

EPHEMERIDES

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9 8.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
13075	1991 UN ₁	9 7.9 317°12	2°8/ 9.9 18				446814	2000 AG ₂₀₉	9 7.9 333°61	7°3/31.5 17			
7 30	23 32.37	+ 0 41.2	1.395	2.216	19.6	17.7	7 30	23 27.72	-21 17.9	1.755	2.615	14.4	20.0
8 9	23 29.68	+ 1 8.5	1.308	2.204	16.1	17.5	8 9	23 25.45	-22 38.1	1.681	2.601	11.6	19.8
8 19	23 24.11	+ 1 18.5	1.239	2.192	11.9	17.2	8 19	23 20.81	-24 0.8	1.628	2.588	9.0	19.6
8 29	23 16.11	+ 1 11.1	1.191	2.181	7.1	16.9	8 29	23 14.27	-25 17.1	1.600	2.575	7.3	19.5
9 8	23 6.63	+ 0 49.3	1.167	2.171	3.0	16.6	9 8	23 6.67	-26 18.1	1.596	2.563	7.9	19.5
9 18	22 56.93	+ 0 18.1	1.167	2.160	5.4	16.7	9 18	22 59.03	-26 56.6	1.616	2.552	10.3	19.6
9 28	22 48.45	- 0 15.4	1.191	2.151	10.3	17.0	9 28	22 52.44	-27 8.6	1.660	2.542	13.3	19.8
10 8	22 42.33	- 0 44.0	1.238	2.142	15.0	17.3	10 8	22 47.78	-26 54.0	1.724	2.532	16.2	20.0
46256	2001 HR ₄₀	9 7.9 175°75	1°1/ 6.7 18				164757	1998 VY ₃₅	9 7.9 306°36	1°1/ 6.9 18			
7 30	23 28.01	- 3 9.9	1.994	2.811	14.6	19.5	7 30	23 26.14	- 3 20.2	1.696	2.527	16.2	20.0
8 9	23 25.14	- 4 20.4	1.911	2.812	11.5	19.3	8 9	23 24.36	- 4 15.4	1.589	2.497	13.0	19.8
8 19	23 20.29	- 5 47.1	1.850	2.812	7.9	19.0	8 19	23 20.23	- 5 30.7	1.502	2.468	9.0	19.5
8 29	23 13.89	- 7 24.9	1.814	2.813	3.9	18.8	8 29	23 14.10	- 7 2.2	1.439	2.438	4.5	19.1
9 8	23 6.63	- 9 6.6	1.807	2.813	1.2	18.6	9 8	23 6.67	- 8 42.7	1.402	2.408	1.3	18.8
9 18	22 59.35	-10 43.9	1.827	2.813	4.9	18.9	9 18	22 58.90	-10 22.7	1.391	2.379	5.8	19.1
9 28	22 52.93	-12 9.4	1.875	2.813	8.8	19.1	9 28	22 51.93	-11 52.1	1.406	2.350	10.6	19.3
10 8	22 48.09	-13 17.7	1.948	2.813	12.3	19.3	10 8	22 46.79	-13 3.2	1.444	2.321	15.0	19.5
218685	2005 TG ₅₁	9 7.9 217°03	3°2/12.1 18				131032	2000 XQ ₄₈	9 8.0 301°68	3°8/ 5.0 18			
7 30	23 26.76	+ 8 38.1	2.389	3.142	14.3	20.5	8 9	23 30.36	-13 40.9	1.548	2.464	12.8	19.7
8 9	23 23.84	+ 8 13.7	2.293	3.140	11.9	20.3	8 19	23 24.35	-14 19.9	1.480	2.447	8.9	19.4
8 19	23 19.23	+ 7 30.6	2.216	3.138	9.1	20.1	8 29	23 16.16	-15 0.5	1.435	2.431	5.2	19.1
8 29	23 13.30	+ 6 29.7	2.163	3.135	6.1	19.9	9 8	23 6.69	-15 35.5	1.416	2.415	4.1	19.0
9 8	23 6.64	+ 5 14.0	2.137	3.132	3.5	19.8	9 18	22 57.08	-15 58.2	1.423	2.399	7.4	19.2
9 18	22 59.93	+ 3 48.7	2.140	3.129	3.9	19.8	9 28	22 48.58	-16 3.5	1.455	2.383	11.6	19.4
9 28	22 53.90	+ 2 20.1	2.171	3.126	6.6	20.0	10 8	22 42.22	-15 49.7	1.508	2.367	15.5	19.6
10 8	22 49.18	+ 0 54.9	2.229	3.123	9.7	20.1	10 18	22 38.61	-15 17.3	1.581	2.352	18.8	19.8
294783	2008 CJ ₄₉	9 7.9 254°28	4°7/ 3.9 18				155502	1999 JP ₉₇	9 8.0 119°41	3°1/ 4.8 18			
7 30	23 32.01	-12 16.6	1.525	2.376	16.7	20.8	8 9	23 27.87	-10 30.7	1.762	2.673	11.7	19.2
8 9	23 29.10	-13 29.7	1.449	2.369	13.2	20.5	8 19	23 22.22	-11 55.9	1.716	2.683	8.0	19.0
8 19	23 23.49	-14 54.6	1.392	2.362	9.2	20.3	8 29	23 14.88	-13 25.4	1.697	2.694	4.3	18.8
8 29	23 15.68	-16 23.0	1.360	2.355	5.6	20.1	9 8	23 6.69	-14 51.0	1.704	2.703	3.4	18.7
9 8	23 6.64	-17 44.7	1.353	2.348	5.1	20.0	9 18	22 58.59	-16 4.8	1.739	2.713	6.5	19.0
9 18	22 57.53	-18 50.2	1.372	2.341	8.5	20.2	9 28	22 51.55	-17 0.9	1.800	2.722	10.2	19.2
9 28	22 49.64	-19 32.8	1.415	2.333	12.7	20.4	10 8	22 46.33	-17 36.4	1.885	2.731	13.4	19.4
10 8	22 43.97	-19 49.8	1.479	2.326	16.4	20.7	10 18	22 43.37	-17 51.2	1.989	2.739	16.1	19.7
446551	2014 NJ ₂₆	9 7.9 359°86	3°1/ 4.5 18				403385	2009 PX ₂₀	9 8.0 324°83	8°7/16.9 17			
7 30	23 26.33	-10 16.0	2.001	2.842	13.7	20.9	8 9	23 25.86	+19 58.6	2.001	2.784	15.7	20.3
8 9	23 23.83	-11 23.5	1.925	2.841	10.7	20.7	8 19	23 20.99	+20 38.3	1.917	2.772	13.5	20.1
8 19	23 19.37	-12 40.9	1.871	2.840	7.3	20.5	8 29	23 14.38	+20 53.6	1.852	2.760	11.2	19.9
8 29	23 13.41	-14 2.3	1.843	2.840	4.1	20.3	9 8	23 6.69	+20 42.7	1.810	2.749	9.4	19.8
9 8	23 6.64	-15 20.3	1.842	2.840	3.4	20.2	9 18	22 58.78	+20 6.5	1.792	2.738	8.7	19.7
9 18	22 59.87	-16 28.0	1.868	2.841	6.3	20.4	9 28	22 51.60	+19 9.3	1.799	2.728	9.7	19.8
9 28	22 53.97	-17 19.8	1.920	2.841	9.7	20.6	10 8	22 46.04	+17 58.2	1.830	2.718	11.8	19.9
10 8	22 49.62	-17 52.8	1.995	2.843	12.8	20.8	10 18	22 42.67	+16 41.5	1.883	2.709	14.2	20.0
247421	2002 CD ₂₇₂	9 7.9 208°93	2°5/ 2.5 18				106683	2000 WW ₁₅₄	9 8.0 358°22	4°2/ 5.1 18			
7 30	23 23.40	-19 8.9	4.830	5.654	6.5	20.3	8 9	23 29.58	-15 35.4	1.442	2.363	13.2	18.2
8 9	23 20.24	-19 42.0	4.749	5.652	5.1	20.2	8 19	23 23.72	-15 52.3	1.390	2.359	9.2	18.0
8 19	23 16.23	-20 15.4	4.693	5.649	3.7	20.1	8 29	23 15.76	-16 7.0	1.361	2.356	5.5	17.8
8 29	23 11.60	-20 46.7	4.665	5.646	2.7	20.0	9 8	23 6.70	-16 13.3	1.357	2.355	4.5	17.7
9 8	23 6.65	-21 13.6	4.666	5.644	2.7	20.0	9 18	22 57.73	-16 5.9	1.378	2.354	7.6	17.9
9 18	23 1.70	-21 34.1	4.697	5.641	3.8	20.1	9 28	22 50.09	-15 41.9	1.424	2.355	11.6	18.1
9 28	22 57.10	-21 46.8	4.755	5.638	5.3	20.2	10 8	22 44.70	-15 1.3	1.491	2.357	15.3	18.4
10 8	22 53.15	-21 50.8	4.840	5.635	6.6	20.3	10 18	22 42.04	-14 5.6	1.577	2.360	18.4	18.6
57175	2001 QD ₂₄	9 7.9 320°06	2°3/ 6.2 18 R				181632	2006 XP ₁₃	9 8.0 34°05	0°4/ 8.4 18			
7 30	23 27.16	- 7 4.3	1.312	2.170	18.5	18.8	8 9	23 26.50	- 2 27.2	1.891	2.785	12.0	20.3
8 9	23 25.78	- 7 41.1	1.224	2.148	14.8	18.5	8 19	23 21.22	- 2 56.5	1.832	2.788	8.4	20.1
8 19	23 21.55	- 8 35.3	1.155	2.128	10.2	18.2	8 29	23 14.38	- 3 36.5	1.796	2.791	4.4	19.9
8 29	23 14.87	- 9 41.6	1.107	2.108	5.2	17.9	9 8	23 6.70	- 4 22.5	1.787	2.794	0.5	19.6
9 8	23 6.66	-10 51.4	1.083	2.088	2.5	17.6	9 18	22 59.04	- 5 9.3	1.806	2.798	4.1	19.9
9 18	22 58.18	-11 54.7	1.082	2.070	7.2	17.9	9 28	22 52.29	- 5 51.3	1.851	2.802	8.0	20.1
9 28	22 50.88	-12 42.2	1.105	2.052	12.5	18.1	10 8	22 47.17	- 6 24.0	1.922	2.805	11.5	20.4
10 8	22 45.96	-13 7.9	1.148	2.035	17.3	18.4	10 18	22 44.14	- 6 44.5	2.014	2.809	14.5	20.6
268862	2006 YO ₂	9 7.9 151°69	0°9/ 8.9 17				218522	2004 TN ₂₆₅	9 8.0 124°50	0°9/ 7.0 18			
7 30	23 33.55	- 0 21.3	1.893	2.691	16.0	21.7	8 9	23 26.19	- 6 48.9	2.387	3.284	9.7	20.7
8 9	23 29.57	- 0 41.3	1.812	2.698	12.8	21.5	8 19	23 20.74	- 7 23.8	2.330	3.290	6.6	20.5
8 19	23 23.38	- 1 16.9	1.752	2.704	9.1	21.3	8 29	23 14.05	- 8 4.1	2.298	3.295	3.3	20.3
8 29	23 15.48	- 2 5.5	1.717	2.709	4.9	21.1	9 8	23 6.71	- 8 45.5	2.294	3.301	0.9	20.1
9 8	23 6.67	- 3 2.1	1.708	2.715	1.0	20.8	9 18	22 59.41	- 9 23.9	2.320	3.306	4.0	20.4
9 18	22 57.88	- 4 0.7	1.727	2.719	4.2	21.0	9 28	22 52.85	- 9 55.2	2.374	3.312	7.2	20.6
9 28	22 50.10	- 4 55.0	1.773	2.723	8.3	21.3	10 8	22 47.62	-10 16.6	2.453	3.317	10.1	20.8
10 8	22 44.12	- 5 39.5	1.845	2.727	12.0	21.5	10 18	22 44.13	-10 26.6	2.555	3.322	12.5	21.0
53908	2000 GT ₂	9 7.9 254°82	3°4/ 4.8 18				307419	2002 TN ₂₃₇	9 8.0 246°65	8°8/21.2 18			
7 30	23 30.95	- 9 38.3	1.634										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
89996	2002 <i>TK</i> ₇₉		9 8.0 247°08	5°0/ 3.6 18			8246	Kotov		9 8.0 3°85	0°4/ 8.2 18		
8 9	23 30.38	-15 47.0	1.588	2.504	12.5	19.7	8 9	23 27.94	-3 53.5	0.981	1.905	17.5	16.3
8 19	23 24.27	-16 57.5	1.530	2.496	8.8	19.5	8 19	23 23.19	-4 1.0	0.933	1.904	12.4	16.0
8 29	23 16.08	-18 8.2	1.497	2.488	5.7	19.3	8 29	23 15.73	-4 23.7	0.905	1.904	6.5	15.7
9 8	23 6.71	-19 10.2	1.489	2.480	5.4	19.3	9 8	23 6.75	-4 55.2	0.897	1.905	0.4	15.3
9 18	22 57.29	-19 55.5	1.508	2.472	8.4	19.4	9 18	22 57.81	-5 27.3	0.912	1.907	6.1	15.7
9 28	22 49.04	-20 19.1	1.551	2.463	12.2	19.6	9 28	22 50.54	-5 51.8	0.949	1.911	12.0	16.0
10 8	22 42.91	-20 19.4	1.616	2.454	15.7	19.8	10 8	22 46.10	-6 2.5	1.006	1.916	17.1	16.3
10 18	22 39.45	-19 57.7	1.699	2.445	18.7	20.0	10 18	22 45.05	-5 56.7	1.079	1.922	21.2	16.6
481564	2007 <i>RY</i> ₃₂₅		9 8.0 358°01	6°6/ 3.3 16			332290	2006 <i>TK</i> ₃₃		9 8.0 162°17	3°4/ 5.2 18		
8 9	23 29.52	-19 47.2	1.326	2.251	13.8	20.3	8 9	23 32.38	-12 42.0	1.664	2.573	12.4	20.6
8 19	23 23.83	-20 31.1	1.281	2.248	10.1	20.0	8 19	23 25.47	-13 30.7	1.612	2.577	8.6	20.4
8 29	23 15.86	-21 8.6	1.257	2.245	7.1	19.9	8 29	23 16.62	-14 21.2	1.585	2.581	4.8	20.2
9 8	23 6.71	-21 30.8	1.258	2.244	7.0	19.9	9 8	23 6.76	-15 6.2	1.584	2.584	3.7	20.1
9 18	22 57.69	-21 31.6	1.282	2.243	9.9	20.0	9 18	22 56.99	-15 39.5	1.611	2.586	6.8	20.3
9 28	22 50.14	-21 8.1	1.329	2.244	13.6	20.3	9 28	22 48.43	-15 56.5	1.664	2.589	10.7	20.5
10 8	22 45.04	-20 21.5	1.396	2.246	17.1	20.5	10 8	22 41.96	-15 55.6	1.740	2.590	14.2	20.8
10 18	22 42.85	-19 15.2	1.481	2.248	20.0	20.7	10 18	22 38.06	-15 37.3	1.835	2.592	17.1	21.0
168531	Joshuakammer		9 8.0 165°78	18°4/ 27.8 16			331585	2001 <i>SP</i> ₁₄₃		9 8.0 356°61	4°1/ 11.8 18		
8 9	23 53.27	-46 12.3	1.226	2.074	20.0	20.1	8 9	23 16.66	+ 7 40.1	0.944	1.851	19.7	19.1
8 19	23 40.87	-47 34.7	1.208	2.078	18.8	20.1	8 19	23 15.39	+ 6 43.2	0.888	1.843	15.0	18.8
8 29	23 24.56	-48 15.5	1.207	2.081	18.4	20.0	8 29	23 11.76	+ 5 8.0	0.849	1.837	9.7	18.5
9 8	23 6.71	-48 2.6	1.225	2.083	19.0	20.1	9 8	23 6.75	+ 3 1.4	0.831	1.833	4.8	18.2
9 18	22 50.05	-46 53.5	1.262	2.085	20.4	20.2	9 18	23 1.64	+ 0 37.2	0.834	1.831	5.8	18.3
9 28	22 36.87	-44 55.1	1.315	2.087	22.3	20.4	9 28	22 57.88	-1 46.5	0.859	1.832	11.0	18.6
10 8	22 28.29	-42 20.6	1.385	2.087	24.1	20.5	10 8	22 56.56	-3 52.9	0.905	1.834	16.3	18.9
10 18	22 24.38	-39 23.0	1.467	2.088	25.7	20.7	10 18	22 58.26	-5 31.1	0.968	1.839	20.9	19.2
476979	2008 <i>YO</i> ₅₁		9 8.0 302°10	2°5/ 5.9 18			128186	2003 <i>SG</i> ₁		9 8.0 225°50	1°4/ 9.8 18		
8 9	23 27.40	- 9 18.8	1.587	2.501	12.6	21.1	8 9	23 25.00	+ 1 27.4	2.625	3.495	9.9	21.1
8 19	23 22.31	-10 11.2	1.512	2.480	8.7	20.9	8 19	23 19.94	+ 1 2.4	2.548	3.489	7.2	20.9
8 29	23 15.15	-11 11.4	1.460	2.458	4.5	20.6	8 29	23 13.69	+ 0 26.8	2.495	3.482	4.2	20.7
9 8	23 6.72	-12 12.3	1.433	2.437	2.7	20.4	9 8	23 6.77	- 0 16.5	2.471	3.475	1.6	20.5
9 18	22 58.06	-13 6.0	1.433	2.416	6.5	20.6	9 18	22 59.79	- 1 4.0	2.475	3.468	3.1	20.6
9 28	22 50.35	-13 45.6	1.458	2.395	10.9	20.8	9 28	22 53.40	- 1 51.3	2.509	3.460	6.1	20.8
10 8	22 44.58	-14 6.7	1.506	2.374	15.0	21.0	10 8	22 48.17	- 2 34.2	2.570	3.453	9.0	20.9
10 18	22 41.42	-14 8.0	1.572	2.354	18.5	21.2	10 18	22 44.51	- 3 9.5	2.654	3.445	11.5	21.1
128995	2004 <i>TZ</i> ₂₃₂		9 8.0 91°06	2°5/ 10.4 18			226259	2003 <i>AQ</i>		9 8.0 166°06	3°1/ 4.9 18		
8 9	23 27.91	+ 3 31.0	1.687	2.564	14.1	19.8	8 9	23 29.29	-11 22.4	1.815	2.725	11.6	20.1
8 19	23 22.31	+ 3 2.6	1.631	2.573	10.3	19.6	8 19	23 23.24	-12 35.0	1.763	2.728	7.9	19.9
8 29	23 14.98	+ 2 16.6	1.597	2.583	6.2	19.4	8 29	23 15.47	-13 51.3	1.736	2.732	4.4	19.7
9 8	23 6.73	+ 1 17.6	1.590	2.593	2.7	19.2	9 8	23 6.78	-15 3.7	1.736	2.735	3.4	19.6
9 18	22 58.54	+ 0 11.8	1.609	2.602	4.3	19.3	9 18	22 58.12	-16 5.0	1.763	2.737	6.5	19.8
9 28	22 51.41	- 0 53.6	1.655	2.612	8.3	19.6	9 28	22 50.49	-16 49.8	1.818	2.739	10.1	20.0
10 8	22 46.13	- 1 51.6	1.726	2.621	12.0	19.8	10 8	22 44.68	-17 15.3	1.895	2.740	13.4	20.3
10 18	22 43.18	- 2 37.7	1.819	2.630	15.2	20.0	10 18	22 41.17	-17 21.5	1.993	2.741	16.2	20.5
396035	2013 <i>CE</i> ₁₆		9 8.0 319°50	0°9/ 7.2 18			353179	2009 <i>RA</i> ₁₂		9 8.0 240°96	0°5/ 9.1 16		
8 9	23 27.87	- 6 41.4	1.711	2.617	12.4	20.5	8 9	23 19.15	- 1 21.2	4.548	5.421	5.9	21.3
8 19	23 22.41	- 7 6.8	1.643	2.607	8.6	20.2	8 19	23 15.54	- 1 46.1	4.472	5.417	4.2	21.2
8 29	23 15.10	- 7 39.8	1.600	2.598	4.3	20.0	8 29	23 11.32	- 2 16.0	4.423	5.413	2.3	21.1
9 8	23 6.74	- 8 15.5	1.582	2.589	1.0	19.7	9 8	23 6.77	- 2 49.0	4.403	5.409	0.5	20.9
9 18	22 58.30	- 8 48.1	1.591	2.580	5.0	20.0	9 18	23 2.21	- 3 23.2	4.413	5.405	1.9	21.0
9 28	22 50.83	- 9 12.3	1.626	2.572	9.3	20.2	9 28	22 57.95	- 3 56.3	4.453	5.401	3.8	21.2
10 8	22 45.19	- 9 24.4	1.685	2.564	13.2	20.4	10 8	22 54.30	- 4 26.4	4.522	5.397	5.6	21.3
10 18	22 41.93	- 9 22.5	1.765	2.556	16.4	20.7	10 18	22 51.51	- 4 51.7	4.615	5.392	7.2	21.4
93814	2000 <i>WJ</i> ₆₀		9 8.0 263°97	4°4/ 2.8 18			270130	2001 <i>RW</i> ₁₁₆		9 8.0 22°39	1°2/ 7.1 16		
8 9	23 25.97	-17 8.0	2.170	3.083	9.8	18.7	8 9	23 25.14	- 4 46.6	1.080	2.005	16.2	20.3
8 19	23 20.80	-18 19.0	2.114	3.077	7.0	18.5	8 19	23 20.96	- 5 47.9	1.041	2.013	11.1	20.0
8 29	23 14.17	-19 28.7	2.084	3.072	4.8	18.3	8 29	23 14.46	- 7 3.5	1.022	2.023	5.5	19.7
9 8	23 6.74	-20 30.7	2.082	3.066	4.8	18.3	9 8	23 6.77	- 8 23.2	1.026	2.033	1.3	19.5
9 18	22 59.30	-21 19.1	2.107	3.061	7.1	18.5	9 18	22 59.25	- 9 36.1	1.054	2.045	6.5	19.9
9 28	22 52.66	-21 50.1	2.158	3.055	9.9	18.6	9 28	22 53.25	-10 32.8	1.105	2.058	11.7	20.2
10 8	22 47.51	-22 2.0	2.232	3.050	12.6	18.8	10 8	22 49.73	-11 7.8	1.175	2.072	16.2	20.5
10 18	22 44.32	-21 55.3	2.326	3.044	14.9	19.0	10 18	22 49.14	-11 19.5	1.264	2.087	19.9	20.8
255543	2006 <i>JW</i> ₆		9 8.0 72°48	3°5/ 10.9 17			365720	2010 <i>VZ</i> ₁₇₉		9 8.0 132°30	3°8/ 3.6 18		
8 9	23 28.66	+ 5 47.7	1.268	2.151	17.4	20.6	8 9	23 27.08	-16 54.0	2.416	3.324	9.1	20.7
8 19	23 23.20	+ 5 11.2	1.220	2.164	12.9	20.4	8 19	23 21.38	-17 44.8	2.368	3.330	6.5	20.6
8 29	23 15.54	+ 4 9.5	1.192	2.176	8.1	20.1	8 29	23 14.40	-18 33.8	2.347	3.335	4.2	20.4
9 8	23 6.75	+ 2 48.4	1.188	2.189	3.9	19.9	9 8	23 6.78	-19 15.5	2.353	3.341	4.1	20.4
9 18	22 58.07	+ 1 17.0	1.208	2.202	5.3	20.1	9 18	22 59.23	-19 46.0	2.388	3.346	6.1	20.6
9 28	22 50.81	- 0 13.6	1.254	2.215	9.8	20.4	9 28	22 52.47	-20 2.1	2.449	3.351	8.7	20.8
10 8	22 45.91	- 1 33.7	1.322	2.228	14.2	20.6	10 8	22 47.11	-20 2.9	2.535	3.356	11.2	20.9
10 18	22 43.85	- 2 36.7	1.411	2.240	17.9	20.9	10 18	22 43.54	-19 48.8	2.641	3.361	13.3	21.1
267334	2001 <i>UD</i> ₂₀₇		9 8.0 48°53	4°0/ 5.3 16			285786	2000 <i>WR</i> ₆₄		9 8.0 9°57	3°0/ 6.4 17		</

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
157639	2005 XY ₇₈		9 8.0 308°67	0°2/ 7.8 18			515231	2012 BS ₁₀₁		9 8.0 186°89	0°6/ 7.4 18		
8 9	23 25.50	- 4 10.0	1.942	2.841	11.5	20.4	8 9	23 25.68	- 5 26.8	2.522	3.414	9.4	22.4
8 19	23 20.65	- 4 45.8	1.867	2.827	8.0	20.2	8 19	23 20.42	- 6 7.2	2.456	3.414	6.5	22.2
8 29	23 14.19	- 5 31.5	1.817	2.814	4.1	19.9	8 29	23 13.95	- 6 54.1	2.416	3.413	3.2	22.0
9 8	23 6.79	- 6 22.3	1.793	2.801	0.2	19.6	9 8	23 6.83	- 7 43.3	2.405	3.412	0.6	21.8
9 18	22 59.27	- 7 12.7	1.797	2.788	4.3	19.9	9 18	22 59.69	- 8 30.6	2.423	3.411	3.7	22.0
9 28	22 52.54	- 7 57.0	1.828	2.775	8.3	20.1	9 28	22 53.21	- 9 11.7	2.470	3.409	6.9	22.2
10 8	22 47.37	- 8 30.5	1.884	2.763	11.9	20.3	10 8	22 47.98	- 9 43.4	2.543	3.408	9.7	22.4
10 18	22 44.27	- 8 50.5	1.960	2.751	15.0	20.5	10 18	22 44.38	-10 3.8	2.638	3.406	12.2	22.6
519642	2012 UF ₁₈₃		9 8.0 125°87	1°1/ 9.1 18			5049	Sherlock		9 8.0 344°01	3°2/ 6.1 18 R		
8 9	23 27.69	- 0 4.6	1.892	2.776	12.4	21.5	8 9	23 27.43	- 9 42.8	0.957	1.892	16.8	15.8
8 19	23 22.06	- 0 37.9	1.832	2.782	8.9	21.3	8 19	23 23.04	-10 23.2	0.905	1.882	11.6	15.5
8 29	23 14.85	- 1 24.0	1.796	2.788	4.9	21.1	8 29	23 15.78	-11 12.4	0.872	1.873	6.1	15.1
9 8	23 6.79	- 2 18.5	1.787	2.793	1.2	20.9	9 8	23 6.84	-12 0.4	0.860	1.865	3.4	15.0
9 18	22 58.75	- 3 15.6	1.806	2.799	3.9	21.1	9 18	22 57.81	-12 36.9	0.870	1.858	8.3	15.2
9 28	22 51.65	- 4 9.4	1.852	2.804	7.9	21.3	9 28	22 50.42	-12 53.7	0.902	1.853	13.9	15.5
10 8	22 46.21	- 4 54.5	1.924	2.809	11.4	21.6	10 8	22 45.95	-12 47.0	0.951	1.849	19.0	15.8
10 18	22 42.91	- 5 27.5	2.017	2.814	14.4	21.8	10 18	22 45.03	-12 16.9	1.016	1.847	23.2	16.1
371360	2006 PK ₄		9 8.0 17°74	6°9/ 4.1 17			258912	2002 QG ₁₃₀		9 8.0 70°48	4°6/ 4.1 17		
8 9	23 25.92	-16 23.4	0.775	1.725	17.7	19.2	8 9	23 29.18	-12 50.7	1.336	2.259	13.9	20.3
8 19	23 21.93	-17 18.5	0.753	1.734	12.5	18.9	8 19	23 23.52	-14 18.3	1.298	2.269	9.6	20.1
8 29	23 15.03	-18 8.8	0.749	1.746	8.0	18.7	8 29	23 15.72	-15 48.3	1.283	2.279	5.6	19.9
9 8	23 6.79	-18 41.6	0.764	1.760	7.4	18.8	9 8	23 6.84	-17 9.8	1.292	2.289	5.0	19.9
9 18	22 59.02	-18 48.6	0.799	1.777	11.2	19.1	9 18	22 58.13	-18 13.7	1.327	2.299	8.5	20.1
9 28	22 53.36	-18 26.2	0.853	1.795	15.8	19.4	9 28	22 50.84	-18 53.6	1.386	2.309	12.5	20.4
10 8	22 50.80	-17 37.0	0.924	1.815	20.1	19.7	10 8	22 45.87	-19 8.0	1.466	2.319	16.2	20.6
10 18	22 51.63	-16 25.6	1.010	1.837	23.5	20.1	10 18	22 43.69	-18 58.2	1.563	2.329	19.2	20.9
321475	2009 RU ₆₂		9 8.0 354°97	2°7/ 5.7 18			219919	2002 GA ₅₇		9 8.0 22°68	2°7/ 5.7 18		
8 9	23 28.66	-12 36.6	1.839	2.750	11.3	19.8	8 9	23 30.93	-13 26.2	2.003	2.909	10.8	19.5
8 19	23 22.80	-12 58.5	1.782	2.748	7.8	19.6	8 19	23 24.24	-13 40.4	1.948	2.911	7.5	19.3
8 29	23 15.25	-13 21.5	1.749	2.746	4.3	19.4	8 29	23 15.95	-13 54.5	1.917	2.913	4.1	19.1
9 8	23 6.81	-13 40.6	1.743	2.744	2.9	19.3	9 8	23 6.85	-14 3.8	1.915	2.915	2.9	19.0
9 18	22 58.40	-13 51.0	1.763	2.743	5.9	19.5	9 18	22 57.83	-14 4.7	1.940	2.918	5.6	19.2
9 28	22 51.01	-13 49.3	1.810	2.742	9.5	19.7	9 28	22 49.83	-13 54.4	1.992	2.920	9.0	19.4
10 8	22 45.40	-13 34.0	1.881	2.742	12.8	19.9	10 8	22 43.56	-13 32.0	2.069	2.923	12.1	19.6
10 18	22 42.04	-13 5.2	1.972	2.742	15.6	20.1	10 18	22 39.47	-12 57.8	2.168	2.926	14.7	19.8
476682	2008 TY ₇₃		9 8.0 304°68	2°8/10.4 18			348396	2005 HA ₃		9 8.0 347°81	3°1/ 5.4 18		
8 9	23 26.45	+ 3 29.5	1.557	2.440	14.7	21.3	8 9	23 29.33	-12 27.4	1.679	2.592	12.1	20.2
8 19	23 21.67	+ 3 9.0	1.478	2.424	10.9	21.1	8 19	23 23.41	-13 4.0	1.623	2.590	8.4	20.0
8 29	23 14.87	+ 2 28.9	1.422	2.408	6.7	20.8	8 29	23 15.63	-13 42.7	1.592	2.588	4.6	19.8
9 8	23 6.82	+ 1 32.6	1.390	2.393	3.0	20.5	9 8	23 6.85	-14 16.9	1.586	2.587	3.3	19.7
9 18	22 58.53	+ 0 26.1	1.384	2.378	4.7	20.6	9 18	22 58.11	-14 41.0	1.607	2.585	6.5	19.9
9 28	22 51.18	- 0 42.4	1.404	2.363	9.1	20.8	9 28	22 50.47	-14 50.6	1.654	2.584	10.3	20.1
10 8	22 45.76	- 1 44.8	1.447	2.348	13.4	21.0	10 8	22 44.77	-14 43.8	1.724	2.583	13.9	20.3
10 18	22 42.90	- 2 34.9	1.511	2.334	17.2	21.2	10 18	22 41.52	-14 20.9	1.813	2.583	16.8	20.5
523211	2016 VY ₂₀		9 8.0 179°39	4°8/ 2.2 18			394450	2007 RJ ₉₂		9 8.0 270°03	0°6/ 7.5 18		
8 9	23 27.48	-21 9.0	2.508	3.414	8.9	21.6	8 9	23 28.53	- 5 32.7	1.879	2.778	11.8	21.7
8 19	23 21.67	-22 1.7	2.459	3.414	6.6	21.4	8 19	23 22.83	- 6 4.0	1.804	2.764	8.2	21.5
8 29	23 14.57	-22 49.6	2.436	3.414	5.0	21.3	8 29	23 15.36	- 6 43.9	1.753	2.750	4.2	21.2
9 8	23 6.82	-23 27.6	2.441	3.415	5.2	21.3	9 8	23 6.85	- 7 27.6	1.729	2.736	0.6	20.9
9 18	22 59.11	-23 51.7	2.474	3.415	7.0	21.5	9 18	22 58.21	- 8 9.6	1.733	2.722	4.7	21.2
9 28	22 52.18	-23 59.3	2.533	3.414	9.3	21.6	9 28	22 50.41	- 8 44.3	1.763	2.708	8.8	21.4
10 8	22 46.95	-23 50.2	2.616	3.414	11.5	21.8	10 8	22 44.30	- 9 7.7	1.819	2.693	12.5	21.6
10 18	22 42.61	-23 25.4	2.718	3.414	13.5	21.9	10 18	22 40.44	- 9 17.3	1.895	2.679	15.7	21.8
47709	2000 DC ₁₆		9 8.0 213°13	1°2/ 6.8 18			428663	2008 GU ₉₉		9 8.0 125°39	1°6/ 6.6 17		
8 9	23 29.94	- 8 14.7	2.178	3.075	10.5	18.9	8 9	23 30.18	- 7 5.5	1.651	2.556	12.8	21.5
8 19	23 23.53	- 8 39.9	2.110	3.070	7.2	18.7	8 19	23 23.92	- 8 2.4	1.602	2.566	8.7	21.3
8 29	23 15.60	- 9 9.7	2.067	3.064	3.6	18.5	8 29	23 15.86	- 9 7.0	1.578	2.576	4.4	21.0
9 8	23 6.82	- 9 39.9	2.053	3.058	1.3	18.3	9 8	23 6.86	-10 12.1	1.580	2.586	1.7	20.9
9 18	22 58.01	-10 6.1	2.067	3.052	4.5	18.5	9 18	22 57.98	-11 10.5	1.610	2.595	5.5	21.2
9 28	22 50.02	-10 24.4	2.109	3.046	8.1	18.7	9 28	22 50.25	-11 56.1	1.666	2.604	9.7	21.4
10 8	22 43.57	-10 32.1	2.177	3.039	11.3	18.9	10 8	22 44.50	-12 25.1	1.745	2.612	13.4	21.7
10 18	22 39.14	-10 28.0	2.267	3.031	14.0	19.1	10 18	22 41.19	-12 36.6	1.845	2.620	16.4	21.9
180921	2005 LV ₁₆		9 8.0 163°06	5°0/ 3.8 18			82547	2001 OB ₆₉		9 8.0 10°82	4°2/ 5.1 18		
8 9	23 31.28	-15 35.6	1.552	2.468	12.7	20.5	8 9	23 24.82	-11 16.5	0.967	1.906	16.2	17.5
8 19	23 24.85	-16 47.4	1.504	2.470	9.0	20.3	8 19	23 20.99	-12 19.5	0.930	1.909	11.1	17.2
8 29	23 16.38	-17 58.6	1.481	2.473	5.7	20.1	8 29	23 14.59	-13 27.8	0.913	1.913	6.1	17.0
9 8	23 6.83	-19 0.3	1.483	2.475	5.4	20.1	9 8	23 6.87	-14 30.1	0.918	1.919	4.6	16.9
9 18	22 57.36	-19 44.7	1.512	2.476	8.4	20.2	9 18	22 59.31	-15 15.6	0.944	1.927	8.8	17.2
9 28	22 49.17	-20 7.2	1.565	2.478	12.1	20.5	9 28	22 53.43	-15 37.3	0.991	1.937	13.8	17.5
10 8	22 43.16	-20 6.7	1.640	2.479	15.5	20.7	10 8	22 50.24	-15 32.8	1.058	1.947	18.2	17.8
10 18	22 39.83	-19 44.9	1.734	2.480	18.3	20.9	10 18	22 50.20	-15 3.7	1.140	1.960	21.8	18.1
522921	2016 PF ₁₀₉		9 8.0 210°64	1°4/ 6.9 16			318496	2005 EK ₁₃₆		9 8.0 68°15	3°1/11.5 17		
8 9	23 32.33	- 8 15.7	1.817										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
297173	2010 VC ₁₁₃	9 8.0 350°24	3°5/ 4.8 18				403747	2011 AX ₄₁	9 8.1 285°81	5°2/ 1.6 18			
8 9	23 25.29	-12 26.5	1.630	2.551	12.0	19.9	8 9	23 25.78	-20 43.1	2.314	3.225	9.3	20.8
8 19	23 20.68	-13 21.5	1.575	2.545	8.3	19.7	8 19	23 20.66	-21 53.7	2.263	3.221	6.9	20.6
8 29	23 14.28	-14 19.6	1.543	2.540	4.7	19.5	8 29	23 14.15	-23 0.2	2.238	3.217	5.3	20.5
9 8	23 6.88	-15 13.4	1.536	2.535	3.8	19.4	9 8	23 6.90	-23 56.4	2.240	3.212	5.6	20.5
9 18	22 59.47	-15 55.9	1.555	2.531	6.9	19.6	9 18	22 59.65	-24 37.2	2.269	3.208	7.6	20.7
9 28	22 53.09	-16 21.9	1.599	2.528	10.7	19.8	9 28	22 53.17	-24 59.5	2.324	3.204	10.1	20.8
10 8	22 48.56	-16 28.8	1.666	2.526	14.2	20.0	10 8	22 48.13	-25 2.4	2.401	3.200	12.4	21.0
10 18	22 46.38	-16 16.5	1.751	2.525	17.2	20.2	10 18	22 44.96	-24 46.9	2.498	3.196	14.5	21.1
141985	2002 PH ₁₃₄	9 8.0 343°30	1°5/ 9.0 18				452224	2015 RK ₂₃₇	9 8.1 18°09	1°8/ 5.9 18			
8 9	23 22.87	-1 33.6	0.925	1.853	18.0	18.3	8 9	23 23.84	-7 50.6	2.013	2.921	10.7	20.5
8 19	23 19.98	-1 37.8	0.864	1.835	13.0	18.0	8 19	23 19.39	-9 1.0	1.958	2.924	7.2	20.3
8 29	23 14.31	-2 2.3	0.820	1.818	7.2	17.6	8 29	23 13.52	-10 18.0	1.928	2.926	3.7	20.1
9 8	23 6.88	-2 41.8	0.797	1.803	1.7	17.2	9 8	23 6.90	-11 35.1	1.925	2.929	2.0	20.0
9 18	22 59.17	-3 28.0	0.794	1.791	6.1	17.4	9 18	23 0.28	-12 45.8	1.951	2.933	5.1	20.2
9 28	22 52.89	-4 10.4	0.812	1.780	12.3	17.7	9 28	22 54.47	-13 44.2	2.003	2.936	8.6	20.4
10 8	22 49.40	-4 39.9	0.848	1.772	17.9	18.0	10 8	22 50.15	-14 26.8	2.080	2.940	11.8	20.6
10 18	22 49.44	-4 50.7	0.901	1.766	22.6	18.3	10 18	22 47.73	-14 51.8	2.177	2.944	14.4	20.8
68060	2000 YT ₆₂	9 8.0 133°35	4°8/ 1.5 18				361005	2005 UW ₅₁₅	9 8.1 175°78	3°1/ 3.9 18			
8 9	23 25.48	-19 14.0	2.381	3.292	9.1	19.0	8 9	23 25.53	-13 34.6	2.484	3.391	8.9	21.3
8 19	23 20.38	-20 42.5	2.339	3.298	6.7	18.8	8 19	23 20.37	-14 46.0	2.429	3.392	6.2	21.2
8 29	23 13.97	-22 7.8	2.323	3.304	5.0	18.7	8 29	23 13.97	-15 58.5	2.401	3.394	3.7	21.0
9 8	23 6.88	-23 23.2	2.335	3.309	5.3	18.8	9 8	23 6.90	-17 6.7	2.401	3.394	3.4	21.0
9 18	22 59.82	-24 23.4	2.376	3.315	7.3	18.9	9 18	22 59.84	-18 5.2	2.430	3.395	5.6	21.1
9 28	22 53.53	-25 4.9	2.442	3.320	9.7	19.1	9 28	22 53.46	-18 50.0	2.487	3.395	8.4	21.3
10 8	22 48.61	-25 26.5	2.531	3.325	12.0	19.3	10 8	22 48.38	-19 18.9	2.569	3.395	10.9	21.5
10 18	22 45.48	-25 28.9	2.640	3.330	13.9	19.4	10 18	22 44.98	-19 31.6	2.671	3.395	13.1	21.7
224737	2006 DL ₇	9 8.0 233°53	0°1/ 8.1 18				357830	2005 UC ₉₄	9 8.1 99°72	4°4/ 3.7 18			
8 9	23 24.37	-2 49.8	2.512	3.399	9.6	20.5	8 9	23 30.00	-18 25.8	2.145	3.052	10.1	20.7
8 19	23 19.58	-3 34.9	2.439	3.393	6.7	20.3	8 19	23 23.53	-19 3.6	2.098	3.058	7.3	20.6
8 29	23 13.57	-4 28.8	2.392	3.387	3.5	20.1	8 29	23 15.59	-19 37.7	2.076	3.063	4.9	20.4
9 8	23 6.89	-5 27.4	2.374	3.381	0.1	19.8	9 8	23 6.92	-20 2.6	2.082	3.068	4.7	20.4
9 18	23 0.16	-6 26.2	2.384	3.375	3.4	20.1	9 18	22 58.36	-20 14.3	2.115	3.073	6.8	20.6
9 28	22 54.04	-7 20.3	2.424	3.369	6.7	20.3	9 28	22 50.77	-20 10.4	2.175	3.078	9.6	20.8
10 8	22 49.12	-8 5.8	2.489	3.362	9.6	20.4	10 8	22 44.83	-19 50.5	2.259	3.083	12.3	20.9
10 18	22 45.82	-8 40.0	2.578	3.355	12.2	20.6	10 18	22 40.96	-19 15.9	2.363	3.088	14.5	21.1
55553	2001 XE ₂₅₇	9 8.0 47°06	5°8/ 15.1 18				286688	2002 FB ₇	9 8.1 173°11	4°2/ 4.3 16			
8 9	23 24.31	+14 57.5	1.933	2.752	14.9	19.2	8 9	23 32.85	-16 48.8	1.985	2.890	10.9	21.6
8 19	23 19.81	+14 30.2	1.864	2.757	12.0	19.0	8 19	23 25.62	-17 28.2	1.932	2.893	7.7	21.4
8 29	23 13.77	+13 37.6	1.816	2.763	9.0	18.8	8 29	23 16.71	-18 5.1	1.905	2.895	4.9	21.2
9 8	23 6.89	+12 22.0	1.793	2.768	6.5	18.7	9 8	23 6.93	-18 33.5	1.905	2.896	4.4	21.2
9 18	23 0.00	+10 48.5	1.796	2.774	5.9	18.7	9 18	22 57.23	-18 48.6	1.934	2.897	6.9	21.4
9 28	22 53.96	+9 4.7	1.826	2.780	7.8	18.8	9 28	22 48.61	-18 47.7	1.989	2.898	10.1	21.6
10 8	22 49.50	+7 19.8	1.882	2.786	10.7	19.0	10 8	22 41.82	-18 30.1	2.068	2.898	13.0	21.8
10 18	22 47.09	+5 41.6	1.962	2.792	13.5	19.2	10 18	22 37.34	-17 57.2	2.167	2.898	15.5	21.9
98203	2000 SM ₁₂₃	9 8.0 253°52	5°4/ 3.6 18				328124	2008 AA ₁₀₃	9 8.1 234°14	1°8/ 6.5 17			
8 9	23 32.43	-16 26.7	1.541	2.456	12.9	18.7	8 9	23 30.82	-7 37.0	1.628	2.533	12.9	22.4
8 19	23 25.91	-17 35.5	1.476	2.441	9.2	18.5	8 19	23 24.63	-8 30.3	1.559	2.523	8.9	22.2
8 29	23 17.09	-18 44.3	1.436	2.426	6.0	18.3	8 29	23 16.39	-9 32.3	1.515	2.513	4.5	21.9
9 8	23 6.91	-19 43.7	1.421	2.411	5.8	18.2	9 8	23 6.93	-10 36.0	1.496	2.502	2.0	21.7
9 18	22 56.58	-20 25.5	1.432	2.395	8.9	18.4	9 18	22 57.33	-11 33.9	1.506	2.490	5.9	21.9
9 28	22 47.43	-20 44.2	1.468	2.379	12.8	18.6	9 28	22 48.77	-12 18.9	1.541	2.478	10.4	22.2
10 8	22 40.52	-20 38.3	1.525	2.362	16.5	18.8	10 8	22 42.23	-12 46.9	1.599	2.466	14.4	22.4
10 18	22 36.48	-20 9.6	1.600	2.345	19.7	19.0	10 18	22 38.30	-12 56.2	1.678	2.453	17.7	22.6
253492	2003 SM ₉₄	9 8.0 358°74	4°2/ 11.4 17				361930	2008 GR ₁₄₀	9 8.1 119°21	0°1/ 7.9 18			
8 9	23 25.01	+6 1.2	1.098	1.993	18.5	19.8	8 9	23 26.08	-3 50.8	2.280	3.171	10.3	21.7
8 19	23 21.08	+5 40.6	1.041	1.990	14.0	19.5	8 19	23 20.78	-4 30.8	2.222	3.178	7.2	21.5
8 29	23 14.70	+4 51.1	1.003	1.988	9.0	19.2	8 29	23 14.18	-5 18.8	2.190	3.186	3.6	21.3
9 8	23 6.90	+3 37.4	0.987	1.988	4.7	19.0	9 8	23 6.92	-6 10.4	2.186	3.193	0.1	21.0
9 18	22 59.01	+2 8.4	0.993	1.988	5.8	19.0	9 18	22 59.68	-7 0.9	2.210	3.200	3.7	21.3
9 28	22 52.51	+0 36.4	1.022	1.989	10.7	19.3	9 28	22 53.21	-7 45.5	2.263	3.207	7.1	21.5
10 8	22 48.50	-0 46.6	1.073	1.991	15.5	19.6	10 8	22 48.12	-8 20.6	2.341	3.214	10.2	21.7
10 18	22 47.60	-1 52.2	1.142	1.993	19.7	19.9	10 18	22 44.80	-8 44.0	2.442	3.220	12.7	21.9
492686	2014 PE ₄₅	9 8.0 303°04	3°9/ 3.0 17				455091	2015 UB ₆₈	9 8.1 324°65	5°4/ 2.8 18			
8 9	23 23.72	-13 58.7	2.111	3.026	9.9	21.2	8 9	23 28.48	-19 50.1	1.904	2.817	10.9	20.5
8 19	23 19.42	-15 32.7	2.039	3.006	6.9	21.0	8 19	23 22.74	-20 42.0	1.849	2.810	8.0	20.3
8 29	23 13.61	-17 10.2	1.994	2.987	4.4	20.8	8 29	23 15.29	-21 29.5	1.819	2.803	5.8	20.2
9 8	23 6.89	-18 43.7	1.977	2.967	4.4	20.7	9 8	23 6.92	-22 5.7	1.815	2.796	5.8	20.2
9 18	23 0.03	-20 5.8	1.987	2.948	7.0	20.9	9 18	22 58.57	-22 25.5	1.838	2.790	8.1	20.3
9 28	22 53.85	-21 10.5	2.024	2.928	10.2	21.0	9 28	22 51.22	-22 25.6	1.886	2.784	11.1	20.5
10 8	22 49.09	-21 54.2	2.084	2.909	13.1	21.2	10 8	22 45.65	-22 5.7	1.956	2.778	14.0	20.7
10 18	22 46.29	-22 16.4	2.164	2.890	15.7	21.3	10 18	22 42.34	-21 27.5	2.045	2.773	16.4	20.9
353460	2011 RC ₁₉	9 8.1 1°43	1°3/ 9.1 18				202509	2006 BG ₁₆₆	9 8.1 9°65	1°0/ 8.8 18			
8 9	23 28.82	-1 15.9	1.692	2.584	13.3	20.7							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
515911	2015 <i>PB</i> ₂₉₀		9 8.1 346°83	7.2/31.4	18		205168	2000 <i>AC</i> ₂₁₄		9 8.1 122°11	10°1/19.5	18	
8 9	23 27.28	-23 34.6	1.808	2.723	11.3	20.6	8 9	23 33.26	+26 27.8	2.257	2.970	16.0	20.1
8 19	23 21.99	-24 57.2	1.765	2.720	8.7	20.4	8 19	23 26.04	+27 32.5	2.191	2.983	14.2	20.0
8 29	23 14.93	-26 12.0	1.746	2.718	7.2	20.3	8 29	23 17.03	+28 11.5	2.144	2.995	12.3	19.9
9 8	23 6.93	-27 10.6	1.753	2.715	7.8	20.3	9 8	23 6.97	+28 22.3	2.120	3.007	10.8	19.8
9 18	22 58.97	-27 46.9	1.784	2.713	10.0	20.5	9 18	22 56.79	+28 5.0	2.119	3.019	10.1	19.8
9 28	22 52.08	-27 57.8	1.840	2.712	12.7	20.6	9 28	22 47.50	+27 23.1	2.143	3.030	10.5	19.8
10 8	22 47.06	-27 43.6	1.916	2.710	15.3	20.8	10 8	22 39.93	+26 23.4	2.192	3.041	11.7	19.9
10 18	22 44.38	-27 7.0	2.009	2.709	17.5	21.0	10 18	22 34.65	+25 13.7	2.263	3.052	13.3	20.1
453212	2008 <i>HU</i> ₇		9 8.1 25°66	11°3/27.7	18		271557	2004 <i>JR</i> ₃₁		9 8.1 87°72	3°7/4.9	17	
8 9	23 28.55	-34 10.2	1.593	2.493	13.5	19.6	8 9	23 31.10	-12 21.2	1.531	2.445	13.0	20.6
8 19	23 22.98	-35 42.2	1.581	2.506	11.8	19.5	8 19	23 24.61	-13 25.5	1.495	2.462	8.9	20.4
8 29	23 15.40	-36 52.7	1.590	2.520	11.3	19.5	8 29	23 16.24	-14 31.3	1.483	2.479	5.0	20.2
9 8	23 6.93	-37 33.5	1.622	2.534	12.1	19.6	9 8	23 6.97	-15 30.4	1.497	2.496	3.9	20.2
9 18	22 58.78	-37 40.7	1.676	2.550	13.8	19.7	9 18	22 57.94	-16 15.8	1.538	2.513	7.1	20.5
9 28	22 52.12	-37 14.6	1.749	2.566	15.8	19.9	9 28	22 50.26	-16 42.7	1.604	2.529	11.0	20.7
10 8	22 47.75	-36 19.5	1.841	2.583	17.7	20.1	10 8	22 44.73	-16 49.5	1.693	2.545	14.4	21.0
10 18	22 46.01	-35 1.1	1.947	2.600	19.3	20.3	10 18	22 41.77	-16 37.3	1.800	2.561	17.2	21.2
357497	2004 <i>PP</i> ₃₁		9 8.1 35°84	2°1/5.7	18		309201	2007 <i>EU</i> ₂₁₅		9 8.1 262°85	2°7/4.8	18	
8 9	23 24.34	-8 7.3	1.843	2.754	11.3	19.9	8 9	23 24.85	-11 11.1	2.208	3.118	9.8	20.1
8 19	23 19.82	-9 25.5	1.794	2.761	7.7	19.7	8 19	23 20.06	-12 22.4	2.147	3.113	6.7	19.9
8 29	23 13.77	-10 50.4	1.770	2.768	3.9	19.5	8 29	23 13.89	-13 37.5	2.113	3.109	3.7	19.7
9 8	23 6.93	-12 14.5	1.772	2.776	2.4	19.4	9 8	23 6.96	-14 50.2	2.106	3.105	3.0	19.7
9 18	23 0.13	-13 30.5	1.803	2.784	5.6	19.7	9 18	22 59.98	-15 54.5	2.127	3.100	5.6	19.8
9 28	22 54.24	-14 32.1	1.860	2.792	9.3	19.9	9 28	22 53.75	-16 45.3	2.176	3.096	8.8	20.0
10 8	22 49.97	-15 15.7	1.940	2.800	12.5	20.1	10 8	22 48.91	-17 19.8	2.249	3.091	11.7	20.2
10 18	22 47.75	-15 39.9	2.041	2.809	15.2	20.3	10 18	22 45.91	-17 36.8	2.342	3.087	14.1	20.4
250786	2005 <i>TZ</i> ₇₅		9 8.1 326°29	6°7/2.7	18		305016	2007 <i>TS</i> ₃₆₀		9 8.1 0°77	0°5/7.6	18	
8 9	23 30.60	-22 1.8	1.633	2.549	12.3	19.6	8 9	23 25.94	-3 43.0	1.815	2.715	12.1	21.2
8 19	23 24.54	-22 42.0	1.569	2.529	9.3	19.4	8 19	23 21.00	-4 40.9	1.754	2.715	8.4	21.0
8 29	23 16.36	-23 15.1	1.528	2.509	7.0	19.2	8 29	23 14.43	-5 49.9	1.718	2.715	4.2	20.7
9 8	23 6.94	-23 33.2	1.512	2.490	7.1	19.2	9 8	23 6.96	-7 3.8	1.708	2.715	0.5	20.4
9 18	22 57.45	-23 30.5	1.521	2.472	9.6	19.3	9 18	22 59.47	-8 15.8	1.725	2.715	4.6	20.8
9 28	22 49.11	-23 4.1	1.554	2.455	12.9	19.5	9 28	22 52.90	-9 19.0	1.770	2.715	8.7	21.0
10 8	22 42.91	-22 14.9	1.609	2.438	16.2	19.6	10 8	22 47.98	-10 8.2	1.838	2.715	12.3	21.2
10 18	22 39.42	-21 5.8	1.681	2.422	19.0	19.8	10 18	22 45.22	-10 40.7	1.928	2.715	15.3	21.4
379168	2009 <i>QO</i> ₅₃		9 8.1 188°89	0°0/8.1	18		398060	2009 <i>HG</i> ₃₈		9 8.1 263°55	2°5/5.4	18	
8 9	23 31.60	-4 6.5	1.620	2.516	13.5	20.8	8 9	23 27.02	-10 10.7	1.962	2.870	10.9	21.4
8 19	23 25.08	-4 26.9	1.558	2.516	9.4	20.6	8 19	23 21.75	-11 12.0	1.893	2.859	7.5	21.2
8 29	23 16.56	-4 57.4	1.520	2.516	4.9	20.3	8 29	23 14.83	-12 18.8	1.849	2.847	4.0	21.0
9 8	23 6.95	-5 33.4	1.508	2.515	0.1	19.9	9 8	23 6.97	-13 24.4	1.833	2.835	2.7	20.9
9 18	22 57.32	-6 8.8	1.523	2.514	4.8	20.3	9 18	22 59.00	-14 22.4	1.844	2.822	5.8	21.0
9 28	22 48.81	-6 38.1	1.564	2.513	9.3	20.6	9 28	22 51.85	-15 7.2	1.882	2.810	9.5	21.2
10 8	22 42.35	-6 56.8	1.630	2.512	13.3	20.8	10 8	22 46.30	-15 35.3	1.944	2.797	12.8	21.4
10 18	22 38.47	-7 2.4	1.716	2.510	16.7	21.1	10 18	22 42.88	-15 45.6	2.027	2.785	15.6	21.6
14491	Hitachiomiya		9 8.1 314°00	4°6/11.4	18		155012	2005 <i>QM</i> ₄		9 8.1 325°33	0°4/8.3	18	
8 9	23 27.20	+6 8.8	1.508	2.381	15.6	18.2	8 9	23 26.48	-2 40.6	1.231	2.143	15.6	19.6
8 19	23 22.58	+6 15.1	1.404	2.341	12.2	17.9	8 19	23 22.09	-3 10.1	1.161	2.127	11.1	19.3
8 29	23 15.61	+5 59.9	1.322	2.300	8.2	17.6	8 29	23 15.28	-3 56.3	1.113	2.111	5.9	18.9
9 8	23 6.95	+5 23.8	1.263	2.260	4.9	17.3	9 8	23 6.97	-4 52.9	1.088	2.095	0.4	18.5
9 18	22 57.63	+4 30.1	1.229	2.219	5.8	17.2	9 18	22 58.41	-5 51.9	1.087	2.081	5.6	18.8
9 28	22 48.99	+3 25.8	1.219	2.179	10.1	17.4	9 28	22 51.03	-6 43.8	1.109	2.067	11.2	19.1
10 8	22 42.28	+2 20.0	1.233	2.140	14.8	17.5	10 8	22 46.01	-7 21.2	1.153	2.054	16.1	19.3
10 18	22 38.43	+1 21.5	1.266	2.101	19.2	17.7	10 18	22 44.03	-7 39.9	1.214	2.043	20.3	19.6
185835	2000 <i>BT</i> ₂₅		9 8.1 170°60	2°2/9.9	17		94625	2001 <i>WE</i> ₅		9 8.1 26°96	6°4/12.8	18	
8 9	23 31.37	+1 44.3	1.763	2.639	13.6	20.6	8 9	23 25.73	+9 4.7	0.908	1.803	21.5	18.6
8 19	23 24.80	+1 33.3	1.698	2.641	9.9	20.4	8 19	23 21.73	+9 5.1	0.869	1.814	16.7	18.4
8 29	23 16.39	+1 7.6	1.657	2.644	5.9	20.2	8 29	23 15.05	+8 30.1	0.847	1.826	11.4	18.2
9 8	23 6.95	+0 30.6	1.642	2.646	2.4	20.0	9 8	23 6.97	+7 24.0	0.844	1.840	7.1	18.0
9 18	22 57.49	+0 12.8	1.654	2.647	4.3	20.1	9 18	22 59.05	+5 56.4	0.862	1.854	7.2	18.0
9 28	22 49.06	+0 56.4	1.694	2.648	8.3	20.3	9 28	22 52.88	+4 21.5	0.902	1.870	11.3	18.3
10 8	22 42.51	+1 34.6	1.759	2.648	12.1	20.6	10 8	22 49.54	+2 53.3	0.961	1.888	16.0	18.7
10 18	22 38.37	+2 3.2	1.846	2.648	15.4	20.8	10 18	22 49.50	+1 41.4	1.039	1.906	20.1	19.0
514856	2008 <i>FA</i> ₂₁		9 8.1 22°61	2°3/5.6	18		204635	2005 <i>YC</i> ₁₃₁		9 8.1 285°09	0°8/7.5	17	
8 9	23 25.02	-9 6.4	1.859	2.771	11.2	20.8	8 9	23 30.45	-4 40.9	1.237	2.149	15.6	20.6
8 19	23 20.30	-10 11.8	1.807	2.774	7.6	20.5	8 19	23 24.74	-5 25.1	1.179	2.145	10.9	20.3
8 29	23 14.03	-11 22.8	1.779	2.777	3.9	20.3	8 29	23 16.58	-6 23.2	1.142	2.141	5.5	20.0
9 8	23 6.95	-12 32.6	1.778	2.781	2.5	20.2	9 8	23 6.99	-7 27.4	1.130	2.137	0.8	19.7
9 18	22 59.89	-13 34.6	1.805	2.785	5.6	20.5	9 18	22 57.34	-8 28.6	1.142	2.133	6.1	20.0
9 28	22 53.74	-14 22.9	1.858	2.790	9.3	20.7	9 28	22 49.06	-9 17.8	1.179	2.130	11.5	20.3
10 8	22 49.21	-14 54.4	1.934	2.794	12.5	20.9	10 8	22 43.28	-9 49.3	1.237	2.126	16.2	20.6
10 18	22 46.76	-15 7.9	2.031	2.799	15.3	21.1	10 18	22 40.60	-10 0.6	1.313	2.122	20.0	20.8
362595	2010 <i>VA</i> ₂₁₁		9 8.1 111°35	6°1/16.3	18		6462	Myougi		9 8.1 327°34	6°2/31.2	18	
8 9	23 25.85												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
506919	2008 <i>EB</i> ₇₃	9 8.1 174°07	1°3/ 6.9 17				297373	2000 <i>GN</i> ₁₇₀	9 8.1 197°50	1°3/ 9.4 18			
8 9	23 31.00	- 6 47.1	1.733	2.633	12.5	21.9	8 9	23 28.95	- 0 3.5	2.298	3.172	10.9	21.2
8 19	23 24.56	- 7 34.8	1.674	2.636	8.6	21.7	8 19	23 22.86	- 0 18.6	2.225	3.170	7.9	21.0
8 29	23 16.28	- 8 30.5	1.640	2.638	4.3	21.5	8 29	23 15.35	- 0 44.0	2.177	3.167	4.5	20.8
9 8	23 7.00	- 9 27.7	1.633	2.639	1.4	21.3	9 8	23 7.04	- 1 16.9	2.158	3.163	1.4	20.6
9 18	22 57.74	-10 20.0	1.654	2.640	5.3	21.5	9 18	22 58.67	- 1 53.2	2.167	3.159	3.5	20.7
9 28	22 49.54	-11 1.2	1.701	2.640	9.5	21.8	9 28	22 51.04	- 2 28.7	2.205	3.155	6.9	20.9
10 8	22 43.26	-11 27.6	1.773	2.640	13.2	22.0	10 8	22 44.83	- 2 59.2	2.269	3.150	10.1	21.1
10 18	22 39.41	-11 37.7	1.865	2.639	16.2	22.2	10 18	22 40.49	- 3 21.6	2.357	3.145	12.9	21.3
499923	2011 <i>HK</i> ₁₁	9 8.1 141°47	9°8/18.3 17				96460	1998 <i>HJ</i> ₃₆	9 8.1 108°93	4°5/ 4.4 18			
8 9	23 28.05	+22 58.2	1.280	2.078	22.1	21.1	8 9	23 32.25	-16 27.0	1.741	2.652	11.9	19.2
8 19	23 23.11	+22 16.5	1.213	2.083	18.7	20.9	8 19	23 25.36	-17 11.0	1.696	2.660	8.4	19.1
8 29	23 15.75	+20 48.2	1.162	2.088	14.9	20.7	8 29	23 16.65	-17 52.4	1.676	2.667	5.3	18.9
9 8	23 7.01	+18 33.6	1.132	2.092	11.4	20.5	9 8	23 7.05	-18 24.6	1.683	2.675	4.8	18.9
9 18	22 58.23	+15 40.8	1.126	2.096	9.8	20.4	9 18	22 57.61	-18 42.2	1.716	2.682	7.4	19.1
9 28	22 50.83	+12 25.5	1.145	2.100	11.2	20.5	9 28	22 49.39	-18 42.1	1.776	2.690	10.8	19.3
10 8	22 45.92	+ 9 7.6	1.189	2.104	14.6	20.7	10 8	22 43.19	-18 24.0	1.858	2.697	13.9	19.5
10 18	22 44.08	+ 6 4.6	1.256	2.107	18.3	21.0	10 18	22 39.46	-17 49.5	1.960	2.704	16.6	19.7
203246	2001 <i>OT</i> ₁₁₀	9 8.1 343°14	1°4/ 8.9 18				220396	2003 <i>RR</i> ₄	9 8.1 337°62	8°5/16.8 17			
8 9	23 29.89	- 1 34.2	1.058	1.971	17.6	19.8	8 9	23 26.30	+19 8.9	1.994	2.782	15.6	19.3
8 19	23 24.63	- 1 42.7	1.002	1.966	12.6	19.5	8 19	23 21.37	+19 50.3	1.914	2.774	13.3	19.1
8 29	23 16.63	- 2 9.3	0.965	1.961	6.9	19.2	8 29	23 14.73	+20 7.8	1.854	2.766	11.0	18.9
9 8	23 7.02	- 2 48.3	0.950	1.957	1.5	18.8	9 8	23 7.04	+20 0.0	1.816	2.759	9.1	18.8
9 18	22 57.30	- 3 32.0	0.958	1.953	5.9	19.1	9 18	22 59.14	+19 27.6	1.803	2.752	8.5	18.8
9 28	22 49.11	- 4 11.2	0.989	1.950	11.7	19.4	9 28	22 52.01	+18 35.2	1.815	2.746	9.5	18.8
10 8	22 43.71	- 4 38.4	1.040	1.948	16.8	19.7	10 8	22 46.48	+17 29.8	1.851	2.740	11.6	18.9
10 18	22 41.72	- 4 49.3	1.109	1.947	21.1	20.0	10 18	22 43.15	+16 19.2	1.909	2.735	14.0	19.1
212238	2005 <i>JD</i> ₃₆	9 8.1 198°87	5°4/ 2.1 18				264094	2009 <i>SS</i> ₂₈₇	9 8.1 298°45	1°9/11.7 14 C			
8 9	23 28.43	-19 43.3	2.030	2.942	10.4	20.4	8 9	23 20.07	+ 5 39.5	4.111	4.955	7.1	20.5
8 19	23 22.65	-20 57.0	1.981	2.940	7.6	20.3	8 19	23 16.33	+ 5 26.2	4.022	4.943	5.4	20.3
8 29	23 15.26	-22 6.7	1.957	2.939	5.7	20.2	8 29	23 11.87	+ 5 4.6	3.959	4.930	3.6	20.2
9 8	23 7.02	-23 5.4	1.960	2.937	5.9	20.2	9 8	23 7.02	+ 4 36.3	3.924	4.918	2.1	20.1
9 18	22 58.79	-23 47.1	1.990	2.935	8.1	20.3	9 18	23 2.11	+ 4 2.9	3.918	4.906	2.4	20.1
9 28	22 51.51	-24 8.4	2.046	2.933	10.9	20.5	9 28	22 57.53	+ 3 27.0	3.942	4.894	4.1	20.2
10 8	22 45.90	-24 8.5	2.124	2.931	13.6	20.7	10 8	22 53.63	+ 2 51.2	3.994	4.882	5.9	20.3
10 18	22 42.45	-23 49.0	2.220	2.928	15.8	20.8	10 18	22 50.68	+ 2 17.9	4.071	4.870	7.7	20.4
243830	2000 <i>TV</i> ₃₆	9 8.1 331°25	2°9/ 5.9 18				400499	2008 <i>JV</i> ₂₅	9 8.1 96°61	4°7/ 2.4 18			
8 9	23 27.80	- 8 41.4	1.137	2.063	15.5	20.1	8 9	23 26.19	-17 58.3	2.186	3.099	9.7	20.5
8 19	23 23.07	- 9 42.7	1.081	2.054	10.7	19.8	8 19	23 20.97	-19 15.8	2.144	3.106	7.0	20.3
8 29	23 15.79	-10 54.4	1.046	2.046	5.5	19.5	8 29	23 14.36	-20 30.7	2.128	3.113	4.9	20.2
9 8	23 7.02	-12 6.6	1.034	2.038	3.2	19.3	9 8	23 7.03	-21 36.2	2.139	3.120	5.1	20.2
9 18	22 58.14	-13 8.4	1.046	2.031	7.7	19.6	9 18	22 59.77	-22 27.0	2.178	3.128	7.2	20.4
9 28	22 50.68	-13 51.0	1.080	2.025	13.0	19.9	9 28	22 53.36	-22 59.3	2.243	3.135	9.9	20.6
10 8	22 45.79	-14 9.6	1.134	2.019	17.6	20.1	10 8	22 48.44	-23 12.3	2.331	3.142	12.4	20.8
10 18	22 44.09	-14 3.6	1.205	2.014	21.5	20.4	10 18	22 45.43	-23 6.6	2.438	3.149	14.5	20.9
513406	2008 <i>RB</i> ₁₀	9 8.1 278°06	0°4/ 8.5 18				383329	2006 <i>KG</i> ₃₈	9 8.1 84°71	3°3/ 4.8 17			
8 9	23 25.22	+ 0 21.7	1.651	2.544	13.5	21.4	8 9	23 28.87	-11 50.4	1.773	2.684	11.7	20.8
8 19	23 20.72	- 1 1.1	1.580	2.536	9.5	21.1	8 19	23 22.91	-13 5.8	1.739	2.706	8.0	20.6
8 29	23 14.40	- 2 42.7	1.533	2.528	5.1	20.9	8 29	23 15.35	-14 22.9	1.731	2.727	4.4	20.5
9 8	23 7.01	- 4 35.7	1.513	2.520	0.4	20.5	9 8	23 7.04	-15 34.1	1.750	2.748	3.6	20.5
9 18	22 59.51	- 6 30.8	1.520	2.513	4.6	20.8	9 18	22 58.94	-16 32.5	1.796	2.769	6.5	20.7
9 28	22 52.92	- 8 17.6	1.555	2.505	9.3	21.1	9 28	22 51.97	-17 13.6	1.868	2.789	9.9	20.9
10 8	22 48.11	- 9 48.0	1.613	2.497	13.3	21.3	10 8	22 46.83	-17 35.3	1.964	2.809	13.0	21.2
10 18	22 45.64	-10 57.1	1.693	2.489	16.8	21.5	10 18	22 43.91	-17 38.1	2.080	2.829	15.6	21.4
328168	2008 <i>CY</i> ₂₀₀	9 8.1 46°09	1°1/ 7.2 17				479131	2013 <i>BN</i> ₃₈	9 8.1 221°85	2°5/ 5.4 18			
8 9	23 28.24	- 4 44.7	1.173	2.090	15.9	20.5	8 9	23 29.44	-12 16.6	2.292	3.194	9.8	22.2
8 19	23 22.99	- 5 46.4	1.138	2.107	10.9	20.3	8 19	23 23.23	-12 56.9	2.224	3.186	6.8	22.0
8 29	23 15.53	- 7 0.5	1.124	2.124	5.4	20.0	8 29	23 15.55	-13 39.1	2.182	3.177	3.7	21.8
9 8	23 7.02	- 8 17.7	1.135	2.142	1.2	19.8	9 8	23 7.05	-14 18.2	2.168	3.168	2.7	21.7
9 18	22 58.76	- 9 27.8	1.170	2.160	6.1	20.2	9 18	22 58.49	-14 49.6	2.183	3.158	5.3	21.8
9 28	22 52.04	-10 22.5	1.229	2.179	11.1	20.5	9 28	22 50.71	-15 9.5	2.226	3.148	8.5	22.0
10 8	22 47.76	-10 57.0	1.309	2.198	15.4	20.8	10 8	22 44.39	-15 15.8	2.294	3.138	11.5	22.2
10 18	22 46.33	-11 9.9	1.407	2.218	18.9	21.1	10 18	22 40.01	-15 8.1	2.384	3.127	14.0	22.4
518213	2016 <i>QM</i> ₈₉	9 8.1 17°60	8°6/29.9 18				74936	1999 <i>TD</i> ₁₇₂	9 8.1 180°84	4°7/ 4.3 18			
8 9	23 28.38	-26 4.4	1.683	2.597	12.1	20.1	8 9	23 32.27	-15 12.7	1.530	2.445	13.0	19.8
8 19	23 22.90	-27 48.3	1.648	2.597	9.7	20.0	8 19	23 25.65	-16 11.5	1.479	2.445	9.1	19.6
8 29	23 15.47	-29 21.1	1.637	2.598	8.6	19.9	8 29	23 16.92	-17 9.9	1.452	2.445	5.6	19.4
9 8	23 7.03	-30 33.1	1.651	2.600	9.4	20.0	9 8	23 7.06	-17 59.5	1.452	2.445	5.0	19.4
9 18	22 58.66	-31 17.5	1.689	2.601	11.5	20.1	9 18	22 57.27	-18 33.1	1.477	2.445	8.1	19.6
9 28	22 51.49	-31 31.5	1.749	2.602	14.1	20.3	9 28	22 48.78	-18 46.2	1.527	2.445	11.9	19.8
10 8	22 46.38	-31 16.6	1.829	2.604	16.6	20.5	10 8	22 42.52	-18 37.8	1.599	2.444	15.5	20.0
10 18	22 43.82	-30 36.5	1.925	2.606	18.7	20.7	10 18	22 39.00	-18 9.4	1.689	2.443	18.4	20.2
352176	2007 <i>RM</i> ₁₁₄	9 8.1 334°83	1°1/ 8.9 18				428554	2008 <i>CM</i> ₇₃					

EPHEMERIDES

9 8.1

9 8.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
79474	1998 BT ₉		9 8.1 149°07'	4.8/ 2.7	18		6380	Gardel		9 8.1 170°05'	0°0/ 8.0	18	
8 9	23 28.04	-18 12.1	2.095	3.006	10.2	19.5	8 9	23 30.10	- 2 18.4	1.671	2.564	13.3	18.5
8 19	23 22.31	-19 22.2	2.048	3.010	7.3	19.4	8 19	23 24.02	- 3 16.9	1.611	2.568	9.3	18.3
8 29	23 15.08	-20 29.5	2.028	3.013	5.1	19.3	8 29	23 16.07	- 4 28.8	1.575	2.571	4.8	18.0
9 8	23 7.06	-21 27.2	2.035	3.017	5.2	19.3	9 8	23 7.10	- 5 47.6	1.566	2.573	0.1	17.7
9 18	22 59.09	-22 9.7	2.069	3.020	7.4	19.4	9 18	22 58.12	- 7 5.3	1.584	2.575	4.7	18.1
9 28	22 52.04	-22 33.6	2.129	3.023	10.2	19.6	9 28	22 50.20	- 8 14.3	1.630	2.576	9.2	18.3
10 8	22 46.60	-22 38.0	2.211	3.026	12.9	19.8	10 8	22 44.21	- 9 8.8	1.699	2.577	13.1	18.6
10 18	22 43.20	-22 23.9	2.314	3.028	15.1	20.0	10 18	22 40.67	- 9 45.7	1.790	2.577	16.4	18.8
424321	2007 TM ₄₄₆		9 8.1 280°66'	0°9/ 7.5	18		30690	4633 T-2		9 8.1 64°79'	1°8/ 6.3	18	
8 9	23 32.58	- 6 17.7	1.379	2.286	14.6	21.5	8 9	23 27.13	- 8 16.5	1.845	2.752	11.5	19.2
8 19	23 26.31	- 6 39.9	1.302	2.266	10.3	21.2	8 19	23 21.80	- 9 9.7	1.791	2.756	7.9	19.0
8 29	23 17.50	- 7 12.3	1.248	2.246	5.3	20.9	8 29	23 14.87	-10 9.0	1.762	2.761	4.0	18.8
9 8	23 7.08	- 7 49.1	1.219	2.226	1.0	20.5	9 8	23 7.09	-11 8.1	1.760	2.765	2.0	18.7
9 18	22 56.32	- 8 23.2	1.216	2.206	6.0	20.8	9 18	22 59.35	-12 0.8	1.786	2.769	5.3	18.9
9 28	22 46.70	- 8 47.6	1.237	2.185	11.3	21.1	9 28	22 52.56	-12 41.5	1.838	2.774	9.1	19.1
10 8	22 39.44	- 8 57.6	1.281	2.165	16.1	21.3	10 8	22 47.46	-13 7.0	1.913	2.778	12.5	19.4
10 18	22 35.28	- 8 50.9	1.343	2.144	20.1	21.5	10 18	22 44.52	-13 16.1	2.010	2.783	15.3	19.6
200375	2000 QQ ₉₁		9 8.1 331°65'	2°5/ 9.5	18		221618	2006 XT ₄₆		9 8.1 336°76'	11°7/ 28.5	18	
8 9	23 28.95	- 0 53.4	1.201	2.107	16.4	19.3	8 9	23 24.00	-25 6.7	1.001	1.941	15.7	18.7
8 19	23 23.98	- 0 26.8	1.127	2.086	12.1	19.0	8 19	23 20.87	-27 21.2	0.956	1.922	12.9	18.5
8 29	23 16.38	- 0 14.6	1.073	2.066	7.1	18.7	8 29	23 14.85	-29 25.1	0.932	1.904	11.8	18.4
9 8	23 7.08	- 0 14.7	1.042	2.047	2.7	18.3	9 8	23 7.09	-31 1.0	0.927	1.888	13.2	18.4
9 18	22 57.39	- 0 22.9	1.034	2.029	5.6	18.5	9 18	22 59.18	-31 55.7	0.942	1.873	16.4	18.5
9 28	22 48.89	- 0 33.3	1.050	2.012	11.0	18.7	9 28	22 52.87	-32 3.4	0.975	1.859	20.1	18.7
10 8	22 42.88	- 0 39.5	1.087	1.997	16.1	19.0	10 8	22 49.48	-31 26.1	1.022	1.848	23.6	18.9
10 18	22 40.15	- 0 36.5	1.141	1.983	20.4	19.2	10 18	22 49.61	-30 10.5	1.082	1.838	26.6	19.1
4719	Burnaby		9 8.1 242°85'	1°1/ 7.0	18		472017	2013 XR ₇		9 8.1 297°22'	1°9/ 6.9	18	
8 9	23 29.98	- 7 37.4	2.113	3.010	10.8	17.2	8 9	23 32.98	- 9 28.0	1.455	2.365	13.8	20.9
8 19	23 23.74	- 8 5.3	2.038	2.997	7.5	17.0	8 19	23 26.48	- 9 40.5	1.380	2.346	9.7	20.6
8 29	23 15.88	- 8 38.9	1.987	2.984	3.8	16.7	8 29	23 17.56	- 9 58.1	1.328	2.326	5.0	20.3
9 8	23 7.08	- 9 13.8	1.965	2.971	1.2	16.5	9 8	23 7.14	-10 15.1	1.302	2.307	2.0	20.0
9 18	22 58.15	- 9 45.2	1.971	2.957	4.6	16.7	9 18	22 56.47	-10 25.6	1.301	2.288	6.2	20.3
9 28	22 50.02	-10 8.7	2.005	2.943	8.3	16.9	9 28	22 46.93	-10 24.8	1.326	2.270	11.1	20.5
10 8	22 43.45	-10 21.3	2.064	2.928	11.7	17.1	10 8	22 39.68	-10 9.6	1.373	2.251	15.6	20.7
10 18	22 38.95	-10 21.3	2.145	2.913	14.6	17.3	10 18	22 35.41	- 9 39.4	1.439	2.233	19.3	20.9
242297	2003 US ₃₄₅		9 8.1 13°71'	0°2/ 7.9	17		92011	1999 VJ ₁₅₉		9 8.1 346°16'	5°8/ 3.0	18	
8 9	23 26.41	- 4 50.9	1.794	2.696	12.1	20.7	8 9	23 30.57	-21 23.5	1.871	2.781	11.2	18.4
8 19	23 21.32	- 5 11.6	1.738	2.699	8.4	20.5	8 19	23 24.23	-22 1.3	1.819	2.777	8.3	18.2
8 29	23 14.62	- 5 40.9	1.706	2.703	4.3	20.3	8 29	23 16.13	-22 32.6	1.793	2.774	6.2	18.1
9 8	23 7.06	- 6 14.1	1.701	2.708	0.2	20.0	9 8	23 7.13	-22 51.0	1.792	2.771	6.2	18.1
9 18	22 59.55	- 6 46.2	1.722	2.714	4.3	20.3	9 18	22 58.21	-22 51.8	1.817	2.768	8.4	18.2
9 28	22 52.99	- 7 12.1	1.770	2.720	8.4	20.6	9 28	22 50.39	-22 33.0	1.868	2.765	11.3	18.4
10 8	22 48.14	- 7 28.1	1.842	2.726	11.9	20.8	10 8	22 44.46	-21 55.1	1.941	2.763	14.1	18.5
10 18	22 45.44	- 7 32.2	1.935	2.733	14.9	21.0	10 18	22 40.88	-21 0.5	2.034	2.762	16.5	18.7
364972	2008 HC ₂₀		9 8.1 26°62'	4°0/ 3.6	18		145149	2005 GX ₁₇₇		9 8.1 12°57'	1°9/ 6.9	18	
8 9	23 24.36	-13 31.5	1.780	2.700	11.2	19.9	8 9	23 28.28	- 7 59.7	0.982	1.912	16.9	19.6
8 19	23 19.92	-14 58.9	1.738	2.707	7.7	19.7	8 19	23 23.46	- 8 23.9	0.941	1.915	11.7	19.3
8 29	23 13.90	-16 27.7	1.720	2.715	4.7	19.6	8 29	23 15.99	- 8 57.4	0.919	1.920	5.9	19.0
9 8	23 7.06	-17 49.6	1.730	2.723	4.5	19.6	9 8	23 7.13	- 9 31.8	0.919	1.926	2.0	18.8
9 18	23 0.29	-18 57.4	1.766	2.732	7.2	19.7	9 18	22 58.42	- 9 58.6	0.942	1.933	7.0	19.1
9 28	22 54.49	-19 45.7	1.827	2.741	10.5	20.0	9 28	22 51.44	-10 10.8	0.986	1.942	12.5	19.5
10 8	22 50.38	-20 12.3	1.911	2.751	13.6	20.2	10 8	22 47.26	-10 4.9	1.050	1.951	17.3	19.8
10 18	22 48.38	-20 17.5	2.014	2.761	16.1	20.4	10 18	22 46.38	- 9 40.5	1.131	1.963	21.2	20.1
257730	1999 XM ₂₅₉		9 8.1 355°75'	10°0/ 16.1	17		247481	2002 KG		9 8.1 111°31'	7°7/ 28.0	18	
8 9	23 27.20	+17 35.3	1.566	2.381	18.0	19.5	8 9	23 28.55	-32 11.5	2.558	3.444	9.5	19.9
8 19	23 22.34	+18 51.1	1.497	2.375	15.4	19.3	8 19	23 22.53	-33 41.9	2.541	3.461	8.2	19.8
8 29	23 15.37	+19 40.7	1.447	2.370	12.7	19.1	8 29	23 15.16	-34 59.2	2.550	3.477	7.7	19.8
9 8	23 7.08	+20 0.9	1.418	2.366	10.7	19.0	9 8	23 7.12	-35 57.4	2.586	3.493	8.4	19.9
9 18	22 58.56	+19 51.8	1.411	2.364	10.1	19.0	9 18	22 59.21	-36 33.1	2.646	3.509	9.7	20.0
9 28	22 51.02	+19 17.6	1.428	2.363	11.3	19.0	9 28	22 52.21	-36 45.1	2.730	3.524	11.3	20.1
10 8	22 45.49	+18 26.5	1.467	2.363	13.7	19.2	10 8	22 46.74	-36 34.7	2.834	3.539	12.8	20.3
10 18	22 42.66	+17 27.9	1.526	2.364	16.3	19.4	10 18	22 43.18	-36 4.9	2.955	3.553	14.1	20.4
154230	2002 JM ₉₈		9 8.1 17°40'	4°7/ 3.5	18		505129	2012 HB ₁₆		9 8.1 224°94'	2°7/ 5.5	17	
8 9	23 28.25	-18 21.1	1.988	2.900	10.6	19.3	8 9	23 30.29	- 9 11.9	1.730	2.637	12.2	21.9
8 19	23 22.50	-19 6.8	1.940	2.903	7.6	19.1	8 19	23 24.26	-10 27.9	1.662	2.627	8.4	21.7
8 29	23 15.19	-19 49.0	1.918	2.905	5.2	19.0	8 29	23 16.28	-11 51.7	1.619	2.616	4.4	21.4
9 8	23 7.08	-20 21.6	1.922	2.908	5.0	19.0	9 8	23 7.14	-13 15.2	1.603	2.605	2.9	21.3
9 18	22 59.07	-20 39.9	1.953	2.911	7.3	19.1	9 18	22 57.86	-14 30.1	1.614	2.593	6.4	21.5
9 28	22 52.03	-20 41.0	2.010	2.914	10.2	19.3	9 28	22 49.55	-15 29.2	1.653	2.580	10.5	21.7
10 8	22 46.69	-20 24.5	2.089	2.918	13.0	19.5	10 8	22 43.12	-16 8.4	1.714	2.567	14.3	21.9
10 18	22 43.47	-19 51.7	2.189	2.922	15.3	19.7	10 18	22 39.17	-16 26.5	1.796	2.553	17.4	22.1
149105	2002 CX ₂₀₅		9 8.1 294°12'	0°1/ 7.9	18		253741	2003 WW ₄₉		9 8.1 250°76'	2°6/ 10.2	18	
8 9	23 26.35	- 3 56.7	2.093										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
34347	2000 <i>RN</i> ₁		9 8.1 150°80	2°3/10.6	18		431746	2008 <i>GW</i> ₁₀		9 8.1 133°22	0°3/8.4	17	
8 9	23 26.82	+ 4 55.4	1.861	2.729	13.4	18.5	8 9	23 30.23	- 2 12.7	1.663	2.556	13.4	22.0
8 19	23 21.62	+ 3 58.0	1.796	2.734	9.8	18.3	8 19	23 24.09	- 2 53.7	1.608	2.564	9.4	21.8
8 29	23 14.82	+ 2 41.7	1.754	2.738	6.0	18.1	8 29	23 16.12	- 3 47.2	1.577	2.572	4.9	21.6
9 8	23 7.14	+ 1 11.5	1.740	2.742	2.5	17.9	9 8	23 7.19	- 4 47.3	1.572	2.579	0.4	21.2
9 18	22 59.44	- 0 25.3	1.753	2.746	4.0	18.0	9 18	22 58.31	- 5 47.4	1.594	2.586	4.5	21.6
9 28	22 52.65	- 2 0.6	1.794	2.750	7.8	18.2	9 28	22 50.54	- 6 40.6	1.644	2.593	8.9	21.8
10 8	22 47.50	- 3 26.6	1.862	2.753	11.4	18.5	10 8	22 44.71	- 7 21.6	1.717	2.599	12.8	22.1
10 18	22 44.49	- 4 38.2	1.952	2.756	14.6	18.7	10 18	22 41.29	- 7 47.7	1.812	2.605	15.9	22.3
395478	2011 <i>UO</i> ₄₁		9 8.1 7°10	2°3/6.2	18		282775	2006 <i>JO</i> ₅₅		9 8.1 138°47	0°5/7.5	16	
8 9	23 29.13	-10 18.0	1.752	2.661	11.9	20.9	8 9	23 26.73	- 3 1.3	1.969	2.862	11.6	20.5
8 19	23 23.29	-10 51.2	1.696	2.662	8.2	20.6	8 19	23 21.48	- 4 17.9	1.912	2.870	8.0	20.3
8 29	23 15.69	-11 28.3	1.664	2.662	4.3	20.4	8 29	23 14.72	- 5 45.6	1.880	2.877	4.0	20.0
9 8	23 7.15	-12 3.4	1.659	2.663	2.4	20.3	9 8	23 7.17	- 7 17.9	1.877	2.884	0.6	19.8
9 18	22 58.65	-12 31.1	1.681	2.663	5.7	20.5	9 18	22 59.64	- 8 47.3	1.902	2.891	4.4	20.1
9 28	22 51.18	-12 46.8	1.729	2.664	9.6	20.7	9 28	22 52.99	-10 6.8	1.955	2.897	8.2	20.3
10 8	22 45.56	-12 48.1	1.800	2.666	13.1	21.0	10 8	22 47.90	-11 11.3	2.034	2.903	11.6	20.6
10 18	22 42.27	-12 34.5	1.892	2.667	16.0	21.2	10 18	22 44.83	-11 58.1	2.134	2.909	14.5	20.8
507634	2013 <i>JR</i> ₄₁		9 8.1 129°61	6°0/30.9	18		344119	1999 <i>VF</i> ₁₃₀		9 8.1 204°16	5°4/14.4	18	
8 9	23 28.20	-26 31.6	2.679	3.577	8.7	21.6	8 9	23 27.15	+13 47.8	2.192	3.006	13.5	21.4
8 19	23 22.20	-27 40.5	2.649	3.589	7.0	21.5	8 19	23 21.79	+13 35.7	2.111	3.002	10.9	21.2
8 29	23 14.97	-28 40.8	2.645	3.601	6.0	21.5	8 29	23 14.92	+13 2.3	2.052	2.998	8.2	21.0
9 8	23 7.15	-29 27.4	2.668	3.613	6.4	21.5	9 8	23 7.18	+12 8.8	2.019	2.994	5.9	20.9
9 18	22 59.43	-29 56.6	2.719	3.625	7.9	21.6	9 18	22 59.33	+10 58.8	2.013	2.989	5.6	20.8
9 28	22 52.53	-30 6.7	2.794	3.636	9.8	21.8	9 28	22 52.21	+ 9 38.1	2.035	2.984	7.5	21.0
10 8	22 47.01	-29 58.1	2.892	3.646	11.6	21.9	10 8	22 46.55	+ 8 14.2	2.083	2.978	10.2	21.1
10 18	22 43.24	-29 32.7	3.010	3.657	13.1	22.1	10 18	22 42.84	+ 6 53.7	2.155	2.972	12.9	21.3
488090	2015 <i>VV</i> ₄₀		9 8.1 326°79	1°0/6.9	18		337161	1999 <i>UF</i> ₂₁		9 8.1 34°86	2°9/5.7	18	
8 9	23 23.44	- 4 44.7	1.962	2.865	11.2	20.4	8 9	23 29.10	-10 53.0	1.550	2.465	12.8	20.8
8 19	23 19.29	- 5 54.2	1.893	2.856	7.7	20.2	8 19	23 23.41	-11 41.6	1.501	2.469	8.8	20.5
8 29	23 13.64	- 7 14.3	1.850	2.848	3.8	20.0	8 29	23 15.80	-12 34.3	1.476	2.474	4.7	20.3
9 8	23 7.14	- 8 38.6	1.833	2.840	1.0	19.7	9 8	23 7.19	-13 23.6	1.476	2.479	3.1	20.2
9 18	23 0.55	-10 0.2	1.844	2.832	4.7	20.0	9 18	22 58.67	-14 2.7	1.503	2.483	6.5	20.5
9 28	22 54.72	-11 12.2	1.883	2.824	8.5	20.2	9 28	22 51.33	-14 26.4	1.555	2.489	10.6	20.7
10 8	22 50.37	-12 9.3	1.946	2.817	12.0	20.4	10 8	22 46.04	-14 32.2	1.629	2.494	14.2	21.0
10 18	22 47.98	-12 48.9	2.030	2.810	14.9	20.6	10 18	22 43.26	-14 20.2	1.722	2.500	17.3	21.2
293385	2007 <i>EV</i> ₄₃		9 8.1 155°67	1°5/10.1	18		451953	2014 <i>MZ</i> ₄₀		9 8.1 350°31	1°1/9.2	18	
8 9	23 24.73	+ 2 30.8	2.522	3.390	10.3	21.0	8 9	23 28.53	- 1 42.3	2.021	2.907	11.7	20.5
8 19	23 19.87	+ 1 49.8	2.454	3.394	7.5	20.8	8 19	23 22.75	- 1 42.2	1.954	2.905	8.4	20.2
8 29	23 13.82	+ 0 56.8	2.412	3.397	4.4	20.7	8 29	23 15.40	- 1 51.7	1.911	2.903	4.6	20.0
9 8	23 7.15	- 0 4.7	2.397	3.401	1.7	20.5	9 8	23 7.19	- 2 7.8	1.895	2.901	1.2	19.8
9 18	23 0.46	- 1 10.2	2.411	3.404	3.1	20.6	9 18	22 58.95	- 2 27.0	1.907	2.900	3.8	20.0
9 28	22 54.41	- 2 14.6	2.454	3.407	6.2	20.8	9 28	22 51.55	- 2 45.1	1.947	2.899	7.5	20.2
10 8	22 49.57	- 3 13.2	2.525	3.409	9.1	21.0	10 8	22 45.72	- 2 58.2	2.012	2.899	10.9	20.4
10 18	22 46.32	- 4 2.5	2.619	3.412	11.6	21.2	10 18	22 41.96	- 3 3.6	2.099	2.898	13.9	20.6
76863	2000 <i>XD</i> ₁₃		9 8.1 181°74	4°1/4.6	17		39459	4266 <i>T</i> ₋₃		9 8.1 10°38	9°6/30.8	18	
8 9	23 33.57	-14 54.7	1.784	2.691	11.9	19.4	8 9	23 32.65	-31 32.6	1.737	2.634	12.7	17.6
8 19	23 26.38	-15 48.1	1.729	2.692	8.3	19.2	8 19	23 25.78	-32 24.1	1.704	2.636	10.7	17.4
8 29	23 17.29	-16 41.3	1.700	2.693	5.0	19.0	8 29	23 16.95	-32 58.8	1.693	2.639	9.6	17.4
9 8	23 7.19	-17 26.9	1.698	2.692	4.4	19.0	9 8	23 7.21	-33 9.3	1.707	2.642	10.1	17.4
9 18	22 57.13	-17 58.9	1.724	2.692	7.2	19.2	9 18	22 57.74	-32 51.9	1.744	2.646	11.8	17.5
9 28	22 48.22	-18 13.2	1.776	2.690	10.7	19.4	9 28	22 49.69	-32 6.6	1.804	2.650	14.1	17.7
10 8	22 41.32	-18 8.7	1.851	2.688	14.0	19.6	10 8	22 43.89	-30 56.8	1.884	2.655	16.3	17.9
10 18	22 36.92	-17 46.4	1.946	2.685	16.8	19.8	10 18	22 40.75	-29 27.5	1.981	2.661	18.3	18.1
333174	2012 <i>CP</i> ₅₄		9 8.1 170°47	1°4/6.7	18		312619	2009 <i>SS</i> ₂₄₆		9 8.1 284°95	0°7/9.6	17	
8 9	23 28.34	- 9 5.6	2.325	3.223	9.8	20.3	8 9	23 19.24	+ 0 14.3	4.316	5.185	6.3	20.8
8 19	23 22.42	- 9 28.8	2.263	3.224	6.8	20.1	8 19	23 15.77	- 0 19.0	4.233	5.174	4.5	20.7
8 29	23 15.15	- 9 55.6	2.228	3.225	3.4	19.9	8 29	23 11.64	- 0 58.5	4.176	5.164	2.6	20.5
9 8	23 7.17	-10 21.9	2.220	3.225	1.5	19.8	9 8	23 7.15	- 1 42.3	4.148	5.154	0.8	20.4
9 18	22 59.20	-10 43.9	2.241	3.226	4.3	20.0	9 18	23 2.63	- 2 27.9	4.151	5.143	1.9	20.5
9 28	22 52.01	-10 58.0	2.291	3.226	7.6	20.2	9 28	22 58.41	- 3 13.0	4.183	5.133	4.0	20.6
10 8	22 46.23	-11 2.2	2.365	3.226	10.5	20.4	10 8	22 54.83	- 3 54.8	4.244	5.122	5.9	20.7
10 18	22 42.29	-10 55.4	2.462	3.226	13.0	20.6	10 18	22 52.13	- 4 31.5	4.330	5.112	7.5	20.9
20863	Jamescronk		9 8.1 313°61	1°3/7.0	18		167357	2003 <i>WM</i> ₃₄		9 8.1 238°72	0°2/8.3	18	
8 9	23 26.64	- 4 49.2	1.202	2.121	15.4	17.2	8 9	23 28.44	- 3 11.5	1.876	2.769	12.1	20.6
8 19	23 22.30	- 5 53.2	1.136	2.106	10.8	16.9	8 19	23 22.79	- 3 40.6	1.809	2.765	8.5	20.4
8 29	23 15.49	- 7 13.9	1.092	2.091	5.4	16.5	8 29	23 15.46	- 4 20.0	1.767	2.762	4.4	20.1
9 8	23 7.17	- 8 42.2	1.071	2.077	1.5	16.2	9 8	23 7.20	- 5 5.1	1.751	2.758	0.2	19.8
9 18	22 58.61	-10 7.1	1.074	2.064	6.6	16.5	9 18	22 58.88	- 5 50.6	1.763	2.755	4.2	20.1
9 28	22 51.28	-11 17.7	1.100	2.051	12.1	16.8	9 28	22 51.45	- 6 30.9	1.802	2.751	8.3	20.4
10 8	22 46.34	-12 6.4	1.147	2.038	17.0	17.0	10 8	22 45.71	- 7 1.3	1.866	2.747	11.9	20.6
10 18	22 44.50	-12 30.0	1.212	2.026	21.1	17.3	10 18	22 42.16	- 7 19.1	1.951	2.743	15.0	20.8
193333	2000 <i>TS</i> ₃₆		9 8.1 304°53	2°0/6.3	18		508230	2015 <i>HT</i> ₄		9 8.1 226°40	3°6/11.4	1	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
146044	2000 <i>EB</i> ₁₀	9 8.1 177°37'	0°5'	8.6	18		19737	2000 <i>AQ</i> ₅₁	9 8.1 288°92'	1°9'	10.1	18	
8 9	23 29.68	-1 34.4	1.807	2.695	12.7	20.8	8 9	23 27.24	+1 26.4	2.163	3.037	11.5	17.8
8 19	23 23.67	-2 17.1	1.743	2.697	9.0	20.6	8 19	23 21.83	+1 19.0	2.089	3.031	8.4	17.6
8 29	23 15.92	-3 12.5	1.704	2.698	4.8	20.3	8 29	23 14.95	+0 59.6	2.039	3.025	5.0	17.4
9 8	23 7.20	-4 15.3	1.691	2.699	0.5	20.0	9 8	23 7.22	+0 31.1	2.015	3.019	2.1	17.2
9 18	22 58.46	-5 19.0	1.707	2.699	4.3	20.3	9 18	22 59.41	-0 2.9	2.020	3.013	3.6	17.3
9 28	22 50.68	-6 17.1	1.750	2.699	8.5	20.6	9 28	22 52.33	-0 37.9	2.053	3.007	7.1	17.5
10 8	22 44.68	-7 4.1	1.818	2.698	12.2	20.8	10 8	22 46.69	-1 9.1	2.112	3.001	10.4	17.7
10 18	22 40.98	-7 36.7	1.907	2.697	15.4	21.0	10 18	22 42.98	-1 33.1	2.193	2.995	13.2	17.9
117549	2005 <i>EH</i> ₈	9 8.1 90°51'	0°6'	7.7	17		214530	2006 <i>KG</i> ₅₀	9 8.1 255°09'	2°1'	9.9	17	
8 9	23 33.58	-5 33.6	1.422	2.325	14.6	19.8	8 9	23 29.22	+2 18.6	1.390	2.279	15.7	21.1
8 19	23 26.51	-6 0.2	1.380	2.341	10.1	19.6	8 19	23 23.84	+1 43.2	1.322	2.273	11.5	20.8
8 29	23 17.36	-6 36.1	1.360	2.357	5.1	19.4	8 29	23 16.20	+0 47.0	1.276	2.266	6.7	20.5
9 8	23 7.22	-7 14.9	1.366	2.373	0.7	19.1	9 8	23 7.24	-0 25.0	1.254	2.259	2.4	20.2
9 18	22 57.30	-7 50.2	1.398	2.389	5.3	19.5	9 18	22 58.11	-1 44.7	1.258	2.253	4.9	20.4
9 28	22 48.84	-8 16.1	1.457	2.404	10.0	19.8	9 28	22 50.13	-3 2.5	1.287	2.246	9.9	20.6
10 8	22 42.70	-8 28.9	1.538	2.419	14.0	20.1	10 8	22 44.35	-4 9.5	1.340	2.238	14.5	20.9
10 18	22 39.34	-8 27.2	1.639	2.434	17.3	20.3	10 18	22 41.41	-4 59.9	1.412	2.231	18.4	21.1
207742	2007 <i>RP</i> ₂₄₅	9 8.1 308°55'	4°1'	4.5	18		80751	2000 <i>CB</i> ₄₆	9 8.1 129°41'	3°4'	10.9	18	
8 9	23 29.49	-14 45.2	1.719	2.633	11.8	20.4	8 9	23 30.96	+4 44.2	1.641	2.510	14.8	19.5
8 19	23 23.64	-15 35.6	1.662	2.628	8.3	20.2	8 19	23 24.68	+4 38.7	1.580	2.516	11.1	19.3
8 29	23 15.93	-16 26.3	1.630	2.624	5.0	20.0	8 29	23 16.49	+4 14.9	1.542	2.523	7.0	19.1
9 8	23 7.21	-17 10.1	1.624	2.619	4.4	19.9	9 8	23 7.24	+3 35.8	1.529	2.529	3.7	18.9
9 18	22 58.48	-17 40.8	1.645	2.615	7.2	20.1	9 18	22 58.00	+2 46.4	1.543	2.535	4.8	19.0
9 28	22 50.83	-17 54.0	1.691	2.611	10.8	20.3	9 28	22 49.86	+1 53.8	1.584	2.540	8.6	19.2
10 8	22 45.09	-17 48.3	1.759	2.607	14.2	20.5	10 8	22 43.71	+1 4.7	1.649	2.546	12.4	19.5
10 18	22 41.77	-17 24.4	1.847	2.603	17.0	20.7	10 18	22 40.06	+0 24.6	1.736	2.551	15.7	19.7
479771	2014 <i>EF</i> ₃₀	9 8.1 297°81'	3°7'	5.1	18		448431	2009 <i>VV</i> ₄₈	9 8.1 348°91'	15°5'	17.1	17	
8 9	23 29.98	-12 44.3	1.550	2.466	12.8	21.3	8 9	23 25.68	-44 13.9	1.495	2.368	15.8	19.2
8 19	23 24.33	-13 33.0	1.475	2.443	8.9	21.0	8 19	23 21.75	-46 29.7	1.477	2.355	15.5	19.2
8 29	23 16.46	-14 25.6	1.424	2.420	5.1	20.7	8 29	23 15.22	-48 15.0	1.478	2.343	16.1	19.2
9 8	23 7.22	-15 14.3	1.398	2.397	4.0	20.6	9 8	23 7.23	-49 19.6	1.497	2.332	17.3	19.2
9 18	22 57.71	-15 51.5	1.398	2.375	7.4	20.7	9 18	22 59.29	-49 38.6	1.534	2.323	18.9	19.3
9 28	22 49.22	-16 11.3	1.423	2.352	11.8	20.9	9 28	22 52.93	-49 12.4	1.585	2.316	20.6	19.4
10 8	22 42.81	-16 10.6	1.470	2.330	15.8	21.1	10 8	22 49.25	-48 6.3	1.649	2.310	22.1	19.6
10 18	22 39.16	-15 49.4	1.535	2.308	19.2	21.3	10 18	22 48.74	-46 27.4	1.723	2.305	23.4	19.7
446797	1999 <i>TE</i> ₇₄	9 8.1 354°55'	0°1'	8.2	18		136310	2004 <i>BB</i> ₄₇	9 8.1 48°22'	4°3'	3.8	18	
8 9	23 26.50	-3 44.5	1.751	2.651	12.4	20.9	8 9	23 26.59	-13 27.9	1.635	2.555	12.0	19.0
8 19	23 21.51	-4 7.3	1.688	2.648	8.7	20.6	8 19	23 21.60	-14 55.1	1.595	2.564	8.3	18.8
8 29	23 14.83	-4 40.2	1.649	2.645	4.5	20.4	8 29	23 14.87	-16 23.8	1.579	2.574	5.0	18.7
9 8	23 7.20	-5 18.6	1.636	2.644	0.2	20.0	9 8	23 7.24	-17 44.8	1.590	2.584	4.7	18.7
9 18	22 59.54	-5 57.1	1.650	2.642	4.3	20.4	9 18	22 59.72	-18 50.5	1.627	2.594	7.6	18.9
9 28	22 52.82	-6 30.1	1.690	2.641	8.5	20.6	9 28	22 53.30	-19 35.3	1.688	2.604	11.1	19.1
10 8	22 47.83	-6 53.2	1.754	2.641	12.3	20.9	10 8	22 48.76	-19 57.2	1.772	2.615	14.3	19.3
10 18	22 45.07	-7 3.8	1.839	2.642	15.4	21.1	10 18	22 46.54	-19 57.0	1.875	2.626	17.0	19.6
450513	2006 <i>AC</i> ₆₅	9 8.1 291°92'	1°0'	7.1	17		70485	1999 <i>TC</i> ₅₂	9 8.1 123°59'	1°8'	9.9	18	
8 9	23 26.04	-6 24.6	2.101	3.001	10.7	22.1	8 9	23 28.55	+1 35.3	1.864	2.742	12.9	20.4
8 19	23 21.08	-7 6.3	2.024	2.985	7.4	21.8	8 19	23 22.83	+1 9.0	1.803	2.748	9.3	20.2
8 29	23 14.59	-7 55.7	1.972	2.969	3.7	21.6	8 29	23 15.48	+0 28.4	1.767	2.755	5.4	20.0
9 8	23 7.20	-8 47.9	1.947	2.953	1.1	21.4	9 8	23 7.26	-0 22.4	1.757	2.761	1.9	19.8
9 18	22 59.68	-9 37.5	1.950	2.937	4.5	21.6	9 18	22 59.05	-1 18.0	1.774	2.767	3.9	19.9
9 28	22 52.87	-10 19.3	1.980	2.921	8.2	21.8	9 28	22 51.78	-2 12.2	1.819	2.773	7.8	20.2
10 8	22 47.51	-10 49.3	2.036	2.905	11.6	22.0	10 8	22 46.21	-2 59.3	1.889	2.779	11.4	20.4
10 18	22 44.11	-11 5.3	2.113	2.890	14.5	22.1	10 18	22 42.82	-3 35.4	1.982	2.785	14.4	20.6
366070	2012 <i>CL</i> ₃₈	9 8.1 247°95'	3°2'	4.2	18		17250	<i>Genelucas</i>	9 8.1 143°08'	0°7'	8.9	18	
8 9	23 26.27	-13 46.2	2.339	3.247	9.4	21.0	8 9	23 27.72	-0 54.6	2.288	3.167	10.8	18.7
8 19	23 21.10	-14 48.6	2.274	3.238	6.5	20.8	8 19	23 22.01	-1 29.2	2.227	3.176	7.6	18.5
8 29	23 14.54	-15 52.5	2.234	3.228	3.9	20.7	8 29	23 14.98	-2 14.0	2.192	3.184	4.1	18.3
9 8	23 7.21	-16 52.3	2.223	3.218	3.5	20.6	9 8	23 7.26	-3 4.9	2.185	3.192	0.8	18.1
9 18	22 59.81	-17 42.7	2.240	3.207	5.9	20.7	9 18	22 59.56	-3 57.3	2.207	3.200	3.4	18.3
9 28	22 53.11	-18 19.3	2.285	3.197	8.8	20.9	9 28	22 52.63	-4 46.2	2.258	3.207	6.9	18.5
10 8	22 47.77	-18 39.9	2.353	3.186	11.6	21.1	10 8	22 47.10	-5 27.6	2.335	3.213	10.0	18.7
10 18	22 44.24	-18 44.0	2.443	3.175	13.9	21.2	10 18	22 43.39	-5 58.4	2.435	3.220	12.6	18.9
450725	2007 <i>EN</i> ₈₉	9 8.1 125°09'	0°3'	8.5	18		153196	2000 <i>WC</i> ₁₆	9 8.1 268°56'	1°1'	9.3	18	
8 9	23 26.78	-2 42.5	2.500	3.383	9.8	21.6	8 9	23 26.59	-0 16.6	2.167	3.048	11.2	20.5
8 19	23 21.25	-3 11.4	2.442	3.393	6.9	21.4	8 19	23 21.39	-0 39.9	2.092	3.041	8.0	20.3
8 29	23 14.54	-3 48.2	2.410	3.404	3.6	21.2	8 29	23 14.74	-1 14.4	2.042	3.033	4.5	20.1
9 8	23 7.21	-4 29.1	2.406	3.413	0.4	21.0	9 8	23 7.25	-1 56.7	2.020	3.026	1.3	19.8
9 18	22 59.93	-5 10.4	2.432	3.423	3.3	21.2	9 18	22 59.68	-2 42.4	2.025	3.018	3.6	20.0
9 28	22 53.35	-5 47.8	2.486	3.433	6.5	21.4	9 28	22 52.83	-3 26.5	2.058	3.010	7.2	20.2
10 8	22 48.05	-6 18.0	2.567	3.442	9.3	21.7	10 8	22 47.39	-4 4.3	2.117	3.003	10.5	20.4
10 18	22 44.41	-6 38.8	2.671	3.451	11.7	21.8	10 18	22 43.85	-4 32.5	2.199	2.995	13.4	20.6
88611	<i>Teharonhiawako</i>	9 8.1 152°25'	0°0'	8.9	12 C		179655	2002 <i>QP</i> ₁	9 8.1 331°34'	1°8'	6.9	18	
8 9	23 9.12	-3 33.6	44.314	45.192</									

EPHEMERIDES

9 8.1

9 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
96987	1999 <i>TS</i> ₂₁₃		9 8.1 237°50	3°5/ 5.0	18		246295	2007 <i>TF</i> ₈₂		9 8.1 188°32	0°4/ 7.7	18	
8 9	23 31.69	-14 18.0	1.898	2.806	11.3	19.7	8 9	23 26.50	- 2 50.3	2.029	2.920	11.4	21.4
8 19	23 25.09	-14 55.4	1.835	2.798	7.9	19.5	8 19	23 21.39	- 4 3.6	1.963	2.920	7.9	21.1
8 29	23 16.69	-15 33.1	1.797	2.791	4.6	19.3	8 29	23 14.78	- 5 28.5	1.923	2.919	4.0	20.9
9 8	23 7.30	-16 4.9	1.786	2.783	3.7	19.2	9 8	23 7.32	- 6 58.9	1.911	2.918	0.4	20.6
9 18	22 57.88	-16 25.7	1.803	2.776	6.5	19.4	9 18	22 59.82	- 8 27.5	1.928	2.917	4.3	20.9
9 28	22 49.45	-16 31.6	1.847	2.767	10.0	19.6	9 28	22 53.11	- 9 47.4	1.972	2.915	8.1	21.2
10 8	22 42.83	-16 21.2	1.914	2.759	13.3	19.8	10 8	22 47.92	-10 53.2	2.043	2.913	11.6	21.4
10 18	22 38.56	-15 55.1	2.001	2.750	16.1	20.0	10 18	22 44.71	-11 42.0	2.135	2.910	14.4	21.6
90569	2004 <i>GY</i> ₁₄		9 8.1 6°98	0°6/ 9.3	16		437958	2002 <i>TJ</i> ₃₂₀		9 8.1 322°14	0°4/ 8.4	18	
8 9	23 20.47	- 1 5.5	4.195	5.067	6.4	19.8	8 9	23 27.00	- 3 5.8	1.508	2.412	13.8	21.3
8 19	23 16.62	- 1 23.3	4.123	5.067	4.6	19.7	8 19	23 22.26	- 3 27.6	1.432	2.394	9.8	21.0
8 29	23 12.11	- 1 46.4	4.078	5.067	2.5	19.6	8 29	23 15.44	- 4 2.5	1.379	2.376	5.2	20.7
9 8	23 7.24	- 2 13.0	4.062	5.068	0.7	19.4	9 8	23 7.33	- 4 45.5	1.351	2.358	0.4	20.3
9 18	23 2.36	- 2 41.1	4.076	5.068	2.0	19.5	9 18	22 58.99	- 5 30.4	1.348	2.341	4.9	20.6
9 28	22 57.83	- 3 8.4	4.119	5.068	4.0	19.7	9 28	22 51.61	- 6 10.0	1.370	2.325	9.8	20.9
10 8	22 53.98	- 3 32.8	4.191	5.069	5.9	19.8	10 8	22 46.21	- 6 38.6	1.415	2.310	14.2	21.1
10 18	22 51.05	- 3 52.5	4.287	5.069	7.6	19.9	10 18	22 43.43	- 6 52.5	1.480	2.295	17.9	21.3
487995	2015 <i>TA</i> ₃₃₇		9 8.1 304°81	4°8/14.2	18		320558	2008 <i>AV</i> ₅₈		9 8.1 156°23	0°9/ 7.2	18	
8 9	23 23.17	+13 17.2	2.061	2.888	13.8	21.0	8 9	23 26.84	- 5 46.5	2.086	2.984	10.8	21.2
8 19	23 19.18	+12 29.4	1.969	2.871	11.1	20.8	8 19	23 21.57	- 6 35.9	2.026	2.986	7.5	20.9
8 29	23 13.68	+11 16.5	1.899	2.855	8.0	20.5	8 29	23 14.84	- 7 32.9	1.991	2.988	3.7	20.7
9 8	23 7.26	+ 9 40.8	1.854	2.838	5.4	20.3	9 8	23 7.33	- 8 32.3	1.983	2.990	1.0	20.5
9 18	23 0.68	+ 7 47.5	1.837	2.822	5.0	20.3	9 18	22 59.81	- 9 28.4	2.004	2.991	4.4	20.8
9 28	22 54.77	+ 5 44.9	1.848	2.806	7.4	20.4	9 28	22 53.11	-10 16.0	2.052	2.993	8.0	21.0
10 8	22 50.28	+ 3 42.4	1.886	2.790	10.7	20.6	10 8	22 47.90	-10 51.3	2.126	2.994	11.2	21.2
10 18	22 47.74	+ 1 48.5	1.948	2.774	13.8	20.8	10 18	22 44.63	-11 12.3	2.221	2.996	14.0	21.4
452040	2014 <i>OF</i> ₁₇₉		9 8.1 350°07	7°1/30.4	18		515071	2010 <i>OU</i> ₃₄		9 8.1 15°99	4°6/ 4.0	18	
8 9	23 25.77	-24 32.7	2.022	2.935	10.4	19.9	8 9	23 31.04	-18 31.4	1.996	2.904	10.7	21.1
8 19	23 20.95	-26 7.7	1.981	2.933	8.2	19.8	8 19	23 24.50	-19 3.9	1.945	2.905	7.7	20.9
8 29	23 14.55	-27 34.9	1.965	2.931	7.1	19.7	8 29	23 16.34	-19 32.4	1.919	2.906	5.2	20.8
9 8	23 7.28	-28 46.4	1.975	2.929	7.7	19.8	9 8	23 7.35	-19 51.2	1.920	2.907	4.9	20.7
9 18	23 0.03	-29 36.2	2.011	2.927	9.7	19.9	9 18	22 58.45	-19 56.2	1.948	2.908	7.1	20.9
9 28	22 53.69	-30 1.1	2.070	2.926	12.1	20.0	9 28	22 50.59	-19 44.8	2.002	2.910	10.1	21.1
10 8	22 48.99	-30 1.2	2.150	2.925	14.4	20.2	10 8	22 44.49	-19 17.0	2.080	2.911	12.9	21.3
10 18	22 46.40	-29 38.6	2.247	2.925	16.4	20.4	10 18	22 40.60	-18 34.3	2.178	2.913	15.4	21.5
471329	2011 <i>KG</i> ₃₆		9 8.1 144°29	4°2/ 3.5	17		488146	2015 <i>VK</i> ₁₃₉		9 8.1 269°07	3°3/12.3	17	
8 9	23 28.27	-13 55.5	1.855	2.768	11.2	21.1	8 9	23 24.61	+ 7 54.7	2.449	3.294	11.3	21.7
8 19	23 22.68	-15 31.5	1.809	2.775	7.8	21.0	8 19	23 19.97	+ 7 32.3	2.363	3.282	8.7	21.5
8 29	23 15.43	-17 8.8	1.789	2.781	4.8	20.8	8 29	23 14.03	+ 6 54.1	2.300	3.269	5.9	21.3
9 8	23 7.30	-18 38.9	1.796	2.787	4.6	20.8	9 8	23 7.32	+ 6 2.1	2.264	3.257	3.6	21.2
9 18	22 59.21	-19 54.0	1.831	2.793	7.4	21.0	9 18	23 0.50	+ 5 0.0	2.257	3.245	3.9	21.2
9 28	22 52.11	-20 48.7	1.892	2.798	10.7	21.2	9 28	22 54.26	+ 3 52.9	2.277	3.232	6.4	21.3
10 8	22 46.75	-21 20.9	1.976	2.803	13.7	21.4	10 8	22 49.23	+ 2 46.5	2.325	3.220	9.3	21.5
10 18	22 43.61	-21 31.1	2.079	2.807	16.2	21.6	10 18	22 45.88	+ 1 45.8	2.396	3.207	12.0	21.7
298701	2004 <i>EW</i> ₅₄		9 8.1 200°59	5°4/14.3	18		124117	2001 <i>JX</i> ₆		9 8.2 131°13	1°5/ 6.2	18	
8 9	23 27.77	+13 19.3	2.275	3.089	13.1	20.7	8 9	23 25.69	- 8 44.8	2.558	3.457	9.0	20.0
8 19	23 22.22	+13 23.9	2.196	3.086	10.6	20.5	8 19	23 20.54	- 9 33.6	2.503	3.464	6.2	19.9
8 29	23 15.19	+13 9.2	2.139	3.084	8.0	20.4	8 29	23 14.24	-10 26.3	2.475	3.472	3.1	19.7
9 8	23 7.30	+12 35.9	2.108	3.080	5.9	20.2	9 8	23 7.33	-11 18.5	2.475	3.479	1.6	19.6
9 18	22 59.31	+11 46.6	2.104	3.077	5.6	20.2	9 18	23 0.45	-12 5.7	2.504	3.486	4.2	19.8
9 28	22 52.03	+10 46.4	2.127	3.073	7.4	20.3	9 28	22 54.25	-12 44.1	2.561	3.492	7.1	20.0
10 8	22 46.16	+ 9 41.6	2.177	3.070	10.0	20.5	10 8	22 49.28	-13 11.0	2.645	3.499	9.8	20.2
10 18	22 42.20	+ 8 38.2	2.250	3.065	12.5	20.6	10 18	22 45.91	-13 25.3	2.750	3.505	12.0	20.3
4204	<i>Barsig</i>		9 8.1 157°37	2°2/10.0	18		132367	2002 <i>GG</i> ₆₈		9 8.2 65°30	1°0/ 7.1	17 R	
8 9	23 30.49	+ 2 37.0	1.559	2.440	14.8	16.8	8 9	23 27.26	- 3 19.8	1.563	2.466	13.5	19.3
8 19	23 24.46	+ 2 4.7	1.498	2.444	10.8	16.6	8 19	23 22.01	- 4 53.6	1.529	2.491	9.2	19.1
8 29	23 16.45	+ 1 14.0	1.460	2.448	6.4	16.4	8 29	23 15.07	- 6 38.7	1.519	2.517	4.5	18.9
9 8	23 7.33	+ 0 9.8	1.447	2.451	2.4	16.1	9 8	23 7.35	- 8 25.9	1.536	2.542	1.1	18.7
9 18	22 58.19	- 1 1.0	1.461	2.454	4.5	16.3	9 18	22 59.83	-10 5.6	1.580	2.568	5.2	19.1
9 28	22 50.18	- 2 10.1	1.501	2.457	9.0	16.5	9 28	22 53.51	-11 29.9	1.651	2.593	9.4	19.4
10 8	22 44.21	- 3 10.2	1.565	2.459	13.1	16.8	10 8	22 49.08	-12 33.7	1.745	2.618	13.0	19.7
10 18	22 40.83	- 3 56.3	1.651	2.461	16.5	17.0	10 18	22 46.96	-13 15.6	1.860	2.643	16.0	19.9
91081	1998 <i>FR</i> ₁₀₉		9 8.1 241°83	1°6/ 9.5	18 R		307570	2003 <i>FN</i> ₇₄		9 8.2 117°91	5°9/ 3.5	17	
8 9	23 30.54	+ 0 5.2	1.903	2.782	12.6	20.0	8 9	23 33.63	-16 49.5	1.375	2.293	13.9	20.4
8 19	23 24.36	- 0 5.0	1.826	2.772	9.1	19.7	8 19	23 26.75	-18 10.2	1.338	2.304	9.9	20.2
8 29	23 16.38	- 0 27.7	1.772	2.761	5.2	19.5	8 29	23 17.63	-19 27.9	1.324	2.314	6.6	20.0
9 8	23 7.33	- 0 59.8	1.745	2.750	1.7	19.2	9 8	23 7.39	-20 32.2	1.336	2.324	6.4	20.0
9 18	22 58.12	- 1 36.7	1.746	2.739	4.1	19.4	9 18	22 57.37	-21 15.1	1.373	2.334	9.4	20.3
9 28	22 49.76	- 2 13.2	1.774	2.727	8.1	19.6	9 28	22 48.89	-21 32.2	1.434	2.343	13.2	20.5
10 8	22 43.10	- 2 44.1	1.828	2.715	11.9	19.8	10 8	22 42.88	-21 23.7	1.515	2.352	16.6	20.7
10 18	22 38.70	- 3 5.7	1.904	2.702	15.1	20.0	10 18	22 39.80	-20 52.5	1.614	2.361	19.5	21.0
342593	2008 <i>UF</i> ₃₀₁		9 8.1 19°17	0°3/ 8.4	18		32498	2000 <i>XX</i> ₃₇		9 8.2 270°06			

EPHEMERIDES

9 8.2

9 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
115881	2003 <i>UQ</i> ₂₈₄		9 8.2 341°54	2°9/10.4	18		176711	Canmore		9 8.2 196°00	0°4/ 7.8	18	
8 9	23 26.64	+ 2 38.9	1.435	2.325	15.3	19.0	8 9	23 28.82	- 2 56.9	1.593	2.492	13.5	20.4
8 19	23 22.01	+ 2 33.3	1.367	2.316	11.3	18.7	8 19	23 23.33	- 4 1.0	1.531	2.491	9.4	20.1
8 29	23 15.30	+ 2 9.0	1.321	2.308	6.9	18.4	8 29	23 15.91	- 5 19.0	1.493	2.489	4.8	19.9
9 8	23 7.36	+ 1 29.5	1.298	2.301	3.1	18.2	9 8	23 7.39	- 6 43.7	1.480	2.488	0.4	19.5
9 18	22 59.27	+ 0 40.4	1.300	2.295	4.8	18.3	9 18	22 58.82	- 8 6.7	1.495	2.486	5.0	19.9
9 28	22 52.24	- 0 10.8	1.328	2.289	9.3	18.5	9 28	22 51.29	- 9 19.6	1.537	2.484	9.6	20.1
10 8	22 47.25	- 0 56.4	1.378	2.284	13.6	18.8	10 8	22 45.72	- 10 16.2	1.602	2.481	13.7	20.4
10 18	22 44.92	- 1 30.9	1.448	2.280	17.3	19.0	10 18	22 42.63	- 10 53.5	1.687	2.478	17.0	20.6
319085	2005 <i>WD</i> ₁₂₇		9 8.2 273°31	0°5/ 7.6	18		114489	2003 <i>AP</i> ₅₈		9 8.2 240°51	0°2/ 7.9	18	
8 9	23 26.58	- 5 9.0	2.145	3.041	10.7	21.6	8 9	23 30.63	- 4 9.1	1.804	2.698	12.5	20.3
8 19	23 21.41	- 5 45.2	2.077	3.036	7.4	21.4	8 19	23 24.52	- 4 42.1	1.729	2.686	8.8	20.0
8 29	23 14.79	- 6 29.2	2.033	3.030	3.8	21.2	8 29	23 16.53	- 5 25.6	1.678	2.674	4.5	19.8
9 8	23 7.35	- 7 16.6	2.017	3.025	0.5	20.9	9 8	23 7.41	- 6 14.6	1.654	2.661	0.2	19.4
9 18	22 59.86	- 8 2.4	2.030	3.019	4.1	21.2	9 18	22 58.13	- 7 3.1	1.658	2.648	4.6	19.7
9 28	22 53.12	- 8 41.6	2.070	3.013	7.7	21.4	9 28	22 49.74	- 7 45.0	1.689	2.635	9.0	19.9
10 8	22 47.82	- 9 10.5	2.135	3.008	11.0	21.6	10 8	22 43.15	- 8 15.5	1.744	2.621	12.9	20.2
10 18	22 44.43	- 9 26.9	2.222	3.002	13.8	21.8	10 18	22 38.94	- 8 32.0	1.821	2.607	16.2	20.4
173011	2006 <i>PL</i> ₁₃		9 8.2 146°37	4°1/11.8	17		497534	2006 <i>BR</i> ₂₃₇		9 8.2 134°00	0°9/ 7.5	17	
8 9	23 31.17	+ 7 8.4	1.611	2.471	15.5	20.7	8 9	23 33.33	- 5 36.4	1.367	2.272	14.9	21.8
8 19	23 24.91	+ 6 55.9	1.549	2.478	11.8	20.4	8 19	23 26.61	- 6 13.0	1.316	2.279	10.3	21.5
8 29	23 16.69	+ 6 22.0	1.509	2.484	7.8	20.2	8 29	23 17.62	- 7 0.0	1.287	2.285	5.2	21.3
9 8	23 7.39	+ 5 29.6	1.494	2.490	4.5	20.0	9 8	23 7.44	- 7 50.5	1.283	2.290	0.9	21.0
9 18	22 58.06	+ 4 24.5	1.506	2.496	5.1	20.1	9 18	22 57.33	- 8 36.9	1.305	2.295	5.7	21.3
9 28	22 49.86	+ 3 14.5	1.544	2.501	8.7	20.3	9 28	22 48.61	- 9 12.2	1.353	2.300	10.6	21.6
10 8	22 43.67	+ 2 7.8	1.607	2.505	12.5	20.6	10 8	22 42.30	- 9 32.1	1.424	2.305	14.9	21.9
10 18	22 40.05	+ 1 10.8	1.691	2.509	15.9	20.8	10 18	22 38.89	- 9 35.0	1.513	2.309	18.4	22.2
45290	2000 <i>AG</i> ₃₃		9 8.2 227°27	2°8/10.7	18		319027	2005 <i>VQ</i> ₁₈		9 8.2 293°29	1°0/ 7.2	18	
8 9	23 30.84	+ 3 23.4	2.095	2.957	12.3	18.9	8 9	23 27.23	- 6 48.0	2.025	2.925	11.0	21.5
8 19	23 24.45	+ 3 30.7	2.016	2.950	9.2	18.7	8 19	23 21.98	- 7 22.0	1.952	2.914	7.6	21.3
8 29	23 16.40	+ 3 24.9	1.962	2.942	5.8	18.5	8 29	23 15.15	- 8 3.0	1.905	2.903	3.8	21.1
9 8	23 7.39	+ 3 7.8	1.935	2.935	3.0	18.3	9 8	23 7.41	- 8 46.2	1.885	2.891	1.1	20.8
9 18	22 58.23	+ 2 42.4	1.936	2.927	4.1	18.3	9 18	22 59.56	- 9 26.4	1.892	2.880	4.5	21.1
9 28	22 49.87	+ 2 13.4	1.966	2.918	7.4	18.5	9 28	22 52.50	- 9 58.8	1.927	2.869	8.3	21.3
10 8	22 43.07	+ 1 45.4	2.021	2.910	10.8	18.7	10 8	22 46.97	- 10 19.6	1.987	2.858	11.8	21.5
10 18	22 38.37	+ 1 22.6	2.099	2.901	13.8	18.9	10 18	22 43.48	- 10 27.0	2.067	2.847	14.7	21.7
436498	2011 <i>EH</i> ₈₃		9 8.2 240°17	1°1/ 7.2	16		476166	2007 <i>TC</i> ₃₈₅		9 8.2 206°94	8°3/30.4	18	
8 9	23 31.82	- 6 47.9	1.804	2.702	12.2	22.3	8 9	23 32.56	- 29 46.2	2.054	2.949	11.1	21.4
8 19	23 25.36	- 7 22.0	1.729	2.689	8.5	22.0	8 19	23 25.67	- 30 53.2	2.013	2.946	9.2	21.3
8 29	23 16.96	- 8 4.0	1.678	2.675	4.3	21.7	8 29	23 17.00	- 31 47.3	1.997	2.944	8.3	21.2
9 8	23 7.40	- 8 48.5	1.655	2.661	1.2	21.5	9 8	23 7.44	- 32 21.6	2.006	2.941	8.8	21.3
9 18	22 57.66	- 9 29.5	1.659	2.646	5.1	21.7	9 18	22 57.97	- 32 31.4	2.040	2.938	10.6	21.4
9 28	22 48.85	- 10 1.5	1.691	2.631	9.4	22.0	9 28	22 49.64	- 32 15.4	2.098	2.935	12.7	21.5
10 8	22 41.88	- 10 20.5	1.746	2.615	13.2	22.2	10 8	22 43.23	- 31 35.5	2.177	2.932	14.9	21.7
10 18	22 37.34	- 10 24.7	1.823	2.599	16.5	22.4	10 18	22 39.21	- 30 35.5	2.273	2.929	16.7	21.8
342128	2008 <i>SB</i> ₁₁₉		9 8.2 40°93	1°4/ 9.4	16		449055	2012 <i>DR</i> ₈₉		9 8.2 262°18	1°5/ 9.5	17	
8 9	23 27.48	+ 0 35.4	1.487	2.381	14.6	21.0	8 9	23 32.18	- 1 16.9	2.356	3.227	10.8	20.7
8 19	23 22.40	- 0 1.5	1.433	2.387	10.5	20.7	8 19	23 25.25	- 0 58.8	2.274	3.217	7.8	20.5
8 29	23 15.40	- 0 55.2	1.402	2.394	5.9	20.5	8 29	23 16.80	- 0 48.6	2.217	3.206	4.5	20.3
9 8	23 7.37	- 1 59.9	1.395	2.401	1.6	20.2	9 8	23 7.44	- 0 44.3	2.190	3.194	1.6	20.0
9 18	22 59.37	- 3 8.1	1.414	2.408	4.5	20.5	9 18	22 57.96	- 0 43.9	2.192	3.183	3.5	20.2
9 28	22 52.52	- 4 11.8	1.459	2.416	9.1	20.7	9 28	22 49.19	- 0 44.2	2.223	3.172	6.9	20.4
10 8	22 47.68	- 5 4.2	1.528	2.424	13.2	21.0	10 8	22 41.85	- 0 42.4	2.281	3.160	10.1	20.5
10 18	22 45.34	- 5 41.2	1.617	2.432	16.6	21.3	10 18	22 36.46	- 0 36.1	2.363	3.149	12.9	20.7
378201	2006 <i>YY</i> ₂₉		9 8.2 116°03	4°7/ 4.1	17		9817	Thersander		9 8.2 242°16	1°4/ 5.4	18	
8 9	23 30.99	- 14 59.4	1.589	2.504	12.6	20.6	8 9	23 21.04	- 12 28.8	4.479	5.378	5.5	18.8
8 19	23 24.75	- 16 9.8	1.546	2.512	8.8	20.4	8 19	23 17.02	- 12 53.9	4.415	5.375	3.7	18.6
8 29	23 16.57	- 17 19.9	1.526	2.519	5.5	20.3	8 29	23 12.36	- 13 19.6	4.378	5.373	2.1	18.5
9 8	23 7.40	- 18 21.0	1.533	2.526	5.0	20.3	9 8	23 7.37	- 13 43.7	4.371	5.370	1.5	18.5
9 18	22 58.34	- 19 6.0	1.566	2.533	7.9	20.5	9 18	23 2.37	- 14 4.2	4.393	5.368	2.9	18.6
9 28	22 50.54	- 19 30.1	1.625	2.540	11.5	20.7	9 28	22 57.70	- 14 19.3	4.445	5.365	4.7	18.7
10 8	22 44.82	- 19 32.4	1.705	2.546	14.9	20.9	10 8	22 53.70	- 14 27.8	4.524	5.362	6.3	18.8
10 18	22 41.67	- 19 14.1	1.804	2.552	17.6	21.1	10 18	22 50.60	- 14 28.9	4.627	5.359	7.8	18.9
396979	2005 <i>SF</i> ₁₁₁		9 8.2 34°62	4°5/ 4.6	18		8656	Cupressus		9 8.2 276°72	1°4/ 6.7	18	
8 9	23 32.16	- 17 35.1	1.809	2.719	11.6	20.5	8 9	23 26.57	- 7 11.2	2.054	2.956	10.8	17.7
8 19	23 25.35	- 17 59.8	1.763	2.725	8.2	20.3	8 19	23 21.51	- 8 0.8	1.982	2.944	7.4	17.5
8 29	23 16.80	- 18 20.7	1.741	2.731	5.3	20.1	8 29	23 14.91	- 8 57.8	1.934	2.932	3.8	17.2
9 8	23 7.40	- 18 32.1	1.746	2.738	4.7	20.1	9 8	23 7.41	- 9 56.6	1.915	2.920	1.5	17.0
9 18	22 58.17	- 18 29.8	1.778	2.745	7.1	20.3	9 18	22 59.80	- 10 51.6	1.923	2.908	4.8	17.2
9 28	22 50.12	- 18 11.5	1.836	2.752	10.4	20.5	9 28	22 52.94	- 11 37.1	1.958	2.896	8.5	17.5
10 8	22 44.01	- 17 37.4	1.918	2.759	13.4	20.7	10 8	22 47.58	- 12 9.4	2.018	2.884	11.9	17.6
10 18	22 40.28	- 16 49.2	2.019	2.767	16.0	20.9	10 18	22 44.22	- 12 26.3	2.100	2.872	14.7	17.8
518741	2009 <i>QZ</i> ₆₅		9 8.2 4°18	1°4/ 6.9	17		141029	2001 <i>WD</i> ₅₉					

EPHEMERIDES

9 8.2

9 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
137396	1999 TY ₁₆₄		9 8.2 317°39	12.4/22.2	17		485360	2011 CZ ₈₅		9 8.2 290°36	0°9/ 7.0	17	
8 9	23 22.94	+28 13.0	1.356	2.120	22.7	19.1	8 9	23 24.04	- 3 12.8	2.260	3.152	10.3	21.5
8 19	23 19.84	+28 3.9	1.270	2.104	20.2	18.8	8 19	23 19.75	- 4 49.0	2.170	3.129	7.2	21.3
8 29	23 14.37	+27 7.1	1.198	2.088	17.3	18.6	8 29	23 14.05	- 6 38.6	2.108	3.105	3.6	21.0
9 8	23 7.41	+25 17.8	1.143	2.073	14.5	18.4	9 8	23 7.46	- 8 35.2	2.075	3.081	0.9	20.8
9 18	23 0.12	+22 37.5	1.110	2.058	12.6	18.2	9 18	23 0.66	-10 31.2	2.071	3.057	4.4	21.0
9 28	22 53.92	+19 16.5	1.100	2.044	12.8	18.2	9 28	22 54.43	-12 18.6	2.097	3.033	8.1	21.2
10 8	22 50.01	+15 33.9	1.114	2.031	15.2	18.3	10 8	22 49.48	-13 51.0	2.149	3.009	11.5	21.4
10 18	22 49.12	+11 50.8	1.151	2.018	18.5	18.5	10 18	22 46.32	-15 4.7	2.224	2.985	14.3	21.5
175209	2005 GD ₂₈		9 8.2 219°91	1°5/ 9.5	18		177828	2005 NS ₃₆		9 8.2 44°34	0°5/ 8.7	18	
8 9	23 31.05	+ 0 41.2	1.694	2.576	13.8	21.2	8 9	23 27.53	- 2 11.6	1.798	2.691	12.5	20.7
8 19	23 24.90	+ 0 12.9	1.621	2.569	10.0	20.9	8 19	23 22.22	- 2 40.9	1.742	2.697	8.8	20.5
8 29	23 16.76	- 0 31.0	1.571	2.562	5.7	20.7	8 29	23 15.28	- 3 21.4	1.709	2.704	4.7	20.2
9 8	23 7.46	- 1 26.2	1.548	2.553	1.7	20.4	9 8	23 7.48	- 4 8.4	1.703	2.710	0.6	19.9
9 18	22 57.99	- 2 26.4	1.551	2.545	4.4	20.6	9 18	22 59.70	- 4 56.2	1.724	2.717	4.1	20.2
9 28	22 49.50	- 3 24.6	1.582	2.535	8.8	20.8	9 28	22 52.89	- 5 39.2	1.772	2.724	8.2	20.5
10 8	22 42.92	- 4 14.3	1.638	2.526	12.9	21.0	10 8	22 47.79	- 6 12.4	1.844	2.731	11.8	20.7
10 18	22 38.83	- 4 50.9	1.714	2.515	16.4	21.3	10 18	22 44.86	- 6 33.2	1.938	2.738	14.8	21.0
154243	2002 KA ₆		9 8.2 122°76	0°8/ 7.2	18		335442	2005 UH ₃₁₁		9 8.2 115°84	6°8/15.4	18	
8 9	23 24.82	- 4 59.2	2.288	3.184	10.1	19.9	8 9	23 27.65	+15 49.7	1.686	2.504	16.7	20.6
8 19	23 20.10	- 6 0.0	2.227	3.187	6.9	19.7	8 19	23 22.50	+15 32.9	1.619	2.510	13.7	20.4
8 29	23 14.10	- 7 8.8	2.192	3.189	3.5	19.5	8 29	23 15.51	+14 47.3	1.572	2.516	10.4	20.2
9 8	23 7.41	- 8 20.3	2.185	3.192	0.8	19.3	9 8	23 7.49	+13 34.4	1.549	2.522	7.6	20.1
9 18	23 0.71	- 9 29.0	2.207	3.194	4.0	19.5	9 18	22 59.43	+11 59.7	1.551	2.528	6.9	20.1
9 28	22 54.72	-10 29.4	2.257	3.197	7.4	19.7	9 28	22 52.38	+10 11.9	1.580	2.533	8.9	20.2
10 8	22 50.04	-11 17.7	2.333	3.199	10.4	19.9	10 8	22 47.21	+ 8 21.7	1.634	2.538	12.0	20.4
10 18	22 47.08	-11 51.5	2.431	3.202	13.0	20.1	10 18	22 44.43	+ 6 38.5	1.710	2.544	15.0	20.6
392106	2009 EA ₄		9 8.2 161°81	2°7/ 4.9	18		25669	Kristinrose		9 8.2 63°18	1°9/ 6.3	18	
8 9	23 27.94	-12 13.9	2.438	3.340	9.3	21.9	8 9	23 27.59	- 8 0.9	1.728	2.637	12.1	18.4
8 19	23 22.18	-13 15.7	2.384	3.346	6.4	21.7	8 19	23 22.30	- 8 59.9	1.679	2.644	8.3	18.2
8 29	23 15.15	-14 19.4	2.357	3.352	3.6	21.5	8 29	23 15.33	-10 5.7	1.654	2.652	4.2	18.0
9 8	23 7.43	-15 19.5	2.359	3.356	2.9	21.5	9 8	23 7.49	-11 11.1	1.655	2.660	2.1	17.9
9 18	22 59.74	-16 11.1	2.390	3.361	5.2	21.7	9 18	22 59.70	-12 9.4	1.683	2.667	5.5	18.1
9 28	22 52.80	-16 50.1	2.449	3.365	8.1	21.8	9 28	22 52.95	-12 54.5	1.738	2.675	9.4	18.4
10 8	22 47.21	-17 14.4	2.533	3.368	10.8	22.0	10 8	22 47.98	-13 23.1	1.817	2.683	12.9	18.6
10 18	22 43.37	-17 23.6	2.638	3.371	13.0	22.2	10 18	22 45.25	-13 34.0	1.915	2.692	15.8	18.8
171124	2005 GV ₂₂		9 8.2 29°77	5°3/ 2.9	18		14816	1981 UQ ₂₂		9 8.2 41°35	1°7/ 6.8	18	
8 9	23 26.67	-16 0.0	1.577	2.500	12.2	19.3	8 9	23 28.83	- 6 13.9	1.265	2.182	15.0	17.5
8 19	23 21.80	-17 30.4	1.537	2.505	8.6	19.1	8 19	23 23.59	- 7 15.4	1.219	2.188	10.3	17.3
8 29	23 15.09	-18 59.9	1.521	2.511	5.8	19.0	8 29	23 16.13	- 8 28.1	1.195	2.194	5.2	17.0
9 8	23 7.43	-20 18.8	1.530	2.518	5.8	19.0	9 8	23 7.51	- 9 42.9	1.195	2.201	1.8	16.8
9 18	22 59.85	-21 19.3	1.565	2.525	8.6	19.2	9 18	22 58.96	-10 50.3	1.220	2.209	6.3	17.1
9 28	22 53.40	-21 56.2	1.624	2.532	12.0	19.4	9 28	22 51.80	-11 42.1	1.270	2.216	11.2	17.4
10 8	22 48.91	-22 8.3	1.705	2.540	15.2	19.6	10 8	22 46.97	-12 13.5	1.340	2.224	15.5	17.7
10 18	22 46.83	-21 57.0	1.803	2.548	17.8	19.8	10 18	22 44.99	-12 23.3	1.430	2.232	19.0	18.0
371384	2006 QF ₁₈₂		9 8.2 280°98	0°4/ 7.8	17		349660	2008 VO ₄₈		9 8.2 28°56	9°0/ 1.4	18	
8 9	23 27.66	- 2 20.1	1.469	2.371	14.2	21.0	8 9	23 30.88	-24 26.0	1.279	2.202	14.4	19.8
8 19	23 22.85	- 3 28.9	1.390	2.352	10.0	20.7	8 19	23 24.97	-25 39.4	1.253	2.212	11.2	19.6
8 29	23 15.85	- 4 55.8	1.335	2.332	5.2	20.4	8 29	23 16.77	-26 39.6	1.249	2.224	9.1	19.5
9 8	23 7.46	- 6 33.5	1.305	2.312	0.4	20.0	9 8	23 7.51	-27 16.5	1.268	2.236	9.5	19.6
9 18	22 58.75	- 8 12.3	1.301	2.292	5.5	20.3	9 18	22 58.59	-27 24.2	1.310	2.249	12.0	19.8
9 28	22 51.00	- 9 41.7	1.323	2.272	10.6	20.6	9 28	22 51.33	-27 1.4	1.373	2.263	15.0	20.0
10 8	22 45.29	-10 53.2	1.367	2.251	15.2	20.8	10 8	22 46.62	-26 11.2	1.455	2.277	18.0	20.2
10 18	22 42.30	-11 42.4	1.431	2.231	19.1	21.0	10 18	22 44.84	-24 58.9	1.554	2.292	20.4	20.5
128975	2004 TX ₁₇₂		9 8.2 344°11	4°4/12.1	18		393041	2013 AR ₁₅		9 8.2 49°29	3°2/11.4	18	
8 9	23 27.56	+ 6 57.4	1.855	2.713	13.8	19.3	8 9	23 27.06	+ 5 38.9	1.889	2.753	13.4	20.6
8 19	23 22.35	+ 7 17.9	1.781	2.707	10.7	19.1	8 19	23 21.91	+ 5 21.7	1.822	2.755	10.1	20.4
8 29	23 15.41	+ 7 21.3	1.730	2.701	7.4	18.9	8 29	23 15.15	+ 4 47.0	1.778	2.757	6.5	20.1
9 8	23 7.45	+ 7 8.8	1.704	2.696	4.8	18.7	9 8	23 7.49	+ 3 57.9	1.760	2.759	3.5	20.0
9 18	22 59.36	+ 6 43.1	1.704	2.691	5.1	18.7	9 18	22 59.78	+ 2 59.1	1.769	2.760	4.3	20.0
9 28	22 52.12	+ 6 9.3	1.731	2.687	8.0	18.9	9 28	22 52.94	+ 1 57.1	1.805	2.762	7.6	20.2
10 8	22 46.53	+ 5 33.2	1.782	2.683	11.4	19.1	10 8	22 47.72	+ 0 58.6	1.867	2.765	11.1	20.5
10 18	22 43.16	+ 5 0.4	1.856	2.680	14.4	19.3	10 18	22 44.62	+ 0 8.6	1.950	2.767	14.1	20.7
260295	2004 TY ₁₀₃		9 8.2 321°67	0°0/ 8.2	18		448708	2010 XT ₇₉		9 8.2 303°38	0°7/ 7.4	17	
8 9	23 25.70	- 3 13.3	2.023	2.917	11.3	20.8	8 9	23 26.06	- 4 54.7	1.950	2.850	11.4	21.8
8 19	23 20.90	- 3 50.8	1.954	2.911	7.9	20.5	8 19	23 21.39	- 5 44.0	1.858	2.819	8.0	21.6
8 29	23 14.60	- 4 38.4	1.910	2.906	4.1	20.3	8 29	23 15.00	- 6 44.2	1.791	2.788	4.1	21.3
9 8	23 7.45	- 5 31.5	1.893	2.901	0.1	19.9	9 8	23 7.50	- 7 50.4	1.750	2.757	0.8	20.9
9 18	23 0.23	- 6 24.6	1.904	2.895	4.0	20.3	9 18	22 59.70	- 8 56.1	1.737	2.726	4.7	21.2
9 28	22 53.79	- 7 12.3	1.942	2.890	7.8	20.5	9 28	22 52.55	- 9 54.7	1.751	2.695	8.9	21.4
10 8	22 48.83	- 7 49.9	2.005	2.886	11.2	20.7	10 8	22 46.92	-10 40.6	1.789	2.664	12.7	21.5
10 18	22 45.84	- 8 14.7	2.089	2.881	14.2	20.9	10 18	22 43.41	-11 10.5	1.849	2.633	16.0	21.7
445366	2010 OE ₉₈		9 8.2 311°83	1°7/ 9.5	17		53625	200					

EPHEMERIDES

9 8.2

9 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
304559	2006 <i>UP</i> ₃₆₀		9 8.2 284°76	1°6/ 6.6 18			223404	2003 <i>SU</i> ₁₄₈		9 8.2 327°72	0°9/ 7.3 18		
8 9	23 27.12	- 7 47.4	1.962	2.866	11.1	21.0	8 9	23 27.62	- 7 17.2	1.970	2.872	11.2	19.7
8 19	23 21.94	- 8 35.4	1.898	2.861	7.6	20.8	8 19	23 22.32	- 7 36.1	1.899	2.861	7.7	19.4
8 29	23 15.17	- 9 29.9	1.858	2.856	3.9	20.6	8 29	23 15.42	- 8 1.0	1.853	2.851	3.9	19.2
9 8	23 7.52	-10 25.5	1.845	2.851	1.7	20.4	9 8	23 7.59	- 8 27.6	1.834	2.841	1.0	18.9
9 18	22 59.82	-11 16.0	1.860	2.845	5.0	20.6	9 18	22 59.68	- 8 51.3	1.842	2.831	4.5	19.2
9 28	22 52.95	-11 56.4	1.903	2.840	8.7	20.9	9 28	22 52.58	- 9 7.8	1.877	2.822	8.3	19.4
10 8	22 47.66	-12 22.8	1.969	2.835	12.1	21.1	10 8	22 47.07	- 9 14.0	1.937	2.813	11.8	19.6
10 18	22 44.44	-12 33.8	2.056	2.830	14.9	21.3	10 18	22 43.63	- 9 8.3	2.018	2.804	14.8	19.8
402035	2003 <i>SO</i> ₂₀₉		9 8.2 330°05	0°0/ 8.2 17			407498	2010 <i>VC</i> ₈₄		9 8.2 159°85	5°2/ 2.2 18		
8 9	23 29.78	- 5 31.8	1.898	2.795	11.8	20.5	8 9	23 28.45	-21 16.7	2.291	3.198	9.6	20.9
8 19	23 23.87	- 5 26.5	1.824	2.782	8.3	20.3	8 19	23 22.69	-22 13.1	2.243	3.198	7.2	20.7
8 29	23 16.22	- 5 27.7	1.775	2.771	4.3	20.0	8 29	23 15.51	-23 4.4	2.221	3.199	5.4	20.6
9 8	23 7.55	- 5 32.3	1.752	2.759	0.1	19.7	9 8	23 7.60	-23 44.7	2.227	3.200	5.6	20.6
9 18	22 58.76	- 5 36.7	1.757	2.749	4.2	20.0	9 18	22 59.73	-24 9.7	2.259	3.200	7.5	20.7
9 28	22 50.84	- 5 37.1	1.789	2.738	8.3	20.2	9 28	22 52.72	-24 16.7	2.318	3.201	10.0	20.9
10 8	22 44.61	- 5 30.7	1.845	2.729	11.9	20.4	10 8	22 47.22	-24 5.4	2.399	3.201	12.3	21.1
10 18	22 40.61	- 5 15.4	1.923	2.719	15.1	20.6	10 18	22 43.64	-23 37.2	2.500	3.202	14.4	21.2
126051	2001 <i>YL</i> ₇₅		9 8.2 307°78	0°5/ 7.7 18			53035	1998 <i>WX</i> ₁₀		9 8.2 326°13	0°7/ 7.7 18		
8 9	23 27.36	- 5 16.8	1.916	2.815	11.6	20.1	8 9	23 26.68	- 4 31.0	1.205	2.123	15.5	18.4
8 19	23 22.15	- 5 48.9	1.848	2.808	8.1	19.8	8 19	23 22.47	- 5 12.3	1.137	2.106	10.9	18.1
8 29	23 15.31	- 6 29.5	1.803	2.800	4.1	19.6	8 29	23 15.80	- 6 9.0	1.091	2.090	5.6	17.7
9 8	23 7.53	- 7 13.8	1.786	2.793	0.6	19.3	9 8	23 7.61	- 7 13.7	1.067	2.074	0.7	17.4
9 18	22 59.68	- 7 56.5	1.796	2.786	4.4	19.6	9 18	22 59.15	- 8 17.1	1.067	2.060	6.1	17.7
9 28	22 52.66	- 8 32.1	1.833	2.779	8.4	19.8	9 28	22 51.89	- 9 9.7	1.091	2.046	11.6	18.0
10 8	22 47.25	- 8 56.7	1.894	2.772	12.0	20.0	10 8	22 47.01	- 9 44.3	1.135	2.033	16.6	18.2
10 18	22 43.96	- 9 8.1	1.977	2.766	15.0	20.2	10 18	22 45.19	- 9 57.6	1.197	2.022	20.7	18.4
395452	2011 <i>SM</i> ₂₆₁		9 8.2 356°08	1°4/ 7.0 18			523710	2014 <i>JF</i> ₈₀		9 8.2 2°32	0°8/ 14.5 17		
8 9	23 30.03	- 8 5.0	1.820	2.723	11.9	21.2	8 9	23 11.62	+10 29.9	18.010	18.810	1.9	21.9
8 19	23 24.01	- 8 31.0	1.760	2.723	8.2	21.0	8 19	23 10.34	+10 26.1	17.928	18.811	1.5	21.8
8 29	23 16.26	- 9 2.6	1.725	2.722	4.2	20.7	8 29	23 8.94	+10 20.2	17.872	18.813	1.1	21.8
9 8	23 7.57	- 9 34.7	1.716	2.722	1.4	20.5	9 8	23 7.47	+10 12.3	17.844	18.815	0.8	21.8
9 18	22 58.88	-10 2.2	1.735	2.722	5.0	20.8	9 18	23 6.00	+10 2.9	17.844	18.817	0.8	21.8
9 28	22 51.18	-10 20.5	1.781	2.722	8.9	21.0	9 28	23 4.59	+ 9 52.3	17.874	18.818	1.0	21.8
10 8	22 45.27	-10 26.7	1.851	2.722	12.5	21.3	10 8	23 3.31	+ 9 41.0	17.931	18.820	1.4	21.8
10 18	22 41.63	-10 19.5	1.941	2.722	15.5	21.5	10 18	23 2.22	+ 9 29.5	18.016	18.822	1.8	21.9
249778	2000 <i>WS</i> ₆₄		9 8.2 294°15	1°3/ 6.9 18			398871	2013 <i>CK</i> ₆₂		9 8.2 258°03	0°5/ 7.6 18		
8 9	23 27.33	- 7 36.3	2.020	2.922	10.9	21.1	8 9	23 25.51	- 2 48.2	2.026	2.919	11.3	20.9
8 19	23 22.08	- 8 13.5	1.950	2.913	7.5	20.9	8 19	23 20.86	- 4 8.3	1.950	2.908	7.9	20.6
8 29	23 15.27	- 8 57.1	1.906	2.903	3.8	20.7	8 29	23 14.68	- 5 41.4	1.901	2.897	4.0	20.4
9 8	23 7.56	- 9 42.1	1.888	2.894	1.4	20.5	9 8	23 7.59	- 7 21.1	1.879	2.886	0.6	20.1
9 18	22 59.77	-10 23.1	1.899	2.885	4.7	20.7	9 18	23 0.37	- 8 59.6	1.886	2.875	4.4	20.4
9 28	22 52.77	-10 55.2	1.936	2.876	8.4	20.9	9 28	22 53.88	-10 29.5	1.921	2.863	8.3	20.6
10 8	22 47.31	-11 15.1	1.998	2.867	11.8	21.1	10 8	22 48.85	-11 44.6	1.982	2.852	11.9	20.8
10 18	22 43.88	-11 21.0	2.082	2.858	14.7	21.3	10 18	22 45.79	-12 41.5	2.064	2.840	14.8	21.0
290368	2005 <i>SC</i> ₂₇₀		9 8.2 55°25	2°0/ 10.2 18			261928	2006 <i>KN</i> ₁₁₅		9 8.2 323°36	7°0/ 2.9 18		
8 9	23 27.29	+ 2 24.5	1.805	2.683	13.2	20.2	8 9	23 29.41	-17 6.0	1.112	2.044	15.2	19.7
8 19	23 21.99	+ 1 56.7	1.758	2.703	9.6	20.0	8 19	23 24.53	-18 29.8	1.059	2.031	11.0	19.5
8 29	23 15.15	+ 1 14.1	1.735	2.722	5.6	19.8	8 29	23 16.90	-19 53.3	1.027	2.019	7.6	19.2
9 8	23 7.56	+ 0 21.0	1.738	2.742	2.2	19.6	9 8	23 7.65	-21 3.5	1.018	2.007	7.6	19.2
9 18	23 0.08	- 0 36.8	1.769	2.762	3.9	19.8	9 18	22 58.26	-21 49.3	1.031	1.996	11.2	19.4
9 28	22 53.62	- 1 33.0	1.826	2.783	7.6	20.1	9 28	22 50.37	-22 3.8	1.065	1.986	15.6	19.6
10 8	22 48.84	- 2 21.9	1.908	2.803	11.0	20.3	10 8	22 45.23	-21 46.3	1.118	1.976	19.8	19.8
10 18	22 46.17	- 2 59.7	2.013	2.823	14.0	20.6	10 18	22 43.47	-21 0.0	1.186	1.967	23.3	20.0
255345	2005 <i>WC</i> ₆₈		9 8.2 220°28	5°3/ 1.8 18			36270	1999 <i>XS</i> ₂₄₈		9 8.2 224°25	1°6/ 11.7 18		
8 9	23 27.92	-21 18.3	2.333	3.241	9.4	20.1	8 9	23 19.87	+ 5 16.1	4.608	5.450	6.5	19.4
8 19	23 22.34	-22 23.4	2.282	3.237	7.1	20.0	8 19	23 16.28	+ 4 57.9	4.527	5.447	4.9	19.3
8 29	23 15.34	-23 23.9	2.257	3.234	5.4	19.9	8 29	23 12.08	+ 4 32.5	4.472	5.444	3.2	19.1
9 8	23 7.58	-24 13.7	2.259	3.230	5.7	19.9	9 8	23 7.56	+ 4 1.2	4.445	5.441	1.8	19.0
9 18	22 59.82	-24 47.9	2.288	3.226	7.6	20.0	9 18	23 3.00	+ 3 25.9	4.449	5.438	2.1	19.1
9 28	22 52.86	-25 3.5	2.343	3.222	10.0	20.1	9 28	22 58.74	+ 2 48.8	4.482	5.435	3.6	19.2
10 8	22 47.36	-25 0.2	2.421	3.218	12.4	20.3	10 8	22 55.09	+ 2 12.1	4.544	5.431	5.3	19.3
10 18	22 43.77	-24 39.0	2.518	3.213	14.4	20.5	10 18	22 52.27	+ 1 38.1	4.631	5.428	6.8	19.4
298291	2003 <i>AL</i> ₈₆		9 8.2 285°31	6°8/ 31.4 18			6178	1986 <i>DA</i>		9 8.2 101°92	1°5/ 6.2 17 R		
8 9	23 27.70	-21 55.5	1.889	2.803	10.9	20.0	8 9	23 30.87	- 9 15.8	2.838	3.726	8.6	20.8
8 19	23 22.58	-23 32.8	1.829	2.786	8.4	19.8	8 19	23 23.94	-10 7.0	2.807	3.763	5.8	20.7
8 29	23 15.63	-25 5.9	1.794	2.768	6.8	19.7	8 29	23 16.00	-11 0.3	2.804	3.799	3.0	20.5
9 8	23 7.59	-26 25.9	1.786	2.751	7.4	19.7	9 8	23 7.64	-11 51.4	2.831	3.834	1.6	20.5
9 18	22 59.40	-27 25.2	1.803	2.734	9.8	19.8	9 18	22 59.46	-12 36.5	2.889	3.868	3.9	20.7
9 28	22 52.10	-27 59.1	1.844	2.716	12.7	19.9	9 28	22 52.07	-13 12.4	2.977	3.901	6.5	20.9
10 8	22 46.56	-28 6.5	1.907	2.699	15.4	20.1	10 8	22 45.95	-13 37.5	3.093	3.933	8.9	21.1
10 18	22 43.34	-27 49.2	1.986	2.681	17.8	20.3	10 18	22 41.42	-13 51.0	3.231	3.964	10.8	21.3
115568	2003 <i>UZ</i> ₈₂		9 8.2 303°86	2°2/ 10.4 18			160224	2002 <i>GT</i> ₅₉	</				

EPHEMERIDES

9 8.2

9 8.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
405818	2006 <i>BK</i> ₁₀₁		9 8.2 321°03	3°7/ 3.8	18		97757	2000 <i>JC</i> ₃		9 8.2 116°59	18°2/29.6	18	
8 9	23 25.09	-13 45.5	2.080	2.994	10.1	20.8	8 9	23 52.48	-44 11.3	1.140	2.002	20.4	18.9
8 19	23 20.52	-15 5.4	2.023	2.989	7.0	20.6	8 19	23 40.65	-45 25.3	1.123	2.008	18.8	18.8
8 29	23 14.48	-16 27.4	1.991	2.985	4.3	20.5	8 29	23 25.00	-45 58.2	1.123	2.014	18.2	18.8
9 8	23 7.62	-17 44.3	1.987	2.980	4.0	20.4	9 8	23 7.88	-45 37.8	1.141	2.020	18.7	18.9
9 18	23 0.71	-18 49.7	2.011	2.976	6.6	20.6	9 18	22 51.97	-44 22.0	1.178	2.026	20.1	19.0
9 28	22 54.58	-19 38.5	2.060	2.971	9.7	20.8	9 28	22 39.48	-42 18.2	1.233	2.031	22.1	19.2
10 8	22 49.92	-20 8.1	2.133	2.967	12.6	21.0	10 8	22 31.48	-39 39.8	1.304	2.036	24.1	19.3
10 18	22 47.19	-20 18.2	2.226	2.963	15.0	21.1	10 18	22 28.03	-36 39.6	1.389	2.041	25.8	19.5
375167	2008 <i>CX</i> ₁₉₆		9 8.2 62°22	0°7/ 8.7	17		264073	2009 <i>SA</i> ₁₈₄		9 8.2 313°49	1°3/10.5	16	
8 9	23 30.84	-1 27.1	1.285	2.187	15.9	20.7	8 9	23 20.89	+ 2 4.2	4.031	4.891	6.9	20.8
8 19	23 24.88	-2 4.0	1.245	2.204	11.2	20.5	8 19	23 17.08	+ 1 50.0	3.949	4.883	5.1	20.7
8 29	23 16.80	-2 56.3	1.227	2.222	5.9	20.2	8 29	23 12.55	+ 1 28.9	3.894	4.876	3.1	20.5
9 8	23 7.67	-3 57.0	1.233	2.240	0.8	19.9	9 8	23 7.62	+ 1 2.6	3.867	4.869	1.4	20.4
9 18	22 58.77	-4 57.8	1.265	2.259	5.0	20.3	9 18	23 2.66	+ 0 33.1	3.869	4.862	2.1	20.4
9 28	22 51.32	-5 50.6	1.322	2.277	10.0	20.6	9 28	22 58.03	+ 0 2.7	3.902	4.854	4.1	20.6
10 8	22 46.23	-6 29.4	1.401	2.296	14.2	20.9	10 8	22 54.10	- 0 26.1	3.962	4.847	6.1	20.7
10 18	22 43.93	-6 51.3	1.499	2.314	17.7	21.2	10 18	22 51.13	- 0 51.2	4.047	4.840	7.8	20.8
67804	2000 <i>VE</i> ₁₁		9 8.2 315°95	0°6/ 8.8	18		18839	Whiteley		9 8.2 19°52	6°0/ 2.2	18	
8 9	23 26.60	-1 55.6	1.909	2.801	12.0	19.9	8 9	23 28.49	-20 38.9	1.834	2.749	11.2	17.6
8 19	23 21.68	-2 23.6	1.837	2.792	8.5	19.6	8 19	23 22.99	-21 45.5	1.791	2.751	8.3	17.4
8 29	23 15.13	-3 3.1	1.789	2.783	4.6	19.4	8 29	23 15.78	-22 46.6	1.773	2.754	6.2	17.3
9 8	23 7.64	-3 49.9	1.768	2.775	0.7	19.1	9 8	23 7.70	-23 34.7	1.781	2.757	6.4	17.3
9 18	23 0.05	-4 38.6	1.774	2.767	4.0	19.3	9 18	22 59.69	-24 4.2	1.814	2.760	8.7	17.5
9 28	22 53.27	-5 23.6	1.807	2.759	8.0	19.6	9 28	22 52.74	-24 11.9	1.872	2.764	11.5	17.7
10 8	22 48.06	-5 59.7	1.864	2.752	11.6	19.8	10 8	22 47.61	-23 57.8	1.952	2.768	14.3	17.9
10 18	22 44.94	-6 23.9	1.944	2.744	14.8	20.0	10 18	22 44.74	-23 23.9	2.050	2.772	16.6	18.1
382593	2002 <i>CB</i> ₃₀₆		9 8.2 205°54	2°0/ 6.0	18		98383	2000 <i>TL</i> ₃₉		9 8.2 322°33	7°5/ 3.2	18	
8 9	23 29.50	- 9 6.8	2.111	3.011	10.6	21.9	8 9	23 31.22	-18 39.5	1.087	2.018	15.6	18.4
8 19	23 23.56	-10 4.8	2.045	3.006	7.3	21.7	8 19	23 25.95	-19 44.6	1.031	2.001	11.5	18.1
8 29	23 16.06	-11 8.3	2.004	3.001	3.8	21.4	8 29	23 17.74	-20 46.6	0.995	1.985	8.1	17.8
9 8	23 7.68	-12 11.3	1.992	2.995	2.2	21.3	9 8	23 7.76	-21 32.9	0.981	1.969	8.0	17.8
9 18	22 59.22	-13 7.9	2.008	2.988	5.2	21.5	9 18	22 57.59	-21 53.5	0.989	1.954	11.5	17.9
9 28	22 51.57	-13 52.9	2.052	2.981	8.7	21.7	9 28	22 48.99	-21 42.7	1.018	1.940	16.0	18.1
10 8	22 45.46	-14 23.0	2.121	2.973	11.9	21.9	10 8	22 43.28	-21 1.0	1.065	1.927	20.3	18.4
10 18	22 41.39	-14 37.0	2.211	2.964	14.6	22.1	10 18	22 41.15	-19 52.3	1.128	1.915	24.0	18.6
118457	1999 <i>WP</i> ₆		9 8.2 226°57	2°8/ 4.6	18		494942	2009 <i>EH</i> ₂₂		9 8.2 196°83	2°1/ 6.1	18	
8 9	23 26.74	-13 36.1	2.582	3.486	8.8	20.2	8 9	23 30.36	-10 42.7	2.204	3.104	10.3	21.6
8 19	23 21.45	-14 29.8	2.516	3.478	6.1	20.0	8 19	23 24.08	-11 18.1	2.140	3.102	7.1	21.4
8 29	23 14.90	-15 24.7	2.477	3.470	3.6	19.8	8 29	23 16.31	-11 56.4	2.103	3.099	3.7	21.2
9 8	23 7.66	-16 15.9	2.466	3.462	3.1	19.8	9 8	23 7.73	-12 32.8	2.094	3.096	2.2	21.1
9 18	23 0.36	-16 58.9	2.485	3.453	5.2	19.9	9 18	22 59.13	-13 2.6	2.113	3.093	5.0	21.3
9 28	22 53.70	-17 29.9	2.531	3.444	8.0	20.1	9 28	22 51.35	-13 22.0	2.160	3.089	8.3	21.5
10 8	22 48.28	-17 47.0	2.602	3.435	10.6	20.2	10 8	22 45.09	-13 28.7	2.232	3.085	11.4	21.7
10 18	22 44.51	-17 49.6	2.694	3.425	12.8	20.4	10 18	22 40.81	-13 22.1	2.326	3.081	14.0	21.9
477074	2009 <i>BV</i> ₇₄		9 8.2 294°92	2°9/ 6.1	18		220514	2004 <i>EF</i> ₂₁		9 8.2 35°72	0°9/ 7.6	16	
8 9	23 33.49	-11 59.3	1.681	2.587	12.5	20.6	8 9	23 31.07	- 6 1.9	1.179	2.094	15.9	20.0
8 19	23 26.92	-12 22.8	1.593	2.557	8.8	20.3	8 19	23 25.24	- 6 24.7	1.138	2.106	11.0	19.8
8 29	23 18.08	-12 49.2	1.529	2.525	4.8	20.0	8 29	23 17.07	- 6 57.9	1.119	2.118	5.6	19.5
9 8	23 7.74	-13 12.6	1.492	2.494	3.0	19.9	9 8	23 7.75	- 7 34.3	1.124	2.131	0.9	19.2
9 18	22 57.01	-13 26.9	1.481	2.463	6.5	20.0	9 18	22 58.62	- 8 6.5	1.153	2.145	5.9	19.6
9 28	22 47.16	-13 27.3	1.497	2.431	10.9	20.2	9 28	22 51.07	- 8 27.9	1.205	2.159	11.0	20.0
10 8	22 39.30	-13 11.3	1.536	2.399	15.1	20.4	10 8	22 46.05	- 8 34.7	1.279	2.174	15.4	20.3
10 18	22 34.18	-12 38.8	1.595	2.367	18.6	20.5	10 18	22 44.01	- 8 25.4	1.372	2.189	18.9	20.6
374760	2006 <i>SZ</i> ₂₅₉		9 8.2 140°61	1°3/ 9.4	17		65465	2002 <i>XQ</i> ₂₀		9 8.2 125°67	1°0/ 9.2	18	R
8 9	23 30.46	+ 0 26.0	1.555	2.443	14.4	21.2	8 9	23 28.46	- 0 50.5	1.979	2.862	12.0	19.6
8 19	23 24.55	- 0 9.0	1.496	2.448	10.4	21.0	8 19	23 22.87	- 1 14.1	1.916	2.866	8.6	19.4
8 29	23 16.67	- 1 0.1	1.461	2.452	5.8	20.7	8 29	23 15.72	- 1 49.2	1.877	2.869	4.7	19.2
9 8	23 7.70	- 2 2.0	1.450	2.456	1.5	20.5	9 8	23 7.73	- 2 31.7	1.865	2.872	1.1	18.9
9 18	22 58.73	- 3 7.6	1.467	2.461	4.5	20.7	9 18	22 59.72	- 3 16.9	1.881	2.875	3.8	19.1
9 28	22 50.90	- 4 9.1	1.510	2.464	9.0	21.0	9 28	22 52.57	- 3 59.2	1.925	2.877	7.6	19.4
10 8	22 45.09	- 4 59.9	1.577	2.468	13.1	21.2	10 8	22 47.01	- 4 34.1	1.994	2.880	11.1	19.6
10 18	22 41.83	- 5 35.9	1.664	2.471	16.6	21.5	10 18	22 43.51	- 4 58.4	2.085	2.883	14.0	19.8
47005	Chengmaolan		9 8.2 357°46	1°5/ 9.4	18		266143	2006 <i>TB</i> ₁₀₀		9 8.2 285°96	0°9/ 8.9	18	
8 9	23 25.70	- 0 43.2	1.253	2.161	15.7	18.0	8 9	23 30.69	- 1 35.9	1.457	2.353	14.7	21.9
8 19	23 21.59	- 0 56.3	1.195	2.156	11.3	17.8	8 19	23 25.10	- 1 55.7	1.377	2.333	10.6	21.6
8 29	23 15.26	- 1 26.3	1.158	2.153	6.4	17.5	8 29	23 17.18	- 2 30.8	1.319	2.313	5.8	21.3
9 8	23 7.67	- 2 8.2	1.144	2.150	1.7	17.2	9 8	23 7.76	- 3 16.5	1.286	2.293	1.1	20.9
9 18	23 0.01	- 2 55.1	1.154	2.150	5.0	17.4	9 18	22 58.00	- 4 6.4	1.279	2.273	5.0	21.1
9 28	22 53.57	- 3 38.7	1.188	2.150	10.0	17.7	9 28	22 49.22	- 4 52.8	1.298	2.253	10.2	21.4
10 8	22 49.36	- 4 12.2	1.243	2.152	14.6	18.0	10 8	22 42.57	- 5 29.0	1.339	2.233	14.8	21.6
10 18	22 47.95	- 4 31.0	1.318	2.155	18.5	18.2	10 18	22 38.79	- 5 50.4	1.399	2.213	18.8	21.8
316474	2010 <i>VR</i> ₂₄		9 8.2 233°48	1°4/ 9.8	18		484939	2009 <i>SC</i> ₁₈₀		9 8.2 329°73	5°3/ 14.5	1	

EPHEMERIDES

9 8.2

9 8.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
94079	2000 <i>YN</i> ₄₆		9 8.2 10°94	5°1/ 2.4	18		364503	2007 <i>EV</i> ₇₂		9 8.2 168°27	0°4/ 7.7	18	
8 9	23 25.87	-17 25.0	1.929	2.846	10.6	18.6	8 9	23 26.38	-4 57.7	2.592	3.481	9.3	21.8
8 19	23 21.15	-18 51.3	1.883	2.847	7.6	18.4	8 19	23 21.16	-5 37.8	2.528	3.483	6.4	21.6
8 29	23 14.85	-20 15.8	1.862	2.848	5.4	18.3	8 29	23 14.77	-6 24.4	2.490	3.486	3.3	21.4
9 8	23 7.71	-21 30.8	1.867	2.850	5.5	18.3	9 8	23 7.75	-7 13.7	2.480	3.488	0.4	21.2
9 18	23 0.58	-22 29.5	1.899	2.852	7.9	18.4	9 18	23 0.71	-8 1.3	2.501	3.489	3.5	21.4
9 28	22 54.35	-23 7.5	1.957	2.854	10.9	18.6	9 28	22 54.31	-8 43.2	2.549	3.491	6.6	21.6
10 8	22 49.74	-23 23.3	2.036	2.856	13.6	18.8	10 8	22 49.11	-9 16.2	2.625	3.492	9.4	21.8
10 18	22 47.21	-23 17.9	2.135	2.858	15.9	19.0	10 18	22 45.50	-9 38.2	2.723	3.493	11.8	22.0
485259	2010 <i>VK</i> ₁₉₅		9 8.2 190°81	8°2/27.3	18		147718	2005 <i>LJ</i> ₄₃		9 8.2 64°70	1°8/ 6.7	17	
8 9	23 34.36	-39 34.0	3.017	3.864	9.4	21.8	8 9	23 29.64	-6 50.8	1.446	2.356	13.9	20.5
8 19	23 26.64	-40 25.2	2.985	3.863	8.5	21.7	8 19	23 24.12	-7 49.4	1.391	2.357	9.6	20.2
8 29	23 17.54	-41 1.3	2.977	3.861	8.3	21.7	8 29	23 16.53	-8 57.8	1.360	2.359	4.8	19.9
9 8	23 7.77	-41 17.7	2.994	3.859	8.7	21.7	9 8	23 7.79	-10 8.0	1.355	2.360	1.9	19.8
9 18	22 58.15	-41 12.0	3.037	3.856	9.8	21.8	9 18	22 59.05	-11 11.5	1.375	2.362	6.0	20.0
9 28	22 49.49	-40 44.0	3.102	3.853	11.0	21.9	9 28	22 51.51	-12 0.8	1.420	2.363	10.6	20.3
10 8	22 42.42	-39 55.7	3.188	3.849	12.3	22.0	10 8	22 46.10	-12 31.6	1.489	2.365	14.7	20.6
10 18	22 37.34	-38 50.5	3.291	3.845	13.4	22.1	10 18	22 43.36	-12 42.3	1.576	2.367	18.1	20.8
511932	2015 <i>HB</i> ₁₆₆		9 8.2 95°48	5°2/14.1	17		1985	Hopmann		9 8.2 171°42	4°8/14.3	18	R
8 9	23 28.43	+12 55.5	1.852	2.679	15.1	21.5	8 9	23 28.66	+13 7.4	2.793	3.594	11.2	16.5
8 19	23 22.86	+12 24.6	1.797	2.699	11.9	21.4	8 19	23 22.75	+13 24.4	2.715	3.597	9.1	16.4
8 29	23 15.70	+11 29.7	1.764	2.719	8.6	21.2	8 29	23 15.61	+13 26.0	2.661	3.599	6.9	16.2
9 8	23 7.73	+10 13.8	1.756	2.738	5.8	21.1	9 8	23 7.78	+13 12.8	2.633	3.601	5.2	16.1
9 18	22 59.85	+8 43.0	1.774	2.757	5.4	21.1	9 18	22 59.86	+12 46.5	2.634	3.603	5.0	16.1
9 28	22 52.98	+7 5.4	1.821	2.776	7.7	21.3	9 28	22 52.54	+12 10.5	2.663	3.604	6.4	16.2
10 8	22 47.83	+5 29.6	1.894	2.794	10.8	21.5	10 8	22 46.40	+11 29.1	2.720	3.604	8.5	16.3
10 18	22 44.84	+4 2.8	1.990	2.812	13.7	21.7	10 18	22 41.85	+10 47.0	2.801	3.605	10.6	16.5
374848	2006 <i>VK</i>		9 8.2 260°10	1°6/ 6.9	18		351824	2006 <i>PG</i> ₃₂		9 8.2 346°81	2°8/ 5.6	18	
8 9	23 31.69	-7 31.6	1.610	2.514	13.1	21.4	8 9	23 26.41	-9 38.9	1.608	2.524	12.4	20.2
8 19	23 25.58	-8 11.7	1.536	2.499	9.1	21.1	8 19	23 21.77	-10 45.9	1.551	2.520	8.5	19.9
8 29	23 17.33	-9 0.4	1.486	2.484	4.7	20.8	8 29	23 15.28	-11 59.6	1.518	2.516	4.5	19.7
9 8	23 7.78	-9 51.3	1.462	2.468	1.7	20.6	9 8	23 7.77	-13 11.8	1.511	2.513	3.0	19.6
9 18	22 58.01	-10 37.3	1.465	2.452	5.7	20.8	9 18	23 0.21	-14 14.8	1.530	2.511	6.4	19.8
9 28	22 49.23	-11 12.0	1.494	2.436	10.3	21.1	9 28	22 53.67	-15 1.9	1.574	2.509	10.5	20.0
10 8	22 42.48	-11 31.1	1.547	2.419	14.5	21.3	10 8	22 48.98	-15 29.4	1.641	2.507	14.1	20.3
10 18	22 38.37	-11 32.9	1.618	2.402	18.0	21.5	10 18	22 46.66	-15 36.4	1.728	2.506	17.2	20.5
13133	Jandecleir		9 8.2 298°40	1°6/ 9.7	18	R	257800	2000 <i>EO</i> ₃₅		9 8.3 173°77	1°2/ 7.1	18	R
8 9	23 27.45	+0 51.4	1.679	2.566	13.6	18.7	8 9	23 31.32	-6 37.2	1.818	2.716	12.2	21.1
8 19	23 22.51	+0 23.0	1.603	2.553	9.9	18.4	8 19	23 24.98	-7 23.4	1.759	2.719	8.4	20.9
8 29	23 15.69	+0 21.5	1.550	2.541	5.7	18.1	8 29	23 16.88	-8 17.5	1.724	2.721	4.2	20.6
9 8	23 7.74	-1 17.8	1.523	2.529	1.8	17.8	9 8	23 7.82	-9 13.2	1.716	2.722	1.3	20.4
9 18	22 59.60	-2 19.8	1.522	2.517	4.3	18.0	9 18	22 58.75	-10 4.5	1.737	2.723	5.0	20.7
9 28	22 52.35	-3 20.3	1.548	2.505	8.7	18.2	9 28	22 50.67	-10 45.5	1.784	2.724	9.0	20.9
10 8	22 46.88	-4 12.3	1.598	2.493	12.8	18.5	10 8	22 44.41	-11 12.5	1.856	2.724	12.7	21.2
10 18	22 43.80	-4 51.3	1.669	2.482	16.3	18.7	10 18	22 40.47	-11 23.9	1.949	2.723	15.6	21.4
107820	2001 <i>FX</i> ₆₂		9 8.2 90°05	4°4/ 5.0	18		476522	2008 <i>GH</i> ₈₈		9 8.3 79°04	1°4/ 7.1	17	
8 9	23 33.64	-14 18.8	1.418	2.333	13.8	19.7	8 9	23 31.18	-6 16.7	1.439	2.346	14.1	21.7
8 19	23 26.85	-15 7.7	1.374	2.341	9.6	19.5	8 19	23 25.03	-7 10.1	1.399	2.363	9.7	21.5
8 29	23 17.87	-15 56.4	1.354	2.348	5.7	19.3	8 29	23 16.91	-8 12.3	1.382	2.380	4.9	21.3
9 8	23 7.79	-16 36.8	1.359	2.356	4.6	19.2	9 8	23 7.82	-9 15.7	1.391	2.397	1.5	21.1
9 18	22 57.87	-17 1.9	1.389	2.363	7.8	19.4	9 18	22 58.93	-10 12.4	1.426	2.414	5.6	21.4
9 28	22 49.40	-17 7.5	1.444	2.370	11.9	19.7	9 28	22 51.38	-10 55.8	1.486	2.430	10.1	21.7
10 8	22 43.29	-16 52.9	1.521	2.377	15.6	19.9	10 8	22 46.01	-11 22.0	1.570	2.447	14.0	22.0
10 18	22 40.03	-16 19.7	1.616	2.384	18.6	20.2	10 18	22 43.27	-11 30.2	1.673	2.463	17.2	22.3
321420	2009 <i>QY</i> ₁₉		9 8.2 330°56	1°2/ 6.8	18		68224	2001 <i>DG</i> ₁₁		9 8.3 248°06	2°4/ 5.2	18	
8 9	23 23.66	-4 43.0	1.928	2.831	11.3	20.1	8 9	23 25.31	-10 12.4	2.271	3.178	9.7	19.1
8 19	23 19.65	-6 7.6	1.861	2.824	7.8	19.9	8 19	23 20.61	-11 25.0	2.209	3.174	6.6	18.9
8 29	23 14.11	-7 43.5	1.819	2.817	3.9	19.6	8 29	23 14.56	-12 42.2	2.173	3.170	3.6	18.7
9 8	23 7.71	-9 23.6	1.804	2.810	1.3	19.4	9 8	23 7.77	-13 57.9	2.165	3.166	2.6	18.7
9 18	23 1.21	-11 0.1	1.818	2.804	4.9	19.7	9 18	23 0.92	-15 6.1	2.186	3.162	5.3	18.8
9 28	22 55.48	-12 25.3	1.859	2.798	8.8	19.9	9 28	22 54.77	-16 1.8	2.234	3.158	8.4	19.0
10 8	22 51.23	-13 33.6	1.924	2.793	12.2	20.1	10 8	22 49.95	-16 41.6	2.307	3.153	11.3	19.2
10 18	22 48.96	-14 22.1	2.011	2.787	15.1	20.3	10 18	22 46.91	-17 4.4	2.402	3.149	13.8	19.4
394627	2007 <i>XP</i> ₁₀		9 8.2 291°89	4°1/ 4.3	18		423035	2003 <i>UR</i> ₆₉		9 8.3 44°63	3°0/ 6.1	16	
8 9	23 29.19	-14 53.8	1.805	2.719	11.4	21.2	8 9	23 31.88	-10 59.4	1.313	2.231	14.5	20.0
8 19	23 23.56	-15 50.7	1.748	2.713	8.0	20.9	8 19	23 25.53	-11 36.1	1.284	2.252	9.9	19.8
8 29	23 16.16	-16 48.0	1.715	2.708	4.9	20.8	8 29	23 17.13	-12 15.6	1.277	2.275	5.2	19.6
9 8	23 7.77	-17 38.6	1.709	2.703	4.4	20.7	9 8	23 7.83	-12 50.4	1.295	2.298	3.1	19.6
9 18	22 59.36	-18 16.2	1.729	2.697	7.1	20.9	9 18	22 58.88	-13 14.1	1.338	2.321	6.7	19.9
9 28	22 51.92	-18 36.2	1.775	2.692	10.6	21.1	9 28	22 51.47	-13 22.3	1.405	2.345	11.0	20.2
10 8	22 46.30	-18 37.1	1.844	2.687	13.8	21.3	10 8	22 46.44	-13 13.5	1.495	2.369	14.8	20.5
10 18	22 42.98	-18 19.3	1.932	2.682	16.6	21.5	10 18	22 44.14	-12 48.5	1.603	2.394	17.8	20.7
426736	2013 <i>TZ</i> ₇₂		9 8.2 34°96	5°5/ 4.8	17		180493	2004 <i>CK</i> ₈₁		9 8.3 93°09	0°8/ 7.6	17	
8 9	23 31.82	-1											

EPHEMERIDES

9 8.3

9 8.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
295113	2008 <i>FL</i> ₅		9 8.3 125°74	0°2/ 8.4 17			292717	2006 <i>UC</i> ₁₃₅		9 8.3 250°44	1°6/ 6.9 18		
8 9	23 31.69	- 2 40.3	1.654	2.546	13.5	21.1	8 9	23 30.97	- 7 7.9	1.632	2.536	13.0	21.9
8 19	23 25.29	- 3 17.5	1.602	2.557	9.5	20.9	8 19	23 25.05	- 7 57.2	1.560	2.523	9.0	21.7
8 29	23 17.04	- 4 6.4	1.573	2.568	5.0	20.6	8 29	23 17.08	- 8 55.7	1.513	2.511	4.6	21.4
9 8	23 7.84	- 5 1.4	1.571	2.578	0.3	20.3	9 8	23 7.86	- 9 56.7	1.492	2.498	1.7	21.2
9 18	22 58.70	- 5 56.0	1.596	2.588	4.5	20.7	9 18	22 58.46	-10 52.9	1.498	2.484	5.7	21.4
9 28	22 50.71	- 6 43.5	1.648	2.597	8.9	21.0	9 28	22 50.05	-11 37.2	1.530	2.470	10.2	21.6
10 8	22 44.69	- 7 19.2	1.724	2.606	12.7	21.2	10 8	22 43.60	-12 5.3	1.585	2.456	14.2	21.9
10 18	22 41.11	- 7 40.3	1.821	2.614	15.9	21.5	10 18	22 39.73	-12 15.2	1.660	2.442	17.7	22.1
352986	2009 <i>BA</i> ₉₉		9 8.3 289°46	1°8/ 6.9 18			144561	2004 <i>FK</i> ₁₂		9 8.3 242°76	3°2/ 11.8 18		
8 9	23 32.44	- 9 34.3	1.719	2.623	12.4	20.8	8 9	23 28.70	+ 6 47.2	2.408	3.252	11.5	20.8
8 19	23 26.04	- 9 50.5	1.642	2.605	8.7	20.5	8 19	23 23.02	+ 6 37.7	2.315	3.235	8.9	20.6
8 29	23 17.57	-10 11.2	1.590	2.587	4.5	20.3	8 29	23 15.88	+ 6 13.3	2.247	3.218	5.9	20.4
9 8	23 7.85	-10 31.3	1.563	2.568	1.9	20.0	9 8	23 7.84	+ 5 35.7	2.206	3.200	3.5	20.2
9 18	22 57.93	-10 45.6	1.564	2.550	5.5	20.3	9 18	22 59.60	+ 4 48.1	2.194	3.182	4.0	20.2
9 28	22 48.95	-10 49.7	1.591	2.532	9.9	20.5	9 28	22 51.95	+ 3 55.1	2.210	3.163	6.7	20.3
10 8	22 41.90	-10 40.7	1.643	2.514	13.8	20.7	10 8	22 45.59	+ 3 2.2	2.254	3.144	9.8	20.5
10 18	22 37.41	-10 17.9	1.714	2.495	17.2	20.9	10 18	22 41.04	+ 2 14.1	2.321	3.124	12.6	20.6
126035	2001 <i>YY</i> ₆₇		9 8.3 108°08	6°4/ 14.3 18			398663	2012 <i>UY</i> ₈₆		9 8.3 286°78	0°9/ 8.9 18		
8 9	23 31.75	+13 19.9	1.833	2.654	15.5	19.4	8 9	23 29.29	- 1 25.1	1.743	2.632	13.0	21.3
8 19	23 25.29	+13 40.3	1.773	2.668	12.5	19.2	8 19	23 23.89	- 1 49.5	1.655	2.609	9.4	21.0
8 29	23 17.05	+13 37.9	1.735	2.681	9.4	19.1	8 29	23 16.51	- 2 27.5	1.592	2.585	5.2	20.7
9 8	23 7.84	+13 13.2	1.721	2.694	7.0	18.9	9 8	23 7.86	- 3 15.0	1.554	2.561	1.0	20.4
9 18	22 58.63	+12 29.5	1.734	2.707	6.6	19.0	9 18	22 58.88	- 4 6.3	1.543	2.537	4.4	20.6
9 28	22 50.45	+11 32.9	1.773	2.719	8.6	19.1	9 28	22 50.70	- 4 54.9	1.559	2.512	9.0	20.8
10 8	22 44.12	+10 31.0	1.837	2.732	11.4	19.3	10 8	22 44.27	- 5 34.7	1.599	2.488	13.2	21.0
10 18	22 40.14	+ 9 30.9	1.923	2.743	14.1	19.5	10 18	22 40.27	- 6 1.4	1.660	2.463	16.8	21.2
471804	2012 <i>VS</i> ₉₉		9 8.3 277°19	1°4/ 9.6 18			308368	2005 <i>QG</i> ₁₇₇		9 8.3 19°99	0°1/ 8.2 18		
8 9	23 28.65	+ 1 1.3	1.917	2.796	12.5	21.8	8 9	23 30.76	- 5 13.8	1.898	2.792	11.9	20.0
8 19	23 23.33	+ 0 27.8	1.823	2.769	9.2	21.5	8 19	23 24.55	- 5 18.4	1.836	2.793	8.3	19.8
8 29	23 16.17	- 0 21.2	1.752	2.742	5.3	21.2	8 29	23 16.66	- 5 30.2	1.799	2.795	4.3	19.6
9 8	23 7.82	- 1 22.0	1.708	2.714	1.6	20.9	9 8	23 7.87	- 5 45.5	1.789	2.797	0.1	19.2
9 18	22 59.14	- 2 29.1	1.692	2.686	4.0	21.1	9 18	22 59.08	- 6 0.2	1.807	2.799	4.1	19.6
9 28	22 51.12	- 3 35.7	1.704	2.657	8.3	21.3	9 28	22 51.24	- 6 10.3	1.852	2.801	8.1	19.8
10 8	22 44.69	- 4 35.1	1.741	2.628	12.3	21.4	10 8	22 45.13	- 6 12.7	1.922	2.803	11.7	20.1
10 18	22 40.48	- 5 22.2	1.799	2.599	15.8	21.6	10 18	22 41.22	- 6 5.5	2.014	2.806	14.6	20.3
277021	2005 <i>AR</i> ₆₈		9 8.3 209°54	2°2/ 6.4 17			239343	2007 <i>RB</i> ₁₁₃		9 8.3 344°71	0°3/ 8.5 18		
8 9	23 31.92	- 8 29.1	1.578	2.484	13.2	21.3	8 9	23 26.58	- 1 38.8	1.661	2.558	13.2	20.0
8 19	23 25.68	- 9 25.6	1.516	2.480	9.1	21.1	8 19	23 21.86	- 2 31.2	1.598	2.556	9.3	19.8
8 29	23 17.36	-10 29.9	1.478	2.476	4.7	20.8	8 29	23 15.35	- 3 37.9	1.559	2.554	4.9	19.5
9 8	23 7.85	-11 34.2	1.467	2.471	2.4	20.7	9 8	23 7.84	- 4 52.8	1.545	2.552	0.3	19.2
9 18	22 58.27	-12 30.9	1.483	2.466	6.2	20.9	9 18	23 0.27	- 6 8.2	1.558	2.551	4.5	19.5
9 28	22 49.81	-13 13.1	1.524	2.460	10.6	21.1	9 28	22 53.64	- 7 16.6	1.597	2.549	8.9	19.8
10 8	22 43.41	-13 37.2	1.589	2.454	14.5	21.4	10 8	22 48.80	- 8 11.7	1.661	2.548	12.8	20.0
10 18	22 39.66	-13 42.1	1.673	2.448	17.8	21.6	10 18	22 46.26	- 8 49.9	1.745	2.548	16.1	20.2
401705	2013 <i>HT</i> ₄₈		9 8.3 58°93	3°4/ 12.3 18			487197	2014 <i>OV</i> ₃₅₆		9 8.3 316°51	3°9/ 12.2 17		
8 9	23 25.71	+ 7 34.8	2.168	3.019	12.4	21.3	8 9	23 27.80	+ 7 3.9	2.145	2.995	12.5	21.6
8 19	23 20.92	+ 7 14.2	2.100	3.022	9.5	21.1	8 19	23 22.47	+ 7 14.3	2.068	2.989	9.7	21.4
8 29	23 14.73	+ 6 36.6	2.054	3.025	6.4	21.0	8 29	23 15.61	+ 7 9.3	2.014	2.984	6.6	21.2
9 8	23 7.79	+ 5 44.7	2.035	3.029	3.8	20.8	9 8	23 7.86	+ 6 50.2	1.986	2.978	4.2	21.0
9 18	23 0.80	+ 4 42.8	2.043	3.032	4.1	20.8	9 18	22 59.99	+ 6 19.7	1.986	2.972	4.5	21.0
9 28	22 54.55	+ 3 36.7	2.079	3.036	6.8	21.0	9 28	22 52.84	+ 5 42.5	2.013	2.967	7.2	21.2
10 8	22 49.70	+ 2 32.5	2.141	3.039	9.9	21.2	10 8	22 47.13	+ 5 3.8	2.066	2.962	10.2	21.4
10 18	22 46.68	+ 1 35.2	2.227	3.043	12.6	21.4	10 18	22 43.38	+ 4 28.5	2.141	2.957	13.1	21.6
396439	2014 <i>EU</i> ₄₉		9 8.3 221°73	3°6/ 11.7 18			43199	2000 <i>AJ</i> ₆₈		9 8.3 35°85	4°5/ 3.3 18		
8 9	23 31.61	+ 6 29.6	2.273	3.116	12.1	21.4	8 9	23 27.35	-17 6.1	2.061	2.973	10.2	17.5
8 19	23 25.08	+ 6 37.5	2.187	3.106	9.3	21.2	8 19	23 22.10	-18 9.4	2.013	2.976	7.3	17.3
8 29	23 16.95	+ 6 30.9	2.126	3.096	6.3	21.0	8 29	23 15.37	-19 10.8	1.991	2.979	4.9	17.2
9 8	23 7.85	+ 6 11.0	2.091	3.084	3.9	20.8	9 8	23 7.85	-20 3.8	1.996	2.982	4.8	17.2
9 18	22 58.57	+ 5 40.6	2.086	3.072	4.3	20.8	9 18	23 0.37	-20 43.0	2.027	2.985	7.1	17.3
9 28	22 49.98	+ 5 3.9	2.109	3.060	7.1	21.0	9 28	22 53.78	-21 4.7	2.085	2.989	10.0	17.5
10 8	22 42.84	+ 4 26.1	2.159	3.047	10.3	21.1	10 8	22 48.76	-21 7.8	2.166	2.992	12.7	17.7
10 18	22 37.68	+ 3 51.8	2.233	3.033	13.1	21.3	10 18	22 45.73	-20 53.0	2.267	2.996	15.0	17.9
189149	2002 <i>GE</i> ₁₇₅		9 8.3 30°56	4°5/ 3.6 18			418142	2008 <i>AF</i> ₅₉		9 8.3 189°86	0°3/ 8.8 17		
8 9	23 29.05	-18 7.8	2.090	3.000	10.3	19.8	8 9	23 22.85	- 2 32.6	3.872	4.748	6.8	22.8
8 19	23 23.25	-18 55.4	2.041	3.001	7.4	19.7	8 19	23 18.48	- 3 0.4	3.799	4.746	4.8	22.7
8 29	23 15.93	-19 39.8	2.016	3.003	5.0	19.5	8 29	23 13.35	- 3 33.6	3.753	4.745	2.6	22.5
9 8	23 7.83	-20 15.3	2.019	3.005	4.8	19.5	9 8	23 7.81	- 4 9.9	3.736	4.743	0.3	22.3
9 18	22 59.78	-20 37.1	2.049	3.007	7.0	19.7	9 18	23 2.24	- 4 46.8	3.749	4.741	2.2	22.5
9 28	22 52.65	-20 42.2	2.105	3.009	9.9	19.8	9 28	22 57.05	- 5 21.7	3.792	4.738	4.5	22.7
10 8	22 47.13	-20 30.1	2.185	3.011	12.6	20.0	10 8	22 52.62	- 5 52.3	3.864	4.736	6.5	22.8
10 18	22 43.66	-20 1.8	2.284	3.013	14.9	20.2	10 18	22 49.22	- 6 16.7	3.960	4.733	8.3	22.9
60200	1999 <i>VV</i> ₅₆		9 8.3 23°37	2°1/ 6.6 18			284954	2010 <i>EF</i> ₁₂₉		9			

EPHEMERIDES

9 8.3

9 8.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
330584	2008 <i>CP</i> ₁₂₃		9 8.3 220°60	0°4/ 8.6 18			404021	2012 <i>CY</i> ₁₇		9 8.3 266°42	2°3/10.5 18		
8 9	23 30.83	- 1 52.2	1.623	2.515	13.7	21.7	8 9	23 28.70	+ 2 24.6	2.239	3.105	11.5	20.9
8 19	23 24.91	- 2 31.8	1.554	2.509	9.7	21.5	8 19	23 23.05	+ 2 24.8	2.161	3.098	8.5	20.7
8 29	23 17.00	- 3 25.4	1.509	2.503	5.2	21.2	8 29	23 15.92	+ 2 13.1	2.107	3.090	5.2	20.5
9 8	23 7.90	- 4 27.5	1.490	2.497	0.5	20.9	9 8	23 7.93	+ 1 51.6	2.080	3.082	2.5	20.3
9 18	22 58.68	- 5 31.1	1.498	2.491	4.6	21.2	9 18	22 59.82	+ 1 23.6	2.082	3.074	3.6	20.4
9 28	22 50.47	- 6 28.6	1.532	2.483	9.3	21.4	9 28	22 52.41	+ 0 53.3	2.111	3.066	6.9	20.6
10 8	22 44.22	- 7 14.1	1.591	2.476	13.4	21.7	10 8	22 46.40	+ 0 25.1	2.167	3.057	10.1	20.8
10 18	22 40.51	- 7 44.0	1.670	2.468	16.9	21.9	10 18	22 42.28	+ 0 2.7	2.246	3.049	12.9	20.9
301459	2009 <i>DB</i> ₁₁₆		9 8.3 259°77	0°4/ 8.7 18			146933	2002 <i>CZ</i> ₃₀₉		9 8.3 114°92	1°8/10.4 18		
8 9	23 28.53	- 2 22.9	1.877	2.768	12.2	21.5	8 9	23 27.10	+ 2 35.5	2.308	3.175	11.1	20.6
8 19	23 23.08	- 2 52.4	1.809	2.764	8.6	21.3	8 19	23 21.80	+ 2 10.4	2.246	3.184	8.1	20.4
8 29	23 15.96	- 3 33.0	1.765	2.759	4.6	21.0	8 29	23 15.20	+ 1 33.0	2.209	3.193	4.9	20.3
9 8	23 7.88	- 4 20.3	1.748	2.755	0.5	20.7	9 8	23 7.92	+ 0 46.5	2.199	3.202	2.0	20.1
9 18	22 59.72	- 5 8.8	1.758	2.751	4.1	21.0	9 18	23 0.64	- 0 4.8	2.218	3.211	3.3	20.2
9 28	22 52.44	- 5 52.7	1.796	2.747	8.2	21.2	9 28	22 54.10	- 0 56.0	2.266	3.220	6.5	20.4
10 8	22 46.80	- 6 27.1	1.858	2.743	11.8	21.5	10 8	22 48.91	- 1 42.3	2.340	3.228	9.5	20.6
10 18	22 43.34	- 6 49.2	1.942	2.738	14.9	21.7	10 18	22 45.48	- 2 20.3	2.437	3.237	12.1	20.8
329285	2000 <i>CU</i> ₁₀₆		9 8.3 72°57	0°6/ 7.8 17			145445	Le Floch		9 8.3 65°97	1°3/ 6.9 18		
8 9	23 31.27	- 4 10.4	1.399	2.303	14.7	21.0	8 9	23 27.48	- 6 58.2	1.929	2.831	11.3	20.2
8 19	23 25.12	- 5 0.1	1.362	2.324	10.1	20.8	8 19	23 22.24	- 7 46.8	1.876	2.838	7.8	20.0
8 29	23 16.99	- 6 1.0	1.347	2.344	5.1	20.5	8 29	23 15.48	- 8 42.2	1.847	2.845	3.9	19.8
9 8	23 7.91	- 7 5.7	1.357	2.364	0.6	20.2	9 8	23 7.92	- 9 38.7	1.846	2.852	1.4	19.6
9 18	22 59.06	- 8 6.0	1.394	2.385	5.2	20.6	9 18	23 0.40	-10 30.3	1.873	2.859	4.7	19.8
9 28	22 51.60	- 8 54.8	1.456	2.405	9.9	21.0	9 28	22 53.77	-11 11.8	1.926	2.866	8.5	20.1
10 8	22 46.35	- 9 27.7	1.541	2.425	13.8	21.3	10 8	22 48.75	-11 39.8	2.004	2.874	11.8	20.3
10 18	22 43.74	- 9 42.9	1.646	2.445	17.1	21.5	10 18	22 45.77	-11 52.7	2.103	2.881	14.5	20.5
327679	2006 <i>RS</i> ₃₇		9 8.3 317°73	3°1/ 5.7 18			379619	2011 <i>DB</i> ₃		9 8.3 254°01	0°9/ 7.4 18		
8 9	23 27.09	- 8 20.4	1.240	2.163	14.7	20.1	8 9	23 30.24	- 5 5.5	1.680	2.579	12.9	22.0
8 19	23 22.76	- 9 42.4	1.178	2.150	10.2	19.8	8 19	23 24.56	- 5 57.0	1.604	2.565	9.0	21.8
8 29	23 16.05	-11 16.5	1.139	2.139	5.3	19.5	8 29	23 16.88	- 7 0.0	1.552	2.550	4.6	21.5
9 8	23 7.90	-12 51.9	1.124	2.127	3.4	19.3	9 8	23 7.97	- 8 8.3	1.527	2.534	1.0	21.2
9 18	22 59.55	-14 17.2	1.133	2.117	7.7	19.5	9 18	22 58.84	- 9 14.3	1.529	2.518	5.2	21.5
9 28	22 52.43	-15 22.2	1.166	2.106	12.7	19.8	9 28	22 50.61	-10 10.6	1.558	2.502	9.8	21.7
10 8	22 47.63	-16 1.4	1.219	2.097	17.2	20.0	10 8	22 44.26	-10 51.8	1.610	2.485	13.9	21.9
10 18	22 45.82	-16 13.3	1.290	2.088	20.9	20.3	10 18	22 40.41	-11 15.2	1.682	2.468	17.3	22.1
19027	2000 <i>SZ</i> ₁₄₉		9 8.3 238°19	3°3/ 4.9 18			476824	2008 <i>UJ</i> ₂₄₈		9 8.3 303°16	2°6/ 6.0 18		
8 9	23 30.08	-14 54.1	2.206	3.111	10.0	18.3	8 9	23 28.81	- 9 36.8	1.571	2.484	12.8	21.7
8 19	23 23.96	-15 30.0	2.144	3.106	7.0	18.1	8 19	23 23.63	-10 28.2	1.503	2.470	8.9	21.4
8 29	23 16.34	-16 5.6	2.108	3.100	4.2	18.0	8 29	23 16.41	-11 26.5	1.458	2.456	4.7	21.2
9 8	23 7.91	-16 35.6	2.100	3.095	3.5	17.9	9 8	23 7.96	-12 24.5	1.439	2.443	2.8	21.0
9 18	22 59.45	-16 55.6	2.120	3.090	5.9	18.0	9 18	22 59.36	-13 14.5	1.446	2.429	6.4	21.2
9 28	22 51.83	-17 2.4	2.167	3.084	9.0	18.2	9 28	22 51.75	-13 50.0	1.478	2.416	10.7	21.4
10 8	22 45.75	-16 54.7	2.239	3.078	11.8	18.4	10 8	22 46.10	-14 7.1	1.533	2.403	14.7	21.7
10 18	22 41.65	-16 32.7	2.331	3.073	14.3	18.6	10 18	22 43.03	-14 4.8	1.607	2.390	18.1	21.9
314554	2005 <i>YS</i> ₁₅₃		9 8.3 198°60	5°6/30.8 18			2980	Cameron		9 8.3 298°51	0°5/ 8.8 18		
8 9	23 27.43	-25 22.0	2.856	3.754	8.2	21.1	8 9	23 26.58	- 0 39.7	1.582	2.478	13.8	17.3
8 19	23 21.95	-26 37.6	2.808	3.751	6.5	21.0	8 19	23 22.12	- 1 34.0	1.502	2.458	9.9	17.0
8 29	23 15.24	-27 46.8	2.787	3.747	5.6	20.9	8 29	23 15.66	- 2 46.0	1.444	2.439	5.4	16.7
9 8	23 7.88	-28 44.3	2.795	3.743	6.0	21.0	9 8	23 7.95	- 4 10.0	1.412	2.419	0.7	16.3
9 18	23 0.48	-29 25.9	2.829	3.738	7.6	21.1	9 18	22 59.96	- 5 37.7	1.406	2.400	4.7	16.5
9 28	22 53.74	-29 49.2	2.890	3.733	9.5	21.2	9 28	22 52.84	- 7 0.0	1.427	2.381	9.5	16.8
10 8	22 48.22	-29 53.9	2.973	3.728	11.3	21.3	10 8	22 47.56	- 8 9.0	1.471	2.362	13.9	17.0
10 18	22 44.33	-29 41.2	3.075	3.722	12.9	21.5	10 18	22 44.78	- 8 59.4	1.535	2.343	17.7	17.2
387785	2003 <i>UW</i> ₂₉₈		9 8.3 345°26	8°2/ 1.2 18			98975	2001 <i>DY</i> ₁₆		9 8.3 145°28	3°2/ 4.9 18		
8 9	23 28.35	-22 13.8	1.349	2.274	13.6	19.6	8 9	23 29.54	-12 39.7	1.987	2.894	10.8	19.6
8 19	23 23.50	-23 38.0	1.304	2.267	10.4	19.4	8 19	23 23.67	-13 42.9	1.936	2.900	7.5	19.4
8 29	23 16.34	-24 54.5	1.280	2.259	8.4	19.3	8 29	23 16.23	-14 48.0	1.911	2.906	4.3	19.2
9 8	23 7.92	-25 52.5	1.280	2.253	8.9	19.3	9 8	23 7.97	-15 48.3	1.914	2.911	3.5	19.2
9 18	22 59.49	-26 23.7	1.304	2.248	11.5	19.4	9 18	22 59.75	-16 37.8	1.945	2.917	6.2	19.3
9 28	22 52.41	-26 24.0	1.349	2.243	14.9	19.6	9 28	22 52.47	-17 12.1	2.002	2.921	9.5	19.6
10 8	22 47.68	-25 54.5	1.413	2.239	18.1	19.8	10 8	22 46.83	-17 28.9	2.083	2.926	12.5	19.8
10 18	22 45.84	-24 58.9	1.493	2.237	20.9	20.0	10 18	22 43.30	-17 28.4	2.185	2.930	15.0	20.0
225727	2001 <i>RU</i> ₁₀₆		9 8.3 7°49	1°3/ 7.4 18			284521	2007 <i>RN</i> ₉₆		9 8.3 292°36	1°0/ 9.3 18		
8 9	23 27.06	- 6 26.6	1.016	1.944	16.7	19.6	8 9	23 25.84	+ 1 10.6	1.763	2.649	13.1	20.1
8 19	23 22.85	- 6 53.7	0.971	1.945	11.6	19.3	8 19	23 21.46	+ 0 9.8	1.678	2.628	9.5	19.8
8 29	23 16.08	- 7 32.5	0.947	1.947	5.9	19.0	8 29	23 15.27	- 1 9.6	1.616	2.608	5.3	19.6
9 8	23 7.92	- 8 14.9	0.944	1.951	1.3	18.7	9 8	23 7.95	- 2 42.1	1.581	2.587	1.2	19.2
9 18	22 59.82	- 8 52.2	0.963	1.956	6.5	19.1	9 18	23 0.38	- 4 20.2	1.573	2.567	4.2	19.4
9 28	22 53.28	- 9 16.3	1.005	1.963	12.0	19.4	9 28	22 53.56	- 5 54.8	1.592	2.547	8.7	19.6
10 8	22 49.39	- 9 22.6	1.066	1.971	16.8	19.7	10 8	22 48.39	- 7 17.9	1.636	2.526	12.8	19.8
10 18	22 48.66	- 9 9.7	1.144	1.980	20.7	20.0	10 18	22 45.49	- 8 23.9	1.702	2.506	16.4	20.0
136236	2003 <i>WP</i> ₁₃₇		9 8.3 262°33	3°5/11.2 18			62392	2000 <i>SW</i> ₁₆₈		9 8.3 82°65	0°		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
63917	2001 <i>SJ</i> ₃₇		9 8.3 345°45	1.8°/ 6.6	18		369466	2010 <i>RA</i> ₁₄₂		9 8.3 132°18	4°0'/11.7	17	
8 9	23 28.04	- 8 23.4	1.768	2.676	11.9	19.1	8 9	23 29.91	+ 6 49.1	1.423	2.293	16.6	21.5
8 19	23 22.82	- 9 5.4	1.708	2.673	8.2	18.9	8 19	23 24.46	+ 6 25.0	1.361	2.296	12.6	21.2
8 29	23 15.88	- 9 53.8	1.673	2.670	4.2	18.6	8 29	23 16.86	+ 5 36.5	1.320	2.298	8.2	21.0
9 8	23 7.97	-10 42.4	1.663	2.668	1.9	18.5	9 8	23 8.03	+ 4 27.7	1.302	2.301	4.4	20.8
9 18	23 0.04	-11 25.2	1.681	2.666	5.3	18.7	9 18	22 59.14	+ 3 5.5	1.311	2.304	5.2	20.8
9 28	22 53.05	-11 56.8	1.725	2.665	9.3	18.9	9 28	22 51.42	+ 1 39.9	1.345	2.306	9.3	21.1
10 8	22 47.81	-12 13.8	1.792	2.664	12.9	19.2	10 8	22 45.86	+ 0 20.4	1.403	2.308	13.5	21.3
10 18	22 44.82	-12 14.9	1.880	2.663	15.9	19.4	10 18	22 43.03	- 0 45.7	1.482	2.310	17.2	21.6
12552	1998 <i>QQ</i> ₄₅		9 8.3 189°26	2°5'/10.9	18		377588	2005 <i>NJ</i> ₈₇		9 8.3 71°35	1°4'/ 7.1	17	
8 9	23 29.15	+ 3 35.0	2.529	3.385	10.7	17.7	8 9	23 30.96	- 5 47.4	1.356	2.266	14.7	21.1
8 19	23 23.21	+ 3 39.3	2.455	3.384	8.0	17.6	8 19	23 25.02	- 6 46.6	1.318	2.283	10.1	20.8
8 29	23 15.97	+ 3 32.4	2.405	3.383	5.1	17.4	8 29	23 17.03	- 7 55.8	1.303	2.301	5.1	20.6
9 8	23 7.99	+ 3 16.2	2.383	3.382	2.7	17.2	9 8	23 8.04	- 9 6.5	1.312	2.319	1.5	20.4
9 18	22 59.95	+ 2 53.2	2.391	3.381	3.4	17.3	9 18	22 59.25	-10 10.1	1.348	2.337	5.8	20.8
9 28	22 52.56	+ 2 27.1	2.427	3.379	6.2	17.5	9 28	22 51.87	-10 59.3	1.409	2.355	10.4	21.1
10 8	22 46.44	+ 2 1.8	2.490	3.378	9.1	17.6	10 8	22 46.75	-11 30.1	1.492	2.372	14.4	21.4
10 18	22 42.03	+ 1 40.6	2.577	3.376	11.6	17.8	10 18	22 44.31	-11 41.3	1.595	2.390	17.7	21.6
273948	2007 <i>JG</i> ₃₄		9 8.3 41°22	8°8'/ 1.1	16		105357	2000 <i>QF</i> ₁₀₉		9 8.3 316°94	4°2'/ 5.7	18	
8 9	23 30.97	-23 51.9	1.337	2.259	14.0	19.6	8 9	23 32.31	-12 42.7	1.140	2.065	15.6	19.1
8 19	23 25.14	-25 20.8	1.313	2.271	10.8	19.5	8 19	23 26.69	-13 20.1	1.078	2.050	11.0	18.8
8 29	23 17.10	-26 37.4	1.311	2.284	8.9	19.4	8 29	23 18.25	-14 1.1	1.037	2.035	6.2	18.5
9 8	23 8.01	-27 31.3	1.332	2.298	9.4	19.5	9 8	23 8.08	-14 36.5	1.019	2.020	4.4	18.4
9 18	22 59.22	-27 56.0	1.376	2.312	11.8	19.6	9 18	22 57.69	-14 57.6	1.024	2.007	8.5	18.5
9 28	22 51.99	-27 49.4	1.443	2.327	14.8	19.9	9 28	22 48.74	-14 57.9	1.052	1.994	13.6	18.8
10 8	22 47.21	-27 14.3	1.528	2.342	17.6	20.1	10 8	22 42.53	-14 35.4	1.100	1.981	18.4	19.0
10 18	22 45.27	-26 15.5	1.630	2.357	20.0	20.3	10 18	22 39.77	-13 51.3	1.164	1.969	22.3	19.3
225792	2001 <i>UQ</i> ₁₈₇		9 8.3 258°74	0°2'/ 8.5	18		448660	2010 <i>VM</i> ₁₅₂		9 8.3 210°21	4°8'/ 2.2	18	
8 9	23 28.65	- 2 0.3	1.592	2.488	13.7	20.7	8 9	23 27.18	-19 51.3	2.389	3.297	9.2	21.3
8 19	23 23.43	- 2 49.6	1.527	2.484	9.7	20.4	8 19	23 21.93	-20 59.9	2.338	3.295	6.8	21.1
8 29	23 16.27	- 3 53.3	1.485	2.480	5.1	20.2	8 29	23 15.33	-22 5.1	2.313	3.293	5.0	21.0
9 8	23 8.00	- 5 5.4	1.469	2.476	0.3	19.8	9 8	23 8.00	-23 0.8	2.315	3.291	5.2	21.0
9 18	22 59.63	- 6 18.0	1.479	2.472	4.7	20.1	9 18	23 0.65	-23 42.2	2.346	3.289	7.2	21.2
9 28	22 52.26	- 7 23.3	1.516	2.468	9.3	20.4	9 28	22 54.06	-24 6.1	2.402	3.287	9.6	21.3
10 8	22 46.81	- 8 14.9	1.577	2.463	13.4	20.6	10 8	22 48.85	-24 11.6	2.482	3.284	12.0	21.5
10 18	22 43.82	- 8 49.3	1.657	2.459	16.9	20.8	10 18	22 45.45	-23 59.3	2.581	3.282	14.0	21.6
154226	2002 <i>JL</i> ₈₈		9 8.3 122°00	2°5'/11.4	18		276036	2002 <i>AJ</i> ₁₄₀		9 8.3 344°58	5°1'/ 4.2	18	
8 9	23 25.82	+ 5 25.8	2.336	3.193	11.4	19.9	8 9	23 21.77	-11 30.8	0.985	1.927	15.6	18.5
8 19	23 20.95	+ 4 56.2	2.268	3.197	8.5	19.7	8 19	23 19.42	-12 58.4	0.930	1.910	10.9	18.2
8 29	23 14.80	+ 4 12.1	2.225	3.202	5.4	19.5	8 29	23 14.49	-14 35.8	0.895	1.894	6.3	17.9
9 8	23 7.96	+ 3 16.4	2.208	3.207	2.8	19.3	9 8	23 7.98	-16 9.6	0.881	1.880	5.6	17.8
9 18	23 1.09	+ 2 13.6	2.220	3.211	3.5	19.4	9 18	23 1.27	-17 26.2	0.888	1.868	9.9	18.0
9 28	22 54.90	+ 1 9.1	2.260	3.216	6.4	19.6	9 28	22 55.92	-18 14.7	0.916	1.858	15.0	18.3
10 8	22 50.02	+ 0 8.2	2.327	3.220	9.4	19.8	10 8	22 53.16	-18 30.3	0.962	1.851	19.7	18.5
10 18	22 46.84	- 0 44.7	2.417	3.224	12.0	20.0	10 18	22 53.62	-18 13.4	1.023	1.845	23.6	18.8
251522	2008 <i>GZ</i> ₃₃		9 8.3 23°94	2°0'/10.5	18		264180	2010 <i>EF</i> ₄₂		9 8.3 130°79	1°9'/ 6.4	17	
8 9	23 25.29	+ 3 25.5	1.879	2.755	12.9	20.0	8 9	23 30.71	- 9 23.7	2.075	2.975	10.8	21.2
8 19	23 20.82	+ 2 44.1	1.816	2.758	9.5	19.8	8 19	23 24.40	-10 6.1	2.025	2.986	7.4	21.0
8 29	23 14.81	+ 1 46.2	1.776	2.762	5.7	19.6	8 29	23 16.60	-10 52.5	2.000	2.997	3.8	20.8
9 8	23 7.96	+ 0 36.2	1.762	2.766	2.3	19.4	9 8	23 8.05	-11 37.3	2.003	3.007	2.0	20.7
9 18	23 1.09	- 0 39.7	1.776	2.770	3.8	19.5	9 18	22 59.57	-12 15.7	2.035	3.017	4.9	21.0
9 28	22 55.05	- 1 54.6	1.817	2.775	7.5	19.8	9 28	22 52.02	-12 43.4	2.095	3.027	8.4	21.2
10 8	22 50.57	- 3 1.6	1.883	2.779	11.1	20.0	10 8	22 46.08	-12 57.9	2.179	3.036	11.5	21.4
10 18	22 48.11	- 3 56.2	1.971	2.784	14.1	20.2	10 18	22 42.18	-12 58.6	2.285	3.045	14.0	21.6
361530	Victorfranzhess		9 8.3 170°54	4°5'/ 2.0	18		345076	2005 <i>JB</i> ₈₇		9 8.3 277°89	2°4'/10.8	18	
8 9	23 28.45	-21 45.7	2.872	3.772	8.1	22.0	8 9	23 26.38	+ 4 44.2	1.860	2.730	13.3	21.2
8 19	23 22.60	-22 42.3	2.825	3.775	6.1	21.9	8 19	23 21.76	+ 3 57.4	1.776	2.714	9.9	21.0
8 29	23 15.59	-23 34.4	2.804	3.779	4.7	21.8	8 29	23 15.42	+ 2 51.0	1.714	2.697	6.1	20.7
9 8	23 7.99	-24 17.1	2.813	3.781	4.9	21.8	9 8	23 8.01	+ 1 28.8	1.678	2.681	2.7	20.5
9 18	23 0.41	-24 46.8	2.849	3.783	6.5	22.0	9 18	23 0.39	- 0 2.8	1.670	2.664	4.0	20.5
9 28	22 53.51	-25 1.2	2.912	3.785	8.5	22.1	9 28	22 53.51	- 1 35.6	1.689	2.647	8.0	20.7
10 8	22 47.84	-24 59.9	3.000	3.786	10.5	22.2	10 8	22 48.21	- 3 1.5	1.734	2.630	11.9	20.9
10 18	22 43.75	-24 43.6	3.108	3.787	12.2	22.4	10 18	22 45.08	- 4 14.2	1.801	2.613	15.3	21.1
103715	2000 <i>CA</i> ₉₁		9 8.3 208°86	0°2'/ 8.1	18		183684	2003 <i>YE</i> ₉		9 8.3 221°26	2°0'/ 6.5	18	
8 9	23 28.44	- 3 49.6	2.280	3.167	10.5	20.6	8 9	23 31.78	- 8 23.9	1.751	2.653	12.3	21.1
8 19	23 22.85	- 4 31.1	2.208	3.162	7.3	20.4	8 19	23 25.54	- 9 16.7	1.683	2.645	8.5	20.8
8 29	23 15.83	- 5 21.3	2.161	3.156	3.8	20.1	8 29	23 17.37	-10 16.6	1.640	2.637	4.4	20.6
9 8	23 8.00	- 6 15.9	2.143	3.150	0.2	19.8	9 8	23 8.08	-11 17.1	1.624	2.628	2.1	20.4
9 18	23 0.09	- 7 9.8	2.153	3.143	3.8	20.1	9 18	22 58.66	-12 11.2	1.635	2.619	5.7	20.6
9 28	22 52.88	- 7 58.1	2.192	3.136	7.3	20.3	9 28	22 50.20	-12 52.6	1.674	2.609	9.9	20.8
10 8	22 47.06	- 8 36.6	2.257	3.129	10.6	20.5	10 8	22 43.63	-13 17.6	1.736	2.599	13.6	21.1
10 18	22 43.07	- 9 3.0	2.345	3.121	13.3	20.7	10 18	22 39.50	-13 24.8	1.818	2.588	16.8	21.3
403505	2009 <i>VO</i> ₈₀		9 8.3 6°04	9°7'/27.1	18		180870	2005 <i>JR</i> ₄₄		9 8.3 27			

EPHEMERIDES

9 8.3

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
376096	2010 <i>VH</i> ₁₆₉		9 8.3 317°37	4.5/ 4.9	17		389436	2010 <i>CW</i> ₇₅		9 8.3 178°88	2.3/10.4	18	
8 9	23 31.82	-13 25.8	1.329	2.249	14.2	20.8	8 9	23 32.31	+ 2 8.3	2.103	2.967	12.2	21.4
8 19	23 25.93	-14 24.6	1.276	2.245	9.9	20.5	8 19	23 25.63	+ 2 8.8	2.032	2.968	9.0	21.2
8 29	23 17.67	-15 25.8	1.246	2.242	5.8	20.3	8 29	23 17.34	+ 1 57.0	1.986	2.969	5.5	21.0
9 8	23 8.09	-16 20.1	1.240	2.238	4.8	20.2	9 8	23 8.15	+ 1 35.2	1.968	2.970	2.5	20.8
9 18	22 58.49	-16 59.0	1.259	2.235	8.2	20.4	9 18	22 58.89	+ 1 6.9	1.978	2.970	3.8	20.9
9 28	22 50.24	-17 16.6	1.302	2.232	12.6	20.7	9 28	22 50.46	+ 0 36.7	2.017	2.969	7.3	21.1
10 8	22 44.40	-17 11.2	1.366	2.229	16.6	20.9	10 8	22 43.63	+ 0 9.2	2.082	2.968	10.6	21.3
10 18	22 41.54	-16 44.0	1.448	2.226	19.9	21.1	10 18	22 38.89	- 0 11.9	2.169	2.967	13.5	21.5
412896	2014 <i>QQ</i> ₇₀		9 8.3 130°46	5.1/14.1	18		452001	2014 <i>OP</i> ₄₆		9 8.3 306°92	1.3/ 7.0	17	
8 9	23 28.75	+12 27.7	2.463	3.275	12.3	21.4	8 9	23 26.86	- 7 14.8	2.023	2.925	10.9	21.5
8 19	23 23.00	+12 45.5	2.391	3.281	9.9	21.2	8 19	23 21.97	- 7 53.4	1.948	2.910	7.6	21.3
8 29	23 15.90	+12 46.5	2.342	3.286	7.4	21.1	8 29	23 15.49	- 8 39.0	1.898	2.895	3.9	21.1
9 8	23 8.05	+12 31.3	2.319	3.291	5.5	21.0	9 8	23 8.09	- 9 26.6	1.875	2.881	1.3	20.8
9 18	23 0.13	+12 2.0	2.324	3.296	5.2	21.0	9 18	23 0.54	-10 10.9	1.879	2.866	4.6	21.1
9 28	22 52.89	+11 22.5	2.357	3.301	6.9	21.1	9 28	22 53.74	-10 46.6	1.911	2.852	8.4	21.3
10 8	22 46.97	+10 38.0	2.416	3.306	9.2	21.2	10 8	22 48.43	-11 10.0	1.967	2.838	11.9	21.5
10 18	22 42.82	+ 9 53.5	2.499	3.310	11.5	21.4	10 18	22 45.13	-11 19.1	2.044	2.824	14.8	21.6
158133	2001 <i>FT</i> ₂₆		9 8.3 185°25	3.0/12.9	18		395534	2011 <i>UW</i> ₁₅₄		9 8.3 26°09	4.2/ 4.3	18	
8 9	23 25.00	+ 9 22.5	2.886	3.714	10.2	20.7	8 9	23 28.75	-15 7.1	1.784	2.698	11.5	20.8
8 19	23 20.25	+ 8 46.5	2.806	3.714	7.9	20.5	8 19	23 23.31	-16 3.9	1.736	2.701	8.0	20.6
8 29	23 14.43	+ 7 55.7	2.751	3.714	5.5	20.4	8 29	23 16.15	-17 0.3	1.712	2.705	5.0	20.4
9 8	23 8.01	+ 6 52.6	2.723	3.713	3.4	20.3	9 8	23 8.11	-17 49.3	1.715	2.709	4.5	20.4
9 18	23 1.54	+ 5 40.6	2.725	3.711	3.4	20.3	9 18	23 0.12	-18 24.8	1.745	2.712	7.1	20.6
9 28	22 55.61	+ 4 24.7	2.756	3.710	5.5	20.4	9 28	22 53.15	-18 42.8	1.799	2.717	10.5	20.8
10 8	22 50.72	+ 3 9.7	2.815	3.708	8.0	20.6	10 8	22 47.98	-18 41.8	1.877	2.721	13.6	21.0
10 18	22 47.26	+ 2 0.3	2.900	3.705	10.3	20.7	10 18	22 45.06	-18 22.6	1.974	2.726	16.2	21.2
274553	2008 <i>SS</i> ₂₅₇		9 8.3 25°45	3.5/ 5.8	17		307118	2002 <i>CW</i> ₉₃		9 8.3 193°51	0.2/ 8.2	18	
8 9	23 29.15	-11 3.2	1.156	2.083	15.2	19.7	8 9	23 32.15	- 4 43.4	1.938	2.828	11.9	21.3
8 19	23 24.04	-11 50.6	1.121	2.093	10.5	19.5	8 19	23 25.62	- 5 2.7	1.872	2.827	8.4	21.1
8 29	23 16.63	-12 42.2	1.107	2.105	5.6	19.3	8 29	23 17.36	- 5 30.3	1.830	2.825	4.3	20.9
9 8	23 8.08	-13 28.6	1.116	2.118	3.7	19.2	9 8	23 8.15	- 6 1.8	1.816	2.823	0.2	20.5
9 18	22 59.75	-14 2.0	1.148	2.132	7.5	19.5	9 18	22 58.89	- 6 32.4	1.830	2.821	4.2	20.8
9 28	22 52.97	-14 16.6	1.204	2.147	12.1	19.8	9 28	22 50.54	- 6 57.5	1.872	2.818	8.2	21.1
10 8	22 48.68	-14 10.5	1.281	2.163	16.2	20.1	10 8	22 43.91	- 7 13.4	1.939	2.815	11.8	21.3
10 18	22 47.28	-13 44.6	1.375	2.180	19.5	20.4	10 18	22 39.51	- 7 18.0	2.027	2.811	14.8	21.5
18702	Sadowski		9 8.3 255°86	0.4/ 8.7	18		220312	2003 <i>EX</i> ₄₂		9 8.3 325°94	1.0/10.2	17	
8 9	23 30.88	- 2 45.0	1.904	2.791	12.2	18.8	8 9	23 20.31	+ 1 34.2	3.869	4.733	7.1	19.9
8 19	23 24.88	- 3 8.0	1.822	2.775	8.7	18.5	8 19	23 16.83	+ 1 0.7	3.789	4.727	5.2	19.8
8 29	23 17.06	- 3 41.8	1.765	2.759	4.7	18.2	8 29	23 12.62	+ 0 19.8	3.735	4.721	3.0	19.6
9 8	23 8.12	- 4 22.4	1.734	2.742	0.5	17.9	9 8	23 8.01	- 0 26.5	3.711	4.715	1.1	19.5
9 18	22 58.95	- 5 4.7	1.732	2.725	4.2	18.1	9 18	23 3.36	- 1 15.5	3.716	4.709	2.1	19.6
9 28	22 50.59	- 5 43.0	1.757	2.707	8.4	18.4	9 28	22 59.06	- 2 4.2	3.750	4.703	4.2	19.7
10 8	22 43.89	- 6 12.6	1.808	2.689	12.3	18.6	10 8	22 55.46	- 2 49.8	3.813	4.698	6.3	19.9
10 18	22 39.46	- 6 30.2	1.880	2.671	15.5	18.8	10 18	22 52.84	- 3 29.9	3.901	4.692	8.1	20.0
371483	2006 <i>TQ</i> ₄₆		9 8.3 332°56	3.0/10.5	18		454170	2013 <i>FT</i> ₁₈		9 8.3 95°05	6.7/31.7	18	
8 9	23 23.49	+ 2 56.7	1.036	1.946	18.1	20.2	8 9	23 30.48	-26 36.5	2.270	3.169	10.0	20.9
8 19	23 20.68	+ 2 35.6	0.965	1.924	13.6	19.8	8 19	23 24.24	-27 36.4	2.236	3.178	8.0	20.8
8 29	23 15.23	+ 1 47.1	0.912	1.903	8.3	19.5	8 29	23 16.54	-28 26.6	2.228	3.187	6.8	20.8
9 8	23 8.06	+ 0 35.4	0.879	1.884	3.4	19.1	9 8	23 8.13	-29 1.1	2.246	3.196	7.2	20.8
9 18	23 0.48	- 0 50.6	0.869	1.866	5.7	19.2	9 18	22 59.87	-29 16.1	2.290	3.205	8.8	20.9
9 28	22 54.09	- 2 18.2	0.881	1.850	11.5	19.5	9 28	22 52.57	-29 10.1	2.359	3.214	10.9	21.1
10 8	22 50.24	- 3 34.8	0.912	1.835	17.0	19.7	10 8	22 46.91	-28 43.9	2.451	3.223	13.0	21.2
10 18	22 49.73	- 4 31.4	0.960	1.822	21.8	20.0	10 18	22 43.28	-28 0.2	2.561	3.232	14.7	21.4
442814	2013 <i>AD</i> ₄₆		9 8.3 290°07	0.2/ 8.1	18		220669	2004 <i>RT</i> ₁₉₈		9 8.3 25°17	0.6/ 7.8	18	
8 9	23 29.21	- 4 34.0	1.852	2.748	12.1	21.0	8 9	23 30.27	- 6 43.5	1.876	2.774	11.8	19.6
8 19	23 23.68	- 4 58.0	1.781	2.739	8.5	20.7	8 19	23 24.27	- 6 51.5	1.820	2.779	8.2	19.4
8 29	23 16.40	- 5 31.3	1.734	2.729	4.4	20.5	8 29	23 16.64	- 7 5.4	1.788	2.784	4.2	19.2
9 8	23 8.10	- 6 9.2	1.713	2.720	0.2	20.1	9 8	23 8.14	- 7 21.2	1.783	2.790	0.6	18.9
9 18	22 59.68	- 6 46.5	1.720	2.711	4.3	20.4	9 18	22 59.69	- 7 34.9	1.805	2.796	4.3	19.2
9 28	22 52.12	- 7 18.0	1.753	2.702	8.5	20.7	9 28	22 52.21	- 7 42.4	1.855	2.802	8.2	19.5
10 8	22 46.25	- 7 39.4	1.812	2.693	12.2	20.9	10 8	22 46.45	- 7 41.1	1.929	2.808	11.7	19.7
10 18	22 42.61	- 7 48.2	1.891	2.684	15.4	21.1	10 18	22 42.87	- 7 29.5	2.025	2.815	14.6	19.9
164742	1998 <i>SS</i> ₁₃₈		9 8.3 351°91	6.3/14.5	18		478502	2012 <i>SJ</i> ₁₇		9 8.3 8°05	0.1/ 8.3	18	
8 9	23 19.01	+12 11.8	1.148	2.023	19.3	18.4	8 9	23 29.24	- 4 11.0	1.304	2.214	15.1	20.7
8 19	23 17.23	+11 43.7	1.080	2.011	15.5	18.1	8 19	23 24.09	- 4 31.1	1.251	2.215	10.6	20.5
8 29	23 13.28	+10 38.4	1.031	2.001	11.2	17.9	8 29	23 16.73	- 5 3.4	1.219	2.216	5.5	20.2
9 8	23 8.01	+ 8 58.6	1.002	1.993	7.4	17.6	9 8	23 8.15	- 5 42.1	1.211	2.218	0.2	19.8
9 18	23 2.55	+ 6 52.6	0.995	1.987	6.7	17.6	9 18	22 59.56	- 6 20.0	1.228	2.221	5.2	20.2
9 28	22 58.21	+ 4 34.6	1.011	1.982	10.1	17.8	9 28	22 52.26	- 6 50.3	1.269	2.225	10.2	20.5
10 8	22 56.04	+ 2 20.5	1.050	1.980	14.5	18.0	10 8	22 47.23	- 7 7.9	1.333	2.230	14.7	20.8
10 18	22 56.68	+ 0 23.2	1.108	1.980	18.7	18.3	10 18	22 45.01	- 7 10.1	1.415	2.235	18.3	21.0
106784	2000 <i>XQ</i> ₂₁		9 8.3 310°25	1.2/ 9.0	18 R		393431	2001 <i>SV</i> ₂₁₇		9 8.3 349°84</			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
355969	2009 AA ₅	9 8.3 321°39	0°8/ 7.7 18				351115	2003 VN ₂	9 8.3 303°40	6°7/ 3.3 18			
8 9	23 28.86	- 5 41.1	1.494	2.402	13.7	20.7	8 9	23 34.99	-22 7.1	1.638	2.547	12.6	20.3
8 19	23 23.78	- 6 9.9	1.426	2.390	9.6	20.4	8 19	23 28.00	-22 44.6	1.575	2.531	9.5	20.0
8 29	23 16.60	- 6 49.0	1.379	2.377	4.9	20.1	8 29	23 18.77	-23 14.5	1.535	2.515	7.1	19.9
9 8	23 8.15	- 7 32.7	1.358	2.365	0.8	19.8	9 8	23 8.24	-23 28.8	1.521	2.499	7.1	19.8
9 18	22 59.53	- 8 14.2	1.363	2.354	5.3	20.1	9 18	22 57.65	-23 22.0	1.532	2.483	9.5	19.9
9 28	22 51.95	- 8 46.8	1.392	2.343	10.1	20.3	9 28	22 48.27	-22 51.6	1.568	2.468	12.8	20.1
10 8	22 46.39	- 9 5.7	1.445	2.333	14.3	20.5	10 8	22 41.12	-21 58.6	1.626	2.453	16.1	20.3
10 18	22 43.47	- 9 8.6	1.517	2.323	17.9	20.8	10 18	22 36.80	-20 46.5	1.702	2.438	19.0	20.5
221822	2008 EP ₃₆	9 8.3 93°43	1°5/ 7.1 17				377581	2005 NL ₃₃	9 8.3 105°08	1°2/ 7.3 17			
8 9	23 32.48	- 6 46.5	1.528	2.432	13.7	20.8	8 9	23 31.58	- 5 44.5	1.559	2.461	13.6	21.3
8 19	23 25.96	- 7 35.4	1.487	2.450	9.4	20.6	8 19	23 25.37	- 6 38.8	1.513	2.475	9.3	21.1
8 29	23 17.54	- 8 32.1	1.469	2.467	4.7	20.4	8 29	23 17.26	- 7 42.3	1.491	2.488	4.7	20.9
9 8	23 8.18	- 9 29.3	1.478	2.484	1.5	20.2	9 8	23 8.19	- 8 47.8	1.495	2.502	1.3	20.6
9 18	22 59.01	-10 20.0	1.513	2.501	5.5	20.5	9 18	22 59.25	- 9 47.7	1.526	2.515	5.3	21.0
9 28	22 51.14	-10 58.2	1.575	2.517	9.8	20.8	9 28	22 51.52	-10 35.6	1.584	2.527	9.7	21.2
10 8	22 45.38	-11 20.4	1.660	2.534	13.6	21.1	10 8	22 45.84	-11 7.2	1.665	2.540	13.5	21.5
10 18	22 42.19	-11 25.7	1.765	2.549	16.6	21.4	10 18	22 42.67	-11 21.2	1.766	2.552	16.6	21.8
520228	2014 DD ₁₅₃	9 8.3 157°12	1°0/ 9.4 18				509900	2009 CV ₅₀	9 8.3 211°59	0°3/ 8.0 18			
8 9	23 28.24	+ 0 6.5	1.990	2.871	12.1	21.9	8 9	23 31.07	- 5 19.2	2.287	3.174	10.5	22.1
8 19	23 22.85	- 0 32.8	1.926	2.874	8.6	21.7	8 19	23 24.72	- 5 40.2	2.214	3.167	7.3	21.9
8 29	23 15.92	- 1 24.9	1.886	2.877	4.8	21.5	8 29	23 16.88	- 6 7.9	2.166	3.161	3.8	21.6
9 8	23 8.14	- 2 25.4	1.873	2.879	1.2	21.2	9 8	23 8.19	- 6 38.6	2.146	3.154	0.3	21.3
9 18	23 0.32	- 3 28.5	1.888	2.882	3.7	21.4	9 18	22 59.41	- 7 8.1	2.156	3.146	3.8	21.6
9 28	22 53.34	- 4 28.2	1.932	2.884	7.6	21.7	9 28	22 51.38	- 7 32.5	2.195	3.138	7.4	21.8
10 8	22 47.92	- 5 19.2	2.000	2.886	11.0	21.9	10 8	22 44.78	- 7 48.4	2.259	3.129	10.6	22.0
10 18	22 44.53	- 5 57.7	2.091	2.888	14.0	22.1	10 18	22 40.11	- 7 54.1	2.347	3.120	13.3	22.2
257395	2009 SW ₂₁₆	9 8.3 246°59	1°8/ 4.6 18				157946	2000 AL ₇₉	9 8.3 275°42	0°2/ 8.5 18			
8 9	23 22.43	-15 36.2	4.721	5.620	5.2	20.5	8 9	23 26.30	- 2 34.8	2.328	3.214	10.3	19.8
8 19	23 18.18	-15 58.7	4.653	5.611	3.7	20.3	8 19	23 21.45	- 3 13.7	2.244	3.197	7.3	19.6
8 29	23 13.29	-16 20.6	4.613	5.603	2.2	20.2	8 29	23 15.21	- 4 2.5	2.186	3.180	3.9	19.4
9 8	23 8.06	-16 39.7	4.602	5.595	2.0	20.2	9 8	23 8.13	- 4 57.2	2.155	3.162	0.3	19.0
9 18	23 2.81	-16 54.2	4.621	5.586	3.2	20.3	9 18	23 0.90	- 5 53.2	2.153	3.145	3.5	19.3
9 28	22 57.88	-17 2.6	4.670	5.577	4.8	20.4	9 28	22 54.27	- 6 45.1	2.179	3.127	7.1	19.5
10 8	22 53.59	-17 3.8	4.745	5.569	6.3	20.5	10 8	22 48.92	- 7 28.6	2.231	3.109	10.4	19.7
10 18	22 50.18	-16 57.4	4.844	5.560	7.7	20.6	10 18	22 45.32	- 8 0.6	2.306	3.091	13.2	19.8
202791	2008 QC ₄	9 8.3 285°23	1°6/11.6 16				110424	2001 TK ₂₁	9 8.3 43°48	5°4/ 4.5 18			
8 9	23 20.59	+ 4 38.8	4.277	5.123	6.8	20.2	8 9	23 32.58	-15 56.7	1.264	2.187	14.5	19.3
8 19	23 16.97	+ 4 20.0	4.193	5.117	5.1	20.1	8 19	23 26.34	-16 50.6	1.230	2.199	10.2	19.1
8 29	23 12.69	+ 3 53.6	4.136	5.111	3.3	19.9	8 29	23 17.83	-17 42.0	1.218	2.211	6.4	18.9
9 8	23 8.04	+ 3 21.1	4.107	5.105	1.8	19.8	9 8	23 8.22	-18 21.6	1.230	2.224	5.7	18.9
9 18	23 3.34	+ 2 44.5	4.108	5.099	2.1	19.9	9 18	22 58.88	-18 42.4	1.266	2.237	8.8	19.2
9 28	22 58.97	+ 2 6.1	4.139	5.093	3.8	20.0	9 28	22 51.12	-18 40.7	1.326	2.251	12.8	19.4
10 8	22 55.23	+ 1 28.6	4.198	5.087	5.7	20.1	10 8	22 45.87	-18 16.7	1.406	2.265	16.4	19.7
10 18	22 52.40	+ 0 54.1	4.282	5.081	7.3	20.2	10 18	22 43.55	-17 33.0	1.504	2.280	19.5	20.0
195269	2002 EZ ₆₀	9 8.3 312°43	0°7/ 9.6 18				520244	2014 DR ₁₅₄	9 8.3 52°34	1°7/ 6.7 18			
8 9	23 21.32	- 0 56.5	4.232	5.102	6.4	20.0	8 9	23 28.61	- 7 45.8	1.818	2.722	11.8	21.5
8 19	23 17.47	- 1 12.3	4.157	5.099	4.6	19.8	8 19	23 23.22	- 8 34.4	1.760	2.723	8.1	21.3
8 29	23 12.94	- 1 33.4	4.108	5.096	2.6	19.7	8 29	23 16.16	- 9 29.7	1.727	2.725	4.1	21.0
9 8	23 8.05	- 1 58.1	4.088	5.093	0.7	19.5	9 8	23 8.18	-10 25.7	1.720	2.726	1.7	20.9
9 18	23 3.13	- 2 24.4	4.097	5.090	1.9	19.6	9 18	23 0.18	-11 16.1	1.741	2.727	5.1	21.1
9 28	22 58.54	- 2 50.1	4.137	5.087	4.0	19.8	9 28	22 53.12	-11 55.3	1.789	2.728	9.1	21.4
10 8	22 54.62	- 3 13.2	4.205	5.085	5.9	19.9	10 8	22 47.78	-12 19.8	1.860	2.729	12.6	21.6
10 18	22 51.61	- 3 31.8	4.297	5.082	7.5	20.0	10 18	22 44.63	-12 28.1	1.952	2.730	15.5	21.8
315357	2007 UR ₅₇	9 8.3 159°54	5°0/ 4.6 17				82925	2001 QG ₁₁₀	9 8.3 299°17	0°2/ 8.1 18			
8 9	23 34.66	-15 29.2	1.414	2.329	13.8	21.2	8 9	23 29.42	- 4 44.4	1.815	2.712	12.2	19.4
8 19	23 27.79	-16 25.3	1.366	2.331	9.8	21.0	8 19	23 23.88	- 5 6.3	1.744	2.703	8.6	19.2
8 29	23 18.62	-17 20.5	1.340	2.333	6.1	20.8	8 29	23 16.56	- 5 37.4	1.698	2.694	4.5	18.9
9 8	23 8.23	-18 5.9	1.340	2.334	5.3	20.7	9 8	23 8.20	- 6 13.0	1.677	2.685	0.2	18.5
9 18	22 57.92	-18 34.0	1.366	2.336	8.4	20.9	9 18	22 59.72	- 6 47.9	1.684	2.676	4.4	18.9
9 28	22 49.02	-18 40.3	1.416	2.337	12.5	21.1	9 28	22 52.12	- 7 16.8	1.718	2.667	8.6	19.1
10 8	22 42.54	-18 24.5	1.488	2.338	16.2	21.4	10 8	22 46.24	- 7 35.7	1.776	2.658	12.4	19.3
10 18	22 39.00	-17 48.4	1.577	2.339	19.3	21.6	10 18	22 42.63	- 7 42.0	1.855	2.650	15.6	19.5
94935	2001 YY ₇₃	9 8.3 266°04	4°9/ 3.9 18				444190	2005 SP ₅₇	9 8.3 266°35	2°3/ 6.2 18			
8 9	23 30.23	-15 28.4	1.635	2.550	12.2	19.7	8 9	23 30.23	-11 22.2	2.092	2.995	10.6	21.3
8 19	23 24.57	-16 40.5	1.579	2.544	8.7	19.5	8 19	23 24.22	-11 50.1	2.028	2.990	7.3	21.0
8 29	23 16.94	-17 53.1	1.547	2.538	5.6	19.3	8 29	23 16.64	-12 20.4	1.990	2.986	3.9	20.8
9 8	23 8.18	-18 57.5	1.541	2.533	5.2	19.3	9 8	23 8.20	-12 48.2	1.978	2.981	2.4	20.7
9 18	22 59.37	-19 46.1	1.562	2.527	8.1	19.4	9 18	22 59.73	-13 9.1	1.995	2.976	5.2	20.9
9 28	22 51.64	-20 13.5	1.607	2.520	11.7	19.7	9 28	22 52.11	-13 19.2	2.040	2.971	8.6	21.1
10 8	22 45.89	-20 18.2	1.674	2.514	15.1	19.9	10 8	22 46.05	-13 16.7	2.109	2.966	11.8	21.3
10 18	22 42.68	-20 1.1	1.760	2.508	18.0	20.1	10 18	22 42.05	-13 1.1	2.199	2.961	14.4	21.5
211433	2002 XL ₆₆	9 8.3 344°79	4°8/ 3.9 18				353211	2009 SQ ₃₅₅	9 8.3 290°93	0°1/ 8.6 18			
8 9	23 28.96	-16 10.4	1.695</										

EPHEMERIDES

9 8.3

9 8.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
376511	2012 LQ		9 8.3 260°72	3°4/ 5.2 18			8539	Laban		9 8.3 330°28	1°8/ 6.6 18		
8 9	23 29.56	-10 17.6	1.502	2.416	13.2	20.5	8 9	23 27.44	-8 15.4	1.836	2.743	11.6	17.2
8 19	23 24.26	-11 37.6	1.441	2.409	9.1	20.2	8 19	23 22.46	-9 1.1	1.773	2.738	8.0	17.0
8 29	23 16.85	-13 4.9	1.404	2.401	5.0	20.0	8 29	23 15.81	-9 53.2	1.734	2.732	4.1	16.8
9 8	23 8.21	-14 30.3	1.393	2.393	3.7	19.9	9 8	23 8.21	-10 45.9	1.722	2.727	1.9	16.6
9 18	22 59.45	-15 44.2	1.408	2.386	7.3	20.1	9 18	23 0.55	-11 33.1	1.737	2.722	5.2	16.8
9 28	22 51.77	-16 39.1	1.448	2.378	11.6	20.3	9 28	22 53.76	-12 9.3	1.778	2.718	9.1	17.0
10 8	22 46.16	-17 10.9	1.510	2.369	15.5	20.5	10 8	22 48.64	-12 30.8	1.843	2.714	12.6	17.2
10 18	22 43.21	-17 19.1	1.590	2.361	18.7	20.7	10 18	22 45.67	-12 36.4	1.929	2.710	15.6	17.4
13014	Hasslachner		9 8.3 320°86	2°9/ 5.5 18			114007	2002 UO ₃₈		9 8.3 226°56	6°5/31.4 18		
8 9	23 28.37	-12 36.8	1.994	2.903	10.7	17.7	8 9	23 29.69	-27 46.4	2.546	3.440	9.3	19.3
8 19	23 23.02	-13 13.0	1.928	2.893	7.4	17.5	8 19	23 23.66	-28 38.1	2.503	3.440	7.5	19.2
8 29	23 16.06	-13 51.0	1.888	2.883	4.2	17.3	8 29	23 16.29	-29 20.6	2.485	3.439	6.5	19.2
9 8	23 8.19	-14 25.6	1.874	2.874	3.0	17.2	9 8	23 8.22	-29 48.6	2.494	3.439	6.9	19.2
9 18	23 0.25	-14 51.5	1.888	2.865	5.8	17.3	9 18	23 0.23	-29 58.6	2.530	3.438	8.4	19.3
9 28	22 53.14	-15 4.8	1.928	2.856	9.2	17.5	9 28	22 53.06	-29 49.2	2.591	3.438	10.3	19.4
10 8	22 47.63	-15 3.3	1.992	2.848	12.4	17.7	10 8	22 47.36	-29 20.9	2.674	3.437	12.2	19.5
10 18	22 44.20	-14 46.8	2.076	2.839	15.2	17.9	10 18	22 43.52	-28 35.9	2.776	3.437	13.9	19.7
501640	2014 SK ₂₁₆		9 8.3 12°55	7°1/ 2.7 17			318181	2004 RG ₆₀		9 8.3 345°97	0°4/ 8.6 18		
8 9	23 29.31	-16 11.8	1.095	2.027	15.3	20.0	8 9	23 28.35	-4 20.9	0.886	1.815	18.4	19.8
8 19	23 24.49	-18 1.0	1.056	2.028	11.0	19.7	8 19	23 24.32	-4 17.0	0.831	1.803	13.2	19.4
8 29	23 17.07	-19 49.8	1.038	2.030	7.6	19.6	8 29	23 17.23	-4 28.4	0.794	1.793	7.0	19.1
9 8	23 8.22	-21 23.8	1.043	2.031	7.7	19.6	9 8	23 8.26	-4 49.2	0.777	1.784	0.5	18.6
9 18	22 59.43	-22 31.1	1.071	2.034	11.2	19.8	9 18	22 59.07	-5 11.6	0.781	1.777	6.4	19.0
9 28	22 52.23	-23 5.0	1.121	2.037	15.4	20.0	9 28	22 51.49	-5 27.0	0.806	1.772	12.8	19.3
10 8	22 47.72	-23 5.1	1.188	2.040	19.3	20.3	10 8	22 46.95	-5 28.9	0.849	1.768	18.4	19.6
10 18	22 46.41	-22 34.9	1.271	2.044	22.5	20.6	10 18	22 46.13	-5 13.9	0.907	1.766	23.0	19.9
381757	2009 SZ ₁₆₀		9 8.3 289°90	2°2/ 6.6 18			124021	2001 FT ₁₁₀		9 8.3 26°12	0°0/ 8.4 18		
8 9	23 30.48	-8 34.7	1.524	2.434	13.3	21.0	8 9	23 26.36	-3 25.1	1.862	2.760	12.0	18.8
8 19	23 25.00	-9 19.9	1.450	2.416	9.3	20.7	8 19	23 21.59	-3 59.3	1.809	2.767	8.4	18.6
8 29	23 17.30	-10 13.4	1.399	2.397	4.8	20.4	8 29	23 15.29	-4 43.3	1.779	2.775	4.4	18.4
9 8	23 8.24	-11 8.3	1.373	2.378	2.3	20.2	9 8	23 8.19	-5 32.2	1.776	2.783	0.1	18.0
9 18	22 58.90	-11 56.8	1.373	2.359	6.2	20.4	9 18	23 1.12	-6 20.5	1.800	2.792	4.0	18.4
9 28	22 50.56	-12 32.0	1.399	2.340	10.9	20.7	9 28	22 54.95	-7 2.6	1.851	2.802	7.9	18.6
10 8	22 44.26	-12 49.6	1.447	2.321	15.2	20.9	10 8	22 50.37	-7 34.1	1.926	2.812	11.4	18.9
10 18	22 40.70	-12 47.9	1.514	2.303	18.8	21.1	10 18	22 47.82	-7 52.7	2.023	2.822	14.3	19.1
163102	2002 AQ ₁₂₅		9 8.3 241°82	0°5/ 7.3 17 R			12818	Tomhanks		9 8.3 34°62	2°4/ 6.1 18		
8 9	23 20.65	-6 52.2	4.410	5.299	5.8	20.0	8 9	23 28.99	-9 42.1	1.686	2.596	12.3	17.7
8 19	23 17.00	-7 24.3	4.339	5.296	4.0	19.9	8 19	23 23.57	-10 32.0	1.634	2.600	8.4	17.5
8 29	23 12.72	-7 59.5	4.297	5.293	2.0	19.7	8 29	23 16.38	-11 27.0	1.606	2.603	4.4	17.3
9 8	23 8.09	-8 35.5	4.283	5.290	0.6	19.6	9 8	23 8.23	-12 20.3	1.604	2.607	2.6	17.2
9 18	23 3.43	-9 10.1	4.300	5.286	2.3	19.7	9 18	23 0.11	-13 5.4	1.629	2.611	5.9	17.4
9 28	22 59.10	-9 41.2	4.346	5.283	4.2	19.9	9 28	22 53.03	-13 36.8	1.679	2.615	9.8	17.7
10 8	22 55.39	-10 6.9	4.420	5.280	6.0	20.0	10 8	22 47.80	-13 51.7	1.753	2.620	13.3	17.9
10 18	22 52.56	-10 25.8	4.518	5.276	7.6	20.1	10 18	22 44.90	-13 49.3	1.847	2.624	16.3	18.1
41768	2000 VB ₃₇		9 8.3 322°89	4°7/ 4.4 18			376665	2013 QC ₁₀		9 8.3 83°46	0°9/ 9.1 17		
8 9	23 26.03	-12 14.0	1.255	2.184	14.1	17.6	8 9	23 33.06	-1 18.9	1.374	2.269	15.5	21.4
8 19	23 22.28	-13 33.2	1.181	2.154	9.9	17.3	8 19	23 26.57	-1 43.9	1.329	2.284	11.0	21.2
8 29	23 16.06	-15 1.2	1.128	2.125	5.9	17.0	8 29	23 17.97	-2 23.6	1.306	2.299	6.0	21.0
9 8	23 8.21	-16 27.2	1.099	2.097	5.1	16.8	9 8	23 8.29	-3 12.1	1.308	2.314	1.1	20.7
9 18	22 59.94	-17 39.7	1.094	2.070	9.1	17.0	9 18	22 58.76	-4 2.3	1.335	2.329	4.8	21.0
9 28	22 52.73	-18 28.9	1.111	2.044	13.9	17.2	9 28	22 50.62	-4 46.8	1.389	2.344	9.6	21.3
10 8	22 47.81	-18 49.5	1.147	2.018	18.5	17.4	10 8	22 44.80	-5 19.8	1.466	2.359	13.8	21.6
10 18	22 45.97	-18 41.0	1.200	1.994	22.4	17.6	10 18	22 41.75	-5 38.4	1.562	2.373	17.3	21.9
67623	2000 SK ₁₇₆		9 8.3 76°51	1°2/ 7.4 18			90307	2003 FB ₁₀		9 8.4 40°58	1°3/ 7.2 18		
8 9	23 31.58	-4 33.3	1.262	2.171	15.6	18.9	8 9	23 27.83	-6 34.3	1.634	2.541	12.7	19.1
8 19	23 25.61	-5 40.2	1.225	2.189	10.7	18.7	8 19	23 22.68	-7 20.3	1.594	2.559	8.7	18.9
8 29	23 17.46	-6 59.4	1.210	2.208	5.4	18.5	8 29	23 15.85	-8 13.9	1.578	2.576	4.4	18.7
9 8	23 8.25	-8 21.5	1.219	2.226	1.2	18.2	9 8	23 8.22	-9 8.4	1.588	2.595	1.3	18.6
9 18	22 59.26	-9 36.7	1.254	2.244	5.9	18.6	9 18	23 0.72	-9 57.4	1.625	2.613	5.0	18.9
9 28	22 51.76	-10 36.5	1.314	2.262	10.8	18.9	9 28	22 54.33	-10 35.2	1.687	2.632	9.1	19.1
10 8	22 46.65	-11 16.2	1.396	2.280	15.0	19.2	10 8	22 49.78	-10 58.4	1.773	2.652	12.6	19.4
10 18	22 44.38	-11 34.4	1.497	2.298	18.4	19.5	10 18	22 47.47	-11 5.8	1.880	2.672	15.5	19.7
92095	1999 XP ₃₀		9 8.3 222°49	3°9/13.4 18			136153	2003 TH ₁₃		9 8.4 292°79	18°0/15.9 18		
8 9	23 25.74	+10 29.2	2.565	3.391	11.4	19.8	8 9	23 40.44	-48 53.2	1.429	2.269	18.1	19.4
8 19	23 20.95	+10 10.2	2.482	3.386	9.0	19.6	8 19	23 33.07	-51 6.0	1.398	2.245	18.0	19.3
8 29	23 14.92	+8 34.7	2.423	3.381	6.4	19.5	8 29	23 21.89	-52 44.1	1.386	2.221	18.6	19.3
9 8	23 8.17	+8 44.4	2.390	3.375	4.3	19.3	9 8	23 8.43	-53 34.6	1.391	2.198	19.9	19.3
9 18	23 1.33	+7 42.6	2.385	3.369	4.2	19.3	9 18	22 54.88	-53 31.1	1.412	2.174	21.5	19.4
9 28	22 55.06	+6 34.3	2.410	3.363	6.2	19.4	9 28	22 43.58	-52 34.8	1.446	2.150	23.3	19.5
10 8	22 49.98	+5 25.0	2.461	3.357	8.8	19.6	10 8	22 36.11	-50 53.3	1.491	2.127	25.0	19.6
10 18	22 46.50	+4 19.8	2.537	3.350	11.3	19.7	10 18	22 33.02	-48 36.2	1.546	2.104	26.5	19.7
177521	2004 EK ₈₃		9 8.3 177°16	2°5/ 5.7 18			313957	2004 RJ ₂₅₀		9 8.4 344°48	0°5/ 8.8 18		
8 9	23 27.52	-9 56.3	1.949	2.856	11.0	20.1	8 9	23 27.87	-3 9.4	1.750</			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
479659	2014 <i>DY</i> ₆₆		9 8.4 331°15	4°5/ 4.3	18		260274	2004 <i>TW</i> ₂		9 8.4 248°23	0°2/ 8.1	18	
8 9	23 29.93	-15 24.0	1.677	2.592	12.0	20.6	8 9	23 27.24	-4 18.5	2.362	3.251	10.1	21.5
8 19	23 24.31	-16 22.3	1.624	2.589	8.5	20.4	8 19	23 22.06	-4 50.2	2.289	3.244	7.1	21.3
8 29	23 16.80	-17 20.4	1.594	2.586	5.3	20.2	8 29	23 15.53	-5 29.6	2.241	3.236	3.7	21.0
9 8	23 8.26	-18 10.7	1.591	2.584	4.8	20.2	9 8	23 8.24	-6 12.9	2.222	3.229	0.2	20.7
9 18	22 59.70	-18 46.5	1.613	2.581	7.6	20.3	9 18	23 0.87	-6 55.6	2.231	3.222	3.6	21.0
9 28	22 52.23	-19 3.2	1.661	2.579	11.2	20.6	9 28	22 54.15	-7 33.4	2.268	3.214	7.0	21.2
10 8	22 46.68	-18 59.4	1.731	2.576	14.5	20.8	10 8	22 48.73	-8 2.6	2.331	3.206	10.1	21.4
10 18	22 43.57	-18 36.1	1.820	2.575	17.3	21.0	10 18	22 45.06	-8 20.9	2.417	3.198	12.8	21.6
390047	2012 <i>UD</i> ₆₉		9 8.4 217°70	4°5/13.3	18		355107	2006 <i>UV</i> ₁₂		9 8.4 322°09	0°8/ 7.6	18	
8 9	23 28.00	+10 44.4	1.941	2.778	14.2	21.1	8 9	23 27.23	-5 7.5	1.813	2.714	12.0	21.1
8 19	23 22.85	+10 17.1	1.862	2.773	11.1	20.9	8 19	23 22.35	-5 52.5	1.747	2.708	8.4	20.9
8 29	23 16.04	+9 27.4	1.805	2.768	7.8	20.6	8 29	23 15.78	-6 47.1	1.706	2.703	4.3	20.6
9 8	23 8.23	+8 17.6	1.774	2.762	5.1	20.5	9 8	23 8.25	-7 45.7	1.690	2.697	0.8	20.3
9 18	23 0.29	+6 52.9	1.769	2.756	5.0	20.5	9 18	23 0.64	-8 42.1	1.702	2.692	4.6	20.6
9 28	22 53.14	+5 20.5	1.793	2.750	7.7	20.6	9 28	22 53.89	-9 29.9	1.741	2.687	8.7	20.8
10 8	22 47.58	+3 49.0	1.842	2.743	11.1	20.8	10 8	22 48.79	-10 4.6	1.804	2.683	12.4	21.1
10 18	22 44.15	+2 25.4	1.915	2.736	14.2	21.0	10 18	22 45.87	-10 23.8	1.887	2.678	15.5	21.3
207023	2004 <i>VS</i> ₄₆		9 8.4 86°55	5°6/ 4.1	18		436411	2011 <i>AW</i> ₁₃		9 8.4 288°74	6°6/ 2.6	18	
8 9	23 33.70	-15 21.2	1.282	2.202	14.6	19.6	8 9	23 31.06	-17 34.3	1.407	2.328	13.5	21.1
8 19	23 27.13	-16 41.1	1.249	2.216	10.2	19.4	8 19	23 25.66	-19 4.1	1.339	2.305	9.9	20.8
8 29	23 18.28	-17 59.3	1.239	2.231	6.5	19.2	8 29	23 17.78	-20 34.8	1.295	2.283	7.0	20.6
9 8	23 8.31	-19 5.2	1.253	2.245	6.0	19.2	9 8	23 8.34	-21 55.0	1.276	2.261	7.1	20.5
9 18	22 58.59	-19 50.2	1.292	2.259	9.1	19.4	9 18	22 58.58	-22 54.2	1.281	2.238	10.3	20.6
9 28	22 50.47	-20 9.8	1.355	2.273	13.1	19.7	9 28	22 49.95	-23 25.3	1.309	2.216	14.4	20.8
10 8	22 44.88	-20 3.7	1.438	2.287	16.7	20.0	10 8	22 43.62	-23 26.4	1.357	2.193	18.2	21.0
10 18	22 42.25	-19 34.9	1.539	2.300	19.7	20.2	10 18	22 40.32	-22 59.2	1.422	2.171	21.5	21.2
37119	2000 <i>VQ</i> ₆		9 8.4 91°17	2°4/ 6.3	18		77525	2001 <i>HK</i> ₅₆		9 8.4 217°35	0°3/ 8.6	18	
8 9	23 31.63	-9 38.8	1.679	2.585	12.5	19.2	8 9	23 31.10	-2 4.5	1.761	2.649	13.0	20.7
8 19	23 25.31	-10 27.5	1.636	2.600	8.6	19.0	8 19	23 25.14	-2 47.6	1.689	2.643	9.2	20.5
8 29	23 17.22	-11 20.4	1.618	2.616	4.5	18.8	8 29	23 17.30	-3 43.8	1.642	2.636	4.9	20.2
9 8	23 8.27	-12 11.0	1.627	2.631	2.5	18.7	9 8	23 8.34	-4 47.8	1.620	2.628	0.4	19.8
9 18	22 59.47	-12 52.8	1.663	2.645	5.8	19.0	9 18	22 59.23	-5 52.9	1.627	2.619	4.4	20.1
9 28	22 51.84	-13 21.0	1.725	2.660	9.6	19.2	9 28	22 51.04	-6 52.1	1.661	2.611	8.8	20.4
10 8	22 46.16	-13 33.1	1.811	2.674	13.1	19.5	10 8	22 44.65	-7 39.5	1.720	2.601	12.8	20.6
10 18	22 42.86	-13 28.8	1.916	2.688	16.0	19.7	10 18	22 40.65	-8 11.7	1.800	2.591	16.1	20.8
122081	2000 <i>HU</i> ₃₉		9 8.4 27°58	1°9/ 7.0	17		60222	1999 <i>VB</i> ₁₁₅		9 8.4 47°65	0°8/ 9.1	18	
8 9	23 26.23	-5 7.5	0.838	1.773	18.5	18.7	8 9	23 29.86	-2 25.8	2.003	2.889	11.8	18.1
8 19	23 22.49	-6 19.1	0.810	1.786	12.7	18.5	8 19	23 23.97	-2 31.2	1.944	2.895	8.4	17.9
8 29	23 16.03	-7 46.2	0.800	1.801	6.3	18.2	8 29	23 16.55	-2 45.7	1.909	2.902	4.6	17.7
9 8	23 8.23	-9 15.6	0.811	1.817	2.0	18.0	9 8	23 8.31	-3 6.2	1.902	2.908	0.9	17.5
9 18	23 0.70	-10 34.0	0.843	1.835	7.4	18.4	9 18	23 0.08	-3 28.5	1.922	2.915	3.7	17.7
9 28	22 55.01	-11 30.4	0.896	1.854	13.1	18.8	9 28	22 52.74	-3 48.6	1.970	2.922	7.4	17.9
10 8	22 52.17	-11 59.9	0.968	1.874	18.0	19.1	10 8	22 47.00	-4 2.6	2.043	2.929	10.8	18.2
10 18	22 52.57	-12 2.3	1.056	1.895	21.9	19.5	10 18	22 43.30	-4 8.1	2.139	2.937	13.7	18.4
338017	2002 <i>FA</i> ₃₀		9 8.4 104°76	1°2/ 9.6	16		395158	2010 <i>CP</i> ₁₃₆		9 8.4 183°55	3°8/ 12.8	18	
8 9	23 29.56	+0 40.4	1.821	2.702	13.0	21.3	8 9	23 27.88	+9 11.7	2.173	3.012	12.8	21.9
8 19	23 23.82	+0 1.3	1.768	2.716	9.3	21.1	8 19	23 22.60	+8 44.2	2.098	3.012	9.9	21.7
8 29	23 16.46	+0 51.7	1.739	2.729	5.2	20.9	8 29	23 15.86	+7 57.9	2.046	3.012	6.8	21.6
9 8	23 8.26	+1 53.5	1.736	2.742	1.4	20.7	9 8	23 8.29	+6 55.5	2.020	3.012	4.2	21.4
9 18	23 0.11	+2 58.1	1.761	2.755	3.9	20.9	9 18	23 0.63	+5 41.5	2.023	3.011	4.3	21.4
9 28	22 52.96	+3 58.7	1.814	2.768	7.9	21.2	9 28	22 53.71	+4 22.1	2.054	3.010	6.9	21.6
10 8	22 47.53	+4 49.9	1.892	2.780	11.4	21.4	10 8	22 48.22	+3 4.4	2.111	3.008	10.0	21.8
10 18	22 44.28	+5 28.1	1.992	2.792	14.5	21.6	10 18	22 44.63	+1 53.9	2.193	3.006	12.9	22.0
142184	2002 <i>RC</i> ₄₇		9 8.4 340°42	3°1/ 6.5	18		272446	2005 <i>UQ</i> ₁₃		9 8.4 205°15	0°2/ 8.5	17	
8 9	23 32.08	-11 6.4	1.150	2.073	15.6	18.7	8 9	23 30.62	-2 32.9	1.901	2.788	12.2	22.1
8 19	23 26.47	-11 26.8	1.093	2.064	10.9	18.5	8 19	23 24.68	-3 11.8	1.831	2.784	8.7	21.8
8 29	23 18.17	-11 51.5	1.058	2.056	5.8	18.2	8 29	23 17.00	-4 2.1	1.785	2.779	4.6	21.6
9 8	23 8.32	-12 12.8	1.045	2.049	3.2	18.0	9 8	23 8.33	-4 58.9	1.767	2.775	0.3	21.2
9 18	22 58.37	-12 23.5	1.056	2.042	7.4	18.2	9 18	22 59.56	-5 56.2	1.777	2.769	4.1	21.5
9 28	22 49.90	-12 18.1	1.089	2.037	12.6	18.5	9 28	22 51.66	-6 48.0	1.815	2.763	8.3	21.8
10 8	22 44.10	-11 54.4	1.144	2.032	17.2	18.7	10 8	22 45.44	-7 29.1	1.878	2.757	12.0	22.0
10 18	22 41.60	-11 12.9	1.215	2.029	21.1	19.0	10 18	22 41.43	-7 56.6	1.962	2.750	15.1	22.2
295914	2008 <i>WD</i> ₁₁₀		9 8.4 319°58	1°5/ 7.1	18		360335	2001 <i>TB</i> ₂₆₀		9 8.4 63°27	4°6/ 5.5	17	
8 9	23 29.25	-7 16.2	1.535	2.444	13.3	20.4	8 9	23 35.65	-13 33.5	1.115	2.037	16.1	20.3
8 19	23 24.01	-7 55.4	1.470	2.435	9.2	20.2	8 19	23 28.70	-14 20.9	1.081	2.050	11.2	20.0
8 29	23 16.74	-8 43.3	1.429	2.427	4.7	19.9	8 29	23 19.17	-15 8.7	1.068	2.064	6.4	19.8
9 8	23 8.28	-9 33.4	1.413	2.419	1.6	19.7	9 8	23 8.41	-15 47.1	1.078	2.078	4.9	19.8
9 18	22 59.70	-10 18.6	1.424	2.412	5.6	19.9	9 18	22 57.97	-16 8.2	1.113	2.092	8.5	20.0
9 28	22 52.17	-10 52.4	1.459	2.405	10.2	20.2	9 28	22 49.37	-16 7.7	1.170	2.106	13.1	20.3
10 8	22 46.64	-11 10.6	1.518	2.398	14.2	20.4	10 8	22 43.62	-15 45.4	1.248	2.120	17.3	20.6
10 18	22 43.68	-11 11.6	1.595	2.391	17.6	20.6	10 18	22 41.15	-15 3.6	1.344	2.134	20.6	20.9
242212	2003 <i>QZ</i> ₁₀₅		9 8.4 351°23	3°4/ 5.6	18		41658	2000 <i>SP</i> ₃₁₉		9 8.4 242°88	4°8/ 4.2	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
268809	2006 <i>VV</i> ₁₅		9 8.4 230°83	0°3/ 8.6 17			511336	2014 <i>EQ</i> ₁₄		9 8.4 252°42	0°9/ 7.6 18		
8 9	23 31.78	- 2 43.2	1.720	2.610	13.2	22.1	8 9	23 30.58	- 6 5.6	1.846	2.743	12.0	21.9
8 19	23 25.67	- 3 14.2	1.647	2.602	9.3	21.9	8 19	23 24.73	- 6 39.6	1.773	2.733	8.4	21.7
8 29	23 17.60	- 3 57.5	1.598	2.593	5.0	21.6	8 29	23 17.08	- 7 22.0	1.725	2.722	4.3	21.4
9 8	23 8.36	- 4 47.9	1.576	2.583	0.4	21.2	9 8	23 8.35	- 8 7.5	1.704	2.711	0.9	21.2
9 18	22 58.95	- 5 39.4	1.581	2.573	4.5	21.5	9 18	22 59.48	- 8 50.4	1.711	2.700	4.7	21.4
9 28	22 50.49	- 6 25.5	1.613	2.563	9.0	21.8	9 28	22 51.48	- 9 25.2	1.744	2.688	8.9	21.7
10 8	22 43.89	- 7 0.8	1.669	2.552	13.0	22.0	10 8	22 45.21	- 9 47.7	1.802	2.677	12.6	21.9
10 18	22 39.74	- 7 22.1	1.746	2.541	16.4	22.2	10 18	22 41.22	- 9 55.9	1.881	2.665	15.8	22.1
206440	2003 <i>SC</i> ₂₁₀		9 8.4 285°24	5°2/13.7 18			167242	2003 <i>US</i> ₉₁		9 8.4 76°47	0°7/ 7.7 17		
8 9	23 27.06	+11 23.6	1.814	2.653	14.9	19.9	8 9	23 29.24	- 4 38.3	1.690	2.590	12.8	20.1
8 19	23 22.41	+11 8.8	1.726	2.637	11.9	19.7	8 19	23 23.69	- 5 30.1	1.644	2.604	8.9	19.9
8 29	23 15.93	+10 30.0	1.660	2.620	8.6	19.5	8 29	23 16.44	- 6 31.6	1.622	2.619	4.5	19.6
9 8	23 8.31	+9 28.6	1.618	2.603	5.8	19.3	9 8	23 8.33	- 7 36.2	1.626	2.633	0.7	19.4
9 18	23 0.42	+8 8.9	1.602	2.587	5.6	19.2	9 18	23 0.32	- 8 37.1	1.658	2.648	4.7	19.7
9 28	22 53.28	+6 38.2	1.612	2.570	8.3	19.4	9 28	22 53.38	- 9 27.9	1.716	2.662	8.8	20.0
10 8	22 47.80	+5 5.7	1.648	2.553	11.8	19.5	10 8	22 48.27	-10 4.3	1.798	2.677	12.5	20.3
10 18	22 44.60	+3 39.7	1.706	2.537	15.2	19.7	10 18	22 45.43	-10 24.4	1.901	2.691	15.4	20.5
474486	2003 <i>SB</i> ₃₃₀		9 8.4 254°22	0°7/ 7.8 18			312675	2010 <i>MF</i> ₂₈		9 8.4 357°09	0°0/ 8.4 18		
8 9	23 32.81	- 6 45.1	1.937	2.830	11.8	21.6	8 9	23 31.52	- 5 13.1	1.852	2.746	12.2	20.4
8 19	23 26.24	- 6 58.8	1.860	2.818	8.2	21.4	8 19	23 25.28	- 5 12.8	1.788	2.745	8.6	20.1
8 29	23 17.85	- 7 18.9	1.808	2.804	4.3	21.1	8 29	23 17.31	- 5 19.6	1.749	2.744	4.5	19.9
9 8	23 8.38	- 7 41.1	1.784	2.791	0.7	20.8	9 8	23 8.37	- 5 30.0	1.736	2.744	0.2	19.5
9 18	22 58.74	- 8 1.0	1.788	2.777	4.5	21.1	9 18	22 59.40	- 5 40.2	1.751	2.743	4.2	19.9
9 28	22 49.95	- 8 14.3	1.819	2.763	8.6	21.3	9 28	22 51.39	- 5 46.2	1.793	2.743	8.2	20.1
10 8	22 42.88	- 8 17.7	1.876	2.749	12.3	21.5	10 8	22 45.14	- 5 44.8	1.860	2.744	11.9	20.4
10 18	22 38.10	- 8 9.7	1.954	2.735	15.4	21.7	10 18	22 41.15	- 5 34.2	1.949	2.744	14.9	20.6
195091	2002 <i>CH</i> ₁₁₈		9 8.4 272°60	0°2/ 8.5 18			390358	2013 <i>CC</i> ₂₀₇		9 8.4 291°90	1°0/10.4 16		
8 9	23 29.32	- 2 29.4	1.737	2.630	12.9	20.7	8 9	23 21.33	+ 1 11.0	4.329	5.190	6.5	21.4
8 19	23 24.00	- 3 9.0	1.657	2.613	9.2	20.4	8 19	23 17.53	+ 0 57.6	4.247	5.182	4.7	21.2
8 29	23 16.77	- 4 1.9	1.601	2.596	4.9	20.1	8 29	23 13.06	+ 0 38.2	4.191	5.175	2.8	21.1
9 8	23 8.34	- 5 2.9	1.571	2.578	0.3	19.7	9 8	23 8.22	+ 0 14.3	4.164	5.168	1.2	20.9
9 18	22 59.67	- 6 5.5	1.568	2.561	4.5	20.0	9 18	23 3.34	+ 0 12.3	4.168	5.160	1.9	21.0
9 28	22 51.83	- 7 2.5	1.592	2.543	9.0	20.2	9 28	22 58.77	- 0 39.3	4.201	5.153	3.8	21.1
10 8	22 45.75	- 7 48.0	1.641	2.525	13.1	20.5	10 8	22 54.84	- 1 4.6	4.262	5.146	5.7	21.3
10 18	22 42.06	- 8 18.2	1.710	2.507	16.6	20.6	10 18	22 51.81	- 1 26.3	4.348	5.138	7.4	21.4
43214	2000 <i>AQ</i> ₁₃₅		9 8.4 37°12	1°4/ 7.1 18			514169	2015 <i>MU</i> ₁₅		9 8.4 101°70	3°6/12.2 18		
8 9	23 28.51	- 8 10.3	1.930	2.834	11.3	18.2	8 9	23 27.70	+ 7 35.0	1.947	2.799	13.5	21.3
8 19	23 23.05	- 8 38.5	1.880	2.843	7.8	18.0	8 19	23 22.56	+ 7 11.0	1.882	2.806	10.3	21.1
8 29	23 16.07	- 9 11.7	1.855	2.852	4.0	17.8	8 29	23 15.87	+ 6 28.2	1.840	2.813	6.9	20.9
9 8	23 8.31	- 9 45.0	1.856	2.862	1.4	17.6	9 8	23 8.32	+ 5 29.7	1.824	2.820	4.0	20.7
9 18	23 0.62	-10 13.6	1.885	2.872	4.6	17.9	9 18	23 0.75	+ 4 20.5	1.836	2.826	4.3	20.8
9 28	22 53.86	-10 33.3	1.941	2.883	8.3	18.1	9 28	22 54.03	+ 3 7.5	1.875	2.833	7.3	21.0
10 8	22 48.72	-10 41.5	2.021	2.894	11.6	18.3	10 8	22 48.89	+ 1 57.5	1.940	2.839	10.6	21.2
10 18	22 45.64	-10 36.9	2.123	2.905	14.3	18.6	10 18	22 45.79	+ 0 56.2	2.028	2.846	13.6	21.4
40218	1998 <i>SQ</i> ₉₇		9 8.4 335°87	2°3/11.2 18			449866	2015 <i>MQ</i> ₅₇		9 8.4 1°90	2°8/ 5.8 18		
8 9	23 23.74	+ 5 41.1	1.995	2.861	12.7	18.2	8 9	23 26.59	- 9 23.9	1.516	2.434	12.9	20.1
8 19	23 19.84	+ 4 38.9	1.920	2.856	9.4	18.0	8 19	23 22.11	-10 28.7	1.463	2.432	8.9	19.9
8 29	23 14.47	+ 3 17.4	1.868	2.850	5.9	17.8	8 29	23 15.74	-11 40.3	1.434	2.432	4.7	19.6
9 8	23 8.25	+ 1 41.2	1.843	2.845	2.6	17.6	9 8	23 8.32	-12 50.6	1.429	2.432	3.0	19.5
9 18	23 1.94	- 0 3.0	1.846	2.840	3.6	17.6	9 18	23 0.88	-13 51.3	1.451	2.433	6.5	19.7
9 28	22 56.35	- 1 46.9	1.877	2.835	7.2	17.9	9 28	22 54.51	-14 35.9	1.497	2.435	10.6	20.0
10 8	22 52.17	- 3 22.8	1.934	2.831	10.8	18.1	10 8	22 50.07	-15 0.5	1.566	2.437	14.4	20.2
10 18	22 49.90	- 4 44.8	2.014	2.827	13.9	18.3	10 18	22 48.06	-15 4.5	1.653	2.440	17.5	20.4
111634	2002 <i>AU</i> ₁₄₇		9 8.4 55°00	1°6/ 6.8 18			352655	2008 <i>QX</i> ₂₈		9 8.4 302°31	1°3/10.8 18		
8 9	23 28.46	- 8 14.0	1.948	2.851	11.2	19.2	8 9	23 22.21	+ 2 11.9	4.292	5.147	6.6	20.3
8 19	23 23.02	- 8 52.9	1.896	2.858	7.7	19.0	8 19	23 18.14	+ 2 6.2	4.213	5.144	4.9	20.2
8 29	23 16.06	- 9 37.0	1.869	2.866	3.9	18.8	8 29	23 13.38	+ 1 54.1	4.161	5.141	3.0	20.1
9 8	23 8.31	-10 21.0	1.868	2.873	1.6	18.7	9 8	23 8.25	+ 1 37.2	4.138	5.138	1.4	19.9
9 18	23 0.60	-10 59.7	1.896	2.881	4.8	18.9	9 18	23 3.08	+ 1 17.1	4.144	5.136	2.0	20.0
9 28	22 53.80	-11 28.5	1.950	2.889	8.4	19.1	9 28	22 58.24	+ 0 55.8	4.180	5.133	3.8	20.1
10 8	22 48.60	-11 44.4	2.029	2.897	11.7	19.4	10 8	22 54.06	+ 0 35.5	4.245	5.130	5.7	20.2
10 18	22 45.46	-11 46.4	2.129	2.905	14.4	19.6	10 18	22 50.81	+ 0 18.1	4.335	5.128	7.3	20.4
507644	2013 <i>NN</i> ₁₂		9 8.4 336°27	6°2/13.0 17			131161	2001 <i>CL</i> ₂₃		9 8.4 72°53	4°1/11.7 18		
8 9	23 29.95	+ 9 27.4	1.267	2.134	18.4	21.0	8 9	23 33.00	+ 5 42.2	1.691	2.551	14.8	19.0
8 19	23 24.88	+ 9 39.6	1.202	2.130	14.5	20.8	8 19	23 26.34	+ 5 59.7	1.639	2.568	11.3	18.8
8 29	23 17.36	+ 9 24.1	1.156	2.126	10.3	20.5	8 29	23 17.85	+ 5 59.5	1.610	2.585	7.4	18.6
9 8	23 8.36	+ 8 42.0	1.133	2.123	6.8	20.3	9 8	23 8.41	+ 5 43.5	1.607	2.602	4.4	18.5
9 18	22 59.16	+ 7 38.6	1.132	2.120	6.8	20.3	9 18	22 59.06	+ 5 15.7	1.630	2.619	5.0	18.6
9 28	22 51.18	+ 6 23.1	1.156	2.118	10.3	20.5	9 28	22 50.85	+ 4 41.6	1.680	2.636	8.2	18.8
10 8	22 45.58	+ 5 6.7	1.202	2.116	14.6	20.7	10 8	22 44.61	+ 4 7.6	1.755	2.653	11.7	19.1
10 18	22 43.02	+ 3 58.7	1.268	2.114	18.5	21.0	10 18	22 40.79	+ 3 38.7	1.852	2.669	14.7	19.3
230305	2002 <i>AW</i> ₁₁₅		9 8.4 315°77	6°7/ 1.9 18			212710	2007 <i>RS</i> ₃₉		9 8.4 92°91			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213428	2001 <i>XV</i> ₁₈₂		9 8.4 232°52	4.0°/11.5 17			389512	2010 <i>GE</i> ₁₂₀		9 8.4 60°75	3.4°/ 5.2 18		
8 9	23 32.33	+ 5 40.1	1.494	2.363	16.0	20.6	8 9	23 28.89	-11 49.9	1.702	2.615	12.0	20.3
8 19	23 26.32	+ 5 36.4	1.422	2.356	12.2	20.4	8 19	23 23.52	-12 55.8	1.655	2.622	8.3	20.1
8 29	23 18.06	+ 5 11.4	1.371	2.350	8.0	20.1	8 29	23 16.41	-14 4.7	1.634	2.629	4.6	19.9
9 8	23 8.43	+ 4 27.6	1.344	2.342	4.4	19.9	9 8	23 8.40	-15 8.9	1.638	2.637	3.6	19.8
9 18	22 58.57	+ 3 30.3	1.343	2.335	5.2	19.9	9 18	23 0.44	-16 1.4	1.669	2.645	6.6	20.0
9 28	22 49.77	+ 2 27.3	1.368	2.327	9.4	20.1	9 28	22 53.53	-16 37.2	1.726	2.653	10.2	20.3
10 8	22 43.10	+ 1 27.3	1.417	2.319	13.6	20.4	10 8	22 48.47	-16 53.7	1.806	2.661	13.6	20.5
10 18	22 39.23	+ 0 36.9	1.486	2.310	17.4	20.6	10 18	22 45.69	-16 51.0	1.906	2.669	16.3	20.7
141615	2002 <i>JQ</i> ₁₇		9 8.4 209°81	1.1°/ 7.3 18			479091	2013 <i>AF</i> ₁₁₇		9 8.4 271°91	4.3°/ 3.9 18		
8 9	23 30.74	- 6 41.2	2.085	2.979	11.0	21.0	8 9	23 28.83	-15 8.3	1.905	2.817	11.0	21.5
8 19	23 24.66	- 7 20.2	2.016	2.974	7.6	20.7	8 19	23 23.52	-16 18.1	1.841	2.805	7.8	21.3
8 29	23 16.98	- 8 6.2	1.971	2.968	3.9	20.5	8 29	23 16.46	-17 29.0	1.803	2.794	4.9	21.1
9 8	23 8.39	- 8 54.1	1.955	2.961	1.1	20.3	9 8	23 8.40	-18 33.6	1.791	2.782	4.6	21.1
9 18	22 59.70	- 9 38.7	1.967	2.955	4.4	20.5	9 18	23 0.23	-19 25.2	1.806	2.771	7.3	21.2
9 28	22 51.82	-10 15.0	2.008	2.947	8.2	20.7	9 28	22 52.92	-19 58.6	1.848	2.759	10.6	21.4
10 8	22 45.50	-10 39.5	2.073	2.939	11.6	20.9	10 8	22 47.29	-20 11.6	1.912	2.747	13.7	21.6
10 18	22 41.24	-10 50.5	2.160	2.931	14.4	21.1	10 18	22 43.86	-20 4.4	1.995	2.735	16.4	21.8
257814	2000 <i>FP</i> ₄₁		9 8.4 98°77	2.4°/ 6.1 17			142089	2002 <i>QE</i> ₅₂		9 8.4 60°76	1.8°/ 7.2 17		
8 9	23 31.95	- 8 55.2	1.661	2.566	12.7	20.8	8 9	23 33.50	- 7 34.0	1.244	2.157	15.5	19.6
8 19	23 25.54	-10 3.7	1.624	2.587	8.7	20.6	8 19	23 27.01	- 8 11.0	1.208	2.174	10.6	19.4
8 29	23 17.39	-11 17.3	1.611	2.608	4.5	20.4	8 29	23 18.28	- 8 55.9	1.194	2.192	5.4	19.1
9 8	23 8.39	-12 28.0	1.625	2.629	2.6	20.3	9 8	23 8.47	- 9 40.7	1.204	2.210	1.8	18.9
9 18	22 59.59	-13 28.8	1.667	2.649	5.9	20.6	9 18	22 58.93	-10 18.0	1.239	2.228	6.1	19.3
9 28	22 52.00	-14 13.8	1.736	2.668	9.8	20.9	9 28	22 50.97	-10 41.5	1.299	2.247	10.9	19.6
10 8	22 46.36	-14 40.6	1.828	2.687	13.2	21.1	10 8	22 45.52	-10 48.3	1.381	2.265	15.1	19.9
10 18	22 43.11	-14 48.7	1.940	2.705	16.0	21.4	10 18	22 42.98	-10 38.0	1.482	2.284	18.5	20.2
363285	2002 <i>GN</i> ₁₈₁		9 8.4 191°79	3.9°/ 4.3 18			145567	2006 <i>OZ</i> ₁₀		9 8.4 44°73	3.2°/ 10.6 18		
8 9	23 30.11	-16 50.7	2.266	3.171	9.8	20.6	8 9	23 32.04	+ 2 43.1	1.197	2.089	17.5	19.7
8 19	23 24.08	-17 31.5	2.211	3.170	7.0	20.4	8 19	23 26.22	+ 2 43.9	1.149	2.099	13.0	19.5
8 29	23 16.61	-18 10.3	2.181	3.170	4.5	20.3	8 29	23 18.00	+ 2 23.9	1.121	2.108	7.9	19.2
9 8	23 8.38	-18 41.9	2.180	3.169	4.1	20.3	9 8	23 8.48	+ 1 47.0	1.116	2.119	3.6	19.0
9 18	23 0.17	-19 2.0	2.206	3.169	6.2	20.4	9 18	22 59.02	+ 1 0.1	1.135	2.129	5.3	19.2
9 28	22 52.79	-19 7.8	2.259	3.168	9.1	20.6	9 28	22 51.04	+ 0 11.7	1.178	2.140	10.1	19.5
10 8	22 46.91	-18 58.1	2.336	3.167	11.7	20.8	10 8	22 45.58	+ 0 30.0	1.243	2.152	14.6	19.8
10 18	22 42.96	-18 33.7	2.435	3.166	14.0	20.9	10 18	22 43.16	+ 0 59.6	1.328	2.164	18.4	20.0
392145	2009 <i>HN</i> ₃₇		9 8.4 206°14	18.2°/28.3 15			146014	2000 <i>CD</i> ₁₀₄		9 8.4 231°81	0.1°/ 8.6 17		
8 9	23 53.16	-43 49.8	1.167	2.027	20.1	20.6	8 9	23 23.03	- 2 46.4	3.664	4.542	7.1	20.2
8 19	23 41.71	-45 16.8	1.140	2.025	18.6	20.5	8 19	23 18.83	- 3 23.8	3.583	4.532	5.0	20.1
8 29	23 26.16	-46 4.7	1.132	2.022	18.2	20.4	8 29	23 13.82	- 4 7.1	3.529	4.522	2.7	19.9
9 8	23 8.73	-45 59.6	1.142	2.018	18.8	20.5	9 8	23 8.33	- 4 53.9	3.504	4.512	0.2	19.7
9 18	22 52.12	-44 57.1	1.171	2.015	20.5	20.6	9 18	23 2.79	- 5 41.1	3.510	4.501	2.4	19.9
9 28	22 38.77	-43 2.9	1.217	2.010	22.6	20.7	9 28	22 57.62	- 6 25.8	3.545	4.491	4.8	20.0
10 8	22 29.96	-40 29.9	1.279	2.006	24.7	20.9	10 8	22 53.23	- 7 5.3	3.609	4.480	7.0	20.2
10 18	22 25.89	-37 31.6	1.353	2.001	26.6	21.1	10 18	22 49.92	- 7 37.4	3.697	4.469	8.9	20.3
332123	2005 <i>OF</i> ₈		9 8.4 346°42	21.5°/ 5.3 18			96773	1999 <i>RJ</i> ₆₀		9 8.4 329°46	0.5°/ 7.9 18		
8 9	23 21.10	+39 11.8	1.192	1.890	28.4	18.7	8 9	23 27.24	- 4 22.0	1.343	2.255	14.6	18.6
8 19	23 19.38	+41 12.4	1.125	1.875	27.1	18.5	8 19	23 22.93	- 4 57.6	1.274	2.239	10.3	18.3
8 29	23 14.84	+42 26.6	1.068	1.861	25.6	18.4	8 29	23 16.37	- 5 46.9	1.226	2.224	5.4	18.0
9 8	23 8.33	+42 44.2	1.020	1.849	24.1	18.2	9 8	23 8.43	- 6 43.4	1.203	2.210	0.5	17.6
9 18	23 1.24	+41 58.1	0.985	1.839	22.7	18.1	9 18	23 0.26	- 7 39.3	1.204	2.196	5.5	18.0
9 28	22 55.41	+40 8.0	0.963	1.831	21.7	18.0	9 28	22 53.15	- 8 26.2	1.229	2.184	10.6	18.2
10 8	22 52.43	+37 23.5	0.957	1.826	21.5	18.0	10 8	22 48.19	- 8 57.8	1.276	2.172	15.2	18.5
10 18	22 53.24	+34 0.6	0.967	1.822	22.2	18.0	10 18	22 46.03	- 9 10.8	1.342	2.162	19.1	18.7
17248	2000 <i>GC</i> ₁₀₇		9 8.4 252°81	0.6°/ 7.9 18			342256	2008 <i>SK</i> ₂₉₈		9 8.4 307°17	1.5°/ 7.4 18		
8 9	23 31.00	- 3 34.3	1.338	2.243	15.2	18.1	8 9	23 33.60	- 8 53.2	1.515	2.422	13.6	20.5
8 19	23 25.52	- 4 29.7	1.273	2.235	10.7	17.8	8 19	23 27.21	- 9 0.4	1.445	2.408	9.5	20.2
8 29	23 17.69	- 5 40.8	1.231	2.228	5.5	17.5	8 29	23 18.55	- 9 12.8	1.397	2.394	5.0	19.9
9 8	23 8.44	- 6 59.6	1.213	2.220	0.6	17.2	9 8	23 8.53	- 9 25.2	1.374	2.381	1.6	19.7
9 18	22 59.01	- 8 16.9	1.221	2.212	5.7	17.5	9 18	22 58.31	- 9 32.4	1.378	2.367	5.6	19.9
9 28	22 50.77	- 9 22.9	1.254	2.204	10.9	17.8	9 28	22 49.19	- 9 29.9	1.408	2.354	10.4	20.2
10 8	22 44.81	-10 11.0	1.309	2.196	15.6	18.0	10 8	22 42.25	- 9 14.8	1.461	2.342	14.6	20.4
10 18	22 41.79	-10 37.9	1.383	2.188	19.4	18.3	10 18	22 38.11	- 8 46.4	1.533	2.330	18.2	20.6
28778	Michdelucia		9 8.4 147°37	2.3°/ 6.1 18			391575	2007 <i>TL</i> ₂₅₄		9 8.4 136°07	2.3°/ 6.1 18		
8 9	23 29.63	-10 23.2	1.963	2.868	11.1	19.2	8 9	23 29.13	- 9 37.4	1.886	2.792	11.4	20.7
8 19	23 23.90	-11 8.8	1.906	2.870	7.6	19.0	8 19	23 23.62	-10 31.3	1.830	2.794	7.8	20.5
8 29	23 16.58	-11 58.2	1.875	2.872	4.1	18.8	8 29	23 16.48	-11 30.1	1.799	2.796	4.1	20.3
9 8	23 8.39	-12 45.5	1.871	2.873	2.5	18.7	9 8	23 8.45	-12 27.6	1.795	2.798	2.4	20.2
9 18	23 0.21	-13 25.3	1.895	2.875	5.4	18.9	9 18	23 0.42	-13 17.4	1.819	2.800	5.5	20.4
9 28	22 52.94	-13 52.9	1.945	2.877	8.9	19.1	9 28	22 53.31	-13 54.4	1.869	2.802	9.2	20.6
10 8	22 47.30	-14 5.9	2.020	2.878	12.2	19.4	10 8	22 47.87	-14 15.7	1.943	2.804	12.5	20.8
10 18	22 43.77	-14 3.5	2.116	2.880	14.9	19.6	10 18	22 44.57	-14 20.3	2.038	2.806	15.3	21.0
14395	Tommorgan		9 8.4 319°48	16.9°/ 2.2 18 R			505908	2015 <i>EH</i> ₄					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
41278	1999 XA ₉₀		9 8.4 137°07	2.4/12.3	18		184738	2005 SS ₂₀₇		9 8.4 157°71	0.6/ 7.9	18	
8 9	23 23.93	+ 6 53.7	3.492	4.328	8.5	19.4	8 9	23 30.57	- 6 22.6	2.220	3.111	10.6	20.4
8 19	23 19.46	+ 6 39.9	3.420	4.334	6.5	19.2	8 19	23 24.44	- 6 38.3	2.157	3.113	7.3	20.2
8 29	23 14.14	+ 6 15.9	3.373	4.341	4.4	19.1	8 29	23 16.87	- 6 59.7	2.119	3.115	3.8	20.0
9 8	23 8.37	+ 5 43.5	3.355	4.347	2.6	19.0	9 8	23 8.52	- 7 23.0	2.109	3.117	0.6	19.7
9 18	23 2.57	+ 5 5.0	3.365	4.352	2.8	19.0	9 18	23 0.15	- 7 44.4	2.128	3.118	3.9	20.0
9 28	22 57.21	+ 4 23.3	3.405	4.358	4.6	19.2	9 28	22 52.59	- 8 0.0	2.176	3.119	7.4	20.2
10 8	22 52.70	+ 3 41.9	3.473	4.364	6.7	19.3	10 8	22 46.50	- 8 7.3	2.249	3.121	10.6	20.4
10 18	22 49.35	+ 3 3.5	3.567	4.369	8.6	19.5	10 18	22 42.33	- 8 4.6	2.344	3.122	13.2	20.6
36985	2000 SH ₃₄₉		9 8.4 194°14	4.2/ 3.9	18		242875	2006 HR ₅₄		9 8.4 94°10	2.8/ 5.5	16	
8 9	23 29.46	-14 8.6	1.892	2.803	11.1	19.1	8 9	23 28.57	- 9 43.6	1.761	2.670	11.9	20.2
8 19	23 23.91	-15 34.3	1.837	2.802	7.8	18.9	8 19	23 23.29	-11 2.4	1.714	2.680	8.1	20.0
8 29	23 16.67	-17 1.7	1.808	2.800	4.9	18.7	8 29	23 16.34	-12 26.4	1.692	2.689	4.4	19.8
9 8	23 8.47	-18 22.8	1.806	2.798	4.5	18.7	9 8	23 8.50	-13 47.6	1.697	2.698	3.0	19.7
9 18	23 0.22	-19 30.2	1.832	2.796	7.2	18.9	9 18	23 0.71	-14 58.6	1.730	2.708	6.1	19.9
9 28	22 52.88	-20 18.4	1.884	2.793	10.5	19.1	9 28	22 53.92	-15 53.2	1.788	2.717	9.8	20.2
10 8	22 47.25	-20 45.1	1.959	2.790	13.6	19.3	10 8	22 48.90	-16 28.3	1.870	2.726	13.1	20.4
10 18	22 43.83	-20 50.6	2.053	2.787	16.2	19.5	10 18	22 46.08	-16 43.3	1.973	2.734	15.9	20.6
229450	2005 UK ₁₁₅		9 8.4 284°18	3.5/11.4	18		404485	2013 HL ₁₆		9 8.4 164°43	4.5/ 2.6	18	
8 9	23 28.81	+ 5 36.1	1.587	2.458	15.1	21.3	8 9	23 28.64	-20 0.3	2.589	3.492	8.8	21.5
8 19	23 23.85	+ 5 17.5	1.506	2.442	11.5	21.0	8 19	23 22.99	-21 0.7	2.541	3.496	6.5	21.3
8 29	23 16.82	+ 4 37.5	1.446	2.426	7.4	20.8	8 29	23 16.07	-21 57.4	2.519	3.499	4.8	21.2
9 8	23 8.48	+ 3 38.8	1.411	2.411	3.9	20.5	9 8	23 8.50	-22 45.0	2.526	3.502	4.8	21.2
9 18	22 59.85	+ 2 27.2	1.402	2.395	4.8	20.5	9 18	23 0.94	-23 19.5	2.561	3.504	6.6	21.4
9 28	22 52.10	+ 1 10.8	1.419	2.379	8.9	20.7	9 28	22 54.12	-23 38.0	2.623	3.507	8.9	21.5
10 8	22 46.24	- 0 1.5	1.460	2.363	13.2	21.0	10 8	22 48.60	-23 39.8	2.708	3.509	11.1	21.7
10 18	22 42.94	- 1 2.7	1.522	2.348	16.9	21.2	10 18	22 44.80	-23 25.7	2.814	3.510	13.0	21.8
507942	2015 AY ₂₂₃		9 8.4 158°91	5.1/13.3	17		263025	2007 ES ₂₁₃		9 8.4 182°69	0.0/ 8.4	18	
8 9	23 31.84	+10 41.8	1.845	2.679	14.9	22.0	8 9	23 27.08	- 3 30.5	2.562	3.446	9.6	21.4
8 19	23 25.61	+10 37.2	1.777	2.686	11.7	21.8	8 19	23 21.91	- 4 7.3	2.494	3.446	6.7	21.2
8 29	23 17.57	+10 10.8	1.732	2.691	8.4	21.6	8 29	23 15.53	- 4 51.7	2.452	3.446	3.5	21.0
9 8	23 8.51	+ 9 24.5	1.711	2.696	5.6	21.5	9 8	23 8.48	- 5 40.1	2.438	3.446	0.1	20.7
9 18	22 59.39	+ 8 22.4	1.717	2.701	5.5	21.5	9 18	23 1.39	- 6 28.1	2.454	3.445	3.3	21.0
9 28	22 51.21	+ 7 11.5	1.751	2.704	8.1	21.6	9 28	22 54.93	- 7 11.5	2.498	3.444	6.5	21.2
10 8	22 44.82	+ 5 59.6	1.810	2.708	11.4	21.9	10 8	22 49.67	- 7 46.9	2.570	3.443	9.4	21.4
10 18	22 40.75	+ 4 53.5	1.892	2.710	14.4	22.1	10 18	22 46.01	- 8 11.9	2.664	3.442	11.8	21.5
233733	2008 SZ ₂₄₂		9 8.4 284°41	1.0/ 7.5	18		471541	2012 JS ₅₀		9 8.4 353°75	15.5/27.5	16	
8 9	23 29.42	- 5 44.8	1.672	2.574	12.8	20.5	8 9	23 20.18	+33 11.5	1.176	1.924	26.3	20.6
8 19	23 24.11	- 6 27.3	1.601	2.563	8.9	20.3	8 19	23 18.42	+33 30.9	1.107	1.917	24.0	20.4
8 29	23 16.88	- 7 20.0	1.554	2.551	4.6	20.0	8 29	23 14.19	+32 56.8	1.048	1.911	21.4	20.2
9 8	23 8.49	- 8 16.7	1.533	2.540	1.0	19.7	9 8	23 8.43	+31 22.5	1.004	1.907	18.6	20.0
9 18	22 59.93	- 9 10.6	1.538	2.528	5.1	20.0	9 18	23 2.43	+28 47.7	0.977	1.904	16.3	19.8
9 28	22 52.30	- 9 55.1	1.570	2.517	9.5	20.2	9 28	22 57.72	+25 22.0	0.970	1.903	15.5	19.8
10 8	22 46.50	-10 25.3	1.626	2.505	13.5	20.4	10 8	22 55.49	+21 25.3	0.985	1.903	16.5	19.8
10 18	22 43.14	-10 38.9	1.702	2.494	16.9	20.6	10 18	22 56.42	+17 21.8	1.022	1.905	19.0	20.0
279166	2009 SP ₁₅₆		9 8.4 355°38	1.4/ 9.6	16		182692	2001 VH ₆₂		9 8.4 279°35	6.4/ 1.9	18	
8 9	23 25.66	+ 1 19.5	1.192	2.097	16.6	20.8	8 9	23 32.15	-23 23.1	2.030	2.934	10.8	20.0
8 19	23 21.89	+ 0 28.0	1.134	2.093	12.0	20.5	8 19	23 25.84	-24 17.6	1.968	2.918	8.3	19.8
8 29	23 15.84	- 0 46.3	1.096	2.090	6.8	20.2	8 29	23 17.72	-25 5.4	1.930	2.903	6.6	19.6
9 8	23 8.44	- 2 16.3	1.081	2.088	1.7	19.9	9 8	23 8.58	-25 39.5	1.919	2.887	6.8	19.6
9 18	23 0.94	- 3 51.6	1.091	2.087	5.1	20.1	9 18	22 59.35	-25 54.5	1.935	2.871	8.9	19.7
9 28	22 54.67	- 5 20.3	1.124	2.087	10.4	20.4	9 28	22 51.05	-25 47.6	1.975	2.855	11.6	19.9
10 8	22 50.68	- 6 32.9	1.179	2.087	15.3	20.7	10 8	22 44.52	-25 19.1	2.038	2.839	14.3	20.0
10 18	22 49.56	- 7 23.7	1.253	2.089	19.3	21.0	10 18	22 40.29	-24 31.1	2.119	2.823	16.6	20.2
41430	2000 GN ₄		9 8.4 65°39	9.7/ 2.1	18		206064	2002 QD ₁₁₉		9 8.4 312°15	3.0/10.4	18	
8 9	23 39.36	-28 23.1	1.408	2.311	14.7	17.0	8 9	23 33.39	+ 1 21.8	1.665	2.542	14.2	20.1
8 19	23 30.99	-29 14.5	1.383	2.326	11.8	16.9	8 19	23 26.97	+ 1 51.7	1.588	2.530	10.6	19.9
8 29	23 20.29	-29 48.3	1.380	2.341	9.9	16.8	8 29	23 18.44	+ 2 8.8	1.534	2.519	6.6	19.6
9 8	23 8.61	-29 56.1	1.401	2.356	10.1	16.8	9 8	23 8.61	+ 2 14.5	1.506	2.508	3.2	19.4
9 18	22 57.43	-29 33.9	1.446	2.372	12.1	17.0	9 18	22 58.55	+ 2 11.4	1.505	2.497	4.7	19.5
9 28	22 48.13	-28 42.5	1.514	2.387	14.8	17.2	9 28	22 49.43	+ 2 3.8	1.531	2.487	8.8	19.7
10 8	22 41.59	-27 26.7	1.601	2.403	17.5	17.4	10 8	22 42.26	+ 1 56.5	1.580	2.477	12.8	19.9
10 18	22 38.17	-25 52.7	1.706	2.418	19.8	17.7	10 18	22 37.69	+ 1 53.9	1.651	2.467	16.3	20.1
206614	2003 WN ₁₀₃		9 8.4 171°71	7.7/31.6	18		204932	2008 UV ₃₅		9 8.4 301°80	0.1/ 8.5	18	
8 9	23 32.51	-26 27.7	1.933	2.835	11.3	20.1	8 9	23 29.09	- 2 52.0	1.604	2.502	13.5	20.7
8 19	23 26.03	-27 39.3	1.893	2.836	9.1	20.0	8 19	23 23.92	- 3 28.7	1.537	2.495	9.6	20.4
8 29	23 17.74	-28 40.5	1.877	2.837	7.8	19.9	8 29	23 16.80	- 4 18.4	1.493	2.489	5.1	20.2
9 8	23 8.52	-29 23.6	1.886	2.838	8.2	19.9	9 8	23 8.55	- 5 15.5	1.475	2.482	0.3	19.8
9 18	22 59.39	-29 43.4	1.921	2.838	10.1	20.0	9 18	23 0.16	- 6 13.1	1.483	2.475	4.6	20.1
9 28	22 51.37	-29 38.0	1.980	2.839	12.5	20.2	9 28	22 52.74	- 7 4.1	1.517	2.469	9.2	20.4
10 8	22 45.26	-29 8.7	2.060	2.839	14.9	20.4	10 8	22 47.22	- 7 42.8	1.574	2.463	13.3	20.6
10 18	22 41.54	-28 18.7	2.158	2.839	16.9	20.5	10 18	22 44.15	- 8 5.9	1.652	2.457	16.8	20.8
514932	2008 UC ₂₆₀		9 8.4 250°76	3.4/12.1	18		256695	2007 YQ ₇₄		9 8.4 17°56	1.9/ 9.8	18	
8 9	23 27.93												

EPHEMERIDES

9 8.4

9 8.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
137404	1999 <i>TT</i> ₁₇₈		9 8.4 216°03	3°1/ 5.5	18		319376	2006 <i>DV</i> ₁₁₅		9 8.4 277°51	2°9/ 5.4	18	
8 9	23 32.59	-11 24.8	1.839	2.742	11.7	19.7	8 9	23 29.99	-14 8.4	2.338	3.240	9.6	20.7
8 19	23 26.21	-12 25.1	1.773	2.735	8.2	19.5	8 19	23 24.10	-14 37.7	2.268	3.228	6.7	20.5
8 29	23 17.95	-13 29.6	1.732	2.727	4.5	19.3	8 29	23 16.76	-15 7.2	2.224	3.216	3.9	20.3
9 8	23 8.60	-14 31.1	1.718	2.718	3.3	19.2	9 8	23 8.60	-15 32.3	2.207	3.204	3.1	20.3
9 18	22 59.13	-15 23.0	1.732	2.708	6.3	19.3	9 18	23 0.36	-15 48.9	2.219	3.192	5.4	20.4
9 28	22 50.60	-15 59.5	1.773	2.698	10.1	19.6	9 28	22 52.84	-15 53.8	2.259	3.180	8.4	20.6
10 8	22 43.89	-16 17.9	1.838	2.688	13.6	19.8	10 8	22 46.74	-15 45.6	2.324	3.168	11.3	20.7
10 18	22 39.55	-16 17.7	1.923	2.676	16.5	19.9	10 18	22 42.51	-15 24.1	2.410	3.156	13.7	20.9
339309	2004 <i>XZ</i> ₉₅		9 8.4 259°08	2°0/10.3	18		40965	1999 <i>TH</i> ₂₄₉		9 8.4 30°95	2°0/ 9.8	18	
8 9	23 30.74	+ 1 54.0	2.063	2.932	12.2	21.5	8 9	23 33.13	- 0 35.9	1.532	2.420	14.6	18.7
8 19	23 24.89	+ 1 38.3	1.971	2.911	9.0	21.3	8 19	23 26.73	- 0 22.2	1.474	2.424	10.6	18.4
8 29	23 17.30	+ 1 8.9	1.904	2.889	5.4	21.0	8 29	23 18.26	- 0 21.5	1.439	2.429	6.1	18.2
9 8	23 8.59	+ 0 28.5	1.864	2.867	2.2	20.8	9 8	23 8.66	- 0 30.8	1.429	2.434	2.2	18.0
9 18	22 59.61	- 0 18.7	1.851	2.845	3.8	20.9	9 18	22 59.05	- 0 45.9	1.445	2.439	4.5	18.1
9 28	22 51.28	- 1 7.2	1.867	2.821	7.7	21.1	9 28	22 50.62	- 1 1.5	1.488	2.445	8.9	18.4
10 8	22 44.47	- 1 51.5	1.909	2.798	11.4	21.2	10 8	22 44.30	- 1 12.8	1.554	2.451	12.9	18.7
10 18	22 39.76	- 2 26.9	1.974	2.774	14.6	21.4	10 18	22 40.62	- 1 16.1	1.641	2.457	16.4	18.9
480750	2016 <i>NK</i> ₃₀		9 8.4 71°19	5°4/13.2	17		89235	2001 <i>UU</i> ₁₄₈		9 8.4 161°25	1°5/ 6.8	18	
8 9	23 30.87	+ 9 49.0	1.489	2.343	16.9	20.6	8 9	23 28.62	- 8 3.2	2.061	2.961	10.8	20.2
8 19	23 25.13	+ 9 47.0	1.438	2.358	13.1	20.4	8 19	23 23.22	- 8 47.3	2.001	2.962	7.5	20.0
8 29	23 17.40	+ 9 20.2	1.406	2.373	9.2	20.2	8 29	23 16.32	- 9 37.0	1.966	2.963	3.8	19.8
9 8	23 8.60	+ 8 31.2	1.399	2.388	6.0	20.1	9 8	23 8.59	-10 27.1	1.958	2.964	1.6	19.6
9 18	22 59.86	+ 7 25.8	1.417	2.404	5.9	20.1	9 18	23 0.84	-11 12.2	1.979	2.964	4.7	19.8
9 28	22 52.34	+ 6 12.3	1.460	2.419	8.9	20.3	9 28	22 53.91	-11 47.5	2.027	2.965	8.3	20.1
10 8	22 46.91	+ 5 0.0	1.528	2.434	12.5	20.6	10 8	22 48.49	-12 9.9	2.100	2.965	11.5	20.3
10 18	22 44.07	+ 3 56.2	1.617	2.450	15.8	20.8	10 18	22 45.06	-12 18.0	2.194	2.966	14.2	20.5
439571	2014 <i>DP</i> ₈₉		9 8.4 189°27	0°4/ 7.9	18		280594	2004 <i>VU</i> ₁₉		9 8.4 342°58	17°6/ 3.5	17	
8 9	23 27.88	- 3 29.5	1.935	2.829	11.8	21.2	8 9	23 24.77	+41 37.9	1.568	2.201	24.6	20.2
8 19	23 22.79	- 4 25.6	1.871	2.828	8.2	21.0	8 19	23 21.56	+42 35.9	1.491	2.192	23.3	20.1
8 29	23 16.12	- 5 32.6	1.832	2.828	4.2	20.8	8 29	23 15.86	+42 50.4	1.424	2.184	21.7	19.9
9 8	23 8.55	- 6 44.6	1.820	2.827	0.4	20.4	9 8	23 8.57	+42 13.9	1.369	2.176	20.1	19.8
9 18	23 0.93	- 7 55.1	1.836	2.827	4.2	20.8	9 18	23 0.95	+40 42.6	1.329	2.170	18.6	19.7
9 28	22 54.14	- 8 57.7	1.880	2.826	8.2	21.0	9 28	22 54.48	+38 18.9	1.306	2.164	17.7	19.6
10 8	22 48.91	- 9 47.4	1.948	2.825	11.7	21.2	10 8	22 50.42	+35 13.3	1.303	2.159	17.7	19.6
10 18	22 45.74	-10 21.4	2.038	2.824	14.7	21.4	10 18	22 49.49	+31 41.1	1.321	2.156	18.6	19.6
473607	2015 <i>XB</i> ₂₆₆		9 8.4 289°63	1°5/ 6.8	17		308358	2005 <i>QP</i> ₁₂₀		9 8.4 154°56	0°2/ 8.2	18	
8 9	23 27.79	- 8 37.3	2.283	3.182	10.0	21.6	8 9	23 28.77	- 4 9.4	2.114	3.004	11.0	21.2
8 19	23 22.65	- 9 13.2	2.202	3.162	6.9	21.3	8 19	23 23.29	- 4 41.0	2.051	3.006	7.7	21.0
8 29	23 16.04	- 9 54.2	2.146	3.142	3.6	21.1	8 29	23 16.34	- 5 21.0	2.013	3.008	4.0	20.8
9 8	23 8.55	-10 36.0	2.117	3.122	1.6	20.9	9 8	23 8.59	- 6 4.9	2.002	3.009	0.2	20.5
9 18	23 0.90	-11 13.8	2.117	3.102	4.5	21.1	9 18	23 0.81	- 6 48.1	2.019	3.011	3.8	20.8
9 28	22 53.87	-11 43.3	2.145	3.082	7.9	21.3	9 28	22 53.82	- 7 25.5	2.065	3.012	7.5	21.0
10 8	22 48.18	-12 1.2	2.198	3.062	11.1	21.4	10 8	22 48.31	- 7 53.5	2.136	3.013	10.8	21.2
10 18	22 44.33	-12 5.9	2.273	3.042	13.8	21.6	10 18	22 44.73	- 8 9.8	2.229	3.014	13.6	21.4
143911	2003 <i>YJ</i> ₆₉		9 8.4 218°03	2°8/10.9	18		215432	2002 <i>JL</i> ₁₂₉		9 8.4 44°44	2°3/10.3	17	
8 9	23 32.07	+ 4 11.2	1.860	2.723	13.6	20.6	8 9	23 28.80	+ 3 3.1	1.113	2.012	18.0	19.8
8 19	23 25.88	+ 3 56.6	1.782	2.715	10.2	20.4	8 19	23 24.02	+ 2 17.8	1.073	2.028	13.1	19.6
8 29	23 17.82	+ 3 25.2	1.726	2.707	6.4	20.1	8 29	23 16.91	+ 1 8.5	1.053	2.044	7.6	19.3
9 8	23 8.64	+ 2 39.7	1.697	2.698	3.1	19.9	9 8	23 8.61	- 0 16.9	1.056	2.061	2.7	19.1
9 18	22 59.25	+ 1 45.0	1.696	2.688	4.2	20.0	9 18	23 0.48	- 1 47.8	1.082	2.078	5.1	19.3
9 28	22 50.72	+ 0 47.4	1.722	2.678	8.0	20.2	9 28	22 53.85	- 3 12.5	1.133	2.097	10.2	19.6
10 8	22 43.91	- 0 6.4	1.774	2.667	11.8	20.4	10 8	22 49.70	- 4 21.9	1.205	2.115	14.9	20.0
10 18	22 39.43	- 0 51.2	1.849	2.656	15.2	20.6	10 18	22 48.47	- 5 10.9	1.297	2.134	18.7	20.3
297131	2010 <i>ST</i> ₃₃		9 8.4 253°74	3°7/11.4	18		261588	2005 <i>XK</i> ₂₄		9 8.4 301°48	10°3/26.4	18	
8 9	23 30.99	+ 5 32.1	1.478	2.350	16.0	20.8	8 9	23 31.33	-34 51.9	1.993	2.878	11.9	19.9
8 19	23 25.47	+ 5 19.4	1.405	2.342	12.1	20.5	8 19	23 25.54	-36 24.3	1.942	2.855	10.6	19.8
8 29	23 17.73	+ 4 44.8	1.354	2.334	7.8	20.3	8 29	23 17.70	-37 41.4	1.914	2.833	10.3	19.7
9 8	23 8.63	+ 3 51.1	1.326	2.326	4.1	20.0	9 8	23 8.65	-38 34.5	1.910	2.810	11.2	19.7
9 18	22 59.30	+ 2 44.3	1.324	2.317	5.1	20.1	9 18	22 59.47	-38 57.9	1.929	2.788	12.9	19.8
9 28	22 51.00	+ 1 32.8	1.348	2.309	9.3	20.3	9 28	22 51.31	-38 49.2	1.969	2.766	15.0	19.9
10 8	22 44.80	+ 0 25.7	1.396	2.300	13.6	20.5	10 8	22 45.14	-38 10.5	2.027	2.743	17.0	20.0
10 18	22 41.34	- 0 30.1	1.464	2.291	17.5	20.7	10 18	22 41.52	-37 5.8	2.100	2.722	18.8	20.1
151410	2002 <i>EC</i> ₁₂₆		9 8.4 284°26	0°4/ 8.1	18		316396	2010 <i>TK</i> ₅₃		9 8.4 294°48	0°6/ 7.8	18	
8 9	23 29.69	- 5 32.5	2.104	2.996	11.0	20.3	8 9	23 27.29	- 4 58.3	2.048	2.944	11.1	21.3
8 19	23 23.94	- 5 51.2	2.038	2.995	7.7	20.1	8 19	23 22.36	- 5 39.4	1.978	2.936	7.7	21.1
8 29	23 16.69	- 6 16.7	1.997	2.993	4.0	19.8	8 29	23 15.91	- 6 29.2	1.933	2.929	4.0	20.8
9 8	23 8.59	- 6 45.1	1.984	2.991	0.4	19.6	9 8	23 8.58	- 7 22.8	1.914	2.921	0.6	20.5
9 18	23 0.45	- 7 12.2	1.999	2.990	3.9	19.8	9 18	23 1.15	- 8 14.8	1.924	2.914	4.2	20.8
9 28	22 53.11	- 7 33.7	2.042	2.988	7.6	20.1	9 28	22 54.46	- 8 59.7	1.961	2.907	8.0	21.0
10 8	22 47.28	- 7 46.5	2.110	2.987	11.0	20.3	10 8	22 49.25	- 9 33.4	2.023	2.899	11.4	21.2
10 18	22 43.43	- 7 48.5	2.200	2.985	13.7	20.5	10 18	22 46.00	- 9 53.5	2.107	2.892	14.3	21.4
400713	2009 <i>SX</i> ₂		9 8.4 62°02	3°1/12.2	18		475991	2007 <i>PF</</i>					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
248424	2005 SW ₂₂₀		9 8.4 344°52	0°7/ 7.9 18			513374	2008 EQ ₁₃₇		9 8.4 114°78	3°7/ 4.9 18		
8 9	23 32.74	- 7 42.5	1.615	2.518	13.1	19.2	8 9	23 31.33	-15 52.3	2.137	3.041	10.3	21.6
8 19	23 26.47	- 7 30.2	1.548	2.509	9.2	19.0	8 19	23 25.04	-16 27.5	2.085	3.045	7.3	21.4
8 29	23 18.16	- 7 22.8	1.505	2.502	4.8	18.7	8 29	23 17.23	-17 1.2	2.058	3.049	4.5	21.3
9 8	23 8.68	- 7 16.7	1.488	2.495	0.7	18.4	9 8	23 8.66	-17 28.2	2.060	3.053	3.9	21.3
9 18	22 59.10	- 7 8.2	1.497	2.489	4.8	18.7	9 18	23 0.13	-17 44.0	2.089	3.057	6.1	21.4
9 28	22 50.59	- 6 53.8	1.533	2.483	9.3	18.9	9 28	22 52.52	-17 45.8	2.145	3.060	9.1	21.6
10 8	22 44.10	- 6 31.1	1.592	2.479	13.3	19.2	10 8	22 46.51	-17 32.8	2.226	3.064	11.9	21.8
10 18	22 40.20	- 5 59.1	1.672	2.475	16.7	19.4	10 18	22 42.54	-17 5.5	2.327	3.068	14.3	22.0
291901	2006 QB ₈		9 8.4 13°70	0°4/ 8.2 16 R			52270	Noamchomsky		9 8.4 231°28	3°4/11.4 18		
8 9	23 26.45	- 4 41.7	0.842	1.777	18.5	19.6	8 9	23 31.00	+ 5 16.5	1.733	2.597	14.4	19.6
8 19	23 22.86	- 5 2.2	0.806	1.782	13.0	19.3	8 19	23 25.23	+ 5 7.7	1.659	2.591	10.9	19.3
8 29	23 16.47	- 5 38.5	0.788	1.789	6.7	19.1	8 29	23 17.54	+ 4 40.5	1.606	2.585	7.0	19.1
9 8	23 8.60	- 6 22.0	0.790	1.798	0.5	18.7	9 8	23 8.68	+ 3 57.3	1.579	2.578	3.8	18.9
9 18	23 0.87	- 7 2.6	0.813	1.809	6.4	19.1	9 18	22 59.65	+ 3 3.0	1.579	2.571	4.6	18.9
9 28	22 54.92	- 7 31.2	0.857	1.822	12.4	19.5	9 28	22 51.52	+ 2 4.4	1.606	2.564	8.3	19.2
10 8	22 51.85	- 7 41.9	0.919	1.837	17.5	19.9	10 8	22 45.21	+ 1 8.5	1.658	2.556	12.2	19.4
10 18	22 52.12	- 7 32.7	0.997	1.853	21.6	20.2	10 18	22 41.30	+ 0 21.3	1.731	2.549	15.6	19.6
476921	2008 WM ₉₆		9 8.4 8°66	4°5/ 5.8 18			115021	2003 QD ₉₂		9 8.4 285°55	3°3/ 4.4 18		
8 9	23 33.04	-14 51.1	1.202	2.125	15.0	20.0	8 9	23 26.33	-13 10.8	2.224	3.133	9.8	19.3
8 19	23 27.00	-15 8.5	1.157	2.127	10.6	19.7	8 19	23 21.63	-14 21.5	2.162	3.126	6.8	19.1
8 29	23 18.49	-15 24.4	1.133	2.129	6.2	19.5	8 29	23 15.51	-15 34.5	2.126	3.119	4.1	18.9
9 8	23 8.69	-15 31.3	1.133	2.133	4.6	19.4	9 8	23 8.60	-16 43.6	2.118	3.113	3.6	18.8
9 18	22 59.02	-15 23.4	1.157	2.137	8.0	19.6	9 18	23 1.61	-17 42.8	2.138	3.106	6.0	19.0
9 28	22 50.94	-14 57.6	1.204	2.143	12.5	19.9	9 28	22 55.33	-18 27.5	2.184	3.099	9.0	19.2
10 8	22 45.46	-14 13.8	1.272	2.150	16.6	20.2	10 8	22 50.43	-18 55.0	2.255	3.093	11.8	19.3
10 18	22 43.08	-13 14.2	1.358	2.158	20.0	20.4	10 18	22 47.35	-19 4.7	2.347	3.086	14.2	19.5
265578	2005 QH ₁₂₃		9 8.4 48°62	0°3/ 8.6 17			204471	2005 AV ₃₁		9 8.4 195°49	3°0/ 5.4 18		
8 9	23 31.81	- 2 58.9	1.237	2.143	16.0	20.3	8 9	23 29.47	-11 13.9	1.886	2.793	11.3	20.3
8 19	23 25.95	- 3 25.0	1.197	2.159	11.3	20.1	8 19	23 23.96	-12 19.0	1.828	2.792	7.8	20.1
8 29	23 17.86	- 4 4.8	1.179	2.175	5.9	19.8	8 29	23 16.78	-13 28.0	1.795	2.791	4.3	19.9
9 8	23 8.66	- 4 51.7	1.184	2.192	0.5	19.5	9 8	23 8.66	-14 34.1	1.790	2.790	3.2	19.8
9 18	22 59.66	- 5 37.9	1.215	2.209	5.1	19.9	9 18	23 0.49	-15 30.5	1.812	2.788	6.1	20.0
9 28	22 52.15	- 6 16.0	1.270	2.227	10.2	20.2	9 28	22 53.24	-16 11.8	1.861	2.787	9.7	20.2
10 8	22 47.05	- 6 40.8	1.347	2.245	14.5	20.5	10 8	22 47.67	-16 35.1	1.933	2.785	12.9	20.4
10 18	22 44.82	- 6 49.7	1.444	2.263	18.1	20.8	10 18	22 44.28	-16 40.1	2.026	2.783	15.7	20.6
48962	1998 QH ₃₁		9 8.4 21°97	3°4/ 5.9 18			362585	2010 VO ₁₇₃		9 8.4 132°07	4°7/ 2.9 18		
8 9	23 27.83	- 9 15.6	1.020	1.951	16.3	18.4	8 9	23 28.80	-19 29.9	2.350	3.256	9.4	20.5
8 19	23 23.53	-10 20.9	0.984	1.959	11.2	18.1	8 19	23 23.22	-20 26.5	2.302	3.259	6.9	20.4
8 29	23 16.72	-11 34.2	0.969	1.969	5.9	17.9	8 29	23 16.28	-21 19.4	2.281	3.262	5.0	20.3
9 8	23 8.62	-12 44.2	0.976	1.979	3.6	17.8	9 8	23 8.63	-22 3.0	2.286	3.265	5.0	20.3
9 18	23 0.68	-13 40.5	1.005	1.991	7.8	18.1	9 18	23 1.01	-22 32.8	2.320	3.268	6.9	20.4
9 28	22 54.35	-14 15.0	1.057	2.004	12.9	18.4	9 28	22 54.19	-22 46.0	2.379	3.271	9.4	20.6
10 8	22 50.64	-14 24.6	1.128	2.018	17.3	18.7	10 8	22 48.80	-22 41.9	2.462	3.274	11.8	20.7
10 18	22 49.98	-14 10.2	1.216	2.033	20.9	19.0	10 18	22 45.24	-22 21.5	2.566	3.276	13.8	20.9
9712	Nauplius		9 8.4 270°33	0°3/ 9.2 18 R			53932	2000 GB ₄₃		9 8.4 60°56	1°3/ 7.2 18		
8 9	23 20.68	- 1 51.4	4.467	5.340	6.0	18.3	8 9	23 30.27	- 7 28.9	1.774	2.676	12.2	19.4
8 19	23 17.16	- 2 20.5	4.385	5.331	4.3	18.1	8 19	23 24.50	- 8 1.9	1.723	2.684	8.4	19.2
8 29	23 12.99	- 2 54.6	4.331	5.321	2.3	18.0	8 29	23 17.02	- 8 41.3	1.695	2.693	4.3	19.0
9 8	23 8.47	- 3 31.8	4.305	5.312	0.4	17.8	9 8	23 8.67	- 9 21.4	1.695	2.701	1.4	18.8
9 18	23 3.90	- 4 10.0	4.310	5.303	1.9	17.9	9 18	23 0.36	- 9 56.8	1.721	2.709	4.9	19.1
9 28	22 59.63	- 4 47.0	4.345	5.293	3.9	18.1	9 28	22 53.08	-10 22.5	1.774	2.718	8.8	19.3
10 8	22 55.97	- 5 20.4	4.408	5.284	5.7	18.2	10 8	22 47.58	-10 35.4	1.852	2.726	12.3	19.6
10 18	22 53.15	- 5 48.5	4.496	5.274	7.3	18.3	10 18	22 44.32	-10 34.3	1.950	2.735	15.3	19.8
71247	2000 AJ ₁₁		9 8.4 175°63	1°1/ 9.6 18			38052	1998 XA ₇		9 8.4 297°77	0°1/ 8.2 17 R		
8 9	23 29.93	- 0 8.1	2.215	3.089	11.3	20.1	8 9	23 21.30	- 4 48.1	4.270	5.152	6.1	19.9
8 19	23 24.07	- 0 34.4	2.146	3.091	8.1	19.9	8 19	23 17.60	- 5 14.3	4.198	5.150	4.2	19.8
8 29	23 16.75	- 1 11.7	2.103	3.092	4.6	19.7	8 29	23 13.23	- 5 44.4	4.153	5.147	2.2	19.6
9 8	23 8.63	- 1 56.6	2.087	3.093	1.2	19.4	9 8	23 8.51	- 6 16.3	4.137	5.145	0.1	19.4
9 18	23 0.46	- 2 44.4	2.101	3.094	3.4	19.6	9 18	23 3.75	- 6 47.9	4.152	5.142	2.1	19.6
9 28	22 53.04	- 3 30.1	2.143	3.094	7.0	19.8	9 28	22 59.33	- 7 16.9	4.196	5.140	4.2	19.7
10 8	22 47.06	- 4 9.3	2.211	3.094	10.2	20.0	10 8	22 55.55	- 7 41.3	4.268	5.137	6.0	19.9
10 18	22 42.99	- 4 38.7	2.302	3.093	13.0	20.2	10 18	22 52.69	- 7 59.7	4.365	5.135	7.7	20.0
239853	1999 VC ₂₀₂		9 8.4 303°57	3°3/11.5 18			178221	2006 VO ₁₃₈		9 8.4 23°19	0°4/ 8.8 18		
8 9	23 26.64	+ 5 57.3	1.612	2.483	14.9	20.1	8 9	23 27.89	- 2 5.9	1.888	2.778	12.2	20.8
8 19	23 22.35	+ 5 25.5	1.528	2.465	11.3	19.9	8 19	23 22.83	- 2 39.9	1.826	2.780	8.6	20.6
8 29	23 16.10	+ 4 31.1	1.466	2.446	7.3	19.6	8 29	23 16.17	- 3 25.3	1.788	2.782	4.6	20.4
9 8	23 8.61	+ 3 17.3	1.428	2.428	3.7	19.3	9 8	23 8.63	- 4 17.2	1.776	2.783	0.5	20.1
9 18	23 0.82	+ 1 50.4	1.416	2.410	4.6	19.4	9 18	23 1.05	- 5 10.2	1.792	2.785	3.9	20.4
9 28	22 53.86	+ 0 19.3	1.431	2.392	8.7	19.6	9 28	22 54.33	- 5 58.1	1.835	2.787	7.9	20.6
10 8	22 48.68	- 1 6.5	1.470	2.375	13.0	19.8	10 8	22 49.21	- 6 36.4	1.903	2.790	11.5	20.8
10 18	22 45.97	- 2 19.6	1.529	2.358	16.7	20.0	10 18	22 46.17	- 7 1.8	1.993	2.792	14.5	21.0
215332	2001 UA ₁₁₆		9 8.4 350°38	1°9/ 6.6 18			16731	Mitsumata		9 8.4 326°53	5°5/ 4.9 18		
8 9	23 28.10	- 8 27.4	1.754	2.662	12.0	19.							

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
28411	Xiuqicao	9 8.4 43°70'	1°0'	7.6	18		435125	2007 EG ₆₆	9 8.5 188°81'	2°1'	6.5	17	
8 9	23 28.18	- 3 10.7	1.165	2.079	16.2	18.6	8 9	23 33.70	-10 6.7	2.049	2.945	11.1	22.7
8 19	23 23.56	- 4 29.2	1.125	2.091	11.2	18.4	8 19	23 26.81	-10 42.4	1.986	2.945	7.7	22.5
8 29	23 16.69	- 6 3.7	1.106	2.104	5.7	18.1	8 29	23 18.24	-11 21.8	1.948	2.943	4.1	22.3
9 8	23 8.65	- 7 43.6	1.111	2.118	1.0	17.8	9 8	23 8.75	-11 59.5	1.938	2.941	2.2	22.1
9 18	23 0.74	- 9 17.3	1.140	2.132	6.0	18.2	9 18	22 59.23	-12 30.5	1.957	2.939	5.1	22.3
9 28	22 54.25	-10 34.3	1.194	2.147	11.1	18.5	9 28	22 50.61	-12 50.6	2.004	2.936	8.7	22.5
10 8	22 50.13	-11 28.5	1.269	2.161	15.6	18.8	10 8	22 43.67	-12 57.5	2.076	2.932	12.0	22.7
10 18	22 48.85	-11 57.9	1.362	2.177	19.2	19.1	10 18	22 38.91	-12 50.5	2.169	2.927	14.8	22.9
221496	2006 CV ₆₁	9 8.4 271°68'	0°7'	7.8	18		38392	1999 RQ ₁₈₉	9 8.5 266°64'	1°7'	6.5	18	
8 9	23 31.72	- 7 33.3	2.332	3.221	10.2	20.1	8 9	23 27.36	- 8 25.0	2.179	3.080	10.3	19.0
8 19	23 25.34	- 7 38.1	2.253	3.208	7.1	19.9	8 19	23 22.36	- 9 15.7	2.112	3.073	7.1	18.8
8 29	23 17.45	- 7 47.0	2.200	3.195	3.7	19.7	8 29	23 15.92	-10 12.0	2.070	3.067	3.7	18.6
9 8	23 8.70	- 7 57.0	2.176	3.182	0.7	19.4	9 8	23 8.65	-11 8.8	2.055	3.059	1.8	18.4
9 18	22 59.82	- 8 4.7	2.180	3.169	3.9	19.7	9 18	23 1.30	-12 0.6	2.069	3.052	4.7	18.6
9 28	22 51.64	- 8 6.9	2.214	3.156	7.4	19.9	9 28	22 54.67	-12 42.5	2.110	3.045	8.1	18.8
10 8	22 44.88	- 8 1.4	2.273	3.143	10.6	20.0	10 8	22 49.43	-13 11.0	2.176	3.038	11.3	19.0
10 18	22 40.02	- 7 46.9	2.356	3.129	13.3	20.2	10 18	22 46.07	-13 24.7	2.264	3.031	13.9	19.2
249416	2009 DN ₆₉	9 8.4 143°43'	0°4'	9.1	17	R	225690	2001 QS ₁₁₉	9 8.5 329°28'	2°5'	6.6	18	
8 9	23 24.70	- 2 11.0	3.431	4.305	7.7	21.5	8 9	23 28.18	- 8 22.3	1.221	2.143	15.0	18.7
8 19	23 20.05	- 2 32.6	3.365	4.311	5.4	21.3	8 19	23 23.83	- 9 12.3	1.157	2.128	10.4	18.4
8 29	23 14.54	- 3 0.2	3.325	4.316	2.9	21.2	8 29	23 17.03	-10 12.7	1.115	2.114	5.5	18.1
9 8	23 8.57	- 3 31.4	3.314	4.321	0.5	21.0	9 8	23 8.73	-11 14.8	1.095	2.100	2.7	17.9
9 18	23 2.59	- 4 3.5	3.334	4.326	2.4	21.2	9 18	23 0.19	-12 9.2	1.100	2.088	7.0	18.1
9 28	22 57.06	- 4 33.7	3.383	4.331	4.8	21.3	9 28	22 52.85	-12 47.3	1.128	2.076	12.2	18.4
10 8	22 52.40	- 4 59.5	3.459	4.336	7.1	21.5	10 8	22 47.88	-13 4.0	1.176	2.065	16.8	18.6
10 18	22 48.92	- 5 19.0	3.560	4.340	9.0	21.7	10 18	22 45.94	-12 58.0	1.242	2.055	20.8	18.9
265070	2003 SA ₉₇	9 8.4 14°88'	4°1'	12.7	18		481586	2007 TD ₁₅₅	9 8.5 345°71'	5°7'	13.0	17	
8 9	23 29.11	+ 8 10.2	2.298	3.137	12.2	20.5	8 9	23 23.15	+ 8 19.7	1.193	2.077	18.2	19.8
8 19	23 23.52	+ 8 25.6	2.224	3.137	9.5	20.3	8 19	23 20.33	+ 8 24.0	1.123	2.061	14.3	19.5
8 29	23 16.50	+ 8 25.9	2.174	3.138	6.7	20.2	8 29	23 15.22	+ 7 59.8	1.071	2.047	10.0	19.3
9 8	23 8.66	+ 8 12.3	2.151	3.138	4.4	20.0	9 8	23 8.65	+ 7 8.7	1.041	2.035	6.3	19.0
9 18	23 0.73	+ 7 47.1	2.155	3.138	4.5	20.0	9 18	23 1.80	+ 5 56.4	1.032	2.024	6.3	19.0
9 28	22 53.49	+ 7 14.5	2.187	3.139	6.8	20.2	9 28	22 56.03	+ 4 32.8	1.047	2.016	10.1	19.2
10 8	22 47.63	+ 6 39.3	2.245	3.140	9.6	20.4	10 8	22 52.48	+ 3 9.9	1.083	2.008	14.7	19.4
10 18	22 43.60	+ 6 6.1	2.327	3.140	12.2	20.6	10 18	22 51.85	+ 1 57.8	1.138	2.003	18.8	19.7
17697	Evanchen	9 8.4 148°62'	0°4'	8.9	18		252183	2001 DS ₉₀	9 8.5 205°45'	0°5'	7.8	18	
8 9	23 26.23	- 0 56.1	2.187	3.070	11.0	18.3	8 9	23 27.31	- 5 11.5	2.581	3.469	9.4	20.8
8 19	23 21.52	- 1 51.5	2.121	3.072	7.8	18.1	8 19	23 22.14	- 5 50.7	2.511	3.466	6.5	20.6
8 29	23 15.45	- 2 58.5	2.081	3.074	4.2	17.9	8 29	23 15.75	- 6 36.6	2.467	3.462	3.3	20.4
9 8	23 8.62	- 4 12.2	2.068	3.075	0.5	17.6	9 8	23 8.67	- 7 25.1	2.451	3.458	0.5	20.1
9 18	23 1.74	- 5 26.8	2.084	3.077	3.5	17.9	9 18	23 1.53	- 8 12.2	2.464	3.453	3.5	20.4
9 28	22 55.57	- 6 36.4	2.128	3.078	7.1	18.1	9 28	22 55.00	- 8 53.6	2.506	3.449	6.7	20.6
10 8	22 50.76	- 7 35.7	2.198	3.079	10.4	18.3	10 8	22 49.65	- 9 25.9	2.575	3.444	9.5	20.8
10 18	22 47.75	- 8 21.6	2.291	3.080	13.1	18.5	10 18	22 45.91	- 9 47.2	2.667	3.438	12.0	20.9
494547	2017 BY ₃	9 8.5 210°01'	3°1'	4.1	18		433282	2013 AR ₁₃₇	9 8.5 235°42'	1°5'	11.4	18	
8 9	23 26.52	-14 39.2	2.715	3.619	8.4	21.3	8 9	23 21.59	+ 3 49.3	4.567	5.413	6.4	21.8
8 19	23 21.56	-15 44.0	2.654	3.615	5.9	21.2	8 19	23 17.78	+ 3 39.0	4.486	5.410	4.8	21.6
8 29	23 15.42	-16 49.5	2.619	3.610	3.7	21.0	8 29	23 13.35	+ 3 22.2	4.432	5.407	3.1	21.5
9 8	23 8.62	-17 50.5	2.614	3.605	3.4	21.0	9 8	23 8.57	+ 3 0.1	4.407	5.405	1.6	21.4
9 18	23 1.77	-18 42.5	2.637	3.600	5.4	21.1	9 18	23 3.75	+ 2 34.3	4.411	5.402	2.0	21.4
9 28	22 55.51	-19 21.8	2.688	3.594	7.9	21.3	9 28	22 59.23	+ 2 7.0	4.445	5.399	3.6	21.5
10 8	22 50.40	-19 46.3	2.764	3.588	10.3	21.4	10 8	22 55.32	+ 1 40.3	4.508	5.396	5.3	21.7
10 18	22 46.84	-19 55.7	2.862	3.582	12.3	21.6	10 18	22 52.26	+ 1 16.1	4.596	5.393	6.9	21.8
13210	1997 HP ₈	9 8.5 309°01'	0°9'	9.3	18		353615	2011 UY ₃₂	9 8.5 354°13'	2°4'	10.6	18	
8 9	23 27.80	- 0 29.8	1.653	2.545	13.5	18.7	8 9	23 29.44	+ 2 13.9	1.739	2.617	13.7	20.4
8 19	23 23.04	- 1 7.9	1.582	2.536	9.7	18.5	8 19	23 24.08	+ 2 8.5	1.673	2.615	10.1	20.2
8 29	23 16.42	- 2 1.3	1.534	2.527	5.4	18.2	8 29	23 16.92	+ 1 47.9	1.629	2.614	6.1	19.9
9 8	23 8.67	- 3 4.9	1.511	2.518	1.1	17.9	9 8	23 8.73	+ 1 15.3	1.611	2.613	2.7	19.7
9 18	23 0.77	- 4 11.9	1.515	2.509	4.3	18.1	9 18	23 0.44	+ 0 35.4	1.619	2.613	4.1	19.8
9 28	22 53.76	- 5 14.9	1.545	2.501	8.8	18.3	9 28	22 53.09	- 0 6.1	1.654	2.612	8.1	20.0
10 8	22 48.54	- 6 7.1	1.599	2.493	12.9	18.6	10 8	22 47.49	- 0 43.1	1.714	2.612	11.8	20.3
10 18	22 45.69	- 6 44.4	1.674	2.485	16.3	18.8	10 18	22 44.19	- 1 11.3	1.795	2.613	15.1	20.5
233740	2008 SJ ₂₆₉	9 8.5 280°16'	5°1'	3.3	18		69247	1981 ED ₁₀	9 8.5 146°70'	0°7'	9.1	17	
8 9	23 29.00	-15 25.3	1.656	2.573	12.0	19.7	8 9	23 33.75	- 1 26.1	1.723	2.606	13.5	20.4
8 19	23 23.92	-16 55.1	1.597	2.563	8.6	19.4	8 19	23 27.00	- 1 58.1	1.666	2.616	9.6	20.2
8 29	23 16.88	-18 26.7	1.563	2.553	5.7	19.3	8 29	23 18.39	- 2 42.7	1.633	2.626	5.2	20.0
9 8	23 8.69	-19 50.4	1.554	2.543	5.6	19.2	9 8	23 8.79	- 3 34.8	1.627	2.634	0.8	19.7
9 18	23 0.38	-20 57.7	1.572	2.533	8.4	19.4	9 18	22 59.22	- 4 28.1	1.649	2.642	4.2	20.0
9 28	22 53.05	-21 42.4	1.615	2.523	12.0	19.6	9 28	22 50.73	- 5 16.4	1.698	2.649	8.5	20.3
10 8	22 47.61	-22 2.1	1.679	2.514	15.4	19.8	10 8	22 44.18	- 5 54.5	1.772	2.656	12.4	20.5
10 18	22 44.65	-21 57.5	1.761	2.504	18.2	20.0	10 18	22 40.05	- 6 19.3	1.868	2.662	15.5	20.7
407889	2012 BM ₁₁₁	9 8.5 216°02'	1°1'	7.1	18		313055	2000 SB ₁₀	9 8.5 335°56'	9°2'	5.9	17	
8 9	23 26.78	- 6 33.9	2.407	3.302	9.7	21.5	8 9						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
301746	2010 <i>HQ</i> ₇₉	9 8.5 93°20	1.2°/ 9.6 18				371843	2007 <i>XX</i> ₂₅	9 8.5 200°93	2.7°/10.7 18			
8 9	23 29.93	- 0 0.9	1.833	2.715	12.9	20.9	8 9	23 32.68	+ 3 7.8	1.632	2.505	14.7	20.9
8 19	23 24.25	- 0 26.5	1.777	2.725	9.2	20.7	8 19	23 26.49	+ 2 55.1	1.563	2.503	10.9	20.6
8 29	23 16.93	- 1 5.1	1.744	2.734	5.2	20.5	8 29	23 18.26	+ 2 25.0	1.516	2.500	6.7	20.4
9 8	23 8.73	- 1 52.3	1.737	2.743	1.4	20.3	9 8	23 8.83	+ 1 40.8	1.495	2.497	3.0	20.2
9 18	23 0.54	- 2 42.6	1.758	2.752	3.8	20.5	9 18	22 59.26	+ 0 47.8	1.500	2.494	4.5	20.3
9 28	22 53.32	- 3 30.0	1.807	2.762	7.8	20.7	9 28	22 50.70	- 0 6.7	1.533	2.490	8.7	20.5
10 8	22 47.79	- 4 9.5	1.880	2.770	11.4	21.0	10 8	22 44.12	- 0 55.9	1.590	2.486	12.8	20.7
10 18	22 44.44	- 4 37.6	1.976	2.779	14.4	21.2	10 18	22 40.09	- 1 34.6	1.668	2.481	16.3	21.0
412633	2014 <i>OW</i> ₁₆₉	9 8.5 265°19	6°0/31.7 18				53476	2000 <i>AQ</i> ₄₉	9 8.5 64°01	4°2/11.5 18			
8 9	23 28.28	-23 28.6	2.341	3.246	9.5	20.8	8 9	23 32.96	+ 5 22.7	1.120	2.006	18.9	18.5
8 19	23 23.02	-24 45.1	2.285	3.235	7.4	20.7	8 19	23 27.04	+ 5 15.8	1.076	2.020	14.2	18.3
8 29	23 16.28	-25 56.0	2.255	3.224	6.1	20.6	8 29	23 18.61	+ 4 43.1	1.051	2.034	9.1	18.1
9 8	23 8.70	-26 54.7	2.252	3.212	6.5	20.6	9 8	23 8.84	+ 3 49.0	1.048	2.049	4.7	17.9
9 18	23 1.04	-27 36.0	2.276	3.201	8.4	20.7	9 18	22 59.20	+ 2 41.9	1.070	2.064	5.7	18.0
9 28	22 54.12	-27 56.7	2.325	3.189	10.7	20.8	9 28	22 51.16	+ 1 32.1	1.115	2.078	10.3	18.3
10 8	22 48.65	-27 56.3	2.396	3.178	13.0	21.0	10 8	22 45.77	+ 0 29.8	1.181	2.093	14.9	18.6
10 18	22 45.09	-27 36.0	2.486	3.166	14.9	21.1	10 18	22 43.56	- 0 18.4	1.267	2.108	18.8	18.9
320840	2008 <i>FQ</i> ₆₈	9 8.5 35°47	0°6/ 9.1 18				374723	2006 <i>SJ</i> ₄₃	9 8.5 35°49	2°5/10.5 17			
8 9	23 26.44	- 1 2.0	1.843	2.733	12.4	20.5	8 9	23 27.87	+ 3 20.1	1.071	1.973	18.4	20.7
8 19	23 21.82	- 1 45.8	1.788	2.742	8.8	20.2	8 19	23 23.51	+ 2 37.3	1.030	1.985	13.4	20.4
8 29	23 15.66	- 2 42.0	1.757	2.750	4.8	20.0	8 29	23 16.76	+ 1 29.3	1.009	1.999	7.9	20.2
9 8	23 8.68	- 3 45.4	1.753	2.760	0.7	19.7	9 8	23 8.76	+ 0 3.8	1.009	2.014	2.9	19.9
9 18	23 1.71	- 4 49.9	1.775	2.769	3.8	20.0	9 18	23 0.89	- 1 28.3	1.033	2.030	5.1	20.1
9 28	22 55.62	- 5 48.9	1.825	2.779	7.8	20.3	9 28	22 54.52	- 2 54.9	1.081	2.046	10.4	20.5
10 8	22 51.13	- 6 37.3	1.900	2.789	11.3	20.5	10 8	22 50.65	- 4 6.1	1.150	2.063	15.1	20.8
10 18	22 48.67	- 7 11.8	1.996	2.800	14.3	20.7	10 18	22 49.75	- 4 56.4	1.237	2.081	19.0	21.1
483291	2015 <i>TD</i> ₃₄₄	9 8.5 222°17	1°2/ 7.0 18				248168	2004 <i>XB</i> ₂₉	9 8.5 339°17	6°9/13.1 18			
8 9	23 27.40	- 7 33.6	2.339	3.235	9.9	21.8	8 9	23 28.20	+ 8 49.7	1.065	1.947	20.0	19.5
8 19	23 22.29	- 8 15.5	2.274	3.233	6.8	21.6	8 19	23 24.15	+ 9 17.9	1.000	1.937	15.8	19.2
8 29	23 15.86	- 9 2.8	2.235	3.231	3.5	21.4	8 29	23 17.35	+ 9 16.5	0.953	1.927	11.3	18.9
9 8	23 8.69	- 9 51.0	2.223	3.229	1.3	21.3	9 8	23 8.80	+ 8 45.4	0.927	1.919	7.5	18.7
9 18	23 1.48	-10 35.5	2.241	3.227	4.1	21.5	9 18	22 59.91	+ 7 49.3	0.921	1.911	7.5	18.7
9 28	22 54.95	-11 11.9	2.286	3.224	7.4	21.7	9 28	22 52.33	+ 6 37.9	0.938	1.905	11.4	18.9
10 8	22 49.74	-11 37.0	2.357	3.222	10.4	21.9	10 8	22 47.38	+ 5 24.0	0.975	1.899	16.0	19.1
10 18	22 46.27	-11 49.3	2.450	3.219	12.9	22.0	10 18	22 45.83	+ 4 18.3	1.030	1.895	20.4	19.4
186781	2004 <i>DE</i> ₄₃	9 8.5 204°17	0°8/ 7.8 18				436512	2011 <i>FC</i> ₄₅	9 8.5 76°98	4°2/ 5.3 16			
8 9	23 33.06	- 5 45.8	1.686	2.582	13.0	20.8	8 9	23 34.55	-14 42.3	1.546	2.457	13.1	21.4
8 19	23 26.67	- 6 18.4	1.621	2.580	9.1	20.5	8 19	23 27.62	-15 22.7	1.507	2.471	9.2	21.2
8 29	23 18.30	- 6 59.9	1.580	2.577	4.7	20.3	8 29	23 18.72	-16 2.1	1.491	2.485	5.4	21.0
9 8	23 8.81	- 7 44.8	1.566	2.573	0.8	20.0	9 8	23 8.85	-16 33.1	1.501	2.498	4.4	21.0
9 18	22 59.23	- 8 26.9	1.579	2.569	4.9	20.3	9 18	22 59.20	-16 50.2	1.538	2.512	7.2	21.2
9 28	22 50.68	- 9 0.3	1.619	2.565	9.3	20.5	9 28	22 50.90	-16 49.9	1.600	2.525	11.0	21.4
10 8	22 44.07	- 9 20.9	1.684	2.560	13.2	20.7	10 8	22 44.80	-16 31.8	1.684	2.539	14.4	21.7
10 18	22 39.96	- 9 26.7	1.768	2.555	16.5	21.0	10 18	22 41.34	-15 57.2	1.788	2.552	17.2	21.9
439416	2013 <i>CB</i> ₇₆	9 8.5 297°65	1°4/ 6.9 18				436437	2011 <i>BV</i> ₉₇	9 8.5 141°40	2°3/ 6.5 17			
8 9	23 26.20	- 4 43.6	1.738	2.641	12.3	20.6	8 9	23 33.25	- 9 40.1	1.677	2.581	12.7	21.7
8 19	23 21.95	- 6 5.1	1.660	2.623	8.6	20.4	8 19	23 26.71	-10 24.2	1.625	2.588	8.7	21.5
8 29	23 15.88	- 7 40.4	1.607	2.605	4.4	20.1	8 29	23 18.28	-11 13.0	1.597	2.594	4.6	21.3
9 8	23 8.70	- 9 21.9	1.580	2.586	1.4	19.9	9 8	23 8.84	-12 0.1	1.596	2.599	2.4	21.2
9 18	23 1.28	-11 0.8	1.581	2.568	5.3	20.1	9 18	22 59.45	-12 38.9	1.622	2.605	5.8	21.4
9 28	22 54.64	-12 28.2	1.608	2.550	9.7	20.3	9 28	22 51.19	-13 4.5	1.674	2.610	9.8	21.6
10 8	22 49.66	-13 37.4	1.660	2.532	13.6	20.5	10 8	22 44.91	-13 14.2	1.750	2.614	13.4	21.9
10 18	22 46.94	-14 25.1	1.731	2.515	17.0	20.7	10 18	22 41.10	-13 7.4	1.846	2.619	16.4	22.1
223569	2004 <i>FP</i> ₂₇	9 8.5 231°77	0°2/ 8.7 18				53464	1999 <i>XG</i> ₂₀₅	9 8.5 110°79	3°8/ 4.7 18			
8 9	23 31.91	- 2 49.5	1.641	2.533	13.6	21.3	8 9	23 32.23	-15 20.3	2.077	2.981	10.6	18.5
8 19	23 25.94	- 3 19.9	1.572	2.527	9.6	21.0	8 19	23 25.65	-16 11.3	2.038	2.998	7.4	18.4
8 29	23 17.96	- 4 2.6	1.526	2.520	5.1	20.8	8 29	23 17.59	-17 1.0	2.024	3.015	4.6	18.2
9 8	23 8.80	- 4 52.7	1.506	2.514	0.4	20.4	9 8	23 8.81	-17 43.3	2.038	3.031	4.0	18.2
9 18	22 59.48	- 5 43.6	1.514	2.507	4.6	20.7	9 18	23 0.18	-18 13.5	2.081	3.047	6.3	18.4
9 28	22 51.16	- 6 28.7	1.548	2.499	9.2	21.0	9 28	22 52.54	-18 28.4	2.150	3.062	9.3	18.6
10 8	22 44.78	- 7 2.5	1.606	2.492	13.3	21.2	10 8	22 46.58	-18 27.0	2.243	3.077	12.0	18.8
10 18	22 40.92	- 7 21.9	1.685	2.484	16.7	21.4	10 18	22 42.68	-18 10.2	2.357	3.092	14.3	19.0
352311	2007 <i>UP</i> ₅₉	9 8.5 345°49	7°6/ 2.8 18				518205	2016 <i>PE</i> ₉₈	9 8.5 277°90	2°0/10.5 18			
8 9	23 32.00	-22 8.6	1.403	2.322	13.6	20.1	8 9	23 27.62	+ 3 20.9	1.752	2.628	13.7	22.0
8 19	23 26.24	-23 0.5	1.354	2.314	10.3	19.9	8 19	23 22.91	+ 2 37.8	1.674	2.616	10.1	21.8
8 29	23 18.16	-23 44.1	1.327	2.307	7.9	19.8	8 29	23 16.39	+ 1 35.8	1.618	2.605	6.1	21.5
9 8	23 8.81	-24 10.3	1.323	2.301	8.0	19.8	9 8	23 8.77	+ 0 19.2	1.589	2.593	2.3	21.2
9 18	22 59.49	-24 12.5	1.344	2.296	10.5	19.9	9 18	23 0.94	- 1 5.2	1.586	2.581	4.0	21.3
9 28	22 51.53	-23 48.1	1.387	2.291	13.9	20.1	9 28	22 53.93	- 2 29.2	1.610	2.569	8.3	21.6
10 8	22 45.94	-22 58.4	1.450	2.287	17.2	20.3	10 8	22 48.61	- 3 45.0	1.660	2.557	12.3	21.8
10 18	22 43.26	-21 47.3	1.531	2.284	20.1	20.5	10 18	22 45.55	- 4 46.8	1.731	2.545	15.7	22.0
86583	2000 <i>EJ</i> ₅₇	9 8.5 155°53	0°1/ 8.4 17				177939	2005 <i>UV</i> ₁₃₇					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
185970	2001 <i>HP</i> ₆₆	9 8.5 110°26	0°9/ 9.4 17				208114	2000 <i>CG</i> ₉₉	9 8.5 329°17	1°3/ 9.6 18			
8 9	23 31.69	+ 0 54.6	1.711	2.591	13.8	20.7	8 9	23 30.38	- 1 3.8	1.644	2.534	13.7	20.4
8 19	23 25.49	- 0 4.9	1.664	2.612	9.8	20.5	8 19	23 24.89	- 1 10.1	1.576	2.528	9.9	20.1
8 29	23 17.59	- 1 19.6	1.641	2.632	5.4	20.3	8 29	23 17.45	- 1 29.2	1.530	2.522	5.6	19.9
9 8	23 8.82	- 2 43.0	1.645	2.652	1.2	20.1	9 8	23 8.87	- 1 57.4	1.510	2.517	1.5	19.6
9 18	23 0.18	- 4 7.4	1.677	2.671	4.1	20.3	9 18	23 0.16	- 2 29.8	1.517	2.511	4.2	19.8
9 28	22 52.65	- 5 24.9	1.737	2.689	8.3	20.6	9 28	22 52.41	- 3 0.5	1.549	2.506	8.6	20.0
10 8	22 46.98	- 6 29.5	1.822	2.707	12.0	20.9	10 8	22 46.54	- 3 24.4	1.606	2.502	12.7	20.3
10 18	22 43.63	- 7 17.8	1.928	2.724	15.0	21.1	10 18	22 43.12	- 3 37.8	1.684	2.498	16.1	20.5
240651	2005 <i>CZ</i> ₁₃	9 8.5 281°83	2°7/ 5.8 18				181487	2006 <i>TA</i> ₁₀₄	9 8.5 77°90	0°4/ 8.9 18			
8 9	23 28.79	- 9 49.3	1.747	2.656	11.9	20.2	8 9	23 28.34	- 1 56.3	1.964	2.852	11.9	20.7
8 19	23 23.65	- 10 55.0	1.687	2.652	8.2	19.9	8 19	23 23.15	- 2 30.9	1.902	2.854	8.4	20.5
8 29	23 16.73	- 12 6.7	1.652	2.649	4.4	19.7	8 29	23 16.41	- 3 16.5	1.863	2.857	4.5	20.2
9 8	23 8.79	- 13 17.0	1.643	2.645	2.9	19.6	9 8	23 8.82	- 4 8.6	1.852	2.859	0.6	19.9
9 18	23 0.78	- 14 18.5	1.661	2.641	6.1	19.8	9 18	23 1.19	- 5 1.7	1.868	2.862	3.8	20.2
9 28	22 53.71	- 15 5.1	1.705	2.637	10.0	20.0	9 28	22 54.39	- 5 50.1	1.912	2.864	7.7	20.4
10 8	22 48.40	- 15 33.2	1.773	2.634	13.5	20.2	10 8	22 49.14	- 6 29.2	1.981	2.867	11.2	20.7
10 18	22 45.37	- 15 42.0	1.860	2.630	16.4	20.4	10 18	22 45.91	- 6 55.9	2.072	2.869	14.1	20.9
348947	2006 <i>TV</i> ₁₀₁	9 8.5 11°68	0°4/ 8.9 18				22097	2000 <i>BH</i> ₄	9 8.5 166°75	2°8/ 11.9 18			
8 9	23 28.58	- 2 25.9	1.769	2.662	12.7	21.0	8 9	23 29.53	+ 5 48.5	2.890	3.729	10.0	18.2
8 19	23 23.44	- 2 53.4	1.707	2.663	9.0	20.8	8 19	23 23.61	+ 5 52.9	2.816	3.733	7.6	18.1
8 29	23 16.59	- 3 32.3	1.670	2.664	4.8	20.6	8 29	23 16.54	+ 5 46.1	2.767	3.736	5.0	17.9
9 8	23 8.79	- 4 17.9	1.658	2.665	0.6	20.2	9 8	23 8.83	+ 5 29.6	2.746	3.739	3.0	17.8
9 18	23 0.95	- 5 4.6	1.674	2.667	4.1	20.5	9 18	23 1.07	+ 5 5.8	2.755	3.742	3.3	17.8
9 28	22 54.03	- 5 46.3	1.716	2.669	8.3	20.8	9 28	22 53.88	+ 4 37.7	2.793	3.744	5.6	17.9
10 8	22 48.82	- 6 18.4	1.782	2.671	12.0	21.0	10 8	22 47.80	+ 4 9.2	2.859	3.746	8.1	18.1
10 18	22 45.81	- 6 37.7	1.870	2.674	15.1	21.2	10 18	22 43.23	+ 3 43.3	2.950	3.748	10.3	18.3
137744	1999 <i>XU</i> ₁₃₈	9 8.5 204°58	4°7/ 4.2 18				222917	2002 <i>JS</i> ₉₈	9 8.5 39°08	4°1/ 12.8 18			
8 9	23 31.80	- 14 35.6	1.586	2.500	12.7	19.9	8 9	23 27.74	+ 7 58.1	1.875	2.728	13.9	19.2
8 19	23 25.90	- 15 52.3	1.533	2.499	8.9	19.7	8 19	23 22.73	+ 7 56.3	1.821	2.743	10.7	19.1
8 29	23 17.95	- 17 10.4	1.504	2.497	5.6	19.5	8 29	23 16.18	+ 7 35.9	1.788	2.757	7.3	18.9
9 8	23 8.87	- 18 20.8	1.502	2.494	5.1	19.5	9 8	23 8.81	+ 6 59.4	1.781	2.773	4.6	18.8
9 18	22 59.74	- 19 15.2	1.525	2.492	8.0	19.7	9 18	23 1.47	+ 6 11.0	1.800	2.789	4.7	18.8
9 28	22 51.75	- 19 48.1	1.573	2.489	11.8	19.9	9 28	22 55.04	+ 5 16.8	1.847	2.805	7.4	19.0
10 8	22 45.81	- 19 57.7	1.644	2.486	15.3	20.1	10 8	22 50.22	+ 4 23.3	1.918	2.821	10.5	19.2
10 18	22 42.47	- 19 45.1	1.732	2.483	18.2	20.3	10 18	22 47.45	+ 3 35.8	2.012	2.838	13.4	19.5
132307	2002 <i>GH</i> ₁₂	9 8.5 57°71	0°5/ 8.8 18				509559	2008 <i>BY</i> ₅₃	9 8.5 216°71	0°9/ 7.6 18			
8 9	23 31.02	- 1 29.7	1.234	2.138	16.3	19.3	8 9	23 32.50	- 7 47.7	2.237	3.128	10.5	21.6
8 19	23 25.55	- 2 12.9	1.189	2.149	11.5	19.0	8 19	23 25.93	- 8 0.2	2.167	3.123	7.3	21.4
8 29	23 17.80	- 3 12.8	1.165	2.160	6.2	18.8	8 29	23 17.84	- 8 17.3	2.123	3.118	3.8	21.2
9 8	23 8.86	- 4 21.8	1.164	2.172	0.7	18.4	9 8	23 8.90	- 8 35.0	2.106	3.113	0.9	20.9
9 18	23 0.01	- 5 30.9	1.189	2.184	5.1	18.8	9 18	22 59.88	- 8 49.8	2.119	3.108	4.1	21.2
9 28	22 52.58	- 6 30.9	1.239	2.196	10.3	19.1	9 28	22 51.66	- 8 58.1	2.161	3.102	7.6	21.4
10 8	22 47.53	- 7 15.3	1.310	2.208	14.8	19.4	10 8	22 44.93	- 8 57.6	2.228	3.096	10.8	21.6
10 18	22 45.37	- 7 40.8	1.401	2.221	18.5	19.7	10 18	22 40.17	- 8 47.1	2.318	3.090	13.5	21.8
51405	2001 <i>DL</i> ₁₀₆	9 8.5 351°58	0°1/ 8.3 17				342253	2008 <i>SR</i> ₂₈₉	9 8.5 18°30	0°5/ 8.1 18			
8 9	23 21.50	- 4 34.1	4.066	4.949	6.4	19.4	8 9	23 26.29	- 3 10.9	1.163	2.080	16.0	20.0
8 19	23 17.81	- 5 0.4	3.995	4.947	4.4	19.3	8 19	23 22.35	- 4 4.8	1.119	2.087	11.2	19.7
8 29	23 13.42	- 5 30.8	3.952	4.946	2.3	19.1	8 29	23 16.18	- 5 14.5	1.096	2.095	5.8	19.5
9 8	23 8.66	- 6 3.3	3.938	4.945	0.1	18.9	9 8	23 8.82	- 6 31.2	1.096	2.104	0.5	19.1
9 18	23 3.87	- 6 35.5	3.954	4.945	2.2	19.1	9 18	23 1.51	- 7 44.8	1.121	2.114	5.6	19.5
9 28	22 59.43	- 7 5.0	3.999	4.944	4.3	19.3	9 28	22 55.55	- 8 45.8	1.168	2.126	10.8	19.9
10 8	22 55.68	- 7 29.8	4.072	4.943	6.2	19.4	10 8	22 51.88	- 9 27.8	1.237	2.138	15.2	20.2
10 18	22 52.86	- 7 48.3	4.169	4.942	7.9	19.5	10 18	22 50.99	- 9 48.3	1.324	2.151	18.9	20.4
355681	2008 <i>FS</i> ₂	9 8.5 50°46	0°4/ 8.9 18				389562	2010 <i>VR</i> ₃₈	9 8.5 309°58	2°7/ 3.4 17			
8 9	23 26.53	- 1 3.2	1.861	2.751	12.3	20.3	8 9	23 22.49	- 17 50.3	3.928	4.830	6.1	20.3
8 19	23 21.89	- 1 58.8	1.807	2.761	8.7	20.1	8 19	23 18.55	- 18 31.4	3.865	4.822	4.4	20.1
8 29	23 15.73	- 3 7.1	1.778	2.772	4.6	19.9	8 29	23 13.84	- 19 11.1	3.829	4.814	3.0	20.0
9 8	23 8.77	- 4 22.2	1.775	2.783	0.5	19.6	9 8	23 8.71	- 19 46.4	3.823	4.806	2.9	20.0
9 18	23 1.82	- 5 37.5	1.800	2.793	3.9	19.9	9 18	23 3.54	- 20 14.9	3.845	4.799	4.2	20.1
9 28	22 55.76	- 6 46.1	1.852	2.805	7.8	20.1	9 28	22 58.76	- 20 34.3	3.896	4.791	6.0	20.2
10 8	22 51.27	- 7 42.6	1.929	2.816	11.3	20.4	10 8	22 54.72	- 20 43.6	3.972	4.783	7.7	20.3
10 18	22 48.79	- 8 23.8	2.028	2.828	14.3	20.6	10 18	22 51.73	- 20 42.3	4.070	4.776	9.2	20.5
330648	2008 <i>FB</i> ₅₆	9 8.5 49°53	1°1/ 9.4 18				421540	2014 <i>OB</i> ₁₆₈	9 8.5 233°19	5°2/ 1.9 18			
8 9	23 29.84	+ 0 2.3	1.309	2.208	15.9	20.1	8 9	23 28.88	- 21 22.5	2.400	3.305	9.3	21.1
8 19	23 24.65	- 0 37.5	1.262	2.218	11.4	19.8	8 19	23 23.40	- 22 27.5	2.346	3.299	7.0	21.0
8 29	23 17.31	- 1 35.2	1.236	2.229	6.3	19.6	8 29	23 16.51	- 23 28.0	2.317	3.293	5.4	20.9
9 8	23 8.84	- 2 43.9	1.233	2.240	1.4	19.3	9 8	23 8.84	- 24 18.1	2.316	3.287	5.6	20.9
9 18	23 0.44	- 3 55.0	1.257	2.252	4.8	19.6	9 18	23 1.14	- 24 53.1	2.343	3.281	7.5	21.0
9 28	22 53.33	- 4 59.6	1.305	2.264	9.7	19.9	9 28	22 54.18	- 25 9.9	2.395	3.274	9.9	21.1
10 8	22 48.47	- 5 50.6	1.375	2.276	14.1	20.2	10 8	22 48.62	- 25 7.9	2.470	3.267	12.2	21.3
10 18	22 46.33	- 6 24.0	1.466	2.288	17.7	20.5	10 18	22 44.91	- 24 48.1	2.566	3.261	14.2	21.4
350179	2011 <i>UY</i> ₁₄₅	9 8.5 221°71	2°6/ 2.9 18				72839	2001 <i>HS</i>					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
178080	2006 <i>SL</i> ₁₅₂		9 8.5 145°64	0°4/ 8.9 17			24882	1996 <i>RK</i> ₃₀		9 8.5 258°15	0°4/ 9.3 18		
8 9	23 33.11	- 2 6.7	1.706	2.592	13.4	21.0	8 9	23 22.13	- 2 19.5	4.427	5.299	6.1	18.9
8 19	23 26.63	- 2 39.7	1.648	2.601	9.5	20.8	8 19	23 18.22	- 2 35.0	4.350	5.295	4.3	18.8
8 29	23 18.28	- 3 24.9	1.615	2.608	5.1	20.5	8 29	23 13.67	- 2 54.9	4.300	5.290	2.4	18.6
9 8	23 8.93	- 4 16.9	1.608	2.616	0.6	20.2	9 8	23 8.75	- 3 17.7	4.279	5.286	0.5	18.5
9 18	22 59.59	- 5 9.5	1.629	2.622	4.3	20.5	9 18	23 3.80	- 3 41.5	4.289	5.281	1.9	18.6
9 28	22 51.32	- 5 56.3	1.678	2.628	8.6	20.8	9 28	22 59.16	- 4 4.2	4.328	5.277	3.9	18.8
10 8	22 44.98	- 6 32.4	1.750	2.634	12.5	21.1	10 8	22 55.15	- 4 23.9	4.395	5.273	5.7	18.9
10 18	22 41.05	- 6 54.8	1.844	2.639	15.7	21.3	10 18	22 52.02	- 4 39.1	4.488	5.268	7.3	19.0
97501	2000 <i>CE</i> ₉₂		9 8.5 234°79	0°8/ 7.5 18			515993	2015 <i>RE</i> ₂₁₈		9 8.5 34°36	1°3/ 7.4 18		
8 9	23 27.92	- 6 52.5	2.665	3.555	9.0	19.7	8 9	23 29.70	- 7 41.1	1.807	2.710	12.0	21.1
8 19	23 22.61	- 7 23.5	2.589	3.546	6.3	19.5	8 19	23 24.15	- 8 7.3	1.756	2.718	8.3	20.9
8 29	23 16.07	- 7 59.6	2.540	3.536	3.2	19.3	8 29	23 16.96	- 8 39.2	1.729	2.726	4.2	20.6
9 8	23 8.83	- 8 37.4	2.520	3.526	0.8	19.1	9 8	23 8.91	- 9 11.9	1.728	2.734	1.3	20.5
9 18	23 1.50	- 9 12.8	2.529	3.516	3.6	19.3	9 18	23 0.90	- 9 40.2	1.755	2.743	4.7	20.7
9 28	22 54.75	- 9 42.3	2.566	3.506	6.7	19.5	9 28	22 53.89	- 9 59.6	1.808	2.752	8.6	21.0
10 8	22 49.15	- 10 3.0	2.630	3.495	9.5	19.6	10 8	22 48.61	- 10 7.2	1.885	2.762	12.1	21.2
10 18	22 45.13	- 10 13.3	2.717	3.484	11.9	19.8	10 18	22 45.50	- 10 1.8	1.984	2.772	14.9	21.4
48611	1995 <i>FS</i> ₆		9 8.5 277°95	2°2/ 6.6 18 R			248720	2006 <i>QX</i> ₁₄		9 8.5 41°66	2°4/ 10.3 18		
8 9	23 32.09	- 10 24.4	1.912	2.814	11.5	18.8	8 9	23 32.07	+ 0 59.9	1.473	2.360	15.2	20.2
8 19	23 25.96	- 10 51.4	1.836	2.797	8.0	18.5	8 19	23 25.99	+ 1 7.1	1.429	2.377	11.1	20.0
8 29	23 18.00	- 11 22.2	1.784	2.780	4.3	18.3	8 29	23 17.97	+ 0 59.0	1.406	2.394	6.6	19.8
9 8	23 8.92	- 11 51.8	1.759	2.763	2.2	18.1	9 8	23 8.96	+ 0 39.0	1.409	2.413	2.7	19.6
9 18	22 59.66	- 12 14.9	1.762	2.745	5.4	18.3	9 18	23 0.09	+ 0 12.3	1.437	2.431	4.5	19.8
9 28	22 51.23	- 12 27.0	1.792	2.728	9.3	18.5	9 28	22 52.48	- 0 15.3	1.491	2.451	8.7	20.1
10 8	22 44.50	- 12 25.6	1.846	2.710	12.9	18.7	10 8	22 46.99	- 0 38.2	1.569	2.470	12.6	20.4
10 18	22 40.06	- 12 9.9	1.921	2.692	15.9	18.8	10 18	22 44.07	- 0 52.3	1.667	2.490	15.9	20.7
103496	2000 <i>AR</i> ₂₃₉		9 8.5 159°66	5°3/ 1.6 18			251478	2008 <i>DB</i> ₅₅		9 8.5 0°87	0°2/ 8.7 18		
8 9	23 29.68	- 20 35.2	2.387	3.291	9.4	19.4	8 9	23 28.47	- 3 0.0	1.883	2.775	12.1	20.5
8 19	23 23.92	- 22 4.0	2.344	3.297	7.0	19.3	8 19	23 23.33	- 3 28.3	1.820	2.775	8.5	20.3
8 29	23 16.77	- 23 28.4	2.328	3.303	5.4	19.2	8 29	23 16.57	- 4 7.0	1.780	2.775	4.5	20.1
9 8	23 8.87	- 24 41.9	2.340	3.309	5.7	19.2	9 8	23 8.90	- 4 51.5	1.767	2.775	0.4	19.7
9 18	23 0.97	- 25 39.0	2.380	3.314	7.6	19.3	9 18	23 1.17	- 5 36.4	1.782	2.775	4.0	20.0
9 28	22 53.85	- 26 16.4	2.446	3.318	9.9	19.5	9 28	22 54.30	- 6 16.4	1.823	2.775	8.0	20.3
10 8	22 48.17	- 26 33.2	2.536	3.322	12.2	19.7	10 8	22 49.04	- 6 46.7	1.890	2.776	11.6	20.5
10 18	22 44.35	- 26 30.7	2.644	3.325	14.1	19.8	10 18	22 45.89	- 7 4.8	1.977	2.777	14.6	20.7
173215	1998 <i>SG</i> ₁₇₆		9 8.5 336°70	1°0/ 9.3 16			479440	2013 <i>YF</i> ₁₀₉		9 8.5 106°96	7°9/ 15.9 17		
8 9	23 23.80	- 1 1.8	1.178	2.092	16.0	20.3	8 9	23 32.31	+ 16 48.4	1.820	2.620	16.4	21.2
8 19	23 20.92	- 1 28.5	1.102	2.066	11.7	20.0	8 19	23 26.16	+ 17 23.2	1.754	2.628	13.7	21.0
8 29	23 15.66	- 2 15.2	1.046	2.042	6.5	19.6	8 29	23 18.11	+ 17 33.0	1.709	2.636	10.8	20.8
9 8	23 8.82	- 3 16.6	1.012	2.019	1.2	19.2	9 8	23 8.98	+ 17 17.0	1.688	2.644	8.6	20.7
9 18	23 1.60	- 4 24.4	1.001	1.998	5.3	19.4	9 18	22 59.73	+ 16 37.4	1.691	2.652	7.9	20.7
9 28	22 55.40	- 5 28.1	1.013	1.978	11.0	19.7	9 28	22 51.46	+ 15 39.9	1.720	2.660	9.3	20.8
10 8	22 51.45	- 6 18.4	1.046	1.960	16.2	19.9	10 8	22 45.04	+ 14 32.6	1.774	2.668	11.8	21.0
10 18	22 50.53	- 6 49.3	1.096	1.944	20.6	20.2	10 18	22 41.02	+ 13 23.7	1.850	2.675	14.4	21.2
68345	2001 <i>KP</i> ₆₅		9 8.5 0°81	8°1/ 31.2 18			492360	2014 <i>HS</i> ₄₀		9 8.5 27°76	4°7/ 3.9 18		
8 9	23 28.82	- 23 19.6	1.564	2.483	12.5	18.2	8 9	23 29.65	- 16 31.4	1.803	2.716	11.4	20.5
8 19	23 23.90	- 25 2.6	1.525	2.482	9.7	18.0	8 19	23 24.20	- 17 34.8	1.755	2.718	8.1	20.3
8 29	23 16.94	- 26 37.2	1.510	2.481	8.2	17.9	8 29	23 17.02	- 18 36.8	1.732	2.721	5.4	20.1
9 8	23 8.89	- 27 53.1	1.519	2.481	8.8	18.0	9 8	23 8.93	- 19 29.9	1.734	2.723	5.1	20.1
9 18	23 0.84	- 28 42.6	1.552	2.481	11.2	18.1	9 18	23 0.85	- 20 7.9	1.764	2.726	7.6	20.3
9 28	22 53.98	- 29 1.9	1.608	2.482	14.1	18.3	9 28	22 53.79	- 20 26.8	1.818	2.729	10.8	20.5
10 8	22 49.18	- 28 51.7	1.683	2.484	16.8	18.5	10 8	22 48.52	- 20 25.4	1.896	2.732	13.8	20.7
10 18	22 46.95	- 28 15.5	1.775	2.485	19.2	18.7	10 18	22 45.50	- 20 4.8	1.992	2.736	16.3	20.9
371437	2006 <i>SJ</i> ₂₁₅		9 8.5 37°11	0°7/ 7.9 17			226348	2003 <i>FW</i> ₁₃₂		9 8.5 306°84	1°1/ 6.6 16		
8 9	23 28.25	- 2 50.7	1.084	2.001	16.9	20.2	8 9	23 22.59	- 9 45.5	4.044	4.938	6.1	20.5
8 19	23 23.78	- 3 59.2	1.047	2.014	11.8	19.9	8 19	23 18.61	- 10 10.8	3.973	4.931	4.2	20.3
8 29	23 16.94	- 5 24.6	1.029	2.028	6.0	19.7	8 29	23 13.89	- 10 37.9	3.929	4.925	2.2	20.2
9 8	23 8.89	- 6 56.5	1.035	2.043	0.7	19.3	9 8	23 8.79	- 11 4.8	3.914	4.918	1.1	20.1
9 18	23 0.98	- 8 23.1	1.065	2.058	5.9	19.8	9 18	23 3.64	- 11 28.9	3.930	4.912	2.8	20.2
9 28	22 54.59	- 9 34.0	1.118	2.074	11.3	20.1	9 28	22 58.85	- 11 48.2	3.974	4.906	4.8	20.4
10 8	22 50.68	- 10 22.8	1.192	2.091	15.9	20.4	10 8	22 54.77	- 12 1.2	4.046	4.899	6.7	20.5
10 18	22 49.70	- 10 47.4	1.283	2.108	19.6	20.7	10 18	22 51.67	- 12 6.6	4.141	4.893	8.3	20.6
220234	2002 <i>WY</i> ₂₃		9 8.5 9°47	6°0/ 4.5 15			512858	2016 <i>VR</i> ₁₅		9 8.5 342°49	4°2/ 4.9 18		
8 9	23 28.21	- 15 0.7	0.959	1.897	16.4	19.4	8 9	23 30.51	- 14 16.9	1.567	2.483	12.7	20.5
8 19	23 24.06	- 16 1.6	0.923	1.899	11.6	19.1	8 19	23 25.04	- 15 8.4	1.512	2.478	8.9	20.3
8 29	23 17.20	- 17 2.3	0.906	1.902	7.2	18.9	8 29	23 17.56	- 16 0.9	1.481	2.475	5.4	20.1
9 8	23 8.90	- 17 50.6	0.911	1.907	6.4	18.9	9 8	23 8.96	- 16 46.5	1.475	2.471	4.5	20.0
9 18	23 0.74	- 18 17.2	0.937	1.914	10.0	19.1	9 18	23 0.34	- 17 18.6	1.495	2.468	7.5	20.2
9 28	22 54.29	- 18 16.4	0.983	1.922	14.6	19.4	9 28	22 52.82	- 17 32.1	1.540	2.466	11.3	20.4
10 8	22 50.63	- 17 48.3	1.048	1.932	18.9	19.7	10 8	22 47.33	- 17 25.5	1.607	2.463	14.8	20.6
10 18	22 50.22	- 16 56.0	1.129	1.943	22.4	20.0	10 18	22 44.39	- 16 59.6	1.692	2.462	17.8	20.8
39803	1997 <i>UY</i> ₁₅		9 8.5 304°16	0°0/ 8.5 17									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
345457	2006 <i>FG</i> ₂	9 8.5 351 ^o .10	4 ^o .3/12.8 18				353509	2011 <i>SA</i> ₁₀₀	9 8.5 285 ^o .18	1 ^o .6/ 6.8 18			
8 9	23 22.48	+ 9 10.2	1.253	2.132	17.8	19.6	8 9	23 27.93	- 6 53.8	1.871	2.774	11.6	20.4
8 19	23 19.77	+ 8 18.4	1.186	2.124	13.8	19.3	8 19	23 23.02	- 7 55.3	1.808	2.771	8.0	20.2
8 29	23 14.94	+ 6 54.0	1.139	2.117	9.2	19.0	8 29	23 16.46	- 9 5.1	1.770	2.768	4.1	19.9
9 8	23 8.84	+ 5 1.8	1.114	2.112	5.1	18.8	9 8	23 8.97	-10 16.6	1.759	2.764	1.7	19.7
9 18	23 2.57	+ 2 51.8	1.113	2.108	5.3	18.8	9 18	23 1.40	-11 23.2	1.775	2.761	5.0	20.0
9 28	22 57.36	+ 0 37.8	1.136	2.105	9.5	19.0	9 28	22 54.68	-12 18.3	1.819	2.758	8.9	20.2
10 8	22 54.24	- 1 26.3	1.183	2.103	14.2	19.3	10 8	22 49.56	-12 57.8	1.886	2.755	12.4	20.4
10 18	22 53.80	- 3 10.3	1.250	2.103	18.3	19.5	10 18	22 46.56	-13 19.8	1.974	2.752	15.4	20.6
148100	1999 <i>NM</i> ₁₀	9 8.5 21 ^o .14	3 ^o .3/ 5.4 18				36259	1999 <i>XM</i> ₇₄	9 8.5 241 ^o .17	3 ^o .8/30.9 18			
8 9	23 25.55	-10 7.4	1.403	2.326	13.4	18.6	8 9	23 22.53	-26 32.1	4.611	5.503	5.5	18.9
8 19	23 21.56	-11 25.6	1.366	2.337	9.1	18.4	8 19	23 18.56	-27 19.0	4.561	5.498	4.4	18.8
8 29	23 15.70	-12 49.0	1.352	2.350	5.0	18.2	8 29	23 13.90	-28 1.4	4.539	5.493	3.8	18.7
9 8	23 8.88	-14 8.3	1.362	2.363	3.6	18.2	9 8	23 8.86	-28 36.4	4.545	5.487	4.1	18.8
9 18	23 2.16	-15 14.6	1.398	2.378	7.0	18.4	9 18	23 3.80	-29 2.1	4.579	5.482	5.0	18.8
9 28	22 56.60	-16 1.5	1.457	2.393	11.0	18.7	9 28	22 59.09	-29 16.8	4.639	5.476	6.3	18.9
10 8	22 53.01	-16 25.9	1.539	2.410	14.6	19.0	10 8	22 55.06	-29 20.2	4.723	5.470	7.5	19.0
10 18	22 51.82	-16 28.0	1.639	2.427	17.6	19.2	10 18	22 51.98	-29 12.4	4.828	5.465	8.6	19.1
211110	2002 <i>FY</i> ₂₃	9 8.5 80 ^o .27	0 ^o .3/ 8.3 17				22016	1999 <i>XU</i> ₁₀₁	9 8.5 12 ^o .05	4 ^o .0/12.5 18			
8 9	23 33.38	- 3 21.0	1.320	2.222	15.5	20.7	8 9	23 28.86	+ 7 19.6	2.054	2.903	13.0	17.6
8 19	23 27.05	- 4 6.3	1.281	2.241	10.8	20.5	8 19	23 23.59	+ 7 30.6	1.984	2.904	10.1	17.5
8 29	23 18.57	- 5 4.5	1.263	2.259	5.6	20.2	8 29	23 16.76	+ 7 25.4	1.937	2.905	6.9	17.3
9 8	23 9.03	- 6 8.1	1.270	2.278	0.3	19.9	9 8	23 9.06	+ 7 5.4	1.916	2.907	4.4	17.1
9 18	22 59.68	- 7 8.7	1.303	2.296	5.2	20.3	9 18	23 1.26	+ 6 33.8	1.922	2.909	4.6	17.1
9 28	22 51.78	- 7 58.6	1.362	2.314	10.1	20.6	9 28	22 54.23	+ 5 55.1	1.956	2.912	7.2	17.3
10 8	22 46.23	- 8 32.7	1.443	2.332	14.3	20.9	10 8	22 48.70	+ 5 15.1	2.014	2.914	10.3	17.5
10 18	22 43.48	- 8 49.0	1.543	2.349	17.7	21.2	10 18	22 45.17	+ 4 38.7	2.096	2.917	13.1	17.7
257203	2008 <i>RW</i> ₁₂₂	9 8.5 268 ^o .77	0 ^o .8/10.2 18				212934	2008 <i>SN</i> ₈₁	9 8.5 279 ^o .79	10 ^o .0/30.6 18			
8 9	23 21.75	+ 0 19.4	4.494	5.357	6.2	20.5	8 9	23 37.82	-31 37.6	1.743	2.633	13.0	19.9
8 19	23 17.98	+ 0 4.4	4.412	5.349	4.5	20.4	8 19	23 30.30	-32 41.7	1.689	2.617	11.1	19.7
8 29	23 13.57	- 0 16.2	4.357	5.342	2.6	20.2	8 29	23 20.43	-33 30.0	1.659	2.601	10.1	19.6
9 8	23 8.80	- 0 40.7	4.330	5.334	1.0	20.1	9 8	23 9.25	-33 53.5	1.652	2.585	10.6	19.6
9 18	23 3.98	- 1 7.4	4.334	5.327	1.8	20.1	9 18	22 58.04	-33 46.6	1.670	2.568	12.5	19.7
9 28	22 59.46	- 1 34.1	4.367	5.319	3.7	20.3	9 28	22 48.16	-33 7.9	1.710	2.552	15.0	19.8
10 8	22 55.54	- 1 58.8	4.429	5.312	5.5	20.4	10 8	22 40.66	-32 0.6	1.771	2.536	17.4	20.0
10 18	22 52.49	- 2 19.8	4.516	5.304	7.1	20.5	10 18	22 36.09	-30 30.1	1.848	2.519	19.6	20.1
230692	2003 <i>UG</i> ₃₅	9 8.5 12 ^o .99	2 ^o .9/ 5.9 18				261519	2005 <i>WP</i> ₆₉	9 8.5 230 ^o .53	4 ^o .6/ 3.3 18			
8 9	23 27.28	- 8 56.1	1.369	2.289	13.9	19.2	8 9	23 28.94	-18 0.7	2.183	3.091	9.9	21.0
8 19	23 22.91	-10 9.5	1.321	2.291	9.5	18.9	8 19	23 23.56	-19 2.0	2.131	3.090	7.2	20.8
8 29	23 16.49	-11 30.9	1.296	2.294	5.0	18.7	8 29	23 16.70	-20 1.0	2.104	3.090	5.0	20.7
9 8	23 8.95	-12 50.8	1.295	2.298	3.1	18.6	9 8	23 9.05	-20 51.4	2.105	3.089	4.9	20.7
9 18	23 1.41	-13 59.9	1.319	2.302	6.8	18.8	9 18	23 1.39	-21 28.0	2.134	3.088	7.0	20.8
9 28	22 55.05	-14 50.7	1.368	2.308	11.2	19.1	9 28	22 54.54	-21 47.5	2.188	3.088	9.7	21.0
10 8	22 50.77	-15 19.2	1.438	2.313	15.2	19.4	10 8	22 49.20	-21 48.7	2.266	3.087	12.4	21.2
10 18	22 49.08	-15 24.8	1.527	2.320	18.4	19.6	10 18	22 45.79	-21 32.4	2.364	3.086	14.6	21.3
326792	2003 <i>SR</i> ₂₉₃	9 8.5 297 ^o .94	1 ^o .5/ 9.5 18				386363	2008 <i>TQ</i> ₉₅	9 8.5 251 ^o .12	4 ^o .0/12.2 18			
8 9	23 33.07	- 1 19.0	1.318	2.216	15.9	20.7	8 9	23 30.37	+ 7 4.3	1.799	2.654	14.3	20.7
8 19	23 27.27	- 1 21.0	1.248	2.203	11.5	20.4	8 19	23 24.90	+ 7 0.1	1.721	2.646	11.0	20.5
8 29	23 18.97	- 1 38.1	1.198	2.191	6.5	20.1	8 29	23 17.56	+ 6 36.6	1.666	2.639	7.5	20.3
9 8	23 9.08	- 2 6.4	1.173	2.179	1.7	19.8	9 8	23 9.10	+ 5 55.8	1.636	2.631	4.4	20.1
9 18	22 58.90	- 2 39.9	1.172	2.167	5.0	19.9	9 18	23 0.44	+ 5 2.0	1.633	2.623	4.8	20.1
9 28	22 49.88	- 3 11.6	1.197	2.156	10.4	20.2	9 28	22 52.62	+ 4 1.6	1.657	2.615	8.1	20.3
10 8	22 43.22	- 3 34.8	1.243	2.145	15.2	20.5	10 8	22 46.51	+ 3 2.0	1.705	2.606	11.8	20.5
10 18	22 39.63	- 3 45.3	1.309	2.134	19.3	20.7	10 18	22 42.73	+ 2 9.3	1.776	2.598	15.1	20.7
477494	2010 <i>CM</i> ₃₈	9 8.5 148 ^o .53	1 ^o .4/ 9.7 17				508378	2016 <i>FK</i> ₇	9 8.5 59 ^o .99	5 ^o .8/ 4.8 17			
8 9	23 33.87	- 0 45.4	2.026	2.899	12.2	21.5	8 9	23 35.54	-15 27.4	1.114	2.038	15.9	20.2
8 19	23 26.99	- 0 46.6	1.962	2.906	8.8	21.3	8 19	23 28.81	-16 31.2	1.087	2.056	11.2	20.0
8 29	23 18.47	- 0 58.2	1.924	2.912	5.0	21.1	8 29	23 19.58	-17 32.4	1.082	2.075	7.0	19.9
9 8	23 9.05	- 1 17.3	1.913	2.918	1.5	20.8	9 8	23 9.19	-18 20.2	1.099	2.094	6.0	19.9
9 18	22 59.63	- 1 40.0	1.931	2.924	3.7	21.0	9 18	22 59.20	-18 46.6	1.140	2.113	9.3	20.1
9 28	22 51.11	- 2 2.0	1.977	2.929	7.4	21.3	9 28	22 51.05	-18 47.9	1.204	2.132	13.6	20.4
10 8	22 44.27	- 2 19.4	2.049	2.934	10.9	21.5	10 8	22 45.70	-18 24.8	1.289	2.152	17.4	20.7
10 18	22 39.58	- 2 29.1	2.144	2.938	13.8	21.7	10 18	22 43.52	-17 40.7	1.390	2.171	20.5	21.0
188756	2005 <i>UF</i> ₂₆₆	9 8.5 101 ^o .46	0 ^o .6/ 7.9 18				383338	2006 <i>KZ</i> ₁₂₂	9 8.5 130 ^o .75	3 ^o .6/ 4.5 18			
8 9	23 27.77	- 4 51.9	2.167	3.060	10.7	20.8	8 9	23 29.39	-12 18.9	1.946	2.854	11.0	21.1
8 19	23 22.67	- 5 34.6	2.107	3.064	7.4	20.6	8 19	23 23.95	-13 47.0	1.900	2.863	7.6	20.9
8 29	23 16.18	- 6 25.3	2.073	3.069	3.8	20.4	8 29	23 16.93	-15 17.8	1.879	2.872	4.5	20.8
9 8	23 8.94	- 7 19.0	2.066	3.073	0.6	20.1	9 8	23 9.07	-16 43.3	1.885	2.881	3.8	20.7
9 18	23 1.68	- 8 10.7	2.088	3.078	3.9	20.4	9 18	23 1.23	-17 56.4	1.920	2.889	6.5	20.9
9 28	22 55.18	- 8 55.3	2.137	3.082	7.4	20.6	9 28	22 54.30	-18 51.7	1.981	2.896	9.8	21.1
10 8	22 50.09	- 9 29.1	2.212	3.087	10.6	20.8	10 8	22 48.99	-19 26.7	2.066	2.904	12.8	21.3
10 18	22 46.84	- 9 50.1	2.309	3.091	13.3	21.0	10 18	22 45.77	-19 41.3				

EPHEMERIDES

9 8.5

9 8.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
298055	2002 <i>QM</i> ₅₁		9 8.5	0°48	1°3/ 9.5	18	392010	2008 <i>YQ</i> ₁₆₇		9 8.5	337°04	4°2/ 4.5	18
8 9	23 34.36	- 2 20.1	1.687	2.573	13.6	20.5	8 9	23 29.25	-13 48.0	1.694	2.608	12.0	20.9
8 19	23 27.67	- 2 3.3	1.622	2.572	9.8	20.2	8 19	23 24.11	-14 59.3	1.640	2.606	8.4	20.7
8 29	23 18.99	- 1 56.5	1.581	2.572	5.5	20.0	8 29	23 17.12	-16 12.6	1.611	2.604	5.1	20.5
9 8	23 9.20	- 1 56.8	1.566	2.572	1.5	19.7	9 8	23 9.11	-17 19.7	1.607	2.602	4.5	20.5
9 18	22 59.32	- 2 0.9	1.578	2.572	4.2	19.9	9 18	23 1.06	-18 13.3	1.631	2.600	7.3	20.7
9 28	22 50.51	- 2 4.6	1.617	2.572	8.5	20.2	9 28	22 54.01	-18 47.8	1.679	2.599	10.9	20.9
10 8	22 43.65	- 2 4.0	1.681	2.573	12.4	20.4	10 8	22 48.80	-19 1.1	1.750	2.597	14.2	21.1
10 18	22 39.31	- 1 56.3	1.766	2.574	15.7	20.6	10 18	22 45.93	-18 53.5	1.840	2.596	17.1	21.3
325944	2010 <i>VT</i> ₅₆		9 8.5	230°22	4°2/14.5	18	269819	1999 <i>VN</i> ₂₁₃		9 8.6	302°83	3°5/ 4.8	18
8 9	23 26.69	+13 1.9	2.842	3.646	11.0	21.7	8 9	23 28.35	-12 42.9	1.992	2.901	10.7	20.4
8 19	23 21.83	+12 43.9	2.748	3.635	8.9	21.5	8 19	23 23.51	-13 49.4	1.903	2.867	7.6	20.1
8 29	23 15.78	+12 9.3	2.678	3.623	6.6	21.3	8 29	23 16.89	-15 0.8	1.839	2.833	4.5	19.9
9 8	23 9.03	+11 19.3	2.635	3.610	4.7	21.2	9 8	23 9.11	-16 10.4	1.803	2.799	3.8	19.8
9 18	23 2.14	+10 16.6	2.620	3.598	4.4	21.2	9 18	23 0.99	-17 11.1	1.793	2.765	6.6	19.9
9 28	22 55.74	+ 9 5.6	2.634	3.584	6.0	21.2	9 28	22 53.51	-17 56.7	1.810	2.730	10.2	20.0
10 8	22 50.40	+ 7 51.7	2.676	3.571	8.3	21.4	10 8	22 47.53	-18 23.4	1.850	2.696	13.7	20.2
10 18	22 46.55	+ 6 39.9	2.744	3.556	10.6	21.5	10 18	22 43.70	-18 29.9	1.910	2.662	16.7	20.3
309845	2009 <i>CH</i> ₄₇		9 8.5	189°49	1°7/ 6.9	18	515019	2009 <i>SC</i> ₁₇₄		9 8.6	39°07	0°5/ 8.9	18
8 9	23 30.94	- 8 40.7	1.991	2.891	11.2	21.2	8 9	23 30.62	- 3 25.2	2.017	2.904	11.6	20.7
8 19	23 25.04	- 9 16.1	1.930	2.890	7.8	21.0	8 19	23 24.75	- 3 29.4	1.958	2.911	8.2	20.5
8 29	23 17.53	- 9 56.5	1.893	2.890	4.0	20.8	8 29	23 17.35	- 3 41.8	1.924	2.917	4.4	20.2
9 8	23 9.12	-10 36.8	1.884	2.889	1.7	20.6	9 8	23 9.13	- 3 59.2	1.917	2.924	0.6	20.0
9 18	23 0.67	-11 11.9	1.903	2.888	4.8	20.8	9 18	23 0.92	- 4 17.6	1.938	2.931	3.6	20.2
9 28	22 53.10	-11 37.1	1.949	2.887	8.5	21.0	9 28	22 53.58	- 4 33.1	1.987	2.939	7.4	20.5
10 8	22 47.14	-11 49.6	2.020	2.886	11.8	21.2	10 8	22 47.82	- 4 42.3	2.061	2.946	10.8	20.7
10 18	22 43.28	-11 48.3	2.112	2.885	14.6	21.4	10 18	22 44.09	- 4 43.0	2.157	2.954	13.6	20.9
23070	Koussa		9 8.5	195°20	2°4/ 5.5	18	253969	2004 <i>EF</i> ₂		9 8.6	121°43	13°8/ 4.3	17
8 9	23 28.18	-12 8.8	2.599	3.499	8.9	19.3	8 9	23 57.17	-33 15.9	0.992	1.884	20.3	19.7
8 19	23 22.85	-12 56.4	2.537	3.497	6.1	19.1	8 19	23 44.70	-33 39.3	0.953	1.885	16.9	19.5
8 29	23 16.29	-13 45.9	2.501	3.495	3.5	18.9	8 29	23 28.12	-33 30.9	0.933	1.887	14.3	19.3
9 8	23 9.06	-14 32.6	2.494	3.493	2.5	18.9	9 8	23 9.69	-32 37.6	0.935	1.889	14.0	19.3
9 18	23 1.79	-15 12.4	2.516	3.490	4.7	19.0	9 18	22 52.15	-30 56.4	0.959	1.890	16.1	19.5
9 28	22 55.15	-15 41.5	2.566	3.488	7.5	19.2	9 28	22 37.92	-28 34.8	1.005	1.892	19.4	19.7
10 8	22 49.74	-15 58.0	2.641	3.484	10.1	19.4	10 8	22 28.32	-25 46.9	1.070	1.893	22.9	19.9
10 18	22 45.94	-16 1.0	2.739	3.481	12.4	19.5	10 18	22 23.55	-22 46.0	1.151	1.895	25.9	20.2
355534	2008 <i>AG</i> ₁₀₆		9 8.5	278°47	3°0/ 5.5	18	510526	2012 <i>DH</i> ₂₂		9 8.6	183°58	4°2/ 2.7	18
8 9	23 29.62	-11 33.9	1.940	2.847	11.1	21.4	8 9	23 27.23	-18 4.5	2.570	3.476	8.7	20.7
8 19	23 24.30	-12 29.3	1.866	2.829	7.7	21.2	8 19	23 22.24	-19 19.8	2.518	3.476	6.3	20.6
8 29	23 17.24	-13 29.0	1.817	2.812	4.3	20.9	8 29	23 16.00	-20 33.3	2.493	3.476	4.5	20.5
9 8	23 9.11	-14 26.6	1.794	2.794	3.1	20.8	9 8	23 9.07	-21 39.1	2.496	3.476	4.6	20.5
9 18	23 0.80	-15 15.7	1.800	2.777	6.0	21.0	9 18	23 2.11	-22 32.5	2.527	3.475	6.5	20.6
9 28	22 53.26	-15 50.9	1.831	2.759	9.7	21.2	9 28	22 55.80	-23 9.8	2.585	3.474	8.8	20.8
10 8	22 47.33	-16 8.9	1.887	2.741	13.1	21.3	10 8	22 50.73	-23 29.6	2.668	3.473	11.1	20.9
10 18	22 43.58	-16 9.0	1.963	2.723	16.0	21.5	10 18	22 47.32	-23 32.2	2.770	3.472	13.1	21.1
218953	2008 <i>DN</i> ₈₄		9 8.5	26°66	1°3/ 7.8	18	432822	2011 <i>GG</i> ₈₈		9 8.6	191°51	3°9/ 4.9	16
8 9	23 32.40	- 7 9.3	1.047	1.968	16.9	19.0	8 9	23 31.94	-13 17.6	1.721	2.630	12.1	21.7
8 19	23 26.80	- 7 22.5	1.009	1.979	11.8	18.7	8 19	23 25.97	-14 24.3	1.666	2.630	8.5	21.5
8 29	23 18.64	- 7 45.1	0.992	1.991	6.1	18.5	8 29	23 18.10	-15 33.2	1.635	2.629	5.0	21.3
9 8	23 9.18	- 8 9.9	0.996	2.003	1.3	18.2	9 8	23 9.19	-16 36.5	1.631	2.628	4.2	21.2
9 18	22 59.92	- 8 29.5	1.025	2.017	6.2	18.6	9 18	23 0.23	-17 26.9	1.654	2.626	7.1	21.4
9 28	22 52.37	- 8 37.8	1.076	2.032	11.5	18.9	9 28	22 52.32	-17 59.1	1.703	2.624	10.7	21.6
10 8	22 47.55	- 8 31.3	1.147	2.048	16.2	19.2	10 8	22 46.30	-18 11.1	1.775	2.622	14.1	21.8
10 18	22 45.91	- 8 9.2	1.237	2.065	19.9	19.5	10 18	22 42.70	-18 3.0	1.866	2.620	17.0	22.0
299208	2005 <i>JG</i> ₃₆		9 8.5	122°09	4°6/14.1	18	421663	2014 <i>OM</i> ₃₇₄		9 8.6	291°30	4°8/ 2.8	18
8 9	23 27.94	+11 57.1	2.108	2.933	13.6	20.9	8 9	23 27.57	-18 0.8	2.183	3.093	9.8	20.2
8 19	23 22.89	+11 30.4	2.040	2.942	10.8	20.8	8 19	23 22.68	-19 15.2	2.126	3.086	7.1	20.0
8 29	23 16.38	+10 42.7	1.995	2.950	7.7	20.6	8 29	23 16.32	-20 28.0	2.095	3.079	5.1	19.9
9 8	23 9.07	+ 9 36.5	1.975	2.959	5.2	20.5	9 8	23 9.11	-21 32.4	2.091	3.072	5.1	19.9
9 18	23 1.71	+ 8 16.5	1.983	2.966	4.8	20.5	9 18	23 1.83	-22 22.8	2.114	3.065	7.3	20.0
9 28	22 55.15	+ 6 49.4	2.018	2.974	7.0	20.6	9 28	22 55.30	-22 54.8	2.163	3.058	10.0	20.2
10 8	22 50.04	+ 5 22.7	2.081	2.981	10.0	20.8	10 8	22 50.22	-23 7.1	2.235	3.051	12.7	20.3
10 18	22 46.86	+ 4 2.7	2.167	2.989	12.7	21.0	10 18	22 47.05	-23 0.1	2.327	3.045	14.9	20.5
430625	2003 <i>GZ</i> ₅₀		9 8.5	80°61	4°5/ 4.2	17	27511	2000 <i>GD</i> ₁₅₃		9 8.6	295°86	4°2/11.9	18
8 9	23 31.32	-13 44.8	1.577	2.491	12.7	20.6	8 9	23 30.70	+ 6 6.2	1.490	2.359	16.0	18.7
8 19	23 25.43	-15 14.8	1.546	2.512	8.8	20.4	8 19	23 25.46	+ 6 7.6	1.416	2.350	12.3	18.4
8 29	23 17.72	-16 44.9	1.540	2.532	5.4	20.3	8 29	23 18.02	+ 5 47.7	1.363	2.340	8.2	18.2
9 8	23 9.13	-18 5.6	1.559	2.553	4.9	20.3	9 8	23 9.21	+ 5 8.4	1.333	2.330	4.7	18.0
9 18	23 0.72	-19 9.2	1.606	2.573	7.7	20.5	9 18	23 0.14	+ 4 14.6	1.329	2.321	5.3	18.0
9 28	22 53.56	-19 50.6	1.677	2.592	11.2	20.8	9 28	22 52.06	+ 3 13.9	1.350	2.312	9.2	18.2
10 8	22 48.40	-20 8.7	1.771	2.612	14.4	21.0	10 8	22 46.01	+ 2 14.8	1.395	2.303	13.4	18.4
10 18	22 45.68	-20 4.7	1.883	2.631	17.0	21.3	10 18	22 42.68	+ 1 24.4	1.461	2.294	17.2	18.6
285696	2000 <i>SQ</i> ₁₉₄		9 8.5	31°57	4°6/ 6.8	17	41805	2000 <i>WC</i> ₃₀		9 8.6	215°18	3	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
349811	2009 BT ₁₃₁	9 8.6 194° 02'	0° 0'	8.6	18		301518	2009 FC ₁₈	9 8.6 278° 17'	1° 0'	7.5	18	
8 9	23 27.94	- 1 32.2	2.203	3.085	11.0	21.1	8 9	23 28.38	- 5 28.0	1.866	2.765	11.8	20.5
8 19	23 22.89	- 2 39.2	2.132	3.083	7.8	20.9	8 19	23 23.42	- 6 21.8	1.799	2.759	8.2	20.3
8 29	23 16.42	- 3 58.0	2.087	3.081	4.1	20.7	8 29	23 16.79	- 7 25.2	1.757	2.754	4.2	20.0
9 8	23 9.14	- 5 23.3	2.071	3.078	0.2	20.4	9 8	23 9.19	- 8 32.2	1.741	2.748	1.1	19.8
9 18	23 1.77	- 6 48.7	2.083	3.075	3.7	20.7	9 18	23 1.48	- 9 36.1	1.753	2.742	4.7	20.0
9 28	22 55.09	- 8 7.8	2.125	3.072	7.4	20.9	9 28	22 54.60	-10 30.6	1.792	2.736	8.7	20.2
10 8	22 49.78	- 9 15.1	2.193	3.068	10.7	21.1	10 8	22 49.32	-11 11.1	1.855	2.730	12.3	20.5
10 18	22 46.31	-10 7.4	2.283	3.064	13.4	21.3	10 18	22 46.18	-11 35.1	1.939	2.725	15.3	20.7
399280	2014 HR ₁₁₅	9 8.6 208° 13'	0° 8'	9.5	18		204333	2004 RD ₂₂₈	9 8.6 291° 17'	0° 8'	9.2	18	
8 9	23 27.94	+ 0 31.0	2.116	2.993	11.6	21.8	8 9	23 30.41	- 1 32.2	1.617	2.508	13.8	20.6
8 19	23 22.95	- 0 20.5	2.044	2.990	8.3	21.6	8 19	23 25.13	- 1 56.0	1.541	2.495	9.9	20.4
8 29	23 16.47	- 1 25.4	1.997	2.987	4.7	21.4	8 29	23 17.83	- 2 33.6	1.488	2.481	5.5	20.1
9 8	23 9.15	- 2 39.1	1.977	2.983	1.1	21.1	9 8	23 9.26	- 3 20.7	1.461	2.468	1.0	19.7
9 18	23 1.72	- 3 55.7	1.985	2.979	3.5	21.3	9 18	23 0.46	- 4 11.0	1.460	2.454	4.4	20.0
9 28	22 55.01	- 5 8.7	2.022	2.975	7.3	21.5	9 28	22 52.56	- 4 57.8	1.485	2.441	9.1	20.2
10 8	22 49.71	- 6 12.5	2.085	2.970	10.7	21.7	10 8	22 46.54	- 5 34.9	1.535	2.428	13.3	20.4
10 18	22 46.32	- 7 3.0	2.171	2.965	13.6	21.9	10 18	22 43.03	- 5 58.3	1.604	2.415	16.9	20.6
267015	1995 SL ₆₂	9 8.6 219° 19'	2° 2'	6.0	18		86784	2000 GZ ₉₃	9 8.6 62° 71'	1° 3'	7.3	18	
8 9	23 28.92	-12 8.7	2.578	3.477	9.0	20.9	8 9	23 29.68	- 2 51.4	1.339	2.244	15.1	19.2
8 19	23 23.38	-12 37.1	2.516	3.476	6.2	20.7	8 19	23 24.46	- 4 39.7	1.309	2.271	10.4	19.0
8 29	23 16.60	-13 6.7	2.480	3.475	3.4	20.5	8 29	23 17.30	- 6 41.2	1.301	2.299	5.2	18.8
9 8	23 9.16	-13 33.8	2.473	3.474	2.3	20.4	9 8	23 9.22	- 8 44.6	1.320	2.326	1.3	18.6
9 18	23 1.70	-13 54.5	2.495	3.473	4.5	20.6	9 18	23 1.38	-10 38.0	1.365	2.354	5.7	19.0
9 28	22 54.90	-14 6.0	2.544	3.471	7.3	20.8	9 28	22 54.88	-12 12.1	1.436	2.381	10.3	19.3
10 8	22 49.35	-14 6.5	2.620	3.470	10.0	20.9	10 8	22 50.52	-13 21.5	1.530	2.408	14.2	19.6
10 18	22 45.45	-13 55.5	2.717	3.469	12.2	21.1	10 18	22 48.71	-14 5.0	1.643	2.435	17.4	19.9
326262	2012 EP ₁	9 8.6 213° 76'	0° 0'	8.5	18		68152	2001 BO	9 8.6 281° 88'	6° 6'	1.3	18	
8 9	23 27.93	- 3 38.1	2.595	3.477	9.5	22.1	8 9	23 28.90	-19 20.4	1.705	2.622	11.7	18.6
8 19	23 22.72	- 4 11.0	2.521	3.472	6.7	21.9	8 19	23 24.00	-21 11.1	1.654	2.615	8.7	18.4
8 29	23 16.29	- 4 51.4	2.473	3.467	3.5	21.7	8 29	23 17.17	-22 59.4	1.627	2.607	6.7	18.2
9 8	23 9.15	- 5 35.9	2.453	3.461	0.2	21.4	9 8	23 9.23	-24 35.0	1.626	2.600	7.2	18.3
9 18	23 1.92	- 6 20.2	2.463	3.455	3.2	21.7	9 18	23 1.17	-25 49.3	1.652	2.593	9.8	18.4
9 28	22 55.29	- 7 0.4	2.502	3.448	6.4	21.9	9 28	22 54.08	-26 36.6	1.701	2.586	12.9	18.6
10 8	22 49.83	- 7 33.0	2.567	3.442	9.3	22.1	10 8	22 48.86	-26 55.6	1.771	2.578	15.8	18.8
10 18	22 45.97	- 7 55.5	2.656	3.435	11.8	22.2	10 18	22 46.07	-26 48.1	1.859	2.571	18.3	18.9
124750	2001 SO ₂₁₅	9 8.6 3° 31'	2° 3'	6.5	17		42150	2001 BD ₅₃	9 8.6 66° 98'	2° 8'	5.4	18	
8 9	23 25.80	- 5 47.7	1.183	2.105	15.3	19.1	8 9	23 28.16	-11 57.8	2.106	3.012	10.3	18.9
8 19	23 22.19	- 7 16.8	1.132	2.104	10.6	18.9	8 19	23 23.02	-12 55.2	2.060	3.023	7.1	18.7
8 29	23 16.32	- 9 0.6	1.104	2.103	5.4	18.6	8 29	23 16.46	-13 54.7	2.039	3.034	4.0	18.5
9 8	23 9.15	-10 47.7	1.099	2.104	2.5	18.4	9 8	23 9.19	-14 50.3	2.046	3.045	3.0	18.5
9 18	23 1.91	-12 25.8	1.118	2.106	6.9	18.7	9 18	23 1.96	-15 36.6	2.081	3.056	5.5	18.7
9 28	22 55.93	-13 44.2	1.161	2.108	11.9	19.0	9 28	22 55.57	-16 9.5	2.142	3.067	8.6	18.9
10 8	22 52.22	-14 36.6	1.224	2.112	16.4	19.2	10 8	22 50.66	-16 26.8	2.228	3.078	11.5	19.1
10 18	22 51.32	-15 1.2	1.306	2.116	20.1	19.5	10 18	22 47.64	-16 28.2	2.335	3.089	13.9	19.3
253509	2003 SY ₁₄₈	9 8.6 3° 43'	1° 0'	7.9	18		433218	2012 UX ₁₃₂	9 8.6 3° 29'	6° 2'	3.8	18	
8 9	23 31.74	- 5 41.2	1.172	2.087	16.1	20.2	8 9	23 26.29	-15 30.4	1.081	2.017	15.1	19.3
8 19	23 26.40	- 6 11.4	1.120	2.086	11.3	19.9	8 19	23 22.69	-16 47.8	1.040	2.015	10.8	19.1
8 29	23 18.55	- 6 53.6	1.088	2.086	5.8	19.6	8 29	23 16.62	-18 5.0	1.021	2.015	7.1	18.9
9 8	23 9.27	- 7 40.4	1.079	2.086	1.0	19.3	9 8	23 9.20	-19 10.2	1.023	2.016	6.7	18.9
9 18	22 59.94	- 8 23.5	1.095	2.087	6.0	19.7	9 18	23 1.81	-19 53.4	1.048	2.019	10.1	19.1
9 28	22 52.02	- 8 55.1	1.134	2.089	11.3	20.0	9 28	22 55.88	-20 8.2	1.093	2.024	14.3	19.3
10 8	22 46.63	- 9 10.0	1.194	2.091	16.0	20.3	10 8	22 52.44	-19 54.0	1.158	2.030	18.3	19.6
10 18	22 44.34	- 9 6.6	1.273	2.094	19.9	20.5	10 18	22 51.99	-19 13.4	1.239	2.038	21.6	19.9
360378	2002 CU ₁₁₅	9 8.6 122° 29'	6° 5'	18.8	18		472971	2015 GX ₄₂	9 8.6 215° 71'	3° 8'	5.0	18	
8 9	23 28.50	+22 18.0	2.874	3.609	12.4	21.2	8 9	23 32.04	-12 53.8	1.691	2.601	12.3	21.3
8 19	23 23.02	+22 18.4	2.805	3.627	10.6	21.1	8 19	23 26.13	-14 0.1	1.633	2.597	8.6	21.0
8 29	23 16.39	+21 58.6	2.758	3.645	8.8	21.0	8 29	23 18.27	-15 9.2	1.599	2.593	5.0	20.8
9 8	23 9.15	+21 19.1	2.735	3.661	7.2	20.9	9 8	23 9.30	-16 13.4	1.592	2.589	4.1	20.7
9 18	23 1.90	+20 21.8	2.739	3.678	6.5	20.9	9 18	23 0.25	-17 5.0	1.611	2.584	7.1	20.9
9 28	22 55.29	+19 11.0	2.771	3.694	7.0	21.0	9 28	22 52.23	-17 38.5	1.657	2.580	10.8	21.1
10 8	22 49.86	+17 52.1	2.829	3.709	8.4	21.1	10 8	22 46.14	-17 51.6	1.725	2.574	14.3	21.3
10 18	22 45.99	+16 31.1	2.913	3.724	10.1	21.2	10 18	22 42.51	-17 44.3	1.812	2.569	17.3	21.6
371845	2007 XC ₅₀	9 8.6 268° 38'	4° 1'	11.6	18		513457	2008 YZ ₁₄₂	9 8.6 298° 33'	1° 8'	6.9	18	
8 9	23 32.84	+ 5 19.4	1.478	2.348	16.1	21.7	8 9	23 29.46	- 7 35.4	1.716	2.621	12.4	21.5
8 19	23 27.06	+ 5 25.0	1.400	2.334	12.3	21.4	8 19	23 24.30	- 8 26.3	1.652	2.615	8.6	21.3
8 29	23 18.94	+ 5 10.2	1.343	2.321	8.1	21.1	8 29	23 17.30	- 9 25.2	1.612	2.609	4.4	21.0
9 8	23 9.31	+ 4 36.5	1.309	2.308	4.5	20.9	9 8	23 9.25	-10 25.6	1.598	2.603	1.8	20.8
9 18	22 59.34	+ 3 48.7	1.302	2.294	5.3	20.9	9 18	23 1.09	-11 20.4	1.611	2.598	5.4	21.0
9 28	22 50.35	+ 2 54.0	1.320	2.280	9.5	21.1	9 28	22 53.85	-12 3.5	1.651	2.592	9.5	21.3
10 8	22 43.47	+ 2 0.7	1.362	2.266	13.9	21.3	10 8	22 48.40	-12 30.7	1.714	2.587	13.2	21.5
10 18	22 39.44	+ 1 16.0	1.424	2.252	17.8	21.6	10 18	22 45.26	-12 40.5	1.797	2.582	16.4	21.7
363560	2003 YC	9 8.6 305° 00'	9° 9'	27.8	18		291662	2006 HF ₆₇	9 8.6 26° 82'	5° 5'	13.9	18	
8 9	23 27.56	-19 54.3											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
13682	Pressberger		9 8.6	17°19	0°5/ 8.1	18	449774	2014 OA ₁₀₇		9 8.6	128°44	2°6/11.3	18
8 9	23 26.85	- 4 28.1	1.984	2.881	11.4	18.3	8 9	23 30.11	+ 3 52.3	2.332	3.188	11.4	20.9
8 19	23 22.25	- 5 9.3	1.922	2.880	7.9	18.1	8 19	23 24.35	+ 3 52.5	2.264	3.193	8.6	20.7
8 29	23 16.14	- 5 59.5	1.884	2.880	4.1	17.8	8 29	23 17.21	+ 3 40.3	2.220	3.198	5.4	20.5
9 8	23 9.20	- 6 53.8	1.873	2.880	0.5	17.6	9 8	23 9.32	+ 3 17.8	2.204	3.203	2.8	20.3
9 18	23 2.20	- 7 46.5	1.889	2.880	4.0	17.8	9 18	23 1.37	+ 2 48.1	2.217	3.208	3.5	20.4
9 28	22 55.99	- 8 32.3	1.933	2.881	7.8	18.1	9 28	22 54.14	+ 2 15.4	2.258	3.213	6.4	20.6
10 8	22 51.26	- 9 6.7	2.001	2.882	11.2	18.3	10 8	22 48.27	+ 1 44.2	2.325	3.217	9.4	20.8
10 18	22 48.47	- 9 27.4	2.091	2.884	14.1	18.5	10 18	22 44.19	+ 1 18.0	2.416	3.222	12.1	21.0
222016	1998 SO ₇		9 8.6	17°43	1°0/ 7.9	15	449060	2012 EE ₁₆		9 8.6	212°82	4°3/ 3.6	18
8 9	23 32.04	- 7 9.5	0.992	1.916	17.4	19.5	8 9	23 30.21	- 19 16.3	2.478	3.380	9.2	21.0
8 19	23 26.75	- 7 10.8	0.952	1.923	12.1	19.2	8 19	23 24.38	- 20 0.4	2.423	3.378	6.7	20.9
8 29	23 18.76	- 7 21.7	0.931	1.931	6.3	19.0	8 29	23 17.21	- 20 41.1	2.393	3.376	4.7	20.7
9 8	23 9.34	- 7 35.4	0.933	1.940	1.0	18.6	9 8	23 9.32	- 21 13.4	2.392	3.373	4.6	20.7
9 18	23 0.08	- 7 45.2	0.957	1.951	6.2	19.0	9 18	23 1.42	- 21 33.2	2.418	3.370	6.4	20.8
9 28	22 52.54	- 7 45.1	1.003	1.963	11.8	19.4	9 28	22 54.27	- 21 38.1	2.471	3.368	8.9	21.0
10 8	22 47.83	- 8 31.4	1.069	1.976	16.6	19.7	10 8	22 48.48	- 21 27.3	2.549	3.365	11.3	21.2
10 18	22 46.42	- 7 3.3	1.153	1.991	20.5	20.0	10 18	22 44.49	- 21 1.5	2.647	3.362	13.4	21.3
212777	2004 CD ₅₃		9 8.6	348°50	3°3/10.7	18	41275	1999 XP ₇₈		9 8.6	78°07	0°0/ 8.6	18
8 9	23 30.90	+ 1 50.7	1.152	2.050	17.6	19.8	8 9	23 28.10	- 3 32.4	2.222	3.109	10.7	19.6
8 19	23 25.97	+ 2 5.6	1.091	2.044	13.1	19.5	8 19	23 23.00	- 4 4.1	2.157	3.111	7.5	19.4
8 29	23 18.44	+ 2 0.6	1.050	2.039	8.1	19.2	8 29	23 16.53	- 4 44.4	2.118	3.112	4.0	19.2
9 8	23 9.33	+ 1 38.7	1.031	2.034	3.6	19.0	9 8	23 9.28	- 5 29.1	2.106	3.114	0.2	18.8
9 18	23 0.02	+ 1 5.4	1.035	2.031	5.4	19.1	9 18	23 2.00	- 6 13.5	2.123	3.115	3.5	19.1
9 28	22 52.02	+ 0 28.7	1.063	2.028	10.5	19.3	9 28	22 55.43	- 6 53.1	2.168	3.117	7.1	19.4
10 8	22 46.54	- 0 3.2	1.112	2.027	15.4	19.6	10 8	22 50.24	- 7 23.8	2.238	3.118	10.3	19.6
10 18	22 44.26	- 0 24.3	1.179	2.026	19.6	19.9	10 18	22 46.85	- 7 43.5	2.331	3.120	13.0	19.8
445501	2010 VJ ₂₀₇		9 8.6	316°17	0°2/ 8.8	17	272139	2005 MS ₅₃		9 8.6	52°35	0°9/ 9.3	17
8 9	23 28.86	- 3 18.7	1.942	2.833	11.8	21.1	8 9	23 32.82	- 1 25.2	1.241	2.142	16.4	20.2
8 19	23 23.75	- 3 40.1	1.870	2.824	8.4	20.9	8 19	23 26.86	- 1 47.5	1.202	2.160	11.7	20.0
8 29	23 16.99	- 4 11.3	1.822	2.816	4.5	20.6	8 29	23 18.69	- 2 25.4	1.185	2.179	6.4	19.7
9 8	23 9.26	- 4 48.1	1.800	2.808	0.4	20.3	9 8	23 9.41	- 3 12.5	1.191	2.198	1.2	19.5
9 18	23 1.41	- 5 25.9	1.806	2.800	3.9	20.6	9 18	23 0.32	- 4 1.1	1.222	2.217	4.9	19.8
9 28	22 54.34	- 5 59.3	1.840	2.792	7.9	20.8	9 28	22 52.71	- 4 43.6	1.278	2.237	9.9	20.1
10 8	22 48.83	- 6 24.2	1.898	2.784	11.5	21.0	10 8	22 47.52	- 5 14.0	1.356	2.256	14.2	20.4
10 18	22 45.39	- 6 37.6	1.977	2.777	14.6	21.2	10 18	22 45.18	- 5 29.3	1.453	2.276	17.8	20.7
137639	1999 WC ₁₂		9 8.6	14°05	3°7/ 6.2	17	163012	2001 TC ₂₂₀		9 8.6	107°39	0°6/ 7.9	18
8 9	23 26.39	- 9 49.5	0.850	1.791	17.6	19.0	8 9	23 28.58	- 6 25.9	2.598	3.487	9.3	19.9
8 19	23 23.01	- 10 41.2	0.817	1.796	12.2	18.8	8 19	23 23.17	- 6 43.5	2.532	3.487	6.5	19.7
8 29	23 16.85	- 11 40.8	0.803	1.804	6.5	18.5	8 29	23 16.56	- 7 6.1	2.493	3.488	3.3	19.5
9 8	23 9.25	- 12 36.5	0.810	1.814	3.8	18.4	9 8	23 9.29	- 7 30.4	2.481	3.489	0.6	19.3
9 18	23 1.81	- 13 17.4	0.837	1.825	8.3	18.7	9 18	23 1.99	- 7 53.0	2.499	3.489	3.4	19.5
9 28	22 56.12	- 13 35.8	0.884	1.839	13.7	19.0	9 28	22 55.32	- 8 10.6	2.546	3.490	6.5	19.7
10 8	22 53.28	- 13 29.1	0.950	1.854	18.4	19.4	10 8	22 49.86	- 8 20.7	2.619	3.490	9.3	19.9
10 18	22 53.68	- 12 58.4	1.031	1.871	22.2	19.7	10 18	22 46.00	- 8 21.9	2.715	3.491	11.6	20.1
26539	2000 DJ ₁₀		9 8.6	13°95	0°1/ 8.6	18	483639	2004 VA ₃₁		9 8.6	326°00	4°3/13.4	18
8 9	23 29.13	- 4 2.6	1.004	1.926	17.5	17.5	8 9	23 25.96	+ 9 50.7	2.041	2.883	13.4	21.2
8 19	23 24.73	- 4 17.1	0.962	1.931	12.3	17.3	8 19	23 21.71	+ 9 32.7	1.961	2.875	10.5	21.0
8 29	23 17.72	- 4 46.4	0.938	1.936	6.5	17.0	8 29	23 15.94	+ 8 54.7	1.904	2.867	7.4	20.8
9 8	23 9.31	- 5 23.5	0.936	1.944	0.4	16.6	9 8	23 9.26	+ 7 58.8	1.871	2.860	4.8	20.7
9 18	23 0.96	- 6 0.0	0.957	1.953	5.7	17.0	9 18	23 2.43	+ 6 49.1	1.866	2.853	4.6	20.6
9 28	22 54.18	- 6 27.7	1.000	1.963	11.4	17.4	9 28	22 56.29	+ 5 32.1	1.888	2.847	7.2	20.8
10 8	22 50.07	- 6 40.8	1.063	1.975	16.2	17.7	10 8	22 51.58	+ 4 15.0	1.935	2.840	10.4	21.0
10 18	22 49.14	- 6 36.8	1.144	1.988	20.2	18.0	10 18	22 48.80	+ 3 4.2	2.006	2.834	13.3	21.1
56926	2000 RX ₂₁		9 8.6	72°10	2°3/10.7	18	250959	2006 DZ ₄₆		9 8.6	54°69	0°7/ 9.2	17
8 9	23 31.50	+ 1 53.9	1.985	2.854	12.6	19.0	8 9	23 30.15	+ 0 30.4	1.099	2.004	17.7	20.3
8 19	23 25.45	+ 1 58.2	1.924	2.862	9.3	18.8	8 19	23 25.21	- 0 38.1	1.061	2.022	12.5	20.1
8 29	23 17.82	+ 1 49.9	1.887	2.870	5.7	18.6	8 29	23 17.89	- 2 7.9	1.044	2.039	6.8	19.9
9 8	23 9.32	+ 1 31.6	1.876	2.879	2.5	18.4	9 8	23 9.38	- 3 48.9	1.050	2.057	1.0	19.5
9 18	23 0.80	+ 1 6.7	1.894	2.887	3.8	18.5	9 18	23 1.04	- 5 28.9	1.080	2.076	5.3	19.9
9 28	22 53.17	+ 0 40.0	1.939	2.895	7.2	18.8	9 28	22 54.24	- 6 56.4	1.135	2.094	10.7	20.3
10 8	22 47.16	+ 0 16.0	2.010	2.904	10.6	19.0	10 8	22 49.94	- 8 3.2	1.211	2.113	15.4	20.6
10 18	22 43.23	- 0 1.6	2.104	2.912	13.5	19.2	10 18	22 48.60	- 8 45.9	1.305	2.133	19.1	20.9
493631	2015 PA ₆₉		9 8.6	264°36	3°4/11.6	18	496238	2012 FQ ₆₃		9 8.6	261°45	0°2/ 8.4	17
8 9	23 31.13	+ 4 54.8	1.919	2.779	13.4	21.3	8 9	23 27.80	- 3 51.3	2.384	3.270	10.1	22.2
8 19	23 25.38	+ 5 0.8	1.843	2.773	10.2	21.1	8 19	23 22.82	- 4 27.6	2.304	3.257	7.1	22.0
8 29	23 17.88	+ 4 51.1	1.790	2.766	6.6	20.9	8 29	23 16.47	- 5 12.4	2.250	3.245	3.8	21.8
9 8	23 9.33	+ 4 27.7	1.762	2.760	3.7	20.7	9 8	23 9.31	- 6 1.6	2.224	3.232	0.2	21.4
9 18	23 0.60	+ 3 53.9	1.762	2.753	4.3	20.7	9 18	23 2.01	- 6 50.9	2.227	3.218	3.5	21.7
9 28	22 52.67	+ 3 15.0	1.789	2.746	7.7	20.9	9 28	22 55.32	- 7 35.3	2.258	3.205	7.0	21.9
10 8	22 46.37	+ 2 36.7	1.842	2.740	11.2	21.1	10 8	22 49.87	- 8 11.0	2.315	3.192	10.1	22.1
10 18	22 42.27	+ 2 4.0	1.917	2.733	14.3	21.3	10 18	22 46.15	- 8 35.4	2.395	3.178	12.8	22.3
347225	2011 HP ₈₁		9 8.6	76°34	3°4/11.7	17	63960	2001 SG ₆₈		9 8.6	58°01	3°7/12.8	18
8 9	23 32.37	+ 5 24.8	1.620	2									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
161054	2002 <i>JD</i> ₄₄		9 8.6 68°12	4.6/13.0	18		135086	2001 <i>QY</i> ₄₂		9 8.6 339°84	2.1/6.6	18	
8 9	23 31.02	+ 8 57.9	1.629	2.480	15.7	19.6	8 9	23 27.67	- 7 59.6	1.615	2.526	12.6	19.3
8 19	23 25.32	+ 8 49.0	1.580	2.500	12.2	19.4	8 19	23 23.16	- 8 58.9	1.554	2.520	8.8	19.1
8 29	23 17.81	+ 8 17.9	1.553	2.521	8.3	19.2	8 29	23 16.79	-10 6.5	1.516	2.514	4.6	18.8
9 8	23 9.39	+ 7 27.6	1.550	2.542	5.2	19.1	9 8	23 9.35	-11 15.2	1.504	2.508	2.2	18.6
9 18	23 1.05	+ 6 23.8	1.574	2.562	5.2	19.2	9 18	23 1.80	-12 17.2	1.518	2.504	5.8	18.9
9 28	22 53.83	+ 5 14.1	1.624	2.583	8.1	19.4	9 28	22 55.19	-13 5.6	1.558	2.499	10.0	19.1
10 8	22 48.53	+ 4 6.7	1.699	2.603	11.6	19.6	10 8	22 50.40	-13 36.1	1.621	2.496	13.8	19.3
10 18	22 45.59	+ 3 7.7	1.795	2.624	14.7	19.9	10 18	22 47.97	-13 47.2	1.703	2.492	17.0	19.5
81011	2000 <i>ED</i> ₃₆		9 8.6 203°81	6.1/1.9	18		168688	2000 <i>GN</i> ₂₉		9 8.6 218°88	3.7/5.3	18	
8 9	23 32.37	-19 40.4	1.874	2.782	11.3	19.7	8 9	23 34.48	-15 53.4	2.073	2.974	10.8	20.1
8 19	23 26.33	-21 18.3	1.822	2.778	8.4	19.5	8 19	23 27.58	-16 22.2	2.011	2.970	7.6	19.9
8 29	23 18.41	-22 53.2	1.795	2.774	6.4	19.4	8 29	23 18.99	-16 49.5	1.975	2.965	4.7	19.7
9 8	23 9.43	-24 15.8	1.795	2.768	6.7	19.4	9 8	23 9.48	-17 9.8	1.966	2.960	3.9	19.7
9 18	23 0.35	-25 18.6	1.822	2.763	9.0	19.5	9 18	22 59.94	-17 18.8	1.986	2.955	6.2	19.8
9 28	22 52.24	-25 57.0	1.874	2.756	12.0	19.7	9 28	22 51.33	-17 13.6	2.032	2.950	9.4	20.0
10 8	22 45.95	-26 9.9	1.948	2.749	14.8	19.9	10 8	22 44.42	-16 53.3	2.103	2.944	12.5	20.2
10 18	22 42.02	-25 59.2	2.040	2.741	17.2	20.0	10 18	22 39.70	-16 18.8	2.196	2.938	15.0	20.4
318355	2004 <i>TH</i> ₃₂₇		9 8.6 301°04	6.8/15.6	17		4964	Kourovka		9 8.6 339°52	0.1/8.7	18	
8 9	23 29.76	+15 43.7	2.187	2.985	14.1	20.9	8 9	23 27.34	- 1 27.0	1.115	2.028	16.8	16.3
8 19	23 24.38	+16 16.6	2.104	2.977	11.7	20.7	8 19	23 23.53	- 2 22.7	1.055	2.020	12.0	16.0
8 29	23 17.38	+16 29.4	2.042	2.970	9.3	20.5	8 29	23 17.22	- 3 39.5	1.016	2.013	6.4	15.6
9 8	23 9.37	+16 21.4	2.004	2.962	7.3	20.4	9 8	23 9.38	- 5 9.1	0.998	2.006	0.4	15.2
9 18	23 1.15	+15 53.9	1.993	2.955	6.8	20.4	9 18	23 1.34	- 6 40.2	1.005	2.000	5.7	15.6
9 28	22 53.59	+15 10.8	2.008	2.948	8.2	20.4	9 28	22 54.56	- 8 0.7	1.035	1.995	11.4	15.9
10 8	22 47.47	+14 18.3	2.048	2.941	10.5	20.6	10 8	22 50.22	- 9 1.6	1.085	1.991	16.5	16.2
10 18	22 43.35	+13 22.7	2.112	2.934	13.0	20.7	10 18	22 48.98	- 9 38.2	1.153	1.988	20.7	16.4
71426	2000 <i>AJ</i> ₁₉₈		9 8.6 290°22	3.8/12.9	18		386733	2010 <i>AK</i> ₄₄		9 8.6 185°29	1.9/10.3	18	
8 9	23 27.38	+ 8 33.2	2.295	3.135	12.2	18.9	8 9	23 32.62	+ 1 21.4	2.005	2.873	12.5	21.7
8 19	23 22.57	+ 8 27.4	2.215	3.128	9.5	18.7	8 19	23 26.33	+ 1 11.6	1.934	2.873	9.2	21.5
8 29	23 16.36	+ 8 5.2	2.157	3.122	6.6	18.5	8 29	23 18.37	+ 0 49.1	1.888	2.873	5.4	21.3
9 8	23 9.31	+ 7 28.3	2.126	3.115	4.2	18.4	9 8	23 9.45	+ 0 16.8	1.869	2.872	2.1	21.1
9 18	23 2.13	+ 6 40.0	2.122	3.109	4.2	18.4	9 18	23 0.43	- 0 21.1	1.878	2.871	3.7	21.2
9 28	22 55.58	+ 5 45.1	2.146	3.103	6.7	18.5	9 28	22 52.24	- 0 59.4	1.915	2.870	7.4	21.4
10 8	22 50.32	+ 4 49.3	2.197	3.096	9.6	18.7	10 8	22 45.68	- 1 33.1	1.978	2.868	11.0	21.7
10 18	22 46.85	+ 3 57.7	2.271	3.090	12.3	18.9	10 18	22 41.24	- 1 58.5	2.064	2.865	14.0	21.9
107978	2001 <i>FE</i> ₁₃₀		9 8.6 203°11	0.3/8.2	18		405779	2006 <i>AB</i> ₂₂		9 8.6 290°93	2.7/6.1	17	
8 9	23 30.01	- 5 33.9	2.465	3.351	9.8	19.8	8 9	23 31.89	-12 41.4	2.138	3.039	10.5	21.0
8 19	23 24.25	- 5 51.1	2.396	3.349	6.9	19.6	8 19	23 25.88	-13 7.6	2.055	3.016	7.4	20.8
8 29	23 17.17	- 6 14.1	2.352	3.347	3.6	19.4	8 29	23 18.18	-13 35.4	1.998	2.992	4.2	20.6
9 8	23 9.36	- 6 39.6	2.337	3.345	0.3	19.1	9 8	23 9.44	-14 0.0	1.968	2.969	2.8	20.4
9 18	23 1.49	- 7 4.1	2.352	3.342	3.4	19.4	9 18	23 0.49	-14 16.8	1.967	2.945	5.5	20.6
9 28	22 54.29	- 7 23.9	2.394	3.340	6.7	19.6	9 28	22 52.24	-14 22.1	1.993	2.922	8.9	20.7
10 8	22 48.38	- 7 36.2	2.464	3.337	9.7	19.8	10 8	22 45.51	-14 13.6	2.043	2.898	12.2	20.9
10 18	22 44.19	- 7 39.3	2.556	3.334	12.2	20.0	10 18	22 40.86	-13 51.2	2.115	2.874	15.0	21.1
143846	2003 <i>YA</i> ₃		9 8.6 309°47	1.9/9.9	18		320479	2007 <i>VT</i> ₃₂₃		9 8.6 311°65	2.4/10.5	18	
8 9	23 30.50	+ 0 6.8	1.236	2.136	16.5	19.6	8 9	23 28.38	+ 2 55.9	1.207	2.103	17.1	20.5
8 19	23 25.87	- 0 1.9	1.154	2.111	12.2	19.3	8 19	23 24.26	+ 2 20.4	1.136	2.088	12.7	20.2
8 29	23 18.57	- 0 29.6	1.093	2.085	7.2	18.9	8 29	23 17.64	+ 1 19.8	1.084	2.074	7.7	19.9
9 8	23 9.46	- 1 12.7	1.055	2.060	2.2	18.5	9 8	23 9.42	- 0 0.7	1.055	2.060	2.8	19.6
9 18	22 59.79	- 2 4.6	1.040	2.036	5.3	18.7	9 18	23 0.85	- 1 32.2	1.051	2.047	5.1	19.7
9 28	22 51.11	- 2 56.4	1.049	2.012	10.9	18.9	9 28	22 53.40	- 3 3.0	1.070	2.034	10.6	20.0
10 8	22 44.78	- 3 39.3	1.079	1.989	16.2	19.1	10 8	22 48.28	- 4 21.9	1.110	2.022	15.7	20.2
10 18	22 41.68	- 4 6.9	1.128	1.966	20.8	19.4	10 18	22 46.24	- 5 21.3	1.170	2.010	20.1	20.5
349986	2010 <i>ES</i> ₁₃₁		9 8.6 111°00	0.7/7.9	16		477098	2009 <i>BW</i> ₁₄₇		9 8.6 271°81	0.8/9.4	18	
8 9	23 31.82	- 5 44.3	1.942	2.835	11.8	21.2	8 9	23 29.57	- 0 57.2	1.898	2.782	12.4	22.2
8 19	23 25.67	- 6 18.7	1.891	2.848	8.2	21.0	8 19	23 24.38	- 1 29.4	1.817	2.767	8.9	21.9
8 29	23 17.95	- 7 0.3	1.864	2.860	4.2	20.8	8 29	23 17.44	- 2 14.7	1.760	2.751	5.0	21.6
9 8	23 9.41	- 7 44.1	1.865	2.872	0.7	20.6	9 8	23 9.41	- 3 8.9	1.729	2.736	1.0	21.3
9 18	23 0.93	- 8 24.9	1.895	2.884	4.2	20.9	9 18	23 1.16	- 4 6.4	1.726	2.720	3.9	21.5
9 28	22 53.40	- 8 57.8	1.951	2.896	8.1	21.1	9 28	22 53.66	- 5 0.9	1.751	2.705	8.1	21.7
10 8	22 47.54	- 9 19.4	2.033	2.907	11.4	21.4	10 8	22 47.74	- 5 46.6	1.800	2.689	11.9	21.9
10 18	22 43.79	- 9 28.1	2.137	2.919	14.2	21.6	10 18	22 43.99	- 6 19.7	1.871	2.673	15.2	22.1
119566	2001 <i>VN</i> ₇₂		9 8.6 172°33	3.0/11.5	18		299078	2005 <i>ES</i> ₁₄		9 8.6 127°96	0.7/7.8	16	
8 9	23 31.23	+ 5 18.6	1.871	2.730	13.7	20.2	8 9	23 28.38	- 3 15.8	2.062	2.952	11.3	21.1
8 19	23 25.44	+ 4 58.0	1.802	2.733	10.3	20.0	8 19	23 23.27	- 4 33.7	2.006	2.962	7.9	20.9
8 29	23 17.93	+ 4 19.8	1.756	2.734	6.6	19.8	8 29	23 16.71	- 6 2.0	1.976	2.972	4.0	20.7
9 8	23 9.41	+ 3 27.1	1.737	2.736	3.4	19.6	9 8	23 9.36	- 7 34.3	1.974	2.981	0.7	20.5
9 18	23 0.81	+ 2 25.1	1.745	2.737	4.1	19.7	9 18	23 2.02	- 9 3.5	2.001	2.990	4.1	20.8
9 28	22 53.08	+ 1 20.4	1.780	2.738	7.7	19.9	9 28	22 55.47	-10 22.9	2.056	2.999	7.8	21.0
10 8	22 47.03	+ 0 19.7	1.841	2.738	11.3	20.1	10 8	22 50.40	-11 27.5	2.137	3.007	11.1	21.2
10 18	22 43.19	- 0 31.5	1.925	2.738	14.4	20.3	10 18	22 47.24	-12 14.9	2.240	3.015	13.8	21.4
228239	1998 <i>TK</i> ₂₁		9 8.6 243°18	0.8/10.4	18		508065	2015 <i>CZ</i> ₁₁		9 8.6 148°79	0.1/8.5		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
60901	2000 <i>JX</i> ₂₆	9 8.6 70°83	3°2/ 6.6 18				140875	2001 <i>VP</i> ₁₇	9 8.6 27°75	0°9/ 7.9 18			
8 9	23 36.31	-10 54.3	1.232	2.146	15.5	18.8	8 9	23 33.42	-7 29.9	1.809	2.705	12.3	19.3
8 19	23 29.56	-11 28.4	1.184	2.150	10.8	18.5	8 19	23 26.97	-7 34.4	1.750	2.708	8.6	19.1
8 29	23 20.27	-12 7.0	1.157	2.154	5.8	18.2	8 29	23 18.73	-7 44.3	1.715	2.711	4.5	18.8
9 8	23 9.60	-12 41.7	1.155	2.158	3.3	18.1	9 8	23 9.53	-7 55.5	1.708	2.715	0.9	18.6
9 18	22 58.98	-13 5.1	1.177	2.162	7.2	18.4	9 18	23 0.32	-8 3.7	1.728	2.718	4.5	18.9
9 28	22 49.91	-13 11.7	1.224	2.166	12.0	18.6	9 28	22 52.14	-8 5.3	1.775	2.722	8.5	19.1
10 8	22 43.48	-12 59.5	1.292	2.170	16.3	18.9	10 8	22 45.77	-7 57.6	1.846	2.726	12.1	19.3
10 18	22 40.21	-12 29.3	1.378	2.174	19.9	19.2	10 18	22 41.72	-7 39.6	1.939	2.730	15.2	19.6
47598	2000 <i>AR</i> ₂₁₅	9 8.6 348°01	3°6/ 5.1 18				175027	2004 <i>FW</i> ₃₅	9 8.6 147°84	1°3/ 7.2 18			
8 9	23 29.05	-11 51.9	1.656	2.570	12.2	19.3	8 9	23 29.90	-7 31.6	2.388	3.280	9.9	21.0
8 19	23 24.09	-13 2.6	1.602	2.568	8.5	19.1	8 19	23 24.18	-8 16.1	2.331	3.288	6.8	20.8
8 29	23 17.27	-14 17.3	1.571	2.566	4.9	18.8	8 29	23 17.16	-9 5.6	2.300	3.296	3.5	20.6
9 8	23 9.42	-15 27.9	1.567	2.565	3.8	18.8	9 8	23 9.44	-9 55.5	2.298	3.304	1.3	20.5
9 18	23 1.51	-16 26.8	1.588	2.564	6.9	19.0	9 18	23 1.72	-10 41.3	2.325	3.311	4.0	20.7
9 28	22 54.60	-17 7.9	1.636	2.563	10.6	19.2	9 28	22 54.74	-11 18.6	2.380	3.317	7.3	20.9
10 8	22 49.52	-17 28.3	1.706	2.562	14.1	19.4	10 8	22 49.09	-11 44.7	2.462	3.323	10.2	21.1
10 18	22 46.80	-17 28.0	1.795	2.562	17.0	19.6	10 18	22 45.19	-11 58.1	2.565	3.329	12.6	21.3
172474	2003 <i>ST</i> ₇₀	9 8.6 309°85	5°3/11.9 18				11112	Cagnoli	9 8.6 328°59	8°6/17.5 18			
8 9	23 32.80	+6 1.4	1.274	2.150	17.7	19.5	8 9	23 25.11	+18 53.9	1.680	2.484	17.4	17.9
8 19	23 27.36	+6 30.0	1.202	2.138	13.8	19.2	8 19	23 21.57	+19 5.9	1.591	2.465	14.8	17.7
8 29	23 19.30	+6 36.4	1.149	2.126	9.4	19.0	8 29	23 16.10	+18 48.1	1.521	2.447	12.0	17.5
9 8	23 9.55	+6 21.1	1.119	2.115	5.7	18.7	9 8	23 9.38	+17 58.9	1.472	2.429	9.6	17.3
9 18	22 59.42	+5 47.9	1.113	2.103	6.3	18.7	9 18	23 2.34	+16 40.4	1.447	2.412	8.6	17.2
9 28	22 50.41	+5 3.9	1.130	2.093	10.4	18.9	9 28	22 56.06	+14 59.4	1.446	2.396	9.8	17.2
10 8	22 43.81	+4 18.2	1.170	2.082	15.0	19.2	10 8	22 51.53	+13 6.3	1.469	2.380	12.6	17.4
10 18	22 40.37	+3 38.8	1.229	2.072	19.1	19.4	10 18	22 49.40	+11 12.1	1.514	2.366	15.7	17.5
370599	2003 <i>WS</i> ₉₅	9 8.6 335°60	5°3/ 4.9 18				389049	2008 <i>VG</i> ₄₂	9 8.6 292°34	0°5/ 9.1 18			
8 9	23 31.33	-14 10.4	1.141	2.069	15.3	20.1	8 9	23 28.34	-0 51.0	1.644	2.536	13.5	20.8
8 19	23 26.36	-15 11.8	1.088	2.060	10.9	19.8	8 19	23 23.73	-1 41.5	1.567	2.522	9.7	20.5
8 29	23 18.72	-16 15.7	1.056	2.051	6.7	19.6	8 29	23 17.19	-2 48.3	1.513	2.507	5.3	20.2
9 8	23 9.51	-17 11.2	1.047	2.044	5.6	19.5	9 8	23 9.45	-4 5.7	1.485	2.492	0.7	19.9
9 18	23 0.18	-17 48.6	1.060	2.037	9.3	19.7	9 18	23 1.46	-5 26.3	1.483	2.477	4.4	20.1
9 28	22 52.27	-18 1.0	1.096	2.031	13.9	19.9	9 28	22 54.31	-6 41.5	1.508	2.463	9.1	20.4
10 8	22 46.99	-17 46.9	1.152	2.025	18.3	20.2	10 8	22 48.94	-7 44.1	1.556	2.448	13.3	20.6
10 18	22 44.95	-17 8.1	1.223	2.021	21.9	20.4	10 18	22 45.96	-8 29.6	1.626	2.434	16.9	20.8
385204	1999 <i>SY</i> ₂₃	9 8.6 133°32	12°0/ 4.1 15				276677	2003 <i>WW</i> ₁₉₂	9 8.6 326°41	5°2/ 5.3 18			
8 9	23 53.30	-30 17.4	1.074	1.971	18.7	20.1	8 9	23 29.38	-13 10.7	1.017	1.950	16.1	19.6
8 19	23 41.83	-30 48.4	1.036	1.975	15.2	19.9	8 19	23 25.46	-14 1.9	0.948	1.923	11.5	19.2
8 29	23 26.73	-30 54.2	1.019	1.980	12.5	19.8	8 29	23 18.51	-14 58.9	0.900	1.897	6.9	18.9
9 8	23 9.98	-30 23.1	1.023	1.984	12.2	19.8	9 8	23 9.54	-15 50.7	0.873	1.873	5.4	18.7
9 18	22 53.91	-29 10.9	1.051	1.988	14.5	19.9	9 18	23 0.06	-16 26.0	0.867	1.849	9.6	18.9
9 28	22 40.69	-27 22.4	1.102	1.992	17.9	20.1	9 28	22 51.88	-16 35.8	0.882	1.827	15.1	19.1
10 8	22 31.55	-25 8.0	1.172	1.995	21.3	20.4	10 8	22 46.51	-16 16.8	0.915	1.806	20.2	19.3
10 18	22 26.80	-22 38.5	1.258	1.998	24.3	20.6	10 18	22 44.80	-15 29.9	0.963	1.787	24.6	19.5
343942	2011 <i>KG</i> ₂₃	9 8.6 96°14	1°7/ 7.0 18				403920	2011 <i>YB</i> ₇₅	9 8.6 180°51	5°7/31.8 18			
8 9	23 30.65	-7 3.7	1.661	2.564	12.8	20.8	8 9	23 29.21	-23 57.7	2.581	3.481	8.9	21.0
8 19	23 25.13	-8 0.0	1.608	2.571	8.8	20.6	8 19	23 23.74	-25 12.6	2.536	3.482	6.9	20.8
8 29	23 17.79	-9 4.4	1.580	2.577	4.5	20.3	8 29	23 16.95	-26 21.3	2.517	3.482	5.8	20.8
9 8	23 9.46	-10 9.7	1.578	2.584	1.8	20.2	9 8	23 9.44	-27 18.1	2.526	3.482	6.1	20.8
9 18	23 1.14	-11 8.9	1.603	2.590	5.3	20.4	9 18	23 1.91	-27 58.4	2.562	3.482	7.7	20.9
9 28	22 53.86	-11 55.5	1.654	2.596	9.5	20.7	9 28	22 55.09	-28 19.7	2.623	3.481	9.8	21.0
10 8	22 48.45	-12 25.7	1.729	2.602	13.2	20.9	10 8	22 49.61	-28 21.5	2.708	3.481	11.8	21.2
10 18	22 45.38	-12 38.0	1.824	2.608	16.2	21.2	10 18	22 45.88	-28 5.3	2.811	3.479	13.6	21.3
218060	2002 <i>EJ</i> ₅₄	9 8.6 50°42	0°8/ 9.3 18				337978	2002 <i>CM</i> ₁₂₆	9 8.6 117°83	0°9/ 9.5 18			
8 9	23 32.36	-2 51.1	1.967	2.850	12.0	19.5	8 9	23 32.29	-0 57.7	1.877	2.757	12.7	21.2
8 19	23 26.07	-2 46.9	1.910	2.860	8.6	19.3	8 19	23 26.09	-1 23.1	1.822	2.770	9.1	21.0
8 29	23 18.20	-2 51.5	1.878	2.870	4.7	19.1	8 29	23 18.24	-2 0.2	1.791	2.782	5.0	20.8
9 8	23 9.49	-3 1.6	1.873	2.880	1.0	18.8	9 8	23 9.51	-2 44.6	1.787	2.794	1.1	20.6
9 18	23 0.80	-3 13.8	1.897	2.890	3.6	19.0	9 18	23 0.82	-3 31.0	1.812	2.805	3.8	20.8
9 28	22 53.05	-3 24.1	1.948	2.901	7.4	19.3	9 28	22 53.10	-4 13.8	1.863	2.817	7.7	21.1
10 8	22 46.96	-3 29.3	2.024	2.912	10.8	19.5	10 8	22 47.10	-4 48.4	1.941	2.827	11.3	21.3
10 18	22 42.98	-3 26.9	2.123	2.922	13.7	19.8	10 18	22 43.28	-5 11.7	2.040	2.838	14.3	21.5
470929	2009 <i>FR</i> ₁₃	9 8.6 245°09	0°2/ 8.7 17				353056	2009 <i>DK</i> ₅₂	9 8.6 291°54	3°1/ 5.8 18			
8 9	23 35.54	-3 55.4	1.366	2.264	15.4	21.1	8 9	23 30.63	-11 31.5	1.728	2.637	12.1	20.7
8 19	23 29.00	-4 6.8	1.302	2.260	10.9	20.8	8 19	23 25.22	-12 22.6	1.662	2.626	8.4	20.5
8 29	23 20.03	-4 30.1	1.261	2.256	5.9	20.5	8 29	23 17.92	-13 17.8	1.620	2.616	4.7	20.2
9 8	23 9.61	-5 0.2	1.244	2.251	0.5	20.1	9 8	23 9.50	-14 10.3	1.604	2.605	3.3	20.1
9 18	22 59.03	-5 30.8	1.253	2.247	5.1	20.5	9 18	23 0.93	-14 53.3	1.615	2.594	6.3	20.3
9 28	22 49.70	-5 55.4	1.288	2.242	10.3	20.8	9 28	22 53.29	-15 21.4	1.652	2.584	10.2	20.5
10 8	22 42.74	-6 8.9	1.345	2.237	14.9	21.0	10 8	22 47.46	-15 31.4	1.712	2.574	13.9	20.7
10 18	22 38.79	-6 8.6	1.421	2.233	18.7	21.3	10 18	22 44.02	-15 23.1	1.792	2.563	16.9	20.9
72513	2001 <i>DW</i> ₇₈	9 8.6 114°95	3°6/13.7 18				403388	2009 <i>QB</i> ₁₄	9 8.6 87°17	0°9/ 9.5 18			
8 9	23 27.06												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
14770	2198 T ₋₁		9 8.6 244°36	1°1/ 7.2 18			242502	2004 XA ₅₀		9 8.6 25°25	5°9/12.9 18		
8 9	23 27.82	- 7 31.9	2.629	3.521	9.1	19.6	8 9	23 27.79	+ 7 50.7	0.887	1.785	21.5	18.6
8 19	23 22.75	- 8 12.0	2.552	3.510	6.3	19.4	8 19	23 24.01	+ 7 54.4	0.849	1.796	16.6	18.4
8 29	23 16.45	- 8 57.4	2.502	3.498	3.3	19.2	8 29	23 17.50	+ 7 24.3	0.828	1.809	11.2	18.2
9 8	23 9.42	- 9 43.9	2.481	3.486	1.2	19.1	9 8	23 9.51	+ 6 24.6	0.827	1.824	6.7	18.0
9 18	23 2.28	-10 27.4	2.488	3.474	3.8	19.2	9 18	23 1.61	+ 5 5.0	0.846	1.840	6.7	18.1
9 28	22 55.70	-11 3.9	2.525	3.462	6.9	19.4	9 28	22 55.41	+ 3 39.1	0.886	1.857	11.1	18.4
10 8	22 50.27	-11 30.4	2.587	3.450	9.7	19.6	10 8	22 52.03	+ 2 20.1	0.946	1.875	15.8	18.7
10 18	22 46.41	-11 45.2	2.672	3.437	12.1	19.7	10 18	22 51.94	+ 1 17.3	1.024	1.895	20.0	19.0
252142	2000 YA ₁₂₇		9 8.6 248°18	5°2/ 2.3 18			262891	2007 CM ₁₇		9 8.6 151°47	2°6/ 5.4 18		
8 9	23 29.92	-21 10.7	2.388	3.292	9.4	20.3	8 9	23 27.81	-11 13.3	2.369	3.272	9.5	21.0
8 19	23 24.35	-22 13.0	2.328	3.281	7.1	20.1	8 19	23 22.79	-12 18.8	2.314	3.275	6.6	20.8
8 29	23 17.32	-23 11.3	2.295	3.271	5.4	20.0	8 29	23 16.47	-13 27.3	2.284	3.279	3.7	20.6
9 8	23 9.47	-23 59.4	2.289	3.260	5.6	20.0	9 8	23 9.45	-14 33.2	2.283	3.282	2.7	20.6
9 18	23 1.54	-24 32.6	2.310	3.250	7.4	20.1	9 18	23 2.39	-15 31.1	2.311	3.286	5.1	20.7
9 28	22 54.34	-24 47.7	2.357	3.239	9.9	20.3	9 28	22 56.04	-16 16.7	2.366	3.289	8.1	20.9
10 8	22 48.54	-24 44.0	2.427	3.227	12.3	20.4	10 8	22 50.98	-16 47.3	2.447	3.291	10.8	21.1
10 18	22 44.62	-24 22.4	2.517	3.216	14.3	20.6	10 18	22 47.64	-17 2.1	2.549	3.294	13.1	21.3
276368	2002 VA ₄₅		9 8.6 331°10	4°4/ 5.7 18			162355	1999 YW ₅		9 8.6 320°31	17°6/14.9 17		
8 9	23 32.88	-13 29.9	1.238	2.159	14.9	19.8	8 9	23 42.23	+28 13.4	1.551	2.274	21.8	18.9
8 19	23 27.33	-14 10.5	1.181	2.150	10.5	19.5	8 19	23 34.82	+31 17.9	1.461	2.247	20.3	18.7
8 29	23 19.21	-14 53.2	1.145	2.141	6.1	19.2	8 29	23 23.86	+33 59.1	1.390	2.221	18.8	18.5
9 8	23 9.59	-15 29.2	1.132	2.132	4.6	19.1	9 8	23 9.95	+36 5.1	1.339	2.195	17.8	18.4
9 18	22 59.83	-15 50.5	1.144	2.124	8.2	19.3	9 18	22 54.42	+37 26.0	1.308	2.170	17.6	18.3
9 28	22 51.43	-15 51.5	1.179	2.117	12.8	19.5	9 28	22 39.23	+37 58.4	1.298	2.146	18.4	18.3
10 8	22 45.54	-15 30.4	1.235	2.110	17.1	19.8	10 8	22 26.42	+37 47.9	1.306	2.122	19.9	18.3
10 18	22 42.79	-14 48.8	1.308	2.105	20.8	20.0	10 18	22 17.49	+37 5.9	1.331	2.100	21.8	18.4
493556	2015 KT ₄		9 8.6 37°99	1°8/ 7.5 16			186318	2002 CS ₂₅₆		9 8.6 165°04	3°1/ 4.6 18		
8 9	23 35.22	- 9 17.3	1.328	2.238	14.9	20.5	8 9	23 28.28	-13 36.7	2.488	3.391	9.1	21.1
8 19	23 28.54	- 9 24.1	1.285	2.250	10.3	20.3	8 19	23 23.08	-14 44.4	2.434	3.395	6.3	21.0
8 29	23 19.63	- 9 35.7	1.265	2.263	5.4	20.0	8 29	23 16.62	-15 53.2	2.406	3.398	3.8	20.8
9 8	23 9.61	- 9 46.3	1.270	2.276	1.8	19.8	9 8	23 9.46	-16 57.6	2.407	3.401	3.3	20.8
9 18	22 59.77	- 9 50.8	1.300	2.290	5.8	20.1	9 18	23 2.28	-17 52.6	2.436	3.403	5.5	20.9
9 28	22 51.42	- 9 44.8	1.355	2.304	10.5	20.4	9 28	22 55.77	-18 34.0	2.494	3.405	8.2	21.1
10 8	22 45.47	- 9 26.4	1.433	2.319	14.6	20.7	10 8	22 50.53	-18 59.9	2.576	3.407	10.7	21.3
10 18	22 42.40	- 8 55.4	1.530	2.334	17.9	21.0	10 18	22 46.96	-19 9.9	2.679	3.408	12.9	21.5
101960	Molau		9 8.6 14°38	0°1/ 8.7 18			246541	2008 RU ₄₆		9 8.6 259°80	2°9/ 6.5 18		
8 9	23 26.80	- 3 18.0	0.864	1.794	18.7	18.8	8 9	23 35.62	-12 23.1	1.715	2.618	12.5	20.4
8 19	23 23.36	- 3 43.1	0.827	1.800	13.2	18.5	8 19	23 28.71	-12 43.4	1.650	2.612	8.8	20.2
8 29	23 17.15	- 4 26.4	0.808	1.807	7.0	18.2	8 29	23 19.77	-13 5.3	1.610	2.605	4.9	19.9
9 8	23 9.47	- 5 19.2	0.809	1.816	0.4	17.8	9 8	23 9.67	-13 23.1	1.596	2.598	3.0	19.8
9 18	23 1.87	- 6 10.9	0.831	1.827	6.0	18.3	9 18	22 59.48	-13 31.6	1.610	2.591	6.1	20.0
9 28	22 55.97	- 6 51.4	0.874	1.840	12.0	18.7	9 28	22 50.36	-13 27.0	1.650	2.584	10.1	20.2
10 8	22 52.87	- 7 13.8	0.936	1.855	17.1	19.0	10 8	22 43.24	-13 7.9	1.714	2.577	13.7	20.4
10 18	22 53.05	- 7 15.5	1.015	1.871	21.3	19.3	10 18	22 38.69	-12 34.6	1.798	2.570	16.8	20.6
306694	2000 UR ₁₀₅		9 8.6 329°78	3°3/ 5.9 18			319839	2006 VB ₁₇₁		9 8.6 313°50	4°5/13.2 18		
8 9	23 25.62	- 8 38.8	1.195	2.122	14.8	19.8	8 9	23 28.05	+ 9 3.3	1.889	2.735	14.1	20.8
8 19	23 22.38	- 9 53.7	1.125	2.099	10.4	19.5	8 19	23 23.35	+ 9 0.0	1.809	2.726	11.1	20.6
8 29	23 16.70	-11 21.6	1.077	2.076	5.6	19.2	8 29	23 16.95	+ 8 36.7	1.752	2.718	7.8	20.3
9 8	23 9.46	-12 52.5	1.052	2.055	3.5	19.0	9 8	23 9.50	+ 7 55.0	1.719	2.709	5.0	20.2
9 18	23 1.85	-14 14.5	1.050	2.035	7.8	19.2	9 18	23 1.86	+ 6 58.7	1.713	2.701	5.0	20.1
9 28	22 55.32	-15 16.8	1.071	2.017	13.0	19.4	9 28	22 54.97	+ 5 54.2	1.734	2.693	7.7	20.3
10 8	22 51.08	-15 52.9	1.112	1.999	17.7	19.7	10 8	22 49.65	+ 4 48.6	1.780	2.685	11.1	20.5
10 18	22 49.85	-16 0.6	1.170	1.983	21.8	19.9	10 18	22 46.47	+ 3 48.4	1.848	2.677	14.3	20.7
150743	2001 QS ₈₇		9 8.6 312°01	0°3/ 8.4 18			486612	2013 KR ₁₄		9 8.6 334°32	4°2/13.3 18		
8 9	23 33.26	- 5 18.9	1.381	2.286	14.8	19.2	8 9	23 26.57	+ 9 16.6	1.997	2.842	13.5	20.6
8 19	23 27.47	- 5 27.9	1.312	2.274	10.5	18.9	8 19	23 22.21	+ 9 3.0	1.920	2.836	10.6	20.4
8 29	23 19.28	- 5 47.0	1.265	2.262	5.6	18.6	8 29	23 16.30	+ 8 29.8	1.865	2.831	7.4	20.2
9 8	23 9.61	- 6 11.3	1.243	2.250	0.4	18.2	9 8	23 9.46	+ 7 39.0	1.835	2.825	4.7	20.0
9 18	22 59.70	- 6 34.7	1.246	2.239	5.2	18.6	9 18	23 2.48	+ 6 34.8	1.832	2.820	4.6	20.0
9 28	22 50.93	- 6 51.2	1.274	2.228	10.4	18.8	9 28	22 56.22	+ 5 23.5	1.856	2.816	7.3	20.1
10 8	22 44.41	- 6 56.1	1.324	2.218	15.0	19.1	10 8	22 51.42	+ 4 12.1	1.906	2.811	10.5	20.3
10 18	22 40.82	- 6 47.1	1.394	2.208	18.8	19.3	10 18	22 48.58	+ 3 6.9	1.979	2.807	13.5	20.5
42729	1998 QE ₉₀		9 8.6 23°65	8°0/14.1 18			479486	2014 AD ₂₈		9 8.6 95°32	5°2/13.7 18		
8 9	23 33.70	+11 16.3	1.345	2.194	18.6	17.9	8 9	23 31.50	+10 28.0	1.842	2.678	14.8	21.0
8 19	23 27.68	+12 26.2	1.292	2.203	15.0	17.7	8 19	23 25.68	+10 37.2	1.780	2.688	11.7	20.8
8 29	23 19.31	+13 10.8	1.260	2.214	11.4	17.5	8 29	23 18.11	+10 25.6	1.739	2.697	8.4	20.6
9 8	23 9.61	+13 28.7	1.250	2.226	8.6	17.4	9 8	23 9.57	+ 9 54.7	1.723	2.707	5.8	20.5
9 18	22 59.84	+13 21.5	1.263	2.238	8.2	17.4	9 18	23 0.98	+ 9 8.1	1.733	2.716	5.5	20.5
9 28	22 51.38	+12 55.1	1.300	2.252	10.5	17.6	9 28	22 53.33	+ 8 11.9	1.771	2.726	7.9	20.7
10 8	22 45.27	+12 18.2	1.360	2.266	13.7	17.8	10 8	22 47.41	+ 7 13.3	1.834	2.735	11.1	20.9
10 18	22 42.12	+11 39.4	1.440	2.282	16.9	18.1	10 18	22 43.73	+ 6 18.8	1.919	2.744	14.0	21.1
149743	2004 ND ₁₆		9 8.6 23°19	0°6/ 7.9 18			517925	2015 TV ₁₇₀		9 8.6 271°40	7°2/31.1 18		
8 9	23 27.46	- 4 28.0											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
390208	2012 XV ₈	9 8.6 242°69	0°2/ 8.4 18				37949	1998 HD ₂₉	9 8.7 89°24	4°8/13.8 17			
8 9	23 29.65	- 3 22.2	1.859	2.751	12.2	21.2	8 9	23 29.27	+11 16.3	1.756	2.594	15.4	18.8
8 19	23 24.42	- 4 6.0	1.791	2.746	8.6	20.9	8 19	23 24.14	+10 46.9	1.696	2.607	12.1	18.7
8 29	23 17.48	- 5 0.8	1.747	2.741	4.5	20.7	8 29	23 17.31	+ 9 53.5	1.658	2.620	8.5	18.5
9 8	23 9.55	- 6 1.5	1.729	2.737	0.3	20.3	9 8	23 9.55	+ 8 39.4	1.645	2.633	5.5	18.3
9 18	23 1.49	- 7 1.7	1.740	2.732	4.2	20.7	9 18	23 1.79	+ 7 10.5	1.659	2.646	5.1	18.3
9 28	22 54.28	- 7 55.1	1.777	2.727	8.3	20.9	9 28	22 55.00	+ 5 35.4	1.699	2.659	7.8	18.5
10 8	22 48.70	- 8 36.7	1.839	2.722	12.0	21.1	10 8	22 49.94	+ 4 2.8	1.766	2.671	11.2	18.8
10 18	22 45.28	- 9 3.6	1.923	2.716	15.2	21.3	10 18	22 47.11	+ 2 40.0	1.855	2.684	14.2	19.0
430312	2013 XS ₁₁	9 8.6 240°42	1°0/ 6.7 17				124656	2001 SC ₇₅	9 8.7 294°64	2°5/10.3 17			
8 9	23 22.16	- 9 24.2	4.454	5.345	5.7	21.3	8 9	23 33.19	+ 1 17.0	1.246	2.138	16.9	19.6
8 19	23 18.43	- 9 54.1	4.385	5.343	3.9	21.2	8 19	23 27.63	+ 1 13.4	1.178	2.129	12.5	19.3
8 29	23 14.06	-10 25.9	4.345	5.340	2.0	21.1	8 29	23 19.48	+ 0 50.5	1.130	2.120	7.5	19.0
9 8	23 9.34	-10 57.5	4.333	5.337	1.0	21.0	9 8	23 9.70	+ 0 12.0	1.106	2.111	2.8	18.7
9 18	23 4.58	-11 26.7	4.352	5.334	2.5	21.1	9 18	22 59.61	- 0 35.8	1.106	2.102	5.1	18.9
9 28	23 0.14	-11 51.5	4.400	5.332	4.4	21.2	9 28	22 50.74	- 1 24.3	1.131	2.093	10.4	19.1
10 8	22 56.33	-12 10.3	4.476	5.329	6.1	21.4	10 8	22 44.31	- 2 5.2	1.177	2.084	15.4	19.4
10 18	22 53.39	-12 22.0	4.575	5.326	7.6	21.5	10 18	22 41.05	- 2 32.9	1.242	2.076	19.6	19.6
119850	2002 CY ₆₁	9 8.6 17°41	4°1/ 4.9 18				420752	2013 AN ₉₁	9 8.7 332°13	3°2/ 1.9 17			
8 9	23 31.25	-15 46.2	1.833	2.743	11.4	19.2	8 9	23 22.55	-20 52.7	4.125	5.026	5.8	20.0
8 19	23 25.47	-16 25.9	1.783	2.745	8.1	19.0	8 19	23 18.78	-21 43.9	4.072	5.024	4.4	19.9
8 29	23 17.98	-17 4.2	1.757	2.748	5.1	18.8	8 29	23 14.27	-22 32.6	4.048	5.023	3.3	19.9
9 8	23 9.58	-17 34.9	1.757	2.751	4.3	18.8	9 8	23 9.36	-23 15.6	4.051	5.021	3.5	19.9
9 18	23 1.21	-17 53.0	1.785	2.754	6.8	19.0	9 18	23 4.43	-23 50.3	4.084	5.019	4.6	20.0
9 28	22 53.86	-17 55.0	1.838	2.758	10.1	19.2	9 28	22 59.86	-24 14.9	4.144	5.018	6.2	20.1
10 8	22 48.29	-17 40.0	1.914	2.762	13.2	19.4	10 8	22 56.01	-24 28.2	4.228	5.016	7.6	20.2
10 18	22 44.96	-17 8.8	2.010	2.767	15.8	19.6	10 18	22 53.16	-24 30.2	4.335	5.015	9.0	20.3
223221	2003 CF ₂₅	9 8.7 286°96	0°9/ 9.3 18				13674	Bourge	9 8.7 247°45	4°9/ 4.2 18			
8 9	23 32.43	- 1 37.8	1.551	2.442	14.3	20.8	8 9	23 32.06	-14 45.3	1.565	2.479	12.8	18.2
8 19	23 26.86	- 1 54.0	1.466	2.419	10.4	20.5	8 19	23 26.40	-16 3.5	1.507	2.472	9.1	18.0
8 29	23 19.01	- 2 24.4	1.404	2.396	5.8	20.2	8 29	23 18.63	-17 23.5	1.474	2.466	5.8	17.8
9 8	23 9.66	- 3 4.9	1.366	2.373	1.2	19.8	9 8	23 9.64	-18 35.8	1.467	2.459	5.3	17.7
9 18	22 59.89	- 3 49.7	1.355	2.350	4.6	20.0	9 18	23 0.53	-19 32.1	1.486	2.452	8.2	17.9
9 28	22 50.98	- 4 31.8	1.370	2.326	9.6	20.2	9 28	22 52.51	-20 6.4	1.529	2.445	12.0	18.1
10 8	22 44.04	- 5 4.7	1.408	2.303	14.2	20.5	10 8	22 46.54	-20 16.5	1.594	2.438	15.6	18.3
10 18	22 39.83	- 5 24.2	1.467	2.280	18.1	20.7	10 18	22 43.21	-20 3.4	1.677	2.431	18.6	18.5
128836	2004 RG ₃₂₄	9 8.7 270°74	2°2/10.9 18				300675	2007 VJ ₁₃	9 8.7 200°59	2°8/11.8 18			
8 9	23 29.90	+ 2 23.5	2.284	3.148	11.4	19.7	8 9	23 29.03	+ 5 48.1	2.075	2.931	12.7	21.3
8 19	23 24.37	+ 2 23.8	2.206	3.141	8.5	19.5	8 19	23 23.86	+ 5 21.5	2.001	2.929	9.6	21.1
8 29	23 17.39	+ 2 12.4	2.152	3.134	5.2	19.3	8 29	23 17.15	+ 4 38.1	1.950	2.927	6.2	20.9
9 8	23 9.55	+ 1 51.4	2.126	3.127	2.4	19.1	9 8	23 9.55	+ 3 40.9	1.926	2.924	3.2	20.7
9 18	23 1.58	+ 1 24.1	2.128	3.121	3.4	19.1	9 18	23 1.83	+ 2 34.6	1.929	2.922	3.8	20.7
9 28	22 54.27	+ 0 54.4	2.158	3.114	6.6	19.3	9 28	22 54.84	+ 1 25.6	1.961	2.919	7.0	20.9
10 8	22 48.31	+ 0 26.9	2.214	3.107	9.8	19.5	10 8	22 49.32	+ 0 20.2	2.019	2.916	10.4	21.1
10 18	22 44.18	+ 0 5.0	2.294	3.100	12.6	19.7	10 18	22 45.76	- 0 36.4	2.099	2.912	13.4	21.3
508365	2016 EL ₁₉₃	9 8.7 95°81	2°4/ 6.6 17				1801	Titicaca	9 8.7 258°40	5°2/ 2.7 18 R			
8 9	23 32.71	- 7 8.6	1.344	2.254	14.8	21.3	8 9	23 29.81	-19 56.7	2.187	3.094	10.0	15.9
8 19	23 26.84	- 8 26.2	1.302	2.267	10.2	21.1	8 19	23 24.37	-21 1.9	2.131	3.087	7.4	15.7
8 29	23 18.80	- 9 53.2	1.283	2.281	5.2	20.9	8 29	23 17.40	-22 3.6	2.101	3.081	5.5	15.6
9 8	23 9.64	-11 19.8	1.289	2.294	2.5	20.7	9 8	23 9.56	-22 55.2	2.098	3.074	5.6	15.6
9 18	23 0.58	-12 36.1	1.321	2.307	6.4	21.0	9 18	23 1.67	-23 31.6	2.122	3.068	7.6	15.7
9 28	22 52.88	-13 34.3	1.378	2.319	11.0	21.3	9 28	22 54.57	-23 49.1	2.171	3.061	10.2	15.9
10 8	22 47.46	-14 10.3	1.458	2.332	15.1	21.6	10 8	22 48.99	-23 47.0	2.244	3.055	12.8	16.0
10 18	22 44.80	-14 23.6	1.556	2.344	18.4	21.9	10 18	22 45.39	-23 26.2	2.336	3.048	15.0	16.2
476819	2008 UG ₂₄₀	9 8.7 296°77	6°2/13.9 16				104793	2000 HB ₃₈	9 8.7 321°85	4°2/ 5.8 18			
8 9	23 29.80	+11 26.4	1.655	2.495	16.1	21.6	8 9	23 33.41	-13 23.2	1.322	2.240	14.4	19.2
8 19	23 24.93	+11 40.6	1.566	2.475	13.0	21.4	8 19	23 27.65	-14 0.8	1.262	2.229	10.2	18.9
8 29	23 17.95	+11 31.2	1.499	2.456	9.6	21.2	8 29	23 19.41	-14 40.6	1.223	2.219	5.9	18.6
9 8	23 9.60	+10 58.0	1.454	2.436	6.8	21.0	9 8	23 9.70	-15 14.2	1.209	2.209	4.3	18.5
9 18	23 0.85	+10 3.8	1.435	2.417	6.5	20.9	9 18	22 59.84	-15 34.1	1.220	2.200	7.8	18.7
9 28	22 52.86	+ 8 55.0	1.441	2.398	9.2	21.0	9 28	22 51.26	-15 35.1	1.254	2.191	12.3	18.9
10 8	22 46.70	+ 7 40.5	1.471	2.379	12.8	21.2	10 8	22 45.08	-15 15.3	1.309	2.182	16.5	19.2
10 18	22 43.08	+ 6 29.0	1.522	2.360	16.4	21.4	10 18	22 41.92	-14 35.8	1.383	2.174	20.1	19.4
418240	2008 DY ₃₆	9 8.7 284°98	4°4/ 6.6 18				415595	2014 QB ₃₁₆	9 8.7 111°90	0°8/ 9.5 18			
8 9	23 46.27	-16 42.4	1.425	2.323	14.9	20.5	8 9	23 30.12	- 1 38.8	2.328	3.204	10.7	21.1
8 19	23 36.89	-16 31.8	1.343	2.300	10.8	20.2	8 19	23 24.41	- 1 49.9	2.264	3.210	7.6	21.0
8 29	23 24.44	-16 15.1	1.285	2.276	6.5	19.9	8 29	23 17.36	- 2 9.7	2.225	3.215	4.3	20.8
9 8	23 10.01	-15 45.8	1.254	2.253	4.5	19.7	9 8	23 9.57	- 2 35.3	2.214	3.221	1.0	20.5
9 18	22 55.18	-14 59.2	1.250	2.229	7.8	19.9	9 18	23 1.76	- 3 3.0	2.232	3.226	3.2	20.7
9 28	22 41.72	-13 54.3	1.273	2.205	12.6	20.1	9 28	22 54.67	- 3 28.8	2.279	3.231	6.6	20.9
10 8	22 31.06	-12 33.0	1.320	2.181	17.2	20.3	10 8	22 48.94	- 3 49.4	2.352	3.237	9.6	21.1
10 18	22 23.99	-10 59.2	1.387	2.157	21.0	20.5	10 18	22 44.99	- 4 2.1	2.448	3.242	12.3	21.3
126820	2002 EF ₅₃	9 8.7 231°35	1°5/10.4 18				265469	2005 AA ₅₇	9 8.7 289°09	0°4/ 8.3 18			
8 9	23 28.11	+ 1 41.8	2.246	3.116	11.3								

EPHEMERIDES

9 8.7

9 8.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
116726	2004 <i>DK</i> ₁₄	9 8.7 101°34	0°5/ 8.2 18				471009	2009 <i>SC</i> ₂₆₀	9 8.7 331°12	0°1/ 8.6 18			
8 9	23 31.58	- 3 27.7	1.546	2.443	14.0	20.0	8 9	23 25.03	- 1 45.7	1.850	2.744	12.1	20.6
8 19	23 25.89	- 4 23.2	1.496	2.454	9.8	19.8	8 19	23 21.25	- 2 50.9	1.776	2.733	8.6	20.3
8 29	23 18.28	- 5 31.0	1.469	2.464	5.1	19.5	8 29	23 15.87	- 4 10.3	1.727	2.722	4.6	20.1
9 8	23 9.64	- 6 44.0	1.467	2.475	0.5	19.2	9 8	23 9.52	- 5 37.9	1.704	2.711	0.3	19.7
9 18	23 1.04	- 7 54.1	1.493	2.485	4.8	19.6	9 18	23 3.02	- 7 6.3	1.708	2.701	4.1	20.0
9 28	22 53.57	- 8 53.9	1.545	2.495	9.3	19.9	9 28	22 57.25	- 8 27.8	1.739	2.691	8.3	20.2
10 8	22 48.09	- 9 38.1	1.621	2.505	13.3	20.1	10 8	22 52.98	- 9 35.7	1.795	2.682	12.0	20.4
10 18	22 45.10	-10 4.4	1.717	2.514	16.5	20.4	10 18	22 50.75	-10 26.2	1.873	2.674	15.2	20.6
186700	2004 <i>BM</i> ₄₃	9 8.7 146°59	1°5/ 7.3 18				174108	2002 <i>JX</i> ₆₀	9 8.7 290°63	5°2/ 4.9 18			
8 9	23 32.82	- 6 31.7	1.757	2.654	12.6	20.8	8 9	23 34.93	-15 17.5	1.333	2.249	14.4	19.9
8 19	23 26.62	- 7 27.4	1.703	2.662	8.7	20.6	8 19	23 28.74	-16 9.5	1.274	2.240	10.3	19.6
8 29	23 18.63	- 8 31.2	1.674	2.670	4.5	20.3	8 29	23 20.02	-17 1.9	1.238	2.231	6.4	19.4
9 8	23 9.67	- 9 36.5	1.671	2.677	1.5	20.2	9 8	23 9.80	-17 45.3	1.226	2.221	5.4	19.3
9 18	23 0.71	-10 36.3	1.697	2.684	5.0	20.4	9 18	22 59.44	-18 11.5	1.239	2.212	8.7	19.5
9 28	22 52.79	-11 24.5	1.749	2.690	9.1	20.7	9 28	22 50.41	-18 15.1	1.276	2.203	13.0	19.7
10 8	22 46.70	-11 57.2	1.826	2.696	12.7	20.9	10 8	22 43.83	-17 55.1	1.333	2.194	17.1	19.9
10 18	22 42.94	-12 12.9	1.924	2.701	15.7	21.1	10 18	22 40.35	-17 13.4	1.408	2.185	20.5	20.2
170565	2003 <i>WO</i> ₁₆₉	9 8.7 208°44	5°6/ 1.6 18				112454	2002 <i>OQ</i> ₉	9 8.7 7°49	2°8/ 11.2 18			
8 9	23 32.43	-23 37.8	2.552	3.448	9.2	21.1	8 9	23 29.01	+ 3 54.6	1.628	2.504	14.5	19.4
8 19	23 26.06	-24 42.1	2.496	3.441	7.1	21.0	8 19	23 24.15	+ 3 37.0	1.564	2.504	10.9	19.1
8 29	23 18.26	-25 40.5	2.467	3.434	5.7	20.9	8 29	23 17.43	+ 3 1.0	1.521	2.505	6.8	18.9
9 8	23 9.65	-26 27.2	2.465	3.426	6.0	20.9	9 8	23 9.63	+ 2 10.3	1.504	2.506	3.2	18.7
9 18	23 0.98	-26 57.7	2.491	3.417	7.7	21.0	9 18	23 1.74	+ 1 10.7	1.513	2.507	4.3	18.8
9 28	22 53.05	-27 9.4	2.543	3.408	9.9	21.1	9 28	22 54.79	+ 0 9.4	1.547	2.509	8.2	19.0
10 8	22 46.54	-27 2.1	2.619	3.398	12.0	21.3	10 8	22 49.67	- 0 46.4	1.607	2.511	12.2	19.3
10 18	22 41.89	-26 37.1	2.715	3.387	13.9	21.4	10 18	22 46.89	- 1 31.1	1.687	2.513	15.5	19.5
409711	2006 <i>BU</i> ₁₆₇	9 8.7 310°90	1°3/ 9.9 17				207207	2005 <i>EP</i> ₆₉	9 8.7 321°56	1°7/ 9.8 18			
8 9	23 29.92	- 0 27.5	2.177	3.052	11.4	21.2	8 9	23 34.39	- 1 56.9	1.522	2.412	14.6	19.0
8 19	23 24.43	- 0 31.1	2.103	3.047	8.3	21.0	8 19	23 28.20	- 1 31.5	1.447	2.398	10.6	18.8
8 29	23 17.45	- 0 44.8	2.054	3.042	4.8	20.8	8 29	23 19.71	- 1 16.8	1.393	2.384	6.2	18.5
9 8	23 9.60	- 1 5.9	2.032	3.037	1.5	20.6	9 8	23 9.79	- 1 10.4	1.365	2.371	2.0	18.2
9 18	23 1.63	- 1 31.0	2.038	3.032	3.4	20.7	9 18	22 59.57	- 1 9.2	1.363	2.358	4.6	18.3
9 28	22 54.38	- 1 55.8	2.072	3.027	6.9	20.9	9 28	22 50.36	- 1 8.8	1.387	2.345	9.3	18.6
10 8	22 48.54	- 2 16.3	2.132	3.023	10.2	21.1	10 8	22 43.24	- 1 4.8	1.435	2.333	13.7	18.8
10 18	22 44.61	- 2 29.5	2.215	3.018	13.1	21.3	10 18	22 38.89	- 0 53.7	1.503	2.322	17.4	19.0
24963	1997 <i>UB</i> ₁₁	9 8.7 308°33	3°1/ 5.9 18				383257	2006 <i>CL</i> ₃₈	9 8.7 180°11	1°8/ 10.4 18			
8 9	23 34.68	-15 17.5	2.267	3.163	10.1	17.6	8 9	23 33.02	+ 1 22.0	2.100	2.966	12.1	21.9
8 19	23 27.65	-15 26.3	2.204	3.161	7.2	17.4	8 19	23 26.63	+ 1 12.9	2.030	2.967	8.9	21.7
8 29	23 19.09	-15 33.3	2.167	3.158	4.2	17.3	8 29	23 18.63	+ 0 51.5	1.983	2.968	5.3	21.5
9 8	23 9.71	-15 34.6	2.158	3.155	3.1	17.2	9 8	23 9.72	+ 0 20.9	1.965	2.968	2.1	21.3
9 18	23 0.34	-15 26.8	2.179	3.153	5.4	17.3	9 18	23 0.71	- 0 15.2	1.975	2.968	3.6	21.4
9 28	22 51.84	-15 7.9	2.227	3.150	8.4	17.5	9 28	22 52.50	- 0 51.7	2.013	2.967	7.2	21.6
10 8	22 44.91	-14 37.2	2.301	3.148	11.3	17.7	10 8	22 45.85	- 1 23.9	2.078	2.966	10.6	21.8
10 18	22 40.00	-13 55.5	2.398	3.146	13.8	17.9	10 18	22 41.25	- 1 48.4	2.165	2.964	13.5	22.0
480689	2015 <i>PJ</i> ₈₇	9 8.7 306°55	2°5/ 6.2 18				401671	2013 <i>GB</i> ₁₂₂	9 8.7 181°77	2°7/ 5.8 18			
8 9	23 29.15	- 9 40.0	1.768	2.676	11.9	20.9	8 9	23 30.99	-13 6.7	2.324	3.224	9.8	21.2
8 19	23 24.18	-10 35.6	1.703	2.667	8.3	20.7	8 19	23 25.07	-13 40.9	2.265	3.225	6.8	21.0
8 29	23 17.42	-11 37.3	1.662	2.659	4.4	20.4	8 29	23 17.74	-14 15.9	2.231	3.225	3.9	20.8
9 8	23 9.61	-12 38.3	1.647	2.650	2.6	20.3	9 8	23 9.66	-14 47.1	2.226	3.225	2.8	20.8
9 18	23 1.67	-13 31.8	1.660	2.642	5.8	20.5	9 18	23 1.56	-15 10.3	2.249	3.224	5.1	20.9
9 28	22 54.61	-14 11.7	1.698	2.634	9.7	20.7	9 28	22 54.23	-15 22.1	2.300	3.224	8.1	21.1
10 8	22 49.26	-14 34.4	1.760	2.626	13.3	20.9	10 8	22 48.30	-15 21.0	2.376	3.224	11.0	21.3
10 18	22 46.17	-14 38.8	1.842	2.619	16.3	21.1	10 18	22 44.23	-15 6.8	2.473	3.223	13.3	21.5
139011	2001 <i>DC</i> ₄₅	9 8.7 187°51	1°4/ 7.4 18				507259	2011 <i>CS</i> ₄₀	9 8.7 156°10	1°0/ 7.7 17			
8 9	23 31.16	- 5 16.5	1.511	2.414	13.9	19.9	8 9	23 32.48	- 5 24.7	1.834	2.728	12.3	22.0
8 19	23 25.76	- 6 23.9	1.452	2.414	9.6	19.7	8 19	23 26.37	- 6 14.9	1.777	2.734	8.6	21.8
8 29	23 18.30	- 7 43.2	1.416	2.414	5.0	19.4	8 29	23 18.52	- 7 13.9	1.744	2.740	4.4	21.6
9 8	23 9.67	- 9 6.6	1.407	2.413	1.5	19.1	9 8	23 9.71	- 8 15.8	1.738	2.745	1.0	21.3
9 18	23 0.95	-10 24.9	1.424	2.412	5.5	19.4	9 18	23 0.89	- 9 14.1	1.760	2.749	4.6	21.6
9 28	22 53.30	-11 30.0	1.467	2.412	10.2	19.7	9 28	22 53.03	-10 2.7	1.810	2.754	8.7	21.9
10 8	22 47.68	-12 16.4	1.533	2.411	14.3	19.9	10 8	22 46.92	-10 37.4	1.885	2.757	12.3	22.1
10 18	22 44.64	-12 42.0	1.618	2.409	17.6	20.2	10 18	22 43.06	-10 56.5	1.980	2.760	15.2	22.3
57950	2002 <i>JV</i> ₇₂	9 8.7 23°28	2°9/ 5.3 18				148616	2001 <i>RC</i> ₁₁₇	9 8.7 163°16	1°0/ 7.8 18			
8 9	23 26.85	-10 53.3	2.018	2.927	10.6	18.8	8 9	23 34.71	- 6 44.8	1.740	2.635	12.8	19.8
8 19	23 22.33	-12 5.5	1.965	2.930	7.3	18.6	8 19	23 28.01	- 7 9.7	1.680	2.638	8.9	19.5
8 29	23 16.34	-13 21.6	1.937	2.933	4.1	18.4	8 29	23 19.42	- 7 41.7	1.645	2.641	4.6	19.3
9 8	23 9.54	-14 35.0	1.937	2.936	3.0	18.4	9 8	23 9.78	- 8 15.6	1.636	2.643	1.0	19.0
9 18	23 2.72	-15 39.2	1.964	2.940	5.7	18.6	9 18	23 0.11	- 8 46.0	1.656	2.645	4.8	19.3
9 28	22 56.68	-16 28.9	2.018	2.944	9.0	18.8	9 28	22 51.50	- 9 7.8	1.702	2.647	9.0	19.6
10 8	22 52.12	-17 1.1	2.095	2.948	12.0	19.0	10 8	22 44.79	- 9 17.7	1.773	2.649	12.7	19.8
10 18	22 49.48	-17 15.1	2.194	2.952	14.6	19.2	10 18	22 40.52	- 9 14.3	1.864	2.650	15.9	20.0
323385	2003 <i>YQ</i> ₆₉	9 8.7 264°95	5°1/ 4.4 17				481343	2006 <i>BM</i> ₂₆₅	9 8.7 214				

EPHEMERIDES

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Table of astronomical ephemerides with columns for year, epoch, name, and various parameters (alpha, delta, delta, r, beta, V). It is organized into two main columns and contains numerous rows of data for various objects.

EPHEMERIDES

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Table with 14 columns: Year (2020), Right Ascension (α2000), Declination (δ2000), Delta (Δ), r, β, V, and their corresponding values for various astronomical objects across two columns of data.

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
252783	2002 <i>EO</i> ₁₃₂		9 8.8 237°14	1°5/10.3	18		469317	1999 <i>TS</i> ₂₁₂		9 8.8 8°44	2°3/7.7	17	
8 9	23 31.35	+ 0 11.4	2.241	3.111	11.3	20.7	8 9	23 30.58	- 9 50.8	0.802	1.741	18.6	19.8
8 19	23 25.60	+ 0 7.8	2.167	3.107	8.3	20.5	8 19	23 26.46	- 9 41.2	0.765	1.742	13.1	19.5
8 29	23 18.36	- 0 6.1	2.117	3.103	4.9	20.3	8 29	23 19.24	- 9 37.7	0.745	1.746	6.9	19.2
9 8	23 10.26	- 0 27.9	2.095	3.099	1.7	20.1	9 8	23 10.35	- 9 33.1	0.745	1.752	2.3	18.9
9 18	23 2.03	- 0 54.0	2.101	3.095	3.3	20.2	9 18	23 1.57	- 9 20.9	0.766	1.760	7.2	19.3
9 28	22 54.50	- 1 20.3	2.135	3.091	6.8	20.4	9 28	22 54.69	- 8 56.0	0.807	1.771	13.1	19.6
10 8	22 48.36	- 1 42.9	2.196	3.086	10.0	20.6	10 8	22 50.94	- 8 16.5	0.865	1.784	18.2	20.0
10 18	22 44.10	- 1 58.5	2.280	3.082	12.8	20.8	10 18	22 50.78	- 7 22.7	0.940	1.798	22.4	20.3
385219	2000 <i>DB</i> ₄₁		9 8.8 99°40	0°8/7.9	15		295864	2008 <i>WM</i> ₅		9 8.8 197°84	1°0/9.9	18	
8 9	23 30.12	- 4 4.1	2.090	2.978	11.2	21.2	8 9	23 30.96	+ 0 23.4	2.192	3.063	11.5	21.6
8 19	23 24.65	- 5 14.4	2.045	3.000	7.8	21.0	8 19	23 25.36	- 0 13.4	2.118	3.060	8.3	21.4
8 29	23 17.78	- 6 33.1	2.026	3.021	4.0	20.8	8 29	23 18.27	- 1 2.5	2.068	3.057	4.7	21.2
9 8	23 10.22	- 7 54.3	2.035	3.042	0.8	20.6	9 8	23 10.29	- 1 59.9	2.047	3.053	1.3	21.0
9 18	23 2.72	- 9 11.3	2.073	3.063	4.0	20.9	9 18	23 2.19	- 3 0.7	2.054	3.048	3.3	21.1
9 28	22 56.07	- 10 18.4	2.140	3.083	7.6	21.1	9 28	22 54.79	- 3 59.2	2.090	3.043	7.0	21.3
10 8	22 50.91	- 11 11.5	2.232	3.102	10.7	21.4	10 8	22 48.79	- 4 50.2	2.152	3.038	10.4	21.5
10 18	22 47.64	- 11 48.6	2.347	3.121	13.3	21.6	10 18	22 44.70	- 5 30.2	2.237	3.031	13.3	21.7
480397	2015 <i>KT</i> ₅₈		9 8.8 49°94	0°1/8.7	16		155163	2005 <i>UJ</i> ₁₂₄		9 8.8 155°16	4°3/3.9	18	
8 9	23 30.24	- 2 35.5	1.517	2.415	14.1	21.0	8 9	23 32.00	- 19 1.3	2.443	3.343	9.4	20.5
8 19	23 25.22	- 3 25.4	1.464	2.422	10.0	20.8	8 19	23 25.91	- 19 47.4	2.393	3.347	6.8	20.3
8 29	23 18.27	- 4 28.8	1.434	2.429	5.3	20.5	8 29	23 18.46	- 20 30.0	2.369	3.351	4.8	20.2
9 8	23 10.26	- 5 39.0	1.429	2.437	0.4	20.2	9 8	23 10.30	- 21 4.1	2.373	3.355	4.6	20.2
9 18	23 2.23	- 6 48.1	1.451	2.444	4.6	20.5	9 18	23 2.16	- 21 25.6	2.405	3.359	6.4	20.3
9 28	22 55.28	- 7 48.3	1.498	2.452	9.2	20.8	9 28	22 54.80	- 21 31.9	2.464	3.362	8.9	20.5
10 8	22 50.27	- 8 33.9	1.569	2.460	13.2	21.1	10 8	22 48.84	- 21 22.4	2.548	3.365	11.3	20.7
10 18	22 47.70	- 9 2.0	1.661	2.469	16.6	21.4	10 18	22 44.71	- 20 57.9	2.652	3.368	13.3	20.8
296711	2009 <i>SF</i> ₃₂₇		9 8.8 247°19	1°4/11.6	18		154056	2002 <i>CN</i> ₁₆₁		9 8.8 241°98	0°3/8.6	18	
8 9	23 23.78	+ 3 16.2	4.566	5.411	6.5	20.3	8 9	23 33.28	- 4 36.8	1.778	2.669	12.7	20.5
8 19	23 19.75	+ 3 12.2	4.484	5.408	4.8	20.1	8 19	23 27.29	- 5 1.1	1.707	2.662	9.0	20.3
8 29	23 15.07	+ 3 2.0	4.429	5.404	3.1	20.0	8 29	23 19.41	- 5 34.9	1.660	2.655	4.8	20.0
9 8	23 10.02	+ 2 46.7	4.402	5.401	1.6	19.9	9 8	23 10.39	- 6 13.5	1.640	2.647	0.4	19.7
9 18	23 4.92	+ 2 27.9	4.406	5.397	1.9	19.9	9 18	23 1.20	- 6 51.3	1.647	2.640	4.3	20.0
9 28	23 0.11	+ 2 7.5	4.440	5.394	3.6	20.0	9 28	22 52.90	- 7 22.8	1.682	2.632	8.7	20.2
10 8	22 55.91	+ 1 47.5	4.502	5.391	5.3	20.2	10 8	22 46.39	- 7 43.7	1.740	2.624	12.6	20.4
10 18	22 52.57	+ 1 29.8	4.590	5.387	6.9	20.3	10 18	22 42.23	- 7 51.4	1.820	2.615	15.8	20.7
481608	2007 <i>TN</i> ₄₄₃		9 8.8 340°80	5°8/14.2	18		204385	2004 <i>TL</i> ₁₃₁		9 8.8 330°42	3°1/6.3	18	
8 9	23 28.27	+ 11 7.6	1.558	2.406	16.5	20.5	8 9	23 29.88	- 9 55.6	1.372	2.289	14.0	19.1
8 19	23 24.00	+ 11 9.4	1.485	2.400	13.2	20.2	8 19	23 25.30	- 10 51.5	1.310	2.278	9.8	18.8
8 29	23 17.72	+ 10 45.9	1.432	2.393	9.6	20.0	8 29	23 18.49	- 11 54.9	1.270	2.267	5.3	18.5
9 8	23 10.23	+ 9 58.3	1.402	2.388	6.6	19.8	9 8	23 10.32	- 12 57.4	1.254	2.257	3.3	18.4
9 18	23 2.50	+ 8 50.8	1.397	2.383	6.1	19.8	9 18	23 1.95	- 13 50.2	1.264	2.248	6.9	18.6
9 28	22 55.68	+ 7 31.4	1.417	2.379	8.8	19.9	9 28	22 54.68	- 14 25.9	1.297	2.239	11.5	18.8
10 8	22 50.73	+ 6 9.7	1.461	2.375	12.5	20.1	10 8	22 49.53	- 14 40.5	1.352	2.231	15.7	19.1
10 18	22 48.25	+ 4 54.3	1.526	2.372	15.9	20.4	10 18	22 47.15	- 14 33.3	1.426	2.224	19.3	19.3
86688	2000 <i>FA</i> ₄₄		9 8.8 216°24	4°3/4.9	18		487922	2015 <i>TU</i> ₂₀₃		9 8.8 326°48	3°2/12.1	18	
8 9	23 33.45	- 13 59.7	1.705	2.613	12.3	19.9	8 9	23 27.88	+ 5 41.3	1.934	2.795	13.2	20.9
8 19	23 27.46	- 15 7.6	1.646	2.609	8.7	19.7	8 19	23 23.41	+ 5 28.9	1.856	2.786	10.1	20.7
8 29	23 19.48	- 16 17.4	1.612	2.604	5.3	19.5	8 29	23 17.31	+ 4 59.3	1.800	2.777	6.6	20.5
9 8	23 10.36	- 17 21.0	1.604	2.599	4.5	19.4	9 8	23 10.23	+ 4 15.0	1.770	2.768	3.6	20.3
9 18	23 1.13	- 18 11.0	1.623	2.593	7.3	19.6	9 18	23 2.96	+ 3 20.2	1.767	2.760	4.1	20.3
9 28	22 52.91	- 18 41.9	1.668	2.588	11.0	19.8	9 28	22 56.40	+ 2 21.0	1.791	2.752	7.3	20.5
10 8	22 46.61	- 18 51.6	1.736	2.581	14.4	20.0	10 8	22 51.34	+ 1 24.0	1.840	2.744	10.8	20.7
10 18	22 42.78	- 18 40.6	1.822	2.575	17.3	20.2	10 18	22 48.32	+ 0 34.6	1.911	2.737	14.0	20.9
405768	2005 <i>YP</i> ₂₁₈		9 8.8 138°84	2°3/11.6	18		255063	2005 <i>TX</i> ₁₇₄		9 8.8 51°24	2°3/6.6	18	
8 9	23 30.16	+ 4 14.7	2.670	3.519	10.4	21.6	8 9	23 29.99	- 9 28.1	1.820	2.725	11.8	19.8
8 19	23 24.53	+ 4 10.6	2.602	3.527	7.8	21.5	8 19	23 24.77	- 10 19.0	1.774	2.737	8.1	19.6
8 29	23 17.70	+ 3 55.3	2.559	3.534	5.0	21.3	8 29	23 17.94	- 11 14.5	1.752	2.748	4.3	19.4
9 8	23 10.22	+ 3 30.7	2.544	3.542	2.6	21.2	9 8	23 10.27	- 12 8.3	1.757	2.760	2.4	19.3
9 18	23 2.70	+ 2 59.8	2.558	3.549	3.1	21.2	9 18	23 2.64	- 12 54.3	1.789	2.772	5.3	19.5
9 28	22 55.78	+ 2 26.1	2.601	3.556	5.7	21.4	9 28	22 55.97	- 13 27.5	1.847	2.785	9.0	19.8
10 8	22 50.04	+ 1 53.7	2.671	3.562	8.4	21.6	10 8	22 50.98	- 13 45.3	1.930	2.797	12.3	20.0
10 18	22 45.87	+ 1 25.7	2.766	3.569	10.8	21.7	10 18	22 48.10	- 13 46.8	2.033	2.810	15.0	20.2
149846	2005 <i>PY</i> ₂₀		9 8.8 356°44	2°3/6.9	18		103455	2000 <i>AJ</i> ₁₉₆		9 8.8 197°50	1°3/7.2	18	
8 9	23 26.17	- 5 52.0	1.075	2.001	16.2	18.4	8 9	23 28.99	- 5 20.4	2.161	3.053	10.8	20.2
8 19	23 22.97	- 7 7.7	1.024	1.996	11.3	18.1	8 19	23 24.01	- 6 39.4	2.094	3.051	7.5	20.0
8 29	23 17.31	- 8 39.0	0.993	1.993	5.8	17.8	8 29	23 17.55	- 8 7.8	2.053	3.048	3.8	19.7
9 8	23 10.20	- 10 14.7	0.984	1.990	2.3	17.6	9 8	23 10.25	- 9 39.2	2.040	3.045	1.3	19.6
9 18	23 2.96	- 11 42.5	0.999	1.989	7.0	17.9	9 18	23 2.83	- 11 6.6	2.056	3.042	4.4	19.8
9 28	22 57.01	- 12 51.2	1.036	1.989	12.3	18.2	9 28	22 56.11	- 12 23.6	2.101	3.038	8.0	20.0
10 8	22 53.47	- 13 34.0	1.093	1.991	17.1	18.5	10 8	22 50.78	- 13 25.5	2.171	3.034	11.3	20.2
10 18	22 52.93	- 13 49.2	1.167	1.994	21.0	18.8	10 18	22 47.31	- 14 9.8	2.264	3.030	14.0	20.4
402774	2007 <i>BK</i> ₈₁		9 8.8 101°16	2°7/5.1	18								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
374922	2006 YY ₁		9 8.8 289°36	1.6/ 7.6	18		152363	2005 US ₁₄₁		9 8.8 169°49	4.9/ 2.9	18	
8 9	23 32.55	- 6 45.0	1.441	2.347	14.2	21.3	8 9	23 30.92	-20 15.1	2.393	3.295	9.5	20.2
8 19	23 27.23	- 7 27.1	1.366	2.329	10.0	21.0	8 19	23 25.23	-21 14.9	2.344	3.297	7.0	20.1
8 29	23 19.57	- 8 20.0	1.314	2.311	5.3	20.6	8 29	23 18.14	-22 10.8	2.320	3.299	5.2	19.9
9 8	23 10.42	- 9 16.9	1.287	2.294	1.6	20.4	9 8	23 10.31	-22 56.9	2.325	3.300	5.2	20.0
9 18	23 0.92	-10 9.8	1.286	2.276	5.8	20.6	9 18	23 2.46	-23 28.7	2.356	3.301	7.0	20.1
9 28	22 52.41	-10 50.9	1.310	2.258	10.8	20.8	9 28	22 55.39	-23 43.4	2.415	3.302	9.4	20.2
10 8	22 46.01	-11 15.0	1.356	2.241	15.3	21.1	10 8	22 49.72	-23 40.2	2.497	3.303	11.8	20.4
10 18	22 42.44	-11 19.7	1.421	2.223	19.1	21.3	10 18	22 45.88	-23 20.2	2.598	3.304	13.8	20.6
479663	2014 DZ ₆₈		9 8.8 268°58	6.5/ 4.2	18		438589	2007 VL ₃₄		9 8.8 85°37	1.9/ 10.7	18	
8 9	23 40.98	-23 24.6	1.816	2.711	12.3	20.6	8 9	23 30.54	+ 1 57.3	1.866	2.739	13.1	21.7
8 19	23 32.64	-23 46.4	1.758	2.705	9.4	20.4	8 19	23 25.23	+ 1 36.6	1.801	2.742	9.6	21.5
8 29	23 22.18	-23 58.7	1.725	2.699	7.0	20.3	8 29	23 18.25	+ 1 1.3	1.759	2.745	5.7	21.3
9 8	23 10.60	-23 54.9	1.718	2.693	6.7	20.2	9 8	23 10.32	+ 0 15.2	1.744	2.748	2.2	21.1
9 18	22 59.07	-23 31.0	1.738	2.687	8.8	20.3	9 18	23 2.31	- 0 36.8	1.756	2.751	3.7	21.2
9 28	22 48.81	-22 45.8	1.785	2.681	11.8	20.5	9 28	22 55.14	- 1 28.4	1.795	2.754	7.5	21.4
10 8	22 40.74	-21 41.5	1.855	2.675	14.7	20.7	10 8	22 49.61	- 2 13.9	1.860	2.756	11.2	21.6
10 18	22 35.38	-20 21.7	1.946	2.669	17.3	20.9	10 18	22 46.21	- 2 49.2	1.946	2.759	14.3	21.9
114085	2002 VW ₃₅		9 8.8 323°00	2.3/ 7.1	18		23395	5018 T ₋₃		9 8.8 255°81	8.6/ 31.4	18	
8 9	23 30.58	- 7 46.5	1.268	2.184	15.0	19.3	8 9	23 35.75	-28 18.1	1.863	2.759	12.0	18.4
8 19	23 25.96	- 8 36.8	1.204	2.172	10.5	19.1	8 19	23 29.06	-29 27.9	1.814	2.751	9.8	18.2
8 29	23 18.91	- 9 37.8	1.162	2.160	5.6	18.7	8 29	23 20.33	-30 25.8	1.790	2.743	8.6	18.1
9 8	23 10.36	-10 41.3	1.143	2.148	2.4	18.5	9 8	23 10.48	-31 3.6	1.790	2.735	9.1	18.2
9 18	23 1.56	-11 37.8	1.149	2.137	6.6	18.7	9 18	23 0.60	-31 15.8	1.815	2.726	10.9	18.3
9 28	22 53.90	-12 19.1	1.178	2.127	11.7	19.0	9 28	22 51.85	-31 0.2	1.864	2.717	13.4	18.4
10 8	22 48.55	-12 39.9	1.229	2.118	16.3	19.3	10 8	22 45.14	-30 18.7	1.933	2.708	15.8	18.6
10 18	22 46.15	-12 38.6	1.298	2.109	20.1	19.5	10 18	22 40.99	-29 15.1	2.020	2.700	17.9	18.7
425580	2010 TK ₉₉		9 8.8 291°30	2.0/ 7.4	18		222209	2000 EL ₄₉		9 8.8 237°91	4.4/ 3.4	18	
8 9	23 33.88	- 7 43.3	1.318	2.228	15.0	21.3	8 9	23 32.31	-20 55.9	2.756	3.651	8.6	20.8
8 19	23 28.27	- 8 20.7	1.251	2.216	10.6	21.0	8 19	23 26.12	-21 35.1	2.689	3.639	6.4	20.6
8 29	23 20.14	- 9 7.8	1.206	2.203	5.6	20.7	8 29	23 18.61	-22 10.3	2.650	3.627	4.7	20.5
9 8	23 10.46	- 9 57.1	1.185	2.191	2.0	20.4	9 8	23 10.35	-22 36.9	2.638	3.614	4.7	20.5
9 18	23 0.50	-10 40.4	1.190	2.179	6.2	20.7	9 18	23 2.03	-22 51.1	2.656	3.601	6.3	20.6
9 28	22 51.70	-11 10.4	1.219	2.167	11.4	20.9	9 28	22 54.35	-22 50.7	2.700	3.588	8.6	20.7
10 8	22 45.25	-11 22.4	1.269	2.156	16.0	21.2	10 8	22 47.93	-22 35.0	2.770	3.574	10.8	20.9
10 18	22 41.83	-11 14.9	1.338	2.144	19.9	21.4	10 18	22 43.20	-22 5.0	2.860	3.560	12.8	21.0
47204	1999 TO ₂₂₁		9 8.8 69°76	2.0/ 7.1	18		9227	Ashida		9 8.8 161°66	0.3/ 9.2	18	
8 9	23 32.50	- 5 34.3	1.278	2.188	15.4	18.3	8 9	23 29.89	- 2 46.1	2.309	3.190	10.6	18.0
8 19	23 26.90	- 6 58.5	1.245	2.210	10.6	18.1	8 19	23 24.52	- 3 9.6	2.243	3.192	7.5	17.8
8 29	23 19.16	- 8 33.5	1.234	2.231	5.4	17.8	8 29	23 17.79	- 3 41.7	2.201	3.193	4.1	17.6
9 8	23 10.37	-10 8.9	1.247	2.253	2.0	17.7	9 8	23 10.29	- 4 18.8	2.187	3.194	0.5	17.3
9 18	23 1.77	-11 34.0	1.287	2.275	6.1	18.0	9 18	23 2.73	- 4 56.7	2.202	3.195	3.3	17.6
9 28	22 54.60	-12 40.6	1.351	2.297	10.8	18.3	9 28	22 55.86	- 5 31.0	2.245	3.196	6.7	17.8
10 8	22 49.72	-13 24.2	1.438	2.318	14.9	18.6	10 8	22 50.31	- 5 58.1	2.314	3.197	9.9	18.0
10 18	22 47.56	-13 44.4	1.544	2.340	18.1	18.9	10 18	22 46.54	- 6 15.5	2.407	3.198	12.5	18.2
452171	2015 RV ₇₅		9 8.8 269°35	0.3/ 9.1	17		363417	2003 QB ₁₀₁		9 8.8 25°49	0.4/ 8.3	18	
8 9	23 29.47	- 2 21.8	2.471	3.349	10.1	22.5	8 9	23 25.83	- 1 56.4	1.959	2.851	11.7	19.6
8 19	23 24.32	- 2 54.6	2.377	3.325	7.2	22.3	8 19	23 21.86	- 3 20.0	1.900	2.855	8.2	19.4
8 29	23 17.75	- 3 37.0	2.309	3.301	4.0	22.1	8 29	23 16.43	- 4 56.2	1.866	2.861	4.3	19.2
9 8	23 10.28	- 4 25.5	2.269	3.276	0.5	21.8	9 8	23 10.19	- 6 38.4	1.859	2.866	0.4	18.9
9 18	23 2.57	- 5 15.7	2.257	3.251	3.2	21.9	9 18	23 3.89	- 8 18.6	1.880	2.872	4.0	19.2
9 28	22 55.37	- 6 3.1	2.275	3.225	6.8	22.1	9 28	22 58.35	- 9 49.4	1.930	2.878	7.9	19.5
10 8	22 49.36	- 6 43.2	2.319	3.199	10.0	22.3	10 8	22 54.24	-11 4.8	2.005	2.885	11.3	19.7
10 18	22 45.04	- 7 12.9	2.387	3.172	12.8	22.5	10 18	22 52.00	-12 1.7	2.102	2.892	14.2	19.9
442955	2013 CF ₁₁₆		9 8.8 342°70	1.0/ 8.1	18		224069	2005 NN ₄₆		9 8.8 345°01	1.5/ 7.6	18	
8 9	23 33.93	- 7 40.7	1.789	2.685	12.4	20.1	8 9	23 28.11	- 5 31.4	1.134	2.054	16.0	19.9
8 19	23 27.68	- 7 44.7	1.724	2.682	8.7	19.9	8 19	23 24.34	- 6 23.8	1.076	2.045	11.2	19.6
8 29	23 19.58	- 7 54.1	1.683	2.679	4.6	19.7	8 29	23 18.08	- 7 30.8	1.038	2.037	5.9	19.3
9 8	23 10.42	- 8 4.6	1.669	2.676	1.0	19.4	9 8	23 10.32	- 8 43.7	1.024	2.030	1.6	19.0
9 18	23 1.18	- 8 12.1	1.683	2.674	4.5	19.7	9 18	23 2.36	- 9 52.1	1.032	2.024	6.3	19.3
9 28	22 52.90	- 8 12.7	1.723	2.671	8.7	19.9	9 28	22 55.63	-10 45.9	1.064	2.019	11.8	19.6
10 8	22 46.43	- 8 3.7	1.788	2.670	12.4	20.1	10 8	22 51.31	-11 18.7	1.115	2.016	16.6	19.8
10 18	22 42.31	- 7 44.1	1.875	2.668	15.5	20.3	10 18	22 50.01	-11 28.0	1.185	2.013	20.6	20.1
403718	2010 WU ₇		9 8.8 276°60	0.5/ 8.3	18		118220	1996 HA ₂₁		9 8.8 187°53	0.5/ 9.3	18	
8 9	23 31.59	- 6 7.4	2.201	3.090	10.7	20.9	8 9	23 32.39	- 1 21.1	1.915	2.795	12.5	20.7
8 19	23 25.84	- 6 22.0	2.125	3.080	7.6	20.7	8 19	23 26.53	- 2 1.9	1.846	2.795	8.9	20.5
8 29	23 18.55	- 6 42.8	2.075	3.069	4.0	20.5	8 29	23 18.96	- 2 55.1	1.802	2.794	4.9	20.2
9 8	23 10.34	- 7 6.1	2.051	3.059	0.5	20.2	9 8	23 10.39	- 3 55.9	1.786	2.793	0.7	19.9
9 18	23 2.00	- 7 27.9	2.057	3.048	3.8	20.4	9 18	23 1.70	- 4 58.2	1.797	2.791	3.8	20.2
9 28	22 54.35	- 7 44.3	2.090	3.037	7.4	20.7	9 28	22 53.86	- 5 55.6	1.836	2.788	7.9	20.4
10 8	22 48.12	- 7 52.4	2.150	3.027	10.8	20.8	10 8	22 47.65	- 6 42.9	1.901	2.785	11.6	20.6
10 18	22 43.82	- 7 50.2	2.231	3.016	13.6	21.0	10 18	22 43.62	- 7 16.6	1.988	2.782	14.7	20.8
179705	2002 RL ₄₂		9 8.8 266°89	1.4/ 7.4	18		49596	1999 FT ₄		9 8.8 321°19	1.1/ 9.6	18	
8 9	23 30.16	- 6 43.6											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
270987	2002 <i>XW</i> ₆		9 8.8 232°68	5°1/ 3.5 18			410622	2008 <i>QF</i>		9 8.8 7°33	4°7/13.8 17		
8 9	23 33.10	-16 37.9	1.882	2.789	11.4	20.5	8 9	22 44.14	+ 4 54.2	0.314	1.296	23.1	20.6
8 19	23 27.19	-18 1.1	1.817	2.777	8.2	20.3	8 19	22 54.63	+ 4 52.0	0.301	1.294	18.0	20.4
8 29	23 19.38	-19 24.7	1.778	2.765	5.6	20.1	8 29	23 2.73	+ 3 56.6	0.297	1.299	12.0	20.2
9 8	23 10.43	-20 40.2	1.766	2.752	5.4	20.1	9 8	23 9.18	+ 2 22.5	0.305	1.310	6.2	20.0
9 18	23 1.29	-21 40.1	1.782	2.739	8.0	20.2	9 18	23 14.90	+ 0 32.5	0.325	1.327	5.5	20.1
9 28	22 53.01	-22 19.0	1.823	2.725	11.3	20.4	9 28	23 21.08	- 1 8.1	0.357	1.351	10.8	20.6
10 8	22 46.49	-22 34.8	1.887	2.710	14.4	20.6	10 8	23 28.56	- 2 20.6	0.403	1.379	16.5	21.1
10 18	22 42.31	-22 28.4	1.970	2.695	17.0	20.7	10 18	23 37.65	- 2 57.7	0.462	1.412	21.4	21.6
160533	1996 <i>TT</i> ₅₆		9 8.8 348°33	1°6/11.9 16			120307	2004 <i>KX</i> ₉		9 8.8 71°89	3°9/12.2 18		
8 9	23 23.32	+ 4 18.3	4.205	5.048	7.0	19.6	8 9	23 32.83	+ 6 15.1	1.487	2.353	16.2	19.7
8 19	23 19.50	+ 4 8.6	4.126	5.048	5.3	19.4	8 19	23 27.10	+ 6 8.6	1.434	2.366	12.3	19.5
8 29	23 14.98	+ 3 51.7	4.074	5.047	3.4	19.3	8 29	23 19.33	+ 5 40.8	1.402	2.379	8.1	19.3
9 8	23 10.08	+ 3 28.8	4.049	5.046	1.8	19.2	9 8	23 10.45	+ 4 54.9	1.395	2.392	4.5	19.1
9 18	23 5.13	+ 3 1.8	4.055	5.046	2.1	19.2	9 18	23 1.58	+ 3 56.8	1.413	2.405	4.9	19.2
9 28	23 0.50	+ 2 32.9	4.089	5.045	3.8	19.3	9 28	22 53.87	+ 2 54.4	1.456	2.418	8.6	19.4
10 8	22 56.52	+ 2 4.5	4.153	5.045	5.6	19.5	10 8	22 48.23	+ 1 55.8	1.524	2.431	12.5	19.7
10 18	22 53.46	+ 1 38.7	4.242	5.044	7.3	19.6	10 18	22 45.17	+ 1 7.0	1.614	2.444	15.9	19.9
344995	2005 <i>AP</i> ₄₁		9 8.8 241°54	2°1/ 6.4 18			283249	2011 <i>ET</i> ₂₈		9 8.8 220°40	1°2/ 7.3 18		
8 9	23 31.37	- 9 11.8	2.188	3.084	10.5	21.9	8 9	23 27.37	- 7 29.9	2.687	3.580	8.9	20.7
8 19	23 25.77	-10 11.5	2.109	3.068	7.3	21.7	8 19	23 22.65	- 8 13.2	2.620	3.577	6.2	20.5
8 29	23 18.56	-11 17.3	2.056	3.051	3.9	21.4	8 29	23 16.78	- 9 1.4	2.579	3.574	3.2	20.3
9 8	23 10.37	-12 23.5	2.031	3.034	2.2	21.3	9 8	23 10.26	- 9 50.6	2.566	3.571	1.2	20.2
9 18	23 1.97	-13 23.9	2.035	3.016	5.0	21.5	9 18	23 3.67	-10 36.5	2.582	3.568	3.6	20.4
9 28	22 54.22	-14 13.1	2.067	2.997	8.6	21.6	9 28	22 57.63	-11 15.3	2.627	3.565	6.6	20.6
10 8	22 47.89	-14 47.4	2.124	2.978	11.8	21.8	10 8	22 52.70	-11 44.1	2.698	3.562	9.3	20.7
10 18	22 43.53	-15 5.2	2.202	2.958	14.6	22.0	10 18	22 49.27	-12 1.2	2.792	3.559	11.6	20.9
98414	2000 <i>UE</i> ₁₈		9 8.8 221°56	2°8/ 6.3 18			321882	2010 <i>SP</i> ₂₆		9 8.8 33°53	4°0/12.1 17		
8 9	23 33.73	- 9 24.7	1.628	2.532	13.0	20.1	8 9	23 29.24	+ 6 43.0	1.107	1.993	19.1	20.0
8 19	23 27.78	-10 32.1	1.563	2.525	9.1	19.9	8 19	23 25.03	+ 6 10.6	1.058	2.002	14.4	19.7
8 29	23 19.75	-11 47.0	1.521	2.517	4.9	19.6	8 29	23 18.39	+ 5 8.9	1.029	2.011	9.3	19.5
9 8	23 10.47	-13 1.3	1.507	2.509	3.0	19.5	9 8	23 10.39	+ 3 43.6	1.021	2.021	4.7	19.3
9 18	23 1.00	-14 6.7	1.519	2.500	6.3	19.7	9 18	23 2.37	+ 2 4.7	1.036	2.032	5.3	19.4
9 28	22 52.53	-14 56.1	1.558	2.491	10.6	19.9	9 28	22 55.73	+ 0 25.1	1.076	2.044	10.0	19.7
10 8	22 46.01	-15 25.6	1.619	2.481	14.5	20.1	10 8	22 51.55	- 1 3.4	1.137	2.056	14.7	20.0
10 18	22 42.06	-15 34.2	1.700	2.471	17.7	20.3	10 18	22 50.34	- 2 13.0	1.217	2.069	18.8	20.3
50225	2000 <i>AB</i> ₂₄₀		9 8.8 248°64	1°7/ 7.1 18			379911	2012 <i>JH</i> ₅₈		9 8.8 3°99	4°2/ 5.8 18		
8 9	23 31.76	- 6 8.6	1.789	2.686	12.4	19.5	8 9	23 33.00	-12 15.3	1.231	2.152	15.0	20.4
8 19	23 26.34	- 7 20.1	1.711	2.670	8.7	19.3	8 19	23 27.60	-13 9.3	1.182	2.151	10.5	20.1
8 29	23 18.99	- 8 42.9	1.657	2.653	4.5	19.0	8 29	23 19.74	-14 7.1	1.155	2.151	6.0	19.8
9 8	23 10.42	-10 10.0	1.630	2.635	1.7	18.8	9 8	23 10.50	-14 59.2	1.151	2.152	4.4	19.8
9 18	23 1.55	-11 33.1	1.631	2.617	5.3	19.0	9 18	23 1.22	-15 36.9	1.172	2.153	7.9	20.0
9 28	22 53.47	-12 44.4	1.659	2.598	9.6	19.2	9 28	22 53.33	-15 54.0	1.216	2.154	12.5	20.2
10 8	22 47.09	-13 38.3	1.711	2.579	13.6	19.4	10 8	22 47.89	-15 48.4	1.281	2.156	16.6	20.5
10 18	22 43.06	-14 12.1	1.784	2.559	16.9	19.6	10 18	22 45.47	-15 21.2	1.363	2.159	20.1	20.7
128075	2003 <i>OW</i> ₁₄		9 8.8 75°53	5°1/15.2 18			136191	2003 <i>UU</i> ₂₄₇		9 8.8 335°82	0°9/ 9.5 18		
8 9	23 28.00	+13 34.2	2.315	3.125	13.0	19.9	8 9	23 27.55	+ 0 31.0	1.147	2.053	17.0	19.3
8 19	23 23.28	+13 29.4	2.239	3.127	10.5	19.7	8 19	23 23.97	- 0 24.3	1.084	2.044	12.3	19.0
8 29	23 17.17	+13 5.1	2.186	3.129	7.9	19.5	8 29	23 17.94	- 1 43.4	1.040	2.035	6.9	18.6
9 8	23 10.27	+12 22.5	2.157	3.131	5.7	19.4	9 8	23 10.37	- 3 18.6	1.020	2.027	1.3	18.3
9 18	23 3.25	+11 24.7	2.156	3.133	5.2	19.4	9 18	23 2.54	- 4 58.8	1.023	2.020	5.2	18.5
9 28	22 56.89	+10 16.9	2.182	3.134	6.8	19.5	9 28	22 55.88	- 6 31.5	1.050	2.013	10.9	18.8
10 8	22 51.83	+ 9 5.3	2.235	3.136	9.3	19.6	10 8	22 51.57	- 7 46.2	1.098	2.007	16.0	19.1
10 18	22 48.54	+ 7 56.1	2.312	3.138	11.9	19.8	10 18	22 50.27	- 8 37.0	1.164	2.003	20.3	19.3
191070	2002 <i>CC</i> ₁₅₁		9 8.8 305°51	1°8/10.0 18			490411	2009 <i>RP</i> ₇₃		9 8.8 287°37	4°4/14.8 18		
8 9	23 33.77	- 0 48.2	1.478	2.367	15.0	20.3	8 9	23 27.32	+13 35.6	2.486	3.293	12.3	21.6
8 19	23 28.13	- 0 38.3	1.396	2.346	11.0	20.0	8 19	23 22.90	+12 54.9	2.373	3.262	10.0	21.4
8 29	23 20.11	- 0 41.7	1.335	2.325	6.5	19.7	8 29	23 17.06	+11 52.4	2.283	3.231	7.4	21.2
9 8	23 10.51	- 0 55.8	1.299	2.304	2.1	19.3	9 8	23 10.30	+10 29.7	2.219	3.199	5.0	21.0
9 18	23 0.47	- 1 16.4	1.288	2.284	4.6	19.4	9 18	23 3.24	+ 8 50.2	2.184	3.167	4.6	20.9
9 28	22 51.34	- 1 37.5	1.304	2.264	9.6	19.7	9 28	22 56.64	+ 7 0.2	2.179	3.135	6.6	21.0
10 8	22 44.27	- 1 53.3	1.342	2.244	14.2	19.9	10 8	22 51.18	+ 5 7.2	2.201	3.102	9.5	21.1
10 18	22 40.04	- 1 59.5	1.400	2.225	18.2	20.1	10 18	22 47.41	+ 3 18.8	2.249	3.069	12.4	21.2
516794	2010 <i>GW</i> ₃₄		9 8.8 75°37	0°5/ 8.1 18			343358	2010 <i>CE</i> ₇₉		9 8.8 70°54	0°4/ 9.2 16		
8 9	23 26.59	- 5 35.4	2.934	3.820	8.4	22.0	8 9	23 32.23	- 2 12.0	1.651	2.541	13.6	21.3
8 19	23 21.95	- 6 11.6	2.884	3.837	5.8	21.9	8 19	23 26.47	- 2 41.8	1.603	2.556	9.7	21.1
8 29	23 16.33	- 6 52.7	2.859	3.854	3.0	21.7	8 29	23 18.92	- 3 23.4	1.577	2.570	5.2	20.9
9 8	23 10.21	- 7 35.4	2.864	3.871	0.5	21.5	9 8	23 10.44	- 4 11.6	1.578	2.585	0.7	20.6
9 18	23 4.11	- 8 16.1	2.898	3.888	3.0	21.8	9 18	23 2.01	- 5 0.2	1.606	2.600	4.1	20.9
9 28	22 58.58	- 8 51.5	2.961	3.904	5.7	22.0	9 28	22 54.66	- 5 43.0	1.660	2.615	8.4	21.2
10 8	22 54.06	- 9 19.0	3.050	3.921	8.1	22.2	10 8	22 49.18	- 6 15.2	1.739	2.630	12.1	21.4
10 18	22 50.88	- 9 37.0	3.164	3.937	10.2	22.3	10 18	22 46.03	- 6 34.0	1.839	2.645	15.3	21.7
349906	2009 <i>FD</i> ₄₈		9 8.8 59°64	3°0/ 5.9 18			21599	1998 <i>WA</i> ₁₅		9 8.8 292°91			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
477072	2009 <i>BU</i> ₆₉		9 8.8 314°62	4°9/ 4.6 18			254557	2005 <i>EB</i> ₂₈₂		9 8.8 113°54	1°9/ 7.2 17		
8 9	23 29.58	-13 23.4	1.410	2.331	13.5	20.1	8 9	23 34.60	- 7 17.3	1.562	2.463	13.6	21.2
8 19	23 25.30	-14 39.2	1.333	2.302	9.6	19.8	8 19	23 28.22	- 8 15.7	1.517	2.477	9.4	21.0
8 29	23 18.65	-16 1.3	1.279	2.274	5.9	19.5	8 29	23 19.89	- 9 21.8	1.495	2.492	4.9	20.8
9 8	23 10.43	-17 19.8	1.250	2.246	5.2	19.4	9 8	23 10.54	-10 28.0	1.500	2.506	2.0	20.6
9 18	23 1.78	-18 24.5	1.245	2.218	8.6	19.5	9 18	23 1.27	-11 26.6	1.532	2.519	5.5	20.9
9 28	22 54.05	-19 7.0	1.264	2.191	13.1	19.7	9 28	22 53.20	-12 11.3	1.591	2.532	9.8	21.2
10 8	22 48.41	-19 23.0	1.303	2.165	17.3	19.9	10 8	22 47.20	-12 38.5	1.672	2.544	13.6	21.4
10 18	22 45.62	-19 12.0	1.359	2.140	20.9	20.0	10 18	22 43.72	-12 47.3	1.774	2.556	16.7	21.7
319407	2006 <i>HJ</i> ₈		9 8.8 335°62	1°3/10.5 18			303121	2004 <i>CQ</i> ₄₃		9 8.8 30°94	0°3/ 9.1 18		
8 9	23 27.08	+ 1 39.2	2.277	3.148	11.1	20.5	8 9	23 31.03	- 3 0.7	1.740	2.632	13.0	20.5
8 19	23 22.63	+ 1 3.2	2.205	3.146	8.1	20.3	8 19	23 25.67	- 3 23.5	1.681	2.635	9.2	20.2
8 29	23 16.84	+ 0 14.6	2.158	3.144	4.8	20.1	8 29	23 18.54	- 3 57.0	1.646	2.639	5.0	20.0
9 8	23 10.28	- 0 43.0	2.138	3.142	1.6	19.8	9 8	23 10.44	- 4 36.6	1.636	2.644	0.5	19.7
9 18	23 3.63	- 1 44.9	2.146	3.141	3.1	20.0	9 18	23 2.28	- 5 16.8	1.654	2.648	4.0	20.0
9 28	22 57.61	- 2 45.5	2.182	3.139	6.5	20.2	9 28	22 55.07	- 5 51.9	1.698	2.653	8.2	20.2
10 8	22 52.86	- 3 39.8	2.245	3.138	9.7	20.4	10 8	22 49.60	- 6 17.5	1.767	2.658	12.0	20.5
10 18	22 49.82	- 4 24.1	2.331	3.137	12.4	20.6	10 18	22 46.38	- 6 30.7	1.857	2.663	15.1	20.7
451399	2011 <i>FA</i> ₁₂		9 8.8 299°02	6°3/16.5 17			445498	2010 <i>VR</i> ₂₀₄		9 8.8 10°45	3°4/12.5 15		
8 9	23 29.06	+18 14.4	2.446	3.222	13.4	22.1	8 9	23 28.20	+ 6 49.7	1.964	2.819	13.3	21.0
8 19	23 24.29	+17 57.4	2.318	3.177	11.3	21.8	8 19	23 23.59	+ 6 32.6	1.894	2.819	10.2	20.8
8 29	23 17.90	+17 16.6	2.210	3.131	9.0	21.6	8 29	23 17.42	+ 5 57.6	1.847	2.821	6.8	20.6
9 8	23 10.38	+16 11.4	2.128	3.085	7.0	21.4	9 8	23 10.35	+ 5 7.5	1.826	2.822	3.9	20.4
9 18	23 2.40	+14 43.4	2.072	3.039	6.3	21.3	9 18	23 3.17	+ 4 6.9	1.832	2.823	4.1	20.4
9 28	22 54.78	+12 57.4	2.045	2.991	7.7	21.3	9 28	22 56.75	+ 3 1.9	1.864	2.825	7.1	20.6
10 8	22 48.34	+11 1.1	2.046	2.943	10.3	21.4	10 8	22 51.82	+ 1 59.2	1.923	2.827	10.5	20.8
10 18	22 43.72	+ 9 2.9	2.072	2.895	13.2	21.5	10 18	22 48.88	+ 1 4.3	2.004	2.829	13.5	21.0
258493	2002 <i>AE</i> ₅₃		9 8.8 260°40	3°9/12.9 18			482337	2011 <i>UR</i> ₃₉₀		9 8.8 310°43	5°6/13.9 17		
8 9	23 30.09	+ 7 48.4	2.155	2.998	12.7	20.5	8 9	23 28.06	+11 3.8	1.700	2.543	15.6	21.9
8 19	23 24.85	+ 7 50.0	2.078	2.994	9.9	20.3	8 19	23 23.99	+10 59.5	1.600	2.512	12.6	21.7
8 29	23 18.07	+ 7 35.3	2.025	2.991	6.8	20.1	8 29	23 17.90	+10 30.6	1.520	2.481	9.2	21.4
9 8	23 10.38	+ 7 5.8	1.997	2.987	4.3	20.0	9 8	23 10.41	+ 9 37.3	1.463	2.449	6.3	21.2
9 18	23 2.54	+ 6 24.6	1.996	2.984	4.3	20.0	9 18	23 2.43	+ 8 22.8	1.432	2.419	5.9	21.1
9 28	22 55.39	+ 5 36.8	2.024	2.981	6.9	20.1	9 28	22 55.07	+ 6 54.2	1.427	2.388	8.8	21.2
10 8	22 49.65	+ 4 47.9	2.077	2.977	10.0	20.3	10 8	22 49.38	+ 5 21.3	1.446	2.358	12.7	21.3
10 18	22 45.83	+ 4 3.3	2.154	2.974	12.8	20.5	10 18	22 46.12	+ 3 53.3	1.486	2.328	16.5	21.5
42132	2001 <i>BP</i> ₂₄		9 8.8 71°12	3°8/ 4.3 18			203229	2001 <i>FU</i> ₁₅₁		9 8.9 158°56	6°6/ 1.5 18		
8 9	23 29.04	-14 30.0	2.100	3.008	10.3	18.4	8 9	23 33.06	-23 21.7	2.059	2.961	10.8	20.1
8 19	23 23.98	-15 45.4	2.061	3.024	7.2	18.2	8 19	23 26.95	-24 41.4	2.017	2.965	8.3	20.0
8 29	23 17.52	-17 0.7	2.049	3.040	4.5	18.1	8 29	23 19.17	-25 53.9	2.001	2.969	6.7	19.9
9 8	23 10.33	-18 9.1	2.064	3.056	4.1	18.1	9 8	23 10.50	-26 51.8	2.011	2.973	7.0	19.9
9 18	23 3.20	-19 4.9	2.107	3.072	6.3	18.2	9 18	23 1.84	-27 29.5	2.048	2.976	8.9	20.0
9 28	22 56.92	-19 43.9	2.176	3.088	9.2	18.5	9 28	22 54.13	-27 44.2	2.110	2.979	11.4	20.2
10 8	22 52.12	-20 4.4	2.269	3.103	11.9	18.7	10 8	22 48.14	-27 36.1	2.194	2.982	13.8	20.4
10 18	22 49.20	-20 6.8	2.382	3.119	14.1	18.9	10 18	22 44.31	-27 7.4	2.296	2.984	15.8	20.5
22826	1999 <i>RR</i> ₄₂		9 8.8 338°18	0°3/ 8.5 18			45387	2000 <i>AW</i> ₁₂₅		9 8.9 358°57	2°3/ 6.5 18		
8 9	23 26.66	- 2 34.0	1.905	2.798	11.9	17.9	8 9	23 28.99	- 7 54.3	1.706	2.613	12.3	17.6
8 19	23 22.56	- 3 36.2	1.837	2.793	8.4	17.6	8 19	23 24.32	- 9 8.2	1.648	2.612	8.5	17.4
8 29	23 16.88	- 4 50.8	1.793	2.788	4.4	17.4	8 29	23 17.87	-10 30.3	1.615	2.612	4.5	17.1
9 8	23 10.29	- 6 11.9	1.776	2.784	0.4	17.1	9 8	23 10.41	-11 52.8	1.608	2.611	2.4	17.0
9 18	23 3.58	- 7 32.7	1.787	2.779	4.0	17.3	9 18	23 2.86	-13 7.9	1.628	2.611	5.7	17.2
9 28	22 57.61	- 8 45.8	1.825	2.776	8.1	17.6	9 28	22 56.22	-14 8.3	1.674	2.612	9.7	17.4
10 8	22 53.12	- 9 45.7	1.887	2.772	11.7	17.8	10 8	22 51.31	-14 49.9	1.743	2.612	13.3	17.7
10 18	22 50.61	-10 29.0	1.972	2.769	14.7	18.0	10 18	22 48.64	-15 11.0	1.833	2.612	16.3	17.9
157034	2003 <i>SX</i> ₁₂		9 8.8 346°74	0°6/ 9.5 18			223940	2004 <i>XX</i> ₂₁		9 8.9 258°15	1°6/10.7 18		
8 9	23 27.60	- 1 2.9	2.165	3.047	11.2	19.8	8 9	23 28.91	+ 1 44.3	2.553	3.416	10.3	20.6
8 19	23 23.04	- 1 41.9	2.097	3.045	8.0	19.6	8 19	23 23.88	+ 1 25.8	2.465	3.401	7.6	20.4
8 29	23 17.08	- 2 31.9	2.053	3.044	4.4	19.4	8 29	23 17.54	+ 0 56.3	2.403	3.387	4.6	20.2
9 8	23 10.32	- 3 29.0	2.036	3.043	0.8	19.1	9 8	23 10.39	+ 0 18.3	2.369	3.372	1.8	19.9
9 18	23 3.46	- 4 27.8	2.047	3.042	3.3	19.3	9 18	23 3.08	+ 0 24.8	2.363	3.357	3.0	20.0
9 28	22 57.29	- 5 23.0	2.087	3.041	7.0	19.5	9 28	22 56.29	- 1 8.5	2.386	3.342	6.1	20.2
10 8	22 52.46	- 6 9.7	2.152	3.040	10.3	19.7	10 8	22 50.65	- 1 48.7	2.436	3.327	9.1	20.4
10 18	22 49.43	- 6 44.7	2.240	3.039	13.1	19.9	10 18	22 46.62	- 2 21.8	2.510	3.311	11.8	20.5
436142	2009 <i>UD</i> ₇₆		9 8.8 302°75	1°9/12.8 16			91902	1999 <i>VU</i> ₁₇		9 8.9 61°24	3°5/12.9 18		
8 9	23 22.22	+ 6 44.7	4.398	5.229	6.9	21.3	8 9	23 28.10	+ 8 10.8	2.117	2.962	12.9	19.2
8 19	23 18.75	+ 6 26.0	4.316	5.227	5.3	21.2	8 19	23 23.42	+ 7 49.2	2.050	2.968	9.9	19.1
8 29	23 14.62	+ 5 59.1	4.259	5.225	3.6	21.1	8 29	23 17.30	+ 7 9.9	2.006	2.974	6.7	18.9
9 8	23 10.12	+ 5 25.4	4.230	5.222	2.1	21.0	9 8	23 10.37	+ 6 15.5	1.987	2.980	4.0	18.7
9 18	23 5.57	+ 4 46.8	4.231	5.220	2.2	21.0	9 18	23 3.37	+ 5 10.5	1.996	2.986	4.0	18.7
9 28	23 1.33	+ 4 5.7	4.262	5.218	3.7	21.1	9 28	22 57.11	+ 4 0.9	2.033	2.993	6.7	18.9
10 8	22 57.69	+ 3 24.6	4.321	5.216	5.4	21.2	10 8	22 52.24	+ 2 53.1	2.096	2.999	9.8	19.1
10 18	22 54.91	+ 2 46.0	4.407	5.213	7.0	21.3	10 18	22 49.22	+ 1 52.5	2.183	3.006	12.6	19.3
312627	2009 <i>TS</i> ₂₆		9 8.8 292°08	1°0/ 6.9 16			359496	2010 <i>OA</i> ₁₁₈		9 8.9 62			

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9 8.9

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Table with multiple columns for celestial objects, including RA, Dec, Delta, r, beta, V. Objects listed include 485237, 356759, 180483, 213421, 350175, 449470, 203888, 486597, 378217, 440408, 450944, 264925, 198236, 382484, 356457, 365663, 181276, and 119904. Each entry includes a date (year and month) and a time (hour, minute, second).

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
175833	1999 TZ ₁₂₀		9 8.9 25°46'	2.7/ 7.4	17		97282	1999 XQ ₁₅₂		9 8.9 232°88'	1°0/ 7.9	18	
8 9	23 34.47	- 9 46.3	1.002	1.926	17.2	19.0	8 9	23 30.40	- 4 57.9	1.867	2.761	12.1	18.7
8 19	23 28.93	-10 6.7	0.965	1.936	12.0	18.8	8 19	23 25.35	- 5 55.9	1.800	2.757	8.4	18.5
8 29	23 20.66	-10 33.2	0.948	1.946	6.4	18.5	8 29	23 18.60	- 7 4.0	1.757	2.753	4.4	18.2
9 8	23 10.98	-10 57.5	0.953	1.958	2.8	18.3	9 8	23 10.85	- 8 16.3	1.742	2.749	1.0	18.0
9 18	23 1.47	-11 11.9	0.980	1.971	7.0	18.6	9 18	23 2.95	- 9 25.8	1.754	2.744	4.5	18.2
9 28	22 53.70	-11 10.9	1.030	1.985	12.3	19.0	9 28	22 55.87	-10 25.8	1.794	2.739	8.6	18.4
10 8	22 48.76	-10 52.2	1.100	1.999	16.9	19.3	10 8	22 50.39	-11 11.4	1.858	2.734	12.2	18.7
10 18	22 47.11	-10 16.4	1.188	2.015	20.7	19.6	10 18	22 47.04	-11 40.1	1.943	2.729	15.3	18.9
513420	2008 TD ₉₀		9 8.9 294°13'	6°5/15.4	18		40005	1998 HA ₉₆		9 8.9 8°42'	5°6/14.8	18	
8 9	23 29.11	+14 16.4	1.703	2.527	16.4	20.9	8 9	23 25.40	+12 50.5	1.341	2.194	18.3	18.1
8 19	23 24.73	+14 9.9	1.618	2.514	13.4	20.7	8 19	23 22.28	+12 6.3	1.278	2.196	14.6	17.9
8 29	23 18.39	+13 36.4	1.553	2.501	10.1	20.5	8 29	23 17.10	+10 48.4	1.233	2.198	10.5	17.6
9 8	23 10.80	+12 36.1	1.511	2.487	7.3	20.3	9 8	23 10.72	+ 9 0.7	1.211	2.201	6.7	17.4
9 18	23 2.90	+11 12.9	1.494	2.474	6.6	20.2	9 18	23 4.19	+ 6 51.9	1.214	2.205	5.9	17.4
9 28	22 55.76	+ 9 34.6	1.503	2.461	8.7	20.3	9 28	22 58.71	+ 4 34.9	1.241	2.209	9.0	17.6
10 8	22 50.36	+ 7 51.3	1.537	2.448	12.1	20.5	10 8	22 55.22	+ 2 23.4	1.293	2.215	13.0	17.8
10 18	22 47.35	+ 6 12.7	1.593	2.436	15.5	20.7	10 18	22 54.28	+ 0 28.3	1.366	2.222	16.8	18.1
512006	2015 KR ₁₆₅		9 8.9 99°16'	9°2/30.7	18		390345	2013 CA ₁₀₅		9 8.9 269°44'	0°4/ 9.7	16	
8 9	23 35.05	-28 50.9	1.743	2.642	12.5	21.1	8 9	23 23.38	- 2 9.3	4.538	5.407	6.0	21.8
8 19	23 28.72	-30 18.8	1.712	2.648	10.4	20.9	8 19	23 19.66	- 2 26.6	4.458	5.401	4.3	21.7
8 29	23 20.36	-31 32.9	1.704	2.654	9.3	20.9	8 29	23 15.29	- 2 48.4	4.406	5.395	2.4	21.5
9 8	23 10.96	-32 24.2	1.721	2.660	9.8	20.9	9 8	23 10.56	- 3 13.1	4.382	5.388	0.5	21.4
9 18	23 1.65	-32 47.4	1.762	2.666	11.6	21.1	9 18	23 5.77	- 3 38.8	4.388	5.382	1.7	21.5
9 28	22 53.58	-32 40.6	1.825	2.671	14.0	21.2	9 28	23 1.27	- 4 3.5	4.424	5.376	3.7	21.6
10 8	22 47.63	-32 6.2	1.909	2.677	16.2	21.4	10 8	22 57.36	- 4 25.3	4.489	5.369	5.5	21.8
10 18	22 44.25	-31 8.7	2.008	2.682	18.2	21.6	10 18	22 54.30	- 4 42.6	4.579	5.363	7.1	21.9
50848	2000 FM ₄₆		9 8.9 293°09'	2°0/ 6.8	18		473377	2015 UA ₅₄		9 8.9 10°94'	5°3/ 3.7	18	
8 9	23 28.73	- 6 49.9	1.785	2.688	12.1	18.6	8 9	23 32.42	-19 47.7	1.987	2.893	10.9	20.8
8 19	23 24.30	- 8 5.3	1.713	2.675	8.4	18.4	8 19	23 26.64	-20 36.0	1.937	2.894	8.0	20.6
8 29	23 18.09	- 9 31.1	1.665	2.662	4.4	18.1	8 29	23 19.21	-21 19.7	1.913	2.895	5.8	20.5
9 8	23 10.78	-10 59.9	1.644	2.649	2.0	17.9	9 8	23 10.90	-21 52.7	1.915	2.896	5.6	20.5
9 18	23 3.26	-12 23.7	1.651	2.636	5.4	18.1	9 18	23 2.59	-22 9.9	1.943	2.897	7.6	20.6
9 28	22 56.51	-13 34.6	1.684	2.623	9.5	18.4	9 28	22 55.22	-22 8.6	1.997	2.899	10.4	20.8
10 8	22 51.37	-14 27.4	1.741	2.611	13.2	18.6	10 8	22 49.53	-21 48.4	2.074	2.901	13.1	21.0
10 18	22 48.44	-14 59.6	1.818	2.598	16.4	18.8	10 18	22 45.98	-21 11.0	2.171	2.903	15.5	21.1
186351	2002 FB ₄		9 8.9 89°32'	5°0/ 3.5	18		521741	2015 RR ₂₇₂		9 8.9 21°07'	3°8/ 5.5	18	
8 9	23 32.76	-20 17.1	2.220	3.122	10.1	19.9	8 9	23 32.61	-15 5.8	1.874	2.781	11.4	20.8
8 19	23 26.65	-21 8.6	2.182	3.136	7.5	19.7	8 19	23 26.81	-15 40.8	1.823	2.784	8.1	20.6
8 29	23 19.11	-21 55.1	2.171	3.150	5.4	19.6	8 29	23 19.31	-16 15.0	1.796	2.787	4.9	20.4
9 8	23 10.86	-22 30.9	2.186	3.164	5.3	19.6	9 8	23 10.91	-16 42.6	1.796	2.791	4.0	20.4
9 18	23 2.70	-22 51.7	2.229	3.177	7.1	19.8	9 18	23 2.52	-16 58.6	1.822	2.795	6.4	20.5
9 28	22 55.45	-22 55.2	2.298	3.191	9.6	20.0	9 28	22 55.10	-16 59.7	1.875	2.800	9.7	20.7
10 8	22 49.76	-22 41.2	2.390	3.205	12.0	20.1	10 8	22 49.41	-16 44.8	1.952	2.805	12.8	20.9
10 18	22 46.01	-22 11.3	2.503	3.218	14.0	20.3	10 18	22 45.91	-16 14.6	2.049	2.810	15.4	21.1
56287	1999 LM ₁₀		9 8.9 36°61'	5°5/ 2.7	18		76205	2000 EV ₅₆		9 8.9 16°47'	2°0/10.7	18	
8 9	23 28.68	-16 58.6	1.763	2.679	11.5	18.4	8 9	23 29.60	+ 1 35.9	1.486	2.373	15.0	18.0
8 19	23 24.16	-18 41.0	1.723	2.686	8.3	18.2	8 19	23 25.03	+ 1 16.3	1.429	2.377	11.0	17.7
8 29	23 17.93	-20 21.8	1.707	2.693	5.9	18.1	8 29	23 18.49	+ 0 39.5	1.393	2.382	6.5	17.5
9 8	23 10.76	-21 51.9	1.718	2.700	6.0	18.1	9 8	23 10.84	- 0 10.1	1.382	2.387	2.4	17.3
9 18	23 3.58	-23 3.3	1.755	2.708	8.4	18.3	9 18	23 3.12	- 1 6.0	1.397	2.393	4.1	17.4
9 28	22 57.34	-23 51.1	1.817	2.716	11.4	18.5	9 28	22 56.43	- 2 0.6	1.437	2.400	8.6	17.7
10 8	22 52.82	-24 13.8	1.901	2.725	14.3	18.7	10 8	22 51.67	- 2 47.0	1.500	2.407	12.7	17.9
10 18	22 50.47	-24 12.7	2.004	2.733	16.7	18.9	10 18	22 49.36	- 3 20.6	1.585	2.415	16.2	18.2
515985	2015 RH ₁₉₉		9 8.9 353°72'	1°0/10.1	18		512080	2015 NW ₇		9 8.9 104°38'	2°2/11.2	18	
8 9	23 26.73	+ 1 35.2	1.848	2.730	12.8	20.8	8 9	23 31.22	+ 3 20.7	1.953	2.818	12.9	21.5
8 19	23 22.76	+ 0 36.8	1.780	2.727	9.3	20.5	8 19	23 25.77	+ 2 55.9	1.893	2.828	9.6	21.3
8 29	23 17.19	- 0 38.0	1.736	2.725	5.3	20.3	8 29	23 18.75	+ 2 15.9	1.857	2.839	5.9	21.1
9 8	23 10.70	- 2 3.8	1.718	2.724	1.4	20.0	9 8	23 10.87	+ 1 24.6	1.847	2.849	2.5	20.9
9 18	23 4.09	- 3 33.5	1.727	2.723	3.6	20.2	9 18	23 2.95	+ 0 26.9	1.864	2.859	3.6	21.0
9 28	22 58.24	- 4 59.1	1.764	2.722	7.7	20.5	9 28	22 55.88	- 0 30.8	1.910	2.869	7.1	21.2
10 8	22 53.90	- 6 13.8	1.825	2.722	11.4	20.7	10 8	22 50.38	- 1 23.0	1.982	2.879	10.6	21.5
10 18	22 51.57	- 7 13.0	1.909	2.722	14.5	20.9	10 18	22 46.92	- 2 5.3	2.076	2.888	13.5	21.7
513873	2013 JT ₄₉		9 8.9 168°28'	0°6/ 8.1	18		184912	2005 UN ₃₈₂		9 8.9 339°38'	0°2/ 8.7	18	
8 9	23 29.35	- 5 18.3	2.697	3.580	9.2	22.5	8 9	23 27.57	- 2 29.2	1.811	2.704	12.4	19.9
8 19	23 24.15	- 6 0.3	2.631	3.583	6.4	22.4	8 19	23 23.40	- 3 27.1	1.743	2.699	8.8	19.7
8 29	23 17.78	- 6 48.5	2.592	3.587	3.3	22.2	8 29	23 17.58	- 4 38.0	1.700	2.694	4.7	19.4
9 8	23 10.75	- 7 38.9	2.582	3.589	0.6	21.9	9 8	23 10.78	- 5 55.8	1.682	2.690	0.4	19.1
9 18	23 3.68	- 8 27.6	2.602	3.592	3.3	22.2	9 18	23 3.84	- 7 13.5	1.693	2.686	4.1	19.4
9 28	22 57.19	- 9 10.3	2.651	3.594	6.3	22.4	9 28	22 57.68	- 8 23.7	1.729	2.682	8.3	19.6
10 8	22 51.82	- 9 44.1	2.726	3.595	9.0	22.6	10 8	22 53.08	- 9 20.5	1.791	2.679	12.0	19.8
10 18	22 47.98	-10 7.0	2.825	3.596	11.4	22.7	10 18	22 50.56	-10 0.5	1.874	2.676	15.2	20.0
173596	2001 DC ₄₈		9 8.9 170°88'	1°9/10.5	18		352163	2007 RO ₁₉		9 8.9 18°72'	2°2/ 7.8	18	
8 9	23 34.20	+ 1 31.0	1.										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
98703	2000 XE ₃₃	9 8.9 144°98	3°9/13.8 18				387356	2012 XT ₂₂	9 8.9 30°01	9°8/ 1.2 18			
8 9	23 31.59	+10 6.7	2.788	3.602	10.9	19.9	8 9	23 34.88	-27 16.0	1.403	2.313	14.2	19.5
8 19	23 25.72	+10 15.3	2.716	3.611	8.6	19.7	8 19	23 28.85	-28 31.2	1.375	2.322	11.5	19.3
8 29	23 18.64	+10 10.0	2.668	3.620	6.2	19.6	8 29	23 20.53	-29 31.4	1.370	2.332	9.9	19.3
9 8	23 10.88	+9 51.8	2.648	3.628	4.3	19.5	9 8	23 11.09	-30 6.8	1.388	2.342	10.2	19.3
9 18	23 3.05	+9 23.0	2.656	3.636	4.1	19.5	9 18	23 1.87	-30 11.9	1.428	2.353	12.3	19.5
9 28	22 55.81	+8 47.0	2.694	3.644	5.8	19.6	9 28	22 54.16	-29 45.5	1.491	2.365	15.0	19.7
10 8	22 49.72	+8 8.1	2.759	3.651	8.1	19.8	10 8	22 48.89	-28 51.1	1.572	2.377	17.6	19.9
10 18	22 45.18	+7 30.4	2.849	3.658	10.3	20.0	10 18	22 46.47	-27 34.1	1.670	2.390	19.9	20.1
285875	2001 OB ₁	9 8.9 20°22	4°2/ 5.7 15				74144	1998 QV ₇₇	9 8.9 336°15	4°2/11.5 18			
8 9	23 26.72	-9 20.5	0.945	1.881	16.8	19.7	8 9	23 35.25	+2 59.3	1.461	2.336	15.9	18.4
8 19	23 23.56	-10 51.8	0.914	1.891	11.6	19.5	8 19	23 29.31	+3 47.0	1.387	2.325	12.2	18.2
8 29	23 17.85	-12 31.4	0.903	1.903	6.4	19.3	8 29	23 21.00	+4 19.8	1.335	2.314	8.0	17.9
9 8	23 10.81	-14 5.7	0.914	1.916	4.4	19.2	9 8	23 11.17	+4 38.0	1.306	2.304	4.5	17.7
9 18	23 3.87	-15 21.9	0.947	1.931	8.5	19.5	9 18	23 0.99	+4 43.4	1.304	2.295	5.4	17.7
9 28	22 58.48	-16 11.0	1.001	1.948	13.4	19.8	9 28	22 51.82	+4 40.3	1.326	2.287	9.4	17.9
10 8	22 55.65	-16 30.0	1.074	1.966	17.8	20.2	10 8	22 44.78	+4 34.4	1.372	2.280	13.6	18.2
10 18	22 55.80	-16 20.3	1.163	1.985	21.4	20.5	10 18	22 40.58	+4 30.9	1.439	2.273	17.3	18.4
428654	2008 GE ₅₃	9 8.9 227°16	0°1/ 8.8 17				297147	2010 UB ₆	9 8.9 266°69	1°6/ 5.7 16			
8 9	23 32.37	-2 12.6	1.680	2.569	13.5	21.8	8 9	23 23.50	-12 45.8	4.417	5.312	5.6	20.8
8 19	23 26.95	-3 8.2	1.609	2.562	9.6	21.5	8 19	23 19.79	-13 20.2	4.349	5.306	3.9	20.7
8 29	23 19.56	-4 18.3	1.560	2.554	5.2	21.2	8 29	23 15.41	-13 55.4	4.308	5.300	2.3	20.5
9 8	23 10.97	-5 36.5	1.539	2.546	0.4	20.9	9 8	23 10.65	-14 28.9	4.296	5.294	1.7	20.5
9 18	23 2.17	-6 55.3	1.544	2.537	4.4	21.2	9 18	23 5.85	-14 58.6	4.315	5.288	3.0	20.6
9 28	22 54.24	-8 6.4	1.577	2.528	9.0	21.4	9 28	23 1.35	-15 22.3	4.362	5.282	4.7	20.7
10 8	22 48.13	-9 3.6	1.634	2.519	13.1	21.6	10 8	22 57.48	-15 38.7	4.436	5.276	6.4	20.8
10 18	22 44.42	-9 43.0	1.712	2.509	16.6	21.9	10 18	22 54.50	-15 46.8	4.534	5.270	7.9	20.9
445373	2010 PK ₃₀	9 8.9 303°92	3°5/12.7 17				93413	2000 SB ₃₀₁	9 8.9 275°25	0°8/ 9.6 18			
8 9	23 27.92	+7 24.1	1.959	2.812	13.4	21.2	8 9	23 32.83	-1 34.7	1.685	2.571	13.6	20.0
8 19	23 23.72	+7 0.5	1.865	2.788	10.4	20.9	8 19	23 27.31	-1 54.3	1.611	2.561	9.8	19.7
8 29	23 17.83	+6 17.1	1.792	2.765	7.0	20.7	8 29	23 19.79	-2 26.8	1.560	2.551	5.5	19.4
9 8	23 10.82	+5 16.0	1.745	2.741	4.0	20.5	9 8	23 11.06	-3 8.0	1.534	2.541	1.1	19.1
9 18	23 3.49	+4 1.7	1.725	2.718	4.2	20.4	9 18	23 2.08	-3 52.4	1.536	2.531	4.1	19.3
9 28	22 56.76	+2 40.9	1.733	2.694	7.5	20.6	9 28	22 53.98	-4 33.5	1.564	2.521	8.6	19.6
10 8	22 51.47	+1 21.5	1.765	2.671	11.1	20.8	10 8	22 47.69	-5 5.9	1.616	2.511	12.7	19.8
10 18	22 48.23	+0 10.2	1.821	2.648	14.5	20.9	10 18	22 43.82	-5 25.9	1.690	2.500	16.2	20.0
141579	2002 GJ ₁₆₁	9 8.9 69°64	6°3/ 4.2 18				48260	2001 XM ₂₄	9 8.9 247°40	7°8/ 1.2 18			
8 9	23 35.65	-17 12.8	1.295	2.213	14.6	19.6	8 9	23 33.76	-23 26.6	1.687	2.596	12.3	18.7
8 19	23 29.48	-18 27.1	1.257	2.221	10.6	19.4	8 19	23 27.98	-24 58.2	1.639	2.591	9.6	18.6
8 29	23 20.91	-19 38.3	1.241	2.229	7.1	19.2	8 29	23 20.13	-26 22.4	1.616	2.585	7.9	18.5
9 8	23 11.09	-20 35.8	1.249	2.237	6.7	19.2	9 8	23 11.08	-27 29.5	1.617	2.580	8.3	18.5
9 18	23 1.36	-21 11.3	1.281	2.246	9.5	19.4	9 18	23 1.95	-28 12.1	1.644	2.575	10.6	18.6
9 28	22 53.13	-21 20.5	1.337	2.254	13.4	19.7	9 28	22 53.91	-28 26.4	1.694	2.569	13.4	18.8
10 8	22 47.37	-21 3.5	1.414	2.263	16.9	19.9	10 8	22 47.89	-28 12.9	1.765	2.563	16.2	19.0
10 18	22 44.58	-20 23.6	1.507	2.271	19.9	20.2	10 18	22 44.45	-27 34.6	1.852	2.558	18.6	19.1
304348	2006 SL ₂₈₂	9 8.9 345°53	1°8/ 7.3 18				331414	2012 FV ₅₉	9 8.9 279°70	1°2/ 7.5 18			
8 9	23 28.94	-6 56.1	1.574	2.482	13.1	19.8	8 9	23 27.94	-5 51.9	2.227	3.121	10.4	20.8
8 19	23 24.57	-7 51.3	1.513	2.477	9.1	19.6	8 19	23 23.48	-6 53.1	2.153	3.111	7.3	20.6
8 29	23 18.29	-8 56.1	1.474	2.472	4.8	19.3	8 29	23 17.60	-8 2.8	2.104	3.100	3.8	20.3
9 8	23 10.88	-10 3.2	1.462	2.467	1.8	19.1	9 8	23 10.86	-9 15.5	2.084	3.090	1.2	20.1
9 18	23 3.34	-11 4.9	1.475	2.463	5.4	19.3	9 18	23 3.97	-10 25.5	2.091	3.079	4.2	20.3
9 28	22 56.73	-11 54.2	1.514	2.460	9.8	19.6	9 28	22 57.70	-11 26.8	2.127	3.069	7.7	20.5
10 8	22 51.95	-12 26.2	1.575	2.458	13.7	19.8	10 8	22 52.72	-12 15.1	2.188	3.058	10.9	20.7
10 18	22 49.54	-12 39.2	1.657	2.455	17.0	20.0	10 18	22 49.52	-12 48.0	2.271	3.048	13.6	20.9
293288	2007 DG ₄	9 8.9 320°06	1°2/10.3 18				208840	2002 RH ₁₅₈	9 8.9 329°74	0°5/ 9.4 18			
8 9	23 27.61	+1 36.5	2.039	2.915	12.0	20.6	8 9	23 32.77	-2 48.6	1.783	2.670	12.9	20.7
8 19	23 23.31	+0 49.0	1.966	2.910	8.8	20.4	8 19	23 27.10	-3 2.5	1.716	2.668	9.2	20.5
8 29	23 17.51	-0 13.2	1.917	2.905	5.1	20.2	8 29	23 19.60	-3 26.9	1.674	2.666	5.1	20.3
9 8	23 10.83	-1 25.7	1.895	2.901	1.5	19.9	9 8	23 11.05	-3 57.8	1.657	2.665	0.8	20.0
9 18	23 4.01	-2 42.5	1.901	2.896	3.3	20.0	9 18	23 2.38	-4 30.2	1.668	2.663	3.9	20.2
9 28	22 57.88	-3 57.0	1.934	2.892	7.1	20.3	9 28	22 54.60	-4 58.9	1.706	2.661	8.1	20.5
10 8	22 53.14	-5 3.0	1.994	2.888	10.6	20.5	10 8	22 48.55	-5 19.3	1.769	2.660	11.9	20.7
10 18	22 50.29	-5 56.1	2.076	2.884	13.7	20.7	10 18	22 44.78	-5 28.7	1.853	2.659	15.2	20.9
365310	2009 SO ₂₅	9 8.9 6°88	2°8/12.3 18				512540	2016 SZ ₇	9 8.9 21°92	6°2/12.6 18			
8 9	23 27.00	+6 32.0	2.064	2.919	12.7	20.5	8 9	23 37.73	+6 43.2	1.344	2.207	17.8	20.3
8 19	23 22.85	+5 53.6	1.992	2.919	9.7	20.3	8 19	23 31.05	+7 51.7	1.287	2.213	13.9	20.1
8 29	23 17.25	+4 57.4	1.945	2.920	6.3	20.1	8 29	23 21.89	+8 40.3	1.251	2.219	9.9	19.9
9 8	23 10.81	+3 46.8	1.923	2.921	3.3	19.9	9 8	23 11.27	+9 7.6	1.237	2.226	6.7	19.7
9 18	23 4.26	+2 27.2	1.928	2.922	3.6	19.9	9 18	23 0.49	+9 15.3	1.249	2.234	6.8	19.7
9 28	22 58.41	+1 5.4	1.962	2.924	6.7	20.1	9 28	22 51.01	+9 7.9	1.285	2.242	10.0	19.9
10 8	22 53.93	-0 11.7	2.022	2.925	10.1	20.3	10 8	22 43.94	+8 52.9	1.344	2.252	13.8	20.2
10 18	22 51.30	-1 18.8	2.105	2.927	13.0	20.5	10 18	22 39.91	+8 37.0	1.424	2.261	17.3	20.5
170696	2004 BY ₁₈	9 8.9 275°24	4°9/13.7 18				513128	1999 UJ ₃₂	9 8.9 307°38	3°2/ 6.4 18			
8 9	23 31.30	+10 17.2	2.016	2.848	13.9	19.9	8 9	23 32.55	-11 17				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
137616	1999 <i>VJ</i> ₁₉₂		9 8.9 258°43	0°9/ 9.7	18		184575	2005 <i>QW</i> ₉₃		9 8.9 325°10	2°2/ 6.9	18	
8 9	23 36.04	- 1 44.6	1.685	2.567	13.8	20.0	8 9	23 32.08	-10 5.1	1.881	2.783	11.6	20.4
8 19	23 29.71	- 1 56.3	1.600	2.548	10.1	19.7	8 19	23 26.56	-10 35.9	1.817	2.778	8.1	20.2
8 29	23 21.18	- 2 20.5	1.539	2.529	5.7	19.4	8 29	23 19.31	-11 10.7	1.778	2.773	4.4	20.0
9 8	23 11.22	- 2 53.6	1.503	2.510	1.2	19.1	9 8	23 11.07	-11 44.3	1.765	2.768	2.2	19.8
9 18	23 0.85	- 3 30.4	1.495	2.490	4.2	19.2	9 18	23 2.72	-12 11.4	1.779	2.764	5.1	20.0
9 28	22 51.31	- 4 4.9	1.514	2.469	9.0	19.5	9 28	22 55.23	-12 27.6	1.820	2.760	8.9	20.2
10 8	22 43.65	- 4 31.4	1.558	2.448	13.3	19.7	10 8	22 49.40	-12 30.3	1.885	2.756	12.4	20.4
10 18	22 38.58	- 4 46.3	1.622	2.427	17.0	19.9	10 18	22 45.75	-12 18.5	1.972	2.752	15.3	20.6
424423	2008 <i>AW</i> ₁₁₄		9 8.9 290°68	0°9/ 9.6	18		482772	2013 <i>GK</i> ₉₅		9 8.9 137°57	3°0/ 12.7	18	
8 9	23 35.20	- 2 14.0	1.362	2.257	15.6	21.5	8 9	23 30.01	+ 7 5.6	2.508	3.346	11.3	21.6
8 19	23 29.47	- 2 19.2	1.285	2.240	11.4	21.2	8 19	23 24.74	+ 6 49.6	2.440	3.355	8.7	21.5
8 29	23 21.18	- 2 38.4	1.230	2.222	6.4	20.9	8 29	23 18.20	+ 6 19.3	2.395	3.363	5.8	21.3
9 8	23 11.22	- 3 7.5	1.198	2.205	1.3	20.5	9 8	23 10.97	+ 5 37.1	2.378	3.372	3.4	21.1
9 18	23 0.82	- 3 40.7	1.192	2.188	4.8	20.7	9 18	23 3.68	+ 4 46.5	2.389	3.379	3.5	21.2
9 28	22 51.43	- 4 10.8	1.211	2.171	10.2	21.0	9 28	22 57.02	+ 3 52.0	2.430	3.387	5.9	21.3
10 8	22 44.30	- 4 31.7	1.253	2.154	15.1	21.2	10 8	22 51.58	+ 2 58.6	2.497	3.394	8.7	21.5
10 18	22 40.20	- 4 39.1	1.313	2.137	19.3	21.4	10 18	22 47.77	+ 2 10.7	2.589	3.401	11.2	21.7
332184	2006 <i>BC</i> ₁₉₃		9 8.9 237°68	1°9/ 6.3	18		505683	2014 <i>WL</i> ₂₃₉		9 8.9 68°80	4°9/ 4.9	17	
8 9	23 27.91	- 8 39.5	2.526	3.422	9.3	20.9	8 9	23 33.31	-12 15.2	1.243	2.163	15.0	21.3
8 19	23 23.33	- 9 51.1	2.454	3.413	6.4	20.7	8 19	23 28.01	-13 47.5	1.197	2.166	10.5	21.0
8 29	23 17.48	-11 8.4	2.409	3.404	3.4	20.5	8 29	23 20.28	-15 24.7	1.174	2.168	6.3	20.8
9 8	23 10.87	-12 26.1	2.393	3.395	2.0	20.4	9 8	23 11.16	-16 54.9	1.174	2.171	5.2	20.8
9 18	23 4.13	-13 38.5	2.406	3.386	4.4	20.5	9 18	23 1.99	-18 7.2	1.199	2.174	8.7	21.0
9 28	22 57.95	-14 40.7	2.447	3.377	7.5	20.7	9 28	22 54.18	-18 53.9	1.248	2.177	13.1	21.2
10 8	22 52.92	-15 29.0	2.515	3.367	10.3	20.9	10 8	22 48.78	-19 12.4	1.317	2.180	17.1	21.5
10 18	22 49.48	-16 1.8	2.604	3.357	12.7	21.1	10 18	22 46.37	-19 3.9	1.403	2.183	20.4	21.7
97291	1999 <i>XL</i> ₁₆₉		9 8.9 217°50	1°0/ 7.8	18		3810	Aoraki		9 8.9 176°13	4°4/ 12.9	18	
8 9	23 30.21	- 7 7.0	2.589	3.476	9.4	19.8	8 9	23 34.20	+ 8 24.6	1.642	2.490	15.8	17.1
8 19	23 24.87	- 7 39.0	2.517	3.471	6.5	19.6	8 19	23 28.29	+ 8 12.1	1.573	2.492	12.2	16.9
8 29	23 18.27	- 8 16.1	2.471	3.465	3.4	19.4	8 29	23 20.34	+ 7 37.1	1.525	2.494	8.4	16.7
9 8	23 10.94	- 8 54.5	2.453	3.460	1.0	19.2	9 8	23 11.17	+ 6 42.0	1.502	2.495	5.0	16.5
9 18	23 3.52	- 9 30.3	2.465	3.453	3.6	19.4	9 18	23 1.83	+ 5 32.1	1.505	2.495	5.0	16.5
9 28	22 56.67	- 9 59.7	2.506	3.447	6.7	19.6	9 28	22 53.46	+ 4 15.4	1.535	2.495	8.4	16.7
10 8	22 51.01	-10 19.9	2.573	3.440	9.5	19.8	10 8	22 47.00	+ 3 0.6	1.590	2.495	12.2	16.9
10 18	22 46.96	-10 29.2	2.662	3.434	12.0	19.9	10 18	22 43.07	+ 1 54.9	1.667	2.493	15.7	17.2
163104	2002 <i>AO</i> ₁₂₉		9 8.9 324°59	2°1/ 7.4	18		416766	2005 <i>EU</i> ₂₁₈		9 8.9 145°84	3°4/ 5.9	17	
8 9	23 30.04	- 6 16.7	1.072	1.994	16.6	19.6	8 9	23 35.65	-11 26.2	1.717	2.619	12.5	21.6
8 19	23 26.14	- 7 14.1	1.009	1.979	11.7	19.3	8 19	23 29.10	-12 33.9	1.668	2.629	8.7	21.4
8 29	23 19.49	- 8 27.0	0.966	1.965	6.2	19.0	8 29	23 20.66	-13 45.1	1.644	2.638	5.0	21.2
9 8	23 11.08	- 9 45.8	0.945	1.951	2.2	18.7	9 8	23 11.20	-14 51.8	1.647	2.647	3.5	21.1
9 18	23 2.31	-10 59.1	0.947	1.938	7.0	18.9	9 18	23 1.75	-15 46.8	1.678	2.655	6.4	21.3
9 28	22 54.78	-11 55.7	0.972	1.927	12.7	19.2	9 28	22 53.39	-16 24.8	1.735	2.662	10.2	21.6
10 8	22 49.81	-12 28.5	1.016	1.916	17.9	19.5	10 8	22 46.97	-16 43.3	1.816	2.669	13.6	21.8
10 18	22 48.16	-12 35.1	1.076	1.906	22.2	19.7	10 18	22 42.97	-16 42.5	1.917	2.675	16.4	22.0
513727	2012 <i>TB</i> ₁₃₆		9 8.9 237°34	2°1/ 6.8	18		397795	2008 <i>LZ</i> ₇		9 8.9 130°31	6°8/ 31.2	18	
8 9	23 31.47	- 8 4.3	1.849	2.749	11.9	21.3	8 9	23 32.74	-28 6.7	2.506	3.396	9.6	21.4
8 19	23 26.20	- 9 7.4	1.781	2.742	8.3	21.0	8 19	23 26.68	-29 17.8	2.474	3.406	7.8	21.3
8 29	23 19.15	-10 18.3	1.738	2.734	4.4	20.8	8 29	23 19.23	-30 19.1	2.468	3.416	6.9	21.2
9 8	23 11.05	-11 30.2	1.722	2.726	2.2	20.6	9 8	23 11.07	-31 4.7	2.488	3.426	7.2	21.3
9 18	23 2.77	-12 35.9	1.734	2.718	5.3	20.8	9 18	23 2.96	-31 30.9	2.535	3.435	8.7	21.4
9 28	22 55.31	-13 29.1	1.772	2.710	9.3	21.0	9 28	22 55.68	-31 35.8	2.607	3.444	10.5	21.5
10 8	22 49.50	-14 5.5	1.835	2.701	12.8	21.2	10 8	22 49.88	-31 20.2	2.700	3.453	12.4	21.7
10 18	22 45.89	-14 23.4	1.918	2.692	15.9	21.4	10 18	22 45.95	-30 46.5	2.813	3.462	13.9	21.8
27947	Emilemathieu		9 8.9 17°85	11°8/ 26.7	18		432253	2009 <i>RF</i> ₃₁		9 8.9 5°98	0°5/ 8.7	17	
8 9	23 31.64	-29 58.2	1.391	2.302	14.3	18.6	8 9	23 34.28	- 6 9.1	1.118	2.033	16.7	20.0
8 19	23 26.91	-32 39.1	1.366	2.303	12.3	18.5	8 19	23 28.87	- 6 7.3	1.067	2.033	11.9	19.7
8 29	23 19.70	-35 2.2	1.364	2.305	11.9	18.5	8 29	23 20.81	- 6 15.5	1.036	2.033	6.3	19.4
9 8	23 11.09	-36 53.7	1.385	2.307	13.1	18.6	9 8	23 11.23	- 6 28.2	1.028	2.035	0.7	19.0
9 18	23 2.41	-38 4.8	1.428	2.309	15.3	18.7	9 18	23 1.57	- 6 39.1	1.043	2.038	5.5	19.4
9 28	22 55.10	-38 32.8	1.491	2.311	17.8	18.9	9 28	22 53.39	- 6 42.3	1.082	2.042	11.0	19.7
10 8	22 50.21	-38 21.2	1.569	2.314	20.1	19.1	10 8	22 47.81	- 6 33.5	1.142	2.047	15.9	20.0
10 18	22 48.30	-37 36.1	1.661	2.317	22.0	19.3	10 18	22 45.44	- 6 11.1	1.219	2.054	19.8	20.3
370691	2004 <i>GL</i> ₆₃		9 8.9 279°41	0°7/ 8.1	18		251700	1996 <i>RK</i> ₂₁		9 8.9 269°59	0°1/ 8.9	17	
8 9	23 28.92	- 6 31.7	2.650	3.538	9.2	20.8	8 9	23 32.67	- 2 13.7	1.492	2.386	14.6	21.5
8 19	23 23.97	- 6 57.2	2.576	3.530	6.4	20.6	8 19	23 27.51	- 3 2.5	1.414	2.370	10.5	21.2
8 29	23 17.80	- 7 28.0	2.527	3.521	3.4	20.4	8 29	23 20.08	- 4 7.7	1.358	2.352	5.7	20.9
9 8	23 10.93	- 8 0.6	2.506	3.513	0.7	20.1	9 8	23 11.18	- 5 23.2	1.328	2.335	0.5	20.5
9 18	23 3.95	- 8 31.4	2.515	3.505	3.3	20.4	9 18	23 1.90	- 6 40.5	1.323	2.317	4.8	20.7
9 28	22 57.52	- 8 56.9	2.552	3.496	6.4	20.5	9 28	22 53.51	- 7 50.7	1.345	2.299	10.0	21.0
10 8	22 52.21	- 9 14.2	2.615	3.488	9.2	20.7	10 8	22 47.12	- 8 46.2	1.390	2.281	14.6	21.2
10 18	22 48.43	- 9 21.6	2.702	3.480	11.7	20.9	10 18	22 43.45	- 9 22.6	1.454	2.263	18.5	21.4
202886	1979 <i>OZ</i> ₉		9 8.9 44°33	0°5/ 9.4	17		186794	2004 <i>EO</i> ₃₃		9 8.9 86°8			

EPHEMERIDES

9 8.9

9 9.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
95275	2002 <i>CN</i> ₇₃		9 8.9 113°30	0.7/ 9.7 18			295080	2008 <i>EH</i> ₁₃₅		9 9.0 7°79	1.7/ 7.3 18		
8 9	23 31.31	- 1 43.4	2.221	3.098	11.1	19.8	8 9	23 30.28	- 8 2.7	1.931	2.831	11.5	21.0
8 19	23 25.77	- 2 2.2	2.158	3.104	8.0	19.6	8 19	23 25.26	- 8 47.0	1.871	2.832	8.0	20.8
8 29	23 18.80	- 2 30.4	2.120	3.110	4.5	19.4	8 29	23 18.62	- 9 37.4	1.836	2.832	4.2	20.6
9 8	23 11.06	- 3 4.4	2.110	3.116	0.9	19.1	9 8	23 11.08	-10 28.4	1.828	2.833	1.7	20.4
9 18	23 3.27	- 3 40.3	2.128	3.122	3.2	19.3	9 18	23 3.47	-11 14.2	1.847	2.833	4.7	20.6
9 28	22 56.21	- 4 13.5	2.174	3.128	6.7	19.6	9 28	22 56.67	-11 49.7	1.892	2.834	8.5	20.8
10 8	22 50.55	- 4 40.2	2.247	3.134	9.9	19.8	10 8	22 51.44	-12 11.4	1.963	2.836	11.8	21.0
10 18	22 46.72	- 4 57.7	2.342	3.139	12.7	20.0	10 18	22 48.24	-12 18.0	2.054	2.837	14.7	21.2
395039	2009 <i>DY</i> ₈₆		9 9.0 154°84	0°6/ 9.7 18			445675	2011 <i>UF</i> ₉₆		9 9.0 276°68	1°2/ 7.8 18		
8 9	23 31.82	- 1 24.0	2.276	3.150	11.0	22.2	8 9	23 31.89	- 7 2.1	1.924	2.820	11.7	21.7
8 19	23 26.11	- 1 51.9	2.211	3.156	7.9	22.0	8 19	23 26.46	- 7 35.4	1.855	2.813	8.2	21.5
8 29	23 19.00	- 2 29.6	2.171	3.161	4.4	21.8	8 29	23 19.32	- 8 15.8	1.810	2.805	4.3	21.2
9 8	23 11.09	- 3 13.4	2.160	3.166	0.9	21.5	9 8	23 11.16	- 8 58.1	1.791	2.797	1.2	21.0
9 18	23 3.14	- 3 58.7	2.177	3.171	3.2	21.7	9 18	23 2.84	- 9 37.0	1.800	2.790	4.5	21.2
9 28	22 55.89	- 4 41.0	2.223	3.175	6.7	21.9	9 28	22 55.32	-10 7.4	1.837	2.782	8.4	21.4
10 8	22 50.02	- 4 16.1	2.295	3.179	9.9	22.2	10 8	22 49.40	-10 25.6	1.898	2.774	12.0	21.6
10 18	22 45.97	- 5 41.2	2.390	3.183	12.6	22.4	10 18	22 45.60	-10 29.8	1.980	2.767	15.0	21.8
518706	2009 <i>AM</i> ₅₂		9 9.0 332°05	3°7/ 5.5 18			289606	2005 <i>GB</i> ₁₉		9 9.0 197°14	2°3/ 6.9 18		
8 9	23 30.56	-11 49.7	1.661	2.572	12.3	21.0	8 9	23 34.35	-10 44.2	1.946	2.844	11.5	20.5
8 19	23 25.69	-13 0.5	1.604	2.569	8.6	20.8	8 19	23 28.12	-11 14.2	1.884	2.843	8.0	20.3
8 29	23 18.94	-14 15.7	1.571	2.566	5.0	20.5	8 29	23 20.16	-11 47.4	1.847	2.842	4.4	20.1
9 8	23 11.10	-15 27.1	1.564	2.562	3.8	20.5	9 8	23 11.24	-12 18.4	1.838	2.841	2.4	20.0
9 18	23 3.14	-16 26.9	1.583	2.560	6.8	20.6	9 18	23 2.24	-12 42.4	1.856	2.839	5.2	20.1
9 28	22 56.13	-17 9.0	1.628	2.557	10.6	20.9	9 28	22 54.14	-12 55.2	1.901	2.838	8.8	20.4
10 8	22 50.93	-17 30.3	1.696	2.554	14.1	21.1	10 8	22 47.72	-12 54.6	1.972	2.836	12.2	20.6
10 18	22 48.08	-17 30.5	1.782	2.552	17.1	21.3	10 18	22 43.48	-12 40.1	2.063	2.834	15.0	20.8
350910	2002 <i>RX</i> ₂₄₄		9 9.0 291°15	0°4/ 9.3 16			42617	1998 <i>FJ</i> ₁		9 9.0 206°28	4°0/ 12.5 18		
8 9	23 34.98	- 3 51.1	1.814	2.699	12.8	21.2	8 9	23 33.16	+ 7 8.1	1.533	2.393	16.1	19.3
8 19	23 28.87	- 3 50.1	1.728	2.679	9.2	20.9	8 19	23 27.72	+ 6 53.4	1.464	2.391	12.4	19.1
8 29	23 20.73	- 3 57.9	1.665	2.658	5.1	20.7	8 29	23 20.13	+ 6 15.9	1.415	2.389	8.3	18.8
9 8	23 11.28	- 4 11.3	1.630	2.637	0.7	20.3	9 8	23 11.24	+ 5 18.3	1.391	2.387	4.6	18.6
9 18	23 1.48	- 4 26.2	1.621	2.616	4.0	20.5	9 18	23 2.14	+ 4 6.6	1.392	2.385	4.9	18.6
9 28	22 52.44	- 4 38.0	1.641	2.595	8.5	20.7	9 28	22 54.03	+ 2 49.3	1.420	2.382	8.7	18.8
10 8	22 45.12	- 4 42.8	1.685	2.574	12.6	20.9	10 8	22 47.90	+ 1 35.3	1.472	2.379	12.8	19.1
10 18	22 40.20	- 4 37.8	1.750	2.553	16.0	21.1	10 18	22 44.40	+ 0 32.1	1.545	2.376	16.5	19.3
386853	2010 <i>UM</i> ₇₉		9 9.0 240°96	0°5/ 10.1 16			78369	2002 <i>PP</i> ₁₂₀		9 9.0 61°16	1°6/ 10.6 18		
8 9	23 23.94	- 1 18.5	4.489	5.354	6.2	21.6	8 9	23 30.23	+ 1 52.9	1.787	2.664	13.4	19.7
8 19	23 20.12	- 1 33.2	4.412	5.351	4.4	21.5	8 19	23 25.33	+ 1 16.4	1.723	2.666	9.8	19.5
8 29	23 15.64	- 1 52.7	4.362	5.349	2.5	21.3	8 29	23 18.71	+ 0 24.1	1.682	2.669	5.8	19.2
9 8	23 10.80	- 2 15.4	4.341	5.347	0.7	21.1	9 8	23 11.11	+ 0 39.5	1.667	2.672	1.9	19.0
9 18	23 5.91	- 2 39.5	4.350	5.344	1.7	21.2	9 18	23 3.40	- 1 48.1	1.680	2.675	3.7	19.1
9 28	23 1.31	- 3 3.0	4.389	5.342	3.7	21.4	9 28	22 56.56	- 2 54.6	1.719	2.678	7.7	19.4
10 8	22 57.32	- 3 24.0	4.456	5.339	5.5	21.5	10 8	22 51.36	- 3 52.7	1.784	2.682	11.5	19.6
10 18	22 54.19	- 3 40.7	4.549	5.337	7.1	21.6	10 18	22 48.32	- 4 37.9	1.870	2.685	14.7	19.8
220364	2003 <i>NT</i> ₁₂		9 9.0 16°66	2°8/ 6.1 18			322758	2001 <i>DV</i> ₂₃		9 9.0 201°26	3°4/ 3.8 18		
8 9	23 27.72	- 9 44.7	1.694	2.606	12.1	19.4	8 9	23 28.66	-14 44.6	2.771	3.671	8.4	21.3
8 19	23 23.58	-10 53.4	1.645	2.611	8.4	19.1	8 19	23 23.82	-16 13.1	2.709	3.667	5.9	21.2
8 29	23 17.75	-12 7.5	1.621	2.617	4.6	18.9	8 29	23 17.77	-17 42.8	2.675	3.663	3.9	21.0
9 8	23 10.99	-13 19.6	1.622	2.624	2.9	18.8	9 8	23 11.03	-19 8.0	2.671	3.658	3.7	21.0
9 18	23 4.21	-14 22.2	1.650	2.632	5.9	19.1	9 18	23 4.17	-20 23.1	2.696	3.653	5.6	21.1
9 28	22 58.34	-15 9.3	1.704	2.640	9.7	19.3	9 28	22 57.84	-21 24.0	2.749	3.648	8.0	21.3
10 8	22 54.15	-15 37.6	1.780	2.649	13.1	19.5	10 8	22 52.61	-22 8.2	2.828	3.642	10.4	21.4
10 18	22 52.10	-15 46.2	1.877	2.658	15.9	19.8	10 18	22 48.89	-22 35.1	2.928	3.636	12.3	21.6
510722	2012 <i>VC</i> ₆₀		9 9.0 219°26	3°5/ 5.5 18			455009	2015 <i>TY</i> ₂₆₅		9 9.0 20°54	4°1/ 13.4 15		
8 9	23 33.12	-13 27.1	1.985	2.887	11.1	22.1	8 9	23 27.90	+ 8 51.7	1.782	2.633	14.6	21.2
8 19	23 27.27	-14 20.7	1.923	2.883	7.8	21.9	8 19	23 23.70	+ 8 28.3	1.717	2.637	11.3	21.0
8 29	23 19.72	-15 16.1	1.886	2.878	4.7	21.7	8 29	23 17.85	+ 7 43.3	1.673	2.642	7.8	20.8
9 8	23 11.18	-16 6.8	1.876	2.872	3.7	21.6	9 8	23 11.03	+ 6 39.9	1.655	2.647	4.7	20.6
9 18	23 2.53	-16 47.0	1.893	2.866	6.2	21.8	9 18	23 4.13	+ 5 23.4	1.662	2.653	4.5	20.6
9 28	22 54.72	-17 12.0	1.938	2.860	9.5	21.9	9 28	22 58.05	+ 4 1.5	1.696	2.659	7.5	20.8
10 8	22 48.54	-17 19.9	2.007	2.854	12.7	22.1	10 8	22 53.57	+ 2 42.3	1.756	2.666	10.9	21.0
10 18	22 44.50	-17 10.5	2.096	2.848	15.4	22.3	10 18	22 51.19	+ 1 32.3	1.838	2.673	14.1	21.3
91835	1999 <i>TV</i> ₃₁₀		9 9.0 10°68	1°0/ 10.1 18			230322	2002 <i>CQ</i> ₇₇		9 9.0 87°30	1°8/ 7.3 16		
8 9	23 29.10	+ 0 12.5	2.092	2.968	11.7	20.0	8 9	23 31.60	- 6 35.1	1.657	2.558	12.9	20.2
8 19	23 24.34	- 0 19.2	2.024	2.969	8.5	19.8	8 19	23 26.31	- 7 43.4	1.608	2.569	9.0	20.0
8 29	23 18.11	- 1 3.2	1.980	2.969	4.9	19.6	8 29	23 19.22	- 9 0.3	1.584	2.580	4.7	19.8
9 8	23 11.03	- 1 55.4	1.964	2.970	1.3	19.3	9 8	23 11.17	-10 18.1	1.586	2.592	1.8	19.6
9 18	23 3.86	- 2 50.9	1.975	2.970	3.3	19.5	9 18	23 3.11	-11 29.1	1.615	2.603	5.3	19.9
9 28	22 57.39	- 3 44.1	2.014	2.971	7.0	19.7	9 28	22 56.08	-12 26.5	1.671	2.614	9.3	20.1
10 8	22 52.33	- 4 29.9	2.079	2.972	10.3	19.9	10 8	22 50.87	-13 6.1	1.751	2.624	13.0	20.4
10 18	22 49.13	- 5 4.9	2.166	2.973	13.2	20.1	10 18	22 47.96	-13 26.4	1.850	2.635	16.0	20.6
45197	1999 <i>XY</i> ₁₆₇		9 9.0 219°19	2°4/ 6.6 18			379572	2011 <i>BD</i> ₃₂		9			