.5	1.981	2.754	15.4	19.7	1						

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
140079	2001 SY ₁₁₉	12 5.5 349°61	4°6/ 3.9 18				8192	Tonucci	12 5.5 298°43	6°8/ 6.9 18			
10 28	5 12.54	+14 58.0	1.565	2.380	16.9	19.3	10 28	5 22.60	+36 9.4	1.403	2.188	20.0	18.7
11 7	5 9.56	+13 56.2	1.486	2.374	13.5	19.0	11 7	5 18.83	+36 55.8	1.321	2.183	16.6	18.5
11 17	5 3.78	+12 53.6	1.429	2.369	9.5	18.8	11 17	5 10.89	+37 28.9	1.258	2.177	12.6	18.2
11 27	4 55.91	+11 54.8	1.395	2.365	5.8	18.6	11 27	4 59.54	+37 41.3	1.216	2.171	8.7	18.0
12 7	4 47.03	+11 4.8	1.388	2.361	4.8	18.5	12 7	4 46.37	+37 28.0	1.199	2.166	6.8	17.9
12 17	4 38.40	+10 27.9	1.408	2.359	8.0	18.7	12 17	4 33.48	+36 49.1	1.208	2.160	8.8	18.0
12 27	4 31.29	+10 7.3	1.453	2.357	12.0	18.9	12 27	4 22.93	+35 51.2	1.241	2.155	12.7	18.2
1 6	4 26.58	+10 3.7	1.520	2.356	15.7	19.1	1 6	4 16.10	+34 44.4	1.297	2.150	16.8	18.4
112554	2002 PP ₄₄	12 5.5 50°25	2°6/ 4.9 18				125601	2001 XB ₄₇	12 5.5 357°82	1°0/ 5.5 18			
10 28	5 17.24	+15 55.0	1.629	2.432	16.9	18.9	10 28	5 20.32	+20 21.2	1.384	2.194	19.0	19.0
11 7	5 12.97	+15 47.4	1.564	2.446	13.3	18.7	11 7	5 16.48	+21 24.4	1.306	2.192	15.1	18.7
11 17	5 5.91	+15 42.2	1.520	2.460	9.1	18.5	11 17	5 9.01	+22 32.3	1.248	2.190	10.3	18.4
11 27	4 56.83	+15 40.9	1.501	2.475	4.7	18.3	11 27	4 58.59	+23 41.1	1.213	2.189	5.0	18.1
12 7	4 46.88	+15 44.4	1.509	2.490	2.8	18.2	12 7	4 46.55	+24 46.5	1.205	2.189	1.3	17.9
12 17	4 37.33	+15 53.8	1.545	2.505	6.3	18.4	12 17	4 34.58	+25 44.7	1.224	2.190	6.6	18.2
12 27	4 29.40	+16 9.8	1.608	2.520	10.5	18.7	12 27	4 24.50	+26 35.0	1.269	2.191	11.8	18.5
1 6	4 23.93	+16 32.7	1.695	2.536	14.1	19.0	1 6	4 17.58	+27 19.0	1.337	2.193	16.3	18.8
331735	2002 TE ₁₆₉	12 5.5 14°48	1°2/ 4.9 17				441672	2008 XU ₃₈	12 5.5 346°63	1°0/ 5.7 18			
10 28	5 13.70	+23 4.1	1.966	2.762	14.6	20.0	10 28	5 18.51	+24 36.2	1.663	2.460	16.8	21.6
11 7	5 9.85	+22 9.6	1.886	2.766	11.5	19.8	11 7	5 14.36	+24 48.8	1.580	2.459	13.3	21.3
11 17	5 3.62	+21 8.5	1.828	2.770	7.7	19.6	11 17	5 7.13	+24 57.1	1.519	2.458	9.2	21.1
11 27	4 55.71	+20 2.6	1.798	2.774	3.7	19.3	11 27	4 57.54	+24 59.7	1.482	2.458	4.5	20.8
12 7	4 47.08	+18 55.5	1.795	2.779	1.5	19.2	12 7	4 46.76	+24 55.8	1.473	2.457	1.2	20.6
12 17	4 38.79	+17 51.3	1.822	2.784	5.3	19.5	12 17	4 36.21	+24 46.3	1.491	2.456	5.7	20.9
12 27	4 31.85	+16 54.5	1.878	2.790	9.2	19.7	12 27	4 27.30	+24 34.3	1.537	2.456	10.3	21.1
1 6	4 26.99	+16 8.4	1.958	2.797	12.6	19.9	1 6	4 21.06	+24 23.4	1.606	2.456	14.3	21.4
364977	2008 HD ₃₈	12 5.5 51°11	2°2/ 5.9 18				257266	2009 FZ ₇₄	12 5.5 191°58	0°4/ 5.6 18			
10 28	5 20.92	+27 8.5	1.807	2.591	16.2	20.1	10 28	5 18.24	+25 47.3	2.286	3.061	13.5	21.0
11 7	5 15.61	+27 41.9	1.754	2.624	12.7	20.0	11 7	5 13.17	+25 22.1	2.193	3.060	10.6	20.8
11 17	5 7.53	+28 9.3	1.723	2.656	8.8	19.8	11 17	5 5.80	+24 50.2	2.124	3.059	7.3	20.6
11 27	4 57.51	+28 28.2	1.718	2.689	4.6	19.6	11 27	4 56.75	+24 11.6	2.082	3.057	3.5	20.4
12 7	4 46.77	+28 37.2	1.741	2.722	2.3	19.5	12 7	4 46.93	+23 27.5	2.069	3.054	0.7	20.1
12 17	4 36.59	+28 37.0	1.793	2.755	5.3	19.8	12 17	4 37.35	+22 40.5	2.088	3.051	4.5	20.4
12 27	4 28.14	+28 30.5	1.873	2.788	9.0	20.1	12 27	4 29.01	+21 54.4	2.136	3.048	8.3	20.6
1 6	4 22.21	+28 21.4	1.977	2.821	12.3	20.4	1 6	4 22.66	+21 12.7	2.210	3.044	11.5	20.8
133327	2003 SD ₉₃	12 5.5 341°19	0°9/ 5.2 17				241010	2006 MK ₁₂	12 5.5 182°84	4°7/ 4.1 18			
10 28	5 12.99	+21 49.6	1.930	2.730	14.7	19.3	10 28	5 16.94	+ 9 44.6	2.215	2.993	13.8	20.9
11 7	5 9.51	+21 26.4	1.841	2.723	11.6	19.1	11 7	5 12.04	+ 9 5.2	2.131	2.993	11.1	20.7
11 17	5 3.57	+20 59.0	1.775	2.716	7.9	18.9	11 17	5 4.99	+ 8 29.9	2.070	2.994	8.1	20.5
11 27	4 55.77	+20 28.5	1.734	2.710	3.7	18.6	11 27	4 56.37	+ 8 1.9	2.035	2.993	5.5	20.4
12 7	4 47.06	+19 56.6	1.721	2.705	1.2	18.4	12 7	4 47.00	+ 7 43.9	2.030	2.992	4.9	20.3
12 17	4 38.54	+19 25.7	1.736	2.700	5.3	18.7	12 17	4 37.82	+ 7 37.9	2.054	2.991	6.9	20.5
12 27	4 31.30	+18 59.1	1.779	2.695	9.4	18.9	12 27	4 29.76	+ 7 44.8	2.105	2.989	9.9	20.6
1 6	4 26.17	+18 39.3	1.847	2.691	13.0	19.1	1 6	4 23.54	+ 8 3.9	2.182	2.987	12.7	20.8
124608	2001 SH ₄₀	12 5.5 278°55	5°5/ 4.1 18				476429	2008 DG ₇₇	12 5.5 295°33	5°2/ 4.5 18			
10 28	5 16.48	+11 29.2	1.630	2.431	17.0	19.6	10 28	5 17.91	+12 21.3	1.428	2.237	18.6	21.3
11 7	5 12.67	+10 41.8	1.540	2.418	13.7	19.3	11 7	5 14.08	+11 45.3	1.351	2.234	14.9	21.0
11 17	5 5.97	+ 9 57.5	1.471	2.404	10.0	19.1	11 17	5 7.06	+11 13.6	1.293	2.230	10.7	20.8
11 27	4 57.00	+ 9 20.4	1.426	2.390	6.5	18.9	11 27	4 57.54	+10 50.0	1.258	2.226	6.6	20.5
12 7	4 46.82	+ 8 55.0	1.408	2.376	5.7	18.8	12 7	4 46.78	+10 38.3	1.250	2.223	5.3	20.5
12 17	4 36.73	+ 8 44.5	1.416	2.362	8.5	18.9	12 17	4 36.26	+10 40.8	1.267	2.219	8.6	20.6
12 27	4 28.06	+ 8 50.8	1.451	2.348	12.5	19.1	12 27	4 27.45	+10 58.7	1.310	2.216	12.9	20.9
1 6	4 21.84	+ 9 13.4	1.507	2.334	16.3	19.3	1 6	4 21.42	+11 30.8	1.375	2.212	17.0	21.1
63226	2001 BC ₄	12 5.5 255°02	5°1/ 6.5 18				197155	2003 UJ ₂₇₂	12 5.5 71°55	5°1/ 3.5 18 R			
10 28	5 22.75	+33 2.2	1.532	2.317	18.6	19.8	10 28	5 14.60	+ 9 53.1	2.227	3.010	13.6	20.3
11 7	5 18.46	+33 44.4	1.446	2.311	15.2	19.6	11 7	5 9.96	+ 8 44.7	2.168	3.032	10.8	20.2
11 17	5 10.38	+34 16.8	1.380	2.305	11.3	19.3	11 17	5 3.39	+ 7 40.2	2.132	3.055	8.0	20.0
11 27	4 59.22	+34 33.5	1.337	2.299	7.2	19.1	11 27	4 55.53	+ 6 43.7	2.123	3.077	5.6	19.9
12 7	4 46.42	+34 30.5	1.320	2.293	5.2	18.9	12 7	4 47.18	+ 5 58.7	2.143	3.099	5.3	19.9
12 17	4 33.79	+34 7.5	1.330	2.286	7.6	19.1	12 17	4 39.20	+ 5 27.9	2.192	3.121	7.1	20.1
12 27	4 23.20	+33 29.6	1.365	2.280	11.8	19.3	12 27	4 32.40	+ 5 12.3	2.268	3.143	9.6	20.3
1 6	4 15.94	+32 44.5	1.424	2.273	15.8	19.5	1 6	4 27.33	+ 5 11.5	2.368	3.165	12.1	20.5
486580	2013 JU ₅	12 5.5 71°02	0°8/ 5.6 18				117666	2005 ER ₂₀₁	12 5.5 297°30	8°6/ 6.8 17			
10 28	5 18.33	+22 44.5	2.087	2.871	14.3	20.7	10 28	5 25.09	+45 18.1	2.375	3.085	14.8	19.7
11 7	5 13.49	+23 17.7	2.007	2.879	11.3	20.5	11 7	5 19.80	+46 54.4	2.283	3.078	12.8	19.6
11 17	5 6.16	+23 49.8	1.949	2.886	7.7	20.3	11 17	5 11.13	+48 19.7	2.213	3.070	10.9	19.4
11 27	4 56.96	+24 19.1	1.918	2.893	3.7	20.1	11 27	4 59.61	+49 26.4	2.168	3.063	9.2	19.3
12 7	4 46.85	+24 44.0	1.917	2.901	1.0	19.9	12 7	4 46.37	+50 8.7	2.149	3.056	8.6	19.3
12 17	4 36.93	+25 4.1	1.945	2.908	4.8	20.2	12 17	4 32.96	+50 23.8	2.157	3.049	9.3	19.3
12 27	4 28.31	+25 20.5	2.002	2.916	8.6	20.4	12 27	4 21.05	+50 13.7	2.190	3.042	10.9	19.4
1 6	4 21.81	+25 35.1	2.084	2.924	11.9	20.6	1 6	4 11.95	+49 44.7	2.248	3.035	12.9	19.5
492909	2014 QZ ₄₃₇	12 5.5 122°66	2°4/ 4.7 17				191580	2003 YR ₅₃	12 5.5 4°08	0°0/ 5.5 17			
10 28	5 13.83	+14 57.5	2.606	3.38									

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
166307	2002 JA ₂₆	12	5.5 134°67	1°1/ 5.2 18			447941	2008 AP ₉₃	12	5.5 338°87	1°7/ 5.2 18		
10 28	5 19.64	+19 30.6	2.172	2.951	14.0	21.2	10 28	5 17.14	+17 25.0	1.880	2.674	15.3	21.2
11 7	5 14.20	+19 26.3	2.095	2.964	10.9	21.0	11 7	5 12.79	+17 29.8	1.796	2.673	12.1	20.9
11 17	5 6.46	+19 21.1	2.040	2.977	7.4	20.9	11 17	5 5.82	+17 36.3	1.733	2.672	8.2	20.7
11 27	4 57.05	+19 15.2	2.013	2.989	3.5	20.6	11 27	4 56.88	+17 44.7	1.696	2.671	4.1	20.5
12 7	4 46.90	+19 9.1	2.016	3.000	1.3	20.5	12 7	4 46.95	+17 55.4	1.688	2.671	1.9	20.3
12 17	4 37.05	+19 4.1	2.049	3.010	4.9	20.8	12 17	4 37.18	+18 8.9	1.709	2.670	5.6	20.5
12 27	4 28.49	+19 1.8	2.112	3.021	8.5	21.0	12 27	4 28.76	+18 26.1	1.757	2.670	9.7	20.8
1 6	4 21.95	+19 3.6	2.200	3.030	11.7	21.2	1 6	4 22.55	+18 47.7	1.830	2.669	13.3	21.0
463046	2011 HS ₃₉	12	5.5 263°96	3°9/ 5.0 16			334287	2001 UU ₁₇₀	12	5.5 33°24	0°5/ 5.4 18		
10 28	5 33.00	+20 37.4	1.157	1.958	22.5	21.2	10 28	5 17.14	+23 4.5	1.177	2.004	20.7	20.0
11 7	5 28.04	+22 52.9	1.071	1.951	18.2	20.8	11 7	5 13.94	+22 46.3	1.123	2.019	16.2	19.8
11 17	5 18.07	+25 24.6	1.005	1.943	12.8	20.5	11 17	5 7.05	+22 22.3	1.087	2.035	10.9	19.5
11 27	5 3.43	+28 3.1	0.963	1.936	6.9	20.2	11 27	4 57.49	+21 53.2	1.074	2.051	5.1	19.2
12 7	4 45.63	+30 33.3	0.948	1.928	4.2	20.0	12 7	4 46.87	+21 21.2	1.085	2.069	1.1	19.0
12 17	4 27.20	+32 41.3	0.961	1.920	9.3	20.2	12 17	4 36.94	+20 50.0	1.121	2.088	6.8	19.5
12 27	4 11.08	+34 21.3	1.001	1.913	15.3	20.6	12 27	4 29.29	+20 24.3	1.182	2.107	12.1	19.8
1 6	3 59.49	+35 37.1	1.062	1.905	20.5	20.8	1 6	4 24.87	+20 7.4	1.264	2.127	16.5	20.1
513620	2011 JE ₁₆	12	5.5 262°07	0°8/ 5.3 18			385376	2002 RE ₈	12	5.5 24°84	7°0/ 4.4 18		
10 28	5 19.11	+20 37.9	1.668	2.466	16.8	21.9	10 28	5 13.30	+12 0.7	0.920	1.770	23.3	19.7
11 7	5 14.89	+20 36.3	1.575	2.455	13.3	21.6	11 7	5 11.33	+11 1.2	0.880	1.785	18.5	19.4
11 17	5 7.59	+20 33.1	1.502	2.443	9.1	21.3	11 17	5 5.44	+10 9.4	0.856	1.803	13.3	19.2
11 27	4 57.83	+20 28.1	1.454	2.430	4.3	21.0	11 27	4 56.76	+9 32.5	0.853	1.822	8.5	19.0
12 7	4 46.74	+20 21.7	1.434	2.418	1.2	20.8	12 7	4 47.03	+9 15.8	0.870	1.843	7.2	19.1
12 17	4 35.70	+20 15.3	1.441	2.405	6.1	21.1	12 17	4 38.11	+9 21.6	0.911	1.865	10.5	19.3
12 27	4 26.19	+20 11.2	1.476	2.392	10.9	21.3	12 27	4 31.63	+9 49.0	0.972	1.889	15.1	19.7
1 6	4 19.30	+20 12.0	1.535	2.380	15.1	21.6	1 6	4 28.51	+10 33.9	1.053	1.914	19.2	20.0
447151	2005 GR ₉₄	12	5.5 194°05	5°1/ 3.6 18			232477	2003 JW ₁₄	12	5.5 249°54	2°8/ 4.5 18		
10 28	5 15.75	+10 23.9	2.094	2.879	14.3	21.8	10 28	5 18.25	+18 15.1	1.910	2.701	15.2	20.5
11 7	5 11.25	+9 25.0	2.011	2.878	11.5	21.6	11 7	5 13.70	+17 24.4	1.810	2.686	12.1	20.3
11 17	5 4.52	+8 28.9	1.951	2.877	8.4	21.4	11 17	5 6.49	+16 29.9	1.733	2.670	8.4	20.0
11 27	4 56.17	+7 39.7	1.917	2.875	5.8	21.3	11 27	4 57.23	+15 33.8	1.682	2.655	4.5	19.7
12 7	4 47.06	+7 1.0	1.912	2.873	5.3	21.2	12 7	4 46.91	+14 39.6	1.659	2.638	3.0	19.6
12 17	4 38.16	+6 36.0	1.936	2.871	7.5	21.4	12 17	4 36.69	+13 51.4	1.666	2.621	6.5	19.8
12 27	4 30.43	+6 26.2	1.986	2.868	10.5	21.5	12 27	4 27.78	+13 13.2	1.701	2.604	10.6	20.0
1 6	4 24.59	+6 31.4	2.061	2.865	13.4	21.7	1 6	4 21.09	+12 47.5	1.760	2.586	14.4	20.2
139431	2001 OM ₄₅	12	5.5 106°04	8°6/ 3.3 18			385637	2005 QQ ₈₈	12	5.5 3°72	1°3/ 5.3 18		
10 28	5 15.97	- 1 26.1	2.109	2.867	15.0	20.2	10 28	5 14.28	+19 52.8	1.142	1.976	20.7	20.3
11 7	5 11.19	- 2 29.5	2.050	2.882	12.7	20.1	11 7	5 12.09	+19 50.5	1.075	1.975	16.3	20.0
11 17	5 4.33	- 3 20.5	2.011	2.896	10.5	20.0	11 17	5 6.14	+19 47.4	1.026	1.975	11.1	19.7
11 27	4 56.01	- 3 53.9	1.998	2.910	8.9	19.9	11 27	4 57.25	+19 44.1	0.998	1.976	5.3	19.4
12 7	4 47.10	- 4 5.9	2.011	2.924	8.7	19.9	12 7	4 46.91	+19 41.5	0.994	1.978	1.7	19.2
12 17	4 38.52	- 3 55.3	2.050	2.938	9.9	20.0	12 17	4 36.93	+19 41.3	1.015	1.982	7.3	19.6
12 27	4 31.13	- 3 23.2	2.115	2.951	11.9	20.2	12 27	4 29.08	+19 46.2	1.059	1.987	12.9	19.9
1 6	4 25.59	- 2 32.8	2.203	2.964	14.0	20.4	1 6	4 24.55	+19 57.9	1.124	1.993	17.7	20.2
89338	2001 VC ₅₅	12	5.5 166°03	0°3/ 5.6 18			444847	2007 VJ ₁₁₂	12	5.5 116°17	0°6/ 5.6 18		
10 28	5 17.67	+25 40.7	2.289	3.066	13.4	19.5	10 28	5 20.27	+23 48.4	2.079	2.858	14.5	21.9
11 7	5 12.68	+25 12.9	2.201	3.069	10.6	19.3	11 7	5 14.88	+23 58.5	2.005	2.873	11.4	21.7
11 17	5 5.43	+24 38.5	2.136	3.071	7.2	19.1	11 17	5 7.02	+24 5.3	1.953	2.888	7.7	21.5
11 27	4 56.57	+23 57.6	2.099	3.074	3.4	18.9	11 27	4 57.36	+24 7.5	1.927	2.902	3.7	21.3
12 7	4 47.00	+23 11.8	2.091	3.076	0.6	18.7	12 7	4 46.91	+24 4.9	1.931	2.916	0.8	21.1
12 17	4 37.71	+22 23.6	2.114	3.077	4.5	19.0	12 17	4 36.78	+23 58.5	1.966	2.929	4.8	21.4
12 27	4 29.66	+21 36.8	2.166	3.079	8.1	19.2	12 27	4 28.06	+23 50.5	2.029	2.942	8.6	21.7
1 6	4 23.58	+20 54.9	2.245	3.080	11.3	19.4	1 6	4 21.53	+23 43.5	2.118	2.955	11.8	21.9
483469	2002 JT ₂₂	12	5.5 224°94	2°9/ 6.3 17			393728	2004 XX ₁₆₀	12	5.5 331°40	2°8/ 6.1 18		
10 28	5 19.45	+31 57.1	3.031	3.778	11.1	22.7	10 28	5 17.01	+28 31.4	1.505	2.308	18.0	20.1
11 7	5 13.89	+32 31.9	2.922	3.765	9.0	22.5	11 7	5 13.77	+28 52.9	1.419	2.299	14.5	19.9
11 17	5 6.26	+33 1.3	2.836	3.751	6.6	22.3	11 17	5 7.10	+29 6.9	1.353	2.291	10.3	19.6
11 27	4 57.02	+33 22.7	2.778	3.737	4.1	22.2	11 27	4 57.70	+29 10.3	1.311	2.283	5.6	19.3
12 7	4 46.90	+33 34.5	2.751	3.723	2.9	22.1	12 7	4 46.83	+29 1.3	1.294	2.275	2.9	19.1
12 17	4 36.76	+33 36.1	2.756	3.708	4.5	22.1	12 17	4 36.13	+28 40.7	1.304	2.268	6.5	19.3
12 27	4 27.51	+33 29.0	2.791	3.692	7.0	22.1	12 27	4 27.24	+28 12.7	1.339	2.262	11.2	19.6
1 6	4 19.90	+33 16.0	2.853	3.676	9.5	22.4	1 6	4 21.34	+27 43.1	1.398	2.256	15.5	19.8
366368	2000 RF ₂₀	12	5.5 39°47	3°4/ 6.4 18			117377	2004 XW ₁₅₈	12	5.5 12°79	3°4/ 4.9 18		
10 28	5 20.86	+30 41.5	0.999	1.826	23.6	20.1	10 28	5 14.64	+12 24.9	2.035	2.826	14.4	18.8
11 7	5 17.57	+30 39.3	0.954	1.846	18.7	19.9	11 7	5 10.53	+12 20.7	1.954	2.828	11.4	18.6
11 17	5 9.77	+30 21.7	0.925	1.867	13.1	19.7	11 17	5 4.14	+12 21.3	1.896	2.829	8.0	18.4
11 27	4 58.77	+29 46.0	0.916	1.889	7.1	19.4	11 27	4 56.05	+12 28.3	1.863	2.831	4.7	18.2
12 7	4 46.64	+28 53.3	0.931	1.913	3.4	19.3	12 7	4 47.15	+12 42.7	1.859	2.834	3.5	18.1
12 17	4 35.60	+27 49.6	0.969	1.937	7.6	19.6	12 17	4 38.42	+13 4.9	1.883	2.836	6.0	18.3
12 27	4 27.50	+26 44.4	1.032	1.962	12.9	20.0	12 27	4 30.87	+13 35.0	1.935	2.839	9.5	18.5
1 6	4 23.31	+25 46.1	1.114	1.987	17.5	20.3	1 6	4 25.27	+14 12.2	2.013	2.843	12.7	18.7
314426	2005 UC ₄₄₁	12	5.5 55°89	2°7/ 6.4 18			522019	2015 XZ ₃₉₄	12	5.5 35°74	0°7/ 5.7 18		
10 28	5 17.99	+30 31.4	1.912	2.6									

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
323706	2005 <i>GK</i> ₁₆₁	12 5.5 183°11	0°0/ 5.4 18				141505	2002 <i>ED</i> ₇₃	12 5.5 193°91	4°5/ 6.6 18			
10 28	5 23.04	+21 42.5	1.838	2.621	16.0	21.4	10 28	5 25.81	+33 31.3	1.851	2.615	16.6	21.4
11 7	5 17.59	+21 57.9	1.751	2.622	12.7	21.2	11 7	5 20.17	+34 4.1	1.761	2.613	13.6	21.2
11 17	5 9.19	+22 12.0	1.686	2.623	8.6	20.9	11 17	5 11.18	+34 27.2	1.692	2.610	10.0	21.0
11 27	4 58.53	+22 23.3	1.647	2.622	4.1	20.6	11 27	4 59.55	+34 35.5	1.648	2.607	6.4	20.8
12 7	4 46.71	+22 31.2	1.636	2.621	0.7	20.4	12 7	4 46.56	+34 26.1	1.632	2.603	4.5	20.6
12 17	4 35.06	+22 35.9	1.656	2.619	5.5	20.7	12 17	4 33.79	+33 59.2	1.644	2.599	6.7	20.8
12 27	4 24.94	+22 39.4	1.704	2.617	9.9	21.0	12 27	4 22.80	+33 19.3	1.685	2.593	10.3	21.0
1 6	4 17.34	+22 44.0	1.776	2.614	13.7	21.2	1 6	4 14.72	+32 33.2	1.750	2.587	13.9	21.2
237845	<i>Neris</i>	12 5.5 170°47	2°3/ 4.9 18				73449	2002 <i>NW</i> ₁₈	12 5.5 207°45	1°3/ 6.0 18			
10 28	5 18.60	+16 21.5	2.204	2.984	13.8	21.6	10 28	5 15.81	+28 10.3	2.411	3.185	12.9	19.4
11 7	5 13.42	+16 3.3	2.118	2.988	10.9	21.4	11 7	5 11.26	+27 56.6	2.319	3.184	10.2	19.2
11 17	5 5.98	+15 45.7	2.056	2.991	7.5	21.2	11 17	5 4.52	+27 35.7	2.251	3.183	7.1	19.0
11 27	4 56.88	+15 30.0	2.022	2.994	4.0	21.0	11 27	4 56.21	+27 7.0	2.209	3.181	3.6	18.8
12 7	4 47.01	+15 17.5	2.016	2.996	2.5	20.9	12 7	4 47.17	+26 31.2	2.197	3.180	1.3	18.6
12 17	4 37.35	+15 9.8	2.041	2.997	5.4	21.1	12 17	4 38.35	+25 50.3	2.215	3.179	4.3	18.8
12 27	4 28.88	+15 8.4	2.095	2.998	8.9	21.3	12 27	4 30.69	+25 7.5	2.263	3.177	7.7	19.0
1 6	4 22.35	+15 14.2	2.175	2.998	12.1	21.5	1 6	4 24.90	+24 26.5	2.337	3.176	10.8	19.2
252641	2001 <i>XS</i> ₂₃₃	12 5.5 46°90	0°7/ 5.7 18				408081	2012 <i>HU</i> ₄₀	12 5.5 339°45	5°0/ 6.9 17			
10 28	5 16.98	+24 25.1	1.997	2.785	14.7	20.9	10 28	5 18.20	+35 24.5	2.016	2.782	15.3	20.9
11 7	5 12.60	+24 32.1	1.913	2.786	11.6	20.6	11 7	5 14.00	+36 3.6	1.928	2.779	12.6	20.7
11 17	5 5.66	+24 35.1	1.850	2.788	7.9	20.4	11 17	5 6.87	+36 32.8	1.861	2.775	9.5	20.5
11 27	4 56.81	+24 33.2	1.814	2.789	3.8	20.2	11 27	4 57.48	+36 47.7	1.819	2.772	6.5	20.3
12 7	4 47.03	+24 26.1	1.807	2.791	0.9	20.0	12 7	4 46.93	+36 45.6	1.803	2.769	5.0	20.2
12 17	4 37.46	+24 15.1	1.828	2.793	4.9	20.3	12 17	4 36.55	+36 26.6	1.816	2.766	6.6	20.3
12 27	4 29.24	+24 2.5	1.878	2.794	8.9	20.5	12 27	4 27.69	+35 54.2	1.857	2.764	9.6	20.5
1 6	4 23.22	+23 51.1	1.953	2.796	12.4	20.7	1 6	4 21.33	+35 14.0	1.921	2.762	12.7	20.7
403146	2008 <i>FD</i>	12 5.5 303°73	13°1/ 3.6 17				74	<i>Galatea</i>	12 5.5 37°93	2°4/ 4.9 18			
10 28	5 17.60	-12 6.9	1.869	2.592	17.8	20.4	10 28	5 16.17	+18 36.1	1.467	2.280	18.0	12.2
11 7	5 13.24	-12 55.0	1.781	2.570	16.1	20.2	11 7	5 12.34	+18 4.2	1.412	2.300	14.0	12.0
11 17	5 6.24	-13 21.9	1.710	2.547	14.5	20.0	11 17	5 5.57	+17 31.3	1.377	2.320	9.5	11.8
11 27	4 57.16	-13 19.1	1.661	2.525	13.3	19.9	11 27	4 56.74	+16 59.6	1.366	2.342	4.8	11.6
12 7	4 46.95	-12 41.3	1.634	2.503	13.2	19.8	12 7	4 47.11	+16 31.8	1.382	2.363	2.6	11.5
12 17	4 36.74	-11 26.6	1.631	2.481	14.1	19.8	12 17	4 38.06	+16 10.8	1.424	2.386	6.5	11.8
12 27	4 27.75	-9 37.8	1.651	2.460	16.0	19.9	12 27	4 30.81	+15 59.1	1.493	2.409	10.9	12.1
1 6	4 20.93	-7 22.0	1.693	2.439	18.1	20.0	1 6	4 26.16	+15 57.6	1.585	2.432	14.6	12.4
412683	2014 <i>OK</i> ₂₃₁	12 5.5 4°57	6°4/ 3.8 18				475767	2006 <i>WV</i> ₁₈₃	12 5.5 344°61	2°0/ 5.3 18			
10 28	5 11.56	+ 8 21.0	1.737	2.540	16.0	20.0	10 28	5 16.52	+16 37.8	1.217	2.043	20.2	20.5
11 7	5 8.43	+ 7 26.1	1.665	2.540	13.0	19.8	11 7	5 13.80	+16 56.5	1.141	2.036	16.1	20.2
11 17	5 2.86	+ 6 37.4	1.614	2.541	9.7	19.6	11 17	5 7.38	+17 20.6	1.083	2.029	11.1	19.9
11 27	4 55.48	+ 5 59.7	1.587	2.543	7.1	19.5	11 27	4 57.94	+17 50.3	1.046	2.023	5.5	19.6
12 7	4 47.28	+ 5 37.1	1.587	2.545	6.5	19.4	12 7	4 46.86	+18 25.0	1.035	2.018	2.2	19.4
12 17	4 39.33	+ 5 32.3	1.613	2.548	8.6	19.6	12 17	4 35.91	+19 3.6	1.048	2.014	7.4	19.7
12 27	4 32.69	+ 5 45.8	1.664	2.552	11.8	19.8	12 27	4 26.91	+19 45.8	1.086	2.011	13.0	20.0
1 6	4 28.16	+ 6 15.8	1.738	2.557	14.8	20.0	1 6	4 21.18	+20 31.6	1.145	2.009	17.8	20.2
268068	2004 <i>RM</i> ₆₄	12 5.5 139°96	2°7/ 4.7 18				463374	2013 <i>AC</i> ₉₄	12 5.5 328°03	5°4/ 6.4 18			
10 28	5 20.11	+15 57.0	2.149	2.928	14.1	21.7	10 28	5 30.25	+ 4 11.8	1.046	1.847	24.4	20.2
11 7	5 14.50	+15 26.8	2.074	2.942	11.1	21.5	11 7	5 25.47	+ 5 32.9	0.966	1.841	20.1	19.9
11 17	5 6.63	+14 56.9	2.022	2.955	7.7	21.3	11 17	5 15.97	+ 7 26.3	0.903	1.835	14.8	19.5
11 27	4 57.15	+14 29.2	1.997	2.968	4.2	21.1	11 27	5 2.31	+ 9 53.9	0.862	1.830	8.8	19.2
12 7	4 47.00	+14 5.8	2.003	2.980	2.9	21.1	12 7	4 46.05	+12 49.4	0.847	1.825	5.4	19.0
12 17	4 37.17	+13 48.5	2.038	2.991	5.7	21.3	12 17	4 29.56	+15 59.0	0.859	1.821	9.6	19.2
12 27	4 28.65	+13 39.2	2.102	3.002	9.1	21.5	12 27	4 15.44	+19 7.8	0.898	1.817	15.7	19.5
1 6	4 22.14	+13 38.8	2.192	3.011	12.2	21.7	1 6	4 5.56	+22 4.9	0.959	1.814	21.2	19.8
515801	2015 <i>MQ</i> ₆	12 5.5 109°63	1°9/ 5.0 18				176097	2001 <i>BX</i> ₉	12 5.5 249°15	0°3/ 5.4 18			
10 28	5 19.00	+18 17.2	1.820	2.613	15.8	21.7	10 28	5 19.93	+22 59.4	1.542	2.343	17.8	21.5
11 7	5 14.15	+18 1.7	1.747	2.624	12.4	21.5	11 7	5 15.75	+22 45.8	1.455	2.337	14.1	21.3
11 17	5 6.66	+17 45.7	1.696	2.634	8.4	21.3	11 17	5 8.28	+22 27.0	1.388	2.330	9.6	21.0
11 27	4 57.24	+17 30.3	1.670	2.645	4.2	21.1	11 27	4 58.22	+22 2.9	1.346	2.322	4.6	20.7
12 7	4 46.98	+17 17.0	1.673	2.655	2.1	21.0	12 7	4 46.83	+21 34.5	1.330	2.315	0.9	20.4
12 17	4 37.07	+17 7.4	1.704	2.665	5.8	21.2	12 17	4 35.64	+21 4.3	1.342	2.307	6.3	20.7
12 27	4 28.65	+17 3.6	1.764	2.674	9.8	21.5	12 27	4 26.20	+20 36.7	1.381	2.299	11.3	21.0
1 6	4 22.55	+17 6.7	1.848	2.684	13.4	21.8	1 6	4 19.60	+20 15.6	1.443	2.291	15.7	21.3
209309	2003 <i>YV</i> ₁₇₄	12 5.5 64°96	2°3/ 5.1 18				45113	1999 <i>XZ</i> ₇₈	12 5.5 145°62	0°3/ 5.4 18			
10 28	5 17.39	+16 22.5	1.793	2.589	15.8	20.6	10 28	5 19.42	+21 28.6	2.093	2.875	14.4	19.9
11 7	5 13.01	+16 17.8	1.717	2.595	12.5	20.4	11 7	5 14.28	+21 32.7	2.011	2.882	11.3	19.7
11 17	5 5.97	+16 15.1	1.662	2.601	8.6	20.2	11 17	5 6.68	+21 35.0	1.952	2.889	7.6	19.5
11 27	4 56.96	+16 15.4	1.632	2.606	4.4	19.9	11 27	4 57.27	+21 34.8	1.920	2.896	3.6	19.3
12 7	4 47.03	+16 19.5	1.631	2.612	2.5	19.8	12 7	4 47.02	+21 32.5	1.917	2.902	0.7	19.1
12 17	4 37.35	+16 28.3	1.658	2.618	6.0	20.1	12 17	4 37.01	+21 28.8	1.944	2.908	4.9	19.4
12 27	4 29.12	+16 42.8	1.713	2.624	10.0	20.3	12 27	4 28.32	+21 25.6	2.000	2.913	8.7	19.6
1 6	4 23.18	+17 3.5	1.791	2.630	13.6	20.5	1 6	4 21.75	+21 25.0	2.082	2.918	12.1	19.8
373370	2012 <i>LP</i> ₈	12 5.5 155°30	3°3/ 4.5 17				283349	1999 <i>VG</i> ₅₅	12 5.5 59°65	4°7/ 3.9 17			

EPHEMERIDES

12 5.5

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
486600	2013 <i>JC</i> ₅₄	12 5.5 261°06'	3°8'	4.7	18		242015	2002 <i>PJ</i> ₁₆₀	12 5.5 139°56'	0°3'	5.6	18	
10 28	5 16.02	+11 39.5	2.078	2.864	14.3	21.6	10 28	5 19.78	+23 28.6	2.173	2.950	14.0	22.1
11 7	5 11.64	+11 28.3	1.989	2.859	11.4	21.4	11 7	5 14.48	+23 31.2	2.093	2.961	11.0	21.9
11 17	5 4.95	+11 21.7	1.922	2.853	8.2	21.2	11 17	5 6.78	+23 30.4	2.035	2.970	7.5	21.7
11 27	4 56.50	+11 22.0	1.881	2.847	5.0	21.0	11 27	4 57.34	+23 25.4	2.005	2.980	3.5	21.5
12 7	4 47.16	+11 30.4	1.868	2.841	3.9	20.9	12 7	4 47.11	+23 16.4	2.004	2.988	0.6	21.3
12 17	4 37.93	+11 48.0	1.885	2.835	6.4	21.0	12 17	4 37.16	+23 4.5	2.033	2.997	4.6	21.6
12 27	4 29.83	+12 14.8	1.929	2.829	9.8	21.2	12 27	4 28.52	+22 52.0	2.092	3.004	8.4	21.9
1 6	4 23.67	+12 50.2	1.999	2.823	13.0	21.4	1 6	4 21.96	+22 41.4	2.176	3.012	11.6	22.1
332221	2006 <i>GG</i> ₅₀	12 5.5 213°19'	0°3'	5.6	18		417322	2006 <i>BU</i> ₂₈₂	12 5.5 95°77'	4°4'	7.0	18	
10 28	5 15.16	+25 18.7	2.682	3.455	11.8	21.1	10 28	5 19.85	+35 55.9	2.361	3.112	13.8	21.2
11 7	5 10.49	+24 56.7	2.584	3.450	9.3	20.9	11 7	5 14.66	+36 26.3	2.284	3.125	11.3	21.1
11 17	5 3.90	+24 29.3	2.511	3.445	6.3	20.7	11 17	5 6.96	+36 46.6	2.229	3.138	8.4	20.9
11 27	4 55.92	+23 56.6	2.466	3.441	3.0	20.4	11 27	4 57.44	+36 53.5	2.200	3.151	5.7	20.8
12 7	4 47.28	+23 19.6	2.451	3.435	0.6	20.2	12 7	4 47.10	+36 45.5	2.199	3.163	4.4	20.7
12 17	4 38.81	+22 40.4	2.466	3.430	4.0	20.5	12 17	4 37.06	+36 23.1	2.228	3.176	5.7	20.8
12 27	4 31.33	+22 1.7	2.512	3.424	7.2	20.7	12 27	4 28.43	+35 49.8	2.285	3.188	8.3	21.0
1 6	4 25.49	+21 26.3	2.585	3.418	10.1	20.9	1 6	4 21.98	+35 10.3	2.368	3.200	10.9	21.2
404873	2014 <i>KF</i> ₅₁	12 5.5 114°86'	2°7'	4.7	18		329478	2002 <i>QH</i> ₉₁	12 5.5 159°22'	1°5'	4.9	17	
10 28	5 16.71	+16 30.4	1.992	2.783	14.7	21.8	10 28	5 14.31	+19 22.6	2.632	3.411	11.8	21.9
11 7	5 12.15	+15 59.5	1.915	2.790	11.5	21.6	11 7	5 9.76	+18 50.2	2.545	3.415	9.2	21.7
11 17	5 5.22	+15 28.7	1.860	2.797	7.9	21.4	11 17	5 3.38	+18 15.6	2.482	3.418	6.3	21.5
11 27	4 56.58	+15 0.0	1.831	2.804	4.3	21.2	11 27	4 55.69	+17 40.3	2.446	3.421	3.1	21.3
12 7	4 47.17	+14 35.5	1.832	2.810	2.9	21.2	12 7	4 47.43	+17 5.8	2.442	3.423	1.7	21.2
12 17	4 38.05	+14 17.5	1.861	2.817	5.9	21.4	12 17	4 39.36	+16 34.4	2.467	3.426	4.4	21.4
12 27	4 30.24	+14 7.9	1.918	2.823	9.5	21.6	12 27	4 32.27	+16 8.2	2.523	3.428	7.5	21.6
1 6	4 24.48	+14 7.6	2.000	2.829	12.8	21.8	1 6	4 26.75	+15 48.7	2.605	3.430	10.3	21.8
215545	2002 <i>XB</i> ₂₅	12 5.5 356°91'	0°2'	5.6	18		199032	2005 <i>WT</i> ₁₃₈	12 5.5 149°10'	0°2'	5.6	18	
10 28	5 15.85	+24 14.6	1.694	2.495	16.4	20.3	10 28	5 20.80	+24 11.0	1.842	2.628	15.9	21.3
11 7	5 12.17	+24 1.7	1.612	2.494	13.0	20.1	11 7	5 15.73	+23 59.5	1.762	2.634	12.5	21.1
11 17	5 5.61	+23 42.9	1.551	2.493	8.8	19.8	11 17	5 7.87	+23 42.6	1.703	2.640	8.5	20.8
11 27	4 56.88	+23 18.3	1.515	2.492	4.2	19.6	11 27	4 57.94	+23 20.0	1.670	2.646	4.0	20.6
12 7	4 47.11	+22 48.9	1.507	2.491	0.7	19.3	12 7	4 47.06	+22 52.5	1.666	2.651	0.7	20.3
12 17	4 37.61	+22 17.3	1.526	2.491	5.6	19.6	12 17	4 36.51	+22 22.3	1.691	2.655	5.3	20.7
12 27	4 29.68	+21 47.2	1.572	2.492	10.1	19.9	12 27	4 27.54	+21 53.0	1.744	2.660	9.6	21.0
1 6	4 24.23	+21 22.4	1.642	2.493	14.0	20.2	1 6	4 21.01	+21 28.3	1.823	2.663	13.3	21.2
332239	2006 <i>JD</i> ₄₆	12 5.5 204°78'	5°6'	3.3	18		456961	2008 <i>AD</i> ₇₉	12 5.5 1°64'	21°7'	8.7	17	
10 28	5 12.47	+ 2 14.0	3.023	3.777	11.0	21.9	10 28	5 21.35	-18 15.0	0.969	1.728	28.7	20.5
11 7	5 8.04	+ 1 32.7	2.935	3.772	9.1	21.7	11 7	5 17.97	-19 26.2	0.921	1.726	26.6	20.3
11 17	5 2.08	+ 0 58.3	2.871	3.767	7.3	21.6	11 17	5 10.32	-19 54.6	0.884	1.725	24.4	20.2
11 27	4 55.03	+ 0 33.8	2.834	3.762	5.9	21.5	11 27	4 59.35	-19 24.3	0.861	1.725	22.6	20.0
12 7	4 47.45	+ 0 21.6	2.826	3.756	5.7	21.5	12 7	4 46.81	-17 46.4	0.853	1.725	21.7	20.0
12 17	4 39.96	+ 0 23.0	2.847	3.750	6.9	21.6	12 17	4 34.78	-15 1.9	0.862	1.727	22.2	20.0
12 27	4 33.22	+ 0 38.3	2.896	3.743	8.7	21.7	12 27	4 25.27	-11 23.6	0.890	1.730	23.8	20.2
1 6	4 27.74	+ 1 6.3	2.969	3.736	10.6	21.8	1 6	4 19.53	- 7 11.7	0.936	1.734	26.0	20.3
283787	2003 <i>QD</i> ₁₀₅	12 5.5 79°91'	4°4'	4.5	18		102978	1999 <i>XD</i> ₇₇	12 5.5 62°31'	2°1'	5.3	18	
10 28	5 18.23	+12 24.1	1.715	2.510	16.5	20.7	10 28	5 21.64	+16 38.6	1.342	2.152	19.5	19.0
11 7	5 13.52	+11 48.7	1.653	2.527	13.1	20.5	11 7	5 17.09	+16 50.3	1.282	2.167	15.4	18.8
11 17	5 6.20	+11 17.4	1.611	2.544	9.3	20.3	11 17	5 9.11	+17 5.6	1.241	2.183	10.5	18.5
11 27	4 57.03	+10 53.2	1.595	2.561	5.7	20.1	11 27	4 58.59	+17 24.5	1.224	2.199	5.2	18.3
12 7	4 47.11	+10 39.0	1.606	2.578	4.6	20.1	12 7	4 46.96	+17 46.6	1.232	2.215	2.3	18.1
12 17	4 37.61	+10 36.5	1.645	2.594	7.2	20.3	12 17	4 35.84	+18 11.8	1.268	2.232	6.8	18.5
12 27	4 29.67	+10 46.4	1.712	2.611	10.8	20.5	12 27	4 26.76	+18 40.6	1.330	2.248	11.7	18.8
1 6	4 24.04	+11 8.0	1.801	2.627	14.1	20.8	1 6	4 20.73	+19 13.3	1.414	2.265	15.9	19.1
359779	2011 <i>UR</i> ₁₄₅	12 5.5 18°30'	2°5'	5.9	18		78077	2002 <i>LV</i> ₁₄	12 5.5 123°33'	0°6'	5.8	18	
10 28	5 17.85	+27 9.7	1.620	2.418	17.2	20.8	10 28	5 20.69	+26 46.0	2.056	2.832	14.8	20.3
11 7	5 14.01	+27 41.0	1.544	2.422	13.7	20.6	11 7	5 15.23	+26 15.9	1.979	2.846	11.6	20.1
11 17	5 7.02	+28 6.9	1.489	2.425	9.6	20.3	11 17	5 7.27	+25 37.8	1.924	2.859	7.9	19.9
11 27	4 57.61	+28 24.5	1.457	2.430	5.1	20.1	11 27	4 57.56	+24 51.8	1.897	2.871	3.8	19.6
12 7	4 46.99	+28 31.9	1.453	2.434	2.5	19.9	12 7	4 47.15	+23 59.6	1.898	2.883	0.8	19.4
12 17	4 36.65	+28 29.4	1.476	2.440	6.0	20.2	12 17	4 37.17	+23 4.6	1.931	2.895	4.8	19.7
12 27	4 28.03	+28 19.8	1.525	2.446	10.3	20.4	12 27	4 28.68	+22 11.1	1.992	2.906	8.7	20.0
1 6	4 22.16	+28 7.6	1.598	2.452	14.2	20.7	1 6	4 22.43	+21 23.3	2.079	2.916	12.0	20.2
221439	2006 <i>AC</i> ₂₁	12 5.5 2°29'	6°7'	6.9	17		436476	2011 <i>EV</i> ₇	12 5.5 167°79'	0°2'	5.6	15	
10 28	5 17.67	+36 28.0	1.663	2.442	17.6	19.8	10 28	5 21.63	+23 45.7	1.935	2.716	15.4	22.9
11 7	5 14.32	+37 32.3	1.585	2.441	14.6	19.6	11 7	5 16.30	+23 41.2	1.851	2.721	12.1	22.6
11 17	5 7.51	+38 25.6	1.527	2.441	11.2	19.4	11 17	5 8.24	+23 32.3	1.788	2.724	8.3	22.4
11 27	4 57.95	+39 1.7	1.493	2.442	8.1	19.2	11 27	4 58.13	+23 18.4	1.752	2.728	3.9	22.2
12 7	4 46.95	+39 16.1	1.483	2.443	6.7	19.1	12 7	4 47.05	+22 59.6	1.745	2.730	0.7	21.9
12 17	4 36.15	+39 8.0	1.500	2.445	8.2	19.2	12 17	4 36.25	+22 37.8	1.768	2.732	5.2	22.2
12 27	4 27.22	+38 41.1	1.542	2.449	11.3	19.4	12 27	4 26.94	+22 16.0	1.819	2.733	9.4	22.5
1 6	4 21.31	+38 2.7	1.607	2.453	14.5	19.6	1 6	4 19.99	+21 57.6	1.896	2.734	13.0	22.7
401137	2011 <i>UL</i> ₃₆₁	12 5.5 328°05'	5°0'	3.6	18		54119	2000 <i>HW</i> ₂₁	12 5.5 287°43'	1°7'	5.0		

EPHEMERIDES

12 5.5

12 5.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
484310	2007 <i>TO</i> ₁₀₅	12 5.5	20°35'	2.4°/ 5.1	17		420100	2011 <i>EP</i> ₇₈	12 5.5	291°72'	0.3°/ 5.6	17	
10 28	5 14.36	+17 58.0	1.233	2.062	19.8	21.0	10 28	5 14.87	+23 42.3	2.294	3.079	13.2	21.5
11 7	5 11.67	+17 44.4	1.175	2.072	15.5	20.8	11 7	5 10.80	+23 44.1	2.194	3.066	10.4	21.3
11 17	5 5.58	+17 31.5	1.136	2.083	10.6	20.5	11 17	5 4.46	+23 42.7	2.116	3.053	7.1	21.1
11 27	4 56.97	+17 21.0	1.119	2.095	5.3	20.3	11 27	4 56.40	+23 37.4	2.064	3.040	3.4	20.8
12 7	4 47.27	+17 14.7	1.126	2.109	2.6	20.2	12 7	4 47.41	+23 28.3	2.042	3.027	0.6	20.6
12 17	4 38.06	+17 14.6	1.159	2.123	7.1	20.5	12 17	4 38.49	+23 16.5	2.049	3.014	4.5	20.8
12 27	4 30.86	+17 22.3	1.216	2.139	12.1	20.8	12 27	4 30.63	+23 3.9	2.085	3.001	8.2	21.1
1 6	4 26.62	+17 38.5	1.295	2.156	16.3	21.1	1 6	4 24.64	+22 53.1	2.147	2.988	11.5	21.2
138356	2000 <i>GW</i> ₁₂₁	12 5.5	43°80'	3.0°/ 5.1	18		332562	2008 <i>RH</i> ₁₀₄	12 5.6	92°10'	2.0°/ 4.8	18	
10 28	5 17.62	+14 12.6	1.636	2.437	16.9	19.3	10 28	5 14.28	+18 17.9	2.393	3.178	12.7	21.6
11 7	5 13.35	+14 16.0	1.570	2.450	13.3	19.1	11 7	5 9.90	+17 42.5	2.313	3.186	9.9	21.4
11 17	5 6.30	+14 24.1	1.526	2.464	9.2	18.9	11 17	5 3.56	+17 5.6	2.257	3.194	6.8	21.2
11 27	4 57.21	+14 37.9	1.506	2.478	5.0	18.7	11 27	4 55.85	+16 28.8	2.229	3.202	3.5	21.0
12 7	4 47.23	+14 58.1	1.513	2.493	3.1	18.6	12 7	4 47.54	+15 54.4	2.230	3.210	2.1	20.9
12 17	4 37.61	+15 24.5	1.549	2.508	6.4	18.8	12 17	4 39.47	+15 24.5	2.261	3.218	4.9	21.1
12 27	4 29.57	+15 57.0	1.611	2.523	10.5	19.1	12 27	4 32.48	+15 1.3	2.321	3.226	8.1	21.3
1 6	4 23.97	+16 35.1	1.697	2.539	14.1	19.4	1 6	4 27.18	+14 46.2	2.407	3.233	11.0	21.5
80604	2000 <i>AD</i> ₁₅₅	12 5.5	15°13'	0.9°/ 5.8	18		195995	2002 <i>RK</i> ₂₂₉	12 5.6	83°78'	0.4°/ 5.5	18	
10 28	5 17.67	+25 40.7	1.241	2.061	20.2	19.1	10 28	5 16.33	+20 28.0	2.396	3.177	12.8	19.9
11 7	5 14.63	+25 33.6	1.172	2.063	16.0	18.9	11 7	5 11.57	+20 40.1	2.319	3.190	10.0	19.7
11 17	5 7.82	+25 18.4	1.121	2.066	11.0	18.6	11 17	5 4.74	+20 51.6	2.266	3.202	6.7	19.5
11 27	4 58.13	+24 54.1	1.093	2.069	5.4	18.3	11 27	4 56.44	+21 2.0	2.240	3.215	3.2	19.3
12 7	4 47.07	+24 21.3	1.089	2.074	1.2	18.0	12 7	4 47.45	+21 11.3	2.243	3.228	0.7	19.1
12 17	4 36.47	+23 43.6	1.111	2.079	6.7	18.4	12 17	4 38.69	+21 19.7	2.277	3.240	4.2	19.4
12 27	4 28.06	+23 6.7	1.157	2.084	12.1	18.7	12 27	4 31.03	+21 28.4	2.340	3.253	7.6	19.7
1 6	4 22.95	+22 35.8	1.225	2.090	16.8	19.0	1 6	4 25.14	+21 38.6	2.430	3.265	10.6	19.9
194274	2001 <i>UL</i> ₁₆	12 5.5	358°68'	3.1°/ 6.4	18		518936	2010 <i>GR</i> ₁₀₃	12 5.6	136°87'	1.8°/ 5.1	18	
10 28	5 17.59	+30 35.7	1.383	2.189	19.2	19.4	10 28	5 19.20	+17 16.5	2.274	3.052	13.5	22.1
11 7	5 14.45	+30 37.7	1.306	2.186	15.5	19.1	11 7	5 13.81	+17 8.0	2.197	3.064	10.6	21.9
11 17	5 7.66	+30 27.6	1.248	2.185	11.0	18.9	11 17	5 6.26	+16 59.9	2.142	3.077	7.2	21.7
11 27	4 58.05	+30 2.5	1.213	2.184	6.1	18.6	11 27	4 57.15	+16 52.9	2.115	3.088	3.7	21.5
12 7	4 47.08	+29 22.1	1.203	2.184	3.2	18.4	12 7	4 47.34	+16 48.1	2.118	3.099	1.9	21.4
12 17	4 36.50	+28 29.3	1.220	2.185	6.7	18.6	12 17	4 37.80	+16 46.3	2.151	3.110	4.9	21.6
12 27	4 28.01	+27 31.1	1.261	2.186	11.5	18.9	12 27	4 29.45	+16 49.0	2.214	3.120	8.4	21.9
1 6	4 22.71	+26 34.8	1.325	2.188	15.9	19.2	1 6	4 23.00	+16 56.9	2.303	3.129	11.4	22.1
54212	2000 <i>HJ</i> ₈₉	12 5.5	220°59'	1.4°/ 5.1	18		84838	2003 <i>AU</i> ₁₀	12 5.6	1°82'	8.1°/ 4.4	18	
10 28	5 19.01	+20 56.8	1.696	2.494	16.6	20.4	10 28	5 13.68	+ 4 26.4	1.501	2.304	18.1	18.4
11 7	5 14.63	+20 29.8	1.611	2.490	13.1	20.2	11 7	5 10.57	+ 3 46.4	1.431	2.302	15.0	18.2
11 17	5 7.31	+19 58.8	1.547	2.487	8.9	19.9	11 17	5 4.62	+ 3 18.4	1.381	2.301	11.6	18.0
11 27	4 57.77	+19 24.8	1.508	2.484	4.3	19.7	11 27	4 56.54	+ 3 8.0	1.353	2.302	8.8	17.9
12 7	4 47.13	+18 50.0	1.496	2.480	1.7	19.5	12 7	4 47.43	+ 3 19.1	1.350	2.303	8.2	17.8
12 17	4 36.74	+18 17.2	1.514	2.476	6.1	19.7	12 17	4 38.58	+ 3 52.9	1.373	2.305	10.1	18.0
12 27	4 27.91	+17 50.3	1.558	2.472	10.6	20.0	12 27	4 31.24	+ 4 47.7	1.419	2.308	13.3	18.2
1 6	4 21.61	+17 32.1	1.626	2.468	14.6	20.2	1 6	4 26.33	+ 5 59.3	1.487	2.312	16.6	18.4
271338	2003 <i>WU</i> ₆₉	12 5.5	307°08'	0.2°/ 5.5	18		290440	2005 <i>TO</i> ₁₁₆	12 5.6	112°26'	1.1°/ 5.9	18	
10 28	5 15.69	+20 44.4	2.295	3.079	13.2	20.1	10 28	5 23.92	+26 3.3	1.800	2.580	16.4	21.9
11 7	5 11.34	+21 1.8	2.202	3.074	10.4	19.9	11 7	5 18.14	+26 5.0	1.731	2.599	12.9	21.7
11 17	5 4.77	+21 18.9	2.132	3.069	7.0	19.7	11 17	5 9.46	+26 0.6	1.684	2.618	8.8	21.5
11 27	4 56.50	+21 35.2	2.089	3.064	3.3	19.5	11 27	4 58.70	+25 48.4	1.663	2.637	4.4	21.3
12 7	4 47.36	+21 50.1	2.075	3.060	0.6	19.2	12 7	4 47.09	+25 28.7	1.671	2.655	1.3	21.1
12 17	4 38.29	+22 3.7	2.091	3.055	4.5	19.5	12 17	4 35.98	+25 3.3	1.708	2.672	5.3	21.4
12 27	4 30.29	+22 16.9	2.137	3.051	8.1	19.7	12 27	4 26.62	+24 36.0	1.773	2.689	9.5	21.7
1 6	4 24.13	+22 31.1	2.208	3.047	11.4	19.9	1 6	4 19.87	+24 10.8	1.864	2.704	13.1	22.0
65604	3235 <i>T</i> ₋₃	12 5.5	150°64'	2.6°/ 4.8	18		203951	2003 <i>SU</i> ₆	12 5.6	57°81'	1.3°/ 5.2	14 C	
10 28	5 18.97	+17 32.0	1.895	2.684	15.4	20.3	10 28	5 19.95	+20 12.2	1.511	2.315	18.0	21.0
11 7	5 14.09	+16 57.0	1.815	2.690	12.1	20.1	11 7	5 15.28	+19 57.3	1.456	2.339	14.0	20.8
11 17	5 6.66	+16 20.9	1.759	2.696	8.3	19.9	11 17	5 7.60	+19 40.6	1.421	2.363	9.4	20.6
11 27	4 57.37	+15 45.6	1.728	2.701	4.4	19.6	11 27	4 57.82	+19 22.8	1.411	2.387	4.5	20.3
12 7	4 47.23	+15 13.7	1.726	2.705	2.8	19.5	12 7	4 47.25	+19 5.5	1.428	2.411	1.6	20.2
12 17	4 37.39	+14 47.8	1.753	2.709	6.1	19.8	12 17	4 37.28	+18 50.8	1.472	2.436	6.0	20.5
12 27	4 28.96	+14 30.5	1.808	2.713	9.9	20.0	12 27	4 29.18	+18 41.3	1.544	2.460	10.5	20.9
1 6	4 22.76	+14 23.2	1.887	2.717	13.4	20.2	1 6	4 23.77	+18 38.9	1.638	2.485	14.2	21.2
340894	2007 <i>CG</i> ₆₀	12 5.5	285°94'	1.9°/ 6.0	18		205498	2001 <i>RX</i> ₈	12 5.6	70°87'	0.6°/ 5.6	16	
10 28	5 19.21	+27 51.5	1.566	2.364	17.7	20.8	10 28	5 32.71	+22 16.3	1.221	2.018	21.8	20.5
11 7	5 15.52	+27 49.1	1.468	2.345	14.3	20.5	11 7	5 25.65	+22 45.6	1.182	2.060	17.0	20.3
11 17	5 8.39	+27 37.9	1.390	2.327	10.0	20.2	11 17	5 14.69	+23 11.9	1.163	2.102	11.4	20.1
11 27	4 58.48	+27 15.5	1.335	2.309	5.2	19.9	11 27	5 1.10	+23 32.2	1.167	2.142	5.3	19.9
12 7	4 47.01	+26 41.4	1.307	2.291	1.9	19.6	12 7	4 46.73	+23 44.6	1.198	2.183	1.0	19.7
12 17	4 35.57	+25 57.7	1.307	2.272	6.3	19.8	12 17	4 33.53	+23 50.2	1.257	2.222	6.6	20.2
12 27	4 25.85	+25 9.9	1.333	2.254	11.4	20.1	12 27	4 23.10	+23 52.5	1.342	2.260	11.6	20.6
1 6	4 19.08	+24 24.3	1.382	2.236	15.9	20.3	1 6	4 16.28	+23 55.5	1.450	2.298	15.7	21.0
45226	1999 <i>XG</i> ₂₁₃	12 5.5	67°43'	5.7°/ 4.6	18		24247	1999 <i>XD</i> ₁₀₅					

EPHEMERIDES

12 5.6

12 5.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
389401	2009 <i>XQ</i> ₂₂	12 5.6 23°33'	2°8'	5.1	16		454355	2014 <i>MJ</i> ₇	12 5.6 187°45'	1°0'	5.8	18	
10 28	5 15.18	+17 42.0	1.081	1.918	21.4	20.3	10 28	5 20.61	+23 55.4	2.137	2.914	14.3	22.0
11 7	5 12.71	+17 25.3	1.028	1.930	16.8	20.1	11 7	5 15.44	+24 24.0	2.047	2.914	11.3	21.8
11 17	5 6.48	+17 9.8	0.994	1.942	11.5	19.8	11 17	5 7.70	+24 50.6	1.979	2.913	7.8	21.6
11 27	4 57.49	+16 57.5	0.980	1.957	5.8	19.6	11 27	4 57.99	+25 13.3	1.938	2.912	3.8	21.3
12 7	4 47.31	+16 50.7	0.990	1.973	3.0	19.5	12 7	4 47.25	+25 30.6	1.927	2.911	1.2	21.1
12 17	4 37.75	+16 51.4	1.024	1.989	7.7	19.8	12 17	4 36.61	+25 42.3	1.946	2.909	4.8	21.4
12 27	4 30.46	+17 1.2	1.082	2.008	12.9	20.1	12 27	4 27.24	+25 49.8	1.994	2.907	8.7	21.6
1 6	4 26.43	+17 20.7	1.160	2.027	17.4	20.5	1 6	4 20.02	+25 55.4	2.068	2.905	12.1	21.8
174397	2002 <i>VX</i> ₄₄	12 5.6 62°33'	2°6'	5.9	18		123758	2001 <i>AU</i> ₃₉	12 5.6 39°77'	2°3'	5.1	18	
10 28	5 23.14	+26 29.0	1.683	2.469	17.1	19.8	10 28	5 16.42	+14 52.1	2.112	2.899	14.1	19.7
11 7	5 17.89	+27 22.4	1.621	2.491	13.6	19.6	11 7	5 11.97	+14 56.9	2.029	2.901	11.1	19.5
11 17	5 9.51	+28 11.6	1.580	2.513	9.4	19.4	11 17	5 5.23	+15 4.9	1.967	2.903	7.7	19.3
11 27	4 58.81	+28 52.5	1.565	2.535	5.1	19.2	11 27	4 56.77	+15 16.9	1.932	2.905	4.1	19.1
12 7	4 47.09	+29 22.3	1.577	2.558	2.7	19.1	12 7	4 47.47	+15 33.3	1.926	2.906	2.5	19.0
12 17	4 35.80	+29 40.3	1.619	2.580	5.8	19.4	12 17	4 38.33	+15 54.5	1.950	2.908	5.4	19.2
12 27	4 26.35	+29 48.7	1.688	2.603	9.8	19.7	12 27	4 30.34	+16 20.7	2.002	2.910	9.0	19.4
1 6	4 19.66	+29 51.6	1.781	2.625	13.4	19.9	1 6	4 24.29	+16 51.7	2.080	2.912	12.2	19.6
392619	2011 <i>UM</i> ₁₃	12 5.6 118°29'	2°7'	6.2	18	R	287936	2003 <i>UP</i> ₅₆	12 5.6 37°43'	2°9'	4.5	18	
10 28	5 22.30	+28 58.3	2.090	2.859	14.8	21.6	10 28	5 14.36	+17 44.1	1.839	2.640	15.3	20.2
11 7	5 16.77	+29 34.0	2.014	2.873	11.8	21.4	11 7	5 10.45	+16 52.0	1.775	2.656	12.0	20.0
11 17	5 8.55	+30 3.9	1.959	2.886	8.3	21.2	11 17	5 4.15	+15 58.4	1.733	2.672	8.2	19.8
11 27	4 58.33	+30 24.8	1.931	2.899	4.7	21.0	11 27	4 56.20	+15 6.4	1.717	2.690	4.4	19.6
12 7	4 47.17	+30 34.9	1.933	2.911	2.8	20.9	12 7	4 47.59	+14 19.4	1.729	2.707	3.1	19.6
12 17	4 36.29	+30 34.2	1.964	2.923	5.2	21.1	12 17	4 39.40	+13 40.7	1.769	2.725	6.1	19.8
12 27	4 26.88	+30 25.3	2.024	2.935	8.7	21.4	12 27	4 32.61	+13 13.1	1.837	2.744	9.7	20.0
1 6	4 19.81	+30 12.1	2.110	2.946	11.9	21.6	1 6	4 27.92	+12 57.7	1.929	2.762	13.0	20.3
275029	2009 <i>UB</i> ₃₇	12 5.6 141°74'	0°6'	5.7	18		237857	2002 <i>GJ</i> ₁₂₆	12 5.6 182°49'	2°0'	4.9	18	
10 28	5 16.66	+24 17.4	2.461	3.237	12.6	21.6	10 28	5 18.54	+18 5.8	2.193	2.975	13.8	22.4
11 7	5 11.88	+24 23.4	2.375	3.242	9.9	21.4	11 7	5 13.51	+17 37.5	2.105	2.976	10.9	22.2
11 17	5 5.01	+24 25.9	2.313	3.247	6.8	21.2	11 17	5 6.19	+17 7.8	2.040	2.976	7.4	22.0
11 27	4 56.60	+24 24.3	2.277	3.252	3.3	21.0	11 27	4 57.20	+16 38.2	2.002	2.976	3.8	21.7
12 7	4 47.47	+24 18.5	2.272	3.257	0.7	20.8	12 7	4 47.41	+16 10.5	1.994	2.975	2.2	21.6
12 17	4 38.52	+24 9.5	2.297	3.261	4.2	21.0	12 17	4 37.83	+15 46.9	2.016	2.973	5.3	21.8
12 27	4 30.67	+23 59.1	2.352	3.265	7.5	21.3	12 27	4 29.44	+15 29.6	2.067	2.971	8.9	22.0
1 6	4 24.60	+23 49.4	2.433	3.269	10.5	21.5	1 6	4 23.00	+15 20.3	2.143	2.969	12.2	22.2
419310	2009 <i>WN</i> ₇₄	12 5.6 208°13'	0°8'	5.3	18		269479	2009 <i>TH</i> ₃₆	12 5.6 46°06'	1°3'	5.3	18	
10 28	5 15.54	+19 35.9	2.672	3.448	11.7	21.3	10 28	5 19.89	+20 28.9	1.209	2.030	20.6	20.5
11 7	5 10.86	+19 38.3	2.577	3.444	9.2	21.2	11 7	5 16.00	+20 16.6	1.157	2.049	16.1	20.2
11 17	5 4.26	+19 40.3	2.505	3.440	6.3	21.0	11 17	5 8.48	+20 2.3	1.124	2.069	10.9	20.0
11 27	4 56.25	+19 41.8	2.461	3.436	3.0	20.7	11 27	4 58.37	+19 46.7	1.113	2.090	5.2	19.8
12 7	4 47.53	+19 43.1	2.447	3.431	1.0	20.6	12 7	4 47.24	+19 31.2	1.127	2.111	1.7	19.6
12 17	4 38.89	+19 45.0	2.464	3.426	4.1	20.8	12 17	4 36.82	+19 18.4	1.167	2.133	6.9	20.0
12 27	4 31.16	+19 48.4	2.511	3.421	7.3	21.0	12 27	4 28.66	+19 11.3	1.233	2.155	12.0	20.3
1 6	4 25.01	+19 54.6	2.585	3.415	10.2	21.2	1 6	4 23.69	+19 12.1	1.319	2.178	16.3	20.7
196948	2003 <i>US</i> ₃₈	12 5.6 70°27'	4°9'	3.9	18		438820	2009 <i>AV</i> ₈	12 5.6 44°53'	0°4'	5.5	18	
10 28	5 13.36	+ 9 30.0	2.274	3.058	13.3	20.1	10 28	5 19.88	+20 12.3	1.380	2.191	19.0	20.4
11 7	5 9.27	+ 8 41.1	2.197	3.062	10.7	19.9	11 7	5 15.79	+20 32.6	1.319	2.205	14.9	20.1
11 17	5 3.21	+ 7 56.3	2.142	3.066	7.9	19.7	11 17	5 8.33	+20 53.1	1.276	2.220	10.1	19.9
11 27	4 55.74	+ 7 18.9	2.114	3.070	5.5	19.6	11 27	4 58.34	+21 12.8	1.258	2.235	4.8	19.7
12 7	4 47.63	+ 6 52.0	2.115	3.074	5.0	19.6	12 7	4 47.23	+21 30.5	1.265	2.250	0.9	19.4
12 17	4 39.73	+ 6 37.8	2.144	3.078	6.9	19.7	12 17	4 36.59	+21 46.4	1.300	2.266	6.3	19.8
12 27	4 32.87	+ 6 37.1	2.200	3.083	9.6	19.9	12 27	4 27.92	+22 2.1	1.361	2.282	11.1	20.2
1 6	4 27.70	+ 6 49.5	2.281	3.087	12.2	20.1	1 6	4 22.23	+22 19.4	1.444	2.299	15.3	20.4
76623	2000 <i>GS</i> ₁₇₈	12 5.6 308°87'	4°4'	5.1	18		250030	2002 <i>CQ</i> ₅₁	12 5.6 327°19'	2°6'	6.1	18	
10 28	5 17.19	+10 11.8	1.749	2.543	16.3	19.2	10 28	5 17.41	+27 45.7	1.176	1.999	21.0	20.1
11 7	5 13.18	+10 12.1	1.658	2.531	13.2	19.0	11 7	5 15.09	+27 58.9	1.096	1.987	16.9	19.8
11 17	5 6.41	+10 20.4	1.588	2.520	9.5	18.7	11 17	5 8.65	+28 3.2	1.033	1.977	11.9	19.5
11 27	4 57.46	+10 39.1	1.543	2.508	5.9	18.5	11 27	4 58.82	+27 55.3	0.992	1.967	6.3	19.1
12 7	4 47.32	+11 9.3	1.525	2.497	4.5	18.4	12 7	4 47.12	+27 33.4	0.974	1.957	2.7	18.9
12 17	4 37.20	+11 51.0	1.535	2.487	7.3	18.5	12 17	4 35.58	+26 59.6	0.981	1.949	7.4	19.1
12 27	4 28.39	+12 43.2	1.572	2.477	11.2	18.7	12 27	4 26.30	+26 20.0	1.012	1.941	13.2	19.4
1 6	4 21.88	+13 44.1	1.633	2.467	14.9	19.0	1 6	4 20.69	+25 41.9	1.063	1.934	18.3	19.7
265096	2003 <i>SE</i> ₂₉₀	12 5.6 154°97'	5°2'	4.0	18		298411	2003 <i>SQ</i> ₂₉₆	12 5.6 149°43'	6°0'	7.9	18	
10 28	5 13.61	+ 7 36.2	2.318	3.097	13.2	20.6	10 28	5 25.62	+40 50.7	2.199	2.930	15.2	21.0
11 7	5 9.46	+ 6 58.4	2.237	3.097	10.7	20.4	11 7	5 19.61	+41 17.9	2.116	2.938	12.8	20.8
11 17	5 3.36	+ 6 26.3	2.178	3.097	8.0	20.2	11 17	5 10.58	+41 31.0	2.055	2.946	10.0	20.7
11 27	4 55.82	+ 6 3.1	2.146	3.097	5.8	20.1	11 27	4 59.32	+41 25.1	2.018	2.953	7.4	20.5
12 7	4 47.62	+ 5 51.4	2.142	3.098	5.3	20.0	12 7	4 47.07	+40 58.0	2.009	2.960	6.0	20.4
12 17	4 39.58	+ 5 52.8	2.166	3.098	7.0	20.2	12 17	4 35.23	+40 10.7	2.029	2.966	7.0	20.5
12 27	4 32.54	+ 6 7.7	2.218	3.098	9.6	20.3	12 27	4 25.16	+39 8.1	2.077	2.972	9.4	20.7
1 6	4 27.16	+ 6 35.1	2.295	3.098	12.2	20.5	1 6	4 17.75	+37 57.4	2.151	2.977	12.1	20.9
101342	1998 <i>TA</i> ₁₀	12 5.6 74°35'	2°4'	6.2	18		513964	2014 <i>FT</i> ₈	12 5.6 217°94'	2°1'	4.9		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
167253	2003 UY ₁₀₉	12	5.6 139°78	1.9°/ 6.1 18			49214	1998 SJ ₁₂₃	12	5.6 194°62	3°6/ 6.3 18		
10 28	5 21.75	+27 36.9	2.205	2.974	14.1	20.8	10 28	5 22.92	+30 18.5	1.697	2.478	17.2	18.6
11 7	5 16.15	+27 55.7	2.125	2.985	11.2	20.6	11 7	5 18.16	+30 51.9	1.612	2.477	13.9	18.4
11 17	5 8.04	+28 8.9	2.067	2.996	7.8	20.4	11 17	5 10.03	+31 17.7	1.548	2.476	10.0	18.2
11 27	4 58.09	+28 14.5	2.036	3.006	4.1	20.2	11 27	4 59.27	+31 31.8	1.508	2.475	5.9	17.9
12 7	4 47.28	+28 11.6	2.035	3.016	1.9	20.1	12 7	4 47.13	+31 31.4	1.496	2.473	3.6	17.8
12 17	4 36.75	+28 0.8	2.064	3.026	4.8	20.3	12 17	4 35.20	+31 16.7	1.511	2.471	6.4	18.0
12 27	4 27.59	+27 44.8	2.122	3.034	8.3	20.5	12 27	4 25.05	+30 51.5	1.554	2.469	10.5	18.2
1 6	4 20.61	+27 27.1	2.207	3.042	11.5	20.7	1 6	4 17.81	+30 21.8	1.621	2.467	14.4	18.4
125109	2001 UF ₄₂	12	5.6 101°18	1°4/ 5.9 18			408030	2012 FE ₃₇	12	5.6 4°88	5°8/ 4.2 18		
10 28	5 23.42	+25 43.4	1.727	2.511	16.8	20.4	10 28	5 13.84	+ 7 48.1	1.913	2.704	15.2	20.5
11 7	5 17.94	+25 57.0	1.660	2.530	13.3	20.2	11 7	5 10.10	+ 7 10.6	1.836	2.704	12.3	20.3
11 17	5 9.46	+26 5.3	1.614	2.549	9.1	20.0	11 17	5 4.04	+ 6 40.0	1.781	2.704	9.2	20.1
11 27	4 58.78	+26 6.2	1.593	2.567	4.5	19.8	11 27	4 56.26	+ 6 20.0	1.751	2.705	6.6	20.0
12 7	4 47.18	+25 59.2	1.600	2.584	1.5	19.6	12 7	4 47.66	+ 6 13.8	1.747	2.706	5.9	19.9
12 17	4 36.05	+25 45.4	1.637	2.601	5.4	19.9	12 17	4 39.26	+ 6 22.9	1.771	2.708	7.9	20.1
12 27	4 26.72	+25 28.3	1.702	2.618	9.7	20.2	12 27	4 32.08	+ 6 47.4	1.822	2.710	10.9	20.3
1 6	4 20.05	+25 11.9	1.791	2.634	13.4	20.4	1 6	4 26.88	+ 7 25.7	1.896	2.712	13.9	20.4
93176	2000 SA ₁₀₃	12	5.6 159°75	3°7/ 4.4 18			230624	2003 GU ₃₉	12	5.6 306°44	4°4/ 4.7 18		
10 28	5 18.64	+14 28.4	1.957	2.744	15.0	20.3	10 28	5 16.30	+13 39.7	1.482	2.293	17.9	20.4
11 7	5 13.76	+13 44.8	1.877	2.749	11.9	20.1	11 7	5 13.04	+13 11.9	1.394	2.278	14.4	20.1
11 17	5 6.44	+13 2.1	1.820	2.753	8.4	19.9	11 17	5 6.63	+12 47.2	1.325	2.264	10.3	19.8
11 27	4 57.34	+12 23.1	1.789	2.757	4.9	19.7	11 27	4 57.71	+12 28.8	1.280	2.250	6.1	19.6
12 7	4 47.42	+11 50.8	1.787	2.761	3.9	19.6	12 7	4 47.40	+12 19.9	1.260	2.236	4.6	19.4
12 17	4 37.78	+11 27.8	1.814	2.764	6.6	19.8	12 17	4 37.12	+12 22.8	1.267	2.223	8.0	19.6
12 27	4 29.47	+11 16.3	1.869	2.766	10.1	20.0	12 27	4 28.40	+12 39.0	1.299	2.209	12.6	19.8
1 6	4 23.27	+11 16.8	1.948	2.768	13.4	20.2	1 6	4 22.34	+13 8.2	1.353	2.197	16.8	20.1
73050	2002 EQ ₁₂₁	12	5.6 135°50	1°1/ 5.9 18			208309	2001 HO ₆	12	5.6 239°93	0°5/ 5.5 18		
10 28	5 20.34	+25 57.0	1.886	2.670	15.6	20.4	10 28	5 18.43	+20 58.1	2.008	2.795	14.7	21.3
11 7	5 15.43	+25 56.7	1.805	2.676	12.4	20.2	11 7	5 13.89	+21 0.6	1.914	2.787	11.6	21.0
11 17	5 7.75	+25 50.5	1.747	2.682	8.5	19.9	11 17	5 6.75	+21 1.5	1.842	2.779	7.9	20.8
11 27	4 58.01	+25 37.2	1.714	2.688	4.2	19.7	11 27	4 57.62	+21 0.7	1.795	2.771	3.8	20.5
12 7	4 47.31	+25 16.9	1.710	2.694	1.2	19.5	12 7	4 47.43	+20 58.3	1.778	2.763	0.9	20.3
12 17	4 36.93	+24 51.2	1.735	2.699	5.2	19.8	12 17	4 37.33	+20 55.1	1.790	2.754	5.1	20.6
12 27	4 28.09	+24 23.8	1.788	2.704	9.3	20.0	12 27	4 28.48	+20 53.1	1.831	2.745	9.3	20.8
1 6	4 21.67	+23 58.5	1.866	2.709	12.9	20.3	1 6	4 21.80	+20 54.4	1.897	2.736	12.9	21.0
2048	Dwornik	12	5.6 163°18	19°3/ 1.8 18			120339	2004 PM ₇₁	12	5.6 133°47	0°9/ 5.3 18		
10 28	5 20.78	-15 32.3	1.289	2.028	23.7	16.7	10 28	5 16.54	+20 4.4	2.183	2.969	13.7	20.6
11 7	5 16.56	-17 49.3	1.244	2.030	21.9	16.6	11 7	5 12.03	+19 58.5	2.099	2.972	10.8	20.5
11 17	5 8.90	-19 36.7	1.213	2.032	20.3	16.5	11 17	5 5.25	+19 51.4	2.037	2.975	7.3	20.2
11 27	4 58.64	-20 40.6	1.199	2.033	19.5	16.4	11 27	4 56.81	+19 43.2	2.002	2.978	3.5	20.0
12 7	4 47.21	-20 51.9	1.203	2.034	19.5	16.4	12 7	4 47.58	+19 34.8	1.997	2.980	1.2	19.8
12 17	4 36.21	-20 8.4	1.226	2.035	20.4	16.5	12 17	4 38.53	+19 27.3	2.021	2.983	4.8	20.1
12 27	4 27.19	-18 35.1	1.265	2.036	21.9	16.6	12 27	4 30.67	+19 22.6	2.073	2.986	8.5	20.3
1 6	4 21.19	-16 22.9	1.319	2.036	23.7	16.8	1 6	4 24.74	+19 22.1	2.152	2.988	11.7	20.6
8029	Milthompson	12	5.6 19°05	2°8/ 6.2 18			118618	2000 HB ₈	12	5.6 302°93	3°5/ 4.6 18		
10 28	5 16.53	+29 5.7	1.964	2.748	15.1	17.1	10 28	5 17.06	+17 19.0	1.504	2.313	17.8	19.7
11 7	5 12.53	+29 34.6	1.884	2.753	12.0	16.9	11 7	5 13.48	+16 31.2	1.421	2.306	14.1	19.5
11 17	5 5.85	+29 57.2	1.826	2.757	8.5	16.7	11 17	5 6.80	+15 41.0	1.358	2.299	9.8	19.2
11 27	4 57.16	+30 10.9	1.794	2.762	4.8	16.5	11 27	4 57.71	+14 51.6	1.319	2.292	5.4	18.9
12 7	4 47.48	+30 14.3	1.789	2.768	2.8	16.4	12 7	4 47.42	+14 7.1	1.307	2.285	3.7	18.8
12 17	4 38.03	+30 7.7	1.813	2.774	5.3	16.5	12 17	4 37.35	+13 31.8	1.321	2.279	7.5	19.0
12 27	4 29.99	+29 53.8	1.864	2.781	9.0	16.8	12 27	4 28.91	+13 9.3	1.362	2.272	12.1	19.3
1 6	4 24.26	+29 36.4	1.940	2.788	12.3	17.0	1 6	4 23.15	+13 1.4	1.424	2.266	16.3	19.5
513611	2011 GV ₆₇	12	5.6 166°53	2°5/ 6.1 18			46025	2001 DQ ₁₈	12	5.6 216°51	3°5/ 4.9 18		
10 28	5 24.43	+28 11.0	2.156	2.920	14.6	22.5	10 28	5 18.23	+12 39.8	1.959	2.745	15.0	19.5
11 7	5 18.48	+28 47.8	2.069	2.926	11.6	22.3	11 7	5 13.61	+12 30.1	1.871	2.742	12.0	19.3
11 17	5 9.79	+29 19.7	2.004	2.930	8.2	22.1	11 17	5 6.49	+12 24.8	1.806	2.738	8.5	19.1
11 27	4 59.01	+29 43.5	1.967	2.935	4.6	21.9	11 27	4 57.47	+12 25.7	1.767	2.735	5.0	18.8
12 7	4 47.18	+29 57.2	1.959	2.938	2.5	21.8	12 7	4 47.48	+12 34.1	1.755	2.731	3.7	18.7
12 17	4 35.50	+30 0.3	1.981	2.941	5.2	22.0	12 17	4 37.62	+12 50.8	1.773	2.726	6.4	18.9
12 27	4 25.23	+29 55.1	2.034	2.943	8.8	22.2	12 27	4 29.00	+13 16.3	1.819	2.722	10.1	19.1
1 6	4 17.29	+29 45.4	2.112	2.944	12.1	22.4	1 6	4 22.48	+13 49.9	1.890	2.717	13.5	19.3
45165	1999 XS ₁₂₈	12	5.6 81°13	2°9/ 6.5 18			212621	2006 TC ₁₈	12	5.6 83°52	0°2/ 5.6 18		
10 28	5 22.04	+31 12.0	1.780	2.558	16.7	18.6	10 28	5 20.34	+23 2.4	1.955	2.739	15.2	21.1
11 7	5 16.87	+31 15.3	1.713	2.576	13.3	18.4	11 7	5 15.09	+23 7.0	1.890	2.761	11.9	20.9
11 17	5 8.71	+31 8.1	1.667	2.595	9.4	18.2	11 17	5 7.31	+23 8.5	1.847	2.784	8.0	20.7
11 27	4 58.43	+30 48.2	1.646	2.613	5.3	18.0	11 27	4 57.75	+23 6.0	1.830	2.806	3.8	20.5
12 7	4 47.30	+30 15.3	1.652	2.632	2.9	17.9	12 7	4 47.46	+22 59.7	1.843	2.828	0.6	20.3
12 17	4 36.71	+29 32.2	1.688	2.650	5.6	18.1	12 17	4 37.58	+22 50.8	1.885	2.849	4.8	20.7
12 27	4 27.94	+28 43.7	1.751	2.668	9.5	18.4	12 27	4 29.21	+22 41.7	1.955	2.870	8.7	20.9
1 6	4 21.84	+27 55.6	1.839	2.686	12.9	18.6	1 6	4 23.10	+22 34.9	2.051	2.891	12.0	21.2
309077	2006 VB ₄₂	12	5.6 346°71	0°6/ 5.5 18			228554	2001 XG ₈₃	12	5.6 310°53	2°2/ 5.1 18		
10 28	5 15.98	+19 43.8	1.620	2.426	16.8								

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
265046	2003 <i>QH</i> ₅₄	12 5.6 51°01'	0°6'	5.7	18		279798	2000 <i>AQ</i> ₁₄₆	12 5.6 305°06'	20°6'	5.9	17	
10 28	5 18.27	+23 32.4	1.898	2.688	15.3	20.3	10 28	5 22.58	-17 14.0	1.127	1.870	26.3	19.9
11 7	5 13.57	+23 46.5	1.838	2.712	12.0	20.1	11 7	5 18.72	-18 38.1	1.069	1.862	24.3	19.7
11 17	5 6.33	+23 57.4	1.799	2.736	8.1	19.9	11 17	5 10.86	-19 26.6	1.023	1.854	22.4	19.6
11 27	4 57.30	+24 4.0	1.786	2.761	3.9	19.7	11 27	4 59.81	-19 24.3	0.992	1.846	21.0	19.4
12 7	4 47.54	+24 6.0	1.801	2.786	0.8	19.5	12 7	4 47.13	-18 21.0	0.978	1.839	20.6	19.4
12 17	4 38.21	+24 4.3	1.846	2.811	4.8	19.9	12 17	4 34.71	-16 14.9	0.982	1.832	21.3	19.4
12 27	4 30.39	+24 1.0	1.919	2.836	8.7	20.2	12 27	4 24.48	-13 14.6	1.005	1.825	23.1	19.5
1 6	4 24.81	+23 58.6	2.016	2.861	12.0	20.4	1 6	4 17.73	-9 36.0	1.045	1.819	25.4	19.7
266067	2006 <i>RY</i> ₉	12 5.6 43°66'	0°0'	5.5	18		455703	2005 <i>EL</i> ₂₁₃	12 5.6 3°81'	10°0'	8.6	17	
10 28	5 21.06	+24 5.8	1.069	1.896	22.3	20.1	10 28	5 25.41	+50 16.7	2.261	2.953	15.9	20.6
11 7	5 17.32	+23 51.6	1.024	1.919	17.5	19.9	11 7	5 20.51	+51 42.3	2.181	2.953	14.1	20.4
11 17	5 9.54	+23 30.6	0.997	1.943	11.8	19.7	11 17	5 11.91	+52 52.2	2.121	2.954	12.2	20.3
11 27	4 58.93	+23 2.8	0.991	1.968	5.5	19.4	11 27	5 0.30	+53 38.8	2.083	2.954	10.7	20.2
12 7	4 47.30	+22 30.1	1.009	1.994	0.9	19.2	12 7	4 47.04	+53 56.4	2.069	2.955	10.0	20.2
12 17	4 36.61	+21 56.6	1.052	2.020	7.0	19.7	12 17	4 33.89	+53 43.5	2.080	2.956	10.4	20.2
12 27	4 28.53	+21 27.7	1.119	2.046	12.4	20.0	12 27	4 22.67	+53 3.4	2.116	2.957	11.7	20.3
1 6	4 23.97	+21 7.3	1.208	2.073	16.9	20.4	1 6	4 14.68	+52 3.9	2.174	2.959	13.4	20.4
104312	2000 <i>EQ</i> ₁₉₆	12 5.6 185°74'	1°5'	6.2	18		218909	2007 <i>EJ</i> ₂₁₈	12 5.6 32°23'	5°1'	4.1	18	
10 28	5 16.15	+28 16.1	2.759	3.525	11.7	20.8	10 28	5 14.41	+9 54.3	2.018	2.807	14.6	20.4
11 7	5 11.38	+28 19.9	2.666	3.525	9.3	20.6	11 7	5 10.42	+9 9.4	1.940	2.809	11.7	20.2
11 17	5 4.66	+28 18.3	2.596	3.524	6.4	20.4	11 17	5 4.20	+8 29.0	1.885	2.812	8.6	20.0
11 27	4 56.51	+28 10.0	2.553	3.523	3.4	20.2	11 27	4 56.35	+7 56.6	1.856	2.814	5.9	19.9
12 7	4 47.67	+27 55.0	2.541	3.522	1.6	20.1	12 7	4 47.74	+7 35.4	1.854	2.816	5.2	19.8
12 17	4 38.97	+27 34.3	2.559	3.521	3.9	20.2	12 17	4 39.35	+7 27.7	1.880	2.819	7.3	20.0
12 27	4 31.27	+27 9.9	2.607	3.519	6.9	20.4	12 27	4 32.14	+7 34.2	1.933	2.822	10.3	20.1
1 6	4 25.21	+26 44.8	2.682	3.518	9.7	20.6	1 6	4 26.83	+7 54.2	2.010	2.825	13.3	20.3
73868	1997 <i>AD</i> ₆	12 5.6 159°53'	2°6'	5.1	18		395552	2011 <i>UF</i> ₁₉₃	12 5.6 25°51'	3°8'	4.4	18	
10 28	5 22.10	+15 41.3	1.875	2.659	15.7	20.2	10 28	5 15.21	+16 47.8	1.554	2.365	17.2	20.4
11 7	5 16.67	+15 33.5	1.795	2.665	12.4	20.0	11 7	5 11.70	+15 49.6	1.485	2.371	13.6	20.2
11 17	5 8.55	+15 27.8	1.737	2.671	8.6	19.8	11 17	5 5.35	+14 49.9	1.437	2.378	9.4	20.0
11 27	4 58.43	+15 25.2	1.705	2.677	4.6	19.6	11 27	4 56.95	+13 52.5	1.413	2.385	5.3	19.8
12 7	4 47.35	+15 26.8	1.701	2.681	2.7	19.5	12 7	4 47.65	+13 2.0	1.416	2.393	4.0	19.7
12 17	4 36.52	+15 33.5	1.728	2.685	6.0	19.7	12 17	4 38.73	+12 22.7	1.446	2.401	7.3	19.9
12 27	4 27.14	+15 46.3	1.783	2.689	10.0	20.0	12 27	4 31.43	+11 57.5	1.502	2.410	11.4	20.2
1 6	4 20.07	+16 5.7	1.862	2.691	13.6	20.2	1 6	4 26.59	+11 47.6	1.580	2.419	15.1	20.4
298076	2002 <i>QK</i> ₁₃₁	12 5.6 4°21'	12°9'	10.4	18		391601	2007 <i>UJ</i> ₃₉	12 5.6 58°26'	2°4'	4.8	15	
10 28	5 30.44	+54 14.0	1.798	2.486	19.5	20.0	10 28	5 18.89	+19 28.9	1.565	2.369	17.5	21.0
11 7	5 25.82	+55 39.0	1.724	2.486	17.6	19.9	11 7	5 14.36	+18 40.3	1.508	2.390	13.6	20.8
11 17	5 16.21	+56 42.6	1.666	2.486	15.6	19.7	11 17	5 6.98	+17 48.9	1.471	2.412	9.2	20.6
11 27	5 2.49	+57 13.9	1.628	2.486	13.9	19.6	11 27	4 57.63	+16 57.5	1.459	2.434	4.7	20.4
12 7	4 46.66	+57 5.1	1.612	2.487	13.0	19.6	12 7	4 47.55	+16 9.7	1.475	2.456	2.7	20.3
12 17	4 31.36	+56 14.6	1.618	2.488	13.2	19.6	12 17	4 38.06	+15 29.2	1.518	2.478	6.4	20.6
12 27	4 19.10	+54 49.0	1.647	2.489	14.4	19.7	12 27	4 30.35	+14 59.5	1.589	2.500	10.6	20.9
1 6	4 11.37	+53 0.3	1.697	2.490	16.3	19.8	1 6	4 25.17	+14 42.2	1.683	2.523	14.2	21.1
346595	2008 <i>WH</i> ₈	12 5.6 141°54'	0°7'	5.4	18		65404	2002 <i>RX</i> ₁₀₄	12 5.6 26°65'	3°8'	4.7	18	
10 28	5 20.76	+21 4.4	1.989	2.771	15.0	21.9	10 28	5 14.97	+15 43.9	1.445	2.261	18.0	18.6
11 7	5 15.49	+20 58.3	1.910	2.781	11.8	21.7	11 7	5 11.67	+15 4.8	1.383	2.271	14.2	18.4
11 17	5 7.68	+20 49.9	1.853	2.790	8.0	21.5	11 17	5 5.41	+14 26.8	1.340	2.282	9.9	18.2
11 27	4 57.98	+20 39.3	1.823	2.799	3.8	21.3	11 27	4 57.00	+13 53.4	1.321	2.293	5.5	18.0
12 7	4 47.44	+20 27.0	1.823	2.807	1.0	21.1	12 7	4 47.65	+13 27.9	1.328	2.306	4.0	17.9
12 17	4 37.19	+20 14.7	1.852	2.815	5.1	21.4	12 17	4 38.73	+13 13.1	1.361	2.319	7.3	18.1
12 27	4 28.35	+20 4.5	1.909	2.822	9.1	21.7	12 27	4 31.53	+13 10.8	1.420	2.333	11.6	18.4
1 6	4 21.73	+19 58.7	1.993	2.828	12.5	21.9	1 6	4 26.91	+13 21.3	1.501	2.347	15.4	18.7
15495	<i>Bogie</i>	12 5.6 5°95'	2°0'	5.0	18		108044	2001 <i>FW</i> ₁₅₅	12 5.6 178°14'	1°6'	4.9	18	
10 28	5 14.47	+19 49.4	1.558	2.370	17.1	16.9	10 28	5 18.29	+20 38.3	2.123	2.906	14.1	20.2
11 7	5 11.29	+19 16.7	1.483	2.371	13.5	16.7	11 7	5 13.42	+19 54.0	2.036	2.908	11.1	20.0
11 17	5 5.19	+18 41.0	1.428	2.372	9.2	16.5	11 17	5 6.21	+19 5.5	1.971	2.908	7.6	19.7
11 27	4 56.91	+18 4.1	1.397	2.373	4.6	16.2	11 27	4 57.30	+18 14.3	1.934	2.909	3.7	19.5
12 7	4 47.62	+17 28.9	1.393	2.376	2.2	16.1	12 7	4 47.61	+17 23.2	1.927	2.909	1.9	19.4
12 17	4 38.63	+16 58.7	1.416	2.379	6.4	16.3	12 17	4 38.18	+16 35.4	1.950	2.909	5.3	19.6
12 27	4 31.24	+16 36.8	1.465	2.382	10.9	16.6	12 27	4 30.02	+15 54.5	2.001	2.908	9.0	19.8
1 6	4 26.36	+16 25.4	1.537	2.387	14.8	16.8	1 6	4 23.88	+15 22.9	2.078	2.907	12.4	20.0
312875	2011 <i>UJ</i> ₁₇₄	12 5.6 41°67'	0°8'	5.6	18		333228	2012 <i>HW</i> ₄₂	12 5.6 180°11'	0°8'	5.4	17	
10 28	5 22.14	+16 59.8	1.422	2.226	18.9	20.0	10 28	5 15.92	+19 3.1	2.422	3.203	12.7	21.0
11 7	5 17.34	+17 49.1	1.367	2.250	14.8	19.8	11 7	5 11.38	+19 12.1	2.333	3.203	9.9	20.8
11 17	5 9.27	+18 43.2	1.333	2.274	10.0	19.6	11 17	5 4.78	+19 21.3	2.267	3.204	6.8	20.6
11 27	4 58.80	+19 39.6	1.323	2.299	4.7	19.3	11 27	4 56.63	+19 30.8	2.229	3.204	3.3	20.4
12 7	4 47.32	+20 35.6	1.340	2.324	1.1	19.1	12 7	4 47.71	+19 40.5	2.220	3.204	1.0	20.2
12 17	4 36.36	+21 28.8	1.385	2.350	6.1	19.5	12 17	4 38.91	+19 50.8	2.241	3.203	4.4	20.5
12 27	4 27.36	+22 18.7	1.457	2.377	10.7	19.9	12 27	4 31.13	+20 2.6	2.292	3.203	7.8	20.7
1 6	4 21.28	+23 5.8	1.553	2.404	14.7	20.2	1 6	4 25.07	+20 16.8	2.369	3.203	10.8	20.9
297973	2002 <i>JX</i> ₅₅	12 5.6 159°15'	2°9'	4.4	18		384319	2009 <i>SH</i> ₂₁₄	12 5.6 89°30'	2°5'	4.9	18	</

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
412794	2014 <i>PN</i> ₂₂		12 5.6 53°06'	5°0/ 7.3 17			225282	1993 <i>RS</i> ₇		12 5.6 49°87'	0°7/ 5.4 18		
10 28	5 19.92	+36 39.9	2.005	2.766	15.6	20.6	10 28	5 17.82	+21 21.9	1.812	2.607	15.8	20.4
11 7	5 15.32	+37 5.7	1.928	2.774	12.8	20.4	11 7	5 13.23	+21 9.3	1.755	2.633	12.3	20.3
11 17	5 7.81	+37 19.4	1.871	2.782	9.7	20.2	11 17	5 6.11	+20 54.1	1.720	2.660	8.2	20.1
11 27	4 58.14	+37 17.1	1.839	2.790	6.6	20.1	11 27	4 57.25	+20 36.9	1.711	2.687	3.9	19.9
12 7	4 47.50	+36 57.0	1.834	2.799	5.0	20.0	12 7	4 47.73	+20 18.8	1.730	2.714	1.0	19.7
12 17	4 37.21	+36 20.3	1.858	2.808	6.4	20.1	12 17	4 38.72	+20 1.8	1.778	2.742	5.1	20.1
12 27	4 28.57	+35 31.6	1.909	2.817	9.3	20.3	12 27	4 31.25	+19 48.3	1.853	2.769	9.1	20.4
1 6	4 22.46	+34 36.9	1.985	2.826	12.3	20.5	1 6	4 26.05	+19 40.2	1.953	2.797	12.4	20.6
208113	2000 <i>CU</i> ₇₃		12 5.6 159°02'	5°4/ 7.7 18			129094	2004 <i>XZ</i>		12 5.6 327°98'	4°0/ 7.2 17		
10 28	5 23.74	+39 18.0	2.285	3.022	14.6	21.0	10 28	5 17.99	+35 19.1	2.067	2.833	15.0	19.5
11 7	5 18.06	+39 42.9	2.199	3.027	12.1	20.8	11 7	5 13.75	+35 20.6	1.975	2.827	12.3	19.3
11 17	5 9.55	+39 55.2	2.135	3.032	9.4	20.7	11 17	5 6.76	+35 9.7	1.905	2.822	9.1	19.1
11 27	4 58.94	+39 50.6	2.096	3.036	6.8	20.5	11 27	4 57.69	+34 43.7	1.859	2.817	5.9	18.9
12 7	4 47.37	+39 27.0	2.084	3.040	5.4	20.5	12 7	4 47.65	+34 1.8	1.841	2.813	4.0	18.7
12 17	4 36.13	+38 45.4	2.102	3.044	6.5	20.5	12 17	4 37.87	+33 6.0	1.851	2.808	5.8	18.8
12 27	4 26.47	+37 50.1	2.149	3.047	9.0	20.7	12 27	4 29.58	+32 1.2	1.890	2.804	9.0	19.0
1 6	4 19.27	+36 47.4	2.221	3.050	11.7	20.9	1 6	4 23.66	+30 53.7	1.954	2.800	12.3	19.2
403056	2008 <i>AV</i> ₉₁		12 5.6 180°49'	3°2/ 6.7 18			139263	2001 <i>HH</i> ₅₄		12 5.6 153°63'	5°3/ 4.1 18		
10 28	5 20.78	+33 8.4	2.497	3.250	13.1	22.0	10 28	5 17.38	+ 7 2.6	2.305	3.074	13.6	20.3
11 7	5 15.34	+33 23.1	2.405	3.251	10.6	21.8	11 7	5 12.40	+ 6 24.3	2.228	3.082	11.0	20.2
11 17	5 7.53	+33 29.3	2.335	3.252	7.7	21.7	11 17	5 5.39	+ 5 52.0	2.173	3.089	8.3	20.0
11 27	4 57.96	+33 24.4	2.292	3.252	4.8	21.5	11 27	4 56.92	+ 5 29.2	2.146	3.095	6.0	19.9
12 7	4 47.55	+33 7.3	2.278	3.251	3.2	21.4	12 7	4 47.79	+ 5 18.4	2.147	3.101	5.4	19.9
12 17	4 37.32	+32 39.0	2.295	3.250	4.9	21.5	12 17	4 38.88	+ 5 21.0	2.178	3.107	7.1	20.0
12 27	4 28.34	+32 2.5	2.341	3.249	7.9	21.7	12 27	4 31.05	+ 5 37.3	2.236	3.112	9.7	20.1
1 6	4 21.39	+31 22.1	2.414	3.247	10.7	21.8	1 6	4 24.96	+ 6 6.0	2.319	3.116	12.3	20.3
438582	2007 <i>UC</i> ₁₀₇		12 5.6 96°50'	1°0/ 5.9 18			372268	2008 <i>UR</i> ₂₈₅		12 5.6 45°63'	0°7/ 5.4 17		
10 28	5 21.49	+25 31.2	1.951	2.731	15.3	21.8	10 28	5 14.65	+20 58.8	2.254	3.042	13.3	21.5
11 7	5 16.11	+25 37.7	1.883	2.751	12.1	21.6	11 7	5 10.50	+20 47.5	2.173	3.047	10.4	21.3
11 17	5 8.10	+25 39.2	1.837	2.771	8.2	21.4	11 17	5 4.23	+20 34.0	2.115	3.053	7.0	21.1
11 27	4 58.21	+25 34.2	1.816	2.790	4.1	21.2	11 27	4 56.40	+20 18.9	2.084	3.059	3.4	20.9
12 7	4 47.54	+25 22.7	1.825	2.809	1.1	21.0	12 7	4 47.87	+20 3.0	2.082	3.066	1.0	20.7
12 17	4 37.28	+25 6.2	1.864	2.828	4.9	21.3	12 17	4 39.55	+19 47.9	2.109	3.072	4.5	21.0
12 27	4 28.58	+24 47.5	1.931	2.846	8.8	21.6	12 27	4 32.37	+19 35.7	2.165	3.079	8.1	21.2
1 6	4 22.21	+24 30.0	2.023	2.864	12.2	21.8	1 6	4 27.01	+19 27.9	2.247	3.085	11.2	21.4
112602	2002 <i>PP</i> ₆₀		12 5.6 104°47'	6°2/ 4.2 18			218964	2008 <i>FP</i> ₂₂		12 5.6 347°21'	6°0/ 4.4 18		
10 28	5 18.07	+ 5 40.2	2.059	2.832	14.9	20.2	10 28	5 16.64	+11 47.7	1.308	2.126	19.5	20.1
11 7	5 13.02	+ 4 55.7	1.996	2.851	12.1	20.0	11 7	5 13.49	+10 57.6	1.236	2.123	15.7	19.9
11 17	5 5.81	+ 4 19.3	1.956	2.869	9.2	19.9	11 17	5 7.01	+10 11.8	1.182	2.120	11.4	19.6
11 27	4 57.08	+ 3 54.9	1.941	2.886	6.8	19.8	11 27	4 57.95	+ 9 35.5	1.151	2.117	7.4	19.4
12 7	4 47.73	+ 3 45.3	1.954	2.904	6.3	19.8	12 7	4 47.61	+ 9 13.6	1.145	2.116	6.2	19.3
12 17	4 38.72	+ 3 51.8	1.996	2.920	8.0	19.9	12 17	4 37.54	+ 9 9.4	1.164	2.114	9.4	19.5
12 27	4 30.98	+ 4 14.1	2.064	2.937	10.6	20.1	12 27	4 29.27	+ 9 24.3	1.207	2.113	13.7	19.7
1 6	4 25.17	+ 4 50.2	2.157	2.953	13.1	20.3	1 6	4 23.90	+ 9 56.6	1.270	2.113	17.8	20.0
14709	2000 <i>CO</i> ₂₉		12 5.6 191°84'	2°3/ 4.9 18			328606	2009 <i>SD</i> ₁₀₂		12 5.6 13°96'	6°0/ 3.9 18		
10 28	5 17.34	+17 5.5	2.111	2.897	14.1	18.6	10 28	5 13.59	+ 7 41.1	1.975	2.765	14.8	20.3
11 7	5 12.74	+16 40.6	2.024	2.897	11.1	18.4	11 7	5 9.85	+ 6 49.2	1.900	2.766	12.1	20.1
11 17	5 5.82	+16 15.4	1.960	2.896	7.7	18.2	11 17	5 3.87	+ 6 3.3	1.847	2.768	9.1	20.0
11 27	4 57.18	+15 51.4	1.922	2.894	4.1	18.0	11 27	4 56.26	+ 5 27.7	1.818	2.770	6.7	19.8
12 7	4 47.70	+15 30.5	1.912	2.892	2.5	17.9	12 7	4 47.90	+ 5 6.0	1.817	2.772	6.2	19.8
12 17	4 38.40	+15 14.6	1.933	2.890	5.5	18.1	12 17	4 39.74	+ 5 0.4	1.844	2.775	8.1	19.9
12 27	4 30.30	+15 5.6	1.982	2.888	9.2	18.3	12 27	4 32.77	+ 5 11.6	1.897	2.778	10.9	20.1
1 6	4 24.17	+15 4.8	2.056	2.885	12.5	18.5	1 6	4 27.70	+ 5 38.1	1.973	2.781	13.7	20.3
12351	1993 <i>JD</i>		12 5.6 213°24'	3°3/ 4.3 18			204099	2003 <i>WC</i> ₉₉		12 5.6 287°94'	1°5/ 6.2 17		
10 28	5 17.56	+16 29.2	2.078	2.864	14.3	17.8	10 28	5 18.67	+28 48.4	1.829	2.615	16.0	20.1
11 7	5 12.92	+15 33.3	1.988	2.860	11.3	17.6	11 7	5 14.66	+28 27.4	1.723	2.594	12.9	19.8
11 17	5 5.95	+14 35.3	1.920	2.855	7.9	17.4	11 17	5 7.64	+27 55.8	1.638	2.572	9.0	19.5
11 27	4 57.24	+13 38.1	1.880	2.850	4.5	17.1	11 27	4 58.25	+27 12.1	1.577	2.550	4.7	19.2
12 7	4 47.70	+12 45.2	1.869	2.844	3.4	17.1	12 7	4 47.56	+26 16.9	1.545	2.529	1.6	19.0
12 17	4 38.35	+12 0.3	1.887	2.838	6.3	17.2	12 17	4 36.93	+25 13.2	1.541	2.507	5.6	19.2
12 27	4 30.22	+11 26.6	1.934	2.832	9.8	17.4	12 27	4 27.77	+24 6.8	1.566	2.485	10.2	19.4
1 6	4 24.07	+11 5.6	2.005	2.825	13.1	17.6	1 6	4 21.14	+23 4.0	1.614	2.463	14.3	19.6
295121	2008 <i>FO</i> ₁₆		12 5.6 170°48'	1°6/ 5.1 18			157133	2004 <i>NX</i> ₃₀		12 5.6 98°11'	0°9/ 5.8 18		
10 28	5 16.68	+19 4.9	2.151	2.938	13.9	21.3	10 28	5 22.80	+25 10.3	1.733	2.519	16.7	20.8
11 7	5 12.19	+18 45.3	2.066	2.939	10.9	21.1	11 7	5 17.46	+25 12.2	1.666	2.538	13.2	20.6
11 17	5 5.43	+18 24.2	2.003	2.940	7.4	20.9	11 17	5 9.18	+25 8.6	1.620	2.556	9.0	20.4
11 27	4 56.99	+18 2.8	1.967	2.941	3.7	20.7	11 27	4 58.79	+24 58.3	1.600	2.574	4.4	20.2
12 7	4 47.75	+17 42.4	1.959	2.942	1.7	20.5	12 7	4 47.51	+24 41.3	1.608	2.592	1.0	20.0
12 17	4 38.70	+17 24.8	1.982	2.942	5.1	20.8	12 17	4 36.72	+24 19.6	1.644	2.609	5.3	20.3
12 27	4 30.85	+17 12.2	2.033	2.943	8.7	21.0	12 27	4 27.68	+23 56.7	1.709	2.626	9.6	20.6
1 6	4 24.93	+17 6.2	2.109	2.943	12.0	21.2	1 6	4 21.26	+23 36.4	1.799	2.643	13.3	20.9
16757	Luoxiahong		12 5.6 129°07'	2°8/ 4.7 18			56308	1999 <i>RH</i> ₁₃₂		12 5.6 102°56'	0°2/ 5.7 18		
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EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
103926	2000 <i>DR</i> ₆₃	12 5.6 171°03	1.8/ 6.3 18				299195	2005 <i>GP</i> ₁₄₈	12 5.6 280°22	4.4/ 6.2 17			
10 28	5 16.64	+29 3.5	2.758	3.521	11.7	20.5	10 28	5 21.71	+31 10.0	1.864	2.639	16.1	20.7
11 7	5 11.81	+29 9.1	2.667	3.524	9.3	20.3	11 7	5 17.28	+32 7.8	1.767	2.626	13.1	20.5
11 17	5 5.00	+29 8.8	2.599	3.525	6.5	20.1	11 17	5 9.63	+33 0.4	1.691	2.614	9.7	20.3
11 27	4 56.76	+29 1.4	2.558	3.527	3.6	19.9	11 27	4 59.32	+33 42.9	1.640	2.601	6.1	20.0
12 7	4 47.85	+28 46.7	2.547	3.528	1.8	19.8	12 7	4 47.46	+34 10.9	1.616	2.589	4.4	19.9
12 17	4 39.09	+28 25.5	2.568	3.529	4.0	20.0	12 17	4 35.51	+34 22.7	1.621	2.576	6.7	20.0
12 27	4 31.34	+28 0.3	2.618	3.530	6.9	20.1	12 27	4 25.03	+34 20.2	1.654	2.564	10.4	20.2
1 6	4 25.25	+27 33.7	2.695	3.530	9.6	20.3	1 6	4 17.24	+34 8.2	1.710	2.551	14.0	20.4
24688	1990 <i>KE</i> ₁	12 5.6 66°68	6.2/ 3.7 18				355391	2007 <i>TA</i> ₄₄₂	12 5.6 8°63	10.4/ 3.4 18			
10 28	5 13.57	+ 5 18.4	2.247	3.024	13.7	17.8	10 28	5 12.67	+ 2 38.4	1.352	2.161	19.4	20.4
11 7	5 9.47	+ 4 24.4	2.178	3.033	11.2	17.7	11 7	5 10.07	+ 1 15.0	1.292	2.162	16.3	20.2
11 17	5 3.42	+ 3 37.6	2.131	3.042	8.6	17.5	11 17	5 4.49	+ 0 4.3	1.251	2.164	13.2	20.0
11 27	4 56.00	+ 3 1.9	2.110	3.052	6.7	17.4	11 27	4 56.71	- 0 45.1	1.231	2.168	10.9	19.9
12 7	4 47.98	+ 2 40.5	2.117	3.061	6.3	17.4	12 7	4 47.91	- 1 6.7	1.234	2.173	10.5	19.9
12 17	4 40.19	+ 2 35.3	2.151	3.071	7.8	17.6	12 17	4 39.46	- 0 57.5	1.261	2.178	12.4	20.0
12 27	4 33.46	+ 2 46.6	2.213	3.080	10.2	17.7	12 27	4 32.65	- 0 18.8	1.311	2.185	15.3	20.2
1 6	4 28.41	+ 3 12.7	2.298	3.090	12.6	17.9	1 6	4 28.39	+ 0 44.1	1.380	2.193	18.3	20.4
243404	2009 <i>BU</i> ₄	12 5.6 305°91	3.9/ 4.2 18				518578	2007 <i>LM</i> ₂₂	12 5.6 82°74	1.5/ 5.3 18			
10 28	5 12.11	+10 59.9	2.511	3.294	12.2	20.5	10 28	5 16.60	+17 10.5	2.289	3.072	13.3	21.1
11 7	5 8.31	+10 24.8	2.420	3.287	9.8	20.3	11 7	5 11.96	+17 17.1	2.210	3.081	10.4	20.9
11 17	5 2.66	+ 9 52.7	2.353	3.280	7.1	20.2	11 17	5 5.20	+17 25.2	2.155	3.090	7.1	20.7
11 27	4 55.68	+ 9 26.2	2.312	3.272	4.7	20.0	11 27	4 56.91	+17 34.9	2.126	3.100	3.5	20.5
12 7	4 48.02	+ 9 7.5	2.300	3.265	4.1	19.9	12 7	4 47.89	+17 46.5	2.127	3.109	1.6	20.4
12 17	4 40.47	+ 8 58.5	2.317	3.259	6.0	20.1	12 17	4 39.06	+18 0.3	2.158	3.119	4.7	20.6
12 27	4 33.81	+ 9 0.1	2.362	3.252	8.7	20.2	12 27	4 31.35	+18 17.1	2.218	3.128	8.1	20.9
1 6	4 28.66	+ 9 12.4	2.433	3.245	11.3	20.4	1 6	4 25.44	+18 37.2	2.304	3.137	11.1	21.1
347579	2001 <i>BE</i> ₁₀	12 5.6 315°36	2.9/ 5.1 18				32658	4800 <i>P-L</i>	12 5.6 95°97	1.5/ 5.3 18			
10 28	5 15.79	+16 6.8	1.516	2.327	17.6	20.4	10 28	5 22.64	+19 32.9	1.700	2.490	16.8	20.3
11 7	5 12.73	+15 55.9	1.423	2.310	14.0	20.1	11 7	5 17.20	+19 17.3	1.637	2.512	13.2	20.1
11 17	5 6.55	+15 47.1	1.351	2.292	9.8	19.8	11 17	5 8.93	+19 0.3	1.596	2.534	8.9	19.9
11 27	4 57.82	+15 42.3	1.302	2.276	5.2	19.5	11 27	4 58.68	+18 42.6	1.580	2.555	4.3	19.7
12 7	4 47.66	+15 43.1	1.279	2.260	3.1	19.3	12 7	4 47.63	+18 25.6	1.593	2.576	1.7	19.6
12 17	4 37.48	+15 51.0	1.282	2.244	7.1	19.5	12 17	4 37.09	+18 11.3	1.635	2.597	5.8	19.9
12 27	4 28.78	+16 7.4	1.312	2.229	11.9	19.8	12 27	4 28.27	+18 2.0	1.704	2.616	10.0	20.2
1 6	4 22.73	+16 33.0	1.363	2.214	16.3	20.0	1 6	4 21.98	+17 59.6	1.798	2.636	13.6	20.5
289364	2005 <i>BR</i> ₄₉	12 5.6 346°27	0.3/ 5.5 18				239015	2006 <i>DE</i> ₇₀	12 5.6 178°66	1.5/ 6.1 18			
10 28	5 15.63	+26 22.5	1.400	2.213	18.6	19.8	10 28	5 21.31	+27 0.5	2.212	2.982	14.0	21.7
11 7	5 12.75	+25 26.2	1.318	2.206	14.8	19.5	11 7	5 15.96	+27 10.7	2.122	2.984	11.2	21.5
11 17	5 6.51	+24 16.7	1.256	2.200	10.1	19.3	11 17	5 8.10	+27 15.6	2.055	2.985	7.7	21.3
11 27	4 57.72	+22 55.5	1.217	2.194	4.8	18.9	11 27	4 58.34	+27 13.3	2.014	2.986	4.0	21.1
12 7	4 47.71	+21 26.9	1.205	2.190	0.9	18.7	12 7	4 47.66	+27 3.3	2.003	2.986	1.6	20.9
12 17	4 38.06	+19 57.7	1.219	2.186	6.5	19.0	12 17	4 37.16	+26 46.4	2.022	2.985	4.7	21.1
12 27	4 30.30	+18 36.3	1.260	2.183	11.7	19.3	12 27	4 27.96	+26 25.4	2.071	2.984	8.4	21.3
1 6	4 25.45	+17 28.9	1.323	2.181	16.2	19.6	1 6	4 20.90	+26 3.8	2.146	2.982	11.7	21.5
46385	2001 <i>XA</i> ₁₅₂	12 5.6 146°68	1.5/ 5.4 18				282713	2006 <i>BP</i> ₂₃₁	12 5.6 197°30	2.3/ 5.2 18			
10 28	5 22.59	+16 57.9	2.069	2.845	14.7	19.4	10 28	5 19.64	+16 16.4	1.923	2.710	15.3	21.2
11 7	5 16.87	+17 11.3	1.988	2.855	11.6	19.2	11 7	5 14.86	+16 8.9	1.836	2.709	12.1	21.0
11 17	5 8.64	+17 26.8	1.931	2.865	7.9	19.0	11 17	5 7.46	+16 3.0	1.771	2.707	8.4	20.8
11 27	4 58.56	+17 44.2	1.900	2.874	3.9	18.7	11 27	4 58.08	+15 59.7	1.732	2.704	4.4	20.5
12 7	4 47.58	+18 3.1	1.899	2.882	1.7	18.6	12 7	4 47.70	+16 0.1	1.721	2.702	2.5	20.4
12 17	4 36.83	+18 23.7	1.929	2.890	5.2	18.9	12 17	4 37.46	+16 5.2	1.739	2.698	5.8	20.6
12 27	4 27.40	+18 46.2	1.988	2.897	9.0	19.1	12 27	4 28.54	+16 16.1	1.786	2.695	9.8	20.9
1 6	4 20.12	+19 11.6	2.073	2.903	12.3	19.3	1 6	4 21.82	+16 33.5	1.858	2.691	13.4	21.1
146066	2000 <i>FO</i> ₆₃	12 5.6 220°98	4.2/ 6.5 18				190496	2000 <i>GC</i> ₅₅	12 5.6 164°08	1.9/ 6.1 18			
10 28	5 22.17	+32 40.2	2.188	2.948	14.5	20.5	10 28	5 23.16	+27 16.3	1.968	2.741	15.4	21.1
11 7	5 17.05	+33 27.7	2.093	2.942	11.8	20.3	11 7	5 17.73	+27 34.3	1.883	2.747	12.3	20.9
11 17	5 9.10	+34 8.6	2.019	2.936	8.7	20.1	11 17	5 9.46	+27 46.8	1.820	2.751	8.6	20.7
11 27	4 58.92	+34 38.5	1.972	2.930	5.7	19.9	11 27	4 59.03	+27 51.2	1.784	2.755	4.5	20.5
12 7	4 47.52	+34 54.5	1.953	2.923	4.2	19.8	12 7	4 47.55	+27 46.4	1.776	2.758	1.9	20.3
12 17	4 36.14	+34 55.6	1.964	2.916	6.0	19.9	12 17	4 36.31	+27 33.2	1.798	2.761	5.2	20.5
12 27	4 26.09	+34 44.1	2.003	2.909	9.1	20.0	12 27	4 26.58	+27 14.5	1.849	2.763	9.2	20.8
1 6	4 18.39	+34 24.4	2.068	2.901	12.2	20.2	1 6	4 19.30	+26 54.4	1.925	2.765	12.7	21.0
298003	2002 <i>ON</i> ₁₄	12 5.6 90°21	1.6/ 6.3 18				81053	2000 <i>EY</i> ₆₃	12 5.6 69°83	1.1/ 5.4 18			
10 28	5 21.88	+29 28.9	1.904	2.680	15.8	20.6	10 28	5 18.37	+20 7.8	1.801	2.596	15.9	19.2
11 7	5 16.47	+29 3.8	1.835	2.699	12.5	20.4	11 7	5 13.90	+20 0.9	1.730	2.608	12.4	19.0
11 17	5 8.35	+28 28.6	1.787	2.718	8.6	20.2	11 17	5 6.77	+19 52.6	1.680	2.620	8.4	18.8
11 27	4 58.36	+27 42.7	1.765	2.737	4.5	20.0	11 27	4 57.70	+19 43.3	1.656	2.632	4.0	18.6
12 7	4 47.66	+26 47.0	1.772	2.755	1.6	19.9	12 7	4 47.78	+19 33.8	1.660	2.644	1.3	18.4
12 17	4 37.50	+25 47.0	1.809	2.773	5.0	20.1	12 17	4 38.19	+19 25.7	1.693	2.656	5.4	18.7
12 27	4 29.03	+24 46.1	1.874	2.791	8.9	20.4	12 27	4 30.10	+19 20.9	1.753	2.669	9.5	19.0
1 6	4 22.99	+23 49.9	1.966	2.809	12.4	20.6	1 6	4 24.33	+19 21.3	1.838	2.681	13.1	19.2
329906	2005 <i>JM</i> ₁₀₇	12 5.6 140°66	0.7/ 5.5 18				401352	2013 <i>AY</i> ₁₄₉	12 5.6 176°36	0.0/ 5.5 18			

EPHEMERIDES

12 5.6

12 5.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
247211	2001 <i>QU</i> ₉	12 5.6	56°46'	7.4/ 8.4	18		232058	2001 <i>UL</i> ₁₀₈	12 5.7	349°08'	0.6/ 5.7	18	
10 28	5 24.75	+41 48.8	1.736	2.485	18.1	19.6	10 28	5 12.87	+23 23.2	1.134	1.970	20.7	20.2
11 7	5 19.68	+42 27.5	1.675	2.505	15.2	19.5	11 7	5 11.48	+23 32.7	1.059	1.960	16.5	19.9
11 17	5 11.03	+42 48.9	1.632	2.526	12.0	19.3	11 17	5 6.24	+23 38.0	1.002	1.951	11.4	19.6
11 27	4 59.77	+42 46.9	1.613	2.546	9.0	19.2	11 27	4 57.86	+23 38.2	0.966	1.944	5.5	19.2
12 7	4 47.47	+42 18.8	1.619	2.568	7.5	19.1	12 7	4 47.79	+23 32.8	0.953	1.938	1.0	18.9
12 17	4 35.86	+41 26.6	1.652	2.589	8.3	19.2	12 17	4 37.89	+23 23.4	0.964	1.934	7.1	19.3
12 27	4 26.49	+40 17.1	1.711	2.610	10.8	19.4	12 27	4 30.09	+23 13.7	0.998	1.931	12.9	19.6
1 6	4 20.30	+38 59.3	1.794	2.631	13.6	19.7	1 6	4 25.69	+23 7.9	1.053	1.930	17.9	19.9
58993	1998 <i>SF</i> ₉	12 5.6	93°02'	0°0/ 5.7	18		102127	1999 <i>RY</i> ₁₇₇	12 5.7	98°00'	6.5/ 4.4	17	
10 28	5 17.69	+23 9.0	2.389	3.166	12.9	19.7	10 28	5 22.55	+ 8 29.1	1.584	2.371	18.0	20.1
11 7	5 12.66	+23 5.4	2.318	3.185	10.1	19.5	11 7	5 17.12	+ 7 36.2	1.528	2.394	14.5	19.9
11 17	5 5.57	+22 58.6	2.270	3.205	6.8	19.3	11 17	5 8.87	+ 6 51.0	1.494	2.417	10.7	19.8
11 27	4 57.04	+22 48.3	2.249	3.224	3.2	19.1	11 27	4 58.67	+ 6 18.2	1.484	2.439	7.4	19.6
12 7	4 47.90	+22 35.2	2.258	3.243	0.5	18.9	12 7	4 47.72	+ 6 1.5	1.501	2.461	6.6	19.6
12 17	4 39.07	+22 20.5	2.298	3.262	4.1	19.2	12 17	4 37.32	+ 6 2.6	1.545	2.482	8.8	19.8
12 27	4 31.42	+22 6.3	2.367	3.280	7.5	19.5	12 27	4 28.66	+ 6 21.4	1.616	2.502	12.2	20.1
1 6	4 25.59	+21 54.5	2.463	3.298	10.4	19.7	1 6	4 22.54	+ 6 55.6	1.709	2.522	15.3	20.3
137300	1999 <i>RC</i> ₂₃₃	12 5.6	20°43'	1.2/ 5.3	18		159521	2001 <i>FD</i> ₆₉	12 5.7	186°14'	4.5/ 4.0	18	
10 28	5 16.44	+23 1.0	1.107	1.939	21.3	18.8	10 28	5 14.01	+ 9 15.1	2.556	3.331	12.2	20.2
11 7	5 13.94	+22 22.7	1.046	1.945	16.8	18.5	11 7	5 9.69	+ 8 33.6	2.471	3.331	9.9	20.0
11 17	5 7.57	+21 36.7	1.003	1.951	11.4	18.3	11 17	5 3.57	+ 7 56.0	2.409	3.330	7.3	19.9
11 27	4 58.28	+20 44.8	0.981	1.959	5.4	18.0	11 27	4 56.14	+ 7 25.0	2.375	3.330	5.1	19.7
12 7	4 47.70	+19 50.9	0.983	1.968	1.6	17.7	12 7	4 48.10	+ 7 3.2	2.370	3.329	4.6	19.7
12 17	4 37.71	+19 0.8	1.010	1.977	7.4	18.1	12 17	4 40.19	+ 6 52.5	2.394	3.328	6.3	19.8
12 27	4 30.03	+18 20.3	1.061	1.988	12.9	18.5	12 27	4 33.20	+ 6 53.7	2.446	3.326	8.8	19.9
1 6	4 25.72	+17 53.3	1.132	2.000	17.7	18.8	1 6	4 27.73	+ 7 6.5	2.523	3.325	11.3	20.1
137098	1998 <i>YP</i> ₂	12 5.6	332°24'	5.5/ 7.2	17		130337	2000 <i>FR</i> ₂₉	12 5.7	273°94'	2.8/ 6.4	18	
10 28	5 16.31	+35 25.6	1.517	2.308	18.5	19.7	10 28	5 17.32	+30 24.9	2.419	3.186	13.1	20.3
11 7	5 13.73	+35 46.9	1.425	2.292	15.3	19.4	11 7	5 12.88	+30 50.3	2.319	3.176	10.5	20.1
11 17	5 7.53	+35 54.1	1.352	2.276	11.5	19.1	11 17	5 6.09	+31 9.6	2.241	3.166	7.6	19.9
11 27	4 58.39	+35 42.4	1.302	2.262	7.7	18.9	11 27	4 57.47	+31 20.5	2.190	3.155	4.5	19.7
12 7	4 47.67	+35 8.8	1.276	2.248	5.5	18.7	12 7	4 47.88	+31 21.5	2.168	3.145	2.8	19.6
12 17	4 37.08	+34 14.7	1.276	2.235	7.6	18.8	12 17	4 38.33	+31 12.8	2.176	3.135	4.8	19.7
12 27	4 28.41	+33 6.3	1.302	2.223	11.6	19.0	12 27	4 29.88	+30 56.4	2.212	3.124	8.0	19.9
1 6	4 22.89	+31 52.6	1.350	2.212	15.7	19.2	1 6	4 23.37	+30 35.7	2.275	3.114	11.1	20.0
182258	2001 <i>FR</i> ₁₆₈	12 5.6	176°97'	3.2/ 4.8	18		33713	Mithravamsi	12 5.7	266°17'	2.2/ 5.1	18	
10 28	5 20.88	+15 44.9	1.827	2.615	15.9	21.0	10 28	5 18.34	+18 7.0	1.687	2.486	16.6	18.4
11 7	5 15.86	+15 13.2	1.745	2.617	12.6	20.7	11 7	5 14.20	+17 46.9	1.605	2.485	13.1	18.2
11 17	5 8.15	+14 41.9	1.684	2.619	8.8	20.5	11 17	5 7.21	+17 26.2	1.544	2.484	9.0	17.9
11 27	4 58.41	+14 13.4	1.649	2.620	4.9	20.3	11 27	4 58.04	+17 6.3	1.509	2.483	4.6	17.7
12 7	4 47.69	+13 49.9	1.642	2.620	3.3	20.2	12 7	4 47.80	+16 48.9	1.500	2.482	2.4	17.5
12 17	4 37.22	+13 34.0	1.665	2.620	6.5	20.4	12 17	4 37.77	+16 36.2	1.520	2.481	6.2	17.8
12 27	4 28.19	+13 27.7	1.715	2.619	10.5	20.6	12 27	4 29.25	+16 30.6	1.566	2.480	10.6	18.0
1 6	4 21.48	+13 31.9	1.790	2.617	14.1	20.9	1 6	4 23.19	+16 33.5	1.636	2.478	14.5	18.3
325418	2009 <i>KY</i> ₃₅	12 5.6	183°44'	0.7/ 5.4	17		262526	2006 <i>UD</i> ₃₂₁	12 5.7	132°49'	0.2/ 5.6	18	
10 28	5 22.89	+23 18.0	1.726	2.513	16.7	21.3	10 28	5 18.53	+22 3.9	2.205	2.986	13.8	22.0
11 7	5 17.73	+22 45.8	1.640	2.514	13.2	21.0	11 7	5 13.63	+22 3.7	2.124	2.994	10.8	21.8
11 17	5 9.55	+22 7.0	1.576	2.514	9.0	20.8	11 17	5 6.43	+22 1.0	2.065	3.001	7.3	21.6
11 27	4 59.11	+21 22.3	1.538	2.514	4.3	20.5	11 27	4 57.55	+21 55.6	2.034	3.009	3.5	21.4
12 7	4 47.59	+20 33.6	1.528	2.513	1.1	20.3	12 7	4 47.89	+21 47.8	2.031	3.016	0.6	21.1
12 17	4 36.38	+19 44.7	1.547	2.511	5.8	20.6	12 17	4 38.45	+21 38.7	2.059	3.023	4.6	21.5
12 27	4 26.83	+19 0.2	1.595	2.509	10.4	20.9	12 27	4 30.25	+21 30.3	2.116	3.030	8.2	21.7
1 6	4 19.91	+18 24.3	1.667	2.505	14.4	21.1	1 6	4 24.01	+21 24.6	2.199	3.036	11.5	21.9
249921	2001 <i>SV</i> ₂₉₂	12 5.6	47°88'	2.5/ 6.3	18		407854	2012 <i>BF</i> ₆₂	12 5.7	287°82'	0.4/ 5.8	18	
10 28	5 18.86	+28 52.3	1.821	2.607	16.0	20.7	10 28	5 16.98	+24 50.4	2.005	2.793	14.7	21.2
11 7	5 14.58	+29 7.9	1.744	2.614	12.8	20.4	11 7	5 12.84	+24 39.6	1.914	2.787	11.6	20.9
11 17	5 7.41	+29 16.2	1.688	2.620	9.0	20.2	11 17	5 6.14	+24 23.3	1.844	2.782	8.0	20.7
11 27	4 58.08	+29 14.8	1.657	2.627	4.9	20.0	11 27	4 57.51	+24 1.1	1.801	2.776	3.9	20.5
12 7	4 47.75	+29 2.8	1.654	2.635	2.5	19.9	12 7	4 47.91	+23 33.8	1.786	2.770	0.7	20.2
12 17	4 37.72	+28 41.4	1.679	2.642	5.5	20.1	12 17	4 38.47	+23 3.3	1.800	2.765	4.9	20.5
12 27	4 29.27	+28 14.3	1.731	2.650	9.4	20.3	12 27	4 30.35	+22 32.9	1.842	2.760	9.0	20.7
1 6	4 23.33	+27 45.9	1.808	2.658	13.0	20.6	1 6	4 24.39	+22 6.1	1.909	2.754	12.6	21.0
509509	2007 <i>VL</i> ₆₅	12 5.6	30°45'	0.3/ 5.6	18		230436	2002 <i>PF</i> ₁₅₆	12 5.7	8°16'	8.7/ 9.2	17	
10 28	5 18.10	+25 2.6	1.038	1.871	22.4	20.9	10 28	5 18.11	+44 30.1	1.650	2.404	18.7	19.0
11 7	5 15.43	+24 25.3	0.983	1.882	17.6	20.7	11 7	5 15.05	+45 6.2	1.577	2.407	16.0	18.9
11 17	5 8.63	+23 37.7	0.944	1.893	12.0	20.4	11 17	5 8.26	+45 22.4	1.523	2.411	13.0	18.7
11 27	4 58.77	+22 41.0	0.927	1.905	5.7	20.1	11 27	4 58.64	+45 12.3	1.490	2.416	10.3	18.5
12 7	4 47.66	+21 39.2	0.934	1.918	1.0	19.8	12 7	4 47.74	+44 32.7	1.481	2.422	8.8	18.5
12 17	4 37.30	+20 38.7	0.964	1.933	7.4	20.3	12 17	4 37.37	+43 25.1	1.497	2.430	9.4	18.5
12 27	4 29.48	+19 46.9	1.019	1.948	13.1	20.7	12 27	4 29.22	+41 56.8	1.538	2.438	11.7	18.7
1 6	4 25.24	+19 8.7	1.093	1.964	17.9	21.0	1 6	4 24.31	+40 18.1	1.602	2.448	14.5	18.9
102625	1999 <i>VX</i> ₂₇	12 5.7	289°73'	0.8/ 5.8	17		23305	2001 <i>AH</i> ₁₈	12 5.7	229°87'	4.6/ 7.2		

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
517339	2014 <i>JL</i> ₆₃	12	5.7 190°81	9°5/30.3	18		291845	2006 <i>MW</i> ₁₃	12	5.7 136°46	1°0/ 5.7	18	
10 28	5 18.10	- 2 14.7	2.340	3.083	14.1	22.0	10 28	5 27.62	+15 25.5	2.214	2.973	14.3	20.6
11 7	5 13.01	- 4 19.3	2.266	3.082	12.2	21.9	11 7	5 20.77	+16 21.9	2.128	2.985	11.3	20.4
11 17	5 5.89	- 6 15.7	2.215	3.080	10.5	21.7	11 17	5 11.37	+17 23.7	2.066	2.995	7.8	20.2
11 27	4 57.29	- 7 56.3	2.191	3.078	9.5	21.7	11 27	5 0.00	+18 29.1	2.033	3.006	3.8	20.0
12 7	4 47.99	- 9 15.1	2.194	3.075	9.7	21.7	12 7	4 47.63	+19 35.4	2.032	3.015	1.1	19.8
12 17	4 38.85	-10 7.8	2.225	3.072	11.0	21.8	12 17	4 35.36	+20 40.1	2.064	3.025	4.8	20.1
12 27	4 30.75	-10 33.3	2.280	3.068	12.8	21.9	12 27	4 24.35	+21 41.9	2.127	3.034	8.6	20.3
1 6	4 24.36	-10 33.7	2.357	3.063	14.6	22.0	1 6	4 15.48	+22 40.6	2.219	3.042	11.9	20.6
517983	2015 <i>UH</i> ₂₀	12	5.7 135°13	1°4/ 5.9	18		75724	2000 <i>AX</i> ₁₂₉	12	5.7 356°01	7°4/ 4.5	18	
10 28	5 20.06	+25 52.4	2.100	2.878	14.5	21.9	10 28	5 15.58	+ 5 37.0	1.582	2.379	17.6	19.0
11 7	5 15.10	+26 10.1	2.018	2.884	11.5	21.7	11 7	5 12.09	+ 4 58.6	1.508	2.377	14.5	18.8
11 17	5 7.59	+26 23.5	1.957	2.890	7.9	21.5	11 17	5 5.82	+ 4 30.5	1.454	2.375	11.1	18.6
11 27	4 58.18	+26 30.9	1.924	2.896	4.0	21.3	11 27	4 57.44	+ 4 17.8	1.423	2.374	8.2	18.4
12 7	4 47.85	+26 31.4	1.919	2.902	1.4	21.1	12 7	4 48.02	+ 4 24.3	1.417	2.373	7.5	18.4
12 17	4 37.74	+26 25.7	1.944	2.907	4.8	21.4	12 17	4 38.80	+ 4 51.2	1.438	2.373	9.5	18.5
12 27	4 28.96	+26 15.9	1.997	2.913	8.5	21.6	12 27	4 31.04	+ 5 37.7	1.483	2.373	12.8	18.7
1 6	4 22.37	+26 5.2	2.077	2.918	11.9	21.8	1 6	4 25.65	+ 6 40.2	1.551	2.374	16.1	18.9
136910	1998 <i>HN</i> ₉₃	12	5.7 177°80	0°6/ 5.5	18		185038	2006 <i>QU</i> ₁₂₃	12	5.7 80°87	2°7/ 6.6	18	
10 28	5 21.61	+23 13.1	1.657	2.450	17.1	20.5	10 28	5 20.75	+31 24.1	1.886	2.661	15.9	20.2
11 7	5 16.88	+22 44.5	1.575	2.451	13.5	20.3	11 7	5 15.89	+31 18.7	1.812	2.674	12.8	20.0
11 17	5 9.08	+22 9.7	1.513	2.452	9.2	20.1	11 17	5 8.19	+31 2.7	1.759	2.687	9.0	19.8
11 27	4 58.97	+21 29.2	1.477	2.453	4.4	19.8	11 27	4 58.46	+30 34.4	1.732	2.699	5.1	19.6
12 7	4 47.75	+20 44.9	1.468	2.453	1.0	19.5	12 7	4 47.88	+29 53.8	1.732	2.712	2.7	19.4
12 17	4 36.86	+20 0.5	1.488	2.453	5.9	19.9	12 17	4 37.74	+29 3.6	1.762	2.724	5.3	19.6
12 27	4 27.66	+19 20.4	1.536	2.452	10.6	20.1	12 27	4 29.28	+28 9.0	1.819	2.737	9.1	19.9
1 6	4 21.12	+18 48.6	1.607	2.451	14.6	20.4	1 6	4 23.30	+27 15.3	1.902	2.749	12.5	20.1
361805	2008 <i>CG</i> ₃₀	12	5.7 188°22	3°6/ 4.8	18		421633	2014 <i>OY</i> ₂₉₇	12	5.7 101°74	3°9/ 7.0	18	
10 28	5 17.09	+12 0.6	2.251	3.030	13.6	21.6	10 28	5 19.92	+34 34.1	2.332	3.087	13.8	21.1
11 7	5 12.43	+11 41.9	2.164	3.030	10.8	21.4	11 7	5 14.91	+34 58.9	2.252	3.097	11.2	20.9
11 17	5 5.62	+11 27.0	2.100	3.029	7.7	21.2	11 17	5 7.42	+35 14.3	2.194	3.107	8.3	20.7
11 27	4 57.22	+11 17.7	2.063	3.028	4.7	21.0	11 27	4 58.10	+35 17.4	2.161	3.117	5.4	20.6
12 7	4 48.04	+11 15.8	2.055	3.027	3.7	20.9	12 7	4 47.93	+35 6.6	2.158	3.127	3.9	20.5
12 17	4 38.99	+11 22.4	2.076	3.025	6.0	21.1	12 17	4 38.04	+34 42.8	2.183	3.136	5.4	20.6
12 27	4 31.02	+11 38.0	2.126	3.023	9.1	21.3	12 27	4 29.50	+34 9.2	2.238	3.145	8.2	20.8
1 6	4 24.84	+12 2.5	2.202	3.021	12.1	21.4	1 6	4 23.11	+33 30.4	2.318	3.155	11.0	21.0
372714	2009 <i>XT</i> ₁₀	12	5.7 295°25	1°8/ 6.6	17		328836	2009 <i>WB</i> ₄₆	12	5.7 354°34	3°9/ 6.4	17	
10 28	5 19.16	+32 16.2	2.301	3.064	13.8	19.8	10 28	5 18.74	+30 46.6	1.982	2.759	15.2	20.6
11 7	5 14.23	+31 30.2	2.198	3.054	11.1	19.6	11 7	5 14.58	+31 37.4	1.895	2.757	12.3	20.4
11 17	5 6.89	+30 31.4	2.119	3.045	7.8	19.4	11 17	5 7.57	+32 22.5	1.830	2.755	8.9	20.2
11 27	4 57.81	+29 19.0	2.067	3.036	4.3	19.2	11 27	4 58.33	+32 57.9	1.791	2.754	5.6	20.0
12 7	4 47.96	+27 55.0	2.044	3.026	1.8	19.0	12 7	4 47.88	+33 20.5	1.779	2.753	3.9	19.9
12 17	4 38.40	+26 23.3	2.053	3.017	4.6	19.2	12 17	4 37.51	+33 29.4	1.796	2.752	6.0	20.0
12 27	4 30.17	+24 49.8	2.093	3.008	8.2	19.4	12 27	4 28.55	+33 26.6	1.840	2.752	9.4	20.2
1 6	4 24.02	+23 20.6	2.159	2.999	11.5	19.6	1 6	4 21.98	+33 16.4	1.909	2.752	12.7	20.5
306582	2000 <i>FW</i>	12	5.7 205°52	0°8/ 5.8	13 C		260785	2005 <i>NH</i> ₄₀	12	5.7 116°53	1°7/ 6.2	18	
10 28	5 25.07	+24 34.7	1.785	2.565	16.5	22.8	10 28	5 19.06	+28 13.5	2.038	2.816	14.8	21.2
11 7	5 19.65	+24 40.7	1.692	2.560	13.2	22.6	11 7	5 14.40	+28 10.0	1.955	2.821	11.8	21.0
11 17	5 11.07	+24 42.2	1.619	2.554	9.1	22.3	11 17	5 7.15	+27 59.0	1.894	2.826	8.2	20.8
11 27	5 0.00	+24 37.4	1.572	2.547	4.5	22.0	11 27	4 58.00	+27 39.2	1.859	2.831	4.3	20.6
12 7	4 47.60	+24 25.7	1.554	2.539	1.0	21.7	12 7	4 47.96	+27 10.9	1.853	2.836	1.7	20.4
12 17	4 35.32	+24 8.1	1.565	2.530	5.6	22.0	12 17	4 38.21	+26 35.9	1.876	2.840	4.9	20.6
12 27	4 24.62	+23 47.9	1.605	2.520	10.3	22.3	12 27	4 29.88	+25 58.0	1.927	2.845	8.7	20.9
1 6	4 16.61	+23 29.4	1.669	2.509	14.3	22.5	1 6	4 23.78	+25 21.4	2.004	2.849	12.1	21.1
62032	2000 <i>RG</i> ₅₈	12	5.7 146°08	5°9/ 7.4	18		372783	2010 <i>GC</i> ₄₁	12	5.7 15°67	0°1/ 5.7	17	
10 28	5 22.51	+39 4.8	2.235	2.976	14.7	20.1	10 28	5 16.40	+21 36.9	2.184	2.970	13.7	20.6
11 7	5 17.40	+39 52.0	2.150	2.979	12.3	20.0	11 7	5 12.14	+21 58.1	2.099	2.971	10.8	20.5
11 17	5 9.37	+40 27.9	2.086	2.982	9.6	19.8	11 17	5 5.57	+22 18.5	2.036	2.973	7.4	20.2
11 27	4 59.12	+40 47.6	2.047	2.985	7.1	19.7	11 27	4 57.26	+22 37.3	2.000	2.975	3.5	20.0
12 7	4 47.74	+40 48.0	2.036	2.987	5.9	19.6	12 7	4 48.07	+22 53.7	1.993	2.978	0.5	19.8
12 17	4 36.56	+40 29.0	2.053	2.990	7.0	19.7	12 17	4 39.01	+23 7.7	2.015	2.980	4.5	20.1
12 27	4 26.90	+39 53.9	2.098	2.992	9.4	19.8	12 27	4 31.10	+23 20.4	2.067	2.983	8.2	20.3
1 6	4 19.73	+39 8.6	2.168	2.994	12.0	20.0	1 6	4 25.12	+23 33.3	2.144	2.986	11.5	20.5
39516	Lusigny	12	5.7 81°44	1°2/ 5.3	18		313245	2001 <i>UH</i> ₉₈	12	5.7 4°74	2°2/ 5.9	17	
10 28	5 22.20	+22 46.5	1.723	2.512	16.7	18.7	10 28	5 16.15	+24 16.7	1.379	2.195	18.8	20.7
11 7	5 16.76	+21 59.5	1.663	2.538	13.0	18.5	11 7	5 13.43	+25 9.3	1.307	2.195	14.9	20.4
11 17	5 8.59	+21 6.8	1.624	2.563	8.8	18.3	11 17	5 7.24	+26 0.9	1.253	2.196	10.4	20.2
11 27	4 58.55	+20 10.2	1.612	2.587	4.2	18.1	11 27	4 58.30	+26 47.8	1.223	2.198	5.4	19.9
12 7	4 47.87	+19 12.9	1.628	2.612	1.4	17.9	12 7	4 47.90	+27 26.5	1.219	2.202	2.3	19.7
12 17	4 37.80	+18 18.9	1.673	2.636	5.6	18.3	12 17	4 37.68	+27 55.4	1.240	2.207	6.4	20.0
12 27	4 29.48	+17 32.7	1.747	2.660	9.8	18.6	12 27	4 29.32	+28 15.7	1.287	2.213	11.3	20.3
1 6	4 23.65	+16 57.1	1.845	2.683	13.3	18.8	1 6	4 23.98	+28 30.7	1.356	2.220	15.5	20.5
23523	1993 <i>AQ</i>	12	5.7 351°78	3°0/ 6.7	18		43903	1995 <i>WC</i>	12	5.7 33°80	2°6/ 4.9	18	

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
370513	2003 <i>SE</i> ₁₉₇	12	5.7 64°56'	3°0'	4.9	17	70362	1999 <i>RF</i> ₁₉₁	12	5.7 21°03'	3°9'	6.3	18
10 28	5 23.68	+19 11.1	1.228	2.041	20.8	21.0	10 28	5 17.26	+27 57.9	1.122	1.948	21.5	17.7
11 7	5 18.75	+18 17.6	1.181	2.068	16.2	20.8	11 7	5 14.89	+28 50.6	1.069	1.960	17.2	17.5
11 17	5 10.31	+17 21.7	1.153	2.096	11.0	20.6	11 17	5 8.45	+29 36.1	1.033	1.974	12.1	17.3
11 27	4 59.44	+16 26.9	1.148	2.123	5.6	20.4	11 27	4 58.88	+30 9.2	1.018	1.990	6.8	17.0
12 7	4 47.78	+15 37.6	1.169	2.150	3.3	20.3	12 7	4 47.90	+30 26.5	1.027	2.007	3.9	16.9
12 17	4 36.99	+14 58.4	1.217	2.178	7.5	20.7	12 17	4 37.49	+30 28.0	1.060	2.026	7.4	17.2
12 27	4 28.53	+14 32.8	1.290	2.205	12.3	21.0	12 27	4 29.52	+30 18.2	1.117	2.046	12.3	17.5
1 6	4 23.21	+14 22.1	1.385	2.232	16.4	21.3	1 6	4 25.11	+30 3.3	1.195	2.067	16.6	17.9
329903	2005 <i>JC</i> ₈₅	12	5.7 146°79'	1°4'	5.3	18	140906	2001 <i>VG</i> ₅₂	12	5.7 335°44'	1°8'	5.0	18
10 28	5 22.92	+19 25.9	1.831	2.615	16.0	21.7	10 28	5 14.75	+21 28.3	1.672	2.478	16.4	19.2
11 7	5 17.48	+19 15.0	1.753	2.625	12.6	21.5	11 7	5 11.54	+20 39.8	1.584	2.469	13.0	18.9
11 17	5 9.28	+19 2.9	1.698	2.634	8.6	21.2	11 17	5 5.52	+19 45.1	1.518	2.460	8.9	18.7
11 27	4 59.02	+18 49.9	1.668	2.643	4.2	21.0	11 27	4 57.35	+18 46.2	1.476	2.452	4.4	18.4
12 7	4 47.82	+18 37.2	1.667	2.651	1.6	20.8	12 7	4 48.13	+17 46.6	1.462	2.445	2.0	18.2
12 17	4 36.93	+18 26.3	1.696	2.658	5.6	21.1	12 17	4 39.11	+16 50.9	1.475	2.438	6.2	18.5
12 27	4 27.59	+18 19.5	1.753	2.665	9.8	21.4	12 27	4 31.56	+16 3.9	1.515	2.431	10.7	18.7
1 6	4 20.66	+18 18.7	1.835	2.670	13.5	21.6	1 6	4 26.41	+15 28.9	1.579	2.426	14.7	18.9
296067	2009 <i>AX</i> ₄₄	12	5.7 265°23'	3°3'	5.4	18	92364	2000 <i>HN</i> ₃₂	12	5.7 91°74'	0°5'	5.8	18
10 28	5 19.96	+12 6.1	1.848	2.635	15.8	20.2	10 28	5 26.34	+24 6.5	1.395	2.191	19.6	19.1
11 7	5 15.30	+12 18.9	1.760	2.630	12.7	20.0	11 7	5 20.89	+24 8.4	1.336	2.214	15.4	18.9
11 17	5 7.94	+12 38.7	1.693	2.626	9.0	19.7	11 17	5 11.89	+24 5.2	1.297	2.235	10.5	18.7
11 27	4 58.47	+13 6.5	1.652	2.621	5.1	19.5	11 27	5 0.32	+23 55.4	1.281	2.257	5.0	18.4
12 7	4 47.88	+13 42.3	1.639	2.616	3.4	19.4	12 7	4 47.72	+23 39.1	1.293	2.278	0.9	18.2
12 17	4 37.36	+14 25.6	1.655	2.612	6.4	19.6	12 17	4 35.80	+23 18.4	1.332	2.298	6.2	18.6
12 27	4 28.14	+15 15.4	1.700	2.607	10.3	19.8	12 27	4 26.10	+22 57.7	1.399	2.318	11.1	18.9
1 6	4 21.16	+16 10.5	1.769	2.603	14.0	20.0	1 6	4 19.57	+22 41.1	1.488	2.338	15.2	19.2
147630	2004 <i>HN</i> ₄₉	12	5.7 165°36'	0°8'	5.5	18	402330	2005 <i>UB</i> ₁₂₀	12	5.7 74°24'	0°4'	5.8	17
10 28	5 22.20	+19 52.1	1.822	2.608	16.0	20.9	10 28	5 17.77	+24 16.4	2.020	2.806	14.7	22.0
11 7	5 17.09	+19 58.1	1.739	2.611	12.7	20.6	11 7	5 13.33	+24 13.0	1.942	2.815	11.5	21.8
11 17	5 9.13	+20 3.6	1.678	2.615	8.6	20.4	11 17	5 6.41	+24 5.3	1.886	2.823	7.9	21.6
11 27	4 59.01	+20 8.3	1.642	2.618	4.2	20.1	11 27	4 57.67	+23 52.6	1.856	2.831	3.8	21.4
12 7	4 47.82	+20 12.2	1.636	2.620	1.1	19.9	12 7	4 48.11	+23 35.6	1.855	2.840	0.7	21.1
12 17	4 36.83	+20 15.9	1.658	2.622	5.5	20.2	12 17	4 38.82	+23 15.7	1.883	2.848	4.7	21.5
12 27	4 27.34	+20 21.1	1.709	2.623	9.8	20.5	12 27	4 30.88	+22 55.7	1.939	2.857	8.6	21.7
1 6	4 20.27	+20 29.6	1.785	2.624	13.6	20.7	1 6	4 25.09	+22 38.4	2.021	2.865	12.0	21.9
283179	2009 <i>SS</i> ₃₅	12	5.7 260°04'	3°2'	6.6	17	331049	2009 <i>VV</i> ₁₀₀	12	5.7 288°63'	0°1'	5.7	18
10 28	5 18.49	+31 28.7	2.264	3.031	13.8	20.8	10 28	5 17.21	+21 34.7	2.302	3.082	13.3	20.9
11 7	5 13.96	+31 54.7	2.172	3.028	11.2	20.6	11 7	5 12.73	+21 57.2	2.209	3.079	10.5	20.7
11 17	5 6.91	+32 13.4	2.103	3.025	8.1	20.4	11 17	5 5.98	+22 19.1	2.139	3.075	7.1	20.5
11 27	4 57.95	+32 22.2	2.059	3.022	4.9	20.2	11 27	4 57.51	+22 39.5	2.097	3.072	3.4	20.3
12 7	4 48.01	+32 19.4	2.044	3.019	3.2	20.1	12 7	4 48.13	+22 57.7	2.083	3.068	0.5	20.0
12 17	4 38.19	+32 5.5	2.059	3.017	5.2	20.2	12 17	4 38.81	+23 13.5	2.100	3.065	4.4	20.3
12 27	4 29.62	+31 43.0	2.101	3.014	8.4	20.4	12 27	4 30.55	+23 27.7	2.146	3.061	8.1	20.6
1 6	4 23.15	+31 16.0	2.170	3.011	11.5	20.6	1 6	4 24.16	+23 41.7	2.218	3.058	11.3	20.8
268874	2007 <i>AV</i> ₁₇	12	5.7 210°20'	4°5'	6.7	18	8734	Warner	12	5.7 38°63'	0°6'	5.5	18
10 28	5 23.72	+32 26.2	1.675	2.452	17.6	21.6	10 28	5 17.06	+20 53.5	1.962	2.753	14.9	18.0
11 7	5 19.08	+33 2.5	1.589	2.450	14.3	21.4	11 7	5 12.87	+20 53.2	1.880	2.756	11.7	17.8
11 17	5 10.95	+33 29.6	1.524	2.447	10.5	21.1	11 17	5 6.17	+20 51.3	1.821	2.759	8.0	17.6
11 27	5 0.04	+33 42.7	1.482	2.445	6.6	20.9	11 27	4 57.60	+20 47.8	1.787	2.763	3.8	17.3
12 7	4 47.68	+33 38.4	1.468	2.442	4.5	20.8	12 7	4 48.12	+20 43.1	1.781	2.766	0.9	17.1
12 17	4 35.51	+33 16.9	1.481	2.439	6.8	20.9	12 17	4 38.85	+20 38.4	1.805	2.770	5.0	17.4
12 27	4 25.18	+32 42.6	1.521	2.435	10.8	21.1	12 27	4 30.88	+20 35.4	1.857	2.773	9.0	17.7
1 6	4 17.87	+32 2.2	1.585	2.432	14.6	21.3	1 6	4 25.05	+20 36.2	1.933	2.777	12.5	17.9
473368	2015 <i>TP</i> ₃₃₁	12	5.7 160°80'	3°8'	4.9	18	158116	2001 <i>CM</i> ₅	12	5.7 310°86'	0°0'	5.6	17
10 28	5 18.73	+ 9 52.8	2.400	3.169	13.1	21.1	10 28	5 15.58	+22 29.6	1.952	2.746	14.8	20.4
11 7	5 13.51	+ 9 43.9	2.317	3.174	10.5	20.9	11 7	5 11.99	+22 30.6	1.852	2.729	11.8	20.1
11 17	5 6.27	+ 9 40.3	2.256	3.179	7.6	20.7	11 17	5 5.78	+22 28.8	1.774	2.713	8.1	19.9
11 27	4 57.54	+ 9 43.8	2.223	3.184	4.8	20.6	11 27	4 57.51	+22 24.0	1.722	2.697	3.9	19.6
12 7	4 48.09	+ 9 55.6	2.220	3.188	3.9	20.5	12 7	4 48.12	+22 16.2	1.697	2.682	0.6	19.3
12 17	4 38.81	+10 16.1	2.247	3.192	5.9	20.6	12 17	4 38.74	+22 6.6	1.701	2.667	5.1	19.6
12 27	4 30.57	+10 45.4	2.304	3.195	8.8	20.8	12 27	4 30.56	+21 57.3	1.733	2.652	9.4	19.8
1 6	4 24.03	+11 22.4	2.386	3.198	11.5	21.0	1 6	4 24.55	+21 51.1	1.789	2.637	13.2	20.0
222414	2001 <i>FU</i> ₁₆₃	12	5.7 298°32'	2°2'	5.0	18	6057	Robbia	12	5.7 56°94'	7°6'	3.1	18
10 28	5 14.81	+17 17.0	2.093	2.885	14.0	20.6	10 28	5 12.74	+ 0 2.1	2.378	3.140	13.4	16.9
11 7	5 11.06	+16 55.9	1.993	2.868	11.1	20.4	11 7	5 8.80	- 1 1.9	2.312	3.148	11.3	16.8
11 17	5 4.97	+16 34.4	1.914	2.852	7.7	20.1	11 17	5 3.04	- 1 56.2	2.268	3.157	9.3	16.7
11 27	4 57.05	+16 14.0	1.862	2.835	4.1	19.9	11 27	4 55.99	- 2 36.0	2.249	3.165	7.9	16.6
12 7	4 48.15	+15 56.3	1.838	2.818	2.4	19.7	12 7	4 48.38	- 2 57.8	2.257	3.174	7.7	16.6
12 17	4 39.28	+15 43.3	1.842	2.802	5.6	19.9	12 17	4 40.98	- 3 0.0	2.292	3.183	8.9	16.7
12 27	4 31.48	+15 37.0	1.875	2.785	9.4	20.1	12 27	4 34.55	- 2 42.8	2.353	3.192	10.7	16.9
1 6	4 25.60	+15 38.7	1.933	2.769	12.9	20.3	1 6	4 29.68	- 2 8.4	2.437	3.201	12.7	17.0
133415	2003 <i>SC</i> ₁₈₁	12	5.7 321°83'	5°3'	3.6	17	334046	2001 <i>KY</i> ₅₀	12	5.7 187°50'	1°2'	5.3	18
10 28													

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
516494	2005 <i>WH</i> ₄₉	12	5.7 319°72	0°9/ 5.9 18			241808	2001 <i>RH</i> ₉	12	5.7 63°46	11°0/ 1.3 18		
10 28	5 17.25	+24 34.9	1.403	2.215	18.7	21.7	10 28	5 21.47	- 1 7.0	1.793	2.552	17.2	19.0
11 7	5 14.40	+24 41.2	1.315	2.202	14.9	21.4	11 7	5 15.73	- 3 42.4	1.761	2.589	14.7	18.9
11 17	5 8.03	+24 42.6	1.245	2.188	10.4	21.1	11 17	5 7.68	- 6 3.0	1.751	2.625	12.4	18.9
11 27	4 58.78	+24 37.5	1.199	2.175	5.1	20.8	11 27	4 58.13	- 7 59.4	1.768	2.661	11.1	18.9
12 7	4 47.93	+24 25.2	1.178	2.163	1.1	20.5	12 7	4 48.15	- 9 24.7	1.811	2.697	11.2	18.9
12 17	4 37.12	+24 7.3	1.184	2.151	6.4	20.8	12 17	4 38.78	-10 15.9	1.880	2.733	12.4	19.1
12 27	4 28.10	+23 47.6	1.214	2.140	11.8	21.1	12 27	4 30.98	-10 34.4	1.972	2.768	14.2	19.3
1 6	4 22.12	+23 30.7	1.267	2.129	16.5	21.3	1 6	4 25.36	-10 24.7	2.084	2.803	16.0	19.5
191162	2002 <i>JN</i> ₁₂₂	12	5.7 139°19	4°0/ 4.8 18			46139	2001 <i>FV</i> ₅₆	12	5.7 222°77	4°7/ 4.1 18		
10 28	5 16.98	+ 7 8.2	2.883	3.640	11.4	20.4	10 28	5 14.27	+ 7 57.8	2.623	3.394	12.1	19.8
11 7	5 11.75	+ 7 0.1	2.804	3.652	9.2	20.3	11 7	5 9.96	+ 7 21.1	2.532	3.388	9.8	19.6
11 17	5 4.88	+ 6 58.0	2.750	3.664	6.8	20.1	11 17	5 3.86	+ 6 48.9	2.464	3.381	7.3	19.4
11 27	4 56.84	+ 7 3.6	2.723	3.675	4.7	20.0	11 27	4 56.44	+ 6 24.1	2.423	3.374	5.3	19.3
12 7	4 48.28	+ 7 17.9	2.727	3.686	4.1	20.0	12 7	4 48.37	+ 6 9.2	2.411	3.367	4.8	19.3
12 17	4 39.89	+ 7 41.1	2.761	3.696	5.5	20.1	12 17	4 40.39	+ 6 5.7	2.428	3.360	6.4	19.3
12 27	4 32.35	+ 8 13.0	2.826	3.706	7.8	20.3	12 27	4 33.26	+ 6 14.2	2.474	3.352	8.8	19.5
1 6	4 26.21	+ 8 52.5	2.917	3.715	10.0	20.4	1 6	4 27.60	+ 6 34.4	2.545	3.344	11.3	19.6
448352	2009 <i>GY</i>	12	5.7 112°63	0°7/ 5.9 18			226943	2004 <i>TV</i> ₃₃₅	12	5.7 106°56	0°2/ 5.8 18		
10 28	5 19.16	+24 3.0	2.051	2.833	14.6	21.2	10 28	5 17.67	+23 21.9	2.375	3.152	13.0	21.2
11 7	5 14.46	+24 15.9	1.970	2.840	11.5	21.0	11 7	5 12.83	+23 22.2	2.297	3.165	10.2	21.1
11 17	5 7.23	+24 25.5	1.910	2.846	7.9	20.8	11 17	5 5.87	+23 19.4	2.242	3.177	6.9	20.9
11 27	4 58.11	+24 30.7	1.877	2.851	3.8	20.6	11 27	4 57.40	+23 13.0	2.215	3.189	3.3	20.7
12 7	4 48.08	+24 31.0	1.873	2.857	0.9	20.4	12 7	4 48.23	+23 3.4	2.216	3.201	0.5	20.5
12 17	4 38.27	+24 27.1	1.898	2.863	4.8	20.7	12 17	4 39.32	+22 51.7	2.249	3.213	4.2	20.8
12 27	4 29.78	+24 21.0	1.952	2.868	8.6	20.9	12 27	4 31.55	+22 39.7	2.311	3.225	7.6	21.0
1 6	4 23.45	+24 15.4	2.031	2.874	12.0	21.2	1 6	4 25.61	+22 29.7	2.399	3.236	10.6	21.2
331391	2012 <i>FM</i> ₁₅	12	5.7 177°80	0°9/ 5.9 17			447631	2006 <i>UM</i> ₂₆₅	12	5.7 145°75	4°0/ 6.5 18		
10 28	5 25.14	+24 15.0	1.883	2.659	15.9	21.7	10 28	5 23.02	+32 8.1	2.185	2.944	14.5	21.0
11 7	5 19.47	+24 30.1	1.795	2.661	12.7	21.4	11 7	5 17.67	+32 58.1	2.100	2.950	11.8	20.8
11 17	5 10.83	+24 41.7	1.730	2.663	8.7	21.2	11 17	5 9.55	+33 41.5	2.038	2.955	8.6	20.6
11 27	4 59.90	+24 48.0	1.690	2.664	4.3	21.0	11 27	4 59.30	+34 14.1	2.002	2.960	5.5	20.4
12 7	4 47.82	+24 47.8	1.680	2.665	1.0	20.7	12 7	4 47.95	+34 33.0	1.995	2.965	4.0	20.3
12 17	4 35.92	+24 41.8	1.700	2.664	5.3	21.0	12 17	4 36.74	+34 37.5	2.017	2.970	5.8	20.4
12 27	4 25.56	+24 32.5	1.748	2.662	9.6	21.3	12 27	4 26.91	+34 29.9	2.068	2.974	8.8	20.6
1 6	4 17.73	+24 23.4	1.822	2.660	13.4	21.5	1 6	4 19.42	+34 14.6	2.145	2.978	11.9	20.8
83920	2001 <i>VX</i> ₁₅	12	5.7 99°30	4°4/ 5.4 18 R			401713	2013 <i>HP</i> ₁₁₄	12	5.7 267°16	1°3/ 6.0 18		
10 28	5 21.01	+ 7 45.5	2.083	2.852	14.8	19.3	10 28	5 18.42	+25 54.2	2.017	2.801	14.8	21.2
11 7	5 15.55	+ 7 57.0	2.009	2.865	11.9	19.1	11 7	5 14.08	+26 5.7	1.928	2.797	11.7	21.0
11 17	5 7.78	+ 8 17.3	1.957	2.878	8.7	18.9	11 17	5 7.11	+26 12.6	1.859	2.794	8.1	20.7
11 27	4 58.32	+ 8 48.0	1.932	2.891	5.6	18.8	11 27	4 58.13	+26 13.3	1.817	2.791	4.1	20.5
12 7	4 48.07	+ 9 29.3	1.936	2.903	4.4	18.7	12 7	4 48.13	+26 7.2	1.803	2.787	1.4	20.3
12 17	4 38.06	+10 20.2	1.970	2.916	6.5	18.9	12 17	4 38.26	+25 55.1	1.819	2.784	4.9	20.5
12 27	4 29.30	+11 19.1	2.033	2.928	9.6	19.1	12 27	4 29.70	+25 39.7	1.863	2.780	8.9	20.8
1 6	4 22.53	+12 24.0	2.122	2.940	12.6	19.3	1 6	4 23.36	+25 24.2	1.931	2.777	12.4	21.0
172191	Ralphmcnett	12	5.7 33°50	6°5/ 7.8 18			7950	Berezov	12	5.7 96°29	5°1/ 7.5 18		
10 28	5 22.38	+38 56.2	1.746	2.507	17.6	20.0	10 28	5 20.82	+38 4.8	2.397	3.139	13.8	17.3
11 7	5 18.01	+39 29.3	1.667	2.510	14.6	19.8	11 7	5 15.76	+38 41.2	2.316	3.148	11.4	17.1
11 17	5 10.17	+39 47.7	1.608	2.513	11.3	19.6	11 17	5 8.11	+39 6.9	2.258	3.157	8.8	17.0
11 27	4 59.65	+39 45.8	1.571	2.516	8.2	19.5	11 27	4 58.55	+39 18.0	2.225	3.167	6.3	16.8
12 7	4 47.86	+39 20.7	1.561	2.520	6.5	19.4	12 7	4 48.08	+39 12.5	2.219	3.176	5.1	16.8
12 17	4 36.45	+38 33.3	1.578	2.524	7.7	19.5	12 17	4 37.85	+38 50.6	2.243	3.185	6.1	16.8
12 27	4 27.03	+37 29.6	1.621	2.528	10.8	19.6	12 27	4 29.02	+38 15.7	2.295	3.194	8.5	17.0
1 6	4 20.64	+36 18.0	1.688	2.532	14.0	19.9	1 6	4 22.41	+37 32.8	2.373	3.203	11.0	17.2
80203	1999 <i>VA</i> ₅₈	12	5.7 12°18	2°2/ 5.2 18			52522	1996 <i>JW</i> ₁₀	12	5.7 184°83	1°3/ 5.4 18 R		
10 28	5 16.46	+20 37.2	1.175	2.004	20.6	18.7	10 28	5 21.12	+19 27.7	2.053	2.833	14.7	20.1
11 7	5 13.87	+19 59.9	1.109	2.006	16.3	18.4	11 7	5 15.95	+19 17.7	1.964	2.833	11.6	19.9
11 17	5 7.58	+19 17.9	1.061	2.009	11.1	18.1	11 17	5 8.24	+19 6.5	1.898	2.833	7.9	19.7
11 27	4 58.48	+18 33.7	1.035	2.012	5.5	17.8	11 27	4 58.63	+18 54.4	1.858	2.832	3.9	19.5
12 7	4 48.05	+17 50.8	1.033	2.017	2.5	17.7	12 7	4 48.07	+18 42.4	1.847	2.831	1.5	19.3
12 17	4 38.06	+17 14.1	1.057	2.022	7.5	18.0	12 17	4 37.68	+18 31.8	1.867	2.829	5.2	19.5
12 27	4 30.19	+16 48.0	1.104	2.028	12.9	18.3	12 27	4 28.58	+18 24.8	1.915	2.826	9.2	19.8
1 6	4 25.52	+16 35.4	1.172	2.035	17.5	18.6	1 6	4 21.61	+18 23.1	1.989	2.822	12.7	20.0
326571	2002 <i>QT</i> ₁₆	12	5.7 33°03	5°8/ 3.6 18			196339	2003 <i>FM</i> ₇₆	12	5.7 257°07	1°1/ 5.9 18		
10 28	5 13.32	+ 7 59.9	2.134	2.920	14.0	20.4	10 28	5 20.76	+25 41.0	1.794	2.581	16.2	21.4
11 7	5 9.52	+ 6 58.3	2.061	2.925	11.4	20.2	11 7	5 16.41	+25 43.9	1.695	2.567	13.0	21.2
11 17	5 3.67	+ 6 1.7	2.011	2.930	8.6	20.0	11 17	5 9.00	+25 41.3	1.617	2.553	9.0	20.9
11 27	4 56.35	+ 5 14.4	1.986	2.936	6.3	19.9	11 27	4 59.16	+25 31.5	1.564	2.538	4.5	20.6
12 7	4 48.37	+ 4 40.1	1.989	2.942	5.9	19.9	12 7	4 47.98	+25 14.0	1.539	2.523	1.2	20.3
12 17	4 40.62	+ 4 21.3	2.020	2.948	7.7	20.0	12 17	4 36.82	+24 50.1	1.543	2.508	5.6	20.6
12 27	4 33.96	+ 4 19.0	2.078	2.955	10.3	20.2	12 27	4 27.13	+24 23.3	1.574	2.493	10.2	20.8
1 6	4 29.05	+ 4 32.3	2.159	2.961	12.9	20.4	1 6	4 19.99	+23 58.1	1.630	2.477	14.3	21.0
442342	2011 <i>SR</i> ₂₀₂	12	5.7 97°78	5°6/ 3.9 17			101223	1998 <i>SW</i> ₆₂	12	5.7 96°53	4°0/ 6.6 18		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
334800	2003 <i>SJ</i> ₂₀₅	12	5.7	94°10	3°0/ 6.6	18	4516	Pugovkin	12	5.7	302°21	2°5/ 4.9	18
10 28	5 19.66	+31 21.4	2.388	3.149	13.4	21.2	10 28	5 16.54	+16 52.2	1.971	2.763	14.8	16.9
11 7	5 14.58	+31 47.8	2.311	3.164	10.7	21.0	11 7	5 12.42	+16 25.9	1.887	2.762	11.7	16.7
11 17	5 7.17	+32 6.9	2.257	3.178	7.7	20.8	11 17	5 5.88	+15 59.6	1.824	2.761	8.1	16.5
11 27	4 58.06	+32 16.5	2.230	3.193	4.6	20.7	11 27	4 57.53	+15 35.0	1.788	2.760	4.3	16.3
12 7	4 48.17	+32 15.2	2.232	3.207	3.0	20.6	12 7	4 48.29	+15 14.1	1.779	2.759	2.7	16.1
12 17	4 38.54	+32 3.6	2.264	3.221	4.8	20.7	12 17	4 39.24	+14 59.0	1.800	2.758	5.8	16.3
12 27	4 30.19	+31 44.2	2.325	3.235	7.8	20.9	12 27	4 31.44	+14 51.7	1.849	2.757	9.6	16.6
1 6	4 23.84	+31 20.7	2.412	3.249	10.6	21.1	1 6	4 25.69	+14 53.2	1.922	2.756	13.0	16.8
153802	2001 <i>VY</i> ₁₀₉	12	5.7	65°14	0°6/ 5.8	18	110965	2001 <i>UX</i> ₁₇₀	12	5.7	102°15	1°7/ 6.2	18
10 28	5 22.84	+24 17.8	1.444	2.244	18.8	20.0	10 28	5 19.67	+27 9.9	2.075	2.852	14.6	20.0
11 7	5 18.04	+24 18.1	1.387	2.267	14.8	19.8	11 7	5 14.87	+27 23.6	1.996	2.862	11.6	19.8
11 17	5 9.92	+24 13.1	1.350	2.289	10.0	19.6	11 17	5 7.53	+27 31.7	1.939	2.871	8.0	19.6
11 27	4 59.43	+24 1.8	1.337	2.312	4.8	19.4	11 27	4 58.30	+27 32.6	1.908	2.880	4.2	19.4
12 7	4 47.99	+23 44.6	1.350	2.335	0.8	19.1	12 7	4 48.19	+27 25.5	1.906	2.888	1.7	19.2
12 17	4 37.19	+23 23.7	1.391	2.358	5.9	19.5	12 17	4 38.34	+27 11.5	1.933	2.897	4.8	19.5
12 27	4 28.44	+23 3.0	1.459	2.381	10.6	19.9	12 27	4 29.86	+26 53.3	1.989	2.906	8.5	19.7
1 6	4 22.64	+22 46.4	1.551	2.403	14.6	20.2	1 6	4 23.58	+26 34.3	2.071	2.914	11.8	19.9
448370	2009 <i>HX</i> ₉₇	12	5.7	208°27	0°8/ 5.6	18	249483	2009 <i>UU</i> ₂₆	12	5.7	76°03	1°3/ 5.9	18
10 28	5 19.86	+18 45.5	2.093	2.874	14.4	21.4	10 28	5 19.58	+24 49.0	2.202	2.978	13.9	20.3
11 7	5 15.01	+19 4.9	2.002	2.872	11.4	21.2	11 7	5 14.59	+25 19.6	2.129	2.994	11.0	20.1
11 17	5 7.67	+19 25.8	1.934	2.869	7.8	21.0	11 17	5 7.22	+25 47.2	2.078	3.011	7.5	19.9
11 27	4 58.41	+19 47.4	1.892	2.867	3.8	20.7	11 27	4 58.12	+26 10.1	2.054	3.027	3.8	19.7
12 7	4 48.13	+20 9.3	1.879	2.864	1.0	20.5	12 7	4 48.22	+26 27.0	2.059	3.043	1.3	19.6
12 17	4 37.93	+20 31.1	1.897	2.860	4.9	20.8	12 17	4 38.56	+26 37.8	2.095	3.059	4.5	19.8
12 27	4 28.92	+20 53.4	1.944	2.857	8.9	21.0	12 27	4 30.17	+26 44.0	2.160	3.075	8.0	20.1
1 6	4 21.98	+21 17.1	2.016	2.853	12.3	21.2	1 6	4 23.82	+26 48.0	2.251	3.091	11.1	20.3
520844	2014 <i>UZ</i> ₂₃₇	12	5.7	319°71	3°3/ 4.9	17	79676	1998 <i>SG</i> ₄₇	12	5.7	26°77	5°8/ 6.8	18
10 28	5 14.30	+13 5.6	2.095	2.886	14.1	21.0	10 28	5 21.80	+33 6.3	1.301	2.100	20.6	18.9
11 7	5 10.62	+12 53.7	2.001	2.874	11.2	20.8	11 7	5 18.43	+33 58.3	1.234	2.106	16.8	18.7
11 17	5 4.67	+12 45.4	1.928	2.862	8.0	20.6	11 17	5 10.96	+34 39.2	1.184	2.112	12.4	18.4
11 27	4 56.97	+12 42.5	1.882	2.850	4.7	20.4	11 27	5 0.23	+35 2.5	1.157	2.119	8.1	18.2
12 7	4 48.35	+12 46.7	1.864	2.839	3.4	20.3	12 7	4 47.90	+35 3.8	1.153	2.126	5.8	18.1
12 17	4 39.77	+12 58.9	1.874	2.828	6.0	20.4	12 17	4 35.97	+34 43.2	1.176	2.134	8.1	18.3
12 27	4 32.25	+13 19.7	1.913	2.818	9.5	20.6	12 27	4 26.42	+34 6.6	1.222	2.142	12.3	18.5
1 6	4 26.58	+13 48.9	1.976	2.808	12.8	20.8	1 6	4 20.49	+33 22.7	1.291	2.151	16.4	18.8
107678	2001 <i>FO</i> ₁₀	12	5.7	279°42	1°8/ 6.2	18	302623	2002 <i>QE</i> ₁₄₀	12	5.7	64°79	3°8/ 4.8	18
10 28	5 19.33	+27 32.8	1.840	2.625	15.9	20.4	10 28	5 19.50	+14 21.2	1.667	2.464	16.9	21.3
11 7	5 15.28	+27 39.6	1.739	2.609	12.8	20.1	11 7	5 14.77	+13 46.3	1.612	2.488	13.3	21.1
11 17	5 8.25	+27 39.6	1.659	2.593	9.0	19.9	11 17	5 7.39	+13 14.2	1.577	2.512	9.2	20.9
11 27	4 58.82	+27 31.0	1.604	2.577	4.7	19.6	11 27	4 58.17	+12 47.6	1.567	2.536	5.3	20.7
12 7	4 48.07	+27 12.7	1.577	2.560	1.9	19.4	12 7	4 48.24	+12 29.1	1.585	2.561	3.9	20.7
12 17	4 37.34	+26 46.0	1.579	2.544	5.5	19.6	12 17	4 38.82	+12 20.5	1.631	2.585	6.8	20.9
12 27	4 28.02	+26 14.4	1.608	2.527	9.9	19.8	12 27	4 31.02	+12 23.2	1.704	2.609	10.5	21.2
1 6	4 21.20	+25 42.8	1.661	2.510	13.9	20.0	1 6	4 25.58	+12 36.7	1.801	2.633	13.8	21.5
15561	2000 <i>GU</i> ₃₆	12	5.7	63°65	7°7/ 4.5	18	489043	2005 <i>YM</i> ₁₁	12	5.7	42°63	0°7/ 5.9	16
10 28	5 21.35	+ 6 41.5	1.389	2.187	19.6	17.6	10 28	5 20.69	+23 50.3	1.256	2.071	20.3	21.5
11 7	5 16.49	+ 5 41.9	1.345	2.214	15.8	17.4	11 7	5 16.90	+24 1.8	1.201	2.089	16.0	21.3
11 17	5 8.64	+ 4 53.3	1.320	2.242	11.9	17.3	11 17	5 9.46	+24 8.8	1.164	2.108	10.9	21.0
11 27	4 58.74	+ 4 21.4	1.318	2.270	8.7	17.2	11 27	4 59.33	+24 9.8	1.151	2.127	5.2	20.8
12 7	4 48.13	+ 4 10.1	1.342	2.298	7.8	17.2	12 7	4 48.07	+24 4.4	1.162	2.147	1.0	20.5
12 17	4 38.19	+ 4 20.8	1.392	2.326	9.9	17.4	12 17	4 37.43	+23 54.2	1.200	2.167	6.4	21.0
12 27	4 30.17	+ 4 51.9	1.467	2.353	13.1	17.7	12 27	4 29.02	+23 43.1	1.263	2.188	11.4	21.3
1 6	4 24.82	+ 5 39.6	1.563	2.380	16.3	17.9	1 6	4 23.82	+23 34.8	1.348	2.210	15.7	21.6
178097	2006 <i>SL</i> ₂₃₀	12	5.7	65°09	3°1/ 4.9	18	130310	2000 <i>EP</i> ₁₀₃	12	5.7	210°63	0°7/ 5.6	18
10 28	5 17.30	+15 23.9	1.831	2.626	15.6	20.4	10 28	5 17.25	+18 44.9	2.920	3.688	11.0	20.0
11 7	5 13.08	+14 59.3	1.757	2.633	12.4	20.2	11 7	5 12.25	+19 1.4	2.820	3.682	8.7	19.9
11 17	5 6.33	+14 36.4	1.704	2.641	8.6	20.0	11 17	5 5.43	+19 18.6	2.743	3.676	5.9	19.7
11 27	4 57.72	+14 17.1	1.677	2.648	4.8	19.7	11 27	4 57.26	+19 36.2	2.695	3.669	2.9	19.5
12 7	4 48.26	+14 3.5	1.678	2.656	3.2	19.7	12 7	4 48.36	+19 53.9	2.678	3.663	0.8	19.3
12 17	4 39.08	+13 57.4	1.707	2.664	6.2	19.9	12 17	4 39.49	+20 11.8	2.693	3.655	3.8	19.5
12 27	4 31.27	+14 0.2	1.764	2.672	10.0	20.1	12 27	4 31.41	+20 30.2	2.739	3.648	6.8	19.7
1 6	4 25.65	+14 12.2	1.845	2.680	13.4	20.3	1 6	4 24.78	+20 50.0	2.812	3.640	9.5	19.9
493665	2015 <i>RC</i> ₁₀₁	12	5.7	41°32	9°0/ 8.3	17	443011	2013 <i>CQ</i> ₂₁₄	12	5.7	233°45	7°0/ 3.8	18
10 28	5 24.84	+42 18.2	1.581	2.336	19.3	21.4	10 28	5 16.18	+ 5 8.8	1.981	2.760	15.2	21.6
11 7	5 20.53	+43 31.6	1.521	2.352	16.4	21.2	11 7	5 12.03	+ 4 13.1	1.901	2.757	12.5	21.4
11 17	5 12.18	+44 28.1	1.479	2.369	13.2	21.1	11 17	5 5.57	+ 3 24.8	1.842	2.754	9.7	21.3
11 27	5 0.72	+44 59.4	1.459	2.386	10.4	21.0	11 27	4 57.38	+ 2 48.8	1.808	2.750	7.5	21.1
12 7	4 47.81	+45 0.5	1.463	2.404	9.0	20.9	12 7	4 48.35	+ 2 29.2	1.801	2.747	7.1	21.1
12 17	4 35.46	+44 31.5	1.493	2.422	9.8	21.0	12 17	4 39.47	+ 2 28.2	1.821	2.743	8.8	21.2
12 27	4 25.53	+43 38.7	1.548	2.440	12.2	21.2	12 27	4 31.75	+ 2 46.3	1.868	2.739	11.6	21.4
1 6	4 19.17	+42 32.3	1.625	2.459	15.0	21.4	1 6	4 25.99	+ 3 21.5	1.937	2.735	14.3	21.5
99753	2002 <i>JC</i> ₈₅	12	5.7	64°52	0°3/ 5.8	18	405811	2006 <i>BQ</i> ₇₂	12	5.7	53°84	3°2/	

EPHEMERIDES

12 5.7

12 5.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
244129	2001 VE ₅₈	12 5.7 39°48	0°8/ 5.5 18				487536	2014 US ₁₇₂	12 5.7 229°42	2°3/ 5.2 18			
10 28	5 17.95	+23 15.4	1.503	2.310	17.9	19.3	10 28	5 15.48	+14 40.0	2.517	3.295	12.3	20.9
11 7	5 14.01	+22 38.9	1.446	2.331	14.0	19.1	11 7	5 11.09	+14 36.2	2.425	3.292	9.7	20.7
11 17	5 7.08	+21 56.4	1.410	2.352	9.4	18.9	11 17	5 4.76	+14 34.6	2.356	3.289	6.8	20.6
11 27	4 58.07	+21 9.6	1.398	2.374	4.5	18.7	11 27	4 56.98	+14 36.5	2.315	3.285	3.7	20.4
12 7	4 48.28	+20 21.4	1.413	2.397	1.1	18.5	12 7	4 48.47	+14 42.4	2.303	3.282	2.4	20.3
12 17	4 39.08	+19 35.8	1.455	2.420	5.8	18.9	12 17	4 40.05	+14 53.3	2.322	3.278	4.8	20.4
12 27	4 31.71	+18 57.1	1.524	2.444	10.3	19.2	12 27	4 32.55	+15 9.4	2.369	3.274	7.9	20.6
1 6	4 26.97	+18 28.2	1.616	2.469	14.1	19.5	1 6	4 26.63	+15 31.2	2.443	3.270	10.8	20.8
107696	2001 FZ ₁₅	12 5.7 239°37	5°7/ 6.8 18				251451	2008 CR ₁₂₅	12 5.7 11°12	2°3/ 6.4 18			
10 28	5 25.68	+34 56.1	1.744	2.509	17.4	20.3	10 28	5 18.95	+29 4.9	1.887	2.670	15.7	20.8
11 7	5 20.89	+35 46.0	1.648	2.498	14.4	20.1	11 7	5 14.73	+29 12.4	1.803	2.670	12.5	20.6
11 17	5 12.44	+36 26.7	1.573	2.487	10.9	19.8	11 17	5 7.68	+29 12.1	1.739	2.671	8.8	20.3
11 27	5 0.99	+36 51.7	1.522	2.476	7.5	19.6	11 27	4 58.49	+29 1.9	1.701	2.671	4.8	20.1
12 7	4 47.81	+36 56.3	1.497	2.464	5.7	19.5	12 7	4 48.26	+28 41.3	1.690	2.672	2.3	19.9
12 17	4 34.62	+36 39.3	1.501	2.451	7.6	19.6	12 17	4 38.25	+28 11.8	1.709	2.673	5.3	20.1
12 27	4 23.22	+36 4.5	1.531	2.438	11.2	19.8	12 27	4 29.75	+27 37.2	1.755	2.674	9.3	20.4
1 6	4 14.94	+35 19.6	1.585	2.425	15.0	20.0	1 6	4 23.67	+27 2.1	1.825	2.675	12.9	20.6
21526	Mirano	12 5.7 120°61	6°2/ 4.2 18				396942	2005 JQ ₆₇	12 5.7 213°26	3°8/ 6.4 18			
10 28	5 19.78	+ 3 10.1	2.406	3.159	13.5	18.9	10 28	5 23.40	+31 26.6	2.222	2.980	14.3	21.3
11 7	5 14.13	+ 2 27.6	2.343	3.182	11.1	18.8	11 7	5 18.10	+32 18.5	2.125	2.975	11.6	21.1
11 17	5 6.57	+ 1 53.9	2.304	3.204	8.7	18.6	11 17	5 9.99	+33 5.0	2.051	2.969	8.5	20.9
11 27	4 57.71	+ 1 32.3	2.291	3.225	6.7	18.5	11 27	4 59.66	+33 41.9	2.004	2.963	5.4	20.7
12 7	4 48.34	+ 1 25.3	2.308	3.245	6.3	18.6	12 7	4 48.08	+34 5.9	1.985	2.957	3.8	20.6
12 17	4 39.27	+ 1 33.9	2.353	3.265	7.6	18.7	12 17	4 36.48	+34 15.8	1.997	2.950	5.8	20.7
12 27	4 31.32	+ 1 57.6	2.426	3.284	9.8	18.8	12 27	4 26.16	+34 13.5	2.037	2.943	9.0	20.9
1 6	4 25.08	+ 2 34.5	2.525	3.302	12.0	19.0	1 6	4 18.13	+34 2.9	2.103	2.936	12.1	21.1
391266	2006 SV ₂₂	12 5.7 99°62	7°5/ 3.9 18				51651	2001 HC ₆₅	12 5.7 107°57	1°2/ 5.5 18			
10 28	5 18.70	+ 1 14.4	2.173	2.930	14.6	21.3	10 28	5 21.61	+21 2.3	1.573	2.371	17.6	19.8
11 7	5 13.46	+ 0 17.8	2.118	2.955	12.2	21.2	11 7	5 16.99	+20 43.8	1.501	2.380	13.9	19.6
11 17	5 6.19	- 0 28.2	2.085	2.979	9.7	21.1	11 17	5 9.27	+20 22.2	1.449	2.389	9.5	19.3
11 27	4 57.55	- 0 58.9	2.078	3.002	7.9	21.0	11 27	4 59.24	+19 58.1	1.422	2.398	4.6	19.1
12 7	4 48.37	- 1 11.4	2.098	3.025	7.6	21.1	12 7	4 48.17	+19 33.1	1.422	2.407	1.4	18.9
12 17	4 39.56	- 1 4.5	2.146	3.048	8.8	21.2	12 17	4 37.49	+19 9.6	1.451	2.415	6.0	19.2
12 27	4 31.96	- 0 38.9	2.220	3.069	10.9	21.4	12 27	4 28.57	+18 51.0	1.506	2.423	10.7	19.5
1 6	4 26.18	+ 0 2.4	2.318	3.091	13.1	21.5	1 6	4 22.35	+18 39.9	1.585	2.431	14.7	19.8
491529	2012 KC ₂₃	12 5.7 333°77	2°0/ 5.3 17				521423	2015 MZ ₁₄₇	12 5.7 248°29	9°0/ 3.3 18			
10 28	5 15.48	+16 55.2	1.981	2.775	14.6	21.8	10 28	5 16.72	+ 1 4.9	1.832	2.606	16.4	21.5
11 7	5 11.70	+16 52.6	1.892	2.769	11.6	21.6	11 7	5 12.66	- 0 4.6	1.756	2.602	13.9	21.3
11 17	5 5.49	+16 51.5	1.825	2.763	8.0	21.4	11 17	5 6.12	- 1 3.4	1.699	2.597	11.3	21.1
11 27	4 57.41	+16 52.7	1.784	2.757	4.1	21.1	11 27	4 57.72	- 1 45.1	1.667	2.593	9.4	21.0
12 7	4 48.37	+16 57.1	1.771	2.752	2.1	21.0	12 7	4 48.39	- 2 4.6	1.660	2.588	9.2	21.0
12 17	4 39.43	+17 5.4	1.786	2.748	5.4	21.2	12 17	4 39.22	- 1 59.3	1.680	2.584	10.7	21.1
12 27	4 31.67	+17 18.7	1.830	2.743	9.3	21.4	12 27	4 31.31	- 1 29.5	1.724	2.579	13.2	21.2
1 6	4 25.94	+17 37.6	1.898	2.739	12.8	21.6	1 6	4 25.49	- 0 38.3	1.790	2.574	15.9	21.4
229261	2005 AV ₁₉	12 5.7 327°19	2°2/ 5.3 17				69910	1998 SE ₁₅₅	12 5.7 12°81	0°1/ 5.8 18			
10 28	5 14.84	+16 21.9	2.004	2.798	14.5	20.0	10 28	5 14.65	+23 10.3	1.637	2.444	16.7	19.2
11 7	5 11.20	+16 18.1	1.911	2.788	11.5	19.7	11 7	5 11.55	+23 10.5	1.564	2.449	13.1	19.0
11 17	5 5.16	+16 16.2	1.841	2.778	7.9	19.5	11 17	5 5.60	+23 7.0	1.512	2.454	8.9	18.8
11 27	4 57.27	+16 17.1	1.796	2.769	4.2	19.3	11 27	4 57.52	+22 59.4	1.485	2.461	4.3	18.5
12 7	4 48.40	+16 21.7	1.779	2.760	2.3	19.1	12 7	4 48.43	+22 48.3	1.483	2.468	0.6	18.2
12 17	4 39.58	+16 31.1	1.791	2.752	5.5	19.3	12 17	4 39.63	+22 35.3	1.510	2.477	5.4	18.6
12 27	4 31.90	+16 45.9	1.831	2.743	9.4	19.5	12 27	4 32.39	+22 23.0	1.563	2.486	9.8	18.9
1 6	4 26.21	+17 6.8	1.895	2.736	12.9	19.7	1 6	4 27.58	+22 14.3	1.639	2.496	13.7	19.1
67464	2000 QX ₂₀₈	12 5.7 182°71	0°1/ 5.7 18				289519	2005 ED ₁₇₉	12 5.7 61°95	8°7/ 8.5 18			
10 28	5 17.83	+23 23.4	2.223	3.003	13.7	20.0	10 28	5 26.99	+43 10.5	1.698	2.441	18.7	19.7
11 7	5 13.24	+23 8.4	2.134	3.004	10.8	19.8	11 7	5 22.00	+44 15.2	1.635	2.458	15.8	19.6
11 17	5 6.35	+22 49.1	2.068	3.004	7.3	19.6	11 17	5 13.09	+45 2.9	1.591	2.475	12.8	19.4
11 27	4 57.76	+22 25.7	2.029	3.004	3.5	19.4	11 27	5 1.18	+45 25.7	1.569	2.492	10.1	19.3
12 7	4 48.35	+21 59.0	2.018	3.003	0.5	19.1	12 7	4 47.91	+45 19.0	1.572	2.509	8.7	19.3
12 17	4 39.14	+21 30.9	2.038	3.003	4.5	19.4	12 17	4 35.21	+44 43.3	1.601	2.527	9.5	19.4
12 27	4 31.12	+21 4.3	2.087	3.002	8.3	19.7	12 27	4 24.87	+43 44.8	1.655	2.544	11.7	19.5
1 6	4 25.04	+20 41.8	2.162	3.001	11.6	19.9	1 6	4 18.01	+42 33.4	1.732	2.562	14.4	19.7
56509	2000 HB ₇	12 5.7 242°84	2°3/ 6.1 18 R				24525	2001 CS ₄	12 5.7 158°81	3°6/ 4.9 18			
10 28	5 22.52	+26 33.1	1.686	2.474	17.1	19.5	10 28	5 22.73	+12 32.2	2.104	2.875	14.6	19.4
11 7	5 18.04	+27 8.8	1.597	2.468	13.7	19.3	11 7	5 16.97	+12 12.5	2.024	2.885	11.6	19.2
11 17	5 10.28	+27 40.8	1.529	2.463	9.6	19.0	11 17	5 8.83	+11 56.4	1.966	2.893	8.3	19.0
11 27	4 59.88	+28 5.6	1.485	2.457	5.2	18.7	11 27	4 58.94	+11 45.7	1.935	2.901	4.9	18.9
12 7	4 48.02	+28 20.6	1.469	2.451	2.4	18.5	12 7	4 48.24	+11 42.1	1.934	2.907	3.7	18.8
12 17	4 36.22	+28 25.2	1.481	2.445	6.0	18.8	12 17	4 37.77	+11 46.7	1.963	2.913	6.2	19.0
12 27	4 26.04	+28 21.7	1.520	2.439	10.5	19.0	12 27	4 28.58	+12 0.2	2.022	2.918	9.6	19.2
1 6	4 18.66	+28 14.5	1.584	2.432	14.5	19.2	1 6	4 21.44	+12 22.5	2.105	2.921	12.7	19.4
331852	2003 US ₃₃₆	12 5.7 316°27	4°5/ 4.2 17				453277	2008 TJ ₄₀	12 5.7 266°55	2°9/ 6.8 18			
10 28	5 13.65	+11 53.3	2.075	2.866	1								

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12 5.7

12 5.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
229402	2005 <i>SJ</i> ₁₉₅	12	5.7 116°96	0°1/ 5.8 18			383610	2007 <i>JJ</i> ₃₅	12	5.8 279°84	22°1/16.7 16		
10 28	5 23.79	+23 31.0	1.789	2.572	16.4	21.9	10 28	5 44.66	- 2 26.7	1.208	1.951	24.8	21.3
11 7	5 18.28	+23 25.0	1.719	2.589	12.9	21.7	11 7	5 37.58	- 9 29.8	1.115	1.917	23.0	21.0
11 17	5 9.92	+23 14.6	1.670	2.606	8.8	21.5	11 17	5 25.29	-17 1.2	1.053	1.881	22.2	20.9
11 27	4 59.50	+22 59.2	1.647	2.622	4.2	21.3	11 27	5 7.96	-24 18.4	1.027	1.844	23.2	20.8
12 7	4 48.18	+22 39.4	1.652	2.637	0.6	21.0	12 7	4 46.88	-30 34.4	1.034	1.806	25.9	20.8
12 17	4 37.30	+22 17.1	1.687	2.652	5.3	21.4	12 17	4 24.44	-35 16.7	1.069	1.767	29.2	21.0
12 27	4 28.09	+21 55.7	1.750	2.666	9.5	21.7	12 27	4 3.67	-38 19.1	1.120	1.727	32.3	21.1
1 6	4 21.40	+21 38.2	1.838	2.679	13.2	21.9	1 6	3 46.98	-39 57.3	1.181	1.686	34.8	21.2
152891	2000 <i>CA</i> ₇₉	12	5.7 41°19	3°7/ 6.7 18			20313	Fredrikson	12	5.8 122°57	2°8/ 4.9 18		
10 28	5 21.54	+31 3.4	1.260	2.065	20.8	20.2	10 28	5 19.37	+16 55.2	1.877	2.666	15.5	19.2
11 7	5 17.96	+31 16.4	1.199	2.078	16.7	20.0	11 7	5 14.66	+16 20.2	1.802	2.675	12.2	19.0
11 17	5 10.42	+31 17.0	1.156	2.091	11.9	19.7	11 17	5 7.42	+15 44.8	1.748	2.684	8.4	18.8
11 27	4 59.91	+31 1.4	1.135	2.104	6.8	19.5	11 27	4 58.33	+15 11.0	1.720	2.692	4.6	18.6
12 7	4 48.12	+30 28.8	1.138	2.118	3.7	19.4	12 7	4 48.41	+14 41.6	1.721	2.700	2.9	18.5
12 17	4 36.97	+29 42.4	1.168	2.133	7.0	19.6	12 17	4 38.80	+14 18.8	1.751	2.708	6.1	18.8
12 27	4 28.22	+28 49.1	1.222	2.148	11.7	19.9	12 27	4 30.59	+14 5.1	1.809	2.715	9.9	19.0
1 6	4 22.93	+27 57.0	1.299	2.164	16.0	20.2	1 6	4 24.58	+14 1.6	1.891	2.723	13.3	19.2
421931	2014 <i>QG</i> ₂₄₀	12	5.7 94°05	1°6/ 5.3 18			282347	2003 <i>AZ</i> ₂₂	12	5.8 261°59	9°9/ 8.9 18		
10 28	5 17.78	+18 7.9	2.316	3.096	13.2	21.5	10 28	5 33.32	+49 18.9	2.046	2.739	17.3	20.3
11 7	5 12.86	+17 53.4	2.246	3.115	10.3	21.4	11 7	5 27.43	+50 6.6	1.934	2.714	15.3	20.0
11 17	5 5.89	+17 38.6	2.200	3.134	7.0	21.2	11 17	5 17.25	+50 36.8	1.840	2.688	13.1	19.8
11 27	4 57.49	+17 24.4	2.180	3.153	3.5	21.0	11 27	5 3.46	+50 39.9	1.768	2.661	11.1	19.7
12 7	4 48.48	+17 12.1	2.190	3.172	1.7	20.9	12 7	4 47.64	+50 8.7	1.721	2.634	10.0	19.5
12 17	4 39.77	+17 2.8	2.231	3.190	4.7	21.2	12 17	4 31.89	+49 1.0	1.700	2.605	10.5	19.5
12 27	4 32.22	+16 58.0	2.300	3.208	8.0	21.4	12 27	4 18.39	+47 22.3	1.706	2.576	12.5	19.6
1 6	4 26.47	+16 58.8	2.396	3.226	10.9	21.6	1 6	4 8.64	+45 23.6	1.736	2.546	15.2	19.7
295455	2008 <i>PT</i> ₂	12	5.8 100°48	4°7/ 7.4 18			350491	1999 <i>VW</i> ₈	12	5.8 41°87	4°1/ 4.5 14 C		
10 28	5 29.08	+36 8.8	1.898	2.648	16.7	19.9	10 28	5 18.37	+17 29.9	1.333	2.149	19.3	20.3
11 7	5 22.47	+36 25.5	1.835	2.675	13.6	19.7	11 7	5 14.52	+16 18.1	1.282	2.171	15.1	20.1
11 17	5 12.72	+36 28.8	1.793	2.703	10.1	19.6	11 17	5 7.53	+15 4.9	1.252	2.194	10.4	19.9
11 27	5 0.78	+36 14.8	1.775	2.729	6.6	19.4	11 27	4 58.37	+13 55.2	1.245	2.217	5.8	19.7
12 7	4 48.03	+35 42.2	1.786	2.755	4.7	19.4	12 7	4 48.43	+12 54.5	1.264	2.241	4.3	19.6
12 17	4 35.96	+34 53.5	1.827	2.780	6.3	19.5	12 17	4 39.16	+12 7.8	1.309	2.265	7.8	19.9
12 27	4 25.90	+33 54.3	1.896	2.804	9.4	19.8	12 27	4 31.85	+11 38.2	1.380	2.290	12.0	20.2
1 6	4 18.69	+32 52.0	1.991	2.827	12.5	20.0	1 6	4 27.29	+11 26.1	1.472	2.315	15.8	20.5
351822	2006 <i>PG</i> ₂₅	12	5.8 347°19	12°6/ 3.1 18			453890	2011 <i>UY</i> ₁₉₀	12	5.8 11°55	1°0/ 5.9 17		
10 28	5 16.24	- 9 22.6	1.824	2.564	17.6	20.3	10 28	5 19.45	+23 36.2	1.776	2.568	16.2	21.5
11 7	5 12.28	-10 39.0	1.760	2.563	15.7	20.1	11 7	5 15.27	+24 2.8	1.694	2.569	12.8	21.2
11 17	5 5.85	-11 36.2	1.714	2.562	14.0	20.0	11 17	5 8.18	+24 27.4	1.632	2.570	8.8	21.0
11 27	4 57.59	-12 6.5	1.689	2.560	12.8	19.9	11 27	4 58.84	+24 48.0	1.596	2.571	4.4	20.8
12 7	4 48.47	-12 4.6	1.687	2.559	12.7	19.9	12 7	4 48.33	+25 3.3	1.587	2.572	1.1	20.5
12 17	4 39.57	-11 28.9	1.709	2.559	13.6	20.0	12 17	4 37.98	+25 13.1	1.607	2.573	5.3	20.8
12 27	4 31.95	-10 21.7	1.752	2.558	15.3	20.1	12 27	4 29.10	+25 19.1	1.655	2.575	9.7	21.1
1 6	4 26.43	- 8 48.8	1.816	2.558	17.2	20.2	1 6	4 22.69	+25 24.0	1.727	2.577	13.5	21.3
195709	2002 <i>PP</i> ₄₀	12	5.8 55°08	2°6/ 4.4 18			287981	2003 <i>UP</i> ₁₆₂	12	5.8 57°83	2°4/ 5.4 18		
10 28	5 17.10	+19 49.9	2.178	2.963	13.8	19.2	10 28	5 22.69	+17 58.2	1.204	2.020	20.9	20.3
11 7	5 12.45	+18 29.7	2.100	2.972	10.8	19.1	11 7	5 18.39	+17 44.6	1.152	2.041	16.4	20.0
11 17	5 5.66	+17 4.5	2.045	2.981	7.4	18.9	11 17	5 10.44	+17 31.8	1.119	2.063	11.2	19.8
11 27	4 57.39	+15 37.6	2.019	2.991	4.0	18.7	11 27	4 59.85	+17 21.3	1.109	2.084	5.6	19.6
12 7	4 48.52	+14 13.6	2.022	3.000	2.8	18.6	12 7	4 48.22	+17 14.5	1.124	2.107	2.6	19.5
12 17	4 40.00	+12 56.9	2.056	3.010	5.6	18.8	12 17	4 37.29	+17 13.2	1.165	2.129	7.2	19.8
12 27	4 32.71	+11 52.0	2.120	3.019	9.0	19.0	12 27	4 28.63	+17 19.3	1.231	2.151	12.2	20.1
1 6	4 27.31	+11 1.0	2.209	3.029	12.0	19.3	1 6	4 23.19	+17 33.7	1.318	2.174	16.5	20.5
430608	2002 <i>VD</i> ₁₃	12	5.8 47°35	0°9/ 5.9 18			220419	2003 <i>SL</i> ₂₃₀	12	5.8 36°48	0°5/ 5.6 18		
10 28	5 22.09	+24 17.7	1.206	2.021	20.9	20.7	10 28	5 16.44	+21 20.8	1.882	2.677	15.3	20.1
11 7	5 18.16	+24 29.0	1.153	2.041	16.5	20.4	11 7	5 12.47	+21 20.3	1.810	2.688	12.0	19.9
11 17	5 10.41	+24 35.2	1.118	2.061	11.2	20.2	11 17	5 5.99	+21 17.8	1.761	2.700	8.1	19.7
11 27	4 59.87	+24 34.5	1.106	2.082	5.5	20.0	11 27	4 57.67	+21 13.3	1.737	2.713	3.9	19.4
12 7	4 48.18	+24 26.4	1.119	2.104	1.1	19.7	12 7	4 48.52	+21 7.4	1.741	2.726	0.8	19.2
12 17	4 37.19	+24 13.0	1.158	2.126	6.5	20.2	12 17	4 39.67	+21 1.3	1.774	2.739	5.0	19.6
12 27	4 28.56	+23 58.3	1.222	2.148	11.7	20.5	12 27	4 32.20	+20 56.8	1.834	2.753	9.0	19.8
1 6	4 23.28	+23 46.7	1.308	2.171	16.1	20.8	1 6	4 26.90	+20 56.1	1.919	2.767	12.4	20.1
352312	2007 <i>UE</i> ₆₂	12	5.8 243°18	3°5/ 6.5 18			417217	2005 <i>YS</i>	12	5.8 157°09	52°3/14.6 18		
10 28	5 21.79	+30 44.6	1.947	2.719	15.6	21.4	10 28	11 31.46	+54 3.8	0.392	0.970	81.9	20.4
11 7	5 17.16	+31 17.3	1.853	2.712	12.7	21.2	11 7	11 36.50	+59 33.5	0.353	1.024	74.6	20.0
11 17	5 9.53	+31 43.1	1.779	2.704	9.2	20.9	11 17	11 42.50	+66 52.1	0.309	1.064	67.7	19.6
11 27	4 59.52	+31 58.3	1.731	2.696	5.5	20.7	11 27	11 42.26	+77 24.2	0.265	1.089	60.6	19.1
12 7	4 48.20	+32 0.5	1.711	2.687	3.5	20.5	12 7	11 59.58	+87 2.2	0.230	1.101	54.3	18.6
12 17	4 36.94	+31 49.5	1.719	2.679	5.9	20.7	12 17	0 41.81	+67 42.2	0.215	1.100	52.6	18.4
12 27	4 27.13	+31 28.2	1.756	2.670	9.6	20.9	12 27	0 47.38	+47 41.8	0.226	1.085	57.8	18.6
1 6	4 19.84	+31 1.5	1.817	2.661	13.2	21.1	1 6	0 56.67	+31 28.1	0.259	1.056	66.7	19.1
392347	2010 <i>FX</i> ₁₇	12	5.8 297°94	1°4/ 6.0 18			369000	2007 <i>GT</i> ₇₅	12	5.8 137			

EPHEMERIDES

12 5.8

12 5.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
271438	2004 DA ₅₆	12	5.8 177°78	0°6/ 5.6	18		51072	2000 GX ₁₅₉	12	5.8 251°72	3°9/ 7.1	18	
10 28	5 22.49	+21 51.6	1.958	2.738	15.3	22.3	10 28	5 18.63	+34 46.6	2.473	3.226	13.2	19.4
11 7	5 17.22	+21 37.6	1.872	2.741	12.1	22.1	11 7	5 14.03	+35 11.4	2.378	3.222	10.8	19.2
11 17	5 9.25	+21 20.1	1.807	2.742	8.2	21.8	11 17	5 7.04	+35 27.5	2.306	3.219	8.0	19.0
11 27	4 59.27	+20 59.2	1.768	2.743	4.0	21.6	11 27	4 58.22	+35 31.9	2.261	3.215	5.3	18.8
12 7	4 48.31	+20 35.9	1.759	2.743	0.9	21.4	12 7	4 48.49	+35 23.0	2.243	3.211	3.9	18.7
12 17	4 37.57	+20 12.1	1.779	2.743	5.2	21.7	12 17	4 38.87	+35 1.2	2.255	3.207	5.3	18.8
12 27	4 28.24	+19 50.8	1.829	2.742	9.4	21.9	12 27	4 30.45	+34 29.2	2.296	3.203	8.0	19.0
1 6	4 21.20	+19 34.7	1.903	2.740	13.0	22.1	1 6	4 24.03	+33 51.5	2.363	3.199	10.8	19.2
287771	2003 SB ₇₉	12	5.8 197°01	3°5/ 6.7	17		318215	2004 RT ₁₈₇	12	5.8 37°99	7°2/ 8.2	18	
10 28	5 25.97	+31 53.1	1.783	2.552	17.0	21.6	10 28	5 21.99	+41 6.8	1.841	2.592	17.1	20.2
11 7	5 20.64	+32 6.9	1.693	2.550	13.8	21.4	11 7	5 17.64	+41 51.1	1.772	2.604	14.4	20.0
11 17	5 11.97	+32 10.5	1.623	2.547	10.0	21.1	11 17	5 9.92	+42 20.1	1.722	2.616	11.4	19.9
11 27	5 0.70	+32 0.2	1.578	2.543	5.9	20.9	11 27	4 59.68	+42 28.0	1.695	2.630	8.6	19.7
12 7	4 48.10	+31 34.0	1.561	2.539	3.5	20.7	12 7	4 48.29	+42 11.9	1.694	2.643	7.2	19.7
12 17	4 35.73	+30 53.5	1.573	2.533	6.1	20.9	12 17	4 37.35	+41 32.7	1.720	2.657	8.1	19.8
12 27	4 25.13	+30 3.5	1.613	2.528	10.2	21.1	12 27	4 28.37	+40 35.7	1.772	2.671	10.5	19.9
1 6	4 17.41	+29 11.0	1.677	2.521	14.1	21.3	1 6	4 22.33	+39 28.9	1.849	2.686	13.3	20.2
441877	2010 BS ₆	12	5.8 143°53	3°6/ 4.4	18		281828	2009 YN ₂₅	12	5.8 119°43	3°4/ 5.1	18	
10 28	5 19.22	+15 40.1	2.063	2.846	14.5	21.7	10 28	5 19.55	+14 37.4	1.655	2.452	16.9	20.6
11 7	5 14.27	+14 39.9	1.985	2.854	11.5	21.5	11 7	5 15.28	+14 19.6	1.577	2.454	13.5	20.4
11 17	5 7.01	+13 38.6	1.930	2.862	8.0	21.3	11 17	5 8.14	+14 4.7	1.520	2.456	9.4	20.2
11 27	4 58.11	+12 39.6	1.902	2.869	4.7	21.1	11 27	4 58.81	+13 54.8	1.487	2.458	5.3	20.0
12 7	4 48.48	+11 46.5	1.903	2.876	3.7	21.0	12 7	4 48.41	+13 51.7	1.482	2.460	3.5	19.8
12 17	4 39.16	+11 2.8	1.934	2.882	6.3	21.2	12 17	4 38.23	+13 56.9	1.504	2.461	6.8	20.1
12 27	4 31.11	+10 31.3	1.993	2.888	9.7	21.4	12 27	4 29.56	+14 11.3	1.553	2.463	11.0	20.3
1 6	4 25.07	+10 13.0	2.077	2.894	12.8	21.6	1 6	4 23.35	+14 35.1	1.626	2.465	14.7	20.5
66791	1999 TH ₂₃₃	12	5.8 82°72	5°4/ 7.7	18		49513	1999 CK ₂₈	12	5.8 24°47	8°5/ 4.5	18	
10 28	5 26.64	+37 27.3	1.791	2.547	17.4	19.1	10 28	5 15.62	- 3 51.0	2.223	2.970	14.7	17.6
11 7	5 20.90	+37 49.7	1.728	2.570	14.2	18.9	11 7	5 11.32	- 4 22.4	2.151	2.973	12.6	17.5
11 17	5 11.86	+37 57.6	1.686	2.594	10.7	18.8	11 17	5 4.98	- 4 39.5	2.099	2.976	10.5	17.3
11 27	5 0.47	+37 46.5	1.667	2.617	7.3	18.6	11 27	4 57.16	- 4 37.9	2.072	2.979	9.0	17.3
12 7	4 48.16	+37 14.8	1.675	2.640	5.4	18.6	12 7	4 48.65	- 4 15.0	2.071	2.983	8.6	17.2
12 17	4 36.51	+36 24.8	1.712	2.663	6.8	18.7	12 17	4 40.33	- 3 30.3	2.096	2.987	9.6	17.3
12 27	4 26.93	+35 22.7	1.777	2.685	9.9	18.9	12 27	4 33.06	- 2 25.8	2.148	2.991	11.5	17.4
1 6	4 20.31	+34 16.3	1.866	2.707	13.0	19.2	1 6	4 27.51	- 1 5.3	2.223	2.995	13.6	17.6
404706	2014 JV ₃	12	5.8 129°50	2°7/ 5.4	18		127744	2003 FN ₁₂	12	5.8 271°19	3°3/ 6.6	18	
10 28	5 20.69	+13 24.6	2.060	2.839	14.7	21.1	10 28	5 21.44	+30 28.6	1.676	2.460	17.3	20.2
11 7	5 15.53	+13 33.2	1.981	2.847	11.6	20.9	11 7	5 17.34	+30 46.4	1.584	2.451	14.0	19.9
11 17	5 7.97	+13 46.5	1.924	2.855	8.1	20.7	11 17	5 9.90	+30 55.3	1.513	2.442	10.1	19.7
11 27	4 58.62	+14 5.2	1.893	2.863	4.5	20.5	11 27	4 59.80	+30 51.9	1.465	2.433	5.8	19.4
12 7	4 48.41	+14 29.4	1.892	2.870	2.8	20.4	12 7	4 48.27	+30 34.2	1.445	2.424	3.3	19.2
12 17	4 38.38	+14 58.9	1.921	2.877	5.6	20.6	12 17	4 36.85	+30 3.2	1.452	2.415	6.2	19.4
12 27	4 29.60	+15 33.7	1.978	2.884	9.2	20.8	12 27	4 27.14	+29 23.4	1.487	2.406	10.6	19.6
1 6	4 22.86	+16 13.1	2.062	2.891	12.4	21.0	1 6	4 20.28	+28 41.1	1.545	2.397	14.6	19.9
140413	2001 TM ₈₄	12	5.8 290°52	1°0/ 6.0	18		164484	2006 FO ₃₁	12	5.8 194°95	0°6/ 5.5	18	
10 28	5 18.48	+25 22.2	1.967	2.753	15.0	20.6	10 28	5 15.63	+20 47.9	2.797	3.570	11.3	21.3
11 7	5 14.24	+25 30.2	1.879	2.751	11.9	20.4	11 7	5 11.08	+20 39.2	2.702	3.568	8.9	21.1
11 17	5 7.33	+25 33.6	1.813	2.749	8.2	20.2	11 17	5 4.72	+20 28.6	2.631	3.566	6.1	20.9
11 27	4 58.41	+25 31.1	1.773	2.747	4.1	19.9	11 27	4 57.03	+20 16.6	2.589	3.563	2.9	20.7
12 7	4 48.45	+25 22.5	1.760	2.745	1.1	19.7	12 7	4 48.70	+20 3.8	2.576	3.560	0.8	20.5
12 17	4 38.65	+25 8.6	1.777	2.743	4.9	20.0	12 17	4 40.46	+19 51.3	2.595	3.557	3.9	20.8
12 27	4 30.19	+24 52.2	1.822	2.741	9.0	20.2	12 27	4 33.11	+19 40.7	2.643	3.554	6.9	21.0
1 6	4 23.98	+24 36.5	1.892	2.739	12.6	20.4	1 6	4 27.24	+19 33.3	2.719	3.551	9.7	21.2
398931	2013 CP ₁₈₈	12	5.8 194°80	5°0/ 7.2	18		46296	2001 KU ₇₁	12	5.8 184°16	1°0/ 6.1	17	
10 28	5 23.60	+37 9.7	2.359	3.100	14.1	21.4	10 28	5 16.82	+26 18.7	2.432	3.206	12.8	19.8
11 7	5 18.18	+37 49.1	2.266	3.098	11.7	21.2	11 7	5 12.37	+26 16.5	2.341	3.206	10.1	19.6
11 17	5 10.00	+38 18.6	2.194	3.096	8.9	21.1	11 17	5 5.77	+26 9.2	2.274	3.206	7.0	19.4
11 27	4 59.69	+38 34.0	2.148	3.093	6.3	20.9	11 27	4 57.58	+25 56.0	2.233	3.206	3.5	19.2
12 7	4 48.27	+38 32.4	2.130	3.089	5.0	20.8	12 7	4 48.62	+25 37.2	2.221	3.205	1.0	19.0
12 17	4 36.97	+38 13.8	2.142	3.086	6.2	20.9	12 17	4 39.82	+25 14.0	2.240	3.205	4.2	19.3
12 27	4 27.03	+37 41.1	2.183	3.081	8.8	21.0	12 27	4 32.12	+24 49.0	2.289	3.205	7.6	19.5
1 6	4 19.41	+36 59.5	2.249	3.077	11.6	21.2	1 6	4 26.21	+24 24.9	2.363	3.204	10.6	19.7
354651	2005 JG ₁₀₀	12	5.8 111°28	2°1/ 5.4	18		213321	2001 SG ₁₁₉	12	5.8 168°26	5°1/ 3.8	18	R
10 28	5 20.09	+15 45.2	2.122	2.901	14.3	21.4	10 28	5 16.91	+ 9 23.1	2.315	3.090	13.4	20.9
11 7	5 14.94	+15 47.3	2.048	2.915	11.2	21.2	11 7	5 12.24	+ 8 22.0	2.234	3.093	10.8	20.8
11 17	5 7.48	+15 51.6	1.996	2.930	7.7	21.0	11 17	5 5.57	+ 7 24.2	2.177	3.096	8.0	20.6
11 27	4 58.36	+15 58.9	1.971	2.943	4.0	20.8	11 27	4 57.44	+ 6 33.4	2.146	3.099	5.7	20.5
12 7	4 48.48	+16 9.5	1.976	2.957	2.2	20.7	12 7	4 48.65	+ 5 53.2	2.144	3.101	5.3	20.4
12 17	4 38.85	+16 23.8	2.011	2.970	5.2	20.9	12 17	4 40.05	+ 5 26.3	2.172	3.102	7.1	20.6
12 27	4 30.47	+16 42.4	2.075	2.983	8.7	21.2	12 27	4 32.49	+ 5 14.3	2.227	3.103	9.7	20.7
1 6	4 24.07	+17 5.5	2.164	2.995	11.9	21.4	1 6	4 26.65	+ 5 16.7	2.307	3.104	12.4	20.9
180642	2004 GY ₁₇	12	5.8 270°99	3°9/ 4.5	18		83954	2001 WU ₉₈	12	5.8 87°62	4°1/ 4.9	18	
10 28	5 16.27	+13 47.0	1.984										

EPHEMERIDES

12 5.8

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
170353	2003 <i>SO</i> ₁₇₇	12 5.8	6°46'	0°6'	5.7	18	481953	2009 <i>DF</i> ₈₄	12 5.8	257°56'	1°8'	6.2	17
10 28	5 18.32	+20 33.2	1.142	1.970	21.1	19.8	10 28	5 20.16	+27 3.9	1.978	2.758	15.1	22.2
11 7	5 15.73	+20 44.4	1.074	1.970	16.8	19.5	11 7	5 15.75	+27 20.3	1.881	2.747	12.1	22.0
11 17	5 9.22	+20 55.4	1.023	1.970	11.5	19.2	11 17	5 8.54	+27 31.5	1.804	2.736	8.5	21.8
11 27	4 59.59	+21 5.5	0.994	1.972	5.5	18.9	11 27	4 59.11	+27 35.4	1.754	2.725	4.5	21.5
12 7	4 48.34	+21 14.2	0.989	1.974	1.0	18.6	12 7	4 48.47	+27 30.8	1.732	2.714	1.9	21.3
12 17	4 37.40	+21 22.2	1.009	1.978	7.1	19.0	12 17	4 37.87	+27 18.2	1.738	2.703	5.2	21.5
12 27	4 28.64	+21 31.8	1.053	1.982	12.8	19.4	12 27	4 28.60	+27 0.2	1.774	2.691	9.3	21.7
1 6	4 23.31	+21 45.3	1.117	1.987	17.7	19.7	1 6	4 21.65	+26 40.9	1.834	2.679	13.0	21.9
457435	2008 <i>US</i> ₇₉	12 5.8	39°02'	0°7'	6.0	17	49554	1999 <i>CG</i> ₈₇	12 5.8	346°78'	5°0'	6.9	18
10 28	5 16.07	+25 38.9	2.138	2.922	14.0	21.2	10 28	5 18.52	+33 22.1	1.583	2.372	17.9	18.6
11 7	5 11.99	+25 28.2	2.059	2.930	11.0	21.0	11 7	5 15.35	+34 0.3	1.500	2.366	14.7	18.4
11 17	5 5.58	+25 11.8	2.002	2.938	7.6	20.8	11 17	5 8.72	+34 28.4	1.436	2.361	10.9	18.1
11 27	4 57.51	+24 49.6	1.972	2.946	3.7	20.6	11 27	4 59.32	+34 41.3	1.395	2.356	7.1	17.9
12 7	4 48.68	+24 22.4	1.970	2.955	0.8	20.4	12 7	4 48.45	+34 36.1	1.380	2.352	5.0	17.8
12 17	4 40.11	+23 52.2	1.998	2.964	4.5	20.7	12 17	4 37.73	+34 12.7	1.391	2.349	7.1	17.9
12 27	4 32.80	+23 21.8	2.054	2.973	8.1	20.9	12 27	4 28.84	+33 35.6	1.428	2.346	11.0	18.1
1 6	4 27.47	+22 54.4	2.136	2.982	11.4	21.1	1 6	4 22.94	+32 51.8	1.487	2.344	14.8	18.3
408266	2013 <i>FL</i> ₁₆	12 5.8	237°79'	0°8'	6.0	18	518250	2016 <i>UZ</i> ₁₂₆	12 5.8	0°25'	3°1'	6.1	18
10 28	5 19.56	+25 15.9	2.445	3.214	12.9	22.3	10 28	5 19.56	+26 25.9	1.315	2.126	19.7	20.6
11 7	5 14.66	+25 20.0	2.338	3.200	10.3	22.1	11 7	5 16.58	+27 17.7	1.240	2.124	15.8	20.4
11 17	5 7.46	+25 19.9	2.254	3.185	7.1	21.9	11 17	5 9.80	+28 6.5	1.184	2.123	11.2	20.1
11 27	4 58.48	+25 14.7	2.196	3.170	3.6	21.7	11 27	4 59.92	+28 47.5	1.151	2.123	6.1	19.8
12 7	4 48.53	+25 4.1	2.169	3.153	0.9	21.4	12 7	4 48.36	+29 16.6	1.142	2.123	3.2	19.6
12 17	4 38.59	+24 48.8	2.173	3.137	4.3	21.7	12 17	4 36.95	+29 32.4	1.159	2.125	7.0	19.9
12 27	4 29.68	+24 31.0	2.206	3.120	7.9	21.8	12 27	4 27.57	+29 37.3	1.202	2.127	12.0	20.2
1 6	4 22.61	+24 13.5	2.266	3.102	11.2	22.0	1 6	4 21.53	+29 36.2	1.266	2.130	16.4	20.4
43028	1999 <i>VE</i> ₂₃	12 5.8	23°47'	1°4'	5.9	18	80287	1999 <i>XZ</i> ₄₄	12 5.8	43°95'	0°2'	5.7	18
10 28	5 19.81	+22 2.4	1.289	2.104	19.8	16.5	10 28	5 20.33	+23 58.7	1.262	2.077	20.2	19.2
11 7	5 16.46	+22 57.3	1.226	2.114	15.7	16.2	11 7	5 16.75	+23 36.1	1.199	2.088	15.9	19.0
11 17	5 9.47	+23 53.1	1.182	2.125	10.8	16.0	11 17	5 9.52	+23 6.6	1.155	2.099	10.9	18.7
11 27	4 59.63	+24 46.2	1.161	2.137	5.3	15.7	11 27	4 59.57	+22 30.4	1.134	2.110	5.2	18.4
12 7	4 48.38	+25 32.9	1.166	2.150	1.5	15.5	12 7	4 48.44	+21 49.8	1.137	2.122	0.8	18.1
12 17	4 37.47	+26 11.0	1.197	2.164	6.4	15.9	12 17	4 37.87	+21 8.8	1.168	2.135	6.6	18.6
12 27	4 28.62	+26 41.4	1.253	2.179	11.5	16.2	12 27	4 29.46	+20 32.6	1.223	2.148	11.8	18.9
1 6	4 22.97	+27 6.8	1.331	2.195	15.8	16.5	1 6	4 24.24	+20 5.5	1.300	2.161	16.3	19.2
480981	2003 <i>XY</i> ₈	12 5.8	322°56'	7°0'	9.8	16	81629	2000 <i>HO</i> ₇₆	12 5.8	110°06'	4°8'	4.0	18
10 28	5 30.10	+46 7.5	1.568	2.303	20.3	20.0	10 28	5 18.24	+10 0.9	2.316	3.088	13.4	19.2
11 7	5 24.87	+45 16.3	1.460	2.283	17.4	19.7	11 7	5 13.12	+9 0.9	2.251	3.109	10.7	19.1
11 17	5 15.25	+43 52.7	1.371	2.264	13.9	19.5	11 17	5 6.05	+8 4.7	2.209	3.129	7.9	19.0
11 27	5 2.33	+41 48.7	1.304	2.245	10.0	19.2	11 27	4 57.65	+7 15.6	2.194	3.148	5.5	18.8
12 7	4 48.03	+39 2.5	1.265	2.227	7.2	19.0	12 7	4 48.71	+6 37.0	2.209	3.167	4.9	18.8
12 17	4 34.54	+35 41.8	1.255	2.210	8.2	19.0	12 17	4 40.10	+6 11.1	2.253	3.186	6.7	19.0
12 27	4 23.80	+32 3.8	1.275	2.193	12.1	19.2	12 27	4 32.62	+5 59.2	2.326	3.203	9.3	19.2
1 6	4 16.89	+28 28.3	1.322	2.178	16.4	19.4	1 6	4 26.87	+6 0.9	2.423	3.221	11.8	19.4
208889	2002 <i>TU</i> ₉₉	12 5.8	178°25'	6°6'	8.1	18	247834	2003 <i>SF</i> ₂₅₄	12 5.8	181°26'	3°4'	6.9	18
10 28	5 25.80	+41 44.1	2.221	2.948	15.2	20.8	10 28	5 22.78	+32 56.7	2.152	2.911	14.7	20.8
11 7	5 20.23	+42 23.4	2.133	2.949	12.9	20.6	11 7	5 17.54	+33 9.4	2.062	2.912	11.9	20.6
11 17	5 11.56	+42 49.4	2.065	2.950	10.3	20.5	11 17	5 9.55	+33 12.6	1.994	2.913	8.7	20.4
11 27	5 0.50	+42 56.5	2.022	2.951	7.8	20.3	11 27	4 59.50	+33 3.2	1.951	2.913	5.3	20.2
12 7	4 48.26	+42 41.4	2.006	2.951	6.6	20.3	12 7	4 48.44	+32 40.1	1.937	2.912	3.4	20.1
12 17	4 36.28	+42 4.4	2.019	2.950	7.4	20.3	12 17	4 37.60	+32 4.4	1.953	2.911	5.4	20.2
12 27	4 25.97	+41 9.8	2.059	2.950	9.7	20.5	12 27	4 28.22	+31 20.1	1.998	2.910	8.7	20.4
1 6	4 18.34	+40 4.4	2.124	2.949	12.3	20.6	1 6	4 21.17	+30 32.5	2.068	2.908	12.0	20.6
414348	2008 <i>SK</i> ₃₀₈	12 5.8	64°36'	4°7'	3.8	18	44017	1997 <i>WV</i> ₃₅	12 5.8	355°01'	1°1'	6.1	17
10 28	5 15.98	+11 46.0	2.188	2.972	13.8	21.1	10 28	5 15.50	+26 26.8	2.048	2.835	14.4	18.2
11 7	5 11.47	+10 33.2	2.127	2.993	11.0	20.9	11 7	5 11.80	+26 22.3	1.961	2.833	11.5	18.0
11 17	5 4.97	+9 22.8	2.089	3.015	7.9	20.8	11 17	5 5.63	+26 11.6	1.896	2.831	7.9	17.8
11 27	4 57.12	+8 18.9	2.079	3.037	5.4	20.6	11 27	4 57.62	+25 54.2	1.856	2.830	4.0	17.6
12 7	4 48.76	+7 25.3	2.097	3.058	4.9	20.6	12 7	4 48.70	+25 30.4	1.845	2.829	1.1	17.4
12 17	4 40.75	+6 45.2	2.144	3.080	6.8	20.8	12 17	4 39.97	+25 2.0	1.862	2.828	4.7	17.6
12 27	4 33.92	+6 20.1	2.219	3.102	9.5	21.0	12 27	4 32.50	+24 32.0	1.908	2.828	8.6	17.8
1 6	4 28.86	+6 10.0	2.319	3.123	12.1	21.2	1 6	4 27.12	+24 4.0	1.979	2.828	12.0	18.1
382716	2002 <i>XW</i> ₄₁	12 5.8	22°30'	4°1'	6.4	18	19890	3042 <i>T</i> ₋₂	12 5.8	325°25'	3°4'	5.1	18
10 28	5 20.00	+28 45.0	1.172	1.990	21.3	20.2	10 28	5 19.34	+16 22.8	1.342	2.156	19.3	18.8
11 7	5 17.22	+29 34.0	1.110	1.996	17.1	19.9	11 7	5 15.91	+15 58.1	1.265	2.152	15.4	18.5
11 17	5 10.30	+30 15.7	1.066	2.004	12.2	19.7	11 17	5 9.04	+15 34.4	1.207	2.149	10.7	18.2
11 27	5 0.12	+30 44.7	1.042	2.013	7.0	19.4	11 27	4 59.44	+15 14.3	1.172	2.145	5.8	18.0
12 7	4 48.32	+30 57.0	1.043	2.023	4.1	19.3	12 7	4 48.44	+15 0.3	1.162	2.142	3.6	17.8
12 17	4 36.96	+30 52.6	1.069	2.033	7.5	19.5	12 17	4 37.65	+14 55.0	1.178	2.139	7.6	18.1
12 27	4 27.99	+30 36.2	1.118	2.045	12.5	19.8	12 27	4 28.68	+15 0.5	1.219	2.137	12.6	18.3
1 6	4 22.68	+30 14.6	1.189	2.057	16.9	20.1	1 6	4 22.68	+15 17.4	1.282	2.134	17.1	18.6
401472	2013 <i>CQ</i> ₁₈₃	12 5.8	341°98'	8°4'	3.6	18	350026	2010 <i>JG</i> ₁₁₆	12 5.8	238°56'	0°5'	5.9	18

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
356688	2011 <i>UB</i> ₁₂₁	12 5.8 33°99	2.5°/ 6.5 18				271164	2003 <i>SW</i> ₂₃₅	12 5.8 356°70	15°8'/ 8.6 16			
10 28	5 19.79	+29 22.0	1.781	2.566	16.4	20.9	10 28	5 27.50	+55 48.6	1.659	2.352	20.8	19.5
11 7	5 15.62	+29 32.3	1.700	2.568	13.1	20.7	11 7	5 25.26	+58 16.0	1.592	2.346	19.1	19.3
11 17	5 8.46	+29 34.5	1.640	2.571	9.3	20.4	11 17	5 17.44	+60 23.7	1.541	2.341	17.6	19.2
11 27	4 59.04	+29 26.1	1.604	2.574	5.1	20.2	11 27	5 4.34	+61 58.5	1.509	2.338	16.4	19.1
12 7	4 48.52	+29 6.4	1.596	2.577	2.5	20.0	12 7	4 47.77	+62 49.4	1.496	2.337	15.8	19.1
12 17	4 38.26	+28 36.9	1.616	2.580	5.5	20.2	12 17	4 30.89	+62 51.4	1.503	2.336	16.1	19.1
12 27	4 29.61	+28 1.7	1.663	2.583	9.6	20.5	12 27	4 17.22	+62 9.0	1.530	2.337	17.1	19.2
1 6	4 23.53	+27 25.7	1.735	2.586	13.3	20.7	1 6	4 9.04	+60 54.1	1.574	2.339	18.5	19.3
216938	1999 <i>RU</i> ₂₀₄	12 5.8 48°85	3°0'/ 6.9 18				187942	2001 <i>KF</i> ₃	12 5.8 157°93	1°2'/ 5.5 18			
10 28	5 19.93	+32 48.9	1.858	2.633	16.1	19.7	10 28	5 22.38	+20 53.7	1.816	2.601	16.1	21.2
11 7	5 15.41	+32 38.1	1.789	2.650	13.0	19.5	11 7	5 17.30	+20 32.0	1.735	2.607	12.7	21.0
11 17	5 8.06	+32 15.3	1.741	2.666	9.3	19.4	11 17	5 9.43	+20 7.1	1.676	2.613	8.7	20.8
11 27	4 58.72	+31 38.8	1.718	2.683	5.4	19.2	11 27	4 59.48	+19 39.7	1.643	2.617	4.2	20.5
12 7	4 48.59	+30 49.3	1.722	2.701	3.0	19.0	12 7	4 48.54	+19 11.4	1.638	2.622	1.4	20.4
12 17	4 38.96	+29 49.9	1.756	2.718	5.3	19.2	12 17	4 37.89	+18 44.5	1.662	2.625	5.6	20.6
12 27	4 31.03	+28 46.1	1.817	2.736	9.0	19.5	12 27	4 28.77	+18 22.2	1.715	2.628	9.9	20.9
1 6	4 25.58	+27 43.9	1.904	2.754	12.4	19.7	1 6	4 22.06	+18 7.1	1.793	2.631	13.6	21.2
356840	2011 <i>VL</i> ₁₅	12 5.8 314°04	0°7'/ 5.6 18				331689	2002 <i>QX</i> ₁₁₆	12 5.8 38°84	5°2'/ 5.0 18			
10 28	5 17.30	+21 54.0	1.747	2.546	16.1	20.9	10 28	5 19.22	+12 14.6	1.307	2.120	19.7	20.9
11 7	5 13.64	+21 40.1	1.658	2.538	12.8	20.7	11 7	5 15.63	+11 44.5	1.242	2.127	15.8	20.7
11 17	5 7.14	+21 22.6	1.590	2.530	8.8	20.4	11 17	5 8.69	+11 20.3	1.196	2.134	11.3	20.4
11 27	4 58.45	+21 1.8	1.547	2.523	4.2	20.1	11 27	4 59.23	+11 5.7	1.173	2.141	6.9	20.2
12 7	4 48.62	+20 38.8	1.531	2.515	1.0	19.9	12 7	4 48.57	+11 3.9	1.175	2.149	5.3	20.1
12 17	4 38.92	+20 15.8	1.543	2.508	5.6	20.2	12 17	4 38.30	+11 16.3	1.203	2.158	8.5	20.4
12 27	4 30.65	+19 55.9	1.583	2.502	10.1	20.4	12 27	4 29.91	+11 43.3	1.255	2.167	12.9	20.6
1 6	4 24.76	+19 42.1	1.646	2.495	14.0	20.7	1 6	4 24.42	+12 23.1	1.329	2.176	16.9	20.9
347355	2012 <i>QV</i> ₃₃	12 5.8 33°11	3°9'/ 4.8 18				51136	2000 <i>HQ</i> ₄₄	12 5.8 311°30	0°5'/ 5.9 18			
10 28	5 17.36	+17 12.2	1.253	2.075	19.9	20.2	10 28	5 17.22	+22 52.3	2.291	3.072	13.3	19.0
11 7	5 14.19	+16 20.0	1.195	2.087	15.7	19.9	11 7	5 12.92	+23 15.2	2.198	3.067	10.5	18.8
11 17	5 7.65	+15 27.1	1.156	2.100	10.9	19.7	11 17	5 6.34	+23 36.8	2.127	3.062	7.2	18.6
11 27	4 58.65	+14 37.5	1.141	2.114	6.0	19.5	11 27	4 58.00	+23 55.8	2.083	3.057	3.5	18.4
12 7	4 48.62	+13 55.7	1.150	2.128	4.1	19.4	12 7	4 48.73	+24 11.5	2.068	3.053	0.7	18.1
12 17	4 39.13	+13 26.0	1.184	2.144	7.9	19.7	12 17	4 39.51	+24 23.7	2.083	3.049	4.4	18.4
12 27	4 31.64	+13 11.2	1.243	2.160	12.5	20.0	12 27	4 31.35	+24 33.5	2.128	3.044	8.0	18.6
1 6	4 27.06	+13 11.8	1.324	2.176	16.6	20.3	1 6	4 25.06	+24 42.6	2.198	3.040	11.3	18.8
454767	2014 <i>WV</i> ₂₃₅	12 5.8 137°66	5°3'/ 7.4 17				521499	2015 <i>OJ</i> ₉₅	12 5.8 113°18	6°4'/ 4.0 18			
10 28	5 22.67	+39 55.6	2.856	3.577	12.3	20.8	10 28	5 17.43	+7 0.9	1.935	2.717	15.4	21.7
11 7	5 17.06	+40 50.1	2.771	3.585	10.3	20.6	11 7	5 13.05	+6 3.6	1.864	2.724	12.5	21.5
11 17	5 9.07	+41 35.2	2.709	3.593	8.1	20.5	11 17	5 6.33	+5 12.8	1.814	2.731	9.5	21.3
11 27	4 59.26	+42 6.9	2.673	3.601	6.2	20.4	11 27	4 57.93	+4 33.3	1.790	2.738	7.1	21.2
12 7	4 48.52	+42 22.4	2.666	3.609	5.3	20.4	12 7	4 48.76	+4 8.7	1.793	2.745	6.5	21.2
12 17	4 37.88	+42 21.2	2.689	3.616	6.1	20.4	12 17	4 39.84	+4 1.4	1.824	2.752	8.4	21.3
12 27	4 28.40	+42 5.4	2.740	3.623	7.9	20.5	12 27	4 32.19	+4 11.9	1.881	2.758	11.2	21.5
1 6	4 20.90	+41 39.1	2.818	3.630	10.0	20.7	1 6	4 26.54	+4 38.6	1.961	2.765	14.0	21.7
304096	2006 <i>HF</i> ₅₀	12 5.8 122°74	1°3'/ 5.5 18				173063	2006 <i>SG</i> ₉₃	12 5.8 3°82	0°7'/ 5.6 18			
10 28	5 21.98	+18 13.6	2.408	3.176	13.1	22.0	10 28	5 17.00	+21 49.3	1.711	2.511	16.3	20.5
11 7	5 16.10	+18 11.6	2.335	3.197	10.3	21.8	11 7	5 13.37	+21 36.6	1.630	2.510	12.9	20.3
11 17	5 8.13	+18 9.7	2.286	3.218	7.0	21.7	11 17	5 6.92	+21 20.6	1.570	2.511	8.8	20.1
11 27	4 58.69	+18 8.0	2.266	3.239	3.5	21.5	11 27	4 58.33	+21 1.7	1.535	2.511	4.2	19.8
12 7	4 48.63	+18 7.1	2.275	3.258	1.4	21.3	12 7	4 48.70	+20 40.9	1.527	2.512	0.9	19.6
12 17	4 38.85	+18 7.7	2.316	3.277	4.5	21.6	12 17	4 39.29	+20 20.4	1.548	2.513	5.5	19.9
12 27	4 30.26	+18 11.1	2.388	3.295	7.8	21.8	12 27	4 31.37	+20 3.2	1.595	2.515	9.9	20.2
1 6	4 23.50	+18 18.1	2.486	3.312	10.7	22.1	1 6	4 25.85	+19 51.8	1.666	2.517	13.8	20.4
79715	1998 <i>SA</i> ₁₀₇	12 5.8 95°77	1°7'/ 5.4 18				411081	2009 <i>VL</i> ₈₉	12 5.8 45°57	2°3'/ 6.7 17			
10 28	5 24.37	+19 33.3	1.667	2.455	17.2	19.5	10 28	5 18.00	+30 36.2	2.084	2.859	14.6	21.0
11 7	5 18.75	+19 10.1	1.607	2.480	13.5	19.3	11 7	5 13.69	+30 30.2	2.004	2.867	11.7	20.8
11 17	5 10.27	+18 45.1	1.568	2.505	9.1	19.1	11 17	5 6.86	+30 15.2	1.946	2.875	8.3	20.6
11 27	4 59.77	+18 19.5	1.554	2.529	4.5	18.9	11 27	4 58.20	+29 49.6	1.914	2.883	4.6	20.4
12 7	4 48.49	+17 55.0	1.569	2.552	1.9	18.7	12 7	4 48.73	+29 13.8	1.910	2.891	2.3	20.3
12 17	4 37.77	+17 34.1	1.613	2.575	5.9	19.1	12 17	4 39.57	+28 30.0	1.936	2.899	4.8	20.5
12 27	4 28.83	+17 19.4	1.684	2.597	10.1	19.4	12 27	4 31.81	+27 42.2	1.990	2.908	8.4	20.7
1 6	4 22.45	+17 12.8	1.780	2.618	13.7	19.6	1 6	4 26.23	+26 55.1	2.069	2.917	11.6	20.9
63368	2001 <i>HQ</i> ₇	12 5.8 181°57	2°5'/ 4.8 18				132528	2002 <i>JO</i> ₆₁	12 5.8 225°23	1°9'/ 5.4 18			
10 28	5 15.14	+16 15.5	2.500	3.280	12.3	19.6	10 28	5 19.75	+17 23.5	1.958	2.744	15.1	20.4
11 7	5 10.84	+15 39.4	2.412	3.281	9.7	19.4	11 7	5 15.19	+17 17.5	1.866	2.738	12.0	20.2
11 17	5 4.65	+15 2.9	2.348	3.281	6.8	19.2	11 17	5 8.03	+17 12.3	1.796	2.732	8.3	19.9
11 27	4 57.08	+14 28.0	2.311	3.281	3.8	19.1	11 27	4 58.86	+17 8.7	1.752	2.725	4.2	19.7
12 7	4 48.85	+13 56.7	2.303	3.280	2.6	19.0	12 7	4 48.63	+17 7.5	1.736	2.718	2.1	19.5
12 17	4 40.78	+13 31.1	2.326	3.280	5.0	19.1	12 17	4 38.48	+17 9.8	1.750	2.711	5.6	19.7
12 27	4 33.67	+13 13.2	2.378	3.280	8.1	19.3	12 27	4 29.59	+17 16.9	1.792	2.704	9.6	20.0
1 6	4 28.16	+13 3.9	2.456	3.279	10.9	19.5	1 6	4 22.85	+17 29.9	1.860	2.696	13.2	20.2
101843	1999 <i>JM</i> ₇₀	12 5.8 318°37	1°2'/ 5.9 18				311823	2006 <i>UR</i> ₂₆₆	12 5.8 190°28	0°7'/ 5.			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
29242	1992 <i>HB</i> ₄		12 5.8	43°07'	14.8°/29.5	18 R	178964	2001 <i>QY</i> ₂₁₃		12 5.8	46°64'	0.4°/5.9	18
10 28	5 20.36	+ 5 35.8	0.995	1.820	23.7	16.9	10 28	5 19.33	+24 20.0	1.606	2.405	17.3	19.9
11 7	5 17.08	+ 1 53.4	0.947	1.826	20.0	16.7	11 7	5 15.17	+24 14.5	1.544	2.423	13.6	19.7
11 17	5 9.88	- 1 43.9	0.918	1.832	16.7	16.5	11 17	5 8.06	+24 3.9	1.503	2.442	9.2	19.5
11 27	4 59.81	- 4 55.6	0.911	1.839	14.9	16.4	11 27	4 58.83	+23 47.7	1.486	2.462	4.5	19.3
12 7	4 48.52	- 7 23.5	0.926	1.846	15.5	16.5	12 7	4 48.71	+23 26.6	1.497	2.482	0.7	19.1
12 17	4 37.90	- 8 56.4	0.963	1.854	18.0	16.7	12 17	4 39.08	+23 2.9	1.535	2.502	5.4	19.5
12 27	4 29.63	- 9 33.6	1.018	1.861	21.2	16.9	12 27	4 31.19	+22 40.2	1.600	2.522	9.8	19.8
1 6	4 24.74	- 9 23.0	1.088	1.870	24.2	17.2	1 6	4 25.88	+22 21.6	1.690	2.543	13.5	20.0
234592	2001 <i>YL</i> ₆₃		12 5.8	318°42'	0.4°/5.7	18	409061	2003 <i>SK</i> ₁₇₅		12 5.8	67°53'	3.9°/6.9	17
10 28	5 17.36	+21 15.4	1.415	2.228	18.5	20.2	10 28	5 19.97	+33 37.7	2.199	2.960	14.4	21.1
11 7	5 14.57	+21 22.9	1.324	2.212	14.8	20.0	11 7	5 15.29	+34 8.2	2.121	2.970	11.7	20.9
11 17	5 8.35	+21 29.2	1.253	2.196	10.2	19.7	11 17	5 8.02	+34 30.0	2.064	2.980	8.6	20.7
11 27	4 59.29	+21 33.7	1.204	2.181	5.0	19.3	11 27	4 58.82	+34 39.7	2.033	2.990	5.5	20.6
12 7	4 48.58	+21 36.3	1.181	2.166	0.8	19.0	12 7	4 48.71	+34 35.7	2.030	3.001	3.9	20.5
12 17	4 37.82	+21 37.6	1.184	2.152	6.5	19.3	12 17	4 38.84	+34 18.4	2.056	3.011	5.5	20.6
12 27	4 28.71	+21 40.1	1.213	2.138	11.9	19.6	12 27	4 30.36	+33 51.1	2.111	3.021	8.5	20.8
1 6	4 22.53	+21 46.4	1.263	2.126	16.6	19.8	1 6	4 24.10	+33 18.3	2.191	3.031	11.4	21.0
57817	2001 <i>WL</i> ₂₇		12 5.8	152°58'	1.4°/5.5	18	521376	2015 <i>MJ</i> ₁₄₁		12 5.8	113°58'	0.6°/5.6	18
10 28	5 23.25	+17 35.5	2.117	2.890	14.5	19.7	10 28	5 19.93	+22 28.4	1.748	2.540	16.3	21.5
11 7	5 17.57	+17 42.5	2.035	2.900	11.4	19.6	11 7	5 15.56	+22 8.1	1.668	2.544	12.9	21.3
11 17	5 9.42	+17 50.7	1.976	2.909	7.8	19.4	11 17	5 8.36	+21 43.4	1.609	2.548	8.8	21.1
11 27	4 59.45	+18 0.1	1.944	2.917	3.9	19.1	11 27	4 59.03	+21 14.7	1.576	2.552	4.2	20.8
12 7	4 48.59	+18 10.8	1.942	2.925	1.6	19.0	12 7	4 48.69	+20 43.4	1.571	2.555	0.9	20.6
12 17	4 37.93	+18 22.9	1.970	2.931	5.0	19.2	12 17	4 38.64	+20 12.2	1.594	2.559	5.5	20.9
12 27	4 28.56	+18 37.4	2.028	2.937	8.8	19.5	12 27	4 30.13	+19 44.6	1.644	2.562	9.9	21.2
1 6	4 21.29	+18 55.3	2.112	2.943	12.1	19.7	1 6	4 24.06	+19 23.6	1.720	2.565	13.7	21.4
73293	2002 <i>JH</i> ₆₆		12 5.8	174°51'	1°1'/5.5	18	442401	2011 <i>UP</i> ₅₆		12 5.8	28°52'	1°4'/5.4	18
10 28	5 20.71	+19 10.4	2.387	3.158	13.1	20.4	10 28	5 17.21	+21 57.5	1.572	2.378	17.3	20.3
11 7	5 15.36	+19 7.2	2.298	3.162	10.3	20.2	11 7	5 13.63	+21 17.7	1.501	2.385	13.6	20.1
11 17	5 7.83	+19 3.4	2.231	3.164	7.1	20.0	11 17	5 7.10	+20 32.5	1.450	2.392	9.3	19.8
11 27	4 58.67	+18 59.2	2.193	3.166	3.5	19.7	11 27	4 58.43	+19 43.7	1.424	2.400	4.5	19.6
12 7	4 48.71	+18 55.1	2.184	3.168	1.2	19.6	12 7	4 48.80	+18 54.4	1.425	2.409	1.6	19.4
12 17	4 38.89	+18 52.0	2.206	3.168	4.5	19.8	12 17	4 39.55	+18 8.6	1.453	2.418	6.0	19.7
12 27	4 30.17	+18 51.2	2.259	3.168	8.0	20.0	12 27	4 31.97	+17 30.5	1.508	2.427	10.5	20.0
1 6	4 23.28	+18 54.3	2.338	3.167	11.1	20.2	1 6	4 26.91	+17 3.1	1.587	2.437	14.4	20.2
345209	2005 <i>UD</i> ₁₀₃		12 5.8	83°17'	2°4'/6.2	18	132909	2002 <i>SS</i> ₁₄		12 5.8	151°17'	4°5'/4.3	18
10 28	5 27.36	+26 4.4	1.591	2.374	18.1	20.9	10 28	5 18.72	+ 8 37.0	2.586	3.349	12.4	21.4
11 7	5 21.66	+26 53.0	1.530	2.398	14.4	20.7	11 7	5 13.43	+ 7 57.5	2.509	3.360	10.0	21.3
11 17	5 12.61	+27 37.4	1.490	2.422	10.0	20.5	11 17	5 6.31	+ 7 22.5	2.455	3.371	7.4	21.1
11 27	5 1.05	+28 13.6	1.474	2.445	5.3	20.3	11 27	4 57.89	+ 6 54.7	2.429	3.381	5.2	21.0
12 7	4 48.39	+28 38.4	1.487	2.468	2.5	20.2	12 7	4 48.89	+ 6 36.4	2.432	3.390	4.6	21.0
12 17	4 36.22	+28 51.3	1.528	2.491	5.9	20.5	12 17	4 40.09	+ 6 29.1	2.466	3.398	6.2	21.1
12 27	4 26.04	+28 55.2	1.597	2.514	10.2	20.8	12 27	4 32.28	+ 6 33.5	2.529	3.406	8.7	21.3
1 6	4 18.84	+28 54.4	1.690	2.536	13.9	21.1	1 6	4 26.03	+ 6 49.1	2.618	3.413	11.1	21.4
523269	2017 <i>AO</i> ₂₄		12 5.8	39°04'	3°7'/5.1	18	484236	2007 <i>EQ</i> ₁₄₇		12 5.8	55°48'	0°1'/5.8	18
10 28	5 16.56	+11 28.4	2.153	2.935	14.0	21.0	10 28	5 17.56	+22 4.2	2.101	2.886	14.2	21.5
11 7	5 12.29	+11 18.9	2.070	2.937	11.2	20.8	11 7	5 13.28	+22 6.9	2.017	2.889	11.2	21.3
11 17	5 5.82	+11 14.4	2.010	2.939	8.0	20.6	11 17	5 6.62	+22 7.4	1.955	2.892	7.6	21.1
11 27	4 57.73	+11 16.6	1.976	2.941	4.9	20.4	11 27	4 58.17	+22 5.4	1.920	2.895	3.7	20.9
12 7	4 48.84	+11 26.8	1.970	2.943	3.7	20.4	12 7	4 48.84	+22 1.0	1.913	2.898	0.5	20.6
12 17	4 40.08	+11 45.7	1.994	2.945	6.0	20.5	12 17	4 39.69	+21 55.2	1.936	2.901	4.6	20.9
12 27	4 32.43	+12 13.3	2.046	2.947	9.2	20.7	12 27	4 31.76	+21 49.9	1.987	2.904	8.5	21.2
1 6	4 26.60	+12 48.7	2.123	2.949	12.2	20.9	1 6	4 25.83	+21 47.1	2.064	2.908	11.8	21.4
412966	2014 <i>QU</i> ₃₀₆		12 5.8	46°95'	7°3'/8.3	17	281783	2009 <i>ST</i> ₃₃₇		12 5.8	29°72'	1°8'/6.1	18
10 28	5 23.59	+41 36.3	1.908	2.651	16.9	20.5	10 28	5 18.55	+25 6.5	1.646	2.444	17.0	19.2
11 7	5 18.78	+42 27.1	1.846	2.672	14.2	20.4	11 7	5 14.70	+25 43.0	1.582	2.459	13.4	19.0
11 17	5 10.67	+43 2.7	1.803	2.693	11.3	20.2	11 17	5 7.87	+26 16.0	1.538	2.475	9.2	18.8
11 27	5 0.13	+43 17.4	1.784	2.714	8.6	20.1	11 27	4 58.83	+26 42.9	1.519	2.493	4.8	18.6
12 7	4 48.52	+43 8.1	1.791	2.735	7.3	20.1	12 7	4 48.76	+27 1.9	1.527	2.511	1.8	18.4
12 17	4 37.42	+42 35.7	1.825	2.757	8.1	20.2	12 17	4 39.04	+27 13.0	1.563	2.529	5.4	18.7
12 27	4 28.27	+41 45.3	1.885	2.779	10.3	20.4	12 27	4 30.98	+27 18.1	1.626	2.549	9.6	19.0
1 6	4 22.02	+40 44.5	1.970	2.802	12.8	20.6	1 6	4 25.50	+27 20.5	1.713	2.568	13.3	19.3
203926	2003 <i>OX</i> ₃₀		12 5.8	54°78'	6°5'/8.3	18	139374	2001 <i>MW</i> ₁₈		12 5.8	84°37'	1°9'/5.2	18
10 28	5 25.86	+39 33.5	1.518	2.283	19.6	20.0	10 28	5 19.40	+19 32.7	1.944	2.731	15.1	19.4
11 7	5 20.96	+39 49.0	1.459	2.305	16.2	19.8	11 7	5 14.58	+18 53.6	1.876	2.750	11.8	19.2
11 17	5 12.27	+39 45.9	1.419	2.327	12.4	19.6	11 17	5 7.35	+18 12.1	1.831	2.768	8.1	19.0
11 27	5 0.86	+39 19.0	1.401	2.349	8.7	19.5	11 27	4 58.44	+17 30.0	1.812	2.786	4.1	18.8
12 7	4 48.44	+38 27.0	1.408	2.371	6.5	19.4	12 7	4 48.84	+16 49.9	1.822	2.804	2.1	18.7
12 17	4 36.86	+37 13.5	1.443	2.394	7.8	19.5	12 17	4 39.63	+16 14.6	1.862	2.822	5.4	18.9
12 27	4 27.72	+35 47.1	1.504	2.417	11.0	19.8	12 27	4 31.85	+15 46.9	1.929	2.839	9.1	19.2
1 6	4 21.92	+34 17.9	1.588	2.440	14.4	20.1	1 6	4 26.19	+15 28.7	2.022	2.856	12.4	19.4
267520	2002 <i>NU</i> ₇₁		12 5.8	82°65'	3°6'/7.2	17	454025	2012 <i>DP</i> ₉₀		12 5.8	300°48'</		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
513330	2007 <i>FL</i> ₄₀		12 5.8 219°81	3.4/ 6.6	18		325459	2009 <i>QA</i> ₃₉		12 5.8 1°12	1.7/ 5.3	18	
10 28	5 24.88	+31 25.9	2.154	2.912	14.7	22.8	10 28	5 15.92	+19 13.7	1.977	2.770	14.7	21.0
11 7	5 19.44	+31 55.8	2.052	2.902	12.0	22.6	11 7	5 12.11	+18 50.6	1.893	2.770	11.6	20.8
11 17	5 11.11	+32 18.7	1.972	2.891	8.7	22.4	11 17	5 5.88	+18 25.8	1.831	2.770	7.9	20.6
11 27	5 0.47	+32 30.9	1.918	2.880	5.3	22.1	11 27	4 57.86	+18 0.5	1.795	2.770	4.0	20.3
12 7	4 48.55	+32 29.9	1.892	2.868	3.4	22.0	12 7	4 48.97	+17 36.7	1.787	2.770	1.8	20.2
12 17	4 36.63	+32 15.6	1.897	2.855	5.6	22.1	12 17	4 40.26	+17 16.3	1.808	2.770	5.3	20.4
12 27	4 26.06	+31 50.8	1.931	2.841	9.1	22.3	12 27	4 32.79	+17 1.6	1.857	2.771	9.2	20.7
1 6	4 17.86	+31 20.3	1.991	2.827	12.5	22.5	1 6	4 27.35	+16 54.5	1.931	2.772	12.6	20.9
257602	1999 <i>RE</i> ₁₀₃		12 5.8 33°59	7.8/ 9.4	17		168829	2000 <i>SF</i> ₃₂₂		12 5.8 132°24	0.6/ 5.9	18	
10 28	5 25.00	+43 7.2	1.452	2.212	20.6	18.8	10 28	5 25.69	+24 49.2	1.626	2.411	17.7	21.0
11 7	5 20.43	+43 22.6	1.406	2.243	17.2	18.6	11 7	5 20.31	+24 45.9	1.553	2.424	14.0	20.8
11 17	5 11.88	+43 15.5	1.377	2.274	13.5	18.5	11 17	5 11.71	+24 36.9	1.500	2.435	9.6	20.5
11 27	5 0.65	+42 40.6	1.370	2.307	10.0	18.3	11 27	5 0.70	+24 21.0	1.472	2.447	4.7	20.3
12 7	4 48.58	+41 37.2	1.387	2.340	7.9	18.3	12 7	4 48.61	+23 58.4	1.472	2.457	0.8	20.0
12 17	4 37.60	+40 10.2	1.430	2.374	8.6	18.4	12 17	4 36.94	+23 31.2	1.501	2.467	5.6	20.4
12 27	4 29.26	+38 29.3	1.499	2.409	11.3	18.7	12 27	4 27.12	+23 3.5	1.558	2.476	10.3	20.7
1 6	4 24.36	+36 45.7	1.592	2.444	14.3	19.0	1 6	4 20.12	+22 39.5	1.639	2.485	14.3	21.0
428565	2008 <i>CT</i> ₁₅₃		12 5.8 227°23	4.4/ 6.7	18		438487	2007 <i>FO</i> ₄₈		12 5.8 191°51	0.1/ 5.8	18	
10 28	5 25.11	+31 51.8	1.654	2.431	17.8	21.7	10 28	5 22.13	+22 52.8	2.063	2.839	14.7	22.8
11 7	5 20.49	+32 31.5	1.565	2.425	14.5	21.5	11 7	5 16.98	+22 47.5	1.971	2.838	11.7	22.6
11 17	5 12.30	+33 3.0	1.495	2.419	10.6	21.3	11 17	5 9.23	+22 38.6	1.902	2.836	8.0	22.3
11 27	5 1.18	+33 21.1	1.449	2.412	6.6	21.0	11 27	4 59.50	+22 25.7	1.859	2.834	3.9	22.1
12 7	4 48.46	+33 22.2	1.430	2.405	4.4	20.9	12 7	4 48.76	+22 9.2	1.846	2.831	0.5	21.8
12 17	4 35.81	+33 5.8	1.439	2.398	6.9	21.0	12 17	4 38.18	+21 50.5	1.862	2.827	4.9	22.1
12 27	4 24.97	+32 35.8	1.475	2.390	11.0	21.2	12 27	4 28.91	+21 32.3	1.908	2.823	8.9	22.4
1 6	4 17.21	+31 59.2	1.535	2.382	15.0	21.4	1 6	4 21.81	+21 17.4	1.980	2.817	12.5	22.6
96818	1999 <i>RW</i> ₁₇₁		12 5.8 19°27	5.1/ 5.0	18		68104	2000 <i>YU</i> ₁₂₅		12 5.8 235°89	4.9/ 7.4	18	
10 28	5 14.70	+13 9.2	1.169	2.000	20.5	18.9	10 28	5 21.10	+37 19.3	2.383	3.127	13.8	19.6
11 7	5 12.37	+12 35.5	1.114	2.009	16.4	18.6	11 7	5 16.30	+37 52.8	2.288	3.122	11.5	19.4
11 17	5 6.61	+12 7.3	1.077	2.020	11.6	18.4	11 17	5 8.84	+38 16.2	2.214	3.117	8.8	19.2
11 27	4 58.30	+11 48.9	1.062	2.032	7.0	18.2	11 27	4 59.34	+38 25.7	2.166	3.111	6.3	19.0
12 7	4 48.87	+11 43.5	1.071	2.046	5.3	18.1	12 7	4 48.78	+38 18.9	2.146	3.105	4.9	18.9
12 17	4 39.91	+11 53.1	1.104	2.062	8.6	18.4	12 17	4 38.32	+37 55.8	2.154	3.099	6.1	19.0
12 27	4 32.93	+12 17.8	1.160	2.078	13.0	18.7	12 27	4 29.16	+37 19.4	2.191	3.093	8.6	19.1
1 6	4 28.90	+12 55.5	1.237	2.096	17.1	19.0	1 6	4 22.20	+36 34.8	2.254	3.087	11.4	19.3
357089	2001 <i>SX</i> ₂₇₃		12 5.8 135°51	2.1/ 6.4	18		313218	2001 <i>SF</i> ₂₅₀		12 5.8 8°12	2.8/ 6.3	18	
10 28	5 20.30	+28 13.2	2.085	2.860	14.6	21.5	10 28	5 19.08	+27 18.8	1.649	2.443	17.1	20.2
11 7	5 15.60	+28 30.2	2.001	2.863	11.7	21.3	11 7	5 15.44	+28 0.6	1.570	2.444	13.7	20.0
11 17	5 8.30	+28 41.2	1.938	2.867	8.2	21.1	11 17	5 8.64	+28 38.0	1.511	2.445	9.7	19.8
11 27	4 59.02	+28 44.2	1.901	2.871	4.5	20.9	11 27	4 59.36	+29 7.6	1.477	2.447	5.4	19.5
12 7	4 48.77	+28 38.1	1.893	2.874	2.1	20.7	12 7	4 48.77	+29 26.7	1.469	2.450	2.8	19.4
12 17	4 38.71	+28 23.6	1.914	2.877	4.9	20.9	12 17	4 38.34	+29 34.7	1.489	2.453	5.9	19.6
12 27	4 30.01	+28 3.6	1.964	2.880	8.6	21.2	12 27	4 29.54	+29 33.9	1.536	2.457	10.2	19.8
1 6	4 23.52	+27 41.8	2.039	2.883	11.9	21.4	1 6	4 23.45	+29 28.4	1.607	2.462	14.0	20.1
160370	2004 <i>FK</i> ₃₆		12 5.8 197°95	0.1/ 5.9	18		246895	1997 <i>SP</i> ₈		12 5.8 148°76	1.5/ 6.3	18	
10 28	5 22.92	+22 47.6	1.916	2.696	15.6	21.3	10 28	5 20.22	+27 20.1	2.096	2.871	14.6	21.1
11 7	5 17.85	+22 51.8	1.824	2.693	12.4	21.1	11 7	5 15.48	+27 25.0	2.010	2.875	11.6	20.9
11 17	5 9.96	+22 53.1	1.755	2.690	8.5	20.9	11 17	5 8.18	+27 23.8	1.947	2.878	8.1	20.7
11 27	4 59.88	+22 50.6	1.712	2.686	4.1	20.6	11 27	4 58.97	+27 15.0	1.910	2.882	4.2	20.5
12 7	4 48.66	+22 44.1	1.697	2.682	0.5	20.3	12 7	4 48.84	+26 58.4	1.902	2.885	1.6	20.3
12 17	4 37.56	+22 34.5	1.712	2.677	5.2	20.6	12 17	4 38.92	+26 35.2	1.923	2.888	4.7	20.5
12 27	4 27.87	+22 24.2	1.756	2.672	9.5	20.9	12 27	4 30.34	+26 8.6	1.973	2.891	8.5	20.8
1 6	4 20.54	+22 16.2	1.825	2.665	13.3	21.1	1 6	4 23.94	+25 42.1	2.049	2.893	11.9	21.0
365836	2011 <i>TH</i> ₁₇		12 5.8 87°66	3.1/ 5.2	18		140499	2001 <i>TW</i> ₁₅₆		12 5.8 98°17	1.9/ 5.3	18	
10 28	5 21.24	+14 31.2	1.881	2.665	15.7	21.4	10 28	5 18.03	+18 23.7	2.008	2.796	14.7	20.9
11 7	5 16.04	+14 15.2	1.819	2.689	12.3	21.2	11 7	5 13.62	+17 59.7	1.930	2.804	11.6	20.7
11 17	5 8.37	+14 2.1	1.779	2.711	8.6	21.0	11 17	5 6.83	+17 34.7	1.874	2.811	7.9	20.5
11 27	4 58.95	+13 53.4	1.764	2.734	4.8	20.8	11 27	4 58.29	+17 10.2	1.845	2.818	4.1	20.2
12 7	4 48.82	+13 50.6	1.779	2.756	3.2	20.8	12 7	4 48.95	+16 47.7	1.843	2.825	2.1	20.1
12 17	4 39.09	+13 54.7	1.822	2.778	6.0	21.0	12 17	4 39.85	+16 29.4	1.872	2.832	5.3	20.4
12 27	4 30.82	+14 6.4	1.894	2.799	9.5	21.3	12 27	4 32.04	+16 17.4	1.928	2.839	9.1	20.6
1 6	4 24.74	+14 25.8	1.990	2.821	12.8	21.5	1 6	4 26.26	+16 13.1	2.009	2.846	12.4	20.8
155749	2000 <i>SR</i> ₉₇		12 5.8 121°78	1.4/ 5.4	18		438531	2007 <i>TT</i> ₇₀		12 5.8 47°47	7.6/ 3.8	15	
10 28	5 20.78	+21 2.1	1.792	2.582	16.1	20.1	10 28	5 19.64	+ 9 38.0	1.366	2.173	19.4	20.6
11 7	5 16.07	+20 31.0	1.716	2.590	12.7	19.9	11 7	5 15.30	+ 7 59.9	1.326	2.202	15.6	20.5
11 17	5 8.62	+19 56.1	1.661	2.598	8.7	19.7	11 17	5 8.02	+ 6 29.1	1.306	2.233	11.6	20.3
11 27	4 59.16	+19 18.7	1.631	2.606	4.2	19.4	11 27	4 58.78	+ 5 13.0	1.309	2.263	8.4	20.2
12 7	4 48.80	+18 40.8	1.630	2.614	1.6	19.3	12 7	4 48.91	+ 4 18.0	1.338	2.294	7.8	20.3
12 17	4 38.77	+18 5.5	1.658	2.621	5.6	19.5	12 17	4 39.75	+ 3 47.4	1.393	2.326	10.0	20.5
12 27	4 30.27	+17 36.3	1.714	2.628	9.8	19.8	12 27	4 32.47	+ 3 41.6	1.472	2.357	13.2	20.8
1 6	4 24.14	+17 15.6	1.795	2.635	13.5	20.1	1 6	4 27.80	+ 3 57.4	1.572	2.389	16.3	21.1
101274	1998 <i>SC</i> ₁₁₄		12 5.8 39°39	0.3/ 5.9	18		385107	2012 <i>VM</i> ₉₂		12 5.8			

EPHEMERIDES

12 5.9

12 5.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
337938	2001 YA ₂₆	12 5.9 74°25	0°2/ 5.9 18				463961	2014 VC ₂₂	12 5.9 121°55	1°0/ 5.9 17			
10 28	5 22.10	+24 37.4	1.545	2.341	18.0	20.4	10 28	5 20.56	+23 0.5	2.574	3.340	12.4	21.6
11 7	5 17.53	+24 22.0	1.479	2.356	14.2	20.2	11 7	5 15.30	+23 45.9	2.485	3.345	9.8	21.4
11 17	5 9.81	+24 0.3	1.433	2.372	9.7	20.0	11 17	5 7.90	+24 30.9	2.419	3.350	6.7	21.2
11 27	4 59.78	+23 32.0	1.412	2.387	4.7	19.7	11 27	4 58.85	+25 13.5	2.382	3.355	3.4	21.0
12 7	4 48.78	+22 58.5	1.418	2.403	0.6	19.5	12 7	4 48.94	+25 52.0	2.375	3.359	1.0	20.9
12 17	4 38.28	+22 22.8	1.452	2.418	5.7	19.9	12 17	4 39.07	+26 25.2	2.400	3.364	4.0	21.1
12 27	4 29.65	+21 49.2	1.513	2.434	10.3	20.2	12 27	4 30.19	+26 53.4	2.456	3.368	7.3	21.3
1 6	4 23.79	+21 21.6	1.597	2.449	14.3	20.5	1 6	4 23.05	+27 17.9	2.539	3.373	10.2	21.5
376857	2001 SW ₂₉₉	12 5.9 85°85	4°0/ 7.1 18				381041	2006 VE ₁₀₉	12 5.9 335°77	2°6/ 6.3 18			
10 28	5 23.96	+33 40.7	2.022	2.782	15.5	21.5	10 28	5 15.96	+26 29.9	1.147	1.975	21.0	21.6
11 7	5 18.49	+34 5.6	1.955	2.804	12.5	21.3	11 7	5 14.46	+26 58.1	1.066	1.960	17.0	21.3
11 17	5 10.22	+34 20.3	1.909	2.825	9.2	21.2	11 17	5 8.89	+27 20.8	1.002	1.946	12.0	21.0
11 27	4 59.93	+34 21.5	1.889	2.847	5.8	21.0	11 27	4 59.85	+27 34.6	0.959	1.934	6.4	20.6
12 7	4 48.78	+34 7.8	1.896	2.868	4.0	20.9	12 7	4 48.80	+27 36.5	0.939	1.922	2.7	20.4
12 17	4 38.06	+33 40.4	1.933	2.889	5.7	21.1	12 17	4 37.74	+27 26.8	0.943	1.912	7.4	20.6
12 27	4 29.00	+33 3.4	1.999	2.910	8.8	21.3	12 27	4 28.80	+27 9.5	0.971	1.903	13.2	20.9
1 6	4 22.43	+32 22.2	2.090	2.930	11.8	21.6	1 6	4 23.49	+26 50.8	1.018	1.896	18.4	21.2
511350	2014 EF ₄₉	12 5.9 207°60	3°1/ 6.5 18				418651	2008 TQ ₈₃	12 5.9 65°12	4°5/ 7.2 17			
10 28	5 23.25	+29 37.2	1.881	2.655	16.0	21.7	10 28	5 20.25	+35 32.7	2.307	3.060	14.0	21.4
11 7	5 18.44	+30 8.2	1.791	2.652	12.9	21.4	11 7	5 15.56	+36 11.0	2.226	3.068	11.5	21.3
11 17	5 10.57	+30 32.7	1.722	2.649	9.3	21.2	11 17	5 8.29	+36 40.0	2.167	3.076	8.7	21.1
11 27	5 0.28	+30 47.3	1.679	2.645	5.4	21.0	11 27	4 59.09	+36 56.2	2.134	3.084	5.9	21.0
12 7	4 48.71	+30 49.7	1.663	2.642	3.1	20.8	12 7	4 48.94	+36 57.4	2.128	3.092	4.6	20.9
12 17	4 37.23	+30 39.6	1.676	2.637	5.8	21.0	12 17	4 38.98	+36 43.7	2.152	3.100	5.8	21.0
12 27	4 27.28	+30 20.3	1.717	2.633	9.7	21.2	12 27	4 30.36	+36 18.1	2.204	3.109	8.4	21.2
1 6	4 19.91	+29 56.6	1.784	2.628	13.4	21.4	1 6	4 23.93	+35 45.1	2.281	3.117	11.1	21.4
295014	2008 ES ₅₂	12 5.9 336°21	8°7/ 2.6 18				300464	2007 TG ₈₇	12 5.9 45°74	3°4/ 4.9 18			
10 28	5 14.50	+ 4 1.8	1.803	2.590	16.1	20.7	10 28	5 17.83	+15 34.4	1.731	2.529	16.3	21.4
11 7	5 11.10	+ 2 27.3	1.727	2.584	13.5	20.5	11 7	5 13.87	+14 58.4	1.655	2.532	12.9	21.2
11 17	5 5.26	+ 0 59.8	1.672	2.579	10.9	20.4	11 17	5 7.23	+14 23.2	1.599	2.536	9.0	20.9
11 27	4 57.61	- 0 13.8	1.642	2.575	9.0	20.2	11 27	4 58.59	+13 51.3	1.569	2.540	5.1	20.7
12 7	4 49.07	- 1 7.1	1.638	2.571	8.9	20.2	12 7	4 49.01	+13 25.7	1.566	2.543	3.6	20.6
12 17	4 40.70	- 1 35.9	1.660	2.567	10.6	20.3	12 17	4 39.68	+13 9.0	1.591	2.547	6.6	20.8
12 27	4 33.56	- 1 38.9	1.706	2.563	13.2	20.5	12 27	4 31.78	+13 3.2	1.643	2.552	10.6	21.1
1 6	4 28.46	- 1 18.4	1.773	2.560	15.9	20.6	1 6	4 26.16	+13 8.7	1.719	2.556	14.1	21.3
521197	2015 FB ₄₁₃	12 5.9 116°86	0°6/ 5.7 18				450358	2004 XM ₂₅	12 5.9 356°11	4°5/ 6.0 16			
10 28	5 22.56	+22 36.9	1.625	2.418	17.4	21.8	10 28	5 15.74	+ 8 34.5	1.396	2.207	18.8	19.8
11 7	5 17.81	+22 18.5	1.551	2.427	13.7	21.6	11 7	5 13.06	+ 9 10.2	1.317	2.198	15.3	19.6
11 17	5 10.00	+21 55.4	1.498	2.436	9.4	21.3	11 17	5 7.20	+10 1.0	1.257	2.192	11.1	19.3
11 27	4 59.91	+21 28.0	1.470	2.445	4.5	21.1	11 27	4 58.80	+11 8.4	1.219	2.187	6.7	19.0
12 7	4 48.78	+20 57.6	1.469	2.454	0.9	20.8	12 7	4 48.98	+12 31.3	1.208	2.185	4.6	18.9
12 17	4 38.04	+20 27.0	1.497	2.462	5.7	21.2	12 17	4 39.18	+14 6.2	1.223	2.183	7.5	19.1
12 27	4 29.02	+20 0.0	1.552	2.470	10.3	21.5	12 27	4 30.94	+15 48.4	1.264	2.184	12.0	19.3
1 6	4 22.67	+19 39.8	1.631	2.478	14.3	21.7	1 6	4 25.39	+17 33.1	1.328	2.187	16.2	19.6
174291	2002 SA ₄₈	12 5.9 89°78	3°1/ 4.9 18				114937	2003 QP ₅₁	12 5.9 10°79	1°7/ 6.3 18			
10 28	5 18.26	+16 5.6	1.865	2.657	15.5	20.1	10 28	5 14.04	+26 59.5	2.203	2.988	13.6	18.4
11 7	5 13.95	+15 31.3	1.790	2.664	12.3	19.9	11 7	5 10.58	+27 19.5	2.123	2.993	10.8	18.2
11 17	5 7.13	+14 57.5	1.736	2.671	8.5	19.7	11 17	5 4.84	+27 35.0	2.065	2.999	7.5	18.0
11 27	4 58.48	+14 26.3	1.708	2.678	4.7	19.5	11 27	4 57.42	+27 44.3	2.034	3.005	4.0	17.8
12 7	4 48.97	+14 0.3	1.707	2.685	3.2	19.4	12 7	4 49.17	+27 46.9	2.030	3.012	1.7	17.7
12 17	4 39.74	+13 41.9	1.736	2.692	6.2	19.6	12 17	4 41.09	+27 43.2	2.056	3.020	4.5	17.9
12 27	4 31.86	+13 33.1	1.792	2.699	9.9	19.9	12 27	4 34.17	+27 35.1	2.109	3.029	7.9	18.1
1 6	4 26.14	+13 34.6	1.872	2.706	13.3	20.1	1 6	4 29.15	+27 25.4	2.189	3.039	11.0	18.3
302759	2002 VH ₅₃	12 5.9 37°87	0°3/ 5.9 18				239273	2007 KS ₁	12 5.9 260°76	2°6/ 5.4 18			
10 28	5 19.33	+27 2.7	1.683	2.476	16.9	19.7	10 28	5 20.34	+15 53.3	1.681	2.476	16.8	20.5
11 7	5 15.20	+26 16.2	1.607	2.483	13.3	19.5	11 7	5 16.19	+15 48.1	1.592	2.468	13.4	20.2
11 17	5 8.14	+25 19.2	1.552	2.490	9.1	19.2	11 17	5 9.08	+15 45.7	1.523	2.460	9.4	20.0
11 27	4 58.98	+24 12.6	1.522	2.497	4.4	19.0	11 27	4 59.62	+15 47.0	1.479	2.452	5.0	19.7
12 7	4 48.93	+22 59.4	1.520	2.505	0.6	18.7	12 7	4 48.89	+15 53.2	1.463	2.444	2.8	19.6
12 17	4 39.31	+21 44.6	1.547	2.514	5.4	19.1	12 17	4 38.20	+16 5.1	1.474	2.435	6.4	19.8
12 27	4 31.38	+20 34.4	1.602	2.522	9.9	19.4	12 27	4 28.94	+16 23.7	1.513	2.427	10.9	20.0
1 6	4 25.98	+19 33.9	1.681	2.531	13.8	19.6	1 6	4 22.15	+16 49.5	1.576	2.419	14.9	20.2
215306	2001 SW ₁₇₆	12 5.9 92°53	6°4/ 4.0 18				368481	2003 SG ₂₉₁	12 5.9 93°79	2°8/ 5.1 17			
10 28	5 17.53	+ 5 59.4	2.049	2.824	14.8	20.4	10 28	5 26.44	+18 3.3	1.561	2.350	18.2	20.7
11 7	5 12.96	+ 5 1.7	1.986	2.840	12.1	20.3	11 7	5 20.48	+17 19.5	1.506	2.379	14.2	20.5
11 17	5 6.22	+ 4 11.2	1.944	2.856	9.3	20.1	11 17	5 11.53	+16 34.6	1.472	2.408	9.7	20.3
11 27	4 57.96	+ 3 32.5	1.928	2.872	7.0	20.0	11 27	5 0.53	+15 51.1	1.463	2.436	5.1	20.1
12 7	4 49.06	+ 3 9.1	1.940	2.887	6.5	20.0	12 7	4 48.81	+15 12.1	1.483	2.463	3.0	20.0
12 17	4 40.47	+ 3 2.8	1.979	2.902	8.2	20.2	12 17	4 37.76	+14 40.9	1.531	2.489	6.6	20.3
12 27	4 33.10	+ 3 13.9	2.046	2.917	10.7	20.4	12 27	4 28.64	+14 20.4	1.607	2.515	10.8	20.6
1 6	4 27.61	+ 3 40.4	2.136	2.932	13.2	20.6	1 6	4 22.23	+14 11.6	1.706	2.539	14.4	20.9
243394	2008 YB ₁₅₆	12 5.9 138°98	0°9/ 6.1 18				308804	2006 QD ₈₃	12 5.9 113°30	2°5/ 5.2 18			
10 28	5 21.58	+24 32.7	2.004										

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
477448	2009 <i>WJ</i> ₁₉₆	12 5.9 108°24	1°2/ 5.7 18				41454	2000 <i>MQ</i> ₅	12 5.9 60°78	2°9/ 5.6 18	R		
10 28	5 23.40	+18 54.8	1.647	2.438	17.3	21.5	10 28	5 26.26	+15 0.6	1.168	1.979	21.8	18.8
11 7	5 18.41	+19 0.5	1.576	2.451	13.6	21.3	11 7	5 21.35	+15 11.5	1.121	2.005	17.1	18.6
11 17	5 10.41	+19 6.6	1.526	2.463	9.3	21.1	11 17	5 12.66	+15 28.2	1.092	2.032	11.8	18.3
11 27	5 0.16	+19 13.1	1.500	2.475	4.6	20.8	11 27	5 1.26	+15 51.1	1.085	2.059	6.1	18.1
12 7	4 48.85	+19 19.9	1.503	2.487	1.4	20.7	12 7	4 48.79	+16 19.4	1.104	2.086	3.0	18.0
12 17	4 37.87	+19 27.7	1.534	2.498	5.8	21.0	12 17	4 37.08	+16 52.5	1.150	2.113	7.3	18.4
12 27	4 28.57	+19 37.8	1.593	2.509	10.2	21.3	12 27	4 27.76	+17 30.1	1.220	2.140	12.3	18.7
1 6	4 21.87	+19 51.9	1.676	2.520	14.1	21.5	1 6	4 21.79	+18 11.7	1.313	2.167	16.6	19.1
106894	2000 <i>YT</i> ₄₁	12 5.9 17°12	0°3/ 5.8 18				320244	2007 <i>KP</i> ₁	12 5.9 178°37	4°2/ 4.3 17			
10 28	5 18.39	+21 32.4	1.095	1.926	21.6	18.4	10 28	5 15.16	+ 9 17.1	2.768	3.535	11.6	22.2
11 7	5 15.97	+21 39.1	1.032	1.930	17.2	18.1	11 7	5 10.71	+ 8 37.0	2.681	3.537	9.3	22.0
11 17	5 9.55	+21 43.7	0.987	1.934	11.8	17.8	11 17	5 4.57	+ 8 0.3	2.619	3.537	6.9	21.8
11 27	4 59.98	+21 45.6	0.963	1.940	5.7	17.5	11 27	4 57.22	+ 7 29.9	2.584	3.538	4.8	21.7
12 7	4 48.86	+21 44.9	0.962	1.947	0.8	17.2	12 7	4 49.29	+ 7 7.8	2.579	3.538	4.3	21.7
12 17	4 38.16	+21 42.9	0.986	1.955	7.1	17.6	12 17	4 41.48	+ 6 55.9	2.604	3.538	5.8	21.8
12 27	4 29.75	+21 42.6	1.034	1.964	12.8	18.0	12 27	4 34.50	+ 6 54.9	2.657	3.537	8.2	21.9
1 6	4 24.83	+21 47.1	1.101	1.974	17.7	18.3	1 6	4 28.92	+ 7 4.8	2.736	3.536	10.5	22.1
110617	2001 <i>TD</i> ₁₄₇	12 5.9 88°96	2°0/ 5.4 18				50114	2000 <i>AC</i> ₁₁₇	12 5.9 184°67	1°6/ 5.4 18			
10 28	5 18.55	+17 33.8	1.981	2.769	14.9	20.7	10 28	5 21.68	+20 55.5	1.749	2.539	16.5	19.0
11 7	5 14.08	+17 19.9	1.905	2.778	11.7	20.5	11 7	5 17.01	+20 21.4	1.664	2.539	13.0	18.8
11 17	5 7.19	+17 6.3	1.851	2.788	8.0	20.3	11 17	5 9.46	+19 42.9	1.601	2.539	8.9	18.5
11 27	4 58.54	+16 54.1	1.824	2.797	4.1	20.1	11 27	4 59.74	+19 1.4	1.564	2.538	4.4	18.3
12 7	4 49.07	+16 44.5	1.825	2.806	2.1	20.0	12 7	4 48.96	+18 19.3	1.554	2.537	1.7	18.1
12 17	4 39.84	+16 39.0	1.855	2.815	5.3	20.2	12 17	4 38.43	+17 39.8	1.574	2.536	5.9	18.4
12 27	4 31.92	+16 39.1	1.913	2.825	9.1	20.5	12 27	4 29.43	+17 6.8	1.621	2.534	10.3	18.6
1 6	4 26.06	+16 45.7	1.996	2.834	12.4	20.7	1 6	4 22.88	+16 43.3	1.692	2.532	14.2	18.9
292589	2006 <i>TC</i> ₁₀₀	12 5.9 16°48	1°7/ 6.3 18				329550	2002 <i>TJ</i> ₃₄₂	12 5.9 183°38	1°3/ 5.5 18			
10 28	5 17.26	+26 48.2	1.497	2.302	18.0	20.6	10 28	5 15.88	+18 6.7	2.803	3.576	11.3	21.6
11 7	5 14.13	+26 54.9	1.425	2.307	14.3	20.4	11 7	5 11.36	+17 59.2	2.711	3.576	8.9	21.4
11 17	5 7.78	+26 54.4	1.374	2.313	10.0	20.2	11 17	5 5.06	+17 51.5	2.643	3.576	6.1	21.3
11 27	4 58.97	+26 45.2	1.346	2.319	5.1	19.9	11 27	4 57.48	+17 44.3	2.603	3.576	3.1	21.1
12 7	4 49.01	+26 27.1	1.343	2.327	1.7	19.7	12 7	4 49.25	+17 38.3	2.593	3.575	1.4	20.9
12 17	4 39.37	+26 2.1	1.368	2.335	5.8	20.0	12 17	4 41.13	+17 34.4	2.614	3.574	4.0	21.1
12 27	4 31.52	+25 34.2	1.418	2.344	10.4	20.3	12 27	4 33.85	+17 33.8	2.665	3.573	7.0	21.3
1 6	4 26.45	+25 8.0	1.492	2.354	14.5	20.5	1 6	4 28.01	+17 37.3	2.742	3.571	9.7	21.5
193091	2000 <i>GP</i> ₈₀	12 5.9 253°55	3°1/ 6.7 18				317292	2002 <i>GF</i> ₅₂	12 5.9 145°41	1°1/ 5.6 17			
10 28	5 18.80	+31 41.0	2.496	3.255	12.9	20.4	10 28	5 24.77	+20 52.2	1.846	2.625	16.1	22.0
11 7	5 14.24	+32 10.7	2.399	3.250	10.4	20.2	11 7	5 19.16	+20 35.6	1.768	2.637	12.7	21.8
11 17	5 7.35	+32 33.9	2.324	3.244	7.6	20.0	11 17	5 10.75	+20 16.1	1.713	2.648	8.7	21.6
11 27	4 58.67	+32 48.1	2.276	3.238	4.7	19.8	11 27	5 0.30	+19 54.3	1.684	2.658	4.2	21.3
12 7	4 49.04	+32 51.6	2.257	3.231	3.1	19.7	12 7	4 48.90	+19 31.2	1.684	2.668	1.3	21.1
12 17	4 39.45	+32 44.3	2.268	3.225	4.9	19.8	12 17	4 37.85	+19 9.0	1.713	2.676	5.4	21.4
12 27	4 30.95	+32 28.4	2.308	3.219	7.8	20.0	12 27	4 28.36	+18 50.5	1.772	2.684	9.6	21.7
1 6	4 24.35	+32 7.2	2.375	3.213	10.7	20.2	1 6	4 21.29	+18 38.4	1.855	2.691	13.3	22.0
241786	2001 <i>PR</i> ₅	12 5.9 95°14	2°2/ 5.0 18				511659	2015 <i>BZ</i> ₂₉₈	12 5.9 265°78	5°2/ 4.9 18			
10 28	5 20.21	+19 8.0	2.090	2.871	14.4	20.7	10 28	5 20.51	+11 50.0	1.442	2.245	18.7	21.2
11 7	5 15.03	+18 18.9	2.022	2.892	11.3	20.5	11 7	5 16.66	+11 18.9	1.362	2.241	15.1	21.0
11 17	5 7.61	+17 27.3	1.978	2.913	7.7	20.4	11 17	5 9.58	+10 53.0	1.302	2.236	10.9	20.7
11 27	4 58.64	+16 35.5	1.961	2.933	4.0	20.2	11 27	4 59.93	+10 36.1	1.265	2.231	6.8	20.5
12 7	4 49.07	+15 46.4	1.973	2.953	2.3	20.1	12 7	4 48.94	+10 31.3	1.254	2.226	5.4	20.4
12 17	4 39.91	+15 3.0	2.016	2.973	5.3	20.3	12 17	4 38.08	+10 40.9	1.269	2.221	8.4	20.5
12 27	4 32.08	+14 28.2	2.087	2.993	8.8	20.6	12 27	4 28.88	+11 5.4	1.309	2.217	12.8	20.8
1 6	4 26.27	+14 3.7	2.184	3.012	11.9	20.8	1 6	4 22.44	+11 43.6	1.372	2.212	16.9	21.0
350448	1995 <i>UN</i> ₃₁	12 5.9 308°21	4°8/ 6.6 18				464361	2016 <i>AO</i> ₁₄₂	12 5.9 260°52	3°4/ 4.6 18			
10 28	5 21.45	+31 37.7	1.648	2.432	17.5	21.0	10 28	5 14.52	+13 30.2	2.504	3.284	12.3	21.6
11 7	5 17.79	+32 32.6	1.555	2.419	14.4	20.8	11 7	5 10.50	+12 50.5	2.410	3.277	9.8	21.4
11 17	5 10.63	+33 21.2	1.483	2.407	10.6	20.5	11 17	5 4.60	+12 11.8	2.340	3.269	7.0	21.2
11 27	5 0.56	+33 58.1	1.434	2.396	6.8	20.3	11 27	4 57.29	+11 36.6	2.297	3.262	4.3	21.1
12 7	4 48.78	+34 18.7	1.411	2.384	4.8	20.1	12 7	4 49.29	+11 7.2	2.283	3.254	3.5	21.0
12 17	4 36.92	+34 21.4	1.416	2.373	7.2	20.3	12 17	4 41.37	+10 45.8	2.298	3.246	5.6	21.1
12 27	4 26.72	+34 8.7	1.447	2.362	11.1	20.5	12 27	4 34.35	+10 34.0	2.343	3.238	8.5	21.3
1 6	4 19.49	+33 46.6	1.501	2.352	15.1	20.7	1 6	4 28.88	+10 32.5	2.412	3.230	11.2	21.5
77412	2001 <i>FH</i> ₁₇₅	12 5.9 84°88	0°0/ 5.9 18				343379	2010 <i>CO</i> ₁₂₉	12 5.9 306°38	6°4/ 4.1 18			
10 28	5 23.54	+20 42.0	1.838	2.621	16.0	18.6	10 28	5 16.13	+11 18.1	1.486	2.295	18.0	20.5
11 7	5 18.22	+21 13.2	1.770	2.639	12.6	18.4	11 7	5 13.30	+10 18.1	1.393	2.273	14.7	20.2
11 17	5 10.13	+21 44.5	1.723	2.658	8.6	18.2	11 17	5 7.38	+ 9 20.1	1.319	2.252	10.9	19.9
11 27	4 59.98	+22 14.3	1.702	2.677	4.1	18.0	11 27	4 58.94	+ 8 29.4	1.269	2.231	7.4	19.7
12 7	4 48.89	+22 41.0	1.710	2.695	0.5	17.7	12 7	4 49.06	+ 7 51.8	1.243	2.210	6.5	19.6
12 17	4 38.11	+23 4.1	1.748	2.713	5.0	18.1	12 17	4 39.11	+ 7 31.9	1.244	2.190	9.4	19.7
12 27	4 28.88	+23 24.6	1.815	2.731	9.2	18.4	12 27	4 30.58	+ 7 32.6	1.269	2.170	13.6	19.9
1 6	4 22.05	+23 44.2	1.906	2.749	12.7	18.6	1 6	4 24.63	+ 7 53.5	1.315	2.151	17.7	20.1
118482	2000 <i>BT</i> ₅₁	12 5.9 226°67	2°1/ 6.4 18				407186	2009 <i>UJ</i> ₉₄	12 5.9 42°22</				

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
94064	2000 YQ ₂₅	12 5.9 35°11'	0°9'	6.1	18		8306	Shoko	12 5.9 54°78'	3°1'	5.2	18	
10 28	5 18.02	+24 51.4	1.877	2.667	15.5	19.5	10 28	5 23.14	+18 55.1	1.150	1.969	21.5	17.7
11 7	5 14.02	+24 58.6	1.800	2.674	12.2	19.3	11 7	5 18.91	+18 9.1	1.103	1.993	16.9	17.5
11 17	5 7.36	+25 1.4	1.745	2.681	8.4	19.1	11 17	5 10.99	+17 21.4	1.075	2.018	11.5	17.3
11 27	4 58.72	+24 58.9	1.715	2.689	4.2	18.9	11 27	5 0.46	+16 35.3	1.069	2.043	5.9	17.1
12 7	4 49.13	+24 50.7	1.712	2.697	1.0	18.7	12 7	4 49.00	+15 54.8	1.088	2.069	3.2	17.0
12 17	4 39.78	+24 38.2	1.739	2.705	4.9	19.0	12 17	4 38.37	+15 24.1	1.132	2.095	7.6	17.3
12 27	4 31.86	+24 23.9	1.793	2.714	9.0	19.2	12 27	4 30.09	+15 6.4	1.201	2.121	12.6	17.7
1 6	4 26.20	+24 10.9	1.872	2.723	12.5	19.5	1 6	4 25.06	+15 2.7	1.292	2.147	16.8	18.0
323269	2003 SY ₃₃₇	12 5.9 125°80'	3°2'	5.1	16		328444	2008 TQ ₆₈	12 5.9 64°76'	3°9'	6.7	18	
10 28	5 24.15	+15 59.0	1.665	2.453	17.2	22.2	10 28	5 22.17	+32 11.5	2.250	3.008	14.2	20.9
11 7	5 18.81	+15 27.6	1.596	2.468	13.6	22.0	11 7	5 17.01	+33 4.7	2.179	3.028	11.4	20.7
11 17	5 10.58	+14 57.1	1.548	2.483	9.5	21.7	11 17	5 9.28	+33 51.0	2.132	3.048	8.4	20.5
11 27	5 0.23	+14 29.7	1.526	2.496	5.2	21.5	11 27	4 59.64	+34 26.5	2.110	3.068	5.4	20.4
12 7	4 48.95	+14 7.8	1.531	2.509	3.4	21.5	12 7	4 49.09	+34 48.7	2.118	3.087	3.9	20.3
12 17	4 38.08	+13 53.9	1.565	2.522	6.6	21.7	12 17	4 38.77	+34 57.2	2.155	3.107	5.5	20.5
12 27	4 28.88	+13 49.7	1.627	2.534	10.7	22.0	12 27	4 29.82	+34 54.2	2.220	3.127	8.3	20.7
1 6	4 22.22	+13 56.0	1.712	2.545	14.4	22.2	1 6	4 23.06	+34 43.5	2.312	3.147	11.0	20.9
367857	2011 CD ₄₆	12 5.9 323°32'	3°4'	7.1	17		294722	2008 BC ₃₆	12 5.9 354°72'	4°9'	7.3	17	
10 28	5 18.89	+33 11.8	2.253	3.015	14.0	20.9	10 28	5 20.83	+34 48.6	1.835	2.605	16.5	20.9
11 7	5 14.53	+33 25.0	2.162	3.014	11.4	20.7	11 7	5 16.79	+35 18.9	1.750	2.604	13.5	20.7
11 17	5 7.64	+33 29.1	2.093	3.012	8.3	20.5	11 17	5 9.60	+35 38.4	1.686	2.603	10.1	20.5
11 27	4 58.85	+33 21.5	2.050	3.010	5.2	20.3	11 27	4 59.96	+35 42.8	1.646	2.602	6.7	20.3
12 7	4 49.13	+33 1.2	2.035	3.009	3.4	20.2	12 7	4 49.07	+35 29.5	1.632	2.601	4.9	20.2
12 17	4 39.57	+32 29.2	2.049	3.007	5.2	20.3	12 17	4 38.38	+34 59.2	1.646	2.601	6.6	20.3
12 27	4 31.31	+31 48.8	2.092	3.006	8.3	20.5	12 27	4 29.35	+34 16.1	1.687	2.601	9.9	20.5
1 6	4 25.17	+31 4.8	2.161	3.005	11.4	20.7	1 6	4 23.01	+33 26.8	1.753	2.602	13.4	20.7
446381	2014 HW ₁₃₆	12 5.9 326°26'	2°0'	5.4	18		256817	2008 CB ₁₂₁	12 5.9 232°42'	2°8'	6.5	18	
10 28	5 18.14	+18 31.8	1.593	2.397	17.2	20.8	10 28	5 21.40	+29 36.9	2.295	3.059	13.8	20.9
11 7	5 14.61	+18 15.7	1.509	2.391	13.7	20.6	11 7	5 16.53	+30 7.9	2.195	3.050	11.1	20.7
11 17	5 8.07	+17 58.9	1.445	2.386	9.4	20.3	11 17	5 9.11	+30 33.7	2.118	3.041	8.0	20.5
11 27	4 59.19	+17 42.8	1.406	2.381	4.8	20.0	11 27	4 59.66	+30 51.3	2.066	3.032	4.7	20.3
12 7	4 49.08	+17 28.8	1.393	2.376	2.2	19.9	12 7	4 49.10	+30 58.9	2.044	3.022	2.8	20.1
12 17	4 39.12	+17 19.1	1.408	2.372	6.3	20.1	12 17	4 38.54	+30 56.1	2.052	3.012	5.0	20.3
12 27	4 30.67	+17 15.9	1.450	2.368	10.9	20.4	12 27	4 29.15	+30 44.9	2.089	3.002	8.4	20.5
1 6	4 24.77	+17 20.9	1.514	2.364	15.0	20.6	1 6	4 21.83	+30 28.9	2.152	2.991	11.6	20.7
264320	1999 TS ₁₅₆	12 5.9 46°82'	5°4'	7.1	18		439831	1994 RD ₇	12 5.9 82°79'	0°0'	5.8	18	
10 28	5 24.11	+33 14.4	1.258	2.057	21.2	20.3	10 28	5 21.68	+23 30.5	1.801	2.587	16.2	21.8
11 7	5 20.41	+33 52.0	1.197	2.069	17.2	20.1	11 7	5 16.80	+23 22.8	1.734	2.606	12.7	21.6
11 17	5 12.52	+34 16.7	1.153	2.081	12.7	19.9	11 17	5 9.17	+23 10.7	1.688	2.624	8.6	21.4
11 27	5 1.41	+34 22.6	1.131	2.094	8.0	19.6	11 27	4 59.57	+22 54.0	1.668	2.642	4.2	21.2
12 7	4 48.82	+34 6.5	1.133	2.108	5.4	19.5	12 7	4 49.14	+22 33.5	1.675	2.660	0.5	20.9
12 17	4 36.82	+33 30.1	1.161	2.122	7.8	19.7	12 17	4 39.12	+22 11.2	1.713	2.678	5.1	21.3
12 27	4 27.33	+32 40.5	1.213	2.136	12.1	20.0	12 27	4 30.69	+21 50.1	1.778	2.696	9.2	21.6
1 6	4 21.51	+31 46.7	1.288	2.150	16.3	20.3	1 6	4 24.66	+21 33.1	1.868	2.713	12.8	21.9
395209	2010 JS ₁₉	12 5.9 62°21'	7°5'	4.7	18		350501	1999 VS ₂₁₀	12 5.9 4°62'	2°0'	6.4	17	
10 28	5 18.58	+ 3 26.6	1.779	2.557	16.7	20.7	10 28	5 12.41	+27 37.4	1.101	1.937	21.2	20.3
11 7	5 14.07	+ 2 41.0	1.725	2.578	13.7	20.5	11 7	5 11.45	+27 36.4	1.037	1.936	17.0	20.0
11 17	5 7.14	+ 2 6.9	1.691	2.599	10.7	20.4	11 17	5 6.58	+27 24.7	0.990	1.937	11.9	19.7
11 27	4 58.52	+ 1 48.9	1.681	2.621	8.2	20.3	11 27	4 58.66	+27 0.7	0.964	1.939	6.2	19.4
12 7	4 49.21	+ 1 50.0	1.698	2.642	7.6	20.3	12 7	4 49.26	+26 25.2	0.960	1.944	2.0	19.2
12 17	4 40.31	+ 2 11.1	1.742	2.664	9.2	20.4	12 17	4 40.26	+25 41.9	0.981	1.951	6.8	19.5
12 27	4 32.81	+ 2 50.6	1.811	2.685	11.7	20.6	12 27	4 33.48	+24 57.3	1.024	1.960	12.3	19.8
1 6	4 27.45	+ 3 45.2	1.904	2.707	14.4	20.9	1 6	4 30.05	+24 17.7	1.089	1.970	17.1	20.2
405351	2003 WV ₁₀	12 5.9 71°93'	4°7'	7.0	18		196723	2003 SB ₁₁₁	12 5.9 62°88'	5°4'	7.4	17	
10 28	5 23.54	+34 50.3	2.273	3.022	14.3	20.6	10 28	5 22.20	+37 12.9	2.187	2.935	14.8	19.7
11 7	5 18.13	+35 47.2	2.204	3.044	11.7	20.4	11 7	5 17.34	+38 2.6	2.113	2.949	12.2	19.5
11 17	5 10.06	+36 35.5	2.158	3.065	8.8	20.3	11 17	5 9.67	+38 41.8	2.060	2.962	9.4	19.3
11 27	5 0.01	+37 10.9	2.138	3.087	6.0	20.2	11 27	4 59.90	+39 6.2	2.032	2.976	6.7	19.2
12 7	4 49.03	+37 30.6	2.146	3.108	4.7	20.1	12 7	4 49.11	+39 12.8	2.032	2.990	5.4	19.2
12 17	4 38.30	+37 34.3	2.183	3.129	6.0	20.2	12 17	4 38.56	+39 1.8	2.061	3.003	6.5	19.3
12 27	4 29.00	+37 24.5	2.249	3.150	8.5	20.4	12 27	4 29.51	+38 36.2	2.117	3.017	9.0	19.4
1 6	4 21.99	+37 5.7	2.341	3.171	11.1	20.6	1 6	4 22.86	+38 1.5	2.199	3.031	11.6	19.6
5783	Kumagaya	12 5.9 287°88'	3°3'	6.8	18		278563	2008 GH ₉₃	12 5.9 265°12'	0°8'	6.0	17	
10 28	5 22.83	+30 45.8	1.450	2.243	19.1	16.9	10 28	5 20.01	+23 21.8	2.100	2.880	14.4	20.9
11 7	5 19.00	+30 52.8	1.368	2.239	15.5	16.7	11 7	5 15.55	+23 48.3	2.003	2.871	11.5	20.7
11 17	5 11.44	+30 48.7	1.304	2.236	11.1	16.4	11 17	5 8.50	+24 13.5	1.927	2.861	7.9	20.5
11 27	5 0.93	+30 29.8	1.263	2.232	6.3	16.1	11 27	4 59.40	+24 35.7	1.878	2.852	4.0	20.2
12 7	4 48.90	+29 54.7	1.248	2.229	3.3	15.9	12 7	4 49.16	+24 53.6	1.858	2.842	0.9	20.0
12 17	4 37.14	+29 5.9	1.260	2.225	6.6	16.1	12 17	4 38.90	+25 6.7	1.867	2.833	4.8	20.2
12 27	4 27.40	+28 9.7	1.298	2.222	11.4	16.4	12 27	4 29.80	+25 16.3	1.906	2.823	8.8	20.4
1 6	4 20.89	+27 13.7	1.359	2.218	15.8	16.7	1 6	4 22.80	+25 24.5	1.970	2.813	12.3	20.7
372886	2010 XL ₈₅	12 5.9 18°82'	3°3'	5.2	18		101700	1999 CO ₁₄₉	12 5.9 208°26'	2°1'	6.5	18	
10 28	5 16.53	+18 20.7	1.030	1.869	22.1	20.9	10 28						

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
296172	2009 <i>BE</i> ₁₃₆	12 5.9 203°62	0°7/ 6.1 18				167294	2003 <i>UB</i> ₂₀₆	12 5.9 350°44	1°1/ 5.6 18			
10 28	5 20.71	+25 27.5	2.108	2.884	14.5	21.3	10 28	5 15.44	+22 32.5	1.393	2.210	18.5	19.4
11 7	5 15.96	+25 23.2	2.016	2.882	11.5	21.1	11 7	5 12.97	+22 1.8	1.313	2.204	14.7	19.1
11 17	5 8.65	+25 13.6	1.945	2.878	7.9	20.9	11 17	5 7.21	+21 24.8	1.254	2.198	10.1	18.9
11 27	4 59.40	+24 57.9	1.901	2.874	4.0	20.7	11 27	4 58.90	+20 42.8	1.217	2.194	4.9	18.5
12 7	4 49.17	+24 36.1	1.886	2.870	0.8	20.4	12 7	4 49.29	+19 58.4	1.206	2.190	1.3	18.3
12 17	4 39.09	+24 9.9	1.901	2.866	4.7	20.7	12 17	4 39.91	+19 15.8	1.221	2.188	6.4	18.6
12 27	4 30.28	+23 42.3	1.944	2.861	8.6	20.9	12 27	4 32.27	+18 39.8	1.261	2.186	11.5	18.9
1 6	4 23.60	+23 16.7	2.014	2.856	12.1	21.1	1 6	4 27.44	+18 14.1	1.323	2.185	16.0	19.2
60969	2000 <i>JO</i> ₈₃	12 5.9 201°42	1°0/ 5.7 18				301717	2010 <i>GK</i> ₁₀₃	12 5.9 158°97	4°9/ 4.3 18			
10 28	5 21.96	+20 24.3	1.933	2.716	15.4	20.8	10 28	5 18.94	+ 9 36.8	2.253	3.025	13.8	21.7
11 7	5 17.10	+20 15.1	1.842	2.713	12.2	20.6	11 7	5 14.06	+ 8 46.2	2.174	3.031	11.1	21.5
11 17	5 9.52	+20 4.0	1.773	2.709	8.4	20.4	11 17	5 7.07	+ 7 59.3	2.117	3.037	8.2	21.3
11 27	4 59.86	+19 51.2	1.730	2.705	4.1	20.1	11 27	4 58.57	+ 7 19.8	2.088	3.042	5.7	21.2
12 7	4 49.13	+19 37.5	1.716	2.700	1.2	19.9	12 7	4 49.36	+ 6 50.6	2.087	3.047	5.1	21.1
12 17	4 38.51	+19 24.3	1.731	2.695	5.3	20.2	12 17	4 40.36	+ 6 34.1	2.116	3.051	6.9	21.3
12 27	4 29.23	+19 14.1	1.775	2.689	9.5	20.4	12 27	4 32.45	+ 6 31.4	2.173	3.055	9.7	21.4
1 6	4 22.21	+19 9.1	1.844	2.683	13.2	20.6	1 6	4 26.32	+ 6 42.1	2.255	3.058	12.4	21.6
362448	2010 <i>RS</i> ₁₀₆	12 5.9 104°52	0°8/ 6.1 18				42117	2001 <i>BD</i> ₆	12 5.9 251°40	4°0/ 4.9 18			
10 28	5 19.56	+25 1.3	2.072	2.852	14.5	21.2	10 28	5 17.17	+ 9 54.1	2.501	3.271	12.6	19.2
11 7	5 15.00	+25 4.9	1.991	2.859	11.5	21.0	11 7	5 12.71	+ 9 34.8	2.397	3.255	10.2	19.0
11 17	5 7.95	+25 4.2	1.931	2.865	7.9	20.8	11 17	5 6.24	+ 9 19.9	2.317	3.239	7.5	18.8
11 27	4 59.04	+24 58.0	1.898	2.872	3.9	20.5	11 27	4 58.24	+ 9 11.7	2.264	3.222	4.9	18.6
12 7	4 49.25	+24 46.5	1.893	2.878	0.9	20.3	12 7	4 49.40	+ 9 11.9	2.239	3.206	4.1	18.6
12 17	4 39.68	+24 30.7	1.919	2.884	4.6	20.6	12 17	4 40.54	+ 9 21.7	2.245	3.188	6.0	18.6
12 27	4 31.41	+24 13.2	1.972	2.890	8.5	20.9	12 27	4 32.53	+ 9 41.7	2.280	3.171	8.9	18.8
1 6	4 25.27	+23 57.1	2.051	2.896	11.8	21.1	1 6	4 26.09	+10 11.3	2.340	3.153	11.7	19.0
300486	2007 <i>TK</i> ₁₃₀	12 5.9 12°20	3°3/ 6.6 17				440901	2006 <i>UJ</i> ₂₈₈	12 5.9 43°80	4°0/ 7.1 17			
10 28	5 15.12	+28 58.3	1.162	1.987	21.0	20.3	10 28	5 22.07	+32 48.8	1.545	2.330	18.5	20.6
11 7	5 13.44	+29 21.6	1.101	1.992	16.8	20.1	11 7	5 17.81	+33 2.8	1.487	2.352	14.8	20.4
11 17	5 7.86	+29 34.9	1.058	1.999	11.9	19.8	11 17	5 10.19	+33 4.4	1.448	2.374	10.7	20.3
11 27	4 59.26	+29 35.1	1.036	2.008	6.7	19.6	11 27	5 0.17	+32 50.6	1.433	2.398	6.5	20.1
12 7	4 49.23	+29 20.6	1.037	2.019	3.3	19.4	12 7	4 49.19	+32 20.6	1.444	2.421	4.0	20.0
12 17	4 39.65	+28 53.7	1.063	2.031	6.9	19.7	12 17	4 38.82	+31 37.2	1.483	2.445	6.3	20.2
12 27	4 32.32	+28 19.8	1.112	2.044	11.9	20.0	12 27	4 30.50	+30 46.1	1.548	2.469	10.1	20.5
1 6	4 28.35	+27 45.6	1.183	2.060	16.4	20.3	1 6	4 25.10	+29 54.2	1.637	2.494	13.7	20.7
243651	1999 <i>TV</i> ₂₅₃	12 5.9 15°30	3°2/ 5.2 18				415237	2012 <i>JV</i> ₁₂	12 5.9 42°60	1°2/ 6.1 18			
10 28	5 14.25	+18 29.6	1.164	1.998	20.4	19.7	10 28	5 20.39	+23 14.6	1.999	2.781	14.9	20.1
11 7	5 12.26	+17 47.0	1.106	2.004	16.1	19.5	11 7	5 15.79	+24 0.0	1.924	2.793	11.8	19.9
11 17	5 6.75	+17 2.5	1.065	2.012	11.1	19.2	11 17	5 8.59	+24 44.5	1.871	2.805	8.1	19.7
11 27	4 58.62	+16 19.6	1.047	2.022	5.9	19.0	11 27	4 59.42	+25 25.8	1.844	2.817	4.1	19.4
12 7	4 49.32	+15 42.7	1.052	2.033	3.4	18.9	12 7	4 49.27	+26 1.6	1.846	2.830	1.3	19.3
12 17	4 40.48	+15 15.8	1.082	2.046	7.6	19.2	12 17	4 39.28	+26 31.0	1.878	2.843	4.8	19.5
12 27	4 33.65	+15 2.1	1.136	2.060	12.6	19.5	12 27	4 30.63	+26 54.7	1.939	2.856	8.6	19.8
1 6	4 29.81	+15 2.6	1.210	2.075	17.0	19.8	1 6	4 24.18	+27 14.5	2.025	2.870	12.0	20.0
521175	2015 <i>FF</i> ₄₁₀	12 5.9 200°38	0°4/ 5.8 18				361365	2006 <i>UR</i> ₂₆₃	12 5.9 60°29	0°7/ 6.1 18			
10 28	5 22.33	+23 17.6	1.818	2.602	16.1	21.8	10 28	5 19.65	+25 1.2	1.813	2.602	16.0	21.4
11 7	5 17.58	+22 57.5	1.729	2.600	12.8	21.6	11 7	5 15.40	+24 58.9	1.738	2.611	12.6	21.2
11 17	5 9.94	+22 32.1	1.661	2.597	8.8	21.4	11 17	5 8.38	+24 51.4	1.684	2.620	8.7	21.0
11 27	5 0.09	+22 1.5	1.619	2.594	4.3	21.1	11 27	4 59.31	+24 38.0	1.655	2.629	4.3	20.8
12 7	4 49.13	+21 26.8	1.605	2.590	0.7	20.8	12 7	4 49.29	+24 18.8	1.653	2.638	0.8	20.5
12 17	4 38.36	+20 50.8	1.621	2.586	5.4	21.2	12 17	4 39.56	+23 55.8	1.681	2.647	5.0	20.9
12 27	4 29.08	+20 17.1	1.664	2.581	9.9	21.4	12 27	4 31.35	+23 32.1	1.736	2.657	9.2	21.1
1 6	4 22.25	+19 49.6	1.733	2.576	13.8	21.6	1 6	4 25.51	+23 11.2	1.816	2.666	12.9	21.4
335435	2005 <i>UZ</i> ₂₀₇	12 5.9 81°36	0°9/ 5.7 18				212356	2006 <i>DC</i> ₈₇	12 5.9 68°50	1°7/ 5.6 17			
10 28	5 23.91	+21 3.8	1.548	2.342	18.0	21.5	10 28	5 23.13	+19 23.8	1.246	2.059	20.5	20.6
11 7	5 18.87	+20 52.5	1.487	2.364	14.2	21.3	11 7	5 19.15	+19 13.9	1.182	2.069	16.3	20.3
11 17	5 10.73	+20 38.7	1.447	2.386	9.6	21.1	11 17	5 11.46	+19 3.4	1.137	2.079	11.2	20.1
11 27	5 0.38	+20 22.7	1.432	2.407	4.6	20.9	11 27	5 0.94	+18 52.8	1.114	2.090	5.5	19.8
12 7	4 49.11	+20 5.5	1.444	2.429	1.2	20.7	12 7	4 49.11	+18 43.3	1.117	2.101	1.9	19.6
12 17	4 38.39	+19 49.2	1.485	2.450	5.8	21.1	12 17	4 37.73	+18 36.9	1.146	2.111	7.0	19.9
12 27	4 29.52	+19 36.8	1.552	2.470	10.3	21.4	12 27	4 28.50	+18 36.3	1.200	2.122	12.2	20.3
1 6	4 23.39	+19 30.5	1.644	2.491	14.2	21.7	1 6	4 22.52	+18 43.5	1.275	2.133	16.8	20.6
481595	2007 <i>TM</i> ₂₃₂	12 5.9 341°95	0°4/ 5.8 17				50625	2000 <i>EL</i> ₆₆	12 5.9 112°95	0°9/ 5.6 18			
10 28	5 17.78	+21 54.0	1.608	2.411	17.1	21.5	10 28	5 16.83	+19 58.5	2.644	3.417	11.9	19.6
11 7	5 14.41	+21 50.3	1.524	2.406	13.6	21.3	11 7	5 12.19	+19 50.7	2.564	3.429	9.3	19.4
11 17	5 8.00	+21 43.8	1.461	2.402	9.3	21.0	11 17	5 5.70	+19 41.8	2.507	3.441	6.3	19.3
11 27	4 59.24	+21 34.3	1.422	2.398	4.5	20.8	11 27	4 57.89	+19 32.1	2.479	3.453	3.1	19.1
12 7	4 49.24	+21 22.5	1.409	2.394	0.8	20.5	12 7	4 49.48	+19 22.4	2.480	3.464	1.0	18.9
12 17	4 39.39	+21 9.9	1.424	2.391	5.7	20.8	12 17	4 41.26	+19 13.6	2.513	3.476	4.0	19.2
12 27	4 31.07	+20 59.4	1.466	2.388	10.4	21.1	12 27	4 34.00	+19 7.2	2.575	3.486	7.1	19.4
1 6	4 25.32	+20 53.6	1.531	2.386	14.6	21.3	1 6	4 28.31	+19 4.5	2.664	3.497	9.8	19.6
299003	2004 <i>XP</i> ₈₇	12 5.9 12°98	1°0/ 5.6 18				266028	2006 <i>FQ</i> ₄₉	12 5.9 226°52				

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
219193	1999 <i>UO</i> ₁₀	12 5.9	15°34'	20°2'	7.9	18	2510	Shandong	12 5.9	97°64'	1°8'	5.6	18 R
10 28	5 34.38	+53 20.1	1.135	1.874	26.4	18.7	10 28	5 25.86	+18 8.3	1.539	2.330	18.3	16.3
11 7	5 33.48	+56 58.8	1.089	1.878	24.2	18.6	11 7	5 20.44	+18 6.1	1.477	2.351	14.4	16.1
11 17	5 25.23	+60 14.7	1.059	1.884	22.2	18.5	11 17	5 11.87	+18 4.7	1.435	2.372	9.8	15.9
11 27	5 9.33	+62 46.8	1.045	1.892	20.8	18.4	11 27	5 1.01	+18 4.3	1.418	2.392	4.9	15.7
12 7	4 47.97	+64 16.6	1.049	1.901	20.2	18.4	12 7	4 49.17	+18 5.5	1.429	2.412	1.9	15.5
12 17	4 26.03	+64 36.4	1.070	1.911	20.5	18.5	12 17	4 37.83	+18 9.3	1.468	2.431	6.1	15.8
12 27	4 9.13	+63 55.0	1.107	1.923	21.7	18.6	12 27	4 28.35	+18 17.3	1.535	2.450	10.6	16.1
1 6	4 0.39	+62 32.4	1.159	1.936	23.2	18.8	1 6	4 21.65	+18 30.7	1.625	2.468	14.5	16.4
393392	2000 <i>QK</i> ₁₉₉	12 5.9	58°56'	5°5'	5.0	17	258237	2001 <i>TF</i> ₁₁₉	12 5.9	55°94'	0°4'	6.1	17
10 28	5 21.73	+ 8 36.1	1.775	2.556	16.6	21.4	10 28	5 22.91	+27 19.4	1.667	2.454	17.3	21.0
11 7	5 16.36	+ 8 0.8	1.733	2.595	13.2	21.2	11 7	5 17.77	+26 31.6	1.611	2.483	13.6	20.8
11 17	5 8.59	+ 7 33.4	1.711	2.633	9.7	21.1	11 17	5 9.77	+25 34.3	1.576	2.512	9.2	20.6
11 27	4 59.24	+ 7 17.2	1.715	2.672	6.5	21.0	11 27	4 59.86	+24 28.5	1.567	2.541	4.5	20.4
12 7	4 49.36	+ 7 14.2	1.747	2.710	5.5	21.0	12 7	4 49.33	+23 17.4	1.586	2.570	0.6	20.2
12 17	4 40.06	+ 7 25.1	1.807	2.747	7.5	21.2	12 17	4 39.49	+22 6.0	1.634	2.600	5.2	20.6
12 27	4 32.30	+ 7 49.4	1.894	2.785	10.4	21.5	12 27	4 31.50	+21 0.1	1.710	2.629	9.4	20.9
1 6	4 26.75	+ 8 24.9	2.006	2.822	13.2	21.7	1 6	4 26.08	+20 4.0	1.811	2.658	13.0	21.2
279294	2009 <i>WT</i> ₁₂₅	12 5.9	230°65'	1°1'	5.6	18	9373	Hamra	12 5.9	129°72'	1°2'	6.3	18
10 28	5 21.12	+22 0.4	1.737	2.528	16.5	20.9	10 28	5 22.23	+26 19.7	2.038	2.812	14.9	19.3
11 7	5 16.78	+21 29.8	1.647	2.522	13.1	20.7	11 7	5 17.16	+26 25.2	1.958	2.822	11.8	19.1
11 17	5 9.50	+20 54.0	1.578	2.516	9.0	20.4	11 17	5 9.47	+26 25.2	1.901	2.832	8.2	18.9
11 27	4 59.95	+20 13.8	1.534	2.509	4.4	20.1	11 27	4 59.84	+26 18.5	1.869	2.842	4.2	18.7
12 7	4 49.25	+19 31.3	1.519	2.503	1.3	19.9	12 7	4 49.31	+26 4.6	1.867	2.850	1.3	18.5
12 17	4 38.70	+18 49.8	1.532	2.496	5.8	20.2	12 17	4 39.05	+25 44.8	1.894	2.859	4.7	18.8
12 27	4 29.66	+18 13.5	1.572	2.488	10.4	20.4	12 27	4 30.19	+25 22.2	1.950	2.867	8.6	19.0
1 6	4 23.10	+17 45.7	1.637	2.481	14.4	20.7	1 6	4 23.58	+25 0.2	2.032	2.875	12.0	19.3
153532	2001 <i>SK</i> ₆₃	12 5.9	72°03'	2°4'	5.4	18	227536	2005 <i>YB</i> ₉₁	12 5.9	118°82'	0°7'	6.2	18
10 28	5 21.97	+17 47.1	1.499	2.299	18.2	20.5	10 28	5 18.08	+25 58.0	2.264	3.041	13.6	20.6
11 7	5 17.47	+17 27.9	1.437	2.316	14.4	20.3	11 7	5 13.68	+25 48.3	2.177	3.043	10.7	20.4
11 17	5 9.89	+17 9.0	1.394	2.333	9.9	20.1	11 17	5 6.99	+25 33.0	2.113	3.046	7.4	20.2
11 27	5 0.05	+16 51.9	1.377	2.350	5.1	19.9	11 27	4 58.62	+25 11.7	2.075	3.049	3.7	20.0
12 7	4 49.25	+16 38.4	1.386	2.367	2.5	19.8	12 7	4 49.46	+24 44.9	2.067	3.051	0.8	19.7
12 17	4 38.92	+16 30.3	1.422	2.384	6.4	20.0	12 17	4 40.49	+24 14.4	2.088	3.054	4.3	20.0
12 27	4 30.38	+16 29.7	1.485	2.401	10.9	20.3	12 27	4 32.70	+23 43.0	2.139	3.056	7.9	20.2
1 6	4 24.54	+16 37.5	1.572	2.418	14.7	20.6	1 6	4 26.83	+23 14.0	2.215	3.059	11.1	20.4
11243	de Graauw	12 5.9	15°51'	2°4'	5.3	18	312303	2008 <i>CP</i> ₅₀	12 5.9	340°82'	0°7'	5.8	18
10 28	5 16.73	+17 38.9	1.657	2.460	16.6	17.4	10 28	5 18.28	+20 29.7	1.766	2.562	16.1	20.1
11 7	5 13.28	+17 16.7	1.581	2.463	13.2	17.2	11 7	5 14.53	+20 35.1	1.681	2.559	12.7	19.9
11 17	5 7.05	+16 54.4	1.527	2.466	9.1	17.0	11 17	5 7.97	+20 39.8	1.616	2.555	8.7	19.7
11 27	4 58.73	+16 33.8	1.496	2.470	4.8	16.7	11 27	4 59.25	+20 43.5	1.577	2.552	4.3	19.4
12 7	4 49.40	+16 16.8	1.493	2.474	2.6	16.6	12 7	4 49.38	+20 46.4	1.565	2.550	0.9	19.1
12 17	4 40.32	+16 5.7	1.517	2.479	6.1	16.9	12 17	4 39.62	+20 49.0	1.581	2.547	5.4	19.5
12 27	4 32.70	+16 2.4	1.568	2.485	10.4	17.1	12 27	4 31.24	+20 53.2	1.625	2.545	9.8	19.7
1 6	4 27.45	+16 8.0	1.643	2.491	14.1	17.4	1 6	4 25.21	+21 0.8	1.693	2.543	13.7	20.0
356177	2009 <i>HF</i> ₈₄	12 5.9	172°94'	4°4'	4.6	18	36172	1999 <i>RH</i> ₂₄₇	12 5.9	247°39'	0°7'	5.7	17
10 28	5 17.98	+10 13.6	2.316	3.089	13.4	21.5	10 28	5 17.54	+21 6.4	2.288	3.068	13.3	19.6
11 7	5 13.33	+ 9 37.0	2.232	3.091	10.8	21.4	11 7	5 13.27	+20 54.6	2.192	3.061	10.5	19.4
11 17	5 6.62	+ 9 4.3	2.171	3.093	7.9	21.2	11 17	5 6.76	+20 40.5	2.118	3.053	7.2	19.2
11 27	4 58.40	+ 8 38.3	2.137	3.095	5.3	21.0	11 27	4 58.55	+20 24.3	2.071	3.045	3.5	18.9
12 7	4 49.46	+ 8 21.4	2.132	3.096	4.5	21.0	12 7	4 49.47	+20 7.0	2.053	3.037	0.9	18.7
12 17	4 40.66	+ 8 15.5	2.156	3.097	6.4	21.1	12 17	4 40.46	+19 49.9	2.065	3.029	4.5	19.0
12 27	4 32.90	+ 8 21.3	2.209	3.097	9.3	21.3	12 27	4 32.52	+19 35.3	2.107	3.021	8.2	19.2
1 6	4 26.85	+ 8 38.5	2.287	3.097	12.0	21.5	1 6	4 26.39	+19 25.1	2.174	3.013	11.5	19.4
162323	1999 <i>XA</i> ₄₅	12 5.9	39°76'	1°7'	5.3	18	228946	2003 <i>TD</i> ₅₇	12 5.9	27°46'	0°7'	6.2	17
10 28	5 20.03	+24 0.5	1.395	2.203	19.0	19.2	10 28	5 17.93	+27 37.6	2.149	2.927	14.2	19.7
11 7	5 16.11	+22 44.2	1.334	2.219	14.9	19.0	11 7	5 13.63	+27 1.9	2.063	2.929	11.2	19.5
11 17	5 8.97	+21 18.2	1.294	2.236	10.1	18.8	11 17	5 6.97	+26 17.5	1.999	2.932	7.7	19.3
11 27	4 59.58	+19 46.1	1.278	2.254	4.9	18.5	11 27	4 58.60	+25 24.7	1.962	2.935	3.9	19.1
12 7	4 49.34	+18 14.0	1.289	2.272	2.0	18.4	12 7	4 49.48	+24 25.3	1.954	2.939	0.7	18.8
12 17	4 39.75	+16 48.9	1.327	2.291	6.5	18.7	12 17	4 40.63	+23 22.7	1.976	2.942	4.5	19.1
12 27	4 32.13	+15 37.4	1.392	2.310	11.3	19.0	12 27	4 33.07	+22 21.4	2.027	2.946	8.2	19.4
1 6	4 27.31	+14 43.2	1.480	2.330	15.3	19.3	1 6	4 27.54	+21 25.6	2.105	2.950	11.6	19.6
493190	2014 <i>UQ</i> ₁₉	12 5.9	34°66'	0°4'	5.8	17	134928	2001 <i>AG</i> ₂	12 5.9	46°26'	0°2'	5.9	18
10 28	5 16.89	+20 55.4	2.199	2.983	13.7	21.3	10 28	5 25.07	+22 21.9	1.047	1.870	22.9	19.0
11 7	5 12.76	+21 1.9	2.116	2.987	10.8	21.1	11 7	5 20.96	+22 36.2	1.006	1.898	18.0	18.8
11 17	5 6.39	+21 7.3	2.056	2.992	7.3	20.9	11 17	5 12.70	+22 47.4	0.982	1.926	12.2	18.6
11 27	4 58.34	+21 11.4	2.022	2.997	3.5	20.7	11 27	5 1.48	+22 53.9	0.979	1.956	5.8	18.4
12 7	4 49.47	+21 14.3	2.017	3.002	0.6	20.4	12 7	4 49.17	+22 55.1	1.001	1.986	0.7	18.1
12 17	4 40.75	+21 16.6	2.042	3.007	4.4	20.7	12 17	4 37.80	+22 52.4	1.048	2.017	6.8	18.6
12 27	4 33.16	+21 19.7	2.095	3.012	8.1	21.0	12 27	4 29.10	+22 49.6	1.119	2.048	12.3	19.0
1 6	4 27.44	+21 25.0	2.174	3.018	11.3	21.2	1 6	4 24.03	+22 50.1	1.211	2.079	16.8	19.4
400677	2009 <i>PF</i>	12 5.9	50°67'	10°9'	5.3	18	82716	2001 <i>PV</i> ₄₇	12 5.9	310°69'	7°0'	4.4	18
10 28	5 19.42	- 7 11.1											

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
332776	2009 VY ₃₀	12 5.9 261°35	1°0/ 6.3 17				109970	2001 SW ₅₁	12 5.9 105°87	3°9/ 4.8 18			
10 28	5 17.63	+27 16.3	2.357	3.130	13.2	21.2	10 28	5 19.94	+11 24.7	2.314	3.084	13.5	20.3
11 7	5 13.33	+27 3.1	2.261	3.124	10.5	21.0	11 7	5 14.66	+10 50.2	2.249	3.108	10.7	20.2
11 17	5 6.78	+26 43.2	2.187	3.119	7.3	20.8	11 17	5 7.39	+10 19.3	2.207	3.131	7.7	20.0
11 27	4 58.56	+26 16.2	2.141	3.113	3.7	20.6	11 27	4 58.75	+9 54.5	2.193	3.153	4.9	19.9
12 7	4 49.50	+25 42.5	2.123	3.107	1.1	20.4	12 7	4 49.54	+9 38.0	2.208	3.175	4.0	19.9
12 17	4 40.58	+25 4.1	2.136	3.101	4.2	20.6	12 17	4 40.65	+9 31.0	2.253	3.197	5.9	20.1
12 27	4 32.78	+24 24.1	2.178	3.095	7.8	20.8	12 27	4 32.91	+9 34.4	2.327	3.217	8.7	20.3
1 6	4 26.85	+23 46.0	2.246	3.089	11.0	21.0	1 6	4 26.93	+9 47.7	2.426	3.238	11.4	20.5
447516	2006 SX ₉₂	12 5.9 49°69	1°9/ 5.4 17				517078	2013 CD ₉₅	12 5.9 124°59	2°8/ 5.2 18			
10 28	5 18.25	+19 11.3	1.756	2.552	16.1	21.6	10 28	5 18.60	+16 9.9	1.922	2.711	15.2	21.8
11 7	5 14.25	+18 44.7	1.683	2.561	12.7	21.4	11 7	5 14.35	+15 43.5	1.841	2.714	12.0	21.6
11 17	5 7.59	+18 16.5	1.631	2.570	8.7	21.2	11 17	5 7.61	+15 17.7	1.781	2.716	8.4	21.4
11 27	4 58.97	+17 48.1	1.605	2.579	4.4	21.0	11 27	4 59.01	+14 54.4	1.748	2.719	4.6	21.2
12 7	4 49.46	+17 21.6	1.607	2.589	2.1	20.8	12 7	4 49.51	+14 35.8	1.742	2.721	2.9	21.1
12 17	4 40.25	+16 59.5	1.636	2.599	5.7	21.1	12 17	4 40.20	+14 23.7	1.765	2.723	5.9	21.3
12 27	4 32.51	+16 44.2	1.693	2.609	9.8	21.4	12 27	4 32.17	+14 20.0	1.816	2.725	9.7	21.5
1 6	4 27.04	+16 37.5	1.774	2.619	13.4	21.6	1 6	4 26.25	+14 25.4	1.892	2.727	13.1	21.7
430808	2005 CH ₆₃	12 5.9 289°83	0°6/ 6.0 18				83251	2001 RF ₆₄	12 5.9 133°79	2°9/ 7.0 18			
10 28	5 21.43	+23 11.5	1.386	2.193	19.2	21.9	10 28	5 22.72	+32 21.9	2.336	3.090	13.8	20.6
11 7	5 18.27	+23 26.5	1.289	2.173	15.4	21.6	11 7	5 17.31	+32 28.3	2.254	3.102	11.1	20.4
11 17	5 11.36	+23 39.3	1.212	2.152	10.8	21.3	11 17	5 9.46	+32 25.8	2.194	3.113	8.0	20.2
11 27	5 1.24	+23 48.0	1.157	2.132	5.4	20.9	11 27	4 59.85	+32 12.2	2.161	3.124	4.8	20.1
12 7	4 49.15	+23 51.2	1.127	2.112	0.9	20.5	12 7	4 49.43	+31 46.9	2.157	3.134	2.9	19.9
12 17	4 36.83	+23 48.9	1.124	2.092	6.7	20.9	12 17	4 39.30	+31 11.3	2.184	3.143	4.8	20.1
12 27	4 26.21	+23 44.0	1.146	2.072	12.4	21.1	12 27	4 30.52	+30 29.1	2.240	3.153	7.9	20.3
1 6	4 18.77	+23 40.5	1.190	2.052	17.4	21.4	1 6	4 23.85	+29 44.8	2.322	3.161	10.9	20.5
32722	3340 T- ₃	12 5.9 199°66	1°3/ 5.6 18				43325	2000 KY ₅₀	12 5.9 236°24	0°2/ 5.9 18			
10 28	5 19.93	+19 33.5	2.197	2.975	13.9	20.4	10 28	5 20.82	+22 13.7	2.348	3.119	13.3	19.0
11 7	5 15.17	+19 18.2	2.105	2.973	11.0	20.2	11 7	5 15.94	+22 28.9	2.243	3.106	10.6	18.8
11 17	5 8.07	+19 1.2	2.035	2.969	7.5	19.9	11 17	5 8.69	+22 42.9	2.161	3.094	7.3	18.6
11 27	4 59.21	+18 43.4	1.992	2.966	3.8	19.7	11 27	4 59.59	+22 54.6	2.106	3.080	3.6	18.3
12 7	4 49.45	+18 25.7	1.978	2.962	1.5	19.5	12 7	4 49.45	+23 3.5	2.081	3.066	0.4	18.0
12 17	4 39.81	+18 9.9	1.995	2.957	4.9	19.8	12 17	4 39.26	+23 9.5	2.087	3.052	4.4	18.3
12 27	4 31.30	+17 58.0	2.040	2.952	8.6	20.0	12 27	4 30.08	+23 14.1	2.123	3.037	8.2	18.5
1 6	4 24.73	+17 51.7	2.112	2.946	12.0	20.2	1 6	4 22.78	+23 18.9	2.185	3.022	11.5	18.7
329451	2002 PT ₁₅₁	12 5.9 59°42	3°5/ 6.8 18				431721	2008 EF ₁₆₃	12 5.9 11°01	4°4/ 5.3 18			
10 28	5 25.74	+30 8.5	1.288	2.086	20.8	20.7	10 28	5 18.31	+14 0.4	1.203	2.026	20.6	20.8
11 7	5 21.30	+30 30.4	1.233	2.107	16.6	20.5	11 7	5 15.53	+13 38.7	1.136	2.027	16.5	20.5
11 17	5 12.92	+30 41.7	1.196	2.129	11.8	20.2	11 17	5 9.16	+13 21.8	1.087	2.029	11.7	20.2
11 27	5 1.65	+30 38.4	1.182	2.151	6.7	20.0	11 27	4 59.98	+13 12.9	1.060	2.031	6.7	20.0
12 7	4 49.18	+30 18.8	1.193	2.173	3.5	19.9	12 7	4 49.40	+13 14.8	1.057	2.035	4.6	19.9
12 17	4 37.43	+29 45.5	1.230	2.195	6.7	20.2	12 17	4 39.11	+13 29.0	1.079	2.039	8.3	20.1
12 27	4 28.11	+29 4.8	1.293	2.217	11.4	20.5	12 27	4 30.77	+13 55.9	1.124	2.044	13.2	20.4
1 6	4 22.25	+28 23.8	1.379	2.239	15.5	20.8	1 6	4 25.53	+14 34.4	1.191	2.050	17.6	20.7
267921	2004 DC ₇	12 5.9 203°99	4°3/ 7.0 18				326187	2012 CO ₁	12 5.9 24°43	1°4/ 5.6 18			
10 28	5 25.13	+32 54.3	1.711	2.483	17.5	20.7	10 28	5 17.50	+19 26.5	1.890	2.683	15.3	21.5
11 7	5 20.44	+33 18.9	1.624	2.481	14.3	20.4	11 7	5 13.61	+19 13.0	1.809	2.685	12.1	21.3
11 17	5 12.30	+33 33.1	1.557	2.478	10.5	20.2	11 17	5 7.17	+18 58.2	1.750	2.688	8.3	21.0
11 27	5 1.45	+33 32.7	1.514	2.475	6.5	20.0	11 27	4 58.82	+18 43.1	1.717	2.691	4.1	20.8
12 7	4 49.18	+33 14.9	1.497	2.472	4.3	19.8	12 7	4 49.55	+18 28.8	1.711	2.695	1.6	20.6
12 17	4 37.10	+32 40.6	1.509	2.469	6.5	20.0	12 17	4 40.47	+18 17.2	1.734	2.698	5.3	20.9
12 27	4 26.84	+31 54.6	1.549	2.465	10.5	20.2	12 27	4 32.70	+18 10.1	1.785	2.702	9.3	21.1
1 6	4 19.51	+31 4.1	1.612	2.461	14.3	20.4	1 6	4 27.08	+18 9.3	1.861	2.706	12.9	21.4
50162	2000 AH ₁₄₆	12 5.9 125°35	10°4/ 5.7 18				11463	Petropokorny	12 5.9 342°46	0°0/ 5.8 18			
10 28	5 25.84	- 6 26.2	1.834	2.564	17.9	18.8	10 28	5 18.14	+23 51.0	1.205	2.028	20.5	18.1
11 7	5 19.81	- 6 55.1	1.771	2.578	15.5	18.6	11 7	5 15.79	+23 39.8	1.129	2.021	16.4	17.8
11 17	5 11.18	- 7 4.6	1.727	2.592	13.0	18.5	11 17	5 9.59	+23 22.2	1.070	2.015	11.3	17.5
11 27	5 0.65	- 6 49.0	1.706	2.606	11.0	18.4	11 27	5 0.30	+22 57.7	1.033	2.010	5.6	17.1
12 7	4 49.30	- 6 5.5	1.712	2.619	10.4	18.4	12 7	4 49.36	+22 27.4	1.020	2.005	0.7	16.8
12 17	4 38.30	- 4 55.0	1.744	2.631	11.4	18.5	12 17	4 38.63	+21 54.6	1.033	2.002	6.8	17.2
12 27	4 28.80	- 3 21.3	1.802	2.642	13.4	18.7	12 27	4 29.96	+21 24.4	1.069	1.999	12.6	17.5
1 6	4 21.59	- 1 31.1	1.884	2.653	15.7	18.9	1 6	4 24.62	+21 1.6	1.126	1.996	17.6	17.8
402725	2006 WN ₇₀	12 5.9 320°35	2°0/ 6.4 17				84638	2002 VO ₅₅	12 5.9 237°30	0°7/ 5.7 18			
10 28	5 20.00	+27 1.9	1.920	2.702	15.5	21.3	10 28	5 21.69	+22 27.8	1.720	2.511	16.7	19.9
11 7	5 15.84	+27 25.3	1.832	2.699	12.4	21.1	11 7	5 17.37	+22 5.6	1.628	2.503	13.3	19.6
11 17	5 8.86	+27 44.0	1.765	2.697	8.7	20.9	11 17	5 10.03	+21 38.3	1.557	2.494	9.1	19.4
11 27	4 59.71	+27 55.6	1.723	2.694	4.7	20.6	11 27	5 0.32	+21 6.3	1.511	2.486	4.5	19.1
12 7	4 49.40	+27 58.7	1.709	2.692	2.0	20.5	12 7	4 49.37	+20 31.0	1.492	2.477	1.0	18.8
12 17	4 39.19	+27 53.6	1.725	2.689	5.2	20.7	12 17	4 38.53	+19 55.4	1.502	2.467	5.7	19.1
12 27	4 30.36	+27 42.5	1.768	2.687	9.2	20.9	12 27	4 29.20	+19 23.2	1.540	2.458	10.4	19.4
1 6	4 23.87	+27 29.2	1.836	2.685	12.8	21.1	1 6	4 22.39	+18 58.3	1.602	2.448	14.5	19.6
291059	2005 YQ ₇₀	12 5.9 91°68	0°8/ 6.2 18				366108	2012 DR ₂₂	12 5.9 336°33	4°8/ 4.5 18			
10 28	5 19.01	+24 56.8	2.145	2.924									

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
408132	2013 <i>CT</i> ₆₆	12 5.9 245°54	3°6/ 4.8 14 C				493037	2014 <i>SA</i> ₂₅₃	12 5.9 122°95	4°6/ 7.6 17			
10 28	5 18.41	+13 38.0	2.215	2.993	13.8	22.4	10 28	5 22.02	+36 56.1	2.405	3.148	13.8	21.6
11 7	5 14.00	+13 3.5	2.114	2.979	11.0	22.2	11 7	5 16.97	+37 23.7	2.321	3.155	11.3	21.4
11 17	5 7.32	+12 30.2	2.036	2.965	7.9	22.0	11 17	5 9.36	+37 40.9	2.259	3.162	8.6	21.3
11 27	4 58.90	+12 0.6	1.984	2.950	4.8	21.7	11 27	4 59.87	+37 44.3	2.223	3.170	6.0	21.1
12 7	4 49.54	+11 37.1	1.962	2.934	3.7	21.6	12 7	4 49.47	+37 32.2	2.215	3.177	4.6	21.0
12 17	4 40.19	+11 21.9	1.969	2.919	6.1	21.8	12 17	4 39.30	+37 5.1	2.236	3.183	5.7	21.1
12 27	4 31.85	+11 16.9	2.004	2.902	9.5	22.0	12 27	4 30.47	+36 26.3	2.286	3.190	8.2	21.3
1 6	4 25.33	+11 22.6	2.064	2.886	12.7	22.1	1 6	4 23.80	+35 40.8	2.362	3.196	10.9	21.5
518509	2006 <i>FZ</i> ₅₁	12 5.9 144°55	1°0/ 6.5 18				187589	2006 <i>WH</i> ₉₈	12 5.9 338°17	0°4/ 6.0 18			
10 28	5 16.78	+27 52.2	4.029	4.774	8.6	23.9	10 28	5 18.09	+22 33.0	1.703	2.501	16.5	20.2
11 7	5 11.56	+27 51.3	3.942	4.789	6.8	23.8	11 7	5 14.65	+22 51.7	1.615	2.494	13.1	20.0
11 17	5 5.02	+27 46.4	3.880	4.803	4.7	23.7	11 17	5 8.25	+23 9.0	1.548	2.487	9.1	19.7
11 27	4 57.57	+27 36.9	3.848	4.817	2.5	23.5	11 27	4 59.52	+23 23.7	1.506	2.481	4.5	19.5
12 7	4 49.72	+27 22.9	3.847	4.829	1.0	23.4	12 7	4 49.52	+23 34.6	1.491	2.476	0.6	19.2
12 17	4 42.00	+27 5.2	3.879	4.842	2.7	23.6	12 17	4 39.56	+23 42.1	1.504	2.471	5.4	19.5
12 27	4 34.97	+26 45.1	3.943	4.853	4.9	23.7	12 27	4 31.03	+23 47.7	1.543	2.466	10.0	19.7
1 6	4 29.05	+26 24.4	4.036	4.864	6.9	23.9	1 6	4 24.97	+23 53.9	1.607	2.462	14.0	20.0
410643	2008 <i>RN</i> ₁₁₁	12 5.9 354°53	3°1/ 6.6 17				492996	2014 <i>SZ</i> ₁₈₉	12 5.9 344°72	3°6/ 4.9 17			
10 28	5 19.08	+30 6.4	2.179	2.949	14.2	20.7	10 28	5 15.18	+14 4.2	1.938	2.733	14.9	21.7
11 7	5 14.87	+30 44.5	2.090	2.948	11.5	20.6	11 7	5 11.72	+13 33.5	1.853	2.728	11.9	21.5
11 17	5 8.09	+31 17.1	2.023	2.947	8.3	20.4	11 17	5 5.87	+13 4.8	1.790	2.724	8.4	21.3
11 27	4 59.32	+31 41.0	1.982	2.946	5.0	20.2	11 27	4 58.23	+12 40.5	1.752	2.720	5.0	21.1
12 7	4 49.50	+31 54.3	1.969	2.946	3.1	20.0	12 7	4 49.68	+12 23.3	1.742	2.717	3.7	21.0
12 17	4 39.74	+31 56.6	1.986	2.945	5.2	20.2	12 17	4 41.25	+12 15.2	1.760	2.714	6.3	21.2
12 27	4 31.21	+31 49.7	2.030	2.945	8.5	20.4	12 27	4 33.99	+12 17.5	1.805	2.712	9.9	21.4
1 6	4 24.80	+31 37.2	2.101	2.945	11.6	20.6	1 6	4 28.71	+12 30.5	1.874	2.710	13.2	21.6
132554	2002 <i>JT</i> ₈₂	12 5.9 133°12	1°0/ 6.2 18				405243	2003 <i>SL</i> ₁₅₁	12 5.9 75°47	6°1/ 7.7 18			
10 28	5 22.26	+24 59.7	1.913	2.693	15.6	20.5	10 28	5 25.93	+39 18.5	2.276	3.009	14.7	20.8
11 7	5 17.43	+25 11.9	1.832	2.700	12.4	20.3	11 7	5 20.26	+40 20.8	2.210	3.032	12.3	20.7
11 17	5 9.83	+25 20.1	1.773	2.706	8.5	20.1	11 17	5 11.73	+41 11.8	2.166	3.056	9.6	20.5
11 27	5 0.13	+25 22.5	1.739	2.712	4.3	19.9	11 27	5 1.05	+41 46.3	2.147	3.079	7.2	20.4
12 7	4 49.41	+25 18.6	1.734	2.718	1.1	19.6	12 7	4 49.36	+42 1.1	2.156	3.102	6.1	20.4
12 17	4 38.91	+25 9.3	1.758	2.724	5.0	19.9	12 17	4 37.97	+41 56.0	2.193	3.125	6.9	20.5
12 27	4 29.86	+24 57.0	1.811	2.729	9.1	20.2	12 27	4 28.15	+41 34.1	2.258	3.148	9.0	20.7
1 6	4 23.16	+24 45.0	1.889	2.734	12.7	20.4	1 6	4 20.81	+41 1.1	2.349	3.170	11.4	20.9
333311	2001 <i>MR</i> ₃	12 5.9 119°23	1°1/ 5.6 12 C				304282	2006 <i>SL</i> ₄₇	12 5.9 3°58	0°6/ 6.1 18			
10 28	5 26.26	+20 27.0	2.305	3.066	13.8	24.1	10 28	5 18.77	+24 50.0	1.739	2.533	16.4	20.6
11 7	5 19.61	+20 6.3	2.237	3.095	10.8	24.0	11 7	5 15.00	+24 44.2	1.657	2.533	13.0	20.4
11 17	5 10.75	+19 43.3	2.192	3.122	7.3	23.8	11 17	5 8.34	+24 32.9	1.595	2.533	9.0	20.1
11 27	5 0.37	+19 18.4	2.176	3.149	3.6	23.6	11 27	4 59.49	+24 15.6	1.558	2.533	4.4	19.9
12 7	4 49.41	+18 53.0	2.191	3.174	1.2	23.5	12 7	4 49.54	+23 52.6	1.549	2.534	0.7	19.6
12 17	4 38.86	+18 28.9	2.237	3.198	4.5	23.8	12 17	4 39.80	+23 25.9	1.568	2.535	5.2	19.9
12 27	4 29.67	+18 8.5	2.314	3.221	8.0	24.0	12 27	4 31.56	+22 59.1	1.614	2.536	9.7	20.2
1 6	4 22.49	+17 53.6	2.419	3.243	11.0	24.3	1 6	4 25.77	+22 35.9	1.684	2.537	13.6	20.4
333046	2011 <i>SQ</i> ₁₃₅	12 5.9 128°76	4°6/ 7.4 18				83022	2001 <i>QA</i> ₁₇₈	12 5.9 66°60	8°4/ 4.4 18			
10 28	5 27.84	+36 19.8	2.408	3.142	14.0	22.1	10 28	5 18.38	+ 1 11.9	1.854	2.623	16.4	19.3
11 7	5 21.41	+36 58.7	2.332	3.161	11.5	21.9	11 7	5 13.91	+ 0 12.6	1.801	2.644	13.7	19.2
11 17	5 12.31	+37 27.5	2.279	3.180	8.7	21.8	11 17	5 7.12	+ 0 34.3	1.768	2.665	11.0	19.1
11 27	5 1.26	+37 42.5	2.251	3.197	6.0	21.7	11 27	4 58.71	+ 1 3.5	1.760	2.687	8.9	19.0
12 7	4 49.30	+37 41.2	2.253	3.214	4.6	21.6	12 7	4 49.65	+ 1 11.5	1.777	2.708	8.5	19.0
12 17	4 37.64	+37 24.0	2.285	3.231	5.8	21.7	12 17	4 40.97	+ 0 57.2	1.821	2.729	9.8	19.1
12 27	4 27.46	+36 54.1	2.347	3.246	8.3	21.9	12 27	4 33.63	+ 0 21.8	1.891	2.750	12.0	19.3
1 6	4 19.59	+36 16.6	2.435	3.261	10.9	22.1	1 6	4 28.32	+ 0 30.9	1.983	2.771	14.4	19.5
247455	2002 <i>GX</i> ₇₂	12 5.9 308°36	2°8/ 5.5 18				277403	2005 <i>UF</i> ₁₈₂	12 5.9 186°46	0°4/ 6.1 18			
10 28	5 20.25	+17 23.6	1.333	2.146	19.5	20.2	10 28	5 22.58	+23 35.1	1.787	2.572	16.3	21.6
11 7	5 16.98	+17 5.0	1.253	2.139	15.6	19.9	11 7	5 17.94	+23 39.0	1.701	2.572	13.0	21.4
11 17	5 10.18	+16 47.0	1.191	2.133	10.9	19.6	11 17	5 10.36	+23 39.3	1.637	2.572	8.9	21.1
11 27	5 0.54	+16 31.2	1.152	2.126	5.7	19.3	11 27	5 0.48	+23 34.8	1.597	2.572	4.4	20.9
12 7	4 49.38	+16 19.9	1.138	2.120	3.0	19.1	12 7	4 49.44	+23 25.4	1.586	2.571	0.6	20.6
12 17	4 38.32	+16 15.3	1.151	2.114	7.3	19.4	12 17	4 38.56	+23 12.3	1.603	2.569	5.3	20.9
12 27	4 29.08	+16 19.6	1.188	2.109	12.5	19.6	12 27	4 29.18	+22 58.2	1.649	2.568	9.8	21.2
1 6	4 22.85	+16 34.2	1.247	2.104	17.2	19.9	1 6	4 22.29	+22 46.4	1.719	2.566	13.7	21.4
518449	2005 <i>BF</i> ₃₈	12 5.9 35°56	6°1/ 5.1 18				151244	2002 <i>AU</i> ₂₃	12 5.9 10°41	0°7/ 6.1 18			
10 28	5 16.78	+ 5 22.0	1.933	2.712	15.5	20.4	10 28	5 19.33	+23 22.4	1.915	2.702	15.3	19.9
11 7	5 12.74	+ 5 2.9	1.865	2.723	12.6	20.3	11 7	5 15.21	+23 43.4	1.830	2.703	12.1	19.7
11 17	5 6.40	+ 4 53.8	1.819	2.735	9.6	20.1	11 17	5 8.40	+24 2.2	1.767	2.703	8.4	19.5
11 27	4 58.41	+ 4 57.8	1.797	2.747	7.0	20.0	11 27	4 59.52	+24 17.6	1.730	2.704	4.1	19.2
12 7	4 49.65	+ 5 16.9	1.803	2.759	6.1	20.0	12 7	4 49.56	+24 28.4	1.721	2.705	0.8	19.0
12 17	4 41.13	+ 5 51.3	1.836	2.772	7.8	20.1	12 17	4 39.71	+24 34.9	1.741	2.707	4.9	19.3
12 27	4 33.83	+ 6 39.6	1.896	2.785	10.5	20.3	12 27	4 31.20	+24 38.7	1.788	2.708	9.0	19.5
1 6	4 28.48	+ 7 39.2	1.981	2.798	13.3	20.5	1 6	4 24.94	+24 42.0	1.861	2.710	12.7	19.8
250673	2005 <i>ON</i> ₂₂	12 5.9 118°98	5°6/ 8.1 18				416360	2003 <i>SR</i> ₃₆₅	12 5.9 335°41				

EPHEMERIDES

12 5.9

12 5.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
372821	2010 <i>UE</i> ₂₅		12 5.9 349°35	1.0°/ 6.1	18		313567	2003 <i>DE</i>		12 5.9 282°56	4.7°/ 4.8	18	
10 28	5 17.46	+22 22.6	1.078	1.911	21.7	20.5	10 28	5 17.59	+10 21.0	2.059	2.841	14.6	21.0
11 7	5 15.79	+22 55.7	1.005	1.903	17.4	20.2	11 7	5 13.65	+9 52.3	1.955	2.820	11.8	20.7
11 17	5 9.97	+23 28.8	0.950	1.897	12.1	19.9	11 17	5 7.30	+9 28.0	1.872	2.798	8.7	20.5
11 27	5 0.67	+23 59.6	0.915	1.892	6.0	19.6	11 27	4 59.03	+9 11.1	1.815	2.776	5.8	20.3
12 7	4 49.41	+24 25.1	0.903	1.888	1.2	19.2	12 7	4 49.67	+9 4.2	1.786	2.754	4.8	20.2
12 17	4 38.23	+24 44.4	0.915	1.885	7.2	19.6	12 17	4 40.22	+9 9.3	1.786	2.731	7.1	20.3
12 27	4 29.25	+24 59.3	0.950	1.884	13.3	19.9	12 27	4 31.78	+9 27.3	1.813	2.709	10.5	20.4
1 6	4 23.94	+25 13.3	1.005	1.883	18.5	20.2	1 6	4 25.23	+9 57.8	1.864	2.686	13.8	20.6
421594	2014 <i>OH</i> ₂₂₁		12 5.9 137°37	2.7°/ 6.7	18		78029	2002 <i>JR</i> ₇₄		12 5.9 139°85	1.8°/ 6.4	18	
10 28	5 21.73	+29 47.1	2.238	3.003	14.1	22.2	10 28	5 26.18	+26 44.2	1.682	2.462	17.4	20.1
11 7	5 16.76	+30 13.2	2.154	3.009	11.3	22.1	11 7	5 20.96	+27 0.1	1.605	2.471	13.9	19.9
11 17	5 9.27	+30 33.0	2.091	3.015	8.1	21.9	11 17	5 12.49	+27 10.2	1.548	2.480	9.7	19.7
11 27	4 59.88	+30 44.0	2.055	3.021	4.7	21.7	11 27	5 1.54	+27 11.8	1.516	2.488	5.1	19.4
12 7	4 49.54	+30 44.8	2.048	3.027	2.7	21.5	12 7	4 49.39	+27 3.7	1.513	2.496	1.8	19.2
12 17	4 39.36	+30 35.6	2.071	3.032	4.9	21.7	12 17	4 37.55	+26 47.0	1.538	2.503	5.6	19.5
12 27	4 30.47	+30 19.0	2.123	3.037	8.2	21.9	12 27	4 27.49	+26 25.2	1.591	2.510	10.0	19.8
1 6	4 23.70	+29 58.6	2.201	3.042	11.3	22.1	1 6	4 20.23	+26 3.0	1.668	2.516	14.0	20.0
202963	1999 <i>RU</i> ₂₄₂		12 5.9 51°86	1.5°/ 6.2	18		73441	2002 <i>MU</i> ₃		12 5.9 41°76	11.1°/ 2.4	18	
10 28	5 23.15	+24 18.2	1.475	2.273	18.6	19.6	10 28	5 16.90	- 1 10.2	1.669	2.444	17.7	19.4
11 7	5 18.77	+24 51.2	1.415	2.292	14.7	19.4	11 7	5 13.21	- 2 59.1	1.608	2.448	15.2	19.2
11 17	5 11.03	+25 21.0	1.374	2.311	10.1	19.2	11 17	5 6.94	- 4 35.3	1.567	2.452	12.9	19.1
11 27	5 0.80	+25 44.8	1.357	2.331	5.1	18.9	11 27	4 58.77	- 5 50.2	1.549	2.457	11.3	19.0
12 7	4 49.45	+26 0.7	1.367	2.351	1.5	18.7	12 7	4 49.72	- 6 36.9	1.555	2.462	11.3	19.0
12 17	4 38.54	+26 8.8	1.405	2.372	5.8	19.1	12 17	4 40.94	- 6 51.9	1.585	2.467	12.7	19.1
12 27	4 29.56	+26 11.6	1.469	2.392	10.4	19.4	12 27	4 33.54	- 6 35.7	1.639	2.473	14.9	19.3
1 6	4 23.50	+26 12.7	1.557	2.413	14.3	19.7	1 6	4 28.34	- 5 52.4	1.712	2.478	17.2	19.4
2617	Jiangxi		12 5.9 4°86	0°1/ 5.9	18 R		516866	2011 <i>GF</i> ₃₂		12 5.9 289°74	2°6/ 5.4	18	
10 28	5 17.39	+19 30.4	1.600	2.405	17.1	14.2	10 28	5 19.57	+17 56.2	1.516	2.321	17.9	22.2
11 7	5 14.19	+20 18.0	1.523	2.405	13.5	14.0	11 7	5 16.24	+17 35.3	1.420	2.302	14.4	21.9
11 17	5 7.99	+21 9.0	1.466	2.407	9.3	13.8	11 17	5 9.64	+17 13.5	1.344	2.284	10.1	21.6
11 27	4 59.42	+22 1.5	1.434	2.409	4.5	13.5	11 27	5 0.36	+16 52.5	1.291	2.265	5.3	21.3
12 7	4 49.60	+22 52.8	1.428	2.413	0.5	13.2	12 7	4 49.51	+16 34.4	1.264	2.246	2.7	21.1
12 17	4 39.85	+23 40.9	1.451	2.419	5.5	13.6	12 17	4 38.57	+16 21.6	1.265	2.228	6.9	21.3
12 27	4 31.60	+24 25.3	1.500	2.425	10.1	13.9	12 27	4 29.12	+16 17.0	1.291	2.209	12.0	21.5
1 6	4 25.88	+25 6.6	1.574	2.432	14.1	14.1	1 6	4 22.37	+16 22.5	1.340	2.191	16.5	21.7
443568	2014 <i>KP</i> ₃₅		12 5.9 342°84	7°4/ 4.0	18		220131	2002 <i>TF</i> ₈₁		12 5.9 91°63	4°2/ 5.2	18	
10 28	5 17.47	+ 6 15.5	1.730	2.518	16.7	21.6	10 28	5 24.08	+13 17.1	1.571	2.362	18.0	20.1
11 7	5 13.68	+ 5 12.0	1.654	2.517	13.7	21.4	11 7	5 18.91	+12 48.0	1.512	2.384	14.3	19.9
11 17	5 7.30	+ 4 15.8	1.599	2.516	10.6	21.2	11 17	5 10.80	+12 23.1	1.473	2.405	10.1	19.7
11 27	4 58.96	+ 3 32.4	1.569	2.515	8.1	21.0	11 27	5 0.61	+12 5.1	1.459	2.426	5.9	19.5
12 7	4 49.66	+ 3 6.7	1.564	2.514	7.5	21.0	12 7	4 49.55	+11 56.1	1.472	2.447	4.3	19.5
12 17	4 40.55	+ 3 1.7	1.586	2.514	9.4	21.1	12 17	4 38.98	+11 57.9	1.514	2.468	7.2	19.7
12 27	4 32.76	+ 3 17.7	1.633	2.513	12.5	21.3	12 27	4 30.15	+12 11.0	1.582	2.488	11.1	20.0
1 6	4 27.15	+ 3 52.5	1.703	2.513	15.5	21.5	1 6	4 23.90	+12 34.9	1.674	2.507	14.6	20.2
477290	2009 <i>SS</i> ₁₇₀		12 5.9 16°55	2°0/ 6.4	18		140726	2001 <i>UU</i> ₉₅		12 5.9 1°83	0°6/ 6.1	18	
10 28	5 18.51	+26 47.8	1.154	1.977	21.2	20.9	10 28	5 19.41	+23 14.9	1.860	2.649	15.6	20.0
11 7	5 16.18	+26 58.8	1.091	1.982	17.0	20.7	11 7	5 15.38	+23 30.8	1.775	2.649	12.4	19.8
11 17	5 9.86	+27 1.8	1.044	1.987	11.8	20.4	11 17	5 8.58	+23 44.3	1.712	2.648	8.5	19.6
11 27	5 0.43	+26 54.2	1.019	1.994	6.2	20.1	11 27	4 59.66	+23 54.2	1.674	2.648	4.2	19.3
12 7	4 49.50	+26 35.5	1.018	2.002	2.1	19.9	12 7	4 49.64	+23 59.9	1.664	2.649	0.7	19.0
12 17	4 39.00	+26 8.0	1.041	2.011	6.8	20.2	12 17	4 39.74	+24 1.6	1.683	2.649	5.0	19.4
12 27	4 30.78	+25 37.2	1.089	2.020	12.2	20.5	12 27	4 31.21	+24 1.3	1.729	2.650	9.3	19.6
1 6	4 26.00	+25 9.0	1.157	2.031	16.9	20.9	1 6	4 24.98	+24 1.5	1.800	2.651	13.0	19.9
317632	2003 <i>CM</i> ₂₀		12 5.9 228°66	1.7°/ 5.6	17		77643	2001 <i>KH</i> ₆₀		12 5.9 65°14	2°9/ 5.7	18	
10 28	5 18.83	+17 21.1	2.319	3.096	13.3	21.1	10 28	5 22.82	+14 4.6	1.683	2.472	17.0	18.5
11 7	5 14.27	+17 16.8	2.222	3.088	10.5	20.9	11 7	5 17.78	+14 11.6	1.625	2.496	13.4	18.3
11 17	5 7.50	+17 13.2	2.147	3.080	7.3	20.6	11 17	5 9.98	+14 23.3	1.587	2.521	9.3	18.1
11 27	4 59.03	+17 10.9	2.100	3.072	3.8	20.4	11 27	5 0.20	+14 40.6	1.575	2.546	5.1	17.9
12 7	4 49.66	+17 10.7	2.081	3.063	1.8	20.2	12 7	4 49.60	+15 3.3	1.591	2.571	2.9	17.9
12 17	4 40.32	+17 13.4	2.093	3.054	4.8	20.4	12 17	4 39.42	+15 31.4	1.635	2.595	6.0	18.1
12 27	4 31.99	+17 20.1	2.135	3.045	8.4	20.6	12 27	4 30.86	+16 4.6	1.707	2.620	10.0	18.4
1 6	4 25.45	+17 31.7	2.202	3.036	11.6	20.8	1 6	4 24.71	+16 42.3	1.804	2.644	13.4	18.7
411989	2012 <i>JY</i> ₂₃		12 5.9 251°19	3°0/ 5.3	18		44192	Paulguttman		12 5.9 192°79	6°1/ 4.5	18	
10 28	5 16.63	+12 59.5	2.410	3.187	12.8	20.9	10 28	5 19.87	+ 5 5.6	2.233	2.995	14.2	19.6
11 7	5 12.38	+12 49.4	2.317	3.181	10.2	20.7	11 7	5 14.98	+ 4 27.8	2.147	2.994	11.7	19.5
11 17	5 6.11	+12 42.5	2.247	3.176	7.3	20.5	11 17	5 7.91	+ 3 57.4	2.084	2.991	9.0	19.3
11 27	4 58.32	+12 40.4	2.204	3.170	4.3	20.3	11 27	4 59.21	+ 3 38.3	2.046	2.989	6.8	19.1
12 7	4 49.74	+12 44.3	2.190	3.165	3.1	20.2	12 7	4 49.70	+ 3 33.3	2.037	2.985	6.2	19.1
12 17	4 41.22	+12 55.0	2.206	3.159	5.3	20.4	12 17	4 40.30	+ 3 43.9	2.056	2.981	7.8	19.2
12 27	4 33.63	+13 13.0	2.251	3.153	8.4	20.5	12 27	4 31.94	+ 4 10.1	2.104	2.977	10.4	19.3
1 6	4 27.67	+13 38.1	2.322	3.148	11.3	20.7	1 6	4 25.37	+ 4 50.2	2.176	2.971	13.0	19.5
477427	2009 <i>WL</i> ₈₁		12 5.9 3°14	2°2/ 6.3	18		108599	2001 <i>MY</i> ₁₇		12 5.9 119°15	4°0/ 4.5	18	

EPHEMERIDES

12 5.9

12 6.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
14505 Barentine		12 5.9 258°14	0°0/ 5.9 18	R			339112 2004 RQ ₂₂₁		12 6.0 62°41	1°6/ 5.4 16			
10 28	5 22.31	+22 16.7	1.757	2.545	16.5	18.9	10 28	5 22.87	+23 58.7	1.494	2.292	18.4	20.2
11 7	5 18.04	+22 21.8	1.657	2.529	13.2	18.7	11 7	5 18.20	+22 45.2	1.431	2.310	14.5	20.0
11 17	5 10.69	+22 24.6	1.577	2.513	9.1	18.4	11 17	5 10.41	+21 22.6	1.388	2.328	9.8	19.8
11 27	5 0.82	+22 24.2	1.522	2.497	4.5	18.1	11 27	5 0.45	+19 53.9	1.371	2.346	4.8	19.5
12 7	4 49.51	+22 20.3	1.495	2.480	0.5	17.7	12 7	4 49.66	+18 24.4	1.381	2.365	1.8	19.4
12 17	4 38.11	+22 13.5	1.497	2.463	5.6	18.1	12 17	4 39.51	+17 0.9	1.420	2.383	6.3	19.7
12 27	4 28.09	+22 6.3	1.527	2.446	10.4	18.3	12 27	4 31.29	+15 49.6	1.486	2.402	10.9	20.0
1 6	4 20.60	+22 1.8	1.581	2.428	14.6	18.5	1 6	4 25.81	+14 54.5	1.576	2.420	14.8	20.3
250954 2006 CJ ₈		12 5.9 142°32	0°7/ 6.2 18				46008 2001 CY ₁₂		12 6.0 187°62	5°4/ 4.9 18			
10 28	5 26.79	+25 11.9	1.608	2.392	17.9	21.0	10 28	5 20.02	+ 6 53.3	2.199	2.965	14.2	19.1
11 7	5 21.46	+25 6.2	1.532	2.402	14.2	20.7	11 7	5 15.15	+ 6 26.7	2.113	2.965	11.6	18.9
11 17	5 12.83	+24 54.2	1.477	2.412	9.8	20.5	11 17	5 8.08	+ 6 7.2	2.050	2.964	8.8	18.7
11 27	5 1.71	+24 34.7	1.447	2.421	4.9	20.2	11 27	4 59.34	+ 5 57.8	2.013	2.963	6.2	18.6
12 7	4 49.43	+24 8.0	1.444	2.429	0.8	20.0	12 7	4 49.77	+ 6 0.8	2.004	2.961	5.5	18.5
12 17	4 37.54	+23 36.3	1.470	2.436	5.7	20.3	12 17	4 40.31	+ 6 17.3	2.024	2.959	7.2	18.6
12 27	4 27.51	+23 4.0	1.524	2.443	10.4	20.6	12 27	4 31.92	+ 6 47.2	2.072	2.956	10.0	18.8
1 6	4 20.34	+22 35.8	1.602	2.450	14.5	20.9	1 6	4 25.35	+ 7 29.0	2.146	2.953	12.8	19.0
410669 2008 ST ₂₁₉		12 5.9 31°50	7°9/ 3.1 18				260518 2005 EJ ₉₂		12 6.0 232°96	4°1/ 5.0 18			
10 28	5 14.33	+ 3 58.2	1.942	2.723	15.3	20.6	10 28	5 21.71	+14 25.4	1.620	2.414	17.4	21.0
11 7	5 10.80	+ 2 30.8	1.880	2.734	12.7	20.4	11 7	5 17.48	+13 48.5	1.532	2.407	14.0	20.7
11 17	5 5.08	+ 1 11.6	1.840	2.745	10.2	20.3	11 17	5 10.22	+13 13.0	1.465	2.399	9.9	20.5
11 27	4 57.82	+ 0 6.6	1.825	2.757	8.3	20.2	11 27	5 0.57	+12 41.8	1.422	2.391	5.9	20.2
12 7	4 49.88	- 0 39.2	1.836	2.769	8.1	20.2	12 7	4 49.63	+12 18.3	1.406	2.382	4.3	20.1
12 17	4 42.21	- 1 2.7	1.874	2.781	9.6	20.3	12 17	4 38.78	+12 5.2	1.418	2.373	7.5	20.3
12 27	4 35.72	- 1 3.5	1.937	2.794	11.9	20.5	12 27	4 29.41	+12 4.8	1.456	2.363	11.8	20.5
1 6	4 31.09	- 0 43.9	2.022	2.808	14.2	20.7	1 6	4 22.57	+12 17.5	1.518	2.354	15.8	20.7
441240 2007 VK ₂₂₁		12 5.9 66°41	0°0/ 5.9 15				20535 Marshburrows		12 6.0 260°81	1°7/ 5.7 18			
10 28	5 22.62	+23 21.0	1.652	2.443	17.2	22.1	10 28	5 22.16	+18 43.3	1.559	2.357	17.8	18.6
11 7	5 17.79	+23 12.0	1.592	2.467	13.5	22.0	11 7	5 18.19	+18 39.2	1.467	2.345	14.2	18.3
11 17	5 10.05	+22 58.7	1.554	2.491	9.2	21.8	11 17	5 10.94	+18 35.4	1.394	2.333	9.9	18.0
11 27	5 0.25	+22 40.8	1.540	2.515	4.4	21.5	11 27	5 1.02	+18 32.2	1.346	2.321	5.0	17.7
12 7	4 49.62	+22 19.3	1.554	2.539	0.5	21.3	12 7	4 49.58	+18 30.3	1.325	2.308	1.8	17.5
12 17	4 39.50	+21 56.4	1.597	2.563	5.3	21.7	12 17	4 38.11	+18 30.9	1.331	2.295	6.4	17.7
12 27	4 31.13	+21 35.4	1.667	2.587	9.6	22.0	12 27	4 28.18	+18 36.0	1.364	2.282	11.4	18.0
1 6	4 25.32	+21 19.2	1.761	2.611	13.3	22.3	1 6	4 20.97	+18 47.5	1.420	2.269	15.8	18.2
295367 2008 HV ₅₁		12 5.9 74°77	3°1/ 4.8 18				210648 2000 HL ₇₅		12 6.0 135°33	3°1/ 4.9 18			
10 28	5 18.17	+16 28.4	2.098	2.882	14.2	21.1	10 28	5 19.10	+14 29.2	2.380	3.153	13.1	20.8
11 7	5 13.62	+15 34.1	2.030	2.900	11.2	20.9	11 7	5 14.16	+13 50.7	2.303	3.165	10.4	20.7
11 17	5 6.89	+14 39.2	1.985	2.918	7.8	20.8	11 17	5 7.22	+13 13.2	2.249	3.177	7.3	20.5
11 27	4 58.66	+13 46.6	1.968	2.936	4.4	20.6	11 27	4 58.85	+12 38.9	2.222	3.188	4.3	20.3
12 7	4 49.81	+12 59.3	1.979	2.954	3.2	20.6	12 7	4 49.86	+12 10.0	2.225	3.199	3.2	20.3
12 17	4 41.30	+12 20.5	2.019	2.972	5.7	20.8	12 17	4 41.08	+11 48.7	2.259	3.209	5.4	20.4
12 27	4 34.03	+11 52.5	2.089	2.990	9.0	21.0	12 27	4 33.39	+11 36.4	2.321	3.219	8.4	20.6
1 6	4 28.66	+11 36.2	2.183	3.008	12.0	21.2	1 6	4 27.40	+11 33.8	2.409	3.228	11.2	20.8
470006 2006 OG ₂₁		12 5.9 75°19	2°8/ 6.6 18				422501 2014 TJ ₂		12 6.0 346°86	0°4/ 5.9 17			
10 28	5 27.18	+28 51.9	1.380	2.171	20.0	21.8	10 28	5 15.90	+21 59.6	1.975	2.768	14.7	21.4
11 7	5 22.18	+29 7.9	1.322	2.194	15.9	21.6	11 7	5 12.43	+21 52.5	1.887	2.763	11.6	21.2
11 17	5 13.46	+29 14.7	1.283	2.216	11.2	21.4	11 17	5 6.49	+21 42.6	1.821	2.759	8.0	21.0
11 27	5 2.02	+29 9.0	1.268	2.238	6.1	21.1	11 27	4 58.66	+21 30.1	1.780	2.755	3.9	20.7
12 7	4 49.44	+28 49.7	1.279	2.260	2.8	21.0	12 7	4 49.87	+21 15.6	1.767	2.751	0.6	20.5
12 17	4 37.53	+28 19.1	1.317	2.282	6.3	21.3	12 17	4 41.19	+21 0.8	1.782	2.748	4.8	20.8
12 27	4 27.92	+27 42.7	1.381	2.304	10.9	21.6	12 27	4 33.72	+20 47.8	1.826	2.746	8.9	21.0
1 6	4 21.59	+27 7.0	1.469	2.325	15.0	21.9	1 6	4 28.31	+20 39.0	1.894	2.744	12.4	21.2
6740 Goff		12 5.9 290°65	1°8/ 6.1 18				298024 2002 PF ₉₀		12 6.0 76°71	0°5/ 6.2 18			
10 28	5 23.23	+23 28.9	1.743	2.529	16.7	17.2	10 28	5 23.59	+26 49.2	1.804	2.583	16.4	20.7
11 7	5 18.94	+24 23.8	1.647	2.517	13.4	17.0	11 7	5 18.30	+26 15.5	1.741	2.608	12.9	20.5
11 17	5 11.44	+25 20.1	1.571	2.506	9.4	16.7	11 17	5 10.27	+25 33.4	1.699	2.632	8.8	20.4
11 27	5 1.27	+26 14.3	1.521	2.494	4.9	16.4	11 27	5 0.34	+24 43.3	1.683	2.657	4.3	20.1
12 7	4 49.49	+27 2.7	1.499	2.483	1.8	16.2	12 7	4 49.71	+23 47.4	1.696	2.681	0.6	19.9
12 17	4 37.52	+27 42.8	1.506	2.471	5.7	16.4	12 17	4 39.65	+22 49.5	1.738	2.704	4.9	20.3
12 27	4 26.94	+28 14.6	1.541	2.460	10.3	16.7	12 27	4 31.29	+21 54.5	1.809	2.728	9.1	20.6
1 6	4 18.98	+28 40.3	1.600	2.449	14.4	16.9	1 6	4 25.38	+21 6.7	1.906	2.751	12.6	20.8
323306 2003 UU ₇₂		12 6.0 154°82	1°6/ 5.6 18				90527 2004 FB ₁₅		12 6.0 199°18	0°2/ 6.1 18			
10 28	5 24.51	+20 22.3	1.784	2.566	16.4	21.7	10 28	5 23.72	+23 35.8	1.985	2.761	15.2	21.1
11 7	5 19.23	+19 53.8	1.704	2.574	13.0	21.5	11 7	5 18.61	+23 33.8	1.892	2.758	12.1	20.9
11 17	5 11.10	+19 22.1	1.646	2.581	8.9	21.2	11 17	5 10.75	+23 27.9	1.821	2.754	8.4	20.7
11 27	5 0.83	+18 48.3	1.614	2.588	4.4	21.0	11 27	5 0.76	+23 17.2	1.775	2.749	4.1	20.4
12 7	4 49.57	+18 14.3	1.611	2.594	1.7	20.8	12 7	4 49.65	+23 1.8	1.759	2.744	0.5	20.1
12 17	4 38.62	+17 42.9	1.637	2.599	5.7	21.1	12 17	4 38.65	+22 43.0	1.773	2.738	5.0	20.4
12 27	4 29.23	+17 17.4	1.691	2.603	10.0	21.4	12 27	4 29.00	+22 23.7	1.816	2.732	9.2	20.7
1 6	4 22.31	+17 0.5	1.770	2.607	13.8	21.6	1 6	4 21.64	+22 7.0	1.884	2.725	12.9	20.9
140189 2001 SC ₂₁₃		12 6.0 242°17	4°2/ 6.9 18				332803 2009 WP ₈₈		12 6.0 1°52	1°5/ 5.5 17			
10 28	5 22.73	+33 18.8	2.146	2.904	14.8								