

EPHEMERIDES

3 29.9

3 30.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
199755	2006 <i>JD</i> ₃₉		3 29.9 58°46'	1.6°/28.4	17		207467	2006 <i>GL</i> ₄₃		3 29.9 273°18'	3.5°/27.4	17	
2 21	12 57.37	- 1 55.2	2.039	2.847	13.6	20.5	2 21	13 2.49	+ 2 28.7	1.537	2.362	16.5	20.3
3 2	12 53.75	- 1 17.0	1.955	2.848	10.5	20.3	3 2	12 58.58	+ 3 2.9	1.449	2.351	12.8	20.0
3 12	12 48.11	- 0 28.3	1.895	2.849	6.9	20.1	3 12	12 51.84	+ 3 46.2	1.383	2.339	8.6	19.7
3 22	12 41.00	+ 0 26.3	1.861	2.850	3.1	19.8	3 22	12 42.87	+ 4 32.5	1.341	2.328	4.5	19.5
4 1	12 33.19	+ 1 21.1	1.856	2.851	2.2	19.8	4 1	12 32.72	+ 5 14.1	1.326	2.317	4.3	19.4
4 11	12 25.59	+ 2 10.0	1.879	2.852	5.9	20.0	4 11	12 22.73	+ 5 43.3	1.337	2.305	8.5	19.6
4 21	12 19.02	+ 2 47.9	1.928	2.854	9.6	20.2	4 21	12 14.13	+ 5 54.8	1.373	2.294	13.0	19.9
5 1	12 14.13	+ 3 11.4	2.001	2.855	12.8	20.4	5 1	12 7.90	+ 5 46.2	1.429	2.282	17.1	20.1
306882	2001 <i>TB</i> ₃₄		3 29.9 88°92'	5.4°/ 5.0	18		275681	2000 <i>SQ</i> ₃₃		3 29.9 287°21'	1.9°/ 2.2	18 R	
2 21	13 0.04	-22 32.1	1.959	2.677	17.1	20.6	2 21	12 54.27	-13 45.8	4.390	5.118	8.1	19.8
3 2	12 55.95	-22 33.3	1.884	2.699	14.4	20.4	3 2	12 50.33	-14 0.7	4.274	5.107	6.6	19.7
3 12	12 49.61	-22 10.2	1.828	2.720	11.2	20.3	3 12	12 45.37	-14 7.9	4.183	5.097	4.9	19.6
3 22	12 41.66	-21 22.6	1.795	2.742	8.0	20.1	3 22	12 39.66	-14 7.8	4.120	5.086	3.1	19.4
4 1	12 33.04	-20 13.3	1.788	2.763	5.7	20.0	4 1	12 33.57	-14 1.5	4.087	5.075	1.9	19.3
4 11	12 24.78	-18 48.6	1.809	2.784	6.0	20.1	4 11	12 27.50	-13 50.4	4.085	5.064	2.7	19.4
4 21	12 17.80	-17 16.9	1.858	2.804	8.5	20.3	4 21	12 21.83	-13 36.7	4.112	5.053	4.5	19.5
5 1	12 12.75	-15 46.9	1.931	2.824	11.5	20.5	5 1	12 16.94	-13 22.5	4.168	5.042	6.3	19.6
347908	2002 <i>XW</i> ₁		3 29.9 166°05'	4.0°/26.6	18		464971	2005 <i>XF</i> ₈₉		3 29.9 48°49'	6.1°/25.0	18	
2 21	13 2.21	+ 2 0.8	1.537	2.361	16.5	20.8	2 21	13 1.14	+ 8 44.4	1.507	2.344	16.1	20.5
3 2	12 58.15	+ 3 5.2	1.463	2.364	12.7	20.5	3 2	12 57.04	+ 9 46.5	1.460	2.366	12.5	20.3
3 12	12 51.37	+ 4 20.5	1.411	2.367	8.5	20.3	3 12	12 50.39	+10 49.9	1.436	2.388	8.8	20.2
3 22	12 42.56	+ 5 39.0	1.384	2.369	4.7	20.1	3 22	12 42.01	+11 46.0	1.436	2.411	6.3	20.1
4 1	12 32.80	+ 6 51.2	1.384	2.371	4.9	20.1	4 1	12 33.02	+12 26.2	1.461	2.434	6.9	20.2
4 11	12 23.37	+ 7 48.0	1.410	2.372	8.8	20.3	4 11	12 24.64	+12 45.1	1.513	2.458	9.9	20.4
4 21	12 15.42	+ 8 23.8	1.461	2.373	13.0	20.6	4 21	12 17.85	+12 40.9	1.587	2.482	13.3	20.6
5 1	12 9.79	+ 8 36.1	1.533	2.374	16.8	20.8	5 1	12 13.29	+12 14.6	1.683	2.506	16.3	20.9
102574	1999 <i>UH</i> ₄₁		3 29.9 144°60'	0°2°/30.2	18		498138	2007 <i>TS</i> ₅₁		3 29.9 151°84'	1°2°/28.6	17	
2 21	13 0.37	- 8 43.8	2.169	2.945	13.9	20.8	2 21	13 0.44	- 0 53.3	2.714	3.503	11.1	22.5
3 2	12 55.87	- 7 53.5	2.086	2.958	10.9	20.6	3 2	12 55.52	- 0 34.4	2.629	3.511	8.5	22.3
3 12	12 49.42	- 6 47.5	2.028	2.970	7.3	20.4	3 12	12 49.00	- 0 9.1	2.569	3.518	5.6	22.1
3 22	12 41.55	- 5 29.8	1.996	2.982	3.4	20.2	3 22	12 41.34	+ 0 19.5	2.537	3.525	2.5	21.9
4 1	12 33.08	- 4 6.2	1.994	2.992	0.8	20.0	4 1	12 33.17	+ 0 47.8	2.536	3.531	1.6	21.9
4 11	12 24.87	- 2 43.7	2.022	3.002	4.8	20.3	4 11	12 25.19	+ 1 12.1	2.565	3.538	4.6	22.1
4 21	12 17.73	- 1 29.0	2.078	3.011	8.5	20.6	4 21	12 18.05	+ 1 29.4	2.622	3.543	7.6	22.3
5 1	12 12.26	- 0 27.1	2.160	3.020	11.8	20.8	5 1	12 12.25	+ 1 37.5	2.706	3.548	10.2	22.5
351498	2005 <i>QC</i> ₁₆₆		3 29.9 160°69'	3°1°/27.2	18		65656	1981 <i>RR</i> ₁		3 29.9 204°72'	1°9°/27.4	18	
2 21	13 3.10	+ 0 29.7	1.694	2.508	15.7	21.3	2 21	12 57.94	- 0 19.9	2.748	3.543	10.8	21.1
3 2	12 58.56	+ 1 29.4	1.618	2.514	12.1	21.1	3 2	12 53.69	+ 0 37.1	2.651	3.537	8.3	20.9
3 12	12 51.51	+ 2 40.2	1.565	2.520	8.0	20.8	3 12	12 47.86	+ 1 42.4	2.579	3.530	5.5	20.7
3 22	12 42.59	+ 3 45.5	1.538	2.525	4.0	20.6	3 22	12 40.86	+ 2 51.8	2.535	3.522	2.7	20.5
4 1	12 32.81	+ 5 6.9	1.539	2.529	3.9	20.6	4 1	12 33.28	+ 4 0.1	2.523	3.514	2.5	20.5
4 11	12 23.87	+ 6 6.1	1.567	2.532	7.8	20.8	4 11	12 25.81	+ 5 2.3	2.541	3.504	5.3	20.7
4 21	12 15.29	+ 6 47.5	1.621	2.535	11.8	21.1	4 21	12 19.07	+ 5 53.9	2.587	3.494	8.2	20.9
5 1	12 9.37	+ 7 8.2	1.698	2.537	15.4	21.3	5 1	12 13.61	+ 6 32.1	2.659	3.484	10.9	21.0
422635	2604 <i>T</i> ₋₃		3 29.9 126°28'	1°5°/31.7	18		62929	2000 <i>VO</i> ₁₅		3 29.9 148°71'	0°1°/29.9	17	
2 21	13 2.03	-11 14.0	2.293	3.052	13.8	22.4	2 21	12 58.76	- 6 29.1	2.123	2.912	13.8	20.1
3 2	12 57.02	-10 57.0	2.214	3.071	10.9	22.2	3 2	12 54.74	- 5 58.4	2.038	2.917	10.8	19.9
3 12	12 50.10	-10 25.4	2.158	3.090	7.6	22.1	3 12	12 48.74	- 5 14.6	1.975	2.922	7.2	19.7
3 22	12 41.84	- 9 41.2	2.128	3.108	4.1	21.9	3 22	12 41.30	- 4 20.9	1.939	2.927	3.3	19.5
4 1	12 33.01	- 8 48.3	2.128	3.125	1.5	21.7	4 1	12 33.18	- 3 22.4	1.932	2.931	0.9	19.3
4 11	12 24.48	- 7 52.1	2.158	3.141	4.2	21.9	4 11	12 25.27	- 2 25.2	1.954	2.935	4.9	19.6
4 21	12 16.99	- 6 58.0	2.216	3.157	7.7	22.2	4 21	12 18.38	- 1 34.9	2.003	2.939	8.7	19.8
5 1	12 11.16	- 6 11.0	2.301	3.172	10.8	22.4	5 1	12 13.16	- 0 55.8	2.078	2.942	12.0	20.1
389817	2011 <i>WW</i> ₃₇		3 29.9 259°73'	4°0°/25.3	17		475914	2007 <i>DR</i> ₁₁₀		3 29.9 219°64'	1°3°/31.6	16	
2 21	12 59.39	+ 8 43.9	2.615	3.426	10.9	21.0	2 21	12 57.26	- 9 38.1	2.832	3.596	11.3	21.4
3 2	12 54.91	+ 9 19.9	2.521	3.412	8.5	20.9	3 2	12 53.15	- 9 38.1	2.732	3.592	9.0	21.3
3 12	12 48.71	+ 9 57.4	2.451	3.399	6.0	20.7	3 12	12 47.49	- 9 27.7	2.655	3.589	6.3	21.1
3 22	12 41.25	+10 31.7	2.410	3.385	4.1	20.5	3 22	12 40.69	- 9 8.2	2.605	3.586	3.4	20.9
4 1	12 33.15	+10 58.1	2.398	3.371	4.6	20.5	4 1	12 33.32	- 8 41.9	2.585	3.582	1.3	20.7
4 11	12 25.16	+11 12.7	2.414	3.357	6.9	20.7	4 11	12 26.05	- 8 12.2	2.595	3.578	3.6	20.9
4 21	12 17.98	+11 13.1	2.458	3.342	9.5	20.8	4 21	12 19.48	- 7 42.8	2.633	3.574	6.6	21.1
5 1	12 12.19	+10 58.5	2.525	3.328	12.1	20.9	5 1	12 14.16	- 7 17.3	2.698	3.570	9.3	21.2
309452	2007 <i>UM</i> ₁₀₄		3 29.9 103°83'	1°0°/29.1	18		39524	1989 <i>SM</i> ₃		3 29.9 270°05'	2°6°/27.5	18	
2 21	13 1.87	- 4 16.5	1.717	2.521	15.9	21.2	2 21	13 0.44	+ 2 5.9	2.140	2.949	13.0	19.5
3 2	12 57.45	- 3 37.4	1.649	2.538	12.3	21.0	3 2	12 56.22	+ 2 36.9	2.037	2.930	10.1	19.2
3 12	12 50.65	- 2 44.5	1.603	2.554	8.1	20.8	3 12	12 49.89	+ 3 15.1	1.957	2.910	6.8	19.0
3 22	12 42.15	- 1 43.0	1.582	2.571	3.5	20.6	3 22	12 41.90	+ 3 56.0	1.903	2.890	3.5	18.7
4 1	12 32.94	- 0 39.6	1.589	2.587	1.7	20.5	4 1	12 33.01	+ 4 34.3	1.879	2.869	3.3	18.7
4 11	12 24.14	+ 0 18.2	1.625	2.602	6.1	20.8	4 11	12 24.16	+ 5 4.3	1.883	2.849	6.6	18.8
4 21	12 16.72	+ 1 4.2	1.686	2.617	10.3	21.1	4 21	12 16.24	+ 5 21.9	1.913	2.828	10.3	19.0
5 1	12 11.37	+ 1 34.6	1.771	2.632	13.9	21.3	5 1	12 9.99	+ 5 24.4	1.967	2.806	13.6	19.2
382378	2013 <i>TW</i> ₁₁₃		3 29.9 118°90'	2°4°/27.8	17		110812	2001 <i>UR</i> ₄₇					

EPHEMERIDES

3 30.0

3 30.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
502421	2015 <i>BS</i> ₂₅₆		3 30.0	85°60	3°8/ 2.9	18	469586	2004 <i>BL</i> ₁₀		3 30.0	11°41	5°3/ 4.5	17
2 21	13 0.80	-16 40.4	1.982	2.729	16.0	21.2	2 21	12 57.17	-20 36.8	2.047	2.778	16.1	20.6
3 2	12 56.46	-16 47.6	1.908	2.750	13.1	21.1	3 2	12 53.85	-20 58.4	1.954	2.779	13.6	20.5
3 12	12 49.93	-16 35.3	1.854	2.769	9.8	20.9	3 12	12 48.36	-20 59.3	1.881	2.780	10.6	20.3
3 22	12 41.84	-16 4.2	1.824	2.789	6.3	20.7	3 22	12 41.22	-20 38.4	1.831	2.781	7.7	20.1
4 1	12 33.07	-15 17.1	1.821	2.809	3.9	20.6	4 1	12 33.23	-19 57.1	1.807	2.782	5.5	20.0
4 11	12 24.63	-14 19.6	1.847	2.828	5.1	20.7	4 11	12 25.39	-18 59.7	1.810	2.784	6.0	20.0
4 21	12 17.41	-13 18.5	1.899	2.847	8.3	20.9	4 21	12 18.61	-17 53.1	1.839	2.786	8.5	20.1
5 1	12 12.07	-12 20.6	1.977	2.866	11.5	21.2	5 1	12 13.62	-16 44.6	1.893	2.788	11.5	20.3
93678	2000 <i>VJ</i> ₆		3 30.0	183°05	1°3/28.7	18	496729	2016 <i>GZ</i> ₁₇₀		3 30.0	129°51	0°5/30.6	18
2 21	13 0.33	- 2 0.5	2.160	2.959	13.2	20.3	2 21	12 55.60	-12 7.1	1.882	2.663	15.6	21.1
3 2	12 55.94	- 1 32.1	2.072	2.959	10.3	20.1	3 2	12 52.61	-10 47.5	1.793	2.666	12.3	20.8
3 12	12 49.55	- 0 54.2	2.008	2.959	6.8	19.9	3 12	12 47.48	- 9 4.6	1.727	2.670	8.4	20.6
3 22	12 41.68	+ 0 10.6	1.971	2.959	3.0	19.6	3 22	12 40.79	- 7 3.0	1.687	2.673	4.0	20.3
4 1	12 33.10	+ 0 33.6	1.962	2.958	1.9	19.5	4 1	12 33.36	- 4 50.8	1.677	2.676	0.8	20.1
4 11	12 24.70	+ 1 13.2	1.983	2.957	5.5	19.8	4 11	12 26.16	- 2 38.8	1.696	2.678	5.3	20.4
4 21	12 17.32	+ 1 43.4	2.030	2.956	9.2	20.0	4 21	12 20.08	- 0 37.0	1.743	2.681	9.5	20.7
5 1	12 11.60	+ 2 1.3	2.103	2.954	12.4	20.2	5 1	12 15.79	+ 1 6.5	1.815	2.684	13.3	20.9
306646	2000 <i>SC</i> ₆₅		3 30.0	280°71	0°4/29.6	16	508511	2016 <i>QE</i> ₄₃		3 30.0	247°10	4°1/ 4.0	17
2 21	12 58.54	- 4 51.2	2.533	3.318	11.9	22.0	2 21	12 56.21	-19 30.1	2.574	3.296	13.3	21.6
3 2	12 54.54	- 4 26.0	2.407	3.285	9.4	21.8	3 2	12 52.64	-19 36.7	2.470	3.292	11.2	21.4
3 12	12 48.68	- 3 49.9	2.305	3.251	6.3	21.6	3 12	12 47.32	-19 26.3	2.388	3.287	8.6	21.3
3 22	12 41.35	- 3 5.3	2.230	3.217	2.9	21.3	3 22	12 40.69	-18 58.8	2.330	3.283	6.0	21.1
4 1	12 33.16	- 2 16.0	2.184	3.183	1.0	21.1	4 1	12 33.38	-18 15.7	2.299	3.278	4.2	21.0
4 11	12 24.86	- 1 27.1	2.169	3.147	4.7	21.3	4 11	12 26.16	-17 20.8	2.297	3.273	4.7	21.0
4 21	12 17.24	- 0 43.3	2.181	3.111	8.4	21.4	4 21	12 19.74	-16 19.3	2.323	3.268	7.1	21.1
5 1	12 10.99	- 0 8.9	2.220	3.075	11.7	21.6	5 1	12 14.72	-15 17.0	2.375	3.264	9.8	21.3
275880	2001 <i>SW</i> ₃₄₅		3 30.0	166°66	1°9/27.7	17	210681	2000 <i>RD</i> ₇₄		3 30.0	249°79	1°9/27.4	18
2 21	13 0.48	- 0 10.0	2.612	3.405	11.4	22.2	2 21	12 56.01	- 0 18.9	2.835	3.633	10.4	20.6
3 2	12 55.64	+ 0 38.4	2.527	3.412	8.7	22.1	3 2	12 52.25	+ 0 34.4	2.725	3.613	8.0	20.4
3 12	12 49.13	+ 1 34.2	2.467	3.418	5.7	21.9	3 12	12 46.95	+ 1 36.0	2.642	3.594	5.3	20.2
3 22	12 41.42	+ 2 33.4	2.436	3.423	2.7	21.7	3 22	12 40.50	+ 2 42.1	2.586	3.573	2.6	20.0
4 1	12 33.18	+ 3 31.0	2.436	3.427	2.4	21.7	4 1	12 33.43	+ 3 48.0	2.561	3.552	2.4	20.0
4 11	12 25.13	+ 4 21.9	2.465	3.431	5.3	21.9	4 11	12 26.39	+ 4 48.5	2.566	3.531	5.2	20.1
4 21	12 17.93	+ 5 2.4	2.524	3.433	8.3	22.1	4 21	12 20.00	+ 5 39.4	2.600	3.509	8.1	20.3
5 1	12 12.14	+ 5 29.8	2.607	3.435	11.0	22.2	5 1	12 14.81	+ 6 17.4	2.659	3.487	10.8	20.4
126126	2001 <i>YK</i> ₁₁₉		3 30.0	216°06	7°9/20.8	18	135087	2001 <i>QY</i> ₄₆		3 30.0	162°06	3°1/ 2.3	17
2 21	13 1.39	+17 46.4	2.162	2.980	12.6	19.7	2 21	12 59.56	-14 40.8	2.398	3.143	13.6	20.2
3 2	12 56.85	+19 10.5	2.090	2.973	10.3	19.5	3 2	12 55.27	-14 54.8	2.302	3.146	11.1	20.0
3 12	12 50.19	+20 31.0	2.042	2.967	8.5	19.4	3 12	12 49.09	-14 54.1	2.229	3.147	8.2	19.8
3 22	12 41.98	+21 39.7	2.021	2.959	7.9	19.3	3 22	12 41.49	-14 39.1	2.181	3.149	5.2	19.6
4 1	12 33.03	+22 29.1	2.027	2.951	8.9	19.4	4 1	12 33.18	-14 11.5	2.162	3.151	3.1	19.5
4 11	12 24.31	+22 54.2	2.058	2.943	11.0	19.5	4 11	12 25.01	-13 35.2	2.171	3.152	4.5	19.6
4 21	12 16.69	+22 53.5	2.113	2.935	13.3	19.6	4 21	12 17.73	-12 54.9	2.208	3.153	7.4	19.8
5 1	12 10.84	+22 28.2	2.188	2.925	15.6	19.8	5 1	12 12.01	-12 15.8	2.272	3.154	10.4	19.9
503686	2016 <i>HS</i> ₁₀		3 30.0	292°38	4°2/25.8	17	465707	2009 <i>TR</i> ₄₅		3 30.0	188°32	2°8/26.6	17
2 21	12 57.10	+ 3 9.7	1.771	2.599	14.5	20.8	2 21	12 58.24	+ 0 59.7	2.338	3.144	12.1	22.3
3 2	12 54.14	+ 4 18.3	1.670	2.574	11.3	20.6	3 2	12 54.19	+ 2 11.1	2.251	3.143	9.3	22.1
3 12	12 48.78	+ 5 38.1	1.592	2.549	7.7	20.3	3 12	12 48.32	+ 3 31.4	2.189	3.142	6.1	21.9
3 22	12 41.50	+ 7 2.4	1.540	2.524	4.6	20.0	3 22	12 41.12	+ 4 55.2	2.155	3.140	3.3	21.7
4 1	12 33.13	+ 8 22.1	1.515	2.499	5.2	20.0	4 1	12 33.28	+ 6 15.8	2.151	3.137	3.5	21.7
4 11	12 24.76	+ 9 28.3	1.517	2.473	8.8	20.2	4 11	12 25.61	+ 7 26.6	2.176	3.134	6.4	21.9
4 21	12 17.44	+10 14.4	1.543	2.448	12.9	20.3	4 21	12 18.84	+ 8 22.8	2.229	3.131	9.6	22.1
5 1	12 12.06	+10 36.7	1.591	2.423	16.6	20.5	5 1	12 13.57	+ 9 1.5	2.306	3.126	12.5	22.2
437582	2014 <i>AW</i> ₄₁		3 30.0	80°24	6°3/21.7	18	52619	1997 <i>VR</i> ₂		3 30.0	272°57	5°3/ 3.7	18
2 21	12 55.95	+12 24.7	2.213	3.041	12.0	20.8	2 21	12 59.59	-18 50.8	1.800	2.547	17.4	19.2
3 2	12 52.42	+14 5.8	2.158	3.055	9.4	20.6	3 2	12 56.12	-19 16.3	1.703	2.540	14.7	19.0
3 12	12 47.09	+15 46.4	2.129	3.069	7.2	20.5	3 12	12 50.12	-19 20.2	1.625	2.534	11.4	18.8
3 22	12 40.52	+17 18.6	2.128	3.084	6.3	20.5	3 22	12 42.11	-19 0.9	1.570	2.528	7.9	18.6
4 1	12 33.42	+18 34.8	2.154	3.098	7.3	20.6	4 1	12 33.01	-18 19.6	1.540	2.522	5.5	18.4
4 11	12 26.62	+19 29.9	2.207	3.112	9.4	20.7	4 11	12 23.99	-17 21.1	1.537	2.515	6.3	18.4
4 21	12 20.82	+20 1.6	2.284	3.126	11.8	20.9	4 21	12 16.16	-16 12.9	1.560	2.509	9.6	18.6
5 1	12 16.56	+20 10.0	2.382	3.140	14.0	21.1	5 1	12 10.41	-15 3.9	1.607	2.503	13.2	18.8
14902	Miyairi		3 30.0	171°69	4°9/23.7	18	499184	2009 <i>SU</i> ₂₃₃		3 30.0	189°52	1°0/29.0	17
2 21	12 58.02	+10 54.0	2.547	3.363	10.9	17.6	2 21	13 3.42	- 1 48.5	2.362	3.149	12.6	22.3
3 2	12 53.82	+11 57.3	2.473	3.365	8.6	17.5	3 2	12 58.17	- 1 33.5	2.268	3.148	9.8	22.1
3 12	12 47.96	+13 1.3	2.424	3.367	6.3	17.3	3 12	12 50.98	- 1 10.6	2.199	3.147	6.5	21.9
3 22	12 40.91	+14 0.0	2.403	3.369	5.0	17.3	3 22	12 42.34	- 0 42.8	2.157	3.145	2.9	21.7
4 1	12 33.32	+14 48.0	2.411	3.370	5.7	17.3	4 1	12 32.98	- 0 14.1	2.145	3.142	1.5	21.5
4 11	12 25.94	+15 20.7	2.447	3.371	7.8	17.4	4 11	12 23.79	+ 0 11.0	2.163	3.138	5.1	21.8
4 21	12 19.43	+15 36.0	2.509	3.371	10.2	17.6	4 21	12 15.54	+ 0 28.9	2.210	3.134	8.6	22.0
5 1	12 14.32	+15 33.3	2.593	3.372	12.4	17.7	5 1	12 8.91	+ 0 36.8	2.282	3.129	11.7	22.2
461547	2003 <i>UU</i> ₄₀₁		3 30.0	120°72	1°4/31.5	18	187337	2005 <i>UW</i> ₁₀₈		3 30.0			

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3 30.0

3 30.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
219524	2001 QZ ₉₃		3 30.0 194° 91'	2° 3'	1.7	17	162756	2000 WT ₈₂		3 30.0 93° 38'	1° 2'	31.0	18
2 21	13 0.68	-13 53.9	2.564	3.307	12.9	22.0	2 21	13 3.90	-9 10.8	1.655	2.442	17.2	20.6
3 2	12 56.02	-13 44.1	2.460	3.304	10.5	21.8	3 2	12 59.13	-8 56.3	1.590	2.464	13.5	20.4
3 12	12 49.54	-13 19.4	2.378	3.300	7.6	21.6	3 12	12 51.84	-8 24.5	1.545	2.487	9.3	20.2
3 22	12 41.69	-12 40.7	2.323	3.296	4.5	21.4	3 22	12 42.76	-7 38.4	1.524	2.508	4.6	20.0
4 1	12 33.15	-11 50.8	2.297	3.290	2.3	21.3	4 1	12 32.95	-6 43.5	1.531	2.530	1.3	19.8
4 11	12 24.71	-10 54.0	2.302	3.284	4.1	21.4	4 11	12 23.62	-5 47.2	1.566	2.551	5.4	20.1
4 21	12 17.10	-9 55.6	2.335	3.277	7.2	21.5	4 21	12 15.78	-4 56.5	1.628	2.571	9.7	20.4
5 1	12 10.96	-9 1.0	2.395	3.270	10.3	21.7	5 1	12 10.15	-4 16.8	1.713	2.591	13.5	20.7
35120	1992 EN ₇		3 30.0 168° 13'	3° 5'	26.6	18	96477	1998 HA ₁₂₈		3 30.0 24° 80'	0° 1'	30.1	18
2 21	13 3.01	+2 46.1	1.928	2.739	14.2	19.0	2 21	12 59.14	-5 59.4	1.286	2.109	19.1	19.4
3 2	12 58.21	+3 46.1	1.850	2.744	10.9	18.8	3 2	12 56.27	-5 49.4	1.216	2.114	15.0	19.2
3 12	12 51.15	+4 54.0	1.796	2.749	7.3	18.6	3 12	12 50.40	-5 21.4	1.166	2.120	10.1	18.9
3 22	12 42.45	+6 3.6	1.768	2.752	4.1	18.4	3 22	12 42.26	-4 39.5	1.139	2.127	4.7	18.6
4 1	12 32.97	+7 7.3	1.770	2.755	4.3	18.4	4 1	12 33.05	-3 50.3	1.136	2.134	1.1	18.4
4 11	12 23.78	+7 58.3	1.799	2.757	7.6	18.6	4 11	12 24.23	-3 2.7	1.158	2.143	6.7	18.8
4 21	12 15.80	+8 32.1	1.856	2.759	11.2	18.8	4 21	12 17.08	-2 24.4	1.203	2.151	11.9	19.1
5 1	12 9.73	+8 46.4	1.934	2.759	14.4	19.0	5 1	12 12.50	-2 1.4	1.270	2.160	16.4	19.4
305552	2008 UC ₁₂₆		3 30.0 5° 61'	0° 6'	29.7	18	431175	2006 RV ₁₂₂		3 30.0 176° 50'	2° 7'	26.5	17
2 21	13 1.88	-2 45.6	1.169	2.002	20.0	20.5	2 21	12 57.77	+3 57.6	2.801	3.605	10.4	21.9
3 2	12 58.78	-2 56.4	1.098	2.002	15.7	20.3	3 2	12 53.48	+4 41.2	2.716	3.607	8.0	21.7
3 12	12 52.31	-2 53.8	1.045	2.002	10.6	20.0	3 12	12 47.68	+5 29.0	2.657	3.609	5.3	21.5
3 22	12 43.20	-2 41.4	1.014	2.004	4.8	19.6	3 22	12 40.80	+6 16.9	2.627	3.610	3.1	21.4
4 1	12 32.77	-2 24.9	1.007	2.006	1.6	19.4	4 1	12 33.42	+7 0.6	2.626	3.610	3.2	21.4
4 11	12 22.70	-2 11.7	1.025	2.009	7.5	19.8	4 11	12 26.21	+7 35.9	2.655	3.610	5.6	21.6
4 21	12 14.49	-2 7.8	1.065	2.013	13.1	20.1	4 21	12 19.75	+7 59.8	2.712	3.610	8.3	21.7
5 1	12 9.19	-2 17.6	1.124	2.017	17.8	20.4	5 1	12 14.54	+8 10.7	2.793	3.609	10.7	21.9
299780	2006 SK ₇₂		3 30.0 200° 41'	0° 8'	28.9	17	384242	2009 DN ₇₇		3 30.0 345° 70'	3° 9'	2.9	18
2 21	12 56.98	-3 12.2	2.665	3.456	11.2	21.8	2 21	12 58.75	-16 23.3	2.215	2.959	14.6	20.5
3 2	12 53.01	-2 41.3	2.571	3.453	8.7	21.6	3 2	12 54.88	-16 44.7	2.119	2.958	12.1	20.3
3 12	12 47.44	-2 1.7	2.501	3.450	5.7	21.4	3 12	12 48.96	-16 49.6	2.044	2.958	9.1	20.1
3 22	12 40.71	-1 16.4	2.459	3.447	2.5	21.2	3 22	12 41.50	-16 37.8	1.994	2.957	6.1	19.9
4 1	12 33.41	-0 29.6	2.447	3.444	1.3	21.1	4 1	12 33.24	-16 10.7	1.971	2.956	4.0	19.8
4 11	12 26.24	+0 14.2	2.464	3.440	4.5	21.3	4 11	12 25.10	-15 32.3	1.976	2.956	5.0	19.9
4 21	12 19.83	+0 51.2	2.510	3.436	7.6	21.5	4 21	12 17.91	-14 47.9	2.009	2.955	7.9	20.0
5 1	12 14.72	+1 18.2	2.581	3.431	10.4	21.7	5 1	12 12.39	-14 3.4	2.067	2.955	11.0	20.2
334238	2001 TR ₀₄		3 30.0 86° 92'	2° 2'	1.3	18	99658	2002 HV ₉		3 30.0 184° 21'	0° 1'	30.0	17
2 21	13 1.91	-13 13.8	1.962	2.723	15.7	21.5	2 21	12 57.09	-7 13.1	2.036	2.829	14.2	20.3
3 2	12 57.17	-12 55.7	1.896	2.753	12.5	21.3	3 2	12 53.61	-6 35.1	1.947	2.829	11.1	20.1
3 12	12 50.31	-12 19.6	1.852	2.782	8.9	21.2	3 12	12 48.11	-5 42.1	1.881	2.829	7.5	19.9
3 22	12 41.99	-11 27.6	1.833	2.810	5.0	21.0	3 22	12 41.10	-4 37.7	1.841	2.828	3.4	19.6
4 1	12 33.11	-10 24.6	1.843	2.838	2.2	20.8	4 1	12 33.35	-3 27.4	1.829	2.828	0.9	19.4
4 11	12 24.67	-9 17.1	1.881	2.866	4.6	21.1	4 11	12 25.79	-2 18.2	1.846	2.828	5.1	19.7
4 21	12 17.49	-8 11.9	1.948	2.892	8.3	21.3	4 21	12 19.25	-1 16.4	1.890	2.827	9.0	19.9
5 1	12 12.20	-7 15.0	2.039	2.919	11.6	21.6	5 1	12 14.40	-0 27.2	1.959	2.826	12.5	20.2
178416	1998 RX ₄₈		3 30.0 235° 58'	0° 2'	29.8	17	466699	2014 WF ₃₈₂		3 30.0 75° 00'	10° 8'	20.5	17
2 21	12 59.31	-6 41.1	1.938	2.731	14.8	20.7	2 21	13 8.29	+25 36.2	1.845	2.650	14.9	21.0
3 2	12 55.56	-6 5.0	1.839	2.720	11.6	20.5	3 2	13 2.44	+26 40.7	1.792	2.654	12.8	20.8
3 12	12 49.55	-5 13.3	1.762	2.710	7.8	20.3	3 12	12 53.98	+27 32.2	1.760	2.658	11.3	20.7
3 22	12 41.80	-4 9.3	1.711	2.698	3.6	20.0	3 22	12 43.70	+28 1.5	1.753	2.663	10.8	20.7
4 1	12 33.12	-2 58.5	1.688	2.687	1.0	19.7	4 1	12 32.75	+28 1.8	1.770	2.667	11.7	20.8
4 11	12 24.54	-1 48.4	1.694	2.675	5.6	20.0	4 11	12 22.37	+27 30.3	1.811	2.671	13.5	20.9
4 21	12 17.00	-0 46.0	1.727	2.662	9.8	20.3	4 21	12 13.61	+26 29.1	1.874	2.675	15.6	21.1
5 1	12 11.30	+0 3.0	1.783	2.649	13.6	20.5	5 1	12 7.19	+25 2.8	1.956	2.679	17.6	21.2
317955	2003 WC ₁₆₁		3 30.0 251° 84'	1° 6'	28.3	17	496028	2008 SC ₉		3 30.0 175° 77'	0° 9'	28.9	18
2 21	12 57.96	-1 21.2	2.111	2.918	13.2	21.1	2 21	12 57.62	-4 31.4	2.406	3.197	12.3	21.7
3 2	12 54.20	-0 46.8	2.023	2.914	10.2	20.9	3 2	12 53.66	-3 41.8	2.317	3.199	9.5	21.5
3 12	12 48.46	-0 2.8	1.957	2.911	6.7	20.7	3 12	12 47.96	-2 40.7	2.251	3.201	6.3	21.3
3 22	12 41.23	+0 46.7	1.919	2.907	3.1	20.4	3 22	12 40.98	-1 32.0	2.214	3.202	2.7	21.0
4 1	12 33.29	+1 36.1	1.908	2.903	2.2	20.4	4 1	12 33.40	-0 21.1	2.206	3.203	1.5	20.9
4 11	12 25.50	+2 19.8	1.927	2.900	5.8	20.6	4 11	12 25.99	+0 46.2	2.227	3.203	4.9	21.2
4 21	12 18.70	+2 53.0	1.972	2.896	9.5	20.8	4 21	12 19.45	+1 44.6	2.277	3.203	8.3	21.4
5 1	12 13.54	+3 12.4	2.040	2.892	12.7	21.0	5 1	12 14.35	+2 30.1	2.353	3.202	11.3	21.6
412593	2014 OU ₆₅		3 30.0 261° 49'	3° 8'	1.7	17	87812	2000 SL ₁₄₆		3 30.0 183° 10'	1° 4'	1.2	18
2 21	13 4.00	-13 42.8	1.672	2.439	17.8	22.3	2 21	12 55.25	-13 9.3	3.085	3.831	10.8	20.4
3 2	12 59.97	-14 5.2	1.560	2.418	14.7	22.0	3 2	12 51.49	-12 33.7	2.983	3.832	8.7	20.3
3 12	12 53.02	-14 8.7	1.469	2.396	10.9	21.7	3 12	12 46.34	-11 44.9	2.905	3.832	6.2	20.1
3 22	12 43.60	-13 52.3	1.400	2.374	6.7	21.4	3 22	12 40.21	-10 44.7	2.854	3.831	3.4	19.9
4 1	12 32.66	-13 16.9	1.358	2.350	3.8	21.2	4 1	12 33.60	-9 36.2	2.834	3.830	1.4	19.8
4 11	12 21.52	-12 27.8	1.343	2.326	6.3	21.3	4 11	12 27.11	-8 24.0	2.845	3.829	3.3	19.9
4 21	12 11.55	-11 32.3	1.354	2.302	10.8	21.4	4 21	12 21.28	-7 12.8	2.885	3.827	6.1	20.1
5 1	12 3.91	-10 39.3	1.388	2.277	15.3	21.6	5 1	12 16.57	-6 7.0	2.954	3.825	8.6	20.3
389224	2009 DF ₁₂₉		3 30.0 131° 51'	0° 5'	29.3	17	424134	2007 FK ₂₂		3 30.0 289° 11'	0° 6'	29.5	17
2 21													

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3 30.0

3 30.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
9230	Yasuda		3 30.0 166°52	0°8/28.9	18		229982	1999 WG ₁₇		3 30.0 76°57	2°3/27.9	18	
2 21	12 57.29	- 3 4.5	2.866	3.653	10.6	19.5	2 21	13 2.31	+ 1 2.3	1.915	2.723	14.3	20.3
3 2	12 53.09	- 2 33.5	2.777	3.657	8.2	19.3	3 2	12 57.52	+ 1 29.4	1.851	2.744	11.0	20.1
3 12	12 47.42	- 1 54.6	2.712	3.661	5.4	19.1	3 12	12 50.60	+ 2 3.5	1.811	2.764	7.2	19.9
3 22	12 40.70	- 1 10.8	2.676	3.664	2.4	18.9	3 22	12 42.19	+ 2 39.8	1.797	2.784	3.5	19.7
4 1	12 33.49	- 0 25.8	2.670	3.667	1.3	18.8	4 1	12 33.20	+ 3 12.9	1.811	2.804	2.9	19.7
4 11	12 26.44	+ 0 16.3	2.694	3.669	4.2	19.1	4 11	12 24.62	+ 3 37.6	1.854	2.824	6.3	20.0
4 21	12 20.10	+ 0 51.8	2.747	3.672	7.1	19.2	4 21	12 17.31	+ 3 50.4	1.923	2.844	9.9	20.2
5 1	12 14.99	+ 1 18.0	2.826	3.673	9.7	19.4	5 1	12 11.88	+ 3 49.4	2.016	2.864	13.0	20.5
22480	1997 GU ₃		3 30.0 207°97	1°5/28.6	18		517649	2015 BB ₅₄₃		3 30.0 302°41	2°9/27.4	17	
2 21	13 0.26	- 1 6.8	2.142	2.943	13.2	18.4	2 21	12 58.63	+ 1 38.6	1.831	2.651	14.4	21.5
3 2	12 55.96	- 0 43.0	2.052	2.941	10.3	18.2	3 2	12 55.11	+ 2 16.6	1.742	2.641	11.2	21.3
3 12	12 49.64	- 0 10.6	1.987	2.938	6.8	17.9	3 12	12 49.31	+ 3 3.4	1.676	2.632	7.4	21.1
3 22	12 41.80	+ 0 26.7	1.947	2.936	3.1	17.7	3 22	12 41.74	+ 3 53.6	1.635	2.622	3.8	20.8
4 1	12 33.23	+ 1 4.0	1.937	2.933	2.0	17.6	4 1	12 33.28	+ 4 40.6	1.622	2.613	3.6	20.8
4 11	12 24.83	+ 1 36.2	1.955	2.930	5.6	17.8	4 11	12 24.97	+ 5 17.7	1.636	2.604	7.2	21.0
4 21	12 17.43	+ 1 58.9	2.001	2.926	9.3	18.1	4 21	12 17.78	+ 5 40.2	1.675	2.595	11.2	21.2
5 1	12 11.71	+ 2 9.4	2.071	2.923	12.6	18.3	5 1	12 12.48	+ 5 45.1	1.737	2.586	14.7	21.4
58814	1998 GQ ₆		3 30.0 155°80	7°0/21.3	18		97978	2000 QS ₁₆₉		3 30.0 174°35	3°4/ 1.9	18	
2 21	12 59.38	+18 12.9	2.418	3.234	11.5	18.9	2 21	13 3.66	-14 15.3	1.843	2.602	16.7	19.8
3 2	12 55.01	+19 20.2	2.354	3.236	9.4	18.7	3 2	12 59.09	-14 27.3	1.752	2.604	13.6	19.6
3 12	12 48.83	+20 22.8	2.314	3.238	7.7	18.6	3 12	12 52.01	-14 20.6	1.682	2.606	10.0	19.4
3 22	12 41.37	+21 14.0	2.301	3.239	7.1	18.6	3 22	12 42.99	-13 55.4	1.636	2.608	6.1	19.1
4 1	12 33.35	+21 48.1	2.315	3.241	7.9	18.6	4 1	12 32.98	-13 14.1	1.617	2.608	3.4	19.0
4 11	12 25.61	+22 1.4	2.355	3.242	9.7	18.7	4 11	12 23.15	-12 22.2	1.626	2.609	5.4	19.1
4 21	12 18.84	+21 53.0	2.419	3.243	11.8	18.9	4 21	12 14.56	-11 26.9	1.662	2.608	9.3	19.3
5 1	12 13.63	+21 23.9	2.504	3.244	13.8	19.0	5 1	12 8.07	-10 35.3	1.722	2.608	13.0	19.5
391726	2008 CE ₁₃₀		3 30.0 226°41	1°9/27.5	17		423538	2005 UN ₂₀₅		3 30.0 130°81	2°6/27.5	17	
2 21	12 54.87	- 0 39.1	2.503	3.308	11.4	21.4	2 21	13 1.51	+ 1 41.8	2.054	2.862	13.5	22.3
3 2	12 51.50	+ 0 15.1	2.414	3.306	8.8	21.2	3 2	12 56.89	+ 2 20.6	1.979	2.871	10.4	22.1
3 12	12 46.51	+ 0 18.0	2.349	3.303	5.7	21.0	3 12	12 50.22	+ 3 6.5	1.928	2.881	6.9	21.9
3 22	12 40.34	+ 0 25.2	2.313	3.300	2.8	20.8	3 22	12 42.07	+ 3 54.3	1.904	2.890	3.5	21.7
4 1	12 33.60	+ 0 31.3	2.306	3.298	2.5	20.8	4 1	12 33.26	+ 4 38.4	1.908	2.898	3.2	21.7
4 11	12 27.01	+ 0 30.8	2.328	3.295	5.4	21.0	4 11	12 24.76	+ 5 13.2	1.941	2.907	6.5	22.0
4 21	12 21.20	+ 0 19.3	2.377	3.292	8.5	21.2	4 21	12 17.37	+ 5 34.9	2.001	2.915	9.9	22.2
5 1	12 16.72	+ 0 53.8	2.451	3.289	11.3	21.3	5 1	12 11.75	+ 5 41.4	2.084	2.922	13.0	22.4
250337	2003 SP ₁₄₂		3 30.0 141°18	1°5/28.5	18		471905	2013 CX ₃₁		3 30.0 102°77	4°9/25.9	18	
2 21	12 59.96	- 3 55.9	1.813	2.618	15.2	20.9	2 21	13 3.47	+ 3 52.6	1.477	2.304	16.9	21.4
3 2	12 56.00	- 2 59.4	1.736	2.626	11.7	20.7	3 2	12 59.06	+ 5 8.3	1.419	2.322	12.9	21.1
3 12	12 49.77	- 1 48.5	1.681	2.634	7.7	20.5	3 12	12 51.94	+ 6 32.2	1.384	2.339	8.7	20.9
3 22	12 41.88	- 0 28.7	1.652	2.641	3.4	20.2	3 22	12 42.89	+ 7 55.1	1.373	2.356	5.3	20.8
4 1	12 33.23	+ 0 52.4	1.652	2.648	2.2	20.2	4 1	12 33.08	+ 9 6.9	1.390	2.372	5.8	20.9
4 11	12 24.88	+ 2 6.7	1.680	2.654	6.3	20.4	4 11	12 23.80	+ 9 59.2	1.433	2.388	9.4	21.1
4 21	12 17.74	+ 3 7.5	1.734	2.660	10.4	20.7	4 21	12 16.16	+10 27.8	1.499	2.404	13.3	21.4
5 1	12 12.54	+ 3 50.4	1.811	2.665	14.0	20.9	5 1	12 10.88	+10 31.8	1.587	2.418	16.7	21.6
11421	Cardano		3 30.0 48°92	1°5/28.5	18		95359	2002 CN ₁₄₄		3 30.0 227°24	5°8/ 4.4	17	
2 21	12 56.60	- 2 5.6	2.044	2.853	13.5	17.4	2 21	13 2.29	-20 45.6	2.166	2.882	15.7	20.1
3 2	12 53.09	- 1 27.6	1.974	2.866	10.4	17.2	3 2	12 57.88	-21 27.2	2.063	2.876	13.4	19.9
3 12	12 47.65	- 0 39.7	1.926	2.880	6.8	17.0	3 12	12 51.17	-21 50.6	1.980	2.870	10.6	19.7
3 22	12 40.86	+ 0 13.6	1.905	2.893	3.0	16.8	3 22	12 42.64	-21 53.9	1.921	2.864	7.8	19.6
4 1	12 33.49	+ 1 6.5	1.912	2.907	2.1	16.8	4 1	12 33.11	-21 36.8	1.888	2.857	5.9	19.4
4 11	12 26.41	+ 1 53.3	1.947	2.921	5.6	17.0	4 11	12 23.59	-21 2.1	1.882	2.851	6.4	19.4
4 21	12 20.38	+ 2 29.2	2.008	2.935	9.2	17.3	4 21	12 15.08	-20 15.3	1.904	2.843	8.8	19.6
5 1	12 15.99	+ 2 51.4	2.094	2.950	12.3	17.5	5 1	12 8.40	-19 23.2	1.950	2.836	11.7	19.7
290610	2005 UE ₂₁₁		3 30.0 159°72	0°5/29.5	17		39700	1996 TO ₉		3 30.1 81°87	0°4/29.8	18	
2 21	13 0.14	- 4 52.6	2.250	3.038	13.1	21.8	2 21	13 10.13	- 1 18.8	1.817	2.608	15.7	18.8
3 2	12 55.72	- 4 19.8	2.164	3.044	10.2	21.6	3 2	13 3.91	- 1 46.8	1.737	2.617	12.3	18.6
3 12	12 49.38	- 3 35.5	2.102	3.049	6.8	21.4	3 12	12 55.10	- 2 8.1	1.679	2.626	8.2	18.4
3 22	12 41.66	- 2 43.4	2.067	3.054	3.0	21.2	3 22	12 44.36	- 2 25.0	1.648	2.635	3.7	18.1
4 1	12 33.29	- 1 48.2	2.061	3.059	1.1	21.1	4 1	12 32.73	- 2 39.9	1.645	2.644	1.1	18.0
4 11	12 25.13	- 0 55.7	2.084	3.063	4.9	21.3	4 11	12 21.44	- 2 56.2	1.673	2.653	5.7	18.3
4 21	12 17.95	- 0 10.8	2.136	3.066	8.5	21.6	4 21	12 11.57	- 3 16.5	1.728	2.661	9.9	18.6
5 1	12 12.38	+ 0 22.6	2.213	3.069	11.7	21.8	5 1	12 3.94	- 3 43.2	1.807	2.670	13.6	18.8
464342	2016 AZ ₁₁₆		3 30.0 352°41	3°8/ 1.9	17		429172	2009 VO ₆₉		3 30.1 86°55	4°1/26.4	17	
2 21	13 0.08	-13 31.0	1.461	2.248	19.0	20.8	2 21	13 1.99	+ 5 48.8	1.891	2.709	14.1	20.9
3 2	12 56.93	-13 53.4	1.377	2.246	15.6	20.5	3 2	12 57.41	+ 6 28.8	1.823	2.720	10.9	20.8
3 12	12 50.90	-13 54.6	1.311	2.244	11.4	20.2	3 12	12 50.63	+ 7 12.5	1.778	2.730	7.4	20.6
3 22	12 42.57	-13 34.3	1.268	2.243	7.0	20.0	3 22	12 42.27	+ 7 54.1	1.759	2.741	4.5	20.4
4 1	12 33.05	-12 55.1	1.249	2.242	3.9	19.8	4 1	12 33.25	+ 8 27.2	1.769	2.751	4.7	20.4
4 11	12 23.70	-12 3.7	1.256	2.242	6.2	19.9	4 11	12 24.59	+ 8 46.7	1.805	2.761	7.7	20.6
4 21	12 15.83	-11 8.5	1.288	2.242	10.7	20.2	4 21	12 17.18	+ 8 49.6	1.868	2.771	11.1	20.9
5 1	12 10.41	-10 18.3	1.342	2.242	15.0	20.4	5 1	12 11.68	+ 8 35.3	1.953	2.782	14.1	21.1
201934	2004 DP ₅₀		3 30.0 49°65	0°6/29.5	17		498725	2008 TG ₁₁₅		3 30.1 171°62	3°1/ 3.1		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
150883	2001 <i>SE</i> ₂₄₂		3 30.1 114°84	1.2°/29.1	18		182699	2001 <i>VM</i> ₁₀₀		3 30.1 128°17	8.3°/19.2	18	
2 21	13 5.76	-1 8.6	2.017	2.811	14.2	20.5	2 21	13 0.85	+23 49.6	2.484	3.290	11.5	20.3
3 2	13 0.18	-1 1.0	1.943	2.826	11.0	20.3	3 2	12 56.13	+25 3.4	2.432	3.296	9.8	20.2
3 12	12 52.41	-0 45.5	1.892	2.841	7.3	20.1	3 12	12 49.59	+26 8.4	2.404	3.303	8.6	20.1
3 22	12 43.08	-0 25.6	1.867	2.855	3.2	19.9	3 22	12 41.78	+26 57.9	2.401	3.309	8.4	20.1
4 1	12 33.08	-0 5.6	1.872	2.869	1.7	19.8	4 1	12 33.45	+27 26.6	2.425	3.315	9.2	20.1
4 11	12 23.43	+0 10.0	1.907	2.883	5.6	20.0	4 11	12 25.46	+27 31.4	2.474	3.320	10.7	20.2
4 21	12 15.02	+0 17.6	1.969	2.896	9.3	20.3	4 21	12 18.51	+27 12.5	2.545	3.326	12.5	20.4
5 1	12 8.52	+0 14.9	2.055	2.909	12.6	20.5	5 1	12 13.15	+26 31.9	2.635	3.331	14.1	20.5
274986	2009 <i>TY</i> ₆		3 30.1 150°82	3.1°/1.9	17		52579	1997 <i>NH</i>		3 30.1 119°47	1.2°/28.9	18	
2 21	13 1.36	-13 53.1	2.039	2.796	15.3	20.9	2 21	13 0.44	-3 49.5	1.961	2.760	14.4	20.4
3 2	12 57.04	-14 5.9	1.949	2.800	12.5	20.7	3 2	12 56.18	-3 4.5	1.887	2.774	11.1	20.2
3 12	12 50.51	-14 2.0	1.880	2.803	9.1	20.5	3 12	12 49.81	-2 7.3	1.836	2.787	7.3	20.0
3 22	12 42.30	-13 41.9	1.835	2.807	5.6	20.3	3 22	12 41.94	-1 2.5	1.812	2.800	3.2	19.7
4 1	12 33.25	-13 7.9	1.818	2.810	3.1	20.2	4 1	12 33.42	+0 3.6	1.816	2.813	1.8	19.7
4 11	12 24.38	-12 24.8	1.830	2.813	4.9	20.3	4 11	12 25.21	+1 4.0	1.849	2.825	5.7	19.9
4 21	12 16.60	-11 38.5	1.868	2.815	8.4	20.5	4 21	12 18.16	+1 53.3	1.909	2.837	9.5	20.2
5 1	12 10.65	-10 55.1	1.932	2.817	11.8	20.7	5 1	12 12.92	+2 27.6	1.993	2.848	12.9	20.4
351930	2006 <i>TM</i> ₂₄		3 30.1 238°65	2.3°/1.9	17		278637	2008 <i>RF</i> ₂		3 30.1 168°57	0.2°/29.9	17	
2 21	12 55.75	-14 41.6	2.554	3.303	12.8	21.1	2 21	12 59.52	-5 24.3	2.053	2.847	14.0	21.0
3 2	12 52.30	-14 20.3	2.447	3.295	10.4	20.9	3 2	12 55.52	-5 4.8	1.966	2.848	11.0	20.8
3 12	12 47.15	-13 42.8	2.363	3.286	7.6	20.7	3 12	12 49.44	-4 33.1	1.901	2.849	7.4	20.6
3 22	12 40.72	-12 50.3	2.305	3.277	4.5	20.5	3 22	12 41.82	-3 52.4	1.862	2.849	3.3	20.4
4 1	12 33.64	-11 45.9	2.275	3.268	2.3	20.3	4 1	12 33.44	-3 7.4	1.851	2.850	0.9	20.2
4 11	12 26.64	-10 34.7	2.275	3.259	4.0	20.4	4 11	12 25.25	-2 23.6	1.869	2.850	5.1	20.5
4 21	12 20.42	-9 22.3	2.304	3.250	7.1	20.6	4 21	12 18.10	-1 46.3	1.915	2.851	9.0	20.7
5 1	12 15.55	-8 14.4	2.359	3.240	10.1	20.8	5 1	12 12.67	-1 19.7	1.984	2.851	12.4	20.9
237619	2001 <i>RF</i> ₅₂		3 30.1 270°28	0.2°/30.2	17		111999	2002 <i>GB</i> ₁₃₄		3 30.1 192°78	0.8°/30.9	18	
2 21	13 0.42	-7 27.4	1.548	2.351	17.4	21.4	2 21	13 1.23	-9 31.6	2.067	2.841	14.6	20.8
3 2	12 57.24	-7 0.4	1.444	2.331	13.9	21.1	3 2	12 56.90	-9 0.2	1.971	2.840	11.6	20.5
3 12	12 51.22	-6 13.5	1.361	2.310	9.5	20.8	3 12	12 50.41	-8 12.4	1.898	2.837	8.0	20.3
3 22	12 42.85	-5 9.5	1.301	2.288	4.5	20.5	3 22	12 42.28	-7 10.8	1.850	2.834	3.9	20.1
4 1	12 33.09	-3 54.5	1.267	2.266	1.0	20.1	4 1	12 33.32	-6 0.2	1.832	2.830	0.9	19.8
4 11	12 23.26	-2 37.5	1.261	2.244	6.6	20.5	4 11	12 24.52	-4 47.6	1.843	2.826	4.9	20.1
4 21	12 14.66	-1 28.1	1.279	2.221	11.9	20.7	4 21	12 16.76	-3 39.7	1.881	2.820	8.9	20.3
5 1	12 8.38	-0 34.3	1.319	2.198	16.6	20.9	5 1	12 10.77	-2 42.5	1.945	2.814	12.5	20.5
242584	2005 <i>GW</i> ₁₃₈		3 30.1 293°59	2.9°/2.0	17		354878	2006 <i>BW</i> ₇₂		3 30.1 347°63	0.2°/29.9	18	
2 21	12 56.42	-14 37.8	2.129	2.889	14.6	20.9	2 21	13 0.95	-4 34.2	1.273	2.098	19.2	20.9
3 2	12 53.35	-14 32.2	2.011	2.864	12.1	20.6	3 2	12 57.93	-4 33.2	1.195	2.094	15.2	20.6
3 12	12 48.18	-14 8.4	1.914	2.840	8.9	20.4	3 12	12 51.76	-4 16.5	1.136	2.091	10.3	20.3
3 22	12 41.32	-13 26.6	1.842	2.815	5.5	20.1	3 22	12 43.09	-3 47.3	1.100	2.088	4.7	20.0
4 1	12 33.48	-12 29.2	1.797	2.790	2.9	19.9	4 1	12 33.12	-3 11.9	1.088	2.086	1.2	19.8
4 11	12 25.59	-11 21.5	1.781	2.765	4.8	20.0	4 11	12 23.39	-2 38.1	1.100	2.085	7.1	20.1
4 21	12 18.55	-10 10.2	1.791	2.740	8.5	20.1	4 21	12 15.33	-2 13.3	1.136	2.084	12.5	20.4
5 1	12 13.16	-9 2.6	1.827	2.716	12.2	20.3	5 1	12 9.96	-2 3.1	1.193	2.083	17.2	20.7
192544	1998 <i>SM</i> ₁₅₇		3 30.1 166°84	1.2°/28.9	18		184097	2004 <i>HQ</i> ₄		3 30.1 78°16	5.4°/26.1	18	
2 21	13 3.44	-3 47.4	1.819	2.617	15.4	21.5	2 21	13 6.63	+9 1.1	1.654	2.475	15.6	19.9
3 2	12 58.78	-3 6.0	1.736	2.622	12.0	21.3	3 2	13 1.25	+9 34.7	1.593	2.490	12.2	19.7
3 12	12 51.71	-2 10.9	1.676	2.627	7.9	21.1	3 12	12 53.30	+10 8.9	1.555	2.505	8.5	19.5
3 22	12 42.85	-1 7.1	1.642	2.631	3.5	20.8	3 22	12 43.53	+10 36.7	1.543	2.519	5.7	19.4
4 1	12 33.14	-0 1.0	1.637	2.634	1.9	20.7	4 1	12 33.06	+10 51.4	1.557	2.534	6.1	19.5
4 11	12 23.70	+0 59.8	1.660	2.636	6.2	21.0	4 11	12 23.12	+10 48.5	1.599	2.549	9.1	19.7
4 21	12 15.53	+1 48.9	1.710	2.637	10.4	21.2	4 21	12 14.75	+10 26.5	1.665	2.564	12.5	19.9
5 1	12 9.38	+2 22.2	1.783	2.638	14.1	21.5	5 1	12 8.66	+9 46.3	1.754	2.578	15.6	20.1
332359	2007 <i>ES</i> ₂₉		3 30.1 241°12	1.3°/28.9	17		177907	2005 <i>SF</i> ₆₇		3 30.1 285°10	0.4°/29.7	17	
2 21	13 0.64	-2 7.0	2.013	2.815	14.0	21.5	2 21	12 58.49	-4 0.7	2.347	3.138	12.5	20.0
3 2	12 56.50	-1 42.9	1.918	2.807	10.9	21.2	3 2	12 54.61	-3 48.8	2.239	3.121	9.8	19.8
3 12	12 50.17	-1 8.6	1.847	2.798	7.2	21.0	3 12	12 48.81	-3 27.3	2.155	3.103	6.6	19.5
3 22	12 42.18	-0 27.7	1.802	2.790	3.2	20.7	3 22	12 41.56	-2 58.8	2.097	3.085	3.0	19.3
4 1	12 33.32	+0 14.5	1.785	2.781	1.9	20.6	4 1	12 33.50	-2 26.8	2.068	3.066	1.0	19.1
4 11	12 24.58	+0 52.3	1.796	2.772	5.8	20.8	4 11	12 25.47	-1 56.0	2.068	3.048	4.8	19.3
4 21	12 16.87	+1 20.7	1.835	2.763	9.8	21.1	4 21	12 18.25	-1 30.7	2.096	3.030	8.4	19.5
5 1	12 10.96	+1 36.1	1.897	2.754	13.3	21.3	5 1	12 12.51	-1 14.4	2.149	3.012	11.7	19.7
5834	1992 <i>SZ</i> ₁₄		3 30.1 267°24	3.2°/2.7	18		90153	2002 <i>YW</i> ₂₃		3 30.1 12°35	5.4°/24.1	17	
2 21	12 56.16	-16 34.7	2.215	2.964	14.5	16.9	2 21	12 57.50	+9 55.2	2.109	2.935	12.5	19.3
3 2	12 52.95	-16 22.1	2.110	2.954	11.9	16.7	3 2	12 53.85	+10 59.2	2.037	2.936	9.8	19.1
3 12	12 47.76	-15 50.2	2.026	2.945	8.9	16.5	3 12	12 48.25	+12 4.7	1.989	2.937	7.1	19.0
3 22	12 41.07	-14 59.6	1.967	2.935	5.6	16.3	3 22	12 41.25	+13 5.0	1.968	2.937	5.5	18.9
4 1	12 33.58	-13 53.4	1.935	2.925	3.3	16.1	4 1	12 33.60	+13 53.4	1.974	2.939	6.2	18.9
4 11	12 26.17	-12 36.9	1.932	2.915	4.6	16.2	4 11	12 26.19	+14 24.6	2.007	2.940	8.7	19.0
4 21	12 19.67	-11 17.1	1.956	2.905	7.9	16.3	4 21	12 19.81	+14 35.9	2.065	2.941	11.5	19.2
5 1	12 14.75	-10 1.0	2.006	2.896	11.3	16.5	5 1	12 15.06	+14 26.8	2.144	2.942	14.1	19.4
335118	2004 <i>TG</i> ₂₅₀		3 30.1 287°43	2.9°/2.1	17		5422	Hodgkin		3 30.1 126°65	1.1		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
104603	2000 <i>GQ</i> ₉₇		3 30.1 28°01'	1.8/28.3	18		488523	2001 <i>QE</i> ₂₁₇		3 30.1 201°94'	2°0'/28.1	17	
2 21	12 57.52	- 1 16.9	2.041	2.850	13.5	19.4	2 21	13 2.76	- 1 59.7	1.967	2.766	14.3	22.9
3 2	12 53.95	- 0 39.2	1.958	2.851	10.4	19.2	3 2	12 58.19	- 1 6.8	1.874	2.761	11.1	22.7
3 12	12 48.37	+ 0 8.2	1.899	2.853	6.9	19.0	3 12	12 51.34	- 0 1.4	1.804	2.756	7.4	22.4
3 22	12 41.33	+ 1 1.0	1.866	2.854	3.2	18.7	3 22	12 42.75	+ 1 11.5	1.761	2.749	3.4	22.2
4 1	12 33.58	+ 1 53.4	1.861	2.856	2.4	18.7	4 1	12 33.26	+ 2 24.8	1.748	2.742	2.7	22.1
4 11	12 36.04	+ 2 39.3	1.884	2.857	5.9	18.9	4 11	12 23.92	+ 3 31.2	1.763	2.733	6.5	22.3
4 21	12 19.53	+ 3 13.9	1.934	2.859	9.6	19.1	4 21	12 15.68	+ 4 24.4	1.805	2.724	10.5	22.5
5 1	12 14.68	+ 3 34.0	2.007	2.860	12.8	19.4	5 1	12 9.32	+ 5 0.4	1.872	2.714	14.1	22.7
47778	2000 <i>EX</i> ₁₀		3 30.1 224°47'	0°6'/29.4	18		365878	2011 <i>UO</i> ₃₁₅		3 30.1 46°21'	0°3'/29.9	18	
2 21	12 58.60	- 4 5.5	2.372	3.163	12.4	19.7	2 21	12 57.85	- 7 24.5	1.352	2.170	18.7	21.0
3 2	12 54.57	- 3 39.7	2.275	3.157	9.7	19.5	3 2	12 55.15	- 6 42.2	1.283	2.179	14.6	20.8
3 12	12 48.71	- 3 3.6	2.202	3.150	6.5	19.3	3 12	12 49.64	- 5 38.7	1.234	2.187	9.8	20.5
3 22	12 41.47	- 2 20.4	2.155	3.143	2.9	19.1	3 22	12 42.03	- 4 19.4	1.208	2.197	4.4	20.2
4 1	12 33.54	- 1 34.3	2.138	3.135	1.2	18.9	4 1	12 33.47	- 2 53.1	1.208	2.206	1.2	20.0
4 11	12 25.72	- 0 50.4	2.150	3.128	4.8	19.1	4 11	12 25.30	- 1 30.5	1.233	2.217	6.7	20.4
4 21	12 18.75	+ 0 13.3	2.189	3.120	8.3	19.3	4 21	12 18.69	- 0 21.1	1.283	2.227	11.7	20.7
5 1	12 13.27	+ 0 13.4	2.254	3.112	11.5	19.5	5 1	12 14.49	+ 0 28.6	1.354	2.237	16.0	21.0
519865	2013 <i>NS</i> ₂₉		3 30.1 173°50'	0°6'/30.6	17		122356	2000 <i>QW</i> ₄₈		3 30.1 108°34'	2°9'/26.8	18	
2 21	13 0.95	- 7 28.5	1.918	2.705	15.1	22.2	2 21	12 58.39	+ 0 11.3	2.021	2.832	13.6	19.8
3 2	12 56.82	- 7 15.9	1.830	2.707	11.9	22.0	3 2	12 54.51	+ 1 28.2	1.953	2.848	10.3	19.6
3 12	12 50.41	- 6 49.1	1.764	2.708	8.1	21.8	3 12	12 48.67	+ 2 55.0	1.909	2.863	6.8	19.4
3 22	12 42.30	- 6 10.6	1.723	2.708	3.9	21.5	3 22	12 41.44	+ 4 24.9	1.892	2.878	3.5	19.2
4 1	12 33.34	- 5 24.9	1.710	2.709	0.9	21.3	4 1	12 33.62	+ 5 50.4	1.905	2.893	3.6	19.3
4 11	12 24.58	- 4 38.1	1.726	2.709	5.1	21.6	4 11	12 26.12	+ 7 4.0	1.946	2.907	6.8	19.5
4 21	12 16.95	- 3 55.9	1.768	2.709	9.3	21.8	4 21	12 19.71	+ 8 0.7	2.014	2.921	10.2	19.7
5 1	12 11.21	- 3 23.5	1.835	2.709	12.9	22.0	5 1	12 15.00	+ 8 37.8	2.105	2.935	13.2	19.9
384235	2009 <i>DO</i> ₅₇		3 30.1 192°87'	2°6'/26.8	17		500521	2012 <i>TB</i> ₃₀₆		3 30.1 140°54'	1°2'/31.6	17	
2 21	12 55.53	+ 1 2.9	2.361	3.172	11.9	20.9	2 21	12 57.70	- 10 34.2	2.580	3.343	12.3	22.5
3 2	12 52.14	+ 2 5.7	2.276	3.172	9.1	20.7	3 2	12 53.66	- 10 13.2	2.491	3.352	9.7	22.3
3 12	12 47.04	+ 3 16.8	2.217	3.171	6.0	20.5	3 12	12 47.98	- 9 39.2	2.426	3.360	6.8	22.2
3 22	12 40.69	+ 4 30.9	2.185	3.170	3.2	20.3	3 22	12 41.12	- 8 54.3	2.387	3.368	3.6	22.0
4 1	12 33.74	+ 5 42.1	2.182	3.170	3.3	20.3	4 1	12 33.71	- 8 1.9	2.378	3.375	1.2	21.8
4 11	12 26.96	+ 6 44.2	2.208	3.169	6.2	20.5	4 11	12 26.48	- 7 6.9	2.399	3.382	3.8	22.0
4 21	12 21.03	+ 7 32.8	2.261	3.168	9.3	20.7	4 21	12 20.08	- 6 13.9	2.448	3.389	7.0	22.2
5 1	12 16.51	+ 8 5.1	2.337	3.167	12.1	20.9	5 1	12 15.04	- 5 27.5	2.523	3.396	9.9	22.4
341181	2007 <i>RW</i> ₁₈		3 30.1 140°29'	2°9'/ 2.0	17		274495	2008 <i>SD</i> ₁₂₅		3 30.1 307°91'	1°8'/28.9	17	
2 21	12 59.64	- 13 50.8	2.216	2.971	14.3	20.4	2 21	13 3.48	+ 0 38.9	1.685	2.499	15.7	19.9
3 2	12 55.55	- 14 1.3	2.123	2.973	11.6	20.2	3 2	12 59.43	+ 0 35.8	1.579	2.473	12.4	19.6
3 12	12 49.44	- 13 56.2	2.052	2.976	8.5	20.0	3 12	12 52.62	+ 0 39.9	1.494	2.448	8.4	19.3
3 22	12 41.83	- 13 36.2	2.007	2.978	5.2	19.8	3 22	12 43.54	+ 0 47.4	1.434	2.422	3.9	19.0
4 1	12 33.46	- 13 3.5	1.989	2.980	2.9	19.7	4 1	12 33.09	+ 0 53.8	1.401	2.397	2.4	18.8
4 11	12 25.24	- 12 22.6	1.999	2.982	4.6	19.8	4 11	12 22.54	+ 0 53.8	1.395	2.372	7.0	19.0
4 21	12 17.99	- 11 38.6	2.037	2.984	7.8	20.0	4 21	12 13.15	+ 0 43.2	1.415	2.348	11.7	19.2
5 1	12 12.40	- 10 57.2	2.101	2.986	11.0	20.2	5 1	12 5.95	+ 0 19.3	1.457	2.324	16.0	19.4
86505	2000 <i>DS</i> ₄₂		3 30.1 169°23'	2°3'/27.9	18		92898	2000 <i>RS</i> ₃		3 30.1 201°81'	1°2'/28.6	18	
2 21	13 2.63	- 1 40.5	1.764	2.571	15.4	20.3	2 21	12 58.87	- 3 15.7	2.448	3.239	12.1	21.1
3 2	12 58.23	- 0 41.8	1.684	2.575	11.9	20.1	3 2	12 54.71	- 2 27.3	2.352	3.235	9.4	20.9
3 12	12 51.40	+ 0 29.9	1.626	2.579	7.8	19.9	3 12	12 48.77	- 1 28.2	2.280	3.230	6.2	20.7
3 22	12 42.75	+ 1 48.7	1.595	2.582	3.7	19.6	3 22	12 41.52	- 0 22.3	2.236	3.224	2.8	20.5
4 1	12 33.25	+ 3 6.5	1.591	2.585	3.1	19.6	4 1	12 33.61	+ 0 45.2	2.222	3.217	1.8	20.4
4 11	12 24.02	+ 4 15.0	1.616	2.586	7.1	19.8	4 11	12 25.82	+ 1 48.5	2.237	3.210	5.1	20.6
4 21	12 16.07	+ 5 7.8	1.668	2.587	11.2	20.1	4 21	12 18.86	+ 2 42.5	2.281	3.203	8.5	20.8
5 1	12 10.18	+ 5 41.2	1.742	2.587	14.8	20.3	5 1	12 13.35	+ 3 23.7	2.350	3.194	11.5	21.0
519323	2011 <i>EF</i> ₉₀		3 30.1 151°10'	1°1'/31.2	17		424821	2008 <i>UG</i> ₁₆₁		3 30.1 71°46'	1°6'/31.7	17	
2 21	12 58.57	- 9 47.4	2.183	2.958	13.9	21.8	2 21	12 58.62	- 10 37.5	1.956	2.735	15.1	21.5
3 2	12 54.67	- 9 26.2	2.094	2.962	11.0	21.6	3 2	12 54.94	- 10 28.1	1.872	2.741	12.1	21.3
3 12	12 48.81	- 8 50.2	2.028	2.966	7.6	21.4	3 12	12 49.13	- 10 2.6	1.810	2.747	8.5	21.1
3 22	12 41.52	- 8 1.8	1.987	2.970	3.9	21.2	3 22	12 41.73	- 9 22.9	1.772	2.754	4.5	20.8
4 1	12 33.55	- 7 5.2	1.976	2.974	1.1	21.0	4 1	12 33.57	- 8 33.2	1.763	2.760	1.6	20.6
4 11	12 25.76	- 6 6.1	1.993	2.977	4.4	21.3	4 11	12 25.64	- 7 39.3	1.781	2.766	4.7	20.9
4 21	12 18.95	- 5 10.5	2.038	2.980	8.1	21.5	4 21	12 18.81	- 6 47.6	1.827	2.773	8.6	21.1
5 1	12 13.76	- 4 23.3	2.108	2.983	11.5	21.7	5 1	12 13.77	- 6 3.7	1.897	2.779	12.1	21.3
65985	1998 <i>HX</i> ₁₄₆		3 30.1 339°20'	8°3'/22.2	18		61690	2000 <i>QV</i> ₁₂₇		3 30.1 215°13'	0°3'/30.4	18	
2 21	12 56.55	+ 12 44.1	1.525	2.371	15.5	18.3	2 21	13 2.22	- 6 14.9	2.393	3.168	12.8	19.9
3 2	12 53.98	+ 14 14.4	1.455	2.362	12.4	18.1	3 2	12 57.41	- 6 6.2	2.289	3.160	10.1	19.6
3 12	12 48.80	+ 15 45.8	1.408	2.354	9.6	17.9	3 12	12 50.66	- 5 46.9	2.210	3.152	6.9	19.4
3 22	12 41.64	+ 17 7.6	1.385	2.346	8.3	17.8	3 22	12 42.42	- 5 19.0	2.157	3.143	3.3	19.2
4 1	12 33.52	+ 18 9.1	1.386	2.340	9.5	17.9	4 1	12 33.40	- 4 45.8	2.134	3.133	0.7	18.9
4 11	12 25.68	+ 18 42.5	1.411	2.334	12.4	18.0	4 11	12 24.46	- 4 11.9	2.141	3.123	4.5	19.2
4 21	12 19.20	+ 18 45.0	1.458	2.328	15.7	18.2	4 21	12 16.39	- 3 41.5	2.177	3.112	8.1	19.4
5 1	12 14.91	+ 18 17.4	1.523	2.324	18.7	18.4	5 1	12 9.87	- 3 18.6	2.238	3.100	11.4	19.6
72465	2001 <i>DN</i> ₂₃		3 30.1 251°33'	3°0'/26.9	17		498632	2008 <i>RZ</i> <					

EPHEMERIDES

3 30.1

3 30.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
64094	2001 <i>SE</i> ₂₉₃		3 30.1 105°94	1.7/1.2	17		503532	2016 <i>FJ</i> ₂₁		3 30.1 226°79	4.0/26.2	17	
2 21	12 57.87	-12 5.4	2.481	3.240	12.8	20.8	2 21	12 59.92	+ 4 9.7	1.895	2.715	14.0	21.8
3 2	12 53.85	-11 51.5	2.398	3.254	10.3	20.6	3 2	12 56.04	+ 5 6.1	1.812	2.711	10.8	21.5
3 12	12 48.12	-11 23.6	2.337	3.267	7.3	20.4	3 12	12 49.93	+ 6 9.7	1.752	2.706	7.3	21.3
3 22	12 41.19	-10 43.6	2.303	3.281	4.0	20.3	3 22	12 42.13	+ 7 13.9	1.719	2.702	4.4	21.1
4 1	12 33.72	- 9 54.7	2.298	3.294	1.7	20.1	4 1	12 33.51	+ 8 11.4	1.714	2.697	4.7	21.1
4 11	12 26.46	- 9 1.6	2.322	3.307	3.9	20.3	4 11	12 25.09	+ 8 55.4	1.736	2.692	7.9	21.3
4 21	12 20.08	- 8 9.5	2.375	3.319	7.0	20.5	4 21	12 17.80	+ 9 21.5	1.783	2.687	11.5	21.5
5 1	12 15.14	- 7 22.8	2.454	3.332	9.9	20.7	5 1	12 12.36	+ 9 27.6	1.853	2.682	14.8	21.7
372014	2008 <i>LA</i> ₇		3 30.1 28°49	1.7/31.9	18		456666	2007 <i>RO</i> ₆₀		3 30.1 174°78	0.6/30.7	16	
2 21	12 54.39	-14 8.0	1.583	2.371	17.7	20.7	2 21	13 1.48	- 9 14.5	1.967	2.745	15.1	22.6
3 2	12 52.17	-13 13.5	1.502	2.375	14.2	20.5	3 2	12 57.19	- 8 40.2	1.877	2.748	11.9	22.4
3 12	12 47.52	-11 52.4	1.441	2.380	10.1	20.2	3 12	12 50.66	- 7 49.0	1.809	2.751	8.2	22.2
3 22	12 41.06	-10 8.1	1.404	2.385	5.4	20.0	3 22	12 42.46	- 6 43.8	1.768	2.752	4.0	21.9
4 1	12 33.74	- 8 8.5	1.393	2.391	1.7	19.7	4 1	12 33.44	- 5 30.2	1.755	2.753	0.9	21.7
4 11	12 26.70	- 6 4.8	1.410	2.397	5.4	20.0	4 11	12 24.63	- 4 15.4	1.771	2.754	5.1	22.0
4 21	12 20.95	- 4 8.6	1.453	2.403	10.1	20.3	4 21	12 16.94	- 3 6.5	1.814	2.753	9.2	22.2
5 1	12 17.24	- 2 29.3	1.520	2.410	14.2	20.5	5 1	12 11.11	- 2 9.4	1.883	2.752	12.9	22.4
282006	2011 <i>HZ</i> ₅₅		3 30.1 305°52	2.9/27.3	17		14728	Schuchardt		3 30.1 231°18	2.3/28.0	18	R
2 21	12 59.00	+ 1 54.0	1.946	2.762	13.8	20.8	2 21	13 1.52	- 1 55.5	1.682	2.494	15.9	18.1
3 2	12 55.23	+ 2 34.9	1.863	2.760	10.7	20.6	3 2	12 57.70	- 1 2.0	1.590	2.484	12.3	17.8
3 12	12 49.32	+ 3 23.6	1.804	2.759	7.1	20.4	3 12	12 51.30	+ 0 6.1	1.519	2.474	8.2	17.5
3 22	12 41.82	+ 4 14.9	1.771	2.757	3.7	20.2	3 22	12 42.86	+ 1 23.2	1.474	2.463	3.8	17.3
4 1	12 33.56	+ 5 2.3	1.765	2.755	3.5	20.2	4 1	12 33.33	+ 2 41.3	1.457	2.451	3.1	17.2
4 11	12 25.50	+ 5 39.9	1.788	2.754	6.9	20.4	4 11	12 23.92	+ 3 51.3	1.467	2.439	7.4	17.4
4 21	12 18.52	+ 6 3.3	1.836	2.752	10.5	20.6	4 21	12 15.73	+ 4 45.9	1.502	2.426	11.9	17.6
5 1	12 13.33	+ 6 10.0	1.907	2.750	13.8	20.8	5 1	12 9.68	+ 5 20.3	1.560	2.413	15.9	17.8
435397	2007 <i>YN</i> ₅₃		3 30.1 101°20	1.3/28.6	17		313737	2003 <i>UK</i> ₂₀₂		3 30.1 114°26	3.7/26.4	18	
2 21	12 56.58	- 2 21.7	2.379	3.179	12.1	21.7	2 21	13 2.56	+ 3 2.0	1.891	2.704	14.3	21.3
3 2	12 52.91	- 1 43.3	2.297	3.185	9.3	21.5	3 2	12 57.83	+ 4 10.8	1.829	2.724	10.9	21.1
3 12	12 47.54	- 0 55.7	2.238	3.190	6.1	21.3	3 12	12 50.91	+ 5 26.7	1.791	2.744	7.3	20.9
3 22	12 40.94	- 0 2.8	2.207	3.196	2.7	21.1	3 22	12 42.49	+ 6 42.7	1.780	2.763	4.2	20.7
4 1	12 33.78	+ 0 50.5	2.205	3.201	1.8	21.1	4 1	12 33.46	+ 7 51.0	1.797	2.781	4.5	20.8
4 11	12 26.80	+ 1 39.0	2.232	3.206	5.0	21.3	4 11	12 24.84	+ 8 45.0	1.843	2.799	7.6	21.0
4 21	12 20.70	+ 2 18.3	2.287	3.211	8.3	21.5	4 21	12 17.50	+ 9 20.5	1.915	2.815	11.0	21.2
5 1	12 16.02	+ 2 45.4	2.366	3.217	11.2	21.7	5 1	12 12.06	+ 9 36.2	2.009	2.832	14.0	21.5
289428	2005 <i>EA</i> ₁₉		3 30.1 282°16	1.6/28.6	17		17273	Karnik		3 30.1 80°73	1.5/28.8	18	
2 21	12 57.41	- 4 19.9	1.597	2.413	16.3	21.4	2 21	12 59.02	- 4 39.5	1.434	2.253	17.7	17.7
3 2	12 54.62	- 3 26.1	1.506	2.402	12.8	21.1	3 2	12 56.00	- 3 45.8	1.358	2.256	13.8	17.4
3 12	12 49.28	- 2 14.4	1.435	2.390	8.5	20.9	3 12	12 50.22	- 2 33.6	1.303	2.258	9.1	17.2
3 22	12 41.94	- 0 50.1	1.390	2.379	3.8	20.6	3 22	12 42.35	- 1 8.9	1.272	2.261	4.0	16.9
4 1	12 33.52	+ 0 38.5	1.371	2.367	2.4	20.4	4 1	12 33.47	+ 0 19.1	1.267	2.264	2.3	16.7
4 11	12 25.22	+ 2 1.5	1.379	2.356	7.1	20.7	4 11	12 24.90	+ 1 39.7	1.288	2.266	7.3	17.1
4 21	12 18.14	+ 3 10.3	1.412	2.345	11.8	20.9	4 21	12 17.80	+ 2 44.3	1.334	2.269	12.2	17.3
5 1	12 13.18	+ 3 58.8	1.467	2.333	16.0	21.1	5 1	12 13.03	+ 3 27.3	1.401	2.272	16.4	17.6
507428	2012 <i>QL</i> ₃₇		3 30.1 227°22	3.7/3.2	17		17937	1999 <i>HO</i> ₄		3 30.1 224°90	0.4/30.5	18	
2 21	12 59.20	-17 26.5	2.459	3.189	13.7	22.4	2 21	12 59.25	- 8 4.7	2.368	3.143	12.9	19.6
3 2	12 55.16	-17 33.3	2.350	3.181	11.4	22.2	3 2	12 55.17	- 7 34.6	2.262	3.133	10.2	19.4
3 12	12 49.20	-17 23.6	2.263	3.171	8.6	22.0	3 12	12 49.20	- 6 50.9	2.180	3.121	7.0	19.2
3 22	12 41.78	-16 57.2	2.201	3.162	5.8	21.8	3 22	12 41.78	- 5 56.0	2.124	3.109	3.3	18.9
4 1	12 33.58	-16 15.8	2.167	3.152	3.8	21.6	4 1	12 33.60	- 4 54.3	2.098	3.097	0.7	18.7
4 11	12 25.42	-15 23.2	2.162	3.141	4.7	21.7	4 11	12 25.48	- 3 51.2	2.101	3.083	4.5	19.0
4 21	12 18.09	-14 24.8	2.185	3.131	7.5	21.8	4 21	12 18.21	- 2 52.5	2.133	3.070	8.2	19.2
5 1	12 12.26	-13 26.6	2.235	3.119	10.5	22.0	5 1	12 12.43	- 2 3.2	2.191	3.055	11.5	19.3
364627	2007 <i>TK</i> ₃₅		3 30.1 163°82	0.8/29.3	18		34868	2001 <i>TB</i> ₁₃₆		3 30.1 299°57	4.2/3.7	18	
2 21	13 0.78	- 5 51.6	1.998	2.789	14.4	21.9	2 21	12 56.55	-18 33.0	2.212	2.949	14.8	17.8
3 2	12 56.53	- 4 57.3	1.914	2.795	11.2	21.7	3 2	12 53.31	-18 38.7	2.110	2.943	12.4	17.6
3 12	12 50.15	- 3 48.1	1.852	2.801	7.5	21.5	3 12	12 48.06	-18 25.3	2.030	2.937	9.5	17.4
3 22	12 42.19	- 2 28.5	1.817	2.805	3.3	21.3	3 22	12 41.29	-17 52.7	1.973	2.932	6.5	17.2
4 1	12 33.50	- 1 5.2	1.812	2.809	1.4	21.1	4 1	12 33.72	-17 2.7	1.943	2.926	4.3	17.1
4 11	12 25.04	+ 0 14.2	1.835	2.812	5.6	21.4	4 11	12 26.23	-16 0.1	1.940	2.920	5.1	17.1
4 21	12 17.69	+ 1 22.9	1.886	2.815	9.6	21.7	4 21	12 19.67	-14 51.0	1.966	2.915	7.9	17.2
5 1	12 12.13	+ 2 16.1	1.962	2.817	13.0	21.9	5 1	12 14.73	-13 42.4	2.016	2.909	11.1	17.4
30744	1981 <i>EN</i> ₁₈		3 30.1 34°27	0.5/30.6	18		55896	1998 <i>AM</i> ₅		3 30.1 74°37	4.0/3.2	17	
2 21	12 55.36	- 8 20.4	2.063	2.854	14.0	19.6	2 21	13 0.00	-16 45.0	2.266	3.004	14.5	19.4
3 2	12 52.28	- 7 49.3	1.981	2.860	11.0	19.5	3 2	12 55.82	-17 9.9	2.177	3.011	12.0	19.2
3 12	12 47.27	- 7 3.3	1.921	2.867	7.5	19.2	3 12	12 49.64	-17 18.6	2.109	3.018	9.1	19.0
3 22	12 40.87	- 6 5.8	1.888	2.873	3.6	19.0	3 22	12 41.97	-17 10.8	2.065	3.025	6.1	18.9
4 1	12 33.81	- 5 1.7	1.882	2.881	0.7	18.8	4 1	12 33.56	-16 48.0	2.049	3.033	4.1	18.7
4 11	12 26.98	- 3 57.6	1.904	2.888	4.7	19.1	4 11	12 25.32	-16 13.9	2.061	3.040	5.0	18.8
4 21	12 21.13	- 2 59.5	1.954	2.896	8.4	19.3	4 21	12 18.05	-15 33.5	2.101	3.047	7.7	19.0
5 1	12 16.90	- 2 12.3	2.028	2.904	11.8	19.6	5 1	12 12.43	-14 52.4	2.166	3.054	10.6	19.2
313612	2003 <i>QR</i> ₅₈		3 30.1 200°50	1.3/28.8	17		427059	2014 <i>TD</i> ₈₄		3 30.1 245°10	10.5/10.4	17	

EPHEMERIDES

3 30.1

3 30.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
8767	Commonern		3 30.1 72°45	0°1/30.0	18		472381	2015 <i>BW</i> ₉₀		3 30.1 78°61	1°7/28.3	17	
2 21	12 57.66	- 6 4.8	2.213	3.003	13.2	18.9	2 21	12 57.76	- 2 12.7	1.952	2.761	14.1	21.1
3 2	12 53.83	- 5 38.8	2.138	3.018	10.3	18.7	3 2	12 54.22	- 1 26.6	1.874	2.767	10.8	20.9
3 12	12 48.18	- 5 1.0	2.086	3.033	6.9	18.5	3 12	12 48.62	- 0 29.2	1.819	2.773	7.1	20.6
3 22	12 41.25	- 4 14.9	2.060	3.048	3.1	18.3	3 22	12 41.52	+ 0 34.5	1.791	2.779	3.2	20.4
4 1	12 33.75	- 3 25.0	2.064	3.062	0.8	18.1	4 1	12 33.73	+ 1 38.1	1.791	2.786	2.3	20.4
4 11	12 26.51	- 2 36.6	2.096	3.077	4.6	18.4	4 11	12 26.19	+ 2 34.8	1.818	2.792	6.0	20.6
4 21	12 20.26	- 1 54.7	2.155	3.092	8.1	18.7	4 21	12 19.73	+ 3 19.4	1.873	2.798	9.8	20.8
5 1	12 15.56	- 1 23.1	2.240	3.106	11.2	18.9	5 1	12 15.01	+ 3 48.1	1.950	2.805	13.1	21.1
122162	2000 <i>KX</i> ₁		3 30.1 247°82	2°2/ 1.4	18		420594	2012 <i>HQ</i> ₃₇		3 30.1 7°96	5°7/25.9	18	
2 21	12 59.32	-13 14.2	2.146	2.906	14.5	20.6	2 21	13 1.75	+ 7 57.4	1.474	2.310	16.4	19.7
3 2	12 55.55	-12 59.1	2.034	2.890	11.8	20.4	3 2	12 58.01	+ 8 39.0	1.405	2.310	12.8	19.5
3 12	12 49.64	-12 26.0	1.944	2.873	8.6	20.1	3 12	12 51.50	+ 9 23.7	1.357	2.311	9.0	19.3
3 22	12 42.06	-11 36.1	1.880	2.856	4.9	19.9	3 22	12 42.93	+10 3.3	1.334	2.313	6.0	19.1
4 1	12 33.53	-10 32.5	1.843	2.838	2.2	19.6	4 1	12 33.40	+10 29.9	1.336	2.315	6.5	19.1
4 11	12 25.00	- 9 21.1	1.836	2.820	4.7	19.8	4 11	12 24.25	+10 37.0	1.363	2.318	9.8	19.3
4 21	12 17.39	- 8 8.7	1.856	2.802	8.6	20.0	4 21	12 16.64	+10 22.1	1.414	2.321	13.7	19.6
5 1	12 11.46	- 7 2.2	1.902	2.782	12.2	20.2	5 1	12 11.39	+ 9 45.4	1.485	2.325	17.2	19.8
129421	3147 <i>T</i> -3		3 30.1 238°31	0°4/29.5	16		26836	1991 <i>PA</i> ₆		3 30.1 235°10	0°2/30.3	18	R
2 21	12 57.24	- 4 25.5	2.975	3.756	10.4	21.9	2 21	12 58.14	- 6 33.8	2.439	3.221	12.4	19.6
3 2	12 53.20	- 3 58.3	2.865	3.741	8.1	21.7	3 2	12 54.24	- 6 13.0	2.338	3.212	9.8	19.4
3 12	12 47.67	- 3 22.4	2.780	3.725	5.4	21.5	3 12	12 48.53	- 5 40.8	2.260	3.204	6.6	19.2
3 22	12 41.02	- 2 40.3	2.722	3.709	2.4	21.3	3 22	12 41.48	- 4 59.6	2.208	3.194	3.1	19.0
4 1	12 33.79	- 1 55.3	2.695	3.693	0.9	21.1	4 1	12 33.73	- 4 13.2	2.186	3.185	0.7	18.7
4 11	12 26.60	- 1 11.5	2.698	3.676	4.0	21.3	4 11	12 26.07	- 3 26.6	2.194	3.176	4.4	19.0
4 21	12 20.04	- 0 32.7	2.731	3.659	7.0	21.5	4 21	12 19.21	- 2 44.4	2.229	3.166	7.9	19.2
5 1	12 14.62	- 0 2.1	2.789	3.641	9.7	21.7	5 1	12 13.79	- 2 10.7	2.290	3.155	11.0	19.4
337100	1999 <i>FJ</i> ₂₀		3 30.1 103°48	0°9/31.1	18		389724	2011 <i>SG</i> ₅₆		3 30.1 347°62	1°0/28.8	17	
2 21	13 0.58	- 7 50.2	2.310	3.085	13.2	20.8	2 21	12 52.11	- 6 24.9	1.975	2.781	14.0	20.3
3 2	12 56.07	- 7 49.6	2.227	3.096	10.4	20.7	3 2	12 49.94	- 5 12.0	1.885	2.776	10.9	20.1
3 12	12 49.69	- 7 37.6	2.166	3.106	7.1	20.5	3 12	12 45.83	- 3 41.7	1.818	2.771	7.2	19.8
3 22	12 41.95	- 7 16.1	2.133	3.116	3.6	20.3	3 22	12 40.29	- 1 59.4	1.778	2.767	3.1	19.6
4 1	12 33.59	- 6 48.4	2.128	3.126	1.0	20.1	4 1	12 34.03	- 0 12.7	1.766	2.764	1.7	19.5
4 11	12 25.44	- 6 18.6	2.152	3.136	4.2	20.3	4 11	12 27.93	+ 1 29.6	1.783	2.760	5.7	19.7
4 21	12 18.26	- 5 51.1	2.205	3.145	7.7	20.6	4 21	12 22.77	+ 2 59.6	1.827	2.758	9.7	19.9
5 1	12 12.66	- 5 29.7	2.283	3.155	10.8	20.8	5 1	12 19.21	+ 4 11.6	1.895	2.756	13.1	20.2
350773	2002 <i>BE</i> ₂₇		3 30.1 21°99	12°8/12.4	18		466665	2014 <i>WY</i> ₁₄₀		3 30.1 105°65	1°5/28.8	17	
2 21	13 5.98	-38 32.2	2.137	2.724	19.0	19.6	2 21	13 0.70	- 2 37.8	1.768	2.576	15.3	21.8
3 2	13 1.56	-40 34.6	2.053	2.730	17.6	19.5	3 2	12 56.73	- 2 4.1	1.691	2.583	11.9	21.6
3 12	12 54.18	-42 13.4	1.985	2.737	16.0	19.3	3 12	12 50.42	- 1 18.5	1.637	2.589	7.8	21.4
3 22	12 44.33	-43 21.9	1.936	2.745	14.5	19.2	3 22	12 42.38	- 0 25.6	1.607	2.596	3.5	21.1
4 1	12 32.97	-43 55.2	1.907	2.753	13.3	19.2	4 1	12 33.55	+ 0 28.2	1.606	2.603	2.1	21.0
4 11	12 21.51	-43 52.6	1.900	2.762	12.8	19.2	4 11	12 25.00	+ 1 15.9	1.632	2.609	6.2	21.3
4 21	12 11.31	-43 18.0	1.914	2.771	13.1	19.2	4 21	12 17.71	+ 1 52.0	1.685	2.615	10.4	21.6
5 1	12 3.54	-42 19.3	1.950	2.780	14.1	19.3	5 1	12 12.40	+ 2 12.8	1.760	2.621	14.0	21.8
192056	2006 <i>BR</i> ₄₀		3 30.1 64°22	1°6/28.5	18		431744	2008 <i>GH</i> ₂		3 30.1 56°96	11°1/20.6	18	
2 21	12 57.82	- 2 30.1	1.925	2.734	14.2	20.5	2 21	13 10.97	+29 40.7	1.984	2.771	14.6	20.3
3 2	12 54.35	- 1 47.2	1.842	2.735	11.0	20.3	3 2	13 4.11	+30 38.0	1.956	2.799	12.8	20.2
3 12	12 48.75	- 0 52.5	1.783	2.736	7.2	20.1	3 12	12 54.88	+31 18.3	1.950	2.826	11.5	20.2
3 22	12 41.59	+ 0 9.2	1.749	2.738	3.3	19.8	3 22	12 44.19	+31 33.9	1.968	2.853	11.1	20.2
4 1	12 33.67	+ 1 11.6	1.744	2.739	2.2	19.7	4 1	12 33.18	+31 20.1	2.011	2.880	11.7	20.3
4 11	12 25.98	+ 2 7.8	1.766	2.741	6.1	20.0	4 11	12 23.00	+30 36.3	2.077	2.908	13.1	20.5
4 21	12 19.36	+ 2 52.2	1.815	2.742	9.9	20.2	4 21	12 14.54	+29 25.9	2.166	2.935	14.7	20.6
5 1	12 14.52	+ 3 21.0	1.887	2.744	13.4	20.4	5 1	12 8.35	+27 54.0	2.273	2.963	16.3	20.8
238360	2004 <i>CO</i> ₂₄		3 30.1 302°93	3°5/25.9	17		272599	2005 <i>VF</i> ₁₁₄		3 30.1 160°15	0°5/30.7	17	
2 21	12 55.04	+ 2 22.9	2.079	2.900	12.9	20.6	2 21	12 59.91	- 7 59.0	2.086	2.869	14.2	22.1
3 2	12 52.10	+ 3 35.7	1.992	2.893	9.9	20.3	3 2	12 55.83	- 7 36.3	1.999	2.873	11.2	21.9
3 12	12 47.21	+ 4 57.6	1.930	2.885	6.6	20.1	3 12	12 49.69	- 6 59.5	1.933	2.876	7.6	21.7
3 22	12 40.89	+ 6 22.5	1.894	2.878	3.9	19.9	3 22	12 42.03	- 6 11.4	1.894	2.879	3.7	21.4
4 1	12 33.85	+ 7 42.7	1.887	2.871	4.3	20.0	4 1	12 33.63	- 5 16.4	1.883	2.882	0.8	21.2
4 11	12 26.95	+ 8 51.0	1.908	2.864	7.4	20.1	4 11	12 25.43	- 4 20.7	1.901	2.885	4.8	21.5
4 21	12 20.98	+ 9 42.2	1.954	2.857	10.7	20.3	4 21	12 18.26	- 3 30.0	1.947	2.887	8.6	21.7
5 1	12 16.60	+10 13.4	2.024	2.851	13.8	20.5	5 1	12 12.80	- 2 49.2	2.018	2.888	12.1	22.0
17801	Zelkowitz		3 30.1 352°63	0°3/29.8	18		159215	Apan		3 30.1 149°41	1°4/29.1	18	
2 21	12 56.47	- 5 9.0	2.015	2.817	14.0	18.4	2 21	13 6.72	- 1 50.3	1.629	2.433	16.6	21.1
3 2	12 53.25	- 4 48.6	1.928	2.814	10.9	18.2	3 2	13 1.64	- 1 34.3	1.552	2.440	12.9	20.9
3 12	12 48.01	- 4 16.0	1.862	2.812	7.3	17.9	3 12	12 53.83	- 1 7.2	1.495	2.447	8.6	20.6
3 22	12 41.26	- 3 34.4	1.822	2.810	3.3	17.7	3 22	12 43.98	- 0 33.5	1.464	2.453	3.9	20.3
4 1	12 33.76	- 2 48.6	1.810	2.809	1.0	17.5	4 1	12 33.17	+ 0 1.2	1.461	2.458	2.1	20.2
4 11	12 26.43	- 2 4.4	1.826	2.808	5.1	17.8	4 11	12 22.69	+ 0 30.1	1.485	2.463	6.6	20.5
4 21	12 20.09	- 1 27.1	1.869	2.807	9.0	18.0	4 21	12 13.69	+ 0 48.4	1.536	2.467	11.1	20.8
5 1	12 15.42	- 1 0.9	1.935	2.807	12.4	18.2	5 1	12 7.02	+ 0 52.5	1.609	2.471	15.1	21.0
508689	2017 <i>UP</i> ₁₇		3 30.1 196°27	0°2/29.9	17		422386	2014 <i>SN</i> ₂₆₅		3 30.1 140°63	2°4/27.8	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
206746	2004 <i>BB</i> ₁₄₂		3 30.1 215°71	0°1/30.1 17			387402	2013 <i>RU</i> ₃₂		3 30.1 116°52	4°4/24.9 18		
2 21	12 57.71	- 6 27.3	2.466	3.248	12.3	21.5	2 21	12 57.85	+ 4 24.8	1.999	2.821	13.3	20.9
3 2	12 53.85	- 6 0.0	2.368	3.243	9.6	21.3	3 2	12 54.21	+ 5 54.8	1.931	2.831	10.2	20.7
3 12	12 48.25	- 5 21.1	2.293	3.238	6.5	21.0	3 12	12 48.57	+ 7 31.8	1.888	2.841	6.9	20.6
3 22	12 41.35	- 4 33.4	2.246	3.232	3.0	20.8	3 22	12 41.49	+ 9 8.1	1.872	2.851	4.6	20.4
4 1	12 33.79	- 3 40.9	2.227	3.226	0.7	20.6	4 1	12 33.79	+10 35.4	1.885	2.861	5.3	20.5
4 11	12 26.35	- 2 48.8	2.239	3.220	4.4	20.9	4 11	12 26.38	+11 46.4	1.925	2.870	8.1	20.7
4 21	12 19.71	- 2 1.8	2.278	3.213	7.8	21.1	4 21	12 20.04	+12 36.6	1.991	2.879	11.3	20.9
5 1	12 14.48	- 1 24.0	2.343	3.207	10.9	21.3	5 1	12 15.40	+13 4.3	2.079	2.888	14.1	21.1
133128	2003 <i>PZ</i> ₃		3 30.1 223°67	2°7/27.4 17			275253	2009 <i>XC</i> ₂₂		3 30.1 64°19	4°0/25.9 18		
2 21	13 1.21	- 0 2.9	1.898	2.707	14.4	20.4	2 21	12 58.23	+ 4 19.3	1.924	2.747	13.7	19.9
3 2	12 57.15	+ 0 53.9	1.805	2.698	11.2	20.1	3 2	12 54.65	+ 5 20.1	1.848	2.748	10.5	19.7
3 12	12 50.77	+ 2 2.2	1.735	2.688	7.4	19.9	3 12	12 48.96	+ 6 27.5	1.796	2.750	7.1	19.5
3 22	12 42.60	+ 3 16.6	1.691	2.678	3.7	19.6	3 22	12 41.71	+ 7 35.0	1.769	2.752	4.4	19.3
4 1	12 33.49	+ 4 29.4	1.676	2.667	3.5	19.6	4 1	12 33.74	+ 8 35.3	1.771	2.753	4.8	19.3
4 11	12 24.50	+ 5 32.9	1.689	2.655	7.2	19.8	4 11	12 26.02	+ 9 21.6	1.800	2.755	7.8	19.5
4 21	12 16.61	+ 6 21.0	1.728	2.643	11.2	20.0	4 21	12 19.39	+ 9 49.9	1.854	2.757	11.2	19.7
5 1	12 10.61	+ 6 49.9	1.790	2.630	14.8	20.2	5 1	12 14.54	+ 9 58.4	1.931	2.758	14.3	19.9
176450	2001 <i>XM</i> ₃₈		3 30.1 124°13	2°1/ 1.8 18			246065	2006 <i>VB</i> ₉₉		3 30.1 215°43	3°7/25.7 18		
2 21	12 59.55	-13 10.3	2.831	3.573	11.8	20.9	2 21	12 58.18	+ 6 39.9	2.509	3.322	11.2	20.9
3 2	12 54.95	-13 11.6	2.744	3.588	9.5	20.8	3 2	12 54.12	+ 7 26.1	2.425	3.319	8.7	20.7
3 12	12 48.80	-13 0.7	2.680	3.602	6.9	20.6	3 12	12 48.37	+ 8 15.5	2.366	3.316	6.0	20.5
3 22	12 41.53	-12 38.6	2.644	3.616	4.1	20.5	3 22	12 41.39	+ 9 3.2	2.334	3.312	3.9	20.4
4 1	12 33.77	-12 7.4	2.637	3.629	2.2	20.4	4 1	12 33.82	+ 9 44.0	2.331	3.309	4.3	20.4
4 11	12 26.18	-11 30.7	2.660	3.642	3.6	20.5	4 11	12 26.41	+10 13.3	2.357	3.305	6.7	20.6
4 21	12 19.38	-10 52.5	2.712	3.655	6.3	20.7	4 21	12 19.84	+10 28.5	2.410	3.301	9.5	20.7
5 1	12 13.89	-10 16.8	2.791	3.667	8.9	20.9	5 1	12 14.66	+10 28.1	2.486	3.297	12.0	20.9
224431	2005 <i>US</i> ₄₄₅		3 30.1 167°53	0°1/30.3 17			272250	2005 <i>QX</i> ₁₃₆		3 30.1 134°12	0°7/29.4 18		
2 21	12 59.56	- 7 18.6	2.198	2.980	13.6	21.2	2 21	13 2.02	- 3 45.3	2.040	2.833	14.1	21.7
3 2	12 55.44	- 6 46.1	2.109	2.984	10.6	21.0	3 2	12 57.43	- 3 21.6	1.960	2.843	10.9	21.5
3 12	12 49.38	- 6 0.0	2.043	2.987	7.2	20.8	3 12	12 50.73	- 2 47.2	1.903	2.852	7.3	21.3
3 22	12 41.88	- 5 3.5	2.004	2.990	3.3	20.5	3 22	12 42.50	- 2 5.4	1.873	2.861	3.2	21.1
4 1	12 33.69	- 4 1.3	1.994	2.992	0.7	20.3	4 1	12 33.57	- 1 21.4	1.871	2.869	1.3	20.9
4 11	12 25.68	- 2 59.7	2.013	2.994	4.7	20.6	4 11	12 24.90	- 0 40.8	1.899	2.877	5.3	21.2
4 21	12 18.65	- 2 4.2	2.060	2.996	8.4	20.8	4 21	12 17.36	- 0 8.4	1.953	2.885	9.1	21.5
5 1	12 13.24	- 1 19.5	2.132	2.996	11.7	21.0	5 1	12 11.59	+ 0 12.2	2.032	2.892	12.5	21.7
275402	2011 <i>BR</i> ₄₀		3 30.1 100°06	9°3/17.7 18			72015	2000 <i>XC</i> ₁₃		3 30.1 8°25	5°0/ 4.2 18		
2 21	13 2.19	+20 57.5	2.105	2.920	13.0	21.2	2 21	12 53.42	-19 55.5	1.573	2.336	18.9	18.3
3 2	12 57.42	+23 21.2	2.075	2.949	10.9	21.1	3 2	12 51.62	-19 51.3	1.490	2.338	15.8	18.1
3 12	12 50.59	+25 35.7	2.072	2.977	9.5	21.1	3 12	12 47.30	-19 18.9	1.424	2.340	12.1	17.8
3 22	12 42.36	+27 30.9	2.096	3.004	9.4	21.1	3 22	12 41.07	-18 18.3	1.380	2.342	8.2	17.6
4 1	12 33.60	+28 58.8	2.148	3.031	10.5	21.2	4 1	12 33.89	-16 52.9	1.360	2.346	5.3	17.5
4 11	12 25.28	+29 55.3	2.223	3.057	12.2	21.4	4 11	12 26.93	-15 11.3	1.367	2.351	6.1	17.5
4 21	12 18.21	+30 20.6	2.320	3.082	14.1	21.6	4 21	12 21.28	-13 24.1	1.398	2.356	9.6	17.7
5 1	12 12.98	+30 17.7	2.436	3.106	15.7	21.8	5 1	12 17.74	-11 42.5	1.453	2.362	13.5	18.0
105393	2000 <i>QT</i> ₁₄₁		3 30.1 182°79	0°3/29.8 18			173826	2001 <i>SX</i> ₃₄₈		3 30.1 142°84	5°8/21.2 17		
2 21	13 2.82	- 2 59.7	2.728	3.506	11.3	19.9	2 21	12 58.63	+17 21.3	3.015	3.823	9.6	21.0
3 2	12 57.55	- 3 3.3	2.633	3.506	8.8	19.7	3 2	12 54.11	+18 34.5	2.957	3.835	7.8	20.9
3 12	12 50.59	- 3 0.4	2.562	3.506	5.9	19.5	3 12	12 48.16	+19 43.9	2.925	3.847	6.3	20.8
3 22	12 42.38	- 2 52.8	2.519	3.506	2.7	19.3	3 22	12 41.23	+20 44.4	2.921	3.858	5.8	20.8
4 1	12 33.57	- 2 43.3	2.507	3.505	0.8	19.2	4 1	12 33.87	+21 31.0	2.946	3.868	6.5	20.9
4 11	12 24.89	- 2 34.8	2.525	3.504	4.1	19.4	4 11	12 26.74	+22 0.5	2.999	3.879	8.1	21.0
4 21	12 17.02	- 2 30.2	2.573	3.503	7.3	19.6	4 21	12 20.39	+22 12.0	3.076	3.888	9.8	21.1
5 1	12 10.52	- 2 31.8	2.648	3.502	10.1	19.8	5 1	12 15.28	+22 5.5	3.176	3.897	11.5	21.3
32342	2000 <i>QE</i> ₉₀		3 30.1 10°75	4°3/ 2.1 18			300209	2006 <i>WT</i> ₁₅₁		3 30.1 255°89	5°1/23.9 17		
2 21	12 59.15	-13 27.0	1.226	2.029	21.1	17.5	2 21	13 1.18	+12 46.0	2.682	3.491	10.7	20.9
3 2	12 56.74	-13 59.4	1.152	2.030	17.3	17.3	3 2	12 56.44	+13 32.6	2.586	3.472	8.5	20.8
3 12	12 51.11	-14 8.2	1.095	2.032	12.7	17.0	3 12	12 49.95	+14 18.7	2.514	3.452	6.4	20.6
3 22	12 42.93	-13 52.7	1.059	2.035	7.8	16.7	3 22	12 42.14	+14 59.0	2.471	3.432	5.2	20.5
4 1	12 33.42	-13 15.5	1.046	2.038	4.4	16.5	4 1	12 33.65	+15 28.4	2.456	3.412	5.8	20.5
4 11	12 24.19	-12 24.3	1.056	2.043	6.8	16.7	4 11	12 25.23	+15 42.9	2.470	3.391	7.8	20.6
4 21	12 16.67	-11 28.7	1.090	2.048	11.6	17.0	4 21	12 17.61	+15 40.3	2.510	3.370	10.3	20.7
5 1	12 11.94	-10 38.8	1.145	2.055	16.2	17.2	5 1	12 11.37	+15 20.4	2.573	3.348	12.6	20.8
287467	2003 <i>AL</i> ₃₅		3 30.1 54°15	1°9/28.5 18			386150	2007 <i>TF</i> ₂₅₆		3 30.1 116°62	0°6/29.5 17		
2 21	13 0.47	- 3 31.2	1.413	2.234	17.8	20.1	2 21	12 58.06	- 4 39.8	2.460	3.248	12.1	22.2
3 2	12 56.76	- 2 33.7	1.365	2.264	13.6	19.9	3 2	12 53.98	- 4 6.1	2.380	3.260	9.4	22.1
3 12	12 50.44	- 1 21.4	1.338	2.294	8.9	19.7	3 12	12 48.24	- 3 22.4	2.325	3.273	6.2	21.9
3 22	12 42.34	- 0 1.6	1.335	2.324	3.9	19.5	3 22	12 41.31	- 2 32.0	2.297	3.285	2.8	21.7
4 1	12 33.62	+ 1 16.3	1.358	2.354	2.6	19.5	4 1	12 33.85	- 1 39.4	2.299	3.297	1.1	21.6
4 11	12 25.52	+ 2 23.2	1.408	2.384	7.1	19.9	4 11	12 26.62	- 0 49.6	2.330	3.308	4.5	21.8
4 21	12 19.04	+ 3 12.8	1.483	2.414	11.4	20.2	4 21	12 20.28	- 0 7.0	2.389	3.319	7.7	22.0
5 1	12 14.83	+ 3 41.9	1.579	2.445	15.1	20.5	5 1	12 15.34	+ 0 25.1	2.474	3.330	10.6	22.3
368707	2005 <i>SQ</i> ₂₆₅												

EPHEMERIDES

3 30.1

3 30.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
30757	1981 <i>EB</i> ₄₀		3 30.1 65°72	0°1/29.9	18		460862	2014 <i>WX</i> ₁₂₆		3 30.1 282°63	0°3/29.9	17	
2 21	12 57.90	- 5 40.9	2.172	2.965	13.4	19.6	2 21	13 1.55	- 5 6.9	1.637	2.442	16.5	21.7
3 2	12 54.08	- 5 17.6	2.097	2.979	10.4	19.4	3 2	12 58.05	- 4 55.0	1.532	2.420	13.1	21.4
3 12	12 48.41	- 4 42.8	2.045	2.993	6.9	19.3	3 12	12 51.80	- 4 28.4	1.447	2.397	9.0	21.1
3 22	12 41.41	- 3 59.8	2.020	3.007	3.1	19.0	3 22	12 43.28	- 3 49.6	1.387	2.374	4.1	20.8
4 1	12 33.84	- 3 13.2	2.023	3.021	0.8	18.9	4 1	12 33.40	- 3 3.8	1.353	2.351	1.1	20.5
4 11	12 26.53	- 2 28.3	2.054	3.036	4.7	19.2	4 11	12 23.43	- 2 18.2	1.346	2.328	6.4	20.8
4 21	12 20.22	- 1 49.9	2.113	3.050	8.2	19.4	4 21	12 14.62	- 1 39.8	1.364	2.305	11.4	21.0
5 1	12 15.48	- 1 21.7	2.197	3.065	11.3	19.6	5 1	12 8.01	- 1 14.7	1.405	2.281	16.0	21.2
255729	2006 <i>QU</i> ₁₃₂		3 30.1 230°09	1°2/29.0	17		122510	2000 <i>QT</i> ₁₉₉		3 30.1 272°16	1°5/28.9	17	
2 21	13 2.03	- 3 6.5	1.978	2.775	14.3	21.4	2 21	13 1.32	- 3 13.8	1.612	2.424	16.4	20.3
3 2	12 57.74	- 2 35.3	1.879	2.764	11.2	21.2	3 2	12 57.87	- 2 39.8	1.509	2.402	13.0	20.1
3 12	12 51.16	- 1 52.1	1.802	2.753	7.5	20.9	3 12	12 51.68	- 1 50.4	1.427	2.380	8.7	19.7
3 22	12 42.80	- 1 0.6	1.753	2.741	3.4	20.6	3 22	12 43.22	- 0 49.6	1.369	2.358	3.9	19.4
4 1	12 33.50	- 0 6.5	1.731	2.728	1.8	20.5	4 1	12 33.42	+ 0 15.6	1.338	2.335	2.2	19.2
4 11	12 24.26	+ 0 43.6	1.738	2.715	5.9	20.7	4 11	12 23.56	+ 1 16.5	1.335	2.312	7.2	19.5
4 21	12 16.08	+ 1 24.2	1.773	2.701	10.1	21.0	4 21	12 14.89	+ 2 5.2	1.356	2.289	12.2	19.7
5 1	12 9.73	+ 1 50.8	1.831	2.687	13.8	21.1	5 1	12 8.44	+ 2 36.0	1.399	2.265	16.6	19.9
129999	1999 <i>VM</i> ₃₃		3 30.1 127°74	0°5/30.6	18		242179	2003 <i>HB</i> ₄₆		3 30.1 257°12	4°7/26.3	18	
2 21	13 2.41	- 8 9.9	1.979	2.760	14.9	21.2	2 21	13 2.88	+ 4 47.1	1.593	2.418	15.9	20.4
3 2	12 57.78	- 7 42.1	1.902	2.775	11.7	21.0	3 2	12 58.96	+ 5 40.1	1.505	2.406	12.4	20.1
3 12	12 50.97	- 6 59.4	1.847	2.790	8.0	20.8	3 12	12 52.27	+ 6 41.2	1.439	2.394	8.5	19.9
3 22	12 42.62	- 6 5.0	1.818	2.804	3.8	20.6	3 22	12 43.42	+ 7 43.0	1.398	2.381	5.2	19.6
4 1	12 33.57	- 5 4.1	1.818	2.817	0.8	20.4	4 1	12 33.40	+ 8 36.8	1.384	2.367	5.6	19.6
4 11	12 24.84	+ 4 3.3	1.847	2.830	4.9	20.7	4 11	12 23.51	+ 9 14.3	1.396	2.354	9.3	19.8
4 21	12 17.29	- 3 8.7	1.904	2.842	8.9	21.0	4 21	12 14.95	+ 9 30.5	1.432	2.340	13.5	20.0
5 1	12 11.59	- 2 25.3	1.985	2.854	12.3	21.2	5 1	12 8.68	+ 9 23.4	1.489	2.326	17.3	20.2
17998	1999 <i>JM</i> ₈₀		3 30.1 319°70	2°7/27.1	18		338933	2004 <i>EY</i> ₄₆		3 30.1 63°89	0°8/30.9	17	
2 21	12 54.45	- 0 10.9	2.025	2.843	13.3	18.0	2 21	13 1.42	- 6 50.6	2.110	2.893	14.0	20.6
3 2	12 51.73	+ 0 53.2	1.935	2.834	10.2	17.8	3 2	12 56.94	- 6 57.8	2.028	2.902	11.1	20.4
3 12	12 47.05	+ 2 8.5	1.869	2.825	6.7	17.5	3 12	12 50.41	- 6 53.9	1.970	2.912	7.6	20.2
3 22	12 40.88	+ 3 29.4	1.829	2.816	3.4	17.3	3 22	12 42.38	- 6 40.7	1.937	2.921	3.7	20.0
4 1	12 33.97	+ 4 48.5	1.817	2.808	3.4	17.3	4 1	12 33.66	- 6 21.4	1.933	2.931	0.9	19.8
4 11	12 27.19	+ 5 58.6	1.834	2.799	6.8	17.5	4 11	12 25.18	- 6 0.2	1.957	2.941	4.6	20.1
4 21	12 21.34	+ 6 53.7	1.876	2.792	10.4	17.7	4 21	12 17.76	- 5 41.5	2.010	2.951	8.3	20.3
5 1	12 17.10	+ 7 30.2	1.941	2.784	13.6	17.8	5 1	12 12.06	- 5 28.9	2.087	2.961	11.5	20.6
204335	2004 <i>RM</i> ₂₃₄		3 30.1 128°05	2°6/1.4	18		472030	2013 <i>YQ</i> ₁₃		3 30.1 159°11	4°7/24.7	17	
2 21	13 4.50	-12 36.9	1.719	2.488	17.3	21.4	2 21	12 58.43	+ 7 46.4	2.240	3.059	12.1	21.5
3 2	12 59.85	-12 38.1	1.640	2.501	13.9	21.2	3 2	12 54.50	+ 8 53.7	2.165	3.062	9.4	21.3
3 12	12 52.61	-12 20.2	1.582	2.513	10.0	20.9	3 12	12 48.71	+10 4.3	2.116	3.065	6.6	21.2
3 22	12 43.45	-11 44.3	1.548	2.525	5.7	20.7	3 22	12 41.59	+11 11.8	2.093	3.067	4.8	21.0
4 1	12 33.39	-10 54.3	1.541	2.536	2.6	20.5	4 1	12 33.85	+12 9.6	2.099	3.069	5.4	21.1
4 11	12 23.65	- 9 56.8	1.561	2.546	5.3	20.7	4 11	12 26.33	+12 52.3	2.133	3.072	7.9	21.2
4 21	12 15.30	- 8 59.5	1.609	2.556	9.5	21.0	4 21	12 19.77	+13 16.8	2.193	3.073	10.7	21.4
5 1	12 9.16	- 8 9.3	1.681	2.565	13.3	21.2	5 1	12 14.77	+13 21.9	2.275	3.075	13.3	21.6
341267	2007 <i>RR</i> ₂₅₄		3 30.1 193°89	0°4/30.6	17		291359	2006 <i>BB</i> ₂₆₀		3 30.1 139°04	2°8/1.3	18	
2 21	12 56.28	- 8 45.8	2.164	2.948	13.7	21.3	2 21	13 6.05	-11 59.0	1.711	2.480	17.4	21.5
3 2	12 52.99	- 8 5.1	2.072	2.948	10.8	21.1	3 2	13 1.13	-12 14.8	1.629	2.490	14.0	21.2
3 12	12 47.80	- 7 8.9	2.004	2.947	7.3	20.9	3 12	12 53.54	-12 12.9	1.567	2.498	10.1	21.0
3 22	12 41.20	- 6 0.4	1.961	2.947	3.5	20.6	3 22	12 43.92	-11 53.9	1.530	2.507	5.8	20.8
4 1	12 33.92	- 4 44.8	1.947	2.946	0.7	20.4	4 1	12 33.30	-11 20.6	1.520	2.514	2.8	20.6
4 11	12 26.79	- 3 28.9	1.963	2.946	4.6	20.7	4 11	12 22.96	-10 38.9	1.537	2.521	5.5	20.8
4 21	12 20.59	- 2 19.2	2.005	2.945	8.4	20.9	4 21	12 14.02	- 9 55.6	1.582	2.528	9.7	21.0
5 1	12 15.96	- 1 20.9	2.073	2.944	11.8	21.1	5 1	12 7.35	- 9 17.3	1.650	2.534	13.6	21.3
313636	2003 <i>SJ</i> ₃₃		3 30.1 191°81	0°6/30.8	17		297845	2002 <i>CC</i> ₅		3 30.1 88°46	3°5/1.9	18	
2 21	13 0.60	- 9 24.8	1.942	2.722	15.2	22.0	2 21	13 7.19	-13 48.2	1.587	2.352	18.6	21.5
3 2	12 56.61	- 8 48.5	1.849	2.721	12.0	21.7	3 2	13 1.97	-14 3.8	1.523	2.379	15.1	21.3
3 12	12 50.37	- 7 54.6	1.778	2.720	8.3	21.5	3 12	12 53.99	-13 58.8	1.478	2.405	10.9	21.1
3 22	12 42.43	- 6 46.0	1.732	2.717	4.0	21.2	3 22	12 44.05	-13 33.9	1.457	2.430	6.5	20.9
4 1	12 33.63	- 5 28.4	1.715	2.714	0.9	21.0	4 1	12 33.30	-12 52.7	1.463	2.455	3.5	20.8
4 11	12 24.99	- 4 9.3	1.727	2.711	5.1	21.3	4 11	12 23.07	-12 1.9	1.496	2.480	5.7	21.0
4 21	12 17.45	- 2 56.1	1.767	2.706	9.3	21.5	4 21	12 14.48	-11 9.3	1.556	2.504	9.7	21.3
5 1	12 11.77	- 1 55.1	1.831	2.702	13.1	21.7	5 1	12 8.32	-10 22.4	1.639	2.527	13.4	21.6
40910	1999 <i>TS</i> ₁₅₂		3 30.1 241°33	2°0/28.2	17		139857	2001 <i>RP</i> ₆₁		3 30.1 14°49	1°0/31.0	17	
2 21	13 1.85	- 1 18.8	1.969	2.772	14.2	19.9	2 21	13 0.38	- 7 17.7	2.077	2.862	14.2	19.7
3 2	12 57.66	- 0 36.0	1.867	2.756	11.1	19.6	3 2	12 56.26	- 7 24.3	1.988	2.863	11.2	19.5
3 12	12 51.16	+ 0 18.4	1.788	2.740	7.4	19.4	3 12	12 50.04	- 7 19.2	1.922	2.864	7.7	19.3
3 22	12 42.84	+ 1 19.9	1.735	2.723	3.5	19.1	3 22	12 42.26	- 7 4.2	1.881	2.865	3.9	19.0
4 1	12 33.52	+ 2 22.3	1.711	2.706	2.7	19.0	4 1	12 33.69	- 6 42.3	1.868	2.866	1.1	18.8
4 11	12 24.24	+ 3 18.3	1.716	2.687	6.6	19.2	4 11	12 25.29	- 6 18.0	1.884	2.868	4.6	19.1
4 21	12 15.97	+ 4 1.9	1.747	2.668	10.7	19.4	4 21	12 17.92	- 5 55.9	1.927	2.870	8.5	19.3
5 1	12 9.55	+ 4 29.2	1.802	2.649	14.4	19.6	5 1	12 12.27	- 5 40.1	1.994	2.872	11.9	19.5
467265	2016 <i>EC</i> ₁₈₂		3 30.1 231°89	4°5/26.4	17		513029	2017 <i>VW</i> ₃		3 30.1 181°68			

EPHEMERIDES

3 30.1

3 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
22144	Linmichaels		3 30.1 179°42	3°6/26.8	18		427322	2014 WC ₂₉₅		3 30.2	2°18	10°2/19.5	18
2 21	13 3.03	+ 3 7.8	1.879	2.692	14.4	18.5	2 21	12 58.24	+17 38.3	1.550	2.392	15.5	19.9
3 2	12 58.47	+ 3 59.9	1.799	2.694	11.1	18.3	3 2	12 55.30	+19 35.8	1.494	2.391	12.8	19.7
3 12	12 51.59	+ 4 59.7	1.742	2.694	7.5	18.1	3 12	12 49.73	+21 29.0	1.461	2.391	10.8	19.6
3 22	12 42.98	+ 6 0.9	1.711	2.695	4.2	17.9	3 22	12 42.22	+23 5.5	1.452	2.391	10.3	19.6
4 1	12 33.55	+ 6 56.3	1.709	2.695	4.3	17.9	4 1	12 33.82	+24 14.5	1.467	2.392	11.6	19.6
4 11	12 24.37	+ 7 39.1	1.734	2.694	7.6	18.1	4 11	12 25.79	+24 49.2	1.505	2.392	14.1	19.8
4 21	12 16.38	+ 8 5.0	1.786	2.693	11.3	18.3	4 21	12 19.20	+24 48.6	1.563	2.394	16.8	20.0
5 1	12 10.35	+ 8 11.9	1.860	2.691	14.6	18.5	5 1	12 14.83	+24 15.3	1.638	2.395	19.3	20.1
55151	2001 QE ₂₁₄		3 30.1 39°54	0°1/30.2	18		385916	2006 TC ₃₈		3 30.2 97°51	0°7/29.4	17	
2 21	12 58.50	- 7 3.9	1.636	2.441	16.5	19.1	2 21	12 57.66	- 3 40.9	2.357	3.152	12.4	21.5
3 2	12 55.31	- 6 35.4	1.557	2.444	13.0	18.9	3 2	12 53.88	- 3 17.3	2.269	3.153	9.6	21.3
3 12	12 49.66	- 5 49.9	1.498	2.448	8.8	18.6	3 12	12 48.32	- 2 44.0	2.204	3.154	6.4	21.1
3 22	12 42.16	- 4 51.1	1.464	2.452	4.1	18.3	3 22	12 41.47	- 2 4.3	2.167	3.155	2.9	20.9
4 1	12 33.77	- 3 45.5	1.457	2.456	0.9	18.1	4 1	12 33.99	- 1 22.4	2.158	3.156	1.2	20.7
4 11	12 25.63	- 2 41.1	1.477	2.460	5.8	18.5	4 11	12 26.67	- 0 43.3	2.178	3.157	4.7	21.0
4 21	12 18.78	- 1 45.3	1.522	2.464	10.3	18.7	4 21	12 20.22	- 0 11.0	2.226	3.158	8.1	21.2
5 1	12 14.01	- 1 3.9	1.590	2.469	14.3	19.0	5 1	12 15.22	+ 0 11.0	2.298	3.158	11.2	21.4
389982	2012 TL ₂₅₅		3 30.1 83°78	0°1/30.1	17		411655	2011 WW ₄		3 30.2 265°62	4°1/2.2	17	
2 21	13 5.86	- 3 6.2	2.325	3.105	13.0	20.7	2 21	13 7.14	-15 26.4	1.926	2.669	16.6	23.0
3 2	13 0.09	- 3 21.9	2.247	3.120	10.1	20.5	3 2	13 2.42	-15 44.0	1.794	2.635	13.9	22.8
3 12	12 52.37	- 3 30.5	2.192	3.136	6.8	20.3	3 12	12 54.86	-15 43.4	1.682	2.599	10.5	22.5
3 22	12 43.26	- 3 33.8	2.165	3.151	3.1	20.1	3 22	12 44.84	-15 22.5	1.595	2.563	6.8	22.2
4 1	12 33.54	- 3 34.5	2.167	3.166	0.7	19.9	4 1	12 33.17	-14 41.8	1.535	2.525	4.1	21.9
4 11	12 24.11	- 3 35.5	2.201	3.181	4.5	20.2	4 11	12 21.06	-13 45.1	1.504	2.485	6.0	21.9
4 21	12 15.73	- 3 39.8	2.263	3.196	7.9	20.5	4 21	12 9.82	-12 39.5	1.500	2.444	10.3	22.1
5 1	12 9.04	- 3 49.7	2.351	3.211	11.0	20.7	5 1	12 0.64	-11 33.7	1.522	2.402	14.7	22.2
245926	2006 RU ₁₈		3 30.1 125°62	2°3/2.6	18		22419	1995 WP ₅		3 30.2 62°96	3°2/27.3	18	
2 21	12 56.87	-16 17.7	3.020	3.748	11.4	21.2	2 21	13 0.70	+ 2 24.8	1.782	2.601	14.8	18.1
3 2	12 52.82	-15 51.7	2.932	3.765	9.3	21.0	3 2	12 56.62	+ 3 6.2	1.718	2.616	11.3	17.9
3 12	12 47.37	-15 11.3	2.868	3.781	6.8	20.9	3 12	12 50.30	+ 3 54.7	1.676	2.631	7.5	17.7
3 22	12 40.94	-14 18.0	2.830	3.797	4.2	20.7	3 22	12 42.39	+ 4 44.2	1.661	2.647	4.0	17.5
4 1	12 34.08	-13 14.9	2.822	3.812	2.3	20.6	4 1	12 33.82	+ 5 28.2	1.673	2.662	3.8	17.5
4 11	12 27.41	-12 6.1	2.844	3.827	3.4	20.7	4 11	12 25.63	+ 6 0.6	1.712	2.678	7.2	17.7
4 21	12 21.47	-10 56.5	2.896	3.841	5.9	20.9	4 21	12 18.72	+ 6 17.6	1.777	2.694	10.8	18.0
5 1	12 16.71	- 9 50.6	2.976	3.855	8.4	21.1	5 1	12 13.76	+ 6 17.6	1.864	2.709	14.0	18.2
8770	Totanus		3 30.1 38°66	1°0/29.1	18		384060	2008 UB ₂₈₉		3 30.2 133°64	2°9/27.3	17	
2 21	12 57.48	- 3 4.8	2.009	2.814	13.9	17.4	2 21	13 0.42	+ 2 44.4	2.127	2.937	13.0	21.9
3 2	12 53.98	- 2 37.3	1.932	2.822	10.7	17.2	3 2	12 56.16	+ 3 21.8	2.048	2.941	10.0	21.7
3 12	12 48.48	- 1 59.2	1.879	2.831	7.1	17.0	3 12	12 49.91	+ 4 5.4	1.993	2.946	6.7	21.5
3 22	12 41.54	- 1 14.5	1.851	2.839	3.1	16.7	3 22	12 42.22	+ 4 50.1	1.965	2.950	3.6	21.4
4 1	12 33.95	- 0 28.4	1.851	2.849	1.6	16.6	4 1	12 33.86	+ 5 30.5	1.965	2.954	3.5	21.4
4 11	12 26.60	+ 0 13.2	1.880	2.858	5.4	16.9	4 11	12 25.74	+ 6 1.2	1.994	2.957	6.5	21.5
4 21	12 20.31	+ 0 45.7	1.935	2.868	9.1	17.1	4 21	12 18.66	+ 6 18.8	2.049	2.961	9.8	21.8
5 1	12 15.69	+ 1 5.6	2.014	2.877	12.4	17.4	5 1	12 13.24	+ 6 21.3	2.128	2.964	12.8	22.0
372931	2011 BE ₃₂		3 30.1 72°14	0°4/30.5	17		473713	2015 YF ₁₈		3 30.2 178°87	0°7/29.5	18	
2 21	12 59.65	- 7 16.2	1.790	2.585	15.7	21.9	2 21	13 3.72	- 5 6.1	1.880	2.671	15.2	22.7
3 2	12 56.00	- 6 58.1	1.708	2.590	12.4	21.7	3 2	12 59.08	- 4 28.5	1.793	2.674	11.9	22.5
3 12	12 50.03	- 6 24.7	1.647	2.594	8.4	21.4	3 12	12 52.08	- 3 36.7	1.728	2.675	7.9	22.3
3 22	12 42.32	- 5 39.2	1.612	2.598	4.0	21.2	3 22	12 43.29	- 2 34.7	1.689	2.676	3.6	22.0
4 1	12 33.77	- 4 46.8	1.604	2.602	0.8	20.9	4 1	12 33.62	- 1 28.6	1.678	2.676	1.4	21.9
4 11	12 25.46	- 3 54.2	1.623	2.607	5.3	21.3	4 11	12 24.16	- 0 25.8	1.697	2.675	5.8	22.1
4 21	12 18.34	- 3 7.8	1.669	2.611	9.6	21.5	4 21	12 15.89	+ 0 27.3	1.742	2.673	10.1	22.4
5 1	12 13.18	- 2 32.8	1.738	2.616	13.3	21.8	5 1	12 9.59	+ 1 5.9	1.812	2.671	13.8	22.6
210755	2000 WE ₁₅		3 30.1 150°67	2°5/27.6	18		258465	2001 YX ₁₂₆		3 30.2 81°30	3°0/1.9	18	
2 21	13 2.80	- 0 14.7	2.050	2.851	13.8	21.6	2 21	13 2.44	-13 23.7	1.839	2.603	16.5	20.8
3 2	12 58.02	+ 0 43.0	1.973	2.862	10.6	21.4	3 2	12 58.08	-13 35.3	1.764	2.620	13.3	20.6
3 12	12 51.14	+ 1 50.5	1.921	2.872	7.0	21.2	3 12	12 51.36	-13 29.0	1.709	2.637	9.7	20.4
3 22	12 42.75	+ 3 2.1	1.895	2.882	3.4	21.0	3 22	12 42.93	-13 5.7	1.679	2.653	5.8	20.2
4 1	12 33.68	+ 4 11.0	1.899	2.890	3.1	21.0	4 1	12 33.71	-12 28.4	1.677	2.669	3.1	20.1
4 11	12 24.90	+ 5 10.5	1.932	2.898	6.5	21.2	4 11	12 24.82	-11 42.7	1.701	2.686	5.1	20.2
4 21	12 17.25	+ 5 55.7	1.993	2.905	10.0	21.5	4 21	12 17.22	-10 55.2	1.753	2.702	8.8	20.5
5 1	12 11.39	+ 6 23.7	2.077	2.911	13.2	21.7	5 1	12 11.62	-10 12.1	1.830	2.718	12.3	20.7
185612	2008 CT ₄₉		3 30.2 23°63	2°0/1.3	18		145033	2005 ET ₂₇₅		3 30.2 289°31	0°4/30.6	17	
2 21	12 58.84	-11 10.3	2.356	3.121	13.3	20.0	2 21	12 55.66	-10 35.4	1.596	2.395	17.1	20.2
3 2	12 54.86	-11 18.0	2.263	3.122	10.7	19.8	3 2	12 53.48	- 9 39.1	1.492	2.375	13.7	19.9
3 12	12 49.03	-11 12.8	2.192	3.123	7.6	19.6	3 12	12 48.73	- 8 17.1	1.408	2.355	9.5	19.6
3 22	12 41.81	-10 55.6	2.146	3.123	4.3	19.4	3 22	12 41.91	- 6 32.5	1.349	2.335	4.6	19.3
4 1	12 33.90	-10 29.0	2.129	3.124	2.0	19.3	4 1	12 33.91	- 4 32.8	1.317	2.316	0.9	19.0
4 11	12 26.11	- 9 56.9	2.141	3.126	4.2	19.4	4 11	12 25.91	- 2 29.5	1.311	2.296	6.2	19.3
4 21	12 19.21	- 9 23.8	2.181	3.127	7.5	19.6	4 21	12 19.05	- 0 34.4	1.332	2.276	11.4	19.5
5 1	12 13.82	- 8 54.3	2.246	3.128	10.6	19.8	5 1	12 14.31	+ 1 2.2	1.376	2.256	16.0	19.7
162549	2000 QT ₂₁₃		3 30.2 109°46	0°6/30.6	18		40538	1999 RV ₁₀₃		3 30.2 276°14	4°2/2.5	18	
2 21	13 5.73	- 7 21.4	1.753	2.538	16.4								

EPHEMERIDES

3 30.2

3 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
160463	2006 <i>BJ</i> ₁₁₈		3 30.2 304°76	4°3/ 2.5 17			473467	2015 <i>XU</i> ₆₂		3 30.2 319°71	4°3/26.8 18		
2 21	12 59.65	-14 57.3	1.808	2.572	16.7	20.3	2 21	12 59.42	+ 1 7.7	1.299	2.137	18.1	20.8
3 2	12 56.51	-15 28.3	1.692	2.545	14.0	20.1	3 2	12 56.73	+ 2 14.2	1.224	2.133	14.0	20.5
3 12	12 50.79	-15 42.0	1.597	2.519	10.6	19.8	3 12	12 51.03	+ 3 35.3	1.170	2.130	9.4	20.2
3 22	12 42.90	-15 36.7	1.524	2.492	6.9	19.5	3 22	12 42.98	+ 5 2.1	1.139	2.126	5.1	19.9
4 1	12 33.67	-15 13.2	1.477	2.466	4.4	19.3	4 1	12 33.75	+ 6 23.6	1.134	2.123	5.2	19.9
4 11	12 24.23	-14 35.1	1.457	2.440	6.0	19.3	4 11	12 24.80	+ 7 28.4	1.153	2.120	9.6	20.2
4 21	12 15.78	-13 48.7	1.463	2.414	9.9	19.5	4 21	12 17.42	+ 8 9.2	1.194	2.117	14.4	20.4
5 1	12 9.35	-13 1.7	1.492	2.388	14.0	19.7	5 1	12 12.60	+ 8 22.8	1.256	2.114	18.6	20.7
46315	2001 <i>QR</i> ₃₀		3 30.2 165°91	1°2/28.8 18			505303	2012 <i>XD</i> ₂₃		3 30.2 179°98	4°1/24.9 17		
2 21	13 0.39	- 3 11.6	2.286	3.078	12.8	19.4	2 21	13 0.18	+ 9 28.1	2.791	3.597	10.4	22.7
3 2	12 56.02	- 2 28.1	2.200	3.083	9.9	19.2	3 2	12 55.51	+10 13.7	2.710	3.599	8.1	22.5
3 12	12 49.78	- 1 34.0	2.138	3.088	6.5	19.0	3 12	12 49.26	+11 0.3	2.655	3.599	5.8	22.4
3 22	12 42.17	- 0 33.3	2.104	3.091	2.9	18.8	3 22	12 41.90	+11 43.1	2.629	3.600	4.2	22.3
4 1	12 33.92	+ 0 28.5	2.099	3.095	1.7	18.7	4 1	12 34.02	+12 17.5	2.632	3.599	4.6	22.3
4 11	12 25.86	+ 1 25.7	2.123	3.097	5.2	18.9	4 11	12 26.32	+12 39.8	2.664	3.599	6.7	22.4
4 21	12 18.74	+ 2 13.2	2.176	3.100	8.7	19.1	4 21	12 19.41	+12 47.9	2.723	3.598	9.1	22.6
5 1	12 13.19	+ 2 47.6	2.253	3.101	11.8	19.3	5 1	12 13.80	+12 41.0	2.806	3.596	11.3	22.7
17316	1198 <i>T</i> ₋₁		3 30.2 33°05	1°9/ 1.0 18			499156	2009 <i>SW</i> ₃₄		3 30.2 174°53	0°9/31.1 17		
2 21	12 58.02	-10 47.0	2.030	2.807	14.7	18.4	2 21	13 0.63	- 8 59.9	2.254	3.026	13.6	22.9
3 2	12 54.49	-10 47.1	1.946	2.813	11.8	18.2	3 2	12 56.32	- 8 40.2	2.161	3.029	10.8	22.7
3 12	12 48.91	-10 32.2	1.884	2.820	8.3	18.0	3 12	12 50.06	- 8 6.7	2.092	3.031	7.4	22.4
3 22	12 41.82	-10 3.8	1.847	2.827	4.6	17.8	3 22	12 42.34	- 7 21.8	2.049	3.032	3.7	22.2
4 1	12 34.00	- 9 25.3	1.837	2.834	1.9	17.6	4 1	12 33.91	- 6 29.4	2.035	3.033	0.9	22.0
4 11	12 26.37	- 8 42.0	1.855	2.841	4.5	17.8	4 11	12 25.64	- 5 34.9	2.050	3.033	4.4	22.3
4 21	12 19.79	- 7 59.5	1.901	2.849	8.2	18.0	4 21	12 18.33	- 4 43.8	2.093	3.033	8.1	22.5
5 1	12 14.92	- 7 23.0	1.971	2.856	11.6	18.3	5 1	12 12.62	- 4 1.1	2.162	3.033	11.4	22.7
341485	2007 <i>TX</i> ₃₆₅		3 30.2 211°30	1°2/28.9 17			61034	2000 <i>KX</i> ₅₆		3 30.2 285°93	0°5/29.6 18		
2 21	12 57.80	- 3 2.2	2.201	3.000	13.0	21.6	2 21	12 56.90	- 5 7.5	2.167	2.963	13.3	19.2
3 2	12 54.16	- 2 25.9	2.112	2.999	10.1	21.4	3 2	12 53.56	- 4 36.4	2.071	2.955	10.4	19.0
3 12	12 48.61	- 1 39.0	2.047	2.998	6.7	21.1	3 12	12 48.29	- 3 52.9	1.998	2.947	7.0	18.8
3 22	12 41.67	- 0 45.4	2.008	2.996	3.0	20.9	3 22	12 41.56	- 3 0.5	1.951	2.939	3.1	18.5
4 1	12 34.04	+ 0 9.8	1.998	2.994	1.7	20.8	4 1	12 34.08	- 2 4.0	1.933	2.931	1.1	18.3
4 11	12 26.56	+ 1 0.7	2.017	2.993	5.3	21.0	4 11	12 26.71	- 1 9.3	1.943	2.923	5.0	18.6
4 21	12 20.01	+ 1 42.4	2.063	2.991	8.9	21.3	4 21	12 20.23	- 0 21.9	1.980	2.915	8.8	18.8
5 1	12 15.02	+ 2 11.2	2.133	2.989	12.1	21.5	5 1	12 15.31	+ 0 13.7	2.042	2.907	12.2	19.0
495896	2005 <i>LJ</i> ₃₆		3 30.2 225°80	0°3/29.9 17			283504	2001 <i>SF</i> ₃₀₉		3 30.2 293°02	2°2/ 1.2 18		
2 21	13 1.08	- 5 57.3	2.101	2.887	14.0	22.3	2 21	13 0.94	-10 44.4	2.223	2.988	13.9	20.6
3 2	12 56.92	- 5 26.1	1.999	2.877	11.0	22.1	3 2	12 56.68	-11 0.9	2.127	2.986	11.2	20.4
3 12	12 50.62	- 4 41.2	1.920	2.866	7.4	21.8	3 12	12 50.38	-11 4.6	2.053	2.984	8.0	20.2
3 22	12 42.66	- 3 45.7	1.867	2.854	3.4	21.6	3 22	12 42.53	-10 56.2	2.005	2.982	4.6	20.0
4 1	12 33.81	- 2 44.8	1.843	2.842	1.0	21.3	4 1	12 33.88	-10 37.8	1.985	2.980	2.2	19.8
4 11	12 25.02	- 1 44.6	1.849	2.829	5.2	21.6	4 11	12 25.32	-10 13.3	1.994	2.978	4.4	20.0
4 21	12 17.20	- 0 51.4	1.882	2.815	9.3	21.8	4 21	12 17.72	- 9 47.2	2.030	2.976	7.9	20.2
5 1	12 11.09	- 0 10.2	1.939	2.801	12.9	22.0	5 1	12 11.75	- 9 24.1	2.092	2.974	11.2	20.4
217875	2001 <i>QV</i> ₂₁₉		3 30.2 195°72	5°6/ 5.2 17			274477	2008 <i>ST</i> ₉₅		3 30.2 195°66	1°3/31.7 18		
2 21	13 2.10	-22 52.2	2.349	3.046	15.1	20.6	2 21	12 58.20	-11 26.1	2.471	3.233	12.8	21.2
3 2	12 57.65	-23 15.3	2.245	3.043	12.9	20.4	3 2	12 54.32	-10 56.5	2.371	3.230	10.2	21.0
3 12	12 51.07	-23 19.0	2.160	3.040	10.3	20.2	3 12	12 48.66	-10 11.9	2.294	3.227	7.2	20.8
3 22	12 42.86	-23 1.6	2.100	3.037	7.7	20.1	3 22	12 41.69	- 9 14.4	2.244	3.224	3.8	20.6
4 1	12 33.76	-22 23.6	2.066	3.032	5.8	19.9	4 1	12 34.07	- 8 7.8	2.223	3.220	1.3	20.4
4 11	12 24.73	-21 28.4	2.061	3.028	6.0	19.9	4 11	12 26.56	- 6 57.6	2.232	3.216	4.0	20.5
4 21	12 16.64	-20 21.8	2.083	3.022	8.2	20.1	4 21	12 19.87	- 5 49.5	2.269	3.211	7.4	20.8
5 1	12 10.26	-19 10.9	2.131	3.016	10.9	20.2	5 1	12 14.62	- 4 48.9	2.333	3.206	10.6	20.9
300079	2006 <i>UF</i> ₂₁₅		3 30.2 210°27	1°3/28.8 17			92882	2000 <i>QQ</i> ₂₂₄		3 30.2 130°01	1°0/29.1 18		
2 21	12 59.62	- 0 56.7	2.565	3.358	11.5	22.1	2 21	13 1.39	- 3 2.2	2.324	3.114	12.7	20.8
3 2	12 55.27	- 0 37.7	2.471	3.355	8.9	21.9	3 2	12 56.69	- 2 29.7	2.247	3.128	9.8	20.7
3 12	12 49.22	- 0 11.7	2.402	3.351	5.9	21.7	3 12	12 50.16	- 1 47.8	2.194	3.143	6.5	20.5
3 22	12 41.92	+ 0 18.0	2.360	3.348	2.7	21.5	3 22	12 42.34	- 1 0.2	2.168	3.156	2.9	20.3
4 1	12 33.99	+ 0 47.8	2.348	3.344	1.7	21.4	4 1	12 33.95	- 0 11.8	2.172	3.169	1.5	20.2
4 11	12 26.19	+ 1 13.5	2.366	3.340	4.8	21.6	4 11	12 25.82	+ 0 32.4	2.206	3.182	4.9	20.4
4 21	12 19.20	+ 1 31.8	2.411	3.335	8.0	21.8	4 21	12 18.67	+ 1 8.2	2.268	3.193	8.3	20.7
5 1	12 13.58	+ 1 40.2	2.482	3.331	10.8	22.0	5 1	12 13.09	+ 1 32.4	2.354	3.205	11.3	20.9
40519	1999 <i>RQ</i> ₉₄		3 30.2 186°29	0°5/29.7 17			135250	2001 <i>SY</i> ₃₃		3 30.2 108°04	0°4/29.7 17		
2 21	13 1.22	- 3 49.6	2.082	2.876	13.8	19.8	2 21	12 58.30	- 5 2.4	2.562	3.346	11.8	20.1
3 2	12 56.93	- 3 35.2	1.993	2.876	10.8	19.6	3 2	12 54.14	- 4 30.6	2.486	3.363	9.1	19.9
3 12	12 50.54	- 3 10.3	1.927	2.876	7.2	19.3	3 12	12 48.38	- 3 49.1	2.433	3.380	6.1	19.7
3 22	12 42.58	- 2 38.1	1.888	2.875	3.3	19.1	3 22	12 41.50	- 3 1.1	2.408	3.396	2.7	19.6
4 1	12 33.85	- 2 2.9	1.876	2.875	1.1	18.9	4 1	12 34.14	- 2 10.7	2.413	3.411	0.9	19.4
4 11	12 25.29	- 1 30.0	1.894	2.874	5.2	19.2	4 11	12 27.01	- 1 22.7	2.448	3.427	4.2	19.7
4 21	12 17.76	- 1 3.9	1.939	2.873	9.0	19.4	4 21	12 20.73	- 0 41.2	2.511	3.442	7.4	19.9
5 1	12 11.95	- 0 48.3	2.008	2.872	12.4	19.6	5 1	12 15.82	- 0 9.5	2.600	3.457	10.1	20.1
110858	2001 <i>UR</i> ₇₉		3 30.2 241°00	0°5/29.7 17			470452	2007 <i>YP</i> ₃₈		3 30.2 29°9			

EPHEMERIDES

3 30.2

3 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
231791	2000 <i>DB</i> ₅		3 30.2 313°29	6°3/23.1	17		299898	2006 <i>SB</i> ₃₇₃		3 30.2 222°39	0°2/30.4	17	
2 21	12 55.67	+ 9 12.6	1.855	2.691	13.6	19.5	2 21	12 57.12	- 7 14.5	3.052	3.822	10.4	22.3
3 2	12 52.97	+10 43.5	1.774	2.678	10.7	19.3	3 2	12 53.16	- 6 44.8	2.943	3.811	8.2	22.1
3 12	12 48.08	+12 19.5	1.716	2.666	7.9	19.1	3 12	12 47.75	- 6 4.9	2.858	3.799	5.6	21.9
3 22	12 41.53	+13 51.8	1.685	2.654	6.3	18.9	3 22	12 41.27	- 5 17.1	2.802	3.787	2.6	21.7
4 1	12 34.12	+15 11.2	1.680	2.642	7.4	19.0	4 1	12 34.23	- 4 24.6	2.775	3.774	0.5	21.5
4 11	12 26.86	+16 9.8	1.701	2.630	10.2	19.1	4 11	12 27.25	- 3 31.6	2.780	3.761	3.6	21.7
4 21	12 20.65	+16 43.2	1.746	2.619	13.4	19.3	4 21	12 20.88	- 2 42.1	2.814	3.747	6.6	21.9
5 1	12 16.23	+16 50.3	1.810	2.608	16.3	19.4	5 1	12 15.63	- 1 59.7	2.874	3.733	9.2	22.1
328759	2009 <i>UN</i> ₈₈		3 30.2 210°72	1°3/28.7	18		413178	2002 <i>QS</i> ₁₁₆		3 30.2 166°93	0°9/29.3	15	
2 21	13 0.33	- 2 38.0	2.376	3.167	12.4	21.8	2 21	13 2.47	- 3 58.3	2.141	2.930	13.7	22.8
3 2	12 56.03	- 1 57.5	2.277	3.160	9.6	21.6	3 2	12 57.80	- 3 25.8	2.055	2.936	10.6	22.6
3 12	12 49.85	+ 1 6.9	2.203	3.152	6.4	21.4	3 12	12 51.08	- 2 42.1	1.992	2.940	7.1	22.4
3 22	12 42.27	- 0 9.8	2.156	3.144	2.9	21.2	3 22	12 42.84	- 1 50.7	1.956	2.944	3.2	22.1
4 1	12 33.96	+ 0 48.7	2.139	3.135	1.8	21.1	4 1	12 33.88	- 0 57.0	1.949	2.947	1.4	22.0
4 11	12 25.76	+ 1 43.0	2.152	3.125	5.2	21.3	4 11	12 25.13	+ 0 6.8	1.972	2.949	5.3	22.3
4 21	12 18.41	+ 2 28.1	2.193	3.115	8.7	21.5	4 21	12 17.42	+ 0 34.9	2.022	2.951	9.0	22.5
5 1	12 12.56	+ 3 0.5	2.258	3.104	11.9	21.6	5 1	12 11.42	+ 1 4.1	2.098	2.952	12.3	22.7
466605	2014 <i>UP</i> ₂₀₄		3 30.2 48°89	4°8/26.2	18		422791	2001 <i>WR</i> ₄₂		3 30.2 146°66	1°0/31.5	15	
2 21	13 0.17	+ 4 45.3	1.517	2.350	16.2	20.9	2 21	13 0.89	-10 31.6	2.502	3.261	12.7	23.7
3 2	12 56.63	+ 5 45.2	1.458	2.364	12.5	20.7	3 2	12 56.25	-10 2.5	2.416	3.274	10.1	23.5
3 12	12 50.53	+ 6 51.6	1.422	2.378	8.4	20.5	3 12	12 49.86	- 9 19.6	2.353	3.286	7.0	23.4
3 22	12 42.60	+ 7 56.3	1.409	2.392	5.2	20.4	3 22	12 42.23	- 8 25.3	2.317	3.298	3.6	23.2
4 1	12 33.92	+ 8 50.5	1.424	2.407	5.6	20.4	4 1	12 34.03	- 7 23.6	2.310	3.308	1.1	23.0
4 11	12 25.69	+ 9 27.1	1.464	2.421	9.0	20.7	4 11	12 26.04	- 6 19.8	2.335	3.318	4.0	23.2
4 21	12 18.94	+ 9 42.2	1.527	2.437	12.7	20.9	4 21	12 18.96	- 5 19.1	2.388	3.327	7.3	23.4
5 1	12 14.38	+ 9 35.1	1.612	2.452	16.1	21.2	5 1	12 13.34	- 4 26.3	2.468	3.335	10.2	23.6
214921	2007 <i>UY</i> ₂₅		3 30.2 2°09	3°1/27.9	17		164329	2005 <i>AE</i> ₆₉		3 30.2 153°66	2°0/28.2	18	
2 21	13 0.94	+ 0 48.8	1.377	2.209	17.6	20.8	2 21	13 1.18	- 2 40.4	1.840	2.645	15.0	20.6
3 2	12 57.72	+ 1 21.3	1.303	2.208	13.7	20.6	3 2	12 57.10	- 1 40.7	1.761	2.652	11.6	20.4
3 12	12 51.58	+ 2 4.9	1.250	2.208	9.1	20.3	3 12	12 50.75	- 0 27.7	1.706	2.658	7.6	20.1
3 22	12 43.22	+ 2 53.2	1.220	2.208	4.5	20.0	3 22	12 42.73	+ 0 53.0	1.676	2.664	3.5	19.9
4 1	12 33.76	+ 3 38.1	1.215	2.208	3.8	20.0	4 1	12 33.92	+ 2 13.6	1.675	2.669	2.6	19.8
4 11	12 24.61	+ 4 11.3	1.236	2.209	8.2	20.3	4 11	12 25.38	+ 3 26.0	1.702	2.674	6.6	20.1
4 21	12 17.01	+ 4 27.4	1.280	2.211	12.9	20.5	4 21	12 18.03	+ 4 23.9	1.756	2.678	10.6	20.3
5 1	12 11.88	+ 4 23.3	1.345	2.213	17.1	20.8	5 1	12 12.60	+ 5 3.3	1.833	2.682	14.1	20.6
1637	Swings		3 30.2 292°88	1°6/28.7	18		152603	1995 <i>VF</i> ₂		3 30.2 259°83	1°9/28.6	17	
2 21	13 1.96	+ 0 36.4	2.235	3.035	12.8	15.3	2 21	13 4.82	- 1 53.9	1.743	2.546	15.7	22.0
3 2	12 57.37	+ 0 43.5	2.143	3.030	10.0	15.1	3 2	13 0.56	- 1 18.7	1.631	2.520	12.4	21.7
3 12	12 50.78	+ 0 56.5	2.076	3.026	6.6	14.9	3 12	12 53.55	- 0 29.9	1.542	2.494	8.4	21.4
3 22	12 42.71	+ 1 12.3	2.035	3.022	3.1	14.7	3 22	12 44.25	+ 0 28.3	1.478	2.466	3.9	21.1
4 1	12 33.89	+ 1 26.9	2.023	3.018	2.1	14.6	4 1	12 33.55	+ 1 29.3	1.442	2.438	2.6	20.9
4 11	12 25.21	+ 1 36.2	2.040	3.014	5.5	14.8	4 11	12 22.69	+ 2 24.9	1.434	2.409	7.2	21.1
4 21	12 17.50	+ 1 37.3	2.084	3.010	9.0	15.0	4 21	12 12.91	+ 3 8.1	1.453	2.379	12.1	21.3
5 1	12 11.41	+ 1 27.8	2.154	3.006	12.1	15.2	5 1	12 5.28	+ 3 33.5	1.493	2.348	16.4	21.5
380728	2005 <i>RM</i> ₁₃		3 30.2 213°47	2°5/1.5	18		99637	2002 <i>GY</i> ₁₀₇		3 30.2 192°69	4°1/26.2	18	
2 21	13 5.90	-11 55.7	2.389	3.135	13.6	22.5	2 21	13 1.78	+ 3 33.6	1.870	2.686	14.3	19.7
3 2	13 0.49	-12 14.2	2.280	3.126	11.1	22.3	3 2	12 57.61	+ 4 41.2	1.788	2.685	11.1	19.5
3 12	12 52.95	-12 20.1	2.194	3.117	8.0	22.0	3 12	12 51.14	+ 5 57.1	1.730	2.683	7.5	19.3
3 22	12 43.75	-12 13.6	2.134	3.107	4.7	21.8	3 22	12 42.93	+ 7 14.5	1.698	2.681	4.5	19.1
4 1	12 33.64	-11 56.0	2.103	3.097	2.5	21.6	4 1	12 33.88	+ 8 25.3	1.695	2.678	4.9	19.1
4 11	12 23.54	-11 30.9	2.103	3.085	4.5	21.8	4 11	12 25.04	+ 9 21.7	1.719	2.674	8.1	19.3
4 21	12 14.32	-11 2.7	2.132	3.073	7.9	21.9	4 21	12 17.37	+ 9 59.0	1.769	2.670	11.8	19.5
5 1	12 6.75	-10 36.0	2.187	3.060	11.2	22.1	5 1	12 11.60	+10 14.9	1.841	2.665	15.0	19.7
493761	2015 <i>TO</i> ₃₁₄		3 30.2 113°79	1°7/31.5	18		501181	2013 <i>TQ</i> ₁₀₂		3 30.2 122°92	0°1/30.1	17	
2 21	13 6.87	- 9 28.9	1.477	2.266	18.8	22.3	2 21	13 0.80	- 5 37.7	2.090	2.879	14.0	22.1
3 2	13 2.10	- 9 32.6	1.405	2.280	15.0	22.1	3 2	12 56.55	- 5 19.9	2.007	2.886	10.9	21.9
3 12	12 54.38	- 9 17.7	1.353	2.294	10.4	21.8	3 12	12 50.26	- 4 50.4	1.948	2.894	7.3	21.7
3 22	12 44.45	- 8 46.4	1.324	2.307	5.4	21.6	3 22	12 42.47	- 4 12.0	1.914	2.901	3.4	21.5
4 1	12 33.51	- 8 3.2	1.322	2.320	1.8	21.4	4 1	12 33.99	- 3 29.4	1.909	2.908	0.8	21.3
4 11	12 22.99	- 7 15.5	1.347	2.332	5.9	21.7	4 11	12 25.74	- 2 47.8	1.933	2.915	4.9	21.6
4 21	12 14.11	- 6 31.1	1.397	2.344	10.7	22.0	4 21	12 18.54	- 2 12.4	1.985	2.922	8.7	21.8
5 1	12 7.78	- 5 56.5	1.471	2.355	14.9	22.2	5 1	12 13.04	- 1 47.0	2.061	2.928	12.0	22.0
209393	2004 <i>EE</i> ₆₃		3 30.2 291°55	1°1/31.4	17		43728	1979 <i>MA</i> ₃		3 30.2 100°33	2°3/1.1	18	
2 21	12 57.19	- 9 34.7	2.209	2.987	13.6	20.6	2 21	13 2.06	-11 56.0	1.533	2.319	18.3	19.0
3 2	12 53.79	- 9 20.4	2.111	2.981	10.9	20.4	3 2	12 58.34	-11 50.5	1.456	2.327	14.8	18.8
3 12	12 48.46	- 8 51.9	2.036	2.975	7.6	20.2	3 12	12 51.88	-11 24.0	1.398	2.336	10.5	18.5
3 22	12 41.67	- 8 11.1	1.986	2.969	3.9	19.9	3 22	12 43.34	-10 38.1	1.364	2.344	5.8	18.3
4 1	12 34.12	- 7 21.8	1.964	2.962	1.2	19.7	4 1	12 33.80	- 9 37.8	1.355	2.352	2.3	18.1
4 11	12 26.68	- 6 29.3	1.971	2.956	4.4	19.9	4 11	12 24.57	- 8 31.0	1.374	2.360	5.6	18.3
4 21	12 20.13	- 5 39.1	2.006	2.950	8.1	20.1	4 21	12 16.81	- 7 26.5	1.418	2.368	10.2	18.6
5 1	12 15.13	- 4 56.4	2.065	2.944	11.5	20.3	5 1	12 11.38	- 6 31.8	1.485	2.376	14.4	18.8
204833	2007 <i>PY</i> ₃₄		3 30.2 242°69	0°1/30.1	17		63054	2000 <i>WG</i> ₁₀₀		3 30.2 41°43			

EPHEMERIDES

3 30.2

3 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
23127	2000 AV ₉₇		3 30.2 108°59	3°4/27.4	18		150925	2001 TT ₆₂		3 30.2 78°08	4°7/26.3	18	
2 21	13 4.09	+ 0 36.9	1.494	2.315	17.1	17.6	2 21	13 4.30	+ 6 52.3	1.735	2.556	15.1	19.3
3 2	12 59.74	+ 1 35.2	1.431	2.330	13.1	17.4	3 2	12 59.48	+ 7 35.8	1.676	2.573	11.6	19.1
3 12	12 52.67	+ 2 44.8	1.389	2.344	8.7	17.2	3 12	12 52.27	+ 8 22.2	1.639	2.590	8.0	18.9
3 22	12 43.63	+ 3 58.1	1.372	2.359	4.4	16.9	3 22	12 43.40	+ 9 4.7	1.628	2.608	5.1	18.8
4 1	12 33.76	+ 5 6.1	1.382	2.373	4.1	17.0	4 1	12 33.87	+ 9 36.4	1.645	2.625	5.4	18.8
4 11	12 24.35	+ 6 0.1	1.418	2.386	8.1	17.2	4 11	12 24.82	+ 9 52.2	1.689	2.642	8.4	19.0
4 21	12 16.52	+ 6 34.7	1.480	2.399	12.4	17.5	4 21	12 17.17	+ 9 49.6	1.758	2.659	11.8	19.3
5 1	12 11.04	+ 6 47.6	1.563	2.411	16.1	17.8	5 1	12 11.61	+ 9 28.5	1.849	2.676	14.8	19.5
229537	2005 YU ₄₂		3 30.2 127°51	1°7/28.4	17		63283	2001 DA ₄₆		3 30.2 175°07	1°5/28.2	18	
2 21	12 59.38	- 1 53.8	1.980	2.786	14.0	20.9	2 21	12 56.06	- 0 57.7	2.746	3.544	10.7	20.0
3 2	12 55.57	- 1 11.1	1.900	2.791	10.8	20.7	3 2	12 52.43	- 0 18.6	2.658	3.545	8.3	19.8
3 12	12 49.66	- 0 17.6	1.843	2.795	7.1	20.5	3 12	12 47.30	+ 0 27.7	2.594	3.545	5.4	19.7
3 22	12 42.22	+ 0 42.0	1.812	2.800	3.3	20.2	3 22	12 41.09	+ 1 17.8	2.558	3.546	2.5	19.5
4 1	12 34.07	+ 1 41.4	1.810	2.805	2.3	20.2	4 1	12 34.37	+ 2 7.4	2.552	3.546	1.9	19.4
4 11	12 26.15	+ 2 34.1	1.835	2.809	6.0	20.4	4 11	12 27.78	+ 2 52.1	2.576	3.546	4.7	19.6
4 21	12 19.30	+ 3 14.9	1.888	2.813	9.8	20.7	4 21	12 21.91	+ 3 28.2	2.627	3.546	7.6	19.8
5 1	12 14.20	+ 3 40.5	1.964	2.817	13.1	20.9	5 1	12 17.26	+ 3 53.0	2.704	3.546	10.2	20.0
289336	2005 AM ₈₀		3 30.2 77°72	0°9/29.5	18		462173	2007 TD ₂₇₃		3 30.2 62°70	6°5/25.7	18	
2 21	13 3.41	- 4 6.2	1.492	2.302	17.6	21.2	2 21	13 6.18	+ 9 52.0	1.431	2.263	17.1	21.0
3 2	12 59.22	- 3 40.3	1.428	2.319	13.7	21.0	3 2	13 1.48	+10 38.6	1.374	2.275	13.4	20.8
3 12	12 52.33	- 3 0.0	1.384	2.337	9.1	20.8	3 12	12 53.88	+11 25.5	1.338	2.288	9.6	20.6
3 22	12 43.48	- 2 10.1	1.365	2.354	4.0	20.5	3 22	12 44.21	+12 4.3	1.326	2.300	6.8	20.4
4 1	12 33.81	- 1 17.7	1.373	2.371	1.6	20.4	4 1	12 33.70	+12 26.5	1.339	2.313	7.3	20.5
4 11	12 24.60	- 0 30.6	1.407	2.387	6.5	20.7	4 11	12 23.76	+12 26.5	1.378	2.326	10.4	20.7
4 21	12 16.96	+ 0 4.9	1.466	2.404	11.0	21.0	4 21	12 15.56	+12 3.1	1.441	2.339	14.1	20.9
5 1	12 11.65	+ 0 24.8	1.548	2.421	15.0	21.3	5 1	12 9.88	+11 17.9	1.523	2.352	17.4	21.2
32583	2001 QZ ₁₀₁		3 30.2 38°69	2°9/28.5	18		18546	1997 AP ₄		3 30.2 29°19	0°2/30.4	18	
2 21	13 11.97	+ 4 49.7	1.692	2.496	16.1	17.4	2 21	12 58.09	- 7 11.7	1.274	2.096	19.3	17.1
3 2	13 5.75	+ 4 33.4	1.611	2.499	12.6	17.2	3 2	12 55.64	- 6 50.2	1.208	2.105	15.2	16.9
3 12	12 56.70	+ 4 19.0	1.552	2.502	8.5	16.9	3 12	12 50.24	- 6 8.6	1.161	2.114	10.3	16.6
3 22	12 45.53	+ 4 2.4	1.520	2.505	4.3	16.7	3 22	12 42.64	- 5 11.3	1.137	2.125	4.8	16.3
4 1	12 33.36	+ 3 39.8	1.515	2.508	3.4	16.6	4 1	12 34.02	- 4 5.9	1.137	2.136	1.0	16.1
4 11	12 21.53	+ 3 8.0	1.540	2.511	7.2	16.9	4 11	12 25.82	- 3 2.3	1.162	2.147	6.6	16.5
4 21	12 11.24	+ 2 25.8	1.592	2.515	11.4	17.1	4 21	12 19.24	- 2 9.3	1.210	2.160	11.7	16.8
5 1	12 3.38	+ 1 32.8	1.667	2.519	15.1	17.4	5 1	12 15.16	- 1 33.2	1.280	2.173	16.1	17.1
251628	2010 JK ₁₀₅		3 30.2 337°70	14°2/12.9	18		362751	2011 UU ₃₈₃		3 30.2 177°24	3°8/2.6	18	
2 21	13 2.88	-40 15.2	2.051	2.635	19.8	19.7	2 21	13 3.43	-15 47.7	1.805	2.559	17.1	21.7
3 2	12 59.62	-42 19.0	1.954	2.624	18.6	19.5	3 2	12 59.18	-15 56.7	1.714	2.560	14.1	21.5
3 12	12 53.31	-43 59.5	1.871	2.613	17.2	19.4	3 12	12 52.38	-15 45.2	1.642	2.562	10.5	21.3
3 22	12 44.31	-45 9.3	1.805	2.603	15.8	19.2	3 22	12 43.61	-15 12.9	1.594	2.563	6.7	21.1
4 1	12 33.55	-45 42.2	1.758	2.594	14.7	19.1	4 1	12 33.80	-14 22.5	1.573	2.563	3.9	20.9
4 11	12 22.46	-45 36.1	1.731	2.586	14.2	19.1	4 11	12 24.15	-13 19.9	1.580	2.563	5.5	21.0
4 21	12 12.54	-44 54.0	1.724	2.578	14.4	19.1	4 21	12 15.75	-12 12.8	1.613	2.562	9.3	21.2
5 1	12 5.11	-43 43.4	1.737	2.571	15.4	19.1	5 1	12 9.46	-11 9.4	1.671	2.560	13.1	21.4
107670	2001 FE ₅		3 30.2 287°56	0°1/30.2	17		494836	2007 UR ₉		3 30.2 221°78	1°3/28.8	17	
2 21	13 0.11	- 6 13.4	1.625	2.429	16.6	19.8	2 21	13 2.03	- 4 0.8	2.141	2.931	13.6	23.0
3 2	12 56.97	- 5 57.4	1.522	2.410	13.2	19.5	3 2	12 57.67	- 3 7.6	2.037	2.919	10.7	22.7
3 12	12 51.15	- 5 25.0	1.441	2.390	9.1	19.2	3 12	12 51.16	- 2 0.6	1.957	2.906	7.1	22.5
3 22	12 43.14	- 4 38.9	1.384	2.371	4.3	18.9	3 22	12 43.00	- 0 44.1	1.904	2.892	3.2	22.2
4 1	12 33.86	- 3 44.5	1.353	2.351	0.9	18.6	4 1	12 33.93	+ 0 35.8	1.880	2.876	1.9	22.1
4 11	12 24.53	- 2 49.4	1.348	2.332	6.2	18.9	4 11	12 24.91	+ 1 51.7	1.886	2.860	5.8	22.3
4 21	12 16.37	- 2 1.2	1.369	2.313	11.2	19.1	4 21	12 16.84	+ 2 57.0	1.920	2.843	9.8	22.5
5 1	12 10.39	- 1 26.4	1.413	2.293	15.6	19.3	5 1	12 10.45	+ 3 47.0	1.979	2.825	13.3	22.7
461506	2003 QE ₂₉		3 30.2 235°25	2°7/1.4	16		374302	2005 SB ₁₅₀		3 30.2 217°40	2°7/27.9	17	
2 21	13 7.13	-12 2.1	2.125	2.875	15.0	21.9	2 21	13 4.85	+ 2 43.2	1.934	2.741	14.3	21.2
3 2	13 1.87	-12 21.4	2.010	2.859	12.2	21.6	3 2	12 59.95	+ 3 1.6	1.847	2.737	11.1	21.0
3 12	12 54.15	-12 26.8	1.917	2.841	8.9	21.4	3 12	12 52.71	+ 3 25.9	1.782	2.733	7.4	20.8
3 22	12 44.45	-12 17.8	1.849	2.823	5.3	21.1	3 22	12 43.70	+ 3 51.5	1.744	2.730	3.8	20.5
4 1	12 33.58	-11 56.0	1.810	2.804	2.7	20.9	4 1	12 33.80	+ 4 13.2	1.734	2.725	3.3	20.5
4 11	12 22.59	-11 25.1	1.801	2.783	5.1	21.0	4 11	12 24.09	+ 4 25.8	1.752	2.721	6.8	20.7
4 21	12 12.56	-10 50.4	1.820	2.762	8.9	21.2	4 21	12 15.54	+ 4 25.9	1.798	2.716	10.6	20.9
5 1	12 4.40	-10 17.7	1.865	2.740	12.7	21.4	5 1	12 8.94	+ 4 11.9	1.866	2.711	14.0	21.1
415051	2012 AX ₅		3 30.2 25°34	2°6/1.2	18		434988	2006 UV ₁₅₅		3 30.2 199°89	0°8/29.1	18	
2 21	12 58.84	-11 31.8	1.353	2.155	19.5	20.6	2 21	12 55.90	- 4 59.0	2.740	3.526	11.1	22.0
3 2	12 56.19	-11 35.8	1.280	2.160	15.7	20.4	3 2	12 52.35	- 4 3.0	2.644	3.523	8.6	21.8
3 12	12 50.63	-11 17.6	1.225	2.167	11.2	20.1	3 12	12 47.28	- 2 56.0	2.572	3.520	5.7	21.6
3 22	12 42.84	-10 38.7	1.192	2.174	6.2	19.8	3 22	12 41.10	- 1 41.6	2.528	3.516	2.5	21.4
4 1	12 33.96	- 9 44.2	1.184	2.181	2.6	19.6	4 1	12 34.37	- 0 24.7	2.515	3.512	1.3	21.3
4 11	12 25.40	- 8 42.5	1.202	2.189	6.0	19.9	4 11	12 27.76	+ 0 49.2	2.532	3.507	4.4	21.5
4 21	12 18.40	- 7 42.8	1.243	2.198	10.9	20.2	4 21	12 21.85	+ 1 55.3	2.578	3.503	7.5	21.7
5 1	12 13.87	- 6 53.4	1.306	2.207	15.3	20.4	5 1	12 17.17	+ 2 49.7	2.650	3.498	10.3	21.9
36723	2000 RE ₄₃		3 30.2 291°54	4°5/2.8	18		246880	1995 SR ₅₄		3 30.2 181°67	0°5/29.7	17	
2 21	12 59.41	-16 15.7	1.510										

EPHEMERIDES

3 30.2

3 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
494230	2016 <i>NZ</i> ₄₄		3 30.2 270°51	0°7/29.4	17		317088	2001 <i>SA</i> ₃₄₂		3 30.2 211°61	3°1/2.4	17	
2 21	12 57.05	- 4 7.5	2.340	3.135	12.5	21.7	2 21	12 59.00	-15 38.1	1.960	2.716	15.9	21.0
3 2	12 53.54	- 3 37.4	2.245	3.129	9.7	21.5	3 2	12 55.54	-15 24.6	1.863	2.713	13.0	20.8
3 12	12 48.23	- 2 56.6	2.174	3.123	6.5	21.3	3 12	12 49.85	-14 50.3	1.787	2.710	9.6	20.6
3 22	12 41.59	- 2 8.6	2.130	3.117	2.9	21.0	3 22	12 42.44	-13 56.0	1.735	2.706	5.9	20.3
4 1	12 34.27	- 1 17.8	2.114	3.112	1.2	20.9	4 1	12 34.14	-12 45.4	1.710	2.703	3.1	20.1
4 11	12 27.06	- 0 29.5	2.127	3.106	4.8	21.1	4 11	12 25.96	-11 25.0	1.714	2.699	4.9	20.2
4 21	12 20.69	+ 0 11.5	2.168	3.100	8.3	21.3	4 21	12 18.85	-10 2.7	1.745	2.694	8.7	20.5
5 1	12 15.77	+ 0 41.5	2.233	3.094	11.4	21.5	5 1	12 13.57	- 8 46.3	1.800	2.690	12.3	20.7
287060	2002 <i>RB</i> ₄		3 30.2 270°49	2°1/1.2	17		302346	2002 <i>AJ</i> ₁₇₂		3 30.2 35°39	0°7/30.7	18	
2 21	12 57.79	-13 44.2	1.767	2.542	16.7	21.3	2 21	13 0.93	- 7 3.4	1.206	2.028	20.2	20.5
3 2	12 54.97	-13 10.2	1.659	2.524	13.6	21.0	3 2	12 58.02	- 7 1.2	1.143	2.038	16.0	20.3
3 12	12 49.70	-12 12.3	1.571	2.505	9.8	20.7	3 12	12 51.94	- 6 39.7	1.098	2.050	10.9	20.0
3 22	12 42.45	-10 51.7	1.507	2.486	5.5	20.4	3 22	12 43.48	- 6 2.4	1.074	2.062	5.2	19.8
4 1	12 34.06	- 9 13.2	1.470	2.467	2.1	20.1	4 1	12 33.93	- 5 15.7	1.075	2.074	1.0	19.5
4 11	12 25.66	- 7 25.7	1.461	2.447	5.4	20.3	4 11	12 24.85	- 4 28.8	1.101	2.088	6.6	19.9
4 21	12 18.33	- 5 39.4	1.478	2.427	10.0	20.5	4 21	12 17.55	- 3 49.8	1.150	2.102	11.9	20.2
5 1	12 12.99	- 4 4.2	1.520	2.407	14.3	20.7	5 1	12 12.97	- 3 25.1	1.220	2.116	16.5	20.5
251845	1999 <i>TX</i> ₂₇₁		3 30.2 128°38	3°4/2.4	18		154271	2002 <i>SZ</i> ₁₇		3 30.2 84°81	0°2/30.1	18	
2 21	13 6.40	-14 49.8	2.074	2.815	15.6	21.2	2 21	13 3.77	- 6 12.4	1.335	2.147	19.2	20.7
3 2	13 0.97	-15 6.4	1.992	2.833	12.7	21.0	3 2	12 59.93	- 5 50.1	1.269	2.160	15.0	20.4
3 12	12 53.27	-15 6.0	1.932	2.849	9.4	20.8	3 12	12 53.07	- 5 9.4	1.222	2.173	10.1	20.2
3 22	12 43.91	-14 48.9	1.897	2.865	5.9	20.6	3 22	12 43.96	- 4 15.0	1.198	2.186	4.6	19.9
4 1	12 33.78	-14 17.3	1.890	2.879	3.4	20.5	4 1	12 33.84	- 3 14.2	1.200	2.198	1.1	19.7
4 11	12 23.92	-13 35.8	1.912	2.894	5.0	20.6	4 11	12 24.18	- 2 16.3	1.228	2.211	6.7	20.1
4 21	12 15.26	-12 50.4	1.963	2.907	8.3	20.9	4 21	12 16.24	- 1 29.4	1.280	2.224	11.7	20.4
5 1	12 8.53	-12 7.0	2.039	2.920	11.5	21.1	5 1	12 10.89	- 0 59.0	1.354	2.236	16.1	20.7
284705	2008 <i>SX</i> ₂₉₈		3 30.2 238°85	2°4/28.1	17		380320	2002 <i>GF</i> ₁₇₈		3 30.2 324°96	1°7/28.8	17	
2 21	13 2.41	- 1 48.6	1.649	2.461	16.1	21.9	2 21	12 58.89	- 1 30.8	1.676	2.494	15.6	21.1
3 2	12 58.63	- 0 56.3	1.554	2.448	12.6	21.6	3 2	12 55.78	- 1 9.4	1.586	2.483	12.2	20.8
3 12	12 52.17	+ 0 11.0	1.481	2.435	8.4	21.4	3 12	12 50.19	- 0 36.6	1.518	2.472	8.1	20.5
3 22	12 43.58	+ 1 27.7	1.433	2.421	4.0	21.1	3 22	12 42.66	+ 0 3.1	1.473	2.462	3.7	20.2
4 1	12 33.82	+ 2 45.6	1.412	2.406	3.1	21.0	4 1	12 34.10	+ 0 43.8	1.456	2.452	2.3	20.1
4 11	12 24.11	+ 3 55.5	1.419	2.391	7.6	21.2	4 11	12 25.66	+ 1 18.6	1.465	2.443	6.6	20.4
4 21	12 15.64	+ 4 49.6	1.451	2.375	12.2	21.4	4 21	12 18.39	+ 1 42.0	1.499	2.434	11.1	20.6
5 1	12 9.34	+ 5 23.2	1.505	2.359	16.3	21.6	5 1	12 13.17	+ 1 50.1	1.556	2.426	15.0	20.8
264742	2002 <i>CU</i> ₁₉₂		3 30.2 85°79	0°8/29.5	17		506453	2001 <i>VW</i> ₇₇		3 30.2 79°41	0°5/29.6	17	
2 21	13 1.04	- 3 49.2	1.859	2.660	15.0	21.0	2 21	12 55.38	- 3 46.6	3.159	3.943	9.8	22.3
3 2	12 56.97	- 3 26.1	1.783	2.670	11.6	20.8	3 2	12 51.65	- 3 24.0	3.080	3.958	7.6	22.2
3 12	12 50.66	- 2 51.2	1.730	2.680	7.7	20.6	3 12	12 46.66	- 2 54.5	3.027	3.973	5.0	22.0
3 22	12 42.72	- 2 8.5	1.702	2.690	3.5	20.3	3 22	12 40.79	- 2 20.6	3.001	3.988	2.2	21.8
4 1	12 34.04	- 1 23.3	1.702	2.699	1.4	20.2	4 1	12 34.54	- 1 45.3	3.005	4.003	0.8	21.7
4 11	12 25.65	- 0 41.9	1.730	2.709	5.6	20.5	4 11	12 28.45	- 1 12.0	3.040	4.018	3.6	22.0
4 21	12 18.45	- 0 9.4	1.784	2.719	9.6	20.8	4 21	12 23.01	- 0 43.6	3.103	4.033	6.2	22.2
5 1	12 13.14	+ 0 10.4	1.862	2.728	13.1	21.0	5 1	12 18.63	- 0 22.6	3.192	4.048	8.5	22.3
437338	2013 <i>SK</i> ₆₆		3 30.2 253°69	1°8/28.5	18		308157	2005 <i>AJ</i> ₅₇		3 30.2 93°43	1°0/29.3	18	
2 21	12 56.16	-12 15.0	1.117	1.936	21.7	21.8	2 21	13 1.61	- 5 16.8	1.595	2.401	16.8	20.9
3 2	12 54.85	- 9 56.9	1.030	1.927	17.2	21.5	3 2	12 57.71	- 4 28.2	1.528	2.418	13.1	20.7
3 12	12 50.21	- 6 51.3	0.962	1.918	11.5	21.1	3 12	12 51.28	- 3 23.3	1.483	2.435	8.6	20.5
3 22	12 42.85	- 3 6.4	0.918	1.908	5.0	20.7	3 22	12 43.05	- 2 8.0	1.463	2.451	3.8	20.2
4 1	12 33.99	+ 0 58.2	0.901	1.898	3.1	20.6	4 1	12 34.05	- 0 50.0	1.470	2.467	1.7	20.1
4 11	12 25.28	+ 4 55.5	0.911	1.888	9.8	20.9	4 11	12 25.46	+ 0 21.8	1.504	2.483	6.3	20.4
4 21	12 18.26	+ 8 20.9	0.945	1.877	16.3	21.2	4 21	12 18.30	+ 1 20.2	1.564	2.499	10.7	20.7
5 1	12 14.11	+10 59.3	1.000	1.866	21.7	21.5	5 1	12 13.29	+ 2 0.5	1.647	2.514	14.5	21.0
141380	2002 <i>AF</i> ₆₈		3 30.2 61°28	4°7/4.6	18		18852	1999 <i>RP</i> ₉₁		3 30.2 273°07	0°5/29.7	18	R
2 21	12 58.58	-20 13.7	2.410	3.128	14.2	19.8	2 21	12 57.38	- 4 28.2	2.483	3.273	12.0	18.3
3 2	12 54.81	-20 36.0	2.314	3.130	12.0	19.6	3 2	12 53.77	- 4 3.8	2.377	3.258	9.4	18.1
3 12	12 49.14	-20 40.9	2.238	3.132	9.4	19.5	3 12	12 48.41	- 3 29.3	2.295	3.243	6.3	17.8
3 22	12 42.04	-20 27.7	2.187	3.134	6.8	19.3	3 22	12 41.72	- 2 47.3	2.240	3.228	2.8	17.6
4 1	12 34.20	-19 57.3	2.162	3.136	4.9	19.2	4 1	12 34.32	- 2 2.0	2.214	3.212	1.0	17.4
4 11	12 26.47	-19 13.4	2.166	3.139	5.3	19.2	4 11	12 26.96	- 1 18.0	2.218	3.197	4.6	17.6
4 21	12 19.63	-18 21.0	2.197	3.141	7.5	19.3	4 21	12 20.35	- 0 39.9	2.249	3.182	8.0	17.8
5 1	12 14.31	-17 26.1	2.253	3.143	10.2	19.5	5 1	12 15.11	- 0 11.5	2.305	3.166	11.1	18.0
317892	2003 <i>UC</i> ₁₆₅		3 30.2 138°69	0°4/29.8	18		273001	2006 <i>DJ</i> ₆₈		3 30.2 20°89	3°3/27.8	18	R
2 21	13 3.27	- 5 21.3	1.932	2.721	14.9	22.0	2 21	13 4.35	+ 4 20.5	1.720	2.538	15.3	19.6
3 2	12 58.62	- 4 51.6	1.853	2.733	11.6	21.8	3 2	12 59.76	+ 4 31.4	1.644	2.541	11.9	19.4
3 12	12 51.74	- 4 8.8	1.797	2.744	7.8	21.6	3 12	12 52.67	+ 4 46.5	1.591	2.544	8.0	19.2
3 22	12 43.23	- 3 16.6	1.767	2.754	3.5	21.4	3 22	12 43.71	+ 5 0.9	1.563	2.548	4.3	19.0
4 1	12 33.97	- 2 20.7	1.765	2.764	1.1	21.2	4 1	12 33.90	+ 5 9.1	1.562	2.552	3.9	19.0
4 11	12 25.00	- 1 27.4	1.793	2.773	5.4	21.5	4 11	12 24.40	+ 5 6.4	1.588	2.556	7.4	19.2
4 21	12 17.22	- 0 42.6	1.847	2.781	9.4	21.8	4 21	12 16.25	+ 4 50.3	1.640	2.561	11.3	19.4
5 1	12 11.34	- 0 10.5	1.926	2.789	12.9	22.0	5 1	12 10.23	+ 4 19.6	1.715	2.567	14.8	19.6
151018	2001 <i>UV</i> ₁₁₆		3 30.2 67°83	0°8/29.5	18		107373	2001 <i>CR</i> ₃₁		3 30.			

EPHEMERIDES

3 30.2

3 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
253090	2002 <i>TY</i> ₂₅₁		3 30.2 163°11	1.4/28.7	18		135442	2001 <i>UF</i> ₂₀₆		3 30.2 153°84	4.0/25.7	18	
2 21	13 1.81	- 2 47.7	2.198	2.991	13.3	22.1	2 21	13 0.14	+ 7 33.2	2.443	3.254	11.5	19.9
3 2	12 57.25	- 2 3.6	2.114	2.997	10.3	21.9	3 2	12 55.76	+ 8 16.8	2.365	3.257	8.9	19.7
3 12	12 50.72	- 1 8.7	2.053	3.003	6.8	21.7	3 12	12 49.62	+ 9 2.6	2.313	3.261	6.2	19.6
3 22	12 42.76	- 0 7.4	2.020	3.008	3.1	21.4	3 22	12 42.23	+ 9 45.6	2.287	3.264	4.2	19.4
4 1	12 34.11	+ 0 54.7	2.016	3.012	1.9	21.3	4 1	12 34.28	+10 20.7	2.291	3.267	4.5	19.5
4 11	12 25.68	+ 1 51.4	2.042	3.016	5.5	21.6	4 11	12 26.52	+10 43.6	2.324	3.269	6.9	19.6
4 21	12 18.25	+ 2 37.7	2.096	3.019	9.1	21.8	4 21	12 19.67	+10 51.8	2.383	3.272	9.6	19.8
5 1	12 12.47	+ 3 10.2	2.174	3.021	12.2	22.0	5 1	12 14.29	+10 44.4	2.465	3.274	12.1	20.0
7153	Vladzakharov		3 30.2 109°08	0°2/30.4	18 R		328258	2008 <i>FN</i> ₁₃₃		3 30.2 209°11	0°1/30.2	17	
2 21	13 4.20	- 6 24.9	1.651	2.446	16.8	18.4	2 21	13 2.91	- 5 16.8	1.960	2.749	14.7	21.5
3 2	12 59.71	- 6 8.6	1.578	2.460	13.2	18.2	3 2	12 58.51	- 5 6.3	1.867	2.746	11.6	21.3
3 12	12 52.66	- 5 37.2	1.526	2.473	8.9	18.0	3 12	12 51.82	- 4 43.8	1.796	2.742	7.9	21.0
3 22	12 43.71	- 4 54.1	1.499	2.485	4.2	17.7	3 22	12 43.37	- 4 11.9	1.752	2.738	3.6	20.8
4 1	12 33.91	- 4 5.0	1.499	2.498	0.8	17.5	4 1	12 34.02	- 3 34.9	1.735	2.734	0.8	20.5
4 11	12 24.47	- 3 17.0	1.527	2.510	5.7	17.9	4 11	12 24.79	- 2 58.5	1.747	2.729	5.2	20.8
4 21	12 16.45	+ 1 36.4	1.581	2.522	10.2	18.2	4 21	12 16.66	- 2 27.9	1.786	2.724	9.4	21.1
5 1	12 10.63	- 2 8.2	1.658	2.533	14.0	18.4	5 1	12 10.40	- 2 7.5	1.850	2.719	13.1	21.3
391339	2006 <i>UV</i> ₈₇		3 30.2 108°83	2°9/ 1.6	18		464523	2016 <i>CY</i> ₁₁		3 30.2 5°38	1°3/31.2	17	
2 21	13 2.89	-13 47.5	1.391	2.176	19.9	21.0	2 21	12 57.48	- 8 52.7	1.275	2.093	19.6	20.6
3 2	12 59.29	-13 34.8	1.318	2.187	16.1	20.8	3 2	12 55.35	- 8 47.2	1.200	2.093	15.6	20.4
3 12	12 52.69	-12 56.7	1.263	2.198	11.6	20.5	3 12	12 50.24	- 8 20.6	1.144	2.094	10.8	20.1
3 22	12 43.82	-11 55.0	1.231	2.209	6.6	20.3	3 22	12 42.79	- 7 35.3	1.109	2.095	5.5	19.8
4 1	12 33.89	-10 35.2	1.224	2.220	2.9	20.1	4 1	12 34.15	- 6 37.6	1.098	2.097	1.4	19.5
4 11	12 24.34	- 9 7.5	1.243	2.230	6.0	20.3	4 11	12 25.78	- 5 36.6	1.112	2.100	6.3	19.8
4 21	12 16.44	- 7 42.5	1.288	2.240	10.8	20.6	4 21	12 18.98	- 4 41.8	1.150	2.104	11.6	20.1
5 1	12 11.09	- 6 29.9	1.355	2.249	15.3	20.9	5 1	12 14.73	- 4 0.9	1.208	2.109	16.3	20.4
228395	2001 <i>BC</i> ₂₇		3 30.2 50°92	5°1/25.4	18		130007	Frankteti		3 30.2 106°77	0°3/30.5	18 R	
2 21	12 58.56	+ 5 22.7	1.634	2.467	15.2	20.1	2 21	13 2.68	- 6 8.8	2.151	2.932	13.9	20.5
3 2	12 55.21	+ 6 40.4	1.580	2.485	11.7	19.9	3 2	12 57.94	- 6 1.8	2.073	2.946	10.9	20.3
3 12	12 49.53	+ 8 3.7	1.549	2.504	8.0	19.7	3 12	12 51.18	- 5 43.5	2.017	2.960	7.3	20.1
3 22	12 42.22	+ 9 24.1	1.543	2.523	5.3	19.6	3 22	12 42.98	- 5 16.6	1.989	2.974	3.5	19.9
4 1	12 34.26	+10 32.7	1.564	2.542	5.9	19.7	4 1	12 34.14	- 4 44.8	1.989	2.988	0.7	19.7
4 11	12 26.74	+11 22.1	1.611	2.561	9.0	19.9	4 11	12 25.56	- 4 13.0	2.018	3.001	4.6	20.0
4 21	12 20.57	+11 48.9	1.682	2.581	12.4	20.1	4 21	12 18.05	- 3 45.6	2.076	3.014	8.3	20.3
5 1	12 16.38	+11 52.3	1.775	2.601	15.4	20.4	5 1	12 12.25	- 3 26.4	2.158	3.027	11.5	20.5
186565	2002 <i>YQ</i> ₁₆		3 30.2 46°66	3°2/27.7	18		87465	2000 <i>QU</i> ₁₃₀		3 30.2 254°06	2°0/ 1.2	18	
2 21	13 0.61	+ 0 51.7	1.457	2.285	17.0	19.6	2 21	13 1.88	-11 53.5	2.291	3.047	13.8	20.8
3 2	12 57.15	+ 1 35.6	1.395	2.298	13.1	19.4	3 2	12 57.62	-11 49.0	2.171	3.025	11.3	20.6
3 12	12 51.02	+ 2 29.7	1.355	2.312	8.6	19.2	3 12	12 51.24	-11 29.3	2.073	3.002	8.1	20.3
3 22	12 42.97	+ 3 27.3	1.339	2.326	4.3	19.0	3 22	12 43.15	-10 55.4	2.001	2.978	4.6	20.1
4 1	12 34.11	+ 4 20.0	1.348	2.341	3.9	19.0	4 1	12 34.07	-10 9.5	1.958	2.953	2.0	19.8
4 11	12 25.69	+ 5 0.1	1.384	2.355	7.9	19.2	4 11	12 24.90	- 9 16.5	1.944	2.928	4.5	20.0
4 21	12 18.78	+ 5 22.6	1.444	2.371	12.1	19.5	4 21	12 16.53	- 8 22.0	1.958	2.902	8.3	20.1
5 1	12 14.15	+ 5 25.3	1.526	2.386	15.8	19.8	5 1	12 9.76	- 7 32.1	1.999	2.876	11.9	20.3
437476	2013 <i>YA</i> ₄₇		3 30.2 86°89	2°8/26.9	17		175516	2006 <i>SS</i> ₄₁		3 30.2 265°98	0°6/29.8	17	
2 21	12 56.93	+ 1 30.0	2.224	3.036	12.5	21.2	2 21	13 3.33	- 3 38.6	1.697	2.500	16.1	20.8
3 2	12 53.43	+ 2 30.0	2.149	3.044	9.5	21.0	3 2	12 59.29	- 3 30.8	1.602	2.490	12.7	20.6
3 12	12 48.14	+ 3 37.7	2.099	3.053	6.3	20.8	3 12	12 52.61	- 3 10.9	1.529	2.479	8.6	20.3
3 22	12 41.56	+ 4 47.6	2.076	3.061	3.4	20.6	3 22	12 43.84	- 2 42.0	1.481	2.469	3.9	20.0
4 1	12 34.41	+ 5 53.5	2.081	3.069	3.4	20.7	4 1	12 33.93	- 2 9.0	1.459	2.458	1.3	19.8
4 11	12 27.48	+ 6 49.3	2.116	3.077	6.3	20.9	4 11	12 24.09	- 1 38.2	1.466	2.447	6.1	20.1
4 21	12 21.48	+ 7 30.8	2.177	3.086	9.5	21.1	4 21	12 15.47	- 1 15.3	1.498	2.436	10.8	20.3
5 1	12 16.98	+ 7 55.7	2.261	3.094	12.3	21.3	5 1	12 9.00	- 1 4.8	1.553	2.425	14.9	20.5
302881	2003 <i>JH</i> ₁₇		3 30.2 329°59	5°9/25.9	15		347458	2012 <i>TV</i> ₂₆₂		3 30.2 39°28	0°7/31.1	18	
2 21	12 59.57	+ 5 18.8	1.250	2.097	18.1	19.8	2 21	12 54.41	-11 24.0	1.978	2.762	14.8	20.3
3 2	12 57.09	+ 6 18.6	1.176	2.088	14.2	19.6	3 2	12 51.78	-10 24.0	1.896	2.770	11.7	20.1
3 12	12 51.47	+ 7 27.7	1.121	2.080	9.8	19.3	3 12	12 47.20	- 9 4.2	1.837	2.778	8.1	19.9
3 22	12 43.38	+ 8 36.5	1.089	2.071	6.3	19.1	3 22	12 41.19	- 7 28.9	1.803	2.787	4.0	19.7
4 1	12 33.99	+ 9 34.0	1.081	2.064	6.8	19.1	4 1	12 34.53	- 5 44.6	1.798	2.796	0.8	19.4
4 11	12 24.85	+10 9.9	1.096	2.057	10.9	19.2	4 11	12 28.10	- 4 0.1	1.821	2.806	4.7	19.7
4 21	12 17.32	+10 19.0	1.134	2.051	15.5	19.5	4 21	12 22.69	- 2 23.5	1.872	2.816	8.6	20.0
5 1	12 12.45	+10 0.0	1.190	2.045	19.6	19.7	5 1	12 18.91	- 1 1.3	1.948	2.826	12.1	20.2
170894	2004 <i>TH</i> ₂₉₈		3 30.2 242°74	0°2/30.1	17		20684	1999 <i>VW</i> ₄₄		3 30.2 45°27	2°6/ 1.4	18	
2 21	13 1.82	- 6 43.4	1.754	2.549	16.0	21.1	2 21	13 2.28	-10 58.4	1.792	2.569	16.4	18.0
3 2	12 58.08	- 6 10.3	1.653	2.535	12.7	20.9	3 2	12 58.18	-11 20.7	1.711	2.577	13.2	17.8
3 12	12 51.78	- 5 19.9	1.573	2.520	8.6	20.6	3 12	12 51.65	-11 27.4	1.652	2.585	9.5	17.6
3 22	12 43.45	- 4 15.5	1.518	2.505	4.0	20.3	3 22	12 43.31	-11 19.3	1.616	2.594	5.4	17.4
4 1	12 33.97	- 3 3.0	1.491	2.490	1.0	20.0	4 1	12 34.07	-10 59.0	1.608	2.603	2.6	17.2
4 11	12 24.51	- 1 50.7	1.492	2.473	6.0	20.3	4 11	12 25.07	-10 31.2	1.627	2.612	5.1	17.4
4 21	12 16.18	- 0 46.6	1.519	2.456	10.7	20.5	4 21	12 17.32	-10 1.7	1.672	2.621	9.1	17.6
5 1	12 9.90	+ 0 3.0	1.569	2.439	14.9	20.7	5 1	12 11.60	- 9 36.2	1.742	2.631	12.7	17.9
148308	2000 <i>LF</i> ₃₆		3 30.2 331°78	3°4/ 1.8	17		425202	2009 <i>VE</i> ₈		3 30.2 163°38	1°0/29.2		

EPHEMERIDES

3 30.2

3 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
463099	2011 <i>UW</i> ₃₀	3 30.2 150°22'		4.0°/26.9 18'			457703	2009 <i>FP</i> ₁	3 30.3 323°75'		1.8°/29.2 17'		
2 21	13 6.34	+ 4 30.7	1.774	2.586	15.1	22.0	2 21	13 0.00	- 1 9.4	1.258	2.093	18.8	20.4
3 2	13 1.22	+ 5 11.6	1.700	2.593	11.7	21.8	3 2	12 57.65	- 1 5.5	1.167	2.073	14.8	20.0
3 12	12 53.61	+ 5 58.2	1.649	2.600	7.9	21.6	3 12	12 52.09	- 0 49.2	1.096	2.054	10.0	19.7
3 22	12 44.17	+ 6 44.2	1.624	2.607	4.6	21.4	3 22	12 43.82	- 0 24.7	1.047	2.036	4.6	19.3
4 1	12 33.90	+ 7 22.6	1.627	2.613	4.6	21.4	4 1	12 33.96	+ 0 1.4	1.021	2.019	2.5	19.1
4 11	12 23.97	+ 7 47.3	1.658	2.618	7.9	21.6	4 11	12 24.07	+ 0 21.1	1.020	2.002	8.0	19.4
4 21	12 15.40	+ 7 55.0	1.715	2.623	11.7	21.9	4 21	12 15.67	+ 0 27.8	1.042	1.987	13.6	19.7
5 1	12 8.96	+ 7 44.3	1.794	2.627	15.0	22.1	5 1	12 9.99	+ 0 16.9	1.083	1.973	18.6	19.9
346829	2009 <i>DT</i> ₄	3 30.2 22°10'		3.8°/ 2.2 17'			90155	2002 <i>YW</i> ₂₅	3 30.3 345°77'		8.2°/21.7 17'		
2 21	13 2.31	-12 58.7	1.809	2.577	16.6	19.6	2 21	12 55.75	+14 19.0	1.704	2.546	14.3	18.8
3 2	12 58.25	-13 44.3	1.727	2.584	13.6	19.4	3 2	12 53.27	+15 45.8	1.634	2.537	11.6	18.6
3 12	12 51.74	-14 14.5	1.667	2.592	10.0	19.2	3 12	12 48.44	+17 11.8	1.588	2.528	9.2	18.4
3 22	12 43.37	-14 28.6	1.630	2.600	6.3	19.0	3 22	12 41.86	+18 27.4	1.565	2.521	8.2	18.4
4 1	12 34.07	-14 27.7	1.620	2.610	3.9	18.9	4 1	12 34.42	+19 23.1	1.568	2.514	9.3	18.4
4 11	12 24.97	-14 15.5	1.637	2.620	5.5	19.0	4 11	12 27.21	+19 52.5	1.595	2.509	11.8	18.5
4 21	12 17.11	-13 57.0	1.681	2.630	9.0	19.2	4 21	12 21.21	+19 53.0	1.644	2.504	14.7	18.7
5 1	12 11.28	-13 38.2	1.748	2.641	12.5	19.5	5 1	12 17.15	+19 25.6	1.712	2.500	17.5	18.9
503581	2016 <i>GF</i> ₅₁	3 30.2 186°20'		0.2°/30.4 17'			368742	2005 <i>UU</i> ₃₄₂	3 30.3 111°45'		6.1°/ 5.4 17'		
2 21	13 0.53	- 7 17.1	2.047	2.832	14.3	21.8	2 21	13 3.94	-22 37.8	2.081	2.786	16.6	21.6
3 2	12 56.53	- 6 47.7	1.956	2.832	11.3	21.6	3 2	12 59.29	-23 14.7	1.998	2.801	14.1	21.4
3 12	12 50.42	- 6 3.8	1.887	2.832	7.7	21.4	3 12	12 52.32	-23 30.6	1.933	2.815	11.3	21.3
3 22	12 42.71	- 5 8.6	1.845	2.831	3.6	21.1	3 22	12 43.61	-23 23.8	1.892	2.829	8.4	21.1
4 1	12 34.21	- 4 7.1	1.831	2.830	0.7	20.9	4 1	12 34.05	-22 54.8	1.877	2.842	6.4	21.0
4 11	12 25.87	- 3 5.7	1.845	2.828	5.0	21.2	4 11	12 24.70	-22 7.6	1.889	2.855	6.5	21.1
4 21	12 18.55	- 2 10.6	1.888	2.826	9.0	21.4	4 21	12 16.54	-21 8.4	1.928	2.868	8.7	21.2
5 1	12 12.97	- 1 26.9	1.955	2.823	12.5	21.7	5 1	12 10.31	-20 4.8	1.993	2.880	11.4	21.4
267448	2002 <i>DF</i> ₇	3 30.2 87°51'		8.0°/22.5 18'			396269	2014 <i>CP</i> ₁₇	3 30.3 27°69'		2.1°/ 1.4 17'		
2 21	13 4.83	+16 53.1	1.906	2.725	14.0	20.4	2 21	13 0.33	-11 7.1	2.314	3.077	13.5	20.6
3 2	12 59.68	+18 11.2	1.863	2.749	11.3	20.2	3 2	12 56.18	-11 20.9	2.220	3.078	10.9	20.5
3 12	12 52.32	+19 23.5	1.844	2.772	9.0	20.1	3 12	12 50.09	-11 21.9	2.149	3.079	7.8	20.3
3 22	12 43.46	+20 21.5	1.850	2.795	8.0	20.1	3 22	12 42.55	-11 11.1	2.103	3.080	4.5	20.0
4 1	12 34.09	+20 58.2	1.883	2.818	8.8	20.2	4 1	12 34.28	-10 50.5	2.086	3.081	2.1	19.9
4 11	12 25.25	+21 9.8	1.942	2.840	10.9	20.4	4 11	12 26.12	-10 23.9	2.097	3.082	4.2	20.0
4 21	12 17.80	+20 56.3	2.024	2.862	13.2	20.6	4 21	12 18.87	- 9 55.8	2.137	3.083	7.6	20.2
5 1	12 12.33	+20 19.9	2.126	2.884	15.4	20.8	5 1	12 13.18	- 9 30.7	2.202	3.084	10.7	20.4
166361	2002 <i>LO</i> ₁₆	3 30.2 311°30'		2.1°/ 1.0 17'			22396	1994 <i>VR</i>	3 30.3 184°27'		3.1°/26.8 18'		
2 21	12 58.37	-10 30.4	1.749	2.537	16.3	20.6	2 21	13 1.91	+ 4 41.8	2.523	3.324	11.5	19.1
3 2	12 55.50	-10 37.6	1.643	2.517	13.2	20.4	3 2	12 57.11	+ 5 18.2	2.436	3.324	8.9	18.9
3 12	12 50.14	-10 28.0	1.558	2.497	9.5	20.1	3 12	12 50.55	+ 5 58.6	2.375	3.324	6.0	18.8
3 22	12 42.75	-10 2.3	1.497	2.477	5.3	19.8	3 22	12 42.71	+ 6 38.6	2.342	3.323	3.5	18.6
4 1	12 34.18	- 9 23.6	1.462	2.458	2.1	19.5	4 1	12 34.25	+ 7 13.5	2.338	3.322	3.6	18.6
4 11	12 25.56	- 8 37.5	1.453	2.440	5.4	19.7	4 11	12 25.97	+ 7 38.9	2.364	3.320	6.1	18.8
4 21	12 17.99	- 7 50.8	1.470	2.422	9.9	19.9	4 21	12 18.55	+ 7 51.9	2.417	3.318	9.0	18.9
5 1	12 12.42	- 7 10.6	1.511	2.404	14.1	20.1	5 1	12 12.58	+ 7 51.1	2.495	3.315	11.7	19.1
414757	2010 <i>GH</i> ₁₃₀	3 30.2 281°36'		1.0°/29.6 14 C			431786	2008 <i>OY</i> ₁₉	3 30.3 174°84'		4.2°/ 3.9 17'		
2 21	13 5.16	- 2 33.7	1.500	2.311	17.5	22.0	2 21	13 3.25	-18 53.2	2.590	3.301	13.5	21.6
3 2	13 1.33	- 2 29.7	1.396	2.288	13.9	21.7	3 2	12 58.31	-19 16.8	2.490	3.304	11.3	21.3
3 12	12 54.41	- 2 13.4	1.312	2.264	9.5	21.4	3 12	12 51.46	-19 24.9	2.411	3.306	8.8	21.3
3 22	12 44.87	- 1 47.9	1.252	2.240	4.4	21.0	3 22	12 43.18	-19 16.8	2.357	3.308	6.1	21.1
4 1	12 33.71	- 1 18.6	1.218	2.216	1.7	20.8	4 1	12 34.15	-18 53.4	2.332	3.309	4.3	21.0
4 11	12 22.38	- 0 52.5	1.210	2.191	7.2	21.0	4 11	12 25.19	-18 17.6	2.336	3.309	4.9	21.1
4 21	12 12.32	- 0 36.0	1.228	2.167	12.6	21.3	4 21	12 17.10	-17 34.2	2.368	3.309	7.2	21.2
5 1	12 4.74	- 0 34.2	1.267	2.142	17.4	21.5	5 1	12 10.53	-16 48.4	2.427	3.308	9.9	21.4
278662	2008 <i>RU</i> ₆₈	3 30.2 123°51'		2.1°/28.2 17'			20765	2000 <i>JC</i> ₄₀	3 30.3 8°30'		7.1°/ 6.5 18'		
2 21	13 0.92	+ 0 23.0	2.058	2.864	13.5	20.8	2 21	12 57.72	-25 8.1	1.740	2.458	18.9	17.0
3 2	12 56.72	+ 0 54.4	1.978	2.869	10.5	20.6	3 2	12 55.03	-25 24.4	1.649	2.458	16.3	16.8
3 12	12 50.46	+ 1 33.6	1.921	2.874	6.9	20.4	3 12	12 49.79	-25 12.6	1.575	2.458	13.3	16.6
3 22	12 42.70	+ 2 16.3	1.891	2.878	3.3	20.2	3 22	12 42.55	-24 30.3	1.522	2.459	10.0	16.4
4 1	12 34.24	+ 2 57.0	1.889	2.883	2.7	20.2	4 1	12 34.27	-23 18.5	1.493	2.460	7.6	16.3
4 11	12 26.01	+ 3 30.3	1.916	2.887	6.0	20.4	4 11	12 26.16	-21 43.2	1.489	2.460	7.4	16.3
4 21	12 18.83	+ 3 52.1	1.969	2.891	9.6	20.6	4 21	12 19.31	-19 53.8	1.512	2.461	9.8	16.4
5 1	12 13.37	+ 3 59.8	2.047	2.895	12.8	20.8	5 1	12 14.61	-18 1.9	1.558	2.463	13.0	16.6
183585	2003 <i>SZ</i> ₂₀₁	3 30.2 205°40'		2.4°/27.9 18'			223504	2004 <i>BK</i> ₁₁₅	3 30.3 337°81'		2.0°/31.6 18'		
2 21	13 3.28	+ 0 2.6	2.016	2.818	13.9	21.3	2 21	13 0.06	- 8 41.0	1.402	2.209	18.7	19.4
3 2	12 58.72	+ 0 45.5	1.924	2.813	10.8	21.0	3 2	12 57.29	- 9 0.3	1.315	2.201	15.0	19.1
3 12	12 51.93	+ 1 38.2	1.856	2.807	7.2	20.8	3 12	12 51.57	- 9 2.6	1.247	2.192	10.6	18.9
3 22	12 43.44	+ 2 35.6	1.814	2.801	3.5	20.6	3 22	12 43.48	- 8 48.8	1.202	2.185	5.7	18.5
4 1	12 34.08	+ 3 31.7	1.801	2.794	3.0	20.5	4 1	12 34.06	- 8 22.2	1.181	2.178	2.0	18.3
4 11	12 24.85	+ 4 19.7	1.817	2.786	6.5	20.7	4 11	12 24.74	- 7 49.4	1.185	2.172	6.1	18.5
4 21	12 16.68	+ 4 54.7	1.860	2.777	10.4	20.9	4 21	12 16.84	- 7 17.7	1.214	2.167	11.2	18.8
5 1	12 10.34	+ 5 13.5	1.927	2.768	13.8	21.1	5 1	12 11.42	- 6 54.1	1.264	2.163	15.8	19.0
308767	2006 <i>OO</i> ₈	3 30.3 169°32'		8.6°/18.8 17'			119660						

EPHEMERIDES

3 30.3

3 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
362671	2011 <i>UT</i> ₄₇		3 30.3 337°29	3°2/ 1.8	18		422419	2014 <i>SN</i> ₂₈₃		3 30.3 234°05	1°4/31.4	16	
2 21	12 58.27	-13 42.5	1.380	2.173	19.6	20.4	2 21	13 3.82	-9 0.5	1.811	2.591	16.1	22.2
3 2	12 55.91	-13 39.8	1.295	2.169	16.0	20.1	3 2	12 59.59	-8 59.6	1.711	2.582	12.9	22.0
3 12	12 50.63	-13 12.1	1.229	2.166	11.7	19.8	3 12	12 52.80	-8 43.0	1.632	2.571	9.1	21.7
3 22	12 43.02	-12 20.1	1.184	2.162	6.8	19.6	3 22	12 43.97	-8 12.2	1.578	2.560	4.7	21.4
4 1	12 34.17	-11 8.1	1.164	2.159	3.2	19.3	4 1	12 34.01	-7 30.8	1.551	2.549	1.4	21.2
4 11	12 25.48	-9 45.4	1.169	2.157	6.1	19.5	4 11	12 24.07	-6 44.8	1.552	2.537	5.3	21.4
4 21	12 18.25	-8 22.7	1.198	2.155	11.0	19.7	4 21	12 15.28	-6 0.7	1.580	2.525	9.9	21.6
5 1	12 13.50	-7 10.3	1.250	2.153	15.7	20.0	5 1	12 8.55	-5 24.8	1.633	2.512	13.9	21.9
71190	1999 <i>XO</i> ₂₂₉		3 30.3 67°60	1°1/31.2	18		176552	2002 <i>AG</i> ₁₂₅		3 30.3 291°94	10°8/ 8.8	18	
2 21	13 2.94	-7 27.8	1.893	2.678	15.4	18.8	2 21	13 9.78	-35 32.6	2.553	3.138	16.2	19.3
3 2	12 58.46	-7 35.5	1.817	2.691	12.1	18.6	3 2	13 4.37	-37 24.8	2.440	3.124	14.9	19.1
3 12	12 51.71	-7 30.5	1.762	2.704	8.4	18.4	3 12	12 56.22	-38 59.6	2.345	3.110	13.5	19.0
3 22	12 43.31	-7 14.5	1.733	2.717	4.2	18.1	3 22	12 45.71	-40 11.1	2.272	3.097	12.1	18.9
4 1	12 34.14	-6 51.2	1.732	2.730	1.1	17.9	4 1	12 33.60	-40 54.2	2.221	3.083	11.1	18.8
4 11	12 25.25	-6 25.5	1.758	2.743	4.8	18.2	4 11	12 21.06	-41 7.4	2.196	3.070	10.9	18.7
4 21	12 17.58	-6 2.3	1.812	2.756	8.8	18.5	4 21	12 9.33	-40 52.8	2.195	3.056	11.5	18.7
5 1	12 11.84	-5 45.9	1.890	2.770	12.3	18.7	5 1	11 59.53	-40 16.2	2.217	3.043	12.8	18.8
500029	2011 <i>SW</i> ₃₉		3 30.3 114°60	2°3/ 1.7	17		64683	2001 <i>XA</i> ₇₂		3 30.3 122°67	5°6/22.6	18	
2 21	13 1.80	-11 59.7	2.544	3.294	12.8	21.6	2 21	12 58.47	+13 42.8	2.621	3.436	10.7	19.5
3 2	12 57.09	-12 18.7	2.453	3.301	10.3	21.4	3 2	12 54.35	+14 55.9	2.560	3.448	8.5	19.4
3 12	12 50.57	-12 25.8	2.384	3.308	7.5	21.2	3 12	12 48.63	+16 7.4	2.524	3.459	6.5	19.3
3 22	12 42.74	-12 21.5	2.342	3.315	4.4	21.0	3 22	12 41.81	+17 11.3	2.517	3.470	5.6	19.3
4 1	12 34.25	-12 7.5	2.329	3.322	2.4	20.9	4 1	12 34.51	+18 2.1	2.537	3.481	6.3	19.3
4 11	12 25.91	-11 47.1	2.346	3.329	4.0	21.0	4 11	12 27.44	+18 35.7	2.586	3.492	8.2	19.4
4 21	12 18.42	-11 24.2	2.391	3.335	7.0	21.2	4 21	12 21.24	+18 50.6	2.659	3.502	10.3	19.6
5 1	12 12.40	-11 2.7	2.463	3.342	9.9	21.4	5 1	12 16.39	+18 46.6	2.755	3.512	12.3	19.8
33965	2000 <i>NY</i> ₁₀		3 30.3 252°58	0°7/29.6	18		293542	2007 <i>HR</i> ₈		3 30.3 281°13	0°7/30.9	17	
2 21	13 0.68	-4 23.8	2.003	2.798	14.3	19.2	2 21	12 59.83	-7 48.8	1.879	2.669	15.3	21.5
3 2	12 56.83	-3 57.8	1.902	2.785	11.2	19.0	3 2	12 56.29	-7 38.0	1.784	2.662	12.1	21.3
3 12	12 50.76	-3 19.4	1.823	2.772	7.5	18.8	3 12	12 50.45	-7 12.4	1.711	2.654	8.4	21.1
3 22	12 42.96	-2 31.6	1.771	2.758	3.4	18.5	3 22	12 42.83	-6 34.2	1.662	2.647	4.1	20.8
4 1	12 34.21	-1 39.7	1.746	2.744	1.3	18.3	4 1	12 34.27	-5 47.9	1.642	2.640	0.9	20.5
4 11	12 25.51	-0 49.9	1.750	2.730	5.5	18.5	4 11	12 25.81	-4 59.5	1.649	2.633	5.1	20.8
4 21	12 17.79	-0 7.9	1.781	2.716	9.7	18.8	4 21	12 18.42	-4 15.2	1.682	2.626	9.4	21.0
5 1	12 11.85	+0 21.5	1.837	2.701	13.4	19.0	5 1	12 12.89	-3 40.6	1.740	2.619	13.2	21.3
360768	2005 <i>BQ</i> ₄₀		3 30.3 133°51	4°5/26.1	18		341216	2007 <i>RB</i> ₁₂₈		3 30.3 170°48	0°6/29.6	17	
2 21	13 1.86	+3 50.5	1.686	2.509	15.3	21.1	2 21	12 59.33	-4 9.6	2.386	3.175	12.4	21.9
3 2	12 57.88	+5 3.0	1.617	2.517	11.8	20.9	3 2	12 55.26	-3 44.5	2.297	3.177	9.7	21.7
3 12	12 51.44	+6 23.6	1.570	2.524	8.0	20.7	3 12	12 49.40	-3 9.6	2.231	3.178	6.5	21.5
3 22	12 43.22	+7 44.6	1.549	2.531	4.9	20.5	3 22	12 42.23	-2 27.8	2.192	3.180	2.9	21.3
4 1	12 34.18	+8 56.8	1.556	2.538	5.3	20.5	4 1	12 34.42	-1 43.4	2.183	3.181	1.1	21.2
4 11	12 25.47	+9 52.3	1.589	2.544	8.7	20.7	4 11	12 26.76	-1 1.4	2.202	3.181	4.6	21.4
4 21	12 18.09	+10 26.5	1.648	2.550	12.4	21.0	4 21	12 19.97	-0 26.1	2.250	3.182	8.1	21.6
5 1	12 12.78	+10 37.6	1.728	2.556	15.7	21.2	5 1	12 14.64	-0 0.9	2.323	3.182	11.1	21.8
211901	2004 <i>JE</i> ₅₅		3 30.3 306°10	0°3/30.5	17		341714	2007 <i>VS</i> ₁₉₁		3 30.3 111°64	5°1/ 5.8	18	
2 21	12 57.75	-6 27.5	2.086	2.878	13.9	20.9	2 21	12 59.61	-23 27.9	2.666	3.354	13.6	20.8
3 2	12 54.48	-6 15.1	1.982	2.862	11.0	20.7	3 2	12 55.42	-23 44.9	2.577	3.368	11.6	20.7
3 12	12 49.15	-5 50.1	1.901	2.846	7.5	20.4	3 12	12 49.47	-23 44.0	2.508	3.382	9.3	20.6
3 22	12 42.20	-5 14.8	1.845	2.831	3.6	20.1	3 22	12 42.25	-23 24.4	2.464	3.396	7.0	20.4
4 1	12 34.37	-4 33.1	1.817	2.816	0.7	19.9	4 1	12 34.42	-22 47.3	2.446	3.409	5.3	20.3
4 11	12 26.57	-3 50.6	1.817	2.801	4.9	20.1	4 11	12 26.76	-21 56.2	2.457	3.422	5.3	20.4
4 21	12 19.67	-3 12.5	1.844	2.786	8.9	20.4	4 21	12 19.98	-20 56.0	2.496	3.435	7.0	20.5
5 1	12 14.40	-2 43.7	1.896	2.772	12.5	20.5	5 1	12 14.63	-19 52.5	2.562	3.448	9.3	20.6
418967	2009 <i>HE</i> ₂₉		3 30.3 246°10	2°4/28.3	17		407675	2011 <i>UG</i> ₂₇		3 30.3 99°90	0°9/31.1	18	
2 21	13 4.51	+0 42.4	1.826	2.633	15.0	21.5	2 21	13 0.36	-10 21.2	1.558	2.351	17.7	21.5
3 2	13 0.04	+1 8.8	1.729	2.620	11.7	21.3	3 2	12 56.98	-9 44.0	1.483	2.361	14.1	21.3
3 12	12 53.05	+1 44.3	1.654	2.606	7.9	21.0	3 12	12 51.00	-8 45.4	1.427	2.371	9.7	21.1
3 22	12 44.06	+2 24.2	1.605	2.592	3.8	20.8	3 22	12 43.08	-7 29.0	1.396	2.381	4.8	20.8
4 1	12 33.98	+3 2.4	1.584	2.578	3.0	20.7	4 1	12 34.26	-6 1.9	1.392	2.390	1.0	20.6
4 11	12 23.96	+3 32.7	1.591	2.563	7.0	20.9	4 11	12 25.76	-4 33.8	1.414	2.400	5.7	20.9
4 21	12 15.07	+3 50.0	1.624	2.547	11.2	21.1	4 21	12 18.67	-3 14.0	1.463	2.409	10.4	21.2
5 1	12 8.23	+3 51.4	1.681	2.532	15.0	21.3	5 1	12 13.77	-2 9.6	1.535	2.418	14.5	21.5
314211	2005 <i>MX</i> ₅₂		3 30.3 286°65	19°7/ 5.4	18		434439	2005 <i>NX</i> ₃₇		3 30.3 285°34	6°3/21.9	17	
2 21	12 58.74	+30 19.2	1.033	1.883	20.9	20.0	2 21	12 56.08	+12 3.8	2.234	3.061	11.9	21.1
3 2	12 57.71	+34 30.7	0.998	1.871	19.8	19.9	3 2	12 52.99	+13 38.0	2.153	3.050	9.5	20.9
3 12	12 52.61	+38 20.4	0.984	1.859	20.0	19.8	3 12	12 48.02	+15 14.2	2.097	3.038	7.3	20.8
3 22	12 44.16	+41 24.2	0.989	1.847	21.5	19.9	3 22	12 41.65	+16 44.7	2.068	3.026	6.3	20.7
4 1	12 33.95	+43 23.9	1.010	1.836	23.8	20.0	4 1	12 34.55	+18 1.7	2.067	3.014	7.3	20.7
4 11	12 24.13	+44 13.4	1.045	1.824	26.4	20.1	4 11	12 27.57	+18 58.8	2.093	3.002	9.6	20.8
4 21	12 16.59	+43 57.3	1.090	1.813	28.8	20.2	4 21	12 21.47	+19 32.6	2.142	2.991	12.2	21.0
5 1	12 12.58	+42 45.3	1.142	1.802	30.8	20.4	5 1	12 16.88	+19 42.5	2.213	2.979	14.6	21.1
51962	2001 <i>QH</i> ₂₆₇		3 30.3 330°57	4°6/ 8.3	18		5509	Rennsteig		3 30.3 284°22	0°1/30.3	18	
2 21	12 53.17	-28 5											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
305281	2007 YR ₆₅		3 30.3 222°55	4.3/ 4.0	18		77949	2002 GM ₁₃₂		3 30.3 172°94	0.8/30.9	18	
2 21	13 0.36	-18 55.6	2.587	3.303	13.4	21.5	2 21	13 3.97	- 8 10.7	1.931	2.710	15.3	20.3
3 2	12 56.15	-19 22.3	2.483	3.300	11.2	21.4	3 2	12 59.37	- 7 57.9	1.842	2.713	12.1	20.1
3 12	12 50.08	-19 33.8	2.400	3.296	8.8	21.2	3 12	12 52.43	- 7 30.3	1.775	2.716	8.4	19.9
3 22	12 42.60	-19 29.3	2.341	3.291	6.2	21.0	3 22	12 43.73	- 6 50.4	1.733	2.717	4.1	19.6
4 1	12 34.36	-19 9.5	2.311	3.287	4.4	20.9	4 1	12 34.15	- 6 2.5	1.720	2.719	0.9	19.4
4 11	12 26.15	-18 37.4	2.309	3.283	4.9	20.9	4 11	12 24.74	- 5 12.6	1.736	2.719	5.0	19.7
4 21	12 18.75	-17 57.1	2.335	3.278	7.2	21.0	4 21	12 16.49	- 4 26.8	1.778	2.719	9.2	19.9
5 1	12 12.79	-17 14.1	2.388	3.273	9.9	21.2	5 1	12 10.17	- 3 50.6	1.846	2.719	12.9	20.2
298857	2004 RN ₂₅₀		3 30.3 112°69	1.2/31.3	18		48072	2001 FB ₁₁		3 30.3 290°27	1.0/30.9	18	
2 21	13 6.55	- 9 6.3	1.757	2.534	16.7	21.9	2 21	13 3.42	- 6 44.1	1.607	2.404	17.1	18.9
3 2	13 1.39	- 8 59.2	1.686	2.554	13.2	21.7	3 2	12 59.68	- 6 57.3	1.507	2.388	13.7	18.7
3 12	12 53.73	- 8 35.9	1.635	2.574	9.1	21.5	3 12	12 53.12	- 6 56.8	1.427	2.372	9.6	18.4
3 22	12 44.27	- 7 59.0	1.610	2.593	4.6	21.3	3 22	12 44.24	- 6 43.8	1.372	2.357	4.8	18.1
4 1	12 34.03	- 7 13.1	1.613	2.611	1.3	21.1	4 1	12 34.01	- 6 21.9	1.342	2.341	1.2	17.8
4 11	12 24.19	- 6 24.7	1.644	2.629	5.2	21.4	4 11	12 23.74	- 5 56.5	1.340	2.325	5.9	18.0
4 21	12 15.76	- 5 40.2	1.703	2.645	9.4	21.7	4 21	12 14.69	- 5 33.9	1.363	2.310	10.9	18.3
5 1	12 9.49	- 5 5.0	1.785	2.662	13.1	21.9	5 1	12 7.93	- 5 19.6	1.408	2.294	15.4	18.5
30723	1978 RU ₈		3 30.3 149°25	1.7/27.9	18		512977	2017 UY ₈		3 30.3 228°56	1.2/28.9	18	
2 21	12 56.81	- 1 3.4	2.841	3.635	10.5	19.7	2 21	13 3.09	- 1 21.4	2.577	3.362	11.7	22.5
3 2	12 52.97	- 0 9.6	2.758	3.643	8.1	19.6	3 2	12 58.17	- 0 59.4	2.469	3.348	9.2	22.3
3 12	12 47.70	+ 0 51.7	2.701	3.651	5.3	19.4	3 12	12 51.39	- 0 29.7	2.386	3.333	6.1	22.1
3 22	12 41.40	+ 1 56.7	2.671	3.658	2.5	19.2	3 22	12 43.21	+ 0 4.7	2.330	3.317	2.8	21.8
4 1	12 34.64	+ 3 0.7	2.672	3.665	2.1	19.2	4 1	12 34.26	+ 0 39.8	2.305	3.301	1.7	21.7
4 11	12 28.03	+ 3 58.8	2.704	3.671	4.7	19.4	4 11	12 25.34	+ 1 11.2	2.310	3.284	4.9	21.9
4 21	12 22.14	+ 4 47.4	2.764	3.677	7.5	19.6	4 21	12 17.20	+ 1 35.2	2.344	3.266	8.3	22.1
5 1	12 17.43	+ 5 23.6	2.849	3.683	10.0	19.8	5 1	12 10.47	+ 1 48.8	2.403	3.247	11.3	22.3
58750	1998 FY ₁₀		3 30.3 231°16	0.4/29.9	18		224529	2005 WP ₉₉		3 30.3 210°53	0.4/29.9	17	
2 21	13 0.49	- 4 52.8	1.993	2.788	14.3	19.4	2 21	13 0.36	- 5 34.8	2.130	2.918	13.7	21.2
3 2	12 56.62	- 4 31.0	1.901	2.784	11.2	19.2	3 2	12 56.38	- 5 5.3	2.035	2.914	10.8	20.9
3 12	12 50.57	- 3 56.8	1.831	2.779	7.6	19.0	3 12	12 50.34	- 4 22.9	1.963	2.909	7.3	20.7
3 22	12 42.87	- 3 13.5	1.787	2.774	3.5	18.7	3 22	12 42.75	- 3 31.1	1.917	2.904	3.3	20.5
4 1	12 34.31	- 2 26.0	1.771	2.770	1.0	18.5	4 1	12 34.37	- 2 34.6	1.900	2.898	0.9	20.3
4 11	12 25.89	- 1 40.2	1.784	2.765	5.3	18.8	4 11	12 26.09	- 1 39.6	1.912	2.892	5.0	20.5
4 21	12 18.49	- 1 1.7	1.823	2.759	9.3	19.0	4 21	12 18.78	- 0 51.7	1.951	2.886	8.9	20.8
5 1	12 12.87	- 0 34.9	1.886	2.754	12.9	19.2	5 1	12 13.13	- 0 15.3	2.015	2.879	12.4	21.0
369359	2009 UE ₆		3 30.3 223°46	3.4/ 2.0	17		64471	2001 VL ₄₂		3 30.3 188°06	0.4/29.9	17	
2 21	13 3.64	-13 16.2	1.875	2.636	16.3	20.8	2 21	13 1.23	- 5 18.1	2.159	2.946	13.6	20.4
3 2	12 59.36	-13 41.2	1.780	2.633	13.4	20.6	3 2	12 56.98	- 4 52.2	2.068	2.946	10.7	20.2
3 12	12 52.59	-13 49.8	1.705	2.630	9.8	20.4	3 12	12 50.70	- 4 14.3	1.999	2.945	7.2	20.0
3 22	12 43.87	-13 41.8	1.655	2.627	6.1	20.2	3 22	12 42.90	- 3 27.6	1.957	2.944	3.3	19.7
4 1	12 34.09	-13 18.7	1.631	2.623	3.4	20.0	4 1	12 34.34	- 2 36.8	1.943	2.942	0.9	19.5
4 11	12 24.40	-12 45.2	1.636	2.619	5.3	20.1	4 11	12 25.92	- 1 47.5	1.959	2.940	4.9	19.8
4 21	12 15.84	-12 7.0	1.667	2.615	9.1	20.3	4 21	12 18.48	- 1 5.1	2.003	2.937	8.8	20.0
5 1	12 9.31	-11 30.8	1.723	2.611	12.9	20.5	5 1	12 12.70	- 0 33.6	2.071	2.934	12.1	20.2
122268	2000 OF ₅₇		3 30.3 217°32	1.4/31.6	18		217929	2001 TT ₂₂		3 30.3 179°96	0.8/31.1	17	
2 21	13 1.60	- 9 48.2	2.174	2.943	14.1	20.3	2 21	13 1.27	- 8 54.8	2.280	3.050	13.5	21.3
3 2	12 57.36	- 9 41.5	2.073	2.937	11.3	20.1	3 2	12 56.92	- 8 33.1	2.185	3.052	10.7	21.1
3 12	12 51.02	- 9 20.5	1.995	2.930	7.9	19.9	3 12	12 50.61	- 7 57.6	2.114	3.052	7.4	20.9
3 22	12 43.08	- 8 47.0	1.942	2.923	4.2	19.6	3 22	12 42.84	- 7 10.6	2.070	3.053	3.7	20.7
4 1	12 34.27	- 8 4.2	1.918	2.915	1.4	19.4	4 1	12 34.35	- 6 16.3	2.054	3.052	0.9	20.4
4 11	12 25.53	- 7 17.2	1.923	2.907	4.5	19.6	4 11	12 26.00	- 5 20.1	2.068	3.052	4.4	20.7
4 21	12 17.74	- 6 31.5	1.955	2.899	8.3	19.8	4 21	12 18.59	- 4 27.4	2.110	3.050	8.0	20.9
5 1	12 11.63	- 5 52.5	2.014	2.890	11.8	20.0	5 1	12 12.77	- 3 43.2	2.178	3.048	11.3	21.1
384199	2009 BK ₁₅₀		3 30.3 8°73	1.4/31.6	17		11105	Puchnarová		3 30.3 178°88	1.9/ 1.6	18	
2 21	12 57.98	- 9 29.3	1.991	2.775	14.7	20.9	2 21	13 0.58	-12 56.4	2.681	3.426	12.3	19.9
3 2	12 54.66	- 9 25.7	1.903	2.776	11.7	20.7	3 2	12 56.10	-12 43.6	2.582	3.428	9.9	19.7
3 12	12 49.23	- 9 7.5	1.837	2.777	8.2	20.5	3 12	12 49.92	-12 17.0	2.505	3.429	7.1	19.5
3 22	12 42.24	- 8 36.5	1.796	2.778	4.3	20.3	3 22	12 42.49	-11 38.0	2.455	3.430	4.1	19.3
4 1	12 34.45	- 7 56.4	1.783	2.780	1.4	20.1	4 1	12 34.43	-10 49.3	2.435	3.430	1.9	19.1
4 11	12 26.83	- 7 12.7	1.797	2.783	4.6	20.3	4 11	12 26.49	- 9 55.2	2.445	3.429	3.8	19.3
4 21	12 20.23	- 6 31.1	1.838	2.785	8.5	20.5	4 21	12 19.34	- 9 0.6	2.485	3.428	6.8	19.5
5 1	12 15.35	- 5 56.6	1.903	2.788	12.0	20.7	5 1	12 13.55	- 8 10.2	2.551	3.426	9.7	19.6
225523	2000 RN ₁₆		3 30.3 210°01	3.8/ 3.0	17		409862	2006 SL ₁₇₉		3 30.3 118°23	0.8/29.6	18	
2 21	13 1.49	-16 31.7	2.163	2.903	15.0	20.8	2 21	13 2.45	- 3 57.9	1.748	2.550	15.8	21.7
3 2	12 57.37	-16 44.6	2.062	2.899	12.5	20.6	3 2	12 58.33	- 3 33.9	1.669	2.556	12.3	21.5
3 12	12 51.08	-16 39.9	1.982	2.894	9.4	20.4	3 12	12 51.78	- 2 57.0	1.613	2.563	8.2	21.3
3 22	12 43.12	-16 17.4	1.926	2.890	6.2	20.2	3 22	12 43.44	- 2 11.3	1.581	2.569	3.7	21.0
4 1	12 34.26	-15 38.8	1.898	2.885	3.9	20.1	4 1	12 34.24	- 1 22.8	1.578	2.576	1.4	20.8
4 11	12 25.47	-14 48.5	1.898	2.879	5.0	20.1	4 11	12 25.31	- 0 38.0	1.601	2.581	5.9	21.1
4 21	12 17.65	-13 52.4	1.926	2.873	8.2	20.3	4 21	12 17.65	- 0 2.9	1.652	2.587	10.2	21.4
5 1	12 11.57	-12 57.2	1.979	2.867	11.5	20.5	5 1	12 12.02	+ 0 18.5	1.725	2.593	13.9	21.6
498771	2008 UE ₈₄		3 30.3 221°07	1.3/31.6	17		165992	2001 YY ₁₅₆		3 30.3 217°18	2.7/ 1.7	18	
2 21	12 59.48	-10 0.0	2.240	3.011	1								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
353326	2010 LR ₉₂		3 30.3 295°93	3°1/ 1.9	16		264545	2001 SQ ₁₂₃		3 30.3 173°96	0°1/30.4	16	
2 21	13 2.66	-12 25.6	2.304	3.057	13.9	20.6	2 21	13 0.86	-7 28.6	2.386	3.160	12.9	22.5
3 2	12 58.32	-12 58.9	2.183	3.032	11.4	20.4	3 2	12 56.48	-6 52.9	2.293	3.163	10.1	22.4
3 12	12 51.81	-13 20.4	2.084	3.006	8.5	20.2	3 12	12 50.26	-6 4.2	2.224	3.166	6.8	22.1
3 22	12 43.54	-13 29.5	2.011	2.981	5.3	19.9	3 22	12 42.68	-5 5.6	2.183	3.168	3.2	21.9
4 1	12 34.19	-13 26.9	1.965	2.956	3.1	19.7	4 1	12 34.45	-4 1.5	2.171	3.170	0.6	21.7
4 11	12 24.68	-13 15.2	1.949	2.931	4.8	19.8	4 11	12 26.37	-2 57.8	2.189	3.170	4.4	22.0
4 21	12 15.95	-12 58.3	1.961	2.906	8.2	20.0	4 21	12 19.18	-1 59.9	2.236	3.170	8.0	22.2
5 1	12 8.81	-12 40.8	1.998	2.881	11.6	20.1	5 1	12 13.50	-1 12.2	2.308	3.170	11.1	22.4
431863	2008 SF ₁₁₄		3 30.3 177°72	2°1/28.0	17		326957	2004 GF ₃₄		3 30.3 328°53	6°7/ 4.1	17	
2 21	13 0.75	+0 28.1	2.334	3.134	12.3	22.1	2 21	12 59.48	-18 38.6	1.497	2.260	19.7	20.3
3 2	12 56.40	+1 4.1	2.248	3.135	9.5	21.9	3 2	12 56.97	-19 33.7	1.402	2.247	16.7	20.1
3 12	12 50.20	+1 47.6	2.185	3.136	6.3	21.7	3 12	12 51.50	-20 7.0	1.324	2.236	13.2	19.8
3 22	12 42.63	+2 34.2	2.150	3.137	3.1	21.5	3 22	12 43.59	-20 15.0	1.268	2.224	9.5	19.6
4 1	12 34.42	+3 19.1	2.144	3.137	2.6	21.4	4 1	12 34.22	-19 56.8	1.235	2.214	6.9	19.4
4 11	12 26.37	+3 57.0	2.168	3.137	5.6	21.6	4 11	12 24.79	-19 16.3	1.226	2.204	7.7	19.4
4 21	12 19.24	+4 24.3	2.219	3.136	8.9	21.8	4 21	12 16.67	-18 21.0	1.241	2.195	11.1	19.6
5 1	12 13.62	+4 38.2	2.295	3.135	11.9	22.0	5 1	12 11.02	-17 20.9	1.278	2.186	15.0	19.8
329394	2001 YO ₂₅		3 30.3 131°97	5°7/24.4	18		63682	2001 QZ ₁₄₇		3 30.3 176°37	4°4/25.9	18	
2 21	13 4.13	+11 30.6	2.158	2.971	12.8	21.5	2 21	13 5.20	+8 15.0	2.263	3.068	12.5	19.3
3 2	12 59.03	+12 30.6	2.095	2.984	10.0	21.3	3 2	12 59.88	+8 55.9	2.183	3.071	9.8	19.1
3 12	12 51.92	+13 30.1	2.056	2.996	7.4	21.2	3 12	12 52.54	+9 38.7	2.127	3.072	6.9	18.9
3 22	12 43.39	+14 22.3	2.044	3.008	5.8	21.1	3 22	12 43.73	+10 17.8	2.099	3.074	4.6	18.7
4 1	12 34.28	+15 1.1	2.060	3.020	6.4	21.2	4 1	12 34.24	+10 47.7	2.100	3.074	5.0	18.8
4 11	12 25.50	+15 21.8	2.104	3.031	8.7	21.3	4 11	12 24.98	+11 3.9	2.129	3.074	7.5	18.9
4 21	12 17.87	+15 22.7	2.174	3.041	11.3	21.5	4 21	12 16.76	+11 4.0	2.186	3.074	10.4	19.1
5 1	12 11.98	+15 4.3	2.265	3.051	13.8	21.7	5 1	12 10.24	+10 47.5	2.266	3.073	13.1	19.3
100458	1996 TP ₃		3 30.3 138°15	3°5/ 1.9	18		91595	1999 TZ ₉		3 30.3 91°51	1°3/29.0	18	
2 21	13 13.08	-12 51.3	2.057	2.793	15.8	20.3	2 21	13 1.71	-2 25.8	2.066	2.863	13.8	19.9
3 2	13 6.33	-13 35.3	1.970	2.808	12.9	20.1	3 2	12 57.23	-1 54.4	1.998	2.883	10.7	19.7
3 12	12 57.05	-14 5.4	1.905	2.821	9.5	19.9	3 12	12 50.75	-1 13.3	1.952	2.902	7.0	19.5
3 22	12 45.87	-14 20.7	1.866	2.834	5.9	19.7	3 22	12 42.88	-0 26.8	1.934	2.922	3.2	19.3
4 1	12 33.75	-14 21.8	1.857	2.847	3.5	19.6	4 1	12 34.43	+0 19.9	1.944	2.941	1.8	19.2
4 11	12 21.86	-14 11.9	1.879	2.858	5.2	19.7	4 11	12 26.31	+1 1.1	1.983	2.960	5.4	19.5
4 21	12 11.25	-13 55.6	1.929	2.868	8.7	19.9	4 21	12 19.30	+1 32.5	2.050	2.978	8.9	19.7
5 1	12 2.76	-13 38.4	2.005	2.878	12.0	20.1	5 1	12 14.01	+1 51.2	2.141	2.996	12.1	20.0
357512	2004 RQ ₃₂		3 30.3 171°82	2°8/27.4	18		128861	2004 SK ₃₀		3 30.3 189°94	0°3/29.9	18	
2 21	13 3.42	+0 17.3	2.015	2.817	13.9	22.5	2 21	13 2.66	-6 14.1	1.739	2.534	16.1	20.4
3 2	12 58.76	+1 19.9	1.933	2.822	10.8	22.3	3 2	12 58.64	-5 41.5	1.651	2.534	12.7	20.2
3 12	12 51.92	+2 32.6	1.875	2.826	7.1	22.0	3 12	12 52.11	-4 52.8	1.585	2.533	8.6	19.9
3 22	12 43.47	+3 49.6	1.843	2.829	3.7	21.8	3 22	12 43.67	-3 51.8	1.544	2.531	3.9	19.6
4 1	12 34.25	+5 3.7	1.841	2.831	3.4	21.8	4 1	12 34.25	-2 44.7	1.531	2.529	1.0	19.4
4 11	12 25.26	+6 7.5	1.869	2.833	6.8	22.0	4 11	12 25.01	-1 39.4	1.545	2.527	5.9	19.7
4 21	12 17.38	+6 55.8	1.923	2.833	10.5	22.2	4 21	12 17.00	-0 43.2	1.586	2.523	10.4	20.0
5 1	12 11.31	+7 25.7	2.000	2.832	13.7	22.5	5 1	12 11.06	-0 1.5	1.650	2.520	14.3	20.2
505209	2012 TK ₂₄₄		3 30.3 270°10	0°6/30.9	17		280272	2003 BF ₂₈		3 30.3 105°79	10°0/17.9	18	
2 21	12 56.03	-10 19.7	2.208	2.986	13.7	21.6	2 21	12 59.66	+19 53.5	1.815	2.644	14.1	19.8
3 2	12 53.05	-9 31.1	2.101	2.971	10.9	21.4	3 2	12 56.15	+22 9.8	1.769	2.653	11.9	19.7
3 12	12 48.14	-8 24.7	2.016	2.957	7.5	21.1	3 12	12 50.29	+24 19.3	1.746	2.661	10.3	19.6
3 22	12 41.77	-7 3.2	1.958	2.942	3.7	20.9	3 22	12 42.75	+26 10.7	1.749	2.669	10.2	19.6
4 1	12 34.60	-5 31.9	1.928	2.927	0.7	20.6	4 1	12 34.46	+27 34.2	1.777	2.677	11.5	19.7
4 11	12 27.48	-3 58.1	1.928	2.912	4.6	20.8	4 11	12 26.52	+28 24.4	1.829	2.684	13.5	19.8
4 21	12 21.20	-2 29.2	1.956	2.897	8.5	21.1	4 21	12 19.87	+28 40.4	1.901	2.692	15.8	20.0
5 1	12 16.44	-1 11.8	2.009	2.882	12.0	21.2	5 1	12 15.20	+28 25.0	1.991	2.699	17.8	20.2
85967	1999 GK ₁		3 30.3 353°33	7°1/24.8	18		467435	2005 YM ₁₆₆		3 30.3 355°32	7°6/22.1	17	
2 21	13 5.56	+13 7.4	1.680	2.505	15.3	18.4	2 21	12 57.46	+11 51.3	1.710	2.548	14.4	20.8
3 2	13 0.88	+13 51.3	1.609	2.504	12.2	18.2	3 2	12 54.57	+13 33.9	1.645	2.547	11.5	20.6
3 12	12 53.56	+14 33.0	1.561	2.503	9.2	18.0	3 12	12 49.33	+15 18.3	1.602	2.546	8.8	20.5
3 22	12 44.28	+15 4.5	1.537	2.502	7.2	17.9	3 22	12 42.35	+16 54.4	1.585	2.546	7.6	20.4
4 1	12 34.11	+15 18.3	1.539	2.502	7.8	17.9	4 1	12 34.54	+18 12.1	1.594	2.545	8.8	20.4
4 11	12 24.29	+15 9.5	1.567	2.501	10.5	18.0	4 11	12 27.00	+19 3.8	1.628	2.545	11.4	20.6
4 21	12 15.92	+14 37.1	1.619	2.501	13.7	18.2	4 21	12 20.67	+19 26.5	1.685	2.545	14.4	20.8
5 1	12 9.78	+13 42.7	1.692	2.501	16.8	18.4	5 1	12 16.31	+19 20.5	1.761	2.545	17.2	21.0
467636	2008 RZ ₇₁		3 30.3 220°83	3°0/ 2.3	17		373856	2003 QV ₁₀		3 30.3 291°62	25°5/28.8	18	
2 21	13 2.66	-14 18.6	2.380	3.121	13.8	21.8	2 21	13 33.58	-34 26.3	1.174	1.822	29.6	21.1
3 2	12 58.10	-14 32.4	2.272	3.113	11.3	21.6	3 2	13 28.94	-39 44.4	1.084	1.804	28.2	20.9
3 12	12 51.50	-14 31.5	2.186	3.104	8.4	21.4	3 12	13 17.66	-45 0.7	1.013	1.787	26.8	20.7
3 22	12 43.33	-14 16.1	2.126	3.095	5.3	21.2	3 22	12 58.27	-49 50.5	0.960	1.770	25.7	20.5
4 1	12 34.30	-13 47.9	2.095	3.085	3.1	21.1	4 1	12 30.65	-53 40.9	0.928	1.753	25.6	20.4
4 11	12 25.27	-13 10.4	2.092	3.074	4.5	21.1	4 11	11 57.71	-56 4.8	0.916	1.736	26.4	20.4
4 21	12 17.11	-12 28.7	2.118	3.063	7.7	21.3	4 21	11 25.31	-56 55.7	0.920	1.719	28.0	20.4
5 1	12 10.53	-11 48.0	2.171	3.052	10.9	21.5	5 1	10 59.53	-56 33.3	0.937	1.703	30.0	20.5
208320	2001 NY ₆		3 30.3 176°07	2°8/ 3.1	18		115173	2003 SW ₈₃		3 30.3 90°69	0°2/30.1	18	
2 21	13 0.03	-16 25.9	3.069	3.789	11.4	21.7							

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
170179	2003 <i>MR</i> ₃		3 30.3 268°43	3°7/ 2.1 17			148736	2001 <i>TG</i> ₁₀₅		3 30.3 124°20	0°8/29.6 18		
2 21	13 2.52	-14 10.9	1.690	2.457	17.6	20.3	2 21	13 2.23	-3 57.9	2.007	2.800	14.3	19.6
3 2	12 59.01	-14 26.4	1.581	2.438	14.6	20.0	3 2	12 57.81	-3 31.4	1.929	2.811	11.1	19.4
3 12	12 52.73	-14 22.1	1.492	2.418	10.8	19.8	3 12	12 51.27	-2 53.6	1.873	2.821	7.4	19.2
3 22	12 44.13	-13 57.1	1.426	2.398	6.7	19.5	3 22	12 43.19	-2 8.2	1.844	2.832	3.3	18.9
4 1	12 34.13	-13 13.2	1.386	2.378	3.7	19.2	4 1	12 34.41	-1 20.5	1.843	2.841	1.3	18.8
4 11	12 23.99	-12 15.8	1.372	2.357	5.9	19.3	4 11	12 25.89	-0 36.4	1.872	2.851	5.3	19.1
4 21	12 14.97	-11 12.8	1.385	2.336	10.4	19.5	4 21	12 18.49	-0 0.8	1.927	2.860	9.1	19.3
5 1	12 8.16	-10 13.0	1.421	2.315	14.7	19.7	5 1	12 12.87	+0 22.6	2.007	2.868	12.5	19.5
499899	2011 <i>FY</i> ₁₅₇		3 30.3 34°75	4°5/25.9 17			296935	2010 <i>DV</i> ₆		3 30.3 245°01	1°3/28.9 17		
2 21	13 0.01	+5 40.6	1.822	2.647	14.3	20.9	2 21	12 57.37	-3 34.8	2.152	2.953	13.2	21.2
3 2	12 56.34	+6 36.3	1.749	2.649	11.1	20.7	3 2	12 54.03	-2 48.4	2.061	2.949	10.3	21.0
3 12	12 50.41	+7 37.3	1.698	2.651	7.6	20.5	3 12	12 48.76	-1 49.9	1.994	2.945	6.8	20.8
3 22	12 42.82	+8 36.8	1.673	2.653	4.9	20.3	3 22	12 42.06	-0 43.6	1.953	2.941	3.1	20.5
4 1	12 34.45	+9 27.5	1.675	2.655	5.3	20.4	4 1	12 34.64	+0 24.6	1.940	2.937	1.8	20.4
4 11	12 26.34	+10 2.8	1.704	2.658	8.3	20.6	4 11	12 27.34	+1 28.4	1.957	2.933	5.4	20.6
4 21	12 19.40	+10 19.0	1.758	2.660	11.8	20.8	4 21	12 20.96	+2 22.0	2.000	2.929	9.1	20.8
5 1	12 14.36	+10 14.8	1.834	2.663	14.9	21.0	5 1	12 16.15	+3 1.4	2.068	2.924	12.4	21.0
466436	2013 <i>TG</i> ₅₉		3 30.3 252°15	4°0/ 3.6 17			253263	2003 <i>AZ</i> ₆₀		3 30.3 65°01	1°4/31.6 18		
2 21	12 58.30	-18 47.8	2.037	2.776	15.9	21.8	2 21	13 2.15	-11 17.5	1.585	2.370	17.8	20.9
3 2	12 55.11	-18 34.9	1.929	2.764	13.3	21.6	3 2	12 58.09	-10 47.9	1.528	2.401	14.1	20.7
3 12	12 49.71	-17 59.3	1.842	2.752	10.1	21.4	3 12	12 51.56	-9 57.9	1.492	2.431	9.7	20.5
3 22	12 42.57	-17 1.0	1.778	2.740	6.7	21.1	3 22	12 43.31	-8 51.5	1.479	2.462	5.0	20.3
4 1	12 34.49	-15 42.5	1.741	2.728	4.1	21.0	4 1	12 34.41	-7 35.3	1.494	2.492	1.4	20.1
4 11	12 26.44	-14 10.1	1.732	2.715	5.2	21.0	4 11	12 26.04	-6 18.2	1.536	2.522	5.2	20.5
4 21	12 19.37	-12 32.0	1.751	2.702	8.5	21.2	4 21	12 19.17	-5 8.1	1.605	2.552	9.5	20.8
5 1	12 14.08	-10 57.1	1.795	2.689	12.2	21.3	5 1	12 14.46	-4 11.3	1.697	2.581	13.2	21.1
403813	2011 <i>UO</i> ₁₁₇		3 30.3 236°54	2°2/ 1.2 16			310139	2011 <i>HP</i> ₈₀		3 30.3 220°54	2°6/27.2 17		
2 21	13 4.52	-11 35.0	1.838	2.606	16.4	22.2	2 21	12 57.08	-0 12.9	2.168	2.978	12.8	20.8
3 2	13 0.24	-11 35.2	1.731	2.592	13.3	21.9	3 2	12 53.77	+0 54.9	2.081	2.975	9.9	20.6
3 12	12 53.35	-11 17.7	1.645	2.577	9.6	21.7	3 12	12 48.57	+2 13.2	2.017	2.971	6.5	20.4
3 22	12 44.35	-10 43.2	1.583	2.561	5.4	21.4	3 22	12 41.96	+3 36.5	1.981	2.968	3.3	20.2
4 1	12 34.11	-9 54.5	1.549	2.545	2.2	21.1	4 1	12 34.66	+4 57.8	1.974	2.964	3.2	20.2
4 11	12 23.82	-8 57.7	1.543	2.528	5.3	21.3	4 11	12 27.50	+6 10.0	1.996	2.960	6.4	20.3
4 21	12 14.63	-8 0.0	1.564	2.510	9.8	21.5	4 21	12 21.24	+7 7.8	2.044	2.956	9.8	20.5
5 1	12 7.50	-7 8.7	1.609	2.491	14.0	21.7	5 1	12 16.53	+7 47.7	2.116	2.952	12.9	20.7
459211	2012 <i>DD</i> ₈₁		3 30.3 60°53	3°7/27.1 16			99302	2001 <i>RU</i> ₉₂		3 30.3 128°65	1°0/31.5 18		
2 21	12 59.99	+1 27.8	1.566	2.393	16.1	21.5	2 21	12 58.54	-9 39.0	2.544	3.311	12.4	20.5
3 2	12 56.65	+2 28.0	1.497	2.399	12.4	21.3	3 2	12 54.56	-9 21.1	2.457	3.320	9.8	20.3
3 12	12 50.77	+3 38.8	1.450	2.406	8.3	21.1	3 12	12 48.92	-8 50.8	2.393	3.328	6.8	20.1
3 22	12 43.02	+4 52.7	1.427	2.413	4.4	20.9	3 22	12 42.06	-8 10.2	2.355	3.337	3.5	19.9
4 1	12 34.42	+6 1.1	1.431	2.420	4.4	20.9	4 1	12 34.65	-7 22.9	2.347	3.345	1.0	19.7
4 11	12 26.15	+6 55.4	1.462	2.428	8.1	21.1	4 11	12 27.40	-6 33.3	2.368	3.353	3.8	20.0
4 21	12 19.25	+7 30.2	1.517	2.435	12.2	21.4	4 21	12 20.98	-5 46.2	2.418	3.360	7.0	20.2
5 1	12 14.48	+7 43.1	1.593	2.442	15.8	21.6	5 1	12 15.94	-5 5.7	2.494	3.368	9.9	20.4
501102	2013 <i>SB</i> ₈₃		3 30.3 219°69	2°5/27.3 17			291051	2005 <i>YD</i> ₅₅		3 30.3 301°18	5°0/25.3 17		
2 21	13 1.31	+1 31.0	2.485	3.282	11.7	23.0	2 21	12 57.56	+5 13.3	1.738	2.570	14.6	20.5
3 2	12 56.84	+2 20.8	2.384	3.271	9.1	22.8	3 2	12 54.77	+6 26.1	1.648	2.552	11.4	20.2
3 12	12 50.54	+3 18.3	2.309	3.259	6.1	22.6	3 12	12 49.60	+7 47.9	1.580	2.535	7.9	20.0
3 22	12 42.86	+4 18.9	2.261	3.246	3.2	22.3	3 22	12 42.57	+9 10.8	1.538	2.518	5.3	19.8
4 1	12 34.45	+5 17.2	2.244	3.233	3.1	22.3	4 1	12 34.52	+10 25.7	1.523	2.501	6.0	19.8
4 11	12 26.10	+6 7.7	2.256	3.218	6.0	22.5	4 11	12 26.55	+11 24.0	1.533	2.484	9.3	19.9
4 21	12 18.56	+6 46.2	2.297	3.203	9.2	22.6	4 21	12 19.67	+12 0.1	1.568	2.468	13.1	20.1
5 1	12 12.45	+7 9.8	2.362	3.188	12.1	22.8	5 1	12 14.72	+12 11.3	1.624	2.452	16.5	20.3
459005	2011 <i>WO</i> ₁₅₂		3 30.3 123°49	4°2/ 3.2 18			386236	2008 <i>AX</i> ₈		3 30.3 15°17	0°1/30.4 17		
2 21	13 4.82	-17 13.8	1.841	2.583	17.2	21.8	2 21	12 57.04	-6 14.1	1.944	2.742	14.5	21.1
3 2	13 0.16	-17 22.3	1.761	2.599	14.2	21.6	3 2	12 53.94	-5 58.5	1.862	2.746	11.4	20.9
3 12	12 53.02	-17 9.5	1.701	2.614	10.7	21.4	3 12	12 48.77	-5 29.9	1.803	2.750	7.7	20.7
3 22	12 44.05	-16 35.4	1.665	2.629	6.9	21.2	3 22	12 42.08	-4 51.4	1.768	2.755	3.6	20.5
4 1	12 34.22	-15 42.9	1.655	2.642	4.3	21.1	4 1	12 34.65	-4 7.6	1.761	2.760	0.7	20.3
4 11	12 24.68	-14 38.1	1.674	2.656	5.5	21.2	4 11	12 27.43	-3 24.3	1.782	2.766	4.9	20.6
4 21	12 16.47	-13 28.7	1.720	2.668	8.9	21.4	4 21	12 21.24	-2 47.1	1.829	2.772	8.8	20.8
5 1	12 10.35	-12 22.6	1.791	2.680	12.4	21.6	5 1	12 16.76	-2 20.1	1.901	2.779	12.3	21.1
158959	2004 <i>RW</i> ₁₉₇		3 30.3 190°42	0°6/30.9 17			265613	2005 <i>SL</i> ₆₉		3 30.3 143°92	0°9/31.2 17		
2 21	12 59.69	-8 29.9	2.203	2.981	13.7	21.0	2 21	13 2.42	-8 38.8	2.132	2.905	14.2	22.1
3 2	12 55.79	-8 3.9	2.109	2.980	10.8	20.8	3 2	12 57.91	-8 26.4	2.046	2.914	11.3	21.9
3 12	12 49.93	-7 23.8	2.038	2.979	7.4	20.6	3 12	12 51.33	-8 0.4	1.983	2.922	7.8	21.7
3 22	12 42.60	-6 32.0	1.993	2.977	3.6	20.3	3 22	12 43.24	-7 23.0	1.946	2.929	3.9	21.4
4 1	12 34.52	-5 33.1	1.977	2.975	0.7	20.1	4 1	12 34.42	-6 38.2	1.938	2.936	1.0	21.2
4 11	12 26.57	-4 32.9	1.990	2.973	4.5	20.4	4 11	12 25.81	-5 51.3	1.959	2.943	4.5	21.5
4 21	12 19.56	-3 37.2	2.030	2.971	8.3	20.6	4 21	12 18.24	-5 7.9	2.008	2.949	8.3	21.7
5 1	12 14.15	-2 51.0	2.096	2.968	11.6	20.8	5 1	12 12.39	-4 32.4	2.082	2.955	11.6	22.0
242392	2004 <i>FA</i> ₉		3 30.3 267°56	2°3/27.5 17			472515	2015 <i>CQ</i> ₃₈		3 30.3 297°07	8°7/21.5 17		
2 21	12 55.87	-0 40.8	2.31										

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3 30.3

3 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
67172	2000 <i>BH</i> ₁₆		3 30.3 144°67	2°0/ 1.6 18			39581	1993 <i>FQ</i> ₂₁		3 30.3 225°63	0°3/30.6 18		
2 21	13 1.68	-12 29.0	2.581	3.328	12.7	19.8	2 21	13 0.37	-6 50.7	2.138	2.922	13.8	19.7
3 2	12 56.98	-12 25.1	2.491	3.339	10.2	19.7	3 2	12 56.44	-6 33.6	2.042	2.917	10.9	19.5
3 12	12 50.54	-12 8.0	2.425	3.349	7.3	19.5	3 12	12 50.46	-6 3.8	1.968	2.911	7.5	19.2
3 22	12 42.83	-11 38.8	2.385	3.359	4.2	19.3	3 22	12 42.91	-5 23.6	1.920	2.906	3.6	19.0
4 1	12 34.53	-11 0.1	2.374	3.368	2.0	19.2	4 1	12 34.55	-4 37.4	1.901	2.900	0.7	18.7
4 11	12 26.39	-10 16.2	2.393	3.377	3.8	19.3	4 11	12 26.29	-3 50.6	1.910	2.894	4.7	19.0
4 21	12 19.12	-9 31.5	2.442	3.385	6.9	19.5	4 21	12 18.97	-3 8.5	1.948	2.887	8.6	19.2
5 1	12 13.29	-8 50.8	2.517	3.393	9.8	19.7	5 1	12 13.31	-2 35.8	2.010	2.881	12.1	19.4
172481	2003 <i>SN</i> ₁₀₃		3 30.3 194°72	0°5/29.8 18			53606	2000 <i>CN</i> ₈₁		3 30.3 297°16	2°9/28.0 18		
2 21	13 2.79	-5 19.9	1.983	2.772	14.6	21.1	2 21	12 58.50	-1 57.5	1.323	2.155	18.2	18.6
3 2	12 58.45	-4 48.3	1.891	2.770	11.5	20.9	3 2	12 56.41	-1 4.5	1.228	2.133	14.3	18.3
3 12	12 51.86	-4 3.1	1.821	2.768	7.7	20.7	3 12	12 51.28	+0 7.8	1.153	2.111	9.6	18.0
3 22	12 43.56	-3 7.9	1.777	2.764	3.5	20.4	3 22	12 43.59	+1 33.1	1.100	2.089	4.6	17.6
4 1	12 34.38	-2 8.1	1.762	2.761	1.1	20.2	4 1	12 34.37	+3 1.6	1.073	2.067	3.8	17.5
4 11	12 25.34	-1 10.4	1.776	2.756	5.4	20.5	4 11	12 25.08	+4 21.0	1.070	2.046	8.9	17.7
4 21	12 17.38	-0 20.9	1.817	2.751	9.5	20.7	4 21	12 17.15	+5 21.2	1.091	2.024	14.3	17.9
5 1	12 11.25	+0 15.6	1.883	2.745	13.2	20.9	5 1	12 11.76	+5 55.4	1.130	2.004	19.2	18.2
98646	2000 <i>WH</i> ₁₃₄		3 30.3 321°90	2°5/31.9 18			90299	2003 <i>ED</i> ₃₄		3 30.3 303°83	8°2/ 4.5 18		
2 21	13 3.29	-9 36.8	1.442	2.238	18.8	19.4	2 21	13 4.58	-21 14.1	1.738	2.465	18.6	19.0
3 2	12 59.84	-10 2.8	1.354	2.232	15.2	19.1	3 2	13 0.91	-22 37.6	1.626	2.443	16.2	18.8
3 12	12 53.36	-10 11.7	1.286	2.226	10.9	18.9	3 12	12 54.27	-23 44.1	1.532	2.420	13.3	18.5
3 22	12 44.45	-10 4.1	1.240	2.221	6.0	18.6	3 22	12 45.02	-24 28.5	1.461	2.398	10.4	18.3
4 1	12 34.18	-9 42.5	1.219	2.216	2.5	18.3	4 1	12 34.06	-24 47.2	1.413	2.376	8.4	18.1
4 11	12 24.00	-9 12.8	1.224	2.211	6.1	18.5	4 11	12 22.72	-24 40.3	1.391	2.354	8.8	18.1
4 21	12 15.27	-8 42.2	1.254	2.206	11.1	18.8	4 21	12 12.44	-24 12.3	1.394	2.332	11.4	18.2
5 1	12 9.06	-8 17.6	1.306	2.202	15.6	19.0	5 1	12 4.46	-23 31.5	1.419	2.311	14.9	18.3
143468	2003 <i>CP</i> ₃		3 30.3 115°27	0°8/29.6 18 R			424103	2007 <i>EO</i> ₂₇		3 30.3 95°11	1°6/28.7 18		
2 21	13 5.12	-1 14.3	2.556	3.337	11.9	19.7	2 21	13 1.15	-3 16.4	1.909	2.709	14.7	22.1
3 2	12 59.55	-1 18.0	2.473	3.349	9.3	19.5	3 2	12 56.97	-2 21.4	1.843	2.731	11.3	21.9
3 12	12 52.20	-1 15.9	2.415	3.360	6.2	19.3	3 12	12 50.69	-1 14.4	1.801	2.752	7.4	21.7
3 22	12 43.59	-1 10.3	2.385	3.371	2.8	19.1	3 22	12 42.94	-0 0.7	1.784	2.772	3.3	21.5
4 1	12 34.40	-1 4.1	2.385	3.382	1.2	19.0	4 1	12 34.57	+1 12.6	1.797	2.793	2.2	21.5
4 11	12 25.43	-1 0.3	2.416	3.393	4.4	19.3	4 11	12 26.57	+2 18.3	1.838	2.812	5.9	21.7
4 21	12 17.39	-1 1.7	2.476	3.403	7.6	19.5	4 21	12 19.76	+3 10.8	1.906	2.832	9.7	22.0
5 1	12 10.85	-1 10.2	2.562	3.414	10.4	19.7	5 1	12 14.77	+3 46.9	1.998	2.851	12.9	22.2
94923	2001 <i>YA</i> ₆₄		3 30.3 123°37	0°3/30.1 18			415315	2013 <i>HP</i> ₁₂		3 30.3 307°22	5°2/26.4 17		
2 21	13 4.88	-6 8.7	1.756	2.546	16.2	20.7	2 21	13 0.96	+4 49.7	1.374	2.212	17.3	20.8
3 2	13 0.15	-5 37.8	1.683	2.562	12.6	20.5	3 2	12 58.11	+5 41.2	1.289	2.197	13.6	20.5
3 12	12 52.97	-4 52.0	1.632	2.578	8.5	20.3	3 12	12 52.24	+6 41.9	1.225	2.182	9.4	20.3
3 22	12 44.03	-3 55.4	1.606	2.593	3.9	20.1	3 22	12 43.95	+7 43.6	1.184	2.168	5.8	20.0
4 1	12 34.31	-2 54.2	1.609	2.607	1.0	19.9	4 1	12 34.33	+8 36.3	1.169	2.153	6.1	20.0
4 11	12 24.95	-1 55.6	1.640	2.621	5.6	20.2	4 11	12 24.80	+9 10.7	1.177	2.140	10.1	20.2
4 21	12 16.94	-1 6.2	1.698	2.634	9.9	20.5	4 21	12 16.73	+9 21.1	1.209	2.126	14.7	20.4
5 1	12 11.02	-0 30.6	1.779	2.647	13.6	20.7	5 1	12 11.16	+9 5.5	1.260	2.113	18.9	20.6
295399	2008 <i>JZ</i> ₈		3 30.3 273°37	2°0/28.2 17			344222	2001 <i>RK</i> ₁₀₆		3 30.3 231°99	1°1/28.9 17		
2 21	12 57.51	-3 23.3	1.786	2.598	15.1	20.8	2 21	12 57.54	-3 29.8	2.612	3.402	11.5	21.8
3 2	12 54.66	-2 18.5	1.691	2.585	11.7	20.5	3 2	12 53.86	-2 44.4	2.509	3.391	8.9	21.7
3 12	12 49.50	-0 57.4	1.619	2.573	7.8	20.3	3 12	12 48.53	-1 48.7	2.431	3.380	5.9	21.4
3 22	12 42.53	+0 34.4	1.572	2.561	3.6	20.0	3 22	12 41.96	-0 46.2	2.381	3.368	2.7	21.2
4 1	12 34.60	+2 8.8	1.553	2.548	2.7	19.9	4 1	12 34.75	+0 18.4	2.360	3.356	1.5	21.1
4 11	12 26.75	+3 36.5	1.562	2.536	6.9	20.1	4 11	12 27.61	+1 19.7	2.369	3.344	4.7	21.3
4 21	12 19.96	+4 49.5	1.597	2.523	11.2	20.3	4 21	12 21.18	+2 13.0	2.407	3.331	8.0	21.5
5 1	12 15.05	+5 42.4	1.654	2.510	15.0	20.5	5 1	12 16.05	+2 54.5	2.470	3.318	10.9	21.7
154679	2004 <i>GD</i> ₃₇		3 30.3 342°41	2°7/ 1.0 18			381436	2008 <i>QA</i> ₅		3 30.3 169°58	1°1/31.5 17		
2 21	12 59.79	-10 12.9	1.157	1.975	21.2	20.1	2 21	13 2.29	-8 58.9	2.429	3.193	12.9	21.6
3 2	12 57.73	-10 33.5	1.078	1.968	17.2	19.8	3 2	12 57.62	-8 55.9	2.335	3.197	10.3	21.4
3 12	12 52.28	-10 32.2	1.016	1.962	12.3	19.5	3 12	12 51.07	-8 41.1	2.265	3.200	7.2	21.2
3 22	12 44.05	-10 9.3	0.974	1.957	6.8	19.2	3 22	12 43.14	-8 16.1	2.221	3.202	3.7	21.0
4 1	12 34.28	-9 28.7	0.956	1.953	2.7	18.9	4 1	12 34.52	-7 43.8	2.206	3.204	1.2	20.8
4 11	12 24.63	-8 38.8	0.961	1.949	6.8	19.2	4 11	12 26.04	-7 8.5	2.222	3.206	4.1	21.0
4 21	12 16.70	-7 49.5	0.988	1.947	12.5	19.5	4 21	12 18.44	-6 34.6	2.265	3.207	7.5	21.2
5 1	12 11.68	-7 10.2	1.035	1.945	17.6	19.7	5 1	12 12.36	-6 6.2	2.335	3.207	10.6	21.4
422352	2014 <i>SG</i> ₂₂₉		3 30.3 109°10	0°5/30.8 18			354904	2006 <i>CX</i> ₂₈		3 30.3 28°68	5°2/ 3.0 18		
2 21	13 2.86	-7 52.0	1.817	2.603	15.8	22.2	2 21	13 2.66	-15 49.1	1.366	2.144	20.5	20.4
3 2	12 58.53	-7 30.3	1.742	2.618	12.5	22.0	3 2	12 59.49	-16 27.8	1.287	2.147	17.0	20.1
3 12	12 51.88	-6 53.1	1.689	2.633	8.5	21.8	3 12	12 53.18	-16 43.3	1.226	2.150	12.9	19.9
3 22	12 43.53	-6 3.7	1.661	2.647	4.1	21.6	3 22	12 44.38	-16 33.7	1.186	2.154	8.5	19.6
4 1	12 34.43	-5 7.5	1.662	2.660	0.8	21.4	4 1	12 34.26	-16 0.6	1.169	2.158	5.4	19.4
4 11	12 25.64	-4 11.2	1.690	2.674	5.1	21.7	4 11	12 24.34	-15 10.3	1.178	2.162	6.9	19.5
4 21	12 18.11	-3 21.3	1.745	2.687	9.3	22.0	4 21	12 16.03	-14 11.8	1.211	2.166	11.0	19.8
5 1	12 12.57	-2 42.9	1.825	2.699	12.9	22.2	5 1	12 10.38	-13 15.2	1.265	2.171	15.3	20.0
401007	2011 <i>QX</i> ₉₂		3 30.3 183°82	3°3/ 2.0 17			229686	2007 <i>DP</i> ₃₆		3 30.3 288°8			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
224501	2005 <i>WP</i> ₂₇		3 30.3 212°19	0°7/29.6	18		200753	2001 <i>WW</i> ₆		3 30.3 38°20	6°5/26.5	18	
2 21	13 1.55	- 4 17.9	2.263	3.050	13.1	21.3	2 21	13 4.20	+ 7 3.4	1.053	1.905	20.4	19.1
3 2	12 57.23	- 3 50.2	2.165	3.043	10.2	21.1	3 2	13 0.75	+ 7 51.4	1.010	1.924	15.8	18.9
3 12	12 50.93	- 3 11.5	2.090	3.036	6.9	20.8	3 12	12 53.85	+ 8 43.1	0.987	1.945	10.9	18.7
3 22	12 43.12	- 2 24.9	2.042	3.029	3.1	20.6	3 22	12 44.53	+ 9 28.0	0.984	1.966	7.0	18.6
4 1	12 34.53	- 1 35.0	2.023	3.021	1.2	20.4	4 1	12 34.32	+ 9 55.8	1.005	1.988	7.3	18.6
4 11	12 26.03	- 0 47.3	2.033	3.012	5.0	20.7	4 11	12 24.94	+ 9 59.7	1.049	2.011	11.1	18.9
4 21	12 18.43	- 0 6.8	2.072	3.003	8.7	20.9	4 21	12 17.70	+ 9 38.0	1.114	2.034	15.4	19.2
5 1	12 12.41	+ 0 22.6	2.135	2.993	12.0	21.1	5 1	12 13.41	+ 8 52.7	1.197	2.058	19.2	19.5
337621	2001 <i>TR</i> ₇₂		3 30.3 130°95	1°1/28.9	18		274491	2008 <i>SF</i> ₁₁₆		3 30.3 253°47	0°7/29.5	17	
2 21	12 59.06	- 2 6.2	2.872	3.658	10.6	21.6	2 21	12 58.10	- 6 0.1	2.226	3.015	13.2	21.4
3 2	12 54.70	- 1 33.0	2.793	3.672	8.2	21.4	3 2	12 54.68	- 5 8.3	2.118	2.998	10.4	21.2
3 12	12 48.88	- 0 52.6	2.738	3.686	5.4	21.3	3 12	12 49.31	- 4 1.6	2.034	2.981	7.0	20.9
3 22	12 42.05	- 0 8.3	2.712	3.699	2.4	21.1	3 22	12 42.42	- 2 43.8	1.976	2.964	3.2	20.7
4 1	12 34.77	+ 0 36.0	2.716	3.712	1.5	21.0	4 1	12 34.70	- 1 20.5	1.948	2.946	1.3	20.5
4 11	12 27.67	+ 1 16.5	2.751	3.725	4.2	21.2	4 11	12 26.99	+ 0 1.2	1.949	2.927	5.2	20.7
4 21	12 21.33	+ 1 49.6	2.814	3.737	7.0	21.4	4 21	12 20.12	+ 1 14.6	1.978	2.909	9.1	20.9
5 1	12 16.20	+ 2 13.1	2.904	3.748	9.6	21.6	5 1	12 14.78	+ 2 14.4	2.032	2.889	12.5	21.1
412074	2013 <i>ET</i> ₁₂₀		3 30.3 341°25	1°8/31.5	17		358042	2006 <i>GZ</i> ₂₄		3 30.3 344°60	1°5/29.3	17	
2 21	12 56.10	- 8 32.5	1.122	1.953	20.9	20.2	2 21	12 56.84	- 3 13.6	1.140	1.982	19.8	20.9
3 2	12 54.93	- 8 45.8	1.040	1.940	16.8	19.9	3 2	12 55.35	- 2 54.7	1.063	1.972	15.6	20.6
3 12	12 50.46	- 8 37.8	0.976	1.928	11.9	19.6	3 12	12 50.62	- 2 18.1	1.004	1.964	10.5	20.2
3 22	12 43.25	- 8 9.7	0.932	1.918	6.2	19.2	3 22	12 43.28	- 1 29.0	0.967	1.956	4.8	19.9
4 1	12 34.48	- 7 26.3	0.911	1.909	1.8	18.9	4 1	12 34.52	- 0 35.6	0.952	1.950	2.2	19.7
4 11	12 25.78	- 6 36.7	0.912	1.902	6.9	19.2	4 11	12 25.93	+ 0 11.8	0.961	1.945	8.0	20.0
4 21	12 18.71	- 5 50.8	0.935	1.896	12.8	19.5	4 21	12 19.00	+ 0 44.3	0.992	1.941	13.7	20.3
5 1	12 14.49	- 5 17.6	0.978	1.891	18.0	19.8	5 1	12 14.82	+ 0 56.4	1.042	1.939	18.6	20.6
176067	2000 <i>WJ</i> ₄		3 30.3 111°50	1°0/31.3	18		92943	2000 <i>RD</i> ₃₈		3 30.3 109°42	0°9/29.5	17	
2 21	13 0.67	- 7 50.7	2.493	3.264	12.5	20.4	2 21	12 59.24	- 4 38.6	1.871	2.673	14.9	19.4
3 2	12 56.29	- 7 54.3	2.403	3.269	9.9	20.2	3 2	12 55.78	- 4 1.4	1.788	2.675	11.6	19.2
3 12	12 50.15	- 7 47.5	2.336	3.274	6.8	20.0	3 12	12 50.11	- 3 10.5	1.726	2.677	7.7	19.0
3 22	12 42.70	- 7 32.0	2.296	3.278	3.5	19.8	3 22	12 42.79	- 2 10.1	1.690	2.678	3.5	18.7
4 1	12 34.63	- 7 10.4	2.285	3.283	1.0	19.6	4 1	12 34.66	- 1 6.4	1.682	2.680	1.5	18.6
4 11	12 26.70	- 6 46.4	2.303	3.287	3.9	19.9	4 11	12 26.72	- 0 6.6	1.702	2.682	5.7	18.9
4 21	12 19.61	- 6 23.9	2.350	3.292	7.2	20.1	4 21	12 19.89	+ 0 43.3	1.748	2.683	9.8	19.1
5 1	12 13.96	- 6 6.4	2.423	3.296	10.2	20.3	5 1	12 14.89	+ 1 18.6	1.818	2.685	13.4	19.3
210910	2001 <i>SB</i> ₂₄₀		3 30.3 189°34	1°2/28.9	17		39590	1993 <i>FG</i> ₇₆		3 30.3 249°63	0°2/30.6	18	
2 21	12 59.10	- 1 53.0	2.550	3.342	11.6	21.3	2 21	12 58.37	- 8 15.1	2.278	3.057	13.2	19.8
3 2	12 55.04	- 1 23.8	2.459	3.342	9.0	21.1	3 2	12 54.85	- 7 35.2	2.169	3.042	10.5	19.6
3 12	12 49.29	- 0 46.5	2.392	3.341	6.0	20.9	3 12	12 49.41	- 6 40.1	2.083	3.026	7.2	19.3
3 22	12 42.30	- 0 4.5	2.352	3.339	2.7	20.7	3 22	12 42.47	- 5 32.6	2.024	3.009	3.4	19.1
4 1	12 34.72	+ 0 38.0	2.342	3.338	1.6	20.6	4 1	12 34.71	- 4 17.5	1.994	2.992	0.6	18.8
4 11	12 27.26	+ 1 16.6	2.361	3.336	4.8	20.8	4 11	12 26.97	- 3 1.1	1.993	2.975	4.6	19.1
4 21	12 20.59	+ 1 47.2	2.409	3.334	7.9	21.0	4 21	12 20.06	- 1 50.0	2.020	2.958	8.5	19.3
5 1	12 15.29	+ 2 7.1	2.482	3.332	10.8	21.2	5 1	12 14.65	- 0 49.8	2.073	2.940	11.9	19.4
498916	2009 <i>AW</i> ₄₆		3 30.3 35°92	1°2/31.5	17		49638	1999 <i>HK</i> ₉		3 30.3 65°69	1°5/1.1	18	
2 21	13 0.19	- 8 33.6	2.009	2.792	14.7	21.5	2 21	12 56.71	- 12 6.7	2.145	2.916	14.2	18.4
3 2	12 56.37	- 8 35.9	1.924	2.796	11.7	21.3	3 2	12 53.51	- 11 36.5	2.061	2.925	11.4	18.2
3 12	12 50.42	- 8 24.9	1.861	2.801	8.1	21.1	3 12	12 48.42	- 10 49.3	1.999	2.933	8.0	18.0
3 22	12 42.90	- 8 2.3	1.823	2.806	4.2	20.8	3 22	12 41.95	- 9 47.5	1.962	2.942	4.3	17.8
4 1	12 34.60	- 7 31.6	1.813	2.811	1.3	20.6	4 1	12 34.83	- 8 35.8	1.954	2.951	1.5	17.6
4 11	12 26.48	- 6 57.8	1.831	2.816	4.6	20.9	4 11	12 27.92	- 7 20.7	1.974	2.960	4.2	17.8
4 21	12 19.41	- 6 25.9	1.876	2.822	8.5	21.1	4 21	12 21.96	- 6 8.6	2.022	2.970	7.9	18.0
5 1	12 14.10	- 6 0.8	1.945	2.827	11.9	21.3	5 1	12 17.58	- 5 5.5	2.096	2.979	11.1	18.3
425467	2010 <i>EB</i> ₁₀₁		3 30.3 69°66	1°5/28.7	17		102304	1999 <i>TB</i> ₉₂		3 30.3 195°01	3°4/26.9	18	
2 21	12 57.37	- 3 8.1	2.068	2.872	13.6	21.5	2 21	13 1.52	+ 1 39.3	1.881	2.694	14.4	20.3
3 2	12 54.09	- 2 19.2	1.984	2.874	10.5	21.2	3 2	12 57.56	+ 2 43.3	1.797	2.692	11.1	20.1
3 12	12 48.84	- 1 18.4	1.924	2.876	6.9	21.0	3 12	12 51.32	+ 3 57.2	1.737	2.690	7.4	19.9
3 22	12 42.15	- 0 10.4	1.889	2.878	3.1	20.8	3 22	12 43.36	+ 5 14.6	1.703	2.687	4.1	19.7
4 1	12 34.76	+ 0 58.8	1.884	2.880	2.0	20.7	4 1	12 34.55	+ 6 27.7	1.697	2.684	4.1	19.7
4 11	12 27.55	+ 2 2.3	1.907	2.882	5.6	21.0	4 11	12 25.92	+ 7 28.8	1.719	2.681	7.5	19.9
4 21	12 21.31	+ 2 54.5	1.956	2.884	9.3	21.2	4 21	12 18.41	+ 8 12.5	1.767	2.677	11.3	20.1
5 1	12 16.69	+ 3 31.7	2.030	2.886	12.6	21.4	5 1	12 12.78	+ 8 35.8	1.838	2.672	14.7	20.3
253209	2002 <i>XX</i> ₈₅		3 30.3 112°30	1°0/31.4	18		361672	2007 <i>TW</i> ₄₅₁		3 30.3 253°22	8°0/7.9	17	
2 21	13 4.66	- 9 25.3	2.163	2.928	14.3	22.2	2 21	13 1.29	- 29 47.7	1.993	2.661	18.2	20.9
3 2	12 59.47	- 9 8.8	2.090	2.952	11.3	22.1	3 2	12 57.91	- 29 55.1	1.872	2.641	16.2	20.6
3 12	12 52.28	- 8 38.4	2.040	2.976	7.8	21.9	3 12	12 51.93	- 29 33.3	1.768	2.620	13.6	20.4
3 22	12 43.67	- 7 56.6	2.017	2.999	3.9	21.7	3 22	12 43.81	- 28 38.2	1.684	2.599	10.9	20.2
4 1	12 34.47	- 7 7.6	2.023	3.021	1.1	21.5	4 1	12 34.43	- 27 8.5	1.625	2.576	8.6	20.0
4 11	12 25.60	- 6 16.7	2.058	3.042	4.4	21.8	4 11	12 24.97	- 25 8.2	1.593	2.553	8.1	19.9
4 21	12 17.87	- 5 29.5	2.122	3.063	8.0	22.0	4 21	12 16.61	- 22 46.3	1.587	2.529	10.0	20.0
5 1	12 11.88	- 4 50.5	2.212	3.082	11.2	22.3	5 1	12 10.33	- 20 15.3	1.608	2.505	13.2	20.1
59614	1999 <i>JR</i> ₆₉		3 30.3 340°71	2°5/28.2	18		230941	2004 <i>XN</i> ₂₂					

EPHEMERIDES

3 30.3

3 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
86799	2000 <i>GH</i> ₁₁₂		3 30.3 269°23	2°1/28.5 18			50555	2000 <i>EF</i> ₂₄		3 30.3 220°15	0°1/30.3 18		
2 21	13 0.89	- 3 2.2	1.569	2.384	16.7	19.8	2 21	12 58.37	- 6 30.2	2.261	3.047	13.1	19.0
3 2	12 57.81	- 2 10.8	1.469	2.364	13.1	19.5	3 2	12 54.76	- 6 2.3	2.167	3.044	10.3	18.8
3 12	12 51.96	- 1 1.9	1.389	2.343	8.8	19.2	3 12	12 49.28	- 5 21.9	2.096	3.041	7.0	18.5
3 22	12 43.86	+ 0 19.4	1.334	2.322	4.1	18.8	3 22	12 42.39	- 4 31.9	2.052	3.038	3.3	18.3
4 1	12 34.42	+ 1 44.8	1.306	2.301	2.8	18.7	4 1	12 34.79	- 3 36.9	2.036	3.035	0.7	18.1
4 11	12 24.93	+ 3 4.1	1.304	2.279	7.6	18.9	4 11	12 27.31	- 2 42.4	2.049	3.032	4.6	18.4
4 21	12 16.63	+ 4 8.2	1.327	2.257	12.6	19.1	4 21	12 20.71	- 1 53.7	2.090	3.028	8.2	18.6
5 1	12 10.56	+ 4 51.0	1.372	2.235	17.1	19.3	5 1	12 15.62	- 1 15.2	2.156	3.025	11.5	18.8
295723	2008 <i>UR</i> ₅₁		3 30.3 83°28	0°1/30.4 17			318725	2005 <i>RC</i> ₁₁		3 30.3 172°53	1°4/28.9 18		
2 21	12 59.72	- 6 21.4	2.061	2.850	14.1	21.6	2 21	13 1.11	- 11 18.7	1.314	2.115	20.0	20.4
3 2	12 55.90	- 6 2.3	1.979	2.857	11.1	21.5	3 2	12 58.22	- 9 8.5	1.231	2.118	15.7	20.1
3 12	12 50.06	- 5 30.6	1.919	2.864	7.5	21.2	3 12	12 52.27	- 6 21.5	1.170	2.121	10.5	19.8
3 22	12 42.72	- 4 49.3	1.885	2.872	3.5	21.0	3 22	12 43.96	- 3 6.8	1.134	2.123	4.6	19.5
4 1	12 34.69	- 4 3.1	1.880	2.879	0.7	20.8	4 1	12 34.47	+ 0 19.2	1.127	2.124	2.5	19.4
4 11	12 26.86	- 3 17.4	1.903	2.886	4.8	21.1	4 11	12 25.28	+ 3 35.9	1.148	2.124	8.3	19.7
4 21	12 20.06	- 2 37.6	1.953	2.893	8.6	21.3	4 21	12 17.71	+ 6 25.7	1.196	2.124	13.9	20.0
5 1	12 14.94	- 2 7.9	2.028	2.900	11.9	21.6	5 1	12 12.73	+ 8 37.7	1.265	2.123	18.6	20.3
341188	2007 <i>RJ</i> ₅₀		3 30.3 149°38	2°9/ 2.6 17			222587	2001 <i>WH</i> ₄₄		3 30.3 54°38	1°8/27.9 18		
2 21	13 0.64	- 14 55.3	2.494	3.234	13.3	22.2	2 21	12 56.10	+ 1 20.1	2.873	3.674	10.2	20.4
3 2	12 56.35	- 15 1.7	2.400	3.240	10.9	22.0	3 2	12 52.45	+ 1 50.3	2.798	3.687	7.8	20.2
3 12	12 50.24	- 14 53.4	2.329	3.245	8.0	21.9	3 12	12 47.42	+ 2 25.3	2.748	3.700	5.2	20.1
3 22	12 42.79	- 14 30.9	2.283	3.250	5.0	21.7	3 22	12 41.42	+ 3 1.9	2.726	3.712	2.6	19.9
4 1	12 34.67	- 13 56.4	2.266	3.255	2.9	21.5	4 1	12 35.00	+ 3 36.3	2.734	3.725	2.2	19.9
4 11	12 26.68	- 13 13.8	2.278	3.260	4.2	21.6	4 11	12 28.76	+ 4 4.8	2.771	3.738	4.6	20.1
4 21	12 19.56	- 12 27.9	2.318	3.264	7.1	21.8	4 21	12 23.22	+ 4 24.7	2.835	3.751	7.3	20.3
5 1	12 13.90	- 11 43.8	2.384	3.268	10.0	22.0	5 1	12 18.84	+ 4 34.3	2.925	3.764	9.6	20.4
380498	2004 <i>DT</i>		3 30.3 85°08	2°1/27.9 18			242764	2005 <i>WO</i> ₁₅₄		3 30.3 257°91	6°9/23.1 18		
2 21	13 0.37	+ 0 4.5	2.240	3.042	12.7	21.0	2 21	12 59.83	+ 11 14.0	1.836	2.666	14.0	20.2
3 2	12 56.04	+ 0 49.4	2.177	3.066	9.7	20.9	3 2	12 56.32	+ 12 40.3	1.763	2.662	11.1	20.0
3 12	12 49.93	+ 1 41.7	2.138	3.089	6.4	20.7	3 12	12 50.53	+ 14 8.6	1.714	2.658	8.3	19.9
3 22	12 42.58	+ 2 36.5	2.126	3.112	3.1	20.5	3 22	12 43.02	+ 15 30.2	1.690	2.654	6.9	19.8
4 1	12 34.74	+ 3 28.6	2.143	3.135	2.6	20.5	4 1	12 34.67	+ 16 36.0	1.693	2.650	7.8	19.8
4 11	12 27.21	+ 4 12.5	2.189	3.158	5.6	20.7	4 11	12 26.55	+ 17 19.2	1.722	2.646	10.5	20.0
4 21	12 20.71	+ 4 44.7	2.262	3.180	8.8	21.0	4 21	12 19.58	+ 17 36.6	1.775	2.641	13.5	20.1
5 1	12 15.76	+ 5 2.9	2.360	3.202	11.6	21.2	5 1	12 14.52	+ 17 28.2	1.848	2.637	16.3	20.3
434843	2006 <i>SW</i> ₁₂₃		3 30.3 171°75	3°2/25.5 18			340758	2006 <i>SH</i> ₂₉₈		3 30.3 75°13	0°1/30.3 17		
2 21	12 56.38	+ 3 6.3	2.760	3.567	10.5	21.5	2 21	12 58.36	- 6 21.2	2.314	3.099	12.9	21.4
3 2	12 52.80	+ 4 32.0	2.677	3.569	8.0	21.4	3 2	12 54.54	- 5 53.9	2.239	3.116	10.0	21.3
3 12	12 47.73	+ 6 4.3	2.620	3.571	5.4	21.2	3 12	12 48.98	- 5 15.2	2.188	3.133	6.7	21.1
3 22	12 41.59	+ 7 37.8	2.593	3.573	3.4	21.1	3 22	12 42.19	- 4 28.3	2.164	3.150	3.1	20.9
4 1	12 34.94	+ 9 6.3	2.596	3.575	3.8	21.1	4 1	12 34.86	- 3 37.6	2.168	3.167	0.6	20.7
4 11	12 28.42	+ 10 24.3	2.629	3.576	6.2	21.2	4 11	12 27.77	- 2 48.3	2.201	3.183	4.3	21.0
4 21	12 22.61	+ 11 27.5	2.690	3.577	8.8	21.4	4 21	12 21.60	- 2 5.2	2.263	3.200	7.7	21.2
5 1	12 18.01	+ 12 13.6	2.776	3.577	11.1	21.6	5 1	12 16.92	- 1 31.8	2.349	3.217	10.7	21.5
410050	2007 <i>AX</i> ₁₇		3 30.3 121°61	2°2/28.3 18			429274	2010 <i>CG</i> ₇₅		3 30.3 69°98	1°0/31.3 17		
2 21	13 4.31	+ 0 18.6	2.065	2.864	13.8	21.6	2 21	13 1.58	- 8 35.6	1.921	2.704	15.2	21.5
3 2	12 59.32	+ 0 53.5	1.994	2.880	10.6	21.3	3 2	12 57.39	- 8 26.3	1.851	2.724	12.0	21.3
3 12	12 52.25	+ 1 36.1	1.946	2.896	7.0	21.5	3 12	12 51.06	- 8 2.5	1.803	2.744	8.3	21.1
3 22	12 43.71	+ 2 21.7	1.925	2.912	3.4	21.1	3 22	12 43.19	- 7 27.0	1.780	2.763	4.1	20.9
4 1	12 34.53	+ 3 4.9	1.933	2.927	2.7	21.0	4 1	12 34.66	- 6 44.1	1.785	2.783	1.0	20.7
4 11	12 25.68	+ 3 40.2	1.971	2.941	6.0	21.3	4 11	12 26.46	- 5 59.5	1.818	2.803	4.7	21.0
4 21	12 17.97	+ 4 3.7	2.035	2.955	9.5	21.5	4 21	12 19.45	- 5 19.0	1.878	2.823	8.5	21.3
5 1	12 12.05	+ 4 13.1	2.124	2.968	12.6	21.7	5 1	12 14.27	- 4 47.2	1.963	2.843	11.9	21.6
157264	2004 <i>RH</i> ₁₉₀		3 30.3 210°16	2°2/ 2.0 18			177054	2003 <i>EY</i> ₃₅		3 30.3 24°22	1°2/29.1 18 R		
2 21	12 59.03	- 14 49.0	2.436	3.181	13.4	20.8	2 21	12 57.61	- 2 38.3	2.102	2.906	13.4	20.3
3 2	12 55.22	- 14 19.6	2.330	3.175	10.9	20.6	3 2	12 54.24	- 2 7.9	2.020	2.909	10.4	20.1
3 12	12 49.57	- 13 32.6	2.246	3.168	7.9	20.4	3 12	12 48.94	- 1 27.3	1.961	2.913	6.9	19.9
3 22	12 42.52	- 12 29.4	2.188	3.161	4.7	20.2	3 22	12 42.23	- 0 40.5	1.929	2.917	3.1	19.7
4 1	12 34.75	- 11 13.5	2.159	3.153	2.2	20.0	4 1	12 34.84	+ 0 7.3	1.924	2.921	1.7	19.6
4 11	12 27.06	- 9 50.6	2.159	3.144	4.1	20.1	4 11	12 27.64	+ 0 50.5	1.948	2.925	5.3	19.8
4 21	12 20.20	- 8 27.2	2.189	3.135	7.4	20.3	4 21	12 21.41	+ 1 24.4	1.998	2.930	8.9	20.0
5 1	12 14.80	- 7 9.7	2.246	3.126	10.6	20.5	5 1	12 16.76	+ 1 45.7	2.073	2.935	12.1	20.3
377371	2004 <i>RX</i> ₁₅₂		3 30.3 252°08	2°0/ 1.4 17			499241	2009 <i>US</i> ₁₄₁		3 30.3 207°58	2°7/ 2.7 17		
2 21	12 58.45	- 13 0.0	2.039	2.806	15.0	21.4	2 21	13 0.35	- 16 22.7	2.541	3.273	13.2	23.6
3 2	12 55.18	- 12 36.6	1.935	2.795	12.2	21.2	3 2	12 56.19	- 16 1.6	2.432	3.266	10.9	23.4
3 12	12 49.77	- 11 54.2	1.853	2.785	8.7	21.0	3 12	12 50.21	- 15 23.0	2.344	3.258	8.1	23.2
3 22	12 42.69	- 10 54.2	1.796	2.774	4.9	20.7	3 22	12 42.83	- 14 27.9	2.283	3.250	5.0	23.0
4 1	12 34.71	- 9 40.8	1.766	2.762	2.0	20.5	4 1	12 34.72	- 13 19.0	2.250	3.241	2.8	22.8
4 11	12 26.78	- 8 20.6	1.765	2.751	4.6	20.6	4 11	12 26.67	- 12 1.5	2.248	3.231	4.1	22.9
4 21	12 19.81	- 7 1.1	1.791	2.739	8.6	20.8	4 21	12 19.43	- 10 41.4	2.274	3.220	7.2	23.1
5 1	12 14.55	- 5 49.5	1.843	2.727	12.3	21.0	5 1	12 13.63	- 9 25.0	2.328	3.209	10.3	23.2
3698	Manning												

EPHEMERIDES

3 30.3

3 30.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
468485	2004 TX ₃₂₇		3 30.3 240°30	5°3/ 5.1	17		193243	2000 SS ₄₂		3 30.4 59°57	6°3/28.9	17	
2 21	13 0.70	-22 17.6	2.344	3.047	14.9	21.7	2 21	13 27.72	+11 45.8	0.967	1.791	24.0	18.8
3 2	12 56.83	-22 30.6	2.228	3.033	12.8	21.5	3 2	13 19.96	+11 5.8	0.908	1.803	19.2	18.5
3 12	12 50.86	-22 23.7	2.133	3.018	10.2	21.3	3 12	13 7.33	+10 16.6	0.866	1.815	13.5	18.3
3 22	12 43.22	-21 55.5	2.062	3.003	7.5	21.1	3 22	12 51.01	+9 10.8	0.846	1.827	8.1	18.0
4 1	12 34.64	-21 6.5	2.017	2.988	5.5	20.9	4 1	12 33.18	+7 44.1	0.851	1.840	6.7	18.0
4 11	12 26.03	-20 0.5	2.000	2.972	5.8	20.9	4 11	12 16.48	+5 57.8	0.882	1.853	11.2	18.3
4 21	12 18.28	-18 43.5	2.011	2.955	8.1	21.0	4 21	12 3.01	+3 57.8	0.937	1.866	16.7	18.6
5 1	12 12.16	-17 22.9	2.048	2.938	11.0	21.2	5 1	11 53.91	+1 50.5	1.012	1.879	21.4	18.9
155441	1998 FP ₁₀		3 30.3 299°73	2°2/31.8	18		156069	2001 SM ₈₆		3 30.4 315°63	1°9/31.7	18	
2 21	13 4.47	-8 37.3	1.791	2.572	16.2	19.7	2 21	12 59.38	-9 38.5	1.257	2.071	20.1	20.0
3 2	13 0.42	-9 10.0	1.679	2.549	13.2	19.4	3 2	12 57.28	-9 42.9	1.169	2.058	16.2	19.7
3 12	12 53.68	-9 30.8	1.589	2.526	9.4	19.1	3 12	12 51.98	-9 25.6	1.098	2.046	11.5	19.4
3 22	12 44.70	-9 39.6	1.523	2.504	5.2	18.8	3 22	12 44.02	-8 47.6	1.049	2.034	6.1	19.0
4 1	12 34.32	-9 38.0	1.485	2.481	2.2	18.6	4 1	12 34.51	-7 53.6	1.024	2.022	1.9	18.7
4 11	12 23.77	-9 29.4	1.473	2.459	5.5	18.7	4 11	12 25.01	-6 52.3	1.023	2.011	6.6	19.0
4 21	12 14.24	-9 18.8	1.489	2.437	10.1	18.9	4 21	12 17.03	-5 54.0	1.045	2.001	12.3	19.2
5 1	12 6.79	-9 11.3	1.528	2.415	14.3	19.1	5 1	12 11.75	-5 7.9	1.087	1.991	17.4	19.5
88660	2001 RN ₇₅		3 30.3 181°54	2°2/28.5	18		204711	Luojialun		3 30.4 285°17	1°5/28.9	17	
2 21	13 6.16	-0 13.7	1.816	2.618	15.3	20.3	2 21	12 58.74	-2 43.0	2.029	2.833	13.8	20.9
3 2	13 1.26	+0 18.8	1.731	2.619	11.9	20.1	3 2	12 55.46	-2 5.2	1.922	2.811	10.8	20.6
3 12	12 53.87	+1 1.1	1.669	2.620	7.9	19.9	3 12	12 50.02	-1 15.0	1.837	2.788	7.2	20.4
3 22	12 44.60	+1 48.5	1.633	2.620	3.8	19.6	3 22	12 42.88	-0 16.4	1.778	2.766	3.3	20.1
4 1	12 34.38	+2 34.5	1.625	2.619	2.8	19.5	4 1	12 34.76	+0 45.0	1.747	2.743	2.0	19.9
4 11	12 24.38	+3 12.5	1.646	2.618	6.7	19.8	4 11	12 26.61	+1 42.3	1.744	2.720	6.0	20.2
4 21	12 15.63	+3 37.7	1.693	2.616	10.8	20.0	4 21	12 19.35	+2 29.5	1.768	2.698	10.0	20.3
5 1	12 8.95	+3 46.8	1.763	2.613	14.5	20.2	5 1	12 13.77	+3 1.9	1.816	2.675	13.7	20.5
185574	2008 BV ₄		3 30.3 324°96	4°6/26.7	17		94591	2001 VS ₅₉		3 30.4 59°35	3°8/ 2.1	18	
2 21	12 59.68	+3 36.8	1.447	2.283	16.7	20.7	2 21	13 3.46	-13 21.7	1.402	2.186	19.8	19.4
3 2	12 56.87	+4 29.0	1.367	2.274	13.0	20.4	3 2	12 59.96	-13 44.6	1.325	2.193	16.2	19.2
3 12	12 51.28	+5 31.0	1.308	2.265	8.9	20.2	3 12	12 53.43	-13 45.8	1.267	2.199	11.8	18.9
3 22	12 43.51	+6 34.9	1.272	2.257	5.2	19.9	3 22	12 44.53	-13 25.1	1.231	2.206	7.2	18.7
4 1	12 34.60	+7 31.4	1.262	2.249	5.4	19.9	4 1	12 34.44	-12 45.5	1.220	2.213	3.8	18.5
4 11	12 25.87	+8 11.9	1.278	2.242	9.3	20.1	4 11	12 24.61	-11 53.9	1.234	2.220	6.2	18.7
4 21	12 18.52	+8 30.6	1.316	2.235	13.6	20.3	4 21	12 16.38	-10 59.3	1.273	2.227	10.7	18.9
5 1	12 13.50	+8 25.3	1.375	2.229	17.6	20.6	5 1	12 10.71	-10 10.4	1.334	2.234	15.0	19.2
115241	2003 SZ ₁₄₉		3 30.3 133°24	2°4/28.4	18		212428	2006 OX ₁		3 30.4 229°99	0°9/29.5	16	
2 21	13 5.78	+0 32.3	1.764	2.570	15.5	20.3	2 21	13 3.04	-4 6.6	1.980	2.772	14.5	21.4
3 2	13 0.92	+1 0.1	1.689	2.579	12.0	20.1	3 2	12 58.80	-3 36.9	1.879	2.761	11.4	21.2
3 12	12 53.58	+1 36.6	1.637	2.588	8.0	19.9	3 12	12 52.25	-2 54.3	1.801	2.749	7.7	20.9
3 22	12 44.43	+2 16.7	1.610	2.596	3.9	19.7	3 22	12 43.90	-2 2.5	1.749	2.736	3.5	20.6
4 1	12 34.44	+2 54.3	1.611	2.604	2.9	19.6	4 1	12 34.56	-1 6.8	1.725	2.723	1.4	20.5
4 11	12 24.76	+3 23.2	1.640	2.612	6.7	19.9	4 11	12 25.26	-0 13.8	1.730	2.709	5.7	20.7
4 21	12 16.42	+3 39.2	1.695	2.619	10.8	20.1	4 21	12 16.98	+0 30.5	1.763	2.695	9.9	20.9
5 1	12 10.18	+3 39.7	1.774	2.626	14.3	20.4	5 1	12 10.53	+1 1.4	1.819	2.679	13.6	21.1
65686	1990 TN ₈		3 30.3 201°43	0°1/30.2	18		387996	2005 QD ₉₉		3 30.4 147°97	2°1/ 1.8	18	
2 21	12 57.82	-6 20.8	2.908	3.682	10.8	19.8	2 21	13 1.49	-12 6.9	2.846	3.589	11.7	21.9
3 2	12 53.90	-5 48.9	2.807	3.678	8.5	19.7	3 2	12 56.76	-12 19.4	2.751	3.596	9.5	21.7
3 12	12 48.48	-5 6.9	2.731	3.673	5.7	19.5	3 12	12 50.42	-12 20.8	2.680	3.602	6.8	21.5
3 22	12 41.98	-4 17.5	2.682	3.668	2.6	19.2	3 22	12 42.89	-12 11.8	2.635	3.608	4.0	21.4
4 1	12 34.92	-3 24.1	2.664	3.662	0.6	19.1	4 1	12 34.78	-11 54.2	2.620	3.613	2.1	21.2
4 11	12 27.94	-2 31.2	2.676	3.656	3.8	19.3	4 11	12 26.78	-11 30.9	2.636	3.619	3.6	21.3
4 21	12 21.63	-1 42.9	2.717	3.650	6.8	19.5	4 21	12 19.54	-11 5.4	2.680	3.623	6.4	21.5
5 1	12 16.50	-1 2.8	2.784	3.643	9.5	19.7	5 1	12 13.58	-10 41.6	2.752	3.628	9.0	21.7
27747	1990 YW		3 30.3 92°98	1°0/31.8	18		51958	2001 QJ ₂₅₆		3 30.4 268°04	0°5/29.5	18	
2 21	12 57.72	-11 29.8	2.528	3.289	12.6	18.6	2 21	12 54.05	-2 2.0	4.442	5.220	7.3	18.9
3 2	12 53.90	-10 49.4	2.452	3.311	10.0	18.5	3 2	12 50.46	-1 53.3	4.337	5.212	5.6	18.7
3 12	12 48.48	-9 54.6	2.399	3.332	6.9	18.3	3 12	12 45.93	-1 40.5	4.259	5.204	3.7	18.6
3 22	12 41.95	-8 48.5	2.373	3.354	3.6	18.1	3 22	12 40.74	-1 25.2	4.209	5.196	1.7	18.4
4 1	12 34.94	-7 35.3	2.377	3.375	1.0	18.0	4 1	12 35.21	-1 9.2	4.190	5.188	0.7	18.3
4 11	12 28.18	-6 20.7	2.411	3.395	3.7	18.2	4 11	12 29.73	-0 54.6	4.202	5.180	2.7	18.5
4 21	12 22.28	-5 10.1	2.473	3.416	6.9	18.4	4 21	12 24.65	-0 43.2	4.244	5.171	4.7	18.6
5 1	12 17.74	-4 8.3	2.562	3.436	9.7	18.7	5 1	12 20.28	-0 36.5	4.313	5.163	6.6	18.7
212914	2007 XL ₄₄		3 30.3 357°73	5°4/24.9	17		499327	2009 WQ ₁₅₄		3 30.4 173°38	1°8/ 1.2	17	
2 21	12 57.58	+8 20.9	1.868	2.699	13.7	20.0	2 21	13 2.39	-11 0.1	2.266	3.026	13.9	22.5
3 2	12 54.49	+9 21.0	1.795	2.697	10.7	19.8	3 2	12 57.91	-10 57.9	2.172	3.029	11.1	22.3
3 12	12 49.25	+10 24.2	1.744	2.695	7.6	19.6	3 12	12 51.42	-10 41.6	2.100	3.031	7.9	22.1
3 22	12 42.42	+11 23.4	1.720	2.694	5.5	19.5	3 22	12 43.43	-10 12.6	2.054	3.032	4.4	21.9
4 1	12 34.84	+12 11.2	1.722	2.694	6.2	19.5	4 1	12 34.68	-9 33.9	2.037	3.033	1.8	21.7
4 11	12 27.48	+12 41.4	1.750	2.694	8.9	19.7	4 11	12 26.05	-8 50.2	2.049	3.034	4.3	21.8
4 21	12 21.22	+12 51.1	1.803	2.695	12.1	19.9	4 21	12 18.37	-8 6.7	2.090	3.034	7.8	22.1
5 1	12 16.75	+12 39.3	1.877	2.696	15.0	20.1	5 1	12 12.32	-7 28.3	2.156	3.034	11.1	22.3
222819	2002 CA ₂₉₈		3 30.4 108°77	0°4/30.8	18		332536	2008 PX ₇		3 30.4 267°70	4°9/24.6	18	
2 21	13 0.07	-7 43.3	1.911	2.700	15.1	20.7	2 21	12 58.71	+5 17.6	2.065	2.885	13.0	

EPHEMERIDES

3 30.4

3 30.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
503384	2016 <i>CO</i> ₁₀₂		3 30.4 117°07'	1.7°/31.9	18		105000	2000 <i>KZ</i> ₃		3 30.4 190°92'	3°0'	3.2	18
2 21	13 08.6	-12 16.1	1.670	2.449	17.3	21.4	2 21	12 58.05	-17 10.7	2.688	3.416	12.7	20.0
3 2	12 57.34	-11 44.4	1.590	2.459	13.9	21.2	3 2	12 54.30	-16 59.0	2.585	3.415	10.5	19.8
3 12	12 51.33	-10 51.0	1.531	2.468	9.8	20.9	3 12	12 48.88	-16 31.2	2.504	3.414	7.8	19.6
3 22	12 43.45	-9 38.7	1.496	2.477	5.2	20.7	3 22	12 42.23	-15 48.0	2.449	3.412	5.1	19.4
4 1	12 34.69	-8 13.4	1.488	2.486	1.7	20.5	4 1	12 34.95	-14 51.7	2.422	3.410	3.1	19.3
4 11	12 26.21	-6 44.2	1.508	2.494	5.2	20.7	4 11	12 27.77	-13 46.8	2.425	3.407	4.0	19.4
4 21	12 19.04	-5 20.1	1.554	2.502	9.7	21.0	4 21	12 21.34	-12 38.5	2.457	3.404	6.6	19.5
5 1	12 13.97	-4 8.8	1.624	2.510	13.7	21.2	5 1	12 16.24	-11 32.3	2.515	3.401	9.4	19.7
385135	2013 <i>SC</i> ₃₀		3 30.4 158°61'	1.7°/28.6	17		488564	2001 <i>VN</i> ₁₁₁		3 30.4 188°58'	0°1'	30.5	17
2 21	13 1.25	-1 7.5	2.272	3.068	12.8	21.5	2 21	12 58.58	-6 25.5	3.245	4.011	9.9	22.7
3 2	12 56.90	-0 31.4	2.188	3.073	9.9	21.3	3 2	12 54.31	-6 0.8	3.144	4.010	7.8	22.6
3 12	12 50.66	+0 13.4	2.128	3.078	6.5	21.1	3 12	12 48.68	-5 27.4	3.068	4.008	5.3	22.4
3 22	12 43.05	+1 2.8	2.095	3.082	3.1	20.9	3 22	12 42.08	-4 47.5	3.020	4.005	2.5	22.2
4 1	12 34.78	+1 51.7	2.092	3.086	2.1	20.8	4 1	12 34.99	-4 4.1	3.004	4.002	0.5	22.0
4 11	12 26.69	+2 34.7	2.117	3.090	5.4	21.0	4 11	12 27.98	-3 20.7	3.018	3.999	3.4	22.2
4 21	12 19.56	+3 7.5	2.171	3.093	8.8	21.2	4 21	12 21.58	-2 40.7	3.062	3.995	6.1	22.4
5 1	12 13.98	+3 27.4	2.249	3.096	11.9	21.4	5 1	12 16.24	-2 7.3	3.133	3.990	8.6	22.6
153734	2001 <i>UF</i> ₁₃₄		3 30.4 63°60'	6°1'/6.3	18		159422	1999 <i>TL</i> ₃₄		3 30.4 211°79'	1°6'/28.3	18	
2 21	12 59.04	-25 9.4	1.709	2.426	19.2	19.5	2 21	12 58.45	-2 47.1	2.467	3.260	12.0	20.7
3 2	12 55.92	-24 55.3	1.637	2.449	16.3	19.3	3 2	12 54.69	-1 44.5	2.369	3.253	9.3	20.5
3 12	12 50.32	-24 10.7	1.583	2.471	12.9	19.1	3 12	12 49.20	-0 30.5	2.296	3.246	6.1	20.2
3 22	12 42.94	-22 55.7	1.551	2.494	9.4	19.0	3 22	12 42.40	+0 50.3	2.251	3.238	2.8	20.0
4 1	12 34.81	-21 14.0	1.544	2.517	6.6	18.8	4 1	12 34.93	+2 12.2	2.236	3.230	2.2	19.9
4 11	12 27.09	-19 14.2	1.563	2.540	6.5	18.9	4 11	12 27.55	+3 28.8	2.250	3.221	5.3	20.1
4 21	12 20.76	-17 7.7	1.610	2.562	9.0	19.1	4 21	12 20.96	+4 34.6	2.294	3.211	8.7	20.3
5 1	12 16.54	-15 5.6	1.681	2.585	12.3	19.3	5 1	12 15.75	+5 25.7	2.362	3.201	11.6	20.5
250480	2004 <i>DX</i> ₂₄		3 30.4 241°16'	12°6'/4.5	18		102705	1999 <i>VM</i> ₈₈		3 30.4 222°21'	1°7'/28.9	16	
2 21	13 16.06	-22 57.0	1.259	1.989	24.3	20.3	2 21	13 3.90	-1 35.8	1.882	2.683	14.8	20.3
3 2	13 11.40	-25 23.9	1.170	1.983	21.4	20.1	3 2	12 59.54	-1 8.5	1.789	2.676	11.6	20.1
3 12	13 2.36	-27 33.1	1.098	1.977	18.1	19.8	3 12	12 52.79	-0 30.5	1.718	2.668	7.8	19.9
3 22	12 49.27	-29 13.4	1.045	1.970	14.8	19.6	3 22	12 44.17	+0 14.1	1.673	2.660	3.6	19.6
4 1	12 33.44	-30 14.6	1.014	1.963	12.8	19.4	4 1	12 34.58	+0 59.5	1.656	2.652	2.2	19.5
4 11	12 17.07	-30 32.6	1.007	1.955	13.2	19.4	4 11	12 25.09	+1 39.3	1.667	2.643	6.2	19.7
4 21	12 2.52	-30 12.8	1.021	1.947	15.9	19.6	4 21	12 16.71	+2 8.3	1.705	2.633	10.4	19.9
5 1	11 51.73	-29 28.2	1.055	1.940	19.4	19.7	5 1	12 10.27	+2 22.7	1.767	2.624	14.1	20.1
383933	2008 <i>SU</i> ₂₀₁		3 30.4 235°61'	1°1'/31.5	17		32526	2001 <i>OD</i> ₉₈		3 30.4 307°02'	4°4'	4.2	18
2 21	12 59.47	-9 35.7	2.161	2.936	14.0	21.7	2 21	12 57.43	-19 17.7	2.170	2.904	15.2	17.9
3 2	12 55.80	-9 19.3	2.062	2.930	11.2	21.5	3 2	12 54.34	-19 24.4	2.069	2.898	12.7	17.7
3 12	12 50.11	-8 48.0	1.985	2.923	7.8	21.3	3 12	12 49.19	-19 11.2	1.988	2.892	9.9	17.5
3 22	12 42.86	-8 4.1	1.934	2.916	4.0	21.0	3 22	12 42.48	-18 37.9	1.930	2.886	6.8	17.3
4 1	12 34.81	-7 11.2	1.911	2.910	1.1	20.8	4 1	12 34.92	-17 46.2	1.899	2.880	4.6	17.2
4 11	12 26.83	-6 15.1	1.917	2.902	4.5	21.0	4 11	12 27.43	-16 40.7	1.895	2.875	5.2	17.2
4 21	12 19.77	-5 21.6	1.951	2.895	8.3	21.2	4 21	12 20.86	-15 28.0	1.919	2.869	8.0	17.4
5 1	12 14.33	-4 36.1	2.010	2.888	11.8	21.4	5 1	12 15.93	-14 15.3	1.968	2.864	11.1	17.5
63381	2001 <i>HJ</i> ₅₃		3 30.4 240°88'	2°2'/28.4	17		159946	2005 <i>YT</i> ₄₈		3 30.4 292°19'	5°5'/25.9	18	
2 21	13 3.02	-2 22.2	1.671	2.479	16.1	19.6	2 21	13 0.37	+4 10.1	1.385	2.223	17.2	20.3
3 2	12 59.27	-1 30.8	1.573	2.465	12.6	19.3	3 2	12 57.72	+5 19.0	1.297	2.205	13.5	20.0
3 12	12 52.85	-0 23.9	1.497	2.450	8.5	19.0	3 12	12 52.09	+6 39.8	1.231	2.188	9.3	19.7
3 22	12 44.29	+0 53.1	1.447	2.434	4.0	18.7	3 22	12 44.03	+8 3.9	1.187	2.170	5.9	19.4
4 1	12 34.52	+2 12.3	1.423	2.418	2.9	18.6	4 1	12 34.60	+9 19.9	1.169	2.153	6.4	19.4
4 11	12 24.76	+3 24.5	1.428	2.402	7.3	18.8	4 11	12 25.20	+10 17.0	1.176	2.135	10.5	19.6
4 21	12 16.20	+4 21.8	1.458	2.384	12.0	19.0	4 21	12 17.20	+10 48.1	1.206	2.118	15.1	19.8
5 1	12 9.78	+4 59.0	1.510	2.366	16.2	19.2	5 1	12 11.66	+10 50.3	1.254	2.102	19.3	20.0
49008	1998 <i>QY</i> ₆₈		3 30.4 291°48'	4°8'/3.3	18		9206	<i>Yanaikeizo</i>		3 30.4 161°03'	0°4'/29.9	18	
2 21	12 59.80	-17 3.3	1.638	2.400	18.3	19.1	2 21	13 3.15	-5 13.4	2.208	2.989	13.5	19.1
3 2	12 56.99	-17 22.5	1.536	2.386	15.3	18.9	3 2	12 58.46	-4 44.5	2.121	2.996	10.6	18.9
3 12	12 51.45	-17 19.1	1.454	2.372	11.7	18.6	3 12	12 51.76	-4 3.8	2.058	3.003	7.1	18.7
3 22	12 43.69	-16 51.8	1.393	2.358	7.8	18.3	3 22	12 43.59	-3 14.9	2.022	3.008	3.2	18.4
4 1	12 34.63	-16 1.9	1.357	2.344	4.9	18.1	4 1	12 34.72	-2 22.3	2.015	3.013	0.9	18.3
4 11	12 25.51	-14 55.1	1.347	2.330	6.2	18.2	4 11	12 26.03	-1 31.8	2.038	3.018	4.9	18.6
4 21	12 17.59	-13 39.9	1.362	2.317	10.2	18.3	4 21	12 18.36	-0 48.5	2.089	3.021	8.6	18.8
5 1	12 11.87	-12 26.1	1.401	2.303	14.3	18.6	5 1	12 12.33	-0 16.3	2.165	3.024	11.8	19.0
316057	2009 <i>HS</i> ₆₀		3 30.4 280°57'	0°5'/29.9	17		210408	2007 <i>WF</i> ₆		3 30.4 145°78'	4°7'/5.1	18	
2 21	13 1.67	-4 57.2	1.632	2.437	16.6	21.4	2 21	12 59.24	-21 24.3	2.474	3.182	14.1	20.9
3 2	12 58.34	-4 39.1	1.530	2.419	13.1	21.1	3 2	12 55.43	-21 37.9	2.378	3.186	12.0	20.7
3 12	12 52.31	-4 5.9	1.450	2.400	8.9	20.8	3 12	12 49.75	-21 33.2	2.301	3.189	9.4	20.6
3 22	12 44.08	-3 20.6	1.394	2.382	4.2	20.5	3 22	12 42.68	-21 9.7	2.249	3.193	6.8	20.4
4 1	12 34.55	-2 28.8	1.364	2.363	1.2	20.2	4 1	12 34.89	-20 28.7	2.224	3.196	5.0	20.3
4 11	12 24.99	-1 38.1	1.362	2.344	6.3	20.5	4 11	12 27.21	-19 33.8	2.227	3.199	5.2	20.3
4 21	12 16.58	-0 55.7	1.384	2.325	11.3	20.7	4 21	12 20.41	-18 30.6	2.258	3.202	7.3	20.4
5 1	12 10.35	-0 27.7	1.429	2.307	15.7	20.9	5 1	12 15.10	-17 25.2	2.315	3.205	9.9	20.6
253137	2002 <i>VF</i> ₄₆		3 30.4 90°55'	3°0'/27.6	18		219821	2002 <i>BW</i> ₂₆		3 30.4 169°59'	0°4'/29.9	18	
2 21	13 3.14	+1 9.0											

EPHEMERIDES

3 30.4

3 30.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
319013	2005 <i>UR</i> ₄₉₇		3 30.4 179°10	0°6/31.1	18		87908	2000 <i>SJ</i> ₃₁₁		3 30.4 83°72	9°6/11.2	18	
2 21	12 56.88	-12 31.3	1.904	2.680	15.6	20.1	2 21	13 0.24	-34 19.6	2.012	2.649	18.9	19.0
3 2	12 54.01	-11 14.2	1.811	2.681	12.4	19.9	3 2	12 56.96	-34 54.0	1.925	2.659	16.9	18.8
3 12	12 48.99	-9 33.5	1.741	2.681	8.6	19.6	3 12	12 51.16	-34 59.6	1.853	2.668	14.7	18.7
3 22	12 42.37	-7 33.4	1.697	2.681	4.2	19.4	3 22	12 43.46	-34 32.5	1.801	2.678	12.3	18.6
4 1	12 34.96	-5 21.7	1.682	2.681	0.7	19.1	4 1	12 34.80	-33 31.9	1.770	2.688	10.4	18.4
4 11	12 27.73	-3 8.9	1.697	2.681	5.1	19.4	4 11	12 26.37	-32 1.3	1.764	2.697	9.6	18.4
4 21	12 21.56	-1 5.3	1.740	2.681	9.4	19.7	4 21	12 19.22	-30 8.7	1.783	2.707	10.3	18.5
5 1	12 17.14	+0 40.9	1.808	2.680	13.1	19.9	5 1	12 14.16	-28 4.7	1.827	2.716	12.2	18.6
386590	2009 <i>FZ</i> ₄₉		3 30.4 322°20	5°5/26.2	17		215477	2002 <i>RK</i> ₁₆₃		3 30.4 297°83	1°0/29.5	17	
2 21	13 4.39	+10 23.8	1.863	2.683	14.2	19.7	2 21	12 58.69	-4 56.4	1.530	2.345	17.0	20.9
3 2	13 0.05	+10 43.8	1.767	2.661	11.3	19.5	3 2	12 56.19	-4 21.8	1.431	2.325	13.4	20.6
3 12	12 53.22	+11 3.5	1.694	2.640	8.2	19.2	3 12	12 50.97	-3 29.2	1.352	2.305	9.1	20.3
3 22	12 44.42	+11 16.7	1.645	2.620	5.8	19.0	3 22	12 43.53	-2 22.6	1.297	2.285	4.2	19.9
4 1	12 34.55	+11 17.3	1.624	2.600	6.1	19.0	4 1	12 34.78	-1 9.1	1.268	2.266	1.7	19.7
4 11	12 24.75	+11 0.6	1.630	2.580	8.9	19.1	4 11	12 25.98	+0 2.0	1.265	2.246	6.9	20.0
4 21	12 16.07	+10 24.6	1.661	2.561	12.4	19.3	4 21	12 18.38	+1 1.7	1.286	2.227	12.0	20.2
5 1	12 9.39	+9 29.8	1.714	2.543	15.8	19.5	5 1	12 12.99	+1 43.3	1.329	2.208	16.5	20.4
210723	2000 <i>SQ</i> ₃₀₈		3 30.4 195°56	2°6/1.8	17		217108	2001 <i>XL</i> ₁₈₅		3 30.4 178°67	0°9/31.5	16	
2 21	13 4.12	-13 27.4	2.002	2.757	15.6	21.5	2 21	13 1.51	-9 56.7	2.665	3.421	12.1	21.7
3 2	12 59.66	-13 25.4	1.903	2.754	12.7	21.3	3 2	12 56.91	-9 31.7	2.567	3.424	9.6	21.6
3 12	12 52.84	-13 5.6	1.826	2.751	9.3	21.0	3 12	12 50.61	-8 53.9	2.492	3.426	6.7	21.4
3 22	12 44.21	-12 28.7	1.774	2.748	5.5	20.8	3 22	12 43.07	-8 5.6	2.445	3.426	3.4	21.1
4 1	12 34.61	-11 37.7	1.749	2.743	2.7	20.6	4 1	12 34.90	-7 10.0	2.428	3.426	0.9	20.9
4 11	12 25.09	-10 38.1	1.753	2.738	4.9	20.7	4 11	12 26.85	-6 12.0	2.442	3.426	3.8	21.2
4 21	12 16.65	-9 36.8	1.785	2.732	8.8	20.9	4 21	12 19.59	-5 16.5	2.485	3.424	7.0	21.4
5 1	12 10.10	-8 40.7	1.843	2.725	12.4	21.1	5 1	12 13.70	-4 27.8	2.555	3.422	10.0	21.6
303767	2005 <i>QJ</i> ₁₆₉		3 30.4 227°93	4°1/25.1	18		175586	<i>Tsou</i>		3 30.4 150°44	1°7/28.4	17	
2 21	12 57.74	+7 32.8	2.560	3.374	11.0	20.6	2 21	12 58.20	-0 35.7	2.410	3.211	12.0	20.6
3 2	12 54.05	+8 31.8	2.476	3.369	8.5	20.4	3 2	12 54.49	+0 0.1	2.324	3.212	9.2	20.4
3 12	12 48.71	+9 34.0	2.417	3.364	6.0	20.2	3 12	12 49.06	+0 43.7	2.262	3.213	6.1	20.2
3 22	12 42.16	+10 34.0	2.385	3.359	4.2	20.1	3 22	12 42.36	+1 31.2	2.227	3.214	2.9	20.0
4 1	12 35.02	+11 26.4	2.382	3.354	4.7	20.1	4 1	12 35.05	+2 18.0	2.221	3.215	2.2	19.9
4 11	12 28.00	+12 6.3	2.408	3.348	7.0	20.3	4 11	12 27.89	+2 59.0	2.244	3.216	5.2	20.1
4 21	12 21.77	+12 30.7	2.460	3.343	9.6	20.4	4 21	12 21.56	+3 30.2	2.294	3.217	8.4	20.3
5 1	12 16.86	+12 38.1	2.535	3.337	12.0	20.6	5 1	12 16.64	+3 49.0	2.370	3.217	11.3	20.5
384757	2011 <i>SR</i> ₁₄		3 30.4 270°89	1°5/1.2	17		105548	2000 <i>RF</i> ₄₅		3 30.4 176°93	1°0/31.6	18	
2 21	12 56.59	-12 8.3	2.312	3.078	13.5	20.9	2 21	13 0.53	-8 37.4	2.894	3.653	11.2	19.7
3 2	12 53.46	-11 41.8	2.209	3.070	10.8	20.7	3 2	12 56.02	-8 35.6	2.796	3.655	8.9	19.5
3 12	12 48.49	-10 59.0	2.128	3.061	7.7	20.5	3 12	12 49.96	-8 24.1	2.722	3.656	6.2	19.4
3 22	12 42.12	-10 1.6	2.073	3.052	4.2	20.3	3 22	12 42.76	-8 4.3	2.676	3.657	3.2	19.2
4 1	12 35.02	-8 53.5	2.046	3.043	1.5	20.1	4 1	12 34.98	-7 38.6	2.659	3.657	1.0	19.0
4 11	12 27.99	-7 40.6	2.048	3.034	4.1	20.2	4 11	12 27.31	-7 10.5	2.673	3.657	3.5	19.2
4 21	12 21.77	-6 29.0	2.078	3.025	7.7	20.4	4 21	12 20.34	-6 43.3	2.716	3.657	6.4	19.4
5 1	12 17.02	-5 24.7	2.134	3.016	11.0	20.6	5 1	12 14.60	-6 20.4	2.786	3.656	9.1	19.6
360272	2000 <i>SE</i> ₂₅₄		3 30.4 261°94	2°2/28.5	17		344768	2003 <i>WT</i> ₉₄		3 30.4 173°41	0°9/29.3	17	
2 21	13 3.27	-1 26.7	1.750	2.557	15.5	21.4	2 21	13 0.40	-3 8.6	2.790	3.571	11.0	22.7
3 2	12 59.46	-0 45.6	1.644	2.535	12.2	21.1	3 2	12 55.93	-2 37.1	2.698	3.574	8.5	22.5
3 12	12 53.02	+0 9.0	1.560	2.512	8.2	20.8	3 12	12 49.89	-1 57.3	2.631	3.577	5.7	22.3
3 22	12 44.43	+1 12.4	1.501	2.488	3.9	20.5	3 22	12 42.72	-1 12.4	2.592	3.579	2.6	22.1
4 1	12 34.57	+2 17.6	1.470	2.464	2.9	20.4	4 1	12 35.00	-0 26.0	2.584	3.581	1.2	22.0
4 11	12 24.62	+3 16.3	1.466	2.440	7.2	20.6	4 11	12 27.40	+0 17.3	2.606	3.582	4.3	22.2
4 21	12 15.74	+4 1.4	1.489	2.415	11.8	20.8	4 21	12 20.56	+0 53.9	2.657	3.582	7.3	22.4
5 1	12 8.92	+4 28.0	1.533	2.389	16.0	21.0	5 1	12 14.98	+1 20.9	2.734	3.582	10.0	22.6
129294	2005 <i>SX</i> ₁₀₅		3 30.4 160°41	1°5/28.4	17		52368	1993 <i>FQ</i> ₄₄		3 30.4 61°38	0°7/31.2	18	
2 21	12 59.87	-3 47.1	2.523	3.309	11.9	20.3	2 21	12 57.27	-9 38.9	2.072	2.854	14.3	18.9
3 2	12 55.65	-2 36.2	2.437	3.317	9.2	20.2	3 2	12 53.99	-9 1.4	1.997	2.870	11.3	18.7
3 12	12 49.75	-1 13.8	2.376	3.324	6.1	20.0	3 12	12 48.80	-8 8.1	1.945	2.886	7.7	18.5
3 22	12 42.63	+0 15.3	2.344	3.331	2.8	19.8	3 22	12 42.25	-7 2.6	1.918	2.902	3.8	18.3
4 1	12 34.96	+1 45.0	2.342	3.337	2.0	19.7	4 1	12 35.09	-5 50.1	1.920	2.919	0.7	18.1
4 11	12 27.45	+3 8.9	2.371	3.342	5.1	19.9	4 11	12 28.19	-4 37.3	1.950	2.935	4.4	18.4
4 21	12 20.79	+4 21.7	2.430	3.346	8.3	20.1	4 21	12 22.31	-3 30.7	2.008	2.951	8.1	18.6
5 1	12 15.51	+5 19.6	2.513	3.350	11.1	20.3	5 1	12 18.02	-2 35.4	2.090	2.968	11.4	18.9
114789	2003 <i>MT</i> ₁₀		3 30.4 342°14	0°6/30.9	18		468924	2014 <i>WT</i> ₃₈₉		3 30.4 42°46	2°1/28.2	18	
2 21	12 51.58	-9 40.7	1.344	2.165	18.6	18.2	2 21	12 56.75	-3 9.0	1.703	2.520	15.5	20.7
3 2	12 50.84	-9 4.7	1.256	2.151	14.8	17.9	3 2	12 54.03	-2 0.6	1.631	2.528	11.9	20.5
3 12	12 47.42	-8 3.5	1.186	2.138	10.3	17.6	3 12	12 49.06	-0 37.5	1.581	2.537	7.8	20.3
3 22	12 41.85	-6 40.6	1.139	2.126	5.1	17.2	3 22	12 42.44	+0 53.8	1.557	2.546	3.6	20.0
4 1	12 35.08	-5 3.4	1.116	2.115	0.9	16.9	4 1	12 35.05	+2 24.8	1.560	2.555	2.8	20.0
4 11	12 28.41	-3 23.6	1.118	2.106	6.3	17.2	4 11	12 27.95	+3 46.3	1.591	2.564	6.7	20.3
4 21	12 23.04	-1 52.8	1.144	2.098	11.7	17.5	4 21	12 22.03	+4 51.5	1.647	2.574	10.8	20.5
5 1	12 19.94	-0 40.7	1.191	2.092	16.4	17.8	5 1	12 17.98	+5 36.1	1.725	2.584	14.3	20.8
8934	<i>Nishimurajun</i>		3 30.4 119°42	4°9/24.0	18		109293	2001 <i>QJ</i> ₁₂₄		3 30.4 204°84	1°1/29.2	17	
2 21	12 58.36	+10 4.4	2.505	3.321	11.1								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
503115	2015 <i>FJ</i> ₃₂₇		3 30.4	3°86	4°1/26.3	17	232967	2005 <i>EY</i> ₇₀		3 30.4	256°77	0°6/31.0	17
2 21	12 56.10	+ 3 14.4	1.699	2.531	14.8	20.6	2 21	13 0.71	- 7 13.6	2.168	2.950	13.8	21.3
3 2	12 53.59	+ 4 18.1	1.625	2.530	11.4	20.4	3 2	12 56.77	- 7 8.5	2.072	2.945	10.9	21.1
3 12	12 48.81	+ 5 30.5	1.574	2.531	7.7	20.2	3 12	12 50.79	- 6 51.3	1.998	2.939	7.5	20.9
3 22	12 42.35	+ 6 44.3	1.548	2.532	4.6	20.0	3 22	12 43.25	- 6 24.1	1.950	2.934	3.7	20.6
4 1	12 35.07	+ 7 51.1	1.549	2.534	4.9	20.0	4 1	12 34.91	- 5 50.4	1.930	2.929	0.8	20.4
4 11	12 28.03	+ 8 43.3	1.576	2.536	8.2	20.2	4 11	12 26.65	- 5 14.9	1.939	2.924	4.5	20.7
4 21	12 22.14	+ 9 15.8	1.627	2.539	11.9	20.4	4 21	12 19.32	- 4 42.6	1.976	2.918	8.3	20.9
5 1	12 18.13	+ 9 26.4	1.699	2.543	15.2	20.6	5 1	12 13.62	- 4 17.8	2.038	2.913	11.7	21.1
167240	2003 <i>UU</i> ₈₁		3 30.4	86°38	0°3/30.2	18	169938	2002 <i>TQ</i> ₃₀		3 30.4	177°31	0°4/29.9	18
2 21	13 3.19	- 6 39.4	1.620	2.418	17.0	21.2	2 21	13 0.70	- 4 14.3	2.841	3.617	11.0	21.6
3 2	12 59.05	- 6 4.3	1.556	2.439	13.3	21.0	3 2	12 56.15	- 3 53.8	2.747	3.619	8.6	21.5
3 12	12 52.40	- 5 12.8	1.512	2.460	8.9	20.8	3 12	12 50.05	- 3 25.0	2.677	3.621	5.7	21.3
3 22	12 43.96	- 4 9.6	1.493	2.480	4.1	20.5	3 22	12 42.81	- 2 50.4	2.635	3.622	2.6	21.1
4 1	12 34.78	- 3 1.7	1.501	2.500	0.9	20.3	4 1	12 35.01	- 2 13.5	2.624	3.622	0.8	20.9
4 11	12 26.02	- 1 57.2	1.537	2.520	5.7	20.7	4 11	12 27.33	- 1 38.0	2.643	3.622	4.0	21.2
4 21	12 18.69	- 1 3.0	1.600	2.540	10.1	21.0	4 21	12 20.38	- 1 7.7	2.691	3.621	7.0	21.4
5 1	12 13.51	- 0 24.1	1.685	2.559	13.9	21.3	5 1	12 14.68	- 0 45.2	2.766	3.620	9.7	21.5
409393	2005 <i>ER</i> ₉₇		3 30.4	43°64	3°5/ 2.1	18	187980	2001 <i>QP</i> ₂₈₈		3 30.4	60°11	6°2/ 5.7	18
2 21	13 1.54	-13 21.7	1.300	2.094	20.6	20.6	2 21	12 59.21	-23 7.4	1.666	2.397	19.2	19.4
3 2	12 58.53	-13 36.5	1.236	2.109	16.7	20.4	3 2	12 56.24	-23 13.9	1.590	2.411	16.3	19.2
3 12	12 52.47	-13 27.5	1.189	2.124	12.1	20.1	3 12	12 50.71	-22 52.2	1.531	2.426	12.9	19.0
3 22	12 44.13	-12 55.5	1.164	2.140	7.2	19.9	3 22	12 43.26	-22 1.5	1.494	2.441	9.3	18.8
4 1	12 34.74	-12 4.9	1.163	2.157	3.6	19.7	4 1	12 34.92	-20 44.3	1.481	2.456	6.6	18.7
4 11	12 25.77	-11 4.2	1.187	2.174	6.1	19.9	4 11	12 26.90	-19 8.1	1.495	2.472	6.6	18.7
4 21	12 18.51	-10 2.9	1.235	2.192	10.7	20.2	4 21	12 20.25	-17 23.0	1.534	2.487	9.4	18.9
5 1	12 13.83	- 9 10.0	1.305	2.209	15.0	20.5	5 1	12 15.75	-15 39.9	1.598	2.503	12.7	19.2
212809	2007 <i>TW</i> ₃₇₉		3 30.4	0°35	3°7/ 2.2	18	248382	2005 <i>SY</i> ₆		3 30.4	230°98	1°0/31.8	17
2 21	12 58.74	-13 37.7	1.306	2.103	20.3	20.2	2 21	12 57.08	-10 35.1	2.904	3.662	11.2	21.9
3 2	12 56.58	-13 53.1	1.226	2.101	16.7	19.9	3 2	12 53.44	-10 10.9	2.795	3.652	8.9	21.7
3 12	12 51.37	-13 44.5	1.164	2.100	12.2	19.7	3 12	12 48.30	- 9 34.4	2.709	3.641	6.3	21.6
3 22	12 43.73	-13 11.6	1.123	2.100	7.4	19.4	3 22	12 42.02	- 8 47.5	2.650	3.630	3.3	21.3
4 1	12 34.79	-12 18.1	1.106	2.101	3.8	19.2	4 1	12 35.16	- 7 53.2	2.621	3.619	1.0	21.1
4 11	12 26.04	-11 12.2	1.114	2.102	6.3	19.3	4 11	12 28.34	- 6 55.7	2.623	3.607	3.5	21.3
4 21	12 18.84	-10 4.1	1.145	2.104	11.1	19.6	4 21	12 22.16	- 5 59.6	2.653	3.595	6.5	21.5
5 1	12 14.20	- 9 3.8	1.197	2.106	15.7	19.9	5 1	12 17.14	- 5 9.0	2.710	3.583	9.3	21.7
310522	2000 <i>YS</i> ₆₆		3 30.4	127°48	3°8/26.4	18	110718	2001 <i>TA</i> ₂₃₁		3 30.4	217°36	3°8/25.7	18
2 21	13 5.30	+ 4 14.9	2.157	2.960	13.1	21.2	2 21	12 57.88	+ 5 14.4	2.354	3.168	11.8	19.7
3 2	12 59.99	+ 5 22.0	2.093	2.982	10.1	21.0	3 2	12 54.33	+ 6 17.1	2.270	3.165	9.1	19.5
3 12	12 52.69	+ 6 34.3	2.054	3.003	6.8	20.9	3 12	12 48.99	+ 7 25.0	2.212	3.163	6.3	19.3
3 22	12 44.01	+ 7 45.6	2.043	3.023	4.2	20.7	3 22	12 42.36	+ 8 32.5	2.181	3.160	4.0	19.2
4 1	12 34.78	+ 8 49.1	2.061	3.042	4.4	20.8	4 1	12 35.10	+ 9 33.5	2.178	3.157	4.5	19.2
4 11	12 25.89	+ 9 39.1	2.109	3.060	7.1	21.0	4 11	12 27.97	+10 22.3	2.204	3.153	7.0	19.3
4 21	12 18.15	+10 12.0	2.184	3.077	10.2	21.2	4 21	12 21.70	+10 55.3	2.257	3.150	9.9	19.5
5 1	12 12.14	+10 26.5	2.282	3.093	12.9	21.4	5 1	12 16.85	+11 10.6	2.332	3.146	12.6	19.7
300070	2006 <i>UA</i> ₂₀₆		3 30.4	357°36	1°4/ 1.1	17	416123	2002 <i>QM</i> ₆₉		3 30.4	180°51	1°6/28.7	14 C
2 21	12 56.24	-11 50.0	2.262	3.031	13.6	20.3	2 21	13 2.65	- 2 14.4	2.269	3.059	13.0	22.8
3 2	12 53.19	-11 21.6	2.168	3.031	10.9	20.1	3 2	12 58.07	- 1 29.9	2.179	3.061	10.1	22.6
3 12	12 48.30	-10 36.8	2.096	3.030	7.7	19.9	3 12	12 51.55	- 0 35.1	2.113	3.062	6.7	22.4
3 22	12 42.06	- 9 38.0	2.050	3.030	4.2	19.6	3 22	12 43.57	+ 0 25.8	2.075	3.062	3.1	22.1
4 1	12 35.13	- 8 29.3	2.033	3.030	1.4	19.4	4 1	12 34.88	+ 1 27.1	2.066	3.061	2.0	22.0
4 11	12 28.34	- 7 16.7	2.044	3.030	4.1	19.6	4 11	12 26.34	+ 2 23.0	2.087	3.060	5.5	22.3
4 21	12 22.41	- 6 6.4	2.083	3.030	7.7	19.8	4 21	12 18.74	+ 3 8.6	2.136	3.058	9.0	22.5
5 1	12 17.96	- 5 4.3	2.148	3.030	10.9	20.1	5 1	12 12.74	+ 3 40.3	2.210	3.055	12.1	22.7
385132	2013 <i>RO</i> ₃₁		3 30.4	261°86	0°5/30.8	17	457642	2009 <i>BZ</i> ₁₈₁		3 30.4	0°02	0°7/29.9	16
2 21	13 6.06	- 5 30.0	1.973	2.755	14.9	20.5	2 21	12 57.86	- 5 21.0	1.271	2.099	19.0	21.4
3 2	13 1.32	- 5 41.7	1.865	2.738	11.9	20.3	3 2	12 55.82	- 4 55.2	1.196	2.097	15.0	21.1
3 12	12 54.12	- 5 43.0	1.779	2.722	8.2	20.0	3 12	12 50.79	- 4 10.4	1.141	2.096	10.1	20.8
3 22	12 44.92	- 5 35.4	1.719	2.704	4.0	19.7	3 22	12 43.44	- 3 11.3	1.107	2.096	4.6	20.5
4 1	12 34.56	- 5 21.8	1.688	2.687	0.8	19.4	4 1	12 34.89	- 2 5.9	1.098	2.096	1.4	20.3
4 11	12 24.15	- 5 6.6	1.685	2.669	5.2	19.7	4 11	12 26.59	- 1 4.3	1.113	2.097	7.0	20.7
4 21	12 14.74	- 4 54.1	1.710	2.651	9.5	19.9	4 21	12 19.83	- 0 15.3	1.151	2.099	12.3	21.0
5 1	12 7.24	- 4 48.7	1.760	2.632	13.4	20.1	5 1	12 15.58	+ 0 14.9	1.211	2.102	16.9	21.2
317412	2002 <i>PC</i> ₁₇₆		3 30.4	186°52	2°2/ 1.9	17	138935	2001 <i>BH</i> ₁₂		3 30.4	17°26	2°6/ 1.8	17
2 21	12 58.86	-13 44.7	2.384	3.136	13.5	21.3	2 21	12 58.52	-12 40.7	1.721	2.501	16.8	20.0
3 2	12 55.15	-13 29.7	2.286	3.136	10.9	21.2	3 2	12 55.58	-12 40.3	1.637	2.504	13.6	19.7
3 12	12 49.59	-12 58.6	2.210	3.135	7.9	21.0	3 12	12 50.24	-12 20.6	1.573	2.507	9.8	19.5
3 22	12 42.65	-12 12.9	2.161	3.134	4.7	20.8	3 22	12 43.07	-11 42.9	1.533	2.510	5.7	19.3
4 1	12 35.02	-11 15.7	2.139	3.133	2.2	20.6	4 1	12 34.97	-10 50.9	1.519	2.514	2.6	19.1
4 11	12 27.50	-10 12.1	2.147	3.132	4.1	20.7	4 11	12 27.06	- 9 51.4	1.532	2.518	5.1	19.3
4 21	12 20.84	- 9 7.9	2.183	3.130	7.4	20.9	4 21	12 20.35	- 8 51.9	1.570	2.523	9.2	19.5
5 1	12 15.65	- 8 8.8	2.245	3.128	10.5	21.1	5 1	12 15.62	- 7 59.3	1.632	2.528	13.0	19.7
100969	1998 <i>QV</i> ₂₁		3 30.4	187°35	0°2/30.6	16	489400	2006 <i>VE</i> ₇		3			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
105864	2000 SC ₁₇₁		3 30.4 217°78	1.2/28.8	17		458239	2010 TY ₂₉		3 30.4	1°74	2°1/	1.1 17
2 21	13 0 14	- 0 45.1	2.979	3.764	10.3	20.6	2 21	12 56.14	-11 18.9	1.277	2.089	19.9	20.3
3 2	12 55.70	- 0 23.2	2.876	3.756	8.0	20.4	3 2	12 54.53	-11 11.0	1.200	2.088	16.0	20.1
3 12	12 49.76	+ 0 4.8	2.799	3.747	5.3	20.2	3 12	12 49.97	-10 38.7	1.141	2.087	11.4	19.8
3 22	12 42.69	+ 0 36.1	2.751	3.737	2.5	20.0	3 22	12 43.10	- 9 44.1	1.104	2.087	6.2	19.5
4 1	12 35.06	+ 1 7.5	2.732	3.727	1.6	19.9	4 1	12 35.02	- 8 33.1	1.090	2.088	2.1	19.2
4 11	12 27.48	+ 1 35.2	2.744	3.717	4.3	20.1	4 11	12 27.17	- 7 15.7	1.101	2.090	6.1	19.5
4 21	12 20.56	+ 1 56.3	2.785	3.707	7.2	20.3	4 21	12 20.82	- 6 2.6	1.135	2.093	11.3	19.8
5 1	12 14.81	+ 2 8.4	2.852	3.695	9.7	20.5	5 1	12 16.95	- 5 3.0	1.191	2.097	16.0	20.1
27645	2074 T ₋₂		3 30.4 200°90	0°0/30.4	17		109414	2001 QE ₁₈₇		3 30.4 188°23	6°0/	6.4 17	
2 21	12 58.37	- 6 17.7	2.808	3.582	11.1	21.2	2 21	13 2.83	-25 22.2	2.443	3.119	15.0	20.6
3 2	12 54.43	- 5 52.3	2.708	3.579	8.7	21.0	3 2	12 58.42	-25 42.2	2.338	3.119	13.0	20.5
3 12	12 48.94	- 5 16.9	2.633	3.575	5.9	20.8	3 12	12 51.93	-25 41.9	2.253	3.117	10.6	20.3
3 22	12 42.32	- 4 34.0	2.585	3.571	2.8	20.6	3 22	12 43.84	-25 19.4	2.191	3.115	8.2	20.1
4 1	12 35.13	- 3 47.1	2.568	3.567	0.5	20.4	4 1	12 34.90	-24 35.0	2.155	3.113	6.3	20.0
4 11	12 28.02	- 3 0.5	2.580	3.562	3.8	20.7	4 11	12 26.02	-23 32.1	2.148	3.109	6.3	20.0
4 21	12 21.60	+ 2 18.1	2.621	3.556	6.9	20.9	4 21	12 18.07	-22 16.5	2.168	3.105	8.0	20.1
5 1	12 16.40	- 1 43.5	2.689	3.551	9.7	21.0	5 1	12 11.77	-20 55.5	2.215	3.101	10.5	20.3
161845	2007 AK ₁₈		3 30.4 29°82	7°5/	6.7 18		42300	2001 UU ₁₄₀		3 30.4 41°60	0°5/29.9	18	
2 21	12 58.96	-24 58.3	1.696	2.415	19.3	19.7	2 21	12 58.69	- 4 32.5	2.113	2.909	13.6	19.5
3 2	12 56.23	-25 28.9	1.610	2.418	16.7	19.5	3 2	12 55.15	- 4 9.9	2.030	2.914	10.6	19.3
3 12	12 50.85	-25 32.1	1.541	2.423	13.6	19.3	3 12	12 49.65	- 3 36.1	1.971	2.919	7.1	19.1
3 22	12 43.42	-25 5.4	1.492	2.427	10.4	19.2	3 22	12 42.73	- 2 54.6	1.937	2.925	3.2	18.9
4 1	12 34.92	-24 9.1	1.467	2.432	8.0	19.0	4 1	12 35.12	- 2 10.0	1.932	2.930	1.0	18.7
4 11	12 26.59	-22 48.6	1.468	2.436	7.8	19.0	4 11	12 27.71	- 1 27.8	1.955	2.936	4.9	19.0
4 21	12 19.57	-21 12.9	1.493	2.442	10.0	19.2	4 21	12 21.26	- 0 52.9	2.005	2.942	8.6	19.2
5 1	12 14.75	-19 33.0	1.542	2.447	13.1	19.3	5 1	12 16.41	- 0 28.8	2.080	2.948	11.8	19.5
499812	2011 CD ₁₀₈		3 30.4 339°61	0°6/30.9	17		332641	2008 UK ₉₁		3 30.4 282°47	5°0/	4.7 17	
2 21	12 59.87	- 7 25.1	1.706	2.503	16.3	21.7	2 21	12 59.37	-21 38.6	2.114	2.833	16.0	21.0
3 2	12 56.67	- 7 16.7	1.617	2.500	12.9	21.5	3 2	12 56.25	-21 32.1	1.983	2.800	13.7	20.7
3 12	12 51.02	- 6 52.9	1.550	2.496	8.9	21.2	3 12	12 50.82	-21 1.7	1.871	2.767	10.8	20.5
3 22	12 43.47	- 6 16.1	1.508	2.493	4.4	21.0	3 22	12 43.48	-20 5.5	1.782	2.734	7.7	20.2
4 1	12 34.92	- 5 31.1	1.491	2.490	0.8	20.7	4 1	12 34.95	-18 44.2	1.720	2.700	5.3	20.0
4 11	12 26.51	- 4 44.5	1.502	2.488	5.4	21.0	4 11	12 26.22	-17 2.9	1.686	2.665	5.8	19.9
4 21	12 19.28	- 4 2.9	1.538	2.485	9.9	21.3	4 21	12 18.32	-15 9.5	1.679	2.630	8.9	20.0
5 1	12 14.07	- 3 31.9	1.598	2.483	13.9	21.5	5 1	12 12.17	-13 14.2	1.699	2.594	12.6	20.2
138710	2000 SE ₁₀₃		3 30.4 230°64	0°1/30.5	18		127059	2002 GJ ₅₀		3 30.4 36°86	5°2/	3.9 17	
2 21	12 57.57	- 7 1.5	2.767	3.542	11.3	20.7	2 21	13 1.59	-17 51.6	1.738	2.488	17.8	19.7
3 2	12 53.89	- 6 30.1	2.661	3.531	8.9	20.5	3 2	12 58.07	-18 27.8	1.655	2.494	14.9	19.5
3 12	12 48.64	- 5 47.6	2.579	3.521	6.0	20.3	3 12	12 51.99	-18 43.3	1.591	2.501	11.5	19.3
3 22	12 42.22	- 4 56.5	2.525	3.510	2.9	20.0	3 22	12 43.94	-18 36.8	1.550	2.509	7.9	19.1
4 1	12 35.18	- 4 0.5	2.500	3.499	0.5	19.8	4 1	12 34.89	-18 9.5	1.534	2.516	5.4	19.0
4 11	12 28.19	- 3 4.3	2.506	3.488	3.9	20.1	4 11	12 26.01	-17 26.1	1.545	2.524	6.2	19.0
4 21	12 21.87	- 2 12.4	2.540	3.476	7.1	20.3	4 21	12 18.40	-16 33.7	1.581	2.532	9.3	19.2
5 1	12 16.78	- 1 28.7	2.601	3.464	9.9	20.4	5 1	12 12.91	-15 40.2	1.641	2.541	12.8	19.5
36227	1999 UR ₅		3 30.4 267°00	2°9/	3.1 18		432007	2008 UZ ₃₄₂		3 30.4 234°07	0°4/30.8	18	
2 21	12 56.66	-16 44.6	2.624	3.359	12.8	18.5	2 21	13 3.21	- 6 23.6	2.437	3.209	12.7	21.8
3 2	12 53.39	-16 33.0	2.510	3.345	10.6	18.3	3 2	12 58.57	- 6 17.9	2.328	3.196	10.1	21.6
3 12	12 48.43	-16 4.9	2.419	3.331	7.9	18.1	3 12	12 51.97	- 6 1.8	2.243	3.182	6.9	21.4
3 22	12 42.16	-15 21.0	2.353	3.317	5.1	17.9	3 22	12 43.87	- 5 37.2	2.184	3.168	3.4	21.1
4 1	12 35.19	-14 23.5	2.314	3.303	3.0	17.7	4 1	12 34.93	- 5 7.1	2.155	3.154	0.6	20.9
4 11	12 28.24	-13 16.7	2.306	3.289	4.0	17.8	4 11	12 25.99	- 4 35.7	2.155	3.138	4.3	21.1
4 21	12 22.01	-12 6.2	2.325	3.274	6.9	17.9	4 21	12 17.86	- 4 7.4	2.185	3.122	7.9	21.3
5 1	12 17.08	-10 57.7	2.372	3.260	9.8	18.1	5 1	12 11.22	- 3 45.9	2.240	3.106	11.2	21.5
310671	2002 FJ ₆		3 30.4 43°79	17°3/24.7	16		383754	2007 VF ₁₄₈		3 30.4 52°04	2°5/	2.2 17	
2 21	13 24.35	+28 12.2	0.922	1.749	24.7	20.0	2 21	12 57.37	-14 40.0	2.020	2.782	15.3	20.6
3 2	13 17.66	+29 10.5	0.881	1.756	21.6	19.8	3 2	12 54.19	-14 18.5	1.946	2.801	12.3	20.4
3 12	13 5.86	+29 42.9	0.854	1.763	18.8	19.7	3 12	12 49.03	-13 38.0	1.893	2.819	8.9	20.2
3 22	12 50.39	+29 31.4	0.846	1.771	17.3	19.6	3 22	12 42.44	-12 40.6	1.864	2.838	5.3	20.1
4 1	12 33.70	+28 24.3	0.857	1.780	17.8	19.6	4 1	12 35.22	-11 30.7	1.863	2.857	2.5	19.9
4 11	12 18.54	+26 22.3	0.888	1.789	20.0	19.8	4 11	12 28.28	-10 14.9	1.890	2.876	4.4	20.1
4 21	12 6.88	+23 37.2	0.937	1.799	23.0	20.0	4 21	12 22.40	- 9 0.3	1.945	2.896	7.8	20.3
5 1	11 59.65	+20 24.5	1.003	1.808	26.0	20.3	5 1	12 18.19	- 7 53.3	2.024	2.915	11.1	20.5
123348	2000 VY ₆₀		3 30.4 243°60	0°9/29.4	17		154291	2002 TT ₂₄₉		3 30.4 179°22	1°2/29.5	18	
2 21	12 58.39	- 3 8.1	2.653	3.441	11.3	20.6	2 21	13 5.80	- 3 16.4	1.528	2.334	17.4	20.4
3 2	12 54.59	- 2 39.6	2.550	3.431	8.8	20.4	3 2	13 1.56	- 2 54.2	1.446	2.335	13.7	20.1
3 12	12 49.14	- 2 2.4	2.472	3.419	5.9	20.2	3 12	12 54.46	- 2 18.1	1.385	2.336	9.2	19.9
3 22	12 42.47	- 1 19.2	2.421	3.408	2.7	20.0	3 22	12 45.15	- 1 32.6	1.348	2.336	4.2	19.6
4 1	12 35.14	- 0 34.2	2.399	3.397	1.3	19.8	4 1	12 34.70	- 0 44.0	1.339	2.336	1.8	19.4
4 11	12 27.87	+ 0 8.3	2.408	3.385	4.5	20.0	4 11	12 24.48	- 0 0.3	1.356	2.336	6.7	19.7
4 21	12 21.31	+ 0 44.1	2.444	3.373	7.7	20.2	4 21	12 15.71	+ 0 32.0	1.398	2.335	11.6	20.0
5 1	12 16.03	+ 1 10.0	2.506	3.360	10.6	20.4	5 1	12 9.32	+ 0 48.4	1.463	2.334	15.8	20.2
386202	2007 VR ₂₈₇		3 30.4 60°22	4°7/	4.7 17		28126	Nydegger		3 30.4 87°85	3°2/	1.9 18	
2 21	12 58.53	-20 14.5	2.238	2.9									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
375783	2009 <i>SC</i> ₂₉₀		3 30.4 88°78'	4.4°/26.8	18		173501	2000 <i>SU</i> ₃₁₁		3 30.4 218°67'	7.4°/ 8.7	18	
2 21	13 6.71	+ 7 15.4	1.880	2.692	14.4	20.6	2 21	13 4.57	-31 48.5	3.063	3.671	13.4	20.9
3 2	13 1.46	+ 7 44.4	1.814	2.706	11.2	20.4	3 2	12 59.61	-32 45.9	2.948	3.663	12.0	20.8
3 12	12 53.89	+ 8 15.3	1.771	2.720	7.7	20.3	3 12	12 52.71	-33 26.6	2.853	3.654	10.4	20.7
3 22	12 44.70	+ 8 42.4	1.755	2.734	4.9	20.1	3 22	12 44.26	-33 47.6	2.779	3.645	8.9	20.5
4 1	12 34.82	+ 8 59.9	1.767	2.748	4.9	20.1	4 1	12 34.90	-33 47.2	2.731	3.636	7.7	20.4
4 11	12 25.34	+ 9 3.4	1.806	2.761	7.8	20.3	4 11	12 25.45	-33 26.2	2.710	3.626	7.5	20.4
4 21	12 17.18	+ 8 50.9	1.872	2.775	11.1	20.6	4 21	12 16.69	-32 47.7	2.716	3.615	8.2	20.4
5 1	12 11.02	+ 8 22.3	1.960	2.788	14.1	20.8	5 1	12 9.36	-31 56.6	2.747	3.604	9.7	20.5
106166	2000 <i>TN</i> ₆₆		3 30.4 325°78'	0°2/30.7	17		467740	2009 <i>RH</i> ₂₄		3 30.4 204°17'	1°4/31.6	17	
2 21	12 58.03	- 6 48.6	2.303	3.087	13.0	20.3	2 21	13 6.17	- 8 6.7	2.062	2.832	14.8	22.2
3 2	12 54.55	- 6 30.0	2.210	3.085	10.2	20.1	3 2	13 1.20	- 8 21.1	1.965	2.829	11.8	21.9
3 12	12 49.24	- 5 59.5	2.140	3.084	7.0	19.9	3 12	12 53.92	- 8 23.6	1.889	2.825	8.3	21.7
3 22	12 42.57	- 5 19.7	2.096	3.082	3.3	19.7	3 22	12 44.84	- 8 15.3	1.840	2.822	4.3	21.5
4 1	12 35.20	- 4 34.6	2.081	3.080	0.6	19.4	4 1	12 34.80	- 7 58.7	1.820	2.817	1.4	21.2
4 11	12 27.95	- 3 49.3	2.095	3.078	4.3	19.7	4 11	12 24.84	- 7 37.9	1.828	2.813	4.7	21.5
4 21	12 21.56	- 3 8.5	2.136	3.077	7.9	19.9	4 21	12 15.92	- 7 17.7	1.865	2.808	8.7	21.7
5 1	12 16.63	- 2 36.4	2.202	3.075	11.1	20.1	5 1	12 8.86	- 7 2.5	1.927	2.802	12.3	21.9
286370	2001 <i>XS</i> ₁₉₅		3 30.4 50°90'	5°9/25.6	18		215410	2002 <i>GN</i> ₂		3 30.4 46°83'	9°8/28.4	17	
2 21	13 0.63	+ 4 39.7	1.270	2.114	18.1	19.5	2 21	13 29.89	+17 24.7	0.957	1.780	24.3	20.0
3 2	12 57.74	+ 6 5.0	1.216	2.126	14.0	19.3	3 2	13 22.03	+17 6.8	0.896	1.785	19.9	19.7
3 12	12 51.89	+ 7 39.1	1.182	2.140	9.6	19.0	3 12	13 9.04	+16 33.0	0.852	1.792	15.0	19.5
3 22	12 43.89	+ 9 11.2	1.172	2.153	6.3	18.9	3 22	12 52.10	+15 31.7	0.829	1.798	10.8	19.2
4 1	12 34.98	+10 29.2	1.187	2.167	6.9	19.0	4 1	12 33.49	+13 55.5	0.830	1.805	10.2	19.2
4 11	12 26.57	+11 23.4	1.226	2.181	10.6	19.2	4 11	12 16.04	+11 46.1	0.856	1.813	13.7	19.4
4 21	12 19.85	+11 49.4	1.287	2.196	14.7	19.5	4 21	12 1.96	+ 9 13.4	0.905	1.821	18.6	19.7
5 1	12 15.61	+11 46.6	1.367	2.210	18.3	19.7	5 1	11 52.46	+ 6 28.5	0.974	1.829	23.1	20.0
288821	2004 <i>RF</i> ₁₈₂		3 30.4 220°15'	2°5/ 1.4	17		388343	2006 <i>TP</i> ₅₉		3 30.4 170°04'	1°0/29.3	18	
2 21	13 5.36	-11 31.0	1.732	2.503	17.1	21.0	2 21	13 0.64	- 1 52.2	2.647	3.434	11.4	21.6
3 2	13 1.12	-11 41.5	1.635	2.497	13.9	20.7	3 2	12 56.26	- 1 35.1	2.557	3.436	8.8	21.4
3 12	12 54.16	-11 34.5	1.558	2.490	10.0	20.5	3 12	12 50.23	- 1 11.0	2.491	3.438	5.9	21.2
3 22	12 45.05	-11 10.6	1.506	2.483	5.7	20.2	3 22	12 43.01	- 0 42.6	2.452	3.439	2.7	21.0
4 1	12 34.73	-10 32.4	1.480	2.475	2.5	20.0	4 1	12 35.19	- 0 13.5	2.444	3.440	1.3	20.9
4 11	12 24.44	- 9 45.7	1.482	2.467	5.4	20.2	4 11	12 27.51	+ 0 12.4	2.465	3.441	4.4	21.1
4 21	12 15.37	- 8 57.6	1.510	2.458	9.9	20.4	4 21	12 20.61	+ 0 31.8	2.515	3.442	7.5	21.3
5 1	12 8.48	- 8 15.1	1.562	2.449	14.0	20.6	5 1	12 15.03	+ 0 42.2	2.590	3.443	10.3	21.5
248620	2006 <i>ET</i> ₁₇		3 30.4 295°16'	0°8/29.8	17		233305	2006 <i>BD</i> ₆₉		3 30.4 26°61'	4°7/25.8	17	
2 21	12 59.55	- 5 32.2	1.450	2.265	17.8	21.4	2 21	13 0.07	+ 6 1.0	1.852	2.676	14.1	20.6
3 2	12 57.18	- 5 1.2	1.345	2.239	14.1	21.1	3 2	12 56.53	+ 7 2.7	1.777	2.677	11.0	20.4
3 12	12 51.91	- 4 10.5	1.260	2.213	9.7	20.8	3 12	12 50.76	+ 8 9.8	1.726	2.677	7.6	20.2
3 22	12 44.16	- 3 3.7	1.199	2.187	4.5	20.4	3 22	12 43.34	+ 9 15.3	1.700	2.679	5.0	20.0
4 1	12 34.88	- 1 47.5	1.163	2.161	1.5	20.1	4 1	12 35.13	+10 11.5	1.701	2.680	5.5	20.0
4 11	12 25.41	- 0 31.9	1.152	2.135	7.2	20.4	4 11	12 27.15	+10 51.7	1.730	2.681	8.4	20.2
4 21	12 17.14	+ 0 33.1	1.165	2.109	12.7	20.6	4 21	12 20.31	+11 12.1	1.783	2.682	11.8	20.4
5 1	12 11.24	+ 1 19.5	1.200	2.083	17.7	20.8	5 1	12 15.31	+11 11.4	1.858	2.683	14.9	20.6
296123	2009 <i>BC</i> ₆₈		3 30.4 98°42'	0°1/30.4	17		477184	2009 <i>FB</i> ₆₈		3 30.4 315°84'	0°3/30.7	17	
2 21	12 58.64	- 6 15.8	2.267	3.053	13.1	21.4	2 21	12 59.61	- 6 0.9	2.224	3.010	13.3	21.5
3 2	12 54.99	- 5 49.2	2.182	3.059	10.2	21.2	3 2	12 55.89	- 5 55.3	2.128	3.005	10.5	21.3
3 12	12 49.50	- 5 10.7	2.120	3.065	6.9	21.0	3 12	12 50.23	- 5 38.9	2.055	2.999	7.2	21.1
3 22	12 42.67	- 4 23.4	2.085	3.071	3.2	20.8	3 22	12 43.09	- 5 13.8	2.008	2.994	3.4	20.8
4 1	12 35.21	- 3 31.7	2.078	3.077	0.6	20.5	4 1	12 35.17	- 4 43.5	1.989	2.988	0.6	20.6
4 11	12 27.91	- 2 41.1	2.100	3.082	4.5	20.8	4 11	12 27.34	- 4 12.7	1.999	2.983	4.5	20.9
4 21	12 21.52	- 1 56.5	2.150	3.088	8.0	21.1	4 21	12 20.40	- 3 45.7	2.037	2.978	8.2	21.1
5 1	12 16.63	- 1 21.9	2.225	3.094	11.2	21.3	5 1	12 15.01	- 3 26.6	2.099	2.973	11.5	21.3
375297	2008 <i>PQ</i> ₇		3 30.4 305°04'	7°6/ 5.6	17		503919	2002 <i>RJ</i> ₂₆₆		3 30.4 264°55'	3°6/ 2.8	17	
2 21	13 0.34	-22 40.9	1.750	2.477	18.5	20.8	2 21	13 1.74	-15 2.6	2.153	2.900	14.9	21.5
3 2	12 57.51	-23 34.1	1.643	2.459	16.1	20.6	3 2	12 57.78	-15 25.3	2.050	2.892	12.3	21.3
3 12	12 51.97	-24 5.4	1.554	2.441	13.2	20.4	3 12	12 51.65	-15 32.2	1.968	2.885	9.2	21.1
3 22	12 44.13	-24 10.9	1.485	2.424	10.1	20.1	3 22	12 43.81	-15 23.1	1.911	2.877	6.0	20.9
4 1	12 34.89	-23 48.8	1.441	2.407	7.9	20.0	4 1	12 35.03	-14 59.1	1.882	2.870	3.7	20.7
4 11	12 25.48	-23 1.8	1.421	2.390	8.0	19.9	4 11	12 26.27	-14 24.2	1.880	2.862	4.9	20.8
4 21	12 17.17	-21 56.4	1.427	2.373	10.5	20.0	4 21	12 18.43	-13 43.5	1.906	2.855	8.2	20.9
5 1	12 11.04	-20 42.1	1.455	2.357	13.9	20.2	5 1	12 12.31	-13 3.1	1.957	2.847	11.5	21.1
103728	2000 <i>CZ</i> ₉₉		3 30.4 204°71'	0°4/30.8	18		253257	2003 <i>AZ</i> ₅₆		3 30.4 79°97'	0°3/30.2	18	
2 21	12 59.99	- 7 14.9	2.294	3.073	13.2	20.7	2 21	13 3.62	- 5 11.5	1.721	2.518	16.2	20.5
3 2	12 56.10	- 6 56.3	2.199	3.071	10.4	20.5	3 2	12 59.33	- 4 53.0	1.653	2.536	12.6	20.3
3 12	12 50.30	- 6 25.5	2.127	3.069	7.1	20.3	3 12	12 52.62	- 4 21.0	1.606	2.554	8.5	20.0
3 22	12 43.08	- 5 44.8	2.081	3.066	3.4	20.1	3 22	12 44.18	- 3 39.6	1.584	2.571	3.9	19.8
4 1	12 35.13	- 4 58.2	2.064	3.063	0.6	19.8	4 1	12 34.99	- 2 54.1	1.590	2.589	0.9	19.6
4 11	12 27.29	- 4 10.8	2.076	3.059	4.4	20.1	4 11	12 26.16	- 2 11.3	1.623	2.606	5.5	20.0
4 21	12 20.32	- 3 27.7	2.116	3.056	8.0	20.3	4 21	12 18.67	- 1 36.7	1.683	2.623	9.7	20.3
5 1	12 14.87	- 2 53.2	2.181	3.052	11.3	20.5	5 1	12 13.24	- 1 14.5	1.767	2.640	13.4	20.5
374160	2004 <i>VB</i> ₄		3 30.4 181°31'	1°7/ 1.3	17		425084	2009 <i>SB</i> ₂					

EPHEMERIDES

3 30.4

3 30.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
437682	2014 <i>DX</i> ₃		3 30.4 266°22	2.4/	1.9	17	142668	2002 <i>TG</i> ₂₁₄		3 30.5 271°68	1.2/29.5	17	
2 21	13 0.90	-12 13.2	2.389	3.144	13.4	21.4	2 21	13 5.69	-2 9.7	1.820	2.618	15.4	20.7
3 2	12 56.88	-12 26.1	2.282	3.133	10.9	21.2	3 2	13 1.39	-1 58.0	1.709	2.593	12.2	20.5
3 12	12 50.91	-12 25.8	2.197	3.123	7.9	20.9	3 12	12 54.44	-1 35.6	1.619	2.568	8.3	20.2
3 22	12 43.43	-12 12.9	2.138	3.112	4.7	20.7	3 22	12 45.29	-1 5.6	1.555	2.542	3.9	19.8
4 1	12 35.12	-11 49.1	2.107	3.101	2.4	20.5	4 1	12 34.80	-0 32.8	1.518	2.516	1.7	19.6
4 11	12 26.82	-11 18.3	2.105	3.090	4.2	20.6	4 11	12 24.15	-0 3.5	1.510	2.489	6.3	19.9
4 21	12 19.32	-10 44.8	2.131	3.078	7.5	20.8	4 21	12 14.52	+0 16.8	1.528	2.461	11.0	20.1
5 1	12 13.32	-10 13.5	2.183	3.067	10.7	21.0	5 1	12 6.91	+0 23.8	1.570	2.434	15.2	20.3
157782	3296 <i>T</i> ₋₂		3 30.4 226°99	0.6/29.9	17		450985	2008 <i>SN</i> ₂₂₃		3 30.5 80°72	1.8/31.9	18	
2 21	13 4.64	-3 12.2	2.291	3.073	13.1	20.9	2 21	13 2.49	-11 2.9	1.390	2.185	19.4	21.8
3 2	12 59.78	-3 5.7	2.188	3.064	10.3	20.7	3 2	12 59.20	-10 49.5	1.317	2.195	15.5	21.6
3 12	12 52.86	-2 50.4	2.109	3.054	6.9	20.5	3 12	12 52.97	-10 13.6	1.263	2.204	10.9	21.3
3 22	12 44.34	-2 29.0	2.057	3.044	3.2	20.2	3 22	12 44.52	-9 17.7	1.232	2.214	5.8	21.0
4 1	12 34.97	-2 4.9	2.034	3.033	1.0	20.0	4 1	12 34.98	-8 7.9	1.225	2.223	1.8	20.8
4 11	12 25.65	-1 42.5	2.042	3.021	4.8	20.3	4 11	12 25.78	-6 53.5	1.246	2.233	5.9	21.1
4 21	12 17.21	-1 25.8	2.077	3.010	8.6	20.5	4 21	12 18.15	-5 44.3	1.290	2.242	10.9	21.4
5 1	12 10.40	-1 18.1	2.138	2.997	11.9	20.7	5 1	12 13.00	-4 48.2	1.358	2.252	15.3	21.7
108915	2001 <i>PY</i> ₁₂		3 30.4 223°38	4.3/26.1	18		163956	2003 <i>UV</i> ₄₅		3 30.5 266°81	0.4/30.9	17	R
2 21	13 1.08	+4 23.2	1.894	2.712	14.1	20.1	2 21	12 58.51	-8 4.3	2.081	2.866	14.1	20.5
3 2	12 57.36	+5 29.3	1.810	2.707	10.9	19.8	3 2	12 55.23	-7 36.5	1.983	2.858	11.2	20.3
3 12	12 51.37	+6 43.2	1.750	2.702	7.5	19.6	3 12	12 49.90	-6 53.8	1.907	2.850	7.7	20.0
3 22	12 43.68	+7 57.9	1.715	2.696	4.7	19.4	3 22	12 43.00	-5 58.8	1.856	2.841	3.7	19.8
4 1	12 35.11	+9 5.4	1.709	2.690	5.1	19.4	4 1	12 35.26	-4 56.3	1.834	2.833	0.6	19.5
4 11	12 26.69	+9 58.4	1.729	2.683	8.2	19.6	4 11	12 27.59	-3 52.6	1.840	2.824	4.7	19.8
4 21	12 19.36	+10 32.2	1.776	2.677	11.7	19.8	4 21	12 20.85	-2 54.1	1.874	2.816	8.7	20.0
5 1	12 13.87	+10 44.5	1.844	2.670	15.0	20.0	5 1	12 15.74	-2 6.1	1.932	2.807	12.3	20.2
94544	2001 <i>UB</i> ₁₇₉		3 30.4 347°97	2.6/28.2	18		117499	2005 <i>CQ</i> ₂₁		3 30.5 48°62	2.1/28.7	18	
2 21	12 59.16	-2 44.4	1.350	2.178	18.1	19.6	2 21	13 0.11	-2 54.1	1.423	2.246	17.6	19.7
3 2	12 56.70	-1 42.7	1.274	2.177	14.1	19.3	3 2	12 57.19	-2 3.7	1.353	2.253	13.7	19.5
3 12	12 51.36	-0 22.7	1.218	2.176	9.4	19.0	3 12	12 51.53	-0 57.4	1.304	2.260	9.1	19.3
3 22	12 43.79	+1 8.4	1.186	2.174	4.4	18.7	3 22	12 43.81	+0 18.3	1.279	2.268	4.2	19.0
4 1	12 35.08	+2 40.0	1.179	2.174	3.4	18.7	4 1	12 35.13	+1 34.3	1.280	2.276	2.8	18.9
4 11	12 26.62	+4 0.9	1.197	2.173	8.1	18.9	4 11	12 26.78	+2 41.0	1.306	2.284	7.4	19.2
4 21	12 19.62	+5 2.1	1.240	2.173	13.1	19.2	4 21	12 19.89	+3 30.8	1.357	2.292	12.0	19.5
5 1	12 15.03	+5 38.5	1.302	2.172	17.4	19.5	5 1	12 15.30	+3 59.5	1.429	2.300	16.1	19.8
412049	2013 <i>ES</i> ₇		3 30.4 326°49	1.7/31.6	16		8528	1992 <i>SC</i> ₂₄		3 30.5 135°60	2.7/	2.0	18
2 21	12 59.41	-8 51.1	1.255	2.071	19.9	21.7	2 21	13 2.45	-14 16.1	1.820	2.582	16.7	18.0
3 2	12 57.37	-8 58.4	1.168	2.059	16.1	21.4	3 2	12 58.53	-14 1.8	1.736	2.591	13.6	17.7
3 12	12 52.16	-8 45.2	1.100	2.048	11.4	21.1	3 12	12 52.20	-13 26.9	1.672	2.599	9.8	17.5
3 22	12 44.32	-8 13.0	1.052	2.037	6.0	20.7	3 22	12 44.08	-12 32.7	1.633	2.608	5.8	17.3
4 1	12 34.96	-7 26.2	1.029	2.027	1.7	20.4	4 1	12 35.08	-11 23.6	1.621	2.615	2.7	17.1
4 11	12 25.63	-6 33.4	1.029	2.018	6.5	20.7	4 11	12 26.31	-10 6.6	1.637	2.623	5.0	17.3
4 21	12 17.81	-5 43.9	1.053	2.009	12.2	21.0	4 21	12 18.76	-8 50.1	1.680	2.630	9.0	17.5
5 1	12 12.66	-5 6.5	1.097	2.002	17.2	21.2	5 1	12 13.21	-7 41.5	1.748	2.636	12.7	17.8
322329	2011 <i>GO</i> ₈₄		3 30.4 232°43	0.4/30.9	17		280335	2003 <i>SX</i> ₁₀₉		3 30.5 155°83	2.1/	2.0	17
2 21	13 0.87	-7 19.1	2.080	2.863	14.2	21.5	2 21	12 59.31	-14 2.9	2.439	3.187	13.3	21.0
3 2	12 57.04	-7 4.1	1.984	2.858	11.3	21.3	3 2	12 55.47	-13 42.3	2.345	3.192	10.8	20.8
3 12	12 51.10	-6 35.8	1.911	2.853	7.7	21.0	3 12	12 49.84	-13 5.6	2.274	3.197	7.8	20.7
3 22	12 43.54	-5 56.5	1.863	2.847	3.8	20.8	3 22	12 42.89	-12 14.4	2.229	3.202	4.6	20.5
4 1	12 35.14	-5 10.4	1.843	2.842	0.7	20.5	4 1	12 35.30	-11 12.0	2.212	3.207	2.1	20.2
4 11	12 26.82	-4 23.1	1.852	2.836	4.7	20.8	4 11	12 27.86	-10 3.8	2.225	3.211	3.9	20.4
4 21	12 19.47	-3 40.2	1.888	2.830	8.7	21.0	4 21	12 21.27	-8 55.5	2.267	3.214	7.1	20.6
5 1	12 13.80	-3 6.5	1.949	2.824	12.2	21.2	5 1	12 16.13	-7 52.7	2.335	3.217	10.2	20.8
387117	2012 <i>TF</i> ₁₆₈		3 30.4 111°32	1.5/28.4	17		443750	2015 <i>MG</i>		3 30.5 255°24	1.3/28.8	16	
2 21	12 58.46	-1 46.1	2.648	3.440	11.3	21.6	2 21	12 57.66	-2 26.6	2.760	3.549	10.9	21.8
3 2	12 54.48	-0 56.8	2.574	3.457	8.6	21.4	3 2	12 54.05	-1 44.9	2.650	3.531	8.5	21.6
3 12	12 48.98	+0 0.6	2.525	3.474	5.7	21.3	3 12	12 48.85	-0 54.2	2.564	3.513	5.6	21.4
3 22	12 42.41	+1 1.8	2.504	3.491	2.7	21.1	3 22	12 42.44	+0 2.5	2.507	3.494	2.6	21.2
4 1	12 35.37	+2 2.2	2.513	3.507	1.9	21.1	4 1	12 35.38	+1 0.6	2.480	3.475	1.7	21.1
4 11	12 28.54	+2 56.9	2.552	3.523	4.7	21.3	4 11	12 28.33	+1 55.4	2.482	3.456	4.6	21.3
4 21	12 22.52	+3 42.0	2.619	3.539	7.6	21.5	4 21	12 21.93	+2 42.4	2.513	3.436	7.8	21.4
5 1	12 17.78	+4 14.7	2.712	3.554	10.2	21.7	5 1	12 16.73	+3 18.3	2.569	3.416	10.6	21.6
402076	2003 <i>UF</i> ₁₉₃		3 30.4 136°93	0.8/31.2	18		464223	2015 <i>BB</i> ₂₄₂		3 30.5 254°46	1.2/31.7	17	
2 21	13 4.53	-8 36.2	1.950	2.726	15.3	22.6	2 21	12 59.73	-10 6.3	1.984	2.762	15.0	21.1
3 2	12 59.87	-8 17.5	1.870	2.738	12.1	22.4	3 2	12 56.32	-9 48.9	1.886	2.755	12.0	20.9
3 12	12 52.95	-7 43.7	1.811	2.750	8.3	22.2	3 12	12 50.71	-9 14.9	1.809	2.747	8.4	20.7
3 22	12 44.36	-6 57.5	1.778	2.761	4.1	21.9	3 22	12 43.41	-8 26.5	1.757	2.739	4.4	20.4
4 1	12 35.00	-6 3.7	1.773	2.772	0.8	21.7	4 1	12 35.20	-7 27.7	1.733	2.731	1.2	20.2
4 11	12 25.90	-5 8.5	1.798	2.782	4.8	22.0	4 11	12 27.05	-6 24.9	1.737	2.723	4.7	20.4
4 21	12 17.97	-4 18.1	1.850	2.791	8.9	22.3	4 21	12 19.90	-5 24.8	1.768	2.715	8.8	20.6
5 1	12 11.94	-3 37.7	1.926	2.800	12.4	22.5	5 1	12 14.49	-4 33.6	1.824	2.706	12.6	20.8
328280	2008 <i>GS</i> ₆₉		3 30.5 43°75	1.2/29.2	18		198405	2004 <i>VY</i> ₅₆		3 30.5 203°14	1.3/31.8	17	
2 21	12 56.61	-6 51.7	1.541	2.354	17.0								

EPHEMERIDES

3 30.5

3 30.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
381617	2008 WM ₁₀₃		3 30.5 69°24	4.9/ 4.8	17		52884	1998 SX ₅₄		3 30.5 163°28	1.1/29.4	18	
2 21	12 59.54	-20 29.2	2.063	2.789	16.1	20.9	2 21	13 4.00	-5 3.1	1.815	2.608	15.6	20.1
3 2	12 56.08	-20 41.9	1.976	2.798	13.5	20.7	3 2	12 59.68	-4 12.4	1.732	2.615	12.2	19.9
3 12	12 50.47	-20 33.5	1.909	2.807	10.5	20.5	3 12	12 52.96	-3 6.2	1.672	2.620	8.1	19.7
3 22	12 43.25	-20 3.5	1.866	2.817	7.5	20.3	3 22	12 44.46	-1 49.6	1.638	2.625	3.7	19.4
4 1	12 35.24	-19 13.9	1.848	2.826	5.2	20.2	4 1	12 35.09	-0 29.6	1.632	2.629	1.7	19.3
4 11	12 27.41	-18 9.6	1.858	2.835	5.6	20.3	4 11	12 25.95	+0 45.4	1.654	2.632	6.0	19.6
4 21	12 20.65	-16 57.5	1.895	2.845	8.1	20.4	4 21	12 18.02	+1 48.5	1.704	2.635	10.3	19.8
5 1	12 15.65	-15 45.3	1.957	2.854	11.1	20.6	5 1	12 12.08	+2 34.6	1.778	2.637	14.0	20.1
423522	2005 UX ₁₀₁		3 30.5 188°96	3.8/26.4	17		417656	2006 YL ₁₆		3 30.5 137°63	1.6/ 1.1	16	
2 21	13 3.91	+5 57.0	2.287	3.092	12.4	22.0	2 21	13 4.01	-11 1.9	2.226	2.984	14.2	21.8
3 2	12 59.10	+6 42.4	2.202	3.091	9.6	21.8	3 2	12 59.22	-10 53.2	2.142	2.998	11.3	21.6
3 12	12 52.30	+7 31.9	2.142	3.090	6.7	21.6	3 12	12 52.41	-10 29.9	2.080	3.010	8.0	21.4
3 22	12 44.06	+8 20.0	2.109	3.088	4.2	21.4	3 22	12 44.13	-9 53.8	2.044	3.022	4.4	21.2
4 1	12 35.10	+9 1.1	2.105	3.085	4.4	21.5	4 1	12 35.16	-9 8.4	2.037	3.034	1.6	21.1
4 11	12 26.31	+9 30.2	2.130	3.082	7.0	21.6	4 11	12 26.40	-8 18.7	2.060	3.045	4.2	21.3
4 21	12 18.48	+9 44.0	2.182	3.078	10.1	21.8	4 21	12 18.67	-7 30.3	2.111	3.055	7.8	21.5
5 1	12 12.27	+9 41.4	2.258	3.074	12.9	22.0	5 1	12 12.62	-6 48.1	2.188	3.064	11.0	21.7
402927	2007 TS ₁₆₅		3 30.5 91°95	0.8/31.2	18		15673	Chetaev		3 30.5 250°93	2.9/ 1.7	18	
2 21	13 3.81	-8 40.4	1.613	2.403	17.4	21.4	2 21	13 5.91	-12 45.9	1.825	2.586	16.7	18.7
3 2	12 59.71	-8 22.2	1.543	2.420	13.7	21.1	3 2	13 1.68	-12 54.1	1.711	2.565	13.7	18.4
3 12	12 53.03	-7 46.4	1.493	2.436	9.4	20.9	3 12	12 54.73	-12 44.3	1.616	2.544	10.1	18.1
3 22	12 44.46	-6 56.2	1.467	2.452	4.7	20.7	3 22	12 45.51	-12 16.2	1.546	2.521	6.0	17.8
4 1	12 35.04	-5 57.4	1.468	2.467	0.9	20.4	4 1	12 34.87	-11 31.8	1.503	2.498	2.9	17.6
4 11	12 25.99	-4 57.7	1.497	2.483	5.4	20.8	4 11	12 24.03	-10 36.4	1.488	2.473	5.5	17.7
4 21	12 18.35	-4 4.5	1.552	2.498	9.9	21.1	4 21	12 14.22	-9 37.4	1.500	2.448	10.0	17.9
5 1	12 12.91	-3 23.5	1.630	2.513	13.8	21.4	5 1	12 6.50	-8 42.7	1.537	2.422	14.3	18.1
185477	2007 CK ₆		3 30.5 193°04	0.6/29.8	17		151046	2001 UX ₂₁₉		3 30.5 310°68	0.6/30.9	17	
2 21	13 2.58	-4 37.0	2.242	3.026	13.3	21.7	2 21	12 58.77	-7 50.5	1.594	2.397	17.0	19.8
3 2	12 58.17	-4 7.2	2.147	3.024	10.4	21.5	3 2	12 56.21	-7 37.4	1.496	2.381	13.6	19.5
3 12	12 51.75	-3 26.0	2.076	3.021	7.0	21.3	3 12	12 51.03	-7 6.5	1.418	2.365	9.4	19.3
3 22	12 43.84	-2 36.7	2.032	3.018	3.2	21.1	3 22	12 43.73	-6 20.3	1.364	2.350	4.7	18.9
4 1	12 35.15	-1 44.1	2.016	3.015	1.1	20.9	4 1	12 35.21	-5 23.7	1.336	2.335	0.8	18.6
4 11	12 26.57	-0 53.6	2.031	3.010	4.9	21.1	4 11	12 26.68	-4 24.4	1.334	2.321	5.8	18.9
4 21	12 18.93	-0 10.6	2.074	3.005	8.6	21.4	4 21	12 19.31	-3 30.5	1.357	2.306	10.7	19.2
5 1	12 12.89	+0 21.2	2.141	3.000	11.9	21.6	5 1	12 14.07	-2 48.9	1.403	2.293	15.1	19.4
239798	1981 EZ ₃₁		3 30.5 7°89	5.3/ 4.6	17		151097	2001 VN ₁₀₈		3 30.5 219°08	1.6/ 1.1	18	R
2 21	12 57.24	-19 19.4	1.855	2.601	17.0	19.9	2 21	13 2.45	-11 1.4	2.282	3.042	13.8	20.9
3 2	12 54.60	-19 46.7	1.767	2.602	14.3	19.7	3 2	12 58.17	-10 52.5	2.176	3.033	11.1	20.7
3 12	12 49.65	-19 52.8	1.699	2.604	11.2	19.5	3 12	12 51.85	-10 29.0	2.093	3.024	7.9	20.5
3 22	12 42.94	-19 36.7	1.653	2.607	7.9	19.3	3 22	12 43.95	-9 52.2	2.035	3.014	4.4	20.2
4 1	12 35.31	-18 59.7	1.632	2.611	5.5	19.2	4 1	12 35.18	-9 5.2	2.007	3.003	1.6	20.0
4 11	12 27.81	-18 6.7	1.637	2.616	6.0	19.2	4 11	12 26.44	-8 13.0	2.007	2.992	4.3	20.2
4 21	12 21.41	-17 4.6	1.668	2.621	8.8	19.4	4 21	12 18.58	-7 21.0	2.036	2.981	8.0	20.4
5 1	12 16.89	-16 1.3	1.723	2.627	12.0	19.6	5 1	12 12.30	-6 34.9	2.091	2.968	11.4	20.6
499145	2009 RF ₁₉		3 30.5 221°75	1.8/ 1.4	17		329594	2003 BG ₇₆		3 30.5 343°28	10.4/20.9	17	
2 21	13 2.16	-12 8.0	2.369	3.122	13.5	22.8	2 21	12 59.99	+17 29.1	1.446	2.289	16.3	19.8
3 2	12 57.88	-11 55.7	2.259	3.111	11.0	22.6	3 2	12 57.27	+19 6.7	1.384	2.282	13.5	19.6
3 12	12 51.62	-11 28.2	2.172	3.100	7.9	22.4	3 12	12 51.70	+20 39.9	1.343	2.275	11.3	19.4
3 22	12 43.81	-10 46.2	2.111	3.087	4.4	22.2	3 22	12 43.97	+21 56.9	1.325	2.270	10.5	19.4
4 1	12 35.16	-9 54.2	2.078	3.074	1.8	22.0	4 1	12 35.19	+22 46.3	1.330	2.265	11.7	19.4
4 11	12 26.51	-8 55.6	2.076	3.061	4.2	22.1	4 11	12 26.73	+23 1.5	1.358	2.261	14.3	19.5
4 21	12 18.70	-7 56.7	2.102	3.047	7.8	22.3	4 21	12 19.77	+22 41.1	1.406	2.257	17.3	19.7
5 1	12 12.42	-7 3.0	2.154	3.032	11.1	22.5	5 1	12 15.18	+21 48.1	1.471	2.254	20.1	19.9
407826	2012 BG ₁₃		3 30.5 122°86	8.3/20.3	18		199028	2005 WT ₁₁₇		3 30.5 214°37	0.4/30.8	18	
2 21	13 5.11	+17 55.6	2.125	2.937	13.0	21.0	2 21	13 6.27	-7 6.1	1.764	2.548	16.3	20.9
3 2	13 0.05	+19 55.5	2.082	2.960	10.7	20.9	3 2	13 1.76	-6 54.6	1.667	2.542	13.0	20.7
3 12	12 52.89	+21 49.9	2.065	2.982	8.8	20.8	3 12	12 54.61	-6 27.9	1.591	2.534	9.0	20.4
3 22	12 44.29	+23 29.4	2.075	3.003	8.3	20.9	3 22	12 45.35	-5 48.3	1.541	2.526	4.4	20.1
4 1	12 35.12	+24 46.0	2.112	3.023	9.3	20.9	4 1	12 34.93	-5 0.4	1.518	2.516	0.7	19.8
4 11	12 26.33	+25 35.0	2.176	3.043	11.2	21.1	4 11	12 24.56	-4 10.9	1.523	2.507	5.6	20.2
4 21	12 18.76	+25 55.7	2.263	3.061	13.3	21.3	4 21	12 15.38	-3 26.6	1.555	2.496	10.2	20.4
5 1	12 13.01	+25 50.0	2.369	3.079	15.2	21.5	5 1	12 8.33	-2 53.3	1.611	2.485	14.4	20.6
107574	2001 DS ₉₂		3 30.5 26°24	1.1/29.7	18		386497	2009 BR ₄₀		3 30.5 74°51	6.6/ 5.9	17	
2 21	13 0.68	-3 48.5	1.305	2.130	18.8	19.9	2 21	13 4.39	-23 25.4	2.231	2.925	15.9	20.9
3 2	12 57.90	-3 27.7	1.236	2.136	14.7	19.6	3 2	12 59.84	-24 22.0	2.143	2.935	13.7	20.8
3 12	12 52.16	-2 51.1	1.188	2.143	9.8	19.4	3 12	12 53.04	-25 0.0	2.074	2.945	11.1	20.6
3 22	12 44.18	-2 3.6	1.162	2.151	4.5	19.1	3 22	12 44.52	-25 17.0	2.029	2.955	8.6	20.5
4 1	12 35.12	-1 12.7	1.161	2.159	1.7	18.9	4 1	12 35.10	-25 12.2	2.009	2.965	6.9	20.4
4 11	12 26.42	-0 27.3	1.185	2.168	7.0	19.3	4 11	12 25.77	-24 48.1	2.017	2.975	6.9	20.4
4 21	12 19.31	+0 5.4	1.232	2.177	12.0	19.6	4 21	12 17.49	-24 9.6	2.051	2.985	8.6	20.5
5 1	12 14.70	+0 20.9	1.301	2.187	16.3	19.8	5 1	12 11.01	-23 23.3	2.110	2.995	11.0	20.7
113607	2002 TQ ₅₃		3 30.5 80°95	6.8/23.6	18		168920	2000 YK ₅₀		3 30.5 138°75	2.9/27.5	18	
2 21	13 4.49	+16 3.0	2.173	2.985	12.7	19.0	2 21	13 4.04	+0 45.6	2.0			

EPHEMERIDES

3 30.5

3 30.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
336445	2008 <i>UG</i> ₃₁₆		3 30.5 215°17'		5°7'/23.3 17		35732	1999 <i>GL</i> ₈		3 30.5 68°98'		1°6'/31.9 18	
2 21	13 3.30	+14 16.9	2.668	3.472	10.8	21.5	2 21	13 2.15	-11 41.2	1.376	2.171	19.6	18.5
3 2	12 58.42	+15 15.9	2.582	3.463	8.7	21.4	3 2	12 58.82	-11 13.9	1.313	2.190	15.6	18.2
3 12	12 51.78	+16 13.6	2.522	3.454	6.7	21.2	3 12	12 52.63	-10 22.7	1.269	2.210	10.9	18.0
3 22	12 43.84	+17 4.3	2.490	3.443	5.7	21.1	3 22	12 44.36	-9 11.4	1.248	2.230	5.7	17.8
4 1	12 35.24	+17 42.4	2.487	3.433	6.3	21.1	4 1	12 35.18	-7 47.4	1.252	2.250	1.6	17.6
4 11	12 26.77	+18 3.9	2.512	3.421	8.2	21.2	4 11	12 26.48	-6 20.9	1.283	2.270	5.7	17.9
4 21	12 19.12	+18 6.8	2.563	3.409	10.5	21.4	4 21	12 19.40	-5 2.1	1.339	2.290	10.6	18.2
5 1	12 12.88	+17 51.0	2.636	3.396	12.7	21.5	5 1	12 14.75	-3 58.7	1.417	2.310	14.8	18.5
293070	2006 <i>WJ</i> ₁₆₇		3 30.5 4°57'		1°6'/1.2 17		34752	2001 <i>QU</i> ₁₀₅		3 30.5 319°48'		1°0'/31.3 18	
2 21	12 56.83	-11 4.1	2.126	2.901	14.2	20.8	2 21	12 58.66	-9 15.5	1.320	2.132	19.3	17.7
3 2	12 53.86	-10 50.7	2.035	2.901	11.4	20.6	3 2	12 56.62	-8 59.0	1.233	2.123	15.5	17.4
3 12	12 48.94	-10 21.7	1.966	2.902	8.0	20.3	3 12	12 51.57	-8 19.8	1.165	2.113	10.9	17.1
3 22	12 42.57	-9 39.1	1.922	2.902	4.4	20.1	3 22	12 44.07	-7 20.3	1.119	2.104	5.5	16.8
4 1	12 35.47	-8 46.6	1.906	2.903	1.6	19.9	4 1	12 35.21	-6 6.9	1.097	2.096	1.1	16.5
4 11	12 28.50	-7 49.8	1.918	2.905	4.3	20.1	4 11	12 26.42	-4 49.5	1.100	2.088	6.4	16.8
4 21	12 22.44	-6 54.6	1.957	2.907	7.9	20.3	4 21	12 19.08	-3 38.7	1.127	2.080	11.9	17.1
5 1	12 17.96	-6 6.6	2.022	2.909	11.3	20.5	5 1	12 14.24	-2 43.5	1.175	2.073	16.8	17.3
497785	2006 <i>SY</i> ₃₈₄		3 30.5 179°03'		3°4'/25.9 17		416993	2005 <i>TO</i> ₁₅₂		3 30.5 92°96'		6°1'/24.1 18	
2 21	12 57.43	+4 21.0	2.505	3.316	11.3	21.9	2 21	13 4.10	+11 37.1	2.038	2.854	13.3	21.4
3 2	12 53.93	+5 25.8	2.423	3.317	8.7	21.7	3 2	12 59.24	+12 51.2	1.989	2.879	10.4	21.3
3 12	12 48.78	+6 36.2	2.366	3.317	5.9	21.5	3 12	12 52.34	+14 4.3	1.964	2.904	7.7	21.1
3 22	12 42.43	+7 46.8	2.337	3.317	3.7	21.4	3 22	12 44.06	+15 8.9	1.966	2.928	6.2	21.1
4 1	12 35.50	+8 51.8	2.337	3.317	4.0	21.4	4 1	12 35.26	+15 58.0	1.996	2.952	6.8	21.2
4 11	12 28.72	+9 45.8	2.366	3.317	6.5	21.6	4 11	12 26.89	+16 27.2	2.053	2.976	9.1	21.3
4 21	12 22.72	+10 25.1	2.422	3.317	9.3	21.7	4 21	12 19.74	+16 34.7	2.134	2.998	11.6	21.5
5 1	12 18.05	+10 47.6	2.502	3.316	11.8	21.9	5 1	12 14.37	+16 21.3	2.238	3.021	14.0	21.7
225569	2000 <i>TZ</i> ₅₉		3 30.5 165°75'		5°4'/23.9 18		64380	2001 <i>UN</i> ₁₂₇		3 30.5 28°77'		2°8'/28.3 18	
2 21	13 3.59	+12 38.2	2.584	3.389	11.1	21.4	2 21	12 58.13	-2 46.9	1.182	2.021	19.5	18.8
3 2	12 58.58	+13 40.7	2.512	3.395	8.8	21.3	3 2	12 56.16	-1 45.4	1.119	2.028	15.1	18.5
3 12	12 51.82	+14 42.3	2.465	3.401	6.6	21.1	3 12	12 51.12	-0 25.0	1.076	2.035	10.0	18.2
3 22	12 43.82	+15 37.4	2.447	3.405	5.4	21.0	3 22	12 43.75	+1 6.0	1.054	2.043	4.7	18.0
4 1	12 35.26	+16 20.2	2.457	3.409	6.0	21.1	4 1	12 35.30	+2 36.1	1.057	2.052	3.6	17.9
4 11	12 26.91	+16 46.8	2.496	3.413	8.0	21.2	4 11	12 27.25	+3 53.0	1.084	2.062	8.5	18.2
4 21	12 19.46	+16 55.3	2.562	3.416	10.3	21.4	4 21	12 20.87	+4 48.1	1.134	2.072	13.5	18.5
5 1	12 13.48	+16 45.5	2.650	3.418	12.4	21.5	5 1	12 17.06	+5 16.9	1.204	2.083	17.9	18.8
26395	Megkurohara		3 30.5 25°63'		0°9'/29.9 18		208973	2002 <i>XL</i> ₁₀₀		3 30.5 178°12'		3°2'/3.5 17	
2 21	13 1.40	-3 46.9	1.316	2.139	18.8	19.1	2 21	12 59.31	-17 16.3	2.597	3.324	13.1	20.8
3 2	12 58.46	-3 34.5	1.247	2.146	14.7	18.9	3 2	12 55.46	-17 13.8	2.496	3.325	10.8	20.7
3 12	12 52.55	-3 7.0	1.198	2.153	9.9	18.6	3 12	12 49.87	-16 55.3	2.418	3.326	8.2	20.5
3 22	12 44.39	-2 29.1	1.172	2.161	4.5	18.3	3 22	12 42.99	-16 21.1	2.365	3.326	5.4	20.3
4 1	12 35.15	-1 47.3	1.171	2.169	1.5	18.1	4 1	12 35.44	-15 33.4	2.340	3.326	3.3	20.2
4 11	12 26.26	-1 10.0	1.195	2.178	6.8	18.5	4 11	12 27.98	-14 36.4	2.345	3.326	4.2	20.2
4 21	12 18.97	-0 43.8	1.242	2.188	11.8	18.8	4 21	12 21.31	-13 35.1	2.378	3.326	6.8	20.4
5 1	12 14.18	-0 33.3	1.311	2.199	16.1	19.1	5 1	12 16.02	-12 35.2	2.438	3.325	9.6	20.6
390969	2005 <i>QM</i> ₁₂₅		3 30.5 207°18'		1°5'/28.5 17		124851	2001 <i>TH</i> ₁₈		3 30.5 113°29'		2°3'/28.8 18	
2 21	12 57.02	-1 53.6	2.607	3.403	11.3	21.7	2 21	13 7.18	-0 27.5	1.595	2.402	16.8	20.4
3 2	12 53.57	-1 4.8	2.515	3.400	8.7	21.6	3 2	13 2.36	+0 1.7	1.526	2.416	13.0	20.2
3 12	12 48.53	-0 6.9	2.447	3.397	5.8	21.4	3 12	12 54.85	+0 41.3	1.478	2.430	8.6	20.0
3 22	12 42.32	+0 56.1	2.407	3.394	2.7	21.1	3 22	12 45.38	+1 25.8	1.456	2.443	4.1	19.7
4 1	12 35.53	+1 59.3	2.397	3.391	2.0	21.1	4 1	12 35.03	+2 8.4	1.461	2.456	2.8	19.7
4 11	12 28.85	+2 57.4	2.416	3.388	4.9	21.3	4 11	12 25.07	+2 42.3	1.493	2.468	6.9	19.9
4 21	12 22.89	+3 46.2	2.463	3.385	8.0	21.5	4 21	12 16.61	+3 2.5	1.552	2.480	11.3	20.2
5 1	12 18.21	+4 22.3	2.536	3.381	10.7	21.6	5 1	12 10.44	+3 6.3	1.632	2.491	15.0	20.5
285714	2000 <i>SN</i> ₂₆₀		3 30.5 107°75'		1°2'/29.4 18		225524	2000 <i>RA</i> ₂₆		3 30.5 122°59'		2°8'/2.8 18	
2 21	13 5.97	-3 25.2	1.722	2.520	16.1	21.4	2 21	13 1.85	-15 56.6	2.323	3.059	14.2	21.2
3 2	13 1.16	-2 52.7	1.655	2.539	12.5	21.2	3 2	12 57.49	-15 43.2	2.239	3.076	11.6	21.0
3 12	12 53.89	-2 7.7	1.609	2.558	8.3	21.0	3 12	12 51.23	-15 12.4	2.177	3.093	8.5	20.8
3 22	12 44.87	-1 15.1	1.589	2.577	3.8	20.7	3 22	12 43.60	-14 25.5	2.141	3.109	5.3	20.7
4 1	12 35.09	-0 21.2	1.598	2.595	1.7	20.6	4 1	12 35.35	-13 25.5	2.134	3.124	2.9	20.5
4 11	12 25.71	+0 26.9	1.634	2.612	6.0	20.9	4 11	12 27.32	-12 18.1	2.155	3.139	4.2	20.6
4 21	12 17.72	+1 3.6	1.697	2.629	10.2	21.2	4 21	12 20.28	-11 9.1	2.206	3.153	7.3	20.8
5 1	12 11.83	+1 25.5	1.783	2.645	13.8	21.5	5 1	12 14.83	-10 4.7	2.283	3.167	10.3	21.1
269550	Chur		3 30.5 321°07'		8°3'/23.2 16		300018	2006 <i>UZ</i> ₇₉		3 30.5 114°68'		0°5'/31.1 17	
2 21	13 3.56	+15 32.9	1.709	2.536	14.9	20.3	2 21	12 56.87	-9 10.3	2.430	3.205	12.6	21.6
3 2	12 59.61	+16 36.1	1.636	2.528	12.2	20.1	3 2	12 53.57	-8 31.4	2.340	3.209	10.0	21.4
3 12	12 53.07	+17 36.4	1.585	2.521	9.6	19.9	3 12	12 48.59	-7 38.6	2.274	3.214	6.8	21.2
3 22	12 44.57	+18 24.5	1.559	2.513	8.3	19.8	3 22	12 42.38	-6 34.8	2.235	3.219	3.4	21.0
4 1	12 35.13	+18 52.2	1.558	2.506	9.1	19.9	4 1	12 35.57	-5 24.7	2.224	3.223	0.6	20.8
4 11	12 25.93	+18 53.8	1.581	2.499	11.6	20.0	4 11	12 28.90	-4 14.0	2.243	3.227	4.0	21.1
4 21	12 18.07	+18 27.9	1.628	2.493	14.6	20.2	4 21	12 23.05	-3 8.1	2.290	3.232	7.4	21.3
5 1	12 12.35	+17 36.4	1.695	2.487	17.5	20.3	5 1	12 18.57	-2 12.0	2.364	3.236	10.5	21.5
303378	2004 <i>WD</i> ₂		3 30.5 133°77'		0°9'/31.4 18		145209	2005 <i>JY</i> ₃₈		3 30.5 262°99'		0°5'/29.9 17	
2 21	13 4.10	-9 47.0	1.825	2									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
379209	2009 <i>SD</i> ₁₂₄		3 30.5 255°79	1°9/31.9	17		107732	2001 <i>FK</i> ₂₈		3 30.5 304°40	2°5/28.6	18	
2 21	13 6.67	- 8 40.4	1.948	2.719	15.5	21.0	2 21	13 0.61	- 0 48.0	1.484	2.308	17.0	19.4
3 2	13 1.94	- 9 5.2	1.844	2.707	12.5	20.7	3 2	12 57.85	- 0 15.3	1.391	2.291	13.3	19.1
3 12	12 54.70	- 9 17.9	1.760	2.695	8.9	20.5	3 12	12 52.27	+ 0 30.8	1.319	2.274	9.0	18.8
3 22	12 45.43	- 9 19.1	1.702	2.682	4.9	20.2	3 22	12 44.40	+ 1 25.0	1.270	2.258	4.3	18.5
4 1	12 35.00	- 9 10.6	1.672	2.669	1.9	20.0	4 1	12 35.21	+ 2 19.6	1.246	2.241	3.1	18.3
4 11	12 24.52	- 8 56.2	1.671	2.656	5.0	20.2	4 11	12 26.03	+ 3 6.0	1.249	2.225	7.7	18.6
4 21	12 15.07	- 8 40.6	1.697	2.643	9.2	20.4	4 21	12 18.11	+ 3 37.0	1.275	2.210	12.6	18.8
5 1	12 7.58	- 8 28.7	1.748	2.629	13.1	20.6	5 1	12 12.49	+ 3 48.1	1.323	2.194	17.1	19.0
376531	2012 <i>RA</i> ₃₃		3 30.5 244°97	3°1/5.7	18		128696	2004 <i>RV</i> ₉₇		3 30.5 279°47	1°2/31.6	17	
2 21	12 54.44	-22 15.9	4.857	5.528	8.0	21.1	2 21	12 59.53	- 9 55.0	1.869	2.653	15.6	20.4
3 2	12 50.92	-22 32.2	4.741	5.521	6.8	21.0	3 2	12 56.39	- 9 38.6	1.769	2.641	12.5	20.2
3 12	12 46.45	-22 39.0	4.647	5.514	5.5	20.9	3 12	12 50.93	- 9 4.9	1.690	2.630	8.8	19.9
3 22	12 41.29	-22 36.2	4.580	5.507	4.2	20.8	3 22	12 43.65	- 8 15.8	1.636	2.619	4.6	19.7
4 1	12 35.77	-22 24.3	4.541	5.501	3.2	20.7	4 1	12 35.36	- 7 15.8	1.609	2.607	1.2	19.4
4 11	12 30.26	-22 4.8	4.532	5.494	3.2	20.7	4 11	12 27.10	- 6 11.4	1.610	2.596	5.0	19.6
4 21	12 25.11	-21 39.7	4.552	5.487	4.2	20.8	4 21	12 19.87	- 5 9.9	1.637	2.584	9.3	19.9
5 1	12 20.66	-21 11.2	4.600	5.480	5.6	20.9	5 1	12 14.48	- 4 17.9	1.688	2.573	13.3	20.1
83672	2001 <i>TD</i> ₃₅		3 30.5 269°07	0°9/29.7	18		286220	2001 <i>UW</i> ₁₁₄		3 30.5 210°03	1°0/31.4	17	
2 21	13 4.18	- 2 47.9	1.929	2.724	14.7	18.4	2 21	13 2.97	-10 14.9	1.810	2.587	16.2	21.6
3 2	13 0.00	- 2 37.2	1.822	2.705	11.6	18.2	3 2	12 59.12	- 9 45.7	1.713	2.582	13.0	21.4
3 12	12 53.38	- 2 16.1	1.738	2.686	7.9	17.9	3 12	12 52.80	- 8 57.3	1.637	2.576	9.1	21.1
3 22	12 44.82	- 1 47.5	1.679	2.666	3.7	17.6	3 22	12 44.53	- 7 52.1	1.586	2.569	4.7	20.9
4 1	12 35.11	- 1 15.9	1.648	2.646	1.4	17.4	4 1	12 35.21	- 6 35.4	1.563	2.562	1.0	20.6
4 11	12 25.35	- 0 47.0	1.646	2.626	5.8	17.6	4 11	12 25.98	- 5 15.0	1.568	2.554	5.2	20.8
4 21	12 16.58	- 0 25.8	1.670	2.605	10.1	17.8	4 21	12 17.88	- 3 59.3	1.600	2.545	9.8	21.1
5 1	12 9.69	- 0 16.4	1.719	2.585	14.0	18.0	5 1	12 11.77	- 2 55.6	1.657	2.535	13.8	21.3
58132	1981 <i>EW</i> ₃₉		3 30.5 286°50	1°1/31.6	17		519678	2013 <i>AR</i> ₅		3 30.5 327°93	4°0/4.1	17	
2 21	13 1.27	- 8 3.9	2.328	3.100	13.2	19.9	2 21	12 58.56	-18 34.6	2.364	3.092	14.2	21.5
3 2	12 57.22	- 8 11.8	2.224	3.090	10.5	19.7	3 2	12 55.13	-18 44.2	2.265	3.092	11.9	21.3
3 12	12 51.21	- 8 8.8	2.143	3.080	7.4	19.4	3 12	12 49.79	-18 36.2	2.187	3.091	9.1	21.2
3 22	12 43.68	- 7 56.2	2.088	3.070	3.9	19.2	3 22	12 43.02	-18 10.6	2.134	3.090	6.3	21.0
4 1	12 35.33	- 7 36.3	2.062	3.060	1.1	19.0	4 1	12 35.49	-17 28.9	2.108	3.089	4.2	20.8
4 11	12 27.01	- 7 13.2	2.064	3.050	4.2	19.2	4 11	12 28.05	-16 35.4	2.109	3.089	4.8	20.9
4 21	12 19.51	- 6 50.9	2.095	3.040	7.8	19.4	4 21	12 21.46	-15 35.4	2.139	3.088	7.4	21.0
5 1	12 13.53	- 6 33.6	2.151	3.030	11.1	19.6	5 1	12 16.38	-14 35.2	2.194	3.087	10.3	21.2
92437	2000 <i>JZ</i> ₈₀		3 30.5 292°26	5°8/3.3	18		497311	2005 <i>TN</i> ₆₂		3 30.5 221°45	1°2/29.3	17	
2 21	13 2.73	-16 34.8	1.440	2.210	20.0	19.4	2 21	13 3.56	- 2 28.1	2.445	3.229	12.3	24.3
3 2	12 59.98	-17 19.9	1.337	2.191	16.9	19.1	3 2	12 58.87	- 1 58.9	2.340	3.217	9.6	24.1
3 12	12 54.06	-17 43.8	1.252	2.172	13.1	18.8	3 12	12 52.26	- 1 20.4	2.258	3.204	6.5	23.9
3 22	12 45.39	-17 43.0	1.188	2.153	9.0	18.5	3 22	12 44.17	- 0 35.8	2.204	3.191	3.0	23.6
4 1	12 34.99	-17 17.1	1.148	2.134	6.0	18.3	4 1	12 35.29	+ 0 10.5	2.180	3.177	1.6	23.5
4 11	12 24.34	-16 30.1	1.133	2.115	7.3	18.3	4 11	12 26.43	+ 0 53.4	2.186	3.162	5.0	23.7
4 21	12 14.97	-15 30.3	1.141	2.097	11.6	18.5	4 21	12 18.38	+ 1 28.5	2.221	3.146	8.5	23.9
5 1	12 8.20	-14 28.4	1.172	2.078	16.2	18.7	5 1	12 11.80	+ 1 52.3	2.281	3.130	11.7	24.1
45368	2000 <i>AU</i> ₁₀₉		3 30.5 236°04	4°0/3.6	18		182522	2001 <i>SZ</i> ₃₃₇		3 30.5 212°66	0°4/31.4	18	
2 21	13 2.42	-18 30.8	2.165	2.893	15.4	19.7	2 21	12 52.04	- 7 43.3	4.880	5.639	6.9	21.1
3 2	12 58.46	-18 29.2	2.050	2.878	12.9	19.5	3 2	12 48.99	- 7 29.9	4.776	5.636	5.4	21.0
3 12	12 52.26	-18 7.2	1.956	2.862	9.9	19.3	3 12	12 45.12	- 7 10.6	4.697	5.633	3.7	20.9
3 22	12 44.26	-17 24.4	1.885	2.845	6.6	19.0	3 22	12 40.67	- 6 46.9	4.648	5.630	1.9	20.7
4 1	12 35.22	-16 22.3	1.843	2.828	4.2	18.9	4 1	12 35.93	- 6 20.2	4.628	5.627	0.4	20.6
4 11	12 26.13	-15 5.9	1.828	2.810	5.1	18.9	4 11	12 31.23	- 5 52.7	4.639	5.623	2.1	20.7
4 21	12 17.95	-13 42.4	1.842	2.791	8.4	19.0	4 21	12 26.88	- 5 26.3	4.681	5.620	4.0	20.9
5 1	12 11.51	-12 19.9	1.882	2.771	11.9	19.2	5 1	12 23.17	- 5 2.9	4.750	5.617	5.7	21.0
261214	2005 <i>UO</i> ₇		3 30.5 229°13	10°4/6.4	17		90190	2003 <i>AB</i> ₄₁		3 30.5 336°14	3°9/25.9	18	
2 21	13 13.99	-27 52.4	1.977	2.634	18.6	20.3	2 21	12 56.28	+ 3 42.3	2.052	2.874	13.0	19.3
3 2	13 8.30	-29 49.8	1.877	2.631	16.6	20.2	3 2	12 53.48	+ 4 52.7	1.970	2.870	10.0	19.1
3 12	12 59.45	-31 29.3	1.795	2.628	14.3	20.0	3 12	12 48.73	+ 6 10.9	1.911	2.865	6.8	18.9
3 22	12 47.87	-32 44.0	1.736	2.625	12.1	19.8	3 22	12 42.53	+ 7 30.4	1.879	2.861	4.2	18.7
4 1	12 34.55	-33 28.2	1.702	2.621	10.6	19.7	4 1	12 35.59	+ 8 43.8	1.875	2.857	4.6	18.7
4 11	12 20.91	-33 40.7	1.694	2.618	10.6	19.7	4 11	12 28.80	+ 9 44.2	1.899	2.853	7.5	18.9
4 21	12 8.43	-33 25.0	1.711	2.614	12.0	19.8	4 21	12 22.94	+10 26.8	1.948	2.850	10.8	19.1
5 1	11 58.39	-32 49.2	1.752	2.610	14.2	19.9	5 1	12 18.65	+10 49.2	2.019	2.847	13.8	19.3
493574	2015 <i>KB</i> ₁₃₉		3 30.5 273°09	4°5/25.5	17		493395	2014 <i>WB</i> ₁₆₂		3 30.5 116°22	1°7/1.2	18	
2 21	13 0.79	+ 9 0.2	2.369	3.182	11.8	21.1	2 21	13 3.22	-10 44.8	2.035	2.802	15.0	21.3
3 2	12 56.70	+ 9 43.4	2.282	3.173	9.2	20.9	3 2	12 58.85	-10 41.3	1.953	2.814	12.0	21.1
3 12	12 50.75	+10 28.2	2.218	3.164	6.6	20.7	3 12	12 52.31	-10 22.6	1.893	2.826	8.5	20.9
3 22	12 43.42	+11 9.5	2.182	3.155	4.7	20.6	3 22	12 44.19	- 9 50.4	1.858	2.837	4.6	20.7
4 1	12 35.40	+11 41.8	2.174	3.146	5.1	20.6	4 1	12 35.31	- 9 8.2	1.851	2.848	1.7	20.5
4 11	12 27.49	+12 0.4	2.195	3.137	7.5	20.7	4 11	12 26.65	- 8 21.5	1.874	2.859	4.5	20.7
4 21	12 20.46	+12 2.9	2.241	3.128	10.2	20.9	4 21	12 19.10	- 7 36.1	1.923	2.870	8.2	21.0
5 1	12 14.91	+11 48.5	2.311	3.119	12.9	21.0	5 1	12 13.33	- 6 57.1	1.998	2.880	11.7	21.2
414174	2008 <i>AK</i> ₁₃₅		3 30.5 36°96	2°5/28.8	18		465705	2009 <i>TN</i> ₃₅		3 30.			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
170074	2002 VC ₁₃₂		3 30.5 106°24	0°8/29.6	17		272824	2006 AG ₈₅		3 30.5 57°33	3°1/1.8	18	
2 21	13 0.82	- 3 28.0	2.468	3.253	12.2	21.8	2 21	13 7.23	-11 4.4	1.764	2.532	16.9	20.2
3 2	12 56.48	- 2 58.9	2.393	3.271	9.4	21.6	3 2	13 2.36	-11 46.4	1.686	2.545	13.7	20.0
3 12	12 50.45	- 2 20.9	2.342	3.288	6.2	21.4	3 12	12 54.90	-12 13.8	1.629	2.558	9.9	19.7
3 22	12 43.23	- 1 37.4	2.318	3.305	2.8	21.2	3 22	12 45.50	-12 26.5	1.597	2.571	5.9	19.5
4 1	12 35.49	- 0 52.7	2.324	3.322	1.2	21.1	4 1	12 35.13	-12 25.8	1.591	2.584	3.1	19.4
4 11	12 27.98	- 0 11.4	2.360	3.338	4.5	21.4	4 11	12 25.02	-12 15.6	1.614	2.598	5.3	19.5
4 21	12 21.37	+ 0 22.5	2.424	3.354	7.7	21.6	4 21	12 16.24	-12 1.0	1.663	2.612	9.1	19.8
5 1	12 16.17	+ 0 46.1	2.514	3.370	10.5	21.8	5 1	12 9.63	-11 47.5	1.736	2.625	12.8	20.0
184521	2005 QJ ₁₆		3 30.5 143°35	1°3/28.8	17		345645	2006 SC ₃₈₅		3 30.5 131°77	5°1/24.2	18	
2 21	12 57.51	- 2 26.2	2.700	3.491	11.1	21.1	2 21	12 59.28	+10 40.7	2.431	3.247	11.4	20.7
3 2	12 53.86	- 1 42.8	2.614	3.496	8.6	20.9	3 2	12 55.42	+11 43.6	2.360	3.251	9.0	20.5
3 12	12 48.69	- 0 51.0	2.553	3.502	5.7	20.7	3 12	12 49.83	+12 47.2	2.313	3.255	6.6	20.4
3 22	12 42.42	+ 0 5.7	2.520	3.507	2.6	20.5	3 22	12 42.99	+13 45.7	2.293	3.258	5.2	20.3
4 1	12 35.64	+ 1 2.8	2.517	3.512	1.6	20.4	4 1	12 35.58	+14 33.0	2.301	3.262	5.8	20.3
4 11	12 28.99	+ 1 55.5	2.543	3.517	4.5	20.7	4 11	12 28.37	+15 4.8	2.338	3.265	7.9	20.5
4 21	12 23.08	+ 2 39.7	2.598	3.522	7.5	20.8	4 21	12 22.02	+15 18.6	2.400	3.269	10.3	20.6
5 1	12 18.41	+ 3 12.6	2.678	3.526	10.2	21.0	5 1	12 17.10	+15 13.9	2.484	3.272	12.6	20.8
499160	2009 SL ₅₀		3 30.5 208°94	5°0/4.3	17		93206	2000 SS ₁₂₂		3 30.5 179°75	1°5/28.9	17	
2 21	13 6.93	-19 50.7	2.428	3.130	14.5	23.0	2 21	13 1.23	- 2 21.1	2.177	2.973	13.3	20.8
3 2	13 1.75	-20 28.8	2.317	3.123	12.3	22.8	3 2	12 57.19	- 1 42.5	2.089	2.974	10.3	20.6
3 12	12 54.37	-20 51.1	2.228	3.116	9.7	22.6	3 12	12 51.17	- 0 53.5	2.025	2.974	6.9	20.4
3 22	12 45.24	-20 55.7	2.163	3.108	7.0	22.5	3 22	12 43.68	+ 0 1.6	1.987	2.975	3.2	20.2
4 1	12 35.12	-20 42.5	2.127	3.099	5.2	22.3	4 1	12 35.46	+ 0 57.5	1.978	2.974	1.9	20.1
4 11	12 24.94	-20 13.9	2.119	3.089	5.6	22.3	4 11	12 27.39	+ 1 48.3	1.999	2.974	5.4	20.3
4 21	12 15.64	-19 34.5	2.140	3.079	8.0	22.5	4 21	12 20.27	+ 2 29.0	2.046	2.973	9.0	20.5
5 1	12 7.99	-18 50.2	2.188	3.068	10.8	22.6	5 1	12 14.75	+ 2 56.2	2.118	2.972	12.3	20.7
466471	2013 TU ₁₃₃		3 30.5 245°85	2°1/28.7	17		505294	2012 WJ ₁₂		3 30.5 101°04	2°4/2.6	17	
2 21	13 6.99	+ 1 25.4	2.061	2.856	13.9	21.7	2 21	12 58.03	-15 2.9	2.455	3.201	13.3	21.8
3 2	13 1.95	+ 1 36.1	1.959	2.843	10.9	21.5	3 2	12 54.51	-14 47.4	2.366	3.210	10.8	21.6
3 12	12 54.56	+ 1 53.2	1.881	2.830	7.4	21.3	3 12	12 49.26	-14 15.8	2.299	3.219	7.9	21.4
3 22	12 45.34	+ 2 12.8	1.830	2.816	3.6	21.0	3 22	12 42.75	-13 29.4	2.258	3.228	4.8	21.2
4 1	12 35.11	+ 2 30.3	1.807	2.801	2.6	20.9	4 1	12 35.64	-12 31.4	2.244	3.237	2.5	21.1
4 11	12 24.91	+ 2 41.1	1.814	2.787	6.2	21.1	4 11	12 28.68	-11 26.7	2.260	3.245	3.9	21.2
4 21	12 15.72	+ 2 41.6	1.848	2.771	10.1	21.3	4 21	12 22.57	-10 21.1	2.305	3.254	6.9	21.4
5 1	12 8.37	+ 2 29.5	1.907	2.756	13.6	21.5	5 1	12 17.87	- 9 19.9	2.375	3.262	9.8	21.6
479701	2014 DB ₁₁₆		3 30.5 296°42	1°6/1.1	17		430875	2005 QS ₆₀		3 30.5 251°73	1°9/27.9	18	
2 21	13 1.01	- 9 22.3	2.383	3.149	13.1	21.2	2 21	12 56.83	- 1 41.8	2.717	3.511	10.9	21.3
3 2	12 56.98	- 9 34.4	2.280	3.141	10.5	21.0	3 2	12 53.48	- 0 36.5	2.610	3.495	8.5	21.1
3 12	12 51.04	- 9 35.1	2.200	3.133	7.5	20.8	3 12	12 48.56	+ 0 39.1	2.528	3.478	5.6	20.9
3 22	12 43.63	- 9 25.6	2.146	3.125	4.1	20.6	3 22	12 42.44	+ 2 0.7	2.474	3.461	2.7	20.7
4 1	12 35.42	- 9 7.9	2.120	3.117	1.6	20.4	4 1	12 35.69	+ 3 23.0	2.451	3.444	2.3	20.6
4 11	12 27.25	- 8 45.7	2.124	3.109	4.1	20.6	4 11	12 28.95	+ 4 40.0	2.458	3.426	5.2	20.8
4 21	12 19.89	- 8 23.0	2.155	3.101	7.5	20.8	4 21	12 22.87	+ 5 46.7	2.494	3.407	8.2	20.9
5 1	12 14.01	- 8 4.0	2.213	3.094	10.7	21.0	5 1	12 17.98	+ 6 39.4	2.555	3.389	11.0	21.1
2143	Jimarnold		3 30.5 176°97	0°6/29.9	18		273038	2006 DK ₁₂₈		3 30.5 316°99	1°5/29.1	17	
2 21	13 7.56	- 3 56.2	2.026	2.808	14.6	18.2	2 21	13 0.98	- 1 52.1	1.895	2.700	14.6	20.9
3 2	13 2.28	- 3 38.6	1.936	2.811	11.4	18.0	3 2	12 57.34	- 1 26.5	1.808	2.697	11.4	20.6
3 12	12 54.69	- 3 10.0	1.869	2.813	7.7	17.8	3 12	12 51.46	- 0 50.6	1.743	2.695	7.6	20.4
3 22	12 45.35	- 2 33.6	1.828	2.815	3.6	17.5	3 22	12 43.88	- 0 8.2	1.704	2.692	3.5	20.1
4 1	12 35.13	- 1 54.0	1.817	2.815	1.1	17.3	4 1	12 35.44	+ 0 35.0	1.693	2.690	2.0	20.0
4 11	12 25.07	- 1 16.9	1.835	2.815	5.3	17.6	4 11	12 27.14	+ 1 12.9	1.710	2.687	5.9	20.3
4 21	12 16.14	- 0 47.1	1.881	2.813	9.4	17.8	4 21	12 19.91	+ 1 40.5	1.753	2.685	9.9	20.5
5 1	12 9.09	- 0 28.5	1.952	2.811	12.9	18.1	5 1	12 14.51	+ 1 54.2	1.819	2.683	13.5	20.7
495281	2013 RU ₅₀		3 30.5 153°33	2°3/1.9	17		51394	2001 DX ₄₉		3 30.5 298°25	8°1/23.5	17	
2 21	13 3.36	-12 50.3	2.347	3.095	13.8	21.8	2 21	13 2.26	+11 28.2	1.499	2.335	16.2	18.7
3 2	12 58.73	-12 52.5	2.256	3.103	11.2	21.6	3 2	12 59.27	+12 46.8	1.408	2.310	13.1	18.4
3 12	12 52.15	-12 40.1	2.186	3.110	8.1	21.4	3 12	12 53.33	+14 9.7	1.339	2.285	10.0	18.2
3 22	12 44.11	-12 14.3	2.143	3.116	4.8	21.2	3 22	12 44.98	+15 26.8	1.293	2.260	8.2	18.0
4 1	12 35.35	-11 37.5	2.128	3.122	2.3	21.1	4 1	12 35.22	+16 26.4	1.273	2.235	9.2	18.0
4 11	12 26.74	-10 54.1	2.143	3.127	4.2	21.2	4 11	12 25.42	+16 59.1	1.277	2.210	12.5	18.1
4 21	12 19.06	-10 9.2	2.186	3.132	7.4	21.4	4 21	12 16.92	+17 0.2	1.302	2.185	16.4	18.3
5 1	12 12.97	- 9 28.0	2.256	3.137	10.6	21.6	5 1	12 10.79	+16 29.4	1.346	2.160	20.0	18.4
104472	2000 GF ₁₇		3 30.5 64°91	0°7/29.8	18		456631	2007 PN ₁₁		3 30.5 251°43	4°7/3.0	16	
2 21	12 59.13	- 4 50.4	2.024	2.820	14.1	19.9	2 21	13 6.67	-16 12.7	1.827	2.571	17.3	21.9
3 2	12 55.66	- 4 17.9	1.944	2.828	11.0	19.7	3 2	13 2.39	-16 46.4	1.714	2.553	14.5	21.6
3 12	12 50.17	- 3 33.1	1.886	2.835	7.3	19.5	3 12	12 55.32	-17 2.0	1.622	2.534	11.1	21.4
3 22	12 43.20	- 2 39.8	1.855	2.842	3.3	19.2	3 22	12 45.92	-16 57.5	1.552	2.515	7.5	21.1
4 1	12 35.52	- 1 43.5	1.852	2.850	1.1	19.1	4 1	12 35.05	-16 33.2	1.509	2.495	4.8	20.9
4 11	12 28.06	- 0 50.3	1.877	2.858	5.1	19.4	4 11	12 23.97	-15 52.5	1.494	2.474	6.2	20.9
4 21	12 21.61	- 0 5.7	1.929	2.865	8.9	19.6	4 21	12 13.95	-15 1.9	1.505	2.453	10.0	21.1
5 1	12 16.82	+ 0 26.4	2.005	2.873	12.2	19.8	5 1	12 6.06	-14 9.6	1.540	2.431	14.0	21.3
197623	2004 JY ₄₁		3 30.5 313°41	0°4/30.2	17		244006	2001 SB ₆₆		3 30.5 77°48	1°5/1.7	18	
2 21	12 55.75	- 7 41.1	1.195	2.025	1								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
234141	2000 <i>EJ</i> ₉		3 30.5 65°31'	2°8'/28.3	18		367766	2010 <i>WS</i> ₁₃		3 30.5 259°24'	1°1'/31.5	17	
2 21	13 1.57	- 2 7.8	1.306	2.134	18.6	20.4	2 21	13 1.68	- 9 5.2	1.788	2.574	16.1	21.5
3 2	12 58.62	- 1 9.6	1.240	2.142	14.5	20.1	3 2	12 58.22	- 8 52.6	1.689	2.563	12.9	21.2
3 12	12 52.70	+ 0 5.2	1.193	2.150	9.6	19.9	3 12	12 52.28	- 8 23.1	1.611	2.551	9.0	21.0
3 22	12 44.55	+ 1 29.0	1.170	2.159	4.6	19.6	3 22	12 44.38	- 7 38.5	1.557	2.540	4.7	20.7
4 1	12 35.34	+ 2 51.3	1.173	2.167	3.5	19.6	4 1	12 35.37	- 6 43.3	1.530	2.528	1.1	20.4
4 11	12 26.51	+ 4 1.4	1.200	2.176	8.1	19.9	4 11	12 26.37	- 5 44.3	1.530	2.516	5.2	20.7
4 21	12 19.29	+ 4 51.4	1.252	2.185	13.0	20.1	4 21	12 18.47	- 4 48.6	1.557	2.504	9.8	20.9
5 1	12 14.57	+ 5 17.4	1.324	2.193	17.2	20.4	5 1	12 12.54	- 4 3.0	1.608	2.492	13.9	21.1
329069	2011 <i>BV</i> ₇		3 30.5 194°81'	2°3'/28.2	17		305792	2009 <i>DV</i> ₇₅		3 30.5 89°15'	1°8'/29.0	18	
2 21	13 1.55	- 0 33.2	2.018	2.822	13.9	21.5	2 21	13 2.17	- 3 6.6	1.503	2.317	17.3	21.5
3 2	12 57.62	+ 0 12.8	1.931	2.820	10.8	21.3	3 2	12 58.78	- 2 24.6	1.428	2.322	13.5	21.3
3 12	12 51.57	+ 1 8.9	1.867	2.819	7.2	21.0	3 12	12 52.67	- 1 27.6	1.374	2.327	9.0	21.0
3 22	12 43.91	+ 2 10.3	1.830	2.817	3.5	20.8	3 22	12 44.52	- 0 21.1	1.344	2.332	4.1	20.8
4 1	12 35.45	+ 3 10.4	1.821	2.814	2.8	20.7	4 1	12 35.36	+ 0 46.8	1.341	2.337	2.4	20.6
4 11	12 27.13	+ 4 2.9	1.841	2.812	6.3	21.0	4 11	12 26.49	+ 1 47.2	1.364	2.342	7.0	20.9
4 21	12 19.83	+ 4 42.4	1.887	2.808	10.0	21.2	4 21	12 19.02	+ 2 33.0	1.412	2.347	11.6	21.2
5 1	12 14.27	+ 5 5.8	1.957	2.805	13.3	21.4	5 1	12 13.82	+ 2 59.7	1.482	2.352	15.6	21.5
212678	2006 <i>VX</i> ₅₉		3 30.5 197°32'	1°5'/28.8	17		45257	1999 <i>YC</i> ₁₄		3 30.5 126°80'	1°1'/29.4	17	
2 21	12 58.47	- 1 28.5	2.428	3.225	12.0	21.0	2 21	12 59.76	- 3 32.1	2.155	2.951	13.4	19.7
3 2	12 54.85	- 0 54.5	2.339	3.225	9.3	20.8	3 2	12 56.05	- 2 55.6	2.072	2.956	10.4	19.5
3 12	12 49.49	- 0 12.1	2.274	3.224	6.2	20.6	3 12	12 50.40	- 2 8.1	2.011	2.960	6.9	19.3
3 22	12 42.87	+ 0 35.1	2.237	3.224	2.9	20.4	3 22	12 43.33	- 1 13.6	1.977	2.965	3.2	19.1
4 1	12 35.63	+ 1 22.3	2.228	3.223	1.9	20.3	4 1	12 35.58	- 0 17.3	1.972	2.969	1.5	18.9
4 11	12 28.51	+ 2 4.6	2.249	3.223	5.0	20.5	4 11	12 27.99	+ 0 34.8	1.996	2.974	5.1	19.2
4 21	12 22.21	+ 2 37.9	2.297	3.222	8.2	20.7	4 21	12 21.36	+ 1 17.6	2.046	2.978	8.8	19.4
5 1	12 17.28	+ 2 59.3	2.369	3.222	11.2	20.9	5 1	12 16.32	+ 1 47.6	2.122	2.982	12.0	19.6
266621	2008 <i>PY</i> ₁₆		3 30.5 313°28'	5°7'/3.0	17		421219	2013 <i>SH</i> ₃₁		3 30.5 147°12'	4°8'/24.9	18	
2 21	13 4.62	-15 20.6	1.631	2.393	18.4	20.6	2 21	13 0.84	+ 7 42.0	2.225	3.040	12.4	21.0
3 2	13 1.12	-16 26.9	1.525	2.374	15.5	20.3	3 2	12 56.78	+ 8 56.1	2.154	3.047	9.6	20.8
3 12	12 54.67	-17 17.7	1.439	2.355	12.0	20.1	3 12	12 50.82	+10 13.6	2.107	3.054	6.8	20.7
3 22	12 45.68	-17 50.0	1.375	2.337	8.3	19.8	3 22	12 43.50	+11 28.0	2.088	3.061	4.9	20.5
4 1	12 35.10	-18 2.2	1.336	2.319	5.8	19.6	4 1	12 35.55	+12 32.2	2.098	3.067	5.5	20.6
4 11	12 24.25	-17 56.3	1.322	2.301	7.1	19.6	4 11	12 27.82	+13 20.7	2.135	3.073	7.9	20.7
4 21	12 14.53	-17 37.2	1.334	2.284	10.8	19.8	4 21	12 21.06	+13 50.1	2.199	3.078	10.7	20.9
5 1	12 7.15	-17 12.5	1.369	2.268	14.8	20.0	5 1	12 15.87	+13 59.5	2.285	3.083	13.3	21.1
322487	2011 <i>UN</i> ₂₅₃		3 30.5 161°33'	0°8'/29.8	18		209557	2004 <i>WJ</i> ₁₂		3 30.5 43°49'	3°2'/1.8	18	
2 21	13 3.93	- 5 15.2	1.897	2.687	15.1	21.7	2 21	13 3.33	-11 53.2	1.251	2.050	20.9	20.0
3 2	12 59.58	- 4 34.5	1.814	2.693	11.8	21.5	3 2	13 0.17	-12 14.2	1.188	2.066	16.9	19.7
3 12	12 52.92	- 3 39.4	1.752	2.699	8.0	21.0	3 12	12 53.83	-12 12.6	1.143	2.081	12.2	19.5
3 22	12 44.55	- 2 34.4	1.717	2.704	3.6	21.0	3 22	12 45.11	-11 49.4	1.119	2.098	7.0	19.3
4 1	12 35.34	- 1 25.6	1.710	2.708	1.3	20.8	4 1	12 35.27	-11 8.9	1.120	2.115	3.2	19.1
4 11	12 26.34	- 0 20.3	1.732	2.712	5.6	21.1	4 11	12 25.89	-10 19.2	1.145	2.133	6.1	19.3
4 21	12 18.50	+ 0 34.9	1.782	2.715	9.7	21.4	4 21	12 18.28	- 9 29.3	1.194	2.151	11.0	19.6
5 1	12 12.56	+ 1 15.5	1.855	2.717	13.3	21.6	5 1	12 13.36	- 8 47.7	1.265	2.170	15.4	19.9
310011	2009 <i>KV</i> ₈		3 30.5 207°89'	4°3'/24.6	18		54303	2000 <i>JD</i> ₆₆		3 30.5 151°57'	6°8'/23.2	18	
2 21	12 57.60	+ 8 21.8	2.631	3.445	10.7	21.6	2 21	13 2.23	+12 2.0	1.958	2.780	13.5	18.8
3 2	12 54.04	+ 9 27.3	2.550	3.443	8.3	21.4	3 2	12 58.16	+13 28.4	1.892	2.785	10.7	18.6
3 12	12 48.88	+10 35.4	2.495	3.441	6.0	21.2	3 12	12 51.91	+14 55.3	1.850	2.790	8.1	18.4
3 22	12 42.57	+11 40.8	2.467	3.438	4.4	21.1	3 22	12 44.06	+16 14.4	1.835	2.794	6.8	18.4
4 1	12 35.69	+12 37.9	2.468	3.435	4.9	21.2	4 1	12 35.47	+17 17.3	1.846	2.798	7.6	18.4
4 11	12 28.94	+13 21.8	2.497	3.432	7.1	21.3	4 11	12 27.16	+17 58.0	1.884	2.802	10.0	18.6
4 21	12 22.94	+13 49.7	2.553	3.429	9.5	21.4	4 21	12 19.98	+18 14.1	1.946	2.806	12.8	18.7
5 1	12 18.21	+14 0.3	2.632	3.426	11.9	21.6	5 1	12 14.63	+18 5.8	2.029	2.809	15.4	18.9
371140	2005 <i>WR</i> ₁₃₄		3 30.5 181°95'	4°0'/26.0	17		436672	2011 <i>SQ</i> ₈₀		3 30.5 190°95'	0°1'/30.4	17	
2 21	13 1.85	+ 5 40.8	2.272	3.081	12.3	21.8	2 21	12 57.05	- 7 12.9	2.599	3.377	11.8	21.5
3 2	12 57.57	+ 6 39.6	2.191	3.082	9.6	21.6	3 2	12 53.66	- 6 30.7	2.504	3.377	9.3	21.4
3 12	12 51.38	+ 7 43.3	2.134	3.082	6.6	21.4	3 12	12 48.67	- 5 36.3	2.433	3.376	6.3	21.2
3 22	12 43.77	+ 8 45.9	2.104	3.082	4.3	21.2	3 22	12 42.50	- 4 32.9	2.389	3.375	2.9	20.9
4 1	12 35.48	+ 9 41.3	2.103	3.081	4.6	21.3	4 1	12 35.74	- 3 24.7	2.374	3.373	0.6	20.7
4 11	12 27.36	+10 24.0	2.131	3.080	7.2	21.4	4 11	12 29.09	- 2 17.3	2.390	3.372	4.0	21.0
4 21	12 20.18	+10 50.3	2.185	3.078	10.2	21.6	4 21	12 23.17	- 1 15.7	2.434	3.370	7.3	21.2
5 1	12 14.55	+10 58.7	2.263	3.076	12.9	21.8	5 1	12 18.53	- 0 24.1	2.504	3.368	10.2	21.4
166964	2003 <i>NK</i> ₃		3 30.5 240°03'	4°6'/26.3	16		500792	2013 <i>ER</i> ₁₂₆		3 30.5 260°58'	7°8'/21.1	16	
2 21	13 2.23	+ 3 38.6	1.716	2.537	15.2	20.4	2 21	12 59.06	+ 8 38.5	1.664	2.499	14.9	20.9
3 2	12 58.65	+ 4 48.9	1.628	2.527	11.8	20.2	3 2	12 56.37	+11 10.5	1.579	2.482	11.8	20.7
3 12	12 52.55	+ 6 9.3	1.563	2.516	8.1	19.9	3 12	12 51.15	+13 54.0	1.519	2.465	9.0	20.5
3 22	12 44.47	+ 7 32.3	1.524	2.506	5.0	19.7	3 22	12 43.89	+16 36.3	1.487	2.448	7.9	20.4
4 1	12 35.35	+ 8 48.5	1.512	2.495	5.3	19.7	4 1	12 35.49	+19 2.8	1.482	2.430	9.5	20.4
4 11	12 26.32	+ 9 49.4	1.527	2.483	8.8	19.9	4 11	12 27.10	+21 1.0	1.503	2.412	12.7	20.5
4 21	12 18.47	+10 29.0	1.566	2.471	12.8	20.1	4 21	12 19.84	+22 23.9	1.547	2.394	16.2	20.7
5 1	12 12.66	+10 44.6	1.627	2.459	16.4	20.3	5 1	12 14.62	+23 9.6	1.610	2.375	19.3	20.9
210167	2006 <i>SF</i> ₃₈₃		3 30.5 182°06'	1°2'/28.9	17		23113	Aaronhakim		3 30.5 201°50'			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
277002	2004 <i>XX</i> ₇₂		3 30.5 159°07'		3°9'/26.4 17		110552	2001 <i>TE</i> ₁₀₃		3 30.5 153°36'		3°4'/27.2 18	
2 21	13 1.06	+ 4 56.5	2.105	2.919	13.0	20.3	2 21	13 5.62	+ 5 4.7	2.293	3.092	12.5	19.4
3 2	12 57.10	+ 5 52.0	2.027	2.921	10.1	20.1	3 2	13 0.41	+ 5 38.5	2.214	3.100	9.7	19.2
3 12	12 51.14	+ 6 52.9	1.973	2.924	6.9	19.9	3 12	12 53.24	+ 6 16.0	2.160	3.107	6.6	19.0
3 22	12 43.70	+ 7 53.4	1.946	2.926	4.3	19.8	3 22	12 44.67	+ 6 52.5	2.133	3.114	3.9	18.9
4 1	12 35.55	+ 8 46.7	1.947	2.928	4.5	19.8	4 1	12 35.44	+ 7 22.9	2.136	3.120	3.8	18.9
4 11	12 27.60	+ 9 27.2	1.976	2.930	7.3	19.9	4 11	12 26.44	+ 7 42.7	2.168	3.126	6.5	19.1
4 21	12 20.66	+ 9 51.1	2.031	2.931	10.5	20.1	4 21	12 18.46	+ 7 49.1	2.228	3.131	9.6	19.2
5 1	12 15.36	+ 9 56.9	2.109	2.933	13.4	20.3	5 1	12 12.11	+ 7 41.1	2.312	3.136	12.4	19.4
506046	2015 <i>KW</i> ₈₀		3 30.5 221°81'		5°6'/22.9 17		203750	2002 <i>RF</i> ₆₉		3 30.5 218°41'		0°3'/30.2 18	
2 21	12 58.82	+13 28.7	2.638	3.452	10.7	21.9	2 21	12 59.51	- 5 46.1	2.311	3.095	12.9	20.6
3 2	12 55.02	+14 37.2	2.560	3.447	8.5	21.7	3 2	12 55.82	- 5 16.8	2.215	3.091	10.1	20.4
3 12	12 49.57	+15 45.1	2.507	3.442	6.6	21.6	3 12	12 50.28	- 4 35.6	2.142	3.087	6.9	20.2
3 22	12 42.92	+16 46.5	2.482	3.437	5.6	21.5	3 22	12 43.33	- 3 45.6	2.096	3.082	3.2	20.0
4 1	12 35.69	+17 35.7	2.486	3.432	6.3	21.5	4 1	12 35.66	- 2 51.2	2.079	3.078	0.8	19.8
4 11	12 28.59	+18 8.5	2.517	3.426	8.2	21.7	4 11	12 28.08	- 1 57.9	2.091	3.073	4.6	20.0
4 21	12 22.27	+19 22.5	2.573	3.421	10.4	21.8	4 21	12 21.34	- 1 10.8	2.131	3.067	8.2	20.2
5 1	12 17.27	+18 17.6	2.651	3.415	12.5	21.9	5 1	12 16.09	- 0 34.2	2.196	3.062	11.4	20.4
466843	2015 <i>BN</i> ₂₄₉		3 30.5 214°82'		1°3'/29.2 17		422782	2001 <i>VL</i> ₈₄		3 30.5 95°87'		4°5'/4.7 18	
2 21	13 0.36	- 3 18.9	2.111	2.907	13.6	21.6	2 21	13 5.32	-20 38.9	2.207	2.916	15.6	22.2
3 2	12 56.65	- 2 39.6	2.018	2.903	10.6	21.4	3 2	13 0.28	-20 41.8	2.136	2.947	13.0	22.1
3 12	12 50.92	- 1 48.7	1.949	2.899	7.1	21.2	3 12	12 53.17	-20 24.3	2.085	2.978	10.0	21.9
3 22	12 43.64	- 0 50.1	1.907	2.894	3.3	20.9	3 22	12 44.61	-19 46.6	2.058	3.008	6.9	21.8
4 1	12 35.58	+ 0 10.5	1.893	2.890	1.7	20.8	4 1	12 35.46	-18 51.3	2.059	3.037	4.7	21.7
4 11	12 27.63	+ 1 6.9	1.908	2.885	5.4	21.0	4 11	12 26.65	-17 43.6	2.089	3.066	5.1	21.8
4 21	12 20.61	+ 1 53.5	1.949	2.879	9.2	21.3	4 21	12 19.01	-16 30.4	2.147	3.093	7.6	22.0
5 1	12 15.23	+ 2 26.3	2.016	2.874	12.6	21.5	5 1	12 13.16	-15 18.5	2.232	3.120	10.4	22.2
422981	2003 <i>QN</i> ₈₁		3 30.5 225°40'		2°2'/1.4 17		370952	2005 <i>SA</i> ₅₄		3 30.5 149°12'		0°5'/30.1 17	
2 21	13 4.82	-10 17.5	2.085	2.849	14.8	21.2	2 21	13 3.57	- 4 33.2	2.117	2.903	13.9	21.9
3 2	13 0.26	-10 40.5	1.989	2.847	12.0	21.0	3 2	12 59.06	- 4 12.3	2.033	2.910	10.9	21.7
3 12	12 53.43	-10 50.7	1.914	2.844	8.6	20.8	3 12	12 52.47	- 3 40.4	1.971	2.917	7.3	21.5
3 22	12 44.87	-10 48.6	1.865	2.842	4.9	20.5	3 22	12 44.35	- 3 0.7	1.936	2.923	3.4	21.3
4 1	12 35.36	-10 36.1	1.844	2.839	2.2	20.3	4 1	12 35.49	- 2 17.7	1.930	2.929	0.9	21.1
4 11	12 25.92	-10 17.0	1.852	2.837	4.6	20.5	4 11	12 26.83	- 1 36.9	1.953	2.934	4.9	21.4
4 21	12 17.49	- 9 55.8	1.887	2.834	8.4	20.7	4 21	12 19.19	- 1 3.1	2.004	2.939	8.7	21.6
5 1	12 10.85	- 9 37.4	1.948	2.831	11.8	20.9	5 1	12 13.26	- 0 40.1	2.080	2.943	12.0	21.9
225385	1999 <i>TO</i> ₁₇₈		3 30.5 94°49'		1°8'/1.4 18		252215	2001 <i>HH</i> ₆₁		3 30.5 342°84'		1°1'/31.3 17	
2 21	13 0.77	-11 27.4	2.018	2.788	15.0	20.4	2 21	12 56.30	- 8 30.1	1.258	2.081	19.5	20.1
3 2	12 57.04	-11 18.4	1.934	2.796	12.1	20.2	3 2	12 54.93	- 8 23.9	1.175	2.070	15.7	19.8
3 12	12 51.18	-10 53.2	1.871	2.804	8.6	20.0	3 12	12 50.55	- 7 56.1	1.109	2.060	11.0	19.5
3 22	12 43.76	-10 13.6	1.834	2.812	4.7	19.8	3 22	12 43.75	- 7 9.3	1.066	2.052	5.6	19.1
4 1	12 35.57	- 9 23.4	1.823	2.820	1.8	19.6	4 1	12 35.57	- 6 9.3	1.045	2.044	1.1	18.8
4 11	12 27.56	- 8 28.3	1.842	2.828	4.4	19.8	4 11	12 27.49	- 5 5.6	1.049	2.038	6.4	19.1
4 21	12 20.61	- 7 34.5	1.887	2.836	8.2	20.0	4 21	12 20.85	- 4 8.1	1.076	2.033	11.9	19.4
5 1	12 15.40	- 6 47.8	1.958	2.843	11.7	20.2	5 1	12 16.73	- 3 25.2	1.123	2.029	16.8	19.7
470916	2009 <i>DE</i> ₉₂		3 30.5 215°48'		6°3'/5.3 17		285742	2000 <i>TL</i> ₂₃		3 30.5 180°60'		0°3'/31.0 18	
2 21	13 6.35	-22 15.2	2.394	3.085	15.0	21.3	2 21	12 56.93	- 9 13.1	2.828	3.594	11.3	21.4
3 2	13 1.39	-23 19.5	2.293	3.084	12.9	21.1	3 2	12 53.44	- 8 26.8	2.730	3.595	8.9	21.3
3 12	12 54.20	-24 7.9	2.212	3.084	10.5	20.9	3 12	12 48.47	- 7 27.8	2.657	3.595	6.1	21.1
3 22	12 45.25	-24 37.9	2.155	3.083	8.1	20.8	3 22	12 42.41	- 6 18.9	2.611	3.595	3.0	20.9
4 1	12 35.29	-24 48.0	2.126	3.082	6.5	20.7	4 1	12 35.83	- 5 4.3	2.596	3.595	0.5	20.6
4 11	12 25.29	-24 39.9	2.124	3.081	6.6	20.7	4 11	12 29.35	- 3 49.2	2.611	3.594	3.6	20.9
4 21	12 16.20	-24 17.4	2.149	3.081	8.4	20.8	4 21	12 23.55	- 2 38.5	2.655	3.593	6.7	21.1
5 1	12 8.80	-23 46.0	2.200	3.080	10.8	20.9	5 1	12 18.92	- 1 36.6	2.726	3.592	9.5	21.3
209868	2005 <i>JV</i> ₆₆		3 30.5 313°47'		2°4'/1.8 17		67575	2000 <i>SY</i> ₁₁₁		3 30.5 216°88'		0°9'/29.5 18	
2 21	12 58.67	-12 25.2	2.025	2.794	15.0	20.4	2 21	13 1.30	- 2 5.8	2.664	3.448	11.4	19.9
3 2	12 55.58	-12 25.8	1.924	2.784	12.2	20.2	3 2	12 56.93	- 1 51.8	2.566	3.443	8.9	19.7
3 12	12 50.35	-12 9.9	1.845	2.775	8.8	19.9	3 12	12 50.88	- 1 30.5	2.492	3.438	5.9	19.5
3 22	12 43.44	-11 38.5	1.790	2.766	5.2	19.7	3 22	12 43.57	- 1 4.8	2.446	3.433	2.7	19.3
4 1	12 35.62	-10 54.3	1.762	2.757	2.4	19.5	4 1	12 35.63	- 0 37.9	2.430	3.427	1.2	19.2
4 11	12 27.83	-10 2.6	1.762	2.748	4.6	19.6	4 11	12 27.76	- 0 13.8	2.443	3.421	4.4	19.4
4 21	12 20.98	- 9 9.7	1.788	2.740	8.4	19.8	4 21	12 20.64	+ 0 4.3	2.485	3.415	7.5	19.6
5 1	12 15.82	- 8 21.7	1.840	2.732	12.0	20.0	5 1	12 14.84	+ 0 13.7	2.553	3.408	10.4	19.8
171875	2001 <i>QX</i> ₂₁₉		3 30.5 184°89'		6°0'/7.1 18		37941	1998 <i>HS</i> ₆		3 30.5 182°88'		3°7'/26.8 18	
2 21	13 0.97	-26 20.8	2.725	3.390	13.8	20.0	2 21	13 1.47	+ 4 13.2	2.024	2.837	13.5	19.3
3 2	12 56.90	-26 49.8	2.621	3.390	12.0	19.9	3 2	12 57.55	+ 5 3.3	1.943	2.837	10.4	19.1
3 12	12 50.99	-27 0.7	2.536	3.389	10.0	19.7	3 12	12 51.52	+ 5 59.4	1.886	2.837	7.1	18.9
3 22	12 43.66	-26 51.7	2.475	3.389	7.9	19.6	3 22	12 43.92	+ 6 55.8	1.855	2.837	4.2	18.7
4 1	12 35.59	-26 22.9	2.440	3.388	6.3	19.5	4 1	12 35.57	+ 7 45.9	1.853	2.837	4.3	18.7
4 11	12 27.55	-25 36.8	2.433	3.387	6.1	19.5	4 11	12 27.40	+ 8 23.7	1.878	2.837	7.3	18.9
4 21	12 20.31	-24 38.0	2.453	3.385	7.5	19.5	4 21	12 20.27	+ 8 45.4	1.930	2.836	10.6	19.1
5 1	12 14.50	-23 32.3	2.499	3.383	9.5	19.7	5 1	12 14.86	+ 8 49.0	2.004	2.835	13.7	19.3
42910	1999 <i>RB</i> ₂₂₁		3 30.5 191°										

EPHEMERIDES

3 30.5

3 30.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
310082	2010 <i>LP</i> ₇₂		3 30.5 329°17	4°1/ 4.2 17			455585	2004 <i>RE</i> ₃₁₄		3 30.6 166°60	0°3/30.9 18		
2 21	12 56.89	-18 45.5	2.245	2.980	14.7	20.2	2 21	13 6.01	-7 20.3	1.935	2.713	15.3	22.4
3 2	12 54.02	-18 51.7	2.143	2.973	12.3	20.0	3 2	13 1.23	-7 1.2	1.848	2.718	12.1	22.2
3 12	12 49.20	-18 38.9	2.061	2.966	9.5	19.8	3 12	12 54.10	-6 27.6	1.782	2.723	8.3	22.0
3 22	12 42.88	-18 7.2	2.002	2.960	6.5	19.6	3 22	12 45.20	-5 42.5	1.743	2.727	4.0	21.8
4 1	12 35.75	-17 18.2	1.971	2.953	4.3	19.4	4 1	12 35.40	-4 50.4	1.732	2.731	0.6	21.5
4 11	12 28.67	-16 16.5	1.967	2.947	4.9	19.4	4 11	12 25.80	-3 57.8	1.750	2.733	5.0	21.8
4 21	12 22.45	-15 8.1	1.990	2.942	7.6	19.6	4 21	12 17.34	-3 10.9	1.795	2.735	9.2	22.1
5 1	12 17.77	-13 59.9	2.039	2.936	10.7	19.8	5 1	12 10.82	-2 34.5	1.866	2.736	12.9	22.3
249637	1999 <i>TY</i> ₁₃₇		3 30.5 289°23	0°8/29.7 16			469776	2005 <i>QR</i> ₉₀		3 30.6 202°17	0°0/30.6 17		
2 21	13 2.36	-2 28.1	2.447	3.233	12.2	20.5	2 21	12 58.54	-6 17.7	3.017	3.787	10.5	22.4
3 2	12 58.16	-2 17.6	2.323	3.201	9.7	20.3	3 2	12 54.61	-5 53.0	2.915	3.783	8.3	22.2
3 12	12 51.99	-1 58.9	2.223	3.169	6.6	20.0	3 12	12 49.24	-5 19.0	2.838	3.778	5.6	22.0
3 22	12 44.23	-1 34.3	2.150	3.137	3.1	19.8	3 22	12 42.80	-4 38.1	2.788	3.773	2.7	21.8
4 1	12 35.52	-1 7.4	2.106	3.104	1.2	19.6	4 1	12 35.82	-3 53.3	2.769	3.768	0.4	21.6
4 11	12 26.66	-0 42.5	2.092	3.071	4.9	19.8	4 11	12 28.90	-3 8.7	2.780	3.762	3.5	21.8
4 21	12 18.48	-0 23.6	2.106	3.037	8.6	19.9	4 21	12 22.62	-2 27.9	2.821	3.756	6.5	22.0
5 1	12 11.72	-0 14.2	2.145	3.003	11.9	20.1	5 1	12 17.46	-1 54.1	2.888	3.750	9.1	22.2
485851	2012 <i>EN</i> ₉		3 30.5 89°87	0°1/30.7 17			366401	2001 <i>RH</i> ₁₄₀		3 30.6 131°72	1°5/28.9 18		
2 21	13 0.18	-16 12.9	1.098	1.898	23.2	20.7	2 21	13 3.65	-1 58.6	2.201	2.992	13.3	22.0
3 2	12 58.04	-13 59.8	1.033	1.915	18.5	20.4	3 2	12 58.96	-1 21.2	2.125	3.007	10.3	21.8
3 12	12 52.55	-11 1.8	0.986	1.932	12.7	20.1	3 12	12 52.31	-0 34.5	2.073	3.021	6.8	21.6
3 22	12 44.57	-7 28.4	0.962	1.948	6.0	19.8	3 22	12 44.26	+0 17.3	2.047	3.034	3.2	21.4
4 1	12 35.50	-3 38.9	0.965	1.964	1.0	19.5	4 1	12 35.58	+1 8.9	2.051	3.047	1.9	21.3
4 11	12 27.00	+0 1.7	0.996	1.980	7.7	20.0	4 11	12 27.15	+1 54.8	2.085	3.059	5.3	21.6
4 21	12 20.43	+3 12.1	1.052	1.995	13.7	20.4	4 21	12 19.76	+2 30.5	2.146	3.071	8.8	21.8
5 1	12 16.66	+5 39.9	1.130	2.010	18.7	20.7	5 1	12 13.99	+2 53.1	2.232	3.082	11.9	22.0
142369	Johnhodes		3 30.5 14°08	2°5/28.3 18			170574	2003 <i>XA</i> ₇		3 30.6 115°58	3°4/ 2.2 18		
2 21	12 57.79	-2 59.9	1.422	2.248	17.5	20.1	2 21	13 9.80	-13 5.7	1.915	2.663	16.5	20.0
3 2	12 55.54	-1 55.9	1.348	2.250	13.5	19.9	3 2	13 4.20	-13 38.2	1.835	2.680	13.4	19.8
3 12	12 50.61	-0 34.5	1.295	2.252	9.0	19.6	3 12	12 56.10	-13 55.0	1.776	2.696	9.8	19.6
3 22	12 43.63	+0 57.4	1.266	2.254	4.2	19.4	3 22	12 46.13	-13 55.7	1.742	2.712	6.0	19.4
4 1	12 35.64	+2 29.6	1.262	2.257	3.2	19.3	4 1	12 35.26	-13 42.1	1.736	2.727	3.4	19.3
4 11	12 27.91	+3 51.3	1.285	2.261	7.7	19.6	4 11	12 24.65	-13 18.1	1.759	2.742	5.1	19.4
4 21	12 21.55	+4 54.2	1.331	2.264	12.3	19.8	4 21	12 15.33	-12 49.4	1.810	2.756	8.7	19.7
5 1	12 17.42	+5 33.4	1.399	2.269	16.4	20.1	5 1	12 8.11	-12 21.8	1.886	2.769	12.2	19.9
80262	1999 <i>XY</i> ₁₃		3 30.5 49°80	4°0/26.8 18			346150	2007 <i>VE</i> ₂₅₃		3 30.6 147°63	4°8/24.6 17		
2 21	12 59.28	+0 50.5	1.471	2.302	16.8	18.3	2 21	13 0.19	+9 48.1	2.487	3.299	11.3	21.2
3 2	12 56.53	+2 9.0	1.405	2.309	12.9	18.1	3 2	12 56.11	+10 50.1	2.414	3.305	8.8	21.0
3 12	12 51.15	+3 40.3	1.360	2.317	8.6	17.9	3 12	12 50.32	+11 53.4	2.367	3.310	6.4	20.9
3 22	12 43.84	+5 15.8	1.340	2.325	4.8	17.7	3 22	12 43.31	+12 52.2	2.347	3.315	4.9	20.8
4 1	12 35.62	+6 44.9	1.346	2.334	4.9	17.7	4 1	12 35.74	+13 40.8	2.356	3.320	5.4	20.8
4 11	12 27.73	+7 57.7	1.378	2.342	8.7	17.9	4 11	12 28.37	+14 14.7	2.393	3.324	7.5	20.9
4 21	12 21.23	+8 47.7	1.433	2.351	12.8	18.2	4 21	12 21.85	+14 31.4	2.456	3.329	10.0	21.1
5 1	12 16.91	+9 12.1	1.510	2.360	16.5	18.4	5 1	12 16.74	+14 30.2	2.542	3.333	12.3	21.3
127544	2002 <i>XD</i> ₈₁		3 30.6 169°45	3°1/27.9 18			203416	2001 <i>XJ</i> ₁₀₃		3 30.6 124°43	3°0/27.9 18		
2 21	13 7.57	+1 33.6	1.873	2.673	14.9	20.6	2 21	13 3.03	-0 44.9	1.613	2.428	16.3	20.3
3 2	13 2.45	+2 19.1	1.792	2.679	11.6	20.4	3 2	12 59.23	+0 17.7	1.542	2.437	12.6	20.1
3 12	12 54.92	+3 13.2	1.734	2.683	7.8	20.2	3 12	12 52.88	+1 33.1	1.492	2.446	8.4	19.9
3 22	12 45.57	+4 10.2	1.702	2.687	4.1	20.0	3 22	12 44.64	+2 54.4	1.468	2.455	4.2	19.7
4 1	12 35.33	+5 3.3	1.700	2.690	3.6	19.9	4 1	12 35.52	+4 12.7	1.471	2.463	3.6	19.6
4 11	12 25.34	+5 45.7	1.726	2.692	7.1	20.2	4 11	12 26.71	+5 19.2	1.501	2.471	7.5	19.9
4 21	12 16.58	+6 12.8	1.778	2.693	10.9	20.4	4 21	12 19.25	+6 7.6	1.557	2.479	11.7	20.1
5 1	12 9.84	+6 22.2	1.854	2.692	14.4	20.6	5 1	12 13.93	+6 34.6	1.635	2.486	15.4	20.4
506225	2016 <i>JC</i> ₃₆		3 30.6 320°83	2°5/28.4 17			370053	2000 <i>SR</i> ₃₅₇		3 30.6 166°01	4°2/24.8 16		
2 21	12 55.94	-2 10.9	1.445	2.275	17.0	21.0	2 21	13 1.58	+8 7.4	2.703	3.507	10.7	22.2
3 2	12 54.35	-1 23.1	1.347	2.251	13.4	20.7	3 2	12 57.04	+9 19.4	2.627	3.514	8.3	22.0
3 12	12 50.06	-0 18.0	1.269	2.227	9.0	20.4	3 12	12 50.89	+10 34.0	2.576	3.520	5.9	21.9
3 22	12 43.53	+0 59.1	1.215	2.204	4.3	20.0	3 22	12 43.57	+11 45.8	2.555	3.525	4.3	21.8
4 1	12 35.66	+2 19.4	1.186	2.181	3.2	19.9	4 1	12 35.71	+12 48.9	2.563	3.529	4.9	21.8
4 11	12 27.72	+3 32.5	1.182	2.160	8.0	20.1	4 11	12 28.02	+13 38.7	2.601	3.533	7.0	21.9
4 21	12 20.95	+4 29.0	1.202	2.139	13.0	20.3	4 21	12 21.12	+14 12.1	2.665	3.536	9.4	22.1
5 1	12 16.41	+5 2.7	1.242	2.119	17.6	20.5	5 1	12 15.54	+14 28.2	2.754	3.538	11.6	22.3
313637	2003 <i>SG</i> ₃₅		3 30.6 138°09	0°2/30.4 18			334552	2002 <i>SS</i> ₄₃		3 30.6 160°01	0°8/29.6 18		
2 21	13 5.33	-5 56.6	1.946	2.729	15.1	22.4	2 21	13 0.31	-3 37.9	2.639	3.422	11.5	21.6
3 2	13 0.59	-5 33.1	1.867	2.741	11.8	22.2	3 2	12 56.12	-3 5.7	2.551	3.428	9.0	21.4
3 12	12 53.58	-4 56.4	1.809	2.753	8.0	21.9	3 12	12 50.31	-2 24.6	2.487	3.433	6.0	21.2
3 22	12 44.91	-4 9.9	1.778	2.764	3.7	21.7	3 22	12 43.32	-1 37.7	2.451	3.438	2.7	21.0
4 1	12 35.46	-3 18.7	1.776	2.774	0.7	21.5	4 1	12 35.77	-0 49.1	2.445	3.442	1.2	20.9
4 11	12 26.26	-2 29.1	1.802	2.784	5.1	21.8	4 11	12 28.35	-0 3.5	2.468	3.446	4.3	21.1
4 21	12 18.25	-1 46.7	1.856	2.793	9.1	22.1	4 21	12 21.71	+0 35.2	2.521	3.449	7.5	21.3
5 1	12 12.12	-1 15.9	1.934	2.802	12.7	22.3	5 1	12 16.39	+1 3.8	2.599	3.452	10.2	21.5
455597	2004 <i>TB</i> ₃₃		3 30.6 135°83	1°2/31.7 18			210983	Wadeparker		3 30.6 215°72	2°2/27.6 18		
2 21	13 4.95	-10 12.4	1.822	2.595	16.3	22.0							

EPHEMERIDES

3 30.6

3 30.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
148530	2001 <i>QP</i> ₁₉		3 30.6 111°42'	5°7/ 4.4 18			167771	2005 <i>AF</i> ₁		3 30.6 115°34'	4°0/ 2.9 18		
2 21	13 8.99	-19 28.3	2.017	2.732	16.7	20.0	2 21	13 5.16	-15 39.3	1.692	2.448	18.0	20.6
3 2	13 3.64	-20 22.0	1.933	2.747	14.1	19.8	3 2	13 1.00	-15 56.9	1.611	2.458	14.8	20.4
3 12	12 55.79	-20 57.5	1.869	2.761	11.1	19.7	3 12	12 54.18	-15 53.7	1.549	2.468	11.1	20.2
3 22	12 46.04	-21 12.6	1.829	2.775	8.0	19.5	3 22	12 45.32	-15 29.5	1.510	2.478	7.1	20.0
4 1	12 35.30	-21 7.1	1.816	2.788	5.9	19.4	4 1	12 35.45	-14 46.7	1.498	2.487	4.2	19.8
4 11	12 24.74	-20 44.1	1.831	2.801	6.3	19.4	4 11	12 25.79	-13 51.4	1.512	2.496	5.6	19.9
4 21	12 15.40	-20 9.1	1.873	2.814	8.8	19.6	4 21	12 17.50	-12 51.3	1.553	2.505	9.4	20.2
5 1	12 8.10	-19 29.0	1.941	2.826	11.8	19.8	5 1	12 11.41	-11 54.4	1.618	2.513	13.2	20.4
316591	2011 <i>UA</i> ₁₇₂		3 30.6 242°02'	2°5/ 2.5 17			39624	1994 <i>PT</i> ₈		3 30.6 208°49'	1°7/ 28.7 17		
2 21	13 0.88	-14 0.0	2.729	3.467	12.3	21.4	2 21	12 59.67	- 2 17.3	2.122	2.922	13.4	20.1
3 2	12 56.75	-14 7.7	2.616	3.454	10.1	21.2	3 2	12 56.12	- 1 30.1	2.032	2.919	10.4	19.9
3 12	12 50.87	-14 2.5	2.525	3.441	7.5	21.0	3 12	12 50.58	- 0 31.8	1.966	2.917	6.9	19.7
3 22	12 43.66	-13 44.7	2.460	3.428	4.6	20.8	3 22	12 43.54	+ 0 33.3	1.927	2.914	3.2	19.5
4 1	12 35.70	-13 16.1	2.423	3.414	2.6	20.7	4 1	12 35.75	+ 1 38.9	1.916	2.911	2.2	19.4
4 11	12 27.73	-12 39.8	2.417	3.400	3.9	20.7	4 11	12 28.09	+ 2 38.8	1.934	2.908	5.7	19.6
4 21	12 20.43	-12 0.1	2.439	3.386	6.7	20.9	4 21	12 21.36	+ 3 27.4	1.978	2.904	9.4	19.8
5 1	12 14.44	-11 21.4	2.488	3.371	9.6	21.1	5 1	12 16.22	+ 4 1.0	2.047	2.901	12.6	20.0
199986	Chervone		3 30.6 251°87'	6°9/ 22.8 18			240662	2005 <i>EZ</i> ₃₀		3 30.6 39°15'	3°6/ 2.5 18		
2 21	13 2.56	+14 11.8	2.150	2.967	12.7	20.0	2 21	13 0.00	-14 51.5	1.384	2.169	20.0	20.1
3 2	12 58.43	+15 24.5	2.066	2.954	10.2	19.8	3 2	12 57.46	-14 52.6	1.310	2.177	16.3	19.9
3 12	12 52.18	+16 36.6	2.006	2.940	8.0	19.6	3 12	12 52.02	-14 28.4	1.255	2.186	12.0	19.6
3 22	12 44.31	+17 40.8	1.972	2.926	6.9	19.5	3 22	12 44.37	-13 39.5	1.221	2.195	7.3	19.4
4 1	12 35.60	+18 29.5	1.966	2.911	7.7	19.5	4 1	12 35.62	-12 30.8	1.211	2.205	3.7	19.2
4 11	12 26.99	+18 57.1	1.986	2.897	10.0	19.6	4 11	12 27.15	-11 11.1	1.227	2.215	5.9	19.3
4 21	12 19.36	+19 1.2	2.030	2.882	12.7	19.8	4 21	12 20.20	- 9 50.8	1.267	2.225	10.4	19.6
5 1	12 13.44	+18 41.8	2.096	2.867	15.2	19.9	5 1	12 15.68	- 8 39.7	1.330	2.236	14.7	19.9
184139	2004 <i>JC</i> ₂₀		3 30.6 299°75'	4°2/ 26.7 17			491717	2012 <i>UM</i> ₁₄₇		3 30.6 73°73'	1°5/ 1.3 17		
2 21	12 58.83	+ 2 10.7	1.620	2.447	15.6	20.2	2 21	12 58.76	-11 16.4	2.262	3.029	13.7	21.6
3 2	12 56.30	+ 3 15.7	1.522	2.425	12.2	20.0	3 2	12 55.26	-11 1.4	2.177	3.038	11.0	21.4
3 12	12 51.21	+ 4 33.4	1.447	2.403	8.3	19.7	3 12	12 49.90	-10 31.5	2.114	3.047	7.7	21.2
3 22	12 44.02	+ 5 56.8	1.397	2.381	4.8	19.4	3 22	12 43.19	- 9 49.0	2.077	3.056	4.2	21.0
4 1	12 35.63	+ 7 16.6	1.373	2.359	5.0	19.4	4 1	12 35.82	- 8 57.3	2.068	3.065	1.5	20.8
4 11	12 27.20	+ 8 23.0	1.375	2.338	8.9	19.5	4 11	12 28.63	- 8 1.8	2.088	3.074	4.0	21.0
4 21	12 19.87	+ 9 8.8	1.401	2.316	13.2	19.7	4 21	12 22.35	- 7 8.0	2.135	3.083	7.5	21.2
5 1	12 14.61	+ 9 29.9	1.447	2.295	17.2	19.9	5 1	12 17.57	- 6 20.9	2.209	3.092	10.6	21.4
417214	2005 <i>XF</i> ₁₀₂		3 30.6 43°93'	6°6/ 24.2 18			216085	2006 <i>QT</i> ₁₀₇		3 30.6 265°52'	3°1/ 2.1 17		
2 21	12 59.88	+ 9 20.8	1.634	2.469	15.2	20.5	2 21	13 2.82	-13 6.2	1.698	2.469	17.4	20.6
3 2	12 56.69	+10 44.3	1.577	2.480	11.9	20.3	3 2	12 59.36	-13 18.9	1.601	2.461	14.3	20.4
3 12	12 51.10	+12 10.3	1.542	2.491	8.6	20.1	3 12	12 53.24	-13 12.8	1.523	2.452	10.5	20.1
3 22	12 43.78	+13 29.5	1.532	2.502	6.7	20.0	3 22	12 44.98	-12 47.7	1.468	2.443	6.3	19.9
4 1	12 35.71	+14 32.5	1.549	2.514	7.5	20.1	4 1	12 35.50	-12 6.2	1.440	2.434	3.2	19.6
4 11	12 28.00	+15 12.7	1.591	2.527	10.3	20.3	4 11	12 26.02	-11 14.0	1.438	2.425	5.5	19.8
4 21	12 21.61	+15 27.1	1.656	2.539	13.4	20.5	4 21	12 17.72	-10 18.7	1.463	2.415	9.8	20.0
5 1	12 17.23	+15 16.0	1.741	2.552	16.3	20.7	5 1	12 11.55	- 9 28.0	1.511	2.406	13.9	20.2
102179	1999 <i>RX</i> ₂₃₇		3 30.6 128°50'	4°3/ 25.9 18			218703	2005 <i>TH</i> ₁₈₂		3 30.6 108°79'	5°7/ 5.6 18		
2 21	13 4.27	+ 4 56.6	2.024	2.833	13.6	20.3	2 21	13 3.37	-22 37.4	2.034	2.742	16.8	20.6
3 2	12 59.57	+ 6 10.9	1.959	2.850	10.5	20.1	3 2	12 59.21	-22 56.1	1.951	2.758	14.3	20.5
3 12	12 52.78	+ 7 30.6	1.918	2.867	7.2	19.9	3 12	12 52.75	-22 52.5	1.887	2.773	11.3	20.3
3 22	12 44.50	+ 8 48.9	1.904	2.883	4.6	19.8	3 22	12 44.59	-22 25.3	1.847	2.788	8.3	20.1
4 1	12 35.59	+ 9 58.2	1.920	2.898	5.0	19.8	4 1	12 35.59	-21 35.9	1.832	2.802	6.0	20.0
4 11	12 27.00	+10 52.0	1.964	2.912	7.8	20.0	4 11	12 26.83	-20 29.3	1.844	2.816	6.1	20.1
4 21	12 19.56	+11 26.7	2.034	2.926	10.9	20.3	4 21	12 19.22	-19 12.8	1.884	2.830	8.4	20.2
5 1	12 13.91	+11 41.0	2.127	2.939	13.7	20.5	5 1	12 13.52	-17 54.5	1.949	2.843	11.3	20.4
467693	2008 <i>VW</i> ₆₇		3 30.6 231°05'	4°1/ 25.4 18			284691	2008 <i>SY</i> ₇₁		3 30.6 190°73'	1°0/ 29.7 18		
2 21	13 2.70	+ 8 1.6	2.672	3.474	10.9	22.0	2 21	13 7.97	- 3 6.0	1.872	2.661	15.4	21.4
3 2	12 58.09	+ 8 55.3	2.572	3.458	8.5	21.8	3 2	13 2.92	- 2 46.3	1.781	2.660	12.1	21.2
3 12	12 51.74	+ 9 52.0	2.498	3.442	6.1	21.6	3 12	12 55.37	- 2 15.2	1.712	2.658	8.1	21.0
3 22	12 44.05	+10 46.8	2.453	3.425	4.3	21.5	3 22	12 45.88	- 1 36.3	1.669	2.655	3.8	20.7
4 1	12 35.65	+11 34.3	2.437	3.408	4.7	21.5	4 1	12 35.38	- 0 54.8	1.654	2.652	1.5	20.5
4 11	12 27.29	+12 9.6	2.450	3.389	6.9	21.6	4 11	12 25.01	- 0 16.9	1.669	2.648	5.8	20.8
4 21	12 19.67	+12 29.8	2.490	3.370	9.6	21.8	4 21	12 15.82	+ 0 12.0	1.711	2.643	10.1	21.0
5 1	12 13.40	+12 33.3	2.555	3.351	12.1	21.9	5 1	12 8.67	+ 0 28.0	1.777	2.637	13.9	21.2
429207	2009 <i>WK</i> ₁₉₄		3 30.6 200°63'	4°3/ 4.7 17			502270	2015 <i>BR</i> ₁₂₅		3 30.6 184°91'	2°9/ 27.4 17		
2 21	12 59.67	-21 6.3	2.203	2.920	15.4	21.9	2 21	13 0.94	+ 1 29.6	2.095	2.903	13.3	21.8
3 2	12 56.24	-20 51.2	2.100	2.918	13.0	21.7	3 2	12 57.10	+ 2 23.4	2.011	2.903	10.3	21.6
3 12	12 50.72	-20 13.6	2.018	2.915	10.1	21.5	3 12	12 51.23	+ 3 25.7	1.951	2.903	6.9	21.4
3 22	12 43.64	-19 13.4	1.959	2.912	7.0	21.3	3 22	12 43.85	+ 4 30.9	1.917	2.902	3.7	21.2
4 1	12 35.72	-17 53.0	1.927	2.908	4.6	21.1	4 1	12 35.73	+ 5 32.7	1.912	2.901	3.5	21.2
4 11	12 27.91	-16 18.5	1.924	2.905	5.0	21.2	4 11	12 27.76	+ 6 24.6	1.936	2.900	6.6	21.3
4 21	12 21.04	-14 37.4	1.950	2.900	7.8	21.3	4 21	12 20.77	+ 7 2.0	1.986	2.899	10.1	21.6
5 1	12 15.84	-12 58.3	2.001	2.896	11.1	21.5	5 1	12 15.42	+ 7 22.2	2.060	2.897	13.2	21.7
386545	2009 <i>DY</i> ₅												

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
466328	2013 RE ₁₆		3 30.6 73°84	0°3/30.3	17		17406	1987 DO		3 30.6 32°15	1°8/29.2	18	
2 21	12 59.92	- 6 36.5	1.799	2.596	15.6	21.7	2 21	12 59.48	- 3 42.7	1.180	2.014	19.8	17.7
3 2	12 56.65	- 6 1.2	1.718	2.601	12.2	21.5	3 2	12 57.27	- 3 2.5	1.121	2.026	15.4	17.4
3 12	12 51.09	- 5 10.2	1.659	2.606	8.3	21.3	3 12	12 51.97	- 2 4.2	1.080	2.038	10.2	17.2
3 22	12 43.83	- 4 7.5	1.624	2.611	3.9	21.0	3 22	12 44.37	+ 0 54.8	1.062	2.051	4.7	16.9
4 1	12 35.74	- 2 59.3	1.617	2.616	0.8	20.8	4 1	12 35.72	+ 0 16.1	1.068	2.065	2.4	16.8
4 11	12 27.85	- 1 53.0	1.638	2.621	5.4	21.1	4 11	12 27.53	+ 1 17.6	1.098	2.080	7.6	17.1
4 21	12 21.10	- 0 55.7	1.685	2.626	9.6	21.4	4 21	12 21.06	+ 2 1.7	1.151	2.096	12.7	17.5
5 1	12 16.22	- 0 12.4	1.756	2.631	13.3	21.6	5 1	12 17.16	+ 2 23.9	1.225	2.112	17.1	17.8
367682	2010 NB ₉₉		3 30.6 248°40	0°7/31.1	17		68555	2001 XX ₈₄		3 30.6 19°68	6°0/6.9	18	
2 21	13 3.64	- 7 39.4	1.797	2.583	16.0	21.5	2 21	12 56.62	-24 59.7	2.138	2.840	16.2	18.8
3 2	12 59.81	- 7 30.5	1.697	2.572	12.8	21.3	3 2	12 53.98	-25 7.3	2.045	2.844	14.0	18.6
3 12	12 53.44	- 7 6.4	1.618	2.560	8.9	21.0	3 12	12 49.26	-24 51.4	1.971	2.848	11.3	18.4
3 22	12 45.06	- 6 29.1	1.564	2.548	4.4	20.7	3 22	12 43.00	-24 10.8	1.919	2.852	8.6	18.3
4 1	12 35.53	- 5 42.8	1.537	2.536	0.8	20.4	4 1	12 35.94	-23 6.8	1.892	2.857	6.4	18.2
4 11	12 25.99	- 4 54.0	1.538	2.523	5.3	20.7	4 11	12 29.02	-21 44.5	1.892	2.862	6.2	18.1
4 21	12 17.56	- 4 9.3	1.566	2.510	9.9	20.9	4 21	12 23.09	-20 11.2	1.919	2.868	8.1	18.3
5 1	12 11.13	- 3 34.6	1.617	2.497	14.0	21.1	5 1	12 18.84	-18 35.2	1.972	2.874	10.8	18.4
403927	2012 AP ₁₇		3 30.6 47°35	0°5/31.0	18		346035	2007 TE ₄₀₅		3 30.6 352°60	2°5/28.3	17	
2 21	13 1.27	- 8 1.0	1.424	2.230	18.5	21.0	2 21	13 2.01	+ 2 4.2	2.059	2.867	13.5	20.7
3 2	12 58.24	- 7 42.6	1.354	2.240	14.6	20.7	3 2	12 57.99	+ 2 25.8	1.975	2.866	10.5	20.5
3 12	12 52.43	- 7 5.1	1.304	2.251	10.0	20.5	3 12	12 51.87	+ 2 53.5	1.913	2.865	7.0	20.3
3 22	12 44.53	- 6 12.2	1.277	2.263	4.9	20.2	3 22	12 44.20	+ 3 23.0	1.878	2.864	3.6	20.1
4 1	12 35.65	- 5 10.6	1.276	2.275	0.8	19.9	4 1	12 35.75	+ 3 49.4	1.871	2.863	3.0	20.0
4 11	12 27.10	- 4 9.0	1.300	2.287	5.9	20.3	4 11	12 27.47	+ 4 7.8	1.892	2.863	6.2	20.2
4 21	12 20.04	- 3 15.4	1.350	2.299	10.7	20.6	4 21	12 20.20	+ 4 14.7	1.940	2.862	9.7	20.5
5 1	12 15.31	- 2 36.3	1.421	2.312	14.9	20.9	5 1	12 14.62	+ 4 7.9	2.011	2.862	12.9	20.7
482394	2012 BH ₁₀		3 30.6 355°90	19°9/10.3	18		378234	2007 BJ ₈₁		3 30.6 280°43	7°6/5.3	17	
2 21	13 10.60	-33 38.3	1.089	1.789	29.0	20.5	2 21	13 5.32	-22 28.4	1.923	2.633	17.6	20.7
3 2	13 8.33	-36 56.7	1.019	1.787	26.8	20.3	3 2	13 1.43	-23 34.1	1.810	2.614	15.3	20.5
3 12	13 1.26	-39 47.4	0.962	1.786	24.4	20.1	3 12	12 54.80	-24 21.5	1.716	2.596	12.6	20.3
3 22	12 49.59	-41 55.3	0.919	1.785	22.1	19.9	3 22	12 45.86	-24 46.4	1.644	2.577	9.8	20.1
4 1	12 34.68	-43 5.7	0.892	1.785	20.4	19.8	4 1	12 35.44	-24 46.3	1.597	2.558	7.8	19.9
4 11	12 19.12	-43 12.1	0.881	1.785	19.9	19.8	4 11	12 24.74	-24 22.5	1.577	2.539	8.0	19.9
4 21	12 5.81	-42 20.3	0.888	1.786	20.6	19.8	4 21	12 15.03	-23 39.9	1.581	2.520	10.3	20.0
5 1	11 57.01	-40 46.4	0.910	1.787	22.4	19.9	5 1	12 7.40	-22 46.5	1.610	2.501	13.5	20.1
159459	2000 KB		3 30.6 176°50	1°3/28.5	16		62128	2000 SO ₁		3 30.6 185°81	6°8/8.5	18	R
2 21	13 6.72	- 3 38.2	3.435	4.190	9.7	22.6	2 21	13 5.73	-30 51.4	3.242	3.850	12.7	18.5
3 2	13 0.65	- 2 18.8	3.333	4.195	7.5	22.5	3 2	13 0.48	-31 46.1	3.132	3.850	11.3	18.4
3 12	12 53.16	- 0 49.9	3.258	4.199	5.0	22.3	3 12	12 53.41	-32 24.8	3.043	3.849	9.7	18.3
3 22	12 44.65	+ 0 44.5	3.216	4.201	2.3	22.1	3 22	12 44.92	-32 45.1	2.977	3.848	8.2	18.2
4 1	12 35.64	+ 2 19.6	3.209	4.202	1.7	22.1	4 1	12 35.63	-32 45.8	2.937	3.846	7.1	18.1
4 11	12 26.73	+ 3 50.1	3.236	4.202	4.2	22.2	4 11	12 26.28	-32 27.8	2.924	3.844	6.8	18.1
4 21	12 18.48	+ 5 11.6	3.297	4.200	6.8	22.4	4 21	12 17.62	-31 54.0	2.939	3.841	7.6	18.1
5 1	12 11.36	+ 6 20.8	3.387	4.197	9.1	22.6	5 1	12 10.29	-31 9.1	2.981	3.838	9.0	18.2
169111	2001 OV ₃₅		3 30.6 198°94	1°6/1.3	17		224211	2005 SX ₂₁		3 30.6 266°20	2°4/1.7	17	
2 21	13 2.03	-10 30.4	2.597	3.352	12.4	20.6	2 21	13 2.18	-11 49.8	1.830	2.602	16.3	20.7
3 2	12 57.63	-10 33.3	2.496	3.349	10.0	20.5	3 2	12 58.61	-11 56.1	1.734	2.596	13.2	20.4
3 12	12 51.47	-10 24.4	2.418	3.346	7.1	20.3	3 12	12 52.60	-11 45.3	1.659	2.590	9.6	20.2
3 22	12 43.96	-10 5.0	2.366	3.343	4.0	20.1	3 22	12 44.66	-11 18.0	1.607	2.584	5.5	19.9
4 1	12 35.75	- 9 37.3	2.343	3.339	1.6	19.9	4 1	12 35.67	-10 37.3	1.582	2.578	2.4	19.7
4 11	12 27.60	- 9 5.0	2.351	3.336	3.8	20.0	4 11	12 26.72	- 9 48.8	1.585	2.572	5.0	19.9
4 21	12 20.22	- 8 32.2	2.387	3.331	7.0	20.2	4 21	12 18.87	- 8 59.1	1.615	2.566	9.2	20.1
5 1	12 14.23	- 8 3.1	2.449	3.327	10.0	20.4	5 1	12 12.97	- 8 14.9	1.668	2.559	13.1	20.3
100912	1998 KU ₂₆		3 30.6 94°00	6°1/24.5	18		160446	2005 UG ₂₂₇		3 30.6 104°59	0°1/30.6	17	
2 21	13 7.30	+15 58.8	2.406	3.207	12.0	18.9	2 21	13 1.04	- 6 54.1	1.865	2.656	15.3	21.0
3 2	13 1.58	+16 32.3	2.342	3.219	9.6	18.7	3 2	12 57.46	- 6 26.8	1.782	2.661	12.1	20.8
3 12	12 53.97	+17 1.2	2.303	3.231	7.4	18.6	3 12	12 51.62	- 5 44.6	1.721	2.667	8.2	20.6
3 22	12 45.04	+17 20.1	2.290	3.243	6.1	18.5	3 22	12 44.11	- 4 51.0	1.686	2.672	3.9	20.3
4 1	12 35.60	+17 24.4	2.306	3.254	6.6	18.6	4 1	12 35.77	- 3 51.3	1.678	2.677	0.6	20.1
4 11	12 26.49	+17 11.2	2.350	3.266	8.4	18.7	4 11	12 27.63	- 2 52.6	1.699	2.682	5.1	20.4
4 21	12 18.47	+16 40.3	2.421	3.277	10.7	18.9	4 21	12 20.61	- 2 1.1	1.746	2.687	9.3	20.7
5 1	12 12.12	+15 52.9	2.514	3.289	12.9	19.0	5 1	12 15.43	- 1 21.9	1.817	2.692	12.9	20.9
196640	Mulhacén		3 30.6 62°24	4°1/3.6	17		155297	2005 YS ₉		3 30.6 220°94	0°7/29.9	18	
2 21	13 1.01	-17 6.7	1.982	2.727	16.1	20.0	2 21	13 2.21	- 4 25.8	2.061	2.851	14.1	21.1
3 2	12 57.45	-17 22.5	1.893	2.731	13.4	19.8	3 2	12 58.24	- 4 1.0	1.966	2.846	11.1	20.9
3 12	12 51.65	-17 19.2	1.824	2.736	10.1	19.6	3 12	12 52.13	- 3 24.2	1.893	2.840	7.5	20.7
3 22	12 44.14	-16 56.5	1.779	2.741	6.8	19.4	3 22	12 44.36	- 2 38.9	1.847	2.834	3.5	20.4
4 1	12 35.75	-16 16.4	1.760	2.746	4.3	19.3	4 1	12 35.73	- 1 49.8	1.829	2.828	1.1	20.2
4 11	12 27.49	-15 23.8	1.769	2.751	5.2	19.4	4 11	12 27.18	- 1 3.0	1.840	2.821	5.2	20.5
4 21	12 20.30	-14 25.2	1.804	2.756	8.3	19.6	4 21	12 19.61	- 0 23.7	1.878	2.814	9.2	20.7
5 1	12 14.93	-13 27.7	1.865	2.761	11.7	19.8	5 1	12 13.74	+ 0 3.7	1.941	2.806	12.7	20.9
332352	2007 DY ₁₁₂		3 30.6 278°33	4°1/26.1	17		82936	2001 QQ ₁₁₃		3 30.6 302°60	0°4/30.2	18	
2 21	12 58.23	+ 2 8.7	1.804	2.627	14.5	20.6							

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
406354	2007 RA ₁₇₁		3 30.6	87°66	0°9/29.9	18	33196	Kaienyang		3 30.6	81°65	0°7/31.4	18
2 21	13 6.61	- 4 1.5	1.567	2.368	17.3	21.7	2 21	12 58.96	- 9 12.2	2.291	3.065	13.3	19.0
3 2	13 2.01	- 3 40.3	1.502	2.388	13.5	21.5	3 2	12 55.34	- 8 45.2	2.212	3.079	10.5	18.8
3 12	12 54.75	- 3 5.7	1.459	2.408	9.0	21.2	3 12	12 49.93	- 8 4.5	2.155	3.094	7.3	18.7
3 22	12 45.57	- 2 22.1	1.440	2.427	4.1	21.0	3 22	12 43.24	- 7 12.9	2.125	3.108	3.6	18.4
4 1	12 35.56	- 1 35.9	1.448	2.447	1.4	20.8	4 1	12 35.96	- 6 14.9	2.124	3.123	0.7	18.2
4 11	12 25.99	- 0 54.3	1.484	2.466	6.1	21.2	4 11	12 28.88	- 5 15.9	2.152	3.137	4.0	18.5
4 21	12 17.93	- 0 23.0	1.546	2.484	10.5	21.5	4 21	12 22.72	- 4 21.3	2.208	3.151	7.5	18.8
5 1	12 12.16	- 0 6.0	1.630	2.502	14.4	21.8	5 1	12 18.04	- 3 35.6	2.289	3.166	10.6	19.0
138667	2000 RZ ₉₉		3 30.6	180°62	4°0/5.4	18	105094	2000 LK ₁		3 30.6	208°20	4°9/24.5	18
2 21	12 57.95	-22 21.9	2.787	3.483	13.0	20.5	2 21	13 0.08	+ 9 54.2	2.504	3.317	11.2	19.7
3 2	12 54.43	-22 7.3	2.682	3.483	11.0	20.3	3 2	12 56.13	+10 56.8	2.423	3.313	8.8	19.5
3 12	12 49.29	-21 34.3	2.599	3.484	8.6	20.2	3 12	12 50.44	+12 0.9	2.366	3.309	6.4	19.4
3 22	12 42.94	-20 42.9	2.540	3.484	6.2	20.0	3 22	12 43.49	+13 1.1	2.337	3.305	4.9	19.3
4 1	12 35.98	-19 35.1	2.509	3.483	4.3	19.9	4 1	12 35.91	+13 51.3	2.337	3.300	5.5	19.3
4 11	12 29.12	-18 15.2	2.507	3.483	4.4	19.9	4 11	12 28.46	+14 26.8	2.365	3.296	7.6	19.4
4 21	12 23.01	-16 48.9	2.535	3.482	6.5	20.0	4 21	12 21.83	+14 45.0	2.419	3.291	10.2	19.6
5 1	12 18.20	-15 22.3	2.590	3.481	9.0	20.2	5 1	12 16.59	+14 45.0	2.496	3.285	12.5	19.7
23272	2000 YR ₆₇		3 30.6	169°83	1°1/31.7	18	57130	2001 PE ₅		3 30.6	134°76	5°3/24.0	18
2 21	13 4.31	-10 6.8	2.155	2.918	14.4	19.4	2 21	13 0.11	+10 48.2	2.380	3.195	11.6	18.8
3 2	12 59.73	- 9 45.6	2.063	2.923	11.5	19.2	3 2	12 56.17	+11 57.0	2.311	3.202	9.2	18.7
3 12	12 53.03	- 9 9.0	1.993	2.927	8.0	19.0	3 12	12 50.46	+13 6.5	2.266	3.208	6.8	18.5
3 22	12 44.76	- 8 19.3	1.950	2.931	4.2	18.8	3 22	12 43.48	+14 10.5	2.249	3.213	5.4	18.4
4 1	12 35.68	- 7 20.7	1.935	2.933	1.1	18.5	4 1	12 35.92	+15 2.7	2.260	3.219	6.0	18.5
4 11	12 26.75	- 6 19.0	1.950	2.935	4.4	18.8	4 11	12 28.56	+15 38.5	2.299	3.224	8.1	18.6
4 21	12 18.84	- 5 20.3	1.994	2.936	8.3	19.0	4 21	12 22.10	+15 55.5	2.363	3.229	10.6	18.8
5 1	12 12.63	- 4 30.3	2.063	2.936	11.7	19.2	5 1	12 17.11	+15 53.2	2.450	3.234	12.9	19.0
85422	Maedanaoe		3 30.6	151°89	5°3/23.7	18	200972	2002 CT ₉₄		3 30.6	80°34	1°5/31.7	18 R
2 21	13 2.81	+11 49.9	2.557	3.364	11.2	20.8	2 21	13 8.47	- 8 52.1	1.490	2.276	18.7	19.7
3 2	12 58.10	+13 2.8	2.489	3.374	8.8	20.6	3 2	13 3.63	- 8 58.4	1.427	2.300	14.9	19.5
3 12	12 51.66	+14 15.5	2.448	3.384	6.6	20.5	3 12	12 55.93	- 8 47.4	1.383	2.323	10.3	19.3
3 22	12 44.01	+15 22.1	2.434	3.393	5.4	20.4	3 22	12 46.15	- 8 21.3	1.364	2.346	5.4	19.1
4 1	12 35.81	+16 16.5	2.450	3.402	6.0	20.5	4 1	12 35.49	- 7 44.8	1.371	2.369	1.5	18.9
4 11	12 27.84	+16 54.3	2.493	3.410	8.0	20.6	4 11	12 25.32	- 7 4.7	1.405	2.391	5.5	19.2
4 21	12 20.75	+17 13.3	2.563	3.417	10.3	20.8	4 21	12 16.79	- 6 28.1	1.465	2.413	10.1	19.5
5 1	12 15.10	+17 13.5	2.656	3.423	12.4	20.9	5 1	12 10.73	- 6 0.6	1.548	2.435	14.1	19.8
20638	Lingchen		3 30.6	216°38	1°8/1.5	18	116308	2003 YR ₆₃		3 30.6	80°44	2°4/1.7	18
2 21	13 0.34	-11 50.9	2.120	2.885	14.5	18.7	2 21	13 1.83	-12 24.1	1.642	2.420	17.6	19.8
3 2	12 56.77	-11 37.8	2.023	2.882	11.7	18.5	3 2	12 58.48	-12 18.8	1.559	2.425	14.2	19.6
3 12	12 51.12	-11 8.3	1.947	2.879	8.4	18.3	3 12	12 52.55	-11 53.2	1.497	2.430	10.2	19.4
3 22	12 43.89	-10 24.0	1.897	2.875	4.7	18.1	3 22	12 44.64	-11 8.9	1.457	2.436	5.8	19.1
4 1	12 35.82	- 9 28.5	1.875	2.871	1.8	17.9	4 1	12 35.73	-10 10.1	1.444	2.441	2.4	18.9
4 11	12 27.84	- 8 27.4	1.881	2.868	4.4	18.0	4 11	12 27.01	- 9 4.2	1.458	2.446	5.2	19.1
4 21	12 20.80	- 7 27.1	1.915	2.863	8.1	18.3	4 21	12 19.59	- 7 59.3	1.498	2.451	9.6	19.4
5 1	12 15.41	- 6 33.5	1.974	2.859	11.6	18.5	5 1	12 14.29	- 7 3.1	1.562	2.456	13.6	19.6
340583	2006 PG ₉		3 30.6	162°65	3°0/3.0	17	24137	1999 VP ₇₂		3 30.6	183°72	0°1/30.6	18
2 21	13 1.64	-15 23.5	2.596	3.329	13.0	21.2	2 21	13 1.82	- 6 10.8	2.550	3.322	12.2	20.6
3 2	12 57.36	-15 34.8	2.499	3.332	10.7	21.1	3 2	12 57.46	- 5 49.1	2.454	3.323	9.6	20.4
3 12	12 51.30	-15 31.9	2.424	3.335	8.0	20.9	3 12	12 51.34	- 5 16.7	2.382	3.323	6.5	20.2
3 22	12 43.91	-15 15.2	2.374	3.338	5.1	20.7	3 22	12 43.92	- 4 36.4	2.337	3.322	3.1	20.0
4 1	12 35.83	-14 46.4	2.353	3.341	3.1	20.6	4 1	12 35.85	- 3 51.7	2.322	3.321	0.5	19.7
4 11	12 27.84	-14 9.0	2.361	3.343	4.1	20.7	4 11	12 27.88	- 3 7.2	2.337	3.319	4.1	20.0
4 21	12 20.65	-13 27.4	2.398	3.345	6.8	20.8	4 21	12 20.70	- 2 27.4	2.381	3.317	7.5	20.2
5 1	12 14.86	-12 46.6	2.461	3.347	9.6	21.0	5 1	12 14.92	- 1 56.0	2.450	3.314	10.4	20.4
297779	2001 XC ₂₂₈		3 30.6	139°08	0°3/30.9	18	36325	2000 LF ₂₉		3 30.6	262°26	1°0/31.5	18
2 21	13 6.36	- 7 18.4	1.774	2.557	16.3	21.8	2 21	13 2.77	- 8 46.9	2.091	2.865	14.5	19.6
3 2	13 1.69	- 7 0.2	1.694	2.568	12.9	21.6	3 2	12 58.86	- 8 38.3	1.978	2.844	11.6	19.4
3 12	12 54.52	- 6 26.7	1.637	2.579	8.8	21.3	3 12	12 52.71	- 8 15.3	1.886	2.823	8.2	19.1
3 22	12 45.50	- 5 41.0	1.604	2.589	4.3	21.1	3 22	12 44.74	- 7 39.5	1.819	2.802	4.2	18.8
4 1	12 35.58	- 4 48.4	1.599	2.598	0.6	20.8	4 1	12 35.70	- 6 54.2	1.781	2.780	1.0	18.5
4 11	12 25.92	- 3 55.6	1.623	2.607	5.3	21.2	4 11	12 26.55	- 6 4.9	1.772	2.757	4.7	18.8
4 21	12 17.57	- 3 9.2	1.673	2.615	9.6	21.4	4 21	12 18.28	- 5 17.6	1.790	2.734	8.9	19.0
5 1	12 11.29	- 2 34.4	1.748	2.622	13.4	21.7	5 1	12 11.71	- 4 37.8	1.833	2.711	12.7	19.1
267218	2000 WS ₁₀₃		3 30.6	168°90	0°1/30.6	17 R	249133	2007 YJ ₆₃		3 30.6	140°01	1°1/29.5	18
2 21	13 0.89	- 7 12.2	2.403	3.178	12.8	21.2	2 21	13 3.61	- 4 8.2	1.969	2.760	14.6	21.6
3 2	12 56.82	- 6 35.9	2.312	3.182	10.0	21.0	3 2	12 59.26	- 3 25.8	1.890	2.771	11.4	21.4
3 12	12 50.94	- 5 46.9	2.244	3.185	6.8	20.8	3 12	12 52.73	- 2 30.7	1.834	2.782	7.6	21.2
3 22	12 43.73	- 4 48.3	2.203	3.188	3.2	20.6	3 22	12 44.62	- 1 27.5	1.804	2.791	3.5	20.9
4 1	12 35.87	- 3 44.7	2.192	3.191	0.5	20.3	4 1	12 35.75	- 0 22.2	1.803	2.801	1.6	20.8
4 11	12 28.14	- 2 41.8	2.211	3.193	4.3	20.6	4 11	12 27.13	+ 0 38.2	1.831	2.809	5.5	21.1
4 21	12 21.27	- 1 44.7	2.258	3.194	7.8	20.8	4 21	12 19.63	+ 1 28.1	1.887	2.818	9.4	21.4
5 1	12 15.85	- 0 58.0	2.331	3.195	10.9	21.0	5 1	12 13.93	+ 2 3.3	1.966	2.825	12.8	21.6
249469	2009 JL ₅		3 30.6	228°46	3°7/24.9	18	431249	2006 TH ₈₁		3 30.6	230°01	2°0/28.4	17
2 21	12 57.05	+ 5 56.6	2.800	3.609	10.3	21.1	2 21						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
327218	2005 <i>OM</i> ₂₈		3 30.6 264°91	1.3°/29.5	17		206719	2004 <i>BW</i> ₅₂		3 30.6 53°17	2°3'/1.8	17	
2 21	13 1.92	- 3 14.1	1.819	2.622	15.2	21.3	2 21	13 1.09	-12 5.0	1.948	2.716	15.5	20.6
3 2	12 58.39	- 2 44.9	1.723	2.610	12.0	21.1	3 2	12 57.39	-12 9.0	1.871	2.731	12.5	20.4
3 12	12 52.46	- 2 2.7	1.648	2.598	8.1	20.8	3 12	12 51.53	-11 56.7	1.816	2.746	9.0	20.2
3 22	12 44.62	- 1 11.6	1.598	2.586	3.7	20.5	3 22	12 44.09	-11 29.4	1.785	2.761	5.2	20.0
4 1	12 35.74	- 0 17.4	1.576	2.573	1.8	20.4	4 1	12 35.91	-10 50.7	1.782	2.777	2.3	19.8
4 11	12 26.89	+ 0 32.8	1.582	2.561	6.1	20.6	4 11	12 27.96	-10 5.7	1.806	2.792	4.5	20.0
4 21	12 19.10	+ 1 12.8	1.613	2.548	10.4	20.8	4 21	12 21.13	- 9 20.6	1.857	2.808	8.2	20.3
5 1	12 13.22	+ 1 38.1	1.668	2.536	14.3	21.0	5 1	12 16.09	- 8 40.8	1.933	2.824	11.6	20.5
117482	2005 <i>CD</i> ₂		3 30.6 281°81	1°7'/28.8	18		297766	2001 <i>XF</i> ₁₅₁		3 30.6 154°21	0°7'/31.3	18	
2 21	12 59.96	- 1 34.1	2.058	2.862	13.6	20.3	2 21	13 4.99	- 9 1.9	1.837	2.614	16.0	22.0
3 2	12 56.43	- 0 57.7	1.972	2.860	10.6	20.1	3 2	13 0.61	- 8 36.8	1.753	2.622	12.7	21.8
3 12	12 50.86	- 0 11.1	1.908	2.859	7.1	19.9	3 12	12 53.82	- 7 54.9	1.690	2.630	8.8	21.5
3 22	12 43.76	+ 0 41.2	1.870	2.858	3.3	19.7	3 22	12 45.22	- 6 58.9	1.653	2.636	4.4	21.3
4 1	12 35.89	+ 1 33.6	1.861	2.856	2.2	19.6	4 1	12 35.72	- 5 54.2	1.643	2.642	0.8	21.0
4 11	12 28.16	+ 2 20.1	1.880	2.855	5.7	19.8	4 11	12 26.44	- 4 48.0	1.663	2.648	5.0	21.3
4 21	12 21.40	+ 2 55.8	1.925	2.854	9.4	20.0	4 21	12 18.36	- 3 47.3	1.709	2.652	9.4	21.6
5 1	12 16.29	+ 3 17.2	1.995	2.852	12.7	20.2	5 1	12 12.28	- 2 58.3	1.780	2.656	13.1	21.8
61107	2000 <i>LR</i> ₃₁		3 30.6 277°72	1°6'/29.2	18		214050	2004 <i>FU</i>		3 30.6 114°31	0°1'/30.5	18	
2 21	13 0.14	- 4 40.8	1.517	2.331	17.2	19.5	2 21	12 59.64	- 6 25.2	2.369	3.150	12.7	21.0
3 2	12 57.55	- 3 48.8	1.421	2.314	13.6	19.2	3 2	12 55.84	- 5 55.1	2.286	3.160	10.0	20.8
3 12	12 52.21	- 2 37.3	1.344	2.298	9.2	18.9	3 12	12 50.28	- 5 13.5	2.226	3.169	6.7	20.6
3 22	12 44.62	- 1 11.1	1.292	2.280	4.2	18.5	3 22	12 43.45	- 4 23.3	2.193	3.179	3.2	20.4
4 1	12 35.73	+ 0 21.3	1.266	2.263	2.3	18.3	4 1	12 36.02	- 3 29.1	2.189	3.188	0.6	20.2
4 11	12 26.81	+ 1 49.1	1.267	2.246	7.2	18.6	4 11	12 28.75	- 2 36.0	2.214	3.197	4.2	20.5
4 21	12 19.09	+ 3 2.7	1.292	2.229	12.3	18.8	4 21	12 22.36	- 1 48.9	2.268	3.206	7.7	20.8
5 1	12 13.61	+ 3 54.9	1.339	2.211	16.9	19.1	5 1	12 17.41	- 1 11.8	2.347	3.214	10.7	21.0
141043	2001 <i>WT</i> ₇₉		3 30.6 42°07	2°5'/28.1	17		379243	2009 <i>SJ</i> ₃₄₉		3 30.6 69°37	8°7'/24.2	18	
2 21	12 59.90	+ 1 11.8	2.067	2.876	13.4	19.9	2 21	13 12.20	+19 15.4	1.795	2.602	15.2	20.2
3 2	12 56.27	+ 1 45.7	1.992	2.885	10.3	19.8	3 2	13 6.15	+19 55.8	1.732	2.608	12.6	20.0
3 12	12 50.66	+ 2 26.8	1.941	2.893	6.9	19.6	3 12	12 57.45	+20 28.0	1.692	2.614	10.1	19.9
3 22	12 43.63	+ 3 10.4	1.916	2.902	3.5	19.4	3 22	12 46.86	+20 43.7	1.676	2.620	8.8	19.8
4 1	12 35.93	+ 3 51.0	1.919	2.911	2.9	19.3	4 1	12 35.49	+20 36.3	1.687	2.626	9.3	19.9
4 11	12 28.46	+ 4 23.2	1.950	2.920	6.0	19.5	4 11	12 24.60	+20 2.7	1.724	2.632	11.4	20.0
4 21	12 22.00	+ 4 43.4	2.007	2.929	9.5	19.8	4 21	12 15.28	+19 4.2	1.785	2.638	14.1	20.2
5 1	12 17.17	+ 4 49.2	2.088	2.939	12.5	20.0	5 1	12 8.27	+17 44.1	1.867	2.644	16.6	20.4
357049	2000 <i>SO</i> ₂₄₈		3 30.6 212°59	1°7'/29.2	17		64130	2001 <i>TC</i> ₂₆		3 30.6 124°01	2°3'/2.6	17	
2 21	13 6.63	- 1 22.3	1.821	2.619	15.4	21.3	2 21	12 59.52	-14 33.5	2.587	3.328	12.8	20.1
3 2	13 2.02	- 1 0.0	1.728	2.613	12.1	21.1	3 2	12 55.67	-14 22.9	2.497	3.338	10.4	20.0
3 12	12 54.87	- 0 27.2	1.658	2.607	8.1	20.8	3 12	12 50.14	-13 57.5	2.430	3.348	7.6	19.8
3 22	12 45.75	+ 0 11.9	1.613	2.600	3.8	20.6	3 22	12 43.38	-13 18.5	2.388	3.358	4.6	19.6
4 1	12 35.57	+ 0 51.6	1.597	2.593	2.2	20.4	4 1	12 36.04	-12 28.8	2.375	3.367	2.4	19.5
4 11	12 25.49	+ 1 25.7	1.609	2.585	6.3	20.7	4 11	12 28.84	-11 32.7	2.392	3.377	3.7	19.6
4 21	12 16.57	+ 1 49.0	1.647	2.577	10.6	20.9	4 21	12 22.45	-10 35.4	2.437	3.385	6.6	19.8
5 1	12 9.69	+ 1 57.9	1.709	2.568	14.4	21.1	5 1	12 17.42	- 9 41.7	2.509	3.394	9.5	20.0
518161	2016 <i>GK</i> ₂₅₉		3 30.6 195°55	2°8'/27.5	17		462888	2010 <i>WJ</i> ₂		3 30.6 260°98	8°7'/22.7	17	
2 21	13 1.28	+ 2 13.3	2.358	3.160	12.2	21.9	2 21	13 6.57	+16 45.3	1.765	2.585	14.9	20.9
3 2	12 57.17	+ 2 59.4	2.270	3.158	9.4	21.7	3 2	13 2.11	+17 56.5	1.688	2.574	12.2	20.7
3 12	12 51.22	+ 3 52.2	2.206	3.156	6.3	21.5	3 12	12 54.99	+19 4.5	1.633	2.562	9.9	20.5
3 22	12 43.90	+ 4 47.0	2.169	3.153	3.4	21.3	3 22	12 45.84	+19 59.7	1.603	2.551	8.7	20.5
4 1	12 35.90	+ 5 38.4	2.162	3.150	3.2	21.3	4 1	12 35.64	+20 33.3	1.598	2.539	9.6	20.5
4 11	12 28.01	+ 6 21.1	2.183	3.146	6.1	21.5	4 11	12 25.63	+20 39.3	1.619	2.527	12.0	20.6
4 21	12 20.99	+ 6 51.1	2.232	3.142	9.2	21.6	4 21	12 16.93	+20 16.3	1.662	2.515	15.0	20.7
5 1	12 15.45	+ 7 6.1	2.305	3.138	12.1	21.8	5 1	12 10.41	+19 26.1	1.726	2.502	17.8	20.9
52940	1998 <i>SV</i> ₁₃₇		3 30.6 86°87	2°1'/29.2	18		403043	2008 <i>AZ</i> ₁₈		3 30.6 114°60	0°1'/30.7	18	
2 21	13 8.13	- 0 42.6	1.401	2.215	18.3	18.8	2 21	13 5.31	- 6 43.5	1.877	2.660	15.5	21.7
3 2	13 3.62	- 0 26.6	1.334	2.227	14.3	18.6	3 2	13 0.67	- 6 22.6	1.803	2.677	12.2	21.6
3 12	12 56.10	+ 0 0.5	1.287	2.239	9.6	18.3	3 12	12 53.74	- 5 47.8	1.750	2.693	8.3	21.3
3 22	12 46.33	+ 0 33.3	1.263	2.251	4.5	18.1	3 22	12 45.13	- 5 2.3	1.724	2.709	3.9	21.1
4 1	12 35.52	+ 1 5.2	1.267	2.263	2.6	18.0	4 1	12 35.77	- 4 11.4	1.725	2.724	0.6	20.9
4 11	12 25.13	+ 1 29.1	1.296	2.275	7.2	18.3	4 11	12 26.71	- 3 21.4	1.755	2.739	5.0	21.2
4 21	12 16.41	+ 1 39.8	1.350	2.286	12.0	18.6	4 21	12 18.89	- 2 38.1	1.813	2.753	9.1	21.5
5 1	12 10.26	+ 1 34.6	1.426	2.297	16.1	18.8	5 1	12 12.99	- 2 6.2	1.895	2.767	12.7	21.7
505519	2013 <i>YK</i> ₁₁		3 30.6 36°28	7°0'/7.1	17		316796	1999 <i>TW</i> ₂₅₃		3 30.6 223°03	2°0'/1.3	16	
2 21	12 59.97	-25 12.4	2.024	2.724	17.1	21.0	2 21	13 7.51	-10 10.4	2.013	2.774	15.4	21.9
3 2	12 56.75	-25 51.9	1.939	2.733	14.8	20.8	3 2	13 2.64	-10 24.8	1.908	2.765	12.5	21.7
3 12	12 51.25	-26 8.7	1.873	2.743	12.2	20.7	3 12	12 55.31	-10 25.5	1.824	2.754	8.9	21.4
3 22	12 44.01	-26 0.6	1.828	2.753	9.5	20.5	3 22	12 46.02	-10 12.9	1.766	2.744	5.0	21.1
4 1	12 35.88	-25 27.8	1.807	2.764	7.4	20.4	4 1	12 35.60	- 9 49.2	1.736	2.732	2.0	20.9
4 11	12 27.90	-24 34.0	1.813	2.775	7.2	20.4	4 11	12 25.15	- 9 18.9	1.735	2.720	4.8	21.1
4 21	12 21.02	-23 25.9	1.844	2.786	8.9	20.6	4 21	12 15.72	- 8 47.2	1.763	2.708	9.0	21.3
5 1	12 16.00	-22 11.5	1.900	2.798	11.4	20.7	5 1	12 8.19	- 8 19.7	1.815	2.695	12.7	21.5
170324	2003 <i>ST</i> ₇₅		3 30.6 124°82	0°6'/30.1	18		434870	2006 <i>SJ</i> ₃₁₂		3 30.6 216°1			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
367108	2006 <i>RX</i> ₅₅		3 30.6 236°71	0°6/30.1	17		332123	2005 <i>VH</i> ₆₆		3 30.6 253°49	1°6/29.1	17	
2 21	13 3.33	- 5 26.7	2.090	2.874	14.1	23.3	2 21	13 1.56	- 2 25.3	1.873	2.676	14.8	21.6
3 2	12 59.24	- 4 54.1	1.982	2.859	11.2	23.1	3 2	12 57.99	- 1 51.1	1.781	2.670	11.6	21.4
3 12	12 52.93	- 4 7.7	1.898	2.843	7.6	22.8	3 12	12 52.12	- 1 5.0	1.712	2.663	7.8	21.1
3 22	12 44.87	- 3 10.9	1.840	2.826	3.6	22.5	3 22	12 44.48	- 0 11.3	1.668	2.656	3.6	20.9
4 1	12 35.81	- 2 8.6	1.811	2.809	1.0	22.3	4 1	12 35.90	+ 0 44.1	1.652	2.649	2.1	20.7
4 11	12 26.73	- 1 7.4	1.811	2.791	5.3	22.6	4 11	12 27.41	+ 1 34.1	1.664	2.641	6.1	21.0
4 21	12 18.56	- 0 13.5	1.838	2.773	9.4	22.8	4 21	12 19.97	+ 2 13.0	1.702	2.634	10.2	21.2
5 1	12 12.09	+ 0 27.9	1.891	2.753	13.1	22.9	5 1	12 14.38	+ 2 36.7	1.764	2.627	13.9	21.4
35131	1992 <i>PE</i> ₂		3 30.6 192°01	5°6/5.9	18 R		52017	2002 <i>NB</i> ₂₇		3 30.6 259°81	0°5/30.2	17	
2 21	13 4.22	-23 46.3	2.503	3.185	14.6	19.9	2 21	13 2.49	- 5 47.4	1.888	2.679	15.2	20.6
3 2	12 59.67	-24 11.1	2.397	3.183	12.5	19.8	3 2	12 58.89	- 5 15.9	1.780	2.660	12.0	20.3
3 12	12 53.07	-24 17.2	2.311	3.181	10.1	19.6	3 12	12 52.88	- 4 29.0	1.693	2.639	8.2	20.0
3 22	12 44.88	-24 3.0	2.248	3.178	7.7	19.4	3 22	12 44.92	- 3 29.8	1.632	2.619	3.9	19.7
4 1	12 35.81	-23 28.6	2.213	3.174	5.9	19.3	4 1	12 35.81	- 2 23.7	1.599	2.597	1.0	19.4
4 11	12 26.77	-22 37.3	2.205	3.170	5.9	19.3	4 11	12 26.62	- 1 18.1	1.594	2.576	5.7	19.7
4 21	12 18.60	-21 34.0	2.226	3.165	7.8	19.4	4 21	12 18.40	- 0 20.3	1.616	2.553	10.2	19.9
5 1	12 12.01	-20 25.5	2.273	3.159	10.3	19.5	5 1	12 12.04	+ 0 23.9	1.661	2.531	14.3	20.1
230654	2003 <i>SD</i> ₉₉		3 30.6 317°32	1°5/29.3	17		210553	1999 <i>TM</i> ₂₉		3 30.6 217°38	0°4/31.0	16	
2 21	13 0.31	- 2 18.0	1.879	2.685	14.7	20.7	2 21	13 2.80	- 8 28.1	1.980	2.758	15.0	21.1
3 2	12 56.99	- 1 51.0	1.789	2.679	11.5	20.5	3 2	12 58.90	- 7 58.9	1.880	2.751	11.9	20.9
3 12	12 51.42	- 1 12.9	1.721	2.673	7.7	20.3	3 12	12 52.72	- 7 13.4	1.803	2.743	8.3	20.6
3 22	12 44.13	- 0 27.6	1.679	2.667	3.6	20.0	3 22	12 44.77	- 6 14.3	1.750	2.735	4.1	20.4
4 1	12 35.94	+ 0 19.1	1.664	2.661	1.9	19.9	4 1	12 35.85	- 5 6.5	1.726	2.725	0.6	20.1
4 11	12 27.85	+ 1 0.9	1.677	2.656	5.9	20.1	4 11	12 26.98	- 3 57.1	1.731	2.716	5.0	20.4
4 21	12 20.80	+ 1 32.5	1.716	2.651	10.0	20.3	4 21	12 19.11	- 2 53.0	1.764	2.705	9.2	20.6
5 1	12 15.55	+ 1 49.9	1.779	2.646	13.6	20.5	5 1	12 13.04	- 2 0.3	1.821	2.694	13.0	20.8
163662	2002 <i>VR</i> ₁₂₀		3 30.6 182°35	2°3/28.1	18		14584	Lawson		3 30.6 203°54	1°9/28.9	18	
2 21	13 3.71	+ 2 51.1	2.679	3.470	11.2	20.5	2 21	13 5.36	- 2 16.2	1.814	2.612	15.4	19.1
3 2	12 58.80	+ 3 13.3	2.589	3.470	8.7	20.4	3 2	13 1.05	- 1 31.6	1.723	2.608	12.1	18.9
3 12	12 52.20	+ 3 39.7	2.523	3.471	5.8	20.2	3 12	12 54.24	- 0 34.0	1.653	2.603	8.1	18.6
3 22	12 44.36	+ 4 7.0	2.486	3.470	3.1	20.0	3 22	12 45.50	+ 0 31.8	1.610	2.597	3.8	18.4
4 1	12 35.91	+ 4 31.2	2.479	3.470	2.6	20.0	4 1	12 35.74	+ 1 38.8	1.595	2.591	2.5	18.3
4 11	12 27.59	+ 4 48.6	2.503	3.468	5.2	20.1	4 11	12 26.07	+ 2 39.2	1.608	2.583	6.5	18.5
4 21	12 20.07	+ 4 56.6	2.554	3.467	8.1	20.3	4 21	12 17.56	+ 3 26.5	1.648	2.575	10.8	18.7
5 1	12 13.91	+ 4 53.3	2.631	3.465	10.8	20.5	5 1	12 11.06	+ 3 56.6	1.712	2.566	14.6	18.9
83946	2001 <i>WR</i> ₂₆		3 30.6 273°33	0°7/29.8	17		57244	2001 <i>QK</i> ₈₄		3 30.6 154°13	0°5/30.2	18	
2 21	12 58.71	- 4 23.7	2.305	3.096	12.7	20.0	2 21	13 3.66	- 6 41.6	1.609	2.406	17.1	20.1
3 2	12 55.33	- 3 53.1	2.205	3.086	10.0	19.8	3 2	12 59.93	- 6 1.2	1.528	2.411	13.5	19.9
3 12	12 50.09	- 3 11.4	2.130	3.077	6.7	19.6	3 12	12 53.56	- 5 2.8	1.469	2.416	9.1	19.7
3 22	12 43.45	- 2 21.8	2.081	3.068	3.1	19.3	3 22	12 45.19	- 3 50.9	1.433	2.420	4.3	19.4
4 1	12 36.05	- 1 28.9	2.060	3.058	1.1	19.2	4 1	12 35.82	- 2 32.7	1.425	2.424	1.0	19.2
4 11	12 28.72	- 0 38.2	2.068	3.049	4.8	19.4	4 11	12 26.67	- 1 17.2	1.445	2.427	6.0	19.5
4 21	12 22.19	+ 0 5.4	2.104	3.039	8.4	19.6	4 21	12 18.86	- 0 12.6	1.490	2.430	10.7	19.8
5 1	12 17.11	+ 0 37.7	2.165	3.029	11.6	19.8	5 1	12 13.22	+ 0 35.2	1.559	2.433	14.8	20.0
111816	2002 <i>CL</i> ₃₀₄		3 30.6 254°47	7°1/6.1	18		436952	2012 <i>TT</i> ₁₄₉		3 30.6 127°66	0°6/31.3	17	
2 21	13 4.36	-24 0.9	2.129	2.823	16.5	20.2	2 21	12 59.91	- 8 22.1	2.522	3.291	12.4	22.1
3 2	13 0.32	-24 54.2	2.021	2.813	14.4	20.0	3 2	12 55.98	- 8 1.7	2.435	3.300	9.8	22.0
3 12	12 53.85	-25 28.3	1.933	2.802	11.8	19.8	3 12	12 50.36	- 7 29.4	2.371	3.309	6.7	21.8
3 22	12 45.38	-25 40.0	1.866	2.792	9.3	19.6	3 22	12 43.52	- 6 47.8	2.334	3.317	3.4	21.6
4 1	12 35.73	-25 27.8	1.825	2.781	7.4	19.5	4 1	12 36.09	- 6 0.3	2.326	3.325	0.6	21.4
4 11	12 25.96	-24 53.8	1.810	2.770	7.4	19.4	4 11	12 28.82	- 5 11.8	2.348	3.333	3.8	21.6
4 21	12 17.15	-24 3.0	1.822	2.759	9.3	19.5	4 21	12 22.35	- 4 26.7	2.399	3.341	7.1	21.8
5 1	12 10.21	-23 2.9	1.859	2.748	12.1	19.7	5 1	12 17.26	- 3 49.1	2.475	3.348	10.0	22.0
111040	2001 <i>VK</i> ₂₄		3 30.6 278°05	1°6/29.2	17		506682	2006 <i>SF</i> ₄₁₁		3 30.6 200°58	0°5/30.0	17	
2 21	13 2.30	- 1 51.2	1.799	2.605	15.2	19.7	2 21	12 59.22	- 4 47.0	2.852	3.629	10.9	22.7
3 2	12 58.70	- 1 26.1	1.706	2.596	11.9	19.5	3 2	12 55.30	- 4 17.3	2.753	3.626	8.5	22.5
3 12	12 52.68	- 0 49.7	1.636	2.587	8.0	19.2	3 12	12 49.86	- 3 38.4	2.678	3.622	5.7	22.3
3 22	12 44.77	- 0 6.2	1.591	2.578	3.8	18.9	3 22	12 43.29	- 2 53.1	2.631	3.617	2.6	22.1
4 1	12 35.84	+ 0 38.5	1.573	2.569	2.1	18.8	4 1	12 36.14	- 2 4.9	2.614	3.612	0.8	21.9
4 11	12 26.99	+ 1 17.9	1.582	2.560	6.2	19.0	4 11	12 29.07	- 1 18.3	2.627	3.607	3.9	22.1
4 21	12 19.23	+ 1 46.3	1.618	2.551	10.5	19.2	4 21	12 22.66	- 0 37.0	2.670	3.602	6.9	22.3
5 1	12 13.42	+ 2 0.0	1.677	2.543	14.3	19.5	5 1	12 17.44	- 0 4.4	2.738	3.596	9.7	22.5
32713	4159 <i>T</i> ₋₂		3 30.6 41°16	0°9/29.8	18		130733	2000 <i>SU</i> ₂₃₁		3 30.6 355°03	2°8/31.3	18	
2 21	12 59.59	- 3 44.8	1.935	2.736	14.5	18.5	2 21	13 19.13	- 2 9.4	1.130	1.937	22.2	18.4
3 2	12 56.17	- 3 19.6	1.863	2.749	11.2	18.3	3 2	13 13.74	- 4 6.3	1.046	1.932	18.0	18.1
3 12	12 50.68	- 2 43.2	1.813	2.762	7.5	18.1	3 12	13 4.03	- 6 3.8	0.982	1.927	12.8	17.7
3 22	12 43.70	- 1 59.6	1.789	2.776	3.4	17.9	3 22	12 50.60	- 7 59.0	0.941	1.924	6.9	17.4
4 1	12 36.03	- 1 14.0	1.792	2.790	1.3	17.8	4 1	12 34.93	- 9 47.3	0.925	1.922	2.9	17.1
4 11	12 28.62	- 0 32.3	1.823	2.804	5.2	18.1	4 11	12 19.25	-11 24.9	0.936	1.922	7.7	17.4
4 21	12 22.29	+ 0 0.6	1.881	2.819	9.0	18.3	4 21	12 5.70	-12 50.9	0.972	1.923	13.7	17.7
5 1	12 17.67	+ 0 21.1	1.963	2.834	12.3	18.6	5 1	11 55.84	-14 7.7	1.029	1.925	18.8	18.0
279382	2010 <i>CO</i> ₄₃		3 30.6 85°55	4°9/25.1									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
293272	2007 <i>CR</i> ₄₀		3 30.6 111°94	4°2/26.0	18		208058	1999 <i>TC</i> ₂₈₄		3 30.6 240°20	1°3/29.3	17	
2 21	13 1.87	+ 3 49.4	2.007	2.819	13.6	21.3	2 21	13 2.48	- 4 27.0	2.039	2.829	14.2	21.3
3 2	12 57.81	+ 5 11.4	1.943	2.837	10.5	21.2	3 2	12 58.66	- 3 36.3	1.932	2.813	11.2	21.1
3 12	12 51.72	+ 6 40.1	1.903	2.854	7.1	21.0	3 12	12 52.60	- 2 30.8	1.848	2.796	7.5	20.8
3 22	12 44.18	+ 8 8.4	1.891	2.870	4.5	20.9	3 22	12 44.78	- 1 14.5	1.791	2.778	3.5	20.5
4 1	12 36.02	+ 9 28.2	1.907	2.886	4.8	20.9	4 1	12 35.95	+ 0 6.3	1.762	2.759	1.8	20.4
4 11	12 28.15	+10 32.7	1.951	2.902	7.6	21.1	4 11	12 27.08	+ 1 23.8	1.763	2.739	5.8	20.6
4 21	12 21.39	+11 17.7	2.022	2.917	10.8	21.3	4 21	12 19.13	+ 2 31.1	1.790	2.719	10.0	20.8
5 1	12 16.34	+11 41.6	2.115	2.932	13.6	21.5	5 1	12 12.90	+ 3 22.6	1.843	2.698	13.7	21.0
278907	2008 <i>TQ</i> ₁₄₄		3 30.6 201°29	0°4/30.2	17		311589	2006 <i>HZ</i> ₁₅₁		3 30.6 324°79	3°1/2.2	18	
2 21	13 0.72	- 5 32.1	2.263	3.047	13.2	21.7	2 21	13 0.61	-14 5.5	1.484	2.266	19.0	20.8
3 2	12 56.90	- 5 0.1	2.168	3.044	10.3	21.5	3 2	12 57.98	-14 2.0	1.397	2.263	15.6	20.6
3 12	12 51.16	- 4 15.9	2.097	3.042	7.0	21.2	3 12	12 52.53	-13 34.7	1.328	2.260	11.4	20.3
3 22	12 43.97	- 3 22.9	2.052	3.038	3.2	21.0	3 22	12 44.84	-12 44.0	1.282	2.258	6.8	20.0
4 1	12 36.04	- 2 25.8	2.036	3.035	0.9	20.8	4 1	12 35.94	-11 34.1	1.261	2.256	3.2	19.8
4 11	12 28.20	- 1 30.2	2.049	3.031	4.7	21.1	4 11	12 27.14	-10 13.5	1.265	2.254	5.7	19.9
4 21	12 21.24	- 0 41.5	2.091	3.026	8.4	21.3	4 21	12 19.70	- 8 52.2	1.295	2.252	10.4	20.2
5 1	12 15.80	- 0 3.9	2.157	3.022	11.6	21.5	5 1	12 14.58	- 7 39.7	1.348	2.250	14.8	20.4
170369	2003 <i>SC</i> ₂₃₄		3 30.6 148°89	1°7/29.1	18		368545	2003 <i>YL</i> ₁		3 30.6 323°72	18°3/12.4	18	
2 21	13 5.31	- 2 4.6	1.995	2.788	14.4	21.0	2 21	13 5.78	-35 32.2	1.151	1.840	28.2	20.2
3 2	13 0.60	- 1 26.6	1.916	2.798	11.2	20.8	3 2	13 4.16	-38 4.2	1.076	1.836	26.1	20.0
3 12	12 53.70	- 0 38.0	1.859	2.807	7.5	20.6	3 12	12 58.16	-40 3.8	1.012	1.833	23.7	19.8
3 22	12 45.17	+ 0 16.7	1.829	2.816	3.5	20.4	3 22	12 48.11	-41 18.1	0.962	1.830	21.3	19.6
4 1	12 35.88	+ 1 11.5	1.828	2.824	2.1	20.3	4 1	12 35.35	-41 35.3	0.928	1.827	19.3	19.4
4 11	12 26.83	+ 2 0.0	1.856	2.831	5.8	20.6	4 11	12 22.23	-40 51.7	0.910	1.824	18.3	19.3
4 21	12 18.90	+ 2 37.4	1.911	2.837	9.6	20.8	4 21	12 11.21	-39 14.5	0.910	1.822	18.9	19.4
5 1	12 12.79	+ 3 0.3	1.990	2.843	13.0	21.0	5 1	12 4.21	-37 0.4	0.927	1.820	20.7	19.5
148868	2001 <i>VV</i> ₉₀		3 30.6 218°34	1°4/28.8	18		146463	2001 <i>RM</i> ₅₉		3 30.6 77°31	0°8/30.1	18	
2 21	12 57.98	- 2 51.6	2.702	3.491	11.1	20.9	2 21	13 8.70	- 2 14.2	1.723	2.519	16.2	19.5
3 2	12 54.46	- 1 58.7	2.603	3.484	8.6	20.7	3 2	13 3.49	- 2 17.8	1.655	2.537	12.7	19.3
3 12	12 49.36	- 0 56.0	2.529	3.477	5.7	20.5	3 12	12 55.74	- 2 12.1	1.608	2.555	8.5	19.1
3 22	12 43.09	+ 0 12.9	2.482	3.469	2.7	20.3	3 22	12 46.15	- 2 0.2	1.586	2.573	3.9	18.8
4 1	12 36.21	+ 1 22.9	2.466	3.461	1.8	20.2	4 1	12 35.76	- 1 46.5	1.592	2.591	1.2	18.7
4 11	12 29.40	+ 2 28.7	2.480	3.453	4.7	20.4	4 11	12 25.75	- 1 35.9	1.627	2.609	5.6	19.0
4 21	12 23.27	+ 3 25.8	2.522	3.444	7.8	20.5	4 21	12 17.16	- 1 32.2	1.688	2.626	9.8	19.3
5 1	12 18.36	+ 4 10.5	2.589	3.435	10.5	20.7	5 1	12 10.73	- 1 38.4	1.774	2.644	13.5	19.5
383875	2008 <i>RA</i> ₆₄		3 30.6 239°77	0°7/29.9	17		368958	2007 <i>BV</i> ₃		3 30.6 110°72	4°7/3.9	17	
2 21	13 2.43	- 4 16.9	2.377	3.159	12.7	22.0	2 21	13 3.01	-18 3.8	1.865	2.605	17.1	21.3
3 2	12 58.25	- 3 50.8	2.268	3.143	10.0	21.8	3 2	12 59.24	-18 23.6	1.777	2.611	14.3	21.1
3 12	12 52.12	- 3 14.0	2.183	3.127	6.8	21.6	3 12	12 53.05	-18 22.7	1.709	2.617	10.9	20.9
3 22	12 44.47	- 2 29.3	2.124	3.111	3.1	21.3	3 22	12 44.97	-18 0.3	1.664	2.623	7.4	20.7
4 1	12 35.98	- 1 41.0	2.096	3.094	1.0	21.1	4 1	12 35.93	-17 18.2	1.645	2.628	4.9	20.6
4 11	12 27.48	- 0 54.3	2.096	3.076	4.8	21.4	4 11	12 27.02	-16 21.6	1.653	2.634	5.6	20.6
4 21	12 19.76	- 0 14.1	2.125	3.058	8.4	21.5	4 21	12 19.29	-15 17.7	1.688	2.639	8.8	20.8
5 1	12 13.52	+ 0 15.7	2.180	3.039	11.7	21.7	5 1	12 13.54	-14 14.4	1.747	2.644	12.3	21.1
10838	Lebon		3 30.6 279°67	0°1/30.7	18		231847	2000 <i>RJ</i> ₈₇		3 30.6 204°13	0°5/30.0	17	
2 21	13 6.18	- 4 7.1	1.902	2.691	15.2	17.6	2 21	13 1.62	- 5 20.2	2.472	3.250	12.4	22.0
3 2	13 1.78	- 4 17.4	1.796	2.674	12.1	17.3	3 2	12 57.45	- 4 43.2	2.372	3.245	9.7	21.8
3 12	12 54.86	- 4 18.0	1.712	2.656	8.3	17.1	3 12	12 51.47	- 3 54.8	2.295	3.239	6.5	21.6
3 22	12 45.90	- 4 10.8	1.653	2.639	4.0	16.8	3 22	12 44.13	- 2 58.0	2.246	3.232	3.0	21.3
4 1	12 35.75	- 3 59.1	1.623	2.622	0.6	16.5	4 1	12 36.07	- 1 57.4	2.227	3.225	0.9	21.1
4 11	12 25.51	- 3 47.3	1.620	2.604	5.3	16.8	4 11	12 28.07	- 0 58.5	2.237	3.217	4.5	21.4
4 21	12 16.29	- 3 39.8	1.645	2.586	9.8	17.0	4 21	12 20.87	- 0 6.3	2.277	3.208	8.0	21.6
5 1	12 9.01	- 3 40.7	1.694	2.569	13.8	17.2	5 1	12 15.08	+ 0 35.1	2.342	3.199	11.1	21.8
161830	2006 <i>XZ</i> ₂₅		3 30.6 206°87	0°7/31.5	17		408270	2013 <i>FL</i> ₁₈		3 30.6 251°62	1°3/29.5	16	
2 21	12 58.50	- 9 4.1	2.831	3.595	11.3	21.1	2 21	13 2.59	- 4 13.5	1.650	2.455	16.4	22.0
3 2	12 54.80	- 8 39.4	2.729	3.590	9.0	21.0	3 2	12 59.24	- 3 35.1	1.555	2.444	12.9	21.8
3 12	12 49.55	- 8 3.3	2.650	3.586	6.2	20.8	3 12	12 53.25	- 2 40.7	1.482	2.432	8.8	21.5
3 22	12 43.17	- 7 17.6	2.598	3.580	3.2	20.6	3 22	12 45.16	- 1 34.7	1.433	2.420	4.1	21.2
4 1	12 36.20	- 6 25.9	2.576	3.575	0.7	20.3	4 1	12 35.89	- 0 24.1	1.410	2.408	1.8	21.0
4 11	12 29.29	- 5 32.2	2.585	3.569	3.5	20.6	4 11	12 26.65	+ 0 42.6	1.416	2.395	6.5	21.2
4 21	12 23.05	- 4 41.1	2.622	3.563	6.6	20.8	4 21	12 18.58	+ 1 37.4	1.446	2.383	11.3	21.5
5 1	12 18.00	- 3 56.5	2.686	3.557	9.4	20.9	5 1	12 12.63	+ 2 14.9	1.500	2.370	15.5	21.7
409765	2006 <i>DE</i> ₁₄₁		3 30.6 323°45	5°7/25.4	14	C 9	341228	2007 <i>RK</i> ₁₅₀		3 30.6 154°59	1°6/28.9	17	
2 21	12 56.12	+ 1 58.8	1.267	2.114	17.9	20.9	2 21	13 4.62	+ 0 28.1	2.560	3.346	11.8	21.4
3 2	12 54.79	+ 3 40.3	1.189	2.103	13.9	20.6	3 2	12 59.58	+ 0 42.5	2.473	3.352	9.1	21.2
3 12	12 50.54	+ 5 39.7	1.131	2.091	9.5	20.3	3 12	12 52.77	+ 1 2.6	2.411	3.358	6.1	21.0
3 22	12 43.94	+ 7 46.0	1.097	2.081	6.0	20.1	3 22	12 44.69	+ 1 25.1	2.377	3.363	2.9	20.8
4 1	12 36.06	+ 9 44.9	1.088	2.071	6.9	20.1	4 1	12 35.99	+ 1 46.4	2.374	3.368	1.9	20.7
4 11	12 28.31	+11 22.2	1.103	2.062	11.1	20.3	4 11	12 27.45	+ 2 2.8	2.400	3.373	4.8	21.0
4 21	12 21.97	+12 28.6	1.139	2.053	15.7	20.5	4 21	12 19.78	+ 2 11.4	2.455	3.377	7.9	21.2
5 1	12 18.06	+13 0.2	1.194	2.045	19.9	20.7	5 1	12 13.54	+ 2 10.1	2.535	3.381	10.7	21.3
152590	1995 <i>OC</i> ₁		3 30.6 267°35	0°5/31.2	17		30118	2000 <i>FC</i> ₃₇		3 30.6 236°87			

EPHEMERIDES

3 30.6

3 30.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
173299	1999 TZ ₃₀₀		3 30.6 137°32	2.2/ 1.8 18			522876	2016 OF ₇		3 30.7 269°18	6°0/ 6.9 17		
2 21	13 6.02	-12 28.6	2.063	2.816	15.3	21.4	2 21	12 59.21	-25 29.2	2.519	3.199	14.5	21.3
3 2	13 1.17	-12 26.3	1.979	2.830	12.3	21.2	3 2	12 55.84	-25 52.4	2.411	3.192	12.6	21.2
3 12	12 54.10	-12 7.7	1.917	2.843	8.9	21.0	3 12	12 50.55	-25 56.1	2.322	3.186	10.4	21.0
3 22	12 45.39	-11 34.0	1.880	2.855	5.1	20.8	3 22	12 43.77	-25 38.8	2.257	3.179	8.1	20.8
4 1	12 35.89	-10 48.6	1.871	2.866	2.3	20.6	4 1	12 36.17	-25 0.6	2.217	3.172	6.3	20.7
4 11	12 26.60	-9 56.9	1.892	2.877	4.5	20.8	4 11	12 28.59	-24 4.4	2.204	3.165	6.2	20.7
4 21	12 18.43	-9 4.9	1.941	2.887	8.2	21.0	4 21	12 21.81	-22 55.5	2.218	3.158	7.7	20.8
5 1	12 12.10	-8 18.5	2.015	2.897	11.6	21.2	5 1	12 16.51	-21 40.4	2.259	3.151	10.1	20.9
337423	2001 RP ₇		3 30.6 140°94	0°2/30.4 17			354814	2005 WL ₂₅		3 30.7 30°25	0°5/30.4 18		
2 21	13 0.02	-5 43.7	2.996	3.766	10.6	22.1	2 21	13 3.75	-4 52.9	1.259	2.079	19.7	21.2
3 2	12 55.75	-5 13.2	2.911	3.779	8.3	22.0	3 2	13 0.72	-4 43.5	1.187	2.083	15.5	20.9
3 12	12 50.06	-4 33.7	2.850	3.791	5.6	21.8	3 12	12 54.50	-4 17.2	1.135	2.087	10.6	20.6
3 22	12 43.37	-3 48.1	2.817	3.803	2.6	21.6	3 22	12 45.81	-3 38.0	1.104	2.092	5.0	20.3
4 1	12 36.21	-2 59.6	2.815	3.814	0.6	21.5	4 1	12 35.86	-2 52.8	1.098	2.097	1.1	20.1
4 11	12 29.20	-2 12.5	2.844	3.825	3.6	21.7	4 11	12 26.21	-2 10.3	1.117	2.102	6.8	20.5
4 21	12 22.88	-1 30.3	2.902	3.835	6.4	21.9	4 21	12 18.22	-1 38.1	1.160	2.108	12.2	20.8
5 1	12 17.71	-0 56.0	2.987	3.845	8.9	22.1	5 1	12 12.90	-1 21.8	1.223	2.114	16.8	21.1
477182	2009 FR ₆₁		3 30.6 345°13	1°1/29.5 16			62591	2000 ST ₃₀₃		3 30.7 156°66	2°3/ 1.7 18		
2 21	12 57.05	-4 9.8	2.004	2.807	14.0	21.7	2 21	13 6.97	-11 5.4	2.233	2.985	14.3	20.0
3 2	12 54.31	-3 31.3	1.915	2.803	10.9	21.5	3 2	13 1.84	-11 26.8	2.140	2.990	11.6	19.8
3 12	12 49.55	-2 40.2	1.849	2.799	7.3	21.3	3 12	12 54.56	-11 35.5	2.069	2.995	8.4	19.6
3 22	12 43.27	-1 40.4	1.808	2.796	3.4	21.0	3 22	12 45.65	-11 31.9	2.025	2.999	4.9	19.4
4 1	12 36.22	-0 37.6	1.795	2.792	1.5	20.9	4 1	12 35.89	-11 17.8	2.009	3.003	2.3	19.3
4 11	12 29.27	+0 21.4	1.810	2.790	5.4	21.2	4 11	12 26.25	-10 56.9	2.022	3.007	4.4	19.4
4 21	12 23.26	+1 10.8	1.851	2.787	9.2	21.4	4 21	12 17.59	-10 33.6	2.065	3.010	7.8	19.6
5 1	12 18.86	+1 46.2	1.916	2.785	12.7	21.6	5 1	12 10.66	-10 12.5	2.133	3.013	11.1	19.8
149915	2005 SA ₈₈		3 30.6 355°80	0°8/30.1 18			266307	2007 CS ₁₄		3 30.7 123°82	1°7/ 1.3 17		
2 21	13 2.79	-3 34.0	1.609	2.417	16.6	20.4	2 21	13 3.29	-11 0.9	1.982	2.749	15.4	21.3
3 2	12 59.32	-3 24.6	1.526	2.415	13.1	20.2	3 2	12 59.16	-10 54.0	1.898	2.758	12.3	21.1
3 12	12 53.23	-3 2.6	1.464	2.414	8.9	19.9	3 12	12 52.82	-10 31.1	1.835	2.768	8.7	20.9
3 22	12 45.11	-2 31.8	1.426	2.414	4.1	19.7	3 22	12 44.83	-9 53.9	1.798	2.776	4.8	20.7
4 1	12 35.94	-1 57.4	1.415	2.413	1.2	19.4	4 1	12 36.03	-9 6.1	1.788	2.785	1.7	20.5
4 11	12 26.93	-1 25.9	1.430	2.413	6.0	19.8	4 11	12 27.42	-8 13.7	1.807	2.793	4.5	20.7
4 21	12 19.19	-1 3.1	1.471	2.413	10.6	20.0	4 21	12 19.91	-7 22.7	1.853	2.801	8.4	21.0
5 1	12 13.61	-0 53.3	1.534	2.414	14.7	20.3	5 1	12 14.21	-6 38.8	1.925	2.809	11.9	21.2
224574	2005 XM ₁₈		3 30.7 179°80	3°6/26.9 17			397159	2005 XR ₇₁		3 30.7 155°94	3°5/27.7 18		
2 21	13 1.72	+3 28.4	2.053	2.864	13.4	20.6	2 21	13 7.61	+2 18.4	1.753	2.560	15.5	21.6
3 2	12 57.83	+4 24.0	1.972	2.864	10.4	20.4	3 2	13 2.73	+3 5.7	1.678	2.568	12.1	21.4
3 12	12 51.86	+5 26.5	1.914	2.865	7.1	20.2	3 12	12 55.33	+4 1.3	1.624	2.575	8.1	21.2
3 22	12 44.34	+6 30.2	1.883	2.865	4.1	20.0	3 22	12 46.03	+4 59.0	1.597	2.581	4.4	21.0
4 1	12 36.06	+7 28.1	1.880	2.865	4.2	20.0	4 1	12 35.84	+5 51.4	1.598	2.587	4.0	20.9
4 11	12 27.96	+8 14.2	1.906	2.865	7.1	20.2	4 11	12 25.93	+6 31.5	1.626	2.592	7.5	21.2
4 21	12 20.86	+8 44.1	1.957	2.864	10.5	20.4	4 21	12 17.34	+6 54.7	1.681	2.596	11.4	21.4
5 1	12 15.45	+8 55.7	2.032	2.863	13.6	20.6	5 1	12 10.86	+6 59.0	1.759	2.599	14.9	21.6
258130	2001 RB ₂₅		3 30.7 188°27	0°5/31.2 17			272151	2005 NS ₅₀		3 30.7 182°33	1°2/ 1.1 15		
2 21	13 2.77	-8 13.9	2.252	3.023	13.6	22.5	2 21	13 3.21	-10 47.8	2.576	3.327	12.6	23.1
3 2	12 58.53	-7 49.6	2.156	3.022	10.8	22.2	3 2	12 58.61	-10 27.3	2.476	3.329	10.1	22.9
3 12	12 52.30	-7 11.7	2.083	3.021	7.5	22.0	3 12	12 52.22	-9 53.4	2.400	3.329	7.1	22.7
3 22	12 44.55	-6 22.6	2.036	3.019	3.7	21.8	3 22	12 44.50	-9 7.8	2.350	3.329	3.8	22.5
4 1	12 36.03	-5 26.5	2.018	3.017	0.6	21.5	4 1	12 36.09	-8 13.8	2.330	3.327	1.2	22.3
4 11	12 27.60	-4 29.2	2.030	3.014	4.4	21.8	4 11	12 27.76	-7 16.4	2.340	3.325	3.8	22.5
4 21	12 20.08	-3 36.2	2.070	3.011	8.1	22.0	4 21	12 20.25	-6 20.5	2.380	3.323	7.1	22.7
5 1	12 14.15	-2 52.3	2.136	3.006	11.5	22.2	5 1	12 14.14	-5 30.8	2.447	3.319	10.2	22.9
255791	2006 SF ₃		3 30.7 223°60	1°3/31.7 17			308163	2005 BA ₁₁		3 30.7 76°26	3°1/28.1 18		
2 21	13 5.07	-8 47.1	1.890	2.666	15.7	21.4	2 21	13 4.94	+0 4.3	1.474	2.292	17.4	21.2
3 2	13 0.84	-8 47.7	1.792	2.659	12.6	21.1	3 2	13 0.88	+0 57.0	1.416	2.313	13.4	21.0
3 12	12 54.16	-8 33.8	1.715	2.652	8.9	20.9	3 12	12 54.12	+2 0.8	1.380	2.334	8.9	20.7
3 22	12 45.55	-8 6.7	1.663	2.645	4.7	20.6	3 22	12 45.44	+3 8.4	1.368	2.355	4.5	20.5
4 1	12 35.87	-7 29.9	1.639	2.637	1.3	20.4	4 1	12 35.96	+4 11.3	1.383	2.376	3.7	20.5
4 11	12 26.22	-6 48.9	1.643	2.629	5.0	20.6	4 11	12 26.97	+5 1.1	1.425	2.396	7.6	20.8
4 21	12 17.64	-6 9.8	1.675	2.621	9.3	20.8	4 21	12 19.53	+5 32.8	1.491	2.417	11.8	21.1
5 1	12 11.01	-5 38.1	1.730	2.612	13.2	21.0	5 1	12 14.40	+5 43.9	1.579	2.437	15.5	21.4
131181	2001 CT ₄₁		3 30.7 161°67	0°5/31.2 17			165144	2000 QO ₇		3 30.7 281°64	4°3/25.9 17		
2 21	12 59.74	-8 48.9	2.117	2.896	14.1	20.4	2 21	12 58.82	-2 33.8	1.594	2.412	16.3	20.1
3 2	12 56.28	-8 16.6	2.027	2.898	11.2	20.2	3 2	12 56.58	-0 23.9	1.484	2.383	12.7	19.8
3 12	12 50.82	-7 29.0	1.959	2.899	7.7	20.0	3 12	12 51.69	+2 13.3	1.397	2.353	8.6	19.5
3 22	12 43.86	-6 29.1	1.917	2.901	3.8	19.8	3 22	12 44.57	+5 9.3	1.337	2.322	4.8	19.2
4 1	12 36.16	-5 21.8	1.904	2.902	0.6	19.5	4 1	12 36.04	+8 10.0	1.306	2.291	5.5	19.1
4 11	12 28.58	-4 13.5	1.919	2.904	4.5	19.8	4 11	12 27.31	+10 58.9	1.303	2.259	10.0	19.3
4 21	12 21.96	-3 10.6	1.962	2.905	8.3	20.1	4 21	12 19.61	+13 21.9	1.326	2.227	14.9	19.5
5 1	12 16.93	-2 18.3	2.030	2.906	11.8	20.3	5 1	12 13.98	+15 10.0	1.371	2.195	19.2	19.7
20849	2000 VJ ₁		3 30.7 84°10	1°9/28.9 18			187458	2005 XT ₂₃		3 30.7 224°39	1°4/29.3 18		
2 21	13 4.37	-3 40.4	1.588	2.393	16.9	18.6	2 21	13 3.62	-2 2.8	2.313	3.101	12.8	20

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
453289	2008 TX ₁₆₅		3 30.7 172°42	3°6/	2.5 18		64545	2001 VB ₁₂₂		3 30.7 102°31	3°4/26.5 18		
2 21	13 6.78	-14 10.7	1.672	2.432	18.0	21.7	2 21	12 59.50	+ 4 14.2	2.428	3.236	11.7	19.8
3 2	13 2.52	-14 27.4	1.583	2.435	14.8	21.5	3 2	12 55.68	+ 5 12.2	2.357	3.249	9.0	19.6
3 12	12 55.47	-14 24.4	1.513	2.437	11.0	21.2	3 12	12 50.19	+ 6 15.0	2.312	3.262	6.1	19.5
3 22	12 46.24	-14 1.3	1.467	2.438	6.8	21.0	3 22	12 43.51	+ 7 17.3	2.294	3.274	3.7	19.3
4 1	12 35.82	-13 20.5	1.447	2.439	3.7	20.8	4 1	12 36.30	+ 8 13.6	2.305	3.287	3.9	19.4
4 11	12 25.52	-12 27.9	1.455	2.440	5.6	20.9	4 11	12 29.29	+ 8 58.9	2.345	3.299	6.3	19.5
4 21	12 16.54	-11 31.2	1.489	2.440	9.8	21.1	4 21	12 23.15	+ 9 29.9	2.412	3.311	9.1	19.7
5 1	12 9.83	-10 38.5	1.547	2.440	13.8	21.4	5 1	12 18.39	+ 9 44.8	2.503	3.323	11.6	19.9
171250	2005 MU ₁₄		3 30.7 82°64	3°2/26.9 17			189595	2000 WU ₈₆		3 30.7 126°54	1°9/ 1.7 18		
2 21	12 58.10	+ 1 54.0	2.180	2.992	12.7	20.1	2 21	13 2.59	-12 15.8	2.226	2.982	14.2	20.7
3 2	12 54.87	+ 3 0.7	2.102	2.997	9.8	19.9	3 2	12 58.36	-12 6.3	2.141	2.994	11.5	20.5
3 12	12 49.80	+ 4 15.6	2.048	3.001	6.5	19.7	3 12	12 52.15	-11 41.3	2.078	3.005	8.2	20.3
3 22	12 43.37	+ 5 32.7	2.021	3.005	3.7	19.6	3 22	12 44.49	-11 2.5	2.041	3.017	4.6	20.1
4 1	12 36.29	+ 6 45.4	2.023	3.009	3.8	19.6	4 1	12 36.14	-10 13.4	2.032	3.028	1.9	20.0
4 11	12 29.38	+ 7 47.2	2.053	3.013	6.6	19.8	4 11	12 27.97	- 9 19.0	2.052	3.038	4.1	20.1
4 21	12 23.37	+ 8 33.6	2.109	3.017	9.8	20.0	4 21	12 20.78	- 8 25.2	2.100	3.048	7.6	20.4
5 1	12 18.87	+ 9 1.8	2.189	3.021	12.7	20.2	5 1	12 15.20	- 7 37.2	2.175	3.058	10.8	20.6
411465	2010 XU ₃₈		3 30.7 116°95	9°8/20.5 18			297929	2002 EL ₈₀		3 30.7 94°74	0°9/29.9 18		
2 21	13 7.38	+22 26.5	1.948	2.756	14.1	21.2	2 21	13 6.16	- 4 35.1	1.593	2.393	17.1	21.2
3 2	13 2.27	+23 56.7	1.902	2.770	12.0	21.0	3 2	13 1.71	- 4 3.2	1.528	2.413	13.4	21.0
3 12	12 54.81	+25 17.3	1.879	2.784	10.3	21.0	3 12	12 54.65	- 3 16.9	1.485	2.433	8.9	20.8
3 22	12 45.71	+26 19.1	1.882	2.798	9.8	20.9	3 22	12 45.71	- 2 21.1	1.465	2.453	4.1	20.5
4 1	12 35.95	+26 54.8	1.910	2.811	10.7	21.0	4 1	12 35.96	- 1 22.6	1.474	2.472	1.4	20.4
4 11	12 26.64	+27 0.9	1.962	2.823	12.5	21.2	4 11	12 26.63	- 0 29.3	1.509	2.491	6.0	20.7
4 21	12 18.71	+26 37.9	2.036	2.836	14.5	21.3	4 21	12 18.76	+ 0 12.7	1.571	2.509	10.5	21.0
5 1	12 12.82	+25 49.1	2.129	2.847	16.5	21.5	5 1	12 13.10	+ 0 39.1	1.656	2.527	14.2	21.3
52478	1995 TO		3 30.7 148°77	0°3/30.5 18			495098	2011 SO ₂₂₁		3 30.7 246°39	0°5/30.3 17		
2 21	13 7.59	- 5 42.3	1.708	2.497	16.6	19.6	2 21	13 4.98	- 5 40.3	1.705	2.499	16.4	22.8
3 2	13 2.85	- 5 23.0	1.628	2.506	13.1	19.4	3 2	13 1.17	- 5 13.3	1.602	2.483	13.1	22.6
3 12	12 55.49	- 4 49.4	1.569	2.514	8.9	19.2	3 12	12 54.65	- 4 30.0	1.520	2.466	9.0	22.3
3 22	12 46.16	- 4 4.7	1.536	2.522	4.2	18.9	3 22	12 45.92	- 3 33.8	1.462	2.449	4.2	21.9
4 1	12 35.86	- 3 14.6	1.530	2.529	0.8	18.7	4 1	12 35.89	- 2 30.3	1.432	2.431	1.0	21.7
4 11	12 25.81	- 2 26.2	1.552	2.535	5.6	19.0	4 11	12 25.79	- 1 27.4	1.430	2.412	6.1	22.0
4 21	12 17.10	- 1 45.7	1.601	2.541	10.1	19.3	4 21	12 16.80	- 0 33.1	1.454	2.393	11.0	22.2
5 1	12 10.57	- 1 18.1	1.674	2.545	14.1	19.5	5 1	12 9.94	+ 0 6.6	1.501	2.373	15.4	22.4
331541	2000 TQ ₂₀		3 30.7 220°34	4°8/25.6 17			466614	2014 VL ₁₂		3 30.7 181°22	1°0/29.6 17		
2 21	13 5.04	+ 8 59.7	2.308	3.113	12.3	21.1	2 21	13 4.96	- 3 34.7	2.178	2.962	13.6	22.5
3 2	13 0.26	+ 9 48.3	2.217	3.104	9.7	20.9	3 2	13 0.28	- 3 2.6	2.087	2.964	10.7	22.3
3 12	12 53.46	+10 39.0	2.152	3.095	7.0	20.7	3 12	12 53.50	- 2 19.6	2.019	2.965	7.2	22.1
3 22	12 45.13	+11 26.2	2.113	3.085	5.0	20.6	3 22	12 45.17	- 1 29.2	1.978	2.965	3.3	21.9
4 1	12 36.02	+12 3.9	2.103	3.074	5.3	20.6	4 1	12 36.03	- 0 36.5	1.966	2.964	1.4	21.7
4 11	12 27.00	+12 27.0	2.122	3.063	7.8	20.7	4 11	12 27.03	+ 0 12.6	1.984	2.962	5.2	22.0
4 21	12 18.91	+12 32.9	2.167	3.051	10.7	20.9	4 21	12 19.00	+ 0 53.1	2.030	2.960	8.9	22.2
5 1	12 12.42	+12 20.6	2.236	3.039	13.4	21.0	5 1	12 12.65	+ 1 21.3	2.101	2.957	12.3	22.4
86650	2000 EW ₁₅₃		3 30.7 302°32	4°8/27.1 18			490903	2011 BC ₁₀₉		3 30.7 200°25	0°4/31.1 17		
2 21	13 1.70	+ 2 52.2	1.299	2.137	18.1	19.6	2 21	13 1.05	- 8 12.0	2.065	2.845	14.4	22.0
3 2	12 59.33	+ 3 44.3	1.211	2.118	14.3	19.3	3 2	12 57.41	- 7 43.7	1.971	2.843	11.4	21.7
3 12	12 53.79	+ 4 49.0	1.142	2.100	9.8	18.9	3 12	12 51.67	- 7 0.4	1.900	2.841	7.9	21.5
3 22	12 45.63	+ 5 58.5	1.096	2.082	5.7	18.6	3 22	12 44.33	- 6 4.9	1.854	2.838	3.9	21.3
4 1	12 35.92	+ 7 2.3	1.075	2.064	5.6	18.6	4 1	12 36.16	- 5 2.0	1.837	2.836	0.6	21.0
4 11	12 26.18	+ 7 49.6	1.078	2.046	10.0	18.8	4 11	12 28.09	- 3 58.1	1.848	2.833	4.7	21.3
4 21	12 17.86	+ 8 13.0	1.103	2.029	15.0	19.0	4 21	12 20.99	- 2 59.6	1.887	2.829	8.7	21.5
5 1	12 12.14	+ 8 9.0	1.147	2.012	19.6	19.2	5 1	12 15.56	- 2 11.8	1.950	2.826	12.2	21.7
17662	1996 VG ₃₀		3 30.7 53°37	4°1/ 3.7 18			316814	1999 VC ₁₆₅		3 30.7 161°02	1°0/29.7 16		
2 21	13 0.82	-17 36.7	1.634	2.392	18.5	17.2	2 21	13 6.04	- 3 23.5	2.181	2.963	13.7	22.4
3 2	12 57.66	-17 35.8	1.566	2.413	15.2	17.0	3 2	13 1.05	- 2 56.9	2.095	2.971	10.7	22.2
3 12	12 51.98	-17 10.6	1.516	2.434	11.4	16.8	3 12	12 53.97	- 2 20.1	2.033	2.978	7.2	22.0
3 22	12 44.47	-16 22.0	1.489	2.455	7.4	16.7	3 22	12 45.37	- 1 36.5	1.997	2.984	3.3	21.8
4 1	12 36.14	-15 14.1	1.488	2.476	4.3	16.5	4 1	12 36.01	- 0 51.0	1.991	2.989	1.3	21.7
4 11	12 28.15	-13 54.6	1.513	2.498	5.4	16.6	4 11	12 26.83	- 0 9.0	2.015	2.994	5.1	21.9
4 21	12 21.53	-12 32.6	1.564	2.520	9.0	16.9	4 21	12 18.68	+ 0 24.9	2.067	2.997	8.8	22.2
5 1	12 17.00	-11 16.8	1.640	2.542	12.6	17.1	5 1	12 12.24	+ 0 47.1	2.144	3.000	12.0	22.4
186054	2001 SC ₅₄		3 30.7 191°06	2°1/28.5 17			217895	2001 RV ₁₅₁		3 30.7 227°12	5°4/24.3 17		
2 21	13 6.33	+ 1 14.3	2.416	3.203	12.3	21.5	2 21	13 0.35	+ 6 38.3	2.024	2.844	13.3	20.5
3 2	13 1.12	+ 1 39.2	2.322	3.202	9.6	21.3	3 2	12 56.92	+ 8 16.4	1.939	2.835	10.4	20.3
3 12	12 53.96	+ 2 10.3	2.253	3.200	6.5	21.1	3 12	12 51.37	+10 2.0	1.878	2.827	7.4	20.1
3 22	12 45.35	+ 2 43.8	2.212	3.197	3.2	20.9	3 22	12 44.21	+11 46.9	1.845	2.817	5.5	19.9
4 1	12 36.00	+ 3 15.3	2.200	3.193	2.5	20.8	4 1	12 36.18	+13 22.0	1.840	2.808	6.3	20.0
4 11	12 26.76	+ 3 40.4	2.219	3.189	5.5	21.0	4 11	12 28.25	+14 39.2	1.863	2.798	9.1	20.1
4 21	12 18.42	+ 3 55.5	2.266	3.184	8.8	21.2	4 21	12 21.28	+15 33.3	1.911	2.787	12.2	20.3
5 1	12 11.62	+ 3 58.5	2.339	3.178	11.8	21.4	5 1	12 15.99	+16 2.4	1.981	2.776	15.1	20.4
30557	2001 OD ₆₇		3 30.7 147°00	0°8/29.8 18			43408	2000 WW ₁₃₇		3 30.7 104°48	1°0/31.5 18		
2 21	13 2.40	- 5 4.4	2.268	3.05									

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
9762	Hermannesse		3 30.7	83°81	1.3/31.6	18	320681	2008 CO ₂₀₉		3 30.7	92°92	2.2/1.8	18
2 21	13 5.65	- 8 37.1	1.423	2.219	19.0	18.6	2 21	13 2.11	-13 15.8	1.714	2.485	17.2	20.8
3 2	13 1.89	- 8 39.8	1.347	2.226	15.2	18.3	3 2	12 58.58	-12 55.7	1.637	2.498	13.9	20.6
3 12	12 55.15	- 8 24.3	1.291	2.234	10.6	18.1	3 12	12 52.60	-12 14.5	1.580	2.512	10.0	20.3
3 22	12 46.10	- 7 52.8	1.258	2.241	5.5	17.8	3 22	12 44.80	-11 14.4	1.547	2.525	5.6	20.1
4 1	12 35.90	- 7 10.0	1.250	2.249	1.4	17.5	4 1	12 36.15	-10 0.6	1.541	2.538	2.2	19.9
4 11	12 25.97	- 6 23.5	1.269	2.256	5.8	17.8	4 11	12 27.77	- 8 40.9	1.563	2.550	4.9	20.1
4 21	12 17.58	- 5 41.1	1.313	2.264	10.8	18.1	4 21	12 20.66	- 7 24.0	1.611	2.563	9.1	20.4
5 1	12 11.69	- 5 9.4	1.379	2.271	15.2	18.4	5 1	12 15.58	- 6 17.1	1.684	2.575	13.0	20.6
212626	2006 TZ ₂₇		3 30.7	317°65	5°6/25.6	17	508422	2016 JM ₃₀		3 30.7	291°36	2°2/1.9	17
2 21	13 5.67	+12 20.9	2.141	2.951	12.9	19.8	2 21	12 57.86	-13 55.9	1.818	2.590	16.4	21.2
3 2	13 0.87	+12 49.9	2.058	2.944	10.3	19.6	3 2	12 55.45	-13 27.7	1.709	2.571	13.4	21.0
3 12	12 53.92	+13 17.2	1.998	2.937	7.7	19.4	3 12	12 50.69	-12 36.6	1.621	2.552	9.7	20.7
3 22	12 45.37	+13 37.0	1.964	2.930	5.8	19.3	3 22	12 44.02	-11 23.8	1.556	2.533	5.6	20.4
4 1	12 36.02	+13 43.9	1.958	2.924	6.2	19.3	4 1	12 36.25	- 9 53.6	1.518	2.514	2.2	20.2
4 11	12 26.85	+13 34.0	1.980	2.917	8.5	19.4	4 11	12 28.42	- 8 14.1	1.508	2.496	5.0	20.3
4 21	12 18.74	+13 5.8	2.028	2.911	11.3	19.6	4 21	12 21.58	- 6 34.6	1.524	2.477	9.4	20.5
5 1	12 12.39	+12 20.0	2.098	2.905	14.0	19.7	5 1	12 16.60	- 5 4.6	1.565	2.458	13.6	20.7
418365	2008 GT ₁₁₉		3 30.7	293°88	7°7/24.5	17	110781	2001 UW ₃₁		3 30.7	304°39	5°5/26.9	17
2 21	13 7.28	+14 22.9	1.709	2.530	15.3	20.4	2 21	13 6.90	+ 8 11.7	1.596	2.418	16.1	19.5
3 2	13 2.73	+15 13.6	1.633	2.522	12.4	20.2	3 2	13 2.80	+ 8 38.0	1.504	2.401	12.8	19.2
3 12	12 55.49	+16 1.8	1.578	2.515	9.5	20.0	3 12	12 55.80	+ 9 6.8	1.434	2.384	9.1	19.0
3 22	12 46.20	+16 39.1	1.547	2.507	7.8	19.9	3 22	12 46.49	+ 9 31.2	1.388	2.367	6.0	18.8
4 1	12 35.89	+16 57.3	1.543	2.500	8.4	19.9	4 1	12 35.88	+ 9 43.8	1.369	2.350	6.0	18.7
4 11	12 25.81	+16 51.0	1.565	2.492	11.0	20.0	4 11	12 25.30	+ 9 38.4	1.375	2.333	9.4	18.9
4 21	12 17.09	+16 19.1	1.610	2.485	14.2	20.2	4 21	12 16.02	+ 9 12.0	1.406	2.317	13.5	19.0
5 1	12 10.58	+15 23.2	1.676	2.478	17.2	20.4	5 1	12 9.06	+ 8 24.7	1.458	2.301	17.3	19.2
207842	2007 UX ₇₈		3 30.7	203°17	0°6/30.1	18	455276	2001 XW ₂₂₀		3 30.7	173°15	3°5/27.6	18
2 21	13 0.47	- 4 28.5	2.430	3.215	12.4	21.2	2 21	13 7.24	+ 2 47.5	1.898	2.701	14.6	22.1
3 2	12 56.59	- 4 3.4	2.336	3.212	9.7	21.0	3 2	13 2.33	+ 3 35.5	1.817	2.705	11.4	21.9
3 12	12 50.93	- 3 28.1	2.265	3.210	6.5	20.8	3 12	12 55.03	+ 4 31.1	1.759	2.708	7.7	21.6
3 22	12 43.93	- 2 45.7	2.220	3.207	3.0	20.6	3 22	12 45.95	+ 5 28.4	1.727	2.711	4.3	21.4
4 1	12 36.24	- 2 0.4	2.205	3.204	0.9	20.4	4 1	12 35.98	+ 6 20.4	1.724	2.712	4.0	21.4
4 11	12 28.65	- 1 16.8	2.220	3.200	4.4	20.6	4 11	12 26.23	+ 7 0.6	1.750	2.713	7.3	21.6
4 21	12 21.87	- 0 39.6	2.262	3.197	7.9	20.9	4 21	12 17.67	+ 7 24.6	1.802	2.713	11.0	21.8
5 1	12 16.49	- 0 12.2	2.330	3.193	10.9	21.0	5 1	12 11.07	+ 7 30.3	1.877	2.712	14.4	22.0
345678	2006 UQ ₉₇		3 30.7	44°28	6°7/24.4	17	248697	2006 KM ₁₁₈		3 30.7	267°75	0°1/30.7	17
2 21	13 6.07	+15 58.2	2.147	2.957	12.9	20.4	2 21	13 3.29	- 6 49.5	1.746	2.538	16.2	22.0
3 2	13 1.01	+16 35.7	2.083	2.965	10.4	20.2	3 2	12 59.86	- 6 26.5	1.637	2.516	12.9	21.7
3 12	12 53.87	+17 8.5	2.042	2.973	8.1	20.1	3 12	12 53.80	- 5 46.8	1.548	2.493	9.0	21.4
3 22	12 45.27	+17 30.4	2.028	2.981	6.7	20.0	3 22	12 45.57	- 4 52.7	1.484	2.470	4.3	21.1
4 1	12 36.05	+17 36.0	2.041	2.990	7.2	20.1	4 1	12 36.02	- 3 49.6	1.448	2.447	0.7	20.8
4 11	12 27.17	+17 22.2	2.080	2.999	9.2	20.2	4 11	12 26.32	- 2 44.9	1.439	2.423	5.8	21.1
4 21	12 19.45	+16 48.7	2.145	3.008	11.7	20.4	4 21	12 17.64	- 1 46.6	1.456	2.398	10.7	21.3
5 1	12 13.50	+15 56.8	2.233	3.017	14.0	20.5	5 1	12 10.99	- 1 1.5	1.496	2.373	15.1	21.5
520924	2014 WW ₅₃₂		3 30.7	359°93	5°8/5.7	17	417526	2006 TZ ₃₀		3 30.7	58°18	2°8/28.7	18
2 21	12 59.00	-22 10.4	1.894	2.619	17.4	20.8	2 21	13 6.49	+ 1 23.0	1.515	2.332	17.1	21.4
3 2	12 56.22	-22 25.0	1.800	2.619	14.8	20.6	3 2	13 2.13	+ 1 41.9	1.451	2.346	13.3	21.2
3 12	12 51.09	-22 15.6	1.725	2.618	11.8	20.4	3 12	12 55.04	+ 2 8.8	1.409	2.361	8.9	21.0
3 22	12 44.14	-21 40.9	1.672	2.618	8.6	20.2	3 22	12 45.96	+ 2 38.4	1.390	2.377	4.4	20.8
4 1	12 36.21	-20 42.4	1.644	2.618	6.1	20.0	4 1	12 36.01	+ 3 4.2	1.398	2.392	3.2	20.7
4 11	12 28.37	-19 25.2	1.642	2.619	6.2	20.1	4 11	12 26.48	+ 3 20.1	1.433	2.408	7.2	21.0
4 21	12 21.63	-17 57.4	1.667	2.619	8.8	20.2	4 21	12 18.48	+ 3 22.2	1.493	2.424	11.4	21.3
5 1	12 16.78	-16 28.2	1.716	2.620	12.1	20.4	5 1	12 12.80	+ 3 8.7	1.575	2.440	15.2	21.6
262063	2006 RM ₄₁		3 30.7	142°02	1°5/29.2	18	434803	2006 RY ₅₈		3 30.7	247°27	0°4/30.3	17
2 21	13 5.86	- 1 47.5	2.072	2.862	14.0	22.1	2 21	13 2.56	- 3 54.0	2.410	3.192	12.5	21.4
3 2	13 0.97	- 1 18.2	1.993	2.873	10.9	21.9	3 2	12 58.29	- 3 47.7	2.310	3.185	9.9	21.2
3 12	12 53.94	- 0 39.5	1.937	2.884	7.3	21.7	3 12	12 52.14	- 3 32.7	2.233	3.177	6.7	21.0
3 22	12 45.36	+ 0 4.6	1.908	2.894	3.4	21.4	3 22	12 44.56	- 3 11.2	2.183	3.169	3.1	20.7
4 1	12 36.04	+ 0 48.8	1.908	2.904	1.9	21.3	4 1	12 36.21	- 2 46.8	2.162	3.161	0.7	20.5
4 11	12 26.96	+ 1 27.5	1.937	2.913	5.5	21.6	4 11	12 27.91	- 2 23.5	2.171	3.153	4.4	20.8
4 21	12 18.98	+ 1 56.3	1.994	2.921	9.2	21.8	4 21	12 20.42	- 2 5.0	2.208	3.145	7.9	21.0
5 1	12 12.77	+ 2 12.1	2.075	2.929	12.5	22.1	5 1	12 14.39	- 1 54.7	2.270	3.136	11.1	21.2
213180	2000 SD ₁₇₃		3 30.7	283°74	4°1/8.5	18	297541	2001 PW ₄₁		3 30.7	203°41	3°5/2.8	17
2 21	12 53.24	-28 35.1	4.514	5.144	9.1	19.9	2 21	13 6.78	-15 29.4	1.968	2.709	16.3	21.5
3 2	12 50.32	-28 34.1	4.391	5.132	8.0	19.8	3 2	13 2.22	-15 37.9	1.865	2.705	13.5	21.3
3 12	12 46.38	-28 20.2	4.289	5.120	6.7	19.7	3 12	12 55.16	-15 27.5	1.783	2.699	10.1	21.1
3 22	12 41.69	-27 53.2	4.211	5.108	5.4	19.6	3 22	12 46.12	-14 58.0	1.725	2.692	6.4	20.8
4 1	12 36.61	-27 13.6	4.160	5.096	4.3	19.5	4 1	12 35.97	-14 11.4	1.695	2.685	3.6	20.6
4 11	12 31.56	-26 23.2	4.137	5.084	4.1	19.5	4 11	12 25.82	-13 12.8	1.693	2.677	5.2	20.7
4 21	12 26.93	-25 24.7	4.143	5.072	4.8	19.5	4 21	12 16.74	-12 9.3	1.719	2.668	8.9	20.9
5 1	12 23.06	-24 21.4	4.177	5.060	6.1	19.6	5 1	12 9.63	-11 8.3	1.770	2.658	12.6	21.1
333422	2003 KJ ₂		3 30.7	289°92	5°4/25.1	17	489341	2006 UN ₂₄		3 30.7	119°23	0°8/29.8	17
2 21	12 59.92	+ 6 24.4	1.828	2.654	14.2	20.8	2 21	1					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
72098	2000 Y _Y ₄₉		3 30.7 174°18	3°9/26.9	18		326790	2003 S _Q ₂₈₈		3 30.7 187°01	1°1/29.6	17	
2 21	13 4.79	+ 3 32.8	1.876	2.686	14.5	19.8	2 21	13 4.37	- 4 2.4	2.149	2.934	13.8	22.2
3 2	13 0.45	+ 4 30.4	1.797	2.689	11.3	19.6	3 2	12 59.90	- 3 21.2	2.056	2.934	10.8	22.0
3 12	12 53.79	+ 5 35.5	1.741	2.691	7.7	19.4	3 12	12 53.33	- 2 27.8	1.987	2.933	7.2	21.8
3 22	12 45.38	+ 6 41.8	1.711	2.693	4.5	19.2	3 22	12 45.18	- 1 26.2	1.944	2.931	3.4	21.5
4 1	12 36.10	+ 7 41.6	1.709	2.693	4.5	19.2	4 1	12 36.20	- 0 22.0	1.931	2.929	1.5	21.4
4 11	12 27.03	+ 8 28.0	1.735	2.694	7.7	19.4	4 11	12 27.34	+ 0 38.5	1.948	2.925	5.3	21.6
4 21	12 19.12	+ 8 56.5	1.787	2.694	11.3	19.6	4 21	12 19.46	+ 1 29.6	1.992	2.921	9.1	21.8
5 1	12 13.12	+ 9 5.0	1.861	2.693	14.6	19.8	5 1	12 13.24	+ 2 7.1	2.061	2.916	12.5	22.0
312225	2007 X _P ₁		3 30.7 47°07	2°9/28.6	18		406500	2007 V _Y ₁₀₀		3 30.7 57°72	1°7/1.1	18	
2 21	13 3.07	- 0 20.4	1.344	2.171	18.2	21.0	2 21	13 3.05	- 10 14.9	1.472	2.265	18.6	21.4
3 2	12 59.79	+ 0 18.3	1.284	2.185	14.1	20.7	3 2	12 59.73	- 10 11.1	1.400	2.276	14.9	21.1
3 12	12 53.63	+ 1 9.2	1.244	2.200	9.4	20.5	3 12	12 53.62	- 9 47.6	1.347	2.287	10.5	20.9
3 22	12 45.34	+ 2 5.4	1.227	2.215	4.6	20.3	3 22	12 45.41	- 9 6.6	1.317	2.298	5.6	20.7
4 1	12 36.12	+ 2 58.3	1.236	2.230	3.4	20.2	4 1	12 36.17	- 8 13.2	1.312	2.310	1.7	20.4
4 11	12 27.34	+ 3 39.6	1.270	2.246	7.7	20.5	4 11	12 27.23	- 7 15.4	1.334	2.322	5.5	20.7
4 21	12 20.16	+ 4 3.5	1.328	2.262	12.3	20.8	4 21	12 19.76	- 6 21.2	1.381	2.334	10.2	21.0
5 1	12 15.40	+ 4 7.5	1.407	2.278	16.2	21.1	5 1	12 14.61	- 5 37.9	1.451	2.346	14.4	21.3
387309	2012 V _G ₅₇		3 30.7 266°45	2°5/2.6	17		214900	2007 T _P ₈₈		3 30.7 159°94	0°3/30.3	17	
2 21	12 58.30	- 15 1.8	2.275	3.026	14.1	21.4	2 21	13 0.59	- 5 16.5	2.734	3.508	11.4	21.8
3 2	12 55.20	- 14 45.4	2.171	3.017	11.6	21.2	3 2	12 56.44	- 4 49.3	2.643	3.514	8.9	21.6
3 12	12 50.17	- 14 11.1	2.088	3.009	8.5	21.0	3 12	12 50.72	- 4 12.7	2.577	3.519	6.0	21.5
3 22	12 43.66	- 13 19.9	2.030	3.001	5.2	20.8	3 22	12 43.85	- 3 29.4	2.538	3.524	2.8	21.3
4 1	12 36.36	- 12 15.0	2.000	2.993	2.6	20.6	4 1	12 36.41	- 2 43.0	2.530	3.528	0.7	21.1
4 11	12 29.11	- 11 1.8	1.998	2.984	4.2	20.7	4 11	12 29.10	- 1 58.0	2.551	3.532	3.9	21.3
4 21	12 22.68	- 9 46.8	2.024	2.976	7.6	20.8	4 21	12 22.53	- 1 18.3	2.602	3.536	7.0	21.5
5 1	12 17.75	- 8 36.6	2.077	2.967	10.9	21.0	5 1	12 17.21	- 0 47.3	2.678	3.539	9.8	21.7
185521	2007 V _A ₆₇		3 30.7 30°58	0°6/31.3	17		375914	2009 W _V ₂₃		3 30.7 205°93	1°3/29.5	17	
2 21	12 59.18	- 7 56.9	1.918	2.708	15.0	20.5	2 21	13 6.51	- 1 4.0	2.276	3.061	13.1	21.1
3 2	12 56.03	- 7 43.4	1.840	2.716	11.9	20.3	3 2	13 1.48	- 0 51.3	2.179	3.056	10.2	20.9
3 12	12 50.76	- 7 15.6	1.782	2.725	8.2	20.1	3 12	12 54.36	- 0 31.1	2.105	3.051	6.9	20.7
3 22	12 43.92	- 6 36.2	1.750	2.734	4.1	19.9	3 22	12 45.67	- 0 6.5	2.059	3.045	3.3	20.4
4 1	12 36.34	- 5 49.8	1.745	2.744	0.7	19.6	4 1	12 36.13	+ 0 18.6	2.042	3.038	1.7	20.3
4 11	12 28.95	- 5 2.3	1.768	2.754	4.6	19.9	4 11	12 26.68	+ 0 39.5	2.055	3.031	5.2	20.5
4 21	12 22.61	- 4 19.5	1.817	2.764	8.6	20.2	4 21	12 18.14	+ 0 52.7	2.096	3.024	8.8	20.7
5 1	12 18.01	- 3 46.2	1.890	2.775	12.1	20.4	5 1	12 11.24	+ 0 55.4	2.163	3.016	12.0	20.9
431271	2006 U _X ₉₃		3 30.7 243°38	1°4/28.9	17		36065	1999 R _X ₄₈		3 30.7 178°12	5°2/22.5	18	
2 21	13 0.06	- 1 26.6	2.615	3.406	11.4	21.7	2 21	12 58.47	+ 13 12.2	2.926	3.736	9.8	20.1
3 2	12 56.22	- 0 53.8	2.512	3.393	8.9	21.5	3 2	12 54.74	+ 14 32.0	2.853	3.738	7.8	20.0
3 12	12 50.68	- 0 12.7	2.432	3.380	6.0	21.2	3 12	12 49.53	+ 15 51.6	2.806	3.738	6.1	19.9
3 22	12 43.86	+ 0 33.3	2.380	3.367	2.8	21.0	3 22	12 43.27	+ 17 5.2	2.787	3.739	5.2	19.8
4 1	12 36.35	+ 1 19.8	2.358	3.354	1.8	20.9	4 1	12 36.50	+ 18 7.5	2.797	3.739	5.9	19.9
4 11	12 28.86	+ 2 2.2	2.366	3.340	4.8	21.1	4 11	12 29.85	+ 18 54.3	2.836	3.739	7.6	20.0
4 21	12 22.08	+ 2 36.5	2.401	3.326	8.0	21.3	4 21	12 23.88	+ 19 23.3	2.900	3.739	9.6	20.1
5 1	12 16.59	+ 2 59.6	2.462	3.311	10.9	21.4	5 1	12 19.08	+ 19 34.0	2.987	3.738	11.5	20.2
495089	2011 S _A ₂₉		3 30.7 269°57	0°6/31.1	17		165443	2000 Y _A ₁₀₂		3 30.7 83°56	2°7/28.2	18	
2 21	13 5.35	- 7 32.2	1.592	2.384	17.5	22.4	2 21	13 4.50	- 1 53.1	1.586	2.396	16.7	20.1
3 2	13 1.86	- 7 21.9	1.481	2.359	14.1	22.1	3 2	13 0.34	- 0 40.5	1.531	2.424	12.8	19.9
3 12	12 55.43	- 6 54.0	1.391	2.334	9.9	21.8	3 12	12 53.68	+ 0 45.0	1.498	2.451	8.5	19.7
3 22	12 46.47	- 6 10.2	1.323	2.308	5.0	21.4	3 22	12 45.29	+ 2 15.8	1.491	2.477	4.1	19.5
4 1	12 35.91	- 5 14.9	1.283	2.282	0.7	21.1	4 1	12 36.22	+ 3 42.5	1.511	2.504	3.3	19.5
4 11	12 25.08	- 4 15.8	1.269	2.255	6.1	21.4	4 11	12 27.63	+ 4 56.3	1.559	2.529	7.2	19.8
4 21	12 15.35	- 3 21.1	1.281	2.227	11.5	21.6	4 21	12 20.50	+ 5 51.2	1.632	2.555	11.2	20.1
5 1	12 7.90	- 2 38.8	1.315	2.199	16.4	21.8	5 1	12 15.50	+ 6 24.3	1.728	2.579	14.7	20.4
289907	2005 N _G ₆		3 30.7 112°82	0°6/30.0	18		416115	2002 P _F ₁₉₅		3 30.7 197°54	0°7/31.5	14 C	
2 21	13 3.88	- 5 31.6	2.097	2.879	14.1	21.6	2 21	13 4.30	- 8 47.2	2.186	2.953	14.1	23.4
3 2	12 59.34	- 4 50.8	2.025	2.900	11.0	21.4	3 2	12 59.89	- 8 28.2	2.087	2.950	11.2	23.1
3 12	12 52.80	- 3 57.5	1.976	2.921	7.4	21.2	3 12	12 53.36	- 7 55.0	2.010	2.946	7.8	22.9
3 22	12 44.83	- 2 55.9	1.954	2.941	3.4	21.0	3 22	12 45.22	- 7 9.8	1.960	2.942	4.0	22.7
4 1	12 36.24	- 1 51.6	1.961	2.960	1.0	20.9	4 1	12 36.21	- 6 16.5	1.938	2.937	0.8	22.4
4 11	12 27.94	- 0 50.8	1.998	2.978	4.9	21.2	4 11	12 27.26	- 5 20.9	1.946	2.931	4.4	22.7
4 21	12 20.73	+ 0 0.9	2.063	2.996	8.6	21.4	4 21	12 19.26	- 4 28.6	1.982	2.924	8.3	22.9
5 1	12 15.21	+ 0 39.7	2.152	3.014	11.8	21.7	5 1	12 12.91	- 3 45.0	2.044	2.917	11.8	23.1
376253	2011 F _V ₁		3 30.7 70°29	2°2/28.7	17		48413	1986 T _B ₇		3 30.7 193°28	3°3/3.9	18	
2 21	13 2.82	+ 0 5.7	1.898	2.704	14.5	20.4	2 21	12 59.72	- 18 1.8	2.672	3.393	12.9	18.8
3 2	12 58.92	+ 0 34.0	1.815	2.705	11.3	20.2	3 2	12 55.99	- 17 56.1	2.568	3.391	10.7	18.7
3 12	12 52.76	+ 1 11.1	1.755	2.706	7.6	19.9	3 12	12 50.55	- 17 34.1	2.486	3.389	8.2	18.5
3 22	12 44.92	+ 1 52.4	1.721	2.708	3.7	19.7	3 22	12 43.82	- 16 56.3	2.429	3.387	5.4	18.3
4 1	12 36.23	+ 2 32.1	1.714	2.709	2.7	19.6	4 1	12 36.43	- 16 4.6	2.400	3.384	3.4	18.2
4 11	12 27.71	+ 3 4.4	1.736	2.710	6.2	19.8	4 11	12 29.10	- 15 3.1	2.400	3.382	4.1	18.2
4 21	12 20.29	+ 3 24.8	1.783	2.711	10.1	20.1	4 21	12 22.51	- 13 57.0	2.429	3.378	6.6	18.4
5 1	12 14.70	+ 3 30.4	1.855	2.712	13.5	20.3	5 1	12 17.25	- 12 52.0	2.485	3.375	9.4	18.5
160545	1998 K _A ₁₁	</											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
63658	2001 <i>QJ</i> ₁₁₅		3 30.7 223°26	3°3/ 3.6	18		174571	2003 <i>OV</i> ₁₂		3 30.7 267°94	4°7/ 3.5	17	
2 21	13 0.24	-16 54.3	2.516	3.245	13.4	19.9	2 21	13 4.69	-17 17.0	1.828	2.571	17.3	20.5
3 2	12 56.54	-16 56.9	2.410	3.240	11.1	19.8	3 2	13 1.11	-17 38.6	1.709	2.546	14.6	20.2
3 12	12 51.01	-16 43.4	2.326	3.234	8.4	19.6	3 12	12 54.80	-17 40.0	1.610	2.521	11.3	19.9
3 22	12 44.08	-16 14.1	2.267	3.228	5.6	19.4	3 22	12 46.18	-17 19.3	1.533	2.495	7.6	19.7
4 1	12 36.39	-15 30.9	2.235	3.222	3.4	19.2	4 1	12 36.08	-16 36.7	1.482	2.468	4.9	19.4
4 11	12 28.74	-14 37.6	2.233	3.215	4.3	19.3	4 11	12 25.68	-15 36.5	1.459	2.441	6.0	19.4
4 21	12 21.86	-13 39.4	2.259	3.208	7.0	19.4	4 21	12 16.24	-14 26.0	1.462	2.413	9.9	19.6
5 1	12 16.38	-12 42.2	2.311	3.201	10.0	19.6	5 1	12 8.86	-13 14.3	1.489	2.385	14.1	19.8
278725	2008 <i>SN</i> ₆₄		3 30.7 145°65	0°9/31.8	17		242916	2006 <i>OS</i> ₂		3 30.7 192°77	0°8/31.6	16	
2 21	12 59.47	-11 33.0	2.274	3.037	13.7	20.8	2 21	13 4.71	-9 1.1	2.199	2.964	14.1	21.7
3 2	12 55.95	-10 45.0	2.184	3.044	10.9	20.6	3 2	13 0.20	-8 42.8	2.101	2.963	11.2	21.5
3 12	12 50.58	-9 40.0	2.117	3.051	7.6	20.4	3 12	12 53.57	-8 10.3	2.025	2.960	7.8	21.2
3 22	12 43.84	-8 20.9	2.076	3.057	4.0	20.2	3 22	12 45.34	-7 25.7	1.975	2.957	4.0	21.0
4 1	12 36.44	-6 53.0	2.064	3.063	0.9	19.9	4 1	12 36.25	-6 33.0	1.954	2.953	0.8	20.7
4 11	12 29.20	-5 23.0	2.082	3.068	4.1	20.2	4 11	12 27.23	-5 37.6	1.963	2.948	4.4	21.0
4 21	12 22.85	-3 57.9	2.129	3.073	7.7	20.4	4 21	12 19.15	-4 45.3	2.000	2.942	8.3	21.2
5 1	12 18.00	-2 43.6	2.202	3.078	11.0	20.6	5 1	12 12.74	-4 1.4	2.063	2.936	11.7	21.4
460420	2014 <i>SA</i> ₁₄₂		3 30.7 289°04	13°6/20.2	17		437771	2015 <i>AC</i> ₁₉₈		3 30.7 180°87	3°2/27.3	17	
2 21	13 15.36	+26 23.2	1.501	2.306	17.8	20.3	2 21	13 1.65	+2 8.1	2.068	2.876	13.4	21.5
3 2	13 10.04	+27 41.5	1.422	2.282	15.7	20.1	3 2	12 57.83	+3 3.4	1.985	2.877	10.4	21.3
3 12	13 1.07	+28 47.4	1.362	2.258	14.1	19.9	3 12	12 51.95	+4 6.7	1.926	2.877	7.0	21.1
3 22	12 49.15	+29 27.4	1.324	2.233	13.6	19.8	3 22	12 44.54	+5 12.4	1.893	2.877	3.9	20.9
4 1	12 35.63	+29 29.3	1.309	2.209	14.7	19.8	4 1	12 36.37	+6 13.9	1.889	2.877	3.8	20.9
4 11	12 22.27	+28 46.8	1.316	2.184	17.0	19.9	4 11	12 28.35	+7 4.7	1.913	2.876	6.8	21.1
4 21	12 10.73	+27 21.4	1.343	2.159	19.8	20.0	4 21	12 21.32	+7 40.3	1.964	2.875	10.2	21.3
5 1	12 2.21	+25 19.4	1.387	2.135	22.7	20.1	5 1	12 15.95	+7 58.1	2.038	2.874	13.3	21.5
290761	2005 <i>UV</i> ₅₁₀		3 30.7 272°90	2°1/ 1.4	17		503854	1996 <i>RA</i> ₇		3 30.7 206°01	1°5/ 1.3	17	
2 21	13 2.54	-11 59.3	1.515	2.300	18.5	21.8	2 21	13 2.89	-9 53.2	2.449	3.208	13.0	21.7
3 2	12 59.80	-11 48.2	1.407	2.278	15.2	21.5	3 2	12 58.57	-10 0.0	2.349	3.205	10.4	21.5
3 12	12 54.10	-11 14.0	1.319	2.256	11.0	21.2	3 12	12 52.37	-9 55.1	2.273	3.203	7.4	21.3
3 22	12 45.89	-10 17.0	1.253	2.233	6.2	20.8	3 22	12 44.74	-9 39.6	2.222	3.200	4.1	21.1
4 1	12 36.10	-9 1.3	1.212	2.209	2.1	20.5	4 1	12 36.34	-9 15.8	2.200	3.197	1.5	20.9
4 11	12 26.09	-7 35.2	1.198	2.186	5.9	20.7	4 11	12 28.00	-8 47.6	2.208	3.193	3.9	21.1
4 21	12 17.24	-6 9.2	1.209	2.162	11.3	20.9	4 21	12 20.48	-8 19.1	2.244	3.190	7.3	21.3
5 1	12 10.74	-4 53.8	1.242	2.138	16.3	21.1	5 1	12 14.42	-7 54.4	2.306	3.186	10.4	21.5
273930	2007 <i>JJ</i> ₄		3 30.7 317°85	4°1/ 3.9	17		290336	2005 <i>ST</i> ₂₃₅		3 30.7 62°70	1°3/31.9	18	
2 21	12 57.64	-18 14.9	1.779	2.533	17.3	20.1	2 21	13 2.63	-9 41.6	1.680	2.465	17.0	21.3
3 2	12 55.34	-18 8.3	1.680	2.524	14.5	19.9	3 2	12 59.00	-9 31.5	1.609	2.481	13.5	21.1
3 12	12 50.64	-17 37.3	1.600	2.516	11.1	19.6	3 12	12 52.92	-9 4.2	1.558	2.497	9.4	20.9
3 22	12 44.04	-16 41.8	1.543	2.507	7.3	19.4	3 22	12 45.03	-8 22.1	1.532	2.514	4.9	20.6
4 1	12 36.40	-15 24.7	1.511	2.500	4.4	19.2	4 1	12 36.31	-7 30.2	1.532	2.530	1.3	20.4
4 11	12 28.80	-13 52.9	1.506	2.492	5.4	19.2	4 11	12 27.90	-6 35.6	1.560	2.547	5.0	20.7
4 21	12 22.27	-12 15.6	1.528	2.485	9.0	19.4	4 21	12 20.79	-5 45.1	1.614	2.563	9.3	21.0
5 1	12 17.66	-10 42.6	1.573	2.478	12.9	19.6	5 1	12 15.73	-5 4.8	1.691	2.580	13.0	21.3
238188	2003 <i>SU</i> ₂₇₉		3 30.7 267°92	0°8/31.5	17		403912	2011 <i>YD</i> ₅₁		3 30.7 72°22	2°7/28.5	18	
2 21	12 59.78	-9 14.9	2.064	2.843	14.5	20.8	2 21	13 3.86	-0 50.0	1.484	2.302	17.3	20.9
3 2	12 56.55	-8 52.2	1.963	2.832	11.6	20.5	3 2	13 0.18	-0 2.8	1.421	2.318	13.4	20.7
3 12	12 51.21	-8 13.8	1.883	2.822	8.1	20.3	3 12	12 53.81	+0 56.6	1.379	2.333	8.9	20.4
3 22	12 44.24	-7 21.9	1.829	2.812	4.1	20.0	3 22	12 45.47	+2 1.6	1.362	2.349	4.3	20.2
4 1	12 36.38	-6 20.9	1.803	2.802	0.8	19.8	4 1	12 36.26	+3 3.7	1.370	2.364	3.3	20.2
4 11	12 28.54	-5 17.0	1.805	2.791	4.6	20.0	4 11	12 27.45	+3 54.7	1.405	2.380	7.3	20.5
4 21	12 21.61	-4 16.8	1.835	2.781	8.6	20.2	4 21	12 20.13	+4 28.8	1.465	2.395	11.7	20.7
5 1	12 16.33	-3 25.9	1.889	2.770	12.3	20.4	5 1	12 15.06	+4 43.1	1.547	2.411	15.5	21.0
216610	2002 <i>TC</i> ₂₁₇		3 30.7 173°92	1°9/28.7	18		507828	2014 <i>DE</i> ₁₄₆		3 30.7 239°87	3°8/ 3.9	18	
2 21	13 3.79	-1 28.9	2.163	2.956	13.4	21.8	2 21	13 0.94	-17 17.7	2.416	3.145	13.9	21.3
3 2	12 59.39	-0 44.3	2.077	2.959	10.4	21.6	3 2	12 57.18	-17 35.3	2.315	3.143	11.6	21.1
3 12	12 52.96	+0 10.3	2.013	2.962	7.0	21.4	3 12	12 51.49	-17 37.1	2.236	3.141	8.9	20.9
3 22	12 45.00	+1 10.5	1.977	2.964	3.3	21.2	3 22	12 44.35	-17 22.7	2.181	3.139	6.0	20.7
4 1	12 36.29	+2 10.3	1.970	2.965	2.3	21.1	4 1	12 36.41	-16 53.6	2.154	3.137	3.9	20.6
4 11	12 27.73	+3 3.8	1.993	2.966	5.7	21.3	4 11	12 28.52	-16 13.3	2.155	3.135	4.6	20.6
4 21	12 20.14	+3 45.8	2.043	2.965	9.3	21.5	4 21	12 21.45	-15 26.7	2.184	3.133	7.3	20.8
5 1	12 14.21	+4 13.2	2.117	2.965	12.5	21.7	5 1	12 15.87	-14 39.4	2.239	3.131	10.2	21.0
105579	2000 <i>RE</i> ₇₇		3 30.7 189°30	0°1/30.8	18		170080	2002 <i>WQ</i> ₈		3 30.7 28°43	5°8/24.8	18	
2 21	13 5.07	-7 21.1	2.174	2.945	14.0	21.4	2 21	13 1.57	+10 52.2	2.049	2.869	13.1	19.5
3 2	13 0.47	-6 49.1	2.077	2.944	11.1	21.2	3 2	12 57.76	+11 49.2	1.978	2.871	10.3	19.3
3 12	12 53.75	-6 3.0	2.003	2.943	7.6	21.0	3 12	12 51.88	+12 46.6	1.931	2.874	7.6	19.2
3 22	12 45.41	-5 5.7	1.956	2.940	3.7	20.7	3 22	12 44.49	+13 37.8	1.910	2.877	5.9	19.1
4 1	12 36.22	-4 4.1	1.938	2.937	0.5	20.5	4 1	12 36.40	+14 16.2	1.916	2.880	6.4	19.1
4 11	12 27.13	-2 58.4	1.949	2.932	4.7	20.8	4 11	12 28.54	+14 36.6	1.949	2.883	8.8	19.2
4 21	12 19.00	-2 0.7	1.990	2.927	8.6	21.0	4 21	12 21.72	+14 36.8	2.007	2.886	11.6	19.4
5 1	12 12.55	-1 14.0	2.056	2.920	12.1	21.2	5 1	12 16.60	+14 16.8	2.086	2.890	14.2	19.6
135106	2001 <i>QN</i> ₁₀₀		3 30.7 95°83	3°4/27.3	18		438868	2009 <i></i>					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
269797	1999 <i>UR</i> ₃₇		3 30.7 34°15'	0.4/30.3	17		475764	2006 <i>WM</i> ₁₇₁		3 30.7 198°76'	2.4/2.8	17	
2 21	12 57.34	- 8 4.9	1.775	2.573	15.7	20.1	2 21	12 58.66	-15 10.6	2.715	3.452	12.4	21.9
3 2	12 54.83	- 7 5.6	1.694	2.578	12.3	19.8	3 2	12 55.13	-14 57.8	2.613	3.450	10.1	21.7
3 12	12 50.10	- 5 47.4	1.635	2.583	8.4	19.6	3 12	12 49.96	-14 30.1	2.532	3.448	7.5	21.5
3 22	12 43.71	- 4 15.3	1.601	2.588	3.9	19.3	3 22	12 43.58	-13 48.7	2.478	3.446	4.6	21.4
4 1	12 36.52	- 2 36.7	1.595	2.593	0.9	19.1	4 1	12 36.57	-12 55.9	2.452	3.443	2.5	21.2
4 11	12 29.52	- 1 1.0	1.616	2.599	5.4	19.5	4 11	12 29.62	-11 56.2	2.456	3.440	3.6	21.3
4 21	12 23.61	+ 0 23.6	1.664	2.605	9.7	19.7	4 21	12 23.39	-10 54.4	2.488	3.437	6.5	21.5
5 1	12 19.50	+ 1 30.8	1.736	2.611	13.4	20.0	5 1	12 18.41	- 9 55.6	2.547	3.434	9.3	21.6
67266	2000 <i>EC</i> ₁₆₃		3 30.7 215°41'	0.1/30.7	18		391721	2008 <i>CX</i> ₇₄		3 30.7 325°02'	1.9/1.7	17	
2 21	13 2.55	- 7 46.4	1.529	2.328	17.7	20.1	2 21	12 59.26	-11 11.7	2.197	2.965	14.0	21.1
3 2	12 59.42	- 7 10.2	1.442	2.325	14.1	19.8	3 2	12 56.02	-11 12.6	2.098	2.958	11.3	20.9
3 12	12 53.53	- 6 13.8	1.376	2.322	9.7	19.6	3 12	12 50.80	-10 59.2	2.020	2.951	8.1	20.6
3 22	12 45.47	- 5 1.2	1.333	2.319	4.6	19.3	3 22	12 44.06	-10 32.6	1.968	2.945	4.6	20.4
4 1	12 36.25	- 3 39.4	1.317	2.316	0.7	18.9	4 1	12 36.49	- 9 55.7	1.943	2.939	1.9	20.2
4 11	12 27.16	- 2 18.1	1.328	2.312	6.1	19.3	4 11	12 28.97	- 9 13.0	1.946	2.933	4.2	20.4
4 21	12 19.38	- 1 6.5	1.364	2.308	11.1	19.6	4 21	12 22.30	- 8 30.0	1.977	2.927	7.8	20.6
5 1	12 13.85	- 0 11.8	1.422	2.304	15.5	19.8	5 1	12 17.17	- 7 51.8	2.033	2.922	11.2	20.8
258907	2002 <i>QP</i> ₁₁₃		3 30.7 231°86'	2.4/3.1	18		274303	2008 <i>QW</i> ₂₅		3 30.7 203°87'	1.8/28.8	17	
2 21	12 57.08	-15 36.2	3.027	3.759	11.3	21.1	2 21	13 1.38	- 1 40.6	2.133	2.931	13.4	20.8
3 2	12 53.73	-15 26.0	2.920	3.754	9.3	20.9	3 2	12 57.61	- 0 59.1	2.043	2.928	10.4	20.5
3 12	12 48.93	-15 2.4	2.836	3.749	6.9	20.7	3 12	12 51.83	- 0 7.4	1.976	2.926	7.0	20.3
3 22	12 43.06	-14 26.2	2.778	3.744	4.4	20.6	3 22	12 44.52	+ 0 50.3	1.936	2.923	3.3	20.1
4 1	12 36.62	-13 39.6	2.749	3.738	2.5	20.4	4 1	12 36.43	+ 1 48.3	1.924	2.919	2.2	20.0
4 11	12 30.23	-12 46.3	2.749	3.733	3.4	20.5	4 11	12 28.46	+ 2 40.4	1.942	2.916	5.7	20.2
4 21	12 24.45	-11 50.3	2.778	3.728	5.9	20.6	4 21	12 21.41	+ 3 21.5	1.986	2.912	9.3	20.4
5 1	12 19.77	-10 56.2	2.835	3.722	8.4	20.8	5 1	12 15.97	+ 3 48.1	2.055	2.908	12.6	20.6
331941	2004 <i>TB</i> ₁₂₃		3 30.7 215°39'	1.2/29.4	17		197179	2003 <i>UM</i> ₂₆₆		3 30.7 216°36'	0.2/30.9	18	
2 21	13 2.19	- 3 4.2	2.448	3.232	12.3	22.4	2 21	13 0.38	- 7 30.1	2.281	3.059	13.3	21.2
3 2	12 58.01	- 2 27.9	2.347	3.224	9.6	22.2	3 2	12 56.75	- 7 1.1	2.183	3.054	10.5	21.0
3 12	12 51.99	- 1 41.5	2.269	3.215	6.4	22.0	3 12	12 51.21	- 6 18.8	2.108	3.049	7.2	20.8
3 22	12 44.57	- 0 48.6	2.219	3.206	3.0	21.8	3 22	12 44.23	- 5 26.0	2.059	3.044	3.5	20.5
4 1	12 36.40	+ 0 6.4	2.199	3.196	1.5	21.6	4 1	12 36.48	- 4 26.9	2.040	3.039	0.5	20.3
4 11	12 28.27	+ 0 57.9	2.208	3.185	4.9	21.8	4 11	12 28.80	- 3 27.4	2.049	3.033	4.4	20.6
4 21	12 20.93	+ 1 41.3	2.246	3.174	8.3	22.0	4 21	12 21.97	- 2 33.0	2.086	3.027	8.1	20.8
5 1	12 15.02	+ 2 12.9	2.309	3.162	11.4	22.2	5 1	12 16.63	- 1 48.4	2.149	3.021	11.4	21.0
219533	2001 <i>QO</i> ₁₈₄		3 30.7 184°44'	0.1/30.9	16		35314	1997 <i>AV</i> ₈		3 30.7 86°15'	7.1/8.1	18	
2 21	13 0.84	- 9 16.6	2.192	2.965	13.9	20.7	2 21	13 3.48	-27 46.9	2.474	3.132	15.2	18.6
3 2	12 57.15	- 8 21.7	2.097	2.965	11.0	20.5	3 2	12 59.23	-28 34.9	2.385	3.145	13.4	18.5
3 12	12 51.49	- 7 9.9	2.025	2.965	7.5	20.2	3 12	12 52.92	-29 3.2	2.316	3.158	11.2	18.3
3 22	12 44.34	- 5 44.9	1.980	2.964	3.7	20.0	3 22	12 45.05	-29 9.5	2.269	3.171	9.1	18.2
4 1	12 36.44	- 4 12.3	1.964	2.963	0.5	19.7	4 1	12 36.37	-28 53.2	2.247	3.183	7.4	18.1
4 11	12 28.66	- 2 39.7	1.978	2.961	4.6	20.0	4 11	12 27.79	-28 16.7	2.251	3.196	7.1	18.1
4 21	12 21.78	- 1 14.2	2.020	2.958	8.4	20.3	4 21	12 20.15	-27 24.9	2.282	3.209	8.3	18.2
5 1	12 16.49	- 0 1.8	2.088	2.955	11.9	20.5	5 1	12 14.16	-26 24.1	2.339	3.221	10.2	18.3
42563	1996 <i>XK</i> ₂₂		3 30.7 244°62'	0.7/30.1	18		209362	2004 <i>DD</i> ₅₉		3 30.7 336°19'	2.2/28.4	17	
2 21	13 4.67	- 4 26.1	1.911	2.701	15.0	20.3	2 21	12 58.11	- 0 53.3	1.977	2.788	13.8	20.3
3 2	13 0.63	- 4 2.5	1.807	2.686	11.9	20.1	3 2	12 55.25	- 0 7.2	1.890	2.783	10.7	20.1
3 12	12 54.16	- 3 25.8	1.725	2.671	8.1	19.8	3 12	12 50.33	+ 0 49.5	1.825	2.778	7.2	19.9
3 22	12 45.75	- 2 39.3	1.669	2.655	3.8	19.5	3 22	12 43.85	+ 1 51.9	1.786	2.773	3.5	19.6
4 1	12 36.22	- 1 47.9	1.640	2.639	1.2	19.3	4 1	12 36.56	+ 2 53.7	1.775	2.769	2.7	19.5
4 11	12 26.65	- 0 58.3	1.640	2.622	5.6	19.5	4 11	12 29.38	+ 3 48.1	1.792	2.765	6.2	19.8
4 21	12 18.08	- 0 16.8	1.668	2.604	10.0	19.7	4 21	12 23.16	+ 4 29.7	1.835	2.761	9.9	20.0
5 1	12 11.39	+ 0 11.9	1.719	2.586	14.0	19.9	5 1	12 18.57	+ 4 54.9	1.901	2.758	13.3	20.2
2217	Eltigen		3 30.7 265°51'	0.9/29.7	18		353612	2011 <i>UQ</i> ₂₁		3 30.7 184°30'	0.7/31.5	17	
2 21	12 59.04	- 3 39.9	2.537	3.325	11.8	16.7	2 21	13 1.48	- 7 36.5	2.697	3.462	11.8	22.0
3 2	12 55.54	- 3 8.8	2.431	3.310	9.3	16.5	3 2	12 57.25	- 7 32.2	2.599	3.462	9.3	21.8
3 12	12 50.32	- 2 27.8	2.349	3.295	6.2	16.3	3 12	12 51.37	- 7 17.9	2.526	3.462	6.5	21.6
3 22	12 43.78	- 1 39.9	2.293	3.280	2.9	16.1	3 22	12 44.26	- 6 55.5	2.479	3.461	3.3	21.4
4 1	12 36.52	- 0 49.4	2.267	3.265	1.2	15.9	4 1	12 36.51	- 6 27.6	2.462	3.461	0.7	21.2
4 11	12 29.27	- 0 1.2	2.270	3.249	4.5	16.1	4 11	12 28.83	- 5 57.9	2.475	3.460	3.6	21.4
4 21	12 22.72	+ 0 40.2	2.302	3.233	7.9	16.3	4 21	12 21.89	- 5 30.2	2.516	3.459	6.8	21.6
5 1	12 17.49	+ 1 11.0	2.358	3.218	11.0	16.5	5 1	12 16.25	- 5 7.9	2.584	3.457	9.7	21.8
499265	2009 <i>VQ</i> ₃₉		3 30.7 175°53'	8.9/10.6	17		128429	2004 <i>NK</i>		3 30.7 233°70'	0.7/30.0	18	
2 21	13 1.19	-33 8.0	2.127	2.765	17.9	20.8	2 21	13 2.67	- 4 18.6	1.994	2.786	14.4	20.6
3 2	12 57.98	-33 37.0	2.028	2.766	16.1	20.6	3 2	12 58.85	- 3 54.2	1.898	2.779	11.4	20.4
3 12	12 52.36	-33 39.0	1.945	2.766	13.9	20.4	3 12	12 52.81	- 3 17.7	1.826	2.772	7.7	20.2
3 22	12 44.86	-33 10.4	1.882	2.766	11.6	20.3	3 22	12 45.06	- 2 32.3	1.779	2.765	3.6	19.9
4 1	12 36.36	-32 10.0	1.842	2.767	9.7	20.2	4 1	12 36.39	- 1 43.2	1.760	2.758	1.1	19.7
4 11	12 27.95	-30 41.2	1.827	2.767	8.9	20.1	4 11	12 27.78	- 0 56.4	1.769	2.751	5.3	20.0
4 21	12 20.66	-28 51.2	1.838	2.767	9.8	20.2	4 21	12 20.16	- 0 17.6	1.806	2.743	9.4	20.2
5 1	12 15.31	-26 49.8	1.875	2.766	11.8	20.3	5 1	12 14.29	+ 0 9.0	1.867	2.735	13.0	20.4
463687	2014 <i>OE</i> ₁₉₈		3 30.7 134°45'	1.2/29.5	18		4914	Pardina		3 30.7 134°28'	5.4/5.9	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
477945	2011 <i>QV</i> ₉₄		3 30.7 90°37'	3°6/ 3.7	17		502521	2015 <i>BA</i> ₄₃₄		3 30.7 104°75'	3°1/27.6	17	
2 21	13 1.02	-16 46.2	2.394	3.126	14.0	21.4	2 21	13 1.34	+ 1 54.8	1.989	2.800	13.8	21.5
3 2	12 57.23	-17 2.5	2.298	3.128	11.6	21.2	3 2	12 57.67	+ 2 43.9	1.911	2.804	10.7	21.3
3 12	12 51.53	-17 3.1	2.223	3.131	8.8	21.0	3 12	12 51.90	+ 3 40.8	1.857	2.808	7.2	21.1
3 22	12 44.39	-16 47.9	2.173	3.133	5.9	20.8	3 22	12 44.58	+ 4 40.0	1.828	2.813	3.9	20.9
4 1	12 36.50	-16 18.5	2.151	3.136	3.8	20.7	4 1	12 36.52	+ 5 35.1	1.828	2.817	3.6	20.9
4 11	12 28.68	-15 38.5	2.157	3.138	4.5	20.7	4 11	12 28.65	+ 6 19.6	1.855	2.821	6.7	21.1
4 21	12 21.71	-14 52.8	2.191	3.141	7.2	20.9	4 21	12 21.81	+ 6 49.4	1.909	2.825	10.2	21.3
5 1	12 16.24	-14 7.1	2.251	3.143	10.1	21.1	5 1	12 16.68	+ 7 1.9	1.986	2.829	13.4	21.5
246144	2007 <i>PA</i> ₆		3 30.7 259°34'	0°8/30.1	17		270519	2002 <i>GN</i> ₃₀		3 30.7 28°31'	3°0/28.2	18	
2 21	13 5.09	- 4 54.5	1.765	2.558	16.0	21.7	2 21	13 2.14	+ 1 31.1	1.668	2.487	15.7	19.9
3 2	13 1.30	- 4 27.1	1.655	2.536	12.7	21.5	3 2	12 58.69	+ 2 4.9	1.595	2.492	12.2	19.7
3 12	12 54.86	- 3 44.5	1.567	2.513	8.7	21.2	3 12	12 52.79	+ 2 47.2	1.543	2.497	8.2	19.5
3 22	12 46.21	- 2 49.6	1.503	2.490	4.1	20.8	3 22	12 45.06	+ 3 32.4	1.516	2.502	4.2	19.3
4 1	12 36.22	- 1 48.2	1.467	2.466	1.3	20.6	4 1	12 36.45	+ 4 13.7	1.516	2.508	3.5	19.2
4 11	12 26.06	- 0 48.0	1.460	2.441	6.1	20.8	4 11	12 28.09	+ 4 44.4	1.543	2.515	7.1	19.5
4 21	12 16.93	+ 0 3.7	1.478	2.416	11.0	21.0	4 21	12 20.98	+ 5 0.2	1.595	2.521	11.1	19.7
5 1	12 9.83	+ 0 40.6	1.520	2.390	15.3	21.2	5 1	12 15.89	+ 4 58.6	1.669	2.528	14.7	19.9
6268	<i>Versailles</i>		3 30.7 95°04'	1°2/29.7	18		142401	2002 <i>SH</i> ₂₃		3 30.7 293°90'	2°2/29.6	17	
2 21	13 6.32	- 4 10.3	1.561	2.363	17.3	18.3	2 21	13 13.26	+ 2 18.1	1.589	2.391	17.1	20.0
3 2	13 1.96	- 3 33.0	1.497	2.383	13.5	18.1	3 2	13 8.18	+ 1 57.7	1.481	2.366	13.7	19.7
3 12	12 54.96	- 2 41.2	1.454	2.403	9.0	17.9	3 12	12 59.85	+ 1 40.8	1.393	2.341	9.4	19.4
3 22	12 46.04	- 1 40.1	1.435	2.423	4.2	17.7	3 22	12 48.74	+ 1 24.1	1.330	2.316	4.7	19.0
4 1	12 36.29	- 0 37.3	1.444	2.442	1.7	17.6	4 1	12 35.88	+ 1 3.5	1.295	2.292	2.5	18.8
4 11	12 26.96	+ 0 19.3	1.480	2.461	6.3	17.9	4 11	12 22.75	+ 0 34.8	1.288	2.267	7.2	19.1
4 21	12 19.11	+ 1 3.2	1.542	2.479	10.7	18.2	4 21	12 10.85	- 0 4.5	1.307	2.242	12.4	19.3
5 1	12 13.52	+ 1 30.3	1.627	2.497	14.5	18.5	5 1	12 1.45	- 0 55.8	1.350	2.217	17.0	19.5
68457	2001 <i>SC</i> ₆₃		3 30.7 116°31'	1°1/29.4	18		9973	<i>Szpilman</i>		3 30.7 136°04'	0°8/31.5	18	
2 21	13 0.61	- 2 40.9	2.525	3.312	11.9	19.9	2 21	13 4.18	- 8 52.2	2.071	2.842	14.7	19.0
3 2	12 56.58	- 2 9.0	2.444	3.324	9.2	19.8	3 2	12 59.80	- 8 32.6	1.988	2.853	11.6	18.8
3 12	12 50.89	- 1 28.5	2.389	3.335	6.1	19.6	3 12	12 53.31	- 7 58.6	1.927	2.864	8.1	18.6
3 22	12 44.01	- 0 43.1	2.360	3.347	2.8	19.4	3 22	12 45.25	- 7 12.6	1.892	2.874	4.1	18.3
4 1	12 36.58	+ 0 3.1	2.361	3.358	1.4	19.3	4 1	12 36.43	- 6 19.0	1.885	2.884	0.8	18.1
4 11	12 29.32	+ 0 45.2	2.392	3.369	4.5	19.5	4 11	12 27.82	- 5 23.9	1.908	2.893	4.5	18.4
4 21	12 22.89	+ 1 19.6	2.451	3.379	7.6	19.7	4 21	12 20.26	- 4 33.0	1.959	2.902	8.3	18.7
5 1	12 17.81	+ 1 43.2	2.535	3.390	10.4	19.9	5 1	12 14.44	- 3 51.4	2.034	2.910	11.7	18.9
438436	2006 <i>WC</i> ₉₇		3 30.7 222°90'	4°1/26.1	17		115238	2003 <i>SQ</i> ₁₄₇		3 30.7 236°93'	3°7/ 2.7	17	
2 21	13 1.40	+ 7 50.8	2.476	3.284	11.5	21.6	2 21	13 4.94	-14 34.3	1.771	2.528	17.3	20.4
3 2	12 57.31	+ 8 32.7	2.393	3.282	9.0	21.4	3 2	13 1.14	-14 53.2	1.671	2.521	14.3	20.1
3 12	12 51.46	+ 9 16.8	2.334	3.279	6.3	21.2	3 12	12 54.69	-14 53.3	1.592	2.513	10.7	19.9
3 22	12 44.31	+ 9 58.1	2.302	3.277	4.3	21.1	3 22	12 46.10	-14 33.9	1.536	2.505	6.7	19.6
4 1	12 36.54	+10 31.7	2.299	3.274	4.6	21.1	4 1	12 36.29	-13 56.8	1.506	2.497	3.8	19.4
4 11	12 28.89	+10 53.1	2.325	3.271	6.8	21.2	4 11	12 26.45	-13 7.1	1.503	2.488	5.5	19.5
4 21	12 22.08	+10 59.9	2.377	3.268	9.5	21.4	4 21	12 17.75	-12 12.1	1.527	2.479	9.5	19.7
5 1	12 16.67	+10 51.0	2.452	3.265	12.1	21.5	5 1	12 11.14	-11 19.4	1.575	2.470	13.5	19.9
278789	2008 <i>SC</i> ₁₉₆		3 30.7 257°36'	1°3/29.5	17		277331	2005 <i>TN</i> ₁₂		3 30.7 185°07'	0°9/29.8	17	
2 21	13 2.03	- 2 28.8	2.064	2.861	13.9	21.2	2 21	13 2.73	- 4 20.7	2.235	3.020	13.3	22.2
3 2	12 58.26	- 2 4.7	1.970	2.854	10.9	21.0	3 2	12 58.58	- 3 45.0	2.143	3.020	10.4	22.0
3 12	12 52.37	- 1 30.5	1.898	2.846	7.3	20.8	3 12	12 52.46	- 2 57.7	2.074	3.020	7.0	21.8
3 22	12 44.85	- 0 49.6	1.852	2.839	3.4	20.5	3 22	12 44.85	- 2 2.6	2.032	3.019	3.2	21.6
4 1	12 36.45	- 0 6.9	1.835	2.832	1.6	20.4	4 1	12 36.49	- 1 4.6	2.019	3.017	1.2	21.4
4 11	12 28.13	+ 0 31.7	1.846	2.824	5.4	20.6	4 11	12 28.24	- 0 9.5	2.036	3.015	4.9	21.7
4 21	12 20.75	+ 1 1.6	1.884	2.817	9.3	20.8	4 21	12 20.89	+ 0 37.3	2.081	3.013	8.6	21.9
5 1	12 15.05	+ 1 18.9	1.946	2.809	12.7	21.0	5 1	12 15.12	+ 1 12.0	2.150	3.010	11.9	22.1
29134	1987 <i>RW</i>		3 30.7 146°20'	1°9/ 1.3	18		339031	2004 <i>HY</i> ₃₇		3 30.7 75°39'	3°4/27.4	18	
2 21	13 7.98	-10 40.9	1.821	2.586	16.6	18.9	2 21	13 3.14	+ 5 0.0	2.183	2.990	12.8	20.3
3 2	13 3.14	-10 42.0	1.737	2.596	13.3	18.6	3 2	12 58.80	+ 5 31.4	2.109	2.999	9.9	20.2
3 12	12 55.77	-10 26.4	1.674	2.606	9.5	18.4	3 12	12 52.52	+ 6 6.5	2.060	3.009	6.8	20.0
3 22	12 46.48	- 9 55.7	1.636	2.614	5.2	18.2	3 22	12 44.83	+ 6 40.6	2.037	3.018	4.0	19.8
4 1	12 36.22	- 9 13.5	1.625	2.622	1.9	18.0	4 1	12 36.50	+ 7 8.4	2.043	3.028	3.9	19.8
4 11	12 26.18	- 8 25.7	1.644	2.630	4.9	18.2	4 11	12 28.41	+ 7 25.6	2.077	3.037	6.5	20.0
4 21	12 17.39	- 7 38.9	1.689	2.636	9.1	18.5	4 21	12 21.32	+ 7 29.3	2.137	3.047	9.6	20.2
5 1	12 10.69	- 6 59.3	1.759	2.642	12.9	18.7	5 1	12 15.85	+ 7 18.6	2.222	3.056	12.4	20.4
345696	2006 <i>UN</i> ₁₉₀		3 30.7 108°49'	5°6/ 7.2	18		8480	1987 <i>RD</i> ₁		3 30.8 80°76'	0°1/30.8	18	
2 21	12 59.50	-25 53.7	2.575	3.250	14.3	20.3	2 21	13 3.99	- 6 21.4	1.833	2.621	15.6	18.0
3 2	12 55.98	-26 1.8	2.480	3.259	12.4	20.2	3 2	12 59.81	- 6 1.6	1.763	2.640	12.3	17.8
3 12	12 50.63	-25 49.8	2.405	3.268	10.1	20.0	3 12	12 53.36	- 5 28.1	1.715	2.659	8.3	17.6
3 22	12 43.95	-25 16.6	2.353	3.276	7.8	19.9	3 22	12 45.27	- 4 44.4	1.693	2.678	4.0	17.3
4 1	12 36.59	-24 23.4	2.328	3.285	5.9	19.8	4 1	12 36.45	- 3 55.8	1.698	2.697	0.6	17.1
4 11	12 29.36	-23 14.1	2.330	3.293	5.7	19.8	4 11	12 27.95	- 3 8.6	1.732	2.716	5.0	17.5
4 21	12 22.99	-21 54.2	2.360	3.302	7.2	19.9	4 21	12 20.68	- 2 28.4	1.792	2.734	9.1	17.8
5 1	12 18.07	-20 30.5	2.416	3.310	9.5	20.0	5 1	12 15.31	- 1 59.8	1.877	2.752	12.6	18.0
503675	2016 <i>HM</i> ₅		3 30.7 285°53'	2°0/ 1.9	17		363287	2002 <i>GK</i> ₁₈₅		3 30.8 359°54'	2°1/29.5	17	

EPHEMERIDES

3 30.8

3 30.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
294009	2007 <i>TV</i> ₉₅		3 30.8	32°71	6°3/26.1	18	224252	2005 <i>SG</i> ₁₉₃		3 30.8	93°75	7°0/24.6	18
2 21	13 7.30	+12 29.7	1.748	2.567	15.0	19.7	2 21	13 9.14	+14 50.9	1.938	2.748	14.1	20.0
3 2	13 2.42	+12 55.3	1.690	2.581	11.9	19.5	3 2	13 3.60	+15 43.2	1.884	2.767	11.3	19.9
3 12	12 55.10	+13 18.0	1.655	2.597	8.8	19.4	3 12	12 55.76	+16 31.4	1.853	2.785	8.7	19.8
3 22	12 46.07	+13 31.0	1.644	2.613	6.5	19.3	3 22	12 46.36	+17 8.3	1.848	2.804	7.1	19.7
4 1	12 36.36	+13 28.7	1.661	2.629	6.8	19.3	4 1	12 36.34	+17 27.4	1.871	2.822	7.6	19.8
4 11	12 27.11	+13 7.7	1.704	2.646	9.2	19.5	4 11	12 26.78	+17 25.0	1.920	2.840	9.8	19.9
4 21	12 19.28	+12 27.7	1.772	2.664	12.2	19.7	4 21	12 18.58	+17 0.8	1.994	2.858	12.4	20.1
5 1	12 13.54	+11 30.3	1.861	2.682	15.0	19.9	5 1	12 12.38	+16 16.6	2.090	2.875	14.8	20.3
169251	2001 <i>SG</i> ₁₁₃		3 30.8	53°73	1°2/ 1.1	18	388029	2005 <i>SH</i> ₈₇		3 30.8	325°78	1°3/29.7	17
2 21	12 57.76	-11 30.2	2.158	2.929	14.2	20.0	2 21	13 4.91	+ 0 0.2	2.150	2.945	13.4	20.5
3 2	12 54.80	-10 55.6	2.070	2.934	11.3	19.8	3 2	13 0.43	- 0 5.6	2.054	2.937	10.5	20.3
3 12	12 49.93	-10 4.1	2.005	2.939	8.0	19.6	3 12	12 53.81	- 0 5.5	1.982	2.929	7.1	20.0
3 22	12 43.65	- 8 58.4	1.964	2.945	4.2	19.4	3 22	12 45.56	- 0 2.4	1.935	2.922	3.4	19.8
4 1	12 36.69	- 7 43.1	1.952	2.950	1.2	19.2	4 1	12 36.43	+ 0 0.4	1.918	2.915	1.6	19.6
4 11	12 29.87	- 6 25.0	1.969	2.956	4.1	19.4	4 11	12 27.37	- 0 0.9	1.929	2.908	5.2	19.9
4 21	12 23.96	- 5 10.6	2.014	2.962	7.8	19.6	4 21	12 19.25	- 0 9.2	1.968	2.901	8.9	20.1
5 1	12 19.57	- 4 5.8	2.084	2.968	11.2	19.8	5 1	12 12.81	- 0 26.6	2.031	2.895	12.3	20.3
242146	2003 <i>BM</i> ₈₃		3 30.8	348°31	5°2/ 2.9	18	246301	2007 <i>TF</i> ₁₁₆		3 30.8	67°77	1°4/29.3	17
2 21	13 5.09	-13 46.0	1.697	2.462	17.7	19.4	2 21	12 59.89	- 2 52.4	2.112	2.910	13.5	20.5
3 2	13 1.46	-15 3.1	1.601	2.451	14.8	19.2	3 2	12 56.36	- 2 12.8	2.038	2.923	10.5	20.3
3 12	12 55.06	-16 7.0	1.524	2.442	11.3	19.0	3 12	12 50.92	- 1 22.8	1.987	2.936	7.0	20.1
3 22	12 46.35	-16 55.2	1.470	2.434	7.7	18.7	3 22	12 44.10	- 0 26.8	1.962	2.950	3.2	19.9
4 1	12 36.27	-17 26.0	1.443	2.427	5.3	18.6	4 1	12 36.65	+ 0 29.8	1.966	2.963	1.8	19.8
4 11	12 26.08	-17 41.0	1.441	2.421	6.5	18.6	4 11	12 29.42	+ 1 20.9	1.999	2.976	5.2	20.1
4 21	12 17.02	-17 44.1	1.466	2.416	10.0	18.8	4 21	12 23.17	+ 2 1.9	2.058	2.990	8.7	20.3
5 1	12 10.16	-17 41.1	1.513	2.413	13.7	19.0	5 1	12 18.49	+ 2 29.3	2.142	3.003	11.9	20.6
232579	2003 <i>SM</i> ₃₅₁		3 30.8	254°98	3°0/27.7	17	281977	2011 <i>HS</i> ₈		3 30.8	16°92	5°1/26.3	18
2 21	13 1.18	+ 1 50.7	2.037	2.846	13.6	20.5	2 21	13 3.09	+ 7 19.1	1.781	2.603	14.7	20.1
3 2	12 57.58	+ 2 35.8	1.950	2.842	10.5	20.3	3 2	12 59.31	+ 8 6.5	1.707	2.604	11.5	19.8
3 12	12 51.89	+ 3 28.8	1.886	2.838	7.1	20.1	3 12	12 53.16	+ 8 57.4	1.656	2.605	8.1	19.6
3 22	12 44.63	+ 4 24.7	1.849	2.833	3.8	19.9	3 22	12 45.25	+ 9 45.1	1.630	2.607	5.4	19.5
4 1	12 36.55	+ 5 17.2	1.840	2.829	3.5	19.8	4 1	12 36.48	+10 22.3	1.631	2.609	5.7	19.5
4 11	12 28.58	+ 6 0.0	1.858	2.825	6.6	20.0	4 11	12 27.95	+10 43.0	1.659	2.611	8.6	19.7
4 21	12 21.59	+ 6 28.7	1.903	2.820	10.2	20.2	4 21	12 20.62	+10 44.2	1.711	2.614	12.0	19.9
5 1	12 16.27	+ 6 40.5	1.972	2.816	13.4	20.4	5 1	12 15.24	+10 25.2	1.785	2.616	15.1	20.1
116034	2003 <i>WH</i> ₉₅		3 30.8	285°25	1°9/29.2	17	306936	2001 <i>US</i> ₁₀₀		3 30.8	221°35	0°8/29.9	18
2 21	13 2.48	- 2 22.4	1.593	2.405	16.6	19.8	2 21	13 3.09	- 2 24.0	2.487	3.271	12.1	20.9
3 2	12 59.47	- 1 49.6	1.492	2.385	13.1	19.5	3 2	12 58.69	- 2 12.4	2.389	3.266	9.5	20.7
3 12	12 53.72	- 1 2.3	1.413	2.365	8.9	19.2	3 12	12 52.46	- 1 53.0	2.315	3.260	6.4	20.5
3 22	12 45.72	- 0 4.9	1.357	2.345	4.2	18.9	3 22	12 44.86	- 1 28.6	2.268	3.254	3.0	20.2
4 1	12 36.38	+ 0 55.5	1.328	2.325	2.4	18.7	4 1	12 36.54	- 1 2.7	2.250	3.248	1.2	20.1
4 11	12 26.94	+ 1 50.5	1.326	2.305	7.1	18.9	4 11	12 28.27	- 0 39.4	2.263	3.242	4.5	20.3
4 21	12 18.64	+ 2 32.5	1.348	2.284	12.0	19.2	4 21	12 20.81	- 0 22.1	2.303	3.235	7.9	20.5
5 1	12 12.50	+ 2 56.2	1.392	2.264	16.4	19.4	5 1	12 14.76	- 0 13.9	2.369	3.229	10.9	20.7
370463	2003 <i>BZ</i> ₆₀		3 30.8	48°06	10°3/ 7.9	18	176007	2000 <i>RV</i> ₆₄		3 30.8	147°59	4°1/ 4.9	18
2 21	13 8.13	-27 8.4	1.629	2.323	20.9	20.3	2 21	13 2.19	-20 7.8	2.828	3.528	12.7	20.9
3 2	13 4.09	-28 46.2	1.554	2.336	18.4	20.1	3 2	12 57.85	-20 28.0	2.731	3.535	10.7	20.8
3 12	12 56.92	-29 59.2	1.495	2.349	15.6	20.0	3 12	12 51.82	-20 33.2	2.655	3.541	8.4	20.6
3 22	12 47.24	-30 41.7	1.457	2.363	12.8	19.8	3 22	12 44.53	-20 23.0	2.604	3.547	6.0	20.5
4 1	12 36.17	-30 50.1	1.440	2.378	10.7	19.7	4 1	12 36.59	-19 58.3	2.580	3.553	4.3	20.4
4 11	12 25.21	-30 26.4	1.448	2.392	10.4	19.8	4 11	12 28.72	-19 21.9	2.586	3.559	4.6	20.4
4 21	12 15.77	-29 37.3	1.480	2.407	11.8	19.9	4 21	12 21.59	-18 38.0	2.621	3.564	6.5	20.5
5 1	12 8.93	-28 33.3	1.534	2.422	14.1	20.1	5 1	12 15.79	-17 51.4	2.682	3.569	8.9	20.7
372081	2008 <i>SF</i> ₄₀		3 30.8	151°92	1°3/29.4	17	97962	2000 <i>QC</i> ₁₄₁		3 30.8	104°32	1°4/31.7	18
2 21	13 2.53	- 2 13.6	2.244	3.035	13.1	21.5	2 21	13 12.02	- 6 13.9	1.921	2.690	15.7	18.9
3 2	12 58.36	- 1 44.7	2.158	3.040	10.2	21.3	3 2	13 6.23	- 6 53.1	1.833	2.696	12.6	18.7
3 12	12 52.27	- 1 6.6	2.097	3.044	6.8	21.1	3 12	12 57.86	- 7 22.9	1.766	2.701	8.8	18.5
3 22	12 44.76	- 0 23.0	2.062	3.048	3.2	20.9	3 22	12 47.53	- 7 43.9	1.726	2.707	4.6	18.2
4 1	12 36.55	+ 0 21.4	2.056	3.052	1.7	20.8	4 1	12 36.16	- 7 57.4	1.714	2.712	1.4	18.0
4 11	12 28.49	+ 1 1.2	2.079	3.056	5.1	21.0	4 11	12 24.94	- 8 6.5	1.732	2.717	4.9	18.3
4 21	12 21.35	+ 1 32.3	2.130	3.059	8.6	21.3	4 21	12 14.94	- 8 14.6	1.778	2.722	9.0	18.5
5 1	12 15.78	+ 1 51.5	2.205	3.062	11.7	21.5	5 1	12 7.02	- 8 25.4	1.850	2.727	12.7	18.8
433875	2015 <i>BA</i> ₃₂₄		3 30.8	193°17	3°3/27.4	17	173756	2001 <i>RM</i> ₁₀₀		3 30.8	187°28	1°4/ 1.3	18
2 21	13 3.00	+ 3 21.0	2.098	2.905	13.3	21.5	2 21	13 2.83	- 9 50.5	2.620	3.375	12.3	20.8
3 2	12 58.90	+ 4 4.6	2.013	2.904	10.3	21.3	3 2	12 58.41	- 9 52.9	2.521	3.375	9.9	20.6
3 12	12 52.73	+ 4 54.7	1.953	2.903	7.0	21.1	3 12	12 52.24	- 9 44.0	2.444	3.374	7.0	20.4
3 22	12 45.01	+ 5 45.8	1.918	2.901	4.0	20.9	3 22	12 44.75	- 9 25.2	2.395	3.373	3.8	20.2
4 1	12 36.51	+ 6 32.0	1.913	2.899	3.8	20.9	4 1	12 36.57	- 8 58.8	2.374	3.371	1.4	20.0
4 11	12 28.15	+ 7 7.6	1.935	2.898	6.8	21.1	4 11	12 28.45	- 8 28.5	2.384	3.370	3.7	20.2
4 21	12 20.78	+ 7 28.6	1.984	2.895	10.2	21.2	4 21	12 21.09	- 7 58.2	2.423	3.367	6.9	20.4
5 1	12 15.08	+ 7 33.0	2.057	2.893	13.2	21.4	5 1	12 15.10	- 7 31.8	2.488	3.365	9.8	20.6
168250	2006 <i>KU</i> ₁₀₉		3 30.8	174°34	2°1/28.9	18	401162	2011 <i>WN</i> ₅₃		3 30.8			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
292623	2006 <i>UD</i> ₉		3 30.8 191.°20	5.°5/24.2	18		495125	2011 <i>WA</i> ₃₆		3 30.8 94.°55	1.°6/29.5	18	
2 21	13 2.97	+13 39.3	2.603	3.409	11.0	20.4	2 21	13 5.84	- 3 2.3	1.567	2.373	17.1	22.1
3 2	12 58.44	+14 27.7	2.526	3.408	8.8	20.3	3 2	13 1.67	- 2 28.6	1.500	2.388	13.3	21.8
3 12	12 52.19	+15 14.5	2.474	3.407	6.7	20.1	3 12	12 54.85	- 1 41.6	1.453	2.404	8.9	21.6
3 22	12 44.69	+15 54.3	2.449	3.406	5.5	20.1	3 22	12 46.09	- 0 46.5	1.432	2.419	4.1	21.4
4 1	12 36.60	+16 22.0	2.453	3.405	6.0	20.1	4 1	12 36.44	+ 0 9.6	1.437	2.434	2.0	21.3
4 11	12 28.67	+16 33.9	2.484	3.403	7.9	20.2	4 11	12 27.16	+ 0 58.8	1.469	2.449	6.4	21.6
4 21	12 21.58	+16 28.4	2.542	3.401	10.2	20.3	4 21	12 19.32	+ 1 35.2	1.527	2.463	10.8	21.9
5 1	12 15.89	+16 5.6	2.622	3.399	12.3	20.5	5 1	12 13.71	+ 1 55.0	1.608	2.477	14.7	22.1
347473	2012 <i>UZ</i> ₃		3 30.8 302.°70	1.°6/29.1	17		279426	2010 <i>MU</i> ₈		3 30.8 248.°58	2.°7/28.3	17	
2 21	13 0.09	- 1 55.9	2.040	2.842	13.8	20.8	2 21	13 3.38	- 0 41.4	1.860	2.664	14.8	21.2
3 2	12 56.78	- 1 22.5	1.948	2.836	10.8	20.6	3 2	12 59.71	+ 0 10.8	1.759	2.648	11.6	21.0
3 12	12 51.39	- 0 38.7	1.879	2.830	7.2	20.4	3 12	12 53.63	+ 1 15.8	1.681	2.632	7.8	20.7
3 22	12 44.42	+ 0 11.5	1.837	2.824	3.4	20.1	3 22	12 45.61	+ 2 28.1	1.628	2.615	4.0	20.4
4 1	12 36.63	+ 1 2.6	1.822	2.818	2.0	20.0	4 1	12 36.49	+ 3 40.5	1.604	2.597	3.2	20.3
4 11	12 28.92	+ 1 48.4	1.836	2.812	5.6	20.2	4 11	12 27.33	+ 4 44.9	1.608	2.579	7.0	20.5
4 21	12 22.14	+ 2 23.9	1.876	2.807	9.4	20.4	4 21	12 19.19	+ 5 34.6	1.638	2.560	11.2	20.7
5 1	12 17.01	+ 2 45.4	1.939	2.801	12.9	20.6	5 1	12 12.93	+ 6 5.4	1.691	2.541	15.0	20.9
49441	Scerbanenco		3 30.8 97.°72	1.°9/ 1.7	18		146485	2001 <i>RJ</i> ₁₄₄		3 30.8 80.°98	3.°0/ 2.5	18	
2 21	13 3.21	-12 48.2	1.871	2.635	16.2	20.0	2 21	13 4.23	-13 45.6	1.767	2.530	17.1	20.4
3 2	12 59.26	-12 27.3	1.796	2.654	13.1	19.9	3 2	13 0.26	-13 51.8	1.692	2.546	13.9	20.2
3 12	12 53.04	-11 47.3	1.742	2.672	9.3	19.7	3 12	12 53.84	-13 38.9	1.637	2.562	10.1	20.0
3 22	12 45.16	-10 50.7	1.712	2.690	5.2	19.4	3 22	12 45.61	-13 7.8	1.605	2.578	6.1	19.8
4 1	12 36.54	- 9 42.2	1.711	2.707	2.0	19.3	4 1	12 36.50	-12 21.9	1.600	2.594	3.1	19.6
4 11	12 28.20	- 8 29.0	1.737	2.724	4.6	19.5	4 11	12 27.67	-11 27.5	1.623	2.609	4.9	19.8
4 21	12 21.05	- 7 18.5	1.791	2.741	8.5	19.7	4 21	12 20.11	-10 31.8	1.673	2.625	8.8	20.0
5 1	12 15.79	- 6 17.2	1.870	2.757	12.1	20.0	5 1	12 14.57	- 9 41.5	1.746	2.640	12.4	20.3
468876	2013 <i>RA</i> ₆₁		3 30.8 196.°82	4.°5/ 4.1	17		70699	1999 <i>US</i> ₂₇		3 30.8 343.°02	0.°6/31.2	18	
2 21	13 6.66	-18 16.6	2.347	3.061	14.7	21.6	2 21	12 58.92	- 8 9.3	1.327	2.142	19.1	18.8
3 2	13 1.81	-18 49.1	2.242	3.058	12.3	21.4	3 2	12 57.04	- 7 52.8	1.244	2.136	15.3	18.6
3 12	12 54.80	-19 5.7	2.159	3.055	9.6	21.2	3 12	12 52.23	- 7 15.3	1.180	2.130	10.6	18.3
3 22	12 46.08	-19 5.3	2.100	3.052	6.7	21.0	3 22	12 45.05	- 6 19.7	1.139	2.125	5.3	18.0
4 1	12 36.40	-18 48.1	2.069	3.047	4.7	20.9	4 1	12 36.58	- 5 12.6	1.121	2.120	0.7	17.6
4 11	12 26.70	-18 17.1	2.067	3.043	5.2	20.9	4 11	12 28.21	- 4 3.6	1.128	2.116	6.2	18.0
4 21	12 17.90	-17 37.2	2.093	3.037	7.8	21.1	4 21	12 21.24	- 3 2.5	1.160	2.113	11.6	18.3
5 1	12 10.76	-16 54.1	2.146	3.032	10.8	21.2	5 1	12 16.71	- 2 17.1	1.212	2.111	16.3	18.5
388663	2007 <i>TX</i> ₃₃₄		3 30.8 58.°24	2.°3/28.6	17		120172	2003 <i>JU</i> ₉		3 30.8 272.°26	0.°5/31.4	17	
2 21	13 2.70	+ 1 23.4	2.090	2.894	13.4	21.3	2 21	12 58.37	- 8 20.4	2.501	3.274	12.4	20.5
3 2	12 58.59	+ 1 46.8	2.014	2.903	10.4	21.1	3 2	12 55.10	- 7 56.7	2.396	3.263	9.8	20.3
3 12	12 52.47	+ 2 16.6	1.961	2.911	7.0	20.9	3 12	12 50.11	- 7 20.4	2.313	3.252	6.8	20.1
3 22	12 44.87	+ 2 48.6	1.934	2.920	3.5	20.7	3 22	12 43.79	- 6 33.9	2.258	3.241	3.4	19.9
4 1	12 36.59	+ 3 17.9	1.935	2.928	2.7	20.7	4 1	12 36.77	- 5 40.6	2.231	3.230	0.5	19.6
4 11	12 28.52	+ 3 39.7	1.965	2.937	5.8	20.9	4 11	12 29.76	- 4 45.6	2.233	3.218	3.9	19.8
4 21	12 21.47	+ 3 50.4	2.022	2.946	9.3	21.1	4 21	12 23.48	- 3 53.9	2.264	3.207	7.4	20.0
5 1	12 16.08	+ 3 48.2	2.103	2.955	12.4	21.3	5 1	12 18.52	- 3 10.0	2.320	3.196	10.5	20.2
175697	1995 <i>UG</i> ₂		3 30.8 197.°92	0.°4/30.4	16		54850	2001 <i>OZ</i> ₁₁		3 30.8 163.°90	3.°0/26.8	18	
2 21	13 4.87	- 5 25.7	2.090	2.871	14.2	21.6	2 21	13 1.56	+ 5 10.7	2.848	3.645	10.4	19.2
3 2	13 0.47	- 5 0.1	1.995	2.868	11.2	21.4	3 2	12 57.17	+ 5 53.0	2.766	3.650	8.1	19.1
3 12	12 53.88	- 4 21.8	1.922	2.865	7.6	21.2	3 12	12 51.26	+ 6 38.7	2.709	3.655	5.5	18.9
3 22	12 45.62	- 3 34.0	1.875	2.861	3.6	20.9	3 22	12 44.25	+ 7 23.7	2.680	3.659	3.4	18.8
4 1	12 36.47	- 2 41.5	1.857	2.856	0.8	20.7	4 1	12 36.72	+ 8 3.6	2.682	3.663	3.4	18.8
4 11	12 27.40	- 1 50.3	1.868	2.850	5.0	21.0	4 11	12 29.32	+ 8 34.5	2.713	3.666	5.6	18.9
4 21	12 19.30	- 1 6.0	1.907	2.844	9.0	21.2	4 21	12 22.65	+ 8 53.6	2.772	3.669	8.1	19.1
5 1	12 12.93	- 0 33.1	1.971	2.837	12.5	21.4	5 1	12 17.21	+ 8 59.7	2.855	3.672	10.5	19.3
434832	2006 <i>SL</i> ₄₈		3 30.8 175.°99	1.°6/28.8	17		506568	2005 <i>UQ</i> ₉₁		3 30.8 244.°20	2.°3/ 1.9	17	
2 21	13 1.47	+ 0 9.6	2.886	3.672	10.6	21.9	2 21	13 3.36	-12 22.2	2.092	2.850	14.9	22.0
3 2	12 57.10	+ 0 36.6	2.795	3.674	8.2	21.7	3 2	12 59.48	-12 22.3	1.984	2.837	12.2	21.8
3 12	12 51.21	+ 1 9.5	2.729	3.676	5.5	21.6	3 12	12 53.37	-12 6.1	1.897	2.824	8.9	21.5
3 22	12 44.22	+ 1 45.0	2.691	3.677	2.7	21.4	3 22	12 45.46	-11 34.5	1.835	2.810	5.2	21.3
4 1	12 36.68	+ 2 19.5	2.684	3.677	1.9	21.3	4 1	12 36.53	-10 50.0	1.801	2.796	2.3	21.1
4 11	12 29.25	+ 2 49.2	2.706	3.678	4.5	21.5	4 11	12 27.54	- 9 57.7	1.795	2.781	4.6	21.2
4 21	12 22.50	+ 3 11.2	2.758	3.678	7.3	21.7	4 21	12 19.46	- 9 3.7	1.817	2.766	8.4	21.4
5 1	12 16.96	+ 3 23.1	2.835	3.677	9.8	21.8	5 1	12 13.10	- 8 14.4	1.864	2.751	12.1	21.6
333087	2011 <i>UK</i> ₁₆₄		3 30.8 187.°56	2.°4/28.5	18		503398	2016 <i>CL</i> ₂₀₆		3 30.8 335.°66	2.°9/ 1.9	17	
2 21	13 3.32	- 2 15.0	1.795	2.598	15.4	21.2	2 21	13 3.01	-11 44.4	1.487	2.274	18.7	21.2
3 2	12 59.57	- 1 12.0	1.709	2.598	12.0	21.0	3 2	13 0.03	-12 2.3	1.400	2.270	15.3	21.0
3 12	12 53.42	+ 0 5.3	1.646	2.597	8.0	20.7	3 12	12 54.15	-12 0.8	1.332	2.266	11.1	20.7
3 22	12 45.43	+ 1 30.7	1.609	2.596	3.9	20.5	3 22	12 45.95	-11 40.1	1.286	2.263	6.5	20.4
4 1	12 36.51	+ 2 56.4	1.600	2.594	2.9	20.4	4 1	12 36.46	-11 3.3	1.265	2.260	2.9	20.2
4 11	12 27.73	+ 4 13.4	1.619	2.592	6.8	20.6	4 11	12 27.03	-10 16.7	1.269	2.257	5.7	20.3
4 21	12 20.09	+ 5 15.0	1.665	2.589	11.0	20.9	4 21	12 18.94	- 9 28.2	1.299	2.255	10.4	20.6
5 1	12 14.38	+ 5 56.5	1.734	2.585	14.6	21.1	5 1	12 13.21	- 8 45.9	1.351	2.253	14.8	20.8
396670	2002 <i>QN</i> ₇₀		3 30.8 235.°87	0.°3/30.6	17		408753	1992 <i>SU</i> ₃					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
392571	2011 <i>SG</i> ₁₁₉		3 30.8 272°66	4°0/26.2	17		499205	2009 <i>UO</i> ₇		3 30.8 248°34	2°7/28.3	17	
2 21	13 1.04	+ 7 9.8	2.372	3.182	11.8	21.1	2 21	13 2.59	+ 0 31.3	1.877	2.685	14.6	22.2
3 2	12 57.16	+ 7 53.3	2.288	3.179	9.2	20.9	3 2	12 58.95	+ 1 12.7	1.788	2.679	11.4	22.0
3 12	12 51.46	+ 8 39.6	2.228	3.175	6.5	20.7	3 12	12 53.00	+ 2 3.9	1.721	2.673	7.6	21.8
3 22	12 44.42	+ 9 23.8	2.195	3.171	4.3	20.6	3 22	12 45.28	+ 2 59.7	1.681	2.667	3.9	21.5
4 1	12 36.71	+10 0.4	2.191	3.168	4.6	20.6	4 1	12 36.62	+ 3 53.5	1.668	2.660	3.2	21.5
4 11	12 29.12	+10 24.9	2.214	3.164	6.9	20.7	4 11	12 28.06	+ 4 38.5	1.682	2.653	6.7	21.7
4 21	12 22.38	+10 34.3	2.265	3.160	9.8	20.9	4 21	12 20.55	+ 5 9.5	1.723	2.646	10.7	21.9
5 1	12 17.09	+10 27.5	2.338	3.157	12.4	21.1	5 1	12 14.88	+ 5 23.2	1.787	2.639	14.2	22.1
241900	2001 <i>XF</i> ₁₄₁		3 30.8 191°91	1°2/ 1.4	18		34866	2001 <i>TN</i> ₁₁₉		3 30.8 50°87	8°6/ 7.4	18	
2 21	12 59.53	-11 5.4	2.810	3.563	11.6	21.5	2 21	13 4.62	-25 35.6	1.673	2.379	20.0	18.3
3 2	12 55.75	-10 45.3	2.709	3.561	9.3	21.3	3 2	13 1.14	-26 40.4	1.595	2.391	17.4	18.1
3 12	12 50.40	-10 12.8	2.630	3.559	6.6	21.2	3 12	12 54.81	-27 19.8	1.534	2.404	14.4	17.9
3 22	12 43.89	-9 29.5	2.579	3.557	3.6	21.0	3 22	12 46.25	-27 29.8	1.494	2.416	11.4	17.8
4 1	12 36.78	-8 38.5	2.557	3.555	1.2	20.8	4 1	12 36.50	-27 9.1	1.476	2.429	9.1	17.7
4 11	12 29.74	-7 44.0	2.566	3.552	3.4	20.9	4 11	12 26.91	-26 21.4	1.483	2.442	8.8	17.7
4 21	12 23.37	-6 50.6	2.603	3.548	6.4	21.1	4 21	12 18.73	-25 14.3	1.515	2.455	10.5	17.8
5 1	12 18.22	-6 2.4	2.667	3.545	9.2	21.3	5 1	12 12.90	-23 57.9	1.570	2.469	13.3	18.0
153175	2000 <i>UN</i> ₂		3 30.8 253°57	0°1/30.8	17		235975	2005 <i>EX</i> ₂₅₇		3 30.8 269°96	0°4/31.3	18	
2 21	13 2.49	-5 3.2	2.473	3.250	12.4	20.4	2 21	12 59.21	-8 25.2	2.196	2.975	13.7	20.5
3 2	12 58.30	-5 0.6	2.372	3.243	9.8	20.2	3 2	12 56.03	-7 57.4	2.095	2.966	10.9	20.2
3 12	12 52.26	-4 49.1	2.295	3.236	6.7	20.0	3 12	12 50.89	-7 15.0	2.016	2.956	7.5	20.0
3 22	12 44.83	-4 30.5	2.244	3.229	3.2	19.7	3 22	12 44.24	-6 20.7	1.963	2.947	3.8	19.8
4 1	12 36.65	-4 8.0	2.222	3.221	0.4	19.5	4 1	12 36.78	-5 18.7	1.938	2.937	0.5	19.5
4 11	12 28.50	-3 45.4	2.230	3.214	4.1	19.7	4 11	12 29.35	-4 15.2	1.942	2.928	4.4	19.8
4 21	12 21.13	-3 26.5	2.266	3.206	7.6	20.0	4 21	12 22.76	-3 16.0	1.974	2.918	8.2	20.0
5 1	12 15.18	-3 14.5	2.328	3.198	10.7	20.1	5 1	12 17.69	-2 26.6	2.031	2.908	11.7	20.2
109191	2001 <i>QS</i> ₇₃		3 30.8 107°08	1°1/31.8	18		332836	2010 <i>AT</i> ₆₉		3 30.8 126°76	3°6/27.3	18	
2 21	13 2.82	-9 43.1	1.889	2.666	15.7	19.5	2 21	13 2.89	+ 4 3.7	2.025	2.835	13.6	20.4
3 2	12 59.01	-9 26.6	1.807	2.675	12.5	19.3	3 2	12 58.89	+ 4 46.8	1.946	2.838	10.5	20.2
3 12	12 52.94	-8 53.8	1.747	2.685	8.7	19.1	3 12	12 52.77	+ 5 35.5	1.891	2.841	7.2	20.0
3 22	12 45.19	-8 7.2	1.712	2.694	4.5	18.8	3 22	12 45.10	+ 6 24.4	1.862	2.844	4.2	19.8
4 1	12 36.61	-7 11.5	1.705	2.703	1.1	18.6	4 1	12 36.67	+ 7 7.4	1.861	2.847	4.1	19.8
4 11	12 28.23	-6 13.0	1.726	2.712	4.7	18.9	4 11	12 28.43	+ 7 38.7	1.888	2.850	7.0	20.0
4 21	12 20.98	-5 18.5	1.774	2.721	8.7	19.1	4 21	12 21.23	+ 7 54.8	1.942	2.852	10.4	20.2
5 1	12 15.58	-4 33.5	1.846	2.730	12.4	19.4	5 1	12 15.74	+ 7 53.9	2.018	2.855	13.4	20.4
165251	2000 <i>SA</i> ₁₇₆		3 30.8 203°49	2°6/ 1.9	18		212431	2006 <i>OO</i> ₁₁		3 30.8 252°83	0°1/30.7	17	
2 21	13 6.77	-12 17.5	1.912	2.669	16.2	20.7	2 21	13 3.55	-6 54.9	1.921	2.706	15.2	21.4
3 2	13 2.32	-12 26.4	1.813	2.666	13.2	20.5	3 2	12 59.86	-6 26.3	1.812	2.687	12.1	21.2
3 12	12 55.38	-12 18.7	1.735	2.661	9.6	20.3	3 12	12 53.78	-5 41.9	1.725	2.668	8.4	20.9
3 22	12 46.46	-11 54.8	1.682	2.656	5.6	20.0	3 22	12 45.75	-4 44.3	1.663	2.648	4.0	20.6
4 1	12 36.43	-11 17.1	1.656	2.651	2.6	19.8	4 1	12 36.58	-3 38.6	1.629	2.628	0.6	20.3
4 11	12 26.42	-10 31.0	1.659	2.645	4.9	19.9	4 11	12 27.31	-2 32.0	1.624	2.607	5.3	20.6
4 21	12 17.50	-9 42.7	1.689	2.638	9.0	20.1	4 21	12 18.99	-1 31.6	1.645	2.586	9.9	20.8
5 1	12 10.55	-8 58.9	1.744	2.630	12.8	20.4	5 1	12 12.50	-0 43.7	1.691	2.564	13.9	21.0
192370	1996 <i>AG</i> ₁₀		3 30.8 162°29	1°2/ 1.1	17		364582	2007 <i>RP</i> ₁₀₃		3 30.8 160°99	0°6/31.2	18	
2 21	13 1.69	-10 15.7	2.300	3.064	13.6	21.2	2 21	13 7.85	-6 47.8	1.807	2.587	16.1	21.4
3 2	12 57.77	-9 59.1	2.208	3.068	10.9	21.0	3 2	13 3.14	-6 46.6	1.721	2.592	12.8	21.2
3 12	12 51.93	-9 28.3	2.138	3.071	7.6	20.8	3 12	12 55.89	-6 31.8	1.656	2.596	8.9	21.0
3 22	12 44.68	-8 45.4	2.094	3.074	4.1	20.6	3 22	12 46.68	-6 5.8	1.616	2.600	4.4	20.7
4 1	12 36.69	-7 54.0	2.079	3.077	1.2	20.4	4 1	12 36.47	-5 32.6	1.604	2.603	0.7	20.4
4 11	12 28.82	-6 59.3	2.093	3.079	4.0	20.6	4 11	12 26.42	-4 57.8	1.620	2.606	5.1	20.8
4 21	12 21.84	-6 6.7	2.135	3.081	7.6	20.8	4 21	12 17.60	-4 27.2	1.664	2.608	9.5	21.0
5 1	12 16.37	-5 21.3	2.203	3.082	10.8	21.0	5 1	12 10.84	-4 5.7	1.732	2.609	13.4	21.3
362775	2011 <i>WT</i> ₁₀₀		3 30.8 175°71	1°7/ 1.4	18		360217	1999 <i>RA</i> ₃₀		3 30.8 144°99	1°0/29.7	18	
2 21	13 4.75	-11 50.0	1.910	2.674	16.0	21.5	2 21	13 2.20	-6 50.8	1.945	2.732	14.9	21.3
3 2	13 0.62	-11 31.6	1.818	2.677	12.9	21.3	3 2	12 58.44	-5 40.2	1.863	2.741	11.7	21.1
3 12	12 54.12	-10 54.8	1.747	2.679	9.2	21.1	3 12	12 52.52	-4 12.5	1.805	2.751	7.8	20.8
3 22	12 45.80	-10 1.5	1.702	2.680	5.1	20.8	3 22	12 45.00	-2 33.2	1.772	2.759	3.6	20.6
4 1	12 36.54	-8 55.9	1.683	2.681	1.7	20.6	4 1	12 36.72	-0 49.8	1.769	2.767	1.4	20.4
4 11	12 27.39	-7 44.9	1.694	2.681	4.7	20.8	4 11	12 28.64	+ 0 48.7	1.796	2.774	5.5	20.7
4 21	12 19.36	-6 35.9	1.732	2.680	8.9	21.0	4 21	12 21.65	+ 2 14.8	1.850	2.781	9.5	21.0
5 1	12 13.23	-5 35.7	1.795	2.679	12.7	21.3	5 1	12 16.43	+ 3 22.9	1.928	2.787	13.0	21.2
180540	2004 <i>EY</i> ₉		3 30.8 266°31	3°4/ 3.0	18		262524	2006 <i>UU</i> ₂₉₀		3 30.8 322°64	3°6/28.2	17	
2 21	13 4.90	-14 51.4	2.488	3.219	13.5	20.1	2 21	13 1.79	+ 1 48.9	1.405	2.236	17.4	20.2
3 2	13 0.42	-15 22.0	2.369	3.201	11.2	19.9	3 2	12 59.21	+ 2 20.2	1.318	2.222	13.7	19.9
3 12	12 53.89	-15 39.8	2.272	3.182	8.5	19.7	3 12	12 53.70	+ 3 2.2	1.252	2.208	9.3	19.6
3 22	12 45.71	-15 44.2	2.201	3.163	5.6	19.5	3 22	12 45.81	+ 3 48.5	1.208	2.194	5.0	19.3
4 1	12 36.54	-15 35.6	2.158	3.144	3.5	19.3	4 1	12 36.58	+ 4 31.0	1.189	2.182	4.2	19.2
4 11	12 27.23	-15 16.6	2.144	3.124	4.6	19.3	4 11	12 27.38	+ 5 1.4	1.196	2.170	8.4	19.5
4 21	12 18.64	-14 51.1	2.158	3.104	7.5	19.5	4 21	12 19.52	+ 5 13.5	1.226	2.158	13.2	19.7
5 1	12 11.53	-14 23.8	2.199	3.084	10.6	19.6	5 1	12 14.05	+ 5 4.4	1.276	2.148	17.5	19.9
337947	2001 <i>YO</i> ₁₃₄		3 30.8 107°47	3°6/27.0	17		39828	1998 <i>BH</i> ₄		3 30.8 5°07	1°6/31.8	18	
2 21	13 5.48</												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
410002	2006 WW ₂₉		3 30.8 53°48	5°6/ 6.7 18			287558	2003 FN ₁₀		3 30.8 265°17	1°0/29.9 17		
2 21	13 3.97	-28 43.8	1.504	2.204	22.1	20.1	2 21	13 1.50	-4 20.3	1.962	2.757	14.5	21.2
3 2	13 0.25	-27 26.3	1.446	2.247	18.7	19.9	3 2	12 58.13	-3 46.6	1.860	2.743	11.4	20.9
3 12	12 53.79	-25 29.0	1.405	2.289	14.6	19.8	3 12	12 52.52	-2 59.4	1.780	2.728	7.8	20.7
3 22	12 45.52	-22 54.6	1.387	2.331	10.1	19.6	3 22	12 45.13	-2 2.4	1.726	2.713	3.6	20.4
4 1	12 36.68	-19 51.9	1.395	2.373	6.4	19.5	4 1	12 36.75	-1 1.1	1.700	2.698	1.4	20.2
4 11	12 28.58	-16 36.3	1.433	2.415	6.1	19.6	4 11	12 28.35	-0 2.4	1.702	2.683	5.6	20.4
4 21	12 22.20	-13 24.8	1.500	2.457	9.1	19.8	4 21	12 20.89	+0 47.4	1.731	2.667	9.8	20.7
5 1	12 18.16	-10 31.7	1.594	2.498	12.8	20.2	5 1	12 15.16	+1 23.3	1.784	2.652	13.5	20.9
92048	1999 VW ₂₀₂		3 30.8 206°35	3°0/ 2.6 18			425886	2011 FV ₃₅		3 30.8 238°85	0°4/30.4 17		
2 21	13 6.53	-13 45.1	2.371	3.107	14.0	19.5	2 21	13 4.75	-3 52.2	1.993	2.782	14.5	21.5
3 2	13 1.66	-14 9.3	2.266	3.103	11.5	19.3	3 2	13 0.53	-3 47.1	1.900	2.778	11.5	21.3
3 12	12 54.70	-14 20.1	2.183	3.098	8.5	19.1	3 12	12 54.05	-3 31.6	1.830	2.775	7.8	21.1
3 22	12 46.09	-14 17.2	2.126	3.093	5.4	18.9	3 22	12 45.82	-3 8.7	1.785	2.771	3.7	20.8
4 1	12 36.57	-14 1.9	2.097	3.087	3.1	18.8	4 1	12 36.66	-2 42.2	1.769	2.767	0.8	20.6
4 11	12 27.04	-13 37.3	2.098	3.080	4.4	18.8	4 11	12 27.59	-2 17.2	1.781	2.763	5.1	20.9
4 21	12 18.37	-13 7.8	2.127	3.074	7.6	19.0	4 21	12 19.54	-1 58.3	1.820	2.760	9.1	21.1
5 1	12 11.29	-12 38.4	2.183	3.066	10.7	19.2	5 1	12 13.28	-1 49.1	1.884	2.755	12.7	21.3
145068	2005 GF ₃₀		3 30.8 246°75	4°2/27.1 18			339455	2005 EV ₁₉₇		3 30.8 257°46	0°8/31.7 17		
2 21	13 4.45	+4 1.6	1.778	2.593	15.0	20.2	2 21	12 59.30	-9 27.6	2.208	2.983	13.8	21.4
3 2	13 0.60	+4 52.5	1.689	2.583	11.7	19.9	3 2	12 56.08	-9 1.5	2.111	2.978	11.0	21.2
3 12	12 54.26	+5 51.4	1.622	2.573	8.1	19.7	3 12	12 50.92	-8 20.4	2.036	2.973	7.7	21.0
3 22	12 45.96	+6 51.7	1.580	2.562	4.8	19.4	3 22	12 44.29	-7 26.8	1.986	2.969	3.9	20.7
4 1	12 36.59	+7 45.7	1.566	2.551	4.8	19.4	4 1	12 36.88	-6 25.0	1.965	2.964	0.8	20.5
4 11	12 27.30	+8 26.0	1.579	2.540	8.2	19.6	4 11	12 29.53	-5 20.7	1.973	2.959	4.2	20.7
4 21	12 19.14	+8 47.7	1.617	2.528	12.0	19.8	4 21	12 23.04	-4 20.1	2.008	2.954	8.0	20.9
5 1	12 12.97	+8 48.6	1.678	2.517	15.6	20.0	5 1	12 18.06	-3 28.5	2.068	2.949	11.4	21.1
330360	2006 VV ₁₂₂		3 30.8 48°80	3°2/ 2.5 18			501221	2013 UX ₇		3 30.8 83°88	5°5/ 6.0 17		
2 21	13 2.11	-13 56.5	1.533	2.310	18.7	20.7	2 21	13 0.01	-23 10.3	2.010	2.722	16.9	20.7
3 2	12 59.04	-14 2.0	1.459	2.322	15.2	20.5	3 2	12 56.96	-23 12.1	1.918	2.728	14.4	20.5
3 12	12 53.27	-13 45.5	1.405	2.335	11.1	20.3	3 12	12 51.67	-22 49.8	1.846	2.733	11.4	20.3
3 22	12 45.47	-13 8.1	1.374	2.348	6.7	20.0	3 22	12 44.68	-22 2.4	1.796	2.739	8.3	20.1
4 1	12 36.67	-12 13.9	1.367	2.361	3.3	19.9	4 1	12 36.83	-20 51.8	1.771	2.744	5.9	20.0
4 11	12 28.16	-11 10.2	1.387	2.375	5.4	20.0	4 11	12 29.12	-19 23.8	1.774	2.750	5.9	20.0
4 21	12 21.03	-10 5.6	1.433	2.389	9.6	20.3	4 21	12 22.47	-17 46.5	1.804	2.756	8.3	20.2
5 1	12 16.13	-9 8.3	1.502	2.403	13.6	20.6	5 1	12 17.62	-16 8.8	1.859	2.761	11.4	20.4
506714	2006 UB ₁₉₀		3 30.8 163°85	3°3/ 4.3 17			342948	2009 AZ ₃₇		3 30.8 96°34	0°3/30.5 17		
2 21	12 59.70	-18 50.6	2.838	3.550	12.4	21.9	2 21	13 0.45	-5 40.3	2.191	2.978	13.5	22.0
3 2	12 55.93	-18 44.4	2.738	3.554	10.3	21.7	3 2	12 56.89	-5 13.8	2.105	2.982	10.6	21.8
3 12	12 50.57	-18 22.5	2.660	3.558	7.9	21.5	3 12	12 51.40	-4 35.4	2.042	2.987	7.2	21.6
3 22	12 44.02	-17 45.2	2.607	3.561	5.4	21.4	3 22	12 44.48	-3 48.4	2.005	2.991	3.4	21.3
4 1	12 36.88	-16 54.6	2.582	3.564	3.5	21.3	4 1	12 36.86	-2 57.3	1.997	2.996	0.7	21.1
4 11	12 29.82	-15 54.6	2.587	3.567	3.9	21.3	4 11	12 29.39	-2 7.7	2.017	3.000	4.5	21.4
4 21	12 23.47	-14 49.8	2.620	3.569	6.2	21.4	4 21	12 22.82	-1 24.6	2.065	3.004	8.2	21.6
5 1	12 18.38	-13 45.6	2.681	3.571	8.8	21.6	5 1	12 17.79	-0 52.3	2.137	3.008	11.5	21.8
157954	2000 DX ₁		3 30.8 268°29	1°4/29.7 17			468114	2013 YK ₅₄		3 30.8 217°85	3°5/26.6 17		
2 21	13 3.12	-4 15.7	1.490	2.300	17.6	20.9	2 21	13 3.67	+5 26.8	2.600	3.398	11.3	22.4
3 2	13 0.19	-3 38.6	1.394	2.286	13.9	20.6	3 2	12 59.14	+6 17.8	2.503	3.387	8.8	22.2
3 12	12 54.36	-2 43.8	1.320	2.271	9.5	20.3	3 12	12 52.82	+7 13.5	2.430	3.376	6.1	22.0
3 22	12 46.17	-1 35.8	1.268	2.256	4.5	20.0	3 22	12 45.15	+8 8.9	2.386	3.364	3.9	21.9
4 1	12 36.58	-0 22.2	1.243	2.241	2.0	19.8	4 1	12 36.77	+8 58.9	2.372	3.351	4.0	21.9
4 11	12 26.95	+0 47.5	1.244	2.225	7.0	20.0	4 11	12 28.44	+9 38.4	2.387	3.338	6.4	22.0
4 21	12 18.57	+1 44.3	1.270	2.209	12.2	20.3	4 21	12 20.85	+10 4.1	2.430	3.323	9.3	22.2
5 1	12 12.51	+2 21.8	1.317	2.194	16.8	20.5	5 1	12 14.64	+10 14.0	2.497	3.309	11.9	22.3
455752	2005 JV ₁₈₅		3 30.8 321°17	0°8/30.3 17			333013	2011 PY ₁₁		3 30.8 193°46	2°0/28.2 18		
2 21	13 2.41	-3 8.7	1.346	2.168	18.5	20.8	2 21	12 58.82	-0 57.4	2.498	3.294	11.7	21.2
3 2	12 59.98	-3 11.5	1.252	2.149	14.8	20.5	3 2	12 55.38	+0 0.3	2.408	3.293	9.1	21.0
3 12	12 54.45	-3 1.0	1.178	2.131	10.2	20.2	3 12	12 50.27	+1 7.2	2.342	3.292	6.0	20.8
3 22	12 46.30	-2 40.5	1.125	2.113	4.9	19.8	3 22	12 43.92	+2 18.8	2.304	3.290	3.0	20.6
4 1	12 36.56	-2 15.1	1.097	2.096	1.3	19.5	4 1	12 36.94	+3 29.5	2.296	3.288	2.5	20.6
4 11	12 26.71	-1 52.2	1.094	2.080	6.9	19.8	4 11	12 30.06	+4 33.7	2.317	3.286	5.3	20.7
4 21	12 18.19	-1 38.4	1.115	2.065	12.4	20.1	4 21	12 23.94	+5 26.7	2.366	3.283	8.4	20.9
5 1	12 12.20	-1 39.1	1.156	2.050	17.3	20.3	5 1	12 19.13	+6 5.2	2.440	3.281	11.3	21.1
27507	2000 GS ₁₄₁		3 30.8 135°19	4°1/26.9 18			522714	2016 LZ ₆₀		3 30.8 323°98	2°7/ 2.6 17		
2 21	13 5.67	+5 14.9	1.969	2.777	14.0	19.1	2 21	12 57.01	-15 26.0	1.748	2.518	17.0	20.8
3 2	13 1.07	+6 3.8	1.897	2.787	10.9	18.9	3 2	12 54.92	-14 58.3	1.650	2.509	14.0	20.6
3 12	12 54.25	+6 57.6	1.848	2.796	7.5	18.7	3 12	12 50.49	-14 6.3	1.573	2.501	10.3	20.3
3 22	12 45.83	+7 50.0	1.825	2.805	4.6	18.5	3 22	12 44.20	-12 51.3	1.519	2.493	6.1	20.1
4 1	12 36.67	+8 34.6	1.831	2.813	4.6	18.6	4 1	12 36.90	-11 18.0	1.491	2.486	2.8	19.8
4 11	12 27.76	+9 5.5	1.865	2.821	7.5	18.7	4 11	12 29.66	-9 34.8	1.490	2.479	4.9	20.0
4 21	12 20.00	+9 19.6	1.925	2.828	10.8	19.0	4 21	12 23.47	-7 51.6	1.516	2.472	9.2	20.2
5 1	12 14.07	+9 15.5	2.008	2.835	13.8	19.2	5 1	12 19.17	-6 17.9	1.566	2.466	13.2	20.4
147350	2003 BD ₇₈		3 30.8 24°19	7°0/25.5 18			146113	2000 QQ ₁₇₉		3 30.8 184°20	0°9/29.7 18		
2 21	13 1.76	+8 49.8	1.319	2.163	17.6	18.7	2 21	13 0.18	-3 8.6	2.864	3.645		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
499157	2009 SC ₃₆		3 30.8 247°19	1.3/1.0	17		87530	2000 QG ₂₀₀		3 30.8 171°59	2°0/28.7	17	
2 21	13 2.28	-10 20.8	2.042	2.812	14.9	22.5	2 21	13 2.60	-1 10.1	2.155	2.951	13.4	20.3
3 2	12 58.71	-10 3.9	1.936	2.799	12.0	22.3	3 2	12 58.60	-0 26.3	2.069	2.953	10.4	20.1
3 12	12 52.90	-9 30.5	1.851	2.786	8.5	22.0	3 12	12 52.59	+0 27.3	2.007	2.956	6.9	19.9
3 22	12 45.33	-8 42.4	1.791	2.772	4.6	21.8	3 22	12 45.08	+1 26.1	1.971	2.957	3.4	19.7
4 1	12 36.75	-7 43.4	1.760	2.758	1.3	21.5	4 1	12 36.83	+2 24.3	1.964	2.958	2.4	19.6
4 11	12 28.14	-6 39.5	1.756	2.743	4.6	21.7	4 11	12 28.72	+3 15.9	1.987	2.959	5.7	19.8
4 21	12 20.45	-5 37.6	1.781	2.728	8.7	21.9	4 21	12 21.56	+3 56.0	2.036	2.960	9.2	20.0
5 1	12 14.46	-4 43.9	1.830	2.713	12.5	22.1	5 1	12 16.01	+4 21.4	2.110	2.960	12.4	20.2
236687	2006 SK ₄₂		3 30.8 144°09	3°7/25.6	17		49379	1998 XF ₃		3 30.8 108°54	4°5/3.8	18	
2 21	12 58.93	+5 50.6	2.643	3.450	10.8	20.6	2 21	13 6.97	-17 10.8	1.921	2.656	16.8	19.0
3 2	12 55.32	+6 59.8	2.566	3.457	8.4	20.4	3 2	13 2.38	-17 39.8	1.839	2.670	14.0	18.9
3 12	12 50.14	+8 13.2	2.516	3.463	5.8	20.3	3 12	12 55.35	-17 49.9	1.777	2.684	10.7	18.7
3 22	12 43.83	+9 25.3	2.493	3.469	3.9	20.1	3 22	12 46.46	-17 40.3	1.739	2.697	7.2	18.5
4 1	12 36.98	+10 30.5	2.500	3.474	4.3	20.2	4 1	12 36.65	-17 12.4	1.727	2.710	4.7	18.4
4 11	12 30.27	+11 24.0	2.536	3.480	6.5	20.3	4 11	12 27.03	-16 30.8	1.743	2.723	5.5	18.4
4 21	12 24.32	+12 2.3	2.599	3.485	9.0	20.5	4 21	12 18.61	-15 41.8	1.786	2.736	8.6	18.6
5 1	12 19.62	+12 23.9	2.685	3.490	11.4	20.7	5 1	12 12.19	-14 52.5	1.855	2.748	11.9	18.9
430079	2013 SG ₅₀		3 30.8 179°71	7°3/23.7	17		495940	2006 QH ₁₈₆		3 30.8 232°75	1°7/29.2	17	
2 21	13 11.32	+19 3.8	2.343	3.136	12.5	21.0	2 21	13 4.24	-2 23.8	2.056	2.848	14.0	22.9
3 2	13 5.16	+19 47.2	2.270	3.137	10.3	20.8	3 2	13 0.17	-1 42.8	1.953	2.835	11.0	22.7
3 12	12 56.87	+20 24.5	2.222	3.138	8.4	20.7	3 12	12 53.86	-0 49.9	1.874	2.821	7.4	22.5
3 22	12 47.06	+20 49.1	2.200	3.138	7.3	20.6	3 22	12 45.79	+0 10.8	1.820	2.807	3.6	22.2
4 1	12 36.56	+20 55.5	2.206	3.138	7.9	20.7	4 1	12 36.73	+1 13.5	1.796	2.792	2.1	22.0
4 11	12 26.34	+20 40.6	2.240	3.137	9.7	20.8	4 11	12 27.66	+2 11.2	1.800	2.776	5.9	22.3
4 21	12 17.26	+20 4.1	2.300	3.136	11.9	20.9	4 21	12 19.51	+2 58.2	1.832	2.759	9.9	22.5
5 1	12 9.98	+19 8.1	2.382	3.135	14.1	21.1	5 1	12 13.09	+3 30.1	1.888	2.742	13.5	22.7
270522	2002 GY ₄₇		3 30.8 174°07	0°2/30.9	17		468953	2015 AM ₂₈		3 30.8 123°12	3°2/2.9	17	
2 21	13 3.94	-5 54.5	2.029	2.812	14.5	20.5	2 21	13 4.02	-15 3.2	2.021	2.768	15.7	22.3
3 2	12 59.83	-5 48.3	1.939	2.812	11.5	20.3	3 2	12 59.95	-15 11.5	1.934	2.777	12.9	22.1
3 12	12 53.54	-5 30.4	1.871	2.813	7.9	20.1	3 12	12 53.63	-15 1.9	1.868	2.786	9.6	21.9
3 22	12 45.58	-5 3.2	1.829	2.813	3.8	19.8	3 22	12 45.63	-14 35.0	1.826	2.794	6.0	21.7
4 1	12 36.75	-4 30.5	1.814	2.814	0.5	19.5	4 1	12 36.76	-13 53.1	1.811	2.802	3.4	21.6
4 11	12 28.03	-3 57.6	1.829	2.814	4.7	19.9	4 11	12 28.05	-13 1.5	1.825	2.810	4.7	21.7
4 21	12 20.33	-3 29.3	1.871	2.814	8.7	20.1	4 21	12 20.41	-12 6.5	1.866	2.817	8.1	21.9
5 1	12 14.37	-3 9.8	1.938	2.814	12.2	20.3	5 1	12 14.57	-11 14.5	1.932	2.824	11.5	22.1
500875	2013 JZ ₆₂		3 30.8 341°59	1°6/29.6	17		471363	2011 SQ ₃₈		3 30.8 191°68	1°9/1.9	18	
2 21	12 58.17	-3 45.9	1.209	2.044	19.4	21.1	2 21	13 1.92	-11 40.2	2.632	3.380	12.4	21.7
3 2	12 56.76	-3 16.8	1.129	2.034	15.3	20.8	3 2	12 57.79	-11 45.4	2.531	3.379	10.1	21.5
3 12	12 52.25	-2 29.0	1.068	2.025	10.4	20.5	3 12	12 51.92	-11 38.5	2.454	3.378	7.3	21.3
3 22	12 45.22	-1 27.8	1.028	2.017	4.9	20.2	3 22	12 44.75	-11 20.4	2.403	3.377	4.2	21.1
4 1	12 36.78	-0 21.7	1.013	2.011	2.2	20.0	4 1	12 36.88	-10 53.3	2.381	3.376	1.9	21.0
4 11	12 28.44	+0 38.4	1.021	2.005	7.6	20.3	4 11	12 29.07	-10 20.8	2.388	3.374	3.7	21.1
4 21	12 21.59	+1 23.3	1.051	2.000	13.1	20.6	4 21	12 22.00	-9 46.9	2.425	3.372	6.7	21.3
5 1	12 17.32	+1 46.8	1.102	1.996	18.0	20.8	5 1	12 16.27	-9 15.9	2.487	3.370	9.6	21.4
294716	2008 BU ₂₇		3 30.8 203°24	5°1/5.8	18		382343	2013 TT ₅₃		3 30.8 178°69	1°7/1.3	17	
2 21	13 1.87	-22 27.0	2.632	3.323	13.7	21.0	2 21	13 3.32	-9 58.9	1.952	2.724	15.4	21.2
3 2	12 57.92	-22 54.0	2.527	3.321	11.8	20.8	3 2	12 59.51	-10 2.7	1.860	2.724	12.4	21.0
3 12	12 52.11	-23 4.2	2.443	3.319	9.5	20.7	3 12	12 53.41	-9 51.7	1.790	2.724	8.8	20.7
3 22	12 44.87	-22 56.5	2.383	3.316	7.1	20.5	3 22	12 45.56	-9 27.3	1.745	2.724	4.8	20.5
4 1	12 36.84	-22 31.1	2.349	3.314	5.4	20.4	4 1	12 36.78	-8 52.6	1.727	2.724	1.7	20.3
4 11	12 28.83	-21 50.8	2.344	3.311	5.4	20.4	4 11	12 28.10	-8 12.9	1.737	2.724	4.6	20.5
4 21	12 21.58	-21 0.2	2.366	3.308	7.2	20.5	4 21	12 20.45	-7 33.9	1.775	2.724	8.6	20.7
5 1	12 15.75	-20 4.7	2.415	3.305	9.6	20.6	5 1	12 14.61	-7 1.0	1.837	2.724	12.2	20.9
497378	2005 UG ₄₂₃		3 30.8 199°88	0°6/31.5	17		226800	2004 RM ₂₀₂		3 30.8 173°54	1°1/31.9	17	
2 21	13 3.59	-8 36.7	2.365	3.129	13.2	23.8	2 21	13 0.98	-10 34.6	2.093	2.863	14.6	20.7
3 2	12 59.28	-8 16.9	2.264	3.125	10.6	23.6	3 2	12 57.49	-10 8.2	2.000	2.864	11.7	20.5
3 12	12 53.04	-7 43.9	2.185	3.121	7.3	23.4	3 12	12 51.93	-9 25.4	1.930	2.865	8.2	20.3
3 22	12 45.31	-7 0.0	2.134	3.116	3.7	23.2	3 22	12 44.81	-8 28.5	1.885	2.866	4.3	20.0
4 1	12 36.79	-6 8.8	2.111	3.110	0.7	22.9	4 1	12 36.89	-7 22.1	1.868	2.866	1.1	19.8
4 11	12 28.32	-5 15.6	2.119	3.104	4.1	23.2	4 11	12 29.09	-6 12.5	1.880	2.867	4.3	20.0
4 21	12 20.69	-4 25.4	2.155	3.097	7.8	23.4	4 21	12 22.23	-5 6.3	1.920	2.867	8.2	20.3
5 1	12 14.56	-3 43.2	2.217	3.089	11.1	23.6	5 1	12 17.01	-4 9.5	1.985	2.867	11.7	20.5
373404	1995 VO ₁₅		3 30.8 121°29	2°6/2.8	17		470021	2006 RL ₆₃		3 30.8 123°06	2°5/27.1	17	
2 21	13 1.65	-15 14.4	2.202	2.947	14.7	21.4	2 21	12 59.49	+2 17.9	2.984	3.778	10.1	22.1
3 2	12 57.85	-14 59.9	2.115	2.958	12.0	21.2	3 2	12 55.49	+3 20.4	2.912	3.796	7.7	22.0
3 12	12 52.07	-14 27.5	2.050	2.969	8.8	21.0	3 12	12 50.13	+4 28.0	2.866	3.814	5.2	21.8
3 22	12 44.82	-13 38.4	2.010	2.980	5.4	20.8	3 22	12 43.80	+5 36.4	2.849	3.831	2.9	21.7
4 1	12 36.87	-12 36.2	1.997	2.990	2.7	20.7	4 1	12 37.05	+6 40.8	2.863	3.848	2.9	21.7
4 11	12 29.08	-11 26.5	2.014	3.000	4.2	20.8	4 11	12 30.47	+7 37.0	2.907	3.864	5.1	21.9
4 21	12 22.26	-10 15.8	2.059	3.009	7.5	21.0	4 21	12 24.58	+8 21.6	2.979	3.879	7.5	22.1
5 1	12 17.04	-9 10.3	2.129	3.019	10.7	21.2	5 1	12 19.81	+8 52.8	3.076	3.894	9.7	22.2
315468	2007 XZ ₅₆		3 30.8 110°21	1°2/31.9	18		402921	2007 TD ₁₄₃		3 30.8 106°85	3°7/27.4	18	
2 21	13 5.40	-9 53.8	1.772	2.547	16.6	22.0	2 21	13 6.77	+2 36.0	1.797			

EPHEMERIDES

3 30.8

3 30.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
433530	2013 <i>WG</i> ₈₃		3 30.8 174°86	2°0/ 2.2 17			227159	2005 <i>QZ</i> ₁₁		3 30.8 205°34	2°6/ 2.3 17		
2 21	13 0.96	-13 42.8	2.435	3.181	13.4	22.2	2 21	13 3.33	-13 28.8	1.980	2.737	15.7	20.8
3 2	12 57.18	-13 21.4	2.337	3.183	10.9	22.0	3 2	12 59.57	-13 28.3	1.883	2.735	12.8	20.6
3 12	12 51.57	-12 44.1	2.262	3.185	7.9	21.8	3 12	12 53.51	-13 10.0	1.807	2.732	9.4	20.4
3 22	12 44.61	-11 52.2	2.213	3.186	4.6	21.6	3 22	12 45.66	-12 34.8	1.756	2.729	5.6	20.2
4 1	12 36.95	-10 49.3	2.192	3.187	2.0	21.5	4 1	12 36.84	-11 45.5	1.731	2.725	2.7	20.0
4 11	12 29.37	-9 40.4	2.201	3.188	3.8	21.6	4 11	12 28.07	-10 47.6	1.735	2.721	4.7	20.1
4 21	12 22.63	-8 31.6	2.239	3.187	7.1	21.8	4 21	12 20.31	-9 47.9	1.766	2.717	8.5	20.3
5 1	12 17.31	-7 28.3	2.303	3.187	10.2	22.0	5 1	12 14.37	-8 53.2	1.822	2.713	12.2	20.5
139901	2001 <i>RE</i> ₉₉		3 30.8 234°23	0°7/30.0 18			4687	<i>Brunsandrej</i>		3 30.8 91°15	1°7/ 1.8 18		
2 21	13 0.09	-4 33.9	2.394	3.179	12.5	20.6	2 21	13 0.82	-11 59.2	2.386	3.142	13.4	17.9
3 2	12 56.53	-4 1.2	2.295	3.173	9.8	20.4	3 2	12 57.01	-11 47.8	2.304	3.156	10.7	17.7
3 12	12 51.17	-3 17.5	2.220	3.166	6.6	20.1	3 12	12 51.41	-11 22.1	2.243	3.171	7.7	17.5
3 22	12 44.43	-2 26.1	2.172	3.159	3.1	19.9	3 22	12 44.52	-10 43.9	2.209	3.185	4.3	17.3
4 1	12 36.97	-1 31.4	2.153	3.151	1.0	19.7	4 1	12 37.01	-9 56.6	2.203	3.199	1.7	17.2
4 11	12 29.57	-0 38.9	2.163	3.144	4.6	20.0	4 11	12 29.67	-9 4.9	2.226	3.213	3.8	17.3
4 21	12 22.94	+0 6.6	2.202	3.136	8.1	20.2	4 21	12 23.21	-8 13.9	2.278	3.226	7.0	17.5
5 1	12 17.72	+0 41.2	2.265	3.128	11.2	20.3	5 1	12 18.20	-7 28.5	2.355	3.240	10.0	17.8
494928	2008 <i>YH</i> ₈₅		3 30.8 108°34	3°3/ 2.7 18			284361	2006 <i>SP</i> ₁₂₆		3 30.8 140°65	2°8/26.9 17		
2 21	13 5.73	-14 51.4	1.599	2.362	18.6	21.9	2 21	12 58.88	+2 23.7	2.710	3.510	10.8	21.3
3 2	13 1.82	-14 52.0	1.522	2.376	15.2	21.7	3 2	12 55.25	+3 29.1	2.631	3.519	8.3	21.1
3 12	12 55.17	-14 30.2	1.465	2.389	11.2	21.5	3 12	12 50.10	+4 40.6	2.578	3.527	5.6	20.9
3 22	12 46.45	-13 46.8	1.430	2.402	6.8	21.3	3 22	12 43.86	+5 53.3	2.553	3.535	3.2	20.8
4 1	12 36.71	-12 45.7	1.422	2.415	3.4	21.1	4 1	12 37.10	+7 2.1	2.557	3.542	3.3	20.8
4 11	12 27.24	-11 34.5	1.440	2.427	5.4	21.3	4 11	12 30.48	+8 1.7	2.592	3.549	5.6	21.0
4 21	12 19.19	-10 22.0	1.485	2.439	9.5	21.5	4 21	12 24.58	+8 48.5	2.654	3.556	8.3	21.2
5 1	12 13.41	-9 16.7	1.554	2.450	13.5	21.8	5 1	12 19.91	+9 20.2	2.741	3.562	10.7	21.3
44970	1999 <i>VJ</i> ₉₈		3 30.8 283°77	1°7/29.5 17			57170	2001 <i>QB</i> ₂₀		3 30.8 126°48	0°7/30.2 18		
2 21	13 3.38	-2 28.4	1.598	2.408	16.6	20.0	2 21	13 4.37	-4 39.9	2.013	2.799	14.5	20.0
3 2	13 0.17	-2 2.6	1.503	2.395	13.1	19.7	3 2	13 0.08	-4 11.6	1.934	2.811	11.3	19.8
3 12	12 54.25	-1 23.4	1.430	2.381	8.9	19.5	3 12	12 53.64	-3 31.2	1.877	2.822	7.6	19.6
3 22	12 46.12	-0 35.1	1.380	2.368	4.2	19.2	3 22	12 45.63	-2 42.7	1.847	2.833	3.6	19.3
4 1	12 36.74	+0 15.9	1.357	2.355	2.1	19.0	4 1	12 36.87	-1 51.1	1.845	2.843	1.0	19.2
4 11	12 27.35	+1 1.8	1.361	2.341	6.7	19.2	4 11	12 28.32	-1 2.5	1.872	2.853	5.0	19.5
4 21	12 19.14	+1 35.7	1.390	2.328	11.5	19.5	4 21	12 20.86	-0 22.2	1.926	2.863	8.9	19.7
5 1	12 13.09	+1 53.0	1.441	2.315	15.8	19.7	5 1	12 15.15	+0 5.9	2.005	2.872	12.3	19.9
351543	2005 <i>TP</i> ₁₀		3 30.8 192°89	3°1/ 2.3 18			348570	2005 <i>WS</i>		3 30.8 212°24	3°4/ 4.0 17		
2 21	13 8.20	-13 14.3	1.728	2.487	17.6	21.0	2 21	13 0.27	-17 44.3	2.697	3.418	12.8	21.1
3 2	13 3.78	-13 28.2	1.634	2.486	14.4	20.8	3 2	12 56.56	-17 50.3	2.592	3.414	10.7	20.9
3 12	12 56.60	-13 23.5	1.559	2.484	10.6	20.5	3 12	12 51.15	-17 41.0	2.508	3.410	8.2	20.7
3 22	12 47.22	-13 0.2	1.509	2.481	6.4	20.3	3 22	12 44.43	-17 16.7	2.450	3.407	5.5	20.6
4 1	12 36.60	-12 20.5	1.485	2.478	3.2	20.0	4 1	12 37.02	-16 38.8	2.419	3.403	3.6	20.4
4 11	12 26.02	-11 30.2	1.489	2.474	5.4	20.2	4 11	12 29.64	-15 50.9	2.418	3.398	4.1	20.4
4 21	12 16.67	-10 36.5	1.519	2.470	9.6	20.4	4 21	12 22.97	-14 57.6	2.445	3.394	6.6	20.6
5 1	12 9.54	-9 47.3	1.574	2.465	13.7	20.6	5 1	12 17.61	-14 4.0	2.499	3.389	9.3	20.8
251018	<i>Liubirena</i>		3 30.8 161°12	0°7/31.6 16			375837	2009 <i>UR</i> ₁₂₃		3 30.8 185°83	0°9/31.9 17		
2 21	13 4.96	-8 53.6	2.148	2.914	14.3	21.7	2 21	13 1.10	-11 28.0	2.363	3.121	13.4	21.5
3 2	13 0.48	-8 31.7	2.058	2.921	11.4	21.5	3 2	12 57.34	-10 42.4	2.264	3.121	10.7	21.3
3 12	12 53.90	-7 55.5	1.992	2.928	7.9	21.3	3 12	12 51.73	-9 40.0	2.188	3.121	7.5	21.1
3 22	12 45.75	-7 7.4	1.951	2.933	4.0	21.1	3 22	12 44.72	-8 23.6	2.139	3.120	3.9	20.9
4 1	12 36.82	-6 11.7	1.939	2.938	0.7	20.8	4 1	12 36.99	-6 57.9	2.119	3.118	0.9	20.6
4 11	12 28.03	-5 14.2	1.957	2.942	4.4	21.1	4 11	12 29.35	-5 29.4	2.130	3.116	4.0	20.9
4 21	12 20.23	-4 20.8	2.003	2.945	8.2	21.3	4 21	12 22.56	-4 5.0	2.169	3.113	7.6	21.1
5 1	12 14.13	-3 36.5	2.074	2.948	11.6	21.5	5 1	12 17.23	-2 50.4	2.235	3.109	10.9	21.3
500104	2012 <i>BW</i> ₈₂		3 30.8 319°39	3°9/27.7 17			274073	2007 <i>XH</i> ₃₂		3 30.8 78°22	1°1/31.7 18		
2 21	12 59.02	+0 45.6	1.368	2.204	17.5	21.0	2 21	13 5.88	-7 50.3	1.609	2.398	17.4	20.3
3 2	12 57.17	+1 38.9	1.280	2.186	13.8	20.7	3 2	13 1.92	-7 55.1	1.530	2.405	13.9	20.1
3 12	12 52.43	+2 46.8	1.212	2.170	9.4	20.4	3 12	12 55.26	-7 44.6	1.471	2.412	9.7	19.9
3 22	12 45.33	+4 2.2	1.167	2.153	5.0	20.1	3 22	12 46.53	-7 20.7	1.436	2.419	5.0	19.6
4 1	12 36.86	+5 15.3	1.146	2.138	4.6	20.0	4 1	12 36.75	-6 47.5	1.427	2.426	1.1	19.4
4 11	12 28.38	+6 15.4	1.151	2.123	8.9	20.2	4 11	12 27.18	-6 11.4	1.446	2.433	5.3	19.7
4 21	12 21.20	+6 54.4	1.178	2.109	13.8	20.5	4 21	12 18.95	-5 38.7	1.490	2.440	9.9	19.9
5 1	12 16.37	+7 8.0	1.225	2.095	18.2	20.7	5 1	12 12.94	-5 15.0	1.558	2.447	14.0	20.2
306922	2001 <i>UL</i> ₂₉		3 30.8 234°69	5°4/25.6 18			356282	2010 <i>CB</i> ₁₇₀		3 30.8 296°55	1°6/29.6 17		
2 21	13 6.77	+9 41.7	2.106	2.913	13.2	21.1	2 21	12 59.98	-4 59.3	1.324	2.146	18.7	21.2
3 2	13 2.05	+10 31.4	2.015	2.901	10.5	20.9	3 2	12 58.18	-4 15.0	1.227	2.125	14.9	20.9
3 12	12 55.07	+11 23.1	1.947	2.889	7.6	20.7	3 12	12 53.32	-3 8.7	1.149	2.104	10.2	20.6
3 22	12 46.37	+12 10.5	1.906	2.876	5.6	20.5	3 22	12 45.87	-1 45.1	1.094	2.083	4.8	20.2
4 1	12 36.74	+12 46.9	1.894	2.863	6.0	20.5	4 1	12 36.82	-0 12.9	1.064	2.062	2.2	20.0
4 11	12 27.18	+13 6.6	1.909	2.849	8.5	20.7	4 11	12 27.63	+1 15.9	1.059	2.041	7.7	20.2
4 21	12 18.63	+13 6.9	1.950	2.835	11.6	20.8	4 21	12 19.72	+2 30.0	1.077	2.021	13.4	20.5
5 1	12 11.84	+12 47.1	2.014	2.820	14.6	21.0	5 1	12 14.30	+3 20.9	1.115	2.000	18.5	20.7
460274	2014 <i>QW</i> ₃₂₅		3 30.8 184°02	1°8/29.0 17			33992	2000 <i>OQ</i>		3 30.8 208°95	4°8/ 4.7 18		
2 21	13 3.98	-2 39.7	1.937	2.733	14.7	22							

EPHEMERIDES

3 30.8

3 30.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
140627	2001 <i>UR</i> ₁₃		3 30.8 181°58	0°4/30.3	18		462681	2009 <i>UX</i> ₈₆		3 30.9 318°06	4°7/27.7	17	
2 21	12 59.54	- 5 23.0	2.918	3.692	10.8	20.7	2 21	13 6.91	+ 6 35.8	1.572	2.393	16.3	20.8
3 2	12 55.71	- 4 47.6	2.822	3.692	8.4	20.6	3 2	13 3.00	+ 6 52.9	1.482	2.378	12.9	20.5
3 12	12 50.41	- 4 2.7	2.750	3.693	5.7	20.4	3 12	12 56.20	+ 7 13.4	1.414	2.364	9.1	20.2
3 22	12 44.03	- 3 11.1	2.707	3.692	2.7	20.2	3 22	12 47.11	+ 7 30.9	1.369	2.351	5.5	20.0
4 1	12 37.10	- 2 16.6	2.693	3.692	0.7	20.0	4 1	12 36.73	+ 7 38.7	1.351	2.337	5.2	19.9
4 11	12 30.25	- 1 23.5	2.710	3.691	3.7	20.3	4 11	12 26.40	+ 7 31.1	1.359	2.325	8.7	20.1
4 21	12 24.06	- 0 35.8	2.756	3.689	6.7	20.4	4 21	12 17.37	+ 7 5.0	1.392	2.312	12.9	20.3
5 1	12 19.01	+ 0 3.0	2.829	3.687	9.4	20.6	5 1	12 10.65	+ 6 20.0	1.446	2.301	16.8	20.5
499948	2011 <i>HR</i> ₉₃		3 30.8 240°56	3°0/27.7	17		16255	Hampton		3 30.9 161°08	0°4/31.3	18	
2 21	13 1.92	+ 2 22.9	2.134	2.940	13.1	21.8	2 21	13 1.22	- 7 44.4	2.512	3.282	12.4	19.6
3 2	12 58.17	+ 3 6.1	2.044	2.934	10.2	21.5	3 2	12 57.28	- 7 23.0	2.420	3.286	9.8	19.4
3 12	12 52.39	+ 3 56.6	1.979	2.929	6.9	21.3	3 12	12 51.61	- 6 49.9	2.351	3.289	6.8	19.2
3 22	12 45.08	+ 4 49.3	1.939	2.923	3.8	21.1	3 22	12 44.66	- 6 7.7	2.309	3.293	3.4	19.0
4 1	12 36.96	+ 5 38.3	1.929	2.917	3.5	21.1	4 1	12 37.07	- 5 20.0	2.297	3.296	0.5	18.8
4 11	12 28.94	+ 6 17.8	1.946	2.911	6.5	21.3	4 11	12 29.58	- 4 31.4	2.313	3.298	3.9	19.1
4 21	12 21.84	+ 6 43.7	1.990	2.905	9.9	21.5	4 21	12 22.88	- 3 46.7	2.359	3.301	7.2	19.3
5 1	12 16.34	+ 6 53.3	2.058	2.899	13.0	21.6	5 1	12 17.55	- 3 9.8	2.430	3.303	10.2	19.5
341251	2007 <i>RR</i> ₂₀₈		3 30.8 232°80	1°3/29.5	17		388399	2006 <i>VP</i> ₄₇		3 30.9 76°13	3°3/27.5	17	
2 21	13 1.29	- 2 31.5	2.164	2.959	13.3	21.1	2 21	13 3.17	+ 5 12.3	2.337	3.141	12.2	21.3
3 2	12 57.64	- 2 2.3	2.074	2.957	10.4	20.9	3 2	12 58.84	+ 5 40.2	2.260	3.148	9.5	21.1
3 12	12 52.01	- 1 23.1	2.007	2.955	7.0	20.7	3 12	12 52.66	+ 6 11.4	2.206	3.154	6.5	20.9
3 22	12 44.88	- 0 37.7	1.966	2.953	3.3	20.4	3 22	12 45.14	+ 6 41.5	2.180	3.161	3.8	20.7
4 1	12 36.99	+ 0 9.1	1.954	2.951	1.6	20.3	4 1	12 37.01	+ 7 5.8	2.183	3.168	3.7	20.7
4 11	12 29.20	+ 0 51.6	1.970	2.949	5.2	20.6	4 11	12 29.06	+ 7 20.1	2.214	3.175	6.2	20.9
4 21	12 22.31	+ 1 25.3	2.014	2.946	8.8	20.8	4 21	12 22.03	+ 7 22.0	2.272	3.181	9.1	21.1
5 1	12 16.98	+ 1 46.5	2.082	2.944	12.1	21.0	5 1	12 16.50	+ 7 10.4	2.355	3.188	11.9	21.3
171877	2001 <i>QR</i> ₂₂₈		3 30.8 188°06	3°7/4.4	18		278505	2008 <i>AS</i> ₁₃₂		3 30.9 184°80	0°1/30.9	16	
2 21	13 1.35	-18 41.1	2.664	3.377	13.1	20.7	2 21	13 5.06	- 7 8.2	2.105	2.879	14.3	22.1
3 2	12 57.43	-18 48.2	2.560	3.377	11.0	20.6	3 2	13 0.68	- 6 44.2	2.011	2.880	11.4	21.9
3 12	12 51.75	-18 39.5	2.478	3.376	8.4	20.4	3 12	12 54.14	- 6 6.5	1.940	2.880	7.8	21.7
3 22	12 44.74	-18 14.8	2.421	3.375	5.8	20.2	3 22	12 45.95	- 5 18.0	1.895	2.879	3.8	21.4
4 1	12 37.01	-17 35.7	2.392	3.373	3.9	20.1	4 1	12 36.90	- 4 23.2	1.878	2.877	0.5	21.2
4 11	12 29.33	-16 45.7	2.392	3.371	4.3	20.1	4 11	12 27.95	- 3 28.1	1.891	2.875	4.7	21.5
4 21	12 22.40	-15 49.6	2.421	3.369	6.7	20.3	4 21	12 19.97	- 2 38.5	1.932	2.872	8.6	21.7
5 1	12 16.82	-14 52.8	2.476	3.366	9.4	20.4	5 1	12 13.71	- 1 59.3	1.998	2.868	12.2	21.9
369889	2012 <i>RT</i> ₃₁		3 30.8 165°38	0°4/30.4	17		233371	2006 <i>DM</i> ₁₆₉		3 30.9 241°61	3°2/27.0	17	
2 21	13 4.10	- 3 50.7	2.210	2.994	13.5	20.8	2 21	12 59.97	+ 1 38.0	2.204	3.011	12.7	20.7
3 2	12 59.78	- 3 43.6	2.120	2.995	10.6	20.6	3 2	12 56.64	+ 2 46.1	2.110	3.001	9.9	20.4
3 12	12 53.43	- 3 27.1	2.052	2.996	7.2	20.4	3 12	12 51.37	+ 4 3.7	2.040	2.991	6.7	20.2
3 22	12 45.56	- 3 3.9	2.012	2.997	3.4	20.1	3 22	12 44.62	+ 5 25.1	1.998	2.981	3.8	20.0
4 1	12 36.91	- 2 37.7	2.000	2.998	0.8	19.9	4 1	12 37.08	+ 6 43.4	1.984	2.970	3.8	20.0
4 11	12 28.38	- 2 13.0	2.017	2.999	4.6	20.2	4 11	12 29.58	+ 7 51.6	1.999	2.960	6.7	20.2
4 21	12 20.78	- 1 53.9	2.062	3.000	8.3	20.4	4 21	12 22.93	+ 8 44.4	2.041	2.948	10.1	20.3
5 1	12 14.78	- 1 43.7	2.132	3.000	11.6	20.6	5 1	12 17.79	+ 9 18.6	2.106	2.937	13.1	20.5
10714	1983 <i>QG</i>		3 30.9 184°73	5°3/23.9	18		329310	2000 <i>SF</i> ₆₈		3 30.9 218°70	2°2/28.7	18	R
2 21	13 4.89	+12 59.8	2.761	3.560	10.7	19.2	2 21	13 6.61	+ 1 25.3	2.293	3.083	12.8	20.8
3 2	12 59.93	+14 4.2	2.682	3.561	8.5	19.1	3 2	13 1.73	+ 1 46.5	2.194	3.075	10.0	20.6
3 12	12 53.29	+15 8.1	2.629	3.560	6.5	18.9	3 12	12 54.78	+ 2 14.0	2.120	3.066	6.8	20.4
3 22	12 45.41	+16 5.8	2.604	3.559	5.3	18.9	3 22	12 46.25	+ 2 44.0	2.073	3.057	3.5	20.1
4 1	12 36.94	+16 52.0	2.608	3.557	5.9	18.9	4 1	12 36.87	+ 3 12.1	2.055	3.048	2.6	20.1
4 11	12 28.60	+17 22.5	2.641	3.554	7.7	19.0	4 11	12 27.54	+ 3 33.4	2.067	3.038	5.7	20.2
4 21	12 21.06	+17 35.2	2.701	3.550	9.9	19.2	4 21	12 19.09	+ 3 44.5	2.106	3.027	9.2	20.4
5 1	12 14.87	+17 29.9	2.783	3.546	12.0	19.3	5 1	12 12.25	+ 3 43.1	2.171	3.016	12.3	20.6
136703	1995 <i>SJ</i> ₈₈		3 30.9 290°49	0°7/31.7	17		504828	2010 <i>LL</i> ₆₂		3 30.9 162°33	3°1/26.0	18	
2 21	12 58.79	- 9 7.7	2.253	3.029	13.5	21.4	2 21	12 58.23	+ 2 8.0	2.732	3.533	10.7	21.6
3 2	12 55.71	- 8 44.5	2.152	3.020	10.8	21.1	3 2	12 54.80	+ 3 41.2	2.648	3.537	8.2	21.4
3 12	12 50.73	- 8 7.1	2.074	3.012	7.5	20.9	3 12	12 49.85	+ 5 22.0	2.591	3.540	5.6	21.3
3 22	12 44.30	- 7 17.6	2.021	3.003	3.9	20.7	3 22	12 43.79	+ 7 4.8	2.564	3.544	3.4	21.1
4 1	12 37.08	- 6 20.1	1.996	2.995	0.7	20.4	4 1	12 37.20	+ 8 43.1	2.567	3.547	3.7	21.1
4 11	12 29.89	- 5 20.1	2.000	2.987	4.2	20.7	4 11	12 30.71	+10 10.8	2.601	3.550	6.1	21.3
4 21	12 23.52	- 4 23.4	2.032	2.978	7.9	20.9	4 21	12 24.91	+11 23.4	2.662	3.552	8.7	21.5
5 1	12 18.61	- 3 35.3	2.089	2.970	11.3	21.1	5 1	12 20.30	+12 18.1	2.749	3.554	11.1	21.6
134728	2000 <i>AN</i> ₇₇		3 30.9 145°05	0°5/31.4	18		377385	2004 <i>RK</i> ₂₆₃		3 30.9 178°61	1°5/29.3	17	
2 21	13 4.71	- 8 58.4	2.168	2.935	14.2	21.0	2 21	13 0.96	- 3 35.6	2.078	2.873	13.8	21.5
3 2	13 0.22	- 8 26.3	2.084	2.947	11.3	20.8	3 2	12 57.46	- 2 45.3	1.991	2.874	10.8	21.3
3 12	12 53.69	- 7 39.4	2.022	2.959	7.8	20.6	3 12	12 51.94	- 1 42.4	1.926	2.875	7.2	21.0
3 22	12 45.66	- 6 40.8	1.987	2.970	3.9	20.4	3 22	12 44.89	- 0 31.5	1.888	2.875	3.4	20.8
4 1	12 36.92	- 5 35.2	1.981	2.980	0.6	20.2	4 1	12 37.06	+ 0 41.1	1.878	2.875	1.9	20.7
4 11	12 28.36	- 4 28.8	2.004	2.989	4.3	20.5	4 11	12 29.36	+ 1 48.6	1.898	2.875	5.5	20.9
4 21	12 20.82	- 3 27.7	2.057	2.998	8.1	20.7	4 21	12 22.60	+ 2 45.1	1.944	2.874	9.3	21.2
5 1	12 14.94	- 2 37.0	2.134	3.006	11.5	20.9	5 1	12 17.46	+ 3 26.3	2.015	2.873	12.6	21.4
318540	2005 <i>GO</i> ₂		3 30.9 16°78	2°8/29.0	18		325786	2010 <i>PC</i> ₅₈		3 30.9 171°48	0°1/30.9	16</	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
286437	2002 AN ₃₀		3 30.9 11°64	1.3°/31.8	18		417577	2006 UT ₂₇₃		3 30.9 181°96	1.1°/29.8	14	C
2 21	12 59.91	- 8 45.4	1.163	1.984	20.9	19.9	2 21	13 5.59	- 2 56.5	2.162	2.947	13.7	22.4
3 2	12 58.20	- 8 44.8	1.092	1.986	16.7	19.7	3 2	13 1.01	- 2 29.1	2.071	2.948	10.7	22.2
3 12	12 53.27	- 8 22.2	1.040	1.989	11.7	19.4	3 12	12 54.32	- 1 51.4	2.004	2.949	7.2	22.0
3 22	12 45.77	- 7 40.0	1.008	1.993	6.1	19.1	3 22	12 46.05	- 1 7.1	1.962	2.949	3.4	21.7
4 1	12 36.94	- 6 44.6	0.999	1.998	1.3	18.8	4 1	12 36.96	- 0 21.0	1.951	2.948	1.5	21.6
4 11	12 28.35	- 5 45.7	1.014	2.004	6.3	19.1	4 11	12 27.98	+ 0 21.4	1.968	2.946	5.2	21.8
4 21	12 21.42	- 4 53.2	1.052	2.011	11.9	19.4	4 21	12 19.97	+ 0 55.2	2.013	2.944	8.9	22.1
5 1	12 17.17	- 4 15.2	1.110	2.018	16.7	19.7	5 1	12 13.63	+ 1 16.9	2.084	2.942	12.2	22.3
98334	2000 SK ₂₉₅		3 30.9 161°06	1°5'/ 1.2	18		291923	Kuzmaskryabin		3 30.9 248°21	0°9'/31.7	17	
2 21	13 7.47	- 9 55.5	1.979	2.742	15.5	20.2	2 21	13 4.60	- 8 49.8	1.913	2.688	15.5	21.9
3 2	13 2.70	- 9 52.5	1.890	2.749	12.5	20.0	3 2	13 0.79	- 8 36.7	1.805	2.673	12.5	21.7
3 12	12 55.58	- 9 34.4	1.822	2.755	8.8	19.8	3 12	12 54.53	- 8 7.7	1.719	2.656	8.8	21.4
3 22	12 46.67	- 9 2.8	1.780	2.760	4.7	19.6	3 22	12 46.30	- 7 24.5	1.657	2.640	4.6	21.1
4 1	12 36.84	- 8 21.3	1.767	2.764	1.5	19.3	4 1	12 36.91	- 6 31.0	1.624	2.622	0.9	20.8
4 11	12 27.14	- 7 35.4	1.782	2.768	4.6	19.6	4 11	12 27.43	- 5 33.7	1.618	2.604	5.0	21.0
4 21	12 18.57	- 6 51.1	1.825	2.771	8.6	19.8	4 21	12 18.91	- 4 39.2	1.640	2.586	9.5	21.3
5 1	12 11.88	- 6 13.8	1.893	2.773	12.3	20.0	5 1	12 12.26	- 3 54.1	1.686	2.567	13.5	21.5
138759	2000 SK ₂₈₁		3 30.9 188°50	3°4'/ 4.3	18		459157	2012 DX ₅		3 30.9 132°33	2°1'/ 1.7	16	
2 21	13 0.99	-18 20.9	2.901	3.612	12.2	21.2	2 21	13 6.56	-11 15.0	1.853	2.617	16.4	22.1
3 2	12 57.00	-18 26.5	2.796	3.611	10.2	21.1	3 2	13 2.15	-11 21.2	1.768	2.626	13.2	21.9
3 12	12 51.39	-18 17.6	2.713	3.610	7.8	20.9	3 12	12 55.29	-11 11.0	1.705	2.635	9.5	21.7
3 22	12 44.57	-17 54.3	2.655	3.608	5.4	20.7	3 22	12 46.56	-10 45.6	1.666	2.643	5.4	21.5
4 1	12 37.11	-17 17.9	2.625	3.606	3.5	20.6	4 1	12 36.89	-10 8.3	1.654	2.650	2.2	21.3
4 11	12 29.68	-16 31.8	2.625	3.604	4.0	20.6	4 11	12 27.39	- 9 24.4	1.671	2.658	4.8	21.4
4 21	12 22.93	-15 40.2	2.654	3.602	6.2	20.8	4 21	12 19.08	- 8 40.4	1.715	2.665	8.8	21.7
5 1	12 17.42	-14 47.9	2.710	3.598	8.7	20.9	5 1	12 12.77	- 8 2.2	1.783	2.671	12.5	21.9
367849	2011 CB ₉		3 30.9 155°88	5°8'/ 6.0	15		406462	2007 UC ₁₈		3 30.9 211°84	1°7'/29.2	17	
2 21	13 6.81	-23 16.0	2.385	3.068	15.2	22.4	2 21	13 5.31	- 2 36.8	2.041	2.831	14.2	22.2
3 2	13 1.99	-23 49.3	2.289	3.076	13.0	22.2	3 2	13 1.02	- 1 52.0	1.943	2.824	11.1	22.0
3 12	12 55.01	-24 3.8	2.213	3.084	10.5	22.0	3 12	12 54.48	- 0 55.1	1.868	2.815	7.5	21.7
3 22	12 46.38	-23 57.9	2.160	3.091	7.9	21.9	3 22	12 46.19	+ 0 9.8	1.820	2.806	3.6	21.5
4 1	12 36.88	-23 31.7	2.135	3.097	6.0	21.8	4 1	12 36.94	+ 1 16.4	1.800	2.796	2.1	21.4
4 11	12 27.44	-22 48.0	2.138	3.102	6.0	21.8	4 11	12 27.73	+ 2 17.7	1.810	2.785	5.9	21.6
4 21	12 18.95	-21 52.4	2.168	3.107	7.9	21.9	4 21	12 19.48	+ 3 7.9	1.847	2.774	9.9	21.8
5 1	12 12.16	-20 51.3	2.225	3.111	10.4	22.1	5 1	12 12.99	+ 3 42.5	1.909	2.761	13.4	22.0
212628	2006 TR ₄₁		3 30.9 68°94	3°4'/27.4	18		409166	2003 UV ₂₁₁		3 30.9 186°12	1°5'/29.5	17	
2 21	13 3.38	+ 5 25.5	2.263	3.069	12.5	20.0	2 21	13 6.77	- 2 5.9	2.185	2.969	13.6	22.5
3 2	12 59.09	+ 5 54.4	2.185	3.074	9.7	19.8	3 2	13 1.91	- 1 35.3	2.092	2.969	10.6	22.3
3 12	12 52.88	+ 6 26.7	2.131	3.079	6.7	19.6	3 12	12 54.93	- 0 54.9	2.023	2.969	7.2	22.1
3 22	12 45.29	+ 6 57.6	2.103	3.084	4.0	19.4	3 22	12 46.35	- 0 8.4	1.981	2.967	3.4	21.9
4 1	12 37.03	+ 7 22.4	2.104	3.088	3.8	19.4	4 1	12 36.93	+ 0 38.9	1.969	2.965	1.8	21.8
4 11	12 28.96	+ 7 36.7	2.134	3.094	6.4	19.6	4 11	12 27.61	+ 1 21.6	1.986	2.962	5.3	22.0
4 21	12 21.83	+ 7 38.0	2.190	3.099	9.4	19.8	4 21	12 19.26	+ 1 54.9	2.031	2.958	9.1	22.2
5 1	12 16.25	+ 7 25.0	2.270	3.104	12.2	20.0	5 1	12 12.59	+ 2 15.5	2.101	2.953	12.4	22.4
423427	2005 QS ₆		3 30.9 180°77	3°2'/ 2.9	15		432242	2009 PJ ₂₀		3 30.9 93°02	2°7'/27.8	18	
2 21	13 6.91	-14 48.1	2.346	3.077	14.2	22.4	2 21	13 2.35	- 1 7.9	2.006	2.807	14.0	21.8
3 2	13 2.01	-15 5.4	2.246	3.079	11.7	22.0	3 2	12 58.39	+ 0 10.8	1.944	2.832	10.8	21.6
3 12	12 55.01	-15 7.9	2.167	3.079	8.8	22.0	3 12	12 52.42	+ 1 40.1	1.906	2.856	7.1	21.4
3 22	12 46.39	-14 55.5	2.115	3.080	5.6	21.8	3 22	12 45.06	+ 3 13.1	1.895	2.880	3.6	21.2
4 1	12 36.90	-14 29.8	2.090	3.079	3.2	21.7	4 1	12 37.11	+ 4 42.3	1.913	2.904	3.2	21.2
4 11	12 27.45	-13 54.3	2.095	3.078	4.4	21.7	4 11	12 29.47	+ 6 0.2	1.960	2.927	6.4	21.5
4 21	12 18.90	-13 14.0	2.129	3.076	7.5	21.9	4 21	12 22.93	+ 7 1.5	2.034	2.949	9.8	21.7
5 1	12 11.97	-12 34.4	2.189	3.074	10.7	22.1	5 1	12 18.07	+ 7 43.3	2.132	2.971	12.7	22.0
363107	2000 UB ₉₂		3 30.9 174°42	0°5'/31.3	18		112392	2002 NA ₃₃		3 30.9 276°58	2°8'/ 2.4	18	
2 21	13 8.02	- 6 48.6	1.885	2.662	15.7	21.6	2 21	13 2.05	-14 39.1	1.841	2.601	16.6	19.8
3 2	13 3.27	- 6 44.2	1.795	2.665	12.5	21.3	3 2	12 59.08	-14 25.9	1.721	2.573	13.8	19.5
3 12	12 56.06	- 6 26.5	1.727	2.667	8.6	21.1	3 12	12 53.58	-13 50.6	1.620	2.546	10.2	19.2
3 22	12 46.94	- 5 57.8	1.685	2.668	4.3	20.8	3 22	12 45.94	-12 53.1	1.544	2.517	6.2	18.9
4 1	12 36.83	- 5 22.1	1.670	2.669	0.6	20.6	4 1	12 36.96	-11 36.2	1.494	2.488	2.9	18.6
4 11	12 26.84	- 4 45.0	1.685	2.670	5.0	20.9	4 11	12 27.73	-10 6.5	1.471	2.459	5.1	18.7
4 21	12 18.00	- 4 12.1	1.726	2.669	9.3	21.1	4 21	12 19.41	- 8 33.1	1.476	2.429	9.7	18.9
5 1	12 11.13	- 3 48.4	1.793	2.668	13.1	21.4	5 1	12 13.01	- 7 5.6	1.505	2.398	14.1	19.1
385871	2006 RS ₇₁		3 30.9 136°90	0°7'/31.7	17		199317	2006 BQ ₁₀₇		3 30.9 290°78	1°8'/29.2	17	
2 21	13 2.80	- 7 48.5	2.647	3.410	12.0	21.6	2 21	13 1.41	- 2 7.9	1.884	2.688	14.7	20.6
3 2	12 58.40	- 7 44.5	2.557	3.418	9.5	21.4	3 2	12 58.10	- 1 31.9	1.795	2.684	11.5	20.4
3 12	12 52.32	- 7 30.3	2.491	3.425	6.6	21.3	3 12	12 52.54	- 0 44.2	1.729	2.680	7.7	20.2
3 22	12 45.01	- 7 7.8	2.451	3.433	3.4	21.1	3 22	12 45.26	+ 0 10.5	1.688	2.675	3.7	19.9
4 1	12 37.09	- 6 39.8	2.441	3.440	0.7	20.8	4 1	12 37.07	+ 1 6.3	1.675	2.671	2.2	19.8
4 11	12 29.28	- 6 10.0	2.462	3.447	3.6	21.1	4 11	12 28.98	+ 1 56.3	1.690	2.667	6.0	20.0
4 21	12 22.26	- 5 42.1	2.511	3.454	6.8	21.3	4 21	12 21.92	+ 2 34.8	1.730	2.663	10.0	20.3
5 1	12 16.57	- 5 19.7	2.586	3.460	9.6	21.5	5 1	12 16.64	+ 2 58.0	1.795	2.659	13.6	20.5
337030	1995 SB ₃₉		3 30.9 43°60	0°6'/30.3	17		200687	2001 TS ₂₃₀		3 30.9 281°53	0°3'/31.1	17	
2 21	13 5.28	- 2 22.0	2.053	2.844									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
6480	Scarlati		3 30.9 235°15	0°6/30.3	18		522827	2016 NJ ₈₂		3 30.9 188°08	1°9/2.4	17	
2 21	13 4.27	- 5 49.5	2.007	2.791	14.6	18.9	2 21	12 58.69	-14 3.2	2.481	3.229	13.1	21.9
3 2	13 0.34	- 5 14.7	1.901	2.777	11.6	18.6	3 2	12 55.45	-13 37.9	2.382	3.229	10.7	21.7
3 12	12 54.12	- 4 25.3	1.818	2.762	7.9	18.4	3 12	12 50.47	-12 56.3	2.305	3.228	7.7	21.5
3 22	12 46.07	- 3 24.4	1.761	2.747	3.8	18.1	3 22	12 44.19	-12 0.2	2.255	3.228	4.5	21.3
4 1	12 36.96	- 2 17.5	1.732	2.731	0.9	17.8	4 1	12 37.25	-10 53.0	2.232	3.227	2.0	21.1
4 11	12 27.82	- 1 11.5	1.732	2.714	5.3	18.1	4 11	12 30.39	- 9 39.9	2.239	3.226	3.7	21.2
4 21	12 19.61	- 0 13.1	1.760	2.696	9.6	18.3	4 21	12 24.29	- 8 26.9	2.275	3.225	6.9	21.4
5 1	12 13.16	+ 0 32.1	1.812	2.678	13.4	18.5	5 1	12 19.56	- 7 19.5	2.337	3.224	10.0	21.6
500620	2012 US ₁₄₉		3 30.9 117°17	2°6/28.4	17		495837	2001 SB ₃₄₉		3 30.9 152°05	4°4/26.3	16	
2 21	13 5.27	+ 3 24.2	2.355	3.151	12.4	21.5	2 21	13 6.05	+ 7 24.4	2.263	3.065	12.6	21.7
3 2	13 0.48	+ 3 40.5	2.273	3.156	9.6	21.3	3 2	13 1.15	+ 8 16.5	2.189	3.074	9.8	21.5
3 12	12 53.81	+ 4 0.9	2.215	3.162	6.5	21.1	3 12	12 54.28	+ 9 11.3	2.139	3.083	6.9	21.3
3 22	12 45.75	+ 4 21.5	2.184	3.167	3.5	20.9	3 22	12 45.99	+10 3.1	2.116	3.091	4.7	21.2
4 1	12 37.03	+ 4 38.3	2.182	3.172	2.9	20.9	4 1	12 37.03	+10 46.0	2.123	3.098	4.9	21.2
4 11	12 28.48	+ 4 47.3	2.209	3.177	5.6	21.1	4 11	12 28.29	+11 15.1	2.158	3.104	7.3	21.4
4 21	12 20.86	+ 4 46.0	2.265	3.182	8.8	21.3	4 21	12 20.56	+11 27.7	2.220	3.110	10.2	21.6
5 1	12 14.77	+ 4 32.9	2.345	3.187	11.6	21.5	5 1	12 14.44	+11 22.8	2.306	3.116	12.8	21.7
67396	2000 PV ₂		3 30.9 221°32	1°1/31.9	18		97855	2000 QV ₁₄		3 30.9 199°30	0°8/30.2	18	
2 21	13 4.48	-10 14.8	1.863	2.636	16.0	20.6	2 21	13 5.44	- 5 7.4	1.896	2.683	15.2	20.2
3 2	13 0.69	- 9 52.4	1.762	2.627	12.9	20.4	3 2	13 1.28	- 4 33.7	1.803	2.680	12.0	19.9
3 12	12 54.44	- 9 11.8	1.682	2.618	9.1	20.1	3 12	12 54.74	- 3 45.8	1.732	2.677	8.2	19.7
3 22	12 46.25	- 8 14.9	1.627	2.609	4.8	19.8	3 22	12 46.35	- 2 47.5	1.686	2.672	3.9	19.4
4 1	12 36.95	- 7 6.4	1.600	2.598	1.1	19.6	4 1	12 36.97	- 1 44.5	1.669	2.667	1.1	19.2
4 11	12 27.66	- 5 53.5	1.601	2.587	5.0	19.8	4 11	12 27.67	- 0 43.9	1.681	2.662	5.5	19.5
4 21	12 19.41	- 4 44.0	1.629	2.576	9.4	20.0	4 21	12 19.44	+ 0 7.6	1.719	2.655	9.8	19.7
5 1	12 13.08	- 3 44.8	1.682	2.564	13.5	20.3	5 1	12 13.10	+ 0 45.2	1.782	2.648	13.6	20.0
259188	2003 AM ₂₉		3 30.9 31°24	8°8/7.1	18		457470	2008 UQ ₂₂₁		3 30.9 194°62	0°3/30.7	18	
2 21	13 3.41	-23 56.5	1.456	2.188	21.5	19.0	2 21	13 8.63	- 5 20.6	1.841	2.623	15.8	22.0
3 2	13 0.63	-25 8.0	1.384	2.199	18.6	18.8	3 2	13 3.88	- 5 6.4	1.748	2.622	12.6	21.8
3 12	12 54.78	-25 52.7	1.328	2.211	15.2	18.6	3 12	12 56.57	- 4 39.0	1.676	2.619	8.6	21.5
3 22	12 46.50	-26 6.1	1.291	2.224	11.9	18.4	3 22	12 47.26	- 4 1.3	1.630	2.615	4.1	21.2
4 1	12 36.93	-25 47.1	1.277	2.238	9.3	18.3	4 1	12 36.86	- 3 18.1	1.612	2.611	0.7	20.9
4 11	12 27.55	-24 59.6	1.287	2.252	9.0	18.3	4 11	12 26.54	- 2 35.6	1.623	2.606	5.4	21.3
4 21	12 19.71	-23 52.5	1.320	2.267	11.1	18.5	4 21	12 17.37	- 1 59.8	1.661	2.600	9.9	21.5
5 1	12 14.42	-22 37.0	1.375	2.283	14.2	18.7	5 1	12 10.24	- 1 35.5	1.723	2.594	13.8	21.7
306633	2000 RT ₁₀₇		3 30.9 121°60	4°7/26.5	18		21881	1999 UK ₁₅		3 30.9 166°92	1°2/29.6	18	
2 21	13 7.78	+ 5 46.8	1.867	2.675	14.7	21.3	2 21	13 2.27	- 3 0.1	2.206	2.997	13.3	19.2
3 2	13 2.80	+ 6 52.4	1.805	2.694	11.4	21.1	3 2	12 58.37	- 2 26.6	2.118	2.999	10.4	19.0
3 12	12 55.51	+ 8 2.7	1.766	2.713	7.9	21.0	3 12	12 52.51	- 1 42.7	2.054	3.001	7.0	18.8
3 22	12 46.58	+ 9 10.5	1.753	2.731	5.1	20.8	3 22	12 45.19	- 0 52.3	2.016	3.003	3.3	18.5
4 1	12 36.95	+10 8.1	1.769	2.748	5.3	20.9	4 1	12 37.14	- 0 0.5	2.007	3.005	1.6	18.4
4 11	12 27.68	+10 49.3	1.813	2.764	8.1	21.1	4 11	12 29.21	+ 0 47.2	2.028	3.006	5.1	18.6
4 21	12 19.69	+11 10.6	1.883	2.779	11.4	21.3	4 21	12 22.19	+ 1 26.0	2.075	3.007	8.7	18.9
5 1	12 13.66	+11 11.4	1.975	2.794	14.4	21.5	5 1	12 16.73	+ 1 52.3	2.148	3.008	11.9	19.1
58247	1993 PH ₃		3 30.9 211°29	1°6/29.3	17		98070	2000 RQ ₅₃		3 30.9 149°83	1°7/29.3	18	
2 21	13 4.60	- 3 42.2	2.045	2.833	14.2	20.7	2 21	13 6.27	- 2 32.7	1.989	2.779	14.5	20.5
3 2	13 0.47	- 2 49.6	1.946	2.826	11.2	20.5	3 2	13 1.63	- 1 48.8	1.909	2.789	11.3	20.3
3 12	12 54.12	- 1 43.2	1.871	2.818	7.5	20.3	3 12	12 54.78	- 0 53.6	1.852	2.799	7.6	20.1
3 22	12 46.03	- 0 27.4	1.822	2.808	3.6	20.0	3 22	12 46.29	+ 0 8.3	1.822	2.808	3.6	19.9
4 1	12 37.00	+ 0 51.1	1.802	2.798	2.0	19.8	4 1	12 37.01	+ 1 10.5	1.820	2.816	2.1	19.8
4 11	12 28.00	+ 2 5.0	1.811	2.787	5.8	20.1	4 11	12 27.95	+ 2 6.5	1.848	2.824	5.7	20.0
4 21	12 19.96	+ 3 7.5	1.848	2.775	9.8	20.3	4 21	12 20.00	+ 2 50.8	1.903	2.831	9.6	20.3
5 1	12 13.65	+ 3 53.9	1.910	2.762	13.4	20.5	5 1	12 13.87	+ 3 19.8	1.983	2.837	13.0	20.5
264570	2001 TV ₇₀		3 30.9 124°86	1°9/28.9	18		35172	1993 TA ₃		3 30.9 256°55	1°9/29.3	18	
2 21	13 5.48	- 0 43.7	2.146	2.938	13.6	21.1	2 21	13 3.25	- 3 17.4	1.681	2.486	16.2	18.6
3 2	13 0.77	- 0 8.5	2.072	2.953	10.5	20.9	3 2	13 0.01	- 2 31.5	1.582	2.471	12.7	18.3
3 12	12 54.05	+ 0 35.2	2.021	2.968	7.0	20.7	3 12	12 54.15	- 1 29.9	1.505	2.456	8.6	18.0
3 22	12 45.88	+ 1 22.9	1.997	2.983	3.4	20.5	3 22	12 46.19	- 0 17.3	1.453	2.440	4.1	17.7
4 1	12 37.04	+ 2 9.2	2.002	2.996	2.3	20.4	4 1	12 37.00	+ 0 59.0	1.428	2.425	2.3	17.6
4 11	12 28.44	+ 2 48.8	2.036	3.010	5.5	20.7	4 11	12 27.77	+ 2 9.9	1.431	2.408	6.8	17.8
4 21	12 20.90	+ 3 17.6	2.098	3.022	9.0	20.9	4 21	12 19.65	+ 3 7.6	1.459	2.392	11.4	18.0
5 1	12 15.02	+ 3 32.9	2.185	3.034	12.1	21.1	5 1	12 13.58	+ 3 46.5	1.509	2.375	15.6	18.2
57242	2001 QK ₈₃		3 30.9 154°09	3°6/3.2	18		199446	2006 DM ₃₅		3 30.9 25°23	0°8/30.1	18	
2 21	13 7.77	-15 23.3	2.224	2.955	14.9	19.7	2 21	13 0.32	- 5 1.1	1.902	2.699	14.8	20.6
3 2	13 2.78	-15 49.4	2.131	2.962	12.3	19.5	3 2	12 57.19	- 4 24.4	1.816	2.700	11.6	20.4
3 12	12 55.58	-16 0.1	2.059	2.968	9.3	19.3	3 12	12 51.89	- 3 33.9	1.754	2.701	7.9	20.1
3 22	12 46.70	-15 54.9	2.012	2.974	6.1	19.2	3 22	12 44.95	- 2 33.7	1.716	2.703	3.7	19.9
4 1	12 36.93	-15 35.2	1.993	2.980	3.7	19.0	4 1	12 37.17	- 1 29.6	1.706	2.704	1.2	19.7
4 11	12 27.24	-15 4.4	2.004	2.985	4.8	19.1	4 11	12 29.53	- 0 28.8	1.724	2.706	5.3	20.0
4 21	12 18.55	-14 27.7	2.042	2.989	7.8	19.3	4 21	12 22.91	+ 0 22.5	1.769	2.708	9.4	20.2
5 1	12 11.60	-13 50.8	2.107	2.993	10.9	19.5	5 1	12 18.04	+ 0 59.8	1.837	2.709	13.0	20.4
148622	2001 RY ₁₂₆		3 30.9 211°36	2°2/28.6	17		137199	1999 KX ₄		3 30.9 356°25	62°5/21.0	18	
2 21	13 4.16	- 0 11.3	2.141	2.937	13.4	21.2							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
369291	2009 <i>RB</i> ₆₁		3 30.9 175°02	6°8/ 6.6 17			175626	2007 <i>PK</i> ₂₅		3 30.9 126°70	0°2/31.3 18		
2 21	13 5.02	-24 31.4	2.105	2.796	16.8	21.0	2 21	13 0.16	-9 7.6	3.144	3.898	10.5	21.0
3 2	13 1.01	-25 11.0	2.008	2.797	14.5	20.9	3 2	12 56.02	-8 18.9	3.061	3.918	8.3	20.9
3 12	12 54.62	-25 29.3	1.929	2.798	11.9	20.7	3 12	12 50.55	-7 19.4	3.003	3.937	5.6	20.7
3 22	12 46.33	-25 24.0	1.872	2.799	9.2	20.5	3 22	12 44.15	-6 11.8	2.973	3.956	2.8	20.5
4 1	12 37.00	-24 54.3	1.841	2.799	7.2	20.4	4 1	12 37.33	-4 59.9	2.975	3.974	0.3	20.3
4 11	12 27.68	-24 3.6	1.836	2.799	7.0	20.4	4 11	12 30.67	-3 48.4	3.008	3.991	3.2	20.6
4 21	12 19.39	-22 57.9	1.858	2.799	8.9	20.5	4 21	12 24.67	-2 41.6	3.071	4.008	5.9	20.8
5 1	12 12.99	-21 45.2	1.905	2.798	11.6	20.6	5 1	12 19.77	-1 43.0	3.162	4.024	8.4	21.0
216604	2002 <i>TA</i> ₁		3 30.9 251°02	2°1/28.9 17			422227	2014 <i>RO</i> ₆₂		3 30.9 267°82	0°2/31.1 17		
2 21	13 3.69	-1 42.7	1.887	2.688	14.8	21.2	2 21	13 8.63	-5 22.9	1.608	2.399	17.4	21.4
3 2	13 0.03	-1 0.8	1.786	2.673	11.6	20.9	3 2	13 4.60	-5 28.8	1.501	2.379	14.0	21.2
3 12	12 53.99	-0 6.5	1.708	2.658	7.9	20.6	3 12	12 57.57	-5 21.4	1.414	2.357	9.8	20.9
3 22	12 46.06	+0 55.7	1.655	2.642	3.8	20.4	3 22	12 47.99	-5 2.6	1.351	2.336	4.9	20.5
4 1	12 37.04	+1 59.3	1.630	2.625	2.5	20.2	4 1	12 36.81	-4 36.3	1.314	2.313	0.6	20.1
4 11	12 27.98	+2 56.7	1.634	2.609	6.4	20.4	4 11	12 25.38	-4 8.3	1.305	2.291	6.0	20.5
4 21	12 19.92	+3 41.8	1.663	2.592	10.6	20.6	4 21	12 15.08	-3 45.2	1.322	2.267	11.3	20.7
5 1	12 13.69	+4 10.0	1.716	2.574	14.5	20.8	5 1	12 7.09	-3 32.4	1.361	2.244	16.0	20.9
83859	2001 <i>UB</i> ₆₆		3 30.9 235°86	5°0/26.2 18			519427	2011 <i>UT</i> ₄₁₅		3 30.9 235°41	3°2/27.0 16		
2 21	13 7.41	+8 52.2	2.153	2.957	13.1	19.2	2 21	13 1.98	+5 37.6	2.759	3.558	10.7	22.3
3 2	13 2.56	+9 35.4	2.059	2.944	10.4	19.0	3 2	12 57.78	+6 12.8	2.663	3.548	8.3	22.2
3 12	12 55.49	+10 20.9	1.989	2.931	7.5	18.8	3 12	12 51.96	+6 51.3	2.592	3.538	5.8	22.0
3 22	12 46.70	+11 2.7	1.945	2.918	5.2	18.6	3 22	12 44.91	+7 29.1	2.549	3.528	3.6	21.8
4 1	12 36.98	+11 34.7	1.930	2.904	5.5	18.6	4 1	12 37.24	+8 1.9	2.535	3.517	3.6	21.8
4 11	12 27.31	+11 51.5	1.944	2.889	8.1	18.7	4 11	12 29.61	+8 25.6	2.551	3.506	5.8	21.9
4 21	12 18.62	+11 50.3	1.984	2.874	11.2	18.9	4 21	12 22.68	+8 37.4	2.595	3.495	8.5	22.1
5 1	12 11.66	+11 30.3	2.047	2.858	14.2	19.0	5 1	12 17.00	+8 36.0	2.663	3.484	11.0	22.2
278309	2007 <i>HP</i> ₁₅		3 30.9 311°82	10°9/20.6 17			400556	2008 <i>WU</i> ₄₂		3 30.9 143°24	3°0/ 2.4 18		
2 21	13 5.76	+19 48.4	1.605	2.430	15.9	20.0	2 21	13 5.06	-13 58.4	1.611	2.379	18.3	22.2
3 2	13 2.48	+21 12.5	1.510	2.394	13.5	19.8	3 2	13 1.45	-13 56.4	1.527	2.384	15.0	21.9
3 12	12 56.17	+22 33.4	1.436	2.357	11.6	19.6	3 12	12 55.10	-13 32.5	1.462	2.389	11.0	21.7
3 22	12 47.31	+23 39.6	1.385	2.320	11.0	19.4	3 22	12 46.62	-12 47.7	1.420	2.394	6.5	21.5
4 1	12 36.89	+24 19.4	1.357	2.284	12.2	19.4	4 1	12 37.02	-11 45.7	1.404	2.398	3.1	21.2
4 11	12 26.29	+24 24.0	1.353	2.248	14.9	19.4	4 11	12 27.59	-10 34.0	1.415	2.402	5.3	21.4
4 21	12 16.90	+23 50.6	1.369	2.212	18.1	19.5	4 21	12 19.47	-9 21.4	1.452	2.406	9.7	21.7
5 1	12 9.89	+22 41.2	1.402	2.177	21.3	19.7	5 1	12 13.59	-8 16.6	1.513	2.409	13.8	21.9
281584	2008 <i>UD</i> ₁₄₁		3 30.9 219°44	1°7/ 1.8 17			69481	1996 <i>XU</i> ₁₉		3 30.9 46°31	0°8/31.5 18		
2 21	13 0.61	-12 9.8	2.174	2.936	14.3	21.3	2 21	13 2.83	-8 37.4	1.343	2.149	19.4	18.3
3 2	12 57.24	-11 52.5	2.077	2.933	11.6	21.1	3 2	12 59.94	-8 23.5	1.278	2.163	15.4	18.1
3 12	12 51.86	-11 18.7	2.001	2.930	8.3	20.9	3 12	12 54.13	-7 49.4	1.232	2.177	10.7	17.8
3 22	12 44.94	-10 30.0	1.950	2.927	4.7	20.7	3 22	12 46.13	-6 58.8	1.208	2.193	5.4	17.6
4 1	12 37.21	-9 30.2	1.927	2.924	1.7	20.5	4 1	12 37.10	-5 58.2	1.209	2.208	0.9	17.3
4 11	12 29.54	-8 24.9	1.933	2.920	4.1	20.6	4 11	12 28.43	-4 56.7	1.236	2.224	5.8	17.7
4 21	12 22.75	-7 20.4	1.967	2.917	7.9	20.8	4 21	12 21.33	-4 2.9	1.288	2.241	10.8	18.0
5 1	12 17.54	-6 22.8	2.026	2.913	11.3	21.1	5 1	12 16.65	-3 23.3	1.361	2.257	15.1	18.3
438615	2007 <i>WT</i> ₅₈		3 30.9 56°96	6°2/23.9 15			166544	2002 <i>RL</i> ₄₅		3 30.9 174°21	0°6/30.1 18		
2 21	13 0.78	+11 48.9	2.070	2.892	12.9	21.4	2 21	13 1.75	-4 18.7	2.870	3.643	10.9	22.1
3 2	12 57.19	+13 5.7	2.016	2.909	10.2	21.3	3 2	12 57.49	-3 48.8	2.776	3.646	8.6	21.9
3 12	12 51.65	+14 21.9	1.986	2.926	7.7	21.2	3 12	12 51.68	-3 10.3	2.706	3.648	5.8	21.7
3 22	12 44.74	+15 30.0	1.983	2.944	6.3	21.1	3 22	12 44.76	-2 25.8	2.665	3.650	2.7	21.5
4 1	12 37.25	+16 23.2	2.006	2.961	6.9	21.2	4 1	12 37.27	-1 39.1	2.653	3.652	0.9	21.4
4 11	12 30.05	+16 56.6	2.056	2.979	9.1	21.3	4 11	12 29.87	-0 54.3	2.673	3.652	3.9	21.6
4 21	12 23.90	+17 8.1	2.131	2.996	11.6	21.5	4 21	12 23.16	-0 15.3	2.721	3.653	6.9	21.8
5 1	12 19.38	+16 58.1	2.226	3.014	13.9	21.7	5 1	12 17.65	+0 15.0	2.796	3.652	9.5	22.0
249670	1999 <i>VE</i> ₁₂₉		3 30.9 214°30	1°8/ 1.7 16			228402	2001 <i>EP</i> ₁		3 30.9 85°71	5°4/25.3 18		
2 21	13 4.91	-12 4.3	2.189	2.942	14.5	22.1	2 21	13 5.46	+9 29.0	2.043	2.854	13.4	19.9
3 2	13 0.67	-11 49.6	2.082	2.933	11.8	21.8	3 2	13 0.73	+10 35.3	1.992	2.881	10.5	19.8
3 12	12 54.25	-11 18.4	1.997	2.924	8.5	21.6	3 12	12 53.98	+11 42.3	1.965	2.907	7.6	19.6
3 22	12 46.13	-10 31.9	1.937	2.914	4.8	21.4	3 22	12 45.83	+12 42.9	1.965	2.933	5.6	19.6
4 1	12 37.06	-9 33.6	1.906	2.903	1.8	21.1	4 1	12 37.15	+13 30.4	1.993	2.959	6.0	19.6
4 11	12 27.97	-8 29.0	1.905	2.891	4.3	21.3	4 11	12 28.86	+14 0.2	2.048	2.984	8.3	19.8
4 21	12 19.77	-7 24.5	1.932	2.879	8.2	21.5	4 21	12 21.74	+14 10.1	2.129	3.009	11.0	20.0
5 1	12 13.24	-6 26.4	1.985	2.865	11.8	21.7	5 1	12 16.36	+14 0.5	2.233	3.033	13.5	20.2
204802	2006 <i>SS</i> ₂₂		3 30.9 228°38	3°6/26.2 18			464927	2005 <i>UZ</i> ₁₆₁		3 30.9 139°00	9°1/23.8 18		
2 21	12 59.30	+4 24.2	2.423	3.232	11.7	20.5	2 21	13 19.81	+23 31.8	2.112	2.889	14.2	21.4
3 2	12 55.92	+5 30.0	2.335	3.227	9.1	20.3	3 2	13 11.98	+24 10.5	2.048	2.898	12.0	21.3
3 12	12 50.80	+6 42.0	2.272	3.221	6.2	20.1	3 12	13 1.62	+24 38.3	2.008	2.906	10.1	21.2
3 22	12 44.38	+7 54.6	2.237	3.216	4.0	19.9	3 22	12 49.50	+24 47.3	1.994	2.914	9.1	21.1
4 1	12 37.29	+9 1.7	2.230	3.210	4.2	20.0	4 1	12 36.70	+24 31.9	2.008	2.922	9.6	21.2
4 11	12 30.28	+9 57.5	2.253	3.204	6.7	20.1	4 11	12 24.44	+23 49.9	2.050	2.929	11.2	21.3
4 21	12 24.05	+10 38.0	2.302	3.198	9.6	20.3	4 21	12 13.72	+22 43.2	2.117	2.936	13.4	21.4
5 1	12 19.17	+11 0.9	2.374	3.192	12.3	20.4	5 1	12 5.27	+21 15.8	2.207	2.942	15.5	21.6
438390	2006 <i>UN</i> ₃₆		3 30.9 135°64	1°6/29.1 17			150542	2000 <i>SW</i> ₁₅₇		3 30.9 168°72	1°4/ 1.8 18		
2 21	13 2.48</												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
258151	2001 SX ₁₁		3 30.9 97°08	1.3/29.6	18		463474	2013 PD ₅₀		3 30.9 206°59	4.7/ 4.7	17	
2 21	13 4.76	- 4 12.7	2.046	2.833	14.3	21.6	2 21	13 5.24	-19 43.4	2.281	2.992	15.1	22.2
3 2	13 0.22	- 3 20.4	1.982	2.861	11.1	21.5	3 2	13 0.96	-20 4.0	2.175	2.987	12.8	22.0
3 12	12 53.67	- 2 16.3	1.942	2.888	7.4	21.3	3 12	12 54.48	-20 6.6	2.089	2.982	10.0	21.8
3 22	12 45.71	- 1 5.4	1.928	2.914	3.4	21.1	3 22	12 46.28	-19 49.9	2.027	2.976	7.1	21.6
4 1	12 37.17	+ 0 5.9	1.943	2.940	1.6	21.0	4 1	12 37.11	-19 14.7	1.992	2.969	4.9	21.5
4 11	12 28.97	+ 1 11.1	1.988	2.966	5.2	21.3	4 11	12 27.91	-18 24.6	1.985	2.961	5.3	21.5
4 21	12 21.89	+ 2 4.8	2.061	2.990	8.8	21.5	4 21	12 19.60	-17 25.2	2.007	2.954	7.9	21.6
5 1	12 16.54	+ 2 43.5	2.158	3.014	12.0	21.8	5 1	12 12.97	-16 23.4	2.054	2.945	11.0	21.8
246429	2007 VY ₈₄		3 30.9 131°34	1.2/29.5	18		363503	2003 UT ₁₅		3 30.9 149°74	1.7/ 1.5	18	
2 21	13 2.98	- 1 34.2	2.754	3.535	11.2	21.3	2 21	13 3.39	-12 10.5	1.840	2.608	16.3	21.0
3 2	12 58.41	- 1 9.6	2.673	3.548	8.7	21.2	3 2	12 59.73	-11 46.0	1.754	2.614	13.2	20.8
3 12	12 52.28	- 0 38.1	2.617	3.561	5.8	21.0	3 12	12 53.72	-11 1.9	1.687	2.620	9.4	20.5
3 22	12 45.03	- 0 3.0	2.588	3.574	2.7	20.8	3 22	12 45.90	-10 0.4	1.646	2.625	5.2	20.3
4 1	12 37.25	+ 0 32.2	2.590	3.586	1.4	20.7	4 1	12 37.17	- 8 46.5	1.632	2.629	1.7	20.1
4 11	12 29.64	+ 1 3.5	2.622	3.598	4.2	21.0	4 11	12 28.59	- 7 27.6	1.646	2.634	4.7	20.3
4 21	12 22.80	+ 1 27.7	2.683	3.609	7.2	21.2	4 21	12 21.15	- 6 11.7	1.688	2.637	8.9	20.5
5 1	12 17.23	+ 1 42.5	2.770	3.620	9.8	21.3	5 1	12 15.62	- 5 6.0	1.754	2.641	12.7	20.8
8459	Larsbergknut		3 30.9 134°57	0.5/30.3	18		44547	1999 BC ₃		3 30.9 121°95	0.3/30.5	18	
2 21	13 0.57	- 4 53.4	2.772	3.547	11.2	19.5	2 21	12 57.94	- 5 44.7	2.763	3.541	11.2	19.1
3 2	12 56.58	- 4 22.3	2.687	3.558	8.8	19.3	3 2	12 54.62	- 5 13.6	2.671	3.543	8.8	19.0
3 12	12 51.07	- 3 42.0	2.626	3.568	5.9	19.1	3 12	12 49.81	- 4 32.6	2.603	3.545	5.9	18.8
3 22	12 44.46	- 2 55.5	2.593	3.579	2.8	18.9	3 22	12 43.89	- 3 44.5	2.562	3.547	2.8	18.6
4 1	12 37.33	- 2 6.6	2.590	3.588	0.8	18.8	4 1	12 37.42	- 2 53.1	2.550	3.549	0.6	18.4
4 11	12 30.33	- 1 19.8	2.617	3.598	3.8	19.0	4 11	12 31.05	- 2 2.9	2.569	3.551	3.8	18.7
4 21	12 24.06	- 0 38.8	2.673	3.607	6.9	19.2	4 21	12 25.34	- 1 17.9	2.615	3.553	6.8	18.9
5 1	12 19.01	- 0 6.7	2.755	3.615	9.5	19.4	5 1	12 20.81	- 0 41.7	2.688	3.555	9.5	19.0
351466	2005 NZ ₆₅		3 30.9 191°57	5.1/ 6.5	17		304637	2006 VU ₁₅₅		3 30.9 200°16	1.5/ 1.8	17	
2 21	13 2.22	-24 9.7	2.898	3.570	12.9	21.8	2 21	13 1.80	-11 9.3	2.985	3.729	11.2	22.3
3 2	12 58.11	-24 35.0	2.791	3.569	11.2	21.7	3 2	12 57.57	-11 5.3	2.879	3.725	9.0	22.2
3 12	12 52.28	-24 44.0	2.704	3.567	9.1	21.5	3 12	12 51.79	-10 50.3	2.796	3.721	6.5	22.0
3 22	12 45.12	-24 35.6	2.642	3.565	7.0	21.4	3 22	12 44.86	-10 25.6	2.741	3.716	3.7	21.8
4 1	12 37.24	-24 10.1	2.606	3.563	5.4	21.3	4 1	12 37.31	- 9 53.2	2.715	3.711	1.5	21.6
4 11	12 29.36	-23 29.8	2.599	3.560	5.3	21.3	4 11	12 29.78	- 9 16.6	2.720	3.705	3.3	21.7
4 21	12 22.18	-22 38.8	2.620	3.557	6.8	21.4	4 21	12 22.89	- 8 39.5	2.754	3.699	6.1	21.9
5 1	12 16.31	-21 42.3	2.668	3.554	8.9	21.5	5 1	12 17.16	- 8 5.5	2.815	3.693	8.8	22.1
216396	2008 DF ₆₅		3 30.9 289°68	6.4/22.9	18		463467	2013 PX ₃₀		3 30.9 279°40	1.7/29.5	17	
2 21	13 0.65	+13 59.5	2.332	3.148	11.8	19.8	2 21	13 3.68	- 2 28.9	1.737	2.541	15.7	21.5
3 2	12 57.16	+15 8.7	2.245	3.132	9.6	19.7	3 2	13 0.36	- 2 0.1	1.632	2.520	12.5	21.2
3 12	12 51.75	+16 17.7	2.183	3.116	7.5	19.5	3 12	12 54.46	- 1 18.1	1.549	2.498	8.5	20.9
3 22	12 44.90	+17 19.6	2.147	3.100	6.4	19.4	3 22	12 46.42	- 0 26.9	1.490	2.477	4.1	20.6
4 1	12 37.27	+18 7.8	2.138	3.084	7.2	19.4	4 1	12 37.10	+ 0 27.4	1.458	2.455	2.1	20.4
4 11	12 29.70	+18 37.1	2.156	3.068	9.3	19.5	4 11	12 27.65	+ 1 17.3	1.453	2.433	6.5	20.6
4 21	12 22.96	+18 44.9	2.199	3.053	11.7	19.6	4 21	12 19.22	+ 1 56.0	1.475	2.410	11.2	20.8
5 1	12 17.70	+18 30.9	2.263	3.037	14.1	19.8	5 1	12 12.79	+ 2 18.5	1.518	2.388	15.4	21.0
3560	Chenqian		3 30.9 165°27	2.9/ 3.3	18		433247	2012 VS ₉₆		3 30.9 141°25	4.2/25.6	17	
2 21	13 2.84	-15 24.2	2.626	3.355	12.9	16.4	2 21	13 1.57	+ 8 27.2	2.584	3.391	11.1	21.3
3 2	12 58.61	-15 35.0	2.528	3.358	10.6	16.2	3 2	12 57.48	+ 9 19.5	2.509	3.397	8.7	21.1
3 12	12 52.61	-15 31.9	2.451	3.361	8.0	16.0	3 12	12 51.74	+10 13.6	2.459	3.403	6.2	21.0
3 22	12 45.27	-15 15.1	2.400	3.364	5.1	15.9	3 22	12 44.81	+11 4.4	2.437	3.409	4.4	20.9
4 1	12 37.23	-14 46.3	2.378	3.366	3.0	15.7	4 1	12 37.32	+11 46.8	2.444	3.414	4.7	20.9
4 11	12 29.25	-14 8.9	2.385	3.368	4.0	15.8	4 11	12 30.00	+12 16.4	2.479	3.420	6.8	21.1
4 21	12 22.04	-13 27.4	2.421	3.370	6.7	16.0	4 21	12 23.47	+12 31.0	2.541	3.425	9.3	21.2
5 1	12 16.21	-12 46.6	2.484	3.371	9.5	16.1	5 1	12 18.29	+12 29.4	2.626	3.429	11.6	21.4
188454	2004 JK ₅		3 30.9 288°15	7.1/ 6.3	18		167612	2004 CF ₉		3 30.9 74°35	1.8/28.9	17	
2 21	13 1.55	-23 52.1	1.872	2.584	18.0	19.8	2 21	13 1.18	- 1 2.4	2.136	2.936	13.3	20.8
3 2	12 58.86	-24 23.8	1.753	2.559	15.7	19.5	3 2	12 57.59	- 0 27.4	2.053	2.940	10.4	20.6
3 12	12 53.56	-24 31.9	1.652	2.534	12.9	19.3	3 12	12 52.04	+ 0 16.6	1.994	2.943	6.9	20.4
3 22	12 46.05	-24 13.0	1.572	2.508	9.9	19.0	3 22	12 45.03	+ 1 5.4	1.961	2.947	3.4	20.1
4 1	12 37.11	-23 25.6	1.516	2.483	7.5	18.8	4 1	12 37.30	+ 1 53.7	1.956	2.951	2.2	20.1
4 11	12 27.91	-22 12.9	1.486	2.457	7.4	18.8	4 11	12 29.72	+ 2 35.8	1.979	2.955	5.5	20.3
4 21	12 19.64	-20 41.9	1.481	2.431	9.9	18.8	4 21	12 23.07	+ 3 7.3	2.030	2.958	9.0	20.5
5 1	12 13.38	-19 2.9	1.501	2.405	13.4	19.0	5 1	12 17.99	+ 3 25.1	2.105	2.962	12.2	20.7
196242	2003 CV ₂₁		3 30.9 101°19	0.2/30.7	18		14048	1995 WS ₇		3 30.9 9°42	1.0/30.2	18	
2 21	13 6.52	- 7 11.3	1.512	2.307	18.1	21.1	2 21	13 2.80	- 4 40.3	1.261	2.083	19.5	17.9
3 2	13 2.46	- 6 36.3	1.445	2.325	14.3	20.8	3 2	13 0.29	- 4 16.9	1.187	2.084	15.4	17.6
3 12	12 55.65	- 5 43.2	1.397	2.343	9.7	20.6	3 12	12 54.65	- 3 35.5	1.131	2.084	10.5	17.3
3 22	12 46.81	- 4 36.7	1.374	2.360	4.6	20.4	3 22	12 46.54	- 2 40.7	1.098	2.086	5.0	17.0
4 1	12 37.05	- 3 24.0	1.378	2.377	0.7	20.1	4 1	12 37.11	- 1 40.6	1.089	2.087	1.5	16.8
4 11	12 27.67	- 2 14.1	1.409	2.393	5.8	20.5	4 11	12 27.89	- 0 44.9	1.105	2.089	7.0	17.1
4 21	12 19.78	- 1 14.9	1.466	2.409	10.6	20.8	4 21	12 20.24	- 0 2.0	1.144	2.092	12.4	17.4
5 1	12 14.19	- 0 32.2	1.546	2.425	14.6	21.1	5 1	12 15.18	+ 0 22.1	1.204	2.095	17.0	17.7
10582	Harumi		3 30.9 183°53	3.7/26.1	18		374057	2004 PN ₈₉		3 30.9 210°94	2.0/28.4	17	
2 21	13 2.31	+ 7 58.9	2.857	3.657	10.3	18.5	2 21	13 1.44					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
40004	1998 <i>HF</i> ₉₄		3 30.9 353°84	2.7/29.5	18		191898	2005 <i>AJ</i> ₇₉		3 30.9 183°62	0.6/30.3	17	
2 21	12 57.77	+ 1 47.8	1.051	1.907	20.1	17.7	2 21	13 2.48	- 4 26.3	2.305	3.089	13.0	21.1
3 2	12 56.96	+ 1 31.7	0.977	1.894	15.9	17.4	3 2	12 58.51	- 4 1.7	2.213	3.089	10.2	20.9
3 12	12 52.77	+ 1 23.1	0.921	1.883	10.9	17.1	3 12	12 52.65	- 3 26.5	2.145	3.089	6.9	20.7
3 22	12 45.78	+ 1 17.1	0.886	1.875	5.4	16.7	3 22	12 45.36	- 2 43.9	2.102	3.088	3.3	20.5
4 1	12 37.22	+ 1 7.5	0.872	1.869	3.1	16.6	4 1	12 37.33	- 1 58.2	2.089	3.088	0.9	20.3
4 11	12 28.77	+ 0 48.0	0.880	1.865	8.2	16.8	4 11	12 29.40	- 1 14.6	2.105	3.087	4.6	20.6
4 21	12 21.99	+ 0 14.5	0.909	1.865	13.8	17.1	4 21	12 22.32	- 0 37.7	2.149	3.086	8.1	20.8
5 1	12 18.06	- 0 34.8	0.958	1.867	18.7	17.4	5 1	12 16.74	- 0 11.2	2.219	3.084	11.3	21.0
39470	1978 <i>UB</i> ₇		3 30.9 63°30	0.4/30.7	18		63887	2001 <i>SH</i> ₃		3 30.9 21°39	0.7/30.4	18	
2 21	13 10.32	- 2 49.7	1.706	2.497	16.5	19.5	2 21	13 5.08	- 2 10.4	1.868	2.665	15.1	17.5
3 2	13 5.09	- 3 4.8	1.638	2.516	13.0	19.3	3 2	13 0.95	- 2 18.7	1.787	2.670	11.8	17.3
3 12	12 57.27	- 3 10.6	1.591	2.536	8.8	19.1	3 12	12 54.49	- 2 18.7	1.729	2.676	8.0	17.1
3 22	12 47.57	- 3 9.6	1.569	2.555	4.2	18.9	3 22	12 46.29	- 2 13.0	1.696	2.682	3.8	16.8
4 1	12 37.03	- 3 5.5	1.576	2.575	0.7	18.7	4 1	12 37.22	- 2 5.4	1.691	2.689	1.0	16.6
4 11	12 26.86	- 3 2.7	1.610	2.594	5.3	19.0	4 11	12 28.34	- 2 0.1	1.713	2.696	5.2	17.0
4 21	12 18.11	- 3 5.0	1.672	2.614	9.6	19.3	4 21	12 20.59	- 2 0.9	1.763	2.704	9.2	17.2
5 1	12 11.54	- 3 15.4	1.757	2.634	13.3	19.6	5 1	12 14.73	- 2 10.5	1.836	2.713	12.8	17.4
502466	2015 <i>BW</i> ₃₁₄		3 30.9 215°66	5.3/23.9	17		214567	2006 <i>QK</i> ₁₆		3 30.9 249°74	3.6/2.9	18	
2 21	13 0.49	+ 8 10.2	2.313	3.127	12.0	21.4	2 21	13 7.95	- 14 38.5	2.042	2.782	15.8	20.8
3 2	12 57.00	+ 9 46.1	2.229	3.121	9.4	21.2	3 2	13 3.51	- 15 2.2	1.924	2.762	13.2	20.6
3 12	12 51.64	+ 11 27.1	2.170	3.114	6.9	21.1	3 12	12 56.53	- 15 10.0	1.827	2.742	9.9	20.3
3 22	12 44.87	+ 13 5.9	2.140	3.107	5.3	21.0	3 22	12 47.46	- 15 0.8	1.754	2.721	6.4	20.1
4 1	12 37.36	+ 14 34.7	2.138	3.099	6.1	21.0	4 1	12 37.06	- 14 35.3	1.709	2.699	3.7	19.9
4 11	12 29.92	+ 15 46.6	2.164	3.091	8.4	21.1	4 11	12 26.43	- 13 57.3	1.693	2.676	5.2	19.9
4 21	12 23.30	+ 16 37.5	2.217	3.083	11.2	21.3	4 21	12 16.69	- 13 12.3	1.704	2.653	8.9	20.1
5 1	12 18.14	+ 17 5.7	2.291	3.074	13.7	21.4	5 1	12 8.80	- 12 27.2	1.741	2.629	12.8	20.3
378294	2007 <i>EO</i> ₁₅₇		3 30.9 12°84	0.5/31.3	17		138686	2000 <i>SK</i> ₅₀		3 30.9 209°26	0.4/31.4	18	
2 21	13 2.44	- 6 35.1	1.498	2.303	17.8	21.3	2 21	12 58.73	- 8 55.0	2.592	3.360	12.1	20.3
3 2	12 59.52	- 6 35.6	1.419	2.305	14.2	21.1	3 2	12 55.42	- 8 17.5	2.493	3.357	9.6	20.1
3 12	12 53.86	- 6 20.7	1.361	2.307	9.8	20.8	3 12	12 50.47	- 7 26.8	2.417	3.354	6.6	19.9
3 22	12 46.09	- 5 52.9	1.326	2.311	4.9	20.5	3 22	12 44.29	- 6 25.6	2.368	3.350	3.3	19.7
4 1	12 37.21	- 5 17.1	1.316	2.315	0.6	20.2	4 1	12 37.47	- 5 18.0	2.348	3.347	0.4	19.5
4 11	12 28.51	- 4 40.2	1.332	2.319	5.6	20.6	4 11	12 30.71	- 4 9.4	2.358	3.343	3.8	19.7
4 21	12 21.15	- 4 8.9	1.373	2.325	10.4	20.9	4 21	12 24.67	- 3 4.9	2.397	3.339	7.1	19.9
5 1	12 16.01	- 3 48.6	1.437	2.331	14.6	21.1	5 1	12 19.90	- 2 9.3	2.462	3.335	10.1	20.1
249662	1999 <i>VP</i> ₂₇		3 30.9 158°79	1.1/1.0	17		65193	2002 <i>CA</i> ₂₆₃		3 30.9 318°70	3.5/27.4	18	
2 21	13 5.76	- 10 8.0	2.189	2.948	14.3	22.1	2 21	13 4.50	+ 6 25.1	2.378	3.180	12.1	19.4
3 2	13 1.16	- 9 48.3	2.100	2.957	11.5	21.9	3 2	12 59.98	+ 6 46.3	2.292	3.178	9.4	19.2
3 12	12 54.47	- 9 13.9	2.032	2.964	8.1	21.7	3 12	12 53.58	+ 7 9.7	2.230	3.176	6.5	19.0
3 22	12 46.23	- 8 26.6	1.991	2.971	4.3	21.4	3 22	12 45.78	+ 7 31.1	2.195	3.174	4.0	18.9
4 1	12 37.20	- 7 30.7	1.979	2.977	1.1	21.2	4 1	12 37.29	+ 7 46.1	2.188	3.172	3.9	18.9
4 11	12 28.32	- 6 31.7	1.996	2.982	4.2	21.5	4 11	12 28.93	+ 7 50.8	2.211	3.170	6.3	19.0
4 21	12 20.43	- 5 35.7	2.042	2.987	8.0	21.7	4 21	12 21.45	+ 7 43.0	2.261	3.168	9.3	19.2
5 1	12 14.21	- 4 47.7	2.114	2.990	11.4	21.9	5 1	12 15.47	+ 7 21.7	2.336	3.167	12.0	19.4
184216	2004 <i>QV</i> ₂₇		3 30.9 69°60	1.7/1.7	18		502911	2015 <i>EK</i> ₁₅		3 30.9 14°83	0.7/31.5	17	
2 21	13 0.90	- 12 39.6	1.793	2.566	16.5	20.5	2 21	13 4.77	- 6 10.6	1.757	2.547	16.1	20.7
3 2	12 57.75	- 12 10.1	1.717	2.581	13.3	20.3	3 2	13 0.95	- 6 23.0	1.672	2.549	12.9	20.5
3 12	12 52.33	- 11 20.3	1.662	2.595	9.4	20.1	3 12	12 54.65	- 6 23.2	1.609	2.551	8.9	20.3
3 22	12 45.22	- 10 13.2	1.631	2.610	5.2	19.9	3 22	12 46.43	- 6 13.1	1.570	2.554	4.5	20.0
4 1	12 37.33	- 8 54.1	1.628	2.625	1.7	19.7	4 1	12 37.21	- 5 56.2	1.558	2.557	0.7	19.7
4 11	12 29.68	- 7 31.1	1.652	2.640	4.6	19.9	4 11	12 28.12	- 5 37.3	1.573	2.560	5.0	20.0
4 21	12 23.20	- 6 12.1	1.703	2.655	8.7	20.2	4 21	12 20.20	- 5 21.4	1.615	2.564	9.3	20.3
5 1	12 18.58	- 5 4.3	1.778	2.670	12.4	20.4	5 1	12 14.28	- 5 13.1	1.681	2.568	13.2	20.5
307988	2004 <i>RL</i> ₁		3 30.9 199°40	6.5/23.1	17		141476	2002 <i>CD</i> ₂₄₁		3 30.9 207°58	2.2/1.9	18	
2 21	13 2.51	+ 6 2.4	1.782	2.604	14.7	20.7	2 21	13 3.73	- 11 37.5	2.047	2.808	15.1	20.0
3 2	12 59.17	+ 8 25.3	1.704	2.601	11.5	20.4	3 2	12 59.87	- 11 43.1	1.951	2.807	12.3	19.8
3 12	12 53.43	+ 10 59.3	1.650	2.597	8.3	20.2	3 12	12 53.79	- 11 33.5	1.877	2.805	8.9	19.6
3 22	12 45.84	+ 13 33.0	1.625	2.593	6.6	20.1	3 22	12 45.99	- 11 9.5	1.828	2.804	5.1	19.4
4 1	12 37.26	+ 15 53.5	1.629	2.589	7.8	20.2	4 1	12 37.26	- 10 33.9	1.806	2.802	2.2	19.2
4 11	12 28.78	+ 17 49.7	1.660	2.583	10.8	20.3	4 11	12 28.59	- 9 51.6	1.813	2.800	4.4	19.3
4 21	12 21.41	+ 19 14.8	1.716	2.577	14.1	20.5	4 21	12 20.89	- 9 8.2	1.847	2.797	8.2	19.5
5 1	12 15.96	+ 20 6.9	1.793	2.571	17.2	20.7	5 1	12 14.93	- 8 29.4	1.906	2.795	11.8	19.7
455599	2004 <i>TE</i> ₄₇		3 30.9 92°09	1.3/1.1	18		18641	1998 <i>EG</i> ₁₀		3 30.9 131°12	4.2/3.5	18	R
2 21	13 5.24	- 11 21.5	1.583	2.362	18.1	21.6	2 21	13 6.93	- 16 15.3	1.760	2.506	17.8	18.0
3 2	13 1.37	- 10 52.0	1.514	2.383	14.5	21.4	3 2	13 2.74	- 16 36.1	1.675	2.515	14.7	17.8
3 12	12 54.88	- 10 1.5	1.466	2.403	10.1	21.2	3 12	12 55.92	- 16 36.8	1.609	2.523	11.1	17.6
3 22	12 46.47	- 8 53.3	1.442	2.423	5.3	21.0	3 22	12 47.06	- 16 16.6	1.567	2.531	7.2	17.4
4 1	12 37.20	- 7 33.9	1.444	2.443	1.3	20.7	4 1	12 37.13	- 15 37.5	1.551	2.538	4.4	17.3
4 11	12 28.29	- 6 12.2	1.474	2.462	5.1	21.0	4 11	12 27.35	- 14 45.0	1.562	2.546	5.5	17.3
4 21	12 20.80	- 4 57.0	1.531	2.481	9.7	21.3	4 21	12 18.84	- 13 46.4	1.600	2.552	9.1	17.6
5 1	12 15.51	- 3 55.4	1.611	2.499	13.6	21.6	5 1	12 12.46	- 12 49.8	1.662	2.559	12.8	17.8
338325	2002 <i>VZ</i> ₁₁₀		3 30.9 219°22	4.1/5.0	18		509301	2006 <i>VH</i> ₁					

EPHEMERIDES

3 30.9

3 30.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
270534	2002 <i>GV</i> ₈₈		3 30.9	19°86	6°4/24.3	18	375892	2009 <i>VQ</i> ₈₂		3 30.9	128°92	2°3/	2.5 17
2 21	12 59.13	+ 7 59.2	1.674	2.507	14.9	19.8	2 21	13 2.52	-14 20.6	2.241	2.987	14.4	22.0
3 2	12 56.56	+ 9 33.6	1.607	2.510	11.7	19.6	3 2	12 58.62	-14 2.4	2.154	2.998	11.7	21.9
3 12	12 51.63	+11 13.4	1.564	2.514	8.5	19.5	3 12	12 52.75	-13 26.8	2.089	3.010	8.5	21.7
3 22	12 44.95	+12 49.0	1.546	2.517	6.5	19.3	3 22	12 45.44	-12 35.6	2.049	3.021	5.1	21.5
4 1	12 37.41	+14 10.3	1.555	2.522	7.3	19.4	4 1	12 37.42	-11 32.3	2.037	3.031	2.3	21.3
4 11	12 30.10	+15 9.3	1.589	2.526	10.1	19.6	4 11	12 29.56	-10 22.7	2.055	3.041	4.0	21.4
4 21	12 23.97	+15 41.8	1.646	2.531	13.4	19.8	4 21	12 22.65	- 9 13.0	2.101	3.051	7.4	21.7
5 1	12 19.74	+15 47.1	1.724	2.536	16.4	20.0	5 1	12 17.32	- 8 9.2	2.173	3.060	10.6	21.9
69634	1998 <i>FH</i> ₆₈		3 30.9	14°91	0°1/30.9	18	217026	2001 <i>OB</i> ₅₆		3 30.9	192°87	3°1/	3.2 17
2 21	13 2.90	- 5 27.8	1.275	2.094	19.5	19.0	2 21	13 4.03	-15 52.4	2.235	2.971	14.7	21.0
3 2	13 0.34	- 5 25.4	1.203	2.097	15.5	18.8	3 2	12 59.97	-15 51.9	2.134	2.969	12.2	20.8
3 12	12 54.68	- 5 6.3	1.149	2.100	10.6	18.5	3 12	12 53.80	-15 33.9	2.054	2.967	9.1	20.6
3 22	12 46.58	- 4 33.8	1.117	2.104	5.2	18.2	3 22	12 46.01	-14 58.7	1.999	2.965	5.8	20.4
4 1	12 37.22	- 3 54.1	1.110	2.109	0.7	17.9	4 1	12 37.34	-14 8.7	1.972	2.961	3.3	20.3
4 11	12 28.09	- 3 15.5	1.127	2.114	6.4	18.3	4 11	12 28.71	-13 8.6	1.973	2.958	4.4	20.3
4 21	12 20.53	- 2 45.3	1.168	2.121	11.7	18.6	4 21	12 20.98	-12 4.7	2.003	2.953	7.7	20.5
5 1	12 15.53	- 2 29.3	1.230	2.128	16.3	18.9	5 1	12 14.88	-11 3.3	2.059	2.949	11.0	20.7
498363	2007 <i>VZ</i> ₃₂₂		3 30.9	153°84	3°8/	4.7 17	16756	1996 <i>RQ</i> ₁₁		3 30.9	279°89	0°7/30.4	18
2 21	13 1.36	-19 22.4	2.580	3.292	13.5	21.7	2 21	13 2.68	- 4 46.5	1.824	2.621	15.4	18.5
3 2	12 57.56	-19 27.2	2.482	3.297	11.3	21.6	3 2	12 59.40	- 4 24.8	1.724	2.606	12.2	18.3
3 12	12 51.97	-19 15.2	2.405	3.301	8.8	21.4	3 12	12 53.71	- 3 49.4	1.645	2.592	8.4	18.0
3 22	12 45.04	-18 46.3	2.353	3.305	6.1	21.2	3 22	12 46.08	- 3 3.6	1.591	2.577	4.0	17.7
4 1	12 37.41	-18 2.2	2.329	3.309	4.1	21.1	4 1	12 37.33	- 2 12.5	1.564	2.563	1.0	17.5
4 11	12 29.86	-17 6.9	2.334	3.312	4.4	21.1	4 11	12 28.55	- 1 22.9	1.565	2.548	5.6	17.8
4 21	12 23.11	-16 5.3	2.366	3.316	6.8	21.3	4 21	12 20.77	- 0 41.2	1.592	2.534	10.0	18.0
5 1	12 17.74	-15 3.3	2.426	3.318	9.5	21.5	5 1	12 14.87	- 0 12.6	1.643	2.519	14.0	18.2
477702	2010 <i>RA</i> ₁₄₁		3 30.9	278°37	2°8/	2.6 16	456749	2007 <i>TN</i> ₅₂		3 30.9	233°80	1°0/30.2	16
2 21	13 4.56	-12 57.9	2.540	3.279	13.1	21.5	2 21	13 7.49	- 3 14.4	1.768	2.561	15.9	22.1
3 2	13 0.22	-13 25.5	2.423	3.262	10.8	21.3	3 2	13 3.23	- 3 0.8	1.671	2.552	12.6	21.9
3 12	12 53.93	-13 41.4	2.328	3.244	8.0	21.1	3 12	12 56.35	- 2 35.4	1.596	2.542	8.6	21.6
3 22	12 46.07	-13 45.4	2.259	3.226	5.0	20.8	3 22	12 47.36	- 2 1.5	1.546	2.532	4.1	21.3
4 1	12 37.28	-13 38.6	2.218	3.208	2.9	20.7	4 1	12 37.18	- 1 24.2	1.524	2.522	1.3	21.1
4 11	12 28.37	-13 23.3	2.207	3.190	4.2	20.7	4 11	12 27.00	- 0 49.8	1.529	2.511	5.9	21.4
4 21	12 20.15	-13 3.4	2.225	3.172	7.2	20.9	4 21	12 17.95	- 0 23.9	1.561	2.500	10.5	21.6
5 1	12 13.34	-12 43.0	2.269	3.154	10.3	21.0	5 1	12 10.96	- 0 11.0	1.617	2.488	14.5	21.8
201701	2003 <i>UD</i> ₁₃₉		3 30.9	179°80	3°4/27.1	17	506689	2006 <i>TW</i> ₄₉		3 30.9	148°13	2°3/27.9	18
2 21	13 2.27	+ 3 50.4	2.330	3.134	12.2	20.9	2 21	13 2.60	+ 3 16.8	2.969	3.759	10.2	22.0
3 2	12 58.30	+ 4 42.7	2.246	3.135	9.5	20.7	3 2	12 58.06	+ 3 48.4	2.888	3.768	7.9	21.8
3 12	12 52.47	+ 5 40.8	2.187	3.135	6.5	20.5	3 12	12 52.06	+ 4 23.9	2.831	3.777	5.3	21.7
3 22	12 45.27	+ 6 39.5	2.154	3.135	3.9	20.3	3 22	12 45.02	+ 4 59.8	2.803	3.785	3.0	21.5
4 1	12 37.39	+ 7 33.0	2.151	3.135	3.8	20.3	4 1	12 37.48	+ 5 32.2	2.805	3.793	2.7	21.5
4 11	12 29.63	+ 8 15.9	2.177	3.135	6.5	20.5	4 11	12 30.08	+ 5 57.7	2.838	3.800	4.9	21.7
4 21	12 22.73	+ 8 44.6	2.229	3.134	9.5	20.6	4 21	12 23.38	+ 6 13.8	2.899	3.807	7.4	21.9
5 1	12 17.31	+ 8 56.9	2.305	3.133	12.3	20.8	5 1	12 17.86	+ 6 18.8	2.985	3.814	9.7	22.0
498232	2007 <i>UY</i> ₄₁		3 30.9	141°01	2°1/	2.7 17	147956	1993 <i>TG</i> ₁₁		3 30.9	214°55	1°0/31.9	18
2 21	13 1.57	-14 8.9	2.785	3.520	12.1	23.5	2 21	13 3.71	- 9 50.9	2.260	3.023	13.8	21.1
3 2	12 57.46	-13 57.3	2.693	3.531	9.9	23.3	3 2	12 59.67	- 9 30.7	2.156	3.015	11.1	20.9
3 12	12 51.76	-13 32.2	2.624	3.541	7.2	23.2	3 12	12 53.58	- 8 55.9	2.074	3.007	7.8	20.6
3 22	12 44.89	-12 54.6	2.581	3.551	4.3	23.0	3 22	12 45.91	- 8 8.3	2.018	2.998	4.1	20.4
4 1	12 37.46	-12 7.3	2.568	3.561	2.1	22.9	4 1	12 37.37	- 7 11.6	1.990	2.989	1.0	20.1
4 11	12 30.14	-11 14.3	2.584	3.570	3.4	23.0	4 11	12 28.83	- 6 11.4	1.993	2.979	4.2	20.3
4 21	12 23.56	-10 20.1	2.630	3.578	6.2	23.1	4 21	12 21.15	- 5 13.6	2.023	2.968	8.0	20.6
5 1	12 18.24	- 9 29.4	2.703	3.586	8.9	23.3	5 1	12 15.02	- 4 23.6	2.080	2.957	11.5	20.7
58550	1997 <i>GN</i> ₁₉		3 30.9	174°87	1°0/	1.5 18	364653	2007 <i>TL</i> ₁₆₃		3 30.9	144°15	0°7/30.4	18
2 21	12 58.14	-12 34.6	2.871	3.618	11.5	19.8	2 21	13 7.71	- 4 10.0	1.774	2.564	16.0	21.2
3 2	12 54.78	-11 45.2	2.770	3.620	9.2	19.6	3 2	13 3.17	- 3 55.0	1.693	2.571	12.6	20.9
3 12	12 49.94	-10 41.2	2.694	3.621	6.5	19.4	3 12	12 56.12	- 3 27.6	1.633	2.578	8.6	20.7
3 22	12 44.02	- 9 25.1	2.644	3.622	3.5	19.2	3 22	12 47.16	- 2 51.5	1.598	2.584	4.1	20.5
4 1	12 37.56	- 8 0.7	2.625	3.623	1.0	19.0	4 1	12 37.24	- 2 11.7	1.592	2.590	1.0	20.2
4 11	12 31.18	- 6 33.5	2.637	3.623	3.3	19.2	4 11	12 27.51	- 1 34.6	1.613	2.596	5.5	20.6
4 21	12 25.47	- 5 8.9	2.679	3.623	6.3	19.4	4 21	12 19.02	- 1 5.5	1.661	2.601	9.9	20.8
5 1	12 20.91	- 3 52.0	2.748	3.623	9.1	19.6	5 1	12 12.59	- 0 48.7	1.733	2.605	13.7	21.1
343055	2009 <i>CD</i> ₁₂		3 30.9	179°62	4°0/	4.7 18	141915	2002 <i>PX</i> ₈₀		3 30.9	120°35	2°6/28.6	18
2 21	13 3.21	-19 10.1	2.720	3.425	13.0	21.3	2 21	13 4.58	- 0 27.0	1.766	2.572	15.4	20.3
3 2	12 58.95	-19 27.8	2.617	3.426	11.0	21.1	3 2	13 0.66	+ 0 20.8	1.692	2.581	12.0	20.1
3 12	12 52.90	-19 30.3	2.535	3.427	8.5	21.0	3 12	12 54.36	+ 1 19.4	1.640	2.590	8.0	19.9
3 22	12 45.51	-19 17.2	2.479	3.427	6.0	20.8	3 22	12 46.28	+ 2 23.0	1.613	2.599	4.0	19.7
4 1	12 37.38	-18 49.5	2.450	3.427	4.1	20.7	4 1	12 37.35	+ 3 24.4	1.614	2.607	3.1	19.6
4 11	12 29.29	-18 10.3	2.451	3.427	4.5	20.7	4 11	12 28.66	+ 4 16.2	1.643	2.615	6.7	19.9
4 21	12 21.94	-17 23.8	2.480	3.426	6.7	20.8	4 21	12 21.18	+ 4 53.1	1.698	2.623	10.7	20.1
5 1	12 15.94	-16 35.3	2.536	3.424	9.2	21.0	5 1	12 15.65	+ 5 12.0	1.775	2.630	14.2	20.4
63328	2001 <i>FU</i> ₅₄		3 30.9	312°02	1°5/29.8	18	162632	2000 <i>SA</i> ₁₄₇		3 30.9	124°		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
92348	2000 <i>GH</i> ₁₆₈		3 30.9 279°57	2°7/28.8	18		371710	2007 <i>EO</i> ₄₃		3 30.9 70°45	0°5/31.4	16	
2 21	13 3.54	- 1 20.8	1.456	2.275	17.5	19.9	2 21	13 5.88	- 6 16.1	1.814	2.599	15.9	20.9
3 2	13 0.74	- 0 37.8	1.363	2.259	13.8	19.6	3 2	13 1.75	- 6 20.7	1.730	2.604	12.6	20.7
3 12	12 55.00	+ 0 20.6	1.290	2.244	9.4	19.3	3 12	12 55.17	- 6 12.9	1.668	2.609	8.7	20.5
3 22	12 46.85	+ 1 28.7	1.241	2.228	4.7	19.0	3 22	12 46.74	- 5 54.8	1.631	2.614	4.4	20.2
4 1	12 37.28	+ 2 38.0	1.217	2.212	3.3	18.9	4 1	12 37.35	- 5 30.1	1.621	2.620	0.6	19.9
4 11	12 27.65	+ 3 38.8	1.219	2.196	7.9	19.1	4 11	12 28.11	- 5 4.1	1.639	2.625	4.9	20.3
4 21	12 19.28	+ 4 22.8	1.246	2.180	12.9	19.3	4 21	12 20.05	- 4 41.9	1.684	2.630	9.2	20.5
5 1	12 13.26	+ 4 44.9	1.293	2.164	17.4	19.6	5 1	12 13.95	- 4 27.9	1.752	2.636	13.0	20.8
83344	2001 <i>RU</i> ₁₃₉		3 30.9 69°03	1°1/29.8	18		287390	2002 <i>VV</i> ₆₂		3 30.9 152°31	2°5/31.1	17	
2 21	13 1.76	- 3 20.1	2.133	2.925	13.6	19.6	2 21	13 1.63	- 15 7.5	2.669	3.401	12.7	21.3
3 2	12 57.97	- 2 49.2	2.062	2.943	10.6	19.4	3 2	12 57.65	- 14 59.7	2.574	3.408	10.4	21.2
3 12	12 52.27	- 2 8.1	2.013	2.960	7.1	19.2	3 12	12 51.99	- 14 37.2	2.501	3.414	7.7	21.0
3 22	12 45.20	- 1 20.9	1.991	2.978	3.3	19.0	3 22	12 45.08	- 14 1.1	2.454	3.420	4.8	20.8
4 1	12 37.51	- 0 32.5	1.998	2.995	1.4	18.9	4 1	12 37.55	- 13 13.8	2.435	3.426	2.5	20.7
4 11	12 30.05	+ 0 11.4	2.033	3.013	4.9	19.1	4 11	12 30.10	- 12 19.5	2.446	3.431	3.7	20.8
4 21	12 23.58	+ 0 46.5	2.096	3.030	8.4	19.4	4 21	12 23.42	- 11 23.0	2.487	3.436	6.5	21.0
5 1	12 18.68	+ 1 9.6	2.183	3.048	11.5	19.6	5 1	12 18.06	- 10 29.3	2.554	3.441	9.3	21.1
145446	2005 <i>RN</i> ₁₀		3 30.9 248°71	0°2/30.7	18		105916	2000 <i>SJ</i> ₂₀₇		3 30.9 206°45	0°1/30.9	17	
2 21	12 58.22	- 8 26.2	2.763	3.530	11.5	20.5	2 21	13 0.90	- 5 58.9	2.815	3.585	11.2	21.3
3 2	12 55.01	- 7 25.9	2.650	3.516	9.1	20.3	3 2	12 56.99	- 5 37.9	2.713	3.580	8.8	21.1
3 12	12 50.22	- 6 11.5	2.561	3.501	6.2	20.0	3 12	12 51.51	- 5 7.4	2.636	3.576	6.0	20.9
3 22	12 44.24	- 4 46.0	2.501	3.485	3.0	19.8	3 22	12 44.85	- 4 29.7	2.586	3.571	2.9	20.7
4 1	12 37.61	- 3 14.3	2.470	3.469	0.5	19.6	4 1	12 37.58	- 3 48.0	2.566	3.565	0.4	20.5
4 11	12 30.98	- 1 42.3	2.471	3.453	3.9	19.8	4 11	12 30.35	- 3 6.6	2.576	3.560	3.7	20.8
4 21	12 24.98	- 0 15.8	2.501	3.437	7.2	20.0	4 21	12 23.77	- 2 29.1	2.615	3.553	6.8	20.9
5 1	12 20.15	+ 1 0.0	2.558	3.420	10.1	20.2	5 1	12 18.40	- 1 59.1	2.681	3.547	9.6	21.1
215840	2005 <i>CP</i> ₃₅		3 30.9 344°51	2°2/29.4	17		375916	2009 <i>WF</i> ₂₈		3 30.9 87°51	2°0/1.9	17	
2 21	13 0.10	- 2 18.3	1.261	2.094	18.9	20.3	2 21	13 2.90	- 12 24.0	1.953	2.716	15.7	21.3
3 2	12 58.28	- 1 49.3	1.182	2.086	14.9	20.0	3 2	12 59.19	- 12 12.7	1.874	2.730	12.6	21.1
3 12	12 53.41	- 1 4.2	1.123	2.079	10.1	19.7	3 12	12 53.29	- 11 43.9	1.816	2.745	9.1	20.9
3 22	12 46.08	- 0 8.7	1.085	2.073	4.8	19.4	3 22	12 45.77	- 10 59.6	1.782	2.759	5.1	20.7
4 1	12 37.39	+ 0 49.0	1.072	2.068	2.6	19.2	4 1	12 37.48	- 10 3.7	1.776	2.773	2.0	20.5
4 11	12 28.81	+ 1 38.8	1.082	2.064	7.7	19.5	4 11	12 29.39	- 9 2.4	1.799	2.786	4.4	20.7
4 21	12 21.70	+ 2 12.8	1.116	2.061	12.9	19.8	4 21	12 22.40	- 8 2.5	1.849	2.800	8.2	20.9
5 1	12 17.09	+ 2 26.0	1.170	2.059	17.5	20.0	5 1	12 17.19	- 7 9.9	1.923	2.813	11.7	21.2
85563	1998 <i>BF</i> ₇		3 30.9 142°28	14°3/15.8	18		383670	2007 <i>TQ</i> ₁₇₅		3 30.9 122°86	2°1/2.7	17	
2 21	13 6.92	+ 21 16.7	1.279	2.115	18.5	18.9	2 21	13 0.14	- 14 54.1	2.510	3.250	13.2	21.5
3 2	13 3.63	+ 24 39.9	1.241	2.124	15.9	18.8	3 2	12 56.57	- 14 27.7	2.420	3.261	10.7	21.4
3 12	12 56.95	+ 27 53.2	1.226	2.133	14.4	18.7	3 12	12 51.28	- 13 44.9	2.353	3.271	7.8	21.2
3 22	12 47.69	+ 30 37.4	1.234	2.141	14.6	18.7	3 22	12 44.75	- 12 47.6	2.311	3.282	4.7	21.0
4 1	12 37.22	+ 32 36.6	1.265	2.148	16.3	18.8	4 1	12 37.61	- 11 39.1	2.298	3.292	2.2	20.8
4 11	12 27.20	+ 33 43.4	1.316	2.155	18.8	19.0	4 11	12 30.60	- 10 24.9	2.315	3.301	3.6	21.0
4 21	12 19.04	+ 33 59.1	1.384	2.160	21.3	19.2	4 21	12 24.41	- 9 10.8	2.360	3.311	6.7	21.2
5 1	12 13.71	+ 33 30.4	1.466	2.165	23.5	19.4	5 1	12 19.58	- 8 2.3	2.433	3.320	9.6	21.4
671	Carnegia		3 30.9 90°97	0°7/31.7	18		160289	2003 <i>BM</i> ₆₆		3 30.9 6°31	1°9/29.4	17	
2 21	13 3.12	- 7 27.6	2.318	3.089	13.3	15.2	2 21	12 59.54	- 2 58.6	1.422	2.246	17.6	19.7
3 2	12 59.01	- 7 26.8	2.231	3.096	10.5	15.1	3 2	12 57.39	- 2 21.0	1.347	2.246	13.8	19.5
3 12	12 53.01	- 7 14.9	2.166	3.102	7.3	14.9	3 12	12 52.52	- 1 27.9	1.292	2.247	9.3	19.3
3 22	12 45.59	- 6 53.9	2.127	3.109	3.7	14.7	3 22	12 45.55	- 0 25.0	1.260	2.248	4.4	19.0
4 1	12 37.47	- 6 26.8	2.117	3.115	0.7	14.4	4 1	12 37.50	+ 0 39.6	1.254	2.251	2.4	18.8
4 11	12 29.46	- 5 57.9	2.136	3.122	4.0	14.7	4 11	12 29.65	+ 1 36.8	1.273	2.254	6.9	19.1
4 21	12 22.34	- 5 31.3	2.183	3.128	7.5	14.9	4 21	12 23.13	+ 2 19.3	1.316	2.258	11.7	19.4
5 1	12 16.72	- 5 11.0	2.256	3.134	10.6	15.1	5 1	12 18.82	+ 2 42.4	1.381	2.263	15.8	19.6
162558	2000 <i>RF</i> ₂₁		3 30.9 132°45	2°7/2.6	18		171820	2001 <i>FT</i> ₁₂		3 30.9 42°64	2°2/29.3	18	
2 21	13 6.20	- 14 32.5	1.869	2.620	16.7	20.8	2 21	13 2.00	- 2 53.2	1.344	2.168	18.5	19.3
3 2	13 1.92	- 14 23.3	1.786	2.633	13.6	20.6	3 2	12 59.32	- 2 8.1	1.281	2.179	14.4	19.0
3 12	12 55.23	- 13 54.1	1.724	2.646	10.0	20.4	3 12	12 53.78	- 1 7.3	1.237	2.192	9.6	18.8
3 22	12 46.73	- 13 6.2	1.686	2.658	6.0	20.2	3 22	12 46.12	+ 0 2.6	1.217	2.205	4.6	18.5
4 1	12 37.34	- 12 3.3	1.676	2.669	2.8	20.0	4 1	12 37.45	+ 1 12.6	1.222	2.218	2.6	18.4
4 11	12 28.16	- 10 52.3	1.694	2.680	4.7	20.2	4 11	12 29.14	+ 2 13.1	1.252	2.232	7.2	18.8
4 21	12 20.18	- 9 40.6	1.739	2.690	8.6	20.4	4 21	12 22.34	+ 2 56.8	1.307	2.246	11.9	19.1
5 1	12 14.17	- 8 35.7	1.810	2.700	12.3	20.7	5 1	12 17.89	+ 3 19.7	1.382	2.261	16.0	19.3
129949	1999 <i>TG</i> ₂₁₃		3 30.9 296°80	1°2/31.5	17		318352	2004 <i>TJ</i> ₃₁₈		3 30.9 259°73	1°4/1.4	17	
2 21	13 15.89	- 3 38.1	1.524	2.310	18.4	19.5	2 21	13 1.41	- 10 55.3	1.999	2.770	15.1	21.0
3 2	13 10.88	- 4 35.1	1.410	2.283	15.0	19.2	3 2	12 58.18	- 10 39.9	1.899	2.763	12.2	20.7
3 12	13 2.34	- 5 27.2	1.316	2.257	10.7	18.8	3 12	12 52.75	- 10 7.7	1.821	2.755	8.7	20.5
3 22	12 50.66	- 6 14.6	1.247	2.230	5.6	18.5	3 22	12 45.60	- 9 20.4	1.767	2.747	4.8	20.2
4 1	12 36.83	- 6 57.6	1.204	2.203	1.3	18.1	4 1	12 37.50	- 8 21.8	1.741	2.739	1.5	20.0
4 11	12 22.44	- 7 37.9	1.190	2.176	6.4	18.4	4 11	12 29.42	- 7 18.2	1.744	2.731	4.5	20.2
4 21	12 9.20	- 8 17.6	1.203	2.150	12.0	18.6	4 21	12 22.27	- 6 16.4	1.773	2.723	8.5	20.4
5 1	11 58.60	- 9 0.1	1.239	2.123	17.1	18.8	5 1	12 16.83	- 5 22.5	1.827	2.715	12.3	20.6
192198	2007 <i>HJ</i> ₁₂		3 30.9 264°08	0°2/30.8	17		94010	2000 <i>XJ</i> ₂₇	</				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
162165	1999 <i>FT</i> ₄₃		3 30.9 19 ^o 14	1.3/29.8	18		34361	2000 <i>RT</i> ₂₈		3 30.9 171 ^o 86	2.8/3.7	18	
2 21	13 0.82	- 2 46.6	1.803	2.609	15.2	19.3	2 21	12 59.27	-17 2.1	2.575	3.305	13.1	19.2
3 2	12 57.74	- 2 23.7	1.725	2.614	11.8	19.1	3 2	12 55.95	-16 46.1	2.475	3.306	10.9	19.0
3 12	12 52.41	- 1 49.5	1.669	2.619	8.0	18.9	3 12	12 50.93	-16 13.3	2.397	3.307	8.1	18.9
3 22	12 45.39	- 1 8.2	1.637	2.624	3.8	18.6	3 22	12 44.63	-15 24.7	2.344	3.307	5.2	18.7
4 1	12 37.54	- 0 25.3	1.633	2.630	1.6	18.5	4 1	12 37.67	-14 22.7	2.319	3.308	3.0	18.5
4 11	12 29.86	+ 0 12.9	1.656	2.637	5.6	18.8	4 11	12 30.78	-13 12.3	2.324	3.309	3.8	18.6
4 21	12 23.28	+ 0 41.3	1.705	2.644	9.6	19.0	4 21	12 24.65	-11 59.0	2.357	3.309	6.6	18.8
5 1	12 18.51	+ 0 56.1	1.777	2.652	13.2	19.2	5 1	12 19.84	-10 48.6	2.417	3.309	9.5	18.9
293071	2006 <i>WL</i> ₁₆₇		3 30.9 256 ^o 12	2 ^o 0/28.7	17		503143	2015 <i>GZ</i> ₁₉		3 30.9 117 ^o 02	0 ^o 6/30.2	17	
2 21	13 0.62	+ 0 3.8	2.424	3.221	12.0	21.3	2 21	12 58.90	- 6 38.7	2.193	2.980	13.5	21.8
3 2	12 57.02	+ 0 37.4	2.333	3.218	9.3	21.1	3 2	12 55.87	- 5 44.4	2.105	2.982	10.6	21.6
3 12	12 51.65	+ 1 18.4	2.266	3.214	6.3	20.9	3 12	12 50.96	- 4 35.7	2.040	2.985	7.1	21.3
3 22	12 44.97	+ 2 3.0	2.225	3.211	3.1	20.7	3 22	12 44.66	- 3 16.6	2.001	2.987	3.4	21.1
4 1	12 37.60	+ 2 46.5	2.213	3.207	2.3	20.6	4 1	12 37.66	- 1 53.2	1.991	2.989	1.0	20.9
4 11	12 30.31	+ 3 24.1	2.231	3.203	5.2	20.8	4 11	12 30.78	- 0 32.3	2.010	2.992	4.7	21.2
4 21	12 23.81	+ 3 51.8	2.276	3.200	8.4	21.0	4 21	12 24.76	+ 0 39.6	2.057	2.994	8.4	21.4
5 1	12 18.67	+ 4 7.0	2.345	3.196	11.3	21.2	5 1	12 20.22	+ 1 37.7	2.129	2.996	11.7	21.6
174328	2002 <i>TC</i> ₁₃₂		3 30.9 242 ^o 49	2 ^o 8/2.3	17		395205	2010 <i>HD</i> ₃₈		3 30.9 136 ^o 74	2 ^o 8/3.4	18	
2 21	13 5.27	-12 43.7	1.848	2.609	16.5	20.5	2 21	13 0.86	-15 40.0	2.649	3.381	12.8	21.4
3 2	13 1.50	-12 56.0	1.747	2.601	13.5	20.3	3 2	12 57.12	-15 42.6	2.553	3.385	10.5	21.3
3 12	12 55.20	-12 51.2	1.667	2.593	10.0	20.0	3 12	12 51.68	-15 30.7	2.479	3.390	7.9	21.1
3 22	12 46.88	-12 29.3	1.611	2.584	6.0	19.8	3 22	12 44.98	-15 5.1	2.430	3.394	5.0	20.9
4 1	12 37.38	-11 52.7	1.581	2.575	2.9	19.5	4 1	12 37.63	-14 27.6	2.409	3.398	2.9	20.8
4 11	12 27.84	-11 6.5	1.579	2.566	5.0	19.7	4 11	12 30.36	-13 42.1	2.418	3.402	3.8	20.8
4 21	12 19.35	-10 17.3	1.604	2.557	9.1	19.9	4 21	12 23.83	-12 53.1	2.455	3.406	6.5	21.0
5 1	12 12.83	- 9 32.0	1.654	2.547	13.0	20.1	5 1	12 18.61	-12 5.6	2.519	3.409	9.2	21.2
4438	Sykes		3 30.9 204 ^o 81	3 ^o 5/25.9	18		19581	1999 <i>NC</i> ₃		3 30.9 248 ^o 95	1 ^o 1/29.8	18	
2 21	13 2.11	+ 8 23.1	3.138	3.934	9.6	17.8	2 21	13 1.44	- 4 35.5	2.105	2.895	13.8	18.7
3 2	12 57.72	+ 9 5.0	3.047	3.929	7.5	17.6	3 2	12 58.07	- 3 52.6	2.003	2.883	10.9	18.5
3 12	12 51.90	+ 9 48.4	2.981	3.923	5.3	17.5	3 12	12 52.62	- 2 56.2	1.925	2.871	7.4	18.2
3 22	12 45.02	+10 29.5	2.944	3.916	3.7	17.4	3 22	12 45.55	- 1 50.2	1.872	2.858	3.5	18.0
4 1	12 37.61	+11 4.0	2.938	3.909	4.0	17.4	4 1	12 37.57	- 0 40.2	1.848	2.845	1.4	17.8
4 11	12 30.27	+11 28.6	2.960	3.902	5.8	17.5	4 11	12 29.59	+ 0 27.0	1.852	2.832	5.3	18.0
4 21	12 23.55	+11 41.0	3.011	3.894	8.0	17.6	4 21	12 22.47	+ 1 25.2	1.884	2.818	9.2	18.2
5 1	12 17.94	+11 40.1	3.087	3.885	10.2	17.7	5 1	12 16.96	+ 2 9.4	1.941	2.805	12.8	18.4
349428	2008 <i>AZ</i> ₆₇		3 30.9 36 ^o 71	3 ^o 8/4.0	17		407888	2012 <i>BE</i> ₁₁₁		3 30.9 80 ^o 10	0 ^o 7/30.4	18	
2 21	13 1.66	-16 58.8	2.314	3.047	14.4	21.1	2 21	13 4.84	- 5 48.6	1.595	2.393	17.2	22.0
3 2	12 58.06	-17 18.0	2.220	3.049	12.0	20.9	3 2	13 1.04	- 5 10.9	1.530	2.413	13.4	21.8
3 12	12 52.49	-17 21.0	2.146	3.052	9.1	20.7	3 12	12 54.70	- 4 17.3	1.486	2.433	9.1	21.6
3 22	12 45.42	-17 7.6	2.096	3.055	6.2	20.5	3 22	12 46.50	- 3 12.7	1.466	2.452	4.3	21.4
4 1	12 37.56	-16 39.3	2.074	3.058	4.0	20.4	4 1	12 37.48	- 2 4.4	1.473	2.472	1.1	21.2
4 11	12 29.75	-15 59.9	2.080	3.061	4.6	20.4	4 11	12 28.82	- 1 0.6	1.508	2.491	5.7	21.5
4 21	12 22.81	-15 14.4	2.113	3.064	7.3	20.6	4 21	12 21.53	- 0 8.2	1.568	2.510	10.2	21.8
5 1	12 17.40	-14 28.4	2.173	3.068	10.3	20.8	5 1	12 16.37	+ 0 28.1	1.652	2.529	14.0	22.1
294429	2007 <i>VH</i> ₂₄₄		3 30.9 37 ^o 18	3 ^o 2/3.6	18		67888	2000 <i>WR</i> ₅₉		3 30.9 189 ^o 91	1 ^o 6/1.6	18	
2 21	13 0.02	-16 20.4	2.148	2.893	15.0	20.6	2 21	13 4.89	-11 57.9	2.033	2.792	15.3	20.1
3 2	12 56.90	-16 17.9	2.055	2.895	12.4	20.4	3 2	13 0.84	-11 35.6	1.936	2.791	12.4	19.9
3 12	12 51.76	-15 57.0	1.983	2.898	9.3	20.2	3 12	12 54.52	-10 55.4	1.860	2.789	8.8	19.7
3 22	12 45.09	-15 18.3	1.935	2.901	6.0	20.0	3 22	12 46.47	- 9 59.2	1.809	2.787	4.9	19.4
4 1	12 37.61	-14 24.4	1.914	2.903	3.4	19.9	4 1	12 37.48	- 8 51.0	1.787	2.784	1.6	19.2
4 11	12 30.22	-13 20.6	1.921	2.907	4.4	19.9	4 11	12 28.55	- 7 37.4	1.793	2.780	4.5	19.4
4 21	12 23.74	-12 13.4	1.956	2.910	7.6	20.1	4 21	12 20.62	- 6 25.6	1.828	2.776	8.5	19.6
5 1	12 18.86	-11 9.3	2.016	2.913	10.9	20.3	5 1	12 14.46	- 5 22.3	1.888	2.771	12.2	19.8
409007	2002 <i>XA</i> ₉₈		3 30.9 104 ^o 74	4 ^o 4/26.9	18		470921	2009 <i>DG</i> ₁₃₀		3 30.9 294 ^o 19	2 ^o 7/2.4	17	
2 21	13 7.38	+ 5 44.8	1.918	2.725	14.4	21.9	2 21	13 4.29	-12 13.2	2.275	3.026	14.1	21.0
3 2	13 2.51	+ 6 39.6	1.857	2.746	11.1	21.7	3 2	13 0.19	-12 38.1	2.173	3.020	11.5	20.8
3 12	12 55.41	+ 7 38.4	1.820	2.767	7.7	21.6	3 12	12 54.01	-12 50.2	2.092	3.014	8.5	20.6
3 22	12 46.75	+ 8 34.8	1.809	2.787	4.9	21.4	3 22	12 46.21	-12 49.6	2.037	3.008	5.2	20.4
4 1	12 37.43	+ 9 21.8	1.826	2.806	4.9	21.5	4 1	12 37.51	-12 37.7	2.010	3.002	2.7	20.2
4 11	12 28.47	+ 9 53.9	1.871	2.825	7.7	21.7	4 11	12 28.78	-12 17.8	2.011	2.997	4.3	20.3
4 21	12 20.74	+10 8.0	1.942	2.843	10.9	21.9	4 21	12 20.90	-11 54.2	2.041	2.991	7.6	20.5
5 1	12 14.90	+10 3.6	2.037	2.861	13.8	22.1	5 1	12 14.60	-11 31.5	2.096	2.985	10.9	20.7
374460	2005 <i>XU</i> ₄₃		3 30.9 246 ^o 68	2 ^o 1/28.9	17		408715	2014 <i>OJ</i> ₄		3 30.9 289 ^o 91	3 ^o 2/2.2	17	
2 21	13 4.25	- 0 41.0	2.099	2.895	13.7	22.2	2 21	13 2.98	-12 50.7	1.396	2.183	19.7	21.3
3 2	13 0.28	- 0 6.8	1.997	2.881	10.7	22.0	3 2	13 0.78	-13 1.7	1.289	2.159	16.4	21.0
3 12	12 54.14	+ 0 37.1	1.918	2.866	7.3	21.7	3 12	12 55.42	-12 50.0	1.200	2.135	12.1	20.7
3 22	12 46.29	+ 1 26.7	1.865	2.851	3.6	21.5	3 22	12 47.29	-12 14.6	1.133	2.110	7.3	20.3
4 1	12 37.47	+ 2 16.4	1.841	2.836	2.4	21.4	4 1	12 37.35	-11 17.8	1.090	2.085	3.3	20.0
4 11	12 28.63	+ 3 0.1	1.846	2.820	5.9	21.5	4 11	12 27.05	-10 6.5	1.071	2.060	6.2	20.1
4 21	12 20.67	+ 3 32.8	1.878	2.804	9.8	21.7	4 21	12 17.93	- 8 50.9	1.077	2.036	11.7	20.3
5 1	12 14.38	+ 3 50.8	1.933	2.787	13.2	21.9	5 1	12 11.32	- 7 42.2	1.104	2.011	16.9	20.5

EPHEMERIDES

3 30.9

3 31.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
341675	2007 <i>VN</i> ₉₀		3 30.9 156°17'	4.3/26.3	18		334500	2002 <i>QH</i> ₉₄		3 30.9 146°42'	1.1/1.3	17	
2 21	13 3.90	+ 8 10.0	2.349	3.155	12.1	20.8	2 21	13 0.10	-11 32.9	2.383	3.142	13.3	21.1
3 2	12 59.57	+ 8 52.1	2.270	3.157	9.5	20.6	3 2	12 56.67	-10 56.6	2.291	3.147	10.6	21.0
3 12	12 53.37	+ 9 36.1	2.216	3.160	6.7	20.4	3 12	12 51.46	-10 4.5	2.221	3.152	7.5	20.8
3 22	12 45.80	+10 16.9	2.188	3.162	4.6	20.3	3 22	12 44.92	- 8 59.3	2.178	3.157	4.0	20.6
4 1	12 37.57	+10 48.9	2.189	3.164	4.8	20.3	4 1	12 37.73	- 7 45.3	2.164	3.162	1.1	20.3
4 11	12 29.50	+11 8.0	2.219	3.166	7.1	20.5	4 11	12 30.64	- 6 28.4	2.179	3.166	3.8	20.5
4 21	12 22.33	+11 11.6	2.275	3.167	9.9	20.6	4 21	12 24.38	- 5 14.6	2.223	3.170	7.3	20.8
5 1	12 16.66	+10 58.9	2.354	3.169	12.5	20.8	5 1	12 19.53	- 4 9.6	2.293	3.174	10.4	21.0
222607	2001 <i>XY</i> ₃₇		3 30.9 264°94'	1.7/29.6	18		72223	2001 <i>AM</i> ₁₀		3 30.9 94°31'	3.1/2.8	18	
2 21	13 6.93	- 0 33.8	1.906	2.702	14.8	19.9	2 21	13 4.05	-15 0.5	1.637	2.401	18.2	20.0
3 2	13 2.64	- 0 24.2	1.807	2.690	11.7	19.6	3 2	13 0.64	-14 54.3	1.558	2.412	14.9	19.8
3 12	12 55.89	- 0 6.2	1.730	2.677	8.0	19.4	3 12	12 54.60	-14 25.5	1.499	2.424	11.0	19.6
3 22	12 47.20	+ 0 16.7	1.678	2.664	3.9	19.1	3 22	12 46.57	-13 35.2	1.463	2.435	6.7	19.4
4 1	12 37.40	+ 0 39.7	1.655	2.651	2.0	18.9	4 1	12 37.54	-12 27.6	1.453	2.446	3.3	19.2
4 11	12 27.58	+ 0 57.6	1.660	2.638	5.9	19.2	4 11	12 28.74	-11 10.4	1.469	2.457	5.1	19.3
4 21	12 18.78	+ 1 6.1	1.691	2.625	10.1	19.4	4 21	12 21.26	- 9 52.6	1.513	2.468	9.3	19.6
5 1	12 11.88	+ 1 2.0	1.747	2.612	13.9	19.6	5 1	12 15.91	- 8 42.6	1.580	2.478	13.2	19.8
382834	2004 <i>AC</i> ₂₁		3 30.9 127°29'	2.6/27.9	17		82830	2001 <i>QS</i> ₄₅		3 30.9 160°13'	0.9/1.1	18	
2 21	13 2.17	+ 1 49.5	2.458	3.255	11.9	21.7	2 21	13 2.19	- 9 14.8	2.716	3.472	11.9	20.8
3 2	12 58.09	+ 2 36.9	2.382	3.267	9.2	21.6	3 2	12 58.05	- 9 1.3	2.621	3.478	9.5	20.6
3 12	12 52.28	+ 3 30.5	2.330	3.278	6.2	21.4	3 12	12 52.27	- 8 36.5	2.551	3.482	6.6	20.4
3 22	12 45.25	+ 4 25.8	2.306	3.289	3.3	21.2	3 22	12 45.29	- 8 2.4	2.507	3.487	3.5	20.2
4 1	12 37.64	+ 5 17.5	2.311	3.300	3.0	21.2	4 1	12 37.70	- 7 21.8	2.493	3.491	0.9	20.0
4 11	12 30.20	+ 6 0.8	2.346	3.310	5.6	21.4	4 11	12 30.19	- 6 38.8	2.509	3.495	3.5	20.2
4 21	12 23.61	+ 6 32.1	2.408	3.320	8.5	21.6	4 21	12 23.42	- 5 57.7	2.553	3.498	6.6	20.5
5 1	12 18.41	+ 6 49.3	2.494	3.330	11.2	21.8	5 1	12 17.92	- 5 22.2	2.625	3.501	9.4	20.6
231698	1998 <i>QC</i> ₂		3 30.9 249°76'	6.3/6.3	18		67574	2000 <i>SL</i> ₁₁₁		3 30.9 88°90'	0.8/30.3	18	
2 21	13 5.05	-24 1.9	2.403	3.085	15.1	20.3	2 21	13 3.88	- 6 17.6	1.534	2.335	17.6	18.9
3 2	13 0.98	-24 42.3	2.286	3.070	13.1	20.1	3 2	13 0.52	- 5 34.4	1.463	2.348	13.8	18.7
3 12	12 54.71	-25 4.8	2.188	3.054	10.8	19.9	3 12	12 54.50	- 4 33.4	1.412	2.360	9.4	18.4
3 22	12 46.64	-25 6.8	2.113	3.038	8.4	19.7	3 22	12 46.51	- 3 19.7	1.386	2.373	4.4	18.2
4 1	12 37.47	-24 47.4	2.064	3.021	6.6	19.6	4 1	12 37.57	- 2 1.1	1.386	2.385	1.2	18.0
4 11	12 28.14	-24 8.7	2.043	3.004	6.5	19.5	4 11	12 28.91	- 0 46.8	1.414	2.397	6.0	18.3
4 21	12 19.59	-23 15.2	2.049	2.987	8.3	19.6	4 21	12 21.64	+ 0 15.1	1.467	2.409	10.7	18.6
5 1	12 12.65	-22 13.5	2.080	2.969	11.0	19.7	5 1	12 16.54	+ 0 59.2	1.542	2.421	14.7	18.9
109171	2001 <i>QP</i> ₆₄		3 30.9 122°04'	2.0/28.8	18		411208	2010 <i>MM</i> ₉₇		3 31.0 157°81'	0.4/30.7	16	
2 21	13 2.43	- 3 15.0	2.058	2.851	14.0	20.0	2 21	13 6.42	- 5 24.6	2.105	2.882	14.3	22.1
3 2	12 58.63	- 2 4.1	1.983	2.866	10.8	19.9	3 2	13 1.81	- 5 1.4	2.018	2.889	11.2	21.9
3 12	12 52.82	+ 0 40.6	1.932	2.880	7.2	19.7	3 12	12 55.06	- 4 26.2	1.955	2.896	7.6	21.7
3 22	12 45.56	+ 0 49.9	1.908	2.894	3.5	19.4	3 22	12 46.71	- 3 42.2	1.917	2.902	3.7	21.5
4 1	12 37.62	+ 2 20.0	1.913	2.907	2.4	19.4	4 1	12 37.56	- 2 54.0	1.909	2.907	0.7	21.2
4 11	12 29.90	+ 3 42.0	1.947	2.920	5.8	19.6	4 11	12 28.55	- 2 7.4	1.930	2.912	4.8	21.6
4 21	12 23.20	+ 4 50.0	2.009	2.932	9.4	19.9	4 21	12 20.56	- 1 27.5	1.978	2.916	8.6	21.8
5 1	12 18.14	+ 5 40.0	2.096	2.944	12.6	20.1	5 1	12 14.29	- 0 58.5	2.052	2.920	12.0	22.0
458869	2011 <i>UO</i> ₁₂₉		3 30.9 154°37'	2.5/2.3	18		270069	2001 <i>PQ</i> ₂₅		3 31.0 184°12'	1.8/29.2	18	
2 21	13 6.36	-13 25.0	1.813	2.571	16.9	22.4	2 21	13 5.90	- 0 52.4	2.189	2.979	13.4	21.4
3 2	13 2.22	-13 18.3	1.725	2.578	13.8	22.2	3 2	13 1.36	- 0 22.4	2.099	2.979	10.5	21.2
3 12	12 55.58	-12 52.1	1.658	2.584	10.0	22.0	3 12	12 54.74	+ 0 16.3	2.032	2.979	7.1	21.0
3 22	12 47.01	-12 7.5	1.616	2.590	5.9	21.8	3 22	12 46.56	+ 0 59.7	1.993	2.978	3.4	20.8
4 1	12 37.44	-11 8.3	1.600	2.595	2.6	21.6	4 1	12 37.57	+ 1 42.8	1.982	2.977	2.1	20.7
4 11	12 28.02	-10 1.1	1.612	2.600	4.8	21.7	4 11	12 28.69	+ 2 20.2	2.000	2.975	5.5	20.9
4 21	12 19.79	- 8 53.6	1.652	2.604	9.0	22.0	4 21	12 20.75	+ 2 47.6	2.046	2.973	9.1	21.1
5 1	12 13.59	- 7 53.2	1.717	2.607	12.8	22.2	5 1	12 14.44	+ 3 1.9	2.117	2.970	12.3	21.3
389198	2009 <i>CM</i> ₅₁		3 30.9 23°33'	4.1/3.4	16		431095	2006 <i>DN</i> ₁₆₈		3 31.0 138°71'	1.4/29.5	17	
2 21	13 4.22	-14 47.6	1.899	2.652	16.4	20.9	2 21	13 4.40	- 1 45.0	2.227	3.016	13.2	21.9
3 2	13 0.50	-15 27.5	1.813	2.657	13.6	20.7	3 2	13 0.08	- 1 18.4	2.144	3.023	10.3	21.7
3 12	12 54.40	-15 51.1	1.748	2.663	10.3	20.5	3 12	12 53.79	- 0 43.2	2.084	3.031	6.9	21.5
3 22	12 46.46	-15 57.7	1.706	2.670	6.7	20.3	3 22	12 46.07	- 0 2.9	2.052	3.038	3.3	21.3
4 1	12 37.54	-15 48.2	1.690	2.677	4.2	20.2	4 1	12 37.63	+ 0 37.7	2.048	3.045	1.7	21.2
4 11	12 28.71	-15 26.4	1.702	2.684	5.2	20.2	4 11	12 29.36	+ 1 13.4	2.074	3.051	5.1	21.4
4 21	12 20.97	-14 57.5	1.740	2.692	8.5	20.4	4 21	12 22.02	+ 1 40.3	2.127	3.057	8.6	21.7
5 1	12 15.13	-14 27.7	1.802	2.701	11.9	20.7	5 1	12 16.27	+ 1 55.3	2.205	3.063	11.7	21.9
323445	2004 <i>HV</i> ₂₇		3 30.9 333°67'	1.1/1.2	17		61652	2000 <i>QO</i> ₁₁₂		3 31.0 113°54'	0.5/31.5	17	
2 21	12 57.49	-12 58.1	1.600	2.386	17.7	20.4	2 21	13 2.51	- 8 8.0	1.883	2.667	15.5	19.2
3 2	12 55.64	-12 3.4	1.509	2.381	14.3	20.2	3 2	12 59.09	- 7 47.6	1.796	2.669	12.3	18.9
3 12	12 51.31	-10 42.4	1.438	2.376	10.1	19.9	3 12	12 53.39	- 7 11.6	1.731	2.672	8.5	18.7
3 22	12 45.03	- 8 58.3	1.390	2.372	5.4	19.6	3 22	12 45.96	- 6 23.1	1.690	2.674	4.3	18.5
4 1	12 37.70	- 6 58.6	1.369	2.368	1.1	19.3	4 1	12 37.64	- 5 26.7	1.677	2.676	0.5	18.2
4 11	12 30.46	- 4 54.4	1.376	2.364	5.2	19.6	4 11	12 29.44	- 4 29.1	1.692	2.679	4.8	18.5
4 21	12 24.37	- 2 57.5	1.409	2.361	10.1	19.9	4 21	12 22.29	- 3 36.9	1.734	2.681	9.0	18.7
5 1	12 20.28	- 1 17.6	1.465	2.358	14.4	20.1	5 1	12 16.96	- 2 55.4	1.800	2.683	12.7	19.0
430349	2013 <i>YU</i> ₁₀₈		3 30.9 162°10'	4.1/2									