

EPHEMERIDES

4 2.9

4 3.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
347722	2001 <i>XB</i> ₁₆₉		4 2.9 141°66	6°8/12.4 18			459619	2013 <i>HU</i> ₁₂₆		4 2.9 321°71	1°8/ 4.1 17		
3 2	13 10.79	-31 55.8	2.697	3.407	13.1	20.9	3 2	13 17.13	- 9 8.1	1.393	2.247	16.3	21.2
3 12	13 5.55	-32 9.7	2.611	3.413	11.3	20.7	3 12	13 11.09	- 9 30.0	1.319	2.243	12.2	20.9
3 22	12 58.73	-32 2.3	2.546	3.419	9.3	20.6	3 22	13 2.27	- 9 38.2	1.266	2.239	7.4	20.6
4 1	12 50.95	-31 32.8	2.505	3.425	7.6	20.5	4 1	12 51.62	- 9 34.3	1.238	2.235	2.5	20.3
4 11	12 43.00	-30 42.7	2.491	3.431	6.8	20.5	4 11	12 40.54	- 9 22.6	1.236	2.231	4.2	20.4
4 21	12 35.66	-29 36.2	2.503	3.436	7.3	20.5	4 21	12 30.45	- 9 8.7	1.260	2.228	9.4	20.7
5 1	12 29.61	-28 19.1	2.542	3.442	8.8	20.6	5 1	12 22.61	- 8 58.7	1.308	2.224	14.1	20.9
5 11	12 25.34	-26 58.2	2.606	3.446	10.7	20.7	5 11	12 17.76	- 8 57.8	1.375	2.221	18.1	21.2
294196	2007 <i>TJ</i> ₄₁₉		4 2.9 10°89	0°0/ 2.8 17			495990	2007 <i>UY</i> ₄		4 2.9 229°91	1°5/ 1.7 17		
3 2	13 7.97	- 8 43.4	2.122	2.971	11.7	21.0	3 2	13 14.74	- 3 47.1	1.900	2.755	12.6	22.4
3 12	13 3.62	- 7 49.9	2.046	2.971	8.5	20.8	3 12	13 8.77	- 3 3.6	1.813	2.742	9.0	22.2
3 22	12 57.68	- 6 43.8	1.995	2.971	4.8	20.6	3 22	13 0.74	- 2 10.3	1.750	2.728	5.0	21.9
4 1	12 50.78	- 5 29.6	1.973	2.971	0.8	20.3	4 1	12 51.36	- 1 12.2	1.716	2.714	1.5	21.6
4 11	12 43.74	- 4 13.7	1.979	2.971	3.2	20.5	4 11	12 41.62	- 0 16.0	1.711	2.699	4.5	21.8
4 21	12 37.34	- 3 2.6	2.013	2.972	7.1	20.7	4 21	12 32.57	+ 0 31.9	1.734	2.683	8.8	22.0
5 1	12 32.27	- 2 1.8	2.073	2.972	10.5	20.9	5 1	12 25.11	+ 1 6.5	1.782	2.666	12.7	22.2
5 11	12 28.99	- 1 15.4	2.156	2.972	13.5	21.1	5 11	12 19.87	+ 1 24.8	1.850	2.648	16.1	22.4
40683	1999 <i>RB</i> ₂₁₃		4 2.9 252°34	4°4/ 7.7 18			412561	2014 <i>NS</i> ₅₄		4 2.9 315°16	5°0/30.6 14 C		
3 2	13 10.53	-20 49.1	2.085	2.881	13.8	18.7	3 2	13 14.77	+ 3 40.9	1.273	2.157	15.5	20.2
3 12	13 5.69	-20 39.9	1.991	2.871	11.1	18.5	3 12	13 9.43	+ 4 29.7	1.208	2.150	11.3	20.0
3 22	12 58.96	-20 10.0	1.919	2.861	8.0	18.3	3 22	13 1.33	+ 5 21.7	1.166	2.144	7.0	19.7
4 1	12 51.02	-19 19.8	1.873	2.851	5.2	18.1	4 1	12 51.47	+ 6 7.9	1.148	2.137	5.1	19.6
4 11	12 42.76	-18 13.3	1.855	2.840	4.6	18.0	4 11	12 41.29	+ 6 39.1	1.154	2.131	8.2	19.7
4 21	12 35.13	-16 56.5	1.865	2.829	7.0	18.1	4 21	12 32.23	+ 6 49.2	1.185	2.125	12.8	20.0
5 1	12 28.97	-15 37.0	1.901	2.819	10.3	18.3	5 1	12 25.46	+ 6 35.4	1.236	2.120	17.2	20.2
5 11	12 24.85	-14 22.3	1.960	2.808	13.4	18.5	5 11	12 21.69	+ 5 58.6	1.304	2.115	20.9	20.4
353264	2010 <i>EM</i> ₁₁₁		4 2.9 43°14	0°9/ 2.3 18			22971	1999 <i>VY</i> ₈		4 3.0 170°20	5°1/28.7 18		
3 2	13 12.33	- 6 26.1	1.225	2.100	16.7	21.0	3 2	13 14.67	+ 7 49.2	2.076	2.941	11.2	18.8
3 12	13 7.59	- 5 38.8	1.167	2.105	12.0	20.8	3 12	13 8.37	+ 8 57.4	2.017	2.946	8.3	18.6
3 22	13 0.20	- 4 35.2	1.131	2.111	6.6	20.5	3 22	13 0.33	+10 4.1	1.983	2.950	5.8	18.5
4 1	12 51.22	- 3 23.0	1.119	2.118	1.2	20.1	4 1	12 51.27	+11 2.3	1.979	2.953	5.3	18.5
4 11	12 42.08	- 2 12.3	1.132	2.125	5.1	20.4	4 11	12 42.13	+11 45.8	2.002	2.955	7.3	18.6
4 21	12 34.14	- 1 12.6	1.170	2.132	10.6	20.8	4 21	12 33.78	+12 10.7	2.053	2.957	10.2	18.8
5 1	12 28.50	- 0 31.1	1.229	2.139	15.3	21.0	5 1	12 26.97	+12 15.5	2.128	2.958	13.1	19.0
5 11	12 25.75	- 0 11.4	1.307	2.147	19.3	21.3	5 11	12 22.18	+12 0.9	2.222	2.958	15.5	19.1
222830	2002 <i>EL</i> ₇		4 2.9 73°90	1°6/ 4.3 18			227479	2005 <i>WE</i> ₁₉₀		4 3.0 206°81	0°8/ 3.9 18		
3 2	13 16.61	-10 27.1	1.777	2.614	14.1	20.5	3 2	13 9.76	-11 56.4	1.989	2.827	12.8	20.7
3 12	13 9.85	-10 28.6	1.726	2.642	10.4	20.4	3 12	13 5.05	-10 53.8	1.907	2.824	9.4	20.5
3 22	13 1.13	-10 16.8	1.699	2.669	6.2	20.2	3 22	12 58.56	- 9 33.9	1.849	2.821	5.6	20.2
4 1	12 51.36	- 9 54.4	1.700	2.696	2.2	20.0	4 1	12 50.99	- 8 1.4	1.820	2.817	1.5	19.9
4 11	12 41.64	- 9 26.2	1.729	2.723	3.4	20.1	4 11	12 43.22	- 6 23.6	1.819	2.813	3.2	20.1
4 21	12 32.98	- 8 57.5	1.785	2.749	7.4	20.4	4 21	12 36.14	- 4 48.7	1.847	2.809	7.3	20.3
5 1	12 26.18	- 8 33.4	1.868	2.775	11.0	20.7	5 1	12 30.51	- 3 24.0	1.902	2.804	11.1	20.5
5 11	12 21.70	- 8 17.9	1.972	2.801	14.1	20.9	5 11	12 26.87	- 2 15.1	1.979	2.799	14.4	20.7
89983	2002 <i>TE</i> ₃₆		4 2.9 110°50	1°1/ 1.7 18			145412	2005 <i>OO</i>		4 3.0 114°96	3°7/ 7.2 18		
3 2	13 9.82	- 4 8.4	2.240	3.096	10.9	19.5	3 2	13 11.12	-18 54.6	2.445	3.240	12.1	20.4
3 12	13 4.79	- 3 23.0	2.176	3.106	7.7	19.3	3 12	13 5.78	-19 1.3	2.366	3.247	9.5	20.3
3 22	12 58.27	- 2 30.1	2.138	3.116	4.2	19.1	3 22	12 58.88	-18 52.5	2.311	3.254	6.7	20.1
4 1	12 50.89	- 1 34.3	2.128	3.125	1.2	18.9	4 1	12 51.04	-18 28.9	2.282	3.261	4.3	19.9
4 11	12 43.44	- 0 41.1	2.147	3.135	3.7	19.1	4 11	12 43.04	-17 53.4	2.283	3.267	3.9	19.9
4 21	12 36.67	+ 0 4.6	2.194	3.144	7.2	19.3	4 21	12 35.64	-17 10.3	2.312	3.274	6.1	20.1
5 1	12 31.20	+ 0 39.1	2.268	3.153	10.3	19.5	5 1	12 29.53	-16 24.8	2.368	3.280	8.8	20.2
5 11	12 27.47	+ 1 0.0	2.363	3.162	13.0	19.7	5 11	12 25.18	-15 41.9	2.447	3.286	11.4	20.4
290734	2005 <i>UN</i> ₄₄₈		4 2.9 36°08	6°0/ 7.4 18			172230	2002 <i>RZ</i> ₁₁₃		4 3.0 246°46	0°3/ 2.7 17		
3 2	13 13.62	-19 37.7	1.236	2.067	19.4	19.8	3 2	13 9.97	- 6 41.5	2.123	2.974	11.6	20.6
3 12	13 8.77	-19 57.5	1.171	2.072	15.5	19.6	3 12	13 5.11	- 6 4.7	2.042	2.969	8.4	20.4
3 22	13 1.01	-19 48.8	1.125	2.077	11.0	19.3	3 22	12 58.57	- 5 17.5	1.986	2.963	4.7	20.2
4 1	12 51.39	-19 11.5	1.101	2.083	7.1	19.1	4 1	12 51.00	- 4 23.9	1.959	2.957	0.7	19.8
4 11	12 41.44	-18 10.7	1.101	2.089	6.4	19.1	4 11	12 43.22	- 3 29.5	1.959	2.951	3.4	20.0
4 21	12 32.69	-16 56.1	1.125	2.095	9.8	19.3	4 21	12 36.05	- 2 39.8	1.988	2.945	7.3	20.3
5 1	12 26.42	-15 39.5	1.171	2.101	14.1	19.6	5 1	12 30.25	- 1 59.6	2.043	2.939	10.8	20.5
5 11	12 23.31	-14 31.7	1.236	2.108	18.2	19.8	5 11	12 26.30	- 1 32.4	2.120	2.933	13.8	20.7
371998	2008 <i>HC</i> ₁₆		4 2.9 3°37	3°6/30.9 18			15090	1999 <i>CA</i> ₉₇		4 3.0 246°40	0°5/ 2.4 18		
3 2	13 8.25	- 0 40.9	1.296	2.184	15.0	19.7	3 2	13 9.52	- 6 3.6	2.250	3.101	11.0	17.9
3 12	13 4.56	+ 0 30.6	1.237	2.183	10.7	19.4	3 12	13 4.71	- 5 25.8	2.167	3.094	7.9	17.7
3 22	12 58.48	+ 1 51.7	1.201	2.183	6.1	19.2	3 22	12 58.32	- 4 38.5	2.110	3.087	4.4	17.5
4 1	12 50.95	+ 3 12.7	1.189	2.183	3.7	19.0	4 1	12 50.95	- 3 45.7	2.082	3.080	0.8	17.2
4 11	12 43.24	+ 4 23.0	1.203	2.185	7.0	19.2	4 11	12 43.39	- 2 52.6	2.082	3.073	3.3	17.4
4 21	12 36.56	+ 5 14.1	1.240	2.188	11.6	19.5	4 21	12 36.40	- 2 4.4	2.111	3.066	7.0	17.6
5 1	12 31.91	+ 5 41.1	1.298	2.191	15.9	19.7	5 1	12 30.68	- 1 25.7	2.165	3.058	10.4	17.8
5 11	12 29.87	+ 5 43.0	1.374	2.196	19.5	20.0	5 11	12 26.72	- 0 59.5	2.242	3.051	13.3	17.9
236834	2007 <i>RH</i> ₇₈		4 2.9 211°91	0°5/ 3.5 17			24202	1999 <i>XR</i> ₄₂		4 3.0 238°45	1°0/ 3.8 18		</

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
423593	2005 VV ₁₃₅	4	3.0 128°77	2°3/31.8	17		353872	2012 WY ₁₄	4	3.0 138°30	2°4/31.0	17	
3 2	13 13.22	- 0 31.3	1.948	2.811	12.0	22.4	3 2	13 9.78	+ 1 23.7	2.658	3.517	9.3	21.8
3 12	13 7.41	+ 0 9.0	1.886	2.819	8.5	22.2	3 12	13 4.57	+ 2 8.6	2.595	3.527	6.5	21.6
3 22	12 59.82	+ 0 54.4	1.849	2.827	4.8	22.0	3 22	12 58.11	+ 2 56.2	2.559	3.536	3.8	21.4
4 1	12 51.20	+ 1 39.5	1.840	2.835	2.3	21.8	4 1	12 50.92	+ 3 42.0	2.553	3.544	2.4	21.3
4 11	12 42.49	+ 2 18.5	1.859	2.842	4.9	22.0	4 11	12 43.69	+ 4 21.8	2.576	3.552	4.3	21.5
4 21	12 34.60	+ 2 46.7	1.906	2.849	8.5	22.3	4 21	12 37.02	+ 4 52.0	2.628	3.560	7.0	21.7
5 1	12 28.27	+ 3 1.0	1.978	2.856	11.9	22.5	5 1	12 31.46	+ 5 10.3	2.706	3.568	9.6	21.9
5 11	12 24.01	+ 3 0.0	2.071	2.862	14.8	22.7	5 11	12 27.41	+ 5 15.6	2.807	3.575	11.9	22.0
254086	2004 JX ₈	4	3.0 88°45	4°0/ 6.9	18		225583	2000 WS ₃₂	4	3.0 70°25	8°6/25.6	18	
3 2	13 11.58	-18 54.6	1.711	2.527	15.6	20.3	3 2	13 13.10	+16 35.2	1.764	2.633	12.7	19.8
3 12	13 6.57	-18 34.1	1.642	2.537	12.1	20.1	3 12	13 7.44	+17 55.7	1.726	2.644	10.2	19.7
3 22	12 59.48	-17 50.4	1.595	2.547	8.3	19.9	3 22	12 59.86	+19 5.1	1.712	2.654	8.7	19.6
4 1	12 51.15	-16 45.9	1.572	2.557	4.8	19.7	4 1	12 51.23	+19 54.8	1.723	2.665	9.0	19.6
4 11	12 42.69	-15 26.7	1.577	2.567	4.4	19.7	4 11	12 42.64	+20 18.9	1.760	2.675	10.8	19.7
4 21	12 35.14	-14 1.1	1.609	2.577	7.6	19.9	4 21	12 35.05	+20 15.6	1.820	2.686	13.2	19.9
5 1	12 29.39	-12 38.0	1.666	2.587	11.3	20.2	5 1	12 29.24	+19 45.9	1.901	2.697	15.7	20.1
5 11	12 25.97	-11 25.1	1.746	2.597	14.7	20.4	5 11	12 25.68	+18 53.5	1.999	2.707	17.8	20.3
334782	2003 SE ₁₄₇	4	3.0 202°70	2°3/ 5.9	18		214542	2006 OV ₉	4	3.0 289°12	0°1/ 2.9	17	
3 2	13 9.92	-16 34.6	2.558	3.364	11.3	21.4	3 2	13 12.92	- 7 0.5	1.503	2.365	14.9	21.3
3 12	13 4.88	-16 0.5	2.466	3.360	8.6	21.2	3 12	13 8.03	- 6 35.0	1.413	2.344	10.9	21.0
3 22	12 58.37	-15 10.7	2.399	3.355	5.7	21.0	3 22	13 0.60	- 5 54.8	1.347	2.324	6.2	20.7
4 1	12 50.97	-14 7.5	2.360	3.349	2.9	20.8	4 1	12 51.42	- 5 4.2	1.305	2.304	1.0	20.2
4 11	12 43.39	-12 55.1	2.351	3.343	2.9	20.8	4 11	12 41.69	- 4 10.3	1.290	2.284	4.4	20.4
4 21	12 36.34	-11 39.1	2.372	3.337	5.8	21.0	4 21	12 32.69	- 3 21.0	1.301	2.263	9.7	20.7
5 1	12 30.47	-10 25.4	2.421	3.330	8.8	21.1	5 1	12 25.59	- 2 43.4	1.335	2.243	14.5	20.9
5 11	12 26.23	- 9 19.1	2.494	3.322	11.5	21.3	5 11	12 21.19	- 2 22.7	1.388	2.223	18.6	21.1
346130	2007 VG ₁₇₄	4	3.0 183°50	2°6/30.7	17		472120	2014 BR ₁₉	4	3.0 251°89	4°4/ 7.6	17	
3 2	13 11.41	+ 3 10.1	2.829	3.686	8.9	22.2	3 2	13 11.29	-20 13.6	2.277	3.070	12.9	21.5
3 12	13 5.71	+ 3 48.7	2.757	3.686	6.3	22.0	3 12	13 6.11	-20 25.5	2.189	3.066	10.3	21.3
3 22	12 58.74	+ 4 28.8	2.712	3.686	3.8	21.9	3 22	12 59.19	-20 20.1	2.123	3.062	7.5	21.1
4 1	12 51.02	+ 5 6.3	2.697	3.685	2.7	21.8	4 1	12 51.15	-19 57.6	2.083	3.057	5.0	20.9
4 11	12 43.21	+ 5 37.3	2.712	3.684	4.4	21.9	4 11	12 42.84	-19 20.6	2.071	3.053	4.6	20.9
4 21	12 35.91	+ 5 58.7	2.756	3.682	7.0	22.1	4 21	12 35.12	-18 33.5	2.087	3.049	6.6	21.0
5 1	12 29.69	+ 6 8.4	2.827	3.680	9.6	22.2	5 1	12 28.76	-17 42.3	2.130	3.045	9.5	21.2
5 11	12 24.93	+ 6 5.7	2.921	3.677	11.7	22.4	5 11	12 24.30	-16 53.0	2.196	3.040	12.3	21.4
500984	2013 RX ₁	4	3.0 163°44	1°5/ 4.7	17		393345	2014 EH ₁	4	3.0 69°95	0°2/ 3.2	17	
3 2	13 11.27	-12 41.4	2.307	3.133	11.7	21.7	3 2	13 10.25	- 7 19.6	2.302	3.147	11.0	21.1
3 12	13 5.89	-12 11.0	2.229	3.138	8.7	21.5	3 12	13 5.18	- 7 1.7	2.226	3.149	8.0	20.9
3 22	12 58.95	-11 26.9	2.176	3.142	5.3	21.3	3 22	12 58.57	- 6 34.6	2.175	3.150	4.5	20.7
4 1	12 51.07	-10 32.0	2.151	3.146	2.0	21.1	4 1	12 51.03	- 6 1.6	2.152	3.151	0.8	20.4
4 11	12 43.05	- 9 31.1	2.156	3.150	2.8	21.2	4 11	12 43.35	- 5 26.8	2.158	3.152	2.9	20.6
4 21	12 35.67	- 8 29.8	2.189	3.153	6.3	21.4	4 21	12 36.26	- 4 54.5	2.193	3.153	6.5	20.8
5 1	12 29.61	- 7 33.5	2.250	3.155	9.5	21.6	5 1	12 30.45	- 4 28.8	2.254	3.154	9.8	21.0
5 11	12 25.34	- 6 46.7	2.334	3.157	12.4	21.8	5 11	12 26.38	- 4 12.6	2.338	3.155	12.6	21.2
158733	2003 OS ₅	4	3.0 301°84	7°5/ 8.3	18		122682	2000 SG ₁	4	3.0 214°04	11°5/17.9	18	
3 2	13 14.30	-23 33.2	1.762	2.549	16.4	19.8	3 2	13 14.30	-43 20.3	2.218	2.847	17.5	19.8
3 12	13 9.09	-24 27.2	1.657	2.523	13.7	19.6	3 12	13 8.82	-43 57.4	2.124	2.843	16.1	19.7
3 22	13 1.28	-25 0.5	1.572	2.497	10.7	19.3	3 22	13 0.93	-44 4.0	2.047	2.839	14.4	19.5
4 1	12 51.53	-25 9.4	1.511	2.471	8.2	19.1	4 1	12 51.46	-43 35.5	1.988	2.834	12.9	19.4
4 11	12 40.97	-24 53.7	1.475	2.445	7.6	19.0	4 11	12 41.60	-42 31.1	1.951	2.830	11.8	19.3
4 21	12 30.91	-24 16.8	1.465	2.419	9.6	19.1	4 21	12 32.60	-40 54.6	1.937	2.825	11.6	19.3
5 1	12 22.60	-23 25.9	1.479	2.394	12.9	19.2	5 1	12 25.52	-38 53.7	1.947	2.819	12.4	19.3
5 11	12 16.99	-22 30.5	1.513	2.368	16.3	19.4	5 11	12 21.06	-36 39.5	1.981	2.814	13.9	19.4
374518	2005 YG ₂₆₈	4	3.0 173°72	5°4/27.2	17		332795	2009 WW ₄₁	4	3.0 209°68	0°9/ 1.9	17	
3 2	13 11.41	+10 17.6	2.351	3.217	10.1	21.6	3 2	13 11.31	- 5 16.1	2.241	3.092	11.1	21.8
3 12	13 5.92	+11 37.9	2.294	3.220	7.6	21.5	3 12	13 6.01	- 4 26.6	2.159	3.086	7.9	21.6
3 22	12 58.92	+12 55.3	2.264	3.222	5.8	21.4	3 22	12 59.07	- 3 27.5	2.102	3.079	4.4	21.3
4 1	12 51.06	+14 3.0	2.262	3.224	5.7	21.4	4 1	12 51.13	- 2 23.4	2.074	3.072	1.0	21.1
4 11	12 43.10	+14 55.2	2.289	3.226	7.5	21.5	4 11	12 42.98	- 1 20.1	2.075	3.064	3.7	21.3
4 21	12 35.81	+15 28.3	2.342	3.226	10.0	21.6	4 21	12 35.43	- 0 23.3	2.106	3.056	7.4	21.5
5 1	12 29.81	+15 41.1	2.419	3.227	12.4	21.8	5 1	12 29.18	+ 0 22.3	2.162	3.047	10.8	21.7
5 11	12 25.56	+15 34.3	2.515	3.226	14.5	22.0	5 11	12 24.76	+ 0 53.7	2.241	3.038	13.7	21.9
199862	2007 EY ₁₁₈	4	3.0 238°60	1°3/ 1.7	18		299266	2005 NS ₆₁	4	3.0 93°30	5°7/ 9.2	17	
3 2	13 11.51	- 3 48.0	2.029	2.887	11.8	21.0	3 2	13 12.13	-24 32.5	2.370	3.135	13.3	20.9
3 12	13 6.29	- 3 7.3	1.947	2.878	8.4	20.7	3 12	13 6.66	-24 58.3	2.289	3.141	10.9	20.8
3 22	12 59.28	- 2 17.8	1.891	2.870	4.6	20.5	3 22	12 59.46	-25 5.3	2.230	3.146	8.5	20.6
4 1	12 51.14	- 1 24.4	1.863	2.861	1.3	20.2	4 1	12 51.20	-24 52.8	2.197	3.152	6.4	20.5
4 11	12 42.75	- 0 33.0	1.863	2.851	4.1	20.4	4 11	12 42.71	-24 22.8	2.191	3.158	5.7	20.5
4 21	12 35.01	+ 0 10.8	1.891	2.842	8.1	20.6	4 21	12 34.85	-23 39.3	2.212	3.164	7.0	20.5
5 1	12 28.71	+ 0 42.5	1.945	2.832	11.7	20.8	5 1	12 28.38	-22 48.1	2.260	3.170	9.3	20.7
5 11	12 24.39	+ 0 59.3	2.020	2.822	14.8	21.0	5 11	12 23.82	-21 55.6	2.332	3.175	11.7	20.9
192798	1999 UV ₅₈	4	3.0 30°94	0°3/ 2.7	18		337451	2001 RS ₈₅	4	3.0 122°62	1°6/ 4.7	17	
3 2	13 7.58	- 9 4.1	1.572	2.435	14.3								

EPHEMERIDES

4 3.0

4 3.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
166711	2002 <i>TL</i> ₂₀₀		4 3.0 113°86	4.2/ 7.7	18		425343	2010 <i>BX</i> ₃		4 3.0 317°01	2.8/31.3	18	
3 2	13 10.66	-20 37.1	2.253	3.045	13.1	19.8	3 2	13 10.56	+ 0 2.0	1.847	2.717	12.2	20.0
3 12	13 5.58	-20 33.4	2.175	3.052	10.4	19.7	3 12	13 5.71	+ 0 52.6	1.777	2.714	8.6	19.8
3 22	12 58.83	-20 11.2	2.119	3.059	7.5	19.5	3 22	12 59.00	+ 1 49.1	1.732	2.711	4.9	19.6
4 1	12 51.09	-19 31.4	2.090	3.066	4.9	19.3	4 1	12 51.16	+ 2 45.2	1.714	2.708	2.8	19.4
4 11	12 43.18	-18 37.7	2.089	3.072	4.4	19.3	4 11	12 43.13	+ 3 34.2	1.724	2.705	5.4	19.6
4 21	12 35.95	-17 35.5	2.116	3.079	6.4	19.5	4 21	12 35.85	+ 4 10.6	1.760	2.702	9.2	19.8
5 1	12 30.10	-16 31.0	2.169	3.085	9.3	19.6	5 1	12 30.11	+ 4 30.7	1.820	2.699	12.8	20.0
5 11	12 26.13	-15 30.5	2.247	3.091	12.1	19.8	5 11	12 26.46	+ 4 32.9	1.901	2.697	15.8	20.2
436656	2011 <i>RR</i> ₁₄		4 3.0 213°01	1.2/ 1.6	17		495846	2002 <i>PW</i> ₁₃₈		4 3.0 194°91	4.2/ 7.1	16	
3 2	13 11.88	- 1 42.7	2.766	3.615	9.3	21.4	3 2	13 17.14	-19 31.6	2.340	3.124	12.9	22.8
3 12	13 6.14	- 1 24.3	2.682	3.609	6.6	21.2	3 12	13 10.31	-19 49.3	2.247	3.121	10.2	22.6
3 22	12 59.05	- 1 1.8	2.625	3.602	3.7	21.0	3 22	13 1.58	-19 50.6	2.179	3.117	7.4	22.4
4 1	12 51.13	- 0 38.1	2.598	3.595	1.2	20.8	4 1	12 51.61	-19 35.2	2.138	3.113	4.8	22.2
4 11	12 43.04	- 0 16.9	2.602	3.588	3.3	21.0	4 11	12 41.33	-19 5.4	2.126	3.108	4.5	22.2
4 21	12 35.45	- 0 1.1	2.635	3.580	6.3	21.2	4 21	12 31.64	-18 25.3	2.144	3.101	6.8	22.3
5 1	12 28.93	+ 0 6.7	2.695	3.572	9.2	21.3	5 1	12 23.41	-17 40.5	2.189	3.094	9.7	22.5
5 11	12 23.93	+ 0 4.8	2.778	3.564	11.6	21.5	5 11	12 17.21	-16 57.2	2.258	3.087	12.6	22.7
414412	2009 <i>BW</i> ₁₄₈		4 3.0 347°16	4.4/ 6.0	17		331533	2000 <i>SG</i> ₂₀₄		4 3.0 196°82	0.0/ 2.9	17	
3 2	13 14.61	-15 39.2	1.353	2.192	17.6	20.8	3 2	13 12.45	- 7 28.7	2.209	3.052	11.5	21.5
3 12	13 9.40	-16 3.9	1.279	2.189	13.7	20.5	3 12	13 6.85	- 7 0.1	2.128	3.050	8.4	21.2
3 22	13 1.40	-16 7.0	1.226	2.187	9.3	20.3	3 22	12 59.57	- 6 21.3	2.072	3.047	4.7	21.0
4 1	12 51.57	-15 48.8	1.197	2.185	5.2	20.0	4 1	12 51.26	- 5 35.7	2.045	3.043	0.8	20.7
4 11	12 41.29	-15 13.4	1.193	2.184	5.2	20.0	4 11	12 42.75	- 4 48.3	2.047	3.040	3.1	20.9
4 21	12 32.04	-14 28.0	1.213	2.183	9.3	20.2	4 21	12 34.86	- 4 4.1	2.078	3.035	7.0	21.1
5 1	12 25.04	-13 41.7	1.256	2.182	13.8	20.5	5 1	12 28.34	- 3 27.8	2.135	3.030	10.4	21.3
5 11	12 21.06	-13 2.7	1.319	2.182	17.8	20.7	5 11	12 23.70	- 3 2.8	2.215	3.025	13.4	21.5
247835	2003 <i>ST</i> ₂₅₅		4 3.0 231°54	0.2/ 2.9	16		356309	2010 <i>GD</i> ₁₅₈		4 3.0 48°96	3.9/31.4	18	
3 2	13 14.35	- 7 0.4	1.828	2.678	13.2	21.4	3 2	13 15.28	+ 1 13.2	1.290	2.171	15.6	20.7
3 12	13 8.59	- 6 30.3	1.742	2.667	9.6	21.2	3 12	13 9.67	+ 1 58.8	1.233	2.174	11.2	20.4
3 22	13 0.71	- 5 47.9	1.680	2.656	5.5	20.9	3 22	13 1.42	+ 2 50.0	1.198	2.178	6.5	20.2
4 1	12 51.44	- 4 57.3	1.646	2.645	0.9	20.5	4 1	12 51.58	+ 3 38.3	1.188	2.182	3.9	20.0
4 11	12 41.82	- 4 4.6	1.640	2.633	3.8	20.7	4 11	12 41.58	+ 4 15.1	1.204	2.186	7.1	20.2
4 21	12 32.92	- 3 16.2	1.662	2.620	8.3	21.0	4 21	12 32.78	+ 4 34.0	1.243	2.190	11.8	20.5
5 1	12 25.66	- 2 38.0	1.709	2.607	12.4	21.2	5 1	12 26.27	+ 4 31.9	1.305	2.194	16.1	20.8
5 11	12 20.70	- 2 14.0	1.777	2.593	15.9	21.4	5 11	12 22.66	+ 4 8.6	1.384	2.198	19.7	21.0
52466	1995 <i>OF</i> ₄		4 3.0 105°30	3.6/29.6	17		421427	2013 <i>YM</i>		4 3.0 150°06	6.0/27.2	17	
3 2	13 8.53	+ 3 18.0	2.267	3.136	10.2	19.5	3 2	13 10.53	+ 9 40.1	2.025	2.898	11.1	20.6
3 12	13 3.89	+ 4 31.2	2.208	3.144	7.3	19.3	3 12	13 5.50	+11 8.2	1.972	2.902	8.4	20.5
3 22	12 57.81	+ 5 46.6	2.177	3.151	4.5	19.2	3 22	12 58.80	+12 33.5	1.944	2.905	6.3	20.3
4 1	12 50.92	+ 6 58.1	2.174	3.159	3.7	19.1	4 1	12 51.12	+13 48.1	1.944	2.909	6.2	20.3
4 11	12 43.95	+ 7 59.5	2.199	3.166	5.7	19.3	4 11	12 43.35	+14 45.2	1.971	2.912	8.3	20.5
4 21	12 37.63	+ 8 46.2	2.252	3.173	8.6	19.5	4 21	12 36.34	+15 20.7	2.023	2.914	11.0	20.6
5 1	12 32.57	+ 9 15.7	2.330	3.180	11.4	19.7	5 1	12 30.78	+15 33.0	2.099	2.917	13.6	20.8
5 11	12 29.18	+ 9 27.3	2.428	3.187	13.8	19.8	5 11	12 27.15	+15 23.3	2.193	2.919	15.9	21.0
436686	2011 <i>SL</i> ₁₆₈		4 3.0 256°66	0.7/ 3.9	16		401066	2011 <i>UN</i> ₅₄		4 3.0 179°79	1.4/ 4.4	17	
3 2	13 9.07	-10 9.0	2.495	3.330	10.6	22.1	3 2	13 14.15	-12 22.9	1.884	2.716	13.7	22.2
3 12	13 4.36	- 9 37.0	2.399	3.315	7.8	21.9	3 12	13 8.32	-11 45.3	1.805	2.718	10.2	22.0
3 22	12 58.15	- 8 53.4	2.329	3.300	4.6	21.6	3 22	13 0.49	-10 50.9	1.751	2.719	6.2	21.8
4 1	12 51.00	- 8 1.1	2.287	3.284	1.3	21.4	4 1	12 51.42	- 9 43.1	1.724	2.720	2.1	21.5
4 11	12 43.61	- 7 4.5	2.274	3.268	2.7	21.4	4 11	12 42.15	- 8 28.4	1.725	2.719	3.3	21.6
4 21	12 36.68	- 6 8.4	2.291	3.252	6.2	21.6	4 21	12 33.67	- 7 14.2	1.755	2.718	7.5	21.8
5 1	12 30.88	- 5 18.0	2.335	3.236	9.4	21.8	5 1	12 26.84	- 6 7.7	1.811	2.716	11.4	22.1
5 11	12 26.70	- 4 37.1	2.402	3.219	12.3	22.0	5 11	12 22.24	- 5 14.4	1.890	2.714	14.8	22.3
11203	Danielbetten		4 3.0 268°43	2.8/31.8	18		175803	1999 <i>RB</i> ₁₅₅		4 3.0 244°68	4.9/ 8.4	18	
3 2	13 14.08	- 0 57.4	1.527	2.398	14.2	18.0	3 2	13 12.85	-22 51.0	2.663	3.429	11.9	20.0
3 12	13 8.73	- 0 10.9	1.447	2.384	10.2	17.7	3 12	13 7.14	-23 19.7	2.564	3.419	9.8	19.9
3 22	13 0.93	+ 0 44.4	1.390	2.370	5.8	17.4	3 22	12 59.77	-23 32.7	2.488	3.409	7.5	19.7
4 1	12 51.51	+ 1 41.7	1.359	2.355	2.8	17.2	4 1	12 51.31	-23 29.4	2.438	3.399	5.5	19.5
4 11	12 41.66	+ 2 32.6	1.356	2.340	6.0	17.4	4 11	12 42.52	-23 10.8	2.418	3.388	5.0	19.5
4 21	12 32.64	+ 3 10.1	1.377	2.325	10.7	17.6	4 21	12 34.19	-22 40.3	2.425	3.377	6.5	19.6
5 1	12 25.54	+ 3 28.9	1.422	2.310	15.1	17.8	5 1	12 27.04	-22 2.2	2.460	3.366	8.8	19.7
5 11	12 21.07	+ 3 27.1	1.486	2.294	18.9	18.0	5 11	12 21.63	-21 22.2	2.519	3.354	11.2	19.8
340778	2006 <i>SL</i> ₃₇₅		4 3.0 61°23	1.3/ 1.7	17		463100	2011 <i>UV</i> ₄₅		4 3.0 127°93	1.0/ 3.9	18	
3 2	13 10.10	- 3 6.0	2.163	3.022	11.1	20.7	3 2	13 15.87	-10 31.1	1.808	2.646	13.9	22.7
3 12	13 5.12	- 2 32.6	2.094	3.025	7.9	20.5	3 12	13 9.46	-10 2.8	1.745	2.662	10.2	22.5
3 22	12 58.56	- 1 52.4	2.050	3.029	4.3	20.3	3 22	13 1.06	- 9 20.0	1.707	2.678	6.0	22.3
4 1	12 51.07	- 1 9.9	2.035	3.033	1.3	20.0	4 1	12 51.51	- 8 26.6	1.695	2.692	1.7	22.0
4 11	12 43.46	- 0 30.2	2.048	3.036	3.9	20.2	4 11	12 41.90	- 7 28.7	1.712	2.706	3.4	22.2
4 21	12 36.52	+ 0 2.3	2.090	3.040	7.4	20.5	4 21	12 33.25	- 6 33.1	1.758	2.720	7.6	22.4
5 1	12 30.91	+ 0 23.9	2.156	3.044	10.7	20.7	5 1	12 26.37	- 5 45.7	1.829	2.732	11.5	22.7
5 11	12 27.11	+ 0 32.5	2.245	3.048	13.4	20.9	5 11	12 21.80	- 5 10.9	1.922	2.744	14.7	22.9
347126	2010 <i>JF</i> ₁₆₈		4 3.0 167°82	6.8/24.9	17		396216	2013 <i>YK</i> ₁₂₄		4 3.0 151°25	4.9/27.9	17	

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4 3.0

4 3.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
519990	2013 <i>TU</i> ₁₆₈		4 3.0 193°09	1.3°/ 1.7 18			141004	2001 <i>WR</i> ₃₁		4 3.0 103°37	1.8°/ 5.2 18		
3 2	13 12.81	- 3 1.2	2.269	3.121	10.9	21.9	3 2	13 8.73	-14 5.8	2.337	3.161	11.6	20.2
3 12	13 7.05	- 2 27.2	2.191	3.119	7.8	21.7	3 12	13 4.09	-13 32.9	2.262	3.168	8.7	20.0
3 22	12 59.66	- 1 46.6	2.139	3.117	4.3	21.5	3 22	12 57.99	-12 45.5	2.212	3.175	5.5	19.8
4 1	12 51.29	- 1 3.5	2.116	3.114	1.3	21.3	4 1	12 51.01	-11 46.5	2.189	3.182	2.4	19.6
4 11	12 42.74	- 0 22.8	2.123	3.110	3.8	21.5	4 11	12 43.94	-10 41.0	2.196	3.189	2.8	19.6
4 21	12 34.82	+ 0 10.9	2.158	3.106	7.4	21.7	4 21	12 37.48	- 9 34.3	2.231	3.196	6.0	19.8
5 1	12 28.23	+ 0 34.1	2.220	3.102	10.7	21.9	5 1	12 32.27	- 8 32.1	2.293	3.203	9.1	20.0
5 11	12 23.47	+ 0 44.4	2.304	3.097	13.4	22.0	5 11	12 28.75	- 7 39.2	2.379	3.210	11.9	20.2
500147	2012 <i>DU</i> ₃₄		4 3.0 306°53	2.4°/ 4.5 17			281970	2011 <i>GV</i> ₆₉		4 3.0 270°38	1.9°/ 1.2 17		
3 2	13 15.85	-10 25.9	1.493	2.342	15.8	21.0	3 2	13 12.89	- 1 9.3	2.101	2.960	11.4	21.2
3 12	13 10.25	-10 52.5	1.406	2.326	11.9	20.7	3 12	13 7.37	- 0 38.8	2.008	2.939	8.2	20.9
3 22	13 1.94	-11 5.5	1.340	2.310	7.4	20.4	3 22	12 59.99	- 0 2.2	1.941	2.919	4.6	20.7
4 1	12 51.73	-11 5.6	1.300	2.295	3.0	20.1	4 1	12 51.39	+ 0 35.9	1.901	2.898	1.9	20.4
4 11	12 40.92	-10 56.1	1.286	2.280	4.2	20.1	4 11	12 42.42	+ 1 10.3	1.891	2.876	4.5	20.6
4 21	12 30.86	-10 42.2	1.298	2.265	9.1	20.4	4 21	12 34.01	+ 1 36.2	1.909	2.854	8.3	20.8
5 1	12 22.84	-10 29.9	1.333	2.251	13.8	20.6	5 1	12 26.98	+ 1 49.9	1.952	2.832	11.9	20.9
5 11	12 17.67	-10 25.1	1.389	2.237	17.9	20.8	5 11	12 21.92	+ 1 49.1	2.016	2.810	15.1	21.1
350296	2012 <i>TA</i> ₃₁₁		4 3.0 133°70	3.0°/ 6.7 17			283580	2001 <i>XC</i> ₉₇		4 3.0 155°82	2.5°/ 6.6 18		
3 2	13 9.45	-17 58.5	2.457	3.260	11.8	20.7	3 2	13 9.98	-17 26.2	3.045	3.839	10.0	21.4
3 12	13 4.58	-17 38.1	2.378	3.267	9.1	20.6	3 12	13 4.72	-17 12.3	2.963	3.847	7.7	21.2
3 22	12 58.25	-17 1.6	2.323	3.273	6.2	20.4	3 22	12 58.25	-16 45.8	2.906	3.854	5.2	21.1
4 1	12 51.05	-16 10.9	2.295	3.279	3.6	20.2	4 1	12 51.07	-16 8.2	2.878	3.861	3.0	20.9
4 11	12 43.72	-15 10.2	2.296	3.285	3.3	20.2	4 11	12 43.79	-15 22.4	2.879	3.868	2.9	20.9
4 21	12 36.99	-14 4.4	2.326	3.291	5.8	20.4	4 21	12 36.99	-14 32.2	2.911	3.874	4.9	21.1
5 1	12 31.50	-12 59.5	2.383	3.296	8.7	20.6	5 1	12 31.20	-13 41.8	2.971	3.879	7.4	21.2
5 11	12 27.68	-12 0.5	2.464	3.302	11.4	20.8	5 11	12 26.82	-12 55.2	3.057	3.884	9.6	21.4
150872	2001 <i>ST</i> ₂₀₁		4 3.0 203°92	0.2°/ 3.4 18			381472	2008 <i>RQ</i> ₁₃₇		4 3.0 179°59	2.8°/ 5.8 17		
3 2	13 3.29	- 7 25.2	4.826	5.659	5.9	20.8	3 2	13 11.90	-15 14.0	2.031	2.852	13.3	21.4
3 12	12 59.61	- 7 8.0	4.740	5.657	4.2	20.7	3 12	13 6.65	-15 7.2	1.950	2.852	10.1	21.2
3 22	12 55.27	- 6 46.5	4.682	5.654	2.4	20.6	3 22	12 59.56	-14 44.1	1.893	2.852	6.7	21.0
4 1	12 50.53	- 6 22.0	4.654	5.652	0.5	20.4	4 1	12 51.31	-14 6.3	1.863	2.852	3.4	20.8
4 11	12 45.73	- 5 56.6	4.657	5.650	1.5	20.5	4 11	12 42.84	-13 18.2	1.860	2.852	3.5	20.8
4 21	12 41.17	- 5 32.1	4.690	5.647	3.4	20.6	4 21	12 35.06	-12 25.4	1.886	2.852	6.8	21.0
5 1	12 37.14	- 5 10.4	4.751	5.644	5.2	20.8	5 1	12 28.79	-11 34.1	1.938	2.852	10.3	21.2
5 11	12 33.90	- 4 53.1	4.838	5.642	6.7	20.9	5 11	12 24.55	-10 49.9	2.012	2.851	13.5	21.4
95216	2002 <i>CU</i> ₈		4 3.0 201°48	1.6°/ 4.5 18			309814	2009 <i>BE</i> ₉₈		4 3.0 356°50	4.9°/ 30.3 18		
3 2	13 14.71	-12 12.4	1.869	2.702	13.8	20.3	3 2	13 13.49	+ 3 10.1	1.343	2.226	15.0	20.8
3 12	13 8.81	-11 46.7	1.785	2.698	10.3	20.1	3 12	13 8.36	+ 4 11.9	1.283	2.225	10.8	20.6
3 22	13 0.83	-11 4.5	1.725	2.693	6.3	19.8	3 22	13 0.71	+ 5 17.6	1.247	2.224	6.6	20.3
4 1	12 51.51	-10 8.9	1.692	2.688	2.3	19.5	4 1	12 51.52	+ 6 17.9	1.235	2.224	5.0	20.2
4 11	12 41.91	- 9 5.5	1.688	2.682	3.4	19.6	4 11	12 42.12	+ 7 3.6	1.249	2.224	7.9	20.4
4 21	12 33.05	- 8 1.3	1.712	2.676	7.6	19.9	4 21	12 33.82	+ 7 28.1	1.286	2.224	12.3	20.6
5 1	12 25.86	- 7 3.2	1.762	2.668	11.6	20.1	5 1	12 27.67	+ 7 28.6	1.345	2.224	16.4	20.9
5 11	12 20.95	- 6 16.8	1.833	2.660	15.1	20.3	5 11	12 24.28	+ 7 5.4	1.422	2.225	19.8	21.1
467038	2016 <i>CA</i> ₂₁₄		4 3.0 6°91	2.1°/ 1.5 17			325190	2008 <i>FE</i> ₁₀₃		4 3.0 296°11	0.0°/ 3.0 17		
3 2	13 11.00	- 3 13.7	1.269	2.150	15.8	20.6	3 2	13 8.30	-11 13.6	1.656	2.508	14.3	20.5
3 12	13 6.66	- 2 31.6	1.208	2.150	11.3	20.4	3 12	13 4.35	- 9 47.2	1.577	2.503	10.4	20.2
3 22	12 59.78	- 1 38.0	1.169	2.151	6.2	20.1	3 22	12 58.37	- 7 59.4	1.521	2.497	5.9	20.0
4 1	12 51.33	- 0 40.3	1.155	2.152	2.1	19.8	4 1	12 51.12	- 5 57.0	1.492	2.491	1.1	19.6
4 11	12 42.67	+ 0 12.2	1.165	2.155	5.7	20.1	4 11	12 43.63	- 3 50.3	1.492	2.485	3.9	19.8
4 21	12 35.09	+ 0 51.6	1.199	2.158	10.8	20.3	4 21	12 36.92	- 1 50.5	1.519	2.480	8.7	20.1
5 1	12 29.68	+ 1 12.4	1.256	2.162	15.4	20.6	5 1	12 31.88	- 0 7.2	1.571	2.474	13.0	20.3
5 11	12 27.05	+ 1 12.3	1.330	2.166	19.2	20.9	5 11	12 29.08	+ 1 13.6	1.645	2.469	16.6	20.5
341670	2007 <i>VW</i> ₈₆		4 3.0 84°42	1.9°/ 5.0 17			348932	2006 <i>TD</i> ₆₁		4 3.0 144°16	1.0°/ 1.9 17		
3 2	13 12.38	-12 45.1	2.230	3.055	12.1	20.6	3 2	13 11.65	- 2 42.9	2.683	3.531	9.5	21.5
3 12	13 6.69	-12 39.5	2.167	3.074	9.0	20.4	3 12	13 5.96	- 2 21.7	2.613	3.539	6.8	21.3
3 22	12 59.41	-12 21.2	2.129	3.092	5.6	20.2	3 22	12 58.96	- 1 55.8	2.570	3.547	3.7	21.1
4 1	12 51.25	-11 52.3	2.118	3.111	2.5	20.1	4 1	12 51.20	- 1 28.2	2.556	3.554	1.1	21.0
4 11	12 43.03	-11 16.9	2.136	3.129	3.0	20.1	4 11	12 43.36	- 1 2.7	2.573	3.561	3.2	21.1
4 21	12 35.54	-10 39.4	2.183	3.147	6.2	20.4	4 21	12 36.08	- 0 42.5	2.619	3.567	6.2	21.3
5 1	12 29.46	-10 4.8	2.256	3.165	9.3	20.6	5 1	12 29.94	- 0 30.2	2.692	3.574	9.0	21.5
5 11	12 25.23	- 9 37.0	2.353	3.182	12.1	20.8	5 11	12 25.34	- 0 27.5	2.789	3.580	11.4	21.7
8461	Sammiepfung		4 3.0 85°74	0.1°/ 3.1 18			332722	2009 <i>ST</i> ₂₃₃		4 3.0 166°43	1.8°/ 1.3 16		
3 2	13 14.51	- 7 12.2	1.788	2.639	13.5	18.8	3 2	13 15.22	- 0 37.4	2.280	3.133	10.9	21.1
3 12	13 8.46	- 6 52.9	1.732	2.657	9.7	18.6	3 12	13 8.73	- 0 12.7	2.209	3.138	7.7	20.9
3 22	13 0.49	- 6 22.6	1.699	2.675	5.5	18.4	3 22	13 0.60	+ 0 16.2	2.165	3.142	4.3	20.6
4 1	12 51.43	- 5 45.5	1.694	2.692	1.0	18.1	4 1	12 51.51	+ 0 45.2	2.150	3.146	1.8	20.5
4 11	12 42.35	- 5 7.1	1.717	2.710	3.5	18.4	4 11	12 42.30	+ 1 9.9	2.165	3.149	4.1	20.6
4 21	12 34.22	- 4 32.9	1.767	2.727	7.7	18.7	4 21	12 33.78	+ 1 26.6	2.208	3.151	7.5	20.9
5 1	12 27.84	- 4 7.6	1.843	2.745	11.5	18.9	5 1	12 26.67	+ 1 32.6	2.278	3.153	10.7	21.1
5 11	12 23.69	- 3 54.3	1.940	2.761	14.6	19.2	5 11	12 21.43	+ 1 26.6	2.371	3.155	13.4	21.2
303245	2004 <i>QB</i> ₉		4 3.0 204°32	1.4°/ 1.9 17			502288	2015 <i>BD</i> ₁₄₁		4 3.1 163°96	2.1°/ 1.1 17		</

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
63462	2001 <i>OE</i> ₉		4 3.1 127°80	3°5/ 7.5 18			177675	2005 <i>ED</i> ₉₈		4 3.1 39°68	3°5/ 6.0 18		
3 2	13 10.93	-19 58.9	2.620	3.406	11.6	19.7	3 2	13 11.70	-16 19.4	1.402	2.240	17.1	20.0
3 12	13 5.58	-19 50.6	2.543	3.419	9.1	19.5	3 12	13 7.12	-16 3.7	1.335	2.246	13.2	19.8
3 22	12 58.80	-19 26.4	2.491	3.431	6.5	19.4	3 22	13 0.07	-15 23.7	1.289	2.251	8.7	19.5
4 1	12 51.20	-18 47.6	2.466	3.443	4.1	19.2	4 1	12 51.49	-14 22.1	1.266	2.257	4.5	19.3
4 11	12 43.50	-17 57.5	2.471	3.455	3.7	19.2	4 11	12 42.68	-13 5.9	1.269	2.263	4.4	19.3
4 21	12 36.40	-17 0.6	2.504	3.466	5.7	19.3	4 21	12 34.91	-11 44.9	1.298	2.269	8.6	19.5
5 1	12 30.51	-16 2.3	2.565	3.477	8.2	19.5	5 1	12 29.23	-10 29.0	1.350	2.276	13.0	19.8
5 11	12 26.26	-15 7.5	2.651	3.487	10.7	19.7	5 11	12 26.27	-9 26.4	1.423	2.282	16.9	20.1
135241	2001 <i>SS</i> ₁₆		4 3.1 135°63	0°0/ 2.9 18			454097	2013 <i>BX</i> ₆₁		4 3.1 48°62	2°3/ 1.4 18		
3 2	13 12.42	-6 28.4	2.474	3.315	10.5	20.0	3 2	13 13.55	-3 13.3	1.218	2.098	16.4	21.1
3 12	13 6.64	-6 16.4	2.402	3.322	7.6	19.9	3 12	13 8.53	-2 23.7	1.164	2.105	11.7	20.9
3 22	12 59.40	-5 56.7	2.356	3.330	4.3	19.7	3 22	13 0.86	-1 22.4	1.132	2.113	6.5	20.6
4 1	12 51.31	-5 32.3	2.339	3.337	0.7	19.4	4 1	12 51.62	-0 17.7	1.124	2.122	2.3	20.3
4 11	12 43.10	-5 6.7	2.352	3.344	2.8	19.6	4 11	12 42.26	+ 0 40.5	1.142	2.131	6.0	20.6
4 21	12 35.52	-4 43.7	2.394	3.351	6.2	19.8	4 21	12 34.14	+ 1 23.9	1.183	2.140	11.1	20.9
5 1	12 29.17	-4 26.5	2.463	3.358	9.2	20.0	5 1	12 28.34	+ 1 47.2	1.246	2.149	15.7	21.2
5 11	12 24.51	-4 17.7	2.556	3.364	11.9	20.2	5 11	12 25.44	+ 1 48.5	1.327	2.158	19.5	21.5
293613	2007 <i>LQ</i> ₈		4 3.1 179°11	3°3/30.6 17			512401	2016 <i>PA</i> ₅₃		4 3.1 227°35	5°5/26.2 17		
3 2	13 10.73	+ 1 31.6	2.001	2.869	11.4	20.9	3 2	13 9.76	+13 27.6	2.779	3.640	8.8	21.8
3 12	13 5.72	+ 2 35.1	1.934	2.870	8.1	20.7	3 12	13 4.71	+14 35.3	2.711	3.630	6.9	21.7
3 22	12 58.99	+ 3 43.0	1.893	2.870	4.8	20.5	3 22	12 58.33	+15 38.8	2.671	3.620	5.6	21.6
4 1	12 51.25	+ 4 48.8	1.880	2.870	3.3	20.4	4 1	12 51.17	+16 32.4	2.659	3.609	5.7	21.6
4 11	12 43.37	+ 5 45.7	1.896	2.870	5.7	20.5	4 11	12 43.87	+17 11.6	2.675	3.598	7.2	21.6
4 21	12 36.20	+ 6 28.7	1.938	2.870	9.1	20.7	4 21	12 37.07	+17 33.6	2.718	3.586	9.3	21.8
5 1	12 30.47	+ 6 54.2	2.005	2.870	12.4	20.9	5 1	12 31.33	+17 37.2	2.784	3.574	11.4	21.9
5 11	12 26.69	+ 7 1.2	2.092	2.869	15.1	21.1	5 11	12 27.07	+17 23.2	2.870	3.562	13.2	22.0
352611	2008 <i>EE</i> ₁₀₁		4 3.1 148°60	1°1/ 4.3 18			506640	2006 <i>RW</i> ₄₂		4 3.1 187°58	0°4/ 2.5 17		
3 2	13 13.19	-9 58.3	2.781	3.605	10.0	21.3	3 2	13 8.37	-7 1.0	2.493	3.339	10.3	22.2
3 12	13 7.10	-10 3.0	2.703	3.612	7.4	21.1	3 12	13 3.80	-6 8.9	2.414	3.339	7.4	22.0
3 22	12 59.64	-9 59.3	2.651	3.618	4.4	20.9	3 22	12 57.86	-5 7.0	2.362	3.338	4.1	21.8
4 1	12 51.36	-9 48.6	2.628	3.624	1.6	20.7	4 1	12 51.09	-3 59.7	2.339	3.338	0.7	21.5
4 11	12 42.96	-9 33.7	2.636	3.629	2.5	20.8	4 11	12 44.20	-2 52.1	2.345	3.336	3.0	21.7
4 21	12 35.09	-9 17.7	2.674	3.635	5.4	21.0	4 21	12 37.84	-1 49.4	2.381	3.335	6.4	21.9
5 1	12 28.35	-9 3.6	2.740	3.640	8.2	21.2	5 1	12 32.61	-0 56.2	2.443	3.334	9.5	22.1
5 11	12 23.16	-8 54.3	2.830	3.644	10.7	21.3	5 11	12 28.95	-0 15.7	2.529	3.332	12.1	22.3
170150	2003 <i>BW</i> ₈₈		4 3.1 185°90	3°2/ 6.8 18			403842	2011 <i>UX</i> ₂₆₉		4 3.1 86°98	3°5/31.5 18		
3 2	13 10.69	-17 53.9	2.557	3.356	11.5	20.5	3 2	13 16.35	+ 1 24.4	1.445	2.318	14.7	21.0
3 12	13 5.51	-17 51.1	2.470	3.356	9.0	20.3	3 12	13 10.19	+ 2 4.5	1.391	2.328	10.5	20.8
3 22	12 58.83	-17 33.5	2.408	3.355	6.2	20.1	3 22	13 1.66	+ 2 48.8	1.360	2.339	6.1	20.6
4 1	12 51.23	-17 2.3	2.372	3.354	3.8	20.0	4 1	12 51.75	+ 3 30.0	1.356	2.349	3.6	20.5
4 11	12 43.45	-16 20.5	2.366	3.353	3.5	19.9	4 11	12 41.79	+ 4 0.6	1.378	2.359	6.5	20.7
4 21	12 36.19	-15 32.3	2.389	3.352	5.8	20.1	4 21	12 32.98	+ 4 15.6	1.425	2.369	10.8	20.9
5 1	12 30.13	-14 42.8	2.439	3.351	8.6	20.3	5 1	12 26.30	+ 4 12.2	1.495	2.379	14.7	21.2
5 11	12 25.74	-13 56.9	2.513	3.349	11.2	20.4	5 11	12 22.28	+ 3 50.3	1.584	2.389	18.1	21.4
374102	2004 <i>RT</i> ₂₈₉		4 3.1 173°91	6°3/28.1 17			103383	2000 <i>AF</i> ₁₂₁		4 3.1 114°16	3°4/ 5.9 18		
3 2	13 15.27	+12 14.2	2.016	2.880	11.6	20.3	3 2	13 15.36	-16 11.0	1.457	2.288	17.0	19.4
3 12	13 8.93	+13 3.7	1.958	2.881	8.9	20.2	3 12	13 9.63	-15 53.5	1.393	2.300	13.0	19.2
3 22	13 0.77	+13 47.2	1.925	2.882	6.7	20.0	3 22	13 1.43	-15 12.5	1.350	2.311	8.5	19.0
4 1	12 51.56	+14 18.1	1.920	2.883	6.5	20.0	4 1	12 51.73	-14 10.8	1.331	2.322	4.3	18.7
4 11	12 42.27	+14 31.2	1.942	2.884	8.3	20.1	4 11	12 41.87	-12 55.6	1.340	2.333	4.3	18.8
4 21	12 33.82	+14 24.0	1.990	2.884	11.0	20.3	4 21	12 33.14	-11 36.3	1.374	2.343	8.5	19.0
5 1	12 26.97	+13 56.3	2.061	2.884	13.7	20.5	5 1	12 26.55	-10 22.3	1.433	2.353	12.9	19.3
5 11	12 22.23	+13 10.1	2.152	2.884	16.1	20.6	5 11	12 22.72	-9 21.6	1.513	2.362	16.6	19.6
425727	2011 <i>BL</i> ₇₆		4 3.1 292°19	6°9/ 8.6 17			422774	2001 <i>UB</i> ₁₉₃		4 3.1 191°42	5°8/27.5 17		
3 2	13 14.36	-23 24.1	1.808	2.594	16.0	21.1	3 2	13 14.90	+12 26.6	2.400	3.258	10.2	22.1
3 12	13 8.97	-24 8.3	1.716	2.582	13.3	20.9	3 12	13 8.49	+13 27.8	2.337	3.256	7.8	22.0
3 22	13 1.16	-24 31.0	1.644	2.570	10.3	20.7	3 22	13 0.49	+14 24.2	2.301	3.254	6.1	21.8
4 1	12 51.69	-24 29.6	1.596	2.558	7.7	20.5	4 1	12 51.56	+15 9.6	2.293	3.251	6.0	21.8
4 11	12 41.66	-24 5.1	1.575	2.546	7.0	20.4	4 11	12 42.51	+15 39.0	2.314	3.247	7.7	21.9
4 21	12 32.28	-23 21.9	1.579	2.535	8.9	20.5	4 21	12 34.14	+15 49.6	2.362	3.242	10.0	22.1
5 1	12 24.69	-22 27.7	1.607	2.523	12.0	20.7	5 1	12 27.13	+15 40.8	2.433	3.236	12.4	22.2
5 11	12 19.64	-21 31.1	1.658	2.512	15.2	20.8	5 11	12 21.94	+15 13.7	2.525	3.230	14.5	22.4
31015	Boccardi		4 3.1 61°94	2°8/31.8 18			456275	2006 <i>RV</i> ₇₉		4 3.1 316°33	1°4/ 1.9 17		
3 2	13 12.28	-2 51.6	1.287	2.166	15.8	19.1	3 2	13 9.99	-5 11.5	1.338	2.214	15.5	21.1
3 12	13 7.50	-1 38.7	1.232	2.173	11.2	18.8	3 12	13 6.10	-4 23.9	1.258	2.197	11.2	20.8
3 22	13 0.23	-0 13.9	1.200	2.181	6.2	18.6	3 22	12 59.65	-3 20.7	1.200	2.181	6.2	20.5
4 1	12 51.50	+ 1 13.2	1.193	2.189	2.8	18.4	4 1	12 51.46	-2 8.6	1.167	2.165	1.5	20.1
4 11	12 42.65	+ 2 31.7	1.212	2.197	6.4	18.6	4 11	12 42.80	-0 57.2	1.159	2.150	5.4	20.3
4 21	12 34.96	+ 3 32.6	1.255	2.206	11.2	18.9	4 21	12 34.98	+ 0 3.9	1.176	2.136	10.7	20.6
5 1	12 29.44	+ 4 10.3	1.320	2.214	15.6	19.2	5 1	12 29.19	+ 0 47.0	1.214	2.122	15.6	20.8
5 11	12 26.67	+ 4 23.2	1.403	2.223	19.2	19.4	5 11	12 26.17	+ 1 7.7	1.270	2.109	19.8	21.0
370803	2004 <i>TR</i> ₁₇₃		4 3.1 106°33	2°7/ 5.7 15			192993	2000 <i>DF</i> ₉₀					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
522895	2016 <i>PV</i> ₁₀₃		4 3.1 223°86	0.4/ 2.6	17		166514	2002 <i>QZ</i> ₅₆		4 3.1 228°07	1.3/ 1.7	17	
3 2	13 10.07	- 5 44.0	2.371	3.220	10.6	22.0	3 2	13 11.04	- 3 14.4	2.162	3.019	11.2	20.9
3 12	13 5.11	- 5 15.1	2.292	3.217	7.6	21.8	3 12	13 5.93	- 2 37.5	2.085	3.015	8.0	20.7
3 22	12 58.64	- 4 38.0	2.237	3.214	4.2	21.6	3 22	12 59.16	- 1 53.2	2.032	3.011	4.4	20.4
4 1	12 51.25	- 3 56.2	2.212	3.210	0.7	21.3	4 1	12 51.37	- 1 6.0	2.008	3.006	1.4	20.2
4 11	12 43.70	- 3 14.2	2.215	3.207	3.1	21.5	4 11	12 43.40	- 0 21.2	2.013	3.001	3.9	20.4
4 21	12 36.70	- 2 36.6	2.248	3.203	6.6	21.7	4 21	12 36.04	+ 0 16.2	2.046	2.996	7.6	20.6
5 1	12 30.92	- 2 7.2	2.306	3.199	9.8	21.9	5 1	12 30.03	+ 0 42.4	2.105	2.991	11.0	20.8
5 11	12 26.82	- 1 48.8	2.387	3.195	12.6	22.1	5 11	12 25.86	+ 0 54.9	2.185	2.986	13.8	21.0
522799	2016 <i>NN</i> ₇₉		4 3.1 241°96	3°6/ 7.7	17		212284	2005 <i>LX</i> ₂₂		4 3.1 284°15	0°1/ 2.9	17	
3 2	13 9.13	-20 33.6	2.722	3.507	11.2	22.0	3 2	13 9.73	- 7 3.0	2.200	3.049	11.3	21.0
3 12	13 4.41	-20 20.7	2.622	3.495	9.0	21.8	3 12	13 4.98	- 6 33.5	2.120	3.045	8.2	20.8
3 22	12 58.26	-19 51.7	2.545	3.483	6.5	21.6	3 22	12 58.63	- 5 54.0	2.064	3.040	4.6	20.6
4 1	12 51.19	-19 7.3	2.496	3.471	4.2	21.5	4 1	12 51.28	- 5 8.3	2.036	3.035	0.8	20.3
4 11	12 43.90	-18 10.7	2.475	3.459	3.7	21.4	4 11	12 43.74	- 4 21.2	2.038	3.031	3.1	20.5
4 21	12 37.06	-17 6.0	2.484	3.446	5.7	21.5	4 21	12 36.79	- 3 37.8	2.067	3.026	6.9	20.7
5 1	12 31.31	-15 58.9	2.520	3.433	8.3	21.7	5 1	12 31.13	- 3 2.6	2.122	3.021	10.3	20.9
5 11	12 27.12	-14 54.7	2.581	3.420	10.9	21.8	5 11	12 27.27	- 2 38.9	2.200	3.017	13.2	21.1
435371	2007 <i>VX</i> ₃₁₆		4 3.1 145°85	4°5/28.9	17		89742	2002 <i>AW</i> ₁₆		4 3.1 353°60	7°9/25.1	18	
3 2	13 10.71	+ 7 43.4	2.323	3.190	10.1	21.1	3 2	13 7.51	+14 1.1	1.783	2.663	12.0	18.5
3 12	13 5.51	+ 8 35.2	2.262	3.192	7.4	20.9	3 12	13 3.65	+15 35.8	1.731	2.658	9.5	18.3
3 22	12 58.82	+ 9 25.3	2.226	3.194	5.1	20.8	3 22	12 57.95	+17 3.7	1.704	2.655	8.0	18.2
4 1	12 51.28	+10 8.3	2.220	3.196	4.6	20.8	4 1	12 51.16	+18 15.6	1.702	2.651	8.4	18.3
4 11	12 43.65	+10 39.2	2.241	3.197	6.4	20.9	4 11	12 44.24	+19 3.9	1.726	2.649	10.5	18.4
4 21	12 36.66	+10 54.7	2.289	3.199	9.1	21.0	4 21	12 38.10	+19 25.1	1.772	2.647	13.1	18.5
5 1	12 30.95	+10 53.5	2.362	3.200	11.7	21.2	5 1	12 33.52	+19 18.4	1.839	2.646	15.7	18.7
5 11	12 26.95	+10 35.8	2.455	3.202	13.9	21.4	5 11	12 30.99	+18 46.4	1.923	2.646	18.0	18.9
467389	2004 <i>XX</i> ₇₄		4 3.1 190°43	5°2/27.9	17		1497	Tampere		4 3.1 230°19	0°5/ 3.6	18 R	
3 2	13 13.36	+10 51.4	2.462	3.322	9.9	21.6	3 2	13 10.71	- 8 57.8	2.233	3.074	11.5	16.4
3 12	13 7.36	+11 48.6	2.398	3.321	7.5	21.4	3 12	13 5.69	- 8 31.5	2.149	3.068	8.4	16.2
3 22	12 59.85	+12 42.2	2.361	3.319	5.6	21.3	3 22	12 59.03	- 7 54.0	2.090	3.063	4.9	15.9
4 1	12 51.47	+13 26.5	2.352	3.317	5.4	21.3	4 1	12 51.36	- 7 8.5	2.059	3.057	1.1	15.7
4 11	12 42.97	+13 56.7	2.373	3.313	7.1	21.4	4 11	12 43.47	- 6 19.6	2.058	3.052	2.9	15.8
4 21	12 35.11	+14 9.7	2.420	3.310	9.5	21.5	4 21	12 36.17	- 5 32.5	2.084	3.045	6.7	16.0
5 1	12 28.53	+14 4.8	2.492	3.305	11.9	21.7	5 1	12 30.17	- 4 52.1	2.137	3.039	10.1	16.2
5 11	12 23.68	+13 42.5	2.584	3.301	14.0	21.9	5 11	12 25.98	- 4 22.2	2.213	3.033	13.1	16.4
115585	2003 <i>UT</i> ₉₅		4 3.1 196°80	1°0/ 2.1	17		415781	2000 <i>WY</i> ₁₀		4 3.1 98°26	5°2/28.9	17	
3 2	13 13.94	- 5 19.0	2.075	2.924	11.9	20.9	3 2	13 11.83	+ 7 2.8	1.890	2.763	11.8	20.5
3 12	13 8.07	- 4 31.5	1.995	2.921	8.6	20.7	3 12	13 6.56	+ 8 9.8	1.835	2.769	8.6	20.3
3 22	13 0.38	- 3 33.9	1.940	2.917	4.7	20.5	3 22	12 59.51	+ 9 15.8	1.805	2.775	5.9	20.2
4 1	12 51.57	- 2 30.9	1.914	2.913	1.1	20.2	4 1	12 51.43	+10 13.3	1.803	2.781	5.3	20.1
4 11	12 42.55	- 1 28.8	1.918	2.907	3.9	20.4	4 11	12 43.27	+10 55.8	1.828	2.786	7.5	20.3
4 21	12 34.20	- 0 33.6	1.950	2.901	7.8	20.6	4 21	12 35.94	+11 19.2	1.879	2.792	10.5	20.5
5 1	12 27.32	+ 0 9.7	2.008	2.894	11.4	20.8	5 1	12 30.18	+11 21.8	1.953	2.798	13.5	20.7
5 11	12 22.45	+ 0 38.1	2.089	2.886	14.5	21.0	5 11	12 26.47	+11 4.4	2.046	2.803	16.0	20.9
243209	2007 <i>UK</i> ₃₁		4 3.1 164°99	3°6/29.8	18		78942	2003 <i>SA</i> ₁₇₁		4 3.1 164°42	1°9/ 1.1	18	
3 2	13 9.94	+ 3 58.3	2.263	3.131	10.3	20.6	3 2	13 14.02	- 2 30.5	2.041	2.896	11.8	21.0
3 12	13 5.01	+ 5 0.1	2.199	3.133	7.4	20.4	3 12	13 8.06	- 1 34.4	1.973	2.903	8.4	20.8
3 22	12 58.57	+ 6 3.7	2.161	3.135	4.7	20.3	3 22	13 0.33	- 0 30.8	1.931	2.908	4.6	20.5
4 1	12 51.25	+ 7 3.2	2.151	3.136	3.7	20.2	4 1	12 51.58	+ 0 34.6	1.917	2.913	1.9	20.4
4 11	12 43.82	+ 7 52.8	2.170	3.137	5.8	20.3	4 11	12 42.70	+ 1 35.4	1.933	2.917	4.6	20.6
4 21	12 37.03	+ 8 28.4	2.217	3.139	8.7	20.5	4 21	12 34.59	+ 2 25.8	1.977	2.921	8.3	20.8
5 1	12 31.51	+ 8 47.3	2.288	3.140	11.5	20.7	5 1	12 27.99	+ 3 1.8	2.047	2.923	11.7	21.0
5 11	12 27.72	+ 8 49.2	2.380	3.140	14.0	20.9	5 11	12 23.39	+ 3 21.3	2.139	2.925	14.6	21.2
91111	1998 <i>HU</i> ₄₇		4 3.1 70°49	4°7/30.2	18		213095	1999 <i>VV</i> ₄₃		4 3.1 266°72	1°7/ 1.2	18	
3 2	13 14.55	+ 6 3.2	1.766	2.637	12.6	17.9	3 2	13 12.26	- 0 20.9	2.686	3.538	9.4	20.0
3 12	13 8.61	+ 6 43.8	1.708	2.642	9.1	17.7	3 12	13 6.64	+ 0 1.7	2.586	3.514	6.8	19.8
3 22	13 0.69	+ 7 23.5	1.675	2.648	5.9	17.5	3 22	12 59.53	+ 0 28.1	2.514	3.490	3.8	19.6
4 1	12 51.62	+ 7 55.7	1.669	2.653	4.7	17.4	4 1	12 51.45	+ 0 55.0	2.470	3.466	1.7	19.4
4 11	12 42.47	+ 8 14.5	1.691	2.659	7.0	17.6	4 11	12 43.09	+ 1 18.6	2.457	3.441	3.8	19.5
4 21	12 34.25	+ 8 16.3	1.738	2.664	10.4	17.8	4 21	12 35.14	+ 1 35.4	2.474	3.416	6.9	19.6
5 1	12 27.77	+ 8 0.0	1.809	2.670	13.7	18.0	5 1	12 28.25	+ 1 42.8	2.517	3.390	9.9	19.8
5 11	12 23.55	+ 7 26.2	1.899	2.676	16.5	18.2	5 11	12 22.92	+ 1 39.1	2.583	3.364	12.5	19.9
469160	2015 <i>HM</i> ₅₉		4 3.1 5°14	4°0/ 7.2	17		245218	2004 <i>XN</i> ₂₀		4 3.1 179°94	0°7/ 2.4	18	
3 2	13 9.27	-18 43.3	1.948	2.760	14.1	20.5	3 2	13 15.03	- 6 4.7	2.064	2.910	12.1	21.4
3 12	13 4.90	-18 40.8	1.868	2.760	11.1	20.3	3 12	13 8.83	- 5 19.3	1.988	2.912	8.7	21.2
3 22	12 58.67	-18 18.7	1.811	2.761	7.8	20.0	3 22	13 0.80	- 4 23.3	1.937	2.913	4.8	21.0
4 1	12 51.29	-17 38.3	1.780	2.762	4.8	19.9	4 1	12 51.67	- 3 21.5	1.915	2.914	0.9	20.7
4 11	12 43.67	-16 43.8	1.775	2.763	4.3	19.8	4 11	12 42.36	- 2 20.0	1.923	2.913	3.7	20.9
4 21	12 36.76	-15 41.1	1.797	2.765	7.0	20.0	4 21	12 33.78	- 1 24.9	1.960	2.912	7.7	21.1
5 1	12 31.36	-14 37.4	1.845	2.767	10.3	20.2	5 1	12 26.71	- 0 41.0	2.023	2.910	11.3	21.3
5 11	12 28.02	-13 39.6	1.916	2.769	13.5	20.4	5 11	12 21.69	- 0 11.6	2.108	2.907	14.3	21.5
434099	2002 <i>GK</i> ₈₉		4 3.1 65°04	2°8/ 5.9	17		42975	1999 <i>TW</i> ₁₉₆		4 3.1 172°29	1°7/ 4.8	18	
3 2	1												

EPHEMERIDES

4 3.1

4 3.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
231556	2008 <i>TT</i> ₄		4 3.1 89°66	0°2/ 3.3 17			388777	2007 <i>YW</i> ₅₈		4 3.1 76°36	6°6/10.4 18		
3 2	13 10.25	- 8 50.2	1.919	2.768	12.7	20.7	3 2	13 14.53	-27 13.1	2.316	3.062	14.1	20.8
3 12	13 5.51	- 8 9.4	1.846	2.770	9.3	20.5	3 12	13 8.48	-27 51.1	2.246	3.080	11.8	20.6
3 22	12 58.98	- 7 15.3	1.797	2.772	5.3	20.2	3 22	13 0.63	-28 8.4	2.199	3.099	9.4	20.5
4 1	12 51.36	- 6 12.4	1.776	2.774	1.0	19.9	4 1	12 51.68	-28 3.9	2.176	3.117	7.4	20.4
4 11	12 43.57	- 5 7.0	1.782	2.776	3.3	20.1	4 11	12 42.56	-27 39.1	2.180	3.136	6.6	20.4
4 21	12 36.52	- 4 5.8	1.817	2.778	7.5	20.4	4 21	12 34.19	-26 58.3	2.211	3.154	7.6	20.5
5 1	12 30.96	- 3 14.6	1.877	2.780	11.2	20.6	5 1	12 27.33	-26 7.5	2.269	3.172	9.5	20.6
5 11	12 27.41	- 2 37.3	1.958	2.782	14.4	20.8	5 11	12 22.51	-25 13.6	2.350	3.190	11.7	20.8
42926	1999 <i>TJ</i> ₇		4 3.1 269°80	0°3/ 3.4 18			385869	2006 <i>RJ</i> ₆₄		4 3.1 121°30	2°2/ 5.8 17		
3 2	13 12.61	- 9 3.3	1.659	2.511	14.3	19.9	3 2	13 11.74	-14 46.2	2.741	3.549	10.6	21.5
3 12	13 7.68	- 8 26.6	1.567	2.493	10.5	19.6	3 12	13 6.10	-14 40.6	2.669	3.564	8.0	21.4
3 22	13 0.45	- 7 33.3	1.499	2.474	6.1	19.3	3 22	12 59.13	-14 23.1	2.623	3.580	5.2	21.2
4 1	12 51.65	- 6 27.7	1.457	2.455	1.2	18.9	4 1	12 51.41	-13 55.3	2.605	3.594	2.7	21.0
4 11	12 42.38	- 5 16.8	1.442	2.436	3.9	19.1	4 11	12 43.60	-13 20.4	2.617	3.608	2.8	21.1
4 21	12 33.79	- 4 8.7	1.454	2.416	8.8	19.3	4 21	12 36.37	-12 42.2	2.659	3.622	5.3	21.3
5 1	12 26.93	- 3 11.1	1.490	2.397	13.4	19.5	5 1	12 30.28	-12 4.9	2.729	3.636	8.0	21.4
5 11	12 22.52	- 2 29.8	1.547	2.377	17.3	19.7	5 11	12 25.74	-11 32.2	2.823	3.649	10.4	21.6
92349	2000 <i>HG</i> ₄		4 3.1 284°37	1°1/ 3.9 17			85033	3073 <i>P-L</i>		4 3.1 280°92	3°0/ 6.2 17		
3 2	13 11.99	-10 58.7	1.406	2.262	16.1	20.3	3 2	13 9.71	-17 26.9	1.760	2.583	14.9	19.2
3 12	13 7.57	-10 22.9	1.319	2.245	12.0	20.0	3 12	13 5.51	-16 46.6	1.665	2.567	11.6	19.0
3 22	13 0.53	- 9 26.0	1.254	2.228	7.2	19.7	3 22	12 59.19	-15 42.1	1.592	2.551	7.7	18.7
4 1	12 51.68	- 8 11.8	1.213	2.211	2.0	19.3	4 1	12 51.46	-14 15.9	1.545	2.535	3.9	18.4
4 11	12 42.29	- 6 48.6	1.198	2.194	4.2	19.4	4 11	12 43.34	-12 34.4	1.525	2.519	3.8	18.4
4 21	12 33.69	- 5 26.5	1.209	2.176	9.6	19.6	4 21	12 35.90	-10 46.9	1.533	2.503	7.7	18.6
5 1	12 27.11	- 4 15.5	1.243	2.159	14.7	19.9	5 1	12 30.09	- 9 3.4	1.567	2.487	12.0	18.8
5 11	12 23.34	- 3 23.0	1.296	2.142	19.0	20.1	5 11	12 26.58	- 7 32.7	1.622	2.471	15.7	19.0
240003	2001 <i>SU</i> ₃₁₃		4 3.1 153°67	3°9/29.1 17			33741	1999 <i>NB</i> ₅₀		4 3.1 332°71	9°7/10.8 18		
3 2	13 9.55	+ 5 54.9	2.479	3.346	9.6	20.7	3 2	13 8.77	-27 33.0	1.423	2.213	19.4	17.7
3 12	13 4.62	+ 7 0.2	2.419	3.351	6.9	20.6	3 12	13 5.54	-28 23.7	1.333	2.194	16.7	17.4
3 22	12 58.32	+ 8 5.6	2.385	3.355	4.6	20.4	3 22	12 59.55	-28 44.5	1.260	2.176	13.6	17.2
4 1	12 51.24	+ 9 5.5	2.380	3.359	4.1	20.4	4 1	12 51.56	-28 30.9	1.207	2.159	10.9	17.0
4 11	12 44.08	+ 9 54.6	2.404	3.363	5.9	20.5	4 11	12 42.87	-27 42.8	1.177	2.143	9.7	16.8
4 21	12 37.51	+10 29.3	2.456	3.366	8.5	20.7	4 21	12 34.94	-26 26.0	1.170	2.128	11.1	16.9
5 1	12 32.11	+10 47.5	2.532	3.370	11.0	20.8	5 1	12 29.14	-24 51.1	1.184	2.114	14.1	17.0
5 11	12 28.29	+10 49.1	2.629	3.373	13.2	21.0	5 11	12 26.37	-23 11.5	1.218	2.101	17.6	17.2
427888	2005 <i>SU</i> ₂₈₉		4 3.1 134°78	1°2/ 4.1 17			34835	2001 <i>SZ</i> ₂₄₉		4 3.1 292°85	0°7/ 1.8 18		
3 2	13 16.79	- 9 35.9	2.168	2.998	12.2	21.9	3 2	13 3.18	- 3 9.9	4.345	5.194	6.2	19.7
3 12	13 9.97	- 9 36.9	2.098	3.010	9.0	21.7	3 12	12 59.68	- 2 41.6	4.261	5.188	4.4	19.6
3 22	13 1.40	- 9 27.3	2.053	3.022	5.4	21.5	3 22	12 55.44	- 2 9.8	4.205	5.182	2.4	19.5
4 1	12 51.78	- 9 9.3	2.037	3.034	1.7	21.3	4 1	12 50.77	- 1 36.6	4.178	5.176	0.7	19.3
4 11	12 42.05	- 8 46.5	2.051	3.045	3.0	21.4	4 11	12 46.01	- 1 4.5	4.183	5.170	2.1	19.4
4 21	12 33.09	- 8 23.1	2.094	3.055	6.7	21.6	4 21	12 41.53	- 0 35.6	4.216	5.164	4.1	19.6
5 1	12 25.65	- 8 3.5	2.164	3.065	10.0	21.9	5 1	12 37.62	- 0 11.9	4.278	5.158	6.0	19.7
5 11	12 20.24	- 7 51.0	2.258	3.075	12.9	22.1	5 11	12 34.56	+ 0 5.1	4.364	5.152	7.6	19.8
496821	1995 <i>OA</i> ₃		4 3.1 254°20	0°1/ 2.9 17			242670	2005 <i>SP</i> ₁₀₅		4 3.1 181°10	2°0/ 5.5 17		
3 2	13 10.99	- 8 6.4	2.067	2.914	12.0	22.2	3 2	13 11.78	-15 13.9	2.427	3.239	11.6	21.1
3 12	13 6.09	- 7 21.5	1.975	2.898	8.8	22.0	3 12	13 6.35	-14 36.5	2.341	3.240	8.8	20.9
3 22	12 59.36	- 6 23.6	1.907	2.882	5.0	21.7	3 22	12 59.37	-13 43.6	2.281	3.241	5.6	20.7
4 1	12 51.45	- 5 16.7	1.867	2.866	0.9	21.4	4 1	12 51.47	-12 37.9	2.249	3.241	2.6	20.5
4 11	12 43.23	- 4 6.9	1.856	2.849	3.4	21.5	4 11	12 43.40	-11 24.2	2.247	3.240	2.8	20.5
4 21	12 35.57	- 3 0.9	1.874	2.832	7.6	21.8	4 21	12 35.93	-10 8.3	2.275	3.239	6.0	20.7
5 1	12 29.29	- 2 4.6	1.917	2.814	11.3	22.0	5 1	12 29.73	- 8 56.3	2.330	3.237	9.2	20.9
5 11	12 24.97	- 1 22.5	1.982	2.796	14.6	22.1	5 11	12 25.26	- 7 53.2	2.410	3.234	12.0	21.1
428800	2008 <i>TM</i> ₂		4 3.1 59°88	3°2/ 2.4 17			417750	2007 <i>DP</i> ₂₀		4 3.1 70°92	5°5/ 7.2 17		
3 2	13 36.83	+ 4 54.1	0.936	1.805	21.1	20.3	3 2	13 17.45	-19 12.7	1.747	2.550	15.8	20.7
3 12	13 26.34	+ 3 42.3	0.879	1.812	15.5	20.0	3 12	13 11.06	-19 59.2	1.673	2.556	12.6	20.5
3 22	13 11.37	+ 2 21.9	0.842	1.819	9.0	19.6	3 22	13 2.29	-20 26.4	1.621	2.563	9.2	20.3
4 1	12 53.58	+ 0 51.0	0.829	1.826	3.3	19.3	4 1	12 52.00	-20 33.1	1.595	2.569	6.2	20.1
4 11	12 35.53	- 0 49.6	0.844	1.834	7.1	19.6	4 11	12 41.38	-20 21.0	1.595	2.576	5.8	20.1
4 21	12 19.72	- 2 36.3	0.883	1.841	13.6	19.9	4 21	12 31.64	-19 55.0	1.622	2.583	8.3	20.3
5 1	12 7.94	- 4 25.7	0.944	1.849	19.3	20.3	5 1	12 23.82	-19 21.9	1.675	2.589	11.6	20.5
5 11	12 0.88	- 6 16.0	1.023	1.857	23.9	20.6	5 11	12 18.58	-18 49.0	1.749	2.596	14.8	20.7
217920	2001 <i>ST</i> ₃₁₆		4 3.1 180°17	5°3/ 8.6 17			516985	2012 <i>PS</i> ₄₄		4 3.1 227°86	1°7/ 5.1 17		
3 2	13 15.10	-23 22.1	2.326	3.094	13.4	20.9	3 2	13 10.15	-14 16.6	2.379	3.199	11.6	22.4
3 12	13 8.94	-23 39.2	2.238	3.095	11.0	20.7	3 12	13 5.28	-13 35.3	2.285	3.189	8.8	22.2
3 22	13 0.93	-23 37.2	2.173	3.096	8.3	20.5	3 22	12 58.83	-12 38.3	2.215	3.178	5.5	22.0
4 1	12 51.74	-23 15.7	2.134	3.096	6.0	20.4	4 1	12 51.39	-11 28.4	2.173	3.167	2.3	21.7
4 11	12 42.27	-22 36.8	2.123	3.096	5.4	20.3	4 11	12 43.71	-10 10.6	2.161	3.155	2.8	21.8
4 21	12 33.44	-21 45.0	2.140	3.095	7.0	20.4	4 21	12 36.56	- 8 51.0	2.179	3.143	6.2	22.0
5 1	12 26.06	-20 46.5	2.185	3.094	9.6	20.6	5 1	12 30.63	- 7 35.8	2.224	3.131	9.5	22.1
5 11	12 20.69	-19 48.1	2.253	3.091	12.3	20.7	5 11	12 26.43	- 6 30.4	2.292	3.118	12.5	22.3
94025	2000 <i>XC</i> ₃₇		4 3.1 201°23	3°1/ 6.1 17			458995	2011 <i>WG</i> ₁₃₂		4 3.1 113°36	0°2/ 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
28393	1999 <i>RB</i> ₁₂		4 3.1 192°12	0°7/ 2.2 18			118474	2000 <i>AH</i> ₄₁		4 3.1 136°59	4°2/27.6 18		
3 2	13 8.29	- 5 18.6	2.875	3.721	9.1	20.0	3 2	13 8.94	+11 6.4	3.189	4.049	7.9	19.7
3 12	13 3.63	- 4 33.5	2.794	3.719	6.5	19.8	3 12	13 3.92	+12 1.4	3.139	4.061	5.9	19.6
3 22	12 57.77	- 3 41.2	2.741	3.717	3.6	19.6	3 22	12 57.85	+12 52.9	3.116	4.072	4.5	19.5
4 1	12 51.19	- 2 45.3	2.717	3.715	0.8	19.4	4 1	12 51.22	+13 36.8	3.122	4.083	4.4	19.5
4 11	12 44.50	- 1 50.1	2.723	3.712	2.9	19.5	4 11	12 44.55	+14 9.5	3.158	4.094	5.7	19.6
4 21	12 38.25	- 0 59.7	2.759	3.709	5.8	19.7	4 21	12 38.38	+14 29.0	3.221	4.104	7.6	19.8
5 1	12 32.99	- 0 17.6	2.822	3.706	8.6	19.9	5 1	12 33.14	+14 34.1	3.310	4.114	9.4	19.9
5 11	12 29.09	+ 0 13.6	2.909	3.702	10.9	20.0	5 11	12 29.17	+14 25.3	3.419	4.124	11.1	20.0
28116	1998 <i>SP</i> ₅₆		4 3.1 231°56	0°0/ 2.9 18			432725	2011 <i>CN</i> ₁₁₀		4 3.1 61°31	2°0/ 1.1 18		
3 2	13 12.00	- 6 53.1	2.113	2.960	11.8	18.5	3 2	13 9.87	- 3 43.3	1.737	2.605	12.9	20.8
3 12	13 6.71	- 6 30.3	2.032	2.956	8.6	18.3	3 12	13 5.37	- 2 32.5	1.672	2.608	9.2	20.6
3 22	12 59.67	- 5 57.5	1.975	2.950	4.8	18.0	3 22	12 58.96	- 1 11.1	1.632	2.612	5.0	20.4
4 1	12 51.54	- 5 18.3	1.946	2.945	0.8	17.7	4 1	12 51.43	+ 0 13.7	1.619	2.615	2.0	20.2
4 11	12 43.19	- 4 37.6	1.947	2.940	3.2	17.9	4 11	12 43.75	+ 1 33.4	1.633	2.619	5.0	20.4
4 21	12 35.46	- 4 0.2	1.975	2.934	7.2	18.1	4 21	12 36.88	+ 2 40.7	1.674	2.623	9.1	20.6
5 1	12 29.13	- 3 30.8	2.029	2.928	10.7	18.3	5 1	12 31.63	+ 3 30.3	1.740	2.626	12.9	20.9
5 11	12 24.72	- 3 12.6	2.106	2.922	13.8	18.5	5 11	12 28.50	+ 3 59.6	1.825	2.630	16.0	21.1
331940	2004 <i>TK</i> ₁₁₉		4 3.1 233°46	3°1/30.5 17			351869	2006 <i>ST</i> ₄₂		4 3.1 187°09	3°7/28.6 18		
3 2	13 11.80	+ 1 56.6	2.359	3.220	10.2	22.2	3 2	13 10.77	+ 9 13.9	3.283	4.139	7.8	22.1
3 12	13 6.45	+ 2 59.3	2.274	3.206	7.3	21.9	3 12	13 5.24	+ 9 59.0	3.215	4.138	5.8	22.0
3 22	12 59.49	+ 4 6.4	2.215	3.190	4.4	21.7	3 22	12 58.62	+10 42.1	3.175	4.136	4.1	21.9
4 1	12 51.52	+ 5 12.3	2.185	3.174	3.1	21.6	4 1	12 51.36	+11 19.3	3.165	4.134	3.8	21.8
4 11	12 43.30	+ 6 11.1	2.186	3.158	5.3	21.7	4 11	12 44.02	+11 47.0	3.185	4.132	5.2	21.9
4 21	12 35.60	+ 6 57.7	2.214	3.140	8.5	21.9	4 21	12 37.13	+12 3.0	3.234	4.129	7.2	22.1
5 1	12 29.13	+ 7 28.8	2.268	3.122	11.5	22.1	5 1	12 31.15	+12 6.0	3.308	4.125	9.2	22.2
5 11	12 24.40	+ 7 42.7	2.343	3.104	14.1	22.2	5 11	12 26.45	+11 56.2	3.405	4.121	10.9	22.3
34606	2000 <i>UT</i>		4 3.1 278°15	1°7/ 1.6 18 R			377462	2004 <i>XP</i> ₃₂		4 3.1 223°05	6°4/26.9 17		
3 2	13 11.92	- 3 0.0	1.813	2.676	12.7	18.9	3 2	13 13.69	+13 25.2	2.249	3.111	10.6	21.0
3 12	13 6.84	- 2 20.7	1.740	2.673	9.1	18.6	3 12	13 7.81	+14 28.2	2.183	3.103	8.3	20.8
3 22	12 59.81	- 1 33.1	1.691	2.670	5.0	18.4	3 22	13 0.24	+15 25.6	2.143	3.094	6.6	20.7
4 1	12 51.58	- 0 42.3	1.669	2.666	1.7	18.2	4 1	12 51.66	+16 10.9	2.131	3.086	6.6	20.7
4 11	12 43.12	+ 0 5.0	1.675	2.663	4.6	18.3	4 11	12 42.92	+16 38.6	2.147	3.076	8.3	20.8
4 21	12 35.42	+ 0 43.2	1.708	2.660	8.7	18.6	4 21	12 34.85	+16 45.7	2.188	3.067	10.8	20.9
5 1	12 29.32	+ 1 7.7	1.766	2.657	12.5	18.8	5 1	12 28.18	+16 31.7	2.252	3.056	13.3	21.1
5 11	12 25.38	+ 1 16.2	1.844	2.653	15.7	19.0	5 11	12 23.39	+15 57.9	2.336	3.046	15.5	21.2
193677	2001 <i>DH</i> ₁₀₄		4 3.1 173°58	1°0/ 2.0 17			65128	2002 <i>CN</i> ₆₅		4 3.1 352°56	2°7/31.4 18		
3 2	13 10.97	- 4 48.6	2.021	2.877	11.9	20.1	3 2	13 10.68	+ 1 40.6	2.205	3.070	10.7	19.3
3 12	13 5.97	- 4 5.3	1.948	2.878	8.5	19.9	3 12	13 5.63	+ 2 13.5	2.135	3.069	7.6	19.1
3 22	12 59.24	- 3 12.8	1.900	2.878	4.7	19.7	3 22	12 59.01	+ 2 49.3	2.091	3.068	4.4	18.9
4 1	12 51.47	- 2 15.9	1.881	2.879	1.1	19.4	4 1	12 51.44	+ 3 23.2	2.075	3.067	2.7	18.8
4 11	12 43.54	- 1 20.6	1.890	2.879	3.9	19.6	4 11	12 43.74	+ 3 50.5	2.088	3.067	4.8	18.9
4 21	12 36.29	- 0 32.6	1.926	2.879	7.7	19.9	4 21	12 36.68	+ 4 7.2	2.128	3.066	8.1	19.1
5 1	12 30.49	+ 0 3.6	1.988	2.880	11.3	20.1	5 1	12 30.93	+ 4 11.0	2.193	3.066	11.1	19.3
5 11	12 26.61	+ 0 25.2	2.072	2.879	14.3	20.3	5 11	12 26.96	+ 4 0.8	2.279	3.066	13.8	19.5
15077	Edyalge		4 3.1 60°23	0°9/ 2.2 18			375862	2009 <i>VV</i> ₃₂		4 3.1 215°26	5°5/ 8.7 17		
3 2	13 11.08	- 4 27.2	2.012	2.870	11.9	17.6	3 2	13 11.67	-23 7.3	1.936	2.722	15.1	20.6
3 12	13 6.03	- 3 56.0	1.944	2.874	8.5	17.4	3 12	13 6.76	-23 8.5	1.851	2.721	12.3	20.4
3 22	12 59.26	- 3 16.5	1.900	2.878	4.7	17.2	3 22	12 59.83	-22 46.5	1.788	2.720	9.2	20.2
4 1	12 51.47	- 2 33.2	1.883	2.882	1.1	16.9	4 1	12 51.61	-22 1.3	1.749	2.718	6.4	20.1
4 11	12 43.55	- 1 51.5	1.896	2.886	3.8	17.1	4 11	12 43.11	-20 56.6	1.737	2.717	5.6	20.0
4 21	12 36.34	- 1 16.4	1.935	2.890	7.6	17.4	4 21	12 35.34	-19 38.8	1.753	2.715	7.6	20.1
5 1	12 30.58	- 0 51.9	2.000	2.895	11.1	17.6	5 1	12 29.20	-18 16.3	1.794	2.714	10.7	20.3
5 11	12 26.75	- 0 40.5	2.087	2.899	14.0	17.8	5 11	12 25.27	-16 57.3	1.858	2.712	13.8	20.5
56015	1998 <i>UH</i> ₂₆		4 3.1 49°00	2°9/31.9 18			472563	2015 <i>DQ</i> ₆₂		4 3.1 61°67	0°1/ 2.9 17		
3 2	13 12.59	- 2 36.2	1.247	2.127	16.0	19.0	3 2	13 11.23	- 7 15.6	1.885	2.738	12.8	21.5
3 12	13 7.86	- 1 29.1	1.192	2.133	11.4	18.7	3 12	13 6.28	- 6 42.9	1.812	2.739	9.2	21.3
3 22	13 0.56	- 0 10.3	1.158	2.140	6.3	18.5	3 22	12 59.48	- 5 58.5	1.764	2.740	5.2	21.1
4 1	12 51.71	+ 1 10.9	1.150	2.146	2.9	18.3	4 1	12 51.55	- 5 6.8	1.743	2.742	0.9	20.7
4 11	12 42.71	+ 2 23.5	1.167	2.153	6.4	18.5	4 11	12 43.43	- 4 13.9	1.750	2.743	3.5	20.9
4 21	12 34.90	+ 3 18.6	1.207	2.160	11.4	18.8	4 21	12 36.06	- 3 25.7	1.785	2.745	7.7	21.2
5 1	12 29.32	+ 3 50.7	1.270	2.167	15.9	19.1	5 1	12 30.23	- 2 47.6	1.844	2.746	11.5	21.4
5 11	12 26.55	+ 3 58.3	1.350	2.174	19.6	19.3	5 11	12 26.47	- 2 23.1	1.926	2.748	14.6	21.6
129576	1997 <i>RG</i> ₂		4 3.1 136°34	1°2/ 2.1 18			64787	2001 <i>XH</i> ₂₀₀		4 3.1 342°40	0°4/ 3.5 17		
3 2	13 15.97	- 4 18.3	1.588	2.449	14.3	19.9	3 2	13 11.08	- 8 43.2	1.579	2.437	14.5	19.5
3 12	13 9.89	- 3 44.3	1.525	2.456	10.3	19.6	3 12	13 6.52	- 8 15.3	1.505	2.433	10.6	19.3
3 22	13 1.56	- 3 0.2	1.484	2.463	5.7	19.4	3 22	12 59.76	- 7 32.4	1.454	2.430	6.2	19.0
4 1	12 51.89	- 2 11.6	1.471	2.469	1.4	19.1	4 1	12 51.61	- 6 38.7	1.429	2.427	1.3	18.7
4 11	12 42.06	- 1 25.4	1.485	2.475	4.6	19.3	4 11	12 43.18	- 5 41.3	1.430	2.425	3.8	18.9
4 21	12 33.23	- 0 48.1	1.526	2.481	9.2	19.6	4 21	12 35.59	- 4 47.6	1.457	2.422	8.6	19.1
5 1	12 26.35	- 0 24.6	1.591	2.487	13.3	19.9	5 1	12 29.80	- 4 4.3	1.509	2.420	12.9	19.4
5 11	12 21.98	- 0 17.3	1.676	2.492	16.8	20.1	5 11	12 26.43	- 3 36.1	1.580	2.419	16.5	19.6
279258	2009 <i>VK</i> ₅₆		4 3.1 243°53	0°1/ 3.2 17			295639	2008 <i>SF</i> ₂₅₆		4 3.1 133°33	0°2/ 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
149589	2004 <i>CN</i> ₃₅		4 3.1 314°79	3°0/31.9	18		29163	1989 <i>SF</i> ₁₄		4 3.1 192°39	5°9/ 9.6	17	
3 2	13 12.67	- 2 27.7	1.202	2.084	16.4	19.8	3 2	13 12.80	-25 41.5	2.117	2.881	14.7	19.4
3 12	13 8.19	- 1 26.3	1.136	2.078	11.7	19.5	3 12	13 7.47	-25 37.8	2.027	2.880	12.1	19.3
3 22	13 0.91	- 0 11.8	1.091	2.073	6.6	19.2	3 22	13 0.20	-25 10.3	1.959	2.878	9.3	19.1
4 1	12 51.83	+ 1 6.6	1.071	2.067	3.0	18.9	4 1	12 51.70	-24 19.0	1.916	2.876	6.8	18.9
4 11	12 42.38	+ 2 17.8	1.075	2.062	6.7	19.1	4 11	12 42.94	-23 6.9	1.900	2.873	5.9	18.9
4 21	12 34.03	+ 3 12.0	1.103	2.057	12.0	19.4	4 21	12 34.87	-21 40.2	1.912	2.870	7.4	18.9
5 1	12 27.98	+ 3 42.6	1.151	2.052	16.9	19.7	5 1	12 28.36	-20 7.2	1.951	2.867	10.2	19.1
5 11	12 24.94	+ 3 47.5	1.217	2.047	21.0	19.9	5 11	12 23.97	-18 36.5	2.013	2.863	13.1	19.3
306444	1998 <i>WT</i> ₆		4 3.1 88°67	0°7/ 3.8	18		57443	2001 <i>SM</i> ₅₄		4 3.1 189°22	3°2/30.7	18	
3 2	13 13.86	-10 3.4	1.706	2.551	14.2	21.0	3 2	13 12.13	+ 3 53.5	2.313	3.176	10.3	19.1
3 12	13 8.16	- 9 28.0	1.650	2.571	10.4	20.8	3 12	13 6.61	+ 4 28.8	2.244	3.176	7.4	18.9
3 22	13 0.49	- 8 37.9	1.618	2.591	6.0	20.6	3 22	12 59.55	+ 5 5.1	2.201	3.175	4.5	18.7
4 1	12 51.72	- 7 37.7	1.612	2.610	1.5	20.3	4 1	12 51.57	+ 5 37.6	2.187	3.175	3.3	18.6
4 11	12 42.92	- 6 34.5	1.635	2.629	3.4	20.5	4 11	12 43.47	+ 6 1.8	2.201	3.174	5.2	18.8
4 21	12 35.12	- 5 35.2	1.685	2.648	7.8	20.8	4 21	12 36.00	+ 6 14.2	2.244	3.173	8.2	18.9
5 1	12 29.11	- 4 46.0	1.760	2.667	11.6	21.1	5 1	12 29.83	+ 6 13.0	2.312	3.172	11.1	19.1
5 11	12 25.37	- 4 11.0	1.857	2.685	14.9	21.3	5 11	12 25.41	+ 5 57.5	2.401	3.171	13.6	19.3
456901	2007 <i>VL</i> ₂₀₁		4 3.1 355°43	2°1/ 1.8	16		356410	2010 <i>TQ</i> ₄₉		4 3.1 176°96	1°4/ 1.4	17	
3 2	13 13.06	- 2 8.8	1.176	2.060	16.6	20.7	3 2	13 8.45	- 2 15.8	2.670	3.526	9.4	21.4
3 12	13 8.48	- 1 49.7	1.113	2.056	11.9	20.4	3 12	13 3.83	- 1 39.7	2.596	3.526	6.6	21.2
3 22	13 1.08	- 1 21.3	1.071	2.053	6.7	20.1	3 22	12 57.93	- 0 58.4	2.549	3.526	3.7	21.0
4 1	12 51.86	- 0 50.0	1.053	2.050	2.2	19.8	4 1	12 51.28	- 0 15.7	2.530	3.526	1.4	20.8
4 11	12 42.32	- 0 23.8	1.059	2.049	5.8	20.0	4 11	12 44.52	+ 0 24.1	2.541	3.527	3.4	21.0
4 21	12 33.92	- 0 9.6	1.088	2.049	11.2	20.3	4 21	12 38.26	+ 0 57.5	2.580	3.527	6.4	21.2
5 1	12 27.89	- 0 12.2	1.138	2.050	16.1	20.6	5 1	12 33.04	+ 1 21.2	2.646	3.527	9.2	21.4
5 11	12 24.91	- 0 33.3	1.206	2.052	20.2	20.9	5 11	12 29.29	+ 1 33.6	2.735	3.526	11.6	21.5
185236	2006 <i>TP</i> ₁₂₀		4 3.1 87°94	4°4/28.8	17		8580	Pinsky		4 3.1 139°69	4°7/27.9	18	
3 2	13 9.09	+ 6 28.6	2.271	3.142	10.2	20.3	3 2	13 10.09	+ 9 38.4	2.577	3.442	9.3	18.6
3 12	13 4.43	+ 7 36.7	2.212	3.145	7.4	20.1	3 12	13 4.98	+10 42.8	2.523	3.450	7.0	18.4
3 22	12 58.31	+ 8 44.5	2.180	3.149	5.0	20.0	3 22	12 58.55	+11 44.5	2.496	3.457	5.1	18.3
4 1	12 51.34	+ 9 45.9	2.176	3.153	4.5	20.0	4 1	12 51.39	+12 37.8	2.498	3.465	4.9	18.3
4 11	12 44.28	+10 35.1	2.200	3.157	6.5	20.1	4 11	12 44.17	+13 18.1	2.528	3.472	6.5	18.4
4 21	12 37.86	+11 8.2	2.251	3.161	9.2	20.3	4 21	12 37.55	+13 42.4	2.586	3.478	8.8	18.6
5 1	12 32.69	+11 23.2	2.326	3.165	11.8	20.5	5 1	12 32.09	+13 49.6	2.667	3.485	11.1	18.7
5 11	12 29.21	+11 20.1	2.421	3.169	14.1	20.6	5 11	12 28.18	+13 40.0	2.769	3.491	13.0	18.9
501288	2013 <i>WW</i> ₅₄		4 3.1 131°88	4°5/28.9	17		60216	1999 <i>VG</i> ₈₂		4 3.1 276°20	1°1/ 4.1	18	R
3 2	13 11.24	+ 6 39.0	2.241	3.109	10.4	21.4	3 2	13 13.69	-11 10.7	1.757	2.598	14.1	20.5
3 12	13 5.94	+ 7 47.1	2.186	3.118	7.6	21.2	3 12	13 8.57	-10 36.0	1.649	2.567	10.6	20.2
3 22	12 59.14	+ 8 54.4	2.158	3.127	5.2	21.1	3 22	13 1.09	- 9 42.7	1.565	2.536	6.4	19.9
4 1	12 51.48	+ 9 54.7	2.159	3.136	4.6	21.1	4 1	12 51.91	- 8 33.7	1.506	2.504	1.9	19.5
4 11	12 43.77	+10 42.2	2.188	3.144	6.5	21.2	4 11	12 42.07	- 7 15.2	1.476	2.471	3.7	19.6
4 21	12 36.76	+11 13.3	2.244	3.152	9.3	21.4	4 21	12 32.73	- 5 55.5	1.474	2.437	8.6	19.8
5 1	12 31.09	+11 26.1	2.324	3.160	11.9	21.6	5 1	12 25.01	- 4 43.1	1.496	2.403	13.3	20.0
5 11	12 27.17	+11 21.0	2.424	3.168	14.2	21.7	5 11	12 19.71	- 3 45.3	1.540	2.368	17.4	20.1
71346	2000 <i>AV</i> ₁₀₄		4 3.1 231°44	8°4/23.4	18		53017	1998 <i>VF</i> ₂₆		4 3.1 241°28	1°8/ 4.6	18	
3 2	13 12.94	+20 21.7	2.257	3.110	10.9	19.3	3 2	13 15.13	-12 39.1	1.715	2.549	14.7	19.6
3 12	13 7.32	+21 46.1	2.201	3.101	9.3	19.2	3 12	13 9.53	-12 13.2	1.621	2.534	11.1	19.4
3 22	13 0.00	+23 0.1	2.170	3.091	8.4	19.1	3 22	13 1.56	-11 28.5	1.550	2.518	6.9	19.1
4 1	12 51.65	+23 55.9	2.166	3.081	8.9	19.1	4 1	12 51.98	-10 27.5	1.505	2.501	2.6	18.8
4 11	12 43.14	+24 28.2	2.187	3.070	10.5	19.2	4 11	12 41.90	- 9 16.5	1.489	2.483	3.7	18.8
4 21	12 35.33	+24 34.6	2.233	3.060	12.5	19.3	4 21	12 32.51	- 8 3.1	1.500	2.465	8.3	19.0
5 1	12 28.94	+24 15.4	2.298	3.048	14.6	19.4	5 1	12 24.89	- 6 55.9	1.536	2.446	12.8	19.2
5 11	12 24.48	+23 33.3	2.381	3.037	16.4	19.6	5 11	12 19.77	- 6 1.8	1.593	2.426	16.7	19.4
333432	2003 <i>RA</i> ₁₄		4 3.1 211°37	0°0/ 3.1	18		245098	2004 <i>PN</i> ₃₄		4 3.1 278°51	2°4/ 1.2	18	
3 2	13 11.24	- 7 56.5	2.738	3.573	9.8	22.5	3 2	13 12.67	- 3 28.3	1.401	2.274	15.1	20.8
3 12	13 5.86	- 7 20.4	2.647	3.564	7.1	22.3	3 12	13 8.03	- 2 26.6	1.320	2.258	10.9	20.5
3 22	12 59.11	- 6 35.0	2.582	3.555	4.0	22.1	3 22	13 0.82	- 1 10.8	1.262	2.242	6.1	20.1
4 1	12 51.49	- 5 43.5	2.547	3.545	0.7	21.8	4 1	12 51.85	+ 0 11.5	1.229	2.226	2.4	19.8
4 11	12 43.69	- 4 49.9	2.542	3.535	2.6	22.0	4 11	12 42.40	+ 1 30.1	1.222	2.209	6.0	20.0
4 21	12 36.35	- 3 58.9	2.567	3.523	5.9	22.1	4 21	12 33.77	+ 2 35.4	1.240	2.193	11.2	20.3
5 1	12 30.07	- 3 14.4	2.621	3.511	8.9	22.3	5 1	12 27.16	+ 3 20.1	1.281	2.176	15.9	20.5
5 11	12 25.31	- 2 39.7	2.698	3.499	11.5	22.5	5 11	12 23.31	+ 3 40.6	1.339	2.159	20.0	20.7
109004	2001 <i>PZ</i> ₆₅		4 3.1 112°91	3°5/ 6.6	18		498784	2008 <i>UG</i> ₁₅₂		4 3.1 259°15	0°2/ 2.9	17	
3 2	13 14.46	-17 47.5	1.989	2.796	14.0	20.1	3 2	13 10.54	- 7 22.9	1.983	2.835	12.3	21.7
3 12	13 8.50	-17 38.0	1.922	2.813	10.9	19.9	3 12	13 5.79	- 6 42.9	1.902	2.828	8.9	21.5
3 22	13 0.67	-17 10.0	1.879	2.830	7.4	19.8	3 22	12 59.23	- 5 51.0	1.845	2.821	5.0	21.2
4 1	12 51.76	-16 25.0	1.862	2.847	4.2	19.6	4 1	12 51.54	- 4 51.4	1.816	2.815	0.8	20.9
4 11	12 42.77	-15 27.9	1.873	2.863	3.9	19.6	4 11	12 43.61	- 3 50.3	1.815	2.808	3.5	21.1
4 21	12 34.63	-14 25.0	1.913	2.878	6.8	19.8	4 21	12 36.33	- 2 53.9	1.842	2.801	7.6	21.3
5 1	12 28.13	-13 23.1	1.979	2.893	10.2	20.0	5 1	12 30.49	- 2 7.6	1.894	2.794	11.3	21.5
5 11	12 23.76	-12 28.4	2.068	2.908	13.1	20.3	5 11	12 26.63	- 1 35.5	1.968	2.787	14.5	21.7
371004	2005 <i>TL</i> ₁₁₄		4 3.1 74°44	0°2/ 3.4	17		353894	2012 <i>XV</i> ₃₇		4 3.1 218°23	2°8/ 6.5	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
500716	2012 XG ₁₈		4 3.1 111°01	0°6/ 2.5 17			309850	2009 DU ₆		4 3.1 324°22	1°4/ 4.0 17		
3 2	13 10.58	- 5 19.5	2.557	3.404	10.0	22.5	3 2	13 15.53	- 9 3.0	1.345	2.204	16.5	20.6
3 12	13 5.32	- 4 47.0	2.494	3.419	7.2	22.4	3 12	13 10.18	- 9 11.6	1.270	2.197	12.3	20.4
3 22	12 58.75	- 4 7.6	2.457	3.434	3.9	22.2	3 22	13 2.06	- 9 5.2	1.217	2.191	7.4	20.1
4 1	12 51.44	- 3 24.7	2.450	3.448	0.7	22.0	4 1	12 52.09	- 8 46.3	1.188	2.186	2.2	19.7
4 11	12 44.08	- 2 42.7	2.472	3.462	3.0	22.2	4 11	12 41.66	- 8 20.2	1.185	2.180	4.2	19.8
4 21	12 37.33	- 2 5.6	2.523	3.476	6.1	22.4	4 21	12 32.21	- 7 53.6	1.207	2.175	9.5	20.1
5 1	12 31.74	- 1 36.7	2.601	3.490	9.0	22.6	5 1	12 24.98	- 7 33.3	1.252	2.171	14.4	20.4
5 11	12 27.71	- 1 18.2	2.702	3.503	11.5	22.8	5 11	12 20.73	- 7 24.9	1.315	2.166	18.5	20.6
501337	2013 XM ₂₃		4 3.1 119°10	8°6/21.9 17			441839	2009 VU ₂₈		4 3.1 108°23	0°5/ 3.9 18		
3 2	13 12.55	+24 35.0	2.529	3.367	10.4	21.6	3 2	13 6.59	- 9 32.5	3.437	4.267	8.1	22.0
3 12	13 6.76	+26 1.2	2.504	3.383	9.1	21.5	3 12	13 2.25	- 9 5.9	3.366	4.280	5.9	21.9
3 22	12 59.54	+27 13.5	2.504	3.399	8.6	21.5	3 22	12 56.96	- 8 31.9	3.322	4.292	3.4	21.7
4 1	12 51.57	+28 5.5	2.530	3.414	9.1	21.6	4 1	12 51.13	- 7 52.9	3.307	4.305	0.9	21.5
4 11	12 43.63	+28 33.5	2.582	3.429	10.3	21.7	4 11	12 45.25	- 7 11.9	3.323	4.317	1.9	21.6
4 21	12 36.45	+28 36.7	2.656	3.443	11.9	21.8	4 21	12 39.77	- 6 31.9	3.369	4.329	4.4	21.8
5 1	12 30.62	+28 16.4	2.751	3.457	13.4	22.0	5 1	12 35.11	- 5 56.0	3.443	4.341	6.8	22.0
5 11	12 26.54	+27 35.7	2.862	3.471	14.7	22.1	5 11	12 31.59	- 5 26.6	3.541	4.353	8.8	22.1
467630	2008 LV ₄		4 3.1 326°82	4°2/30.6 17			27769	1991 UA ₃		4 3.1 168°80	2°2/31.4 18		
3 2	13 9.89	+ 1 35.6	1.400	2.285	14.3	20.8	3 2	13 11.48	+ 1 18.2	2.734	3.590	9.2	19.3
3 12	13 5.95	+ 2 35.6	1.326	2.269	10.3	20.6	3 12	13 5.94	+ 1 54.6	2.664	3.594	6.5	19.1
3 22	12 59.59	+ 3 42.7	1.274	2.254	6.2	20.3	3 22	12 59.11	+ 2 33.5	2.621	3.597	3.8	18.9
4 1	12 51.63	+ 4 48.3	1.248	2.239	4.3	20.1	4 1	12 51.52	+ 3 11.0	2.608	3.600	2.2	18.8
4 11	12 43.29	+ 5 42.9	1.247	2.225	7.4	20.3	4 11	12 43.84	+ 3 43.2	2.625	3.602	4.1	18.9
4 21	12 35.78	+ 6 18.9	1.269	2.212	11.9	20.5	4 21	12 36.69	+ 4 6.7	2.670	3.604	6.8	19.1
5 1	12 30.21	+ 6 31.5	1.313	2.200	16.2	20.7	5 1	12 30.64	+ 4 19.4	2.743	3.606	9.5	19.3
5 11	12 27.25	+ 6 19.8	1.375	2.189	19.8	20.9	5 11	12 26.09	+ 4 20.0	2.838	3.607	11.7	19.5
292153	2006 RZ ₉₇		4 3.1 169°84	1°3/ 4.7 17			150953	2001 TM ₁₂₅		4 3.1 181°41	3°9/ 6.7 17		
3 2	13 10.76	-11 46.9	2.802	3.623	10.0	22.1	3 2	13 15.03	-17 44.8	2.041	2.846	13.8	20.4
3 12	13 5.46	-11 30.4	2.720	3.626	7.4	21.9	3 12	13 9.06	-17 55.6	1.958	2.846	10.8	20.2
3 22	12 58.85	-11 3.5	2.664	3.629	4.6	21.7	3 22	13 1.11	-17 48.9	1.898	2.847	7.5	20.0
4 1	12 51.47	-10 28.5	2.637	3.632	1.8	21.5	4 1	12 51.90	-17 25.3	1.864	2.847	4.6	19.8
4 11	12 43.95	- 9 48.6	2.640	3.634	2.4	21.6	4 11	12 42.40	-16 48.0	1.859	2.846	4.3	19.8
4 21	12 36.93	- 9 7.7	2.673	3.635	5.3	21.8	4 21	12 33.61	-16 2.0	1.882	2.845	7.1	20.0
5 1	12 30.97	- 8 29.9	2.734	3.637	8.1	22.0	5 1	12 26.38	-15 13.9	1.931	2.844	10.4	20.2
5 11	12 26.50	- 7 58.4	2.819	3.638	10.6	22.1	5 11	12 21.33	-14 29.8	2.003	2.843	13.5	20.4
100385	1995 VP ₁₅		4 3.1 286°57	1°7/ 1.8 17			105855	2000 SD ₁₆₇		4 3.1 218°30	3°5/ 6.7 18		
3 2	13 13.56	- 3 32.2	1.570	2.436	14.1	20.3	3 2	13 13.11	-17 15.8	2.480	3.279	11.8	19.9
3 12	13 8.54	- 2 56.4	1.480	2.414	10.2	20.0	3 12	13 7.42	-17 35.0	2.391	3.276	9.3	19.7
3 22	13 1.07	- 2 9.5	1.413	2.393	5.8	19.7	3 22	13 0.09	-17 40.5	2.327	3.274	6.5	19.5
4 1	12 51.91	- 1 16.9	1.373	2.370	1.7	19.4	4 1	12 51.71	-17 32.6	2.290	3.271	4.0	19.3
4 11	12 42.21	- 0 26.0	1.359	2.348	5.1	19.5	4 11	12 43.08	-17 13.5	2.282	3.268	3.8	19.3
4 21	12 33.20	+ 0 15.7	1.371	2.326	10.0	19.8	4 21	12 34.98	-16 46.8	2.303	3.265	6.1	19.5
5 1	12 26.00	+ 0 42.3	1.406	2.304	14.6	20.0	5 1	12 28.13	-16 16.9	2.351	3.262	8.9	19.6
5 11	12 21.39	+ 0 50.2	1.461	2.282	18.6	20.2	5 11	12 23.05	-15 48.7	2.423	3.258	11.6	19.8
208971	2002 XP ₉₂		4 3.1 167°91	3°1/ 6.8 18			310892	2003 QM ₁₁₁		4 3.1 107°73	6°3/27.9 18		
3 2	13 10.64	-17 58.4	2.419	3.220	12.0	20.9	3 2	13 15.61	+ 9 23.9	1.803	2.672	12.5	20.7
3 12	13 5.61	-17 46.5	2.335	3.222	9.4	20.7	3 12	13 9.23	+10 55.4	1.768	2.696	9.3	20.5
3 22	12 59.03	-17 18.6	2.275	3.224	6.4	20.5	3 22	13 1.01	+12 22.4	1.758	2.720	6.8	20.4
4 1	12 51.51	-16 36.2	2.242	3.226	3.8	20.4	4 1	12 51.85	+13 35.9	1.776	2.742	6.6	20.4
4 11	12 43.81	-15 42.9	2.239	3.227	3.5	20.3	4 11	12 42.77	+14 29.1	1.821	2.764	8.6	20.6
4 21	12 36.69	-14 43.7	2.263	3.228	5.9	20.5	4 21	12 34.74	+14 58.5	1.892	2.785	11.5	20.8
5 1	12 30.83	-13 44.2	2.316	3.229	8.9	20.7	5 1	12 28.48	+15 3.6	1.985	2.806	14.2	21.0
5 11	12 26.69	-12 49.9	2.392	3.230	11.6	20.9	5 11	12 24.41	+14 46.5	2.097	2.826	16.5	21.2
488890	2005 SZ ₂₅₂		4 3.1 225°57	0°8/ 2.5 17			498611	2008 RJ ₈₁		4 3.1 227°91	1°0/ 4.2 17		
3 2	13 16.90	- 5 48.8	1.728	2.579	13.8	22.7	3 2	13 11.28	-11 0.3	2.054	2.892	12.5	22.1
3 12	13 10.70	- 5 12.7	1.642	2.568	10.0	22.5	3 12	13 6.29	-10 29.1	1.970	2.886	9.3	21.9
3 22	13 2.17	- 4 24.4	1.579	2.556	5.6	22.2	3 22	12 59.52	- 9 43.6	1.910	2.880	5.5	21.6
4 1	12 52.09	- 3 28.5	1.544	2.542	1.1	21.8	4 1	12 51.62	- 8 47.1	1.877	2.874	1.7	21.4
4 11	12 41.60	- 2 31.8	1.537	2.528	4.3	22.0	4 11	12 43.47	- 7 45.2	1.873	2.867	3.0	21.5
4 21	12 31.85	- 1 41.5	1.558	2.513	9.0	22.3	4 21	12 35.95	- 6 43.8	1.897	2.860	7.0	21.7
5 1	12 23.88	- 1 3.6	1.604	2.498	13.4	22.5	5 1	12 29.85	- 5 49.2	1.947	2.853	10.7	21.9
5 11	12 18.39	- 0 41.9	1.670	2.481	17.0	22.7	5 11	12 25.72	- 5 6.1	2.019	2.846	13.9	22.1
178002	2006 QR ₁₂₂		4 3.1 182°70	3°3/ 7.2 18			100240	1994 PV ₃₃		4 3.1 208°16	1°6/ 5.3 18		
3 2	13 12.42	-18 55.1	2.937	3.721	10.5	21.1	3 2	13 9.99	-13 26.1	2.894	3.709	9.9	20.4
3 12	13 6.69	-19 3.1	2.847	3.721	8.3	20.9	3 12	13 4.94	-13 9.3	2.802	3.703	7.5	20.2
3 22	12 59.57	-18 58.0	2.782	3.721	5.9	20.7	3 22	12 58.59	-12 41.4	2.736	3.697	4.7	20.0
4 1	12 51.61	-18 40.3	2.744	3.721	3.8	20.6	4 1	12 51.44	-12 4.1	2.699	3.691	2.1	19.8
4 11	12 43.45	-18 12.2	2.737	3.720	3.5	20.6	4 11	12 44.12	-11 20.7	2.691	3.684	2.5	19.9
4 21	12 35.76	-17 37.0	2.759	3.718	5.3	20.7	4 21	12 37.23	-10 35.1	2.714	3.677	5.2	20.0
5 1	12 29.13	-16 58.8	2.809	3.717	7.8	20.8	5 1	12 31.35	- 9 51.3	2.764	3.670	8.0	20.2
5 11	12 24.02	-16 21.9	2.885	3.714	10.1	21.0	5 11	12 26.90	- 9 13.1	2.839	3.662	10.4	20.3
106661	2000 WH ₁₄₄		4 3.1 168°83	3°4/29.1 18 R			297230	2205 T-3		4 3.1 237°16	1°1/ 4.2 17		
3 2	13 9.16	+ 6 23.2	3.057	3.918	8.1	20.6</							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
307946	2004 <i>FX</i> ₁₂₉		4 3.1 303°27	3°9/30.5	17		61599	2000 <i>QR</i> ₉₁		4 3.1 215°51	1°4/ 4.5	18	
3 2	13 9.81	+ 0 12.6	1.527	2.406	13.7	20.1	3 2	13 12.57	-11 42.4	2.109	2.940	12.4	19.3
3 12	13 5.77	+ 1 31.3	1.448	2.389	9.8	19.8	3 12	13 7.21	-11 20.5	2.022	2.934	9.3	19.1
3 22	12 59.45	+ 3 0.0	1.392	2.371	5.8	19.6	3 22	13 0.05	-10 44.6	1.960	2.928	5.7	18.8
4 1	12 51.63	+ 4 29.8	1.363	2.354	3.9	19.4	4 1	12 51.75	- 9 57.5	1.926	2.922	2.0	18.6
4 11	12 43.42	+ 5 50.5	1.359	2.337	7.1	19.5	4 11	12 43.18	- 9 3.8	1.921	2.915	3.0	18.6
4 21	12 35.95	+ 6 53.4	1.381	2.320	11.5	19.7	4 21	12 35.23	- 8 9.3	1.944	2.908	6.8	18.9
5 1	12 30.26	+ 7 32.7	1.425	2.304	15.6	19.9	5 1	12 28.71	- 7 19.8	1.993	2.900	10.5	19.1
5 11	12 27.03	+ 7 46.4	1.487	2.288	19.2	20.1	5 11	12 24.15	- 6 40.1	2.066	2.892	13.6	19.3
383749	2007 <i>VD</i> ₁₁₄		4 3.1 91°10	0°6/ 2.4	17		225505	2000 <i>QT</i> ₂₆		4 3.1 246°25	1°9/ 4.9	17	
3 2	13 10.04	- 5 50.1	2.225	3.076	11.1	21.6	3 2	13 12.99	-12 53.0	2.080	2.907	12.8	20.8
3 12	13 5.14	- 5 9.6	2.160	3.087	7.9	21.4	3 12	13 7.62	-12 37.5	1.985	2.893	9.6	20.5
3 22	12 58.74	- 4 20.4	2.121	3.098	4.4	21.2	3 22	13 0.35	-12 6.9	1.913	2.878	6.1	20.3
4 1	12 51.47	- 3 26.8	2.110	3.109	0.8	20.9	4 1	12 51.81	-11 23.4	1.869	2.863	2.5	20.0
4 11	12 44.13	- 2 34.0	2.128	3.119	3.3	21.1	4 11	12 42.90	-10 31.3	1.854	2.848	3.2	20.0
4 21	12 37.45	- 1 47.2	2.174	3.130	6.9	21.4	4 21	12 34.57	- 9 36.4	1.867	2.832	7.0	20.2
5 1	12 32.08	- 1 10.4	2.247	3.140	10.1	21.6	5 1	12 27.66	- 8 44.7	1.906	2.815	10.7	20.4
5 11	12 28.44	- 0 46.3	2.342	3.150	12.8	21.8	5 11	12 22.78	- 8 1.9	1.968	2.799	14.1	20.6
381161	2007 <i>GP</i> ₇₃		4 3.1 252°42	5°9/28.1	18		478103	2011 <i>UH</i> ₇₄		4 3.1 256°78	0°7/ 2.3	16	
3 2	13 14.64	+11 2.3	2.097	2.961	11.2	20.8	3 2	13 10.54	- 4 49.3	2.646	3.492	9.7	22.5
3 12	13 8.68	+11 56.7	2.021	2.946	8.5	20.6	3 12	13 5.49	- 4 14.9	2.547	3.472	7.0	22.3
3 22	13 0.86	+12 47.4	1.972	2.931	6.4	20.4	3 22	12 58.99	- 3 32.9	2.474	3.451	3.9	22.0
4 1	12 51.87	+13 27.6	1.950	2.916	6.1	20.4	4 1	12 51.56	- 2 46.6	2.431	3.429	0.9	21.7
4 11	12 42.63	+13 51.5	1.956	2.900	8.0	20.4	4 11	12 43.85	- 2 0.4	2.417	3.407	3.1	21.9
4 21	12 34.06	+13 55.5	1.988	2.884	10.9	20.6	4 21	12 36.56	- 1 18.5	2.433	3.385	6.5	22.1
5 1	12 26.97	+13 38.7	2.043	2.868	13.7	20.7	5 1	12 30.33	- 0 44.8	2.476	3.362	9.6	22.2
5 11	12 21.91	+13 2.1	2.118	2.851	16.2	20.9	5 11	12 25.62	- 0 22.0	2.542	3.338	12.2	22.4
111305	2001 <i>XB</i> ₆₁		4 3.1 1°35	6°3/27.9	18		2631	Zhejiang		4 3.1 137°56	0°9/ 2.2	18	
3 2	13 9.92	+10 13.7	1.783	2.662	12.1	18.7	3 2	13 14.09	- 3 35.6	2.281	3.130	11.0	16.9
3 12	13 5.39	+11 16.0	1.728	2.661	9.1	18.5	3 12	13 8.01	- 3 14.0	2.214	3.140	7.8	16.7
3 22	12 59.01	+12 14.2	1.697	2.661	6.8	18.4	3 22	13 0.35	- 2 46.1	2.173	3.149	4.3	16.5
4 1	12 51.53	+13 0.6	1.691	2.661	6.6	18.4	4 1	12 51.78	- 2 15.6	2.160	3.158	1.0	16.2
4 11	12 43.93	+13 28.8	1.712	2.662	8.6	18.5	4 11	12 43.12	- 1 46.8	2.177	3.167	3.5	16.4
4 21	12 37.16	+13 35.3	1.757	2.663	11.5	18.7	4 21	12 35.15	- 1 23.7	2.224	3.175	7.0	16.7
5 1	12 31.97	+13 19.0	1.825	2.665	14.5	18.8	5 1	12 28.54	- 1 9.4	2.296	3.183	10.2	16.9
5 11	12 28.89	+12 41.8	1.910	2.668	17.0	19.0	5 11	12 23.76	- 1 6.0	2.392	3.190	12.8	17.1
210259	2007 <i>RO</i> ₂₉₀		4 3.1 92°94	0°3/ 3.5	17		433855	2015 <i>BD</i> ₂₇₇		4 3.1 143°71	1°9/ 1.1	17	
3 2	13 10.17	- 8 49.2	2.214	3.057	11.5	20.9	3 2	13 11.38	- 2 3.7	2.135	2.994	11.2	21.2
3 12	13 5.26	- 8 15.6	2.146	3.067	8.3	20.7	3 12	13 6.18	- 1 12.6	2.068	3.000	7.9	21.0
3 22	12 58.82	- 7 31.1	2.103	3.077	4.8	20.5	3 22	12 59.37	- 0 15.0	2.028	3.006	4.4	20.8
4 1	12 51.49	- 6 39.3	2.088	3.087	1.0	20.2	4 1	12 51.62	+ 0 43.8	2.015	3.011	1.9	20.6
4 11	12 44.07	- 5 45.5	2.103	3.096	2.9	20.4	4 11	12 43.75	+ 1 38.0	2.032	3.016	4.4	20.8
4 21	12 37.31	- 4 54.7	2.145	3.106	6.5	20.6	4 21	12 36.58	+ 2 22.5	2.077	3.021	7.9	21.0
5 1	12 31.86	- 4 11.8	2.214	3.116	9.8	20.8	5 1	12 30.78	+ 2 53.5	2.147	3.026	11.1	21.3
5 11	12 28.18	- 3 40.2	2.306	3.125	12.6	21.0	5 11	12 26.82	+ 3 9.2	2.238	3.030	13.8	21.4
423772	2006 <i>DX</i> ₁₅₁		4 3.1 332°30	1°6/ 4.3	16		214413	2005 <i>OB</i> ₁₇		4 3.1 211°26	0°4/ 2.6	18	
3 2	13 10.09	-10 5.9	1.470	2.329	15.3	20.8	3 2	13 8.28	- 7 13.9	2.485	3.332	10.3	20.7
3 12	13 6.15	-10 5.9	1.384	2.311	11.5	20.5	3 12	13 3.84	- 6 21.2	2.405	3.329	7.4	20.6
3 22	12 59.76	- 9 50.1	1.320	2.294	7.0	20.2	3 22	12 58.03	- 5 18.6	2.350	3.326	4.1	20.3
4 1	12 51.71	- 9 20.9	1.280	2.277	2.4	19.9	4 1	12 51.38	- 4 10.1	2.324	3.323	0.7	20.1
4 11	12 43.14	- 8 43.6	1.266	2.261	3.9	19.9	4 11	12 44.59	- 3 1.1	2.328	3.320	3.0	20.2
4 21	12 35.31	- 8 5.1	1.277	2.247	8.9	20.2	4 21	12 38.31	- 1 56.8	2.361	3.316	6.4	20.5
5 1	12 29.35	- 7 32.6	1.310	2.233	13.6	20.4	5 1	12 33.15	- 1 1.9	2.421	3.313	9.5	20.6
5 11	12 26.01	- 7 12.0	1.364	2.221	17.7	20.6	5 11	12 29.55	- 0 19.6	2.504	3.309	12.2	20.8
10260	1972 <i>TC</i>		4 3.1 139°29	4°8/ 8.6	18		51629	2001 <i>HM</i> ₄₃		4 3.1 307°30	1°7/ 4.7	17	
3 2	13 12.96	-23 10.7	2.132	2.910	14.2	17.9	3 2	13 10.22	-12 49.3	1.481	2.331	15.8	19.2
3 12	13 7.45	-22 55.9	2.054	2.920	11.4	17.7	3 12	13 6.18	-12 14.5	1.398	2.319	11.9	18.9
3 22	13 0.13	-22 19.1	1.999	2.930	8.4	17.5	3 22	12 59.75	-11 17.9	1.337	2.308	7.3	18.6
4 1	12 51.73	-21 21.2	1.970	2.940	5.7	17.4	4 1	12 51.73	-10 3.2	1.300	2.296	2.6	18.3
4 11	12 43.20	-20 6.6	1.968	2.949	4.9	17.3	4 11	12 43.30	- 8 38.2	1.290	2.285	3.8	18.3
4 21	12 35.42	-18 41.7	1.995	2.957	6.8	17.5	4 21	12 35.68	- 7 12.5	1.305	2.274	8.8	18.6
5 1	12 29.18	-17 14.4	2.049	2.965	9.8	17.7	5 1	12 29.94	- 5 55.9	1.344	2.264	13.5	18.8
5 11	12 24.99	-15 52.3	2.127	2.973	12.6	17.9	5 11	12 26.79	- 4 55.9	1.403	2.254	17.6	19.0
32959	1996 <i>HB</i> ₂₅		4 3.1 192°42	2°7/31.3	18		105651	2000 <i>SF</i> ₂₄		4 3.1 326°57	5°2/ 1.8	18	
3 2	13 13.80	+ 1 4.7	2.307	3.164	10.6	19.7	3 2	13 34.66	+ 7 42.9	0.998	1.867	20.1	18.6
3 12	13 7.86	+ 1 52.3	2.232	3.162	7.5	19.5	3 12	13 24.86	+ 6 59.8	0.933	1.866	15.0	18.2
3 22	13 0.30	+ 2 43.8	2.184	3.160	4.4	19.3	3 22	13 10.72	+ 6 5.5	0.890	1.864	9.3	17.9
4 1	12 51.77	+ 3 34.2	2.165	3.157	2.7	19.2	4 1	12 53.72	+ 4 54.4	0.870	1.863	5.3	17.7
4 11	12 43.07	+ 4 18.0	2.175	3.153	4.8	19.3	4 11	12 36.23	+ 3 24.4	0.877	1.861	8.4	17.8
4 21	12 35.00	+ 4 50.9	2.214	3.148	8.1	19.5	4 21	12 20.66	+ 1 38.4	0.909	1.860	14.3	18.1
5 1	12 28.25	+ 5 10.1	2.279	3.142	11.1	19.7	5 1	12 8.82	- 0 18.9	0.962	1.859	19.8	18.5
5 11	12 23.31	+ 5 14.1	2.366	3.136	13.8	19.8	5 11	12 1.51	- 2 22.8	1.034	1.858	24.3	18.8
429627	2011 <i>FN</i> ₆₄		4 3.1 119°86	1°4/ 4.4	17		462938	2011 <i>BB</i> ₉₈		4 3.1 13°74	3°2/31.4	17	
3 2	13 12												

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4 3.1

4 3.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
171791	2001 CZ ₁₆		4 3.1 192°50	4.8/ 7.6	18		299890	2006 SD ₃₄₁		4 3.1 149°83	1.2/ 1.6	17	
3 2	13 18.13	-20 48.6	2.206	2.985	13.7	20.6	3 2	13 8.82	-4 20.0	2.541	3.393	9.9	21.5
3 12	13 11.29	-21 9.6	2.115	2.984	11.0	20.4	3 12	13 4.17	-3 24.4	2.469	3.398	7.0	21.3
3 22	13 2.41	-21 12.6	2.047	2.981	8.1	20.2	3 22	12 58.19	-2 21.4	2.425	3.403	3.8	21.1
4 1	12 52.20	-20 56.9	2.006	2.977	5.5	20.0	4 1	12 51.45	-1 15.5	2.410	3.407	1.2	20.9
4 11	12 41.63	-20 24.6	1.994	2.973	5.0	20.0	4 11	12 44.60	-0 11.9	2.424	3.412	3.4	21.1
4 21	12 31.71	-19 40.2	2.010	2.968	7.2	20.1	4 21	12 38.31	+0 44.7	2.468	3.416	6.6	21.3
5 1	12 23.33	-18 49.9	2.054	2.961	10.2	20.3	5 1	12 33.12	+1 30.3	2.538	3.420	9.5	21.5
5 11	12 17.13	-18 0.6	2.122	2.954	13.1	20.5	5 11	12 29.46	+2 2.6	2.631	3.423	12.0	21.7
343893	2011 HG ₁₀₀		4 3.1 348°01	0.6/ 2.5	17		150999	2001 UT ₃₅		4 3.1 77°19	8.2/27.1	18	
3 2	13 6.95	-8 46.8	1.551	2.416	14.4	20.3	3 2	13 16.33	+15 11.3	1.689	2.556	13.2	19.7
3 12	13 3.58	-7 29.9	1.478	2.411	10.4	20.0	3 12	13 9.89	+16 19.6	1.655	2.575	10.4	19.6
3 22	12 58.16	-5 54.2	1.427	2.406	5.8	19.7	3 22	13 1.47	+17 17.0	1.645	2.594	8.5	19.5
4 1	12 51.44	-4 7.2	1.403	2.402	1.0	19.4	4 1	12 52.02	+17 55.5	1.661	2.612	8.4	19.6
4 11	12 44.49	-2 18.9	1.407	2.399	4.3	19.6	4 11	12 42.68	+18 9.4	1.703	2.631	10.3	19.7
4 21	12 38.33	-0 39.7	1.436	2.396	9.1	19.9	4 21	12 34.49	+17 57.3	1.769	2.649	12.9	19.9
5 1	12 33.88	+0 41.9	1.489	2.394	13.4	20.1	5 1	12 28.22	+17 20.7	1.856	2.667	15.4	20.1
5 11	12 31.69	+1 40.8	1.562	2.393	17.1	20.4	5 11	12 24.31	+16 23.3	1.961	2.685	17.6	20.3
474499	2003 UU ₄₇		4 3.1 69°09	21.3/28.8	16		398400	2011 SJ ₂₀₃		4 3.1 148°75	1.9/ 5.6	18	
3 2	13 43.43	+37 57.1	0.965	1.777	25.0	20.8	3 2	13 9.23	-14 28.9	2.606	3.422	10.8	21.1
3 12	13 30.27	+38 41.8	0.948	1.795	23.0	20.7	3 12	13 4.49	-14 5.1	2.526	3.426	8.2	21.0
3 22	13 12.88	+38 35.6	0.948	1.814	21.6	20.7	3 22	12 58.40	-13 28.2	2.470	3.430	5.2	20.8
4 1	12 53.91	+37 25.2	0.964	1.833	21.4	20.8	4 1	12 51.49	-12 40.4	2.443	3.434	2.5	20.6
4 11	12 36.38	+35 11.2	1.000	1.852	22.3	20.9	4 11	12 44.45	-11 45.9	2.445	3.438	2.6	20.6
4 21	12 22.48	+32 6.7	1.053	1.871	24.0	21.1	4 21	12 37.94	-10 49.1	2.476	3.441	5.5	20.8
5 1	12 13.21	+28 29.4	1.124	1.890	26.0	21.3	5 1	12 32.56	-9 54.9	2.534	3.444	8.4	21.0
5 11	12 8.55	+24 36.4	1.210	1.909	27.8	21.6	5 11	12 28.72	-9 7.7	2.617	3.447	11.0	21.2
136032	2002 VP ₁₁₀		4 3.1 78°05	5.6/27.9	18		105590	2000 RJ ₈₆		4 3.2 294°33	0.4/ 3.5	17	
3 2	13 12.19	+11 3.2	2.192	3.059	10.6	19.0	3 2	13 12.32	-7 21.7	2.213	3.056	11.5	19.7
3 12	13 6.58	+12 7.3	2.156	3.082	8.0	18.9	3 12	13 6.95	-7 16.6	2.130	3.051	8.4	19.4
3 22	12 59.49	+13 6.1	2.146	3.105	6.0	18.8	3 22	12 59.89	-7 2.7	2.072	3.046	4.8	19.2
4 1	12 51.64	+13 53.4	2.164	3.128	5.8	18.8	4 1	12 51.77	-6 42.4	2.043	3.041	1.1	18.9
4 11	12 43.86	+14 24.3	2.210	3.150	7.5	19.0	4 11	12 43.42	-6 19.5	2.042	3.036	2.9	19.1
4 21	12 36.89	+14 36.4	2.281	3.172	9.9	19.1	4 21	12 35.65	-5 58.0	2.070	3.031	6.7	19.3
5 1	12 31.33	+14 29.3	2.376	3.195	12.2	19.3	5 1	12 29.22	-5 42.0	2.124	3.026	10.1	19.5
5 11	12 27.57	+14 4.7	2.491	3.216	14.3	19.5	5 11	12 24.65	-5 34.6	2.200	3.021	13.1	19.7
54633	2000 SL ₁₃₀		4 3.1 166°36	7.2/11.7	18		36317	2000 LL ₁₂		4 3.2 274°32	0.5/ 3.6	18	
3 2	13 12.25	-30 24.3	2.443	3.168	14.0	19.5	3 2	13 12.31	-9 44.6	1.954	2.796	12.8	19.0
3 12	13 7.01	-30 54.5	2.354	3.168	12.0	19.4	3 12	13 7.34	-9 6.1	1.849	2.769	9.5	18.8
3 22	12 59.97	-31 3.2	2.287	3.169	9.9	19.2	3 22	13 0.32	-8 12.0	1.768	2.741	5.6	18.5
4 1	12 51.77	-30 48.8	2.243	3.169	8.1	19.1	4 1	12 51.88	-7 5.8	1.715	2.713	1.3	18.1
4 11	12 43.29	-30 12.5	2.225	3.170	7.2	19.1	4 11	12 42.93	-5 53.4	1.690	2.684	3.4	18.2
4 21	12 35.40	-29 18.0	2.234	3.170	7.9	19.1	4 21	12 34.49	-4 42.0	1.693	2.654	7.9	18.4
5 1	12 28.91	-28 11.4	2.269	3.171	9.6	19.2	5 1	12 27.48	-3 38.6	1.722	2.624	12.1	18.6
5 11	12 24.37	-27 0.0	2.327	3.171	11.7	19.4	5 11	12 22.60	-2 49.1	1.772	2.594	15.7	18.8
88060	2000 VO ₄₄		4 3.1 170°40	5.3/ 9.4	18		155806	2000 VE ₂₈		4 3.2 129°44	1.7/ 5.2	18	
3 2	13 11.84	-24 50.4	2.213	2.981	14.0	19.3	3 2	13 11.89	-14 11.6	2.305	3.124	12.0	20.3
3 12	13 6.70	-24 40.0	2.127	2.983	11.5	19.1	3 12	13 6.46	-13 32.9	2.235	3.139	9.0	20.1
3 22	12 59.77	-24 7.1	2.063	2.985	8.7	18.9	3 22	12 59.51	-12 39.4	2.190	3.153	5.6	19.9
4 1	12 51.74	-23 12.3	2.024	2.987	6.2	18.8	4 1	12 51.69	-11 34.3	2.173	3.167	2.3	19.8
4 11	12 43.50	-21 59.0	2.013	2.989	5.3	18.7	4 11	12 43.80	-10 22.8	2.186	3.180	2.8	19.8
4 21	12 35.94	-20 33.4	2.030	2.990	6.9	18.8	4 21	12 36.60	-9 10.9	2.228	3.193	6.1	20.0
5 1	12 29.85	-19 3.1	2.074	2.990	9.6	19.0	5 1	12 30.74	-8 4.3	2.298	3.205	9.3	20.3
5 11	12 25.74	-17 36.0	2.142	2.991	12.4	19.2	5 11	12 26.66	-7 7.9	2.391	3.216	12.1	20.5
31385	1998 XF ₉₆		4 3.1 285°53	8.2/25.3	18		377140	2003 OC ₁₆		4 3.2 167°99	2.4/ 6.2	18	
3 2	13 11.18	+12 50.9	1.676	2.554	12.8	17.9	3 2	13 11.73	-16 16.1	2.624	3.427	11.1	21.3
3 12	13 6.60	+14 38.5	1.611	2.539	10.1	17.7	3 12	13 6.29	-15 56.1	2.541	3.432	8.5	21.1
3 22	12 59.87	+16 22.1	1.571	2.524	8.4	17.6	3 22	12 59.42	-15 22.0	2.482	3.436	5.6	20.9
4 1	12 51.77	+17 50.9	1.557	2.509	8.8	17.6	4 1	12 51.68	-14 35.6	2.452	3.440	3.0	20.7
4 11	12 43.37	+18 55.4	1.568	2.494	11.1	17.7	4 11	12 43.81	-13 40.6	2.452	3.443	2.9	20.7
4 21	12 35.74	+19 30.1	1.602	2.479	14.1	17.8	4 21	12 36.48	-12 41.8	2.481	3.445	5.6	20.9
5 1	12 29.84	+19 33.6	1.656	2.464	17.1	18.0	5 1	12 30.34	-11 44.3	2.538	3.447	8.4	21.1
5 11	12 26.27	+19 8.2	1.726	2.449	19.8	18.1	5 11	12 25.81	-10 52.7	2.620	3.448	11.0	21.3
463087	2011 SH ₁₈₂		4 3.1 116°66	0.8/ 3.8	18		177064	2003 FQ ₄		4 3.2 322°74	9.9/19.7	18	
3 2	13 17.33	-9 29.6	1.707	2.549	14.4	22.3	3 2	13 6.33	+18 39.2	1.818	2.693	12.1	18.4
3 12	13 10.74	-9 8.7	1.648	2.567	10.6	22.1	3 12	13 3.09	+21 11.7	1.755	2.668	10.4	18.2
3 22	13 2.04	-8 33.9	1.612	2.584	6.1	21.9	3 22	12 57.91	+23 37.0	1.718	2.643	10.0	18.1
4 1	12 52.13	-7 49.1	1.603	2.600	1.6	21.6	4 1	12 51.44	+25 42.8	1.707	2.619	11.1	18.1
4 11	12 42.16	-7 0.5	1.622	2.616	3.5	21.8	4 11	12 44.62	+27 19.2	1.721	2.595	13.3	18.2
4 21	12 33.22	-6 14.5	1.669	2.632	7.9	22.1	4 21	12 38.42	+28 20.6	1.756	2.572	15.8	18.3
5 1	12 26.17	-5 36.8	1.742	2.646	11.9	22.3	5 1	12 33.73	+28 45.7	1.808	2.550	18.3	18.5
5 11	12 21.53	-5 11.6	1.836	2.661	15.2	22.6	5 11	12 31.16	+28 37.4	1.875	2.528	20.4	18.6
115427	2003 SG ₃₁₂		4 3.1 252°77	6.6/27.1	17		87011	2000 JQ ₅₆		4 3.2 266°65	2.8/31.5	18	
3 2	13 13.46	+8 57.4	1.802	2.674	12.3	20.4	3 2	13 12.18	-0 43.				

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4 3.2

4 3.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
250444	2003 YA ₅₆		4 3.2 146°16	4°3/30.2	18		215528	2002 VQ ₉₁		4 3.2 222°16	5°5/27.9	16	
3 2	13 14.92	+ 3 59.9	1.766	2.636	12.7	20.5	3 2	13 15.55	+10 43.8	2.347	3.206	10.4	21.7
3 12	13 8.99	+ 5 0.5	1.708	2.642	9.1	20.3	3 12	13 9.21	+11 49.4	2.271	3.193	7.9	21.6
3 22	13 1.08	+ 6 3.0	1.674	2.648	5.7	20.1	3 22	13 1.17	+12 52.4	2.221	3.179	5.9	21.4
4 1	12 52.00	+ 6 59.9	1.668	2.654	4.4	20.0	4 1	12 52.06	+13 46.2	2.200	3.164	5.7	21.4
4 11	12 42.82	+ 7 44.2	1.690	2.660	6.8	20.2	4 11	12 42.72	+14 24.9	2.209	3.148	7.6	21.5
4 21	12 34.55	+ 8 11.1	1.737	2.664	10.3	20.4	4 21	12 33.97	+14 44.9	2.244	3.132	10.2	21.6
5 1	12 28.01	+ 8 18.1	1.809	2.669	13.7	20.6	5 1	12 26.56	+14 44.9	2.303	3.114	12.8	21.7
5 11	12 23.73	+ 8 5.5	1.900	2.673	16.6	20.8	5 11	12 21.02	+14 25.5	2.383	3.096	15.1	21.9
428713	2008 RT ₃₂		4 3.2 178°44	0°2/ 3.4	17		206233	2002 VH ₁₂₅		4 3.2 44°15	0°9/ 3.9	17	
3 2	13 12.85	- 7 56.6	2.219	3.060	11.6	22.0	3 2	13 13.06	- 8 44.6	2.066	2.908	12.3	20.0
3 12	13 7.29	- 7 34.2	2.141	3.061	8.4	21.8	3 12	13 7.56	- 8 42.4	1.991	2.910	9.0	19.8
3 22	13 0.06	- 7 1.6	2.089	3.062	4.8	21.5	3 22	13 0.28	- 8 29.7	1.940	2.912	5.3	19.6
4 1	12 51.82	- 6 22.1	2.064	3.063	1.0	21.3	4 1	12 51.91	- 8 9.2	1.917	2.915	1.5	19.3
4 11	12 43.41	- 5 40.3	2.069	3.063	3.0	21.4	4 11	12 43.34	- 7 44.6	1.923	2.917	3.0	19.5
4 21	12 35.62	- 5 0.9	2.103	3.062	6.7	21.7	4 21	12 35.46	- 7 20.5	1.956	2.920	6.9	19.7
5 1	12 29.20	- 4 28.5	2.163	3.062	10.1	21.9	5 1	12 29.03	- 7 1.1	2.016	2.923	10.4	19.9
5 11	12 24.62	- 4 6.4	2.246	3.061	13.1	22.1	5 11	12 24.58	- 6 50.1	2.098	2.925	13.4	20.1
373490	2000 WW ₂₃		4 3.2 186°49	4°7/29.3	17		214188	2005 EO ₁₁		4 3.2 20°80	2°0/ 1.7	18	
3 2	13 14.98	+ 8 33.4	2.286	3.147	10.5	21.3	3 2	13 12.35	- 3 33.1	1.256	2.135	16.1	20.2
3 12	13 8.72	+ 9 19.5	2.221	3.147	7.8	21.1	3 12	13 7.81	- 2 51.6	1.198	2.139	11.5	19.9
3 22	13 0.82	+10 3.3	2.181	3.146	5.4	20.9	3 22	13 0.68	- 1 58.3	1.162	2.143	6.4	19.7
4 1	12 51.96	+10 39.1	2.170	3.145	4.8	20.9	4 1	12 51.99	- 1 0.7	1.150	2.148	2.0	19.4
4 11	12 42.99	+11 2.1	2.188	3.143	6.6	21.0	4 11	12 43.10	- 0 8.1	1.163	2.154	5.6	19.6
4 21	12 34.70	+11 9.1	2.234	3.141	9.4	21.2	4 21	12 35.35	+ 0 31.7	1.201	2.160	10.7	19.9
5 1	12 27.80	+10 59.1	2.304	3.138	12.1	21.3	5 1	12 29.80	+ 0 53.1	1.260	2.167	15.3	20.2
5 11	12 22.77	+10 32.7	2.395	3.135	14.4	21.5	5 11	12 27.05	+ 0 53.9	1.337	2.174	19.1	20.5
387331	2012 VV ₈₉		4 3.2 84°95	1°2/ 1.8	17		343032	2009 BG ₁₃₅		4 3.2 103°22	0°6/ 3.8	17	
3 2	13 10.41	- 3 29.4	2.265	3.120	10.8	21.4	3 2	13 10.69	- 9 26.3	2.192	3.032	11.7	21.8
3 12	13 5.42	- 2 52.3	2.201	3.131	7.7	21.2	3 12	13 5.72	- 8 56.3	2.121	3.040	8.5	21.6
3 22	12 58.94	- 2 8.6	2.164	3.142	4.2	21.0	3 22	12 59.17	- 8 14.7	2.075	3.048	5.0	21.4
4 1	12 51.62	- 1 22.7	2.154	3.152	1.2	20.8	4 1	12 51.70	- 7 25.2	2.058	3.055	1.2	21.2
4 11	12 44.23	- 0 39.4	2.174	3.163	3.6	21.0	4 11	12 44.11	- 6 32.7	2.069	3.063	2.9	21.3
4 21	12 37.49	- 0 3.2	2.222	3.173	7.0	21.3	4 21	12 37.18	- 5 42.5	2.108	3.070	6.5	21.6
5 1	12 32.03	+ 0 22.5	2.296	3.183	10.1	21.5	5 1	12 31.58	- 4 59.5	2.174	3.078	9.9	21.8
5 11	12 28.28	+ 0 35.5	2.392	3.194	12.8	21.7	5 11	12 27.78	- 4 27.4	2.263	3.085	12.7	22.0
365525	2010 RW ₁₃₆		4 3.2 224°74	1°3/ 1.9	16		110433	2001 TJ ₂₇		4 3.2 76°73	1°2/ 4.3	18	
3 2	13 14.09	- 4 16.0	1.908	2.763	12.5	22.3	3 2	13 13.73	-10 51.5	1.690	2.534	14.4	19.8
3 12	13 8.49	- 3 31.0	1.825	2.754	9.0	22.0	3 12	13 8.21	-10 28.1	1.633	2.552	10.6	19.6
3 22	13 0.88	- 2 36.0	1.766	2.744	5.0	21.7	3 22	13 0.66	- 9 49.4	1.598	2.569	6.3	19.4
4 1	12 52.00	- 1 36.0	1.736	2.733	1.4	21.5	4 1	12 51.97	- 8 59.5	1.589	2.586	2.0	19.1
4 11	12 42.81	- 0 37.6	1.734	2.722	4.3	21.7	4 11	12 43.22	- 8 4.6	1.609	2.604	3.4	19.2
4 21	12 34.30	+ 0 12.8	1.760	2.711	8.5	21.9	4 21	12 35.43	- 7 11.5	1.655	2.621	7.7	19.5
5 1	12 27.35	+ 0 50.1	1.811	2.698	12.4	22.1	5 1	12 29.44	- 6 26.5	1.727	2.638	11.6	19.8
5 11	12 22.56	+ 1 11.1	1.883	2.686	15.7	22.3	5 11	12 25.74	- 5 54.1	1.820	2.655	14.8	20.0
435289	2007 TA ₃₈₈		4 3.2 67°16	1°3/ 1.9	15		471445	2011 UN ₁₃₃		4 3.2 227°36	1°6/ 4.9	18	
3 2	13 12.50	- 3 25.8	1.996	2.853	12.0	21.5	3 2	13 12.87	-11 30.1	2.529	3.352	10.9	21.8
3 12	13 6.96	- 2 51.2	1.946	2.877	8.5	21.3	3 12	13 7.24	-11 32.5	2.439	3.345	8.2	21.6
3 22	12 59.80	- 2 9.8	1.922	2.900	4.6	21.1	3 22	13 0.05	-11 24.5	2.374	3.339	5.1	21.4
4 1	12 51.77	- 1 26.4	1.926	2.924	1.3	20.9	4 1	12 51.87	-11 7.6	2.338	3.332	2.1	21.2
4 11	12 43.76	- 0 46.5	1.959	2.947	3.9	21.2	4 11	12 43.45	-10 44.7	2.331	3.324	2.7	21.2
4 21	12 36.60	- 0 14.6	2.019	2.971	7.5	21.4	4 21	12 35.53	-10 19.4	2.354	3.317	5.9	21.4
5 1	12 30.95	+ 0 5.8	2.104	2.994	10.8	21.7	5 1	12 28.79	- 9 55.8	2.404	3.309	9.0	21.6
5 11	12 27.22	+ 0 13.1	2.212	3.017	13.5	21.9	5 11	12 23.74	- 9 37.5	2.478	3.301	11.7	21.8
85642	1998 OS ₈		4 3.2 214°92	2°5/ 5.3	18		489617	2007 TY ₂₆₈		4 3.2 45°24	2°4/ 1.3	18	
3 2	13 16.63	-13 57.7	1.745	2.572	14.8	19.7	3 2	13 16.30	+ 0 38.0	1.683	2.548	13.4	20.2
3 12	13 10.58	-13 46.1	1.658	2.564	11.3	19.4	3 12	13 9.81	+ 0 51.9	1.645	2.578	9.5	20.1
3 22	13 2.19	-13 16.1	1.593	2.556	7.2	19.2	3 22	13 1.42	+ 1 8.7	1.631	2.609	5.3	19.9
4 1	12 52.25	-12 29.7	1.555	2.548	3.3	18.9	4 1	12 52.09	+ 1 23.8	1.645	2.640	2.4	19.8
4 11	12 41.89	-11 31.9	1.544	2.538	3.8	18.9	4 11	12 42.90	+ 1 32.3	1.686	2.672	4.9	20.0
4 21	12 32.29	-10 29.7	1.562	2.528	8.0	19.1	4 21	12 34.84	+ 1 30.9	1.755	2.703	8.7	20.3
5 1	12 24.50	- 9 31.1	1.605	2.517	12.2	19.4	5 1	12 28.65	+ 1 17.7	1.847	2.735	12.2	20.5
5 11	12 19.20	- 8 42.6	1.669	2.505	16.0	19.6	5 11	12 24.73	+ 0 52.3	1.961	2.767	15.0	20.8
94769	2001 XR ₁₀₁		4 3.2 206°96	5°1/29.3	17		128417	Chrimccaa		4 3.2 357°25	5°9/27.7	18	
3 2	13 15.92	+ 6 12.1	1.860	2.727	12.3	19.8	3 2	13 10.77	+10 50.3	2.085	2.956	10.9	19.4
3 12	13 9.78	+ 7 23.9	1.790	2.721	9.0	19.5	3 12	13 5.84	+11 52.7	2.027	2.956	8.3	19.3
3 22	13 1.59	+ 8 36.8	1.745	2.715	6.1	19.4	3 22	12 59.27	+12 51.1	1.995	2.955	6.3	19.1
4 1	12 52.13	+ 9 42.7	1.728	2.707	5.3	19.3	4 1	12 51.73	+13 38.6	1.989	2.955	6.1	19.1
4 11	12 42.44	+10 34.1	1.740	2.699	7.6	19.4	4 11	12 44.08	+14 9.8	2.011	2.955	7.9	19.2
4 21	12 33.53	+11 5.8	1.777	2.691	11.0	19.6	4 21	12 37.13	+14 21.2	2.058	2.955	10.6	19.4
5 1	12 26.29	+11 15.4	1.838	2.681	14.3	19.8	5 1	12 31.60	+14 12.1	2.128	2.955	13.2	19.6
5 11	12 21.30	+11 3.4	1.919	2.671	17.1	20.0	5 11	12 27.94	+13 43.4	2.217	2.955	15.5	19.7
505492	2013 WT ₄₈		4 3.2 150°81	2°3/ 5.7	17		18917	2000 OG ₄₈		4 3.2 82°02	2°2/ 1.1	18	
3 2	13 13.47	-14 39.0	2.448	3.259	11.6	22.7	3 2						

EPHEMERIDES

4 3.2

4 3.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
301808	2011 <i>OO</i> ₁₀		4 3.2 279°46	1°5/ 1.5 17			421443	2014 <i>MN</i> ₁₇		4 3.2 248°42	4°7/29.9 17		
3 2	13 10.36	- 3 57.9	2.241	3.096	10.9	21.4	3 2	13 14.20	+ 2 49.9	1.644	2.516	13.3	21.6
3 12	13 5.69	- 3 0.4	2.138	3.068	7.9	21.1	3 12	13 8.89	+ 4 11.8	1.564	2.501	9.6	21.3
3 22	12 59.31	- 1 52.6	2.061	3.039	4.4	20.9	3 22	13 1.28	+ 5 40.3	1.509	2.485	6.0	21.0
4 1	12 51.77	- 0 39.3	2.012	3.009	1.5	20.6	4 1	12 52.15	+ 7 6.5	1.481	2.468	4.8	20.9
4 11	12 43.84	+ 0 33.1	1.992	2.979	4.1	20.7	4 11	12 42.62	+ 8 20.6	1.481	2.450	7.6	21.0
4 21	12 36.35	+ 1 38.4	2.001	2.948	7.9	20.9	4 21	12 33.84	+ 9 15.1	1.506	2.433	11.7	21.2
5 1	12 30.07	+ 2 31.3	2.036	2.918	11.5	21.1	5 1	12 26.83	+ 9 45.3	1.554	2.414	15.6	21.4
5 11	12 25.57	+ 3 8.2	2.093	2.886	14.6	21.2	5 11	12 22.28	+ 9 50.3	1.620	2.395	18.9	21.6
233465	2006 <i>KZ</i> ₃₄		4 3.2 79°70	1°6/ 1.6 17			522773	2016 <i>NW</i> ₇₆		4 3.2 185°59	5°6/26.5 17		
3 2	13 11.45	- 2 47.8	1.989	2.850	11.8	20.8	3 2	13 8.46	+ 10 40.2	2.357	3.228	9.8	21.3
3 12	13 6.42	- 2 9.0	1.919	2.851	8.4	20.6	3 12	13 4.06	+ 12 10.0	2.300	3.228	7.5	21.2
3 22	12 59.64	- 1 22.9	1.874	2.852	4.7	20.3	3 22	12 58.24	+ 13 37.0	2.270	3.228	5.9	21.1
4 1	12 51.82	- 0 34.3	1.856	2.853	1.6	20.1	4 1	12 51.57	+ 14 54.1	2.269	3.227	6.0	21.1
4 11	12 43.83	+ 0 10.7	1.867	2.855	4.2	20.3	4 11	12 44.79	+ 15 55.3	2.295	3.227	7.7	21.2
4 21	12 36.54	+ 0 47.2	1.905	2.856	8.0	20.5	4 21	12 38.59	+ 16 36.8	2.347	3.227	10.1	21.3
5 1	12 30.71	+ 1 11.1	1.969	2.857	11.5	20.8	5 1	12 33.59	+ 16 57.0	2.421	3.227	12.4	21.5
5 11	12 26.83	+ 1 20.3	2.053	2.858	14.5	21.0	5 11	12 30.23	+ 16 56.5	2.515	3.227	14.5	21.7
170052	2002 <i>VG</i> ₆₀		4 3.2 88°93	0°1/ 3.0 18			28799	2000 <i>HB</i> ₇₂		4 3.2 162°52	0°7/ 2.6 18		
3 2	13 10.57	- 7 41.2	2.193	3.039	11.5	20.5	3 2	13 15.11	- 6 47.2	1.696	2.549	14.0	19.2
3 12	13 5.57	- 6 59.4	2.132	3.055	8.3	20.3	3 12	13 9.31	- 5 55.8	1.627	2.554	10.1	18.9
3 22	12 59.06	- 6 7.3	2.096	3.071	4.6	20.1	3 22	13 1.37	- 4 51.2	1.582	2.559	5.6	18.7
4 1	12 51.70	- 5 9.4	2.088	3.087	0.8	19.9	4 1	12 52.15	- 3 39.2	1.564	2.563	1.0	18.4
4 11	12 44.29	- 4 11.1	2.109	3.102	3.1	20.1	4 11	12 42.75	- 2 27.4	1.575	2.567	4.2	18.6
4 21	12 37.58	- 3 17.7	2.159	3.118	6.7	20.3	4 21	12 34.25	- 1 23.6	1.613	2.569	8.7	18.9
5 1	12 32.20	- 2 33.8	2.235	3.133	9.9	20.6	5 1	12 27.55	- 0 33.8	1.676	2.572	12.8	19.1
5 11	12 28.59	- 2 2.3	2.334	3.148	12.7	20.8	5 11	12 23.21	- 0 1.7	1.760	2.573	16.2	19.4
434527	2005 <i>SB</i> ₂₃₅		4 3.2 258°65	2°4/31.6 16			284407	2006 <i>UQ</i> ₁₅₆		4 3.2 229°20	2°9/30.9 17		
3 2	13 13.30	+ 2 9.7	2.634	3.489	9.5	21.5	3 2	13 12.15	+ 3 24.9	2.583	3.442	9.5	21.1
3 12	13 7.49	+ 2 32.1	2.542	3.471	6.8	21.3	3 12	13 6.64	+ 4 0.0	2.503	3.433	6.9	20.9
3 22	13 0.18	+ 2 56.6	2.477	3.452	4.0	21.1	3 22	12 59.68	+ 4 36.7	2.449	3.423	4.2	20.7
4 1	12 51.92	+ 3 19.5	2.441	3.433	2.4	21.0	4 1	12 51.84	+ 5 10.6	2.425	3.414	2.9	20.6
4 11	12 43.40	+ 3 36.8	2.435	3.414	4.3	21.1	4 11	12 43.83	+ 5 37.5	2.430	3.403	4.8	20.7
4 21	12 35.34	+ 3 45.6	2.459	3.394	7.3	21.2	4 21	12 36.32	+ 5 54.1	2.464	3.393	7.6	20.9
5 1	12 28.39	+ 3 43.5	2.508	3.374	10.2	21.4	5 1	12 29.95	+ 5 58.1	2.524	3.382	10.4	21.0
5 11	12 23.04	+ 3 29.5	2.581	3.354	12.7	21.5	5 11	12 25.18	+ 5 48.8	2.606	3.371	12.8	21.2
407722	2011 <i>UW</i> ₂₉₇		4 3.2 98°53	0°4/ 2.8 18			158102	2000 <i>XD</i> ₃₀		4 3.2 157°78	4°3/29.9 17		
3 2	13 14.66	- 7 25.4	1.529	2.386	15.0	21.6	3 2	13 15.39	+ 7 6.5	2.258	3.118	10.6	20.0
3 12	13 9.03	- 6 37.3	1.473	2.402	10.8	21.4	3 12	13 9.01	+ 7 46.2	2.196	3.124	7.8	19.8
3 22	13 1.19	- 5 35.1	1.440	2.417	6.0	21.2	3 22	13 1.01	+ 8 24.3	2.161	3.129	5.2	19.7
4 1	12 52.09	- 4 25.1	1.433	2.432	1.0	20.9	4 1	12 52.08	+ 8 55.5	2.154	3.134	4.3	19.6
4 11	12 42.93	- 3 15.6	1.453	2.446	4.2	21.1	4 11	12 43.08	+ 9 15.1	2.177	3.138	6.2	19.8
4 21	12 34.84	- 2 14.4	1.501	2.460	8.9	21.4	4 21	12 34.81	+ 9 20.2	2.227	3.142	9.0	19.9
5 1	12 28.70	- 1 27.8	1.572	2.474	13.0	21.7	5 1	12 27.95	+ 9 9.5	2.302	3.146	11.7	20.1
5 11	12 25.06	- 0 59.1	1.663	2.488	16.5	22.0	5 11	12 22.97	+ 8 43.6	2.398	3.149	14.1	20.3
68997	2002 <i>TE</i> ₁₃₆		4 3.2 190°19	3°4/ 6.6 18			277798	2006 <i>EA</i> ₅₇		4 3.2 70°47	0°3/ 2.9 18		
3 2	13 13.55	- 17 4.3	2.349	3.151	12.3	18.8	3 2	13 10.87	- 8 18.0	1.773	2.627	13.4	20.6
3 12	13 7.86	- 17 17.1	2.263	3.150	9.6	18.6	3 12	13 6.06	- 7 18.4	1.718	2.645	9.6	20.4
3 22	13 0.46	- 17 15.2	2.201	3.149	6.6	18.4	3 22	12 59.43	- 6 5.4	1.686	2.663	5.4	20.2
4 1	12 51.97	- 16 59.2	2.166	3.148	4.0	18.2	4 1	12 51.79	- 4 45.2	1.682	2.681	0.9	19.9
4 11	12 43.24	- 16 31.9	2.160	3.147	3.8	18.2	4 11	12 44.13	- 3 25.4	1.707	2.699	3.7	20.2
4 21	12 35.08	- 15 57.2	2.182	3.146	6.3	18.4	4 21	12 37.35	- 2 13.6	1.758	2.717	7.9	20.5
5 1	12 28.25	- 15 20.2	2.232	3.144	9.3	18.5	5 1	12 32.18	- 1 15.4	1.835	2.736	11.6	20.7
5 11	12 23.28	- 14 46.0	2.305	3.142	12.1	18.7	5 11	12 29.10	- 0 34.4	1.933	2.754	14.7	21.0
13659	1997 <i>FH</i> ₄		4 3.2 223°43	0°6/ 3.6 18			300203	2006 <i>WE</i> ₁₁₁		4 3.2 215°25	0°9/ 4.3 17		
3 2	13 17.62	- 7 17.5	1.763	2.609	13.9	17.9	3 2	13 9.50	- 10 54.0	2.772	3.600	9.9	21.5
3 12	13 11.20	- 7 21.4	1.683	2.604	10.2	17.7	3 12	13 4.70	- 10 24.7	2.682	3.593	7.3	21.4
3 22	13 2.52	- 7 14.9	1.626	2.599	5.9	17.4	3 22	12 58.58	- 9 44.8	2.618	3.586	4.4	21.2
4 1	12 52.36	- 7 0.4	1.596	2.594	1.4	17.1	4 1	12 51.65	- 8 56.8	2.583	3.579	1.4	20.9
4 11	12 41.85	- 6 42.3	1.595	2.589	3.6	17.2	4 11	12 44.55	- 8 4.7	2.577	3.572	2.4	21.0
4 21	12 32.13	- 6 25.3	1.621	2.583	8.1	17.5	4 21	12 37.89	- 7 12.6	2.602	3.564	5.5	21.2
5 1	12 24.20	- 6 14.3	1.673	2.577	12.3	17.7	5 1	12 32.26	- 6 25.1	2.654	3.556	8.4	21.4
5 11	12 18.71	- 6 13.0	1.746	2.571	15.8	17.9	5 11	12 28.09	- 5 45.5	2.730	3.547	10.9	21.5
399348	2000 <i>SA</i> ₁₈₁		4 3.2 173°00	0°3/ 3.5 17			503294	2016 <i>AF</i> ₂₄		4 3.2 344°65	0°5/ 3.6 17		
3 2	13 15.58	- 8 44.4	1.936	2.776	13.0	22.7	3 2	13 8.88	- 9 5.6	1.112	1.991	17.8	20.7
3 12	13 9.47	- 8 11.7	1.860	2.779	9.5	22.5	3 12	13 5.77	- 8 38.9	1.043	1.981	13.1	20.3
3 22	13 1.40	- 7 26.2	1.809	2.782	5.5	22.3	3 22	12 59.80	- 7 51.2	0.993	1.972	7.7	20.0
4 1	12 52.14	- 6 31.9	1.786	2.785	1.1	22.0	4 1	12 51.92	- 6 47.9	0.966	1.964	1.7	19.6
4 11	12 42.69	- 5 34.6	1.793	2.786	3.3	22.1	4 11	12 43.58	- 5 38.5	0.962	1.958	4.6	19.8
4 21	12 34.01	- 4 40.5	1.827	2.787	7.6	22.4	4 21	12 36.29	- 4 33.9	0.981	1.953	10.6	20.1
5 1	12 26.95	- 3 55.5	1.888	2.787	11.4	22.6	5 1	12 31.32	- 3 43.9	1.020	1.949	16.0	20.4
5 11	12 22.05	- 3 23.4	1.971	2.786	14.6	22.8	5 11	12 29.43	- 3 15.0	1.078	1.946	20.5	20.6
348282	2004 <i>XY</i> ₂		4 3.2 165°35										

EPHEMERIDES

4 3.2

4 3.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
42370	2002 <i>CB</i> ₁₃₇		4 3.2 319°64	7°8/ 9.6 18			403883	2011 <i>WU</i> ₉₆		4 3.2 257°94	1°4/ 2.0 17		
3 2	13 11.48	-25 11.0	1.631	2.419	17.4	18.7	3 2	13 14.24	-5 9.1	1.611	2.471	14.1	21.4
3 12	13 7.26	-25 46.7	1.539	2.404	14.6	18.5	3 12	13 9.03	-4 18.9	1.523	2.454	10.3	21.1
3 22	13 0.54	-25 56.6	1.467	2.390	11.5	18.2	3 22	13 1.44	-3 15.0	1.458	2.436	5.7	20.8
4 1	12 52.06	-25 37.9	1.417	2.376	8.8	18.0	4 1	12 52.23	-2 3.2	1.420	2.418	1.5	20.5
4 11	12 43.01	-24 52.0	1.391	2.363	7.8	17.9	4 11	12 42.54	-0 51.7	1.409	2.399	4.9	20.7
4 21	12 34.65	-23 44.4	1.390	2.350	9.5	18.0	4 21	12 33.56	+0 11.2	1.425	2.380	9.8	20.9
5 1	12 28.18	-22 24.5	1.413	2.337	12.6	18.1	5 1	12 26.37	+0 58.5	1.465	2.361	14.3	21.1
5 11	12 24.39	-21 3.0	1.456	2.326	16.1	18.3	5 11	12 21.71	+1 26.0	1.525	2.341	18.1	21.3
455258	2001 <i>TF</i> ₁₈₇		4 3.2 133°30	1°5/ 2.0 18			158996	2004 <i>SF</i> ₃₆		4 3.2 173°60	2°3/ 31.8 18		
3 2	13 18.01	-3 18.1	1.642	2.499	14.1	21.7	3 2	13 12.18	-0 53.2	2.073	2.934	11.4	20.1
3 12	13 11.37	-2 47.3	1.581	2.511	10.1	21.4	3 12	13 6.89	-0 3.6	2.003	2.935	8.1	19.9
3 22	13 2.52	-2 8.0	1.544	2.522	5.6	21.2	3 22	12 59.91	+0 51.8	1.959	2.937	4.6	19.7
4 1	12 52.37	-1 25.6	1.534	2.532	1.6	21.0	4 1	12 51.92	+1 47.6	1.943	2.938	2.3	19.5
4 11	12 42.12	-0 46.7	1.553	2.542	4.6	21.2	4 11	12 43.77	+2 37.9	1.956	2.938	4.7	19.7
4 21	12 32.90	-0 17.0	1.598	2.551	9.1	21.5	4 21	12 36.31	+3 17.4	1.997	2.939	8.3	19.9
5 1	12 25.62	+0 0.7	1.669	2.560	13.0	21.7	5 1	12 30.26	+3 42.7	2.062	2.939	11.6	20.1
5 11	12 20.83	+0 0.2	1.759	2.568	16.4	22.0	5 11	12 26.13	+3 52.1	2.149	2.939	14.4	20.3
206984	2004 <i>TA</i> ₁₃₃		4 3.2 112°73	1°6/ 1.9 18			249454	2009 <i>HH</i> ₄₁		4 3.2 289°87	0°5/ 3.9 17		
3 2	13 18.88	-2 53.6	1.707	2.562	13.8	20.4	3 2	13 7.54	-11 19.6	2.275	3.112	11.4	20.4
3 12	13 11.82	-2 24.1	1.653	2.582	9.8	20.2	3 12	13 3.54	-10 18.1	2.188	3.105	8.4	20.1
3 22	13 2.68	-1 47.2	1.625	2.602	5.4	20.0	3 22	12 58.02	-9 1.8	2.127	3.099	4.9	19.9
4 1	12 52.39	-1 8.2	1.624	2.621	1.6	19.8	4 1	12 51.58	-7 34.8	2.094	3.092	1.2	19.6
4 11	12 42.11	-0 33.2	1.651	2.640	4.5	20.0	4 11	12 44.95	-6 3.6	2.090	3.085	2.8	19.7
4 21	12 32.91	+0 7.4	1.706	2.658	8.7	20.3	4 21	12 38.86	-4 34.9	2.116	3.078	6.5	20.0
5 1	12 25.63	+0 5.7	1.786	2.675	12.5	20.5	5 1	12 33.97	-3 15.0	2.168	3.071	9.9	20.2
5 11	12 20.78	+0 4.4	1.888	2.691	15.6	20.8	5 11	12 30.77	-2 8.8	2.244	3.065	12.9	20.3
465396	2008 <i>GA</i> ₄₆		4 3.2 242°06	6°9/ 27.9 17			406363	2007 <i>RH</i> ₂₀₅		4 3.2 130°28	2°3/ 4.9 18		
3 2	13 16.68	+12 46.6	1.914	2.777	12.1	21.5	3 2	13 17.23	-12 12.8	1.632	2.467	15.3	21.5
3 12	13 10.33	+13 40.9	1.846	2.768	9.4	21.3	3 12	13 10.99	-12 15.9	1.562	2.474	11.5	21.2
3 22	13 1.94	+14 29.3	1.802	2.758	7.3	21.1	3 22	13 2.41	-12 2.6	1.515	2.481	7.2	21.0
4 1	12 52.28	+15 4.2	1.786	2.747	7.1	21.1	4 1	12 52.39	-11 35.2	1.494	2.488	3.0	20.8
4 11	12 42.41	+15 19.5	1.797	2.737	9.0	21.2	4 11	12 42.13	-10 58.5	1.500	2.494	3.8	20.8
4 21	12 33.35	+15 12.2	1.833	2.726	11.9	21.3	4 21	12 32.83	-10 18.8	1.534	2.500	8.1	21.1
5 1	12 25.96	+14 42.0	1.892	2.714	14.8	21.5	5 1	12 25.48	-9 42.9	1.592	2.506	12.2	21.3
5 11	12 20.82	+13 51.1	1.970	2.703	17.3	21.6	5 11	12 20.70	-9 16.2	1.672	2.511	15.8	21.6
110395	2001 <i>TO</i> ₈		4 3.2 264°46	2°3/ 1.4 18			9651	Arii-SooHoo		4 3.2 272°83	1°1/ 4.1 18		
3 2	13 17.20	+0 14.4	1.891	2.749	12.5	19.1	3 2	13 13.64	-10 18.6	1.733	2.577	14.1	18.8
3 12	13 10.86	+0 31.0	1.801	2.731	9.0	18.9	3 12	13 8.54	-9 58.5	1.637	2.557	10.5	18.5
3 22	13 2.35	+0 51.9	1.736	2.713	5.2	18.6	3 22	13 1.15	-9 22.5	1.565	2.537	6.3	18.2
4 1	12 52.38	+1 12.6	1.699	2.694	2.3	18.4	4 1	12 52.19	-8 33.6	1.520	2.517	1.9	17.8
4 11	12 41.99	+1 28.0	1.691	2.676	5.0	18.5	4 11	12 42.72	-7 37.4	1.502	2.496	3.6	17.9
4 21	12 32.24	+1 33.6	1.710	2.656	9.1	18.7	4 21	12 33.87	-6 40.9	1.510	2.476	8.3	18.1
5 1	12 24.10	+1 26.5	1.754	2.637	13.0	18.9	5 1	12 26.68	-5 51.4	1.544	2.454	12.7	18.3
5 11	12 18.26	+1 5.1	1.820	2.617	16.3	19.1	5 11	12 21.90	-5 14.6	1.599	2.433	16.6	18.5
112152	2002 <i>JO</i> ₇₁		4 3.2 289°54	0°5/ 2.8 17			231773	1999 <i>VP</i> ₁₈₉		4 3.2 146°98	1°2/ 4.3 18		
3 2	13 12.24	-7 6.0	1.478	2.341	15.0	20.0	3 2	13 15.76	-12 0.9	1.612	2.451	15.2	20.8
3 12	13 7.74	-6 24.6	1.392	2.325	11.0	19.7	3 12	13 9.88	-11 16.5	1.544	2.461	11.3	20.6
3 22	13 0.77	-5 27.1	1.330	2.308	6.2	19.4	3 22	13 1.75	-10 13.3	1.499	2.469	6.7	20.3
4 1	12 52.11	-4 18.6	1.292	2.291	1.1	19.0	4 1	12 52.26	-8 55.9	1.481	2.478	2.0	20.1
4 11	12 42.95	-3 7.6	1.281	2.274	4.5	19.2	4 11	12 42.62	-7 32.4	1.490	2.485	3.6	20.2
4 21	12 34.55	-2 2.8	1.295	2.257	9.8	19.5	4 21	12 33.96	-6 11.6	1.527	2.492	8.3	20.5
5 1	12 28.04	-1 12.3	1.333	2.240	14.5	19.7	5 1	12 27.24	-5 1.6	1.590	2.498	12.6	20.7
5 11	12 24.19	-0 41.1	1.389	2.224	18.6	19.9	5 11	12 23.01	-4 8.1	1.673	2.503	16.2	21.0
456674	2007 <i>RF</i> ₉₈		4 3.2 113°75	2°5/ 31.9 18			321241	2009 <i>BX</i> ₉₁		4 3.2 219°74	4°1/ 30.5 18		
3 2	13 13.00	-2 59.3	1.559	2.427	14.1	21.4	3 2	13 13.76	+1 35.0	1.621	2.493	13.4	20.9
3 12	13 7.86	-1 46.3	1.500	2.436	10.0	21.2	3 12	13 8.48	+2 49.1	1.552	2.489	9.6	20.7
3 22	13 0.58	-0 22.9	1.464	2.444	5.6	20.9	3 22	13 1.00	+4 9.5	1.507	2.484	5.8	20.4
4 1	12 52.04	+1 2.8	1.456	2.452	2.5	20.7	4 1	12 52.14	+5 27.9	1.488	2.478	4.1	20.3
4 11	12 43.37	+2 21.5	1.475	2.460	5.6	20.9	4 11	12 43.01	+6 35.1	1.498	2.472	6.9	20.5
4 21	12 35.68	+3 25.3	1.520	2.467	9.9	21.2	4 21	12 34.74	+7 24.3	1.532	2.466	11.0	20.7
5 1	12 29.85	+4 9.0	1.589	2.475	13.9	21.5	5 1	12 28.27	+7 51.1	1.590	2.459	14.8	20.9
5 11	12 26.41	+4 30.8	1.677	2.482	17.2	21.7	5 11	12 24.21	+7 54.8	1.667	2.453	18.1	21.1
296595	2009 <i>RV</i> ₅₀		4 3.2 161°77	0°0/ 3.1 16			159400	1998 <i>VL</i>		4 3.2 145°41	5°2/ 29.7 18		
3 2	13 11.94	-8 42.3	2.321	3.159	11.2	21.7	3 2	13 16.63	+5 8.6	1.617	2.488	13.5	20.2
3 12	13 6.57	-7 52.5	2.246	3.165	8.1	21.5	3 12	13 10.39	+6 21.3	1.562	2.497	9.8	20.0
3 22	12 59.67	-6 51.3	2.197	3.171	4.6	21.3	3 22	13 1.97	+7 35.0	1.533	2.505	6.4	19.8
4 1	12 51.87	-5 42.9	2.178	3.176	0.8	21.0	4 1	12 52.30	+8 40.9	1.530	2.513	5.3	19.8
4 11	12 43.94	-4 32.9	2.188	3.181	3.0	21.2	4 11	12 42.53	+9 30.9	1.554	2.520	7.8	19.9
4 21	12 36.65	-3 27.1	2.227	3.185	6.6	21.5	4 21	12 33.80	+9 59.9	1.605	2.526	11.4	20.1
5 1	12 30.65	-2 30.5	2.294	3.188	9.9	21.7	5 1	12 27.00	+10 5.7	1.678	2.532	14.9	20.4
5 11	12 26.39	-1 46.7	2.384	3.191	12.6	21.9	5 11	12 22.65	+9 49.5	1.769	2.537	17.8	20.6
384999	2012 <i>TT</i> ₂₂₂		4 3.2 223°18	0°6/ 2.5 17			317162	2001 <i>VD</i> ₁₃₁		4 3.2 75°01	6°9/ 25.9 18		
3 2	13 11.23	-5 12.2	2.365	3.213	10.7	21.6	3 2	13					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
490015	2008 <i>SM</i> ₂₅₀		4 3.2 242°09	2°2/ 1.5 17			132532	2002 <i>JU</i> ₆₂		4 3.2 286°96	8°1/25.9 18		
3 2	13 17.67	- 1 56.7	1.668	2.528	13.8	21.9	3 2	13 13.99	+15 47.2	1.898	2.763	12.1	19.2
3 12	13 11.46	- 1 17.7	1.580	2.511	10.0	21.6	3 12	13 8.50	+16 57.8	1.828	2.746	9.8	19.0
3 22	13 2.81	- 0 29.6	1.516	2.494	5.7	21.3	3 22	13 0.98	+18 0.7	1.783	2.728	8.2	18.9
4 1	12 52.51	+ 0 21.7	1.480	2.476	2.2	21.1	4 1	12 52.17	+18 47.4	1.764	2.710	8.4	18.9
4 11	12 41.70	+ 1 8.9	1.471	2.458	5.3	21.2	4 11	12 43.08	+19 11.3	1.771	2.693	10.3	19.0
4 21	12 31.61	+ 1 45.3	1.490	2.438	10.0	21.4	4 21	12 34.73	+19 8.8	1.802	2.675	13.0	19.1
5 1	12 23.36	+ 2 6.0	1.532	2.418	14.4	21.7	5 1	12 28.00	+18 39.9	1.854	2.657	15.8	19.2
5 11	12 17.67	+ 2 8.2	1.595	2.397	18.1	21.8	5 11	12 23.48	+17 47.1	1.924	2.639	18.2	19.4
122794	2000 <i>ST</i> ₉₃		4 3.2 86°66	2°0/ 5.4 18			426195	2012 <i>JY</i> ₆₆		4 3.2 264°26	5°9/ 9.4 17		
3 2	13 11.15	-15 13.0	1.843	2.670	14.1	19.9	3 2	13 11.38	-24 53.6	1.923	2.701	15.5	21.3
3 12	13 6.29	-14 21.2	1.779	2.687	10.6	19.7	3 12	13 6.80	-24 47.3	1.828	2.690	12.8	21.1
3 22	12 59.60	-13 10.0	1.739	2.703	6.7	19.5	3 22	13 0.11	-24 15.5	1.753	2.679	9.7	20.9
4 1	12 51.87	-11 43.9	1.726	2.719	2.8	19.2	4 1	12 52.02	-23 17.6	1.703	2.668	7.0	20.7
4 11	12 44.09	-10 10.2	1.741	2.735	3.2	19.3	4 11	12 43.56	-21 57.1	1.679	2.656	6.0	20.6
4 21	12 37.16	- 8 37.3	1.784	2.751	7.0	19.6	4 21	12 35.77	-20 21.0	1.682	2.645	7.8	20.7
5 1	12 31.85	+ 1 13.0	1.853	2.767	10.8	19.8	5 1	12 29.60	-18 38.5	1.711	2.633	11.0	20.9
5 11	12 28.62	- 6 3.0	1.945	2.782	13.9	20.1	5 11	12 25.68	-16 59.3	1.763	2.621	14.2	21.0
394788	2008 <i>HV</i> ₅₅		4 3.2 273°27	0°9/ 2.6 17			91083	1998 <i>FR</i> ₁₁₀		4 3.2 319°93	4°6/ 7.2 18		
3 2	13 15.15	- 6 26.8	1.375	2.240	15.9	21.9	3 2	13 12.55	-18 39.0	1.755	2.568	15.3	19.4
3 12	13 10.15	- 5 44.3	1.285	2.217	11.7	21.6	3 12	13 7.70	-18 51.4	1.671	2.563	12.1	19.2
3 22	13 2.31	- 4 44.5	1.216	2.194	6.6	21.2	3 22	13 0.64	-18 43.2	1.609	2.558	8.6	19.0
4 1	12 52.45	- 3 33.0	1.172	2.171	1.3	20.8	4 1	12 52.13	-18 14.8	1.571	2.553	5.4	18.8
4 11	12 41.86	- 2 18.7	1.155	2.147	5.1	21.0	4 11	12 43.24	-17 29.5	1.560	2.548	4.9	18.7
4 21	12 32.01	- 1 11.5	1.162	2.122	10.8	21.2	4 21	12 35.09	-16 33.6	1.576	2.543	7.8	18.9
5 1	12 24.24	- 0 20.4	1.192	2.098	16.1	21.5	5 1	12 28.66	-15 34.8	1.616	2.539	11.5	19.1
5 11	12 19.44	+ 0 9.1	1.241	2.073	20.6	21.7	5 11	12 24.61	-14 40.8	1.679	2.535	14.9	19.3
334723	2003 <i>KZ</i> ₃		4 3.2 296°52	3°2/31.8 17			69369	1994 <i>SP</i> ₉		4 3.2 353°90	1°4/ 1.8 18		
3 2	13 15.95	+ 1 47.8	1.731	2.597	13.0	20.6	3 2	13 6.91	- 7 12.7	1.566	2.434	14.0	18.8
3 12	13 10.23	+ 2 10.3	1.635	2.569	9.5	20.3	3 12	13 3.59	- 5 43.5	1.495	2.431	10.0	18.6
3 22	13 2.14	+ 2 36.6	1.565	2.542	5.6	20.0	3 22	12 58.26	- 3 57.1	1.448	2.428	5.5	18.3
4 1	12 52.39	+ 3 1.3	1.520	2.514	3.2	19.8	4 1	12 51.68	- 2 1.7	1.428	2.426	1.4	18.0
4 11	12 42.07	+ 3 18.2	1.504	2.486	5.9	19.9	4 11	12 44.88	- 0 8.1	1.435	2.425	4.8	18.2
4 21	12 32.34	+ 3 22.4	1.514	2.458	10.2	20.1	4 21	12 38.88	+ 1 33.4	1.468	2.424	9.5	18.5
5 1	12 24.30	+ 3 10.5	1.548	2.430	14.4	20.3	5 1	12 34.54	+ 2 54.7	1.525	2.423	13.6	18.7
5 11	12 18.70	+ 2 41.3	1.601	2.403	18.0	20.5	5 11	12 32.43	+ 3 51.6	1.602	2.424	17.1	19.0
301550	2009 <i>FY</i> ₇₆		4 3.2 173°16	1°3/ 1.5 17			375738	2009 <i>RU</i> ₅₀		4 3.2 164°96	0°2/ 3.4 17		
3 2	13 8.63	- 3 45.0	2.615	3.468	9.6	21.2	3 2	13 13.49	- 8 9.3	2.359	3.195	11.1	22.7
3 12	13 4.08	- 2 49.6	2.540	3.469	6.8	21.0	3 12	13 7.69	- 7 38.9	2.283	3.201	8.1	22.5
3 22	12 58.24	- 1 47.2	2.493	3.470	3.8	20.8	3 22	13 0.33	- 6 58.5	2.233	3.206	4.6	22.3
4 1	12 51.63	- 0 42.3	2.474	3.471	1.3	20.7	4 1	12 52.04	- 6 11.4	2.212	3.210	0.9	22.0
4 11	12 44.90	+ 0 20.2	2.486	3.472	3.5	20.8	4 11	12 43.61	- 5 22.3	2.221	3.214	2.9	22.2
4 21	12 38.68	+ 1 15.5	2.526	3.473	6.5	21.0	4 21	12 35.81	- 4 36.1	2.259	3.217	6.4	22.4
5 1	12 33.53	+ 2 0.0	2.594	3.473	9.4	21.2	5 1	12 29.31	- 3 57.1	2.325	3.220	9.7	22.6
5 11	12 29.86	+ 2 31.2	2.684	3.473	11.8	21.4	5 11	12 24.58	- 3 28.7	2.413	3.222	12.5	22.8
87752	2000 <i>SH</i> ₇₄		4 3.2 218°20	1°7/ 1.4 18			36711	2000 <i>RF</i> ₃₃		4 3.2 278°14	2°0/ 4.8 18		
3 2	13 15.34	- 0 53.1	2.550	3.398	10.0	20.7	3 2	13 13.23	-12 39.0	1.475	2.322	16.0	18.5
3 12	13 9.00	- 0 25.9	2.461	3.387	7.2	20.5	3 12	13 8.45	-12 18.9	1.395	2.314	12.1	18.3
3 22	13 1.09	+ 0 5.8	2.399	3.375	4.1	20.3	3 22	13 1.17	-11 38.5	1.336	2.306	7.5	18.0
4 1	12 52.18	+ 0 38.2	2.366	3.362	1.7	20.1	4 1	12 52.23	-10 40.9	1.303	2.298	2.9	17.7
4 11	12 43.02	+ 1 7.2	2.365	3.349	3.8	20.3	4 11	12 42.88	- 9 32.9	1.295	2.290	3.9	17.7
4 21	12 34.38	+ 1 29.2	2.393	3.335	7.1	20.4	4 21	12 34.37	- 8 23.0	1.313	2.282	8.8	18.0
5 1	12 26.93	+ 1 41.1	2.448	3.320	10.2	20.6	5 1	12 27.84	- 7 20.4	1.355	2.275	13.5	18.2
5 11	12 21.19	+ 1 41.4	2.526	3.304	12.8	20.8	5 11	12 24.01	- 6 32.1	1.417	2.267	17.5	18.5
64024	2001 <i>SL</i> ₁₆₀		4 3.2 141°94	1°3/ 4.8 18			458815	2011 <i>SC</i> ₂₆₀		4 3.2 114°63	0°3/ 2.9 18		
3 2	13 9.42	-12 48.7	2.517	3.341	10.9	20.1	3 2	13 17.11	- 6 44.0	1.694	2.543	14.1	22.4
3 12	13 4.71	-12 9.4	2.440	3.348	8.1	19.9	3 12	13 10.64	- 6 10.6	1.637	2.562	10.2	22.2
3 22	12 58.62	-11 17.2	2.388	3.354	5.0	19.7	3 22	13 2.09	- 5 25.7	1.604	2.580	5.7	21.9
4 1	12 51.71	-10 15.1	2.365	3.360	1.8	19.5	4 1	12 52.36	- 4 34.1	1.598	2.597	1.0	21.6
4 11	12 44.70	- 9 8.0	2.371	3.366	2.5	19.6	4 11	12 42.60	- 3 42.7	1.621	2.613	3.8	21.9
4 21	12 38.24	- 8 1.0	2.407	3.371	5.7	19.8	4 21	12 33.86	- 2 57.7	1.671	2.629	8.3	22.2
5 1	12 32.94	- 6 59.3	2.470	3.377	8.7	20.0	5 1	12 27.00	- 2 24.3	1.746	2.645	12.2	22.5
5 11	12 29.22	- 6 7.1	2.558	3.381	11.4	20.2	5 11	12 22.53	- 2 5.5	1.843	2.659	15.4	22.7
330687	2008 <i>HD</i> ₆₇		4 3.2 9°72	2°1/ 1.2 18			132192	2002 <i>EQ</i> ₃₉		4 3.2 267°10	1°8/ 4.5 17		
3 2	13 4.41	- 7 21.1	1.149	2.036	16.7	19.5	3 2	13 16.56	-10 53.3	1.656	2.496	14.9	19.9
3 12	13 2.24	- 5 32.3	1.093	2.038	11.8	19.3	3 12	13 10.82	-10 55.0	1.560	2.477	11.2	19.6
3 22	12 57.64	- 3 21.5	1.059	2.042	6.4	19.0	3 22	13 2.55	-10 41.5	1.488	2.457	6.9	19.3
4 1	12 51.55	- 1 1.0	1.049	2.047	2.1	18.7	4 1	12 52.52	-10 14.6	1.442	2.438	2.6	19.0
4 11	12 45.30	+ 1 13.6	1.064	2.053	6.1	19.0	4 11	12 41.86	- 9 38.7	1.423	2.417	3.8	19.0
4 21	12 40.10	+ 3 8.4	1.102	2.061	11.5	19.3	4 21	12 31.86	- 8 59.9	1.431	2.397	8.6	19.3
5 1	12 36.94	+ 4 33.8	1.162	2.070	16.2	19.6	5 1	12 23.66	- 8 25.1	1.463	2.376	13.1	19.5
5 11	12 36.39	+ 5 26.4	1.240	2.080	20.1	19.9	5 11	12 18.09	- 8 0.3	1.517	2.355	17.2	19.7
413235	2003 <i>SW</i> ₁₄₉		4 3.2 158°78	1°4/ 2.0 18			506970	2008 <i>RB</i> ₁₄₁		4 3.2 242°64	2°3/ 5.5 17		

EPHEMERIDES

4 3.2

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
495980	2007 <i>TW</i> ₂₇₀		4 3.2 283°65	2°3/ 5.0	17		17551	1993 <i>TZ</i> ₃₁		4 3.2 309°89	4°9/31.1	18	
3 2	13 13.34	-13 33.8	1.528	2.369	15.9	21.6	3 2	13 16.61	+ 4 14.5	1.315	2.195	15.4	17.9
3 12	13 8.72	-13 10.8	1.426	2.342	12.1	21.2	3 12	13 11.10	+ 4 48.0	1.243	2.182	11.3	17.7
3 22	13 1.48	-12 25.7	1.347	2.314	7.7	20.9	3 22	13 2.77	+ 5 23.3	1.193	2.170	7.0	17.4
4 1	12 52.33	-11 20.3	1.292	2.287	3.2	20.6	4 1	12 52.57	+ 5 52.4	1.168	2.158	4.9	17.2
4 11	12 42.46	-10 0.7	1.263	2.258	4.0	20.5	4 11	12 41.91	+ 6 7.1	1.168	2.146	7.9	17.4
4 21	12 33.18	- 8 36.1	1.261	2.230	9.1	20.8	4 21	12 32.26	+ 6 2.1	1.191	2.134	12.5	17.6
5 1	12 25.75	- 7 16.7	1.282	2.201	14.1	21.0	5 1	12 24.86	+ 5 35.0	1.237	2.123	17.0	17.8
5 11	12 21.07	- 6 11.5	1.324	2.172	18.6	21.1	5 11	12 20.46	+ 4 46.7	1.300	2.113	20.8	18.0
239566	2008 <i>SV</i> ₂₉₉		4 3.2 206°68	1°7/ 1.4	17		329318	2000 <i>SA</i> ₃₁₃		4 3.2 236°09	4°3/ 8.1	18	
3 2	13 10.80	- 3 18.9	2.037	2.897	11.7	20.6	3 2	13 13.03	-21 49.4	2.412	3.189	12.7	20.9
3 12	13 5.98	- 2 24.3	1.963	2.895	8.3	20.3	3 12	13 7.63	-21 39.5	2.306	3.174	10.3	20.7
3 22	12 59.47	- 1 21.3	1.915	2.893	4.6	20.1	3 22	13 0.47	-21 10.4	2.223	3.157	7.5	20.5
4 1	12 51.91	- 0 15.2	1.894	2.891	1.7	19.9	4 1	12 52.13	-20 22.5	2.167	3.140	5.0	20.3
4 11	12 44.16	+ 0 47.5	1.903	2.889	4.3	20.1	4 11	12 43.44	-19 18.7	2.140	3.122	4.4	20.2
4 21	12 37.08	+ 1 40.9	1.939	2.887	8.1	20.3	4 21	12 35.25	-18 4.0	2.141	3.103	6.5	20.3
5 1	12 31.40	+ 2 20.4	2.000	2.885	11.5	20.5	5 1	12 28.33	-16 45.3	2.171	3.084	9.4	20.5
5 11	12 27.61	+ 2 43.5	2.082	2.882	14.5	20.7	5 11	12 23.28	-15 29.4	2.224	3.064	12.3	20.6
213493	2002 <i>GH</i> ₃₆		4 3.2 301°05	0°1/ 3.1	16		121823	2000 <i>BA</i> ₁		4 3.2 169°70	9°6/ 7.9	18	
3 2	13 16.05	- 5 33.8	1.389	2.253	15.8	20.6	3 2	13 27.91	-23 15.8	1.355	2.142	20.4	19.3
3 12	13 10.77	- 5 33.6	1.302	2.234	11.6	20.3	3 12	13 19.82	-24 57.8	1.280	2.145	17.0	19.1
3 22	13 2.66	- 5 22.1	1.237	2.215	6.7	20.0	3 22	13 8.03	-26 16.1	1.224	2.147	13.3	18.9
4 1	12 52.55	- 5 2.8	1.197	2.195	1.2	19.6	4 1	12 53.59	-27 3.1	1.193	2.149	10.3	18.7
4 11	12 41.77	- 4 41.3	1.182	2.176	4.5	19.7	4 11	12 38.28	-27 16.2	1.186	2.151	9.7	18.7
4 21	12 31.76	- 4 24.0	1.193	2.158	10.1	20.0	4 21	12 24.08	-26 59.5	1.204	2.151	11.9	18.8
5 1	12 23.85	- 4 16.8	1.227	2.139	15.1	20.2	5 1	12 12.73	-26 22.8	1.245	2.152	15.5	19.0
5 11	12 18.90	- 4 23.9	1.279	2.122	19.5	20.5	5 11	12 5.23	-25 38.8	1.306	2.151	19.0	19.2
465448	2008 <i>SV</i> ₂₃		4 3.2 259°05	0°9/ 2.3	17		346214	2007 <i>YP</i> ₂₆		4 3.2 168°67	3°6/29.6	17	
3 2	13 10.93	- 5 58.6	1.927	2.783	12.4	21.6	3 2	13 11.10	+ 6 23.1	2.720	3.581	9.0	22.0
3 12	13 6.23	- 5 9.7	1.845	2.774	8.9	21.3	3 12	13 5.80	+ 7 12.1	2.655	3.584	6.6	21.9
3 22	12 59.68	- 4 9.3	1.789	2.766	5.0	21.1	3 22	12 59.21	+ 8 0.5	2.618	3.587	4.4	21.7
4 1	12 51.96	- 3 2.2	1.759	2.758	1.0	20.8	4 1	12 51.88	+ 8 43.7	2.610	3.590	3.7	21.7
4 11	12 43.97	- 1 55.3	1.759	2.749	3.9	21.0	4 11	12 44.45	+ 9 17.4	2.632	3.592	5.4	21.8
4 21	12 36.64	- 0 55.2	1.785	2.741	8.1	21.2	4 21	12 37.57	+ 9 38.7	2.681	3.594	7.8	22.0
5 1	12 30.77	- 0 7.5	1.837	2.732	11.8	21.4	5 1	12 31.78	+ 9 45.9	2.756	3.595	10.2	22.1
5 11	12 26.93	+ 0 24.2	1.910	2.723	15.1	21.6	5 11	12 27.48	+ 9 38.7	2.853	3.596	12.3	22.3
428794	2008 <i>SD</i> ₂₉₃		4 3.2 166°75	3°7/ 7.2	17		47363	1999 <i>XX</i> ₇₅		4 3.2 87°63	3°7/31.1	18	
3 2	13 14.59	-18 47.2	2.438	3.228	12.2	21.5	3 2	13 13.96	+ 1 14.2	1.566	2.439	13.8	18.3
3 12	13 8.58	-18 57.9	2.354	3.232	9.7	21.3	3 12	13 8.59	+ 2 11.8	1.508	2.446	9.8	18.1
3 22	13 0.90	-18 53.1	2.294	3.236	6.8	21.2	3 22	13 1.05	+ 3 14.4	1.474	2.452	5.8	17.9
4 1	12 52.18	-18 33.3	2.261	3.239	4.4	21.0	4 1	12 52.23	+ 4 14.3	1.467	2.459	3.7	17.7
4 11	12 43.24	-18 1.0	2.257	3.242	4.0	21.0	4 11	12 43.28	+ 5 3.5	1.486	2.465	6.4	17.9
4 21	12 34.89	-17 20.6	2.283	3.244	6.2	21.1	4 21	12 35.32	+ 5 36.2	1.531	2.472	10.5	18.2
5 1	12 27.87	-16 37.1	2.335	3.246	9.0	21.3	5 1	12 29.22	+ 5 49.0	1.599	2.478	14.2	18.4
5 11	12 22.68	-15 55.9	2.412	3.247	11.7	21.5	5 11	12 25.55	+ 5 41.5	1.687	2.484	17.4	18.6
409004	2002 <i>XF</i> ₅₃		4 3.2 90°46	2°4/ 5.6	18		143539	2003 <i>EN</i> ₂₅		4 3.2 87°77	0°5/ 2.8	18	
3 2	13 15.40	-14 48.5	1.817	2.640	14.5	21.1	3 2	13 12.70	- 4 47.1	2.288	3.136	11.0	20.2
3 12	13 9.30	-14 25.9	1.762	2.666	10.9	20.9	3 12	13 7.17	- 4 35.4	2.216	3.141	7.9	20.0
3 22	13 1.29	-13 45.5	1.730	2.691	6.9	20.8	3 22	13 0.08	- 4 16.8	2.170	3.146	4.4	19.8
4 1	12 52.23	-12 50.6	1.725	2.717	3.2	20.6	4 1	12 52.05	- 3 54.4	2.152	3.150	0.8	19.5
4 11	12 43.18	-11 47.2	1.748	2.741	3.4	20.6	4 11	12 43.87	- 3 32.3	2.163	3.155	3.1	19.7
4 21	12 35.11	-10 42.4	1.799	2.765	7.1	20.9	4 21	12 36.34	- 3 14.1	2.203	3.160	6.7	19.9
5 1	12 28.81	- 9 42.9	1.876	2.789	10.7	21.2	5 1	12 30.10	- 3 3.1	2.269	3.164	9.9	20.1
5 11	12 24.74	- 8 54.2	1.976	2.812	13.8	21.4	5 11	12 25.65	- 3 1.7	2.358	3.169	12.7	20.3
22469	Poloniny		4 3.2 100°24	2°1/ 1.3	18		350708	2001 <i>XB</i> ₁₄		4 3.2 200°01	3°0/29.5	18	
3 2	13 14.82	- 3 12.6	1.658	2.520	13.7	20.0	3 2	13 11.11	+ 6 52.2	3.506	4.359	7.4	22.2
3 12	13 8.97	- 2 8.4	1.608	2.541	9.7	19.8	3 12	13 5.60	+ 7 34.9	3.429	4.354	5.4	22.0
3 22	13 1.14	- 0 55.3	1.582	2.561	5.3	19.6	3 22	12 59.04	+ 8 17.0	3.381	4.348	3.6	21.9
4 1	12 52.21	+ 0 19.3	1.584	2.580	2.1	19.4	4 1	12 51.86	+ 8 55.0	3.363	4.341	3.1	21.8
4 11	12 43.29	+ 1 27.3	1.613	2.599	5.0	19.6	4 11	12 44.56	+ 9 25.5	3.376	4.333	4.5	21.9
4 21	12 35.40	+ 2 22.1	1.670	2.618	9.2	19.9	4 21	12 37.65	+ 9 46.2	3.418	4.324	6.5	22.0
5 1	12 29.33	+ 2 59.3	1.751	2.636	12.9	20.2	5 1	12 31.58	+ 9 55.6	3.487	4.315	8.5	22.2
5 11	12 25.56	+ 3 17.3	1.852	2.653	15.9	20.4	5 11	12 26.71	+ 9 53.2	3.580	4.306	10.3	22.3
149812	2005 <i>MN</i> ₂₆		4 3.2 190°53	0°8/ 4.1	17		13028	Klaustschira		4 3.2 239°96	6°5/26.9	18	
3 2	13 13.93	-10 6.3	2.140	2.974	12.2	21.2	3 2	13 13.47	+10 38.2	2.001	2.869	11.4	18.2
3 12	13 8.23	- 9 40.0	2.058	2.973	9.0	20.9	3 12	13 8.06	+12 7.7	1.929	2.855	8.8	18.0
3 22	13 0.75	- 9 1.1	2.001	2.971	5.3	20.7	3 22	13 0.74	+13 35.3	1.882	2.840	6.8	17.8
4 1	12 52.16	- 8 12.7	1.972	2.969	1.5	20.4	4 1	12 52.20	+14 52.6	1.863	2.824	6.8	17.8
4 11	12 43.36	- 7 19.7	1.972	2.966	3.0	20.5	4 11	12 43.37	+15 51.8	1.871	2.808	8.9	17.9
4 21	12 35.20	- 6 27.7	2.001	2.963	6.9	20.8	4 21	12 35.20	+16 27.9	1.905	2.792	11.8	18.0
5 1	12 28.46	- 5 42.2	2.057	2.959	10.4	21.0	5 1	12 28.52	+16 39.1	1.962	2.774	14.7	18.2
5 11	12 23.67	- 5 7.4	2.135	2.954	13.5	21.2	5 11	12 23.91	+16 26.2	2.036	2.756	17.2	18.4
306149	2010 <i>KC</i> ₆₂		4 3.2 292°77	2°0/ 4.9	18		11854	Ludwigrichter		4 3.2 211°22	1°7/ 4.6	18	
3 2	13 11.32	-1											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
21673	Leatherman		4 3.2 339°02	4.5/30.4	18		173968	2001 XD ₈₂		4 3.2 59°28	6°6/27.3	18	
3 2	13 10.96	+ 1 6.2	1.326	2.211	15.0	18.2	3 2	13 13.43	+14 34.2	2.149	3.012	11.0	19.6
3 12	13 6.84	+ 2 26.4	1.263	2.206	10.7	17.9	3 12	13 7.70	+15 24.9	2.102	3.020	8.6	19.5
3 22	13 0.26	+ 3 54.9	1.222	2.202	6.4	17.6	3 22	13 0.36	+16 7.8	2.079	3.028	6.9	19.4
4 1	12 52.12	+ 5 21.4	1.207	2.198	4.6	17.5	4 1	12 52.12	+16 36.8	2.084	3.037	6.9	19.4
4 11	12 43.71	+ 6 34.8	1.217	2.194	7.8	17.7	4 11	12 43.87	+16 47.3	2.116	3.045	8.5	19.5
4 21	12 36.28	+ 7 26.6	1.250	2.191	12.3	17.9	4 21	12 36.41	+16 37.6	2.173	3.054	10.8	19.7
5 1	12 30.88	+ 7 52.0	1.305	2.188	16.5	18.2	5 1	12 30.42	+16 7.7	2.252	3.062	13.1	19.9
5 11	12 28.17	+ 7 50.7	1.377	2.186	20.1	18.4	5 11	12 26.33	+15 20.1	2.352	3.071	15.2	20.0
111658	2002 AP ₁₉₂		4 3.2 269°73	1°8/ 5.2	18		335606	2006 EK ₄₂		4 3.2 214°06	2°0/ 5.2	17	
3 2	13 10.56	-12 57.8	2.433	3.257	11.3	20.0	3 2	13 12.35	-13 8.3	2.068	2.896	12.8	20.8
3 12	13 5.76	-12 44.7	2.336	3.241	8.5	19.8	3 12	13 7.20	-12 55.5	1.985	2.893	9.7	20.6
3 22	12 59.37	-12 18.7	2.262	3.226	5.4	19.6	3 22	13 0.23	-12 28.0	1.927	2.891	6.1	20.4
4 1	12 51.95	-11 41.7	2.217	3.210	2.3	19.3	4 1	12 52.12	-11 47.9	1.895	2.888	2.6	20.2
4 11	12 44.24	-10 57.5	2.201	3.195	2.8	19.3	4 11	12 43.77	-10 59.8	1.891	2.885	3.1	20.2
4 21	12 36.99	-10 10.5	2.213	3.179	6.0	19.5	4 21	12 36.06	-10 9.1	1.916	2.882	6.7	20.4
5 1	12 30.91	-9 25.8	2.253	3.163	9.3	19.7	5 1	12 29.79	-9 21.7	1.967	2.879	10.3	20.6
5 11	12 26.51	-8 47.8	2.316	3.147	12.2	19.8	5 11	12 25.50	-8 42.8	2.041	2.876	13.5	20.8
402908	2007 TW ₅₇		4 3.2 161°99	0°1/ 3.3	16		109423	2001 QJ ₁₉₃		4 3.2 186°20	7°2/10.3	18	R
3 2	13 15.18	- 8 23.8	1.918	2.761	13.0	22.6	3 2	13 15.33	-27 25.1	2.056	2.808	15.4	19.3
3 12	13 9.22	- 7 46.3	1.846	2.767	9.5	22.4	3 12	13 9.59	-27 52.9	1.969	2.808	13.0	19.1
3 22	13 1.34	- 6 56.0	1.799	2.773	5.4	22.1	3 22	13 1.70	-27 57.3	1.902	2.807	10.4	18.9
4 1	12 52.30	- 5 57.4	1.779	2.777	1.0	21.8	4 1	12 52.41	-27 36.4	1.860	2.806	8.1	18.8
4 11	12 43.10	- 4 56.6	1.788	2.782	3.4	22.0	4 11	12 42.76	-26 51.8	1.844	2.805	7.2	18.7
4 21	12 34.68	- 4 0.1	1.826	2.785	7.6	22.3	4 21	12 33.81	-25 48.5	1.855	2.804	8.3	18.8
5 1	12 27.88	- 3 13.4	1.889	2.788	11.4	22.5	5 1	12 26.53	-24 34.2	1.891	2.802	10.8	18.9
5 11	12 23.23	- 2 40.5	1.975	2.790	14.6	22.7	5 11	12 21.55	-23 17.6	1.951	2.800	13.5	19.1
130142	1999 XP ₁₅₇		4 3.2 154°85	0°2/ 3.0	17		418370	2008 GJ ₁₃₃		4 3.2 175°68	4°2/30.7	17	
3 2	13 11.57	- 7 23.4	2.446	3.286	10.6	20.8	3 2	13 16.00	+ 4 40.4	1.788	2.655	12.6	20.6
3 12	13 6.28	- 6 42.4	2.373	3.294	7.7	20.6	3 12	13 9.91	+ 5 18.9	1.723	2.656	9.2	20.4
3 22	12 59.54	- 5 52.0	2.326	3.301	4.3	20.4	3 22	13 1.78	+ 5 57.9	1.683	2.656	5.7	20.2
4 1	12 51.96	- 4 55.9	2.308	3.307	0.8	20.1	4 1	12 52.41	+ 6 31.3	1.670	2.657	4.2	20.1
4 11	12 44.27	- 3 59.2	2.320	3.313	2.9	20.3	4 11	12 42.88	+ 6 52.9	1.684	2.657	6.6	20.3
4 21	12 37.18	- 3 6.6	2.362	3.318	6.3	20.6	4 21	12 34.21	+ 6 58.8	1.725	2.657	10.1	20.5
5 1	12 31.30	- 2 22.4	2.430	3.323	9.4	20.8	5 1	12 27.27	+ 6 47.2	1.791	2.657	13.6	20.7
5 11	12 27.07	- 1 49.7	2.522	3.327	12.1	20.9	5 11	12 22.61	+ 6 18.3	1.876	2.656	16.5	20.9
259267	2003 CT ₁₅		4 3.2 161°60	13°3/15.0	18		298733	2004 FF ₁₅₅		4 3.2 335°78	1°1/ 2.1	17	
3 2	13 18.84	-37 8.4	1.399	2.118	22.8	20.0	3 2	13 10.07	- 4 27.1	1.991	2.850	11.9	20.9
3 12	13 13.25	-38 4.8	1.324	2.122	20.3	19.9	3 12	13 5.55	- 3 49.8	1.915	2.846	8.5	20.7
3 22	13 4.24	-38 21.9	1.264	2.126	17.6	19.7	3 22	12 59.29	- 3 3.4	1.864	2.843	4.7	20.4
4 1	12 52.90	-37 52.3	1.223	2.129	15.0	19.5	4 1	12 51.95	- 2 12.8	1.841	2.839	1.2	20.2
4 11	12 40.97	-36 35.3	1.202	2.131	13.4	19.4	4 11	12 44.42	- 1 23.8	1.846	2.836	3.9	20.4
4 21	12 30.30	-34 37.8	1.203	2.133	13.6	19.4	4 21	12 37.53	- 0 41.7	1.878	2.833	7.8	20.6
5 1	12 22.44	-32 14.3	1.226	2.135	15.5	19.5	5 1	12 32.04	- 0 11.2	1.935	2.830	11.3	20.8
5 11	12 18.23	-29 42.4	1.270	2.136	18.2	19.7	5 11	12 28.48	+ 0 5.0	2.013	2.827	14.4	21.0
301406	2009 DT ₃₉		4 3.2 129°63	2°5/31.9	18		306592	2000 GB ₄₄		4 3.2 350°61	1°6/ 2.1	17	
3 2	13 13.58	- 2 48.1	1.594	2.461	13.9	21.2	3 2	13 14.19	- 2 36.9	1.371	2.245	15.3	20.1
3 12	13 8.30	- 1 35.5	1.533	2.469	9.9	20.9	3 12	13 9.18	- 2 23.2	1.303	2.241	11.1	19.8
3 22	13 0.89	- 0 12.7	1.497	2.476	5.5	20.7	3 22	13 1.61	- 2 0.9	1.257	2.237	6.2	19.5
4 1	12 52.22	+ 1 12.3	1.488	2.484	2.5	20.5	4 1	12 52.41	- 1 35.4	1.236	2.234	1.7	19.2
4 11	12 43.43	+ 2 30.2	1.506	2.491	5.6	20.7	4 11	12 42.88	- 1 13.3	1.241	2.232	5.1	19.4
4 21	12 35.59	+ 3 33.4	1.551	2.497	9.9	21.0	4 21	12 34.33	- 1 0.6	1.270	2.230	10.1	19.7
5 1	12 29.58	+ 4 16.9	1.620	2.504	13.8	21.2	5 1	12 27.88	- 1 1.6	1.322	2.229	14.7	20.0
5 11	12 25.94	+ 4 38.6	1.708	2.510	17.1	21.5	5 11	12 24.20	- 1 18.6	1.393	2.229	18.5	20.2
141951	2002 PH ₁₁₁		4 3.2 178°02	3°7/30.6	16		461742	2005 UX ₉₅		4 3.2 278°00	4°4/30.5	17	
3 2	13 14.19	+ 2 25.3	1.951	2.816	11.9	20.8	3 2	13 16.00	+ 4 36.6	1.836	2.703	12.4	21.8
3 12	13 8.46	+ 3 29.6	1.885	2.818	8.5	20.6	3 12	13 10.18	+ 5 22.1	1.743	2.676	9.1	21.6
3 22	13 0.90	+ 4 36.7	1.844	2.819	5.2	20.4	3 22	13 2.12	+ 6 10.2	1.675	2.648	5.8	21.3
4 1	12 52.23	+ 5 41.0	1.832	2.820	3.7	20.3	4 1	12 52.52	+ 6 54.1	1.634	2.621	4.4	21.1
4 11	12 43.40	+ 6 35.3	1.848	2.820	6.1	20.5	4 11	12 42.40	+ 7 26.9	1.621	2.592	6.9	21.2
4 21	12 35.33	+ 7 14.4	1.891	2.820	9.5	20.7	4 21	12 32.87	+ 7 43.2	1.635	2.564	10.8	21.4
5 1	12 28.81	+ 7 35.2	1.958	2.819	12.8	20.9	5 1	12 24.94	+ 7 40.0	1.672	2.535	14.5	21.6
5 11	12 24.35	+ 7 37.1	2.046	2.817	15.6	21.1	5 11	12 19.33	+ 7 16.6	1.729	2.505	17.9	21.7
462588	2009 FX ₆₉		4 3.2 304°11	3°0/31.8	17		11491	1988 VT ₂		4 3.2 160°27	0°9/ 4.1	18	
3 2	13 12.26	- 1 20.2	1.432	2.308	14.6	21.2	3 2	13 15.00	-10 27.3	1.945	2.780	13.2	19.1
3 12	13 7.75	- 0 23.4	1.358	2.298	10.5	20.9	3 12	13 9.10	- 9 57.7	1.871	2.787	9.7	18.9
3 22	13 0.79	+ 0 43.6	1.307	2.287	6.0	20.6	3 22	13 1.29	- 9 14.0	1.822	2.792	5.7	18.7
4 1	12 52.25	+ 1 52.9	1.281	2.276	3.0	20.4	4 1	12 52.33	- 8 19.9	1.800	2.797	1.6	18.4
4 11	12 43.32	+ 2 55.2	1.282	2.266	6.3	20.6	4 11	12 43.18	- 7 21.2	1.807	2.802	3.2	18.5
4 21	12 35.26	+ 3 42.5	1.307	2.256	11.0	20.8	4 21	12 34.81	- 6 24.0	1.843	2.806	7.3	18.8
5 1	12 29.14	+ 4 9.1	1.354	2.247	15.4	21.1	5 1	12 28.04	- 5 34.5	1.905	2.809	11.0	19.0
5 11	12 25.65	+ 4 13.0	1.420	2.237	19.2	21.3	5 11	12 23.40	- 4 57.0	1.989	2.811	14.2	19.2
215555	2003 AK ₆₃		4 3.2 49°48	0°9/ 2.4	18		134241	2005 YR ₂₁₉		4 3.2 42°91	14°4/ 8.8	18	
3 2	13 10.91	- 4 47.6	1.980	2.837	12.0</								

EPHEMERIDES

4 3.2

4 3.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
241605	1999 <i>RF</i> ₁₄₀		4 3.2 236°67	2°1/ 5.2 17			88435	2001 <i>QW</i> ₇₀		4 3.2 233°63	7°0/ 9.2 18	R	
3 2	13 13.63	-14 1.9	1.809	2.638	14.3	20.3	3 2	13 17.15	-25 9.8	2.029	2.792	15.3	19.1
3 12	13 8.44	-13 34.4	1.719	2.627	10.9	20.1	3 12	13 11.05	-25 52.5	1.934	2.783	12.8	18.9
3 22	13 1.09	-12 47.9	1.651	2.616	6.9	19.8	3 22	13 2.65	-26 14.3	1.860	2.774	10.0	18.7
4 1	12 52.32	-11 45.0	1.610	2.604	2.9	19.5	4 1	12 52.65	-26 12.6	1.811	2.764	7.7	18.5
4 11	12 43.16	-10 31.4	1.597	2.592	3.5	19.5	4 11	12 42.13	-25 48.2	1.789	2.754	7.0	18.5
4 21	12 34.68	-9 14.8	1.612	2.579	7.7	19.7	4 21	12 32.21	-25 5.0	1.793	2.743	8.5	18.5
5 1	12 27.84	-8 3.2	1.653	2.566	11.9	20.0	5 1	12 23.94	-24 9.9	1.823	2.732	11.2	18.7
5 11	12 23.32	-7 3.5	1.715	2.552	15.5	20.2	5 11	12 18.07	-23 11.3	1.876	2.721	14.1	18.8
412421	2014 <i>DD</i> ₁₁₈		4 3.2 47°10	0°0/ 3.3 17			356994	1998 <i>RW</i> ₅₆		4 3.2 143°47	0°2/ 3.5 18		
3 2	13 12.65	-6 26.4	2.121	2.969	11.8	20.8	3 2	13 16.61	-9 15.3	1.802	2.643	13.8	22.3
3 12	13 7.24	-6 19.7	2.053	2.977	8.5	20.6	3 12	13 10.31	-8 30.6	1.737	2.656	10.1	22.1
3 22	13 0.17	-6 4.6	2.010	2.985	4.8	20.4	3 22	13 1.99	-7 31.5	1.695	2.668	5.8	21.8
4 1	12 52.12	-5 44.0	1.995	2.993	0.9	20.1	4 1	12 52.49	-6 23.1	1.682	2.680	1.2	21.5
4 11	12 43.93	-5 22.0	2.008	3.002	3.0	20.3	4 11	12 42.88	-5 12.3	1.697	2.691	3.5	21.7
4 21	12 36.44	-5 2.6	2.050	3.011	6.8	20.6	4 21	12 34.19	-4 6.5	1.741	2.700	7.9	22.0
5 1	12 30.36	-4 49.7	2.117	3.019	10.2	20.8	5 1	12 27.26	-3 11.7	1.810	2.709	11.8	22.3
5 11	12 26.16	-4 45.8	2.207	3.029	13.1	21.0	5 11	12 22.62	-2 32.2	1.901	2.717	15.0	22.5
389976	2012 <i>TP</i> ₂₃₅		4 3.2 106°09	3°9/30.2 17			20458	1999 <i>LZ</i> ₂₁		4 3.2 231°83	1°1/ 4.3 17		
3 2	13 12.65	+5 27.3	2.194	3.059	10.7	21.1	3 2	13 14.01	-11 36.0	1.931	2.765	13.3	19.8
3 12	13 7.15	+6 11.2	2.135	3.066	7.7	20.9	3 12	13 8.60	-10 56.2	1.838	2.752	9.9	19.6
3 22	13 0.07	+6 54.9	2.102	3.073	5.0	20.8	3 22	13 1.16	-9 59.6	1.769	2.738	6.0	19.3
4 1	12 52.09	+7 33.0	2.097	3.080	4.0	20.7	4 1	12 52.36	-8 49.6	1.727	2.724	1.8	19.0
4 11	12 44.04	+8 0.4	2.120	3.087	5.9	20.8	4 11	12 43.19	-7 32.4	1.714	2.709	3.3	19.1
4 21	12 36.69	+8 13.9	2.171	3.094	8.8	21.0	4 21	12 34.65	-6 15.4	1.730	2.693	7.6	19.3
5 1	12 30.72	+8 11.7	2.247	3.101	11.6	21.2	5 1	12 27.64	-5 6.1	1.771	2.676	11.7	19.5
5 11	12 26.56	+7 54.0	2.343	3.107	14.1	21.4	5 11	12 22.80	-4 10.2	1.835	2.659	15.2	19.7
511618	2015 <i>BF</i> ₂₆		4 3.2 303°25	3°6/ 6.1 17			255634	2006 <i>QR</i> ₂		4 3.2 198°16	0°0/ 3.2 16		
3 2	13 12.86	-15 33.3	1.777	2.603	14.7	21.0	3 2	13 14.69	-7 31.6	1.978	2.822	12.6	21.8
3 12	13 8.05	-15 46.9	1.680	2.583	11.4	20.8	3 12	13 8.93	-6 58.4	1.897	2.819	9.2	21.6
3 22	13 0.98	-15 43.1	1.605	2.563	7.8	20.5	3 22	13 1.26	-6 13.4	1.841	2.816	5.2	21.3
4 1	12 52.32	-15 22.1	1.555	2.543	4.3	20.3	4 1	12 52.38	-5 20.8	1.813	2.812	1.0	21.0
4 11	12 43.11	-14 47.2	1.532	2.523	4.3	20.2	4 11	12 43.24	-4 26.1	1.814	2.807	3.4	21.2
4 21	12 34.47	-14 3.7	1.536	2.504	7.9	20.4	4 21	12 34.80	-3 35.5	1.844	2.802	7.6	21.4
5 1	12 27.46	-13 18.7	1.564	2.485	11.9	20.6	5 1	12 27.89	-2 54.4	1.899	2.797	11.4	21.6
5 11	12 22.84	-12 39.1	1.614	2.466	15.6	20.8	5 11	12 23.08	-2 26.4	1.976	2.790	14.6	21.8
420761	2013 <i>EQ</i> ₁₁₃		4 3.2 337°04	4°0/30.9 18			183356	2002 <i>VH</i> ₁₂₄		4 3.2 221°09	0°7/ 3.9 17		
3 2	13 11.69	-0 18.7	1.305	2.188	15.3	20.2	3 2	13 14.68	-9 40.8	2.065	2.901	12.5	21.3
3 12	13 7.42	+0 59.7	1.242	2.185	10.9	20.0	3 12	13 8.94	-9 15.6	1.976	2.892	9.2	21.1
3 22	13 0.62	+2 28.2	1.201	2.182	6.4	19.7	3 22	13 1.29	-8 37.3	1.911	2.882	5.5	20.8
4 1	12 52.23	+3 56.8	1.186	2.179	4.0	19.5	4 1	12 52.39	-7 49.2	1.873	2.871	1.4	20.5
4 11	12 43.56	+5 14.0	1.195	2.176	7.3	19.7	4 11	12 43.16	-6 56.2	1.865	2.859	3.1	20.6
4 21	12 35.91	+6 10.9	1.229	2.174	12.0	20.0	4 21	12 34.55	-6 4.2	1.886	2.847	7.2	20.9
5 1	12 30.34	+6 42.2	1.284	2.172	16.4	20.2	5 1	12 27.40	-5 18.9	1.933	2.835	11.0	21.1
5 11	12 27.51	+6 46.9	1.356	2.170	20.1	20.4	5 11	12 22.29	-4 44.8	2.002	2.821	14.3	21.3
190378	1999 <i>RV</i> ₁₀₈		4 3.2 240°02	3°4/ 6.8 18			40859	1999 <i>TX</i> ₁₁₁		4 3.2 258°58	0°8/ 4.1 18		
3 2	13 13.00	-17 49.0	2.241	3.043	12.8	20.5	3 2	13 11.74	-10 5.3	1.910	2.754	13.0	19.3
3 12	13 7.69	-17 45.1	2.143	3.030	10.1	20.3	3 12	13 6.86	-9 38.2	1.831	2.751	9.6	19.0
3 22	13 0.56	-17 24.1	2.068	3.018	7.0	20.1	3 22	13 0.10	-8 57.1	1.776	2.748	5.7	18.8
4 1	12 52.22	-16 47.0	2.021	3.004	4.1	19.9	4 1	12 52.16	-8 5.6	1.748	2.746	1.6	18.5
4 11	12 43.54	-15 57.0	2.002	2.991	3.8	19.8	4 11	12 43.97	-7 9.4	1.748	2.743	3.2	18.6
4 21	12 35.38	-14 59.2	2.011	2.976	6.6	20.0	4 21	12 36.48	-6 14.6	1.775	2.740	7.3	18.9
5 1	12 28.58	-14 0.0	2.048	2.962	9.9	20.2	5 1	12 30.50	-5 27.3	1.828	2.737	11.2	19.1
5 11	12 23.70	-13 5.3	2.108	2.947	12.9	20.3	5 11	12 26.59	-4 52.1	1.903	2.734	14.4	19.3
332356	2007 <i>EL</i> ₁₉		4 3.2 356°11	1°3/ 2.1 17			245640	2005 <i>YA</i> ₃₀		4 3.2 126°73	4°5/ 7.0 18		
3 2	13 11.46	-4 37.2	1.507	2.376	14.4	20.8	3 2	13 14.93	-18 39.7	1.495	2.315	17.2	20.6
3 12	13 7.00	-3 57.5	1.439	2.374	10.4	20.5	3 12	13 9.66	-18 35.6	1.423	2.320	13.5	20.4
3 22	13 0.28	-3 6.2	1.393	2.373	5.8	20.3	3 22	13 1.88	-18 6.7	1.371	2.324	9.4	20.1
4 1	12 52.17	-2 9.3	1.374	2.372	1.5	20.0	4 1	12 52.50	-17 14.0	1.344	2.329	5.5	19.9
4 11	12 43.80	-1 14.6	1.380	2.371	4.7	20.2	4 11	12 42.83	-16 3.3	1.342	2.333	5.0	19.9
4 21	12 36.32	-0 29.3	1.412	2.371	9.4	20.4	4 21	12 34.14	-14 43.4	1.367	2.336	8.5	20.1
5 1	12 30.69	+0 0.8	1.468	2.372	13.7	20.7	5 1	12 27.54	-13 24.3	1.416	2.340	12.6	20.4
5 11	12 27.51	+0 12.7	1.543	2.372	17.3	20.9	5 11	12 23.66	-12 15.1	1.486	2.344	16.4	20.6
160168	2001 <i>UF</i> ₁₄₅		4 3.2 74°42	0°7/ 2.6 18			357962	2006 <i>BE</i> ₃₀		4 3.2 42°78	3°0/ 1.0 18		
3 2	13 13.63	-6 14.8	1.673	2.530	13.9	20.8	3 2	13 13.80	-1 45.6	1.227	2.108	16.2	20.7
3 12	13 8.17	-5 33.0	1.621	2.550	9.9	20.6	3 12	13 8.95	-0 50.0	1.173	2.115	11.6	20.5
3 22	13 0.74	-4 40.0	1.592	2.569	5.5	20.4	3 22	13 1.47	+0 15.6	1.141	2.122	6.5	20.2
4 1	12 52.23	-3 41.4	1.590	2.589	1.0	20.1	4 1	12 52.41	+1 22.3	1.134	2.130	3.0	20.0
4 11	12 43.69	-2 44.4	1.616	2.608	4.0	20.4	4 11	12 43.21	+2 20.0	1.152	2.138	6.4	20.2
4 21	12 36.13	-1 55.3	1.669	2.627	8.3	20.7	4 21	12 35.22	+3 0.8	1.193	2.147	11.4	20.5
5 1	12 30.35	-1 19.3	1.746	2.646	12.1	21.0	5 1	12 29.50	+3 19.8	1.256	2.156	15.9	20.8
5 11	12 26.82	-0 59.0	1.845	2.665	15.3	21.2	5 11	12 26.64	+3 16.1	1.337	2.165	19.6	21.1
64903	2001 <i>YL</i> ₈₆		4 3.2 233°39	1°4/ 2.0 17			317150	2001 <i>UC</i> ₂₂₈		4 3.2 75°68	0°2/ 3.6 18	R	
3 2	13 15.76	-4 19.1	1.830	2.684	13.0								

EPHEMERIDES

4 3.2

4 3.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
329582	2002 <i>XK</i> ₄₄		4 3.2 108°98	1.4/ 4.6	18		198544	2004 <i>XO</i> ₁₂₆		4 3.3 186°51	1.7/ 1.4	17	
3 2	13 15.86	-11 14.6	1.887	2.720	13.6	20.8	3 2	13 11.99	-2 33.2	2.189	3.045	11.1	20.6
3 12	13 9.69	-10 59.5	1.824	2.737	10.1	20.6	3 12	13 6.79	-1 47.6	2.115	3.045	7.9	20.4
3 22	13 1.61	-10 30.5	1.786	2.754	6.1	20.4	3 22	12 59.96	-0 55.1	2.067	3.045	4.4	20.2
4 1	12 52.43	-9 50.5	1.775	2.771	2.1	20.2	4 1	12 52.15	-0 0.5	2.047	3.044	1.7	20.0
4 11	12 43.17	-9 4.8	1.792	2.787	3.2	20.3	4 11	12 44.17	+0 50.6	2.057	3.043	4.1	20.2
4 21	12 34.79	-8 19.2	1.838	2.802	7.1	20.6	4 21	12 36.82	+1 33.1	2.094	3.041	7.6	20.4
5 1	12 28.10	-7 39.4	1.909	2.818	10.8	20.8	5 1	12 30.79	+2 3.3	2.158	3.040	10.9	20.6
5 11	12 23.60	-7 9.8	2.003	2.832	13.9	21.1	5 11	12 26.59	+2 18.9	2.243	3.037	13.7	20.8
505211	2012 <i>TG</i> ₂₅₉		4 3.2 160°82	1.2/ 1.9	17		379461	2010 <i>CP</i> ₁₆₁		4 3.3 69°34	0.6/ 2.7	17	
3 2	13 12.58	-2 58.4	2.325	3.177	10.7	22.4	3 2	13 11.94	-6 8.8	1.858	2.713	12.8	21.3
3 12	13 7.10	-2 29.6	2.253	3.180	7.6	22.2	3 12	13 6.88	-5 30.0	1.799	2.727	9.2	21.1
3 22	13 0.08	-1 54.6	2.206	3.183	4.2	22.0	3 22	13 0.03	-4 40.8	1.764	2.741	5.1	20.8
4 1	12 52.15	-1 17.5	2.188	3.186	1.3	21.8	4 1	12 52.15	-3 46.3	1.756	2.755	0.9	20.6
4 11	12 44.08	-0 42.8	2.200	3.188	3.6	22.0	4 11	12 44.20	-2 52.7	1.777	2.769	3.7	20.8
4 21	12 36.62	-0 14.6	2.240	3.191	7.0	22.2	4 21	12 37.07	-2 6.0	1.825	2.783	7.7	21.1
5 1	12 30.44	+0 3.9	2.307	3.193	10.2	22.4	5 1	12 31.51	-1 30.7	1.898	2.797	11.3	21.3
5 11	12 26.00	+0 10.5	2.396	3.194	12.8	22.6	5 11	12 27.99	-1 9.8	1.993	2.811	14.4	21.6
357046	2000 <i>SW</i> ₇₉		4 3.2 241°08	1.3/ 2.1	16		464819	2004 <i>TG</i> ₅₃		4 3.3 186°19	3.3/31.4	17	
3 2	13 14.50	-5 2.8	1.759	2.616	13.4	21.8	3 2	13 16.65	+3 38.7	2.041	2.901	11.6	20.8
3 12	13 9.10	-4 11.3	1.672	2.602	9.7	21.5	3 12	13 10.21	+4 1.4	1.971	2.901	8.4	20.6
3 22	13 1.50	-3 7.2	1.609	2.587	5.4	21.2	3 22	13 1.92	+4 25.0	1.926	2.901	5.1	20.4
4 1	12 52.45	-1 56.2	1.574	2.572	1.4	20.9	4 1	12 52.52	+4 44.7	1.910	2.900	3.3	20.2
4 11	12 42.99	-0 46.0	1.566	2.556	4.5	21.1	4 11	12 42.95	+4 55.6	1.923	2.899	5.5	20.4
4 21	12 34.21	+0 16.0	1.586	2.539	9.1	21.3	4 21	12 34.13	+4 54.6	1.963	2.898	8.8	20.6
5 1	12 27.10	+1 3.4	1.631	2.522	13.3	21.5	5 1	12 26.86	+4 39.8	2.029	2.897	12.1	20.8
5 11	12 22.31	+1 32.5	1.696	2.504	16.9	21.7	5 11	12 21.66	+4 11.2	2.116	2.896	14.9	21.0
128969	2004 <i>TU</i> ₁₆₂		4 3.2 298°17	0°/ 3.1	17		191819	2004 <i>TV</i> ₃₂₁		4 3.3 233°90	3°6/ 7.4	18	
3 2	13 11.49	-7 58.7	1.854	2.705	13.0	20.6	3 2	13 12.07	-19 42.0	2.347	3.139	12.6	20.8
3 12	13 6.71	-7 23.5	1.778	2.703	9.5	20.3	3 12	13 6.97	-19 22.5	2.246	3.126	10.0	20.6
3 22	13 0.02	-6 35.5	1.726	2.702	5.4	20.1	3 22	13 0.15	-18 44.3	2.169	3.113	7.0	20.4
4 1	12 52.15	-5 39.1	1.702	2.700	1.0	19.8	4 1	12 52.20	-17 48.4	2.118	3.099	4.3	20.2
4 11	12 44.06	-4 40.6	1.705	2.699	3.5	19.9	4 11	12 43.95	-16 38.7	2.097	3.084	3.8	20.1
4 21	12 36.68	-3 46.3	1.735	2.697	7.7	20.2	4 21	12 36.21	-15 20.8	2.104	3.069	6.3	20.2
5 1	12 30.84	-3 2.2	1.791	2.695	11.6	20.4	5 1	12 29.76	-14 1.4	2.139	3.054	9.5	20.4
5 11	12 27.11	-2 32.1	1.868	2.694	14.9	20.6	5 11	12 25.15	-12 47.3	2.198	3.038	12.5	20.6
426880	2013 <i>WG</i> ₄₂		4 3.2 74°41	0°4/ 3.7	17		145404	2005 <i>NX</i> ₇₉		4 3.3 184°81	2°6/ 6.1	18	
3 2	13 11.75	-8 58.0	1.906	2.753	12.9	21.4	3 2	13 12.63	-15 14.9	2.500	3.308	11.4	20.2
3 12	13 6.81	-8 29.0	1.835	2.758	9.4	21.1	3 12	13 7.18	-15 19.9	2.414	3.308	8.8	20.0
3 22	13 0.03	-7 47.3	1.789	2.762	5.5	20.9	3 22	13 0.18	-15 12.0	2.353	3.308	5.9	19.8
4 1	12 52.15	-6 56.8	1.769	2.767	1.3	20.6	4 1	12 52.20	-14 52.2	2.320	3.308	3.2	19.6
4 11	12 44.10	-6 3.3	1.778	2.772	3.2	20.8	4 11	12 44.01	-14 23.5	2.317	3.307	3.2	19.6
4 21	12 36.80	-5 12.8	1.814	2.777	7.3	21.0	4 21	12 36.35	-13 49.7	2.342	3.306	5.8	19.8
5 1	12 31.02	-4 30.9	1.876	2.782	11.0	21.3	5 1	12 29.90	-13 15.4	2.394	3.305	8.8	20.0
5 11	12 27.28	-4 1.4	1.959	2.787	14.2	21.5	5 11	12 25.16	-12 44.9	2.471	3.304	11.5	20.2
166840	2002 <i>VT</i> ₁₂₂		4 3.2 124°05	1°0/ 2.3	17		191708	2004 <i>RQ</i> ₁₉₄		4 3.3 224°07	1°2/ 4.5	17	
3 2	13 14.59	-2 52.0	2.217	3.068	11.2	20.2	3 2	13 13.77	-10 45.8	2.153	2.984	12.2	20.7
3 12	13 8.61	-2 42.2	2.145	3.072	8.0	20.0	3 12	13 8.22	-10 32.3	2.065	2.977	9.1	20.5
3 22	13 0.96	-2 27.0	2.099	3.076	4.5	19.7	3 22	13 0.86	-10 6.2	2.001	2.969	5.5	20.2
4 1	12 52.32	-2 9.6	2.082	3.080	1.1	19.5	4 1	12 52.34	-9 30.1	1.965	2.961	1.9	20.0
4 11	12 43.53	-1 54.0	2.094	3.084	3.5	19.7	4 11	12 43.52	-8 48.0	1.958	2.952	2.9	20.0
4 21	12 35.42	-1 43.7	2.135	3.088	7.1	19.9	4 21	12 35.29	-8 5.2	1.979	2.943	6.8	20.2
5 1	12 28.68	-1 41.6	2.202	3.092	10.4	20.1	5 1	12 28.45	-7 26.9	2.027	2.934	10.4	20.4
5 11	12 23.83	-1 49.5	2.291	3.095	13.2	20.3	5 11	12 23.56	-6 57.4	2.098	2.924	13.5	20.6
473421	2015 <i>VE</i> ₁₃₁		4 3.2 52°31	12°0/16.9	18		153790	2001 <i>VJ</i> ₇₁		4 3.3 164°15	2°1/ 5.6	18	
3 2	13 12.20	-38 37.8	1.279	2.007	24.2	20.3	3 2	13 15.74	-14 0.6	2.558	3.365	11.2	20.7
3 12	13 8.18	-38 36.3	1.221	2.027	21.3	20.1	3 12	13 9.31	-13 57.0	2.477	3.373	8.5	20.5
3 22	13 1.14	-37 46.7	1.177	2.048	17.9	19.9	3 22	13 1.33	-13 41.0	2.421	3.379	5.5	20.3
4 1	12 52.36	-36 5.8	1.151	2.070	14.7	19.8	4 1	12 52.41	-13 14.2	2.394	3.385	2.7	20.1
4 11	12 43.53	-33 38.7	1.147	2.091	12.4	19.7	4 11	12 43.32	-12 39.8	2.398	3.389	2.9	20.1
4 21	12 36.23	-30 38.8	1.165	2.113	12.2	19.8	4 21	12 34.82	-12 1.8	2.431	3.394	5.8	20.3
5 1	12 31.58	-27 25.0	1.207	2.136	14.0	20.0	5 1	12 27.59	-11 24.8	2.492	3.397	8.7	20.5
5 11	12 30.09	-24 16.8	1.272	2.158	16.8	20.2	5 11	12 22.09	-10 52.9	2.578	3.399	11.4	20.7
459926	2014 <i>MJ</i> ₅₁		4 3.3 112°94	3°9/ 7.4	18		37520	3193 <i>T</i> ₃		4 3.3 359°44	3°1/ 1.2	18	
3 2	13 15.05	-20 13.5	1.807	2.608	15.5	21.3	3 2	13 13.10	+0 58.0	1.339	2.220	15.1	17.6
3 12	13 9.22	-19 40.9	1.743	2.628	12.1	21.1	3 12	13 8.40	+1 15.3	1.276	2.217	10.9	17.3
3 22	13 1.39	-18 44.7	1.700	2.647	8.4	20.9	3 22	13 1.19	+1 36.9	1.236	2.215	6.3	17.1
4 1	12 52.40	-17 27.6	1.683	2.666	4.9	20.8	4 1	12 52.40	+1 56.5	1.219	2.215	3.1	16.9
4 11	12 43.36	-15 56.2	1.695	2.684	4.3	20.8	4 11	12 43.36	+2 7.6	1.228	2.215	6.1	17.1
4 21	12 35.29	-14 19.0	1.734	2.701	7.2	21.0	4 21	12 35.34	+2 5.0	1.262	2.216	10.8	17.3
5 1	12 29.02	-12 45.1	1.800	2.718	10.8	21.2	5 1	12 29.41	+1 46.0	1.317	2.219	15.1	17.6
5 11	12 25.04	-11 22.3	1.889	2.734	14.0	21.5	5 11	12 26.21	+1 10.1	1.391	2.222	18.8	17.8
375972	2009 <i>WU</i> ₂₁₇		4 3.3 180°60	1°2/ 2.0	17		285487	2000 <i>CH</i> ₇₄		4 3.3 137°73	1°6/ 1.7	16	
3 2	13 13.61	-3 35.7	2.089	2.942	11.7								

EPHEMERIDES

4 3.3

4 3.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
67852	2000 <i>WT</i> ₈		4 3.3 126°44	1.1°/ 4.2	18		216808	2006 <i>TG</i> ₁₁		4 3.3 286°49	0°0/ 3.1	17	
3 2	13 16.28	- 9 59.7	1.633	2.477	14.8	19.8	3 2	13 13.01	- 8 3.8	1.577	2.433	14.6	21.4
3 12	13 10.34	- 9 45.8	1.565	2.484	11.0	19.5	3 12	13 8.33	- 7 32.1	1.485	2.413	10.8	21.1
3 22	13 2.15	- 9 17.1	1.520	2.492	6.5	19.3	3 22	13 1.24	- 6 44.5	1.416	2.392	6.2	20.8
4 1	12 52.58	- 8 36.9	1.502	2.499	1.9	19.0	4 1	12 52.47	- 5 45.4	1.373	2.372	1.2	20.4
4 11	12 42.80	- 7 51.1	1.511	2.506	3.5	19.1	4 11	12 43.16	- 4 41.7	1.357	2.351	4.0	20.6
4 21	12 33.98	- 7 6.5	1.547	2.512	8.1	19.4	4 21	12 34.51	- 3 41.6	1.367	2.330	9.2	20.8
5 1	12 27.05	- 6 29.3	1.608	2.518	12.3	19.7	5 1	12 27.65	- 2 52.7	1.401	2.310	13.9	21.0
5 11	12 22.61	- 6 4.3	1.690	2.524	15.8	19.9	5 11	12 23.34	- 2 20.5	1.454	2.289	17.9	21.2
468750	2011 <i>BY</i> ₃₆		4 3.3 338°13	8°5/ 9.7	17		379280	2009 <i>UP</i> ₁₄₆		4 3.3 272°33	3°1/ 6.4	17	
3 2	13 13.93	-25 27.6	1.570	2.355	18.1	20.9	3 2	13 11.16	-16 52.8	1.868	2.688	14.3	20.9
3 12	13 9.21	-26 25.3	1.486	2.348	15.2	20.7	3 12	13 6.63	-16 30.1	1.778	2.678	11.1	20.7
3 22	13 1.81	-26 57.7	1.422	2.341	12.1	20.4	3 22	13 0.09	-15 46.9	1.711	2.668	7.4	20.4
4 1	12 52.56	-27 1.2	1.380	2.335	9.5	20.3	4 1	12 52.23	-14 45.1	1.669	2.658	3.9	20.2
4 11	12 42.72	-26 36.1	1.362	2.329	8.5	20.2	4 11	12 44.03	-13 30.0	1.655	2.648	3.8	20.2
4 21	12 33.66	-25 47.5	1.369	2.324	10.1	20.3	4 21	12 36.48	-12 8.8	1.668	2.637	7.3	20.3
5 1	12 26.63	-24 44.3	1.398	2.319	13.0	20.4	5 1	12 30.49	-10 49.8	1.707	2.627	11.1	20.6
5 11	12 22.46	-23 37.0	1.448	2.315	16.3	20.6	5 11	12 26.67	- 9 40.5	1.769	2.617	14.6	20.7
131626	2001 <i>XR</i> ₅₈		4 3.3 177°23	2°3/ 5.4	18		192686	Aljuroma		4 3.3 262°95	4°5/ 8.1	18	
3 2	13 15.22	-14 28.3	1.778	2.603	14.6	20.0	3 2	13 13.61	-22 6.9	2.438	3.212	12.7	20.6
3 12	13 9.52	-13 59.4	1.699	2.606	11.1	19.8	3 12	13 8.20	-21 59.8	2.319	3.184	10.3	20.4
3 22	13 1.68	-13 11.2	1.644	2.607	7.0	19.6	3 22	13 0.95	-21 33.5	2.222	3.154	7.6	20.2
4 1	12 52.50	-12 6.7	1.615	2.608	3.1	19.3	4 1	12 52.41	-20 47.7	2.153	3.124	5.2	20.0
4 11	12 43.06	-10 52.1	1.614	2.609	3.5	19.4	4 11	12 43.39	-19 44.8	2.112	3.093	4.6	19.9
4 21	12 34.44	- 9 35.2	1.641	2.608	7.6	19.6	4 21	12 34.76	-18 29.6	2.100	3.061	6.6	19.9
5 1	12 27.57	- 8 24.1	1.694	2.607	11.7	19.8	5 1	12 27.36	-17 8.8	2.116	3.028	9.7	20.1
5 11	12 23.05	- 7 25.2	1.770	2.605	15.2	20.1	5 11	12 21.83	-15 49.7	2.156	2.995	12.7	20.2
1283	Komsomolia		4 3.3 148°37	1°8/31.7	18		367918	2012 <i>BZ</i> ₁₂₅		4 3.3 7°46	1°4/ 2.2	18	
3 2	13 9.25	- 1 5.0	2.935	3.788	8.7	16.2	3 2	13 9.74	- 5 37.7	1.197	2.078	16.5	20.4
3 12	13 4.44	- 0 11.7	2.868	3.797	6.1	16.1	3 12	13 6.17	- 4 49.6	1.138	2.079	11.9	20.1
3 22	12 58.49	+ 0 45.8	2.829	3.805	3.4	15.9	3 22	13 0.00	- 3 45.8	1.099	2.080	6.6	19.8
4 1	12 51.88	+ 1 43.5	2.819	3.813	1.8	15.8	4 1	12 52.22	- 2 34.1	1.084	2.083	1.5	19.5
4 11	12 45.20	+ 2 37.0	2.840	3.821	3.6	15.9	4 11	12 44.19	- 1 24.8	1.094	2.086	5.3	19.7
4 21	12 39.00	+ 3 22.6	2.890	3.828	6.2	16.1	4 21	12 37.25	- 0 27.5	1.127	2.091	10.6	20.0
5 1	12 33.78	+ 3 57.5	2.968	3.835	8.7	16.3	5 1	12 32.48	+ 0 10.6	1.181	2.096	15.4	20.3
5 11	12 29.88	+ 4 20.1	3.068	3.841	10.9	16.4	5 11	12 30.51	+ 0 26.1	1.254	2.103	19.4	20.6
474567	2004 <i>CY</i> ₅₆		4 3.3 66°35	4°6/ 4.5	17		233632	2007 <i>UC</i> ₁₁₃		4 3.3 264°44	3°8/30.2	17	
3 2	13 35.17	- 8 24.4	0.950	1.802	22.3	20.3	3 2	13 12.76	+ 4 36.6	2.242	3.106	10.6	20.0
3 12	13 25.49	-10 23.8	0.895	1.816	16.9	20.1	3 12	13 7.44	+ 5 24.0	2.156	3.088	7.7	19.8
3 22	13 11.37	-12 12.4	0.861	1.830	10.7	19.8	3 22	13 0.41	+ 6 13.1	2.097	3.069	4.9	19.6
4 1	12 54.35	-13 43.8	0.851	1.844	5.2	19.5	4 1	12 52.29	+ 6 58.5	2.066	3.051	3.8	19.5
4 11	12 36.90	-14 54.6	0.866	1.858	6.5	19.6	4 11	12 43.89	+ 7 34.6	2.063	3.032	5.9	19.5
4 21	12 21.52	-15 46.3	0.906	1.872	12.2	20.0	4 21	12 36.01	+ 7 57.1	2.088	3.013	9.0	19.7
5 1	12 10.04	-16 25.5	0.968	1.887	17.6	20.3	5 1	12 29.42	+ 8 3.3	2.138	2.993	12.1	19.9
5 11	12 3.25	-17 0.4	1.047	1.901	22.0	20.7	5 11	12 24.66	+ 7 52.7	2.209	2.974	14.8	20.0
190037	2004 <i>RF</i> ₇₈		4 3.3 127°78	1°7/ 1.5	18		69269	1988 <i>VA</i> ₁		4 3.3 154°11	4°6/ 8.3	18	
3 2	13 12.65	- 2 49.5	2.178	3.032	11.2	20.8	3 2	13 15.87	-22 23.6	2.207	2.982	13.8	20.6
3 12	13 7.17	- 1 59.2	2.116	3.045	7.9	20.6	3 12	13 9.68	-22 15.9	2.127	2.992	11.1	20.4
3 22	13 0.13	- 1 2.1	2.080	3.057	4.4	20.4	3 22	13 1.66	-21 47.7	2.070	3.002	8.1	20.2
4 1	12 52.19	- 0 3.4	2.073	3.069	1.7	20.2	4 1	12 52.52	-20 59.5	2.039	3.010	5.5	20.1
4 11	12 44.18	+ 0 51.2	2.095	3.081	4.1	20.4	4 11	12 43.20	-19 55.1	2.038	3.018	4.8	20.1
4 21	12 36.88	+ 1 36.6	2.145	3.091	7.5	20.7	4 21	12 34.63	-18 40.5	2.064	3.025	6.7	20.2
5 1	12 30.96	+ 2 9.4	2.221	3.102	10.7	20.9	5 1	12 27.60	-17 23.0	2.119	3.032	9.7	20.4
5 11	12 26.85	+ 2 27.4	2.320	3.112	13.4	21.1	5 11	12 22.62	-16 9.7	2.197	3.037	12.5	20.6
255721	2006 <i>QF</i> ₁₂₂		4 3.3 277°99	0°8/ 4.0	17		423449	2005 <i>SA</i> ₈₇		4 3.3 141°87	0°5/ 2.7	15	
3 2	13 12.71	-10 53.8	1.662	2.508	14.5	21.3	3 2	13 13.29	- 6 42.8	2.360	3.200	11.0	23.2
3 12	13 8.06	-10 13.3	1.563	2.484	10.9	21.0	3 12	13 7.56	- 5 55.5	2.293	3.214	7.9	23.0
3 22	13 1.07	- 9 13.6	1.487	2.459	6.5	20.7	3 22	13 0.33	- 4 59.0	2.252	3.227	4.4	22.8
4 1	12 52.43	- 7 58.1	1.437	2.434	1.8	20.3	4 1	12 52.26	- 3 57.6	2.241	3.240	0.8	22.5
4 11	12 43.21	- 6 34.1	1.414	2.409	3.7	20.4	4 11	12 44.11	- 2 56.5	2.260	3.251	3.1	22.7
4 21	12 34.59	- 5 10.5	1.418	2.383	8.7	20.6	4 21	12 36.63	- 2 1.0	2.308	3.262	6.6	23.0
5 1	12 27.65	- 3 56.1	1.446	2.357	13.4	20.8	5 1	12 30.45	- 1 15.3	2.384	3.272	9.8	23.2
5 11	12 23.18	- 2 58.1	1.496	2.330	17.5	21.0	5 11	12 25.99	- 0 42.3	2.482	3.282	12.4	23.4
472893	2015 <i>FT</i> ₃₂₆		4 3.3 233°89	3°0/30.6	17		435940	2009 <i>CE</i> ₂₄		4 3.3 67°88	4°5/ 7.7	17	
3 2	13 10.50	+ 2 13.0	2.435	3.297	9.9	21.6	3 2	13 12.93	-19 54.7	2.175	2.969	13.4	21.4
3 12	13 5.63	+ 3 9.7	2.356	3.288	7.1	21.4	3 12	13 7.66	-20 11.3	2.093	2.971	10.7	21.2
3 22	12 59.30	+ 4 9.8	2.304	3.279	4.3	21.2	3 22	13 0.57	-20 10.3	2.034	2.974	7.7	21.1
4 1	12 52.05	+ 5 8.2	2.280	3.269	3.0	21.1	4 1	12 52.33	-19 52.0	2.002	2.976	5.2	20.9
4 11	12 44.62	+ 5 59.5	2.286	3.259	5.0	21.2	4 11	12 43.84	-19 19.0	1.996	2.979	4.6	20.9
4 21	12 37.70	+ 6 39.1	2.320	3.249	8.0	21.4	4 21	12 35.98	-18 35.8	2.019	2.981	6.7	21.0
5 1	12 31.93	+ 7 4.2	2.380	3.238	10.9	21.5	5 1	12 29.56	-17 48.5	2.067	2.984	9.7	21.2
5 11	12 27.79	+ 7 13.4	2.460	3.228	13.4	21.7	5 11	12 25.11	-17 3.1	2.139	2.986	12.5	21.4
497960	2006 <i>XP</i> ₅₁		4 3.3 104°63	5°6/10.9	17		31665	Veblen		4 3.3 320°88	1°0/ 2.3	18	
3 2	13 10.91	-27 5											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
183206	2002 <i>TT</i> ₂₂		4 3.3 202°40	0°2/ 3.5 18			125953	2001 <i>XH</i> ₂₅₉		4 3.3 130°64	4°6/30.2 18		
3 2	13 13.90	- 8 27.0	1.881	2.726	13.1	21.0	3 2	13 14.92	+ 2 32.1	1.528	2.402	14.0	20.2
3 12	13 8.48	- 7 53.2	1.801	2.723	9.6	20.8	3 12	13 9.40	+ 3 52.6	1.473	2.410	10.0	20.0
3 22	13 1.08	- 7 6.3	1.746	2.720	5.5	20.5	3 22	13 1.65	+ 5 17.4	1.442	2.418	6.2	19.8
4 1	12 52.43	- 6 10.2	1.718	2.717	1.1	20.2	4 1	12 52.59	+ 6 37.4	1.437	2.425	4.7	19.7
4 11	12 43.52	- 5 11.3	1.719	2.713	3.4	20.4	4 11	12 43.41	+ 7 43.2	1.460	2.432	7.4	19.9
4 21	12 35.33	- 4 15.9	1.747	2.708	7.7	20.6	4 21	12 35.25	+ 8 28.2	1.507	2.438	11.3	20.1
5 1	12 28.72	- 3 29.9	1.801	2.704	11.7	20.8	5 1	12 29.03	+ 8 49.3	1.578	2.444	15.0	20.4
5 11	12 24.28	- 2 57.6	1.877	2.698	15.0	21.1	5 11	12 25.28	+ 8 46.8	1.666	2.450	18.1	20.6
280404	2003 <i>VS</i> ₁₀		4 3.3 142°46	1°5/ 1.7 17			169104	2001 <i>NN</i> ₈		4 3.3 255°98	1°6/ 1.6 17		
3 2	13 12.00	- 2 52.8	2.137	2.994	11.3	20.5	3 2	13 10.98	- 2 49.9	2.162	3.020	11.1	20.3
3 12	13 6.82	- 2 13.3	2.068	2.998	8.1	20.3	3 12	13 6.18	- 2 6.9	2.082	3.013	8.0	20.0
3 22	13 0.01	- 1 27.0	2.024	3.001	4.5	20.1	3 22	12 59.72	- 1 16.5	2.028	3.006	4.4	19.8
4 1	12 52.22	- 0 38.5	2.008	3.005	1.5	19.9	4 1	12 52.24	- 0 23.4	2.002	2.999	1.6	19.6
4 11	12 44.29	+ 0 6.8	2.021	3.008	4.0	20.1	4 11	12 44.54	+ 0 26.7	2.005	2.992	4.1	19.8
4 21	12 37.03	+ 0 44.1	2.062	3.011	7.6	20.3	4 21	12 37.42	+ 1 8.7	2.036	2.985	7.7	20.0
5 1	12 31.13	+ 1 9.6	2.128	3.014	10.9	20.5	5 1	12 31.61	+ 1 38.7	2.092	2.978	11.0	20.2
5 11	12 27.07	+ 1 21.2	2.217	3.017	13.7	20.7	5 11	12 27.61	+ 1 54.1	2.170	2.971	13.9	20.3
470534	2008 <i>DV</i> ₂₇		4 3.3 2°54	9°0/20.4 18			370783	2004 <i>SK</i> ₄₈		4 3.3 170°30	1°3/ 1.8 17		
3 2	13 8.53	+20 47.0	2.191	3.051	10.9	21.1	3 2	13 14.60	- 2 8.8	2.583	3.429	10.1	21.3
3 12	13 4.41	+23 2.3	2.152	3.051	9.5	21.0	3 12	13 8.46	- 1 41.8	2.508	3.433	7.1	21.1
3 22	12 58.68	+25 6.2	2.139	3.051	9.0	21.0	3 22	13 0.88	- 1 9.8	2.461	3.437	4.0	20.9
4 1	12 51.98	+26 49.7	2.154	3.051	9.8	21.0	4 1	12 52.45	- 0 36.5	2.443	3.440	1.4	20.7
4 11	12 45.14	+28 6.1	2.193	3.051	11.5	21.1	4 11	12 43.88	+ 0 5.9	2.456	3.443	3.5	20.9
4 21	12 38.95	+28 52.6	2.255	3.052	13.4	21.3	4 21	12 35.90	+ 0 18.4	2.498	3.445	6.6	21.1
5 1	12 34.09	+29 9.4	2.336	3.052	15.2	21.4	5 1	12 29.11	+ 0 33.7	2.568	3.446	9.5	21.3
5 11	12 31.04	+28 59.4	2.431	3.053	16.8	21.5	5 11	12 23.96	+ 0 38.1	2.661	3.447	12.0	21.4
66974	1999 <i>XG</i> ₇₀		4 3.3 226°89	3°6/29.9 18			226712	2004 <i>PG</i> ₁		4 3.3 285°06	2°9/31.8 17		
3 2	13 12.91	+ 5 0.7	2.585	3.444	9.5	20.4	3 2	13 13.93	+ 0 8.5	1.766	2.633	12.8	20.6
3 12	13 7.33	+ 5 55.0	2.502	3.431	6.9	20.2	3 12	13 8.77	+ 0 49.3	1.677	2.611	9.3	20.3
3 22	13 0.28	+ 6 50.7	2.446	3.417	4.5	20.0	3 22	13 1.43	+ 1 36.8	1.612	2.590	5.4	20.0
4 1	12 52.29	+ 7 42.7	2.420	3.402	3.6	19.9	4 1	12 52.60	+ 2 25.0	1.574	2.568	2.9	19.8
4 11	12 44.09	+ 8 25.9	2.423	3.387	5.5	20.0	4 11	12 43.32	+ 3 6.9	1.563	2.546	5.6	20.0
4 21	12 36.37	+ 8 56.4	2.454	3.371	8.2	20.2	4 21	12 34.65	+ 3 36.7	1.579	2.524	9.8	20.1
5 1	12 29.78	+ 9 11.9	2.512	3.354	10.9	20.3	5 1	12 27.60	+ 3 49.9	1.619	2.502	13.8	20.3
5 11	12 24.80	+ 9 11.6	2.590	3.337	13.3	20.5	5 11	12 22.85	+ 3 44.6	1.679	2.480	17.3	20.5
54440	2000 <i>MP</i> ₃		4 3.3 287°04	3°5/31.1 18			105809	2000 <i>SJ</i> ₁₃₆		4 3.3 151°16	1°7/ 5.5 18		
3 2	13 12.78	+ 0 57.5	1.695	2.566	13.0	18.8	3 2	13 10.99	-13 34.0	2.765	3.579	10.3	20.8
3 12	13 7.97	+ 1 54.2	1.609	2.546	9.4	18.5	3 12	13 5.86	-13 19.3	2.685	3.586	7.8	20.7
3 22	13 0.96	+ 2 58.0	1.547	2.525	5.6	18.2	3 22	12 59.41	-12 53.2	2.631	3.592	4.9	20.5
4 1	12 52.47	+ 4 1.8	1.513	2.504	3.6	18.0	4 1	12 52.18	-12 17.6	2.605	3.597	2.3	20.3
4 11	12 43.54	+ 4 57.6	1.505	2.484	6.3	18.2	4 11	12 44.82	-11 36.0	2.609	3.603	2.5	20.3
4 21	12 35.26	+ 5 38.5	1.523	2.463	10.5	18.3	4 21	12 37.96	-10 52.2	2.643	3.608	5.2	20.5
5 1	12 28.63	+ 5 59.8	1.564	2.442	14.5	18.5	5 1	12 32.18	-10 10.4	2.705	3.613	8.0	20.7
5 11	12 24.35	+ 5 59.9	1.625	2.422	18.0	18.7	5 11	12 27.88	- 9 34.4	2.790	3.617	10.5	20.9
210561	1999 <i>TE</i> ₁₆₈		4 3.3 131°81	1°5/ 4.7 18			185188	2006 <i>SM</i> ₃₉₂		4 3.3 198°76	2°3/ 1.1 18		
3 2	13 13.65	-12 52.4	1.753	2.588	14.4	20.7	3 2	13 14.54	- 0 57.7	2.049	2.907	11.7	20.9
3 12	13 8.34	-12 11.8	1.683	2.596	10.7	20.5	3 12	13 8.79	- 0 13.1	1.974	2.904	8.4	20.7
3 22	13 1.01	-11 13.1	1.637	2.605	6.5	20.2	3 22	13 1.23	+ 0 37.5	1.924	2.901	4.7	20.4
4 1	12 52.46	-10 0.5	1.617	2.613	2.3	20.0	4 1	12 52.54	+ 1 28.9	1.902	2.897	2.3	20.3
4 11	12 43.76	- 8 41.0	1.626	2.621	3.3	20.1	4 11	12 43.63	+ 2 15.2	1.909	2.892	4.7	20.4
4 21	12 35.91	- 7 22.7	1.662	2.628	7.6	20.3	4 21	12 35.41	+ 2 51.3	1.944	2.887	8.4	20.6
5 1	12 29.79	- 6 13.1	1.724	2.635	11.6	20.6	5 1	12 28.65	+ 3 13.4	2.005	2.882	11.8	20.8
5 11	12 25.93	- 5 17.8	1.808	2.642	15.0	20.8	5 11	12 23.88	+ 3 19.8	2.087	2.876	14.8	21.0
454149	2013 <i>EY</i> ₅₁		4 3.3 81°63	0°1/ 3.2 15			179534	2002 <i>CT</i> ₂₀₇		4 3.3 309°21	4°3/ 7.3 17		
3 2	13 17.34	- 6 54.7	1.362	2.223	16.3	21.9	3 2	13 13.48	-18 46.8	2.264	3.060	12.9	19.9
3 12	13 11.33	- 6 31.8	1.308	2.238	11.8	21.6	3 12	13 8.12	-19 16.4	2.171	3.051	10.3	19.7
3 22	13 2.80	- 5 55.2	1.276	2.253	6.7	21.4	3 22	13 0.92	-19 30.9	2.101	3.042	7.4	19.5
4 1	12 52.80	- 5 10.2	1.269	2.268	1.2	21.1	4 1	12 52.50	-19 29.6	2.058	3.033	4.9	19.3
4 11	12 42.72	- 4 24.4	1.289	2.283	4.3	21.3	4 11	12 43.71	-19 14.5	2.042	3.025	4.5	19.3
4 21	12 33.84	- 3 45.1	1.334	2.298	9.4	21.7	4 21	12 35.44	-18 49.1	2.055	3.016	6.7	19.4
5 1	12 27.21	- 3 18.2	1.403	2.312	13.8	21.9	5 1	12 28.50	-18 18.3	2.093	3.008	9.7	19.5
5 11	12 23.36	- 3 7.2	1.491	2.327	17.5	22.2	5 11	12 23.50	-17 47.8	2.156	3.000	12.5	19.7
343038	2009 <i>BE</i> ₁₄₂		4 3.3 2°56	2°1/ 1.2 17			33839	2000 <i>GQ</i> ₅₈		4 3.3 271°42	0°0/ 3.2 17		
3 2	13 10.65	- 1 30.9	1.957	2.822	11.8	20.7	3 2	13 14.62	- 8 37.2	1.560	2.413	14.9	19.3
3 12	13 6.02	- 0 47.9	1.888	2.822	8.4	20.5	3 12	13 9.63	- 7 58.0	1.464	2.390	11.1	19.0
3 22	12 59.64	+ 0 1.5	1.843	2.822	4.7	20.3	3 22	13 2.10	- 7 1.0	1.390	2.366	6.4	18.7
4 1	12 52.21	+ 0 52.0	1.826	2.822	2.1	20.1	4 1	12 52.76	- 5 50.6	1.343	2.341	1.3	18.3
4 11	12 44.61	+ 1 37.6	1.837	2.823	4.6	20.3	4 11	12 42.78	- 4 34.4	1.322	2.316	4.2	18.4
4 21	12 37.69	+ 2 13.1	1.875	2.823	8.3	20.5	4 21	12 33.43	- 3 21.4	1.328	2.291	9.5	18.6
5 1	12 32.21	+ 2 34.8	1.938	2.824	11.8	20.7	5 1	12 25.91	- 2 20.3	1.358	2.265	14.4	18.9
5 11	12 28.67	+ 2 40.8	2.022	2.825	14.7	20.9	5 11	12 21.04	- 1 37.3	1.407	2.238	18.6	19.0
65660	1985 <i>PM</i> ₁		4 3.3 214°90	3°2/29.8 18			130043	1999 <i>VZ</i> ₁₄₈		4 3.3 327°74	0°0/ 3.1 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
233676	2008 <i>RD</i> ₆₇		4 3.3 188°75	1°6/ 1.6 18			403847	2011 <i>UG</i> ₃₀₀		4 3.3 159°80	3°6/31.3 18		
3 2	13 12.60	- 2 39.5	2.252	3.106	10.9	21.4	3 2	13 16.37	+ 1 18.7	1.634	2.502	13.6	20.9
3 12	13 7.25	- 1 57.1	2.177	3.105	7.8	21.2	3 12	13 10.41	+ 2 11.8	1.571	2.506	9.8	20.7
3 22	13 0.29	- 1 8.1	2.127	3.104	4.3	21.0	3 22	13 2.25	+ 3 9.7	1.533	2.510	5.8	20.5
4 1	12 52.36	- 0 16.9	2.106	3.103	1.6	20.8	4 1	12 52.76	+ 4 5.2	1.521	2.513	3.6	20.4
4 11	12 44.26	+ 0 31.2	2.115	3.101	3.9	20.9	4 11	12 43.10	+ 4 50.9	1.537	2.516	6.3	20.5
4 21	12 36.76	+ 1 11.3	2.151	3.099	7.4	21.2	4 21	12 34.39	+ 5 20.9	1.579	2.518	10.3	20.8
5 1	12 30.57	+ 1 39.7	2.214	3.096	10.7	21.4	5 1	12 27.53	+ 5 32.0	1.644	2.520	14.1	21.0
5 11	12 26.16	+ 1 54.3	2.299	3.093	13.4	21.5	5 11	12 23.11	+ 5 23.6	1.729	2.521	17.2	21.2
345766	2007 <i>EH</i> ₁₀₅		4 3.3 58°69	1°5/ 2.2 18			402095	2003 <i>UC</i> ₃₀₈		4 3.3 215°06	0°4/ 2.9 16		
3 2	13 14.35	- 5 48.1	1.141	2.017	17.5	20.7	3 2	13 15.47	- 6 30.8	2.010	2.855	12.4	22.1
3 12	13 9.47	- 4 49.2	1.093	2.032	12.5	20.5	3 12	13 9.60	- 5 55.6	1.924	2.847	9.0	21.9
3 22	13 1.85	- 3 34.6	1.067	2.047	6.9	20.2	3 22	13 1.77	- 5 9.2	1.863	2.838	5.1	21.6
4 1	12 52.66	- 2 13.4	1.064	2.062	1.7	19.9	4 1	12 52.69	- 4 15.9	1.830	2.829	0.9	21.3
4 11	12 43.42	- 0 56.8	1.086	2.078	5.5	20.2	4 11	12 43.29	- 3 21.4	1.826	2.818	3.6	21.5
4 21	12 35.52	+ 0 5.1	1.132	2.094	10.9	20.6	4 21	12 34.53	- 2 31.7	1.851	2.807	7.8	21.7
5 1	12 30.05	+ 0 45.8	1.200	2.110	15.6	20.9	5 1	12 27.28	- 1 52.0	1.901	2.795	11.6	21.9
5 11	12 27.52	+ 1 2.8	1.286	2.126	19.5	21.2	5 11	12 22.11	- 1 26.1	1.974	2.783	14.8	22.1
376138	2011 <i>AK</i> ₇₃		4 3.3 64°37	6°0/28.8 18			460296	2014 <i>QQ</i> ₃₆₇		4 3.3 173°03	4°3/30.3 16		
3 2	13 13.28	+ 7 42.2	1.632	2.509	13.1	20.4	3 2	13 14.79	+ 3 25.4	1.786	2.655	12.6	21.4
3 12	13 8.10	+ 8 56.6	1.582	2.517	9.7	20.2	3 12	13 9.13	+ 4 31.8	1.723	2.657	9.1	21.2
3 22	13 0.88	+ 10 9.2	1.556	2.525	6.8	20.1	3 22	13 1.48	+ 5 41.3	1.684	2.659	5.7	21.0
4 1	12 52.47	+ 11 11.0	1.557	2.533	6.2	20.1	4 1	12 52.62	+ 6 46.3	1.674	2.660	4.3	20.9
4 11	12 43.99	+ 11 54.6	1.584	2.541	8.5	20.2	4 11	12 43.60	+ 7 39.2	1.690	2.661	6.8	21.1
4 21	12 36.46	+ 12 15.4	1.635	2.549	11.8	20.4	4 21	12 35.41	+ 8 14.6	1.734	2.661	10.3	21.3
5 1	12 30.73	+ 12 12.2	1.708	2.557	14.9	20.6	5 1	12 28.90	+ 8 29.6	1.801	2.662	13.7	21.5
5 11	12 27.29	+ 11 46.6	1.800	2.565	17.6	20.8	5 11	12 24.62	+ 8 24.1	1.887	2.661	16.6	21.7
436022	2009 <i>HR</i> ₆₂		4 3.3 355°40	3°4/30.9 17			346079	2007 <i>UQ</i> ₁₂₈		4 3.3 60°18	0°0/ 3.2 17		
3 2	13 9.99	+ 1 57.5	1.900	2.773	11.8	20.7	3 2	13 11.16	- 7 30.8	1.997	2.847	12.3	21.5
3 12	13 5.60	+ 2 49.1	1.834	2.771	8.4	20.5	3 12	13 6.29	- 6 56.9	1.937	2.862	8.9	21.3
3 22	12 59.44	+ 3 44.5	1.792	2.769	5.0	20.3	3 22	12 59.76	- 6 12.5	1.902	2.877	5.0	21.1
4 1	12 52.21	+ 4 37.4	1.777	2.768	3.4	20.2	4 1	12 52.29	- 5 21.7	1.894	2.892	0.9	20.8
4 11	12 44.81	+ 5 21.5	1.790	2.767	5.8	20.3	4 11	12 44.74	- 4 30.2	1.914	2.908	3.2	21.0
4 21	12 38.11	+ 5 51.7	1.829	2.766	9.2	20.5	4 21	12 37.95	- 3 43.6	1.963	2.924	7.0	21.3
5 1	12 32.86	+ 6 4.9	1.892	2.766	12.6	20.7	5 1	12 32.60	- 3 6.4	2.037	2.939	10.5	21.6
5 11	12 29.58	+ 6 0.2	1.974	2.767	15.4	20.9	5 11	12 29.16	- 2 41.9	2.133	2.955	13.4	21.8
468230	2015 <i>BV</i> ₁₇₁		4 3.3 145°41	3°4/30.9 17			277014	2005 <i>AG</i> ₁₇		4 3.3 172°57	7°2/24.7 17		
3 2	13 11.82	+ 1 15.1	1.892	2.761	12.0	21.4	3 2	13 12.77	+ 17 32.3	2.426	3.281	10.2	20.6
3 12	13 6.90	+ 2 19.3	1.827	2.763	8.6	21.2	3 12	13 7.27	+ 18 56.9	2.377	3.284	8.3	20.4
3 22	13 0.17	+ 3 28.5	1.788	2.765	5.1	21.0	3 22	13 0.26	+ 20 13.1	2.355	3.286	7.3	20.4
4 1	12 52.35	+ 4 35.6	1.776	2.766	3.4	20.9	4 1	12 52.38	+ 21 14.1	2.360	3.288	7.6	20.4
4 11	12 44.37	+ 5 33.7	1.792	2.768	5.8	21.0	4 11	12 44.42	+ 21 54.8	2.393	3.290	9.1	20.5
4 21	12 37.14	+ 6 17.1	1.834	2.769	9.4	21.3	4 21	12 37.10	+ 22 12.8	2.450	3.291	11.1	20.6
5 1	12 31.43	+ 6 42.3	1.901	2.771	12.7	21.5	5 1	12 31.09	+ 22 8.0	2.529	3.291	13.1	20.8
5 11	12 27.73	+ 6 48.4	1.988	2.772	15.6	21.7	5 11	12 26.81	+ 21 42.4	2.626	3.291	14.8	20.9
97239	1999 <i>XP</i> ₈₁		4 3.3 59°37	2°0/ 1.5 18			501405	2013 <i>YU</i> ₆₆		4 3.3 83°05	5°6/27.7 17		
3 2	13 12.39	- 2 30.4	1.756	2.621	12.9	19.4	3 2	13 10.82	+ 10 16.3	2.180	3.050	10.6	20.4
3 12	13 7.30	- 1 44.3	1.703	2.637	9.2	19.2	3 12	13 5.95	+ 11 28.7	2.129	3.057	8.0	20.2
3 22	13 0.36	- 0 51.0	1.675	2.654	5.1	19.0	3 22	12 59.54	+ 12 37.5	2.104	3.064	6.0	20.1
4 1	12 52.38	+ 0 3.7	1.673	2.670	2.0	18.8	4 1	12 52.25	+ 13 36.0	2.106	3.071	5.9	20.1
4 11	12 44.36	+ 0 52.9	1.700	2.687	4.6	19.0	4 11	12 44.89	+ 14 18.5	2.136	3.078	7.6	20.2
4 21	12 37.23	+ 1 31.1	1.753	2.704	8.6	19.3	4 21	12 38.22	+ 14 41.6	2.192	3.085	10.2	20.4
5 1	12 31.75	+ 1 54.7	1.830	2.720	12.1	19.5	5 1	12 32.89	+ 14 44.3	2.271	3.092	12.6	20.6
5 11	12 28.38	+ 2 1.8	1.928	2.737	15.1	19.8	5 11	12 29.33	+ 14 27.6	2.369	3.099	14.8	20.8
371056	2005 <i>UE</i> ₂₂₉		4 3.3 173°61	0°4/ 2.8 17			264553	2001 <i>SM</i> ₂₃₇		4 3.3 104°19	1°0/ 2.3 18		
3 2	13 13.17	- 6 41.8	2.170	3.015	11.6	22.0	3 2	13 14.30	- 5 4.9	1.891	2.745	12.7	21.7
3 12	13 7.71	- 6 0.9	2.095	3.017	8.4	21.8	3 12	13 8.58	- 4 20.3	1.835	2.762	9.1	21.5
3 22	13 0.58	- 5 9.7	2.044	3.020	4.7	21.6	3 22	13 1.07	- 3 26.3	1.803	2.780	5.0	21.3
4 1	12 52.44	- 4 12.7	2.023	3.021	0.9	21.3	4 1	12 52.54	- 2 28.4	1.798	2.797	1.2	21.1
4 11	12 44.12	- 3 15.2	2.031	3.023	3.3	21.5	4 11	12 43.97	- 1 33.0	1.823	2.813	3.9	21.3
4 21	12 36.46	- 2 22.9	2.067	3.023	7.1	21.7	4 21	12 36.26	- 0 45.7	1.875	2.829	7.9	21.6
5 1	12 30.17	- 1 40.4	2.130	3.023	10.5	21.9	5 1	12 30.16	- 0 11.0	1.953	2.845	11.4	21.8
5 11	12 25.75	- 1 11.0	2.215	3.023	13.5	22.1	5 11	12 26.12	+ 0 8.7	2.052	2.861	14.4	22.1
214096	2004 <i>LQ</i> ₁₁		4 3.3 309°88	7°5/11.7 18			87742	2000 <i>SH</i> ₆₅		4 3.3 177°63	0°6/ 2.7 17 R		
3 2	13 9.78	- 29 41.2	2.110	2.854	15.3	19.9	3 2	13 12.80	- 6 6.4	2.041	2.891	12.1	19.9
3 12	13 5.73	- 29 53.7	2.007	2.838	13.1	19.7	3 12	13 7.55	- 5 26.5	1.966	2.892	8.7	19.7
3 22	12 59.69	- 29 40.9	1.925	2.821	10.7	19.5	3 22	13 0.54	- 4 36.4	1.916	2.892	4.9	19.4
4 1	12 52.30	- 29 1.0	1.865	2.804	8.5	19.4	4 1	12 52.46	- 3 40.5	1.894	2.893	0.9	19.1
4 11	12 44.49	- 27 55.5	1.830	2.788	7.5	19.3	4 11	12 44.18	- 2 44.7	1.901	2.893	3.5	19.3
4 21	12 37.25	- 26 29.4	1.822	2.772	8.3	19.3	4 21	12 36.59	- 1 54.8	1.937	2.893	7.5	19.6
5 1	12 31.50	- 24 50.7	1.839	2.757	10.6	19.4	5 1	12 30.43	- 1 15.6	1.997	2.893	11.0	19.8
5 11	12 27.87	- 23 8.8	1.880	2.742	13.3	19.5	5 11	12 26.22	- 0 50.2	2.080	2.892	14.1	20.0
115322	2003 <i>SM</i> ₂₁₉		4 3.3 116°82	1°3/ 2.1 18			384035	2008 <i>UW</i> ₁₅₆					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
334901	2003 <i>WG</i> ₉₅		4 3.3 135°98	3°7/ 7.9 17			237131	2008 <i>UY</i> ₁₅		4 3.3 358°54	0°7/ 3.8 18		
3 2	13 11.45	-20 44.9	2.387	3.173	12.6	21.2	3 2	13 12.35	-8 15.2	1.033	1.912	18.7	19.9
3 12	13 6.42	-20 22.4	2.307	3.183	10.0	21.1	3 12	13 8.57	-8 8.1	0.971	1.909	13.8	19.6
3 22	12 59.83	-19 41.4	2.251	3.191	7.1	20.9	3 22	13 1.69	-7 42.3	0.928	1.907	8.1	19.3
4 1	12 52.32	-18 43.6	2.222	3.200	4.5	20.8	4 1	12 52.75	-7 2.4	0.907	1.906	1.9	18.9
4 11	12 44.67	-17 33.0	2.222	3.208	3.8	20.7	4 11	12 43.38	-6 17.0	0.909	1.906	4.7	19.1
4 21	12 37.66	-16 15.4	2.251	3.216	6.0	20.9	4 21	12 35.22	-5 35.6	0.934	1.907	10.8	19.4
5 1	12 31.95	-14 57.4	2.307	3.223	8.8	21.1	5 1	12 29.63	-5 6.9	0.979	1.909	16.3	19.7
5 11	12 27.99	-13 45.0	2.388	3.230	11.5	21.2	5 11	12 27.36	-4 56.3	1.041	1.913	20.8	20.0
431124	2006 <i>KA</i> ₉		4 3.3 180°25	0°4/ 3.7 17			121371	1999 <i>TE</i> ₇₇		4 3.3 154°75	0°0/ 3.2 18		
3 2	13 11.74	-8 52.7	2.260	3.099	11.4	21.6	3 2	13 13.02	-7 32.2	2.120	2.964	11.9	20.3
3 12	13 6.67	-8 22.7	2.182	3.100	8.4	21.4	3 12	13 7.66	-7 5.9	2.046	2.967	8.7	20.1
3 22	13 0.00	-7 41.6	2.128	3.100	4.9	21.2	3 22	13 0.60	-6 29.3	1.997	2.971	4.9	19.9
4 1	12 52.36	-6 52.8	2.102	3.100	1.1	20.9	4 1	12 52.50	-5 45.9	1.976	2.974	1.0	19.6
4 11	12 44.53	-6 1.3	2.106	3.100	2.8	21.1	4 11	12 44.23	-5 0.8	1.983	2.977	3.1	19.8
4 21	12 37.31	-5 12.0	2.138	3.100	6.5	21.3	4 21	12 36.63	-4 19.1	2.019	2.980	6.9	20.0
5 1	12 31.37	-4 29.8	2.197	3.099	9.9	21.5	5 1	12 30.43	-3 45.4	2.082	2.982	10.4	20.2
5 11	12 27.20	-3 58.4	2.279	3.098	12.8	21.7	5 11	12 26.12	-3 23.1	2.166	2.984	13.4	20.4
431926	2008 <i>TW</i> ₁₀₀		4 3.3 278°94	0°6/ 3.9 17			336127	2008 <i>OE</i> ₂₅		4 3.3 213°97	5°1/ 8.3 17		
3 2	13 11.91	-9 23.1	1.914	2.759	12.9	21.6	3 2	13 14.47	-21 48.0	2.136	2.919	14.0	21.3
3 12	13 7.08	-8 56.7	1.834	2.755	9.5	21.3	3 12	13 8.94	-22 4.9	2.046	2.915	11.3	21.1
3 22	13 0.35	-8 17.1	1.778	2.751	5.6	21.1	3 22	13 1.46	-22 2.5	1.979	2.911	8.4	20.9
4 1	12 52.44	-7 27.7	1.749	2.747	1.4	20.8	4 1	12 52.69	-21 40.4	1.937	2.906	5.9	20.7
4 11	12 44.26	-6 34.2	1.749	2.743	3.2	20.9	4 11	12 43.57	-21 1.0	1.923	2.902	5.2	20.7
4 21	12 36.76	-5 42.7	1.775	2.739	7.4	21.2	4 21	12 35.07	-20 9.1	1.936	2.897	7.2	20.8
5 1	12 30.76	-4 59.0	1.827	2.736	11.2	21.4	5 1	12 28.05	-19 11.1	1.976	2.891	10.1	20.9
5 11	12 26.82	-4 27.4	1.901	2.732	14.5	21.6	5 11	12 23.13	-18 14.3	2.039	2.886	13.0	21.1
405370	2003 <i>YG</i> ₁₈		4 3.3 60°35	0°6/ 3.7 18			88958	2001 <i>TV</i> ₄₄		4 3.3 186°30	1°6/ 4.6 18		
3 2	13 18.85	-7 13.6	1.381	2.237	16.3	20.7	3 2	13 18.02	-10 57.5	1.743	2.578	14.5	19.6
3 12	13 12.39	-7 18.7	1.330	2.257	11.9	20.5	3 12	13 11.69	-10 51.8	1.665	2.578	10.8	19.3
3 22	13 3.41	-7 11.1	1.301	2.276	6.9	20.3	3 22	13 3.07	-10 31.4	1.609	2.578	6.6	19.1
4 1	12 53.00	-6 54.5	1.298	2.296	1.6	20.0	4 1	12 53.00	-9 58.5	1.581	2.577	2.4	18.8
4 11	12 42.55	-6 34.5	1.321	2.316	3.9	20.2	4 11	12 42.59	-9 18.2	1.580	2.575	3.5	18.9
4 21	12 33.36	-6 16.9	1.370	2.336	8.9	20.5	4 21	12 33.01	-8 36.6	1.608	2.573	7.9	19.1
5 1	12 26.43	-6 7.0	1.443	2.356	13.3	20.8	5 1	12 25.25	-8 0.0	1.661	2.570	12.0	19.4
5 11	12 22.31	-6 8.3	1.536	2.376	16.9	21.1	5 11	12 19.96	-7 33.5	1.735	2.567	15.6	19.6
214181	2005 <i>CV</i> ₇₈		4 3.3 22°00	1°2/ 2.5 18			54918	2001 <i>OC</i> ₉₄		4 3.3 219°41	0°5/ 3.8 18		
3 2	13 13.46	-4 42.9	1.225	2.102	16.6	20.4	3 2	13 14.18	-9 11.7	2.040	2.878	12.5	20.2
3 12	13 8.85	-4 14.9	1.168	2.107	11.9	20.2	3 12	13 8.67	-8 44.7	1.953	2.871	9.2	20.0
3 22	13 1.58	-3 34.3	1.132	2.112	6.7	19.9	3 22	13 1.27	-8 4.9	1.891	2.863	5.4	19.7
4 1	12 52.68	-2 47.5	1.120	2.118	1.5	19.6	4 1	12 52.65	-7 15.8	1.857	2.855	1.3	19.4
4 11	12 43.56	-2 3.1	1.133	2.125	5.0	19.8	4 11	12 43.74	-6 22.6	1.851	2.846	3.1	19.5
4 21	12 35.61	-1 28.7	1.169	2.133	10.3	20.1	4 21	12 35.44	-5 31.1	1.874	2.836	7.2	19.8
5 1	12 29.91	-1 10.1	1.228	2.142	15.1	20.4	5 1	12 28.61	-4 46.9	1.924	2.826	11.0	20.0
5 11	12 27.08	-1 10.3	1.305	2.151	19.0	20.7	5 11	12 23.80	-4 14.4	1.995	2.816	14.3	20.2
148706	2001 <i>SA</i> ₃₄₉		4 3.3 98°18	7°8/ 9.1 18			331909	2004 <i>RT</i> ₅₃		4 3.3 279°95	2°2/ 1.2 17		
3 2	13 22.43	-25 5.7	1.863	2.624	16.5	20.4	3 2	13 12.59	-2 21.2	1.855	2.717	12.5	20.9
3 12	13 15.01	-26 21.3	1.789	2.635	13.8	20.3	3 12	13 7.77	-1 29.3	1.761	2.694	9.0	20.6
3 22	13 5.03	-27 15.2	1.737	2.647	10.9	20.1	3 22	13 0.88	-0 27.6	1.692	2.671	5.1	20.3
4 1	12 53.36	-27 43.8	1.710	2.658	8.6	20.0	4 1	12 52.60	+0 38.1	1.651	2.647	2.2	20.1
4 11	12 41.25	-27 46.9	1.710	2.668	7.9	20.0	4 11	12 43.86	+1 40.6	1.637	2.623	5.0	20.2
4 21	12 30.01	-27 28.4	1.737	2.679	9.3	20.1	4 21	12 35.68	+2 33.1	1.650	2.598	9.3	20.4
5 1	12 20.77	-26 55.0	1.788	2.690	11.8	20.2	5 1	12 29.00	+3 10.0	1.688	2.574	13.2	20.6
5 11	12 14.25	-26 15.7	1.862	2.700	14.5	20.4	5 11	12 24.48	+3 28.3	1.746	2.549	16.7	20.7
101541	1998 <i>YM</i> ₁₇		4 3.3 242°63	2°3/ 1.1 18			115374	2003 <i>SC</i> ₂₅₉		4 3.3 211°77	0°0/ 3.1 16		
3 2	13 13.13	-1 52.7	1.896	2.757	12.3	20.3	3 2	13 15.85	-7 33.9	1.921	2.764	13.0	21.2
3 12	13 7.99	-0 59.9	1.815	2.747	8.8	20.1	3 12	13 9.97	-7 6.0	1.837	2.758	9.5	20.9
3 22	13 0.90	+0 1.2	1.759	2.737	5.0	19.8	3 22	13 2.04	-6 26.0	1.777	2.751	5.5	20.7
4 1	12 52.56	+1 4.7	1.730	2.726	2.3	19.6	4 1	12 52.81	-5 37.9	1.745	2.743	1.0	20.4
4 11	12 43.91	+2 3.6	1.730	2.715	4.9	19.8	4 11	12 43.25	-4 47.3	1.742	2.735	3.5	20.5
4 21	12 35.93	+2 51.8	1.757	2.703	8.9	20.0	4 21	12 34.38	-4 0.2	1.767	2.727	7.8	20.8
5 1	12 29.47	+3 24.4	1.809	2.691	12.7	20.2	5 1	12 27.09	-3 22.1	1.818	2.717	11.7	21.0
5 11	12 25.10	+3 39.2	1.882	2.679	15.9	20.4	5 11	12 21.98	-2 57.1	1.891	2.707	15.1	21.2
383858	2008 <i>PD</i> ₂₁		4 3.3 211°77	5°4/27.2 18			356331	2010 <i>JU</i> ₉₉		4 3.3 268°27	6°5/10.6 17		
3 2	13 12.61	+11 1.0	2.547	3.407	9.6	22.0	3 2	13 13.33	-28 23.7	2.624	3.355	12.9	21.1
3 12	13 7.17	+12 18.2	2.477	3.399	7.3	21.9	3 12	13 8.03	-28 54.8	2.514	3.336	11.0	20.9
3 22	13 0.24	+13 32.8	2.435	3.390	5.7	21.7	3 22	13 0.94	-29 7.1	2.426	3.317	9.0	20.7
4 1	12 52.42	+14 38.5	2.422	3.381	5.6	21.7	4 1	12 52.61	-28 59.0	2.363	3.298	7.2	20.6
4 11	12 44.41	+15 29.8	2.437	3.370	7.3	21.8	4 11	12 43.84	-28 30.9	2.326	3.278	6.5	20.5
4 21	12 36.94	+16 3.1	2.479	3.360	9.6	21.9	4 21	12 35.47	-27 45.8	2.317	3.258	7.4	20.5
5 1	12 30.63	+16 16.8	2.546	3.348	12.0	22.1	5 1	12 28.31	-26 48.9	2.335	3.238	9.3	20.6
5 11	12 25.96	+16 11.3	2.632	3.336	14.0	22.2	5 11	12 22.97	-25 46.8	2.377	3.217	11.6	20.7
390696	2003 <i>AZ</i> ₄₈		4 3.3 109°55	3°4/29.9 18			100226	1994 <i>PJ</i> ₁₆		4 3.3 187°85	1°0/ 4.4 18		
3 2	13 12.84	+5 39.8	2.737	3.594	9.1	21.9							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
520160	2014 CS ₂₅		4 3.3 150°21	1.7°/ 5.2 17			430047	2013 RB ₈₈		4 3.3 140°38	2°0/ 5.3 17		
3 2	13 12.84	-12 27.2	2.510	3.330	11.1	21.8	3 2	13 14.56	-12 54.1	2.113	2.936	12.7	21.7
3 12	13 7.36	-12 24.4	2.430	3.334	8.3	21.6	3 12	13 8.82	-12 46.1	2.038	2.944	9.6	21.5
3 22	13 0.38	-12 10.4	2.376	3.338	5.2	21.4	3 22	13 1.29	-12 24.1	1.988	2.951	6.0	21.3
4 1	12 52.49	-11 46.8	2.349	3.342	2.3	21.2	4 1	12 52.68	-11 50.4	1.965	2.958	2.6	21.1
4 11	12 44.43	-11 16.9	2.353	3.346	2.7	21.3	4 11	12 43.89	-11 9.2	1.970	2.964	3.0	21.1
4 21	12 36.92	-10 44.6	2.385	3.350	5.7	21.5	4 21	12 35.81	-10 25.7	2.005	2.970	6.5	21.4
5 1	12 30.61	-10 14.1	2.445	3.353	8.7	21.7	5 1	12 29.19	-9 45.1	2.066	2.976	10.0	21.6
5 11	12 25.97	-9 49.3	2.528	3.356	11.4	21.8	5 11	12 24.55	-9 12.2	2.150	2.982	13.0	21.8
458986	2011 WT ₇₂		4 3.3 158°87	0°1/ 3.2 18			477977	2011 SJ ₈₂		4 3.3 201°18	0°8/ 4.3 17		
3 2	13 17.38	-7 5.1	1.873	2.716	13.3	22.2	3 2	13 11.27	-9 59.6	2.741	3.569	10.0	22.1
3 12	13 10.97	-6 38.1	1.802	2.724	9.6	22.0	3 12	13 6.16	-9 41.0	2.654	3.566	7.4	21.9
3 22	13 2.55	-5 59.9	1.756	2.730	5.5	21.7	3 22	12 59.68	-9 12.9	2.593	3.562	4.4	21.7
4 1	12 52.91	-5 14.5	1.738	2.736	1.0	21.4	4 1	12 52.38	-8 37.5	2.561	3.558	1.4	21.5
4 11	12 43.09	-4 27.7	1.748	2.742	3.5	21.6	4 11	12 44.89	-7 58.3	2.559	3.554	2.4	21.6
4 21	12 34.10	-3 45.4	1.787	2.746	7.8	21.9	4 21	12 37.86	-7 19.4	2.587	3.549	5.5	21.8
5 1	12 26.80	-3 12.6	1.852	2.750	11.6	22.1	5 1	12 31.89	-6 44.5	2.642	3.544	8.4	21.9
5 11	12 21.75	-2 52.8	1.939	2.753	14.9	22.4	5 11	12 27.41	-6 16.9	2.721	3.539	11.0	22.1
403490	2009 UJ ₇₃		4 3.3 30°13	1°5/ 1.7 17			66749	1999 TN ₁₅₁		4 3.3 227°38	0°7/ 2.5 18		
3 2	13 10.49	-1 1.2	2.415	3.273	10.1	20.0	3 2	13 10.69	-7 11.9	2.261	3.106	11.2	19.9
3 12	13 5.60	-0 43.7	2.354	3.284	7.2	19.9	3 12	13 6.00	-6 6.2	2.173	3.097	8.1	19.7
3 22	12 59.34	-0 22.4	2.319	3.296	4.0	19.7	3 22	12 59.70	-4 48.3	2.112	3.088	4.5	19.5
4 1	12 52.28	-0 0.9	2.312	3.308	1.6	19.5	4 1	12 52.39	-3 23.2	2.079	3.078	0.9	19.2
4 11	12 45.16	+0 17.0	2.334	3.321	3.6	19.7	4 11	12 44.85	-1 57.4	2.076	3.067	3.4	19.4
4 21	12 38.65	+0 28.3	2.384	3.334	6.7	19.9	4 21	12 37.86	-0 37.6	2.103	3.056	7.2	19.6
5 1	12 33.32	+0 30.6	2.461	3.347	9.6	20.1	5 1	12 32.10	+0 30.5	2.156	3.045	10.6	19.8
5 11	12 29.59	+0 22.5	2.559	3.361	12.0	20.3	5 11	12 28.08	+1 23.1	2.231	3.033	13.6	19.9
341812	2007 XB ₅₅		4 3.3 84°54	0°3/ 3.0 17			215130	1999 RB ₁₉₉		4 3.3 282°03	4°2/ 8.4 18 R		
3 2	13 11.83	-6 29.6	2.236	3.082	11.3	21.6	3 2	13 9.83	-21 52.7	2.408	3.191	12.6	19.8
3 12	13 6.65	-6 0.4	2.173	3.097	8.1	21.4	3 12	13 5.49	-21 37.3	2.300	3.170	10.2	19.6
3 22	12 59.96	-5 22.5	2.137	3.112	4.6	21.2	3 22	12 59.48	-21 2.4	2.215	3.150	7.5	19.4
4 1	12 52.41	-4 39.7	2.128	3.127	0.8	21.0	4 1	12 52.37	-20 8.6	2.156	3.129	5.0	19.2
4 11	12 44.78	-3 56.8	2.149	3.141	3.0	21.2	4 11	12 44.92	-18 58.9	2.125	3.108	4.3	19.1
4 21	12 37.83	-3 18.4	2.198	3.156	6.6	21.4	4 21	12 37.92	-17 38.7	2.122	3.087	6.3	19.2
5 1	12 32.21	-2 48.4	2.273	3.171	9.8	21.6	5 1	12 32.13	-16 14.7	2.147	3.066	9.2	19.3
5 11	12 28.33	-2 29.5	2.371	3.185	12.5	21.8	5 11	12 28.09	-14 53.8	2.196	3.044	12.2	19.5
52484	1995 VL ₁₂		4 3.3 19°60	4°9/31.3 18			191301	2003 GP ₁₂		4 3.3 305°73	2°3/ 4.8 17		
3 2	13 15.95	+2 47.1	1.113	2.001	17.0	18.7	3 2	13 16.94	-10 27.3	1.607	2.449	15.1	19.8
3 12	13 10.86	+3 29.8	1.060	2.004	12.3	18.5	3 12	13 11.52	-10 53.4	1.501	2.417	11.6	19.5
3 22	13 2.82	+4 16.2	1.028	2.007	7.4	18.2	3 22	13 3.38	-11 7.0	1.417	2.385	7.3	19.2
4 1	12 52.98	+4 56.8	1.020	2.012	4.9	18.1	4 1	12 53.19	-11 8.7	1.359	2.354	3.0	18.8
4 11	12 42.94	+5 22.3	1.035	2.017	8.0	18.3	4 11	12 42.10	-11 0.9	1.327	2.322	4.0	18.8
4 21	12 34.23	+5 26.7	1.073	2.022	12.9	18.5	4 21	12 31.45	-10 48.3	1.322	2.290	8.9	19.0
5 1	12 28.04	+5 7.6	1.132	2.029	17.4	18.8	5 1	12 22.57	-10 36.7	1.342	2.259	13.8	19.2
5 11	12 25.00	+4 26.4	1.207	2.036	21.2	19.1	5 11	12 16.42	-10 31.9	1.381	2.228	18.1	19.4
135449	2001 VT ₁₆		4 3.3 113°56	4°5/ 8.9 18			522549	2016 EA ₂₄₀		4 3.3 274°14	8°4/24.6 17		
3 2	13 13.00	-22 47.6	2.579	3.348	12.2	19.9	3 2	13 11.45	+13 7.9	1.720	2.597	12.6	20.6
3 12	13 7.47	-22 54.1	2.504	3.363	9.9	19.8	3 12	13 7.00	+15 10.7	1.657	2.583	10.0	20.4
3 22	13 0.44	-22 43.4	2.452	3.378	7.4	19.6	3 22	13 0.46	+17 9.9	1.619	2.569	8.5	20.3
4 1	12 52.50	-22 16.0	2.427	3.392	5.2	19.5	4 1	12 52.57	+18 54.0	1.608	2.555	9.0	20.3
4 11	12 44.44	-21 34.4	2.430	3.406	4.5	19.5	4 11	12 44.36	+20 13.1	1.622	2.541	11.3	20.4
4 21	12 36.99	-20 43.2	2.462	3.420	6.0	19.6	4 21	12 36.90	+21 1.5	1.659	2.526	14.2	20.5
5 1	12 30.80	-19 47.5	2.521	3.433	8.3	19.8	5 1	12 31.09	+21 17.6	1.716	2.512	17.1	20.7
5 11	12 26.32	-18 52.9	2.605	3.447	10.7	19.9	5 11	12 27.55	+21 3.6	1.789	2.498	19.6	20.8
265796	2005 WQ ₁₉₃		4 3.3 144°44	6°9/26.5 18			122736	2000 SY ₄₉		4 3.3 158°66	2°2/ 5.6 17		
3 2	13 12.85	+12 16.7	1.992	2.861	11.5	20.6	3 2	13 13.52	-14 11.8	2.088	2.909	12.9	20.8
3 12	13 7.57	+13 50.5	1.943	2.867	8.9	20.4	3 12	13 8.13	-13 54.7	2.010	2.913	9.8	20.6
3 22	13 0.55	+15 19.0	1.920	2.873	7.1	20.3	3 22	13 0.94	-13 22.0	1.956	2.917	6.3	20.4
4 1	12 52.53	+16 33.8	1.925	2.879	7.2	20.3	4 1	12 52.65	-12 35.9	1.929	2.921	2.9	20.2
4 11	12 44.41	+17 28.2	1.956	2.884	9.1	20.5	4 11	12 44.16	-11 41.3	1.930	2.924	3.1	20.2
4 21	12 37.08	+17 58.5	2.012	2.889	11.7	20.6	4 21	12 36.35	-10 43.9	1.960	2.927	6.6	20.4
5 1	12 31.26	+18 3.8	2.091	2.894	14.2	20.8	5 1	12 29.99	-9 49.7	2.017	2.929	10.1	20.6
5 11	12 27.42	+17 46.2	2.187	2.898	16.4	21.0	5 11	12 25.62	-9 4.1	2.096	2.931	13.2	20.8
72174	2000 YO ₁₀₉		4 3.3 206°10	4°3/ 7.1 18			62178	2000 SN ₃₇		4 3.3 159°21	1°1/ 2.2 17		
3 2	13 16.35	-18 47.3	1.905	2.707	14.7	19.6	3 2	13 12.64	-4 54.3	1.995	2.849	12.1	19.8
3 12	13 10.48	-18 51.8	1.817	2.702	11.7	19.4	3 12	13 7.48	-4 7.1	1.924	2.852	8.7	19.6
3 22	13 2.42	-18 36.4	1.751	2.697	8.2	19.1	3 22	13 0.56	-3 10.4	1.878	2.855	4.8	19.4
4 1	12 52.92	-18 1.4	1.711	2.692	5.1	18.9	4 1	12 52.57	-2 9.2	1.860	2.858	1.2	19.1
4 11	12 43.03	-17 10.4	1.698	2.686	4.6	18.9	4 11	12 44.42	-1 9.8	1.871	2.860	3.9	19.3
4 21	12 33.84	-16 9.3	1.714	2.679	7.5	19.0	4 21	12 36.97	-0 18.2	1.909	2.863	7.8	19.5
5 1	12 26.33	-15 5.8	1.755	2.672	11.1	19.2	5 1	12 30.98	+0 21.1	1.973	2.864	11.3	19.8
5 11	12 21.15	-14 7.4	1.819	2.664	14.5	19.4	5 11	12 26.95	+0 45.1	2.059	2.866	14.4	20.0
472606	2015 DE ₁₅₄		4 3.3 277°63	1°8/ 1.7 16			205271	2000 SM ₇₀		4 3.3 274°23	3°1/31.9 18		
3 2	13 16.24	-0 33.0	2.210	3.061	11.2	20.6	3 2	13 16.31	-0 17.0	1.551	2.419		

EPHEMERIDES

4 3.3

4 3.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
392849	2012 UC ₅₆		4 3.3 116°53	1.8/ 5.6	17		426821	2013 UJ ₆		4 3.3 266°04	3.7/ 7.1	17	
3 2	13 10.88	-14 5.3	2.479	3.296	11.3	21.8	3 2	13 11.82	-18 39.6	1.900	2.710	14.5	21.1
3 12	13 5.94	-13 39.1	2.406	3.308	8.5	21.6	3 12	13 7.25	-18 19.3	1.805	2.697	11.4	20.8
3 22	12 59.58	-12 59.6	2.358	3.319	5.4	21.4	3 22	13 0.63	-17 37.2	1.732	2.683	7.9	20.6
4 1	12 52.39	-12 9.4	2.338	3.330	2.4	21.2	4 1	12 52.65	-16 34.7	1.685	2.670	4.6	20.4
4 11	12 45.10	-11 12.7	2.347	3.341	2.6	21.3	4 11	12 44.28	-15 16.4	1.666	2.656	4.1	20.3
4 21	12 38.39	-10 14.5	2.386	3.352	5.6	21.5	4 21	12 36.54	-13 49.7	1.674	2.643	7.3	20.5
5 1	12 32.89	-9 19.8	2.452	3.362	8.6	21.7	5 1	12 30.33	-12 23.3	1.708	2.629	11.1	20.6
5 11	12 29.00	-8 33.0	2.542	3.372	11.3	21.9	5 11	12 26.31	-11 5.0	1.764	2.615	14.6	20.8
356382	2010 ON ₂₈		4 3.3 271°90	3.5/29.8	17		502523	2015 BC ₄₃₅		4 3.3 285°51	2.7/31.8	17	
3 2	13 9.01	+ 4 13.2	2.563	3.428	9.3	20.7	3 2	13 12.34	- 0 14.0	1.884	2.750	12.2	21.0
3 12	13 4.63	+ 5 14.5	2.483	3.415	6.8	20.5	3 12	13 7.41	+ 0 32.5	1.811	2.745	8.7	20.8
3 22	12 58.88	+ 6 17.9	2.429	3.402	4.3	20.4	3 22	13 0.61	+ 1 25.0	1.762	2.740	5.0	20.5
4 1	12 52.27	+ 7 18.2	2.405	3.388	3.5	20.3	4 1	12 52.63	+ 2 17.6	1.741	2.735	2.7	20.4
4 11	12 45.46	+ 8 10.3	2.409	3.374	5.4	20.4	4 11	12 44.42	+ 3 3.9	1.747	2.730	5.2	20.5
4 21	12 39.11	+ 8 49.8	2.441	3.361	8.1	20.5	4 21	12 36.90	+ 3 38.4	1.780	2.725	9.0	20.7
5 1	12 33.81	+ 9 14.1	2.498	3.347	10.8	20.7	5 1	12 30.89	+ 3 57.3	1.838	2.720	12.5	20.9
5 11	12 30.02	+ 9 22.1	2.576	3.333	13.1	20.8	5 11	12 26.94	+ 3 59.0	1.916	2.715	15.6	21.1
522811	2016 NQ ₈₀		4 3.3 249°86	3.7/29.7	17		387739	2003 GJ ₅₆		4 3.3 50°43	0°0/ 3.2	17	
3 2	13 9.51	+ 4 6.0	2.385	3.252	9.9	21.7	3 2	13 16.92	- 5 5.8	2.115	2.959	11.9	20.4
3 12	13 5.04	+ 5 13.8	2.312	3.245	7.1	21.5	3 12	13 10.47	- 5 20.3	2.046	2.967	8.7	20.2
3 22	12 59.12	+ 6 24.0	2.266	3.239	4.6	21.3	3 22	13 2.24	- 5 28.2	2.002	2.976	4.9	20.0
4 1	12 52.31	+ 7 30.6	2.249	3.232	3.8	21.3	4 1	12 52.93	- 5 31.7	1.986	2.985	1.0	19.7
4 11	12 45.33	+ 8 27.8	2.260	3.225	5.7	21.4	4 11	12 43.48	- 5 34.0	2.000	2.994	3.1	19.9
4 21	12 38.88	+ 9 11.2	2.299	3.218	8.5	21.5	4 21	12 34.76	- 5 37.9	2.043	3.003	6.9	20.2
5 1	12 33.59	+ 9 37.9	2.362	3.211	11.3	21.7	5 1	12 27.54	- 5 46.4	2.112	3.013	10.3	20.4
5 11	12 29.91	+ 9 47.1	2.446	3.204	13.7	21.9	5 11	12 22.32	- 6 1.8	2.205	3.022	13.2	20.6
424767	2008 TG ₈₁		4 3.3 182°59	0°3/ 3.0	17		376621	2013 PB ₄₉		4 3.4 298°57	0°9/ 4.1	17	
3 2	13 14.09	- 5 48.8	1.983	2.833	12.4	21.2	3 2	13 12.50	-10 3.9	1.515	2.369	15.3	21.2
3 12	13 8.59	- 5 30.9	1.908	2.833	9.0	21.0	3 12	13 8.17	- 9 39.4	1.424	2.349	11.4	20.9
3 22	13 1.23	- 5 4.0	1.857	2.833	5.1	20.7	3 22	13 1.37	- 8 57.1	1.355	2.328	6.8	20.6
4 1	12 52.73	- 4 31.5	1.834	2.833	0.9	20.4	4 1	12 52.83	- 8 0.2	1.310	2.308	1.9	20.2
4 11	12 44.01	- 3 58.4	1.840	2.833	3.4	20.6	4 11	12 43.71	- 6 55.7	1.292	2.288	3.8	20.3
4 21	12 35.98	- 3 29.5	1.873	2.832	7.5	20.9	4 21	12 35.27	- 5 51.7	1.300	2.268	9.0	20.6
5 1	12 29.45	- 3 9.2	1.932	2.832	11.1	21.1	5 1	12 28.66	- 4 56.9	1.331	2.248	13.9	20.8
5 11	12 24.96	- 3 0.4	2.013	2.832	14.2	21.3	5 11	12 24.67	- 4 17.5	1.382	2.229	18.1	21.0
211031	2002 AC ₁₅₉		4 3.3 91°33	1°4/ 4.5	18		372747	2010 AT ₆₇		4 3.4 158°40	0°5/ 2.8	17	
3 2	13 15.95	-11 20.1	1.471	2.317	16.1	20.7	3 2	13 13.16	- 6 11.0	2.378	3.220	10.8	22.6
3 12	13 10.32	-10 53.4	1.412	2.332	11.9	20.5	3 12	13 7.61	- 5 31.5	2.306	3.228	7.8	22.4
3 22	13 2.32	-10 8.6	1.375	2.346	7.1	20.3	3 22	13 0.56	- 4 43.2	2.259	3.234	4.4	22.2
4 1	12 52.93	- 9 10.1	1.364	2.361	2.3	20.0	4 1	12 52.62	- 3 50.0	2.242	3.240	0.8	21.9
4 11	12 43.43	- 8 5.5	1.380	2.375	3.7	20.1	4 11	12 44.55	- 2 57.1	2.254	3.246	3.1	22.1
4 21	12 35.01	- 7 3.1	1.421	2.389	8.5	20.4	4 21	12 37.09	- 2 9.2	2.296	3.250	6.6	22.4
5 1	12 28.65	- 6 10.5	1.488	2.403	12.8	20.7	5 1	12 30.89	- 1 30.4	2.364	3.255	9.7	22.6
5 11	12 24.91	- 5 32.9	1.574	2.416	16.4	21.0	5 11	12 26.40	- 1 3.6	2.456	3.258	12.4	22.8
405002	2000 SR ₃₆₅		4 3.3 186°39	1°4/ 1.9	17		272316	2005 SW ₇₀		4 3.4 164°53	0°4/ 3.9	16	
3 2	13 15.55	- 4 15.3	2.070	2.919	12.0	22.8	3 2	13 13.32	- 9 50.3	2.465	3.294	10.9	22.2
3 12	13 9.56	- 3 21.4	1.993	2.919	8.6	22.6	3 12	13 7.70	- 9 9.8	2.388	3.301	8.0	22.0
3 22	13 1.76	- 2 18.2	1.942	2.918	4.8	22.4	3 22	13 0.61	- 8 18.1	2.336	3.307	4.7	21.8
4 1	12 52.83	- 1 10.8	1.919	2.917	1.5	22.1	4 1	12 52.63	- 7 18.5	2.314	3.312	1.1	21.6
4 11	12 43.69	- 0 5.8	1.926	2.914	4.1	22.3	4 11	12 44.51	- 6 16.0	2.322	3.316	2.6	21.7
4 21	12 35.25	+ 0 50.7	1.962	2.911	8.0	22.5	4 21	12 36.99	- 5 15.8	2.360	3.320	6.1	21.9
5 1	12 28.27	+ 1 34.1	2.024	2.906	11.5	22.8	5 1	12 30.70	- 4 22.7	2.426	3.323	9.3	22.1
5 11	12 23.30	+ 2 1.5	2.108	2.901	14.5	22.9	5 11	12 26.09	- 3 40.4	2.515	3.326	12.0	22.3
375803	2009 TQ ₁₅		4 3.3 192°08	2°3/31.8	17		307518	2003 AB ₄₄		4 3.4 172°71	1°0/ 4.4	18	
3 2	13 13.86	- 0 13.7	2.340	3.194	10.5	22.4	3 2	13 15.04	-10 47.5	2.218	3.046	12.0	21.1
3 12	13 8.17	+ 0 35.3	2.264	3.193	7.5	22.2	3 12	13 9.13	-10 24.4	2.139	3.050	8.9	20.9
3 22	13 0.90	+ 1 29.3	2.214	3.190	4.3	22.0	3 22	13 1.50	- 9 48.8	2.084	3.053	5.4	20.7
4 1	12 52.67	+ 2 23.4	2.194	3.187	2.3	21.9	4 1	12 52.81	- 9 3.6	2.058	3.055	1.7	20.4
4 11	12 44.26	+ 3 12.1	2.203	3.183	4.5	22.0	4 11	12 43.93	- 8 13.4	2.062	3.057	2.8	20.5
4 21	12 36.44	+ 3 50.9	2.241	3.179	7.7	22.2	4 21	12 35.70	- 7 23.5	2.095	3.058	6.5	20.7
5 1	12 29.89	+ 4 16.5	2.305	3.174	10.8	22.4	5 1	12 28.87	- 6 39.2	2.154	3.058	10.0	20.9
5 11	12 25.10	+ 4 27.3	2.391	3.168	13.5	22.6	5 11	12 23.93	- 6 4.4	2.237	3.057	12.9	21.1
115302	2003 SU ₂₀₆		4 3.3 96°18	1°7/ 4.7	18		425878	2011 FP ₂₂		4 3.4 121°69	1°8/ 1.5	17	
3 2	13 17.28	-11 6.2	1.578	2.419	15.4	20.1	3 2	13 12.23	- 3 11.1	2.010	2.868	11.9	21.5
3 12	13 11.19	-10 59.4	1.517	2.433	11.5	19.8	3 12	13 7.14	- 2 15.0	1.946	2.877	8.4	21.3
3 22	13 2.80	-10 36.7	1.477	2.447	7.0	19.6	3 22	13 0.36	- 1 10.9	1.908	2.886	4.7	21.1
4 1	12 53.04	-10 1.2	1.464	2.460	2.5	19.4	4 1	12 52.59	- 0 4.6	1.898	2.894	1.8	20.9
4 11	12 43.14	- 9 18.5	1.478	2.473	3.6	19.5	4 11	12 44.70	+ 0 57.4	1.916	2.902	4.3	21.1
4 21	12 34.26	- 8 35.5	1.519	2.486	8.1	19.8	4 21	12 37.55	+ 1 49.4	1.962	2.910	8.0	21.3
5 1	12 27.36	- 7 58.6	1.585	2.499	12.2	20.0	5 1	12 31.84	+ 2 27.3	2.034	2.918	11.4	21.6
5 11	12 23.02	- 7 32.9	1.672	2.511	15.7	20.3	5 11	12 28.05	+ 2 48.8	2.127	2.925	14.2	21.8
452332	2001 BG ₂₉		4 3.3 34°39	6°5/ 8.1	16		262227	2006 SO ₂₇₄		4 3.4 117°94	1°6/ 1.9	18	
3 2	13 14.14	-19 59.8	1.109	1.946	20.8	20.1	3 2						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
199053	2005 <i>WA</i> ₁₉₅		4 3.4 48°43	1°0/ 4.2 18			507232	2011 <i>AQ</i> ₃₈		4 3.4 69°76	0°4/ 3.9 17		
3 2	13 13.08	-11 41.3	1.088	1.955	18.9	20.2	3 2	13 8.32	-9 2.9	2.947	3.780	9.2	22.1
3 12	13 8.68	-10 50.6	1.044	1.975	13.9	20.0	3 12	13 3.90	-8 36.0	2.882	3.797	6.7	22.0
3 22	13 1.53	-9 36.1	1.020	1.996	8.2	19.7	3 22	12 58.37	-8 0.9	2.843	3.814	3.9	21.8
4 1	12 52.81	-8 5.7	1.019	2.017	2.2	19.4	4 1	12 52.22	-7 20.5	2.833	3.831	1.0	21.6
4 11	12 44.10	-6 31.4	1.042	2.039	4.3	19.6	4 11	12 46.01	-6 38.2	2.854	3.848	2.1	21.8
4 21	12 36.80	-5 5.2	1.090	2.061	9.9	20.0	4 21	12 40.29	-5 57.7	2.903	3.865	5.0	22.0
5 1	12 31.95	-3 56.9	1.159	2.083	14.8	20.3	5 1	12 35.52	-5 22.3	2.980	3.882	7.6	22.2
5 11	12 30.06	-3 11.6	1.247	2.106	18.8	20.7	5 11	12 32.06	-4 54.7	3.082	3.899	9.8	22.3
501167	2013 <i>TK</i> ₈₄		4 3.4 146°58	1°4/ 4.9 17			211545	2003 <i>SF</i> ₂₆		4 3.4 215°21	0°7/ 3.9 16		
3 2	13 12.87	-12 12.0	2.161	2.989	12.3	21.9	3 2	13 17.19	-9 3.7	1.963	2.798	13.1	21.5
3 12	13 7.58	-11 45.4	2.086	2.996	9.2	21.7	3 12	13 11.00	-8 48.3	1.875	2.791	9.7	21.2
3 22	13 0.62	-11 5.0	2.035	3.002	5.6	21.5	3 22	13 2.73	-8 20.5	1.811	2.782	5.7	21.0
4 1	12 52.64	-10 13.7	2.012	3.008	2.1	21.3	4 1	12 53.11	-7 43.2	1.775	2.773	1.5	20.7
4 11	12 44.51	-9 16.5	2.018	3.013	2.8	21.3	4 11	12 43.11	-7 1.1	1.769	2.763	3.2	20.8
4 21	12 37.03	-8 19.0	2.053	3.018	6.4	21.6	4 21	12 33.77	-6 19.9	1.790	2.752	7.5	21.0
5 1	12 30.95	-7 26.9	2.114	3.023	9.9	21.8	5 1	12 26.01	-5 45.1	1.838	2.741	11.4	21.2
5 11	12 26.74	-6 44.6	2.199	3.028	12.8	22.0	5 11	12 20.44	-5 21.0	1.908	2.729	14.8	21.4
495106	2011 <i>US</i> ₁₆₆		4 3.4 171°27	2°9/ 1.0 18			498684	2008 <i>SO</i> ₂₆₀		4 3.4 225°25	0°9/ 4.2 17		
3 2	13 17.97	+0 20.7	1.767	2.627	13.1	21.4	3 2	13 13.28	-9 43.8	2.083	2.920	12.3	22.0
3 12	13 11.53	+1 0.5	1.699	2.630	9.4	21.2	3 12	13 8.02	-9 27.1	2.000	2.916	9.1	21.7
3 22	13 2.96	+1 45.4	1.656	2.633	5.4	20.9	3 22	13 0.96	-8 58.2	1.941	2.912	5.4	21.5
4 1	12 53.10	+2 29.4	1.641	2.635	2.9	20.8	4 1	12 52.75	-8 20.1	1.910	2.907	1.6	21.2
4 11	12 43.05	+3 6.0	1.654	2.637	5.4	20.9	4 11	12 44.28	-7 37.4	1.908	2.903	2.9	21.3
4 21	12 33.88	+3 30.0	1.695	2.638	9.4	21.2	4 21	12 36.43	-6 55.2	1.933	2.898	6.9	21.6
5 1	12 26.48	+3 38.3	1.760	2.638	13.2	21.4	5 1	12 29.99	-6 18.8	1.985	2.893	10.5	21.8
5 11	12 21.43	+3 29.8	1.845	2.638	16.3	21.6	5 11	12 25.50	-5 52.2	2.060	2.887	13.6	22.0
163839	2003 <i>ST</i> ₄₅		4 3.4 151°20	2°0/ 1.6 18			334798	2003 <i>SJ</i> ₁₉₄		4 3.4 209°53	2°4/ 6.2 17		
3 2	13 16.92	-1 53.5	1.941	2.795	12.4	20.7	3 2	13 11.82	-16 4.9	2.392	3.201	11.9	21.7
3 12	13 10.57	-1 12.5	1.876	2.804	8.9	20.5	3 12	13 6.82	-15 39.2	2.301	3.196	9.1	21.5
3 22	13 2.33	-0 25.0	1.836	2.813	5.0	20.3	3 22	13 0.21	-14 57.6	2.234	3.190	6.0	21.3
4 1	12 52.98	+0 23.8	1.825	2.821	2.0	20.1	4 1	12 52.60	-14 2.3	2.195	3.184	3.1	21.1
4 11	12 43.50	+1 7.7	1.843	2.828	4.5	20.3	4 11	12 44.76	-12 57.5	2.185	3.177	3.0	21.1
4 21	12 34.85	+1 41.8	1.889	2.835	8.4	20.5	4 21	12 37.45	-11 48.5	2.204	3.170	6.0	21.3
5 1	12 27.82	+2 2.3	1.960	2.841	11.9	20.7	5 1	12 31.38	-10 41.5	2.251	3.163	9.2	21.5
5 11	12 22.92	+2 7.6	2.053	2.846	14.8	21.0	5 11	12 27.04	-9 41.8	2.321	3.155	12.1	21.7
520058	2013 <i>VT</i> ₃₀		4 3.4 223°38	1°4/ 4.8 17			230908	2004 <i>TJ</i> ₁₇₂		4 3.4 205°57	3°9/ 7.3 17		
3 2	13 11.98	-12 6.6	2.098	2.929	12.5	21.8	3 2	13 14.71	-18 48.9	2.222	3.017	13.1	21.1
3 12	13 7.08	-11 40.6	2.014	2.925	9.4	21.6	3 12	13 9.07	-18 57.4	2.132	3.013	10.4	20.9
3 22	13 0.41	-11 0.1	1.954	2.921	5.8	21.3	3 22	13 1.58	-18 48.8	2.066	3.009	7.4	20.7
4 1	12 52.62	-10 8.0	1.921	2.916	2.1	21.1	4 1	12 52.88	-18 23.7	2.026	3.005	4.7	20.5
4 11	12 44.59	-9 9.3	1.917	2.912	2.9	21.1	4 11	12 43.88	-17 44.8	2.014	3.000	4.2	20.5
4 21	12 37.16	-8 9.9	1.941	2.907	6.7	21.4	4 21	12 35.45	-16 56.9	2.031	2.995	6.6	20.6
5 1	12 31.12	-7 15.8	1.991	2.902	10.3	21.6	5 1	12 28.44	-16 5.9	2.075	2.989	9.7	20.8
5 11	12 27.00	-6 31.8	2.065	2.897	13.4	21.8	5 11	12 23.40	-15 17.9	2.142	2.984	12.7	21.0
435884	2008 <i>YK</i> ₁₅₉		4 3.4 331°34	8°0/23.3 16			141085	2001 <i>XQ</i> ₃₅		4 3.4 227°03	0°1/ 3.5 18		
3 2	13 6.21	+10 58.3	1.732	2.617	12.0	20.1	3 2	13 13.24	-6 49.4	2.543	3.381	10.4	20.1
3 12	13 3.23	+13 39.9	1.669	2.601	9.4	19.9	3 12	13 7.72	-6 38.3	2.455	3.373	7.6	19.9
3 22	12 58.34	+16 21.5	1.633	2.586	8.1	19.8	3 22	13 0.69	-6 19.5	2.393	3.366	4.4	19.7
4 1	12 52.23	+18 50.1	1.624	2.572	8.9	19.8	4 1	12 52.70	-5 55.3	2.360	3.358	0.9	19.4
4 11	12 45.82	+20 53.9	1.642	2.558	11.4	19.9	4 11	12 44.48	-5 29.4	2.356	3.350	2.7	19.6
4 21	12 40.06	+22 25.4	1.684	2.545	14.4	20.1	4 21	12 36.75	-5 5.4	2.382	3.341	6.1	19.8
5 1	12 35.78	+23 21.4	1.745	2.533	17.2	20.2	5 1	12 30.17	-4 46.7	2.435	3.332	9.2	20.0
5 11	12 33.57	+23 43.5	1.822	2.521	19.6	20.4	5 11	12 25.21	-4 36.3	2.512	3.323	11.9	20.1
246932	1999 <i>JR</i> ₅		4 3.4 300°86	9°8/26.9 17			434806	2006 <i>RP</i> ₇₈		4 3.4 231°14	0°4/ 2.9 17		
3 2	13 18.08	+14 26.8	1.360	2.236	15.3	20.2	3 2	13 13.39	-4 59.0	2.330	3.175	10.9	21.4
3 12	13 12.56	+15 40.2	1.281	2.207	12.3	19.9	3 12	13 7.91	-4 45.8	2.248	3.171	7.9	21.2
3 22	13 4.04	+16 46.8	1.224	2.178	10.1	19.7	3 22	13 0.82	-4 25.4	2.192	3.167	4.5	21.0
4 1	12 53.40	+17 34.2	1.191	2.149	10.2	19.6	4 1	12 52.73	-4 1.0	2.165	3.163	0.9	20.7
4 11	12 42.05	+17 51.9	1.181	2.120	12.7	19.6	4 11	12 44.42	-3 36.5	2.167	3.159	3.1	20.9
4 21	12 31.55	+17 34.3	1.194	2.092	16.4	19.8	4 21	12 36.68	-3 15.7	2.197	3.155	6.7	21.1
5 1	12 23.28	+16 41.3	1.225	2.063	20.3	19.9	5 1	12 30.19	-3 2.1	2.255	3.150	9.9	21.3
5 11	12 18.11	+15 17.2	1.272	2.035	23.7	20.1	5 11	12 25.46	-2 58.2	2.335	3.145	12.8	21.5
122500	2000 <i>QB</i> ₁₉₄		4 3.4 279°90	6°4/27.2 18			166946	2003 <i>JD</i> ₈		4 3.4 42°75	2°0/ 4.8 18		
3 2	13 11.07	+7 58.6	1.765	2.643	12.2	19.4	3 2	13 14.39	-12 4.1	1.218	2.075	18.0	20.0
3 12	13 6.71	+9 43.4	1.693	2.627	9.2	19.2	3 12	13 9.66	-11 49.5	1.159	2.084	13.5	19.8
3 22	13 0.33	+11 29.8	1.646	2.611	6.8	19.0	3 22	13 2.18	-11 13.4	1.122	2.093	8.3	19.5
4 1	12 52.63	+13 7.9	1.626	2.595	6.8	18.9	4 1	12 53.01	-10 20.0	1.107	2.103	3.0	19.2
4 11	12 44.60	+14 28.1	1.632	2.579	9.2	19.0	4 11	12 43.63	-9 17.2	1.118	2.114	4.1	19.3
4 21	12 37.25	+15 23.6	1.663	2.563	12.5	19.2	4 21	12 35.44	-8 14.9	1.152	2.124	9.4	19.7
5 1	12 31.46	+15 51.3	1.716	2.546	15.7	19.4	5 1	12 29.59	-7 22.0	1.209	2.135	14.2	20.0
5 11	12 27.85	+15 51.6	1.787	2.530	18.5	19.5	5 11	12 26.71	-6 45.2	1.286	2.147	18.3	20.2
10231	1997 <i>WQ</i> ₃₇		4 3.4 156°88	1°9/ 1.2 18			428685	2008 <i>KZ</i> ₃₆		4 3.4 229°60	1°6/ 5.2 17		
3 2	13 11.50	-1 25.2	2.282	3.140	10.6								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
284903	2009 <i>VF</i> ₄₃		4 3.4 216°50	1.3°/ 1.9	17		432802	2011 <i>GK</i> ₂₉		4 3.4 120°87	2°0' / 1.1	18	
3 2	13 13.39	- 3 59.7	2.233	3.083	11.2	21.5	3 2	13 11.54	- 3 44.4	2.091	2.948	11.5	21.7
3 12	13 7.99	- 3 14.8	2.148	3.075	8.0	21.3	3 12	13 6.60	- 2 22.0	2.031	2.961	8.2	21.5
3 22	13 0.91	- 2 21.4	2.090	3.066	4.5	21.0	3 22	13 0.06	- 0 50.8	1.996	2.974	4.5	21.3
4 1	12 52.76	- 1 24.2	2.060	3.057	1.3	20.8	4 1	12 52.62	+ 0 42.5	1.991	2.987	2.0	21.1
4 11	12 44.36	- 0 28.6	2.059	3.048	3.8	20.9	4 11	12 45.11	+ 2 10.3	2.015	2.999	4.4	21.3
4 21	12 36.53	+ 0 19.9	2.088	3.037	7.5	21.2	4 21	12 38.31	+ 3 26.3	2.068	3.011	8.0	21.5
5 1	12 30.00	+ 0 57.0	2.142	3.027	10.9	21.3	5 1	12 32.88	+ 4 25.8	2.146	3.022	11.2	21.8
5 11	12 25.29	+ 1 20.0	2.219	3.015	13.8	21.5	5 11	12 29.28	+ 5 6.5	2.246	3.033	13.9	22.0
126902	2002 <i>EJ</i> ₁₁₀		4 3.4 296°84	3.7°/30.8	18		423904	2006 <i>SV</i> ₂₄₂		4 3.4 252°04	0.9°/ 2.7	17	R
3 2	13 11.69	+ 1 40.1	1.767	2.639	12.5	19.5	3 2	13 16.45	- 4 33.2	1.718	2.573	13.7	21.7
3 12	13 7.14	+ 2 40.9	1.689	2.626	9.0	19.2	3 12	13 10.71	- 4 13.1	1.635	2.563	10.0	21.5
3 22	13 0.58	+ 3 47.3	1.636	2.613	5.4	19.0	3 22	13 2.70	- 3 43.4	1.575	2.552	5.6	21.2
4 1	12 52.71	+ 4 52.3	1.610	2.600	3.7	18.9	4 1	12 53.18	- 3 8.1	1.542	2.541	1.2	20.8
4 11	12 44.53	+ 5 48.2	1.611	2.588	6.3	19.0	4 11	12 43.25	- 2 33.3	1.537	2.529	4.2	21.0
4 21	12 37.02	+ 6 28.7	1.638	2.575	10.1	19.2	4 21	12 34.05	- 2 4.6	1.560	2.518	8.8	21.3
5 1	12 31.09	+ 6 49.7	1.688	2.563	13.8	19.4	5 1	12 26.58	- 1 47.0	1.606	2.506	13.0	21.5
5 11	12 27.33	+ 6 50.1	1.758	2.551	17.0	19.6	5 11	12 21.53	- 1 43.7	1.674	2.494	16.6	21.7
417710	2007 <i>CP</i> ₉		4 3.4 117°55	1.3°/ 4.7	18		502868	2015 <i>DE</i> ₂₀₄		4 3.4 73°33	0.5°/ 4.0	17	
3 2	13 15.30	- 11 36.3	2.039	2.868	12.9	21.8	3 2	13 10.15	- 11 4.5	1.939	2.780	12.9	21.2
3 12	13 9.33	- 11 10.4	1.975	2.886	9.6	21.6	3 12	13 5.78	- 10 7.3	1.869	2.788	9.5	21.0
3 22	13 1.61	- 10 30.7	1.936	2.903	5.8	21.4	3 22	12 59.68	- 8 54.5	1.824	2.796	5.6	20.8
4 1	12 52.88	- 9 40.5	1.924	2.920	2.0	21.2	4 1	12 52.56	- 7 31.1	1.806	2.804	1.4	20.5
4 11	12 44.08	- 8 45.3	1.942	2.937	2.9	21.3	4 11	12 45.31	- 6 4.2	1.817	2.812	3.0	20.7
4 21	12 36.08	- 7 50.7	1.988	2.952	6.7	21.5	4 21	12 38.77	- 4 41.3	1.856	2.820	7.1	20.9
5 1	12 29.62	- 7 2.5	2.061	2.967	10.2	21.8	5 1	12 33.69	- 3 29.2	1.921	2.828	10.8	21.2
5 11	12 25.18	- 6 24.9	2.156	2.982	13.2	22.0	5 11	12 30.54	- 2 32.4	2.008	2.836	13.9	21.4
358041	2006 <i>GU</i> ₂₂		4 3.4 338°97	1.5°/ 2.3	17		393228	2013 <i>GN</i> ₅₆		4 3.4 69°02	4.2°/31.5	18	
3 2	13 10.12	- 5 23.9	1.125	2.009	17.1	20.7	3 2	13 17.53	+ 2 7.8	1.328	2.204	15.5	20.5
3 12	13 6.89	- 4 40.9	1.056	1.998	12.5	20.4	3 12	13 11.60	+ 2 53.1	1.279	2.217	11.2	20.3
3 22	13 0.80	- 3 40.8	1.006	1.988	7.0	20.0	3 22	13 3.15	+ 3 42.1	1.252	2.229	6.6	20.0
4 1	12 52.80	- 2 31.0	0.980	1.978	1.7	19.7	4 1	12 53.24	+ 4 26.4	1.250	2.242	4.2	19.9
4 11	12 44.30	- 1 22.2	0.977	1.970	5.6	19.9	4 11	12 43.27	+ 4 58.0	1.274	2.255	7.0	20.1
4 21	12 36.81	- 0 25.1	0.997	1.963	11.4	20.2	4 21	12 34.53	+ 5 11.6	1.323	2.267	11.4	20.4
5 1	12 31.61	+ 0 12.2	1.037	1.956	16.6	20.4	5 1	12 28.04	+ 5 4.7	1.394	2.280	15.4	20.7
5 11	12 29.46	+ 0 25.2	1.095	1.952	21.1	20.7	5 11	12 24.34	+ 4 38.0	1.483	2.293	18.8	20.9
124281	2001 <i>QP</i> ₃₂		4 3.4 176°12	4.3°/ 6.9	18		136618	1994 <i>CN</i> ₂		4 3.4 230°84	1.3°/ 2.5	18	R
3 2	13 16.51	- 18 19.9	1.606	2.421	16.5	20.0	3 2	13 27.28	- 6 35.2	1.283	2.132	17.8	19.8
3 12	13 10.89	- 18 15.6	1.528	2.422	12.9	19.8	3 12	13 19.68	- 5 38.6	1.188	2.113	13.2	19.5
3 22	13 2.82	- 17 47.9	1.472	2.424	8.9	19.6	3 22	13 8.42	- 4 21.0	1.116	2.092	7.6	19.1
4 1	12 53.16	- 16 58.1	1.440	2.425	5.2	19.3	4 1	12 54.41	- 2 48.5	1.070	2.068	1.7	18.6
4 11	12 43.16	- 15 51.1	1.435	2.425	4.7	19.3	4 11	12 39.28	- 1 12.4	1.051	2.042	5.9	18.8
4 21	12 34.05	- 14 35.0	1.456	2.425	8.2	19.5	4 21	12 24.95	+ 0 14.7	1.059	2.013	12.4	19.1
5 1	12 26.91	- 13 19.2	1.503	2.424	12.3	19.7	5 1	12 13.19	+ 1 21.7	1.091	1.982	18.4	19.3
5 11	12 22.40	- 12 12.3	1.571	2.423	16.0	20.0	5 11	12 5.09	+ 2 2.5	1.141	1.949	23.5	19.5
150914	2001 <i>TR</i> ₃₈		4 3.4 264°24	4.9°/ 7.9	17		94792	2001 <i>XG</i> ₁₄₃		4 3.4 291°01	3.8°/ 6.5	17	
3 2	13 13.61	- 20 27.3	1.861	2.660	15.1	19.8	3 2	13 12.75	- 17 3.4	1.406	2.239	17.4	19.6
3 12	13 8.67	- 20 33.1	1.768	2.649	12.2	19.6	3 12	13 8.55	- 16 48.4	1.320	2.227	13.6	19.3
3 22	13 1.53	- 20 17.3	1.696	2.638	8.8	19.4	3 22	13 1.70	- 16 7.4	1.255	2.215	9.2	19.0
4 1	12 52.92	- 19 39.9	1.650	2.627	5.8	19.1	4 1	12 53.02	- 15 1.7	1.214	2.203	4.9	18.8
4 11	12 43.87	- 18 43.9	1.630	2.615	5.1	19.1	4 11	12 43.80	- 13 37.7	1.198	2.191	4.6	18.7
4 21	12 35.45	- 17 35.7	1.637	2.603	7.7	19.2	4 21	12 35.40	- 12 5.1	1.207	2.180	8.9	18.9
5 1	12 28.67	- 16 23.3	1.670	2.592	11.2	19.4	5 1	12 29.04	- 10 35.4	1.239	2.168	13.7	19.1
5 11	12 24.20	- 15 14.9	1.725	2.580	14.7	19.6	5 11	12 25.51	- 9 18.7	1.292	2.157	18.0	19.4
499142	2009 <i>RJ</i> ₁₂		4 3.4 187°64	0.5°/ 2.8	17		68481	2001 <i>TQ</i> ₉₅		4 3.4 304°81	2.5°/ 5.3	17	
3 2	13 13.30	- 6 40.2	2.306	3.148	11.1	23.3	3 2	13 13.25	- 12 57.4	1.579	2.420	15.4	19.4
3 12	13 7.84	- 5 56.0	2.225	3.147	8.0	23.1	3 12	13 8.68	- 12 55.7	1.490	2.405	11.8	19.1
3 22	13 0.79	- 5 1.8	2.171	3.146	4.5	22.9	3 22	13 1.68	- 12 35.9	1.423	2.390	7.5	18.8
4 1	12 52.75	- 4 1.8	2.146	3.144	0.9	22.6	4 1	12 53.02	- 11 59.8	1.381	2.375	3.3	18.5
4 11	12 44.52	- 3 1.3	2.150	3.142	3.2	22.8	4 11	12 43.83	- 11 12.3	1.365	2.360	3.8	18.5
4 21	12 36.88	- 2 5.8	2.184	3.139	6.8	23.0	4 21	12 35.33	- 10 20.2	1.375	2.346	8.3	18.7
5 1	12 30.52	- 1 20.0	2.244	3.135	10.2	23.2	5 1	12 28.63	- 9 31.5	1.410	2.332	12.9	18.9
5 11	12 25.93	- 0 46.9	2.327	3.131	13.0	23.4	5 11	12 24.50	- 8 53.0	1.464	2.318	16.8	19.2
424725	2008 <i>SM</i> ₂₀₆		4 3.4 180°55	3.5°/30.8	17		354668	2005 <i>MA</i> ₂₉		4 3.4 337°35	7.8°/12.6	18	
3 2	13 13.88	+ 3 46.3	2.147	3.010	11.0	21.0	3 2	13 12.67	- 31 47.6	2.323	3.041	14.8	20.5
3 12	13 8.30	+ 4 29.9	2.079	3.010	7.9	20.8	3 12	13 7.75	- 32 18.4	2.234	3.040	12.8	20.3
3 22	13 1.05	+ 5 15.1	2.037	3.011	4.9	20.7	3 22	13 0.92	- 32 26.0	2.165	3.040	10.7	20.2
4 1	12 52.80	+ 5 56.3	2.023	3.011	3.6	20.6	4 1	12 52.84	- 32 8.4	2.119	3.039	8.8	20.0
4 11	12 44.39	+ 6 28.2	2.038	3.010	5.6	20.7	4 11	12 44.44	- 31 26.6	2.098	3.038	7.9	20.0
4 21	12 36.65	+ 6 46.9	2.080	3.010	8.7	20.9	4 21	12 36.65	- 30 24.6	2.103	3.038	8.4	20.0
5 1	12 30.31	+ 6 50.3	2.147	3.009	11.8	21.1	5 1	12 30.31	- 29 9.1	2.133	3.037	10.0	20.1
5 11	12 25.84	+ 6 37.8	2.236	3.008	14.4	21.3	5 11	12 26.02	- 27 47.9	2.187	3.036	12.2	20.2
274429	2008 <i>SA</i> ₃₀		4 3.4 172°60	0.7°/ 4.1	17		31420						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
376041	2010 CX ₁₄₅		4 3.4 99°85	3°9/30.3	18		94702	2001 XU ₅₃		4 3.4 106°78	3°7/31.4	18	
3 2	13 15.09	+ 5 20.5	2.241	3.101	10.7	20.8	3 2	13 17.54	+ 1 3.3	1.536	2.404	14.3	20.1
3 12	13 8.96	+ 6 10.0	2.196	3.125	7.7	20.6	3 12	13 11.33	+ 2 4.1	1.486	2.421	10.2	19.9
3 22	13 1.33	+ 6 58.8	2.178	3.148	4.9	20.5	3 22	13 2.91	+ 3 9.7	1.461	2.438	6.0	19.7
4 1	12 52.91	+ 7 41.5	2.188	3.171	3.9	20.5	4 1	12 53.25	+ 4 11.9	1.462	2.454	3.7	19.6
4 11	12 44.52	+ 8 13.3	2.227	3.193	5.7	20.6	4 11	12 43.57	+ 5 2.7	1.491	2.470	6.4	19.8
4 21	12 36.92	+ 8 31.0	2.295	3.215	8.5	20.8	4 21	12 34.99	+ 5 36.3	1.545	2.485	10.4	20.1
5 1	12 30.73	+ 8 33.2	2.387	3.236	11.2	21.0	5 1	12 28.41	+ 5 49.9	1.623	2.500	14.2	20.3
5 11	12 26.34	+ 8 20.2	2.500	3.257	13.5	21.2	5 11	12 24.33	+ 5 43.2	1.720	2.514	17.3	20.6
418972	2009 HV ₆₈		4 3.4 325°35	0°0/ 3.2	17		357077	2001 RL ₁₁₀		4 3.4 187°46	1°1/ 4.6	17	
3 2	13 12.59	- 7 19.3	1.290	2.159	16.4	20.9	3 2	13 13.71	- 10 4.4	2.302	3.133	11.6	20.7
3 12	13 8.52	- 7 1.0	1.212	2.146	12.1	20.6	3 12	13 8.22	- 10 0.5	2.220	3.132	8.6	20.5
3 22	13 1.73	- 6 26.7	1.155	2.132	7.0	20.3	3 22	13 1.08	- 9 46.1	2.164	3.132	5.2	20.3
4 1	12 53.07	- 5 41.0	1.121	2.120	1.4	19.9	4 1	12 52.91	- 9 23.2	2.135	3.132	1.8	20.0
4 11	12 43.86	- 4 51.7	1.113	2.108	4.4	20.0	4 11	12 44.53	- 8 55.5	2.136	3.131	2.7	20.1
4 21	12 35.52	- 4 7.0	1.129	2.097	10.0	20.3	4 21	12 36.72	- 8 27.1	2.166	3.130	6.2	20.3
5 1	12 29.30	- 3 34.6	1.166	2.087	15.1	20.6	5 1	12 30.20	- 8 2.2	2.222	3.129	9.5	20.5
5 11	12 25.98	- 3 19.9	1.223	2.077	19.4	20.8	5 11	12 25.49	- 7 44.5	2.302	3.128	12.4	20.7
52603	1997 TV ₉		4 3.4 35°26	3°0/ 1.4	18		61338	2000 PK		4 3.4 98°79	2°1/31.8	18	
3 2	13 14.92	- 0 24.1	1.223	2.105	16.2	17.9	3 2	13 9.44	- 1 55.9	2.306	3.166	10.5	19.3
3 12	13 9.77	+ 0 7.5	1.183	2.124	11.6	17.7	3 12	13 5.04	- 0 49.3	2.241	3.172	7.4	19.1
3 22	13 2.11	+ 0 45.1	1.164	2.144	6.5	17.5	3 22	12 59.20	+ 0 23.7	2.201	3.179	4.2	18.9
4 1	12 53.07	+ 1 21.3	1.170	2.166	3.0	17.3	4 1	12 52.53	+ 1 37.6	2.191	3.186	2.1	18.8
4 11	12 44.08	+ 1 48.3	1.200	2.188	6.0	17.6	4 11	12 45.76	+ 2 46.3	2.210	3.192	4.3	18.9
4 21	12 36.40	+ 2 0.8	1.255	2.211	10.7	17.9	4 21	12 39.57	+ 3 44.5	2.257	3.199	7.5	19.1
5 1	12 30.99	+ 1 55.6	1.331	2.234	14.9	18.2	5 1	12 34.58	+ 4 28.6	2.330	3.205	10.5	19.3
5 11	12 28.33	+ 1 32.7	1.426	2.258	18.4	18.5	5 11	12 31.22	+ 4 56.5	2.425	3.212	13.0	19.5
8879	1993 FN ₂₀		4 3.4 141°97	0°9/ 4.3	18		469167	2015 LF ₃		4 3.4 142°86	3°3/ 7.3	17	
3 2	13 13.23	- 10 25.3	2.050	2.886	12.6	19.0	3 2	13 12.78	- 18 17.4	2.527	3.321	11.8	21.0
3 12	13 7.97	- 9 59.5	1.976	2.891	9.3	18.8	3 12	13 7.46	- 18 19.6	2.445	3.326	9.2	20.9
3 22	13 0.96	- 9 20.6	1.926	2.896	5.5	18.6	3 22	13 0.61	- 18 7.0	2.388	3.332	6.5	20.7
4 1	12 52.87	- 8 32.0	1.904	2.901	1.7	18.3	4 1	12 52.82	- 17 40.4	2.357	3.338	4.0	20.5
4 11	12 44.60	- 7 38.9	1.911	2.906	2.9	18.4	4 11	12 44.85	- 17 2.8	2.356	3.343	3.6	20.5
4 21	12 37.02	- 6 47.0	1.946	2.910	6.8	18.7	4 21	12 37.43	- 16 18.4	2.384	3.348	5.8	20.7
5 1	12 30.88	- 6 1.8	2.007	2.914	10.4	18.9	5 1	12 31.23	- 15 32.2	2.438	3.352	8.5	20.8
5 11	12 26.71	- 5 27.4	2.090	2.918	13.5	19.1	5 11	12 26.72	- 14 49.0	2.518	3.357	11.1	21.0
193792	2001 OB ₇₉		4 3.4 181°23	2°7/ 1.1	18		505613	2014 EF ₂₁		4 3.4 207°43	3°6/ 7.5	17	
3 2	13 17.56	- 0 46.4	1.766	2.625	13.2	21.1	3 2	13 12.22	- 19 2.9	2.506	3.298	11.9	21.4
3 12	13 11.32	+ 0 4.3	1.696	2.626	9.5	20.9	3 12	13 7.13	- 19 5.6	2.417	3.295	9.4	21.2
3 22	13 2.95	+ 1 2.0	1.650	2.627	5.4	20.6	3 22	13 0.46	- 18 52.9	2.351	3.292	6.7	21.0
4 1	12 53.26	+ 2 0.1	1.633	2.627	2.7	20.4	4 1	12 52.80	- 18 25.4	2.311	3.290	4.3	20.9
4 11	12 43.35	+ 2 51.5	1.644	2.627	5.4	20.6	4 11	12 44.89	- 17 45.9	2.301	3.286	3.8	20.8
4 21	12 34.29	+ 3 30.3	1.682	2.625	9.5	20.8	4 21	12 37.50	- 16 58.5	2.319	3.283	5.9	21.0
5 1	12 26.97	+ 3 52.3	1.744	2.623	13.2	21.1	5 1	12 31.30	- 16 8.5	2.365	3.280	8.7	21.1
5 11	12 21.99	+ 3 56.2	1.828	2.620	16.5	21.3	5 11	12 26.80	- 15 21.2	2.434	3.276	11.3	21.3
148827	2001 UV ₁₅₄		4 3.4 289°19	7°9/25.6	18		455718	2005 GF ₄₂		4 3.4 14°81	1°1/ 4.2	17	
3 2	13 14.31	+ 18 30.6	2.199	3.054	11.1	19.6	3 2	13 12.09	- 9 55.0	1.170	2.039	17.8	20.5
3 12	13 8.68	+ 19 29.9	2.139	3.046	9.2	19.5	3 12	13 8.15	- 9 38.6	1.110	2.042	13.1	20.2
3 22	13 1.32	+ 20 19.4	2.105	3.037	8.0	19.4	3 22	13 1.45	- 9 2.5	1.070	2.046	7.8	20.0
4 1	12 52.94	+ 20 52.2	2.097	3.029	8.2	19.4	4 1	12 53.02	- 8 11.7	1.054	2.051	2.2	19.6
4 11	12 44.40	+ 21 3.4	2.115	3.021	9.7	19.5	4 11	12 44.29	- 7 14.4	1.061	2.057	4.2	19.8
4 21	12 36.57	+ 20 50.9	2.157	3.013	11.9	19.6	4 21	12 36.71	- 6 20.2	1.092	2.064	9.7	20.1
5 1	12 30.19	+ 20 15.3	2.221	3.005	14.1	19.7	5 1	12 31.43	- 5 37.5	1.145	2.072	14.7	20.4
5 11	12 25.74	+ 19 19.2	2.304	2.997	16.1	19.9	5 11	12 29.09	- 5 12.1	1.216	2.081	18.9	20.7
121218	1999 RJ ₁₁		4 3.4 148°52	10°3/ 8.4	18		443732	2015 LD ₂₂		4 3.4 353°40	5°7/ 9.9	17	
3 2	13 29.63	- 24 10.4	1.303	2.087	21.2	19.3	3 2	13 7.53	- 25 2.5	1.814	2.601	15.9	19.8
3 12	13 21.45	- 25 59.8	1.232	2.093	17.8	19.1	3 12	13 4.27	- 24 40.5	1.728	2.596	13.1	19.6
3 22	13 9.42	- 27 23.9	1.180	2.099	14.1	18.9	3 22	12 59.03	- 23 50.8	1.663	2.592	9.9	19.4
4 1	12 54.63	- 28 14.3	1.152	2.105	11.1	18.7	4 1	12 52.54	- 22 34.0	1.621	2.589	6.9	19.2
4 11	12 38.95	- 28 28.1	1.147	2.109	10.4	18.7	4 11	12 45.77	- 20 55.0	1.606	2.587	5.7	19.1
4 21	12 24.48	- 28 9.4	1.168	2.114	12.4	18.8	4 21	12 39.72	- 19 2.3	1.617	2.585	7.5	19.2
5 1	12 13.01	- 27 28.9	1.211	2.117	15.8	19.0	5 1	12 35.25	- 17 6.0	1.654	2.584	10.7	19.4
5 11	12 5.55	- 26 40.3	1.273	2.121	19.3	19.2	5 11	12 32.94	- 15 16.3	1.714	2.584	14.0	19.6
251650	2197 T-3		4 3.4 214°85	1°2/ 4.6	16		463168	2012 BY ₅₁		4 3.4 40°63	0°6/ 2.9	18	
3 2	13 15.54	- 11 25.9	2.088	2.915	12.7	22.3	3 2	13 15.03	- 5 46.3	1.280	2.150	16.5	21.3
3 12	13 9.76	- 10 58.7	1.996	2.907	9.5	22.0	3 12	13 9.95	- 5 24.5	1.228	2.163	11.9	21.0
3 22	13 2.06	- 10 17.1	1.930	2.897	5.8	21.8	3 22	13 2.31	- 4 49.9	1.197	2.176	6.7	20.8
4 1	12 53.10	- 9 23.8	1.891	2.887	1.9	21.5	4 1	12 53.18	- 4 8.2	1.191	2.190	1.3	20.5
4 11	12 43.82	- 8 24.0	1.882	2.876	3.0	21.6	4 11	12 43.93	- 3 27.2	1.210	2.204	4.5	20.7
4 21	12 35.13	- 7 23.7	1.901	2.865	7.0	21.8	4 21	12 35.87	- 2 54.1	1.254	2.219	9.6	21.1
5 1	12 27.88	- 6 29.0	1.947	2.852	10.8	22.0	5 1	12 30.03	- 2 34.5	1.321	2.235	14.2	21.4
5 11	12 22.69	- 5 45.1	2.016	2.839	14.1	22.2	5 11	12 26.97	- 2 31.4	1.406	2.250	17.9	21.6
93858	2000 WJ ₁₀₃		4 3.4 235°69	6°0/27.3	18		14990	Zermelo		4 3.4 103°28	0°0/ 3.2	18	R
3 2	13 13.36	+ 10 59.2	2.212	3.076									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
243018	2006 <i>UM</i> ₁₇₈		4 3.4 275°36	5°0/28.9	17		241591	1998 <i>FY</i> ₂₄		4 3.4 348°64	6°7/ 7.2	17	
3 2	13 13.34	+ 8 59.5	2.257	3.121	10.5	20.1	3 2	13 16.09	-18 5.9	1.368	2.195	18.2	18.8
3 12	13 8.02	+ 9 49.1	2.177	3.104	7.9	19.9	3 12	13 11.21	-19 20.3	1.289	2.186	14.7	18.6
3 22	13 1.02	+10 36.9	2.123	3.087	5.6	19.7	3 22	13 3.40	-20 15.5	1.231	2.178	10.8	18.3
4 1	12 52.93	+11 16.9	2.097	3.070	5.2	19.7	4 1	12 53.50	-20 48.1	1.195	2.172	7.5	18.1
4 11	12 44.59	+11 43.8	2.099	3.052	7.0	19.8	4 11	12 42.90	-20 58.0	1.184	2.166	7.0	18.1
4 21	12 36.79	+11 53.9	2.127	3.035	9.8	19.9	4 21	12 33.14	-20 49.3	1.196	2.162	9.9	18.2
5 1	12 30.29	+11 45.5	2.180	3.017	12.6	20.0	5 1	12 25.58	-20 29.4	1.231	2.159	13.9	18.4
5 11	12 25.60	+11 19.1	2.253	2.999	15.0	20.2	5 11	12 21.13	-20 7.2	1.286	2.157	17.7	18.6
259070	2002 <i>UE</i> ₅₂		4 3.4 284°47	4°0/30.9	17		377405	2004 <i>TY</i> ₄₅		4 3.4 229°79	0°9/ 4.4	17	
3 2	13 13.87	+ 1 39.6	1.583	2.457	13.6	20.6	3 2	13 12.16	-11 6.4	2.082	2.917	12.4	21.7
3 12	13 9.02	+ 2 39.0	1.504	2.441	9.9	20.4	3 12	13 7.31	-10 30.1	1.996	2.910	9.2	21.4
3 22	13 1.85	+ 3 44.8	1.448	2.425	6.0	20.1	3 22	13 0.68	- 9 39.3	1.934	2.903	5.6	21.2
4 1	12 53.12	+ 4 49.5	1.418	2.409	4.0	19.9	4 1	12 52.91	- 8 37.3	1.899	2.896	1.7	20.9
4 11	12 43.97	+ 5 44.3	1.415	2.393	6.8	20.1	4 11	12 44.86	- 7 29.9	1.893	2.888	2.9	21.0
4 21	12 35.56	+ 6 22.2	1.438	2.377	11.1	20.3	4 21	12 37.41	- 6 23.2	1.915	2.880	6.9	21.2
5 1	12 28.93	+ 6 38.8	1.483	2.362	15.1	20.5	5 1	12 31.34	- 5 23.5	1.964	2.871	10.6	21.4
5 11	12 24.78	+ 6 32.8	1.547	2.346	18.7	20.7	5 11	12 27.19	- 4 35.8	2.035	2.863	13.8	21.6
497037	2003 <i>SO</i> ₆₀		4 3.4 171°94	1°7/ 5.4	17		507209	2010 <i>UG</i> ₄₉		4 3.4 259°96	2°9/30.9	17	
3 2	13 14.02	-12 58.4	2.597	3.411	10.9	22.5	3 2	13 11.09	+ 3 46.0	2.662	3.522	9.2	21.1
3 12	13 8.28	-12 47.8	2.514	3.414	8.2	22.3	3 12	13 6.13	+ 4 19.7	2.588	3.518	6.7	20.9
3 22	13 1.06	-12 25.5	2.456	3.417	5.2	22.2	3 22	12 59.83	+ 4 54.5	2.541	3.514	4.1	20.7
4 1	12 52.94	-11 53.4	2.427	3.420	2.3	22.0	4 1	12 52.73	+ 5 26.3	2.522	3.510	2.9	20.6
4 11	12 44.63	-11 14.9	2.428	3.422	2.6	22.0	4 11	12 45.48	+ 5 51.0	2.533	3.506	4.6	20.7
4 21	12 36.85	-10 34.0	2.459	3.423	5.6	22.2	4 21	12 38.73	+ 6 5.7	2.572	3.501	7.3	20.9
5 1	12 30.26	- 9 55.3	2.517	3.424	8.6	22.4	5 1	12 33.04	+ 6 8.2	2.636	3.497	9.9	21.1
5 11	12 25.30	- 9 22.6	2.600	3.424	11.2	22.5	5 11	12 28.84	+ 5 57.9	2.723	3.493	12.2	21.2
150313	1999 <i>UB</i> ₃₄		4 3.4 308°48	0°3/ 3.2	17		268942	2007 <i>DE</i> ₃₇		4 3.4 294°51	4°0/ 6.1	18	
3 2	13 15.08	- 7 3.4	1.217	2.086	17.2	20.7	3 2	13 17.99	-14 54.1	1.750	2.571	15.1	20.2
3 12	13 10.43	- 6 37.1	1.145	2.079	12.6	20.4	3 12	13 12.11	-15 34.6	1.655	2.554	11.8	19.9
3 22	13 2.87	- 5 53.9	1.093	2.072	7.3	20.1	3 22	13 3.73	-16 0.3	1.582	2.537	8.1	19.7
4 1	12 53.35	- 4 59.4	1.066	2.064	1.4	19.7	4 1	12 53.57	-16 10.3	1.534	2.521	4.7	19.4
4 11	12 43.33	- 4 2.2	1.063	2.058	4.7	19.9	4 11	12 42.74	-16 6.3	1.514	2.504	4.7	19.4
4 21	12 34.32	- 3 11.6	1.084	2.051	10.5	20.2	4 21	12 32.50	-15 51.9	1.522	2.488	8.2	19.6
5 1	12 27.62	- 2 35.8	1.127	2.045	15.8	20.5	5 1	12 24.00	-15 33.2	1.554	2.471	12.2	19.8
5 11	12 24.02	- 2 19.6	1.188	2.039	20.1	20.7	5 11	12 18.06	-15 16.6	1.608	2.455	15.9	19.9
389779	2011 <i>TF</i> ₁₃		4 3.4 234°70	0°9/ 2.3	17		204171	2004 <i>BW</i> ₃₃		4 3.4 202°08	1°4/ 1.9	17	
3 2	13 9.34	- 5 37.1	2.457	3.306	10.3	20.9	3 2	13 11.99	- 3 11.1	2.196	3.051	11.1	20.8
3 12	13 4.99	- 4 42.7	2.375	3.301	7.4	20.7	3 12	13 7.02	- 2 33.7	2.121	3.050	8.0	20.6
3 22	12 59.22	- 3 39.2	2.319	3.295	4.1	20.5	3 22	13 0.44	- 1 49.2	2.072	3.049	4.5	20.4
4 1	12 52.58	- 2 30.9	2.292	3.290	1.0	20.2	4 1	12 52.86	- 1 2.0	2.050	3.047	1.4	20.2
4 11	12 45.76	- 1 23.4	2.294	3.284	3.3	20.4	4 11	12 45.10	- 0 17.4	2.058	3.046	3.8	20.3
4 21	12 39.44	- 0 21.8	2.326	3.279	6.6	20.6	4 21	12 37.94	+ 0 19.8	2.093	3.045	7.4	20.6
5 1	12 34.23	+ 0 29.3	2.384	3.273	9.7	20.8	5 1	12 32.08	+ 0 45.9	2.155	3.043	10.7	20.8
5 11	12 30.58	+ 1 7.0	2.464	3.267	12.4	21.0	5 11	12 28.00	+ 0 58.6	2.238	3.042	13.5	20.9
90144	2002 <i>YX</i> ₆		4 3.4 129°22	3°8/ 6.5	18		78412	2002 <i>QF</i> ₂₉		4 3.4 91°70	3°7/30.6	17	
3 2	13 18.81	-16 18.1	1.918	2.726	14.4	19.8	3 2	13 12.12	+ 3 1.2	2.000	2.868	11.5	19.4
3 12	13 12.21	-16 41.1	1.844	2.735	11.2	19.6	3 12	13 7.18	+ 3 59.5	1.938	2.872	8.2	19.2
3 22	13 3.49	-16 47.5	1.793	2.745	7.7	19.4	3 22	13 0.53	+ 5 0.5	1.901	2.876	5.1	19.0
4 1	12 53.44	-16 37.7	1.770	2.754	4.5	19.2	4 1	12 52.88	+ 5 57.7	1.892	2.879	3.7	18.9
4 11	12 43.13	-16 14.5	1.774	2.763	4.2	19.2	4 11	12 45.08	+ 6 44.9	1.911	2.883	5.9	19.1
4 21	12 33.64	-15 42.8	1.806	2.771	7.2	19.4	4 21	12 38.00	+ 7 17.4	1.956	2.887	9.2	19.3
5 1	12 25.87	-15 8.8	1.865	2.779	10.7	19.6	5 1	12 32.35	+ 7 32.4	2.026	2.891	12.3	19.5
5 11	12 20.43	-14 38.5	1.946	2.786	13.8	19.9	5 11	12 28.61	+ 7 29.5	2.116	2.894	15.0	19.7
383771	2007 <i>VM</i> ₂₅₅		4 3.4 306°50	4°5/ 8.2	17		434900	2006 <i>TU</i>		4 3.4 218°50	1°1/ 4.9	17	
3 2	13 11.35	-20 56.9	2.117	2.910	13.8	20.7	3 2	13 9.79	-12 53.7	2.619	3.441	10.6	21.9
3 12	13 6.79	-20 57.1	2.028	2.905	11.1	20.5	3 12	13 5.29	-12 4.2	2.528	3.434	7.9	21.8
3 22	13 0.41	-20 37.6	1.962	2.900	8.1	20.3	3 22	12 59.40	-11 1.1	2.462	3.427	4.9	21.5
4 1	12 52.84	-19 58.9	1.921	2.896	5.3	20.2	4 1	12 52.66	- 9 47.5	2.424	3.420	1.7	21.3
4 11	12 44.98	-19 4.3	1.907	2.891	4.6	20.1	4 11	12 45.73	- 8 28.4	2.417	3.412	2.4	21.3
4 21	12 37.72	-17 59.3	1.921	2.887	6.8	20.2	4 21	12 39.26	- 7 9.3	2.440	3.404	5.6	21.6
5 1	12 31.86	-16 50.7	1.961	2.883	9.8	20.4	5 1	12 33.87	- 5 55.7	2.491	3.396	8.7	21.7
5 11	12 27.97	-15 45.7	2.025	2.878	12.8	20.6	5 11	12 30.00	- 4 52.1	2.566	3.387	11.4	21.9
501170	2013 <i>TO</i> ₈₉		4 3.4 207°63	0°6/ 4.0	17		205221	2000 <i>QS</i> ₃₁		4 3.4 113°67	1°0/ 2.7	18	
3 2	13 14.62	- 9 10.2	2.360	3.191	11.3	22.7	3 2	13 19.24	- 4 42.2	1.707	2.557	14.0	20.2
3 12	13 8.89	- 8 48.5	2.271	3.185	8.3	22.5	3 12	13 12.44	- 4 14.3	1.651	2.577	10.0	20.0
3 22	13 1.50	- 8 16.0	2.208	3.178	4.9	22.2	3 22	13 3.55	- 3 37.0	1.619	2.595	5.6	19.8
4 1	12 53.06	- 7 35.5	2.173	3.171	1.3	22.0	4 1	12 53.47	- 2 55.5	1.615	2.613	1.2	19.5
4 11	12 44.35	- 6 51.3	2.168	3.163	2.7	22.1	4 11	12 43.34	- 2 15.9	1.640	2.631	4.0	19.7
4 21	12 36.18	- 6 8.1	2.193	3.154	6.4	22.3	4 21	12 34.24	- 1 43.8	1.692	2.648	8.4	20.0
5 1	12 29.28	- 5 30.6	2.244	3.145	9.8	22.5	5 1	12 27.03	- 1 23.4	1.769	2.664	12.2	20.3
5 11	12 24.16	- 5 2.4	2.320	3.135	12.7	22.7	5 11	12 22.22	- 1 17.0	1.867	2.679	15.4	20.5
78919	2003 <i>SG</i> ₁₀₈		4 3.4 211°29	2°0/ 5.3	16		311250	2005 <i>EV</i> ₂₀		4 3.4 79°03	3°8/31.1	18	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
243339	2008 <i>UB</i> ₄		4 3.4 180°26	18°3/21.1	17		353283	2010 <i>GW</i> ₃₀		4 3.4 332°65	0°3/3.2	16	
3 2	13 32.09	+34 42.3	1.257	2.073	20.1	20.2	3 2	13 11.53	- 8 11.4	1.170	2.044	17.4	20.6
3 12	13 22.73	+36 24.9	1.228	2.074	18.8	20.1	3 12	13 7.92	- 7 28.7	1.099	2.035	12.8	20.3
3 22	13 9.71	+37 31.3	1.217	2.075	18.3	20.1	3 22	13 1.48	- 6 25.6	1.048	2.027	7.3	20.0
4 1	12 54.68	+37 47.5	1.225	2.075	19.0	20.1	4 1	12 53.14	- 5 8.5	1.021	2.020	1.4	19.6
4 11	12 39.85	+37 7.7	1.252	2.075	20.4	20.2	4 11	12 44.33	- 3 47.9	1.018	2.013	4.8	19.8
4 21	12 27.16	+35 35.8	1.297	2.074	22.4	20.3	4 21	12 36.51	- 2 35.0	1.039	2.007	10.7	20.1
5 1	12 17.91	+33 21.5	1.357	2.072	24.4	20.5	5 1	12 30.96	- 1 39.5	1.080	2.002	15.9	20.3
5 11	12 12.58	+30 37.3	1.429	2.070	26.2	20.6	5 11	12 28.43	- 1 7.0	1.140	1.997	20.4	20.6
461459	2002 <i>PF</i> ₁₉₈		4 3.4 291°06	3°8/31.2	17		95884	2003 <i>HY</i> ₃		4 3.4 278°03	1°3/4.8	17	
3 2	13 13.29	+ 0 25.5	1.509	2.384	14.1	21.6	3 2	13 11.16	-12 57.0	1.897	2.732	13.5	20.4
3 12	13 8.77	+ 1 29.4	1.426	2.365	10.2	21.3	3 12	13 6.86	-12 8.9	1.798	2.712	10.2	20.1
3 22	13 1.81	+ 2 42.3	1.367	2.345	6.1	21.0	3 22	13 0.58	-11 1.5	1.723	2.691	6.3	19.8
4 1	12 53.19	+ 3 56.2	1.333	2.326	3.8	20.8	4 1	12 52.94	- 9 38.4	1.675	2.671	2.2	19.5
4 11	12 44.07	+ 5 1.6	1.326	2.306	6.8	20.9	4 11	12 44.89	- 8 5.9	1.655	2.650	3.2	19.5
4 21	12 35.66	+ 5 50.3	1.343	2.286	11.4	21.1	4 21	12 37.39	- 6 32.5	1.662	2.629	7.5	19.7
5 1	12 29.08	+ 6 16.8	1.383	2.267	15.7	21.3	5 1	12 31.34	- 5 6.6	1.696	2.608	11.7	19.9
5 11	12 25.07	+ 6 19.2	1.441	2.248	19.4	21.5	5 11	12 27.40	- 3 54.8	1.752	2.587	15.3	20.1
170739	2004 <i>BU</i> ₁₀₃		4 3.4 356°58	1°7/4.9	17		100643	1997 <i>VZ</i> ₅		4 3.4 75°20	3°5/31.5	18	
3 2	13 14.12	-11 1.0	1.985	2.819	13.0	19.4	3 2	13 16.51	+ 1 46.2	1.670	2.537	13.4	19.5
3 12	13 8.79	-11 8.3	1.906	2.818	9.7	19.2	3 12	13 10.41	+ 2 34.8	1.627	2.561	9.5	19.3
3 22	13 1.56	-11 3.2	1.851	2.817	6.1	19.0	3 22	13 2.35	+ 3 26.1	1.608	2.585	5.6	19.1
4 1	12 53.11	-10 47.6	1.822	2.817	2.4	18.7	4 1	12 53.24	+ 4 13.4	1.617	2.608	3.5	19.1
4 11	12 44.39	-10 25.2	1.822	2.817	3.1	18.8	4 11	12 44.19	+ 4 50.1	1.653	2.632	5.9	19.3
4 21	12 36.33	-10 0.4	1.849	2.816	6.9	19.0	4 21	12 36.19	+ 5 11.8	1.716	2.655	9.6	19.5
5 1	12 29.76	- 9 38.2	1.903	2.817	10.5	19.2	5 1	12 30.02	+ 5 16.2	1.802	2.679	13.0	19.8
5 11	12 25.26	- 9 22.8	1.979	2.817	13.7	19.4	5 11	12 26.13	+ 5 3.4	1.909	2.701	15.9	20.0
389283	2009 <i>HY</i> ₆₈		4 3.4 298°20	1°3/2.1	17		244204	2001 <i>YH</i> ₁₄₁		4 3.4 156°62	1°6/1.9	18	
3 2	13 10.76	- 3 31.0	2.183	3.040	11.1	21.2	3 2	13 15.62	- 4 51.7	1.772	2.626	13.4	21.0
3 12	13 6.24	- 2 55.8	2.097	3.027	8.0	21.0	3 12	13 9.90	- 3 45.7	1.705	2.634	9.6	20.8
3 22	13 0.06	- 2 12.8	2.036	3.013	4.5	20.7	3 22	13 2.17	- 2 28.5	1.664	2.641	5.3	20.6
4 1	12 52.81	- 1 26.2	2.002	3.000	1.4	20.5	4 1	12 53.23	- 1 6.5	1.650	2.647	1.7	20.3
4 11	12 45.29	- 0 41.4	1.998	2.987	3.8	20.6	4 11	12 44.13	+ 0 12.0	1.664	2.653	4.5	20.5
4 21	12 38.29	- 0 3.3	2.021	2.974	7.4	20.8	4 21	12 35.88	+ 1 19.6	1.707	2.657	8.8	20.8
5 1	12 32.55	+ 0 23.9	2.069	2.961	10.9	21.0	5 1	12 29.33	+ 2 10.8	1.774	2.661	12.6	21.0
5 11	12 28.58	+ 0 37.6	2.140	2.948	13.8	21.2	5 11	12 25.02	+ 2 42.9	1.863	2.665	15.8	21.2
226962	2004 <i>VY</i> ₇₃		4 3.4 126°58	2°8/31.4	18		57086	2001 <i>OJ</i> ₃₉		4 3.4 98°60	4°5/30.0	18	
3 2	13 13.96	+ 1 16.0	2.166	3.026	11.1	20.8	3 2	13 14.44	+ 4 7.8	1.798	2.667	12.5	18.4
3 12	13 8.34	+ 2 5.1	2.107	3.038	7.9	20.6	3 12	13 8.89	+ 5 22.6	1.750	2.684	9.0	18.3
3 22	13 1.13	+ 2 57.5	2.074	3.049	4.6	20.4	3 22	13 1.50	+ 6 38.6	1.728	2.701	5.7	18.1
4 1	12 53.00	+ 3 47.8	2.069	3.060	2.8	20.3	4 1	12 53.09	+ 7 48.0	1.734	2.718	4.6	18.1
4 11	12 44.80	+ 4 30.5	2.093	3.071	5.0	20.5	4 11	12 44.66	+ 8 43.5	1.767	2.734	6.9	18.2
4 21	12 37.31	+ 5 1.3	2.145	3.081	8.2	20.7	4 21	12 37.13	+ 9 20.4	1.827	2.750	10.1	18.5
5 1	12 31.21	+ 5 17.7	2.223	3.091	11.2	20.9	5 1	12 31.27	+ 9 36.4	1.910	2.766	13.3	18.7
5 11	12 26.94	+ 5 18.7	2.322	3.101	13.8	21.1	5 11	12 27.52	+ 9 32.0	2.012	2.781	15.9	18.9
421349	2013 <i>TC</i> ₁₀₀		4 3.4 96°02	0°6/2.8	18		310204	2011 <i>SG</i> ₁₃₂		4 3.4 222°78	1°0/2.2	18	
3 2	13 12.02	- 7 19.1	1.960	2.809	12.5	21.0	3 2	13 10.70	- 3 59.1	2.800	3.646	9.3	21.5
3 12	13 7.09	- 6 18.6	1.899	2.825	9.0	20.9	3 12	13 5.85	- 3 22.4	2.713	3.638	6.6	21.3
3 22	13 0.47	- 5 6.4	1.864	2.840	5.0	20.6	3 22	12 59.70	- 2 39.3	2.653	3.629	3.7	21.1
4 1	12 52.88	- 3 48.1	1.856	2.855	1.0	20.4	4 1	12 52.75	- 1 53.2	2.622	3.620	1.0	20.8
4 11	12 45.21	- 2 31.0	1.877	2.869	3.5	20.6	4 11	12 45.61	- 1 8.2	2.622	3.611	3.0	21.0
4 21	12 38.31	- 1 21.5	1.927	2.884	7.5	20.9	4 21	12 38.90	- 0 28.3	2.650	3.601	6.1	21.2
5 1	12 32.89	- 0 25.1	2.002	2.898	11.0	21.1	5 1	12 33.18	+ 0 3.2	2.706	3.591	8.9	21.3
5 11	12 29.40	+ 0 15.0	2.099	2.912	13.9	21.3	5 11	12 28.87	+ 0 24.0	2.785	3.580	11.3	21.5
505058	2011 <i>SD</i> ₉₅		4 3.4 185°41	0°9/4.4	17		243831	2000 <i>TG</i> ₄₀		4 3.4 187°36	4°3/30.3	18	
3 2	13 13.08	- 9 33.1	2.662	3.489	10.3	22.1	3 2	13 15.48	+ 2 57.0	1.775	2.643	12.7	20.8
3 12	13 7.61	- 9 26.5	2.578	3.489	7.6	21.9	3 12	13 9.86	+ 4 12.4	1.709	2.643	9.2	20.6
3 22	13 0.71	- 9 10.9	2.520	3.489	4.6	21.7	3 22	13 2.19	+ 5 31.9	1.668	2.642	5.7	20.4
4 1	12 52.93	- 8 48.3	2.491	3.488	1.4	21.5	4 1	12 53.26	+ 6 47.6	1.654	2.641	4.4	20.3
4 11	12 44.97	- 8 21.9	2.492	3.487	2.4	21.6	4 11	12 44.12	+ 7 51.2	1.668	2.639	6.9	20.4
4 21	12 37.50	- 7 55.3	2.523	3.486	5.6	21.8	4 21	12 35.78	+ 8 36.7	1.709	2.636	10.5	20.6
5 1	12 31.14	- 7 32.1	2.581	3.484	8.5	22.0	5 1	12 29.12	+ 9 0.8	1.774	2.633	14.0	20.8
5 11	12 26.34	- 7 15.3	2.663	3.482	11.1	22.1	5 11	12 24.71	+ 9 3.0	1.857	2.630	16.9	21.0
344575	2003 <i>AE</i> ₅₁		4 3.4 132°27	1°6/5.3	18		422731	2001 <i>QH</i> ₁₀₀		4 3.4 193°45	0°5/2.9	16	
3 2	13 12.51	-12 30.6	2.418	3.240	11.4	20.8	3 2	13 16.06	- 5 24.0	2.503	3.339	10.5	21.8
3 12	13 7.29	-12 18.9	2.342	3.247	8.5	20.6	3 12	13 9.82	- 4 57.7	2.418	3.337	7.6	21.6
3 22	13 0.55	-11 55.1	2.290	3.253	5.3	20.4	3 22	13 2.01	- 4 23.8	2.360	3.334	4.3	21.4
4 1	12 52.90	-11 21.4	2.266	3.259	2.2	20.2	4 1	12 53.22	- 3 45.5	2.331	3.329	0.9	21.1
4 11	12 45.09	-10 41.7	2.271	3.265	2.6	20.2	4 11	12 44.22	- 3 7.0	2.333	3.324	3.0	21.3
4 21	12 37.86	-10 0.2	2.305	3.271	5.8	20.4	4 21	12 35.76	- 2 32.5	2.365	3.318	6.5	21.5
5 1	12 31.86	- 9 21.6	2.367	3.277	8.9	20.7	5 1	12 28.52	- 2 5.8	2.424	3.312	9.7	21.7
5 11	12 27.54	- 8 49.8	2.452	3.282	11.6	20.8	5 11	12 23.00	- 1 49.4	2.507	3.304	12.4	21.8
126738	2002 <i>CT</i> ₂₈₈		4 3.4 207°22	3°2/30.9	18		412092	2013 <i>FH</i> ₂₀		4 3.4 298°18	1°7/2.4	16	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
389722	2011 SA ₅₂		4 3.4 235°43	4.3/28.9	17		329312	2000 SA ₁₃₀		4 3.4 163°99	3°0/ 7.3	17	
3 2	13 13.69	+ 9 55.8	2.839	3.694	8.9	21.1	3 2	13 13.42	-19 0.8	2.553	3.342	11.8	21.0
3 12	13 7.97	+10 34.9	2.760	3.682	6.7	20.9	3 12	13 7.93	-18 34.9	2.469	3.348	9.2	20.8
3 22	13 0.90	+11 11.3	2.708	3.669	4.8	20.8	3 22	13 0.93	-17 52.3	2.409	3.354	6.4	20.6
4 1	12 53.00	+11 40.6	2.686	3.655	4.4	20.8	4 1	12 53.02	-16 54.9	2.378	3.360	3.7	20.5
4 11	12 44.92	+11 59.0	2.693	3.641	5.9	20.8	4 11	12 44.96	-15 46.6	2.375	3.364	3.3	20.4
4 21	12 37.30	+12 3.8	2.728	3.627	8.2	20.9	4 21	12 37.48	-14 32.9	2.403	3.368	5.6	20.6
5 1	12 30.73	+11 53.8	2.788	3.613	10.5	21.1	5 1	12 31.23	-13 19.5	2.459	3.371	8.5	20.8
5 11	12 25.65	+11 29.4	2.870	3.598	12.5	21.2	5 11	12 26.66	-12 12.0	2.540	3.374	11.2	21.0
136426	2005 CJ ₆₉		4 3.4 340°35	4.5/ 6.6	18		36337	2000 NK ₇		4 3.4 299°21	2°6/ 1.4	18	
3 2	13 14.97	-16 26.1	1.393	2.227	17.5	19.7	3 2	13 12.69	- 3 21.1	1.332	2.208	15.5	18.5
3 12	13 10.20	-16 46.0	1.317	2.223	13.7	19.4	3 12	13 8.54	- 2 17.7	1.255	2.195	11.2	18.2
3 22	13 2.72	-16 43.8	1.261	2.219	9.4	19.2	3 22	13 1.77	- 1 0.0	1.201	2.181	6.4	17.9
4 1	12 53.41	-16 19.7	1.229	2.216	5.4	18.9	4 1	12 53.24	+ 0 24.0	1.172	2.169	2.6	17.6
4 11	12 43.61	-15 37.8	1.221	2.213	5.1	18.9	4 11	12 44.23	+ 1 43.4	1.168	2.156	6.1	17.8
4 21	12 34.72	-14 45.6	1.239	2.210	8.9	19.1	4 21	12 36.07	+ 2 48.3	1.189	2.144	11.3	18.0
5 1	12 27.96	-13 52.1	1.279	2.208	13.4	19.3	5 1	12 29.95	+ 3 31.5	1.231	2.131	16.1	18.3
5 11	12 24.09	-13 6.1	1.340	2.207	17.4	19.6	5 11	12 26.62	+ 3 49.6	1.292	2.120	20.1	18.5
87694	2000 SX ₁₃		4 3.4 153°61	4.7/ 8.7	18		236364	2006 BK ₂₂₀		4 3.4 165°19	2°7/ 6.0	17	
3 2	13 13.78	-22 40.9	2.192	2.970	13.8	19.4	3 2	13 14.74	-14 42.1	2.007	2.826	13.5	20.8
3 12	13 8.45	-22 31.1	2.110	2.976	11.2	19.2	3 12	13 9.26	-14 43.0	1.927	2.828	10.3	20.6
3 22	13 1.33	-22 0.5	2.051	2.982	8.2	19.0	3 22	13 1.85	-14 28.2	1.871	2.829	6.8	20.4
4 1	12 53.10	-21 9.7	2.017	2.987	5.6	18.8	4 1	12 53.23	-13 59.3	1.841	2.831	3.5	20.2
4 11	12 44.67	-20 2.6	2.011	2.992	4.8	18.8	4 11	12 44.33	-13 20.1	1.839	2.832	3.5	20.2
4 21	12 36.91	-18 45.1	2.034	2.997	6.7	18.9	4 21	12 36.12	-12 35.9	1.865	2.832	6.8	20.4
5 1	12 30.61	-17 24.4	2.083	3.001	9.5	19.1	5 1	12 29.42	-11 52.7	1.917	2.833	10.3	20.6
5 11	12 26.29	-16 8.0	2.157	3.005	12.4	19.3	5 11	12 24.81	-11 16.0	1.993	2.834	13.5	20.8
238041	2002 YS ₃₃		4 3.4 76°71	4°3/ 6.5	18		434491	2005 SZ ₂₅		4 3.4 215°14	4°9/ 11.2	18	
3 2	13 17.41	-16 29.8	1.332	2.165	18.2	20.2	3 2	13 10.63	-28 36.8	3.128	3.852	11.2	22.1
3 12	13 11.89	-16 40.6	1.269	2.174	14.1	20.0	3 12	13 5.83	-28 17.2	3.023	3.844	9.4	21.9
3 22	13 3.60	-16 27.6	1.226	2.184	9.5	19.8	3 22	12 59.72	-27 39.1	2.940	3.836	7.5	21.8
4 1	12 53.57	-15 52.0	1.206	2.194	5.3	19.5	4 1	12 52.79	-26 42.4	2.884	3.827	5.7	21.7
4 11	12 43.25	-14 59.5	1.211	2.203	5.0	19.5	4 11	12 45.68	-25 29.7	2.857	3.818	4.9	21.6
4 21	12 34.08	-13 58.5	1.242	2.213	8.9	19.8	4 21	12 39.01	-24 5.0	2.858	3.809	5.7	21.6
5 1	12 27.23	-12 58.9	1.296	2.223	13.4	20.1	5 1	12 33.36	-22 33.7	2.889	3.799	7.5	21.7
5 11	12 23.35	-12 9.1	1.370	2.232	17.3	20.3	5 11	12 29.15	-21 2.0	2.946	3.789	9.5	21.9
500496	2012 TP ₂₆₇		4 3.4 56°37	4°4/ 30.3	17		224586	2005 XD ₆₄		4 3.4 83°29	7°6/ 26.3	18	
3 2	13 14.17	+ 6 31.8	2.057	2.922	11.3	21.1	3 2	13 14.97	+13 54.3	1.888	2.754	12.1	19.7
3 12	13 8.60	+ 7 9.3	1.999	2.929	8.3	20.9	3 12	13 9.13	+15 35.0	1.864	2.783	9.5	19.6
3 22	13 1.34	+ 7 45.5	1.966	2.936	5.4	20.7	3 22	13 1.57	+17 6.4	1.865	2.812	7.8	19.6
4 1	12 53.09	+ 8 14.7	1.961	2.943	4.4	20.7	4 1	12 53.13	+18 20.0	1.893	2.839	7.9	19.6
4 11	12 44.75	+ 8 32.1	1.984	2.950	6.3	20.8	4 11	12 44.79	+19 9.7	1.947	2.867	9.7	19.8
4 21	12 37.17	+ 8 34.6	2.033	2.957	9.3	21.0	4 21	12 37.43	+19 33.2	2.026	2.894	12.0	20.0
5 1	12 31.05	+ 8 20.9	2.107	2.964	12.2	21.2	5 1	12 31.73	+19 31.0	2.127	2.921	14.3	20.2
5 11	12 26.87	+ 7 51.5	2.202	2.972	14.7	21.4	5 11	12 28.08	+19 6.3	2.245	2.947	16.2	20.4
101317	1998 SD ₁₄₉		4 3.4 199°41	1°5/ 1.9	16		153071	2000 QW ₂₀₇		4 3.4 160°21	0°0/ 3.3	18	
3 2	13 15.18	- 3 15.3	2.120	2.970	11.6	20.9	3 2	13 14.37	- 7 37.6	2.363	3.199	11.1	21.2
3 12	13 9.42	- 2 30.9	2.040	2.967	8.4	20.7	3 12	13 8.63	- 7 7.5	2.289	3.206	8.1	21.0
3 22	13 1.88	- 1 38.5	1.986	2.962	4.7	20.5	3 22	13 1.34	- 6 27.8	2.240	3.212	4.6	20.8
4 1	12 53.22	- 0 43.0	1.960	2.957	1.6	20.2	4 1	12 53.12	- 5 42.0	2.220	3.218	0.9	20.5
4 11	12 44.31	+ 0 9.8	1.964	2.952	4.1	20.4	4 11	12 44.75	- 4 54.7	2.230	3.223	2.8	20.7
4 21	12 36.04	+ 0 54.5	1.997	2.946	7.8	20.6	4 21	12 36.99	- 4 10.6	2.269	3.227	6.4	20.9
5 1	12 29.18	+ 1 26.9	2.055	2.939	11.3	20.8	5 1	12 30.52	- 3 34.0	2.335	3.231	9.6	21.1
5 11	12 24.26	+ 1 44.4	2.136	2.931	14.3	21.0	5 11	12 25.79	- 3 7.9	2.425	3.234	12.4	21.3
296396	2009 FW ₇₁		4 3.4 15°54	0°7/ 4.1	16		469250	2016 JO ₂₃		4 3.5 296°28	12°1/ 25.9	17	
3 2	13 10.42	-12 37.1	1.417	2.270	16.2	20.6	3 2	13 30.54	+26 47.8	1.734	2.555	15.2	20.3
3 12	13 6.63	-11 22.8	1.347	2.271	12.0	20.4	3 12	13 21.21	+27 26.0	1.657	2.529	13.4	20.1
3 22	13 0.52	- 9 44.4	1.299	2.272	7.1	20.1	3 22	13 8.90	+27 42.8	1.603	2.503	12.2	20.0
4 1	12 52.96	- 7 48.6	1.276	2.274	1.9	19.7	4 1	12 54.67	+27 27.7	1.573	2.477	12.4	19.9
4 11	12 45.14	- 5 46.5	1.280	2.275	3.8	19.9	4 11	12 40.05	+26 34.6	1.570	2.451	13.9	19.9
4 21	12 38.24	- 3 50.3	1.310	2.278	9.0	20.2	4 21	12 26.60	+25 3.6	1.590	2.425	16.4	20.0
5 1	12 33.26	- 2 10.8	1.364	2.280	13.7	20.5	5 1	12 15.57	+22 59.7	1.633	2.399	19.0	20.1
5 11	12 30.79	- 0 54.6	1.438	2.282	17.6	20.7	5 11	12 7.70	+20 31.3	1.694	2.374	21.5	20.3
489726	2007 VT ₃₂₀		4 3.4 128°87	2°8/ 31.4	17		23738	1998 JZ ₁		4 3.5 297°30	2°7/ 1.8	18	
3 2	13 15.81	+ 3 56.6	2.621	3.472	9.6	21.9	3 2	13 17.92	- 1 34.3	1.268	2.142	16.3	17.5
3 12	13 9.42	+ 4 20.9	2.560	3.486	6.9	21.8	3 12	13 12.94	- 1 6.0	1.170	2.107	12.1	17.2
3 22	13 1.67	+ 4 45.4	2.527	3.499	4.2	21.6	3 22	13 4.70	- 0 26.8	1.093	2.072	7.0	16.8
4 1	12 53.15	+ 5 6.3	2.524	3.512	2.8	21.5	4 1	12 53.93	+ 0 17.2	1.040	2.037	2.8	16.4
4 11	12 44.58	+ 5 20.1	2.550	3.524	4.5	21.7	4 11	12 42.02	+ 0 57.2	1.012	2.001	6.5	16.5
4 21	12 36.65	+ 5 24.1	2.606	3.536	7.2	21.9	4 21	12 30.63	+ 1 24.2	1.008	1.966	12.5	16.7
5 1	12 29.94	+ 5 17.0	2.689	3.548	9.8	22.0	5 1	12 21.40	+ 1 31.5	1.026	1.930	18.2	16.9
5 11	12 24.84	+ 4 58.5	2.794	3.559	12.0	22.2	5 11	12 15.48	+ 1 15.5	1.060	1.895	23.1	17.1
190050	2004 RF ₁₇₁		4 3.4 311°75	0°9/ 2.6	17		429629	2011 FG ₆₈		4 3.5 290°95	3°2/ 31.4	17	
3 2	13 10.46	- 6 34.4	1.516	2.383	14.6</								

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4 3.5

4 3.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
61700	2000 QG ₁₃₃		4 3.5 254°63	0°4/ 2.9 17			505066	2011 SS ₁₇₃		4 3.5 176°16	0°1/ 3.6 18		
3 2	13 12.52	- 5 33.5	2.380	3.225	10.7	19.5	3 2	13 16.69	- 5 48.7	2.915	3.743	9.5	21.6
3 12	13 7.41	- 5 11.4	2.291	3.214	7.8	19.3	3 12	13 10.10	- 5 54.3	2.831	3.745	6.9	21.4
3 22	13 0.73	- 4 41.4	2.228	3.203	4.4	19.1	3 22	13 2.13	- 5 54.3	2.775	3.746	4.0	21.2
4 1	12 53.02	- 4 6.5	2.193	3.192	0.9	18.8	4 1	12 53.33	- 5 50.5	2.749	3.747	0.8	21.0
4 11	12 45.06	- 3 31.2	2.188	3.180	3.0	18.9	4 11	12 44.35	- 5 45.4	2.755	3.748	2.4	21.1
4 21	12 37.59	- 2 59.5	2.211	3.169	6.6	19.1	4 21	12 35.85	- 5 41.5	2.791	3.748	5.4	21.3
5 1	12 31.31	- 2 35.5	2.261	3.157	9.9	19.3	5 1	12 28.44	- 5 41.1	2.856	3.748	8.2	21.5
5 11	12 26.72	- 2 21.9	2.334	3.145	12.8	19.5	5 11	12 22.53	- 5 46.5	2.946	3.748	10.6	21.7
204004	2003 UG ₉		4 3.5 126°42	4°0/28.9 17			425426	2010 DE ₁₂		4 3.5 328°72	5°2/29.9 17		
3 2	13 10.66	+ 2 29.7	2.275	3.140	10.4	19.8	3 2	13 13.03	+ 6 31.0	1.695	2.571	12.8	19.7
3 12	13 5.97	+ 4 26.4	2.219	3.151	7.4	19.7	3 12	13 8.28	+ 7 19.0	1.624	2.559	9.4	19.4
3 22	12 59.82	+ 6 27.0	2.190	3.162	4.8	19.5	3 22	13 1.41	+ 8 6.9	1.577	2.548	6.3	19.2
4 1	12 52.82	+ 8 23.3	2.192	3.173	4.1	19.5	4 1	12 53.21	+ 8 47.2	1.555	2.538	5.3	19.1
4 11	12 45.74	+10 7.5	2.223	3.183	6.2	19.6	4 11	12 44.71	+ 9 13.1	1.560	2.527	7.6	19.2
4 21	12 39.28	+11 33.6	2.283	3.193	9.1	19.8	4 21	12 36.96	+ 9 20.1	1.590	2.518	11.1	19.4
5 1	12 34.06	+12 38.0	2.368	3.202	11.8	20.0	5 1	12 30.87	+ 9 6.0	1.643	2.509	14.6	19.6
5 11	12 30.51	+13 20.1	2.474	3.211	14.1	20.2	5 11	12 27.06	+ 8 31.5	1.715	2.500	17.6	19.8
522371	2016 CF ₃₀₂		4 3.5 336°26	5°5/ 6.6 17			172585	2003 UR ₂₇₁		4 3.5 87°89	1°3/ 2.4 18		
3 2	13 17.42	-16 4.7	1.353	2.186	18.0	20.5	3 2	13 17.15	- 4 19.4	1.568	2.427	14.6	20.8
3 12	13 12.22	-17 1.9	1.273	2.177	14.2	20.2	3 12	13 11.12	- 3 43.2	1.515	2.445	10.4	20.6
3 22	13 4.04	-17 40.4	1.214	2.169	10.0	19.9	3 22	13 2.92	- 2 57.2	1.486	2.464	5.8	20.4
4 1	12 53.75	-17 58.0	1.177	2.161	6.3	19.7	4 1	12 53.49	- 2 7.4	1.484	2.482	1.5	20.1
4 11	12 42.77	-17 55.9	1.166	2.154	6.0	19.7	4 11	12 44.01	- 1 20.9	1.509	2.500	4.4	20.4
4 21	12 32.64	-17 39.1	1.179	2.148	9.6	19.8	4 21	12 35.60	- 0 43.9	1.561	2.518	8.9	20.7
5 1	12 24.76	-17 15.3	1.215	2.143	14.0	20.1	5 1	12 29.13	- 0 20.8	1.637	2.535	12.9	20.9
5 11	12 20.01	-16 53.0	1.271	2.138	18.1	20.3	5 11	12 25.11	- 0 13.9	1.733	2.552	16.2	21.2
284883	2009 FB ₆₃		4 3.5 210°43	0°8/ 5.1 18			296315	2009 DK ₁₃₇		4 3.5 309°13	1°5/ 2.2 17		
3 2	13 4.40	-11 37.8	4.584	5.400	6.5	20.7	3 2	13 11.75	- 6 2.2	1.427	2.296	15.2	20.7
3 12	13 0.96	-11 14.6	4.495	5.398	4.8	20.5	3 12	13 7.68	- 4 56.9	1.353	2.288	11.0	20.4
3 22	12 56.80	-10 45.1	4.433	5.397	3.0	20.4	3 22	13 1.21	- 3 35.3	1.302	2.281	6.1	20.1
4 1	12 52.22	-10 10.7	4.401	5.395	1.1	20.2	4 1	12 53.19	- 2 4.8	1.276	2.274	1.6	19.8
4 11	12 47.56	- 9 33.6	4.399	5.394	1.4	20.3	4 11	12 44.80	- 0 35.6	1.277	2.268	5.0	20.0
4 21	12 43.15	- 8 56.0	4.428	5.392	3.3	20.4	4 21	12 37.27	+ 0 42.4	1.303	2.261	10.1	20.3
5 1	12 39.29	- 8 20.3	4.485	5.390	5.2	20.5	5 1	12 31.63	+ 1 41.4	1.351	2.255	14.7	20.5
5 11	12 36.24	- 7 48.4	4.568	5.388	6.8	20.7	5 11	12 28.56	+ 2 17.2	1.419	2.249	18.5	20.8
425152	2009 SS ₃₃₄		4 3.5 150°56	3°3/31.4 18			57751	2001 VB ₁		4 3.5 101°72	9°0/25.8 18		
3 2	13 17.94	+ 3 51.4	2.188	3.043	11.2	20.8	3 2	13 17.20	+18 17.6	1.831	2.690	12.8	18.9
3 12	13 11.24	+ 4 20.3	2.124	3.051	8.1	20.6	3 12	13 10.91	+19 38.2	1.797	2.705	10.5	18.8
3 22	13 2.84	+ 4 49.9	2.086	3.059	4.9	20.4	3 22	13 2.69	+20 46.2	1.787	2.720	9.1	18.7
4 1	12 53.44	+ 5 15.3	2.077	3.066	3.3	20.3	4 1	12 53.43	+21 33.2	1.803	2.735	9.3	18.8
4 11	12 43.94	+ 5 32.0	2.098	3.073	5.3	20.5	4 11	12 44.21	+21 53.8	1.844	2.750	10.9	18.9
4 21	12 35.18	+ 5 37.0	2.147	3.079	8.4	20.7	4 21	12 36.02	+21 46.5	1.909	2.764	13.2	19.1
5 1	12 27.90	+ 5 28.4	2.221	3.084	11.4	20.9	5 1	12 29.63	+21 13.1	1.995	2.778	15.5	19.3
5 11	12 22.58	+ 5 6.1	2.318	3.089	14.0	21.1	5 11	12 25.48	+20 17.5	2.097	2.792	17.4	19.5
413310	2003 UL ₂₉₁		4 3.5 136°87	0°8/ 2.7 18			253420	2003 QV ₄₃		4 3.5 223°53	3°7/30.8 17		
3 2	13 16.02	- 5 51.1	1.895	2.744	12.9	22.0	3 2	13 16.64	+ 2 45.2	2.009	2.869	11.8	21.1
3 12	13 10.09	- 5 6.2	1.831	2.756	9.3	21.8	3 12	13 10.66	+ 3 44.4	1.928	2.858	8.6	20.9
3 22	13 2.26	- 4 10.9	1.792	2.768	5.2	21.6	3 22	13 2.72	+ 4 47.7	1.872	2.845	5.3	20.7
4 1	12 53.34	- 3 10.3	1.781	2.779	1.1	21.3	4 1	12 53.50	+ 5 48.7	1.844	2.832	3.8	20.5
4 11	12 44.30	- 2 11.0	1.798	2.790	3.8	21.6	4 11	12 43.96	+ 6 40.4	1.845	2.818	6.1	20.7
4 21	12 36.08	- 1 19.1	1.844	2.800	7.9	21.8	4 21	12 35.05	+ 7 17.5	1.874	2.803	9.6	20.8
5 1	12 29.49	- 0 39.5	1.916	2.809	11.5	22.1	5 1	12 27.63	+ 7 36.5	1.928	2.787	13.0	21.0
5 11	12 25.02	- 0 15.0	2.009	2.818	14.6	22.3	5 11	12 22.31	+ 7 36.5	2.002	2.771	16.0	21.2
203158	2000 WF ₁₄₂		4 3.5 87°67	6°5/28.9 18			313771	2003 XR ₃₁		4 3.5 103°82	0°0/ 3.3 18		
3 2	13 17.79	+ 8 2.9	1.532	2.405	14.1	19.4	3 2	13 15.80	- 8 25.4	1.693	2.541	14.2	22.2
3 12	13 11.45	+ 9 31.1	1.500	2.431	10.4	19.3	3 12	13 10.09	- 7 44.7	1.635	2.558	10.3	22.0
3 22	13 3.00	+10 55.3	1.491	2.457	7.3	19.2	3 22	13 2.33	- 6 50.3	1.600	2.574	5.9	21.7
4 1	12 53.46	+12 5.8	1.509	2.483	6.7	19.2	4 1	12 53.40	- 5 47.5	1.592	2.590	1.2	21.4
4 11	12 44.04	+12 54.6	1.554	2.508	8.9	19.4	4 11	12 44.38	- 4 43.4	1.612	2.606	3.5	21.7
4 21	12 35.83	+13 18.1	1.624	2.532	12.1	19.6	4 21	12 36.31	- 3 45.1	1.659	2.621	8.0	22.0
5 1	12 29.63	+13 16.0	1.715	2.556	15.2	19.9	5 1	12 30.03	- 2 58.5	1.732	2.636	11.9	22.2
5 11	12 25.89	+12 51.0	1.824	2.580	17.8	20.1	5 11	12 26.05	- 2 27.4	1.826	2.651	15.2	22.5
505028	2011 QE ₆₃		4 3.5 303°86	4°7/ 8.4 17			326696	2003 AM ₄₆		4 3.5 165°75	0°7/ 4.2 18		
3 2	13 11.98	-21 14.5	2.166	2.955	13.6	21.0	3 2	13 15.95	- 9 35.4	2.204	3.035	12.0	21.0
3 12	13 7.28	-21 21.0	2.078	2.951	11.0	20.8	3 12	13 9.93	- 9 13.4	2.127	3.040	8.8	20.8
3 22	13 0.76	-21 8.5	2.012	2.947	8.1	20.6	3 22	13 2.19	- 8 40.0	2.075	3.045	5.2	20.5
4 1	12 53.06	-20 37.1	1.971	2.943	5.5	20.5	4 1	12 53.38	- 7 58.0	2.052	3.049	1.5	20.3
4 11	12 45.06	-19 49.7	1.957	2.939	4.8	20.4	4 11	12 44.39	- 7 12.2	2.058	3.053	2.8	20.4
4 21	12 37.64	-18 51.4	1.971	2.936	6.7	20.5	4 21	12 36.06	- 6 27.6	2.094	3.056	6.6	20.6
5 1	12 31.61	-17 48.8	2.012	2.932	9.7	20.7	5 1	12 29.13	- 5 49.1	2.156	3.058	10.0	20.8
5 11	12 27.53	-16 48.5	2.075	2.928	12.6	20.9	5 11	12 24.11	- 5 20.4	2.241	3.059	13.0	21.0
375947	2009 WG ₁₄₂		4 3.5 241°28	1°3/ 4.7 18			305391	2008 CP ₅₇		4 3.5 229°11	3°4/29.9 18		
3 2	13 15.74	-11 12.4	2.296	3.119</									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
108772	2001 <i>OA</i> ₅₃		4 3.5 220°57	1.4/ 2.2	18		18941	2000 <i>QX</i> ₅₀		4 3.5 63°98	2.3/31.9	18	
3 2	13 15.98	- 3 13.2	2.115	2.964	11.7	20.2	3 2	13 10.77	- 0 57.5	2.119	2.981	11.1	18.2
3 12	13 10.10	- 2 41.6	2.029	2.955	8.5	20.0	3 12	13 6.17	- 0 2.8	2.059	2.992	7.9	18.0
3 22	13 2.36	- 2 2.4	1.970	2.946	4.8	19.7	3 22	13 0.01	+ 0 57.4	2.026	3.003	4.5	17.8
4 1	12 53.43	- 1 20.0	1.938	2.936	1.5	19.5	4 1	12 52.96	+ 1 57.4	2.020	3.014	2.3	17.7
4 11	12 44.20	- 0 39.7	1.936	2.925	3.9	19.6	4 11	12 45.82	+ 2 51.4	2.043	3.025	4.5	17.9
4 21	12 35.56	- 0 6.3	1.962	2.914	7.8	19.8	4 21	12 39.35	+ 3 34.4	2.093	3.036	7.9	18.1
5 1	12 28.34	+ 0 16.1	2.015	2.902	11.4	20.0	5 1	12 34.20	+ 4 3.0	2.168	3.047	11.0	18.3
5 11	12 23.09	+ 0 25.0	2.089	2.889	14.4	20.2	5 11	12 30.81	+ 4 15.8	2.265	3.059	13.6	18.5
503165	2015 <i>GC</i> ₃₈		4 3.5 164°63	2.7/31.3	17		4409	Kissling		4 3.5 238°29	1°1/ 4.6	18	
3 2	13 11.30	+ 0 35.3	2.353	3.213	10.3	21.6	3 2	13 12.68	- 10 27.4	2.405	3.235	11.2	17.5
3 12	13 6.46	+ 1 34.0	2.285	3.216	7.3	21.4	3 12	13 7.56	- 10 15.3	2.316	3.228	8.3	17.3
3 22	13 0.15	+ 2 37.0	2.243	3.218	4.3	21.2	3 22	13 0.86	- 9 52.2	2.253	3.220	5.1	17.1
4 1	12 52.97	+ 3 39.0	2.229	3.221	2.7	21.1	4 1	12 53.15	- 9 20.5	2.217	3.213	1.7	16.9
4 11	12 45.66	+ 4 34.5	2.245	3.223	4.7	21.2	4 11	12 45.19	- 8 43.9	2.210	3.205	2.6	16.9
4 21	12 38.91	+ 5 18.8	2.289	3.224	7.8	21.4	4 21	12 37.72	- 8 6.6	2.232	3.197	6.0	17.1
5 1	12 33.37	+ 5 48.7	2.358	3.226	10.7	21.6	5 1	12 31.45	- 7 33.2	2.282	3.189	9.3	17.3
5 11	12 29.48	+ 6 2.9	2.450	3.227	13.2	21.8	5 11	12 26.87	- 7 7.4	2.355	3.181	12.2	17.5
87872	2000 <i>SE</i> ₂₆₈		4 3.5 312°62	6°3/30.2	18		237482	2000 <i>HZ</i> ₁₈		4 3.5 319°13	4°5/31.8	15	
3 2	13 19.28	+ 9 44.1	1.572	2.442	14.0	18.6	3 2	13 15.92	+ 2 9.6	1.158	2.043	16.6	20.0
3 12	13 13.07	+ 10 9.4	1.496	2.425	10.6	18.4	3 12	13 11.33	+ 2 42.5	1.084	2.026	12.2	19.6
3 22	13 4.30	+ 10 29.7	1.442	2.408	7.5	18.1	3 22	13 3.63	+ 3 20.7	1.031	2.010	7.4	19.3
4 1	12 53.86	+ 10 37.5	1.414	2.392	6.4	18.0	4 1	12 53.78	+ 3 55.8	1.001	1.994	4.5	19.1
4 11	12 42.98	+ 10 26.7	1.413	2.377	8.6	18.1	4 11	12 43.28	+ 4 18.5	0.995	1.979	7.7	19.2
4 21	12 32.97	+ 9 54.0	1.437	2.361	12.3	18.3	4 21	12 33.75	+ 4 21.6	1.012	1.965	13.0	19.5
5 1	12 24.92	+ 8 59.6	1.483	2.347	16.0	18.5	5 1	12 26.61	+ 4 1.5	1.049	1.951	18.0	19.7
5 11	12 19.57	+ 7 45.7	1.548	2.332	19.3	18.7	5 11	12 22.73	+ 3 18.0	1.102	1.939	22.3	19.9
497709	2006 <i>SX</i> ₁₀₄		4 3.5 138°47	4°2/ 9.6	17		45337	2000 <i>AK</i> ₈₃		4 3.5 158°20	0°4/ 3.9	18 R	
3 2	13 12.62	- 24 32.0	3.174	3.921	10.6	22.6	3 2	13 15.40	- 9 31.9	2.023	2.858	12.7	20.4
3 12	13 7.18	- 24 32.9	3.093	3.935	8.7	22.5	3 12	13 9.65	- 8 55.7	1.949	2.865	9.3	20.2
3 22	13 0.48	- 24 18.5	3.035	3.948	6.6	22.4	3 22	13 2.08	- 8 6.6	1.901	2.872	5.5	19.9
4 1	12 53.04	- 23 49.4	3.005	3.961	4.8	22.3	4 1	12 53.40	- 7 8.3	1.880	2.878	1.3	19.6
4 11	12 45.49	- 23 7.7	3.003	3.973	4.2	22.3	4 11	12 44.55	- 6 6.8	1.888	2.883	3.0	19.8
4 21	12 38.42	- 22 16.8	3.031	3.985	5.2	22.3	4 21	12 36.42	- 5 8.2	1.925	2.887	7.1	20.0
5 1	12 32.37	- 21 21.1	3.088	3.996	7.1	22.5	5 1	12 29.80	- 4 18.1	1.989	2.891	10.7	20.3
5 11	12 27.74	- 20 25.4	3.170	4.007	9.1	22.6	5 11	12 25.21	- 3 40.7	2.075	2.894	13.8	20.5
236345	2006 <i>BR</i> ₁₃₅		4 3.5 341°36	4°1/ 6.5	17		68204	2001 <i>BR</i> ₈₀		4 3.5 334°77	3°8/30.6	17	
3 2	13 14.48	- 15 26.6	1.596	2.426	15.8	19.9	3 2	13 10.22	+ 0 42.3	1.693	2.568	12.8	18.9
3 12	13 9.65	- 15 56.5	1.514	2.418	12.4	19.7	3 12	13 6.22	+ 2 2.5	1.625	2.563	9.2	18.7
3 22	13 2.39	- 16 8.7	1.454	2.411	8.5	19.4	3 22	13 0.25	+ 3 29.9	1.581	2.558	5.5	18.5
4 1	12 53.48	- 16 3.0	1.418	2.405	4.9	19.2	4 1	12 53.05	+ 4 56.3	1.564	2.554	3.8	18.4
4 11	12 44.09	- 15 42.4	1.409	2.400	4.7	19.1	4 11	12 45.60	+ 6 12.7	1.574	2.550	6.5	18.5
4 21	12 35.45	- 15 12.3	1.425	2.395	8.2	19.3	4 21	12 38.89	+ 7 11.9	1.609	2.546	10.3	18.7
5 1	12 28.65	- 14 39.5	1.465	2.390	12.2	19.6	5 1	12 33.77	+ 7 49.5	1.668	2.543	14.0	18.9
5 11	12 24.42	- 14 11.1	1.526	2.387	15.9	19.8	5 11	12 30.78	+ 8 4.0	1.746	2.540	17.1	19.1
306427	1998 <i>SZ</i> ₅		4 3.5 166°58	1°5/ 5.0	17		321755	2010 <i>NY</i> ₈₁		4 3.5 185°69	2°4/ 5.9	17	
3 2	13 14.11	- 11 37.9	2.165	2.993	12.3	21.0	3 2	13 15.69	- 15 19.9	2.096	2.908	13.2	22.2
3 12	13 8.69	- 11 28.4	2.086	2.995	9.2	20.8	3 12	13 9.93	- 14 55.3	2.011	2.909	10.1	22.0
3 22	13 1.52	- 11 6.2	2.031	2.997	5.7	20.6	3 22	13 2.29	- 14 13.5	1.950	2.908	6.6	21.8
4 1	12 53.27	- 10 33.5	2.003	2.998	2.2	20.3	4 1	12 53.46	- 13 16.8	1.916	2.907	3.1	21.5
4 11	12 44.80	- 9 54.5	2.005	3.000	2.8	20.4	4 11	12 44.37	- 12 10.2	1.911	2.905	3.2	21.5
4 21	12 36.95	- 9 14.2	2.035	3.001	6.4	20.6	4 21	12 35.94	- 10 59.8	1.936	2.902	6.7	21.8
5 1	12 30.48	- 8 37.4	2.091	3.001	9.9	20.8	5 1	12 28.98	- 9 52.7	1.987	2.899	10.3	22.0
5 11	12 25.92	- 8 8.7	2.171	3.002	12.9	21.0	5 11	12 24.07	- 8 54.6	2.062	2.894	13.4	22.2
423782	2006 <i>EG</i> ₇₃		4 3.5 298°13	0°3/ 3.7	17		452782	2006 <i>DT</i> ₁₄₀		4 3.5 94°57	2°8/ 1.2	18	
3 2	13 14.57	- 7 14.2	1.877	2.725	13.0	21.3	3 2	13 16.43	- 2 4.1	1.443	2.312	15.0	21.5
3 12	13 9.29	- 7 6.5	1.795	2.718	9.6	21.1	3 12	13 10.78	- 1 0.3	1.393	2.328	10.7	21.2
3 22	13 2.00	- 6 48.3	1.737	2.710	5.6	20.8	3 22	13 2.83	+ 0 12.2	1.365	2.343	6.0	21.0
4 1	12 53.39	- 6 22.7	1.705	2.703	1.2	20.5	4 1	12 53.55	+ 1 25.4	1.363	2.359	2.8	20.8
4 11	12 44.44	- 5 54.2	1.702	2.696	3.3	20.6	4 11	12 44.22	+ 2 30.1	1.389	2.374	5.8	21.1
4 21	12 36.16	- 5 27.9	1.726	2.689	7.6	20.9	4 21	12 36.00	+ 3 19.1	1.440	2.389	10.2	21.3
5 1	12 29.42	- 5 8.6	1.775	2.683	11.5	21.1	5 1	12 29.82	+ 3 48.0	1.514	2.403	14.3	21.6
5 11	12 24.85	- 4 59.9	1.846	2.676	14.9	21.3	5 11	12 26.20	+ 3 55.7	1.607	2.418	17.6	21.9
52108	2830 <i>P-L</i>		4 3.5 76°29	1°1/ 2.3	18		151070	2001 <i>VU</i> ₄₉		4 3.5 96°07	1°9/ 4.9	18	
3 2	13 12.83	- 4 44.2	2.080	2.932	11.8	19.6	3 2	13 19.31	- 10 53.0	1.829	2.659	14.1	20.0
3 12	13 7.59	- 3 59.7	2.028	2.955	8.4	19.5	3 12	13 12.61	- 11 7.6	1.764	2.674	10.6	19.8
3 22	13 0.78	- 3 7.4	2.001	2.978	4.6	19.3	3 22	13 3.82	- 11 9.3	1.722	2.688	6.5	19.6
4 1	12 53.10	- 2 12.0	2.003	3.001	1.2	19.1	4 1	12 53.76	- 10 59.8	1.708	2.703	2.6	19.4
4 11	12 45.41	- 1 19.4	2.033	3.023	3.6	19.3	4 11	12 43.54	- 10 42.8	1.723	2.717	3.3	19.5
4 21	12 38.49	- 0 34.6	2.091	3.045	7.2	19.5	4 21	12 34.22	- 10 23.1	1.765	2.731	7.2	19.7
5 1	12 32.98	- 0 1.4	2.175	3.067	10.4	19.8	5 1	12 26.68	- 10 5.6	1.834	2.745	11.0	20.0
5 11	12 29.31	+ 0 18.0	2.282	3.089	13.1	20.0	5 11	12 21.48	- 9 54.7	1.925	2.758	14.2	20.2
151197	2001 <i>YS</i>		4 3.5 69°64	9°3/24.9	18		455595	2004 <i>TJ</i> ₂₆		4 3.5 119°44	0°4/ 3.8	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
471415	2011 <i>SB</i> ₂₇₆		4 3.5 229°01	1°1/ 2.3 17			438401	2006 <i>UE</i> ₁₈₉		4 3.5 121°36	4°1/ 9.3 17		
3 2	13 13.05	- 2 51.1	2.531	3.379	10.1	21.6	3 2	13 11.57	- 23 39.4	2.764	3.526	11.7	21.4
3 12	13 7.72	- 2 30.2	2.448	3.373	7.2	21.4	3 12	13 6.57	- 23 25.7	2.685	3.540	9.4	21.2
3 22	13 0.91	- 2 4.0	2.391	3.366	4.1	21.2	3 22	13 0.21	- 22 54.7	2.630	3.553	7.0	21.1
4 1	12 53.18	- 1 35.6	2.362	3.360	1.2	21.0	4 1	12 53.05	- 22 7.4	2.602	3.566	4.9	21.0
4 11	12 45.24	- 1 9.0	2.364	3.353	3.3	21.1	4 11	12 45.79	- 21 6.9	2.602	3.579	4.2	20.9
4 21	12 37.80	- 0 47.7	2.395	3.346	6.5	21.3	4 21	12 39.08	- 19 57.8	2.632	3.592	5.5	21.0
5 1	12 31.50	- 0 34.8	2.452	3.339	9.6	21.5	5 1	12 33.51	- 18 45.6	2.689	3.604	7.8	21.2
5 11	12 26.79	- 0 32.3	2.532	3.332	12.2	21.7	5 11	12 29.49	- 17 35.9	2.772	3.616	10.0	21.4
122847	2000 <i>SK</i> ₁₂₇		4 3.5 270°74	1°6/ 2.2 18			62646	2000 <i>SO</i> ₃₆₁		4 3.5 289°46	2°0/ 2.1 18		
3 2	13 16.03	- 4 5.8	1.590	2.451	14.3	19.8	3 2	13 19.01	- 0 28.9	1.735	2.593	13.4	19.1
3 12	13 10.83	- 3 25.2	1.499	2.430	10.4	19.5	3 12	13 12.83	- 0 25.0	1.642	2.571	9.8	18.9
3 22	13 3.13	- 2 32.5	1.430	2.408	5.9	19.2	3 22	13 4.23	- 0 16.7	1.573	2.549	5.7	18.6
4 1	12 53.69	- 1 33.0	1.388	2.386	1.7	18.8	4 1	12 53.93	- 0 8.0	1.531	2.528	2.1	18.3
4 11	12 43.64	- 0 34.6	1.373	2.363	4.9	19.0	4 11	12 43.05	- 0 3.9	1.517	2.506	4.8	18.4
4 21	12 34.24	+ 0 15.1	1.384	2.340	9.9	19.2	4 21	12 32.79	- 0 8.6	1.531	2.484	9.4	18.6
5 1	12 26.63	+ 0 49.5	1.419	2.317	14.5	19.4	5 1	12 24.25	- 0 25.2	1.569	2.462	13.6	18.8
5 11	12 21.59	+ 1 4.8	1.474	2.293	18.5	19.6	5 11	12 18.20	- 0 55.4	1.628	2.440	17.3	19.0
129307	Tomconnors		4 3.5 46°29	0°0/ 3.3 18			500661	2012 <i>VN</i> ₂₃		4 3.5 83°65	0°0/ 3.3 17		
3 2	13 19.26	- 5 4.8	1.597	2.450	14.7	18.8	3 2	13 12.20	- 7 30.7	2.274	3.116	11.3	22.1
3 12	13 12.82	- 5 19.3	1.532	2.458	10.7	18.6	3 12	13 7.13	- 7 1.6	2.211	3.132	8.2	22.0
3 22	13 4.04	- 5 25.4	1.491	2.466	6.1	18.3	3 22	13 0.56	- 6 23.2	2.174	3.147	4.7	21.8
4 1	12 53.82	- 5 25.8	1.477	2.475	1.2	18.0	4 1	12 53.13	- 5 39.2	2.164	3.163	0.9	21.5
4 11	12 43.39	- 5 24.7	1.490	2.484	3.7	18.2	4 11	12 45.62	- 4 54.1	2.184	3.178	2.8	21.7
4 21	12 33.94	- 5 26.2	1.530	2.493	8.4	18.5	4 21	12 38.76	- 4 12.8	2.232	3.193	6.3	22.0
5 1	12 26.46	- 5 34.0	1.595	2.503	12.5	18.8	5 1	12 33.19	- 3 39.2	2.307	3.208	9.5	22.2
5 11	12 21.55	- 5 50.9	1.680	2.513	16.0	19.0	5 11	12 29.34	- 3 16.3	2.405	3.223	12.2	22.4
523689	2014 <i>DL</i> ₁₄₃		4 3.5 337°68	0°0/ 3.1 18			234783	2002 <i>PJ</i> ₁₈₆		4 3.5 139°55	0°0/ 3.3 18		
3 2	12 53.72	- 4 44.7	37.048	37.887	0.8	22.1	3 2	13 14.09	- 6 50.6	2.182	3.024	11.7	20.7
3 12	12 53.01	- 4 40.6	36.963	37.883	0.6	22.0	3 12	13 8.63	- 6 32.2	2.108	3.029	8.5	20.5
3 22	12 52.24	- 4 36.1	36.906	37.880	0.3	22.0	3 22	13 1.49	- 6 4.8	2.060	3.033	4.9	20.3
4 1	12 51.42	- 4 31.4	36.878	37.877	0.1	22.0	4 1	12 53.34	- 5 31.4	2.039	3.037	1.0	20.0
4 11	12 50.59	- 4 26.7	36.881	37.874	0.2	22.0	4 11	12 45.00	- 4 56.7	2.048	3.042	3.0	20.2
4 21	12 49.79	- 4 22.2	36.913	37.870	0.5	22.0	4 21	12 37.31	- 4 25.1	2.085	3.045	6.7	20.4
5 1	12 49.04	- 4 18.1	36.973	37.867	0.7	22.1	5 1	12 30.98	- 4 0.8	2.148	3.049	10.1	20.6
5 11	12 48.37	- 4 14.5	37.060	37.864	0.9	22.1	5 11	12 26.50	- 3 46.7	2.234	3.053	13.0	20.8
460279	2014 <i>QU</i> ₃₄₃		4 3.5 192°96	1°3/ 2.4 18			171997	2001 <i>TW</i> ₂₅₆		4 3.5 62°44	8°7/ 24.0 18		
3 2	13 14.84	- 5 47.3	1.541	2.402	14.7	21.4	3 2	13 12.38	+ 19 38.6	2.059	2.918	11.6	19.2
3 12	13 9.76	- 4 51.6	1.470	2.401	10.6	21.1	3 12	13 7.37	+ 21 10.7	2.030	2.934	9.7	19.1
3 22	13 2.36	- 3 41.9	1.422	2.400	6.0	20.8	3 22	13 0.71	+ 22 30.2	2.026	2.950	8.7	19.1
4 1	12 53.50	- 2 25.0	1.401	2.399	1.5	20.5	4 1	12 53.15	+ 23 29.5	2.048	2.966	9.1	19.1
4 11	12 44.35	- 1 9.5	1.407	2.398	4.6	20.7	4 11	12 45.61	+ 24 3.6	2.094	2.983	10.6	19.3
4 21	12 36.07	- 0 3.9	1.439	2.396	9.4	21.0	4 21	12 38.90	+ 24 10.9	2.164	2.999	12.6	19.4
5 1	12 29.67	+ 0 45.1	1.494	2.394	13.8	21.3	5 1	12 33.67	+ 23 52.5	2.254	3.016	14.5	19.6
5 11	12 25.76	+ 1 14.0	1.570	2.392	17.4	21.5	5 11	12 30.36	+ 23 11.7	2.361	3.032	16.2	19.8
41888	2000 <i>WC</i> ₁₁₈		4 3.5 214°05	3°3/ 31.7 18			31062	1996 <i>TP</i> ₁₀		4 3.5 302°10	5°1/ 29.2 18		
3 2	13 16.98	+ 1 1.9	1.737	2.600	13.1	19.0	3 2	13 13.27	+ 8 24.9	2.084	2.951	11.1	16.7
3 12	13 11.12	+ 1 47.9	1.663	2.596	9.5	18.8	3 12	13 8.10	+ 9 16.6	2.018	2.947	8.3	16.5
3 22	13 3.07	+ 2 39.1	1.614	2.590	5.6	18.6	3 22	13 1.21	+ 10 6.3	1.978	2.944	5.8	16.4
4 1	12 53.64	+ 3 29.0	1.592	2.585	3.3	18.4	4 1	12 53.28	+ 10 47.6	1.965	2.940	5.2	16.3
4 11	12 43.92	+ 4 10.6	1.598	2.579	5.8	18.5	4 11	12 45.18	+ 11 15.1	1.980	2.936	7.1	16.4
4 21	12 34.98	+ 4 38.4	1.631	2.572	9.9	18.8	4 21	12 37.74	+ 11 25.2	2.021	2.933	9.9	16.6
5 1	12 27.78	+ 4 48.7	1.688	2.565	13.7	19.0	5 1	12 31.71	+ 11 16.4	2.085	2.929	12.8	16.8
5 11	12 22.93	+ 4 40.5	1.764	2.558	16.9	19.2	5 11	12 27.58	+ 10 49.5	2.170	2.926	15.3	17.0
883	Matterania		4 3.5 245°91	3°2/ 6.1 18 R			18212	4603 <i>P-L</i>		4 3.5 97°30	1°2/ 2.1 18		
3 2	13 16.96	- 15 36.8	1.712	2.532	15.3	16.6	3 2	13 12.06	- 3 24.0	2.490	3.339	10.2	18.7
3 12	13 11.44	- 15 29.9	1.616	2.517	11.9	16.4	3 12	13 6.89	- 2 46.6	2.431	3.357	7.2	18.5
3 22	13 3.46	- 15 2.9	1.542	2.501	7.9	16.1	3 22	13 0.37	- 2 3.5	2.398	3.374	4.0	18.3
4 1	12 53.76	- 14 16.7	1.494	2.484	4.1	15.8	4 1	12 53.10	- 1 18.5	2.395	3.392	1.2	18.1
4 11	12 43.49	- 13 16.0	1.473	2.466	4.0	15.8	4 11	12 45.77	- 0 36.2	2.421	3.409	3.3	18.3
4 21	12 33.85	- 12 7.9	1.480	2.448	8.1	16.0	4 21	12 39.06	- 0 0.5	2.475	3.426	6.4	18.5
5 1	12 25.97	- 11 1.0	1.512	2.430	12.4	16.2	5 1	12 33.53	+ 0 25.4	2.557	3.442	9.3	18.7
5 11	12 20.64	- 10 3.1	1.565	2.410	16.4	16.4	5 11	12 29.56	+ 0 39.7	2.661	3.459	11.7	18.9
269992	2000 <i>VY</i> ₅₁		4 3.5 134°38	0°0/ 3.5 18			270222	2001 <i>TF</i> ₁₇₃		4 3.5 150°35	0°5/ 4.1 15		
3 2	13 16.31	- 7 0.1	2.186	3.024	11.8	21.2	3 2	13 14.39	- 10 2.3	2.365	3.194	11.4	22.4
3 12	13 10.17	- 6 45.3	2.117	3.035	8.6	21.0	3 12	13 8.70	- 9 24.5	2.293	3.205	8.3	22.2
3 22	13 2.32	- 6 21.4	2.073	3.046	4.9	20.8	3 22	13 1.47	- 8 35.1	2.245	3.215	4.9	22.0
4 1	12 53.48	- 5 51.7	2.058	3.056	1.0	20.5	4 1	12 53.33	- 7 37.6	2.227	3.224	1.3	21.8
4 11	12 44.49	- 5 20.4	2.072	3.066	2.9	20.7	4 11	12 45.07	- 6 37.1	2.239	3.233	2.6	21.9
4 21	12 36.21	- 4 51.9	2.116	3.076	6.7	21.0	4 21	12 37.44	- 5 38.8	2.280	3.241	6.2	22.1
5 1	12 29.36	- 4 30.1	2.186	3.085	10.1	21.2	5 1	12 31.10	- 4 47.5	2.348	3.248	9.4	22.3
5 11	12 24.42	- 4 18.1	2.279	3.093	12.9	21.4	5 11	12 26.51	- 4 7.1	2.441	3.255	12.2	22.5
498697	2008 <i>SF</i> ₃₀₇		4 3.5 181°43	2°1/ 31.8 17			231788	2000 <i>CH</i> ₁₀₁		4 3.5 94°46	1°0/ 2.5 1		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
333690	2008 UC ₁₇₀		4 3.5 262°28	2°8/ 6.4 18			119772	2002 AV ₃		4 3.5 68°01	7°0/27.6 18		
3 2	13 11.96	-16 24.1	2.010	2.827	13.5	20.6	3 2	13 13.54	+10 17.3	1.671	2.547	12.9	19.1
3 12	13 7.41	-16 0.5	1.918	2.817	10.5	20.3	3 12	13 8.47	+11 47.8	1.631	2.561	9.8	18.9
3 22	13 0.95	-15 17.9	1.849	2.806	7.0	20.1	3 22	13 1.45	+13 13.4	1.615	2.576	7.4	18.8
4 1	12 53.26	-14 18.5	1.807	2.796	3.6	19.9	4 1	12 53.34	+14 24.6	1.625	2.590	7.3	18.9
4 11	12 45.23	-13 7.1	1.792	2.785	3.4	19.8	4 11	12 45.20	+15 14.1	1.662	2.605	9.3	19.0
4 21	12 37.78	-11 50.4	1.805	2.774	6.8	20.0	4 21	12 38.02	+15 37.9	1.722	2.619	12.2	19.2
5 1	12 31.77	-10 35.9	1.845	2.764	10.5	20.2	5 1	12 32.58	+15 35.7	1.804	2.634	15.1	19.4
5 11	12 27.77	-9 30.2	1.907	2.753	13.8	20.4	5 11	12 29.34	+15 9.9	1.904	2.649	17.5	19.6
155003	2005 NX ₁₀₂		4 3.5 230°12	9°0/16.1 18			463691	2014 OJ ₂₉₆		4 3.5 143°76	0°7/ 4.1 16		
3 2	13 17.62	-42 1.0	3.156	3.759	13.1	20.9	3 2	13 18.02	- 8 45.5	1.788	2.628	13.9	22.2
3 12	13 11.39	-42 55.6	3.049	3.747	12.0	20.8	3 12	13 11.79	- 8 33.3	1.718	2.635	10.3	21.9
3 22	13 3.24	-43 29.8	2.960	3.734	10.8	20.7	3 22	13 3.43	- 8 8.6	1.671	2.643	6.0	21.7
4 1	12 53.74	-43 40.3	2.893	3.722	9.8	20.6	4 1	12 53.77	- 7 34.7	1.652	2.649	1.6	21.4
4 11	12 43.73	-43 26.0	2.850	3.708	9.1	20.5	4 11	12 43.89	- 6 56.7	1.661	2.656	3.3	21.5
4 21	12 34.12	-42 48.4	2.831	3.695	9.1	20.5	4 21	12 34.86	- 6 20.4	1.698	2.662	7.7	21.8
5 1	12 25.76	-41 51.5	2.837	3.681	9.8	20.5	5 1	12 27.59	- 5 51.2	1.760	2.667	11.6	22.1
5 11	12 19.32	-40 41.5	2.867	3.666	10.9	20.6	5 11	12 22.64	- 5 33.2	1.845	2.672	15.0	22.3
73312	2002 JN ₇₈		4 3.5 280°07	0°4/ 3.2 17			343107	2009 DA ₇₅		4 3.5 24°95	2°9/31.4 17		
3 2	13 15.82	- 6 24.3	1.552	2.409	14.8	20.0	3 2	13 9.94	- 0 21.7	1.870	2.740	12.0	20.5
3 12	13 10.73	- 6 1.3	1.462	2.391	10.9	19.7	3 12	13 5.82	+ 0 43.9	1.808	2.745	8.6	20.3
3 22	13 3.11	- 5 25.0	1.396	2.372	6.3	19.4	3 22	12 59.95	+ 1 55.7	1.772	2.750	5.0	20.1
4 1	12 53.74	- 4 39.5	1.355	2.353	1.2	19.0	4 1	12 53.06	+ 3 6.9	1.763	2.756	2.9	19.9
4 11	12 43.78	- 3 51.7	1.340	2.334	4.2	19.2	4 11	12 46.02	+ 4 10.3	1.782	2.762	5.4	20.1
4 21	12 34.49	- 3 8.6	1.352	2.315	9.3	19.4	4 21	12 39.70	+ 5 0.0	1.827	2.769	8.9	20.3
5 1	12 27.04	- 2 37.1	1.388	2.296	14.0	19.6	5 1	12 34.83	+ 5 32.1	1.896	2.776	12.3	20.5
5 11	12 22.22	- 2 21.5	1.443	2.277	18.1	19.8	5 11	12 31.88	+ 5 45.2	1.985	2.783	15.2	20.8
137974	2000 CG ₄₁		4 3.5 105°39	0°6/ 3.9 18			272742	2005 YB ₁₁₄		4 3.5 23°37	5°2/ 7.6 17		
3 2	13 15.55	- 8 59.3	1.654	2.501	14.5	20.1	3 2	13 14.80	-18 44.3	1.581	2.397	16.6	20.0
3 12	13 10.12	- 8 37.0	1.586	2.508	10.7	19.9	3 12	13 9.85	-19 13.7	1.510	2.402	13.2	19.8
3 22	13 2.52	- 8 0.7	1.541	2.514	6.3	19.6	3 22	13 2.50	-19 21.7	1.460	2.408	9.4	19.6
4 1	12 53.57	- 7 14.3	1.522	2.520	1.6	19.3	4 1	12 53.61	-19 8.0	1.434	2.414	6.1	19.4
4 11	12 44.41	- 6 24.0	1.531	2.526	3.4	19.5	4 11	12 44.39	-18 35.9	1.434	2.421	5.4	19.3
4 21	12 36.11	- 5 36.7	1.567	2.532	8.0	19.8	4 21	12 36.05	-17 51.6	1.460	2.428	8.2	19.5
5 1	12 29.62	- 4 58.4	1.627	2.538	12.2	20.0	5 1	12 29.62	-17 2.9	1.509	2.436	11.9	19.7
5 11	12 25.51	- 4 33.5	1.709	2.543	15.7	20.2	5 11	12 25.78	-16 18.0	1.580	2.444	15.3	20.0
461919	2006 SR ₁		4 3.5 235°91	1°0/ 4.3 17			299313	2005 QZ ₈₄		4 3.5 246°79	1°0/ 2.3 17		
3 2	13 15.69	- 9 57.6	1.751	2.593	14.1	21.9	3 2	13 9.65	- 5 22.3	2.430	3.280	10.4	21.0
3 12	13 10.29	- 9 40.0	1.668	2.586	10.5	21.6	3 12	13 5.36	- 4 27.4	2.348	3.274	7.4	20.8
3 22	13 2.69	- 9 7.7	1.607	2.578	6.3	21.4	3 22	12 59.63	- 3 23.5	2.291	3.268	4.2	20.5
4 1	12 53.63	- 8 23.9	1.574	2.571	1.9	21.1	4 1	12 53.01	- 2 14.9	2.263	3.261	1.1	20.3
4 11	12 44.18	- 7 34.2	1.567	2.563	3.3	21.1	4 11	12 46.19	- 1 7.2	2.265	3.255	3.3	20.5
4 21	12 35.45	- 6 45.0	1.589	2.554	7.9	21.4	4 21	12 39.87	- 0 5.6	2.296	3.248	6.7	20.7
5 1	12 28.40	- 6 2.9	1.635	2.546	12.1	21.6	5 1	12 34.66	+ 0 45.1	2.352	3.242	9.8	20.9
5 11	12 23.70	- 5 32.9	1.703	2.537	15.7	21.8	5 11	12 31.02	+ 1 22.2	2.432	3.235	12.5	21.0
30356	2000 JJ ₄₁		4 3.5 235°20	0°5/ 4.0 18			494206	2016 HM ₁₄		4 3.5 41°24	2°0/ 2.0 18		
3 2	13 14.85	- 9 18.9	2.122	2.957	12.2	20.3	3 2	13 14.88	- 2 38.7	1.378	2.250	15.4	20.5
3 12	13 9.40	- 8 51.4	2.029	2.944	9.1	20.1	3 12	13 9.80	- 2 5.4	1.327	2.264	11.0	20.3
3 22	13 2.07	- 8 11.3	1.959	2.930	5.4	19.8	3 22	13 2.37	- 1 23.3	1.299	2.278	6.2	20.0
4 1	12 53.50	- 7 21.8	1.918	2.916	1.4	19.5	4 1	12 53.56	- 0 39.0	1.296	2.293	2.1	19.8
4 11	12 44.56	- 6 27.7	1.906	2.901	3.0	19.6	4 11	12 44.67	- 0 0.3	1.318	2.308	5.1	20.0
4 21	12 36.17	- 5 34.9	1.923	2.885	7.0	19.8	4 21	12 36.88	+ 0 26.8	1.366	2.324	9.8	20.3
5 1	12 29.15	- 4 48.9	1.966	2.869	10.8	20.0	5 1	12 31.15	+ 0 37.9	1.437	2.340	14.0	20.6
5 11	12 24.09	- 4 14.2	2.032	2.853	14.1	20.2	5 11	12 28.01	+ 0 31.6	1.526	2.357	17.4	20.9
266489	2008 CU ₂₁₁		4 3.5 140°90	4°5/28.8 18			208484	2001 UD ₁₉₆		4 3.5 351°51	2°9/ 1.1 18		
3 2	13 10.57	+ 7 28.9	2.440	3.307	9.7	20.3	3 2	13 15.08	+ 2 15.2	1.938	2.801	12.0	19.5
3 12	13 5.93	+ 8 34.4	2.380	3.309	7.2	20.1	3 12	13 9.54	+ 2 32.4	1.867	2.799	8.7	19.3
3 22	12 59.89	+ 9 39.0	2.345	3.311	5.0	20.0	3 22	13 2.11	+ 2 51.6	1.821	2.797	5.1	19.1
4 1	12 53.02	+ 10 36.8	2.339	3.313	4.6	19.9	4 1	12 53.52	+ 3 8.2	1.802	2.795	2.9	18.9
4 11	12 46.05	+ 11 22.7	2.361	3.315	6.3	20.1	4 11	12 44.72	+ 3 17.3	1.812	2.794	5.1	19.0
4 21	12 39.63	+ 11 53.1	2.411	3.317	8.8	20.2	4 21	12 36.63	+ 3 15.6	1.848	2.793	8.7	19.3
5 1	12 34.36	+ 12 6.2	2.484	3.319	11.3	20.4	5 1	12 30.07	+ 3 0.9	1.910	2.792	12.1	19.5
5 11	12 30.68	+ 12 1.9	2.578	3.321	13.4	20.5	5 11	12 25.58	+ 2 32.6	1.992	2.792	15.0	19.7
180705	2004 HA ₅₀		4 3.5 266°13	3°3/31.6 18			359807	2011 UZ ₂₅₁		4 3.5 163°49	1°8/ 1.9 18		
3 2	13 14.27	+ 0 31.6	1.727	2.594	13.0	20.4	3 2	13 16.66	- 3 27.9	1.828	2.683	13.0	21.4
3 12	13 9.22	+ 1 24.3	1.650	2.585	9.4	20.2	3 12	13 10.73	- 2 36.1	1.760	2.688	9.3	21.2
3 22	13 2.04	+ 2 23.3	1.597	2.575	5.5	19.9	3 22	13 2.81	- 1 35.2	1.717	2.693	5.2	21.0
4 1	12 53.50	+ 3 22.1	1.572	2.564	3.3	19.7	4 1	12 53.66	- 0 31.0	1.701	2.698	1.8	20.7
4 11	12 44.61	+ 4 13.0	1.573	2.554	5.9	19.9	4 11	12 44.33	+ 0 29.3	1.714	2.702	4.5	20.9
4 21	12 36.45	+ 4 50.0	1.601	2.544	9.9	20.1	4 21	12 35.81	+ 1 19.5	1.755	2.705	8.6	21.2
5 1	12 29.93	+ 5 8.7	1.653	2.533	13.7	20.3	5 1	12 28.96	+ 1 54.7	1.821	2.707	12.4	21.4
5 11	12 25.69	+ 5 7.8	1.724	2.523	17.0	20.5	5 11	12 24.31	+ 2 12.7	1.907	2.709	15.5	21.6
180480	2004 CU ₆₇		4 3.5 348°10	5°5/29.6 17			466604	2014 UH ₂₀₄		4 3.5 106°87	0°8/ 2.7 18		
3 2	13 11.91	+ 3 52.3	1.415	2.298	14.								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
140502	2001 <i>TK</i> ₁₆₀		4 3.5	20°21'	2°8'/ 6.9	18	25671	2000 <i>AW</i> ₉₅		4 3.5	98°60'	0°0'/ 3.5	18
3 2	13 10.10	-17 42.6	2.240	3.048	12.6	19.9	3 2	13 13.02	-7 38.6	2.030	2.875	12.3	18.5
3 12	13 5.84	-17 10.7	2.156	3.048	9.8	19.7	3 12	13 8.02	-7 13.5	1.956	2.878	9.0	18.3
3 22	12 59.96	-16 20.7	2.096	3.049	6.6	19.5	3 22	13 1.24	-6 37.5	1.906	2.880	5.2	18.0
4 1	12 53.09	-15 15.1	2.062	3.049	3.6	19.3	4 1	12 53.38	-5 54.5	1.884	2.882	1.1	17.7
4 11	12 46.02	-13 58.6	2.057	3.049	3.2	19.3	4 11	12 45.32	-5 9.5	1.890	2.884	3.1	17.9
4 21	12 39.54	-12 37.5	2.080	3.049	6.0	19.5	4 21	12 37.91	-4 27.8	1.924	2.886	7.0	18.1
5 1	12 34.33	-11 18.6	2.130	3.050	9.3	19.7	5 1	12 31.93	-3 54.3	1.984	2.888	10.6	18.4
5 11	12 30.88	-10 8.0	2.205	3.050	12.2	19.9	5 11	12 27.88	-3 32.5	2.066	2.890	13.7	18.6
30742	1981 <i>EG</i> ₁₇		4 3.5	48°05'	2°2'/31.8	18	226831	2004 <i>RS</i> ₃₂₄		4 3.5	105°67'	3°9'/ 7.6	18
3 2	13 8.85	-4 59.4	1.888	2.750	12.3	18.2	3 2	13 13.33	-19 15.5	1.952	2.755	14.4	20.0
3 12	13 4.95	-3 9.5	1.834	2.768	8.7	18.0	3 12	13 8.38	-19 5.2	1.876	2.762	11.3	19.8
3 22	12 59.41	-1 8.6	1.807	2.785	4.8	17.8	3 22	13 1.50	-18 34.7	1.822	2.768	7.9	19.6
4 1	12 52.96	+0 54.5	1.808	2.804	2.2	17.7	4 1	12 53.44	-17 45.2	1.793	2.775	4.8	19.4
4 11	12 46.46	+2 50.4	1.838	2.822	4.8	17.9	4 11	12 45.16	-16 41.4	1.792	2.781	4.2	19.4
4 21	12 40.71	+4 31.0	1.897	2.840	8.5	18.1	4 21	12 37.61	-15 29.8	1.819	2.788	6.9	19.5
5 1	12 36.37	+5 50.8	1.981	2.859	11.9	18.4	5 1	12 31.62	-14 18.0	1.872	2.794	10.2	19.7
5 11	12 33.87	+6 47.5	2.085	2.878	14.7	18.6	5 11	12 27.73	-13 12.9	1.948	2.800	13.4	20.0
464874	2005 <i>JZ</i> ₈₃		4 3.5	275°77'	1°5'/ 4.9	17	507319	2011 <i>QH</i> ₇₉		4 3.5	157°30'	4°8'/27.3	18
3 2	13 13.02	-12 27.5	1.651	2.492	14.9	21.4	3 2	13 9.78	+8 38.2	2.631	3.496	9.1	21.4
3 12	13 8.55	-11 54.1	1.562	2.478	11.2	21.1	3 12	13 5.32	+10 12.7	2.574	3.501	6.8	21.3
3 22	13 1.79	-11 1.0	1.495	2.464	6.9	20.8	3 22	12 59.55	+11 46.1	2.544	3.505	5.1	21.2
4 1	12 53.50	-9 51.7	1.454	2.450	2.5	20.5	4 1	12 53.03	+13 11.9	2.544	3.508	5.0	21.2
4 11	12 44.75	-8 33.0	1.440	2.435	3.4	20.6	4 11	12 46.39	+14 24.3	2.573	3.512	6.7	21.3
4 21	12 36.67	-7 13.2	1.452	2.421	8.2	20.8	4 21	12 40.26	+15 19.4	2.629	3.515	9.0	21.4
5 1	12 30.30	-6 1.1	1.490	2.407	12.7	21.0	5 1	12 35.19	+15 55.1	2.710	3.518	11.2	21.6
5 11	12 26.33	-5 3.7	1.548	2.392	16.6	21.2	5 11	12 31.58	+16 11.6	2.810	3.521	13.1	21.7
165757	2001 <i>QV</i> ₂₀₉		4 3.5	83°66'	1°4'/ 5.2	18	500947	2013 <i>QP</i> ₉		4 3.5	181°50'	1°0'/ 4.5	17
3 2	13 13.02	-12 43.5	2.304	3.126	11.8	20.3	3 2	13 14.79	-10 36.3	2.129	2.959	12.4	22.8
3 12	13 7.68	-12 14.7	2.246	3.152	8.8	20.1	3 12	13 9.26	-10 14.0	2.048	2.960	9.2	22.6
3 22	13 0.88	-11 32.9	2.213	3.178	5.4	20.0	3 22	13 1.96	-9 38.9	1.992	2.961	5.5	22.4
4 1	12 53.26	-10 41.4	2.209	3.203	2.1	19.8	4 1	12 53.54	-8 54.0	1.964	2.961	1.8	22.1
4 11	12 45.62	-9 45.0	2.233	3.228	2.6	19.9	4 11	12 44.89	-8 4.0	1.965	2.960	2.8	22.2
4 21	12 38.68	-8 49.0	2.287	3.253	5.8	20.1	4 21	12 36.87	-7 14.3	1.995	2.959	6.7	22.5
5 1	12 33.07	-7 58.2	2.367	3.277	8.9	20.4	5 1	12 30.26	-6 30.4	2.051	2.958	10.2	22.7
5 11	12 29.18	-7 16.7	2.472	3.301	11.6	20.6	5 11	12 25.58	-5 56.6	2.130	2.956	13.3	22.9
506663	2006 <i>SL</i> ₂₄₁		4 3.5	156°42'	0°7'/ 2.7	17	63978	2001 <i>SE</i> ₈₃		4 3.5	80°73'	0°3'/ 3.8	18
3 2	13 12.47	-4 47.5	2.639	3.482	9.9	22.5	3 2	13 15.09	-10 32.1	1.340	2.195	16.8	19.8
3 12	13 7.23	-4 20.6	2.565	3.487	7.1	22.3	3 12	13 10.06	-9 34.9	1.285	2.211	12.3	19.6
3 22	13 0.63	-3 47.2	2.517	3.492	4.0	22.1	3 22	13 2.58	-8 17.7	1.252	2.227	7.1	19.4
4 1	12 53.22	-3 10.5	2.498	3.496	0.9	21.8	4 1	12 53.66	-6 47.6	1.245	2.243	1.6	19.0
4 11	12 45.68	-2 34.5	2.509	3.500	2.9	22.0	4 11	12 44.64	-5 14.9	1.263	2.259	4.0	19.2
4 21	12 38.66	-2 2.8	2.550	3.504	6.0	22.2	4 21	12 36.78	-3 50.0	1.308	2.274	9.2	19.6
5 1	12 32.74	-1 38.9	2.617	3.508	8.9	22.4	5 1	12 31.06	-2 41.4	1.376	2.290	13.7	19.9
5 11	12 28.34	-1 24.8	2.708	3.511	11.4	22.6	5 11	12 28.01	-1 53.9	1.464	2.305	17.5	20.2
214589	2006 <i>QO</i> ₈₂		4 3.5	265°49'	0°0'/ 3.3	17	151088	2001 <i>VG</i> ₉₁		4 3.5	184°74'	4°3'/29.4	17
3 2	13 15.14	-8 15.9	1.785	2.631	13.7	21.4	3 2	13 14.15	+5 50.5	2.298	3.159	10.4	21.0
3 12	13 10.02	-7 39.6	1.687	2.609	10.1	21.2	3 12	13 8.62	+7 2.4	2.231	3.160	7.6	20.8
3 22	13 2.65	-6 48.4	1.613	2.587	5.9	20.9	3 22	13 1.51	+8 15.2	2.191	3.159	5.1	20.6
4 1	12 53.70	-5 46.2	1.565	2.563	1.2	20.5	4 1	12 53.44	+9 22.3	2.180	3.159	4.4	20.6
4 11	12 44.21	-4 39.4	1.545	2.539	3.7	20.6	4 11	12 45.21	+10 17.8	2.198	3.157	6.3	20.7
4 21	12 35.27	-3 35.6	1.553	2.515	8.4	20.8	4 21	12 37.58	+10 57.2	2.244	3.155	9.2	20.9
5 1	12 27.91	-2 41.8	1.586	2.490	12.8	21.0	5 1	12 31.25	+11 18.2	2.314	3.152	11.9	21.0
5 11	12 22.87	-2 3.4	1.640	2.465	16.7	21.2	5 11	12 26.69	+11 20.6	2.404	3.148	14.3	21.2
208041	1999 <i>RE</i> ₁₆₆		4 3.5	242°34'	0°1'/ 3.4	17	422768	2001 <i>UB</i> ₉₄		4 3.5	179°96'	1°8'/ 1.3	15
3 2	13 16.72	-7 11.3	1.836	2.681	13.4	20.7	3 2	13 13.98	-1 58.6	2.599	3.446	9.9	22.9
3 12	13 11.03	-6 45.9	1.745	2.667	9.9	20.5	3 12	13 8.34	-1 2.2	2.523	3.448	7.0	22.7
3 22	13 3.15	-6 8.3	1.678	2.652	5.7	20.2	3 22	13 1.30	+0 0.2	2.474	3.449	4.0	22.5
4 1	12 53.80	-5 22.1	1.639	2.637	1.1	19.8	4 1	12 53.39	+1 3.9	2.455	3.450	1.8	22.4
4 11	12 43.98	-4 33.2	1.628	2.622	3.6	20.0	4 11	12 45.34	+2 3.7	2.466	3.449	3.8	22.5
4 21	12 34.80	-3 47.7	1.644	2.605	8.2	20.2	4 21	12 37.81	+2 55.1	2.507	3.448	6.9	22.7
5 1	12 27.21	-3 11.6	1.686	2.588	12.3	20.4	5 1	12 31.43	+3 34.6	2.576	3.446	9.8	22.9
5 11	12 21.91	-2 49.1	1.750	2.571	15.9	20.6	5 11	12 26.63	+4 0.1	2.667	3.443	12.2	23.0
410273	2007 <i>TB</i> ₁₆₀		4 3.5	196°36'	1°8'/ 5.4	17	255805	2006 <i>SM</i> ₂₅		4 3.5	167°65'	0°1'/ 3.4	18
3 2	13 15.59	-14 11.4	2.051	2.869	13.2	22.0	3 2	13 14.43	-8 26.1	1.882	2.726	13.2	21.2
3 12	13 9.96	-13 35.8	1.964	2.867	10.0	21.8	3 12	13 9.14	-7 38.7	1.808	2.730	9.6	21.0
3 22	13 2.40	-12 42.9	1.901	2.863	6.4	21.6	3 22	13 1.93	-6 37.8	1.759	2.733	5.5	20.8
4 1	12 53.62	-11 35.5	1.865	2.858	2.7	21.3	4 1	12 53.54	-5 28.2	1.737	2.735	1.1	20.4
4 11	12 44.56	-10 19.1	1.858	2.853	3.0	21.3	4 11	12 44.93	-4 16.6	1.743	2.737	3.4	20.6
4 21	12 36.14	-9 0.8	1.881	2.847	6.9	21.6	4 21	12 37.06	-3 10.2	1.778	2.739	7.7	20.9
5 1	12 29.21	-7 47.7	1.930	2.840	10.6	21.8	5 1	12 30.76	-2 15.0	1.838	2.740	11.5	21.1
5 11	12 24.34	-6 45.7	2.003	2.832	13.9	22.0	5 11	12 26.56	-1 35.1	1.920	2.740	14.8	21.3
321279	2009 <i>EX</i> ₁₇		4 3.5	28°55'	2°0'/ 5.4	17	330019	2005 <i>UC</i> ₉₈		4 3.5	234°91'	1°6'/ 5.3	17
3 2	13 12.71	-12 27.8	1.951	2.783	13.3	21.0							

EPHEMERIDES

4 3.5

4 3.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
22321	1991 <i>RP</i>		4 3.5 213°14	6°7/25.6	17		336348	2008 <i>TZ</i> ₁₂₃		4 3.5 281°39	2°0/ 5.4	17	
3 2	13 13.95	+10 52.0	2.135	3.000	11.0	18.8	3 2	13 12.58	-13 20.7	1.894	2.725	13.7	21.0
3 12	13 8.70	+13 1.9	2.069	2.992	8.5	18.6	3 12	13 7.97	-13 1.6	1.806	2.716	10.4	20.8
3 22	13 1.67	+15 10.7	2.031	2.983	6.9	18.5	3 22	13 1.37	-12 25.7	1.742	2.706	6.6	20.6
4 1	12 53.49	+17 8.8	2.022	2.973	7.2	18.5	4 1	12 53.46	-11 35.6	1.703	2.697	2.8	20.3
4 11	12 45.05	+18 47.2	2.042	2.962	9.2	18.6	4 11	12 45.21	-10 36.1	1.693	2.688	3.2	20.3
4 21	12 37.20	+20 0.3	2.087	2.951	11.9	18.8	4 21	12 37.57	-9 34.0	1.709	2.678	7.1	20.5
5 1	12 30.73	+20 45.7	2.155	2.938	14.5	18.9	5 1	12 31.43	-8 36.1	1.752	2.669	11.1	20.7
5 11	12 26.17	+21 4.3	2.242	2.925	16.7	19.1	5 11	12 27.40	-7 48.3	1.816	2.660	14.5	20.9
501017	2013 <i>RB</i> ₄₇		4 3.5 176°85	0°2/ 3.3	17		382899	2004 <i>QM</i> ₂₇		4 3.5 211°48	2°3/31.7	17	
3 2	13 13.04	-8 9.2	2.299	3.137	11.3	22.7	3 2	13 13.44	-0 14.6	2.519	3.372	10.0	22.7
3 12	13 7.86	-7 19.2	2.221	3.140	8.2	22.5	3 12	13 8.07	+0 41.0	2.436	3.364	7.1	22.5
3 22	13 1.09	-6 17.8	2.168	3.141	4.7	22.3	3 22	13 1.21	+1 41.7	2.379	3.355	4.1	22.3
4 1	12 53.37	-5 9.5	2.144	3.142	0.9	22.0	4 1	12 53.42	+2 42.9	2.352	3.345	2.3	22.1
4 11	12 45.46	-3 59.7	2.150	3.143	3.0	22.2	4 11	12 45.40	+3 39.2	2.356	3.335	4.3	22.3
4 21	12 38.15	-2 54.4	2.185	3.143	6.6	22.4	4 21	12 37.88	+4 26.0	2.388	3.324	7.4	22.4
5 1	12 32.10	-1 58.5	2.247	3.142	10.0	22.6	5 1	12 31.49	+4 59.7	2.446	3.312	10.4	22.6
5 11	12 27.79	-1 15.8	2.332	3.141	12.8	22.8	5 11	12 26.71	+5 18.6	2.527	3.300	12.9	22.8
505894	2015 <i>DZ</i> ₁₇₀		4 3.5 166°81	0°6/ 4.3	17		316562	2011 <i>FB</i> ₄₅		4 3.5 272°92	1°2/ 2.3	17	
3 2	13 12.36	-11 27.3	2.215	3.045	12.0	21.5	3 2	13 13.36	-4 26.1	2.043	2.896	11.9	21.3
3 12	13 7.42	-10 29.5	2.137	3.049	8.8	21.3	3 12	13 8.45	-3 45.9	1.948	2.875	8.7	21.0
3 22	13 0.86	-9 16.9	2.083	3.053	5.2	21.1	3 22	13 1.63	-2 55.9	1.876	2.853	4.9	20.8
4 1	12 53.32	-7 54.1	2.059	3.056	1.4	20.8	4 1	12 53.53	-2 0.3	1.833	2.831	1.3	20.5
4 11	12 45.62	-6 27.2	2.064	3.059	2.7	20.9	4 11	12 45.02	-1 5.3	1.818	2.809	3.9	20.6
4 21	12 38.54	-5 3.1	2.098	3.061	6.5	21.1	4 21	12 37.00	-0 16.7	1.832	2.786	8.0	20.8
5 1	12 32.77	-3 47.9	2.160	3.062	10.0	21.3	5 1	12 30.34	+0 20.3	1.870	2.763	11.8	21.0
5 11	12 28.79	-2 46.4	2.244	3.063	12.9	21.5	5 11	12 25.64	+0 42.3	1.931	2.740	15.1	21.2
93568	2000 <i>UE</i> ₃₉		4 3.5 291°05	5°4/30.2	18		287002	2002 <i>QK</i> ₆₆		4 3.5 201°42	0°3/ 3.9	17	
3 2	13 17.68	+7 46.5	1.744	2.611	12.9	18.6	3 2	13 13.03	-8 26.8	2.256	3.094	11.5	21.5
3 12	13 11.77	+8 22.5	1.664	2.594	9.7	18.3	3 12	13 7.93	-8 1.4	2.174	3.092	8.4	21.3
3 22	13 3.59	+8 56.7	1.609	2.577	6.6	18.1	3 22	13 1.19	-7 25.4	2.118	3.090	4.9	21.1
4 1	12 53.91	+9 22.0	1.580	2.561	5.5	18.0	4 1	12 53.42	-6 42.0	2.089	3.087	1.1	20.8
4 11	12 43.83	+9 32.2	1.578	2.544	7.7	18.1	4 11	12 45.43	-5 55.9	2.090	3.084	2.8	20.9
4 21	12 34.48	+9 23.3	1.602	2.527	11.2	18.2	4 21	12 38.01	-5 11.9	2.119	3.081	6.5	21.2
5 1	12 26.85	+8 53.9	1.650	2.510	14.8	18.4	5 1	12 31.86	-4 34.7	2.175	3.078	9.9	21.4
5 11	12 21.63	+8 5.1	1.716	2.494	17.9	18.6	5 11	12 27.50	-4 7.9	2.254	3.075	12.8	21.6
341455	2007 <i>TF</i> ₂₉₉		4 3.5 222°75	0°5/ 4.2	18		419731	2010 <i>VS</i> ₄₆		4 3.5 128°40	2°9/ 6.2	17	
3 2	13 12.35	-9 37.6	2.475	3.306	10.8	21.8	3 2	13 15.07	-15 40.8	1.811	2.631	14.6	21.4
3 12	13 7.35	-9 8.9	2.385	3.298	8.0	21.6	3 12	13 9.73	-15 27.2	1.737	2.638	11.2	21.2
3 22	13 0.82	-8 29.1	2.320	3.290	4.7	21.4	3 22	13 2.34	-14 54.8	1.686	2.644	7.4	21.0
4 1	12 53.32	-7 41.3	2.284	3.281	1.3	21.2	4 1	12 53.66	-14 5.9	1.661	2.651	3.7	20.8
4 11	12 45.58	-6 49.8	2.277	3.272	2.5	21.2	4 11	12 44.75	-13 5.6	1.663	2.657	3.6	20.8
4 21	12 38.32	-5 59.3	2.300	3.263	6.0	21.4	4 21	12 36.64	-12 0.8	1.694	2.663	7.2	21.0
5 1	12 32.21	-5 14.5	2.350	3.253	9.3	21.6	5 1	12 30.21	-10 58.9	1.749	2.668	11.0	21.2
5 11	12 27.73	-4 39.2	2.423	3.242	12.1	21.8	5 11	12 26.03	-10 6.3	1.828	2.674	14.3	21.5
326336	2000 <i>QU</i> ₉₃		4 3.5 269°23	1°1/ 2.3	17		225834	2001 <i>XE</i> ₇₉		4 3.5 117°44	0°9/ 4.5	16	
3 2	13 11.82	-6 36.7	1.901	2.755	12.6	20.9	3 2	13 14.93	-10 50.4	2.008	2.841	12.9	21.4
3 12	13 7.42	-5 27.6	1.808	2.736	9.2	20.7	3 12	13 9.34	-10 19.5	1.943	2.856	9.5	21.2
3 22	13 1.06	-4 3.6	1.739	2.716	5.2	20.4	3 22	13 1.97	-9 35.0	1.901	2.870	5.7	21.0
4 1	12 53.40	-2 30.7	1.699	2.697	1.3	20.1	4 1	12 53.57	-8 40.7	1.888	2.884	1.7	20.8
4 11	12 45.33	-0 56.7	1.686	2.677	4.1	20.2	4 11	12 45.06	-7 42.0	1.903	2.898	2.9	20.9
4 21	12 37.82	+0 30.0	1.702	2.656	8.5	20.5	4 21	12 37.31	-6 45.2	1.946	2.911	6.8	21.2
5 1	12 31.74	+1 42.2	1.743	2.636	12.5	20.7	5 1	12 31.08	-5 55.7	2.016	2.924	10.3	21.4
5 11	12 27.71	+2 35.3	1.805	2.615	16.0	20.8	5 11	12 26.85	-5 17.7	2.109	2.936	13.4	21.6
93842	2000 <i>WU</i> ₈₇		4 3.5 155°05	6°2/27.4	18		436684	2011 <i>SY</i> ₁₄₇		4 3.5 213°55	0°7/ 4.3	17	
3 2	13 15.14	+13 9.6	2.304	3.162	10.5	19.5	3 2	13 13.72	-8 48.6	2.612	3.442	10.4	21.6
3 12	13 9.28	+14 16.6	2.251	3.169	8.2	19.3	3 12	13 8.26	-8 41.8	2.525	3.437	7.7	21.4
3 22	13 1.85	+15 17.8	2.225	3.175	6.5	19.2	3 22	13 1.32	-8 26.3	2.463	3.432	4.6	21.2
4 1	12 53.52	+16 6.8	2.227	3.181	6.4	19.2	4 1	12 53.45	-8 4.3	2.430	3.427	1.3	21.0
4 11	12 45.10	+16 38.5	2.257	3.187	8.0	19.3	4 11	12 45.35	-7 38.8	2.427	3.422	2.4	21.1
4 21	12 37.39	+16 50.2	2.313	3.192	10.3	19.5	4 21	12 37.73	-7 13.5	2.453	3.416	5.7	21.3
5 1	12 31.04	+16 41.5	2.392	3.196	12.6	19.7	5 1	12 31.22	-6 52.1	2.507	3.410	8.8	21.5
5 11	12 26.50	+16 13.9	2.491	3.200	14.6	19.8	5 11	12 26.29	-6 37.5	2.585	3.404	11.4	21.6
502553	2015 <i>BV</i> ₄₇₀		4 3.5 236°22	1°0/ 2.6	17		473207	2015 <i>KM</i> ₁₁₃		4 3.5 287°79	2°8/ 7.0	17	
3 2	13 12.29	-5 54.5	1.864	2.719	12.8	21.7	3 2	13 9.46	-18 4.2	2.312	3.117	12.4	21.2
3 12	13 7.64	-5 3.8	1.789	2.718	9.2	21.4	3 12	13 5.42	-17 28.3	2.218	3.108	9.6	21.0
3 22	13 1.10	-4 1.5	1.739	2.716	5.2	21.2	3 22	12 59.78	-16 34.0	2.147	3.099	6.6	20.8
4 1	12 53.39	-2 53.0	1.716	2.714	1.2	20.9	4 1	12 53.14	-15 23.4	2.103	3.090	3.6	20.6
4 11	12 45.43	-1 45.2	1.720	2.712	3.9	21.1	4 11	12 46.25	-14 1.3	2.088	3.081	3.2	20.6
4 21	12 38.17	-0 44.9	1.753	2.710	8.1	21.3	4 21	12 39.87	-12 33.9	2.102	3.072	6.0	20.7
5 1	12 32.41	+0 2.2	1.810	2.708	11.9	21.6	5 1	12 34.70	-11 8.2	2.143	3.063	9.2	20.9
5 11	12 28.70	+0 32.8	1.888	2.706	15.1	21.8	5 11	12 31.25	-9 50.5	2.209	3.054	12.2	21.1
247416	2002 <i>CN</i> ₂₁₂		4 3.5 282°74	0°5/ 3.9	17		335842	2007 <i>MP</i> ₅		4 3.5 225°47	1°9/ 5.6	17	
3 2	13 16.06	-8 25.1	1.493	2.347	15.5	20.5	3 2	1					

EPHEMERIDES

4 3.5

4 3.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
140823	2001 <i>UT</i> ₁₆₅		4 3.5 313°89	3°3/30.7	18		180084	2003 <i>DV</i> ₂₄		4 3.5 154°24	3°2/ 7.0	18	
3 2	13 10.12	+ 1 24.2	2.116	2.983	11.0	19.3	3 2	13 15.07	-17 13.9	2.611	3.404	11.4	20.6
3 12	13 5.87	+ 2 35.8	2.046	2.980	7.8	19.1	3 12	13 9.27	-17 29.3	2.527	3.409	9.0	20.5
3 22	13 0.02	+ 3 52.2	2.002	2.978	4.7	18.9	3 22	13 1.92	-17 31.5	2.468	3.413	6.2	20.3
4 1	12 53.19	+ 5 7.1	1.986	2.975	3.4	18.8	4 1	12 53.60	-17 21.0	2.436	3.417	3.8	20.2
4 11	12 46.17	+ 6 13.5	1.998	2.973	5.5	18.9	4 11	12 45.06	-17 0.1	2.434	3.421	3.5	20.1
4 21	12 39.75	+ 7 6.1	2.038	2.970	8.8	19.1	4 21	12 37.03	-16 32.2	2.461	3.424	5.7	20.3
5 1	12 34.61	+ 7 41.2	2.102	2.968	11.9	19.3	5 1	12 30.20	-16 1.6	2.515	3.427	8.4	20.5
5 11	12 31.23	+ 7 57.5	2.187	2.965	14.5	19.5	5 11	12 25.04	-15 32.8	2.595	3.430	10.9	20.6
111607	2002 <i>AE</i> ₈₉		4 3.5 291°61	2°6/31.4	18		461873	2006 <i>JZ</i> ₄		4 3.5 346°77	12°9/18.6	16	
3 2	13 10.06	+ 0 17.2	2.297	3.160	10.4	19.4	3 2	13 0.80	-39 44.8	1.085	1.837	26.4	19.4
3 12	13 5.72	+ 1 16.4	2.225	3.157	7.4	19.2	3 12	13 0.90	-39 33.7	1.001	1.824	23.8	19.1
3 22	12 59.90	+ 2 20.6	2.178	3.154	4.3	19.0	3 22	12 57.93	-38 22.2	0.929	1.811	20.5	18.8
4 1	12 53.16	+ 3 24.3	2.160	3.152	2.7	18.8	4 1	12 52.85	-36 1.1	0.872	1.801	16.9	18.6
4 11	12 46.25	+ 4 21.8	2.170	3.149	4.7	19.0	4 11	12 47.24	-32 30.5	0.835	1.792	13.8	18.4
4 21	12 39.88	+ 5 8.1	2.209	3.146	7.9	19.2	4 21	12 42.79	-28 4.2	0.819	1.786	13.0	18.3
5 1	12 34.70	+ 5 39.9	2.272	3.144	10.9	19.4	5 1	12 40.88	-23 9.3	0.827	1.782	15.3	18.4
5 11	12 31.16	+ 5 55.5	2.357	3.141	13.4	19.5	5 11	12 42.26	-18 18.7	0.858	1.779	19.3	18.6
70413	1999 <i>SJ</i> ₅		4 3.5 175°48	0°8/ 2.8	18		114827	2003 <i>OY</i> ₁₈		4 3.6 252°37	7°7/24.3	18	
3 2	13 16.51	- 5 38.8	2.128	2.971	11.9	20.5	3 2	13 10.79	+12 28.4	1.936	2.810	11.5	19.3
3 12	13 10.47	- 4 59.2	2.052	2.974	8.6	20.3	3 12	13 6.56	+14 47.9	1.880	2.804	9.1	19.1
3 22	13 2.65	- 4 10.1	2.002	2.977	4.9	20.1	3 22	13 0.51	+17 4.2	1.850	2.798	7.8	19.0
4 1	12 53.73	- 3 15.8	1.980	2.979	1.1	19.8	4 1	12 53.33	+19 6.4	1.848	2.792	8.3	19.0
4 11	12 44.62	- 2 21.9	1.988	2.979	3.5	20.0	4 11	12 45.90	+20 45.2	1.873	2.786	10.4	19.2
4 21	12 36.17	- 1 34.0	2.025	2.980	7.3	20.2	4 21	12 39.14	+21 55.1	1.923	2.780	13.0	19.3
5 1	12 29.17	- 0 56.7	2.088	2.979	10.8	20.4	5 1	12 33.81	+22 34.1	1.993	2.773	15.6	19.5
5 11	12 24.13	- 0 32.7	2.174	2.978	13.8	20.6	5 11	12 30.46	+22 44.1	2.080	2.767	17.8	19.6
96409	1998 <i>EW</i> ₁₀		4 3.5 298°62	0°3/ 3.8	18		248072	2004 <i>PP</i> ₄₇		4 3.6 295°19	5°5/ 9.0	18	
3 2	13 18.06	- 6 3.9	1.719	2.568	14.0	18.8	3 2	13 13.16	-23 25.9	2.308	3.079	13.4	20.5
3 12	13 12.24	- 6 16.7	1.626	2.549	10.4	18.5	3 12	13 8.37	-23 48.0	2.195	3.053	11.1	20.3
3 22	13 4.00	- 6 20.7	1.556	2.530	6.1	18.3	3 22	13 1.67	-23 51.8	2.104	3.026	8.6	20.1
4 1	12 54.07	- 6 18.2	1.514	2.512	1.4	17.9	4 1	12 53.60	-23 35.9	2.039	3.000	6.3	19.9
4 11	12 43.54	- 6 13.0	1.498	2.493	3.6	18.0	4 11	12 45.00	-23 1.5	2.000	2.974	5.6	19.8
4 21	12 33.62	- 6 9.4	1.511	2.475	8.4	18.2	4 21	12 36.78	-22 12.4	1.989	2.947	7.2	19.9
5 1	12 25.41	- 6 11.6	1.548	2.457	12.8	18.5	5 1	12 29.81	-21 14.4	2.004	2.921	9.9	20.0
5 11	12 19.68	- 6 23.4	1.606	2.439	16.6	18.7	5 11	12 24.79	-20 14.4	2.043	2.894	12.8	20.1
207501	2006 <i>HQ</i> ₁₁₁		4 3.5 305°44	4°5/ 6.7	17		24019	Jeremygasper		4 3.6 175°65	2°1/ 1.5	18	
3 2	13 14.52	-16 38.6	1.379	2.213	17.6	20.0	3 2	13 14.94	- 3 10.6	1.866	2.722	12.7	19.3
3 12	13 10.17	-16 51.7	1.293	2.199	13.9	19.8	3 12	13 9.53	- 2 7.0	1.795	2.725	9.1	19.1
3 22	13 3.02	-16 41.7	1.227	2.185	9.6	19.5	3 22	13 2.19	- 0 53.8	1.749	2.727	5.1	18.8
4 1	12 53.88	-16 8.5	1.184	2.171	5.5	19.2	4 1	12 53.67	+ 0 22.4	1.732	2.728	2.1	18.6
4 11	12 44.07	-15 16.2	1.166	2.158	5.1	19.1	4 11	12 44.94	+ 1 34.0	1.743	2.728	4.7	18.8
4 21	12 35.04	-14 12.7	1.172	2.145	9.1	19.3	4 21	12 36.95	+ 2 34.4	1.781	2.728	8.7	19.0
5 1	12 28.09	-13 8.1	1.202	2.132	13.9	19.5	5 1	12 30.54	+ 3 18.5	1.845	2.728	12.4	19.2
5 11	12 24.09	-12 11.8	1.251	2.120	18.2	19.8	5 11	12 26.24	+ 3 43.9	1.929	2.727	15.5	19.5
112024	2002 <i>HY</i> ₁		4 3.5 222°58	2°8/ 1.3	18		340741	2006 <i>SA</i> ₂₀₀		4 3.6 72°00	0°4/ 3.9	17	
3 2	13 17.95	- 0 3.3	1.748	2.608	13.2	19.7	3 2	13 13.26	- 8 14.2	2.219	3.058	11.6	21.0
3 12	13 11.92	+ 0 33.7	1.670	2.601	9.6	19.4	3 12	13 8.00	- 7 58.7	2.155	3.073	8.5	20.8
3 22	13 3.66	+ 1 16.6	1.617	2.594	5.6	19.2	3 22	13 1.18	- 7 33.5	2.116	3.088	4.9	20.6
4 1	12 53.97	+ 1 59.6	1.591	2.586	2.8	19.0	4 1	12 53.45	- 7 1.7	2.105	3.103	1.2	20.3
4 11	12 43.93	+ 2 36.1	1.593	2.577	5.4	19.1	4 11	12 45.61	- 6 27.5	2.123	3.118	2.7	20.5
4 21	12 34.65	+ 3 0.7	1.623	2.569	9.5	19.3	4 21	12 38.45	- 5 55.4	2.169	3.133	6.3	20.7
5 1	12 27.10	+ 3 9.6	1.676	2.559	13.5	19.5	5 1	12 32.62	- 5 29.4	2.242	3.147	9.5	21.0
5 11	12 21.92	+ 3 1.2	1.750	2.549	16.8	19.7	5 11	12 28.56	- 5 12.6	2.338	3.162	12.3	21.2
39882	Edgarmitchell		4 3.5 59°11	2°2/ 1.9	18		97900	2000 <i>QF</i> ₇₅		4 3.6 156°50	2°0/ 5.2	18	
3 2	13 17.04	- 2 0.7	1.477	2.344	14.9	18.5	3 2	13 18.26	-12 36.1	1.800	2.626	14.4	20.4
3 12	13 11.47	- 1 30.3	1.411	2.345	10.7	18.3	3 12	13 12.06	-12 26.2	1.725	2.633	10.9	20.2
3 22	13 3.46	- 0 51.8	1.368	2.346	6.1	18.0	3 22	13 3.70	-12 0.2	1.675	2.639	6.8	19.9
4 1	12 53.92	- 0 11.1	1.351	2.348	2.2	17.8	4 1	12 53.99	-11 20.7	1.651	2.645	2.8	19.7
4 11	12 44.11	+ 0 24.5	1.360	2.349	5.2	18.0	4 11	12 44.02	-10 32.7	1.655	2.650	3.3	19.7
4 21	12 35.26	+ 0 48.9	1.395	2.351	9.9	18.2	4 21	12 34.88	- 9 42.5	1.687	2.654	7.4	20.0
5 1	12 28.41	+ 0 57.7	1.454	2.352	14.2	18.5	5 1	12 27.49	- 8 56.7	1.745	2.658	11.4	20.2
5 11	12 24.19	+ 0 49.3	1.532	2.354	17.8	18.7	5 11	12 22.46	- 8 20.8	1.825	2.661	14.8	20.5
271935	2004 <i>XX</i> ₁₄₅		4 3.5 101°89	2°1/ 1.5	17		434984	2006 <i>UN</i> ₁₄₀		4 3.6 238°36	3°3/ 7.5	17	
3 2	13 13.80	- 1 34.2	1.937	2.797	12.1	20.4	3 2	13 10.85	-18 50.4	2.390	3.187	12.2	21.2
3 12	13 8.59	- 0 51.1	1.873	2.804	8.7	20.2	3 12	13 6.37	-18 34.3	2.301	3.185	9.6	21.1
3 22	13 1.59	- 0 1.6	1.833	2.811	4.9	20.0	3 22	13 0.32	-18 1.3	2.236	3.182	6.7	20.9
4 1	12 53.52	+ 0 48.7	1.822	2.817	2.1	19.8	4 1	12 53.29	-17 12.6	2.198	3.180	4.0	20.7
4 11	12 45.31	+ 1 33.8	1.838	2.824	4.5	20.0	4 11	12 46.03	-16 12.1	2.189	3.178	3.5	20.6
4 21	12 37.84	+ 2 8.7	1.882	2.830	8.3	20.2	4 21	12 39.29	-15 5.1	2.207	3.175	5.9	20.8
5 1	12 31.86	+ 2 29.7	1.951	2.837	11.7	20.4	5 1	12 33.77	-13 57.4	2.253	3.172	8.9	21.0
5 11	12 27.89	+ 2 35.0	2.041	2.843	14.6	20.6	5 11	12 29.96	-12 55.0	2.323	3.170	11.7	21.1
209395	2004 <i>ET</i> ₆₉		4 3.5 82°11	2°1/ 5.6	17		218210	2002 <i>TR</i> ₂₆₆		4 3.6 152°37	1°2/ 4.8	18	
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EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
459994	2014 <i>OU</i> ₅₃		4 3.6 221°57	2.4/ 5.5	17		75183	1999 <i>VB</i> ₁₆₀		4 3.6 250°58	0.3/ 3.8	18	R
3 2	13 17.79	-13 35.1	1.747	2.573	14.9	22.6	3 2	13 16.03	-8 34.9	1.815	2.658	13.6	20.1
3 12	13 11.98	-13 25.8	1.659	2.565	11.4	22.3	3 12	13 10.64	-8 6.7	1.721	2.642	10.1	19.8
3 22	13 3.81	-12 58.6	1.593	2.556	7.3	22.1	3 22	13 3.04	-7 24.5	1.652	2.625	5.9	19.6
4 1	12 54.07	-12 15.6	1.553	2.546	3.2	21.8	4 1	12 53.94	-6 31.8	1.610	2.608	1.4	19.2
4 11	12 43.85	-11 21.5	1.542	2.536	3.6	21.8	4 11	12 44.34	-5 34.5	1.595	2.590	3.5	19.3
4 21	12 34.34	-10 23.1	1.558	2.525	7.8	22.0	4 21	12 35.35	-4 39.5	1.609	2.572	8.1	19.6
5 1	12 26.58	-9 28.2	1.599	2.514	12.1	22.2	5 1	12 27.95	-3 53.3	1.647	2.553	12.4	19.8
5 11	12 21.28	-8 43.1	1.662	2.502	15.8	22.5	5 11	12 22.85	-3 20.9	1.708	2.534	16.1	20.0
241857	2001 <i>TQ</i> ₁₃₄		4 3.6 215°94	3.3/ 7.5	18		28323	1999 <i>CP</i> ₁₁₂		4 3.6 99°91	0.5/ 2.9	17	
3 2	13 11.10	-19 7.2	2.327	3.124	12.5	20.5	3 2	13 10.82	-7 27.3	2.166	3.013	11.6	19.4
3 12	13 6.60	-18 45.8	2.239	3.122	9.9	20.3	3 12	13 6.32	-6 28.2	2.098	3.022	8.3	19.2
3 22	13 0.48	-18 6.5	2.174	3.120	6.9	20.1	3 22	13 0.28	-5 17.9	2.055	3.030	4.7	19.0
4 1	12 53.36	-17 10.8	2.136	3.118	4.1	19.9	4 1	12 53.32	-4 1.5	2.040	3.039	0.9	18.7
4 11	12 46.00	-16 2.9	2.126	3.115	3.6	19.8	4 11	12 46.23	-2 45.3	2.055	3.047	3.2	18.9
4 21	12 39.20	-14 48.3	2.145	3.113	6.0	20.0	4 21	12 39.78	-1 35.6	2.098	3.055	6.9	19.1
5 1	12 33.64	-13 33.6	2.191	3.110	9.1	20.2	5 1	12 34.62	-0 37.4	2.167	3.063	10.2	19.4
5 11	12 29.84	-12 24.9	2.261	3.108	11.9	20.4	5 11	12 31.20	+0 5.9	2.259	3.071	13.1	19.6
115437	2003 <i>TG</i> ₅		4 3.6 223°83	1.7/ 1.9	17		293457	2007 <i>EY</i> ₁₉₄		4 3.6 75°18	0.5/ 3.1	18	
3 2	13 15.67	-3 51.5	1.895	2.749	12.7	20.5	3 2	13 14.58	-7 2.3	1.687	2.540	14.0	21.5
3 12	13 10.18	-3 0.7	1.811	2.739	9.2	20.3	3 12	13 9.31	-6 19.2	1.633	2.559	10.1	21.3
3 22	13 2.66	-1 59.7	1.752	2.729	5.2	20.0	3 22	13 2.06	-5 24.0	1.602	2.578	5.7	21.0
4 1	12 53.82	-0 54.0	1.721	2.718	1.7	19.8	4 1	12 53.69	-4 22.3	1.598	2.596	1.1	20.8
4 11	12 44.64	+0 9.5	1.719	2.707	4.4	19.9	4 11	12 45.25	-3 21.2	1.621	2.615	3.7	21.0
4 21	12 36.10	+1 4.1	1.744	2.695	8.6	20.1	4 21	12 37.74	-2 27.5	1.672	2.633	8.0	21.3
5 1	12 29.10	+1 44.5	1.795	2.682	12.5	20.4	5 1	12 31.97	-1 46.5	1.748	2.651	11.9	21.6
5 11	12 24.25	+2 7.6	1.866	2.669	15.8	20.5	5 11	12 28.42	-1 21.4	1.844	2.670	15.1	21.8
1813	<i>Imhotep</i>		4 3.6 352°00	2.1/ 1.9	18	R	287102	2002 <i>RC</i> ₁₄₄		4 3.6 263°34	1.9/ 5.2	17	
3 2	13 15.82	-1 4.6	1.614	2.480	13.9	15.8	3 2	13 15.66	-12 44.3	1.829	2.658	14.1	21.6
3 12	13 10.47	-0 46.6	1.544	2.477	10.0	15.6	3 12	13 10.46	-12 28.0	1.728	2.638	10.8	21.4
3 22	13 2.88	-0 22.5	1.498	2.475	5.7	15.3	3 22	13 2.99	-11 54.6	1.651	2.617	6.8	21.1
4 1	12 53.86	+0 2.3	1.477	2.474	2.2	15.1	4 1	12 53.94	-11 6.1	1.600	2.595	2.8	20.8
4 11	12 44.56	+0 22.3	1.484	2.473	4.9	15.2	4 11	12 44.33	-10 7.4	1.578	2.573	3.4	20.8
4 21	12 36.10	+0 32.4	1.517	2.472	9.3	15.5	4 21	12 35.26	-9 5.2	1.582	2.550	7.7	21.0
5 1	12 29.45	+0 29.1	1.574	2.472	13.3	15.7	5 1	12 27.76	-8 7.0	1.613	2.527	12.0	21.2
5 11	12 25.22	+0 11.0	1.651	2.472	16.7	15.9	5 11	12 22.58	-7 19.3	1.665	2.503	15.8	21.4
178062	2006 <i>SN</i> ₃₈		4 3.6 10°16	1.8/ 5.2	17		416999	2005 <i>TO</i> ₁₆₅		4 3.6 115°30	0.7/ 4.3	16	
3 2	13 12.08	-13 16.5	1.446	2.293	16.3	20.4	3 2	13 15.34	-10 2.7	2.057	2.890	12.6	22.3
3 12	13 8.01	-12 40.5	1.375	2.293	12.2	20.1	3 12	13 9.61	-9 32.6	1.993	2.907	9.3	22.1
3 22	13 1.56	-11 42.7	1.325	2.294	7.6	19.9	3 22	13 2.16	-8 49.8	1.954	2.923	5.5	21.9
4 1	12 53.60	-10 27.2	1.300	2.295	2.9	19.6	4 1	12 53.71	-7 58.3	1.942	2.939	1.5	21.7
4 11	12 45.34	-9 2.3	1.301	2.297	3.6	19.6	4 11	12 45.16	-7 3.4	1.960	2.955	2.8	21.8
4 21	12 37.97	-7 37.7	1.328	2.299	8.4	19.9	4 21	12 37.38	-6 10.8	2.006	2.970	6.7	22.1
5 1	12 32.52	-6 22.9	1.378	2.301	13.0	20.2	5 1	12 31.08	-5 25.7	2.079	2.984	10.2	22.3
5 11	12 29.62	-5 24.8	1.449	2.304	16.9	20.4	5 11	12 26.75	-4 52.0	2.175	2.998	13.1	22.5
195421	2002 <i>GW</i> ₄₄		4 3.6 293°93	3.4/ 6.6	17		209051	2003 <i>QE</i> ₁₁		4 3.6 208°08	3.2/ 6.1	16	
3 2	13 13.22	-16 12.8	1.838	2.658	14.5	20.0	3 2	13 19.19	-15 0.5	1.866	2.680	14.5	20.9
3 12	13 8.62	-16 11.9	1.745	2.644	11.3	19.7	3 12	13 12.90	-15 13.1	1.779	2.676	11.2	20.7
3 22	13 1.88	-15 52.5	1.674	2.630	7.7	19.5	3 22	13 4.31	-15 9.2	1.714	2.670	7.5	20.4
4 1	12 53.68	-15 15.4	1.629	2.617	4.2	19.2	4 1	12 54.21	-14 49.5	1.676	2.665	4.0	20.2
4 11	12 45.03	-14 24.6	1.611	2.603	3.9	19.2	4 11	12 43.65	-14 17.3	1.666	2.658	3.9	20.2
4 21	12 36.97	-13 26.4	1.619	2.589	7.4	19.3	4 21	12 33.79	-13 37.8	1.685	2.651	7.5	20.4
5 1	12 30.46	-12 27.9	1.653	2.576	11.3	19.5	5 1	12 25.62	-12 57.6	1.729	2.644	11.3	20.6
5 11	12 26.21	-11 36.3	1.709	2.562	14.8	19.7	5 11	12 19.84	-12 22.9	1.796	2.635	14.8	20.8
463437	2013 <i>MO</i> ₄		4 3.6 244°05	0.2/ 3.8	17		162609	2000 <i>SH</i> ₉₃		4 3.6 215°82	2.0/ 5.6	17	
3 2	13 15.13	-8 38.8	2.014	2.853	12.6	22.1	3 2	13 15.76	-14 51.6	2.030	2.845	13.4	20.9
3 12	13 9.78	-8 6.7	1.919	2.838	9.3	21.9	3 12	13 10.23	-14 13.8	1.936	2.836	10.3	20.7
3 22	13 2.45	-7 21.5	1.849	2.821	5.5	21.6	3 22	13 2.70	-13 17.4	1.865	2.826	6.6	20.4
4 1	12 53.79	-6 26.7	1.807	2.805	1.2	21.3	4 1	12 53.87	-12 5.0	1.822	2.815	2.9	20.1
4 11	12 44.73	-5 27.9	1.793	2.787	3.2	21.4	4 11	12 44.67	-10 42.2	1.809	2.803	3.1	20.1
4 21	12 36.21	-4 31.3	1.808	2.769	7.5	21.6	4 21	12 36.08	-9 16.4	1.824	2.791	7.0	20.4
5 1	12 29.11	-3 42.9	1.848	2.751	11.4	21.8	5 1	12 28.98	-7 55.4	1.867	2.777	10.9	20.6
5 11	12 24.08	-3 7.3	1.911	2.732	14.8	22.0	5 11	12 23.97	-6 45.8	1.932	2.763	14.3	20.7
177987	2006 <i>QP</i> ₄₃		4 3.6 254°11	0.9/ 2.8	17		245172	2004 <i>TU</i> ₁₂₄		4 3.6 165°13	1.3/ 2.1	17	
3 2	13 16.21	-5 19.0	1.826	2.677	13.2	21.5	3 2	13 14.08	-3 38.1	2.372	3.219	10.7	21.9
3 12	13 10.75	-4 44.8	1.734	2.659	9.6	21.3	3 12	13 8.57	-2 55.5	2.299	3.224	7.7	21.7
3 22	13 3.09	-3 59.3	1.666	2.641	5.5	21.0	3 22	13 1.54	-2 5.9	2.253	3.229	4.3	21.5
4 1	12 53.94	-3 7.0	1.625	2.623	1.2	20.6	4 1	12 53.60	-1 13.6	2.235	3.233	1.4	21.3
4 11	12 44.31	-2 14.2	1.612	2.604	4.0	20.8	4 11	12 45.51	-0 23.7	2.248	3.236	3.5	21.4
4 21	12 35.28	-1 27.4	1.627	2.584	8.6	21.0	4 21	12 38.00	+0 19.2	2.289	3.239	6.9	21.7
5 1	12 27.82	-0 52.4	1.667	2.564	12.7	21.2	5 1	12 31.75	+0 51.4	2.357	3.241	10.0	21.9
5 11	12 22.63	-0 32.8	1.728	2.543	16.3	21.4	5 11	12 27.20	+1 10.7	2.448	3.243	12.7	22.0
64779	2001 <i>XD</i> ₁₉₀		4 3.6 62°02	1.9/ 1.8	18		372752	2010 <i>BV</i> ₁₄		4 3.6 221°04	2.4/ 31.6	17	
3 2	13 12.97	-3 29.6	1.733	2.596	13.2	19.3							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
522810	2016 <i>NP</i> ₈₀		4 3.6 20°74	2°9/ 6.4 17			426752	2013 <i>TE</i> ₉₂		4 3.6 192°12	0°4/ 3.2 17		
3 2	13 12.69	-15 1.8	1.984	2.805	13.5	20.6	3 2	13 14.57	-6 22.0	2.092	2.937	12.0	22.0
3 12	13 7.94	-15 7.6	1.908	2.809	10.4	20.4	3 12	13 9.19	-5 53.8	2.014	2.936	8.7	21.8
3 22	13 1.34	-14 57.8	1.856	2.814	6.9	20.2	3 22	13 2.03	-5 15.8	1.960	2.935	5.0	21.5
4 1	12 53.58	-14 33.8	1.830	2.819	3.7	20.0	4 1	12 53.75	-4 31.8	1.935	2.933	1.0	21.2
4 11	12 45.59	-13 59.4	1.832	2.824	3.5	20.0	4 11	12 45.24	-3 47.1	1.938	2.931	3.2	21.4
4 21	12 38.26	-13 19.5	1.861	2.830	6.6	20.2	4 21	12 37.36	-3 6.7	1.970	2.929	7.2	21.6
5 1	12 32.40	-12 40.1	1.915	2.836	10.1	20.4	5 1	12 30.88	-2 35.3	2.028	2.927	10.7	21.8
5 11	12 28.55	-12 6.4	1.992	2.842	13.2	20.6	5 11	12 26.33	-2 16.0	2.108	2.924	13.8	22.0
428019	2006 <i>BO</i> ₁₈₄		4 3.6 139°74	1°9/ 1.7 17			275146	2009 <i>VG</i> ₈₁		4 3.6 72°29	0°4/ 4.0 18		
3 2	13 14.05	-2 25.6	1.997	2.854	12.0	21.7	3 2	13 12.09	-10 33.2	1.777	2.622	13.8	20.5
3 12	13 8.78	-1 41.7	1.929	2.859	8.6	21.5	3 12	13 7.53	-9 38.8	1.714	2.634	10.1	20.3
3 22	13 1.76	-0 50.7	1.887	2.864	4.8	21.3	3 22	13 1.09	-8 28.5	1.674	2.647	5.9	20.1
4 1	12 53.66	+0 2.2	1.872	2.868	1.9	21.1	4 1	12 53.55	-7 7.8	1.661	2.659	1.4	19.8
4 11	12 45.40	+0 50.9	1.886	2.873	4.3	21.3	4 11	12 45.88	-5 44.2	1.677	2.672	3.2	20.0
4 21	12 37.84	+1 30.2	1.927	2.877	8.0	21.5	4 21	12 39.03	-4 25.6	1.720	2.685	7.5	20.3
5 1	12 31.74	+1 56.3	1.994	2.881	11.5	21.7	5 1	12 33.76	-3 18.8	1.788	2.697	11.3	20.5
5 11	12 27.61	+2 7.1	2.082	2.884	14.4	21.9	5 11	12 30.58	-2 28.3	1.878	2.710	14.6	20.8
120912	1998 <i>SP</i> ₇₅		4 3.6 267°08	1°2/ 2.2 18			423950	2006 <i>UB</i> ₂₂		4 3.6 138°37	0°9/ 4.4 16		
3 2	13 11.09	-5 51.1	2.129	2.981	11.6	19.6	3 2	13 15.22	-10 33.2	1.801	2.639	13.9	22.2
3 12	13 6.74	-4 43.2	2.036	2.963	8.4	19.4	3 12	13 9.86	-10 3.2	1.729	2.646	10.3	22.0
3 22	13 0.67	-3 22.9	1.968	2.945	4.7	19.1	3 22	13 2.48	-9 18.2	1.682	2.652	6.2	21.7
4 1	12 53.46	-1 55.5	1.929	2.927	1.3	18.8	4 1	12 53.86	-8 22.0	1.661	2.658	1.8	21.4
4 11	12 45.92	-0 28.2	1.919	2.908	3.9	19.0	4 11	12 45.02	-7 20.9	1.668	2.663	3.1	21.6
4 21	12 38.87	+0 52.1	1.937	2.889	7.8	19.2	4 21	12 36.97	-6 21.7	1.703	2.668	7.5	21.8
5 1	12 33.09	+1 59.1	1.981	2.870	11.4	19.4	5 1	12 30.58	-5 30.8	1.763	2.673	11.4	22.1
5 11	12 29.13	+2 49.0	2.047	2.850	14.6	19.5	5 11	12 26.40	-4 52.9	1.845	2.678	14.8	22.3
196777	2003 <i>SE</i> ₁₈₁		4 3.6 216°35	0°4/ 4.0 17			249555	2010 <i>JN</i> ₁₆₈		4 3.6 241°25	0°8/ 4.5 17		
3 2	13 13.78	-8 49.0	2.249	3.085	11.6	20.8	3 2	13 11.26	-10 38.8	2.271	3.104	11.6	20.7
3 12	13 8.55	-8 25.6	2.163	3.079	8.5	20.6	3 12	13 6.72	-10 5.7	2.187	3.101	8.6	20.5
3 22	13 1.63	-7 51.2	2.103	3.074	5.0	20.4	3 22	13 0.59	-9 19.9	2.127	3.097	5.2	20.3
4 1	12 53.65	-7 8.9	2.070	3.068	1.3	20.1	4 1	12 53.46	-8 24.7	2.095	3.092	1.5	20.1
4 11	12 45.40	-6 23.3	2.067	3.062	2.8	20.2	4 11	12 46.11	-7 24.9	2.093	3.088	2.6	20.1
4 21	12 37.70	-5 39.2	2.092	3.055	6.5	20.4	4 21	12 39.29	-6 26.1	2.119	3.084	6.3	20.4
5 1	12 31.29	-5 1.5	2.144	3.048	10.0	20.6	5 1	12 33.71	-5 33.7	2.171	3.080	9.7	20.6
5 11	12 26.69	-4 34.0	2.219	3.041	13.0	20.8	5 11	12 29.85	-4 51.7	2.247	3.075	12.6	20.7
321124	2008 <i>UA</i> ₅₂		4 3.6 166°97	1°0/ 2.5 17			459506	2013 <i>EU</i> ₁₀		4 3.6 7°53	1°3/ 4.6 16		
3 2	13 13.53	-4 21.1	2.222	3.071	11.2	21.6	3 2	13 12.47	-11 8.4	1.175	2.039	18.0	20.3
3 12	13 8.30	-3 46.7	2.148	3.074	8.1	21.4	3 12	13 8.72	-10 40.6	1.110	2.040	13.4	20.1
3 22	13 1.44	-3 4.6	2.100	3.076	4.5	21.1	3 22	13 2.18	-9 50.6	1.066	2.040	8.1	19.8
4 1	12 53.60	-2 18.8	2.080	3.077	1.2	20.9	4 1	12 53.83	-8 43.2	1.045	2.042	2.5	19.4
4 11	12 45.58	-1 34.5	2.089	3.079	3.4	21.1	4 11	12 45.11	-7 27.8	1.048	2.044	4.1	19.5
4 21	12 38.17	-0 56.4	2.126	3.080	7.1	21.3	4 21	12 37.47	-6 15.3	1.075	2.048	9.7	19.8
5 1	12 32.06	-0 28.5	2.190	3.081	10.4	21.5	5 1	12 32.11	-5 15.4	1.123	2.051	14.8	20.1
5 11	12 27.74	-0 13.1	2.276	3.082	13.2	21.7	5 11	12 29.71	-4 34.8	1.190	2.056	19.1	20.4
337490	2001 <i>SQ</i> ₉₅		4 3.6 85°91	4°5/ 8.2 17			473273	2015 <i>MJ</i> ₉₂		4 3.6 299°92	3°6/ 30.6 17		
3 2	13 17.53	-20 38.5	2.384	3.161	12.9	20.5	3 2	13 11.18	+2 58.9	2.128	2.995	10.9	20.9
3 12	13 11.11	-21 5.1	2.318	3.184	10.3	20.4	3 12	13 6.74	+3 55.2	2.051	2.984	7.9	20.7
3 22	13 3.02	-21 15.3	2.276	3.207	7.5	20.3	3 22	13 0.64	+4 54.9	1.999	2.973	4.9	20.5
4 1	12 53.93	-21 9.1	2.261	3.230	5.2	20.1	4 1	12 53.48	+5 51.9	1.975	2.963	3.6	20.4
4 11	12 44.71	-20 48.6	2.274	3.253	4.6	20.1	4 11	12 46.08	+6 40.2	1.979	2.952	5.7	20.5
4 21	12 36.20	-20 18.0	2.316	3.275	6.3	20.3	4 21	12 39.23	+7 14.9	2.010	2.942	8.9	20.7
5 1	12 29.10	-19 42.3	2.386	3.297	8.8	20.5	5 1	12 33.66	+7 32.8	2.066	2.931	12.0	20.8
5 11	12 23.91	-19 6.9	2.479	3.318	11.2	20.7	5 11	12 29.89	+7 33.0	2.142	2.921	14.8	21.0
268399	2005 <i>UW</i> ₁₈₃		4 3.6 211°58	0°4/ 4.0 17			68576	2001 <i>YC</i> ₅₃		4 3.6 323°17	6°3/ 30.3 18		
3 2	13 13.79	-9 22.4	1.884	2.726	13.2	21.4	3 2	13 15.41	+5 33.2	1.199	2.086	16.1	18.7
3 12	13 8.81	-8 49.8	1.804	2.724	9.7	21.2	3 12	13 10.92	+6 29.2	1.131	2.072	11.9	18.4
3 22	13 1.88	-8 3.5	1.749	2.722	5.7	20.9	3 22	13 3.51	+7 27.1	1.084	2.059	7.9	18.1
4 1	12 53.72	-7 7.2	1.721	2.719	1.4	20.6	4 1	12 54.13	+8 16.6	1.061	2.047	6.4	18.0
4 11	12 45.28	-6 7.0	1.721	2.716	3.2	20.8	4 11	12 44.23	+8 47.5	1.061	2.035	9.3	18.1
4 21	12 37.53	-5 9.5	1.749	2.713	7.4	21.0	4 21	12 35.34	+8 53.0	1.084	2.024	13.8	18.3
5 1	12 31.30	-4 20.6	1.802	2.710	11.3	21.2	5 1	12 28.75	+8 30.7	1.127	2.013	18.3	18.5
5 11	12 27.18	-3 44.9	1.877	2.707	14.7	21.5	5 11	12 25.24	+7 41.9	1.187	2.004	22.2	18.7
366397	2001 <i>QZ</i> ₂₄₀		4 3.6 185°83	1°5/ 5.3 15			384263	2009 <i>FD</i> ₂₆		4 3.6 49°04	8°1/ 25.2 18		
3 2	13 16.24	-12 33.7	2.546	3.359	11.1	23.1	3 2	13 11.15	+14 6.5	1.807	2.681	12.2	19.8
3 12	13 10.16	-12 18.9	2.459	3.359	8.4	22.9	3 12	13 6.72	+16 2.1	1.781	2.703	9.7	19.6
3 22	13 2.49	-11 52.2	2.396	3.358	5.3	22.7	3 22	13 0.54	+17 48.4	1.780	2.725	8.2	19.6
4 1	12 53.84	-11 15.4	2.363	3.356	2.2	22.4	4 1	12 53.43	+19 15.8	1.805	2.748	8.5	19.7
4 11	12 44.96	-10 32.3	2.360	3.354	2.6	22.5	4 11	12 46.34	+20 17.5	1.856	2.771	10.3	19.8
4 21	12 36.61	-9 47.2	2.387	3.351	5.8	22.7	4 21	12 40.13	+20 50.7	1.930	2.795	12.7	20.0
5 1	12 29.47	-9 4.7	2.442	3.347	8.9	22.9	5 1	12 35.49	+20 55.8	2.025	2.818	15.0	20.2
5 11	12 24.03	-8 29.1	2.521	3.342	11.6	23.0	5 11	12 32.82	+20 35.9	2.137	2.842	16.9	20.4
355866	2008 <i>UY</i> ₃₀₈		4 3.6 214°76	2°8/ 6.0 17			445848	2012 <i>FX</i> ₂₆		4 3.6 20°93	0°1/ 3.7 16		
3 2	13 18.18	-15 16.2	1.816	2.633	14.8	22.2							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
325352	2008 <i>KB</i> ₃₃		4 3.6 318°07	1°1/ 2.5 17			253054	2002 <i>TJ</i> ₄₂		4 3.6 70°12	6°7/31.4 16		
3 2	13 11.15	- 6 31.0	1.534	2.399	14.5	20.7	3 2	13 33.55	+13 3.9	1.574	2.417	15.3	20.4
3 12	13 7.29	- 5 31.7	1.456	2.389	10.5	20.5	3 12	13 22.75	+13 0.8	1.537	2.450	11.6	20.3
3 22	13 1.19	- 4 16.7	1.401	2.379	6.0	20.2	3 22	13 9.57	+12 46.8	1.526	2.483	8.2	20.2
4 1	12 53.63	- 2 52.5	1.372	2.370	1.4	19.9	4 1	12 55.31	+12 16.3	1.543	2.515	6.7	20.2
4 11	12 45.69	- 1 28.3	1.369	2.361	4.5	20.0	4 11	12 41.47	+11 27.0	1.590	2.548	8.4	20.3
4 21	12 38.50	- 0 13.1	1.393	2.353	9.4	20.3	4 21	12 29.33	+10 20.2	1.665	2.579	11.5	20.6
5 1	12 33.05	+ 0 45.4	1.439	2.345	13.8	20.5	5 1	12 19.78	+ 8 59.2	1.765	2.610	14.7	20.8
5 11	12 30.00	+ 1 22.9	1.506	2.337	17.6	20.8	5 11	12 13.22	+ 7 27.9	1.886	2.641	17.3	21.1
59882	1999 <i>RM</i> ₁₂₂		4 3.6 134°98	0°0/ 3.5 18			229971	1999 <i>UX</i> ₁₁		4 3.6 106°41	1°8/ 1.9 17		
3 2	13 9.75	- 8 59.9	2.474	3.312	10.6	19.5	3 2	13 14.51	- 2 0.9	1.950	2.808	12.2	21.2
3 12	13 5.47	- 8 9.1	2.396	3.315	7.7	19.4	3 12	13 9.20	- 1 27.4	1.882	2.812	8.7	21.0
3 22	12 59.80	- 7 7.3	2.345	3.318	4.5	19.1	3 22	13 2.06	- 0 47.5	1.839	2.816	4.9	20.8
4 1	12 53.30	- 5 58.5	2.322	3.320	0.9	18.9	4 1	12 53.82	- 0 6.0	1.823	2.819	1.9	20.6
4 11	12 46.66	- 4 47.9	2.329	3.323	2.6	19.0	4 11	12 45.39	+ 0 31.4	1.836	2.823	4.3	20.8
4 21	12 40.53	- 3 40.9	2.365	3.326	6.0	19.3	4 21	12 37.68	+ 0 59.8	1.876	2.827	8.1	21.0
5 1	12 35.51	- 2 42.3	2.428	3.328	9.1	19.4	5 1	12 31.46	+ 1 15.8	1.941	2.831	11.6	21.2
5 11	12 32.03	- 1 55.7	2.514	3.330	11.8	19.6	5 11	12 27.26	+ 1 17.3	2.027	2.834	14.6	21.4
337678	2001 <i>TA</i> ₂₀₃		4 3.6 150°70	3°0/30.9 18			505758	2015 <i>BP</i> ₁₂₇		4 3.6 259°65	0°3/ 3.9 17		
3 2	13 14.23	+ 4 47.5	2.855	3.707	8.9	21.0	3 2	13 14.66	- 8 10.3	1.884	2.729	13.1	21.3
3 12	13 8.44	+ 5 22.9	2.791	3.716	6.4	20.9	3 12	13 9.51	- 7 51.5	1.802	2.722	9.7	21.1
3 22	13 1.39	+ 5 58.3	2.755	3.725	4.1	20.7	3 22	13 2.36	- 7 20.6	1.743	2.716	5.7	20.8
4 1	12 53.63	+ 6 29.8	2.748	3.733	3.0	20.7	4 1	12 53.90	- 6 41.1	1.711	2.709	1.3	20.5
4 11	12 45.79	+ 6 53.8	2.772	3.740	4.6	20.8	4 11	12 45.11	- 5 58.1	1.707	2.702	3.2	20.6
4 21	12 38.47	+ 7 7.5	2.824	3.748	7.0	20.9	4 21	12 36.97	- 5 17.4	1.730	2.695	7.5	20.9
5 1	12 32.22	+ 7 9.5	2.903	3.754	9.4	21.1	5 1	12 30.35	- 4 44.4	1.779	2.687	11.5	21.1
5 11	12 27.43	+ 6 59.3	3.005	3.760	11.5	21.3	5 11	12 25.88	- 4 23.2	1.850	2.680	14.8	21.3
506709	2006 <i>UU</i> ₁₁₂		4 3.6 227°65	0°2/ 3.9 17			245062	2004 <i>GF</i> ₃		4 3.6 228°11	0°8/ 4.6 18		
3 2	13 12.34	- 8 12.2	2.458	3.294	10.7	22.3	3 2	13 10.57	-11 24.4	2.408	3.237	11.1	20.6
3 12	13 7.40	- 7 48.8	2.372	3.288	7.9	22.1	3 12	13 6.17	-10 42.5	2.321	3.233	8.3	20.4
3 22	13 0.96	- 7 15.8	2.311	3.282	4.6	21.9	3 22	13 0.28	- 9 47.6	2.260	3.228	5.0	20.1
4 1	12 53.56	- 6 36.1	2.278	3.276	1.1	21.6	4 1	12 53.45	- 8 43.0	2.227	3.223	1.6	19.9
4 11	12 45.94	- 5 53.8	2.275	3.270	2.6	21.7	4 11	12 46.42	- 7 33.6	2.223	3.218	2.5	19.9
4 21	12 38.80	- 5 13.4	2.301	3.263	6.1	22.0	4 21	12 39.89	- 6 25.1	2.248	3.213	6.0	20.2
5 1	12 32.82	- 4 39.1	2.354	3.257	9.3	22.1	5 1	12 34.51	- 5 22.8	2.300	3.208	9.3	20.4
5 11	12 28.46	- 4 14.1	2.431	3.250	12.1	22.3	5 11	12 30.75	- 4 31.3	2.376	3.202	12.1	20.5
64577	2001 <i>WQ</i> ₄₁		4 3.6 186°84	18°0/20.9 18			308160	2005 <i>AK</i> ₇₉		4 3.6 80°62	0°6/ 3.1 18		
3 2	13 22.79	-46 12.6	1.354	2.008	26.1	18.1	3 2	13 17.47	- 6 20.6	1.461	2.318	15.5	21.0
3 12	13 17.49	-47 43.9	1.279	2.009	24.3	17.9	3 12	13 11.71	- 5 48.7	1.407	2.335	11.2	20.8
3 22	13 7.91	-48 32.1	1.215	2.008	22.3	17.7	3 22	13 3.61	- 5 4.3	1.375	2.352	6.3	20.5
4 1	12 55.14	-48 25.5	1.165	2.008	20.2	17.6	4 1	12 54.15	- 4 12.9	1.370	2.368	1.3	20.2
4 11	12 41.34	-47 17.9	1.131	2.006	18.6	17.4	4 11	12 44.60	- 3 22.2	1.391	2.385	4.1	20.5
4 21	12 28.94	-45 12.5	1.115	2.004	18.0	17.4	4 21	12 36.14	- 2 39.1	1.439	2.401	8.9	20.8
5 1	12 20.01	-42 22.4	1.119	2.001	18.7	17.4	5 1	12 29.73	- 2 9.3	1.510	2.417	13.2	21.1
5 11	12 15.58	-39 8.0	1.142	1.998	20.4	17.5	5 11	12 25.90	- 1 55.8	1.602	2.433	16.7	21.3
58654	1997 <i>WA</i> ₄₈		4 3.6 129°12	1°8/ 1.8 18			497964	2007 <i>AT</i> ₂₉		4 3.6 343°77	9°0/10.3 17		
3 2	13 16.81	- 1 44.5	2.163	3.013	11.5	20.6	3 2	13 16.69	-26 16.7	1.569	2.346	18.4	21.0
3 12	13 10.59	- 1 7.3	2.103	3.029	8.2	20.4	3 12	13 11.73	-27 23.5	1.487	2.341	15.6	20.8
3 22	13 2.73	- 0 24.5	2.068	3.044	4.6	20.2	3 22	13 4.00	-28 5.0	1.425	2.337	12.6	20.6
4 1	12 53.92	+ 0 18.9	2.063	3.059	1.8	20.0	4 1	12 54.31	-28 17.0	1.384	2.333	10.0	20.4
4 11	12 45.03	+ 0 57.9	2.087	3.073	4.0	20.2	4 11	12 43.97	-27 59.2	1.367	2.330	9.0	20.3
4 21	12 36.89	+ 1 28.1	2.139	3.086	7.5	20.4	4 21	12 34.40	-27 16.1	1.375	2.327	10.3	20.4
5 1	12 30.19	+ 1 46.5	2.218	3.099	10.7	20.7	5 1	12 26.89	-26 16.5	1.405	2.324	13.1	20.5
5 11	12 25.40	+ 1 51.4	2.319	3.111	13.4	20.9	5 11	12 22.30	-25 11.2	1.457	2.323	16.2	20.7
121868	2000 <i>CQ</i> ₉₀		4 3.6 312°75	4°2/ 6.8 18			117158	2004 <i>QB</i> ₁₁		4 3.6 291°09	5°9/28.9 17		
3 2	13 11.86	-17 14.6	1.219	2.063	18.9	19.0	3 2	13 13.73	+ 7 20.1	1.721	2.595	12.7	19.9
3 12	13 8.53	-17 3.7	1.135	2.047	14.9	18.7	3 12	13 8.96	+ 8 32.5	1.652	2.585	9.5	19.7
3 22	13 2.27	-16 23.5	1.070	2.032	10.1	18.3	3 22	13 2.08	+ 9 45.2	1.606	2.574	6.7	19.5
4 1	12 53.91	-15 14.9	1.028	2.017	5.5	18.0	4 1	12 53.86	+10 49.6	1.587	2.564	6.0	19.4
4 11	12 44.87	-13 44.4	1.008	2.003	4.9	17.9	4 11	12 45.34	+11 37.7	1.595	2.553	8.3	19.5
4 21	12 36.66	-12 3.4	1.013	1.989	9.6	18.2	4 21	12 37.55	+12 4.1	1.627	2.543	11.7	19.7
5 1	12 30.69	-10 25.4	1.040	1.976	14.9	18.4	5 1	12 31.40	+12 6.4	1.682	2.532	15.0	19.9
5 11	12 27.85	- 9 2.2	1.085	1.964	19.6	18.6	5 11	12 27.50	+11 45.2	1.754	2.522	17.9	20.1
55009	2001 <i>QZ</i> ₂₆		4 3.6 84°60	0°9/ 4.4 18			109842	2001 <i>RS</i> ₁₂₅		4 3.6 231°37	3°0/30.9 18		
3 2	13 15.45	-10 25.3	1.726	2.567	14.3	18.9	3 2	13 11.16	+ 1 22.2	2.317	3.179	10.3	20.1
3 12	13 9.98	- 9 56.2	1.667	2.585	10.5	18.7	3 12	13 6.61	+ 2 26.9	2.242	3.174	7.4	19.9
3 22	13 2.51	- 9 12.2	1.632	2.602	6.3	18.5	3 22	13 0.54	+ 3 36.1	2.193	3.168	4.5	19.7
4 1	12 53.88	- 8 17.7	1.623	2.620	1.8	18.3	4 1	12 53.52	+ 4 44.1	2.173	3.162	3.1	19.6
4 11	12 45.15	- 7 19.1	1.642	2.637	3.2	18.4	4 11	12 46.31	+ 5 44.9	2.181	3.156	5.1	19.7
4 21	12 37.34	- 6 23.2	1.688	2.654	7.5	18.7	4 21	12 39.63	+ 6 33.5	2.218	3.150	8.2	19.9
5 1	12 31.26	- 5 36.2	1.760	2.671	11.4	19.0	5 1	12 34.13	+ 7 6.6	2.279	3.143	11.1	20.1
5 11	12 27.42	- 5 2.3	1.853	2.688	14.6	19.2	5 11	12 30.29	+ 7 22.6	2.362	3.137	13.7	20.2
102258	1999 <i>TR</i> ₃₁		4 3.6 151°94	0°5/ 4.1 18			5632	Ingelehmann		4 3.6 279°94	9°7/24.3 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
211590	2003 <i>SP</i> ₂₄₇		4 3.6 191 ^o .71	0 ^o .9/ 2.7 18			519032	2010 <i>JR</i> ₁₅₆		4 3.6 240 ^o .85	0 ^o .4/ 4.1 17		
3 2	13 15.94	- 5 49.3	1.948	2.795	12.7	21.0	3 2	13 10.69	-10 13.8	2.390	3.224	11.1	22.4
3 12	13 10.32	- 5 1.4	1.870	2.794	9.2	20.8	3 12	13 6.30	- 9 27.1	2.301	3.216	8.2	22.2
3 22	13 2.77	- 4 2.5	1.817	2.792	5.2	20.6	3 22	13 0.40	- 8 27.8	2.238	3.208	4.8	22.0
4 1	12 54.01	- 2 57.4	1.791	2.790	1.2	20.3	4 1	12 53.54	- 7 19.3	2.202	3.200	1.2	21.7
4 11	12 44.98	- 1 52.9	1.795	2.786	3.8	20.4	4 11	12 46.45	- 6 7.1	2.197	3.192	2.6	21.8
4 21	12 36.63	- 0 55.3	1.827	2.782	7.9	20.7	4 21	12 39.86	- 4 56.7	2.220	3.183	6.2	22.0
5 1	12 29.81	- 0 10.0	1.885	2.778	11.7	20.9	5 1	12 34.41	- 3 53.8	2.270	3.174	9.5	22.2
5 11	12 25.08	+ 0 19.6	1.964	2.772	14.9	21.1	5 11	12 30.59	- 3 2.6	2.344	3.165	12.4	22.4
15674	1978 <i>RR</i> ₇		4 3.6 51 ^o .63	1 ^o .7/ 2.1 18			396143	2013 <i>DA</i> ₉		4 3.6 241 ^o .74	4 ^o .0/ 29.2 17		
3 2	13 13.38	- 5 31.9	1.398	2.266	15.4	17.8	3 2	13 10.14	+ 6 44.5	2.672	3.535	9.1	20.7
3 12	13 8.96	- 4 24.5	1.336	2.270	11.1	17.5	3 12	13 5.71	+ 7 45.3	2.602	3.530	6.7	20.5
3 22	13 2.15	- 3 2.4	1.296	2.275	6.2	17.2	3 22	12 59.97	+ 8 46.1	2.558	3.525	4.6	20.4
4 1	12 53.88	- 1 33.6	1.281	2.279	1.8	17.0	4 1	12 53.44	+ 9 41.6	2.544	3.520	4.1	20.3
4 11	12 45.37	- 0 8.3	1.293	2.284	5.1	17.2	4 11	12 46.76	+10 27.1	2.558	3.515	5.7	20.4
4 21	12 37.83	+ 1 4.1	1.330	2.288	10.0	17.5	4 21	12 40.54	+10 59.1	2.600	3.509	8.1	20.6
5 1	12 32.25	+ 0 56.7	1.391	2.293	14.4	17.7	5 1	12 35.34	+11 15.5	2.666	3.504	10.5	20.7
5 11	12 29.24	+ 2 26.2	1.470	2.298	18.1	18.0	5 11	12 31.59	+11 15.8	2.754	3.498	12.6	20.9
138586	2000 <i>QL</i> ₁₄₂		4 3.6 233 ^o .78	2 ^o .3/ 31.3 18			176778	2002 <i>RF</i> ₂₄₂		4 3.6 129 ^o .32	0 ^o .0/ 3.4 18		
3 2	13 9.60	- 2 29.4	2.488	3.344	9.9	20.0	3 2	13 14.72	- 9 5.2	1.824	2.667	13.6	20.7
3 12	13 5.41	- 0 51.8	2.407	3.337	7.1	19.8	3 12	13 9.46	- 8 14.1	1.757	2.677	9.9	20.5
3 22	12 59.83	+ 0 54.4	2.353	3.330	4.0	19.6	3 22	13 2.27	- 7 8.7	1.714	2.687	5.7	20.3
4 1	12 53.39	+ 2 42.9	2.330	3.323	2.3	19.5	4 1	12 53.93	- 5 54.3	1.698	2.697	1.2	20.0
4 11	12 46.75	+ 4 26.7	2.337	3.315	4.5	19.6	4 11	12 45.43	- 4 38.0	1.712	2.706	3.3	20.2
4 21	12 40.58	+ 5 59.3	2.374	3.308	7.6	19.8	4 21	12 37.74	- 3 27.2	1.753	2.714	7.6	20.4
5 1	12 35.49	+ 7 15.8	2.438	3.300	10.5	20.0	5 1	12 31.66	- 2 28.3	1.819	2.723	11.5	20.7
5 11	12 31.91	+ 8 13.6	2.524	3.292	13.1	20.2	5 11	12 27.72	- 1 45.2	1.907	2.731	14.7	20.9
154785	2004 <i>PV</i> ₄₈		4 3.6 240 ^o .00	1 ^o .3/ 2.3 18			124707	2001 <i>ST</i> ₁₄₉		4 3.6 8 ^o .60	3 ^o .1/ 5.8 18		
3 2	13 15.19	- 3 35.6	2.069	2.920	11.9	20.9	3 2	13 15.14	-13 43.1	1.224	2.075	18.3	19.0
3 12	13 9.78	- 3 1.2	1.982	2.908	8.6	20.7	3 12	13 10.72	-13 44.5	1.157	2.076	14.0	18.7
3 22	13 2.49	- 2 18.6	1.920	2.896	4.9	20.4	3 22	13 3.42	-13 23.2	1.109	2.076	9.1	18.4
4 1	12 53.98	- 1 32.1	1.886	2.883	1.5	20.2	4 1	12 54.22	-12 41.3	1.084	2.078	4.2	18.1
4 11	12 45.14	- 0 47.3	1.881	2.870	3.9	20.3	4 11	12 44.58	-11 45.6	1.084	2.080	4.4	18.2
4 21	12 36.86	- 0 9.5	1.904	2.857	7.8	20.5	4 21	12 36.01	-10 45.1	1.108	2.082	9.3	18.4
5 1	12 29.97	+ 0 17.0	1.953	2.843	11.5	20.7	5 1	12 29.75	- 9 50.0	1.154	2.085	14.3	18.7
5 11	12 25.05	+ 0 29.4	2.023	2.829	14.6	20.9	5 11	12 26.54	- 9 8.0	1.219	2.088	18.5	19.0
353893	2012 <i>XK</i> ₃₇		4 3.6 156 ^o .21	2 ^o .4/ 31.5 17			402867	2007 <i>RT</i> ₁₄₉		4 3.6 168 ^o .24	3 ^o .5/ 30.8 18		
3 2	13 12.09	+ 1 19.1	2.664	3.519	9.4	22.0	3 2	13 17.37	+ 3 3.7	2.292	3.146	10.8	22.8
3 12	13 7.05	+ 2 4.6	2.596	3.525	6.7	21.8	3 12	13 11.02	+ 4 6.8	2.226	3.153	7.8	22.6
3 22	13 0.70	+ 2 53.1	2.555	3.530	4.0	21.6	3 22	13 3.04	+ 5 12.4	2.187	3.159	4.8	22.4
4 1	12 53.58	+ 3 40.1	2.543	3.534	2.4	21.5	4 1	12 54.09	+ 6 14.7	2.177	3.164	3.5	22.3
4 11	12 46.34	+ 4 21.2	2.561	3.539	4.2	21.7	4 11	12 45.00	+ 7 7.6	2.198	3.167	5.5	22.5
4 21	12 39.62	+ 4 52.8	2.608	3.543	7.0	21.8	4 21	12 36.58	+ 7 46.8	2.247	3.170	8.5	22.6
5 1	12 33.97	+ 5 12.4	2.680	3.546	9.6	22.0	5 1	12 29.52	+ 8 9.7	2.321	3.172	11.4	22.8
5 11	12 29.79	+ 5 18.9	2.776	3.550	11.9	22.2	5 11	12 24.31	+ 8 15.5	2.417	3.173	13.9	23.0
177410	2004 <i>BQ</i> ₁₅₂		4 3.6 146 ^o .66	3 ^o .2/ 31.8 18			473245	2015 <i>LG</i> ₃₇		4 3.6 245 ^o .04	4 ^o .7/ 28.9 17		
3 2	13 16.93	+ 1 3.9	1.790	2.652	12.9	20.5	3 2	13 13.10	+ 9 11.0	2.495	3.356	9.7	21.1
3 12	13 11.07	+ 1 51.2	1.726	2.658	9.3	20.3	3 12	13 7.93	+10 0.8	2.423	3.348	7.3	20.9
3 22	13 3.20	+ 2 42.9	1.688	2.663	5.5	20.1	3 22	13 1.28	+10 48.5	2.377	3.339	5.3	20.7
4 1	12 54.12	+ 3 32.8	1.676	2.669	3.2	20.0	4 1	12 53.72	+11 28.8	2.359	3.330	4.8	20.7
4 11	12 44.86	+ 4 14.0	1.693	2.674	5.6	20.1	4 11	12 45.98	+11 56.9	2.370	3.321	6.4	20.8
4 21	12 36.44	+ 4 41.6	1.737	2.678	9.4	20.4	4 21	12 38.76	+12 9.7	2.408	3.312	8.9	20.9
5 1	12 29.71	+ 4 52.5	1.805	2.682	12.9	20.6	5 1	12 32.70	+12 5.7	2.470	3.303	11.4	21.1
5 11	12 25.20	+ 4 45.7	1.894	2.686	16.0	20.8	5 11	12 28.25	+11 45.3	2.554	3.293	13.6	21.2
89899	2002 <i>CT</i> ₂₉₁		4 3.6 220 ^o .74	1 ^o .2/ 2.0 18			331970	2004 <i>YU</i> ₇		4 3.6 226 ^o .77	1 ^o .1/ 2.3 18		
3 2	13 11.34	- 3 14.5	2.726	3.573	9.4	20.4	3 2	13 14.27	- 3 59.2	2.645	3.486	9.9	22.6
3 12	13 6.57	- 2 34.4	2.641	3.566	6.8	20.2	3 12	13 8.78	- 3 16.2	2.550	3.471	7.1	22.4
3 22	13 0.47	- 1 48.0	2.583	3.558	3.8	20.0	3 22	13 1.79	- 2 25.7	2.481	3.456	4.0	22.1
4 1	12 53.54	- 0 59.2	2.554	3.551	1.3	19.8	4 1	12 53.85	- 1 31.5	2.442	3.440	1.2	21.9
4 11	12 46.42	- 0 12.3	2.555	3.543	3.2	19.9	4 11	12 45.63	- 0 38.4	2.434	3.423	3.3	22.0
4 21	12 39.73	+ 0 28.8	2.585	3.534	6.3	20.1	4 21	12 37.83	+ 0 9.2	2.456	3.405	6.6	22.2
5 1	12 34.06	+ 1 0.6	2.642	3.525	9.1	20.3	5 1	12 31.10	+ 0 47.3	2.505	3.386	9.6	22.4
5 11	12 29.82	+ 1 20.8	2.722	3.516	11.6	20.4	5 11	12 25.92	+ 1 13.3	2.577	3.367	12.3	22.5
496595	2015 <i>BX</i> ₄₈₉		4 3.6 211 ^o .70	2 ^o .9/ 6.6 17			127926	2003 <i>GO</i> ₄₈		4 3.6 193 ^o .95	2 ^o .7/ 31.9 18		
3 2	13 15.39	-16 19.6	2.228	3.033	12.8	22.0	3 2	13 17.30	+ 1 59.0	2.311	3.163	10.8	20.2
3 12	13 9.87	-16 13.3	2.136	3.027	9.9	21.8	3 12	13 11.03	+ 2 30.6	2.235	3.161	7.8	20.0
3 22	13 2.53	-15 50.9	2.068	3.021	6.7	21.6	3 22	13 3.09	+ 3 4.8	2.185	3.158	4.6	19.8
4 1	12 54.00	-15 13.8	2.027	3.014	3.7	21.4	4 1	12 54.11	+ 3 37.0	2.164	3.155	2.7	19.7
4 11	12 45.13	-14 25.5	2.015	3.006	3.4	21.3	4 11	12 44.93	+ 4 2.5	2.172	3.151	4.7	19.8
4 21	12 36.82	-13 31.1	2.031	2.998	6.4	21.5	4 21	12 36.35	+ 4 17.9	2.210	3.147	7.9	20.0
5 1	12 29.87	-12 36.7	2.075	2.989	9.7	21.7	5 1	12 29.10	+ 4 20.5	2.273	3.142	11.0	20.2
5 11	12 24.84	-11 47.9	2.142	2.980	12.8	21.9	5 11	12 23.68	+ 4 9.5	2.359	3.136	13.6	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
498755	2008 <i>UU</i> ₁₀		4 3.6 174°25	1°2/ 4.9 17			200251	1999 <i>VM</i> ₁₅₂		4 3.6 141°20	0°8/ 4.4 17		
3 2	13 13.25	-11 52.2	2.169	2.997	12.3	22.2	3 2	13 15.33	-9 32.2	2.166	2.998	12.1	21.0
3 12	13 8.25	-11 23.6	2.089	2.998	9.2	22.0	3 12	13 9.71	-9 16.2	2.092	3.006	8.9	20.8
3 22	13 1.55	-10 41.2	2.033	3.000	5.6	21.8	3 22	13 2.37	-8 48.9	2.043	3.013	5.3	20.6
4 1	12 53.80	-9 47.9	2.005	3.001	2.0	21.5	4 1	12 53.98	-8 13.3	2.022	3.019	1.6	20.3
4 11	12 45.83	-8 48.8	2.006	3.001	2.7	21.6	4 11	12 45.41	-7 33.8	2.030	3.026	2.7	20.4
4 21	12 38.46	-7 49.6	2.035	3.001	6.4	21.8	4 21	12 37.50	-6 55.1	2.067	3.032	6.5	20.7
5 1	12 32.44	-6 56.1	2.091	3.002	9.9	22.0	5 1	12 30.98	-6 22.1	2.131	3.037	9.9	20.9
5 11	12 28.26	-6 12.6	2.170	3.001	12.9	22.2	5 11	12 26.35	-5 58.4	2.217	3.042	12.9	21.1
345575	2006 <i>SP</i>		4 3.6 171°99	1°0/ 5.1 18			293237	2007 <i>BQ</i> ₆₉		4 3.6 90°45	1°9/ 1.9 18		
3 2	13 10.74	-12 43.2	2.923	3.739	9.8	21.8	3 2	13 14.94	-3 15.8	1.756	2.616	13.2	21.4
3 12	13 6.05	-11 57.5	2.839	3.742	7.3	21.7	3 12	13 9.60	-2 24.1	1.700	2.631	9.4	21.2
3 22	13 0.14	-11 0.1	2.781	3.745	4.5	21.5	3 22	13 2.34	-1 23.9	1.669	2.646	5.3	21.0
4 1	12 53.49	-9 54.0	2.752	3.747	1.6	21.3	4 1	12 53.97	-0 21.6	1.664	2.661	1.9	20.8
4 11	12 46.71	-8 43.5	2.754	3.749	2.1	21.3	4 11	12 45.51	+0 35.9	1.688	2.676	4.5	21.0
4 21	12 40.38	-7 33.1	2.786	3.750	5.0	21.5	4 21	12 37.92	+1 22.3	1.739	2.691	8.5	21.2
5 1	12 35.02	-6 27.5	2.847	3.751	7.8	21.7	5 1	12 32.00	+1 53.6	1.814	2.705	12.2	21.5
5 11	12 31.03	-5 30.6	2.932	3.751	10.2	21.9	5 11	12 28.23	+2 7.7	1.910	2.719	15.2	21.7
301341	2009 <i>BC</i> ₁₈₈		4 3.6 97°00	0°1/ 3.5 18			205581	2001 <i>TN</i> ₈₄		4 3.6 267°56	0°0/ 3.7 18		
3 2	13 16.86	-8 59.7	1.573	2.421	15.1	20.8	3 2	13 12.42	-7 59.6	2.318	3.158	11.2	21.1
3 12	13 11.12	-8 3.1	1.520	2.443	11.0	20.6	3 12	13 7.67	-7 29.7	2.222	3.140	8.2	20.9
3 22	13 3.23	-6 51.1	1.491	2.465	6.3	20.4	3 22	13 1.27	-6 49.1	2.150	3.123	4.8	20.6
4 1	12 54.14	-5 30.2	1.488	2.486	1.3	20.1	4 1	12 53.77	-6 0.9	2.107	3.105	1.0	20.3
4 11	12 45.01	-4 8.9	1.513	2.507	3.7	20.3	4 11	12 45.95	-5 9.8	2.092	3.087	2.8	20.4
4 21	12 36.93	-2 55.7	1.565	2.527	8.4	20.7	4 21	12 38.57	-4 21.0	2.107	3.068	6.6	20.7
5 1	12 30.77	-1 57.1	1.642	2.547	12.4	20.9	5 1	12 32.37	-3 39.2	2.148	3.050	10.1	20.8
5 11	12 27.01	-1 16.9	1.740	2.566	15.8	21.2	5 11	12 27.90	-3 8.3	2.211	3.031	13.1	21.0
285386	1999 <i>TT</i> ₁₇₇		4 3.6 155°97	1°0/ 4.9 16			136517	2005 <i>SY</i> ₂₀		4 3.6 139°77	2°1/ 1.9 18		
3 2	13 13.05	-12 21.0	2.883	3.697	9.9	22.2	3 2	13 18.88	-3 2.4	1.590	2.448	14.4	20.5
3 12	13 7.68	-11 40.4	2.805	3.707	7.4	22.0	3 12	13 12.69	-2 13.6	1.529	2.459	10.4	20.2
3 22	13 1.05	-10 48.6	2.753	3.717	4.5	21.8	3 22	13 4.22	-1 15.5	1.492	2.469	5.9	20.0
4 1	12 53.68	-9 48.4	2.730	3.726	1.6	21.6	4 1	12 54.38	-0 14.7	1.482	2.478	2.1	19.8
4 11	12 46.20	-8 44.1	2.739	3.734	2.2	21.7	4 11	12 44.38	+0 41.1	1.499	2.487	5.0	20.0
4 21	12 39.22	-7 40.0	2.778	3.741	5.1	21.9	4 21	12 35.37	+1 25.1	1.543	2.495	9.4	20.3
5 1	12 33.28	-6 40.8	2.845	3.747	7.9	22.1	5 1	12 28.29	+1 52.6	1.612	2.503	13.5	20.5
5 11	12 28.78	-5 50.0	2.938	3.753	10.3	22.3	5 11	12 23.72	+2 1.7	1.700	2.509	16.8	20.7
242991	2006 <i>SJ</i> ₃₉₁		4 3.6 354°46	2°9/30.9 17			20019	Yukiotanaka		4 3.6 200°60	0°6/ 2.9 18		
3 2	13 9.72	-0 33.3	2.173	3.037	10.8	20.0	3 2	13 14.01	-6 0.7	2.725	3.560	9.8	20.4
3 12	13 5.64	+0 52.6	2.104	3.037	7.7	19.8	3 12	13 8.51	-5 20.4	2.637	3.555	7.1	20.2
3 22	13 0.03	+2 25.4	2.060	3.037	4.5	19.6	3 22	13 1.61	-4 31.9	2.576	3.549	4.0	20.0
4 1	12 53.48	+3 58.3	2.046	3.037	2.9	19.5	4 1	12 53.83	-3 38.8	2.544	3.542	0.9	19.7
4 11	12 46.76	+5 23.8	2.061	3.037	5.2	19.6	4 11	12 45.84	-2 45.4	2.543	3.535	2.8	19.9
4 21	12 40.61	+6 36.0	2.103	3.037	8.4	19.8	4 21	12 38.31	-1 56.1	2.573	3.526	6.0	20.1
5 1	12 35.69	+7 30.3	2.170	3.037	11.5	20.0	5 1	12 31.84	-1 14.8	2.630	3.517	9.0	20.2
5 11	12 32.47	+8 5.1	2.259	3.037	14.1	20.2	5 11	12 26.89	-0 44.2	2.711	3.507	11.6	20.4
426650	2013 <i>SR</i> ₇₉		4 3.6 154°31	3°8/29.9 15			188467	2004 <i>LL</i> ₃		4 3.6 253°99	4°7/ 8.6 18		
3 2	13 13.29	+3 38.0	2.315	3.176	10.4	22.2	3 2	13 13.85	-22 18.9	2.091	2.873	14.3	20.2
3 12	13 8.08	+4 59.9	2.255	3.184	7.5	22.0	3 12	13 9.03	-22 3.1	1.986	2.856	11.6	20.0
3 22	13 1.35	+6 24.1	2.221	3.192	4.8	21.9	3 22	13 2.19	-21 24.6	1.903	2.838	8.5	19.7
4 1	12 53.75	+7 44.1	2.217	3.199	3.9	21.8	4 1	12 53.99	-20 23.6	1.846	2.819	5.6	19.5
4 11	12 46.03	+8 53.5	2.242	3.206	5.8	21.9	4 11	12 45.35	-19 3.6	1.816	2.800	4.8	19.4
4 21	12 38.93	+9 47.5	2.295	3.212	8.7	22.1	4 21	12 37.23	-17 31.0	1.815	2.781	7.0	19.5
5 1	12 33.09	+10 23.2	2.373	3.217	11.4	22.3	5 1	12 30.54	-15 54.3	1.840	2.761	10.4	19.7
5 11	12 28.95	+10 40.2	2.472	3.222	13.8	22.5	5 11	12 25.93	-14 22.1	1.890	2.741	13.7	19.9
271787	2004 <i>TF</i> ₄₁		4 3.6 235°27	3°1/31.4 18			496967	2002 <i>PL</i> ₁₅₅		4 3.6 254°42	0°3/ 3.9 17		
3 2	13 17.12	+3 10.3	2.393	3.245	10.4	21.4	3 2	13 16.01	-8 46.3	1.840	2.682	13.5	22.3
3 12	13 10.97	+3 46.0	2.304	3.229	7.6	21.2	3 12	13 10.70	-8 18.2	1.745	2.665	10.0	22.1
3 22	13 3.11	+4 23.9	2.241	3.213	4.7	21.0	3 22	13 3.21	-7 36.1	1.674	2.647	5.9	21.8
4 1	12 54.15	+4 59.3	2.207	3.196	3.1	20.9	4 1	12 54.22	-6 43.3	1.630	2.628	1.4	21.5
4 11	12 44.87	+5 27.4	2.204	3.178	5.0	20.9	4 11	12 44.73	-5 45.7	1.615	2.609	3.4	21.6
4 21	12 36.09	+5 44.4	2.229	3.160	8.2	21.1	4 21	12 35.81	-4 50.0	1.626	2.590	8.0	21.8
5 1	12 28.56	+5 47.7	2.280	3.141	11.2	21.3	5 1	12 28.46	-4 2.8	1.664	2.570	12.2	22.0
5 11	12 22.81	+5 36.5	2.353	3.121	13.9	21.4	5 11	12 23.36	-3 29.1	1.723	2.550	15.9	22.2
138661	2000 <i>RH</i> ₈₉		4 3.6 121°13	0°8/ 4.8 18			312506	2009 <i>BY</i> ₁₇₅		4 3.6 230°23	4°2/30.8 17		
3 2	13 10.55	-12 20.6	2.669	3.491	10.4	20.7	3 2	13 15.84	+1 54.4	1.674	2.542	13.3	21.0
3 12	13 5.96	-11 27.9	2.597	3.504	7.7	20.5	3 12	13 10.58	+3 8.5	1.600	2.534	9.7	20.8
3 22	13 0.09	-10 23.0	2.550	3.516	4.7	20.4	3 22	13 3.10	+4 28.9	1.550	2.525	5.9	20.5
4 1	12 53.48	-9 9.4	2.532	3.529	1.5	20.2	4 1	12 54.18	+5 47.5	1.527	2.515	4.3	20.4
4 11	12 46.79	-7 52.1	2.545	3.541	2.2	20.2	4 11	12 44.90	+6 55.3	1.531	2.505	6.9	20.5
4 21	12 40.63	-6 36.5	2.588	3.552	5.4	20.5	4 21	12 36.38	+7 45.2	1.562	2.495	10.8	20.7
5 1	12 35.53	-5 27.4	2.659	3.564	8.3	20.7	5 1	12 29.58	+8 13.0	1.615	2.484	14.6	20.9
5 11	12 31.90	-4 28.8	2.754	3.575	10.8	20.8	5 11	12 25.14	+8 17.5	1.688	2.473	17.9	21.1
436759	2012 <i>BS</i> ₆₂		4 3.6 137°39	17°4/17.1 18			2107	Ilmari		4 3.6 152°03	2°1/ 5.9 18		
3 2	13 16.68	+25 16.7	1.016	1.892	19.2	20.8	3 2	13 13.26	-14 58.8	1.979	2		

EPHEMERIDES

4 3.6

4 3.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
153621	2001 <i>TC</i> ₂₁		4 3.6 77°68	2.5/ 5.5	18		94866	2001 <i>XW</i> ₂₁₇		4 3.6 203°04	2.8/ 1.0	18	
3 2	13 19.78	-11 54.3	1.717	2.546	14.9	19.3	3 2	13 17.19	-0 43.0	1.828	2.686	12.8	20.3
3 12	13 13.31	-12 16.8	1.651	2.559	11.3	19.1	3 12	13 11.38	+0 14.6	1.752	2.682	9.3	20.1
3 22	13 4.58	-12 25.1	1.609	2.572	7.2	18.9	3 22	13 3.49	+1 19.5	1.701	2.677	5.4	19.8
4 1	12 54.48	-12 20.4	1.593	2.585	3.2	18.7	4 1	12 54.27	+2 25.4	1.678	2.671	2.8	19.7
4 11	12 44.15	-12 6.3	1.605	2.599	3.6	18.7	4 11	12 44.75	+3 24.8	1.683	2.665	5.4	19.8
4 21	12 34.74	-11 47.6	1.644	2.612	7.5	19.0	4 21	12 35.96	+4 11.2	1.716	2.658	9.4	20.0
5 1	12 27.21	-11 29.8	1.709	2.625	11.4	19.3	5 1	12 28.80	+4 40.5	1.773	2.650	13.1	20.2
5 11	12 22.13	-11 17.8	1.796	2.638	14.7	19.5	5 11	12 23.87	+4 50.7	1.851	2.642	16.3	20.4
259463	2003 <i>SS</i> ₁₀₇		4 3.6 207°98	2.0/ 6.4	18		407768	2011 <i>WT</i> ₈₉		4 3.6 155°80	3.4/31.6	18	
3 2	13 10.20	-15 18.3	2.966	3.771	9.9	20.6	3 2	13 18.66	+1 35.9	1.886	2.743	12.5	22.3
3 12	13 5.72	-15 2.6	2.876	3.768	7.6	20.4	3 12	13 12.25	+2 28.6	1.823	2.752	9.0	22.1
3 22	12 59.99	-14 35.1	2.811	3.765	5.0	20.2	3 22	13 3.88	+3 25.2	1.786	2.760	5.4	21.9
4 1	12 53.50	-13 57.5	2.774	3.762	2.6	20.1	4 1	12 54.34	+4 19.2	1.777	2.767	3.4	21.8
4 11	12 46.82	-13 12.7	2.767	3.759	2.5	20.1	4 11	12 44.65	+5 4.1	1.796	2.774	5.7	21.9
4 21	12 40.55	-12 24.6	2.789	3.756	4.8	20.2	4 21	12 35.80	+5 35.0	1.843	2.779	9.3	22.2
5 1	12 35.22	-11 37.3	2.839	3.753	7.5	20.4	5 1	12 28.61	+5 48.8	1.915	2.784	12.7	22.4
5 11	12 31.24	-10 54.7	2.914	3.749	9.9	20.5	5 11	12 23.61	+5 45.0	2.008	2.788	15.6	22.6
504136	2006 <i>RU</i> ₁₂₀		4 3.6 160°11	0.6/ 4.6	17		79851	1998 <i>XQ</i> ₂₂		4 3.6 63°08	3.0/ 6.5	18	
3 2	13 10.50	-11 33.0	2.876	3.698	9.8	22.2	3 2	13 14.54	-16 42.7	1.503	2.331	16.7	19.0
3 12	13 5.89	-10 40.5	2.796	3.704	7.2	22.0	3 12	13 9.63	-16 10.9	1.448	2.353	12.8	18.8
3 22	13 0.05	-9 36.8	2.742	3.709	4.3	21.8	3 22	13 2.48	-15 15.8	1.415	2.375	8.4	18.6
4 1	12 53.50	-8 25.1	2.717	3.714	1.3	21.6	4 1	12 54.04	-14 1.5	1.406	2.397	4.1	18.4
4 11	12 46.83	-7 10.2	2.723	3.718	2.1	21.7	4 11	12 45.54	-12 35.7	1.425	2.419	3.8	18.4
4 21	12 40.63	-5 56.8	2.760	3.722	5.2	21.9	4 21	12 38.10	-11 8.1	1.469	2.441	7.7	18.7
5 1	12 35.40	-4 49.5	2.825	3.726	8.0	22.1	5 1	12 32.62	-9 47.8	1.539	2.463	11.8	19.0
5 11	12 31.55	-3 52.1	2.914	3.729	10.4	22.2	5 11	12 29.59	-8 41.8	1.630	2.486	15.3	19.3
377915	2006 <i>EO</i> ₁₀		4 3.6 1°47	0°2/ 3.5	17		213577	2002 <i>NV</i> ₃₁		4 3.6 294°88	1°9/ 5.3	17	
3 2	13 14.49	-6 28.3	1.819	2.670	13.2	20.9	3 2	13 13.22	-13 48.4	1.544	2.383	15.8	21.0
3 12	13 9.42	-6 9.9	1.745	2.670	9.7	20.7	3 12	13 9.23	-13 12.2	1.436	2.350	12.1	20.7
3 22	13 2.34	-5 40.9	1.695	2.670	5.5	20.4	3 22	13 2.67	-12 11.9	1.350	2.317	7.7	20.3
4 1	12 54.01	-5 5.3	1.672	2.670	1.1	20.1	4 1	12 54.19	-10 49.5	1.289	2.284	3.0	20.0
4 11	12 45.42	-4 28.4	1.676	2.670	3.4	20.3	4 11	12 44.90	-9 11.9	1.254	2.250	3.7	19.9
4 21	12 37.54	-3 55.6	1.708	2.671	7.7	20.5	4 21	12 36.09	-7 29.0	1.246	2.217	9.0	20.1
5 1	12 31.25	-3 31.9	1.764	2.671	11.6	20.8	5 1	12 29.01	-5 52.0	1.261	2.183	14.1	20.3
5 11	12 27.12	-3 20.5	1.842	2.672	14.9	21.0	5 11	12 24.58	-4 31.0	1.297	2.149	18.7	20.5
27525	Vartovka		4 3.6 154°57	1°7/ 5.2	18		7745	1987 <i>DB</i> ₆		4 3.6 87°99	2°7/31.7	18	R
3 2	13 17.31	-13 17.9	1.774	2.601	14.6	18.6	3 2	13 13.67	-0 47.1	1.966	2.827	12.0	17.9
3 12	13 11.48	-12 43.2	1.701	2.609	11.0	18.4	3 12	13 8.48	+0 21.8	1.916	2.848	8.5	17.8
3 22	13 3.52	-11 50.3	1.652	2.617	6.8	18.2	3 22	13 1.63	+1 36.1	1.892	2.869	4.9	17.6
4 1	12 54.26	-10 42.8	1.629	2.624	2.6	17.9	4 1	12 53.86	+2 49.2	1.896	2.889	2.7	17.5
4 11	12 44.77	-9 27.3	1.634	2.630	3.2	18.0	4 11	12 46.06	+3 54.2	1.929	2.910	5.0	17.7
4 21	12 36.13	-8 11.7	1.668	2.635	7.5	18.3	4 21	12 39.06	+4 45.7	1.990	2.930	8.4	17.9
5 1	12 29.23	-7 3.4	1.728	2.640	11.5	18.5	5 1	12 33.54	+5 20.2	2.075	2.950	11.6	18.1
5 11	12 24.65	-6 8.5	1.809	2.644	15.0	18.7	5 11	12 29.93	+5 36.8	2.181	2.969	14.3	18.4
298743	2004 <i>GM</i> ₅₆		4 3.6 219°76	1°4/ 5.4	17		494549	2017 <i>BN</i> ₅		4 3.6 114°75	19°3/17.7	18	
3 2	13 10.71	-13 28.9	2.453	3.273	11.3	21.1	3 2	13 27.15	+36 56.8	1.237	2.053	20.4	20.4
3 12	13 6.30	-12 49.8	2.365	3.269	8.5	20.9	3 12	13 19.38	+39 8.4	1.228	2.064	19.4	20.4
3 22	13 0.41	-11 56.4	2.302	3.265	5.3	20.7	3 22	13 8.19	+40 39.4	1.237	2.075	19.4	20.4
4 1	12 53.60	-10 51.8	2.267	3.261	2.1	20.5	4 1	12 55.22	+41 17.4	1.263	2.086	20.1	20.5
4 11	12 46.57	-9 40.7	2.261	3.256	2.5	20.5	4 11	12 42.55	+40 58.4	1.306	2.096	21.5	20.6
4 21	12 40.05	-8 28.7	2.285	3.252	5.8	20.7	4 21	12 31.96	+39 47.3	1.364	2.106	23.1	20.8
5 1	12 34.66	-7 21.3	2.335	3.247	9.0	20.9	5 1	12 24.57	+37 53.6	1.435	2.115	24.6	21.0
5 11	12 30.87	-6 23.5	2.410	3.241	11.8	21.1	5 11	12 20.80	+35 28.7	1.516	2.124	26.0	21.1
421354	2013 <i>TQ</i> ₁₀₆		4 3.6 149°18	0°3/ 3.3	17		452350	2001 <i>TH</i> ₁₆₅		4 3.6 94°36	6°0/30.2	18	
3 2	13 13.54	-7 14.0	2.016	2.862	12.3	21.2	3 2	13 22.16	+7 37.7	1.515	2.381	14.6	21.6
3 12	13 8.53	-6 34.3	1.943	2.866	9.0	21.0	3 12	13 14.88	+8 36.9	1.477	2.406	10.7	21.4
3 22	13 1.74	-5 43.4	1.895	2.869	5.1	20.8	3 22	13 5.35	+9 32.5	1.464	2.432	7.3	21.3
4 1	12 53.88	-4 45.7	1.874	2.873	1.0	20.5	4 1	12 54.63	+10 16.0	1.478	2.456	6.1	21.3
4 11	12 45.82	-3 47.2	1.882	2.876	3.2	20.7	4 11	12 44.05	+10 40.6	1.518	2.480	8.3	21.5
4 21	12 38.43	-2 53.7	1.918	2.879	7.2	20.9	4 21	12 34.75	+10 43.3	1.584	2.504	11.7	21.7
5 1	12 32.46	-2 10.4	1.980	2.881	10.8	21.2	5 1	12 27.61	+10 24.1	1.673	2.527	14.9	22.0
5 11	12 28.43	-1 40.7	2.064	2.884	13.9	21.4	5 11	12 23.07	+9 45.2	1.780	2.549	17.7	22.2
504279	2006 <i>WJ</i> ₈₅		4 3.6 251°98	2°2/ 6.3	17		281094	2006 <i>UB</i> ₂₁₀		4 3.6 125°46	2°9/ 7.2	17	
3 2	13 10.88	-15 22.1	2.444	3.257	11.5	21.5	3 2	13 11.82	-17 41.5	2.514	3.313	11.7	20.4
3 12	13 6.46	-14 58.5	2.354	3.251	8.9	21.3	3 12	13 7.07	-17 27.3	2.433	3.319	9.1	20.2
3 22	13 0.52	-14 20.1	2.287	3.245	5.8	21.1	3 22	13 0.84	-16 57.9	2.377	3.325	6.2	20.1
4 1	12 53.62	-13 29.0	2.249	3.239	2.9	20.9	4 1	12 53.71	-16 15.0	2.347	3.331	3.6	19.9
4 11	12 46.49	-12 29.3	2.239	3.233	2.8	20.9	4 11	12 46.42	-15 22.1	2.347	3.337	3.2	19.9
4 21	12 39.84	-11 26.0	2.258	3.226	5.7	21.1	4 21	12 39.66	-14 24.0	2.375	3.343	5.5	20.0
5 1	12 34.34	-10 24.9	2.304	3.220	8.8	21.3	5 1	12 34.07	-13 26.1	2.431	3.348	8.4	20.2
5 11	12 30.48	-9 30.7	2.374	3.214	11.7	21.4	5 11	12 30.11	-12 33.2	2.512	3.354	11.0	20.4
386828	2010 <i>GY</i> ₁₄₃		4 3.6 105°85	5°2/28.8	18		493527	2015 <i>FT</i> ₄₄		4 3.6 331°02	1°2/ 2.5	17	
3 2	13 13.37	+9 13.0	2.227	3.092									

EPHEMERIDES

4 3.6

4 3.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
507796	2014 <i>BZ</i> ₂₁		4 3.6 350°11	4.4/ 7.8	17		130908	2000 <i>VH</i> ₄₅		4 3.7 205°21	4.5/30.9	18	
3 2	13 12.97	-18 58.1	1.964	2.769	14.3	21.0	3 2	13 18.42	+ 4 12.6	1.677	2.543	13.4	19.6
3 12	13 8.38	-19 15.6	1.880	2.765	11.4	20.8	3 12	13 12.41	+ 5 3.2	1.608	2.540	9.8	19.4
3 22	13 1.81	-19 14.8	1.818	2.762	8.2	20.6	3 22	13 4.15	+ 5 55.8	1.564	2.537	6.2	19.2
4 1	12 53.95	-18 55.9	1.781	2.760	5.3	20.4	4 1	12 54.47	+ 6 43.2	1.547	2.534	4.6	19.1
4 11	12 45.74	-18 21.6	1.771	2.757	4.6	20.3	4 11	12 44.51	+ 7 18.1	1.557	2.530	6.9	19.2
4 21	12 38.15	-17 37.0	1.788	2.756	7.0	20.5	4 21	12 35.40	+ 7 35.4	1.593	2.525	10.7	19.4
5 1	12 32.05	-16 48.6	1.831	2.754	10.3	20.7	5 1	12 28.10	+ 7 32.6	1.652	2.521	14.4	19.6
5 11	12 28.05	-16 2.9	1.896	2.754	13.4	20.9	5 11	12 23.22	+ 7 9.9	1.731	2.516	17.5	19.8
148578	2001 <i>QG</i> ₂₈₆		4 3.6 196°82	1.1/ 4.9	17		429878	2012 <i>SO</i> ₅₁		4 3.7 243°34	2.9/ 6.6	17	
3 2	13 15.08	-11 44.3	2.217	3.041	12.2	21.2	3 2	13 13.92	-15 48.7	2.098	2.911	13.2	21.1
3 12	13 9.61	-11 14.1	2.130	3.038	9.1	21.0	3 12	13 8.92	-15 45.9	2.012	2.908	10.2	20.9
3 22	13 2.39	-10 30.0	2.069	3.035	5.6	20.7	3 22	13 2.08	-15 27.0	1.949	2.904	6.8	20.7
4 1	12 54.06	-9 35.0	2.035	3.031	1.9	20.5	4 1	12 54.03	-14 53.4	1.912	2.900	3.7	20.5
4 11	12 45.47	-8 34.0	2.031	3.026	2.7	20.5	4 11	12 45.68	-14 8.8	1.904	2.896	3.4	20.4
4 21	12 37.46	-7 32.7	2.055	3.020	6.5	20.8	4 21	12 37.91	-13 18.4	1.924	2.892	6.5	20.6
5 1	12 30.78	-6 37.1	2.107	3.014	10.0	21.0	5 1	12 31.54	-12 28.3	1.970	2.888	10.0	20.8
5 11	12 25.98	-5 51.6	2.183	3.008	13.1	21.2	5 11	12 27.14	-11 44.2	2.039	2.884	13.1	21.0
522440	2016 <i>CV</i> ₃₁₈		4 3.6 285°07	4.7/30.9	17		85971	1999 <i>GW</i> ₅		4 3.7 19°91	8.9/27.2	18	
3 2	13 17.78	+ 5 28.4	1.725	2.592	13.1	21.1	3 2	13 16.62	+17 32.0	1.686	2.550	13.4	18.3
3 12	13 12.01	+ 6 3.3	1.646	2.577	9.6	20.9	3 12	13 10.94	+18 23.7	1.642	2.556	10.9	18.2
3 22	13 3.96	+ 6 38.6	1.591	2.563	6.2	20.6	3 22	13 3.17	+19 2.9	1.622	2.564	9.2	18.1
4 1	12 54.42	+ 7 7.7	1.563	2.548	4.7	20.5	4 1	12 54.24	+19 21.7	1.627	2.571	9.1	18.1
4 11	12 44.48	+ 7 24.1	1.561	2.534	7.0	20.6	4 11	12 45.27	+19 15.2	1.656	2.580	10.8	18.2
4 21	12 35.25	+ 7 23.6	1.586	2.519	10.7	20.8	4 21	12 37.32	+18 42.0	1.709	2.589	13.2	18.4
5 1	12 27.75	+ 7 3.9	1.635	2.505	14.4	21.0	5 1	12 31.23	+17 44.2	1.783	2.599	15.8	18.6
5 11	12 22.64	+ 6 25.5	1.703	2.491	17.6	21.2	5 11	12 27.46	+16 25.9	1.875	2.609	18.0	18.8
12745	1992 <i>UL</i> ₂		4 3.6 169°73	1.6/ 5.0	18		253152	2002 <i>VF</i> ₈₄		4 3.7 146°28	7.2/26.8	18	
3 2	13 19.12	-12 5.5	1.730	2.560	14.8	18.4	3 2	13 16.95	+14 28.0	2.070	2.929	11.5	19.6
3 12	13 12.91	-11 46.0	1.655	2.564	11.1	18.1	3 12	13 10.88	+15 49.0	2.024	2.939	9.1	19.5
3 22	13 4.43	-11 9.7	1.602	2.568	6.9	17.9	3 22	13 3.05	+17 2.6	2.003	2.948	7.5	19.4
4 1	12 54.51	-10 19.6	1.576	2.571	2.5	17.6	4 1	12 54.22	+18 1.1	2.010	2.957	7.5	19.4
4 11	12 44.29	-9 21.5	1.578	2.573	3.3	17.7	4 11	12 45.31	+18 38.5	2.044	2.965	9.2	19.5
4 21	12 34.91	-8 22.6	1.608	2.575	7.7	17.9	4 21	12 37.22	+18 52.2	2.103	2.973	11.5	19.7
5 1	12 27.35	-7 30.0	1.664	2.575	11.9	18.2	5 1	12 30.66	+18 42.1	2.184	2.979	13.9	19.9
5 11	12 22.23	-6 49.3	1.742	2.575	15.5	18.4	5 11	12 26.12	+18 10.6	2.283	2.986	16.0	20.0
97955	2000 <i>QB</i> ₁₃₃		4 3.6 183°78	1.2/ 2.6	18		257337	2009 <i>JG</i> ₉		4 3.7 284°16	2.6/31.2	18	
3 2	13 17.35	- 4 57.4	1.868	2.717	13.0	20.3	3 2	13 9.46	- 1 7.3	2.298	3.159	10.4	20.5
3 12	13 11.45	- 4 13.6	1.793	2.717	9.4	20.1	3 12	13 5.52	+ 0 13.3	2.212	3.145	7.5	20.3
3 22	13 3.52	- 3 19.3	1.742	2.718	5.3	19.8	3 22	13 0.05	+ 1 41.9	2.153	3.130	4.4	20.0
4 1	12 54.31	- 2 19.9	1.719	2.717	1.4	19.5	4 1	12 53.60	+ 3 12.4	2.123	3.115	2.6	19.9
4 11	12 44.84	- 1 21.8	1.725	2.716	4.0	19.7	4 11	12 46.90	+ 4 37.8	2.122	3.100	4.9	20.0
4 21	12 36.11	- 0 31.5	1.759	2.714	8.2	20.0	4 21	12 40.66	+ 5 51.8	2.149	3.085	8.1	20.2
5 1	12 29.00	+ 0 6.0	1.818	2.711	12.1	20.2	5 1	12 35.56	+ 6 49.7	2.202	3.070	11.3	20.3
5 11	12 24.09	+ 0 27.6	1.899	2.707	15.4	20.4	5 11	12 32.08	+ 7 29.1	2.276	3.056	14.0	20.5
106593	2000 <i>WO</i> ₁₀₈		4 3.7 200°62	0.6/ 4.4	18		101931	1999 <i>RZ</i> ₂₀		4 3.7 231°36	1.8/ 5.4	17	
3 2	13 12.58	- 9 23.2	2.790	3.617	9.9	20.3	3 2	13 18.36	-12 44.0	2.173	2.988	12.7	21.5
3 12	13 7.49	- 9 7.2	2.704	3.614	7.3	20.1	3 12	13 12.20	-12 34.3	2.071	2.973	9.7	21.3
3 22	13 1.05	- 8 42.3	2.643	3.611	4.4	19.9	3 22	13 4.02	-12 10.5	1.994	2.956	6.1	21.0
4 1	12 53.78	- 8 10.8	2.610	3.607	1.3	19.7	4 1	12 54.48	-11 34.2	1.945	2.938	2.6	20.8
4 11	12 46.31	- 7 36.0	2.608	3.603	2.2	19.7	4 11	12 44.46	-10 49.1	1.926	2.920	3.0	20.8
4 21	12 39.27	- 7 1.5	2.636	3.599	5.3	19.9	4 21	12 34.94	-10 0.6	1.935	2.900	6.8	21.0
5 1	12 33.26	- 6 31.1	2.691	3.595	8.2	20.1	5 1	12 26.81	- 9 14.4	1.972	2.880	10.5	21.1
5 11	12 28.70	- 6 7.7	2.771	3.590	10.8	20.3	5 11	12 20.71	- 8 35.8	2.033	2.859	13.8	21.3
362443	2010 <i>RD</i> ₈₇		4 3.7 286°96	1.2/ 4.6	17		83691	2001 <i>TE</i> ₆₅		4 3.7 260°05	1.4/ 2.1	18	
3 2	13 14.65	-10 49.3	1.513	2.362	15.6	20.9	3 2	13 12.46	- 3 1.3	2.306	3.159	10.8	19.7
3 12	13 10.14	-10 27.0	1.423	2.344	11.7	20.6	3 12	13 7.67	- 2 23.5	2.221	3.148	7.7	19.5
3 22	13 3.10	- 9 46.1	1.355	2.327	7.2	20.3	3 22	13 1.28	- 1 38.6	2.160	3.137	4.4	19.2
4 1	12 54.28	- 8 50.0	1.312	2.309	2.3	20.0	4 1	12 53.87	- 0 50.8	2.128	3.125	1.5	19.0
4 11	12 44.86	- 7 45.1	1.295	2.291	3.7	20.0	4 11	12 46.20	- 0 5.2	2.125	3.114	3.7	19.2
4 21	12 36.12	- 6 39.8	1.304	2.273	8.8	20.3	4 21	12 39.02	+ 0 33.5	2.151	3.102	7.2	19.3
5 1	12 29.21	- 5 42.7	1.337	2.256	13.7	20.5	5 1	12 33.03	+ 1 1.4	2.202	3.090	10.5	19.5
5 11	12 24.95	- 5 0.6	1.390	2.238	17.9	20.7	5 11	12 28.75	+ 1 16.0	2.276	3.078	13.3	19.7
508437	2016 <i>LZ</i>		4 3.7 260°39	4.8/29.1	18		132028	2002 <i>CN</i> ₁₁₅		4 3.7 89°78	1.9/ 2.4	18	
3 2	13 15.00	+ 7 1.5	2.291	3.151	10.5	21.6	3 2	13 19.91	- 2 13.2	1.463	2.325	15.2	19.8
3 12	13 9.61	+ 8 12.1	2.199	3.126	7.9	21.3	3 12	13 13.64	- 1 54.8	1.404	2.335	11.0	19.6
3 22	13 2.46	+ 9 24.3	2.133	3.099	5.5	21.1	3 22	13 4.89	- 1 28.9	1.367	2.344	6.2	19.3
4 1	12 54.11	+10 31.4	2.096	3.071	4.9	21.1	4 1	12 54.64	- 1 0.8	1.357	2.354	2.0	19.1
4 11	12 45.37	+11 26.8	2.088	3.043	6.9	21.1	4 11	12 44.21	- 0 37.1	1.373	2.364	4.9	19.3
4 21	12 37.07	+12 5.6	2.107	3.014	9.9	21.3	4 21	12 34.85	- 0 23.0	1.416	2.373	9.6	19.6
5 1	12 29.99	+12 24.7	2.151	2.985	12.8	21.4	5 1	12 27.60	- 0 22.4	1.482	2.382	13.8	19.8
5 11	12 24.73	+12 23.6	2.215	2.954	15.5	21.5	5 11	12 23.04	- 0 36.9	1.568	2.392	17.4	20.1
76003	2000 <i>DD</i> ₂₀		4 3.7 357°10	0.4/ 4.1	18		68830	2002 <i>GF</i> ₈₈		4 3.7 207°47	3.4/31.0	17	
3													

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
255862	2006 <i>SG</i> ₁₇₁		4 3.7 263°67	0°7/ 4.3 17			203300	2001 <i>SR</i> ₁₈₆		4 3.7 197°94	3°1/31.8 18		
3 2	13 16.47	- 9 29.1	1.779	2.619	14.0	21.6	3 2	13 17.15	- 0 45.8	1.752	2.612	13.2	20.9
3 12	13 11.19	- 9 7.6	1.681	2.599	10.4	21.4	3 12	13 11.46	+ 0 21.2	1.679	2.610	9.5	20.6
3 22	13 3.61	- 8 31.4	1.608	2.579	6.3	21.1	3 22	13 3.62	+ 1 36.3	1.630	2.606	5.5	20.4
4 1	12 54.42	- 7 43.3	1.560	2.558	1.7	20.7	4 1	12 54.41	+ 2 52.3	1.609	2.602	3.1	20.2
4 11	12 44.67	- 6 48.9	1.541	2.536	3.4	20.8	4 11	12 44.91	+ 4 1.0	1.616	2.597	5.7	20.4
4 21	12 35.46	- 5 55.1	1.549	2.514	8.1	21.0	4 21	12 36.18	+ 4 55.4	1.650	2.592	9.8	20.6
5 1	12 27.87	- 5 8.7	1.582	2.492	12.5	21.2	5 1	12 29.14	+ 5 30.8	1.709	2.585	13.6	20.8
5 11	12 22.62	- 4 35.2	1.636	2.469	16.4	21.4	5 11	12 24.40	+ 5 45.4	1.788	2.578	16.8	21.0
114957	2003 <i>QB</i> ₆₀		4 3.7 221°66	0°9/ 2.8 18			368228	2001 <i>TP</i> ₂₀₄		4 3.7 232°53	2°2/ 1.3 17		
3 2	13 17.37	- 5 12.9	1.967	2.813	12.6	20.6	3 2	13 14.51	- 2 5.7	2.171	3.024	11.3	22.2
3 12	13 11.52	- 4 36.4	1.879	2.803	9.2	20.3	3 12	13 9.28	- 1 5.5	2.083	3.011	8.1	22.0
3 22	13 3.64	- 3 49.6	1.817	2.792	5.2	20.1	3 22	13 2.29	+ 0 3.1	2.020	2.996	4.7	21.7
4 1	12 54.41	- 2 56.8	1.782	2.780	1.2	19.8	4 1	12 54.13	+ 1 14.4	1.987	2.982	2.2	21.5
4 11	12 44.81	- 2 4.2	1.776	2.768	3.8	19.9	4 11	12 45.66	+ 2 22.0	1.982	2.966	4.5	21.6
4 21	12 35.82	- 1 17.6	1.799	2.755	8.0	20.1	4 21	12 37.70	+ 3 19.8	2.006	2.950	8.2	21.8
5 1	12 28.33	- 0 42.2	1.848	2.741	11.9	20.3	5 1	12 31.05	+ 4 3.2	2.056	2.933	11.6	22.0
5 11	12 22.98	- 0 21.5	1.918	2.726	15.2	20.5	5 11	12 26.25	+ 4 29.6	2.128	2.915	14.6	22.2
156399	2001 <i>YA</i> ₁₅₆		4 3.7 93°97	6°3/ 9.1 17			297258	1995 <i>SZ</i> ₆₄		4 3.7 349°47	0°5/ 4.3 17		
3 2	13 18.61	-22 58.1	1.863	2.642	15.9	20.0	3 2	13 10.75	- 9 59.3	2.063	2.904	12.3	20.8
3 12	13 12.61	-23 38.8	1.788	2.651	13.0	19.8	3 12	13 6.57	- 9 22.8	1.984	2.902	9.1	20.6
3 22	13 4.32	-23 58.2	1.735	2.659	9.9	19.7	3 22	13 0.71	- 8 33.0	1.929	2.901	5.4	20.4
4 1	12 54.56	-23 54.6	1.706	2.668	7.2	19.5	4 1	12 53.79	- 7 33.6	1.902	2.899	1.4	20.1
4 11	12 44.44	-23 29.8	1.703	2.677	6.4	19.5	4 11	12 46.64	- 6 30.4	1.902	2.898	2.8	20.2
4 21	12 35.11	-22 48.8	1.728	2.685	8.1	19.6	4 21	12 40.08	- 5 29.4	1.931	2.897	6.7	20.4
5 1	12 27.57	-21 58.9	1.777	2.694	11.0	19.8	5 1	12 34.84	- 4 36.3	1.986	2.896	10.3	20.7
5 11	12 22.47	-21 8.0	1.849	2.702	13.9	20.0	5 11	12 31.45	- 3 55.4	2.063	2.896	13.4	20.9
355268	2007 <i>PK</i> ₃₇		4 3.7 294°73	3°6/31.6 16			249063	2007 <i>TS</i> ₃₆₄		4 3.7 133°91	1°2/ 5.1 18		
3 2	13 12.48	- 2 24.6	1.340	2.218	15.3	20.5	3 2	13 11.67	-12 24.1	2.346	3.172	11.5	20.7
3 12	13 8.75	- 0 57.8	1.257	2.197	11.1	20.2	3 12	13 7.02	-11 46.3	2.270	3.178	8.6	20.5
3 22	13 2.39	+ 0 45.2	1.197	2.177	6.5	19.9	3 22	13 0.88	-10 55.1	2.217	3.183	5.3	20.3
4 1	12 54.19	+ 2 34.9	1.162	2.156	3.6	19.6	4 1	12 53.82	- 9 53.7	2.193	3.189	1.9	20.1
4 11	12 45.38	+ 4 18.7	1.152	2.135	7.0	19.8	4 11	12 46.60	- 8 47.0	2.199	3.194	2.5	20.1
4 21	12 37.31	+ 5 44.9	1.167	2.115	12.1	20.0	4 21	12 39.95	- 7 40.7	2.233	3.199	5.9	20.3
5 1	12 31.18	+ 6 45.0	1.203	2.095	17.0	20.2	5 1	12 34.51	- 6 40.3	2.294	3.204	9.1	20.5
5 11	12 27.83	+ 7 15.4	1.256	2.075	21.1	20.4	5 11	12 30.75	- 5 50.0	2.379	3.209	12.0	20.7
300157	2006 <i>VW</i> ₉₆		4 3.7 165°36	1°0/ 5.0 18			420566	2012 <i>HJ</i> ₉		4 3.7 91°28	9°0/26.4 17		
3 2	13 11.39	-11 39.1	2.914	3.733	9.7	21.7	3 2	13 17.48	+16 58.1	1.713	2.576	13.3	20.6
3 12	13 6.58	-11 11.6	2.832	3.737	7.2	21.6	3 12	13 11.62	+18 13.8	1.667	2.580	10.8	20.4
3 22	13 0.52	-10 33.8	2.776	3.741	4.4	21.4	3 22	13 3.63	+19 18.6	1.644	2.584	9.2	20.4
4 1	12 53.72	- 9 48.3	2.749	3.744	1.6	21.2	4 1	12 54.41	+20 3.3	1.647	2.588	9.3	20.4
4 11	12 46.77	- 8 58.6	2.752	3.747	2.1	21.2	4 11	12 45.08	+20 21.5	1.674	2.592	11.1	20.5
4 21	12 40.27	- 8 8.7	2.785	3.750	5.0	21.4	4 21	12 36.73	+20 11.2	1.726	2.596	13.6	20.6
5 1	12 34.75	- 7 22.6	2.846	3.752	7.7	21.6	5 1	12 30.23	+19 33.4	1.797	2.600	16.2	20.8
5 11	12 30.60	- 6 43.6	2.932	3.754	10.1	21.8	5 11	12 26.08	+18 32.2	1.886	2.604	18.5	21.0
333431	2003 <i>RE</i> ₁₃		4 3.7 210°29	1°7/ 5.5 18			426826	2013 <i>UH</i> ₈		4 3.7 251°14	4°9/29.6 17		
3 2	13 15.06	-12 48.8	2.567	3.380	11.0	22.1	3 2	13 15.18	+ 6 6.1	2.011	2.876	11.6	21.2
3 12	13 9.46	-12 38.2	2.473	3.373	8.4	21.9	3 12	13 9.89	+ 7 12.2	1.931	2.861	8.6	21.0
3 22	13 2.30	-12 15.7	2.404	3.365	5.3	21.7	3 22	13 2.69	+ 8 19.8	1.876	2.845	5.8	20.8
4 1	12 54.12	-11 43.1	2.364	3.357	2.3	21.5	4 1	12 54.24	+ 9 21.9	1.849	2.829	5.0	20.7
4 11	12 45.66	-11 3.6	2.354	3.349	2.6	21.5	4 11	12 45.44	+10 11.4	1.850	2.812	7.1	20.8
4 21	12 37.67	-10 21.6	2.374	3.339	5.7	21.7	4 21	12 37.24	+10 43.2	1.878	2.795	10.3	21.0
5 1	12 30.83	- 9 41.5	2.421	3.330	8.8	21.8	5 1	12 30.45	+10 54.5	1.929	2.777	13.5	21.1
5 11	12 25.64	- 9 7.6	2.493	3.319	11.6	22.0	5 11	12 25.69	+10 45.0	2.000	2.759	16.3	21.3
191847	2004 <i>VB</i> ₃₉		4 3.7 172°18	0°2/ 3.9 17			331604	2001 <i>WD</i> ₉₈		4 3.7 67°12	3°5/ 7.2 18		
3 2	13 13.93	- 8 32.5	2.136	2.975	12.0	21.3	3 2	13 13.77	-18 7.6	1.663	2.480	15.9	20.7
3 12	13 8.79	- 8 0.3	2.059	2.977	8.8	21.1	3 12	13 9.05	-17 43.7	1.599	2.495	12.3	20.5
3 22	13 1.95	- 7 16.7	2.007	2.979	5.1	20.9	3 22	13 2.22	-16 57.0	1.556	2.510	8.4	20.3
4 1	12 54.04	- 6 25.2	1.982	2.980	1.2	20.6	4 1	12 54.12	-15 50.4	1.538	2.525	4.6	20.1
4 11	12 45.92	- 5 31.3	1.986	2.981	2.9	20.8	4 11	12 45.86	-14 30.3	1.547	2.540	4.0	20.1
4 21	12 38.41	- 4 40.2	2.019	2.981	6.8	21.0	4 21	12 38.51	-13 5.1	1.583	2.555	7.3	20.4
5 1	12 32.26	- 3 57.2	2.078	2.982	10.3	21.2	5 1	12 32.94	-11 43.9	1.645	2.570	11.1	20.6
5 11	12 27.98	- 3 25.9	2.160	2.982	13.3	21.4	5 11	12 29.68	-10 33.9	1.728	2.585	14.5	20.9
418388	2008 <i>HE</i> ₄₅		4 3.7 333°63	8°7/27.9 16			206740	2004 <i>BH</i> ₁₂₄		4 3.7 92°07	1°5/ 2.1 17		
3 2	13 16.78	+13 25.6	1.435	2.311	14.6	20.9	3 2	13 13.48	- 2 58.9	2.132	2.986	11.4	20.6
3 12	13 11.56	+14 29.0	1.375	2.302	11.5	20.7	3 12	13 8.39	- 2 22.7	2.067	2.995	8.2	20.4
3 22	13 3.81	+15 24.4	1.338	2.295	9.2	20.5	3 22	13 1.67	- 1 39.8	2.027	3.004	4.6	20.2
4 1	12 54.45	+16 1.7	1.325	2.287	8.9	20.5	4 1	12 53.99	- 0 54.8	2.015	3.012	1.5	20.0
4 11	12 44.81	+16 13.0	1.337	2.281	11.1	20.6	4 11	12 46.18	- 0 12.9	2.032	3.021	3.8	20.2
4 21	12 36.16	+15 54.8	1.371	2.274	14.3	20.8	4 21	12 39.04	+ 0 21.2	2.077	3.030	7.3	20.4
5 1	12 29.57	+15 7.7	1.426	2.269	17.6	21.0	5 1	12 33.24	+ 0 43.9	2.148	3.038	10.6	20.6
5 11	12 25.69	+13 55.6	1.497	2.264	20.6	21.2	5 11	12 29.26	+ 0 53.2	2.241	3.047	13.4	20.8
499318	2009 <i>WR</i> ₁₁₆		4 3.7 239°59	0°2/ 3.4 17			302430	2002 <i>CL</i> ₃₀₃		4 3.7 29°02	0°0/ 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
170183	2003 <i>MB</i> ₁₁		4 3.7 259°13	0°3/ 3.9 16			196506	2003 <i>MW</i> ₁₁		4 3.7 222°84	3°8/ 7.8 18		
3 2	13 15.82	- 9 28.3	1.713	2.556	14.3	21.5	3 2	13 14.60	-19 37.2	2.316	3.105	12.8	20.7
3 12	13 10.79	- 8 49.1	1.617	2.537	10.6	21.2	3 12	13 9.38	-19 34.6	2.220	3.097	10.2	20.5
3 22	13 3.43	- 7 53.0	1.545	2.517	6.3	20.9	3 22	13 2.38	-19 14.4	2.148	3.089	7.3	20.3
4 1	12 54.44	- 6 43.9	1.499	2.497	1.5	20.6	4 1	12 54.21	-18 37.4	2.102	3.080	4.6	20.2
4 11	12 44.90	- 5 28.8	1.481	2.476	3.6	20.7	4 11	12 45.70	-17 46.4	2.084	3.071	4.0	20.1
4 21	12 35.94	- 4 15.8	1.490	2.454	8.5	20.9	4 21	12 37.71	-16 46.4	2.095	3.061	6.3	20.2
5 1	12 28.63	- 3 13.0	1.524	2.432	13.0	21.1	5 1	12 31.01	-15 43.6	2.133	3.051	9.4	20.4
5 11	12 23.72	- 2 26.2	1.579	2.409	17.0	21.3	5 11	12 26.18	-14 44.3	2.196	3.040	12.3	20.6
504391	2007 <i>VU</i> ₂₃₈		4 3.7 119°03	5°4/10.9 17			99965	1979 <i>MC</i> ₇		4 3.7 256°76	1°6/ 2.2 17		
3 2	13 12.29	-27 2.0	2.429	3.176	13.5	21.6	3 2	13 15.15	- 4 20.5	1.788	2.644	13.2	21.0
3 12	13 7.57	-26 50.2	2.345	3.184	11.2	21.5	3 12	13 10.13	- 3 30.6	1.700	2.628	9.6	20.8
3 22	13 1.24	-26 16.7	2.283	3.192	8.7	21.3	3 22	13 2.97	- 2 29.1	1.635	2.612	5.5	20.5
4 1	12 53.92	-25 21.8	2.247	3.200	6.4	21.2	4 1	12 54.36	- 1 21.6	1.598	2.595	1.7	20.2
4 11	12 46.43	-24 8.9	2.238	3.207	5.4	21.1	4 11	12 45.30	- 0 15.4	1.589	2.578	4.5	20.4
4 21	12 39.55	-22 43.3	2.257	3.214	6.5	21.2	4 21	12 36.85	+ 0 42.3	1.607	2.561	8.9	20.6
5 1	12 33.97	- 4 12.1	2.303	3.221	8.7	21.3	5 1	12 29.97	+ 1 25.4	1.649	2.543	13.0	20.8
5 11	12 30.17	-19 42.5	2.374	3.228	11.2	21.5	5 11	12 25.32	+ 1 50.4	1.712	2.525	16.6	21.0
498693	2008 <i>SB</i> ₂₈₃		4 3.7 299°64	3°2/ 1.3 17			377366	2004 <i>RW</i> ₁₁₆		4 3.7 187°79	2°9/31.0 17		
3 2	13 18.22	+ 2 39.7	1.836	2.697	12.7	20.5	3 2	13 13.79	+ 1 38.8	2.541	3.395	9.8	22.2
3 12	13 12.21	+ 2 54.0	1.758	2.688	9.2	20.3	3 12	13 8.46	+ 2 43.0	2.467	3.394	7.1	22.0
3 22	13 4.07	+ 3 10.0	1.704	2.679	5.5	20.0	3 22	13 1.69	+ 3 51.1	2.420	3.393	4.3	21.9
4 1	12 54.55	+ 3 22.8	1.678	2.670	3.2	19.9	4 1	12 54.05	+ 4 57.5	2.402	3.391	2.9	21.8
4 11	12 44.70	+ 3 27.5	1.680	2.662	5.4	20.0	4 11	12 46.23	+ 5 57.0	2.415	3.388	4.8	21.9
4 21	12 35.56	+ 3 20.5	1.709	2.653	9.2	20.2	4 21	12 38.93	+ 6 45.0	2.456	3.385	7.7	22.0
5 1	12 28.07	+ 2 59.5	1.762	2.645	12.9	20.4	5 1	12 32.76	+ 7 18.5	2.524	3.381	10.4	22.2
5 11	12 22.83	+ 2 24.3	1.837	2.637	16.1	20.6	5 11	12 28.18	+ 7 36.1	2.614	3.376	12.8	22.4
406569	2007 <i>YR</i> ₇₃		4 3.7 191°88	0°7/ 3.0 16			341482	2007 <i>TO</i> ₃₆₃		4 3.7 168°04	2°8/ 7.0 18		
3 2	13 16.16	- 6 22.0	2.038	2.881	12.3	22.1	3 2	13 11.38	-17 34.5	2.256	3.062	12.6	20.7
3 12	13 10.51	- 5 39.2	1.958	2.880	9.0	21.9	3 12	13 6.98	-17 6.8	2.172	3.062	9.8	20.6
3 22	13 3.00	- 4 45.6	1.903	2.878	5.1	21.6	3 22	13 0.94	-16 21.4	2.111	3.063	6.6	20.4
4 1	12 54.32	- 3 45.5	1.877	2.875	1.1	21.3	4 1	12 53.90	-15 20.6	2.077	3.063	3.6	20.2
4 11	12 45.36	- 2 45.2	1.879	2.871	3.5	21.5	4 11	12 46.63	-14 9.0	2.071	3.064	3.2	20.1
4 21	12 37.06	- 1 50.5	1.910	2.867	7.5	21.7	4 21	12 39.94	-12 52.6	2.094	3.064	6.0	20.3
5 1	12 30.21	- 1 6.7	1.968	2.862	11.2	21.9	5 1	12 34.52	-11 37.9	2.144	3.064	9.2	20.5
5 11	12 25.37	- 0 37.3	2.047	2.857	14.3	22.1	5 11	12 30.86	-10 31.0	2.218	3.064	12.2	20.7
93369	2000 <i>SQ</i> ₂₆₈		4 3.7 169°00	1°3/ 2.3 17			173942	2001 <i>WW</i> ₅₆		4 3.7 194°30	0°2/ 3.9 18		
3 2	13 13.96	- 4 20.9	2.088	2.938	11.8	20.5	3 2	13 12.31	- 8 22.4	2.786	3.617	9.8	21.8
3 12	13 8.83	- 3 32.6	2.015	2.941	8.5	20.2	3 12	13 7.33	- 7 52.9	2.701	3.615	7.2	21.6
3 22	13 1.99	- 2 35.5	1.967	2.943	4.8	20.0	3 22	13 1.03	- 7 14.6	2.641	3.612	4.2	21.4
4 1	12 54.09	- 1 34.5	1.948	2.945	1.4	19.8	4 1	12 53.91	- 6 30.3	2.611	3.609	1.0	21.1
4 11	12 46.00	- 0 35.7	1.957	2.947	3.8	20.0	4 11	12 46.61	- 5 43.8	2.611	3.606	2.3	21.2
4 21	12 38.55	+ 0 15.2	1.995	2.948	7.5	20.2	4 21	12 39.75	- 4 59.2	2.641	3.602	5.5	21.4
5 1	12 32.48	+ 0 53.8	2.059	2.949	11.0	20.4	5 1	12 33.90	- 4 20.3	2.698	3.597	8.4	21.6
5 11	12 28.29	+ 1 17.4	2.144	2.949	13.9	20.6	5 11	12 29.49	- 3 50.2	2.780	3.592	10.9	21.8
400602	2009 <i>BL</i> ₇₈		4 3.7 169°85	2°8/ 6.3 18			501104	2013 <i>SG</i> ₈₅		4 3.7 268°60	4°1/30.6 18		
3 2	13 17.41	-15 41.5	1.780	2.598	15.0	21.6	3 2	13 14.53	+ 2 32.7	1.867	2.733	12.2	21.3
3 12	13 11.71	-15 25.1	1.702	2.601	11.5	21.3	3 12	13 9.62	+ 3 42.2	1.779	2.712	8.9	21.0
3 22	13 3.80	-14 49.2	1.646	2.604	7.6	21.1	3 22	13 2.66	+ 4 57.7	1.717	2.691	5.6	20.8
4 1	12 54.50	-13 55.9	1.617	2.607	3.8	20.9	4 1	12 54.30	+ 6 11.8	1.682	2.669	4.2	20.6
4 11	12 44.89	-12 50.6	1.615	2.609	3.6	20.9	4 11	12 45.51	+ 7 16.4	1.675	2.647	6.6	20.7
4 21	12 36.07	-11 40.5	1.641	2.610	7.4	21.1	4 21	12 37.27	+ 8 5.0	1.694	2.625	10.3	20.9
5 1	12 28.99	-10 33.7	1.693	2.610	11.4	21.3	5 1	12 30.52	+ 8 33.2	1.738	2.602	14.0	21.1
5 11	12 24.27	- 9 36.8	1.767	2.610	14.9	21.5	5 11	12 25.90	+ 8 39.4	1.800	2.579	17.2	21.2
390220	2012 <i>XB</i> ₃₇		4 3.7 307°13	0°8/ 2.8 17			435331	2007 <i>VY</i> ₄₂		4 3.7 128°83	0°8/ 2.6 17		
3 2	13 11.95	- 5 9.1	2.229	3.079	11.2	21.2	3 2	13 11.44	- 6 0.4	2.383	3.229	10.7	21.3
3 12	13 7.33	- 4 35.0	2.152	3.077	8.1	21.0	3 12	13 6.81	- 5 4.6	2.313	3.237	7.7	21.1
3 22	13 1.12	- 3 52.4	2.100	3.075	4.6	20.7	3 22	13 0.76	- 3 59.8	2.269	3.245	4.3	20.9
4 1	12 53.91	- 3 5.5	2.075	3.074	1.1	20.5	4 1	12 53.85	- 2 50.5	2.254	3.252	1.0	20.7
4 11	12 46.50	- 2 19.1	2.080	3.072	3.2	20.6	4 11	12 46.82	- 1 42.3	2.269	3.260	3.2	20.9
4 21	12 39.65	- 1 38.2	2.113	3.070	6.9	20.9	4 21	12 40.35	- 0 40.7	2.312	3.267	6.6	21.1
5 1	12 34.04	- 1 7.0	2.171	3.068	10.2	21.1	5 1	12 35.06	+ 0 10.1	2.383	3.274	9.7	21.3
5 11	12 30.16	- 0 48.1	2.252	3.067	13.1	21.3	5 11	12 31.37	+ 0 47.2	2.476	3.281	12.3	21.5
303350	2004 <i>TE</i> ₂₉₄		4 3.7 72°79	0°9/ 4.4 18			502205	2015 <i>BW</i> ₇₄		4 3.7 24°58	3°7/ 6.7 17		
3 2	13 15.25	-11 14.4	1.380	2.232	16.6	21.4	3 2	13 16.53	-15 57.6	1.794	2.611	14.9	21.4
3 12	13 10.39	-10 30.4	1.322	2.245	12.3	21.2	3 12	13 11.13	-16 16.3	1.715	2.612	11.6	21.2
3 22	13 3.10	- 9 26.6	1.286	2.258	7.3	20.9	3 22	13 3.52	-16 17.8	1.659	2.613	7.9	20.9
4 1	12 54.34	- 8 8.8	1.274	2.272	2.1	20.7	4 1	12 54.48	-16 2.5	1.629	2.615	4.5	20.7
4 11	12 45.43	- 6 45.9	1.289	2.285	3.7	20.8	4 11	12 45.08	-15 33.7	1.625	2.616	4.2	20.7
4 21	12 37.59	- 5 27.9	1.330	2.299	8.7	21.1	4 21	12 36.41	-14 56.7	1.649	2.618	7.4	20.9
5 1	12 31.81	- 4 23.2	1.394	2.312	13.3	21.4	5 1	12 29.43	-14 18.1	1.698	2.619	11.1	21.1
5 11	12 28.66	- 3 37.0	1.478	2.325	17.1	21.7	5 11	12 24.80	-13 44.1	1.769	2.621	14.5	21.3
170690	2004 <i>BX</i> ₃		4 3.7 121°65	2°0/ 1.9 18			66223	1999 <i>CE</i> ₇₇		4 3.7 238°41	7°6/10.4 18		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
235559	2004 <i>FL</i> ₉₂		4 3.7 67°89	1.4/ 2.0	18		8737	Takehiro		4 3.7 291°24	2.7/ 6.2	18	
3 2	13 10.36	- 5 11.1	2.153	3.007	11.3	20.6	3 2	13 15.00	-14 19.5	2.244	3.057	12.4	17.2
3 12	13 6.20	- 4 2.1	2.081	3.009	8.1	20.4	3 12	13 9.73	-14 35.0	2.149	3.046	9.6	17.0
3 22	13 0.49	- 2 43.1	2.034	3.011	4.5	20.1	3 22	13 2.64	-14 37.5	2.078	3.035	6.4	16.8
4 1	12 53.82	- 1 19.6	2.016	3.014	1.4	19.9	4 1	12 54.32	-14 27.8	2.035	3.023	3.4	16.6
4 11	12 46.98	+ 0 1.4	2.027	3.016	3.8	20.1	4 11	12 45.62	-14 8.3	2.020	3.012	3.3	16.5
4 21	12 40.73	+ 1 13.8	2.067	3.019	7.4	20.3	4 21	12 37.40	-13 42.9	2.033	3.001	6.3	16.7
5 1	12 35.74	+ 2 12.3	2.132	3.021	10.7	20.5	5 1	12 30.46	-13 16.4	2.073	2.989	9.7	16.9
5 11	12 32.46	+ 2 54.0	2.219	3.024	13.5	20.7	5 11	12 25.41	-12 53.6	2.137	2.978	12.7	17.1
21333	1997 <i>BM</i> ₂		4 3.7 340°71	15°8/11.7	18		503408	2016 <i>CV</i> ₂₅₈		4 3.7 1°50	6°0/28.2	17	
3 2	13 25.13	-34 56.8	1.422	2.145	22.4	17.9	3 2	13 11.31	+ 5 20.7	1.628	2.508	13.0	20.1
3 12	13 19.15	-37 39.8	1.343	2.137	20.3	17.7	3 12	13 7.32	+ 7 15.3	1.570	2.507	9.6	19.9
3 22	13 9.17	-39 56.4	1.282	2.130	18.2	17.5	3 22	13 1.30	+ 9 13.0	1.537	2.507	6.7	19.7
4 1	12 55.90	-41 34.6	1.239	2.123	16.5	17.4	4 1	12 54.02	+11 2.9	1.531	2.507	6.3	19.7
4 11	12 41.00	-42 26.3	1.218	2.117	15.8	17.3	4 11	12 46.52	+12 34.6	1.551	2.507	8.7	19.8
4 21	12 26.67	-42 31.1	1.217	2.112	16.3	17.3	4 21	12 39.82	+13 40.9	1.597	2.508	12.2	20.0
5 1	12 15.06	-41 56.6	1.235	2.108	17.9	17.4	5 1	12 34.75	+14 18.5	1.664	2.508	15.4	20.3
5 11	12 7.63	-40 57.1	1.271	2.105	20.1	17.5	5 11	12 31.88	+14 28.0	1.748	2.509	18.2	20.5
508042	2015 <i>BK</i> ₅₃₃		4 3.7 228°83	5°3/27.9	17		342992	2009 <i>BA</i> ₅₈		4 3.7 62°12	1°5/ 2.2	17	
3 2	13 12.59	+10 31.5	2.454	3.316	9.8	21.7	3 2	13 13.36	- 3 27.6	1.964	2.821	12.2	21.0
3 12	13 7.68	+11 38.7	2.386	3.309	7.5	21.5	3 12	13 8.37	- 2 45.5	1.911	2.840	8.7	20.9
3 22	13 1.30	+12 43.2	2.345	3.302	5.7	21.4	3 22	13 1.70	- 1 56.0	1.882	2.859	4.9	20.7
4 1	12 54.00	+13 39.1	2.332	3.295	5.5	21.4	4 1	12 54.08	- 1 4.5	1.881	2.878	1.6	20.5
4 11	12 46.52	+14 20.9	2.347	3.288	7.1	21.5	4 11	12 46.41	- 0 16.8	1.908	2.897	3.9	20.7
4 21	12 39.56	+14 45.2	2.388	3.280	9.5	21.6	4 21	12 39.50	+ 0 22.1	1.963	2.916	7.6	20.9
5 1	12 33.77	+14 50.6	2.454	3.272	11.9	21.7	5 1	12 34.06	+ 0 48.5	2.042	2.936	10.9	21.2
5 11	12 29.60	+14 37.4	2.539	3.264	14.0	21.9	5 11	12 30.51	+ 1 0.5	2.144	2.955	13.7	21.4
419656	2010 <i>TC</i> ₇₉		4 3.7 188°58	0°6/ 3.1	16		175373	2005 <i>SR</i> ₂₂₃		4 3.7 320°35	0°1/ 3.6	17	
3 2	13 16.79	- 6 8.3	2.095	2.936	12.1	22.5	3 2	13 11.68	- 7 11.0	2.099	2.946	11.9	20.7
3 12	13 10.95	- 5 33.0	2.015	2.936	8.8	22.3	3 12	13 7.30	- 6 45.6	2.014	2.937	8.7	20.5
3 22	13 3.27	- 4 47.6	1.961	2.935	5.0	22.0	3 22	13 1.21	- 6 9.8	1.955	2.929	5.0	20.2
4 1	12 54.43	- 3 56.4	1.934	2.933	1.1	21.7	4 1	12 54.01	- 5 27.1	1.922	2.920	1.1	19.9
4 11	12 45.34	- 3 4.7	1.937	2.930	3.3	21.9	4 11	12 46.52	- 4 42.5	1.918	2.912	3.0	20.0
4 21	12 36.89	- 2 18.2	1.969	2.926	7.3	22.1	4 21	12 39.58	- 4 1.1	1.941	2.905	6.9	20.3
5 1	12 29.87	- 1 41.6	2.028	2.922	10.9	22.3	5 1	12 33.93	- 3 27.9	1.991	2.897	10.5	20.5
5 11	12 24.83	- 1 18.0	2.108	2.918	14.0	22.5	5 11	12 30.12	- 3 6.3	2.062	2.890	13.6	20.7
342645	2008 <i>UV</i> ₃₆₄		4 3.7 247°88	3°7/31.1	18		374335	2005 <i>TT</i> ₁₃₄		4 3.7 215°06	0°4/ 3.3	17	
3 2	13 15.91	+ 3 49.9	2.098	2.958	11.3	20.7	3 2	13 17.40	- 5 43.0	2.113	2.954	12.1	22.4
3 12	13 10.35	+ 4 31.8	2.017	2.947	8.3	20.4	3 12	13 11.44	- 5 24.5	2.027	2.947	8.8	22.2
3 22	13 2.95	+ 5 15.7	1.962	2.935	5.2	20.2	3 22	13 3.60	- 4 57.2	1.966	2.940	5.1	21.9
4 1	12 54.37	+ 5 56.1	1.935	2.923	3.7	20.1	4 1	12 54.53	- 4 24.3	1.934	2.932	1.1	21.6
4 11	12 45.49	+ 6 27.3	1.937	2.910	5.8	20.2	4 11	12 45.14	- 3 50.7	1.930	2.924	3.2	21.8
4 21	12 37.20	+ 6 45.0	1.966	2.897	9.1	20.4	4 21	12 36.33	- 3 20.9	1.956	2.915	7.2	22.0
5 1	12 30.29	+ 6 46.7	2.019	2.884	12.3	20.6	5 1	12 28.94	- 2 59.2	2.008	2.905	10.9	22.2
5 11	12 25.34	+ 6 31.7	2.094	2.871	15.1	20.7	5 11	12 23.54	- 2 48.7	2.082	2.895	14.0	22.4
134307	2849 <i>P-L</i>		4 3.7 232°18	0°2/ 3.9	16		197118	2003 <i>UU</i> ₂₀₉		4 3.7 202°29	0°5/ 4.2	17	
3 2	13 17.27	- 8 24.1	1.907	2.746	13.2	22.0	3 2	13 13.53	- 9 12.9	2.056	2.895	12.4	21.3
3 12	13 11.60	- 7 55.0	1.816	2.733	9.8	21.7	3 12	13 8.63	- 8 45.9	1.976	2.894	9.2	21.1
3 22	13 3.81	- 7 12.6	1.748	2.720	5.8	21.4	3 22	13 1.96	- 8 6.6	1.922	2.893	5.4	20.9
4 1	12 54.58	- 6 20.6	1.708	2.706	1.3	21.1	4 1	12 54.17	- 7 18.5	1.894	2.892	1.4	20.6
4 11	12 44.91	- 5 24.6	1.697	2.691	3.3	21.2	4 11	12 46.13	- 6 26.8	1.895	2.891	2.9	20.7
4 21	12 35.84	- 4 31.1	1.713	2.676	7.8	21.5	4 21	12 38.71	- 5 37.1	1.925	2.889	6.8	20.9
5 1	12 28.31	- 3 46.2	1.756	2.660	11.9	21.7	5 1	12 32.67	- 4 54.8	1.980	2.888	10.5	21.2
5 11	12 22.98	- 3 14.5	1.821	2.643	15.4	21.9	5 11	12 28.56	- 4 23.9	2.058	2.887	13.6	21.4
39455	4091 <i>T-3</i>		4 3.7 306°46	3°0/31.7	18		277936	2006 <i>OO</i>		4 3.7 253°34	2°9/31.2	17	
3 2	13 13.12	+ 2 8.2	2.163	3.026	11.0	19.0	3 2	13 11.01	- 0 11.4	2.204	3.066	10.8	20.5
3 12	13 8.26	+ 2 43.9	2.085	3.016	7.9	18.8	3 12	13 6.72	+ 1 4.8	2.126	3.058	7.7	20.3
3 22	13 1.71	+ 3 22.5	2.032	3.007	4.8	18.5	3 22	13 0.84	+ 2 27.7	2.073	3.049	4.6	20.1
4 1	12 54.10	+ 3 59.1	2.007	2.998	3.0	18.4	4 1	12 53.95	+ 3 51.1	2.050	3.041	2.9	20.0
4 11	12 46.24	+ 4 28.5	2.011	2.990	5.0	18.5	4 11	12 46.83	+ 5 8.0	2.055	3.032	5.1	20.1
4 21	12 38.94	+ 4 46.7	2.041	2.981	8.3	18.7	4 21	12 40.24	+ 6 12.4	2.088	3.023	8.4	20.3
5 1	12 32.93	+ 4 51.0	2.097	2.973	11.5	18.9	5 1	12 34.86	+ 7 0.2	2.146	3.015	11.5	20.5
5 11	12 28.73	+ 4 40.3	2.174	2.964	14.2	19.1	5 11	12 31.20	+ 7 29.2	2.226	3.005	14.3	20.6
518169	2016 <i>KE</i> ₅		4 3.7 261°41	3°0/ 7.4	17		501135	2013 <i>TE</i> ₃₉		4 3.7 162°31	0°5/ 4.3	17	
3 2	13 11.74	-20 3.5	2.112	2.909	13.7	21.8	3 2	13 13.23	-10 9.3	1.999	2.837	12.8	21.6
3 12	13 7.45	-19 2.8	2.009	2.894	10.8	21.6	3 12	13 8.44	- 9 28.0	1.923	2.839	9.4	21.4
3 22	13 1.34	-17 38.0	1.930	2.879	7.4	21.4	3 22	13 1.87	- 8 32.6	1.870	2.841	5.6	21.2
4 1	12 54.03	-15 51.4	1.878	2.864	4.1	21.1	4 1	12 54.18	- 7 27.3	1.845	2.843	1.5	20.9
4 11	12 46.40	-13 49.4	1.856	2.849	3.4	21.0	4 11	12 46.27	- 6 18.1	1.849	2.844	2.9	21.0
4 21	12 39.33	-11 40.6	1.863	2.833	6.5	21.2	4 21	12 39.01	- 5 11.6	1.881	2.846	7.0	21.3
5 1	12 33.61	- 9 34.9	1.898	2.818	10.2	21.4	5 1	12 33.18	- 4 13.8	1.939	2.847	10.7	21.5
5 11	12 29.82	- 7 40.7	1.958	2.802	13.6	21.6	5 11	12 29.29	- 3 29.4	2.019	2.848	13.8	21.7
502016	2015 <i>AN</i> ₇₃		4 3.7 123°02	7°9/11.5	17		423200	2004 <i>PF</i> ₄₇		4 3.7 308°49	5°8/ 7.6	17	
3 2	13 16.70												

EPHEMERIDES

4 3.7

4 3.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
200641	2001 <i>SJ</i> ₂₄₆		4 3.7 145°54	0°8/ 3.0 18			165393	2000 <i>XY</i> ₁₁		4 3.7 157°06	0°6/ 3.2 18		
3 2	13 20.13	- 5 15.7	1.734	2.581	14.0	21.0	3 2	13 19.65	- 5 20.2	1.880	2.723	13.2	20.4
3 12	13 13.59	- 4 47.5	1.668	2.591	10.1	20.7	3 12	13 13.15	- 4 58.3	1.809	2.731	9.6	20.2
3 22	13 4.87	- 4 9.1	1.626	2.601	5.8	20.5	3 22	13 4.60	- 4 27.0	1.763	2.737	5.5	20.0
4 1	12 54.83	- 3 25.4	1.612	2.610	1.3	20.2	4 1	12 54.80	- 3 50.6	1.745	2.743	1.2	19.7
4 11	12 44.61	- 2 42.5	1.626	2.618	3.9	20.4	4 11	12 44.77	- 3 14.2	1.756	2.749	3.6	19.9
4 21	12 35.28	- 2 6.2	1.668	2.626	8.3	20.7	4 21	12 35.55	- 2 43.3	1.795	2.753	7.8	20.1
5 1	12 27.78	- 1 41.5	1.735	2.633	12.3	20.9	5 1	12 28.01	- 2 22.2	1.860	2.757	11.6	20.4
5 11	12 22.67	- 1 31.0	1.824	2.639	15.6	21.2	5 11	12 22.70	- 2 13.6	1.947	2.761	14.8	20.6
500707	2012 <i>WF</i> ₁₈		4 3.7 132°93	4°7/29.9 17			5956	d'Alembert		4 3.7 183°28	0°3/ 3.3 18		
3 2	13 15.83	+ 8 59.8	2.303	3.162	10.5	21.2	3 2	13 13.39	- 7 31.7	2.669	3.502	10.1	18.7
3 12	13 10.04	+ 9 35.9	2.240	3.164	7.9	21.0	3 12	13 8.17	- 6 42.1	2.586	3.502	7.3	18.5
3 22	13 2.66	+10 9.0	2.203	3.166	5.5	20.9	3 22	13 1.57	- 5 43.0	2.530	3.502	4.2	18.3
4 1	12 54.35	+10 33.9	2.194	3.168	4.8	20.8	4 1	12 54.13	- 4 38.2	2.503	3.502	0.9	18.1
4 11	12 45.90	+10 46.2	2.213	3.170	6.4	20.9	4 11	12 46.51	- 3 32.4	2.508	3.500	2.7	18.2
4 21	12 38.11	+10 43.4	2.260	3.172	9.0	21.1	4 21	12 39.38	- 2 30.7	2.542	3.498	5.9	18.4
5 1	12 31.64	+10 24.6	2.332	3.174	11.7	21.3	5 1	12 33.33	- 1 37.3	2.604	3.495	8.9	18.6
5 11	12 26.95	+ 9 50.4	2.424	3.176	14.0	21.4	5 11	12 28.79	- 0 55.4	2.690	3.492	11.5	18.8
82071	Debreccen		4 3.7 121°91	4°3/30.9 18			324989	2008 <i>BJ</i> ₇		4 3.7 57°55	0°4/ 4.1 18		
3 2	13 17.72	+ 3 9.5	1.664	2.531	13.5	19.9	3 2	13 16.07	- 9 27.0	1.364	2.220	16.5	21.4
3 12	13 11.83	+ 4 11.7	1.610	2.542	9.7	19.7	3 12	13 10.92	- 8 50.1	1.316	2.242	12.1	21.2
3 22	13 3.83	+ 5 16.7	1.580	2.553	6.0	19.5	3 22	13 3.39	- 7 56.5	1.291	2.265	7.0	20.9
4 1	12 54.60	+ 6 16.5	1.576	2.564	4.4	19.4	4 1	12 54.52	- 6 52.2	1.290	2.288	1.7	20.7
4 11	12 45.26	+ 7 3.6	1.601	2.574	6.7	19.6	4 11	12 45.61	- 5 45.7	1.315	2.311	3.7	20.9
4 21	12 36.86	+ 7 33.0	1.651	2.584	10.4	19.8	4 21	12 37.87	- 4 45.5	1.367	2.335	8.7	21.2
5 1	12 30.27	+ 7 41.9	1.725	2.593	13.9	20.0	5 1	12 32.22	- 3 58.5	1.441	2.358	13.0	21.5
5 11	12 26.02	+ 7 30.6	1.818	2.602	16.8	20.3	5 11	12 29.17	- 3 28.8	1.536	2.381	16.6	21.8
419564	2010 <i>RM</i> ₉		4 3.7 205°91	1°3/ 4.9 16			210566	1999 <i>TG</i> ₂₀₇		4 3.7 80°90	12°9/16.5 18		
3 2	13 17.23	-11 31.4	2.116	2.940	12.7	22.5	3 2	13 16.42	-37 38.7	1.180	1.919	25.4	19.3
3 12	13 11.37	-11 9.6	2.027	2.934	9.5	22.3	3 12	13 12.32	-38 0.3	1.115	1.929	22.4	19.1
3 22	13 3.60	-10 33.8	1.962	2.928	5.9	22.1	3 22	13 4.73	-37 33.3	1.064	1.940	19.0	18.9
4 1	12 54.58	- 9 46.7	1.925	2.920	2.1	21.8	4 1	12 54.87	-36 11.3	1.029	1.951	15.7	18.8
4 11	12 45.22	- 8 53.0	1.917	2.912	2.8	21.8	4 11	12 44.62	-33 56.7	1.014	1.961	13.3	18.7
4 21	12 36.45	- 7 58.4	1.938	2.903	6.8	22.1	4 21	12 35.86	-31 1.9	1.021	1.972	13.2	18.7
5 1	12 29.10	- 7 8.7	1.986	2.894	10.5	22.3	5 1	12 30.02	-27 46.7	1.051	1.982	15.3	18.8
5 11	12 23.76	- 6 28.9	2.058	2.883	13.7	22.5	5 11	12 27.81	-24 33.2	1.102	1.993	18.5	19.1
1175	Margo		4 3.7 222°35	4°2/ 9.4 18			468531	2005 <i>YA</i> ₂₈₈		4 3.7 39°21	12°8/25.6 16		
3 2	13 11.01	-23 33.9	2.628	3.394	12.1	15.5	3 2	13 21.07	+25 12.5	1.423	2.275	16.2	20.2
3 12	13 6.62	-23 16.0	2.534	3.391	9.8	15.3	3 12	13 14.37	+26 18.8	1.403	2.294	14.1	20.1
3 22	13 0.75	-22 39.4	2.462	3.387	7.4	15.1	3 22	13 5.23	+27 1.3	1.403	2.314	12.9	20.1
4 1	12 53.95	-21 45.1	2.416	3.383	5.1	15.0	4 1	12 54.88	+27 11.0	1.426	2.335	13.1	20.2
4 11	12 46.93	-20 36.1	2.399	3.379	4.3	14.9	4 11	12 44.79	+26 44.1	1.470	2.356	14.5	20.3
4 21	12 40.40	-19 17.4	2.411	3.375	5.7	15.0	4 21	12 36.18	+25 42.4	1.536	2.378	16.5	20.5
5 1	12 34.99	-17 55.0	2.451	3.370	8.2	15.2	5 1	12 29.93	+24 11.5	1.620	2.400	18.6	20.7
5 11	12 31.17	-16 35.4	2.515	3.366	10.7	15.3	5 11	12 26.43	+22 18.7	1.721	2.423	20.5	20.9
28830	2000 <i>JY</i> ₃₀		4 3.7 193°61	4°1/ 8.7 18			135466	2001 <i>VO</i> ₉₁		4 3.7 165°36	6°1/25.8 18		
3 2	13 12.79	-21 38.1	2.453	3.231	12.5	19.2	3 2	13 13.86	+17 36.8	2.993	3.839	8.7	20.8
3 12	13 7.98	-21 28.9	2.363	3.230	10.1	19.1	3 12	13 8.34	+18 39.4	2.943	3.844	7.1	20.7
3 22	13 1.56	-21 1.7	2.295	3.228	7.4	18.9	3 22	13 1.59	+19 34.8	2.920	3.849	6.1	20.6
4 1	12 54.13	-20 17.1	2.255	3.227	4.9	18.7	4 1	12 54.13	+20 18.0	2.925	3.853	6.3	20.6
4 11	12 46.45	-19 18.4	2.242	3.225	4.2	18.7	4 11	12 46.60	+20 45.3	2.957	3.857	7.5	20.7
4 21	12 39.30	-18 10.4	2.258	3.223	6.0	18.8	4 21	12 39.58	+20 54.8	3.016	3.861	9.2	20.8
5 1	12 33.37	-16 59.4	2.301	3.220	8.7	18.9	5 1	12 33.61	+20 46.2	3.099	3.863	10.9	21.0
5 11	12 29.16	-15 51.5	2.369	3.218	11.4	19.1	5 11	12 29.06	+20 21.1	3.201	3.866	12.4	21.1
90699	1986 <i>QK</i>		4 3.7 208°85	2°4/ 5.9 18			141480	2002 <i>CD</i> ₂₇₃		4 3.7 7°45	5°1/31.7 18		
3 2	13 18.08	-14 21.2	1.928	2.745	14.0	19.5	3 2	13 15.16	+ 3 10.1	1.049	1.942	17.4	19.1
3 12	13 12.20	-14 8.4	1.839	2.739	10.8	19.3	3 12	13 10.97	+ 3 46.4	0.997	1.942	12.7	18.8
3 22	13 4.17	-13 38.6	1.773	2.732	7.0	19.0	3 22	13 3.77	+ 4 25.7	0.965	1.944	7.8	18.5
4 1	12 54.72	-12 53.4	1.733	2.725	3.3	18.8	4 1	12 54.65	+ 4 58.6	0.955	1.946	5.1	18.4
4 11	12 44.86	-11 57.5	1.722	2.716	3.3	18.8	4 11	12 45.25	+ 5 15.7	0.967	1.951	8.1	18.5
4 21	12 35.65	-10 57.1	1.740	2.707	7.2	19.0	4 21	12 37.11	+ 5 11.4	1.002	1.956	13.0	18.8
5 1	12 28.02	- 9 59.4	1.784	2.698	11.1	19.2	5 1	12 31.47	+ 4 43.4	1.057	1.963	17.6	19.1
5 11	12 22.64	- 9 10.5	1.850	2.687	14.6	19.4	5 11	12 29.00	+ 3 53.4	1.128	1.971	21.5	19.4
272663	2005 <i>WF</i> ₁₈₆		4 3.7 61°31	6°2/29.2 18			9833	Rilke		4 3.7 91°63	2°5/ 1.7 18		
3 2	13 16.71	+ 7 46.3	1.589	2.462	13.6	20.0	3 2	13 17.10	- 2 50.0	1.406	2.274	15.4	17.9
3 12	13 10.90	+ 9 11.0	1.563	2.495	10.0	19.9	3 12	13 11.69	- 1 50.4	1.352	2.286	11.0	17.6
3 22	13 3.16	+10 31.3	1.562	2.528	7.0	19.8	3 22	13 3.88	- 0 40.8	1.321	2.299	6.2	17.4
4 1	12 54.43	+11 38.4	1.586	2.561	6.3	19.8	4 1	12 54.65	+ 0 31.0	1.316	2.312	2.6	17.2
4 11	12 45.86	+12 25.1	1.638	2.593	8.4	20.0	4 11	12 45.29	+ 1 35.6	1.337	2.325	5.5	17.4
4 21	12 38.41	+12 48.0	1.714	2.626	11.4	20.3	4 21	12 37.02	+ 2 25.4	1.384	2.337	10.2	17.7
5 1	12 32.84	+12 46.9	1.813	2.658	14.4	20.5	5 1	12 30.80	+ 2 55.6	1.454	2.349	14.4	18.0
5 11	12 29.52	+12 24.2	1.930	2.690	16.8	20.8	5 11	12 27.19	+ 3 4.5	1.543	2.361	17.8	18.2
503706	2016 <i>JJ</i> ₁₅		4 3.7 335°20	8°2/26.4 17			99757	2002 <i>JK</i> ₉₀		4 3.7 323°86	0°7/ 3.2 17		
3 2	13 7.31	+ 7 11.4</											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
163330	2002 <i>JJ</i> ₁₄₇		4 3.7 142°10	0°7/ 4.4	18		68431	2001 <i>RH</i> ₄₈		4 3.7 45°20	1°4/ 2.9	18	
3 2	13 15.38	-11 7.1	1.700	2.539	14.6	19.9	3 2	13 19.65	-3 22.4	1.225	2.095	17.1	18.5
3 12	13 10.25	-10 21.5	1.629	2.546	10.8	19.7	3 12	13 13.93	-3 12.8	1.168	2.102	12.4	18.3
3 22	13 3.02	-9 18.5	1.581	2.552	6.4	19.4	3 22	13 5.36	-2 53.3	1.133	2.111	7.1	18.0
4 1	12 54.48	-8 3.1	1.560	2.557	1.8	19.1	4 1	12 55.02	-2 29.6	1.121	2.120	1.8	17.7
4 11	12 45.70	-6 42.6	1.567	2.563	3.2	19.2	4 11	12 44.43	-2 8.6	1.136	2.129	4.9	17.9
4 21	12 37.76	-5 25.3	1.601	2.568	7.8	19.5	4 21	12 35.06	-1 56.4	1.174	2.138	10.3	18.3
5 1	12 31.53	-4 18.7	1.661	2.572	11.9	19.8	5 1	12 28.09	-1 57.8	1.235	2.148	15.0	18.6
5 11	12 27.60	-3 28.1	1.742	2.576	15.4	20.0	5 11	12 24.17	-2 14.9	1.315	2.158	19.0	18.8
501884	2014 <i>WY</i> ₃₉₉		4 3.7 147°12	7°7/24.0	17		138862	2000 <i>WP</i> ₁₁₃		4 3.7 33°85	4°7/31.7	18	
3 2	13 13.35	+16 19.4	2.244	3.104	10.7	21.1	3 2	13 18.58	+5 10.8	1.404	2.278	15.0	19.1
3 12	13 8.34	+18 19.1	2.202	3.112	8.8	21.0	3 12	13 12.68	+5 31.7	1.358	2.294	10.9	18.9
3 22	13 1.74	+20 10.9	2.187	3.119	7.7	20.9	3 22	13 4.40	+5 51.4	1.335	2.310	6.8	18.7
4 1	12 54.19	+21 46.2	2.200	3.127	8.2	21.0	4 1	12 54.78	+6 3.2	1.338	2.326	4.7	18.6
4 11	12 46.51	+22 58.5	2.240	3.133	9.8	21.1	4 11	12 45.13	+6 1.4	1.366	2.344	7.0	18.7
4 21	12 39.50	+23 44.5	2.304	3.140	11.9	21.2	4 21	12 36.67	+5 43.2	1.419	2.362	10.9	19.0
5 1	12 33.82	+24 3.9	2.390	3.146	14.0	21.4	5 1	12 30.32	+5 7.8	1.495	2.381	14.6	19.3
5 11	12 29.93	+23 58.7	2.492	3.151	15.7	21.5	5 11	12 26.60	+4 16.6	1.590	2.400	17.8	19.5
22302	1990 <i>OG</i> ₄		4 3.7 225°30	4°4/ 8.9	18		393674	2004 <i>RX</i> ₁₇₁		4 3.7 310°87	5°6/ 7.0	15	
3 2	13 15.06	-22 45.8	2.599	3.363	12.3	19.5	3 2	13 21.94	-18 27.2	2.064	2.852	14.2	20.7
3 12	13 9.66	-22 41.8	2.494	3.351	10.0	19.4	3 12	13 15.47	-19 36.5	1.941	2.815	11.6	20.4
3 22	13 2.58	-22 20.0	2.412	3.338	7.5	19.2	3 22	13 6.42	-20 33.9	1.843	2.778	8.7	20.1
4 1	12 54.40	-21 40.2	2.357	3.324	5.2	19.0	4 1	12 55.35	-21 16.4	1.770	2.742	6.1	19.9
4 11	12 45.87	-20 45.1	2.330	3.309	4.4	18.9	4 11	12 43.22	-21 42.6	1.727	2.705	5.8	19.8
4 21	12 37.78	-19 38.9	2.333	3.294	6.1	19.0	4 21	12 31.23	-21 53.7	1.712	2.668	8.3	19.9
5 1	12 30.86	-18 27.6	2.363	3.278	8.7	19.1	5 1	12 20.60	-21 53.4	1.723	2.631	11.8	20.0
5 11	12 25.67	-17 17.6	2.419	3.261	11.4	19.3	5 11	12 12.31	-21 48.1	1.758	2.595	15.2	20.1
470459	2007 <i>YU</i> ₇₄		4 3.7 136°11	4°0/ 8.4	17		224427	2005 <i>US</i> ₄₁₆		4 3.7 63°11	0°1/ 3.6	17	
3 2	13 13.40	-20 28.8	2.483	3.265	12.3	21.4	3 2	13 13.25	-8 33.2	1.671	2.522	14.2	20.8
3 12	13 8.40	-20 34.4	2.398	3.269	9.8	21.2	3 12	13 8.69	-7 44.2	1.606	2.531	10.3	20.6
3 22	13 1.81	-20 23.6	2.337	3.273	7.1	21.0	3 22	13 2.11	-6 40.5	1.565	2.539	5.9	20.4
4 1	12 54.22	-19 57.0	2.303	3.276	4.7	20.9	4 1	12 54.30	-5 27.7	1.550	2.548	1.2	20.1
4 11	12 46.40	-19 17.4	2.296	3.279	4.1	20.9	4 11	12 46.31	-4 13.5	1.562	2.557	3.5	20.2
4 21	12 39.11	-18 28.9	2.318	3.282	5.9	21.0	4 21	12 39.14	-3 5.7	1.602	2.566	8.0	20.5
5 1	12 33.03	-17 36.9	2.368	3.285	8.5	21.1	5 1	12 33.64	-2 10.7	1.666	2.575	12.1	20.8
5 11	12 28.67	-16 46.9	2.441	3.288	11.1	21.3	5 11	12 30.36	-1 32.6	1.751	2.584	15.4	21.0
387505	1998 <i>KN</i> ₃		4 3.7 114°40	1°2/ 4.7	18		105503	2000 <i>RG</i> ₁		4 3.7 153°51	0°8/ 4.5	18	
3 2	13 44.20	-13 49.8	1.709	2.487	17.1	22.4	3 2	13 18.27	-10 20.7	1.935	2.765	13.4	20.9
3 12	13 30.54	-12 44.0	1.654	2.539	12.7	22.3	3 12	13 12.13	-9 52.7	1.863	2.775	10.0	20.7
3 22	13 14.30	-11 17.2	1.627	2.586	7.6	22.1	3 22	13 4.03	-9 10.8	1.815	2.783	6.0	20.5
4 1	12 56.85	-9 35.1	1.634	2.630	2.4	21.8	4 1	12 54.72	-8 18.6	1.794	2.791	1.8	20.2
4 11	12 39.84	-7 48.0	1.676	2.670	3.6	22.0	4 11	12 45.21	-7 21.8	1.803	2.798	3.0	20.3
4 21	12 24.73	-6 6.5	1.753	2.706	8.4	22.4	4 21	12 36.47	-6 26.6	1.840	2.805	7.1	20.6
5 1	12 12.49	-4 39.3	1.861	2.739	12.6	22.7	5 1	12 29.34	-5 38.9	1.904	2.810	10.9	20.8
5 11	12 3.55	-3 31.4	1.992	2.768	15.8	23.0	5 11	12 24.37	-5 3.2	1.990	2.815	14.1	21.0
430505	2001 <i>UM</i> ₁₇₆		4 3.7 241°85	2°1/ 1.5	17		465956	2011 <i>BO</i> ₆₂		4 3.7 130°12	2°5/ 1.1	18	
3 2	13 14.87	+0 12.3	2.361	3.214	10.5	21.4	3 2	13 16.99	+0 10.4	2.320	3.169	10.8	22.1
3 12	13 9.44	+0 38.1	2.279	3.206	7.6	21.2	3 12	13 10.79	+1 0.3	2.263	3.188	7.7	21.9
3 22	13 2.40	+1 7.8	2.223	3.199	4.4	20.9	3 22	13 3.07	+1 54.0	2.232	3.207	4.5	21.8
4 1	12 54.35	+1 37.1	2.196	3.191	2.1	20.8	4 1	12 54.49	+2 46.4	2.231	3.224	2.5	21.7
4 11	12 46.06	+2 1.8	2.198	3.182	4.1	20.9	4 11	12 45.86	+3 32.3	2.260	3.241	4.4	21.8
4 21	12 38.29	+2 18.2	2.229	3.174	7.4	21.1	4 21	12 37.93	+4 7.6	2.318	3.256	7.5	22.0
5 1	12 31.74	+2 23.5	2.286	3.166	10.5	21.3	5 1	12 31.35	+4 29.6	2.402	3.271	10.4	22.2
5 11	12 26.90	+2 16.3	2.365	3.157	13.2	21.4	5 11	12 26.54	+4 37.2	2.509	3.286	12.9	22.4
215880	2005 <i>EA</i> ₂₄₅		4 3.7 306°17	1°4/ 2.5	18		436662	2011 <i>SX</i> ₃₂		4 3.7 243°98	1°3/ 2.1	18	
3 2	13 12.66	-6 19.0	1.496	2.361	14.8	20.2	3 2	13 11.08	-4 22.3	2.468	3.317	10.3	21.2
3 12	13 8.60	-5 15.0	1.421	2.354	10.8	19.9	3 12	13 6.67	-3 25.0	2.381	3.307	7.4	21.0
3 22	13 2.23	-3 55.2	1.369	2.347	6.1	19.6	3 22	13 0.81	-2 19.0	2.320	3.296	4.2	20.8
4 1	12 54.35	-2 26.4	1.342	2.340	1.6	19.3	4 1	12 54.02	-1 9.0	2.288	3.285	1.4	20.6
4 11	12 46.09	-0 58.3	1.342	2.333	4.7	19.5	4 11	12 47.00	-0 0.5	2.286	3.274	3.5	20.7
4 21	12 38.61	+0 19.6	1.367	2.327	9.6	19.7	4 21	12 40.43	+1 1.2	2.312	3.263	6.8	20.9
5 1	12 32.94	+1 19.7	1.416	2.321	14.1	20.0	5 1	12 34.95	+1 51.7	2.365	3.251	9.9	21.1
5 11	12 29.72	+1 57.6	1.485	2.315	17.9	20.2	5 11	12 31.02	+2 28.0	2.441	3.239	12.6	21.2
239246	2006 <i>TA</i> ₆₀		4 3.7 73°53	2°6/ 6.8	18		240300	2003 <i>FE</i> ₆₀		4 3.7 352°90	4°3/31.7	18	
3 2	13 11.42	-16 42.7	2.301	3.110	12.3	20.2	3 2	13 16.16	+1 8.9	1.247	2.128	16.0	19.9
3 12	13 6.99	-16 20.4	2.223	3.116	9.5	20.0	3 12	13 11.43	+2 3.3	1.186	2.126	11.6	19.6
3 22	13 0.99	-15 41.9	2.168	3.122	6.4	19.8	3 22	13 3.96	+3 4.5	1.146	2.125	7.0	19.4
4 1	12 54.04	-14 49.5	2.140	3.128	3.4	19.7	4 1	12 54.74	+4 3.5	1.131	2.123	4.3	19.2
4 11	12 46.91	-13 47.5	2.141	3.134	3.0	19.6	4 11	12 45.17	+4 50.3	1.140	2.123	7.3	19.4
4 21	12 40.36	-12 41.4	2.170	3.140	5.8	19.8	4 21	12 36.66	+5 17.7	1.173	2.122	12.0	19.6
5 1	12 35.05	-11 37.2	2.226	3.146	8.9	20.0	5 1	12 30.37	+5 21.6	1.227	2.122	16.5	19.9
5 11	12 31.45	-10 40.2	2.307	3.152	11.8	20.2	5 11	12 26.97	+5 1.9	1.299	2.123	20.3	20.1
22880	Pulaski		4 3.7 138°64	1°0/ 2.9	18		312494	2009 <i>AJ</i> ₁₃		4 3.7 271°03	4°9/ 7.6	16	
3 2	13 19.42	-4 25.4	1.816	2.663	13.4	19.1</							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
31250	1998 DR ₁₄		4 3.7 45°80	5°8/ 9.7	18		344398	2001 YU ₁₄₄		4 3.7 86°30	10°8/19.3	15	
3 2	13 14.34	-23 57.2	2.109	2.881	14.5	18.9	3 2	13 15.86	+31 53.9	2.391	3.200	11.9	20.3
3 12	13 9.37	-24 20.8	2.030	2.888	11.9	18.8	3 12	13 10.11	+33 19.6	2.373	3.213	11.0	20.3
3 22	13 2.50	-24 23.9	1.973	2.894	9.1	18.6	3 22	13 2.71	+34 25.7	2.378	3.226	10.8	20.3
4 1	12 54.40	-24 5.8	1.941	2.901	6.7	18.5	4 1	12 54.43	+35 6.0	2.407	3.239	11.4	20.4
4 11	12 46.03	-23 29.0	1.935	2.908	5.8	18.4	4 11	12 46.17	+35 17.3	2.458	3.251	12.4	20.5
4 21	12 38.30	-22 38.1	1.956	2.915	7.2	18.5	4 21	12 38.75	+34 59.8	2.529	3.264	13.7	20.6
5 1	12 32.05	-21 39.8	2.003	2.922	9.8	18.7	5 1	12 32.83	+34 15.9	2.618	3.276	15.0	20.7
5 11	12 27.85	-20 41.2	2.073	2.930	12.5	18.9	5 11	12 28.85	+33 10.0	2.721	3.289	16.1	20.8
170283	2003 QR ₁₀₉		4 3.7 196°46	0°4/ 3.4	18		174553	2003 FR ₈₅		4 3.7 355°26	1°3/ 4.7	17	
3 2	13 19.12	- 5 58.5	1.725	2.572	14.0	20.4	3 2	13 14.21	- 8 41.6	1.682	2.532	14.2	18.9
3 12	13 13.05	- 5 42.2	1.648	2.571	10.3	20.2	3 12	13 9.57	- 8 58.3	1.605	2.526	10.6	18.6
3 22	13 4.71	- 5 15.4	1.595	2.569	5.9	19.9	3 22	13 2.75	- 9 3.7	1.551	2.522	6.5	18.4
4 1	12 54.90	- 4 41.9	1.568	2.567	1.2	19.6	4 1	12 54.50	- 8 59.7	1.522	2.519	2.1	18.1
4 11	12 44.74	- 4 7.2	1.570	2.564	3.7	19.8	4 11	12 45.88	- 8 50.2	1.521	2.517	3.2	18.1
4 21	12 35.36	- 3 37.0	1.599	2.561	8.3	20.0	4 21	12 37.97	- 8 39.6	1.545	2.516	7.6	18.4
5 1	12 27.75	- 3 16.5	1.653	2.557	12.4	20.3	5 1	12 31.72	- 8 32.8	1.595	2.515	11.7	18.6
5 11	12 22.54	- 3 8.9	1.729	2.553	16.0	20.5	5 11	12 27.79	- 8 33.8	1.665	2.516	15.3	18.9
462551	2009 CP ₁₄		4 3.7 113°47	2°5/ 5.9	18		331901	2004 PF ₆₀		4 3.7 178°41	3°9/29.9	17	
3 2	13 19.06	-14 32.0	1.697	2.519	15.4	22.5	3 2	13 13.96	+ 4 38.6	2.388	3.248	10.2	21.7
3 12	13 12.87	-14 13.9	1.635	2.538	11.7	22.3	3 12	13 8.71	+ 5 51.8	2.321	3.249	7.4	21.5
3 22	13 4.49	-13 36.9	1.595	2.556	7.5	22.1	3 22	13 1.96	+ 7 6.7	2.281	3.251	4.9	21.4
4 1	12 54.82	-12 44.2	1.582	2.574	3.4	21.9	4 1	12 54.30	+ 8 17.2	2.271	3.252	4.0	21.3
4 11	12 45.02	-11 41.7	1.596	2.591	3.5	21.9	4 11	12 46.47	+ 9 17.3	2.289	3.252	5.9	21.4
4 21	12 36.19	-10 37.0	1.638	2.607	7.4	22.2	4 21	12 39.21	+10 2.6	2.336	3.251	8.6	21.6
5 1	12 29.24	- 9 37.4	1.706	2.623	11.3	22.5	5 1	12 33.16	+10 30.4	2.407	3.250	11.3	21.8
5 11	12 24.70	- 8 49.1	1.797	2.638	14.7	22.7	5 11	12 28.78	+10 40.2	2.500	3.248	13.7	21.9
19146	1989 YY		4 3.7 354°89	2°9/ 1.7	18		56646	2000 KW ₃₂		4 3.7 319°81	5°6/30.8	18	
3 2	13 12.14	- 2 12.0	1.140	2.027	16.8	17.7	3 2	13 17.11	+ 4 23.7	1.293	2.174	15.6	18.2
3 12	13 8.70	- 1 25.7	1.078	2.022	12.1	17.4	3 12	13 12.11	+ 5 21.9	1.230	2.168	11.5	17.9
3 22	13 2.48	- 0 27.5	1.037	2.018	7.0	17.1	3 22	13 4.38	+ 6 23.0	1.188	2.163	7.4	17.7
4 1	12 54.43	+ 0 33.9	1.018	2.015	2.9	16.9	4 1	12 54.87	+ 7 17.3	1.171	2.158	5.6	17.6
4 11	12 45.99	+ 1 28.2	1.023	2.013	6.3	17.1	4 11	12 44.97	+ 7 55.3	1.178	2.153	8.4	17.7
4 21	12 38.58	+ 2 6.5	1.052	2.013	11.6	17.3	4 21	12 36.09	+ 8 10.6	1.209	2.148	12.8	17.9
5 1	12 33.41	+ 2 22.9	1.100	2.013	16.5	17.6	5 1	12 29.40	+ 8 0.4	1.261	2.144	17.0	18.2
5 11	12 31.17	+ 2 15.5	1.166	2.015	20.6	17.9	5 11	12 25.59	+ 7 25.7	1.331	2.140	20.6	18.4
219743	2001 XZ ₂₃₃		4 3.7 214°85	2°8/ 6.7	17 R		417747	2007 DX ₁₅		4 3.7 19°74	3°4/ 5.9	17	
3 2	13 15.48	-16 43.3	2.286	3.088	12.6	20.7	3 2	13 19.04	-12 43.2	1.481	2.318	16.5	20.6
3 12	13 10.07	-16 28.7	2.191	3.080	9.8	20.5	3 12	13 13.34	-13 22.7	1.412	2.322	12.7	20.3
3 22	13 2.87	-15 57.7	2.120	3.071	6.6	20.3	3 22	13 5.03	-13 46.5	1.364	2.326	8.3	20.1
4 1	12 54.50	-15 11.7	2.076	3.062	3.6	20.1	4 1	12 55.01	-13 54.7	1.341	2.331	4.2	19.9
4 11	12 45.80	-14 14.4	2.061	3.053	3.3	20.0	4 11	12 44.58	-13 50.3	1.343	2.337	4.3	19.9
4 21	12 37.61	-13 11.1	2.075	3.042	6.2	20.2	4 21	12 35.07	-13 38.0	1.372	2.343	8.3	20.1
5 1	12 30.73	-12 8.2	2.116	3.031	9.6	20.4	5 1	12 27.63	-13 24.2	1.425	2.350	12.6	20.4
5 11	12 25.72	-11 11.5	2.182	3.020	12.6	20.5	5 11	12 22.97	-13 15.0	1.499	2.357	16.3	20.6
462276	2008 EF ₁₅₄		4 3.7 26°06	15°3/27.4	18		427199	2014 VX ₂₅		4 3.7 87°57	6°8/29.1	18	
3 2	13 34.34	+32 14.6	1.403	2.215	18.5	20.1	3 2	13 19.64	+11 39.0	1.760	2.623	13.0	20.9
3 12	13 24.17	+32 42.7	1.367	2.223	16.6	20.0	3 12	13 13.04	+12 34.0	1.719	2.642	9.9	20.7
3 22	13 10.92	+32 38.5	1.351	2.231	15.5	19.9	3 22	13 4.47	+13 22.2	1.704	2.661	7.4	20.6
4 1	12 56.16	+31 52.2	1.357	2.240	15.4	20.0	4 1	12 54.82	+13 56.1	1.714	2.680	6.9	20.6
4 11	12 41.83	+30 21.2	1.385	2.249	16.5	20.1	4 11	12 45.22	+14 10.2	1.752	2.698	8.7	20.8
4 21	12 29.53	+28 10.7	1.436	2.260	18.4	20.2	4 21	12 36.65	+14 2.3	1.815	2.717	11.5	21.0
5 1	12 20.34	+25 30.5	1.507	2.271	20.4	20.4	5 1	12 29.92	+13 32.9	1.901	2.735	14.2	21.2
5 11	12 14.65	+22 31.6	1.595	2.282	22.4	20.6	5 11	12 25.47	+12 44.6	2.006	2.753	16.6	21.4
502108	2015 AZ ₂₇₉		4 3.7 111°73	9°2/11.3	17		352038	2006 VK ₈₆		4 3.7 222°10	5°5/27.4	17	
3 2	13 22.64	-29 58.7	1.982	2.709	16.7	21.8	3 2	13 14.88	+14 12.9	2.868	3.718	9.0	21.4
3 12	13 15.86	-31 19.8	1.900	2.713	14.5	21.7	3 12	13 9.22	+15 4.0	2.797	3.708	7.1	21.3
3 22	13 6.50	-32 18.1	1.840	2.718	12.1	21.5	3 22	13 2.20	+15 50.1	2.753	3.698	5.7	21.2
4 1	12 55.33	-32 48.9	1.802	2.723	10.1	21.4	4 1	12 54.36	+16 26.1	2.737	3.687	5.6	21.2
4 11	12 43.56	-32 51.1	1.790	2.727	9.2	21.4	4 11	12 46.34	+16 48.1	2.750	3.675	7.0	21.2
4 21	12 32.46	-32 27.6	1.804	2.732	10.0	21.4	4 21	12 38.79	+16 53.7	2.791	3.664	8.9	21.4
5 1	12 23.22	-31 45.2	1.842	2.736	11.9	21.5	5 1	12 32.30	+16 42.1	2.855	3.651	11.0	21.5
5 11	12 16.64	-30 52.9	1.903	2.740	14.2	21.7	5 11	12 27.29	+16 14.3	2.940	3.638	12.8	21.6
421383	2013 US ₅		4 3.7 211°57	1°5/ 5.3	17		167769	2004 YW ₂₂		4 3.7 157°38	4°8/30.3	18	
3 2	13 13.32	-12 48.1	1.948	2.778	13.4	20.9	3 2	13 16.60	+ 4 0.8	1.691	2.559	13.2	20.3
3 12	13 8.64	-12 15.2	1.867	2.776	10.1	20.7	3 12	13 11.11	+ 5 16.9	1.631	2.564	9.6	20.0
3 22	13 2.08	-11 25.8	1.809	2.775	6.3	20.5	3 22	13 3.52	+ 6 35.9	1.596	2.568	6.2	19.8
4 1	12 54.33	-10 23.3	1.778	2.773	2.4	20.2	4 1	12 54.66	+ 7 49.1	1.588	2.572	4.9	19.8
4 11	12 46.29	- 9 13.3	1.775	2.770	2.9	20.3	4 11	12 45.60	+ 8 48.3	1.607	2.575	7.3	19.9
4 21	12 38.90	- 8 2.8	1.800	2.768	6.9	20.5	4 21	12 37.39	+ 9 27.8	1.652	2.578	10.8	20.1
5 1	12 32.98	- 6 58.5	1.851	2.766	10.7	20.7	5 1	12 30.93	+ 9 44.6	1.720	2.581	14.3	20.3
5 11	12 29.07	- 6 6.1	1.924	2.763	14.0	20.9	5 11	12 26.76	+ 9 39.0	1.807	2.583	17.2	20.6
80120	1999 RU ₁₃₉		4 3.7 185°60	2°0/ 5.4	18		501030	2013 RF ₆₈		4 3.7 217°45			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
470881	2009 <i>BG</i> ₄₅		4 3.7 328°63	3°5/ 7.1 17			112585	2002 <i>PD</i> ₅₆		4 3.8 218°59	0°4/ 4.2 17		
3 2	13 14.62	-16 46.2	2.117	2.924	13.3	21.3	3 2	13 14.86	-10 14.2	1.873	2.711	13.5	19.7
3 12	13 9.55	-16 59.1	2.032	2.922	10.4	21.1	3 12	13 9.87	-9 29.2	1.788	2.705	10.0	19.5
3 22	13 2.62	-16 56.2	1.969	2.919	7.2	20.9	3 22	13 2.88	-8 28.2	1.727	2.699	5.9	19.2
4 1	12 54.48	-16 38.2	1.933	2.917	4.2	20.7	4 1	12 54.58	-7 15.7	1.694	2.692	1.5	18.9
4 11	12 46.01	-16 8.0	1.925	2.915	3.8	20.7	4 11	12 45.93	-5 58.3	1.689	2.684	3.1	19.0
4 21	12 38.11	-15 30.1	1.945	2.913	6.5	20.9	4 21	12 37.94	-4 43.5	1.712	2.676	7.6	19.2
5 1	12 31.60	-14 50.2	1.991	2.911	9.8	21.1	5 1	12 31.48	-3 38.4	1.761	2.668	11.6	19.5
5 11	12 27.07	-14 13.9	2.061	2.910	12.8	21.2	5 11	12 27.15	-2 48.1	1.831	2.660	15.1	19.7
44238	1998 <i>QV</i> ₃₃		4 3.7 233°78	0°0/ 3.9 18			299293	2005 <i>QJ</i>		4 3.8 223°56	1°8/ 1.5 17		
3 2	13 15.90	-8 36.8	2.003	2.841	12.7	19.7	3 2	13 10.92	-2 29.2	2.518	3.371	9.9	20.7
3 12	13 10.57	-8 0.2	1.911	2.828	9.4	19.5	3 12	13 6.53	-1 31.0	2.438	3.366	7.1	20.5
3 22	13 3.26	-7 10.3	1.843	2.815	5.5	19.2	3 22	13 0.74	-0 26.0	2.384	3.361	4.0	20.3
4 1	12 54.63	-6 10.9	1.803	2.801	1.3	18.9	4 1	12 54.09	+0 41.1	2.360	3.355	1.8	20.1
4 11	12 45.61	-5 7.7	1.792	2.787	3.2	19.0	4 11	12 47.24	+1 44.8	2.365	3.350	3.8	20.2
4 21	12 37.14	-4 7.2	1.810	2.772	7.4	19.2	4 21	12 40.86	+2 40.3	2.399	3.344	6.9	20.4
5 1	12 30.11	-3 15.6	1.853	2.756	11.4	19.4	5 1	12 35.54	+3 23.7	2.459	3.338	9.9	20.6
5 11	12 25.14	-2 37.4	1.919	2.740	14.8	19.6	5 11	12 31.74	+3 52.7	2.541	3.332	12.4	20.8
370750	2004 <i>RU</i> ₁₉₁		4 3.7 161°89	1°0/ 5.1 16			506425	2000 <i>DQ</i> ₁₁₀		4 3.8 115°94	10°6/ 11.0 17		
3 2	13 13.75	-12 29.0	2.741	3.555	10.4	21.8	3 2	14 20.98	-76 22.5	4.762	4.884	11.7	24.1
3 12	13 8.42	-11 45.4	2.661	3.563	7.8	21.6	3 12	14 4.57	-77 59.3	4.707	4.912	11.6	24.1
3 22	13 1.74	-10 49.7	2.606	3.570	4.8	21.5	3 22	13 38.45	-79 15.3	4.660	4.939	11.4	24.1
4 1	12 54.26	-9 45.1	2.581	3.577	1.7	21.2	4 1	13 3.07	-80 1.2	4.621	4.966	11.2	24.1
4 11	12 46.65	-8 35.9	2.587	3.582	2.2	21.3	4 11	12 23.06	-80 10.3	4.592	4.991	11.0	24.1
4 21	12 39.55	-7 27.1	2.624	3.587	5.3	21.5	4 21	11 45.83	-79 42.4	4.576	5.016	10.8	24.1
5 1	12 33.53	-6 23.6	2.688	3.592	8.2	21.7	5 1	11 17.13	-78 44.5	4.572	5.040	10.7	24.1
5 11	12 29.01	-5 29.3	2.778	3.595	10.8	21.9	5 11	10 58.45	-77 27.3	4.582	5.064	10.6	24.1
128470	2004 <i>OX</i> ₁₂		4 3.8 272°83	0°6/ 3.1 18			391270	2006 <i>SL</i> ₉₀		4 3.8 334°15	1°0/ 2.9 17		
3 2	13 12.95	-5 8.6	2.447	3.291	10.5	20.2	3 2	13 17.66	-2 32.1	2.053	2.902	12.0	20.2
3 12	13 8.10	-4 45.5	2.354	3.276	7.6	20.0	3 12	13 11.70	-2 36.8	1.973	2.898	8.7	20.0
3 22	13 1.70	-4 14.8	2.287	3.262	4.4	19.8	3 22	13 3.85	-2 36.5	1.919	2.894	5.0	19.7
4 1	12 54.29	-3 39.7	2.249	3.247	1.0	19.5	4 1	12 54.79	-2 34.2	1.892	2.890	1.3	19.5
4 11	12 46.58	-3 4.4	2.240	3.232	2.9	19.6	4 11	12 45.43	-2 33.5	1.894	2.886	3.5	19.6
4 21	12 39.31	-2 32.9	2.259	3.217	6.5	19.8	4 21	12 36.70	-2 37.6	1.925	2.883	7.4	19.9
5 1	12 33.16	-2 9.1	2.306	3.202	9.7	20.0	5 1	12 29.43	-2 49.1	1.982	2.880	11.0	20.1
5 11	12 28.63	-1 55.8	2.375	3.187	12.5	20.1	5 11	12 24.19	-3 10.0	2.061	2.877	14.0	20.3
51376	2001 <i>AZ</i> ₂₃		4 3.8 306°28	5°6/ 30.3 18			403280	2009 <i>BD</i> ₂₂		4 3.8 168°99	4°1/ 30.8 18		
3 2	13 15.32	+4 27.9	1.402	2.281	14.7	18.7	3 2	13 18.23	+3 12.9	1.895	2.755	12.4	22.1
3 12	13 10.70	+5 36.6	1.333	2.271	10.8	18.5	3 12	13 12.13	+4 19.3	1.831	2.760	9.0	21.9
3 22	13 3.54	+6 49.0	1.288	2.262	7.1	18.2	3 22	13 4.07	+5 28.7	1.792	2.764	5.6	21.7
4 1	12 54.72	+7 55.4	1.267	2.252	5.7	18.1	4 1	12 54.82	+6 34.0	1.782	2.768	4.1	21.6
4 11	12 45.49	+8 46.2	1.272	2.243	8.3	18.3	4 11	12 45.39	+7 27.9	1.800	2.771	6.4	21.8
4 21	12 37.14	+9 14.3	1.300	2.234	12.5	18.5	4 21	12 36.74	+8 5.3	1.845	2.773	9.8	22.0
5 1	12 30.76	+9 16.5	1.350	2.226	16.5	18.7	5 1	12 29.70	+8 23.2	1.914	2.774	13.1	22.2
5 11	12 27.06	+8 53.2	1.418	2.218	20.0	18.9	5 11	12 24.82	+8 21.4	2.004	2.774	15.9	22.4
95156	2002 <i>AK</i> ₁₇₅		4 3.8 331°72	2°8/ 1.1 18			386546	2009 <i>DE</i> ₁₄		4 3.8 299°7	6°0/ 27.4 17		
3 2	13 13.38	-1 6.8	1.719	2.586	13.1	19.7	3 2	13 9.88	+7 32.3	1.891	2.768	11.6	20.2
3 12	13 8.83	+0 10.1	1.650	2.584	9.4	19.5	3 12	13 6.08	+9 25.3	1.841	2.774	8.7	20.0
3 22	13 2.26	+0 54.4	1.604	2.582	5.4	19.2	3 22	13 0.58	+11 17.8	1.816	2.780	6.4	19.9
4 1	12 54.42	+2 0.0	1.585	2.579	2.8	19.1	4 1	12 54.05	+13 0.6	1.818	2.787	6.3	19.9
4 11	12 46.31	+2 59.0	1.593	2.577	5.4	19.2	4 11	12 47.39	+14 25.0	1.848	2.793	8.4	20.0
4 21	12 38.94	+3 44.8	1.628	2.575	9.4	19.4	4 21	12 41.41	+15 25.8	1.903	2.800	11.2	20.2
5 1	12 33.16	+4 13.1	1.686	2.574	13.1	19.7	5 1	12 36.84	+16 0.4	1.980	2.808	14.0	20.4
5 11	12 29.57	+4 22.0	1.765	2.572	16.4	19.9	5 11	12 34.14	+16 9.8	2.076	2.816	16.3	20.6
276811	2004 <i>PF</i> ₃₁		4 3.8 303°80	7°8/ 9.3 17			254476	2005 <i>EL</i> ₁₁		4 3.8 356°30	2°7/ 5.3 18		
3 2	13 17.66	-24 8.5	1.696	2.477	17.1	20.5	3 2	13 20.02	-10 35.0	1.333	2.181	17.3	19.8
3 12	13 12.56	-25 7.3	1.601	2.462	14.4	20.3	3 12	13 14.37	-11 12.1	1.261	2.179	13.2	19.6
3 22	13 4.78	-25 44.2	1.526	2.446	11.3	20.1	3 22	13 5.81	-11 34.6	1.210	2.178	8.4	19.3
4 1	12 55.04	-25 55.7	1.474	2.431	8.7	19.9	4 1	12 55.26	-11 42.9	1.183	2.177	3.6	19.0
4 11	12 44.53	-25 41.3	1.448	2.417	7.8	19.8	4 11	12 44.18	-11 40.3	1.181	2.176	4.2	19.0
4 21	12 34.57	-25 4.9	1.446	2.402	9.5	19.8	4 21	12 34.05	-11 32.0	1.205	2.176	9.1	19.3
5 1	12 26.45	-24 14.0	1.468	2.388	12.6	20.0	5 1	12 26.18	-11 24.4	1.252	2.177	13.9	19.6
5 11	12 21.05	-23 18.1	1.512	2.374	16.0	20.1	5 11	12 21.38	-11 23.3	1.318	2.178	18.0	19.8
253052	2002 <i>TN</i> ₂₆		4 3.8 195°15	1°0/ 2.9 17			128258	2003 <i>SF</i> ₂₉₇		4 3.8 218°81	1°2/ 4.9 17		
3 2	13 17.87	-4 23.2	1.930	2.777	12.7	21.2	3 2	13 15.07	-10 53.3	2.136	2.965	12.4	20.8
3 12	13 11.95	-3 57.9	1.852	2.776	9.3	21.0	3 12	13 9.82	-10 40.2	2.051	2.961	9.3	20.6
3 22	13 4.02	-3 24.0	1.799	2.774	5.3	20.7	3 22	13 2.77	-10 14.5	1.990	2.956	5.7	20.4
4 1	12 54.81	-2 45.7	1.773	2.771	1.3	20.4	4 1	12 54.55	-9 38.8	1.956	2.952	2.0	20.1
4 11	12 45.31	-2 8.3	1.776	2.768	3.7	20.6	4 11	12 46.04	-8 57.2	1.952	2.947	2.7	20.2
4 21	12 36.50	-1 37.2	1.807	2.764	7.9	20.9	4 21	12 38.09	-8 14.8	1.975	2.942	6.5	20.4
5 1	12 29.24	-1 16.6	1.864	2.760	11.7	21.1	5 1	12 31.51	-7 36.7	2.025	2.937	10.1	20.6
5 11	12 24.13	-1 9.2	1.943	2.756	14.9	21.3	5 11	12 26.84	-7 7.5	2.099	2.931	13.2	20.8
122470	2000 <i>QQ</i> ₁₅₅		4 3.8 152°24	4°8/ 9.5 18			160988	2002 <i>CK</i> ₁₃₁		4 3.8 141°48	2°6/ 5.9 18		
3 2	13 16.89	-24 1.6	2.553	3.308	1								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
323083	2002 <i>TQ</i> ₂₆₁		4 3.8 199°09	0°0/ 3.6 16			508029	2015 <i>BQ</i> ₄₃₅		4 3.8 165°73	0°8/ 2.9 17		
3 2	13 15.63	- 8 41.3	2.084	2.920	12.4	22.2	3 2	13 14.80	- 5 30.8	2.180	3.025	11.6	21.7
3 12	13 10.24	- 7 59.8	2.000	2.917	9.1	21.9	3 12	13 9.50	- 4 53.8	2.106	3.028	8.4	21.5
3 22	13 3.01	- 7 5.5	1.942	2.913	5.3	21.7	3 22	13 2.52	- 4 7.9	2.057	3.031	4.8	21.3
4 1	12 54.61	- 6 2.6	1.911	2.909	1.2	21.4	4 1	12 54.52	- 3 17.2	2.036	3.034	1.1	21.0
4 11	12 45.93	- 4 56.8	1.909	2.904	3.0	21.5	4 11	12 46.32	- 2 27.0	2.044	3.036	3.3	21.2
4 21	12 37.86	- 3 54.4	1.937	2.898	7.1	21.8	4 21	12 38.74	- 1 42.6	2.081	3.038	7.0	21.4
5 1	12 31.19	- 3 1.1	1.990	2.892	10.8	22.0	5 1	12 32.48	- 1 8.1	2.144	3.040	10.4	21.6
5 11	12 26.47	- 2 21.2	2.067	2.885	13.9	22.2	5 11	12 28.06	- 0 46.4	2.230	3.041	13.3	21.8
359372	2010 <i>CN</i> ₁₈₉		4 3.8 207°61	1°0/ 2.7 17			242141	2003 <i>AY</i> ₉₃		4 3.8 109°78	3°9/ 9.0 17		
3 2	13 14.62	- 9 32.1	1.812	2.654	13.7	20.7	3 2	13 13.12	-22 28.7	2.595	3.365	12.1	20.8
3 12	13 9.72	- 7 45.4	1.728	2.649	9.9	20.4	3 12	13 8.09	-22 10.0	2.521	3.382	9.7	20.7
3 22	13 2.80	- 5 38.8	1.669	2.644	5.6	20.2	3 22	13 1.62	-21 33.5	2.470	3.399	7.1	20.5
4 1	12 54.58	- 3 20.0	1.639	2.637	1.3	19.9	4 1	12 54.31	-20 40.7	2.446	3.416	4.7	20.4
4 11	12 46.05	- 0 59.7	1.640	2.630	4.1	20.0	4 11	12 46.89	-19 35.1	2.451	3.433	4.0	20.4
4 21	12 38.21	+ 1 11.0	1.669	2.623	8.7	20.3	4 21	12 40.07	-18 21.8	2.484	3.449	5.5	20.5
5 1	12 31.94	+ 3 2.7	1.725	2.614	12.8	20.5	5 1	12 34.45	-17 6.8	2.546	3.464	8.0	20.7
5 11	12 27.84	+ 4 30.2	1.803	2.605	16.3	20.7	5 11	12 30.46	-15 55.7	2.633	3.480	10.4	20.9
37757	1997 <i>EG</i> ₂₆		4 3.8 92°87	6°4/ 9.9 18			248602	2006 <i>DN</i> ₃₈		4 3.8 332°63	4°7/30.9 17		
3 2	13 17.41	-24 38.2	1.960	2.728	15.6	18.5	3 2	13 9.07	- 0 52.8	1.077	1.972	16.8	19.2
3 12	13 11.76	-25 8.3	1.886	2.739	12.9	18.3	3 12	13 6.75	+ 0 36.5	1.007	1.955	12.2	18.9
3 22	13 3.97	-25 16.1	1.832	2.750	9.9	18.2	3 22	13 1.56	+ 2 21.5	0.958	1.939	7.3	18.6
4 1	12 54.84	-25 0.6	1.804	2.761	7.4	18.0	4 1	12 54.39	+ 4 10.3	0.931	1.924	4.8	18.4
4 11	12 45.40	-24 24.0	1.801	2.772	6.4	18.0	4 11	12 46.64	+ 5 48.0	0.927	1.910	8.4	18.5
4 21	12 36.73	-23 31.3	1.826	2.783	7.8	18.1	4 21	12 39.80	+ 7 1.8	0.945	1.898	13.8	18.8
5 1	12 29.73	-22 30.1	1.876	2.793	10.4	18.3	5 1	12 35.17	+ 7 43.5	0.983	1.887	18.8	19.0
5 11	12 25.03	-21 28.3	1.949	2.803	13.2	18.5	5 11	12 33.59	+ 7 51.2	1.035	1.877	23.1	19.2
390102	2012 <i>VC</i> ₁₇		4 3.8 131°47	4°1/29.7 17			88927	2001 <i>TQ</i> ₂₀		4 3.8 267°29	5°8/ 9.2 18		
3 2	13 13.26	+ 7 12.9	2.521	3.381	9.7	21.4	3 2	13 15.37	-23 19.4	1.911	2.691	15.5	19.4
3 12	13 8.12	+ 8 4.2	2.461	3.388	7.1	21.2	3 12	13 10.54	-23 30.3	1.810	2.675	12.8	19.2
3 22	13 1.61	+ 8 54.2	2.429	3.394	4.9	21.1	3 22	13 3.46	-23 18.3	1.730	2.658	9.7	18.9
4 1	12 54.29	+ 9 38.0	2.424	3.401	4.2	21.1	4 1	12 54.79	-22 42.0	1.674	2.641	6.9	18.7
4 11	12 46.87	+10 10.8	2.449	3.408	5.8	21.2	4 11	12 45.57	-21 43.8	1.645	2.624	5.9	18.6
4 21	12 40.01	+10 29.7	2.501	3.414	8.3	21.3	4 21	12 36.88	-20 29.4	1.642	2.606	7.9	18.7
5 1	12 34.31	+10 33.2	2.578	3.420	10.7	21.5	5 1	12 29.77	-19 7.1	1.665	2.589	11.2	18.9
5 11	12 30.18	+10 21.2	2.677	3.426	12.8	21.7	5 11	12 24.98	-17 46.1	1.712	2.571	14.5	19.0
341165	2007 <i>QO</i> ₁₃		4 3.8 178°95	1°3/ 2.3 17			338371	2002 <i>XO</i> ₁₁₉		4 3.8 123°56	1°1/ 2.4 17		
3 2	13 13.45	- 3 34.8	2.311	3.160	10.9	21.7	3 2	13 12.88	- 4 17.1	2.473	3.319	10.3	21.6
3 12	13 8.44	- 2 53.4	2.235	3.161	7.8	21.5	3 12	13 7.88	- 3 30.6	2.408	3.331	7.4	21.5
3 22	13 1.88	- 2 4.8	2.186	3.161	4.4	21.3	3 22	13 1.49	- 2 37.0	2.368	3.344	4.2	21.3
4 1	12 54.36	- 1 13.4	2.164	3.162	1.4	21.1	4 1	12 54.30	- 1 40.7	2.358	3.356	1.2	21.1
4 11	12 46.65	- 0 24.2	2.173	3.162	3.5	21.2	4 11	12 47.00	- 0 46.7	2.378	3.367	3.2	21.2
4 21	12 39.50	+ 0 17.9	2.209	3.161	7.0	21.4	4 21	12 40.27	+ 0 0.6	2.427	3.378	6.4	21.5
5 1	12 33.57	+ 0 49.2	2.272	3.161	10.2	21.6	5 1	12 34.70	+ 0 37.5	2.502	3.389	9.4	21.7
5 11	12 29.35	+ 1 7.3	2.358	3.160	12.9	21.8	5 11	12 30.70	+ 1 1.9	2.600	3.400	11.9	21.9
214508	2006 <i>AF</i> ₈₄		4 3.8 275°23	2°0/31.1 18			423707	2006 <i>AJ</i> ₁₀₄		4 3.8 228°18	6°2/ 9.5 17		
3 2	13 7.97	+ 4 18.7	4.281	5.133	6.2	19.9	3 2	13 17.75	-24 7.1	2.106	2.872	14.7	20.7
3 12	13 3.91	+ 4 40.8	4.203	5.128	4.5	19.8	3 12	13 12.06	-24 43.3	2.014	2.867	12.2	20.5
3 22	12 59.05	+ 5 3.1	4.153	5.123	2.8	19.6	3 22	13 4.23	-24 59.7	1.944	2.861	9.5	20.4
4 1	12 53.73	+ 5 23.3	4.132	5.119	2.0	19.6	4 1	12 54.95	-24 54.5	1.899	2.856	7.1	20.2
4 11	12 48.31	+ 5 39.2	4.142	5.114	3.1	19.6	4 11	12 45.20	-24 28.9	1.880	2.850	6.3	20.1
4 21	12 43.15	+ 5 48.9	4.182	5.109	4.8	19.8	4 21	12 36.01	-23 46.9	1.889	2.844	7.7	20.2
5 1	12 38.60	+ 5 51.3	4.249	5.104	6.6	19.9	5 1	12 28.33	-22 54.9	1.924	2.838	10.4	20.3
5 11	12 34.93	+ 5 45.5	4.339	5.099	8.1	20.0	5 11	12 22.86	-22 0.5	1.982	2.832	13.2	20.5
302878	2003 <i>HU</i> ₅₈		4 3.8 310°20	3°1/ 1.1 17			274581	2008 <i>TZ</i> ₄		4 3.8 280°08	0°6/ 4.4 17		
3 2	13 17.01	+ 3 38.4	2.156	3.013	11.2	20.3	3 2	13 14.73	- 9 22.9	1.903	2.743	13.2	21.4
3 12	13 11.18	+ 3 50.8	2.075	3.003	8.2	20.0	3 12	13 9.91	- 9 2.4	1.806	2.724	9.9	21.1
3 22	13 3.54	+ 4 3.7	2.020	2.993	5.0	19.8	3 22	13 3.02	- 8 28.2	1.734	2.705	5.9	20.8
4 1	12 54.74	+ 4 13.0	1.993	2.984	3.1	19.7	4 1	12 54.69	- 7 43.5	1.688	2.685	1.7	20.5
4 11	12 45.66	+ 4 14.5	1.995	2.974	5.0	19.8	4 11	12 45.89	- 6 53.2	1.670	2.665	3.1	20.6
4 21	12 37.18	+ 4 5.3	2.024	2.965	8.3	20.0	4 21	12 37.60	- 6 3.5	1.679	2.646	7.5	20.8
5 1	12 30.06	+ 3 43.6	2.080	2.956	11.5	20.2	5 1	12 30.76	- 5 20.6	1.714	2.626	11.6	21.0
5 11	12 24.87	+ 3 9.1	2.157	2.947	14.3	20.3	5 11	12 26.05	- 4 49.5	1.771	2.606	15.2	21.2
111387	2001 <i>XY</i> ₁₅₈		4 3.8 134°61	2°9/ 6.3 18			379375	2009 <i>WW</i> ₂₅₉		4 3.8 57°08	7°3/28.3 17		
3 2	13 16.97	-15 45.3	1.594	2.419	16.1	19.7	3 2	13 16.84	+12 37.8	1.723	2.591	13.0	20.3
3 12	13 11.65	-15 23.5	1.523	2.426	12.4	19.5	3 12	13 11.20	+13 40.0	1.677	2.601	10.1	20.1
3 22	13 3.99	-14 40.2	1.473	2.433	8.1	19.2	3 22	13 3.55	+14 35.0	1.656	2.611	7.8	20.0
4 1	12 54.85	-13 37.8	1.448	2.439	3.9	19.0	4 1	12 54.76	+15 14.6	1.660	2.622	7.5	20.0
4 11	12 45.43	-12 23.1	1.451	2.446	3.7	19.0	4 11	12 45.90	+15 32.9	1.691	2.632	9.3	20.2
4 21	12 36.91	-11 4.4	1.481	2.452	7.8	19.3	4 21	12 37.99	+15 27.3	1.746	2.643	12.1	20.3
5 1	12 30.29	- 9 50.8	1.535	2.457	12.0	19.5	5 1	12 31.85	+14 58.1	1.823	2.654	14.9	20.6
5 11	12 26.19	- 8 49.6	1.611	2.462	15.7	19.8	5 11	12 27.95	+14 8.1	1.918	2.665	17.3	20.8
341525	2007 <i>TU</i> ₄₃₅		4 3.8 261°06	1°4/ 5.4 18			193612	2001 <i>CG</i> ₁₃		4 3.8 352°26	2°6/ 1.6 17		

EPHEMERIDES

4 3.8

4 3.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
59693	1999 JA ₁₁₆		4 3.8 305°06	2°6/ 6.4	18		419693	2010 UY ₄₀		4 3.8 203°33	1°1/ 2.7	14	C
3 2	13 11.12	-16 27.6	1.666	2.495	15.3	19.3	3 2	13 16.93	-4 47.1	2.040	2.886	12.2	22.0
3 12	13 7.50	-15 45.3	1.574	2.480	11.9	19.1	3 12	13 11.23	-4 6.9	1.959	2.882	8.9	21.8
3 22	13 1.70	-14 38.7	1.504	2.465	7.8	18.8	3 22	13 3.65	-3 17.3	1.902	2.877	5.1	21.5
4 1	12 54.41	-13 10.6	1.458	2.450	3.7	18.5	4 1	12 54.84	-2 22.8	1.873	2.871	1.3	21.2
4 11	12 46.68	-11 28.0	1.440	2.436	3.5	18.5	4 11	12 45.74	-1 29.3	1.874	2.865	3.7	21.4
4 21	12 39.58	-9 40.5	1.449	2.422	7.7	18.7	4 21	12 37.25	-0 42.4	1.903	2.857	7.7	21.6
5 1	12 34.10	-7 58.5	1.483	2.408	12.1	18.9	5 1	12 30.21	-0 7.0	1.958	2.850	11.4	21.8
5 11	12 30.94	-6 30.9	1.538	2.395	16.0	19.1	5 11	12 25.19	+0 13.9	2.035	2.841	14.5	22.0
268166	2004 VN ₂₆		4 3.8 200°65	0°4/ 4.1	17		506059	2015 LG ₁₉		4 3.8 2°26	5°5/ 9.8	17	
3 2	13 16.33	-7 58.3	2.017	2.856	12.6	20.4	3 2	13 10.90	-23 51.7	1.944	2.728	15.1	20.4
3 12	13 10.81	-7 47.1	1.937	2.854	9.3	20.1	3 12	13 7.08	-23 50.0	1.861	2.727	12.4	20.2
3 22	13 3.39	-7 25.3	1.882	2.853	5.5	19.9	3 22	13 1.33	-23 24.7	1.799	2.727	9.4	20.0
4 1	12 54.76	-6 55.9	1.854	2.851	1.4	19.6	4 1	12 54.33	-22 36.1	1.761	2.728	6.6	19.8
4 11	12 45.84	-6 23.3	1.854	2.850	2.9	19.7	4 11	12 47.04	-21 27.9	1.749	2.728	5.5	19.7
4 21	12 37.55	-5 52.4	1.883	2.848	7.0	20.0	4 21	12 40.40	-20 6.4	1.763	2.730	7.2	19.8
5 1	12 30.73	-5 27.9	1.938	2.846	10.7	20.2	5 1	12 35.25	-18 40.0	1.804	2.732	10.1	20.0
5 11	12 25.93	-5 13.4	2.016	2.843	13.9	20.4	5 11	12 32.17	-17 17.0	1.867	2.734	13.2	20.2
424986	2009 BX ₁₈₇		4 3.8 181°13	3°9/29.7	17		60637	2000 FX ₃₀		4 3.8 53°39	3°4/ 1.4	18	
3 2	13 12.01	+5 2.1	2.451	3.314	9.8	21.1	3 2	13 16.87	-1 16.8	1.190	2.068	16.8	19.1
3 12	13 7.34	+6 13.2	2.385	3.314	7.2	20.9	3 12	13 11.95	-0 19.8	1.139	2.079	12.1	18.8
3 22	13 1.23	+7 25.6	2.345	3.314	4.8	20.8	3 22	13 4.29	+0 46.7	1.110	2.089	7.0	18.5
4 1	12 54.27	+8 33.5	2.334	3.314	4.0	20.7	4 1	12 54.98	+1 53.3	1.105	2.100	3.4	18.4
4 11	12 47.14	+9 31.1	2.352	3.314	5.8	20.8	4 11	12 45.50	+2 49.7	1.124	2.111	6.5	18.6
4 21	12 40.55	+10 14.3	2.398	3.313	8.4	21.0	4 21	12 37.25	+3 28.0	1.168	2.122	11.5	18.9
5 1	12 35.08	+10 40.5	2.469	3.313	11.0	21.2	5 1	12 31.31	+3 43.8	1.233	2.134	16.0	19.2
5 11	12 31.19	+10 49.2	2.560	3.311	13.3	21.3	5 11	12 28.28	+3 36.3	1.316	2.146	19.7	19.4
184742	2005 SA ₂₂₅		4 3.8 255°00	0°0/ 3.6	18		161539	2004 VQ ₅₇		4 3.8 196°51	2°1/ 2.1	18	
3 2	13 11.48	-8 4.0	2.525	3.362	10.4	20.9	3 2	13 20.02	-1 38.3	1.818	2.670	13.2	19.9
3 12	13 7.02	-7 29.1	2.435	3.352	7.7	20.7	3 12	13 13.65	-1 6.7	1.741	2.668	9.6	19.7
3 22	13 1.10	-6 44.2	2.369	3.342	4.5	20.5	3 22	13 5.11	-0 28.2	1.689	2.665	5.5	19.4
4 1	12 54.26	-5 52.5	2.333	3.331	1.0	20.2	4 1	12 55.18	+0 12.0	1.665	2.661	2.2	19.2
4 11	12 47.16	-4 58.7	2.326	3.320	2.6	20.3	4 11	12 44.92	+0 47.7	1.669	2.657	4.6	19.3
4 21	12 40.50	-4 7.3	2.348	3.309	6.0	20.5	4 21	12 35.41	+1 13.9	1.701	2.652	8.8	19.6
5 1	12 34.92	-3 22.9	2.397	3.298	9.2	20.7	5 1	12 27.60	+1 26.4	1.759	2.646	12.7	19.8
5 11	12 30.87	-2 48.9	2.469	3.287	11.9	20.9	5 11	12 22.10	+1 23.5	1.837	2.640	16.0	20.0
60606	1999 TS ₁₁₈		4 3.8 210°70	1°1/ 4.9	18		36012	1999 NC ₃₉		4 3.8 261°11	4°0/29.7	18	
3 2	13 13.63	-11 41.0	2.087	2.917	12.6	19.4	3 2	13 12.05	+5 46.8	2.483	3.345	9.7	19.2
3 12	13 8.82	-11 10.0	2.004	2.914	9.4	19.2	3 12	13 7.45	+6 49.6	2.402	3.330	7.2	19.0
3 22	13 2.23	-10 24.5	1.944	2.911	5.8	18.9	3 22	13 1.36	+7 53.7	2.347	3.315	4.8	18.9
4 1	12 54.51	-9 27.7	1.912	2.908	2.0	18.7	4 1	12 54.34	+8 53.5	2.321	3.300	4.1	18.8
4 11	12 46.52	-8 24.9	1.909	2.905	2.7	18.7	4 11	12 47.06	+9 43.4	2.324	3.285	5.9	18.9
4 21	12 39.11	-7 22.1	1.934	2.901	6.6	18.9	4 21	12 40.23	+10 19.4	2.354	3.269	8.6	19.0
5 1	12 33.07	-6 25.5	1.985	2.897	10.3	19.2	5 1	12 34.49	+10 38.7	2.409	3.253	11.3	19.2
5 11	12 28.93	-5 39.9	2.059	2.893	13.4	19.4	5 11	12 30.33	+10 40.6	2.485	3.237	13.6	19.3
142063	2002 QS ₃₂		4 3.8 298°91	0°8/ 3.2	17		310156	2011 QO ₃₅		4 3.8 238°86	4°3/29.0	18	
3 2	13 14.22	-6 30.3	1.471	2.333	15.2	20.5	3 2	13 12.77	+7 45.6	2.685	3.544	9.2	20.8
3 12	13 10.02	-5 52.2	1.383	2.314	11.2	20.2	3 12	13 7.87	+8 48.5	2.605	3.530	6.9	20.6
3 22	13 3.30	-4 58.7	1.318	2.295	6.5	19.9	3 22	13 1.57	+9 51.1	2.552	3.515	4.9	20.5
4 1	12 54.80	-3 54.9	1.277	2.275	1.4	19.7	4 1	12 54.38	+10 48.1	2.528	3.501	4.4	20.4
4 11	12 45.70	-2 48.8	1.263	2.256	4.4	19.7	4 11	12 46.96	+11 34.5	2.533	3.485	6.0	20.5
4 21	12 37.26	-1 49.2	1.273	2.238	9.6	19.9	4 21	12 39.98	+12 6.6	2.566	3.470	8.4	20.6
5 1	12 30.65	-1 3.8	1.307	2.219	14.5	20.1	5 1	12 34.02	+12 22.3	2.624	3.454	10.9	20.8
5 11	12 26.67	-0 37.6	1.361	2.201	18.6	20.3	5 11	12 29.55	+12 21.2	2.702	3.437	13.1	20.9
465060	2006 SK ₄₁		4 3.8 249°92	1°0/ 2.8	17		241854	2001 TL ₁₀₄		4 3.8 134°36	1°4/ 5.7	18	
3 2	13 16.09	-5 43.3	1.879	2.728	13.0	22.3	3 2	13 11.74	-13 42.1	2.568	3.384	11.0	20.6
3 12	13 10.89	-4 57.3	1.786	2.711	9.5	22.1	3 12	13 7.11	-13 4.3	2.491	3.392	8.3	20.4
3 22	13 3.58	-3 59.2	1.718	2.693	5.4	21.8	3 22	13 1.10	-12 13.3	2.438	3.400	5.2	20.2
4 1	12 54.85	-2 53.5	1.677	2.675	1.3	21.4	4 1	12 54.26	-11 12.0	2.414	3.408	2.1	20.0
4 11	12 45.64	-1 47.2	1.664	2.656	3.9	21.6	4 11	12 47.29	-10 5.0	2.420	3.415	2.3	20.0
4 21	12 36.99	-0 47.3	1.680	2.636	8.4	21.8	4 21	12 40.84	-8 57.3	2.455	3.422	5.4	20.3
5 1	12 29.84	+0 0.1	1.720	2.616	12.5	22.0	5 1	12 35.50	-7 54.2	2.518	3.429	8.4	20.5
5 11	12 24.86	+0 31.0	1.782	2.596	16.0	22.2	5 11	12 31.69	-6 59.9	2.605	3.436	11.0	20.6
441311	2008 AM ₇₂		4 3.8 355°90	18°4/18.3	17		429659	2011 GR ₄₆		4 3.8 214°35	2°7/31.8	17	
3 2	13 12.22	-40 53.9	1.362	2.067	24.0	18.8	3 2	13 14.07	+0 3.9	2.186	3.043	11.1	21.1
3 12	13 9.77	-43 38.5	1.289	2.055	22.4	18.6	3 12	13 9.04	+1 0.1	2.109	3.038	8.0	20.9
3 22	13 3.82	-45 50.9	1.231	2.045	20.9	18.4	3 22	13 2.33	+2 1.9	2.057	3.032	4.7	20.7
4 1	12 55.03	-47 20.1	1.188	2.037	19.5	18.3	4 1	12 54.56	+3 3.6	2.034	3.026	2.7	20.5
4 11	12 44.93	-47 59.3	1.162	2.032	18.6	18.2	4 11	12 46.55	+3 59.3	2.040	3.020	4.8	20.7
4 21	12 35.52	-47 48.0	1.153	2.030	18.4	18.2	4 21	12 39.10	+4 43.7	2.074	3.013	8.2	20.8
5 1	12 28.78	-46 52.9	1.160	2.031	19.0	18.2	5 1	12 32.94	+5 13.2	2.133	3.006	11.4	21.0
5 11	12 26.03	-45 27.0	1.183	2.033	20.2	18.3	5 11	12 28.58	+5 26.1	2.213	2.998	14.2	21.2
198913	2005 UD ₁₁₂		4 3.8 126°97	1°9/ 5.4	18		491696	2012 UA ₈₆		4 3.8 176°87	0°3/ 3.4	17	
3 2	13 18.74	-13 8.3	1.550	2.383	16.1	21.3	3 2	13 13.61	-6 15.6	2.443	3.283	10.7	22.1

EPHEMERIDES

4 3.8

4 3.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
107463	2001 <i>DG</i> ₂₈	4 3.8 233°00	3°6/31.7 17				105230	2000 <i>PC</i> ₁₀	4 3.8 222°51	5°6/28.3 17			
3 2	13 16.09	+ 0 41.9	1.598	2.466	13.8	19.7	3 2	13 14.61	+ 8 37.2	2.119	2.983	11.1	20.5
3 12	13 10.99	+ 1 39.7	1.529	2.464	10.0	19.4	3 12	13 9.50	+ 9 59.6	2.049	2.975	8.4	20.3
3 22	13 3.64	+ 2 44.0	1.485	2.461	6.0	19.2	3 22	13 2.63	+11 21.3	2.005	2.967	6.1	20.1
4 1	12 54.87	+ 3 47.2	1.466	2.458	3.6	19.0	4 1	12 54.65	+12 34.9	1.989	2.958	5.8	20.1
4 11	12 45.79	+ 4 41.1	1.475	2.456	6.2	19.2	4 11	12 46.42	+13 33.3	2.001	2.949	7.7	20.2
4 21	12 37.52	+ 5 19.2	1.509	2.453	10.3	19.4	4 21	12 38.78	+14 11.8	2.040	2.939	10.5	20.4
5 1	12 31.05	+ 5 37.4	1.567	2.449	14.2	19.6	5 1	12 32.50	+14 28.1	2.102	2.929	13.3	20.5
5 11	12 26.97	+ 5 34.6	1.644	2.446	17.6	19.8	5 11	12 28.10	+14 22.7	2.183	2.918	15.8	20.7
94735	2001 <i>XX</i> ₇₀	4 3.8 65°84	4°7/31.3 18				59806	1999 <i>RQ</i> ₁₀	4 3.8 196°21	4°5/ 9.1 18			
3 2	13 17.77	+ 2 22.8	1.299	2.176	15.8	18.9	3 2	13 15.98	-22 41.6	2.894	3.651	11.3	19.5
3 12	13 12.41	+ 3 24.1	1.250	2.187	11.4	18.7	3 12	13 10.25	-23 6.2	2.799	3.649	9.2	19.4
3 22	13 4.48	+ 4 29.4	1.222	2.199	7.0	18.5	3 22	13 2.99	-23 16.3	2.728	3.646	7.0	19.2
4 1	12 55.04	+ 5 29.4	1.220	2.210	4.7	18.4	4 1	12 54.74	-23 11.4	2.683	3.643	5.1	19.1
4 11	12 45.46	+ 6 14.9	1.243	2.222	7.5	18.5	4 11	12 46.18	-22 52.8	2.668	3.640	4.5	19.0
4 21	12 37.06	+ 6 39.6	1.290	2.233	11.8	18.8	4 21	12 38.04	-22 23.4	2.682	3.636	5.8	19.1
5 1	12 30.85	+ 6 40.9	1.359	2.245	15.8	19.1	5 1	12 30.97	-21 47.4	2.723	3.632	7.9	19.2
5 11	12 27.40	+ 6 19.6	1.446	2.257	19.2	19.3	5 11	12 25.47	-21 9.7	2.790	3.628	10.2	19.4
14194	1998 <i>XU</i> ₅₀	4 3.8 323°71	4°8/ 7.7 18				301363	2009 <i>CS</i> ₄₃	4 3.8 352°04	1°7/ 2.1 17			
3 2	13 13.05	-18 26.1	1.713	2.528	15.6	17.1	3 2	13 11.45	- 3 24.1	1.886	2.748	12.3	20.7
3 12	13 9.03	-18 47.7	1.616	2.508	12.5	16.9	3 12	13 7.35	- 2 37.9	1.813	2.745	8.9	20.5
3 22	13 2.69	-18 49.5	1.541	2.489	9.0	16.6	3 22	13 1.44	- 1 42.8	1.765	2.743	5.0	20.2
4 1	12 54.71	-18 30.8	1.489	2.470	5.7	16.4	4 1	12 54.39	- 0 44.4	1.744	2.741	1.8	20.0
4 11	12 46.11	-17 54.2	1.463	2.452	5.1	16.3	4 11	12 47.10	+ 0 10.8	1.750	2.739	4.2	20.2
4 21	12 38.05	-17 5.1	1.463	2.434	7.9	16.4	4 21	12 40.45	+ 0 56.9	1.783	2.738	8.1	20.4
5 1	12 31.61	-16 11.0	1.488	2.417	11.8	16.6	5 1	12 35.21	+ 1 29.3	1.840	2.737	11.8	20.6
5 11	12 27.57	-15 20.1	1.534	2.401	15.5	16.8	5 11	12 31.93	+ 1 45.3	1.919	2.736	14.9	20.8
155468	1998 <i>SM</i> ₆₅	4 3.8 157°29	2°7/ 1.4 18				32795	1989 <i>WA</i> ₃	4 3.8 136°51	3°1/31.1 18			
3 2	13 18.82	- 1 21.4	1.696	2.554	13.7	20.7	3 2	13 15.74	+ 5 24.4	2.855	3.705	9.0	20.0
3 12	13 12.79	- 0 24.0	1.631	2.561	9.9	20.4	3 12	13 9.78	+ 5 53.0	2.793	3.717	6.5	19.9
3 22	13 4.59	+ 0 41.1	1.591	2.567	5.7	20.2	3 22	13 2.56	+ 6 21.1	2.759	3.728	4.2	19.7
4 1	12 55.07	+ 1 47.0	1.579	2.573	2.7	20.0	4 1	12 54.61	+ 6 44.9	2.755	3.739	3.1	19.7
4 11	12 45.34	+ 2 45.9	1.594	2.578	5.3	20.2	4 11	12 46.60	+ 7 1.0	2.780	3.749	4.6	19.8
4 21	12 36.49	+ 3 31.4	1.637	2.583	9.5	20.5	4 21	12 39.12	+ 7 7.1	2.835	3.759	6.9	20.0
5 1	12 29.44	+ 3 59.2	1.704	2.586	13.3	20.7	5 1	12 32.72	+ 7 1.7	2.916	3.769	9.3	20.1
5 11	12 24.74	+ 4 7.8	1.791	2.589	16.5	20.9	5 11	12 27.78	+ 6 44.6	3.021	3.778	11.4	20.3
413300	2003 <i>UV</i> ₂₀₆	4 3.8 175°37	2°4/ 6.5 17				297227	3473 <i>T</i> ₋₂	4 3.8 195°76	0°7/ 3.1 17			
3 2	13 16.23	-16 31.4	2.119	2.924	13.3	22.2	3 2	13 16.80	- 5 33.7	2.305	3.143	11.3	22.2
3 12	13 10.69	-15 54.6	2.035	2.928	10.3	22.0	3 12	13 10.97	- 5 1.4	2.221	3.140	8.2	22.0
3 22	13 3.32	-14 59.2	1.975	2.930	6.8	21.8	3 22	13 3.44	- 4 20.5	2.163	3.137	4.7	21.8
4 1	12 54.80	-13 47.9	1.942	2.932	3.3	21.6	4 1	12 54.84	- 3 34.6	2.134	3.132	1.1	21.5
4 11	12 46.03	-12 26.1	1.939	2.933	3.1	21.6	4 11	12 45.98	- 2 48.6	2.135	3.127	3.1	21.6
4 21	12 37.92	-11 0.8	1.965	2.933	6.4	21.8	4 21	12 37.67	- 2 7.3	2.165	3.121	6.8	21.9
5 1	12 31.26	- 9 39.3	2.018	2.933	10.0	22.0	5 1	12 30.65	- 1 35.0	2.222	3.115	10.2	22.1
5 11	12 26.58	- 8 28.0	2.096	2.931	13.1	22.2	5 11	12 25.44	- 1 14.6	2.303	3.108	13.1	22.2
135622	2002 <i>JX</i> ₆₁	4 3.8 275°86	3°9/31.5 17				84376	2002 <i>TO</i> ₁₃₅	4 3.8 77°25	6°5/29.7 18			
3 2	13 16.57	+ 1 23.1	1.592	2.461	13.8	20.0	3 2	13 20.05	+ 9 37.8	1.586	2.454	14.0	19.5
3 12	13 11.56	+ 2 19.7	1.508	2.442	10.1	19.7	3 12	13 13.55	+10 34.3	1.547	2.475	10.5	19.4
3 22	13 4.13	+ 3 23.3	1.447	2.423	6.2	19.4	3 22	13 4.92	+11 25.4	1.533	2.496	7.5	19.3
4 1	12 55.02	+ 4 26.3	1.412	2.404	3.9	19.2	4 1	12 55.13	+12 3.1	1.544	2.517	6.6	19.2
4 11	12 45.38	+ 5 20.3	1.404	2.384	6.6	19.3	4 11	12 45.39	+12 21.1	1.582	2.538	8.6	19.4
4 21	12 36.41	+ 5 58.1	1.422	2.364	11.0	19.5	4 21	12 36.79	+12 16.7	1.645	2.558	11.7	19.6
5 1	12 29.19	+ 6 14.9	1.463	2.344	15.2	19.7	5 1	12 30.18	+11 50.4	1.730	2.579	14.8	19.9
5 11	12 24.47	+ 6 9.2	1.522	2.324	18.8	19.9	5 11	12 26.00	+11 4.5	1.834	2.599	17.4	20.1
277843	2006 <i>HH</i> ₈₆	4 3.8 279°25	2°0/ 2.2 17				320650	2008 <i>CQ</i> ₁₃₀	4 3.8 111°43	1°2/ 2.7 18			
3 2	13 15.84	- 4 0.7	1.548	2.410	14.5	21.4	3 2	13 17.60	- 5 8.2	1.754	2.605	13.7	21.8
3 12	13 11.16	- 3 10.0	1.456	2.388	10.6	21.1	3 12	13 11.76	- 4 22.5	1.696	2.622	9.8	21.6
3 22	13 3.97	- 2 5.9	1.388	2.365	6.1	20.8	3 22	13 3.93	- 3 26.5	1.663	2.638	5.5	21.4
4 1	12 55.01	- 0 54.5	1.345	2.342	2.1	20.4	4 1	12 54.94	- 2 26.1	1.656	2.654	1.4	21.1
4 11	12 45.41	+ 0 15.6	1.329	2.319	5.1	20.6	4 11	12 45.84	- 1 28.2	1.678	2.670	4.0	21.3
4 21	12 36.42	+ 1 15.7	1.340	2.296	10.1	20.8	4 21	12 37.63	- 0 39.1	1.728	2.685	8.2	21.6
5 1	12 29.19	+ 1 58.6	1.373	2.272	14.8	21.0	5 1	12 31.15	- 0 3.7	1.803	2.699	12.0	21.9
5 11	12 24.54	+ 2 20.4	1.426	2.248	18.8	21.2	5 11	12 26.90	+ 0 15.6	1.899	2.713	15.1	22.1
332649	2008 <i>UM</i> ₂₀₀	4 3.8 182°55	1°2/ 5.2 17				438016	2003 <i>YH</i> ₁	4 3.8 209°81	14°4/14.2 18			
3 2	13 14.19	-12 2.8	2.425	3.245	11.4	22.0	3 2	13 24.21	-36 18.6	1.357	2.078	23.4	21.4
3 12	13 9.01	-11 34.9	2.341	3.246	8.5	21.8	3 12	13 18.43	-37 47.8	1.276	2.074	21.0	21.1
3 22	13 2.27	-10 54.4	2.282	3.246	5.3	21.6	3 22	13 8.78	-38 41.5	1.209	2.069	18.3	20.9
4 1	12 54.57	-10 3.9	2.251	3.246	1.9	21.4	4 1	12 56.17	-38 49.7	1.161	2.064	15.9	20.8
4 11	12 46.64	- 9 7.9	2.250	3.245	2.5	21.4	4 11	12 42.42	-38 8.1	1.132	2.057	14.5	20.7
4 21	12 39.24	- 8 11.3	2.278	3.244	5.8	21.6	4 21	12 29.66	-36 40.6	1.125	2.050	14.8	20.6
5 1	12 33.04	- 7 19.3	2.333	3.242	9.1	21.8	5 1	12 19.79	-34 39.8	1.139	2.043	16.8	20.7
5 11	12 28.52	- 6 36.1	2.413	3.240	11.9	22.0	5 11	12 13.96	-32 23.8	1.172	2.034	19.6	20.9
213766	2003 <i>BS</i> ₅₃	4 3.8 348°18	9°2/12.3 18				253928	2004 <i>CV</i> ₇₅	4 3.8 43°37	1°7/ 2.4 18</			

EPHEMERIDES

4 3.8

4 3.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
187182	2005 <i>SJ</i> ₅₁		4 3.8 262°74	0°3/ 3.5 17			467782	2009 <i>WC</i> ₁₃₅		4 3.8 240°30	1°3/ 2.6 17		
3 2	13 15.71	- 7 0.6	1.863	2.710	13.2	21.3	3 2	13 18.22	- 2 54.1	2.122	2.968	11.8	21.9
3 12	13 10.65	- 6 31.2	1.772	2.694	9.7	21.0	3 12	13 12.23	- 2 33.4	2.031	2.954	8.6	21.7
3 22	13 3.49	- 5 49.5	1.704	2.678	5.6	20.8	3 22	13 4.30	- 2 5.9	1.965	2.939	4.9	21.4
4 1	12 54.90	- 4 59.6	1.664	2.662	1.2	20.4	4 1	12 55.08	- 1 35.5	1.927	2.924	1.5	21.2
4 11	12 45.85	- 4 7.3	1.652	2.646	3.5	20.5	4 11	12 45.47	- 1 6.9	1.918	2.908	3.8	21.3
4 21	12 37.37	- 3 18.8	1.667	2.629	7.9	20.8	4 21	12 36.38	- 0 44.5	1.939	2.892	7.7	21.5
5 1	12 30.40	- 2 40.1	1.708	2.612	12.1	21.0	5 1	12 28.68	- 0 32.2	1.985	2.876	11.3	21.7
5 11	12 25.60	- 2 15.4	1.770	2.595	15.6	21.2	5 11	12 22.97	- 0 32.3	2.054	2.859	14.5	21.9
183397	2002 <i>XT</i> ₈₀		4 3.8 98°53	0°9/ 3.0 18			316874	2000 <i>QP</i> ₂₅₄		4 3.8 197°73	1°8/ 5.3 16		
3 2	13 18.42	- 5 7.8	1.847	2.694	13.3	20.6	3 2	13 18.67	- 12 19.8	1.842	2.668	14.2	21.8
3 12	13 12.23	- 4 36.2	1.792	2.716	9.5	20.4	3 12	13 12.78	- 12 6.5	1.758	2.665	10.8	21.5
3 22	13 4.15	- 3 55.5	1.762	2.737	5.4	20.2	3 22	13 4.69	- 11 37.4	1.698	2.662	6.8	21.3
4 1	12 54.99	- 3 10.6	1.760	2.758	1.3	19.9	4 1	12 55.17	- 10 54.7	1.664	2.658	2.7	21.0
4 11	12 45.77	- 2 27.3	1.786	2.778	3.6	20.1	4 11	12 45.27	- 10 3.5	1.659	2.654	3.2	21.0
4 21	12 37.46	- 1 51.1	1.840	2.798	7.7	20.4	4 21	12 36.06	- 9 10.1	1.681	2.649	7.4	21.3
5 1	12 30.82	- 1 26.0	1.920	2.818	11.3	20.7	5 1	12 28.50	- 8 21.3	1.730	2.643	11.4	21.5
5 11	12 26.34	- 1 14.4	2.022	2.837	14.3	20.9	5 11	12 23.26	- 7 42.6	1.801	2.637	14.9	21.7
179204	2001 <i>TD</i> ₁₈₅		4 3.8 317°39	0°5/ 4.2 18			355850	2008 <i>UR</i> ₁₃₁		4 3.8 222°07	1°3/ 2.8 17		
3 2	13 15.27	- 7 38.4	1.999	2.841	12.6	19.9	3 2	13 20.48	- 4 5.5	1.746	2.595	13.8	22.2
3 12	13 10.15	- 7 37.5	1.914	2.833	9.3	19.7	3 12	13 14.22	- 3 36.2	1.661	2.585	10.1	21.9
3 22	13 3.10	- 7 26.8	1.853	2.825	5.5	19.4	3 22	13 5.60	- 2 57.0	1.599	2.574	5.8	21.6
4 1	12 54.80	- 7 8.7	1.819	2.817	1.5	19.1	4 1	12 55.39	- 2 12.7	1.565	2.563	1.6	21.3
4 11	12 46.14	- 6 47.4	1.814	2.810	2.9	19.2	4 11	12 44.71	- 1 29.6	1.560	2.551	4.2	21.5
4 21	12 38.06	- 6 27.1	1.836	2.802	7.0	19.5	4 21	12 34.72	- 0 53.7	1.582	2.538	8.9	21.7
5 1	12 31.40	- 6 12.2	1.885	2.795	10.8	19.7	5 1	12 26.47	- 0 30.4	1.629	2.524	13.1	21.9
5 11	12 26.76	- 6 6.3	1.955	2.788	14.0	19.9	5 11	12 20.66	- 0 22.6	1.697	2.510	16.7	22.1
245574	2005 <i>UF</i> ₂₅₂		4 3.8 234°17	4°9/ 9.9 18			169313	2001 <i>TJ</i> ₁₀₆		4 3.8 101°39	5°3/ 28.5 18		
3 2	13 13.34	- 24 43.8	2.750	3.503	11.9	20.5	3 2	13 16.18	+ 12 40.7	2.609	3.461	9.7	20.1
3 12	13 8.44	- 24 52.8	2.650	3.494	9.9	20.4	3 12	13 10.13	+ 13 29.0	2.568	3.484	7.4	20.0
3 22	13 2.00	- 24 44.7	2.572	3.485	7.6	20.2	3 22	13 2.77	+ 14 11.7	2.554	3.505	5.7	19.9
4 1	12 54.55	- 24 19.1	2.520	3.476	5.6	20.1	4 1	12 54.69	+ 14 43.8	2.569	3.526	5.4	19.9
4 11	12 46.79	- 23 37.9	2.497	3.467	4.9	20.0	4 11	12 46.63	+ 15 1.6	2.612	3.547	6.8	20.0
4 21	12 39.44	- 22 44.8	2.501	3.457	6.0	20.1	4 21	12 39.24	+ 15 3.2	2.682	3.568	8.8	20.2
5 1	12 33.19	- 21 44.8	2.533	3.447	8.2	20.2	5 1	12 33.08	+ 14 48.5	2.777	3.588	10.9	20.4
5 11	12 28.55	- 20 43.7	2.590	3.437	10.6	20.3	5 11	12 28.52	+ 14 18.6	2.892	3.607	12.7	20.5
233361	2006 <i>DO</i> ₁₀₆		4 3.8 275°04	0°4/ 3.4 17			27492	<i>Susanduncan</i>		4 3.8 133°73	1°7/ 2.2 18		
3 2	13 14.20	- 6 31.1	1.923	2.772	12.7	21.2	3 2	13 15.92	- 3 32.7	1.833	2.688	13.0	18.4
3 12	13 9.36	- 6 0.4	1.845	2.769	9.3	21.0	3 12	13 10.58	- 2 44.6	1.767	2.695	9.3	18.2
3 22	13 2.63	- 5 18.8	1.791	2.766	5.3	20.7	3 22	13 3.30	- 1 47.6	1.726	2.702	5.3	18.0
4 1	12 54.69	- 4 30.6	1.765	2.763	1.1	20.4	4 1	12 54.84	- 0 47.5	1.712	2.709	1.8	17.8
4 11	12 46.47	- 3 41.5	1.766	2.760	3.3	20.6	4 11	12 46.20	+ 0 9.0	1.726	2.715	4.3	17.9
4 21	12 38.88	- 2 57.2	1.795	2.757	7.5	20.8	4 21	12 38.33	+ 0 55.7	1.768	2.721	8.3	18.2
5 1	12 32.77	- 2 22.9	1.850	2.754	11.3	21.0	5 1	12 32.04	+ 1 28.1	1.835	2.727	12.0	18.4
5 11	12 28.67	- 2 2.1	1.926	2.751	14.5	21.2	5 11	12 27.88	+ 1 44.0	1.923	2.733	15.1	18.6
469377	2001 <i>SM</i> ₉₉		4 3.8 210°32	0°7/ 2.9 17			240560	2004 <i>RM</i> ₂₉₀		4 3.8 105°12	4°3/ 31.2 18		
3 2	13 11.15	- 6 52.3	2.182	3.030	11.5	20.9	3 2	13 15.92	+ 0 42.7	1.408	2.283	14.9	20.4
3 12	13 6.93	- 5 53.5	2.106	3.030	8.3	20.7	3 12	13 11.05	+ 2 1.4	1.349	2.286	10.8	20.1
3 22	13 1.13	- 4 43.5	2.054	3.029	4.7	20.5	3 22	13 3.76	+ 3 27.7	1.313	2.290	6.5	19.9
4 1	12 54.34	- 3 27.3	2.031	3.029	1.1	20.2	4 1	12 54.96	+ 4 51.8	1.303	2.294	4.3	19.8
4 11	12 47.36	- 2 11.3	2.037	3.029	3.3	20.4	4 11	12 45.92	+ 6 3.5	1.319	2.298	7.1	19.9
4 21	12 40.94	- 1 1.6	2.071	3.028	7.0	20.6	4 21	12 37.86	+ 6 55.0	1.360	2.301	11.4	20.2
5 1	12 35.75	- 0 3.5	2.131	3.028	10.4	20.8	5 1	12 31.79	+ 7 22.0	1.423	2.305	15.5	20.4
5 11	12 32.29	+ 0 39.6	2.214	3.028	13.3	21.0	5 11	12 28.30	+ 7 23.9	1.504	2.308	18.9	20.7
12455	1997 <i>AR</i>		4 3.8 312°00	1°7/ 5.1 18			497368	2005 <i>UM</i> ₂₈₆		4 3.8 207°78	2°3/ 1.7 17		
3 2	13 14.53	- 11 20.9	1.403	2.254	16.4	18.3	3 2	13 15.62	- 1 37.9	1.879	2.738	12.5	21.8
3 12	13 10.40	- 11 11.2	1.318	2.239	12.5	18.0	3 12	13 10.41	- 0 53.3	1.806	2.736	9.0	21.6
3 22	13 3.61	- 10 42.5	1.254	2.224	7.8	17.7	3 22	13 3.24	- 0 1.6	1.757	2.733	5.2	21.3
4 1	12 54.97	- 9 57.6	1.214	2.210	2.8	17.3	4 1	12 54.85	+ 0 51.8	1.735	2.731	2.3	21.1
4 11	12 45.70	- 9 2.6	1.200	2.196	3.7	17.4	4 11	12 46.18	+ 1 40.2	1.742	2.728	4.7	21.3
4 21	12 37.16	- 8 5.7	1.210	2.183	8.9	17.6	4 21	12 38.20	+ 2 18.2	1.775	2.725	8.6	21.5
5 1	12 30.58	- 7 15.6	1.244	2.170	13.9	17.9	5 1	12 31.75	+ 2 41.4	1.834	2.722	12.3	21.7
5 11	12 26.76	- 6 39.4	1.297	2.158	18.2	18.1	5 11	12 27.39	+ 2 48.1	1.914	2.718	15.4	21.9
233637	2007 <i>VW</i> ₈₉		4 3.8 122°23	3°9/ 30.7 18			141374	2002 <i>AW</i> ₅₂		4 3.8 28°11	2°6/ 31.9 18		
3 2	13 14.54	+ 5 6.0	2.201	3.063	10.8	20.2	3 2	13 11.61	- 0 4.8	2.121	2.984	11.1	19.8
3 12	13 9.31	+ 5 51.3	2.137	3.066	7.9	20.0	3 12	13 7.26	+ 0 46.9	2.056	2.988	8.0	19.6
3 22	13 2.46	+ 6 36.9	2.099	3.069	5.1	19.9	3 22	13 1.31	+ 1 43.5	2.015	2.991	4.7	19.4
4 1	12 54.64	+ 7 17.4	2.088	3.072	3.9	19.8	4 1	12 54.40	+ 2 39.7	2.003	2.996	2.6	19.3
4 11	12 46.67	+ 7 47.7	2.106	3.075	5.8	19.9	4 11	12 47.33	+ 3 29.4	2.018	3.000	4.7	19.4
4 21	12 39.33	+ 8 4.1	2.152	3.078	8.7	20.1	4 21	12 40.87	+ 4 8.0	2.061	3.005	8.0	19.6
5 1	12 33.31	+ 8 4.7	2.222	3.081	11.5	20.3	5 1	12 35.69	+ 4 32.1	2.129	3.009	11.1	19.8
5 11	12 29.08	+ 7 49.4	2.313	3.084	14.0	20.5	5 11	12 32.26	+ 4 40.3	2.218	3.014	13.8	20.0
189417	1996 <i>BG</i> ₁₀		4 3.8 131°31	3°3/ 7.9 18			333743	2009 <i>YQ</i> ₅		4 3.8 122°17	3		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
166621	2002 SQ ₁₀		4 3.8 118°24	1°3/ 2.3 18			341579	2007 UA ₆₇		4 3.8 91°72	0°5/ 3.4 17		
3 2	13 14.48	- 3 7.3	2.339	3.187	10.8	20.2	3 2	13 16.15	- 5 0.5	2.098	2.943	12.0	21.1
3 12	13 9.15	- 2 31.9	2.274	3.199	7.7	20.1	3 12	13 10.63	- 4 50.5	2.022	2.944	8.7	20.9
3 22	13 2.33	- 1 50.3	2.235	3.211	4.4	19.9	3 22	13 3.32	- 4 33.0	1.970	2.944	5.0	20.6
4 1	12 54.63	- 1 6.8	2.225	3.222	1.4	19.7	4 1	12 54.89	- 4 11.0	1.947	2.945	1.1	20.4
4 11	12 46.81	- 0 26.0	2.244	3.233	3.4	19.8	4 11	12 46.21	- 3 48.9	1.952	2.946	3.1	20.5
4 21	12 39.60	+ 0 7.7	2.292	3.244	6.8	20.1	4 21	12 38.16	- 3 30.7	1.986	2.946	7.0	20.8
5 1	12 33.65	+ 0 31.2	2.367	3.255	9.8	20.3	5 1	12 31.50	- 3 20.1	2.045	2.947	10.5	21.0
5 11	12 29.38	+ 0 42.4	2.464	3.265	12.4	20.5	5 11	12 26.77	- 3 19.6	2.127	2.947	13.5	21.2
210156	2006 ST ₁₈₄		4 3.8 239°88	0°0/ 3.6 17			502194	2015 BV ₆₉		4 3.8 55°81	1°5/ 5.3 17		
3 2	13 12.84	- 7 40.6	2.375	3.214	11.0	21.4	3 2	13 13.49	- 12 36.1	1.844	2.678	13.9	21.4
3 12	13 8.10	- 7 12.2	2.290	3.208	8.0	21.2	3 12	13 8.95	- 12 4.3	1.767	2.678	10.4	21.1
3 22	13 1.81	- 6 33.9	2.229	3.202	4.7	21.0	3 22	13 2.45	- 11 15.5	1.712	2.679	6.5	20.9
4 1	12 54.53	- 5 49.2	2.197	3.195	1.0	20.7	4 1	12 54.72	- 10 13.4	1.684	2.679	2.4	20.6
4 11	12 47.00	- 5 2.4	2.194	3.189	2.7	20.8	4 11	12 46.70	- 9 3.9	1.684	2.680	3.0	20.7
4 21	12 39.96	- 4 18.3	2.220	3.182	6.3	21.0	4 21	12 39.38	- 7 54.2	1.711	2.681	7.1	20.9
5 1	12 34.09	- 3 41.2	2.273	3.176	9.6	21.2	5 1	12 33.58	- 6 51.4	1.764	2.681	11.0	21.2
5 11	12 29.87	- 3 14.7	2.348	3.169	12.4	21.4	5 11	12 29.88	- 6 1.0	1.839	2.682	14.4	21.4
110362	2001 SJ ₃₂₄		4 3.8 281°03	5°6/ 9.6 18			219336	2000 OL ₆₀		4 3.8 192°85	1°3/ 2.3 18	R	
3 2	13 14.27	- 23 48.6	2.196	2.966	14.0	19.4	3 2	13 15.00	- 4 1.1	2.424	3.267	10.6	21.1
3 12	13 9.49	- 24 7.1	2.099	2.956	11.6	19.2	3 12	13 9.61	- 3 13.5	2.342	3.265	7.7	20.9
3 22	13 2.78	- 24 5.7	2.025	2.946	8.9	19.0	3 22	13 2.66	- 2 18.2	2.287	3.262	4.3	20.6
4 1	12 54.77	- 23 43.5	1.975	2.936	6.5	18.8	4 1	12 54.75	- 1 19.5	2.262	3.259	1.4	20.4
4 11	12 46.34	- 23 2.5	1.952	2.926	5.6	18.7	4 11	12 46.63	- 0 22.6	2.266	3.255	3.4	20.6
4 21	12 38.42	- 22 7.1	1.956	2.916	7.1	18.8	4 21	12 39.02	+ 0 27.5	2.300	3.250	6.8	20.8
5 1	12 31.86	- 21 3.7	1.986	2.906	9.8	18.9	5 1	12 32.60	+ 1 6.8	2.360	3.245	10.0	21.0
5 11	12 27.30	- 19 59.8	2.040	2.896	12.7	19.1	5 11	12 27.85	+ 1 32.8	2.443	3.238	12.7	21.1
266949	2010 TZ ₁₇₉		4 3.8 175°86	2°1/ 2.0 18			175542	2006 SO ₂₁₈		4 3.8 156°41	1°8/ 5.9 17		
3 2	13 18.53	- 1 34.4	1.927	2.779	12.6	21.3	3 2	13 14.99	- 13 1.7	2.592	3.404	11.0	20.7
3 12	13 12.45	- 1 0.1	1.854	2.781	9.1	21.1	3 12	13 9.54	- 12 59.7	2.510	3.408	8.3	20.5
3 22	13 4.40	- 0 19.5	1.807	2.783	5.2	20.8	3 22	13 2.60	- 12 46.4	2.453	3.412	5.3	20.4
4 1	12 55.12	+ 0 22.4	1.788	2.784	2.1	20.6	4 1	12 54.74	- 12 23.4	2.425	3.416	2.5	20.2
4 11	12 45.59	+ 0 59.8	1.797	2.784	4.4	20.8	4 11	12 46.67	- 11 53.8	2.426	3.420	2.5	20.2
4 21	12 36.80	+ 1 27.8	1.835	2.784	8.3	21.0	4 21	12 39.11	- 11 21.3	2.457	3.423	5.4	20.4
5 1	12 29.58	+ 1 42.6	1.897	2.784	12.0	21.2	5 1	12 32.69	- 10 50.0	2.515	3.426	8.4	20.6
5 11	12 24.50	+ 1 42.6	1.982	2.783	15.1	21.4	5 11	12 27.88	- 10 23.8	2.598	3.429	11.0	20.7
215011	2008 ES ₁₉		4 3.8 158°66	0°0/ 3.6 18			297313	1998 WF ₄₂		4 3.8 203°83	1°2/ 4.9 17		
3 2	13 14.49	- 6 42.5	2.595	3.429	10.3	21.1	3 2	13 18.37	- 11 49.9	1.895	2.722	13.8	22.7
3 12	13 9.12	- 6 29.2	2.516	3.433	7.5	20.9	3 12	13 12.54	- 11 16.8	1.808	2.717	10.4	22.4
3 22	13 2.32	- 6 8.5	2.464	3.436	4.4	20.7	3 22	13 4.58	- 10 27.2	1.744	2.711	6.4	22.2
4 1	12 54.65	- 5 42.9	2.441	3.439	1.0	20.5	4 1	12 55.21	- 9 24.3	1.708	2.704	2.2	21.9
4 11	12 46.79	- 5 15.9	2.447	3.441	2.5	20.6	4 11	12 45.46	- 8 14.1	1.700	2.696	3.0	21.9
4 21	12 39.44	- 4 51.2	2.483	3.444	5.8	20.8	4 21	12 36.37	- 7 3.8	1.722	2.687	7.4	22.2
5 1	12 33.20	- 4 32.0	2.546	3.446	8.8	21.0	5 1	12 28.87	- 6 0.4	1.769	2.678	11.5	22.4
5 11	12 28.52	- 4 20.9	2.633	3.448	11.4	21.2	5 11	12 23.61	- 5 9.8	1.839	2.667	15.0	22.6
335871	2007 RG ₁₀₉		4 3.8 84°55	0°2/ 4.0 17			33037	1997 SB ₁₄		4 3.8 18°49	2°8/ 5.9 18		
3 2	13 14.24	- 8 39.8	2.205	3.041	11.8	21.2	3 2	13 14.95	- 14 12.8	1.283	2.130	17.9	18.5
3 12	13 9.02	- 8 5.4	2.147	3.063	8.6	21.1	3 12	13 10.72	- 13 59.4	1.215	2.131	13.7	18.3
3 22	13 2.25	- 7 20.5	2.114	3.085	5.0	20.9	3 22	13 3.78	- 13 22.6	1.168	2.134	8.8	18.0
4 1	12 54.62	- 6 29.0	2.109	3.107	1.2	20.7	4 1	12 55.05	- 12 25.2	1.143	2.137	4.0	17.7
4 11	12 46.92	- 5 36.1	2.134	3.128	2.7	20.8	4 11	12 45.93	- 11 14.7	1.144	2.140	4.0	17.7
4 21	12 39.92	- 4 46.8	2.187	3.150	6.3	21.1	4 21	12 37.80	- 10 0.9	1.169	2.144	8.9	18.0
5 1	12 34.26	- 4 5.7	2.266	3.171	9.5	21.3	5 1	12 31.86	- 8 54.1	1.217	2.148	13.7	18.3
5 11	12 30.35	- 3 35.8	2.369	3.191	12.3	21.5	5 11	12 28.78	- 8 2.1	1.285	2.152	17.9	18.5
173962	2001 XR ₄₃		4 3.8 44°04	6°9/28.2 18			68362	2001 OP ₃₈		4 3.8 102°69	2°2/ 5.4 18		
3 2	13 16.48	+ 14 22.6	2.038	2.898	11.6	19.7	3 2	13 22.04	- 11 4.7	1.756	2.583	14.7	18.9
3 12	13 10.74	+ 15 8.9	1.991	2.908	9.1	19.5	3 12	13 15.23	- 11 30.5	1.686	2.593	11.1	18.7
3 22	13 3.28	+ 15 47.1	1.969	2.918	7.3	19.4	3 22	13 6.12	- 11 43.4	1.639	2.603	7.0	18.5
4 1	12 54.85	+ 16 10.9	1.973	2.928	7.0	19.4	4 1	12 55.56	- 11 44.5	1.619	2.612	3.0	18.2
4 11	12 46.37	+ 16 15.8	2.004	2.939	8.5	19.5	4 11	12 44.70	- 11 36.7	1.627	2.622	3.4	18.3
4 21	12 38.70	+ 16 0.0	2.061	2.950	10.9	19.7	4 21	12 34.71	- 11 24.6	1.664	2.631	7.5	18.5
5 1	12 32.56	+ 15 24.0	2.140	2.961	13.3	19.9	5 1	12 26.57	- 11 13.1	1.726	2.640	11.4	18.8
5 11	12 28.39	+ 14 30.2	2.239	2.972	15.5	20.1	5 11	12 20.90	- 11 7.1	1.811	2.649	14.8	19.0
234004	1997 EJ ₃		4 3.8 300°20	1°8/ 4.9 16			196663	2003 SL ₄₄		4 3.8 191°10	1°9/ 5.8 17		
3 2	13 19.88	- 9 33.6	1.298	2.150	17.4	20.4	3 2	13 15.08	- 13 24.9	2.289	3.106	12.1	20.4
3 12	13 14.53	- 9 51.5	1.218	2.140	13.2	20.1	3 12	13 9.82	- 13 12.6	2.204	3.105	9.2	20.2
3 22	13 6.13	- 9 54.3	1.160	2.131	8.2	19.8	3 22	13 2.86	- 12 46.6	2.143	3.103	5.9	20.0
4 1	12 55.59	- 9 43.4	1.125	2.121	2.9	19.5	4 1	12 54.83	- 12 9.1	2.109	3.102	2.6	19.8
4 11	12 44.34	- 9 23.6	1.115	2.112	4.0	19.5	4 11	12 46.53	- 11 23.9	2.105	3.100	2.7	19.8
4 21	12 33.96	- 9 1.2	1.131	2.102	9.5	19.8	4 21	12 38.78	- 10 35.8	2.129	3.097	6.0	20.0
5 1	12 25.84	- 8 43.4	1.169	2.094	14.7	20.1	5 1	12 32.30	- 9 50.3	2.181	3.095	9.4	20.2
5 11	12 20.86	- 8 36.3	1.226	2.085	19.1	20.3	5 11	12 27.63	- 9 11.8	2.256	3.092	12.3	20.4
503628	2016 GU ₁₄₀		4 3.8 294°47	5°3/30.3 17			100079	1992 RZ ₄		4 3.8 144°41	2°5/31.8 18		
3 2	13 16.90	+ 6 43.3											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
506674	2006 <i>SO</i> ₃₅₀		4 3.8 218°69	0°3/ 4.2 17			264683	2001 <i>YH</i> ₁₂₈		4 3.8 57°54	7°1/10.2 17		
3 2	13 14.64	- 8 10.1	2.730	3.558	10.0	22.3	3 2	13 16.89	-25 8.6	1.721	2.497	17.1	20.1
3 12	13 9.27	- 7 54.7	2.637	3.549	7.4	22.1	3 12	13 11.74	-25 42.0	1.648	2.506	14.2	19.9
3 22	13 2.47	- 7 30.8	2.571	3.541	4.4	21.9	3 22	13 4.23	-25 50.2	1.595	2.514	11.0	19.7
4 1	12 54.74	- 7 0.9	2.534	3.531	1.1	21.6	4 1	12 55.17	-25 31.8	1.565	2.523	8.2	19.6
4 11	12 46.76	- 6 28.3	2.527	3.522	2.3	21.7	4 11	12 45.75	-24 49.0	1.561	2.532	7.1	19.5
4 21	12 39.19	- 5 56.8	2.549	3.512	5.6	21.9	4 21	12 37.16	-23 47.9	1.582	2.541	8.6	19.6
5 1	12 32.66	- 5 29.8	2.600	3.501	8.6	22.1	5 1	12 30.44	-22 37.1	1.628	2.550	11.4	19.8
5 11	12 27.64	- 5 10.5	2.675	3.490	11.2	22.2	5 11	12 26.25	-21 26.1	1.696	2.560	14.4	20.0
463701	2014 <i>PY</i> ₃₇		4 3.8 130°10	1°2/ 2.8 18			149801	2005 <i>JC</i> ₁₃₃		4 3.8 353°69	1°6/ 2.3 17		
3 2	13 18.78	- 4 34.7	1.895	2.742	13.0	21.8	3 2	13 10.71	- 4 39.2	1.678	2.543	13.4	19.9
3 12	13 12.56	- 3 56.1	1.833	2.757	9.4	21.6	3 12	13 7.06	- 3 46.3	1.606	2.540	9.7	19.7
3 22	13 4.43	- 3 8.6	1.796	2.771	5.3	21.4	3 22	13 1.43	- 2 42.0	1.558	2.536	5.5	19.4
4 1	12 55.16	- 2 17.2	1.787	2.785	1.4	21.2	4 1	12 54.54	- 1 32.3	1.536	2.534	1.7	19.2
4 11	12 45.77	- 1 28.1	1.807	2.798	3.8	21.4	4 11	12 47.36	- 0 25.1	1.541	2.532	4.4	19.3
4 21	12 37.22	- 0 46.8	1.855	2.811	7.8	21.6	4 21	12 40.89	+ 0 32.4	1.572	2.531	8.7	19.6
5 1	12 30.30	- 0 17.7	1.929	2.823	11.5	21.9	5 1	12 35.96	+ 1 14.5	1.627	2.530	12.6	19.8
5 11	12 25.52	- 0 3.0	2.025	2.834	14.5	22.1	5 11	12 33.16	+ 1 37.9	1.702	2.530	16.0	20.0
205260	2000 <i>RO</i> ₉₃		4 3.8 246°21	0°5/ 3.4 16			276941	2004 <i>TR</i> ₂₃₀		4 3.8 137°97	1°5/ 5.4 17		
3 2	13 18.47	- 6 29.2	1.788	2.633	13.7	21.6	3 2	13 16.15	-12 1.2	2.145	2.968	12.6	21.1
3 12	13 12.82	- 5 58.5	1.695	2.616	10.1	21.3	3 12	13 10.62	-11 48.0	2.070	2.976	9.4	20.9
3 22	13 4.87	- 5 15.3	1.625	2.599	5.9	21.0	3 22	13 3.33	-11 21.6	2.020	2.984	5.9	20.7
4 1	12 55.32	- 4 23.8	1.582	2.581	1.3	20.6	4 1	12 54.95	-10 44.4	1.997	2.991	2.3	20.4
4 11	12 45.24	- 3 30.1	1.568	2.562	3.7	20.8	4 11	12 46.37	-10 0.9	2.003	2.998	2.7	20.5
4 21	12 35.73	- 2 41.1	1.582	2.542	8.5	21.0	4 21	12 38.44	- 9 16.1	2.037	3.005	6.3	20.7
5 1	12 27.84	- 2 2.8	1.620	2.522	12.8	21.2	5 1	12 31.91	- 8 35.3	2.099	3.011	9.8	20.9
5 11	12 22.29	- 1 39.5	1.680	2.501	16.5	21.4	5 11	12 27.30	- 8 2.8	2.183	3.017	12.8	21.1
375775	2009 <i>SL</i> ₁₆₀		4 3.8 251°90	1°3/ 5.2 17			477916	2011 <i>OE</i> ₁		4 3.8 283°49	2°2/ 6.1 16		
3 2	13 15.98	-11 57.7	2.083	2.908	12.8	22.4	3 2	13 14.30	-14 41.4	2.235	3.049	12.4	22.2
3 12	13 10.77	-11 33.5	1.981	2.889	9.7	22.1	3 12	13 9.55	-14 20.4	2.118	3.016	9.6	22.0
3 22	13 3.58	-10 54.3	1.904	2.869	6.1	21.9	3 22	13 2.91	-13 43.1	2.025	2.983	6.3	21.7
4 1	12 55.02	-10 2.4	1.854	2.849	2.2	21.6	4 1	12 54.91	-12 50.8	1.959	2.950	3.0	21.4
4 11	12 46.00	- 9 2.6	1.832	2.828	2.9	21.6	4 11	12 46.37	-11 47.4	1.921	2.916	3.0	21.3
4 21	12 37.44	- 8 1.0	1.840	2.807	6.9	21.8	4 21	12 38.16	-10 38.5	1.913	2.882	6.5	21.5
5 1	12 30.25	- 7 3.9	1.874	2.785	10.8	22.0	5 1	12 31.14	- 9 30.8	1.931	2.847	10.3	21.7
5 11	12 25.06	- 6 16.9	1.931	2.762	14.3	22.1	5 11	12 26.00	- 8 30.7	1.973	2.811	13.8	21.8
306872	2001 <i>SV</i> ₃₂₁		4 3.8 230°62	3°3/ 7.0 17			136479	2005 <i>GH</i> ₆₈		4 3.8 178°59	0°5/ 3.4 16		
3 2	13 16.05	-17 11.3	2.018	2.824	13.9	21.1	3 2	13 18.23	- 6 3.0	2.060	2.900	12.4	20.6
3 12	13 10.84	-17 3.9	1.925	2.815	10.9	20.9	3 12	13 12.20	- 5 34.2	1.982	2.902	9.0	20.4
3 22	13 3.61	-16 38.2	1.855	2.806	7.5	20.6	3 22	13 4.28	- 4 55.8	1.930	2.903	5.2	20.2
4 1	12 55.03	-15 55.2	1.810	2.796	4.2	20.4	4 1	12 55.18	- 4 11.6	1.906	2.904	1.1	19.9
4 11	12 46.03	-14 58.8	1.794	2.786	3.7	20.3	4 11	12 45.82	- 3 26.9	1.911	2.904	3.3	20.0
4 21	12 37.59	-13 54.9	1.806	2.775	6.8	20.5	4 21	12 37.13	- 2 47.0	1.945	2.903	7.3	20.3
5 1	12 30.63	-12 50.7	1.845	2.764	10.5	20.7	5 1	12 29.91	- 2 16.4	2.005	2.902	10.9	20.5
5 11	12 25.77	-11 52.8	1.906	2.753	13.8	20.9	5 11	12 24.71	- 1 58.4	2.088	2.900	14.0	20.7
129914	1999 <i>TR</i> ₁₀₁		4 3.8 249°28	5°3/30.1 17			374988	2007 <i>EB</i> ₈₃		4 3.8 321°43	1°0/ 2.9 17		
3 2	13 18.43	+ 6 15.8	1.831	2.694	12.6	20.0	3 2	13 11.86	- 6 27.4	1.488	2.353	14.8	20.2
3 12	13 12.67	+ 7 17.5	1.749	2.678	9.4	19.8	3 12	13 8.26	- 5 38.8	1.406	2.338	10.9	20.0
3 22	13 4.71	+ 8 20.7	1.692	2.660	6.4	19.6	3 22	13 2.32	- 4 34.5	1.346	2.324	6.2	19.7
4 1	12 55.28	+ 9 17.7	1.662	2.642	5.3	19.5	4 1	12 54.78	- 3 20.5	1.312	2.310	1.5	19.3
4 11	12 45.41	+10 0.9	1.660	2.624	7.5	19.5	4 11	12 46.77	- 2 5.3	1.303	2.296	4.4	19.5
4 21	12 36.17	+10 24.9	1.684	2.604	11.0	19.7	4 21	12 39.44	- 0 58.1	1.320	2.283	9.4	19.7
5 1	12 28.54	+10 26.9	1.731	2.585	14.5	19.9	5 1	12 33.87	- 0 6.4	1.360	2.271	14.0	19.9
5 11	12 23.18	+10 7.1	1.798	2.565	17.6	20.0	5 11	12 30.77	+ 0 25.0	1.419	2.260	18.0	20.2
133452	2003 <i>SJ</i> ₂₂₄		4 3.8 237°16	4°5/ 9.3 18			502501	2015 <i>BW</i> ₄₀₆		4 3.8 171°76	3°4/ 7.3 17		
3 2	13 12.70	-23 29.1	2.249	3.022	13.7	19.7	3 2	13 16.91	-17 39.1	2.270	3.065	12.9	22.0
3 12	13 8.24	-23 0.9	2.152	3.015	11.1	19.6	3 12	13 11.20	-17 41.0	2.185	3.068	10.1	21.8
3 22	13 2.01	-22 10.3	2.077	3.007	8.2	19.4	3 22	13 3.70	-17 26.8	2.124	3.070	7.0	21.6
4 1	12 54.65	-20 58.1	2.028	2.999	5.5	19.2	4 1	12 55.05	-16 57.4	2.090	3.072	4.1	21.4
4 11	12 46.99	-19 28.5	2.007	2.990	4.5	19.1	4 11	12 46.13	-16 16.0	2.085	3.074	3.6	21.4
4 21	12 39.88	-17 47.9	2.015	2.982	6.4	19.2	4 21	12 37.79	-15 27.3	2.108	3.075	6.2	21.5
5 1	12 34.09	-16 4.5	2.050	2.973	9.4	19.3	5 1	12 30.81	-14 37.2	2.159	3.076	9.3	21.7
5 11	12 30.17	-14 26.2	2.110	2.964	12.4	19.5	5 11	12 25.74	-13 51.1	2.234	3.076	12.2	21.9
42072	2000 <i>YS</i> ₁₃₉		4 3.8 221°63	1°9/ 2.0 16			521020	2015 <i>CP</i> ₆₈		4 3.8 122°15	2°3/ 1.2 17		
3 2	13 17.11	- 3 6.7	1.947	2.798	12.5	20.1	3 2	13 13.55	- 1 44.7	2.173	3.028	11.2	21.6
3 12	13 11.55	- 2 16.8	1.862	2.789	9.1	19.9	3 12	13 8.61	- 0 37.6	2.112	3.040	8.0	21.4
3 22	13 3.99	- 1 17.8	1.803	2.778	5.2	19.6	3 22	13 2.10	+ 0 35.8	2.076	3.052	4.6	21.2
4 1	12 55.11	- 0 14.9	1.771	2.768	1.9	19.4	4 1	12 54.68	+ 1 49.8	2.069	3.063	2.3	21.1
4 11	12 45.86	+ 0 45.1	1.768	2.756	4.4	19.5	4 11	12 47.13	+ 2 57.8	2.091	3.074	4.4	21.2
4 21	12 37.22	+ 1 35.9	1.794	2.744	8.5	19.7	4 21	12 40.24	+ 3 54.6	2.142	3.085	7.8	21.5
5 1	12 30.08	+ 2 12.5	1.844	2.731	12.2	19.9	5 1	12 34.65	+ 4 36.2	2.218	3.095	10.9	21.7
5 11	12 25.03	+ 2 32.1	1.916	2.717	15.5	20.1	5 11	12 30.82	+ 5 0.9	2.316	3.105	13.5	21.9
283579	2001 <i>XU</i> ₈₀		4 3.8 188°57	3°1/30.5 18			74450	1999 <i>CP</i> ₂₅		4 3.8 68°65	3°1/ 6.		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
111216	2001 <i>WM</i> ₃₉		4 3.8 178°67	0°7/ 2.9 16			276007	2001 <i>YP</i> ₄₉		4 3.9 179°12	4°4/ 8.7 18		
3 2	13 15.24	- 5 54.5	2.532	3.368	10.4	21.1	3 2	13 16.61	-21 49.3	2.321	3.095	13.3	20.9
3 12	13 9.72	- 5 6.6	2.452	3.371	7.6	20.9	3 12	13 11.01	-21 49.3	2.232	3.096	10.7	20.7
3 22	13 2.73	- 4 10.1	2.399	3.372	4.3	20.7	3 22	13 3.61	-21 30.5	2.167	3.097	7.9	20.5
4 1	12 54.83	- 3 9.0	2.375	3.373	1.0	20.5	4 1	12 55.06	-20 53.2	2.127	3.098	5.3	20.3
4 11	12 46.74	- 2 8.2	2.382	3.373	3.0	20.6	4 11	12 46.21	-20 0.4	2.116	3.098	4.5	20.3
4 21	12 39.17	- 1 12.7	2.418	3.372	6.3	20.8	4 21	12 37.95	-18 57.0	2.134	3.097	6.4	20.4
5 1	12 32.76	- 0 26.7	2.482	3.371	9.4	21.0	5 1	12 31.04	-17 49.6	2.179	3.096	9.2	20.6
5 11	12 27.96	+ 0 6.9	2.570	3.369	12.1	21.2	5 11	12 26.04	-16 44.7	2.248	3.094	12.0	20.7
174674	2003 <i>SD</i> ₂₆₀		4 3.8 224°03	1°0/ 2.9 18			203745	2002 <i>RH</i> ₂₃		4 3.9 183°61	1°7/ 5.9 18		
3 2	13 18.43	- 4 50.1	1.868	2.715	13.1	20.9	3 2	13 15.22	-13 27.7	2.743	3.550	10.6	20.9
3 12	13 12.62	- 4 20.1	1.783	2.706	9.6	20.6	3 12	13 9.68	-13 18.8	2.655	3.550	8.0	20.7
3 22	13 4.66	- 3 40.2	1.722	2.697	5.5	20.4	3 22	13 2.72	-12 58.5	2.592	3.550	5.2	20.5
4 1	12 55.30	- 2 54.7	1.689	2.687	1.4	20.1	4 1	12 54.85	-12 28.6	2.558	3.549	2.4	20.4
4 11	12 45.52	- 2 9.5	1.684	2.676	3.8	20.2	4 11	12 46.76	-11 52.0	2.554	3.548	2.4	20.4
4 21	12 36.39	- 1 30.6	1.707	2.665	8.2	20.5	4 21	12 39.12	-11 12.6	2.580	3.546	5.2	20.5
5 1	12 28.83	- 1 3.0	1.756	2.653	12.2	20.7	5 1	12 32.57	-10 34.5	2.634	3.544	8.1	20.7
5 11	12 23.50	- 0 49.8	1.826	2.640	15.6	20.9	5 11	12 27.55	-10 1.6	2.713	3.541	10.7	20.9
274892	2009 <i>SX</i> ₆₆		4 3.8 99°58	1°9/ 2.0 17			352407	2007 <i>XC</i> ₄₀		4 3.9 58°57	11°5/ 18.9 18		
3 2	13 14.33	- 3 27.1	1.786	2.645	13.1	21.2	3 2	13 18.84	-43 6.1	2.309	2.929	17.1	20.0
3 12	13 9.54	- 2 33.9	1.718	2.649	9.4	21.0	3 12	13 13.20	-44 17.3	2.234	2.941	15.7	19.8
3 22	13 2.80	- 1 31.4	1.675	2.652	5.3	20.8	3 22	13 5.13	-45 0.9	2.175	2.953	14.1	19.7
4 1	12 54.85	- 0 25.5	1.659	2.656	2.0	20.6	4 1	12 55.43	-45 12.7	2.136	2.965	12.7	19.7
4 11	12 46.69	+ 0 36.3	1.671	2.659	4.5	20.7	4 11	12 45.26	-44 51.5	2.117	2.977	11.8	19.6
4 21	12 39.27	+ 1 27.7	1.709	2.663	8.5	21.0	4 21	12 35.82	-44 0.2	2.121	2.990	11.5	19.6
5 1	12 33.41	+ 2 3.8	1.773	2.666	12.3	21.2	5 1	12 28.22	-42 44.9	2.148	3.002	12.1	19.7
5 11	12 29.67	+ 2 22.1	1.857	2.669	15.5	21.4	5 11	12 23.15	-41 14.8	2.196	3.015	13.2	19.8
285060	2011 <i>HT</i> ₉₁		4 3.8 171°37	2°2/ 1.8 17			140068	2001 <i>SK</i> ₁₁₁		4 3.9 47°02	8°7/ 28.4 18		
3 2	13 16.11	- 0 47.4	2.046	2.901	11.8	20.8	3 2	13 23.88	+20 34.1	1.920	2.761	13.1	18.0
3 12	13 10.64	- 0 14.8	1.975	2.903	8.5	20.6	3 12	13 16.05	+20 59.9	1.884	2.781	10.7	17.9
3 22	13 3.37	+ 0 23.0	1.928	2.904	4.9	20.4	3 22	13 6.31	+21 10.7	1.873	2.801	9.1	17.8
4 1	12 54.98	+ 1 1.3	1.909	2.904	2.2	20.2	4 1	12 55.61	+21 0.8	1.888	2.821	8.9	17.8
4 11	12 46.38	+ 1 34.6	1.919	2.905	4.4	20.3	4 11	12 45.07	+20 26.9	1.929	2.842	10.1	17.9
4 21	12 38.43	+ 1 58.6	1.957	2.905	8.0	20.5	4 21	12 35.69	+19 29.8	1.996	2.863	12.2	18.1
5 1	12 31.91	+ 2 10.0	2.020	2.906	11.4	20.7	5 1	12 28.22	+18 12.5	2.086	2.885	14.4	18.3
5 11	12 27.34	+ 2 7.2	2.105	2.906	14.3	20.9	5 11	12 23.06	+16 39.4	2.196	2.906	16.3	18.5
449467	2014 <i>BZ</i> ₂₈		4 3.8 311°81	16°1/ 13.0 18			506042	2015 <i>KA</i> ₇₄		4 3.9 234°35	6°1/ 27.4 17		
3 2	13 21.39	-33 50.1	1.167	1.923	24.7	20.7	3 2	13 13.79	+13 19.8	2.422	3.281	10.1	21.5
3 12	13 16.89	-36 2.8	1.090	1.913	22.2	20.5	3 12	13 8.76	+14 22.1	2.360	3.277	7.9	21.3
3 22	13 8.26	-37 43.1	1.029	1.904	19.6	20.2	3 22	13 2.20	+15 19.4	2.324	3.273	6.3	21.2
4 1	12 56.29	-38 38.7	0.984	1.895	17.3	20.1	4 1	12 54.73	+16 5.6	2.315	3.268	6.2	21.2
4 11	12 42.80	-38 42.5	0.958	1.887	16.1	20.0	4 11	12 47.10	+16 35.6	2.334	3.263	7.8	21.3
4 21	12 30.14	-37 55.8	0.951	1.879	16.6	19.9	4 21	12 40.02	+16 46.7	2.378	3.259	10.0	21.4
5 1	12 20.54	-36 30.0	0.963	1.871	18.7	20.0	5 1	12 34.15	+16 38.0	2.446	3.254	12.3	21.5
5 11	12 15.36	-34 43.0	0.991	1.864	21.5	20.2	5 11	12 29.94	+16 10.6	2.534	3.249	14.3	21.7
428040	2006 <i>DH</i> ₄₃		4 3.8 338°68	4°8/ 29.7 17			422718	2000 <i>YG</i> ₁₂₂		4 3.9 86°53	6°4/ 28.7 18		
3 2	13 11.06	+ 2 39.1	1.679	2.556	12.8	21.3	3 2	13 18.43	+11 30.9	1.961	2.821	12.0	21.0
3 12	13 7.31	+ 4 16.4	1.613	2.551	9.3	21.1	3 12	13 12.11	+12 37.0	1.927	2.848	9.1	20.9
3 22	13 1.58	+ 5 59.7	1.572	2.547	6.0	20.9	3 22	13 4.07	+13 36.7	1.919	2.874	6.9	20.8
4 1	12 54.59	+ 7 39.5	1.558	2.543	4.9	20.8	4 1	12 55.13	+14 23.0	1.938	2.901	6.5	20.8
4 11	12 47.34	+ 9 6.0	1.571	2.539	7.4	20.9	4 11	12 46.25	+14 50.6	1.985	2.926	8.2	21.0
4 21	12 40.80	+10 11.9	1.609	2.536	11.0	21.1	4 21	12 38.32	+14 57.1	2.057	2.951	10.7	21.2
5 1	12 35.82	+10 52.8	1.670	2.533	14.5	21.3	5 1	12 32.01	+14 42.8	2.153	2.976	13.2	21.4
5 11	12 32.95	+11 8.1	1.749	2.530	17.5	21.5	5 11	12 27.73	+14 9.6	2.268	3.000	15.3	21.6
423726	2006 <i>BS</i> ₁₁₇		4 3.8 164°91	3°1/ 31.6 17			21778	Andrewarren		4 3.9 36°93	0°7/ 3.3 18		
3 2	13 15.04	+ 1 18.2	2.065	2.925	11.5	21.3	3 2	13 14.97	- 6 52.2	1.292	2.159	16.5	18.0
3 12	13 9.83	+ 2 12.8	1.997	2.927	8.3	21.1	3 12	13 10.55	- 6 13.7	1.235	2.168	12.0	17.8
3 22	13 2.88	+ 3 11.5	1.955	2.930	5.0	20.9	3 22	13 3.60	- 5 20.0	1.200	2.177	6.9	17.5
4 1	12 54.87	+ 4 8.5	1.941	2.932	3.1	20.8	4 1	12 55.07	- 4 17.6	1.189	2.187	1.5	17.2
4 11	12 46.67	+ 4 57.5	1.956	2.934	5.2	20.9	4 11	12 46.33	- 3 15.3	1.203	2.198	4.3	17.4
4 21	12 39.13	+ 5 33.8	1.998	2.936	8.6	21.1	4 21	12 38.65	- 2 22.0	1.242	2.209	9.5	17.7
5 1	12 32.99	+ 5 54.2	2.065	2.937	11.8	21.3	5 1	12 33.07	- 1 44.3	1.304	2.220	14.1	18.0
5 11	12 28.73	+ 5 57.5	2.153	2.938	14.5	21.5	5 11	12 30.20	- 1 25.8	1.385	2.232	18.0	18.3
273762	2007 <i>EE</i> ₁₅₄		4 3.9 1°67	2°3/ 5.7 17			83807	2001 <i>TH</i> ₂₂₆		4 3.9 239°89	6°2/ 27.3 18		
3 2	13 15.07	-12 38.0	1.587	2.426	15.4	20.9	3 2	13 13.66	+12 38.1	2.308	3.169	10.4	18.9
3 12	13 10.44	-12 37.4	1.512	2.425	11.7	20.6	3 12	13 8.75	+13 49.8	2.244	3.163	8.1	18.7
3 22	13 3.50	-12 19.5	1.459	2.425	7.5	20.4	3 22	13 2.24	+14 57.2	2.206	3.156	6.5	18.6
4 1	12 55.05	-11 46.7	1.431	2.425	3.3	20.1	4 1	12 54.75	+15 53.5	2.195	3.150	6.4	18.6
4 11	12 46.23	-11 4.0	1.430	2.425	3.5	20.1	4 11	12 47.07	+16 33.1	2.212	3.143	8.1	18.7
4 21	12 38.19	-10 18.1	1.454	2.426	7.8	20.4	4 21	12 39.95	+16 52.7	2.254	3.136	10.4	18.8
5 1	12 31.94	- 9 36.0	1.503	2.428	12.0	20.6	5 1	12 34.08	+16 51.1	2.320	3.129	12.8	19.0
5 11	12 28.15	- 9 3.9	1.573	2.429	15.7	20.9	5 11	12 29.94	+16 29.3	2.404	3.122	14.9	19.1
143304	2003 <i>AU</i> ₄₀		4 3.9 39°23	5°1/ 9.3 17			211519	2003 <i>QP</i> ₅₅		4 3.9 176°90	0°7/ 4.4 18		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213919	2003 <i>UL</i> ₁₇₈		4 3.9 225°06	0°0/ 3.7 16			473194	2015 <i>KH</i> ₇₆		4 3.9 295°47	5°3/28.6 17		
3 2	13 19.15	- 7 5.4	1.801	2.643	13.8	20.5	3 2	13 12.71	+ 9 17.9	2.258	3.124	10.4	20.8
3 12	13 13.24	- 6 50.6	1.716	2.636	10.2	20.2	3 12	13 8.06	+10 24.6	2.196	3.122	7.9	20.6
3 22	13 5.09	- 6 24.3	1.655	2.628	6.0	20.0	3 22	13 1.85	+11 29.0	2.160	3.121	5.8	20.5
4 1	12 55.44	- 5 50.0	1.621	2.619	1.4	19.6	4 1	12 54.69	+12 24.9	2.151	3.120	5.4	20.5
4 11	12 45.35	- 5 13.0	1.615	2.610	3.4	19.8	4 11	12 47.36	+13 6.6	2.170	3.119	7.1	20.6
4 21	12 35.93	- 4 38.9	1.637	2.600	8.0	20.0	4 21	12 40.62	+13 30.4	2.216	3.117	9.7	20.7
5 1	12 28.16	- 4 13.1	1.684	2.590	12.1	20.2	5 1	12 35.12	+13 34.8	2.285	3.116	12.2	20.9
5 11	12 22.73	- 3 59.5	1.753	2.579	15.7	20.4	5 11	12 31.32	+13 20.2	2.373	3.115	14.5	21.1
128323	Peterwvolf		4 3.9 247°41	0°0/ 3.7 17			215104	1995 <i>UL</i> ₁₈		4 3.9 76°59	0°9/ 4.7 18		
3 2	13 17.71	- 8 53.6	1.610	2.456	14.9	20.7	3 2	13 15.36	-11 19.0	1.522	2.367	15.7	20.2
3 12	13 12.51	- 8 7.8	1.518	2.439	11.1	20.4	3 12	13 10.56	-10 36.8	1.460	2.379	11.6	20.0
3 22	13 4.83	- 7 4.3	1.448	2.421	6.6	20.1	3 22	13 3.50	- 9 36.1	1.420	2.391	7.0	19.8
4 1	12 55.41	- 5 47.7	1.405	2.403	1.5	19.7	4 1	12 55.08	- 8 22.2	1.406	2.403	2.1	19.5
4 11	12 45.38	- 4 25.8	1.389	2.384	3.8	19.9	4 11	12 46.47	- 7 3.2	1.419	2.415	3.3	19.6
4 21	12 35.98	- 3 7.7	1.401	2.364	9.0	20.1	4 21	12 38.79	- 5 47.9	1.458	2.427	8.1	19.9
5 1	12 28.36	- 2 1.8	1.437	2.344	13.7	20.3	5 1	12 32.99	- 4 44.2	1.522	2.439	12.4	20.2
5 11	12 23.29	- 1 14.3	1.494	2.323	17.8	20.5	5 11	12 29.62	- 3 57.3	1.607	2.451	16.0	20.4
279203	2009 <i>TM</i> ₄₅		4 3.9 173°42	3°0/31.2 16			366444	2001 <i>XM</i> ₂₁₃		4 3.9 159°33	1°0/ 5.1 16		
3 2	13 14.51	+ 0 55.8	2.390	3.244	10.4	22.1	3 2	13 15.81	-11 54.4	2.634	3.448	10.8	21.8
3 12	13 9.26	+ 2 8.4	2.320	3.247	7.4	21.9	3 12	13 10.09	-11 20.6	2.555	3.458	8.0	21.6
3 22	13 2.49	+ 3 25.7	2.277	3.250	4.5	21.7	3 22	13 2.95	-10 35.1	2.503	3.466	4.9	21.4
4 1	12 54.81	+ 4 41.7	2.263	3.253	3.0	21.6	4 1	12 54.94	- 9 40.7	2.479	3.474	1.7	21.2
4 11	12 46.96	+ 5 50.3	2.280	3.254	4.9	21.8	4 11	12 46.78	- 8 41.7	2.486	3.481	2.3	21.2
4 21	12 39.68	+ 6 46.5	2.325	3.255	7.9	22.0	4 21	12 39.17	- 7 42.9	2.523	3.487	5.5	21.5
5 1	12 33.59	+ 7 26.9	2.396	3.255	10.8	22.1	5 1	12 32.70	- 6 49.0	2.588	3.492	8.5	21.7
5 11	12 29.17	+ 7 50.1	2.489	3.255	13.3	22.3	5 11	12 27.82	- 6 3.8	2.678	3.497	11.1	21.8
272761	2005 <i>YW</i> ₁₅₂		4 3.9 80°62	6°0/29.3 18			426059	2012 <i>BS</i> ₈₁		4 3.9 344°04	3°9/31.8 17		
3 2	13 17.72	+ 9 22.6	1.812	2.677	12.6	20.5	3 2	13 12.82	- 0 17.3	1.274	2.156	15.6	20.3
3 12	13 11.77	+10 25.9	1.772	2.698	9.4	20.3	3 12	13 9.17	+ 0 46.9	1.208	2.149	11.3	20.1
3 22	13 3.95	+11 24.8	1.757	2.719	6.8	20.2	3 22	13 2.93	+ 2 0.9	1.164	2.143	6.7	19.8
4 1	12 55.12	+12 11.9	1.769	2.740	6.1	20.2	4 1	12 54.99	+ 3 15.4	1.144	2.138	3.9	19.6
4 11	12 46.30	+12 41.2	1.808	2.761	8.0	20.4	4 11	12 46.65	+ 4 19.7	1.149	2.133	7.0	19.8
4 21	12 38.44	+12 49.6	1.873	2.781	10.8	20.6	4 21	12 39.22	+ 5 5.2	1.177	2.129	11.7	20.0
5 1	12 32.26	+12 37.0	1.961	2.802	13.6	20.8	5 1	12 33.83	+ 5 26.7	1.227	2.126	16.2	20.3
5 11	12 28.23	+12 5.0	2.068	2.822	16.0	21.0	5 11	12 31.16	+ 5 22.6	1.294	2.124	20.0	20.5
12797	1995 <i>WL</i> ₄		4 3.9 92°49	1°8/ 2.3 18			221845	2008 <i>FK</i> ₇₁		4 3.9 183°28	4°3/31.1 17		
3 2	13 16.83	- 4 4.7	1.630	2.488	14.1	18.9	3 2	13 20.24	+ 6 11.9	2.083	2.937	11.7	20.9
3 12	13 11.39	- 3 11.8	1.575	2.504	10.2	18.7	3 12	13 13.61	+ 6 46.1	2.014	2.938	8.6	20.7
3 22	13 3.87	- 2 9.0	1.543	2.520	5.7	18.5	3 22	13 5.10	+ 7 19.4	1.970	2.938	5.6	20.6
4 1	12 55.12	- 1 2.9	1.539	2.536	1.9	18.3	4 1	12 55.44	+ 7 46.4	1.955	2.937	4.3	20.5
4 11	12 46.27	- 0 1.3	1.562	2.552	4.5	18.5	4 11	12 45.57	+ 8 1.9	1.968	2.937	6.2	20.6
4 21	12 38.35	+ 0 49.1	1.612	2.567	8.8	18.8	4 21	12 36.42	+ 8 2.7	2.010	2.935	9.3	20.8
5 1	12 32.23	+ 1 23.5	1.686	2.582	12.7	19.0	5 1	12 28.79	+ 7 47.4	2.076	2.933	12.3	21.0
5 11	12 28.41	+ 1 39.8	1.781	2.597	15.9	19.3	5 11	12 23.22	+ 7 16.5	2.164	2.931	15.0	21.1
490431	2009 <i>SE</i> ₈₈		4 3.9 139°45	2°0/ 1.8 17			371118	2005 <i>VS</i> ₁₁₁		4 3.9 246°80	1°9/ 5.7 18		
3 2	13 16.55	- 1 33.2	2.232	3.081	11.2	22.5	3 2	13 16.23	-13 20.4	2.144	2.962	12.7	21.5
3 12	13 10.76	- 0 50.8	2.168	3.093	8.0	22.3	3 12	13 10.94	-13 3.4	2.043	2.945	9.7	21.2
3 22	13 3.36	- 0 3.0	2.129	3.104	4.6	22.1	3 22	13 3.72	-12 31.2	1.966	2.927	6.3	21.0
4 1	12 55.01	+ 0 45.6	2.119	3.115	2.0	21.9	4 1	12 55.17	-11 45.7	1.916	2.909	2.7	20.7
4 11	12 46.53	+ 1 29.5	2.139	3.125	4.0	22.1	4 11	12 46.17	-10 51.1	1.895	2.890	2.9	20.7
4 21	12 38.72	+ 2 4.4	2.188	3.135	7.4	22.3	4 21	12 37.63	- 9 53.0	1.903	2.871	6.6	20.9
5 1	12 32.26	+ 2 27.1	2.263	3.144	10.5	22.5	5 1	12 30.43	- 8 57.6	1.938	2.851	10.4	21.1
5 11	12 27.61	+ 2 35.8	2.360	3.152	13.2	22.7	5 11	12 25.20	- 8 10.6	1.996	2.830	13.7	21.2
25419	1999 <i>VC</i> ₇₂		4 3.9 166°92	1°6/ 5.2 18			117050	2004 <i>JR</i> ₃₄		4 3.9 307°79	2°5/ 1.2 18		
3 2	13 18.99	-12 33.2	1.667	2.497	15.3	18.8	3 2	13 11.85	- 0 46.7	2.109	2.971	11.2	19.8
3 12	13 13.17	-12 4.8	1.592	2.502	11.5	18.6	3 12	13 7.60	+ 0 5.7	2.031	2.962	8.1	19.6
3 22	13 5.03	-11 18.2	1.540	2.506	7.1	18.4	3 22	13 1.67	+ 1 4.5	1.977	2.954	4.7	19.3
4 1	12 55.42	-10 16.7	1.514	2.509	2.6	18.1	4 1	12 54.68	+ 2 4.1	1.952	2.946	2.5	19.2
4 11	12 45.49	- 9 6.9	1.516	2.512	3.3	18.1	4 11	12 47.43	+ 2 58.6	1.954	2.937	4.6	19.3
4 21	12 36.40	- 7 56.9	1.545	2.514	7.8	18.4	4 21	12 40.71	+ 3 42.5	1.984	2.930	8.1	19.5
5 1	12 29.15	- 6 54.4	1.600	2.515	12.1	18.7	5 1	12 35.27	+ 4 12.0	2.039	2.922	11.4	19.7
5 11	12 24.38	- 6 5.4	1.677	2.515	15.8	18.9	5 11	12 31.60	+ 4 24.9	2.115	2.914	14.3	19.9
389711	2011 <i>RE</i> ₁₇		4 3.9 208°41	1°8/ 6.0 17			285658	2000 <i>SY</i> ₄₈		4 3.9 260°85	3°5/10.7 18		
3 2	13 13.16	-13 52.4	2.714	3.524	10.6	21.9	3 2	13 9.21	-25 54.1	4.675	5.400	7.7	20.7
3 12	13 8.25	-13 36.9	2.623	3.519	8.1	21.7	3 12	13 5.00	-26 9.0	4.569	5.392	6.4	20.6
3 22	13 1.93	-13 9.4	2.556	3.514	5.2	21.5	3 22	12 59.91	-26 13.7	4.488	5.383	5.1	20.4
4 1	12 54.71	-12 31.6	2.518	3.509	2.4	21.3	4 1	12 54.27	-26 8.1	4.434	5.374	4.0	20.3
4 11	12 47.25	-11 47.0	2.509	3.504	2.4	21.3	4 11	12 48.45	-25 53.1	4.408	5.365	3.5	20.3
4 21	12 40.23	-10 59.6	2.530	3.498	5.2	21.5	4 21	12 42.86	-25 30.4	4.411	5.357	4.0	20.3
5 1	12 34.24	-10 13.8	2.579	3.491	8.2	21.6	5 1	12 37.85	-25 2.3	4.443	5.348	5.2	20.4
5 11	12 29.76	- 9 33.9	2.652	3.485	10.8	21.8	5 11	12 33.74	-24 31.6	4.501	5.339	6.6	20.5
377633	2005 <i>TW</i> ₅₁		4 3.9 252°88	8°8/12.2 18			6645	Arcetri		4 3.9 122°56	0°0/ 3.7 18		
3 2	13 15.04												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
389700	2011 <i>QD</i> ₇₈		4 3.9 116°29	0°5/ 4.5 17			64065	2001 <i>SF</i> ₂₆₈		4 3.9 149°64	0°4/ 3.5 18		
3 2	13 14.76	- 8 34.8	2.511	3.340	10.7	21.4	3 2	13 17.01	- 8 17.7	1.633	2.481	14.7	20.0
3 12	13 9.40	- 8 24.9	2.437	3.349	7.9	21.2	3 12	13 11.69	- 7 21.1	1.565	2.488	10.7	19.7
3 22	13 2.58	- 8 6.2	2.388	3.357	4.7	21.0	3 22	13 4.17	- 6 9.0	1.520	2.494	6.2	19.5
4 1	12 54.88	- 7 41.1	2.369	3.366	1.3	20.8	4 1	12 55.28	- 4 47.4	1.501	2.500	1.3	19.2
4 11	12 47.01	- 7 13.1	2.379	3.374	2.3	20.9	4 11	12 46.15	- 3 24.7	1.511	2.505	3.8	19.3
4 21	12 39.69	- 6 46.0	2.418	3.382	5.7	21.1	4 21	12 37.88	- 2 9.3	1.548	2.510	8.5	19.6
5 1	12 33.52	- 6 23.5	2.484	3.390	8.7	21.3	5 1	12 31.40	- 1 8.4	1.610	2.514	12.7	19.9
5 11	12 28.98	- 6 8.4	2.574	3.397	11.4	21.5	5 11	12 27.29	- 0 26.2	1.693	2.518	16.2	20.1
213157	2000 <i>QY</i> ₄₂		4 3.9 223°32	1°3/ 2.1 18			163260	2002 <i>GO</i> ₄₃		4 3.9 133°18	0°2/ 4.1 18		
3 2	13 12.10	- 3 31.7	2.713	3.558	9.5	21.2	3 2	13 16.29	- 9 53.8	1.651	2.494	14.7	20.1
3 12	13 7.46	- 2 42.7	2.626	3.550	6.9	21.0	3 12	13 11.16	- 9 4.3	1.582	2.502	10.8	19.9
3 22	13 1.47	- 1 46.9	2.565	3.541	3.9	20.8	3 22	13 3.85	- 7 58.3	1.537	2.510	6.4	19.6
4 1	12 54.64	- 0 48.1	2.534	3.531	1.4	20.5	4 1	12 55.21	- 6 41.1	1.519	2.517	1.6	19.3
4 11	12 47.58	+ 0 8.9	2.533	3.521	3.2	20.7	4 11	12 46.35	- 5 20.6	1.528	2.524	3.4	19.5
4 21	12 40.94	+ 0 59.7	2.562	3.511	6.3	20.9	4 21	12 38.33	- 4 5.1	1.565	2.530	8.1	19.8
5 1	12 35.29	+ 1 40.4	2.617	3.500	9.2	21.0	5 1	12 32.07	- 3 2.0	1.626	2.536	12.2	20.0
5 11	12 31.08	+ 2 8.8	2.696	3.489	11.7	21.2	5 11	12 28.14	- 2 16.0	1.709	2.542	15.8	20.2
71919	2000 <i>WT</i> ₅₄		4 3.9 96°76	0°9/ 3.2 18			192675	1999 <i>RG</i> ₂₂₆		4 3.9 154°94	5°4/ 9.5 18		
3 2	13 18.95	- 5 36.9	1.589	2.442	14.7	19.4	3 2	13 18.22	- 23 47.5	2.345	3.104	13.6	20.6
3 12	13 13.01	- 5 4.7	1.532	2.458	10.7	19.2	3 12	13 12.24	- 24 12.4	2.261	3.110	11.1	20.4
3 22	13 4.86	- 4 21.4	1.499	2.474	6.1	18.9	3 22	13 4.39	- 24 18.7	2.199	3.116	8.5	20.3
4 1	12 55.40	- 3 32.4	1.492	2.490	1.4	18.6	4 1	12 55.34	- 24 5.7	2.163	3.121	6.2	20.1
4 11	12 45.81	- 2 44.7	1.513	2.506	3.9	18.9	4 11	12 45.98	- 23 35.1	2.155	3.126	5.4	20.1
4 21	12 37.21	- 2 4.7	1.560	2.521	8.5	19.2	4 21	12 37.21	- 22 51.1	2.175	3.131	6.8	20.2
5 1	12 30.52	- 1 37.3	1.632	2.536	12.6	19.4	5 1	12 29.83	- 21 59.4	2.222	3.135	9.3	20.3
5 11	12 26.26	- 1 25.5	1.725	2.551	15.9	19.7	5 11	12 24.42	- 21 6.6	2.293	3.138	11.8	20.5
105346	2000 <i>QN</i> ₉₆		4 3.9 217°13	0°3/ 3.5 18			180099	2003 <i>EY</i> ₆₂		4 3.9 317°59	1°4/ 2.4 17		
3 2	13 13.79	- 5 56.8	2.779	3.614	9.7	20.3	3 2	13 12.21	- 3 32.6	2.091	2.947	11.6	19.9
3 12	13 8.66	- 5 33.2	2.690	3.607	7.0	20.2	3 12	13 7.90	- 2 54.7	2.010	2.938	8.4	19.6
3 22	13 2.16	- 5 2.4	2.627	3.599	4.0	19.9	3 22	13 1.89	- 2 8.8	1.953	2.929	4.8	19.4
4 1	12 54.80	- 4 27.3	2.593	3.591	0.9	19.7	4 1	12 54.78	- 1 19.4	1.924	2.921	1.5	19.1
4 11	12 47.20	- 3 51.5	2.589	3.582	2.5	19.8	4 11	12 47.38	- 0 32.0	1.923	2.913	3.8	19.3
4 21	12 40.02	- 3 18.6	2.615	3.573	5.7	20.0	4 21	12 40.52	+ 0 8.1	1.949	2.905	7.5	19.5
5 1	12 33.83	- 2 52.2	2.669	3.564	8.6	20.2	5 1	12 34.95	+ 0 36.6	2.001	2.897	11.0	19.7
5 11	12 29.10	- 2 34.7	2.746	3.554	11.1	20.3	5 11	12 31.18	+ 0 51.0	2.075	2.890	14.0	19.9
74761	1999 <i>RA</i> ₂₁₁		4 3.9 295°87	4°9/ 7.6 18			159883	2004 <i>RA</i> ₃₁₀		4 3.9 147°31	2°9/ 7.4 17		
3 2	13 15.88	- 18 28.9	1.508	2.327	17.1	18.9	3 2	13 13.89	- 18 40.1	2.255	3.052	12.9	20.7
3 12	13 11.44	- 18 42.5	1.418	2.313	13.7	18.7	3 12	13 9.00	- 18 5.4	2.175	3.059	10.1	20.6
3 22	13 4.35	- 18 32.8	1.349	2.300	9.7	18.4	3 22	13 2.45	- 17 12.1	2.117	3.066	6.9	20.4
4 1	12 55.37	- 17 59.4	1.303	2.286	6.0	18.1	4 1	12 54.89	- 16 2.4	2.087	3.072	3.9	20.2
4 11	12 45.73	- 17 5.8	1.283	2.273	5.2	18.1	4 11	12 47.15	- 14 41.4	2.086	3.078	3.2	20.2
4 21	12 36.77	- 15 59.2	1.288	2.260	8.6	18.2	4 21	12 40.01	- 13 15.5	2.114	3.084	5.9	20.3
5 1	12 29.72	- 14 49.1	1.317	2.247	12.9	18.4	5 1	12 34.20	- 11 51.6	2.170	3.089	9.1	20.5
5 11	12 25.43	- 13 45.3	1.366	2.235	17.0	18.6	5 11	12 30.20	- 10 36.1	2.250	3.094	12.1	20.7
178241	2006 <i>XC</i> ₃₂		4 3.9 293°39	0°3/ 3.5 17			331493	1999 <i>RU</i> ₁₉₉		4 3.9 251°34	4°0/ 8.1 18		
3 2	13 12.35	- 6 46.9	2.207	3.052	11.4	20.8	3 2	13 14.63	- 20 17.6	2.217	3.005	13.4	20.7
3 12	13 7.97	- 6 15.2	2.116	3.038	8.4	20.6	3 12	13 9.79	- 20 5.8	2.113	2.989	10.7	20.5
3 22	13 1.92	- 5 33.4	2.050	3.024	4.9	20.4	3 22	13 3.07	- 19 34.5	2.033	2.973	7.7	20.3
4 1	12 54.76	- 4 44.9	2.012	3.010	1.0	20.1	4 1	12 55.07	- 18 44.1	1.978	2.956	4.9	20.0
4 11	12 47.29	- 3 55.0	2.003	2.997	3.0	20.2	4 11	12 46.65	- 17 38.0	1.952	2.939	4.1	20.0
4 21	12 40.28	- 3 8.6	2.021	2.983	6.8	20.4	4 21	12 38.70	- 16 22.0	1.953	2.921	6.5	20.1
5 1	12 34.49	- 2 30.8	2.066	2.969	10.3	20.6	5 1	12 32.06	- 15 3.0	1.982	2.903	9.8	20.2
5 11	12 30.46	- 2 4.9	2.133	2.956	13.4	20.8	5 11	12 27.34	- 13 48.4	2.035	2.885	12.9	20.4
38194	1999 <i>LS</i> ₁₃		4 3.9 309°06	1°3/ 4.9 17			39593	1993 <i>OM</i> ₁₀		4 3.9 192°24	0°3/ 3.4 18		
3 2	13 12.56	- 12 13.8	1.342	2.196	16.9	18.7	3 2	13 12.15	- 6 24.0	2.988	3.822	9.1	20.8
3 12	13 9.11	- 11 33.5	1.257	2.180	12.8	18.4	3 12	13 7.38	- 5 50.4	2.904	3.821	6.6	20.6
3 22	13 3.02	- 10 29.3	1.193	2.164	7.9	18.1	3 22	13 1.39	- 5 9.6	2.846	3.818	3.8	20.4
4 1	12 55.07	- 9 5.3	1.152	2.149	2.6	17.7	4 1	12 54.65	- 4 24.5	2.818	3.816	0.8	20.2
4 11	12 46.51	- 7 30.2	1.137	2.134	3.8	17.8	4 11	12 47.74	- 3 38.9	2.820	3.813	2.4	20.3
4 21	12 38.70	- 5 55.2	1.147	2.120	9.3	18.0	4 21	12 41.23	- 2 56.5	2.852	3.809	5.3	20.5
5 1	12 32.85	- 4 31.6	1.180	2.106	14.5	18.3	5 1	12 35.64	- 2 20.6	2.911	3.805	8.0	20.7
5 11	12 29.77	- 3 27.7	1.232	2.092	19.0	18.5	5 11	12 31.36	- 1 53.7	2.995	3.801	10.4	20.8
407284	2010 <i>GG</i> ₁₂₄		4 3.9 269°11	3°5/ 1.3 16			426205	2012 <i>KA</i> ₂₅		4 3.9 126°97	1°6/ 2.4 17		
3 2	13 18.55	+ 0 13.4	1.504	2.371	14.6	21.4	3 2	13 16.72	- 3 19.1	1.831	2.686	13.0	21.2
3 12	13 13.24	+ 0 59.3	1.421	2.354	10.7	21.1	3 12	13 11.27	- 2 40.7	1.765	2.693	9.4	21.0
3 22	13 5.32	+ 1 53.1	1.360	2.337	6.4	20.8	3 22	13 3.84	- 1 54.1	1.723	2.699	5.3	20.8
4 1	12 55.58	+ 2 47.5	1.325	2.319	3.5	20.6	4 1	12 55.22	- 1 4.6	1.709	2.706	1.8	20.5
4 11	12 45.25	+ 3 34.3	1.317	2.301	6.3	20.7	4 11	12 46.40	+ 0 18.3	1.722	2.712	4.2	20.7
4 21	12 35.64	+ 4 6.2	1.334	2.283	10.9	20.9	4 21	12 38.35	+ 0 19.0	1.763	2.718	8.2	21.0
5 1	12 27.91	+ 4 18.4	1.375	2.264	15.4	21.1	5 1	12 31.89	+ 0 43.2	1.829	2.724	11.9	21.2
5 11	12 22.87	+ 4 9.0	1.434	2.246	19.3	21.3	5 11	12 27.58	+ 0 51.9	1.916	2.729	15.1	21.4
142269	2002 <i>RE</i> ₁₁₄		4 3.9 166°90	1°6/ 2.3 18			193952	2001 <i>RH</i> ₆₂		4 3.9 1			

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4 3.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
456719	2007 <i>RL</i> ₃₀₁		4 3.9 113°82	0°0/ 3.8 18			385193	1998 <i>BT</i> ₃		4 3.9 66°46	0°9/ 2.9 17		
3 2	13 18.14	- 8 38.9	1.679	2.523	14.5	22.2	3 2	13 14.36	- 5 9.9	2.019	2.869	12.2	21.5
3 12	13 12.39	- 8 0.9	1.618	2.538	10.6	21.9	3 12	13 9.30	- 4 30.5	1.965	2.890	8.7	21.4
3 22	13 4.52	- 7 8.9	1.580	2.552	6.2	21.7	3 22	13 2.60	- 3 42.7	1.937	2.912	4.9	21.2
4 1	12 55.38	- 6 7.9	1.569	2.567	1.4	21.4	4 1	12 54.97	- 2 51.3	1.936	2.934	1.2	20.9
4 11	12 46.09	- 5 4.9	1.586	2.581	3.4	21.6	4 11	12 47.28	- 2 1.8	1.963	2.955	3.4	21.1
4 21	12 37.71	- 4 7.1	1.630	2.594	7.9	21.9	4 21	12 40.34	- 1 19.5	2.019	2.977	7.1	21.4
5 1	12 31.13	- 3 20.6	1.699	2.607	11.9	22.2	5 1	12 34.82	- 0 48.4	2.100	2.998	10.4	21.7
5 11	12 26.87	- 2 49.3	1.790	2.619	15.3	22.4	5 11	12 31.16	- 0 30.7	2.203	3.020	13.2	21.9
416117	2002 <i>QZ</i> ₃		4 3.9 182°58	0°5/ 4.4 16			88343	2001 <i>OW</i> ₇₀		4 3.9 172°70	2°4/ 1.8 18		
3 2	13 17.57	- 9 34.7	2.197	3.024	12.1	22.5	3 2	13 19.02	- 2 2.0	1.773	2.627	13.4	20.0
3 12	13 11.71	- 9 6.9	2.115	3.026	9.0	22.3	3 12	13 13.05	- 1 8.0	1.703	2.631	9.6	19.8
3 22	13 4.07	- 8 27.1	2.057	3.026	5.4	22.1	3 22	13 4.95	- 0 5.7	1.658	2.634	5.6	19.6
4 1	12 55.30	- 7 38.4	2.028	3.026	1.5	21.8	4 1	12 55.54	+ 0 58.5	1.641	2.636	2.4	19.3
4 11	12 46.28	- 6 45.9	2.029	3.024	2.7	21.9	4 11	12 45.86	+ 1 57.1	1.652	2.638	4.9	19.5
4 21	12 37.85	- 5 54.8	2.059	3.022	6.6	22.2	4 21	12 36.99	+ 2 43.9	1.690	2.638	9.1	19.8
5 1	12 30.79	- 5 10.4	2.116	3.020	10.1	22.4	5 1	12 29.81	+ 3 14.3	1.754	2.638	12.9	20.0
5 11	12 25.64	- 4 36.7	2.196	3.016	13.2	22.6	5 11	12 24.92	+ 3 26.3	1.838	2.638	16.1	20.2
150866	2001 <i>SS</i> ₁₅₈		4 3.9 92°21	1°5/ 5.2 18			184976	2006 <i>BN</i> ₇₀		4 3.9 245°94	0°4/ 4.6 18		
3 2	13 19.05	-10 54.3	1.807	2.638	14.2	20.1	3 2	13 7.40	- 8 37.7	4.610	5.432	6.3	21.0
3 12	13 12.95	-10 50.2	1.746	2.656	10.6	19.9	3 12	13 3.65	- 8 26.1	4.519	5.428	4.7	20.9
3 22	13 4.82	-10 32.4	1.707	2.674	6.5	19.7	3 22	12 59.15	- 8 9.6	4.456	5.423	2.8	20.7
4 1	12 55.46	-10 3.5	1.696	2.691	2.4	19.5	4 1	12 54.19	- 7 49.5	4.422	5.419	0.8	20.5
4 11	12 45.96	- 9 28.4	1.712	2.708	3.0	19.5	4 11	12 49.13	- 7 27.7	4.419	5.414	1.4	20.6
4 21	12 37.33	- 8 52.6	1.757	2.725	7.1	19.8	4 21	12 44.29	- 7 6.2	4.446	5.410	3.3	20.7
5 1	12 30.42	- 8 21.6	1.827	2.741	10.9	20.1	5 1	12 40.00	- 6 46.9	4.502	5.405	5.2	20.9
5 11	12 25.76	- 7 59.7	1.919	2.757	14.1	20.3	5 11	12 36.51	- 6 31.5	4.584	5.401	6.8	21.0
227315	2005 <i>TM</i> ₆₂		4 3.9 245°03	1°8/ 2.3 17			225022	2007 <i>FB</i> ₁₂		4 3.9 47°01	0°5/ 4.4 18		
3 2	13 17.27	- 2 29.3	1.948	2.800	12.4	21.5	3 2	13 14.92	- 9 27.3	1.520	2.372	15.3	20.4
3 12	13 11.76	- 1 57.7	1.862	2.788	9.0	21.3	3 12	13 10.27	- 8 57.9	1.461	2.385	11.3	20.2
3 22	13 4.23	- 1 18.5	1.801	2.776	5.2	21.0	3 22	13 3.39	- 8 12.9	1.425	2.398	6.7	20.0
4 1	12 55.36	- 0 36.5	1.767	2.764	1.9	20.8	4 1	12 55.18	- 7 17.2	1.414	2.412	1.8	19.7
4 11	12 46.10	+ 0 2.8	1.762	2.751	4.2	20.9	4 11	12 46.79	- 6 18.1	1.429	2.426	3.4	19.8
4 21	12 37.43	+ 0 33.9	1.784	2.737	8.3	21.1	4 21	12 39.34	- 5 23.0	1.471	2.440	8.1	20.1
5 1	12 30.23	+ 0 52.5	1.832	2.724	12.1	21.3	5 1	12 33.72	- 4 38.7	1.537	2.455	12.3	20.4
5 11	12 25.12	+ 0 56.4	1.902	2.710	15.3	21.5	5 11	12 30.50	- 4 9.5	1.624	2.470	15.8	20.7
433664	2014 <i>CK</i> ₁₆		4 3.9 201°65	2°7/ 31.6 17			330172	2006 <i>BY</i> ₂₁₉		4 3.9 146°09	1°5/ 5.4 17		
3 2	13 11.48	- 0 6.5	2.279	3.139	10.6	21.0	3 2	13 15.83	-12 20.8	2.086	2.910	12.8	21.1
3 12	13 7.20	+ 1 1.2	2.208	3.139	7.6	20.8	3 12	13 10.52	-11 58.7	2.011	2.917	9.7	20.9
3 22	13 1.41	+ 2 14.5	2.163	3.138	4.5	20.7	3 22	13 3.41	-11 22.3	1.959	2.923	6.0	20.7
4 1	12 54.70	+ 3 27.7	2.146	3.138	2.7	20.5	4 1	12 55.19	-10 34.5	1.934	2.929	2.3	20.4
4 11	12 47.80	+ 4 34.4	2.159	3.137	4.7	20.7	4 11	12 46.75	- 9 40.1	1.939	2.934	2.7	20.5
4 21	12 41.43	+ 5 29.4	2.199	3.137	7.9	20.9	4 21	12 38.96	- 8 45.0	1.972	2.940	6.4	20.7
5 1	12 36.24	+ 6 9.2	2.264	3.136	10.9	21.0	5 1	12 32.59	- 7 54.8	2.031	2.944	10.0	20.9
5 11	12 32.69	+ 6 31.8	2.351	3.135	13.5	21.2	5 11	12 28.16	- 7 14.3	2.114	2.949	13.1	21.1
406871	2009 <i>BX</i> ₁₇₂		4 3.9 39°90	0°6/ 3.5 18			163483	2002 <i>RA</i> ₂₇₄		4 3.9 250°90	0°7/ 3.3 17		
3 2	13 17.40	- 6 6.0	1.164	2.035	17.7	20.7	3 2	13 14.57	- 5 36.5	2.074	2.921	12.0	20.9
3 12	13 12.52	- 5 46.4	1.115	2.049	12.9	20.5	3 12	13 9.64	- 5 8.0	1.994	2.918	8.7	20.7
3 22	13 4.84	- 5 12.7	1.086	2.063	7.4	20.2	3 22	13 2.93	- 4 30.3	1.939	2.913	5.0	20.5
4 1	12 55.49	- 4 30.8	1.080	2.078	1.6	19.9	4 1	12 55.09	- 3 47.2	1.911	2.909	1.1	20.2
4 11	12 45.97	- 3 49.2	1.099	2.094	4.4	20.1	4 11	12 46.97	- 3 3.9	1.912	2.905	3.3	20.3
4 21	12 37.70	- 3 15.7	1.142	2.111	9.9	20.5	4 21	12 39.42	- 2 25.6	1.941	2.901	7.2	20.6
5 1	12 31.81	- 2 56.2	1.207	2.128	14.7	20.8	5 1	12 33.23	- 1 56.8	1.995	2.897	10.8	20.8
5 11	12 28.86	- 2 54.1	1.291	2.145	18.6	21.1	5 11	12 28.93	- 1 40.5	2.072	2.892	13.8	21.0
17393	1981 <i>EA</i> ₄₁		4 3.9 49°53	0°6/ 3.2 18			416920	2005 <i>SN</i> ₄₉		4 3.9 177°71	0°4/ 3.5 17		
3 2	13 11.65	- 6 48.4	2.191	3.038	11.5	19.0	3 2	13 17.36	- 6 13.1	2.164	3.003	11.9	22.4
3 12	13 7.38	- 6 1.4	2.118	3.041	8.3	18.8	3 12	13 11.57	- 5 48.2	2.086	3.005	8.7	22.2
3 22	13 1.54	- 5 4.2	2.070	3.044	4.7	18.6	3 22	13 4.00	- 5 14.1	2.033	3.006	5.0	22.0
4 1	12 54.73	- 4 1.1	2.050	3.048	1.0	18.3	4 1	12 55.33	- 4 34.5	2.009	3.007	1.1	21.7
4 11	12 47.75	- 2 57.9	2.058	3.051	3.1	18.5	4 11	12 46.41	- 3 54.0	2.013	3.007	3.0	21.8
4 21	12 41.33	- 2 0.3	2.095	3.055	6.7	18.7	4 21	12 38.10	- 3 17.7	2.047	3.007	6.9	22.1
5 1	12 36.15	- 1 13.0	2.158	3.059	10.1	18.9	5 1	12 31.17	- 2 49.7	2.107	3.006	10.4	22.3
5 11	12 32.68	- 0 39.3	2.244	3.063	12.9	19.1	5 11	12 26.14	- 2 33.1	2.190	3.005	13.4	22.5
240792	2005 <i>VO</i> ₆₅		4 3.9 359°77	1°6/ 2.8 18			506447	2001 <i>SW</i> ₂₀₉		4 3.9 218°02	0°4/ 3.4 17		
3 2	13 14.08	- 5 49.8	1.125	2.003	17.6	20.7	3 2	13 13.91	- 6 3.9	2.791	3.625	9.6	22.9
3 12	13 10.38	- 4 59.4	1.063	2.001	12.9	20.4	3 12	13 8.80	- 5 34.5	2.699	3.616	7.0	22.7
3 22	13 3.79	- 3 51.6	1.021	2.000	7.3	20.1	3 22	13 2.31	- 4 57.6	2.634	3.607	4.0	22.5
4 1	12 55.30	- 2 34.5	1.002	2.000	1.9	19.7	4 1	12 54.95	- 4 16.1	2.599	3.597	0.9	22.2
4 11	12 46.39	- 1 19.2	1.007	2.000	5.3	20.0	4 11	12 47.35	- 3 33.9	2.593	3.586	2.5	22.3
4 21	12 38.55	- 0 16.5	1.035	2.001	11.0	20.3	4 21	12 40.15	- 2 54.8	2.618	3.575	5.7	22.5
5 1	12 33.02	+ 0 25.5	1.084	2.003	16.2	20.6	5 1	12 33.94	- 2 22.6	2.670	3.564	8.6	22.7
5 11	12 30.51	+ 0 43.0	1.151	2.005	20.4	20.8	5 11	12 29.18	- 1 59.8	2.746	3.552	11.2	22.8
503247	2015 <i>KP</i> ₇		4 3.9 62°17	8°2/ 24.9 17			167083	2003 <i>RR</i> ₂₅		4 3.9 109°96	0°2/ 4.1 18		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
390379	2013 <i>UK</i> ₁₄		4 3.9 253°99	0°7/ 4.6 17			240759	2005 <i>LJ</i> ₁₂		4 3.9 234°95	8°7/ 20.4 18		
3 2	13 16.75	- 9 38.1	2.044	2.877	12.7	21.6	3 2	13 14.74	+26 49.2	2.803	3.626	9.9	21.0
3 12	13 11.43	- 9 18.9	1.946	2.859	9.5	21.4	3 12	13 9.49	+28 17.1	2.751	3.613	9.0	20.9
3 22	13 4.10	- 8 46.8	1.872	2.841	5.8	21.1	3 22	13 2.75	+29 32.7	2.724	3.600	8.7	20.9
4 1	12 55.40	- 8 4.5	1.826	2.823	1.7	20.8	4 1	12 55.08	+30 29.7	2.723	3.586	9.2	20.9
4 11	12 46.22	- 7 16.8	1.808	2.804	2.9	20.8	4 11	12 47.20	+31 3.7	2.747	3.572	10.4	20.9
4 21	12 37.53	- 6 29.2	1.819	2.784	7.1	21.0	4 21	12 39.83	+31 13.0	2.793	3.557	11.9	21.0
5 1	12 30.22	- 5 47.4	1.856	2.764	11.0	21.2	5 1	12 33.61	+30 58.0	2.859	3.542	13.4	21.1
5 11	12 24.94	- 5 16.3	1.915	2.744	14.5	21.4	5 11	12 29.00	+30 21.2	2.941	3.527	14.7	21.2
214716	2006 <i>TD</i> ₈		4 3.9 63°59	5°1/ 28.6 18			83656	2001 <i>TP</i> ₁₂		4 3.9 147°68	0°0/ 3.9 18		
3 2	13 12.09	+ 8 11.2	2.244	3.111	10.4	20.3	3 2	13 13.50	- 7 56.0	2.786	3.615	9.8	20.5
3 12	13 7.65	+ 9 26.2	2.185	3.113	7.8	20.1	3 12	13 8.42	- 7 27.0	2.711	3.624	7.2	20.3
3 22	13 1.69	+10 39.8	2.152	3.115	5.6	20.0	3 22	13 2.05	- 6 49.8	2.662	3.632	4.2	20.1
4 1	12 54.80	+11 45.6	2.147	3.118	5.3	20.0	4 1	12 54.91	- 6 7.3	2.642	3.640	1.0	19.9
4 11	12 47.76	+12 37.5	2.170	3.120	7.0	20.1	4 11	12 47.64	- 5 23.3	2.653	3.647	2.3	20.0
4 21	12 41.31	+13 11.4	2.219	3.123	9.6	20.2	4 21	12 40.84	- 4 41.7	2.693	3.654	5.4	20.2
5 1	12 36.08	+13 25.6	2.291	3.125	12.1	20.4	5 1	12 35.06	- 4 6.1	2.761	3.661	8.2	20.4
5 11	12 32.54	+13 20.4	2.384	3.127	14.4	20.6	5 11	12 30.72	- 3 39.2	2.854	3.667	10.6	20.6
177113	2003 <i>GF</i> ₁₄		4 3.9 318°71	2°0/ 2.2 17			466842	2015 <i>BZ</i> ₂₄₈		4 3.9 262°59	2°2/ 1.7 17		
3 2	13 15.61	- 0 43.1	1.979	2.837	12.0	19.3	3 2	13 14.09	- 2 18.6	1.894	2.754	12.4	20.8
3 12	13 10.55	- 0 29.8	1.893	2.822	8.8	19.0	3 12	13 9.46	- 1 24.7	1.816	2.746	9.0	20.6
3 22	13 3.55	- 0 11.7	1.832	2.807	5.1	18.8	3 22	13 2.92	- 0 22.2	1.763	2.739	5.2	20.3
4 1	12 55.26	+ 0 6.9	1.797	2.793	2.0	18.5	4 1	12 55.14	+ 0 43.0	1.736	2.732	2.3	20.1
4 11	12 46.60	+ 0 21.5	1.791	2.780	4.2	18.7	4 11	12 47.06	+ 1 44.0	1.738	2.724	4.7	20.3
4 21	12 38.48	+ 0 28.1	1.812	2.766	8.1	18.9	4 21	12 39.59	+ 2 34.3	1.767	2.717	8.6	20.5
5 1	12 31.77	+ 0 23.4	1.858	2.753	11.8	19.1	5 1	12 33.57	+ 3 9.4	1.821	2.709	12.3	20.7
5 11	12 27.07	+ 0 5.8	1.926	2.741	14.9	19.2	5 11	12 29.57	+ 3 26.6	1.895	2.702	15.4	20.9
131800	2002 <i>AM</i> ₅₃		4 3.9 172°24	0°0/ 4.0 18			119156	2001 <i>QM</i> ₇		4 3.9 224°93	2°8/ 31.7 17		
3 2	13 18.24	- 8 54.5	1.833	2.671	13.7	21.3	3 2	13 15.71	+ 0 11.0	2.299	3.151	10.8	21.4
3 12	13 12.48	- 8 14.2	1.758	2.675	10.1	21.1	3 12	13 10.38	+ 1 17.0	2.212	3.138	7.8	21.2
3 22	13 4.65	- 7 19.8	1.706	2.678	5.9	20.9	3 22	13 3.37	+ 2 29.2	2.151	3.125	4.7	20.9
4 1	12 55.50	- 6 15.7	1.682	2.680	1.4	20.6	4 1	12 55.25	+ 3 41.9	2.120	3.111	2.8	20.8
4 11	12 46.08	- 5 8.7	1.687	2.682	3.2	20.7	4 11	12 46.81	+ 4 48.8	2.118	3.096	4.9	20.9
4 21	12 37.41	- 4 5.8	1.719	2.683	7.7	21.0	4 21	12 38.86	+ 5 44.3	2.145	3.080	8.2	21.1
5 1	12 30.37	- 3 13.2	1.778	2.683	11.7	21.2	5 1	12 32.13	+ 6 24.4	2.198	3.063	11.4	21.2
5 11	12 25.56	- 2 35.3	1.859	2.682	15.1	21.4	5 11	12 27.17	+ 6 47.0	2.272	3.046	14.2	21.4
384831	2012 <i>RR</i> ₃₀		4 3.9 148°11	5°9/ 27.1 17			229580	2006 <i>BT</i> ₈₁		4 3.9 271°20	0°7/ 3.2 17		
3 2	13 13.14	+11 16.6	2.381	3.243	10.1	20.5	3 2	13 15.23	- 5 28.2	1.922	2.771	12.7	20.8
3 12	13 8.33	+12 46.4	2.328	3.249	7.8	20.3	3 12	13 10.29	- 5 0.5	1.841	2.765	9.3	20.6
3 22	13 2.04	+14 12.7	2.302	3.255	6.1	20.2	3 22	13 3.41	- 4 22.8	1.784	2.759	5.3	20.3
4 1	12 54.88	+15 28.4	2.305	3.261	6.1	20.3	4 1	12 55.26	- 3 39.4	1.755	2.753	1.2	20.0
4 11	12 47.60	+16 27.7	2.335	3.266	7.7	20.4	4 11	12 46.79	- 2 55.9	1.753	2.746	3.5	20.1
4 21	12 40.89	+17 6.9	2.392	3.271	10.0	20.5	4 21	12 38.93	- 2 17.9	1.779	2.740	7.7	20.4
5 1	12 35.39	+17 24.8	2.472	3.276	12.3	20.7	5 1	12 32.53	- 1 50.0	1.831	2.734	11.5	20.6
5 11	12 31.53	+17 22.2	2.571	3.280	14.2	20.8	5 11	12 28.18	- 1 35.6	1.904	2.727	14.7	20.8
39672	1996 <i>BF</i> ₁		4 3.9 246°89	1°9/ 5.8 18			271871	2004 <i>TR</i> ₃₃₂		4 3.9 297°53	0°4/ 3.6 17		
3 2	13 15.25	-13 4.8	2.109	2.930	12.8	19.2	3 2	13 15.34	- 6 26.3	1.858	2.707	13.1	20.9
3 12	13 10.24	-12 52.6	2.017	2.921	9.8	19.0	3 12	13 10.39	- 6 0.8	1.781	2.705	9.6	20.6
3 22	13 3.36	-12 25.9	1.949	2.911	6.2	18.8	3 22	13 3.47	- 5 24.6	1.728	2.703	5.5	20.4
4 1	12 55.23	-11 46.5	1.908	2.901	2.7	18.5	4 1	12 55.27	- 4 41.6	1.702	2.701	1.2	20.1
4 11	12 46.74	-10 58.8	1.896	2.891	2.9	18.5	4 11	12 46.78	- 3 57.6	1.704	2.699	3.3	20.2
4 21	12 38.76	-10 8.0	1.911	2.880	6.5	18.7	4 21	12 38.95	- 3 18.3	1.734	2.697	7.6	20.5
5 1	12 32.14	- 9 20.0	1.954	2.870	10.2	18.9	5 1	12 32.64	- 2 48.7	1.788	2.695	11.5	20.7
5 11	12 27.46	- 8 40.1	2.019	2.859	13.4	19.1	5 11	12 28.43	- 2 32.2	1.864	2.693	14.8	20.9
498247	2007 <i>UB</i> ₉₃		4 3.9 265°42	0°4/ 4.4 17			162738	2000 <i>VG</i> ₅₅		4 3.9 147°39	0°0/ 3.8 18		
3 2	13 13.90	- 8 54.4	2.138	2.976	12.1	21.5	3 2	13 19.34	- 8 7.8	1.937	2.773	13.2	21.5
3 12	13 9.14	- 8 31.5	2.056	2.973	8.9	21.3	3 12	13 13.13	- 7 37.8	1.868	2.784	9.7	21.3
3 22	13 2.65	- 7 57.3	1.998	2.969	5.3	21.1	3 22	13 4.96	- 6 56.0	1.823	2.794	5.7	21.1
4 1	12 55.06	- 7 14.8	1.968	2.966	1.4	20.8	4 1	12 55.60	- 6 6.3	1.806	2.804	1.3	20.8
4 11	12 47.19	- 6 28.8	1.967	2.962	2.7	20.9	4 11	12 46.05	- 5 14.5	1.818	2.813	3.1	21.0
4 21	12 39.88	- 5 44.6	1.993	2.959	6.6	21.2	4 21	12 37.27	- 4 26.4	1.858	2.821	7.3	21.2
5 1	12 33.88	- 5 7.0	2.046	2.955	10.1	21.4	5 1	12 30.09	- 3 47.3	1.925	2.828	11.0	21.5
5 11	12 29.71	- 4 40.0	2.121	2.952	13.2	21.6	5 11	12 25.05	- 3 20.9	2.015	2.835	14.2	21.7
366949	2005 <i>WP</i> ₁		4 3.9 171°65	9°3/ 17.9 13 C			337901	2001 <i>XQ</i> ₇₀		4 3.9 108°30	9°3/ 23.0 18		
3 2	13 22.54	-43 56.4	3.041	3.621	13.9	23.0	3 2	13 18.31	+27 21.0	2.500	3.321	11.1	20.7
3 12	13 15.47	-44 39.3	2.947	3.627	12.7	22.9	3 12	13 11.97	+28 26.4	2.472	3.334	9.9	20.6
3 22	13 6.37	-44 59.2	2.871	3.631	11.5	22.8	3 22	13 4.09	+29 16.1	2.467	3.348	9.3	20.6
4 1	12 55.92	-44 52.6	2.816	3.635	10.3	22.7	4 1	12 55.38	+29 44.2	2.489	3.361	9.7	20.6
4 11	12 45.09	-44 19.1	2.785	3.637	9.5	22.7	4 11	12 46.69	+29 47.5	2.534	3.374	10.7	20.7
4 21	12 34.85	-43 20.7	2.778	3.639	9.3	22.6	4 21	12 38.80	+29 25.7	2.603	3.386	12.2	20.9
5 1	12 26.09	-42 2.7	2.797	3.640	9.9	22.7	5 1	12 32.34	+28 40.6	2.692	3.399	13.6	21.0
5 11	12 19.45	-40 32.2	2.840	3.640	11.0	22.8	5 11	12 27.72	+27 36.0	2.798	3.411	14.9	21.1
153656	2001 <i>TE</i> ₁₂₂		4 3.9 121°51	2°9/ 6.6 17			500653	2012 <i>VU</i> ₁₆		4 3.9 117°44	1°7/		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
407736	2011 <i>UX</i> ₃₆₉		4 3.9 229°03	1°5/ 5.1 17			70315	1999 <i>RE</i> ₁₃₉		4 3.9 314°78	1°6/ 5.0 18		
3 2	13 19.67	-11 22.1	1.681	2.513	15.0	22.6	3 2	13 14.38	-10 53.7	1.291	2.149	17.2	18.6
3 12	13 13.93	-11 10.6	1.592	2.504	11.4	22.3	3 12	13 10.70	-10 44.1	1.204	2.129	13.0	18.3
3 22	13 5.74	-10 42.7	1.527	2.493	7.1	22.0	3 22	13 4.18	-10 14.7	1.137	2.109	8.1	18.0
4 1	12 55.85	-10 0.9	1.487	2.482	2.6	21.7	4 1	12 55.59	-9 27.9	1.093	2.090	2.8	17.6
4 11	12 45.43	-9 10.4	1.475	2.471	3.3	21.7	4 11	12 46.22	-8 30.4	1.074	2.071	3.9	17.6
4 21	12 35.68	-8 18.1	1.490	2.459	8.0	22.0	4 21	12 37.54	-7 31.1	1.079	2.053	9.5	17.9
5 1	12 27.70	-7 31.2	1.531	2.446	12.5	22.2	5 1	12 30.90	-6 39.5	1.106	2.036	14.9	18.1
5 11	12 22.24	-6 55.8	1.593	2.433	16.4	22.4	5 11	12 27.24	-6 3.6	1.152	2.019	19.5	18.3
98807	2000 <i>YK</i> ₁₁₈		4 3.9 13°77	5°5/30.1 18			374978	2007 <i>ES</i> ₇		4 3.9 322°35	1°3/ 3.2 17		
3 2	13 13.83	+ 5 42.0	1.549	2.427	13.6	18.3	3 2	13 20.71	- 2 6.9	1.578	2.435	14.6	19.8
3 12	13 9.48	+ 6 47.5	1.494	2.430	10.0	18.0	3 12	13 14.75	- 2 17.6	1.497	2.425	10.7	19.6
3 22	13 2.99	+ 7 53.5	1.461	2.433	6.7	17.9	3 22	13 6.24	- 2 22.9	1.440	2.416	6.2	19.3
4 1	12 55.18	+ 8 51.4	1.455	2.437	5.6	17.8	4 1	12 56.02	- 2 26.3	1.409	2.407	1.7	19.0
4 11	12 47.17	+ 9 33.3	1.474	2.441	7.9	17.9	4 11	12 45.28	- 2 32.0	1.405	2.398	4.2	19.1
4 21	12 40.03	+ 9 54.0	1.517	2.446	11.4	18.1	4 21	12 35.31	- 2 43.8	1.428	2.390	9.0	19.4
5 1	12 34.64	+ 8 18.1	1.583	2.452	14.8	18.4	5 1	12 27.22	- 3 5.0	1.476	2.383	13.4	19.6
5 11	12 31.56	+ 9 26.7	1.667	2.458	17.8	18.6	5 11	12 21.76	- 3 37.4	1.544	2.376	17.2	19.8
41004	1999 <i>UA</i> ₁₃		4 3.9 176°37	1°2/ 5.2 18			292616	2006 <i>UE</i> ₁		4 3.9 36°46	4°7/ 8.9 18		
3 2	13 15.05	-11 32.8	2.170	2.996	12.3	19.7	3 2	13 14.19	-21 29.7	2.130	2.914	14.0	20.3
3 12	13 9.96	-11 8.7	2.089	2.997	9.2	19.5	3 12	13 9.50	-21 37.6	2.047	2.917	11.3	20.1
3 22	13 3.13	-10 31.1	2.032	2.998	5.7	19.3	3 22	13 2.96	-21 26.1	1.986	2.919	8.3	19.9
4 1	12 55.22	- 9 43.1	2.003	2.999	2.0	19.0	4 1	12 55.24	-20 55.4	1.950	2.922	5.6	19.7
4 11	12 47.05	- 8 49.3	2.003	2.999	2.6	19.1	4 11	12 47.22	-20 8.6	1.942	2.924	4.8	19.7
4 21	12 39.46	- 7 55.3	2.032	2.999	6.3	19.3	4 21	12 39.79	-19 10.8	1.961	2.927	6.6	19.8
5 1	12 33.21	- 7 6.5	2.087	2.999	9.8	19.5	5 1	12 33.76	-18 8.6	2.006	2.930	9.5	20.0
5 11	12 28.81	- 6 27.4	2.165	2.998	12.9	19.7	5 11	12 29.69	-17 8.8	2.075	2.932	12.4	20.2
5117	Mokotoyama		4 3.9 19°46	0°9/ 3.2 18			170776	2004 <i>CA</i> ₉₅		4 3.9 82°09	2°8/ 6.7 17		
3 2	13 16.16	- 3 52.3	2.010	2.860	12.2	16.9	3 2	13 16.16	-15 16.1	2.151	2.961	13.0	20.2
3 12	13 10.82	- 3 43.0	1.937	2.862	8.9	16.7	3 12	13 10.78	-15 22.8	2.077	2.971	10.0	20.0
3 22	13 3.65	- 3 26.9	1.889	2.864	5.1	16.5	3 22	13 3.64	-15 14.7	2.027	2.981	6.7	19.8
4 1	12 55.34	- 3 7.4	1.868	2.866	1.2	16.2	4 1	12 55.39	-14 53.3	2.003	2.991	3.6	19.6
4 11	12 46.78	- 2 48.9	1.876	2.869	3.4	16.4	4 11	12 46.91	-14 21.9	2.009	3.001	3.3	19.6
4 21	12 38.88	- 2 35.4	1.912	2.872	7.3	16.6	4 21	12 39.08	-13 45.1	2.042	3.011	6.2	19.8
5 1	12 32.42	- 2 30.4	1.973	2.875	10.8	16.8	5 1	12 32.64	-13 8.2	2.102	3.021	9.4	20.0
5 11	12 27.93	- 2 36.0	2.056	2.878	13.9	17.1	5 11	12 28.13	-12 36.2	2.185	3.030	12.3	20.2
375845	2009 <i>UJ</i> ₁₅₁		4 3.9 133°51	1°9/ 2.1 17			121206	1999 <i>PO</i> ₃		4 3.9 196°03	2°3/ 6.4 18		
3 2	13 16.76	- 1 53.2	2.049	2.900	11.9	21.6	3 2	13 17.19	-14 35.9	2.505	3.308	11.6	20.6
3 12	13 11.17	- 1 17.8	1.982	2.908	8.6	21.4	3 12	13 11.41	-14 33.1	2.414	3.305	8.9	20.4
3 22	13 3.80	- 0 36.4	1.941	2.916	4.9	21.2	3 22	13 3.99	-14 17.4	2.347	3.302	5.9	20.2
4 1	12 55.37	+ 0 6.4	1.927	2.923	1.9	21.0	4 1	12 55.50	-13 50.0	2.309	3.298	3.0	20.0
4 11	12 46.77	+ 0 44.9	1.943	2.930	4.1	21.1	4 11	12 46.71	-13 14.0	2.300	3.293	2.8	20.0
4 21	12 38.86	+ 1 14.6	1.986	2.937	7.7	21.4	4 21	12 38.40	-12 33.6	2.321	3.288	5.7	20.2
5 1	12 32.39	+ 1 32.0	2.056	2.944	11.1	21.6	5 1	12 31.29	-11 53.6	2.370	3.282	8.8	20.4
5 11	12 27.86	+ 1 35.4	2.147	2.950	14.0	21.8	5 11	12 25.90	-11 18.3	2.443	3.276	11.6	20.5
265763	2005 <i>WZ</i> ₅		4 3.9 179°28	0°9/ 2.9 17			348948	2006 <i>TD</i> ₁₀₅		4 3.9 107°21	1°0/ 2.7 17		
3 2	13 16.58	- 4 53.2	2.280	3.121	11.3	21.4	3 2	13 13.56	- 4 3.2	2.560	3.404	10.1	21.5
3 12	13 10.95	- 4 17.5	2.202	3.122	8.2	21.2	3 12	13 8.55	- 3 26.8	2.496	3.419	7.3	21.3
3 22	13 3.67	- 3 33.7	2.150	3.124	4.7	20.9	3 22	13 2.19	- 2 44.3	2.459	3.433	4.1	21.1
4 1	12 55.36	- 2 45.7	2.126	3.124	1.2	20.7	4 1	12 55.05	- 1 59.3	2.450	3.448	1.2	20.9
4 11	12 46.82	- 1 58.6	2.132	3.124	3.2	20.8	4 11	12 47.82	- 1 16.2	2.471	3.462	3.0	21.1
4 21	12 38.86	- 1 17.2	2.168	3.123	6.9	21.1	4 21	12 41.13	- 0 39.1	2.522	3.476	6.1	21.3
5 1	12 32.18	- 0 45.5	2.230	3.122	10.2	21.3	5 1	12 35.55	- 0 11.1	2.599	3.489	9.0	21.5
5 11	12 27.30	- 0 26.3	2.314	3.120	13.0	21.5	5 11	12 31.50	+ 0 5.8	2.699	3.502	11.4	21.7
87719	2000 <i>SL</i> ₄₅		4 3.9 160°60	5°6/10.2 18			459844	2013 <i>TS</i> ₂₈		4 3.9 61°16	9°0/ 1.9 17		
3 2	13 15.94	-25 18.2	2.149	2.909	14.6	19.4	3 2	13 41.39	+14 35.8	0.989	1.847	21.1	19.9
3 12	13 10.77	-25 16.4	2.064	2.914	12.1	19.2	3 12	13 30.67	+14 8.9	0.937	1.857	16.4	19.7
3 22	13 3.69	-24 52.0	2.000	2.918	9.2	19.0	3 22	13 15.70	+13 22.1	0.905	1.866	11.7	19.5
4 1	12 55.38	-24 4.8	1.961	2.921	6.7	18.9	4 1	12 58.19	+12 7.1	0.898	1.876	9.0	19.3
4 11	12 46.78	-22 58.0	1.950	2.924	5.6	18.8	4 11	12 40.65	+10 21.8	0.916	1.886	10.9	19.5
4 21	12 38.83	-21 37.4	1.966	2.927	7.0	18.9	4 21	12 25.40	+ 8 11.8	0.959	1.896	15.4	19.7
5 1	12 32.36	-20 10.7	2.009	2.929	9.7	19.1	5 1	12 14.02	+ 5 46.3	1.024	1.907	20.0	20.1
5 11	12 27.94	-18 46.1	2.076	2.931	12.5	19.3	5 11	12 7.11	+ 3 13.6	1.107	1.917	23.9	20.4
489346	2006 <i>US</i> ₄₁		4 3.9 168°11	0°4/ 4.5 17			21641	Tiffanyko		4 3.9 156°11	2°4/ 1.5 18		
3 2	13 12.85	- 9 20.0	2.668	3.497	10.2	22.8	3 2	13 15.80	- 0 43.7	2.082	2.937	11.6	19.4
3 12	13 8.07	- 8 50.7	2.588	3.499	7.5	22.6	3 12	13 10.50	+ 0 2.0	2.013	2.941	8.4	19.2
3 22	13 1.93	- 8 11.7	2.533	3.502	4.5	22.4	3 22	13 3.46	+ 0 53.3	1.970	2.945	4.9	19.0
4 1	12 54.95	- 7 25.9	2.506	3.504	1.2	22.2	4 1	12 55.37	+ 1 44.7	1.954	2.948	2.4	18.9
4 11	12 47.80	- 6 37.3	2.510	3.505	2.2	22.3	4 11	12 47.08	+ 2 30.6	1.968	2.952	4.5	19.0
4 21	12 41.11	- 5 50.2	2.543	3.507	5.5	22.5	4 21	12 39.43	+ 3 6.1	2.009	2.954	8.0	19.2
5 1	12 35.47	- 5 8.6	2.604	3.508	8.4	22.7	5 1	12 33.17	+ 3 27.7	2.075	2.957	11.3	19.4
5 11	12 31.31	- 4 35.9	2.688	3.509	11.0	22.9	5 11	12 28.80	+ 3 33.9	2.164	2.959	14.1	19.6
374183	2004 <i>XV</i> ₁₅₉		4 3.9 173°06	3°5/11.3 18			8518	1992 <i>DM</i> ₆		4 3.9 211°55	0°8/ 2.9 18		
3 2	13 8.37	-											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
34583	2000 <i>SN</i> ₃₅₁		4 3.9 60°21	7.7/27.1	18		206705	2004 <i>BH</i> ₃₃		4 3.9 74°22	0.7/3.2	17	
3 2	13 14.32	+11 5.4	1.619	2.494	13.3	18.2	3 2	13 14.27	-5 32.7	2.081	2.928	11.9	20.8
3 12	13 9.68	+12 53.9	1.582	2.510	10.2	18.1	3 12	13 9.43	-5 1.9	2.008	2.931	8.7	20.6
3 22	13 3.04	+14 36.4	1.570	2.526	8.1	18.0	3 22	13 2.88	-4 22.1	1.960	2.934	5.0	20.4
4 1	12 55.26	+16 2.6	1.584	2.543	8.0	18.0	4 1	12 55.26	-3 37.5	1.939	2.937	1.2	20.1
4 11	12 47.42	+17 4.1	1.623	2.559	10.1	18.1	4 11	12 47.43	-2 53.1	1.947	2.940	3.2	20.3
4 21	12 40.52	+17 37.1	1.686	2.576	12.9	18.3	4 21	12 40.21	-2 14.1	1.983	2.943	7.0	20.6
5 1	12 35.34	+17 41.2	1.770	2.593	15.6	18.6	5 1	12 34.34	-1 44.9	2.044	2.946	10.5	20.8
5 11	12 32.37	+17 19.3	1.871	2.610	17.9	18.8	5 11	12 30.32	-1 28.2	2.128	2.949	13.5	21.0
381455	2008 <i>RA</i> ₄₂		4 3.9 244°64	0°1/4.1	17		262858	2007 <i>BR</i> ₃₄		4 3.9 322°93	0°7/4.6	17	
3 2	13 15.90	-7 50.2	2.045	2.884	12.5	22.0	3 2	13 14.78	-9 29.5	1.557	2.407	15.1	20.4
3 12	13 10.76	-7 28.9	1.958	2.876	9.2	21.8	3 12	13 10.45	-9 9.6	1.477	2.399	11.3	20.1
3 22	13 3.73	-6 56.6	1.896	2.867	5.4	21.5	3 22	13 3.77	-8 33.8	1.419	2.391	6.8	19.9
4 1	12 55.46	-6 16.4	1.861	2.858	1.3	21.2	4 1	12 55.52	-7 46.0	1.387	2.384	1.9	19.5
4 11	12 46.83	-5 33.3	1.854	2.849	2.9	21.3	4 11	12 46.82	-6 52.4	1.380	2.377	3.4	19.6
4 21	12 38.76	-4 52.6	1.876	2.840	7.0	21.6	4 21	12 38.83	-6 0.5	1.400	2.370	8.3	19.9
5 1	12 32.07	-4 19.3	1.924	2.831	10.8	21.8	5 1	12 32.61	-5 17.4	1.444	2.364	12.8	20.1
5 11	12 27.35	-3 57.3	1.994	2.821	14.0	22.0	5 11	12 28.84	-4 48.5	1.509	2.358	16.7	20.3
52625	1997 <i>WD</i>		4 3.9 104°87	6°9/29.2	18		170258	2003 <i>QH</i> ₅₅		4 3.9 191°43	3°2/31.8	17	
3 2	13 20.31	+12 10.7	1.775	2.636	13.0	18.7	3 2	13 17.49	+0 17.8	1.875	2.733	12.6	20.9
3 12	13 13.96	+13 0.2	1.722	2.643	10.0	18.5	3 12	13 11.96	+1 22.0	1.803	2.732	9.1	20.7
3 22	13 5.51	+13 43.0	1.693	2.649	7.6	18.4	3 22	13 4.43	+2 32.5	1.756	2.731	5.4	20.4
4 1	12 55.84	+14 11.7	1.691	2.655	7.0	18.4	4 1	12 55.64	+3 42.6	1.737	2.728	3.3	20.3
4 11	12 46.05	+14 20.6	1.715	2.662	8.8	18.5	4 11	12 46.58	+4 44.8	1.746	2.725	5.6	20.4
4 21	12 37.18	+14 7.0	1.765	2.668	11.7	18.7	4 21	12 38.21	+5 32.9	1.782	2.722	9.3	20.6
5 1	12 30.10	+13 31.5	1.837	2.674	14.6	18.9	5 1	12 31.40	+6 2.9	1.844	2.717	12.9	20.9
5 11	12 25.33	+12 36.5	1.929	2.679	17.1	19.1	5 11	12 26.71	+6 13.3	1.925	2.713	15.9	21.1
282799	2006 <i>QS</i> ₆₂		4 3.9 192°15	2°2/31.7	18		145165	2005 <i>HS</i> ₇		4 3.9 185°21	2°3/1.8	18	
3 2	13 12.53	+0 51.5	3.152	4.000	8.3	21.9	3 2	13 18.64	-0 52.7	2.101	2.951	11.8	20.5
3 12	13 7.67	+1 44.5	3.073	3.998	6.0	21.7	3 12	13 12.60	-0 12.4	2.026	2.951	8.5	20.3
3 22	13 1.66	+2 40.8	3.022	3.995	3.5	21.5	3 22	13 4.73	+0 33.6	1.976	2.951	5.0	20.0
4 1	12 54.95	+3 36.5	3.001	3.991	2.2	21.4	4 1	12 55.71	+1 20.3	1.955	2.949	2.3	19.9
4 11	12 48.09	+4 27.4	3.010	3.987	3.7	21.5	4 11	12 46.43	+2 2.0	1.963	2.948	4.4	20.0
4 21	12 41.60	+5 10.2	3.050	3.983	6.1	21.7	4 21	12 37.80	+2 34.0	1.999	2.945	8.0	20.2
5 1	12 35.98	+5 42.1	3.116	3.977	8.5	21.9	5 1	12 30.60	+2 52.7	2.062	2.942	11.4	20.4
5 11	12 31.60	+6 1.8	3.206	3.971	10.6	22.0	5 11	12 25.37	+2 56.5	2.146	2.938	14.3	20.6
366945	2005 <i>VL</i> ₁₁₈		4 3.9 190°18	9°2/17.5	17		137069	1998 <i>WQ</i> ₁₅		4 3.9 108°76	4°2/30.7	18	
3 2	13 22.23	-43 30.9	3.054	3.639	13.8	22.7	3 2	13 20.10	+5 20.7	2.123	2.976	11.5	20.8
3 12	13 15.33	-44 11.6	2.953	3.637	12.6	22.6	3 12	13 13.36	+6 20.0	2.080	3.004	8.4	20.7
3 22	13 6.39	-44 29.5	2.870	3.635	11.4	22.5	3 22	13 4.98	+7 18.6	2.064	3.032	5.4	20.5
4 1	12 56.09	-44 21.4	2.808	3.631	10.2	22.4	4 1	12 55.72	+8 10.4	2.077	3.058	4.3	20.5
4 11	12 45.35	-43 46.3	2.770	3.627	9.4	22.3	4 11	12 46.50	+8 49.8	2.119	3.084	6.0	20.6
4 21	12 35.16	-42 46.4	2.756	3.622	9.3	22.3	4 21	12 38.13	+9 13.4	2.189	3.109	8.9	20.9
5 1	12 26.40	-41 26.6	2.768	3.615	9.9	22.3	5 1	12 31.30	+9 19.8	2.284	3.133	11.7	21.1
5 11	12 19.71	-39 54.2	2.805	3.608	11.0	22.4	5 11	12 26.40	+9 9.6	2.400	3.156	14.0	21.3
125229	2001 <i>UU</i> ₁₅₉		4 3.9 0°91	1°3/5.0	18		122465	2000 <i>QY</i> ₁₄₉		4 3.9 142°23	2°4/6.3	17	
3 2	13 13.32	-12 7.1	1.208	2.068	18.0	19.1	3 2	13 15.25	-15 1.6	1.938	2.756	13.9	20.3
3 12	13 9.81	-11 29.9	1.141	2.066	13.5	18.8	3 12	13 10.34	-14 40.9	1.860	2.760	10.6	20.1
3 22	13 3.54	-10 28.5	1.093	2.065	8.3	18.5	3 22	13 3.50	-14 2.7	1.805	2.764	7.0	19.9
4 1	12 55.45	-9 8.3	1.068	2.065	2.7	18.2	4 1	12 55.43	-13 9.3	1.776	2.767	3.3	19.7
4 11	12 46.93	-7 38.8	1.069	2.066	3.8	18.3	4 11	12 47.09	-12 6.0	1.775	2.770	3.1	19.7
4 21	12 39.39	-6 11.8	1.093	2.067	9.4	18.6	4 21	12 39.43	-10 59.3	1.802	2.773	6.7	19.9
5 1	12 34.03	-4 57.9	1.139	2.069	14.6	18.9	5 1	12 33.26	-9 56.2	1.856	2.776	10.4	20.1
5 11	12 31.56	-4 4.6	1.205	2.071	18.9	19.1	5 11	12 29.17	-9 2.6	1.932	2.779	13.7	20.3
227546	2005 <i>YQ</i> ₁₃₅		4 3.9 172°03	1°2/5.2	17		432476	2010 <i>DA</i> ₅₄		4 3.9 231°97	10°0/18.1	18	
3 2	13 16.50	-11 12.2	2.169	2.994	12.4	21.4	3 2	13 17.63	+32 57.9	2.785	3.580	10.8	21.2
3 12	13 11.04	-10 54.1	2.089	2.997	9.3	21.2	3 12	13 11.68	+34 17.9	2.742	3.569	10.1	21.1
3 22	13 3.82	-10 23.1	2.033	2.999	5.7	21.0	3 22	13 4.11	+35 21.4	2.722	3.557	10.0	21.1
4 1	12 55.48	-9 42.0	2.005	3.000	2.0	20.7	4 1	12 55.56	+36 2.4	2.727	3.545	10.6	21.1
4 11	12 46.88	-8 55.3	2.006	3.002	2.6	20.8	4 11	12 46.84	+36 17.2	2.754	3.532	11.6	21.2
4 21	12 38.88	-8 8.1	2.036	3.003	6.3	21.0	4 21	12 38.75	+36 4.9	2.802	3.519	12.9	21.2
5 1	12 32.24	-7 25.7	2.092	3.003	9.9	21.2	5 1	12 31.97	+35 27.1	2.868	3.506	14.1	21.3
5 11	12 27.49	-6 52.3	2.172	3.003	12.9	21.4	5 11	12 26.96	+34 27.1	2.950	3.493	15.2	21.4
16374	1981 <i>EA</i> ₁₀		4 3.9 72°85	4°3/7.9	18		73912	1997 <i>GV</i> ₂₈		4 3.9 174°47	0°0/3.8	18	
3 2	13 17.93	-18 53.7	2.296	3.083	13.0	18.5	3 2	13 17.85	-8 14.0	2.095	2.928	12.4	21.1
3 12	13 12.12	-19 26.9	2.213	3.087	10.4	18.3	3 12	13 12.06	-7 41.4	2.016	2.931	9.1	20.9
3 22	13 4.48	-19 45.1	2.154	3.091	7.5	18.2	3 22	13 4.43	-6 57.3	1.963	2.934	5.4	20.6
4 1	12 55.64	-19 47.8	2.121	3.095	5.0	18.0	4 1	12 55.65	-6 5.4	1.938	2.936	1.3	20.4
4 11	12 46.47	-19 36.7	2.117	3.099	4.4	18.0	4 11	12 46.62	-5 11.1	1.942	2.937	2.9	20.5
4 21	12 37.86	-19 15.3	2.141	3.103	6.4	18.1	4 21	12 38.23	-4 20.0	1.975	2.937	6.9	20.7
5 1	12 30.59	-18 48.4	2.191	3.107	9.2	18.3	5 1	12 31.27	-3 37.4	2.035	2.937	10.5	21.0
5 11	12 25.25	-18 21.3	2.266	3.112	11.9	18.5	5 11	12 26.27	-3 6.9	2.118	2.936	13.6	21.2
179449	2002 <i>AB</i> ₁₆₅		4 3.9 212°17	4°7/9.7	18		17081	Jaytee		4 3.9 196°16	2°2/1.7	18	
3 2	13 14.45	-23 51.8	2.745	3.501	11.9	20.4	3 2</						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
87686	2000 SW ₆		4 3.9 306°31	9°6/11.4 17			18101	Coustenis		4 3.9 233°37	1°2/ 2.8 17		
3 2	13 17.14	-29 2.1	1.695	2.449	18.1	19.4	3 2	13 17.22	-5 55.8	1.779	2.628	13.6	19.7
3 12	13 12.60	-30 4.9	1.597	2.432	15.7	19.2	3 12	13 12.03	-4 59.9	1.692	2.616	9.9	19.5
3 22	13 5.31	-30 42.5	1.518	2.414	13.1	19.0	3 22	13 4.65	-3 50.4	1.628	2.603	5.7	19.2
4 1	12 55.97	-30 49.8	1.461	2.397	10.7	18.8	4 1	12 55.79	-2 32.9	1.592	2.590	1.5	18.9
4 11	12 45.77	-30 25.7	1.427	2.380	9.6	18.7	4 11	12 46.47	-1 15.3	1.584	2.576	4.1	19.0
4 21	12 36.09	-29 33.4	1.417	2.364	10.6	18.7	4 21	12 37.78	-0 5.3	1.604	2.561	8.7	19.3
5 1	12 28.27	-28 21.1	1.431	2.348	13.1	18.8	5 1	12 30.67	+0 50.3	1.649	2.546	12.9	19.5
5 11	12 23.26	-26 59.9	1.465	2.332	16.1	18.9	5 11	12 25.83	+1 27.3	1.715	2.530	16.5	19.7
103616	2000 CK ₂₃		4 3.9 111°99	2°7/ 1.6 18			512334	2016 LQ ₄₅		4 3.9 221°40	5°1/27.2 18		
3 2	13 17.59	-3 33.8	1.430	2.294	15.4	19.7	3 2	13 12.55	+11 30.7	2.882	3.738	8.7	21.9
3 12	13 12.37	-2 13.7	1.374	2.307	11.0	19.5	3 12	13 7.86	+12 48.3	2.811	3.728	6.8	21.7
3 22	13 4.77	-0 41.7	1.342	2.319	6.3	19.2	3 22	13 1.89	+14 3.4	2.767	3.718	5.3	21.6
4 1	12 55.75	+0 53.2	1.335	2.331	2.7	19.1	4 1	12 55.10	+15 10.5	2.753	3.708	5.3	21.6
4 11	12 46.56	+2 20.3	1.356	2.343	5.7	19.3	4 11	12 48.12	+16 4.6	2.767	3.697	6.7	21.7
4 21	12 38.39	+3 31.0	1.403	2.354	10.2	19.6	4 21	12 41.54	+16 42.5	2.809	3.685	8.8	21.8
5 1	12 32.22	+4 19.4	1.472	2.365	14.4	19.8	5 1	12 35.92	+17 2.4	2.874	3.673	10.8	21.9
5 11	12 28.60	+4 43.7	1.561	2.375	17.9	20.1	5 11	12 31.68	+17 4.5	2.960	3.661	12.7	22.0
30788	Angekauffmann		4 3.9 104°34	0°6/ 4.4 18			93714	2000 VJ ₃₅		4 3.9 138°69	7°6/27.1 18		
3 2	13 27.17	-6 18.5	1.968	2.793	13.5	17.9	3 2	13 18.47	+16 19.7	2.089	2.942	11.7	18.9
3 12	13 18.81	-6 47.4	1.902	2.812	9.9	17.7	3 12	13 12.42	+17 25.7	2.041	2.950	9.4	18.7
3 22	13 8.33	-7 8.6	1.862	2.830	5.9	17.5	3 22	13 4.58	+18 22.8	2.018	2.956	7.8	18.6
4 1	12 56.57	-7 23.6	1.851	2.848	1.6	17.2	4 1	12 55.72	+19 3.7	2.021	2.963	7.8	18.6
4 11	12 44.65	-7 34.9	1.870	2.865	2.9	17.3	4 11	12 46.76	+19 23.2	2.051	2.969	9.4	18.7
4 21	12 33.64	-7 45.2	1.920	2.882	7.1	17.6	4 21	12 38.59	+19 19.3	2.107	2.975	11.6	18.9
5 1	12 24.44	-7 57.9	1.998	2.899	10.7	17.9	5 1	12 31.94	+18 52.4	2.184	2.981	13.9	19.1
5 11	12 17.60	-8 15.6	2.098	2.915	13.8	18.1	5 11	12 27.30	+18 5.2	2.280	2.986	15.9	19.2
364129	2006 BA ₁₈₈		4 3.9 335°26	1°1/ 3.4 16			150975	2001 TV ₁₉₆		4 3.9 196°72	6°1/27.7 17 R		
3 2	13 16.13	-4 18.0	1.113	1.991	17.7	20.5	3 2	13 16.26	+10 58.2	2.209	3.068	10.9	20.6
3 12	13 12.24	-4 13.2	1.040	1.978	13.1	20.1	3 12	13 10.84	+12 23.4	2.145	3.065	8.4	20.5
3 22	13 5.21	-3 56.3	0.986	1.965	7.7	19.8	3 22	13 3.72	+13 45.8	2.108	3.062	6.5	20.3
4 1	12 55.95	-3 32.3	0.956	1.954	1.8	19.4	4 1	12 55.54	+14 57.9	2.099	3.058	6.3	20.3
4 11	12 45.98	-3 8.7	0.948	1.944	4.9	19.5	4 11	12 47.13	+15 53.0	2.118	3.053	8.1	20.4
4 21	12 36.93	-2 53.1	0.964	1.934	11.0	19.8	4 21	12 39.34	+16 27.0	2.163	3.048	10.6	20.6
5 1	12 30.25	-2 51.8	1.000	1.926	16.4	20.1	5 1	12 32.88	+16 38.5	2.231	3.042	13.2	20.7
5 11	12 26.84	-3 8.3	1.053	1.919	21.1	20.4	5 11	12 28.26	+16 28.4	2.319	3.036	15.4	20.9
434858	2006 ST ₂₁₄		4 3.9 171°97	5°9/26.6 18			496413	2013 WD ₁₀₆		4 3.9 144°67	3°4/30.9 17		
3 2	13 15.03	+16 30.6	2.944	3.790	8.9	21.3	3 2	13 15.23	+3 32.9	2.479	3.333	10.0	21.7
3 12	13 9.53	+17 28.8	2.889	3.793	7.2	21.2	3 12	13 9.83	+4 33.0	2.418	3.344	7.3	21.6
3 22	13 2.77	+18 20.4	2.861	3.796	6.0	21.2	3 22	13 3.01	+5 34.7	2.384	3.355	4.6	21.4
4 1	12 55.28	+19 0.4	2.862	3.798	6.1	21.2	4 1	12 55.35	+6 32.7	2.380	3.365	3.4	21.3
4 11	12 47.67	+19 25.1	2.890	3.800	7.3	21.2	4 11	12 47.59	+7 21.9	2.405	3.374	5.1	21.5
4 21	12 40.57	+19 32.5	2.945	3.801	9.0	21.4	4 21	12 40.39	+7 58.3	2.458	3.383	7.8	21.7
5 1	12 34.52	+19 22.2	3.024	3.802	10.8	21.5	5 1	12 34.38	+8 19.6	2.537	3.391	10.5	21.8
5 11	12 29.89	+18 55.5	3.123	3.802	12.4	21.6	5 11	12 29.98	+8 25.2	2.638	3.399	12.7	22.0
195370	2002 FF ₃₀		4 3.9 294°70	6°8/29.2 17			306261	2011 RL ₆		4 3.9 298°80	0°9/ 4.8 17		
3 2	13 18.38	+11 4.2	1.768	2.633	12.9	20.1	3 2	13 13.75	-10 5.8	2.017	2.854	12.7	21.6
3 12	13 12.83	+11 55.0	1.695	2.619	9.9	19.9	3 12	13 9.33	-9 47.5	1.923	2.838	9.5	21.3
3 22	13 5.06	+12 41.4	1.646	2.605	7.5	19.7	3 22	13 3.01	-9 16.1	1.852	2.821	5.8	21.1
4 1	12 55.86	+13 15.7	1.622	2.591	6.9	19.6	4 1	12 55.41	-8 34.2	1.808	2.804	1.9	20.8
4 11	12 46.27	+13 31.0	1.626	2.577	8.8	19.7	4 11	12 47.38	-7 46.5	1.792	2.788	2.8	20.8
4 21	12 37.41	+13 23.6	1.654	2.563	11.9	19.9	4 21	12 39.83	-6 58.8	1.803	2.771	6.9	21.0
5 1	12 30.22	+12 52.7	1.705	2.549	15.1	20.0	5 1	12 33.62	-6 16.6	1.841	2.755	10.8	21.2
5 11	12 25.35	+12 0.2	1.774	2.536	18.0	20.2	5 11	12 29.36	-5 44.8	1.900	2.739	14.2	21.4
304535	2006 UR ₂₇₁		4 3.9 206°69	3°8/ 9.2 18			467905	2011 HD ₉₄		4 3.9 116°83	6°8/27.7 18		
3 2	13 12.48	-22 25.7	2.684	3.453	11.8	21.5	3 2	13 17.20	+13 38.2	2.107	2.965	11.4	21.0
3 12	13 7.98	-22 4.6	2.588	3.449	9.5	21.3	3 12	13 11.45	+14 46.6	2.061	2.976	8.9	20.8
3 22	13 2.01	-21 25.8	2.516	3.445	7.0	21.1	3 22	13 4.00	+15 48.2	2.040	2.988	7.1	20.7
4 1	12 55.12	-20 30.3	2.471	3.441	4.7	21.0	4 1	12 55.58	+16 35.9	2.047	2.999	7.0	20.8
4 11	12 48.00	-19 21.2	2.454	3.437	3.9	20.9	4 11	12 47.10	+17 4.4	2.080	3.010	8.6	20.9
4 21	12 41.34	-18 3.5	2.467	3.433	5.5	21.0	4 21	12 39.37	+17 11.3	2.139	3.021	10.9	21.0
5 1	12 35.76	-16 43.1	2.508	3.428	8.0	21.1	5 1	12 33.12	+16 56.3	2.221	3.031	13.3	21.2
5 11	12 31.74	-15 25.9	2.574	3.423	10.6	21.3	5 11	12 28.79	+16 21.6	2.323	3.041	15.3	21.4
39162	2000 WX ₁₁₈		4 3.9 213°34	2°5/ 6.6 18			80070	1999 JW ₉₆		4 3.9 319°64	2°4/ 1.3 18		
3 2	13 16.09	-15 27.4	2.236	3.043	12.7	20.0	3 2	13 11.40	-2 4.0	2.037	2.898	11.6	19.2
3 12	13 10.84	-15 17.1	2.144	3.038	9.8	19.8	3 12	13 7.46	-0 58.0	1.960	2.891	8.3	18.9
3 22	13 3.79	-14 51.3	2.077	3.032	6.5	19.6	3 22	13 1.82	+0 16.3	1.908	2.885	4.8	18.7
4 1	12 55.55	-14 11.6	2.036	3.025	3.4	19.4	4 1	12 55.11	+1 32.8	1.884	2.879	2.4	18.5
4 11	12 46.98	-13 21.8	2.025	3.018	3.1	19.3	4 11	12 48.14	+2 44.4	1.889	2.873	4.6	18.7
4 21	12 38.93	-12 26.9	2.042	3.011	6.2	19.5	4 21	12 41.72	+3 45.0	1.921	2.867	8.2	18.9
5 1	12 32.18	-11 32.9	2.086	3.003	9.6	19.7	5 1	12 36.59	+4 29.9	1.977	2.862	11.6	19.1
5 11	12 27.31	-10 45.3	2.154	2.995	12.6	19.9	5 11	12 33.26	+4 56.5	2.055	2.857	14.6	19.3
461630	2005 ES ₁₅₅		4 3.9 336°60	0°0/ 3.8 17			5964	1990 QN ₄		4 3.9 159°88	0°4/ 3.4 18		
3 2	13 14.64	-7 0.2	1.217	2.087	17.1	20.8	3 2	13 13.15	-6 21.6	3.112	3.943	8.	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
116703	2004 CS ₁₀₁		4 3.9 72°17'	3.4/ 7.8	18		271811	2004 TV ₁₀₆		4 3.9 204°01'	3.7/31.6	17	
3 2	13 13.25	-18 51.7	2.086	2.887	13.7	20.2	3 2	13 19.63	+ 4 37.1	2.136	2.989	11.4	20.5
3 12	13 8.78	-18 30.1	2.011	2.896	10.7	20.0	3 12	13 13.33	+ 5 6.1	2.061	2.986	8.4	20.3
3 22	13 2.56	-17 49.3	1.959	2.906	7.4	19.8	3 22	13 5.20	+ 5 35.5	2.012	2.982	5.3	20.1
4 1	12 55.28	-16 51.4	1.933	2.916	4.3	19.6	4 1	12 55.91	+ 6 0.4	1.992	2.978	3.7	20.0
4 11	12 47.79	-15 41.1	1.935	2.926	3.6	19.6	4 11	12 46.36	+ 6 15.7	2.000	2.974	5.5	20.1
4 21	12 40.96	-14 24.8	1.965	2.936	6.2	19.8	4 21	12 37.46	+ 6 18.2	2.037	2.970	8.7	20.3
5 1	12 35.52	-13 9.7	2.022	2.946	9.4	20.0	5 1	12 29.99	+ 6 6.1	2.099	2.964	11.9	20.5
5 11	12 31.97	-12 2.0	2.102	2.956	12.4	20.2	5 11	12 24.50	+ 5 39.3	2.182	2.959	14.6	20.7
215570	2003 FK ₄₈		4 3.9 309°81'	0.6/ 4.5	16		431795	2008 QW ₁₅		4 3.9 263°61'	6.8/10.5	18	
3 2	13 15.14	- 8 11.0	2.036	2.876	12.5	20.2	3 2	13 17.95	-27 1.5	2.244	2.987	14.5	21.0
3 12	13 10.42	- 8 8.9	1.933	2.850	9.3	19.9	3 12	13 12.58	-27 29.1	2.130	2.964	12.3	20.8
3 22	13 3.71	- 7 56.5	1.853	2.824	5.7	19.6	3 22	13 5.04	-27 35.7	2.038	2.940	9.9	20.6
4 1	12 55.59	- 7 35.8	1.800	2.797	1.6	19.3	4 1	12 55.93	-27 19.0	1.970	2.916	7.7	20.4
4 11	12 46.94	- 7 10.8	1.776	2.772	2.9	19.4	4 11	12 46.17	-26 39.4	1.929	2.891	6.8	20.3
4 21	12 38.68	- 6 46.0	1.779	2.746	7.1	19.6	4 21	12 36.78	-25 40.5	1.915	2.866	7.9	20.4
5 1	12 31.72	- 6 26.2	1.808	2.721	11.0	19.7	5 1	12 28.76	-24 28.8	1.927	2.840	10.5	20.5
5 11	12 26.75	- 6 15.5	1.859	2.696	14.5	19.9	5 11	12 22.87	-23 12.7	1.963	2.813	13.3	20.6
20027	1992 EY ₁₄		4 3.9 191°09'	1.1/ 2.5	18		70619	1999 TY ₂₁₁		4 3.9 237°3'	1.0/ 3.5	18	
3 2	13 12.29	- 4 13.6	2.839	3.680	9.3	19.8	3 2	13 20.74	- 3 9.9	1.236	2.104	17.1	18.4
3 12	13 7.65	- 3 24.9	2.757	3.679	6.7	19.6	3 12	13 15.11	- 3 22.5	1.178	2.111	12.5	18.1
3 22	13 1.76	- 2 29.6	2.703	3.677	3.8	19.4	3 22	13 6.59	- 3 26.9	1.141	2.118	7.2	17.8
4 1	12 55.08	- 1 31.2	2.678	3.675	1.2	19.2	4 1	12 56.26	- 3 27.3	1.128	2.126	1.7	17.5
4 11	12 48.24	- 0 34.3	2.683	3.672	2.9	19.4	4 11	12 45.60	- 3 28.9	1.140	2.135	4.5	17.7
4 21	12 41.80	+ 0 16.9	2.718	3.669	5.9	19.6	4 21	12 36.11	- 3 36.4	1.177	2.144	9.8	18.0
5 1	12 36.33	+ 0 58.8	2.780	3.665	8.6	19.7	5 1	12 28.98	- 3 53.7	1.236	2.154	14.6	18.3
5 11	12 32.22	+ 1 29.2	2.866	3.662	11.0	19.9	5 11	12 24.88	- 4 23.1	1.315	2.165	18.6	18.6
339454	2005 EM ₁₉₅		4 3.9 131°43'	0.3/ 4.3	17		112293	2002 LD ₃₆		4 3.9 322°55'	7.5/28.5	18	
3 2	13 14.37	- 8 53.1	2.214	3.050	11.8	21.1	3 2	13 12.36	+ 6 15.2	1.241	2.131	15.4	18.7
3 12	13 9.45	- 8 22.3	2.140	3.055	8.7	20.9	3 12	13 9.17	+ 7 57.1	1.172	2.113	11.6	18.4
3 22	13 2.90	- 7 40.5	2.091	3.061	5.1	20.7	3 22	13 3.27	+ 9 43.9	1.124	2.096	8.3	18.1
4 1	12 55.36	- 6 51.0	2.069	3.066	1.3	20.4	4 1	12 55.52	+11 22.6	1.101	2.079	7.7	18.0
4 11	12 47.61	- 5 58.9	2.076	3.072	2.6	20.5	4 11	12 47.21	+12 40.0	1.101	2.063	10.7	18.2
4 21	12 40.45	- 5 9.4	2.112	3.077	6.3	20.8	4 21	12 39.73	+13 26.9	1.123	2.048	14.9	18.3
5 1	12 34.58	- 4 27.3	2.175	3.082	9.7	21.0	5 1	12 34.29	+13 38.9	1.165	2.034	19.0	18.5
5 11	12 30.47	- 3 56.1	2.260	3.086	12.6	21.2	5 11	12 31.67	+13 17.3	1.221	2.021	22.6	18.7
303377	2004 WZ ₁		4 3.9 65°69'	6.1/30.8	18		294795	2008 CW ₇₁		4 3.9 56°29'	6.8/12.2	17	
3 2	13 20.77	+ 7 2.1	1.394	2.266	15.2	20.6	3 2	13 14.03	-29 20.5	2.324	3.057	14.4	20.3
3 12	13 14.81	+ 7 50.4	1.339	2.271	11.3	20.4	3 12	13 9.41	-29 37.4	2.240	3.062	12.2	20.1
3 22	13 6.27	+ 8 37.0	1.307	2.277	7.6	20.2	3 22	13 2.99	-29 32.0	2.176	3.067	9.9	20.0
4 1	12 56.15	+ 9 12.9	1.300	2.282	6.2	20.1	4 1	12 55.41	-29 3.1	2.135	3.072	7.8	19.8
4 11	12 45.82	+ 9 30.7	1.318	2.287	8.5	20.3	4 11	12 47.54	-28 12.7	2.121	3.077	6.8	19.8
4 21	12 36.59	+ 9 26.0	1.361	2.293	12.3	20.5	4 21	12 40.26	-27 5.3	2.133	3.082	7.4	19.8
5 1	12 29.51	+ 8 58.2	1.426	2.298	16.0	20.7	5 1	12 34.34	-25 47.6	2.172	3.087	9.3	20.0
5 11	12 25.19	+ 8 9.3	1.509	2.304	19.2	21.0	5 11	12 30.35	-24 27.2	2.235	3.092	11.6	20.1
366187	2012 HU ₂₇		4 3.9 264°01'	1.3/ 2.7	17		473171	2015 KY ₃₈		4 3.9 345°75'	5.4/28.8	17	
3 2	13 14.72	- 5 18.1	1.791	2.646	13.2	21.3	3 2	13 13.66	+ 9 41.6	2.249	3.112	10.5	21.0
3 12	13 10.15	- 4 27.3	1.709	2.636	9.7	21.1	3 12	13 8.91	+10 42.0	2.187	3.111	8.0	20.8
3 22	13 3.52	- 3 24.3	1.650	2.626	5.5	20.8	3 22	13 2.58	+11 39.8	2.151	3.111	5.9	20.7
4 1	12 55.53	- 2 14.8	1.618	2.616	1.5	20.5	4 1	12 55.30	+12 28.6	2.142	3.110	5.5	20.7
4 11	12 47.17	- 1 6.0	1.614	2.606	4.1	20.7	4 11	12 47.84	+13 3.0	2.161	3.110	7.1	20.8
4 21	12 39.42	- 0 5.2	1.638	2.596	8.4	20.9	4 21	12 40.97	+13 19.8	2.206	3.109	9.7	20.9
5 1	12 33.20	+ 0 41.5	1.686	2.585	12.5	21.1	5 1	12 35.36	+13 17.5	2.275	3.109	12.2	21.1
5 11	12 29.13	+ 1 10.7	1.755	2.575	15.9	21.3	5 11	12 31.46	+12 56.8	2.364	3.108	14.5	21.2
349033	2006 VT ₄₂		4 3.9 148°32'	2.1/ 1.1	18		216089	2006 QH ₁₃₆		4 3.9 229°40'	2.0/ 6.0	18	
3 2	13 13.21	+ 0 44.8	2.943	3.792	8.8	21.6	3 2	13 17.02	-14 40.4	2.164	2.975	12.9	20.8
3 12	13 8.21	+ 1 28.1	2.876	3.801	6.3	21.5	3 12	13 11.64	-14 9.3	2.064	2.961	9.9	20.6
3 22	13 2.02	+ 2 14.2	2.836	3.809	3.7	21.3	3 22	13 4.34	-13 21.2	1.987	2.946	6.4	20.3
4 1	12 55.14	+ 2 59.3	2.825	3.817	2.1	21.2	4 1	12 55.75	-12 18.0	1.938	2.931	2.9	20.1
4 11	12 48.14	+ 3 39.5	2.845	3.825	3.7	21.3	4 11	12 46.73	-11 4.8	1.919	2.914	2.9	20.0
4 21	12 41.60	+ 4 11.5	2.894	3.832	6.2	21.5	4 21	12 38.19	- 9 47.8	1.928	2.897	6.5	20.2
5 1	12 36.02	+ 4 32.9	2.970	3.839	8.7	21.7	5 1	12 31.00	- 8 34.2	1.965	2.878	10.3	20.4
5 11	12 31.77	+ 4 42.5	3.070	3.845	10.8	21.8	5 11	12 25.77	- 7 30.1	2.026	2.859	13.6	20.6
190105	2004 TM ₂₉₀		4 3.9 262°05'	0.9/ 4.9	17		244100	2001 UW ₁₄₆		4 3.9 171°95'	2.1/ 1.3	17	
3 2	13 15.49	-10 16.6	1.888	2.725	13.4	20.9	3 2	13 14.15	+ 0 23.0	2.726	3.575	9.4	21.1
3 12	13 10.63	- 9 57.2	1.805	2.720	10.1	20.7	3 12	13 9.01	+ 1 2.2	2.653	3.578	6.8	20.9
3 22	13 3.76	- 9 23.9	1.746	2.715	6.1	20.5	3 22	13 2.55	+ 1 44.9	2.606	3.580	4.0	20.7
4 1	12 55.59	- 8 39.9	1.714	2.711	2.0	20.2	4 1	12 55.29	+ 2 26.9	2.589	3.582	2.1	20.6
4 11	12 47.06	- 7 50.1	1.710	2.706	2.9	20.2	4 11	12 47.87	+ 3 4.2	2.602	3.583	3.8	20.7
4 21	12 39.15	- 7 9.9	1.733	2.701	7.1	20.5	4 21	12 40.92	+ 3 33.3	2.644	3.584	6.6	20.9
5 1	12 32.75	- 6 18.0	1.781	2.696	11.1	20.7	5 1	12 35.00	+ 3 51.5	2.712	3.585	9.3	21.1
5 11	12 28.44	- 5 46.3	1.852	2.691	14.5	20.9	5 11	12 30.54	+ 3 57.4	2.804	3.585	11.6	21.2
54402	2000 LA ₂		4 3.9 281°13'	3.4/31.7	18		129282	2005 RN ₃₁		4 3.9 227°82'	6.5/12.9	18	
3 2	13 16.11	+ 3 27.2	2.119	2.978	11.3	18.							

EPHEMERIDES

4 3.9

4 4.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
242967	2006 <i>ST</i> ₈₃		4 3.9 209°99	0°9/ 2.8 18			392143	2009 <i>HV</i> ₂₆		4 4.0 293°51	0°0/ 3.8 17		
3 2	13 12.25	- 5 34.5	2.482	3.326	10.4	20.6	3 2	13 13.31	- 7 23.3	2.218	3.060	11.5	21.2
3 12	13 7.81	- 4 41.8	2.400	3.322	7.5	20.4	3 12	13 8.83	- 6 58.4	2.127	3.046	8.5	20.9
3 22	13 1.94	- 3 40.1	2.344	3.319	4.3	20.2	3 22	13 2.67	- 6 23.3	2.061	3.033	5.0	20.7
4 1	12 55.16	- 2 33.9	2.317	3.315	1.1	20.0	4 1	12 55.38	- 5 41.3	2.022	3.020	1.2	20.4
4 11	12 48.17	- 1 28.3	2.320	3.311	3.1	20.1	4 11	12 47.76	- 4 56.9	2.011	3.006	2.8	20.5
4 21	12 41.65	- 0 28.5	2.351	3.306	6.4	20.3	4 21	12 40.61	- 4 15.2	2.029	2.993	6.6	20.7
5 1	12 36.21	+ 0 21.1	2.409	3.302	9.5	20.5	5 1	12 34.66	- 3 40.9	2.073	2.980	10.1	20.9
5 11	12 32.32	+ 0 57.5	2.491	3.297	12.2	20.7	5 11	12 30.47	- 3 17.6	2.140	2.967	13.2	21.1
114996	2003 <i>QL</i> ₇₂		4 3.9 66°30	0°5/ 3.5 18			433893	2015 <i>BZ</i> ₄₀₉		4 4.0 280°42	0°0/ 3.9 17		
3 2	13 14.96	-10 7.9	1.374	2.229	16.5	18.5	3 2	13 15.40	- 7 46.4	1.880	2.724	13.2	21.1
3 12	13 10.46	- 8 38.6	1.325	2.251	11.9	18.3	3 12	13 10.58	- 7 22.7	1.798	2.718	9.7	20.9
3 22	13 3.66	- 6 49.7	1.298	2.273	6.8	18.1	3 22	13 3.77	- 6 47.1	1.739	2.712	5.7	20.6
4 1	12 55.55	- 4 50.5	1.297	2.296	1.5	17.8	4 1	12 55.65	- 6 3.2	1.708	2.706	1.4	20.3
4 11	12 47.39	- 2 53.0	1.324	2.318	4.1	18.0	4 11	12 47.17	- 5 16.4	1.704	2.699	3.1	20.4
4 21	12 40.31	- 1 8.3	1.376	2.340	9.1	18.3	4 21	12 39.31	- 4 32.8	1.728	2.693	7.4	20.7
5 1	12 35.22	+ 0 15.1	1.453	2.362	13.4	18.7	5 1	12 32.94	- 3 57.7	1.777	2.687	11.4	20.9
5 11	12 32.60	+ 1 13.5	1.550	2.384	17.0	18.9	5 11	12 28.65	- 3 35.1	1.848	2.681	14.7	21.1
421517	2014 <i>OJ</i> ₁₀₆		4 3.9 128°72	0°7/ 3.4 18			287490	2003 <i>BJ</i> ₁₉		4 4.0 53°96	3°3/ 31.8 18		
3 2	13 19.52	- 6 17.2	1.814	2.657	13.6	22.3	3 2	13 15.01	+ 2 21.7	1.993	2.855	11.7	20.1
3 12	13 13.40	- 5 38.7	1.751	2.672	9.9	22.1	3 12	13 9.97	+ 3 3.4	1.938	2.869	8.5	19.9
3 22	13 5.27	- 4 49.2	1.713	2.687	5.7	21.9	3 22	13 3.22	+ 3 47.3	1.908	2.882	5.1	19.7
4 1	12 55.94	- 3 53.8	1.703	2.701	1.3	21.6	4 1	12 55.49	+ 4 27.9	1.906	2.896	3.3	19.6
4 11	12 46.45	- 2 58.9	1.721	2.714	3.5	21.8	4 11	12 47.65	+ 4 59.7	1.932	2.910	5.2	19.8
4 21	12 37.82	- 2 10.8	1.767	2.726	7.8	22.1	4 21	12 40.54	+ 5 18.9	1.984	2.924	8.5	20.0
5 1	12 30.88	- 1 34.4	1.839	2.738	11.6	22.3	5 1	12 34.86	+ 5 23.0	2.062	2.939	11.6	20.2
5 11	12 26.15	- 1 12.8	1.932	2.750	14.8	22.6	5 11	12 31.08	+ 5 11.7	2.160	2.953	14.2	20.4
383734	2007 <i>VS</i> ₄		4 3.9 123°40	3°3/ 8.2 17			486638	2013 <i>OC</i> ₄		4 4.0 175°77	15°1/ 10.7 18		
3 2	13 16.03	-19 32.6	2.783	3.559	11.2	21.7	3 2	13 36.56	-31 48.6	1.279	2.015	23.9	20.6
3 12	13 10.39	-19 32.4	2.707	3.576	8.9	21.5	3 12	13 28.34	-34 26.6	1.205	2.018	21.1	20.4
3 22	13 3.36	-19 17.8	2.657	3.593	6.3	21.4	3 22	13 15.38	-36 36.7	1.149	2.020	18.3	20.2
4 1	12 55.49	-18 49.9	2.634	3.609	4.0	21.3	4 1	12 58.61	-38 4.9	1.112	2.021	15.9	20.0
4 11	12 47.47	-18 11.3	2.640	3.625	3.4	21.2	4 11	12 40.09	-38 42.2	1.099	2.021	15.1	20.0
4 21	12 39.99	-17 25.9	2.676	3.640	5.2	21.4	4 21	12 22.49	-38 29.3	1.107	2.021	16.0	20.0
5 1	12 33.63	-16 38.3	2.740	3.655	7.6	21.6	5 1	12 8.25	-37 37.8	1.136	2.020	18.4	20.2
5 11	12 28.83	-15 53.2	2.830	3.670	10.0	21.7	5 11	11 58.83	-36 25.5	1.184	2.018	21.2	20.3
354958	2006 <i>GD</i> ₃₈		4 4.0 342°45	0°3/ 3.7 18			208233	2000 <i>SD</i> ₂₆₅		4 4.0 81°68	1°8/ 2.6 18		
3 2	13 11.15	- 9 28.4	1.164	2.036	17.6	19.5	3 2	13 19.95	- 3 43.8	1.452	2.312	15.5	20.3
3 12	13 8.37	- 8 27.8	1.094	2.028	13.0	19.2	3 12	13 14.01	- 3 3.1	1.403	2.333	11.1	20.1
3 22	13 2.83	- 7 3.4	1.044	2.021	7.6	18.9	3 22	13 5.72	- 2 12.7	1.377	2.353	6.3	19.8
4 1	12 55.44	- 5 22.6	1.017	2.015	1.7	18.5	4 1	12 56.08	- 1 19.1	1.376	2.373	2.0	19.6
4 11	12 47.55	- 3 37.2	1.014	2.010	4.5	18.6	4 11	12 46.37	- 0 30.3	1.403	2.394	4.7	19.8
4 21	12 40.57	- 2 0.4	1.034	2.005	10.4	18.9	4 21	12 37.77	+ 0 7.3	1.455	2.414	9.3	20.1
5 1	12 35.73	- 0 43.2	1.077	2.001	15.7	19.2	5 1	12 31.23	+ 0 29.1	1.532	2.433	13.4	20.4
5 11	12 33.76	+ 0 7.8	1.137	1.999	20.1	19.5	5 11	12 27.26	+ 0 33.2	1.628	2.453	16.8	20.7
471159	2010 <i>GK</i> ₁₅₃		4 4.0 241°27	7°6/ 15.5 17			62761	2000 <i>UA</i> ₁₂		4 4.0 162°42	4°6/ 30.2 18		
3 2	13 16.08	-38 26.2	3.211	3.846	12.4	21.8	3 2	13 18.47	+ 7 48.6	2.331	3.184	10.6	19.1
3 12	13 10.73	-38 49.3	3.095	3.829	11.2	21.7	3 12	13 12.31	+ 8 37.1	2.268	3.190	7.9	19.0
3 22	13 3.74	-38 52.3	2.998	3.811	9.8	21.5	3 22	13 4.53	+ 9 23.8	2.232	3.196	5.5	18.8
4 1	12 55.63	-38 33.0	2.925	3.793	8.5	21.4	4 1	12 55.80	+10 3.3	2.225	3.201	4.6	18.8
4 11	12 47.13	-37 51.3	2.876	3.774	7.7	21.3	4 11	12 46.93	+10 30.5	2.246	3.205	6.3	18.9
4 21	12 39.00	-36 49.3	2.853	3.755	7.8	21.3	4 21	12 38.70	+10 42.4	2.296	3.209	8.9	19.0
5 1	12 31.97	-35 31.7	2.857	3.735	8.7	21.3	5 1	12 31.80	+10 37.6	2.371	3.212	11.5	19.2
5 11	12 26.60	-34 4.5	2.886	3.715	10.1	21.4	5 11	12 26.70	+10 16.7	2.466	3.214	13.8	19.4
377944	2006 <i>HX</i> ₈₆		4 4.0 112°66	1°5/ 2.5 17			210704	2000 <i>SB</i> ₁₄₆		4 4.0 254°26	0°6/ 4.8 18		
3 2	13 15.19	- 3 29.1	2.003	2.856	12.1	21.0	3 2	13 12.21	-11 8.6	2.613	3.437	10.5	21.0
3 12	13 10.18	- 2 49.3	1.934	2.861	8.8	20.8	3 12	13 7.84	-10 23.3	2.512	3.420	7.9	20.8
3 22	13 3.40	- 2 1.7	1.890	2.866	5.0	20.6	3 22	13 2.01	- 9 25.4	2.436	3.403	4.8	20.6
4 1	12 55.53	- 1 11.1	1.874	2.871	1.6	20.4	4 1	12 55.24	- 8 17.8	2.389	3.386	1.5	20.3
4 11	12 47.45	- 0 23.3	1.886	2.876	3.8	20.5	4 11	12 48.17	- 7 5.3	2.372	3.368	2.3	20.4
4 21	12 40.04	+ 0 16.3	1.926	2.881	7.6	20.8	4 21	12 41.48	- 5 53.2	2.385	3.350	5.7	20.6
5 1	12 34.04	+ 0 43.6	1.991	2.885	11.1	21.0	5 1	12 35.81	- 4 46.7	2.425	3.331	8.9	20.7
5 11	12 29.97	+ 0 56.5	2.078	2.890	14.1	21.2	5 11	12 31.63	- 3 50.4	2.490	3.313	11.7	20.9
246054	2006 <i>UX</i> ₃₃₈		4 4.0 208°30	4°2/ 29.6 18			501564	2014 <i>NT</i> ₂₈		4 4.0 328°30	5°7/ 30.6 17		
3 2	13 14.21	+ 8 8.8	2.769	3.624	9.1	21.3	3 2	13 13.53	+ 1 42.1	1.118	2.008	16.7	20.8
3 12	13 9.09	+ 8 59.3	2.696	3.619	6.8	21.2	3 12	13 10.21	+ 3 9.8	1.053	1.997	12.2	20.5
3 22	13 2.63	+ 9 48.6	2.651	3.613	4.8	21.0	3 22	13 3.98	+ 4 47.6	1.009	1.987	7.7	20.3
4 1	12 55.34	+10 31.8	2.635	3.608	4.2	21.0	4 1	12 55.76	+ 6 23.3	0.989	1.978	5.7	20.1
4 11	12 47.88	+11 4.6	2.647	3.602	5.7	21.1	4 11	12 47.01	+ 7 43.3	0.991	1.969	9.0	20.3
4 21	12 40.87	+11 24.1	2.688	3.595	8.0	21.2	4 21	12 39.23	+ 8 36.9	1.016	1.961	13.9	20.5
5 1	12 34.88	+11 28.5	2.754	3.588	10.3	21.3	5 1	12 33.70	+ 8 58.5	1.060	1.954	18.6	20.7
5 11	12 30.35	+11 17.9	2.841	3.581	12.4	21.5	5 11	12 31.21	+ 8 48.1	1.120	1.948	22.6	21.0
286264	2001 <i>VR</i> ₂₅		4 4.0 162°54	0°5/ 3.6 18			110340	2001 <i>SC</i> ₂₉₂		4 4.0 186°61			