

EPHEMERIDES

3 2.9

3 3.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
322450	2011 <i>UD</i> ₁₃		3 2.9 109°64	2°2/29.2	17		387278	2012 <i>UR</i> ₁₂₄		3 2.9 139°74	0°2/ 3.3	17	
2 1	11 15.55	+13 28.7	2.692	3.552	8.9	21.2	2 1	11 16.17	+ 4 26.4	2.473	3.314	10.3	21.7
2 11	11 10.30	+14 9.1	2.631	3.560	6.2	21.0	2 11	11 10.86	+ 4 49.3	2.399	3.318	7.3	21.5
2 21	11 3.77	+14 51.3	2.597	3.568	3.5	20.9	2 21	11 4.13	+ 5 20.6	2.352	3.322	4.0	21.3
3 2	10 56.53	+15 30.9	2.593	3.577	2.3	20.8	3 2	10 56.59	+ 5 56.8	2.335	3.325	0.5	21.1
3 12	10 49.26	+16 3.7	2.619	3.585	4.4	21.0	3 12	10 48.96	+ 6 33.6	2.347	3.329	3.1	21.3
3 22	10 42.62	+16 26.6	2.674	3.592	7.1	21.1	3 22	10 41.98	+ 7 6.9	2.389	3.332	6.5	21.5
4 1	10 37.19	+16 37.7	2.755	3.600	9.7	21.3	4 1	10 36.26	+ 7 33.3	2.458	3.336	9.6	21.7
4 11	10 33.36	+16 36.6	2.858	3.608	11.9	21.5	4 11	10 32.26	+ 7 50.4	2.549	3.339	12.1	21.9
138621	2000 <i>QQ</i> ₂₂₁		3 2.9 247°75	2°2/29.4	17		448768	2011 <i>SR</i> ₃₃		3 2.9 52°29	5°7/27.9	16	
2 1	11 16.60	+12 37.0	2.614	3.472	9.2	20.5	2 1	11 24.84	+15 38.1	1.160	2.042	16.4	20.1
2 11	11 11.22	+13 21.1	2.528	3.457	6.5	20.3	2 11	11 17.51	+17 17.7	1.150	2.087	11.4	19.9
2 21	11 4.36	+14 8.8	2.469	3.441	3.6	20.1	2 21	11 7.71	+18 53.9	1.163	2.133	7.0	19.8
3 2	10 56.59	+14 55.3	2.440	3.425	2.2	20.0	3 2	10 56.89	+20 13.9	1.201	2.178	5.9	19.9
3 12	10 48.63	+15 35.7	2.442	3.409	4.6	20.1	3 12	10 46.71	+21 8.3	1.266	2.223	9.0	20.2
3 22	10 41.22	+16 2.2	2.472	3.392	7.6	20.3	3 22	10 38.50	+21 34.3	1.354	2.268	13.0	20.5
4 1	10 35.02	+16 64.3	2.529	3.375	10.4	20.4	4 1	10 33.08	+21 33.3	1.463	2.312	16.5	20.8
4 11	10 30.52	+16 28.9	2.608	3.358	12.9	20.6	4 11	10 30.72	+21 9.5	1.590	2.356	19.2	21.1
101727	1999 <i>ED</i> ₇		3 2.9 36°85	14°7/28.4	17		375945	2009 <i>WA</i> ₁₃₁		3 2.9 202°60	2°9/ 5.9	17	
2 1	11 48.38	+36 4.7	0.930	1.785	21.9	18.3	2 1	11 17.08	- 3 57.0	2.106	2.922	12.8	21.3
2 11	11 35.63	+36 21.9	0.888	1.790	18.3	18.1	2 11	11 11.78	- 3 44.6	2.024	2.920	9.7	21.1
2 21	11 17.90	+36 3.1	0.865	1.795	15.5	17.9	2 21	11 4.75	- 3 15.7	1.965	2.918	6.3	20.9
3 2	10 57.79	+34 52.2	0.864	1.801	14.8	17.9	3 2	10 56.65	- 2 32.5	1.934	2.916	3.3	20.7
3 12	10 38.73	+32 45.9	0.885	1.808	16.8	18.0	3 12	10 48.37	- 1 39.8	1.932	2.913	3.8	20.7
3 22	10 23.48	+29 55.9	0.929	1.815	20.2	18.2	3 22	10 40.79	- 0 43.3	1.959	2.910	7.1	20.9
4 1	10 13.45	+26 40.3	0.992	1.822	23.9	18.5	4 1	10 34.69	+ 0 11.2	2.012	2.907	10.5	21.1
4 11	10 8.71	+23 15.4	1.071	1.829	27.1	18.8	4 11	10 30.61	+ 0 58.3	2.088	2.904	13.6	21.3
503658	2016 <i>GT</i> ₂₂₂		3 2.9 304°67	2°1/29.9	17		510456	2011 <i>WZ</i> ₃₅		3 2.9 200°57	2°6/ 6.8	17	
2 1	11 14.98	+ 8 29.4	1.704	2.573	12.7	21.4	2 1	11 13.96	- 6 23.8	3.174	3.964	9.5	22.8
2 11	11 10.73	+ 9 40.6	1.619	2.553	9.0	21.1	2 11	11 9.13	- 5 59.2	3.080	3.959	7.4	22.7
2 21	11 4.37	+11 4.3	1.559	2.533	4.8	20.8	2 21	11 3.16	- 5 21.5	3.012	3.954	5.0	22.5
3 2	10 56.61	+12 32.6	1.526	2.514	2.1	20.6	3 2	10 56.50	- 4 32.6	2.973	3.949	2.9	22.4
3 12	10 48.49	+13 56.2	1.521	2.495	5.8	20.8	3 12	10 49.73	- 3 35.8	2.965	3.943	3.0	22.3
3 22	10 41.12	+15 6.9	1.542	2.476	10.2	21.0	3 22	10 43.38	- 2 35.0	2.988	3.936	5.1	22.5
4 1	10 35.50	+15 58.6	1.587	2.457	14.3	21.2	4 1	10 37.96	- 1 34.5	3.040	3.929	7.6	22.6
4 11	10 32.31	+16 28.7	1.652	2.439	17.8	21.4	4 11	10 33.89	- 0 38.2	3.117	3.921	9.8	22.8
2406	<i>Orelskaya</i>		3 2.9 154°75	0°8/ 2.4	18	17.1	462015	2006 <i>XA</i> ₆₅		3 2.9 192°78	4°4/ 7.7	18	
2 1	11 22.84	+ 6 19.1	1.651	2.504	13.9	17.1	2 1	11 16.90	- 9 30.9	2.061	2.852	13.9	20.8
2 11	11 16.11	+ 7 0.2	1.586	2.511	9.9	16.8	2 11	11 11.71	- 9 9.2	1.975	2.850	11.0	20.6
2 21	11 7.14	+ 7 52.4	1.546	2.519	5.2	16.6	2 21	11 4.74	- 8 25.3	1.912	2.849	7.8	20.4
3 2	10 56.86	+ 8 49.2	1.534	2.525	0.8	16.3	3 2	10 56.66	- 7 21.1	1.876	2.846	5.0	20.3
3 12	10 46.48	+ 9 43.0	1.551	2.531	4.8	16.6	3 12	10 48.38	- 6 1.6	1.869	2.844	4.8	20.2
3 22	10 37.21	+10 27.1	1.596	2.536	9.4	16.9	3 22	10 40.80	- 4 33.9	1.890	2.841	7.4	20.4
4 1	10 30.00	+10 57.2	1.665	2.540	13.5	17.1	4 1	10 34.75	- 3 5.9	1.939	2.837	10.7	20.6
4 11	10 25.46	+11 11.2	1.755	2.544	16.8	17.3	4 11	10 30.77	- 1 44.6	2.011	2.833	13.8	20.8
461583	2004 <i>RF</i> ₄₃		3 2.9 248°93	0°5/ 3.5	17		211986	2005 <i>AV</i> ₄₄		3 2.9 56°56	1°6/ 1.9	18	
2 1	11 19.77	+ 3 49.3	2.226	3.063	11.4	22.0	2 1	11 20.78	+ 8 23.2	1.329	2.200	15.5	20.0
2 11	11 13.71	+ 4 6.5	2.129	3.045	8.3	21.7	2 11	11 14.90	+ 9 2.5	1.280	2.214	10.8	19.7
2 21	11 5.82	+ 4 33.9	2.058	3.026	4.6	21.5	2 21	11 6.54	+ 9 51.6	1.254	2.229	5.7	19.5
3 2	10 56.75	+ 5 8.0	2.016	3.006	0.8	21.1	3 2	10 56.82	+10 42.7	1.254	2.244	1.6	19.3
3 12	10 47.35	+ 5 44.4	2.004	2.986	3.5	21.3	3 12	10 47.16	+11 27.0	1.281	2.260	5.8	19.6
3 22	10 38.56	+ 6 18.1	2.022	2.965	7.5	21.5	3 22	10 38.89	+11 58.0	1.333	2.275	10.6	19.9
4 1	10 31.19	+ 6 45.1	2.066	2.944	11.1	21.7	4 1	10 33.02	+12 12.1	1.407	2.291	14.9	20.2
4 11	10 25.86	+ 7 2.2	2.133	2.922	14.2	21.9	4 11	10 30.08	+12 8.5	1.501	2.307	18.4	20.4
34650	2000 <i>WK</i> ₁₀₈		3 2.9 50°04	3°7/ 5.6	18		350647	2001 <i>TO</i> ₁₄₁		3 3.0 60°97	7°0/25.5	18	
2 1	11 20.29	- 2 51.7	1.420	2.257	16.7	18.7	2 1	11 22.51	+27 45.3	2.040	2.900	11.4	20.1
2 11	11 14.59	- 3 1.7	1.355	2.263	12.6	18.5	2 11	11 15.45	+28 35.4	2.006	2.919	8.9	19.9
2 21	11 6.44	- 2 50.9	1.311	2.270	8.1	18.2	2 21	11 6.58	+29 14.7	1.998	2.938	7.2	19.9
3 2	10 56.80	- 2 21.9	1.293	2.276	4.2	18.0	3 2	10 56.81	+29 36.5	2.017	2.958	7.3	19.9
3 12	10 47.01	- 1 40.3	1.301	2.283	5.0	18.1	3 12	10 47.26	+29 36.5	2.064	2.977	9.0	20.1
3 22	10 38.39	- 0 53.8	1.335	2.291	9.3	18.3	3 22	10 38.90	+29 14.3	2.136	2.997	11.4	20.2
4 1	10 32.00	- 0 9.9	1.393	2.298	13.6	18.6	4 1	10 32.48	+28 31.8	2.230	3.017	13.7	20.4
4 11	10 28.48	+ 0 25.0	1.471	2.306	17.3	18.9	4 11	10 28.42	+27 32.6	2.344	3.036	15.6	20.6
207370	2005 <i>LZ</i> ₁₆		3 2.9 81°32	5°0/26.4	18		462289	2008 <i>FH</i> ₅₄		3 3.0 340°50	2°9/29.8	18	
2 1	11 17.23	+20 43.5	2.168	3.038	10.4	20.1	2 1	11 18.21	+11 27.4	1.471	2.346	14.0	21.1
2 11	11 11.81	+21 50.6	2.114	3.042	7.6	19.9	2 11	11 13.14	+12 14.4	1.404	2.341	9.8	20.8
2 21	11 4.70	+22 54.7	2.087	3.046	5.4	19.8	2 21	11 5.69	+13 8.6	1.361	2.336	5.4	20.6
3 2	10 56.63	+23 48.7	2.088	3.051	5.3	19.8	3 2	10 56.76	+14 1.9	1.344	2.331	2.9	20.4
3 12	10 48.53	+24 26.9	2.117	3.055	7.4	19.9	3 12	10 47.64	+14 45.8	1.354	2.327	6.5	20.6
3 22	10 41.27	+24 46.0	2.172	3.059	10.1	20.1	3 22	10 39.60	+15 13.9	1.389	2.324	11.0	20.8
4 1	10 35.58	+24 45.4	2.251	3.064	12.7	20.2	4 1	10 33.71	+15 22.9	1.447	2.321	15.2	21.1
4 11	10 31.94	+24 26.5	2.350	3.068	15.0	20.4	4 11	10 30.59	+15 12.2	1.524	2.319	18.7	21.3
353294	2010 <i>GR</i> ₁₅₄		3 2.9 277°77	4°1/ 7.4	17		500678	2012 <i>VD</i> ₆₃		3 3.0 320°14	3°0/28.8		

EPHEMERIDES

3 3.0

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
56899	2000 <i>QO</i> ₁₅₈		3 3.0 48°67'	6°1/ 8.2 18			431266	2006 <i>UL</i> ₆₈		3 3.0 214°01'	2°9/ 6.6 17		
2 1	11 18.38	-10 9.1	1.707	2.503	16.1	18.5	2 1	11 13.91	-5 48.1	2.506	3.310	11.4	21.9
2 11	11 13.00	-10 33.8	1.635	2.509	13.0	18.3	2 11	11 9.33	-5 22.9	2.420	3.308	8.7	21.7
2 21	11 5.52	-10 35.1	1.584	2.516	9.6	18.1	2 21	11 3.37	-4 41.8	2.358	3.305	5.8	21.5
3 2	10 56.75	-10 12.8	1.559	2.522	6.8	18.0	3 2	10 56.56	-3 47.1	2.324	3.302	3.3	21.4
3 12	10 47.79	-9 30.7	1.560	2.529	6.4	18.0	3 12	10 49.61	-2 43.1	2.320	3.300	3.5	21.4
3 22	10 39.77	-8 35.2	1.587	2.535	8.8	18.1	3 22	10 43.22	-1 35.1	2.345	3.297	6.1	21.5
4 1	10 33.61	-7 34.4	1.640	2.542	12.1	18.3	4 1	10 38.01	-0 28.5	2.398	3.294	9.1	21.7
4 11	10 29.93	-6 36.1	1.714	2.549	15.2	18.5	4 11	10 34.45	+0 31.6	2.476	3.291	11.7	21.9
387328	2012 <i>VU</i> ₈₂		3 3.0 217°29'	3°8/ 7.4 17			359032	2008 <i>WQ</i> ₄₅		3 3.0 338°12'	3°2/ 29.7 18		
2 1	11 14.66	-7 48.9	2.421	3.215	12.0	21.3	2 1	11 21.00	+11 49.6	1.385	2.260	14.7	20.7
2 11	11 9.90	-7 41.7	2.336	3.214	9.4	21.1	2 11	11 15.21	+12 41.0	1.323	2.259	10.4	20.4
2 21	11 3.69	-7 17.5	2.274	3.213	6.6	20.9	2 21	11 6.84	+13 39.5	1.284	2.258	5.7	20.2
3 2	10 56.58	-6 37.9	2.241	3.212	4.2	20.8	3 2	10 56.89	+14 36.0	1.271	2.257	3.3	20.0
3 12	10 49.33	-5 46.5	2.236	3.210	4.1	20.8	3 12	10 46.78	+15 21.3	1.285	2.257	6.9	20.2
3 22	10 42.66	-4 48.4	2.260	3.209	6.4	20.9	3 22	10 37.91	+15 48.9	1.324	2.256	11.6	20.5
4 1	10 37.24	-3 49.0	2.311	3.208	9.3	21.1	4 1	10 31.40	+15 55.8	1.385	2.256	15.9	20.7
4 11	10 33.55	-2 53.6	2.386	3.207	11.9	21.2	4 11	10 27.89	+15 42.2	1.464	2.256	19.5	21.0
108538	2001 <i>LH</i> ₇		3 3.0 194°78'	3°8/ 7.0 18			504164	2006 <i>SP</i> ₃₂₅		3 3.0 217°33'	1°8/ 29.9 17		
2 1	11 17.70	-7 30.6	2.227	3.022	12.9	20.2	2 1	11 16.48	+11 31.8	2.616	3.472	9.3	21.9
2 11	11 12.18	-7 14.1	2.139	3.020	10.1	20.0	2 11	11 11.09	+12 11.0	2.538	3.466	6.5	21.7
2 21	11 4.96	-6 38.8	2.076	3.017	6.9	19.8	2 21	11 4.30	+12 53.9	2.488	3.460	3.5	21.5
3 2	10 56.71	-5 46.6	2.040	3.014	4.3	19.6	3 2	10 56.66	+13 36.3	2.467	3.454	1.9	21.4
3 12	10 48.25	-4 41.9	2.033	3.010	4.3	19.6	3 12	10 48.90	+14 13.3	2.477	3.447	4.2	21.5
3 22	10 40.44	-3 30.6	2.056	3.005	7.0	19.8	3 22	10 41.72	+14 41.4	2.516	3.440	7.2	21.7
4 1	10 34.05	-2 19.3	2.105	3.000	10.2	20.0	4 1	10 35.77	+14 58.1	2.581	3.433	10.1	21.9
4 11	10 29.63	-1 14.1	2.179	2.994	13.1	20.1	4 11	10 31.49	+15 2.5	2.669	3.426	12.5	22.0
365534	2010 <i>RP</i> ₁₆₃		3 3.0 273°49'	0°0/ 2.9 16			25604	Karlin		3 3.0 74°32'	1°6/ 1.4 18		
2 1	11 20.96	+5 27.3	1.611	2.466	14.1	21.2	2 1	11 16.64	+9 12.2	2.001	2.862	11.5	18.6
2 11	11 15.10	+5 44.8	1.525	2.450	10.2	20.9	2 11	11 11.50	+10 0.8	1.934	2.864	8.0	18.4
2 21	11 6.80	+6 14.2	1.462	2.434	5.6	20.6	2 21	11 4.61	+10 56.5	1.891	2.865	4.2	18.1
3 2	10 56.89	+6 50.9	1.427	2.418	0.5	20.2	3 2	10 56.69	+11 53.5	1.878	2.867	1.7	18.0
3 12	10 46.57	+7 28.2	1.419	2.401	4.7	20.5	3 12	10 48.66	+12 45.3	1.893	2.868	4.7	18.2
3 22	10 37.11	+7 59.8	1.438	2.385	9.7	20.7	3 22	10 41.43	+13 26.6	1.936	2.869	8.5	18.4
4 1	10 29.66	+8 20.6	1.482	2.368	14.2	20.9	4 1	10 35.78	+13 53.9	2.004	2.871	11.9	18.6
4 11	10 24.97	+8 27.4	1.546	2.351	18.0	21.1	4 11	10 32.21	+14 5.7	2.094	2.872	14.8	18.8
498574	2008 <i>LC</i> ₁₁		3 3.0 316°96'	2°5/ 29.9 17			490558	2009 <i>WT</i> ₁₉		3 3.0 101°73'	0°5/ 2.5 18		
2 1	11 16.64	+9 56.6	1.572	2.444	13.4	21.4	2 1	11 16.97	+5 24.6	1.921	2.774	12.3	21.7
2 11	11 11.97	+10 57.1	1.499	2.435	9.4	21.1	2 11	11 11.74	+6 13.8	1.856	2.782	8.6	21.5
2 21	11 5.05	+12 7.3	1.451	2.425	5.1	20.9	2 21	11 4.74	+7 13.7	1.818	2.790	4.6	21.2
3 2	10 56.72	+13 19.2	1.429	2.417	2.5	20.7	3 2	10 56.70	+8 18.5	1.807	2.798	0.6	20.9
3 12	10 48.13	+14 23.6	1.434	2.408	6.1	20.9	3 12	10 48.60	+9 21.4	1.826	2.806	4.1	21.2
3 22	10 40.47	+15 13.2	1.466	2.400	10.6	21.1	3 22	10 41.35	+10 16.1	1.872	2.813	8.2	21.5
4 1	10 34.77	+15 43.4	1.520	2.392	14.7	21.3	4 1	10 35.73	+10 58.1	1.944	2.821	11.7	21.7
4 11	10 31.68	+15 52.7	1.594	2.384	18.2	21.5	4 11	10 32.25	+11 25.1	2.038	2.829	14.7	21.9
378715	2008 <i>PH</i> ₂₁		3 3.0 157°01'	2°8/ 28.3 17			500767	2013 <i>CO</i> ₁₅		3 3.0 301°93'	0°3/ 2.8 17		
2 1	11 16.64	+13 45.2	2.664	3.523	9.1	21.3	2 1	11 19.92	+5 42.7	1.345	2.211	15.7	21.2
2 11	11 11.14	+15 3.2	2.603	3.531	6.3	21.1	2 11	11 14.65	+6 7.3	1.269	2.200	11.2	20.9
2 21	11 4.28	+16 23.9	2.570	3.539	3.7	20.9	2 21	11 6.67	+6 46.0	1.215	2.188	6.1	20.6
3 2	10 56.64	+17 41.3	2.568	3.547	2.9	20.9	3 2	10 56.91	+7 32.8	1.186	2.177	0.6	20.2
3 12	10 48.92	+18 49.6	2.596	3.553	5.1	21.0	3 12	10 46.76	+8 19.5	1.184	2.167	5.3	20.5
3 22	10 41.83	+19 44.8	2.655	3.559	7.8	21.2	3 22	10 37.68	+8 58.1	1.207	2.156	10.8	20.8
4 1	10 35.97	+20 24.3	2.739	3.565	10.3	21.4	4 1	10 30.94	+9 22.6	1.253	2.146	15.7	21.0
4 11	10 31.77	+20 47.7	2.845	3.570	12.5	21.6	4 11	10 27.30	+9 29.8	1.317	2.136	19.8	21.2
354925	2006 <i>DD</i> ₁₁₉		3 3.0 303°89'	0°6/ 2.6 18			330698	2008 <i>KT</i> ₁₂		3 3.0 198°24'	4°3/ 7.8 17 R		
2 1	11 17.40	+5 8.5	1.330	2.199	15.6	20.1	2 1	11 16.99	-9 35.3	2.338	3.120	12.7	21.6
2 11	11 12.95	+5 53.0	1.247	2.179	11.2	19.8	2 11	11 11.64	-9 21.0	2.247	3.117	10.1	21.4
2 21	11 5.81	+6 55.0	1.186	2.160	6.1	19.4	2 21	11 4.67	-8 47.2	2.181	3.113	7.2	21.2
3 2	10 56.80	+8 7.8	1.150	2.141	0.7	19.0	3 2	10 56.71	-7 55.6	2.142	3.109	4.8	21.0
3 12	10 47.29	+9 21.3	1.140	2.122	5.6	19.3	3 12	10 48.54	-6 49.9	2.132	3.104	4.5	21.0
3 22	10 38.72	+10 25.5	1.155	2.104	11.2	19.5	3 22	10 40.99	-5 36.0	2.151	3.099	6.8	21.1
4 1	10 32.40	+11 12.7	1.192	2.086	16.3	19.8	4 1	10 34.78	-4 20.4	2.198	3.093	9.8	21.3
4 11	10 29.18	+11 38.4	1.248	2.068	20.6	20.0	4 11	10 30.45	-3 9.2	2.269	3.086	12.6	21.5
248664	2006 <i>HW</i> ₁₅₁		3 3.0 278°78'	0°8/ 3.6 16			377913	2006 <i>EG</i> ₃		3 3.0 177°83'	1°1/ 1.8 18		
2 1	11 18.74	+2 14.7	1.571	2.422	14.6	21.2	2 1	11 16.98	+7 42.5	2.166	3.020	11.0	21.4
2 11	11 13.63	+2 47.4	1.479	2.401	10.7	20.9	2 11	11 11.64	+8 30.4	2.095	3.021	7.7	21.2
2 21	11 6.07	+3 37.8	1.411	2.380	6.1	20.6	2 21	11 4.66	+9 26.2	2.049	3.022	4.1	20.9
3 2	10 56.83	+4 41.1	1.368	2.359	1.2	20.2	3 2	10 56.70	+10 24.7	2.032	3.022	1.1	20.7
3 12	10 47.08	+5 49.6	1.353	2.337	4.6	20.4	3 12	10 48.63	+11 19.8	2.046	3.022	4.2	20.9
3 22	10 38.12	+6 54.8	1.365	2.315	9.7	20.6	3 22	10 41.28	+12 6.2	2.087	3.022	7.9	21.2
4 1	10 31.10	+7 49.2	1.401	2.293	14.5	20.8	4 1	10 35.39	+12 40.3	2.155	3.022	11.2	21.4
4 11	10 26.85	+8 27.4	1.457	2.271	18.5	21.0	4 11	10 31.47	+13 0.2	2.244	3.021	14.0	21.6
279310	2009 <i>WQ</i> ₂₄₈		3 3.0 51°00'	2°0/ 1.3 18			2728	Yatskiv		3 3.0 239°14'	0°9/ 3.9 18		
2 1	11 18.52	+10 25.3	1.773	2.639	12								

EPHEMERIDES

3 3.0

3 3.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
495064	2011 <i>EU</i> ₇₀		3 3.0 290°02	0°9/ 3.9	17		209468	2004 <i>GX</i> ₅₂		3 3.0 242°40	0°8/ 4.0	17	
2 1	11 14.70	+ 0 33.0	1.902	2.744	12.8	21.5	2 1	11 14.71	+ 1 27.3	2.505	3.338	10.4	21.5
2 11	11 10.35	+ 1 23.1	1.812	2.729	9.4	21.3	2 11	11 9.93	+ 2 0.7	2.417	3.330	7.6	21.3
2 21	11 4.12	+ 2 30.5	1.746	2.714	5.4	21.0	2 21	11 3.73	+ 2 45.5	2.355	3.321	4.3	21.1
3 2	10 56.67	+ 3 50.5	1.709	2.698	1.3	20.7	3 2	10 56.64	+ 3 38.3	2.322	3.312	1.1	20.8
3 12	10 48.92	+ 5 15.7	1.700	2.683	3.8	20.8	3 12	10 49.39	+ 4 34.2	2.320	3.303	3.0	20.9
3 22	10 41.84	+ 6 38.3	1.719	2.668	8.1	21.1	3 22	10 42.67	+ 5 28.5	2.347	3.294	6.4	21.1
4 1	10 36.31	+ 7 51.1	1.764	2.653	12.1	21.3	4 1	10 37.15	+ 6 16.7	2.401	3.284	9.5	21.3
4 11	10 32.94	+ 8 49.1	1.830	2.638	15.5	21.5	4 11	10 33.30	+ 6 55.2	2.479	3.275	12.3	21.5
81496	2000 <i>GH</i> ₁₅₉		3 3.0 272°71	3°2/ 5.5	17		135392	2001 <i>TM</i> ₁₉₈		3 3.0 119°38	1°4/ 1.3	18	
2 1	11 20.14	- 2 36.3	1.838	2.661	14.1	19.3	2 1	11 15.10	+ 8 34.9	2.524	3.377	9.7	20.4
2 11	11 14.35	- 2 46.1	1.741	2.642	10.7	19.1	2 11	11 10.09	+ 9 37.4	2.463	3.390	6.7	20.2
2 21	11 6.37	- 2 39.6	1.667	2.623	7.0	18.8	2 21	11 3.74	+10 45.9	2.430	3.403	3.5	20.0
3 2	10 56.89	- 2 18.2	1.620	2.603	3.6	18.6	3 2	10 56.64	+11 55.3	2.426	3.415	1.4	19.9
3 12	10 46.96	- 1 45.6	1.602	2.583	4.5	18.6	3 12	10 49.50	+12 59.9	2.454	3.427	4.0	20.1
3 22	10 37.70	- 1 7.3	1.611	2.563	8.4	18.8	3 22	10 43.02	+13 55.1	2.510	3.439	7.1	20.3
4 1	10 30.15	- 0 29.5	1.646	2.542	12.4	18.9	4 1	10 37.77	+14 37.9	2.593	3.450	9.9	20.5
4 11	10 25.05	+ 0 2.3	1.703	2.521	16.0	19.1	4 11	10 34.17	+15 6.5	2.699	3.461	12.2	20.7
330049	2005 <i>UY</i> ₃₃₂		3 3.0 95°26	0°2/ 3.2	18		462806	2010 <i>RB</i> ₂		3 3.0 210°51	1°1/ 4.0	17	
2 1	11 17.69	+ 3 34.8	1.817	2.666	13.0	21.7	2 1	11 20.50	+ 1 38.5	2.030	2.864	12.5	22.0
2 11	11 12.33	+ 4 13.3	1.752	2.674	9.3	21.5	2 11	11 14.32	+ 2 2.2	1.945	2.857	9.1	21.7
2 21	11 5.10	+ 5 4.5	1.711	2.682	5.1	21.2	2 21	11 6.21	+ 2 39.0	1.884	2.850	5.3	21.5
3 2	10 56.76	+ 6 3.1	1.698	2.689	0.6	20.9	3 2	10 56.89	+ 3 25.3	1.852	2.842	1.4	21.2
3 12	10 48.34	+ 7 2.1	1.714	2.697	4.0	21.2	3 12	10 47.31	+ 4 15.6	1.850	2.833	3.7	21.3
3 22	10 40.83	+ 7 55.3	1.758	2.704	8.2	21.5	3 22	10 38.47	+ 5 4.0	1.877	2.823	7.8	21.6
4 1	10 35.04	+ 8 37.4	1.827	2.712	12.0	21.7	4 1	10 31.24	+ 5 45.4	1.930	2.813	11.5	21.8
4 11	10 31.52	+ 9 5.4	1.917	2.719	15.1	21.9	4 11	10 26.21	+ 6 16.0	2.006	2.802	14.8	22.0
426686	2013 <i>TB</i> ₂₂		3 3.0 146°39	2°7/29.4	17		289908	2005 <i>NT</i> ₇		3 3.0 250°77	1°1/ 4.3	17	
2 1	11 19.45	+13 11.9	2.071	2.933	11.1	21.8	2 1	11 14.88	+ 0 42.3	2.465	3.296	10.7	21.4
2 11	11 13.41	+13 54.5	2.007	2.937	7.8	21.6	2 11	11 10.08	+ 1 10.2	2.377	3.287	7.8	21.2
2 21	11 5.62	+14 39.9	1.970	2.942	4.4	21.4	2 21	11 3.82	+ 1 49.9	2.314	3.278	4.6	21.0
3 2	10 56.81	+15 22.4	1.962	2.946	2.8	21.3	3 2	10 56.66	+ 2 38.3	2.280	3.269	1.4	20.8
3 12	10 47.94	+15 56.1	1.982	2.950	5.4	21.5	3 12	10 49.32	+ 3 30.8	2.276	3.260	3.0	20.9
3 22	10 39.93	+16 17.1	2.031	2.953	8.8	21.7	3 22	10 42.53	+ 4 22.5	2.302	3.250	6.4	21.1
4 1	10 33.55	+16 23.3	2.105	2.957	12.0	21.9	4 1	10 36.96	+ 5 8.9	2.355	3.241	9.6	21.2
4 11	10 29.31	+16 14.6	2.200	2.960	14.7	22.1	4 11	10 33.08	+ 5 46.4	2.431	3.231	12.4	21.4
500682	2012 <i>VC</i> ₇₄		3 3.0 196°09	5°3/25.7	17		49597	1999 <i>FY</i> ₁₂		3 3.0 71°27	1°1/ 4.2	18	R
2 1	11 18.11	+23 37.4	2.436	3.299	9.6	21.5	2 1	11 14.36	+ 0 8.1	2.124	2.960	11.9	19.0
2 11	11 12.35	+24 37.6	2.377	3.298	7.3	21.3	2 11	11 9.80	+ 0 55.6	2.053	2.966	8.7	18.8
2 21	11 5.01	+25 32.9	2.346	3.297	5.6	21.2	2 21	11 3.68	+ 1 57.4	2.007	2.972	5.0	18.6
3 2	10 56.75	+26 17.0	2.343	3.295	5.6	21.2	3 2	10 56.64	+ 3 9.1	1.989	2.979	1.4	18.4
3 12	10 48.43	+26 45.0	2.368	3.294	7.4	21.3	3 12	10 49.51	+ 4 24.3	2.001	2.985	3.3	18.5
3 22	10 40.87	+26 54.3	2.421	3.292	9.8	21.4	3 22	10 43.09	+ 5 36.6	2.042	2.991	7.0	18.7
4 1	10 34.78	+26 44.9	2.496	3.290	12.2	21.6	4 1	10 38.07	+ 6 40.1	2.109	2.997	10.4	19.0
4 11	10 30.61	+26 18.1	2.592	3.288	14.2	21.8	4 11	10 34.94	+ 7 31.1	2.198	3.003	13.3	19.2
282629	2005 <i>QY</i> ₁₈₂		3 3.0 247°09	0°9/ 3.7	17		497613	2006 <i>QK</i> ₄		3 3.0 149°96	0°7/ 2.1	17	
2 1	11 20.23	+ 1 14.6	1.607	2.452	14.7	22.1	2 1	11 15.56	+ 7 19.1	2.899	3.744	8.8	22.3
2 11	11 14.65	+ 2 0.0	1.516	2.435	10.8	21.8	2 11	11 10.28	+ 7 58.4	2.830	3.752	6.2	22.1
2 21	11 6.62	+ 3 4.8	1.449	2.417	6.1	21.5	2 21	11 3.81	+ 8 43.5	2.789	3.761	3.2	21.9
3 2	10 56.92	+ 4 23.9	1.409	2.399	1.3	21.1	3 2	10 56.66	+ 9 30.6	2.778	3.768	0.7	21.7
3 12	10 46.75	+ 5 48.7	1.397	2.380	4.5	21.3	3 12	10 49.46	+10 15.5	2.798	3.776	3.1	21.9
3 22	10 37.37	+ 7 9.9	1.412	2.360	9.6	21.5	3 22	10 42.82	+10 54.5	2.848	3.783	6.1	22.1
4 1	10 29.94	+ 8 19.2	1.453	2.340	14.3	21.8	4 1	10 37.27	+11 25.0	2.926	3.789	8.7	22.3
4 11	10 25.27	+ 9 11.2	1.513	2.319	18.3	22.0	4 11	10 33.19	+11 45.3	3.028	3.795	10.9	22.5
519485	2012 <i>DD</i> ₁₀₂		3 3.0 187°29	5°4/26.9	18		277690	2006 <i>BS</i> ₂₇₈		3 3.0 199°40	0°6/ 2.4	17	
2 1	11 23.97	+22 13.7	2.114	2.973	11.0	20.7	2 1	11 17.49	+ 6 23.7	2.120	2.971	11.4	21.3
2 11	11 16.65	+23 3.7	2.051	2.973	8.2	20.5	2 11	11 12.06	+ 7 1.2	2.045	2.969	8.0	21.1
2 21	11 7.37	+23 48.7	2.016	2.972	5.9	20.4	2 21	11 4.93	+ 7 47.7	1.995	2.967	4.3	20.8
3 2	10 56.97	+24 21.8	2.009	2.970	5.7	20.3	3 2	10 56.77	+ 8 38.3	1.975	2.965	0.6	20.6
3 12	10 46.52	+24 37.5	2.031	2.968	7.7	20.5	3 12	10 48.47	+ 9 27.2	1.984	2.963	3.9	20.8
3 22	10 37.05	+24 33.4	2.081	2.966	10.6	20.6	3 22	10 40.90	+10 9.2	2.021	2.961	7.8	21.0
4 1	10 29.41	+24 9.7	2.154	2.963	13.3	20.8	4 1	10 34.83	+10 40.5	2.084	2.958	11.2	21.2
4 11	10 24.13	+23 28.7	2.248	2.959	15.7	21.0	4 11	10 30.77	+10 58.8	2.170	2.955	14.1	21.4
334568	2002 <i>TO</i> ₈₈		3 3.0 158°74	3°5/ 7.1	18		519305	2011 <i>DH</i> ₅₃		3 3.0 154°14	2°9/ 5.9	17	
2 1	11 15.54	- 7 20.9	2.420	3.215	12.0	20.8	2 1	11 16.67	- 4 1.7	2.053	2.870	13.0	21.5
2 11	11 10.52	- 7 7.3	2.339	3.219	9.3	20.6	2 11	11 11.53	- 3 44.3	1.975	2.873	9.9	21.3
2 21	11 4.03	- 6 36.9	2.282	3.222	6.5	20.4	2 21	11 4.66	- 3 9.8	1.921	2.875	6.4	21.1
3 2	10 56.67	- 5 51.4	2.252	3.225	4.0	20.3	3 2	10 56.75	- 2 20.8	1.895	2.877	3.3	20.9
3 12	10 49.18	- 4 55.0	2.252	3.228	4.0	20.3	3 12	10 48.69	- 1 22.4	1.897	2.879	3.8	20.9
3 22	10 42.31	- 3 52.8	2.281	3.230	6.4	20.4	3 22	10 41.37	- 0 20.7	1.928	2.880	7.1	21.1
4 1	10 36.71	- 2 50.4	2.337	3.232	9.3	20.6	4 1	10 35.55	+ 0 38.1	1.985	2.882	10.6	21.4
4 11	10 32.85	- 1 53.0	2.417	3.234	11.9	20.8	4 11	10 31.78	+ 1 28.7	2.066	2.883	13.6	21.6
118680	2000 <i>LQ</i> ₃₅		3 3.0 238°04	0°4/ 2.6	18		458832	2011 <i>UJ</i> ₂₈		3 3.0 164°45	2°3/ 5.0	18	

EPHEMERIDES

3 3.0

3 3.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
221959	1995 <i>OP</i> ₁₅		3 3.0 102°90	0°1/ 3.2 18			201220	2002 <i>QP</i> ₆₄		3 3.0 49°75	0°7/ 2.4 18		
2 1	11 16.59	+ 2 41.6	1.967	2.812	12.4	21.2	2 1	11 17.60	+ 7 6.7	1.902	2.759	12.2	20.5
2 11	11 11.42	+ 3 42.1	1.906	2.826	8.8	21.0	2 11	11 12.22	+ 7 36.3	1.838	2.766	8.6	20.3
2 21	11 4.56	+ 4 55.7	1.870	2.840	4.8	20.7	2 21	11 5.04	+ 8 14.4	1.800	2.773	4.5	20.1
3 2	10 56.74	+ 6 16.4	1.863	2.854	0.5	20.4	3 2	10 56.82	+ 8 55.7	1.789	2.780	0.7	19.8
3 12	10 48.88	+ 7 36.9	1.885	2.867	3.8	20.7	3 12	10 48.54	+ 9 34.5	1.808	2.788	4.2	20.1
3 22	10 41.87	+ 8 50.3	1.936	2.880	7.7	21.0	3 22	10 41.14	+10 5.8	1.854	2.795	8.2	20.3
4 1	10 36.44	+ 9 51.1	2.013	2.893	11.3	21.2	4 1	10 35.42	+10 25.8	1.925	2.803	11.8	20.6
4 11	10 33.07	+10 36.2	2.112	2.905	14.2	21.4	4 11	10 31.86	+10 32.8	2.017	2.811	14.8	20.8
194125	2001 <i>SV</i> ₂₆₆		3 3.0 116°19	1°9/ 1.4 18			1964	Luyten		3 3.0 100°37	1°4/ 4.3 18		
2 1	11 22.87	+ 9 3.8	1.685	2.543	13.4	20.6	2 1	11 20.36	+ 0 27.6	1.742	2.579	14.1	17.5
2 11	11 16.00	+ 9 59.7	1.634	2.563	9.4	20.4	2 11	11 14.21	+ 0 58.9	1.685	2.599	10.2	17.3
2 21	11 7.06	+11 3.1	1.609	2.582	4.9	20.2	2 21	11 6.10	+ 1 45.8	1.653	2.618	5.9	17.0
3 2	10 56.98	+12 6.5	1.612	2.601	1.9	20.0	3 2	10 56.92	+ 2 43.1	1.648	2.637	1.7	16.8
3 12	10 46.97	+13 2.1	1.644	2.619	5.4	20.3	3 12	10 47.76	+ 3 44.0	1.672	2.656	3.8	17.0
3 22	10 38.14	+13 44.1	1.704	2.636	9.5	20.6	3 22	10 39.65	+ 4 41.7	1.725	2.674	8.1	17.3
4 1	10 31.37	+14 9.3	1.788	2.652	13.2	20.9	4 1	10 33.43	+ 5 30.2	1.802	2.692	11.9	17.5
4 11	10 27.15	+14 17.2	1.893	2.668	16.3	21.1	4 11	10 29.59	+ 6 6.0	1.902	2.709	15.0	17.8
5585	Parks		3 3.0 210°47	9°6/16.9 18			116410	2003 <i>YQ</i> ₁₃₈		3 3.0 319°96	3°9/27.4 18		
2 1	11 20.00	-33 30.6	3.175	3.746	13.4	20.2	2 1	11 14.21	+14 36.6	1.996	2.870	10.9	18.7
2 11	11 13.73	-34 15.1	3.070	3.737	12.3	20.0	2 11	11 9.92	+16 9.6	1.928	2.863	7.7	18.5
2 21	11 5.84	-34 37.0	2.983	3.726	11.2	19.9	2 21	11 3.86	+17 47.1	1.887	2.857	4.7	18.3
3 2	10 56.88	-34 33.3	2.917	3.716	10.2	19.8	3 2	10 56.72	+19 20.6	1.874	2.851	4.2	18.2
3 12	10 47.60	-34 3.4	2.875	3.704	9.6	19.8	3 12	10 49.39	+20 41.8	1.890	2.845	6.8	18.4
3 22	10 38.78	-33 9.3	2.858	3.691	9.7	19.7	3 22	10 42.80	+21 44.7	1.933	2.839	10.2	18.5
4 1	10 31.16	-31 55.5	2.866	3.678	10.3	19.8	4 1	10 37.74	+22 25.9	1.999	2.833	13.3	18.7
4 11	10 25.29	-30 28.4	2.897	3.663	11.4	19.8	4 11	10 34.75	+22 45.1	2.085	2.828	15.9	18.9
257209	2008 <i>WW</i> ₉₁		3 3.0 128°15	16°8/15.9 18			414783	2010 <i>QD</i> ₄		3 3.0 152°83	0°3/ 2.8 18		
2 1	11 29.49	+40 39.1	1.185	2.037	18.3	20.2	2 1	11 19.66	+ 4 47.9	2.068	2.912	11.9	22.4
2 11	11 22.22	+43 45.3	1.174	2.048	16.9	20.1	2 11	11 13.57	+ 5 33.7	2.001	2.921	8.4	22.2
2 21	11 10.94	+46 16.2	1.184	2.059	16.9	20.1	2 21	11 5.74	+ 6 30.1	1.959	2.930	4.5	22.0
3 2	10 57.35	+47 54.6	1.214	2.069	18.2	20.2	3 2	10 56.90	+ 7 31.7	1.946	2.937	0.4	21.7
3 12	10 43.92	+48 33.4	1.264	2.079	20.2	20.4	3 12	10 47.97	+ 8 32.1	1.964	2.944	3.9	22.0
3 22	10 32.89	+48 16.5	1.329	2.088	22.4	20.6	3 22	10 39.88	+ 9 25.6	2.011	2.951	7.8	22.2
4 1	10 25.73	+47 13.7	1.407	2.096	24.3	20.8	4 1	10 33.38	+10 7.8	2.084	2.957	11.2	22.4
4 11	10 22.93	+45 37.1	1.495	2.103	26.0	21.0	4 11	10 28.98	+10 36.2	2.179	2.962	14.2	22.7
280191	2002 <i>SS</i> ₂₁		3 3.0 136°28	0°0/ 3.1 18			186911	2004 <i>LS</i> ₂₇		3 3.0 290°13	7°1/24.5 17		
2 1	11 15.83	+ 3 52.5	2.536	3.375	10.1	21.6	2 1	11 17.26	+21 30.0	1.669	2.548	12.4	19.9
2 11	11 10.61	+ 4 36.9	2.468	3.386	7.2	21.4	2 11	11 12.52	+23 24.4	1.603	2.533	9.4	19.7
2 21	11 4.04	+ 5 30.5	2.427	3.396	3.9	21.2	2 21	11 5.45	+25 18.0	1.562	2.519	7.3	19.5
3 2	10 56.70	+ 6 29.0	2.415	3.406	0.4	21.0	3 2	10 56.89	+26 59.2	1.549	2.504	7.7	19.5
3 12	10 49.31	+ 7 27.4	2.434	3.415	3.1	21.2	3 12	10 48.00	+28 17.2	1.562	2.489	10.4	19.6
3 22	10 42.56	+ 8 21.1	2.483	3.425	6.4	21.4	3 22	10 40.03	+29 6.1	1.599	2.475	13.7	19.8
4 1	10 37.04	+ 9 6.1	2.559	3.433	9.4	21.6	4 1	10 34.05	+29 24.2	1.657	2.460	16.9	20.0
4 11	10 33.18	+ 9 39.9	2.659	3.441	11.9	21.8	4 11	10 30.74	+29 13.7	1.731	2.446	19.6	20.1
50974	2000 <i>GA</i> ₉₁		3 3.0 301°20	5°7/25.8 17			145594	2006 <i>QH</i> ₂		3 3.0 276°17	0°3/ 3.3 17		
2 1	11 17.30	+21 45.9	2.038	2.909	10.8	19.0	2 1	11 18.60	+ 3 12.1	1.644	2.495	14.1	20.4
2 11	11 12.08	+23 1.0	1.977	2.904	8.1	18.9	2 11	11 13.46	+ 3 48.7	1.553	2.476	10.2	20.1
2 21	11 4.99	+24 12.9	1.942	2.898	6.0	18.7	2 21	11 5.99	+ 4 41.5	1.485	2.456	5.7	19.8
3 2	10 56.80	+25 13.6	1.934	2.893	6.1	18.7	3 2	10 56.95	+ 5 45.4	1.445	2.436	0.8	19.4
3 12	10 48.48	+25 56.5	1.955	2.888	8.2	18.8	3 12	10 47.44	+ 6 52.7	1.432	2.415	4.5	19.6
3 22	10 40.99	+26 17.8	2.001	2.882	11.1	19.0	3 22	10 38.70	+ 7 55.3	1.447	2.395	9.5	19.8
4 1	10 35.18	+26 16.8	2.069	2.877	13.8	19.2	4 1	10 31.83	+ 8 46.3	1.486	2.374	14.0	20.0
4 11	10 31.56	+25 55.1	2.157	2.872	16.2	19.3	4 11	10 27.59	+ 9 21.2	1.545	2.353	17.9	20.2
99667	2002 <i>JO</i> ₁		3 3.0 17°87	0°1/ 3.2 18			289580	2005 <i>ER</i> ₃₂₄		3 3.0 248°13	3°7/27.3 16		
2 1	11 14.39	+ 2 50.8	1.549	2.409	14.3	18.8	2 1	11 19.12	+19 36.6	2.915	3.771	8.4	21.8
2 11	11 10.28	+ 3 45.4	1.486	2.413	10.2	18.5	2 11	11 12.98	+20 23.3	2.826	3.749	6.2	21.6
2 21	11 4.11	+ 4 56.5	1.446	2.418	5.6	18.3	2 21	11 5.39	+21 8.8	2.766	3.726	4.2	21.4
3 2	10 56.72	+ 6 17.2	1.432	2.423	0.6	17.9	3 2	10 56.88	+21 48.1	2.736	3.703	3.9	21.4
3 12	10 49.21	+ 7 38.5	1.446	2.429	4.4	18.2	3 12	10 48.17	+22 16.8	2.737	3.680	5.7	21.5
3 22	10 42.67	+ 8 51.8	1.486	2.436	9.1	18.5	3 22	10 39.96	+22 32.0	2.766	3.655	8.1	21.6
4 1	10 38.01	+ 9 50.3	1.551	2.443	13.3	18.8	4 1	10 32.93	+22 32.3	2.822	3.630	10.5	21.7
4 11	10 35.78	+10 30.4	1.635	2.451	16.7	19.0	4 11	10 27.55	+22 18.2	2.899	3.605	12.6	21.8
239919	2000 <i>TA</i> ₄₈		3 3.0 197°42	0°3/ 2.6 18			249380	2009 <i>BZ</i> ₄₄		3 3.0 274°47	1°3/ 4.0 17		
2 1	11 14.05	+ 4 48.2	2.769	3.610	9.3	20.8	2 1	11 20.74	+ 1 58.3	1.648	2.493	14.4	20.9
2 11	11 9.35	+ 5 42.4	2.688	3.608	6.6	20.6	2 11	11 15.03	+ 2 10.6	1.553	2.471	10.6	20.6
2 21	11 3.38	+ 6 45.3	2.634	3.605	3.5	20.4	2 21	11 6.89	+ 2 38.2	1.481	2.449	6.2	20.3
3 2	10 56.65	+ 7 52.8	2.611	3.602	0.4	20.1	3 2	10 57.05	+ 3 17.7	1.436	2.426	1.7	19.9
3 12	10 49.80	+ 8 59.7	2.619	3.598	3.1	20.4	3 12	10 46.68	+ 4 3.2	1.419	2.403	4.4	20.1
3 22	10 43.47	+10 1.4	2.657	3.595	6.2	20.6	3 22	10 37.06	+ 4 47.6	1.429	2.380	9.3	20.3
4 1	10 38.21	+10 54.1	2.722	3.590	9.1	20.8	4 1	10 29.34	+ 5 24.6	1.464	2.356	13.9	20.5
4 11	10 34.45	+11 35.1	2.811	3.586	11.5	20.9	4 11	10 24.34	+ 5 49.4	1.519	2.332	17.9	20.7
363450	2003 <i>SO</i> ₁₇₂		3 3.0 124°82	0°2/ 3.2 18			430206	2013 <i>TX</i> ₁₄₂		3 3.0 220°67	4°5/27.4 17		

EPHEMERIDES

3 3.0

3 3.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
303376	2004 <i>VN</i> ₉₅		3 3.0 286°76	3°2/ 5.2 16			78512	2002 <i>RK</i> ₈₇		3 3.1 111°80	0°0/ 3.0 18		
2 1	11 20.01	- 1 49.0	1.463	2.303	16.2	20.4	2 1	11 16.77	+ 4 36.9	2.385	3.227	10.6	20.2
2 11	11 14.69	- 1 53.8	1.376	2.287	12.3	20.1	2 11	11 11.34	+ 5 14.9	2.322	3.242	7.5	20.0
2 21	11 6.77	- 1 38.9	1.310	2.271	7.8	19.8	2 21	11 4.48	+ 6 1.6	2.287	3.257	4.0	19.8
3 2	10 57.04	- 1 6.1	1.269	2.255	3.7	19.5	3 2	10 56.84	+ 6 52.7	2.280	3.271	0.4	19.5
3 12	10 46.81	- 0 21.1	1.255	2.238	4.9	19.6	3 12	10 49.17	+ 7 43.2	2.304	3.285	3.3	19.8
3 22	10 37.46	+ 0 28.9	1.267	2.222	9.7	19.8	3 22	10 42.22	+ 8 28.5	2.357	3.299	6.7	20.1
4 1	10 30.22	+ 1 15.8	1.303	2.206	14.5	20.0	4 1	10 36.60	+ 9 4.9	2.437	3.312	9.7	20.3
4 11	10 25.94	+ 1 52.8	1.358	2.191	18.6	20.2	4 11	10 32.75	+ 9 30.1	2.540	3.325	12.3	20.5
233879	2008 <i>WM</i> ₉₁		3 3.0 168°20	2°7/ 6.1 17			166843	2002 <i>VU</i> ₁₂₄		3 3.1 76°00	1°2/ 1.7 18		
2 1	11 17.02	- 3 57.2	2.514	3.321	11.2	21.1	2 1	11 16.73	+ 7 38.5	2.136	2.991	11.1	20.6
2 11	11 11.54	- 3 54.7	2.432	3.323	8.6	20.9	2 11	11 11.38	+ 8 35.2	2.088	3.015	7.7	20.4
2 21	11 4.61	- 3 38.8	2.376	3.325	5.6	20.7	2 21	11 4.51	+ 9 38.9	2.066	3.039	4.0	20.3
3 2	10 56.82	- 3 11.2	2.348	3.327	3.1	20.6	3 2	10 56.85	+10 43.8	2.073	3.063	1.2	20.1
3 12	10 48.90	- 2 35.4	2.350	3.329	3.5	20.6	3 12	10 49.23	+11 43.7	2.110	3.087	4.1	20.3
3 22	10 41.58	- 1 55.6	2.381	3.330	6.2	20.8	3 22	10 42.46	+12 33.6	2.176	3.110	7.6	20.6
4 1	10 35.51	- 1 16.3	2.440	3.331	9.1	21.0	4 1	10 37.18	+13 10.2	2.267	3.133	10.7	20.8
4 11	10 31.15	- 0 41.6	2.523	3.332	11.7	21.1	4 11	10 33.81	+13 32.3	2.380	3.156	13.3	21.1
327322	2005 <i>UO</i> ₅₃		3 3.0 148°17	4°9/ 8.8 18			328299	2008 <i>GP</i> ₁₃₇		3 3.1 23°05	15°5/ 18.7 17		
2 1	11 16.57	-12 6.2	2.177	2.950	13.8	21.7	2 1	11 29.60	+44 36.1	1.437	2.265	17.0	20.5
2 11	11 11.41	-11 42.1	2.097	2.958	11.1	21.6	2 11	11 21.67	+46 6.5	1.416	2.270	15.8	20.4
2 21	11 4.61	-10 55.2	2.040	2.965	8.2	21.4	2 21	11 10.38	+47 4.7	1.415	2.276	15.5	20.4
3 2	10 56.83	- 9 47.2	2.010	2.971	5.6	21.2	3 2	10 57.40	+47 19.5	1.434	2.283	16.2	20.5
3 12	10 48.92	- 8 23.0	2.008	2.978	5.1	21.2	3 12	10 44.88	+46 47.0	1.473	2.290	17.7	20.6
3 22	10 41.74	- 6 49.5	2.035	2.983	7.1	21.3	3 22	10 34.64	+45 30.9	1.530	2.298	19.5	20.7
4 1	10 36.01	- 5 14.7	2.090	2.989	10.0	21.5	4 1	10 27.82	+43 39.6	1.603	2.306	21.3	20.9
4 11	10 32.24	- 3 45.7	2.169	2.993	12.8	21.7	4 11	10 24.77	+41 23.2	1.690	2.315	22.8	21.0
270058	2001 <i>OY</i> ₅₄		3 3.0 133°82	0°5/ 3.6 18			31626	1999 <i>GV</i> ₂₀		3 3.1 140°49	5°0/ 26.2 18		
2 1	11 20.58	+ 3 14.9	2.374	3.205	11.0	21.8	2 1	11 17.93	+21 58.3	2.384	3.249	9.7	18.2
2 11	11 13.99	+ 3 41.4	2.310	3.223	7.9	21.6	2 11	11 12.27	+23 0.8	2.329	3.253	7.2	18.0
2 21	11 5.88	+ 4 17.3	2.273	3.240	4.4	21.4	2 21	11 5.03	+23 59.4	2.302	3.257	5.3	17.9
3 2	10 56.95	+ 4 58.9	2.265	3.256	0.8	21.2	3 2	10 56.91	+24 47.8	2.303	3.261	5.3	17.9
3 12	10 48.00	+ 5 41.3	2.289	3.271	3.2	21.4	3 12	10 48.74	+25 20.8	2.332	3.265	7.1	18.0
3 22	10 39.84	+ 6 20.3	2.343	3.286	6.7	21.6	3 22	10 41.36	+25 35.8	2.389	3.269	9.6	18.2
4 1	10 33.12	+ 6 52.0	2.424	3.299	9.8	21.9	4 1	10 35.44	+25 32.3	2.470	3.272	12.0	18.4
4 11	10 28.28	+ 7 14.2	2.529	3.312	12.4	22.1	4 11	10 31.45	+25 11.5	2.570	3.276	14.1	18.5
166588	2002 <i>RY</i> ₁₆₁		3 3.0 108°24	0°6/ 3.7 18			254040	2004 <i>GU</i> ₁₇		3 3.1 11°90	1°2/ 3.9 18		
2 1	11 16.73	+ 2 41.7	2.238	3.077	11.3	21.1	2 1	11 17.20	+ 2 8.2	1.347	2.207	16.0	20.6
2 11	11 11.40	+ 3 12.4	2.171	3.087	8.1	20.9	2 11	11 12.57	+ 2 27.6	1.283	2.209	11.6	20.4
2 21	11 4.55	+ 3 53.8	2.130	3.098	4.5	20.7	2 21	11 5.51	+ 3 4.5	1.242	2.212	6.6	20.1
3 2	10 56.82	+ 4 42.0	2.118	3.108	0.9	20.4	3 2	10 56.96	+ 3 53.7	1.225	2.215	1.6	19.8
3 12	10 49.05	+ 5 31.8	2.136	3.119	3.2	20.6	3 12	10 48.26	+ 4 47.2	1.235	2.219	4.6	20.0
3 22	10 42.00	+ 6 18.1	2.182	3.129	6.9	20.9	3 22	10 40.70	+ 5 36.7	1.269	2.224	9.7	20.3
4 1	10 36.36	+ 6 56.7	2.256	3.138	10.1	21.1	4 1	10 35.34	+ 6 15.5	1.327	2.230	14.3	20.6
4 11	10 32.59	+ 7 24.7	2.352	3.148	12.8	21.3	4 11	10 32.82	+ 6 39.0	1.404	2.236	18.1	20.8
322645	1998 <i>VM</i> ₄₁		3 3.0 158°05	6°1/ 9.3 18			370031	2000 <i>QS</i> ₁₄₇		3 3.1 201°56	9°4/ 6.4 18		
2 1	11 17.88	-13 31.0	2.011	2.779	15.0	21.2	2 1	11 33.81	- 7 47.5	1.160	1.971	21.3	20.4
2 11	11 12.49	-13 29.4	1.930	2.784	12.3	21.0	2 11	11 25.22	- 9 44.0	1.087	1.970	17.3	20.2
2 21	11 5.26	-13 3.3	1.871	2.788	9.3	20.8	2 21	11 12.81	-11 19.1	1.034	1.969	13.0	19.9
3 2	10 56.90	-12 13.2	1.838	2.792	6.8	20.7	3 2	10 57.71	-12 25.8	1.005	1.967	9.8	19.7
3 12	10 48.36	-11 3.3	1.832	2.796	6.2	20.6	3 12	10 41.90	-13 1.1	1.002	1.965	10.0	19.7
3 22	10 40.59	- 9 40.2	1.854	2.799	8.0	20.7	3 22	10 27.52	-13 8.4	1.023	1.962	13.5	19.9
4 1	10 34.43	- 8 12.0	1.903	2.802	10.9	20.9	4 1	10 16.39	-12 56.4	1.066	1.959	17.8	20.1
4 11	10 30.43	- 6 47.1	1.975	2.804	13.8	21.1	4 11	10 9.50	-12 36.5	1.127	1.956	21.9	20.4
180585	2004 <i>FJ</i> ₃₅		3 3.0 305°23	4°1/ 6.9 18			216533	2001 <i>QU</i> ₁₉₅		3 3.1 170°17	5°6/ 9.3 18		
2 1	11 15.19	- 7 12.3	1.633	2.452	15.7	20.0	2 1	11 18.44	-13 28.9	2.349	3.106	13.4	20.6
2 11	11 10.96	- 6 42.9	1.549	2.444	12.3	19.7	2 11	11 12.70	-13 31.7	2.264	3.111	11.0	20.4
2 21	11 4.59	- 5 47.6	1.487	2.436	8.3	19.5	2 21	11 5.32	-13 13.5	2.202	3.114	8.4	20.3
3 2	10 56.85	- 4 29.0	1.450	2.429	4.8	19.2	3 2	10 56.95	-12 34.9	2.167	3.117	6.2	20.1
3 12	10 48.81	- 2 54.1	1.441	2.422	4.8	19.2	3 12	10 48.41	-11 38.8	2.160	3.119	5.7	20.1
3 22	10 41.59	- 1 12.5	1.458	2.415	8.5	19.4	3 22	10 40.52	-10 30.6	2.181	3.121	7.3	20.2
4 1	10 36.18	+ 0 25.8	1.501	2.408	12.6	19.6	4 1	10 34.03	- 9 16.8	2.230	3.122	9.8	20.4
4 11	10 33.25	+ 1 52.2	1.565	2.401	16.4	19.9	4 11	10 29.45	- 8 4.2	2.304	3.123	12.4	20.5
350229	2012 <i>TV</i> ₁₈		3 3.0 152°41	0°5/ 2.4 17			500333	2012 <i>SF</i> ₂₇		3 3.1 145°39	1°2/ 1.8 17		
2 1	11 16.17	+ 6 43.2	3.005	3.845	8.7	23.0	2 1	11 18.92	+ 9 40.1	2.493	3.343	9.9	21.8
2 11	11 10.71	+ 7 19.6	2.935	3.855	6.1	22.8	2 11	11 12.83	+10 2.7	2.425	3.349	6.9	21.7
2 21	11 4.08	+ 8 1.9	2.893	3.864	3.2	22.7	2 21	11 5.30	+10 29.8	2.384	3.356	3.7	21.5
3 2	10 56.79	+ 8 46.4	2.882	3.872	0.5	22.4	3 2	10 56.94	+10 57.2	2.372	3.362	1.2	21.3
3 12	10 49.46	+ 9 29.3	2.902	3.880	3.0	22.7	3 12	10 48.54	+11 20.9	2.392	3.368	3.8	21.5
3 22	10 42.67	+10 7.1	2.953	3.888	5.8	22.9	3 22	10 40.83	+11 37.5	2.440	3.373	7.0	21.7
4 1	10 36.94	+10 37.1	3.031	3.895	8.4	23.0	4 1	10 34.47	+11 44.9	2.516	3.378	9.9	21.9
4 11	10 32.65	+10 57.5	3.133	3.901	10.6	23.2	4 11	10 29.89	+11 41.9	2.614	3.383	12.4	22.1
435949	2009 <i>DO</i> ₃		3 3.0 149°91	0°9/ 2.0 17			494665	2001 <i>TQ</i> ₈₄		3 3.1 180°56			

EPHEMERIDES

3 3.1

3 3.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
284105	2005 <i>SJ</i> ₆₃		3 3.1 258°94	1.2°/ 3.9	18		1812	Gilgamesh		3 3.1 72°96	1.3°/ 4.6	18	
2 1	11 19.77	+ 1 8.8	1.426	2.277	15.8	21.7	2 1	11 14.61	- 0 43.8	2.094	2.927	12.2	16.2
2 11	11 14.51	+ 1 41.5	1.346	2.267	11.6	21.4	2 11	11 10.04	+ 0 4.2	2.024	2.935	8.9	16.0
2 21	11 6.67	+ 2 34.0	1.287	2.256	6.7	21.1	2 21	11 3.90	+ 1 7.4	1.980	2.943	5.2	15.8
3 2	10 57.10	+ 3 41.3	1.255	2.245	1.7	20.8	3 2	10 56.84	+ 2 21.2	1.963	2.952	1.7	15.5
3 12	10 47.12	+ 4 54.7	1.250	2.234	4.7	20.9	3 12	10 49.69	+ 3 39.3	1.976	2.960	3.3	15.7
3 22	10 38.12	+ 6 4.9	1.270	2.222	10.0	21.2	3 22	10 43.27	+ 4 54.8	2.018	2.968	7.0	15.9
4 1	10 31.29	+ 7 3.6	1.314	2.211	14.9	21.4	4 1	10 38.27	+ 6 1.9	2.086	2.977	10.4	16.1
4 11	10 27.41	+ 7 45.2	1.378	2.199	19.0	21.7	4 11	10 35.18	+ 6 56.4	2.177	2.985	13.4	16.3
281509	2008 <i>TB</i> ₁₉		3 3.1 343°89	1.3°/ 1.8	17		454090	2013 <i>BJ</i> ₈		3 3.1 114°73	0°7/ 3.6	18	
2 1	11 17.34	+ 8 27.2	1.985	2.844	11.7	21.2	2 1	11 22.93	+ 3 16.0	1.459	2.311	15.5	21.7
2 11	11 12.08	+ 9 6.0	1.915	2.843	8.2	21.0	2 11	11 16.45	+ 3 35.1	1.398	2.320	11.2	21.5
2 21	11 5.03	+ 9 52.5	1.870	2.843	4.3	20.7	2 21	11 7.54	+ 4 9.0	1.360	2.330	6.2	21.2
3 2	10 56.92	+ 10 41.2	1.853	2.843	1.3	20.5	3 2	10 57.20	+ 4 52.2	1.349	2.339	1.1	20.9
3 12	10 48.69	+ 11 25.9	1.865	2.842	4.5	20.7	3 12	10 46.78	+ 5 37.5	1.365	2.348	4.5	21.1
3 22	10 41.25	+ 12 1.5	1.905	2.842	8.4	20.9	3 22	10 37.59	+ 6 17.8	1.408	2.357	9.5	21.4
4 1	10 35.40	+ 12 24.5	1.970	2.842	11.9	21.2	4 1	10 30.68	+ 6 47.5	1.474	2.365	13.9	21.7
4 11	10 31.67	+ 12 33.2	2.057	2.842	14.8	21.4	4 11	10 26.64	+ 7 3.2	1.561	2.374	17.5	22.0
215711	2004 <i>BD</i> ₅₀		3 3.1 118°51	3°3/ 6.4	17		468309	2016 <i>AD</i> ₁₂₈		3 3.1 244°86	6°5/ 24.3	17	
2 1	11 17.98	- 4 53.2	2.299	3.105	12.2	20.7	2 1	11 19.91	+ 24 36.9	2.194	3.057	10.5	21.4
2 11	11 12.32	- 4 59.2	2.223	3.112	9.4	20.5	2 11	11 14.02	+ 26 7.6	2.122	3.041	8.2	21.2
2 21	11 5.09	- 4 50.4	2.172	3.119	6.3	20.3	2 21	11 6.18	+ 27 34.2	2.078	3.024	6.6	21.1
3 2	10 56.94	- 4 28.2	2.149	3.126	3.7	20.2	3 2	10 57.08	+ 28 48.0	2.062	3.006	7.0	21.1
3 12	10 48.67	- 3 56.1	2.155	3.133	3.9	20.2	3 12	10 47.71	+ 29 41.8	2.074	2.988	9.0	21.2
3 22	10 41.10	- 3 18.7	2.190	3.139	6.6	20.4	3 22	10 39.07	+ 30 11.7	2.113	2.969	11.7	21.3
4 1	10 34.92	- 2 40.8	2.252	3.146	9.6	20.6	4 1	10 32.07	+ 30 17.0	2.173	2.950	14.3	21.4
4 11	10 30.61	- 2 6.8	2.338	3.152	12.3	20.8	4 11	10 27.31	+ 29 59.6	2.252	2.930	16.5	21.6
133081	2003 <i>KH</i> ₁₆		3 3.1 236°07	0°9/ 2.3	17		58339	1994 <i>WB</i> ₁₂		3 3.1 9°60	4°3/ 29.0	18	
2 1	11 20.77	+ 6 32.4	1.864	2.716	12.7	20.9	2 1	11 20.20	+ 13 39.3	1.261	2.143	15.3	18.7
2 11	11 14.77	+ 7 18.8	1.777	2.701	9.0	20.6	2 11	11 14.89	+ 14 40.0	1.205	2.143	10.8	18.4
2 21	11 6.64	+ 8 16.6	1.714	2.686	4.8	20.3	2 21	11 6.84	+ 15 46.0	1.171	2.144	6.3	18.2
3 2	10 57.10	+ 9 20.0	1.680	2.671	0.9	20.0	3 2	10 57.14	+ 16 47.0	1.162	2.146	4.4	18.1
3 12	10 47.21	+ 10 21.6	1.675	2.654	4.7	20.2	3 12	10 47.31	+ 17 32.5	1.179	2.147	8.0	18.3
3 22	10 38.07	+ 11 14.7	1.699	2.637	9.1	20.5	3 22	10 38.84	+ 17 56.2	1.220	2.150	12.7	18.5
4 1	10 30.67	+ 11 54.2	1.748	2.619	13.1	20.7	4 1	10 32.89	+ 17 55.8	1.282	2.152	17.0	18.8
4 11	10 25.68	+ 12 17.3	1.818	2.600	16.6	20.9	4 11	10 30.09	+ 17 32.5	1.361	2.155	20.5	19.1
385081	2012 <i>UY</i> ₁₁₃		3 3.1 29°46	1°5/ 1.7	17		242600	2005 <i>JD</i> ₄₉		3 3.1 160°75	9°3/ 20.2	17	
2 1	11 17.33	+ 9 42.9	1.961	2.822	11.7	20.8	2 1	11 23.13	+ 38 32.3	2.394	3.224	11.0	20.4
2 11	11 12.03	+ 10 10.9	1.898	2.829	8.2	20.6	2 11	11 16.12	+ 39 46.3	2.358	3.226	9.8	20.3
2 21	11 4.98	+ 10 44.7	1.862	2.835	4.3	20.4	2 21	11 7.17	+ 40 43.9	2.347	3.228	9.3	20.3
3 2	10 56.93	+ 11 19.1	1.853	2.842	1.5	20.2	3 2	10 57.16	+ 41 17.9	2.361	3.230	9.9	20.4
3 12	10 48.84	+ 11 48.7	1.873	2.849	4.5	20.4	3 12	10 47.20	+ 41 24.5	2.400	3.231	11.2	20.4
3 22	10 41.61	+ 12 9.1	1.920	2.857	8.3	20.7	3 22	10 38.33	+ 41 3.5	2.462	3.233	12.8	20.6
4 1	10 36.00	+ 12 17.6	1.993	2.865	11.7	20.9	4 1	10 31.36	+ 40 17.6	2.543	3.234	14.5	20.7
4 11	10 32.51	+ 12 13.0	2.087	2.873	14.6	21.1	4 11	10 26.79	+ 39 11.2	2.641	3.235	15.9	20.8
31672	1999 <i>JB</i> ₈		3 3.1 5°41	19°6/ 13.4	18		500432	2012 <i>TG</i> ₁₅₁		3 3.1 148°56	0°8/ 4.1	17	
2 1	11 28.77	+ 48 58.6	1.160	1.988	20.2	16.8	2 1	11 15.71	+ 1 38.9	2.853	3.680	9.5	22.6
2 11	11 22.04	+ 51 1.5	1.145	1.988	19.6	16.8	2 11	11 10.47	+ 2 8.3	2.780	3.689	6.9	22.5
2 21	11 10.93	+ 52 22.1	1.147	1.988	19.8	16.8	2 21	11 4.01	+ 2 47.0	2.733	3.698	3.9	22.3
3 2	10 57.49	+ 52 46.6	1.166	1.990	20.8	16.9	3 2	10 56.86	+ 3 31.8	2.716	3.706	1.0	22.1
3 12	10 44.54	+ 52 10.7	1.200	1.992	22.4	17.0	3 12	10 49.65	+ 4 18.7	2.731	3.713	2.6	22.2
3 22	10 34.44	+ 50 40.0	1.249	1.996	24.1	17.1	3 22	10 42.99	+ 5 3.9	2.775	3.721	5.6	22.4
4 1	10 28.54	+ 48 25.5	1.309	2.001	25.7	17.3	4 1	10 37.41	+ 5 43.8	2.848	3.727	8.3	22.6
4 11	10 27.10	+ 45 39.8	1.381	2.007	27.2	17.4	4 11	10 33.33	+ 6 15.6	2.945	3.734	10.7	22.8
9503	Agrawain		3 3.1 53°81	1°8/ 1.3	18		39000	2000 <i>UZ</i> ₂₆		3 3.1 179°79	0°0/ 2.9	18	
2 1	11 18.29	+ 11 16.6	2.171	3.030	10.8	17.8	2 1	11 19.38	+ 3 24.9	1.881	2.725	12.9	20.3
2 11	11 12.59	+ 11 42.9	2.105	3.034	7.6	17.6	2 11	11 13.63	+ 4 18.4	1.807	2.727	9.2	20.1
2 21	11 5.25	+ 12 13.2	2.065	3.038	4.1	17.4	2 21	11 5.94	+ 5 25.7	1.758	2.728	5.0	19.8
3 2	10 56.96	+ 12 42.5	2.054	3.042	1.8	17.2	3 2	10 57.06	+ 6 41.0	1.737	2.728	0.5	19.5
3 12	10 48.62	+ 13 6.1	2.072	3.046	4.5	17.4	3 12	10 48.00	+ 7 56.5	1.746	2.728	4.1	19.8
3 22	10 41.06	+ 13 20.3	2.118	3.050	8.0	17.6	3 22	10 39.79	+ 9 5.1	1.784	2.727	8.4	20.0
4 1	10 35.01	+ 13 23.0	2.191	3.054	11.2	17.8	4 1	10 33.28	+ 10 1.2	1.848	2.725	12.2	20.2
4 11	10 30.96	+ 13 13.3	2.284	3.058	13.8	18.0	4 11	10 29.05	+ 10 41.4	1.933	2.723	15.4	20.5
270004	2001 <i>BR</i> ₂₃		3 3.1 88°03	0°5/ 3.4	18		163003	2001 <i>SN</i> ₂₂₆		3 3.1 205°60	1°7/ 1.1	17	
2 1	11 23.27	+ 3 31.9	1.259	2.118	17.0	19.9	2 1	11 16.65	+ 10 35.5	2.541	3.395	9.6	20.9
2 11	11 16.89	+ 3 58.5	1.206	2.132	12.2	19.7	2 11	11 11.32	+ 11 17.1	2.465	3.392	6.7	20.7
2 21	11 7.82	+ 4 41.6	1.175	2.147	6.7	19.4	2 21	11 4.55	+ 12 3.4	2.416	3.388	3.6	20.5
3 2	10 57.21	+ 5 34.5	1.170	2.161	1.0	19.1	3 2	10 56.92	+ 12 49.7	2.397	3.384	1.7	20.4
3 12	10 46.62	+ 6 28.1	1.191	2.175	5.0	19.4	3 12	10 49.17	+ 13 31.2	2.408	3.380	4.1	20.5
3 22	10 37.49	+ 7 14.2	1.238	2.189	10.4	19.7	3 22	10 42.02	+ 14 3.9	2.448	3.375	7.3	20.7
4 1	10 30.94	+ 7 46.7	1.308	2.202	15.1	20.0	4 1	10 36.13	+ 14 25.2	2.515	3.370	10.2	20.9
4 11	10 27.53	+ 8 2.6	1.396	2.216	18.9	20.3	4 11	10 31.94	+ 14 33.9	2.604	3.365	12.6	21.1
420445	2012 <i>DA</i> ₃₉		3 3.1 235°88	12°8/ 11.1	17		82049	2000 <i>SL</i>					

EPHEMERIDES

3 3.1

3 3.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
261504	2005 <i>WX</i> ₃₅		3 3.1 283°57	4.4/26.5	18		365182	2009 <i>FY</i> ₁₉		3 3.1 271°14	3.1/29.4	18	
2 1	11 15.35	+20 4.1	2.524	3.391	9.2	20.3	2 1	11 19.20	+11 23.9	1.574	2.444	13.5	20.6
2 11	11 10.49	+21 8.3	2.454	3.381	6.7	20.1	2 11	11 13.94	+12 28.9	1.499	2.433	9.5	20.3
2 21	11 4.13	+22 11.2	2.411	3.371	4.8	20.0	2 21	11 6.31	+13 42.4	1.449	2.422	5.3	20.1
3 2	10 56.88	+23 6.6	2.398	3.362	4.6	19.9	3 2	10 57.14	+14 55.8	1.425	2.411	3.2	19.9
3 12	10 49.49	+23 49.2	2.413	3.352	6.5	20.0	3 12	10 47.68	+15 59.7	1.430	2.400	6.7	20.1
3 22	10 42.72	+24 15.7	2.455	3.342	9.1	20.2	3 22	10 39.15	+16 46.7	1.460	2.388	11.1	20.3
4 1	10 37.22	+24 24.6	2.521	3.332	11.6	20.3	4 1	10 32.66	+17 12.6	1.513	2.377	15.2	20.5
4 11	10 33.50	+24 16.3	2.608	3.323	13.7	20.5	4 11	10 28.88	+17 16.7	1.585	2.365	18.7	20.7
133237	2003 <i>QH</i> ₁₀₇		3 3.1 198°63	4.0/28.4	18		293158	2006 <i>YQ</i> ₁₅		3 3.1 70°33	6.3/25.9	18	
2 1	11 22.29	+15 49.9	1.881	2.745	12.0	20.4	2 1	11 18.40	+19 58.2	1.662	2.540	12.5	20.0
2 11	11 15.74	+16 49.5	1.813	2.742	8.5	20.2	2 11	11 13.18	+21 38.0	1.611	2.543	9.2	19.8
2 21	11 7.10	+17 50.7	1.771	2.739	5.2	20.0	2 21	11 5.78	+23 16.0	1.585	2.546	6.7	19.6
3 2	10 57.18	+18 46.0	1.757	2.735	4.2	19.9	3 2	10 57.08	+24 41.3	1.586	2.549	6.7	19.6
3 12	10 47.10	+19 28.0	1.772	2.730	6.8	20.0	3 12	10 48.29	+25 45.1	1.614	2.552	9.3	19.8
3 22	10 37.96	+19 52.2	1.814	2.725	10.4	20.2	3 22	10 40.56	+26 22.5	1.667	2.555	12.6	20.0
4 1	10 30.69	+19 56.8	1.881	2.719	13.8	20.4	4 1	10 34.83	+26 32.6	1.741	2.558	15.7	20.2
4 11	10 25.88	+19 42.6	1.967	2.713	16.7	20.6	4 11	10 31.68	+26 17.7	1.833	2.561	18.3	20.4
38925	2000 <i>SE</i> ₂₂₂		3 3.1 169°68	0.3/3.4	18		96437	1998 <i>FR</i> ₇₇		3 3.1 47°57	3.3/29.7	18	
2 1	11 17.78	+1 13.6	1.762	2.606	13.6	19.4	2 1	11 19.97	+11 2.2	1.220	2.101	15.9	18.1
2 11	11 12.60	+2 29.3	1.690	2.609	9.8	19.2	2 11	11 14.55	+12 5.4	1.179	2.118	11.0	17.9
2 21	11 5.42	+4 2.9	1.642	2.611	5.4	18.9	2 21	11 6.55	+13 15.8	1.161	2.136	6.0	17.6
3 2	10 57.01	+5 47.6	1.622	2.613	0.7	18.6	3 2	10 57.15	+14 23.2	1.167	2.154	3.3	17.5
3 12	10 48.44	+7 33.8	1.633	2.615	4.1	18.8	3 12	10 47.88	+15 17.2	1.200	2.173	7.1	17.8
3 22	10 40.73	+9 12.3	1.671	2.616	8.7	19.1	3 22	10 40.11	+15 51.3	1.256	2.192	11.8	18.1
4 1	10 34.78	+10 35.5	1.735	2.617	12.7	19.3	4 1	10 34.85	+16 2.9	1.334	2.212	16.0	18.4
4 11	10 31.17	+11 39.3	1.821	2.617	16.0	19.6	4 11	10 32.59	+15 52.7	1.430	2.232	19.4	18.7
155273	2005 <i>WR</i> ₁₁₉		3 3.1 159°96	0°/2.9	18		462384	2008 <i>SG</i> ₁₆₀		3 3.1 226°33	2.1/29.7	17	
2 1	11 17.96	+4 20.3	2.070	2.915	11.8	20.8	2 1	11 19.63	+12 28.0	2.565	3.417	9.6	22.4
2 11	11 12.46	+5 1.2	1.999	2.919	8.4	20.6	2 11	11 13.49	+13 7.7	2.478	3.404	6.7	22.2
2 21	11 5.24	+5 53.0	1.953	2.923	4.6	20.4	2 21	11 5.78	+13 50.9	2.420	3.391	3.7	22.0
3 2	10 57.00	+6 50.7	1.935	2.926	0.4	20.1	3 2	10 57.09	+14 32.7	2.391	3.376	2.2	21.9
3 12	10 48.64	+7 48.4	1.948	2.929	3.7	20.3	3 12	10 48.21	+15 8.3	2.394	3.362	4.5	22.0
3 22	10 41.05	+8 40.2	1.989	2.932	7.6	20.6	3 22	10 39.91	+15 34.0	2.425	3.346	7.7	22.2
4 1	10 34.99	+9 21.7	2.056	2.934	11.1	20.8	4 1	10 32.89	+15 47.3	2.484	3.330	10.6	22.4
4 11	10 30.99	+9 50.0	2.146	2.936	14.1	21.0	4 11	10 27.69	+15 47.5	2.565	3.313	13.1	22.5
113266	2002 <i>RM</i> ₁₅₀		3 3.1 79°14	4.0/7.3	18		20083	1994 <i>GE</i>		3 3.1 336°24	5.4/27.8	18	
2 1	11 15.90	-7 36.7	2.115	2.915	13.3	19.2	2 1	11 19.83	+16 50.7	1.400	2.281	14.2	18.0
2 11	11 10.98	-7 27.8	2.041	2.923	10.4	19.0	2 11	11 14.53	+18 1.6	1.340	2.277	10.2	17.8
2 21	11 4.43	-6 59.9	1.990	2.931	7.2	18.9	2 21	11 6.64	+19 14.2	1.304	2.273	6.5	17.6
3 2	10 56.92	-6 14.9	1.966	2.938	4.5	18.7	3 2	10 57.18	+20 17.9	1.293	2.270	5.7	17.5
3 12	10 49.29	-5 17.4	1.970	2.946	4.4	18.7	3 12	10 47.55	+21 3.0	1.308	2.266	8.8	17.7
3 22	10 42.38	-4 13.3	2.002	2.954	7.0	18.9	3 22	10 39.12	+21 23.8	1.348	2.263	12.9	17.9
4 1	10 36.94	-3 9.1	2.061	2.961	10.1	19.1	4 1	10 33.03	+21 18.7	1.408	2.261	16.8	18.1
4 11	10 33.44	-2 10.5	2.144	2.969	12.9	19.3	4 11	10 29.91	+20 49.9	1.486	2.259	20.1	18.3
129326	2005 <i>TJ</i> ₈₃		3 3.1 186°01	5.5/25.7	18		294344	2007 <i>VY</i> ₈₉		3 3.1 8°72	6.6/25.9	18	
2 1	11 23.38	+25 27.0	2.643	3.494	9.4	20.8	2 1	11 16.72	+22 11.7	1.688	2.568	12.3	19.5
2 11	11 16.04	+26 22.5	2.583	3.494	7.2	20.7	2 11	11 11.94	+23 24.9	1.639	2.570	9.2	19.3
2 21	11 7.08	+27 11.6	2.550	3.493	5.7	20.6	2 21	11 5.08	+24 33.1	1.614	2.572	6.9	19.2
3 2	10 57.18	+27 48.4	2.546	3.491	5.7	20.6	3 2	10 57.03	+25 27.3	1.616	2.576	6.9	19.2
3 12	10 47.24	+28 8.3	2.573	3.489	7.4	20.7	3 12	10 48.94	+26 0.3	1.644	2.580	9.2	19.4
3 22	10 38.09	+28 9.5	2.627	3.486	9.6	20.8	3 22	10 41.92	+26 8.7	1.695	2.585	12.3	19.5
4 1	10 30.44	+27 52.3	2.706	3.481	11.8	21.0	4 1	10 36.85	+25 52.7	1.769	2.591	15.2	19.7
4 11	10 24.78	+27 18.6	2.805	3.476	13.7	21.1	4 11	10 34.23	+25 14.8	1.860	2.598	17.8	19.9
405256	2003 <i>SY</i> ₂₆₅		3 3.1 145°85	0.4/2.7	18		269793	1999 <i>TV</i> ₃₃₂		3 3.1 354°97	0.8/2.4	17	
2 1	11 20.47	+5 10.1	1.958	2.804	12.4	22.5	2 1	11 18.45	+7 22.4	1.825	2.683	12.6	20.7
2 11	11 14.26	+5 57.2	1.893	2.815	8.8	22.3	2 11	11 13.02	+7 49.5	1.755	2.682	8.9	20.5
2 21	11 6.22	+6 54.9	1.854	2.825	4.7	22.1	2 21	11 5.64	+8 25.5	1.709	2.682	4.7	20.2
3 2	10 57.11	+7 57.5	1.844	2.834	0.5	21.8	3 2	10 57.09	+9 5.0	1.691	2.681	0.8	19.9
3 12	10 47.93	+8 58.4	1.863	2.843	4.1	22.1	3 12	10 48.40	+9 42.0	1.701	2.681	4.4	20.2
3 22	10 39.65	+9 51.4	1.911	2.851	8.1	22.4	3 22	10 40.57	+10 11.2	1.739	2.681	8.6	20.4
4 1	10 33.06	+10 32.2	1.986	2.859	11.7	22.6	4 1	10 34.49	+10 28.8	1.801	2.681	12.4	20.7
4 11	10 28.69	+10 58.5	2.082	2.865	14.7	22.8	4 11	10 30.71	+10 32.9	1.885	2.681	15.6	20.9
54844	2001 <i>OY</i> ₂		3 3.1 193°00	2.9/28.6	17		95138	2002 <i>AD</i> ₁₆₀		3 3.1 274°43	0.4/3.5	18	
2 1	11 15.77	+13 22.3	2.366	3.229	9.9	19.7	2 1	11 17.25	+3 13.6	1.856	2.704	12.9	19.9
2 11	11 10.80	+14 32.3	2.297	3.228	6.9	19.5	2 11	11 12.18	+3 48.4	1.780	2.702	9.3	19.6
2 21	11 4.32	+15 46.1	2.256	3.227	4.0	19.3	2 21	11 5.21	+4 36.3	1.730	2.699	5.1	19.4
3 2	10 56.92	+16 57.3	2.244	3.225	3.0	19.2	3 2	10 57.06	+5 32.6	1.706	2.697	0.8	19.0
3 12	10 49.41	+17 59.8	2.263	3.224	5.3	19.4	3 12	10 48.73	+6 30.6	1.712	2.695	3.9	19.3
3 22	10 42.55	+18 48.8	2.309	3.222	8.4	19.5	3 22	10 41.21	+7 23.9	1.745	2.692	8.2	19.5
4 1	10 37.01	+19 21.6	2.381	3.220	11.3	19.7	4 1	10 35.35	+8 7.1	1.803	2.690	12.0	19.8
4 11	10 33.29	+19 37.6	2.474	3.217	13.7	19.9	4 11	10 31.72	+8 36.8	1.883	2.688	15.3	20.0
204283	2004 <i>LY</i> ₈		3 3.1 185°56	1.4/4.4	18		146908	2002 <i>CX</i> ₁₄₈		3 3.1 251°35	1.3/4.6	18	
2 1	11 21.83	+0 27.											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
119521	2001 <i>UU</i> ₁₆₁		3 3.1 213°87	1°1/ 1.9 18			203739	2002 <i>QZ</i> ₉₄		3 3.1 133°94	3°0/28.8 18		
2 1	11 18.69	+ 7 41.7	2.195	3.045	11.0	19.9	2 1	11 17.43	+14 5.0	2.220	3.084	10.4	20.7
2 11	11 13.00	+ 8 27.9	2.114	3.039	7.8	19.7	2 11	11 12.02	+15 3.3	2.159	3.090	7.3	20.6
2 21	11 5.59	+ 9 22.3	2.059	3.031	4.1	19.4	2 21	11 5.01	+16 4.1	2.125	3.095	4.2	20.4
3 2	10 57.10	+10 19.8	2.033	3.023	1.1	19.2	3 2	10 57.08	+17 1.1	2.119	3.100	3.1	20.3
3 12	10 48.42	+11 14.4	2.038	3.015	4.2	19.4	3 12	10 49.08	+17 48.5	2.143	3.105	5.5	20.5
3 22	10 40.41	+12 0.7	2.072	3.006	7.9	19.6	3 22	10 41.84	+18 22.1	2.195	3.110	8.7	20.7
4 1	10 33.86	+12 34.8	2.131	2.996	11.3	19.8	4 1	10 36.08	+18 39.8	2.272	3.115	11.6	20.9
4 11	10 29.31	+12 54.8	2.213	2.986	14.2	20.0	4 11	10 32.25	+18 41.2	2.370	3.119	14.1	21.0
175464	2006 <i>QS</i> ₁₁₁		3 3.1 227°74	2°3/ 5.5 17			461428	2001 <i>VZ</i> ₅		3 3.1 166°11	0°4/ 3.5 17		
2 1	11 17.04	- 2 9.4	2.441	3.257	11.2	20.4	2 1	11 18.46	+ 2 49.7	2.394	3.227	10.9	22.2
2 11	11 11.69	- 2 5.8	2.354	3.252	8.5	20.2	2 11	11 12.66	+ 3 30.2	2.319	3.233	7.8	22.0
2 21	11 4.83	- 1 49.5	2.292	3.247	5.4	20.0	2 21	11 5.33	+ 4 21.3	2.271	3.238	4.3	21.8
3 2	10 57.03	- 1 22.5	2.258	3.241	2.6	19.8	3 2	10 57.12	+ 5 19.0	2.252	3.243	0.7	21.5
3 12	10 49.06	- 0 48.4	2.254	3.236	3.3	19.8	3 12	10 48.79	+ 6 17.7	2.264	3.246	3.2	21.7
3 22	10 41.66	- 0 11.3	2.280	3.230	6.4	20.0	3 22	10 41.14	+ 7 12.5	2.306	3.249	6.7	22.0
4 1	10 35.53	+ 0 24.2	2.333	3.224	9.5	20.2	4 1	10 34.83	+ 7 59.1	2.376	3.252	9.9	22.2
4 11	10 31.16	+ 0 54.2	2.409	3.218	12.2	20.4	4 11	10 30.34	+ 8 34.4	2.469	3.254	12.6	22.4
283587	2001 <i>XH</i> ₂₂₈		3 3.1 105°65	6°0/10.9 18			45695	2000 <i>ET</i> ₁₅₀		3 3.1 147°08	0°1/ 2.9 17		
2 1	11 16.67	-16 51.0	2.702	3.431	12.5	21.0	2 1	11 16.58	+ 4 47.6	2.372	3.215	10.6	19.6
2 11	11 11.26	-17 3.6	2.629	3.450	10.4	20.9	2 11	11 11.33	+ 5 27.1	2.301	3.221	7.5	19.4
2 21	11 4.52	-16 56.7	2.579	3.468	8.3	20.7	2 21	11 4.62	+ 6 15.7	2.256	3.227	4.0	19.2
3 2	10 57.00	-16 30.2	2.555	3.485	6.6	20.6	3 2	10 57.04	+ 7 9.1	2.241	3.232	0.4	18.9
3 12	10 49.42	-15 46.7	2.559	3.503	6.0	20.6	3 12	10 49.38	+ 8 2.0	2.256	3.237	3.3	19.1
3 22	10 42.46	-14 50.4	2.591	3.520	6.9	20.7	3 22	10 42.39	+ 8 49.7	2.300	3.242	6.8	19.4
4 1	10 36.72	-13 46.7	2.651	3.536	8.7	20.9	4 1	10 36.71	+ 9 28.2	2.371	3.246	10.0	19.6
4 11	10 32.62	-12 41.4	2.735	3.553	10.7	21.0	4 11	10 32.81	+ 9 55.1	2.465	3.250	12.6	19.8
201603	2003 <i>SC</i> ₁₉₀		3 3.1 157°48	6°2/24.9 18			74269	1998 <i>SQ</i> ₁₀₉		3 3.1 74°55	3°7/ 6.3 18		
2 1	11 21.42	+26 48.5	2.408	3.264	10.0	20.2	2 1	11 19.75	- 5 1.3	1.610	2.432	15.8	18.4
2 11	11 14.77	+27 51.1	2.358	3.269	7.8	20.1	2 11	11 13.99	- 4 49.2	1.555	2.453	12.0	18.2
2 21	11 6.45	+28 45.8	2.335	3.275	6.4	20.0	2 21	11 6.17	- 4 15.7	1.521	2.474	7.8	18.0
3 2	10 57.19	+29 26.1	2.341	3.280	6.6	20.0	3 2	10 57.20	- 3 24.2	1.514	2.495	4.2	17.9
3 12	10 47.94	+29 47.3	2.375	3.284	8.2	20.1	3 12	10 48.24	- 2 21.2	1.534	2.516	4.6	17.9
3 22	10 39.56	+29 47.6	2.435	3.288	10.4	20.3	3 22	10 40.39	- 1 14.8	1.582	2.536	8.2	18.2
4 1	10 32.80	+29 27.7	2.519	3.292	12.6	20.4	4 1	10 34.52	- 0 12.5	1.655	2.557	12.0	18.5
4 11	10 28.11	+28 50.2	2.621	3.295	14.5	20.6	4 11	10 31.14	+ 0 39.7	1.749	2.577	15.3	18.7
176846	2002 <i>TV</i> ₂₂₇		3 3.1 129°70	1°7/ 1.5 18			32219	2000 <i>OU</i> ₂₀		3 3.1 276°65	3°4/29.5 18		
2 1	11 20.03	+ 8 59.9	1.962	2.818	11.9	20.7	2 1	11 23.26	+15 19.7	1.854	2.716	12.2	17.0
2 11	11 13.95	+ 9 54.4	1.904	2.831	8.3	20.5	2 11	11 16.60	+15 44.9	1.771	2.700	8.7	16.8
2 21	11 6.06	+10 55.9	1.871	2.844	4.4	20.3	2 21	11 7.70	+16 11.2	1.714	2.684	5.1	16.5
3 2	10 57.15	+11 58.0	1.867	2.856	1.7	20.1	3 2	10 57.37	+16 32.3	1.685	2.668	3.5	16.4
3 12	10 48.22	+12 54.0	1.893	2.867	4.8	20.4	3 12	10 46.76	+16 42.3	1.685	2.651	6.3	16.5
3 22	10 40.20	+13 38.5	1.947	2.878	8.6	20.6	3 22	10 37.02	+16 37.4	1.712	2.635	10.2	16.7
4 1	10 33.89	+14 8.1	2.026	2.889	12.0	20.9	4 1	10 29.18	+16 16.4	1.764	2.618	13.9	16.9
4 11	10 29.76	+14 21.9	2.127	2.899	14.8	21.1	4 11	10 23.89	+15 39.8	1.836	2.601	17.0	17.1
430051	2013 <i>RR</i> ₀₃		3 3.1 124°49	0°4/ 2.7 17			303706	2005 <i>OZ</i> ₃₀		3 3.1 231°16	2°5/ 6.0 17		
2 1	11 18.85	+ 6 3.3	2.115	2.962	11.5	22.0	2 1	11 16.30	- 3 39.2	2.748	3.553	10.4	21.7
2 11	11 13.04	+ 6 33.2	2.049	2.971	8.1	21.8	2 11	11 11.08	- 3 34.0	2.653	3.544	7.9	21.5
2 21	11 5.55	+ 7 11.6	2.009	2.980	4.3	21.6	2 21	11 4.49	- 3 16.4	2.584	3.534	5.2	21.3
3 2	10 57.11	+ 7 53.9	1.998	2.989	0.5	21.3	3 2	10 57.05	- 2 48.0	2.543	3.523	2.8	21.2
3 12	10 48.61	+ 8 34.8	2.016	2.997	3.7	21.6	3 12	10 49.41	- 2 12.0	2.533	3.513	3.2	21.2
3 22	10 40.92	+ 9 9.6	2.064	3.005	7.5	21.8	3 22	10 42.26	- 1 32.3	2.553	3.502	5.8	21.3
4 1	10 34.77	+ 9 34.6	2.137	3.013	10.9	22.0	4 1	10 36.21	- 0 52.9	2.601	3.491	8.6	21.5
4 11	10 30.64	+ 9 47.7	2.233	3.020	13.7	22.2	4 11	10 31.72	- 0 17.7	2.673	3.479	11.2	21.6
297920	2002 <i>DJ</i> ₂₀		3 3.1 72°07	0°0/ 3.0 18			237971	2002 <i>RY</i> ₂₀₇		3 3.1 105°36	1°4/ 1.6 18		
2 1	11 19.15	+ 3 35.2	1.420	2.279	15.4	20.6	2 1	11 18.73	+ 9 47.2	2.341	3.193	10.4	20.8
2 11	11 13.87	+ 4 21.7	1.361	2.288	11.0	20.4	2 11	11 12.78	+10 23.2	2.284	3.210	7.2	20.7
2 21	11 6.22	+ 5 24.3	1.325	2.296	6.0	20.1	2 21	11 5.35	+11 3.8	2.255	3.227	3.8	20.5
3 2	10 57.19	+ 6 36.0	1.314	2.305	0.6	19.7	3 2	10 57.13	+11 44.4	2.256	3.244	1.4	20.3
3 12	10 48.06	+ 7 47.4	1.331	2.314	4.8	20.1	3 12	10 48.92	+12 20.0	2.286	3.261	4.1	20.5
3 22	10 40.10	+ 8 50.0	1.374	2.323	9.8	20.4	3 22	10 41.50	+12 46.9	2.346	3.277	7.3	20.8
4 1	10 34.32	+ 9 37.3	1.440	2.331	14.2	20.6	4 1	10 35.50	+13 2.8	2.432	3.293	10.3	21.0
4 11	10 31.30	+10 6.1	1.526	2.340	17.8	20.9	4 11	10 31.36	+13 6.6	2.540	3.308	12.7	21.2
53116	1999 <i>AE</i> ₁₇		3 3.1 322°63	0°8/ 2.4 18			229150	2004 <i>ST</i> ₃₁		3 3.1 133°42	0°5/ 3.6 17		
2 1	11 17.36	+ 5 49.6	1.665	2.525	13.5	19.1	2 1	11 18.76	+ 3 26.7	2.106	2.947	11.8	21.4
2 11	11 12.44	+ 6 39.2	1.594	2.522	9.5	18.8	2 11	11 13.00	+ 3 53.0	2.038	2.955	8.5	21.2
2 21	11 5.43	+ 7 41.4	1.547	2.520	5.1	18.6	2 21	11 5.57	+ 4 30.1	1.994	2.963	4.7	21.0
3 2	10 57.11	+ 8 49.7	1.527	2.518	0.8	18.3	3 2	10 57.16	+ 5 13.7	1.980	2.970	0.8	20.7
3 12	10 48.61	+ 9 55.9	1.535	2.516	4.7	18.5	3 12	10 48.66	+ 5 58.5	1.995	2.977	3.5	20.9
3 22	10 41.01	+10 52.7	1.570	2.514	9.3	18.8	3 22	10 40.96	+ 6 39.5	2.039	2.984	7.3	21.2
4 1	10 35.26	+11 34.8	1.630	2.512	13.3	19.0	4 1	10 34.78	+ 7 12.4	2.109	2.991	10.7	21.4
4 11	10 31.95	+11 59.3	1.709	2.510	16.7	19.3	4 11	10 30.63	+ 7 34.4	2.202	2.997	13.6	21.6
243108	2007 <i>RN</i> ₁₁₁		3 3.1 271°25	0°3/ 2.9 17			447348	2005 <i>YU</i> ₁₈₈		3 3.1 59°92	0°		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
401394	2013 <i>CP</i> ₄₃		3 3.1 207°28	2°9/29.9	18		105069	2000 <i>KQ</i> ₆₆		3 3.1 248°22	4°4/ 8.3	17	
2 1	11 21.96	+11 24.9	1.526	2.394	14.0	21.4	2 1	11 15.58	-11 52.5	1.994	2.776	14.6	19.7
2 11	11 15.89	+12 16.8	1.460	2.392	9.9	21.2	2 11	11 11.06	-10 50.7	1.896	2.765	11.7	19.5
2 21	11 7.38	+13 15.7	1.417	2.390	5.4	20.9	2 21	11 4.69	-9 20.1	1.820	2.754	8.3	19.3
3 2	10 57.35	+14 13.5	1.401	2.388	3.0	20.7	3 2	10 57.12	-7 23.6	1.772	2.742	5.2	19.1
3 12	10 47.13	+15 1.4	1.413	2.385	6.4	20.9	3 12	10 49.27	-5 7.9	1.753	2.731	4.7	19.0
3 22	10 38.01	+15 33.3	1.451	2.382	11.0	21.2	3 22	10 42.08	-2 43.3	1.765	2.718	7.5	19.1
4 1	10 31.08	+15 45.7	1.512	2.379	15.1	21.4	4 1	10 36.39	-0 20.7	1.804	2.706	11.2	19.3
4 11	10 26.98	+15 38.6	1.592	2.375	18.5	21.6	4 11	10 32.82	+1 50.0	1.869	2.693	14.6	19.5
232374	2003 <i>AA</i> ₈₇		3 3.1 62°08	4°9/ 6.8	18		461750	2005 <i>UB</i> ₁₇₂		3 3.1 223°89	5°5/ 9.1	17	
2 1	11 19.59	-6 32.7	1.272	2.103	18.6	20.0	2 1	11 17.46	-13 8.7	2.274	3.037	13.6	22.3
2 11	11 14.39	-6 27.8	1.213	2.114	14.4	19.8	2 11	11 12.22	-13 3.9	2.177	3.028	11.2	22.1
2 21	11 6.61	-5 54.8	1.175	2.126	9.7	19.5	2 21	11 5.26	-12 37.1	2.101	3.017	8.5	21.9
3 2	10 57.27	-4 56.5	1.160	2.139	5.6	19.3	3 2	10 57.18	-11 48.6	2.053	3.007	6.2	21.7
3 12	10 47.83	-3 40.8	1.170	2.151	5.7	19.4	3 12	10 48.83	-10 41.5	2.032	2.995	5.6	21.7
3 22	10 39.67	-2 18.3	1.206	2.164	9.7	19.6	3 22	10 41.05	-9 21.7	2.040	2.984	7.4	21.8
4 1	10 33.93	-0 59.9	1.265	2.176	14.2	19.9	4 1	10 34.64	-7 56.2	2.075	2.971	10.2	21.9
4 11	10 31.19	+0 6.0	1.343	2.189	18.0	20.2	4 11	10 30.19	-6 32.6	2.135	2.958	13.0	22.1
54764	2001 <i>LB</i> ₄		3 3.1 176°53	2°3/29.9	18		331786	2003 <i>HK</i> ₃₀		3 3.1 349°94	7°6/10.1	16	
2 1	11 21.82	+9 51.5	1.847	2.704	12.5	19.6	2 1	11 15.22	-14 26.0	1.615	2.398	17.5	19.8
2 11	11 15.44	+10 58.7	1.779	2.707	8.7	19.4	2 11	11 11.11	-14 41.3	1.535	2.394	14.5	19.5
2 21	11 7.00	+12 13.8	1.737	2.709	4.7	19.2	2 21	11 4.83	-14 27.1	1.474	2.391	11.3	19.3
3 2	10 57.32	+13 29.2	1.724	2.711	2.3	19.0	3 2	10 57.14	-13 42.6	1.437	2.389	8.5	19.2
3 12	10 47.48	+14 36.9	1.740	2.711	5.5	19.2	3 12	10 49.16	-12 31.6	1.424	2.386	7.7	19.1
3 22	10 38.57	+15 30.4	1.785	2.711	9.6	19.5	3 22	10 42.03	-11 1.9	1.437	2.385	9.5	19.2
4 1	10 31.50	+16 6.0	1.854	2.710	13.2	19.7	4 1	10 36.76	-9 23.9	1.474	2.384	12.6	19.4
4 11	10 26.84	+16 22.7	1.944	2.708	16.3	19.9	4 11	10 34.03	-7 48.2	1.532	2.383	15.9	19.6
465762	2009 <i>WA</i> ₁₂₀		3 3.1 112°64	8°4/23.5	17		149715	2004 <i>JT</i> ₁₅		3 3.1 240°45	1°6/ 1.5	18	
2 1	11 21.43	+29 18.1	1.906	2.768	11.9	20.7	2 1	11 18.72	+8 50.5	2.066	2.922	11.4	20.8
2 11	11 15.21	+30 41.5	1.861	2.771	9.7	20.6	2 11	11 13.20	+9 42.5	1.982	2.909	8.0	20.6
2 21	11 6.86	+31 53.8	1.842	2.773	8.4	20.5	2 21	11 5.82	+10 43.0	1.923	2.896	4.3	20.3
3 2	10 57.30	+32 45.7	1.848	2.775	8.9	20.6	3 2	10 57.25	+11 46.0	1.893	2.882	1.6	20.1
3 12	10 47.72	+33 11.1	1.881	2.778	10.7	20.7	3 12	10 48.40	+12 44.8	1.893	2.868	4.7	20.3
3 22	10 39.26	+33 8.4	1.937	2.780	13.2	20.8	3 22	10 40.24	+13 33.5	1.921	2.853	8.6	20.5
4 1	10 32.82	+32 39.1	2.015	2.782	15.5	21.0	4 1	10 33.60	+14 8.1	1.975	2.838	12.2	20.7
4 11	10 28.92	+31 47.5	2.109	2.785	17.6	21.2	4 11	10 29.10	+14 26.6	2.049	2.822	15.3	20.9
199943	2007 <i>GO</i> ₆₇		3 3.1 207°75	0°2/ 3.4	17		111049	2001 <i>VC</i> ₃₇		3 3.1 171°80	5°7/25.5	18	
2 1	11 17.79	+3 49.1	2.520	3.355	10.3	21.8	2 1	11 20.94	+23 34.8	2.319	3.179	10.1	19.8
2 11	11 12.20	+4 20.5	2.434	3.349	7.4	21.6	2 11	11 14.55	+24 50.7	2.264	3.183	7.7	19.6
2 21	11 5.13	+5 1.4	2.374	3.343	4.1	21.4	2 21	11 6.43	+26 1.6	2.237	3.186	5.9	19.5
3 2	10 57.13	+5 48.0	2.345	3.336	0.6	21.1	3 2	10 57.31	+27 0.2	2.239	3.189	6.1	19.5
3 12	10 48.97	+6 35.8	2.346	3.328	3.1	21.3	3 12	10 48.12	+27 40.7	2.269	3.191	7.9	19.7
3 22	10 41.37	+7 20.1	2.377	3.320	6.6	21.5	3 22	10 39.76	+28 0.4	2.326	3.192	10.4	19.8
4 1	10 35.02	+7 57.2	2.435	3.311	9.7	21.7	4 1	10 33.00	+27 59.0	2.407	3.193	12.8	20.0
4 11	10 30.40	+8 24.2	2.517	3.301	12.4	21.8	4 11	10 28.32	+27 38.6	2.507	3.193	14.8	20.1
466564	2014 <i>TA</i> ₂₇		3 3.1 43°90	6°1/ 9.4	18		310024	2009 <i>TA</i>		3 3.1 83°38	2°3/ 1.2	18	
2 1	11 14.87	-13 15.7	1.570	2.362	17.5	21.0	2 1	11 27.10	+13 10.8	2.135	2.983	11.4	20.4
2 11	11 10.77	-12 43.4	1.498	2.369	14.2	20.8	2 11	11 18.55	+13 32.8	2.099	3.021	8.0	20.3
2 21	11 4.56	-11 38.8	1.447	2.376	10.4	20.5	2 21	11 8.39	+13 55.7	2.089	3.059	4.3	20.1
3 2	10 57.08	-10 4.1	1.419	2.384	7.1	20.4	3 2	10 57.49	+14 14.6	2.111	3.097	2.3	20.0
3 12	10 49.44	-8 6.9	1.418	2.392	6.2	20.3	3 12	10 46.88	+14 25.4	2.164	3.133	4.8	20.3
3 22	10 42.77	-5 58.3	1.444	2.400	8.7	20.5	3 22	10 37.45	+14 25.8	2.246	3.169	8.1	20.5
4 1	10 37.98	-3 50.6	1.496	2.408	12.3	20.7	4 1	10 29.88	+14 14.9	2.355	3.204	11.0	20.8
4 11	10 35.68	-1 54.4	1.570	2.417	15.8	21.0	4 11	10 24.55	+13 53.2	2.486	3.238	13.4	21.0
251413	2008 <i>AA</i> ₃₀		3 3.1 159°73	1°4/ 1.7	18		416637	2004 <i>SA</i> ₁₆		3 3.1 214°73	5°8/26.6	17	
2 1	11 20.77	+8 36.8	2.113	2.963	11.4	21.3	2 1	11 22.89	+23 4.4	2.088	2.949	11.1	20.6
2 11	11 14.44	+9 25.2	2.046	2.971	8.0	21.1	2 11	11 16.09	+23 56.1	2.024	2.945	8.3	20.5
2 21	11 6.36	+10 20.7	2.006	2.978	4.2	20.9	2 21	11 7.32	+24 42.5	1.987	2.940	6.2	20.3
3 2	10 57.26	+11 17.5	1.995	2.984	1.4	20.7	3 2	10 57.40	+25 16.4	1.977	2.935	6.0	20.3
3 12	10 48.07	+12 9.5	2.014	2.990	4.4	20.9	3 12	10 47.39	+25 32.1	1.996	2.930	8.0	20.4
3 22	10 39.71	+12 51.6	2.063	2.994	8.2	21.1	3 22	10 38.32	+25 27.2	2.042	2.925	10.9	20.6
4 1	10 32.95	+13 20.5	2.137	2.998	11.5	21.3	4 1	10 31.05	+25 1.8	2.111	2.919	13.6	20.7
4 11	10 28.30	+13 34.8	2.233	3.002	14.3	21.5	4 11	10 26.12	+24 18.4	2.200	2.912	16.0	20.9
187453	2005 <i>WP</i> ₁₉₁		3 3.1 193°45	3°2/28.3	18		480210	2015 <i>GU</i> ₁₂		3 3.1 104°53	1°0/ 2.2	18	
2 1	11 17.51	+13 18.2	2.243	3.105	10.4	20.7	2 1	11 19.39	-1 58.9	1.067	1.926	19.4	20.5
2 11	11 12.17	+14 43.9	2.173	3.104	7.3	20.5	2 11	11 14.60	+1 5.9	1.013	1.941	13.8	20.3
2 21	11 5.17	+16 14.1	2.131	3.101	4.3	20.3	2 21	11 6.87	+4 47.8	0.983	1.956	7.2	19.9
3 2	10 57.15	+17 41.7	2.119	3.098	3.4	20.2	3 2	10 57.36	+8 47.2	0.980	1.970	1.0	19.6
3 12	10 48.96	+18 59.2	2.136	3.095	5.8	20.4	3 12	10 47.76	+12 37.7	1.005	1.984	6.9	20.0
3 22	10 41.46	+20 1.2	2.183	3.091	9.0	20.6	3 22	10 39.66	+15 56.7	1.058	1.998	13.1	20.4
4 1	10 35.39	+20 44.6	2.254	3.086	12.0	20.7	4 1	10 34.30	+18 31.4	1.133	2.011	18.2	20.7
4 11	10 31.28	+21 8.7	2.346	3.081	14.5	20.9	4 11	10 32.30	+20 19.4	1.227	2.023	22.3	21.0
53166	1999 <i>CG</i> ₁₀		3 3.1 304°62	3°8/28.9	18		417296	2006 <i>BH</i> ₆₉		3 3.1 171°26	1°5/ 1.7	17	
2 1	11 2												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
192673	1999 <i>RD</i> ₂₂₂		3 3.1 283°34	6°4/ 8.1 17			388837	2008 <i>DN</i> ₆₆		3 3.1 215°09	0°6/ 3.7 18		
2 1	11 19.80	-11 0.3	1.966	2.746	14.9	19.9	2 1	11 18.45	+ 4 8.1	2.575	3.409	10.1	21.2
2 11	11 14.25	-11 37.7	1.861	2.723	12.2	19.7	2 11	11 12.63	+ 4 11.3	2.492	3.406	7.3	21.0
2 21	11 6.56	-11 54.9	1.778	2.701	9.3	19.4	2 21	11 5.37	+ 4 22.1	2.437	3.404	4.1	20.8
3 2	10 57.36	-11 50.6	1.721	2.677	7.0	19.2	3 2	10 57.24	+ 4 37.8	2.410	3.401	0.8	20.5
3 12	10 47.62	-11 25.9	1.691	2.654	6.6	19.2	3 12	10 48.97	+ 4 55.2	2.415	3.398	3.0	20.7
3 22	10 38.43	-10 45.1	1.689	2.631	8.8	19.2	3 22	10 41.30	+ 5 10.9	2.449	3.394	6.3	20.9
4 1	10 30.81	- 9 54.7	1.711	2.607	12.0	19.4	4 1	10 34.87	+ 5 21.9	2.511	3.391	9.3	21.1
4 11	10 25.53	- 9 2.2	1.757	2.583	15.3	19.5	4 11	10 30.16	+ 5 26.1	2.596	3.387	11.9	21.2
246911	1998 <i>QY</i> ₉₆		3 3.1 54°39	10°9/ 9.3 18			414874	2010 <i>VA</i> ₁₈₅		3 3.1 39°44	3°5/29.4 18		
2 1	11 38.34	-15 14.0	1.422	2.174	20.9	18.6	2 1	11 19.58	+12 54.7	1.415	2.292	14.3	20.7
2 11	11 27.40	-17 29.9	1.382	2.215	17.4	18.4	2 11	11 14.16	+13 47.5	1.367	2.304	10.0	20.4
2 21	11 13.51	-19 14.2	1.365	2.256	14.0	18.3	2 21	11 6.40	+14 44.6	1.343	2.316	5.6	20.2
3 2	10 58.04	-20 20.7	1.373	2.297	11.5	18.3	3 2	10 57.34	+15 37.4	1.344	2.329	3.6	20.1
3 12	10 42.77	-20 49.1	1.408	2.338	11.0	18.4	3 12	10 48.32	+16 17.4	1.372	2.342	6.9	20.3
3 22	10 29.38	-20 45.3	1.469	2.379	12.4	18.6	3 22	10 40.58	+16 39.4	1.426	2.356	11.1	20.6
4 1	10 19.06	-20 19.8	1.554	2.419	14.8	18.8	4 1	10 35.07	+16 41.2	1.501	2.371	15.0	20.9
4 11	10 12.34	-19 44.0	1.659	2.459	17.2	19.1	4 11	10 32.32	+16 23.7	1.596	2.385	18.2	21.1
289917	2005 <i>NM</i> ₂₁		3 3.1 168°73	2°8/ 6.5 18			212040	2005 <i>CH</i> ₅₃		3 3.1 340°99	2°9/29.9 18		
2 1	11 15.77	- 5 7.6	2.780	3.579	10.5	21.0	2 1	11 18.04	+10 34.1	1.283	2.164	15.3	19.6
2 11	11 10.66	- 4 59.2	2.697	3.582	8.1	20.8	2 11	11 13.48	+11 26.9	1.218	2.157	10.8	19.3
2 21	11 4.27	- 4 37.7	2.639	3.584	5.4	20.6	2 21	11 6.26	+12 29.6	1.175	2.150	5.9	19.0
3 2	10 57.10	- 4 4.7	2.609	3.586	3.1	20.5	3 2	10 57.35	+13 33.0	1.157	2.144	3.0	18.8
3 12	10 49.82	- 3 23.6	2.610	3.588	3.3	20.5	3 12	10 48.17	+14 26.9	1.164	2.139	6.9	19.0
3 22	10 43.07	- 2 38.3	2.640	3.589	5.6	20.6	3 22	10 40.17	+15 3.3	1.195	2.135	11.9	19.3
4 1	10 37.41	- 1 53.2	2.699	3.591	8.3	20.8	4 1	10 34.53	+15 18.0	1.248	2.131	16.5	19.5
4 11	10 33.28	- 1 12.2	2.782	3.591	10.7	21.0	4 11	10 31.94	+15 10.3	1.319	2.128	20.3	19.8
367534	2009 <i>RM</i> ₇		3 3.1 157°18	0°4/ 3.5 16			167540	2004 <i>AJ</i> ₄		3 3.1 200°62	0°5/ 3.6 17		
2 1	11 20.75	+ 4 7.5	2.247	3.083	11.4	22.0	2 1	11 17.29	+ 3 32.9	2.295	3.135	11.0	20.5
2 11	11 14.36	+ 4 25.8	2.175	3.090	8.1	21.8	2 11	11 11.96	+ 3 55.5	2.217	3.133	7.9	20.3
2 21	11 6.32	+ 4 53.4	2.129	3.097	4.5	21.6	2 21	11 5.07	+ 4 28.0	2.164	3.132	4.4	20.0
3 2	10 57.31	+ 5 26.5	2.112	3.103	0.7	21.3	3 2	10 57.22	+ 5 6.8	2.140	3.130	0.8	19.8
3 12	10 48.22	+ 6 0.6	2.126	3.108	3.4	21.5	3 12	10 49.23	+ 5 47.3	2.146	3.128	3.2	20.0
3 22	10 39.88	+ 6 31.3	2.169	3.113	7.1	21.8	3 22	10 41.90	+ 6 24.7	2.180	3.126	6.9	20.2
4 1	10 33.04	+ 6 54.8	2.239	3.117	10.4	22.0	4 1	10 35.92	+ 6 55.2	2.242	3.124	10.2	20.4
4 11	10 28.18	+ 7 8.8	2.332	3.121	13.2	22.2	4 11	10 31.79	+ 7 15.9	2.326	3.122	13.0	20.6
209404	2004 <i>EV</i> ₉₃		3 3.1 254°28	0°9/ 2.1 17			148551	2001 <i>QU</i> ₁₅₅		3 3.1 147°14	2°7/ 4.9 17		
2 1	11 16.49	+ 7 41.8	2.475	3.324	10.0	20.7	2 1	11 26.74	+ 0 30.2	1.832	2.656	14.1	19.6
2 11	11 11.37	+ 8 18.6	2.386	3.311	7.0	20.5	2 11	11 18.98	+ 0 9.1	1.755	2.658	10.5	19.4
2 21	11 4.74	+ 9 2.5	2.325	3.297	3.7	20.3	2 21	11 8.99	+ 0 36.9	1.703	2.661	6.5	19.2
3 2	10 57.16	+ 9 49.3	2.293	3.283	0.9	20.0	3 2	10 57.63	+ 0 54.1	1.679	2.663	3.1	19.0
3 12	10 49.38	+10 34.2	2.291	3.269	3.7	20.2	3 12	10 46.07	+ 1 3.2	1.685	2.666	4.3	19.0
3 22	10 42.14	+11 12.6	2.319	3.255	7.1	20.4	3 22	10 35.48	+ 1 7.5	1.720	2.668	8.2	19.3
4 1	10 36.15	+11 41.1	2.373	3.240	10.3	20.6	4 1	10 26.86	+ 1 11.1	1.782	2.670	12.1	19.5
4 11	10 31.89	+11 57.7	2.449	3.225	12.9	20.7	4 11	10 20.83	+ 1 17.6	1.866	2.672	15.3	19.7
85161	1988 <i>SA</i> ₂		3 3.1 225°33	3°7/28.8 18			370751	2004 <i>RZ</i> ₁₉₈		3 3.1 147°29	0°6/ 3.8 16		
2 1	11 22.17	+13 16.0	1.752	2.617	12.7	20.4	2 1	11 19.80	+ 3 2.9	2.656	3.483	10.1	21.7
2 11	11 15.96	+14 29.3	1.675	2.606	9.0	20.1	2 11	11 13.47	+ 3 22.2	2.585	3.496	7.3	21.5
2 21	11 7.45	+15 48.7	1.623	2.594	5.2	19.9	2 21	11 5.77	+ 3 49.9	2.542	3.507	4.1	21.3
3 2	10 57.44	+17 5.5	1.600	2.582	3.8	19.7	3 2	10 57.29	+ 4 23.0	2.528	3.518	0.9	21.1
3 12	10 47.11	+18 10.9	1.605	2.568	6.9	19.9	3 12	10 48.76	+ 4 57.6	2.546	3.529	2.9	21.3
3 22	10 37.66	+18 58.1	1.638	2.554	11.0	20.1	3 22	10 40.89	+ 5 30.0	2.595	3.538	6.1	21.5
4 1	10 30.14	+19 23.7	1.694	2.540	14.8	20.3	4 1	10 34.27	+ 5 56.8	2.672	3.547	9.0	21.7
4 11	10 25.24	+19 27.6	1.770	2.524	18.0	20.5	4 11	10 29.35	+ 6 15.6	2.772	3.556	11.4	21.9
306611	2000 <i>PA</i> ₉		3 3.1 148°92	6°4/12.9 18			38872	2000 <i>SP</i> ₁₁₆		3 3.1 138°42	0°0/ 3.1 18		
2 1	11 17.64	-22 48.0	3.473	4.139	11.0	21.5	2 1	11 15.57	+ 4 46.0	2.766	3.605	9.4	19.7
2 11	11 11.84	-23 14.2	3.387	4.150	9.6	21.4	2 11	11 10.49	+ 5 21.2	2.696	3.614	6.7	19.5
2 21	11 4.86	-23 22.9	3.324	4.161	8.1	21.3	2 21	11 4.16	+ 6 4.1	2.653	3.622	3.6	19.4
3 2	10 57.18	-23 13.2	3.287	4.172	6.9	21.2	3 2	10 57.13	+ 6 50.9	2.640	3.630	0.4	19.1
3 12	10 49.38	-22 46.2	3.277	4.182	6.4	21.2	3 12	10 50.03	+ 7 37.4	2.657	3.638	2.9	19.3
3 22	10 42.04	-22 4.6	3.295	4.191	6.7	21.2	3 22	10 43.50	+ 8 19.7	2.705	3.646	6.0	19.5
4 1	10 35.68	-21 12.4	3.341	4.200	7.8	21.3	4 1	10 38.10	+ 8 54.6	2.780	3.653	8.7	19.7
4 11	10 30.72	-20 14.5	3.412	4.208	9.2	21.4	4 11	10 34.21	+ 9 19.9	2.878	3.660	11.1	19.9
32775	1986 <i>WP</i> ₂		3 3.1 44°00	0°2/ 3.3 18			5944	<i>Utesov</i>		3 3.1 244°82	4°9/26.8 18		
2 1	11 18.65	+ 3 14.2	1.201	2.068	17.0	17.8	2 1	11 18.61	+20 43.4	2.243	3.109	10.2	16.9
2 11	11 13.74	+ 3 57.8	1.152	2.083	12.2	17.5	2 11	11 12.98	+21 41.7	2.179	3.105	7.5	16.7
2 21	11 6.26	+ 4 59.7	1.125	2.098	6.6	17.3	2 21	11 5.64	+22 37.3	2.141	3.100	5.3	16.5
3 2	10 57.32	+ 6 11.6	1.123	2.114	0.8	16.9	3 2	10 57.28	+23 23.7	2.132	3.096	5.1	16.5
3 12	10 48.39	+ 7 23.0	1.146	2.130	5.1	17.3	3 12	10 48.83	+23 55.1	2.151	3.091	7.1	16.6
3 22	10 40.86	+ 8 24.3	1.194	2.147	10.4	17.6	3 22	10 41.14	+24 8.5	2.197	3.087	9.9	16.8
4 1	10 35.78	+ 9 8.8	1.265	2.164	15.1	17.9	4 1	10 34.98	+24 3.0	2.267	3.082	12.6	17.0
4 11	10 33.69	+ 9 33.5	1.354	2.182	18.9	18.2	4 11	10 30.87	+23 39.9	2.357	3.077	14.9	17.1
274490	2008 <i>SY</i> ₁₁₅		3 3.1 157°10	4°7/27.1 17			116675	2004 <i>CH</i> ₆₅		3 3.1 282°34	0°0/ 3.0 17	</	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
53286	1999 <i>FH</i> ₅₇		3 3.1 110°70	0°1/ 3.3 18			329826	2004 <i>RQ</i> ₂₂₄		3 3.1 176°70	0°8/ 2.3 17		
2 1	11 16.50	+ 1 37.5	1.855	2.699	13.0	18.3	2 1	11 19.50	+ 7 37.1	2.139	2.989	11.3	20.8
2 11	11 11.63	+ 2 54.6	1.790	2.709	9.3	18.0	2 11	11 13.61	+ 8 7.5	2.066	2.990	8.0	20.6
2 21	11 4.96	+ 4 27.8	1.750	2.719	5.1	17.8	2 21	11 6.00	+ 8 45.2	2.019	2.991	4.2	20.4
3 2	10 57.22	+ 6 10.0	1.738	2.729	0.6	17.5	3 2	10 57.36	+ 9 25.7	2.001	2.991	0.9	20.1
3 12	10 49.38	+ 7 52.4	1.756	2.738	3.9	17.8	3 12	10 48.59	+10 3.5	2.013	2.992	4.0	20.4
3 22	10 42.40	+ 9 26.6	1.802	2.747	8.2	18.0	3 22	10 40.59	+10 34.1	2.054	2.992	7.8	20.6
4 1	10 37.05	+10 45.8	1.875	2.756	11.9	18.3	4 1	10 34.12	+10 54.1	2.120	2.991	11.2	20.8
4 11	10 33.86	+11 46.4	1.970	2.765	15.0	18.5	4 11	10 29.68	+11 1.8	2.209	2.991	14.0	21.0
124639	2001 <i>SR</i> ₆₆		3 3.1 147°12	3°9/29.1 18			118681	2000 <i>NJ</i> ₁		3 3.1 264°12	2°0/ 4.9 18		
2 1	11 24.47	+14 46.6	1.660	2.525	13.2	20.4	2 1	11 18.14	- 0 52.7	1.908	2.740	13.3	20.4
2 11	11 17.46	+15 39.5	1.603	2.533	9.4	20.2	2 11	11 12.97	- 0 32.5	1.817	2.725	9.9	20.1
2 21	11 8.16	+16 34.5	1.571	2.541	5.5	20.0	2 21	11 5.82	+ 0 4.0	1.749	2.711	6.1	19.9
3 2	10 57.55	+17 23.3	1.566	2.548	4.0	19.9	3 2	10 57.36	+ 0 53.8	1.709	2.696	2.4	19.6
3 12	10 46.91	+17 58.6	1.590	2.554	6.9	20.1	3 12	10 48.55	+ 1 51.4	1.697	2.680	3.8	19.6
3 22	10 37.45	+18 15.8	1.641	2.560	10.8	20.3	3 22	10 40.42	+ 2 50.2	1.713	2.665	7.9	19.9
4 1	10 30.15	+18 13.6	1.716	2.565	14.4	20.5	4 1	10 33.89	+ 3 43.8	1.755	2.649	11.9	20.1
4 11	10 25.56	+17 53.1	1.810	2.570	17.4	20.8	4 11	10 29.61	+ 4 26.9	1.819	2.634	15.3	20.2
34915	4564 <i>P-L</i>		3 3.1 24°93	0°2/ 3.3 18			106051	2000 <i>SJ</i> ₃₁₂		3 3.1 194°48	4°9/ 8.9 18		
2 1	11 15.37	+ 4 1.8	1.927	2.779	12.3	19.2	2 1	11 17.46	-12 8.0	2.792	3.549	11.5	19.8
2 11	11 10.78	+ 4 33.9	1.862	2.785	8.8	19.0	2 11	11 11.95	-12 28.5	2.701	3.547	9.4	19.6
2 21	11 4.47	+ 5 17.4	1.822	2.792	4.8	18.7	2 21	11 5.05	-12 33.0	2.633	3.545	7.2	19.5
3 2	10 57.17	+ 6 7.4	1.809	2.800	0.6	18.4	3 2	10 57.29	-12 21.4	2.593	3.543	5.4	19.4
3 12	10 49.79	+ 6 57.9	1.825	2.808	3.7	18.7	3 12	10 49.33	-11 55.7	2.583	3.540	5.0	19.3
3 22	10 43.22	+ 7 43.3	1.868	2.816	7.7	19.0	3 22	10 41.88	-11 19.2	2.601	3.537	6.4	19.4
4 1	10 38.20	+ 8 18.8	1.937	2.825	11.2	19.2	4 1	10 35.55	-10 36.4	2.646	3.534	8.6	19.5
4 11	10 35.23	+ 8 41.7	2.028	2.834	14.3	19.4	4 11	10 30.82	- 9 52.3	2.717	3.531	10.8	19.7
348848	2006 <i>SK</i> ₅₉		3 3.1 122°07	3°6/ 8.1 18			370715	2004 <i>RE</i> ₄		3 3.1 140°63	2°7/28.9 18		
2 1	11 16.33	- 9 25.4	2.992	3.764	10.5	21.7	2 1	11 18.27	+12 48.7	2.395	3.253	10.0	21.6
2 11	11 10.94	- 9 20.5	2.920	3.782	8.3	21.6	2 11	11 12.56	+13 58.5	2.337	3.266	6.9	21.4
2 21	11 4.38	- 9 1.2	2.872	3.799	6.0	21.5	2 21	11 5.36	+15 11.6	2.307	3.278	3.9	21.3
3 2	10 57.16	- 8 28.9	2.853	3.816	4.0	21.4	3 2	10 57.31	+16 21.7	2.307	3.289	2.8	21.2
3 12	10 49.90	- 7 46.4	2.863	3.832	3.8	21.4	3 12	10 49.22	+17 22.9	2.337	3.300	5.1	21.4
3 22	10 43.19	- 6 57.6	2.904	3.848	5.5	21.5	3 22	10 41.85	+18 10.8	2.396	3.310	8.1	21.6
4 1	10 37.54	- 6 6.8	2.973	3.864	7.7	21.6	4 1	10 35.87	+18 43.0	2.481	3.320	10.9	21.8
4 11	10 33.34	- 5 18.2	3.068	3.879	9.8	21.8	4 11	10 31.71	+18 59.0	2.588	3.329	13.2	21.9
456579	2007 <i>DK</i> ₂₈		3 3.1 307°36	1°6/ 1.6 17			328471	2009 <i>CZ</i> ₅₇		3 3.1 165°87	3°0/ 6.1 18		
2 1	11 16.30	+ 7 24.7	1.714	2.578	12.9	21.1	2 1	11 18.67	- 8 47.1	1.288	2.110	19.0	20.3
2 11	11 11.74	+ 8 29.0	1.639	2.571	9.1	20.8	2 11	11 13.94	- 6 54.1	1.213	2.113	14.5	20.1
2 21	11 5.14	+ 9 45.0	1.590	2.564	4.8	20.6	2 21	11 6.55	- 4 20.0	1.160	2.116	9.2	19.8
3 2	10 57.25	+11 5.5	1.568	2.557	1.6	20.3	3 2	10 57.46	- 1 13.0	1.133	2.119	4.0	19.5
3 12	10 49.13	+12 21.9	1.574	2.551	5.2	20.5	3 12	10 48.08	+ 2 10.0	1.135	2.120	4.8	19.5
3 22	10 41.84	+13 26.3	1.606	2.544	9.6	20.8	3 22	10 39.86	+ 5 28.9	1.166	2.122	10.3	19.8
4 1	10 36.31	+14 13.6	1.663	2.538	13.5	21.0	4 1	10 33.98	+ 8 26.0	1.222	2.122	15.5	20.1
4 11	10 33.16	+14 41.2	1.741	2.532	16.8	21.2	4 11	10 31.17	+10 50.4	1.299	2.123	19.8	20.4
498888	2008 <i>YW</i> ₁₃₂		3 3.1 80°02	1°4/ 4.5 17			128273	2003 <i>UC</i> ₅₂		3 3.1 186°56	1°3/ 4.4 18		
2 1	11 17.99	+ 1 12.5	2.153	2.987	11.9	21.3	2 1	11 22.21	+ 1 8.5	2.162	2.987	12.1	20.9
2 11	11 12.50	+ 1 21.1	2.081	2.993	8.7	21.1	2 11	11 15.56	+ 1 23.0	2.080	2.987	8.9	20.7
2 21	11 5.37	+ 1 41.2	2.035	2.999	5.1	20.9	2 21	11 7.09	+ 1 49.7	2.024	2.987	5.2	20.4
3 2	10 57.28	+ 2 10.0	2.016	3.005	1.7	20.6	3 2	10 57.51	+ 2 25.3	1.996	2.985	1.7	20.2
3 12	10 49.09	+ 2 43.0	2.027	3.011	3.3	20.8	3 12	10 47.74	+ 3 5.2	2.000	2.983	3.4	20.3
3 22	10 41.64	+ 3 15.6	2.067	3.017	6.9	21.0	3 22	10 38.70	+ 3 44.4	2.033	2.979	7.3	20.5
4 1	10 35.66	+ 3 43.5	2.133	3.023	10.3	21.2	4 1	10 31.22	+ 4 18.2	2.093	2.975	10.8	20.7
4 11	10 31.64	+ 4 3.4	2.222	3.029	13.2	21.4	4 11	10 25.85	+ 4 43.1	2.176	2.970	13.8	20.9
282044	1998 <i>SF</i> ₁₀₇		3 3.1 137°56	2°0/ 5.1 18			124848	2001 <i>TZ</i> ₁₅		3 3.1 46°39	7°6/26.6 18		
2 1	11 21.33	- 2 29.0	1.863	2.684	14.0	21.8	2 1	11 22.84	+21 10.5	1.256	2.139	15.3	19.3
2 11	11 15.01	- 1 43.4	1.797	2.700	10.4	21.6	2 11	11 16.86	+22 32.6	1.212	2.146	11.4	19.1
2 21	11 6.77	- 0 39.5	1.756	2.716	6.3	21.4	2 21	11 8.05	+23 49.6	1.191	2.153	8.2	18.9
3 2	10 57.42	+ 0 37.9	1.743	2.730	2.4	21.2	3 2	10 57.61	+24 48.9	1.195	2.160	8.0	18.9
3 12	10 48.02	+ 2 1.4	1.760	2.743	3.7	21.3	3 12	10 47.20	+25 20.7	1.223	2.168	10.8	19.1
3 22	10 39.56	+ 3 23.1	1.806	2.756	7.7	21.5	3 22	10 38.36	+25 21.6	1.274	2.175	14.6	19.3
4 1	10 32.89	+ 4 36.0	1.879	2.767	11.5	21.8	4 1	10 32.23	+24 53.1	1.345	2.184	18.2	19.6
4 11	10 28.53	+ 5 35.4	1.974	2.778	14.7	22.0	4 11	10 29.35	+23 59.8	1.432	2.192	21.3	19.8
206925	2004 <i>PR</i> ₁₀₈		3 3.1 140°41	0°6/ 2.6 18			186608	2003 <i>CK</i> ₁₈		3 3.2 158°41	2°0/ 5.3 18		
2 1	11 24.86	+ 7 4.4	1.841	2.687	13.0	21.3	2 1	11 18.64	- 1 10.0	2.678	3.491	10.4	20.3
2 11	11 17.51	+ 7 28.5	1.779	2.701	9.2	21.1	2 11	11 12.73	- 1 13.3	2.598	3.495	7.8	20.1
2 21	11 8.11	+ 8 0.8	1.742	2.713	4.9	20.9	2 21	11 5.45	- 1 6.1	2.544	3.499	4.9	20.0
3 2	10 57.56	+ 8 36.3	1.734	2.725	0.7	20.6	3 2	10 57.35	- 0 50.1	2.519	3.503	2.3	19.8
3 12	10 46.98	+ 9 8.9	1.756	2.735	4.3	20.9	3 12	10 49.13	- 0 28.4	2.526	3.507	3.0	19.8
3 22	10 37.46	+ 9 34.0	1.806	2.746	8.6	21.2	3 22	10 41.50	- 0 4.5	2.562	3.510	5.9	20.0
4 1	10 29.88	+ 9 48.1	1.883	2.755	12.3	21.4	4 1	10 35.08	+ 0 18.3	2.626	3.513	8.7	20.2
4 11	10 24.76	+ 9 49.7	1.980	2.763	15.4	21.6	4 11	10 30.30	+ 0 36.6	2.715	3.516	11.2	20.4
416948	2005 <i>SG</i> ₁₆₄		3 3.1 172°17	4°2/27.2 17			359639	2011 <i>QD</i> ₆₈		3 3.2 174°57	1°9/ 5.0 18</		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
18373	1991 RQ ₁₆		3 3.2 191°55	1°9/ 1.1 18			190373	1999 RY ₈₄		3 3.2 133°97	0°2/ 3.4 18		
2 1	11 18.93	+10 32.1	2.243	3.098	10.6	19.6	2 1	11 19.06	+ 4 1.8	2.386	3.223	10.8	21.0
2 11	11 13.19	+11 21.4	2.170	3.097	7.5	19.4	2 11	11 13.11	+ 4 30.6	2.320	3.236	7.7	20.8
2 21	11 5.79	+12 16.3	2.123	3.095	4.0	19.2	2 21	11 5.68	+ 5 8.3	2.280	3.249	4.2	20.6
3 2	10 57.39	+13 11.1	2.106	3.093	2.0	19.0	3 2	10 57.41	+ 5 51.2	2.270	3.261	0.6	20.4
3 12	10 48.85	+14 0.1	2.118	3.090	4.6	19.2	3 12	10 49.10	+ 6 34.4	2.290	3.272	3.2	20.6
3 22	10 41.01	+14 38.5	2.160	3.087	8.1	19.4	3 22	10 41.50	+ 7 13.6	2.340	3.284	6.6	20.8
4 1	10 34.63	+15 3.3	2.227	3.083	11.3	19.6	4 1	10 35.28	+ 7 45.1	2.418	3.294	9.7	21.0
4 11	10 30.21	+15 13.4	2.316	3.079	14.0	19.8	4 11	10 30.88	+ 8 6.5	2.518	3.304	12.4	21.2
370706	2004 PN ₄₆		3 3.2 182°86	2°7/ 5.8 17			343094	2009 DT ₃₇		3 3.2 49°40	1°1/ 2.0 17		
2 1	11 20.13	- 3 8.5	2.344	3.152	11.9	21.9	2 1	11 15.50	+ 7 1.5	1.996	2.854	11.6	21.0
2 11	11 13.99	- 3 9.7	2.260	3.153	9.0	21.7	2 11	11 10.85	+ 7 56.8	1.936	2.864	8.1	20.8
2 21	11 6.22	- 2 57.3	2.201	3.153	5.9	21.5	2 21	11 4.54	+ 9 1.0	1.901	2.875	4.3	20.6
3 2	10 57.44	- 2 33.0	2.171	3.152	3.1	21.3	3 2	10 57.29	+10 8.2	1.895	2.885	1.1	20.4
3 12	10 48.49	- 2 0.4	2.171	3.151	3.6	21.3	3 12	10 49.99	+11 11.5	1.918	2.896	4.3	20.6
3 22	10 40.19	+ 1 23.9	2.201	3.150	6.6	21.5	3 22	10 43.47	+12 5.2	1.968	2.907	8.0	20.9
4 1	10 33.27	+ 0 48.1	2.258	3.148	9.8	21.7	4 1	10 38.48	+12 45.3	2.044	2.918	11.4	21.1
4 11	10 28.27	- 0 17.2	2.339	3.146	12.6	21.9	4 11	10 35.48	+13 9.7	2.141	2.929	14.2	21.3
408272	2013 FO ₁₉		3 3.2 280°82	2°3/ 1.4 16			402082	2003 UK ₂₁₄		3 3.2 114°69	0°3/ 3.4 18		
2 1	11 20.79	+ 9 48.6	1.517	2.385	14.1	21.3	2 1	11 21.39	+ 3 26.4	1.786	2.629	13.5	22.2
2 11	11 15.32	+10 33.6	1.435	2.368	10.0	21.0	2 11	11 15.11	+ 4 2.7	1.727	2.646	9.6	22.0
2 21	11 7.30	+11 28.4	1.376	2.350	5.4	20.7	2 21	11 6.87	+ 4 51.5	1.693	2.662	5.3	21.8
3 2	10 57.57	+12 25.7	1.344	2.333	2.3	20.4	3 2	10 57.54	+ 5 47.4	1.687	2.678	0.7	21.5
3 12	10 47.41	+13 16.6	1.339	2.315	6.1	20.6	3 12	10 48.19	+ 6 43.5	1.711	2.693	3.9	21.8
3 22	10 38.15	+13 53.9	1.360	2.297	11.0	20.9	3 22	10 39.85	+ 7 33.5	1.762	2.708	8.2	22.1
4 1	10 31.00	+14 12.8	1.404	2.280	15.5	21.1	4 1	10 33.38	+ 8 12.5	1.839	2.722	12.0	22.3
4 11	10 26.73	+14 11.9	1.467	2.262	19.3	21.3	4 11	10 29.27	+ 8 37.8	1.938	2.736	15.1	22.6
511705	2015 CO ₃₃		3 3.2 328°29	0°4/ 2.9 17			354907	2006 CW ₄₂		3 3.2 1°54	2°1/ 4.7 18		
2 1	11 22.36	+ 7 57.2	1.833	2.685	12.8	20.9	2 1	11 14.57	- 0 47.6	1.082	1.950	18.5	19.8
2 11	11 15.93	+ 7 50.5	1.755	2.680	9.1	20.7	2 11	11 11.30	- 0 15.9	1.020	1.948	13.7	19.5
2 21	11 7.40	+ 7 50.1	1.703	2.674	4.9	20.4	2 21	11 5.23	+ 0 42.6	0.978	1.947	8.2	19.2
3 2	10 57.58	+ 7 52.4	1.678	2.669	0.6	20.1	3 2	10 57.38	+ 2 1.8	0.958	1.947	2.7	18.8
3 12	10 47.55	+ 7 53.1	1.682	2.664	4.2	20.3	3 12	10 49.27	+ 3 30.4	0.962	1.948	5.1	19.0
3 22	10 38.42	+ 7 46.6	1.715	2.659	8.5	20.6	3 22	10 42.42	+ 4 55.9	0.989	1.950	10.8	19.3
4 1	10 31.12	+ 7 36.4	1.772	2.655	12.4	20.8	4 1	10 38.07	+ 6 7.2	1.037	1.954	16.1	19.6
4 11	10 26.27	+ 7 14.8	1.852	2.650	15.7	21.0	4 11	10 36.92	+ 6 57.4	1.104	1.959	20.5	19.9
465717	2009 UQ ₈₃		3 3.2 106°95	2°2/ 29.9 18			462067	2007 EA ₁₂₆		3 3.2 316°99	1°7/ 4.8 17		
2 1	11 19.73	+11 9.8	2.088	2.946	11.2	21.5	2 1	11 13.27	- 2 14.7	1.565	2.409	15.0	20.3
2 11	11 13.70	+12 0.9	2.035	2.964	7.8	21.4	2 11	11 9.89	- 1 12.1	1.472	2.388	11.2	20.0
2 21	11 6.01	+12 56.3	2.009	2.981	4.2	21.2	2 21	11 4.34	+ 0 16.1	1.403	2.368	6.8	19.7
3 2	10 57.42	+13 50.0	2.012	2.998	2.2	21.1	3 2	10 57.30	+ 2 4.8	1.360	2.348	2.2	19.4
3 12	10 48.84	+14 35.9	2.044	3.015	4.9	21.3	3 12	10 49.84	+ 4 4.4	1.344	2.329	4.2	19.5
3 22	10 41.15	+15 9.9	2.105	3.031	8.3	21.5	3 22	10 43.10	+ 6 3.5	1.355	2.310	9.2	19.7
4 1	10 35.07	+15 29.3	2.191	3.047	11.5	21.7	4 1	10 38.15	+ 7 50.9	1.390	2.292	13.8	19.9
4 11	10 31.05	+15 33.8	2.299	3.062	14.0	21.9	4 11	10 35.72	+ 9 18.8	1.447	2.275	17.9	20.1
367174	2006 XB ₁₉		3 3.2 109°52	1°9/ 5.0 18			92388	2000 JP		3 3.2 296°47	1°2/ 3.9 18		
2 1	11 20.72	- 1 13.3	2.060	2.882	12.8	21.4	2 1	11 20.81	+ 2 33.6	1.345	2.202	16.3	19.6
2 11	11 14.39	- 0 49.0	2.001	2.905	9.4	21.2	2 11	11 15.54	+ 2 43.4	1.266	2.190	11.9	19.3
2 21	11 6.38	- 0 10.3	1.967	2.927	5.7	21.1	2 21	11 7.52	+ 3 10.3	1.208	2.177	6.9	19.0
3 2	10 57.46	+ 0 39.1	1.962	2.948	2.2	20.9	3 2	10 57.64	+ 3 50.0	1.175	2.165	1.7	18.6
3 12	10 48.55	+ 1 33.5	1.986	2.969	3.4	21.0	3 12	10 47.31	+ 4 35.1	1.169	2.153	4.8	18.8
3 22	10 40.53	+ 2 27.3	2.040	2.989	7.0	21.2	3 22	10 37.99	+ 5 17.8	1.187	2.141	10.3	19.1
4 1	10 34.14	+ 3 15.3	2.121	3.009	10.4	21.5	4 1	10 30.98	+ 5 50.8	1.229	2.130	15.3	19.3
4 11	10 29.83	+ 3 53.5	2.224	3.028	13.3	21.7	4 11	10 27.08	+ 6 9.3	1.289	2.119	19.6	19.6
499458	2010 EU ₁₂₁		3 3.2 6°52	1°4/ 2.1 17			173791	2001 SS ₁₂₂		3 3.2 94°68	2°4/ 5.8 18		
2 1	11 19.81	+ 9 45.6	1.756	2.619	12.8	20.5	2 1	11 19.55	- 2 45.2	2.539	3.346	11.1	20.2
2 11	11 14.12	+ 9 58.1	1.689	2.619	9.0	20.2	2 11	11 13.33	- 2 45.2	2.478	3.371	8.3	20.1
2 21	11 6.40	+10 16.4	1.647	2.620	4.8	20.0	2 21	11 5.74	- 2 33.0	2.443	3.395	5.3	19.9
3 2	10 57.48	+10 35.6	1.632	2.622	1.4	19.7	3 2	10 57.43	- 2 10.7	2.438	3.419	2.7	19.8
3 12	10 48.45	+10 50.3	1.645	2.624	4.7	20.0	3 12	10 49.12	- 1 41.9	2.463	3.443	3.2	19.9
3 22	10 40.37	+10 56.3	1.685	2.626	8.9	20.2	3 22	10 41.54	- 1 10.3	2.518	3.466	5.9	20.1
4 1	10 34.14	+10 51.0	1.750	2.629	12.7	20.5	4 1	10 35.29	- 0 40.0	2.601	3.489	8.7	20.3
4 11	10 30.31	+10 33.4	1.835	2.633	15.9	20.7	4 11	10 30.75	- 0 14.3	2.708	3.512	11.1	20.5
461717	2005 SQ ₁₆₀		3 3.2 136°93	0°9/ 4.1 18			223751	2004 RR ₁₉₆		3 3.2 126°96	1°0/ 2.2 18 R		
2 1	11 18.91	+ 1 40.2	1.950	2.788	12.8	22.1	2 1	11 20.89	+ 8 39.2	2.213	3.061	11.0	20.2
2 11	11 13.32	+ 2 9.7	1.880	2.795	9.3	21.9	2 11	11 14.49	+ 9 4.8	2.150	3.074	7.8	20.1
2 21	11 5.91	+ 2 52.6	1.835	2.801	5.3	21.7	2 21	11 6.46	+ 9 36.1	2.114	3.085	4.1	19.8
3 2	10 57.44	+ 3 44.6	1.817	2.807	1.3	21.4	3 2	10 57.51	+10 8.6	2.107	3.097	1.0	19.6
3 12	10 48.84	+ 4 39.6	1.829	2.813	3.6	21.6	3 12	10 48.54	+10 37.5	2.130	3.108	3.9	19.9
3 22	10 41.07	+ 5 31.5	1.870	2.818	7.6	21.9	3 22	10 40.40	+10 58.9	2.183	3.119	7.5	20.1
4 1	10 34.93	+ 6 15.3	1.936	2.824	11.3	22.1	4 1	10 33.79	+11 10.2	2.262	3.129	10.7	20.3
4 11	10 30.95	+ 6 47.3	2.025	2.829	14.4	22.3	4 11	10 29.19	+11 10.2	2.363	3.139	13.4	20.5
173645	2001 FX ₁₆₃		3 3.2 50°02	0°1/ 3.1 18			471618	2012 TY ₅		3 3.2 175°96	2°0/ 5.6 17		
2 1	11 27.26	+ 7 40.1	1.294	2.155	16.5	19.2</							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
176026	2000 <i>ST</i> ₈₁		3 3.2 131°63	0°1/ 3.1 18			65116	2002 <i>CH</i> ₅₁		3 3.2 265°28	0°9/ 2.2 18		
2 1	11 15.43	+ 4 38.3	2.803	3.641	9.3	21.2	2 1	11 15.51	+ 7 35.3	2.448	3.299	10.0	19.5
2 11	11 10.42	+ 5 19.0	2.735	3.653	6.6	21.0	2 11	11 10.70	+ 8 14.1	2.370	3.295	7.0	19.3
2 21	11 4.19	+ 6 7.5	2.694	3.664	3.5	20.8	2 21	11 4.46	+ 8 59.9	2.319	3.291	3.7	19.1
3 2	10 57.28	+ 6 59.9	2.684	3.675	0.4	20.5	3 2	10 57.34	+ 9 48.4	2.297	3.287	0.9	18.8
3 12	10 50.32	+ 7 51.8	2.704	3.685	2.9	20.8	3 12	10 50.08	+10 34.6	2.304	3.283	3.6	19.0
3 22	10 43.91	+ 8 39.2	2.754	3.695	5.9	21.0	3 22	10 43.42	+11 14.1	2.341	3.278	7.0	19.2
4 1	10 38.61	+ 9 18.8	2.832	3.705	8.6	21.2	4 1	10 37.99	+11 43.6	2.404	3.274	10.1	19.4
4 11	10 34.80	+ 9 48.3	2.934	3.714	10.9	21.4	4 11	10 34.27	+12 1.1	2.490	3.270	12.7	19.6
108552	2001 <i>LM</i> ₁₂		3 3.2 283°83	5°1/ 7.8 18			426590	2013 <i>SB</i> ₃₀		3 3.2 191°92	2°2/ 29.9 16		
2 1	11 17.81	- 9 15.2	2.166	2.953	13.4	19.7	2 1	11 20.53	+12 17.6	2.280	3.135	10.5	21.7
2 11	11 12.65	- 9 35.2	2.066	2.936	10.8	19.5	2 11	11 14.32	+12 53.6	2.207	3.134	7.4	21.5
2 21	11 5.67	- 9 36.8	1.988	2.918	8.0	19.3	2 21	11 6.44	+13 33.1	2.160	3.132	4.1	21.3
3 2	10 57.46	- 9 20.0	1.937	2.901	5.6	19.1	3 2	10 57.55	+14 10.8	2.144	3.130	2.2	21.2
3 12	10 48.88	- 8 47.0	1.914	2.883	5.4	19.0	3 12	10 48.54	+14 41.6	2.157	3.127	4.8	21.4
3 22	10 40.84	- 8 2.4	1.919	2.866	7.6	19.1	3 22	10 40.27	+15 1.9	2.199	3.124	8.1	21.6
4 1	10 34.21	- 7 12.1	1.951	2.848	10.7	19.3	4 1	10 33.47	+15 9.2	2.267	3.120	11.2	21.7
4 11	10 29.60	- 6 22.4	2.005	2.831	13.7	19.5	4 11	10 28.67	+15 3.1	2.357	3.116	13.9	21.9
21454	Chernoby		3 3.2 64°60	3°8/ 28.3 18			59512	1999 <i>JW</i> ₁₄		3 3.2 43°71	6°3/ 9.7 18		
2 1	11 18.90	+17 22.7	2.190	3.055	10.5	17.9	2 1	11 15.49	-13 34.3	1.724	2.506	16.6	19.0
2 11	11 13.15	+18 5.3	2.133	3.062	7.5	17.7	2 11	11 11.19	-13 17.9	1.648	2.511	13.5	18.8
2 21	11 5.76	+18 47.1	2.103	3.070	4.7	17.6	2 21	11 4.90	-12 32.4	1.593	2.517	10.1	18.6
3 2	10 57.45	+19 22.1	2.101	3.077	3.9	17.5	3 2	10 57.40	-11 19.2	1.563	2.522	7.2	18.4
3 12	10 49.13	+19 45.4	2.129	3.085	6.1	17.7	3 12	10 49.72	- 9 43.8	1.559	2.528	6.3	18.4
3 22	10 41.64	+19 54.0	2.183	3.092	9.0	17.9	3 22	10 42.89	- 7 55.4	1.582	2.534	8.4	18.5
4 1	10 35.70	+19 46.8	2.262	3.100	11.8	18.0	4 1	10 37.82	- 6 4.4	1.630	2.540	11.7	18.7
4 11	10 31.78	+19 24.6	2.362	3.107	14.2	18.2	4 11	10 35.08	- 4 20.6	1.702	2.546	14.9	18.9
480927	2002 <i>YZ</i> ₃		3 3.2 138°14	1°3/ 1.9 17			150672	2001 <i>MJ</i> ₂₈		3 3.2 145°10	1°5/ 4.9 18		
2 1	11 32.03	+ 8 42.8	2.460	3.283	10.9	23.3	2 1	11 19.02	- 1 6.6	2.493	3.309	11.0	21.0
2 11	11 22.10	+ 9 34.5	2.399	3.311	7.7	23.1	2 11	11 13.07	- 0 30.8	2.422	3.323	8.1	20.8
2 21	11 10.48	+10 31.2	2.369	3.337	4.1	23.0	2 21	11 5.68	+ 0 17.6	2.377	3.337	4.9	20.6
3 2	10 57.95	+11 27.5	2.372	3.361	1.3	22.8	3 2	10 57.47	+ 1 15.2	2.362	3.349	1.8	20.4
3 12	10 45.50	+12 17.6	2.410	3.383	4.1	23.0	3 12	10 49.21	+ 2 17.0	2.378	3.361	2.9	20.5
3 22	10 34.04	+12 57.6	2.481	3.403	7.5	23.3	3 22	10 41.61	+ 3 17.9	2.424	3.372	6.2	20.7
4 1	10 24.33	+13 24.9	2.582	3.420	10.5	23.5	4 1	10 35.32	+ 4 13.1	2.499	3.382	9.2	20.9
4 11	10 16.82	+13 39.1	2.707	3.436	12.9	23.7	4 11	10 30.79	+ 4 59.1	2.597	3.391	11.8	21.1
293146	2006 <i>YR</i> ₄		3 3.2 11°57	1°2/ 4.1 18			121522	1999 <i>UU</i> ₂₇		3 3.2 267°44	0°6/ 2.6 17		
2 1	11 18.19	+ 2 10.7	1.486	2.340	15.1	20.2	2 1	11 18.82	+ 6 34.9	1.981	2.832	12.0	20.4
2 11	11 13.28	+ 2 23.8	1.419	2.342	11.0	20.0	2 11	11 13.41	+ 7 5.2	1.895	2.820	8.6	20.1
2 21	11 6.09	+ 2 52.5	1.375	2.344	6.3	19.7	2 21	11 6.09	+ 7 45.0	1.835	2.806	4.6	19.9
3 2	10 57.51	+ 3 32.5	1.357	2.347	1.7	19.4	3 2	10 57.53	+ 8 29.6	1.803	2.793	0.7	19.5
3 12	10 48.76	+ 4 16.9	1.366	2.350	4.3	19.6	3 12	10 48.70	+ 9 13.0	1.799	2.780	4.1	19.8
3 22	10 41.04	+ 4 58.5	1.400	2.354	9.1	19.9	3 22	10 40.57	+ 9 49.9	1.824	2.766	8.3	20.0
4 1	10 35.37	+ 5 31.4	1.458	2.359	13.4	20.2	4 1	10 34.02	+10 15.9	1.875	2.753	12.1	20.2
4 11	10 32.35	+ 5 51.4	1.537	2.364	17.1	20.4	4 11	10 29.66	+10 28.5	1.947	2.739	15.3	20.4
56849	2000 <i>QH</i> ₆₁		3 3.2 234°91	1°2/ 2.1 18			472574	2015 <i>DU</i> ₉₆		3 3.2 197°28	1°0/ 1.9 17		
2 1	11 21.53	+ 9 2.8	2.241	3.088	11.0	19.6	2 1	11 15.64	+ 7 17.2	2.641	3.489	9.5	21.8
2 11	11 15.15	+ 9 27.7	2.152	3.075	7.8	19.4	2 11	11 10.72	+ 8 15.2	2.562	3.486	6.7	21.7
2 21	11 6.96	+ 9 58.7	2.089	3.061	4.2	19.1	2 21	11 4.45	+ 9 20.8	2.511	3.483	3.5	21.4
3 2	10 57.61	+10 31.4	2.056	3.046	1.2	18.9	3 2	10 57.35	+10 29.2	2.490	3.479	1.0	21.2
3 12	10 47.99	+11 0.7	2.054	3.031	4.2	19.0	3 12	10 50.12	+11 34.9	2.499	3.475	3.6	21.4
3 22	10 39.04	+11 22.4	2.081	3.015	7.9	19.2	3 22	10 43.42	+12 33.1	2.539	3.471	6.8	21.6
4 1	10 31.56	+11 33.5	2.134	2.999	11.4	19.4	4 1	10 37.88	+13 20.4	2.605	3.466	9.7	21.8
4 11	10 26.14	+11 32.5	2.210	2.982	14.3	19.6	4 11	10 33.93	+13 54.4	2.695	3.461	12.1	22.0
144571	2004 <i>FA</i> ₂₀		3 3.2 65°82	0°3/ 2.9 18			101232	1998 <i>SU</i> ₇₅		3 3.2 104°04	2°8/ 5.7 18		
2 1	11 26.45	+ 7 56.0	1.554	2.408	14.6	20.0	2 1	11 19.75	- 3 12.0	1.773	2.596	14.5	19.9
2 11	11 18.94	+ 7 43.1	1.494	2.419	10.4	19.8	2 11	11 14.03	- 2 53.6	1.708	2.610	10.9	19.7
2 21	11 9.06	+ 7 37.2	1.459	2.430	5.6	19.5	2 21	11 6.37	- 2 16.6	1.667	2.623	6.9	19.5
3 2	10 57.82	+ 7 34.3	1.451	2.442	0.6	19.2	3 2	10 57.56	- 1 24.7	1.652	2.636	3.3	19.3
3 12	10 46.59	+ 7 29.9	1.472	2.454	4.6	19.5	3 12	10 48.67	- 0 23.8	1.667	2.649	4.0	19.4
3 22	10 36.64	+ 7 20.4	1.520	2.465	9.3	19.8	3 22	10 40.74	+ 0 38.8	1.708	2.662	7.8	19.6
4 1	10 28.98	+ 7 3.3	1.593	2.477	13.4	20.1	4 1	10 34.61	+ 1 36.4	1.776	2.674	11.6	19.9
4 11	10 24.17	+ 6 37.3	1.686	2.489	16.8	20.3	4 11	10 30.82	+ 2 23.7	1.866	2.686	14.8	20.1
371017	2005 <i>UK</i> ₄₀		3 3.2 194°71	1°5/ 1.6 17			292915	2006 <i>VP</i> ₆₀		3 3.2 230°89	0°3/ 3.5 14 C		
2 1	11 19.31	+ 9 15.1	2.321	3.172	10.5	22.9	2 1	11 19.82	+ 3 16.4	1.989	2.830	12.4	22.4
2 11	11 13.46	+10 2.0	2.245	3.170	7.4	22.7	2 11	11 14.13	+ 3 51.2	1.901	2.819	9.0	22.2
2 21	11 5.97	+10 55.4	2.195	3.167	3.9	22.5	2 21	11 6.49	+ 4 38.9	1.839	2.807	5.0	21.9
3 2	10 57.50	+11 49.9	2.174	3.163	1.5	22.3	3 2	10 57.59	+ 5 34.9	1.804	2.795	0.8	21.5
3 12	10 48.87	+12 40.0	2.185	3.159	4.3	22.5	3 12	10 48.39	+ 6 33.1	1.800	2.782	3.8	21.8
3 22	10 40.91	+13 20.9	2.224	3.154	7.7	22.7	3 22	10 39.89	+ 7 27.3	1.824	2.769	8.0	22.0
4 1	10 34.35	+13 49.4	2.290	3.149	10.9	22.9	4 1	10 32.97	+ 8 12.0	1.874	2.755	11.9	22.2
4 11	10 29.70	+14 4.1	2.378	3.142	13.6	23.1	4 11	10 28.26	+ 8 43.7	1.946	2.741	15.2	22.4
473908	2016 <i>EZ</i> ₁₄₉		3 3.2 173°93	2°0/ 1.0 17			309883	2009 <i>DJ</i> ₁₂₈		3 3.2 7°84	1°9/ 1.9 18		</

EPHEMERIDES

3 3.2

3 3.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
320986	2008 <i>JC</i> ₂₄		3 3.2 258°26	1.4/ 2.0	17		56497	2000 <i>GD</i> ₁₄₀		3 3.2 128°82	3.7/29.0	18	
2 1	11 21.49	+ 9 13.3	1.920	2.774	12.2	21.1	2 1	11 22.69	+13 4.2	1.605	2.472	13.5	19.2
2 11	11 15.40	+ 9 40.7	1.832	2.759	8.7	20.8	2 11	11 16.30	+14 18.7	1.552	2.484	9.5	19.0
2 21	11 7.22	+10 15.3	1.770	2.743	4.7	20.5	2 21	11 7.66	+15 37.7	1.525	2.496	5.4	18.7
3 2	10 57.68	+10 51.8	1.737	2.726	1.4	20.3	3 2	10 57.73	+16 51.9	1.525	2.508	3.8	18.7
3 12	10 47.80	+11 24.4	1.732	2.710	4.7	20.5	3 12	10 47.78	+17 52.5	1.554	2.519	6.9	18.9
3 22	10 38.68	+11 47.8	1.756	2.692	9.0	20.7	3 22	10 39.01	+18 33.5	1.609	2.529	10.9	19.1
4 1	10 31.25	+11 58.7	1.805	2.675	12.8	20.9	4 1	10 32.36	+18 52.8	1.688	2.539	14.5	19.4
4 11	10 26.20	+11 55.4	1.875	2.657	16.1	21.1	4 11	10 28.37	+18 51.1	1.785	2.548	17.5	19.6
19813	Eric sands		3 3.2 35°92	0°2/ 3.0	18		382769	2003 <i>SX</i> ₇		3 3.2 191°52	1°7/ 5.3	18	
2 1	11 17.54	+ 3 13.6	1.391	2.253	15.5	18.3	2 1	11 16.49	- 2 2.2	2.540	3.356	10.9	21.6
2 11	11 12.95	+ 4 15.9	1.328	2.256	11.1	18.1	2 11	11 11.38	- 1 26.4	2.454	3.354	8.1	21.4
2 21	11 5.97	+ 5 36.5	1.287	2.260	6.0	17.8	2 21	11 4.85	- 0 36.9	2.394	3.352	5.0	21.2
3 2	10 57.54	+ 7 7.4	1.272	2.263	0.6	17.4	3 2	10 57.45	+ 0 23.1	2.364	3.350	2.1	21.0
3 12	10 48.93	+ 8 38.0	1.284	2.267	4.9	17.7	3 12	10 49.89	+ 1 28.9	2.363	3.346	2.9	21.1
3 22	10 41.41	+ 9 58.2	1.322	2.271	10.1	18.0	3 22	10 42.89	+ 2 35.1	2.393	3.343	6.1	21.3
4 1	10 36.03	+11 0.6	1.383	2.275	14.6	18.3	4 1	10 37.08	+ 3 36.8	2.451	3.339	9.2	21.5
4 11	10 33.41	+11 41.4	1.464	2.280	18.3	18.6	4 11	10 32.94	+ 4 29.7	2.533	3.334	11.9	21.7
423725	2006 <i>BC</i> ₁₁₇		3 3.2 341°58	1°1/ 2.0	18		492697	2014 <i>PJ</i> ₆₁		3 3.2 213°32	0°2/ 2.9	17	
2 1	11 14.85	+ 5 43.4	1.687	2.550	13.2	20.2	2 1	11 21.15	+ 4 22.0	1.977	2.819	12.4	22.6
2 11	11 10.78	+ 6 54.2	1.614	2.545	9.3	20.0	2 11	11 15.09	+ 5 10.2	1.891	2.810	8.9	22.3
2 21	11 4.71	+ 8 19.0	1.567	2.541	4.9	19.7	2 21	11 7.03	+ 6 11.1	1.831	2.801	4.9	22.1
3 2	10 57.41	+ 9 50.3	1.546	2.537	1.1	19.4	3 2	10 57.69	+ 7 19.2	1.800	2.791	0.5	21.7
3 12	10 49.89	+11 18.7	1.554	2.533	4.9	19.7	3 12	10 48.06	+ 8 27.6	1.799	2.780	4.1	22.0
3 22	10 43.19	+12 36.0	1.589	2.530	9.3	19.9	3 22	10 39.16	+ 9 29.6	1.827	2.768	8.4	22.2
4 1	10 38.23	+13 35.9	1.648	2.527	13.3	20.2	4 1	10 31.89	+10 19.8	1.881	2.755	12.2	22.4
4 11	10 35.59	+14 15.4	1.727	2.525	16.7	20.4	4 11	10 26.88	+10 54.8	1.957	2.742	15.5	22.6
249392	2009 <i>BX</i> ₁₁₂		3 3.2 312°59	1°4/ 1.8	17		85308	Atsushimori		3 3.2 146°64	0°6/ 3.7	18	
2 1	11 15.79	+ 8 40.1	2.075	2.935	11.2	20.1	2 1	11 20.92	+ 1 45.8	1.785	2.624	13.7	20.5
2 11	11 11.19	+ 9 22.2	1.993	2.922	7.9	19.9	2 11	11 14.91	+ 2 36.3	1.718	2.635	9.9	20.3
2 21	11 4.85	+10 12.1	1.936	2.910	4.2	19.6	2 21	11 6.89	+ 3 42.1	1.676	2.644	5.5	20.1
3 2	10 57.42	+11 4.7	1.908	2.897	1.4	19.4	3 2	10 57.68	+ 4 57.5	1.662	2.653	1.0	19.8
3 12	10 49.77	+11 53.8	1.908	2.885	4.4	19.6	3 12	10 48.36	+ 6 14.5	1.678	2.661	3.9	20.0
3 22	10 42.77	+12 34.1	1.936	2.873	8.2	19.8	3 22	10 39.99	+ 7 25.5	1.722	2.668	8.3	20.3
4 1	10 37.22	+13 1.6	1.989	2.861	11.7	20.0	4 1	10 33.44	+ 8 24.6	1.792	2.675	12.2	20.5
4 11	10 33.67	+13 14.4	2.064	2.850	14.7	20.2	4 11	10 29.26	+ 9 7.9	1.883	2.681	15.5	20.8
481058	2005 <i>MM</i> ₂₄		3 3.2 283°52	17°4/ 9.7	18		181470	2006 <i>TY</i> ₆₃		3 3.2 127°87	0°8/ 2.4	18	
2 1	11 31.44	-21 3.8	1.132	1.886	25.1	21.0	2 1	11 18.80	+ 5 24.6	1.859	2.711	12.7	20.9
2 11	11 24.26	-24 3.0	1.062	1.881	22.5	20.8	2 11	11 13.34	+ 6 27.1	1.796	2.721	8.9	20.6
2 21	11 12.92	-26 31.1	1.008	1.876	19.8	20.6	2 21	11 6.01	+ 7 41.2	1.759	2.731	4.7	20.4
3 2	10 58.36	-28 13.7	0.973	1.871	17.9	20.4	3 2	10 57.59	+ 9 0.2	1.750	2.740	0.8	20.1
3 12	10 42.54	-29 2.1	0.959	1.866	17.4	20.4	3 12	10 49.08	+10 16.1	1.770	2.750	4.4	20.4
3 22	10 27.84	-28 56.9	0.965	1.862	18.7	20.4	3 22	10 41.46	+11 22.1	1.819	2.758	8.5	20.7
4 1	10 16.45	-28 9.2	0.989	1.857	21.1	20.6	4 1	10 35.55	+12 13.2	1.893	2.767	12.1	20.9
4 11	10 9.67	-26 56.7	1.029	1.853	23.9	20.7	4 11	10 31.86	+12 47.2	1.988	2.775	15.2	21.1
293966	2007 <i>TT</i> ₄₅		3 3.2 167°07	4°2/28.2	18		196772	Fritzleiber		3 3.2 130°31	0°4/ 3.6	17	
2 1	11 23.03	+16 41.3	1.939	2.801	11.7	20.8	2 1	11 17.60	+ 3 11.5	2.134	2.975	11.7	20.7
2 11	11 16.32	+17 44.3	1.878	2.806	8.4	20.6	2 11	11 12.32	+ 3 45.1	2.064	2.981	8.4	20.5
2 21	11 7.60	+18 47.7	1.844	2.811	5.3	20.4	2 21	11 5.41	+ 4 29.7	2.018	2.987	4.7	20.3
3 2	10 57.72	+19 43.9	1.839	2.814	4.4	20.4	3 2	10 57.52	+ 5 21.3	2.002	2.992	0.8	20.0
3 12	10 47.75	+20 25.9	1.863	2.817	6.9	20.5	3 12	10 49.53	+ 6 14.1	2.014	2.997	3.4	20.2
3 22	10 38.75	+20 49.7	1.914	2.820	10.2	20.7	3 22	10 42.28	+ 7 2.8	2.056	3.002	7.2	20.5
4 1	10 31.59	+20 53.8	1.989	2.821	13.4	20.9	4 1	10 36.49	+ 7 42.8	2.124	3.007	10.6	20.7
4 11	10 26.82	+20 39.4	2.084	2.822	16.1	21.1	4 11	10 32.65	+ 8 11.3	2.215	3.012	13.5	20.9
63778	2001 <i>RY</i> ₁		3 3.2 172°37	1°1/ 4.5	18		80418	1999 <i>XA</i> ₂₀₆		3 3.2 147°74	0°4/ 2.9	18	
2 1	11 15.29	+ 0 7.1	2.417	3.246	10.9	19.8	2 1	11 25.73	+ 6 22.6	1.603	2.453	14.4	19.5
2 11	11 10.56	+ 0 47.2	2.338	3.247	8.0	19.6	2 11	11 18.50	+ 6 41.5	1.538	2.461	10.3	19.3
2 21	11 4.40	+ 1 40.1	2.284	3.248	4.7	19.4	2 21	11 8.90	+ 7 10.6	1.498	2.469	5.6	19.0
3 2	10 57.38	+ 2 42.0	2.260	3.249	1.4	19.1	3 2	10 57.91	+ 7 44.4	1.485	2.476	0.6	18.6
3 12	10 50.22	+ 3 47.7	2.266	3.250	3.0	19.2	3 12	10 46.82	+ 8 16.4	1.502	2.483	4.6	19.0
3 22	10 43.66	+ 4 51.8	2.301	3.250	6.4	19.5	3 22	10 36.89	+ 8 40.9	1.545	2.489	9.4	19.2
4 1	10 38.33	+ 5 49.2	2.364	3.250	9.5	19.7	4 1	10 29.15	+ 8 54.2	1.614	2.494	13.5	19.5
4 11	10 34.71	+ 6 36.3	2.450	3.251	12.3	19.8	4 11	10 24.19	+ 8 54.2	1.703	2.499	17.0	19.7
33458	Fialkow		3 3.2 335°87	1°6/ 1.9	18		73678	1988 <i>TY</i>		3 3.2 124°97	1°6/ 1.8	18	
2 1	11 18.00	+ 7 1.5	1.284	2.158	15.7	18.4	2 1	11 23.28	+ 9 9.6	1.935	2.786	12.3	20.3
2 11	11 13.53	+ 7 57.4	1.217	2.152	11.1	18.1	2 11	11 16.36	+ 9 51.4	1.880	2.805	8.6	20.1
2 21	11 6.41	+ 9 8.4	1.172	2.147	5.9	17.8	2 21	11 7.57	+10 39.5	1.850	2.822	4.6	19.9
3 2	10 57.61	+10 25.6	1.152	2.142	1.6	17.5	3 2	10 57.76	+11 27.8	1.850	2.839	1.6	19.7
3 12	10 48.51	+11 38.2	1.158	2.138	6.0	17.7	3 12	10 47.97	+12 10.3	1.879	2.855	4.7	20.0
3 22	10 40.55	+12 36.7	1.188	2.134	11.3	18.0	3 22	10 39.19	+12 42.1	1.937	2.870	8.5	20.2
4 1	10 34.91	+13 14.9	1.241	2.130	16.1	18.3	4 1	10 32.22	+13 0.4	2.021	2.885	12.0	20.5
4 11	10 32.30	+13 30.3	1.311	2.128	20.0	18.5	4 11	10 27.55	+13 4.4	2.127	2.899	14.8	20.7
279126	2009 <i>PU</i> ₁₆		3 3.2 108°23	1°2/ 4.5	18		56249	1999 <i>JS</i> ₇₄		3 3.2 303°48	1°2/ 2.0	18	
2 1	11 19.03	+ 0 1.2											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
128726	2004 <i>RN</i> ₁₄₃		3 3.2 170°06	2.4/29.6	18		200595	2001 <i>RD</i> ₇₀		3 3.2 127°42	3.2/5.9	18	
2 1	11 18.44	+11 29.8	2.196	3.054	10.7	20.5	2 1	11 20.88	- 4 26.7	1.636	2.457	15.6	21.2
2 11	11 12.91	+12 28.9	2.128	3.057	7.5	20.3	2 11	11 15.03	- 4 0.1	1.569	2.469	11.8	21.0
2 21	11 5.73	+13 33.0	2.087	3.059	4.1	20.1	2 21	11 7.03	- 3 11.6	1.526	2.480	7.6	20.7
3 2	10 57.57	+14 35.9	2.076	3.061	2.4	20.0	3 2	10 57.74	- 2 5.2	1.508	2.491	3.7	20.5
3 12	10 49.29	+15 31.4	2.094	3.063	5.0	20.2	3 12	10 48.34	- 0 48.0	1.519	2.502	4.3	20.6
3 22	10 41.75	+16 14.6	2.141	3.064	8.4	20.4	3 22	10 39.95	+ 0 31.2	1.558	2.512	8.3	20.8
4 1	10 35.69	+16 42.5	2.213	3.065	11.5	20.6	4 1	10 33.54	+ 1 44.3	1.622	2.521	12.4	21.1
4 11	10 31.59	+16 54.4	2.307	3.065	14.1	20.8	4 11	10 29.67	+ 2 45.1	1.708	2.530	15.8	21.3
270462	2002 <i>CH</i> ₂₇₆		3 3.2 60°82	0°8/3.9	18		455172	1999 <i>QJ</i>		3 3.2 140°05	0°4/2.8	18	
2 1	11 19.65	+ 2 58.6	1.756	2.602	13.6	20.7	2 1	11 28.84	+ 7 49.6	2.490	3.317	10.7	22.7
2 11	11 14.03	+ 3 13.0	1.690	2.609	9.8	20.5	2 11	11 19.93	+ 7 56.1	2.424	3.336	7.6	22.5
2 21	11 6.43	+ 3 40.0	1.648	2.616	5.6	20.2	2 21	11 9.40	+ 8 7.4	2.386	3.354	4.1	22.3
3 2	10 57.65	+ 4 15.4	1.634	2.624	1.2	19.9	3 2	10 57.99	+ 8 20.1	2.381	3.371	0.5	22.0
3 12	10 48.78	+ 4 53.5	1.648	2.631	3.8	20.1	3 12	10 46.62	+ 8 30.6	2.408	3.387	3.4	22.3
3 22	10 40.84	+ 5 28.4	1.689	2.639	8.1	20.4	3 22	10 36.13	+ 8 36.0	2.468	3.402	6.9	22.5
4 1	10 34.71	+ 5 55.5	1.756	2.647	12.0	20.7	4 1	10 27.26	+ 8 34.5	2.557	3.416	9.9	22.7
4 11	10 30.94	+ 6 11.4	1.844	2.655	15.3	20.9	4 11	10 20.45	+ 8 25.0	2.670	3.428	12.4	22.9
205024	1998 <i>BZ</i> ₅		3 3.2 27°97	1°0/2.1	17		18720	Jerryguo		3 3.2 321°77	4°4/7.8	18	
2 1	11 16.25	+ 7 28.4	2.127	2.982	11.1	20.9	2 1	11 14.37	- 8 23.6	2.066	2.866	13.6	18.0
2 11	11 11.40	+ 8 11.5	2.057	2.983	7.8	20.7	2 11	11 10.26	- 8 16.9	1.974	2.854	10.8	17.8
2 21	11 4.94	+ 9 2.7	2.012	2.985	4.2	20.5	2 21	11 4.42	- 7 49.9	1.904	2.843	7.7	17.6
3 2	10 57.50	+ 9 56.8	1.997	2.987	1.0	20.2	3 2	10 57.46	- 7 3.8	1.861	2.832	5.0	17.4
3 12	10 49.95	+10 47.9	2.010	2.989	4.0	20.5	3 12	10 50.24	- 6 2.7	1.845	2.821	4.7	17.4
3 22	10 43.11	+11 30.9	2.052	2.991	7.7	20.7	3 22	10 43.62	- 4 52.5	1.857	2.810	7.3	17.5
4 1	10 37.72	+12 2.1	2.119	2.993	11.1	20.9	4 1	10 38.41	- 3 40.4	1.895	2.800	10.5	17.7
4 11	10 34.25	+12 19.5	2.209	2.995	13.9	21.1	4 11	10 35.17	- 2 33.1	1.956	2.790	13.7	17.9
298774	2004 <i>PH</i> ₁		3 3.2 162°60	3°2/29.2	18		243424	2009 <i>CT</i> ₂₇		3 3.2 107°17	2°0/29.9	17	
2 1	11 22.87	+13 0.3	1.873	2.733	12.2	21.4	2 1	11 16.54	+10 49.5	2.309	3.168	10.2	21.1
2 11	11 16.27	+14 5.9	1.811	2.740	8.6	21.2	2 11	11 11.49	+11 42.6	2.246	3.175	7.1	20.9
2 21	11 7.63	+15 15.7	1.775	2.746	4.9	21.0	2 21	11 4.93	+12 40.5	2.209	3.182	3.9	20.7
3 2	10 57.80	+16 21.9	1.768	2.751	3.3	20.9	3 2	10 57.51	+13 37.8	2.202	3.189	2.0	20.6
3 12	10 47.86	+17 17.1	1.791	2.756	6.1	21.0	3 12	10 50.02	+14 28.8	2.225	3.196	4.5	20.8
3 22	10 38.90	+17 55.9	1.841	2.760	9.9	21.3	3 22	10 43.23	+15 9.0	2.276	3.202	7.8	21.0
4 1	10 31.80	+18 15.9	1.916	2.762	13.3	21.5	4 1	10 37.80	+15 35.7	2.352	3.209	10.7	21.2
4 11	10 27.11	+18 17.3	2.012	2.765	16.1	21.7	4 11	10 34.18	+15 47.9	2.451	3.216	13.2	21.4
265685	2005 <i>UX</i> ₉₆		3 3.2 202°35	0°3/2.9	17		217904	2001 <i>SD</i> ₁₀₇		3 3.2 226°80	5°3/8.8	17	
2 1	11 18.55	+ 5 2.5	2.196	3.040	11.3	21.8	2 1	11 17.85	-11 59.1	2.149	2.922	14.0	20.8
2 11	11 13.05	+ 5 47.6	2.115	3.036	8.1	21.6	2 11	11 12.70	-11 51.9	2.053	2.912	11.4	20.6
2 21	11 5.85	+ 6 43.1	2.061	3.032	4.3	21.4	2 21	11 5.74	-11 22.2	1.980	2.903	8.5	20.4
3 2	10 57.61	+ 7 44.1	2.036	3.027	0.5	21.0	3 2	10 57.61	-10 30.4	1.933	2.893	6.0	20.2
3 12	10 49.17	+ 8 44.6	2.041	3.021	3.7	21.3	3 12	10 49.19	- 9 20.4	1.914	2.882	5.5	20.2
3 22	10 41.40	+ 9 38.9	2.075	3.016	7.5	21.5	3 22	10 41.37	- 7 58.1	1.923	2.871	7.6	20.3
4 1	10 35.07	+10 22.7	2.135	3.009	11.0	21.7	4 1	10 34.99	- 6 31.4	1.960	2.859	10.6	20.4
4 11	10 30.70	+10 53.0	2.218	3.002	13.9	21.9	4 11	10 30.65	- 5 7.8	2.020	2.847	13.6	20.6
463616	2013 <i>TS</i> ₈		3 3.2 239°32	2°0/1.5	17		327463	2005 <i>XO</i> ₆₉		3 3.2 145°07	0°1/3.3	18	
2 1	11 23.33	+11 45.0	2.034	2.888	11.6	21.8	2 1	11 19.63	+ 4 17.7	2.176	3.016	11.5	21.9
2 11	11 16.59	+12 5.5	1.951	2.877	8.3	21.5	2 11	11 13.73	+ 4 48.1	2.107	3.025	8.2	21.7
2 21	11 7.85	+12 29.8	1.894	2.866	4.5	21.3	2 21	11 6.17	+ 5 28.4	2.064	3.033	4.5	21.5
3 2	10 57.83	+12 52.9	1.867	2.854	2.0	21.1	3 2	10 57.65	+ 6 14.3	2.049	3.040	0.6	21.2
3 12	10 47.58	+13 9.5	1.869	2.842	4.9	21.2	3 12	10 49.04	+ 7 0.3	2.065	3.047	3.4	21.4
3 22	10 38.11	+13 15.9	1.899	2.830	8.8	21.4	3 22	10 41.20	+ 7 41.6	2.110	3.054	7.2	21.7
4 1	10 30.34	+13 9.7	1.956	2.817	12.4	21.6	4 1	10 34.86	+ 8 14.1	2.182	3.061	10.6	21.9
4 11	10 24.87	+12 50.5	2.033	2.804	15.4	21.8	4 11	10 30.49	+ 8 35.4	2.276	3.066	13.4	22.1
345671	2006 <i>UL</i> ₂₉		3 3.2 201°37	2°9/28.9	17		410154	2007 <i>HK</i> ₆₅		3 3.2 290°62	7°5/25.8	17	
2 1	11 18.35	+15 29.1	2.551	3.410	9.4	21.3	2 1	11 21.30	+19 55.5	1.359	2.240	14.5	21.1
2 11	11 12.69	+16 8.1	2.481	3.408	6.6	21.1	2 11	11 16.23	+21 38.9	1.280	2.214	10.9	20.8
2 21	11 5.56	+16 48.0	2.437	3.406	4.0	21.0	2 21	11 8.14	+23 25.3	1.225	2.187	8.0	20.6
3 2	10 57.57	+17 23.8	2.424	3.403	3.0	20.9	3 2	10 57.90	+25 1.2	1.195	2.159	8.1	20.5
3 12	10 49.49	+17 51.1	2.440	3.401	5.0	21.0	3 12	10 46.99	+26 12.9	1.190	2.132	11.4	20.6
3 22	10 42.05	+18 6.6	2.485	3.398	7.9	21.2	3 22	10 37.06	+26 52.0	1.208	2.104	15.7	20.8
4 1	10 35.91	+18 8.9	2.555	3.395	10.6	21.4	4 1	10 29.59	+26 55.9	1.246	2.077	19.9	21.0
4 11	10 31.53	+17 57.7	2.648	3.391	12.9	21.5	4 11	10 25.49	+26 27.4	1.298	2.049	23.5	21.1
64306	2001 <i>UH</i> ₂₉		3 3.2 103°15	7°7/22.9	18		125181	2001 <i>UW</i> ₁₁₆		3 3.2 257°47	6°6/26.9	18	
2 1	11 23.29	+33 54.1	2.537	3.376	10.1	19.5	2 1	11 23.15	+19 57.6	1.452	2.328	14.1	19.4
2 11	11 16.14	+34 56.5	2.508	3.394	8.5	19.4	2 11	11 17.08	+21 14.5	1.391	2.322	10.4	19.2
2 21	11 7.36	+35 45.7	2.506	3.413	7.7	19.4	2 21	11 8.33	+22 29.6	1.354	2.316	7.3	19.0
3 2	10 57.76	+36 15.5	2.530	3.431	8.1	19.5	3 2	10 57.90	+23 31.8	1.342	2.310	6.9	19.0
3 12	10 48.29	+36 22.7	2.582	3.448	9.4	19.6	3 12	10 47.25	+24 11.4	1.357	2.304	9.8	19.1
3 22	10 39.85	+36 7.0	2.658	3.465	11.1	19.7	3 22	10 37.83	+24 23.5	1.396	2.298	13.6	19.3
4 1	10 33.11	+35 30.3	2.757	3.482	12.7	19.9	4 1	10 30.81	+24 7.8	1.456	2.291	17.3	19.5
4 11	10 28.48	+34 36.2	2.873	3.499	14.2	20.0	4 11	10 26.86	+23 27.6	1.533	2.285	20.4	19.7
430369	2014 <i>BU</i> ₂₈		3 3.2 170°15	0°0/3.2	17		320815	2008 <i>FZ</i> ₁₃		3 3.2 44°31	0°3/2.9	18	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
67818	2000 <i>VJ</i> ₃₂		3 3.2 73°32'	1.3°/4.2	18		164060	2003 <i>WV</i> ₁₆		3 3.2 148°24'	0.1°/3.4	17	
2 1	11 20.69	+ 1 6.4	1.444	2.292	15.8	19.3	2 1	11 18.04	+ 4 21.5	2.231	3.073	11.2	21.0
2 11	11 15.03	+ 1 34.3	1.388	2.307	11.5	19.0	2 11	11 12.61	+ 4 50.8	2.159	3.077	8.0	20.8
2 21	11 7.05	+ 2 19.8	1.355	2.322	6.6	18.8	2 21	11 5.59	+ 5 29.7	2.112	3.081	4.4	20.6
3 2	10 57.75	+ 3 17.2	1.347	2.337	1.8	18.5	3 2	10 57.62	+ 6 14.2	2.094	3.085	0.5	20.3
3 12	10 48.42	+ 4 18.5	1.368	2.352	4.3	18.7	3 12	10 49.55	+ 6 59.1	2.107	3.089	3.4	20.5
3 22	10 40.29	+ 5 15.5	1.414	2.367	9.1	19.0	3 22	10 42.18	+ 7 39.6	2.148	3.092	7.1	20.7
4 1	10 34.33	+ 6 1.7	1.485	2.382	13.4	19.3	4 1	10 36.22	+ 8 11.7	2.215	3.096	10.4	20.9
4 11	10 31.10	+ 6 32.9	1.575	2.397	17.0	19.6	4 11	10 32.16	+ 8 32.8	2.306	3.098	13.2	21.1
32217	Beverlyge		3 3.2 210°37'	0°5'/2.7	18		173712	2001 <i>QD</i> ₁₃₀		3 3.2 125°39'	5°2'/8.9	18	
2 1	11 19.39	+ 6 14.6	2.164	3.011	11.3	19.2	2 1	11 20.51	-12 12.7	2.673	3.426	12.0	20.2
2 11	11 13.67	+ 6 50.9	2.083	3.005	8.1	18.9	2 11	11 14.17	-12 43.9	2.595	3.439	9.8	20.1
2 21	11 6.21	+ 7 36.3	2.029	3.000	4.3	18.7	2 21	11 6.38	-12 58.6	2.542	3.452	7.5	20.0
3 2	10 57.67	+ 8 26.2	2.003	2.993	0.6	18.4	3 2	10 57.71	-12 56.6	2.517	3.464	5.7	19.9
3 12	10 48.93	+ 9 14.7	2.007	2.987	3.8	18.6	3 12	10 48.93	-12 39.7	2.521	3.476	5.3	19.8
3 22	10 40.87	+ 9 56.8	2.040	2.980	7.7	18.9	3 22	10 40.75	-12 11.4	2.554	3.488	6.7	20.0
4 1	10 34.29	+ 10 28.4	2.099	2.972	11.2	19.1	4 1	10 33.85	-11 36.2	2.615	3.499	8.8	20.1
4 11	10 29.73	+ 10 47.2	2.181	2.964	14.1	19.3	4 11	10 28.67	-10 59.0	2.700	3.510	11.0	20.3
230371	2002 <i>FA</i> ₁₅		3 3.2 295°54'	6°6'/25.4	17		121300	1999 <i>RM</i> ₂₀₂		3 3.2 158°35'	1°5'/4.6	18	
2 1	11 19.42	+ 21 57.1	1.816	2.688	11.9	19.9	2 1	11 21.02	+ 1 15.1	2.160	2.988	12.1	19.6
2 11	11 14.26	+ 23 23.5	1.734	2.661	9.0	19.6	2 11	11 14.77	+ 1 14.4	2.083	2.991	8.9	19.4
2 21	11 6.78	+ 24 48.8	1.677	2.633	6.9	19.4	2 21	11 6.79	+ 1 24.9	2.032	2.994	5.3	19.2
3 2	10 57.75	+ 26 3.1	1.648	2.606	7.1	19.4	3 2	10 57.77	+ 1 43.9	2.010	2.997	1.9	18.9
3 12	10 48.28	+ 26 57.5	1.646	2.578	9.6	19.5	3 12	10 48.60	+ 2 7.6	2.017	3.000	3.4	19.0
3 22	10 39.57	+ 27 26.3	1.668	2.550	12.9	19.6	3 22	10 40.18	+ 2 31.7	2.054	3.003	7.0	19.3
4 1	10 32.71	+ 27 27.7	1.712	2.522	16.2	19.8	4 1	10 33.29	+ 2 52.1	2.117	3.005	10.4	19.5
4 11	10 28.43	+ 27 3.5	1.774	2.495	19.0	19.9	4 11	10 28.45	+ 3 5.5	2.204	3.007	13.4	19.7
213626	2002 <i>QX</i> ₅₈		3 3.2 268°56'	1°3'/4.3	17		468122	2014 <i>TK</i> ₁₁		3 3.2 39°01'	6°8'/9.6	18	
2 1	11 19.13	+ 0 41.4	1.755	2.595	13.9	21.5	2 1	11 16.22	-12 40.7	1.352	2.156	19.2	20.4
2 11	11 13.98	+ 1 13.3	1.660	2.575	10.3	21.2	2 11	11 11.97	-12 34.0	1.300	2.177	15.5	20.2
2 21	11 6.62	+ 2 2.7	1.589	2.555	6.0	20.9	2 21	11 5.44	-11 54.3	1.267	2.199	11.4	20.0
3 2	10 57.74	+ 3 5.4	1.545	2.534	1.7	20.6	3 2	10 57.61	-10 43.6	1.257	2.221	7.9	19.9
3 12	10 48.40	+ 4 14.9	1.529	2.513	4.0	20.7	3 12	10 49.78	- 9 9.7	1.272	2.244	7.0	19.9
3 22	10 39.74	+ 5 23.2	1.541	2.492	8.7	20.9	3 22	10 43.15	- 7 23.9	1.312	2.268	9.3	20.1
4 1	10 32.81	+ 6 23.1	1.578	2.470	13.1	21.1	4 1	10 38.67	- 5 38.3	1.376	2.293	12.9	20.4
4 11	10 28.35	+ 7 9.3	1.636	2.448	16.9	21.3	4 11	10 36.87	- 4 3.2	1.462	2.317	16.3	20.6
158522	2002 <i>FZ</i> ₁₂		3 3.2 265°86'	1°5'/1.8	18		135161	2001 <i>QN</i> ₂₄₁		3 3.2 49°31'	0°8'/2.5	18	
2 1	11 18.70	+ 9 3.3	1.925	2.784	12.0	19.9	2 1	11 19.73	+ 8 19.7	2.062	2.915	11.6	18.9
2 11	11 13.34	+ 9 42.9	1.851	2.780	8.4	19.6	2 11	11 13.87	+ 8 33.2	1.996	2.921	8.2	18.7
2 21	11 6.08	+ 10 30.0	1.802	2.775	4.5	19.4	2 21	11 6.29	+ 8 52.8	1.956	2.928	4.4	18.5
3 2	10 57.66	+ 11 18.9	1.782	2.771	1.5	19.2	3 2	10 57.71	+ 9 14.4	1.944	2.935	0.8	18.2
3 12	10 49.06	+ 12 3.2	1.790	2.767	4.7	19.4	3 12	10 49.07	+ 9 33.3	1.962	2.941	3.9	18.5
3 22	10 41.25	+ 12 37.7	1.826	2.763	8.7	19.6	3 22	10 41.26	+ 9 45.7	2.008	2.949	7.7	18.7
4 1	10 35.09	+ 12 58.6	1.887	2.758	12.3	19.8	4 1	10 35.04	+ 9 49.0	2.079	2.956	11.1	18.9
4 11	10 31.14	+ 13 4.5	1.969	2.754	15.4	20.0	4 11	10 30.89	+ 9 41.6	2.173	2.963	14.0	19.1
204755	2006 <i>JK</i> ₃₅		3 3.2 215°97'	1°3'/4.6	17		240328	2003 <i>MJ</i> ₁₀		3 3.2 193°93'	2°5'/29.8	18	
2 1	11 16.16	+ 0 0.8	2.214	3.045	11.7	21.3	2 1	11 22.49	+ 11 47.9	2.085	2.940	11.4	21.2
2 11	11 11.35	+ 0 36.5	2.133	3.043	8.6	21.0	2 11	11 15.93	+ 12 40.3	2.011	2.937	8.0	21.0
2 21	11 4.93	+ 1 26.2	2.076	3.040	5.1	20.8	2 21	11 7.48	+ 13 37.7	1.963	2.934	4.4	20.8
3 2	10 57.54	+ 2 25.9	2.048	3.037	1.6	20.6	3 2	10 57.85	+ 14 33.8	1.945	2.930	2.5	20.7
3 12	10 49.97	+ 3 30.3	2.050	3.033	3.2	20.7	3 12	10 48.04	+ 15 21.9	1.957	2.926	5.3	20.8
3 22	10 43.03	+ 4 33.4	2.080	3.030	6.9	20.9	3 22	10 39.02	+ 15 57.4	1.997	2.920	8.9	21.0
4 1	10 37.45	+ 5 29.9	2.137	3.027	10.3	21.1	4 1	10 31.65	+ 16 17.2	2.063	2.913	12.3	21.2
4 11	10 33.73	+ 6 15.5	2.218	3.023	13.2	21.3	4 11	10 26.50	+ 16 20.7	2.151	2.906	15.1	21.4
282248	2002 <i>GD</i> ₆₁		3 3.2 356°80'	2°9'/29.7	17		187874	2000 <i>QH</i> ₉₁		3 3.2 235°73'	1°2'/4.5	18	
2 1	11 19.13	+ 12 29.1	1.774	2.642	12.4	20.5	2 1	11 19.01	+ 0 31.0	2.380	3.204	11.2	21.5
2 11	11 13.74	+ 13 14.9	1.708	2.641	8.7	20.3	2 11	11 13.38	+ 0 58.0	2.281	3.188	8.3	21.3
2 21	11 6.32	+ 14 5.3	1.668	2.640	4.9	20.0	2 21	11 6.08	+ 1 37.6	2.209	3.172	4.9	21.0
3 2	10 57.69	+ 14 53.4	1.655	2.640	2.9	19.9	3 2	10 57.70	+ 2 26.9	2.166	3.154	1.6	20.8
3 12	10 48.92	+ 15 32.4	1.670	2.640	5.9	20.1	3 12	10 49.03	+ 3 21.1	2.153	3.136	3.2	20.9
3 22	10 41.08	+ 15 57.3	1.711	2.640	9.8	20.3	3 22	10 40.88	+ 4 14.9	2.170	3.118	6.8	21.1
4 1	10 35.05	+ 16 5.3	1.777	2.640	13.3	20.5	4 1	10 34.01	+ 5 3.4	2.215	3.098	10.2	21.2
4 11	10 31.40	+ 15 56.1	1.862	2.640	16.4	20.7	4 11	10 29.01	+ 5 42.7	2.283	3.078	13.2	21.4
363530	2003 <i>UN</i> ₂₆₀		3 3.2 162°79'	1°7'/4.7	18		34398	Terryschmidt		3 3.2 106°00'	1°9'/1.3	18	
2 1	11 19.74	- 0 21.8	1.737	2.572	14.2	21.5	2 1	11 18.63	+ 9 30.2	1.901	2.761	12.0	18.4
2 11	11 14.20	+ 0 7.6	1.664	2.575	10.5	21.2	2 11	11 13.22	+ 10 25.6	1.840	2.769	8.4	18.2
2 21	11 6.60	+ 0 54.2	1.614	2.578	6.2	21.0	2 21	11 5.98	+ 11 28.2	1.804	2.777	4.5	18.0
3 2	10 57.73	+ 1 53.6	1.592	2.580	2.1	20.7	3 2	10 57.68	+ 12 31.3	1.797	2.785	1.9	17.8
3 12	10 48.67	+ 2 59.1	1.598	2.582	3.9	20.8	3 12	10 49.30	+ 13 27.8	1.819	2.793	5.0	18.0
3 22	10 40.50	+ 4 3.1	1.632	2.584	8.2	21.1	3 22	10 41.80	+ 14 12.2	1.868	2.801	8.8	18.3
4 1	10 34.14	+ 4 59.1	1.691	2.585	12.3	21.3	4 1	10 35.98	+ 14 41.2	1.943	2.808	12.3	18.5
4 11	10 30.19	+ 5 42.1	1.772	2.586	15.7	21.6	4 11	10 32.35	+ 14 53.4	2.038	2.816	15.2	18.7
166643	2002 <i>SN</i> ₅₆		3 3.2 89°98'</										

EPHEMERIDES

3 3.2

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
381174	2007 <i>JT</i> ₆		3 3.2 184°85	1.2°/ 4.6	17		519537	2012 <i>KS</i> ₅₂		3 3.2 119°39	2.9°/28.8	18	
2 1	11 17.71	+ 0 19.0	2.553	3.376	10.6	22.3	2 1	11 18.56	+13 19.9	2.326	3.185	10.2	21.8
2 11	11 12.26	+ 0 48.1	2.470	3.376	7.8	22.2	2 11	11 12.88	+14 30.7	2.274	3.202	7.1	21.6
2 21	11 5.38	+ 1 28.8	2.413	3.375	4.6	22.0	2 21	11 5.70	+15 44.1	2.249	3.220	4.1	21.5
3 2	10 57.63	+ 2 17.8	2.386	3.374	1.5	21.7	3 2	10 57.68	+16 53.7	2.255	3.236	3.0	21.4
3 12	10 49.73	+ 3 10.7	2.390	3.373	2.9	21.8	3 12	10 49.65	+17 53.4	2.291	3.252	5.3	21.6
3 22	10 42.41	+ 4 2.8	2.423	3.371	6.2	22.0	3 22	10 42.39	+18 39.1	2.355	3.268	8.3	21.8
4 1	10 36.30	+ 4 49.6	2.484	3.368	9.2	22.2	4 1	10 36.55	+19 8.6	2.444	3.282	11.0	22.0
4 11	10 31.88	+ 5 27.8	2.570	3.365	11.9	22.4	4 11	10 32.58	+19 21.6	2.556	3.297	13.3	22.2
342983	2009 <i>BN</i> ₄₆		3 3.2 122°32	0.9°/ 2.1	17		58333	1994 <i>UL</i> ₁		3 3.2 113°32	0.4°/ 2.9	18	
2 1	11 14.82	+ 5 57.3	2.273	3.124	10.7	21.1	2 1	11 24.42	+ 5 35.5	1.706	2.553	13.9	19.9
2 11	11 10.35	+ 7 5.9	2.201	3.126	7.5	20.9	2 11	11 17.36	+ 6 13.3	1.653	2.575	9.8	19.7
2 21	11 4.38	+ 8 24.3	2.156	3.129	4.0	20.7	2 21	11 8.22	+ 7 1.7	1.625	2.596	5.2	19.5
3 2	10 57.52	+ 9 46.9	2.140	3.131	0.9	20.5	3 2	10 57.96	+ 7 54.6	1.626	2.617	0.6	19.2
3 12	10 50.53	+11 6.9	2.155	3.133	3.9	20.7	3 12	10 47.75	+ 8 44.7	1.656	2.636	4.4	19.5
3 22	10 44.17	+12 18.2	2.198	3.135	7.4	20.9	3 22	10 38.71	+ 9 26.2	1.713	2.655	8.7	19.8
4 1	10 39.13	+13 16.4	2.268	3.137	10.6	21.1	4 1	10 31.69	+ 9 55.1	1.797	2.674	12.6	20.1
4 11	10 35.86	+13 59.0	2.360	3.139	13.3	21.3	4 11	10 27.21	+10 9.4	1.901	2.691	15.7	20.3
427411	1999 <i>VF</i> ₄₂		3 3.2 43°11	1.7°/ 4.8	18		424653	2008 <i>QK</i> ₂₁		3 3.2 224°37	3.2°/ 6.5	17	
2 1	11 17.88	- 0 1.1	1.834	2.671	13.5	20.8	2 1	11 18.35	- 5 6.8	2.236	3.041	12.5	21.1
2 11	11 12.78	+ 0 15.7	1.763	2.675	10.0	20.6	2 11	11 12.97	- 5 0.1	2.145	3.034	9.6	20.9
2 21	11 5.80	+ 0 47.6	1.716	2.680	6.0	20.4	2 21	11 5.89	- 4 37.0	2.079	3.026	6.5	20.7
3 2	10 57.68	+ 1 31.1	1.696	2.684	2.2	20.1	3 2	10 57.72	- 3 59.3	2.040	3.018	3.7	20.5
3 12	10 49.42	+ 2 20.4	1.705	2.689	3.7	20.3	3 12	10 49.30	- 3 10.9	2.030	3.009	3.9	20.5
3 22	10 41.99	+ 3 9.4	1.741	2.694	7.7	20.5	3 22	10 41.48	- 2 17.1	2.049	3.001	6.9	20.7
4 1	10 36.24	+ 3 52.2	1.802	2.699	11.5	20.7	4 1	10 35.04	- 1 23.5	2.096	2.991	10.2	20.8
4 11	10 32.71	+ 4 24.6	1.886	2.704	14.7	21.0	4 11	10 30.54	- 0 35.4	2.166	2.982	13.1	21.0
3852	Glennford		3 3.2 125°36	0.5°/ 3.8	18		193878	2001 <i>QT</i> ₁₇₈		3 3.2 125°02	0.0°/ 3.1	18	
2 1	11 16.84	+ 2 51.9	2.651	3.483	10.0	17.7	2 1	11 22.54	+ 3 26.8	1.793	2.634	13.5	20.8
2 11	11 11.53	+ 3 22.2	2.584	3.497	7.1	17.5	2 11	11 16.01	+ 4 18.0	1.735	2.653	9.6	20.5
2 21	11 4.92	+ 4 1.4	2.543	3.509	4.0	17.3	2 21	11 7.50	+ 5 22.1	1.702	2.672	5.2	20.3
3 2	10 57.58	+ 4 46.2	2.531	3.522	0.8	17.1	3 2	10 57.89	+ 6 33.0	1.698	2.689	0.6	20.0
3 12	10 50.19	+ 5 32.1	2.551	3.534	2.8	17.3	3 12	10 48.27	+ 7 42.8	1.724	2.706	4.0	20.3
3 22	10 43.41	+ 6 15.2	2.600	3.545	6.0	17.5	3 22	10 39.68	+ 8 44.8	1.778	2.722	8.4	20.6
4 1	10 37.81	+ 6 51.8	2.677	3.557	8.8	17.7	4 1	10 32.97	+ 9 33.8	1.859	2.737	12.1	20.9
4 11	10 33.80	+ 7 19.3	2.778	3.567	11.2	17.9	4 11	10 28.65	+10 7.2	1.960	2.751	15.2	21.1
214202	2005 <i>EU</i> ₅₀		3 3.2 311°93	0.3°/ 3.4	18		226744	2004 <i>RA</i> ₁₉		3 3.2 84°97	3.0°/ 6.2	18	
2 1	11 21.59	+ 4 56.4	1.482	2.339	15.0	20.2	2 1	11 18.08	- 4 24.1	1.893	2.711	13.9	20.5
2 11	11 15.89	+ 5 5.2	1.407	2.332	10.9	20.0	2 11	11 12.83	- 4 4.6	1.828	2.725	10.6	20.4
2 21	11 7.70	+ 5 26.5	1.355	2.326	6.0	19.7	2 21	11 5.79	- 3 26.6	1.786	2.739	6.8	20.2
3 2	10 57.91	+ 5 55.7	1.330	2.320	0.8	19.3	3 2	10 57.70	- 2 33.2	1.771	2.752	3.5	20.0
3 12	10 47.81	+ 6 26.2	1.331	2.315	4.6	19.5	3 12	10 49.54	- 1 30.3	1.784	2.766	3.9	20.0
3 22	10 38.74	+ 6 51.9	1.359	2.309	9.7	19.8	3 22	10 42.24	- 0 24.7	1.825	2.779	7.3	20.3
4 1	10 31.83	+ 7 7.5	1.410	2.304	14.2	20.1	4 1	10 36.59	+ 0 37.0	1.893	2.793	10.9	20.5
4 11	10 27.76	+ 7 10.1	1.481	2.299	18.1	20.3	4 11	10 33.08	+ 1 29.4	1.984	2.806	13.9	20.7
452720	2005 <i>YJ</i> ₁₉₉		3 3.2 7°99	3.0°/ 1.6	15		378948	2008 <i>UP</i> ₁₇₆		3 3.2 149°97	0.3°/ 2.9	17	
2 1	11 17.30	+10 56.5	0.883	1.782	18.5	19.9	2 1	11 18.45	+ 5 47.2	2.320	3.163	10.8	21.7
2 11	11 13.66	+11 20.4	0.836	1.783	13.1	19.6	2 11	11 12.86	+ 6 20.2	2.249	3.170	7.6	21.5
2 21	11 6.72	+11 53.8	0.808	1.786	7.1	19.3	2 21	11 5.73	+ 7 1.4	2.205	3.175	4.1	21.3
3 2	10 57.79	+12 26.6	0.801	1.790	3.0	19.1	3 2	10 57.70	+ 7 46.6	2.190	3.181	0.5	21.0
3 12	10 48.77	+12 48.2	0.816	1.797	7.6	19.4	3 12	10 49.57	+ 8 30.7	2.205	3.186	3.4	21.3
3 22	10 41.46	+12 51.6	0.852	1.806	13.4	19.7	3 22	10 42.14	+ 9 9.2	2.249	3.191	7.0	21.5
4 1	10 37.18	+12 33.8	0.907	1.816	18.6	20.0	4 1	10 36.09	+ 9 38.5	2.321	3.195	10.2	21.7
4 11	10 36.53	+11 55.3	0.978	1.828	22.8	20.3	4 11	10 31.88	+ 9 56.5	2.414	3.199	12.9	21.9
437039	2012 <i>TR</i> ₃₁₂		3 3.2 138°43	4.4°/27.1	17		319007	2005 <i>UN</i> ₄₇₉		3 3.2 161°75	15.3°/23.5	16	
2 1	11 19.22	+20 40.8	2.495	3.356	9.5	21.2	2 1	11 42.25	+39 19.6	1.224	2.062	18.8	20.1
2 11	11 13.32	+21 32.8	2.439	3.362	7.0	21.1	2 11	11 31.31	+40 43.3	1.188	2.067	16.5	19.9
2 21	11 5.93	+22 21.6	2.410	3.369	4.9	21.0	2 21	11 16.18	+41 36.3	1.173	2.070	15.3	19.9
3 2	10 57.69	+23 1.7	2.411	3.375	4.6	21.0	3 2	10 58.84	+41 42.8	1.179	2.073	15.7	19.9
3 12	10 49.43	+23 28.4	2.441	3.381	6.4	21.1	3 12	10 42.00	+40 56.6	1.208	2.076	17.6	20.0
3 22	10 41.91	+23 39.2	2.498	3.387	8.9	21.2	3 22	10 28.00	+39 22.4	1.257	2.078	20.1	20.2
4 1	10 35.80	+23 33.4	2.580	3.392	11.3	21.4	4 1	10 18.27	+37 11.7	1.323	2.079	22.7	20.4
4 11	10 31.53	+23 12.2	2.683	3.397	13.4	21.6	4 11	10 13.15	+34 37.5	1.404	2.080	25.0	20.6
183396	2002 <i>XZ</i> ₇₆		3 3.2 105°59	4.9°/26.8	18		303296	2004 <i>ST</i> ₁₄		3 3.2 185°91	4.2°/28.4	18	
2 1	11 19.16	+21 1.4	2.281	3.146	10.1	20.2	2 1	11 23.50	+15 51.2	1.847	2.710	12.2	21.5
2 11	11 13.38	+22 1.1	2.230	3.155	7.5	20.1	2 11	11 16.85	+16 57.4	1.782	2.710	8.7	21.3
2 21	11 5.99	+22 57.4	2.206	3.164	5.3	20.0	2 21	11 8.06	+18 5.5	1.742	2.710	5.4	21.1
3 2	10 57.70	+23 43.6	2.211	3.173	5.1	20.0	3 2	10 57.97	+19 7.2	1.731	2.709	4.4	21.0
3 12	10 49.40	+24 14.7	2.244	3.182	7.0	20.1	3 12	10 47.72	+19 54.9	1.749	2.707	7.0	21.2
3 22	10 41.92	+24 28.0	2.304	3.191	9.6	20.3	3 22	10 38.43	+20 23.8	1.795	2.704	10.6	21.4
4 1	10 35.98	+24 22.9	2.388	3.200	12.1	20.4	4 1	10 31.06	+20 32.0	1.864	2.701	14.0	21.6
4 11	10 32.01	+24 0.8	2.492	3.208	14.2	20.6	4 11	10 26.19	+20 20.6	1.953	2.696	16.8	21.8
233906	2009 <i>CT</i> ₃₈		3 3.2 326°53	0.4°/ 2.9	17		405343	2003 <i>UP</i> ₃₄₀		3 3.2 135°16			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
194423	2001 VC ₆₂		3 3.2 51°73	4.7/29.3	18		50378	2000 CV ₈₈		3 3.2 269°72	2°3/29.5	18	R
2 1	11 24.42	+15 21.8	1.234	2.113	15.8	19.8	2 1	11 16.07	+10 32.5	2.194	3.055	10.6	18.7
2 11	11 18.01	+16 6.7	1.188	2.125	11.2	19.6	2 11	11 11.43	+11 43.8	2.110	3.040	7.5	18.5
2 21	11 8.80	+16 52.8	1.165	2.137	6.7	19.4	2 21	11 5.10	+13 2.7	2.052	3.025	4.1	18.2
3 2	10 58.05	+17 30.4	1.167	2.149	4.8	19.3	3 2	10 57.68	+14 22.8	2.024	3.010	2.4	18.1
3 12	10 47.38	+17 50.9	1.195	2.162	8.1	19.5	3 12	10 50.00	+15 36.8	2.025	2.994	5.1	18.2
3 22	10 38.30	+17 50.0	1.246	2.175	12.6	19.8	3 22	10 42.92	+16 38.8	2.055	2.979	8.7	18.4
4 1	10 31.92	+17 27.6	1.320	2.189	16.7	20.1	4 1	10 37.21	+17 24.6	2.110	2.963	11.9	18.6
4 11	10 28.76	+16 45.9	1.411	2.203	20.1	20.4	4 11	10 33.43	+17 52.4	2.186	2.947	14.7	18.8
235609	2004 PQ ₈₁		3 3.2 246°34	0°9/ 2.5	17		14918	1994 BP ₄		3 3.2 330°59	2°3/29.8	18	R
2 1	11 19.96	+ 5 10.8	1.614	2.470	14.0	21.0	2 1	11 14.25	+ 9 9.0	1.765	2.635	12.3	17.1
2 11	11 14.69	+ 6 13.1	1.531	2.457	10.0	20.7	2 11	11 10.41	+10 25.5	1.689	2.623	8.6	16.8
2 21	11 7.07	+ 7 31.1	1.471	2.444	5.4	20.4	2 21	11 4.64	+11 52.7	1.638	2.612	4.7	16.6
3 2	10 57.88	+ 8 57.8	1.439	2.430	0.9	20.1	3 2	10 57.63	+13 22.8	1.614	2.602	2.4	16.4
3 12	10 48.29	+10 23.6	1.436	2.416	5.0	20.3	3 12	10 50.37	+14 46.6	1.619	2.591	5.7	16.6
3 22	10 39.53	+11 39.4	1.459	2.401	10.0	20.6	3 22	10 43.85	+15 56.4	1.650	2.582	9.8	16.8
4 1	10 32.69	+12 38.4	1.507	2.386	14.4	20.8	4 1	10 38.97	+16 47.0	1.705	2.573	13.6	17.0
4 11	10 28.51	+13 17.0	1.574	2.370	18.1	21.0	4 11	10 36.34	+17 16.3	1.779	2.565	16.8	17.2
458526	2011 CR ₁₀₆		3 3.2 267°95	0°9/ 2.4	17		173066	2006 SY ₁₂₇		3 3.2 146°77	5°3/ 9.4	17	
2 1	11 17.11	+ 6 0.7	1.893	2.748	12.3	21.3	2 1	11 18.00	-13 14.3	2.694	3.445	12.0	20.3
2 11	11 12.30	+ 6 54.9	1.815	2.741	8.7	21.1	2 11	11 12.47	-13 35.0	2.611	3.451	9.9	20.1
2 21	11 5.60	+ 8 0.7	1.762	2.735	4.7	20.8	2 21	11 5.53	-13 38.4	2.551	3.457	7.6	20.0
3 2	10 57.71	+ 9 12.0	1.737	2.728	0.9	20.5	3 2	10 57.73	-13 24.6	2.518	3.463	5.8	19.9
3 12	10 49.59	+10 21.6	1.742	2.721	4.4	20.8	3 12	10 49.77	-12 55.5	2.513	3.468	5.3	19.8
3 22	10 42.22	+11 22.4	1.774	2.714	8.6	21.0	3 22	10 42.37	-12 14.8	2.537	3.473	6.6	19.9
4 1	10 36.45	+12 9.5	1.831	2.708	12.3	21.2	4 1	10 36.16	-11 27.5	2.589	3.478	8.7	20.1
4 11	10 32.86	+12 39.9	1.909	2.701	15.5	21.4	4 11	10 31.60	-10 38.6	2.665	3.482	10.9	20.2
470037	2006 SB ₅₈		3 3.2 185°12	3°4/ 7.5	17		327277	2005 SJ ₂₄₇		3 3.2 170°09	2°4/ 5.7	16	
2 1	11 15.79	- 7 50.8	2.709	3.495	11.1	22.4	2 1	11 17.82	- 3 10.9	1.998	2.819	13.2	21.3
2 11	11 10.88	- 7 35.4	2.621	3.495	8.7	22.2	2 11	11 12.68	- 2 40.1	1.920	2.821	9.9	21.1
2 21	11 4.65	- 7 4.4	2.557	3.494	6.1	22.0	2 21	11 5.77	- 1 51.6	1.866	2.822	6.3	20.9
3 2	10 57.60	- 6 19.5	2.522	3.493	3.8	21.9	3 2	10 57.76	- 0 48.9	1.839	2.824	2.9	20.7
3 12	10 50.41	- 5 24.1	2.517	3.492	3.7	21.9	3 12	10 49.57	+ 0 22.2	1.842	2.825	3.6	20.7
3 22	10 43.73	- 4 22.9	2.541	3.491	5.8	22.0	3 22	10 42.12	+ 1 34.6	1.873	2.826	7.3	20.9
4 1	10 38.16	- 3 21.0	2.594	3.489	8.5	22.2	4 1	10 36.21	+ 2 41.9	1.931	2.826	10.9	21.2
4 11	10 34.16	- 2 23.1	2.671	3.487	10.9	22.3	4 11	10 32.38	+ 3 38.7	2.011	2.827	14.0	21.4
84635	2002 VD ₅₄		3 3.2 325°30	1°3/ 2.1	18		33554	1999 JU ₁₇		3 3.2 230°28	1°7/ 5.4	18	
2 1	11 19.01	+ 7 30.7	1.593	2.456	13.8	19.6	2 1	11 16.29	- 1 33.7	2.888	3.701	9.8	19.5
2 11	11 13.89	+ 8 15.8	1.523	2.454	9.8	19.3	2 11	11 11.22	- 1 13.2	2.790	3.688	7.3	19.3
2 21	11 6.55	+ 9 12.0	1.477	2.451	5.2	19.0	2 21	11 4.85	- 0 41.5	2.719	3.675	4.5	19.1
3 2	10 57.82	+10 12.3	1.458	2.448	1.3	18.7	3 2	10 57.66	- 0 0.6	2.677	3.662	2.0	18.9
3 12	10 48.88	+11 8.6	1.467	2.446	5.1	19.0	3 12	10 50.27	+ 0 45.8	2.666	3.648	2.7	18.9
3 22	10 40.89	+11 54.0	1.502	2.444	9.7	19.3	3 22	10 43.32	+ 1 33.7	2.685	3.634	5.6	19.1
4 1	10 34.86	+12 23.7	1.561	2.442	13.9	19.5	4 1	10 37.39	+ 2 19.1	2.732	3.619	8.4	19.3
4 11	10 31.40	+12 35.6	1.639	2.440	17.3	19.7	4 11	10 32.94	+ 2 58.4	2.804	3.604	10.9	19.4
377684	2005 VE ₃₂		3 3.2 209°50	7°2/10.5	17		473742	2016 EV ₄		3 3.2 353°29	3°0/ 1.2	18	
2 1	11 17.44	-15 45.2	1.936	2.695	15.8	20.8	2 1	11 19.35	+11 50.8	1.345	2.223	14.8	20.8
2 11	11 12.58	-15 59.0	1.852	2.694	13.2	20.7	2 11	11 14.44	+12 25.9	1.282	2.219	10.5	20.5
2 21	11 5.77	-15 46.7	1.789	2.693	10.4	20.5	2 21	11 6.97	+13 7.4	1.241	2.215	5.8	20.3
3 2	10 57.74	-15 7.6	1.750	2.693	8.1	20.3	3 2	10 57.90	+13 47.4	1.225	2.212	3.0	20.1
3 12	10 49.44	-14 4.8	1.736	2.692	7.3	20.3	3 12	10 48.64	+14 17.5	1.235	2.210	6.6	20.3
3 22	10 41.88	-12 44.7	1.750	2.691	8.7	20.4	3 22	10 40.54	+14 31.8	1.269	2.209	11.4	20.5
4 1	10 35.94	-11 15.5	1.790	2.690	11.3	20.5	4 1	10 34.74	+14 27.2	1.326	2.209	15.7	20.8
4 11	10 32.23	- 9 46.5	1.852	2.689	14.2	20.7	4 11	10 31.89	+14 3.7	1.401	2.209	19.4	21.0
501602	2014 QS ₃₂₂		3 3.2 228°03	0°8/ 2.5	17		42366	2002 CL ₁₂₅		3 3.2 118°87	1°0/ 4.2	18	
2 1	11 20.96	+ 6 8.7	1.866	2.716	12.7	22.0	2 1	11 22.27	+ 0 51.1	1.810	2.644	13.8	19.8
2 11	11 15.13	+ 6 56.8	1.782	2.705	9.1	22.0	2 11	11 15.81	+ 1 30.8	1.752	2.664	10.0	19.6
2 21	11 7.20	+ 7 56.5	1.722	2.694	4.9	21.7	2 21	11 7.42	+ 2 25.4	1.718	2.683	5.7	19.4
3 2	10 57.90	+ 9 2.1	1.691	2.682	0.9	21.4	3 2	10 57.95	+ 3 29.7	1.712	2.702	1.5	19.1
3 12	10 48.28	+10 6.1	1.689	2.669	4.5	21.7	3 12	10 48.47	+ 4 36.6	1.736	2.720	3.7	19.3
3 22	10 39.42	+11 1.7	1.716	2.655	8.9	21.9	3 22	10 40.00	+ 5 39.0	1.789	2.737	7.9	19.6
4 1	10 32.27	+11 43.8	1.768	2.641	12.9	22.1	4 1	10 33.38	+ 6 31.5	1.868	2.754	11.7	19.9
4 11	10 27.49	+12 9.5	1.841	2.626	16.3	22.3	4 11	10 29.11	+ 7 10.3	1.969	2.769	14.8	20.1
468594	2007 TX ₃₆₉		3 3.2 94°64	7°5/23.8	18		465424	2008 PW ₆		3 3.2 219°43	5°2/ 8.9	17	
2 1	11 22.35	+30 51.1	2.286	3.137	10.6	20.9	2 1	11 17.96	-12 9.6	2.373	3.138	13.1	21.8
2 11	11 15.67	+31 56.4	2.251	3.151	8.7	20.7	2 11	11 12.68	-12 10.7	2.277	3.130	10.6	21.6
2 21	11 7.24	+32 50.0	2.241	3.165	7.6	20.7	2 21	11 5.76	-11 51.8	2.204	3.122	8.0	21.5
3 2	10 57.89	+33 25.1	2.259	3.178	7.9	20.7	3 2	10 57.78	-11 13.2	2.157	3.113	5.8	21.3
3 12	10 48.63	+33 37.4	2.304	3.192	9.4	20.9	3 12	10 49.53	-10 17.8	2.139	3.104	5.3	21.2
3 22	10 40.40	+33 26.1	2.373	3.205	11.4	21.0	3 22	10 41.84	- 9 10.8	2.150	3.094	7.1	21.3
4 1	10 33.93	+32 52.9	2.465	3.218	13.4	21.2	4 1	10 35.45	- 7 58.5	2.188	3.083	9.8	21.5
4 11	10 29.66	+32 1.3	2.575	3.231	15.1	21.3	4 11	10 30.92	- 6 47.4	2.250	3.072	12.5	21.6
246837	Bethfabinsky		3 3.2 291°79	4°1/ 7.3	18		71314	2000 AW ₇₆		3 3.2 97°97	1°0/ 2.2	18	R
2 1	11 16.85	- 7 5.0	2.179	2.979	13.0	20.1							

EPHEMERIDES

3 3.2

3 3.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
143833	2003 <i>WB</i> ₁₆₁		3 3.2 280°85	2.4/ 1.3	17		88539	2001 <i>QZ</i> ₁₈₈		3 3.3 36°59	3°0/29.4	18	
2 1	11 20.11	+ 9 58.5	1.596	2.462	13.6	20.2	2 1	11 15.83	+ 8 51.2	1.417	2.293	14.4	18.8
2 11	11 14.89	+10 51.8	1.512	2.444	9.7	19.9	2 11	11 11.74	+10 35.4	1.364	2.302	10.0	18.5
2 21	11 7.24	+11 55.0	1.452	2.425	5.3	19.6	2 21	11 5.42	+12 31.3	1.337	2.312	5.4	18.3
3 2	10 57.96	+13 0.7	1.419	2.407	2.5	19.3	3 2	10 57.77	+14 27.5	1.335	2.322	3.1	18.2
3 12	10 48.25	+14 0.0	1.413	2.388	6.1	19.5	3 12	10 50.03	+16 11.8	1.361	2.333	6.8	18.4
3 22	10 39.37	+14 45.3	1.434	2.369	10.7	19.7	3 22	10 43.39	+17 34.8	1.413	2.344	11.2	18.7
4 1	10 32.46	+15 11.8	1.478	2.350	15.1	19.9	4 1	10 38.79	+18 31.7	1.487	2.355	15.2	19.0
4 11	10 28.28	+15 17.8	1.542	2.331	18.7	20.1	4 11	10 36.80	+19 1.6	1.580	2.367	18.4	19.2
432550	2010 <i>JC</i> ₄₅		3 3.2 176°69	1°6/ 5.5	17		244184	2001 <i>XR</i> ₂₀₅		3 3.3 67°66	2°3/ 5.8	18	
2 1	11 14.64	- 2 46.5	2.694	3.508	10.4	21.5	2 1	11 15.93	- 3 8.5	2.207	3.025	12.2	20.4
2 11	11 10.07	- 2 1.0	2.611	3.509	7.7	21.4	2 11	11 11.13	- 2 42.0	2.142	3.041	9.1	20.2
2 21	11 4.23	- 1 1.7	2.553	3.510	4.8	21.2	2 21	11 4.84	- 2 0.3	2.102	3.057	5.8	20.0
3 2	10 57.61	+ 0 7.9	2.525	3.510	2.0	21.0	3 2	10 57.71	- 1 6.6	2.090	3.073	2.7	19.8
3 12	10 50.86	+ 1 23.2	2.528	3.511	2.7	21.0	3 12	10 50.52	- 0 6.2	2.107	3.090	3.3	19.9
3 22	10 44.63	+ 2 38.7	2.560	3.511	5.7	21.2	3 22	10 44.06	+ 0 55.2	2.153	3.106	6.4	20.1
4 1	10 39.50	+ 3 49.4	2.621	3.511	8.6	21.4	4 1	10 38.97	+ 1 52.2	2.225	3.122	9.6	20.3
4 11	10 35.88	+ 4 51.1	2.707	3.510	11.2	21.6	4 11	10 35.69	+ 2 40.5	2.322	3.138	12.4	20.6
258394	2001 <i>XA</i> ₈₈		3 3.2 59°72	3°1/29.6	18		158531	2002 <i>GB</i> ₅₂		3 3.3 72°49	2°7/29.9	18	
2 1	11 19.68	+11 48.6	1.588	2.458	13.4	20.0	2 1	11 20.08	+12 5.2	1.797	2.662	12.4	20.0
2 11	11 14.15	+12 53.1	1.544	2.478	9.3	19.8	2 11	11 14.33	+12 53.1	1.744	2.675	8.7	19.8
2 21	11 6.57	+14 2.5	1.525	2.498	5.2	19.6	2 21	11 6.66	+13 45.1	1.716	2.689	4.8	19.6
3 2	10 57.86	+15 8.4	1.533	2.518	3.2	19.5	3 2	10 57.91	+14 34.6	1.716	2.702	2.7	19.5
3 12	10 49.23	+16 2.6	1.569	2.539	6.2	19.8	3 12	10 49.17	+15 14.7	1.745	2.715	5.6	19.7
3 22	10 41.75	+16 39.7	1.631	2.559	10.2	20.1	3 22	10 41.43	+15 40.9	1.800	2.729	9.4	20.0
4 1	10 36.29	+16 57.3	1.717	2.580	13.7	20.3	4 1	10 35.52	+15 50.9	1.880	2.742	12.8	20.2
4 11	10 33.30	+16 55.8	1.822	2.601	16.7	20.6	4 11	10 31.92	+15 44.6	1.981	2.756	15.6	20.4
397468	2007 <i>HS</i> ₇₃		3 3.2 229°64	4°0/28.8	17		224467	2005 <i>VL</i> ₅₄		3 3.3 269°45	1°6/ 1.7	17	
2 1	11 24.00	+15 1.4	1.786	2.649	12.6	22.3	2 1	11 18.60	+ 8 21.9	1.868	2.727	12.3	21.1
2 11	11 17.43	+16 2.3	1.708	2.636	9.0	22.1	2 11	11 13.50	+ 9 15.2	1.782	2.711	8.7	20.8
2 21	11 8.53	+17 6.9	1.655	2.624	5.4	21.8	2 21	11 6.37	+10 18.5	1.722	2.695	4.7	20.5
3 2	10 58.11	+18 6.7	1.630	2.610	4.2	21.7	3 2	10 57.90	+11 25.5	1.690	2.679	1.6	20.3
3 12	10 47.36	+18 53.8	1.634	2.596	7.0	21.9	3 12	10 49.10	+12 28.7	1.686	2.662	5.0	20.5
3 22	10 37.50	+19 22.5	1.666	2.580	10.9	22.1	3 22	10 41.01	+13 21.4	1.710	2.646	9.2	20.7
4 1	10 29.58	+19 30.4	1.721	2.564	14.7	22.2	4 1	10 34.57	+13 58.7	1.759	2.629	13.1	20.9
4 11	10 24.30	+19 18.0	1.796	2.548	17.8	22.4	4 11	10 30.43	+14 18.3	1.828	2.612	16.4	21.1
374515	2005 <i>YM</i> ₂₄₅		3 3.3 195°77	0°0/ 3.1	17		298821	2004 <i>RS</i> ₇₃		3 3.3 224°26	1°9/ 1.8	18	
2 1	11 20.07	+ 5 11.6	2.100	2.944	11.8	21.2	2 1	11 23.12	+ 9 17.8	1.664	2.523	13.5	21.0
2 11	11 14.22	+ 5 32.3	2.023	2.942	8.4	21.0	2 11	11 16.86	+ 9 58.6	1.587	2.516	9.6	20.7
2 21	11 6.60	+ 6 2.2	1.971	2.941	4.6	20.7	2 21	11 8.25	+10 48.1	1.535	2.508	5.2	20.5
3 2	10 57.89	+ 6 37.4	1.948	2.939	0.5	20.4	3 2	10 58.12	+11 39.6	1.510	2.499	1.9	20.2
3 12	10 49.01	+ 7 12.8	1.955	2.937	3.6	20.6	3 12	10 47.69	+12 25.4	1.514	2.491	5.4	20.4
3 22	10 40.88	+ 7 43.7	1.990	2.934	7.5	20.9	3 22	10 38.20	+12 59.2	1.545	2.481	10.0	20.7
4 1	10 34.27	+ 8 6.1	2.052	2.932	11.1	21.1	4 1	10 30.72	+13 17.1	1.600	2.472	14.1	20.9
4 11	10 29.74	+ 8 17.7	2.136	2.929	14.1	21.3	4 11	10 25.91	+13 17.8	1.676	2.461	17.6	21.1
233944	2009 <i>WL</i> ₄₅		3 3.3 123°15	2°2/ 5.5	18		203481	2002 <i>AG</i> ₅₀		3 3.3 108°14	1°1/ 4.2	18	
2 1	11 17.61	- 2 22.4	1.969	2.794	13.2	20.7	2 1	11 22.56	+ 1 22.4	1.603	2.444	14.9	20.7
2 11	11 12.55	- 1 57.1	1.895	2.799	9.9	20.5	2 11	11 16.25	+ 1 51.3	1.545	2.461	10.8	20.5
2 21	11 5.71	- 1 15.0	1.845	2.803	6.1	20.2	2 21	11 7.77	+ 2 36.0	1.511	2.477	6.2	20.2
3 2	10 57.80	- 0 19.6	1.822	2.807	2.7	20.0	3 2	10 58.05	+ 3 31.3	1.503	2.493	1.6	20.0
3 12	10 49.73	+ 0 43.4	1.827	2.811	3.6	20.1	3 12	10 48.30	+ 4 29.7	1.524	2.508	4.0	20.2
3 22	10 42.42	+ 1 47.4	1.862	2.815	7.3	20.3	3 22	10 39.67	+ 5 24.0	1.573	2.523	8.6	20.5
4 1	10 36.68	+ 2 46.2	1.922	2.819	10.9	20.6	4 1	10 33.09	+ 6 8.2	1.646	2.537	12.7	20.8
4 11	10 33.02	+ 3 34.8	2.005	2.822	14.0	20.8	4 11	10 29.10	+ 6 38.6	1.741	2.551	16.1	21.0
244727	2003 <i>QX</i> ₁₁₄		3 3.3 259°33	0°1/ 3.4	16		386242	2008 <i>AH</i> ₇₂		3 3.3 116°64	5°5/10.0	18	
2 1	11 21.65	+ 4 16.4	1.749	2.596	13.6	21.7	2 1	11 19.88	-15 1.8	2.880	3.612	11.7	21.9
2 11	11 15.85	+ 4 45.4	1.655	2.576	9.9	21.4	2 11	11 13.70	-15 30.0	2.806	3.630	9.7	21.8
2 21	11 7.74	+ 5 27.9	1.586	2.556	5.5	21.1	2 21	11 6.18	-15 41.2	2.756	3.648	7.7	21.7
3 2	10 58.05	+ 6 19.2	1.544	2.535	0.7	20.7	3 2	10 57.87	-15 35.1	2.732	3.666	6.0	21.6
3 12	10 47.88	+ 7 12.6	1.531	2.514	4.3	20.9	3 12	10 49.48	-15 13.5	2.738	3.683	5.5	21.6
3 22	10 38.42	+ 8 1.1	1.546	2.492	9.1	21.1	3 22	10 41.67	-14 39.7	2.773	3.700	6.6	21.7
4 1	10 30.76	+ 8 38.8	1.586	2.470	13.5	21.3	4 1	10 35.04	-13 58.2	2.835	3.716	8.4	21.8
4 11	10 25.67	+ 9 2.0	1.646	2.447	17.3	21.5	4 11	10 30.02	-13 14.0	2.923	3.731	10.3	21.9
425778	2011 <i>CP</i> ₅₁		3 3.3 249°18	2°0/ 4.9	17		292658	2006 <i>UQ</i> ₅₄		3 3.3 180°91	3°6/ 7.7	18	
2 1	11 21.71	+ 0 11.1	2.100	2.925	12.5	21.1	2 1	11 15.99	- 8 9.5	2.696	3.481	11.2	21.0
2 11	11 15.52	+ 0 4.5	2.007	2.911	9.3	20.9	2 11	11 11.07	- 8 1.6	2.609	3.481	8.8	20.8
2 21	11 7.39	+ 0 9.9	1.938	2.898	5.7	20.6	2 21	11 4.81	- 7 38.2	2.547	3.481	6.2	20.6
3 2	10 58.00	+ 0 25.6	1.898	2.884	2.4	20.4	3 2	10 57.73	- 7 0.7	2.512	3.481	4.0	20.5
3 12	10 48.27	+ 0 47.8	1.887	2.870	3.6	20.4	3 12	10 50.51	- 6 12.3	2.507	3.481	3.8	20.5
3 22	10 39.19	+ 1 12.1	1.906	2.855	7.4	20.6	3 22	10 43.80	- 5 17.5	2.532	3.481	5.9	20.6
4 1	10 31.63	+ 1 34.1	1.951	2.840	11.1	20.8	4 1	10 38.21	- 4 21.1	2.584	3.480	8.5	20.8
4 11	10 26.23	+ 1 49.8	2.019	2.825	14.3	21.0	4 11	10 34.19	- 3 27.9	2.661	3.479	10.9	20.9
80213	1999 <i>VS</i> ₁₀₅		3 3.3 229°92	0°6/ 3.7	18		209912	2005 <i>NY</i> ₆₁		3 3.3 250°86	0°0/ 3.1		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
500693	2012 VG ₉₅		3 3.3 313°30	7°9/12.2 17			492722	2014 QS ₅₉		3 3.3 225°71	0°2/ 3.1 17		
2 1	11 14.62	-19 26.4	2.149	2.879	15.3	20.4	2 1	11 20.05	+ 3 32.1	1.737	2.584	13.6	22.2
2 11	11 10.55	-19 38.4	2.052	2.868	13.1	20.2	2 11	11 14.64	+ 4 30.0	1.654	2.575	9.8	22.0
2 21	11 4.72	-19 24.2	1.975	2.857	10.8	20.0	2 21	11 7.05	+ 5 43.9	1.596	2.566	5.4	21.7
3 2	10 57.74	-18 42.3	1.922	2.847	8.8	19.9	3 2	10 58.03	+ 7 7.3	1.565	2.556	0.6	21.3
3 12	10 50.46	-17 34.8	1.895	2.836	7.9	19.8	3 12	10 48.69	+ 8 31.8	1.564	2.546	4.4	21.6
3 22	10 43.77	-16 7.1	1.894	2.826	8.7	19.8	3 22	10 40.13	+ 9 48.9	1.590	2.535	9.1	21.8
4 1	10 38.50	-14 27.0	1.919	2.816	10.8	19.9	4 1	10 33.38	+10 51.8	1.642	2.523	13.3	22.1
4 11	10 35.23	-12 43.7	1.967	2.807	13.4	20.1	4 11	10 29.09	+11 36.5	1.715	2.511	16.9	22.3
265595	2005 RV ₁₀		3 3.3 146°98	3°9/ 7.1 16			419356	2009 WO ₂₂₄		3 3.3 114°78	3°0/ 6.2 17		
2 1	11 21.51	- 6 44.3	2.238	3.030	12.9	21.5	2 1	11 18.24	- 4 5.1	1.995	2.811	13.4	20.8
2 11	11 15.15	- 6 53.2	2.162	3.040	10.1	21.3	2 11	11 13.01	- 3 54.8	1.919	2.815	10.2	20.6
2 21	11 7.09	- 6 45.5	2.110	3.049	7.0	21.2	2 21	11 6.00	- 3 27.3	1.868	2.820	6.7	20.4
3 2	10 58.01	- 6 22.4	2.086	3.058	4.4	21.0	3 2	10 57.90	- 2 45.0	1.843	2.824	3.5	20.2
3 12	10 48.79	- 5 47.3	2.091	3.066	4.4	21.0	3 12	10 49.65	- 1 52.9	1.847	2.829	3.9	20.3
3 22	10 40.30	- 5 5.1	2.126	3.073	6.9	21.2	3 22	10 42.16	- 0 56.9	1.880	2.833	7.2	20.5
4 1	10 33.31	- 4 21.0	2.188	3.080	9.9	21.4	4 1	10 36.22	- 0 3.1	1.938	2.837	10.7	20.7
4 11	10 28.32	- 3 40.4	2.273	3.087	12.7	21.6	4 11	10 32.37	+ 0 43.0	2.020	2.841	13.8	20.9
183154	2002 SK ₁		3 3.3 87°84	0°4/ 3.6 18			89078	2001 TC ₁₆₂		3 3.3 264°11	1°1/ 4.1 18		
2 1	11 23.15	+ 3 51.4	1.743	2.586	13.8	20.9	2 1	11 21.28	+ 1 47.6	1.498	2.346	15.4	20.5
2 11	11 16.44	+ 4 16.3	1.693	2.611	9.8	20.7	2 11	11 15.85	+ 2 10.3	1.413	2.333	11.3	20.2
2 21	11 7.77	+ 4 52.7	1.668	2.637	5.4	20.5	2 21	11 7.86	+ 2 50.5	1.351	2.319	6.6	19.9
3 2	10 58.07	+ 5 35.5	1.671	2.662	0.8	20.2	3 2	10 58.14	+ 3 44.0	1.315	2.305	1.6	19.5
3 12	10 48.46	+ 6 18.4	1.703	2.686	3.9	20.5	3 12	10 47.95	+ 4 43.2	1.306	2.290	4.5	19.7
3 22	10 39.97	+ 6 55.8	1.763	2.710	8.1	20.8	3 22	10 38.64	+ 5 39.9	1.323	2.276	9.7	19.9
4 1	10 33.43	+ 7 23.3	1.849	2.734	11.9	21.0	4 1	10 31.41	+ 6 26.8	1.365	2.261	14.5	20.2
4 11	10 29.29	+ 7 38.6	1.957	2.757	14.9	21.3	4 11	10 27.05	+ 6 58.7	1.426	2.246	18.5	20.4
3027	Shavarsh		3 3.3 170°40	0°4/ 3.8 18			133160	2003 QK ₃₀		3 3.3 211°22	4°5/28.2 18		
2 1	11 18.79	+ 2 44.8	2.413	3.245	10.8	18.4	2 1	11 23.23	+16 51.9	1.839	2.703	12.2	20.1
2 11	11 13.13	+ 3 21.2	2.336	3.249	7.8	18.3	2 11	11 16.79	+17 55.3	1.769	2.697	8.8	19.9
2 21	11 5.95	+ 4 8.0	2.286	3.253	4.4	18.0	2 21	11 8.16	+18 59.8	1.725	2.691	5.6	19.7
3 2	10 57.88	+ 5 1.5	2.265	3.256	0.8	17.8	3 2	10 58.16	+19 57.2	1.709	2.685	4.7	19.6
3 12	10 49.67	+ 5 56.5	2.275	3.258	3.1	18.0	3 12	10 47.96	+20 40.0	1.722	2.677	7.3	19.8
3 22	10 42.11	+ 6 48.0	2.315	3.260	6.6	18.2	3 22	10 38.68	+21 3.3	1.762	2.670	10.9	19.9
4 1	10 35.86	+ 7 31.8	2.382	3.261	9.8	18.4	4 1	10 31.30	+21 5.6	1.825	2.661	14.3	20.1
4 11	10 31.40	+ 8 4.9	2.473	3.261	12.5	18.6	4 11	10 26.45	+20 48.0	1.908	2.652	17.2	20.3
340596	2006 QE ₁₇		3 3.3 178°99	2°2/29.5 17			394393	2007 EK ₉₂		3 3.3 148°16	1°2/ 2.4 18		
2 1	11 15.98	+11 15.1	2.546	3.403	9.5	21.0	2 1	11 24.87	+ 7 36.8	1.597	2.451	14.3	21.8
2 11	11 11.12	+12 22.0	2.476	3.404	6.6	20.8	2 11	11 18.01	+ 8 14.9	1.535	2.460	10.1	21.5
2 21	11 4.85	+13 33.9	2.433	3.405	3.6	20.6	2 21	11 8.81	+ 9 2.7	1.496	2.468	5.4	21.3
3 2	10 57.75	+14 45.0	2.420	3.405	2.2	20.5	3 2	10 58.23	+ 9 53.6	1.486	2.476	1.2	21.0
3 12	10 50.53	+15 49.8	2.438	3.405	4.5	20.7	3 12	10 47.55	+10 39.9	1.504	2.483	5.0	21.3
3 22	10 43.89	+16 43.5	2.484	3.405	7.5	20.9	3 22	10 38.02	+11 15.5	1.549	2.489	9.7	21.6
4 1	10 38.45	+17 23.1	2.557	3.404	10.3	21.1	4 1	10 30.63	+11 36.3	1.619	2.495	13.8	21.8
4 11	10 34.68	+17 47.5	2.652	3.403	12.7	21.2	4 11	10 25.98	+11 41.0	1.709	2.499	17.2	22.1
24187	1999 XO ₁₈		3 3.3 103°67	2°0/ 1.5 18			498379	2007 WR ₂₆		3 3.3 92°99	2°6/29.4 17		
2 1	11 22.22	+ 9 14.1	1.738	2.596	13.1	19.0	2 1	11 18.01	+13 6.2	2.302	3.162	10.2	21.7
2 11	11 15.85	+10 10.3	1.688	2.616	9.1	18.8	2 11	11 12.56	+13 58.5	2.249	3.178	7.1	21.5
2 21	11 7.49	+11 13.7	1.663	2.636	4.9	18.6	2 21	11 5.62	+14 53.5	2.222	3.193	4.0	21.3
3 2	10 58.05	+12 16.9	1.667	2.655	2.0	18.5	3 2	10 57.86	+15 45.3	2.225	3.208	2.7	21.3
3 12	10 48.64	+13 12.5	1.699	2.674	5.2	18.7	3 12	10 50.09	+16 28.6	2.257	3.223	5.0	21.4
3 22	10 40.33	+13 54.8	1.759	2.692	9.2	19.0	3 22	10 43.08	+16 59.7	2.318	3.238	8.0	21.6
4 1	10 33.95	+14 20.6	1.844	2.710	12.8	19.2	4 1	10 37.49	+17 16.5	2.404	3.253	10.8	21.8
4 11	10 29.99	+14 29.3	1.949	2.727	15.8	19.5	4 11	10 33.75	+17 18.6	2.512	3.267	13.2	22.0
327330	2005 UU ₁₁₀		3 3.3 202°85	7°0/24.2 17			160712	2000 QN ₈₅		3 3.3 116°39	2°7/ 5.3 18		
2 1	11 23.67	+28 31.0	2.341	3.192	10.4	21.3	2 1	11 23.35	- 1 27.2	1.612	2.442	15.4	19.8
2 11	11 16.78	+29 42.8	2.282	3.188	8.4	21.2	2 11	11 16.91	- 1 27.1	1.547	2.453	11.5	19.6
2 21	11 8.01	+30 45.9	2.251	3.182	7.1	21.1	2 21	11 8.22	- 1 9.6	1.504	2.464	7.2	19.4
3 2	10 58.12	+31 32.9	2.247	3.176	7.4	21.1	3 2	10 58.18	- 0 37.5	1.489	2.474	3.2	19.1
3 12	10 48.11	+31 58.4	2.272	3.170	9.1	21.2	3 12	10 48.02	+ 0 3.4	1.501	2.484	4.3	19.2
3 22	10 38.97	+32 0.3	2.322	3.163	11.3	21.3	3 22	10 38.93	+ 0 46.6	1.540	2.494	8.5	19.5
4 1	10 31.52	+31 39.3	2.395	3.155	13.5	21.5	4 1	10 31.90	+ 1 25.5	1.605	2.503	12.6	19.8
4 11	10 26.31	+30 58.4	2.486	3.146	15.5	21.6	4 11	10 27.52	+ 1 55.2	1.691	2.512	16.1	20.0
149240	2002 RX ₂₀₇		3 3.3 42°08	2°9/ 1.5 18			454673	2014 QD ₃₇₈		3 3.3 41°96	1°7/ 4.6 18		
2 1	11 24.85	+11 28.2	1.241	2.115	16.2	19.9	2 1	11 18.50	- 0 0.3	1.429	2.278	15.9	20.6
2 11	11 18.53	+11 59.8	1.182	2.117	11.5	19.6	2 11	11 13.67	+ 0 28.9	1.367	2.286	11.7	20.4
2 21	11 9.29	+12 38.1	1.145	2.119	6.3	19.3	2 21	11 6.52	+ 1 17.8	1.327	2.294	6.9	20.1
3 2	10 58.28	+13 14.8	1.134	2.122	2.9	19.1	3 2	10 57.99	+ 2 20.8	1.313	2.302	2.2	19.9
3 12	10 47.12	+13 41.0	1.148	2.124	6.8	19.3	3 12	10 49.32	+ 3 29.7	1.326	2.311	4.3	20.0
3 22	10 37.38	+13 50.8	1.187	2.127	11.9	19.6	3 22	10 41.74	+ 4 35.7	1.364	2.320	9.1	20.3
4 1	10 30.32	+13 41.8	1.248	2.130	16.6	19.9	4 1	10 36.26	+ 5 31.2	1.426	2.329	13.5	20.6
4 11	10 26.58	+13 14.3	1.327	2.133	20.4	20.2	4 11	10 33.47	+ 6 11.2	1.509	2.339	17.2	20.8
206997	2004 TC ₂₀₇		3 3.3 58°87	2°7/ 1.3 18			113891	2002 TG ₂₇₀		3 3.3 161°17	1°5/ 1.9 18		
2 1	11 21.59	+10 25.6	1.349	2.222	15.								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
186117	2001 <i>TC</i> ₁₂₈		3 3.3 134°12	2.7/29.5	18		5636	Jacobson		3 3.3 207°19	0.7/2.6	18	
2 1	11 20.46	+12 21.7	2.048	2.908	11.3	20.6	2 1	11 18.24	+ 6 22.1	2.268	3.114	10.9	17.7
2 11	11 14.49	+13 21.4	1.990	2.919	7.9	20.4	2 11	11 12.90	+ 7 5.3	2.188	3.110	7.7	17.5
2 21	11 6.76	+14 25.0	1.958	2.930	4.4	20.2	2 21	11 5.93	+ 7 57.4	2.135	3.106	4.1	17.3
3 2	10 58.02	+15 25.9	1.956	2.940	2.8	20.1	3 2	10 57.96	+ 8 53.5	2.110	3.101	0.7	17.0
3 12	10 49.23	+16 17.6	1.983	2.950	5.4	20.3	3 12	10 49.81	+ 9 48.1	2.116	3.096	3.7	17.2
3 22	10 41.30	+16 55.3	2.037	2.959	8.9	20.5	3 22	10 42.30	+10 35.9	2.151	3.090	7.4	17.5
4 1	10 35.01	+17 16.7	2.118	2.968	12.0	20.7	4 1	10 36.16	+11 12.9	2.212	3.084	10.7	17.6
4 11	10 30.84	+17 21.4	2.219	2.976	14.7	20.9	4 11	10 31.91	+11 36.9	2.296	3.078	13.5	17.8
412111	2013 <i>GF</i> ₁₅		3 3.3 249°47	0.4/2.9	16		4753	Phidias		3 3.3 279°91	2.7/29.9	18	
2 1	11 21.45	+ 5 18.6	1.764	2.613	13.4	21.8	2 1	11 20.08	+11 23.6	1.683	2.550	13.0	17.0
2 11	11 15.68	+ 5 54.6	1.675	2.598	9.6	21.5	2 11	11 14.69	+12 13.8	1.610	2.542	9.2	16.8
2 21	11 7.67	+ 6 43.2	1.611	2.582	5.3	21.2	2 21	11 7.09	+13 10.9	1.562	2.535	5.1	16.5
3 2	10 58.14	+ 7 39.1	1.575	2.566	0.6	20.8	3 2	10 58.10	+14 7.4	1.541	2.528	2.8	16.3
3 12	10 48.22	+ 8 35.3	1.567	2.549	4.4	21.1	3 12	10 48.86	+14 55.6	1.548	2.520	6.0	16.5
3 22	10 39.04	+ 9 24.7	1.587	2.531	9.1	21.3	3 22	10 40.53	+15 29.3	1.582	2.513	10.2	16.8
4 1	10 31.66	+10 1.9	1.632	2.513	13.4	21.5	4 1	10 34.10	+15 45.0	1.639	2.506	14.1	17.0
4 11	10 26.80	+10 23.6	1.698	2.495	17.0	21.7	4 11	10 30.20	+15 42.2	1.716	2.499	17.4	17.2
86035	1999 <i>NH</i> ₂₈		3 3.3 229°02	11.7/8.3	18		151079	2001 <i>VP</i> ₆₄		3 3.3 205°18	4.5/26.8	18	
2 1	11 31.27	-13 38.7	1.246	2.030	21.7	19.0	2 1	11 19.64	+21 54.8	2.725	3.583	8.9	19.9
2 11	11 23.73	-15 39.1	1.169	2.025	18.3	18.7	2 11	11 13.69	+22 44.6	2.659	3.579	6.6	19.7
2 21	11 12.56	-17 13.6	1.111	2.021	14.9	18.5	2 21	11 6.28	+23 31.0	2.619	3.574	4.8	19.6
3 2	10 58.75	-18 13.8	1.075	2.016	12.2	18.3	3 2	10 58.02	+24 8.6	2.609	3.569	4.7	19.5
3 12	10 44.06	-18 35.8	1.064	2.010	11.9	18.3	3 12	10 49.65	+24 33.3	2.629	3.564	6.3	19.6
3 22	10 30.50	-18 23.2	1.076	2.005	14.1	18.4	3 22	10 41.93	+24 42.4	2.677	3.558	8.6	19.8
4 1	10 19.85	-17 45.5	1.109	1.999	17.6	18.6	4 1	10 35.49	+24 35.3	2.749	3.552	10.9	19.9
4 11	10 13.17	-16 56.2	1.161	1.993	21.2	18.8	4 11	10 30.80	+24 13.0	2.843	3.546	12.9	20.1
209779	2005 <i>GS</i> ₁		3 3.3 236°70	6.4/27.2	16 R		225572	2000 <i>UW</i> ₂₇		3 3.3 100°15	1.1/2.3	18	
2 1	11 30.11	+24 20.4	1.982	2.834	12.0	19.9	2 1	11 19.64	+ 7 21.8	1.956	2.808	12.1	20.9
2 11	11 21.68	+25 1.2	1.905	2.819	9.2	19.7	2 11	11 13.95	+ 8 7.3	1.898	2.823	8.5	20.7
2 21	11 10.84	+25 34.7	1.854	2.804	6.9	19.5	2 21	11 6.49	+ 9 1.0	1.866	2.838	4.5	20.5
3 2	10 58.52	+25 53.1	1.832	2.789	6.6	19.4	3 2	10 58.04	+ 9 57.2	1.862	2.852	1.1	20.3
3 12	10 45.96	+25 50.5	1.839	2.772	8.6	19.5	3 12	10 49.57	+10 49.4	1.888	2.867	4.2	20.5
3 22	10 34.44	+25 24.6	1.873	2.755	11.7	19.7	3 22	10 41.98	+11 32.2	1.942	2.881	8.1	20.8
4 1	10 25.02	+24 36.8	1.932	2.738	14.8	19.8	4 1	10 36.04	+12 2.1	2.022	2.894	11.6	21.0
4 11	10 18.35	+23 30.8	2.010	2.719	17.4	20.0	4 11	10 32.23	+12 17.4	2.123	2.908	14.4	21.3
318630	2005 <i>KS</i> ₂		3 3.3 351°40	2.9/6.4	17		302089	2000 <i>YO</i> ₄₈		3 3.3 40°56	7.6/8.6	18	
2 1	11 15.29	- 4 42.7	2.024	2.841	13.2	20.5	2 1	11 21.51	- 9 58.2	1.216	2.033	20.2	19.9
2 11	11 10.96	- 4 18.7	1.943	2.840	10.1	20.3	2 11	11 16.08	-10 44.4	1.165	2.051	16.2	19.7
2 21	11 4.92	- 3 36.1	1.886	2.838	6.6	20.0	2 21	11 7.94	-11 0.2	1.133	2.069	11.9	19.5
3 2	10 57.83	- 2 38.0	1.856	2.837	3.5	19.8	3 2	10 58.22	-10 45.2	1.124	2.089	8.4	19.3
3 12	10 50.55	- 1 29.7	1.854	2.836	3.8	19.9	3 12	10 48.45	-10 4.3	1.139	2.109	7.8	19.4
3 22	10 43.95	- 0 17.7	1.881	2.836	7.0	20.1	3 22	10 40.08	- 9 6.3	1.177	2.130	10.5	19.6
4 1	10 38.80	+ 0 51.0	1.933	2.835	10.5	20.3	4 1	10 34.24	- 8 2.3	1.238	2.152	14.2	19.8
4 11	10 35.63	+ 1 50.9	2.009	2.835	13.7	20.5	4 11	10 31.53	- 7 2.4	1.319	2.174	17.8	20.1
225668	2001 <i>OU</i> ₂		3 3.3 194°66	1.5/5.0	17		140335	2001 <i>TZ</i> ₃		3 3.3 286°50	3.7/7.3	18	
2 1	11 18.98	- 1 12.4	2.610	3.424	10.7	22.3	2 1	11 15.47	- 7 10.6	2.220	3.021	12.7	19.6
2 11	11 13.25	- 0 37.8	2.521	3.421	7.9	22.1	2 11	11 11.06	- 6 55.4	2.124	3.008	10.0	19.4
2 21	11 6.06	+ 0 9.5	2.458	3.417	4.8	21.9	2 21	11 5.01	- 6 21.4	2.052	2.994	6.9	19.2
3 2	10 57.96	+ 1 6.6	2.425	3.412	1.8	21.7	3 2	10 57.89	- 5 30.3	2.006	2.981	4.2	19.0
3 12	10 49.68	+ 2 8.8	2.423	3.406	2.9	21.8	3 12	10 50.49	- 4 26.3	1.989	2.967	4.1	18.9
3 22	10 41.93	+ 3 11.1	2.452	3.400	6.1	22.0	3 22	10 43.64	- 3 15.3	2.001	2.954	6.8	19.1
4 1	10 35.39	+ 4 8.6	2.509	3.392	9.2	22.2	4 1	10 38.10	- 2 3.7	2.039	2.940	10.1	19.2
4 11	10 30.52	+ 4 57.4	2.591	3.384	11.9	22.3	4 11	10 34.43	- 0 57.9	2.101	2.927	13.1	19.4
59949	1999 <i>RL</i> ₂₁₅		3 3.3 199°73	0.9/2.4	18		120590	1995 <i>ST</i> ₄₂		3 3.3 119°45	1.6/1.8	18	
2 1	11 20.91	+ 6 26.5	2.076	2.922	11.8	20.2	2 1	11 19.55	+ 9 4.5	1.972	2.828	11.8	20.4
2 11	11 14.93	+ 7 17.0	1.996	2.918	8.4	20.0	2 11	11 13.94	+ 9 47.4	1.908	2.835	8.3	20.1
2 21	11 7.09	+ 8 17.5	1.942	2.914	4.5	19.8	2 21	11 6.53	+10 37.3	1.869	2.842	4.4	19.9
3 2	10 58.09	+ 9 22.5	1.918	2.908	0.9	19.5	3 2	10 58.06	+11 28.2	1.859	2.848	1.6	19.7
3 12	10 48.86	+10 25.2	1.923	2.902	4.2	19.7	3 12	10 49.50	+12 14.1	1.878	2.854	4.6	19.9
3 22	10 40.35	+11 19.7	1.958	2.895	8.2	19.9	3 22	10 41.79	+12 49.7	1.925	2.860	8.4	20.2
4 1	10 33.41	+12 1.5	2.019	2.887	11.7	20.1	4 1	10 35.71	+13 12.0	1.997	2.866	11.8	20.4
4 11	10 28.60	+12 28.2	2.101	2.879	14.8	20.3	4 11	10 31.77	+13 19.4	2.091	2.872	14.7	20.6
183408	2002 <i>YM</i> ₈		3 3.3 65°79	2.7/1.1	18		83764	2001 <i>TA</i> ₁₅₈		3 3.3 30°07	5.7/26.0	18	
2 1	11 20.85	+10 50.3	1.543	2.411	13.9	19.3	2 1	11 18.53	+22 40.3	2.141	3.009	10.6	18.9
2 11	11 15.10	+11 46.6	1.496	2.429	9.7	19.1	2 11	11 13.20	+23 48.2	2.087	3.011	7.9	18.8
2 21	11 7.18	+12 49.1	1.474	2.447	5.3	18.9	2 21	11 6.11	+24 51.5	2.059	3.013	6.0	18.6
3 2	10 58.09	+13 49.6	1.478	2.465	2.7	18.8	3 2	10 58.01	+25 43.0	2.059	3.015	6.0	18.6
3 12	10 49.04	+14 40.0	1.511	2.484	6.0	19.0	3 12	10 49.85	+26 17.0	2.087	3.018	7.9	18.8
3 22	10 41.19	+15 14.5	1.569	2.502	10.1	19.3	3 22	10 42.52	+26 30.4	2.140	3.020	10.6	18.9
4 1	10 35.42	+15 30.6	1.651	2.520	13.9	19.6	4 1	10 36.79	+26 23.0	2.217	3.023	13.1	19.1
4 11	10 32.23	+15 28.2	1.753	2.539	16.9	19.8	4 11	10 33.14	+25 56.5	2.313	3.026	15.3	19.3
455154	1996 <i>RQ</i> ₁₉		3 3.3 96°10	0.8/2.6	18		172628	2003 <i>XD</i> ₁₆		3 3.3 211°48	4.2/28.4	18	
2 1	11												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
61059	2000 <i>LX</i>		3 3.3 105°93	1°0/ 4.2 18			64299	2001 <i>UF</i> ₁₅		3 3.3 69°06	2°4/ 1.1 18		
2 1	11 20.22	+ 0 2.5	1.600	2.440	14.9	18.8	2 1	11 21.37	+10 0.9	1.660	2.522	13.3	19.1
2 11	11 14.67	+ 1 2.4	1.541	2.457	10.8	18.6	2 11	11 15.25	+11 8.4	1.623	2.554	9.2	18.9
2 21	11 7.01	+ 2 21.0	1.506	2.473	6.2	18.3	2 21	11 7.20	+12 21.6	1.612	2.585	5.0	18.7
3 2	10 58.13	+ 3 51.4	1.499	2.489	1.5	18.1	3 2	10 58.16	+13 32.5	1.629	2.616	2.5	18.6
3 12	10 49.20	+ 5 24.3	1.520	2.504	4.0	18.3	3 12	10 49.29	+14 33.1	1.674	2.647	5.5	18.9
3 22	10 41.34	+ 6 50.6	1.569	2.519	8.6	18.6	3 22	10 41.60	+15 17.9	1.747	2.677	9.4	19.2
4 1	10 35.43	+ 8 3.0	1.643	2.533	12.7	18.8	4 1	10 35.89	+15 44.5	1.843	2.707	12.9	19.4
4 11	10 32.02	+ 8 57.3	1.738	2.547	16.1	19.1	4 11	10 32.57	+15 52.6	1.960	2.737	15.7	19.7
329056	2011 <i>AA</i> ₆₄		3 3.3 257°21	2°6/ 5.5 17			168878	2000 <i>WV</i> ₂₈		3 3.3 205°72	2°0/ 5.3 17		
2 1	11 20.48	- 1 43.1	1.958	2.781	13.3	21.1	2 1	11 21.14	- 1 44.1	2.047	2.867	13.0	22.0
2 11	11 14.83	- 1 43.5	1.866	2.768	10.1	20.8	2 11	11 15.18	- 1 20.2	1.960	2.861	9.7	21.8
2 21	11 7.16	- 1 28.8	1.798	2.755	6.4	20.6	2 21	11 7.30	- 0 40.2	1.897	2.855	6.0	21.5
3 2	10 58.17	- 1 0.9	1.757	2.741	3.0	20.3	3 2	10 58.21	+ 0 12.8	1.862	2.848	2.5	21.3
3 12	10 48.82	- 0 24.0	1.745	2.727	3.9	20.3	3 12	10 48.83	+ 1 13.3	1.857	2.840	3.6	21.4
3 22	10 40.13	+ 0 16.5	1.761	2.713	7.7	20.5	3 22	10 40.14	+ 2 15.1	1.881	2.831	7.4	21.6
4 1	10 33.03	+ 0 54.9	1.803	2.699	11.5	20.7	4 1	10 33.00	+ 3 12.0	1.932	2.822	11.2	21.8
4 11	10 28.18	+ 1 26.2	1.868	2.684	14.9	20.9	4 11	10 28.04	+ 3 59.0	2.006	2.811	14.4	22.0
161557	2004 <i>YF</i> ₆		3 3.3 193°98	1°3/ 2.1 18			59477	1999 <i>HP</i> ₃		3 3.3 3°32	4°8/27.2 18		
2 1	11 21.52	+ 7 35.6	2.002	2.851	12.0	20.6	2 1	11 16.83	+17 43.8	1.921	2.794	11.3	18.0
2 11	11 15.42	+ 8 28.3	1.926	2.849	8.5	20.4	2 11	11 12.15	+19 0.9	1.862	2.794	8.1	17.9
2 21	11 7.40	+ 9 30.3	1.875	2.847	4.5	20.1	2 21	11 5.63	+20 18.3	1.829	2.794	5.4	17.7
3 2	10 58.19	+10 35.5	1.853	2.843	1.3	19.9	3 2	10 58.00	+21 27.9	1.824	2.795	5.0	17.7
3 12	10 48.76	+11 37.0	1.862	2.839	4.5	20.1	3 12	10 50.25	+22 22.3	1.846	2.795	7.4	17.8
3 22	10 40.11	+12 28.7	1.899	2.834	8.5	20.3	3 22	10 43.33	+22 56.9	1.895	2.797	10.6	18.0
4 1	10 33.09	+13 6.4	1.962	2.828	12.2	20.6	4 1	10 38.06	+23 9.9	1.966	2.798	13.6	18.2
4 11	10 28.30	+13 28.1	2.046	2.821	15.2	20.7	4 11	10 34.97	+23 2.2	2.057	2.800	16.1	18.4
348559	2005 <i>VS</i> ₁₆		3 3.3 133°15	4°3/28.7 18			356297	2010 <i>FY</i> ₂₀		3 3.3 263°23	1°0/ 2.5 17		
2 1	11 23.58	+14 15.8	1.583	2.451	13.6	20.8	2 1	11 20.10	+ 5 32.5	1.523	2.382	14.5	21.3
2 11	11 17.13	+15 36.1	1.531	2.463	9.6	20.6	2 11	11 15.03	+ 6 31.1	1.439	2.367	10.4	21.0
2 21	11 8.38	+16 59.8	1.505	2.474	5.7	20.4	2 21	11 7.48	+ 7 45.7	1.379	2.352	5.6	20.7
3 2	10 58.30	+18 17.0	1.505	2.485	4.4	20.4	3 2	10 58.25	+ 9 9.2	1.346	2.337	1.0	20.3
3 12	10 48.17	+19 18.5	1.534	2.495	7.4	20.6	3 12	10 48.57	+10 31.7	1.340	2.321	5.3	20.6
3 22	10 39.23	+19 58.8	1.589	2.505	11.3	20.8	3 22	10 39.73	+11 43.8	1.361	2.304	10.4	20.8
4 1	10 32.46	+20 15.7	1.668	2.514	14.9	21.0	4 1	10 32.91	+12 38.4	1.405	2.288	15.0	21.1
4 11	10 28.41	+20 10.6	1.765	2.522	17.9	21.3	4 11	10 28.88	+13 12.0	1.469	2.271	18.9	21.3
298851	2004 <i>RZ</i> ₂₃₂		3 3.3 338°53	2°7/ 1.5 18			276663	2003 <i>WQ</i> ₅₈		3 3.3 142°17	0°6/ 3.9 18		
2 1	11 22.80	+11 0.7	1.370	2.241	15.1	20.6	2 1	11 21.42	+ 2 25.9	1.938	2.775	12.9	21.3
2 11	11 16.97	+11 37.2	1.305	2.239	10.7	20.3	2 11	11 15.30	+ 3 0.8	1.871	2.785	9.3	21.1
2 21	11 8.47	+12 21.1	1.263	2.237	5.9	20.0	2 21	11 7.30	+ 3 48.6	1.829	2.796	5.2	20.9
3 2	10 58.32	+13 4.4	1.247	2.235	2.7	19.8	3 2	10 58.22	+ 4 44.5	1.815	2.805	1.0	20.6
3 12	10 47.95	+13 38.6	1.258	2.234	6.4	20.0	3 12	10 49.03	+ 5 42.1	1.831	2.814	3.6	20.8
3 22	10 38.80	+13 57.6	1.294	2.233	11.3	20.3	3 22	10 40.72	+ 6 35.2	1.876	2.823	7.7	21.1
4 1	10 32.02	+13 58.2	1.352	2.232	15.7	20.6	4 1	10 34.09	+ 7 19.0	1.947	2.831	11.4	21.3
4 11	10 28.28	+13 40.1	1.429	2.231	19.4	20.8	4 11	10 29.69	+ 7 50.1	2.040	2.838	14.5	21.5
503155	2015 <i>GM</i> ₃₁		3 3.3 55°84	0°9/ 2.5 18			498071	2007 <i>RJ</i> ₁₆₀		3 3.3 126°45	0°2/ 3.1 17		
2 1	11 17.39	+ 6 50.7	1.970	2.825	11.9	21.0	2 1	11 17.32	+ 5 2.6	2.366	3.209	10.6	22.2
2 11	11 12.36	+ 7 32.7	1.912	2.839	8.4	20.9	2 11	11 12.14	+ 5 41.9	2.298	3.217	7.5	22.0
2 21	11 5.64	+ 8 23.3	1.880	2.853	4.4	20.6	2 21	11 5.50	+ 6 29.9	2.256	3.226	4.1	21.8
3 2	10 57.97	+ 9 16.9	1.876	2.867	0.9	20.4	3 2	10 58.00	+ 7 22.4	2.243	3.234	0.5	21.5
3 12	10 50.27	+10 7.4	1.901	2.881	4.0	20.7	3 12	10 50.42	+ 8 14.1	2.260	3.242	3.3	21.7
3 22	10 43.41	+10 49.5	1.954	2.895	7.9	20.9	3 22	10 43.51	+ 9 0.3	2.307	3.249	6.8	22.0
4 1	10 38.12	+11 19.5	2.032	2.910	11.3	21.2	4 1	10 37.90	+ 9 37.3	2.380	3.257	9.9	22.2
4 11	10 34.86	+11 35.5	2.132	2.924	14.1	21.4	4 11	10 34.06	+10 2.7	2.477	3.264	12.5	22.4
218030	2001 <i>YQ</i> ₁₄₃		3 3.3 98°60	0°9/ 4.1 18			282343	2002 <i>XB</i> ₄₇		3 3.3 115°62	2°8/29.9 18		
2 1	11 21.05	+ 2 53.5	1.843	2.684	13.2	20.1	2 1	11 23.67	+10 9.1	1.588	2.450	13.9	20.3
2 11	11 15.10	+ 3 5.5	1.776	2.692	9.6	19.9	2 11	11 17.11	+11 25.1	1.540	2.470	9.7	20.1
2 21	11 7.20	+ 3 29.6	1.733	2.700	5.5	19.7	2 21	11 8.34	+12 48.4	1.516	2.489	5.3	19.9
3 2	10 58.16	+ 4 1.7	1.718	2.708	1.3	19.4	3 2	10 58.34	+14 9.9	1.520	2.507	2.8	19.8
3 12	10 49.02	+ 4 36.6	1.732	2.716	3.7	19.6	3 12	10 48.37	+15 20.3	1.554	2.525	6.1	20.0
3 22	10 40.78	+ 5 8.8	1.774	2.724	7.9	19.9	3 22	10 39.61	+16 13.0	1.614	2.541	10.3	20.3
4 1	10 34.30	+ 5 33.9	1.842	2.731	11.6	20.1	4 1	10 32.98	+16 45.0	1.698	2.558	14.0	20.6
4 11	10 30.12	+ 5 48.6	1.931	2.739	14.8	20.3	4 11	10 28.99	+16 56.2	1.801	2.573	17.1	20.8
122901	2000 <i>SO</i> ₁₆₁		3 3.3 200°44	1°6/ 1.8 18			6203	<i>Lyubamoroz</i>		3 3.3 227°90	0°4/ 3.8 18		
2 1	11 19.06	+ 8 38.1	1.998	2.854	11.7	20.2	2 1	11 16.50	+ 3 19.7	2.436	3.273	10.5	18.7
2 11	11 13.66	+ 9 28.2	1.925	2.852	8.3	20.0	2 11	11 11.60	+ 3 48.6	2.354	3.270	7.6	18.5
2 21	11 6.43	+10 26.4	1.877	2.850	4.4	19.7	2 21	11 5.24	+ 4 27.3	2.299	3.267	4.3	18.3
3 2	10 58.08	+11 26.8	1.858	2.848	1.6	19.5	3 2	10 57.99	+ 5 12.4	2.273	3.263	0.8	18.0
3 12	10 49.55	+12 22.5	1.869	2.845	4.6	19.7	3 12	10 50.58	+ 5 59.1	2.277	3.260	3.0	18.2
3 22	10 41.79	+13 8.0	1.907	2.842	8.5	20.0	3 22	10 43.74	+ 6 42.8	2.310	3.256	6.5	18.4
4 1	10 35.60	+13 39.4	1.971	2.839	12.0	20.2	4 1	10 38.15	+ 7 19.4	2.370	3.253	9.7	18.6
4 11	10 31.55	+13 55.0	2.056	2.836	15.0	20.4	4 11	10 34.26	+ 7 46.2	2.453	3.249	12.4	18.7
168879	2000 <i>WD</i> ₃₄		3 3.3 140°20	3°3/ 6.5 18			79202	1993 <i>UV</i> ₅		3 3.3 226°72	0°4/ 2.9 17		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
90838	1995 <i>WD</i> ₇		3 3.3 143°69	3°6/ 7.3 18			325798	2010 <i>RF</i> ₇₀		3 3.3 209°23	6°6/29.6 18		
2 1	11 18.77	- 7 2.8	2.321	3.114	12.5	19.6	2 1	11 38.57	+21 8.3	1.223	2.085	17.2	20.3
2 11	11 13.23	- 6 55.1	2.244	3.123	9.7	19.5	2 11	11 28.67	+21 19.3	1.159	2.083	12.8	20.1
2 21	11 6.13	- 6 30.5	2.191	3.131	6.7	19.3	2 21	11 15.07	+21 21.6	1.117	2.080	8.4	19.8
3 2	10 58.09	- 5 50.7	2.165	3.139	4.1	19.1	3 2	10 59.21	+21 4.9	1.101	2.077	6.6	19.7
3 12	10 49.93	- 4 59.7	2.170	3.146	4.0	19.1	3 12	10 43.24	+20 22.6	1.113	2.073	9.6	19.8
3 22	10 42.43	- 4 2.8	2.203	3.153	6.5	19.3	3 22	10 29.21	+19 14.8	1.150	2.069	14.3	20.1
4 1	10 36.30	- 3 5.5	2.264	3.160	9.5	19.5	4 1	10 18.67	+17 46.0	1.210	2.065	18.8	20.3
4 11	10 32.02	- 2 13.2	2.349	3.166	12.2	19.7	4 11	10 12.26	+16 2.9	1.287	2.060	22.6	20.6
463266	2012 <i>GP</i> ₁₃		3 3.3 236°26	6°1/24.8 17			7775	<i>Taiko</i>		3 3.3 110°99	2°1/ 5.3 18		
2 1	11 20.57	+23 58.7	2.286	3.147	10.2	21.1	2 1	11 20.35	- 1 30.9	2.047	2.869	12.9	18.0
2 11	11 14.77	+25 26.8	2.215	3.133	7.9	21.0	2 11	11 14.44	- 1 13.2	1.983	2.885	9.6	17.8
2 21	11 7.09	+26 51.3	2.172	3.119	6.3	20.8	2 21	11 6.82	- 0 40.8	1.943	2.901	5.9	17.6
3 2	10 58.22	+28 4.0	2.157	3.103	6.5	20.8	3 2	10 58.22	+ 0 2.9	1.931	2.917	2.5	17.4
3 12	10 49.09	+28 58.1	2.171	3.087	8.5	20.9	3 12	10 49.57	+ 0 52.9	1.949	2.932	3.4	17.5
3 22	10 40.65	+29 29.7	2.211	3.071	11.1	21.0	3 22	10 41.75	+ 1 43.3	1.995	2.947	7.0	17.8
4 1	10 33.75	+29 37.9	2.274	3.054	13.6	21.2	4 1	10 35.51	+ 2 28.9	2.068	2.961	10.4	18.0
4 11	10 28.96	+29 24.4	2.355	3.036	15.8	21.3	4 11	10 31.33	+ 3 5.6	2.165	2.975	13.3	18.2
123762	2001 <i>AU</i> ₄₁		3 3.3 135°76	12°0/ 9.5 18			131607	2001 <i>XQ</i> ₁₉		3 3.3 320°40	5°2/28.9 18		
2 1	11 32.89	-16 11.8	1.302	2.066	21.9	19.2	2 1	11 22.52	+16 5.1	1.273	2.154	15.3	19.0
2 11	11 24.64	-18 6.6	1.235	2.075	18.6	19.0	2 11	11 17.10	+16 56.0	1.206	2.143	11.1	18.8
2 21	11 12.96	-19 31.1	1.188	2.084	15.3	18.8	2 21	11 8.74	+17 49.4	1.161	2.132	6.8	18.5
3 2	10 58.96	-20 17.7	1.163	2.092	12.7	18.7	3 2	10 58.48	+18 35.0	1.141	2.122	5.3	18.4
3 12	10 44.41	-20 24.3	1.162	2.100	12.0	18.7	3 12	10 47.87	+19 3.0	1.147	2.112	8.7	18.5
3 22	10 31.22	-19 56.1	1.185	2.107	13.7	18.8	3 22	10 38.52	+19 7.5	1.176	2.103	13.3	18.7
4 1	10 20.97	-19 4.0	1.230	2.113	16.7	19.0	4 1	10 31.73	+18 47.0	1.226	2.095	17.7	19.0
4 11	10 14.54	-18 1.7	1.295	2.119	19.8	19.2	4 11	10 28.24	+18 3.6	1.293	2.087	21.5	19.2
331300	2011 <i>EN</i> ₂₀		3 3.3 124°22	2°1/ 1.1 18			249585	1995 <i>UF</i> ₁₅		3 3.3 39°51	1°1/ 4.2 18		
2 1	11 19.75	+10 28.7	2.063	2.920	11.4	21.3	2 1	11 19.87	+ 2 1.7	1.437	2.291	15.6	20.6
2 11	11 14.02	+11 26.6	2.004	2.932	7.9	21.1	2 11	11 14.73	+ 2 24.3	1.374	2.296	11.4	20.4
2 21	11 6.58	+12 30.0	1.972	2.944	4.3	20.9	2 21	11 7.22	+ 3 3.7	1.334	2.303	6.5	20.1
3 2	10 58.16	+13 32.6	1.969	2.956	2.2	20.8	3 2	10 58.29	+ 3 54.6	1.319	2.309	1.6	19.8
3 12	10 49.69	+14 27.9	1.995	2.967	4.9	21.0	3 12	10 49.20	+ 4 49.4	1.331	2.316	4.3	20.0
3 22	10 42.06	+15 10.9	2.050	2.978	8.4	21.2	3 22	10 41.21	+ 5 40.0	1.369	2.323	9.2	20.3
4 1	10 36.01	+15 38.7	2.130	2.988	11.7	21.4	4 1	10 35.35	+ 6 20.1	1.431	2.331	13.7	20.6
4 11	10 32.03	+15 50.4	2.231	2.998	14.3	21.6	4 11	10 32.22	+ 6 45.5	1.513	2.338	17.4	20.9
432556	2010 <i>JF</i> ₇₅		3 3.3 324°76	3°9/28.0 17			66303	1999 <i>JG</i> ₃₇		3 3.3 243°24	2°9/29.9 18		
2 1	11 15.74	+14 40.7	1.937	2.809	11.3	20.7	2 1	11 22.86	+11 57.6	1.724	2.586	13.0	19.7
2 11	11 11.44	+16 0.9	1.867	2.801	8.0	20.5	2 11	11 16.78	+12 47.2	1.644	2.574	9.2	19.4
2 21	11 5.31	+17 25.3	1.823	2.793	4.9	20.2	2 21	11 8.36	+13 43.2	1.590	2.561	5.2	19.2
3 2	10 58.02	+18 46.0	1.807	2.785	4.1	20.2	3 2	10 58.43	+14 38.3	1.562	2.548	2.9	19.0
3 12	10 50.53	+19 54.8	1.819	2.777	6.7	20.3	3 12	10 48.16	+15 24.5	1.564	2.534	6.1	19.2
3 22	10 43.77	+20 45.9	1.858	2.770	10.1	20.5	3 22	10 38.75	+15 55.9	1.592	2.520	10.4	19.4
4 1	10 38.57	+21 16.2	1.920	2.763	13.4	20.7	4 1	10 31.27	+16 9.1	1.644	2.506	14.3	19.6
4 11	10 35.51	+21 25.3	2.002	2.757	16.1	20.9	4 11	10 26.40	+16 3.5	1.717	2.491	17.7	19.8
172573	2003 <i>UL</i> ₂₀₁		3 3.3 72°25	1°6/ 2.1 18			30601	2082 <i>P-L</i>		3 3.3 212°25	2°3/ 5.3 18		
2 1	11 22.06	+ 8 0.5	1.469	2.332	14.7	20.5	2 1	11 21.91	- 1 48.1	1.778	2.603	14.4	19.5
2 11	11 16.07	+ 8 48.3	1.421	2.351	10.3	20.3	2 11	11 16.00	- 1 28.6	1.693	2.597	10.8	19.3
2 21	11 7.82	+ 9 45.7	1.397	2.371	5.5	20.0	2 21	11 7.91	- 0 51.1	1.631	2.591	6.7	19.0
3 2	10 58.32	+10 44.9	1.400	2.390	1.6	19.8	3 2	10 58.38	+ 0 1.4	1.597	2.583	2.8	18.8
3 12	10 48.88	+11 37.4	1.431	2.409	5.3	20.1	3 12	10 48.53	+ 1 2.8	1.592	2.575	4.0	18.8
3 22	10 40.70	+12 16.9	1.487	2.429	9.9	20.4	3 22	10 39.47	+ 2 5.8	1.615	2.567	8.3	19.1
4 1	10 34.70	+12 39.6	1.568	2.448	13.9	20.7	4 1	10 32.20	+ 3 3.4	1.663	2.558	12.4	19.3
4 11	10 31.40	+12 44.6	1.668	2.467	17.2	21.0	4 11	10 27.40	+ 3 50.1	1.734	2.548	16.0	19.5
265351	2004 <i>RT</i> ₅₉		3 3.3 251°34	0°1/ 3.5 17			290945	2005 <i>WH</i> ₁₅₆		3 3.3 165°80	4°2/ 8.2 17		
2 1	11 23.18	+ 5 51.8	1.959	2.802	12.5	20.1	2 1	11 18.17	- 9 51.6	2.344	3.122	12.8	21.3
2 11	11 16.71	+ 5 51.5	1.875	2.793	9.0	19.9	2 11	11 12.86	- 9 32.5	2.260	3.127	10.2	21.1
2 21	11 8.20	+ 5 59.4	1.816	2.785	5.0	19.6	2 21	11 5.98	- 8 53.9	2.200	3.131	7.3	20.9
3 2	10 58.39	+ 6 12.2	1.786	2.776	0.7	19.3	3 2	10 58.15	- 7 57.4	2.168	3.135	4.8	20.8
3 12	10 48.32	+ 6 25.4	1.785	2.768	3.8	19.5	3 12	10 50.16	- 6 47.4	2.165	3.138	4.4	20.7
3 22	10 39.03	+ 6 34.9	1.813	2.759	8.0	19.8	3 22	10 42.80	- 5 29.8	2.192	3.141	6.6	20.9
4 1	10 31.43	+ 6 37.4	1.867	2.750	11.9	20.0	4 1	10 36.77	- 4 11.2	2.246	3.143	9.5	21.1
4 11	10 26.15	+ 6 30.7	1.943	2.741	15.1	20.2	4 11	10 32.58	- 2 57.7	2.325	3.145	12.2	21.3
325537	2009 <i>SG</i> ₄₉		3 3.3 196°16	1°4/ 2.2 17			104624	2000 <i>GD</i> ₁₁₂		3 3.3 192°22	4°3/27.3 18		
2 1	11 23.85	+10 10.8	2.059	2.908	11.7	20.6	2 1	11 20.61	+20 41.7	2.560	3.418	9.4	19.8
2 11	11 17.03	+10 24.7	1.983	2.907	8.3	20.4	2 11	11 14.48	+21 30.1	2.494	3.416	6.9	19.7
2 21	11 8.29	+10 43.2	1.934	2.905	4.5	20.1	2 21	11 6.81	+22 15.8	2.456	3.414	4.8	19.5
3 2	10 58.40	+11 1.8	1.913	2.903	1.4	19.9	3 2	10 58.24	+22 53.1	2.448	3.412	4.5	19.5
3 12	10 48.34	+11 15.8	1.923	2.900	4.4	20.1	3 12	10 49.58	+23 17.5	2.469	3.410	6.3	19.6
3 22	10 39.12	+11 21.6	1.962	2.897	8.2	20.3	3 22	10 41.62	+23 26.2	2.517	3.407	8.8	19.8
4 1	10 31.58	+11 16.9	2.026	2.894	11.7	20.6	4 1	10 35.03	+23 18.6	2.591	3.403	11.3	19.9
4 11	10 26.28	+11 0.8	2.113	2.890	14.7	20.8	4 11	10 30.29	+22 55.6	2.686	3.400	13.4	20.1
337495	2001 <i>SV</i> ₁₀₀		3 3.3 145°76	0°8/ 4.2 17			58421	1996 <i>BG</i> ₅		3 3.3 278°37	2°9/28.8 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
210950	2001 <i>UK</i> ₄₃		3 3.3 23°73	3°0/ 6.8 18			68777	2002 <i>FD</i> ₁		3 3.3 214°73	2°1/ 1.5 18		
2 1	11 15.36	- 5 42.8	2.232	3.039	12.4	19.7	2 1	11 23.87	+11 1.9	2.029	2.880	11.8	19.8
2 11	11 10.93	- 5 18.6	2.150	3.040	9.6	19.5	2 11	11 17.18	+11 39.5	1.947	2.872	8.3	19.6
2 21	11 4.95	- 4 36.8	2.093	3.041	6.4	19.3	2 21	11 8.47	+12 22.5	1.892	2.863	4.6	19.4
3 2	10 58.03	- 3 40.1	2.063	3.042	3.6	19.1	3 2	10 58.49	+13 5.2	1.866	2.854	2.1	19.2
3 12	10 50.94	- 2 33.2	2.062	3.043	3.6	19.1	3 12	10 48.24	+13 41.4	1.870	2.843	5.0	19.3
3 22	10 44.47	- 1 22.2	2.090	3.044	6.5	19.3	3 22	10 38.76	+14 6.5	1.903	2.832	8.9	19.6
4 1	10 39.32	+ 0 13.2	2.144	3.045	9.7	19.5	4 1	10 30.98	+14 17.4	1.961	2.820	12.5	19.8
4 11	10 35.99	+ 0 48.2	2.223	3.046	12.6	19.7	4 11	10 25.49	+14 13.4	2.041	2.807	15.5	19.9
21107	1992 <i>PZ</i> ₄		3 3.3 176°29	2°0/ 5.7 18			464682	2001 <i>UU</i> ₇₈		3 3.3 72°07	2°4/ 1.3 18		
2 1	11 17.86	- 3 29.4	2.289	3.101	12.0	18.1	2 1	11 23.58	+10 57.1	1.695	2.555	13.3	21.1
2 11	11 12.66	- 2 42.4	2.207	3.103	9.0	17.9	2 11	11 16.80	+11 47.4	1.659	2.588	9.2	20.9
2 21	11 5.89	- 1 38.8	2.150	3.105	5.6	17.7	2 21	11 8.09	+12 42.2	1.649	2.621	5.0	20.7
3 2	10 58.15	- 0 22.1	2.121	3.106	2.5	17.5	3 2	10 58.41	+13 34.1	1.666	2.653	2.4	20.6
3 12	10 50.24	+ 1 1.7	2.124	3.107	3.2	17.5	3 12	10 48.94	+14 16.4	1.712	2.685	5.4	20.9
3 22	10 42.97	+ 2 25.9	2.156	3.107	6.6	17.7	3 22	10 40.70	+14 44.6	1.786	2.716	9.3	21.1
4 1	10 37.03	+ 3 44.3	2.216	3.107	9.9	17.9	4 1	10 34.48	+14 56.6	1.884	2.747	12.7	21.4
4 11	10 32.94	+ 4 52.0	2.300	3.105	12.8	18.1	4 11	10 30.70	+14 52.6	2.002	2.778	15.5	21.7
340823	2006 <i>UY</i> ₁₃₁		3 3.3 126°62	3°3/28.6 17			222675	2001 <i>YM</i> ₃₄		3 3.3 217°02	6°9/10.7 17		
2 1	11 19.40	+17 8.1	2.579	3.437	9.3	21.5	2 1	11 19.99	-17 18.4	2.404	3.132	13.9	20.8
2 11	11 13.53	+17 49.2	2.521	3.447	6.6	21.3	2 11	11 14.31	-17 40.3	2.304	3.123	11.8	20.6
2 21	11 6.25	+18 29.6	2.490	3.456	4.2	21.1	2 21	11 6.89	-17 40.3	2.227	3.114	9.5	20.4
3 2	10 58.18	+19 4.3	2.489	3.464	3.4	21.1	3 2	10 58.30	-17 17.2	2.175	3.104	7.6	20.3
3 12	10 50.08	+19 29.1	2.517	3.473	5.3	21.2	3 12	10 49.39	-16 32.7	2.150	3.093	7.0	20.2
3 22	10 42.69	+19 41.2	2.574	3.481	7.9	21.4	3 22	10 41.01	-15 30.8	2.153	3.082	8.0	20.3
4 1	10 36.62	+19 39.5	2.657	3.489	10.4	21.6	4 1	10 33.98	-14 18.1	2.183	3.070	10.2	20.4
4 11	10 32.29	+19 24.4	2.762	3.497	12.6	21.8	4 11	10 28.87	-13 1.7	2.238	3.057	12.7	20.5
302448	2002 <i>EF</i> ₈₃		3 3.3 339°60	0°8/ 3.9 18			58168	1990 <i>QB</i> ₉		3 3.3 117°17	1°2/ 2.3 18		
2 1	11 18.27	+ 2 52.2	1.240	2.105	16.7	20.4	2 1	11 21.72	+ 5 51.0	1.663	2.516	13.8	19.1
2 11	11 14.03	+ 3 14.8	1.169	2.097	12.2	20.1	2 11	11 15.73	+ 7 1.3	1.608	2.533	9.7	18.9
2 21	11 7.06	+ 3 56.1	1.118	2.090	7.0	19.8	2 21	11 7.65	+ 8 23.7	1.578	2.550	5.2	18.7
3 2	10 58.31	+ 4 50.7	1.093	2.083	1.3	19.4	3 2	10 58.38	+ 9 50.1	1.576	2.566	1.2	18.4
3 12	10 49.18	+ 5 49.5	1.092	2.077	4.9	19.6	3 12	10 49.09	+11 11.4	1.603	2.581	4.8	18.7
3 22	10 41.15	+ 6 43.2	1.115	2.072	10.5	19.9	3 22	10 40.85	+12 19.9	1.657	2.596	9.2	19.0
4 1	10 35.46	+ 7 24.1	1.161	2.068	15.6	20.2	4 1	10 34.57	+13 10.8	1.737	2.610	13.1	19.2
4 11	10 32.88	+ 7 47.3	1.225	2.064	19.8	20.4	4 11	10 30.77	+13 42.3	1.837	2.624	16.3	19.5
119369	2001 <i>SZ</i> ₂₇₇		3 3.3 41°63	7°0/ 9.8 18			303351	2004 <i>TS</i> ₂₉₅		3 3.3 116°57	0°0/ 3.2 18		
2 1	11 17.90	-13 17.2	1.636	2.420	17.2	19.3	2 1	11 23.26	+ 4 9.1	1.706	2.551	14.0	22.0
2 11	11 13.21	-13 32.4	1.565	2.427	14.1	19.1	2 11	11 16.76	+ 4 46.7	1.648	2.568	10.0	21.8
2 21	11 6.38	-13 19.7	1.514	2.435	10.8	18.9	2 21	11 8.20	+ 5 36.6	1.615	2.585	5.4	21.5
3 2	10 58.22	-12 39.0	1.488	2.443	7.9	18.8	3 2	10 58.45	+ 6 33.1	1.610	2.601	0.7	21.2
3 12	10 49.87	-11 34.6	1.486	2.451	7.1	18.7	3 12	10 48.69	+ 7 28.8	1.634	2.617	4.1	21.5
3 22	10 42.43	-10 14.2	1.511	2.460	9.0	18.9	3 22	10 40.00	+ 8 17.4	1.686	2.632	8.6	21.8
4 1	10 36.86	- 8 47.6	1.560	2.469	12.2	19.1	4 1	10 33.27	+ 8 53.9	1.764	2.646	12.4	22.1
4 11	10 33.79	- 7 24.2	1.631	2.478	15.3	19.3	4 11	10 29.02	+ 9 15.8	1.862	2.660	15.7	22.3
471773	2012 <i>UA</i> ₁₄₁		3 3.3 178°15	2°4/ 6.4 17			387406	2013 <i>SH</i> ₃₃		3 3.3 152°81	4°0/27.9 18		
2 1	11 16.10	- 4 41.4	2.654	3.457	10.8	22.2	2 1	11 21.40	+18 25.9	2.403	3.261	9.9	21.6
2 11	11 11.25	- 4 14.8	2.569	3.458	8.3	22.0	2 11	11 15.07	+19 20.2	2.345	3.269	7.2	21.4
2 21	11 5.06	- 3 33.9	2.510	3.459	5.4	21.8	2 21	11 7.15	+20 13.0	2.314	3.277	4.7	21.3
3 2	10 58.06	- 2 41.1	2.479	3.459	2.9	21.7	3 2	10 58.33	+20 58.4	2.313	3.284	4.1	21.3
3 12	10 50.92	- 1 40.5	2.479	3.460	3.1	21.7	3 12	10 49.46	+21 31.3	2.342	3.291	6.1	21.4
3 22	10 44.30	- 0 37.0	2.508	3.459	5.7	21.9	3 22	10 41.37	+21 48.7	2.399	3.297	8.8	21.6
4 1	10 38.81	+ 0 24.4	2.565	3.459	8.6	22.0	4 1	10 34.75	+21 49.7	2.481	3.303	11.4	21.8
4 11	10 34.89	+ 1 19.3	2.647	3.458	11.2	22.2	4 11	10 30.07	+21 35.0	2.585	3.308	13.6	21.9
52994	1998 <i>UY</i> ₂₉		3 3.3 87°74	5°6/27.9 18			93385	2000 <i>SS</i> ₂₇₈		3 3.3 198°85	6°0/26.3 18		
2 1	11 22.55	+16 26.4	1.361	2.239	14.7	19.1	2 1	11 23.57	+24 4.4	2.163	3.021	10.9	20.0
2 11	11 16.80	+17 48.9	1.310	2.245	10.6	18.9	2 11	11 16.85	+25 1.8	2.102	3.019	8.3	19.8
2 21	11 8.41	+19 13.2	1.282	2.251	6.7	18.7	2 21	11 8.22	+25 53.3	2.067	3.016	6.3	19.7
3 2	10 58.47	+20 27.7	1.281	2.257	5.8	18.7	3 2	10 58.46	+26 31.7	2.060	3.013	6.3	19.6
3 12	10 48.43	+21 22.1	1.305	2.262	8.9	18.9	3 12	10 48.61	+26 51.4	2.082	3.010	8.2	19.8
3 22	10 39.72	+21 50.7	1.354	2.268	13.0	19.1	3 22	10 39.65	+26 50.0	2.130	3.006	10.8	19.9
4 1	10 33.43	+21 52.2	1.424	2.274	16.8	19.3	4 1	10 32.44	+26 27.7	2.202	3.001	13.4	20.1
4 11	10 30.17	+21 29.1	1.511	2.280	20.0	19.6	4 11	10 27.49	+25 47.1	2.293	2.997	15.7	20.2
35171	1993 <i>TF</i> ₁		3 3.3 125°37	3°3/ 6.3 18			445978	2013 <i>BD</i> ₃₄		3 3.3 67°99	2°4/ 1.5 18		
2 1	11 21.51	- 4 35.7	1.714	2.531	15.2	18.5	2 1	11 21.00	+ 7 49.2	1.246	2.119	16.2	21.0
2 11	11 15.60	- 4 18.4	1.646	2.543	11.6	18.3	2 11	11 15.66	+ 9 9.2	1.202	2.137	11.3	20.7
2 21	11 7.61	- 3 40.5	1.602	2.554	7.5	18.1	2 21	11 7.75	+10 41.6	1.180	2.155	6.0	20.5
3 2	10 58.37	- 2 45.2	1.584	2.566	3.9	17.9	3 2	10 58.40	+12 15.3	1.184	2.173	2.4	20.3
3 12	10 49.01	- 1 38.9	1.594	2.576	4.3	18.0	3 12	10 49.09	+13 38.3	1.214	2.191	6.4	20.6
3 22	10 40.61	- 0 29.3	1.633	2.587	8.0	18.2	3 22	10 41.18	+14 41.8	1.270	2.209	11.4	20.9
4 1	10 34.10	+ 0 36.0	1.697	2.596	11.9	18.4	4 1	10 35.71	+15 21.4	1.347	2.228	15.7	21.2
4 11	10 30.04	+ 1 31.1	1.783	2.606	15.3	18.7	4 11	10 33.21	+15 36.6	1.443	2.246	19.2	21.5
56409	2000 <i>FQ</i> ₂₉		3 3.3 313°11	1°7/ 2.3 18			23598	1995 <i>WL</i> ₁₃		3 3.3 103°08	1°2/ 2		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
501957	2014 YK ₁₀		3 3.3 305°52	6°6/ 8.4 17			317389	2002 PS ₂		3 3.4 208°60	4°6/ 8.7 17		
2 1	11 19.58	-10 45.8	1.834	2.621	15.5	20.6	2 1	11 17.31	-10 51.3	2.483	3.254	12.4	21.3
2 11	11 14.47	-11 27.7	1.738	2.604	12.8	20.3	2 11	11 12.27	-10 47.9	2.390	3.250	10.0	21.1
2 21	11 7.18	-11 48.7	1.663	2.587	9.7	20.1	2 21	11 5.72	-10 26.0	2.321	3.245	7.4	20.9
3 2	10 58.37	-11 47.2	1.612	2.570	7.2	19.9	3 2	10 58.20	-9 46.4	2.279	3.240	5.1	20.8
3 12	10 49.06	-11 24.6	1.589	2.553	6.8	19.9	3 12	10 50.47	-8 52.4	2.266	3.235	4.7	20.7
3 22	10 40.37	-10 45.5	1.591	2.536	9.0	19.9	3 22	10 43.27	-7 48.7	2.282	3.229	6.6	20.8
4 1	10 33.33	-9 56.5	1.619	2.520	12.3	20.1	4 1	10 37.31	-6 41.2	2.326	3.223	9.2	21.0
4 11	10 28.72	-9 5.7	1.668	2.504	15.5	20.3	4 11	10 33.07	-5 35.9	2.393	3.216	11.8	21.2
240313	2003 GO ₃₅		3 3.3 257°96	11°4/21.1 17			467795	2009 YG ₇		3 3.4 105°62	3°6/28.7 18		
2 1	11 33.78	+37 31.6	1.873	2.702	13.6	21.6	2 1	11 19.53	+14 45.4	1.990	2.855	11.3	21.4
2 11	11 24.95	+38 58.6	1.804	2.677	12.0	21.4	2 11	11 14.00	+15 48.6	1.933	2.864	8.0	21.2
2 21	11 13.02	+40 8.2	1.760	2.651	11.4	21.3	2 21	11 6.67	+16 53.9	1.904	2.873	4.8	21.0
3 2	10 59.07	+40 48.3	1.741	2.624	12.1	21.3	3 2	10 58.31	+17 54.1	1.902	2.882	3.7	20.9
3 12	10 44.72	+40 51.2	1.747	2.596	13.9	21.4	3 12	10 49.90	+18 42.6	1.929	2.890	6.1	21.1
3 22	10 31.67	+40 15.5	1.775	2.568	16.2	21.5	3 22	10 42.35	+19 15.0	1.984	2.899	9.4	21.3
4 1	10 21.30	+39 5.1	1.823	2.538	18.7	21.6	4 1	10 36.46	+19 29.2	2.063	2.907	12.5	21.5
4 11	10 14.37	+37 27.4	1.887	2.508	20.8	21.7	4 11	10 32.70	+19 25.6	2.162	2.915	15.1	21.7
156470	2002 CM ₃₇		3 3.3 355°18	1°0/ 2.5 18			168374	1997 CH ₂₃		3 3.4 58°17	0°7/ 2.6 18		
2 1	11 20.01	+7 42.3	1.743	2.601	13.1	19.8	2 1	11 17.48	+6 18.6	2.032	2.884	11.7	20.4
2 11	11 14.58	+8 10.3	1.672	2.600	9.3	19.6	2 11	11 12.42	+7 2.0	1.979	2.904	8.2	20.2
2 21	11 7.09	+8 47.1	1.627	2.599	5.0	19.4	2 21	11 5.75	+7 53.9	1.952	2.924	4.4	20.0
3 2	10 58.34	+9 27.3	1.608	2.599	1.0	19.1	3 2	10 58.20	+8 49.1	1.953	2.944	0.7	19.7
3 12	10 49.41	+10 4.4	1.618	2.598	4.5	19.3	3 12	10 50.66	+9 41.3	1.983	2.964	3.8	20.0
3 22	10 41.38	+10 33.1	1.655	2.598	8.9	19.6	3 22	10 43.95	+10 25.6	2.042	2.984	7.5	20.3
4 1	10 35.16	+10 49.3	1.717	2.598	12.8	19.8	4 1	10 38.76	+10 58.1	2.126	3.004	10.8	20.5
4 11	10 31.34	+10 51.3	1.799	2.599	16.1	20.0	4 11	10 35.53	+11 17.1	2.232	3.024	13.6	20.7
301081	2008 UD ₂₆₅		3 3.3 293°48	5°5/ 7.1 18			409013	2003 AA ₇₉		3 3.4 80°40	2°2/ 5.3 18		
2 1	11 20.19	-6 35.0	1.367	2.192	17.9	20.7	2 1	11 21.90	-1 23.0	1.733	2.562	14.5	21.0
2 11	11 15.45	-6 52.0	1.279	2.176	14.2	20.4	2 11	11 15.71	-1 4.0	1.681	2.587	10.7	20.8
2 21	11 7.95	-6 43.6	1.211	2.159	9.9	20.1	2 21	11 7.59	-0 28.3	1.653	2.613	6.5	20.6
3 2	10 58.49	-6 9.5	1.166	2.142	6.2	19.9	3 2	10 58.42	+0 19.9	1.652	2.638	2.6	20.4
3 12	10 48.39	-5 14.1	1.147	2.126	6.2	19.8	3 12	10 49.31	+1 14.2	1.679	2.663	3.8	20.5
3 22	10 39.13	-4 5.7	1.152	2.110	10.1	20.0	3 22	10 41.25	+2 7.9	1.735	2.688	7.7	20.8
4 1	10 32.07	-2 54.5	1.181	2.094	14.9	20.2	4 1	10 35.09	+2 55.0	1.816	2.712	11.4	21.1
4 11	10 28.11	-1 50.5	1.229	2.078	19.2	20.4	4 11	10 31.28	+3 31.4	1.920	2.736	14.6	21.3
234833	2002 RG ₁₃₂		3 3.4 222°45	4°7/ 7.9 17			122410	2000 QD ₉₀		3 3.4 213°27	1°5/ 5.1 18		
2 1	11 18.80	-8 46.3	2.192	2.979	13.3	20.0	2 1	11 17.07	-2 0.2	2.085	2.909	12.6	20.0
2 11	11 13.47	-9 3.0	2.107	2.978	10.6	19.9	2 11	11 12.31	-1 5.4	2.000	2.905	9.3	19.7
2 21	11 6.42	-9 1.7	2.045	2.977	7.7	19.7	2 21	11 5.81	+0 7.2	1.939	2.900	5.6	19.5
3 2	10 58.28	-8 43.0	2.010	2.976	5.3	19.5	3 2	10 58.23	+1 33.1	1.907	2.895	2.0	19.2
3 12	10 49.91	-8 9.5	2.004	2.974	5.0	19.5	3 12	10 50.42	+3 5.6	1.905	2.890	3.3	19.3
3 22	10 42.18	-7 26.1	2.025	2.973	7.2	19.6	3 22	10 43.25	+4 37.0	1.932	2.884	7.2	19.6
4 1	10 35.87	-6 38.5	2.073	2.971	10.1	19.8	4 1	10 37.51	+6 0.1	1.986	2.878	10.9	19.8
4 11	10 31.53	-5 52.4	2.145	2.970	12.9	20.0	4 11	10 33.76	+7 9.9	2.064	2.871	14.0	20.0
422229	2014 RR ₆₂		3 3.4 160°87	4°0/28.6 18			345572	2006 RW ₁₀₄		3 3.4 272°28	2°9/29.4 17		
2 1	11 22.27	+15 6.6	1.860	2.724	12.1	21.2	2 1	11 19.39	+14 51.4	2.296	3.156	10.2	21.0
2 11	11 16.09	+16 16.0	1.800	2.729	8.6	20.9	2 11	11 13.77	+15 26.7	2.225	3.153	7.3	20.8
2 21	11 7.87	+17 27.7	1.766	2.734	5.2	20.7	2 21	11 6.53	+16 3.4	2.180	3.149	4.3	20.6
3 2	10 58.45	+18 33.7	1.760	2.738	4.1	20.7	3 2	10 58.31	+16 36.3	2.164	3.146	3.0	20.5
3 12	10 48.92	+19 26.4	1.783	2.742	6.7	20.9	3 12	10 49.97	+17 0.4	2.178	3.143	5.2	20.6
3 22	10 40.33	+20 0.8	1.833	2.745	10.3	21.1	3 22	10 42.33	+17 12.5	2.220	3.139	8.3	20.8
4 1	10 33.59	+20 15.0	1.907	2.748	13.6	21.3	4 1	10 36.13	+17 10.6	2.287	3.136	11.3	21.0
4 11	10 29.23	+20 9.7	2.001	2.750	16.3	21.5	4 11	10 31.85	+16 54.9	2.376	3.132	13.8	21.2
81273	2000 FA ₅₀		3 3.4 296°38	8°6/11.0 18			30610	2623 P-L		3 3.4 164°03	4°6/28.5 18		
2 1	11 16.87	-17 26.4	1.733	2.490	17.5	18.7	2 1	11 25.57	+19 6.2	1.993	2.852	11.6	20.1
2 11	11 12.78	-17 42.6	1.624	2.463	15.0	18.4	2 11	11 18.31	+19 45.0	1.932	2.856	8.5	19.9
2 21	11 6.37	-17 28.3	1.535	2.435	12.1	18.2	2 21	11 9.04	+20 21.2	1.896	2.859	5.5	19.7
3 2	10 58.30	-16 40.5	1.468	2.408	9.6	18.0	3 2	10 58.62	+20 48.0	1.890	2.862	4.7	19.7
3 12	10 49.60	-15 20.4	1.426	2.380	8.6	17.8	3 12	10 48.14	+21 0.0	1.912	2.865	6.9	19.8
3 22	10 41.45	-13 34.5	1.410	2.353	10.1	17.9	3 22	10 38.67	+20 54.5	1.962	2.867	10.1	20.0
4 1	10 35.01	-11 33.2	1.418	2.325	13.2	18.0	4 1	10 31.08	+20 31.4	2.037	2.869	13.1	20.2
4 11	10 31.13	-9 28.9	1.449	2.298	16.8	18.1	4 11	10 25.89	+19 52.5	2.132	2.870	15.7	20.4
411254	2010 RF ₁₀₉		3 3.4 200°13	0°8/ 4.1 18			369396	2009 VC ₈₇		3 3.4 119°28	0°6/ 4.0 18		
2 1	11 19.51	+1 15.3	1.868	2.706	13.2	21.8	2 1	11 19.15	+2 5.6	2.211	3.044	11.6	21.9
2 11	11 14.18	+2 1.1	1.789	2.703	9.7	21.6	2 11	11 13.54	+2 44.8	2.147	3.060	8.4	21.7
2 21	11 6.88	+3 2.7	1.734	2.700	5.5	21.3	2 21	11 6.36	+3 35.7	2.109	3.076	4.7	21.5
3 2	10 58.34	+4 15.1	1.707	2.697	1.2	21.0	3 2	10 58.29	+4 33.6	2.101	3.091	1.0	21.2
3 12	10 49.56	+5 31.0	1.709	2.693	3.7	21.2	3 12	10 50.18	+5 33.0	2.122	3.105	3.2	21.4
3 22	10 41.55	+6 43.1	1.740	2.689	8.1	21.4	3 22	10 42.81	+6 28.4	2.172	3.119	6.8	21.7
4 1	10 35.19	+7 44.8	1.797	2.684	12.0	21.6	4 1	10 36.89	+7 15.2	2.250	3.133	10.1	21.9
4 11	10 31.10	+8 31.9	1.875	2.679	15.3	21.9	4 11	10 32.86	+7 50.5	2.351	3.146	12.9	22.1
506690	2006 TZ ₅₀		3 3.4 199°44	2°6/ 6.9 17			89763	2002 AY ₆₀		3 3.4 114°17	0°2/ 3.5 18		
2 1	11 15.81	-6 0.9	3.059	3.849	9.8	23.0	2 1	11 21.30	+2 36.3	1.631	2.477</		

EPHEMERIDES

3 3.4

3 3.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
276400	2002 <i>XS</i> ₄₅		3 3.4 171°87	2°8/29.9	18		50168	2000 <i>AH</i> ₁₅₅		3 3.4 260°31	2°7/5.2	18	
2 1	11 25.13	+12 1.5	1.937	2.790	12.2	20.8	2 1	11 22.73	- 0 49.9	1.385	2.227	16.8	18.7
2 11	11 18.07	+12 58.5	1.870	2.795	8.6	20.6	2 11	11 17.10	- 0 49.7	1.308	2.221	12.6	18.5
2 21	11 8.96	+14 0.4	1.829	2.800	4.8	20.4	2 21	11 8.77	- 0 29.6	1.253	2.216	7.8	18.2
3 2	10 58.62	+15 0.0	1.818	2.803	2.8	20.2	3 2	10 58.66	+ 0 7.2	1.224	2.210	3.3	17.9
3 12	10 48.14	+15 50.3	1.837	2.805	5.6	20.4	3 12	10 48.15	+ 0 54.5	1.220	2.205	4.7	18.0
3 22	10 38.60	+16 26.1	1.884	2.807	9.4	20.6	3 22	10 38.67	+ 1 44.2	1.243	2.199	9.7	18.2
4 1	10 30.88	+16 44.8	1.957	2.807	12.9	20.9	4 1	10 31.47	+ 2 28.3	1.289	2.193	14.5	18.5
4 11	10 25.57	+16 46.2	2.051	2.806	15.8	21.1	4 11	10 27.30	+ 3 0.8	1.355	2.188	18.6	18.7
111653	2002 <i>AE</i> ₁₈₄		3 3.4 125°67	0°7/2.6	18		117467	2005 <i>BE</i> ₁₁		3 3.4 339°51	0°1/3.3	18	
2 1	11 17.47	+ 4 2.5	1.904	2.753	12.5	19.5	2 1	11 20.61	+ 5 9.6	1.375	2.237	15.6	19.6
2 11	11 12.63	+ 5 21.1	1.837	2.760	8.9	19.3	2 11	11 15.53	+ 5 31.5	1.305	2.233	11.2	19.3
2 21	11 5.99	+ 6 53.3	1.796	2.767	4.8	19.1	2 21	11 7.86	+ 6 7.4	1.257	2.229	6.2	19.0
3 2	10 58.26	+ 8 32.0	1.784	2.774	0.7	18.8	3 2	10 58.56	+ 6 51.6	1.234	2.225	0.7	18.6
3 12	10 50.41	+10 8.6	1.801	2.781	4.2	19.1	3 12	10 48.95	+ 7 36.2	1.238	2.222	4.8	18.9
3 22	10 43.35	+11 35.1	1.846	2.787	8.3	19.3	3 22	10 40.42	+ 8 13.6	1.268	2.219	10.1	19.2
4 1	10 37.88	+12 45.8	1.918	2.793	12.0	19.6	4 1	10 34.13	+ 8 38.1	1.320	2.217	14.8	19.5
4 11	10 34.52	+13 37.5	2.011	2.799	15.0	19.8	4 11	10 30.76	+ 8 46.5	1.391	2.215	18.7	19.7
21846	Wojakowski		3 3.4 306°38	0°6/3.8	18		212599	2006 <i>SN</i> ₂₃₉		3 3.4 159°81	0°2/3.1	17	
2 1	11 20.10	+ 3 23.0	1.445	2.301	15.4	18.6	2 1	11 16.78	+ 5 18.1	2.768	3.606	9.4	21.7
2 11	11 15.14	+ 3 42.6	1.365	2.289	11.2	18.3	2 11	11 11.69	+ 5 55.1	2.694	3.611	6.7	21.5
2 21	11 7.66	+ 4 18.0	1.307	2.277	6.4	18.0	2 21	11 5.34	+ 6 39.7	2.646	3.616	3.6	21.3
3 2	10 58.49	+ 5 4.4	1.276	2.266	1.2	17.6	3 2	10 58.23	+ 7 28.0	2.629	3.620	0.4	21.1
3 12	10 48.91	+ 5 54.4	1.271	2.255	4.5	17.8	3 12	10 51.03	+ 8 15.7	2.643	3.624	2.9	21.3
3 22	10 40.26	+ 6 40.1	1.291	2.244	9.8	18.0	3 22	10 44.37	+ 8 58.8	2.687	3.628	6.0	21.5
4 1	10 33.71	+ 7 14.9	1.335	2.234	14.5	18.3	4 1	10 38.81	+ 9 34.1	2.758	3.631	8.8	21.7
4 11	10 30.02	+ 7 34.5	1.399	2.224	18.6	18.5	4 11	10 34.78	+ 9 59.4	2.853	3.634	11.2	21.9
85423	1996 <i>XX</i> ₃₆		3 3.4 24°34	5°0/8.3	18		206086	2002 <i>RH</i> ₁₂₄		3 3.4 145°24	4°5/27.1	18	
2 1	11 15.89	- 8 58.8	1.786	2.589	15.2	19.3	2 1	11 18.85	+19 14.1	2.329	3.193	10.0	20.2
2 11	11 11.61	- 9 2.3	1.718	2.599	12.1	19.1	2 11	11 13.39	+20 24.7	2.273	3.199	7.3	20.0
2 21	11 5.47	- 8 43.2	1.671	2.608	8.7	18.9	2 21	11 6.33	+21 33.9	2.243	3.204	5.0	19.9
3 2	10 58.21	- 8 3.0	1.650	2.619	5.7	18.7	3 2	10 58.35	+22 34.8	2.243	3.209	4.7	19.9
3 12	10 50.82	- 7 6.5	1.655	2.630	5.3	18.7	3 12	10 50.29	+23 21.7	2.272	3.214	6.7	20.0
3 22	10 44.26	- 6 0.5	1.687	2.642	7.8	18.9	3 22	10 42.97	+23 51.2	2.328	3.219	9.3	20.2
4 1	10 39.35	- 4 52.7	1.745	2.654	11.0	19.1	4 1	10 37.09	+24 1.9	2.409	3.224	11.9	20.4
4 11	10 36.62	- 3 50.3	1.825	2.667	14.1	19.3	4 11	10 33.12	+23 54.8	2.509	3.228	14.1	20.5
330078	2005 <i>VE</i> ₁₃₆		3 3.4 245°41	2°8/29.7	17		504925	2011 <i>BU</i> ₁₂₃		3 3.4 217°57	3°1/29.2	17	
2 1	11 20.13	+12 10.3	1.941	2.803	11.8	21.6	2 1	11 18.14	+12 0.1	1.869	2.735	11.9	21.2
2 11	11 14.63	+13 3.3	1.865	2.794	8.3	21.4	2 11	11 13.23	+13 16.8	1.802	2.734	8.4	20.9
2 21	11 7.15	+14 1.6	1.814	2.785	4.7	21.1	2 21	11 6.39	+14 39.8	1.761	2.732	4.8	20.7
3 2	10 58.44	+14 58.8	1.791	2.776	2.8	21.0	3 2	10 58.38	+16 1.2	1.748	2.731	3.2	20.6
3 12	10 49.47	+15 47.7	1.797	2.767	5.6	21.1	3 12	10 50.18	+17 12.7	1.764	2.730	6.1	20.8
3 22	10 41.28	+16 23.0	1.831	2.757	9.4	21.3	3 22	10 42.80	+18 8.1	1.806	2.728	9.8	21.0
4 1	10 34.74	+16 41.6	1.889	2.747	12.9	21.5	4 1	10 37.07	+18 43.8	1.873	2.727	13.2	21.2
4 11	10 30.45	+16 42.7	1.968	2.737	15.9	21.7	4 11	10 33.58	+18 59.1	1.961	2.725	16.1	21.4
290701	2005 <i>UF</i> ₃₈₅		3 3.4 80°56	2°5/5.5	18		87004	2000 <i>JU</i> ₄₉		3 3.4 212°89	2°4/1.5	18	
2 1	11 19.77	- 1 41.0	1.804	2.633	14.0	21.1	2 1	11 24.94	+11 10.9	1.682	2.541	13.4	19.7
2 11	11 14.39	- 1 33.8	1.730	2.635	10.5	20.9	2 11	11 18.29	+11 48.0	1.608	2.536	9.5	19.5
2 21	11 7.02	- 1 10.2	1.679	2.638	6.6	20.6	2 21	11 9.27	+12 31.3	1.558	2.530	5.3	19.2
3 2	10 58.42	- 0 32.8	1.656	2.641	3.0	20.4	3 2	10 58.74	+13 13.9	1.536	2.524	2.4	19.0
3 12	10 49.63	+ 0 12.9	1.660	2.643	3.9	20.5	3 12	10 47.95	+13 48.6	1.543	2.517	5.7	19.2
3 22	10 41.67	+ 1 0.7	1.692	2.646	7.8	20.7	3 22	10 38.13	+14 10.0	1.577	2.510	10.1	19.4
4 1	10 35.44	+ 1 44.6	1.750	2.649	11.6	20.9	4 1	10 30.35	+14 15.1	1.636	2.502	14.1	19.7
4 11	10 31.52	+ 2 19.6	1.829	2.652	14.9	21.2	4 11	10 25.28	+14 3.5	1.714	2.494	17.5	19.9
301207	2009 <i>AQ</i> ₃₄		3 3.4 94°79	0°2/3.2	18		367908	2012 <i>BS</i> ₅₆		3 3.4 352°94	5°2/6.4	18	
2 1	11 22.93	+ 4 33.6	1.497	2.350	15.1	21.0	2 1	11 20.66	- 3 42.6	1.258	2.099	18.2	19.9
2 11	11 16.77	+ 5 12.5	1.443	2.367	10.8	20.7	2 11	11 15.80	- 4 29.4	1.186	2.093	14.2	19.7
2 21	11 8.33	+ 6 4.8	1.412	2.383	5.9	20.5	2 21	11 8.14	- 4 55.2	1.134	2.088	9.7	19.4
3 2	10 58.57	+ 7 3.9	1.408	2.399	0.7	20.2	3 2	10 58.62	- 4 59.6	1.106	2.085	5.8	19.2
3 12	10 48.80	+ 8 1.5	1.432	2.414	4.5	20.5	3 12	10 48.68	- 4 46.0	1.102	2.083	6.1	19.2
3 22	10 40.23	+ 8 50.3	1.482	2.430	9.3	20.8	3 22	10 39.84	- 4 20.8	1.123	2.081	10.2	19.4
4 1	10 33.83	+ 9 25.4	1.557	2.445	13.5	21.1	4 1	10 33.40	- 3 51.8	1.165	2.081	14.8	19.6
4 11	10 30.13	+ 9 44.1	1.653	2.460	16.9	21.3	4 11	10 30.14	- 3 26.9	1.227	2.082	18.9	19.9
462375	2008 <i>SH</i> ₁₀₈		3 3.4 284°56	0°4/3.7	17		417627	2006 <i>WH</i> ₁₇₀		3 3.4 291°93	10°8/21.1	18	
2 1	11 23.29	+ 5 0.9	1.893	2.735	12.9	21.5	2 1	11 23.13	+32 53.4	1.654	2.514	13.5	20.7
2 11	11 17.10	+ 4 59.7	1.792	2.709	9.4	21.3	2 11	11 17.30	+34 42.3	1.605	2.505	11.6	20.5
2 21	11 8.65	+ 5 7.8	1.715	2.684	5.4	21.0	2 21	11 8.82	+36 16.6	1.580	2.496	10.8	20.5
3 2	10 58.65	+ 5 22.2	1.667	2.658	0.9	20.6	3 2	10 58.68	+37 24.2	1.580	2.487	11.6	20.5
3 12	10 48.13	+ 5 38.4	1.648	2.632	3.9	20.7	3 12	10 48.35	+37 57.1	1.603	2.478	13.6	20.6
3 22	10 38.22	+ 5 51.7	1.658	2.605	8.5	21.0	3 22	10 39.23	+37 53.3	1.648	2.469	16.1	20.7
4 1	10 30.00	+ 5 58.2	1.693	2.579	12.7	21.2	4 1	10 32.49	+37 15.4	1.712	2.461	18.5	20.9
4 11	10 24.21	+ 5 54.9	1.750	2.552	16.3	21.3	4 11	10 28.77	+36 9.2	1.790	2.452	20.7	21.0
1784	Benguella		3 3.4 255°90	0°9/2.6	18		458138	2010 <i>HJ</i> ₁₈		3 3.4 159°01	4°5/27.2	18	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
32838	1992 <i>EL</i> ₈		3 3.4 164°01	2°5/ 1.0 18			360425	2002 <i>GF</i> ₁₈₁		3 3.4 217°35	4°2/28.3 17		
2 1	11 21.59	+ 9 47.6	1.754	2.614	12.9	18.3	2 1	11 23.94	+17 15.5	2.082	2.940	11.2	21.7
2 11	11 15.75	+11 2.2	1.689	2.619	9.1	18.0	2 11	11 17.29	+18 14.0	2.006	2.931	8.1	21.5
2 21	11 7.80	+12 25.4	1.650	2.623	4.9	17.8	2 21	11 8.63	+19 13.1	1.956	2.921	5.2	21.3
3 2	10 58.57	+13 48.8	1.640	2.627	2.6	17.6	3 2	10 58.69	+20 5.6	1.936	2.910	4.4	21.2
3 12	10 49.18	+15 3.8	1.658	2.630	5.7	17.9	3 12	10 48.51	+20 44.9	1.945	2.898	6.7	21.4
3 22	10 40.73	+16 3.3	1.704	2.632	9.8	18.1	3 22	10 39.11	+21 6.6	1.981	2.886	10.0	21.5
4 1	10 34.14	+16 43.3	1.775	2.634	13.5	18.3	4 1	10 31.41	+21 9.1	2.043	2.872	13.2	21.7
4 11	10 30.00	+17 2.9	1.865	2.636	16.6	18.5	4 11	10 26.00	+20 53.3	2.125	2.858	15.9	21.9
466397	2013 <i>SS</i> ₅₆		3 3.4 141°06	2°1/ 1.2 17			458134	2010 <i>FV</i> ₉₂		3 3.4 344°73	5°7/28.3 18		
2 1	11 19.45	+10 43.6	2.117	2.974	11.1	21.5	2 1	11 16.13	+13 51.2	1.009	1.906	16.8	20.3
2 11	11 13.91	+11 35.7	2.052	2.980	7.8	21.3	2 11	11 13.02	+15 17.7	0.950	1.896	12.0	20.0
2 21	11 6.67	+12 33.2	2.014	2.986	4.3	21.1	2 21	11 6.78	+16 53.7	0.911	1.886	7.3	19.7
3 2	10 58.43	+13 30.1	2.005	2.992	2.1	20.9	3 2	10 58.48	+18 25.1	0.896	1.878	5.9	19.6
3 12	10 50.09	+14 20.3	2.026	2.998	4.8	21.1	3 12	10 49.80	+19 36.8	0.903	1.871	9.9	19.8
3 22	10 42.53	+14 58.9	2.074	3.003	8.3	21.3	3 22	10 42.47	+20 18.7	0.931	1.865	15.1	20.0
4 1	10 36.49	+15 23.0	2.149	3.008	11.5	21.6	4 1	10 37.90	+20 27.1	0.978	1.861	19.9	20.3
4 11	10 32.47	+15 31.7	2.244	3.013	14.2	21.8	4 11	10 36.85	+20 3.5	1.039	1.858	24.0	20.6
379174	2009 <i>RY</i> ₂		3 3.4 207°92	1°3/ 2.0 17			410194	2007 <i>RR</i> ₁₃₈		3 3.4 218°88	0°2/ 3.3 17		
2 1	11 22.79	+ 9 45.3	2.475	3.318	10.2	22.2	2 1	11 24.42	+ 5 40.1	1.880	2.722	13.0	22.2
2 11	11 16.16	+10 13.1	2.390	3.311	7.2	22.0	2 11	11 17.78	+ 5 59.7	1.795	2.714	9.4	22.0
2 21	11 7.89	+10 45.8	2.332	3.303	3.9	21.8	2 21	11 8.96	+ 6 29.4	1.735	2.705	5.2	21.7
3 2	10 58.59	+11 19.1	2.305	3.294	1.3	21.6	3 2	10 58.74	+ 7 4.8	1.704	2.695	0.6	21.3
3 12	10 49.09	+11 48.5	2.309	3.284	3.9	21.8	3 12	10 48.20	+ 7 40.0	1.702	2.684	4.1	21.6
3 22	10 40.21	+12 10.2	2.343	3.274	7.3	22.0	3 22	10 38.45	+ 8 9.7	1.729	2.673	8.5	21.8
4 1	10 32.69	+12 21.7	2.404	3.263	10.5	22.1	4 1	10 30.47	+ 8 29.6	1.782	2.661	12.5	22.0
4 11	10 27.05	+12 21.6	2.488	3.251	13.1	22.3	4 11	10 24.94	+ 8 37.3	1.857	2.648	15.9	22.2
417078	2005 <i>UQ</i> ₂₅₁		3 3.4 51°93	14°8/19.7 18			330439	2007 <i>DR</i> ₅₅		3 3.4 194°33	1°7/ 1.8 17		
2 1	11 35.87	+47 14.0	1.675	2.477	16.2	20.3	2 1	11 19.90	+ 9 17.8	1.988	2.844	11.8	21.3
2 11	11 26.24	+48 27.3	1.658	2.488	15.1	20.2	2 11	11 14.38	+10 3.6	1.916	2.843	8.3	21.1
2 21	11 13.46	+49 9.1	1.662	2.500	14.8	20.2	2 21	11 7.00	+10 56.6	1.870	2.842	4.5	20.8
3 2	10 59.22	+49 9.9	1.687	2.513	15.3	20.3	3 2	10 58.49	+11 51.0	1.852	2.841	1.7	20.6
3 12	10 45.60	+48 27.1	1.732	2.525	16.5	20.4	3 12	10 49.81	+12 40.3	1.863	2.839	4.7	20.8
3 22	10 34.30	+47 4.8	1.797	2.538	17.9	20.5	3 22	10 41.90	+13 19.2	1.902	2.837	8.5	21.0
4 1	10 26.37	+45 11.0	1.879	2.551	19.4	20.7	4 1	10 35.60	+13 44.0	1.967	2.835	12.0	21.3
4 11	10 22.13	+42 55.2	1.975	2.564	20.8	20.8	4 11	10 31.46	+13 53.4	2.053	2.832	15.0	21.5
38183	1999 <i>JM</i> ₁₂₅		3 3.4 214°93	0°9/ 4.2 18			384104	2008 <i>WR</i> ₇₀		3 3.4 91°33	5°4/26.4 18		
2 1	11 21.83	+ 1 55.3	1.906	2.741	13.1	19.4	2 1	11 21.12	+22 19.5	2.242	3.104	10.4	20.9
2 11	11 15.89	+ 2 23.3	1.821	2.734	9.6	19.1	2 11	11 14.93	+23 30.6	2.207	3.128	7.7	20.7
2 21	11 7.91	+ 3 5.4	1.760	2.726	5.5	18.9	2 21	11 7.14	+24 36.4	2.198	3.151	5.7	20.7
3 2	10 58.60	+ 3 57.4	1.728	2.718	1.3	18.5	3 2	10 58.49	+25 30.0	2.218	3.174	5.6	20.7
3 12	10 48.98	+ 4 53.2	1.725	2.709	3.7	18.7	3 12	10 49.93	+26 6.2	2.267	3.197	7.4	20.8
3 22	10 40.11	+ 5 46.4	1.751	2.699	8.1	18.9	3 22	10 42.28	+26 22.7	2.342	3.219	9.9	21.0
4 1	10 32.91	+ 6 31.4	1.803	2.689	12.0	19.2	4 1	10 36.25	+26 19.5	2.441	3.241	12.2	21.2
4 11	10 28.02	+ 7 4.0	1.876	2.678	15.4	19.4	4 11	10 32.24	+25 58.7	2.560	3.262	14.2	21.4
293626	2007 <i>MG</i> ₁₃		3 3.4 249°54	3°8/28.9 18			114911	2003 <i>QR</i> ₃₀		3 3.4 104°28	0°2/ 3.5 18		
2 1	11 22.07	+13 6.0	1.725	2.590	12.8	20.9	2 1	11 23.30	+ 5 38.2	2.134	2.973	11.8	19.4
2 11	11 16.38	+14 24.1	1.641	2.572	9.1	20.6	2 11	11 16.53	+ 5 41.1	2.071	2.987	8.4	19.2
2 21	11 8.32	+15 49.7	1.583	2.554	5.4	20.4	2 21	11 8.06	+ 5 51.7	2.033	3.001	4.7	19.0
3 2	10 58.66	+17 14.0	1.553	2.535	3.9	20.2	3 2	10 58.62	+ 6 6.5	2.024	3.015	0.6	18.7
3 12	10 48.55	+18 27.2	1.552	2.515	7.0	20.4	3 12	10 49.15	+ 6 21.5	2.046	3.029	3.4	19.0
3 22	10 39.22	+19 21.8	1.577	2.495	11.2	20.6	3 22	10 40.54	+ 6 33.0	2.097	3.042	7.2	19.3
4 1	10 31.78	+19 53.8	1.626	2.474	15.1	20.8	4 1	10 33.55	+ 6 38.1	2.175	3.055	10.5	19.5
4 11	10 26.96	+20 2.6	1.694	2.452	18.5	20.9	4 11	10 28.64	+ 6 34.9	2.276	3.068	13.3	19.7
120964	1998 <i>VK</i> ₂₂		3 3.4 143°04	0°8/ 4.1 18			65453	2002 <i>VJ</i> ₆₈		3 3.4 185°46	2°6/ 6.2 18		
2 1	11 23.81	+ 2 10.4	1.723	2.561	14.2	20.5	2 1	11 19.02	- 3 27.3	2.518	3.324	11.3	19.3
2 11	11 17.28	+ 2 40.3	1.657	2.572	10.3	20.3	2 11	11 13.45	- 3 26.7	2.433	3.324	8.6	19.1
2 21	11 8.61	+ 3 24.5	1.616	2.582	5.9	20.1	2 21	11 6.39	- 3 13.1	2.374	3.323	5.6	18.9
3 2	10 58.68	+ 4 18.1	1.602	2.592	1.3	19.8	3 2	10 58.42	- 2 48.3	2.342	3.323	3.0	18.8
3 12	10 48.62	+ 5 14.1	1.618	2.601	3.9	20.0	3 12	10 50.28	- 2 15.4	2.341	3.322	3.3	18.8
3 22	10 39.57	+ 6 5.8	1.661	2.610	8.4	20.3	3 22	10 42.70	- 1 38.7	2.370	3.320	6.1	19.0
4 1	10 32.47	+ 6 47.6	1.730	2.617	12.4	20.5	4 1	10 36.36	- 1 2.4	2.426	3.318	9.1	19.1
4 11	10 27.87	+ 7 16.0	1.821	2.624	15.8	20.8	4 11	10 31.74	- 0 30.6	2.506	3.316	11.7	19.3
350613	2001 <i>SZ</i> ₉₆		3 3.4 264°08	2°2/ 5.0 17			404523	2013 <i>HA</i> ₁₁₁		3 3.4 53°06	0°5/ 3.8 18		
2 1	11 21.30	- 0 53.9	1.531	2.369	15.6	21.5	2 1	11 20.80	+ 2 53.7	1.304	2.163	16.5	20.9
2 11	11 16.04	- 0 34.1	1.441	2.353	11.8	21.2	2 11	11 15.54	+ 3 27.1	1.251	2.177	11.9	20.7
2 21	11 8.23	+ 0 6.1	1.373	2.336	7.2	20.9	2 21	11 7.79	+ 4 17.7	1.220	2.191	6.6	20.4
3 2	10 58.66	+ 1 3.2	1.331	2.318	2.7	20.5	3 2	10 58.59	+ 5 18.7	1.215	2.205	1.1	20.1
3 12	10 48.55	+ 2 10.3	1.316	2.301	4.4	20.6	3 12	10 49.35	+ 6 20.8	1.236	2.220	4.6	20.4
3 22	10 39.22	+ 3 18.9	1.328	2.283	9.4	20.8	3 22	10 41.39	+ 7 15.5	1.282	2.235	9.8	20.7
4 1	10 31.89	+ 4 20.4	1.364	2.264	14.2	21.1	4 1	10 35.76	+ 7 56.3	1.351	2.251	14.3	21.0
4 11	10 27.38	+ 5 8.4	1.420	2.246	18.3	21.3	4 11	10 33.01	+ 8 19.9	1.440	2.266	18.1	21.3
303384	2004 <i>XH</i> ₃₂		3 3.4 62°73	6°8/27.2 18			519623	2012 <i>US</i> ₁₈₁		3 3.4 266°81	3°1		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
72325	2001 BT ₅₅		3 3.4 141°02	1.7°/ 1.9	18		40454	1999 RY ₃₉		3 3.4 190°78	2°5/ 6.3	18	
2 1	11 22.39	+ 8 46.8	1.822	2.676	12.7	20.1	2 1	11 17.73	- 4 25.9	2.415	3.221	11.7	20.0
2 11	11 16.19	+ 9 37.7	1.760	2.686	9.0	19.9	2 11	11 12.61	- 3 58.7	2.329	3.220	8.9	19.8
2 21	11 7.99	+10 36.6	1.723	2.695	4.8	19.6	2 21	11 5.97	- 3 16.0	2.268	3.218	5.8	19.6
3 2	10 58.62	+11 36.8	1.715	2.704	1.7	19.4	3 2	10 58.39	- 2 20.1	2.235	3.216	3.0	19.4
3 12	10 49.16	+12 31.0	1.736	2.712	4.9	19.7	3 12	10 50.63	- 1 15.8	2.231	3.213	3.3	19.4
3 22	10 40.65	+13 13.5	1.785	2.720	9.0	19.9	3 22	10 43.44	- 0 8.5	2.258	3.210	6.3	19.6
4 1	10 33.97	+13 40.7	1.859	2.727	12.6	20.2	4 1	10 37.51	+ 0 56.0	2.313	3.207	9.4	19.8
4 11	10 29.65	+13 51.3	1.954	2.733	15.7	20.4	4 11	10 33.32	+ 1 53.1	2.391	3.203	12.2	20.0
383775	2007 VC ₃₀₁		3 3.4 92°96	4°4/27.1	18		12003	Hideosugai		3 3.4 62°30	2°2/ 1.1	18	
2 1	11 17.60	+18 18.0	2.277	3.144	10.1	20.7	2 1	11 19.06	+12 49.2	2.364	3.221	10.1	17.2
2 11	11 12.52	+19 36.6	2.228	3.156	7.3	20.6	2 11	11 13.47	+13 16.8	2.302	3.229	7.1	17.0
2 21	11 5.88	+20 54.3	2.205	3.168	4.9	20.4	2 21	11 6.38	+13 46.8	2.266	3.237	4.0	16.8
3 2	10 58.36	+22 4.0	2.212	3.180	4.6	20.4	3 2	10 58.44	+14 14.5	2.259	3.245	2.2	16.7
3 12	10 50.79	+22 59.6	2.247	3.191	6.6	20.6	3 12	10 50.45	+14 35.6	2.282	3.253	4.5	16.8
3 22	10 43.97	+23 37.5	2.310	3.203	9.3	20.8	3 22	10 43.19	+14 46.9	2.334	3.261	7.6	17.1
4 1	10 38.58	+23 56.1	2.397	3.215	11.9	21.0	4 1	10 37.31	+14 46.7	2.412	3.270	10.5	17.2
4 11	10 35.08	+23 56.3	2.504	3.226	14.0	21.1	4 11	10 33.26	+14 34.6	2.511	3.278	12.9	17.4
457833	2009 SN ₇₉		3 3.4 275°63	2°3/ 5.3	17		87655	2000 RW ₈₈		3 3.4 80°32	4°9/ 7.2	18	
2 1	11 20.11	- 1 14.2	1.847	2.676	13.8	21.2	2 1	11 22.97	- 6 31.7	1.839	2.641	14.9	19.4
2 11	11 14.88	- 1 1.9	1.747	2.654	10.4	20.9	2 11	11 16.72	- 7 8.0	1.763	2.646	11.8	19.2
2 21	11 7.48	- 0 32.7	1.671	2.631	6.5	20.6	2 21	11 8.36	- 7 26.2	1.711	2.650	8.3	19.0
3 2	10 58.59	+ 0 10.9	1.622	2.608	2.7	20.3	3 2	10 58.70	- 7 26.2	1.684	2.655	5.5	18.8
3 12	10 49.21	+ 1 3.8	1.601	2.585	3.9	20.3	3 12	10 48.80	- 7 10.9	1.686	2.659	5.4	18.8
3 22	10 40.42	+ 1 59.5	1.608	2.561	8.2	20.5	3 22	10 39.75	- 6 44.8	1.715	2.664	8.2	19.0
4 1	10 33.26	+ 2 51.3	1.640	2.537	12.4	20.7	4 1	10 32.49	- 6 14.0	1.770	2.669	11.5	19.2
4 11	10 28.46	+ 3 33.4	1.695	2.513	16.1	20.9	4 11	10 27.64	- 5 44.5	1.847	2.673	14.7	19.4
337578	2001 SH ₃₂₁		3 3.4 137°90	3°3/ 7.7	17		132135	2002 CN ₂₄₉		3 3.4 219°31	2°1/ 5.2	18	
2 1	11 17.17	- 7 51.2	2.806	3.588	10.8	21.5	2 1	11 20.99	- 1 8.4	1.687	2.519	14.7	20.3
2 11	11 11.97	- 7 39.9	2.728	3.599	8.5	21.3	2 11	11 15.49	- 0 48.2	1.606	2.515	11.0	20.0
2 21	11 5.52	- 7 14.0	2.675	3.610	5.9	21.2	2 21	11 7.78	- 0 9.8	1.549	2.510	6.7	19.8
3 2	10 58.32	- 6 35.0	2.651	3.621	3.8	21.1	3 2	10 58.63	+ 0 43.3	1.518	2.505	2.6	19.5
3 12	10 51.03	- 5 46.4	2.656	3.631	3.6	21.1	3 12	10 49.17	+ 1 44.6	1.515	2.500	4.0	19.6
3 22	10 44.28	- 4 52.2	2.692	3.641	5.6	21.2	3 22	10 40.55	+ 2 46.7	1.540	2.494	8.4	19.8
4 1	10 38.64	- 3 57.3	2.755	3.650	8.1	21.4	4 1	10 33.78	+ 3 42.4	1.590	2.488	12.7	20.0
4 11	10 34.51	- 3 5.9	2.844	3.659	10.4	21.5	4 11	10 29.53	+ 4 26.2	1.662	2.482	16.3	20.3
371261	2006 BS ₂₅₅		3 3.4 42°98	3°5/ 6.2	18		292646	2006 UT ₃₈		3 3.4 214°51	3°2/ 7.4	17	
2 1	11 20.26	- 3 8.7	1.579	2.409	15.7	20.4	2 1	11 15.89	- 7 10.1	2.679	3.469	11.1	21.6
2 11	11 14.85	- 3 17.6	1.521	2.424	11.9	20.2	2 11	11 11.21	- 6 52.7	2.587	3.464	8.7	21.5
2 21	11 7.32	- 3 7.4	1.485	2.440	7.7	19.9	2 21	11 5.18	- 6 19.8	2.519	3.459	6.0	21.3
3 2	10 58.55	- 2 40.7	1.474	2.456	4.0	19.8	3 2	10 58.30	- 5 33.1	2.480	3.454	3.7	21.1
3 12	10 49.71	- 2 2.8	1.491	2.473	4.5	19.8	3 12	10 51.24	- 4 36.2	2.471	3.448	3.5	21.1
3 22	10 41.94	- 1 20.4	1.534	2.490	8.2	20.1	3 22	10 44.67	- 3 33.7	2.491	3.442	5.8	21.2
4 1	10 36.12	- 0 40.2	1.602	2.508	12.1	20.3	4 1	10 39.19	- 2 30.9	2.539	3.436	8.5	21.4
4 11	10 32.81	- 0 7.6	1.691	2.526	15.4	20.6	4 11	10 35.27	- 1 32.5	2.612	3.430	11.1	21.6
452508	2004 RM ₁₈₄		3 3.4 148°84	3°2/ 6.0	18		282850	2006 WX ₁₀₀		3 3.4 135°40	2°0/ 5.7	17	
2 1	11 22.91	- 3 41.8	1.747	2.564	14.9	21.7	2 1	11 17.32	- 1 45.1	2.584	3.399	10.7	20.8
2 11	11 16.69	- 3 33.0	1.675	2.572	11.4	21.5	2 11	11 12.19	- 1 35.1	2.506	3.404	8.0	20.6
2 21	11 8.34	- 3 5.2	1.626	2.580	7.3	21.2	2 21	11 5.68	- 1 13.3	2.453	3.409	5.0	20.4
3 2	10 58.68	- 2 21.0	1.604	2.586	3.7	21.0	3 2	10 58.36	- 0 41.9	2.429	3.414	2.3	20.3
3 12	10 48.84	- 1 26.1	1.611	2.593	4.2	21.1	3 12	10 50.92	- 0 4.6	2.436	3.418	2.9	20.3
3 22	10 39.94	- 0 27.7	1.645	2.599	8.1	21.3	3 22	10 44.04	+ 0 34.5	2.471	3.423	5.8	20.5
4 1	10 32.91	+ 0 27.5	1.706	2.604	12.0	21.6	4 1	10 38.35	+ 1 11.3	2.534	3.427	8.7	20.7
4 11	10 28.35	+ 1 13.5	1.789	2.608	15.3	21.8	4 11	10 34.28	+ 1 42.3	2.622	3.431	11.3	20.9
133633	2003 UN ₁₄₁		3 3.4 242°38	2°3/ 1.1	18		247847	2003 SH ₃₅₂		3 3.4 228°85	1°1/ 2.4	17	
2 1	11 20.27	+ 9 4.3	1.817	2.676	12.6	20.6	2 1	11 22.43	+ 7 33.1	1.972	2.820	12.2	22.2
2 11	11 14.95	+10 19.9	1.733	2.662	8.9	20.3	2 11	11 16.33	+ 8 15.0	1.885	2.808	8.7	21.9
2 21	11 7.48	+11 46.6	1.675	2.647	4.9	20.0	2 21	11 8.18	+ 9 6.5	1.824	2.795	4.7	21.6
3 2	10 58.59	+13 16.5	1.645	2.632	2.4	19.8	3 2	10 58.69	+10 1.8	1.791	2.781	1.2	21.4
3 12	10 49.32	+14 40.6	1.644	2.616	5.6	20.0	3 12	10 48.86	+10 54.5	1.788	2.767	4.5	21.6
3 22	10 40.77	+15 50.9	1.670	2.600	9.9	20.2	3 22	10 39.74	+11 38.4	1.814	2.751	8.7	21.8
4 1	10 33.94	+16 42.2	1.722	2.583	13.8	20.4	4 1	10 32.26	+12 9.4	1.865	2.735	12.5	22.0
4 11	10 29.51	+17 12.3	1.793	2.565	17.1	20.6	4 11	10 27.07	+12 25.0	1.938	2.719	15.7	22.2
123341	2000 VQ ₅₄		3 3.4 148°20	1°0/ 4.4	17		326984	2004 PM ₅		3 3.4 187°34	1°2/ 4.7	17	
2 1	11 20.19	+ 1 48.0	2.179	3.010	11.9	20.5	2 1	11 19.12	+ 0 18.0	2.398	3.221	11.2	22.1
2 11	11 14.41	+ 2 8.5	2.106	3.016	8.6	20.3	2 11	11 13.59	+ 0 47.9	2.314	3.220	8.2	21.9
2 21	11 6.96	+ 2 40.5	2.058	3.023	5.0	20.1	2 21	11 6.50	+ 1 30.2	2.257	3.219	4.9	21.7
3 2	10 58.51	+ 3 20.6	2.039	3.029	1.4	19.8	3 2	10 58.47	+ 2 21.5	2.229	3.218	1.6	21.5
3 12	10 49.94	+ 4 3.8	2.050	3.034	3.2	20.0	3 12	10 50.25	+ 3 17.0	2.232	3.215	3.0	21.6
3 22	10 42.09	+ 4 45.0	2.091	3.040	6.9	20.2	3 22	10 42.64	+ 4 11.5	2.264	3.213	6.5	21.8
4 1	10 35.72	+ 5 20.0	2.158	3.044	10.3	20.4	4 1	10 36.32	+ 5 0.2	2.323	3.209	9.7	22.0
4 11	10 31.31	+ 5 45.4	2.248	3.049	13.2	20.6	4 11	10 31.80	+ 5 39.6	2.407	3.205	12.5	22.2
62893	2000 UM ₁₀₁		3 3.4 342°52	0°4/ 3.1	18		362079	2009 BG ₁₁₁		3 3.4 339°49	4°4/29.0	18</	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
35678	1998 XW ₉₆		3 3.4 275°22	1.4/ 4.5	18		428927	2008 WJ ₈₉		3 3.4 91°69	4.1/27.6	17	
2 1	11 22.23	+ 1 20.9	1.567	2.410	15.1	18.4	2 1	11 17.70	+16 50.5	2.176	3.043	10.4	21.1
2 11	11 16.75	+ 1 35.9	1.471	2.387	11.2	18.1	2 11	11 12.67	+18 6.8	2.122	3.052	7.5	20.9
2 21	11 8.69	+ 2 8.1	1.397	2.363	6.7	17.8	2 21	11 6.02	+19 23.5	2.095	3.061	4.8	20.7
3 2	10 58.78	+ 2 54.1	1.350	2.339	2.0	17.4	3 2	10 58.42	+20 33.5	2.097	3.070	4.3	20.7
3 12	10 48.23	+ 3 47.3	1.330	2.315	4.4	17.5	3 12	10 50.76	+21 30.3	2.127	3.078	6.5	20.9
3 22	10 38.38	+ 4 40.1	1.337	2.290	9.6	17.8	3 22	10 43.86	+22 9.7	2.185	3.087	9.4	21.1
4 1	10 30.50	+ 5 25.2	1.369	2.265	14.4	18.0	4 1	10 38.43	+22 30.1	2.267	3.095	12.1	21.3
4 11	10 25.44	+ 5 57.0	1.420	2.240	18.6	18.2	4 11	10 34.96	+22 31.8	2.369	3.104	14.4	21.4
387514	1999 RM ₁₉₀		3 3.4 204°55	1°0/ 2.6	18		406472	2007 UT ₇₁		3 3.4 81°06	0°5/ 3.8	18	
2 1	11 24.18	+ 6 21.6	1.806	2.652	13.2	22.2	2 1	11 19.63	+ 1 33.0	1.524	2.373	15.1	20.9
2 11	11 17.68	+ 7 10.3	1.725	2.647	9.5	21.9	2 11	11 14.48	+ 2 30.5	1.467	2.388	10.9	20.7
2 21	11 8.95	+ 8 10.5	1.670	2.640	5.1	21.6	2 21	11 7.16	+ 3 45.6	1.434	2.403	6.1	20.5
3 2	10 58.79	+ 9 16.1	1.643	2.633	1.0	21.3	3 2	10 58.57	+ 5 11.1	1.427	2.418	1.1	20.1
3 12	10 48.30	+10 19.4	1.645	2.625	4.6	21.6	3 12	10 49.92	+ 6 37.7	1.448	2.432	4.2	20.4
3 22	10 38.66	+11 13.3	1.676	2.615	9.1	21.8	3 22	10 42.35	+ 7 56.3	1.496	2.447	9.0	20.7
4 1	10 30.86	+11 53.0	1.733	2.605	13.2	22.0	4 1	10 36.78	+ 8 59.9	1.569	2.461	13.1	21.0
4 11	10 25.57	+12 15.9	1.811	2.593	16.6	22.2	4 11	10 33.75	+ 9 45.0	1.662	2.475	16.6	21.3
35424	1998 BK		3 3.4 89°68	4°0/29.1	18		317728	2003 QY ₉₃		3 3.4 133°85	1°6/ 2.1	18	
2 1	11 24.25	+13 51.2	1.527	2.394	14.0	18.7	2 1	11 23.77	+ 8 53.3	1.836	2.688	12.8	21.1
2 11	11 17.65	+15 4.3	1.486	2.418	9.8	18.5	2 11	11 17.14	+ 9 34.3	1.776	2.701	9.0	20.9
2 21	11 8.79	+16 20.0	1.471	2.442	5.7	18.3	2 21	11 8.52	+10 22.5	1.741	2.713	4.8	20.7
3 2	10 58.74	+17 28.7	1.483	2.465	4.2	18.3	3 2	10 58.74	+11 11.8	1.735	2.724	1.6	20.5
3 12	10 48.80	+18 21.9	1.523	2.487	7.1	18.5	3 12	10 48.91	+11 55.4	1.758	2.735	4.7	20.7
3 22	10 40.19	+18 54.5	1.589	2.509	11.0	18.8	3 22	10 40.08	+12 28.3	1.810	2.745	8.8	21.0
4 1	10 33.81	+19 5.2	1.678	2.531	14.5	19.1	4 1	10 33.10	+12 47.2	1.886	2.755	12.4	21.2
4 11	10 30.13	+18 55.5	1.787	2.552	17.4	19.3	4 11	10 28.52	+12 51.0	1.984	2.764	15.4	21.4
219736	2001 XK ₁₇₁		3 3.4 148°62	0°4/ 3.9	17		492906	2014 QJ ₄₃₂		3 3.4 227°59	1°5/ 1.9	17	
2 1	11 20.05	+ 2 44.1	2.542	3.370	10.5	21.8	2 1	11 22.43	+ 8 33.9	2.014	2.863	11.9	21.9
2 11	11 14.09	+ 3 22.0	2.472	3.383	7.5	21.7	2 11	11 16.31	+ 9 21.0	1.927	2.851	8.5	21.7
2 21	11 6.70	+ 4 9.7	2.429	3.395	4.2	21.5	2 21	11 8.18	+10 16.8	1.866	2.837	4.6	21.4
3 2	10 58.49	+ 5 3.3	2.415	3.406	0.8	21.2	3 2	10 58.72	+11 15.4	1.834	2.823	1.5	21.2
3 12	10 50.21	+ 5 57.9	2.433	3.416	2.9	21.4	3 12	10 48.94	+12 10.1	1.832	2.808	4.7	21.4
3 22	10 42.57	+ 6 48.9	2.481	3.426	6.3	21.6	3 22	10 39.85	+12 55.0	1.859	2.792	8.7	21.6
4 1	10 36.20	+ 7 32.3	2.558	3.434	9.3	21.8	4 1	10 32.37	+13 25.9	1.911	2.776	12.5	21.8
4 11	10 31.56	+ 8 5.4	2.658	3.442	11.8	22.0	4 11	10 27.14	+13 40.9	1.985	2.759	15.6	21.9
424752	2008 TW ₃₃		3 3.4 89°42	0°3/ 3.1	17		150893	2001 SK ₂₇₈		3 3.4 232°61	1°3/ 4.7	18	
2 1	11 17.99	+ 5 5.1	2.007	2.856	12.0	21.7	2 1	11 20.68	+ 0 25.9	2.338	3.160	11.5	21.1
2 11	11 12.97	+ 5 47.1	1.939	2.861	8.5	21.5	2 11	11 14.86	+ 0 48.7	2.239	3.144	8.5	20.9
2 21	11 6.22	+ 6 39.7	1.896	2.867	4.6	21.3	2 21	11 7.31	+ 1 24.2	2.167	3.128	5.1	20.7
3 2	10 58.44	+ 7 37.6	1.881	2.872	0.6	21.0	3 2	10 58.61	+ 2 9.4	2.123	3.111	1.7	20.4
3 12	10 50.54	+ 8 34.6	1.896	2.877	3.8	21.2	3 12	10 49.60	+ 2 59.8	2.110	3.094	3.2	20.5
3 22	10 43.40	+ 9 24.8	1.938	2.883	7.7	21.5	3 22	10 41.12	+ 3 50.1	2.127	3.076	6.8	20.7
4 1	10 37.79	+10 3.9	2.007	2.888	11.2	21.7	4 1	10 33.96	+ 4 35.5	2.172	3.057	10.3	20.9
4 11	10 34.21	+10 29.2	2.097	2.893	14.2	21.9	4 11	10 28.70	+ 5 11.9	2.239	3.037	13.4	21.0
480106	2015 FX ₄₃		3 3.4 269°47	4°9/ 9.9	16		81793	2000 JK ₈₅		3 3.4 196°37	2°2/29.4	18	
2 1	11 15.00	-14 22.6	2.621	3.372	12.3	22.1	2 1	11 16.67	+11 36.7	2.655	3.510	9.2	20.1
2 11	11 10.72	-13 51.6	2.510	3.353	10.2	21.9	2 11	11 11.77	+12 46.4	2.580	3.507	6.4	19.9
2 21	11 4.98	-12 58.8	2.422	3.333	7.7	21.7	2 21	11 5.49	+14 0.9	2.534	3.504	3.6	19.7
3 2	10 58.29	-11 44.8	2.361	3.314	5.6	21.5	3 2	10 58.38	+15 14.6	2.517	3.501	2.3	19.6
3 12	10 51.34	-10 13.3	2.329	3.294	4.9	21.4	3 12	10 51.11	+16 21.9	2.532	3.497	4.5	19.7
3 22	10 44.83	- 8 29.9	2.327	3.274	6.4	21.5	3 22	10 44.37	+17 18.3	2.575	3.493	7.4	19.9
4 1	10 39.41	- 6 41.8	2.353	3.253	9.0	21.6	4 1	10 38.78	+18 0.6	2.645	3.489	10.1	20.1
4 11	10 35.62	- 4 56.2	2.406	3.233	11.6	21.8	4 11	10 34.80	+18 27.6	2.738	3.484	12.4	20.2
6118	Mayuboshi		3 3.4 260°09	1°6/ 1.9	18		507413	2012 OC ₄		3 3.4 255°58	2°9/28.8	17	
2 1	11 20.08	+ 7 56.1	1.786	2.643	12.8	17.8	2 1	11 18.32	+11 41.1	2.308	3.165	10.3	21.6
2 11	11 14.83	+ 8 49.4	1.701	2.628	9.1	17.6	2 11	11 13.28	+13 13.0	2.214	3.142	7.3	21.3
2 21	11 7.44	+ 9 53.6	1.641	2.613	4.9	17.3	2 21	11 6.49	+14 52.9	2.149	3.119	4.2	21.1
3 2	10 58.61	+11 2.1	1.609	2.598	1.6	17.0	3 2	10 58.52	+16 33.8	2.114	3.096	3.0	21.0
3 12	10 49.42	+12 7.1	1.605	2.583	5.0	17.2	3 12	10 50.18	+18 7.6	2.109	3.071	5.6	21.1
3 22	10 40.97	+13 1.3	1.629	2.567	9.5	17.4	3 22	10 42.34	+19 27.7	2.134	3.046	9.0	21.3
4 1	10 34.26	+13 39.8	1.678	2.551	13.5	17.6	4 1	10 35.79	+20 29.4	2.185	3.020	12.2	21.4
4 11	10 29.96	+14 0.0	1.747	2.534	16.9	17.8	4 11	10 31.16	+21 11.0	2.256	2.994	15.0	21.6
283316	1029 T- ₃		3 3.4 156°32	4°0/ 9.5	17		344313	2001 UJ ₁₇₇		3 3.4 131°60	3°3/ 7.6	17	
2 1	11 15.95	-12 47.2	3.276	4.023	10.2	22.4	2 1	11 16.44	- 7 37.0	2.601	3.389	11.4	21.0
2 11	11 11.01	-12 36.8	3.190	4.031	8.3	22.2	2 11	11 11.57	- 7 19.2	2.522	3.398	8.9	20.9
2 21	11 4.98	-12 11.3	3.128	4.039	6.2	22.1	2 21	11 5.37	- 6 45.4	2.468	3.406	6.2	20.7
3 2	10 58.29	-11 31.6	3.095	4.046	4.5	22.0	3 2	10 58.36	- 5 57.6	2.442	3.415	3.8	20.6
3 12	10 51.50	-10 40.2	3.091	4.052	4.1	22.0	3 12	10 51.25	- 4 59.7	2.446	3.423	3.6	20.6
3 22	10 45.16	- 9 41.0	3.117	4.058	5.3	22.0	3 22	10 44.71	- 3 56.6	2.479	3.430	5.8	20.7
4 1	10 39.75	- 8 38.2	3.172	4.064	7.2	22.2	4 1	10 39.32	- 2 53.6	2.540	3.438	8.5	20.9
4 11	10 35.66	- 7 36.3	3.253	4.069	9.2	22.3	4 11	10 35.54	- 1 55.4	2.626	3.445	11.0	21.1
452415	2002 TL ₁₈₁		3 3.4 187°68	1°3/ 4.6	18		373657	2002 QO ₆₂		3 3.4 74°76	5°7/ 5.3	18	
2 1	11 23.29	+ 0 13.1	1.847	2.675	13.8	22.5	2						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
429235	2010 <i>AK</i> ₅₁		3 3.4 341°31	8°0/ 9.9 17			417290	2006 <i>BJ</i> ₃₀		3 3.4 28°47	3°9/28.6 18		
2 1	11 20.85	-14 46.0	1.911	2.670	16.0	21.0	2 1	11 17.07	+12 52.0	1.614	2.489	13.0	20.4
2 11	11 15.33	-15 45.1	1.826	2.667	13.5	20.8	2 11	11 12.68	+14 19.3	1.559	2.494	9.1	20.2
2 21	11 7.71	-16 21.7	1.763	2.663	10.8	20.6	2 21	11 6.22	+15 52.6	1.528	2.500	5.3	19.9
3 2	10 58.68	-16 33.4	1.723	2.660	8.7	20.5	3 2	10 58.52	+17 21.9	1.525	2.507	4.0	19.9
3 12	10 49.28	-16 20.8	1.710	2.658	8.1	20.5	3 12	10 50.70	+18 37.8	1.550	2.514	7.0	20.1
3 22	10 40.57	-15 48.0	1.723	2.655	9.4	20.5	3 22	10 43.85	+19 33.5	1.600	2.521	10.9	20.3
4 1	10 33.55	-15 1.7	1.761	2.653	11.9	20.7	4 1	10 38.87	+20 5.9	1.673	2.529	14.4	20.5
4 11	10 28.89	-14 9.8	1.820	2.651	14.6	20.8	4 11	10 36.30	+20 15.0	1.765	2.537	17.4	20.8
406743	2008 <i>HZ</i> ₃₆		3 3.4 90°71	0°2/ 3.6 18			366845	2005 <i>QT</i> ₁₃₈		3 3.4 235°06	0°2/ 3.2 17		
2 1	11 18.80	+ 2 50.9	1.742	2.589	13.6	21.2	2 1	11 15.69	+ 4 26.8	2.732	3.570	9.5	21.3
2 11	11 13.76	+ 3 38.1	1.676	2.596	9.8	20.9	2 11	11 11.08	+ 5 14.6	2.643	3.560	6.8	21.1
2 21	11 6.74	+ 4 39.9	1.634	2.603	5.4	20.7	2 21	11 5.15	+ 6 11.6	2.581	3.550	3.7	20.9
3 2	10 58.55	+ 5 50.3	1.620	2.610	0.8	20.4	3 2	10 58.39	+ 7 13.8	2.548	3.539	0.4	20.6
3 12	10 50.21	+ 7 1.6	1.634	2.617	3.9	20.6	3 12	10 51.44	+ 8 16.4	2.547	3.528	3.0	20.8
3 22	10 42.77	+ 8 6.4	1.676	2.624	8.3	20.9	3 22	10 44.95	+ 9 14.7	2.575	3.517	6.2	21.0
4 1	10 37.08	+ 8 58.9	1.743	2.631	12.2	21.1	4 1	10 39.53	+10 4.6	2.631	3.506	9.1	21.1
4 11	10 33.70	+ 9 35.7	1.831	2.638	15.5	21.4	4 11	10 35.62	+10 43.4	2.711	3.494	11.7	21.3
370748	2004 <i>RW</i> ₁₈₁		3 3.4 204°93	2°2/ 6.1 17			370734	2004 <i>RV</i> ₁₁₂		3 3.4 169°42	3°9/ 7.6 17		
2 1	11 18.42	- 3 44.3	2.521	3.326	11.3	22.0	2 1	11 21.42	- 7 59.1	2.607	3.384	11.7	21.4
2 11	11 13.09	- 3 16.1	2.429	3.320	8.5	21.8	2 11	11 15.16	- 8 10.8	2.521	3.388	9.2	21.3
2 21	11 6.26	- 2 33.0	2.362	3.314	5.5	21.6	2 21	11 7.38	- 8 7.4	2.461	3.392	6.6	21.1
3 2	10 58.49	- 1 37.8	2.324	3.307	2.7	21.4	3 2	10 58.67	- 7 49.8	2.429	3.396	4.4	21.0
3 12	10 50.50	- 0 34.7	2.317	3.299	3.1	21.4	3 12	10 49.79	- 7 20.5	2.427	3.399	4.2	21.0
3 22	10 43.04	+ 0 30.9	2.340	3.291	6.1	21.6	3 22	10 41.49	- 6 43.5	2.456	3.401	6.3	21.1
4 1	10 36.79	+ 1 33.8	2.391	3.282	9.3	21.8	4 1	10 34.44	- 6 3.3	2.512	3.402	8.9	21.3
4 11	10 32.24	+ 2 29.2	2.466	3.273	12.0	22.0	4 11	10 29.14	- 5 24.6	2.593	3.403	11.4	21.4
303421	2005 <i>AO</i> ₄		3 3.4 38°55	5°6/28.2 18			345655	2006 <i>TE</i> ₆₀		3 3.4 289°36	6°3/10.7 18		
2 1	11 21.92	+16 45.8	1.325	2.206	14.9	20.1	2 1	11 15.91	-15 39.5	2.357	3.105	13.6	20.4
2 11	11 16.47	+17 58.4	1.276	2.212	10.7	19.8	2 11	11 11.52	-15 48.8	2.259	3.094	11.4	20.2
2 21	11 8.39	+19 12.0	1.249	2.218	6.8	19.6	2 21	11 5.51	-15 36.3	2.183	3.083	9.1	20.0
3 2	10 58.76	+20 15.3	1.248	2.225	5.8	19.6	3 2	10 58.45	-15 1.5	2.131	3.072	7.0	19.9
3 12	10 49.07	+20 58.8	1.273	2.232	8.8	19.8	3 12	10 51.11	-14 6.7	2.107	3.061	6.3	19.8
3 22	10 40.72	+21 17.1	1.322	2.240	12.9	20.0	3 22	10 44.29	-12 56.6	2.110	3.050	7.5	19.9
4 1	10 34.80	+21 9.3	1.391	2.247	16.8	20.3	4 1	10 38.73	-11 37.8	2.140	3.039	9.8	20.0
4 11	10 31.90	+20 38.2	1.478	2.256	19.9	20.5	4 11	10 34.98	-10 17.6	2.194	3.028	12.4	20.2
387819	2004 <i>FH</i> ₆₉		3 3.4 313°85	0°9/ 2.5 16			362066	2009 <i>BP</i> ₆₂		3 3.4 11°79	5°0/ 6.7 18		
2 1	11 16.68	+ 7 1.3	2.051	2.906	11.5	21.6	2 1	11 19.36	- 4 26.5	1.159	2.004	19.1	20.5
2 11	11 12.14	+ 7 42.5	1.969	2.896	8.2	21.4	2 11	11 14.98	- 4 48.9	1.096	2.006	14.8	20.2
2 21	11 5.85	+ 8 33.0	1.914	2.886	4.4	21.1	2 21	11 7.77	- 4 45.4	1.053	2.009	10.0	20.0
3 2	10 58.46	+ 9 27.7	1.886	2.876	0.9	20.8	3 2	10 58.75	- 4 17.4	1.032	2.013	5.7	19.7
3 12	10 50.83	+10 20.5	1.887	2.867	4.1	21.0	3 12	10 49.45	- 3 31.1	1.035	2.017	5.9	19.8
3 22	10 43.86	+11 5.7	1.916	2.858	8.0	21.3	3 22	10 41.39	- 2 35.7	1.062	2.023	10.2	20.0
4 1	10 38.34	+11 39.1	1.970	2.849	11.5	21.5	4 1	10 35.83	- 1 41.3	1.111	2.030	15.0	20.3
4 11	10 34.82	+11 58.2	2.046	2.840	14.6	21.6	4 11	10 33.48	- 0 56.4	1.178	2.038	19.1	20.6
433166	2012 <i>TV</i> ₂₆₃		3 3.4 175°63	2°9/29.2 17			196394	2003 <i>GL</i> ₂₃		3 3.4 246°24	7°6/24.9 18		
2 1	11 19.71	+14 56.5	2.467	3.324	9.7	21.8	2 1	11 28.76	+30 22.1	2.267	3.109	11.1	20.3
2 11	11 13.96	+15 37.5	2.399	3.325	6.9	21.6	2 11	11 20.76	+31 14.4	2.195	3.092	9.0	20.2
2 21	11 6.71	+16 19.7	2.358	3.326	4.1	21.4	2 21	11 10.60	+31 56.0	2.149	3.075	7.7	20.1
3 2	10 58.56	+16 58.1	2.346	3.327	2.9	21.4	3 2	10 59.10	+32 19.2	2.131	3.057	7.9	20.0
3 12	10 50.31	+17 27.9	2.364	3.327	5.0	21.5	3 12	10 47.41	+32 18.6	2.141	3.039	9.6	20.1
3 22	10 42.73	+17 45.8	2.411	3.327	7.9	21.7	3 22	10 36.67	+31 52.9	2.177	3.020	11.9	20.2
4 1	10 36.49	+17 50.1	2.484	3.327	10.7	21.9	4 1	10 27.82	+31 3.4	2.237	3.000	14.3	20.3
4 11	10 32.06	+17 40.8	2.579	3.327	13.1	22.0	4 11	10 21.48	+29 54.3	2.316	2.980	16.4	20.5
419319	2009 <i>WS</i> ₉₀		3 3.4 81°28	1°9/ 5.4 18			225547	2000 <i>SN</i> ₁₈₉		3 3.4 254°68	2°0/ 5.4 17		
2 1	11 18.81	- 2 11.3	1.921	2.746	13.5	21.6	2 1	11 20.09	- 1 23.9	2.180	2.999	12.3	21.0
2 11	11 13.51	- 1 29.8	1.864	2.769	10.0	21.4	2 11	11 14.61	- 1 8.6	2.079	2.980	9.3	20.8
2 21	11 6.49	- 0 31.5	1.832	2.792	6.1	21.2	2 21	11 7.28	- 0 38.6	2.002	2.960	5.8	20.5
3 2	10 58.53	+ 0 38.8	1.827	2.814	2.4	21.0	3 2	10 58.70	+ 0 3.7	1.953	2.939	2.5	20.3
3 12	10 50.55	+ 1 54.4	1.852	2.836	3.4	21.1	3 12	10 49.74	+ 0 53.8	1.935	2.918	3.4	20.3
3 22	10 43.47	+ 3 8.1	1.905	2.858	7.1	21.4	3 22	10 41.30	+ 1 46.2	1.945	2.896	7.2	20.5
4 1	10 37.99	+ 4 13.7	1.985	2.880	10.7	21.7	4 1	10 34.24	+ 2 35.4	1.982	2.874	10.8	20.7
4 11	10 34.60	+ 5 6.7	2.088	2.902	13.6	21.9	4 11	10 29.20	+ 3 16.4	2.042	2.851	14.1	20.8
96008	2004 <i>OA</i> ₅		3 3.4 279°07	1°3/ 4.8 17 R			205927	2002 <i>JF</i> ₁₀		3 3.4 199°62	19°0/16.5 17		
2 1	11 18.15	+ 1 8.6	2.490	3.316	10.7	20.0	2 1	11 37.78	+45 34.8	1.142	1.974	20.3	20.0
2 11	11 13.00	+ 1 17.3	2.388	3.295	7.9	19.7	2 11	11 29.25	+47 54.5	1.119	1.973	19.2	19.9
2 21	11 6.28	+ 1 36.6	2.312	3.275	4.8	19.5	2 21	11 15.91	+49 35.8	1.114	1.972	19.1	19.9
3 2	10 58.52	+ 2 4.2	2.266	3.254	1.6	19.2	3 2	10 59.78	+50 21.1	1.127	1.971	20.1	19.9
3 12	10 50.47	+ 2 36.4	2.249	3.233	3.0	19.3	3 12	10 43.87	+50 3.3	1.158	1.969	21.9	20.0
3 22	10 42.88	+ 3 9.0	2.261	3.211	6.4	19.5	3 22	10 30.89	+48 47.1	1.204	1.967	24.0	20.2
4 1	10 36.48	+ 3 38.1	2.301	3.190	9.7	19.7	4 1	10 22.50	+46 44.4	1.262	1.965	26.1	20.4
4 11	10 31.80	+ 4 0.2	2.365	3.168	12.5	19.8	4 11	10 19.06	+44 9.3	1.331	1.962	27.9	20.5
285092	1994 <i>AP</i> ₁₄		3 3.4 115°45	2°4/ 5.7 18			46461	6105 <i>P-L</i>		3 3.4 172°93	3°0/ 6.9 18		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
21773	1999 <i>RH</i> ₂₁₆		3 3.4 60°85	2.1/ 1.4	18		324501	2006 <i>UQ</i> ₂₈₆		3 3.4 98°54	0.5/ 2.9	18	
2 1	11 19.30	+ 8 21.5	1.668	2.530	13.3	17.8	2 1	11 21.88	+ 5 30.0	1.808	2.656	13.1	21.6
2 11	11 14.00	+ 9 41.3	1.628	2.559	9.2	17.6	2 11	11 15.81	+ 6 12.5	1.754	2.676	9.3	21.4
2 21	11 6.82	+11 9.2	1.614	2.587	4.9	17.4	2 21	11 7.83	+ 7 5.4	1.725	2.695	5.0	21.2
3 2	10 58.63	+12 36.5	1.628	2.616	2.1	17.3	3 2	10 58.79	+ 8 2.8	1.724	2.714	0.7	20.9
3 12	10 50.53	+13 54.4	1.670	2.645	5.3	17.6	3 12	10 49.76	+ 8 57.6	1.752	2.733	4.1	21.2
3 22	10 43.51	+14 56.5	1.740	2.673	9.3	17.9	3 22	10 41.71	+ 9 44.0	1.808	2.751	8.2	21.5
4 1	10 38.34	+15 39.1	1.834	2.702	12.8	18.1	4 1	10 35.48	+10 17.9	1.889	2.769	11.9	21.7
4 11	10 35.48	+16 1.6	1.948	2.730	15.6	18.4	4 11	10 31.54	+10 37.1	1.992	2.786	14.9	22.0
124724	2001 <i>SE</i> ₁₆₅		3 3.4 81°34	1.4/ 2.5	18		232741	2004 <i>FP</i> ₉₄		3 3.4 297°21	5°1/ 26.6	18	
2 1	11 24.41	+ 8 4.6	1.378	2.241	15.5	19.7	2 1	11 17.77	+19 48.8	2.123	2.992	10.6	19.4
2 11	11 18.14	+ 8 33.7	1.321	2.251	11.0	19.5	2 11	11 12.93	+21 6.6	2.057	2.985	7.8	19.2
2 21	11 9.31	+ 9 12.7	1.287	2.260	5.9	19.2	2 21	11 6.32	+22 23.5	2.018	2.978	5.5	19.0
3 2	10 58.97	+ 9 54.6	1.280	2.270	1.4	18.9	3 2	10 58.61	+23 31.6	2.008	2.972	5.4	19.0
3 12	10 48.55	+10 31.5	1.299	2.280	5.4	19.2	3 12	10 50.72	+24 24.2	2.025	2.965	7.5	19.1
3 22	10 39.42	+10 57.0	1.344	2.289	10.3	19.5	3 22	10 43.56	+24 57.0	2.069	2.959	10.4	19.3
4 1	10 32.67	+11 7.3	1.413	2.299	14.7	19.8	4 1	10 37.92	+25 8.5	2.136	2.953	13.2	19.5
4 11	10 28.88	+11 1.2	1.501	2.308	18.3	20.0	4 11	10 34.33	+24 59.5	2.223	2.947	15.6	19.6
362650	2011 <i>SN</i> ₂₃₀		3 3.4 98°82	0.9/ 4.2	18		109592	2001 <i>QJ</i> ₂₈₀		3 3.4 129°91	3°5/ 28.1	18	
2 1	11 23.07	+ 1 19.5	1.632	2.471	14.8	21.4	2 1	11 18.17	+16 24.3	2.453	3.315	9.6	19.8
2 11	11 16.78	+ 1 59.1	1.579	2.494	10.7	21.2	2 11	11 12.91	+17 28.6	2.396	3.323	6.8	19.6
2 21	11 8.39	+ 2 54.3	1.550	2.516	6.1	20.9	2 21	11 6.17	+18 33.3	2.366	3.332	4.3	19.5
3 2	10 58.84	+ 3 59.3	1.548	2.538	1.4	20.7	3 2	10 58.59	+19 32.6	2.365	3.340	3.7	19.4
3 12	10 49.31	+ 5 6.3	1.575	2.559	3.9	20.9	3 12	10 50.94	+20 20.9	2.394	3.348	5.7	19.6
3 22	10 40.90	+ 6 7.8	1.629	2.580	8.4	21.2	3 22	10 43.97	+20 54.7	2.451	3.355	8.4	19.8
4 1	10 34.50	+ 6 57.8	1.710	2.600	12.4	21.5	4 1	10 38.32	+21 12.3	2.533	3.363	11.0	19.9
4 11	10 30.61	+ 7 33.0	1.811	2.619	15.6	21.7	4 11	10 34.44	+21 13.8	2.637	3.370	13.2	20.1
499019	2009 <i>CV</i> ₆₀		3 3.4 97°51	2°8/ 6.2	17		104284	2000 <i>EX</i> ₁₅₅		3 3.4 281°75	3°9/ 6.4	18	
2 1	11 21.07	- 3 5.5	2.321	3.128	12.0	21.9	2 1	11 20.03	- 4 47.1	1.452	2.281	16.8	20.1
2 11	11 14.97	- 3 17.8	2.251	3.142	9.1	21.8	2 11	11 15.35	- 4 37.8	1.360	2.262	13.1	19.8
2 21	11 7.30	- 3 16.9	2.206	3.156	6.0	21.6	2 21	11 8.04	- 4 3.7	1.288	2.243	8.7	19.5
3 2	10 58.71	- 3 4.5	2.189	3.169	3.2	21.4	3 2	10 58.88	- 3 6.3	1.242	2.224	4.6	19.2
3 12	10 50.04	- 2 43.7	2.202	3.182	3.6	21.5	3 12	10 49.09	- 1 51.7	1.221	2.204	5.1	19.2
3 22	10 42.08	- 2 18.6	2.245	3.195	6.4	21.7	3 22	10 40.07	- 0 29.0	1.227	2.185	9.6	19.4
4 1	10 35.53	- 1 53.3	2.314	3.208	9.4	21.9	4 1	10 33.09	+ 0 51.2	1.256	2.165	14.4	19.6
4 11	10 30.86	- 1 31.8	2.408	3.220	12.1	22.1	4 11	10 29.03	+ 2 0.0	1.305	2.146	18.8	19.8
36374	2000 <i>OO</i> ₁₆		3 3.4 48°89	3°6/ 5.9	18		418287	2008 <i>EC</i> ₁₅₃		3 3.4 143°01	5°9/ 27.1	18	
2 1	11 22.65	- 2 29.3	1.396	2.232	17.0	18.9	2 1	11 24.83	+22 13.5	1.951	2.812	11.7	21.0
2 11	11 16.99	- 2 40.2	1.328	2.236	12.9	18.6	2 11	11 17.95	+23 11.6	1.898	2.819	8.8	20.8
2 21	11 8.76	- 2 30.6	1.282	2.239	8.3	18.4	2 21	11 9.04	+24 4.5	1.871	2.826	6.4	20.7
3 2	10 58.92	- 2 2.7	1.260	2.244	4.1	18.1	3 2	10 58.97	+24 44.4	1.872	2.833	6.1	20.7
3 12	10 48.81	- 1 22.3	1.265	2.248	4.9	18.2	3 12	10 48.89	+25 5.5	1.901	2.839	8.1	20.8
3 22	10 39.82	- 0 36.8	1.295	2.252	9.3	18.4	3 22	10 39.85	+25 5.2	1.957	2.845	11.0	21.0
4 1	10 33.09	+ 0 5.8	1.349	2.256	13.8	18.7	4 1	10 32.72	+24 43.9	2.036	2.850	13.8	21.2
4 11	10 29.28	+ 0 39.2	1.424	2.261	17.6	19.0	4 11	10 28.02	+24 4.2	2.135	2.855	16.2	21.4
165777	2001 <i>QG</i> ₂₆₅		3 3.4 74°44	6°2/ 11.0	18		36551	2000 <i>QR</i> ₁₀₁		3 3.4 20°76	1°7/ 1.4	18	
2 1	11 16.81	-15 59.9	2.258	3.005	14.2	19.8	2 1	11 15.80	+ 8 56.4	2.215	3.073	10.7	18.4
2 11	11 12.06	-16 1.5	2.186	3.020	11.8	19.6	2 11	11 11.39	+10 0.6	2.146	3.074	7.5	18.2
2 21	11 5.75	-15 40.1	2.135	3.035	9.2	19.5	2 21	11 5.42	+11 12.4	2.103	3.075	4.0	18.0
3 2	10 58.52	-14 56.0	2.109	3.050	7.1	19.4	3 2	10 58.52	+12 25.6	2.088	3.076	1.8	17.9
3 12	10 51.19	-13 52.8	2.110	3.064	6.2	19.3	3 12	10 51.48	+13 33.8	2.104	3.078	4.4	18.0
3 22	10 44.54	-12 36.2	2.139	3.079	7.4	19.4	3 22	10 45.09	+14 31.4	2.147	3.079	7.9	18.3
4 1	10 39.28	-11 13.2	2.195	3.094	9.6	19.6	4 1	10 40.03	+15 14.6	2.217	3.081	11.0	18.5
4 11	10 35.87	- 9 51.2	2.275	3.109	12.0	19.8	4 11	10 36.80	+15 41.7	2.308	3.082	13.7	18.6
403888	2011 <i>WP</i> ₁₁₆		3 3.4 86°64	1°8/ 2.0	18		497787	2006 <i>SP</i> ₃₈₇		3 3.4 341°99	4°3/ 9.0	17	
2 1	11 23.19	+ 8 22.2	1.540	2.400	14.4	21.5	2 1	11 13.79	-12 14.9	2.078	2.858	14.2	20.9
2 11	11 16.96	+ 9 13.3	1.492	2.420	10.1	21.3	2 11	11 10.12	-11 12.2	1.987	2.854	11.4	20.7
2 21	11 8.52	+10 13.3	1.468	2.440	5.4	21.1	2 21	11 4.80	- 9 42.3	1.918	2.850	8.2	20.5
3 2	10 58.87	+11 14.3	1.471	2.460	1.8	20.9	3 2	10 58.45	- 7 48.3	1.877	2.846	5.2	20.3
3 12	10 49.26	+12 8.3	1.502	2.479	5.3	21.2	3 12	10 51.89	- 5 36.9	1.865	2.842	4.5	20.2
3 22	10 40.86	+12 48.9	1.560	2.499	9.7	21.5	3 22	10 45.96	- 3 17.5	1.882	2.839	6.9	20.4
4 1	10 34.59	+13 12.7	1.641	2.517	13.6	21.8	4 1	10 41.40	- 1 0.4	1.928	2.836	10.3	20.5
4 11	10 30.94	+13 18.8	1.743	2.536	16.8	22.0	4 11	10 38.74	+ 1 5.5	1.999	2.833	13.4	20.7
294975	2008 <i>EB</i> ₁₃		3 3.4 306°95	2°9/ 1.1	18		384983	2012 <i>TT</i> ₁₈₅		3 3.4 255°22	8°2/ 21.9	17	
2 1	11 21.09	+11 49.1	1.626	2.493	13.3	20.9	2 1	11 22.70	+34 18.6	2.472	3.312	10.3	20.5
2 11	11 15.64	+12 37.6	1.558	2.490	9.4	20.7	2 11	11 16.37	+35 29.5	2.416	3.301	8.9	20.4
2 21	11 7.93	+13 32.2	1.514	2.487	5.3	20.4	2 21	11 8.18	+36 28.3	2.387	3.291	8.2	20.3
3 2	10 58.81	+14 25.4	1.498	2.484	2.9	20.3	3 2	10 58.88	+37 7.8	2.384	3.280	8.7	20.4
3 12	10 49.48	+15 9.4	1.509	2.481	6.1	20.4	3 12	10 49.45	+37 23.5	2.407	3.269	10.1	20.4
3 22	10 41.12	+15 38.3	1.546	2.478	10.3	20.7	3 22	10 40.86	+37 13.8	2.454	3.258	12.0	20.5
4 1	10 34.72	+15 49.0	1.606	2.475	14.2	20.9	4 1	10 33.93	+36 40.0	2.522	3.246	13.8	20.7
4 11	10 30.92	+15 41.1	1.687	2.472	17.5	21.1	4 11	10 29.17	+35 45.8	2.608	3.235	15.5	20.8
256319	2006 <i>XB</i> ₄		3 3.4 170°60	0°3/ 3.2	16		377210	2003 <i>XJ</i> ₁₀		3 3.4 111°21	11		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
287603	2003 <i>GO</i> ₁₅		3 3.4 282°39	2°1/ 2.1 18			311270	2005 <i>EU</i> ₁₈₉		3 3.5 319°94	2°7/ 5.4 18		
2 1	11 24.09	+ 9 54.4	1.415	2.281	15.0	20.5	2 1	11 21.02	- 1 6.4	1.456	2.296	16.2	20.8
2 11	11 18.21	+10 22.3	1.337	2.268	10.8	20.2	2 11	11 15.88	- 1 7.0	1.379	2.291	12.2	20.5
2 21	11 9.58	+10 58.8	1.282	2.255	5.9	19.9	2 21	11 8.23	- 0 48.5	1.324	2.286	7.6	20.3
3 2	10 59.10	+11 37.1	1.253	2.243	2.1	19.6	3 2	10 58.95	- 0 13.7	1.295	2.281	3.3	20.0
3 12	10 48.17	+12 8.9	1.251	2.230	5.9	19.8	3 12	10 49.30	+ 0 31.4	1.291	2.276	4.5	20.0
3 22	10 38.27	+12 27.8	1.275	2.217	11.1	20.0	3 22	10 40.61	+ 1 19.4	1.314	2.271	9.2	20.3
4 1	10 30.67	+12 29.9	1.321	2.204	15.8	20.3	4 1	10 34.02	+ 2 2.7	1.361	2.267	13.8	20.5
4 11	10 26.15	+12 14.1	1.387	2.191	19.7	20.5	4 11	10 30.25	+ 2 35.3	1.428	2.263	17.7	20.8
224863	2007 <i>AP</i> ₁₂		3 3.5 304°08	2°8/29.9 18			67806	2000 <i>VZ</i> ₁₅		3 3.5 177°23	3°9/28.5 18		
2 1	11 18.65	+10 53.0	1.704	2.571	12.8	20.1	2 1	11 20.17	+15 37.5	1.958	2.824	11.5	19.5
2 11	11 13.88	+11 56.7	1.631	2.564	9.0	19.8	2 11	11 14.70	+16 41.9	1.894	2.824	8.2	19.3
2 21	11 6.99	+13 8.5	1.584	2.557	5.0	19.6	2 21	11 7.33	+17 48.2	1.857	2.825	5.1	19.1
3 2	10 58.75	+14 20.6	1.564	2.550	2.8	19.4	3 2	10 58.81	+18 49.0	1.847	2.825	4.1	19.1
3 12	10 50.25	+15 24.4	1.571	2.543	6.0	19.6	3 12	10 50.15	+19 37.3	1.866	2.825	6.5	19.2
3 22	10 42.60	+16 13.1	1.606	2.536	10.1	19.8	3 22	10 42.33	+20 8.4	1.913	2.825	9.9	19.4
4 1	10 36.74	+16 42.8	1.663	2.530	13.9	20.0	4 1	10 36.18	+20 20.4	1.983	2.825	13.1	19.6
4 11	10 33.31	+16 52.1	1.741	2.524	17.2	20.2	4 11	10 32.24	+20 13.5	2.073	2.825	15.7	19.8
461685	2005 <i>MF</i> ₁₇		3 3.5 150°52	4°8/26.9 17			501593	2014 <i>QY</i> ₁₉₈		3 3.5 45°90	2°1/ 5.3 18		
2 1	11 20.16	+17 36.8	2.050	2.916	11.0	21.3	2 1	11 18.20	- 2 6.1	1.318	2.165	17.1	20.4
2 11	11 14.62	+19 15.3	1.996	2.923	8.0	21.1	2 11	11 13.76	- 1 21.7	1.264	2.180	12.7	20.2
2 21	11 7.24	+20 54.1	1.968	2.930	5.4	20.9	2 21	11 6.96	- 0 13.6	1.232	2.196	7.7	19.9
3 2	10 58.77	+22 24.6	1.969	2.937	5.1	20.9	3 2	10 58.77	+ 1 11.7	1.225	2.213	2.8	19.7
3 12	10 50.18	+23 38.9	2.000	2.943	7.4	21.1	3 12	10 50.52	+ 2 44.0	1.244	2.230	4.3	19.8
3 22	10 42.42	+24 32.2	2.058	2.949	10.4	21.3	3 22	10 43.45	+ 4 12.4	1.288	2.247	9.2	20.1
4 1	10 36.27	+25 2.4	2.139	2.954	13.2	21.5	4 1	10 38.57	+ 5 27.9	1.357	2.264	13.7	20.4
4 11	10 32.28	+25 10.8	2.240	2.958	15.6	21.7	4 11	10 36.42	+ 6 24.7	1.445	2.282	17.4	20.7
148897	2001 <i>WN</i> ₅₆		3 3.5 27°03	1°1/ 2.5 18			327868	2006 <i>YB</i> ₅₁		3 3.5 66°44	4°1/ 6.3 18		
2 1	11 20.25	+ 7 29.9	1.659	2.518	13.5	20.3	2 1	11 25.86	- 3 14.6	1.578	2.398	16.1	19.9
2 11	11 14.96	+ 8 5.6	1.592	2.520	9.6	20.0	2 11	11 18.91	- 3 49.5	1.520	2.417	12.3	19.7
2 21	11 7.54	+ 8 51.1	1.550	2.522	5.2	19.8	2 21	11 9.68	- 4 6.4	1.485	2.436	8.1	19.5
3 2	10 58.82	+ 9 40.4	1.534	2.525	1.2	19.5	3 2	10 59.12	- 4 6.4	1.476	2.455	4.6	19.3
3 12	10 49.93	+10 26.1	1.547	2.527	4.7	19.8	3 12	10 48.52	- 3 53.2	1.495	2.475	5.0	19.4
3 22	10 41.99	+11 2.2	1.586	2.530	9.2	20.0	3 22	10 39.10	- 3 32.4	1.541	2.494	8.5	19.6
4 1	10 35.93	+11 24.4	1.650	2.533	13.1	20.3	4 1	10 31.83	- 3 10.0	1.613	2.513	12.3	19.9
4 11	10 32.33	+11 30.9	1.734	2.536	16.5	20.5	4 11	10 27.28	- 2 51.5	1.705	2.532	15.6	20.1
428396	2007 <i>SY</i> ₁₀		3 3.5 26°32	1°1/ 2.5 17			236408	2006 <i>DH</i> ₇₄		3 3.5 18°30	8°3/25.8 18		
2 1	11 20.63	+ 8 58.7	1.946	2.801	12.0	20.9	2 1	11 26.44	+28 36.1	1.751	2.610	13.0	19.5
2 11	11 14.96	+ 9 16.1	1.878	2.804	8.5	20.7	2 11	11 19.35	+29 26.5	1.701	2.612	10.3	19.3
2 21	11 7.43	+ 9 39.7	1.835	2.807	4.6	20.5	2 21	11 9.90	+30 4.7	1.676	2.615	8.5	19.2
3 2	10 58.81	+10 4.7	1.821	2.811	1.2	20.2	3 2	10 59.15	+30 22.2	1.677	2.617	8.6	19.2
3 12	10 50.07	+10 26.2	1.835	2.815	4.2	20.4	3 12	10 48.44	+30 13.5	1.704	2.620	10.4	19.3
3 22	10 42.16	+10 40.0	1.877	2.819	8.1	20.7	3 22	10 39.02	+29 37.9	1.756	2.623	13.1	19.5
4 1	10 35.91	+10 43.2	1.945	2.823	11.7	20.9	4 1	10 31.86	+28 38.1	1.829	2.627	15.8	19.7
4 11	10 31.84	+10 34.5	2.034	2.827	14.7	21.1	4 11	10 27.48	+27 18.8	1.921	2.631	18.1	19.9
27276	Davidblack		3 3.5 339°96	4°8/28.8 18			35932	1999 <i>JP</i> ₁₁₃		3 3.5 346°32	4°0/29.7 18		
2 1	11 19.51	+12 42.5	1.184	2.069	15.9	17.4	2 1	11 20.66	+12 38.3	1.235	2.116	15.7	18.9
2 11	11 15.18	+14 10.9	1.124	2.064	11.3	17.1	2 11	11 15.91	+13 34.5	1.173	2.111	11.1	18.7
2 21	11 7.96	+15 48.8	1.087	2.060	6.6	16.9	2 21	11 8.34	+14 38.1	1.133	2.107	6.4	18.4
3 2	10 58.90	+17 23.5	1.074	2.056	4.9	16.7	3 2	10 58.98	+15 38.8	1.118	2.103	4.0	18.2
3 12	10 49.54	+18 41.7	1.085	2.053	8.7	16.9	3 12	10 49.34	+16 26.2	1.128	2.100	7.7	18.4
3 22	10 41.42	+19 34.1	1.121	2.050	13.6	17.2	3 22	10 40.95	+16 52.9	1.162	2.098	12.6	18.7
4 1	10 35.82	+19 56.7	1.176	2.048	18.1	17.4	4 1	10 35.03	+16 55.7	1.216	2.096	17.1	18.9
4 11	10 33.47	+19 50.3	1.248	2.046	21.8	17.7	4 11	10 32.29	+16 35.1	1.288	2.095	20.9	19.2
236690	2006 <i>SC</i> ₁₈₆		3 3.5 248°97	0°5/ 2.8 17			272515	2005 <i>UH</i> ₂₂₆		3 3.5 117°53	1°7/ 1.8 18		
2 1	11 18.13	+ 6 30.3	2.738	3.578	9.4	21.6	2 1	11 21.14	+ 9 24.7	1.972	2.826	11.9	21.2
2 11	11 12.90	+ 7 4.5	2.641	3.560	6.7	21.4	2 11	11 15.27	+10 9.8	1.911	2.838	8.4	21.0
2 21	11 6.25	+ 7 46.1	2.571	3.540	3.7	21.1	2 21	11 7.58	+11 1.4	1.877	2.849	4.5	20.7
3 2	10 58.67	+ 8 31.4	2.530	3.521	0.6	20.9	3 2	10 58.86	+11 53.6	1.871	2.860	1.7	20.6
3 12	10 50.85	+ 9 16.1	2.521	3.501	3.2	21.0	3 12	10 50.07	+12 39.9	1.895	2.871	4.6	20.8
3 22	10 43.46	+ 9 56.0	2.541	3.480	6.4	21.2	3 22	10 42.16	+13 15.4	1.947	2.881	8.4	21.0
4 1	10 37.16	+10 27.8	2.589	3.459	9.4	21.4	4 1	10 35.90	+13 37.1	2.024	2.891	11.8	21.3
4 11	10 32.44	+10 49.0	2.661	3.437	12.0	21.5	4 11	10 31.81	+13 43.9	2.123	2.901	14.6	21.5
211296	2002 <i>RY</i> ₂₁₉		3 3.5 284°85	0°0/ 3.3 17			39549	Casals		3 3.5 19°28	2°3/ 1.2 18		
2 1	11 19.65	+ 3 47.4	1.607	2.460	14.3	20.7	2 1	11 16.13	+ 8 16.5	1.578	2.448	13.5	18.5
2 11	11 14.87	+ 4 29.3	1.515	2.439	10.4	20.4	2 11	11 12.11	+ 9 37.5	1.518	2.452	9.5	18.3
2 21	11 7.70	+ 5 27.7	1.447	2.417	5.8	20.1	2 21	11 6.02	+11 9.8	1.482	2.456	5.1	18.0
3 2	10 58.89	+ 6 37.0	1.405	2.396	0.7	19.7	3 2	10 58.67	+12 44.5	1.473	2.461	2.3	17.9
3 12	10 49.54	+ 7 49.2	1.391	2.374	4.5	19.9	3 12	10 51.18	+14 11.5	1.492	2.467	5.7	18.1
3 22	10 40.91	+ 8 55.6	1.403	2.352	9.6	20.1	3 22	10 44.61	+15 22.5	1.537	2.473	10.0	18.3
4 1	10 34.14	+ 9 49.0	1.440	2.330	14.2	20.3	4 1	10 39.87	+16 12.7	1.606	2.480	13.9	18.6
4 11	10 30.00	+10 24.8	1.496	2.308	18.2	20.5	4 11	10 37.54	+16 40.2	1.694	2.488	17.1	18.8
2660	Wasserman		3 3.5 251°45	4°0/ 7.7 18			259615	2003 <i>VZ</i> ₂		3 3.5 198°24	2°9/29.8 18		
2 1													

EPHEMERIDES

3 3.5

3 3.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
188582	2005 <i>LV</i> ₂₈		3 3.5 136°15	0°3/ 3.7 18			403730	2010 <i>XX</i> ₁₀		3 3.5 132°79	0°1/ 3.7 18		
2 1	11 24.16	+ 2 42.6	1.512	2.358	15.4	20.8	2 1	11 20.85	+ 3 6.1	2.280	3.112	11.4	21.7
2 11	11 17.87	+ 3 26.4	1.450	2.369	11.1	20.6	2 11	11 14.86	+ 3 54.0	2.216	3.129	8.1	21.5
2 21	11 9.19	+ 4 26.5	1.411	2.380	6.2	20.3	2 21	11 7.31	+ 4 52.6	2.179	3.146	4.5	21.3
3 2	10 59.09	+ 5 36.3	1.400	2.390	1.0	20.0	3 2	10 58.87	+ 5 57.2	2.171	3.162	0.7	21.0
3 12	10 48.85	+ 6 47.0	1.416	2.400	4.4	20.2	3 12	10 50.38	+ 7 1.7	2.195	3.177	3.2	21.2
3 22	10 39.76	+ 7 50.3	1.460	2.409	9.3	20.6	3 22	10 42.63	+ 8 0.8	2.248	3.192	6.8	21.5
4 1	10 32.82	+ 8 39.9	1.529	2.417	13.7	20.8	4 1	10 36.31	+ 8 50.0	2.328	3.205	10.1	21.7
4 11	10 28.65	+ 9 12.4	1.617	2.425	17.2	21.1	4 11	10 31.89	+ 9 26.8	2.432	3.218	12.8	21.9
463209	2012 <i>CJ</i> ₄₇		3 3.5 204°93	3°0/29.0 16			192107	2006 <i>CD</i> ₂₆		3 3.5 218°84	1°7/ 1.7 17		
2 1	11 18.90	+10 58.2	1.982	2.843	11.6	21.2	2 1	11 18.83	+ 8 54.7	2.090	2.945	11.3	20.1
2 11	11 13.85	+12 34.7	1.909	2.839	8.1	20.9	2 11	11 13.70	+ 9 49.0	2.014	2.941	8.0	19.9
2 21	11 6.92	+14 19.5	1.864	2.835	4.6	20.7	2 21	11 6.80	+10 51.1	1.964	2.937	4.3	19.7
3 2	10 58.80	+16 4.1	1.847	2.830	3.1	20.6	3 2	10 58.82	+11 55.1	1.943	2.932	1.7	19.5
3 12	10 50.43	+17 39.5	1.861	2.825	6.0	20.8	3 12	10 50.63	+12 54.4	1.952	2.927	4.5	19.7
3 22	10 42.78	+18 58.4	1.903	2.820	9.6	21.0	3 22	10 43.12	+13 43.5	1.989	2.922	8.3	19.9
4 1	10 36.69	+19 56.4	1.969	2.814	13.0	21.2	4 1	10 37.10	+14 18.4	2.051	2.917	11.7	20.1
4 11	10 32.76	+20 32.3	2.056	2.808	15.9	21.4	4 11	10 33.11	+14 37.4	2.134	2.911	14.6	20.3
341220	2007 <i>RV</i> ₁₃₃		3 3.5 250°74	0°0/ 3.4 17			71901	2000 <i>WS</i> ₂₃		3 3.5 280°60	0°3/ 3.3 18		
2 1	11 16.63	+ 2 49.1	2.248	3.087	11.2	21.3	2 1	11 18.71	+ 3 17.6	1.518	2.374	14.8	18.6
2 11	11 12.07	+ 3 47.4	2.159	3.076	8.1	21.1	2 11	11 14.20	+ 4 17.7	1.439	2.364	10.7	18.3
2 21	11 5.89	+ 4 58.8	2.096	3.065	4.5	20.8	2 21	11 7.34	+ 5 36.2	1.382	2.353	5.9	18.0
3 2	10 58.67	+ 6 18.6	2.062	3.053	0.6	20.5	3 2	10 58.90	+ 7 6.2	1.352	2.343	0.7	17.6
3 12	10 51.19	+ 7 40.1	2.058	3.041	3.4	20.7	3 12	10 50.08	+ 8 37.9	1.350	2.333	4.7	17.9
3 22	10 44.27	+ 8 56.8	2.084	3.029	7.2	20.9	3 22	10 42.11	+10 1.2	1.374	2.322	9.8	18.2
4 1	10 38.64	+10 3.2	2.136	3.017	10.7	21.1	4 1	10 36.09	+11 8.4	1.421	2.312	14.4	18.4
4 11	10 34.84	+10 55.4	2.211	3.004	13.7	21.3	4 11	10 32.74	+11 54.8	1.489	2.302	18.2	18.6
26251	Kiranmanne		3 3.5 294°55	2°9/ 5.4 18			539	Pamina		3 3.5 141°42	2°8/ 6.6 18		
2 1	11 21.02	- 1 28.2	1.323	2.168	17.2	18.2	2 1	11 20.06	- 4 46.2	2.400	3.200	11.9	15.2
2 11	11 16.20	- 1 23.9	1.240	2.155	13.1	17.9	2 11	11 14.30	- 4 35.2	2.325	3.212	9.1	15.1
2 21	11 8.59	- 0 57.6	1.179	2.141	8.2	17.6	2 21	11 7.02	- 4 9.3	2.276	3.222	6.0	14.9
3 2	10 59.05	- 0 11.9	1.142	2.128	3.5	17.3	3 2	10 58.84	- 3 30.7	2.254	3.233	3.3	14.7
3 12	10 48.94	+ 0 46.3	1.130	2.115	4.8	17.3	3 12	10 50.55	- 2 43.4	2.262	3.242	3.5	14.8
3 22	10 39.77	+ 1 48.0	1.143	2.102	10.1	17.6	3 22	10 42.92	- 1 52.3	2.300	3.252	6.2	15.0
4 1	10 32.87	+ 2 43.9	1.180	2.089	15.1	17.8	4 1	10 36.61	- 1 2.5	2.366	3.260	9.2	15.2
4 11	10 29.09	+ 3 26.7	1.235	2.077	19.5	18.0	4 11	10 32.11	- 0 18.4	2.456	3.268	11.9	15.3
419850	2011 <i>AT</i> ₉		3 3.5 57°78	9°5/21.0 18			421390	2013 <i>UF</i> ₁₃		3 3.5 159°35	2°9/ 6.4 18		
2 1	11 19.68	+29 6.5	1.726	2.595	12.6	20.2	2 1	11 19.12	- 4 3.8	2.091	2.903	13.0	20.9
2 11	11 14.77	+31 30.6	1.688	2.598	10.4	20.1	2 11	11 13.88	- 3 53.1	2.012	2.905	9.9	20.7
2 21	11 7.54	+33 43.6	1.675	2.601	9.5	20.0	2 21	11 6.89	- 3 25.8	1.956	2.907	6.5	20.5
3 2	10 58.88	+35 32.8	1.689	2.604	10.4	20.1	3 2	10 58.83	- 2 44.3	1.928	2.909	3.4	20.3
3 12	10 50.04	+36 49.5	1.728	2.607	12.5	20.2	3 12	10 50.59	- 1 53.2	1.930	2.911	3.7	20.3
3 22	10 42.23	+37 30.4	1.789	2.610	15.0	20.4	3 22	10 43.03	- 0 58.1	1.959	2.913	6.9	20.5
4 1	10 36.49	+37 36.9	1.870	2.614	17.4	20.6	4 1	10 36.94	- 0 5.1	2.016	2.914	10.3	20.7
4 11	10 33.41	+37 13.8	1.964	2.617	19.3	20.7	4 11	10 32.86	+ 0 40.8	2.095	2.915	13.4	20.9
144962	2005 <i>EZ</i> ₇₇		3 3.5 281°86	1°4/ 4.6 17			402016	2003 <i>SB</i> ₂₈		3 3.5 93°04	2°4/ 5.6 18		
2 1	11 20.35	+ 0 54.6	1.598	2.441	14.8	20.3	2 1	11 22.55	- 2 21.3	1.670	2.496	15.1	21.3
2 11	11 15.36	+ 1 15.7	1.509	2.425	11.0	20.0	2 11	11 16.45	- 1 56.8	1.614	2.518	11.3	21.1
2 21	11 7.98	+ 1 54.4	1.442	2.408	6.5	19.7	2 21	11 8.30	- 1 13.6	1.582	2.540	7.0	20.9
3 2	10 58.97	+ 2 46.8	1.402	2.391	2.0	19.4	3 2	10 59.01	- 0 16.2	1.576	2.562	3.0	20.7
3 12	10 49.48	+ 3 46.2	1.389	2.374	4.1	19.5	3 12	10 49.71	+ 0 48.5	1.599	2.583	3.9	20.8
3 22	10 40.74	+ 4 44.9	1.403	2.357	9.1	19.7	3 22	10 41.47	+ 1 52.9	1.650	2.604	8.0	21.1
4 1	10 33.89	+ 5 35.3	1.441	2.340	13.7	19.9	4 1	10 35.18	+ 2 50.1	1.727	2.625	11.8	21.4
4 11	10 29.69	+ 6 12.2	1.500	2.323	17.6	20.1	4 11	10 31.33	+ 3 35.4	1.825	2.644	15.1	21.7
366380	2000 <i>TP</i> ₂₁		3 3.5 70°19	2°5/ 1.0 18			341450	2007 <i>TP</i> ₂₆₉		3 3.5 182°77	0°9/ 2.4 17		
2 1	11 20.71	+ 9 34.9	1.757	2.617	12.8	20.8	2 1	11 18.22	+ 7 33.8	2.649	3.492	9.6	21.8
2 11	11 14.96	+10 57.0	1.720	2.650	8.9	20.6	2 11	11 12.93	+ 8 13.8	2.572	3.493	6.8	21.6
2 21	11 7.38	+12 25.2	1.709	2.682	4.8	20.4	2 21	11 6.25	+ 9 0.4	2.522	3.493	3.6	21.4
3 2	10 58.85	+13 51.0	1.727	2.714	2.5	20.3	3 2	10 58.75	+ 9 49.2	2.502	3.492	0.9	21.1
3 12	10 50.43	+15 6.2	1.774	2.745	5.4	20.6	3 12	10 51.11	+10 35.7	2.513	3.491	3.4	21.3
3 22	10 43.09	+16 5.0	1.848	2.776	9.2	20.9	3 22	10 44.02	+11 15.8	2.554	3.490	6.5	21.5
4 1	10 37.58	+16 44.3	1.947	2.807	12.5	21.1	4 1	10 38.11	+11 46.4	2.622	3.488	9.4	21.7
4 11	10 34.32	+17 4.0	2.066	2.837	15.2	21.4	4 11	10 33.81	+12 5.6	2.713	3.486	11.9	21.9
489647	2007 <i>UA</i> ₁₀		3 3.5 200°54	1°0/ 2.5 18			496264	2012 <i>QX</i> ₄₁		3 3.5 129°28	1°6/ 5.4 18		
2 1	11 21.41	+ 6 3.5	2.077	2.921	11.8	22.1	2 1	11 20.62	- 0 42.2	3.045	3.850	9.5	22.1
2 11	11 15.57	+ 7 5.5	1.996	2.917	8.4	21.9	2 11	11 14.38	- 0 38.3	2.974	3.869	7.0	21.9
2 21	11 7.85	+ 8 18.5	1.941	2.912	4.5	21.7	2 21	11 6.94	- 0 25.2	2.931	3.886	4.3	21.8
3 2	10 58.95	+ 9 36.6	1.915	2.906	1.0	21.4	3 2	10 58.84	- 0 4.9	2.919	3.903	1.9	21.6
3 12	10 49.78	+10 52.5	1.920	2.899	4.2	21.6	3 12	10 50.69	+ 0 19.7	2.938	3.920	2.5	21.7
3 22	10 41.31	+11 59.5	1.954	2.891	8.2	21.8	3 22	10 43.10	+ 0 45.5	2.988	3.936	5.1	21.9
4 1	10 34.37	+12 52.6	2.015	2.882	11.8	22.0	4 1	10 36.60	+ 1 9.4	3.067	3.951	7.7	22.1
4 11	10 29.55	+13 29.2	2.097	2.872	14.9	22.2	4 11	10 31.58	+ 1 28.8	3.171	3.966	9.9	22.2
33165	1998 <i>EO</i> ₂		3 3.5 178°69	0°2/ 3.1 18 R			430859	2005 <i>NR</i> ₃₀		3 3.5 184°76	2°7/28.4 17		
2 1	1												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
467735	2009 PV ₁₉		3 3.5 99°79' 0°2/ 3.7 18				233271	2006 AP ₁		3 3.5 23°25' 8°6/23.4 18			
2 1	11 23.45	+ 4 32.6	2.043	2.880	12.3	21.6	2 1	11 18.47	+25 33.7	1.585	2.463	13.0	19.7
2 11	11 16.77	+ 4 50.3	1.987	2.903	8.8	21.4	2 11	11 13.95	+27 34.3	1.545	2.468	10.3	19.6
2 21	11 8.37	+ 5 17.4	1.957	2.925	4.9	21.2	2 21	11 7.11	+29 26.6	1.530	2.473	8.7	19.5
3 2	10 59.03	+ 5 49.6	1.956	2.947	0.7	20.9	3 2	10 58.91	+30 58.4	1.540	2.479	9.3	19.5
3 12	10 49.71	+ 6 21.9	1.985	2.968	3.4	21.2	3 12	10 50.60	+32 0.8	1.575	2.486	11.6	19.7
3 22	10 41.31	+ 6 49.9	2.043	2.989	7.3	21.5	3 22	10 43.40	+32 30.2	1.634	2.493	14.4	19.9
4 1	10 34.59	+ 7 9.9	2.128	3.009	10.7	21.7	4 1	10 38.30	+32 27.5	1.711	2.500	17.1	20.1
4 11	10 29.99	+ 7 19.9	2.235	3.029	13.5	21.9	4 11	10 35.84	+31 56.9	1.805	2.508	19.3	20.3
330422	2007 CH ₂₇		3 3.5 91°46' 7°1/25.3 18				407751	2011 WM ₂₂		3 3.5 91°20' 2°4/ 5.5 18			
2 1	11 22.11	+23 32.4	1.775	2.644	12.3	20.2	2 1	11 21.80	- 2 3.5	1.566	2.397	15.7	22.0
2 11	11 16.19	+25 12.7	1.739	2.661	9.4	20.0	2 11	11 16.11	- 1 41.2	1.505	2.412	11.7	21.8
2 21	11 8.17	+26 46.0	1.729	2.678	7.4	20.0	2 21	11 8.23	- 0 59.3	1.468	2.427	7.2	21.6
3 2	10 59.00	+28 2.2	1.746	2.695	7.5	20.0	3 2	10 59.06	- 0 2.0	1.456	2.442	3.0	21.4
3 12	10 49.86	+28 54.1	1.789	2.711	9.6	20.2	3 12	10 49.80	+ 1 3.2	1.472	2.457	4.1	21.5
3 22	10 41.83	+29 18.6	1.858	2.728	12.4	20.4	3 22	10 41.60	+ 2 8.3	1.516	2.471	8.4	21.7
4 1	10 35.80	+29 16.5	1.948	2.744	15.0	20.6	4 1	10 35.42	+ 3 6.1	1.584	2.485	12.5	22.0
4 11	10 32.25	+28 51.2	2.056	2.759	17.2	20.8	4 11	10 31.81	+ 3 51.1	1.674	2.499	16.0	22.3
463517	2013 QB ₇₁		3 3.5 188°81' 0°2/ 3.3 17				153047	2000 QW ₆₈		3 3.5 138°27' 0°9/ 4.6 18			
2 1	11 20.72	+ 5 12.9	2.221	3.061	11.3	22.5	2 1	11 20.00	+ 0 53.1	2.440	3.263	11.0	20.9
2 11	11 14.93	+ 5 46.2	2.142	3.060	8.1	22.3	2 11	11 14.22	+ 1 27.9	2.371	3.277	8.0	20.7
2 21	11 7.45	+ 6 28.9	2.090	3.059	4.4	22.0	2 21	11 6.98	+ 2 14.1	2.328	3.291	4.7	20.5
3 2	10 58.93	+ 7 16.7	2.066	3.057	0.6	21.7	3 2	10 58.89	+ 3 8.0	2.315	3.304	1.3	20.3
3 12	10 50.22	+ 8 4.1	2.073	3.055	3.5	21.9	3 12	10 50.73	+ 4 4.5	2.333	3.316	2.9	20.4
3 22	10 42.19	+ 8 46.2	2.109	3.052	7.3	22.2	3 22	10 43.24	+ 4 58.7	2.380	3.328	6.3	20.7
4 1	10 35.59	+ 9 18.9	2.172	3.049	10.7	22.4	4 1	10 37.06	+ 5 46.3	2.456	3.339	9.3	20.9
4 11	10 30.94	+ 9 39.8	2.257	3.045	13.6	22.6	4 11	10 32.63	+ 6 24.0	2.555	3.350	12.0	21.1
363246	2002 AH ₁₇₉		3 3.5 24°92' 3°7/ 5.5 18				300750	2007 VC ₂₀₁		3 3.5 332°79' 0°3/ 3.8 17			
2 1	11 23.69	- 0 21.5	1.140	1.994	18.8	20.1	2 1	11 16.68	+ 3 49.1	1.711	2.566	13.4	19.9
2 11	11 18.11	- 0 59.1	1.084	2.001	14.1	19.9	2 11	11 12.55	+ 4 14.2	1.627	2.551	9.8	19.6
2 21	11 9.57	- 1 17.1	1.047	2.010	8.9	19.6	2 21	11 6.37	+ 4 52.9	1.567	2.537	5.5	19.3
3 2	10 59.22	- 1 17.1	1.034	2.019	4.2	19.4	3 2	10 58.84	+ 5 40.6	1.533	2.524	0.9	19.0
3 12	10 48.69	- 1 4.1	1.046	2.030	5.4	19.5	3 12	10 50.98	+ 6 30.8	1.527	2.511	3.9	19.2
3 22	10 39.59	- 0 45.1	1.081	2.041	10.3	19.8	3 22	10 43.84	+ 7 16.8	1.547	2.500	8.5	19.4
4 1	10 33.17	- 0 27.4	1.139	2.053	15.1	20.1	4 1	10 38.39	+ 7 52.9	1.592	2.488	12.7	19.6
4 11	10 30.10	- 0 17.2	1.215	2.066	19.2	20.4	4 11	10 35.28	+ 8 15.1	1.657	2.478	16.3	19.8
410762	2009 DC ₁₀₅		3 3.5 261°99' 0°9/ 2.8 18				495989	2007 TJ ₄₅₀		3 3.5 224°78' 3°6/ 6.9 17			
2 1	11 20.88	+ 6 8.9	1.557	2.415	14.3	21.6	2 1	11 21.44	- 6 12.3	2.022	2.822	13.8	22.4
2 11	11 15.62	+ 6 52.4	1.486	2.413	10.2	21.3	2 11	11 15.75	- 5 57.4	1.926	2.811	10.8	22.1
2 21	11 8.05	+ 7 48.5	1.439	2.412	5.5	21.1	2 21	11 8.08	- 5 22.7	1.854	2.799	7.3	21.9
3 2	10 59.02	+ 8 50.7	1.419	2.410	1.0	20.7	3 2	10 59.07	- 4 29.9	1.808	2.786	4.2	21.7
3 12	10 49.74	+ 9 50.7	1.427	2.408	4.8	21.0	3 12	10 49.68	- 3 23.8	1.792	2.772	4.3	21.7
3 22	10 41.42	+10 40.8	1.461	2.406	9.6	21.3	3 22	10 40.90	- 2 10.9	1.805	2.757	7.5	21.8
4 1	10 35.09	+11 15.9	1.519	2.405	13.9	21.5	4 1	10 33.66	- 0 58.5	1.845	2.742	11.2	22.0
4 11	10 31.40	+11 33.2	1.597	2.403	17.5	21.7	4 11	10 28.61	+ 0 6.6	1.907	2.726	14.6	22.2
274408	2008 RU ₁₃₈		3 3.5 272°40' 1°7/ 1.7 17				109365	2001 QC ₁₅₈		3 3.5 105°47' 0°0/ 3.4 18			
2 1	11 18.22	+ 8 46.7	1.956	2.814	11.8	20.4	2 1	11 20.86	+ 3 36.1	1.998	2.838	12.4	20.3
2 11	11 13.34	+ 9 43.0	1.885	2.813	8.3	20.2	2 11	11 15.02	+ 4 27.8	1.943	2.860	8.9	20.1
2 21	11 6.64	+10 47.7	1.840	2.812	4.5	20.0	2 21	11 7.47	+ 5 31.0	1.913	2.881	4.8	19.9
3 2	10 58.83	+11 54.4	1.822	2.811	1.8	19.8	3 2	10 58.97	+ 6 39.9	1.911	2.902	0.6	19.6
3 12	10 50.84	+12 56.0	1.834	2.810	4.7	20.0	3 12	10 50.46	+ 7 47.7	1.940	2.922	3.6	19.9
3 22	10 43.60	+13 46.5	1.874	2.809	8.6	20.2	3 22	10 42.82	+ 8 48.4	1.998	2.942	7.5	20.2
4 1	10 37.92	+14 22.0	1.938	2.808	12.1	20.4	4 1	10 36.80	+ 9 37.2	2.082	2.961	11.0	20.4
4 11	10 34.35	+14 40.6	2.024	2.807	15.1	20.6	4 11	10 32.85	+10 11.6	2.188	2.980	13.8	20.7
302049	2000 TC ₂₄		3 3.5 118°95' 3°2/ 6.0 18				100288	1995 CZ ₅		3 3.5 236°75' 1°7/ 5.2 17			
2 1	11 23.32	- 3 11.4	1.658	2.480	15.4	20.6	2 1	11 21.04	- 0 32.1	2.280	3.099	11.8	21.0
2 11	11 17.16	- 3 8.5	1.591	2.491	11.7	20.4	2 11	11 15.28	- 0 14.0	2.181	3.083	8.8	20.7
2 21	11 8.80	- 2 46.6	1.547	2.502	7.5	20.2	2 21	11 7.75	+ 0 17.6	2.108	3.067	5.4	20.5
3 2	10 59.12	- 2 8.4	1.530	2.512	3.7	20.0	3 2	10 59.04	+ 1 0.1	2.063	3.050	2.1	20.2
3 12	10 49.29	- 1 19.7	1.540	2.523	4.3	20.0	3 12	10 49.98	+ 1 48.9	2.048	3.032	3.2	20.3
3 22	10 40.46	- 0 27.4	1.578	2.532	8.2	20.3	3 22	10 41.45	+ 2 38.8	2.063	3.013	6.9	20.5
4 1	10 33.59	+ 0 21.6	1.641	2.542	12.2	20.5	4 1	10 34.26	+ 3 24.8	2.105	2.994	10.4	20.7
4 11	10 29.27	+ 1 1.6	1.727	2.551	15.6	20.8	4 11	10 29.03	+ 4 2.4	2.171	2.974	13.6	20.8
148514	2001 PS ₅		3 3.5 107°38' 1°6/ 2.1 18				161588	2005 LE ₃₀		3 3.5 196°71' 0°6/ 2.7 18			
2 1	11 25.03	+10 13.8	1.916	2.767	12.4	20.3	2 1	11 17.03	+ 6 56.7	2.994	3.834	8.7	21.6
2 11	11 18.02	+10 37.3	1.860	2.784	8.7	20.1	2 11	11 12.00	+ 7 35.4	2.912	3.831	6.2	21.4
2 21	11 9.11	+11 5.6	1.830	2.801	4.7	19.9	2 21	11 5.75	+ 8 20.3	2.857	3.827	3.3	21.2
3 2	10 59.15	+11 33.5	1.828	2.817	1.6	19.7	3 2	10 58.76	+ 9 7.9	2.833	3.823	0.7	21.0
3 12	10 49.20	+11 55.7	1.856	2.833	4.6	19.9	3 12	10 51.63	+ 9 53.9	2.840	3.819	2.9	21.2
3 22	10 40.27	+12 8.2	1.913	2.849	8.4	20.2	3 22	10 44.96	+10 34.9	2.877	3.814	5.9	21.4
4 1	10 33.18	+12 8.9	1.996	2.864	11.9	20.4	4 1	10 39.30	+11 7.7	2.941	3.809	8.5	21.5
4 11	10 28.41	+11 57.3	2.100	2.879	14.7	20.6	4 11	10 35.06	+11 30.5	3.030	3.803	10.8	21.7
52268	1986 WU		3 3.5 81°71' 4°9/ 8.0 18				172055	2001 XG ₁₃₇		3 3.5 347°31' 7°3/23.7 18			
2 1	11 21.91	- 8 48.6	1.711	2.50									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
119510	2001 <i>UW</i> ₁₃₄		3 3.5 249°68	5°3/27.4	17		402879	2007 <i>RV</i> ₂₅₉		3 3.5 56°26	3°4/ 1.1	16	
2 1	11 24.49	+20 43.1	2.097	2.956	11.1	20.2	2 1	11 23.45	+11 44.1	1.288	2.162	15.7	20.9
2 11	11 17.92	+21 39.0	2.016	2.938	8.3	19.9	2 11	11 17.51	+12 40.7	1.248	2.183	11.0	20.7
2 21	11 9.26	+22 32.8	1.962	2.920	5.9	19.8	2 21	11 9.04	+13 42.9	1.232	2.205	6.1	20.4
3 2	10 59.24	+23 16.9	1.936	2.901	5.5	19.7	3 2	10 59.22	+14 41.0	1.241	2.227	3.4	20.3
3 12	10 48.91	+23 44.9	1.939	2.881	7.6	19.8	3 12	10 49.53	+15 26.0	1.277	2.250	6.8	20.6
3 22	10 39.33	+23 53.0	1.969	2.861	10.7	19.9	3 22	10 41.31	+15 52.1	1.337	2.272	11.3	20.9
4 1	10 31.45	+23 40.2	2.023	2.841	13.8	20.1	4 1	10 35.53	+15 57.2	1.420	2.295	15.3	21.2
4 11	10 25.92	+23 8.1	2.097	2.820	16.4	20.2	4 11	10 32.70	+15 42.4	1.521	2.318	18.6	21.5
100430	1996 <i>HK</i> ₁₈		3 3.5 133°60	7°2/25.5	18		290072	2005 <i>QH</i> ₇₃		3 3.5 338°39	5°8/ 9.1	18	
2 1	11 25.31	+26 15.0	1.981	2.838	11.7	19.6	2 1	11 15.47	-15 1.9	1.041	1.855	23.0	19.8
2 11	11 18.36	+27 27.1	1.936	2.849	9.1	19.4	2 11	11 12.65	-13 24.1	0.965	1.853	18.6	19.5
2 21	11 9.36	+28 30.4	1.917	2.859	7.4	19.3	2 21	11 6.83	-10 48.3	0.908	1.850	13.2	19.2
3 2	10 59.23	+29 16.6	1.926	2.869	7.5	19.4	3 2	10 58.98	-7 18.3	0.873	1.849	7.8	18.9
3 12	10 49.11	+29 39.9	1.962	2.878	9.3	19.5	3 12	10 50.68	-3 11.4	0.863	1.847	6.2	18.8
3 22	10 40.09	+29 38.4	2.024	2.886	11.8	19.7	3 22	10 43.58	+1 4.9	0.879	1.846	10.9	19.0
4 1	10 33.02	+29 13.4	2.108	2.895	14.3	19.8	4 1	10 39.11	+5 2.6	0.920	1.845	16.8	19.3
4 11	10 28.41	+28 28.4	2.211	2.903	16.5	20.0	4 11	10 38.06	+8 21.8	0.982	1.844	21.9	19.6
205304	2000 <i>SF</i> ₂₉₃		3 3.5 199°16	3°5/ 6.6	18		359054	2008 <i>YC</i> ₂₀		3 3.5 256°97	3°3/29.7	18	
2 1	11 22.87	-4 59.0	1.938	2.744	14.1	20.3	2 1	11 20.95	+11 12.0	1.536	2.405	13.9	20.6
2 11	11 16.77	-4 57.0	1.852	2.741	10.9	20.1	2 11	11 15.82	+12 24.9	1.465	2.398	9.8	20.4
2 21	11 8.63	-4 36.7	1.789	2.737	7.3	19.9	2 21	11 8.27	+13 47.0	1.418	2.391	5.5	20.1
3 2	10 59.16	-3 59.8	1.754	2.733	4.1	19.7	3 2	10 59.16	+15 9.0	1.398	2.383	3.4	19.9
3 12	10 49.38	-3 10.6	1.748	2.728	4.3	19.7	3 12	10 49.72	+16 20.9	1.405	2.376	6.7	20.1
3 22	10 40.32	-2 15.4	1.770	2.722	7.7	19.9	3 22	10 41.23	+17 14.7	1.439	2.368	11.2	20.4
4 1	10 32.93	-1 20.6	1.818	2.715	11.4	20.1	4 1	10 34.78	+17 46.2	1.495	2.360	15.3	20.6
4 11	10 27.83	-0 32.4	1.890	2.708	14.7	20.3	4 11	10 31.07	+17 54.5	1.570	2.352	18.7	20.8
267454	2002 <i>EQ</i> ₁₅		3 3.5 12°65	4°5/ 7.9	18		200742	2001 <i>VS</i> ₁₀₅		3 3.5 149°78	4°2/29.1	18	
2 1	11 14.08	-8 51.2	1.458	2.278	17.2	19.5	2 1	11 25.70	+15 25.4	1.676	2.539	13.2	20.7
2 11	11 10.86	-8 11.8	1.387	2.281	13.5	19.3	2 11	11 18.89	+16 23.3	1.618	2.547	9.4	20.5
2 21	11 5.47	-7 2.1	1.338	2.285	9.3	19.0	2 21	11 9.79	+17 22.8	1.586	2.554	5.7	20.3
3 2	10 58.74	-5 25.9	1.313	2.290	5.5	18.8	3 2	10 59.35	+18 15.6	1.581	2.560	4.3	20.2
3 12	10 51.80	-3 31.8	1.313	2.295	5.0	18.8	3 12	10 48.81	+18 54.0	1.604	2.566	7.0	20.4
3 22	10 45.77	-1 31.6	1.340	2.302	8.5	19.0	3 22	10 39.39	+19 13.4	1.654	2.572	10.8	20.6
4 1	10 41.64	+0 23.0	1.392	2.310	12.7	19.3	4 1	10 32.08	+19 12.3	1.728	2.576	14.4	20.9
4 11	10 39.99	+2 2.2	1.466	2.318	16.4	19.5	4 11	10 27.45	+18 52.2	1.821	2.580	17.4	21.1
29284	1993 <i>FL</i> ₄₁		3 3.5 353°65	0°4/ 3.2	18		461092	2015 <i>BR</i> ₅		3 3.5 107°82	4°1/28.1	18	
2 1	11 19.76	+4 5.0	1.298	2.163	16.2	19.0	2 1	11 20.00	+16 21.4	2.066	2.931	11.0	20.8
2 11	11 15.17	+4 57.5	1.232	2.161	11.7	18.7	2 11	11 14.49	+17 35.0	2.015	2.943	7.9	20.6
2 21	11 7.97	+6 8.2	1.188	2.160	6.4	18.4	2 21	11 7.24	+18 49.1	1.990	2.956	5.0	20.5
3 2	10 59.09	+7 29.3	1.169	2.160	0.8	18.0	3 2	10 59.00	+19 56.4	1.993	2.968	4.3	20.4
3 12	10 49.91	+8 50.0	1.176	2.159	5.1	18.3	3 12	10 50.71	+20 50.3	2.026	2.980	6.5	20.6
3 22	10 41.85	+10 0.3	1.208	2.159	10.6	18.7	3 22	10 43.27	+21 26.4	2.086	2.991	9.5	20.8
4 1	10 36.06	+10 52.7	1.263	2.159	15.4	18.9	4 1	10 37.43	+21 43.2	2.170	3.003	12.4	21.0
4 11	10 33.25	+11 23.4	1.336	2.159	19.4	19.2	4 11	10 33.66	+21 41.4	2.274	3.014	14.8	21.2
83847	2001 <i>UO</i> ₃₇		3 3.5 5°89	2°6/ 1.1	18		400330	2007 <i>UW</i> ₁₀		3 3.5 113°19	2°0/ 5.1	18	
2 1	11 21.32	+13 53.7	2.183	3.040	10.8	19.0	2 1	11 23.66	-0 11.9	1.689	2.520	14.7	20.9
2 11	11 15.38	+14 18.9	2.113	3.040	7.7	18.8	2 11	11 17.37	-0 2.3	1.625	2.533	10.9	20.7
2 21	11 7.71	+14 45.8	2.070	3.040	4.4	18.6	2 21	11 8.94	+0 23.4	1.584	2.546	6.6	20.4
3 2	10 59.04	+15 9.5	2.056	3.041	2.6	18.5	3 2	10 59.24	+1 1.4	1.571	2.558	2.5	20.2
3 12	10 50.24	+15 25.3	2.071	3.041	5.0	18.6	3 12	10 49.43	+1 45.8	1.586	2.570	3.9	20.3
3 22	10 42.22	+15 29.8	2.115	3.041	8.3	18.8	3 22	10 40.63	+2 30.1	1.628	2.581	8.1	20.6
4 1	10 35.73	+15 21.5	2.184	3.041	11.4	19.0	4 1	10 33.78	+3 8.5	1.696	2.593	12.1	20.8
4 11	10 31.26	+15 0.3	2.275	3.042	14.1	19.2	4 11	10 29.43	+3 36.6	1.786	2.603	15.5	21.1
240272	2002 <i>XU</i> ₉₀		3 3.5 56°23	7°3/23.8	18		219642	2001 <i>UW</i> ₇₆		3 3.5 225°95	6°2/25.9	17	
2 1	11 18.63	+25 34.8	1.960	2.829	11.3	19.5	2 1	11 24.33	+24 14.9	2.190	3.047	10.8	21.4
2 11	11 13.63	+27 25.5	1.930	2.849	8.8	19.4	2 11	11 17.73	+25 22.3	2.120	3.036	8.3	21.2
2 21	11 6.78	+29 7.6	1.927	2.868	7.4	19.3	2 21	11 9.12	+26 24.7	2.077	3.025	6.5	21.1
3 2	10 58.91	+30 31.8	1.951	2.888	7.8	19.4	3 2	10 59.28	+27 14.3	2.063	3.013	6.5	21.1
3 12	10 51.04	+31 31.4	2.002	2.908	9.7	19.6	3 12	10 49.20	+27 44.7	2.076	3.000	8.4	21.2
3 22	10 44.14	+32 3.9	2.077	2.928	12.1	19.7	3 22	10 39.93	+27 52.9	2.117	2.987	11.1	21.3
4 1	10 38.97	+32 9.9	2.173	2.948	14.3	19.9	4 1	10 32.36	+27 38.8	2.180	2.973	13.7	21.4
4 11	10 36.01	+31 52.4	2.287	2.968	16.2	20.1	4 11	10 27.06	+27 4.5	2.263	2.959	16.0	21.6
371249	2006 <i>BG</i> ₁₅₆		3 3.5 79°50	2°1/ 1.2	18		248540	2005 <i>WY</i> ₁₉₅		3 3.5 116°83	2°9/29.6	18	
2 1	11 18.17	+8 10.7	1.873	2.732	12.2	21.2	2 1	11 20.49	+12 40.0	2.016	2.876	11.4	21.0
2 11	11 13.26	+9 41.0	1.822	2.751	8.5	21.0	2 11	11 14.86	+13 40.7	1.959	2.887	8.0	20.8
2 21	11 6.57	+11 20.0	1.797	2.770	4.6	20.8	2 21	11 7.46	+14 45.3	1.928	2.898	4.6	20.6
3 2	10 58.89	+12 59.5	1.801	2.789	2.1	20.7	3 2	10 59.05	+15 47.0	1.925	2.909	3.0	20.5
3 12	10 51.17	+14 30.6	1.835	2.807	5.1	20.9	3 12	10 50.56	+16 39.0	1.952	2.919	5.5	20.7
3 22	10 44.33	+15 46.6	1.896	2.826	8.9	21.1	3 22	10 42.92	+17 16.7	2.007	2.929	8.9	20.9
4 1	10 39.12	+16 43.1	1.983	2.844	12.2	21.4	4 1	10 36.90	+17 37.6	2.086	2.939	12.1	21.2
4 11	10 36.01	+17 19.1	2.090	2.862	15.0	21.6	4 11	10 32.98	+17 41.4	2.186	2.948	14.7	21.4
7012	Hobbes		3 3.5 141°21	2°2/ 1.5	18 R		27204	1999 <i>CY</i> ₇₄		3 3.5 91°56	4°7/ 8.5	18 R	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
291909	2006 <i>QP</i> ₁₁		3 3.5 265°61	1°5/ 2.3	17		298992	2004 <i>XJ</i> ₂₆		3 3.5 87°48	0°5/ 3.9	18	
2 1	11 22.24	+ 8 6.0	1.701	2.557	13.4	21.1	2 1	11 25.15	+ 3 13.7	1.551	2.396	15.1	21.2
2 11	11 16.67	+ 8 46.4	1.613	2.540	9.6	20.8	2 11	11 18.41	+ 3 42.1	1.503	2.421	10.9	21.0
2 21	11 8.75	+ 9 37.3	1.550	2.522	5.2	20.5	2 21	11 9.47	+ 4 24.1	1.478	2.446	6.1	20.8
3 2	10 59.25	+10 32.5	1.514	2.504	1.5	20.2	3 2	10 59.34	+ 5 13.9	1.481	2.471	1.1	20.5
3 12	10 49.30	+11 24.4	1.506	2.485	5.1	20.4	3 12	10 49.29	+ 6 4.2	1.512	2.496	4.1	20.8
3 22	10 40.10	+12 6.1	1.526	2.466	9.7	20.6	3 22	10 40.49	+ 6 48.3	1.570	2.520	8.7	21.1
4 1	10 32.75	+12 32.8	1.570	2.447	14.0	20.8	4 1	10 33.83	+ 7 21.1	1.653	2.543	12.7	21.4
4 11	10 27.99	+12 42.0	1.634	2.428	17.7	21.0	4 11	10 29.81	+ 7 40.0	1.758	2.566	16.0	21.6
153374	2001 <i>QF</i> ₁₅		3 3.5 224°47	1°9/ 1.9	18		184529	2005 <i>QG</i> ₂₄		3 3.5 277°79	0°2/ 3.8	17	
2 1	11 24.27	+ 9 8.2	1.706	2.561	13.4	20.7	2 1	11 15.57	+ 2 42.0	2.388	3.226	10.7	20.0
2 11	11 18.05	+ 9 55.3	1.625	2.552	9.6	20.4	2 11	11 11.30	+ 3 32.9	2.298	3.214	7.7	19.8
2 21	11 9.47	+10 51.8	1.570	2.542	5.2	20.1	2 21	11 5.55	+ 4 36.0	2.235	3.203	4.3	19.6
3 2	10 59.34	+11 50.6	1.542	2.531	1.9	19.9	3 2	10 58.84	+ 5 46.8	2.200	3.191	0.7	19.3
3 12	10 48.85	+12 43.9	1.543	2.520	5.4	20.1	3 12	10 51.90	+ 6 59.6	2.196	3.179	3.1	19.4
3 22	10 39.22	+13 25.1	1.572	2.507	9.9	20.3	3 22	10 45.47	+ 8 8.7	2.221	3.168	6.7	19.6
4 1	10 31.52	+13 49.8	1.625	2.495	14.0	20.5	4 1	10 40.24	+ 9 8.9	2.273	3.156	10.0	19.8
4 11	10 26.45	+13 56.4	1.698	2.481	17.5	20.7	4 11	10 36.70	+ 9 56.6	2.348	3.144	12.9	20.0
88382	2001 <i>PL</i> ₄₉		3 3.5 273°47	8°8/11.3	18		457448	2008 <i>UE</i> ₁₃₁		3 3.5 116°34	2°3/ 5.4	18	
2 1	11 20.23	-17 38.4	1.835	2.581	17.0	18.7	2 1	11 23.16	- 1 49.5	1.588	2.418	15.6	22.8
2 11	11 15.16	-18 20.9	1.747	2.575	14.5	18.5	2 11	11 17.13	- 1 24.7	1.526	2.432	11.6	22.6
2 21	11 7.89	-18 36.7	1.678	2.568	11.9	18.3	2 21	11 8.87	- 0 40.5	1.486	2.446	7.1	22.3
3 2	10 59.14	-18 23.2	1.632	2.562	9.6	18.1	3 2	10 59.28	+ 0 18.7	1.473	2.459	2.9	22.1
3 12	10 49.96	-17 41.4	1.612	2.555	8.8	18.1	3 12	10 49.58	+ 1 25.6	1.488	2.472	4.0	22.2
3 22	10 41.49	-16 36.6	1.617	2.549	9.9	18.1	3 22	10 40.94	+ 2 31.9	1.530	2.484	8.4	22.5
4 1	10 34.73	-15 17.0	1.646	2.542	12.4	18.2	4 1	10 34.33	+ 3 30.4	1.598	2.496	12.6	22.7
4 11	10 30.43	-13 52.6	1.698	2.536	15.2	18.4	4 11	10 30.32	+ 4 16.0	1.687	2.508	16.1	23.0
70529	1999 <i>TR</i> ₁₁₆		3 3.5 180°85	0°7/ 2.9	18		245635	2005 <i>YQ</i>		3 3.5 172°37	14°2/12.9	18	
2 1	11 22.67	+ 6 16.9	2.127	2.968	11.7	20.9	2 1	11 28.78	-23 34.8	1.395	2.114	22.6	20.3
2 11	11 16.42	+ 6 56.7	2.051	2.970	8.3	20.7	2 11	11 22.07	-25 19.2	1.321	2.117	20.1	20.1
2 21	11 8.36	+ 7 45.5	2.001	2.971	4.5	20.5	2 21	11 12.08	-26 28.5	1.264	2.120	17.4	20.0
3 2	10 59.19	+ 8 38.4	1.981	2.971	0.8	20.2	3 2	10 59.77	-26 54.6	1.227	2.121	15.2	19.8
3 12	10 49.83	+ 9 29.5	1.990	2.970	3.8	20.4	3 12	10 46.73	-26 34.5	1.211	2.122	14.2	19.8
3 22	10 41.20	+10 13.5	2.029	2.969	7.7	20.7	3 22	10 34.75	-25 33.1	1.217	2.123	14.9	19.8
4 1	10 34.13	+10 46.3	2.095	2.967	11.2	20.9	4 1	10 25.43	-24 1.7	1.245	2.122	16.9	19.9
4 11	10 29.14	+11 5.8	2.183	2.964	14.2	21.1	4 11	10 19.72	-22 15.8	1.292	2.121	19.6	20.1
89240	2001 <i>UO</i> ₁₅₆		3 3.5 223°45	0°4/ 3.1	17		193812	2001 <i>PV</i> ₅₀		3 3.5 129°62	2°1/ 1.8	18	
2 1	11 19.80	+ 4 59.7	2.031	2.876	12.0	20.6	2 1	11 26.02	+ 9 52.2	1.777	2.629	13.2	21.1
2 11	11 14.51	+ 5 44.1	1.948	2.869	8.6	20.3	2 11	11 18.93	+10 41.7	1.722	2.647	9.3	20.9
2 21	11 7.38	+ 6 39.9	1.892	2.862	4.7	20.1	2 21	11 9.75	+11 37.6	1.692	2.664	5.0	20.7
3 2	10 59.06	+ 7 42.0	1.863	2.854	0.6	19.7	3 2	10 59.41	+12 33.0	1.692	2.680	2.1	20.5
3 12	10 50.49	+ 8 43.9	1.865	2.846	3.8	20.0	3 12	10 49.05	+13 20.6	1.720	2.695	5.1	20.8
3 22	10 42.59	+ 9 39.3	1.894	2.838	7.9	20.2	3 22	10 39.78	+13 55.3	1.777	2.709	9.2	21.0
4 1	10 36.21	+10 23.4	1.950	2.829	11.6	20.4	4 1	10 32.48	+14 14.1	1.859	2.723	12.8	21.3
4 11	10 31.92	+10 53.2	2.028	2.820	14.7	20.6	4 11	10 27.68	+14 16.6	1.962	2.735	15.8	21.5
119319	2001 <i>SZ</i> ₁₀₄		3 3.5 231°52	2°0/ 5.5	18		412286	2013 <i>JZ</i> ₂₀		3 3.5 346°39	2°1/ 2.1	18	
2 1	11 20.33	- 1 55.5	2.222	3.038	12.2	21.2	2 1	11 24.13	+10 28.5	1.420	2.286	14.9	20.8
2 11	11 14.83	- 1 32.0	2.126	3.025	9.2	21.0	2 11	11 18.18	+10 49.0	1.353	2.284	10.7	20.5
2 21	11 7.54	- 0 53.4	2.054	3.011	5.7	20.7	2 21	11 9.61	+11 16.4	1.309	2.282	5.8	20.2
3 2	10 59.09	- 0 2.2	2.011	2.997	2.5	20.5	3 2	10 59.41	+11 44.0	1.291	2.280	2.1	20.0
3 12	10 50.31	+ 0 56.7	1.998	2.982	3.3	20.5	3 12	10 48.97	+12 4.6	1.300	2.279	5.7	20.2
3 22	10 42.08	+ 1 57.4	2.014	2.966	6.9	20.7	3 22	10 39.67	+12 12.8	1.335	2.277	10.6	20.5
4 1	10 35.21	+ 2 54.3	2.058	2.949	10.5	20.9	4 1	10 32.68	+12 5.7	1.393	2.277	15.0	20.7
4 11	10 30.31	+ 3 42.4	2.125	2.932	13.6	21.1	4 11	10 28.65	+11 42.7	1.469	2.276	18.7	21.0
365170	2009 <i>DQ</i> ₁₃₉		3 3.5 62°31	0°2/ 3.4	18		29052	4258 <i>T-2</i>		3 3.5 265°37	1°2/ 2.5	18	
2 1	11 23.10	+ 5 1.9	1.363	2.222	15.9	21.0	2 1	11 19.93	+ 6 49.7	1.732	2.588	13.2	19.1
2 11	11 17.24	+ 5 31.4	1.313	2.239	11.4	20.7	2 11	11 14.87	+ 7 38.2	1.654	2.581	9.4	18.9
2 21	11 8.94	+ 6 14.3	1.285	2.257	6.2	20.5	2 21	11 7.70	+ 8 38.1	1.601	2.574	5.1	18.6
3 2	10 59.26	+ 7 3.9	1.284	2.274	0.8	20.2	3 2	10 59.16	+ 9 43.3	1.576	2.566	1.2	18.3
3 12	10 49.59	+ 7 52.0	1.309	2.292	4.7	20.5	3 12	10 50.32	+10 45.8	1.579	2.558	4.7	18.5
3 22	10 41.22	+ 8 31.4	1.360	2.311	9.7	20.8	3 22	10 42.29	+11 38.6	1.608	2.551	9.2	18.8
4 1	10 35.15	+ 8 57.2	1.435	2.329	14.0	21.1	4 1	10 36.03	+12 16.6	1.663	2.543	13.2	19.0
4 11	10 31.93	+ 9 7.0	1.529	2.347	17.6	21.4	4 11	10 32.18	+12 37.1	1.738	2.536	16.6	19.2
371032	2005 <i>UK</i> ₁₀₃		3 3.5 57°31	0°7/ 2.9	18		500341	2012 <i>SW</i> ₅₅		3 3.5 143°51	1°0/ 2.0	17	
2 1	11 19.62	+ 5 44.6	1.661	2.518	13.7	21.2	2 1	11 17.44	+ 7 59.9	3.000	3.842	8.7	22.5
2 11	11 14.53	+ 6 28.3	1.602	2.528	9.7	21.0	2 11	11 12.26	+ 8 55.1	2.934	3.855	6.1	22.3
2 21	11 7.39	+ 7 23.7	1.567	2.539	5.3	20.7	2 21	11 5.92	+ 9 55.8	2.896	3.867	3.2	22.2
3 2	10 59.07	+ 8 24.2	1.559	2.549	0.8	20.4	3 2	10 58.91	+10 57.7	2.889	3.879	1.0	22.0
3 12	10 50.65	+ 9 22.2	1.578	2.560	4.4	20.7	3 12	10 51.82	+11 56.3	2.914	3.890	3.2	22.2
3 22	10 43.19	+10 11.2	1.625	2.571	8.8	21.0	3 22	10 45.26	+12 47.8	2.969	3.900	6.0	22.4
4 1	10 37.59	+10 46.2	1.697	2.583	12.7	21.3	4 1	10 39.72	+13 29.2	3.052	3.910	8.5	22.6
4 11	10 34.36	+11 5.1	1.789	2.594	15.9	21.5	4 11	10 35.61	+13 59.1	3.159	3.920	10.6	22.7
219429	2000 <i>TH</i> ₂₈		3 3.5 84°86	0°5/ 3.9	18		121528	1999 <i>UX</i> ₃₂		3 3.5 180°53	0°7/		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
131122	2001 <i>BG</i> ₁₁		3 3.5 165°36	0°3/ 3.9 18			69268	1988 <i>SD</i> ₂		3 3.5 257°97	5°2/28.1 18		
2 1	11 22.04	+ 2 44.6	2.085	2.918	12.2	21.3	2 1	11 25.21	+18 17.4	1.771	2.634	12.6	19.8
2 11	11 15.99	+ 3 27.0	2.011	2.925	8.8	21.0	2 11	11 18.82	+19 17.5	1.689	2.616	9.3	19.5
2 21	11 8.15	+ 4 21.8	1.963	2.930	5.0	20.8	2 21	11 9.98	+20 18.2	1.632	2.596	6.2	19.3
3 2	10 59.21	+ 5 24.2	1.944	2.935	0.9	20.5	3 2	10 59.52	+21 10.8	1.604	2.576	5.4	19.2
3 12	10 50.12	+ 6 27.8	1.956	2.939	3.4	20.7	3 12	10 48.62	+21 47.1	1.603	2.556	8.0	19.3
3 22	10 41.79	+ 7 26.7	1.996	2.942	7.4	21.0	3 22	10 38.57	+22 2.0	1.628	2.535	11.7	19.5
4 1	10 35.00	+ 8 15.8	2.064	2.944	11.0	21.2	4 1	10 30.49	+21 53.9	1.677	2.513	15.3	19.7
4 11	10 30.30	+ 8 51.8	2.154	2.946	14.0	21.4	4 11	10 25.10	+21 24.2	1.745	2.491	18.5	19.8
279710	2011 <i>GK</i> ₁₂		3 3.5 251°96	1°6/ 5.1 17			271652	2004 <i>QQ</i> ₁₄		3 3.5 184°78	0°9/ 4.7 17		
2 1	11 18.54	- 0 17.9	2.057	2.886	12.5	21.5	2 1	11 18.36	- 0 9.9	2.567	3.387	10.6	21.7
2 11	11 13.61	+ 0 6.2	1.972	2.880	9.3	21.3	2 11	11 13.17	+ 0 43.3	2.483	3.387	7.8	21.5
2 21	11 6.90	+ 0 45.0	1.912	2.873	5.6	21.1	2 21	11 6.54	+ 1 49.5	2.425	3.387	4.6	21.3
3 2	10 59.06	+ 1 35.2	1.879	2.867	2.0	20.8	3 2	10 59.03	+ 3 4.6	2.397	3.385	1.3	21.0
3 12	10 50.96	+ 2 31.3	1.876	2.861	3.3	20.9	3 12	10 51.35	+ 4 23.4	2.400	3.384	2.8	21.1
3 22	10 43.51	+ 3 27.4	1.901	2.854	7.2	21.1	3 22	10 44.21	+ 5 40.0	2.433	3.381	6.1	21.4
4 1	10 37.52	+ 4 17.7	1.953	2.848	10.8	21.3	4 1	10 38.24	+ 6 49.3	2.495	3.378	9.3	21.5
4 11	10 33.54	+ 4 58.0	2.027	2.841	14.0	21.5	4 11	10 33.92	+ 7 47.4	2.582	3.374	11.9	21.7
332946	2011 <i>DY</i> ₂₉		3 3.5 288°14	1°1/ 2.4 17			503215	2015 <i>HV</i> ₃₇		3 3.5 296°01	2°8/ 6.8 17		
2 1	11 16.95	+ 4 59.3	1.831	2.685	12.7	20.2	2 1	11 15.08	- 5 47.3	2.221	3.029	12.5	20.8
2 11	11 12.76	+ 6 15.7	1.740	2.666	9.1	19.9	2 11	11 11.10	- 5 6.4	2.125	3.016	9.6	20.6
2 21	11 6.57	+ 7 47.8	1.675	2.647	4.9	19.7	2 21	11 5.52	- 4 6.0	2.054	3.003	6.4	20.3
3 2	10 59.02	+ 9 28.9	1.637	2.628	1.1	19.3	3 2	10 58.91	- 2 49.1	2.010	2.990	3.4	20.1
3 12	10 51.08	+11 9.8	1.629	2.608	4.6	19.5	3 12	10 52.02	- 1 21.2	1.995	2.977	3.5	20.1
3 22	10 43.75	+12 41.4	1.648	2.589	9.1	19.8	3 22	10 45.66	+ 0 10.9	2.009	2.965	6.6	20.3
4 1	10 37.99	+13 56.7	1.693	2.570	13.2	20.0	4 1	10 40.57	+ 1 39.9	2.050	2.952	10.0	20.5
4 11	10 34.47	+14 51.5	1.758	2.551	16.7	20.1	4 11	10 37.28	+ 2 59.5	2.116	2.940	13.1	20.6
430253	2013 <i>WD</i> ₂₂		3 3.5 109°18	5°4/26.3 17			311127	2004 <i>QK</i> ₂₅		3 3.5 56°47	13°9/19.9 18		
2 1	11 19.16	+20 30.1	2.093	2.960	10.8	20.8	2 1	11 19.35	-31 0.9	1.387	2.069	24.2	19.4
2 11	11 13.99	+21 55.3	2.040	2.966	8.0	20.7	2 11	11 14.92	-31 30.6	1.332	2.092	21.7	19.3
2 21	11 7.06	+23 18.2	2.014	2.971	5.8	20.5	2 21	11 7.85	-31 13.3	1.291	2.116	19.0	19.1
3 2	10 59.07	+24 30.6	2.016	2.977	5.7	20.5	3 2	10 59.22	-30 4.6	1.266	2.140	16.3	19.0
3 12	10 50.99	+25 25.8	2.047	2.982	7.8	20.7	3 12	10 50.50	-28 7.6	1.261	2.165	14.4	19.0
3 22	10 43.71	+25 59.8	2.103	2.987	10.5	20.9	3 22	10 43.10	-25 32.6	1.279	2.189	13.9	19.0
4 1	10 38.01	+26 11.8	2.183	2.993	13.2	21.0	4 1	10 38.13	-22 35.8	1.320	2.214	15.0	19.2
4 11	10 34.40	+26 2.9	2.282	2.998	15.4	21.2	4 11	10 36.17	-19 34.9	1.383	2.239	17.0	19.4
292856	2006 <i>UE</i> ₃₄₁		3 3.5 276°94	1°5/ 2.3 17			110968	2001 <i>UZ</i> ₁₇₂		3 3.5 234°36	0°6/ 2.8 17		
2 1	11 21.64	+ 8 15.0	1.684	2.542	13.4	21.0	2 1	11 17.79	+ 6 29.1	2.547	3.390	10.0	20.4
2 11	11 16.26	+ 8 52.5	1.598	2.526	9.6	20.8	2 11	11 12.81	+ 7 8.2	2.461	3.381	7.1	20.2
2 21	11 8.56	+ 9 40.1	1.537	2.509	5.3	20.5	2 21	11 6.38	+ 7 55.2	2.401	3.371	3.8	20.0
3 2	10 59.31	+10 31.6	1.503	2.493	1.5	20.2	3 2	10 59.02	+ 8 45.9	2.371	3.361	0.7	19.7
3 12	10 49.63	+11 19.7	1.497	2.476	5.0	20.4	3 12	10 51.47	+ 9 35.6	2.371	3.351	3.3	19.9
3 22	10 40.73	+11 57.7	1.518	2.459	9.7	20.6	3 22	10 44.43	+10 19.7	2.401	3.341	6.7	20.1
4 1	10 33.69	+12 20.8	1.563	2.443	13.9	20.8	4 1	10 38.56	+10 54.5	2.457	3.330	9.8	20.3
4 11	10 29.22	+12 26.8	1.629	2.426	17.6	21.0	4 11	10 34.35	+11 17.7	2.537	3.319	12.4	20.5
194369	2001 <i>UG</i> ₁₉₅		3 3.5 47°48	1°8/ 4.9 18			82172	2001 <i>HP</i> ₉		3 3.5 294°46	1°2/ 4.5 18		
2 1	11 19.83	- 0 49.3	1.236	2.089	17.7	20.4	2 1	11 19.29	+ 0 17.7	1.285	2.140	17.0	19.3
2 11	11 15.22	- 0 11.8	1.179	2.099	13.0	20.1	2 11	11 15.11	+ 0 59.9	1.203	2.125	12.6	19.0
2 21	11 8.00	+ 0 49.0	1.144	2.110	7.8	19.9	2 21	11 8.17	+ 2 6.3	1.143	2.111	7.4	18.6
3 2	10 59.22	+ 2 6.9	1.133	2.122	2.5	19.6	3 2	10 59.30	+ 3 31.5	1.106	2.096	1.9	18.3
3 12	10 50.30	+ 3 31.4	1.147	2.133	4.5	19.7	3 12	10 49.87	+ 5 5.4	1.096	2.082	4.7	18.4
3 22	10 42.62	+ 4 51.7	1.187	2.146	9.8	20.1	3 22	10 41.35	+ 6 36.0	1.110	2.067	10.5	18.7
4 1	10 37.30	+ 5 58.6	1.250	2.158	14.6	20.4	4 1	10 35.09	+ 7 52.9	1.148	2.053	15.8	18.9
4 11	10 34.93	+ 6 46.5	1.332	2.171	18.5	20.7	4 11	10 31.94	+ 8 49.0	1.204	2.040	20.3	19.2
388825	2008 <i>CM</i> ₁₃₅		3 3.5 204°37	1°5/ 5.4 18			269772	1999 <i>TJ</i> ₇₆		3 3.5 207°40	1°5/ 2.1 17		
2 1	11 17.65	- 0 29.6	2.746	3.563	10.1	21.3	2 1	11 20.33	+ 9 11.3	2.170	3.021	11.1	21.4
2 11	11 12.58	- 0 16.6	2.660	3.560	7.5	21.1	2 11	11 14.78	+ 9 49.6	2.094	3.018	7.9	21.2
2 21	11 6.19	+ 0 6.9	2.599	3.557	4.6	20.9	2 21	11 7.51	+10 34.5	2.044	3.015	4.3	20.9
3 2	10 58.97	+ 0 38.8	2.567	3.553	1.9	20.7	3 2	10 59.18	+11 20.8	2.022	3.012	1.5	20.7
3 12	10 51.59	+ 1 15.6	2.566	3.550	2.7	20.8	3 12	10 50.66	+12 2.9	2.031	3.008	4.2	20.9
3 22	10 44.70	+ 1 53.2	2.595	3.546	5.6	21.0	3 22	10 42.83	+12 36.2	2.068	3.004	7.9	21.1
4 1	10 38.90	+ 2 28.1	2.652	3.542	8.5	21.1	4 1	10 36.45	+12 57.2	2.131	2.999	11.2	21.3
4 11	10 34.63	+ 2 56.8	2.732	3.537	11.0	21.3	4 11	10 32.07	+13 4.6	2.216	2.995	14.1	21.5
439017	2011 <i>CT</i> ₉		3 3.5 99°24	5°8/ 7.5 18			381679	2009 <i>BH</i> ₉₂		3 3.5 347°30	0°8/ 4.2 16		
2 1	11 26.95	- 7 50.9	1.888	2.675	15.2	20.8	2 1	11 17.63	+ 2 55.1	1.810	2.658	13.1	21.0
2 11	11 19.76	- 8 51.2	1.810	2.680	12.1	20.6	2 11	11 13.15	+ 3 11.8	1.732	2.652	9.6	20.7
2 21	11 10.36	- 9 34.0	1.755	2.685	8.9	20.4	2 21	11 6.73	+ 3 41.4	1.679	2.647	5.5	20.5
3 2	10 59.55	- 9 57.8	1.727	2.690	6.3	20.2	3 2	10 59.10	+ 4 19.9	1.652	2.642	1.3	20.2
3 12	10 48.45	-10 4.0	1.728	2.695	6.1	20.2	3 12	10 51.22	+ 5 1.6	1.653	2.638	3.6	20.3
3 22	10 38.19	- 9 56.1	1.758	2.700	8.5	20.4	3 22	10 44.10	+ 5 40.7	1.681	2.635	7.9	20.6
4 1	10 29.77	- 9 39.6	1.813	2.705	11.7	20.6	4 1	10 38.59	+ 6 11.9	1.735	2.632	11.8	20.8
4 11	10 23.84	- 9 20.5	1.891	2.710	14.7	20.8	4 11	10 35.30	+ 6 31.6	1.809	2.630	15.2	21.0
423756	2006 <i>DZ</i> ₄₃		3 3.5 356°38	0°5/ 3.1 18			498135	2007 <i>TZ</i> ₄₂		3 3.5 9°84	0°1/		

EPHEMERIDES

3 3.5

3 3.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
246071	2006 <i>WH</i> ₄₄		3 3.5 158°47'	5°6'/24.1	18		360403	2002 <i>FF</i> ₄₀		3 3.6 340°69'	6°7'/27.6	17	
2 1	11 19.45	+28 0.3	3.033	3.883	8.3	21.3	2 1	11 16.38	+16 7.0	1.053	1.950	16.3	19.8
2 11	11 13.81	+29 10.1	2.985	3.889	6.7	21.2	2 11	11 13.42	+17 35.9	0.990	1.935	11.9	19.5
2 21	11 6.84	+30 13.1	2.965	3.895	5.7	21.2	2 21	11 7.37	+19 11.3	0.949	1.920	7.8	19.3
3 2	10 59.10	+31 3.9	2.974	3.901	5.9	21.2	3 2	10 59.25	+20 38.8	0.930	1.908	7.0	19.2
3 12	10 51.30	+31 38.4	3.012	3.906	7.2	21.3	3 12	10 50.67	+21 44.1	0.934	1.897	10.6	19.3
3 22	10 44.10	+31 55.0	3.076	3.911	9.0	21.4	3 22	10 43.33	+22 17.6	0.959	1.887	15.5	19.5
4 1	10 38.10	+31 53.4	3.163	3.915	10.7	21.5	4 1	10 38.67	+22 16.2	1.003	1.879	20.1	19.8
4 11	10 33.71	+31 35.3	3.271	3.919	12.2	21.7	4 11	10 37.48	+21 42.3	1.061	1.873	24.1	20.0
362636	2011 <i>SH</i> ₁₄₆		3 3.5 69°09'	1°1'/4.4	18		116945	2004 <i>GL</i> ₄₅		3 3.6 181°92'	1°6'/5.0	18	
2 1	11 22.33	+ 1 13.9	1.386	2.235	16.3	20.8	2 1	11 20.19	- 0 11.9	1.763	2.598	14.1	20.0
2 11	11 16.73	+ 1 44.6	1.334	2.253	11.9	20.6	2 11	11 15.01	+ 0 12.5	1.687	2.598	10.4	19.8
2 21	11 8.73	+ 2 33.4	1.304	2.271	6.9	20.4	2 21	11 7.79	+ 0 53.5	1.635	2.598	6.3	19.5
3 2	10 59.36	+ 3 34.0	1.299	2.289	1.8	20.1	3 2	10 59.28	+ 1 47.2	1.610	2.598	2.2	19.3
3 12	10 49.96	+ 4 38.0	1.322	2.307	4.2	20.3	3 12	10 50.54	+ 2 47.0	1.613	2.598	3.7	19.4
3 22	10 41.80	+ 5 36.8	1.370	2.325	9.2	20.6	3 22	10 42.60	+ 3 46.1	1.644	2.598	8.0	19.6
4 1	10 35.87	+ 6 23.8	1.443	2.343	13.6	20.9	4 1	10 36.41	+ 4 37.9	1.700	2.597	12.0	19.8
4 11	10 32.71	+ 6 54.9	1.535	2.361	17.2	21.2	4 11	10 32.55	+ 5 17.6	1.777	2.597	15.4	20.1
130459	2000 <i>QZ</i> ₆₆		3 3.6 158°77'	1°8'/1.8	18		323431	2004 <i>FG</i> ₁₂₀		3 3.6 168°34'	0°8'/2.7	17	
2 1	11 21.71	+ 7 49.3	1.761	2.616	13.1	20.2	2 1	11 21.74	+ 6 56.5	2.290	3.131	11.0	21.4
2 11	11 16.05	+ 9 0.2	1.695	2.622	9.2	20.0	2 11	11 15.69	+ 7 38.4	2.217	3.137	7.8	21.2
2 21	11 8.32	+10 21.6	1.655	2.627	5.0	19.7	2 21	11 7.99	+ 8 28.3	2.171	3.141	4.2	20.9
3 2	10 59.32	+11 45.7	1.643	2.632	1.8	19.5	3 2	10 59.31	+ 9 21.2	2.155	3.145	0.9	20.7
3 12	10 50.15	+13 3.7	1.660	2.636	5.1	19.7	3 12	10 50.48	+10 11.5	2.169	3.148	3.7	20.9
3 22	10 41.88	+14 8.5	1.704	2.639	9.3	20.0	3 22	10 42.35	+10 54.6	2.212	3.150	7.3	21.1
4 1	10 35.42	+14 55.2	1.774	2.642	13.1	20.2	4 1	10 35.64	+11 26.7	2.283	3.152	10.6	21.4
4 11	10 31.36	+15 22.3	1.864	2.644	16.3	20.4	4 11	10 30.85	+11 45.9	2.376	3.153	13.3	21.5
131736	2001 <i>YB</i> ₁₁₄		3 3.6 355°18'	2°3'/5.3	18		8962	Noctua		3 3.6 92°31'	1°8'/1.6	18	
2 1	11 18.56	- 1 16.9	1.278	2.130	17.3	19.2	2 1	11 18.73	+10 42.6	2.349	3.203	10.3	17.9
2 11	11 14.43	- 0 53.2	1.209	2.127	13.0	18.9	2 11	11 13.49	+11 21.0	2.285	3.211	7.2	17.8
2 21	11 7.69	- 0 6.0	1.161	2.125	7.9	18.6	2 21	11 6.75	+12 3.8	2.247	3.218	3.9	17.6
3 2	10 59.26	+ 1 0.1	1.136	2.124	3.0	18.3	3 2	10 59.13	+12 46.2	2.238	3.226	1.8	17.4
3 12	10 50.50	+ 2 16.2	1.137	2.123	4.5	18.4	3 12	10 51.44	+13 23.1	2.259	3.233	4.2	17.6
3 22	10 42.79	+ 3 32.0	1.163	2.123	9.7	18.7	3 22	10 44.43	+13 50.8	2.309	3.241	7.4	17.8
4 1	10 37.33	+ 4 37.8	1.211	2.123	14.6	19.0	4 1	10 38.75	+14 6.7	2.385	3.248	10.4	18.0
4 11	10 34.83	+ 5 27.0	1.279	2.124	18.8	19.2	4 11	10 34.87	+14 9.7	2.482	3.255	12.9	18.2
56298	1999 <i>RO</i> ₄₆		3 3.6 269°21'	2°1'/29.7	18		270554	2002 <i>GP</i> ₁₇₉		3 3.6 280°33'	6°3'/25.6	17	
2 1	11 16.32	+10 7.7	2.486	3.341	9.7	19.0	2 1	11 19.46	+21 25.3	1.916	2.787	11.5	20.2
2 11	11 11.90	+11 25.6	2.395	3.322	6.9	18.8	2 11	11 14.55	+22 59.5	1.848	2.774	8.6	20.0
2 21	11 5.96	+12 51.2	2.332	3.303	3.8	18.6	2 21	11 7.57	+24 32.4	1.806	2.761	6.6	19.9
3 2	10 59.02	+14 18.7	2.298	3.284	2.2	18.4	3 2	10 59.27	+25 54.4	1.791	2.748	6.7	19.9
3 12	10 51.80	+15 41.3	2.295	3.264	4.6	18.6	3 12	10 50.67	+26 57.0	1.804	2.735	8.9	20.0
3 22	10 45.04	+16 53.2	2.321	3.244	7.9	18.7	3 22	10 42.84	+27 35.4	1.842	2.722	12.0	20.1
4 1	10 39.44	+17 50.3	2.374	3.224	10.9	18.9	4 1	10 36.72	+27 47.8	1.903	2.710	14.9	20.3
4 11	10 35.53	+18 30.3	2.449	3.203	13.5	19.1	4 11	10 32.93	+27 35.8	1.981	2.697	17.5	20.5
453247	2008 <i>SS</i> ₃₁		3 3.6 161°44'	2°0'/5.2	18		512982	2017 <i>UG</i> ₁₄		3 3.6 183°10'	0°3'/3.9	17	
2 1	11 24.34	- 0 49.5	1.746	2.572	14.6	22.2	2 1	11 19.18	+ 4 7.0	2.627	3.459	10.0	21.9
2 11	11 17.96	- 0 32.1	1.673	2.578	10.8	22.0	2 11	11 13.73	+ 4 27.5	2.547	3.460	7.2	21.8
2 21	11 9.40	+ 0 2.2	1.624	2.584	6.6	21.7	2 21	11 6.87	+ 4 56.2	2.493	3.459	4.1	21.5
3 2	10 59.49	+ 0 49.0	1.602	2.589	2.5	21.5	3 2	10 59.16	+ 5 30.0	2.469	3.459	0.7	21.3
3 12	10 49.36	+ 1 44.6	1.609	2.593	3.8	21.6	3 12	10 51.30	+ 6 4.7	2.475	3.458	2.8	21.5
3 22	10 40.16	+ 2 38.6	1.644	2.596	8.1	21.8	3 22	10 44.00	+ 6 36.7	2.511	3.457	6.1	21.7
4 1	10 32.84	+ 3 26.9	1.705	2.599	12.2	22.1	4 1	10 37.88	+ 7 2.5	2.575	3.456	9.1	21.9
4 11	10 28.02	+ 4 4.1	1.788	2.601	15.6	22.3	4 11	10 33.38	+ 7 19.7	2.663	3.454	11.6	22.0
249460	2009 <i>HZ</i> ₈₄		3 3.6 175°32'	0°3'/3.9	18		498560	2008 <i>JS</i> ₂₃		3 3.6 259°98'	2°9'/29.6	17	
2 1	11 21.68	+ 2 55.7	2.148	2.981	11.9	21.4	2 1	11 21.16	+12 32.5	2.041	2.899	11.4	22.3
2 11	11 15.75	+ 3 36.3	2.071	2.984	8.6	21.1	2 11	11 15.67	+13 31.0	1.951	2.879	8.1	22.0
2 21	11 8.07	+ 4 28.8	2.020	2.987	4.9	20.9	2 21	11 8.18	+14 35.4	1.888	2.859	4.7	21.8
3 2	10 59.31	+ 5 28.6	1.998	2.989	0.8	20.6	3 2	10 59.36	+15 39.1	1.854	2.838	3.0	21.6
3 12	10 50.36	+ 6 29.9	2.006	2.990	3.4	20.8	3 12	10 50.16	+16 34.9	1.849	2.817	5.7	21.7
3 22	10 42.13	+ 7 26.6	2.044	2.990	7.3	21.1	3 22	10 41.58	+17 16.9	1.872	2.795	9.4	21.9
4 1	10 35.38	+ 8 14.0	2.109	2.989	10.8	21.3	4 1	10 34.54	+17 41.7	1.920	2.772	13.0	22.1
4 11	10 30.66	+ 8 48.9	2.196	2.988	13.8	21.5	4 11	10 29.70	+17 48.1	1.988	2.750	16.0	22.3
165426	2000 <i>YO</i> ₆₀		3 3.6 49°78'	0°9'/4.2	18		429872	2012 <i>SC</i> ₃₀		3 3.6 348°01'	1°9'/1.9	17	
2 1	11 21.63	+ 2 20.0	1.329	2.184	16.5	19.5	2 1	11 21.15	+11 2.5	1.994	2.851	11.7	20.7
2 11	11 16.35	+ 2 43.7	1.274	2.197	12.0	19.3	2 11	11 15.49	+11 24.1	1.922	2.849	8.3	20.5
2 21	11 8.59	+ 3 24.5	1.242	2.211	6.8	19.0	2 21	11 7.97	+11 50.3	1.876	2.848	4.5	20.2
3 2	10 59.38	+ 4 16.6	1.235	2.225	1.5	18.7	3 2	10 59.32	+12 16.0	1.858	2.846	1.9	20.0
3 12	10 50.08	+ 5 11.6	1.254	2.239	4.4	18.9	3 12	10 50.51	+12 36.1	1.869	2.845	4.6	20.2
3 22	10 42.03	+ 6 1.3	1.298	2.254	9.5	19.3	3 22	10 42.49	+12 46.5	1.908	2.844	8.4	20.5
4 1	10 36.26	+ 6 39.1	1.366	2.269	14.0	19.6	4 1	10 36.09	+12 44.9	1.972	2.843	11.8	20.7
4 11	10 33.33	+ 7 1.4	1.454	2.284	17.7	19.8	4 11	10 31.86	+12 30.5	2.057	2.843	14.8	20.9
222351	2000 <i>WL</i> ₁₂₈		3 3.6 151°37'	1°1'/4.7	18		302813	2003 <i>BL</i> ₇₀		3 3.6 274°86'	1°5'/5.0	17	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
231543	2008 <i>SR</i> ₂₁₈		3 3.6 152°72	1°0/ 4.6 17			522594	2016 <i>ER</i> ₂₄₇		3 3.6 194°19	1°1/ 4.7 17		
2 1	11 19.85	+ 1 27.8	2.259	3.088	11.6	21.0	2 1	11 18.47	+ 0 14.4	2.076	2.906	12.4	21.7
2 11	11 14.37	+ 1 51.0	2.184	3.093	8.5	20.8	2 11	11 13.56	+ 0 54.1	1.996	2.905	9.1	21.5
2 21	11 7.28	+ 2 25.8	2.135	3.098	4.9	20.6	2 21	11 6.93	+ 1 48.6	1.941	2.904	5.4	21.3
3 2	10 59.23	+ 3 8.7	2.114	3.103	1.4	20.4	3 2	10 59.21	+ 2 53.6	1.914	2.903	1.6	21.0
3 12	10 51.03	+ 3 54.9	2.123	3.107	3.0	20.5	3 12	10 51.29	+ 4 3.2	1.917	2.901	3.2	21.1
3 22	10 43.50	+ 4 39.4	2.161	3.111	6.6	20.7	3 22	10 44.03	+ 5 10.7	1.948	2.900	7.1	21.4
4 1	10 37.35	+ 5 17.8	2.227	3.115	10.0	21.0	4 1	10 38.21	+ 6 10.3	2.006	2.897	10.7	21.6
4 11	10 33.08	+ 5 46.8	2.315	3.118	12.8	21.1	4 11	10 34.38	+ 6 57.8	2.087	2.895	13.8	21.8
39873	1998 <i>DC</i> ₃₄		3 3.6 288°53	0°7/ 3.0 18			254549	2005 <i>ED</i> ₂₂₂		3 3.6 259°99	2°2/ 1.9 17		
2 1	11 21.97	+ 6 23.1	1.505	2.364	14.7	19.2	2 1	11 24.04	+ 10 47.8	1.698	2.557	13.3	20.7
2 11	11 16.74	+ 6 52.0	1.422	2.349	10.6	18.9	2 11	11 17.97	+ 11 19.4	1.617	2.545	9.5	20.4
2 21	11 8.97	+ 7 33.6	1.363	2.335	5.8	18.6	2 21	11 9.56	+ 11 57.7	1.561	2.533	5.3	20.1
3 2	10 59.49	+ 8 21.9	1.330	2.321	0.9	18.2	3 2	10 59.59	+ 12 36.1	1.533	2.521	2.2	19.9
3 12	10 49.55	+ 9 9.3	1.325	2.307	4.9	18.4	3 12	10 49.27	+ 13 7.9	1.532	2.508	5.5	20.1
3 22	10 40.49	+ 9 48.3	1.345	2.293	10.0	18.7	3 22	10 39.81	+ 13 27.4	1.559	2.495	9.9	20.3
4 1	10 33.48	+ 10 13.4	1.389	2.279	14.7	18.9	4 1	10 32.28	+ 13 31.5	1.610	2.482	14.0	20.5
4 11	10 29.29	+ 10 21.6	1.452	2.265	18.6	19.1	4 11	10 27.38	+ 13 19.2	1.681	2.469	17.5	20.7
380565	2004 <i>QO</i> ₁₉		3 3.6 204°99	5°6/24.9 17			396899	2004 <i>XV</i> ₉₁		3 3.6 187°17	0°8/ 4.3 16		
2 1	11 21.83	+ 24 59.4	2.714	3.566	9.1	22.6	2 1	11 23.15	+ 1 53.5	2.003	2.833	12.8	22.8
2 11	11 15.73	+ 26 20.9	2.648	3.560	7.1	22.5	2 11	11 16.97	+ 2 24.7	1.922	2.833	9.3	22.6
2 21	11 8.03	+ 27 37.8	2.611	3.552	5.7	22.4	2 21	11 8.84	+ 3 9.2	1.867	2.832	5.4	22.4
3 2	10 59.34	+ 28 43.6	2.603	3.544	5.9	22.4	3 2	10 59.49	+ 4 2.8	1.841	2.830	1.3	22.1
3 12	10 50.45	+ 29 32.7	2.625	3.534	7.5	22.5	3 12	10 49.89	+ 4 59.6	1.844	2.828	3.5	22.2
3 22	10 42.16	+ 30 2.1	2.674	3.524	9.7	22.6	3 22	10 41.04	+ 5 53.5	1.876	2.825	7.6	22.5
4 1	10 35.19	+ 30 11.3	2.746	3.514	11.8	22.7	4 1	10 33.81	+ 6 39.0	1.936	2.820	11.4	22.7
4 11	10 30.04	+ 30 1.6	2.839	3.502	13.7	22.9	4 11	10 28.79	+ 7 12.5	2.017	2.816	14.6	22.9
303464	2005 <i>CZ</i> ₂₅		3 3.6 1°85	5°1/29.2 18			258218	2001 <i>TV</i> ₂₆		3 3.6 94°39	4°9/ 8.5 18		
2 1	11 21.78	+ 15 27.8	1.194	2.079	15.9	20.0	2 1	11 20.60	- 9 47.9	1.904	2.692	15.0	20.5
2 11	11 16.87	+ 16 18.5	1.139	2.077	11.4	19.8	2 11	11 15.10	- 9 41.6	1.839	2.710	11.9	20.3
2 21	11 9.07	+ 17 12.0	1.105	2.076	6.9	19.5	2 21	11 7.75	- 9 12.7	1.796	2.729	8.5	20.1
3 2	10 59.49	+ 17 57.7	1.095	2.076	5.2	19.4	3 2	10 59.33	- 8 23.3	1.779	2.746	5.6	20.0
3 12	10 49.71	+ 18 25.8	1.109	2.077	8.5	19.6	3 12	10 50.81	- 7 18.3	1.790	2.764	5.1	20.0
3 22	10 41.30	+ 18 30.8	1.147	2.079	13.1	19.9	3 22	10 43.15	- 6 4.7	1.829	2.781	7.5	20.2
4 1	10 35.48	+ 18 11.3	1.206	2.082	17.4	20.1	4 1	10 37.17	- 4 50.3	1.895	2.798	10.6	20.4
4 11	10 32.89	+ 17 29.5	1.282	2.086	21.0	20.4	4 11	10 33.36	- 3 41.9	1.984	2.815	13.6	20.6
84449	2002 <i>TA</i> ₂₄₁		3 3.6 99°06	1°3/ 2.2 18			379932	2012 <i>LW</i> ₂		3 3.6 234°67	7°1/24.4 17		
2 1	11 19.27	+ 8 32.2	2.234	3.085	10.9	20.0	2 1	11 22.79	+ 26 53.0	2.196	3.053	10.8	20.9
2 11	11 13.91	+ 9 14.2	2.173	3.098	7.6	19.8	2 11	11 16.75	+ 28 14.7	2.131	3.042	8.6	20.7
2 21	11 7.00	+ 10 2.6	2.139	3.110	4.1	19.6	2 21	11 8.73	+ 29 29.6	2.093	3.031	7.2	20.6
3 2	10 59.19	+ 10 52.3	2.133	3.123	1.3	19.4	3 2	10 59.47	+ 30 29.5	2.083	3.019	7.5	20.6
3 12	10 51.32	+ 11 37.8	2.158	3.135	3.9	19.6	3 12	10 49.98	+ 31 7.8	2.101	3.007	9.3	20.7
3 22	10 44.19	+ 12 14.7	2.210	3.147	7.4	19.8	3 22	10 41.28	+ 31 21.6	2.144	2.994	11.7	20.9
4 1	10 38.46	+ 12 39.9	2.289	3.159	10.5	20.1	4 1	10 34.24	+ 31 10.9	2.209	2.982	14.2	21.0
4 11	10 34.61	+ 12 51.9	2.391	3.171	13.1	20.3	4 11	10 29.47	+ 30 38.3	2.292	2.968	16.3	21.1
62137	2000 <i>SM</i> ₇		3 3.6 25°54	0°8/ 2.9 18			500378	2012 <i>TC</i> ₅₉		3 3.6 167°52	1°2/ 2.4 17		
2 1	11 21.60	+ 8 43.7	2.113	2.962	11.5	18.7	2 1	11 20.93	+ 9 25.8	2.471	3.317	10.1	21.3
2 11	11 15.68	+ 8 48.7	2.043	2.966	8.1	18.5	2 11	11 15.03	+ 9 48.0	2.397	3.319	7.2	21.1
2 21	11 8.02	+ 8 59.2	1.999	2.970	4.4	18.3	2 21	11 7.62	+ 10 14.9	2.351	3.321	3.9	20.9
3 2	10 59.33	+ 9 11.2	1.983	2.974	0.9	18.0	3 2	10 59.31	+ 10 42.5	2.334	3.323	1.2	20.7
3 12	10 50.54	+ 9 20.7	1.998	2.978	3.8	18.2	3 12	10 50.89	+ 11 6.8	2.347	3.325	3.6	20.9
3 22	10 42.53	+ 9 24.3	2.040	2.983	7.5	18.5	3 22	10 43.11	+ 11 24.1	2.390	3.326	6.9	21.1
4 1	10 36.05	+ 9 19.6	2.109	2.988	10.9	18.7	4 1	10 36.64	+ 11 32.1	2.460	3.327	9.9	21.3
4 11	10 31.63	+ 9 5.2	2.200	2.993	13.7	18.9	4 11	10 31.96	+ 11 29.6	2.552	3.328	12.5	21.5
309355	2007 <i>TZ</i> ₆₆		3 3.6 75°13	1°9/ 5.2 18			81752	2000 <i>JR</i> ₅₆		3 3.6 267°21	1°5/ 2.2 17		
2 1	11 20.67	- 1 6.1	1.482	2.322	15.9	20.8	2 1	11 19.89	+ 7 39.8	1.831	2.687	12.6	19.8
2 11	11 15.54	- 0 31.6	1.421	2.334	11.8	20.6	2 11	11 14.89	+ 8 33.7	1.746	2.673	9.0	19.6
2 21	11 8.13	+ 0 23.1	1.382	2.346	7.1	20.4	2 21	11 7.82	+ 9 38.6	1.686	2.658	4.9	19.3
3 2	10 59.36	+ 1 32.7	1.370	2.358	2.5	20.1	3 2	10 59.36	+ 10 48.2	1.653	2.643	1.5	19.0
3 12	10 50.46	+ 2 48.9	1.384	2.370	4.0	20.2	3 12	10 50.54	+ 11 54.6	1.649	2.628	4.8	19.2
3 22	10 42.63	+ 4 2.6	1.426	2.382	8.7	20.5	3 22	10 42.42	+ 12 50.8	1.673	2.612	9.2	19.4
4 1	10 36.85	+ 5 5.9	1.491	2.394	13.0	20.8	4 1	10 35.95	+ 13 31.7	1.722	2.596	13.1	19.6
4 11	10 33.70	+ 5 53.7	1.578	2.406	16.7	21.1	4 11	10 31.80	+ 13 54.7	1.791	2.581	16.5	19.8
497642	2006 <i>RW</i> ₃₁		3 3.6 138°75	0°0/ 3.5 17			59228	1999 <i>CH</i>		3 3.6 125°89	4°0/29.5 18		
2 1	11 17.85	+ 4 45.2	2.779	3.614	9.5	22.8	2 1	11 26.02	+ 14 36.1	1.578	2.442	13.8	18.3
2 11	11 12.69	+ 5 18.9	2.709	3.624	6.8	22.7	2 11	11 19.28	+ 15 30.5	1.523	2.452	9.8	18.1
2 21	11 6.26	+ 6 0.0	2.665	3.633	3.7	22.5	2 21	11 10.16	+ 16 27.2	1.493	2.463	5.8	17.9
3 2	10 59.10	+ 6 45.2	2.652	3.642	0.5	22.2	3 2	10 59.67	+ 17 17.8	1.491	2.472	4.1	17.8
3 12	10 51.86	+ 7 30.2	2.669	3.651	2.8	22.4	3 12	10 49.13	+ 17 54.4	1.516	2.481	6.9	18.0
3 22	10 45.17	+ 8 11.2	2.717	3.660	5.8	22.7	3 22	10 39.78	+ 18 12.2	1.568	2.490	10.9	18.2
4 1	10 39.59	+ 8 44.8	2.792	3.668	8.6	22.8	4 1	10 32.65	+ 18 9.8	1.643	2.499	14.6	18.5
4 11	10 35.51	+ 9 8.9	2.891	3.676	11.0	23.0	4 11	10 28.27	+ 17 48.6	1.737	2.507	17.7	18.7
402974	2007 <i>UT</i> ₉₆		3 3.6 212°58	0°4/ 3.9 17			377382	2004 <					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
84175	2002 RA ₁₀₅		3 3.6 154°83	1.1/ 4.5 18			331797	2003 ON ₁₇		3 3.6 175°61	0.4/ 3.2 18		
2 1	11 22.95	+ 0 32.1	1.585	2.423	15.2	19.9	2 1	11 23.40	+ 5 20.4	2.116	2.953	11.9	22.1
2 11	11 17.15	+ 1 14.7	1.515	2.429	11.1	19.6	2 11	11 17.04	+ 5 58.4	2.040	2.957	8.5	21.9
2 21	11 9.06	+ 2 15.7	1.470	2.435	6.5	19.4	2 21	11 8.85	+ 6 46.2	1.991	2.959	4.7	21.7
3 2	10 59.54	+ 3 29.3	1.451	2.440	1.7	19.1	3 2	10 59.54	+ 7 39.1	1.970	2.961	0.6	21.3
3 12	10 49.81	+ 4 47.4	1.460	2.445	4.0	19.2	3 12	10 50.05	+ 8 31.0	1.981	2.962	3.7	21.6
3 22	10 41.06	+ 6 1.0	1.497	2.449	8.8	19.5	3 22	10 41.31	+ 9 16.6	2.020	2.962	7.6	21.8
4 1	10 34.31	+ 7 3.0	1.559	2.452	13.1	19.8	4 1	10 34.12	+ 9 51.6	2.087	2.962	11.2	22.0
4 11	10 30.20	+ 7 48.6	1.642	2.455	16.8	20.0	4 11	10 29.05	+10 13.7	2.176	2.960	14.1	22.2
463929	2014 UU ₁₆₉		3 3.6 86°38	7.2/25.4 18			485	Genua		3 3.6 41°51	4.3/ 8.1 18		
2 1	11 21.99	+23 10.1	1.737	2.607	12.5	20.2	2 1	11 16.25	- 9 9.7	1.547	2.358	16.8	12.0
2 11	11 16.30	+24 51.8	1.699	2.622	9.5	20.1	2 11	11 12.33	- 8 25.3	1.486	2.374	13.1	11.8
2 21	11 8.47	+26 27.0	1.686	2.637	7.4	20.0	2 21	11 6.36	- 7 12.6	1.447	2.391	9.0	11.6
3 2	10 59.44	+27 45.6	1.701	2.651	7.6	20.0	3 2	10 59.19	- 5 36.0	1.432	2.408	5.3	11.4
3 12	10 50.41	+28 39.6	1.742	2.666	9.7	20.2	3 12	10 51.93	- 3 44.2	1.444	2.426	4.8	11.4
3 22	10 42.48	+29 5.9	1.808	2.681	12.5	20.4	3 22	10 45.64	- 1 48.2	1.484	2.444	8.0	11.7
4 1	10 36.54	+29 5.0	1.895	2.695	15.2	20.6	4 1	10 41.19	+ 0 1.3	1.549	2.463	11.9	11.9
4 11	10 33.12	+28 40.4	2.000	2.709	17.5	20.8	4 11	10 39.10	+ 1 35.8	1.636	2.481	15.4	12.2
255593	2006 OW ₁₀		3 3.6 210°22	1.2/ 2.4 17			218365	2004 HB ₅₀		3 3.6 193°16	4.4/27.5 16		
2 1	11 22.59	+ 7 44.5	2.087	2.933	11.7	22.2	2 1	11 23.43	+20 21.9	2.599	3.451	9.5	21.0
2 11	11 16.56	+ 8 27.8	2.005	2.926	8.3	22.0	2 11	11 16.85	+21 18.5	2.530	3.449	7.0	20.8
2 21	11 8.63	+ 9 19.7	1.948	2.919	4.5	21.8	2 21	11 8.66	+22 12.9	2.489	3.445	4.9	20.7
3 2	10 59.49	+10 14.8	1.921	2.911	1.2	21.5	3 2	10 59.52	+22 59.1	2.477	3.441	4.5	20.6
3 12	10 50.08	+11 6.9	1.924	2.902	4.2	21.7	3 12	10 50.22	+23 32.2	2.496	3.437	6.3	20.8
3 22	10 41.36	+11 50.3	1.956	2.893	8.2	21.9	3 22	10 41.59	+23 49.1	2.544	3.431	8.8	20.9
4 1	10 34.19	+12 21.2	2.013	2.882	11.8	22.1	4 1	10 34.34	+23 49.0	2.617	3.424	11.3	21.1
4 11	10 29.15	+12 37.5	2.093	2.871	14.8	22.3	4 11	10 28.95	+23 32.9	2.711	3.417	13.4	21.2
227588	2006 AH ₁₈		3 3.6 10°24	4.0/ 6.1 18			2070	Humason		3 3.6 167°76	0.5/ 3.2 18		
2 1	11 19.77	- 1 52.9	1.291	2.138	17.4	18.8	2 1	11 24.69	+ 5 42.7	1.735	2.581	13.7	17.4
2 11	11 15.23	- 2 27.4	1.229	2.142	13.3	18.6	2 11	11 18.26	+ 6 18.9	1.665	2.585	9.8	17.2
2 21	11 8.13	- 2 42.3	1.188	2.146	8.7	18.3	2 21	11 9.64	+ 7 6.3	1.619	2.589	5.4	17.0
3 2	10 59.43	- 2 38.9	1.170	2.153	4.6	18.1	3 2	10 59.66	+ 7 59.4	1.601	2.592	0.8	16.6
3 12	10 50.51	- 2 21.7	1.177	2.160	5.1	18.2	3 12	10 49.48	+ 8 50.8	1.613	2.595	4.3	16.9
3 22	10 42.72	- 1 57.3	1.209	2.170	9.4	18.4	3 22	10 40.25	+ 9 34.2	1.653	2.597	8.8	17.2
4 1	10 37.19	- 1 32.9	1.264	2.180	13.8	18.7	4 1	10 32.93	+10 5.1	1.717	2.598	12.9	17.4
4 11	10 34.58	- 1 14.7	1.338	2.192	17.6	19.0	4 11	10 28.13	+10 20.9	1.803	2.598	16.2	17.6
301107	2008 VG ₇₀		3 3.6 185°33	5.3/27.8 18			96779	1999 RX ₈₂		3 3.6 254°40	0.4/ 4.0 18		
2 1	11 25.33	+18 17.5	1.801	2.664	12.5	21.9	2 1	11 19.60	+ 2 58.9	2.121	2.958	11.9	20.4
2 11	11 18.73	+19 33.2	1.738	2.664	9.1	21.7	2 11	11 14.47	+ 3 31.6	2.028	2.943	8.7	20.2
2 21	11 9.89	+20 48.8	1.701	2.664	6.1	21.6	2 21	11 7.52	+ 4 16.7	1.961	2.928	4.9	19.9
3 2	10 59.67	+21 55.0	1.693	2.663	5.5	21.5	3 2	10 59.37	+ 5 10.1	1.923	2.913	0.9	19.6
3 12	10 49.26	+22 43.8	1.712	2.661	7.9	21.7	3 12	10 50.91	+ 6 6.2	1.914	2.898	3.4	19.7
3 22	10 39.82	+23 10.6	1.759	2.659	11.3	21.8	3 22	10 43.02	+ 6 59.2	1.934	2.882	7.4	20.0
4 1	10 32.36	+23 14.0	1.828	2.655	14.6	22.1	4 1	10 36.54	+ 7 44.0	1.980	2.866	11.1	20.2
4 11	10 27.48	+22 56.0	1.917	2.652	17.4	22.2	4 11	10 32.08	+ 8 16.7	2.048	2.849	14.3	20.3
140574	2001 TA ₂₁₆		3 3.6 126°11	0.1/ 3.5 18			330094	2005 WM ₁₀₈		3 3.6 182°06	2.0/ 1.6 18		
2 1	11 20.86	+ 5 59.5	2.510	3.346	10.3	20.0	2 1	11 20.98	+10 16.5	2.090	2.944	11.4	21.6
2 11	11 14.93	+ 6 11.5	2.439	3.355	7.4	19.8	2 11	11 15.35	+11 6.6	2.019	2.945	8.0	21.4
2 21	11 7.56	+ 6 30.3	2.395	3.364	4.1	19.6	2 21	11 7.93	+12 2.9	1.974	2.945	4.4	21.2
3 2	10 59.34	+ 6 52.5	2.381	3.372	0.5	19.3	3 2	10 59.42	+12 59.4	1.957	2.945	2.0	21.0
3 12	10 51.03	+ 7 14.4	2.398	3.380	3.0	19.5	3 12	10 50.74	+13 49.9	1.971	2.944	4.7	21.2
3 22	10 43.38	+ 7 32.5	2.444	3.388	6.3	19.8	3 22	10 42.79	+14 29.2	2.012	2.943	8.4	21.4
4 1	10 37.01	+ 7 44.1	2.517	3.395	9.4	20.0	4 1	10 36.38	+14 54.1	2.080	2.942	11.7	21.6
4 11	10 32.39	+ 7 47.3	2.614	3.403	11.9	20.2	4 11	10 32.04	+15 3.4	2.168	2.940	14.5	21.8
430445	2000 QZ ₁₀₆		3 3.6 204°18	1.5/ 5.7 17			253204	2002 XL ₇₅		3 3.6 129°02	2.9/29.7 18		
2 1	11 16.18	- 2 27.8	2.939	3.747	9.7	22.1	2 1	11 23.38	+13 16.7	2.150	3.004	11.1	21.0
2 11	11 11.55	- 1 44.7	2.847	3.742	7.3	22.0	2 11	11 16.89	+14 13.0	2.096	3.021	7.8	20.9
2 21	11 5.70	- 0 49.1	2.781	3.737	4.5	21.8	2 21	11 8.68	+15 12.0	2.069	3.038	4.5	20.7
3 2	10 59.09	+ 0 16.3	2.746	3.731	1.9	21.6	3 2	10 59.52	+16 7.3	2.071	3.054	2.9	20.6
3 12	10 52.31	+ 1 27.0	2.741	3.725	2.5	21.6	3 12	10 50.33	+16 52.7	2.104	3.069	5.3	20.8
3 22	10 45.96	+ 2 38.3	2.767	3.718	5.3	21.8	3 22	10 42.01	+17 24.4	2.164	3.084	8.5	21.0
4 1	10 40.59	+ 3 45.6	2.822	3.711	8.1	22.0	4 1	10 35.30	+17 40.2	2.251	3.097	11.5	21.2
4 11	10 36.62	+ 4 45.0	2.902	3.704	10.5	22.1	4 11	10 30.67	+17 40.3	2.359	3.110	14.1	21.4
147354	2003 BY ₈₂		3 3.6 4°57	1.7/ 4.9 18			413207	2003 BW ₇₀		3 3.6 86°91	0.0/ 3.4 18		
2 1	11 20.95	+ 1 12.6	1.548	2.393	15.1	19.5	2 1	11 22.66	+ 4 22.6	1.781	2.625	13.5	21.6
2 11	11 15.80	+ 1 15.7	1.477	2.393	11.2	19.2	2 11	11 16.58	+ 4 56.3	1.728	2.647	9.6	21.4
2 21	11 8.36	+ 1 34.4	1.428	2.393	6.7	19.0	2 21	11 8.57	+ 5 41.4	1.700	2.669	5.3	21.2
3 2	10 59.47	+ 2 5.2	1.405	2.394	2.3	18.7	3 2	10 59.50	+ 6 32.2	1.700	2.690	0.7	20.9
3 12	10 50.33	+ 2 42.3	1.410	2.395	4.0	18.8	3 12	10 50.44	+ 7 22.2	1.728	2.712	3.8	21.2
3 22	10 42.14	+ 3 19.0	1.440	2.396	8.7	19.1	3 22	10 42.39	+ 8 5.5	1.785	2.732	8.0	21.5
4 1	10 35.91	+ 3 49.4	1.495	2.398	13.0	19.3	4 1	10 36.17	+ 8 37.8	1.867	2.753	11.7	21.8
4 11	10 32.30	+ 4 8.9	1.571	2.401	16.6	19.6	4 11	10 32.25	+ 8 56.6	1.971	2.773	14.8	22.0
343011	2009 BR ₉₀		3 3.6 144°92	1.7/ 1.5 17			405369	2003 XU ₃₇		3 3.6 68°18	3.1/ 5.9 18		
2 1	11 17.40	+ 9 17.7	2.443	3.296	10.0	21.0	2 1	1					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
222598	2001 <i>XT</i> ₁₀		3 3.6 229°53	6°4/25.9	17		419177	2009 <i>TK</i> ₃₃		3 3.6 92°61	0°8/ 4.5	18	
2 1	11 23.57	+23 43.8	2.033	2.894	11.3	20.9	2 1	11 19.73	+ 1 4.9	1.948	2.782	12.9	21.1
2 11	11 17.40	+24 57.7	1.967	2.885	8.7	20.8	2 11	11 14.44	+ 1 46.5	1.887	2.799	9.4	20.9
2 21	11 9.15	+26 6.8	1.927	2.876	6.7	20.6	2 21	11 7.41	+ 2 42.1	1.851	2.816	5.4	20.7
3 2	10 59.61	+27 2.7	1.915	2.867	6.8	20.6	3 2	10 59.38	+ 3 46.6	1.843	2.832	1.4	20.5
3 12	10 49.85	+27 38.6	1.931	2.857	8.8	20.7	3 12	10 51.29	+ 4 53.6	1.864	2.848	3.3	20.7
3 22	10 40.93	+27 51.1	1.973	2.847	11.6	20.9	3 22	10 44.02	+ 5 56.5	1.913	2.864	7.3	20.9
4 1	10 33.78	+27 39.7	2.037	2.836	14.3	21.0	4 1	10 38.34	+ 6 49.8	1.989	2.880	10.9	21.2
4 11	10 29.00	+27 7.0	2.120	2.825	16.7	21.2	4 11	10 34.74	+ 7 30.1	2.088	2.895	13.9	21.4
312811	2011 <i>FP</i> ₈₈		3 3.6 15°34	2°8/ 1.4	18		292385	2006 <i>SD</i> ₂₆₅		3 3.6 229°01	3°6/ 7.8	17	
2 1	11 22.05	+12 24.1	1.697	2.561	13.0	20.3	2 1	11 17.28	- 7 40.5	2.510	3.298	11.8	21.2
2 11	11 16.41	+12 57.2	1.632	2.563	9.2	20.0	2 11	11 12.55	- 7 33.5	2.419	3.294	9.3	21.0
2 21	11 8.62	+13 34.6	1.592	2.564	5.2	19.8	2 21	11 6.36	- 7 10.3	2.353	3.289	6.5	20.8
3 2	10 59.54	+14 9.8	1.580	2.566	2.8	19.6	3 2	10 59.25	- 6 32.1	2.314	3.285	4.1	20.7
3 12	10 50.31	+14 36.2	1.595	2.568	5.7	19.8	3 12	10 51.92	- 5 42.4	2.304	3.280	3.9	20.7
3 22	10 42.05	+14 49.2	1.637	2.571	9.7	20.1	3 22	10 45.10	- 4 45.8	2.323	3.275	6.1	20.8
4 1	10 35.70	+14 46.4	1.703	2.574	13.4	20.3	4 1	10 39.45	- 3 47.8	2.369	3.269	8.9	20.9
4 11	10 31.83	+14 27.7	1.789	2.577	16.6	20.5	4 11	10 35.46	- 2 53.4	2.440	3.264	11.6	21.1
60974	2000 <i>KC</i> ₃		3 3.6 80°63	1°4/ 4.8	18		301420	2009 <i>DC</i> ₅₁		3 3.6 322°42	1°7/ 1.9	17	
2 1	11 21.59	- 0 25.2	1.376	2.222	16.6	18.9	2 1	11 18.94	+10 6.0	2.142	2.998	11.0	21.1
2 11	11 16.32	+ 0 20.5	1.320	2.237	12.2	18.7	2 11	11 13.90	+10 38.1	2.066	2.993	7.8	20.9
2 21	11 8.65	+ 1 27.4	1.286	2.252	7.2	18.4	2 21	11 7.16	+11 15.8	2.016	2.987	4.3	20.7
3 2	10 59.54	+ 2 48.8	1.278	2.267	2.1	18.2	3 2	10 59.36	+11 54.3	1.994	2.982	1.7	20.5
3 12	10 50.35	+ 4 14.8	1.296	2.282	4.2	18.3	3 12	10 51.37	+12 28.1	2.001	2.977	4.3	20.7
3 22	10 42.34	+ 5 35.3	1.341	2.296	9.2	18.7	3 22	10 44.05	+12 52.9	2.036	2.972	7.9	20.9
4 1	10 36.53	+ 6 42.4	1.410	2.311	13.7	19.0	4 1	10 38.17	+13 5.6	2.097	2.968	11.3	21.1
4 11	10 33.50	+ 7 31.0	1.499	2.326	17.4	19.2	4 11	10 34.26	+13 5.0	2.179	2.963	14.1	21.3
437201	2012 <i>WZ</i> ₅		3 3.6 217°69	3°9/ 8.2	18		140987	2001 <i>WS</i> ₁₃		3 3.6 43°05	2°6/ 6.7	18	
2 1	11 17.20	- 8 54.1	2.533	3.315	11.9	21.1	2 1	11 16.18	- 4 40.2	2.226	3.037	12.3	19.8
2 11	11 12.48	- 8 47.1	2.442	3.311	9.4	21.0	2 11	11 11.85	- 4 12.8	2.149	3.042	9.4	19.6
2 21	11 6.31	- 8 23.2	2.376	3.307	6.8	20.8	2 21	11 5.99	- 3 28.6	2.095	3.046	6.2	19.4
3 2	10 59.23	- 7 43.6	2.336	3.303	4.5	20.6	3 2	10 59.19	- 2 30.5	2.069	3.050	3.2	19.2
3 12	10 51.93	- 6 51.6	2.325	3.299	4.1	20.6	3 12	10 52.24	- 1 23.6	2.072	3.055	3.4	19.2
3 22	10 45.15	- 5 51.9	2.344	3.295	6.2	20.7	3 22	10 45.91	- 0 13.7	2.104	3.059	6.4	19.4
4 1	10 39.53	- 4 49.9	2.390	3.290	8.9	20.9	4 1	10 40.87	+ 0 52.9	2.162	3.064	9.6	19.6
4 11	10 35.56	- 3 51.1	2.461	3.285	11.5	21.0	4 11	10 37.63	+ 1 51.2	2.245	3.069	12.5	19.8
86636	2000 <i>ER</i> ₁₃₃		3 3.6 254°57	4°0/29.2	18		201647	2003 <i>SS</i> ₄₂₉		3 3.6 141°63	0°4/ 4.1	17	
2 1	11 21.60	+12 5.2	1.473	2.345	14.2	18.8	2 1	11 19.11	+ 2 52.7	2.199	3.035	11.6	21.5
2 11	11 16.53	+13 30.2	1.402	2.336	10.1	18.5	2 11	11 13.93	+ 3 26.0	2.126	3.040	8.4	21.3
2 21	11 8.91	+15 4.8	1.354	2.326	5.9	18.3	2 21	11 7.13	+ 4 10.5	2.078	3.045	4.7	21.1
3 2	10 59.61	+16 38.3	1.334	2.317	4.1	18.1	3 2	10 59.36	+ 5 2.1	2.059	3.049	0.9	20.8
3 12	10 49.92	+17 59.5	1.340	2.307	7.5	18.3	3 12	10 51.44	+ 5 55.3	2.070	3.054	3.2	21.0
3 22	10 41.19	+18 59.8	1.372	2.297	12.0	18.5	3 22	10 44.20	+ 6 44.9	2.110	3.058	6.9	21.3
4 1	10 34.58	+19 34.6	1.426	2.287	16.2	18.7	4 1	10 38.35	+ 7 26.2	2.176	3.062	10.3	21.5
4 11	10 30.83	+19 43.7	1.498	2.277	19.7	19.0	4 11	10 34.39	+ 7 56.3	2.265	3.066	13.1	21.7
508168	2015 <i>FY</i> ₂₁₁		3 3.6 262°05	0°5/ 2.9	17		262479	2006 <i>UQ</i> ₁₈₂		3 3.6 106°11	2°0/ 5.7	18	
2 1	11 16.40	+ 4 38.6	2.586	3.426	9.9	21.7	2 1	11 19.59	- 2 50.8	1.808	2.632	14.2	21.0
2 11	11 11.94	+ 5 40.4	2.489	3.407	7.1	21.5	2 11	11 14.51	- 2 4.7	1.741	2.645	10.6	20.8
2 21	11 6.04	+ 6 52.9	2.419	3.388	3.9	21.2	2 21	11 7.53	- 0 59.4	1.699	2.657	6.5	20.6
3 2	10 59.20	+ 8 11.6	2.378	3.369	0.6	20.9	3 2	10 59.43	+ 0 20.4	1.683	2.669	2.6	20.3
3 12	10 52.08	+ 9 30.8	2.369	3.349	3.3	21.1	3 12	10 51.20	+ 1 47.1	1.696	2.681	3.5	20.4
3 22	10 45.39	+10 44.7	2.389	3.329	6.7	21.3	3 22	10 43.82	+ 3 12.5	1.738	2.693	7.6	20.7
4 1	10 39.79	+11 48.5	2.437	3.309	9.9	21.5	4 1	10 38.13	+ 4 29.3	1.806	2.704	11.4	20.9
4 11	10 35.80	+12 39.0	2.508	3.289	12.6	21.6	4 11	10 34.66	+ 5 32.0	1.896	2.715	14.6	21.2
465889	2010 <i>UT</i> ₂		3 3.6 118°61	1°7/ 2.0	18		120210	2004 <i>EN</i> ₃₉		3 3.6 209°35	0°9/ 2.8	17	
2 1	11 26.17	+10 38.0	2.226	3.069	11.2	21.9	2 1	11 24.62	+ 8 17.7	2.151	2.993	11.6	20.4
2 11	11 18.74	+11 8.8	2.173	3.093	7.9	21.7	2 11	11 17.97	+ 8 36.8	2.068	2.987	8.3	20.1
2 21	11 9.66	+11 43.4	2.146	3.116	4.3	21.5	2 21	11 9.43	+ 9 2.3	2.011	2.981	4.5	19.9
3 2	10 59.68	+12 16.9	2.150	3.138	1.7	21.4	3 2	10 59.70	+ 9 30.0	1.984	2.974	1.0	19.6
3 12	10 49.75	+12 44.3	2.185	3.160	4.2	21.6	3 12	10 49.72	+ 9 54.9	1.987	2.966	3.9	19.8
3 22	10 40.74	+13 2.3	2.250	3.180	7.6	21.8	3 22	10 40.46	+10 12.9	2.019	2.958	7.8	20.0
4 1	10 33.37	+13 8.8	2.341	3.200	10.7	22.0	4 1	10 32.75	+10 21.0	2.078	2.949	11.3	20.2
4 11	10 28.08	+13 3.3	2.455	3.219	13.3	22.3	4 11	10 27.19	+10 17.7	2.159	2.940	14.3	20.4
88883	2001 <i>SY</i> ₂₈₀		3 3.6 181°69	0°7/ 2.8	18		423223	2004 <i>RF</i> ₂₀₅		3 3.6 225°93	4°9/ 9.0	17	
2 1	11 18.54	+ 7 0.4	2.571	3.414	9.9	20.4	2 1	11 20.16	-11 42.4	2.505	3.266	12.6	22.3
2 11	11 13.35	+ 7 34.6	2.494	3.414	7.0	20.2	2 11	11 14.71	-11 43.8	2.402	3.254	10.2	22.1
2 21	11 6.75	+ 8 15.7	2.444	3.414	3.8	20.0	2 21	11 7.62	-11 26.5	2.323	3.241	7.7	21.9
3 2	10 59.29	+ 8 59.7	2.424	3.414	0.7	19.7	3 2	10 59.46	-10 50.7	2.270	3.227	5.5	21.8
3 12	10 51.70	+ 9 41.9	2.434	3.414	3.3	19.9	3 12	10 50.97	- 9 59.0	2.247	3.212	5.0	21.7
3 22	10 44.66	+10 18.4	2.473	3.413	6.5	20.1	3 22	10 42.94	- 8 56.0	2.252	3.197	6.8	21.8
4 1	10 38.82	+10 45.8	2.540	3.412	9.5	20.3	4 1	10 36.14	- 7 47.6	2.286	3.181	9.4	21.9
4 11	10 34.63	+11 2.4	2.629	3.411	12.0	20.5	4 11	10 31.11	- 6 40.2	2.344	3.165	12.1	22.1
378785	2008 <i>SV</i> ₅₀		3 3.6 239°45	0°9/ 4.5	17		163148	2002 <i>CQ</i> ₉₅		3 3.6 12°57	0°3/ 3.4		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
39119	2000 <i>WF</i> ₃₇		3 3.6 144°57'	4.0°/28.1 18			492737	2014 <i>QD</i> ₁₂₇		3 3.6 233°69'	0.9°/ 4.4 17		
2 1	11 20.01	+16 1.5	2.128	2.991	10.8	19.4	2 1	11 23.41	+1 53.8	1.870	2.703	13.4	22.7
2 11	11 14.65	+17 20.3	2.070	2.998	7.7	19.2	2 11	11 17.47	+2 21.4	1.778	2.689	9.9	22.4
2 21	11 7.56	+18 40.6	2.038	3.004	4.9	19.0	2 21	11 9.35	+3 3.7	1.710	2.675	5.8	22.2
3 2	10 59.44	+19 54.9	2.035	3.010	4.2	19.0	3 2	10 59.76	+3 56.6	1.670	2.660	1.4	21.8
3 12	10 51.20	+20 56.2	2.062	3.015	6.4	19.2	3 12	10 49.73	+4 54.1	1.660	2.644	3.7	22.0
3 22	10 43.73	+21 40.1	2.116	3.021	9.5	19.4	3 22	10 40.38	+5 49.3	1.678	2.627	8.3	22.2
4 1	10 37.78	+22 4.3	2.194	3.026	12.4	19.5	4 1	10 32.71	+6 36.1	1.722	2.610	12.4	22.4
4 11	10 33.86	+22 9.2	2.293	3.030	14.8	19.7	4 11	10 27.43	+7 10.3	1.788	2.592	16.0	22.6
374514	2005 <i>YH</i> ₂₃₇		3 3.6 209°13'	5.8°/ 9.3 17			1550	Tito		3 3.6 117°41'	4.2°/28.3 18		
2 1	11 21.20	-12 18.6	2.242	3.005	13.8	20.8	2 1	11 24.61	+17 24.3	2.144	3.000	11.0	16.5
2 11	11 15.57	-12 42.0	2.151	3.001	11.3	20.6	2 11	11 17.77	+18 30.9	2.099	3.023	7.9	16.4
2 21	11 8.14	-12 45.7	2.082	2.996	8.7	20.5	2 21	11 9.20	+19 36.3	2.082	3.045	5.1	16.2
3 2	10 59.54	-12 29.1	2.040	2.991	6.4	20.3	3 2	10 59.70	+20 33.4	2.095	3.067	4.3	16.2
3 12	10 50.63	-11 54.5	2.025	2.986	5.9	20.3	3 12	10 50.24	+21 16.4	2.137	3.088	6.4	16.4
3 22	10 42.30	-11 6.3	2.039	2.981	7.6	20.4	3 22	10 41.73	+21 41.8	2.207	3.108	9.3	16.6
4 1	10 35.37	-10 10.5	2.079	2.975	10.2	20.5	4 1	10 34.90	+21 48.9	2.302	3.127	12.0	16.8
4 11	10 30.44	-9 13.9	2.143	2.968	12.9	20.7	4 11	10 30.21	+21 38.8	2.417	3.145	14.3	17.0
505009	2011 <i>OD</i> ₁₃		3 3.6 195°18'	2.6°/ 6.7 17			257321	2009 <i>HF</i> ₉₄		3 3.6 276°98'	0.9°/ 2.8 17		
2 1	11 18.52	-4 32.0	2.733	3.530	10.7	21.8	2 1	11 19.90	+5 22.2	1.656	2.511	13.8	21.2
2 11	11 13.32	-4 25.7	2.644	3.528	8.2	21.6	2 11	11 15.19	+6 19.8	1.567	2.493	9.9	20.9
2 21	11 6.75	-4 6.5	2.580	3.526	5.5	21.4	2 21	11 8.18	+7 32.7	1.503	2.474	5.4	20.6
3 2	10 59.34	-3 36.0	2.545	3.523	3.1	21.3	3 2	10 59.60	+8 54.5	1.465	2.455	1.0	20.2
3 12	10 51.74	-2 57.3	2.540	3.520	3.2	21.3	3 12	10 50.54	+10 16.1	1.455	2.436	4.8	20.5
3 22	10 44.62	-2 14.5	2.565	3.516	5.6	21.4	3 22	10 42.19	+11 28.7	1.473	2.417	9.7	20.7
4 1	10 38.61	-1 31.9	2.618	3.512	8.4	21.6	4 1	10 35.62	+12 25.5	1.514	2.398	14.1	20.9
4 11	10 34.15	-0 53.3	2.695	3.508	10.9	21.8	4 11	10 31.60	+13 2.6	1.576	2.378	17.8	21.1
496306	2013 <i>EW</i> ₁₂₂		3 3.6 352°06'	1.4°/ 4.8 18			358635	2007 <i>VD</i> ₂₃₉		3 3.6 210°21'	1.9°/ 1.8 17		
2 1	11 18.13	-0 52.4	1.351	2.201	16.6	21.1	2 1	11 23.15	+9 27.1	1.972	2.823	12.1	22.2
2 11	11 14.09	+0 1.2	1.280	2.199	12.3	20.8	2 11	11 17.11	+10 17.7	1.893	2.817	8.6	21.9
2 21	11 7.58	+1 19.0	1.231	2.198	7.3	20.5	2 21	11 9.05	+11 16.1	1.839	2.810	4.7	21.7
3 2	10 59.47	+2 54.6	1.207	2.196	2.1	20.2	3 2	10 59.71	+12 16.2	1.814	2.803	1.9	21.5
3 12	10 51.05	+4 37.4	1.210	2.196	4.3	20.3	3 12	10 50.09	+13 10.8	1.819	2.794	4.9	21.6
3 22	10 43.61	+6 15.8	1.238	2.195	9.6	20.6	3 22	10 41.21	+13 54.2	1.852	2.785	8.8	21.9
4 1	10 38.29	+7 39.7	1.290	2.195	14.4	20.9	4 1	10 33.98	+14 22.6	1.911	2.775	12.5	22.1
4 11	10 35.77	+8 42.8	1.361	2.195	18.5	21.1	4 11	10 29.01	+14 34.5	1.991	2.765	15.6	22.3
375535	2008 <i>UX</i> ₁₈₆		3 3.6 90°07'	15.5°/18.9 17			240765	2005 <i>MX</i> ₁₂		3 3.6 268°14'	7.1°/21.9 18 R		
2 1	11 21.42	-30 4.6	1.192	1.897	26.5	20.8	2 1	11 18.12	+27 0.7	2.360	3.222	9.9	20.0
2 11	11 17.01	-30 52.8	1.130	1.908	23.8	20.6	2 11	11 13.48	+29 6.9	2.299	3.209	8.0	19.9
2 21	11 9.43	-30 50.1	1.079	1.919	20.9	20.4	2 21	11 7.04	+31 8.1	2.266	3.196	7.1	19.8
3 2	10 59.74	-29 48.9	1.044	1.930	18.0	20.3	3 2	10 59.43	+32 55.0	2.261	3.183	7.8	19.8
3 12	10 49.68	-27 49.6	1.028	1.941	16.0	20.2	3 12	10 51.51	+34 20.1	2.285	3.170	9.6	19.9
3 22	10 41.01	-25 2.7	1.033	1.952	15.6	20.2	3 22	10 44.17	+35 19.3	2.333	3.157	11.9	20.1
4 1	10 35.16	-21 47.0	1.060	1.962	17.1	20.3	4 1	10 38.24	+35 51.5	2.403	3.143	14.0	20.2
4 11	10 32.90	-18 24.7	1.107	1.973	19.7	20.5	4 11	10 34.31	+35 58.6	2.491	3.130	15.9	20.3
52469	1995 <i>QV</i> ₁		3 3.6 174°20'	0.4°/ 3.3 18			388268	2006 <i>QR</i> ₁₀₆		3 3.6 114°01'	0.1°/ 3.8 18		
2 1	11 25.81	+5 36.8	1.686	2.531	14.1	19.7	2 1	11 16.87	+2 26.2	2.682	3.512	9.9	21.4
2 11	11 19.17	+6 7.0	1.615	2.535	10.1	19.4	2 11	11 12.08	+3 28.7	2.617	3.529	7.1	21.3
2 21	11 10.22	+6 48.7	1.567	2.537	5.6	19.1	2 21	11 6.03	+4 41.3	2.579	3.546	3.9	21.1
3 2	10 59.84	+7 36.2	1.548	2.539	0.8	18.8	3 2	10 59.27	+5 59.4	2.571	3.562	0.6	20.8
3 12	10 49.23	+8 22.6	1.558	2.540	4.3	19.1	3 12	10 52.44	+7 17.4	2.595	3.578	2.8	21.0
3 22	10 39.59	+9 1.5	1.595	2.540	9.0	19.3	3 22	10 46.18	+8 30.3	2.649	3.593	5.9	21.3
4 1	10 31.95	+9 28.3	1.658	2.540	13.2	19.6	4 1	10 41.03	+9 33.8	2.731	3.608	8.7	21.5
4 11	10 26.93	+9 40.6	1.741	2.538	16.6	19.8	4 11	10 37.40	+10 25.0	2.838	3.623	11.1	21.7
321808	2010 <i>RN</i> ₃		3 3.6 232°88'	3.1°/ 2.5 18			97002	1999 <i>TX</i> ₂₄₀		3 3.6 92°89'	3.5°/29.1 18		
2 1	11 39.93	+14 40.4	1.206	2.063	17.7	20.2	2 1	11 19.77	+13 52.5	1.929	2.794	11.7	19.7
2 11	11 30.28	+14 17.8	1.132	2.057	12.9	19.9	2 11	11 14.64	+14 57.4	1.867	2.797	8.3	19.5
2 21	11 16.80	+13 53.1	1.081	2.051	7.4	19.6	2 21	11 7.64	+16 5.9	1.830	2.799	4.9	19.3
3 2	11 0.81	+13 19.6	1.056	2.044	3.1	19.3	3 2	10 59.51	+17 10.7	1.821	2.802	3.6	19.2
3 12	10 44.37	+12 32.1	1.060	2.037	7.0	19.5	3 12	10 51.23	+18 4.6	1.840	2.804	6.1	19.3
3 22	10 29.64	+11 29.9	1.090	2.030	12.8	19.8	3 22	10 43.77	+18 42.4	1.887	2.807	9.6	19.5
4 1	10 18.27	+10 15.0	1.143	2.022	18.0	20.1	4 1	10 37.94	+19 1.6	1.958	2.809	12.8	19.8
4 11	10 11.08	+8 50.5	1.215	2.014	22.3	20.3	4 11	10 34.29	+19 2.0	2.049	2.812	15.6	20.0
82973	2001 <i>QA</i> ₁₃₇		3 3.6 246°96'	0.4°/ 3.9 18			199775	2006 <i>KL</i> ₃₁		3 3.6 295°68'	0.5°/ 4.1 17		
2 1	11 24.90	+5 1.9	1.957	2.795	12.7	19.1	2 1	11 19.02	+3 2.2	2.023	2.864	12.3	21.0
2 11	11 18.41	+5 2.7	1.868	2.783	9.3	18.9	2 11	11 14.06	+3 29.0	1.945	2.862	8.9	20.8
2 21	11 9.80	+5 12.6	1.804	2.771	5.3	18.6	2 21	11 7.32	+4 7.8	1.892	2.859	5.1	20.6
3 2	10 59.81	+5 28.4	1.768	2.758	0.9	18.3	3 2	10 59.47	+4 54.5	1.867	2.857	1.0	20.3
3 12	10 49.46	+5 45.6	1.762	2.745	3.7	18.5	3 12	10 51.40	+5 43.4	1.870	2.854	3.4	20.5
3 22	10 39.81	+5 59.7	1.784	2.732	8.0	18.7	3 22	10 44.03	+6 29.0	1.902	2.852	7.4	20.7
4 1	10 31.84	+6 7.1	1.833	2.718	11.9	18.9	4 1	10 38.14	+7 6.3	1.960	2.850	11.0	20.9
4 11	10 26.21	+6 5.1	1.905	2.705	15.3	19.1	4 11	10 34.28	+7 32.2	2.040	2.848	14.1	21.1
135612	2002 <i>JE</i> ₂₇		3 3.6 255°29'	1.2°/ 2.6 17			29803	Michaelshao		3 3.6 57°91'	0.4°/ 3.3 18 R		
2 1	11 21.79	+6 38.4	1.805										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
115	Thyra		3 3.6 100°03	4.6/ 7.1	18		8617	1980 PW		3 3.6 147°04	1.2/ 4.7	18	
2 1	11 26.70	- 5 51.3	1.676	2.481	16.0	11.5	2 1	11 23.55	+ 1 3.9	2.026	2.852	12.8	18.6
2 11	11 19.69	- 6 14.5	1.615	2.501	12.4	11.3	2 11	11 17.20	+ 1 26.8	1.956	2.863	9.4	18.4
2 21	11 10.45	- 6 17.7	1.577	2.520	8.5	11.1	2 21	11 9.02	+ 2 2.9	1.911	2.873	5.5	18.1
3 2	10 59.91	- 6 1.9	1.565	2.539	5.2	11.0	3 2	10 59.73	+ 2 48.1	1.894	2.883	1.7	17.9
3 12	10 49.29	- 5 31.4	1.581	2.558	5.1	11.0	3 12	10 50.31	+ 3 37.1	1.907	2.891	3.3	18.0
3 22	10 39.75	- 4 52.2	1.625	2.576	8.3	11.2	3 22	10 41.70	+ 4 24.2	1.950	2.900	7.3	18.3
4 1	10 32.27	- 4 11.4	1.694	2.594	11.9	11.5	4 1	10 34.72	+ 5 4.4	2.019	2.907	10.9	18.5
4 11	10 27.39	- 3 35.1	1.786	2.611	15.1	11.7	4 11	10 29.90	+ 5 34.2	2.111	2.914	13.9	18.7
422471	2014 SR ₃₁₉		3 3.6 173°88	0°1/ 3.8	17		330722	2008 QT ₃₄		3 3.6 208°40	0°8/ 4.7	17	
2 1	11 22.08	+ 3 27.1	2.055	2.891	12.3	22.7	2 1	11 18.09	- 0 16.7	2.408	3.231	11.2	21.4
2 11	11 16.20	+ 4 6.8	1.979	2.894	8.9	22.5	2 11	11 13.21	+ 0 42.9	2.319	3.225	8.2	21.2
2 21	11 8.48	+ 4 58.4	1.929	2.897	5.0	22.3	2 21	11 6.81	+ 1 57.2	2.256	3.219	4.8	21.0
3 2	10 59.64	+ 5 57.2	1.908	2.899	0.8	21.9	3 2	10 59.42	+ 3 21.7	2.223	3.212	1.3	20.8
3 12	10 50.61	+ 6 56.8	1.917	2.900	3.5	22.2	3 12	10 51.81	+ 4 50.4	2.221	3.205	2.9	20.9
3 22	10 42.31	+ 7 51.5	1.954	2.900	7.5	22.4	3 22	10 44.73	+ 6 16.7	2.248	3.197	6.5	21.1
4 1	10 35.57	+ 8 36.1	2.019	2.900	11.2	22.6	4 1	10 38.87	+ 7 34.7	2.304	3.189	9.8	21.3
4 11	10 30.93	+ 9 7.7	2.106	2.900	14.2	22.8	4 11	10 34.74	+ 8 40.1	2.384	3.180	12.7	21.4
409924	2006 TK ₁₁₆		3 3.6 142°52	5°1/27.5	18		132171	2002 EV ₂₁		3 3.6 9°47	5°1/29.2	18	
2 1	11 23.93	+19 33.6	2.013	2.874	11.4	21.7	2 1	11 25.07	+16 36.0	1.339	2.214	15.1	19.3
2 11	11 17.51	+20 46.0	1.961	2.884	8.4	21.5	2 11	11 19.10	+17 23.4	1.281	2.215	10.9	19.0
2 21	11 9.17	+21 56.2	1.935	2.894	5.8	21.4	2 21	11 10.36	+18 11.5	1.246	2.215	6.8	18.8
3 2	10 59.73	+22 56.1	1.938	2.904	5.3	21.4	3 2	10 59.94	+18 50.6	1.237	2.216	5.2	18.7
3 12	10 50.22	+23 39.1	1.969	2.913	7.5	21.5	3 12	10 49.34	+19 12.1	1.253	2.218	8.2	18.9
3 22	10 41.65	+24 1.8	2.028	2.921	10.4	21.7	3 22	10 40.06	+19 11.3	1.294	2.219	12.5	19.1
4 1	10 34.85	+24 3.4	2.110	2.928	13.2	21.9	4 1	10 33.27	+18 47.7	1.357	2.221	16.6	19.4
4 11	10 30.32	+23 45.6	2.212	2.936	15.6	22.1	4 11	10 29.61	+18 3.5	1.437	2.224	20.0	19.6
36817	2000 SL ₇₆		3 3.6 245°89	0°3/ 3.3	18		345697	2006 UU ₂₂₂		3 3.6 127°90	0°6/ 4.3	17	
2 1	11 20.73	+ 3 34.6	1.683	2.531	14.0	18.9	2 1	11 19.74	+ 3 19.3	2.524	3.355	10.5	20.8
2 11	11 15.71	+ 4 33.2	1.598	2.519	10.1	18.7	2 11	11 14.22	+ 3 32.3	2.451	3.362	7.6	20.6
2 21	11 8.43	+ 5 48.4	1.537	2.507	5.6	18.4	2 21	11 7.28	+ 3 53.9	2.403	3.369	4.3	20.4
3 2	10 59.65	+ 7 13.9	1.504	2.495	0.7	18.0	3 2	10 59.49	+ 4 21.2	2.385	3.375	1.0	20.2
3 12	10 50.46	+ 8 40.9	1.499	2.482	4.4	18.2	3 12	10 51.59	+ 4 50.3	2.398	3.382	2.8	20.3
3 22	10 42.02	+10 0.3	1.522	2.468	9.2	18.5	3 22	10 44.30	+ 5 17.4	2.440	3.388	6.1	20.6
4 1	10 35.37	+11 5.1	1.569	2.454	13.6	18.7	4 1	10 38.24	+ 5 39.2	2.509	3.394	9.1	20.8
4 11	10 31.22	+11 51.0	1.637	2.440	17.3	18.9	4 11	10 33.88	+ 5 53.2	2.603	3.400	11.7	20.9
401979	2002 UC ₃₂		3 3.6 116°29	0°0/ 3.5	18		58794	1998 FW ₈₄		3 3.6 59°50	5°4/27.5	18	
2 1	11 24.56	+ 4 32.3	2.261	3.091	11.5	23.6	2 1	11 23.33	+22 37.8	2.146	3.006	10.9	18.2
2 11	11 17.63	+ 5 3.8	2.205	3.118	8.2	23.5	2 11	11 16.99	+23 19.6	2.092	3.012	8.1	18.1
2 21	11 9.10	+ 5 44.0	2.176	3.143	4.5	23.3	2 21	11 8.86	+23 56.0	2.063	3.018	5.9	17.9
3 2	10 59.72	+ 6 28.7	2.177	3.167	0.6	23.0	3 2	10 59.71	+24 20.7	2.063	3.024	5.6	17.9
3 12	10 50.35	+ 7 12.5	2.209	3.191	3.2	23.3	3 12	10 50.54	+24 29.0	2.091	3.030	7.4	18.0
3 22	10 41.83	+ 7 51.0	2.270	3.214	6.8	23.5	3 22	10 42.28	+24 18.8	2.146	3.037	10.0	18.2
4 1	10 34.85	+ 8 20.8	2.360	3.235	10.0	23.8	4 1	10 35.71	+23 50.4	2.225	3.043	12.7	18.4
4 11	10 29.85	+ 8 39.8	2.473	3.256	12.6	24.0	4 11	10 31.30	+23 5.9	2.324	3.049	14.9	18.6
221397	2005 YQ ₅₆		3 3.6 335°30	0°4/ 4.0	17		187994	2001 SZ ₆₃		3 3.6 185°89	2°3/ 6.1	18	
2 1	11 20.21	+ 3 18.6	1.788	2.633	13.4	21.1	2 1	11 19.17	- 3 40.6	2.076	2.890	13.0	20.7
2 11	11 15.10	+ 3 45.5	1.713	2.632	9.7	20.9	2 11	11 14.16	- 3 2.3	1.993	2.890	9.8	20.4
2 21	11 7.97	+ 4 25.4	1.663	2.631	5.5	20.7	2 21	11 7.39	- 2 5.9	1.935	2.890	6.3	20.2
3 2	10 59.58	+ 5 13.9	1.640	2.630	1.0	20.3	3 2	10 59.52	- 0 55.0	1.905	2.889	2.9	20.0
3 12	10 50.96	+ 6 4.4	1.645	2.629	3.7	20.5	3 12	10 51.42	+ 0 24.5	1.904	2.887	3.4	20.0
3 22	10 43.14	+ 6 50.6	1.678	2.629	8.1	20.8	3 22	10 43.98	+ 1 45.5	1.932	2.886	7.0	20.2
4 1	10 37.03	+ 7 27.3	1.736	2.628	12.1	21.0	4 1	10 37.99	+ 3 1.0	1.987	2.884	10.6	20.5
4 11	10 33.22	+ 7 51.0	1.815	2.628	15.4	21.2	4 11	10 34.01	+ 4 5.7	2.065	2.881	13.7	20.7
263859	2009 BX ₁₇₈		3 3.6 300°50	1°0/ 4.4	18		470246	2006 XE ₆₃		3 3.6 214°43	4°3/ 8.8	18	
2 1	11 20.60	+ 2 7.0	1.458	2.310	15.5	20.8	2 1	11 17.34	-10 18.0	2.649	3.420	11.7	21.2
2 11	11 15.92	+ 2 28.1	1.373	2.294	11.5	20.5	2 11	11 12.58	-10 19.8	2.558	3.417	9.4	21.0
2 21	11 8.69	+ 3 6.8	1.311	2.279	6.7	20.2	2 21	11 6.42	-10 5.0	2.490	3.414	7.0	20.9
3 2	10 59.71	+ 3 58.6	1.273	2.263	1.6	19.8	3 2	10 59.38	- 9 34.4	2.450	3.410	4.8	20.7
3 12	10 50.22	+ 4 56.2	1.262	2.248	4.3	19.9	3 12	10 52.13	- 8 50.6	2.438	3.407	4.4	20.7
3 22	10 41.55	+ 5 51.3	1.277	2.233	9.6	20.2	3 22	10 45.37	- 7 58.0	2.456	3.404	6.1	20.8
4 1	10 34.91	+ 6 36.2	1.316	2.218	14.5	20.4	4 1	10 39.72	- 7 1.5	2.501	3.400	8.6	20.9
4 11	10 31.11	+ 7 5.9	1.374	2.204	18.6	20.7	4 11	10 35.67	- 6 6.4	2.571	3.396	11.0	21.1
421441	2014 KT ₉₇		3 3.6 261°60	3°5/ 6.1	18		469563	2003 UZ ₃₃₇		3 3.6 222°70	4°0/27.7	17	
2 1	11 23.51	- 2 52.7	1.601	2.426	15.7	20.7	2 1	11 20.69	+21 25.3	2.880	3.734	8.6	21.3
2 11	11 17.83	- 3 3.6	1.514	2.415	12.1	20.4	2 11	11 14.82	+21 58.9	2.812	3.731	6.4	21.2
2 21	11 9.69	- 2 55.9	1.449	2.403	7.9	20.2	2 21	11 7.57	+22 29.1	2.771	3.727	4.5	21.1
3 2	10 59.85	- 2 30.8	1.409	2.392	4.1	19.9	3 2	10 59.54	+22 51.5	2.760	3.724	4.1	21.0
3 12	10 49.53	- 1 53.1	1.397	2.380	4.6	19.9	3 12	10 51.41	+23 2.5	2.779	3.720	5.7	21.1
3 22	10 39.99	- 1 9.0	1.412	2.368	8.8	20.1	3 22	10 43.89	+23 0.0	2.826	3.717	7.9	21.3
4 1	10 32.40	- 0 26.0	1.452	2.356	13.2	20.3	4 1	10 37.56	+22 43.4	2.899	3.713	10.1	21.4
4 11	10 27.53	+ 0 9.7	1.512	2.343	17.1	20.6	4 11	10 32.87	+22 13.7	2.993	3.709	12.1	21.6
346065	2007 UR ₈₃		3 3.6 234°27	4°8/27.3	17		231541	2008 SF ₁₇₄		3 3.6 93°48	0°3/ 3.9	17	
2 1	11 20.88	+20 37.2	2.316	3.177	10.1	21.3	2 1						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
376452	2012 <i>HO</i> ₆₃		3 3.6 254°44	7.9/24.3	17		463699	2014 <i>PD</i> ₃₀		3 3.6 48°41	6.4/ 6.4	16	
2 1	11 25.03	+28 10.5	2.004	2.860	11.7	21.1	2 1	11 42.20	- 3 30.3	1.317	2.121	19.6	20.3
2 11	11 18.63	+29 28.7	1.938	2.846	9.4	20.9	2 11	11 30.87	- 5 26.4	1.276	2.160	15.1	20.1
2 21	11 9.99	+30 38.7	1.896	2.830	8.0	20.8	2 21	11 16.60	- 7 2.4	1.259	2.200	10.4	20.0
3 2	10 59.91	+31 31.1	1.882	2.815	8.4	20.8	3 2	11 0.84	- 8 14.4	1.270	2.240	6.8	19.9
3 12	10 49.55	+31 59.0	1.895	2.799	10.3	20.9	3 12	10 45.45	- 9 2.3	1.310	2.280	7.1	20.0
3 22	10 40.08	+31 59.5	1.932	2.783	12.8	21.0	3 22	10 32.08	- 9 29.9	1.378	2.320	10.4	20.3
4 1	10 32.51	+31 33.1	1.991	2.766	15.4	21.2	4 1	10 21.89	- 9 43.9	1.472	2.360	14.1	20.6
4 11	10 27.48	+30 43.6	2.068	2.749	17.7	21.3	4 11	10 15.32	- 9 52.0	1.586	2.399	17.3	20.9
237236	2008 <i>WV</i> ₅		3 3.6 119°66	1°3/ 2.3	17		489711	2007 <i>VU</i> ₂₁₅		3 3.6 67°68	4°1/ 8.1	17	
2 1	11 19.45	+ 8 4.7	2.135	2.986	11.3	20.8	2 1	11 18.32	- 8 5.5	2.226	3.017	13.0	21.1
2 11	11 14.24	+ 8 51.4	2.069	2.993	8.0	20.6	2 11	11 13.45	- 8 7.8	2.147	3.022	10.3	20.9
2 21	11 7.38	+ 9 45.7	2.028	3.000	4.3	20.4	2 21	11 6.97	- 7 52.1	2.092	3.027	7.3	20.7
3 2	10 59.52	+10 42.0	2.017	3.006	1.3	20.2	3 2	10 59.50	- 7 19.8	2.063	3.033	4.7	20.6
3 12	10 51.55	+11 34.4	2.035	3.013	4.1	20.4	3 12	10 51.85	- 6 34.5	2.063	3.038	4.4	20.6
3 22	10 44.31	+12 17.7	2.081	3.019	7.7	20.6	3 22	10 44.83	- 5 41.3	2.091	3.043	6.7	20.7
4 1	10 38.51	+12 48.5	2.153	3.025	11.0	20.9	4 1	10 39.17	- 4 46.0	2.146	3.049	9.6	20.9
4 11	10 34.67	+13 5.1	2.248	3.031	13.8	21.1	4 11	10 35.37	- 3 54.4	2.225	3.054	12.4	21.1
495939	2006 <i>QH</i> ₉₀		3 3.6 145°61	3°2/ 8.7	18		70019	1998 <i>YE</i> ₁₂		3 3.6 149°20	4°1/27.6	18	
2 1	11 17.42	-10 3.3	3.410	4.170	9.6	22.5	2 1	11 19.39	+17 56.8	2.435	3.296	9.7	18.6
2 11	11 12.30	- 9 48.8	3.329	4.183	7.6	22.4	2 11	11 14.09	+19 7.7	2.377	3.302	7.0	18.4
2 21	11 6.13	- 9 21.1	3.273	4.196	5.5	22.2	2 21	11 7.26	+20 18.2	2.346	3.308	4.7	18.3
3 2	10 59.35	- 8 41.3	3.246	4.208	3.7	22.1	3 2	10 59.53	+21 21.9	2.344	3.314	4.2	18.2
3 12	10 52.49	- 7 52.2	3.250	4.219	3.4	22.1	3 12	10 51.70	+22 13.2	2.372	3.319	6.1	18.4
3 22	10 46.06	- 6 57.4	3.284	4.230	4.8	22.2	3 22	10 44.54	+22 48.4	2.427	3.324	8.8	18.5
4 1	10 40.53	- 6 0.7	3.348	4.240	6.8	22.4	4 1	10 38.71	+23 5.9	2.508	3.328	11.3	18.7
4 11	10 36.26	- 5 6.1	3.437	4.250	8.8	22.5	4 11	10 34.69	+23 6.1	2.609	3.332	13.5	18.9
63088	2000 <i>WM</i> ₁₃₉		3 3.6 297°51	2°8/29.7	18		402907	2007 <i>TF</i> ₅₆		3 3.6 113°03	0°9/ 2.9	18	
2 1	11 18.90	+13 42.8	2.263	3.123	10.4	19.0	2 1	11 24.36	+ 6 37.0	1.764	2.612	13.4	21.7
2 11	11 13.91	+14 25.2	2.183	3.111	7.4	18.8	2 11	11 17.92	+ 7 18.3	1.708	2.629	9.5	21.5
2 21	11 7.24	+15 10.8	2.130	3.100	4.3	18.6	2 21	11 9.46	+ 8 9.2	1.676	2.647	5.1	21.3
3 2	10 59.53	+15 54.0	2.105	3.088	2.8	18.5	3 2	10 59.85	+ 9 3.5	1.674	2.664	1.0	21.0
3 12	10 51.59	+16 29.3	2.109	3.076	5.1	18.6	3 12	10 50.20	+ 9 54.2	1.700	2.680	4.3	21.3
3 22	10 44.26	+16 52.7	2.142	3.065	8.4	18.8	3 22	10 41.58	+10 35.6	1.754	2.696	8.6	21.6
4 1	10 38.31	+17 1.7	2.199	3.054	11.5	18.9	4 1	10 34.85	+11 3.5	1.834	2.711	12.3	21.8
4 11	10 34.25	+16 55.6	2.278	3.042	14.1	19.1	4 11	10 30.53	+11 16.5	1.935	2.726	15.4	22.1
93538	2000 <i>UJ</i> ₁₇		3 3.6 68°18	2°3/ 1.5	18		134481	1998 <i>VJ</i> ₅₄		3 3.6 118°57	4°7/28.8	18 R	
2 1	11 20.86	+ 9 54.2	1.722	2.583	13.0	19.7	2 1	11 27.32	+18 41.3	1.893	2.750	12.2	19.5
2 11	11 15.45	+10 53.2	1.673	2.602	9.1	19.5	2 11	11 19.95	+19 24.0	1.842	2.765	8.8	19.3
2 21	11 8.09	+11 59.0	1.649	2.621	5.0	19.3	2 21	11 10.53	+20 4.0	1.816	2.779	5.7	19.2
3 2	10 59.63	+13 4.1	1.653	2.640	2.3	19.2	3 2	11 0.00	+20 34.4	1.819	2.793	4.7	19.1
3 12	10 51.17	+14 0.8	1.685	2.659	5.3	19.4	3 12	10 49.49	+20 49.4	1.852	2.806	6.9	19.3
3 22	10 43.72	+14 43.4	1.744	2.678	9.2	19.7	3 22	10 40.10	+20 46.5	1.911	2.819	10.2	19.5
4 1	10 38.10	+15 8.9	1.827	2.697	12.7	19.9	4 1	10 32.67	+20 25.6	1.995	2.831	13.2	19.7
4 11	10 34.79	+15 16.6	1.931	2.716	15.6	20.2	4 11	10 27.71	+19 48.8	2.099	2.843	15.8	19.9
292526	2006 <i>TX</i> ₃₇		3 3.6 173°76	0°4/ 3.1	17		310328	2011 <i>UA</i> ₁₇₈		3 3.6 78°74	1°4/ 2.5	18	
2 1	11 17.98	+ 6 18.0	2.882	3.719	9.1	22.1	2 1	11 23.14	+ 7 0.9	1.462	2.322	15.0	20.7
2 11	11 12.88	+ 6 52.5	2.804	3.722	6.5	21.9	2 11	11 17.35	+ 7 52.6	1.411	2.339	10.6	20.5
2 21	11 6.52	+ 7 33.5	2.754	3.724	3.5	21.7	2 21	11 9.25	+ 8 55.5	1.385	2.357	5.7	20.2
3 2	10 59.42	+ 8 17.5	2.735	3.725	0.6	21.4	3 2	10 59.83	+10 1.7	1.384	2.374	1.4	20.0
3 12	10 52.19	+ 9 0.4	2.746	3.726	2.9	21.6	3 12	10 50.39	+11 2.2	1.412	2.392	5.1	20.3
3 22	10 45.46	+ 9 38.5	2.787	3.727	5.9	21.8	3 22	10 42.15	+11 50.0	1.466	2.409	9.8	20.6
4 1	10 39.79	+10 8.9	2.856	3.727	8.6	22.0	4 1	10 36.08	+12 20.5	1.543	2.427	13.9	20.9
4 11	10 35.57	+10 29.6	2.948	3.727	10.9	22.2	4 11	10 32.70	+12 32.6	1.640	2.444	17.2	21.1
350261	2012 <i>TB</i> ₁₇₅		3 3.6 28°04	2°6/ 1.5	17		109663	2001 <i>RO</i> ₁₈		3 3.6 159°84	0°0/ 3.7	18	
2 1	11 24.12	+13 58.7	2.093	2.947	11.3	20.1	2 1	11 18.60	+ 4 18.0	2.895	3.725	9.3	21.1
2 11	11 17.61	+14 12.1	2.024	2.949	8.1	19.8	2 11	11 13.29	+ 4 49.9	2.819	3.732	6.6	20.9
2 21	11 9.25	+14 26.6	1.981	2.950	4.6	19.6	2 21	11 6.75	+ 5 29.3	2.771	3.738	3.7	20.7
3 2	10 59.81	+14 37.7	1.967	2.952	2.6	19.5	3 2	10 59.47	+ 6 13.1	2.753	3.743	0.6	20.5
3 12	10 50.26	+14 40.7	1.982	2.953	4.9	19.7	3 12	10 52.09	+ 6 57.1	2.766	3.749	2.6	20.7
3 22	10 41.56	+14 33.0	2.026	2.955	8.4	19.9	3 22	10 45.21	+ 7 37.7	2.809	3.753	5.6	20.9
4 1	10 34.49	+14 13.3	2.096	2.957	11.7	20.1	4 1	10 39.40	+ 8 11.6	2.881	3.757	8.4	21.1
4 11	10 29.60	+13 41.7	2.187	2.959	14.4	20.3	4 11	10 35.06	+ 8 36.6	2.977	3.761	10.7	21.2
104494	2000 <i>GA</i> ₃₁		3 3.6 264°90	0°8/ 4.4	17		280879	2005 <i>WB</i> ₄		3 3.6 113°40	2°6/ 6.5	18	
2 1	11 20.06	+ 1 20.4	1.912	2.748	13.1	20.8	2 1	11 19.45	- 4 36.9	2.035	2.846	13.4	20.7
2 11	11 15.09	+ 1 58.2	1.816	2.729	9.6	20.5	2 11	11 14.30	- 4 2.5	1.966	2.859	10.1	20.5
2 21	11 8.08	+ 2 51.8	1.745	2.710	5.6	20.2	2 21	11 7.44	- 3 9.8	1.920	2.872	6.5	20.3
3 2	10 59.68	+ 3 57.2	1.701	2.690	1.4	19.9	3 2	10 59.57	- 2 2.4	1.903	2.885	3.2	20.1
3 12	10 50.84	+ 5 7.8	1.685	2.670	3.6	20.0	3 12	10 51.59	- 0 46.4	1.914	2.897	3.5	20.2
3 22	10 42.59	+ 6 16.4	1.699	2.650	8.0	20.2	3 22	10 44.36	+ 0 31.2	1.954	2.909	6.8	20.4
4 1	10 35.89	+ 7 16.2	1.738	2.629	12.2	20.4	4 1	10 38.64	+ 1 43.8	2.022	2.921	10.3	20.6
4 11	10 31.42	+ 8 2.5	1.799	2.608	15.7	20.6	4 11	10 34.92	+ 2 46.0	2.113	2.932	13.3	20.8
36304	2000 <i>JY</i> ₅₆		3 3.6 231°73	1°1/ 4.8	18		280833	2005 <i>UG</i> ₁₁₆		3 3.6 186°72	2°4/ 5.8	18	</

EPHEMERIDES

3 3.6

3 3.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
497912	2006 VS ₄₅		3 3.6 147°33	6°7/14.4 18			520107	2014 AK ₂₂		3 3.7 215°57	4°4/26.6 17		
2 1	11 19.73	-24 48.2	3.462	4.107	11.3	22.3	2 1	11 18.55	+19 44.7	2.608	3.468	9.1	21.6
2 11	11 14.06	-25 15.7	3.376	4.120	10.0	22.2	2 11	11 13.53	+21 4.8	2.539	3.462	6.7	21.4
2 21	11 7.17	-25 24.9	3.312	4.131	8.6	22.1	2 21	11 7.01	+22 24.2	2.498	3.456	4.8	21.3
3 2	10 59.54	-25 14.8	3.272	4.142	7.4	22.0	3 2	10 59.56	+23 36.5	2.487	3.449	4.7	21.3
3 12	10 51.76	-24 46.3	3.259	4.152	6.8	22.0	3 12	10 51.92	+24 35.7	2.505	3.441	6.5	21.4
3 22	10 44.42	-24 2.0	3.273	4.162	7.0	22.0	3 22	10 44.83	+25 18.2	2.551	3.434	9.0	21.5
4 1	10 38.06	-23 5.9	3.315	4.171	7.9	22.1	4 1	10 38.97	+25 42.1	2.622	3.426	11.4	21.7
4 11	10 33.09	-22 3.1	3.382	4.180	9.2	22.2	4 11	10 34.82	+25 47.8	2.712	3.417	13.4	21.8
432059	2008 YA ₂₃		3 3.7 107°14	1°5/ 1.9 18			467869	2011 BL ₈₆		3 3.7 302°63	2°3/ 1.5 17		
2 1	11 19.23	+ 9 11.5	2.369	3.219	10.4	21.5	2 1	11 18.71	+ 9 9.3	1.681	2.546	13.1	21.1
2 11	11 13.92	+10 1.0	2.310	3.234	7.3	21.3	2 11	11 14.31	+10 12.5	1.600	2.531	9.3	20.9
2 21	11 7.15	+10 56.0	2.278	3.249	3.9	21.1	2 21	11 7.72	+11 26.5	1.544	2.517	5.1	20.6
3 2	10 59.54	+11 51.5	2.275	3.264	1.5	21.0	3 2	10 59.69	+12 43.9	1.514	2.502	2.3	20.4
3 12	10 51.88	+12 42.0	2.303	3.278	4.0	21.2	3 12	10 51.29	+13 55.6	1.513	2.488	5.6	20.5
3 22	10 44.91	+13 23.3	2.359	3.292	7.2	21.4	3 22	10 43.63	+14 54.0	1.538	2.474	10.0	20.7
4 1	10 39.27	+13 52.4	2.442	3.306	10.1	21.6	4 1	10 37.73	+15 33.9	1.587	2.461	14.1	21.0
4 11	10 35.39	+14 8.1	2.547	3.319	12.6	21.8	4 11	10 34.28	+15 53.0	1.655	2.448	17.5	21.2
384518	2010 CG ₂₁₈		3 3.7 110°46	7°2/11.7 17			241294	2007 UH ₅₁		3 3.7 82°87	4°8/ 9.6 17		
2 1	11 19.09	-17 52.3	2.338	3.066	14.2	21.1	2 1	11 16.56	-12 18.9	2.291	3.060	13.4	20.6
2 11	11 14.06	-18 22.7	2.253	3.068	12.1	20.9	2 11	11 12.19	-11 59.8	2.211	3.067	10.8	20.4
2 21	11 7.36	-18 30.9	2.188	3.071	9.9	20.8	2 21	11 6.29	-11 19.1	2.153	3.074	8.0	20.3
3 2	10 59.59	-18 15.8	2.149	3.073	8.0	20.7	3 2	10 59.46	-10 18.5	2.121	3.080	5.6	20.1
3 12	10 51.57	-17 39.1	2.135	3.075	7.2	20.6	3 12	10 52.48	- 9 2.2	2.118	3.087	4.9	20.1
3 22	10 44.14	-16 44.8	2.149	3.077	8.1	20.7	3 22	10 46.11	- 7 36.4	2.143	3.094	6.6	20.2
4 1	10 38.04	-15 39.3	2.189	3.079	10.0	20.8	4 1	10 41.03	- 6 8.1	2.195	3.100	9.3	20.4
4 11	10 33.85	-14 29.7	2.253	3.081	12.3	20.9	4 11	10 37.72	- 4 44.3	2.273	3.107	12.0	20.6
245488	2005 QL ₁₁		3 3.7 214°33	1°2/ 2.1 17			429063	2009 FK ₄		3 3.7 14°90	3°2/28.8 17		
2 1	11 16.76	+ 7 39.7	2.490	3.338	10.0	20.8	2 1	11 16.97	+13 33.1	2.211	3.075	10.4	20.7
2 11	11 12.23	+ 8 38.1	2.412	3.336	7.0	20.6	2 11	11 12.54	+14 50.1	2.146	3.076	7.4	20.5
2 21	11 6.27	+ 9 44.2	2.362	3.333	3.8	20.4	2 21	11 6.51	+16 11.2	2.107	3.076	4.4	20.3
3 2	10 59.43	+10 53.0	2.341	3.330	1.2	20.2	3 2	10 59.50	+17 29.3	2.097	3.077	3.3	20.3
3 12	10 52.43	+11 58.8	2.350	3.327	3.7	20.4	3 12	10 52.34	+18 37.7	2.116	3.078	5.6	20.4
3 22	10 45.96	+12 56.5	2.388	3.324	7.0	20.6	3 22	10 45.82	+19 31.2	2.164	3.079	8.8	20.6
4 1	10 40.67	+13 42.3	2.453	3.320	10.0	20.8	4 1	10 40.67	+20 6.9	2.236	3.080	11.7	20.8
4 11	10 37.02	+14 14.2	2.541	3.317	12.6	21.0	4 11	10 37.37	+20 24.0	2.328	3.081	14.2	21.0
58439	1996 GF ₂₀		3 3.7 0°21	2°2/ 5.3 18			187754	1995 YV ₇		3 3.7 87°42	1°3/ 2.4 18		
2 1	11 18.46	- 0 45.1	1.151	2.010	18.2	18.7	2 1	11 20.97	+ 7 31.2	1.974	2.824	12.1	20.6
2 11	11 14.69	- 0 24.1	1.086	2.008	13.6	18.4	2 11	11 15.35	+ 8 25.1	1.922	2.846	8.5	20.4
2 21	11 8.12	+ 0 21.4	1.041	2.007	8.3	18.1	2 21	11 8.01	+ 9 26.9	1.897	2.868	4.6	20.2
3 2	10 59.72	+ 1 26.6	1.018	2.007	3.0	17.8	3 2	10 59.71	+10 30.5	1.900	2.890	1.3	20.0
3 12	10 50.98	+ 2 41.8	1.020	2.007	4.7	17.9	3 12	10 51.42	+11 29.1	1.933	2.911	4.2	20.2
3 22	10 43.39	+ 3 55.9	1.046	2.009	10.3	18.2	3 22	10 44.00	+12 17.3	1.994	2.932	8.0	20.5
4 1	10 38.22	+ 4 58.6	1.094	2.011	15.4	18.5	4 1	10 38.21	+12 51.6	2.081	2.953	11.3	20.7
4 11	10 36.20	+ 5 43.3	1.161	2.014	19.8	18.7	4 11	10 34.49	+13 10.5	2.189	2.973	14.0	21.0
24499	2001 AL ₃₀		3 3.7 177°67	2°1/ 1.3 18			354034	2001 RC ₁₁₀		3 3.7 91°32	0°5/ 3.2 18		
2 1	11 21.34	+11 39.3	2.404	3.255	10.2	19.1	2 1	11 23.32	+ 3 28.4	1.476	2.327	15.4	21.3
2 11	11 15.50	+12 24.8	2.333	3.257	7.2	18.9	2 11	11 17.44	+ 4 41.7	1.429	2.351	11.0	21.1
2 21	11 8.07	+13 14.4	2.288	3.258	4.0	18.7	2 21	11 9.30	+ 6 10.5	1.405	2.375	6.0	20.9
3 2	10 59.69	+14 2.9	2.273	3.259	2.1	18.6	3 2	10 59.90	+ 7 46.1	1.408	2.399	0.8	20.6
3 12	10 51.17	+14 45.0	2.289	3.259	4.5	18.8	3 12	10 50.53	+ 9 17.8	1.439	2.422	4.6	20.9
3 22	10 43.31	+15 16.6	2.333	3.259	7.7	19.0	3 22	10 42.36	+10 36.9	1.498	2.444	9.4	21.2
4 1	10 36.79	+15 35.3	2.404	3.258	10.6	19.1	4 1	10 36.33	+11 37.2	1.581	2.466	13.5	21.5
4 11	10 32.12	+15 40.1	2.497	3.257	13.2	19.3	4 11	10 32.94	+12 16.5	1.685	2.487	16.9	21.8
417243	2005 YY ₁₅₆		3 3.7 46°76	4°5/28.5 18			129543	1996 RU ₅		3 3.7 181°87	0°8/ 2.9 18		
2 1	11 19.60	+14 22.5	1.515	2.391	13.6	20.4	2 1	11 23.18	+ 6 17.6	2.028	2.871	12.1	21.4
2 11	11 14.80	+15 50.7	1.474	2.408	9.6	20.2	2 11	11 17.08	+ 7 5.0	1.952	2.872	8.7	21.1
2 21	11 7.84	+17 21.6	1.456	2.426	5.9	20.0	2 21	11 9.08	+ 8 2.4	1.903	2.873	4.7	20.9
3 2	10 59.66	+18 45.2	1.466	2.445	4.7	20.0	3 2	10 59.89	+ 9 4.1	1.882	2.873	0.9	20.6
3 12	10 51.48	+19 52.0	1.503	2.464	7.5	20.2	3 12	10 50.50	+10 3.6	1.892	2.872	4.0	20.8
3 22	10 44.42	+20 36.2	1.564	2.483	11.2	20.4	3 22	10 41.85	+10 54.8	1.930	2.870	8.1	21.1
4 1	10 39.39	+20 56.1	1.649	2.502	14.7	20.7	4 1	10 34.81	+11 33.6	1.995	2.867	11.7	21.3
4 11	10 36.86	+20 52.8	1.752	2.522	17.5	20.9	4 11	10 29.93	+11 57.4	2.081	2.864	14.7	21.5
246709	2009 BR ₆		3 3.7 110°52	6°0/ 8.4 18			173913	2001 VA ₄₂		3 3.7 122°31	4°2/27.8 17		
2 1	11 24.13	- 9 38.8	1.611	2.405	17.0	20.6	2 1	11 20.00	+19 12.2	2.451	3.311	9.7	20.4
2 11	11 18.12	-10 2.7	1.541	2.415	13.7	20.4	2 11	11 14.52	+20 7.5	2.394	3.318	7.0	20.2
2 21	11 9.77	-10 2.1	1.493	2.425	10.0	20.2	2 21	11 7.53	+21 1.0	2.364	3.325	4.8	20.1
3 2	10 59.96	- 9 37.3	1.470	2.435	6.8	20.1	3 2	10 59.66	+21 47.0	2.363	3.331	4.3	20.1
3 12	10 49.92	- 8 52.2	1.473	2.445	6.3	20.1	3 12	10 51.72	+22 20.4	2.391	3.338	6.1	20.2
3 22	10 40.86	- 7 53.8	1.503	2.454	8.9	20.2	3 22	10 44.48	+22 38.3	2.447	3.344	8.7	20.4
4 1	10 33.83	- 6 50.8	1.558	2.464	12.4	20.5	4 1	10 38.60	+22 39.7	2.528	3.350	11.2	20.5
4 11	10 29.46	- 5 51.5	1.635	2.472	15.7	20.7	4 11	10 34.54	+22 25.2	2.629	3.356	13.3	20.7
17373	1981 EQ ₃		3 3.7 214°02	2°7/ 6.9 18			48284	2002 GD ₆₀		3 3.7 358°93	0°6/ 3.1 18 R		
2 1	11 19.31	- 5 1.4	2.967	3.757	10.1	19							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
436353	2010 <i>JC</i> ₁₁₂		3 3.7 304°71	0°1/ 3.5 17			286288	2001 <i>VV</i> ₁₂₅		3 3.7 226°19	3°6/ 7.9 17		
2 1	11 18.40	+ 4 56.9	1.998	2.846	12.1	21.1	2 1	11 17.39	- 7 54.3	2.453	3.241	12.0	20.7
2 11	11 13.82	+ 5 26.6	1.906	2.827	8.7	20.9	2 11	11 12.76	- 7 44.1	2.363	3.238	9.5	20.5
2 21	11 7.37	+ 6 7.6	1.839	2.809	4.9	20.6	2 21	11 6.63	- 7 16.9	2.298	3.234	6.7	20.4
3 2	10 59.67	+ 6 55.5	1.799	2.790	0.7	20.2	3 2	10 59.57	- 6 34.3	2.260	3.230	4.2	20.2
3 12	10 51.62	+ 7 44.4	1.788	2.772	3.7	20.4	3 12	10 52.29	- 5 39.8	2.250	3.227	3.9	20.2
3 22	10 44.15	+ 8 28.7	1.805	2.754	7.9	20.6	3 22	10 45.53	- 4 38.4	2.270	3.223	6.2	20.3
4 1	10 38.13	+ 9 3.2	1.848	2.736	11.7	20.8	4 1	10 39.96	- 3 35.8	2.317	3.219	9.1	20.5
4 11	10 34.20	+ 9 24.8	1.912	2.718	15.0	21.0	4 11	10 36.08	- 2 37.2	2.389	3.214	11.8	20.6
264511	2001 <i>QU</i> ₂₁₇		3 3.7 142°41	0°4/ 3.3 18			95787	2003 <i>FJ</i> ₁₂		3 3.7 297°85	6°8/ 25.5 17		
2 1	11 22.24	+ 5 32.0	2.091	2.932	11.9	21.3	2 1	11 19.45	+ 20 28.8	1.666	2.542	12.6	19.0
2 11	11 16.28	+ 6 7.9	2.024	2.942	8.5	21.1	2 11	11 14.98	+ 22 17.5	1.597	2.526	9.5	18.8
2 21	11 8.57	+ 6 53.0	1.982	2.951	4.7	20.8	2 21	11 8.17	+ 24 6.9	1.553	2.511	7.1	18.6
3 2	10 59.83	+ 7 42.7	1.969	2.960	0.7	20.5	3 2	10 59.82	+ 25 45.4	1.537	2.496	7.3	18.6
3 12	10 50.97	+ 8 31.1	1.986	2.968	3.6	20.8	3 12	10 51.07	+ 27 2.6	1.546	2.481	9.9	18.7
3 22	10 42.88	+ 9 13.1	2.032	2.976	7.5	21.0	3 22	10 43.16	+ 27 51.7	1.580	2.466	13.3	18.8
4 1	10 36.34	+ 9 44.7	2.105	2.983	10.9	21.3	4 1	10 37.16	+ 28 10.8	1.636	2.451	16.6	19.0
4 11	10 31.86	+ 10 3.6	2.200	2.990	13.8	21.5	4 11	10 33.77	+ 28 1.6	1.708	2.437	19.4	19.2
419156	2009 <i>SM</i> ₃₃₇		3 3.7 121°15	2°9/ 29.7 18			462281	2008 <i>FR</i> ₉		3 3.7 35°61	1°3/ 2.9 18		
2 1	11 22.47	+ 13 24.4	2.222	3.077	10.8	22.0	2 1	11 27.57	+ 9 50.8	1.367	2.229	15.7	21.3
2 11	11 16.31	+ 14 20.0	2.169	3.094	7.6	21.8	2 11	11 20.75	+ 9 41.8	1.310	2.238	11.2	21.0
2 21	11 8.52	+ 15 18.0	2.142	3.111	4.4	21.6	2 21	11 11.28	+ 9 38.8	1.276	2.248	6.1	20.8
3 2	10 59.81	+ 16 12.3	2.145	3.128	2.9	21.5	3 2	11 0.25	+ 9 36.7	1.268	2.258	1.4	20.5
3 12	10 51.08	+ 16 57.2	2.178	3.144	5.2	21.7	3 12	10 49.17	+ 9 30.2	1.287	2.269	5.1	20.8
3 22	10 43.17	+ 17 28.7	2.240	3.159	8.3	21.9	3 22	10 39.45	+ 9 15.5	1.333	2.281	10.1	21.1
4 1	10 36.78	+ 17 44.8	2.327	3.174	11.2	22.1	4 1	10 32.20	+ 8 50.5	1.402	2.293	14.5	21.4
4 11	10 32.37	+ 17 45.6	2.436	3.188	13.6	22.3	4 11	10 27.99	+ 8 14.9	1.490	2.305	18.1	21.6
455862	2005 <i>UL</i> ₄₆		3 3.7 94°47	7°6/ 25.7 18			464145	2014 <i>XF</i> ₁₉		3 3.7 173°67	1°6/ 5.2 18		
2 1	11 25.98	+ 26 51.5	1.872	2.731	12.3	20.5	2 1	11 22.92	+ 0 0.2	2.211	3.030	12.1	21.4
2 11	11 19.11	+ 28 2.1	1.834	2.747	9.6	20.3	2 11	11 16.77	+ 0 14.8	2.131	3.034	9.0	21.2
2 21	11 10.15	+ 29 2.6	1.822	2.762	7.8	20.3	2 21	11 8.88	+ 0 42.1	2.077	3.036	5.5	20.9
3 2	11 0.04	+ 29 44.5	1.836	2.777	7.9	20.3	3 2	10 59.91	+ 1 19.2	2.051	3.038	2.0	20.7
3 12	10 50.02	+ 30 2.2	1.877	2.792	9.7	20.4	3 12	10 50.74	+ 2 1.5	2.056	3.040	3.1	20.8
3 22	10 41.17	+ 29 54.2	1.943	2.807	12.2	20.6	3 22	10 42.25	+ 2 43.9	2.090	3.040	6.8	21.0
4 1	10 34.38	+ 29 22.3	2.031	2.821	14.7	20.8	4 1	10 35.22	+ 3 21.8	2.151	3.040	10.2	21.2
4 11	10 30.12	+ 28 30.5	2.138	2.836	16.8	21.0	4 11	10 30.19	+ 3 51.4	2.236	3.040	13.2	21.4
456697	2007 <i>RO</i> ₂₁₉		3 3.7 153°44	2°8/ 29.8 18			412114	2013 <i>GL</i> ₁₉		3 3.7 294°18	2°4/ 1.6 16		
2 1	11 23.86	+ 12 12.8	2.112	2.964	11.3	22.2	2 1	11 19.23	+ 7 31.8	1.424	2.292	14.8	21.2
2 11	11 17.44	+ 13 20.5	2.050	2.975	8.0	22.0	2 11	11 15.11	+ 8 51.0	1.339	2.272	10.6	20.9
2 21	11 9.21	+ 14 32.6	2.016	2.985	4.6	21.8	2 21	11 8.40	+ 10 27.2	1.277	2.251	5.8	20.6
3 2	10 59.92	+ 15 42.1	2.011	2.994	2.9	21.7	3 2	10 59.87	+ 12 11.4	1.241	2.230	2.4	20.3
3 12	10 50.53	+ 16 42.1	2.037	3.003	5.4	21.9	3 12	10 50.76	+ 13 51.6	1.232	2.209	6.3	20.5
3 22	10 41.95	+ 17 27.8	2.091	3.011	8.8	22.1	3 22	10 42.43	+ 15 16.6	1.249	2.188	11.5	20.7
4 1	10 34.99	+ 17 56.3	2.171	3.017	11.9	22.3	4 1	10 36.14	+ 16 18.7	1.288	2.168	16.3	20.9
4 11	10 30.15	+ 18 7.3	2.272	3.023	14.5	22.5	4 11	10 32.74	+ 16 54.4	1.345	2.148	20.3	21.1
94946	2001 <i>YY</i> ₈₃		3 3.7 134°41	3°6/ 29.5 18			208435	2001 <i>TV</i> ₉₀		3 3.7 161°25	0°7/ 2.9 17		
2 1	11 24.36	+ 13 7.4	1.685	2.548	13.2	20.4	2 1	11 20.80	+ 7 48.0	2.509	3.350	10.1	20.5
2 11	11 18.13	+ 14 18.3	1.630	2.559	9.3	20.2	2 11	11 15.07	+ 8 7.6	2.434	3.353	7.2	20.3
2 21	11 9.71	+ 15 33.6	1.599	2.569	5.4	20.0	2 21	11 7.85	+ 8 33.0	2.387	3.356	3.9	20.1
3 2	11 0.00	+ 16 44.7	1.597	2.579	3.7	19.9	3 2	10 59.76	+ 9 0.5	2.369	3.359	0.8	19.8
3 12	10 50.19	+ 17 43.0	1.623	2.589	6.5	20.1	3 12	10 51.54	+ 9 26.0	2.381	3.361	3.3	20.0
3 22	10 41.43	+ 18 22.9	1.676	2.598	10.4	20.4	3 22	10 43.93	+ 9 46.1	2.423	3.363	6.6	20.3
4 1	10 34.67	+ 18 41.9	1.753	2.606	14.0	20.6	4 1	10 37.60	+ 9 58.0	2.492	3.365	9.6	20.4
4 11	10 30.46	+ 18 40.6	1.849	2.614	16.9	20.8	4 11	10 33.00	+ 10 0.1	2.584	3.367	12.2	20.6
279570	2011 <i>DN</i> ₈		3 3.7 93°04	1°3/ 2.5 18			412135	2013 <i>GW</i> ₅₀		3 3.7 192°50	2°2/ 1.6 17		
2 1	11 21.92	+ 8 40.0	1.918	2.771	12.3	20.8	2 1	11 23.55	+ 10 33.5	1.992	2.844	11.9	22.1
2 11	11 16.19	+ 9 10.0	1.853	2.778	8.7	20.6	2 11	11 17.42	+ 11 25.6	1.918	2.842	8.5	21.9
2 21	11 8.57	+ 9 46.9	1.813	2.784	4.7	20.3	2 21	11 9.31	+ 12 24.2	1.870	2.840	4.7	21.6
3 2	10 59.84	+ 10 25.7	1.801	2.791	1.3	20.1	3 2	10 59.98	+ 13 22.8	1.850	2.837	2.3	21.5
3 12	10 50.98	+ 11 0.2	1.819	2.798	4.3	20.3	3 12	10 50.42	+ 14 14.7	1.861	2.834	5.0	21.6
3 22	10 42.98	+ 11 26.0	1.864	2.804	8.3	20.6	3 22	10 41.64	+ 14 54.3	1.900	2.830	8.9	21.9
4 1	10 36.64	+ 11 39.6	1.935	2.811	11.8	20.8	4 1	10 34.51	+ 15 18.3	1.964	2.825	12.4	22.1
4 11	10 32.52	+ 11 39.9	2.027	2.818	14.8	21.0	4 11	10 29.62	+ 15 25.8	2.050	2.819	15.4	22.3
521043	2015 <i>DU</i> ₂₃₅		3 3.7 92°99	1°7/ 1.9 17			284625	2007 <i>VS</i> ₁₀₆		3 3.7 233°04	0°6/ 3.1 17		
2 1	11 19.65	+ 9 26.7	2.091	2.946	11.3	21.7	2 1	11 19.07	+ 6 29.4	2.350	3.194	10.6	21.4
2 11	11 14.47	+ 10 10.4	2.025	2.951	8.0	21.5	2 11	11 13.98	+ 7 2.4	2.269	3.189	7.6	21.2
2 21	11 7.59	+ 11 0.5	1.984	2.956	4.3	21.3	2 21	11 7.33	+ 7 43.6	2.213	3.183	4.2	21.0
3 2	10 59.69	+ 11 51.4	1.972	2.961	1.7	21.1	3 2	10 59.70	+ 8 28.6	2.187	3.178	0.7	20.7
3 12	10 51.67	+ 12 37.4	1.990	2.966	4.4	21.3	3 12	10 51.86	+ 9 12.4	2.191	3.172	3.4	20.9
3 22	10 44.39	+ 13 13.4	2.035	2.971	8.0	21.6	3 22	10 44.61	+ 9 50.5	2.223	3.166	7.0	21.2
4 1	10 38.59	+ 13 36.3	2.106	2.976	11.3	21.8	4 1	10 38.64	+ 10 19.2	2.283	3.160	10.2	21.3
4 11	10 34.78	+ 13 44.8	2.199	2.981	14.1	22.0	4 11	10 34.47	+ 10 36.2	2.365	3.154	13.0	21.5

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
259187	2003 <i>AZ</i> ₂₇		3 3.7 113°61	4.7/27.5	18		185997	2001 <i>PE</i> ₃₅		3 3.7 232°08	3.5/ 7.5	17	
2 1	11 22.41	+17 15.0	2.042	2.904	11.3	20.5	2 1	11 19.43	- 7 27.6	2.119	2.914	13.4	20.7
2 11	11 16.43	+18 48.7	1.998	2.925	8.1	20.3	2 11	11 14.51	- 6 56.6	2.022	2.903	10.5	20.5
2 21	11 8.65	+20 21.9	1.982	2.945	5.4	20.2	2 21	11 7.77	- 6 4.5	1.949	2.891	7.2	20.3
3 2	10 59.88	+21 46.2	1.995	2.964	4.9	20.2	3 2	10 59.82	- 4 53.6	1.903	2.879	4.2	20.1
3 12	10 51.08	+22 54.1	2.037	2.983	7.1	20.3	3 12	10 51.54	- 3 29.0	1.886	2.866	4.0	20.0
3 22	10 43.19	+23 41.4	2.107	3.002	10.0	20.6	3 22	10 43.81	- 1 57.7	1.898	2.853	7.0	20.2
4 1	10 36.97	+24 6.7	2.200	3.020	12.7	20.8	4 1	10 37.49	+ 0 27.7	1.938	2.839	10.6	20.4
4 11	10 32.89	+24 11.4	2.314	3.037	15.0	21.0	4 11	10 33.17	+ 0 54.1	2.001	2.824	13.8	20.6
282144	2001 <i>QH</i> ₃₃₀		3 3.7 180°18	3.2/29.9	18		149769	2004 <i>QM</i> ₉		3 3.7 114°39	2.5/29.5	17	
2 1	11 25.95	+12 59.0	1.896	2.750	12.3	21.6	2 1	11 17.68	+13 46.3	2.680	3.536	9.1	20.0
2 11	11 19.20	+13 55.8	1.827	2.752	8.8	21.4	2 11	11 12.80	+14 35.6	2.616	3.542	6.4	19.8
2 21	11 10.32	+14 56.9	1.785	2.754	5.1	21.2	2 21	11 6.60	+15 27.0	2.580	3.548	3.7	19.7
3 2	11 0.15	+15 55.0	1.771	2.754	3.2	21.1	3 2	10 59.63	+16 15.8	2.573	3.554	2.6	19.6
3 12	10 49.77	+16 42.8	1.786	2.754	5.9	21.2	3 12	10 52.57	+16 57.2	2.596	3.560	4.5	19.7
3 22	10 40.29	+17 15.2	1.830	2.752	9.7	21.4	3 22	10 46.08	+17 27.8	2.648	3.566	7.2	19.9
4 1	10 32.64	+17 29.7	1.899	2.750	13.2	21.7	4 1	10 40.75	+17 45.6	2.726	3.572	9.8	20.1
4 11	10 27.41	+17 26.3	1.988	2.747	16.1	21.9	4 11	10 36.98	+17 50.0	2.826	3.578	12.0	20.2
192828	1999 <i>VJ</i> ₉₉		3 3.7 197°39	3.4/28.9	17		31384	1998 <i>XE</i> ₉₆		3 3.7 133°23	3.2/29.9	18	
2 1	11 21.90	+16 7.2	2.393	3.249	10.0	21.2	2 1	11 22.94	+10 43.5	1.566	2.430	13.9	19.1
2 11	11 15.99	+16 58.4	2.322	3.246	7.2	21.0	2 11	11 17.31	+12 2.5	1.507	2.438	9.8	18.9
2 21	11 8.44	+17 50.5	2.277	3.243	4.5	20.8	2 21	11 9.38	+13 29.7	1.474	2.446	5.5	18.6
3 2	10 59.88	+18 37.7	2.262	3.239	3.5	20.8	3 2	11 0.06	+14 55.7	1.468	2.453	3.2	18.5
3 12	10 51.16	+19 14.8	2.277	3.235	5.6	20.9	3 12	10 50.57	+16 10.6	1.490	2.460	6.4	18.7
3 22	10 43.10	+19 37.9	2.320	3.230	8.5	21.1	3 22	10 42.14	+17 7.2	1.538	2.467	10.6	19.0
4 1	10 36.44	+19 45.4	2.389	3.225	11.3	21.2	4 1	10 35.75	+17 41.6	1.610	2.473	14.5	19.2
4 11	10 31.67	+19 37.2	2.479	3.220	13.7	21.4	4 11	10 32.00	+17 53.6	1.701	2.479	17.7	19.4
10766	1990 <i>UB</i> ₁		3 3.7 92°22	5.3/27.1	18		249218	2008 <i>EO</i> ₈₆		3 3.7 91°00	2.7/ 1.6	18	
2 1	11 23.20	+23 14.9	2.335	3.191	10.2	17.0	2 1	11 28.56	+13 13.4	1.825	2.676	12.9	20.0
2 11	11 16.81	+24 3.3	2.289	3.206	7.7	16.9	2 11	11 20.80	+13 39.7	1.779	2.703	9.1	19.8
2 21	11 8.81	+24 46.0	2.270	3.221	5.7	16.8	2 21	11 11.06	+14 7.9	1.760	2.729	5.1	19.6
3 2	10 59.92	+25 17.1	2.279	3.236	5.5	16.8	3 2	11 0.28	+14 32.0	1.770	2.755	2.7	19.5
3 12	10 51.07	+25 32.1	2.317	3.250	7.1	16.9	3 12	10 49.64	+14 46.5	1.809	2.780	5.3	19.7
3 22	10 43.08	+25 29.1	2.383	3.265	9.5	17.1	3 22	10 40.20	+14 48.6	1.876	2.805	9.0	20.0
4 1	10 36.67	+25 8.5	2.472	3.279	11.9	17.3	4 1	10 32.79	+14 37.1	1.969	2.829	12.4	20.3
4 11	10 32.25	+24 32.1	2.582	3.293	13.9	17.4	4 11	10 27.84	+14 12.6	2.083	2.853	15.1	20.5
304892	2007 <i>RR</i> ₂₀₀		3 3.7 281°85	1.0/ 4.4	16		414822	2010 <i>UF</i> ₂₇		3 3.7 89°10	1.9/ 5.4	18	
2 1	11 22.52	+ 2 10.1	1.515	2.361	15.3	20.7	2 1	11 22.12	- 1 16.7	1.784	2.611	14.3	21.7
2 11	11 17.40	+ 2 29.6	1.422	2.340	11.4	20.4	2 11	11 16.37	- 0 48.2	1.727	2.632	10.6	21.6
2 21	11 9.68	+ 3 6.2	1.352	2.319	6.7	20.1	2 21	11 8.71	- 0 2.9	1.693	2.653	6.4	21.4
3 2	10 59.92	+ 3 56.0	1.308	2.298	1.7	19.7	3 2	10 59.95	+ 0 54.6	1.687	2.674	2.4	21.1
3 12	10 49.92	+ 4 51.7	1.292	2.277	4.3	19.8	3 12	10 51.16	+ 1 57.7	1.710	2.695	3.5	21.3
3 22	10 40.46	+ 5 45.4	1.301	2.255	9.6	20.1	3 22	10 43.32	+ 2 59.4	1.761	2.715	7.5	21.5
4 1	10 32.97	+ 6 29.7	1.335	2.234	14.5	20.3	4 1	10 37.26	+ 3 53.5	1.837	2.735	11.3	21.8
4 11	10 28.34	+ 6 59.3	1.388	2.212	18.7	20.5	4 11	10 33.47	+ 4 35.7	1.937	2.754	14.4	22.0
430318	2013 <i>YT</i> ₁₁		3 3.7 51°17	7.9/23.1	18		95463	2002 <i>DS</i> ₅		3 3.7 70°28	3.3/ 7.0	18	
2 1	11 20.05	+28 40.7	2.055	2.917	11.2	20.4	2 1	11 19.35	- 5 38.5	1.840	2.652	14.5	19.4
2 11	11 14.94	+30 19.4	2.016	2.924	9.1	20.3	2 11	11 14.42	- 5 16.4	1.776	2.668	11.1	19.2
2 21	11 7.93	+31 48.2	2.002	2.932	8.0	20.2	2 21	11 7.65	- 4 34.0	1.735	2.684	7.4	19.0
3 2	10 59.81	+32 58.4	2.015	2.939	8.4	20.2	3 2	10 59.80	- 3 34.8	1.721	2.701	4.0	18.8
3 12	10 51.60	+33 43.8	2.054	2.947	10.2	20.4	3 12	10 51.86	- 2 24.7	1.735	2.717	4.0	18.8
3 22	10 44.30	+34 2.0	2.117	2.954	12.4	20.5	3 22	10 44.76	- 1 11.2	1.777	2.733	7.2	19.1
4 1	10 38.71	+33 53.9	2.201	2.962	14.6	20.7	4 1	10 39.30	+ 0 1.5	1.844	2.750	10.8	19.3
4 11	10 35.35	+33 22.8	2.302	2.970	16.4	20.9	4 11	10 36.00	+ 0 58.5	1.935	2.766	13.9	19.5
285195	1996 <i>VB</i> ₂₃		3 3.7 110°81	2.7/ 6.9	17		222768	2002 <i>CR</i> ₈₁		3 3.7 27°32	0.7/ 3.1	18	
2 1	11 16.60	- 5 14.9	2.285	3.091	12.2	20.8	2 1	11 21.07	+ 6 43.8	1.535	2.395	14.4	19.8
2 11	11 12.27	- 4 42.3	2.202	3.092	9.4	20.6	2 11	11 15.97	+ 7 8.9	1.474	2.401	10.3	19.6
2 21	11 6.41	- 3 52.4	2.143	3.092	6.2	20.4	2 21	11 8.63	+ 7 44.7	1.437	2.408	5.6	19.3
3 2	10 59.60	- 2 48.0	2.112	3.093	3.2	20.2	3 2	10 59.95	+ 8 25.1	1.425	2.416	0.9	19.0
3 12	10 52.60	- 1 34.4	2.111	3.093	3.3	20.2	3 12	10 51.14	+ 9 3.3	1.441	2.424	4.5	19.3
3 22	10 46.18	- 0 17.5	2.138	3.094	6.3	20.4	3 22	10 43.35	+ 9 33.0	1.484	2.433	9.2	19.6
4 1	10 41.03	+ 0 56.2	2.193	3.094	9.5	20.6	4 1	10 37.55	+ 9 50.0	1.550	2.442	13.3	19.9
4 11	10 37.63	+ 2 1.5	2.272	3.095	12.4	20.8	4 11	10 34.31	+ 9 52.2	1.636	2.451	16.7	20.1
136657	1995 <i>OX</i> ₄		3 3.7 177°09	0.3/ 3.4	17		434331	2004 <i>JY</i> ₃₉		3 3.7 184°04	6.0/24.6	18	
2 1	11 18.73	+ 5 33.3	2.592	3.430	10.0	21.2	2 1	11 19.48	+25 49.5	2.531	3.389	9.5	20.9
2 11	11 13.60	+ 6 5.6	2.514	3.431	7.1	21.0	2 11	11 14.28	+27 9.2	2.476	3.389	7.4	20.8
2 21	11 7.07	+ 6 45.8	2.463	3.432	3.9	20.8	2 21	11 7.50	+28 23.1	2.449	3.389	6.1	20.7
3 2	10 59.69	+ 7 29.9	2.442	3.433	0.6	20.5	3 2	10 59.79	+29 24.4	2.450	3.388	6.4	20.7
3 12	10 52.17	+ 8 13.5	2.451	3.433	3.0	20.7	3 12	10 51.94	+30 8.0	2.480	3.388	8.0	20.8
3 22	10 45.20	+ 8 52.5	2.490	3.433	6.3	20.9	3 22	10 44.75	+30 31.0	2.535	3.387	10.1	20.9
4 1	10 39.40	+ 9 23.5	2.556	3.433	9.3	21.1	4 1	10 38.92	+30 33.1	2.613	3.386	12.2	21.1
4 11	10 35.22	+ 9 44.1	2.645	3.432	11.8	21.3	4 11	10 34.93	+30 16.0	2.710	3.385	14.0	21.2
456754	2007 <i>TQ</i> ₈₀		3 3.7 156°42	1.9/ 1.9	18		16593	1992 <i>UB</i> ₃		3 3.7 155°02	6.0/26.8	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
489566	2007 <i>TK</i> ₃₀		3 3.7 141°14	0°9/ 2.5 17			156111	2001 <i>SY</i> ₂₅₃		3 3.7 223°58	0°3/ 4.0 17		
2 1	11 19.56	+ 8 7.0	2.935	3.773	8.9	22.4	2 1	11 22.70	+ 2 15.3	1.791	2.629	13.7	21.3
2 11	11 14.00	+ 8 44.8	2.868	3.787	6.3	22.3	2 11	11 17.12	+ 3 3.6	1.704	2.619	10.0	21.0
2 21	11 7.22	+ 9 27.7	2.830	3.800	3.4	22.1	2 21	11 9.35	+ 4 8.2	1.642	2.609	5.7	20.7
3 2	10 59.75	+10 11.9	2.822	3.812	0.9	21.9	3 2	11 0.11	+ 5 23.8	1.607	2.597	1.0	20.4
3 12	10 52.21	+10 53.3	2.846	3.824	3.1	22.1	3 12	10 50.47	+ 6 42.6	1.601	2.585	3.9	20.5
3 22	10 45.21	+11 28.5	2.899	3.835	5.9	22.3	3 22	10 41.54	+ 7 56.5	1.624	2.572	8.6	20.8
4 1	10 39.29	+11 55.0	2.981	3.845	8.5	22.5	4 1	10 34.34	+ 8 58.7	1.672	2.559	12.8	21.0
4 11	10 34.85	+12 11.2	3.087	3.855	10.7	22.7	4 11	10 29.57	+ 9 44.7	1.742	2.545	16.4	21.2
42853	1999 <i>RP</i> ₆₉		3 3.7 313°92	1°2/ 2.8 18			292308	2006 <i>SB</i> ₁₅₃		3 3.7 89°03	3°3/ 7.2 17		
2 1	11 19.74	+ 6 2.1	1.380	2.246	15.4	18.8	2 1	11 19.09	- 5 34.0	2.355	3.154	12.1	20.7
2 11	11 15.45	+ 6 52.4	1.303	2.234	11.0	18.5	2 11	11 13.98	- 5 35.1	2.278	3.161	9.4	20.5
2 21	11 8.58	+ 7 58.6	1.249	2.222	6.1	18.2	2 21	11 7.35	- 5 21.0	2.226	3.169	6.4	20.3
3 2	10 59.99	+ 9 13.0	1.221	2.211	1.3	17.8	3 2	10 59.79	- 4 53.4	2.201	3.177	3.8	20.2
3 12	10 50.95	+10 25.7	1.218	2.200	5.3	18.1	3 12	10 52.09	- 4 15.6	2.206	3.185	3.7	20.2
3 22	10 42.83	+11 27.3	1.241	2.190	10.6	18.3	3 22	10 45.00	- 3 32.5	2.239	3.192	6.2	20.4
4 1	10 36.83	+12 10.9	1.287	2.180	15.4	18.6	4 1	10 39.20	- 2 48.8	2.300	3.200	9.2	20.5
4 11	10 33.71	+12 33.1	1.351	2.171	19.4	18.8	4 11	10 35.17	- 2 9.3	2.384	3.207	11.9	20.7
214825	2006 <i>VS</i> ₄₁		3 3.7 251°69	2°4/29.9 17			288017	2003 <i>UZ</i> ₂₁₃		3 3.7 242°96	0°7/ 4.4 17		
2 1	11 18.67	+12 31.7	2.461	3.316	9.8	20.5	2 1	11 22.67	+ 1 51.6	1.924	2.757	13.1	21.9
2 11	11 13.69	+13 17.9	2.383	3.309	6.9	20.3	2 11	11 17.04	+ 2 24.1	1.829	2.740	9.7	21.6
2 21	11 7.19	+14 7.8	2.332	3.302	4.0	20.1	2 21	11 9.29	+ 3 11.5	1.758	2.723	5.6	21.4
3 2	10 59.76	+14 56.4	2.310	3.294	2.4	20.0	3 2	11 0.11	+ 4 9.7	1.716	2.705	1.3	21.0
3 12	10 52.13	+15 38.5	2.318	3.287	4.6	20.1	3 12	10 50.48	+ 5 12.3	1.702	2.687	3.6	21.1
3 22	10 45.07	+16 10.0	2.354	3.279	7.7	20.3	3 22	10 41.46	+ 6 12.6	1.718	2.667	8.1	21.4
4 1	10 39.26	+16 28.4	2.417	3.271	10.6	20.5	4 1	10 34.02	+ 7 4.4	1.759	2.647	12.2	21.6
4 11	10 35.18	+16 32.6	2.501	3.263	13.1	20.6	4 11	10 28.89	+ 7 43.1	1.823	2.627	15.7	21.8
98439	2000 <i>UD</i> ₅₀		3 3.7 108°92	2°8/ 1.4 18			498476	2008 <i>CV</i> ₇₃		3 3.7 109°32	6°5/11.7 17		
2 1	11 23.27	+10 34.4	1.567	2.430	14.0	19.5	2 1	11 22.79	-18 34.0	2.846	3.548	12.5	21.9
2 11	11 17.52	+11 34.3	1.509	2.439	9.9	19.3	2 11	11 16.43	-19 13.5	2.772	3.569	10.6	21.7
2 21	11 9.49	+12 41.8	1.476	2.448	5.5	19.0	2 21	11 8.63	-19 34.2	2.722	3.589	8.7	21.6
3 2	11 0.10	+13 48.4	1.470	2.456	2.8	18.9	3 2	10 59.98	-19 35.2	2.697	3.609	7.1	21.6
3 12	10 50.57	+14 45.5	1.491	2.465	5.9	19.1	3 12	10 51.20	-19 17.8	2.701	3.629	6.5	21.6
3 22	10 42.13	+15 26.6	1.539	2.473	10.2	19.4	3 22	10 42.99	-18 45.2	2.733	3.648	7.2	21.6
4 1	10 35.73	+15 48.4	1.611	2.481	14.1	19.6	4 1	10 36.00	-18 2.0	2.792	3.666	8.7	21.7
4 11	10 31.97	+15 50.5	1.702	2.488	17.4	19.8	4 11	10 30.68	-17 13.8	2.876	3.684	10.5	21.9
426670	2013 <i>TR</i> ₁₃		3 3.7 103°48	0°0/ 3.6 17			344507	2002 <i>RZ</i> ₁₀		3 3.7 129°87	0°7/ 4.2 18		
2 1	11 19.20	+ 3 46.2	1.986	2.829	12.3	21.5	2 1	11 27.73	+ 3 2.6	1.605	2.443	15.1	21.3
2 11	11 14.26	+ 4 32.8	1.917	2.836	8.9	21.3	2 11	11 20.62	+ 3 20.8	1.544	2.458	10.9	21.1
2 21	11 7.57	+ 5 31.4	1.874	2.843	4.9	21.0	2 21	11 11.18	+ 3 52.7	1.506	2.472	6.2	20.8
3 2	10 59.81	+ 6 36.8	1.859	2.850	0.7	20.7	3 2	11 0.36	+ 4 33.3	1.496	2.486	1.3	20.5
3 12	10 51.91	+ 7 42.2	1.873	2.856	3.5	21.0	3 12	10 49.44	+ 5 16.0	1.514	2.499	4.0	20.8
3 22	10 44.76	+ 8 41.4	1.916	2.863	7.6	21.2	3 22	10 39.66	+ 5 54.3	1.561	2.511	8.7	21.1
4 1	10 39.13	+ 9 29.5	1.984	2.870	11.1	21.5	4 1	10 32.00	+ 6 23.1	1.633	2.522	12.9	21.3
4 11	10 35.53	+10 3.3	2.075	2.876	14.2	21.7	4 11	10 27.07	+ 6 39.3	1.726	2.533	16.3	21.6
497578	2006 <i>FA</i> ₄₇		3 3.7 302°80	3°4/29.8 17			124680	2001 <i>ST</i> ₁₁₁		3 3.7 147°68	0°5/ 4.1 18		
2 1	11 21.03	+ 9 14.4	1.413	2.282	14.8	21.2	2 1	11 25.53	+ 3 29.5	1.612	2.454	14.8	19.7
2 11	11 16.83	+10 44.1	1.304	2.238	10.8	20.8	2 11	11 19.15	+ 3 47.0	1.543	2.460	10.7	19.5
2 21	11 9.69	+12 33.9	1.219	2.192	6.1	20.4	2 21	11 10.42	+ 4 17.9	1.499	2.466	6.1	19.2
3 2	11 0.22	+14 34.5	1.160	2.146	3.5	20.1	3 2	11 0.26	+ 4 57.5	1.481	2.471	1.2	18.9
3 12	10 49.60	+16 32.6	1.128	2.100	7.7	20.2	3 12	10 49.89	+ 5 39.1	1.492	2.476	4.0	19.1
3 22	10 39.38	+18 14.5	1.121	2.053	13.3	20.4	3 22	10 40.53	+ 6 16.4	1.530	2.480	8.8	19.4
4 1	10 31.13	+19 30.0	1.137	2.006	18.7	20.5	4 1	10 33.22	+ 6 44.1	1.593	2.484	13.0	19.7
4 11	10 26.05	+20 14.4	1.169	1.959	23.5	20.7	4 11	10 28.57	+ 6 59.0	1.677	2.488	16.6	19.9
261323	2005 <i>UR</i> ₂₂₀		3 3.7 3°93	5°0/ 8.2 17			357336	2003 <i>OT</i> ₁₇		3 3.7 233°29	0°0/ 3.6 17		
2 1	11 19.32	- 8 33.7	1.724	2.526	15.7	20.6	2 1	11 24.90	+ 4 49.5	1.963	2.800	12.7	22.0
2 11	11 14.68	- 8 35.8	1.645	2.526	12.5	20.3	2 11	11 18.58	+ 5 14.0	1.870	2.786	9.3	21.7
2 21	11 7.96	- 8 14.6	1.588	2.526	8.9	20.1	2 21	11 10.13	+ 5 49.5	1.803	2.770	5.2	21.4
3 2	10 59.89	- 7 31.1	1.555	2.526	5.8	19.9	3 2	11 0.24	+ 6 31.8	1.764	2.755	0.8	21.1
3 12	10 51.53	- 6 30.2	1.550	2.527	5.3	19.9	3 12	10 49.93	+ 7 15.1	1.755	2.738	3.8	21.3
3 22	10 43.95	- 5 19.1	1.571	2.527	8.1	20.1	3 22	10 40.27	+ 7 53.7	1.775	2.720	8.2	21.5
4 1	10 38.10	- 4 6.1	1.618	2.528	11.7	20.3	4 1	10 32.25	+ 8 22.9	1.821	2.702	12.2	21.7
4 11	10 34.62	- 2 59.0	1.687	2.529	15.1	20.5	4 11	10 26.55	+ 8 39.5	1.889	2.683	15.6	21.9
209584	2004 <i>XT</i> ₁₀₆		3 3.7 51°43	1°0/ 4.4 18			370166	2002 <i>AM</i> ₇₉		3 3.7 45°57	2°7/ 1.4 18		
2 1	11 24.24	+ 2 55.3	1.287	2.142	17.0	19.9	2 1	11 20.91	+10 37.9	1.504	2.373	14.1	20.7
2 11	11 18.48	+ 3 3.3	1.234	2.156	12.3	19.7	2 11	11 15.82	+11 34.4	1.456	2.388	9.9	20.4
2 21	11 10.11	+ 3 27.5	1.203	2.171	7.1	19.4	2 21	11 8.53	+12 37.8	1.430	2.403	5.5	20.2
3 2	11 0.20	+ 4 2.5	1.196	2.186	1.7	19.1	3 2	10 59.98	+13 39.9	1.432	2.419	2.8	20.1
3 12	10 50.22	+ 4 40.8	1.216	2.201	4.4	19.3	3 12	10 51.39	+14 32.2	1.460	2.435	5.9	20.3
3 22	10 41.56	+ 5 15.1	1.261	2.217	9.6	19.7	3 22	10 43.92	+15 8.6	1.514	2.451	10.1	20.6
4 1	10 35.31	+ 5 39.5	1.330	2.233	14.2	20.0	4 1	10 38.49	+15 26.0	1.592	2.468	14.0	20.9
4 11	10 32.04	+ 5 50.4	1.418	2.250	18.0	20.3	4 11	10 35.61	+15 24.3	1.689	2.485	17.1	21.1
157394	2004 <i>TT</i> ₂₁₁		3 3.7 217°60	2°4/ 1.3 18			162577	2000 <i>RR</i> ₉₀		3 3.7 147°53	3		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
310951	2003 <i>UT</i> ₃₈		3 3.7 120°95	3°2/29.8	18		18807	1999 <i>JL</i> ₈₅		3 3.7 117°02	1°8/ 5.8	18	
2 1	11 24.55	+12 53.0	1.825	2.683	12.6	21.3	2 1	11 20.77	- 5 46.8	1.771	2.582	15.0	18.4
2 11	11 18.14	+13 54.9	1.772	2.699	8.9	21.1	2 11	11 15.53	- 4 4.3	1.703	2.599	11.3	18.2
2 21	11 9.72	+15 0.4	1.746	2.715	5.1	20.9	2 21	11 8.34	- 1 56.3	1.659	2.616	6.9	18.0
3 2	11 0.16	+16 2.0	1.747	2.730	3.3	20.8	3 2	10 59.98	+ 0 29.7	1.645	2.631	2.6	17.8
3 12	10 50.56	+16 52.4	1.778	2.745	5.9	21.0	3 12	10 51.51	+ 3 2.3	1.661	2.647	3.5	17.9
3 22	10 41.97	+17 26.7	1.836	2.759	9.6	21.3	3 22	10 43.92	+ 5 29.4	1.708	2.661	7.8	18.1
4 1	10 35.25	+17 42.6	1.919	2.772	12.9	21.5	4 1	10 38.07	+ 7 40.7	1.783	2.675	11.8	18.4
4 11	10 30.90	+17 40.5	2.022	2.785	15.7	21.7	4 11	10 34.50	+ 9 29.9	1.881	2.689	15.2	18.7
116266	2003 <i>YF</i> ₃₃		3 3.7 196°83	1°0/ 4.7	18		497278	2005 <i>QH</i> ₅₈		3 3.7 222°38	0°5/ 3.1	17	
2 1	11 21.18	+ 0 21.4	1.955	2.785	13.1	20.4	2 1	11 20.34	+ 4 46.2	2.178	3.018	11.5	22.3
2 11	11 15.81	+ 1 5.3	1.873	2.783	9.6	20.2	2 11	11 15.11	+ 5 42.9	2.090	3.008	8.3	22.1
2 21	11 8.52	+ 2 5.2	1.816	2.780	5.7	20.0	2 21	11 8.11	+ 6 51.5	2.029	2.998	4.6	21.8
3 2	11 0.00	+ 3 16.5	1.787	2.776	1.6	19.7	3 2	10 59.96	+ 8 6.5	1.996	2.987	0.7	21.5
3 12	10 51.21	+ 4 32.4	1.788	2.772	3.4	19.8	3 12	10 51.52	+ 9 21.3	1.995	2.976	3.7	21.7
3 22	10 43.12	+ 5 45.7	1.817	2.768	7.6	20.1	3 22	10 43.65	+10 29.6	2.022	2.964	7.6	21.9
4 1	10 36.60	+ 6 49.8	1.873	2.763	11.5	20.3	4 1	10 37.18	+11 26.0	2.076	2.951	11.2	22.1
4 11	10 32.25	+ 7 40.4	1.951	2.757	14.7	20.5	4 11	10 32.66	+12 7.4	2.152	2.938	14.2	22.3
16498	Passau		3 3.7 60°93	0°8/ 4.6	18		124138	2001 <i>LE</i> ₁₂		3 3.7 200°66	4°0/ 7.1	18	
2 1	11 17.07	- 0 59.7	1.785	2.621	13.8	17.2	2 1	11 23.55	- 6 7.9	1.734	2.540	15.5	20.5
2 11	11 12.90	+ 0 21.6	1.718	2.631	10.1	17.0	2 11	11 17.78	- 6 0.4	1.649	2.537	12.1	20.2
2 21	11 6.88	+ 2 2.4	1.676	2.642	5.9	16.8	2 21	11 9.74	- 5 31.0	1.587	2.533	8.2	20.0
3 2	10 59.75	+ 3 55.8	1.662	2.652	1.4	16.5	3 2	11 0.22	- 4 41.6	1.552	2.529	4.7	19.8
3 12	10 52.47	+ 5 52.2	1.678	2.663	3.5	16.7	3 12	10 50.32	- 3 37.3	1.544	2.524	4.7	19.8
3 22	10 45.99	+ 7 41.8	1.721	2.673	7.9	17.0	3 22	10 41.20	- 2 25.8	1.564	2.519	8.2	19.9
4 1	10 41.12	+ 9 16.8	1.791	2.684	11.7	17.2	4 1	10 33.91	- 1 15.2	1.610	2.513	12.2	20.2
4 11	10 38.39	+10 32.4	1.884	2.695	15.0	17.5	4 11	10 29.12	- 0 12.8	1.678	2.506	15.8	20.4
283500	2001 <i>SK</i> ₂₅₈		3 3.7 234°29	1°0/ 4.7	17		473165	2015 <i>KO</i> ₃₁		3 3.7 250°83	1°2/ 2.3	17	
2 1	11 20.77	+ 2 12.6	2.291	3.120	11.4	20.9	2 1	11 18.19	+ 8 43.3	2.546	3.394	9.8	21.6
2 11	11 15.27	+ 2 18.4	2.208	3.117	8.4	20.7	2 11	11 13.33	+ 9 20.9	2.464	3.386	6.9	21.4
2 21	11 8.12	+ 2 34.3	2.151	3.114	4.9	20.4	2 21	11 7.02	+10 4.6	2.408	3.379	3.8	21.2
3 2	10 59.94	+ 2 57.7	2.122	3.111	1.5	20.2	3 2	10 59.80	+10 50.2	2.382	3.371	1.2	21.0
3 12	10 51.55	+ 3 24.6	2.122	3.107	3.0	20.3	3 12	10 52.40	+11 32.8	2.385	3.363	3.6	21.2
3 22	10 43.76	+ 3 50.8	2.152	3.103	6.6	20.5	3 22	10 45.51	+12 8.4	2.418	3.355	6.8	21.4
4 1	10 37.32	+ 4 12.6	2.209	3.100	9.9	20.7	4 1	10 39.80	+12 33.8	2.478	3.347	9.8	21.5
4 11	10 32.76	+ 4 26.8	2.289	3.096	12.8	20.9	4 11	10 35.74	+12 47.2	2.560	3.338	12.4	21.7
405822	2006 <i>BV</i> ₁₂₃		3 3.7 305°81	1°7/ 4.7	18		68025	2000 <i>YV</i> ₂₁		3 3.7 97°03	3°1/ 6.2	18	
2 1	11 24.86	+ 2 26.4	1.369	2.218	16.5	20.6	2 1	11 25.28	- 2 47.7	1.640	2.460	15.6	18.6
2 11	11 19.20	+ 2 14.1	1.290	2.208	12.3	20.3	2 11	11 18.84	- 2 50.1	1.579	2.478	11.8	18.4
2 21	11 10.73	+ 2 16.8	1.233	2.199	7.3	20.0	2 21	11 10.20	- 2 34.2	1.541	2.496	7.6	18.2
3 2	11 0.36	+ 2 31.4	1.200	2.189	2.3	19.7	3 2	11 0.28	- 2 2.6	1.530	2.513	3.7	18.0
3 12	10 49.48	+ 2 52.6	1.194	2.180	4.5	19.8	3 12	10 50.26	- 1 20.9	1.547	2.530	4.2	18.0
3 22	10 39.58	+ 3 13.8	1.214	2.171	9.8	20.0	3 22	10 41.30	- 0 35.7	1.591	2.546	8.1	18.3
4 1	10 31.97	+ 3 29.1	1.257	2.162	14.8	20.3	4 1	10 34.35	+ 0 6.4	1.661	2.562	12.0	18.6
4 11	10 27.47	+ 3 34.0	1.320	2.154	19.0	20.5	4 11	10 29.97	+ 0 40.2	1.753	2.578	15.4	18.8
409830	2006 <i>PH</i> ₅		3 3.7 174°23	3°1/29.5	18		379928	2012 <i>KW</i> ₄₄		3 3.7 297°56	7°2/10.3	17	
2 1	11 23.38	+13 32.6	2.145	2.999	11.1	22.0	2 1	11 17.92	-14 26.8	1.758	2.530	16.7	20.6
2 11	11 17.20	+14 35.5	2.078	3.003	7.9	21.8	2 11	11 13.92	-14 33.2	1.655	2.508	14.0	20.4
2 21	11 9.20	+15 41.9	2.037	3.005	4.6	21.6	2 21	11 7.72	-14 11.2	1.571	2.486	10.9	20.1
3 2	11 0.11	+16 45.0	2.026	3.007	3.2	21.5	3 2	10 59.95	-13 19.4	1.511	2.464	8.1	19.9
3 12	10 50.84	+17 38.2	2.045	3.009	5.6	21.7	3 12	10 51.62	-12 0.4	1.477	2.442	7.2	19.8
3 22	10 42.34	+18 16.9	2.092	3.009	8.9	21.9	3 22	10 43.85	-10 21.2	1.469	2.420	9.1	19.9
4 1	10 35.41	+18 38.4	2.165	3.009	12.0	22.1	4 1	10 37.72	- 8 31.9	1.486	2.398	12.4	20.0
4 11	10 30.57	+18 42.7	2.259	3.008	14.7	22.3	4 11	10 34.02	- 6 43.5	1.526	2.376	16.0	20.2
374400	2005 <i>VZ</i> ₉₇		3 3.7 217°37	9°5/15.1	17		247867	2003 <i>UU</i> ₉₄		3 3.7 211°79	2°3/ 6.1	17	
2 1	11 22.54	-27 45.9	2.630	3.266	14.7	21.8	2 1	11 21.92	- 3 16.9	2.073	2.884	13.1	22.1
2 11	11 16.69	-28 28.0	2.526	3.256	13.3	21.6	2 11	11 16.32	- 2 48.1	1.982	2.877	10.0	21.8
2 21	11 9.02	-28 45.7	2.441	3.245	11.7	21.5	2 21	11 8.83	- 2 1.7	1.915	2.869	6.4	21.6
3 2	11 0.10	-28 36.0	2.377	3.233	10.3	21.4	3 2	11 0.09	- 1 0.5	1.876	2.860	2.9	21.3
3 12	10 50.76	-27 58.4	2.339	3.221	9.6	21.3	3 12	10 51.03	+ 0 9.8	1.867	2.850	3.5	21.4
3 22	10 41.88	-26 55.8	2.326	3.207	9.8	21.3	3 22	10 42.57	+ 1 22.7	1.887	2.840	7.2	21.6
4 1	10 34.31	-25 33.8	2.339	3.193	10.9	21.3	4 1	10 35.60	+ 2 31.2	1.934	2.829	10.9	21.8
4 11	10 28.68	-24 0.2	2.376	3.178	12.5	21.4	4 11	10 30.73	+ 3 30.0	2.004	2.817	14.2	22.0
224396	2005 <i>UQ</i> ₂₅₃		3 3.7 229°99	3°4/ 7.2	17		82023	2000 <i>SG</i> ₃₄		3 3.7 25°27	1°4/ 1.8	18	
2 1	11 20.30	- 6 10.5	2.155	2.954	13.1	21.5	2 1	11 15.75	+10 13.4	2.987	3.837	8.4	19.2
2 11	11 15.12	- 5 55.8	2.060	2.944	10.2	21.3	2 11	11 11.38	+10 50.4	2.914	3.839	5.9	19.0
2 21	11 8.14	- 5 22.6	1.989	2.933	7.0	21.0	2 21	11 5.85	+11 31.3	2.869	3.840	3.2	18.8
3 2	10 59.96	- 4 32.7	1.945	2.922	4.0	20.8	3 2	10 59.64	+12 12.4	2.854	3.841	1.4	18.7
3 12	10 51.45	- 3 30.5	1.930	2.910	3.9	20.8	3 12	10 53.32	+12 50.0	2.868	3.843	3.3	18.8
3 22	10 43.51	- 2 22.0	1.944	2.898	7.0	21.0	3 22	10 47.46	+13 20.6	2.912	3.845	6.0	19.0
4 1	10 36.95	- 1 13.9	1.986	2.886	10.4	21.2	4 1	10 42.58	+13 42.0	2.983	3.846	8.5	19.2
4 11	10 32.39	- 0 12.1	2.051	2.873	13.6	21.3	4 11	10 39.07	+13 52.8	3.078	3.848	10.7	19.3
128445	2004 <i>ND</i> ₂₀		3 3.7 96°44	12°0/13.7	18		88917	2001 <i>TZ</i> ₁₀		3 3.7 25°87	4°4/28.7	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
283423	2000 SZ ₂₈₅		3 3.7 137°09	1.5/ 5.4	17		369299	2009 SR ₂₆		3 3.7 180°34	1.1/ 4.8	17	
2 1	11 20.18	+ 0 11.9	2.637	3.453	10.5	20.8	2 1	11 20.43	+ 0 37.3	2.070	2.899	12.5	21.6
2 11	11 14.64	+ 0 15.7	2.559	3.460	7.8	20.6	2 11	11 15.19	+ 1 11.2	1.991	2.900	9.2	21.4
2 21	11 7.70	+ 0 29.7	2.508	3.466	4.8	20.4	2 21	11 8.18	+ 1 59.1	1.937	2.900	5.4	21.2
3 2	10 59.93	+ 0 51.5	2.486	3.472	1.9	20.2	3 2	11 0.05	+ 2 57.2	1.911	2.900	1.6	20.9
3 12	10 52.04	+ 1 17.8	2.494	3.478	2.7	20.3	3 12	10 51.71	+ 3 59.5	1.915	2.900	3.2	21.0
3 22	10 44.71	+ 1 44.9	2.532	3.484	5.7	20.5	3 22	10 44.05	+ 4 59.8	1.948	2.899	7.1	21.3
4 1	10 38.55	+ 2 9.4	2.599	3.489	8.6	20.7	4 1	10 37.86	+ 5 52.7	2.007	2.898	10.7	21.5
4 11	10 34.02	+ 2 28.3	2.689	3.494	11.2	20.9	4 11	10 33.69	+ 6 33.9	2.089	2.897	13.8	21.7
501410	2013 YQ ₁₁₃		3 3.7 218°43	2°3/ 1.0	17		240620	2004 XS ₉₂		3 3.7 118°12	1°0/ 2.9	18	
2 1	11 18.40	+11 38.5	2.385	3.241	10.1	21.7	2 1	11 25.72	+ 7 4.7	1.712	2.561	13.7	21.3
2 11	11 13.56	+12 34.9	2.311	3.238	7.1	21.5	2 11	11 19.10	+ 7 42.7	1.655	2.577	9.8	21.1
2 21	11 7.18	+13 36.1	2.264	3.234	4.0	21.3	2 21	11 10.35	+ 8 30.0	1.623	2.593	5.3	20.9
3 2	10 59.86	+14 36.6	2.246	3.231	2.3	21.2	3 2	11 0.38	+ 9 20.4	1.618	2.609	1.1	20.6
3 12	10 52.37	+15 30.7	2.258	3.228	4.6	21.3	3 12	10 50.36	+10 6.9	1.643	2.624	4.4	20.9
3 22	10 45.46	+16 13.6	2.299	3.224	7.8	21.5	3 22	10 41.39	+10 43.7	1.695	2.638	8.8	21.1
4 1	10 39.82	+16 42.5	2.365	3.220	10.7	21.7	4 1	10 34.39	+11 7.1	1.773	2.652	12.6	21.4
4 11	10 35.95	+16 56.2	2.453	3.216	13.3	21.9	4 11	10 29.89	+11 15.4	1.872	2.665	15.8	21.7
403922	2012 AF ₈		3 3.7 133°20	1°3/ 2.5	18		275576	1999 TT ₁₆₂		3 3.7 220°73	3°4/ 7.6	17	
2 1	11 23.34	+ 7 24.5	1.918	2.765	12.5	22.0	2 1	11 18.60	- 7 15.6	2.271	3.064	12.7	21.3
2 11	11 17.25	+ 8 18.7	1.857	2.779	8.9	21.8	2 11	11 13.84	- 6 48.9	2.178	3.058	9.9	21.1
2 21	11 9.26	+ 9 21.8	1.822	2.792	4.8	21.5	2 21	11 7.43	- 6 3.1	2.109	3.051	6.8	20.9
3 2	11 0.17	+10 27.3	1.815	2.805	1.3	21.3	3 2	10 59.96	- 5 0.5	2.068	3.044	4.0	20.7
3 12	10 50.99	+11 28.2	1.838	2.817	4.4	21.6	3 12	10 52.22	- 3 45.7	2.056	3.036	3.8	20.6
3 22	10 42.68	+12 18.5	1.890	2.828	8.3	21.8	3 22	10 45.03	- 2 24.9	2.074	3.028	6.5	20.8
4 1	10 36.09	+12 54.4	1.968	2.839	11.9	22.1	4 1	10 39.13	- 1 5.1	2.118	3.020	9.8	21.0
4 11	10 31.72	+13 14.2	2.067	2.849	14.8	22.3	4 11	10 35.07	+ 0 7.8	2.188	3.011	12.8	21.1
191163	2002 JN ₁₂₅		3 3.7 197°88	0°2/ 3.9	17		319719	2006 UX ₆₀		3 3.7 149°11	1°8/ 5.4	18	
2 1	11 20.23	+ 3 40.4	2.208	3.044	11.5	20.7	2 1	11 22.09	- 0 41.3	1.894	2.720	13.6	21.1
2 11	11 14.95	+ 4 11.1	2.128	3.043	8.3	20.5	2 11	11 16.48	- 0 21.3	1.820	2.725	10.1	20.9
2 21	11 8.00	+ 4 52.6	2.073	3.041	4.7	20.3	2 21	11 8.93	+ 0 14.2	1.770	2.730	6.2	20.7
3 2	10 59.99	+ 5 40.6	2.048	3.038	0.8	20.0	3 2	11 0.19	+ 1 1.8	1.748	2.735	2.4	20.5
3 12	10 51.78	+ 6 30.0	2.052	3.036	3.2	20.2	3 12	10 51.24	+ 1 55.7	1.754	2.739	3.5	20.5
3 22	10 44.20	+ 7 15.6	2.085	3.033	7.0	20.4	3 22	10 43.07	+ 2 49.6	1.789	2.743	7.5	20.8
4 1	10 38.01	+ 7 52.8	2.145	3.030	10.4	20.6	4 1	10 36.57	+ 3 37.6	1.850	2.747	11.2	21.0
4 11	10 33.72	+ 8 18.8	2.227	3.026	13.4	20.8	4 11	10 32.28	+ 4 15.1	1.934	2.750	14.5	21.2
496184	2011 DC ₁₅		3 3.7 164°29	1°7/ 5.2	17		336864	2011 FA ₁₄₂		3 3.7 243°94	2°3/ 1.5	17	
2 1	11 21.99	+ 0 17.0	1.980	2.807	13.0	21.6	2 1	11 21.02	+11 13.0	2.013	2.870	11.6	20.8
2 11	11 16.35	+ 0 25.2	1.903	2.809	9.7	21.4	2 11	11 15.70	+11 59.2	1.938	2.865	8.2	20.6
2 21	11 8.83	+ 0 46.9	1.850	2.811	5.9	21.1	2 21	11 8.50	+12 51.2	1.889	2.860	4.6	20.4
3 2	11 0.12	+ 1 19.2	1.825	2.812	2.2	20.9	3 2	11 0.13	+13 42.8	1.868	2.854	2.4	20.2
3 12	10 51.20	+ 1 57.2	1.829	2.813	3.4	21.0	3 12	10 51.52	+14 27.7	1.876	2.849	5.0	20.4
3 22	10 43.02	+ 2 35.7	1.861	2.814	7.3	21.2	3 22	10 43.64	+15 0.8	1.912	2.843	8.7	20.6
4 1	10 36.41	+ 3 9.5	1.920	2.815	10.9	21.4	4 1	10 37.32	+15 18.9	1.973	2.837	12.2	20.8
4 11	10 31.96	+ 3 34.6	2.001	2.816	14.1	21.7	4 11	10 33.12	+15 20.9	2.055	2.831	15.1	21.0
38908	2000 SX ₁₇₀		3 3.7 258°59	3°3/ 1.3	18		386934	2011 OU		3 3.8 113°25	3°4/ 28.2	18	
2 1	11 25.99	+13 7.9	1.582	2.444	13.9	18.7	2 1	11 17.99	+15 3.6	2.490	3.350	9.6	21.0
2 11	11 19.74	+13 44.7	1.505	2.434	10.0	18.5	2 11	11 13.19	+16 28.3	2.435	3.362	6.8	20.9
2 21	11 10.94	+14 26.1	1.452	2.423	5.8	18.2	2 21	11 6.96	+17 54.7	2.408	3.374	4.2	20.7
3 2	11 0.46	+15 4.7	1.427	2.412	3.3	18.0	3 2	10 59.90	+19 16.5	2.410	3.385	3.5	20.7
3 12	10 49.60	+15 32.8	1.429	2.401	6.4	18.2	3 12	10 52.74	+20 27.4	2.443	3.397	5.5	20.8
3 22	10 39.70	+15 44.9	1.458	2.390	10.8	18.4	3 22	10 46.20	+21 23.1	2.504	3.408	8.2	21.0
4 1	10 31.92	+15 38.6	1.510	2.378	15.0	18.6	4 1	10 40.90	+22 1.3	2.591	3.419	10.8	21.2
4 11	10 26.98	+15 14.1	1.582	2.367	18.5	18.8	4 11	10 37.30	+22 21.7	2.699	3.430	12.9	21.4
13156	Mannoucyo		3 3.7 218°63	3°4/ 6.6	18		416616	2004 RX ₉₇		3 3.8 278°16	1°7/ 4.9	17	
2 1	11 24.08	- 4 39.6	1.783	2.593	15.0	19.0	2 1	11 26.54	+ 2 17.7	1.914	2.741	13.4	20.7
2 11	11 18.19	- 4 27.9	1.692	2.584	11.6	18.7	2 11	11 19.95	+ 1 57.4	1.812	2.719	10.0	20.4
2 21	11 10.03	- 3 55.8	1.625	2.575	7.7	18.5	2 21	11 11.07	+ 1 47.3	1.735	2.697	6.1	20.1
3 2	11 0.33	- 3 5.2	1.584	2.564	4.0	18.2	3 2	11 0.56	+ 1 45.7	1.686	2.674	2.2	19.8
3 12	10 50.18	- 2 1.6	1.571	2.553	4.3	18.2	3 12	10 49.50	+ 1 49.3	1.667	2.651	3.7	19.9
3 22	10 40.74	- 0 52.2	1.587	2.541	8.2	18.4	3 22	10 39.02	+ 1 54.2	1.676	2.628	8.1	20.1
4 1	10 33.07	+ 0 15.1	1.629	2.529	12.3	18.6	4 1	10 30.21	+ 1 56.6	1.712	2.604	12.3	20.3
4 11	10 27.89	+ 1 13.4	1.693	2.515	16.0	18.8	4 11	10 23.84	+ 1 52.8	1.771	2.581	15.9	20.5
497854	2006 UE ₁₀₀		3 3.7 135°56	5°3/ 11.6	17		469149	2015 FL ₃₂₅		3 3.8 277°78	5°3/ 26.6	17	
2 1	11 16.82	-17 3.5	2.824	3.548	12.1	21.7	2 1	11 19.81	+21 30.1	2.255	3.118	10.3	20.7
2 11	11 12.25	-16 45.4	2.738	3.557	10.1	21.6	2 11	11 14.72	+22 39.9	2.191	3.113	7.7	20.5
2 21	11 6.39	-16 7.1	2.675	3.566	8.0	21.5	2 21	11 7.91	+23 47.1	2.154	3.109	5.7	20.4
3 2	10 59.77	-15 9.3	2.638	3.574	6.1	21.3	3 2	11 0.05	+24 44.4	2.145	3.104	5.5	20.4
3 12	10 53.02	-13 55.2	2.630	3.582	5.3	21.3	3 12	10 52.02	+25 26.0	2.164	3.099	7.4	20.5
3 22	10 46.78	-12 29.7	2.651	3.590	6.2	21.4	3 22	10 44.69	+25 48.2	2.210	3.094	10.1	20.6
4 1	10 41.62	-10 58.7	2.701	3.598	8.1	21.5	4 1	10 38.81	+25 50.1	2.279	3.089	12.6	20.8
4 11	10 37.96	- 9 28.6	2.776	3.605	10.2	21.7	4 11	10 34.91	+25 32.8	2.368	3.085	14.9	20.9
81387	2000 GD ₇₅		3 3.7 211°80	3°8/ 28.5	18		138565	2000 QG ₇₆		3 3.8 114°99	1°1/ 4.9	18	
2 1	11 21.06	+17 34.5	2.422	3.279	9.9	19.9</							

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
284344	2006 RY ₆₃		3 3.8 182°76	0°5/ 4.3 17			334756	Leövey		3 3.8 211°22	2°0/ 5.8 17		
2 1	11 20.93	+ 3 37.0	2.534	3.363	10.5	21.0	2 1	11 20.79	- 1 25.5	2.316	3.131	11.8	21.7
2 11	11 15.27	+ 3 46.7	2.453	3.363	7.6	20.8	2 11	11 15.36	- 1 14.8	2.228	3.126	8.9	21.5
2 21	11 8.13	+ 4 4.8	2.398	3.363	4.4	20.6	2 21	11 8.28	- 0 50.8	2.165	3.121	5.6	21.3
3 2	11 0.09	+ 4 28.4	2.373	3.363	1.0	20.4	3 2	11 0.14	- 0 16.1	2.131	3.116	2.5	21.1
3 12	10 51.88	+ 4 53.9	2.378	3.362	2.8	20.5	3 12	10 51.76	+ 0 25.4	2.126	3.110	3.1	21.1
3 22	10 44.24	+ 5 17.5	2.413	3.362	6.1	20.7	3 22	10 43.94	+ 1 8.8	2.151	3.104	6.5	21.3
4 1	10 37.83	+ 5 36.1	2.476	3.361	9.2	20.9	4 1	10 37.44	+ 1 49.4	2.203	3.097	9.8	21.5
4 11	10 33.12	+ 5 47.0	2.562	3.359	11.9	21.1	4 11	10 32.79	+ 2 23.0	2.279	3.090	12.7	21.7
272970	2006 DC ₃		3 3.8 336°44	1°1/ 2.7 18			331138	2010 VD ₁₃₃		3 3.8 44°46	10°6/ 24.9 18		
2 1	11 19.21	+ 6 33.5	1.850	2.704	12.6	20.2	2 1	11 27.20	+30 6.1	1.358	2.226	15.4	19.7
2 11	11 14.51	+ 7 24.4	1.778	2.703	9.0	20.0	2 11	11 20.60	+31 29.5	1.335	2.247	12.5	19.5
2 21	11 7.88	+ 8 26.1	1.730	2.701	4.9	19.8	2 21	11 11.27	+32 35.2	1.335	2.268	10.7	19.5
3 2	11 0.06	+ 9 32.5	1.710	2.700	1.1	19.5	3 2	11 0.56	+33 12.1	1.358	2.290	11.0	19.5
3 12	10 52.01	+10 36.4	1.719	2.699	4.3	19.7	3 12	10 50.12	+33 14.3	1.405	2.312	12.9	19.7
3 22	10 44.72	+11 31.0	1.755	2.698	8.5	20.0	3 22	10 41.41	+32 42.2	1.474	2.335	15.5	19.9
4 1	10 39.04	+12 11.6	1.816	2.697	12.2	20.2	4 1	10 35.41	+31 40.8	1.562	2.358	18.1	20.2
4 11	10 35.55	+12 35.7	1.898	2.696	15.4	20.4	4 11	10 32.52	+30 17.0	1.666	2.382	20.3	20.4
265680	2005 UK ₇₃		3 3.8 183°86	1°4/ 2.3 18			168503	1999 TL ₈		3 3.8 132°21	4°2/ 29.1 18		
2 1	11 21.70	+ 8 28.4	2.054	2.903	11.7	21.1	2 1	11 26.75	+16 47.6	1.886	2.743	12.2	19.9
2 11	11 16.12	+ 9 12.7	1.980	2.904	8.3	20.9	2 11	11 19.75	+17 39.5	1.832	2.757	8.8	19.7
2 21	11 8.72	+10 4.6	1.933	2.904	4.5	20.6	2 21	11 10.71	+18 31.0	1.804	2.769	5.5	19.5
3 2	11 0.19	+10 58.7	1.914	2.903	1.5	20.4	3 2	11 0.50	+19 14.7	1.805	2.781	4.3	19.5
3 12	10 51.46	+11 48.7	1.925	2.902	4.3	20.6	3 12	10 50.26	+19 44.4	1.834	2.793	6.6	19.6
3 22	10 43.46	+12 29.3	1.964	2.901	8.1	20.8	3 22	10 41.06	+19 56.4	1.891	2.803	10.0	19.9
4 1	10 36.99	+12 56.8	2.029	2.900	11.6	21.1	4 1	10 33.77	+19 49.9	1.973	2.814	13.2	20.1
4 11	10 32.62	+13 9.5	2.115	2.898	14.5	21.3	4 11	10 28.90	+19 26.4	2.075	2.823	15.8	20.3
283212	2010 NM ₂₄		3 3.8 301°20	3°7/ 6.4 17			295343	2008 HS ₁₆		3 3.8 213°43	1°3/ 5.1 17		
2 1	11 20.83	- 3 32.3	1.463	2.295	16.6	20.5	2 1	11 20.68	- 0 10.1	2.227	3.049	12.0	21.7
2 11	11 16.37	- 3 36.1	1.369	2.273	12.9	20.2	2 11	11 15.35	+ 0 21.7	2.138	3.042	8.9	21.5
2 21	11 9.29	- 3 18.0	1.296	2.251	8.5	19.9	2 21	11 8.31	+ 1 7.6	2.074	3.035	5.3	21.2
3 2	11 0.32	- 2 39.2	1.247	2.230	4.5	19.6	3 2	11 0.16	+ 2 4.1	2.039	3.027	1.8	21.0
3 12	10 50.68	- 1 44.7	1.225	2.209	4.9	19.6	3 12	10 51.73	+ 3 5.8	2.034	3.019	3.1	21.1
3 22	10 41.73	- 0 42.5	1.228	2.188	9.4	19.8	3 22	10 43.88	+ 4 7.1	2.058	3.010	6.8	21.3
4 1	10 34.76	+ 0 18.4	1.255	2.167	14.2	20.0	4 1	10 37.38	+ 5 2.3	2.110	3.000	10.3	21.5
4 11	10 30.66	+ 1 9.9	1.302	2.147	18.5	20.2	4 11	10 32.80	+ 5 47.2	2.184	2.990	13.4	21.7
16267	Mcdermott		3 3.8 290°48	1°1/ 4.9 18			84178	2002 RO ₁₀₅		3 3.8 84°94	0°9/ 2.8 18		
2 1	11 18.52	+ 1 0.1	2.140	2.972	12.0	18.7	2 1	11 20.71	+ 7 6.6	2.246	3.090	11.1	19.7
2 11	11 13.83	+ 1 25.7	2.057	2.967	8.9	18.5	2 11	11 15.12	+ 7 47.6	2.193	3.114	7.8	19.5
2 21	11 7.45	+ 2 4.3	1.998	2.962	5.2	18.3	2 21	11 8.03	+ 8 35.6	2.167	3.137	4.2	19.3
3 2	11 0.00	+ 2 52.5	1.968	2.957	1.6	18.0	3 2	11 0.11	+ 9 25.8	2.170	3.160	0.9	19.1
3 12	10 52.32	+ 3 45.0	1.967	2.952	3.1	18.1	3 12	10 52.18	+10 12.6	2.203	3.183	3.6	19.4
3 22	10 45.24	+ 4 36.3	1.994	2.947	6.9	18.4	3 22	10 45.02	+10 51.7	2.265	3.206	7.0	19.6
4 1	10 39.53	+ 5 21.3	2.048	2.943	10.4	18.6	4 1	10 39.28	+11 19.9	2.354	3.228	10.1	19.9
4 11	10 35.74	+ 5 56.0	2.125	2.938	13.5	18.8	4 11	10 35.39	+11 35.6	2.465	3.250	12.6	20.1
464331	2016 AL ₁₁₁		3 3.8 29°94	2°8/ 1.7 18			71993	2000 WG ₁₇₃		3 3.8 93°75	1°7/ 2.3 18		
2 1	11 21.00	+ 9 57.8	1.271	2.147	15.7	20.6	2 1	11 24.29	+ 7 59.8	1.619	2.475	14.0	19.7
2 11	11 16.31	+10 53.1	1.220	2.155	11.1	20.4	2 11	11 18.14	+ 8 57.7	1.570	2.496	9.9	19.5
2 21	11 9.05	+11 57.7	1.190	2.164	6.1	20.1	2 21	11 9.86	+10 4.7	1.546	2.518	5.3	19.3
3 2	11 0.24	+13 2.5	1.186	2.174	2.8	20.0	3 2	11 0.39	+11 13.1	1.550	2.539	1.8	19.1
3 12	10 51.32	+13 57.2	1.208	2.185	6.4	20.2	3 12	10 50.93	+12 14.5	1.581	2.559	5.0	19.4
3 22	10 43.65	+14 34.6	1.254	2.196	11.2	20.5	3 22	10 42.59	+13 2.5	1.640	2.579	9.3	19.7
4 1	10 38.31	+14 50.8	1.322	2.208	15.5	20.8	4 1	10 36.25	+13 33.4	1.724	2.599	13.1	19.9
4 11	10 35.87	+14 45.6	1.408	2.221	19.1	21.0	4 11	10 32.43	+13 46.2	1.828	2.618	16.2	20.2
20493	1999 OD ₅		3 3.8 171°77	3°3/ 28.6 18			94503	2001 UW ₆₄		3 3.8 177°93	1°1/ 4.7 18		
2 1	11 19.95	+14 25.7	2.417	3.273	9.9	18.9	2 1	11 24.73	+ 1 42.4	1.648	2.485	14.8	19.9
2 11	11 14.68	+15 47.0	2.351	3.277	7.0	18.8	2 11	11 18.68	+ 2 1.4	1.573	2.486	10.9	19.6
2 21	11 7.85	+17 11.4	2.313	3.280	4.3	18.6	2 21	11 10.32	+ 2 35.6	1.522	2.487	6.4	19.4
3 2	11 0.06	+18 32.0	2.305	3.282	3.4	18.5	3 2	11 0.49	+ 3 21.0	1.499	2.488	1.7	19.1
3 12	10 52.12	+19 42.4	2.327	3.284	5.6	18.7	3 12	10 50.37	+ 4 10.8	1.503	2.488	3.9	19.2
3 22	10 44.79	+20 37.8	2.378	3.285	8.5	18.8	3 22	10 41.16	+ 4 58.2	1.535	2.488	8.6	19.5
4 1	10 38.77	+21 15.6	2.454	3.286	11.2	19.0	4 1	10 33.90	+ 5 37.0	1.592	2.487	12.8	19.7
4 11	10 34.55	+21 35.4	2.552	3.286	13.5	19.2	4 11	10 29.25	+ 6 3.3	1.670	2.486	16.4	20.0
354872	2006 BU ₃₉		3 3.8 26°08	2°1/ 1.9 18			412670	2014 OJ ₁₉₈		3 3.8 145°10	0°9/ 4.5 18		
2 1	11 16.82	+ 5 6.8	1.070	1.951	17.6	20.3	2 1	11 27.65	+ 3 30.4	1.880	2.711	13.5	21.1
2 11	11 13.65	+ 6 48.0	1.021	1.959	12.4	20.0	2 11	11 20.46	+ 3 25.9	1.809	2.719	9.9	20.9
2 21	11 7.70	+ 8 50.0	0.992	1.968	6.7	19.8	2 21	11 11.17	+ 3 31.9	1.762	2.727	5.7	20.7
3 2	11 0.05	+10 59.3	0.988	1.978	2.1	19.5	3 2	11 0.61	+ 3 45.1	1.744	2.734	1.5	20.4
3 12	10 52.24	+12 59.8	1.009	1.989	6.6	19.8	3 12	10 49.88	+ 4 1.2	1.756	2.741	3.5	20.6
3 22	10 45.72	+14 38.2	1.053	2.001	12.1	20.1	3 22	10 40.08	+ 4 15.8	1.797	2.747	7.8	20.8
4 1	10 41.66	+15 46.6	1.118	2.014	17.0	20.5	4 1	10 32.11	+ 4 25.1	1.865	2.753	11.6	21.1
4 11	10 40.67	+16 23.4	1.200	2.027	20.9	20.8	4 11	10 26.56	+ 4 26.2	1.955	2.758	14.8	21.3
345624	2006 SY ₂₆₅		3 3.8 191°99	1°9/ 6.2 17			503543	2016 FD ₃₁		3 3.8 261°46	1°1/ 2.7 17		
2 1	11 18.11	- 2 38.5	2.785	3.591	10.3	21.5	2 1						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
323879	2005 SA ₂₀₄		3 3.8	4°56'	3°4'	7.3 18							
2 1	11 17.56	- 7 8.5	1.715	2.527	15.4	20.8							
2 11	11 13.49	- 6 21.2	1.636	2.527	11.9	20.6							
2 21	11 7.41	- 5 8.3	1.579	2.527	8.0	20.4							
3 2	11 0.05	- 3 33.6	1.548	2.528	4.3	20.1							
3 12	10 52.42	- 1 44.9	1.544	2.528	4.1	20.1							
3 22	10 45.55	+ 0 7.9	1.569	2.528	7.8	20.3							
4 1	10 40.36	+ 1 54.6	1.620	2.529	11.8	20.6							
4 11	10 37.44	+ 3 27.4	1.694	2.530	15.3	20.8							
117190	2004 RQ ₁₃₈		3 3.8	156°49'	4°7'	9.1 18							
2 1	11 18.88	-11 8.2	2.111	2.888	14.1	20.3							
2 11	11 14.12	-10 47.6	2.028	2.892	11.3	20.1							
2 21	11 7.64	-10 4.4	1.968	2.895	8.3	20.0							
3 2	11 0.08	- 9 0.2	1.933	2.898	5.5	19.8							
3 12	10 52.31	- 7 39.7	1.928	2.901	4.9	19.8							
3 22	10 45.18	- 6 9.9	1.950	2.903	7.0	19.9							
4 1	10 39.48	- 4 38.6	2.000	2.905	10.1	20.1							
4 11	10 35.75	- 3 13.1	2.074	2.907	13.0	20.3							
27052	Katebush		3 3.8	106°39'	2°9'	1.4 18							
2 1	11 23.97	+ 9 55.8	1.424	2.289	15.0	18.7							
2 11	11 18.28	+11 5.9	1.369	2.300	10.6	18.5							
2 21	11 10.11	+12 25.4	1.338	2.310	5.8	18.2							
3 2	11 0.46	+13 44.5	1.333	2.320	2.9	18.1							
3 12	10 50.68	+14 53.1	1.356	2.330	6.3	18.3							
3 22	10 42.07	+15 43.7	1.404	2.339	10.9	18.6							
4 1	10 35.70	+16 12.4	1.476	2.348	15.0	18.8							
4 11	10 32.15	+16 18.9	1.566	2.357	18.4	19.1							
150843	2001 SB ₅₈		3 3.8	79°93'	3°0'	1.4 18							
2 1	11 26.25	+13 13.0	1.730	2.589	13.1	19.7							
2 11	11 19.40	+13 48.0	1.684	2.611	9.3	19.5							
2 21	11 10.51	+14 25.3	1.663	2.633	5.3	19.3							
3 2	11 0.51	+14 58.4	1.670	2.655	3.0	19.2							
3 12	10 50.58	+15 21.4	1.705	2.676	5.6	19.4							
3 22	10 41.81	+15 30.4	1.768	2.698	9.4	19.7							
4 1	10 35.04	+15 24.0	1.855	2.719	12.9	20.0							
4 11	10 30.75	+15 3.0	1.963	2.740	15.7	20.2							
165328	2000 UY ₉₂		3 3.8	259°28'	3°7'	6.7 18							
2 1	11 22.77	- 4 39.9	1.693	2.509	15.4	20.1							
2 11	11 17.47	- 4 37.6	1.598	2.493	12.0	19.8							
2 21	11 9.79	- 4 14.6	1.525	2.476	8.1	19.6							
3 2	11 0.46	- 3 32.1	1.478	2.459	4.4	19.3							
3 12	10 50.57	- 2 35.0	1.459	2.441	4.6	19.3							
3 22	10 41.33	- 1 30.6	1.467	2.423	8.5	19.4							
4 1	10 33.88	- 0 26.8	1.500	2.405	12.8	19.6							
4 11	10 29.00	+ 0 29.0	1.555	2.386	16.7	19.8							
432118	2009 BF ₂₃		3 3.8	60°42'	0°3'	3.5 17							
2 1	11 21.55	+ 6 29.4	2.096	2.941	11.7	21.4							
2 11	11 15.93	+ 6 43.3	2.029	2.948	8.4	21.2							
2 21	11 8.59	+ 7 4.9	1.986	2.955	4.6	20.9							
3 2	11 0.23	+ 7 30.2	1.972	2.963	0.7	20.7							
3 12	10 51.76	+ 7 54.6	1.988	2.971	3.4	20.9							
3 22	10 44.05	+ 8 13.9	2.032	2.979	7.3	21.1							
4 1	10 37.84	+ 8 25.0	2.102	2.986	10.7	21.4							
4 11	10 33.65	+ 8 25.9	2.195	2.994	13.5	21.6							
23151	Georgehotz		3 3.8	85°08'	0°0'	3.7 18							
2 1	11 20.15	+ 4 25.3	2.041	2.883	12.1	18.9							
2 11	11 15.01	+ 4 53.8	1.969	2.887	8.7	18.7							
2 21	11 8.12	+ 5 32.7	1.923	2.891	4.9	18.4							
3 2	11 0.17	+ 6 17.7	1.904	2.895	0.8	18.1							
3 12	10 52.05	+ 7 3.2	1.915	2.899	3.4	18.4							
3 22	10 44.65	+ 7 43.9	1.954	2.903	7.3	18.6							
4 1	10 38.75	+ 8 15.6	2.019	2.906	10.9	18.8							
4 11	10 34.86	+ 8 35.3	2.106	2.910	13.9	19.0							
241716	2000 UO ₁₀		3 3.8	177°60'	1°6'	5.4 17							
2 1	11 23.04	- 1 7.5	2.098	2.915	12.8	21.8							
2 11	11 17.08	- 0 34.7	2.017	2.918	9.5	21.6							
2 21	11 9.30	+ 0 13.5	1.961	2.920	5.8	21.4							
3 2	11 0.36	+ 1 13.5	1.934	2.921	2.1	21.1							
3 12	10 51.19	+ 2 19.4	1.936	2.921	3.2	21.2							
3 22	10 42.72	+ 3 24.8	1.969	2.920	7.1	21.4							
4 1	10 35.76	+ 4 23.8	2.029	2.919	10.7	21.6							
4 11	10 30.87	+ 5 12.0	2.111	2.917	13.8	21.8							
366404	2001 SY ₁₄₅		3 3.8	199°32'	1°4'	5.4 16							
2 1	11 20.92	- 1 3.5	2.443	3.257	11.3	22.9							
2 11	11 15.40	- 0 28.5	2.353	3.252	8.4	22.7							
2 21	11 8.31	+ 0 20.3	2.289	3.247	5.1	22.5							
3 2	11 0.21	+ 1 19.4	2.255	3.242	1.9	22.2							
3 12	10 51.87	+ 2 24.0	2.251	3.235	2.9	22.3							
3 22	10 44.07	+ 3 28.5	2.277	3.228	6.3	22.5							
4 1	10 37.51	+ 4 27.7	2.331	3.220	9.6	22.7							
4 11	10 32.71	+ 5 17.6	2.409	3.211	12.4	22.9							
376182	2011 CB ₃₅		3 3.8	286°77'	2°2'	5.6 17							
2 1	11 21.95	- 0 26.8	1.842	2.671	13.8	20.9							
2 11	11 16.62	- 0 29.2	1.754	2.660	10.4	20.6							
2 21	11 9.19	- 0 16.9	1.690	2.649	6.5	20.4							
3 2	11 0.36	+ 0 7.8	1.653	2.639	2.8	20.1							
3 12	10 51.16	+ 0 40.5	1.644	2.628	3.7	20.1							
3 22	10 42.64	+ 1 15.7	1.663	2.618	7.8	20.3							
4 1	10 35.77	+ 1 47.7	1.707	2.608	11.8	20.6							
4 11	10 31.22	+ 2 12.0	1.773	2.597	15.3	20.8							
138713	2000 SK ₁₁₇		3 3.8	85°73'	1°0'	2.9 18							
2 1	11 23.90	+ 5 49.2	1.506	2.361	14.9	20.0							
2 11	11 18.00	+ 6 44.1	1.457	2.382	10.6	19.8							
2 21	11 9.86	+ 7 51.1	1.431	2.402	5.7	19.5							
3 2	11 0.43	+ 9 2.6	1.432	2.423	1.1	19.3							
3 12	10 51.00	+10 9.6	1.461	2.443	4.7	19.6							
3 22	10 42.74	+11 4.6	1.517	2.462	9.4	19.9							
4 1	10 36.59	+11 42.9	1.598	2.482	13.4	20.2							
4 11	10 33.06	+12 2.9	1.698	2.501	16.7	20.4							
268641	2006 DR<												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
501209	2013 <i>TV</i> ₁₄₁		3 3.8 58°09	2°2/ 1.8	17		349299	2007 <i>TE</i> ₄₄₈		3 3.8 99°06	2°9/29.9	18	
2 1	11 21.64	+10 40.4	1.873	2.732	12.3	21.4	2 1	11 21.96	+14 23.7	2.225	3.081	10.7	20.8
2 11	11 16.22	+11 20.4	1.807	2.734	8.7	21.2	2 11	11 16.17	+14 59.5	2.162	3.088	7.6	20.6
2 21	11 8.86	+12 6.3	1.765	2.736	4.8	20.9	2 21	11 8.73	+15 36.7	2.126	3.094	4.5	20.4
3 2	11 0.31	+12 52.0	1.751	2.739	2.2	20.8	3 2	11 0.32	+16 10.2	2.118	3.100	2.9	20.3
3 12	10 51.60	+13 31.1	1.766	2.741	4.9	20.9	3 12	10 51.82	+16 34.9	2.140	3.107	5.1	20.4
3 22	10 43.72	+13 58.6	1.808	2.744	8.8	21.2	3 22	10 44.07	+16 47.4	2.190	3.113	8.2	20.6
4 1	10 37.52	+14 11.4	1.875	2.747	12.4	21.4	4 1	10 37.81	+16 46.2	2.266	3.119	11.2	20.8
4 11	10 33.57	+14 8.8	1.963	2.749	15.4	21.6	4 11	10 33.51	+16 31.0	2.363	3.125	13.7	21.0
272580	2005 <i>VU</i> ₂₇		3 3.8 182°30	0°0/ 3.6	17		492861	2014 <i>QY</i> ₃₅₈		3 3.8 159°05	0°1/ 3.9	18	
2 1	11 21.82	+ 4 31.2	2.023	2.863	12.3	21.7	2 1	11 24.20	+ 4 4.2	2.140	2.972	12.0	22.5
2 11	11 16.26	+ 5 2.2	1.947	2.864	8.9	21.5	2 11	11 17.84	+ 4 34.3	2.068	2.981	8.7	22.3
2 21	11 8.87	+ 5 44.0	1.896	2.864	5.0	21.3	2 21	11 9.69	+ 5 14.7	2.022	2.988	4.9	22.1
3 2	11 0.32	+ 6 32.0	1.873	2.864	0.7	21.0	3 2	11 0.47	+ 6 1.1	2.004	2.995	0.8	21.8
3 12	10 51.56	+ 7 20.4	1.880	2.863	3.5	21.2	3 12	10 51.10	+ 6 47.9	2.017	3.001	3.3	22.0
3 22	10 43.51	+ 8 3.7	1.915	2.863	7.6	21.4	3 22	10 42.47	+ 7 30.1	2.060	3.006	7.2	22.3
4 1	10 37.01	+ 8 37.5	1.977	2.861	11.2	21.7	4 1	10 35.38	+ 8 3.4	2.129	3.010	10.7	22.5
4 11	10 32.61	+ 8 58.7	2.061	2.860	14.3	21.9	4 11	10 30.36	+ 8 25.2	2.222	3.014	13.6	22.7
108933	2001 <i>PD</i> ₂₃		3 3.8 269°69	0°5/ 4.2	17		340672	2006 <i>RJ</i> ₄₂		3 3.8 10°05	1°6/ 2.3	17	
2 1	11 22.37	+ 4 26.7	2.211	3.046	11.6	19.8	2 1	11 20.09	+ 9 49.6	2.035	2.891	11.6	20.3
2 11	11 16.61	+ 4 29.6	2.121	3.035	8.4	19.5	2 11	11 15.01	+10 18.7	1.966	2.892	8.2	20.0
2 21	11 9.07	+ 4 41.3	2.057	3.024	4.8	19.3	2 21	11 8.16	+10 53.5	1.922	2.893	4.5	19.8
3 2	11 0.36	+ 4 58.6	2.022	3.012	1.0	19.0	3 2	11 0.24	+11 29.2	1.906	2.895	1.6	19.6
3 12	10 51.36	+ 5 17.8	2.016	3.001	3.2	19.1	3 12	10 52.17	+12 0.1	1.919	2.897	4.3	19.8
3 22	10 42.96	+ 5 34.8	2.040	2.989	7.0	19.3	3 22	10 44.84	+12 22.1	1.959	2.899	8.0	20.0
4 1	10 35.96	+ 5 46.1	2.090	2.978	10.6	19.5	4 1	10 39.02	+12 32.0	2.026	2.901	11.4	20.2
4 11	10 30.95	+ 5 49.0	2.163	2.966	13.6	19.7	4 11	10 35.23	+12 28.8	2.113	2.904	14.3	20.4
405244	2003 <i>SV</i> ₁₅₄		3 3.8 185°56	1°4/ 5.3	17		467170	2016 <i>EH</i> ₁₀₉		3 3.8 249°04	3°7/29.2	17	
2 1	11 23.02	- 0 35.8	2.269	3.084	12.0	22.4	2 1	11 22.69	+14 22.4	1.963	2.823	11.7	21.1
2 11	11 16.99	- 0 4.9	2.185	3.085	8.9	22.1	2 11	11 17.11	+15 25.7	1.881	2.808	8.4	20.9
2 21	11 9.23	+ 0 39.9	2.125	3.084	5.4	21.9	2 21	11 9.47	+16 33.4	1.825	2.793	5.1	20.7
3 2	11 0.38	+ 1 35.2	2.095	3.083	1.9	21.7	3 2	11 0.47	+17 38.1	1.797	2.777	3.8	20.5
3 12	10 51.30	+ 2 35.8	2.096	3.080	3.0	21.8	3 12	10 51.10	+18 32.1	1.798	2.761	6.3	20.7
3 22	10 42.84	+ 3 35.8	2.127	3.077	6.7	22.0	3 22	10 42.42	+19 9.8	1.827	2.745	10.0	20.8
4 1	10 35.78	+ 4 30.1	2.185	3.073	10.2	22.2	4 1	10 35.37	+19 28.3	1.880	2.728	13.4	21.0
4 11	10 30.66	+ 5 14.5	2.267	3.068	13.1	22.4	4 11	10 30.61	+19 27.2	1.953	2.710	16.4	21.2
317851	2003 <i>TC</i> ₁₅		3 3.8 189°47	0°7/ 3.1	18		226793	2004 <i>RT</i> ₁₈₂		3 3.8 139°15	3°3/ 7.6	18	
2 1	11 22.94	+ 5 35.5	2.027	2.868	12.2	21.8	2 1	11 18.85	- 7 31.4	2.145	2.940	13.3	20.5
2 11	11 17.10	+ 6 25.8	1.949	2.867	8.8	21.5	2 11	11 14.07	- 6 55.1	2.066	2.946	10.4	20.3
2 21	11 9.36	+ 7 26.9	1.897	2.866	4.8	21.3	2 21	11 7.63	- 5 58.7	2.011	2.953	7.1	20.1
3 2	11 0.41	+ 8 33.4	1.873	2.864	0.9	21.0	3 2	11 0.17	- 4 45.0	1.983	2.960	4.0	19.9
3 12	10 51.22	+ 9 38.5	1.880	2.861	3.9	21.2	3 12	10 52.53	- 3 19.6	1.985	2.966	3.8	19.9
3 22	10 42.74	+10 35.7	1.915	2.857	8.0	21.5	3 22	10 45.55	- 1 49.8	2.016	2.971	6.6	20.1
4 1	10 35.82	+11 20.5	1.977	2.853	11.6	21.7	4 1	10 39.97	- 0 22.8	2.074	2.977	9.9	20.3
4 11	10 31.05	+11 50.0	2.061	2.847	14.7	21.9	4 11	10 36.29	+ 0 55.1	2.157	2.982	12.9	20.5
300174	2006 <i>WM</i> ₁₁		3 3.8 180°20	7°5/14.1	18		385112	2012 <i>VC</i> ₁₀₇		3 3.8 211°45	1°9/ 5.9	17	
2 1	11 18.94	-23 38.3	2.909	3.578	12.9	20.6	2 1	11 18.74	- 1 50.1	2.543	3.355	10.9	21.6
2 11	11 13.92	-24 7.3	2.816	3.579	11.3	20.5	2 11	11 13.81	- 1 32.6	2.455	3.351	8.2	21.4
2 21	11 7.48	-24 15.5	2.744	3.579	9.7	20.4	2 21	11 7.43	- 1 2.5	2.392	3.347	5.2	21.2
3 2	11 0.12	-24 1.4	2.695	3.579	8.3	20.3	3 2	11 0.14	+ 0 22.1	2.358	3.343	2.3	21.0
3 12	10 52.53	-23 26.0	2.672	3.579	7.5	20.2	3 12	10 52.64	+ 0 24.5	2.354	3.338	2.8	21.1
3 22	10 45.39	-22 32.4	2.677	3.578	7.8	20.3	3 22	10 45.65	+ 1 12.8	2.380	3.333	5.9	21.3
4 1	10 39.35	-21 25.4	2.707	3.578	9.0	20.3	4 1	10 39.81	+ 1 58.3	2.433	3.328	9.0	21.4
4 11	10 34.91	-20 11.4	2.762	3.577	10.7	20.4	4 11	10 35.61	+ 2 37.1	2.511	3.323	11.7	21.6
221226	2005 <i>UQ</i> ₁₃₈		3 3.8 40°91	1°0/ 4.7	18		94956	2001 <i>YD</i> ₉₂		3 3.8 131°53	1°3/ 2.7	18	
2 1	11 20.03	+ 1 19.1	1.687	2.530	14.2	20.4	2 1	11 25.70	+ 7 27.7	1.826	2.672	13.1	20.0
2 11	11 15.24	+ 1 49.7	1.618	2.534	10.4	20.1	2 11	11 19.07	+ 8 14.2	1.766	2.688	9.3	19.8
2 21	11 8.39	+ 2 36.0	1.573	2.539	6.1	19.9	2 21	11 10.42	+ 9 9.6	1.733	2.703	5.1	19.6
3 2	11 0.27	+ 3 33.3	1.554	2.543	1.6	19.6	3 2	11 0.59	+10 7.5	1.727	2.717	1.3	19.3
3 12	10 51.94	+ 4 34.7	1.563	2.548	3.6	19.7	3 12	10 50.69	+11 0.7	1.752	2.731	4.4	19.6
3 22	10 44.47	+ 5 32.7	1.599	2.554	8.1	20.0	3 22	10 41.77	+11 43.5	1.805	2.744	8.6	19.9
4 1	10 38.76	+ 6 21.3	1.660	2.559	12.2	20.3	4 1	10 34.69	+12 12.2	1.883	2.756	12.3	20.1
4 11	10 35.41	+ 6 56.1	1.743	2.565	15.6	20.5	4 11	10 29.99	+12 25.3	1.983	2.767	15.3	20.3
281843	2010 <i>CS</i> ₂₄		3 3.8 63°58	0°6/ 3.2	17		467500	2006 <i>WU</i> ₁₉₉		3 3.8 173°56	7°2/21.2	18	
2 1	11 19.44	+ 5 39.0	1.977	2.825	12.2	21.2	2 1	11 23.21	+36 25.2	3.153	3.978	8.7	22.0
2 11	11 14.58	+ 6 21.9	1.906	2.828	8.7	21.0	2 11	11 16.87	+37 35.1	3.112	3.981	7.6	21.9
2 21	11 7.94	+ 7 15.3	1.860	2.830	4.8	20.7	2 21	11 9.05	+38 33.7	3.098	3.984	7.2	21.9
3 2	11 0.19	+ 8 13.7	1.842	2.832	0.8	20.4	3 2	11 0.38	+39 15.4	3.111	3.986	7.6	21.9
3 12	10 52.27	+ 9 10.9	1.853	2.835	3.8	20.7	3 12	10 51.64	+39 36.8	3.151	3.987	8.7	22.0
3 22	10 45.07	+10 0.7	1.892	2.837	7.8	20.9	3 22	10 43.57	+39 37.0	3.215	3.988	10.1	22.1
4 1	10 39.39	+10 38.8	1.957	2.840	11.4	21.1	4 1	10 36.82	+39 17.0	3.300	3.989	11.5	22.2
4 11	10 35.76	+11 2.6	2.043	2.842	14.4	21.3	4 11	10 31.84	+38 39.3	3.404	3.989	12.7	22.3
29593	1998 <i>FA</i> ₁₂₉		3 3.8 141°18	0°4/ 3.4	18		6133	Royal dutchastro		3 3.8 258°29	1°2/ 4.9	17	

EPHEMERIDES

3 3.8

3 3.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
393800	2005 <i>QC</i> ₂₀		3 3.8 122°15	0°0/ 3.8 18			48193	2001 <i>HO</i> ₅₈		3 3.8 124°18	3°0/28.6 18		
2 1	11 24.72	+ 2 40.9	1.600	2.441	14.9	21.5	2 1	11 19.06	+13 27.1	2.597	3.452	9.4	19.3
2 11	11 18.59	+ 3 36.3	1.541	2.458	10.7	21.3	2 11	11 13.95	+15 0.7	2.543	3.468	6.6	19.1
2 21	11 10.24	+ 4 47.4	1.506	2.474	6.0	21.0	2 21	11 7.46	+16 37.2	2.517	3.484	4.0	19.0
3 2	11 0.58	+ 6 7.2	1.499	2.490	0.9	20.7	3 2	11 0.17	+18 10.0	2.522	3.499	3.1	18.9
3 12	10 50.82	+ 7 26.7	1.521	2.505	4.1	21.0	3 12	10 52.78	+19 32.8	2.558	3.514	5.1	19.1
3 22	10 42.13	+ 8 37.7	1.570	2.519	8.8	21.3	3 22	10 45.98	+20 40.8	2.623	3.529	7.8	19.3
4 1	10 35.45	+ 9 34.0	1.645	2.532	12.9	21.6	4 1	10 40.40	+21 31.4	2.715	3.543	10.4	19.5
4 11	10 31.35	+10 12.5	1.741	2.545	16.3	21.8	4 11	10 36.45	+22 4.3	2.828	3.556	12.5	19.7
151814	2003 <i>FP</i> ₈₇		3 3.8 275°84	0°4/ 3.5 17			522506	2016 <i>EO</i> ₂₃₃		3 3.8 197°52	1°7/ 5.7 17		
2 1	11 24.63	+ 6 48.3	1.894	2.739	12.8	19.9	2 1	11 19.32	- 1 58.4	2.250	3.067	12.0	21.7
2 11	11 18.58	+ 6 55.5	1.802	2.721	9.3	19.7	2 11	11 14.40	- 1 20.0	2.165	3.065	9.0	21.5
2 21	11 10.34	+ 7 10.9	1.734	2.703	5.2	19.4	2 21	11 7.83	- 0 26.1	2.105	3.062	5.6	21.3
3 2	11 0.63	+ 7 30.7	1.694	2.685	0.8	19.0	3 2	11 0.24	+ 0 39.8	2.073	3.059	2.2	21.1
3 12	10 50.47	+ 7 49.9	1.684	2.667	3.9	19.2	3 12	10 52.41	+ 1 52.2	2.071	3.056	3.0	21.1
3 22	10 40.98	+ 8 3.8	1.702	2.648	8.4	19.4	3 22	10 45.16	+ 3 4.9	2.098	3.052	6.6	21.3
4 1	10 33.17	+ 8 8.8	1.745	2.630	12.4	19.7	4 1	10 39.23	+ 4 11.8	2.153	3.048	10.0	21.5
4 11	10 27.73	+ 8 2.5	1.810	2.611	15.9	19.8	4 11	10 35.14	+ 5 8.4	2.232	3.043	13.0	21.7
90197	2003 <i>AW</i> ₅₈		3 3.8 48°48	6°3/26.2 18			320517	2007 <i>YT</i> ₈		3 3.8 313°14	0°2/ 3.7 18		
2 1	11 19.48	+18 12.8	1.584	2.461	13.1	19.1	2 1	11 23.84	+ 5 43.2	1.530	2.383	14.8	20.5
2 11	11 15.04	+20 16.1	1.536	2.468	9.5	18.9	2 11	11 18.27	+ 5 56.8	1.455	2.378	10.7	20.3
2 21	11 8.35	+22 20.0	1.512	2.474	6.8	18.8	2 21	11 10.24	+ 6 22.0	1.404	2.374	6.0	20.0
3 2	11 0.30	+24 12.3	1.517	2.481	6.7	18.8	3 2	11 0.63	+ 6 53.9	1.379	2.369	0.9	19.6
3 12	10 52.07	+25 42.0	1.548	2.488	9.4	18.9	3 12	10 50.67	+ 7 26.0	1.381	2.365	4.4	19.9
3 22	10 44.84	+26 43.0	1.603	2.495	12.8	19.2	3 22	10 41.66	+ 7 51.9	1.409	2.361	9.3	20.1
4 1	10 39.55	+27 13.6	1.680	2.502	15.9	19.4	4 1	10 34.70	+ 8 6.9	1.462	2.357	13.8	20.4
4 11	10 36.82	+27 15.9	1.775	2.510	18.6	19.6	4 11	10 30.48	+ 8 8.2	1.535	2.353	17.5	20.6
501042	2013 <i>RD</i> ₈₂		3 3.8 187°09	0°5/ 4.3 17			216930	1998 <i>SD</i> ₆₉		3 3.8 238°61	3°3/ 6.3 18		
2 1	11 21.09	+ 2 39.2	2.078	2.912	12.2	22.0	2 1	11 26.00	- 3 14.5	1.748	2.562	15.1	21.1
2 11	11 15.73	+ 3 8.6	1.999	2.912	8.9	21.8	2 11	11 19.79	- 3 19.0	1.652	2.547	11.6	20.8
2 21	11 8.60	+ 3 50.2	1.946	2.912	5.1	21.6	2 21	11 11.14	- 3 5.3	1.579	2.531	7.7	20.6
3 2	11 0.34	+ 4 39.7	1.921	2.911	1.1	21.3	3 2	11 0.80	- 2 34.8	1.533	2.515	3.9	20.3
3 12	10 51.86	+ 5 31.7	1.925	2.910	3.2	21.5	3 12	10 49.87	- 1 51.9	1.515	2.498	4.4	20.3
3 22	10 44.06	+ 6 20.4	1.958	2.908	7.2	21.7	3 22	10 39.62	- 1 2.8	1.526	2.480	8.5	20.5
4 1	10 37.74	+ 7 1.0	2.018	2.907	10.8	21.9	4 1	10 31.16	- 0 14.6	1.562	2.461	12.8	20.7
4 11	10 33.44	+ 7 30.1	2.100	2.905	13.9	22.1	4 11	10 25.32	+ 0 26.2	1.620	2.442	16.6	20.9
423757	2006 <i>DZ</i> ₄₅		3 3.8 80°59	0°2/ 3.6 17			411427	2010 <i>VR</i> ₂₁₂		3 3.8 77°97	3°9/ 7.8 18		
2 1	11 19.27	+ 4 0.4	1.934	2.779	12.5	21.3	2 1	11 18.63	- 8 30.6	1.686	2.491	15.9	21.3
2 11	11 14.50	+ 4 47.2	1.864	2.784	9.0	21.1	2 11	11 14.26	- 7 43.7	1.614	2.500	12.4	21.1
2 21	11 7.92	+ 5 46.2	1.819	2.788	5.0	20.8	2 21	11 7.88	- 6 30.3	1.565	2.509	8.5	20.9
3 2	11 0.23	+ 6 52.0	1.802	2.793	0.7	20.5	3 2	11 0.26	- 4 54.1	1.541	2.518	4.8	20.7
3 12	10 52.37	+ 7 57.9	1.814	2.798	3.6	20.8	3 12	10 52.44	- 3 3.2	1.545	2.527	4.4	20.6
3 22	10 45.26	+ 8 57.3	1.854	2.802	7.7	21.0	3 22	10 45.47	- 1 7.9	1.577	2.536	7.7	20.9
4 1	10 39.68	+ 9 45.0	1.920	2.807	11.4	21.3	4 1	10 40.23	+ 0 41.6	1.635	2.545	11.6	21.1
4 11	10 36.18	+10 18.0	2.008	2.811	14.5	21.5	4 11	10 37.30	+ 2 17.2	1.716	2.554	15.1	21.3
293335	2007 <i>DW</i> ₇₉		3 3.8 95°45	1°0/ 2.8 18			470899	2009 <i>CH</i> ₃₆		3 3.8 137°76	3°5/ 28.5 17		
2 1	11 19.90	+ 5 14.7	1.819	2.669	13.0	21.2	2 1	11 18.63	+14 50.8	2.285	3.147	10.2	21.2
2 11	11 14.99	+ 6 23.3	1.757	2.680	9.2	21.0	2 11	11 13.86	+16 6.9	2.222	3.150	7.3	21.1
2 21	11 8.20	+ 7 44.2	1.721	2.692	5.0	20.7	2 21	11 7.51	+17 25.5	2.186	3.153	4.5	20.9
3 2	11 0.27	+ 9 10.1	1.712	2.703	1.0	20.5	3 2	11 0.19	+18 40.1	2.179	3.156	3.6	20.8
3 12	10 52.22	+10 32.7	1.733	2.714	4.2	20.7	3 12	10 52.73	+19 43.9	2.202	3.159	5.8	21.0
3 22	10 45.01	+11 44.8	1.782	2.725	8.4	21.0	3 22	10 45.92	+20 32.4	2.252	3.162	8.7	21.2
4 1	10 39.46	+12 41.0	1.856	2.735	12.1	21.3	4 1	10 40.45	+21 2.9	2.328	3.165	11.5	21.3
4 11	10 36.09	+13 18.8	1.952	2.746	15.2	21.5	4 11	10 36.82	+21 15.4	2.424	3.168	13.9	21.5
175018	2004 <i>FC</i> ₂₀		3 3.8 321°95	1°7/ 5.5 17			236935	2007 <i>TE</i> ₂₅₄		3 3.8 122°08	3°4/ 7.9 18		
2 1	11 17.54	- 0 38.6	1.957	2.789	13.0	19.6	2 1	11 17.55	- 7 52.4	2.339	3.130	12.5	20.6
2 11	11 13.37	- 0 15.3	1.870	2.778	9.7	19.4	2 11	11 13.06	- 7 25.5	2.258	3.135	9.8	20.4
2 21	11 7.36	+ 0 23.9	1.806	2.767	6.0	19.2	2 21	11 7.05	- 6 40.2	2.201	3.140	6.8	20.2
3 2	11 0.16	+ 1 15.5	1.769	2.756	2.3	18.9	3 2	11 0.13	- 5 38.8	2.171	3.145	4.1	20.0
3 12	10 52.65	+ 2 14.2	1.761	2.746	3.3	18.9	3 12	10 53.04	- 4 26.1	2.171	3.150	3.7	20.0
3 22	10 45.75	+ 3 13.5	1.780	2.736	7.3	19.2	3 22	10 46.53	- 3 8.0	2.200	3.155	6.2	20.2
4 1	10 40.30	+ 4 7.2	1.825	2.727	11.1	19.4	4 1	10 41.27	- 1 50.8	2.256	3.159	9.2	20.4
4 11	10 36.89	+ 4 50.4	1.892	2.717	14.4	19.6	4 11	10 37.74	- 0 40.4	2.337	3.164	11.9	20.6
130498	2000 <i>QW</i> ₁₂₈		3 3.8 232°26	2°5/ 5.8 18			9305	Hazard		3 3.8 210°72	2°1/ 2.0 18		
2 1	11 24.25	- 1 27.2	1.695	2.520	15.0	20.0	2 1	11 25.07	+ 8 42.2	1.670	2.524	13.7	18.6
2 11	11 18.45	- 1 24.1	1.609	2.513	11.3	19.7	2 11	11 19.06	+ 9 42.6	1.593	2.518	9.8	18.4
2 21	11 10.33	- 1 3.7	1.547	2.504	7.2	19.5	2 21	11 10.67	+10 53.6	1.540	2.511	5.4	18.1
3 2	11 0.64	- 0 28.4	1.511	2.496	3.2	19.2	3 2	11 0.72	+12 7.7	1.515	2.504	2.1	17.8
3 12	10 50.52	+ 0 16.5	1.503	2.487	4.0	19.2	3 12	10 50.39	+13 15.9	1.519	2.496	5.4	18.0
3 22	10 41.17	+ 1 4.4	1.522	2.478	8.4	19.5	3 22	10 40.92	+14 10.6	1.551	2.487	10.0	18.3
4 1	10 33.67	+ 1 48.7	1.567	2.468	12.6	19.7	4 1	10 33.39	+14 47.1	1.607	2.477	14.1	18.5
4 11	10 28.74	+ 2 23.6	1.634	2.458	16.4	19.9	4 11	10 28.50	+15 3.6	1.683	2.467	17.6	18.7
152633	1997 <i>GO</i> ₃₅		3 3.8 208°15	2°4/ 1.7 18			368244	2001 <i>VJ</i> ₁₀₅		3 3.8 144°65	6°0/ 10.3 18		
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
239689	2008 YC ₁₀₄		3 3.8 288°46	1°1/ 2.7 17			416235	2003 BZ ₅		3 3.8 344°27	10°4/22.5 16		
2 1	11 18.98	+ 7 32.2	2.136	2.987	11.3	20.7	2 1	11 13.11	+22 58.8	1.101	2.002	15.5	19.5
2 11	11 14.27	+ 8 13.5	2.053	2.976	8.1	20.5	2 11	11 11.41	+25 29.9	1.045	1.983	12.2	19.2
2 21	11 7.83	+ 9 3.3	1.995	2.966	4.4	20.2	2 21	11 6.78	+28 0.1	1.011	1.966	10.4	19.1
3 2	11 0.27	+ 9 56.8	1.966	2.956	1.1	20.0	3 2	11 0.15	+30 10.6	1.000	1.951	11.5	19.1
3 12	10 52.46	+10 48.0	1.966	2.945	3.9	20.2	3 12	10 53.05	+31 45.0	1.011	1.938	14.7	19.2
3 22	10 45.24	+11 31.5	1.994	2.935	7.7	20.4	3 22	10 47.08	+32 34.6	1.041	1.926	18.6	19.4
4 1	10 39.40	+12 3.2	2.048	2.925	11.2	20.6	4 1	10 43.64	+32 38.1	1.088	1.917	22.2	19.6
4 11	10 35.51	+12 20.9	2.124	2.915	14.2	20.8	4 11	10 43.50	+32 0.6	1.147	1.910	25.4	19.8
511675	2015 BK ₄₂₄		3 3.8 100°38	0°2/ 4.0 17			204470	2005 AU ₂₆		3 3.8 357°10	1°0/ 4.6 18		
2 1	11 19.82	+ 3 23.5	2.044	2.884	12.2	21.9	2 1	11 17.19	+ 0 19.8	1.227	2.088	17.2	19.5
2 11	11 14.82	+ 3 59.2	1.974	2.890	8.8	21.7	2 11	11 13.87	+ 1 9.9	1.160	2.084	12.7	19.2
2 21	11 8.08	+ 4 46.6	1.929	2.896	5.0	21.5	2 21	11 7.94	+ 2 24.2	1.113	2.082	7.4	18.9
3 2	11 0.31	+ 5 41.0	1.911	2.902	0.9	21.2	3 2	11 0.32	+ 3 56.0	1.091	2.081	1.8	18.5
3 12	10 52.37	+ 6 36.4	1.923	2.908	3.3	21.4	3 12	10 52.35	+ 5 33.8	1.094	2.080	4.5	18.7
3 22	10 45.15	+ 7 27.2	1.964	2.913	7.2	21.6	3 22	10 45.41	+ 7 5.6	1.121	2.081	10.1	19.0
4 1	10 39.40	+ 8 8.6	2.030	2.919	10.8	21.8	4 1	10 40.69	+ 8 21.3	1.171	2.082	15.1	19.3
4 11	10 35.65	+ 8 37.6	2.120	2.924	13.8	22.1	4 11	10 38.89	+ 9 14.8	1.240	2.084	19.3	19.5
233698	2008 SK ₃₄		3 3.8 133°17	0°7/ 3.2 18			181252	2005 UD ₂₅₅		3 3.8 254°92	0°8/ 2.9 17		
2 1	11 21.97	+ 3 59.4	1.411	2.268	15.7	20.5	2 1	11 18.24	+ 7 2.6	2.595	3.438	9.8	21.2
2 11	11 17.01	+ 5 6.0	1.346	2.271	11.3	20.2	2 11	11 13.49	+ 7 40.3	2.507	3.427	7.0	21.0
2 21	11 9.57	+ 6 30.3	1.303	2.274	6.2	19.9	2 21	11 7.31	+ 8 25.3	2.446	3.416	3.8	20.8
3 2	11 0.56	+ 8 4.0	1.287	2.277	1.0	19.6	3 2	11 0.21	+ 9 13.7	2.414	3.404	0.8	20.5
3 12	10 51.27	+ 9 36.2	1.298	2.280	4.9	19.9	3 12	10 52.89	+10 0.8	2.412	3.392	3.3	20.7
3 22	10 43.02	+10 56.7	1.335	2.283	10.1	20.2	3 22	10 46.05	+10 42.1	2.440	3.380	6.6	20.9
4 1	10 36.90	+11 58.3	1.396	2.286	14.6	20.4	4 1	10 40.33	+11 14.2	2.494	3.368	9.6	21.1
4 11	10 33.58	+12 37.7	1.476	2.288	18.4	20.7	4 11	10 36.22	+11 34.9	2.572	3.356	12.2	21.2
331830	2003 UO		3 3.8 226°59	6°2/11.7 18			471126	2010 DL ₅		3 3.8 316°56	2°1/ 5.3 17		
2 1	11 19.85	-18 13.3	2.781	3.493	12.5	21.6	2 1	11 22.06	+ 1 3.0	1.744	2.580	14.1	20.4
2 11	11 14.68	-18 19.7	2.673	3.480	10.7	21.4	2 11	11 16.93	+ 0 47.9	1.650	2.561	10.6	20.1
2 21	11 7.99	-18 5.8	2.588	3.467	8.7	21.3	2 21	11 9.54	+ 0 45.7	1.579	2.541	6.6	19.8
3 2	11 0.31	-17 30.9	2.527	3.452	6.9	21.1	3 2	11 0.59	+ 0 54.7	1.535	2.522	2.6	19.5
3 12	10 52.31	-16 36.6	2.495	3.437	6.2	21.0	3 12	10 51.14	+ 1 10.9	1.519	2.504	3.8	19.6
3 22	10 44.73	-15 26.9	2.492	3.422	7.0	21.1	3 22	10 42.33	+ 1 29.5	1.529	2.486	8.2	19.8
4 1	10 38.23	-14 7.3	2.516	3.405	8.9	21.2	4 1	10 35.22	+ 1 45.3	1.565	2.468	12.5	20.0
4 11	10 33.36	-12 44.6	2.566	3.388	11.2	21.3	4 11	10 30.58	+ 1 54.0	1.622	2.451	16.2	20.2
349913	2009 KX ₈		3 3.8 325°55	0°6/ 3.2 17			80403	1999 XH ₁₈₂		3 3.8 72°76	0°6/ 4.2 18		
2 1	11 16.92	+ 5 20.4	2.162	3.010	11.3	20.6	2 1	11 27.15	+ 4 5.3	1.272	2.126	17.2	18.3
2 11	11 12.75	+ 6 7.7	2.081	3.003	8.1	20.3	2 11	11 20.86	+ 4 8.8	1.213	2.135	12.5	18.0
2 21	11 6.96	+ 7 5.6	2.026	2.996	4.4	20.1	2 21	11 11.75	+ 4 27.0	1.176	2.145	7.1	17.7
3 2	11 0.14	+ 8 9.1	1.999	2.989	0.7	19.8	3 2	11 0.91	+ 4 54.8	1.164	2.154	1.5	17.4
3 12	10 53.09	+ 9 12.1	2.001	2.983	3.5	20.0	3 12	10 49.90	+ 5 25.0	1.178	2.163	4.6	17.6
3 22	10 46.63	+10 8.8	2.032	2.977	7.3	20.2	3 22	10 40.21	+ 5 50.5	1.218	2.173	10.0	18.0
4 1	10 41.48	+10 54.4	2.088	2.971	10.8	20.4	4 1	10 33.06	+ 6 6.0	1.281	2.182	14.8	18.3
4 11	10 38.17	+11 26.0	2.167	2.966	13.7	20.6	4 11	10 29.07	+ 6 8.3	1.363	2.192	18.8	18.5
317462	2002 RS ₆₈		3 3.8 151°81	2°3/ 6.0 18			195202	2002 CF ₃₀₁		3 3.8 262°31	0°6/ 4.3 17		
2 1	11 20.62	- 7 51.7	1.202	2.030	19.7	20.2	2 1	11 22.14	+ 3 31.7	1.928	2.767	12.8	20.3
2 11	11 16.42	- 5 49.3	1.129	2.034	15.0	19.9	2 11	11 16.67	+ 3 45.0	1.847	2.762	9.4	20.1
2 21	11 9.40	- 3 4.1	1.079	2.037	9.4	19.6	2 21	11 9.23	+ 4 9.6	1.790	2.757	5.4	19.8
3 2	11 0.55	+ 0 14.4	1.053	2.040	3.5	19.3	3 2	11 0.52	+ 4 41.9	1.761	2.752	1.2	19.5
3 12	10 51.30	+ 3 47.4	1.057	2.043	4.6	19.4	3 12	10 51.54	+ 5 16.7	1.761	2.746	3.4	19.7
3 22	10 43.19	+ 7 12.9	1.088	2.046	10.5	19.7	3 22	10 43.27	+ 5 48.7	1.790	2.741	7.7	19.9
4 1	10 37.47	+10 12.2	1.144	2.048	16.0	20.0	4 1	10 36.60	+ 6 13.5	1.844	2.736	11.5	20.1
4 11	10 34.89	+12 34.9	1.220	2.049	20.5	20.3	4 11	10 32.14	+ 6 27.7	1.920	2.730	14.8	20.3
349882	2009 DZ ₈₄		3 3.8 272°09	3°0/29.5 17			266296	2007 BZ ₅₂		3 3.8 316°35	1°6/ 5.0 17		
2 1	11 20.18	+14 38.1	2.349	3.206	10.1	21.1	2 1	11 23.27	+ 1 51.6	1.651	2.491	14.6	20.5
2 11	11 15.00	+15 21.6	2.271	3.197	7.2	20.9	2 11	11 17.78	+ 1 44.7	1.570	2.483	10.9	20.2
2 21	11 8.17	+16 7.4	2.219	3.188	4.3	20.7	2 21	11 9.98	+ 1 51.3	1.512	2.476	6.5	20.0
3 2	11 0.33	+16 50.0	2.197	3.178	3.1	20.6	3 2	11 0.66	+ 2 8.6	1.480	2.469	2.2	19.7
3 12	10 52.27	+17 24.1	2.204	3.168	5.2	20.7	3 12	10 50.96	+ 2 31.9	1.476	2.462	3.8	19.8
3 22	10 44.82	+17 45.8	2.239	3.159	8.3	20.9	3 22	10 42.07	+ 2 55.6	1.499	2.455	8.4	20.0
4 1	10 38.70	+17 53.0	2.299	3.149	11.2	21.1	4 1	10 35.05	+ 3 14.4	1.547	2.448	12.7	20.2
4 11	10 34.43	+17 45.3	2.381	3.140	13.8	21.3	4 11	10 30.61	+ 3 24.3	1.616	2.442	16.4	20.5
449181	2013 BA ₈₀		3 3.8 83°92	2°1/ 2.1 18			357563	2004 TF ₇₉		3 3.8 110°60	3°5/29.9 18		
2 1	11 23.25	+ 7 2.6	1.350	2.213	15.8	21.4	2 1	11 27.76	+13 37.1	1.735	2.591	13.2	21.3
2 11	11 17.83	+ 8 21.1	1.301	2.231	11.1	21.2	2 11	11 20.58	+14 33.7	1.689	2.614	9.3	21.1
2 21	11 9.94	+ 9 52.7	1.275	2.248	6.0	21.0	2 21	11 11.28	+15 32.8	1.668	2.636	5.4	21.0
3 2	11 0.60	+11 27.1	1.275	2.265	2.1	20.7	3 2	11 0.82	+16 26.5	1.675	2.658	3.5	20.9
3 12	10 51.20	+12 52.8	1.303	2.281	5.8	21.0	3 12	10 50.41	+17 7.7	1.712	2.679	6.1	21.1
3 22	10 43.05	+14 1.1	1.357	2.298	10.6	21.3	3 22	10 41.17	+17 32.0	1.776	2.699	9.9	21.3
4 1	10 37.17	+14 47.0	1.433	2.314	14.9	21.6	4 1	10 33.98	+17 37.9	1.864	2.718	13.3	21.6
4 11	10 34.12	+15 9.3	1.529	2.331	18.3	21.9	4 11	10 29.32	+17 26.4	1.973	2.736	16.1	21.8
391332	2006 UP ₁₂		3 3.8 61°81	6°2/25.9 17			309339	2007 TA ₆		3 3.8 144°56	0°3/ 4.1 18		
2 1	11 22.02	+25 36.7	2.295	3.153	10.3	21.0							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
500384	2012 <i>TE</i> ₇₀		3 3.8 120°78	0°9/ 2.7 17			235602	2004 <i>PM</i> ₅₉		3 3.8 224°37	0°2/ 3.6 17		
2 1	11 19.54	+ 7 38.6	2.604	3.446	9.8	21.8	2 1	11 23.51	+ 3 42.4	1.849	2.688	13.3	21.8
2 11	11 14.27	+ 8 17.5	2.539	3.459	6.9	21.6	2 11	11 17.83	+ 4 33.2	1.761	2.677	9.7	21.5
2 21	11 7.66	+ 9 2.6	2.502	3.472	3.8	21.4	2 21	11 9.99	+ 5 38.7	1.697	2.666	5.4	21.2
3 2	11 0.27	+ 9 49.5	2.494	3.484	0.9	21.2	3 2	11 0.70	+ 6 53.3	1.662	2.653	0.8	20.9
3 12	10 52.80	+10 33.6	2.517	3.496	3.3	21.4	3 12	10 50.99	+ 8 9.3	1.657	2.640	4.0	21.1
3 22	10 45.92	+11 11.1	2.569	3.508	6.4	21.7	3 22	10 41.96	+ 9 19.0	1.680	2.625	8.6	21.3
4 1	10 40.25	+11 39.0	2.649	3.520	9.2	21.9	4 1	10 34.60	+10 16.0	1.728	2.610	12.7	21.5
4 11	10 36.18	+11 55.6	2.752	3.531	11.6	22.0	4 11	10 29.61	+10 56.7	1.799	2.595	16.2	21.7
454473	2014 <i>OT</i> ₉₁		3 3.8 279°75	1°4/ 5.0 18			190988	2001 <i>XD</i> ₂₁₅		3 3.8 97°24	3°0/ 6.5 18		
2 1	11 20.50	- 0 40.6	1.424	2.268	16.3	21.2	2 1	11 24.37	- 4 31.7	1.607	2.423	16.1	20.0
2 11	11 16.08	+ 0 4.1	1.345	2.260	12.1	20.9	2 11	11 18.32	- 4 2.2	1.551	2.447	12.2	19.8
2 21	11 9.15	+ 1 11.9	1.288	2.253	7.3	20.6	2 21	11 10.12	- 3 11.1	1.517	2.470	7.8	19.6
3 2	11 0.54	+ 2 37.2	1.256	2.245	2.2	20.3	3 2	11 0.68	- 2 2.6	1.510	2.493	3.8	19.4
3 12	10 51.49	+ 4 10.7	1.252	2.238	4.2	20.4	3 12	10 51.21	- 0 44.4	1.532	2.515	4.1	19.5
3 22	10 43.32	+ 5 41.7	1.273	2.230	9.4	20.7	3 22	10 42.82	+ 0 34.7	1.581	2.537	8.0	19.8
4 1	10 37.19	+ 7 0.5	1.318	2.223	14.3	20.9	4 1	10 36.42	+ 1 46.7	1.655	2.558	12.0	20.1
4 11	10 33.86	+ 8 0.5	1.384	2.215	18.4	21.2	4 11	10 32.54	+ 2 45.8	1.752	2.578	15.3	20.3
240317	2003 <i>HS</i> ₁₇		3 3.8 39°72	4°0/29.9 18			175387	2006 <i>LF</i> ₇		3 3.8 213°04	1°8/ 5.4 17		
2 1	11 24.47	+13 8.5	1.315	2.189	15.4	20.4	2 1	11 24.30	- 0 16.9	2.081	2.900	12.8	20.7
2 11	11 18.94	+14 4.3	1.258	2.192	11.0	20.2	2 11	11 18.16	- 0 6.1	1.991	2.892	9.6	20.4
2 21	11 10.69	+15 5.8	1.224	2.196	6.4	19.9	2 21	11 10.07	+ 0 18.6	1.926	2.884	5.9	20.2
3 2	11 0.76	+16 3.0	1.216	2.200	4.1	19.8	3 2	11 0.70	+ 0 54.4	1.889	2.876	2.3	19.9
3 12	10 50.64	+16 46.3	1.233	2.204	7.3	20.0	3 12	10 50.99	+ 1 36.6	1.882	2.866	3.3	20.0
3 22	10 41.78	+17 9.3	1.275	2.209	11.9	20.3	3 22	10 41.90	+ 2 19.9	1.904	2.856	7.2	20.2
4 1	10 35.34	+17 9.7	1.339	2.213	16.2	20.5	4 1	10 34.34	+ 2 59.1	1.953	2.845	11.0	20.4
4 11	10 31.94	+16 48.4	1.421	2.218	19.7	20.8	4 11	10 28.92	+ 3 29.8	2.025	2.833	14.2	20.6
74909	1999 <i>TV</i> ₁₃₉		3 3.8 197°52	0°6/ 3.3 18			412531	2014 <i>MS</i> ₃₉		3 3.8 239°24	1°5/ 2.6 17		
2 1	11 23.86	+ 5 56.3	2.032	2.872	12.2	20.8	2 1	11 25.48	+ 8 12.1	1.723	2.574	13.5	22.1
2 11	11 17.81	+ 6 32.9	1.952	2.869	8.8	20.5	2 11	11 19.39	+ 8 50.3	1.637	2.561	9.8	21.8
2 21	11 9.84	+ 7 19.4	1.897	2.866	4.9	20.3	2 21	11 10.93	+ 9 38.5	1.576	2.547	5.4	21.6
3 2	11 0.63	+ 8 10.9	1.871	2.862	0.8	20.0	3 2	11 0.85	+10 30.5	1.543	2.532	1.5	21.3
3 12	10 51.16	+ 9 1.2	1.875	2.857	3.8	20.2	3 12	10 50.32	+11 18.8	1.538	2.517	4.9	21.5
3 22	10 42.39	+ 9 44.8	1.908	2.851	7.9	20.4	3 22	10 40.56	+11 56.9	1.561	2.502	9.5	21.7
4 1	10 35.20	+10 17.2	1.967	2.845	11.6	20.6	4 1	10 32.67	+12 20.2	1.609	2.486	13.8	21.9
4 11	10 30.19	+10 36.1	2.049	2.838	14.7	20.8	4 11	10 27.38	+12 26.7	1.677	2.469	17.4	22.1
118874	2000 <i>TK</i> ₂₈		3 3.8 202°92	1°5/ 2.1 18			293032	2006 <i>WC</i> ₇₆		3 3.8 214°14	0°6/ 3.1 17		
2 1	11 20.61	+10 30.6	2.569	3.416	9.7	20.6	2 1	11 18.74	+ 6 40.3	2.875	3.712	9.1	22.1
2 11	11 15.14	+10 58.0	2.492	3.414	6.9	20.4	2 11	11 13.72	+ 7 15.3	2.789	3.705	6.5	21.9
2 21	11 8.20	+11 29.4	2.442	3.412	3.8	20.2	2 21	11 7.40	+ 7 57.0	2.729	3.698	3.6	21.7
3 2	11 0.37	+12 1.0	2.421	3.409	1.5	20.0	3 2	11 0.27	+ 8 41.7	2.700	3.690	0.7	21.4
3 12	10 52.39	+12 28.3	2.431	3.407	3.7	20.1	3 12	10 52.96	+ 9 25.3	2.702	3.682	2.9	21.6
3 22	10 44.97	+12 48.0	2.470	3.404	6.9	20.3	3 22	10 46.09	+10 4.1	2.734	3.674	6.0	21.8
4 1	10 38.78	+12 57.7	2.536	3.401	9.8	20.5	4 1	10 40.25	+10 35.0	2.793	3.665	8.7	21.9
4 11	10 34.27	+12 56.2	2.625	3.398	12.3	20.7	4 11	10 35.88	+10 55.7	2.876	3.656	11.1	22.1
281364	2008 <i>CH</i> ₉		3 3.8 292°55	0°8/ 4.7 17			106973	2000 <i>YR</i> ₉₀		3 3.8 37°40	4°1/ 6.8 18		
2 1	11 19.55	+ 2 32.8	2.331	3.163	11.2	20.5	2 1	11 22.49	- 4 16.1	1.384	2.214	17.4	19.3
2 11	11 14.61	+ 2 43.6	2.236	3.147	8.2	20.3	2 11	11 17.43	- 4 25.8	1.318	2.220	13.4	19.1
2 21	11 8.03	+ 3 4.7	2.167	3.131	4.8	20.1	2 21	11 9.85	- 4 12.9	1.274	2.227	9.0	18.9
3 2	11 0.36	+ 3 33.3	2.125	3.115	1.3	19.8	3 2	11 0.67	- 3 39.1	1.253	2.234	4.9	18.7
3 12	10 52.39	+ 4 5.3	2.114	3.099	2.9	19.9	3 12	10 51.23	- 2 50.6	1.259	2.242	5.0	18.7
3 22	10 44.92	+ 4 36.5	2.131	3.082	6.6	20.1	3 22	10 42.86	- 1 55.4	1.290	2.249	9.0	18.9
4 1	10 38.70	+ 5 2.6	2.175	3.066	10.0	20.3	4 1	10 36.66	- 1 2.1	1.345	2.258	13.4	19.2
4 11	10 34.29	+ 5 20.5	2.242	3.051	13.0	20.4	4 11	10 33.31	- 0 17.9	1.420	2.266	17.2	19.4
64974	Savaria		3 3.8 284°36	1°0/ 2.8 18			166635	2002 <i>SD</i> ₃₄		3 3.8 135°40	0°3/ 3.5 18		
2 1	11 18.57	+ 7 32.5	2.352	3.200	10.5	19.4	2 1	11 19.87	+ 5 19.3	2.414	3.253	10.6	21.0
2 11	11 13.86	+ 8 8.9	2.266	3.188	7.5	19.1	2 11	11 14.64	+ 5 57.3	2.345	3.261	7.6	21.0
2 21	11 7.58	+ 8 53.0	2.206	3.177	4.1	18.9	2 21	11 7.94	+ 6 43.7	2.301	3.270	4.2	20.8
3 2	11 0.29	+ 9 40.3	2.175	3.165	1.0	18.6	3 2	11 0.36	+ 7 34.4	2.287	3.278	0.6	20.5
3 12	10 52.75	+10 25.7	2.174	3.154	3.6	18.8	3 12	10 52.66	+ 8 24.1	2.303	3.285	3.1	20.7
3 22	10 45.75	+11 4.5	2.201	3.142	7.1	19.0	3 22	10 45.58	+ 9 8.4	2.349	3.293	6.6	20.9
4 1	10 39.99	+11 33.0	2.255	3.131	10.4	19.2	4 1	10 39.77	+ 9 43.6	2.421	3.300	9.7	21.1
4 11	10 36.00	+11 49.1	2.331	3.119	13.2	19.4	4 11	10 35.69	+10 7.3	2.517	3.307	12.3	21.3
112142	2002 <i>JV</i> ₆₁		3 3.8 240°16	1°3/ 2.6 17			269382	2009 <i>QW</i>		3 3.8 162°66	2°5/29.8 17		
2 1	11 22.38	+ 6 45.5	1.967	2.813	12.3	20.8	2 1	11 23.22	+13 57.9	2.721	3.567	9.3	21.2
2 11	11 16.95	+ 7 45.5	1.876	2.797	8.8	20.5	2 11	11 16.89	+14 45.7	2.655	3.576	6.6	21.0
2 21	11 9.47	+ 8 57.4	1.810	2.781	4.8	20.2	2 21	11 9.14	+15 35.3	2.616	3.583	3.9	20.8
3 2	11 0.61	+10 14.9	1.774	2.763	1.3	19.9	3 2	11 0.55	+16 21.8	2.608	3.590	2.6	20.7
3 12	10 51.33	+11 30.3	1.767	2.745	4.5	20.1	3 12	10 51.86	+17 0.6	2.632	3.596	4.5	20.9
3 22	10 42.65	+12 36.6	1.788	2.727	8.7	20.3	3 22	10 43.78	+17 28.3	2.685	3.601	7.2	21.1
4 1	10 35.52	+13 28.1	1.836	2.707	12.6	20.5	4 1	10 36.95	+17 43.2	2.765	3.605	9.8	21.2
4 11	10 30.61	+14 2.0	1.905	2.687	15.9	20.7	4 11	10 31.81	+17 44.7	2.868	3.608	12.1	21.4
303408	2004 <i>XM</i> ₁₇₁		3 3.8 205°15	3°5/ 6.9 18			186056	2001 <i>ST</i> ₆₇		3 3.8 69°63	3°0/ 6.9 18		
2 1	11 23.65	-											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
331944	2004 TZ ₂₀₃		3 3.8 183°80	4.4/ 9.2	17		148564	2001 QA ₂₂₃		3 3.8 91°10	0.9/ 4.5	18	
2 1	11 19.98	-11 19.2	2.609	3.370	12.1	22.1	2 1	11 29.09	+ 4 4.1	1.822	2.653	13.8	20.4
2 11	11 14.74	-11 9.1	2.518	3.370	9.8	22.0	2 11	11 21.48	+ 3 52.7	1.764	2.674	10.0	20.2
2 21	11 8.03	-10 40.8	2.450	3.370	7.2	21.8	2 21	11 11.81	+ 3 51.2	1.731	2.695	5.8	20.0
3 2	11 0.39	- 9 55.4	2.410	3.370	5.0	21.7	3 2	11 0.99	+ 3 56.4	1.727	2.716	1.4	19.7
3 12	10 52.53	- 8 55.9	2.400	3.368	4.5	21.6	3 12	10 50.17	+ 4 4.1	1.752	2.737	3.5	19.9
3 22	10 45.18	- 7 47.4	2.418	3.366	6.2	21.7	3 22	10 40.43	+ 4 10.4	1.807	2.757	7.7	20.2
4 1	10 39.00	- 6 35.6	2.466	3.364	8.7	21.9	4 1	10 32.63	+ 4 11.9	1.888	2.776	11.5	20.5
4 11	10 34.48	- 5 26.2	2.538	3.360	11.2	22.1	4 11	10 27.31	+ 4 6.2	1.991	2.796	14.6	20.7
282091	2000 QL ₁₅₈		3 3.8 178°87	2.3/ 7.2	18		320903	2008 GQ ₇₆		3 3.8 107°36	7.5/ 25.9	18	
2 1	11 18.88	- 5 8.0	3.337	4.122	9.2	22.4	2 1	11 25.86	+25 28.4	1.807	2.668	12.5	20.2
2 11	11 13.65	- 4 59.2	3.247	4.123	7.1	22.3	2 11	11 19.41	+26 43.3	1.762	2.677	9.7	20.0
2 21	11 7.31	- 4 39.4	3.184	4.125	4.8	22.1	2 21	11 10.75	+27 49.8	1.741	2.686	7.7	19.9
3 2	11 0.28	- 4 10.0	3.149	4.125	2.8	22.0	3 2	11 0.83	+28 38.8	1.748	2.695	7.8	19.9
3 12	10 53.10	- 3 33.6	3.146	4.125	2.7	22.0	3 12	10 50.88	+29 3.9	1.782	2.703	9.7	20.0
3 22	10 46.32	- 2 53.6	3.174	4.125	4.7	22.1	3 22	10 42.04	+29 2.8	1.840	2.712	12.4	20.2
4 1	10 40.43	- 2 13.3	3.231	4.124	7.1	22.2	4 1	10 35.25	+28 36.6	1.920	2.720	15.1	20.4
4 11	10 35.81	- 1 36.0	3.314	4.122	9.2	22.4	4 11	10 31.03	+27 49.2	2.019	2.728	17.4	20.6
176020	2000 SQ ₅₀		3 3.8 188°08	1.5/ 5.7	18		307221	2002 GS ₈₈		3 3.8 325°60	9.2/ 24.8	17	
2 1	11 18.76	- 1 1.2	2.739	3.551	10.2	20.9	2 1	11 19.96	+22 18.6	1.212	2.100	15.4	19.7
2 11	11 13.77	- 0 43.3	2.653	3.551	7.7	20.7	2 11	11 16.26	+24 15.0	1.149	2.083	11.9	19.4
2 21	11 7.45	- 0 14.2	2.594	3.550	4.8	20.5	2 21	11 9.52	+26 10.2	1.109	2.066	9.5	19.2
3 2	11 0.30	+ 0 23.6	2.563	3.549	2.0	20.3	3 2	11 0.69	+27 48.7	1.093	2.050	9.8	19.2
3 12	10 52.98	+ 1 6.5	2.563	3.547	2.6	20.4	3 12	10 51.35	+28 56.3	1.100	2.035	12.9	19.3
3 22	10 46.14	+ 1 50.4	2.593	3.545	5.5	20.6	3 22	10 43.15	+29 25.6	1.128	2.021	16.8	19.5
4 1	10 40.37	+ 2 31.2	2.650	3.543	8.4	20.7	4 1	10 37.50	+29 15.7	1.174	2.008	20.6	19.7
4 11	10 36.13	+ 3 5.6	2.733	3.541	10.9	20.9	4 11	10 35.23	+28 31.1	1.235	1.996	23.9	19.9
498310	2007 VM ₁₃₈		3 3.8 200°39	2.6/ 6.9	17		316563	2011 FL ₅₆		3 3.8 324°49	4.0/ 29.0	17	
2 1	11 17.91	- 4 41.8	2.310	3.116	12.1	21.8	2 1	11 18.26	+13 0.7	1.613	2.486	13.1	20.1
2 11	11 13.39	- 4 16.6	2.225	3.115	9.3	21.6	2 11	11 14.30	+14 19.5	1.538	2.473	9.3	19.8
2 21	11 7.32	- 3 34.9	2.165	3.114	6.1	21.4	2 21	11 8.11	+15 45.9	1.488	2.459	5.6	19.6
3 2	11 0.29	- 2 39.5	2.133	3.114	3.2	21.2	3 2	11 0.45	+17 10.8	1.465	2.446	4.1	19.4
3 12	10 53.04	- 1 35.0	2.130	3.113	3.3	21.2	3 12	10 52.42	+18 24.2	1.468	2.434	7.1	19.6
3 22	10 46.35	- 0 27.2	2.156	3.112	6.2	21.4	3 22	10 45.18	+19 18.6	1.497	2.423	11.2	19.8
4 1	10 40.92	+ 0 38.1	2.209	3.110	9.4	21.6	4 1	10 39.75	+19 49.7	1.549	2.411	15.0	20.0
4 11	10 37.24	+ 1 35.9	2.286	3.109	12.3	21.8	4 11	10 36.82	+19 56.7	1.620	2.401	18.3	20.2
64528	2001 VZ ₁₀₅		3 3.8 252°15	1.6/ 5.1	18		304485	2006 UV ₁₀₅		3 3.8 152°10	4.9/ 10.3	17	
2 1	11 23.29	+ 0 33.1	1.487	2.329	15.8	19.3	2 1	11 16.89	-13 31.9	2.507	3.262	12.7	21.3
2 11	11 18.01	+ 0 50.9	1.410	2.324	11.8	19.0	2 11	11 12.60	-13 17.2	2.418	3.263	10.4	21.1
2 21	11 10.22	+ 1 27.1	1.355	2.319	7.1	18.7	2 21	11 6.87	-12 42.0	2.352	3.265	7.9	21.0
3 2	11 0.77	+ 2 17.5	1.325	2.314	2.3	18.4	3 2	11 0.24	-11 47.3	2.313	3.266	5.7	20.8
3 12	10 50.91	+ 3 14.9	1.323	2.309	4.1	18.5	3 12	10 53.42	-10 36.7	2.302	3.267	5.0	20.8
3 22	10 41.96	+ 4 11.3	1.347	2.303	9.1	18.8	3 22	10 47.12	- 9 15.5	2.319	3.268	6.4	20.9
4 1	10 35.07	+ 4 59.2	1.395	2.298	13.7	19.0	4 1	10 41.99	- 7 50.1	2.365	3.268	8.8	21.0
4 11	10 30.97	+ 5 33.4	1.464	2.293	17.7	19.3	4 11	10 38.49	- 6 27.1	2.435	3.269	11.3	21.2
129123	2004 XY ₁₄₂		3 3.8 224°94	0.4/ 3.4	17		275616	2000 AH ₂₁₆		3 3.8 196°42	3.9/ 28.8	18	
2 1	11 21.70	+ 6 0.7	2.309	3.147	11.0	21.1	2 1	11 21.45	+16 1.7	2.072	2.933	11.1	20.7
2 11	11 16.14	+ 6 29.1	2.222	3.139	7.9	20.9	2 11	11 16.08	+17 2.4	2.005	2.933	8.0	20.5
2 21	11 8.88	+ 7 5.9	2.161	3.130	4.4	20.6	2 21	11 8.88	+18 4.7	1.965	2.932	5.0	20.3
3 2	11 0.54	+ 7 47.1	2.130	3.121	0.7	20.3	3 2	11 0.57	+19 1.6	1.954	2.931	4.0	20.3
3 12	10 51.94	+ 8 27.9	2.129	3.111	3.4	20.5	3 12	10 52.07	+19 46.5	1.971	2.929	6.3	20.4
3 22	10 43.92	+ 9 3.5	2.157	3.101	7.1	20.7	3 22	10 44.32	+20 15.1	2.016	2.928	9.5	20.6
4 1	10 37.22	+ 9 30.1	2.212	3.090	10.5	20.9	4 1	10 38.13	+20 25.3	2.085	2.927	12.5	20.8
4 11	10 32.41	+ 9 45.5	2.289	3.079	13.3	21.1	4 11	10 34.03	+20 17.6	2.174	2.925	15.1	21.0
17652	Nepoti		3 3.8 287°13	3.9/ 6.8	18		34097	2000 PD ₁₂		3 3.8 23°18	4.2/ 27.2	18	
2 1	11 23.73	- 4 5.6	1.829	2.641	14.6	18.0	2 1	11 17.09	+15 33.3	2.199	3.065	10.4	18.1
2 11	11 18.00	- 4 31.6	1.743	2.634	11.4	17.8	2 11	11 12.92	+17 23.7	2.137	3.066	7.4	17.9
2 21	11 10.09	- 4 41.1	1.680	2.627	7.7	17.6	2 21	11 7.11	+19 17.4	2.103	3.068	4.9	17.8
3 2	11 0.75	- 4 34.8	1.643	2.620	4.5	17.4	3 2	11 0.29	+21 5.9	2.098	3.069	4.5	17.7
3 12	10 51.01	- 4 15.7	1.634	2.614	4.6	17.4	3 12	10 53.27	+22 40.9	2.123	3.071	6.7	17.9
3 22	10 41.98	- 3 48.5	1.653	2.607	7.9	17.5	3 22	10 46.86	+23 56.7	2.176	3.072	9.7	18.1
4 1	10 34.66	- 3 19.1	1.698	2.601	11.7	17.7	4 1	10 41.81	+24 50.1	2.253	3.074	12.4	18.2
4 11	10 29.72	- 2 53.1	1.764	2.594	15.1	17.9	4 11	10 38.62	+25 21.0	2.350	3.076	14.8	18.4
174673	2003 SO ₂₅₅		3 3.8 100°24	0.2/ 4.0	18		388670	2007 TZ ₃₉₇		3 3.8 124°79	2.6/ 1.1	17	
2 1	11 24.56	+ 3 30.0	1.702	2.543	14.2	21.1	2 1	11 22.29	+14 3.7	2.391	3.244	10.2	21.3
2 11	11 18.39	+ 4 5.1	1.646	2.562	10.2	20.9	2 11	11 16.39	+14 38.2	2.328	3.252	7.2	21.1
2 21	11 10.15	+ 4 53.1	1.614	2.582	5.7	20.7	2 21	11 8.92	+15 14.4	2.292	3.261	4.2	20.9
3 2	11 0.74	+ 5 48.4	1.610	2.601	1.0	20.4	3 2	11 0.57	+15 47.3	2.286	3.269	2.7	20.9
3 12	10 51.27	+ 6 43.8	1.635	2.619	3.8	20.6	3 12	10 52.13	+16 12.1	2.309	3.276	4.7	21.0
3 22	10 42.83	+ 7 32.8	1.688	2.637	8.2	20.9	3 22	10 44.39	+16 25.9	2.361	3.284	7.7	21.2
4 1	10 36.30	+ 8 10.4	1.766	2.655	12.1	21.2	4 1	10 38.05	+16 26.8	2.439	3.291	10.6	21.4
4 11	10 32.19	+ 8 33.8	1.865	2.672	15.3	21.4	4 11	10 33.55	+16 14.7	2.539	3.299	13.0	21.6
116934	2004 GF ₃₁		3 3.8 277°86	1.5/ 5.5	17		352731	2008 SC ₂₉₄		3 3.8 199°00	2.9/ 1.2	18	
2 1	11 17.96	- 0 46.6	2.337	3.159	11.5	20.							

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
110020	2001 <i>SM</i> ₇₁		3 3.8 118°77	1°8/ 2.2 18			166563	2002 <i>RS</i> ₁₀₄		3 3.9 76°66	5°5/27.6 18		
2 1	11 24.56	+ 7 41.4	1.659	2.512	13.9	20.3	2 1	11 26.38	+23 14.8	2.168	3.022	11.0	19.8
2 11	11 18.49	+ 8 49.7	1.604	2.529	9.8	20.1	2 11	11 19.28	+24 2.4	2.134	3.050	8.3	19.6
2 21	11 10.26	+10 7.9	1.574	2.546	5.3	19.9	2 21	11 10.48	+24 43.4	2.127	3.078	6.1	19.6
3 2	11 0.78	+11 28.2	1.572	2.561	1.8	19.7	3 2	11 0.82	+25 11.4	2.148	3.106	5.7	19.6
3 12	10 51.22	+12 41.4	1.599	2.577	5.1	19.9	3 12	10 51.31	+25 22.1	2.198	3.133	7.4	19.7
3 22	10 42.71	+13 40.7	1.654	2.591	9.4	20.2	3 22	10 42.85	+25 14.2	2.275	3.160	9.8	19.9
4 1	10 36.15	+14 21.6	1.733	2.605	13.2	20.4	4 1	10 36.14	+24 48.4	2.376	3.186	12.2	20.1
4 11	10 32.09	+14 43.1	1.833	2.618	16.3	20.7	4 11	10 31.59	+24 7.3	2.498	3.213	14.2	20.3
375263	2008 <i>GC</i> ₁₃₁		3 3.8 269°83	0°7/ 3.2 17			285150	1995 <i>UD</i> ₆₂		3 3.9 88°76	1°7/ 1.9 17		
2 1	11 21.31	+ 5 45.7	1.923	2.769	12.5	21.8	2 1	11 20.32	+10 17.4	2.331	3.182	10.5	21.6
2 11	11 16.27	+ 6 30.3	1.828	2.749	9.1	21.5	2 11	11 14.99	+10 58.3	2.273	3.197	7.4	21.4
2 21	11 9.16	+ 7 27.0	1.758	2.728	5.0	21.2	2 21	11 8.16	+11 43.8	2.241	3.211	4.0	21.3
3 2	11 0.64	+ 8 30.7	1.716	2.707	0.9	20.9	3 2	11 0.47	+12 29.0	2.238	3.226	1.7	21.1
3 12	10 51.67	+ 9 34.3	1.703	2.685	4.1	21.1	3 12	10 52.73	+13 8.7	2.266	3.241	4.0	21.3
3 22	10 43.27	+10 31.1	1.719	2.663	8.5	21.3	3 22	10 45.69	+13 39.1	2.321	3.255	7.3	21.5
4 1	10 36.41	+11 15.3	1.760	2.641	12.5	21.5	4 1	10 40.00	+13 57.6	2.403	3.269	10.2	21.7
4 11	10 31.79	+11 43.8	1.822	2.618	16.0	21.7	4 11	10 36.10	+14 3.1	2.508	3.283	12.7	21.9
463704	2014 <i>QW</i> ₂₂		3 3.8 125°39	3°0/ 6.3 18			161758	2006 <i>TL</i> ₁₈		3 3.9 34°91	0°1/ 3.8 18		
2 1	11 24.09	- 2 55.3	1.705	2.525	15.1	21.1	2 1	11 20.41	+ 3 46.9	1.411	2.269	15.5	19.9
2 11	11 18.23	- 2 53.5	1.634	2.532	11.5	20.9	2 11	11 15.86	+ 4 29.1	1.352	2.277	11.2	19.6
2 21	11 10.19	- 2 33.5	1.586	2.540	7.4	20.7	2 21	11 8.95	+ 5 27.1	1.316	2.286	6.3	19.4
3 2	11 0.79	- 1 57.8	1.564	2.547	3.7	20.4	3 2	11 0.62	+ 6 34.1	1.305	2.295	1.0	19.0
3 12	10 51.17	- 1 11.7	1.570	2.554	4.1	20.5	3 12	10 52.11	+ 7 41.1	1.320	2.305	4.4	19.3
3 22	10 42.44	- 0 22.0	1.604	2.560	7.9	20.7	3 22	10 44.66	+ 8 39.6	1.362	2.315	9.4	19.6
4 1	10 35.58	+ 0 24.8	1.664	2.566	11.9	21.0	4 1	10 39.28	+ 9 23.4	1.427	2.326	13.8	19.9
4 11	10 31.19	+ 1 3.1	1.745	2.572	15.3	21.2	4 11	10 36.55	+ 9 49.2	1.512	2.337	17.4	20.2
141302	2001 <i>YU</i> ₁₀₆		3 3.8 352°06	1°7/ 5.6 17			48813	1997 <i>WJ</i> ₁		3 3.9 104°97	2°7/ 1.2 18		
2 1	11 18.38	- 0 34.6	2.169	2.995	12.1	19.7	2 1	11 22.99	+13 48.4	2.207	3.061	10.8	19.3
2 11	11 13.81	- 0 21.0	2.088	2.993	9.0	19.5	2 11	11 16.99	+14 21.7	2.145	3.070	7.7	19.1
2 21	11 7.61	+ 0 6.0	2.032	2.991	5.6	19.3	2 21	11 9.31	+14 56.8	2.111	3.079	4.5	19.0
3 2	11 0.38	+ 0 43.6	2.004	2.990	2.3	19.0	3 2	11 0.66	+15 28.5	2.105	3.089	2.7	18.9
3 12	10 52.93	+ 1 27.3	2.004	2.989	3.1	19.1	3 12	10 51.94	+15 52.0	2.129	3.098	4.9	19.0
3 22	10 46.09	+ 2 11.9	2.033	2.988	6.6	19.3	3 22	10 44.00	+16 3.7	2.181	3.107	8.1	19.2
4 1	10 40.59	+ 2 52.4	2.088	2.987	10.0	19.5	4 1	10 37.56	+16 2.1	2.259	3.116	11.1	19.4
4 11	10 36.96	+ 3 24.8	2.166	2.987	13.0	19.7	4 11	10 33.12	+15 47.2	2.359	3.124	13.7	19.6
99959	1978 <i>VW</i> ₉		3 3.8 206°61	1°3/ 2.7 17			377430	2004 <i>TS</i> ₂₀₃		3 3.9 173°77	4°9/27.7 17		
2 1	11 23.03	+ 7 52.4	2.058	2.904	11.9	19.3	2 1	11 24.15	+20 50.6	2.280	3.136	10.5	21.5
2 11	11 17.25	+ 8 34.1	1.979	2.900	8.5	19.1	2 11	11 17.87	+21 45.7	2.218	3.138	7.8	21.4
2 21	11 9.57	+ 9 24.1	1.925	2.895	4.6	18.8	2 21	11 9.83	+22 37.7	2.184	3.140	5.5	21.2
3 2	11 0.70	+10 17.3	1.899	2.889	1.3	18.6	3 2	11 0.75	+23 20.2	2.178	3.141	5.1	21.2
3 12	10 51.55	+11 7.2	1.904	2.883	4.2	18.8	3 12	10 51.54	+23 47.6	2.201	3.142	6.9	21.3
3 22	10 43.10	+11 48.4	1.937	2.876	8.1	19.0	3 22	10 43.11	+23 57.2	2.251	3.143	9.6	21.5
4 1	10 36.18	+12 17.1	1.996	2.869	11.7	19.2	4 1	10 36.23	+23 48.3	2.326	3.143	12.2	21.7
4 11	10 31.39	+12 31.3	2.077	2.861	14.7	19.4	4 11	10 31.40	+23 22.2	2.422	3.143	14.5	21.8
383733	2007 <i>UC</i> ₁₄₀		3 3.9 103°98	4°3/ 8.7 17			22408	1995 <i>SC</i> ₃		3 3.9 147°99	1°0/ 2.8 18		
2 1	11 18.73	- 9 23.2	2.307	3.088	12.9	20.9	2 1	11 23.23	+ 8 9.0	2.402	3.242	10.6	19.4
2 11	11 13.99	- 9 19.4	2.226	3.093	10.3	20.7	2 11	11 17.06	+ 8 39.2	2.333	3.252	7.5	19.2
2 21	11 7.67	- 8 57.0	2.168	3.098	7.4	20.6	2 21	11 9.32	+ 9 15.4	2.292	3.261	4.1	19.0
3 2	11 0.39	- 8 17.3	2.138	3.104	4.9	20.4	3 2	11 0.66	+ 9 53.2	2.280	3.270	1.0	18.8
3 12	10 52.92	- 7 24.1	2.135	3.109	4.4	20.4	3 12	10 51.90	+10 28.0	2.299	3.278	3.5	19.0
3 22	10 46.04	- 6 22.5	2.162	3.114	6.5	20.5	3 22	10 43.83	+10 55.8	2.347	3.286	6.9	19.3
4 1	10 40.46	- 5 18.6	2.215	3.119	9.3	20.7	4 1	10 37.12	+11 13.9	2.423	3.293	10.0	19.5
4 11	10 36.66	- 4 18.3	2.293	3.124	12.0	20.9	4 11	10 32.25	+11 20.7	2.522	3.299	12.6	19.6
210687	2000 <i>SO</i>		3 3.9 354°72	4°9/29.1 17			458770	2011 <i>SH</i> ₆₆		3 3.9 259°86	11°6/15.4 18		
2 1	11 26.62	+20 44.7	1.979	2.837	11.8	19.3	2 1	11 20.04	-25 11.7	1.604	2.312	20.5	21.5
2 11	11 19.81	+21 1.7	1.913	2.834	8.7	19.1	2 11	11 15.83	-25 36.4	1.515	2.305	18.2	21.3
2 21	11 10.96	+21 14.0	1.872	2.832	5.9	18.9	2 21	11 9.12	-25 23.1	1.441	2.298	15.6	21.1
3 2	11 0.91	+21 15.7	1.860	2.831	4.9	18.8	3 2	11 0.68	-24 27.0	1.387	2.290	13.2	20.9
3 12	10 50.76	+21 2.3	1.876	2.830	6.9	18.9	3 12	10 51.71	-22 48.7	1.356	2.283	11.7	20.8
3 22	10 41.57	+20 32.1	1.919	2.829	10.0	19.1	3 22	10 43.53	-20 35.5	1.349	2.276	12.0	20.8
4 1	10 34.22	+19 45.5	1.987	2.829	13.0	19.3	4 1	10 37.34	-18 0.0	1.366	2.268	14.0	20.9
4 11	10 29.25	+18 44.8	2.076	2.829	15.7	19.5	4 11	10 33.95	-15 18.0	1.405	2.260	16.9	21.0
366426	2001 <i>VT</i> ₂₂		3 3.9 191°51	5°9/11.5 17			146368	2001 <i>PZ</i> ₄₅		3 3.9 95°11	9°0/23.7 18		
2 1	11 21.21	-17 38.5	2.762	3.476	12.6	22.5	2 1	11 25.17	+29 6.5	1.780	2.640	12.7	19.8
2 11	11 15.64	-17 37.1	2.663	3.474	10.6	22.3	2 11	11 18.99	+30 50.8	1.748	2.655	10.4	19.7
2 21	11 8.57	-17 15.2	2.587	3.471	8.5	22.2	2 21	11 10.56	+32 22.7	1.741	2.670	9.0	19.6
3 2	11 0.54	-16 32.4	2.538	3.467	6.6	22.0	3 2	11 0.86	+33 32.0	1.761	2.685	9.4	19.7
3 12	10 52.27	-15 31.2	2.516	3.463	5.9	22.0	3 12	10 51.15	+34 11.8	1.805	2.699	11.3	19.8
3 22	10 44.48	-14 15.8	2.525	3.457	6.8	22.0	3 22	10 42.62	+34 20.6	1.874	2.714	13.7	20.0
4 1	10 37.84	-12 52.3	2.561	3.451	8.8	22.1	4 1	10 36.20	+34 0.4	1.962	2.728	16.0	20.2
4 11	10 32.85	-11 27.2	2.624	3.444	11.0	22.3	4 11	10 32.41	+33 16.0	2.067	2.741	17.9	20.4
453254	2008 <i>SL</i> ₁₃₂		3 3.9 255°72	1°2/ 4.8 17			287327	2002 <i>TJ</i> ₃₀₄		3 3.9 29°09	0°2/ 4.1 18</		

EPHEMERIDES

3 3.9

3 3.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
417615	2006 <i>WQ</i> ₅₁		3 3.9 219°60	3°7/29.4	17		97010	1999 <i>TK</i> ₂₅₆		3 3.9 252°76	1°3/ 5.2	18	
2 1	11 23.65	+14 29.8	1.909	2.769	12.0	21.5	2 1	11 19.26	- 0 22.5	1.956	2.786	13.1	19.7
2 11	11 17.85	+15 26.7	1.836	2.763	8.6	21.3	2 11	11 14.62	+ 0 13.3	1.875	2.783	9.7	19.5
2 21	11 9.97	+16 27.1	1.789	2.757	5.2	21.1	2 21	11 8.15	+ 1 5.0	1.819	2.781	5.8	19.3
3 2	11 0.79	+17 23.4	1.770	2.751	3.7	21.0	3 2	11 0.52	+ 2 8.7	1.790	2.778	2.0	19.0
3 12	10 51.34	+18 8.6	1.780	2.744	6.2	21.1	3 12	10 52.62	+ 3 18.1	1.790	2.776	3.2	19.1
3 22	10 42.69	+18 37.6	1.818	2.737	9.9	21.3	3 22	10 45.39	+ 4 26.3	1.818	2.773	7.3	19.3
4 1	10 35.75	+18 47.9	1.879	2.730	13.3	21.5	4 1	10 39.66	+ 5 27.0	1.873	2.770	11.1	19.6
4 11	10 31.14	+18 39.5	1.961	2.722	16.2	21.7	4 11	10 36.00	+ 6 15.4	1.950	2.768	14.3	19.8
377429	2004 <i>TV</i> ₂₀₂		3 3.9 161°12	3°0/29.4	16		415938	2001 <i>WA</i> ₉		3 3.9 107°63	2°6/ 1.1	18	
2 1	11 23.05	+15 12.6	2.528	3.379	9.8	22.3	2 1	11 23.86	+12 0.5	2.162	3.012	11.2	22.1
2 11	11 16.90	+16 0.1	2.463	3.386	7.0	22.1	2 11	11 17.54	+13 1.9	2.114	3.038	7.9	21.9
2 21	11 9.23	+16 48.5	2.426	3.392	4.2	22.0	2 21	11 9.58	+14 6.7	2.094	3.063	4.4	21.7
3 2	11 0.66	+17 32.8	2.418	3.398	3.1	21.9	3 2	11 0.72	+15 8.5	2.103	3.087	2.6	21.6
3 12	10 51.98	+18 7.9	2.441	3.403	5.0	22.0	3 12	10 51.87	+16 1.2	2.142	3.110	4.9	21.8
3 22	10 43.97	+18 30.6	2.493	3.407	7.8	22.2	3 22	10 43.88	+16 40.4	2.210	3.133	8.2	22.1
4 1	10 37.29	+18 39.2	2.572	3.411	10.5	22.4	4 1	10 37.46	+17 4.0	2.303	3.155	11.1	22.3
4 11	10 32.41	+18 33.6	2.672	3.414	12.8	22.6	4 11	10 33.05	+17 11.7	2.419	3.176	13.6	22.5
79782	1998 <i>UN</i> ₄₀		3 3.9 112°50	2°1/ 2.0	18		463068	2011 <i>JK</i> ₇		3 3.9 273°46	4°2/28.8	17	
2 1	11 26.69	+10 59.4	1.998	2.845	12.1	19.8	2 1	11 22.67	+16 54.0	1.977	2.839	11.5	20.9
2 11	11 19.66	+11 35.9	1.945	2.867	8.5	19.6	2 11	11 17.13	+17 45.5	1.903	2.830	8.4	20.6
2 21	11 10.78	+12 16.6	1.919	2.888	4.7	19.4	2 21	11 9.58	+18 38.0	1.854	2.820	5.4	20.4
3 2	11 0.90	+12 55.7	1.922	2.909	2.1	19.3	3 2	11 0.77	+19 24.4	1.834	2.810	4.3	20.3
3 12	10 51.02	+13 27.7	1.954	2.929	4.7	19.5	3 12	10 51.69	+19 58.1	1.842	2.800	6.6	20.5
3 22	10 42.12	+13 48.5	2.016	2.948	8.3	19.7	3 22	10 43.36	+20 14.8	1.876	2.790	10.0	20.6
4 1	10 34.98	+13 56.0	2.104	2.967	11.6	20.0	4 1	10 36.68	+20 12.6	1.935	2.780	13.2	20.8
4 11	10 30.08	+13 49.8	2.213	2.985	14.3	20.2	4 11	10 32.25	+19 52.2	2.014	2.770	16.0	21.0
150917	2001 <i>TD</i> ₄₄		3 3.9 173°44	6°0/26.6	18		387279	2012 <i>UW</i> ₁₃₂		3 3.9 149°56	1°0/ 2.6	18	
2 1	11 25.87	+24 12.9	2.252	3.105	10.7	19.8	2 1	11 18.97	+ 7 51.5	2.777	3.618	9.3	21.7
2 11	11 19.14	+25 15.1	2.195	3.108	8.2	19.6	2 11	11 13.90	+ 8 35.6	2.706	3.626	6.6	21.6
2 21	11 10.55	+26 11.4	2.164	3.111	6.3	19.5	2 21	11 7.55	+ 9 25.7	2.663	3.633	3.6	21.4
3 2	11 0.87	+26 54.9	2.162	3.112	6.2	19.5	3 2	11 0.44	+10 17.5	2.650	3.640	1.0	21.2
3 12	10 51.08	+27 19.9	2.188	3.114	7.9	19.6	3 12	10 53.21	+11 6.5	2.668	3.647	3.2	21.4
3 22	10 42.14	+27 24.0	2.241	3.114	10.4	19.8	3 22	10 46.51	+11 48.9	2.716	3.653	6.2	21.6
4 1	10 34.86	+27 7.4	2.319	3.115	12.9	20.0	4 1	10 40.91	+12 21.6	2.791	3.659	8.9	21.7
4 11	10 29.75	+26 32.4	2.415	3.114	15.0	20.1	4 11	10 36.81	+12 43.0	2.890	3.664	11.2	21.9
168494	1999 <i>RE</i> ₁₇₇		3 3.9 109°68	0°0/ 3.8	18		309350	2007 <i>TA</i> ₅₂		3 3.9 337°56	3°6/ 1.5	18	
2 1	11 24.85	+ 3 59.5	1.774	2.614	13.7	20.5	2 1	11 24.70	+12 59.2	1.332	2.204	15.4	19.7
2 11	11 18.57	+ 4 33.0	1.716	2.632	9.9	20.3	2 11	11 19.27	+13 33.6	1.265	2.199	11.0	19.4
2 21	11 10.28	+ 5 18.5	1.682	2.650	5.5	20.1	2 21	11 11.04	+14 13.2	1.221	2.193	6.4	19.1
3 2	11 0.83	+ 6 10.6	1.677	2.667	0.9	19.8	3 2	11 1.02	+14 49.6	1.203	2.189	3.6	18.9
3 12	10 51.31	+ 7 2.5	1.700	2.684	3.7	20.0	3 12	10 50.67	+15 14.4	1.210	2.184	6.9	19.1
3 22	10 42.77	+ 7 48.1	1.752	2.700	8.1	20.3	3 22	10 41.47	+15 21.8	1.242	2.180	11.7	19.4
4 1	10 36.08	+ 8 22.7	1.829	2.716	11.9	20.6	4 1	10 34.64	+15 9.2	1.296	2.177	16.1	19.6
4 11	10 31.75	+ 8 43.6	1.928	2.731	15.0	20.8	4 11	10 30.92	+14 37.3	1.368	2.174	19.9	19.9
123316	2000 <i>VR</i> ₉		3 3.9 209°73	0°7/ 3.2	17		53539	2000 <i>AO</i> ₂₄₃		3 3.9 0°49	3°4/ 1.8	18	
2 1	11 21.72	+ 6 27.5	2.045	2.890	12.0	20.1	2 1	11 22.89	+11 21.9	1.060	1.944	17.4	18.4
2 11	11 16.31	+ 7 2.3	1.967	2.887	8.6	19.9	2 11	11 18.37	+11 59.7	1.003	1.942	12.5	18.1
2 21	11 9.06	+ 7 46.3	1.914	2.884	4.7	19.6	2 21	11 10.68	+12 46.5	0.966	1.940	7.1	17.8
3 2	11 0.65	+ 8 34.8	1.890	2.880	0.9	19.3	3 2	11 0.97	+13 32.3	0.952	1.940	3.4	17.6
3 12	10 52.01	+ 9 21.7	1.895	2.877	3.8	19.5	3 12	10 50.94	+14 6.4	0.962	1.941	7.3	17.8
3 22	10 44.04	+10 1.7	1.929	2.873	7.8	19.8	3 22	10 42.31	+14 21.5	0.995	1.942	12.8	18.1
4 1	10 37.59	+10 30.8	1.988	2.869	11.4	20.0	4 1	10 36.44	+14 14.1	1.048	1.945	17.7	18.4
4 11	10 33.22	+10 46.5	2.070	2.864	14.4	20.2	4 11	10 34.05	+13 44.8	1.118	1.949	21.9	18.6
338971	2004 <i>FQ</i> ₅₆		3 3.9 335°60	10°1/23.8	17		384973	2012 <i>TL</i> ₁₆₂		3 3.9 339°41	0°3/ 3.6	17	
2 1	11 32.97	+37 43.1	2.073	2.897	12.6	20.4	2 1	11 18.91	+ 5 0.4	2.197	3.040	11.3	21.4
2 11	11 24.46	+38 26.8	2.021	2.892	11.0	20.3	2 11	11 14.19	+ 5 38.3	2.121	3.040	8.1	21.2
2 21	11 13.55	+38 52.0	1.994	2.888	10.1	20.3	2 21	11 7.84	+ 6 26.2	2.071	3.040	4.5	21.0
3 2	11 1.34	+38 50.9	1.993	2.884	10.4	20.3	3 2	11 0.49	+ 7 19.5	2.049	3.039	0.7	20.7
3 12	10 49.21	+38 19.3	2.017	2.880	11.7	20.3	3 12	10 52.96	+ 8 12.5	2.056	3.039	3.3	20.9
3 22	10 38.43	+37 17.9	2.066	2.876	13.7	20.5	3 22	10 46.04	+ 9 0.0	2.092	3.039	7.1	21.1
4 1	10 29.98	+35 50.8	2.136	2.873	15.7	20.6	4 1	10 40.46	+ 9 37.8	2.155	3.039	10.4	21.3
4 11	10 24.36	+34 4.1	2.224	2.870	17.4	20.7	4 11	10 36.74	+10 3.1	2.240	3.039	13.3	21.5
472378	2015 <i>BM</i> ₇₂		3 3.9 233°93	3°2/ 7.1	17		152696	1998 <i>RO</i> ₅₂		3 3.9 175°63	2°6/ 1.8	18	
2 1	11 20.56	- 5 9.1	2.202	3.004	12.8	21.8	2 1	11 26.96	+10 58.6	1.753	2.606	13.2	20.7
2 11	11 15.45	- 5 1.8	2.109	2.995	9.9	21.5	2 11	11 20.30	+11 47.4	1.684	2.609	9.4	20.4
2 21	11 8.59	- 4 37.9	2.041	2.987	6.7	21.3	2 21	11 11.39	+12 42.7	1.641	2.611	5.3	20.2
3 2	11 0.59	- 3 58.9	2.000	2.978	3.8	21.1	3 2	11 1.07	+13 37.2	1.626	2.613	2.6	20.0
3 12	10 52.27	- 3 8.9	1.988	2.969	3.7	21.1	3 12	10 50.52	+14 23.5	1.640	2.613	5.5	20.2
3 22	10 44.51	- 2 13.3	2.005	2.960	6.7	21.3	3 22	10 40.92	+14 55.8	1.681	2.613	9.7	20.4
4 1	10 38.10	- 1 17.9	2.049	2.950	10.1	21.5	4 1	10 33.26	+15 11.0	1.748	2.612	13.5	20.7
4 11	10 33.61	- 0 28.3	2.117	2.940	13.1	21.6	4 11	10 28.16	+15 8.8	1.835	2.611	16.7	20.9
306238	2011 <i>QW</i> ₆₇		3 3.9 218°92	0°5/ 4.4	18		321083	2008 <i>SB</i> ₁₃₃		3 3.9 251°48	0°4/ 3.5		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
421404	2013 <i>VH</i> ₁₆		3 3.9 178°27'	2.4/ 6.6	17		127347	2002 <i>JT</i> ₁₂₀		3 3.9 265°08'	4.4/27.9	17	
2 1	11 19.80	- 4 15.1	2.400	3.203	11.8	21.6	2 1	11 20.25	+16 15.8	2.079	2.943	11.0	19.8
2 11	11 14.73	- 3 45.8	2.315	3.204	9.0	21.5	2 11	11 15.41	+17 38.5	2.000	2.927	8.0	19.6
2 21	11 8.11	- 3 0.9	2.256	3.205	5.9	21.3	2 21	11 8.66	+19 4.7	1.947	2.912	5.2	19.4
3 2	11 0.54	- 2 3.0	2.224	3.206	2.9	21.1	3 2	11 0.66	+20 26.4	1.922	2.896	4.5	19.3
3 12	10 52.77	- 0 56.9	2.223	3.206	3.1	21.1	3 12	10 52.33	+21 35.7	1.927	2.879	6.9	19.4
3 22	10 45.55	+ 0 11.7	2.252	3.206	6.1	21.3	3 22	10 44.60	+22 26.8	1.958	2.863	10.1	19.6
4 1	10 39.58	+ 1 17.3	2.308	3.205	9.3	21.5	4 1	10 38.36	+22 56.6	2.014	2.846	13.3	19.8
4 11	10 35.35	+ 2 14.9	2.389	3.204	12.1	21.6	4 11	10 34.21	+23 5.0	2.090	2.829	16.0	19.9
200474	2000 <i>XD</i> ₄₆		3 3.9 69°42'	6.2/ 2.1	18		241563	1981 <i>EZ</i> ₅		3 3.9 5°81'	3.4/ 7.9	17	
2 1	11 44.99	+20 31.3	0.980	1.845	20.2	18.1	2 1	11 15.95	- 6 48.7	2.509	3.304	11.6	20.0
2 11	11 34.33	+20 10.4	0.931	1.857	14.9	17.8	2 11	11 11.94	- 6 45.5	2.426	3.305	9.1	19.8
2 21	11 19.49	+19 38.5	0.904	1.869	9.4	17.6	2 21	11 6.55	- 6 27.1	2.367	3.306	6.4	19.7
3 2	11 2.33	+18 46.6	0.900	1.881	6.2	17.4	3 2	11 0.31	- 5 54.8	2.336	3.308	3.9	19.5
3 12	10 45.48	+17 30.9	0.923	1.894	9.2	17.6	3 12	10 53.90	- 5 12.0	2.333	3.310	3.7	19.5
3 22	10 31.26	+15 54.7	0.971	1.906	14.5	18.0	3 22	10 47.99	- 4 23.1	2.358	3.313	5.8	19.6
4 1	10 21.17	+14 4.8	1.040	1.919	19.4	18.3	4 1	10 43.20	- 3 33.1	2.411	3.316	8.6	19.8
4 11	10 15.67	+12 7.9	1.127	1.931	23.4	18.6	4 11	10 39.99	- 2 46.7	2.488	3.320	11.2	20.0
64592	2001 <i>XG</i> ₈		3 3.9 78°09'	1.8/ 2.5	18		34305	2000 <i>QN</i> ₁₇₉		3 3.9 56°08'	2.6/ 1.6	17	
2 1	11 27.27	+10 52.7	1.757	2.609	13.3	18.3	2 1	11 24.05	+14 8.0	2.155	3.009	11.1	18.8
2 11	11 20.30	+11 5.9	1.702	2.625	9.4	18.1	2 11	11 17.78	+14 25.3	2.094	3.019	7.9	18.7
2 21	11 11.25	+11 23.4	1.672	2.642	5.2	17.9	2 21	11 9.80	+14 43.6	2.060	3.028	4.6	18.5
3 2	11 1.03	+11 40.1	1.670	2.659	1.9	17.7	3 2	11 0.83	+14 58.3	2.054	3.038	2.6	18.4
3 12	10 50.80	+11 50.5	1.697	2.675	4.7	17.9	3 12	10 51.80	+15 5.0	2.078	3.048	4.8	18.5
3 22	10 41.67	+11 51.3	1.752	2.691	8.8	18.2	3 22	10 43.61	+15 1.0	2.130	3.059	8.1	18.7
4 1	10 34.51	+11 40.5	1.832	2.708	12.4	18.4	4 1	10 37.00	+14 45.0	2.208	3.069	11.2	18.9
4 11	10 29.83	+11 17.8	1.934	2.724	15.4	18.7	4 11	10 32.43	+14 17.3	2.308	3.079	13.8	19.1
423239	2004 <i>TB</i> ₃₅		3 3.9 130°18'	0.8/ 3.2	16		59358	1999 <i>CL</i> ₁₅₈		3 3.9 52°03'	0.2/ 1.1	15	
2 1	11 22.39	+ 6 55.3	2.052	2.897	11.9	22.0	2 1	11 1.67	+13 29.9	36.506	37.356	0.8	22.7
2 11	11 16.71	+ 7 25.7	1.983	2.904	8.5	21.8	2 11	11 0.94	+13 35.7	36.437	37.362	0.5	22.7
2 21	11 9.26	+ 8 4.3	1.940	2.910	4.7	21.6	2 21	11 0.13	+13 41.6	36.398	37.367	0.3	22.6
3 2	11 0.72	+ 8 46.3	1.926	2.916	0.9	21.3	3 2	10 59.28	+13 47.3	36.388	37.372	0.2	22.6
3 12	10 52.04	+ 9 26.1	1.941	2.922	3.7	21.5	3 12	10 58.42	+13 52.8	36.409	37.378	0.3	22.6
3 22	10 44.12	+ 9 58.9	1.984	2.928	7.6	21.8	3 22	10 57.60	+13 57.6	36.459	37.383	0.6	22.7
4 1	10 37.75	+10 21.1	2.054	2.933	11.1	22.0	4 1	10 56.83	+14 1.8	36.538	37.388	0.8	22.7
4 11	10 33.43	+10 30.7	2.145	2.939	14.0	22.2	4 11	10 56.15	+14 5.2	36.641	37.394	1.0	22.7
32387	D'Egidio		3 3.9 94°33'	1.9/ 1.7	18		173563	2001 <i>AG</i> ₁₂		3 3.9 36°82'	9.7/10.9	18	
2 1	11 19.07	+10 15.7	2.375	3.227	10.2	19.0	2 1	11 23.41	-14 32.4	1.267	2.056	21.1	19.4
2 11	11 14.13	+11 9.0	2.315	3.240	7.2	18.8	2 11	11 18.36	-15 39.0	1.210	2.070	17.6	19.2
2 21	11 7.73	+12 7.2	2.281	3.252	4.0	18.6	2 21	11 10.54	-16 12.8	1.171	2.085	13.9	19.0
3 2	11 0.48	+13 5.2	2.277	3.264	1.9	18.5	3 2	11 0.98	-16 10.7	1.154	2.100	10.8	18.9
3 12	10 53.14	+13 57.3	2.302	3.276	4.2	18.7	3 12	10 51.15	-15 35.4	1.159	2.117	9.7	18.9
3 22	10 46.45	+14 39.3	2.357	3.288	7.3	18.9	3 22	10 42.54	-14 34.9	1.188	2.134	11.3	19.0
4 1	10 41.04	+15 8.3	2.437	3.299	10.2	19.1	4 1	10 36.37	-13 20.6	1.239	2.152	14.3	19.2
4 11	10 37.37	+15 23.1	2.540	3.311	12.7	19.3	4 11	10 33.32	-12 4.7	1.310	2.170	17.6	19.5
97090	1999 <i>VM</i> ₅₇		3 3.9 79°57'	0.4/ 4.2	18		66870	1999 <i>VE</i> ₄₈		3 3.9 159°97'	1.7/ 5.7	18	
2 1	11 20.76	+ 3 15.4	1.933	2.773	12.8	20.0	2 1	11 22.30	- 0 39.1	2.428	3.241	11.4	19.2
2 11	11 15.66	+ 3 43.9	1.862	2.778	9.3	19.8	2 11	11 16.46	- 0 30.0	2.349	3.247	8.5	19.0
2 21	11 8.72	+ 4 24.6	1.816	2.783	5.3	19.6	2 21	11 9.07	- 0 9.0	2.296	3.252	5.3	18.8
3 2	11 0.65	+ 5 12.8	1.798	2.788	1.0	19.3	3 2	11 0.72	+ 0 21.3	2.271	3.257	2.2	18.6
3 12	10 52.39	+ 6 2.7	1.808	2.793	3.4	19.4	3 12	10 52.21	+ 0 57.1	2.277	3.261	2.9	18.7
3 22	10 44.90	+ 6 48.5	1.847	2.798	7.5	19.7	3 22	10 44.30	+ 1 33.9	2.313	3.265	6.1	18.9
4 1	10 38.97	+ 7 25.2	1.911	2.803	11.2	19.9	4 1	10 37.68	+ 2 7.6	2.377	3.269	9.3	19.1
4 11	10 35.16	+ 7 49.8	1.998	2.808	14.3	20.2	4 11	10 32.85	+ 2 34.7	2.464	3.271	12.0	19.3
56438	2000 <i>GV</i> ₄₉		3 3.9 194°60'	2.1/ 5.8	18		488894	2005 <i>TY</i> ₄₁		3 3.9 146°25'	1.6/ 5.4	18	
2 1	11 22.94	- 2 20.2	1.757	2.580	14.6	19.5	2 1	11 25.20	- 1 14.6	1.834	2.654	14.2	23.0
2 11	11 17.49	- 1 43.9	1.676	2.578	11.0	19.3	2 11	11 18.90	- 0 36.7	1.765	2.667	10.6	22.8
2 21	11 9.87	- 0 47.7	1.618	2.576	6.9	19.0	2 21	11 10.55	+ 0 18.6	1.720	2.679	6.4	22.6
3 2	11 0.85	+ 0 24.4	1.586	2.573	2.7	18.7	3 2	11 0.97	+ 1 26.5	1.703	2.690	2.3	22.4
3 12	10 51.49	+ 1 45.1	1.584	2.569	3.7	18.8	3 12	10 51.21	+ 2 40.2	1.715	2.700	3.5	22.5
3 22	10 42.89	+ 3 6.2	1.610	2.565	8.0	19.0	3 22	10 42.35	+ 3 52.0	1.757	2.710	7.7	22.7
4 1	10 36.05	+ 4 19.8	1.662	2.560	12.2	19.3	4 1	10 35.25	+ 4 55.4	1.825	2.718	11.6	23.0
4 11	10 31.62	+ 5 20.0	1.736	2.555	15.8	19.5	4 11	10 30.51	+ 5 45.6	1.916	2.726	14.9	23.2
267377	2001 <i>XG</i> ₁₉₅		3 3.9 64°30'	10.8/13.1	18		388379	2006 <i>UF</i> ₂₁₁		3 3.9 137°97'	3.9/ 8.6	17	
2 1	11 25.22	-22 17.0	1.909	2.612	17.8	20.2	2 1	11 18.43	- 8 56.3	2.529	3.308	12.0	21.6
2 11	11 19.22	-23 40.6	1.831	2.617	15.7	20.1	2 11	11 13.71	- 8 53.9	2.445	3.311	9.5	21.5
2 21	11 10.91	-24 37.5	1.772	2.621	13.5	19.9	2 21	11 7.54	- 8 34.9	2.384	3.314	6.9	21.3
3 2	11 1.03	-25 3.0	1.734	2.626	11.6	19.8	3 2	11 0.48	- 8 0.4	2.351	3.317	4.5	21.2
3 12	10 50.68	-24 56.5	1.721	2.631	10.8	19.8	3 12	10 53.24	- 7 13.7	2.346	3.319	4.1	21.1
3 22	10 41.06	-24 21.2	1.733	2.635	11.3	19.8	3 22	10 46.51	- 6 19.4	2.371	3.322	6.0	21.3
4 1	10 33.24	-23 24.4	1.768	2.640	13.0	19.9	4 1	10 40.95	- 5 22.6	2.423	3.325	8.7	21.4
4 11	10 27.95	-22 15.7	1.825	2.645	15.1	20.1	4 11	10 37.03	- 4 28.6	2.499	3.327	11.2	21.6
118278	1998 <i>RO</i> ₁₇		3 3.9 148°09'	1.3/ 4.9	18		151916	2004 <i>EX</i> ₅₇		3 3.9 241°93'	1.2/ 2.9	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
215881	2005 <i>EE</i> ₂₄₅		3 3.9 344°28	1°3/ 2.9 18			357530	2004 <i>RK</i> ₁₆₄		3 3.9 116°57	3°0/ 1.5 18		
2 1	11 19.83	+ 6 28.7	1.285	2.155	16.0	20.3	2 1	11 27.66	+12 17.0	1.670	2.526	13.6	21.3
2 11	11 15.83	+ 7 12.8	1.216	2.148	11.5	20.0	2 11	11 20.73	+13 7.0	1.618	2.544	9.7	21.1
2 21	11 9.18	+ 8 12.0	1.169	2.142	6.3	19.7	2 21	11 11.57	+14 1.2	1.591	2.561	5.5	20.9
3 2	11 0.78	+ 9 18.5	1.146	2.136	1.4	19.3	3 2	11 1.15	+14 52.0	1.592	2.578	3.1	20.8
3 12	10 52.00	+10 22.3	1.149	2.132	5.4	19.6	3 12	10 50.71	+15 32.1	1.622	2.594	5.9	21.0
3 22	10 44.23	+11 14.4	1.176	2.128	10.7	19.9	3 22	10 41.42	+15 56.5	1.679	2.609	9.8	21.2
4 1	10 38.69	+11 48.2	1.226	2.125	15.6	20.1	4 1	10 34.20	+16 3.3	1.761	2.623	13.5	21.5
4 11	10 36.11	+12 0.8	1.294	2.123	19.6	20.4	4 11	10 29.59	+15 52.8	1.863	2.637	16.5	21.7
163495	2002 <i>SH</i> ₃₃		3 3.9 149°22	2°1/ 6.5 17			9127	Brucekoehn		3 3.9 233°55	1°1/ 2.5 18		
2 1	11 19.64	- 3 20.1	2.717	3.519	10.6	20.7	2 1	11 18.92	+ 8 21.0	2.607	3.452	9.7	19.1
2 11	11 14.43	- 2 59.7	2.639	3.528	8.1	20.5	2 11	11 14.05	+ 9 1.3	2.524	3.445	6.9	18.9
2 21	11 7.89	- 2 26.7	2.586	3.536	5.2	20.3	2 21	11 7.75	+ 9 47.9	2.467	3.437	3.8	18.7
3 2	11 0.54	- 1 43.3	2.562	3.544	2.6	20.2	3 2	11 0.56	+10 36.7	2.440	3.429	1.2	18.5
3 12	10 53.07	- 0 53.4	2.569	3.552	2.8	20.2	3 12	10 53.16	+11 22.8	2.443	3.421	3.5	18.6
3 22	10 46.12	- 0 1.5	2.605	3.559	5.5	20.4	3 22	10 46.26	+12 2.1	2.475	3.412	6.7	18.8
4 1	10 40.28	+ 0 48.1	2.671	3.565	8.3	20.6	4 1	10 40.48	+12 31.3	2.534	3.404	9.6	19.0
4 11	10 35.99	+ 1 31.5	2.760	3.571	10.8	20.7	4 11	10 36.32	+12 48.6	2.617	3.395	12.2	19.2
82562	2001 <i>OH</i> ₇₈		3 3.9 138°17	4°7/27.2 18			498256	2007 <i>UC</i> ₁₁₄		3 3.9 169°59	1°4/ 5.7 17		
2 1	11 20.32	+19 31.0	2.320	3.182	10.1	20.0	2 1	11 19.51	- 0 57.9	2.954	3.762	9.7	22.8
2 11	11 15.15	+20 44.3	2.263	3.187	7.4	19.8	2 11	11 14.28	- 0 35.3	2.871	3.766	7.2	22.6
2 21	11 8.37	+21 56.1	2.233	3.191	5.2	19.7	2 21	11 7.80	- 0 2.3	2.814	3.770	4.5	22.4
3 2	11 0.62	+22 59.7	2.231	3.196	4.9	19.7	3 2	11 0.57	+ 0 38.8	2.787	3.773	1.8	22.2
3 12	10 52.74	+23 48.9	2.258	3.200	6.8	19.8	3 12	10 53.20	+ 1 24.2	2.792	3.776	2.4	22.3
3 22	10 45.55	+24 20.3	2.313	3.204	9.4	20.0	3 22	10 46.30	+ 2 10.2	2.827	3.778	5.2	22.5
4 1	10 39.77	+24 32.4	2.391	3.208	11.9	20.1	4 1	10 40.40	+ 2 52.9	2.890	3.780	7.9	22.7
4 11	10 35.87	+24 26.1	2.490	3.212	14.1	20.3	4 11	10 35.94	+ 3 29.2	2.979	3.781	10.3	22.8
239227	2006 <i>SY</i> ₅₄		3 3.9 124°91	1°9/ 1.4 18			505545	2013 <i>YH</i> ₁₁₆		3 3.9 143°34	2°9/29.2 17		
2 1	11 18.80	+10 47.4	2.718	3.567	9.2	20.6	2 1	11 18.68	+13 45.5	2.540	3.396	9.5	21.3
2 11	11 13.81	+11 43.7	2.657	3.580	6.5	20.5	2 11	11 13.87	+14 51.1	2.475	3.401	6.7	21.1
2 21	11 7.52	+12 44.1	2.623	3.592	3.6	20.3	2 21	11 7.63	+15 59.6	2.438	3.406	4.0	21.0
3 2	11 0.48	+13 43.8	2.619	3.605	1.9	20.2	3 2	11 0.55	+17 5.2	2.431	3.411	2.9	20.9
3 12	10 53.36	+14 37.8	2.646	3.617	3.9	20.4	3 12	10 53.33	+18 2.3	2.453	3.415	4.9	21.0
3 22	10 46.80	+15 22.3	2.702	3.628	6.7	20.6	3 22	10 46.69	+18 46.9	2.504	3.420	7.7	21.2
4 1	10 41.37	+15 54.6	2.785	3.639	9.3	20.7	4 1	10 41.26	+19 16.5	2.581	3.424	10.4	21.4
4 11	10 37.48	+16 13.7	2.891	3.650	11.5	20.9	4 11	10 37.47	+19 30.4	2.680	3.428	12.6	21.6
316651	1990 <i>OL</i>		3 3.9 255°92	1°3/ 2.3 18			61457	2000 <i>QM</i> ₃₀		3 3.9 251°20	2°6/ 1.6 18		
2 1	11 21.06	+ 7 17.2	2.643	3.481	9.8	21.3	2 1	11 23.94	+10 7.7	1.721	2.579	13.2	19.7
2 11	11 15.72	+ 8 24.7	2.535	3.453	7.0	21.0	2 11	11 18.43	+11 9.9	1.635	2.562	9.5	19.4
2 21	11 8.77	+ 9 41.8	2.454	3.423	3.9	20.8	2 21	11 10.55	+12 21.9	1.574	2.545	5.3	19.2
3 2	11 0.72	+11 3.6	2.404	3.393	1.3	20.5	3 2	11 1.06	+13 36.3	1.540	2.527	2.6	18.9
3 12	10 52.26	+12 24.1	2.386	3.362	3.8	20.7	3 12	10 51.08	+14 44.0	1.535	2.509	5.8	19.1
3 22	10 44.15	+13 37.3	2.398	3.330	7.2	20.8	3 22	10 41.81	+15 37.5	1.557	2.490	10.2	19.3
4 1	10 37.12	+14 38.7	2.439	3.297	10.4	21.0	4 1	10 34.35	+16 11.9	1.603	2.470	14.4	19.5
4 11	10 31.74	+15 25.4	2.502	3.262	13.1	21.1	4 11	10 29.46	+16 25.6	1.670	2.450	17.9	19.7
190086	2004 <i>TW</i> ₁₁₂		3 3.9 241°08	6°0/ 9.7 17			504533	2008 <i>SS</i> ₁₅		3 3.9 195°87	0°4/ 4.4 17		
2 1	11 22.11	-13 5.5	2.293	3.047	13.8	20.4	2 1	11 21.37	+ 2 56.4	2.359	3.188	11.1	22.7
2 11	11 16.65	-13 28.6	2.191	3.034	11.4	20.2	2 11	11 15.91	+ 3 25.0	2.276	3.186	8.1	22.5
2 21	11 9.36	-13 32.0	2.112	3.021	8.8	20.0	2 21	11 8.84	+ 4 4.2	2.218	3.183	4.7	22.2
3 2	11 0.81	-13 14.8	2.059	3.007	6.7	19.9	3 2	11 0.76	+ 4 50.3	2.190	3.180	1.0	22.0
3 12	10 51.85	-12 38.7	2.033	2.992	6.0	19.8	3 12	10 52.45	+ 5 38.5	2.192	3.176	2.9	22.1
3 22	10 43.37	-11 47.8	2.036	2.977	7.6	19.9	3 22	10 44.72	+ 6 23.7	2.223	3.172	6.6	22.3
4 1	10 36.21	-10 48.3	2.066	2.962	10.2	20.0	4 1	10 38.29	+ 7 1.9	2.282	3.167	9.9	22.5
4 11	10 31.01	- 9 46.9	2.119	2.946	13.0	20.1	4 11	10 33.66	+ 7 29.9	2.364	3.162	12.7	22.7
190400	1999 <i>TG</i> ₁₄₅		3 3.9 152°41	1°4/ 2.5 18			436725	2011 <i>UP</i> ₁₆₉		3 3.9 263°04	2°1/ 1.8 17		
2 1	11 22.64	+ 9 1.6	2.205	3.051	11.2	20.5	2 1	11 22.53	+12 39.2	2.467	3.316	10.0	21.2
2 11	11 16.82	+ 9 35.2	2.135	3.057	7.9	20.3	2 11	11 16.69	+12 58.9	2.385	3.307	7.2	21.0
2 21	11 9.31	+10 14.8	2.092	3.062	4.3	20.1	2 21	11 9.26	+13 21.0	2.329	3.299	4.1	20.8
3 2	11 0.79	+10 55.7	2.077	3.066	1.4	19.9	3 2	11 0.84	+13 41.5	2.304	3.290	2.1	20.6
3 12	10 52.12	+11 32.5	2.093	3.071	4.0	20.1	3 12	10 52.21	+13 56.1	2.308	3.281	4.2	20.8
3 22	10 44.16	+12 1.0	2.137	3.075	7.5	20.3	3 22	10 44.17	+14 1.7	2.342	3.272	7.4	21.0
4 1	10 37.65	+12 18.1	2.208	3.078	10.8	20.5	4 1	10 37.43	+13 56.4	2.402	3.264	10.4	21.1
4 11	10 33.11	+12 22.5	2.301	3.082	13.5	20.7	4 11	10 32.51	+13 39.7	2.485	3.255	13.0	21.3
236179	2005 <i>VN</i> ₇₈		3 3.9 96°61	0°4/ 3.6 18			475553	2006 <i>TL</i> ₇₈		3 3.9 192°76	18°0/21.8 16		
2 1	11 23.10	+ 3 9.3	1.399	2.252	16.0	21.1	2 1	11 47.13	+43 15.6	1.138	1.965	20.6	21.2
2 11	11 17.82	+ 4 14.8	1.342	2.265	11.5	20.8	2 11	11 36.60	+44 59.2	1.103	1.965	18.8	21.0
2 21	11 10.11	+ 5 38.0	1.309	2.279	6.4	20.6	2 21	11 21.09	+46 7.2	1.088	1.964	18.0	21.0
3 2	11 0.93	+ 7 10.4	1.301	2.292	0.9	20.2	3 2	11 2.73	+46 21.0	1.092	1.963	18.6	21.0
3 12	10 51.60	+ 8 41.3	1.321	2.305	4.6	20.5	3 12	10 44.69	+45 32.7	1.116	1.961	20.3	21.1
3 22	10 43.41	+10 0.7	1.367	2.317	9.7	20.8	3 22	10 29.77	+43 47.8	1.157	1.958	22.7	21.3
4 1	10 37.39	+11 1.9	1.438	2.330	14.1	21.1	4 1	10 19.62	+41 19.5	1.215	1.956	25.1	21.4
4 11	10 34.14	+11 41.5	1.528	2.342	17.8	21.4	4 11	10 14.61	+38 23.3	1.285	1.952	27.3	21.6
99385	2001 <i>YD</i> ₁₂₅		3 3.9 226°69	0°5/ 3.4 18			408996	2002 <i>UC</i> ₆₀		3 3.9 122°59	2°4/ 6.6 18		
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
422207	2014 <i>RD</i> ₅₀		3 3.9 157°09	1°9/ 2.2 18			121315	Mikelentz		3 3.9 244°74	1°1/ 5.1 17		
2 1	11 25.39	+10 0.4	1.945	2.794	12.3	21.4	2 1	11 21.66	+0 56.8	2.232	3.057	11.9	20.6
2 11	11 19.00	+10 39.4	1.878	2.801	8.7	21.2	2 11	11 16.32	+1 18.0	2.137	3.042	8.8	20.4
2 21	11 10.64	+11 24.5	1.837	2.807	4.8	21.0	2 21	11 9.20	+1 51.8	2.066	3.027	5.3	20.1
3 2	11 1.08	+12 9.8	1.824	2.812	1.9	20.8	3 2	11 0.89	+2 35.3	2.023	3.012	1.7	19.8
3 12	10 51.36	+12 49.0	1.841	2.817	4.7	21.0	3 12	10 52.23	+3 23.8	2.011	2.996	3.0	19.9
3 22	10 42.50	+13 17.4	1.886	2.821	8.5	21.2	3 22	10 44.09	+4 11.8	2.028	2.980	6.9	20.1
4 1	10 35.35	+13 32.0	1.957	2.825	12.1	21.4	4 1	10 37.28	+4 54.5	2.072	2.963	10.5	20.3
4 11	10 30.47	+13 31.8	2.049	2.828	15.0	21.7	4 11	10 32.40	+5 27.8	2.139	2.946	13.6	20.5
131549	2001 <i>VJ</i> ₂₁		3 3.9 32°70	1°4/ 4.8 18			205666	2001 <i>XS</i> ₁₇₈		3 3.9 341°76	8°2/ 25.9 18		
2 1	11 22.32	+1 42.0	1.061	1.926	19.0	19.3	2 1	11 16.14	+17 43.5	1.041	1.940	16.3	18.7
2 11	11 17.75	+1 54.1	1.013	1.940	13.9	19.1	2 11	11 13.77	+19 50.7	0.983	1.926	12.1	18.4
2 21	11 10.26	+2 27.1	0.985	1.954	8.2	18.8	2 21	11 8.32	+22 4.2	0.946	1.913	8.7	18.2
3 2	11 1.03	+3 14.8	0.980	1.970	2.3	18.5	3 2	11 0.77	+24 6.3	0.932	1.902	8.8	18.1
3 12	10 51.70	+4 7.6	1.000	1.986	4.7	18.7	3 12	10 52.73	+25 40.2	0.941	1.892	12.3	18.3
3 22	10 43.83	+4 55.9	1.042	2.004	10.4	19.1	3 22	10 45.89	+26 35.1	0.970	1.884	16.9	18.5
4 1	10 38.60	+5 31.9	1.107	2.022	15.4	19.4	4 1	10 41.68	+26 48.3	1.017	1.877	21.2	18.7
4 11	10 36.61	+5 51.2	1.189	2.041	19.5	19.7	4 11	10 40.89	+26 23.1	1.078	1.872	24.8	19.0
91470	1999 <i>RX</i> ₈₇		3 3.9 108°43	1°0/ 2.9 18			141894	2002 <i>PC</i> ₅₆		3 3.9 189°57	0°4/ 4.3 18		
2 1	11 22.50	+7 41.9	1.981	2.830	12.1	19.2	2 1	11 21.88	+2 0.5	1.994	2.827	12.7	20.4
2 11	11 16.89	+8 12.9	1.915	2.836	8.7	19.0	2 11	11 16.54	+2 48.4	1.914	2.826	9.3	20.2
2 21	11 9.44	+8 51.7	1.873	2.843	4.7	18.7	2 21	11 9.32	+3 50.5	1.860	2.825	5.3	19.9
3 2	11 0.89	+9 33.2	1.860	2.850	1.1	18.5	3 2	11 0.91	+5 2.0	1.833	2.823	1.1	19.6
3 12	10 52.19	+10 11.6	1.876	2.856	4.0	18.7	3 12	10 52.23	+6 15.9	1.836	2.821	3.4	19.8
3 22	10 44.29	+10 42.1	1.920	2.863	7.9	19.0	3 22	10 44.23	+7 25.4	1.869	2.818	7.6	20.1
4 1	10 37.97	+11 1.2	1.990	2.869	11.4	19.2	4 1	10 37.76	+8 24.5	1.927	2.815	11.3	20.3
4 11	10 33.79	+11 7.1	2.081	2.875	14.4	19.4	4 11	10 33.41	+9 9.3	2.009	2.811	14.5	20.5
456897	2007 <i>VZ</i> ₁₈₀		3 3.9 133°55	1°1/ 2.9 18			125133	2001 <i>UB</i> ₆₀		3 3.9 18°33	4°9/ 29.8 18		
2 1	11 25.06	+7 3.1	1.872	2.717	12.9	22.6	2 1	11 25.32	+14 56.7	1.181	2.061	16.4	19.1
2 11	11 18.76	+7 47.3	1.810	2.731	9.2	22.4	2 11	11 19.91	+15 44.1	1.128	2.063	11.8	18.9
2 21	11 10.50	+8 40.6	1.774	2.743	5.0	22.2	2 21	11 11.51	+16 34.6	1.096	2.067	7.1	18.6
3 2	11 1.06	+9 37.0	1.766	2.756	1.2	21.9	3 2	11 1.27	+17 17.7	1.088	2.071	4.9	18.5
3 12	10 51.52	+10 29.6	1.787	2.767	4.2	22.1	3 12	10 50.86	+17 43.9	1.105	2.075	8.1	18.7
3 22	10 42.88	+11 12.8	1.837	2.778	8.3	22.4	3 22	10 41.85	+17 47.6	1.146	2.081	12.8	18.9
4 1	10 36.00	+11 42.6	1.913	2.788	12.0	22.7	4 1	10 35.50	+17 27.6	1.208	2.087	17.2	19.2
4 11	10 31.42	+11 57.3	2.010	2.798	15.0	22.9	4 11	10 32.45	+16 46.1	1.287	2.093	20.9	19.5
312713	2010 <i>QS</i> ₃		3 3.9 230°04	1°8/ 2.1 17			19802	2000 <i>RD</i> ₇₂		3 3.9 83°44	0°9/ 4.7 18		
2 1	11 22.54	+7 57.2	1.939	2.789	12.3	21.4	2 1	11 24.71	+0 56.7	1.526	2.365	15.6	18.9
2 11	11 17.16	+9 4.5	1.854	2.777	8.8	21.2	2 11	11 18.72	+1 37.5	1.477	2.390	11.4	18.7
2 21	11 9.74	+10 22.7	1.794	2.765	4.8	20.9	2 21	11 10.53	+2 35.2	1.450	2.415	6.6	18.5
3 2	11 0.97	+11 45.0	1.763	2.752	1.8	20.7	3 2	11 1.09	+3 43.6	1.450	2.439	1.7	18.3
3 12	10 51.81	+13 3.3	1.762	2.738	4.8	20.8	3 12	10 51.65	+4 54.2	1.478	2.463	3.8	18.5
3 22	10 43.29	+14 10.4	1.789	2.724	9.0	21.0	3 22	10 43.37	+5 59.0	1.533	2.487	8.5	18.8
4 1	10 36.35	+15 0.9	1.842	2.709	12.8	21.2	4 1	10 37.16	+6 51.5	1.614	2.510	12.6	19.1
4 11	10 31.65	+15 32.6	1.916	2.693	16.0	21.4	4 11	10 33.53	+7 28.3	1.715	2.533	16.0	19.4
415784	2000 <i>WS</i> ₅₁		3 3.9 95°49	5°6/ 27.3 18			345675	2006 <i>UQ</i> ₆₈		3 3.9 165°31	2°7/ 29.6 17		
2 1	11 25.10	+21 25.7	2.016	2.876	11.5	21.7	2 1	11 19.75	+14 5.1	2.615	3.469	9.4	21.3
2 11	11 18.64	+22 34.5	1.977	2.898	8.5	21.6	2 11	11 14.63	+14 55.0	2.547	3.472	6.6	21.1
2 21	11 10.33	+23 38.6	1.964	2.919	6.2	21.5	2 21	11 8.09	+15 47.0	2.506	3.474	3.9	21.0
3 2	11 1.02	+24 30.2	1.980	2.940	5.8	21.5	3 2	11 0.70	+16 36.1	2.495	3.476	2.7	20.9
3 12	10 51.75	+25 3.6	2.023	2.961	7.7	21.6	3 12	10 53.19	+17 17.6	2.514	3.478	4.7	21.0
3 22	10 43.49	+25 16.1	2.093	2.981	10.4	21.8	3 22	10 46.24	+17 47.7	2.562	3.480	7.4	21.2
4 1	10 37.00	+25 8.0	2.187	3.001	13.0	22.0	4 1	10 40.48	+18 4.4	2.635	3.481	10.1	21.4
4 11	10 32.75	+24 41.4	2.301	3.021	15.2	22.2	4 11	10 36.37	+18 7.1	2.731	3.482	12.3	21.5
87915	2000 <i>SB</i> ₃₁₅		3 3.9 142°30	6°0/ 9.3 18			28348	1999 <i>FO</i> ₂₃		3 3.9 359°57	0°9/ 4.7 18		
2 1	11 23.31	-11 34.5	2.043	2.812	14.8	19.9	2 1	11 22.24	+3 5.4	2.017	2.853	12.5	17.3
2 11	11 17.57	-12 4.7	1.962	2.816	12.1	19.7	2 11	11 16.75	+3 5.4	1.940	2.852	9.2	17.1
2 21	11 9.90	-12 14.2	1.903	2.820	9.2	19.6	2 21	11 9.42	+3 15.9	1.887	2.852	5.4	16.9
3 2	11 0.99	-12 2.5	1.870	2.824	6.7	19.4	3 2	11 0.94	+3 33.9	1.862	2.852	1.5	16.6
3 12	10 51.78	-11 32.1	1.864	2.828	6.1	19.4	3 12	10 52.22	+3 55.0	1.866	2.852	3.2	16.7
3 22	10 43.27	-10 47.8	1.887	2.831	7.9	19.5	3 22	10 44.22	+4 15.0	1.899	2.852	7.2	17.0
4 1	10 36.30	-9 55.9	1.935	2.835	10.7	19.7	4 1	10 37.74	+4 29.9	1.958	2.852	10.8	17.2
4 11	10 31.50	-9 3.5	2.007	2.838	13.5	19.9	4 11	10 33.36	+4 36.5	2.039	2.853	13.9	17.4
465131	2006 <i>YO</i> ₉		3 3.9 83°15	4°9/ 8.2 18			274369	2008 <i>RL</i> ₇₅		3 3.9 183°86	6°9/ 26.6 18		
2 1	11 24.05	-8 15.5	1.757	2.551	15.8	21.0	2 1	11 34.51	+30 8.3	2.460	3.289	10.7	20.6
2 11	11 18.14	-8 26.6	1.695	2.571	12.5	20.8	2 11	11 25.23	+30 40.8	2.398	3.290	8.6	20.5
2 21	11 10.19	-8 15.7	1.655	2.592	8.8	20.7	2 21	11 13.99	+31 1.9	2.364	3.289	7.1	20.4
3 2	11 1.02	-7 44.4	1.642	2.611	5.7	20.5	3 2	11 1.66	+31 5.3	2.358	3.289	7.0	20.4
3 12	10 51.75	-6 57.2	1.656	2.631	5.2	20.5	3 12	10 49.34	+30 47.2	2.383	3.288	8.4	20.5
3 22	10 43.42	-6 0.8	1.697	2.650	7.8	20.7	3 22	10 38.07	+30 7.2	2.436	3.286	10.6	20.6
4 1	10 36.92	-5 2.6	1.764	2.670	11.2	21.0	4 1	10 28.68	+29 7.5	2.515	3.284	12.7	20.7
4 11	10 32.80	-4 9.4	1.854	2.688	14.3	21.2	4 11	10 21.70	+27 52.2	2.614	3.281	14.7	20.9
229110	2004 <i>RG</i> ₆₄		3 3.9 139°67	0°2/ 4.1 18			168072	2006 <i>DU</i> ₄		3 3.9 284°69	0°9/ 3.3 18		
2 1	11 22.29	+3 42.7	2.349	3.179	11.1								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
101849	1999 <i>JJ</i> ₉₁		3 3.9 288°42	3°3/28.8	18		337667	2001 <i>TG</i> ₁₇₈		3 3.9 151°92	3°5/ 8.5	17	
2 1	11 17.99	+13 7.3	2.189	3.051	10.6	19.4	2 1	11 18.52	- 8 44.1	2.679	3.455	11.4	21.3
2 11	11 13.76	+14 31.2	2.104	3.033	7.6	19.2	2 11	11 13.75	- 8 28.2	2.595	3.461	9.0	21.2
2 21	11 7.80	+16 1.4	2.046	3.015	4.5	18.9	2 21	11 7.62	- 7 56.0	2.535	3.467	6.4	21.0
3 2	11 0.69	+17 30.8	2.017	2.997	3.5	18.8	3 2	11 0.67	- 7 9.3	2.504	3.472	4.1	20.9
3 12	10 53.24	+18 51.6	2.018	2.979	5.9	19.0	3 12	10 53.56	- 6 11.5	2.502	3.477	3.7	20.8
3 22	10 46.32	+19 57.5	2.046	2.962	9.2	19.1	3 22	10 46.95	- 5 7.5	2.529	3.482	5.7	21.0
4 1	10 40.72	+20 44.5	2.100	2.944	12.3	19.3	4 1	10 41.44	- 4 2.5	2.585	3.486	8.3	21.1
4 11	10 37.04	+21 11.2	2.174	2.926	15.1	19.5	4 11	10 37.48	- 3 1.4	2.666	3.490	10.7	21.3
299314	2005 <i>QH</i> ₉₀		3 3.9 141°60	3°1/ 7.3	17		155594	2000 <i>CP</i> ₂₂		3 3.9 90°24	0°2/ 4.1	18	
2 1	11 21.29	- 5 16.9	2.693	3.482	11.0	20.8	2 1	11 23.55	+ 2 9.5	1.358	2.209	16.5	20.0
2 11	11 15.69	- 5 28.3	2.611	3.488	8.6	20.7	2 11	11 18.26	+ 3 2.6	1.301	2.222	12.0	19.7
2 21	11 8.69	- 5 27.0	2.554	3.494	5.9	20.5	2 21	11 10.46	+ 4 14.4	1.266	2.234	6.8	19.5
3 2	11 0.82	- 5 14.0	2.526	3.500	3.6	20.4	3 2	11 1.15	+ 5 37.5	1.257	2.247	1.2	19.1
3 12	10 52.79	- 4 51.9	2.528	3.505	3.4	20.4	3 12	10 51.67	+ 7 1.4	1.274	2.259	4.4	19.4
3 22	10 45.28	- 4 24.1	2.559	3.510	5.7	20.5	3 22	10 43.35	+ 8 16.3	1.318	2.272	9.6	19.7
4 1	10 38.92	- 3 54.8	2.619	3.515	8.4	20.7	4 1	10 37.26	+ 9 14.9	1.386	2.284	14.2	20.0
4 11	10 34.16	- 3 27.6	2.703	3.520	10.8	20.9	4 11	10 34.01	+ 9 53.5	1.474	2.296	17.9	20.3
435914	2009 <i>BX</i> ₈₁		3 3.9 308°07	2°3/ 2.2	17		93144	2000 <i>SM</i> ₇₈		3 3.9 264°26	0°0/ 3.8	18	R
2 1	11 26.72	+13 2.0	1.952	2.804	12.2	20.6	2 1	11 20.65	+ 3 49.9	1.872	2.716	13.0	20.2
2 11	11 20.32	+13 5.1	1.851	2.774	8.8	20.4	2 11	11 15.83	+ 4 30.3	1.789	2.708	9.4	19.9
2 21	11 11.63	+13 10.2	1.775	2.745	5.1	20.1	2 21	11 9.03	+ 5 23.9	1.732	2.700	5.3	19.7
3 2	11 1.34	+13 12.5	1.728	2.715	2.3	19.8	3 2	11 0.94	+ 6 25.8	1.702	2.692	0.9	19.3
3 12	10 50.53	+13 7.2	1.710	2.686	5.0	19.9	3 12	10 52.52	+ 7 29.1	1.700	2.684	3.7	19.5
3 22	10 40.32	+12 50.9	1.721	2.657	9.2	20.1	3 22	10 44.79	+ 8 26.9	1.727	2.676	8.1	19.8
4 1	10 31.78	+12 21.8	1.757	2.628	13.1	20.3	4 1	10 38.63	+ 9 13.7	1.778	2.668	12.0	20.0
4 11	10 25.67	+11 39.8	1.815	2.599	16.5	20.5	4 11	10 34.68	+ 9 45.8	1.852	2.660	15.4	20.2
148841	2001 <i>VL</i> ₁₁		3 3.9 102°55	6°0/ 9.1	18		231302	2006 <i>BM</i> ₁₆₅		3 3.9 199°25	0°8/ 3.1	17	
2 1	11 22.49	-10 44.7	1.846	2.628	15.7	19.7	2 1	11 20.53	+ 6 8.6	2.216	3.059	11.2	21.4
2 11	11 17.17	-11 9.6	1.766	2.630	12.7	19.5	2 11	11 15.44	+ 6 54.9	2.137	3.057	8.0	21.1
2 21	11 9.77	-11 12.2	1.708	2.632	9.5	19.3	2 21	11 8.68	+ 7 50.6	2.085	3.054	4.4	20.9
3 2	11 1.02	-10 52.2	1.675	2.634	6.8	19.1	3 2	11 0.87	+ 8 50.7	2.061	3.051	0.9	20.6
3 12	10 51.96	-10 12.7	1.668	2.637	6.1	19.1	3 12	10 52.84	+ 9 49.3	2.067	3.048	3.6	20.8
3 22	10 43.63	- 9 19.3	1.689	2.639	8.2	19.2	3 22	10 45.42	+10 40.9	2.103	3.045	7.3	21.1
4 1	10 36.99	- 8 19.5	1.736	2.641	11.3	19.4	4 1	10 39.36	+11 21.3	2.164	3.041	10.7	21.3
4 11	10 32.66	- 7 20.9	1.805	2.643	14.4	19.6	4 11	10 35.18	+11 47.9	2.248	3.037	13.6	21.5
175611	2006 <i>VF</i> ₃₁		3 3.9 161°28	1°5/ 1.9	18		206776	2004 <i>CS</i> ₇₈		3 3.9 50°65	0°8/ 3.2	18	
2 1	11 19.60	+10 27.0	2.925	3.769	8.8	21.2	2 1	11 20.48	+ 5 57.9	1.797	2.648	13.0	20.4
2 11	11 14.38	+11 5.0	2.853	3.774	6.2	21.0	2 11	11 15.49	+ 6 43.2	1.747	2.671	9.2	20.2
2 21	11 7.91	+11 46.7	2.810	3.779	3.4	20.9	2 21	11 8.69	+ 7 38.3	1.723	2.693	5.0	20.0
3 2	11 0.70	+12 28.4	2.796	3.783	1.5	20.7	3 2	11 0.86	+ 8 37.3	1.725	2.716	0.9	19.7
3 12	10 53.38	+13 6.0	2.813	3.787	3.4	20.9	3 12	10 53.01	+ 9 33.0	1.757	2.739	3.9	20.0
3 22	10 46.55	+13 36.1	2.860	3.791	6.2	21.1	3 22	10 46.09	+10 19.8	1.816	2.762	8.0	20.3
4 1	10 40.79	+13 56.6	2.934	3.794	8.8	21.2	4 1	10 40.83	+10 53.4	1.900	2.785	11.5	20.5
4 11	10 36.48	+14 6.0	3.032	3.797	11.0	21.4	4 11	10 37.73	+11 12.0	2.005	2.809	14.5	20.8
499893	2011 <i>FH</i> ₃₀		3 3.9 0°50	2°8/ 5.8	17		341500	2007 <i>TL</i> ₃₉₉		3 3.9 54°80	3°9/ 8.4	18	
2 1	11 22.59	- 0 1.6	1.459	2.301	16.1	20.6	2 1	11 17.94	- 8 53.3	1.987	2.781	14.2	20.6
2 11	11 17.60	- 0 26.7	1.387	2.299	12.1	20.3	2 11	11 13.62	- 8 19.9	1.923	2.800	11.2	20.4
2 21	11 10.14	- 0 35.8	1.337	2.298	7.7	20.1	2 21	11 7.65	- 7 24.6	1.881	2.820	7.8	20.3
3 2	11 1.09	- 0 30.7	1.312	2.297	3.5	19.8	3 2	11 0.70	- 6 10.7	1.866	2.839	4.7	20.1
3 12	10 51.71	- 0 15.8	1.313	2.298	4.3	19.9	3 12	10 53.66	- 4 44.2	1.879	2.859	4.1	20.1
3 22	10 43.27	+ 0 3.2	1.340	2.300	8.8	20.1	3 22	10 47.37	- 3 12.8	1.921	2.879	6.7	20.3
4 1	10 36.89	+ 0 20.4	1.391	2.302	13.2	20.4	4 1	10 42.55	- 1 44.2	1.990	2.899	9.9	20.5
4 11	10 33.25	+ 0 30.7	1.462	2.305	17.0	20.6	4 11	10 39.66	- 0 25.0	2.082	2.919	12.9	20.8
266366	2007 <i>EO</i> ₆₂		3 3.9 92°74	2°0/ 2.1	17		106459	2000 <i>WD</i> ₃		3 3.9 32°06	19°5/19.7	18	
2 1	11 21.85	+ 9 22.5	1.812	2.669	12.7	21.0	2 1	11 24.98	-31 31.0	1.167	1.859	27.5	19.2
2 11	11 16.61	+10 12.8	1.747	2.674	9.0	20.8	2 11	11 20.53	-33 43.4	1.103	1.861	25.5	19.0
2 21	11 9.39	+11 10.9	1.708	2.679	5.0	20.5	2 21	11 12.42	-35 11.3	1.051	1.863	23.3	18.9
3 2	11 0.96	+12 10.2	1.696	2.684	2.0	20.3	3 2	11 1.58	-35 42.6	1.013	1.865	21.2	18.7
3 12	10 52.35	+13 3.2	1.712	2.689	4.9	20.5	3 12	10 49.81	-35 11.5	0.990	1.867	19.8	18.6
3 22	10 44.59	+13 44.4	1.757	2.694	8.9	20.8	3 22	10 39.19	-33 41.3	0.985	1.869	19.5	18.6
4 1	10 38.54	+14 9.9	1.825	2.699	12.5	21.0	4 1	10 31.59	-31 24.8	0.997	1.872	20.4	18.7
4 11	10 34.76	+14 18.4	1.915	2.704	15.6	21.2	4 11	10 28.11	-28 41.9	1.026	1.874	22.2	18.8
466393	2013 <i>SF</i> ₄₇		3 3.9 206°68	0°3/ 3.6	17		180068	2003 <i>BK</i> ₈₂		3 3.9 112°83	0°7/ 3.4	18	
2 1	11 22.05	+ 5 0.4	2.309	3.144	11.1	22.5	2 1	11 25.64	+ 6 47.3	1.960	2.801	12.6	20.2
2 11	11 16.49	+ 5 38.0	2.224	3.139	8.0	22.3	2 11	11 19.10	+ 7 12.5	1.901	2.819	9.0	20.0
2 21	11 9.26	+ 6 25.3	2.165	3.133	4.5	22.0	2 21	11 10.69	+ 7 45.8	1.867	2.835	4.9	19.8
3 2	11 0.95	+ 7 18.0	2.136	3.126	0.7	21.7	3 2	11 1.20	+ 8 22.3	1.861	2.852	0.9	19.6
3 12	10 52.38	+ 8 10.7	2.136	3.119	3.3	21.9	3 12	10 51.66	+ 8 56.5	1.886	2.868	3.7	19.8
3 22	10 44.39	+ 8 58.3	2.167	3.111	7.0	22.2	3 22	10 43.02	+ 9 23.6	1.939	2.883	7.7	20.1
4 1	10 37.73	+ 9 36.5	2.224	3.103	10.4	22.4	4 1	10 36.09	+ 9 40.5	2.019	2.898	11.2	20.3
4 11	10 32.94	+10 2.7	2.304	3.094	13.3	22.5	4 11	10 31.37	+ 9 45.3	2.120	2.913	14.2	20.6
249109	2007 <i>VH</i> ₃₀₆		3 3.9 137°21	1°0/ 2.9	18		489645	2007 <i>TL</i> ₄₄₃		3 3.9 195°09	1°2/ 2.7	17	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
257244	2009 <i>EP</i> ₂₆		3 3.9 303°30	1°0/ 4.7 17			218690	2005 <i>TU</i> ₇₄		3 3.9 131°97	2°0/ 5.7 18		
2 1	11 20.53	+ 1 20.9	1.438	2.288	15.8	20.9	2 1	11 23.98	- 0 33.2	1.969	2.790	13.3	20.7
2 11	11 16.38	+ 1 50.5	1.348	2.267	11.8	20.6	2 11	11 18.03	- 0 29.7	1.896	2.797	10.0	20.5
2 21	11 9.66	+ 2 40.1	1.279	2.246	7.0	20.3	2 21	11 10.19	- 0 12.3	1.847	2.805	6.2	20.3
3 2	11 1.09	+ 3 45.2	1.236	2.226	1.8	19.9	3 2	11 1.17	+ 0 16.5	1.826	2.812	2.6	20.0
3 12	10 51.90	+ 4 57.8	1.219	2.206	4.2	20.0	3 12	10 51.95	+ 0 51.8	1.834	2.818	3.4	20.1
3 22	10 43.42	+ 6 8.3	1.228	2.186	9.7	20.3	3 22	10 43.51	+ 1 28.5	1.870	2.825	7.1	20.3
4 1	10 36.91	+ 7 8.1	1.261	2.166	14.7	20.5	4 1	10 36.68	+ 2 1.6	1.933	2.831	10.8	20.6
4 11	10 33.25	+ 7 50.9	1.313	2.147	19.0	20.7	4 11	10 32.03	+ 2 26.8	2.019	2.837	13.9	20.8
148031	1998 <i>FG</i> ₁₀₁		3 3.9 315°91	6°6/11.9 17			426690	2013 <i>TM</i> ₂₆		3 3.9 229°72	0°6/ 4.6 17		
2 1	11 15.58	-17 48.7	2.049	2.792	15.5	19.5	2 1	11 20.82	+ 2 1.7	2.039	2.872	12.5	21.8
2 11	11 12.22	-17 16.2	1.939	2.772	13.1	19.3	2 11	11 15.82	+ 2 36.8	1.955	2.867	9.1	21.6
2 21	11 7.04	-16 13.2	1.851	2.751	10.4	19.1	2 21	11 9.00	+ 3 25.4	1.895	2.860	5.3	21.3
3 2	11 0.63	-14 39.2	1.787	2.731	7.8	18.9	3 2	11 0.98	+ 4 23.2	1.864	2.854	1.2	21.0
3 12	10 53.83	-12 38.2	1.749	2.711	6.6	18.8	3 12	10 52.68	+ 5 24.2	1.862	2.847	3.2	21.1
3 22	10 47.54	-10 18.0	1.740	2.692	7.9	18.8	3 22	10 45.00	+ 6 22.3	1.889	2.840	7.3	21.4
4 1	10 42.61	- 7 49.5	1.759	2.673	10.7	18.9	4 1	10 38.78	+ 7 11.9	1.942	2.833	11.1	21.6
4 11	10 39.70	- 5 24.0	1.804	2.654	13.9	19.1	4 11	10 34.60	+ 7 49.2	2.018	2.826	14.2	21.8
102826	1999 <i>VA</i> ₁₈₄		3 3.9 124°30	0°4/ 3.6 18			295690	2008 <i>TP</i> ₁₃₈		3 3.9 244°67	0°7/ 4.5 17		
2 1	11 24.06	+ 4 45.4	1.887	2.727	13.0	21.0	2 1	11 25.76	+ 2 30.9	1.650	2.488	14.7	21.7
2 11	11 18.06	+ 5 31.1	1.826	2.743	9.3	20.8	2 11	11 19.90	+ 2 53.5	1.559	2.473	10.9	21.4
2 21	11 10.16	+ 6 28.1	1.789	2.758	5.2	20.6	2 21	11 11.53	+ 3 31.6	1.491	2.457	6.4	21.1
3 2	11 1.13	+ 7 30.4	1.781	2.772	0.8	20.3	3 2	11 1.43	+ 4 21.0	1.451	2.441	1.5	20.7
3 12	10 51.99	+ 8 31.3	1.803	2.786	3.8	20.6	3 12	10 50.77	+ 5 15.0	1.438	2.424	4.0	20.9
3 22	10 43.73	+ 9 24.5	1.853	2.799	7.9	20.8	3 22	10 40.82	+ 6 6.2	1.454	2.406	9.0	21.1
4 1	10 37.18	+10 5.3	1.929	2.811	11.6	21.1	4 1	10 32.76	+ 6 47.9	1.494	2.388	13.6	21.3
4 11	10 32.85	+10 31.4	2.028	2.823	14.6	21.3	4 11	10 27.39	+ 7 15.7	1.556	2.369	17.5	21.6
177948	2006 <i>KV</i>		3 3.9 260°42	2°1/ 2.1 16			19559	1999 <i>JY</i> ₈₀		3 3.9 167°16	2°6/29.7 18		
2 1	11 23.43	+ 8 54.7	1.682	2.538	13.5	21.1	2 1	11 20.79	+11 27.7	2.313	3.166	10.5	18.7
2 11	11 18.15	+ 9 49.7	1.596	2.522	9.7	20.9	2 11	11 15.58	+12 46.5	2.245	3.170	7.4	18.5
2 21	11 10.50	+10 55.5	1.535	2.506	5.4	20.6	2 21	11 8.75	+14 10.9	2.205	3.174	4.2	18.3
3 2	11 1.23	+12 5.1	1.500	2.489	2.1	20.3	3 2	11 0.93	+15 34.2	2.194	3.177	2.7	18.2
3 12	10 51.47	+13 9.7	1.495	2.472	5.4	20.5	3 12	10 52.94	+16 49.5	2.214	3.180	5.0	18.4
3 22	10 42.44	+14 1.8	1.516	2.454	10.0	20.7	3 22	10 45.57	+17 51.3	2.262	3.182	8.2	18.6
4 1	10 35.23	+14 36.3	1.561	2.436	14.2	20.9	4 1	10 39.54	+18 36.4	2.337	3.184	11.1	18.8
4 11	10 30.60	+14 50.9	1.627	2.418	17.8	21.1	4 11	10 35.35	+19 3.7	2.433	3.185	13.7	18.9
148784	2001 <i>UK</i> ₂₅		3 3.9 88°57	6°9/10.9 18			208560	2002 <i>AT</i> ₂₀₅		3 3.9 105°43	5°0/26.9 18		
2 1	11 21.82	-14 55.7	1.865	2.624	16.3	19.7	2 1	11 20.76	+20 55.8	2.348	3.208	10.0	20.1
2 11	11 16.61	-15 9.9	1.795	2.638	13.5	19.6	2 11	11 15.52	+22 7.8	2.297	3.218	7.4	20.0
2 21	11 9.43	-14 58.0	1.745	2.652	10.5	19.4	2 21	11 8.68	+23 16.9	2.273	3.228	5.4	19.9
3 2	11 1.02	-14 19.9	1.720	2.666	7.9	19.3	3 2	11 0.92	+24 16.4	2.277	3.237	5.2	19.9
3 12	10 52.43	-13 19.3	1.721	2.680	6.9	19.2	3 12	10 53.06	+25 0.7	2.310	3.246	7.0	20.0
3 22	10 44.65	-12 2.8	1.749	2.694	8.4	19.3	3 22	10 45.93	+25 26.5	2.370	3.256	9.4	20.2
4 1	10 38.56	-10 39.2	1.803	2.708	11.0	19.5	4 1	10 40.20	+25 33.0	2.454	3.265	11.9	20.3
4 11	10 34.73	- 9 17.1	1.880	2.721	13.8	19.7	4 11	10 36.34	+25 21.5	2.559	3.274	13.9	20.5
87697	2000 <i>SA</i> ₁₅		3 3.9 56°30	5°1/ 7.8 18			497784	2006 <i>SB</i> ₃₈₃		3 3.9 187°47	0°3/ 3.5 17		
2 1	11 25.59	- 6 42.0	1.643	2.446	16.3	17.8	2 1	11 19.20	+ 5 25.4	2.814	3.648	9.4	22.7
2 11	11 19.40	- 7 19.0	1.583	2.466	12.8	17.6	2 11	11 14.20	+ 6 2.5	2.733	3.647	6.7	22.5
2 21	11 11.00	- 7 35.3	1.546	2.485	9.1	17.4	2 21	11 7.90	+ 6 47.2	2.679	3.646	3.7	22.3
3 2	11 1.29	- 7 31.5	1.534	2.504	5.8	17.3	3 2	11 0.80	+ 7 35.7	2.654	3.645	0.6	22.0
3 12	10 51.45	- 7 11.0	1.549	2.524	5.5	17.3	3 12	10 53.53	+ 8 23.8	2.661	3.643	2.8	22.2
3 22	10 42.64	- 6 39.6	1.591	2.544	8.3	17.5	3 22	10 46.73	+ 9 7.5	2.697	3.641	5.9	22.4
4 1	10 35.81	- 6 4.0	1.658	2.564	11.7	17.8	4 1	10 40.99	+ 9 43.4	2.762	3.638	8.7	22.6
4 11	10 31.52	- 5 31.0	1.748	2.584	14.9	18.0	4 11	10 36.73	+10 9.2	2.850	3.635	11.1	22.8
498165	2007 <i>TB</i> ₁₆₈		3 3.9 134°76	0°6/ 3.3 17			437462	2013 <i>YV</i> ₂₇		3 3.9 0°07	5°4/27.3 15		
2 1	11 21.37	+ 6 48.0	2.620	3.456	9.9	22.2	2 1	11 17.78	+17 56.5	1.728	2.604	12.2	20.6
2 11	11 15.74	+ 7 16.4	2.551	3.467	7.1	22.1	2 11	11 13.89	+19 22.7	1.670	2.602	8.9	20.4
2 21	11 8.73	+ 7 51.2	2.510	3.478	3.9	21.9	2 21	11 7.98	+20 49.7	1.637	2.601	6.1	20.2
3 2	11 0.91	+ 8 28.5	2.499	3.489	0.7	21.6	3 2	11 0.82	+22 8.1	1.631	2.601	5.7	20.2
3 12	10 52.99	+ 9 4.3	2.518	3.499	3.0	21.8	3 12	10 53.45	+23 9.4	1.651	2.601	8.1	20.3
3 22	10 45.67	+ 9 34.7	2.567	3.509	6.2	22.1	3 22	10 46.92	+23 48.2	1.697	2.602	11.4	20.5
4 1	10 39.55	+ 9 56.9	2.644	3.519	9.1	22.3	4 1	10 42.11	+24 2.3	1.765	2.604	14.5	20.7
4 11	10 35.07	+10 9.1	2.744	3.528	11.5	22.4	4 11	10 39.59	+23 52.9	1.852	2.607	17.2	20.9
500309	2012 <i>RY</i>		3 3.9 255°30	1°1/ 2.7 18			327418	2005 <i>VL</i> ₁₂₂		3 3.9 37°47	12°8/18.1 17		
2 1	11 18.55	+ 5 35.6	2.087	2.935	11.7	20.7	2 1	11 13.77	-29 11.9	0.924	1.675	29.7	19.8
2 11	11 14.17	+ 6 46.8	2.005	2.927	8.3	20.5	2 11	11 12.20	-28 27.3	0.867	1.689	26.1	19.6
2 21	11 8.05	+ 8 10.2	1.949	2.920	4.6	20.3	2 21	11 7.47	-26 32.1	0.821	1.704	21.7	19.4
3 2	11 0.82	+ 9 39.5	1.922	2.912	1.1	20.0	3 2	11 0.75	-23 21.8	0.791	1.720	17.1	19.2
3 12	10 53.30	+11 7.1	1.925	2.904	4.0	20.2	3 12	10 53.81	-19 6.3	0.782	1.737	13.5	19.0
3 22	10 46.37	+12 25.9	1.956	2.896	7.9	20.4	3 22	10 48.36	-14 11.7	0.795	1.755	13.1	19.1
4 1	10 40.81	+13 30.3	2.013	2.888	11.5	20.6	4 1	10 45.71	- 9 12.8	0.833	1.774	16.0	19.3
4 11	10 37.20	+14 17.3	2.092	2.880	14.5	20.8	4 11	10 46.46	- 4 41.3	0.894	1.793	20.1	19.6
498721	2008 <i>TB</i> ₁₀₉		3 3.9 199°06	1°2/ 2.5 17			305671	2009 <i>BA</i> ₉₃		3 3.9 50°76	0°7/ 3.4 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
224956	2007 <i>ER</i> ₁₂		3 3.9 178°77	0°3/ 3.6 17			94496	2001 <i>UW</i> ₄₈		3 3.9 111°89	4°8/29.0 18		
2 1	11 23.07	+ 5 40.5	2.099	2.939	11.9	20.8	2 1	11 25.25	+14 48.6	1.491	2.360	14.2	19.7
2 11	11 17.33	+ 6 8.0	2.023	2.940	8.6	20.6	2 11	11 19.42	+16 9.0	1.439	2.370	10.2	19.5
2 21	11 9.79	+ 6 44.7	1.972	2.941	4.8	20.3	2 21	11 11.13	+17 32.7	1.412	2.380	6.3	19.3
3 2	11 1.13	+ 7 26.3	1.950	2.941	0.8	20.0	3 2	11 1.38	+18 49.3	1.411	2.389	4.9	19.3
3 12	10 52.25	+ 8 7.3	1.958	2.941	3.5	20.2	3 12	10 51.49	+19 49.2	1.437	2.399	7.7	19.4
3 22	10 44.07	+ 8 42.7	1.995	2.941	7.4	20.5	3 22	10 42.76	+20 26.3	1.489	2.408	11.7	19.7
4 1	10 37.38	+ 9 8.6	2.058	2.940	10.9	20.7	4 1	10 36.22	+20 38.8	1.563	2.417	15.4	19.9
4 11	10 32.75	+ 9 22.5	2.143	2.939	13.9	20.9	4 11	10 32.47	+20 28.1	1.656	2.425	18.4	20.2
210943	2001 <i>TJ</i> ₂₂₈		3 3.9 63°87	10°7/19.4 18			467498	2006 <i>WM</i> ₁₀₃		3 3.9 3°85	4°3/29.9 17		
2 1	11 19.46	-31 25.2	2.310	2.931	16.9	19.7	2 1	11 19.50	+13 4.9	1.175	2.061	15.9	20.5
2 11	11 14.85	-32 0.0	2.235	2.946	15.3	19.5	2 11	11 15.78	+14 0.4	1.120	2.060	11.4	20.2
2 21	11 8.43	-32 5.0	2.176	2.960	13.6	19.4	2 21	11 9.30	+15 2.4	1.087	2.060	6.7	20.0
3 2	11 0.90	-31 37.4	2.137	2.975	12.1	19.3	3 2	11 1.09	+16 0.6	1.077	2.062	4.3	19.8
3 12	10 53.16	-30 38.1	2.121	2.989	11.0	19.3	3 12	10 52.64	+16 44.3	1.092	2.065	7.7	20.0
3 22	10 46.13	-29 11.2	2.128	3.004	10.8	19.3	3 22	10 45.41	+17 6.6	1.129	2.069	12.4	20.3
4 1	10 40.59	-27 24.1	2.159	3.019	11.5	19.4	4 1	10 40.58	+17 4.6	1.188	2.075	16.8	20.6
4 11	10 37.11	-25 26.4	2.214	3.033	12.8	19.5	4 11	10 38.80	+16 39.0	1.263	2.082	20.5	20.8
288293	2004 <i>AC</i> ₂₅		3 3.9 57°74	1°4/ 2.6 18			433938	1994 <i>UN</i> ₁₀		3 3.9 194°99	13°3/16.5 18		
2 1	11 20.64	+ 7 59.3	1.917	2.771	12.3	21.1	2 1	11 23.22	-27 20.1	1.392	2.095	23.3	21.2
2 11	11 15.61	+ 8 43.2	1.860	2.785	8.7	20.9	2 11	11 18.60	-27 49.3	1.310	2.094	20.8	21.0
2 21	11 8.80	+ 9 35.1	1.829	2.800	4.7	20.7	2 21	11 11.04	-27 34.1	1.242	2.093	18.0	20.8
3 2	11 0.96	+10 29.0	1.825	2.814	1.4	20.4	3 2	11 1.41	-26 27.8	1.193	2.091	15.3	20.6
3 12	10 53.03	+11 18.4	1.850	2.829	4.2	20.7	3 12	10 51.19	-24 30.5	1.164	2.088	13.5	20.5
3 22	10 45.93	+11 58.1	1.902	2.844	8.0	20.9	3 22	10 41.97	-21 50.9	1.159	2.085	13.6	20.5
4 1	10 40.42	+12 24.6	1.980	2.859	11.5	21.2	4 1	10 35.14	-18 45.3	1.177	2.081	15.6	20.6
4 11	10 37.00	+12 36.2	2.080	2.875	14.3	21.4	4 11	10 31.59	-15 33.5	1.217	2.077	18.6	20.8
265734	2005 <i>UH</i> ₄₅₄		3 3.9 101°97	1°7/ 2.6 18			250931	2005 <i>WF</i> ₁₂₂		3 3.9 98°99	17°5/15.7 17		
2 1	11 27.08	+10 34.2	1.917	2.764	12.5	20.8	2 1	11 31.26	+40 47.8	1.129	1.982	19.0	19.8
2 11	11 20.18	+10 52.3	1.858	2.780	8.9	20.6	2 11	11 25.10	+44 7.4	1.122	1.995	17.7	19.8
2 21	11 11.33	+11 14.8	1.825	2.795	4.9	20.4	2 21	11 14.79	+46 49.9	1.135	2.008	17.7	19.8
3 2	11 1.38	+11 36.8	1.821	2.809	1.7	20.2	3 2	11 2.00	+48 37.6	1.168	2.020	19.0	19.9
3 12	10 51.37	+11 53.1	1.846	2.824	4.4	20.4	3 12	10 49.19	+49 23.2	1.219	2.033	20.9	20.1
3 22	10 42.34	+12 0.0	1.900	2.838	8.3	20.6	3 22	10 38.64	+49 10.6	1.286	2.045	23.0	20.3
4 1	10 35.11	+11 55.5	1.979	2.852	11.8	20.9	4 1	10 31.90	+48 9.8	1.365	2.056	24.9	20.5
4 11	10 30.20	+11 39.1	2.081	2.865	14.7	21.1	4 11	10 29.47	+46 33.3	1.453	2.068	26.4	20.7
3965	Konopleva		3 3.9 94°10	6°4/ 9.8 18			417128	2005 <i>UC</i> ₅₂₇		3 3.9 69°54	1°7/ 2.5 18		
2 1	11 24.24	-12 31.1	1.928	2.694	15.6	16.5	2 1	11 22.82	+ 8 48.2	1.728	2.585	13.2	21.9
2 11	11 18.29	-13 1.0	1.859	2.710	12.8	16.4	2 11	11 17.36	+ 9 29.4	1.670	2.596	9.4	21.7
2 21	11 10.37	-13 8.1	1.812	2.726	9.7	16.2	2 21	11 9.87	+10 18.5	1.636	2.607	5.1	21.5
3 2	11 1.24	-12 52.2	1.790	2.742	7.2	16.1	3 2	11 1.18	+11 9.1	1.629	2.619	1.7	21.3
3 12	10 51.91	-12 16.2	1.795	2.757	6.4	16.1	3 12	10 52.37	+11 54.1	1.651	2.630	4.7	21.5
3 22	10 43.41	-11 25.6	1.828	2.772	8.1	16.2	3 22	10 44.50	+12 28.0	1.700	2.642	8.8	21.8
4 1	10 36.60	-10 27.6	1.887	2.787	10.8	16.4	4 1	10 38.44	+12 47.4	1.774	2.653	12.6	22.0
4 11	10 32.06	- 9 29.7	1.969	2.802	13.6	16.6	4 11	10 34.73	+12 50.9	1.868	2.665	15.7	22.2
395737	2012 <i>UC</i> ₈₇		3 3.9 108°80	4°4/29.8 18			130671	2000 <i>SH</i> ₁₁₃		3 3.9 116°62	1°3/ 5.1 18		
2 1	11 28.41	+14 19.2	1.367	2.234	15.4	20.7	2 1	11 22.57	- 0 27.7	1.611	2.445	15.2	19.8
2 11	11 21.80	+15 18.3	1.316	2.246	11.0	20.4	2 11	11 17.36	+ 0 16.3	1.544	2.455	11.2	19.6
2 21	11 12.49	+16 20.6	1.289	2.258	6.6	20.2	2 21	11 9.96	+ 1 19.4	1.501	2.464	6.7	19.3
3 2	11 1.59	+17 16.3	1.287	2.269	4.5	20.1	3 2	11 1.20	+ 2 36.0	1.484	2.473	2.1	19.1
3 12	10 50.59	+17 56.1	1.312	2.280	7.5	20.3	3 12	10 52.24	+ 3 57.7	1.495	2.481	3.7	19.2
3 22	10 40.96	+18 14.7	1.363	2.291	11.8	20.6	3 22	10 44.21	+ 5 15.9	1.534	2.490	8.3	19.5
4 1	10 33.79	+18 10.6	1.436	2.301	15.8	20.9	4 1	10 38.06	+ 6 22.9	1.599	2.498	12.5	19.8
4 11	10 29.69	+17 45.6	1.528	2.311	19.2	21.1	4 11	10 34.40	+ 7 14.0	1.684	2.505	16.1	20.0
299950	2006 <i>TQ</i> ₅₉		3 3.9 256°68	3°7/ 8.2 17			55091	2001 <i>QT</i> ₁₂₂		3 3.9 137°79	1°5/ 2.2 18		
2 1	11 18.44	- 7 57.6	2.469	3.255	12.0	20.9	2 1	11 20.40	+ 9 29.1	2.418	3.265	10.3	20.0
2 11	11 13.90	- 7 50.4	2.375	3.247	9.5	20.7	2 11	11 15.21	+10 12.7	2.349	3.272	7.3	19.9
2 21	11 7.85	- 7 26.4	2.305	3.240	6.8	20.5	2 21	11 8.53	+11 1.9	2.308	3.278	4.0	19.7
3 2	11 0.83	- 6 46.8	2.262	3.232	4.3	20.3	3 2	11 0.96	+11 51.7	2.296	3.284	1.5	19.5
3 12	10 53.54	- 5 55.1	2.248	3.224	3.9	20.3	3 12	10 53.25	+12 37.1	2.314	3.290	3.9	19.7
3 22	10 46.73	- 4 56.0	2.263	3.216	6.1	20.4	3 22	10 46.16	+13 13.9	2.360	3.295	7.1	19.9
4 1	10 41.07	- 3 55.2	2.305	3.208	9.0	20.6	4 1	10 40.34	+13 39.0	2.434	3.301	10.1	20.1
4 11	10 37.09	- 2 57.9	2.372	3.200	11.7	20.7	4 11	10 36.27	+13 51.1	2.530	3.306	12.6	20.3
140881	2001 <i>VB</i> ₂₁		3 3.9 72°71	1°8/ 5.9 18			87627	2000 <i>RH</i> ₅₂		3 3.9 168°73	3°1/ 8.6 18		
2 1	11 19.41	- 1 29.3	2.233	3.052	12.0	20.1	2 1	11 17.85	- 9 4.2	3.127	3.895	10.1	20.4
2 11	11 14.56	- 1 7.7	2.166	3.066	9.0	19.9	2 11	11 13.16	- 8 40.7	3.038	3.899	8.0	20.2
2 21	11 8.16	- 0 32.4	2.123	3.080	5.6	19.7	2 21	11 7.31	- 8 2.7	2.974	3.903	5.7	20.1
3 2	11 0.86	+ 0 13.4	2.108	3.094	2.3	19.5	3 2	11 0.75	- 7 11.9	2.939	3.906	3.7	19.9
3 12	10 53.45	+ 1 4.9	2.123	3.108	2.9	19.6	3 12	10 54.05	- 6 11.4	2.934	3.909	3.3	19.9
3 22	10 46.71	+ 1 56.7	2.167	3.122	6.2	19.8	3 22	10 47.77	- 5 5.4	2.960	3.911	5.0	20.0
4 1	10 41.29	+ 2 44.0	2.237	3.136	9.5	20.1	4 1	10 42.42	- 3 58.5	3.015	3.913	7.3	20.2
4 11	10 37.67	+ 3 22.8	2.331	3.150	12.2	20.3	4 11	10 38.39	- 2 55.1	3.095	3.914	9.5	20.3
521072	2015 <i>DP</i> ₂₃₉		3 3.9 1°14	7°8/23.2 17			328613	2009 <i>SU</i> ₁₂₆		3 3.9 193°08	0°2/ 4.2 17		

EPHEMERIDES

3 3.9

3 3.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
155449	1998 <i>HV</i> ₉₄		3 3.9 319°75	5°9/ 9.7 18			401500	2013 <i>EX</i> ₁₈		3 3.9 293°63	1°1/ 3.2 14 C		
2 1	11 17.63	-11 54.1	1.706	2.495	16.4	19.4	2 1	11 23.52	+ 6 47.1	1.408	2.269	15.4	21.1
2 11	11 13.96	-11 46.7	1.615	2.483	13.4	19.2	2 11	11 18.60	+ 7 21.0	1.326	2.254	11.2	20.8
2 21	11 8.17	-11 11.5	1.544	2.472	10.1	19.0	2 21	11 10.98	+ 8 8.5	1.267	2.239	6.3	20.4
3 2	11 0.95	-10 8.8	1.497	2.460	7.0	18.7	3 2	11 1.48	+ 9 3.0	1.233	2.223	1.3	20.1
3 12	10 53.29	- 8 43.1	1.476	2.450	6.0	18.7	3 12	10 51.41	+ 9 55.8	1.226	2.208	5.1	20.3
3 22	10 46.28	- 7 2.6	1.482	2.439	8.3	18.8	3 22	10 42.21	+10 38.7	1.244	2.194	10.5	20.5
4 1	10 40.92	- 5 17.6	1.513	2.429	11.9	18.9	4 1	10 35.14	+11 5.7	1.285	2.179	15.3	20.8
4 11	10 37.92	- 3 38.2	1.567	2.420	15.5	19.1	4 11	10 31.03	+11 13.8	1.345	2.165	19.5	21.0
7869	Pradun		3 3.9 206°77	1°8/ 5.6 18			460079	2014 <i>OG</i> ₂₉₈		3 3.9 249°35	0°1/ 4.1 16		
2 1	11 24.17	- 1 8.7	1.850	2.672	14.0	19.0	2 1	11 25.59	+ 4 36.0	1.680	2.523	14.2	21.4
2 11	11 18.45	- 0 39.7	1.764	2.666	10.5	18.7	2 11	11 19.71	+ 4 52.2	1.595	2.512	10.4	21.2
2 21	11 10.60	+ 0 6.9	1.702	2.661	6.5	18.5	2 21	11 11.43	+ 5 20.8	1.533	2.501	6.0	20.9
3 2	11 1.35	+ 1 7.3	1.667	2.654	2.4	18.2	3 2	11 1.54	+ 5 57.3	1.498	2.489	1.1	20.5
3 12	10 51.71	+ 2 15.3	1.661	2.647	3.5	18.3	3 12	10 51.19	+ 6 35.4	1.492	2.476	4.0	20.7
3 22	10 42.78	+ 3 23.4	1.685	2.639	7.8	18.5	3 22	10 41.60	+ 7 9.0	1.513	2.464	8.9	21.0
4 1	10 35.52	+ 4 24.9	1.734	2.630	11.9	18.7	4 1	10 33.89	+ 7 32.8	1.559	2.451	13.2	21.2
4 11	10 30.61	+ 5 14.3	1.806	2.620	15.4	18.9	4 11	10 28.78	+ 7 43.5	1.626	2.438	17.0	21.4
188470	2004 <i>LN</i> ₁₃		3 3.9 309°49	2°2/ 5.8 18			382004	2010 <i>RM</i> ₆₄		3 3.9 30°28	1°4/24.7 17		
2 1	11 19.86	- 1 18.6	1.550	2.388	15.5	19.9	2 1	11 6.50	+27 13.7	13.344	14.191	2.1	22.8
2 11	11 15.78	- 1 1.5	1.458	2.369	11.7	19.6	2 11	11 4.52	+27 34.9	13.321	14.224	1.7	22.8
2 21	11 9.31	- 0 24.0	1.388	2.349	7.4	19.3	2 21	11 2.31	+27 54.6	13.327	14.258	1.4	22.8
3 2	11 1.16	+ 0 30.9	1.344	2.330	3.0	19.0	3 2	10 59.97	+28 11.8	13.363	14.292	1.4	22.8
3 12	10 52.45	+ 1 36.6	1.326	2.312	4.0	19.0	3 12	10 57.62	+28 26.0	13.427	14.326	1.8	22.8
3 22	10 44.40	+ 2 44.8	1.334	2.293	8.8	19.2	3 22	10 55.36	+28 36.8	13.520	14.359	2.2	22.9
4 1	10 38.18	+ 3 47.1	1.366	2.276	13.5	19.4	4 1	10 53.31	+28 43.7	13.638	14.393	2.7	22.9
4 11	10 34.57	+ 4 36.6	1.419	2.258	17.6	19.6	4 11	10 51.55	+28 46.7	13.779	14.427	3.1	23.0
302139	2001 <i>RT</i> ₁₀₃		3 3.9 150°87	2°3/ 2.1 18			420574	2012 <i>HH</i> ₁₈		3 3.9 357°51	0°6/ 4.6 16		
2 1	11 27.51	+10 23.5	1.773	2.623	13.2	21.6	2 1	11 16.82	- 0 29.4	1.468	2.317	15.6	21.2
2 11	11 20.75	+11 10.1	1.710	2.633	9.4	21.4	2 11	11 13.49	+ 0 48.4	1.396	2.315	11.5	21.0
2 21	11 11.81	+12 3.2	1.672	2.642	5.3	21.2	2 21	11 7.94	+ 2 30.0	1.346	2.313	6.7	20.7
3 2	11 1.55	+12 55.9	1.662	2.650	2.3	21.0	3 2	11 0.95	+ 4 27.9	1.322	2.312	1.5	20.3
3 12	10 51.13	+13 40.9	1.682	2.657	5.2	21.2	3 12	10 53.64	+ 6 30.7	1.326	2.312	4.0	20.5
3 22	10 41.70	+14 12.7	1.730	2.664	9.3	21.4	3 22	10 47.17	+ 8 26.4	1.356	2.312	9.1	20.8
4 1	10 34.20	+14 28.5	1.803	2.670	13.0	21.7	4 1	10 42.55	+10 4.9	1.411	2.313	13.7	21.1
4 11	10 29.20	+14 27.7	1.896	2.675	16.1	21.9	4 11	10 40.44	+11 20.2	1.486	2.314	17.5	21.3
265736	2005 <i>UM</i> ₄₈₆		3 3.9 121°36	4°8/ 8.6 18			51193	2000 <i>HT</i> ₉₆		3 3.9 85°06	5°0/27.6 18		
2 1	11 24.35	- 9 23.0	2.123	2.899	14.0	21.4	2 1	11 22.10	+20 8.4	2.122	2.984	10.9	19.4
2 11	11 18.23	- 9 38.9	2.050	2.913	11.2	21.3	2 11	11 16.66	+21 11.1	2.067	2.990	8.0	19.2
2 21	11 10.32	- 9 35.8	2.000	2.928	8.1	21.1	2 21	11 9.44	+22 11.4	2.037	2.995	5.7	19.1
3 2	11 1.30	- 9 14.2	1.978	2.941	5.5	21.0	3 2	11 1.18	+23 2.2	2.036	3.001	5.2	19.1
3 12	10 52.11	- 8 37.5	1.984	2.954	5.0	21.0	3 12	10 52.80	+23 37.5	2.063	3.007	7.1	19.2
3 22	10 43.66	- 7 50.7	2.018	2.967	7.1	21.1	3 22	10 45.22	+23 54.1	2.117	3.012	9.9	19.4
4 1	10 36.74	- 6 59.9	2.080	2.979	10.0	21.3	4 1	10 39.20	+23 51.0	2.194	3.018	12.6	19.6
4 11	10 31.89	- 6 11.3	2.165	2.991	12.8	21.5	4 11	10 35.25	+23 29.6	2.292	3.024	14.9	19.7
431286	2006 <i>UF</i> ₂₁₈		3 3.9 199°01	0°9/ 2.8 17			295788	2008 <i>UY</i> ₂₃₁		3 3.9 244°93	1°7/ 5.3 18		
2 1	11 20.13	+ 8 15.5	3.056	3.893	8.6	22.4	2 1	11 24.90	+ 0 12.8	1.586	2.420	15.4	21.7
2 11	11 14.83	+ 8 47.2	2.972	3.889	6.2	22.2	2 11	11 19.36	+ 0 29.8	1.499	2.409	11.5	21.4
2 21	11 8.28	+ 9 24.0	2.916	3.884	3.4	22.0	2 21	11 11.31	+ 1 4.8	1.434	2.396	7.0	21.1
3 2	11 0.96	+10 2.5	2.890	3.879	0.9	21.8	3 2	11 1.54	+ 1 54.2	1.396	2.384	2.4	20.8
3 12	10 53.48	+10 38.9	2.895	3.874	2.9	22.0	3 12	10 51.23	+ 2 51.5	1.385	2.371	4.0	20.8
3 22	10 46.44	+11 9.9	2.931	3.868	5.8	22.1	3 22	10 41.68	+ 3 48.8	1.402	2.357	8.9	21.1
4 1	10 40.38	+11 32.8	2.994	3.861	8.4	22.3	4 1	10 34.07	+ 4 38.9	1.443	2.343	13.5	21.3
4 11	10 35.72	+11 46.2	3.082	3.854	10.6	22.4	4 11	10 29.18	+ 5 16.0	1.505	2.329	17.5	21.5
354084	2001 <i>WZ</i> ₂₀		3 3.9 58°07	1°8/ 5.3 18			327004	2004 <i>RO</i> ₂₉		3 3.9 199°21	3°1/29.2 17		
2 1	11 23.48	- 0 14.0	1.275	2.122	17.6	20.8	2 1	11 20.74	+12 24.9	2.232	3.088	10.7	21.1
2 11	11 18.37	+ 0 10.4	1.220	2.136	13.0	20.5	2 11	11 15.70	+13 50.8	2.159	3.085	7.6	20.9
2 21	11 10.66	+ 0 56.0	1.186	2.150	7.8	20.3	2 21	11 8.95	+15 22.5	2.113	3.082	4.5	20.7
3 2	11 1.37	+ 1 57.2	1.176	2.165	2.6	20.0	3 2	11 1.12	+16 52.7	2.097	3.078	3.2	20.6
3 12	10 51.93	+ 3 4.9	1.193	2.180	4.2	20.2	3 12	10 53.03	+18 13.8	2.110	3.073	5.5	20.7
3 22	10 43.72	+ 4 9.5	1.235	2.195	9.4	20.5	3 22	10 45.55	+19 20.1	2.153	3.068	8.8	20.9
4 1	10 37.84	+ 5 3.0	1.301	2.210	14.1	20.8	4 1	10 39.44	+20 7.8	2.221	3.063	11.8	21.1
4 11	10 34.90	+ 5 40.3	1.386	2.225	17.9	21.1	4 11	10 35.24	+20 36.1	2.310	3.057	14.4	21.3
333241	2012 <i>HF</i> ₆₅		3 3.9 269°75	2°3/ 1.9 16			290022	2005 <i>QG</i> ₂₀		3 3.9 212°47	0°7/ 4.7 18		
2 1	11 22.22	+10 27.9	1.834	2.692	12.5	20.8	2 1	11 22.73	+ 3 26.6	2.673	3.496	10.2	20.7
2 11	11 17.05	+11 15.5	1.758	2.685	8.9	20.6	2 11	11 16.84	+ 3 25.6	2.586	3.492	7.5	20.5
2 21	11 9.81	+12 10.4	1.706	2.677	5.0	20.3	2 21	11 9.48	+ 3 32.3	2.525	3.488	4.4	20.3
3 2	11 1.24	+13 5.9	1.683	2.670	2.3	20.1	3 2	11 1.20	+ 3 44.3	2.494	3.483	1.2	20.1
3 12	10 52.37	+13 55.0	1.687	2.662	5.2	20.3	3 12	10 52.72	+ 3 58.6	2.494	3.479	2.6	20.2
3 22	10 44.24	+14 31.7	1.719	2.655	9.2	20.5	3 22	10 44.75	+ 4 12.0	2.525	3.474	5.8	20.4
4 1	10 37.80	+14 52.4	1.776	2.648	12.9	20.7	4 1	10 37.94	+ 4 21.7	2.583	3.469	8.8	20.6
4 11	10 33.66	+14 55.8	1.853	2.640	16.1	20.9	4 11	10 32.78	+ 4 25.3	2.666	3.464	11.4	20.7
55115	2001 <i>QQ</i> ₁₆₂		3 3.9 130°19	0°2/ 4.2 17			303295	2004 <i>SB</i> ₁₃		3 3.9 212°74	2°1/ 2.0 17		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
286030	2001 SB ₁₆₉		3 3.9 76°95	6°8/26.1	18		366856	2005 ST ₁₅		3 3.9 164°70	0°0/3.8	16	
2 1	11 26.72	+27 59.5	2.236	3.085	10.9	20.1	2 1	11 23.66	+4 31.4	2.193	3.026	11.7	22.6
2 11	11 19.76	+28 51.8	2.201	3.106	8.6	20.0	2 11	11 17.72	+4 58.8	2.118	3.031	8.5	22.4
2 21	11 11.06	+29 34.0	2.192	3.127	7.1	19.9	2 21	11 10.06	+5 35.8	2.069	3.035	4.8	22.2
3 2	11 1.45	+29 59.9	2.212	3.148	7.0	19.9	3 2	11 1.33	+6 18.3	2.049	3.039	0.8	21.9
3 12	10 51.94	+30 5.3	2.258	3.169	8.5	20.1	3 12	10 52.41	+7 1.2	2.059	3.042	3.2	22.1
3 22	10 43.46	+29 49.3	2.331	3.190	10.6	20.2	3 22	10 44.18	+7 39.6	2.098	3.045	7.0	22.3
4 1	10 36.73	+29 13.4	2.428	3.211	12.8	20.4	4 1	10 37.40	+8 9.5	2.164	3.047	10.5	22.6
4 11	10 32.18	+28 20.8	2.543	3.231	14.6	20.6	4 11	10 32.59	+8 28.3	2.254	3.049	13.4	22.8
31274	1998 FE ₂₄		3 3.9 27°11	0°6/4.6	18		492293	2013 YR ₁₀₉		3 3.9 58°94	0°1/4.2	18	
2 1	11 18.14	+1 46.4	1.938	2.778	12.7	18.1	2 1	11 20.10	+3 32.9	2.031	2.871	12.2	21.4
2 11	11 13.93	+2 26.7	1.869	2.784	9.3	17.9	2 11	11 15.18	+4 7.6	1.973	2.889	8.8	21.2
2 21	11 7.98	+3 20.9	1.824	2.790	5.4	17.7	2 21	11 8.60	+4 53.3	1.940	2.907	5.0	21.0
3 2	11 0.96	+4 24.2	1.806	2.796	1.3	17.4	3 2	11 1.07	+5 45.2	1.935	2.925	0.9	20.7
3 12	10 53.77	+5 30.1	1.817	2.803	3.2	17.6	3 12	10 53.48	+6 37.5	1.959	2.944	3.2	20.9
3 22	10 47.29	+6 32.0	1.856	2.810	7.2	17.8	3 22	10 46.64	+7 24.7	2.011	2.962	7.0	21.2
4 1	10 42.27	+7 24.4	1.921	2.818	10.9	18.0	4 1	10 41.29	+8 2.5	2.090	2.981	10.4	21.4
4 11	10 39.25	+8 3.4	2.009	2.826	14.0	18.3	4 11	10 37.88	+8 28.0	2.191	2.999	13.3	21.7
296593	2009 RO ₃₄		3 3.9 217°81	1°0/2.9	17		495885	2004 SE ₅₇		3 3.9 212°61	0°4/4.5	18	
2 1	11 23.36	+7 42.4	2.347	3.187	10.8	22.3	2 1	11 20.27	+1 14.9	2.509	3.332	10.8	22.4
2 11	11 17.52	+8 20.2	2.259	3.177	7.8	22.1	2 11	11 15.23	+2 11.0	2.417	3.324	7.9	22.2
2 21	11 9.97	+9 5.5	2.198	3.167	4.3	21.9	2 21	11 8.66	+3 19.9	2.351	3.315	4.6	22.0
3 2	11 1.31	+9 53.8	2.166	3.156	1.1	21.6	3 2	11 1.11	+4 37.6	2.316	3.305	1.0	21.7
3 12	10 52.35	+10 39.8	2.165	3.144	3.7	21.8	3 12	10 53.29	+5 58.3	2.311	3.295	2.8	21.8
3 22	10 43.96	+11 18.7	2.193	3.132	7.3	22.0	3 22	10 45.94	+7 16.0	2.336	3.284	6.4	22.0
4 1	10 36.88	+11 46.9	2.249	3.119	10.6	22.2	4 1	10 39.75	+8 25.3	2.390	3.273	9.6	22.2
4 11	10 31.70	+12 2.3	2.327	3.106	13.5	22.4	4 11	10 35.24	+9 22.5	2.468	3.261	12.4	22.4
194430	2001 VO ₇₇		3 3.9 72°44	3°6/1.3	18		114692	2003 FW ₈₉		3 3.9 232°11	2°9/6.4	18	
2 1	11 26.25	+11 14.8	1.313	2.182	15.8	20.0	2 1	11 24.82	-3 9.8	1.802	2.617	14.7	20.2
2 11	11 20.18	+12 27.5	1.275	2.206	11.1	19.8	2 11	11 19.09	-3 1.4	1.709	2.605	11.3	19.9
2 21	11 11.56	+13 46.6	1.259	2.231	6.3	19.6	2 21	11 11.09	-2 34.5	1.640	2.593	7.3	19.7
3 2	11 1.55	+15 1.7	1.270	2.255	3.6	19.5	3 2	11 1.55	-1 51.0	1.597	2.580	3.6	19.4
3 12	10 51.61	+16 2.5	1.307	2.279	6.8	19.8	3 12	10 51.51	-0 56.2	1.583	2.567	4.0	19.4
3 22	10 43.09	+16 42.6	1.369	2.303	11.2	20.1	3 22	10 42.12	+0 3.3	1.597	2.553	8.0	19.6
4 1	10 36.98	+16 59.7	1.455	2.327	15.2	20.4	4 1	10 34.44	+1 0.1	1.637	2.538	12.2	19.8
4 11	10 33.78	+16 54.7	1.558	2.351	18.5	20.7	4 11	10 29.20	+1 48.2	1.699	2.523	15.9	20.0
340716	2006 SE ₆₄		3 3.9 124°82	0°2/4.3	17		158737	2003 PL ₃		3 3.9 217°32	0°8/3.0	18	
2 1	11 19.48	+3 30.5	2.596	3.427	10.2	21.7	2 1	11 20.89	+6 32.1	2.417	3.257	10.5	21.1
2 11	11 14.49	+4 1.2	2.525	3.436	7.4	21.5	2 11	11 15.71	+7 18.5	2.331	3.249	7.5	20.9
2 21	11 8.14	+4 40.8	2.480	3.445	4.2	21.3	2 21	11 8.95	+8 13.6	2.272	3.241	4.2	20.7
3 2	11 0.98	+5 25.8	2.464	3.454	0.8	21.1	3 2	11 1.16	+9 12.8	2.242	3.232	0.9	20.4
3 12	10 53.71	+6 11.7	2.478	3.462	2.7	21.3	3 12	10 53.12	+10 10.5	2.242	3.223	3.4	20.6
3 22	10 46.98	+6 54.3	2.522	3.471	5.9	21.5	3 22	10 45.60	+11 1.6	2.272	3.213	7.0	20.8
4 1	10 41.41	+7 29.9	2.594	3.479	8.9	21.7	4 1	10 39.32	+11 42.1	2.330	3.203	10.2	21.0
4 11	10 37.43	+7 56.1	2.689	3.487	11.4	21.9	4 11	10 34.79	+12 9.7	2.410	3.192	13.0	21.2
163002	2001 SX ₁₇₅		3 3.9 86°18	2°9/29.8	18		498215	2007 TP ₄₃₈		3 3.9 70°91	3°3/7.9	17	
2 1	11 20.73	+13 32.7	2.274	3.130	10.5	19.9	2 1	11 18.24	-7 7.6	2.172	2.969	13.1	21.6
2 11	11 15.51	+14 27.5	2.219	3.145	7.4	19.8	2 11	11 13.89	-6 41.3	2.094	2.975	10.2	21.4
2 21	11 8.74	+15 24.9	2.192	3.160	4.3	19.6	2 21	11 7.93	-5 56.0	2.039	2.981	7.0	21.2
3 2	11 1.08	+16 18.8	2.193	3.175	2.9	19.5	3 2	11 0.99	-4 54.2	2.011	2.987	4.1	21.1
3 12	10 53.36	+17 3.7	2.224	3.190	5.0	19.7	3 12	10 53.85	-3 41.0	2.012	2.993	3.7	21.0
3 22	10 46.35	+17 35.8	2.283	3.204	8.0	19.9	3 22	10 47.33	-2 22.7	2.041	2.998	6.4	21.2
4 1	10 40.73	+17 52.8	2.367	3.219	10.9	20.1	4 1	10 42.14	-1 6.2	2.098	3.004	9.6	21.4
4 11	10 36.95	+17 54.6	2.473	3.233	13.3	20.3	4 11	10 38.77	+0 2.6	2.179	3.010	12.5	21.6
144562	2004 FS ₁₂		3 3.9 36°82	4°8/8.2	18		172480	2003 SE ₉₇		3 3.9 129°34	1°3/2.8	18	
2 1	11 18.75	-8 19.5	1.233	2.059	19.3	19.2	2 1	11 25.47	+7 45.3	1.913	2.757	12.7	21.1
2 11	11 15.00	-7 50.5	1.182	2.079	15.1	19.0	2 11	11 19.14	+8 31.9	1.853	2.773	9.0	20.9
2 21	11 8.77	-6 49.8	1.152	2.100	10.3	18.8	2 21	11 10.87	+9 26.6	1.818	2.788	4.9	20.6
3 2	11 1.10	-5 22.1	1.144	2.122	5.9	18.6	3 2	11 1.48	+10 23.5	1.812	2.802	1.4	20.4
3 12	10 53.34	-3 37.4	1.161	2.144	5.2	18.6	3 12	10 51.98	+11 15.8	1.836	2.815	4.3	20.6
3 22	10 46.77	-1 48.3	1.204	2.168	8.9	18.9	3 22	10 43.39	+11 57.9	1.889	2.828	8.2	20.9
4 1	10 42.41	-0 7.1	1.270	2.192	13.3	19.2	4 1	10 36.52	+12 26.3	1.967	2.840	11.8	21.2
4 11	10 40.81	+1 17.3	1.356	2.216	17.1	19.5	4 11	10 31.90	+12 39.5	2.067	2.852	14.7	21.4
459658	2013 KL ₇		3 3.9 298°96	0°5/4.4	17		425950	2011 GS ₈₄		3 3.9 272°73	2°7/6.9	17	
2 1	11 21.26	+2 31.7	1.468	2.319	15.4	21.3	2 1	11 18.93	-4 44.6	2.018	2.829	13.4	21.5
2 11	11 16.92	+3 4.7	1.380	2.301	11.4	21.0	2 11	11 14.58	-4 14.5	1.928	2.821	10.3	21.2
2 21	11 10.03	+3 56.2	1.314	2.282	6.6	20.7	2 21	11 8.42	-3 25.1	1.863	2.813	6.8	21.0
3 2	11 1.36	+5 0.9	1.274	2.264	1.4	20.3	3 2	11 1.08	-2 19.2	1.824	2.806	3.4	20.8
3 12	10 52.10	+6 10.8	1.261	2.246	4.3	20.4	3 12	10 53.43	-1 2.5	1.814	2.798	3.5	20.8
3 22	10 43.57	+7 16.7	1.273	2.228	9.6	20.7	3 22	10 46.35	+0 18.1	1.832	2.790	7.0	21.0
4 1	10 37.00	+8 10.5	1.309	2.211	14.5	20.9	4 1	10 40.69	+1 35.2	1.877	2.782	10.6	21.2
4 11	10 33.22	+8 46.9	1.365	2.194	18.7	21.1	4 11	10 37.04	+2 42.5	1.945	2.774	13.9	21.4
29235	1992 EU ₁₃		3 3.9 105°38	1°8/5.4	18		256938	2008 EH ₃₉		3 3.9 106°31	2°4/1.8	18	
2 1	11 28.35	-0 8.8	1.695	2.518	15.1	17.7	2 1	11 22.66	+9 32.9	1.742	2.600	13.1	20.7
2 11	11 21.28	+0 0											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
230511	2002 <i>VD</i> ₃₈		3 3.9 139°68	0°6/ 4.5 18			39902	1998 <i>FG</i> ₃₀		3 4.0 239°79	0°6/ 4.5 18		
2 1	11 27.61	+ 2 56.1	1.585	2.423	15.2	21.4	2 1	11 25.11	+ 2 57.6	1.968	2.800	12.9	19.5
2 11	11 21.05	+ 3 18.0	1.519	2.433	11.1	21.1	2 11	11 19.16	+ 3 19.6	1.873	2.784	9.5	19.2
2 21	11 12.11	+ 3 54.3	1.477	2.443	6.4	20.9	2 21	11 11.10	+ 3 54.2	1.803	2.768	5.6	18.9
3 2	11 1.70	+ 4 39.9	1.462	2.452	1.4	20.6	3 2	11 1.58	+ 4 37.8	1.761	2.751	1.3	18.6
3 12	10 51.09	+ 5 27.9	1.476	2.461	3.9	20.8	3 12	10 51.61	+ 5 24.7	1.748	2.733	3.5	18.7
3 22	10 41.52	+ 6 11.2	1.517	2.468	8.7	21.1	3 22	10 42.22	+ 6 9.0	1.764	2.715	7.9	19.0
4 1	10 34.03	+ 6 44.4	1.583	2.476	13.0	21.3	4 1	10 34.40	+ 6 45.5	1.807	2.695	11.9	19.2
4 11	10 29.24	+ 7 4.2	1.670	2.482	16.6	21.6	4 11	10 28.85	+ 7 10.3	1.872	2.676	15.4	19.3
54846	2001 <i>OJ</i> ₅		3 3.9 125°49	5°3/ 9.3 18			312852	2011 <i>UA</i> ₈₅		3 4.0 25°09	2°7/ 5.9 18		
2 1	11 24.49	-11 15.6	2.153	2.917	14.2	19.1	2 1	11 23.02	- 1 5.1	1.344	2.186	17.1	20.6
2 11	11 18.36	-11 32.1	2.079	2.933	11.5	18.9	2 11	11 18.13	- 1 3.9	1.278	2.190	12.9	20.4
2 21	11 10.44	-11 28.3	2.029	2.947	8.6	18.8	2 21	11 10.64	- 0 42.3	1.233	2.194	8.1	20.1
3 2	11 1.42	-11 4.7	2.005	2.961	6.1	18.6	3 2	11 1.50	- 0 3.7	1.213	2.199	3.4	19.9
3 12	10 52.21	-10 24.4	2.009	2.975	5.5	18.6	3 12	10 52.05	+ 0 45.1	1.218	2.204	4.3	19.9
3 22	10 43.73	- 9 32.5	2.042	2.988	7.3	18.8	3 22	10 43.66	+ 1 35.8	1.249	2.210	9.1	20.2
4 1	10 36.78	- 8 35.5	2.102	3.001	10.0	18.9	4 1	10 37.48	+ 2 20.5	1.303	2.216	13.8	20.5
4 11	10 31.89	- 7 39.7	2.186	3.012	12.7	19.1	4 11	10 34.18	+ 2 53.2	1.378	2.222	17.7	20.8
212736	2007 <i>RC</i> ₂₄₄		3 3.9 146°47	1°9/ 2.3 18			178384	1997 <i>SS</i> ₁₈		3 4.0 233°11	0°7/ 3.4 17		
2 1	11 25.76	+ 9 16.6	1.939	2.786	12.4	21.3	2 1	11 24.19	+ 6 30.1	2.016	2.858	12.3	21.3
2 11	11 19.37	+10 5.5	1.876	2.797	8.8	21.1	2 11	11 18.38	+ 6 58.5	1.929	2.847	8.9	21.1
2 21	11 11.03	+11 1.5	1.838	2.808	4.9	20.9	2 21	11 10.59	+ 7 36.2	1.868	2.837	4.9	20.8
3 2	11 1.51	+11 58.2	1.829	2.817	1.9	20.7	3 2	11 1.49	+ 8 18.6	1.835	2.825	0.9	20.5
3 12	10 51.86	+12 48.8	1.850	2.826	4.6	20.9	3 12	10 52.04	+ 9 0.0	1.832	2.814	3.8	20.7
3 22	10 43.07	+13 28.0	1.899	2.834	8.5	21.1	3 22	10 43.23	+ 9 34.9	1.857	2.802	8.0	20.9
4 1	10 36.00	+13 52.6	1.974	2.842	12.0	21.4	4 1	10 35.97	+ 9 59.3	1.908	2.789	11.7	21.1
4 11	10 31.19	+14 1.4	2.071	2.848	15.0	21.6	4 11	10 30.90	+10 10.7	1.982	2.776	15.0	21.3
175789	1999 <i>RG</i> ₅₈		3 4.0 173°86	0°0/ 3.9 18			352657	2008 <i>QS</i> ₃₃		3 4.0 58°65	0°7/ 3.6 18		
2 1	11 23.69	+ 3 24.3	2.054	2.886	12.4	21.6	2 1	11 29.04	+ 7 6.9	1.194	2.056	17.5	20.1
2 11	11 17.88	+ 4 8.1	1.977	2.890	9.0	21.4	2 11	11 22.42	+ 7 16.3	1.149	2.076	12.6	19.8
2 21	11 10.21	+ 5 4.1	1.926	2.893	5.1	21.2	2 21	11 12.95	+ 7 37.0	1.125	2.096	7.0	19.6
3 2	11 1.38	+ 6 7.4	1.904	2.895	0.9	20.8	3 2	11 1.87	+ 8 2.4	1.126	2.116	1.2	19.3
3 12	10 52.32	+ 7 11.6	1.912	2.896	3.4	21.0	3 12	10 50.83	+ 8 24.9	1.153	2.137	5.0	19.6
3 22	10 43.97	+ 8 10.3	1.949	2.897	7.5	21.3	3 22	10 41.34	+ 8 38.3	1.205	2.157	10.4	19.9
4 1	10 37.15	+ 8 58.6	2.013	2.896	11.1	21.5	4 1	10 34.54	+ 8 39.0	1.280	2.178	15.0	20.3
4 11	10 32.42	+ 9 33.3	2.100	2.896	14.2	21.7	4 11	10 30.96	+ 8 25.5	1.373	2.199	18.8	20.6
416923	2005 <i>ST</i> ₅₃		3 4.0 83°39	0°2/ 3.9 18			312076	2007 <i>TH</i> ₄₁		3 4.0 188°99	1°5/ 2.6 18		
2 1	11 24.83	+ 5 40.3	1.762	2.607	13.6	21.1	2 1	11 25.07	+ 8 22.2	2.024	2.869	12.1	21.8
2 11	11 18.84	+ 5 55.2	1.697	2.616	9.8	20.9	2 11	11 18.94	+ 9 10.1	1.948	2.868	8.6	21.6
2 21	11 10.78	+ 6 19.9	1.658	2.626	5.5	20.6	2 21	11 10.87	+10 6.3	1.897	2.867	4.8	21.4
3 2	11 1.47	+ 6 50.0	1.645	2.636	0.9	20.3	3 2	11 1.55	+11 4.9	1.876	2.865	1.6	21.2
3 12	10 52.02	+ 7 19.6	1.661	2.645	3.8	20.6	3 12	10 51.97	+11 59.2	1.884	2.862	4.4	21.3
3 22	10 43.49	+ 7 43.7	1.705	2.655	8.1	20.8	3 22	10 43.12	+12 43.5	1.921	2.858	8.3	21.6
4 1	10 36.79	+ 7 58.3	1.775	2.665	12.0	21.1	4 1	10 35.87	+13 14.1	1.984	2.854	11.9	21.8
4 11	10 32.46	+ 8 1.2	1.866	2.674	15.2	21.3	4 11	10 30.80	+13 29.1	2.069	2.848	14.9	22.0
216268	2006 <i>WY</i> ₇₇		3 4.0 28°74	2°4/ 6.7 17			426773	2013 <i>TW</i> ₁₀₇		3 4.0 136°21	0°8/ 3.2 17		
2 1	11 18.53	- 3 20.8	2.292	3.104	12.0	20.7	2 1	11 21.47	+ 6 33.8	2.121	2.965	11.6	21.7
2 11	11 14.04	- 3 5.5	2.212	3.106	9.2	20.5	2 11	11 16.22	+ 7 15.4	2.051	2.971	8.3	21.5
2 21	11 8.00	- 2 35.4	2.156	3.108	6.0	20.3	2 21	11 9.27	+ 8 5.8	2.007	2.977	4.6	21.3
3 2	11 1.01	- 1 52.9	2.128	3.110	3.0	20.1	3 2	11 1.27	+ 8 59.9	1.992	2.982	1.0	21.0
3 12	10 53.82	- 1 2.4	2.129	3.113	3.1	20.1	3 12	10 53.11	+ 9 51.8	2.006	2.987	3.7	21.2
3 22	10 47.20	- 0 9.0	2.159	3.115	6.2	20.3	3 22	10 45.64	+10 36.2	2.049	2.992	7.4	21.5
4 1	10 41.84	+ 0 42.0	2.215	3.118	9.4	20.5	4 1	10 39.61	+11 9.2	2.118	2.997	10.8	21.7
4 11	10 38.23	+ 1 26.0	2.296	3.121	12.2	20.7	4 11	10 35.54	+11 28.7	2.209	3.001	13.7	21.9
236120	2005 <i>SS</i> ₁₃₇		3 4.0 138°38	0°5/ 4.4 18			212609	2006 <i>SB</i> ₃₂₀		3 4.0 264°61	4°1/ 28.7 17		
2 1	11 25.19	+ 2 6.8	1.577	2.417	15.2	21.1	2 1	11 22.15	+18 10.0	2.302	3.160	10.3	20.6
2 11	11 19.33	+ 2 49.0	1.512	2.427	11.1	20.9	2 11	11 16.67	+18 55.8	2.233	3.157	7.5	20.4
2 21	11 11.16	+ 3 47.7	1.469	2.436	6.4	20.7	2 21	11 9.50	+19 40.8	2.191	3.154	4.9	20.2
3 2	11 1.56	+ 4 56.9	1.454	2.444	1.3	20.3	3 2	11 1.31	+20 19.2	2.178	3.151	4.1	20.2
3 12	10 51.73	+ 6 8.1	1.467	2.452	3.9	20.5	3 12	10 52.96	+20 45.6	2.194	3.148	6.1	20.3
3 22	10 42.90	+ 7 13.3	1.507	2.459	8.8	20.8	3 22	10 45.28	+20 57.0	2.237	3.145	8.9	20.4
4 1	10 36.07	+ 8 5.8	1.573	2.466	13.1	21.1	4 1	10 39.02	+20 51.8	2.306	3.142	11.7	20.6
4 11	10 31.86	+ 8 41.9	1.659	2.472	16.6	21.4	4 11	10 34.68	+20 30.9	2.395	3.139	14.1	20.8
249523	Friedan		3 4.0 164°92	5°2/ 12.2 18			312245	2007 <i>YM</i> ₄₈		3 4.0 102°56	1°1/ 3.1 18		
2 1	11 17.81	-18 8.3	3.066	3.776	11.5	21.3	2 1	11 24.76	+ 6 22.2	1.711	2.559	13.8	21.7
2 11	11 13.24	-17 45.6	2.972	3.780	9.7	21.2	2 11	11 18.78	+ 7 13.0	1.657	2.578	9.8	21.5
2 21	11 7.45	-17 3.2	2.902	3.784	7.7	21.1	2 21	11 10.75	+ 8 14.2	1.627	2.597	5.4	21.3
3 2	11 0.91	-16 1.9	2.857	3.788	6.0	20.9	3 2	11 1.52	+ 9 19.2	1.624	2.615	1.2	21.0
3 12	10 54.23	-14 44.5	2.842	3.791	5.2	20.9	3 12	10 52.23	+10 20.0	1.651	2.632	4.3	21.3
3 22	10 47.99	-13 15.6	2.857	3.794	5.9	20.9	3 22	10 43.93	+11 10.3	1.705	2.649	8.6	21.6
4 1	10 42.74	-11 40.8	2.900	3.796	7.6	21.1	4 1	10 37.51	+11 45.8	1.785	2.666	12.4	21.8
4 11	10 38.88	-10 6.1	2.971	3.798	9.7	21.2	4 11	10 33.49	+12 4.7	1.886	2.682	15.5	22.1
320941	2008 <i>GC</i> ₁₄₃		3 4.0 291°10	1°0/ 3.2 17			500959	2013 <i>QD</i> ₄₂		3 4.0 137°94	0°1/ 4.2 17		