

EPHEMERIDES

10 3.9

10 4.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
261671	2005 YH ₁₆₃	10	3.9 148°77	5°0/27.2	18		327590	2006 DQ ₁₆₆	10	4.0 310°78	0°0/4.1	18	
8 29	1 1.87	-11 40.2	2.674	3.531	10.0	20.5	8 29	1 4.78	+ 5 10.2	2.229	3.063	12.5	20.7
9 8	0 57.31	-12 47.9	2.618	3.538	7.7	20.4	9 8	0 59.91	+ 5 10.2	2.146	3.058	9.6	20.5
9 18	0 51.36	-13 53.8	2.587	3.544	5.8	20.3	9 18	0 53.23	+ 5 1.8	2.085	3.053	6.1	20.3
9 28	0 44.50	-14 52.5	2.584	3.550	5.0	20.2	9 28	0 45.30	+ 4 47.1	2.052	3.049	2.4	20.0
10 8	0 37.35	-15 38.8	2.610	3.556	6.0	20.3	10 8	0 36.86	+ 4 29.6	2.047	3.044	1.5	20.0
10 18	0 30.56	-16 9.4	2.663	3.562	8.0	20.4	10 18	0 28.75	+ 4 13.0	2.071	3.039	5.4	20.2
10 28	0 24.74	-16 22.3	2.742	3.567	10.2	20.6	10 28	0 21.76	+ 4 1.2	2.123	3.035	8.9	20.4
11 7	0 20.35	-16 17.5	2.843	3.572	12.1	20.8	11 7	0 16.52	+ 3 57.4	2.199	3.030	12.0	20.6
477176	2009 FX ₃₄	10	3.9 292°37	2°9/1.8	18		71040	1999 XG ₇₄	10	4.0 275°54	1°3/5.3	18	
8 29	1 8.46	- 2 59.4	1.837	2.693	13.9	20.8	8 29	1 3.81	+10 44.6	1.986	2.810	14.2	19.5
9 8	1 3.03	- 3 11.3	1.759	2.684	10.5	20.5	9 8	0 59.62	+10 23.4	1.882	2.786	11.2	19.3
9 18	0 55.37	- 3 26.9	1.703	2.676	6.8	20.3	9 18	0 53.32	+ 9 46.0	1.800	2.762	7.5	19.0
9 28	0 46.12	- 3 41.5	1.673	2.668	3.3	20.1	9 28	0 45.42	+ 8 54.4	1.744	2.737	3.5	18.7
10 8	0 36.25	- 3 50.4	1.671	2.659	4.0	20.1	10 8	0 36.74	+ 7 53.0	1.715	2.712	1.8	18.6
10 18	0 26.80	- 3 49.2	1.697	2.651	7.8	20.3	10 18	0 28.25	+ 6 47.9	1.715	2.687	5.9	18.8
10 28	0 18.81	- 3 35.1	1.749	2.643	11.6	20.5	10 28	0 20.94	+ 5 46.3	1.742	2.661	10.0	19.0
11 7	0 13.00	- 3 6.7	1.824	2.635	14.9	20.7	11 7	0 15.60	+ 4 54.6	1.793	2.635	13.8	19.2
296463	2009 HT ₈₃	10	3.9 84°48	0°8/4.9	18		224642	2005 YK ₁₉₀	10	4.0 54°24	1°6/5.7	18	
8 29	1 0.76	+11 11.2	2.003	2.830	14.0	20.6	8 29	1 2.55	+10 59.6	2.137	2.957	13.5	20.5
9 8	0 56.97	+10 18.2	1.930	2.837	10.8	20.4	9 8	0 58.25	+10 49.3	2.062	2.963	10.5	20.3
9 18	0 51.37	+ 9 8.3	1.880	2.844	7.1	20.2	9 18	0 52.17	+10 25.4	2.010	2.969	7.0	20.1
9 28	0 44.55	+ 7 45.7	1.856	2.850	3.0	19.9	9 28	0 44.88	+ 9 50.0	1.984	2.976	3.4	19.9
10 8	0 37.32	+ 6 16.6	1.859	2.857	1.5	19.8	10 8	0 37.17	+ 9 7.1	1.986	2.982	1.8	19.8
10 18	0 30.52	+ 4 48.5	1.892	2.863	5.5	20.1	10 18	0 29.84	+ 8 21.4	2.016	2.988	5.1	20.0
10 28	0 24.95	+ 3 28.8	1.952	2.870	9.2	20.4	10 28	0 23.71	+ 7 38.6	2.074	2.995	8.6	20.3
11 7	0 21.19	+ 2 23.0	2.037	2.876	12.5	20.6	11 7	0 19.33	+ 7 3.3	2.156	3.001	11.7	20.5
22427	1996 DB	10	3.9 114°93	4°3/9.4	18		511428	2014 HM ₁₈₈	10	4.0 101°57	2°4/1.8	18	
8 29	1 8.56	+21 21.1	2.991	3.727	11.9	19.7	8 29	1 4.40	- 0 5.5	1.922	2.777	13.3	21.7
9 8	1 2.27	+21 49.0	2.916	3.749	9.8	19.5	9 8	0 59.75	- 0 45.4	1.856	2.782	10.0	21.5
9 18	0 54.48	+22 2.7	2.865	3.771	7.6	19.4	9 18	0 53.16	- 1 32.3	1.813	2.787	6.3	21.3
9 28	0 45.70	+22 1.7	2.839	3.791	5.5	19.3	9 28	0 45.26	- 2 21.1	1.796	2.792	2.9	21.1
10 8	0 36.57	+21 47.0	2.843	3.812	4.3	19.3	10 8	0 36.93	- 3 5.8	1.807	2.797	3.6	21.2
10 18	0 27.80	+21 21.3	2.877	3.831	4.9	19.3	10 18	0 29.07	- 3 40.9	1.846	2.801	7.2	21.4
10 28	0 20.05	+20 48.4	2.941	3.851	6.8	19.5	10 28	0 22.56	- 4 2.2	1.911	2.806	10.7	21.6
11 7	0 13.81	+20 13.1	3.032	3.869	8.9	19.6	11 7	0 17.98	- 4 7.6	1.999	2.810	13.8	21.8
267775	2003 SH ₈₂	10	3.9 305°39	1°6/5.1	17		161624	2005 WB ₂₀₂	10	4.0 195°74	0°3/3.6	18	
8 29	1 11.46	+ 7 14.4	2.119	2.936	13.7	20.0	8 29	1 2.28	+ 5 11.6	2.725	3.554	10.6	21.8
9 8	1 5.38	+ 7 55.5	2.010	2.910	10.7	19.7	9 8	0 57.69	+ 4 43.5	2.641	3.552	8.1	21.6
9 18	0 57.00	+ 8 29.5	1.924	2.883	7.3	19.5	9 18	0 51.67	+ 4 7.1	2.581	3.549	5.1	21.4
9 28	0 46.83	+ 8 56.2	1.865	2.857	3.5	19.2	9 28	0 44.68	+ 3 25.3	2.549	3.546	1.9	21.2
10 8	0 35.73	+ 9 16.9	1.835	2.831	2.1	19.0	10 8	0 37.32	+ 2 41.8	2.547	3.543	1.5	21.2
10 18	0 24.71	+ 9 33.4	1.836	2.805	5.8	19.2	10 18	0 30.22	+ 2 0.6	2.575	3.539	4.7	21.4
10 28	0 14.86	+ 9 49.0	1.864	2.779	9.8	19.4	10 28	0 24.03	+ 1 25.8	2.631	3.535	7.8	21.6
11 7	0 7.05	+10 7.0	1.919	2.754	13.3	19.6	11 7	0 19.24	+ 1 0.3	2.713	3.530	10.4	21.8
204785	2006 KT ₁₀₂	10	3.9 189°02	1°8/6.0	18	R	25522	Roisen	10	4.0 291°98	2°7/1.7	18	
8 29	1 2.65	+13 51.2	2.091	2.901	14.1	20.5	8 29	1 4.25	- 0 25.5	1.767	2.628	14.1	18.7
9 8	0 58.42	+13 9.5	2.007	2.900	11.1	20.3	9 8	0 59.94	- 1 4.5	1.690	2.619	10.6	18.5
9 18	0 52.32	+12 9.6	1.944	2.899	7.6	20.1	9 18	0 53.46	- 1 51.4	1.635	2.611	6.7	18.3
9 28	0 44.94	+10 54.2	1.908	2.898	3.8	19.9	9 28	0 45.44	- 2 40.7	1.606	2.602	3.1	18.0
10 8	0 37.07	+ 9 28.6	1.901	2.896	2.0	19.7	10 8	0 36.80	- 3 25.8	1.605	2.594	4.0	18.1
10 18	0 29.57	+ 7 59.7	1.922	2.894	5.3	20.0	10 18	0 28.57	- 4 0.7	1.630	2.586	7.9	18.3
10 28	0 23.29	+ 6 35.3	1.972	2.892	9.0	20.2	10 28	0 21.74	- 4 20.3	1.681	2.577	11.8	18.5
11 7	0 18.83	+ 5 21.9	2.046	2.889	12.3	20.4	11 7	0 17.02	- 4 22.2	1.753	2.569	15.2	18.7
383129	2005 TZ ₁₅₄	10	4.0 304°14	2°1/5.4	18		509190	2006 KT ₁₁₂	10	4.0 52°48	8°7/25.2	18	
8 29	1 6.71	+ 9 38.0	1.468	2.310	17.4	20.8	8 29	1 2.45	-13 20.3	1.512	2.394	14.9	20.7
9 8	1 2.46	+ 9 54.1	1.382	2.295	13.8	20.5	9 8	0 58.58	-15 25.2	1.483	2.413	11.7	20.6
9 18	0 55.43	+ 9 54.4	1.316	2.281	9.3	20.2	9 18	0 52.48	-17 24.1	1.476	2.432	9.3	20.5
9 28	0 46.28	+ 9 39.8	1.273	2.266	4.5	19.9	9 28	0 44.98	-19 5.3	1.494	2.452	8.8	20.5
10 8	0 36.13	+ 9 13.9	1.256	2.252	2.5	19.7	10 8	0 37.17	-20 19.3	1.537	2.472	10.4	20.7
10 18	0 26.32	+ 8 42.4	1.264	2.239	7.1	20.0	10 18	0 30.11	-21 1.1	1.604	2.492	13.0	20.9
10 28	0 18.20	+ 8 12.7	1.298	2.225	12.0	20.2	10 28	0 24.74	-21 10.2	1.692	2.513	15.6	21.1
11 7	0 12.77	+ 7 51.6	1.353	2.212	16.4	20.5	11 7	0 21.60	-20 49.6	1.798	2.533	17.9	21.3
316131	2009 SW ₁₅	10	4.0 42°94	2°4/6.4	18		46950	1998 SA ₁₁₈	10	4.0 308°19	0°7/4.5	18	
8 29	1 3.58	+12 45.2	2.091	2.904	14.0	20.2	8 29	1 6.51	+ 6 35.8	1.723	2.564	15.3	17.7
9 8	0 59.08	+12 50.2	2.016	2.910	11.0	20.0	9 8	1 1.82	+ 6 42.9	1.638	2.553	11.8	17.4
9 18	0 52.73	+12 40.8	1.963	2.916	7.6	19.8	9 18	0 54.77	+ 6 38.4	1.575	2.543	7.7	17.2
9 28	0 45.09	+12 18.2	1.936	2.923	4.2	19.6	9 28	0 45.99	+ 6 24.3	1.537	2.533	3.2	16.9
10 8	0 36.99	+11 45.6	1.935	2.929	2.5	19.5	10 8	0 36.44	+ 6 4.6	1.526	2.523	1.8	16.8
10 18	0 29.29	+11 7.5	1.963	2.936	5.2	19.7	10 18	0 27.26	+ 5 44.0	1.542	2.513	6.4	17.0
10 28	0 22.82	+10 29.5	2.019	2.943	8.6	20.0	10 28	0 19.54	+ 5 28.0	1.584	2.504	10.8	17.3
11 7	0 18.20	+ 9 56.7	2.099	2.950	11.7	20.2	11 7	0 14.10	+ 5 21.3	1.650	2.495	14.6	17.5
325072	2008 DD ₁	10	4.0 128°77	2°5/1.7	17		41367	2000 AP ₉₉	10	4.0 295°56	1°7/6.0	18	
8 29	1 7.30	+ 1 17.4	1.789	2.640	14.4	21.3	8 29	0 59.76	+13 17.7	2.159	2.975	13.5	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
72458	2001 <i>DA</i> ₁₆		10 4.0	52°29'	7.8/26.4	18	256607	2007 <i>VW</i> ₅₂		10 4.0	45°16'	0.7/4.6	17
8 29	1 3.39	-12 27.6	1.614	2.492	14.3	19.1	8 29	1 3.65	+10 39.8	1.025	1.893	21.4	20.1
9 8	0 59.28	-14 4.1	1.570	2.500	11.2	19.0	9 8	1 0.33	+9 49.5	0.984	1.913	16.3	19.9
9 18	0 52.97	-15 37.3	1.548	2.508	8.7	18.8	9 18	0 53.98	+8 33.7	0.961	1.935	10.5	19.6
9 28	0 45.21	-16 57.1	1.552	2.516	7.9	18.8	9 28	0 45.65	+6 59.6	0.960	1.957	4.3	19.4
10 8	0 37.04	-17 54.8	1.580	2.525	9.3	18.9	10 8	0 36.88	+5 19.4	0.982	1.979	2.3	19.3
10 18	0 29.53	-18 25.0	1.633	2.534	12.0	19.1	10 18	0 29.15	+3 46.2	1.028	2.003	8.2	19.7
10 28	0 23.60	-18 26.3	1.708	2.543	14.9	19.3	10 28	0 23.72	+2 31.0	1.096	2.027	13.4	20.1
11 7	0 19.89	-18 0.7	1.802	2.552	17.4	19.5	11 7	0 21.24	+1 40.3	1.185	2.051	17.8	20.5
352890	2008 <i>YJ</i> ₃₇		10 4.0	315°52'	2°6/1.9	18	261425	2005 <i>UN</i> ₅₁₀		10 4.0	108°21'	4°2/29.8	18
8 29	1 1.61	+1 26.2	1.492	2.363	15.7	20.8	8 29	1 5.39	-7 24.6	2.201	3.058	11.8	20.6
9 8	0 58.44	+0 39.2	1.409	2.343	11.9	20.5	9 8	1 0.24	-8 3.0	2.139	3.064	9.0	20.4
9 18	0 52.79	-0 20.4	1.346	2.324	7.5	20.2	9 18	0 53.37	-8 41.8	2.101	3.070	6.1	20.2
9 28	0 45.29	-1 26.5	1.308	2.305	3.3	19.9	9 28	0 45.37	-9 15.7	2.091	3.075	4.2	20.1
10 8	0 36.95	-2 30.7	1.296	2.287	4.1	19.9	10 8	0 37.02	-9 39.8	2.109	3.081	5.2	20.2
10 18	0 28.95	-3 24.4	1.309	2.269	8.8	20.2	10 18	0 29.12	-9 50.4	2.155	3.087	7.8	20.4
10 28	0 22.48	-4 0.4	1.346	2.252	13.4	20.4	10 28	0 22.45	-9 45.3	2.226	3.092	10.7	20.6
11 7	0 18.42	-4 14.6	1.403	2.236	17.4	20.6	11 7	0 17.54	-9 24.3	2.321	3.098	13.2	20.8
15663	Periphas		10 4.0	338°74'	0°3/3.6	18	295520	2008 <i>RP</i> ₁₁₂		10 4.0	327°04'	1°6/7.0	18
8 29	1 2.27	+2 35.1	3.885	4.707	7.9	17.7	8 29	0 55.78	+14 5.0	4.014	4.802	8.2	20.8
9 8	0 57.26	+2 43.5	3.796	4.703	5.9	17.5	9 8	0 52.47	+13 55.0	3.919	4.797	6.5	20.7
9 18	0 51.23	+2 48.4	3.732	4.699	3.7	17.4	9 18	0 48.24	+13 36.2	3.848	4.792	4.6	20.5
9 28	0 44.51	+2 51.1	3.699	4.696	1.4	17.2	9 28	0 43.40	+13 9.9	3.805	4.787	2.6	20.4
10 8	0 37.52	+2 53.4	3.696	4.692	1.1	17.2	10 8	0 38.30	+12 37.7	3.790	4.782	1.6	20.3
10 18	0 30.71	+2 56.8	3.725	4.689	3.5	17.3	10 18	0 33.36	+12 2.1	3.806	4.777	3.0	20.4
10 28	0 24.53	+3 3.2	3.785	4.686	5.7	17.5	10 28	0 28.96	+11 25.8	3.852	4.773	5.0	20.5
11 7	0 19.34	+3 14.0	3.871	4.683	7.7	17.6	11 7	0 25.45	+10 51.7	3.925	4.768	6.9	20.7
136125	2003 <i>QU</i> ₆₅		10 4.0	334°91'	3°8/30.6	18	95556	2002 <i>EA</i> ₉₇		10 4.0	156°18'	1°8/6.2	18
8 29	1 2.75	-1 57.2	1.579	2.451	14.9	19.7	8 29	1 1.08	+13 33.2	2.344	3.151	12.8	19.8
9 8	0 58.99	-2 57.2	1.512	2.447	11.2	19.4	9 8	0 57.05	+13 1.7	2.261	3.153	10.1	19.6
9 18	0 52.93	-4 5.2	1.466	2.443	7.2	19.2	9 18	0 51.40	+12 14.8	2.202	3.155	6.9	19.4
9 28	0 45.27	-5 13.9	1.446	2.439	4.0	19.0	9 28	0 44.65	+11 14.8	2.168	3.157	3.6	19.2
10 8	0 37.01	-6 14.6	1.451	2.435	5.3	19.1	10 8	0 37.48	+10 6.0	2.163	3.159	1.9	19.1
10 18	0 29.25	-7 0.2	1.483	2.432	9.1	19.3	10 18	0 30.66	+8 53.9	2.188	3.160	4.7	19.3
10 28	0 23.03	-7 25.3	1.538	2.429	13.1	19.5	10 28	0 24.89	+7 44.7	2.241	3.162	8.0	19.5
11 7	0 19.05	-7 28.1	1.615	2.427	16.5	19.8	11 7	0 20.72	+6 43.9	2.319	3.163	11.0	19.7
249044	Barrymarshall		10 4.0	38°17'	2°2/5.7	17	67378	2000 <i>OC</i> ₃		10 4.0	127°66'	16°5/18.8	18
8 29	1 2.93	+12 47.9	0.967	1.834	22.4	19.5	8 29	1 13.60	+39 28.9	1.347	2.030	26.0	19.1
9 8	0 59.99	+12 19.4	0.926	1.852	17.4	19.3	9 8	1 8.99	+41 27.0	1.280	2.035	23.9	18.9
9 18	0 53.86	+11 22.0	0.902	1.872	11.7	19.0	9 18	1 0.34	+42 49.3	1.225	2.039	21.5	18.7
9 28	0 45.62	+10 1.3	0.898	1.892	5.5	18.8	9 28	0 48.42	+43 24.7	1.185	2.043	19.1	18.6
10 8	0 36.86	+8 28.2	0.916	1.913	2.7	18.7	10 8	0 34.90	+43 6.4	1.162	2.047	17.3	18.5
10 18	0 29.17	+6 56.1	0.958	1.936	8.0	19.1	10 18	0 21.98	+41 55.2	1.158	2.051	16.5	18.5
10 28	0 23.87	+5 37.6	1.022	1.959	13.4	19.5	10 28	0 11.80	+40 1.4	1.175	2.055	17.1	18.5
11 7	0 21.65	+4 40.9	1.105	1.982	17.9	19.8	11 7	0 5.68	+37 42.5	1.210	2.058	18.7	18.6
430699	2004 <i>BM</i> ₁₀₀		10 4.0	168°15'	2°0/5.8	17	513748	2012 <i>UJ</i> ₁₃₃		10 4.0	296°28'	4°0/7.1	18
8 29	1 8.29	+11 58.0	1.930	2.742	15.0	22.5	8 29	1 6.91	+14 40.1	1.692	2.504	16.7	20.9
9 8	1 2.83	+11 47.8	1.851	2.747	11.8	22.2	9 8	1 2.34	+15 9.1	1.603	2.494	13.5	20.7
9 18	0 55.23	+11 21.7	1.795	2.750	8.0	22.0	9 18	0 55.25	+15 20.7	1.535	2.483	9.8	20.4
9 28	0 46.13	+10 41.4	1.764	2.754	4.0	21.8	9 28	0 46.26	+15 14.3	1.490	2.472	6.0	20.2
10 8	0 36.46	+9 51.2	1.761	2.756	2.2	21.7	10 8	0 36.38	+14 51.6	1.472	2.462	4.1	20.1
10 18	0 27.25	+8 56.9	1.787	2.758	5.7	21.9	10 18	0 26.82	+14 17.2	1.480	2.451	6.7	20.2
10 28	0 19.47	+8 5.1	1.840	2.759	9.6	22.2	10 28	0 18.77	+13 38.0	1.514	2.441	10.7	20.4
11 7	0 13.80	+7 21.8	1.918	2.760	13.1	22.4	11 7	0 13.14	+13 1.5	1.571	2.431	14.5	20.6
389497	2010 <i>FG</i> ₂₂		10 4.0	12°91'	2°6/1.9	18	9463	Criscione		10 4.0	94°29'	0°4/4.4	18
8 29	1 4.31	+0 10.1	1.508	2.377	15.7	20.6	8 29	1 2.80	+7 50.0	2.119	2.951	13.1	18.9
9 8	1 0.21	-0 26.6	1.445	2.378	11.8	20.4	9 8	0 58.45	+7 24.5	2.046	2.956	10.1	18.8
9 18	0 53.71	-1 12.1	1.403	2.380	7.4	20.2	9 18	0 52.33	+6 47.0	1.995	2.962	6.5	18.6
9 28	0 45.57	-2 0.4	1.386	2.382	3.3	19.9	9 28	0 45.01	+6 0.5	1.971	2.967	2.6	18.3
10 8	0 36.84	-2 44.1	1.394	2.385	4.0	20.0	10 8	0 37.27	+5 9.8	1.975	2.972	1.5	18.2
10 18	0 28.71	-3 16.5	1.428	2.388	8.3	20.2	10 18	0 29.93	+4 20.3	2.008	2.977	5.4	18.5
10 28	0 22.22	-3 32.5	1.487	2.392	12.5	20.5	10 28	0 23.78	+3 37.3	2.068	2.983	9.0	18.8
11 7	0 18.11	-3 30.0	1.567	2.396	16.1	20.7	11 7	0 19.39	+3 5.0	2.153	2.988	12.1	19.0
143907	2003 <i>YV</i> ₆₃		10 4.0	284°88'	5°4/29.6	18	157821	1996 <i>TA</i> ₂₄		10 4.0	76°97'	0°1/4.1	18
8 29	1 5.16	-4 48.1	1.427	2.304	15.9	19.6	8 29	1 5.73	+7 0.1	1.623	2.468	15.9	20.5
9 8	1 1.11	-5 58.8	1.358	2.295	12.1	19.4	9 8	1 1.12	+6 36.7	1.559	2.477	12.1	20.3
9 18	0 54.45	-7 16.1	1.311	2.286	8.1	19.2	9 18	0 54.22	+5 59.1	1.516	2.486	7.8	20.0
9 28	0 45.90	-8 30.8	1.288	2.277	5.5	19.0	9 28	0 45.77	+5 11.3	1.498	2.495	3.0	19.8
10 8	0 36.60	-9 32.9	1.291	2.268	7.0	19.1	10 8	0 36.80	+4 19.3	1.507	2.504	1.9	19.7
10 18	0 27.83	-10 14.1	1.318	2.259	10.9	19.3	10 18	0 28.42	+3 30.2	1.543	2.513	6.6	20.0
10 28	0 20.81	-10 29.4	1.369	2.250	15.0	19.5	10 28	0 21.65	+2 50.3	1.605	2.522	10.9	20.3
11 7	0 16.35	-10 18.3	1.439	2.242	18.6	19.7	11 7	0 17.17	+2 24.3	1.689	2.531	14.5	20.6
31777	Amywinegar		10 4.0	61°99'	1°6/2.4	18	137458	1999 <i>TD</i> ₂₉₀		10 4.0	283°42'	0°8/3.3	18
8 29	1 2.68	+2 19.5	1.965	2.817	13.2	18.5	8 29						

EPHEMERIDES

10 4.0

10 4.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
130214	2000 AC ₂₂₇	10	4.0 251 ^o 00	0 ^o / 3.9 18			296219	2009 CY ₂₇	10	4.0 314 ^o 57	6 ^o / 8.7 18		
8 29	1 1.46	+ 6 43.5	2.535	3.364	11.3	21.8	8 29	1 8.08	+19 20.5	1.682	2.472	17.8	20.2
9 8	0 57.27	+ 6 16.2	2.444	3.354	8.7	21.6	9 8	1 3.42	+20 21.4	1.592	2.460	14.9	20.0
9 18	0 51.53	+ 5 38.9	2.377	3.344	5.6	21.3	9 18	0 56.08	+21 3.7	1.521	2.448	11.5	19.8
9 28	0 44.72	+ 4 54.2	2.337	3.333	2.1	21.1	9 28	0 46.66	+21 24.1	1.473	2.437	8.3	19.6
10 8	0 37.46	+ 4 6.3	2.326	3.322	1.4	21.0	10 8	0 36.19	+21 22.0	1.450	2.426	6.6	19.4
10 18	0 30.44	+ 3 19.6	2.344	3.312	4.9	21.3	10 18	0 25.97	+21 0.1	1.453	2.415	7.9	19.5
10 28	0 24.35	+ 2 38.6	2.391	3.301	8.2	21.5	10 28	0 17.31	+20 25.0	1.481	2.405	11.1	19.6
11 7	0 19.74	+ 2 7.1	2.463	3.289	11.0	21.6	11 7	0 11.20	+19 45.1	1.532	2.395	14.6	19.8
20375	Sherrigerten	10	4.0 249 ^o 66	3 ^o / 7.8 18			405886	2006 EU ₆₇	10	4.0 228 ^o 17	1 ^o 8/ 1.8 18		
8 29	1 4.20	+17 27.0	1.883	2.681	15.9	18.6	8 29	1 1.21	+ 0 59.3	2.423	3.271	11.2	21.7
9 8	0 59.98	+17 25.5	1.794	2.674	12.9	18.4	9 8	0 57.09	+ 0 13.4	2.344	3.267	8.4	21.5
9 18	0 53.57	+17 3.8	1.726	2.667	9.4	18.1	9 18	0 51.42	- 0 39.7	2.289	3.263	5.2	21.3
9 28	0 45.57	+16 22.0	1.681	2.659	5.9	17.9	9 28	0 44.69	- 1 35.6	2.262	3.259	2.3	21.1
10 8	0 36.89	+15 23.3	1.663	2.652	3.9	17.8	10 8	0 37.56	- 2 29.2	2.264	3.254	2.9	21.1
10 18	0 28.54	+14 13.5	1.673	2.645	6.0	17.9	10 18	0 30.73	- 3 15.7	2.295	3.250	6.0	21.3
10 28	0 21.56	+13 0.7	1.709	2.637	9.6	18.1	10 28	0 24.89	- 3 51.0	2.354	3.245	9.1	21.5
11 7	0 16.68	+11 52.9	1.770	2.629	13.2	18.3	11 7	0 20.57	- 4 12.5	2.436	3.241	11.8	21.7
41856	2000 WL ₉₀	10	4.0 299 ^o 30	1 ^o 0/ 2.9 18			228122	2008 UH ₁₁	10	4.0 310 ^o 93	0 ^o 1/ 4.2 15		
8 29	1 2.58	+ 3 26.8	2.106	2.952	12.7	19.2	8 29	0 55.82	+ 6 10.5	4.314	5.134	7.2	20.8
9 8	0 58.34	+ 2 55.8	2.028	2.949	9.6	19.0	9 8	0 52.42	+ 5 54.5	4.226	5.132	5.4	20.6
9 18	0 52.30	+ 2 15.6	1.974	2.947	6.0	18.8	9 18	0 48.19	+ 5 33.1	4.164	5.129	3.5	20.5
9 28	0 45.03	+ 1 30.1	1.946	2.944	2.3	18.5	9 28	0 43.41	+ 5 8.1	4.131	5.127	1.4	20.3
10 8	0 37.28	+ 0 44.3	1.947	2.941	2.3	18.5	10 8	0 38.42	+ 4 41.5	4.128	5.124	0.8	20.3
10 18	0 29.89	+ 0 3.5	1.975	2.938	6.1	18.8	10 18	0 33.58	+ 4 15.4	4.155	5.122	3.0	20.4
10 28	0 23.66	- 0 27.5	2.031	2.936	9.6	19.0	10 28	0 29.24	+ 3 52.0	4.211	5.120	5.0	20.6
11 7	0 19.19	- 0 45.6	2.110	2.933	12.7	19.2	11 7	0 25.71	+ 3 33.2	4.295	5.117	6.8	20.7
13583	Bosret	10	4.0 91 ^o 42	1 ^o 5/ 2.6 18			497218	2004 XX ₁₀₂	10	4.0 317 ^o 77	18 ^o 7/ 20.8 17		
8 29	1 4.59	+ 2 15.4	1.874	2.725	13.8	18.0	8 29	1 4.63	+40 26.4	1.133	1.845	28.7	20.7
9 8	1 0.00	+ 1 42.5	1.805	2.729	10.4	17.8	9 8	1 2.73	+42 26.7	1.061	1.836	26.7	20.5
9 18	0 53.41	+ 1 0.6	1.759	2.733	6.5	17.6	9 18	0 56.72	+43 47.4	1.000	1.827	24.4	20.2
9 28	0 45.45	+ 0 14.2	1.739	2.736	2.5	17.4	9 28	0 47.20	+44 15.2	0.950	1.818	22.0	20.0
10 8	0 37.02	- 0 30.7	1.746	2.740	2.8	17.4	10 8	0 35.79	+43 40.8	0.916	1.810	19.9	19.9
10 18	0 29.06	- 1 8.5	1.782	2.743	6.8	17.7	10 18	0 24.80	+42 2.4	0.897	1.803	18.8	19.8
10 28	0 22.46	- 1 34.4	1.844	2.747	10.6	17.9	10 28	0 16.64	+39 30.5	0.896	1.796	19.1	19.8
11 7	0 17.86	- 1 45.6	1.928	2.750	13.8	18.1	11 7	0 12.82	+36 25.7	0.914	1.790	20.9	19.9
397929	2008 WA ₆₀	10	4.0 332 ^o 74	2 ^o 3/ 6.2 18			388177	2006 BM ₁₃₀	10	4.0 97 ^o 96	3 ^o 6/ 7.2 18		
8 29	1 0.54	+13 50.4	1.529	2.363	17.2	20.1	8 29	1 9.20	+14 53.6	1.844	2.646	16.0	21.2
9 8	0 57.55	+13 20.6	1.449	2.356	13.6	19.9	9 8	1 3.58	+15 13.4	1.776	2.660	12.8	21.0
9 18	0 52.18	+12 27.6	1.389	2.349	9.4	19.6	9 18	0 55.74	+15 16.1	1.729	2.675	9.1	20.8
9 28	0 45.07	+11 13.8	1.352	2.343	4.8	19.3	9 28	0 46.38	+15 1.7	1.707	2.689	5.4	20.7
10 8	0 37.24	+ 9 45.8	1.341	2.337	2.5	19.2	10 8	0 36.50	+14 33.4	1.712	2.702	3.6	20.6
10 18	0 29.85	+ 8 12.7	1.356	2.332	6.5	19.4	10 18	0 27.18	+13 55.8	1.746	2.716	5.9	20.7
10 28	0 24.02	+ 6 44.9	1.397	2.327	11.1	19.6	10 28	0 19.41	+13 15.5	1.806	2.729	9.5	21.0
11 7	0 20.52	+ 5 31.2	1.460	2.323	15.2	19.9	11 7	0 13.87	+12 38.9	1.891	2.742	12.8	21.2
117227	2004 RG ₃₂₆	10	4.0 241 ^o 57	1 ^o 2/ 5.3 18			513905	2013 YE ₃₀	10	4.0 271 ^o 27	1 ^o 7/ 5.5 18		
8 29	1 5.30	+ 8 58.2	2.432	3.248	12.2	19.5	8 29	1 5.04	+11 17.6	1.752	2.579	15.7	22.4
9 8	1 0.24	+ 9 4.5	2.343	3.242	9.5	19.3	9 8	1 0.86	+11 0.8	1.654	2.559	12.4	22.2
9 18	0 53.46	+ 9 0.9	2.278	3.237	6.3	19.1	9 18	0 54.31	+10 26.0	1.578	2.539	8.4	21.9
9 28	0 45.47	+ 8 48.5	2.239	3.232	2.9	18.9	9 28	0 45.96	+ 9 34.9	1.526	2.518	4.0	21.6
10 8	0 36.99	+ 8 30.1	2.230	3.226	1.6	18.8	10 8	0 36.72	+ 8 32.1	1.501	2.497	2.1	21.4
10 18	0 28.78	+ 8 9.1	2.250	3.220	4.8	19.0	10 18	0 27.72	+ 7 24.6	1.503	2.476	6.4	21.6
10 28	0 21.61	+ 7 49.5	2.298	3.215	8.1	19.2	10 28	0 20.10	+ 6 20.6	1.532	2.455	10.9	21.9
11 7	0 16.08	+ 7 35.1	2.372	3.209	11.1	19.4	11 7	0 14.72	+ 5 27.5	1.584	2.433	15.0	22.1
253482	2003 SM ₇₅	10	4.0 0 ^o 82	1 ^o 0/ 3.3 18			29035	2214 T ₋₁	10	4.1 33 ^o 11	0 ^o 7/ 3.5 18		
8 29	0 56.76	+ 7 5.0	0.964	1.855	20.5	18.9	8 29	1 3.02	+ 6 35.9	1.320	2.183	17.7	18.0
9 8	0 55.57	+ 6 10.6	0.907	1.851	15.6	18.6	9 8	0 59.54	+ 5 48.2	1.260	2.189	13.5	17.8
9 18	0 51.29	+ 4 51.3	0.869	1.849	9.9	18.3	9 18	0 53.45	+ 4 42.5	1.220	2.195	8.5	17.5
9 28	0 44.79	+ 3 15.2	0.850	1.849	3.6	17.9	9 28	0 45.56	+ 3 25.1	1.203	2.201	3.1	17.2
10 8	0 37.46	+ 1 35.3	0.854	1.850	3.3	17.9	10 8	0 37.06	+ 2 5.1	1.212	2.208	2.6	17.2
10 18	0 30.85	+ 0 5.7	0.880	1.853	9.5	18.3	10 18	0 29.24	+ 0 52.6	1.246	2.215	7.9	17.6
10 28	0 26.38	- 1 1.3	0.926	1.857	15.2	18.6	10 28	0 23.24	- 0 4.0	1.304	2.223	12.7	17.9
11 7	0 24.91	- 1 39.5	0.991	1.863	19.9	18.9	11 7	0 19.82	- 0 39.5	1.383	2.231	16.8	18.1
330627	2008 ED ₇₄	10	4.0 116 ^o 53	1 ^o 9/ 2.4 17			302727	2002 TG ₃₁₇	10	4.1 295 ^o 84	5 ^o 3/ 8.4 17		
8 29	1 9.20	+ 1 36.4	1.699	2.549	15.1	20.9	8 29	1 5.02	+18 41.1	1.833	2.625	16.4	21.2
9 8	1 3.53	+ 1 0.2	1.641	2.564	11.3	20.7	9 8	1 0.95	+19 9.0	1.728	2.600	13.7	20.9
9 18	0 55.64	+ 0 15.1	1.606	2.579	7.1	20.5	9 18	0 54.45	+19 17.6	1.643	2.576	10.4	20.7
9 28	0 46.29	- 0 33.5	1.596	2.593	2.9	20.3	9 28	0 46.05	+19 5.2	1.581	2.552	7.1	20.5
10 8	0 36.52	- 1 19.1	1.614	2.607	3.3	20.3	10 8	0 36.65	+18 32.5	1.545	2.527	5.3	20.3
10 18	0 27.42	- 1 55.6	1.661	2.620	7.4	20.6	10 18	0 27.37	+17 43.4	1.535	2.503	6.9	20.3
10 28	0 19.97	- 2 18.4	1.733	2.633	11.3	20.9	10 28	0 19.41	+16 45.2	1.552	2.479	10.5	20.5
11 7	0 14.79	- 2 25.0	1.828	2.645	14.6	21.1	11 7	0 13.71	+15 46.3	1.592	2.455	14.2	20.7
144152	2004 BY ₉₆	10	4.0 183 ^o 43	3 ^o 6/ 30.7 18			81360	2000 GL ₅					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
92955	2000 <i>RK</i> ₄₄	10	4.1 126°31	3°6/ 6.9 18			43845	1993 <i>OS</i> ₉	10	4.1 142°50	4°9/29.5 18		
8 29	1 9.94	+14 18.9	1.827	2.631	16.1	18.7	8 29	1 5.84	- 5 6.4	1.686	2.554	14.3	18.8
9 8	1 4.28	+14 46.4	1.752	2.637	12.9	18.5	9 8	1 1.13	- 6 20.1	1.627	2.559	10.8	18.6
9 18	0 56.28	+14 57.6	1.697	2.643	9.2	18.3	9 18	0 54.22	- 7 38.1	1.591	2.563	7.2	18.4
9 28	0 46.63	+14 52.2	1.668	2.649	5.5	18.1	9 28	0 45.83	- 8 52.2	1.581	2.568	5.0	18.3
10 8	0 36.35	+14 32.5	1.665	2.655	3.7	18.0	10 8	0 36.96	- 9 54.0	1.598	2.572	6.3	18.4
10 18	0 26.54	+14 2.9	1.690	2.661	6.1	18.1	10 18	0 28.65	-10 37.1	1.641	2.576	9.6	18.6
10 28	0 18.27	+13 29.7	1.743	2.666	9.8	18.4	10 28	0 21.90	-10 57.6	1.709	2.580	13.1	18.8
11 7	0 12.30	+12 59.1	1.820	2.671	13.2	18.6	11 7	0 17.35	-10 55.0	1.798	2.583	16.1	19.0
315987	2009 <i>DA</i> ₁₆	10	4.1 190°31	0°7/ 4.6 17			136584	1992 <i>EE</i> ₂₈	10	4.1 267°84	3°4/ 6.4 18		
8 29	1 8.04	+ 8 47.8	1.521	2.361	17.0	21.8	8 29	1 10.08	+12 30.5	1.684	2.500	16.7	19.9
9 8	1 3.21	+ 8 24.5	1.446	2.360	13.2	21.5	9 8	1 4.85	+13 1.7	1.592	2.486	13.4	19.7
9 18	0 55.78	+ 7 43.7	1.392	2.359	8.6	21.3	9 18	0 56.96	+13 17.7	1.520	2.472	9.5	19.4
9 28	0 46.48	+ 6 48.7	1.362	2.358	3.6	21.0	9 28	0 47.02	+13 17.8	1.472	2.458	5.4	19.1
10 8	0 36.45	+ 5 46.2	1.359	2.357	1.9	20.9	10 8	0 36.09	+13 3.8	1.451	2.444	3.5	19.0
10 18	0 26.95	+ 4 43.9	1.383	2.354	7.0	21.2	10 18	0 25.43	+12 39.8	1.458	2.430	6.7	19.2
10 28	0 19.19	+ 3 50.3	1.432	2.352	11.8	21.5	10 28	0 16.32	+12 12.2	1.491	2.415	11.0	19.4
11 7	0 13.97	+ 3 11.6	1.504	2.349	15.8	21.7	11 7	0 9.71	+11 48.0	1.547	2.400	15.0	19.6
81278	2000 <i>FK</i> ₅₆	10	4.1 332°53	1°8/ 2.5 18			153254	2001 <i>BF</i> ₄₇	10	4.1 286°50	0°2/ 3.8 18		
8 29	1 4.95	+ 1 14.6	1.769	2.625	14.3	19.4	8 29	1 0.13	+ 7 29.0	2.175	3.011	12.7	19.9
9 8	1 0.47	+ 0 49.6	1.695	2.621	10.8	19.2	9 8	0 56.52	+ 6 39.8	2.090	3.005	9.7	19.7
9 18	0 53.84	+ 0 16.2	1.644	2.619	6.8	19.0	9 18	0 51.20	+ 5 37.3	2.028	2.998	6.2	19.5
9 28	0 45.69	- 0 21.1	1.619	2.616	2.7	18.7	9 28	0 44.68	+ 4 25.5	1.994	2.991	2.3	19.2
10 8	0 36.97	- 0 56.3	1.620	2.613	3.1	18.7	10 8	0 37.69	+ 3 9.9	1.987	2.984	1.7	19.2
10 18	0 28.70	- 1 24.0	1.649	2.611	7.2	19.0	10 18	0 31.00	+ 1 57.0	2.010	2.977	5.6	19.4
10 28	0 21.85	- 1 39.5	1.704	2.608	11.2	19.2	10 28	0 25.39	+ 0 53.0	2.060	2.970	9.2	19.6
11 7	0 17.12	- 1 40.0	1.781	2.606	14.6	19.5	11 7	0 21.43	+ 0 2.7	2.134	2.964	12.4	19.8
252868	2002 <i>JR</i> ₅	10	4.1 160°78	4°4/28.5 18			168739	2000 <i>QG</i> ₅₇	10	4.1 81°94	3°2/ 1.6 18		
8 29	1 1.90	- 7 57.8	2.484	3.343	10.6	20.4	8 29	1 7.70	+ 1 8.8	1.298	2.168	17.6	19.7
9 8	0 57.52	- 9 4.2	2.421	3.346	8.0	20.2	9 8	1 2.91	+ 0 0.7	1.252	2.186	13.1	19.5
9 18	0 51.65	-10 11.6	2.383	3.349	5.6	20.1	9 18	0 55.46	- 1 18.8	1.227	2.204	8.2	19.2
9 28	0 44.79	-11 14.2	2.373	3.352	4.4	20.0	9 28	0 46.30	- 2 40.7	1.226	2.222	3.8	19.0
10 8	0 37.59	-12 6.6	2.392	3.355	5.4	20.1	10 8	0 36.71	- 3 54.7	1.251	2.240	4.8	19.1
10 18	0 30.75	-12 44.5	2.439	3.357	7.7	20.2	10 18	0 28.02	- 4 52.1	1.301	2.258	9.3	19.5
10 28	0 24.92	-13 5.2	2.511	3.359	10.2	20.4	10 28	0 21.33	- 5 27.2	1.375	2.275	13.7	19.8
11 7	0 20.59	-13 8.1	2.606	3.361	12.5	20.6	11 7	0 17.32	- 5 38.3	1.470	2.293	17.3	20.0
374741	2006 <i>SH</i> ₃₀	10	4.1 9°26	3°2/ 6.3 18			514809	2007 <i>TF</i> ₂₄₅	10	4.1 5°67	5°6/ 7.3 18		
8 29	1 0.64	+12 53.7	1.042	1.906	21.4	20.5	8 29	1 7.55	+14 5.7	1.284	2.119	19.9	20.2
9 8	0 58.43	+12 55.2	0.984	1.907	16.9	20.3	9 8	1 3.39	+15 18.8	1.218	2.119	16.1	19.9
9 18	0 53.11	+12 30.0	0.943	1.910	11.7	20.0	9 18	0 56.20	+16 13.7	1.169	2.120	11.8	19.7
9 28	0 45.53	+11 40.2	0.921	1.913	6.1	19.7	9 28	0 46.74	+16 47.5	1.142	2.123	7.6	19.5
10 8	0 37.11	+10 33.0	0.922	1.919	3.3	19.6	10 8	0 36.34	+17 0.5	1.139	2.127	5.6	19.4
10 18	0 29.43	+ 9 19.3	0.946	1.925	7.9	19.9	10 18	0 26.51	+16 56.2	1.161	2.132	8.1	19.5
10 28	0 23.93	+ 8 11.2	0.992	1.933	13.2	20.2	10 28	0 18.73	+16 42.0	1.206	2.139	12.2	19.8
11 7	0 21.50	+ 7 18.7	1.057	1.942	18.0	20.5	11 7	0 13.94	+16 26.1	1.272	2.147	16.2	20.1
291751	2006 <i>KF</i> ₅	10	4.1 60°89	1°4/ 5.4 18			352393	2007 <i>WV</i> ₃₆	10	4.1 247°09	2°9/ 6.9 18		
8 29	1 3.54	+10 58.8	1.701	2.534	15.8	20.8	8 29	1 4.40	+14 29.1	2.012	2.818	14.7	21.6
9 8	0 59.44	+10 33.8	1.633	2.542	12.3	20.6	9 8	0 59.98	+14 28.2	1.925	2.813	11.7	21.4
9 18	0 53.17	+ 9 51.4	1.587	2.550	8.2	20.4	9 18	0 53.53	+14 10.5	1.858	2.807	8.3	21.2
9 28	0 45.43	+ 8 54.7	1.565	2.558	3.8	20.2	9 28	0 45.61	+13 36.9	1.817	2.802	4.8	20.9
10 8	0 37.18	+ 7 49.6	1.569	2.566	1.9	20.1	10 8	0 37.09	+12 50.7	1.804	2.796	2.9	20.8
10 18	0 29.46	+ 6 43.3	1.602	2.575	6.0	20.3	10 18	0 28.88	+11 57.0	1.818	2.790	5.5	21.0
10 28	0 23.23	+ 5 43.5	1.660	2.583	10.2	20.6	10 28	0 21.94	+11 2.4	1.860	2.784	9.1	21.2
11 7	0 19.15	+ 4 56.2	1.742	2.592	13.8	20.9	11 7	0 16.96	+10 13.4	1.926	2.778	12.5	21.4
317334	2002 <i>JH</i> ₈₇	10	4.1 131°58	3°6/ 7.4 17			253466	2003 <i>SS</i> ₂₅	10	4.1 352°77	1°5/ 2.9 17		
8 29	1 5.94	+17 2.9	1.576	2.385	17.9	21.0	8 29	0 57.99	+ 4 48.6	0.961	1.856	20.2	19.7
9 8	1 1.52	+16 41.9	1.504	2.392	14.4	20.8	9 8	0 56.61	+ 4 10.2	0.901	1.847	15.4	19.4
9 18	0 54.63	+15 56.4	1.451	2.399	10.3	20.6	9 18	0 52.07	+ 3 11.2	0.859	1.841	9.8	19.0
9 28	0 46.02	+14 48.1	1.422	2.406	6.0	20.3	9 28	0 45.19	+ 1 58.9	0.837	1.836	3.6	18.7
10 8	0 36.79	+13 22.5	1.420	2.412	3.6	20.2	10 8	0 37.38	+ 0 44.7	0.837	1.833	3.7	18.7
10 18	0 28.14	+11 48.5	1.444	2.418	6.4	20.4	10 18	0 30.23	- 0 19.0	0.858	1.831	9.8	19.0
10 28	0 21.20	+10 16.4	1.495	2.424	10.6	20.7	10 28	0 25.27	- 1 1.8	0.900	1.831	15.5	19.3
11 7	0 16.70	+ 8 55.6	1.569	2.429	14.5	20.9	11 7	0 23.41	- 1 18.1	0.959	1.833	20.3	19.6
456622	2007 <i>HW</i> ₄₁	10	4.1 136°12	0°0/ 3.9 18			220182	2002 <i>UD</i> ₃₄	10	4.1 11°15	6°1/10.1 18		
8 29	1 2.51	+ 6 21.0	2.522	3.351	11.4	22.1	8 29	0 50.47	+23 28.0	0.924	1.771	24.8	19.2
9 8	0 57.97	+ 5 52.9	2.448	3.358	8.7	22.0	9 8	0 50.99	+22 48.6	0.870	1.775	20.6	19.0
9 18	0 51.93	+ 5 15.5	2.398	3.365	5.5	21.8	9 18	0 48.46	+21 21.8	0.831	1.781	15.5	18.7
9 28	0 44.90	+ 4 31.7	2.375	3.372	2.1	21.6	9 28	0 43.77	+19 9.2	0.810	1.789	10.1	18.5
10 8	0 37.53	+ 3 45.6	2.382	3.379	1.4	21.5	10 8	0 38.34	+16 22.6	0.809	1.799	6.2	18.3
10 18	0 30.50	+ 3 1.5	2.418	3.385	4.8	21.8	10 18	0 33.67	+13 21.2	0.831	1.812	8.0	18.5
10 28	0 24.46	+ 2 23.8	2.483	3.391	8.0	22.0	10 28	0 31.10	+10 27.6	0.875	1.827	12.9	18.8
11 7	0 19.92	+ 1 55.7	2.573	3.397	10.7	22.2	11 7	0 31.40	+ 7 59.9	0.939	1.843	17.8	19.1
147090	2002 <i>SZ</i> ₅₃	10	4.1 341°87	5°6/ 8.9 18			236522	2006 <i>HQ</i> ₄	10	4.1 71°95	1°2/ 2.9 18		
8 29	0 56.55	+											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
7955	Ogiwara		10 4.1 240°29	0°8/ 4.9 18			210138	2006 SW ₁₉		10 4.1 20°43	0°2/ 3.9 18		
8 29	1 3.89	+ 9 4.5	2.155	2.979	13.2	18.6	8 29	1 0.45	+ 7 22.4	1.485	2.343	16.4	19.8
9 8	0 59.43	+ 8 43.6	2.065	2.971	10.2	18.4	9 8	0 57.36	+ 6 39.2	1.424	2.350	12.5	19.6
9 18	0 53.11	+ 8 9.7	1.998	2.961	6.7	18.2	9 18	0 51.99	+ 5 39.4	1.383	2.357	7.9	19.3
9 28	0 45.45	+ 7 25.1	1.957	2.952	2.9	17.9	9 28	0 45.06	+ 4 28.1	1.367	2.365	3.0	19.1
10 8	0 37.22	+ 6 34.2	1.945	2.942	1.5	17.8	10 8	0 37.62	+ 3 13.5	1.377	2.374	2.1	19.0
10 18	0 29.29	+ 5 42.2	1.962	2.932	5.4	18.0	10 18	0 30.74	+ 2 4.1	1.412	2.383	7.0	19.4
10 28	0 22.50	+ 4 55.1	2.006	2.922	9.1	18.3	10 28	0 25.45	+ 1 7.6	1.473	2.393	11.4	19.6
11 7	0 17.49	+ 4 17.5	2.075	2.912	12.4	18.4	11 7	0 22.40	+ 0 29.3	1.555	2.404	15.2	19.9
476807	2008 UP ₁₈₈		10 4.1 20°28	15°8/ 1.5 18			50444	2000 DG ₃₄		10 4.1 40°43	4°0/ 7.3 18		
8 29	1 18.54	-27 59.3	0.798	1.681	24.5	18.7	8 29	1 6.52	+15 0.7	1.654	2.468	17.0	18.7
9 8	1 11.68	-27 52.9	0.787	1.703	20.9	18.6	9 8	1 1.88	+15 25.5	1.586	2.477	13.7	18.5
9 18	1 0.91	-27 13.4	0.790	1.729	17.7	18.5	9 18	0 54.86	+15 31.6	1.538	2.486	9.8	18.3
9 28	0 48.17	-25 51.2	0.811	1.757	15.9	18.5	9 28	0 46.18	+15 19.2	1.514	2.495	6.0	18.1
10 8	0 35.79	-23 46.1	0.851	1.788	16.2	18.7	10 8	0 36.89	+14 51.1	1.515	2.505	4.0	18.0
10 18	0 25.69	-21 6.7	0.912	1.821	18.2	18.9	10 18	0 28.14	+14 12.5	1.544	2.516	6.4	18.1
10 28	0 19.05	-18 5.3	0.991	1.856	20.8	19.2	10 28	0 21.02	+13 30.8	1.598	2.526	10.1	18.4
11 7	0 16.18	-14 54.3	1.088	1.893	23.3	19.6	11 7	0 16.25	+12 52.9	1.675	2.537	13.6	18.6
230332	2002 CT ₁₁₉		10 4.1 151°51	7°1/26.3 18			339266	2004 VD ₉₁		10 4.1 12°69	7°9/11.3 18		
8 29	1 4.17	-11 26.0	1.826	2.696	13.3	20.0	8 29	1 0.29	+24 18.7	1.300	2.099	21.5	19.7
9 8	0 59.77	-13 10.4	1.773	2.700	10.4	19.9	9 8	0 57.89	+24 44.4	1.234	2.102	18.2	19.5
9 18	0 53.33	-14 53.8	1.745	2.704	7.9	19.7	9 18	0 52.67	+24 37.6	1.183	2.107	14.4	19.3
9 28	0 45.52	-16 26.4	1.743	2.708	7.1	19.7	9 28	0 45.41	+23 56.1	1.153	2.112	10.6	19.1
10 8	0 37.26	-17 39.6	1.767	2.711	8.6	19.8	10 8	0 37.37	+22 42.6	1.144	2.119	8.1	19.0
10 18	0 29.52	-18 27.6	1.817	2.714	11.2	20.0	10 18	0 29.93	+21 5.3	1.159	2.126	8.7	19.1
10 28	0 23.21	-18 47.8	1.890	2.717	14.0	20.2	10 28	0 24.42	+19 17.1	1.197	2.135	11.8	19.3
11 7	0 18.93	-18 41.4	1.983	2.719	16.4	20.3	11 7	0 21.68	+17 31.8	1.257	2.144	15.5	19.5
224134	2005 QU ₃₃		10 4.1 65°27	0°2/ 4.3 16			255478	2005 YR ₁₈₁		10 4.1 184°31	4°2/28.1 18		
8 29	1 7.61	+ 7 27.4	1.373	2.224	17.9	20.9	8 29	1 3.27	-11 30.6	3.169	4.017	8.8	21.0
9 8	1 2.79	+ 7 3.2	1.323	2.244	13.6	20.6	9 8	0 58.28	-12 18.1	3.102	4.017	6.8	20.9
9 18	0 55.39	+ 6 22.7	1.292	2.263	8.7	20.4	9 18	0 52.04	-13 4.0	3.060	4.017	5.0	20.8
9 28	0 46.31	+ 5 30.7	1.286	2.282	3.4	20.2	9 28	0 44.99	-13 44.1	3.047	4.016	4.2	20.7
10 8	0 36.78	+ 4 34.4	1.305	2.302	2.0	20.1	10 8	0 37.66	-14 14.6	3.063	4.014	5.0	20.8
10 18	0 28.08	+ 3 41.9	1.350	2.322	7.2	20.5	10 18	0 30.61	-14 32.7	3.109	4.012	6.8	20.9
10 28	0 21.32	+ 3 0.5	1.421	2.341	11.7	20.8	10 28	0 24.38	-14 36.7	3.181	4.010	8.8	21.0
11 7	0 17.15	+ 2 34.8	1.513	2.361	15.6	21.1	11 7	0 19.40	-14 26.5	3.276	4.007	10.6	21.2
408290	2013 GX ₁₂		10 4.1 151°57	5°2/27.7 18			513825	2013 EC ₃₅		10 4.1 118°60	2°5/30.7 18		
8 29	1 2.50	- 9 55.5	2.333	3.194	11.1	21.7	8 29	1 1.97	- 1 17.9	2.624	3.471	10.4	22.6
9 8	0 58.09	-11 8.7	2.274	3.198	8.5	21.5	9 8	0 57.45	- 2 24.2	2.566	3.489	7.7	22.4
9 18	0 52.08	-12 21.4	2.240	3.202	6.2	21.4	9 18	0 51.56	- 3 35.3	2.533	3.505	4.9	22.3
9 28	0 45.01	-13 27.4	2.233	3.205	5.2	21.3	9 28	0 44.81	- 4 46.3	2.529	3.522	2.7	22.1
10 8	0 37.59	-14 20.6	2.254	3.209	6.3	21.4	10 8	0 37.80	- 5 51.7	2.555	3.538	3.5	22.2
10 18	0 30.56	-14 56.7	2.303	3.212	8.6	21.5	10 18	0 31.17	- 6 47.1	2.611	3.553	6.1	22.4
10 28	0 24.63	-15 13.3	2.377	3.215	11.1	21.7	10 28	0 25.51	- 7 29.1	2.694	3.568	8.7	22.6
11 7	0 20.30	-15 10.2	2.473	3.218	13.3	21.9	11 7	0 21.25	- 7 55.8	2.802	3.583	11.1	22.8
283861	2003 WB ₃₉		10 4.1 4°80	3°8/ 7.1 18			483406	1999 RK ₃₀		10 4.1 346°13	27°2/26.2 17		
8 29	1 3.36	+14 26.1	1.449	2.280	18.2	20.6	8 29	1 19.03	+32 6.7	0.967	1.731	29.6	19.6
9 8	0 59.84	+14 42.4	1.378	2.280	14.6	20.4	9 8	1 16.47	+38 9.6	0.889	1.697	28.4	19.3
9 18	0 53.74	+14 37.8	1.326	2.280	10.4	20.2	9 18	1 8.20	+44 14.2	0.830	1.665	27.5	19.1
9 28	0 45.78	+14 12.8	1.296	2.281	6.1	19.9	9 28	0 53.09	+49 52.2	0.791	1.637	27.2	19.0
10 8	0 37.08	+13 31.0	1.291	2.283	3.8	19.8	10 8	0 31.24	+54 31.3	0.770	1.613	27.8	18.9
10 18	0 28.89	+12 39.2	1.311	2.286	6.8	20.0	10 18	0 5.16	+57 45.9	0.764	1.593	29.1	18.9
10 28	0 22.42	+11 46.1	1.356	2.290	11.1	20.2	10 28	23 40.27	+59 31.4	0.772	1.577	30.7	18.9
11 7	0 18.48	+10 59.8	1.423	2.294	15.0	20.5	11 7	23 22.23	+60 6.5	0.790	1.565	32.2	19.0
431664	2008 CX ₇₅		10 4.1 218°29	2°0/ 2.3 17			110952	2001 UV ₁₆₀		10 4.1 191°56	1°4/ 2.6 18		
8 29	1 7.46	+ 2 0.6	1.760	2.611	14.6	22.0	8 29	1 2.83	+ 2 45.7	2.056	2.904	12.9	19.7
9 8	1 2.49	+ 1 17.1	1.681	2.604	11.1	21.8	9 8	0 58.60	+ 2 5.2	1.982	2.904	9.7	19.5
9 18	0 55.22	+ 0 22.9	1.623	2.596	7.0	21.5	9 18	0 52.55	+ 1 15.4	1.931	2.904	6.1	19.3
9 28	0 46.32	+ 0 36.7	1.592	2.588	2.9	21.3	9 28	0 45.25	+ 0 21.0	1.907	2.904	2.4	19.1
10 8	0 36.74	+ 0 34.8	1.588	2.580	3.4	21.3	10 8	0 37.49	+ 0 32.6	1.911	2.904	2.7	19.1
10 18	0 27.58	+ 0 24.3	1.612	2.571	7.6	21.5	10 18	0 30.12	+ 0 19.6	1.943	2.904	6.4	19.3
10 28	0 19.88	+ 0 25.5	1.662	2.561	11.8	21.8	10 28	0 23.95	+ 0 15.1	2.002	2.903	9.9	19.6
11 7	0 14.39	+ 0 16.8	1.735	2.551	15.3	22.0	11 7	0 19.56	+ 0 16.0	2.084	2.903	13.0	19.8
76525	2000 GO ₅₃		10 4.1 277°36	0°3/ 4.5 18			260412	2004 XS ₂₇		10 4.1 229°18	1°0/ 2.8 18		
8 29	1 1.25	+ 7 41.1	2.420	3.248	11.8	20.1	8 29	1 1.77	+ 2 59.9	2.630	3.468	10.7	21.2
9 8	0 57.24	+ 7 17.0	2.330	3.239	9.1	19.9	9 8	0 57.46	+ 2 25.6	2.544	3.461	8.1	21.0
9 18	0 51.62	+ 6 42.1	2.263	3.229	5.9	19.7	9 18	0 51.69	+ 1 43.7	2.482	3.453	5.1	20.8
9 28	0 44.88	+ 5 58.8	2.224	3.220	2.4	19.4	9 28	0 44.91	+ 0 57.6	2.448	3.446	1.9	20.6
10 8	0 37.68	+ 5 11.2	2.213	3.210	1.3	19.3	10 8	0 37.72	+ 0 11.6	2.444	3.438	2.1	20.6
10 18	0 30.73	+ 4 24.0	2.231	3.201	4.9	19.6	10 18	0 30.78	+ 0 30.2	2.469	3.430	5.2	20.8
10 28	0 24.75	+ 3 42.0	2.277	3.191	8.3	19.8	10 28	0 24.75	+ 1 3.7	2.523	3.421	8.3	21.0
11 7	0 20.30	+ 3 9.2	2.348	3.182	11.3	20.0	11 7	0 20.13	+ 1 26.0	2.601	3.413	10.9	21.1
191538	2003 UR ₂₂₇		10 4.1 297°07	1°3/ 5.4 17			112035	2002 HW ₁₀		10 4.1 65°68	5°3/29.4 18		
8 29	1 2.34	+ 9 49.3	2.280	3.101	12.7	20.1	8 29	1 8.57	-11 24.7				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
477010	2008 <i>YO</i> ₁₄₆	10	4.1 334°14	1.6°/ 2.7 18			442047	2010 <i>RG</i> ₃₀	10	4.1 12°57	2°5/ 6.3 18		
8 29	1 2.49	+ 3 20.5	1.575	2.437	15.4	21.0	8 29	1 6.03	+11 44.7	1.886	2.705	15.0	21.0
9 8	0 58.93	+ 2 40.1	1.501	2.431	11.7	20.7	9 8	1 1.30	+12 1.6	1.808	2.706	11.9	20.8
9 18	0 53.05	+ 1 47.1	1.449	2.425	7.4	20.5	9 18	0 54.43	+12 4.2	1.752	2.707	8.2	20.6
9 28	0 45.51	+ 0 46.9	1.421	2.419	2.8	20.2	9 28	0 46.04	+11 53.3	1.721	2.709	4.4	20.3
10 8	0 37.32	- 0 13.0	1.420	2.414	3.1	20.2	10 8	0 37.06	+11 31.8	1.716	2.710	2.6	20.2
10 18	0 29.58	- 1 5.2	1.444	2.409	7.7	20.5	10 18	0 28.47	+11 4.0	1.740	2.712	5.7	20.4
10 28	0 23.35	- 1 42.9	1.494	2.405	12.0	20.7	10 28	0 21.27	+10 35.6	1.790	2.715	9.5	20.7
11 7	0 19.38	- 2 2.2	1.565	2.401	15.8	20.9	11 7	0 16.15	+10 12.0	1.864	2.717	12.9	20.9
226452	2003 <i>SV</i> ₉₈	10	4.1 14°79	9°0/13.7 18			70531	1999 <i>TT</i> ₁₁₉	10	4.1 49°02	1°1/ 4.8 18		
8 29	1 1.27	+29 5.5	1.716	2.461	19.1	19.0	8 29	1 11.98	+ 6 4.6	1.571	2.409	16.6	18.5
9 8	0 58.12	+29 52.0	1.646	2.467	16.6	18.8	9 8	1 6.03	+ 6 34.2	1.506	2.418	12.8	18.3
9 18	0 52.59	+30 10.8	1.592	2.475	13.9	18.7	9 18	0 57.52	+ 6 53.0	1.462	2.428	8.4	18.0
9 28	0 45.35	+29 58.9	1.558	2.484	11.2	18.5	9 28	0 47.23	+ 7 2.4	1.443	2.438	3.6	17.8
10 8	0 37.43	+29 16.6	1.546	2.493	9.3	18.4	10 8	0 36.33	+ 7 5.4	1.451	2.448	1.9	17.7
10 18	0 29.98	+28 8.5	1.559	2.504	9.2	18.5	10 18	0 26.09	+ 7 6.1	1.487	2.459	6.6	18.0
10 28	0 24.13	+26 43.2	1.596	2.515	10.8	18.6	10 28	0 17.65	+ 7 9.0	1.549	2.470	11.0	18.3
11 7	0 20.63	+25 11.4	1.656	2.528	13.2	18.8	11 7	0 11.78	+ 7 18.3	1.634	2.480	14.7	18.6
33274	Beauringham	10	4.1 164°25	4°2/30.1 18			185117	2006 <i>SP</i> ₅₄	10	4.1 326°80	5°4/30.9 18		
8 29	1 6.56	- 5 16.4	1.950	2.808	13.0	18.8	8 29	1 5.49	- 5 2.7	1.100	1.991	18.5	19.7
9 8	1 1.45	- 6 9.9	1.885	2.812	9.9	18.6	9 8	1 2.34	- 5 30.1	1.026	1.969	14.3	19.3
9 18	0 54.37	- 7 6.7	1.844	2.815	6.5	18.4	9 18	0 55.87	- 6 2.4	0.970	1.949	9.5	19.0
9 28	0 45.95	- 8 0.1	1.830	2.817	4.3	18.2	9 28	0 46.80	- 6 31.1	0.936	1.929	5.7	18.7
10 8	0 37.09	- 8 43.8	1.843	2.819	5.3	18.3	10 8	0 36.52	- 6 46.6	0.925	1.911	7.0	18.8
10 18	0 28.71	- 9 12.7	1.884	2.821	8.4	18.5	10 18	0 26.71	- 6 41.2	0.936	1.893	11.9	19.0
10 28	0 21.70	- 9 23.4	1.951	2.823	11.7	18.7	10 28	0 19.03	- 6 10.4	0.967	1.877	17.0	19.2
11 7	0 16.67	- 9 15.3	2.040	2.824	14.5	18.9	11 7	0 14.59	- 5 14.4	1.017	1.863	21.6	19.4
383173	2005 <i>VW</i> ₁₁₈	10	4.1 345°36	23°0/23.5 18			7255	1993 <i>VY</i> ₁	10	4.1 96°65	1°5/ 3.0 18		
8 29	1 2.34	+42 35.5	1.158	1.855	28.9	19.3	8 29	1 11.05	+ 2 33.6	1.448	2.302	17.0	17.3
9 8	1 1.46	+45 59.2	1.089	1.837	27.6	19.1	9 8	1 5.34	+ 2 10.3	1.393	2.318	12.8	17.1
9 18	0 56.42	+48 51.2	1.031	1.820	26.2	19.0	9 18	0 57.03	+ 1 36.3	1.359	2.333	8.0	16.9
9 28	0 47.42	+50 56.7	0.985	1.806	24.9	18.8	9 28	0 47.01	+ 0 57.1	1.350	2.348	3.1	16.6
10 8	0 35.83	+52 3.5	0.952	1.794	23.8	18.7	10 8	0 36.51	+ 0 19.3	1.368	2.363	3.0	16.7
10 18	0 24.03	+52 4.8	0.932	1.784	23.1	18.6	10 18	0 26.81	- 0 10.5	1.413	2.377	7.8	17.0
10 28	0 14.97	+51 3.7	0.926	1.776	23.1	18.6	10 28	0 19.04	- 0 27.1	1.482	2.391	12.2	17.3
11 7	0 10.80	+49 14.1	0.933	1.771	23.7	18.6	11 7	0 13.90	- 0 27.9	1.574	2.405	15.9	17.6
389826	2012 <i>BU</i> ₆₀	10	4.1 315°89	3°1/27.5 16			448606	2010 <i>UG</i> ₂₅	10	4.1 357°26	10°1/27.6 18		
8 29	0 54.63	- 8 30.3	4.050	4.907	6.9	20.5	8 29	1 4.60	-17 32.4	1.275	2.160	16.8	18.7
9 8	0 51.65	- 9 38.1	3.976	4.900	5.2	20.4	9 8	1 0.95	-18 16.3	1.224	2.153	13.8	18.5
9 18	0 47.81	-10 46.5	3.929	4.893	3.7	20.3	9 18	0 54.48	-18 49.4	1.192	2.148	11.2	18.3
9 28	0 43.38	-11 52.1	3.912	4.886	3.1	20.2	9 28	0 46.09	-19 1.3	1.182	2.144	10.1	18.3
10 8	0 38.74	-12 51.3	3.924	4.879	3.9	20.3	10 8	0 37.10	-18 44.6	1.195	2.143	11.4	18.3
10 18	0 34.24	-13 41.4	3.966	4.873	5.4	20.4	10 18	0 28.89	-17 56.3	1.230	2.143	14.1	18.5
10 28	0 30.26	-14 20.1	4.035	4.866	7.0	20.5	10 28	0 22.69	-16 38.1	1.285	2.145	17.3	18.7
11 7	0 27.12	-14 46.2	4.128	4.860	8.6	20.6	11 7	0 19.23	-14 55.1	1.358	2.148	20.2	18.9
180262	2003 <i>WH</i> ₁₈	10	4.1 320°09	4°6/ 7.1 17			184805	2005 <i>TX</i> ₁₁₅	10	4.1 75°01	0°5/ 4.7 18		
8 29	1 7.66	+14 31.7	1.344	2.173	19.4	20.3	8 29	1 3.37	+ 8 21.4	2.022	2.854	13.7	20.5
9 8	1 3.51	+15 6.1	1.266	2.166	15.7	20.0	9 8	0 59.01	+ 7 57.4	1.953	2.863	10.5	20.3
9 18	0 56.35	+15 19.7	1.207	2.160	11.4	19.8	9 18	0 52.81	+ 7 20.7	1.907	2.872	6.8	20.1
9 28	0 46.91	+15 11.4	1.169	2.153	6.9	19.5	9 28	0 45.38	+ 6 34.3	1.886	2.882	2.8	19.9
10 8	0 36.43	+14 43.4	1.156	2.147	4.6	19.4	10 8	0 37.53	+ 5 43.2	1.894	2.891	1.5	19.8
10 18	0 26.40	+14 1.6	1.168	2.142	7.6	19.5	10 18	0 30.13	+ 4 53.0	1.929	2.900	5.4	20.1
10 28	0 18.30	+13 15.1	1.204	2.136	12.3	19.8	10 28	0 23.97	+ 4 9.2	1.992	2.909	9.1	20.3
11 7	0 13.12	+12 33.1	1.261	2.131	16.6	20.0	11 7	0 19.66	+ 3 36.3	2.080	2.919	12.3	20.6
407649	2011 <i>FK</i> ₇₀	10	4.1 291°09	0°7/ 4.6 17			521505	2015 <i>OC</i> ₉₆	10	4.1 83°92	1°0/ 2.9 18		
8 29	1 10.58	+ 5 27.4	2.314	3.133	12.6	20.9	8 29	1 1.72	+ 5 28.4	2.023	2.867	13.2	21.5
9 8	1 4.55	+ 5 53.2	2.207	3.110	9.8	20.7	9 8	0 57.71	+ 4 25.4	1.961	2.880	9.9	21.3
9 18	0 56.47	+ 6 12.3	2.125	3.088	6.4	20.5	9 18	0 51.95	+ 3 10.5	1.921	2.893	6.2	21.1
9 28	0 46.86	+ 6 25.8	2.070	3.065	2.7	20.2	9 28	0 45.04	+ 1 49.2	1.909	2.906	2.3	20.9
10 8	0 36.47	+ 6 35.6	2.045	3.042	1.5	20.1	10 8	0 37.78	+ 0 28.1	1.925	2.919	2.3	20.9
10 18	0 26.23	+ 6 43.9	2.050	3.019	5.4	20.3	10 18	0 30.97	- 0 45.9	1.969	2.932	6.1	21.2
10 28	0 17.07	+ 6 54.0	2.085	2.996	9.1	20.5	10 28	0 25.39	- 1 47.0	2.041	2.944	9.7	21.4
11 7	0 9.73	+ 7 8.8	2.145	2.973	12.4	20.7	11 7	0 21.57	- 2 31.5	2.137	2.957	12.7	21.7
266993	2010 <i>XV</i> ₄₄	10	4.1 351°05	9°1/24.2 18			49239	1998 <i>SE</i> ₁₆₄	10	4.1 53°06	5°8/30.4 18		
8 29	1 1.90	-18 55.3	1.841	2.710	13.2	19.6	8 29	1 12.31	- 9 38.8	1.513	2.378	15.8	16.9
9 8	0 58.15	-20 21.7	1.791	2.706	11.0	19.4	9 8	1 5.97	-10 3.9	1.474	2.400	12.1	16.8
9 18	0 52.37	-21 40.0	1.763	2.702	9.4	19.3	9 18	0 57.23	-10 26.0	1.456	2.423	8.3	16.6
9 28	0 45.21	-22 41.3	1.760	2.699	9.2	19.3	9 28	0 47.02	-10 38.2	1.464	2.447	5.9	16.5
10 8	0 37.60	-23 18.3	1.781	2.696	10.5	19.4	10 8	0 36.58	-10 35.2	1.498	2.470	6.8	16.7
10 18	0 30.49	-23 27.1	1.826	2.694	12.6	19.5	10 18	0 27.10	-10 14.1	1.558	2.494	9.9	16.9
10 28	0 24.79	-23 7.1	1.892	2.693	15.0	19.7	10 28	0 19.57	- 9 34.6	1.643	2.518	13.3	17.2
11 7	0 21.10	-22 20.8	1.976	2.692	17.1	19.8	11 7	0 14.58	- 8 38.8	1.749	2.542	16.2	17.4
198166	2004 <i>TP</i> ₇₇	10	4.1 181°13	0°6/ 3.6 18			478885	2012 <i>WD</i> ₈	10	4.1 338°55	8°5/28.7 18		
8 29	1 8.56	+ 3 49.1											

EPHEMERIDES

10 4.1

10 4.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
494196	2016 <i>HQ</i> ₁	10	4.1	69°00	0°3/ 4.3	17	481945	2009 <i>CL</i> ₄₉	10	4.1	283°03	3°3/ 6.5	18
8 29	1 9.67	+ 7 49.4	1.245	2.099	19.2	21.2	8 29	1 10.30	+12 16.9	1.863	2.672	15.6	21.3
9 8	1 4.53	+ 7 24.4	1.200	2.122	14.6	21.0	9 8	1 4.82	+12 56.3	1.770	2.660	12.5	21.1
9 18	0 56.59	+ 6 41.4	1.175	2.145	9.4	20.7	9 18	0 56.89	+13 22.6	1.698	2.648	8.9	20.9
9 28	0 46.85	+ 5 45.7	1.172	2.169	3.7	20.5	9 28	0 47.12	+13 35.1	1.652	2.636	5.1	20.6
10 8	0 36.69	+ 4 45.4	1.195	2.192	2.1	20.4	10 8	0 36.46	+13 35.0	1.633	2.624	3.4	20.5
10 18	0 27.52	+ 3 49.5	1.243	2.215	7.5	20.8	10 18	0 26.04	+13 25.4	1.642	2.612	6.2	20.6
10 28	0 20.50	+ 3 5.9	1.316	2.238	12.4	21.2	10 28	0 17.04	+13 11.3	1.678	2.600	10.1	20.9
11 7	0 16.32	+ 2 39.2	1.410	2.261	16.3	21.5	11 7	0 10.31	+12 58.6	1.738	2.588	13.8	21.1
328599	2009 <i>SH</i> ₈₇	10	4.1	332°58	1°4/ 2.5	18	91941	1999 <i>VR</i> ₆₃	10	4.1	47°68	3°4/ 1.1	18
8 29	0 59.92	+ 4 7.0	2.063	2.913	12.8	20.8	8 29	1 6.05	- 4 27.0	1.941	2.800	13.1	18.5
9 8	0 56.46	+ 3 10.0	1.986	2.909	9.6	20.6	9 8	1 1.02	- 4 53.6	1.884	2.810	9.8	18.4
9 18	0 51.24	+ 2 1.7	1.932	2.906	6.0	20.4	9 18	0 54.08	- 5 22.6	1.849	2.821	6.4	18.2
9 28	0 44.81	+ 0 47.0	1.904	2.902	2.3	20.2	9 28	0 45.89	- 5 48.9	1.840	2.832	3.7	18.0
10 8	0 37.92	- 0 27.7	1.905	2.899	2.6	20.2	10 8	0 37.33	- 6 7.6	1.860	2.843	4.5	18.1
10 18	0 31.37	- 1 35.6	1.934	2.896	6.4	20.4	10 18	0 29.32	- 6 14.6	1.907	2.854	7.6	18.3
10 28	0 25.95	- 2 31.1	1.990	2.893	9.9	20.6	10 28	0 22.67	- 6 7.5	1.980	2.865	10.8	18.5
11 7	0 22.23	- 3 10.2	2.069	2.890	13.0	20.8	11 7	0 17.97	- 5 45.6	2.075	2.877	13.7	18.8
1827	Atkinson	10	4.1	290°22	1°3/ 5.4	18	114909	2003 <i>QD</i> ₂₈	10	4.1	112°61	4°8/ 9.9	18
8 29	1 2.49	+10 54.3	1.850	2.680	14.9	16.7	8 29	1 2.88	+22 9.9	2.385	3.142	14.0	19.6
9 8	0 58.82	+10 29.7	1.754	2.661	11.7	16.4	9 8	0 58.60	+22 17.3	2.300	3.146	11.7	19.4
9 18	0 53.00	+ 9 47.8	1.679	2.642	7.9	16.2	9 18	0 52.58	+22 6.1	2.236	3.150	9.0	19.2
9 28	0 45.58	+ 8 50.8	1.629	2.622	3.7	15.9	9 28	0 45.35	+21 36.0	2.196	3.154	6.4	19.1
10 8	0 37.40	+ 7 43.6	1.606	2.603	1.8	15.7	10 8	0 37.64	+20 49.2	2.183	3.157	4.9	19.0
10 18	0 29.46	+ 6 33.2	1.611	2.584	6.0	16.0	10 18	0 30.26	+19 49.6	2.199	3.161	5.6	19.1
10 28	0 22.79	+ 5 27.2	1.642	2.565	10.3	16.2	10 28	0 23.99	+18 43.2	2.242	3.165	7.9	19.2
11 7	0 18.15	+ 4 32.7	1.697	2.546	14.1	16.4	11 7	0 19.41	+17 36.8	2.311	3.168	10.5	19.4
256664	2007 <i>XY</i> ₂₇	10	4.1	290°52	3°3/ 6.6	18	192248	2008 <i>EK</i> ₉₉	10	4.1	310°48	6°0/ 28.4	18
8 29	1 5.53	+13 40.6	1.406	2.239	18.5	20.4	8 29	1 5.81	-11 42.0	2.007	2.869	12.6	20.0
9 8	1 1.81	+13 44.6	1.321	2.225	14.9	20.2	9 8	1 0.91	-12 32.1	1.943	2.866	9.8	19.9
9 18	0 55.27	+13 26.6	1.255	2.212	10.5	19.9	9 18	0 54.07	-13 19.8	1.903	2.863	7.2	19.7
9 28	0 46.55	+12 47.0	1.211	2.199	5.8	19.6	9 28	0 45.92	-13 58.5	1.889	2.861	6.0	19.6
10 8	0 36.80	+11 49.9	1.192	2.186	3.4	19.4	10 8	0 37.31	-14 22.2	1.902	2.858	7.1	19.7
10 18	0 27.41	+10 43.0	1.198	2.173	7.2	19.6	10 18	0 29.17	-14 27.0	1.941	2.856	9.6	19.9
10 28	0 19.77	+ 9 36.3	1.229	2.161	12.1	19.8	10 28	0 22.36	-14 11.1	2.005	2.853	12.4	20.0
11 7	0 14.88	+ 8 39.4	1.281	2.148	16.6	20.1	11 7	0 17.48	-13 35.5	2.090	2.851	14.9	20.2
266826	2009 <i>TX</i> ₃₅	10	4.1	357°79	1°9/ 2.3	18	234325	2001 <i>DR</i> ₅₅	10	4.1	116°63	1°2/ 5.3	18
8 29	1 3.02	+ 0 26.1	1.908	2.765	13.3	20.2	8 29	1 7.20	+10 3.6	2.148	2.963	13.6	21.1
9 8	0 58.91	+ 0 2.2	1.837	2.764	10.0	20.0	9 8	1 1.76	+ 9 48.7	2.082	2.980	10.5	20.9
9 18	0 52.85	- 0 28.8	1.788	2.762	6.3	19.8	9 18	0 54.50	+ 9 21.0	2.038	2.997	6.9	20.7
9 28	0 45.45	- 1 2.3	1.765	2.761	2.7	19.5	9 28	0 46.05	+ 8 42.7	2.021	3.014	3.2	20.5
10 8	0 37.56	- 1 33.2	1.769	2.761	3.1	19.6	10 8	0 37.24	+ 7 58.2	2.033	3.030	1.6	20.5
10 18	0 30.08	- 1 56.5	1.801	2.761	6.8	19.8	10 18	0 28.91	+ 7 12.4	2.074	3.045	5.1	20.7
10 28	0 23.89	- 2 8.1	1.859	2.762	10.5	20.0	10 28	0 21.88	+ 6 30.7	2.143	3.060	8.6	21.0
11 7	0 19.60	- 2 5.7	1.939	2.763	13.7	20.2	11 7	0 16.69	+ 5 57.4	2.238	3.074	11.6	21.2
461209	2015 <i>VV</i> ₁₂₆	10	4.1	101°48	3°9/ 30.1	18	470562	2008 <i>FH</i> ₁₀₆	10	4.1	217°19	2°7/ 1.7	17
8 29	1 4.80	- 6 47.8	2.287	3.143	11.5	20.5	8 29	1 7.75	- 0 2.6	1.792	2.645	14.3	22.1
9 8	0 59.87	- 7 24.3	2.222	3.146	8.7	20.3	9 8	1 2.70	- 0 50.1	1.714	2.638	10.8	21.9
9 18	0 53.27	- 8 1.7	2.181	3.149	5.9	20.1	9 18	0 55.40	- 1 46.5	1.658	2.631	6.8	21.6
9 28	0 45.57	- 8 35.0	2.167	3.153	4.0	20.0	9 28	0 46.49	- 2 45.8	1.628	2.623	3.2	21.4
10 8	0 37.51	- 8 59.4	2.182	3.156	4.8	20.1	10 8	0 36.92	- 3 41.1	1.626	2.615	4.0	21.4
10 18	0 29.85	- 9 11.4	2.225	3.159	7.5	20.3	10 18	0 27.77	- 4 25.7	1.652	2.606	8.0	21.6
10 28	0 23.34	- 9 8.5	2.294	3.163	10.3	20.5	10 28	0 20.06	- 4 54.3	1.704	2.596	11.9	21.9
11 7	0 18.51	- 8 50.4	2.386	3.166	12.8	20.6	11 7	0 14.53	- 5 4.3	1.778	2.586	15.4	22.1
195094	2002 <i>CR</i> ₁₁₉	10	4.1	111°65	1°6/ 5.6	18	160677	2000 <i>CP</i> ₈₁	10	4.1	340°85	9°3/ 24.7	18
8 29	1 4.79	+11 16.9	1.701	2.530	16.0	20.2	8 29	0 52.23	- 8 28.9	1.092	2.005	16.8	17.8
9 8	1 0.54	+10 57.5	1.626	2.532	12.5	20.0	9 8	0 52.04	-10 46.8	1.027	1.981	13.1	17.5
9 18	0 54.04	+10 20.5	1.572	2.534	8.4	19.8	9 18	0 49.15	-13 13.9	0.983	1.958	10.1	17.3
9 28	0 45.95	+ 9 28.3	1.543	2.535	4.0	19.5	9 28	0 44.21	-15 34.1	0.961	1.937	9.5	17.2
10 8	0 37.25	+ 8 26.5	1.540	2.537	2.0	19.4	10 8	0 38.35	-17 29.8	0.960	1.917	12.1	17.3
10 18	0 29.03	+ 7 22.0	1.565	2.539	6.1	19.7	10 18	0 32.93	-18 47.5	0.980	1.900	16.1	17.4
10 28	0 22.30	+ 6 22.8	1.616	2.540	10.3	19.9	10 28	0 29.31	-19 20.3	1.018	1.886	20.1	17.6
11 7	0 17.78	+ 5 35.2	1.691	2.542	14.1	20.2	11 7	0 28.38	-19 8.8	1.071	1.873	23.7	17.8
257938	2000 <i>WS</i> ₁₈₄	10	4.1	9°49	6°0/ 27.4	18	45611	2000 <i>DV</i> ₅₄	10	4.1	344°80	0°0/ 3.9	18
8 29	1 2.82	-11 34.5	2.112	2.977	11.9	20.4	8 29	1 1.29	+ 6 42.5	2.164	3.001	12.7	19.0
9 8	0 58.55	-12 44.0	2.053	2.978	9.3	20.2	9 8	0 57.43	+ 6 15.2	2.085	2.999	9.7	18.8
9 18	0 52.52	-13 51.8	2.018	2.978	7.0	20.1	9 18	0 51.85	+ 5 36.6	2.028	2.997	6.2	18.6
9 28	0 45.30	-14 50.8	2.009	2.978	6.0	20.1	9 28	0 45.07	+ 4 50.0	1.998	2.995	2.4	18.4
10 8	0 37.68	-15 34.9	2.028	2.978	7.2	20.1	10 8	0 37.84	+ 4 0.1	1.996	2.993	1.5	18.3
10 18	0 30.49	-15 59.5	2.073	2.979	9.6	20.3	10 18	0 30.94	+ 3 12.0	2.023	2.992	5.4	18.6
10 28	0 24.50	-16 2.6	2.142	2.979	12.1	20.5	10 28	0 25.14	+ 2 31.1	2.076	2.990	9.0	18.8
11 7	0 20.28	-15 44.8	2.231	2.980	14.5	20.6	11 7	0 21.01	+ 2 1.3	2.154	2.989	12.1	19.0
481048	2005 <i>GA</i> ₁₀	10	4.1	129°02	5°7/ 12.4	16	223469	2003 <i>UB</i> ₂₀₈	10	4.1	287°91	3°0/ 7.8	18
8 29	1 4.93	+29 5.											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
46691	1997 <i>BK</i> ₃	10	4.1	203°65	0°5/ 3.6	18	263794	2008 <i>QQ</i> ₃₇	10	4.1	15°60	0°3/ 4.6	18
8 29	1 7.68	+ 5 34.0	1.838	2.676	14.6	19.8	8 29	0 56.94	+ 7 3.2	4.024	4.841	7.7	20.5
9 8	1 2.61	+ 5 1.8	1.757	2.672	11.2	19.6	9 8	0 53.39	+ 6 50.0	3.939	4.842	5.9	20.4
9 18	0 55.32	+ 4 16.9	1.698	2.668	7.1	19.3	9 18	0 48.95	+ 6 31.0	3.880	4.843	3.8	20.2
9 28	0 46.46	+ 3 23.2	1.666	2.663	2.7	19.0	9 28	0 43.91	+ 6 7.6	3.849	4.844	1.6	20.1
10 8	0 36.96	+ 2 26.8	1.661	2.657	2.1	19.0	10 8	0 38.65	+ 5 42.1	3.848	4.845	0.8	20.0
10 18	0 27.87	+ 1 34.1	1.685	2.651	6.6	19.3	10 18	0 33.56	+ 5 16.6	3.878	4.847	3.1	20.2
10 28	0 20.19	+ 0 51.4	1.736	2.645	10.8	19.5	10 28	0 29.01	+ 4 53.6	3.936	4.848	5.2	20.3
11 7	0 14.66	+ 0 23.2	1.810	2.637	14.3	19.7	11 7	0 25.34	+ 4 35.2	4.022	4.849	7.1	20.5
384429	2009 <i>XY</i> ₂₀	10	4.1	267°79	0°4/ 4.5	18	517217	2014 <i>AK</i> ₅₇	10	4.1	144°76	4°9/ 29.8	18
8 29	1 5.62	+ 7 48.0	1.731	2.570	15.3	21.5	8 29	1 7.82	- 7 1.2	1.845	2.706	13.6	21.4
9 8	1 1.29	+ 7 28.4	1.642	2.556	11.9	21.2	9 8	1 2.53	- 7 53.6	1.785	2.711	10.3	21.2
9 18	0 54.64	+ 6 53.9	1.575	2.543	7.8	21.0	9 18	0 55.14	- 8 47.5	1.748	2.716	7.0	21.0
9 28	0 46.24	+ 6 7.5	1.533	2.529	3.2	20.7	9 28	0 46.36	- 9 35.9	1.737	2.721	4.9	20.9
10 8	0 37.07	+ 5 14.4	1.518	2.515	1.8	20.5	10 8	0 37.13	-10 12.4	1.753	2.726	6.0	21.0
10 18	0 28.21	+ 4 21.3	1.530	2.501	6.5	20.8	10 18	0 28.45	-10 31.9	1.797	2.730	9.1	21.2
10 28	0 20.77	+ 3 35.4	1.568	2.487	11.0	21.0	10 28	0 21.25	-10 31.9	1.866	2.734	12.3	21.4
11 7	0 15.55	+ 3 2.3	1.629	2.472	14.9	21.3	11 7	0 16.15	-10 12.4	1.956	2.737	15.1	21.6
483899	2006 <i>AM</i> ₄₂	10	4.1	189°65	1°6/ 1.9	18	515703	2014 <i>QB</i> ₃₄₀	10	4.1	60°30	4°2/ 29.2	18
8 29	1 1.43	+ 0 43.7	2.942	3.781	9.7	22.6	8 29	1 2.02	- 4 14.6	1.993	2.857	12.5	21.1
9 8	0 57.05	- 0 1.6	2.861	3.780	7.2	22.4	9 8	0 57.85	- 5 44.3	1.954	2.885	9.3	21.0
9 18	0 51.39	- 0 52.6	2.807	3.778	4.5	22.2	9 18	0 51.99	- 7 16.8	1.940	2.912	6.2	20.8
9 28	0 44.86	- 1 45.6	2.781	3.776	2.0	22.0	9 28	0 45.09	- 8 44.6	1.953	2.939	4.3	20.8
10 8	0 38.00	- 2 36.6	2.784	3.774	2.5	22.1	10 8	0 37.97	-10 0.5	1.995	2.966	5.5	20.9
10 18	0 31.39	- 3 21.6	2.818	3.771	5.2	22.3	10 18	0 31.40	-10 59.0	2.063	2.994	8.2	21.1
10 28	0 25.60	- 3 57.2	2.881	3.767	7.8	22.4	10 28	0 26.11	-11 36.8	2.158	3.021	11.1	21.4
11 7	0 21.07	- 4 21.1	2.968	3.764	10.1	22.6	11 7	0 22.55	-11 53.5	2.274	3.048	13.5	21.6
454031	2012 <i>FS</i> ₁₇	10	4.1	6°82	0°8/ 3.3	18	125002	2001 <i>TJ</i> ₁₅₄	10	4.1	14°34	5°9/ 29.9	18
8 29	1 2.47	+ 4 3.8	2.171	3.014	12.5	21.5	8 29	1 4.74	- 5 45.9	1.219	2.106	17.3	18.5
9 8	0 58.29	+ 3 37.0	2.096	3.015	9.4	21.3	9 8	1 1.08	- 6 42.6	1.168	2.109	13.2	18.2
9 18	0 52.37	+ 3 1.2	2.044	3.015	5.9	21.1	9 18	0 54.62	- 7 43.1	1.137	2.113	8.8	18.0
9 28	0 45.28	+ 2 19.8	2.018	3.015	2.2	20.9	9 28	0 46.23	- 8 37.7	1.128	2.117	6.0	17.9
10 8	0 37.74	+ 1 37.5	2.020	3.016	2.0	20.9	10 8	0 37.24	- 9 16.6	1.144	2.123	7.3	18.0
10 18	0 30.56	+ 0 59.4	2.051	3.016	5.7	21.1	10 18	0 29.02	- 9 33.0	1.183	2.129	11.3	18.2
10 28	0 24.50	+ 0 29.8	2.109	3.017	9.2	21.3	10 28	0 22.80	- 9 23.7	1.243	2.136	15.4	18.5
11 7	0 20.14	+ 0 12.1	2.192	3.018	12.2	21.5	11 7	0 19.33	- 8 49.7	1.323	2.143	19.0	18.7
220969	2005 <i>MG</i> ₄₃	10	4.1	13°56	2°1/ 5.8	18	114037	2002 <i>VH</i> ₁₀	10	4.1	65°53	8°8/ 29.7	18
8 29	0 54.13	+12 45.8	0.873	1.758	22.6	18.3	8 29	1 19.57	-17 1.3	1.433	2.288	17.1	19.3
9 8	0 53.77	+12 13.8	0.828	1.765	17.7	18.0	9 8	1 11.86	-17 22.0	1.383	2.296	13.7	19.1
9 18	0 50.28	+11 9.8	0.800	1.774	11.9	17.8	9 18	1 1.22	-17 31.6	1.354	2.304	10.6	18.9
9 28	0 44.59	+ 9 39.6	0.790	1.785	5.6	17.5	9 28	0 48.70	-17 21.6	1.348	2.313	8.8	18.9
10 8	0 38.21	+ 7 55.7	0.801	1.799	2.6	17.4	10 8	0 35.76	-16 46.4	1.369	2.321	9.7	18.9
10 18	0 32.67	+ 6 13.2	0.834	1.815	8.2	17.8	10 18	0 23.91	-15 44.8	1.416	2.330	12.5	19.1
10 28	0 29.34	+ 4 46.6	0.888	1.833	13.8	18.1	10 28	0 14.39	-14 19.8	1.486	2.339	15.7	19.4
11 7	0 28.95	+ 3 45.2	0.960	1.852	18.6	18.5	11 7	0 7.89	-12 36.6	1.577	2.348	18.6	19.6
149072	2002 <i>CV</i> ₇₆	10	4.1	85°11	3°7/ 7.8	18	323008	2002 <i>PX</i> ₁₂₅	10	4.1	9°24	1°9/ 5.1	18
8 29	1 5.41	+16 26.1	2.173	2.963	14.2	20.1	8 29	1 1.80	+ 7 8.2	0.862	1.754	22.3	18.8
9 8	1 0.62	+16 42.8	2.093	2.967	11.5	19.9	9 8	0 59.78	+ 7 44.8	0.815	1.756	17.3	18.5
9 18	0 53.92	+16 43.5	2.034	2.972	8.4	19.7	9 18	0 54.25	+ 8 2.5	0.783	1.760	11.5	18.2
9 28	0 45.90	+16 28.5	2.001	2.977	5.3	19.5	9 28	0 46.21	+ 8 3.0	0.770	1.767	5.2	17.9
10 8	0 37.35	+16 0.0	1.995	2.981	3.7	19.4	10 8	0 37.27	+ 7 52.1	0.778	1.776	2.7	17.8
10 18	0 29.16	+15 21.9	2.017	2.986	5.4	19.5	10 18	0 29.26	+ 7 37.3	0.807	1.787	8.6	18.2
10 28	0 22.19	+14 39.9	2.067	2.991	8.4	19.7	10 28	0 23.77	+ 7 27.4	0.856	1.800	14.3	18.6
11 7	0 17.07	+13 59.8	2.142	2.995	11.4	19.9	11 7	0 21.69	+ 7 29.1	0.924	1.816	19.2	18.9
412680	2014 <i>OL</i> ₂₂₆	10	4.1	123°49	5°3/ 27.7	18	220465	2004 <i>BF</i> ₅₂	10	4.1	146°18	0°6/ 4.6	17
8 29	1 2.44	-10 42.5	2.332	3.194	11.1	21.3	8 29	1 8.30	+ 8 30.0	1.851	2.678	14.9	21.3
9 8	0 58.10	-11 50.1	2.274	3.198	8.6	21.2	9 8	1 2.95	+ 8 4.8	1.780	2.688	11.5	21.1
9 18	0 52.16	-12 56.6	2.241	3.202	6.3	21.1	9 18	0 55.46	+ 7 25.5	1.732	2.696	7.5	20.9
9 28	0 45.17	-13 55.7	2.235	3.205	5.3	21.0	9 28	0 46.52	+ 6 35.2	1.709	2.704	3.1	20.6
10 8	0 37.84	-14 41.7	2.256	3.209	6.4	21.1	10 8	0 37.07	+ 5 39.4	1.715	2.712	1.6	20.5
10 18	0 30.90	-15 10.6	2.305	3.213	8.7	21.2	10 18	0 28.14	+ 4 44.6	1.749	2.719	6.0	20.9
10 28	0 25.05	-15 20.1	2.379	3.216	11.1	21.4	10 28	0 20.69	+ 3 57.0	1.810	2.725	10.0	21.1
11 7	0 20.80	-15 10.5	2.474	3.220	13.3	21.6	11 7	0 15.36	+ 3 21.6	1.896	2.731	13.5	21.3
444274	2005 <i>UP</i> ₃₃₅	10	4.1	15°49	5°2/ 9.6	17	428643	2008 <i>GL</i> ₄	10	4.1	153°28	0°1/ 4.0	17
8 29	1 1.56	+20 57.4	1.817	2.604	16.7	20.7	8 29	1 8.79	+ 6 32.8	1.847	2.679	14.8	21.7
9 8	0 58.09	+21 3.6	1.740	2.607	13.8	20.5	9 8	1 3.32	+ 6 5.3	1.776	2.687	11.3	21.5
9 18	0 52.49	+20 46.9	1.682	2.610	10.6	20.3	9 18	0 55.71	+ 5 25.0	1.727	2.695	7.2	21.3
9 28	0 45.38	+20 7.1	1.647	2.614	7.3	20.1	9 28	0 46.62	+ 4 35.8	1.705	2.701	2.8	21.0
10 8	0 37.69	+19 7.1	1.638	2.619	5.3	20.0	10 8	0 37.02	+ 3 43.2	1.711	2.707	1.8	21.0
10 18	0 30.42	+17 52.9	1.655	2.624	6.4	20.1	10 18	0 27.93	+ 2 53.4	1.745	2.713	6.2	21.3
10 28	0 24.55	+16 33.0	1.698	2.629	9.4	20.3	10 28	0 20.32	+ 2 12.6	1.807	2.718	10.3	21.5
11 7	0 20.78	+15 16.1	1.765	2.635	12.7	20.5	11 7	0 14.85	+ 1 44.8	1.892	2.722	13.7	21.7
383561	2007 <i>EV</i> ₁₀₄	10	4.1	235°81	0°4/ 3.8	18	75310	1999 <i>XA</i> ₃₉	10	4.1	247°57		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
27589	Paigeentry	10	4.1	317°52	0°6/ 4.7	18	405441	2004 TD ₈₃	10	4.1	43°66	0°5/ 4.7	18
8 29	1 4.17	+ 8 7.0	1.597	2.442	16.1	19.1	8 29	1 2.35	+ 8 18.9	1.959	2.795	13.9	21.4
9 8	1 0.30	+ 7 49.9	1.518	2.435	12.5	18.9	9 8	0 58.35	+ 7 53.3	1.892	2.804	10.7	21.2
9 18	0 54.05	+ 7 17.1	1.459	2.428	8.2	18.6	9 18	0 52.50	+ 7 14.7	1.846	2.813	6.9	21.0
9 28	0 46.07	+ 6 31.6	1.425	2.421	3.4	18.3	9 28	0 45.40	+ 6 26.2	1.826	2.822	2.8	20.8
10 8	0 37.35	+ 5 39.1	1.417	2.415	1.8	18.2	10 8	0 37.87	+ 5 33.1	1.834	2.831	1.5	20.7
10 18	0 29.04	+ 4 46.8	1.436	2.408	6.7	18.5	10 18	0 30.78	+ 4 41.1	1.870	2.841	5.5	21.0
10 28	0 22.26	+ 4 2.0	1.480	2.402	11.2	18.7	10 28	0 24.96	+ 3 56.1	1.933	2.851	9.3	21.2
11 7	0 17.79	+ 3 30.5	1.546	2.397	15.2	19.0	11 7	0 20.98	+ 3 22.4	2.019	2.861	12.5	21.5
186777	2004 DY ₃₂	10	4.1	90°57	0°7/ 3.6	17	285496	2000 DZ ₉	10	4.1	279°00	1°1/ 3.2	18
8 29	1 9.18	+ 4 32.3	1.536	2.385	16.4	20.2	8 29	1 4.86	+ 4 52.0	1.531	2.387	16.1	21.2
9 8	1 3.90	+ 4 11.9	1.477	2.398	12.5	20.0	9 8	1 0.98	+ 4 11.5	1.450	2.375	12.3	20.9
9 18	0 56.17	+ 3 39.5	1.440	2.411	7.9	19.8	9 18	0 54.58	+ 3 15.8	1.389	2.363	7.8	20.6
9 28	0 46.81	+ 2 59.5	1.427	2.424	2.9	19.5	9 28	0 46.33	+ 2 10.0	1.352	2.350	3.0	20.3
10 8	0 36.94	+ 2 18.3	1.441	2.437	2.3	19.5	10 8	0 37.25	+ 1 1.5	1.342	2.338	2.8	20.3
10 18	0 27.77	+ 1 42.2	1.482	2.450	7.1	19.8	10 18	0 28.55	- 0 1.0	1.359	2.325	7.8	20.6
10 28	0 20.37	+ 1 17.1	1.549	2.463	11.5	20.1	10 28	0 21.43	- 0 49.6	1.400	2.313	12.5	20.8
11 7	0 15.44	+ 1 6.5	1.639	2.475	15.2	20.4	11 7	0 16.73	- 1 19.2	1.462	2.300	16.6	21.0
449974	2015 PW ₃₇	10	4.1	66°88	4°9/ 8.3	18	269630	2011 AO ₂₈	10	4.1	303°71	8°5/22.3	18
8 29	1 8.73	+17 37.0	1.844	2.634	16.4	21.2	8 29	1 1.14	-20 28.1	2.247	3.106	11.5	19.7
9 8	1 3.46	+18 14.1	1.772	2.644	13.4	21.0	9 8	0 57.35	-22 14.1	2.197	3.101	9.8	19.6
9 18	0 55.90	+18 32.9	1.721	2.655	10.0	20.8	9 18	0 51.84	-23 52.7	2.171	3.097	8.7	19.5
9 28	0 46.73	+18 32.4	1.694	2.665	6.6	20.7	9 28	0 45.14	-25 15.5	2.172	3.092	8.8	19.5
10 8	0 36.95	+18 14.3	1.693	2.676	4.9	20.6	10 8	0 38.03	-26 15.8	2.197	3.088	10.0	19.6
10 18	0 27.66	+17 42.7	1.720	2.687	6.4	20.7	10 18	0 31.28	-26 49.8	2.247	3.083	11.8	19.7
10 28	0 19.90	+17 4.1	1.773	2.698	9.6	20.9	10 28	0 25.68	-26 56.3	2.318	3.079	13.7	19.9
11 7	0 14.39	+16 25.5	1.851	2.709	12.7	21.2	11 7	0 21.78	-26 37.2	2.407	3.075	15.5	20.0
180947	2005 MQ ₁₃	10	4.1	44°33	1°3/ 5.0	16	324114	2005 XU ₁₀₉	10	4.1	276°42	4°7/28.6	18
8 29	1 7.06	+ 9 10.6	1.168	2.026	19.9	19.9	8 29	1 1.80	- 7 49.8	2.242	3.105	11.4	20.2
9 8	1 2.82	+ 9 1.5	1.123	2.046	15.3	19.7	9 8	0 57.79	- 8 56.4	2.172	3.099	8.7	20.0
9 18	0 55.67	+ 8 32.7	1.096	2.066	10.0	19.4	9 18	0 52.09	-10 4.6	2.126	3.093	6.1	19.9
9 28	0 46.63	+ 7 48.1	1.092	2.087	4.3	19.2	9 28	0 45.25	-11 8.2	2.107	3.087	4.7	19.8
10 8	0 37.09	+ 6 55.4	1.111	2.109	2.1	19.1	10 8	0 37.97	-12 1.0	2.116	3.080	5.9	19.8
10 18	0 28.50	+ 6 3.5	1.156	2.131	7.4	19.5	10 18	0 31.02	-12 38.2	2.152	3.074	8.4	20.0
10 28	0 22.09	+ 5 21.0	1.224	2.154	12.4	19.8	10 28	0 25.15	-12 56.5	2.214	3.068	11.2	20.2
11 7	0 18.54	+ 4 53.7	1.313	2.177	16.5	20.2	11 7	0 20.92	-12 55.4	2.297	3.062	13.7	20.3
45105	1999 XU ₇₄	10	4.1	199°11	4°3/29.0	18	444938	2008 CU ₂₃	10	4.2	324°57	2°0/ 5.7	17
8 29	1 2.99	- 7 57.9	2.408	3.266	10.9	19.0	8 29	1 2.67	+10 36.5	1.604	2.443	16.3	21.3
9 8	0 58.51	- 8 51.7	2.340	3.265	8.3	18.8	9 8	0 59.32	+10 38.7	1.515	2.426	12.9	21.1
9 18	0 52.45	- 9 46.1	2.297	3.263	5.8	18.6	9 18	0 53.54	+10 24.2	1.446	2.410	8.8	20.8
9 28	0 45.34	-10 36.0	2.282	3.262	4.3	18.5	9 28	0 45.95	+ 9 54.3	1.401	2.394	4.3	20.5
10 8	0 37.85	-11 16.0	2.294	3.261	5.3	18.6	10 8	0 37.49	+ 9 13.1	1.382	2.378	2.3	20.3
10 18	0 30.70	-11 42.0	2.335	3.259	7.7	18.8	10 18	0 29.31	+ 8 26.9	1.388	2.364	6.5	20.6
10 28	0 24.60	-11 51.5	2.401	3.257	10.4	18.9	10 28	0 22.59	+ 7 43.0	1.420	2.349	11.0	20.8
11 7	0 20.06	-11 44.0	2.491	3.255	12.7	19.1	11 7	0 18.19	+ 7 8.5	1.474	2.336	15.1	21.0
479873	2014 GR ₄₄	10	4.1	294°34	8°8/27.8	18	21602	Ialmenus	10	4.2	235°88	1°6/ 7.5	18
8 29	1 14.13	-19 10.5	1.781	2.630	14.5	20.3	8 29	0 56.24	+14 55.0	4.632	5.409	7.4	19.6
9 8	1 7.52	-19 47.4	1.718	2.624	11.9	20.1	9 8	0 52.82	+14 48.9	4.536	5.406	5.9	19.5
9 18	0 58.43	-20 14.3	1.677	2.617	9.7	19.9	9 18	0 48.60	+14 35.1	4.464	5.402	4.2	19.4
9 28	0 47.68	-20 22.9	1.661	2.611	8.8	19.9	9 28	0 43.84	+14 14.4	4.420	5.399	2.5	19.3
10 8	0 36.40	-20 7.4	1.671	2.605	9.8	19.9	10 8	0 38.86	+13 48.3	4.406	5.395	1.6	19.2
10 18	0 25.79	-19 25.4	1.707	2.598	12.1	20.1	10 18	0 34.01	+13 18.7	4.422	5.392	2.7	19.3
10 28	0 16.96	-18 17.9	1.767	2.592	14.8	20.2	10 28	0 29.63	+12 47.9	4.468	5.388	4.4	19.4
11 7	0 10.60	-16 49.0	1.847	2.586	17.4	20.4	11 7	0 26.01	+12 18.3	4.541	5.384	6.0	19.5
482436	2012 CC ₅₆	10	4.1	282°71	6°2/10.5	18	207189	2005 EP ₂₉	10	4.2	121°00	1°9/ 2.2	18
8 29	1 5.01	+23 41.0	2.192	2.943	15.3	21.4	8 29	1 6.39	+ 0 44.4	2.185	3.028	12.4	20.8
9 8	1 0.58	+24 14.4	2.096	2.933	13.0	21.2	9 8	1 1.12	+ 0 7.0	2.123	3.043	9.3	20.7
9 18	0 54.10	+24 28.5	2.020	2.924	10.4	21.0	9 18	0 54.12	- 0 37.0	2.086	3.058	5.8	20.5
9 28	0 46.08	+24 21.4	1.967	2.914	7.8	20.8	9 28	0 46.00	- 1 23.0	2.075	3.071	2.5	20.3
10 8	0 37.34	+23 53.4	1.940	2.904	6.3	20.7	10 8	0 37.55	- 2 5.9	2.094	3.085	2.9	20.4
10 18	0 28.82	+23 7.6	1.939	2.895	6.8	20.8	10 18	0 29.57	- 2 41.0	2.142	3.098	6.2	20.6
10 28	0 21.50	+22 10.1	1.966	2.885	9.1	20.9	10 28	0 22.82	- 3 4.6	2.217	3.111	9.5	20.8
11 7	0 16.11	+21 8.2	2.018	2.876	11.8	21.0	11 7	0 17.84	- 3 14.5	2.317	3.123	12.3	21.0
261570	2005 WY ₁₈₆	10	4.1	223°38	0°3/ 3.7	18	51285	2000 KM ₁₅	10	4.2	250°86	2°8/ 1.3	18
8 29	1 3.33	+ 5 8.4	2.646	3.475	10.9	21.8	8 29	1 4.91	- 1 35.7	2.135	2.987	12.3	20.1
9 8	0 58.72	+ 4 43.3	2.556	3.466	8.3	21.6	9 8	1 0.29	- 2 18.4	2.050	2.975	9.3	19.8
9 18	0 52.59	+ 4 9.7	2.490	3.458	5.3	21.4	9 18	0 53.79	- 3 7.3	1.989	2.962	6.0	19.6
9 28	0 45.42	+ 3 30.4	2.452	3.449	2.0	21.2	9 28	0 45.95	- 3 57.5	1.955	2.948	3.1	19.4
10 8	0 37.80	+ 2 49.1	2.443	3.439	1.5	21.1	10 8	0 37.54	- 4 43.2	1.949	2.935	3.9	19.4
10 18	0 30.43	+ 2 9.9	2.464	3.430	4.9	21.3	10 18	0 29.43	- 5 19.1	1.971	2.921	7.2	19.6
10 28	0 23.96	+ 1 36.9	2.514	3.419	8.0	21.5	10 28	0 22.46	- 5 41.0	2.020	2.907	10.6	19.8
11 7	0 18.93	+ 1 13.3	2.589	3.409	10.8	21.7	11 7	0 17.28	- 5 46.7	2.092	2.892	13.7	20.0
264913	2002 TD ₂₂₈	10	4.1	299°26	3°1/ 1.2	18	48550	1993 TU ₂₅	10	4.2	262°30	2°1/ 2.3	18
8 29	1 0.86	+ 3 15.5	1.414	2.285	16.3	20.2	8 29	1 5.75	+ 0 21.0	1.895	2.747		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
19245	1994 <i>EL</i> ₂	10	4.2 173°52	1°1/ 5.2 18			507934	2015 <i>AM</i> ₁₂₃	10	4.2 278°14	2°8/ 6.3 17		
8 29	1 9.71	+ 8 47.7	2.210	3.023	13.3	19.2	8 29	1 6.57	+13 9.0	1.404	2.237	18.6	21.7
9 8	1 3.80	+ 8 48.7	2.128	3.026	10.3	19.0	9 8	1 2.50	+13 4.6	1.329	2.235	14.7	21.5
9 18	0 55.96	+ 8 38.5	2.069	3.028	6.9	18.8	9 18	0 55.67	+12 38.2	1.273	2.232	10.2	21.2
9 28	0 46.76	+ 8 18.8	2.037	3.030	3.1	18.6	9 28	0 46.80	+11 51.3	1.240	2.230	5.4	20.9
10 8	0 37.05	+ 7 52.9	2.035	3.032	1.6	18.5	10 8	0 37.09	+10 49.2	1.232	2.227	3.0	20.8
10 18	0 27.71	+ 7 24.7	2.062	3.032	5.2	18.7	10 18	0 27.89	+ 9 40.0	1.249	2.225	7.0	21.0
10 28	0 19.61	+ 6 59.0	2.118	3.033	8.8	18.9	10 28	0 20.50	+ 8 33.7	1.292	2.222	11.8	21.3
11 7	0 13.40	+ 6 39.9	2.199	3.032	11.9	19.1	11 7	0 15.82	+ 7 39.0	1.356	2.220	16.1	21.6
132654	2002 <i>LD</i> ₅₄	10	4.2 63°01	7°6/12.6 18			407479	2010 <i>UO</i> ₁₀₀	10	4.2 191°28	4°1/ 9.0 18		
8 29	1 5.24	+27 44.8	1.739	2.485	18.9	19.2	8 29	1 3.26	+19 50.8	2.394	3.164	13.6	21.0
9 8	1 1.00	+28 1.4	1.675	2.503	16.1	19.1	9 8	0 58.94	+19 50.9	2.305	3.164	11.2	20.8
9 18	0 54.39	+27 49.8	1.628	2.522	13.0	18.9	9 18	0 52.88	+19 33.6	2.238	3.163	8.4	20.6
9 28	0 46.18	+27 8.1	1.602	2.541	10.0	18.8	9 28	0 45.61	+18 58.8	2.195	3.162	5.7	20.5
10 8	0 37.44	+25 59.0	1.601	2.560	7.9	18.7	10 8	0 37.85	+18 9.0	2.179	3.161	4.1	20.4
10 18	0 29.34	+24 28.8	1.625	2.579	8.0	18.8	10 18	0 30.38	+17 8.5	2.192	3.160	5.2	20.4
10 28	0 22.89	+22 47.3	1.675	2.599	10.1	18.9	10 28	0 23.98	+16 3.2	2.234	3.158	7.9	20.6
11 7	0 18.80	+21 5.5	1.749	2.618	12.8	19.2	11 7	0 19.25	+14 59.5	2.301	3.156	10.7	20.8
308885	2006 <i>SS</i> ₁₃₃	10	4.2 7°55	2°6/ 6.4 17			42607	1998 <i>DQ</i> ₁₀	10	4.2 48°31	2°5/ 2.2 18		
8 29	1 0.97	+12 53.7	1.447	2.288	17.7	20.4	8 29	1 3.95	+ 3 52.8	1.165	2.042	18.7	17.2
9 8	0 58.04	+12 47.5	1.379	2.289	14.0	20.2	9 8	1 0.46	+ 2 38.4	1.121	2.058	14.0	17.0
9 18	0 52.67	+12 20.5	1.330	2.291	9.7	20.0	9 18	0 54.21	+ 1 8.0	1.096	2.075	8.7	16.8
9 28	0 45.57	+11 34.6	1.304	2.294	5.1	19.7	9 28	0 46.14	+ 0 28.9	1.095	2.092	3.5	16.5
10 8	0 37.80	+10 35.5	1.302	2.298	2.7	19.6	10 8	0 37.59	+ 0 2.4	1.117	2.110	4.2	16.6
10 18	0 30.56	+ 9 30.9	1.327	2.303	6.5	19.8	10 18	0 29.93	+ 0 15.6	1.165	2.128	9.2	17.0
10 28	0 24.96	+ 8 29.7	1.375	2.309	10.9	20.1	10 28	0 24.29	+ 0 7.0	1.235	2.147	13.9	17.3
11 7	0 21.74	+ 7 39.8	1.446	2.316	14.9	20.4	11 7	0 21.36	+ 0 31.9	1.326	2.166	17.8	17.6
66336	1999 <i>JB</i> ₆₂	10	4.2 41°49	0°8/ 4.7 18			511357	2014 <i>FL</i> ₁₀	10	4.2 90°39	0°2/ 4.3 18		
8 29	1 6.28	+ 8 33.7	1.065	1.932	20.8	17.6	8 29	1 6.19	+ 7 3.1	1.927	2.760	14.2	21.9
9 8	1 2.47	+ 8 16.3	1.021	1.949	15.9	17.4	9 8	1 1.23	+ 6 41.7	1.864	2.775	10.8	21.7
9 18	0 55.59	+ 7 38.0	0.995	1.968	10.3	17.1	9 18	0 54.33	+ 6 8.4	1.824	2.791	6.9	21.5
9 28	0 46.66	+ 6 44.0	0.990	1.987	4.3	16.8	9 28	0 46.14	+ 5 26.4	1.809	2.806	2.7	21.3
10 8	0 37.20	+ 5 43.1	1.009	2.007	2.2	16.8	10 8	0 37.56	+ 4 41.0	1.823	2.820	1.6	21.3
10 18	0 28.73	+ 4 45.3	1.052	2.027	8.0	17.2	10 18	0 29.50	+ 3 57.6	1.866	2.835	5.7	21.6
10 28	0 22.57	+ 4 0.0	1.117	2.048	13.2	17.6	10 28	0 22.83	+ 3 21.6	1.935	2.850	9.5	21.8
11 7	0 19.41	+ 3 32.9	1.203	2.069	17.5	17.9	11 7	0 18.12	+ 2 56.9	2.028	2.864	12.7	22.1
147481	2004 <i>CO</i> ₃₇	10	4.2 249°99	2°0/ 2.2 18			211783	2004 <i>BP</i> ₁₄₉	10	4.2 357°87	0°1/ 4.0 18		
8 29	1 3.24	+ 4 49.2	1.587	2.444	15.6	20.1	8 29	1 3.90	+ 6 7.5	1.676	2.525	15.3	20.6
9 8	0 59.59	+ 3 31.2	1.510	2.437	11.8	19.8	9 8	0 59.94	+ 5 45.7	1.603	2.523	11.7	20.3
9 18	0 53.60	+ 1 56.0	1.454	2.429	7.4	19.6	9 18	0 53.75	+ 5 10.7	1.551	2.522	7.5	20.1
9 28	0 45.94	+ 0 10.8	1.424	2.421	2.9	19.3	9 28	0 45.99	+ 4 26.3	1.525	2.522	2.9	19.8
10 8	0 37.58	+ 0 34.7	1.421	2.413	3.5	19.3	10 8	0 37.63	+ 3 38.2	1.525	2.522	1.9	19.8
10 18	0 29.64	+ 0 10.2	1.445	2.405	8.2	19.6	10 18	0 29.73	+ 2 53.0	1.552	2.522	6.6	20.1
10 28	0 23.21	+ 0 26.8	1.495	2.397	12.6	19.8	10 28	0 23.28	+ 2 17.0	1.604	2.523	10.8	20.3
11 7	0 19.04	+ 0 19.4	1.566	2.389	16.4	20.0	11 7	0 19.01	+ 1 54.8	1.680	2.523	14.5	20.6
154105	2002 <i>EW</i> ₄	10	4.2 305°68	2°1/ 1.8 18			72381	2001 <i>CM</i> ₁₀	10	4.2 112°82	3°0/ 30.6 18		
8 29	1 0.44	+ 2 11.4	1.994	2.850	12.9	20.2	8 29	1 2.85	+ 3 6.4	2.427	3.280	11.0	19.5
9 8	0 57.01	+ 1 7.9	1.913	2.840	9.7	20.0	9 8	0 58.35	+ 3 57.9	2.366	3.291	8.2	19.3
9 18	0 51.74	+ 0 6.4	1.856	2.831	6.1	19.8	9 18	0 52.34	+ 4 53.0	2.330	3.302	5.3	19.2
9 28	0 45.17	+ 0 26.0	1.826	2.822	2.7	19.5	9 28	0 45.36	+ 5 47.0	2.321	3.312	3.1	19.0
10 8	0 38.08	+ 0 43.6	1.823	2.813	3.4	19.6	10 8	0 38.07	+ 6 34.6	2.342	3.323	3.9	19.1
10 18	0 31.31	+ 0 52.5	1.848	2.804	7.1	19.8	10 18	0 31.17	+ 7 11.7	2.391	3.333	6.6	19.3
10 28	0 25.68	+ 0 46.4	1.900	2.796	10.7	20.0	10 28	0 25.31	+ 7 35.0	2.467	3.343	9.4	19.5
11 7	0 21.83	+ 0 21.9	1.974	2.788	13.9	20.2	11 7	0 20.97	+ 7 43.2	2.566	3.352	11.8	19.7
160048	1999 <i>TF</i> ₁₈₅	10	4.2 46°90	8°3/10.9 18			376755	1999 <i>VH</i> ₇₀	10	4.2 321°49	4°9/ 1.3 18		
8 29	1 10.98	+23 37.9	1.406	2.185	21.1	19.1	8 29	1 6.58	+ 4 22.2	1.166	2.052	18.1	20.7
9 8	1 5.72	+24 42.5	1.357	2.211	17.8	18.9	9 8	1 3.13	+ 4 48.1	1.089	2.030	13.9	20.4
9 18	0 57.56	+25 19.1	1.325	2.237	14.0	18.8	9 18	0 56.45	+ 5 19.7	1.030	2.008	9.3	20.1
9 28	0 47.44	+25 24.3	1.314	2.264	10.5	18.6	9 28	0 47.24	+ 5 49.0	0.994	1.987	5.3	19.8
10 8	0 36.73	+24 59.5	1.326	2.292	8.4	18.6	10 8	0 36.82	+ 6 6.8	0.981	1.967	6.5	19.8
10 18	0 26.88	+24 10.6	1.363	2.319	9.0	18.7	10 18	0 26.80	+ 6 5.7	0.991	1.948	11.3	20.0
10 28	0 19.17	+23 7.7	1.424	2.348	11.5	18.9	10 28	0 18.81	+ 5 40.9	1.022	1.931	16.4	20.3
11 7	0 14.37	+22 1.8	1.508	2.376	14.5	19.2	11 7	0 13.96	+ 4 51.9	1.071	1.914	21.0	20.5
275848	2001 <i>SP</i> ₇₆	10	4.2 61°86	3°1/ 6.4 17			21323	1997 <i>AZ</i> ₃	10	4.2 209°65	7°4/ 26.0 18		
8 29	1 9.98	+13 47.6	1.097	1.941	21.9	20.2	8 29	1 3.89	+12 24.1	1.831	2.701	13.2	18.1
9 8	1 5.16	+13 36.7	1.056	1.967	17.2	20.0	9 8	0 59.74	+14 6.6	1.774	2.700	10.4	18.0
9 18	0 57.22	+12 59.2	1.032	1.993	11.7	19.8	9 18	0 53.52	+15 47.6	1.741	2.698	8.1	17.8
9 28	0 47.27	+11 58.7	1.029	2.020	6.0	19.6	9 28	0 45.88	+17 17.6	1.734	2.696	7.5	17.8
10 8	0 36.88	+10 43.5	1.050	2.046	3.2	19.5	10 8	0 37.75	+18 27.9	1.753	2.693	8.9	17.9
10 18	0 27.62	+ 9 24.9	1.096	2.073	7.5	19.8	10 18	0 30.08	+19 12.4	1.798	2.691	11.5	18.0
10 28	0 20.79	+ 8 14.1	1.166	2.099	12.5	20.2	10 28	0 23.80	+19 28.8	1.865	2.689	14.2	18.2
11 7	0 17.05	+ 7 19.5	1.256	2.125	16.8	20.5	11 7	0 19.55	+19 18.1	1.951	2.686	16.7	18.4
30203	Kimdavis	10	4.2 172°79	0°6/ 4.7 18			389520	2010 <i>GT</i> ₁₅₇	10	4.2 193°11	2°6/ 1.8 18		
8 29	1 7.52	+ 8 32.4											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
383233	2006 <i>BD</i> ₃₇	10	4.2 198°52	0°1/ 4.1 18			333202	2012 <i>GY</i> ₃₁	10	4.2 220°58	0°9/ 5.4 18		
8 29	1 6.12	+ 6 35.7	1.917	2.753	14.2	22.4	8 29	1 1.68	+10 21.9	2.866	3.675	10.7	21.6
9 8	1 1.38	+ 6 7.7	1.838	2.751	10.9	22.2	9 8	0 57.43	+ 9 56.9	2.772	3.667	8.3	21.4
9 18	0 54.57	+ 5 27.0	1.781	2.749	7.0	22.0	9 18	0 51.80	+ 9 21.1	2.701	3.659	5.5	21.2
9 28	0 46.32	+ 4 37.2	1.750	2.746	2.7	21.7	9 28	0 45.21	+ 8 36.4	2.658	3.651	2.6	21.0
10 8	0 37.48	+ 3 43.6	1.747	2.743	1.8	21.6	10 8	0 38.22	+ 7 46.1	2.645	3.642	1.2	20.9
10 18	0 29.04	+ 2 52.4	1.772	2.740	6.1	21.9	10 18	0 31.44	+ 6 54.1	2.662	3.633	4.1	21.1
10 28	0 21.92	+ 2 9.5	1.824	2.737	10.1	22.1	10 28	0 25.49	+ 6 5.0	2.708	3.623	7.1	21.3
11 7	0 16.82	+ 1 39.4	1.900	2.733	13.5	22.4	11 7	0 20.84	+ 5 22.6	2.780	3.613	9.7	21.4
362505	2010 <i>TM</i> ₇₅	10	4.2 67°51	1°3/ 2.9 18			177572	2004 <i>FU</i> ₁₂₆	10	4.2 290°80	0°6/ 3.5 18		
8 29	1 5.78	+ 1 45.4	2.053	2.899	13.0	21.3	8 29	1 2.45	+ 5 51.1	1.922	2.766	13.8	20.4
9 8	1 0.91	+ 1 28.0	1.982	2.902	9.8	21.1	9 8	0 58.62	+ 5 9.1	1.842	2.761	10.5	20.2
9 18	0 54.16	+ 1 3.3	1.933	2.905	6.2	20.9	9 18	0 52.83	+ 4 14.2	1.784	2.755	6.7	20.0
9 28	0 46.13	+ 0 35.1	1.911	2.908	2.4	20.7	9 28	0 45.66	+ 3 10.6	1.752	2.750	2.5	19.7
10 8	0 37.63	+ 0 7.9	1.917	2.911	2.5	20.7	10 8	0 37.94	+ 2 4.5	1.748	2.744	2.1	19.6
10 18	0 29.56	- 0 13.8	1.952	2.914	6.2	21.0	10 18	0 30.57	+ 1 2.6	1.772	2.739	6.3	19.9
10 28	0 22.73	- 0 26.1	2.013	2.917	9.7	21.2	10 28	0 24.44	+ 0 11.1	1.823	2.734	10.2	20.1
11 7	0 17.77	- 0 26.5	2.098	2.920	12.8	21.4	11 7	0 20.21	- 0 25.4	1.897	2.729	13.6	20.4
507177	2010 <i>GF</i> ₁₇₂	10	4.2 163°40	3°5/ 30.8 18			221913	2008 <i>RS</i> ₂₈	10	4.2 306°59	0°6/ 5.2 18		
8 29	1 9.72	- 5 30.0	2.272	3.117	11.9	21.8	8 29	0 56.35	+ 8 48.6	4.179	4.990	7.6	20.5
9 8	1 3.65	- 6 1.8	2.204	3.123	9.0	21.6	9 8	0 53.00	+ 8 32.5	4.089	4.986	5.8	20.4
9 18	0 55.78	- 6 35.2	2.160	3.128	6.0	21.4	9 18	0 48.79	+ 8 9.9	4.023	4.983	3.8	20.3
9 28	0 46.73	- 7 5.6	2.145	3.133	3.7	21.3	9 28	0 44.00	+ 7 42.4	3.986	4.979	1.7	20.1
10 8	0 37.28	- 7 28.2	2.158	3.137	4.4	21.3	10 8	0 38.98	+ 7 11.9	3.978	4.976	0.8	20.0
10 18	0 28.28	- 7 39.2	2.201	3.140	7.2	21.5	10 18	0 34.11	+ 6 40.7	4.002	4.972	2.9	20.2
10 28	0 20.52	- 7 36.4	2.271	3.143	10.2	21.7	10 28	0 29.75	+ 6 11.3	4.054	4.969	5.0	20.3
11 7	0 14.57	- 7 19.1	2.365	3.145	12.9	21.9	11 7	0 26.22	+ 5 45.9	4.134	4.965	6.8	20.5
226397	2003 <i>QT</i> ₁₄	10	4.2 339°15	4°5/ 8.8 18			298256	2002 <i>VP</i> ₉₆	10	4.2 323°96	5°1/ 8.3 18		
8 29	1 2.13	+18 56.2	2.023	2.812	15.2	19.6	8 29	1 1.17	+17 36.6	1.526	2.343	18.1	20.1
9 8	0 58.45	+19 9.0	1.935	2.805	12.5	19.4	9 8	0 58.51	+17 56.3	1.429	2.319	14.9	19.8
9 18	0 52.77	+19 2.9	1.868	2.800	9.4	19.2	9 18	0 53.27	+17 53.5	1.352	2.296	11.2	19.6
9 28	0 45.65	+18 37.5	1.824	2.794	6.3	19.0	9 28	0 45.99	+17 26.4	1.296	2.273	7.3	19.3
10 8	0 37.90	+17 55.0	1.806	2.789	4.5	18.9	10 8	0 37.67	+16 37.1	1.264	2.252	5.1	19.1
10 18	0 30.45	+17 0.1	1.816	2.785	5.9	19.0	10 18	0 29.54	+15 31.3	1.257	2.231	7.2	19.2
10 28	0 24.23	+15 59.5	1.852	2.781	8.9	19.2	10 28	0 22.91	+14 18.3	1.274	2.211	11.4	19.3
11 7	0 19.91	+15 0.4	1.913	2.777	12.1	19.4	11 7	0 18.77	+13 8.4	1.314	2.192	15.6	19.6
57141	2001 <i>PG</i> ₃₂	10	4.2 294°48	4°8/ 30.8 18			12170	Vanvollenhoven	10	4.2 36°08	1°7/ 5.7 18		
8 29	1 8.68	- 5 16.7	1.489	2.358	15.8	19.5	8 29	1 3.37	+11 18.1	1.542	2.380	16.9	17.9
9 8	1 4.04	- 5 52.3	1.408	2.340	12.1	19.2	9 8	0 59.44	+10 58.7	1.495	2.406	13.1	17.7
9 18	0 56.68	- 6 32.0	1.348	2.322	8.1	18.9	9 18	0 53.31	+10 21.3	1.469	2.433	8.7	17.6
9 28	0 47.25	- 7 8.7	1.313	2.303	5.0	18.7	9 28	0 45.79	+ 9 29.7	1.467	2.460	4.1	17.4
10 8	0 36.89	- 7 34.6	1.303	2.285	6.1	18.7	10 8	0 37.93	+ 8 30.1	1.491	2.488	2.0	17.3
10 18	0 26.93	- 7 43.3	1.319	2.267	10.2	18.9	10 18	0 30.77	+ 7 29.9	1.542	2.517	6.0	17.6
10 28	0 18.65	- 7 30.6	1.359	2.249	14.5	19.1	10 28	0 25.25	+ 6 36.6	1.618	2.546	10.0	17.9
11 7	0 13.00	- 6 56.1	1.419	2.232	18.3	19.3	11 7	0 21.93	+ 5 55.7	1.717	2.575	13.5	18.2
233222	2005 <i>YO</i> ₁₃	10	4.2 14°16	1°8/ 2.7 18			376426	2012 <i>HF</i> ₇	10	4.2 129°25	4°9/ 29.9 17		
8 29	1 4.87	+ 2 54.4	1.579	2.438	15.6	20.9	8 29	1 6.77	- 4 2.5	1.531	2.401	15.4	21.1
9 8	1 0.77	+ 2 12.3	1.511	2.438	11.8	20.6	9 8	1 2.18	- 5 17.2	1.474	2.406	11.6	20.9
9 18	0 54.33	+ 1 18.3	1.464	2.439	7.4	20.4	9 18	0 55.20	- 6 37.8	1.438	2.411	7.7	20.6
9 28	0 46.25	+ 0 18.1	1.442	2.439	2.9	20.1	9 28	0 46.58	- 7 55.4	1.428	2.416	5.0	20.5
10 8	0 37.57	- 0 40.8	1.447	2.440	3.2	20.2	10 8	0 37.42	- 9 0.9	1.444	2.421	6.3	20.6
10 18	0 29.41	- 1 31.0	1.478	2.441	7.7	20.4	10 18	0 28.88	- 9 46.8	1.486	2.426	10.0	20.8
10 28	0 22.81	- 2 6.2	1.534	2.442	12.0	20.7	10 28	0 22.03	- 10 8.9	1.551	2.430	13.7	21.1
11 7	0 18.51	- 2 23.1	1.612	2.444	15.6	20.9	11 7	0 17.57	- 10 6.6	1.638	2.434	17.0	21.3
322538	2011 <i>YN</i> ₂₇	10	4.2 332°21	1°3/ 1.7 18			38453	1999 <i>TU</i> ₁	10	4.2 125°01	1°2/ 2.9 18 R		
8 29	0 55.70	- 0 25.8	4.148	4.990	7.0	20.4	8 29	1 4.63	+ 2 1.3	2.259	3.101	12.1	17.8
9 8	0 52.50	- 0 57.7	4.068	4.987	5.2	20.3	9 8	0 59.89	+ 1 38.3	2.186	3.105	9.1	17.6
9 18	0 48.46	- 1 32.8	4.013	4.985	3.3	20.1	9 18	0 53.45	+ 1 8.1	2.136	3.108	5.7	17.4
9 28	0 43.86	- 2 8.7	3.987	4.982	1.5	20.0	9 28	0 45.86	+ 0 34.5	2.114	3.111	2.2	17.1
10 8	0 39.05	- 2 42.9	3.991	4.980	1.9	20.0	10 8	0 37.85	+ 0 1.8	2.120	3.114	2.3	17.2
10 18	0 34.40	- 3 13.0	4.026	4.977	3.8	20.2	10 18	0 30.22	- 0 25.7	2.155	3.117	5.8	17.4
10 28	0 30.26	- 3 36.8	4.089	4.975	5.7	20.3	10 28	0 23.71	- 0 44.2	2.218	3.120	9.1	17.6
11 7	0 26.94	- 3 52.9	4.177	4.973	7.4	20.4	11 7	0 18.87	- 0 51.2	2.305	3.123	12.0	17.8
505098	2011 <i>YB</i> ₇₇	10	4.2 265°55	2°1/ 2.8 17			424485	2008 <i>DS</i> ₁₅	10	4.2 210°27	1°9/ 2.5 17		
8 29	1 9.69	+ 1 25.1	1.352	2.215	17.4	21.4	8 29	1 7.61	+ 2 27.7	1.785	2.633	14.5	21.8
9 8	1 4.95	+ 1 1.9	1.279	2.208	13.3	21.1	9 8	1 2.69	+ 1 40.5	1.706	2.628	11.0	21.5
9 18	0 57.30	+ 0 27.8	1.226	2.201	8.5	20.8	9 18	0 55.51	+ 0 42.2	1.649	2.622	7.0	21.3
9 28	0 47.49	- 0 11.9	1.196	2.194	3.4	20.5	9 28	0 46.73	- 0 22.0	1.618	2.615	2.8	21.0
10 8	0 36.79	- 0 49.5	1.193	2.186	3.7	20.5	10 8	0 37.30	- 1 24.9	1.616	2.608	3.2	21.0
10 18	0 26.62	- 1 17.8	1.215	2.179	8.8	20.8	10 18	0 28.27	- 2 19.5	1.641	2.601	7.5	21.3
10 28	0 18.37	- 1 30.6	1.261	2.172	13.7	21.1	10 28	0 20.68	- 2 59.6	1.693	2.592	11.6	21.5
11 7	0 12.94	- 1 24.7	1.327	2.165	18.0	21.3	11 7	0 15.26	- 3 21.9	1.767	2.584	15.1	21.7
437117	2012 <i>UQ</i> ₁₃₃	10	4.2 18°37	1°7/ 2.8 18			424336	2007 <i>UW</i> ₁₀₃	10				

EPHEMERIDES

10 4.2

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213503	2002 <i>GM</i> ₈₀	10	4.2	80°06'	3°0'/2.2	17	410097	2007 <i>EC</i> ₈₆	10	4.2	138°68'	0°3'/3.9	18
8 29	1 11.13	- 0 37.3	1.352	2.216	17.4	19.9	8 29	1 6.81	+ 4 4.4	2.729	3.552	10.8	21.2
9 8	1 5.64	- 1 7.5	1.301	2.231	13.1	19.7	9 8	1 1.22	+ 3 59.6	2.654	3.561	8.2	21.0
9 18	0 57.44	- 1 45.5	1.270	2.245	8.3	19.4	9 18	0 54.16	+ 3 48.3	2.604	3.570	5.2	20.9
9 28	0 47.44	- 2 24.8	1.264	2.260	3.7	19.2	9 28	0 46.13	+ 3 32.8	2.583	3.579	2.0	20.7
10 8	0 36.94	- 2 57.8	1.283	2.274	4.3	19.3	10 8	0 37.76	+ 3 16.0	2.591	3.587	1.4	20.6
10 18	0 27.30	- 3 18.2	1.329	2.288	8.8	19.6	10 18	0 29.73	+ 3 0.9	2.630	3.595	4.6	20.9
10 28	0 19.69	- 3 21.7	1.399	2.303	13.2	19.9	10 28	0 22.67	+ 2 50.6	2.698	3.603	7.5	21.1
11 7	0 14.81	- 3 7.2	1.489	2.317	16.9	20.2	11 7	0 17.09	+ 2 47.4	2.792	3.610	10.1	21.3
405744	2005 <i>YA</i> ₇₀	10	4.2	358°08'	6°6'/27.4	18	188448	2004 <i>HW</i> ₃₅	10	4.2	70°26'	5°0'/30.4	18
8 29	1 2.32	-11 39.9	1.881	2.753	12.9	20.3	8 29	1 8.51	- 4 56.3	1.432	2.303	16.2	20.1
9 8	0 58.48	-12 52.3	1.824	2.751	10.1	20.2	9 8	1 3.50	- 5 52.2	1.385	2.318	12.2	19.9
9 18	0 52.69	-14 2.9	1.789	2.750	7.6	20.0	9 18	0 56.00	- 6 51.5	1.360	2.333	8.0	19.7
9 28	0 45.59	-15 3.8	1.780	2.750	6.6	19.9	9 28	0 46.88	- 7 45.8	1.359	2.348	5.1	19.5
10 8	0 38.04	-15 47.8	1.798	2.749	7.8	20.0	10 8	0 37.34	- 8 27.1	1.384	2.364	6.3	19.7
10 18	0 30.95	-16 10.3	1.840	2.750	10.4	20.2	10 18	0 28.60	- 8 49.3	1.435	2.379	9.9	19.9
10 28	0 25.18	-16 8.9	1.907	2.750	13.2	20.4	10 28	0 21.73	- 8 49.5	1.509	2.394	13.7	20.2
11 7	0 21.33	-15 44.6	1.993	2.751	15.7	20.6	11 7	0 17.36	- 8 28.2	1.604	2.409	16.9	20.4
481379	2006 <i>KE</i> ₁₀₂	10	4.2	289°35'	9°4'/24.7	18	150445	2000 <i>GD</i> ₁₆₁	10	4.2	223°96'	2°6'/2.2	18
8 29	1 5.77	-18 28.9	1.753	2.619	13.9	21.4	8 29	1 8.59	- 0 19.4	1.628	2.485	15.3	20.1
9 8	1 1.30	-20 1.0	1.701	2.614	11.5	21.2	9 8	1 3.58	- 0 49.1	1.556	2.482	11.6	19.8
9 18	0 54.59	-21 25.4	1.671	2.610	9.8	21.1	9 18	0 56.15	- 1 26.6	1.506	2.480	7.3	19.6
9 28	0 46.35	-22 32.3	1.665	2.606	9.5	21.1	9 28	0 47.01	- 2 6.4	1.481	2.477	3.3	19.3
10 8	0 37.58	-23 13.6	1.684	2.601	10.9	21.2	10 8	0 37.20	- 2 42.1	1.483	2.474	3.9	19.4
10 18	0 29.36	-23 24.8	1.727	2.597	13.2	21.3	10 18	0 27.91	- 3 7.4	1.513	2.471	8.1	19.6
10 28	0 22.68	-23 5.5	1.790	2.593	15.6	21.5	10 28	0 20.22	- 3 17.8	1.567	2.468	12.2	19.9
11 7	0 18.21	-22 18.5	1.872	2.588	17.9	21.7	11 7	0 14.89	- 3 11.1	1.644	2.465	15.8	20.1
38498	1999 <i>TX</i> ₁₄₈	10	4.2	33°15'	1°4'/5.5	18	392517	2011 <i>QM</i> ₂₇	10	4.2	295°15'	6°8'/26.0	18
8 29	1 3.39	+10 9.3	1.787	2.620	15.2	18.8	8 29	1 0.93	- 7 54.1	1.733	2.610	13.5	20.3
9 8	0 59.37	+10 0.7	1.722	2.630	11.8	18.6	9 8	0 57.66	-10 10.5	1.671	2.605	10.4	20.1
9 18	0 53.30	+ 9 37.1	1.678	2.641	7.9	18.4	9 18	0 52.31	-12 31.6	1.634	2.600	7.7	19.9
9 28	0 45.84	+ 9 1.1	1.659	2.652	3.7	18.2	9 28	0 45.50	-14 46.1	1.624	2.595	6.9	19.8
10 8	0 37.91	+ 8 17.4	1.666	2.663	1.8	18.1	10 8	0 38.13	-16 42.5	1.641	2.591	8.6	19.9
10 18	0 30.47	+ 7 31.9	1.702	2.675	5.6	18.3	10 18	0 31.17	-18 12.1	1.684	2.586	11.6	20.1
10 28	0 24.44	+ 6 50.7	1.763	2.688	9.6	18.6	10 28	0 25.56	-19 10.2	1.750	2.581	14.7	20.3
11 7	0 20.44	+ 6 19.0	1.848	2.701	13.0	18.9	11 7	0 21.97	-19 36.7	1.835	2.577	17.4	20.5
468853	2013 <i>AT</i> ₁₃₁	10	4.2	264°04'	3°6'/26.3	18	289053	2004 <i>TQ</i> ₁₇₇	10	4.2	61°32'	0°3'/4.6	18
8 29	0 55.33	-12 57.1	4.366	5.220	6.5	21.3	8 29	1 1.13	+ 9 7.8	2.131	2.961	13.1	20.7
9 8	0 52.22	-13 56.5	4.299	5.216	5.1	21.2	9 8	0 57.38	+ 8 23.7	2.056	2.966	10.1	20.5
9 18	0 48.29	-14 54.5	4.259	5.211	3.9	21.1	9 18	0 51.92	+ 7 25.6	2.005	2.970	6.5	20.3
9 28	0 43.82	-15 47.8	4.248	5.206	3.6	21.1	9 28	0 45.30	+ 6 17.3	1.980	2.975	2.7	20.0
10 8	0 39.14	-16 33.5	4.266	5.201	4.3	21.1	10 8	0 38.27	+ 5 4.4	1.983	2.980	1.4	19.9
10 18	0 34.61	-17 9.2	4.312	5.197	5.5	21.2	10 18	0 31.60	+ 3 53.1	2.015	2.985	5.3	20.2
10 28	0 30.57	-17 33.4	4.384	5.192	7.0	21.3	10 28	0 26.07	+ 2 49.7	2.074	2.990	8.9	20.5
11 7	0 27.33	-17 45.5	4.480	5.187	8.3	21.4	11 7	0 22.21	+ 1 58.8	2.158	2.995	12.0	20.7
365393	2009 <i>VM</i> ₁₀₈	10	4.2	61°79'	2°6'/7.6	18	288129	2003 <i>WO</i> ₇₉	10	4.2	320°72'	2°6'/6.3	18
8 29	1 0.45	+16 54.4	2.265	3.060	13.6	20.4	8 29	1 2.09	+12 14.3	1.493	2.332	17.3	20.5
9 8	0 56.82	+16 19.4	2.185	3.065	10.9	20.2	9 8	0 59.16	+12 15.2	1.401	2.311	13.8	20.2
9 18	0 51.54	+15 26.1	2.128	3.071	7.7	20.0	9 18	0 53.66	+11 56.4	1.329	2.290	9.6	19.9
9 28	0 45.14	+14 16.7	2.095	3.077	4.5	19.8	9 28	0 46.16	+11 18.7	1.279	2.270	5.1	19.6
10 8	0 38.34	+12 55.6	2.091	3.083	2.6	19.7	10 8	0 37.67	+10 26.2	1.254	2.250	2.8	19.4
10 18	0 31.90	+11 29.0	2.116	3.090	4.7	19.9	10 18	0 29.43	+ 9 26.0	1.255	2.231	6.8	19.6
10 28	0 26.54	+10 3.8	2.169	3.096	7.9	20.1	10 28	0 22.71	+ 8 27.1	1.280	2.213	11.6	19.9
11 7	0 22.81	+ 8 46.6	2.248	3.102	10.9	20.3	11 7	0 18.47	+ 7 37.9	1.327	2.196	16.0	20.1
188189	2002 <i>PL</i> ₈₄	10	4.2	8°33'	0°3'/3.9	18 R	80959	2000 <i>DK</i> ₁₀₅	10	4.2	72°72'	5°7'/28.9	18
8 29	1 5.61	+ 4 52.0	1.139	2.012	19.3	19.1	8 29	1 6.65	- 4 51.5	1.446	2.320	15.9	18.8
9 8	1 2.12	+ 4 47.9	1.079	2.013	14.8	18.8	9 8	1 1.93	- 6 36.3	1.412	2.346	11.9	18.6
9 18	0 55.58	+ 4 28.8	1.038	2.014	9.5	18.5	9 18	0 54.88	- 8 24.1	1.401	2.373	8.0	18.5
9 28	0 46.84	+ 3 58.8	1.019	2.017	3.6	18.2	9 28	0 46.41	-10 4.2	1.415	2.399	5.8	18.4
10 8	0 37.29	+ 3 25.3	1.023	2.020	2.5	18.1	10 8	0 37.66	-11 26.2	1.455	2.426	7.2	18.6
10 18	0 28.46	+ 2 56.0	1.051	2.025	8.3	18.5	10 18	0 29.76	-12 23.4	1.521	2.452	10.6	18.8
10 28	0 21.75	+ 2 38.3	1.102	2.030	13.6	18.8	10 28	0 23.66	-12 52.5	1.610	2.477	14.0	19.1
11 7	0 18.02	+ 2 36.8	1.172	2.036	18.1	19.1	11 7	0 19.93	-12 54.8	1.720	2.503	16.8	19.4
451614	2012 <i>DH</i> ₇₇	10	4.2	251°00'	2°1'/1.7	18	354008	2001 <i>DQ</i> ₅₅	10	4.2	322°77'	1°6'/7.0	18
8 29	1 3.36	- 0 25.4	2.579	3.423	10.7	22.1	8 29	0 57.77	+13 28.5	3.950	4.738	8.4	20.6
9 8	0 58.87	- 1 5.0	2.486	3.406	8.1	21.9	9 8	0 54.17	+13 27.9	3.853	4.731	6.6	20.5
9 18	0 52.81	- 1 50.6	2.418	3.390	5.1	21.7	9 18	0 49.60	+13 19.1	3.781	4.725	4.7	20.4
9 28	0 45.65	- 2 38.2	2.378	3.373	2.4	21.5	9 28	0 44.36	+13 2.9	3.736	4.718	2.7	20.2
10 8	0 38.01	- 3 23.4	2.367	3.355	3.0	21.5	10 8	0 38.85	+12 41.0	3.721	4.712	1.7	20.1
10 18	0 30.57	- 4 1.5	2.386	3.338	6.0	21.7	10 18	0 33.48	+12 15.4	3.735	4.706	3.1	20.2
10 28	0 24.04	- 4 28.8	2.432	3.319	9.0	21.8	10 28	0 28.67	+11 48.8	3.779	4.700	5.1	20.4
11 7	0 18.97	- 4 43.0	2.503	3.301	11.7	22.0	11 7	0 24.77	+11 23.9	3.851	4.694	7.0	20.5
476953	2008 <i>XO</i> ₃₄	10	4.2	250°71'	6°5'/10.8	18	493782	2015 <i>UT</i> ₄₂	10	4.2	241°59'	0°0'/4.0	18
8 29	1 5.38	+24 35.4											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
330309	2006 <i>UL</i> ₄	10	4.2 258°51	0°9/ 4.9 18			340398	2006 <i>EJ</i> ₃₃	10	4.2	0°12	4°4/ 6.7 18	
8 29	1 6.54	+ 9 5.9	1.488	2.331	17.2	20.9	8 29	1 1.08	+11 20.4	1.003	1.875	21.5	19.2
9 8	1 2.31	+ 8 47.0	1.414	2.329	13.3	20.7	9 8	0 59.16	+12 16.6	0.943	1.869	17.2	18.9
9 18	0 55.49	+ 8 10.4	1.360	2.327	8.8	20.4	9 18	0 53.98	+12 52.4	0.899	1.866	12.2	18.7
9 28	0 46.80	+ 7 19.2	1.330	2.326	3.8	20.1	9 28	0 46.34	+13 6.7	0.875	1.865	7.0	18.4
10 8	0 37.37	+ 6 19.7	1.326	2.324	1.9	20.0	10 8	0 37.68	+13 1.9	0.872	1.866	4.4	18.2
10 18	0 28.43	+ 5 19.8	1.349	2.322	6.9	20.3	10 18	0 29.64	+12 44.1	0.891	1.870	8.2	18.5
10 28	0 21.20	+ 4 27.8	1.396	2.320	11.7	20.6	10 28	0 23.83	+12 22.4	0.931	1.875	13.4	18.8
11 7	0 16.48	+ 3 50.0	1.466	2.318	15.8	20.8	11 7	0 21.24	+12 5.8	0.990	1.883	18.0	19.1
59355	1999 <i>CL</i> ₁₅₃	10	4.2 197°36	0°1/ 4.4 18			320624	2008 <i>CT</i> ₄₀	10	4.2 132°85	3°4/ 7.1 17		
8 29	0 55.48	+ 6 23.3	4.860	5.676	6.5	20.6	8 29	1 8.49	+15 8.8	1.637	2.447	17.3	20.6
9 8	0 52.25	+ 6 2.9	4.771	5.675	4.9	20.5	9 8	1 3.58	+15 10.0	1.564	2.454	13.9	20.4
9 18	0 48.28	+ 5 37.6	4.709	5.673	3.1	20.3	9 18	0 56.19	+14 50.7	1.512	2.461	9.8	20.2
9 28	0 43.84	+ 5 9.0	4.676	5.672	1.2	20.2	9 28	0 47.06	+14 11.7	1.483	2.467	5.7	20.0
10 8	0 39.21	+ 4 38.9	4.673	5.670	0.7	20.1	10 8	0 37.28	+13 17.4	1.481	2.473	3.5	19.9
10 18	0 34.71	+ 4 9.3	4.701	5.668	2.6	20.3	10 18	0 28.03	+12 14.3	1.506	2.479	6.3	20.0
10 28	0 30.64	+ 3 42.2	4.758	5.666	4.4	20.4	10 28	0 20.44	+11 11.1	1.557	2.484	10.4	20.3
11 7	0 27.28	+ 3 19.4	4.843	5.664	6.1	20.6	11 7	0 15.28	+10 15.6	1.632	2.490	14.1	20.5
177155	2003 <i>SE</i> ₂₃	10	4.2 320°81	0°9/ 4.7 18			73442	Feruglio	10	4.2 347°93	1°5/ 2.7 18		
8 29	1 8.65	+ 6 24.4	1.244	2.103	18.9	19.7	8 29	1 0.40	+ 2 55.7	1.869	2.727	13.6	18.6
9 8	1 4.54	+ 6 41.8	1.168	2.092	14.7	19.4	9 8	0 57.13	+ 2 16.8	1.793	2.720	10.2	18.4
9 18	0 57.28	+ 6 45.0	1.110	2.082	9.8	19.1	9 18	0 51.93	+ 1 27.6	1.740	2.715	6.4	18.2
9 28	0 47.62	+ 6 35.9	1.075	2.071	4.1	18.7	9 28	0 45.38	+ 0 32.7	1.712	2.710	2.5	17.9
10 8	0 36.85	+ 6 19.1	1.064	2.062	2.2	18.6	10 8	0 38.30	- 0 21.5	1.712	2.706	2.7	17.9
10 18	0 26.53	+ 6 0.7	1.078	2.053	8.0	18.9	10 18	0 31.58	- 1 9.0	1.738	2.702	6.7	18.2
10 28	0 18.22	+ 5 48.1	1.115	2.044	13.4	19.2	10 28	0 26.08	- 1 44.2	1.791	2.699	10.5	18.4
11 7	0 12.95	+ 5 47.0	1.173	2.036	18.1	19.4	11 7	0 22.45	- 2 3.8	1.866	2.697	13.8	18.6
319200	2005 <i>YU</i> ₁₇₅	10	4.2 157°84	6°0/11.7 17			133158	2003 <i>QE</i> ₂₇	10	4.2 346°27	1°2/ 2.7 18		
8 29	1 5.22	+26 13.0	2.601	3.322	13.8	20.9	8 29	0 59.27	+ 5 37.4	2.135	2.981	12.6	19.5
9 8	1 0.43	+26 40.2	2.512	3.326	11.8	20.7	9 8	0 56.02	+ 4 24.4	2.058	2.979	9.5	19.3
9 18	0 53.89	+26 49.2	2.444	3.328	9.6	20.6	9 18	0 51.09	+ 2 58.5	2.004	2.977	5.9	19.0
9 28	0 46.11	+26 38.4	2.399	3.331	7.4	20.5	9 28	0 45.03	+ 1 24.9	1.977	2.975	2.2	18.8
10 8	0 37.81	+26 8.6	2.380	3.333	6.1	20.4	10 8	0 38.52	- 0 9.3	1.980	2.974	2.4	18.8
10 18	0 29.78	+25 22.7	2.389	3.336	6.3	20.4	10 18	0 32.35	- 1 36.9	2.011	2.972	6.1	19.1
10 28	0 22.81	+24 25.6	2.426	3.338	7.9	20.5	10 28	0 27.24	- 2 51.5	2.069	2.971	9.6	19.3
11 7	0 17.51	+23 23.8	2.489	3.339	10.1	20.6	11 7	0 23.76	- 3 48.6	2.152	2.970	12.7	19.5
512200	2015 <i>TT</i> ₁₁	10	4.2 91°32	3°3/ 7.8 18			167494	2003 <i>YO</i> ₈₃	10	4.2 206°76	1°3/ 5.6 18		
8 29	1 5.28	+16 57.2	2.056	2.848	14.9	20.9	8 29	1 5.15	+10 44.1	2.205	3.019	13.3	20.9
9 8	1 0.56	+16 46.7	1.989	2.866	11.9	20.7	9 8	1 0.49	+10 25.0	2.117	3.015	10.4	20.7
9 18	0 53.96	+16 17.8	1.943	2.883	8.6	20.5	9 18	0 53.98	+ 9 52.1	2.053	3.011	7.0	20.5
9 28	0 46.11	+15 32.0	1.922	2.901	5.2	20.4	9 28	0 46.17	+ 9 7.5	2.014	3.006	3.3	20.2
10 8	0 37.86	+14 33.1	1.928	2.918	3.3	20.3	10 8	0 37.83	+ 8 15.3	2.004	3.001	1.6	20.1
10 18	0 30.10	+13 27.0	1.964	2.935	5.2	20.4	10 18	0 29.79	+ 7 20.6	2.024	2.996	5.1	20.3
10 28	0 23.66	+12 20.5	2.026	2.952	8.5	20.7	10 28	0 22.89	+ 6 29.4	2.071	2.990	8.7	20.6
11 7	0 19.11	+11 20.0	2.115	2.969	11.5	20.9	11 7	0 17.76	+ 5 46.6	2.143	2.983	11.9	20.8
354482	2004 <i>EV</i> ₁₅	10	4.2 286°31	1°1/ 5.3 18			448682	2010 <i>WV</i> ₉	10	4.2 350°71	1°7/ 2.8 18		
8 29	1 3.58	+ 9 57.0	1.895	2.725	14.6	20.7	8 29	1 5.03	+ 0 41.0	1.708	2.567	14.6	20.6
9 8	0 59.68	+ 9 37.8	1.802	2.709	11.4	20.4	9 8	1 0.81	+ 0 30.5	1.634	2.562	11.0	20.4
9 18	0 53.66	+ 9 3.1	1.731	2.694	7.6	20.2	9 18	0 54.36	+ 0 12.7	1.583	2.557	7.0	20.2
9 28	0 46.09	+ 8 15.2	1.685	2.678	3.5	19.9	9 28	0 46.35	- 0 8.3	1.557	2.554	2.8	19.9
10 8	0 37.81	+ 7 18.6	1.666	2.663	1.7	19.7	10 8	0 37.73	- 0 27.2	1.557	2.551	3.0	19.9
10 18	0 29.78	+ 6 19.7	1.675	2.648	5.8	20.0	10 18	0 29.54	- 0 39.1	1.584	2.548	7.2	20.2
10 28	0 23.00	+ 5 25.4	1.710	2.632	10.0	20.2	10 28	0 22.80	- 0 40.0	1.637	2.547	11.2	20.4
11 7	0 18.21	+ 4 41.7	1.770	2.617	13.7	20.4	11 7	0 18.21	- 0 27.4	1.712	2.546	14.7	20.6
35332	1997 <i>EY</i> ₅₂	10	4.2 143°88	0°4/ 3.8 18			349805	2009 <i>BR</i> ₁₀₆	10	4.2 243°10	1°9/ 5.9 18		
8 29	1 3.46	+ 5 29.7	2.476	3.307	11.5	19.8	8 29	1 7.02	+11 17.8	2.181	2.991	13.6	21.5
9 8	0 58.88	+ 4 59.2	2.402	3.313	8.7	19.6	9 8	1 2.04	+11 18.1	2.084	2.978	10.7	21.2
9 18	0 52.77	+ 4 19.7	2.351	3.319	5.5	19.4	9 18	0 55.08	+11 5.1	2.010	2.964	7.4	21.0
9 28	0 45.64	+ 3 34.3	2.328	3.325	2.1	19.2	9 28	0 46.65	+10 39.8	1.961	2.951	3.8	20.8
10 8	0 38.14	+ 2 47.3	2.335	3.331	1.5	19.2	10 8	0 37.54	+10 5.4	1.941	2.936	2.0	20.6
10 18	0 30.98	+ 2 3.2	2.371	3.336	5.0	19.4	10 18	0 28.66	+ 9 26.1	1.950	2.922	5.3	20.8
10 28	0 24.83	+ 1 26.2	2.435	3.342	8.2	19.6	10 28	0 20.92	+ 8 47.5	1.987	2.907	8.9	21.0
11 7	0 20.19	+ 0 59.5	2.524	3.346	10.9	19.8	11 7	0 15.03	+ 8 14.7	2.049	2.891	12.3	21.2
363283	2002 <i>GT</i> ₁₆₉	10	4.2 60°32	3°2/ 8.2 15			278987	2008 <i>UW</i> ₂₀₅	10	4.2 12°98	0°9/ 3.5 18		
8 29	1 1.66	+18 35.9	2.080	2.869	14.8	20.9	8 29	0 59.67	+ 6 52.0	1.243	2.115	18.1	18.5
9 8	0 57.79	+18 0.1	2.015	2.890	11.9	20.7	9 8	0 57.33	+ 5 57.2	1.185	2.118	13.7	18.3
9 18	0 52.16	+17 4.1	1.971	2.910	8.6	20.6	9 18	0 52.38	+ 4 42.8	1.146	2.123	8.7	18.0
9 28	0 45.40	+15 50.2	1.953	2.931	5.2	20.4	9 28	0 45.62	+ 3 15.7	1.130	2.128	3.2	17.7
10 8	0 38.31	+14 23.4	1.962	2.952	3.2	20.3	10 8	0 38.22	+ 1 46.2	1.139	2.135	2.7	17.7
10 18	0 31.70	+12 50.7	2.000	2.973	5.0	20.5	10 18	0 31.46	+ 0 25.3	1.172	2.143	8.1	18.1
10 28	0 26.34	+11 19.8	2.066	2.994	8.2	20.7	10 28	0 26.49	- 0 37.6	1.228	2.152	13.0	18.4
11 7	0 22.74	+ 9 57.7	2.158	3.015	11.2	21.0	11 7	0 24.03	- 1 17.3	1.305	2.161	17.1	18.7
315184	2007 <i>JM</i> ₄₂	10	4.2 159°18	6°7/23.6 18			492282	2013 <i>YS</i> ₁₂	10	4.2 298°50	0°6/ 5.0 16		
8 29	1 1.69	-18 1.2	2.7										

EPHEMERIDES

10 4.2

10 4.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
379997	2013 <i>CM</i> ₁₅₆	10	4.2 325°76	2°4/29.6	18		436505	2011 <i>FO</i> ₁₀	10	4.2 144°85	0°2/4.5	16	
8 29	0 55.39	- 5 25.5	4.039	4.891	7.0	20.5	8 29	1 6.67	+ 8 16.7	1.890	2.720	14.6	22.4
9 8	0 52.34	- 6 12.2	3.962	4.886	5.2	20.4	9 8	1 1.78	+ 7 40.8	1.819	2.728	11.2	22.2
9 18	0 48.43	- 7 0.3	3.911	4.881	3.5	20.2	9 18	0 54.85	+ 6 50.6	1.770	2.736	7.2	22.0
9 28	0 43.95	- 7 47.0	3.890	4.875	2.4	20.2	9 28	0 46.53	+ 5 49.9	1.747	2.743	2.9	21.7
10 8	0 39.24	- 8 29.4	3.898	4.870	3.0	20.2	10 8	0 37.71	+ 4 44.5	1.752	2.750	1.6	21.6
10 18	0 34.69	- 9 4.7	3.935	4.865	4.7	20.3	10 18	0 29.38	+ 3 41.2	1.786	2.756	5.9	21.9
10 28	0 30.66	- 9 30.9	4.001	4.861	6.5	20.4	10 28	0 22.43	+ 2 46.5	1.847	2.762	9.9	22.2
11 7	0 27.46	- 9 46.8	4.091	4.856	8.1	20.6	11 7	0 17.51	+ 2 5.2	1.933	2.767	13.3	22.4
112492	2002 <i>PA</i> ₆	10	4.2 124°34	1°3/5.5	18		223350	2003 <i>RN</i> ₁₅	10	4.2 2°38	5°0/9.7	18	
8 29	1 4.32	+10 52.5	1.887	2.712	14.8	20.2	8 29	1 2.15	+20 58.0	2.063	2.839	15.3	19.7
9 8	1 0.09	+10 29.3	1.810	2.714	11.5	20.0	9 8	0 58.46	+21 8.9	1.979	2.839	12.7	19.5
9 18	0 53.82	+ 9 50.1	1.756	2.717	7.7	19.7	9 18	0 52.80	+20 59.8	1.916	2.839	9.8	19.3
9 28	0 46.13	+ 8 57.6	1.726	2.719	3.6	19.5	9 28	0 45.77	+20 30.1	1.875	2.839	6.8	19.1
10 8	0 37.91	+ 7 57.0	1.724	2.721	1.7	19.4	10 8	0 38.16	+19 42.1	1.861	2.840	5.0	19.0
10 18	0 30.10	+ 6 54.5	1.750	2.723	5.6	19.6	10 18	0 30.88	+18 40.6	1.874	2.841	6.0	19.1
10 28	0 23.62	+ 5 57.2	1.803	2.725	9.6	19.9	10 28	0 24.83	+17 32.3	1.914	2.842	8.7	19.3
11 7	0 19.13	+ 5 10.7	1.880	2.727	13.0	20.1	11 7	0 20.66	+16 24.9	1.979	2.844	11.7	19.5
144519	2004 <i>EM</i> ₇₈	10	4.2 272°51	2°4/1.5	18		46694	1997 <i>CS</i> ₉	10	4.2 299°48	3°2/6.4	18	
8 29	1 1.36	+ 2 26.5	1.975	2.829	13.1	20.0	8 29	1 8.64	+12 12.4	1.446	2.276	18.2	19.7
9 8	0 57.82	+ 1 9.0	1.890	2.817	9.9	19.8	9 8	1 4.21	+12 35.9	1.365	2.268	14.6	19.5
9 18	0 52.39	- 0 20.8	1.830	2.804	6.2	19.5	9 18	0 56.93	+12 41.4	1.303	2.261	10.2	19.2
9 28	0 45.59	- 1 56.7	1.796	2.792	2.8	19.3	9 28	0 47.50	+12 28.8	1.265	2.253	5.6	18.9
10 8	0 38.22	- 3 30.8	1.791	2.779	3.7	19.3	10 8	0 37.09	+12 1.2	1.251	2.245	3.4	18.8
10 18	0 31.15	- 4 55.2	1.813	2.767	7.4	19.5	10 18	0 27.07	+11 24.2	1.263	2.238	7.1	19.0
10 28	0 25.24	- 6 3.1	1.863	2.754	11.1	19.7	10 28	0 18.83	+10 45.9	1.301	2.231	11.8	19.2
11 7	0 21.14	- 6 50.5	1.935	2.742	14.4	19.9	11 7	0 13.32	+10 14.1	1.360	2.224	16.0	19.5
332015	2005 <i>NY</i> ₅₄	10	4.2 357°20	0°9/3.6	18		8630	Billprady	10	4.2 123°04	0°4/4.6	18	R
8 29	0 55.52	+ 5 58.9	0.931	1.828	20.5	19.6	8 29	1 10.55	+ 7 34.2	1.616	2.451	16.4	18.0
9 8	0 54.94	+ 5 25.7	0.873	1.820	15.7	19.3	9 8	1 5.00	+ 7 17.5	1.552	2.464	12.6	17.8
9 18	0 51.26	+ 4 30.4	0.833	1.815	10.0	18.9	9 18	0 57.02	+ 6 46.3	1.509	2.476	8.2	17.5
9 28	0 45.29	+ 3 19.7	0.813	1.811	3.8	18.6	9 28	0 47.39	+ 6 4.1	1.492	2.488	3.3	17.3
10 8	0 38.41	+ 2 4.9	0.813	1.810	3.1	18.5	10 8	0 37.23	+ 5 16.8	1.501	2.499	1.8	17.2
10 18	0 32.18	+ 0 58.6	0.835	1.811	9.3	18.9	10 18	0 27.70	+ 4 30.8	1.539	2.510	6.6	17.5
10 28	0 28.08	+ 0 11.8	0.877	1.814	15.1	19.2	10 28	0 19.89	+ 3 52.9	1.603	2.520	10.9	17.8
11 7	0 26.98	- 0 9.3	0.938	1.820	19.9	19.6	11 7	0 14.50	+ 3 27.8	1.689	2.530	14.6	18.1
225221	2008 <i>SN</i> ₂₂	10	4.2 17°51	0°4/4.9	17		352326	2007 <i>UX</i> ₁₂₆	10	4.2 205°63	4°5/29.8	18	
8 29	0 56.89	+ 8 7.3	3.720	4.537	8.3	20.5	8 29	1 6.64	- 7 3.1	2.039	2.897	12.6	21.2
9 8	0 53.53	+ 7 48.4	3.638	4.539	6.3	20.4	9 8	1 1.65	- 7 50.5	1.970	2.895	9.6	21.0
9 18	0 49.21	+ 7 22.6	3.580	4.542	4.1	20.2	9 18	0 54.73	- 8 39.5	1.925	2.893	6.6	20.8
9 28	0 44.26	+ 6 51.5	3.551	4.545	1.8	20.1	9 28	0 46.48	- 9 23.9	1.906	2.890	4.6	20.7
10 8	0 39.07	+ 6 17.7	3.551	4.548	0.9	20.0	10 8	0 37.76	- 9 57.8	1.915	2.888	5.6	20.8
10 18	0 34.06	+ 5 43.8	3.581	4.551	3.2	20.2	10 18	0 29.46	-10 16.6	1.952	2.885	8.5	20.9
10 28	0 29.64	+ 5 12.5	3.640	4.554	5.5	20.3	10 28	0 22.45	-10 17.5	2.014	2.882	11.5	21.1
11 7	0 26.15	+ 4 46.4	3.726	4.558	7.5	20.5	11 7	0 17.33	-10 0.2	2.099	2.878	14.3	21.3
394997	2009 <i>BG</i> ₇₁	10	4.2 202°55	6°6/25.6	18		462235	2008 <i>AZ</i> ₁₀₉	10	4.2 180°94	0°3/3.7	17	
8 29	1 4.69	-14 49.8	2.389	3.244	11.1	21.7	8 29	0 58.56	+ 5 3.3	3.785	4.608	8.0	22.6
9 8	0 59.97	-16 18.7	2.326	3.240	8.9	21.6	9 8	0 54.76	+ 4 33.4	3.700	4.608	6.1	22.4
9 18	0 53.56	-17 44.7	2.289	3.235	7.1	21.5	9 18	0 49.99	+ 3 57.5	3.642	4.609	3.8	22.3
9 28	0 46.00	-19 0.3	2.279	3.230	6.7	21.4	9 28	0 44.57	+ 3 17.9	3.612	4.608	1.4	22.1
10 8	0 38.01	-19 59.2	2.297	3.224	7.9	21.5	10 8	0 38.92	+ 2 37.3	3.612	4.608	1.1	22.1
10 18	0 30.36	-20 37.1	2.341	3.217	9.9	21.6	10 18	0 33.44	+ 1 58.5	3.643	4.608	3.5	22.3
10 28	0 23.80	-20 51.8	2.410	3.210	12.1	21.8	10 28	0 28.56	+ 1 24.3	3.704	4.607	5.7	22.4
11 7	0 18.89	-20 44.0	2.498	3.203	14.2	21.9	11 7	0 24.62	+ 0 56.8	3.791	4.606	7.7	22.6
349845	2009 <i>CY</i> ₅₅	10	4.2 333°72	6°2/8.9	18		226322	2003 <i>EL</i> ₁₈	10	4.2 169°44	1°7/2.5	18	
8 29	1 3.96	+18 39.4	1.478	2.289	18.9	20.2	8 29	1 7.07	+ 2 21.8	2.001	2.844	13.4	21.9
9 8	1 0.70	+19 21.8	1.393	2.276	15.7	20.0	9 8	1 1.99	+ 1 36.8	1.929	2.848	10.1	21.6
9 18	0 54.73	+19 42.2	1.326	2.264	12.0	19.7	9 18	0 54.95	+ 0 42.4	1.879	2.851	6.3	21.4
9 28	0 46.65	+19 37.9	1.280	2.252	8.3	19.5	9 28	0 46.58	- 0 16.4	1.857	2.854	2.6	21.2
10 8	0 37.55	+19 10.1	1.259	2.241	6.2	19.3	10 8	0 37.71	- 1 13.6	1.863	2.856	2.9	21.2
10 18	0 28.74	+18 23.3	1.261	2.231	7.8	19.4	10 18	0 29.28	- 2 3.1	1.899	2.857	6.7	21.5
10 28	0 21.59	+17 26.1	1.288	2.222	11.5	19.6	10 28	0 22.16	- 2 40.0	1.961	2.858	10.3	21.7
11 7	0 17.08	+16 28.5	1.337	2.214	15.4	19.8	11 7	0 16.96	- 3 1.3	2.046	2.859	13.5	21.9
157316	2004 <i>SG</i> ₄₁	10	4.2 43°04	0°3/3.9	16		145195	2005 <i>JM</i> ₃₀	10	4.2 32°01	0°0/4.1	18	
8 29	1 4.55	+ 7 27.5	1.238	2.101	18.7	19.4	8 29	1 2.71	+ 8 0.9	1.831	2.671	14.6	20.1
9 8	1 0.79	+ 6 41.6	1.196	2.124	14.2	19.2	9 8	0 58.91	+ 7 19.6	1.757	2.672	11.2	19.9
9 18	0 54.40	+ 5 37.7	1.174	2.148	9.0	19.0	9 18	0 53.09	+ 6 23.3	1.705	2.674	7.2	19.6
9 28	0 46.33	+ 4 22.5	1.174	2.172	3.4	18.8	9 28	0 45.88	+ 5 16.1	1.679	2.675	2.8	19.4
10 8	0 37.87	+ 3 5.7	1.200	2.197	2.3	18.8	10 8	0 38.14	+ 4 4.5	1.680	2.677	1.7	19.3
10 18	0 30.29	+ 1 56.8	1.251	2.223	7.6	19.2	10 18	0 30.82	+ 2 55.6	1.709	2.679	6.1	19.6
10 28	0 24.68	+ 1 3.9	1.326	2.249	12.2	19.5	10 28	0 24.82	+ 1 56.4	1.765	2.681	10.1	19.8
11 7	0 21.64	+ 0 31.2	1.422	2.275	16.1	19.8	11 7	0 20.80	+ 1 11.9	1.844	2.683	13.6	20.1
378690	2008 <i>KL</i> ₅	10	4.2 244°07	0°9/3.4	17		157704	2006 <i>AL</i> ₂₉	10	4.2 261°13	3°5/30.5	18	
8 29	1 4.80	+ 6 15.0	1.643	2.491									

EPHEMERIDES

10 4.2

10 4.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
99055	2001 <i>ES</i> ₁₆	10	4.2 140°88	1°0/ 5.2 18			127471	2002 <i>RD</i> ₁₁₀	10	4.2 117°57	2°1/ 6.1 18		
8 29	1 5.85	+ 9 52.6	2.133	2.951	13.5	20.2	8 29	1 6.19	+13 13.0	1.586	2.411	17.2	19.6
9 8	1 0.97	+ 9 29.2	2.059	2.960	10.5	20.0	9 8	1 1.87	+12 44.8	1.517	2.418	13.5	19.4
9 18	0 54.26	+ 8 52.4	2.007	2.968	6.9	19.8	9 18	0 55.14	+11 55.5	1.467	2.425	9.2	19.2
9 28	0 46.30	+ 8 4.8	1.982	2.976	3.1	19.6	9 28	0 46.74	+10 48.1	1.442	2.432	4.6	18.9
10 8	0 37.91	+ 7 11.0	1.986	2.983	1.5	19.5	10 8	0 37.74	+ 9 28.9	1.443	2.439	2.3	18.8
10 18	0 29.93	+ 6 16.6	2.019	2.990	5.2	19.7	10 18	0 29.30	+ 8 6.3	1.471	2.446	6.3	19.1
10 28	0 23.17	+ 5 27.1	2.080	2.997	8.8	20.0	10 28	0 22.50	+ 6 49.7	1.526	2.452	10.7	19.3
11 7	0 18.23	+ 4 47.4	2.165	3.003	11.9	20.2	11 7	0 18.06	+ 5 46.5	1.604	2.458	14.5	19.6
366068	2012 <i>CK</i> ₃₇	10	4.2 230°75	3°0/ 7.7 18			149711	2004 <i>JD</i> ₁₀	10	4.2 144°48	5°6/ 28.8 18		
8 29	1 3.29	+16 27.9	2.419	3.207	13.0	21.4	8 29	1 5.16	- 5 47.9	1.643	2.513	14.5	20.1
9 8	0 59.01	+16 21.1	2.326	3.200	10.5	21.2	9 8	1 0.92	- 7 20.8	1.584	2.517	11.0	19.9
9 18	0 53.04	+15 58.7	2.255	3.194	7.6	21.0	9 18	0 54.45	- 8 58.3	1.549	2.520	7.5	19.7
9 28	0 45.86	+15 21.2	2.209	3.187	4.7	20.8	9 28	0 46.45	-10 31.0	1.540	2.523	5.6	19.6
10 8	0 38.16	+14 31.5	2.191	3.181	3.0	20.7	10 8	0 37.94	-11 49.2	1.558	2.526	7.1	19.7
10 18	0 30.71	+13 34.1	2.202	3.173	4.8	20.8	10 18	0 29.96	-12 45.6	1.601	2.529	10.3	19.9
10 28	0 24.28	+12 34.5	2.242	3.166	7.8	21.0	10 28	0 23.52	-13 16.0	1.669	2.532	13.7	20.1
11 7	0 19.47	+11 38.6	2.307	3.159	10.8	21.2	11 7	0 19.28	-13 20.3	1.756	2.534	16.7	20.3
195388	2002 <i>GK</i> ₉	10	4.2 160°90	0°6/ 4.9 17			515364	2013 <i>CY</i> ₂₀₄	10	4.2 338°20	3°2/ 1.3 18		
8 29	1 3.66	+11 17.0	2.104	2.922	13.7	20.3	8 29	1 2.00	- 0 22.5	1.600	2.470	14.8	20.8
9 8	0 59.37	+10 12.9	2.025	2.927	10.6	20.1	9 8	0 58.69	- 1 18.8	1.529	2.463	11.2	20.6
9 18	0 53.27	+ 8 51.8	1.970	2.931	6.9	19.9	9 18	0 53.14	- 2 24.7	1.479	2.456	7.1	20.3
9 28	0 45.93	+ 7 17.7	1.941	2.936	2.9	19.7	9 28	0 45.99	- 3 33.3	1.455	2.450	3.6	20.1
10 8	0 38.16	+ 5 37.3	1.942	2.939	1.4	19.6	10 8	0 38.20	- 4 36.5	1.456	2.444	4.6	20.2
10 18	0 30.78	+ 3 58.3	1.972	2.942	5.4	19.9	10 18	0 30.85	- 5 26.7	1.484	2.439	8.6	20.4
10 28	0 24.60	+ 2 28.4	2.031	2.945	9.1	20.1	10 28	0 24.95	- 5 58.1	1.536	2.434	12.6	20.6
11 7	0 20.20	+ 1 13.3	2.115	2.947	12.4	20.3	11 7	0 21.22	- 6 8.0	1.609	2.430	16.1	20.8
433451	2013 <i>TT</i> ₁₅₆	10	4.2 259°25	0°8/ 3.6 18			104749	2000 <i>HR</i> ₁₂	10	4.2 231°01	0°0/ 4.0 18		
8 29	1 7.07	+ 4 48.1	1.607	2.456	15.8	21.5	8 29	1 7.76	+ 6 31.2	1.848	2.683	14.7	20.1
9 8	1 2.63	+ 4 21.4	1.526	2.447	12.1	21.3	9 8	1 2.89	+ 6 8.1	1.761	2.673	11.3	19.9
9 18	0 55.72	+ 3 41.3	1.466	2.438	7.8	21.0	9 18	0 55.78	+ 5 31.8	1.696	2.664	7.3	19.6
9 28	0 47.00	+ 2 52.2	1.431	2.429	2.9	20.7	9 28	0 47.03	+ 4 45.7	1.657	2.653	2.9	19.3
10 8	0 37.49	+ 2 0.4	1.423	2.419	2.4	20.6	10 8	0 37.57	+ 3 55.1	1.645	2.643	1.8	19.2
10 18	0 28.37	+ 1 13.1	1.442	2.410	7.3	20.9	10 18	0 28.43	+ 3 6.1	1.662	2.631	6.4	19.5
10 28	0 20.81	+ 0 37.2	1.486	2.400	11.9	21.2	10 28	0 20.66	+ 2 25.2	1.706	2.620	10.6	19.7
11 7	0 15.62	+ 0 17.1	1.552	2.390	15.8	21.4	11 7	0 15.01	+ 1 57.2	1.773	2.607	14.3	19.9
324298	2006 <i>DC</i> ₇₁	10	4.2 316°40	3°8/ 7.7 18			208123	2000 <i>DB</i> ₂₄	10	4.2 208°75	0°4/ 3.8 18		
8 29	1 5.91	+15 41.9	2.139	2.933	14.3	20.6	8 29	1 4.72	+ 5 59.9	2.362	3.190	12.1	21.7
9 8	1 1.28	+16 9.7	2.049	2.926	11.6	20.4	9 8	1 0.06	+ 5 24.0	2.275	3.185	9.2	21.5
9 18	0 54.65	+16 22.8	1.979	2.919	8.5	20.2	9 18	0 53.70	+ 4 37.4	2.211	3.179	5.9	21.3
9 28	0 46.54	+16 20.7	1.935	2.912	5.4	20.0	9 28	0 46.15	+ 3 43.6	2.175	3.172	2.2	21.0
10 8	0 37.77	+16 5.0	1.918	2.905	3.8	19.9	10 8	0 38.12	+ 2 47.2	2.169	3.165	1.6	21.0
10 18	0 29.26	+15 38.9	1.929	2.898	5.6	20.0	10 18	0 30.36	+ 1 53.4	2.191	3.157	5.3	21.2
10 28	0 21.91	+15 7.6	1.967	2.892	8.7	20.2	10 28	0 23.65	+ 1 7.2	2.243	3.149	8.8	21.4
11 7	0 16.45	+14 36.9	2.030	2.885	11.9	20.4	11 7	0 18.55	+ 0 32.5	2.319	3.140	11.8	21.6
470462	2008 <i>AT</i> ₂₆	10	4.2 166°91	2°5/ 6.6 17			3070	Aitken	10	4.3 132°37	0°5/ 3.8 18		
8 29	1 9.65	+13 49.4	2.001	2.801	15.0	22.2	8 29	1 8.85	+ 6 29.0	1.777	2.612	15.1	18.0
9 8	1 4.07	+13 41.3	1.921	2.807	11.9	22.0	9 8	1 3.50	+ 5 45.6	1.713	2.627	11.5	17.8
9 18	0 56.37	+13 16.4	1.863	2.812	8.3	21.8	9 18	0 55.99	+ 4 48.5	1.672	2.640	7.3	17.6
9 28	0 47.19	+12 36.0	1.830	2.816	4.5	21.6	9 28	0 47.04	+ 3 42.7	1.656	2.653	2.8	17.3
10 8	0 37.43	+11 44.1	1.825	2.819	2.6	21.4	10 8	0 37.63	+ 2 34.8	1.669	2.665	2.0	17.3
10 18	0 28.11	+10 46.1	1.850	2.822	5.5	21.6	10 18	0 28.81	+ 1 31.9	1.710	2.677	6.5	17.6
10 28	0 20.16	+ 9 48.9	1.902	2.824	9.2	21.9	10 28	0 21.52	+ 0 40.6	1.779	2.688	10.5	17.9
11 7	0 14.29	+ 8 58.8	1.980	2.825	12.6	22.1	11 7	0 16.40	+ 0 5.0	1.870	2.698	13.9	18.1
119444	2001 <i>TY</i> ₁₄₈	10	4.2 129°37	4°6/ 30.3 17			468778	2011 <i>WY</i> ₁₄₈	10	4.3 306°47	3°8/ 26.6 18		
8 29	1 8.13	- 5 0.6	1.697	2.559	14.5	19.5	8 29	0 56.79	-14 15.8	4.156	5.008	6.8	21.1
9 8	1 3.06	- 5 56.0	1.638	2.566	11.0	19.3	9 8	0 53.41	-15 0.1	4.088	5.002	5.4	21.0
9 18	0 55.74	- 6 55.1	1.601	2.572	7.3	19.1	9 18	0 49.14	-15 42.0	4.047	4.996	4.2	20.9
9 28	0 46.92	- 7 50.5	1.590	2.578	4.7	19.0	9 28	0 44.30	-16 18.6	4.034	4.990	3.8	20.9
10 8	0 37.62	- 8 34.9	1.606	2.584	5.8	19.1	10 8	0 39.25	-16 46.9	4.049	4.984	4.5	20.9
10 18	0 28.90	- 9 2.5	1.649	2.590	9.1	19.3	10 18	0 34.36	-17 4.9	4.092	4.979	5.8	21.0
10 28	0 21.76	- 9 10.1	1.717	2.595	12.6	19.5	10 28	0 30.01	-17 11.3	4.162	4.973	7.2	21.1
11 7	0 16.84	- 8 57.1	1.806	2.600	15.7	19.7	11 7	0 26.52	-17 5.8	4.254	4.967	8.6	21.2
402413	2005 <i>YY</i> ₁₆₉	10	4.2 334°84	6°7/ 27.0 18			484012	2006 <i>DL</i> ₅₂	10	4.3 229°52	2°9/ 30.6 18		
8 29	1 1.36	-11 2.1	1.840	2.715	13.0	20.4	8 29	1 1.14	- 1 56.8	2.421	3.275	11.0	21.5
9 8	0 57.92	-12 25.1	1.777	2.706	10.1	20.2	9 8	0 57.26	- 2 58.6	2.346	3.272	8.2	21.3
9 18	0 52.50	-13 47.8	1.736	2.699	7.7	20.0	9 18	0 51.86	- 4 6.1	2.296	3.269	5.3	21.1
9 28	0 45.68	-15 1.6	1.722	2.691	6.7	19.9	9 28	0 45.42	- 5 14.0	2.274	3.266	3.0	21.0
10 8	0 38.35	-15 58.7	1.733	2.685	8.1	20.0	10 8	0 38.58	- 6 16.7	2.281	3.263	3.9	21.0
10 18	0 31.41	-16 33.2	1.769	2.678	10.8	20.2	10 18	0 32.04	- 7 9.0	2.316	3.260	6.7	21.2
10 28	0 25.78	-16 42.3	1.829	2.672	13.6	20.3	10 28	0 26.46	- 7 47.0	2.379	3.256	9.6	21.4
11 7	0 22.07	-16 26.4	1.908	2.667	16.2	20.5	11 7	0 22.37	- 8 8.6	2.464	3.253	12.2	21.6
381738	2009 <i>RP</i> ₇₀	10	4.2 180°71	0°9/ 3.4 16			100002	1983 <i>QC</i> ₁	10	4.3 356°32	0°9/ 4.9 18		
8 29	1 5.46	+ 5 46.3											

EPHEMERIDES

10 4.3

10 4.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
300533	2007 <i>TO</i> ₂₃₀	10 4.3	11°18'	0°0'	4.0	18	20845	2000 <i>UY</i> ₁₀₂	10 4.3	299°97'	2°3'	2.1	18
8 29	1 2.65	+ 7 57.9	1.750	2.593	15.0	20.8	8 29	1 6.22	- 1 19.0	2.088	2.938	12.6	17.4
9 8	0 58.99	+ 7 14.0	1.677	2.593	11.5	20.6	9 8	1 1.36	- 1 39.9	2.012	2.934	9.5	17.2
9 18	0 53.23	+ 6 14.4	1.625	2.594	7.4	20.4	9 18	0 54.60	- 2 5.8	1.959	2.931	6.1	17.0
9 28	0 46.01	+ 5 3.5	1.598	2.595	2.9	20.1	9 28	0 46.54	- 2 32.5	1.933	2.928	2.8	16.8
10 8	0 38.23	+ 3 48.0	1.599	2.596	1.8	20.0	10 8	0 37.97	- 2 55.3	1.935	2.925	3.3	16.8
10 18	0 30.89	+ 2 35.6	1.627	2.597	6.3	20.3	10 18	0 29.77	- 3 10.1	1.966	2.922	6.7	17.0
10 28	0 24.92	+ 1 33.8	1.681	2.598	10.5	20.6	10 28	0 22.79	- 3 13.2	2.023	2.918	10.2	17.2
11 7	0 20.99	+ 0 47.8	1.758	2.599	14.1	20.8	11 7	0 17.65	- 3 3.2	2.104	2.915	13.2	17.4
217557	2007 <i>JX</i> ₄	10 4.3	32°63'	2°6'	6.6	18	449488	2014 <i>FB</i> ₃₃	10 4.3	176°18'	11°0'	30.1	15
8 29	1 1.99	+14 14.1	1.239	2.084	19.8	19.5	8 29	1 27.46	-18 13.9	1.120	1.977	20.7	21.2
9 8	0 59.08	+13 47.4	1.188	2.100	15.6	19.2	9 8	1 19.02	-18 43.7	1.066	1.978	16.9	21.0
9 18	0 53.49	+12 54.9	1.156	2.117	10.7	19.0	9 18	1 6.54	-18 59.4	1.030	1.979	13.2	20.8
9 28	0 46.12	+11 40.6	1.145	2.135	5.5	18.8	9 28	0 51.29	-18 48.3	1.016	1.980	11.1	20.7
10 8	0 38.21	+10 12.8	1.158	2.154	2.8	18.7	10 8	0 35.23	-18 2.0	1.027	1.980	12.0	20.8
10 18	0 31.07	+ 8 42.2	1.197	2.174	6.8	19.0	10 18	0 20.53	-16 39.7	1.062	1.980	15.3	21.0
10 28	0 25.84	+ 7 20.2	1.259	2.195	11.5	19.3	10 28	0 8.93	-14 46.8	1.119	1.979	19.2	21.2
11 7	0 23.20	+ 6 14.9	1.344	2.216	15.6	19.6	11 7	0 1.33	-12 32.5	1.194	1.978	22.7	21.5
332064	2005 <i>ST</i> ₉₉	10 4.3	89°07'	3°2'	7.2	17	399559	2003 <i>SS</i> ₇₀	10 4.3	10°79'	8°3'	12.1	17
8 29	1 7.00	+15 36.5	1.602	2.415	17.5	20.8	8 29	1 8.33	+27 7.7	2.034	2.764	16.9	20.2
9 8	1 2.43	+15 24.4	1.538	2.429	14.0	20.6	9 8	1 3.48	+28 20.0	1.952	2.766	14.7	20.1
9 18	0 55.47	+14 50.6	1.493	2.443	9.9	20.4	9 18	0 56.27	+29 11.7	1.889	2.768	12.2	19.9
9 28	0 46.88	+13 56.7	1.472	2.457	5.6	20.1	9 28	0 47.30	+29 38.9	1.848	2.770	9.9	19.8
10 8	0 37.75	+12 48.0	1.477	2.471	3.3	20.0	10 8	0 37.51	+29 40.4	1.831	2.773	8.5	19.7
10 18	0 29.24	+11 32.4	1.510	2.484	6.2	20.2	10 18	0 28.00	+29 18.0	1.840	2.777	8.6	19.7
10 28	0 22.40	+10 18.8	1.569	2.498	10.2	20.5	10 28	0 19.89	+28 37.4	1.875	2.781	10.3	19.8
11 7	0 17.93	+ 9 15.1	1.651	2.511	13.9	20.8	11 7	0 14.00	+27 46.5	1.933	2.785	12.5	20.0
217328	2004 <i>RV</i> ₆₂	10 4.3	73°05'	0°1'	4.1	18	104771	2000 <i>HH</i> ₂₈	10 4.3	63°79'	12°2'	22.5	18
8 29	1 3.21	+ 7 17.8	2.079	2.913	13.3	20.2	8 29	1 10.38	-29 12.3	1.813	2.649	14.9	18.6
9 8	0 58.94	+ 6 36.9	2.019	2.931	10.1	20.0	9 8	1 4.70	-30 36.0	1.787	2.660	13.3	18.6
9 18	0 52.94	+ 5 44.2	1.982	2.950	6.4	19.8	9 18	0 56.72	-31 41.0	1.783	2.672	12.3	18.5
9 28	0 45.83	+ 4 43.6	1.971	2.968	2.5	19.6	9 28	0 47.32	-32 18.3	1.800	2.683	12.4	18.6
10 8	0 38.39	+ 3 40.7	1.989	2.986	1.6	19.6	10 8	0 37.65	-32 22.8	1.840	2.695	13.3	18.7
10 18	0 31.41	+ 2 41.3	2.035	3.004	5.4	19.9	10 18	0 28.82	-31 53.3	1.902	2.707	14.9	18.8
10 28	0 25.66	+ 1 51.0	2.109	3.022	8.9	20.1	10 28	0 21.78	-30 52.5	1.983	2.719	16.5	18.9
11 7	0 21.63	+ 1 13.4	2.207	3.040	11.9	20.4	11 7	0 17.10	-29 25.9	2.080	2.731	18.0	19.1
25016	1998 <i>QJ</i> ₄	10 4.3	323°83'	2°7'	2.5	18	94211	2001 <i>BG</i> ₃₄	10 4.3	319°42'	3°8'	7.9	18
8 29	1 3.80	+ 0 58.2	1.200	2.081	18.0	17.5	8 29	1 4.82	+16 6.1	2.062	2.859	14.7	18.7
9 8	1 0.98	+ 0 31.5	1.121	2.060	13.8	17.2	9 8	1 0.57	+16 27.1	1.972	2.850	11.9	18.5
9 18	0 55.14	- 0 7.6	1.062	2.040	8.9	16.9	9 18	0 54.28	+16 32.0	1.902	2.842	8.8	18.1
9 28	0 46.95	- 0 53.1	1.024	2.021	3.8	16.5	9 28	0 46.50	+16 20.7	1.858	2.835	5.6	18.3
10 8	0 37.63	- 1 36.4	1.010	2.003	4.3	16.5	10 8	0 38.05	+15 55.0	1.840	2.827	3.8	17.9
10 18	0 28.67	- 2 8.5	1.019	1.986	9.7	16.8	10 18	0 29.86	+15 18.7	1.849	2.820	5.6	18.0
10 28	0 21.59	- 2 21.9	1.050	1.970	15.1	17.0	10 28	0 22.86	+14 37.8	1.886	2.813	8.9	18.2
11 7	0 17.45	- 2 12.8	1.101	1.955	19.7	17.3	11 7	0 17.79	+13 58.4	1.947	2.806	12.1	18.4
364525	2007 <i>EC</i> ₁₈₈	10 4.3	120°89'	1°5'	2.4	18	402455	2006 <i>BQ</i> ₈₈	10 4.3	305°49'	4°3'	29.2	18
8 29	1 3.74	+ 1 10.0	2.618	3.456	10.7	21.8	8 29	1 1.66	- 5 51.0	2.154	3.017	11.8	21.0
9 8	0 59.00	+ 0 31.9	2.553	3.470	8.0	21.6	9 8	0 57.88	- 6 58.7	2.083	3.012	8.9	20.8
9 18	0 52.85	- 0 11.9	2.513	3.484	5.0	21.4	9 18	0 52.38	- 8 9.8	2.036	3.006	6.1	20.6
9 28	0 45.78	- 0 57.9	2.501	3.497	2.1	21.3	9 28	0 45.70	- 9 18.0	2.016	3.001	4.4	20.5
10 8	0 38.42	- 1 41.6	2.519	3.510	2.4	21.3	10 8	0 38.56	-10 16.6	2.024	2.995	5.5	20.6
10 18	0 31.42	- 2 19.1	2.567	3.523	5.3	21.5	10 18	0 31.75	-11 0.4	2.060	2.990	8.2	20.7
10 28	0 25.40	- 2 46.9	2.642	3.535	8.2	21.7	10 28	0 26.03	-11 25.6	2.120	2.985	11.2	20.9
11 7	0 20.81	- 3 3.0	2.743	3.547	10.7	21.9	11 7	0 21.99	-11 31.0	2.203	2.980	13.8	21.1
403999	2012 <i>BR</i> ₁₃₆	10 4.3	151°43'	3°7'	8.9	18	523277	2017 <i>BO</i> ₁₀	10 4.3	220°55'	0°1'	4.2	18
8 29	1 5.09	+19 18.2	2.721	3.482	12.4	21.6	8 29	1 3.00	+ 6 20.8	2.588	3.414	11.2	22.2
9 8	1 0.18	+19 28.0	2.635	3.488	10.1	21.5	9 8	0 58.65	+ 5 54.3	2.500	3.408	8.6	22.0
9 18	0 53.70	+19 23.0	2.572	3.494	7.6	21.3	9 18	0 52.77	+ 5 18.3	2.436	3.402	5.5	21.8
9 28	0 46.15	+19 3.3	2.534	3.500	5.2	21.2	9 28	0 45.84	+ 4 35.6	2.400	3.396	2.1	21.6
10 8	0 38.18	+18 30.7	2.525	3.505	3.8	21.1	10 8	0 38.47	+ 3 50.1	2.393	3.390	1.3	21.5
10 18	0 30.49	+17 48.6	2.545	3.510	4.8	21.2	10 18	0 31.35	+ 3 6.0	2.415	3.383	4.8	21.8
10 28	0 23.77	+17 1.4	2.594	3.514	7.1	21.3	10 28	0 25.16	+ 2 27.8	2.466	3.376	7.9	22.0
11 7	0 18.55	+16 14.4	2.669	3.519	9.5	21.5	11 7	0 20.41	+ 1 58.9	2.542	3.368	10.7	22.1
521412	2015 <i>MM</i> ₁₄₅	10 4.3	344°72'	2°5'	2.1	18	215597	2003 <i>QZ</i> ₇₆	10 4.3	62°90'	1°1'	5.2	17
8 29	1 3.64	+ 0 58.1	1.595	2.459	15.1	20.9	8 29	1 5.79	+11 7.8	1.259	2.108	19.3	19.8
9 8	0 59.94	+ 0 15.4	1.524	2.455	11.4	20.7	9 8	1 1.96	+10 26.6	1.205	2.122	15.0	19.6
9 18	0 53.94	- 0 37.3	1.476	2.451	7.2	20.4	9 18	0 55.37	+ 9 22.3	1.169	2.137	9.9	19.3
9 28	0 46.32	- 1 34.1	1.452	2.448	3.2	20.2	9 28	0 46.91	+ 8 0.0	1.156	2.151	4.3	19.1
10 8	0 38.08	- 2 27.5	1.454	2.445	3.8	20.2	10 8	0 37.88	+ 6 29.2	1.169	2.166	2.0	19.0
10 18	0 30.29	- 3 10.4	1.483	2.443	8.0	20.5	10 18	0 29.64	+ 5 0.6	1.207	2.181	7.3	19.3
10 28	0 24.01	- 3 37.3	1.536	2.441	12.2	20.7	10 28	0 23.37	+ 3 44.9	1.269	2.197	12.2	19.7
11 7	0 19.95	- 3 45.1	1.611	2.440	15.8	20.9	11 7	0 19.81	+ 2 49.0	1.353	2.212	16.4	20.0
256541	2007 <i>GA</i> ₂₈	10 4.3	133°31'	8°2'	23.8	18	267933	2004 <i>DF</i> ₅₉	10 4.3	265°13'	1°9'	2.6	18
8 29	1 8.09	-25											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
97441	2000 BH ₂	10	4.3 174°35	0°7/ 5.1 18			153113	2000 SH ₇₀	10	4.3 73°82	1°0/ 3.3 18		
8 29	1 3.04	+ 8 48.4	2.758	3.572	10.9	20.3	8 29	1 5.01	+ 6 40.3	1.565	2.414	16.2	19.4
9 8	0 58.55	+ 8 30.1	2.675	3.574	8.4	20.1	9 8	1 0.78	+ 5 32.0	1.513	2.435	12.2	19.2
9 18	0 52.64	+ 8 1.9	2.615	3.575	5.5	19.9	9 18	0 54.34	+ 4 8.3	1.483	2.455	7.6	19.0
9 28	0 45.77	+ 7 26.0	2.583	3.576	2.4	19.7	9 28	0 46.47	+ 2 35.9	1.478	2.475	2.8	18.7
10 8	0 38.53	+ 6 45.7	2.580	3.577	1.2	19.6	10 8	0 38.21	+ 1 3.8	1.500	2.496	2.5	18.7
10 18	0 31.55	+ 6 4.7	2.607	3.578	4.2	19.8	10 18	0 30.63	- 0 19.0	1.550	2.516	7.1	19.1
10 28	0 25.45	+ 5 27.2	2.663	3.578	7.2	20.0	10 28	0 24.66	- 1 25.2	1.626	2.536	11.2	19.4
11 7	0 20.73	+ 4 56.6	2.745	3.578	9.8	20.2	11 7	0 20.91	- 2 10.7	1.724	2.556	14.7	19.6
155599	2000 CL ₇₄	10	4.3 68°17	5°4/27.8 18			187267	2005 TA ₃₂	10	4.3 44°56	2°2/ 2.7 16		
8 29	1 1.87	- 9 31.0	2.201	3.066	11.5	19.5	8 29	1 6.84	+ 2 20.0	1.229	2.101	18.2	20.7
9 8	0 57.89	-10 51.0	2.150	3.076	8.8	19.3	9 8	1 2.68	+ 1 41.6	1.184	2.117	13.7	20.5
9 18	0 52.29	-12 10.5	2.124	3.087	6.4	19.2	9 18	0 55.78	+ 0 51.1	1.158	2.135	8.6	20.3
9 28	0 45.63	-13 22.7	2.125	3.097	5.4	19.1	9 28	0 47.07	- 0 4.4	1.155	2.152	3.5	20.0
10 8	0 38.64	-14 21.3	2.153	3.108	6.5	19.2	10 8	0 37.87	- 0 56.1	1.176	2.170	3.7	20.1
10 18	0 32.07	-15 1.6	2.208	3.119	8.8	19.4	10 18	0 29.54	- 1 36.1	1.223	2.189	8.6	20.4
10 28	0 26.63	-15 21.3	2.288	3.130	11.3	19.6	10 28	0 23.24	- 1 58.5	1.293	2.208	13.2	20.7
11 7	0 22.82	-15 20.4	2.390	3.141	13.6	19.8	11 7	0 19.64	- 2 0.8	1.384	2.228	17.0	21.0
101610	1999 CW ₇	10	4.3 295°45	10°6/ 6.6 17			482963	2014 KA ₆₇	10	4.3 230°97	1°8/ 2.4 18		
8 29	1 19.01	+16 1.0	1.025	1.853	24.2	18.7	8 29	1 4.67	+ 1 47.6	2.128	2.973	12.6	22.1
9 8	1 14.78	+18 14.7	0.923	1.817	20.7	18.3	9 8	1 0.24	+ 1 2.9	2.045	2.965	9.5	21.8
9 18	1 5.75	+20 21.8	0.837	1.779	16.5	18.0	9 18	0 53.95	+ 0 9.3	1.985	2.957	6.0	21.6
9 28	0 51.91	+22 12.6	0.771	1.742	12.3	17.6	9 28	0 46.36	- 0 48.7	1.952	2.949	2.5	21.4
10 8	0 34.41	+23 36.3	0.726	1.704	10.7	17.3	10 8	0 38.23	- 1 45.1	1.948	2.940	2.9	21.4
10 18	0 15.62	+24 24.5	0.704	1.666	13.8	17.3	10 18	0 30.41	- 2 34.3	1.973	2.931	6.5	21.6
10 28	23 58.74	+24 39.6	0.702	1.627	19.4	17.5	10 28	0 23.72	- 3 11.4	2.025	2.922	10.1	21.8
11 7	23 46.44	+24 34.3	0.716	1.590	25.4	17.6	11 7	0 18.80	- 3 33.1	2.100	2.912	13.2	22.0
5880	1992 MA	10	4.3 61°35	0°0/ 4.1 18			337289	2000 WL ₁₉₄	10	4.3 318°51	9°9/26.9 18		
8 29	1 3.74	+ 6 58.6	2.029	2.864	13.5	17.3	8 29	1 9.43	-17 35.5	1.476	2.345	15.9	19.6
9 8	0 59.43	+ 6 31.1	1.967	2.880	10.3	17.1	9 8	1 4.72	-18 36.0	1.410	2.329	13.1	19.3
9 18	0 53.32	+ 5 52.0	1.928	2.895	6.6	16.9	9 18	0 57.23	-19 28.5	1.365	2.314	10.7	19.2
9 28	0 46.05	+ 5 5.0	1.915	2.911	2.6	16.7	9 28	0 47.73	-20 2.4	1.343	2.298	9.9	19.1
10 8	0 38.40	+ 4 15.1	1.929	2.927	1.5	16.7	10 8	0 37.44	-20 9.1	1.345	2.284	11.2	19.1
10 18	0 31.22	+ 3 27.8	1.973	2.943	5.4	17.0	10 18	0 27.72	-19 43.9	1.370	2.270	13.9	19.3
10 28	0 25.29	+ 2 48.2	2.043	2.958	9.0	17.2	10 28	0 19.84	-18 46.7	1.417	2.256	17.1	19.4
11 7	0 21.15	+ 2 20.1	2.138	2.974	12.1	17.4	11 7	0 14.66	-17 21.8	1.481	2.243	20.0	19.6
13372	1998 VU ₆	10	4.3 329°89	1°8/30.8 18 R			389992	2012 TA ₂₉₁	10	4.3 311°27	3°0/ 1.9 18		
8 29	0 56.48	- 3 29.5	4.184	5.030	6.9	18.3	8 29	1 4.72	- 0 11.4	1.492	2.361	15.8	20.9
9 8	0 53.18	- 4 1.4	4.107	5.028	5.1	18.2	9 8	1 1.09	- 0 52.4	1.413	2.346	12.0	20.6
9 18	0 49.03	- 4 35.2	4.056	5.026	3.3	18.1	9 18	0 54.91	- 1 43.5	1.355	2.331	7.7	20.3
9 28	0 44.32	- 5 8.4	4.034	5.024	1.9	18.0	9 28	0 46.85	- 2 38.3	1.320	2.316	3.7	20.1
10 8	0 39.41	- 5 38.4	4.041	5.022	2.4	18.0	10 8	0 37.94	- 3 28.9	1.312	2.302	4.4	20.1
10 18	0 34.65	- 6 3.1	4.078	5.020	4.1	18.1	10 18	0 29.41	- 4 7.6	1.329	2.288	8.9	20.3
10 28	0 30.41	- 6 20.5	4.144	5.019	5.9	18.3	10 28	0 22.45	- 4 28.3	1.370	2.275	13.4	20.5
11 7	0 26.98	- 6 29.4	4.235	5.017	7.6	18.4	11 7	0 17.93	- 4 27.9	1.432	2.262	17.3	20.8
157738	2006 BJ ₁₈₃	10	4.3 219°82	0°9/ 3.1 18			407867	2012 BH ₈₁	10	4.3 123°73	3°4/ 8.1 18		
8 29	1 2.71	+ 3 32.7	2.557	3.393	11.0	21.1	8 29	1 5.22	+16 58.6	2.423	3.204	13.2	21.2
9 8	0 58.43	+ 2 58.0	2.472	3.388	8.3	20.9	9 8	1 0.45	+17 5.6	2.343	3.212	10.7	21.1
9 18	0 52.63	+ 2 15.2	2.412	3.382	5.3	20.7	9 18	0 53.99	+16 57.4	2.284	3.219	7.8	20.9
9 28	0 45.79	+ 1 27.8	2.380	3.377	2.0	20.5	9 28	0 46.35	+16 34.6	2.251	3.226	4.9	20.7
10 8	0 38.54	+ 0 40.1	2.377	3.371	2.0	20.5	10 8	0 38.27	+15 59.4	2.247	3.233	3.4	20.6
10 18	0 31.54	- 0 3.6	2.403	3.365	5.2	20.7	10 18	0 30.52	+15 15.8	2.271	3.240	4.9	20.7
10 28	0 25.46	- 0 39.0	2.457	3.359	8.3	20.9	10 28	0 23.85	+14 29.0	2.323	3.247	7.6	20.9
11 7	0 20.84	- 1 3.1	2.536	3.353	11.1	21.0	11 7	0 18.82	+13 44.3	2.401	3.253	10.4	21.1
433706	2014 WF ₄₉₅	10	4.3 268°08	0°9/ 2.9 16			444632	2006 WX ₆₉	10	4.3 315°17	0°1/ 4.2 18		
8 29	0 58.93	+ 2 57.9	3.381	4.214	8.7	22.1	8 29	1 5.81	+ 5 17.8	1.832	2.674	14.5	21.6
9 8	0 55.28	+ 2 21.1	3.283	4.197	6.5	21.9	9 8	1 1.43	+ 5 9.9	1.750	2.667	11.1	21.3
9 18	0 50.50	+ 1 38.1	3.210	4.180	4.1	21.7	9 18	0 54.88	+ 4 51.1	1.690	2.659	7.2	21.1
9 28	0 44.94	+ 0 51.6	3.166	4.163	1.6	21.5	9 28	0 46.78	+ 4 24.5	1.655	2.652	2.8	20.8
10 8	0 39.04	+ 0 4.9	3.152	4.146	1.7	21.5	10 8	0 38.01	+ 3 54.5	1.648	2.645	1.7	20.7
10 18	0 33.29	- 0 38.6	3.168	4.128	4.2	21.7	10 18	0 29.58	+ 3 26.3	1.668	2.638	6.2	21.0
10 28	0 28.17	- 1 15.7	3.214	4.111	6.7	21.8	10 28	0 22.50	+ 3 5.2	1.715	2.631	10.3	21.2
11 7	0 24.09	- 1 43.9	3.284	4.093	9.0	21.9	11 7	0 17.49	+ 2 55.1	1.784	2.625	13.9	21.4
392049	2009 BB ₁₁₈	10	4.3 351°63	3°7/30.7 18			389485	2010 EW ₁₂₇	10	4.3 112°61	5°4/29.8 18		
8 29	1 3.74	- 2 3.4	1.730	2.595	14.1	21.2	8 29	1 11.85	-10 21.1	1.983	2.834	13.2	20.5
9 8	0 59.82	- 3 7.2	1.663	2.595	10.6	20.9	9 8	1 5.50	-10 56.9	1.930	2.848	10.1	20.4
9 18	0 53.79	- 4 18.2	1.619	2.594	6.9	20.7	9 18	0 57.17	-11 30.3	1.900	2.862	7.2	20.2
9 28	0 46.30	- 5 29.5	1.601	2.593	3.9	20.6	9 28	0 47.55	-11 55.3	1.898	2.875	5.4	20.1
10 8	0 38.26	- 6 33.1	1.610	2.593	5.0	20.6	10 8	0 37.61	-12 6.6	1.924	2.889	6.3	20.2
10 18	0 30.68	- 7 22.1	1.645	2.593	8.6	20.8	10 18	0 28.31	-12 1.1	1.977	2.901	8.9	20.4
10 28	0 24.50	- 7 51.7	1.706	2.593	12.2	21.1	10 28	0 20.50	-11 37.8	2.056	2.914	11.8	20.6
11 7	0 20.39	- 8 0.0	1.787	2.593	15.4	21.3	11 7	0 14.77	-10 57.8	2.158	2.926	14.3	20.8
150288	1999 TS ₁₁₆	10	4.3 358°94	0°3/ 3.9 18			104241	2000 EB ₁₃₄	10	4.3 220°10	3°8/30.4 18		
8 29	1 5.28	+ 4 24.1	1.855	2.701	14.2	19.3	8 29	1 5.86	- 4 50.1	2.144			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
278142	2007 CG ₆₂	10	4.3 233°16	2°4/ 6.7 18			511092	2013 TS ₁₃₇	10	4.3 345°24	2°4/ 2.5 18		
8 29	1 5.56	+14 37.3	1.876	2.684	15.5	21.7	8 29	0 56.05	+ 4 17.0	0.973	1.871	19.7	20.9
9 8	1 1.31	+14 9.3	1.784	2.674	12.4	21.4	9 8	0 55.42	+ 3 21.4	0.908	1.857	15.1	20.6
9 18	0 54.86	+13 21.0	1.712	2.664	8.7	21.2	9 18	0 51.73	+ 2 3.8	0.861	1.844	9.6	20.2
9 28	0 46.79	+12 14.1	1.665	2.653	4.7	20.9	9 28	0 45.72	+ 0 32.4	0.834	1.832	3.8	19.9
10 8	0 38.01	+10 53.3	1.646	2.641	2.5	20.8	10 8	0 38.70	- 1 0.0	0.828	1.823	4.4	19.9
10 18	0 29.53	+ 9 26.1	1.655	2.629	5.8	21.0	10 18	0 32.19	- 2 19.2	0.844	1.815	10.3	20.2
10 28	0 22.38	+ 8 1.1	1.692	2.617	9.9	21.2	10 28	0 27.73	- 3 13.7	0.880	1.810	16.0	20.5
11 7	0 17.31	+ 6 46.3	1.753	2.604	13.6	21.4	11 7	0 26.27	- 3 37.6	0.934	1.806	20.9	20.8
487910	2015 TX ₁₈₃	10	4.3 339°26	4°1/30.9 18			391988	Illmárton	10	4.3 16°27	7°3/29.4 18		
8 29	1 6.41	- 6 7.1	1.852	2.714	13.5	20.5	8 29	1 5.88	- 9 53.2	1.228	2.116	17.2	19.8
9 8	1 1.78	- 6 31.6	1.779	2.707	10.3	20.3	9 8	1 2.07	-10 44.9	1.183	2.122	13.3	19.6
9 18	0 55.04	- 6 57.7	1.729	2.700	6.9	20.1	9 18	0 55.47	-11 34.5	1.158	2.128	9.5	19.4
9 28	0 46.82	- 7 19.7	1.705	2.694	4.3	19.9	9 28	0 47.01	-12 12.2	1.155	2.137	7.4	19.3
10 8	0 38.04	- 7 32.4	1.708	2.689	5.2	19.9	10 8	0 38.02	-12 29.5	1.176	2.146	8.6	19.4
10 18	0 29.68	- 7 31.4	1.738	2.683	8.4	20.1	10 18	0 29.86	-12 21.4	1.220	2.156	12.0	19.6
10 28	0 22.69	- 7 14.2	1.793	2.679	11.8	20.3	10 28	0 23.71	-11 47.0	1.285	2.168	15.7	19.9
11 7	0 17.75	- 6 40.6	1.871	2.674	14.9	20.5	11 7	0 20.27	-10 48.9	1.370	2.180	19.0	20.1
43370	2000 WD ₅	10	4.3 202°91	3°5/ 7.7 18			449037	2012 CX ₄₂	10	4.3 204°73	3°6/29.8 18		
8 29	1 7.46	+16 12.2	2.075	2.866	14.8	19.7	8 29	1 2.42	- 4 45.1	2.467	3.322	10.8	21.8
9 8	1 2.53	+16 17.2	1.986	2.862	12.0	19.5	9 8	0 58.25	- 5 47.8	2.395	3.319	8.1	21.7
9 18	0 55.53	+16 5.1	1.919	2.859	8.7	19.3	9 18	0 52.56	- 6 54.0	2.347	3.317	5.4	21.5
9 28	0 47.04	+15 36.1	1.876	2.855	5.3	19.1	9 28	0 45.82	- 7 58.5	2.327	3.314	3.6	21.4
10 8	0 37.89	+14 52.8	1.861	2.851	3.5	19.0	10 8	0 38.69	- 8 55.4	2.336	3.310	4.6	21.4
10 18	0 29.06	+14 0.0	1.875	2.846	5.5	19.1	10 18	0 31.86	- 9 40.3	2.374	3.307	7.1	21.6
10 28	0 21.49	+13 4.2	1.916	2.841	8.9	19.3	10 28	0 25.99	-10 9.5	2.438	3.303	9.9	21.8
11 7	0 15.88	+12 12.1	1.982	2.835	12.2	19.5	11 7	0 21.62	-10 21.7	2.525	3.299	12.3	21.9
295699	2008 TC ₁₇₃	10	4.3 43°97	0°3/ 4.8 18			72670	2001 FL ₅₂	10	4.3 247°76	1°8/ 6.4 18		
8 29	0 56.73	+ 7 16.2	4.262	5.077	7.4	21.2	8 29	1 3.24	+12 31.7	2.583	3.385	11.9	20.1
9 8	0 53.37	+ 6 59.5	4.178	5.080	5.6	21.1	9 8	0 58.96	+12 19.0	2.485	3.373	9.4	19.9
9 18	0 49.17	+ 6 37.2	4.120	5.082	3.6	20.9	9 18	0 53.08	+11 53.5	2.409	3.361	6.5	19.7
9 28	0 44.42	+ 6 10.7	4.090	5.084	1.5	20.8	9 28	0 46.06	+11 16.6	2.360	3.348	3.4	19.5
10 8	0 39.46	+ 5 42.2	4.090	5.087	0.8	20.7	10 8	0 38.53	+10 31.3	2.340	3.335	1.8	19.4
10 18	0 34.65	+ 5 13.7	4.120	5.090	2.9	20.9	10 18	0 31.20	+ 9 41.7	2.349	3.322	4.4	19.6
10 28	0 30.35	+ 4 47.7	4.180	5.092	4.9	21.1	10 28	0 24.78	+ 8 52.8	2.387	3.309	7.6	19.7
11 7	0 26.86	+ 4 26.1	4.267	5.095	6.7	21.2	11 7	0 19.85	+ 8 9.2	2.451	3.295	10.5	19.9
176091	2000 YW ₉₈	10	4.3 216°50	3°8/30.9 18			55639	2070 P-L	10	4.3 91°92	1°0/ 5.2 18		
8 29	1 7.48	- 1 40.1	1.625	2.486	15.1	20.7	8 29	1 6.31	+ 8 47.1	1.939	2.766	14.4	19.4
9 8	1 2.89	- 2 44.0	1.553	2.482	11.4	20.4	9 8	1 1.63	+ 8 40.1	1.864	2.770	11.1	19.2
9 18	0 55.90	- 3 56.6	1.503	2.477	7.4	20.2	9 18	0 54.91	+ 8 20.1	1.811	2.773	7.4	18.9
9 28	0 47.21	- 5 10.5	1.479	2.471	4.1	20.0	9 28	0 46.79	+ 7 49.5	1.783	2.777	3.3	18.7
10 8	0 37.83	- 6 17.0	1.481	2.465	5.2	20.0	10 8	0 38.12	+ 7 12.5	1.783	2.780	1.6	18.6
10 18	0 28.92	- 7 8.4	1.511	2.459	9.1	20.3	10 18	0 29.87	+ 6 34.1	1.812	2.784	5.5	18.9
10 28	0 21.56	- 7 39.2	1.565	2.453	13.1	20.5	10 28	0 22.94	+ 6 0.1	1.867	2.787	9.4	19.1
11 7	0 16.53	- 7 47.3	1.640	2.446	16.6	20.7	11 7	0 17.98	+ 5 35.0	1.947	2.791	12.8	19.3
276444	2003 EV ₃₂	10	4.3 176°60	2°7/ 1.4 16			344449	2002 JB ₁₀₆	10	4.3 89°60	2°9/ 1.7 17		
8 29	1 4.80	+ 1 37.0	1.916	2.768	13.6	21.5	8 29	1 8.86	- 1 20.8	1.856	2.707	13.9	20.9
9 8	1 0.45	+ 0 17.7	1.845	2.769	10.2	21.3	9 8	1 3.32	- 2 4.1	1.807	2.730	10.4	20.7
9 18	0 54.14	- 1 12.5	1.797	2.771	6.4	21.1	9 18	0 55.81	- 2 52.7	1.781	2.753	6.6	20.6
9 28	0 46.46	- 2 46.8	1.777	2.772	3.1	20.9	9 28	0 47.07	- 3 41.0	1.782	2.776	3.3	20.4
10 8	0 38.28	- 4 17.0	1.785	2.772	3.9	20.9	10 8	0 38.02	- 4 22.9	1.811	2.798	3.9	20.5
10 18	0 30.52	- 5 35.5	1.821	2.772	7.6	21.2	10 18	0 29.61	- 4 53.3	1.868	2.820	7.3	20.7
10 28	0 24.05	- 6 36.0	1.884	2.771	11.2	21.4	10 28	0 22.70	- 5 8.7	1.952	2.842	10.8	21.0
11 7	0 19.51	- 7 15.5	1.969	2.770	14.4	21.6	11 7	0 17.83	- 5 8.1	2.058	2.863	13.7	21.2
299611	2006 HZ ₈₉	10	4.3 60°17	8°9/26.0 18			295428	2008 KW ₃₁	10	4.3 96°49	1°7/ 2.3 18		
8 29	1 6.51	-15 1.1	1.555	2.428	15.0	20.2	8 29	1 2.62	+ 2 7.6	2.256	3.102	12.0	20.7
9 8	1 1.84	-16 49.0	1.531	2.455	11.9	20.1	9 8	0 58.45	+ 1 14.3	2.192	3.113	9.0	20.6
9 18	0 54.94	-18 28.6	1.530	2.481	9.6	20.0	9 18	0 52.69	+ 0 12.9	2.152	3.124	5.6	20.4
9 28	0 46.70	-19 49.2	1.554	2.507	8.9	20.1	9 28	0 45.86	- 0 51.7	2.139	3.135	2.4	20.2
10 8	0 38.21	-20 42.9	1.602	2.534	10.3	20.2	10 8	0 38.69	- 1 53.8	2.155	3.146	2.8	20.2
10 18	0 30.55	-21 6.1	1.674	2.560	12.6	20.4	10 18	0 31.92	- 2 48.1	2.200	3.157	6.0	20.5
10 28	0 24.62	-20 58.9	1.768	2.587	15.1	20.6	10 28	0 26.22	- 3 30.2	2.271	3.167	9.2	20.7
11 7	0 20.94	-20 25.0	1.880	2.613	17.3	20.9	11 7	0 22.13	- 3 57.4	2.367	3.178	11.9	20.9
124048	2001 FH ₁₄₆	10	4.3 143°59	3°7/ 8.5 18			430873	2005 QU ₄₅	10	4.3 27°13	0°9/ 4.9 18		
8 29	1 4.72	+17 54.8	2.441	3.217	13.2	19.8	8 29	1 8.85	+ 6 54.0	1.272	2.127	18.8	20.4
9 8	1 0.13	+18 6.6	2.355	3.219	10.8	19.7	9 8	1 4.43	+ 7 6.4	1.211	2.134	14.5	20.2
9 18	0 53.84	+18 3.1	2.291	3.221	8.0	19.5	9 18	0 57.11	+ 7 3.8	1.170	2.140	9.5	19.9
9 28	0 46.34	+17 44.3	2.252	3.223	5.3	19.3	9 28	0 47.72	+ 6 48.7	1.152	2.148	4.1	19.6
10 8	0 38.36	+17 12.3	2.241	3.225	3.7	19.2	10 8	0 37.60	+ 6 26.4	1.158	2.156	2.0	19.5
10 18	0 30.65	+16 30.6	2.259	3.227	5.0	19.3	10 18	0 28.19	+ 6 3.3	1.189	2.164	7.4	19.9
10 28	0 24.00	+15 44.4	2.304	3.228	7.7	19.5	10 28	0 20.79	+ 5 46.2	1.245	2.174	12.3	20.2
11 7	0 18.98	+14 59.2	2.376	3.230	10.4	19.7	11 7	0 16.25	+ 5 40.4	1.322	2.183	16.6	20.5
427607	2003 SO ₂₈₀	10	4.3 348°40	3°2/ 6.0 18			126951	2002 FQ ₈	10	4.3 109°59	0°0/ 4.1 18		
8 29	1 5.00	+ 9 39.3	1.018	1.888	21.4	20.5	8 29	1 5.52	+ 8 42.8	2.009	2.836		

EPHEMERIDES

10 4.3

10 4.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
369701	2012 <i>DH</i> ₃		10 4.3 63°75	3°1/ 2.0 17			510793	2013 <i>AU</i> ₁₃₂		10 4.3 169°41	1°4/ 7.1 18		
8 29	1 8.34	+ 0 21.8	1.279	2.149	17.8	20.6	8 29	0 57.52	+13 20.5	4.371	5.156	7.7	20.9
9 8	1 3.85	- 0 25.6	1.227	2.160	13.4	20.4	9 8	0 53.99	+13 15.5	4.280	5.156	6.1	20.8
9 18	0 56.60	- 1 23.3	1.195	2.171	8.4	20.2	9 18	0 49.61	+13 2.9	4.213	5.156	4.2	20.7
9 28	0 47.48	- 2 23.6	1.187	2.183	3.9	19.9	9 28	0 44.65	+12 43.8	4.174	5.157	2.4	20.5
10 8	0 37.78	- 3 17.4	1.203	2.194	4.6	20.0	10 8	0 39.47	+12 19.7	4.164	5.157	1.4	20.5
10 18	0 28.89	- 3 56.6	1.245	2.206	9.2	20.3	10 18	0 34.42	+11 52.6	4.185	5.157	2.7	20.6
10 28	0 21.99	- 4 15.9	1.311	2.217	13.7	20.6	10 28	0 29.88	+11 24.8	4.236	5.157	4.6	20.7
11 7	0 17.81	- 4 13.5	1.397	2.229	17.5	20.9	11 7	0 26.15	+10 58.8	4.314	5.157	6.3	20.8
511331	2014 <i>ER</i> ₃		10 4.3 192°33	2°5/ 6.8 18			25938	2001 <i>DC</i> ₁₀₂		10 4.3 272°89	0°1/ 4.0 18		
8 29	1 9.85	+13 10.4	2.301	3.094	13.5	22.0	8 29	0 58.02	+ 4 33.5	4.452	5.273	7.0	19.4
9 8	1 4.13	+13 22.3	2.211	3.092	10.7	21.9	9 8	0 54.35	+ 4 22.3	4.355	5.261	5.3	19.2
9 18	0 56.46	+13 21.0	2.144	3.090	7.5	21.6	9 18	0 49.83	+ 4 6.7	4.283	5.249	3.4	19.1
9 28	0 47.41	+13 7.0	2.103	3.087	4.3	21.4	9 28	0 44.74	+ 3 48.2	4.240	5.236	1.3	18.9
10 8	0 37.77	+12 42.5	2.091	3.084	2.6	21.3	10 8	0 39.42	+ 3 28.6	4.228	5.224	0.9	18.9
10 18	0 28.41	+12 11.2	2.109	3.080	5.0	21.5	10 18	0 34.20	+ 3 9.9	4.246	5.212	3.0	19.0
10 28	0 20.21	+11 38.1	2.156	3.075	8.4	21.7	10 28	0 29.46	+ 2 54.1	4.294	5.200	4.9	19.2
11 7	0 13.85	+11 8.3	2.228	3.070	11.5	21.9	11 7	0 25.50	+ 2 42.9	4.369	5.188	6.7	19.3
305113	2007 <i>VK</i> ₈₃		10 4.3 316°06	4°1/30.7 18			60657	2000 <i>FT</i> ₄₇		10 4.3 329°46	4°2/29.7 18		
8 29	1 4.16	- 3 28.7	1.678	2.546	14.3	20.6	8 29	1 1.82	- 2 28.4	1.815	2.682	13.5	18.4
9 8	1 0.37	- 4 17.1	1.601	2.533	10.9	20.3	9 8	0 58.34	- 3 57.7	1.748	2.680	10.1	18.2
9 18	0 54.31	- 5 11.6	1.546	2.521	7.2	20.1	9 18	0 52.87	- 5 34.9	1.704	2.678	6.6	18.0
9 28	0 46.62	- 6 5.5	1.517	2.508	4.3	19.9	9 28	0 46.03	- 7 12.0	1.687	2.676	4.3	17.9
10 8	0 38.23	- 6 51.3	1.513	2.496	5.3	19.9	10 8	0 38.67	- 8 40.0	1.697	2.675	5.6	17.9
10 18	0 30.21	- 7 22.5	1.536	2.484	9.0	20.1	10 18	0 31.72	- 9 51.3	1.734	2.673	8.9	18.1
10 28	0 23.61	- 7 34.5	1.583	2.473	12.8	20.3	10 28	0 26.05	-10 40.5	1.797	2.672	12.3	18.3
11 7	0 19.18	- 7 25.6	1.652	2.462	16.2	20.5	11 7	0 22.31	-11 5.6	1.880	2.670	15.3	18.5
78497	2002 <i>RR</i> ₇₁		10 4.3 310°81	2°4/ 1.9 18			22059	2000 <i>AD</i> ₇₅		10 4.3 200°55	0°6/ 5.7 18		
8 29	1 0.18	+ 3 33.8	1.599	2.464	15.1	19.2	8 29	0 55.60	+ 9 57.7	4.933	5.734	6.6	19.0
9 8	0 57.58	+ 2 18.1	1.506	2.438	11.5	18.9	9 8	0 52.46	+ 9 36.1	4.840	5.732	5.1	18.8
9 18	0 52.70	+ 0 45.0	1.435	2.412	7.3	18.6	9 18	0 48.59	+ 9 8.6	4.774	5.729	3.4	18.7
9 28	0 46.05	- 0 59.0	1.390	2.387	3.1	18.3	9 28	0 44.25	+ 8 36.4	4.736	5.727	1.6	18.6
10 8	0 38.56	- 2 44.3	1.371	2.362	4.0	18.3	10 8	0 39.72	+ 8 1.2	4.728	5.725	0.8	18.5
10 18	0 31.28	- 4 20.1	1.378	2.337	8.6	18.5	10 18	0 35.31	+ 7 25.2	4.751	5.722	2.4	18.6
10 28	0 25.35	- 5 37.1	1.410	2.313	13.2	18.7	10 28	0 31.33	+ 6 50.5	4.804	5.719	4.2	18.8
11 7	0 21.61	- 6 29.3	1.463	2.290	17.2	18.9	11 7	0 28.03	+ 6 19.2	4.885	5.717	5.8	18.9
135903	2002 <i>TK</i> ₈₉		10 4.3 8°22	2°9/ 6.9 18			318936	2005 <i>UQ</i> ₁₂₄		10 4.3 290°92	3°1/ 7.8 18		
8 29	1 5.59	+13 45.7	1.825	2.638	15.7	20.1	8 29	1 1.91	+16 45.8	2.120	2.917	14.3	21.1
9 8	1 1.31	+13 50.5	1.746	2.638	12.5	19.9	9 8	0 58.33	+16 27.7	2.026	2.907	11.6	20.9
9 18	0 54.85	+13 38.0	1.688	2.639	8.8	19.6	9 18	0 52.87	+15 50.8	1.954	2.897	8.4	20.6
9 28	0 46.83	+13 9.4	1.654	2.639	5.0	19.4	9 28	0 46.05	+14 56.1	1.906	2.887	5.0	20.4
10 8	0 38.17	+12 27.9	1.646	2.640	2.9	19.3	10 8	0 38.65	+13 47.3	1.885	2.877	3.1	20.3
10 18	0 29.90	+11 39.1	1.667	2.641	5.7	19.5	10 18	0 31.50	+12 30.1	1.893	2.867	5.2	20.4
10 28	0 23.01	+10 50.0	1.714	2.642	9.6	19.7	10 28	0 25.48	+11 11.8	1.929	2.857	8.6	20.6
11 7	0 18.24	+10 6.9	1.784	2.643	13.1	19.9	11 7	0 21.24	+ 9 59.6	1.989	2.848	11.9	20.8
91511	1999 <i>RJ</i> ₁₆₃		10 4.3 327°04	3°9/ 7.9 18 R			246193	2007 <i>RD</i> ₉₉		10 4.3 4°29	3°1/ 6.8 18		
8 29	1 5.96	+16 6.1	2.044	2.839	14.9	18.6	8 29	1 6.49	+12 55.5	1.592	2.417	17.1	20.5
9 8	1 1.47	+16 30.5	1.957	2.835	12.1	18.4	9 8	1 2.30	+13 11.2	1.517	2.417	13.6	20.3
9 18	0 54.92	+16 38.9	1.891	2.830	8.9	18.2	9 18	0 55.64	+13 9.0	1.462	2.417	9.6	20.1
9 28	0 46.86	+16 31.0	1.849	2.826	5.6	18.0	9 28	0 47.19	+12 49.6	1.430	2.417	5.3	19.8
10 8	0 38.14	+16 8.6	1.835	2.822	3.9	17.9	10 8	0 38.00	+12 16.5	1.424	2.418	3.1	19.7
10 18	0 29.70	+15 35.5	1.848	2.818	5.7	18.0	10 18	0 29.25	+11 35.2	1.445	2.420	6.3	19.9
10 28	0 22.50	+14 57.4	1.888	2.814	8.9	18.2	10 28	0 22.10	+10 53.3	1.491	2.421	10.5	20.2
11 7	0 17.25	+14 20.6	1.953	2.811	12.1	18.4	11 7	0 17.34	+10 17.7	1.560	2.423	14.4	20.4
75485	1999 <i>XC</i> ₁₇₄		10 4.3 206°19	3°8/30.9 18			285797	2000 <i>WN</i> ₁₉₃		10 4.3 113°50	2°5/ 6.2 17		
8 29	1 9.63	- 3 41.1	1.828	2.682	14.0	19.3	8 29	1 10.91	+12 15.0	1.506	2.330	18.0	21.5
9 8	1 4.28	- 4 27.5	1.754	2.678	10.6	19.1	9 8	1 5.63	+12 15.0	1.441	2.342	14.1	21.2
9 18	0 56.70	- 5 18.9	1.702	2.673	7.0	18.9	9 18	0 57.72	+11 55.9	1.396	2.353	9.7	21.0
9 28	0 47.54	- 6 9.1	1.677	2.668	4.1	18.7	9 28	0 47.97	+11 19.4	1.375	2.364	5.0	20.8
10 8	0 37.77	- 6 51.2	1.680	2.662	5.0	18.8	10 8	0 37.58	+10 30.4	1.380	2.375	2.6	20.7
10 18	0 28.43	- 7 19.4	1.711	2.656	8.5	19.0	10 18	0 27.84	+ 9 36.1	1.411	2.386	6.5	20.9
10 28	0 20.54	- 7 30.0	1.767	2.649	12.1	19.2	10 28	0 19.93	+ 8 44.8	1.469	2.396	11.0	21.2
11 7	0 14.82	- 7 21.6	1.846	2.642	15.4	19.4	11 7	0 14.63	+ 8 3.3	1.550	2.405	14.9	21.5
321967	2010 <i>UP</i> ₂₇		10 4.3 10°89	0°0/ 4.1 18			122287	2000 <i>PZ</i> ₁₆		10 4.3 107°03	4°3/30.6 18		
8 29	1 1.87	+ 6 55.9	1.650	2.501	15.4	20.3	8 29	1 8.98	- 1 30.8	1.443	2.308	16.4	19.4
9 8	0 58.55	+ 6 30.0	1.582	2.503	11.8	20.1	9 8	1 4.01	- 2 54.1	1.394	2.325	12.3	19.2
9 18	0 53.08	+ 5 49.8	1.536	2.506	7.6	19.9	9 18	0 56.54	- 4 25.7	1.367	2.342	7.9	19.0
9 28	0 46.12	+ 4 59.5	1.514	2.510	3.0	19.6	9 28	0 47.45	- 5 56.0	1.366	2.358	4.5	18.8
10 8	0 38.61	+ 4 5.2	1.518	2.515	1.8	19.5	10 8	0 37.92	- 7 15.0	1.391	2.373	5.8	19.0
10 18	0 31.56	+ 3 13.7	1.549	2.521	6.4	19.8	10 18	0 29.15	- 8 14.4	1.442	2.388	9.7	19.2
10 28	0 25.93	+ 2 31.7	1.605	2.527	10.6	20.1	10 28	0 22.22	- 8 49.4	1.518	2.403	13.6	19.5
11 7	0 22.40	+ 2 3.8	1.684	2.534	14.2	20.4	11 7	0 17.78	- 8 59.3	1.614	2.417	16.9	19.8
480250	2015 <i>HT</i> ₄₀		10 4.3 148°53	0°7/ 3.6 16			488070	2015 <i>UQ</i> ₇₉		10 4.3 299°96	9°1/23.4 17		
8 29	1 5.39	+ 6 42											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
162865	2001 <i>EP</i> ₈	10	4.3 253°22	3°6/30.2	18		321468	2009 <i>RH</i> ₄₈	10	4.3 302°83	0°3/4.0	18	
8 29	1 3.10	- 1 2.9	1.954	2.812	13.0	20.7	8 29	1 8.20	+ 3 17.9	2.192	3.025	12.7	20.2
9 8	0 59.28	- 2 29.0	1.872	2.800	9.8	20.4	9 8	1 2.93	+ 3 25.5	2.105	3.017	9.7	19.9
9 18	0 53.50	- 4 5.0	1.814	2.787	6.3	20.2	9 18	0 55.75	+ 3 26.4	2.041	3.009	6.3	19.7
9 28	0 46.31	- 5 43.6	1.783	2.774	3.7	20.0	9 28	0 47.19	+ 3 22.7	2.004	3.001	2.4	19.5
10 8	0 38.52	- 7 16.5	1.780	2.761	4.9	20.1	10 8	0 38.05	+ 3 17.6	1.996	2.993	1.6	19.4
10 18	0 31.02	- 8 35.6	1.805	2.747	8.4	20.3	10 18	0 29.19	+ 3 14.3	2.018	2.985	5.5	19.6
10 28	0 24.71	- 9 34.8	1.856	2.733	11.9	20.4	10 28	0 21.49	+ 3 16.2	2.067	2.978	9.2	19.9
11 7	0 20.26	-10 11.2	1.929	2.719	15.0	20.6	11 7	0 15.60	+ 3 26.2	2.141	2.971	12.3	20.1
353383	2011 <i>MO</i> ₇	10	4.3 35°10	0°6/4.8	16		355780	2008 <i>RR</i> ₁₂₆	10	4.3 189°90	1°0/2.2	18	
8 29	1 5.61	+ 7 52.3	1.353	2.207	17.9	20.8	8 29	0 55.56	+ 0 34.1	4.828	5.663	6.2	21.7
9 8	1 1.67	+ 7 40.5	1.301	2.222	13.8	20.6	9 8	0 52.43	+ 0 3.0	4.746	5.662	4.6	21.5
9 18	0 55.17	+ 7 12.2	1.268	2.238	8.9	20.4	9 18	0 48.59	- 0 31.1	4.691	5.662	2.9	21.4
9 28	0 46.95	+ 6 31.5	1.259	2.255	3.7	20.1	9 28	0 44.27	- 1 6.3	4.665	5.661	1.3	21.3
10 8	0 38.21	+ 5 44.9	1.275	2.272	1.8	20.0	10 8	0 39.77	- 1 40.5	4.670	5.660	1.5	21.3
10 18	0 30.19	+ 5 0.0	1.316	2.290	6.9	20.4	10 18	0 35.40	- 2 11.5	4.705	5.659	3.2	21.4
10 28	0 24.02	+ 4 23.9	1.382	2.309	11.5	20.7	10 28	0 31.46	- 2 37.5	4.769	5.658	4.9	21.6
11 7	0 20.36	+ 4 1.8	1.469	2.328	15.4	21.0	11 7	0 28.21	- 2 57.0	4.860	5.657	6.4	21.7
42906	1999 <i>RK</i> ₂₁₂	10	4.3 169°87	4°1/8.9	18		1091	<i>Spiraea</i>	10	4.3 284°29	0°5/3.8	18	
8 29	1 3.55	+20 13.2	1.891	2.676	16.3	19.1	8 29	1 1.73	+ 4 58.6	2.557	3.391	11.1	16.2
9 8	0 59.74	+19 47.2	1.808	2.677	13.3	18.9	9 8	0 57.76	+ 4 31.5	2.471	3.384	8.4	16.0
9 18	0 53.83	+18 57.2	1.744	2.677	9.9	18.7	9 18	0 52.30	+ 3 55.7	2.409	3.378	5.4	15.8
9 28	0 46.44	+17 44.3	1.704	2.678	6.3	18.5	9 28	0 45.80	+ 3 14.3	2.374	3.371	2.1	15.6
10 8	0 38.46	+16 12.8	1.691	2.678	4.1	18.4	10 8	0 38.87	+ 2 31.2	2.369	3.365	1.5	15.5
10 18	0 30.89	+14 30.2	1.706	2.679	5.8	18.5	10 18	0 32.19	+ 1 50.6	2.392	3.358	4.9	15.7
10 28	0 24.67	+12 45.9	1.749	2.679	9.2	18.7	10 28	0 26.41	+ 1 16.8	2.443	3.352	8.1	15.9
11 7	0 20.49	+11 9.2	1.816	2.679	12.7	18.9	11 7	0 22.06	+ 0 52.9	2.520	3.346	10.8	16.1
485306	2011 <i>AF</i> ₆₂	10	4.3 197°30	6°1/12.8	17		289493	2005 <i>EN</i> ₁₁₂	10	4.3 251°56	1°7/2.6	18	
8 29	1 5.95	+29 4.6	3.018	3.707	12.7	21.7	8 29	1 5.06	+ 2 27.3	2.025	2.871	13.1	21.4
9 8	1 0.97	+29 35.7	2.920	3.704	11.0	21.6	9 8	1 0.73	+ 1 43.0	1.937	2.858	10.0	21.2
9 18	0 54.38	+29 49.8	2.841	3.701	9.2	21.4	9 18	0 54.43	+ 0 48.7	1.872	2.845	6.3	20.9
9 28	0 46.62	+29 45.4	2.787	3.698	7.4	21.3	9 28	0 46.70	- 0 11.2	1.834	2.831	2.6	20.7
10 8	0 38.34	+29 22.4	2.758	3.694	6.3	21.2	10 8	0 38.34	- 1 10.5	1.824	2.817	2.9	20.7
10 18	0 30.25	+28 43.0	2.758	3.690	6.3	21.2	10 18	0 30.26	- 2 3.1	1.843	2.803	6.7	20.9
10 28	0 23.06	+27 51.1	2.785	3.686	7.5	21.3	10 28	0 23.35	- 2 43.4	1.888	2.788	10.5	21.1
11 7	0 17.36	+26 52.3	2.839	3.681	9.3	21.4	11 7	0 18.31	- 3 7.8	1.957	2.774	13.8	21.3
316965	2001 <i>FE</i> ₇₁	10	4.3 157°38	0°3/4.7	18		193440	2000 <i>WR</i> ₁₂₆	10	4.3 5°52	1°2/5.4	18	
8 29	1 6.93	+ 6 11.3	2.828	3.642	10.7	21.3	8 29	1 2.94	+10 25.5	1.427	2.274	17.6	19.2
9 8	1 1.46	+ 6 9.6	2.747	3.648	8.2	21.2	9 8	0 59.76	+10 2.0	1.357	2.274	13.7	18.9
9 18	0 54.54	+ 6 0.5	2.691	3.653	5.3	21.0	9 18	0 54.08	+ 9 18.6	1.308	2.274	9.1	18.7
9 28	0 46.64	+ 5 45.8	2.663	3.658	2.2	20.8	9 28	0 46.60	+ 8 18.8	1.281	2.275	4.1	18.4
10 8	0 38.37	+ 5 28.1	2.665	3.663	1.1	20.7	10 8	0 38.41	+ 7 9.2	1.280	2.277	1.9	18.3
10 18	0 30.39	+ 5 10.6	2.698	3.667	4.3	21.0	10 18	0 30.74	+ 5 58.8	1.304	2.280	6.7	18.6
10 28	0 23.33	+ 4 56.2	2.761	3.671	7.2	21.2	10 28	0 24.73	+ 4 56.5	1.353	2.282	11.5	18.9
11 7	0 17.69	+ 4 47.7	2.849	3.674	9.7	21.3	11 7	0 21.16	+ 4 9.3	1.424	2.286	15.6	19.1
137180	1999 <i>JF</i> ₂₀	10	4.3 90°24	1°0/3.3	18		159594	2001 <i>XP</i> ₁₉₂	10	4.3 128°56	2°1/2.4	18	
8 29	1 8.01	+ 2 45.8	2.129	2.966	12.9	20.2	8 29	1 6.77	+ 1 44.4	1.845	2.694	14.1	20.0
9 8	1 2.54	+ 2 26.1	2.071	2.986	9.7	20.0	9 8	1 1.98	+ 0 56.2	1.781	2.703	10.6	19.8
9 18	0 55.30	+ 1 59.0	2.037	3.006	6.1	19.8	9 18	0 55.14	- 0 1.2	1.739	2.712	6.7	19.6
9 28	0 46.93	+ 1 28.0	2.029	3.026	2.4	19.6	9 28	0 46.93	- 1 2.3	1.724	2.720	2.8	19.4
10 8	0 38.23	+ 0 57.7	2.051	3.046	2.1	19.6	10 8	0 38.25	- 2 0.4	1.736	2.728	3.2	19.4
10 18	0 30.05	+ 0 32.2	2.102	3.065	5.7	19.9	10 18	0 30.07	- 2 49.2	1.777	2.735	7.1	19.7
10 28	0 23.16	+ 0 15.4	2.180	3.084	9.1	20.1	10 28	0 23.30	- 3 23.7	1.844	2.742	10.8	19.9
11 7	0 18.08	+ 0 9.6	2.283	3.103	12.0	20.4	11 7	0 18.55	- 3 41.2	1.934	2.749	14.0	20.1
383087	2005 <i>SV</i> ₈₆	10	4.3 317°88	0°6/3.8	18		138188	2000 <i>EV</i> ₁₁₅	10	4.3 146°44	0°4/3.9	18	
8 29	1 3.36	+ 6 27.4	1.403	2.262	17.1	21.2	8 29	1 4.44	+ 6 12.3	1.932	2.771	13.9	20.9
9 8	1 0.22	+ 5 48.5	1.325	2.252	13.2	20.9	9 8	1 0.23	+ 5 37.5	1.857	2.772	10.6	20.7
9 18	0 54.47	+ 4 51.8	1.268	2.241	8.5	20.7	9 18	0 54.06	+ 4 50.2	1.804	2.773	6.8	20.5
9 28	0 46.78	+ 3 42.2	1.234	2.232	3.3	20.3	9 28	0 46.52	+ 3 54.4	1.777	2.774	2.6	20.2
10 8	0 38.25	+ 2 27.9	1.225	2.222	2.4	20.2	10 8	0 38.47	+ 2 55.9	1.779	2.775	1.8	20.2
10 18	0 30.13	+ 1 18.1	1.242	2.213	7.8	20.5	10 18	0 30.80	+ 2 0.8	1.808	2.776	6.0	20.5
10 28	0 23.67	+ 0 22.0	1.284	2.205	12.7	20.8	10 28	0 24.41	+ 1 15.2	1.864	2.777	9.9	20.7
11 7	0 19.72	- 0 14.4	1.346	2.197	17.0	21.1	11 7	0 19.92	+ 0 43.2	1.944	2.778	13.2	20.9
158757	2003 <i>QV</i> ₈₇	10	4.3 345°34	0°9/3.3	18		384340	2009 <i>TE</i> ₄	10	4.3 32°66	5°0/30.4	17	
8 29	1 0.46	+ 5 27.8	2.007	2.854	13.2	19.3	8 29	1 3.41	- 1 50.2	1.167	2.055	17.9	20.0
9 8	0 57.17	+ 4 38.5	1.930	2.850	10.0	19.0	9 8	1 0.29	- 3 11.8	1.123	2.065	13.4	19.8
9 18	0 52.08	+ 3 36.8	1.875	2.847	6.3	18.8	9 18	0 54.41	- 4 42.5	1.098	2.077	8.7	19.6
9 28	0 45.73	+ 2 27.4	1.846	2.843	2.4	18.6	9 28	0 46.69	- 6 11.5	1.097	2.089	5.2	19.4
10 8	0 38.89	+ 1 16.4	1.845	2.841	2.1	18.5	10 8	0 38.42	- 7 26.9	1.119	2.103	6.6	19.6
10 18	0 32.38	+ 0 10.4	1.872	2.838	6.1	18.8	10 18	0 30.95	- 8 19.5	1.165	2.117	10.8	19.8
10 28	0 27.01	- 0 44.5	1.926	2.836	9.8	19.0	10 28	0 25.47	- 8 44.4	1.233	2.131	15.1	20.1
11 7	0 23.37	- 1 24.0	2.003	2.834	13.0	19.2	11 7	0 22.65	- 8 41.2	1.320	2.146	18.7	20.4
340324	2006 <i>DV</i> ₃₂	10	4.3 178°93	2°8/6.8	18		131112	2001 <i>AQ</i> ₃₅	10	4.3 104°50	5°5/9.6	18	
8 29	1 10.10	+13 13.3	2.054	2.853	14								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
508920	2004 <i>CN</i> ₁₀₈	10	4.3	192°73	5°0/ 9.9	18	286995	2002 <i>QV</i> ₅₄	10	4.3	291°13	3°4/ 6.9	18
8 29	1 7.20	+22 12.3	2.458	3.205	13.9	21.7	8 29	1 9.35	+13 14.3	1.841	2.649	15.8	20.5
9 8	1 2.15	+22 31.5	2.365	3.203	11.6	21.5	9 8	1 4.34	+13 46.5	1.752	2.641	12.7	20.3
9 18	0 55.24	+22 33.3	2.293	3.201	9.1	21.3	9 18	0 56.95	+14 4.1	1.684	2.632	9.1	20.0
9 28	0 47.00	+22 16.6	2.245	3.199	6.6	21.2	9 28	0 47.78	+14 6.6	1.641	2.624	5.3	19.8
10 8	0 38.18	+21 42.7	2.225	3.196	5.0	21.1	10 8	0 37.77	+13 55.6	1.624	2.615	3.5	19.7
10 18	0 29.62	+20 54.9	2.233	3.193	5.8	21.1	10 18	0 28.04	+13 34.8	1.635	2.607	6.1	19.8
10 28	0 22.14	+19 58.6	2.270	3.189	8.0	21.3	10 28	0 19.70	+13 9.9	1.673	2.599	9.9	20.0
11 7	0 16.41	+19 0.2	2.332	3.185	10.6	21.4	11 7	0 13.60	+12 47.2	1.735	2.591	13.5	20.2
514824	2007 <i>VD</i> ₃₃₈	10	4.3	278°82	3°8/ 7.9	18	340534	2006 <i>JY</i> ₅₁	10	4.3	269°31	0°2/ 4.1	18
8 29	1 5.95	+16 20.7	2.032	2.826	15.0	21.0	8 29	1 3.90	+ 7 41.2	1.845	2.683	14.5	21.2
9 8	1 1.55	+16 36.4	1.938	2.815	12.2	20.8	9 8	1 0.10	+ 6 56.0	1.753	2.668	11.2	20.9
9 18	0 55.05	+16 35.3	1.865	2.804	8.9	20.6	9 18	0 54.17	+ 5 54.8	1.684	2.652	7.3	20.7
9 28	0 46.98	+16 17.2	1.816	2.793	5.6	20.4	9 28	0 46.66	+ 4 41.3	1.640	2.637	2.9	20.4
10 8	0 38.18	+15 44.0	1.794	2.782	3.8	20.2	10 8	0 38.43	+ 3 22.2	1.624	2.621	1.8	20.3
10 18	0 29.61	+14 59.9	1.800	2.771	5.7	20.3	10 18	0 30.46	+ 2 5.1	1.635	2.604	6.4	20.5
10 28	0 22.26	+14 11.2	1.833	2.759	9.1	20.5	10 28	0 23.76	+ 0 57.9	1.673	2.588	10.7	20.8
11 7	0 16.88	+13 24.7	1.890	2.748	12.5	20.7	11 7	0 19.07	+ 0 6.3	1.735	2.571	14.5	21.0
383028	2005 <i>NK</i> ₇₆	10	4.3	8°31	5°3/ 8.5	18	268906	2007 <i>CR</i> ₃	10	4.3	247°80	3°6/ 7.3	18
8 29	1 3.39	+17 41.2	1.228	2.059	20.8	20.4	8 29	1 7.96	+15 3.3	1.691	2.501	16.9	20.4
9 8	1 0.60	+17 59.4	1.162	2.059	17.0	20.2	9 8	1 3.45	+15 12.9	1.605	2.493	13.6	20.2
9 18	0 54.88	+17 50.1	1.112	2.061	12.6	19.9	9 18	0 56.45	+15 3.2	1.538	2.486	9.8	20.0
9 28	0 46.98	+17 12.6	1.083	2.063	8.0	19.7	9 28	0 47.59	+14 34.2	1.495	2.478	5.8	19.7
10 8	0 38.21	+16 11.2	1.077	2.066	5.3	19.6	10 8	0 37.88	+13 48.9	1.478	2.470	3.6	19.6
10 18	0 30.01	+14 54.4	1.095	2.071	7.6	19.7	10 18	0 28.51	+12 53.2	1.488	2.462	6.4	19.7
10 28	0 23.79	+13 34.0	1.136	2.076	12.0	20.0	10 28	0 20.64	+11 55.2	1.525	2.454	10.5	19.9
11 7	0 20.44	+12 21.6	1.198	2.082	16.3	20.3	11 7	0 15.15	+11 2.7	1.585	2.445	14.4	20.2
377648	2005 <i>UD</i> ₁₃₅	10	4.3	274°19	2°7/30.4	17	229366	2005 <i>QE</i> ₁₈₀	10	4.3	18°38	1°4/ 5.4	18
8 29	1 1.01	- 5 25.1	3.212	4.060	8.7	20.9	8 29	1 2.21	+10 35.7	1.139	2.002	20.0	19.9
9 8	0 56.93	- 5 59.7	3.124	4.045	6.6	20.7	9 8	0 59.65	+10 14.5	1.083	2.008	15.6	19.6
9 18	0 51.65	- 6 36.0	3.062	4.030	4.4	20.5	9 18	0 54.19	+ 9 29.9	1.044	2.014	10.4	19.4
9 28	0 45.03	- 7 10.7	3.028	4.015	2.8	20.4	9 28	0 46.69	+ 8 26.2	1.027	2.022	4.7	19.1
10 8	0 39.07	- 7 40.2	3.024	4.000	3.5	20.4	10 8	0 38.47	+ 7 11.7	1.033	2.031	2.1	19.0
10 18	0 32.79	- 8 1.6	3.049	3.985	5.6	20.6	10 18	0 30.95	+ 5 57.3	1.063	2.041	7.5	19.3
10 28	0 27.20	- 8 12.4	3.101	3.970	7.9	20.7	10 28	0 25.44	+ 4 53.7	1.117	2.052	12.7	19.7
11 7	0 22.75	- 8 11.5	3.178	3.954	10.0	20.8	11 7	0 22.72	+ 4 8.4	1.190	2.064	17.2	20.0
449330	2013 <i>FQ</i> ₂₁	10	4.3	150°62	0°9/ 3.4	18	317428	2002 <i>QX</i> ₁₈	10	4.3	71°87	2°0/ 2.9	17
8 29	1 7.91	+ 2 11.4	2.366	3.199	11.9	22.0	8 29	1 10.23	+ 2 22.3	1.352	2.212	17.6	20.7
9 8	1 2.46	+ 2 2.3	2.291	3.204	9.0	21.8	9 8	1 5.07	+ 1 45.7	1.305	2.233	13.2	20.5
9 18	0 55.31	+ 1 47.0	2.239	3.208	5.7	21.6	9 18	0 57.28	+ 0 57.8	1.279	2.253	8.3	20.3
9 28	0 47.00	+ 1 28.2	2.215	3.212	2.2	21.4	9 28	0 47.80	+ 0 5.3	1.277	2.274	3.3	20.0
10 8	0 38.26	+ 1 9.7	2.220	3.215	1.9	21.4	10 8	0 37.88	- 0 43.9	1.301	2.295	3.4	20.1
10 18	0 29.88	+ 0 54.9	2.255	3.219	5.4	21.6	10 18	0 28.82	- 1 22.5	1.351	2.315	8.1	20.4
10 28	0 22.62	+ 0 47.2	2.319	3.222	8.7	21.9	10 28	0 21.74	- 1 45.0	1.425	2.335	12.5	20.8
11 7	0 17.03	+ 0 48.8	2.407	3.225	11.5	22.1	11 7	0 17.30	- 1 49.2	1.521	2.355	16.2	21.0
392280	2010 <i>AV</i> ₁₂₁	10	4.3	302°96	1°2/ 6.3	15	352701	2008 <i>SE</i> ₁₃₇	10	4.3	348°78	6°0/28.3	18
8 29	1 1.22	+10 41.7	4.209	5.001	7.8	21.1	8 29	1 0.36	- 3 58.7	1.413	2.297	15.5	19.7
9 8	0 56.81	+10 52.1	4.114	4.997	6.1	20.9	9 8	0 57.77	- 5 53.1	1.352	2.293	11.8	19.5
9 18	0 51.45	+10 56.1	4.044	4.993	4.2	20.8	9 18	0 52.79	- 7 56.7	1.314	2.289	8.0	19.3
9 28	0 45.44	+10 54.5	4.003	4.990	2.2	20.7	9 28	0 46.11	- 9 57.9	1.300	2.286	6.0	19.1
10 8	0 39.16	+10 48.6	3.991	4.986	1.3	20.6	10 8	0 38.79	-11 44.0	1.312	2.284	7.8	19.2
10 18	0 33.00	+10 40.1	4.011	4.982	2.9	20.7	10 18	0 31.97	-13 5.0	1.349	2.282	11.5	19.4
10 28	0 27.39	+10 31.0	4.062	4.979	4.9	20.8	10 28	0 26.72	-13 54.6	1.408	2.280	15.3	19.7
11 7	0 22.66	+10 23.4	4.140	4.975	6.7	21.0	11 7	0 23.80	-14 12.1	1.486	2.280	18.6	19.9
330614	2008 <i>DK</i> ₈₁	10	4.3	86°32	0°2/ 4.2	16	25311	1998 <i>YV</i> ₃	10	4.3	349°12	1°3/ 3.1	18
8 29	1 8.34	+ 7 9.2	1.517	2.361	16.8	21.6	8 29	1 0.23	+ 3 38.1	1.680	2.542	14.6	18.5
9 8	1 3.48	+ 6 32.3	1.462	2.379	12.8	21.4	9 8	0 57.38	+ 3 4.0	1.604	2.533	11.1	18.2
9 18	0 56.23	+ 5 40.0	1.428	2.397	8.2	21.1	9 18	0 52.42	+ 2 18.0	1.550	2.525	7.0	18.0
9 28	0 47.38	+ 4 37.3	1.418	2.415	3.2	20.9	9 28	0 45.95	+ 1 25.1	1.521	2.518	2.7	17.7
10 8	0 38.07	+ 3 31.7	1.435	2.432	2.0	20.8	10 8	0 38.87	+ 0 31.7	1.517	2.513	2.6	17.7
10 18	0 29.47	+ 2 31.0	1.480	2.450	6.8	21.2	10 18	0 32.15	- 0 15.4	1.541	2.508	7.0	18.0
10 28	0 22.61	+ 1 42.3	1.550	2.467	11.2	21.5	10 28	0 26.76	- 0 50.1	1.589	2.504	11.1	18.2
11 7	0 18.15	+ 1 10.2	1.642	2.483	14.9	21.8	11 7	0 23.40	- 1 8.3	1.659	2.501	14.7	18.4
399963	2006 <i>BG</i> ₆₃	10	4.3	221°92	4°5/29.2	18	299616	2006 <i>JE</i> ₄	10	4.3	298°44	2°6/ 7.1	18
8 29	1 4.17	- 8 28.4	2.353	3.210	11.2	20.5	8 29	1 2.20	+16 3.8	1.744	2.557	16.3	20.1
9 8	0 59.67	- 9 20.0	2.285	3.208	8.5	20.3	9 8	0 58.89	+15 23.3	1.659	2.552	13.1	19.9
9 18	0 53.54	-10 12.1	2.241	3.206	6.0	20.2	9 18	0 53.40	+14 19.2	1.595	2.547	9.2	19.7
9 28	0 46.30	-10 59.0	2.224	3.203	4.6	20.1	9 28	0 46.35	+12 54.0	1.555	2.542	5.0	19.4
10 8	0 38.66	-11 35.6	2.235	3.201	5.5	20.1	10 8	0 38.64	+11 13.5	1.542	2.537	2.6	19.2
10 18	0 31.37	-11 57.8	2.275	3.198	7.9	20.3	10 18	0 31.31	+ 9 26.7	1.556	2.532	5.8	19.4
10 28	0 25.13	-12 3.0	2.339	3.196	10.6	20.4	10 28	0 25.36	+ 7 43.7	1.598	2.527	10.0	19.7
11 7	0 20.50	-11 50.9	2.427	3.193	13.0	20.6	11 7	0 21.51	+ 6 13.4	1.663	2.523	13.8	19.9
256617	2007 <i>VH</i> ₁₅₅	10	4.3	66°93	1°5/ 3.4	18	293413	2007 <i>ET</i>					

EPHEMERIDES

10 4.3

10 4.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
482944	2014 <i>JL</i> ₆₇	10	4.3 153°94	2°2/ 6.9 18			200036	2007 <i>RH</i> ₇₇	10	4.4 221°61	0°5/ 5.3 18		
8 29	1 3.06	+15 5.1	2.092	2.895	14.3	21.5	8 29	0 56.58	+ 8 35.3	4.636	5.443	6.9	20.7
9 8	0 59.12	+14 30.3	2.010	2.898	11.3	21.3	9 8	0 53.27	+ 8 20.5	4.546	5.441	5.3	20.6
9 18	0 53.33	+13 37.0	1.950	2.900	7.9	21.1	9 18	0 49.17	+ 7 59.9	4.481	5.440	3.5	20.5
9 28	0 46.27	+12 27.6	1.916	2.902	4.3	20.9	9 28	0 44.56	+ 7 35.0	4.445	5.438	1.6	20.3
10 8	0 38.71	+11 6.8	1.909	2.904	2.3	20.8	10 8	0 39.75	+ 7 7.4	4.438	5.436	0.7	20.2
10 18	0 31.52	+ 9 41.4	1.932	2.906	5.0	21.0	10 18	0 35.06	+ 6 39.3	4.463	5.434	2.6	20.4
10 28	0 25.51	+ 8 18.9	1.982	2.907	8.6	21.2	10 28	0 30.83	+ 6 12.8	4.517	5.432	4.5	20.5
11 7	0 21.29	+ 7 6.0	2.058	2.909	11.9	21.4	11 7	0 27.33	+ 5 49.8	4.599	5.430	6.2	20.7
493116	2014 <i>TK</i> ₁₆	10	4.3 176°29	0°0/ 4.4 18			195412	2002 <i>GF</i> ₃₉	10	4.4 311°33	1°6/ 7.3 18		
8 29	1 4.37	+ 5 43.7	2.576	3.401	11.3	21.1	8 29	0 57.19	+13 59.3	4.085	4.870	8.2	19.5
9 8	0 59.72	+ 5 36.5	2.494	3.401	8.6	20.9	9 8	0 53.87	+13 49.4	3.988	4.864	6.5	19.3
9 18	0 53.55	+ 5 21.3	2.436	3.401	5.6	20.7	9 18	0 49.63	+13 31.1	3.916	4.859	4.6	19.2
9 28	0 46.33	+ 5 0.3	2.405	3.401	2.2	20.5	9 28	0 44.77	+13 5.4	3.871	4.853	2.6	19.1
10 8	0 38.69	+ 4 36.6	2.404	3.401	1.2	20.4	10 8	0 39.65	+12 33.9	3.856	4.848	1.6	19.0
10 18	0 31.33	+ 4 13.8	2.432	3.401	4.6	20.7	10 18	0 34.66	+11 59.0	3.870	4.842	2.9	19.1
10 28	0 24.93	+ 3 55.3	2.489	3.401	7.7	20.9	10 28	0 30.21	+11 23.5	3.915	4.837	4.9	19.2
11 7	0 19.99	+ 3 44.3	2.571	3.401	10.5	21.1	11 7	0 26.61	+10 50.0	3.986	4.832	6.8	19.3
489934	2008 <i>RG</i> ₄₆	10	4.3 348°39	0°3/ 3.9 18			453219	2008 <i>HK</i> ₃₅	10	4.4 29°87	7°0/ 27.8 18		
8 29	0 57.61	+ 4 11.0	4.281	5.105	7.2	21.5	8 29	1 5.28	-13 14.1	1.804	2.672	13.5	19.8
9 8	0 54.07	+ 3 56.4	4.196	5.105	5.4	21.4	9 8	1 0.89	-14 15.7	1.756	2.680	10.6	19.6
9 18	0 49.70	+ 3 37.4	4.137	5.104	3.4	21.3	9 18	0 54.47	-15 13.0	1.731	2.688	8.1	19.5
9 28	0 44.76	+ 3 15.6	4.107	5.104	1.3	21.1	9 28	0 46.72	-15 58.3	1.731	2.697	7.0	19.5
10 8	0 39.61	+ 2 53.1	4.107	5.103	0.9	21.1	10 8	0 38.58	-16 25.0	1.756	2.706	8.2	19.6
10 18	0 34.60	+ 2 31.9	4.137	5.103	3.1	21.2	10 18	0 31.02	-16 29.4	1.807	2.716	10.6	19.7
10 28	0 30.10	+ 2 14.1	4.197	5.103	5.1	21.4	10 28	0 24.91	-16 10.4	1.882	2.726	13.3	19.9
11 7	0 26.41	+ 2 1.5	4.284	5.102	6.9	21.5	11 7	0 20.82	-15 29.8	1.976	2.736	15.7	20.1
299233	2005 <i>JO</i> ₁₅₀	10	4.3 227°33	1°0/ 3.3 18			474682	2005 <i>EK</i> ₇₃	10	4.4 288°30	1°6/ 2.9 16		
8 29	1 4.03	+ 4 50.5	2.078	2.918	13.1	21.6	8 29	1 4.19	+ 3 56.6	1.764	2.615	14.5	22.1
9 8	0 59.86	+ 4 4.4	1.995	2.912	9.9	21.4	9 8	1 0.53	+ 3 7.0	1.666	2.590	11.1	21.9
9 18	0 53.83	+ 3 6.7	1.936	2.907	6.3	21.1	9 18	0 54.59	+ 2 3.1	1.591	2.564	7.1	21.6
9 28	0 46.49	+ 2 1.7	1.903	2.900	2.4	20.9	9 28	0 46.92	+ 0 49.8	1.541	2.538	2.8	21.3
10 8	0 38.61	+ 0 55.4	1.899	2.894	2.2	20.9	10 8	0 38.38	- 0 25.8	1.518	2.512	3.0	21.2
10 18	0 31.04	- 0 5.9	1.923	2.888	6.1	21.1	10 18	0 30.02	- 1 35.4	1.522	2.485	7.5	21.4
10 28	0 24.62	- 0 56.5	1.975	2.881	9.8	21.3	10 28	0 22.93	- 2 31.5	1.552	2.459	11.9	21.6
11 7	0 19.99	- 1 32.3	2.050	2.874	13.0	21.5	11 7	0 17.94	- 3 8.7	1.604	2.432	15.9	21.8
447095	2004 <i>TZ</i> ₁₁₀	10	4.3 258°49	0°9/ 3.4 17			99645	2002 <i>GE</i> ₁₆₅	10	4.4 311°39	1°3/ 3.1 18		
8 29	1 6.41	+ 2 29.6	2.630	3.460	11.0	21.5	8 29	1 2.75	+ 5 10.3	1.594	2.450	15.6	19.1
9 8	1 1.36	+ 2 15.9	2.529	3.440	8.3	21.3	9 8	0 59.47	+ 4 17.5	1.515	2.441	11.9	18.9
9 18	0 54.68	+ 1 55.8	2.453	3.421	5.3	21.1	9 18	0 53.87	+ 3 9.1	1.458	2.432	7.5	18.6
9 28	0 46.82	+ 1 31.9	2.404	3.401	2.1	20.8	9 28	0 46.60	+ 1 50.5	1.425	2.423	2.9	18.3
10 8	0 38.40	+ 1 7.6	2.385	3.380	1.8	20.8	10 8	0 38.62	+ 0 30.0	1.419	2.414	2.8	18.3
10 18	0 30.15	+ 0 46.5	2.397	3.360	5.2	21.0	10 18	0 31.01	- 0 43.7	1.439	2.405	7.5	18.5
10 28	0 22.80	+ 0 32.1	2.437	3.339	8.4	21.1	10 28	0 24.84	- 1 42.6	1.485	2.397	11.9	18.8
11 7	0 16.93	+ 0 27.0	2.502	3.317	11.2	21.3	11 7	0 20.90	- 2 21.6	1.552	2.389	15.8	19.0
406768	2008 <i>LH</i> ₅	10	4.3 302°92	7°3/ 25.2 18			352942	2009 <i>AT</i> ₄₉	10	4.4 314°54	0°7/ 4.9 16		
8 29	1 2.53	-15 55.9	2.196	3.059	11.6	20.3	8 29	1 4.87	+ 7 35.3	1.512	2.361	16.6	21.2
9 8	0 58.62	-17 22.5	2.138	3.054	9.4	20.2	9 8	1 1.40	+ 7 30.5	1.422	2.341	13.0	20.9
9 18	0 52.97	-18 45.0	2.103	3.048	7.7	20.1	9 18	0 55.33	+ 7 10.4	1.353	2.322	8.6	20.6
9 28	0 46.12	-19 55.5	2.095	3.043	7.4	20.1	9 28	0 47.26	+ 6 37.3	1.307	2.303	3.7	20.2
10 8	0 38.83	-20 47.6	2.113	3.038	8.6	20.1	10 8	0 38.20	+ 5 56.4	1.287	2.285	1.8	20.1
10 18	0 31.90	-21 16.7	2.157	3.033	10.6	20.3	10 18	0 29.40	+ 5 14.3	1.292	2.267	7.0	20.4
10 28	0 26.11	-21 21.3	2.223	3.028	12.9	20.4	10 28	0 22.12	+ 4 38.6	1.323	2.249	11.9	20.6
11 7	0 22.01	-21 2.3	2.309	3.023	14.9	20.6	11 7	0 17.30	+ 4 15.5	1.374	2.233	16.3	20.8
304189	2006 <i>QU</i> ₆₅	10	4.3 336°60	1°3/ 5.5 18			156860	2003 <i>DG</i> ₈	10	4.4 95°01	0°6/ 3.8 18		
8 29	1 4.89	+ 9 15.8	1.678	2.516	15.8	20.9	8 29	1 6.62	+ 6 8.4	1.636	2.481	15.8	20.7
9 8	1 1.01	+ 9 14.5	1.598	2.509	12.3	20.7	9 8	1 2.15	+ 5 28.7	1.572	2.491	12.0	20.5
9 18	0 54.81	+ 8 58.3	1.539	2.503	8.3	20.4	9 18	0 55.42	+ 4 34.8	1.530	2.501	7.6	20.3
9 28	0 46.94	+ 8 29.2	1.504	2.497	3.8	20.1	9 28	0 47.15	+ 3 31.8	1.514	2.511	2.9	20.0
10 8	0 38.34	+ 7 51.7	1.495	2.492	1.8	20.0	10 8	0 38.36	+ 2 26.7	1.524	2.521	2.1	20.0
10 18	0 30.11	+ 7 11.5	1.513	2.487	6.1	20.3	10 18	0 30.13	+ 1 26.9	1.562	2.530	6.8	20.3
10 28	0 23.32	+ 6 35.3	1.557	2.483	10.5	20.5	10 28	0 23.46	+ 0 39.3	1.625	2.540	11.0	20.6
11 7	0 18.75	+ 6 8.8	1.623	2.479	14.3	20.7	11 7	0 19.03	+ 0 8.1	1.712	2.549	14.6	20.8
404815	2014 <i>JD</i> ₆₈	10	4.4 146°09	2°4/ 1.7 18			423173	2004 <i>FS</i> ₁₆₆	10	4.4 143°24	4°8/ 9.4 16		
8 29	1 5.29	- 0 23.4	2.250	3.096	12.0	22.1	8 29	1 10.62	+20 51.5	2.137	2.896	15.4	22.3
9 8	1 0.54	- 1 11.3	2.182	3.103	9.0	22.0	9 8	1 4.86	+21 1.5	2.059	2.909	12.7	22.1
9 18	0 54.11	- 2 5.3	2.138	3.110	5.7	21.8	9 18	0 57.04	+20 51.9	2.003	2.921	9.6	22.0
9 28	0 46.55	- 3 0.6	2.122	3.116	2.8	21.6	9 28	0 47.78	+20 22.1	1.970	2.933	6.6	21.8
10 8	0 38.61	- 3 51.8	2.135	3.122	3.4	21.6	10 8	0 37.99	+19 34.4	1.966	2.944	4.8	21.7
10 18	0 31.05	- 4 33.9	2.176	3.128	6.5	21.9	10 18	0 28.64	+18 33.7	1.990	2.954	5.9	21.8
10 28	0 24.62	- 5 2.9	2.245	3.133	9.6	22.1	10 28	0 20.67	+17 26.9	2.042	2.964	8.7	22.0
11 7	0 19.86	- 5 16.9	2.338	3.138	12.4	22.3	11 7	0 14.73	+16 21.4	2.120	2.972	11.6	22.2
143784	2003 <i>WU</i> ₇₄	10	4.4 269°94	2°7/ 6.5 18			362994	2013 <i>CE</i> ₁₃₇	10	4.4 271°40	2°7/ 1.4 18		
8 29	1 8.98	+12 5.8</											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
136864	1998 <i>FB</i> ₄₁		10 4.4 86°78	0°7/ 3.7 17			435716	2008 <i>UC</i> ₃₃		10 4.4 37°25	3°1/ 2.2 18		
8 29	1 10.61	+ 6 53.9	1.540	2.380	16.8	19.9	8 29	1 6.31	+ 0 20.6	1.208	2.085	18.1	20.6
9 8	1 5.01	+ 5 56.6	1.496	2.412	12.7	19.7	9 8	1 2.34	- 0 22.7	1.168	2.105	13.6	20.4
9 18	0 57.09	+ 4 44.4	1.473	2.442	8.0	19.5	9 18	0 55.67	- 1 15.6	1.148	2.125	8.5	20.2
9 28	0 47.74	+ 3 23.8	1.476	2.473	3.0	19.3	9 28	0 47.26	- 2 10.2	1.150	2.147	3.9	20.0
10 8	0 38.11	+ 2 3.3	1.506	2.502	2.3	19.3	10 8	0 38.42	- 2 57.4	1.178	2.169	4.5	20.1
10 18	0 29.31	+ 0 51.0	1.564	2.531	6.9	19.7	10 18	0 30.49	- 3 30.1	1.230	2.192	9.0	20.5
10 28	0 22.32	- 0 6.1	1.648	2.559	11.1	20.0	10 28	0 24.56	- 3 43.4	1.305	2.216	13.4	20.8
11 7	0 17.72	- 0 44.4	1.756	2.586	14.6	20.3	11 7	0 21.30	- 3 36.1	1.400	2.240	17.1	21.1
310872	2003 <i>HF</i> ₁₄		10 4.4 326°57	2°0/ 1.0 16			161760	2006 <i>TU</i> ₂₅		10 4.4 81°01	1°7/ 5.9 17		
8 29	1 1.25	- 5 44.5	4.292	5.130	6.9	19.8	8 29	1 8.66	+12 47.9	1.454	2.282	18.3	20.7
9 8	0 56.77	- 5 54.7	4.214	5.130	5.2	19.7	9 8	1 3.83	+12 11.1	1.402	2.307	14.2	20.6
9 18	0 51.42	- 6 5.4	4.162	5.129	3.4	19.6	9 18	0 56.52	+11 12.8	1.370	2.330	9.5	20.3
9 28	0 45.48	- 6 14.3	4.140	5.128	2.1	19.5	9 28	0 47.59	+9 57.1	1.362	2.354	4.5	20.1
10 8	0 39.34	- 6 19.5	4.148	5.127	2.5	19.5	10 8	0 38.23	+ 8 32.0	1.381	2.378	2.1	20.0
10 18	0 33.37	- 6 19.4	4.187	5.126	4.1	19.6	10 18	0 29.66	+ 7 6.7	1.426	2.401	6.4	20.4
10 28	0 27.95	- 6 12.6	4.255	5.125	5.9	19.8	10 28	0 22.95	+ 5 50.8	1.498	2.423	10.8	20.7
11 7	0 23.40	- 5 58.3	4.349	5.125	7.5	19.9	11 7	0 18.72	+ 4 50.8	1.592	2.446	14.6	21.0
392095	2009 <i>DK</i> ₁₁₇		10 4.4 73°30	0°8/ 5.1 18			291129	2005 <i>YY</i> ₂₀₄		10 4.4 300°44	1°4/ 2.9 18		
8 29	1 7.20	+ 7 54.4	1.872	2.702	14.7	21.0	8 29	1 3.11	+ 2 40.7	2.158	3.004	12.4	21.3
9 8	1 2.43	+ 7 49.7	1.799	2.708	11.3	20.8	9 8	0 59.11	+ 2 4.7	2.079	2.999	9.4	21.1
9 18	0 55.55	+ 7 32.5	1.748	2.713	7.5	20.6	9 18	0 53.35	+ 1 19.9	2.022	2.994	5.9	20.9
9 28	0 47.23	+ 7 5.4	1.723	2.718	3.2	20.4	9 28	0 46.36	+ 0 30.4	1.992	2.989	2.4	20.6
10 8	0 38.35	+ 6 32.5	1.725	2.723	1.5	20.3	10 8	0 38.87	- 0 18.5	1.991	2.985	2.5	20.6
10 18	0 29.91	+ 5 59.0	1.756	2.728	5.7	20.6	10 18	0 31.70	- 1 1.7	2.018	2.980	6.0	20.9
10 28	0 22.85	+ 5 30.3	1.813	2.733	9.6	20.8	10 28	0 25.61	- 1 34.3	2.071	2.975	9.5	21.1
11 7	0 17.83	+ 5 10.8	1.894	2.739	13.1	21.0	11 7	0 21.22	- 1 53.4	2.149	2.971	12.6	21.3
15492	Nyberg		10 4.4 347°84	1°1/ 5.1 18			303487	2005 <i>EB</i> ₇₇		10 4.4 118°82	0°4/ 3.9 18		
8 29	1 3.07	+ 7 53.9	1.156	2.025	19.4	17.5	8 29	1 4.88	+ 6 46.5	2.027	2.861	13.6	21.2
9 8	1 0.53	+ 7 58.1	1.086	2.015	15.1	17.2	9 8	1 0.45	+ 6 1.5	1.958	2.871	10.3	21.0
9 18	0 54.99	+ 7 44.1	1.035	2.007	10.1	16.9	9 18	0 54.18	+ 5 4.1	1.913	2.881	6.6	20.8
9 28	0 47.17	+ 7 14.5	1.004	2.000	4.4	16.6	9 28	0 46.67	+ 3 58.5	1.894	2.890	2.5	20.6
10 8	0 38.35	+ 6 35.2	0.997	1.995	2.1	16.4	10 8	0 38.74	+ 2 50.6	1.903	2.900	1.7	20.5
10 18	0 30.03	+ 5 54.6	1.013	1.990	7.8	16.8	10 18	0 31.24	+ 1 46.8	1.941	2.909	5.7	20.8
10 28	0 23.68	+ 5 21.6	1.052	1.987	13.3	17.1	10 28	0 24.99	+ 0 53.0	2.007	2.918	9.4	21.1
11 7	0 20.25	+ 5 3.0	1.110	1.986	18.0	17.4	11 7	0 20.55	+ 0 13.2	2.097	2.926	12.6	21.3
360041	2013 <i>AO</i> ₅₃		10 4.4 221°71	2°4/29.2 18			308933	2006 <i>SQ</i> ₃₇₂		10 4.4 0°15	0°1/ 5.2 15		
8 29	0 56.18	- 7 23.2	4.599	5.448	6.3	21.1	8 29	0 44.77	+ 6 59.0	28.937	29.748	1.2	22.6
9 8	0 52.98	- 8 3.6	4.525	5.445	4.7	21.0	9 8	0 44.00	+ 6 52.9	28.868	29.767	0.9	22.6
9 18	0 49.02	- 8 44.4	4.477	5.442	3.3	20.9	9 18	0 43.14	+ 6 46.0	28.826	29.786	0.6	22.6
9 28	0 44.55	- 9 23.1	4.458	5.439	2.4	20.8	9 28	0 42.22	+ 6 38.6	28.811	29.805	0.3	22.5
10 8	0 39.89	- 9 57.2	4.469	5.436	2.9	20.8	10 8	0 41.27	+ 6 30.9	28.827	29.824	0.1	22.5
10 18	0 35.36	-10 24.6	4.510	5.432	4.4	20.9	10 18	0 40.34	+ 6 23.1	28.872	29.843	0.4	22.6
10 28	0 31.29	-10 43.6	4.578	5.429	5.9	21.0	10 28	0 39.47	+ 6 15.6	28.947	29.863	0.8	22.6
11 7	0 27.97	-10 53.4	4.672	5.426	7.3	21.2	11 7	0 38.69	+ 6 8.6	29.050	29.882	1.0	22.7
103645	2000 <i>CP</i> ₃₅		10 4.4 266°44	0°9/ 5.4 18			415608	2014 <i>QB</i> ₃₅₃		10 4.4 331°30	2°0/ 6.2 17		
8 29	1 2.78	+ 9 53.3	2.477	3.293	12.0	19.8	8 29	1 5.77	+10 47.2	2.201	3.014	13.3	20.6
9 8	0 58.74	+ 9 30.9	2.378	3.278	9.3	19.6	9 8	1 1.19	+11 1.1	2.114	3.009	10.5	20.4
9 18	0 53.09	+ 8 56.4	2.303	3.263	6.2	19.4	9 18	0 54.73	+11 3.2	2.049	3.004	7.2	20.2
9 28	0 46.25	+ 8 11.6	2.255	3.248	2.8	19.1	9 28	0 46.94	+10 54.4	2.011	3.000	3.8	20.0
10 8	0 38.89	+ 7 20.5	2.235	3.232	1.3	19.0	10 8	0 38.57	+10 37.1	2.000	2.995	2.1	19.8
10 18	0 31.72	+ 6 27.5	2.244	3.217	4.7	19.2	10 18	0 30.46	+10 15.1	2.018	2.991	5.0	20.0
10 28	0 25.48	+ 5 37.8	2.282	3.201	8.0	19.4	10 28	0 23.48	+ 9 52.9	2.064	2.987	8.5	20.2
11 7	0 20.74	+ 4 56.0	2.346	3.185	11.1	19.6	11 7	0 18.26	+ 9 35.0	2.134	2.984	11.6	20.4
18417	1993 <i>QY</i> ₉		10 4.4 56°45	3°5/ 1.7 18			296063	2009 <i>AL</i> ₄₂		10 4.4 10°06	1°7/ 3.0 18		
8 29	1 6.75	+ 1 11.1	1.178	2.055	18.5	18.9	8 29	1 5.19	+ 2 32.1	1.578	2.437	15.6	20.6
9 8	1 2.83	+ 0 1.8	1.133	2.070	13.9	18.6	9 8	1 1.24	+ 2 1.8	1.510	2.438	11.8	20.3
9 18	0 56.08	- 1 20.0	1.107	2.085	8.7	18.4	9 18	0 54.96	+ 1 20.7	1.465	2.439	7.5	20.1
9 28	0 47.44	- 2 44.6	1.105	2.101	4.1	18.2	9 28	0 47.05	+ 0 34.1	1.443	2.441	3.0	19.8
10 8	0 38.29	- 4 0.8	1.127	2.117	5.0	18.3	10 8	0 38.53	- 0 11.4	1.448	2.443	3.0	19.8
10 18	0 30.01	- 4 59.1	1.174	2.133	9.7	18.6	10 18	0 30.51	- 0 49.0	1.480	2.445	7.4	20.1
10 28	0 23.79	- 5 33.2	1.243	2.150	14.3	18.9	10 28	0 24.04	- 1 13.3	1.537	2.448	11.7	20.4
11 7	0 20.34	- 5 41.5	1.333	2.167	18.1	19.2	11 7	0 19.82	- 1 20.8	1.615	2.452	15.3	20.6
360445	2002 <i>MR</i> ₆		10 4.4 85°43	3°7/29.8 18			91176	1998 <i>RE</i> ₁₉		10 4.4 1°06	3°5/ 7.1 18		
8 29	1 5.03	- 6 8.0	2.549	3.399	10.6	21.3	8 29	1 9.05	+13 1.6	1.927	2.733	15.2	18.4
9 8	1 0.01	- 7 6.2	2.507	3.429	8.0	21.1	9 8	1 3.97	+13 43.9	1.845	2.733	12.2	18.2
9 18	0 53.60	- 8 5.1	2.491	3.458	5.4	21.0	9 18	0 56.67	+14 12.7	1.785	2.732	8.7	18.0
9 28	0 46.35	- 8 59.7	2.504	3.487	3.7	21.0	9 28	0 47.75	+14 27.6	1.750	2.732	5.2	17.8
10 8	0 38.90	- 9 45.3	2.545	3.516	4.5	21.1	10 8	0 38.12	+14 29.8	1.742	2.733	3.5	17.7
10 18	0 31.92	-10 18.1	2.615	3.544	6.8	21.2	10 18	0 28.83	+14 22.3	1.762	2.734	5.8	17.9
10 28	0 25.99	-10 36.1	2.712	3.572	9.2	21.4	10 28	0 20.90	+14 9.9	1.810	2.735	9.3	18.1
11 7	0 21.54	-10 38.8	2.833	3.599	11.3	21.6	11 7	0 15.07	+13 58.1	1.881	2.737	12.6	18.3
182267	2001 <i>HK</i> ₂₆		10 4.4 314°17	5°6/ 9.9 18			489064	2005 <i>YB</i> ₂₁₇		10 4.4 327°82	4°4/ 7.9 17		
8 29	0 57.04	+24 23.0	1.264										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
479908	2014 <i>HC</i> ₄₅	10 4.4	8°09'	3°8'	1.8	18	160916	2001 <i>XB</i> ₄₄	10 4.4	86°35'	3°8'	8.1	18
8 29	1 10.87	- 5 2.9	1.595	2.456	15.3	20.7	8 29	1 7.32	+16 38.8	2.118	2.905	14.7	19.9
9 8	1 5.50	- 5 11.4	1.529	2.456	11.7	20.5	9 8	1 2.42	+16 59.6	2.039	2.911	11.9	19.7
9 18	0 57.66	- 5 21.6	1.486	2.458	7.7	20.3	9 18	0 55.54	+17 4.2	1.982	2.918	8.7	19.5
9 28	0 48.11	- 5 28.2	1.467	2.459	4.3	20.1	9 28	0 47.27	+16 52.6	1.949	2.924	5.6	19.3
10 8	0 37.95	- 5 26.0	1.475	2.461	4.9	20.1	10 8	0 38.44	+16 26.8	1.944	2.930	3.8	19.2
10 18	0 28.38	- 5 11.0	1.510	2.464	8.6	20.3	10 18	0 29.98	+15 50.8	1.967	2.937	5.5	19.4
10 28	0 20.50	- 4 41.1	1.570	2.467	12.5	20.6	10 28	0 22.76	+15 10.3	2.018	2.943	8.5	19.6
11 7	0 15.06	- 3 56.3	1.652	2.470	15.9	20.8	11 7	0 17.46	+14 31.2	2.093	2.949	11.5	19.8
295436	2008 <i>LS</i> ₄	10 4.4	273°40'	4°6'	9.7	18	441220	2007 <i>VL</i> ₆₃	10 4.4	300°06'	14°6'	18.8	15
8 29	1 3.95	+20 53.0	2.349	3.114	14.0	20.5	8 29	1 0.29	+38 35.0	1.125	1.857	27.9	21.0
9 8	0 59.82	+21 4.5	2.255	3.107	11.7	20.3	9 8	0 59.45	+39 12.7	1.039	1.840	25.5	20.8
9 18	0 53.87	+20 58.3	2.182	3.101	9.0	20.2	9 18	0 54.94	+39 1.7	0.962	1.823	22.6	20.5
9 28	0 46.62	+20 33.8	2.133	3.094	6.3	20.0	9 28	0 47.39	+37 49.5	0.899	1.806	19.2	20.2
10 8	0 38.77	+19 52.7	2.111	3.088	4.7	19.9	10 8	0 38.28	+35 28.9	0.853	1.790	16.1	20.0
10 18	0 31.17	+18 58.8	2.116	3.082	5.6	19.9	10 18	0 29.59	+32 3.1	0.827	1.774	14.6	19.9
10 28	0 24.62	+17 57.9	2.150	3.075	8.1	20.1	10 28	0 23.35	+27 50.6	0.822	1.759	15.8	19.9
11 7	0 19.78	+16 56.6	2.209	3.069	10.9	20.2	11 7	0 20.86	+23 21.0	0.840	1.744	19.3	20.0
407001	2009 <i>RF</i> ₅₈	10 4.4	54°74'	2°1'	6.8	18	517179	2013 <i>RY</i> ₃	10 4.4	271°27'	2°4'	1.7	18
8 29	1 2.59	+13 54.8	2.099	2.909	14.0	21.2	8 29	1 4.49	+ 6 20.2	1.704	2.550	15.2	21.2
9 8	0 58.73	+13 33.0	2.027	2.918	11.1	21.0	9 8	1 0.91	+ 4 22.9	1.601	2.523	11.6	20.9
9 18	0 53.10	+12 54.8	1.977	2.928	7.7	20.9	9 18	0 54.96	+ 2 1.2	1.522	2.495	7.3	20.6
9 28	0 46.27	+12 2.5	1.951	2.939	4.1	20.7	9 28	0 47.17	- 0 37.5	1.470	2.467	3.1	20.3
10 8	0 39.00	+11 0.4	1.954	2.949	2.2	20.6	10 8	0 38.45	- 3 21.2	1.447	2.437	4.1	20.3
10 18	0 32.13	+ 9 54.2	1.985	2.959	4.9	20.8	10 18	0 29.88	- 5 56.1	1.454	2.408	8.9	20.5
10 28	0 26.44	+ 8 50.6	2.044	2.970	8.3	21.0	10 28	0 22.61	- 8 9.4	1.488	2.377	13.5	20.7
11 7	0 22.49	+ 7 55.2	2.127	2.981	11.5	21.2	11 7	0 17.55	- 9 53.1	1.544	2.346	17.6	20.9
434213	2003 <i>SF</i> ₅₀	10 4.4	44°13'	3°4'	7.2	18	355775	2008 <i>RK</i> ₁₂₃	10 4.4	2°30'	0°6'	5.6	18
8 29	1 7.85	+14 37.9	1.299	2.130	19.9	20.5	8 29	0 58.06	+ 8 55.9	4.170	4.976	7.7	21.2
9 8	1 3.43	+14 38.5	1.256	2.158	15.7	20.3	9 8	0 54.50	+ 8 46.8	4.082	4.976	5.9	21.1
9 18	0 56.35	+14 15.5	1.232	2.187	10.9	20.1	9 18	0 50.05	+ 8 31.5	4.019	4.977	3.9	21.0
9 28	0 47.55	+13 31.4	1.230	2.217	6.1	20.0	9 28	0 45.01	+ 8 11.3	3.985	4.977	1.8	20.8
10 8	0 38.34	+12 32.5	1.253	2.247	3.5	19.9	10 8	0 39.74	+ 7 47.9	3.980	4.977	0.8	20.7
10 18	0 30.03	+11 27.4	1.301	2.277	6.6	20.2	10 18	0 34.62	+ 7 23.5	4.005	4.977	2.8	20.9
10 28	0 23.74	+10 25.7	1.374	2.308	10.9	20.5	10 28	0 30.02	+ 7 0.5	4.061	4.977	4.9	21.0
11 7	0 20.10	+ 9 35.1	1.469	2.339	14.7	20.8	11 7	0 26.25	+ 6 41.1	4.143	4.977	6.8	21.2
42146	2001 <i>BN</i> ₄₂	10 4.4	292°96'	2°3'	9.1	18	230678	2003 <i>SK</i> ₃₀₉	10 4.4	93°51'	1°7'	6.3	18
8 29	0 56.85	+18 41.2	4.345	5.101	8.1	19.2	8 29	1 5.71	+11 40.2	2.432	3.236	12.5	20.2
9 8	0 53.60	+18 31.7	4.248	5.099	6.6	19.1	9 8	1 0.81	+11 36.6	2.362	3.252	9.8	20.1
9 18	0 49.49	+18 12.5	4.174	5.097	5.0	19.0	9 18	0 54.30	+11 20.8	2.315	3.268	6.7	19.9
9 28	0 44.78	+17 44.4	4.128	5.095	3.3	18.8	9 28	0 46.72	+10 54.6	2.295	3.284	3.4	19.7
10 8	0 39.85	+17 8.9	4.110	5.092	2.3	18.8	10 8	0 38.79	+10 21.1	2.304	3.299	1.8	19.6
10 18	0 35.04	+16 28.0	4.123	5.090	3.0	18.8	10 18	0 31.24	+ 9 44.2	2.342	3.314	4.4	19.8
10 28	0 30.74	+15 44.7	4.165	5.088	4.6	18.9	10 28	0 24.76	+ 9 8.6	2.408	3.329	7.5	20.1
11 7	0 27.27	+15 1.7	4.235	5.085	6.3	19.1	11 7	0 19.88	+ 8 38.3	2.501	3.344	10.3	20.3
381084	2007 <i>BD</i> ₄₃	10 4.4	202°66'	0°3'	4.7	16	516201	2016 <i>SX</i> ₃₆	10 4.4	332°21'	1°1'	5.3	18
8 29	1 7.83	+ 8 5.4	1.879	2.708	14.7	22.5	8 29	1 1.79	+ 9 36.3	1.398	2.251	17.5	20.4
9 8	1 3.01	+ 7 39.1	1.797	2.705	11.4	22.2	9 8	0 59.18	+ 9 20.2	1.316	2.236	13.7	20.1
9 18	0 56.02	+ 6 58.7	1.736	2.701	7.4	22.0	9 18	0 53.97	+ 8 44.5	1.254	2.223	9.2	19.8
9 28	0 47.49	+ 6 7.2	1.701	2.697	3.1	21.7	9 28	0 46.79	+ 7 52.2	1.214	2.209	4.1	19.5
10 8	0 38.30	+ 5 9.9	1.695	2.692	1.5	21.6	10 8	0 38.70	+ 6 49.3	1.199	2.197	1.9	19.3
10 18	0 29.48	+ 4 13.3	1.716	2.687	6.0	21.9	10 18	0 30.96	+ 5 44.3	1.210	2.186	7.0	19.6
10 28	0 22.02	+ 3 23.9	1.765	2.681	10.1	22.1	10 28	0 24.82	+ 4 46.6	1.244	2.175	12.1	19.9
11 7	0 16.63	+ 2 47.0	1.838	2.675	13.7	22.3	11 7	0 21.19	+ 4 3.8	1.299	2.166	16.5	20.1
8256	Shenzhou	10 4.4	324°42'	4°7'	1.9	18 R	223154	2002 <i>X</i> ₅₃	10 4.4	340°28'	1°5'	5.3	18
8 29	1 6.16	- 3 21.8	1.002	1.896	19.6	16.0	8 29	1 8.59	+ 7 38.6	1.288	2.141	18.7	19.6
9 8	1 3.63	- 3 37.2	0.923	1.868	15.3	15.6	9 8	1 4.56	+ 8 0.0	1.214	2.134	14.7	19.3
9 18	0 57.50	- 3 59.5	0.862	1.842	10.1	15.3	9 18	0 57.52	+ 8 6.4	1.160	2.128	9.8	19.0
9 28	0 48.39	- 4 20.9	0.821	1.816	5.4	14.9	9 28	0 48.22	+ 7 59.4	1.128	2.122	4.5	18.7
10 8	0 37.69	- 4 31.8	0.801	1.792	6.2	14.9	10 8	0 37.91	+ 7 43.1	1.120	2.117	2.2	18.5
10 18	0 27.25	- 4 23.7	0.803	1.769	11.8	15.1	10 18	0 28.08	+ 7 23.4	1.137	2.113	7.4	18.8
10 28	0 19.01	- 3 50.9	0.825	1.747	17.7	15.3	10 28	0 20.18	+ 7 7.4	1.178	2.109	12.6	19.1
11 7	0 14.29	- 2 52.7	0.864	1.728	22.9	15.6	11 7	0 15.18	+ 7 1.2	1.240	2.107	17.1	19.4
375198	2008 <i>EZ</i> ₃₈	10 4.4	283°56'	3°7'	1.3	18	401509	2013 <i>EP</i> ₃₄	10 4.4	88°28'	2°2'	1.9	18
8 29	1 5.50	- 0 8.0	1.430	2.300	16.3	21.3	8 29	1 3.76	+ 0 33.0	2.140	2.990	12.4	21.4
9 8	1 1.88	- 1 13.6	1.354	2.287	12.4	21.0	9 8	0 59.48	- 0 19.8	2.079	3.002	9.3	21.2
9 18	0 55.63	- 2 31.5	1.298	2.274	8.0	20.7	9 18	0 53.51	- 1 19.7	2.042	3.014	5.8	21.0
9 28	0 47.42	- 3 54.0	1.267	2.261	4.1	20.5	9 28	0 46.43	- 2 21.4	2.031	3.027	2.7	20.8
10 8	0 38.33	- 5 11.0	1.261	2.248	5.2	20.5	10 8	0 38.98	- 3 19.0	2.050	3.039	3.3	20.9
10 18	0 29.64	- 6 13.0	1.280	2.235	9.7	20.7	10 18	0 31.96	- 4 7.3	2.096	3.051	6.5	21.1
10 28	0 22.61	- 6 52.6	1.324	2.222	14.2	20.9	10 28	0 26.10	- 4 42.0	2.170	3.063	9.7	21.3
11 7	0 18.09	- 7 6.7	1.387	2.209	18.2	21.2	11 7	0 21.93	- 5 1.0	2.267	3.074	12.5	21.6
113586	2002 <i>TT</i> ₄₆	10 4.4	70°44'	2°2'	2.4	18	507953	2015 <i>BT</i> ₁₇	10 4.4	248°86'	1°6'	5.6	17
8 29	1 6.55	+ 0 33.0	1.812	2.665	14.1								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
377311	2004 <i>GF</i> ₄₆	10	4.4	178°09'	1°0'	3.4	17						
8 29	1 9.28	+ 3 54.6	1.956	2.792	13.9	22.3	8 29	1 3.62	+ 1 28.2	1.725	2.584	14.4	21.0
9 8	1 3.95	+ 3 22.1	1.880	2.794	10.6	22.1	9 8	0 59.90	+ 0 30.3	1.655	2.583	10.9	20.7
9 18	0 56.54	+ 2 39.3	1.826	2.795	6.7	21.8	9 18	0 54.05	- 0 38.1	1.608	2.583	6.9	20.5
9 28	0 47.68	+ 1 50.2	1.799	2.796	2.6	21.6	9 28	0 46.74	- 1 50.7	1.587	2.583	3.1	20.3
10 8	0 38.26	+ 1 0.5	1.801	2.796	2.3	21.6	10 8	0 38.86	- 2 59.9	1.592	2.583	3.7	20.3
10 18	0 29.26	+ 0 16.0	1.831	2.795	6.4	21.8	10 18	0 31.41	- 3 58.3	1.625	2.583	7.7	20.6
10 28	0 21.60	- 0 18.1	1.889	2.794	10.2	22.1	10 28	0 25.34	- 4 39.9	1.683	2.583	11.6	20.8
11 7	0 15.96	- 0 38.1	1.970	2.792	13.6	22.3	11 7	0 21.32	- 5 1.9	1.763	2.584	15.0	21.0
278118	2007 <i>CX</i> ₈	10	4.4	129°23'	0°0'	4.3	16						
8 29	1 8.26	+ 7 31.6	1.832	2.663	14.9	22.1	8 29	1 3.35	+ 19 25.0	2.523	3.291	13.1	21.3
9 8	1 3.21	+ 6 58.4	1.765	2.675	11.4	21.9	9 8	0 59.21	+ 19 18.4	2.429	3.287	10.7	21.1
9 18	0 56.05	+ 6 11.5	1.720	2.686	7.4	21.7	9 18	0 53.41	+ 18 55.0	2.356	3.283	8.0	20.9
9 28	0 47.47	+ 5 14.8	1.701	2.697	2.9	21.4	9 28	0 46.45	+ 18 15.1	2.309	3.278	5.3	20.7
10 8	0 38.41	+ 4 14.2	1.710	2.708	1.6	21.3	10 8	0 39.00	+ 17 21.2	2.290	3.273	3.7	20.6
10 18	0 29.86	+ 3 16.4	1.748	2.718	6.0	21.7	10 18	0 31.79	+ 16 17.4	2.299	3.268	4.8	20.7
10 28	0 22.75	+ 2 27.7	1.813	2.727	10.0	21.9	10 28	0 25.56	+ 15 9.7	2.337	3.263	7.5	20.9
11 7	0 17.74	+ 1 52.6	1.901	2.736	13.4	22.2	11 7	0 20.89	+ 14 4.0	2.402	3.257	10.2	21.0
228434	2001 <i>QQ</i> ₄₅	10	4.4	27°07'	2°8'	2.5	18						
8 29	1 4.11	+ 1 46.6	1.069	1.955	19.3	20.2	8 29	1 14.51	+ 24 9.9	1.748	2.498	18.6	20.1
9 8	1 1.09	+ 1 2.0	1.026	1.967	14.5	19.9	9 8	1 7.84	+ 24 24.5	1.707	2.546	15.4	19.9
9 18	0 55.11	+ 0 4.3	1.002	1.981	9.1	19.7	9 18	0 58.88	+ 24 13.3	1.685	2.592	11.9	19.8
9 28	0 47.15	- 0 58.0	0.999	1.996	3.9	19.5	9 28	0 48.52	+ 23 36.2	1.686	2.638	8.5	19.7
10 8	0 38.62	- 1 54.5	1.019	2.012	4.3	19.5	10 8	0 37.94	+ 22 36.8	1.713	2.684	6.3	19.7
10 18	0 30.98	- 2 36.3	1.063	2.030	9.4	19.9	10 18	0 28.29	+ 21 22.1	1.768	2.728	6.9	19.8
10 28	0 25.46	- 2 57.1	1.129	2.048	14.2	20.2	10 28	0 20.53	+ 20 1.4	1.850	2.772	9.4	20.1
11 7	0 22.78	- 2 54.8	1.214	2.067	18.3	20.5	11 7	0 15.21	+ 18 43.4	1.957	2.814	12.2	20.3
516019	2015 <i>SH</i> ₁	10	4.4	43°73'	5°0'	9.3	18						
8 29	1 5.00	+ 19 44.4	1.782	2.571	16.9	20.7	8 29	1 7.68	+ 8 38.7	1.804	2.634	15.2	20.4
9 8	1 0.96	+ 19 57.9	1.715	2.584	13.9	20.5	9 8	1 2.78	+ 8 54.0	1.744	2.650	11.8	20.2
9 18	0 54.72	+ 19 49.5	1.668	2.598	10.5	20.3	9 18	0 55.79	+ 8 56.9	1.705	2.667	7.8	20.0
9 28	0 46.97	+ 19 19.4	1.644	2.613	7.1	20.2	9 28	0 47.38	+ 8 49.2	1.692	2.685	3.7	19.8
10 8	0 38.69	+ 18 30.5	1.645	2.627	5.0	20.1	10 8	0 38.53	+ 8 34.1	1.706	2.703	1.8	19.7
10 18	0 30.91	+ 17 28.6	1.673	2.643	6.2	20.2	10 18	0 30.22	+ 8 16.3	1.748	2.722	5.5	20.0
10 28	0 24.61	+ 16 21.6	1.727	2.658	9.3	20.4	10 28	0 23.37	+ 8 0.5	1.816	2.741	9.4	20.3
11 7	0 20.44	+ 15 17.7	1.806	2.674	12.5	20.7	11 7	0 18.62	+ 7 51.1	1.908	2.760	12.7	20.6
150646	2001 <i>DX</i> ₃₆	10	4.4	150°14'	1°4'	3.0	17						
8 29	1 8.32	+ 4 20.2	1.801	2.642	14.7	21.0	8 29	1 4.56	- 3 43.2	1.952	2.813	13.0	21.2
9 8	1 3.30	+ 3 26.3	1.733	2.651	11.1	20.8	9 8	1 0.33	- 5 12.4	1.888	2.816	9.8	21.0
9 18	0 56.14	+ 2 20.2	1.688	2.659	7.0	20.6	9 18	0 54.20	- 6 47.5	1.848	2.819	6.5	20.8
9 28	0 47.52	+ 1 7.4	1.669	2.666	2.7	20.3	9 28	0 46.77	- 8 20.8	1.835	2.822	4.4	20.7
10 8	0 38.39	- 0 5.0	1.679	2.673	2.7	20.3	10 8	0 38.87	- 9 44.0	1.851	2.824	5.6	20.7
10 18	0 29.77	- 1 9.7	1.717	2.679	6.9	20.6	10 18	0 31.39	- 10 50.4	1.894	2.827	8.7	20.9
10 28	0 22.61	- 2 0.4	1.781	2.685	10.9	20.9	10 28	0 25.17	- 11 35.2	1.962	2.828	11.9	21.1
11 7	0 17.56	- 2 33.4	1.869	2.689	14.2	21.1	11 7	0 20.81	- 11 57.2	2.053	2.830	14.7	21.3
362971	2013 <i>CM</i> ₈	10	4.4	278°64'	0°3'	4.1	18						
8 29	1 4.25	+ 6 21.0	1.904	2.744	14.1	21.0	8 29	0 56.24	+ 14 0.1	1.161	2.020	20.0	19.7
9 8	1 0.27	+ 5 47.4	1.823	2.739	10.8	20.8	9 8	0 55.11	+ 12 50.0	1.102	2.025	15.6	19.5
9 18	0 54.26	+ 5 0.8	1.765	2.734	6.9	20.5	9 18	0 51.35	+ 11 9.0	1.062	2.031	10.4	19.2
9 28	0 46.82	+ 4 5.2	1.732	2.729	2.7	20.3	9 28	0 45.73	+ 9 3.7	1.044	2.039	4.8	19.0
10 8	0 38.78	+ 3 6.0	1.727	2.724	1.8	20.2	10 8	0 39.47	+ 6 46.4	1.050	2.048	1.9	18.8
10 18	0 31.09	+ 2 9.9	1.750	2.719	6.1	20.5	10 18	0 33.82	+ 4 32.1	1.081	2.059	7.3	19.2
10 28	0 24.65	+ 1 23.0	1.799	2.713	10.1	20.7	10 28	0 29.96	+ 2 35.0	1.136	2.071	12.5	19.5
11 7	0 20.14	+ 0 49.9	1.872	2.708	13.5	20.9	11 7	0 28.60	+ 1 4.7	1.211	2.085	16.9	19.8
189547	2000 <i>RN</i> ₄₄	10	4.4	318°20'	7°1'	8.9	18						
8 29	1 7.75	+ 18 49.6	1.453	2.258	19.4	18.9	8 29	1 4.43	+ 11 48.3	1.991	2.809	14.4	21.3
9 8	1 4.10	+ 19 55.9	1.360	2.237	16.3	18.6	9 8	1 0.15	+ 10 59.4	1.926	2.826	11.1	21.1
9 18	0 57.44	+ 20 43.0	1.284	2.216	12.7	18.3	9 18	0 54.02	+ 9 53.8	1.883	2.843	7.4	20.9
9 28	0 48.33	+ 21 6.3	1.229	2.196	9.2	18.1	9 28	0 46.67	+ 8 35.5	1.867	2.859	3.4	20.7
10 8	0 37.84	+ 21 4.6	1.198	2.176	7.2	17.9	10 8	0 38.95	+ 7 10.7	1.878	2.876	1.4	20.6
10 18	0 27.43	+ 20 40.1	1.191	2.157	8.7	17.9	10 18	0 31.71	+ 5 46.6	1.919	2.892	5.2	20.9
10 28	0 18.68	+ 20 0.2	1.208	2.139	12.4	18.1	10 28	0 25.75	+ 4 30.3	1.988	2.908	9.0	21.1
11 7	0 12.78	+ 19 15.0	1.246	2.122	16.4	18.3	11 7	0 21.63	+ 3 27.3	2.081	2.923	12.2	21.4
397644	2007 <i>XW</i> ₃₆	10	4.4	274°80'	3°4'	1.4	18						
8 29	1 7.51	- 3 24.1	1.917	2.772	13.4	21.1	8 29	1 6.84	+ 17 13.0	2.259	3.040	14.0	20.1
9 8	1 2.73	- 3 56.5	1.837	2.762	10.2	20.9	9 8	1 1.97	+ 17 23.4	2.176	3.044	11.4	19.9
9 18	0 55.85	- 4 33.3	1.780	2.752	6.6	20.7	9 18	0 55.24	+ 17 17.7	2.115	3.049	8.4	19.7
9 28	0 47.45	- 5 9.4	1.749	2.741	3.7	20.5	9 28	0 47.20	+ 16 55.9	2.079	3.053	5.4	19.6
10 8	0 38.43	- 5 38.8	1.746	2.731	4.4	20.5	10 8	0 38.63	+ 16 20.5	2.071	3.057	3.6	19.5
10 18	0 29.75	- 5 56.6	1.771	2.721	7.9	20.7	10 18	0 30.38	+ 15 35.5	2.091	3.061	5.2	19.6
10 28	0 22.38	- 5 59.0	1.821	2.710	11.5	20.9	10 28	0 23.30	+ 14 46.6	2.139	3.064	8.1	19.8
11 7	0 17.01	- 5 44.7	1.894	2.700	14.7	21.1	11 7	0 18.01	+ 13 59.7	2.213	3.067	11.1	19.9
13647	Rey	10	4.4	43°41'	2°4'	2.0	18						
8 29	1 3.94	- 0 19.7	1.943	2.800	13.2	18.3	8 29	1 12.21	- 9 9.4	1.608	2.469	15.2	19.9
9 8	0 59.76	- 0 58.9	1.887	2.813	9.9	18.2	9 8	1 6.94	- 9 25.7	1.519	2.444	11.9	19.7
9 18	0 53.76	- 1 44.4	1.854	2.827	6.2	18.0	9 18	0 58					

EPHEMERIDES

10 4.4

10 4.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
18201	2733 <i>P-L</i>		10 4.4 320°36	2°2/ 2.6 18			412695	2014 <i>OQ</i> ₂₅₉		10 4.4 3°83	5°0/29.1 18		
8 29	1 4.40	+ 2 10.4	1.466	2.332	16.2	18.6	8 29	1 4.03	- 8 22.7	2.078	2.941	12.2	20.5
9 8	1 0.98	+ 1 30.2	1.390	2.321	12.3	18.4	9 8	0 59.84	- 9 20.5	2.015	2.941	9.3	20.3
9 18	0 55.04	+ 0 37.5	1.334	2.310	7.8	18.1	9 18	0 53.86	-10 19.1	1.975	2.941	6.6	20.1
9 28	0 47.23	- 0 21.9	1.302	2.299	3.3	17.8	9 28	0 46.64	-11 11.8	1.962	2.941	5.0	20.0
10 8	0 38.60	- 1 19.9	1.296	2.289	3.6	17.8	10 8	0 39.00	-11 52.7	1.976	2.942	6.1	20.1
10 18	0 30.38	- 2 8.5	1.316	2.280	8.3	18.1	10 18	0 31.75	-12 17.0	2.017	2.942	8.7	20.3
10 28	0 23.75	- 2 40.7	1.359	2.271	12.9	18.3	10 28	0 25.69	-12 22.3	2.083	2.943	11.5	20.4
11 7	0 19.54	- 2 52.6	1.424	2.263	16.9	18.5	11 7	0 21.39	-12 8.1	2.170	2.944	14.1	20.6
75466	1999 <i>XU</i> ₁₅₉		10 4.4 303°73	3°1/ 7.2 18			184194	2004 <i>PS</i> ₃₂		10 4.4 9°25	2°3/ 2.2 18		
8 29	1 3.05	+14 57.6	1.678	2.497	16.6	19.6	8 29	1 4.68	- 0 3.7	1.948	2.802	13.2	20.0
9 8	0 59.90	+14 47.1	1.580	2.475	13.4	19.3	9 8	1 0.46	- 0 36.7	1.878	2.803	10.0	19.8
9 18	0 54.36	+14 15.1	1.502	2.454	9.6	19.1	9 18	0 54.32	- 1 16.5	1.830	2.803	6.3	19.5
9 28	0 46.99	+13 22.2	1.447	2.433	5.5	18.8	9 28	0 46.85	- 1 58.4	1.809	2.805	2.9	19.3
10 8	0 38.70	+12 12.5	1.418	2.413	3.1	18.6	10 8	0 38.89	- 2 36.8	1.815	2.806	3.3	19.4
10 18	0 30.61	+10 52.9	1.416	2.392	6.2	18.7	10 18	0 31.32	- 3 6.5	1.849	2.807	6.9	19.6
10 28	0 23.88	+ 9 32.8	1.440	2.372	10.7	18.9	10 28	0 25.01	- 3 23.4	1.909	2.809	10.4	19.8
11 7	0 19.40	+ 8 21.2	1.486	2.352	14.8	19.1	11 7	0 20.57	- 3 25.2	1.992	2.811	13.5	20.0
363058	1999 <i>VH</i> ₁₅₂		10 4.4 337°81	5°1/29.2 18			450324	2004 <i>TK</i> ₂₆		10 4.4 242°64	0°8/ 5.5 18		
8 29	1 6.01	- 9 52.0	2.189	3.046	11.9	20.4	8 29	1 1.22	+12 1.0	2.378	3.191	12.5	21.3
9 8	1 1.24	-10 37.4	2.123	3.045	9.2	20.3	9 8	0 57.62	+11 3.4	2.288	3.185	9.7	21.1
9 18	0 54.70	-11 21.8	2.082	3.045	6.6	20.1	9 18	0 52.41	+ 9 49.8	2.220	3.179	6.5	20.9
9 28	0 46.96	-11 59.5	2.068	3.045	5.1	20.0	9 28	0 46.09	+ 8 23.4	2.180	3.173	2.9	20.7
10 8	0 38.80	-12 25.0	2.081	3.044	6.0	20.1	10 8	0 39.31	+ 6 49.7	2.169	3.167	1.3	20.6
10 18	0 31.03	-12 34.7	2.121	3.044	8.5	20.2	10 18	0 32.79	+ 5 15.2	2.188	3.160	4.8	20.8
10 28	0 24.45	-12 26.4	2.187	3.043	11.2	20.4	10 28	0 27.25	+ 3 46.8	2.236	3.153	8.2	21.0
11 7	0 19.61	-12 0.4	2.275	3.043	13.7	20.6	11 7	0 23.24	+ 2 30.2	2.310	3.147	11.3	21.2
25570	<i>Kesun</i>		10 4.4 74°92	3°3/ 2.1 18			43769	1988 <i>EK</i>		10 4.4 251°45	2°1/ 1.9 18		
8 29	1 11.37	- 1 47.1	1.423	2.285	16.7	18.5	8 29	1 4.27	+ 2 41.4	2.227	3.068	12.3	18.9
9 8	1 6.03	- 2 15.6	1.368	2.297	12.7	18.2	9 8	1 0.11	+ 1 26.1	2.129	3.048	9.3	18.7
9 18	0 58.07	- 2 50.4	1.335	2.308	8.1	18.0	9 18	0 54.14	- 0 1.3	2.056	3.028	5.9	18.4
9 28	0 48.33	- 3 25.1	1.325	2.320	4.0	17.8	9 28	0 46.82	- 1 35.3	2.011	3.006	2.6	18.2
10 8	0 38.06	- 3 52.6	1.342	2.332	4.5	17.9	10 8	0 38.88	- 3 9.0	1.995	2.984	3.3	18.2
10 18	0 28.53	- 4 7.2	1.386	2.343	8.7	18.2	10 18	0 31.12	- 4 35.0	2.009	2.962	6.8	18.4
10 28	0 20.91	- 4 5.1	1.453	2.355	12.9	18.4	10 28	0 24.39	- 5 46.8	2.050	2.939	10.4	18.6
11 7	0 15.91	- 3 45.2	1.542	2.367	16.5	18.7	11 7	0 19.33	- 6 40.1	2.116	2.915	13.6	18.7
407825	2012 <i>BZ</i> ₁₂		10 4.4 198°63	5°8/26.3 18			169746	2002 <i>OQ</i> ₁₉		10 4.4 27°11	1°1/ 5.5 18		
8 29	1 2.75	-12 33.5	2.512	3.370	10.5	21.4	8 29	1 3.87	+10 33.8	1.719	2.552	15.7	20.3
9 8	0 58.62	-14 1.6	2.450	3.368	8.3	21.3	9 8	1 0.15	+10 4.2	1.646	2.554	12.2	20.1
9 18	0 52.97	-15 28.3	2.413	3.366	6.4	21.1	9 18	0 54.27	+ 9 17.1	1.593	2.557	8.1	19.8
9 28	0 46.27	-16 46.9	2.404	3.363	5.8	21.1	9 28	0 46.87	+ 8 16.0	1.566	2.559	3.7	19.6
10 8	0 39.18	-17 51.4	2.422	3.360	7.0	21.2	10 8	0 38.88	+ 7 6.7	1.565	2.562	1.6	19.4
10 18	0 32.38	-18 37.1	2.468	3.356	9.0	21.3	10 18	0 31.33	+ 5 56.6	1.591	2.565	5.9	19.7
10 28	0 26.56	-19 1.9	2.539	3.353	11.2	21.4	10 28	0 25.18	+ 4 53.6	1.644	2.568	10.1	20.0
11 7	0 22.22	-19 5.5	2.631	3.349	13.2	21.6	11 7	0 21.13	+ 4 3.7	1.720	2.572	13.8	20.2
265431	2004 <i>VW</i> ₅₇		10 4.4 357°42	14°7/16.2 18			23890	<i>Quindou</i>		10 4.4 90°22	0°3/ 4.7 18		
8 29	0 58.45	-28 22.7	1.417	2.287	16.3	18.9	8 29	1 4.89	+ 8 16.6	1.867	2.701	14.6	18.9
9 8	0 56.62	-30 50.4	1.388	2.281	15.0	18.8	9 8	1 0.74	+ 7 46.3	1.793	2.704	11.2	18.7
9 18	0 52.22	-32 57.4	1.380	2.277	14.7	18.8	9 18	0 54.56	+ 7 1.7	1.742	2.708	7.3	18.5
9 28	0 46.06	-34 30.6	1.393	2.274	15.4	18.9	9 28	0 46.97	+ 6 6.5	1.716	2.711	3.0	18.2
10 8	0 39.31	-35 21.3	1.425	2.273	16.9	18.9	10 8	0 38.85	+ 5 6.2	1.717	2.715	1.5	18.1
10 18	0 33.18	-35 26.6	1.474	2.273	18.7	19.1	10 18	0 31.15	+ 4 7.2	1.747	2.719	5.8	18.4
10 28	0 28.79	-34 48.6	1.539	2.274	20.6	19.2	10 28	0 24.76	+ 3 16.2	1.803	2.722	9.8	18.7
11 7	0 26.82	-33 33.6	1.617	2.278	22.2	19.4	11 7	0 20.35	+ 2 37.9	1.883	2.726	13.2	18.9
268162	2004 <i>UF</i> ₈		10 4.4 331°82	0°2/ 4.2 17			254669	2005 <i>LO</i> ₁₉		10 4.4 324°15	4°5/25.5 18		
8 29	1 3.12	+ 4 35.0	1.549	2.408	15.8	20.5	8 29	0 57.90	-17 30.2	4.024	4.872	7.1	19.3
9 8	1 0.10	+ 4 35.6	1.454	2.380	12.3	20.2	9 8	0 54.45	-18 18.9	3.963	4.868	5.8	19.2
9 18	0 54.59	+ 4 24.7	1.380	2.353	8.0	19.9	9 18	0 50.08	-19 3.8	3.928	4.864	4.8	19.1
9 28	0 47.11	+ 4 5.2	1.329	2.326	3.2	19.6	9 28	0 45.11	-19 41.6	3.920	4.861	4.6	19.1
10 8	0 38.63	+ 3 41.8	1.304	2.301	2.0	19.4	10 8	0 39.91	-20 9.5	3.941	4.857	5.2	19.1
10 18	0 30.32	+ 3 20.2	1.304	2.277	7.1	19.7	10 18	0 34.89	-20 25.2	3.988	4.853	6.4	19.2
10 28	0 23.40	+ 3 6.8	1.328	2.254	12.0	19.9	10 28	0 30.44	-20 27.8	4.061	4.850	7.8	19.3
11 7	0 18.84	+ 3 6.2	1.375	2.232	16.3	20.1	11 7	0 26.89	-20 17.1	4.156	4.847	9.1	19.4
163208	2002 <i>EN</i> ₄₈		10 4.4 193°49	0°1/ 4.7 18			264067	2009 <i>SH</i> ₁₃₉		10 4.4 311°62	0°0/ 4.2 17		
8 29	0 56.38	+ 6 55.1	4.624	5.438	6.8	20.7	8 29	1 2.46	+ 6 59.2	2.031	2.869	13.4	21.4
9 8	0 53.18	+ 6 33.8	4.536	5.437	5.2	20.6	9 8	0 58.89	+ 6 33.2	1.941	2.855	10.3	21.2
9 18	0 49.21	+ 6 7.3	4.474	5.437	3.4	20.5	9 18	0 53.41	+ 5 54.6	1.873	2.841	6.7	20.9
9 28	0 44.73	+ 5 37.1	4.441	5.436	1.4	20.3	9 28	0 46.55	+ 5 6.6	1.830	2.827	2.7	20.7
10 8	0 40.05	+ 5 5.1	4.438	5.436	0.7	20.2	10 8	0 39.08	+ 4 14.0	1.816	2.813	1.5	20.5
10 18	0 35.50	+ 4 33.4	4.466	5.435	2.7	20.4	10 18	0 31.84	+ 3 22.6	1.829	2.800	5.7	20.8
10 28	0 31.41	+ 4 4.3	4.524	5.434	4.6	20.6	10 28	0 25.72	+ 2 38.2	1.869	2.787	9.6	21.0
11 7	0 28.05	+ 3 39.6	4.608	5.434	6.3	20.7	11 7	0 21.39	+ 2 5.7	1.933	2.774	13.0	21.2
437488	2013 <i>YF</i> ₅₈		10 4.4 337°92	2°6/ 2.7 18			281740	2008 <i>YH</i> ₂₇		10 4.4 359°82	1°7/ 3.2 18		
8 29	1 6.81	+ 0 7.3	1.274	2.148	17.6	20.9</							

EPHEMERIDES

10 4.4

10 4.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
21731	Zhuruochen	10 4.4	161°88	4°3/29.6	18		226549	2003 <i>UA</i> ₃₀₄	10 4.4	57°05	1°4/5.9	18	
8 29	1 3.54	- 2 18.8	1.845	2.708	13.5	17.7	8 29	1 5.02	+10 17.3	2.125	2.944	13.6	20.3
9 8	0 59.71	- 3 57.4	1.780	2.710	10.1	17.5	9 8	1 0.54	+10 10.4	2.060	2.959	10.5	20.1
9 18	0 53.89	- 5 44.2	1.739	2.712	6.6	17.3	9 18	0 54.29	+ 9 50.7	2.016	2.974	7.1	19.9
9 28	0 46.71	- 7 30.6	1.725	2.713	4.3	17.1	9 28	0 46.86	+ 9 20.5	1.998	2.990	3.4	19.7
10 8	0 39.03	- 9 7.4	1.739	2.715	5.6	17.2	10 8	0 39.02	+ 8 43.5	2.009	3.005	1.6	19.6
10 18	0 31.76	-10 26.8	1.780	2.716	8.9	17.4	10 18	0 31.62	+ 8 4.4	2.047	3.021	4.9	19.9
10 28	0 25.80	-11 23.2	1.847	2.717	12.3	17.6	10 28	0 25.41	+ 7 28.2	2.114	3.037	8.3	20.1
11 7	0 21.75	-11 54.8	1.935	2.718	15.2	17.8	11 7	0 20.96	+ 6 59.5	2.205	3.053	11.4	20.3
134568	1999 <i>RH</i> ₂₁₅	10 4.4	30°30	0°3/8.9	06 C		49875	1999 <i>XR</i> ₁₃₀	10 4.4	177°38	0°5/4.1	18	
8 29	0 44.58	+15 58.9	37.565	38.325	1.0	24.0	8 29	1 11.18	+ 4 37.0	1.680	2.520	15.7	19.8
9 8	0 43.89	+15 56.2	37.472	38.327	0.8	24.0	9 8	1 5.79	+ 4 25.2	1.606	2.521	12.0	19.6
9 18	0 43.13	+15 52.7	37.404	38.330	0.6	24.0	9 18	0 57.96	+ 4 2.1	1.553	2.522	7.7	19.3
9 28	0 42.32	+15 48.3	37.364	38.333	0.4	24.0	9 28	0 48.40	+ 3 31.4	1.526	2.522	3.0	19.0
10 8	0 41.48	+15 43.3	37.352	38.335	0.3	23.9	10 8	0 38.15	+ 2 58.1	1.526	2.523	2.0	19.0
10 18	0 40.66	+15 37.8	37.370	38.338	0.4	24.0	10 18	0 28.38	+ 2 28.2	1.554	2.522	6.7	19.3
10 28	0 39.88	+15 32.0	37.417	38.341	0.6	24.0	10 28	0 20.20	+ 2 7.0	1.608	2.522	11.1	19.5
11 7	0 39.18	+15 26.2	37.492	38.343	0.8	24.0	11 7	0 14.38	+ 1 58.6	1.685	2.521	14.8	19.8
477486	2010 <i>BL</i> ₅₁	10 4.4	178°05	8°9/25.9	18		212660	2006 <i>US</i> ₁₉₅	10 4.4	65°48	0°1/4.6	18	
8 29	1 8.65	-18 19.1	1.829	2.688	13.8	20.8	8 29	1 3.84	+ 8 24.4	1.843	2.679	14.6	20.7
9 8	1 3.62	-19 36.4	1.778	2.688	11.3	20.7	9 8	0 59.93	+ 7 43.8	1.774	2.686	11.2	20.5
9 18	0 56.39	-20 45.8	1.749	2.688	9.5	20.6	9 18	0 54.04	+ 6 48.5	1.727	2.694	7.3	20.3
9 28	0 47.69	-21 38.4	1.745	2.688	9.0	20.6	9 28	0 46.79	+ 5 42.5	1.706	2.702	2.9	20.0
10 8	0 38.51	-22 7.0	1.766	2.688	10.1	20.6	10 8	0 39.06	+ 4 32.0	1.712	2.710	1.5	19.9
10 18	0 29.89	-22 8.0	1.812	2.688	12.3	20.8	10 18	0 31.77	+ 3 24.1	1.747	2.718	5.9	20.2
10 28	0 22.81	-21 41.0	1.880	2.688	14.8	20.9	10 28	0 25.81	+ 2 25.6	1.808	2.726	9.8	20.5
11 7	0 17.89	-20 49.0	1.967	2.688	17.0	21.1	11 7	0 21.79	+ 1 41.3	1.893	2.734	13.2	20.7
34244	2000 <i>QF</i> ₁₀₁	10 4.4	16°21	4°0/30.8	18		208091	1999 <i>XM</i> ₁₆₂	10 4.4	307°72	6°9/29.4	18	
8 29	1 4.98	- 4 13.7	1.768	2.633	13.9	17.9	8 29	1 10.28	-11 14.6	1.586	2.452	15.1	19.9
9 8	1 0.84	- 4 58.5	1.705	2.635	10.5	17.7	9 8	1 5.52	-11 54.0	1.501	2.427	12.0	19.6
9 18	0 54.63	- 5 47.3	1.666	2.638	6.9	17.5	9 18	0 58.05	-12 31.7	1.438	2.402	8.8	19.4
9 28	0 47.00	- 6 33.7	1.651	2.641	4.2	17.4	9 28	0 48.53	-12 59.6	1.400	2.377	7.0	19.2
10 8	0 38.88	- 7 11.1	1.664	2.645	5.1	17.4	10 8	0 38.05	-13 9.7	1.387	2.352	8.1	19.2
10 18	0 31.23	- 7 34.3	1.703	2.649	8.4	17.7	10 18	0 27.88	-12 56.5	1.399	2.328	11.4	19.4
10 28	0 24.98	- 7 39.7	1.766	2.654	11.9	17.9	10 28	0 19.31	-12 17.9	1.434	2.304	15.2	19.5
11 7	0 20.76	- 7 26.5	1.852	2.658	14.9	18.1	11 7	0 13.26	-11 15.1	1.490	2.281	18.6	19.7
161078	2002 <i>LE</i> ₅₇	10 4.4	12°40	6°4/12.2	18		225160	2008 <i>GL</i> ₉₆	10 4.4	11°91	2°4/2.4	18	
8 29	1 2.64	+26 19.2	2.159	2.899	15.8	19.1	8 29	1 1.06	+ 4 19.5	1.156	2.036	18.6	19.3
9 8	0 59.05	+26 34.8	2.074	2.901	13.5	19.0	9 8	0 58.82	+ 3 8.3	1.099	2.038	14.0	19.1
9 18	0 53.51	+26 28.0	2.008	2.902	10.9	18.8	9 18	0 53.78	+ 1 38.5	1.062	2.041	8.8	18.8
9 28	0 46.59	+25 57.5	1.965	2.905	8.3	18.7	9 28	0 46.79	+ 0 0.9	1.047	2.045	3.6	18.5
10 8	0 39.10	+25 4.7	1.947	2.907	6.6	18.6	10 8	0 39.08	+ 1 37.8	1.056	2.050	4.1	18.6
10 18	0 31.92	+23 53.8	1.955	2.910	6.8	18.6	10 18	0 32.02	+ 3 0.1	1.090	2.056	9.3	18.9
10 28	0 25.96	+22 32.0	1.990	2.913	8.7	18.7	10 28	0 26.85	+ 3 58.8	1.145	2.063	14.3	19.2
11 7	0 21.85	+21 7.3	2.050	2.917	11.3	18.9	11 7	0 24.35	+ 4 29.5	1.220	2.070	18.4	19.5
421705	2014 <i>PF</i> ₁₅	10 4.4	59°97	0°8/3.5	18		404057	2012 <i>DO</i> ₂₃	10 4.4	174°15	2°5/30.9	18	
8 29	1 4.05	+ 4 31.7	2.053	2.895	13.1	21.3	8 29	1 1.64	- 0 47.4	2.616	3.463	10.5	20.8
9 8	0 59.78	+ 3 56.1	1.995	2.912	9.9	21.2	9 8	0 57.72	- 1 56.4	2.542	3.465	7.8	20.6
9 18	0 53.77	+ 3 10.9	1.960	2.930	6.2	21.0	9 18	0 52.39	- 3 11.5	2.494	3.466	5.0	20.4
9 28	0 46.62	+ 2 20.2	1.951	2.948	2.4	20.8	9 28	0 46.10	- 4 27.8	2.475	3.467	2.7	20.3
10 8	0 39.13	+ 1 29.4	1.970	2.965	2.0	20.8	10 8	0 39.45	- 5 39.6	2.484	3.468	3.5	20.3
10 18	0 32.10	+ 0 43.9	2.017	2.983	5.7	21.1	10 18	0 33.08	- 6 42.0	2.524	3.468	6.2	20.5
10 28	0 26.29	+ 0 8.3	2.092	3.001	9.2	21.3	10 28	0 27.60	- 7 30.9	2.591	3.468	8.9	20.7
11 7	0 22.22	- 0 14.4	2.190	3.019	12.1	21.5	11 7	0 23.49	- 8 4.0	2.681	3.468	11.3	20.8
174234	2002 <i>RD</i> ₈₄	10 4.4	12°50	0°1/4.3	18		187268	2005 <i>TH</i> ₃₂	10 4.4	60°38	1°4/3.3	18	
8 29	1 1.17	+ 7 52.6	1.397	2.256	17.2	19.2	8 29	1 7.56	+ 4 16.8	1.367	2.226	17.5	20.5
9 8	0 58.49	+ 7 11.1	1.334	2.259	13.2	19.0	9 8	1 3.22	+ 3 34.9	1.315	2.242	13.2	20.3
9 18	0 53.38	+ 6 11.4	1.291	2.263	8.5	18.7	9 18	0 56.32	+ 2 39.3	1.285	2.259	8.3	20.1
9 28	0 46.57	+ 4 58.6	1.271	2.269	3.4	18.4	9 28	0 47.71	+ 1 36.2	1.278	2.275	3.2	19.8
10 8	0 39.14	+ 3 41.2	1.277	2.275	2.0	18.4	10 8	0 38.60	+ 0 34.3	1.296	2.292	2.9	19.9
10 18	0 32.25	+ 2 28.4	1.308	2.282	7.1	18.7	10 18	0 30.24	+ 0 18.5	1.341	2.309	7.8	20.2
10 28	0 26.98	+ 1 28.8	1.364	2.289	11.8	19.0	10 28	0 23.73	+ 0 55.5	1.410	2.326	12.3	20.5
11 7	0 24.05	+ 0 48.1	1.441	2.298	15.7	19.3	11 7	0 19.74	+ 1 13.2	1.501	2.343	16.0	20.8
516624	2008 <i>BC</i> ₃₈	10 4.4	293°39	6°6/26.5	18		347118	2010 <i>JS</i> ₈₂	10 4.4	146°44	6°1/27.9	18	
8 29	1 1.87	- 9 1.4	1.857	2.730	13.0	21.0	8 29	1 9.05	-13 27.2	2.287	3.137	11.7	21.4
9 8	0 58.63	-10 53.3	1.781	2.711	10.1	20.8	9 8	1 3.42	-14 28.2	2.234	3.147	9.2	21.2
9 18	0 53.35	-12 49.7	1.729	2.692	7.6	20.6	9 18	0 56.04	-15 25.5	2.205	3.156	7.0	21.1
9 28	0 46.57	-14 40.8	1.703	2.674	6.7	20.5	9 28	0 47.54	-16 12.8	2.203	3.165	6.1	21.1
10 8	0 39.12	-16 16.5	1.704	2.655	8.3	20.6	10 8	0 38.70	-16 44.6	2.230	3.174	7.1	21.2
10 18	0 31.94	-17 29.0	1.731	2.636	11.2	20.7	10 18	0 30.33	-16 57.5	2.283	3.181	9.2	21.3
10 28	0 25.98	-18 13.2	1.781	2.618	14.3	20.9	10 28	0 23.20	-16 50.2	2.362	3.188	11.5	21.5
11 7	0 21.95	-18 28.5	1.851	2.600	17.0	21.0	11 7	0 17.84	-16 23.8	2.462	3.195	13.7	21.7
280939	2006 <i>BB</i> ₈₉	10 4.4	68°15	3°5/1.4	18		363461	2003 <i>SN</i> ₂₃₈	10 4.4	35°73	1°8/6.2	18	
8 29	1 6.37	-											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
104543	2000 GX ₅₈	10	4.4 157°53	0°3/ 4.1 18			421990	2014 QH ₃₀₇	10	4.4 301°36	0°5/ 3.9 18		
8 29	1 8.86	+ 6 2.9	1.871	2.704	14.6	21.1	8 29	1 5.23	+ 3 46.3	2.290	3.125	12.2	20.4
9 8	1 3.75	+ 5 34.0	1.798	2.710	11.1	20.9	9 8	1 0.75	+ 3 36.7	2.202	3.116	9.3	20.2
9 18	0 56.51	+ 4 52.8	1.748	2.715	7.2	20.7	9 18	0 54.51	+ 3 19.3	2.138	3.107	6.0	20.0
9 28	0 47.80	+ 4 3.2	1.723	2.720	2.8	20.4	9 28	0 47.02	+ 2 56.8	2.101	3.098	2.3	19.7
10 8	0 38.54	+ 3 10.7	1.727	2.724	1.8	20.4	10 8	0 39.00	+ 2 32.9	2.092	3.089	1.7	19.7
10 18	0 29.73	+ 2 21.5	1.759	2.727	6.1	20.7	10 18	0 31.23	+ 2 11.6	2.112	3.080	5.4	19.9
10 28	0 22.32	+ 1 41.4	1.819	2.731	10.1	20.9	10 28	0 24.50	+ 1 56.9	2.160	3.071	8.8	20.1
11 7	0 16.99	+ 1 14.7	1.902	2.733	13.6	21.2	11 7	0 19.42	+ 1 51.6	2.233	3.062	11.9	20.3
35140	1992 RQ ₇	10	4.4 32°60	2°3/ 2.6 18			266735	2009 SH ₃	10	4.4 354°03	2°6/ 6.8 17		
8 29	1 5.24	+ 2 14.9	1.382	2.249	16.9	18.6	8 29	1 2.97	+ 12 53.0	1.783	2.607	15.6	20.7
9 8	1 1.54	+ 1 29.4	1.325	2.257	12.7	18.3	9 8	0 59.54	+ 12 57.4	1.704	2.603	12.4	20.5
9 18	0 55.31	+ 0 31.8	1.288	2.264	8.0	18.1	9 18	0 53.97	+ 12 45.0	1.644	2.599	8.7	20.2
9 28	0 47.35	+ 0 31.1	1.276	2.273	3.4	17.8	9 28	0 46.86	+ 12 17.0	1.609	2.597	4.8	20.0
10 8	0 38.80	+ 1 30.7	1.288	2.281	3.7	17.9	10 8	0 39.09	+ 11 37.0	1.600	2.595	2.7	19.9
10 18	0 30.89	+ 2 18.9	1.327	2.291	8.3	18.2	10 18	0 31.67	+ 10 50.5	1.618	2.593	5.7	20.1
10 28	0 24.72	+ 2 49.7	1.389	2.300	12.7	18.5	10 28	0 25.58	+ 10 4.3	1.661	2.593	9.6	20.3
11 7	0 21.01	+ 2 59.9	1.472	2.311	16.5	18.7	11 7	0 21.52	+ 9 24.7	1.729	2.593	13.2	20.5
189306	2005 XO ₂₉	10	4.4 213°04	6°6/13.5 18			199136	2005 YU ₁₀₇	10	4.5 92°10	1°2/ 3.4 17		
8 29	1 4.87	+ 29 58.5	2.728	3.420	13.8	20.2	8 29	1 7.13	+ 4 35.5	1.695	2.541	15.2	21.3
9 8	1 0.46	+ 30 18.6	2.629	3.415	12.1	20.1	9 8	1 2.51	+ 3 50.7	1.635	2.555	11.5	21.1
9 18	0 54.32	+ 30 19.1	2.550	3.411	10.1	19.9	9 18	0 55.72	+ 2 53.8	1.598	2.569	7.3	20.9
9 28	0 46.93	+ 29 58.3	2.493	3.406	8.1	19.8	9 28	0 47.49	+ 1 50.1	1.586	2.583	2.8	20.7
10 8	0 38.99	+ 29 16.6	2.462	3.401	6.8	19.7	10 8	0 38.80	+ 0 46.6	1.602	2.597	2.5	20.7
10 18	0 31.27	+ 28 16.5	2.458	3.395	6.7	19.7	10 18	0 30.69	+ 0 9.5	1.645	2.610	6.8	21.0
10 28	0 24.55	+ 27 3.2	2.482	3.390	8.0	19.8	10 28	0 24.09	+ 0 52.4	1.714	2.624	10.8	21.2
11 7	0 19.44	+ 25 43.5	2.532	3.384	9.9	19.9	11 7	0 19.64	+ 1 18.4	1.806	2.637	14.2	21.5
54273	2000 JC ₄₁	10	4.4 182°06	0°2/ 4.2 18			292374	2006 SU ₂₅₆	10	4.5 337°77	1°3/ 5.6 18		
8 29	1 7.70	+ 6 45.2	1.916	2.748	14.3	20.1	8 29	1 3.18	+ 10 28.1	1.728	2.562	15.5	21.1
9 8	1 2.88	+ 6 9.6	1.838	2.749	11.0	19.9	9 8	0 59.75	+ 10 8.4	1.647	2.556	12.2	20.9
9 18	0 55.97	+ 5 20.9	1.782	2.749	7.1	19.7	9 18	0 54.13	+ 9 31.8	1.588	2.551	8.2	20.6
9 28	0 47.60	+ 4 22.8	1.753	2.749	2.8	19.4	9 28	0 46.94	+ 8 40.9	1.553	2.546	3.8	20.3
10 8	0 38.65	+ 3 21.2	1.752	2.749	1.7	19.3	10 8	0 39.08	+ 7 41.0	1.544	2.541	1.7	20.2
10 18	0 30.10	+ 2 22.4	1.779	2.747	6.1	19.6	10 18	0 31.57	+ 6 39.0	1.562	2.537	5.9	20.5
10 28	0 22.87	+ 1 33.0	1.834	2.746	10.1	19.9	10 28	0 25.42	+ 5 42.4	1.607	2.534	10.2	20.7
11 7	0 17.65	+ 0 57.3	1.912	2.743	13.5	20.1	11 7	0 21.36	+ 4 57.5	1.674	2.530	13.9	20.9
238186	2003 SW ₂₆₇	10	4.4 33°17	0°0/ 4.2 18			86364	1999 XC ₁₉₄	10	4.5 192°78	1°0/ 3.3 18		
8 29	1 4.36	+ 7 48.1	1.629	2.474	15.8	20.8	8 29	1 4.97	+ 2 45.2	2.553	3.386	11.1	18.9
9 8	1 0.62	+ 7 11.5	1.560	2.478	12.2	20.6	9 8	1 0.30	+ 2 22.6	2.472	3.385	8.4	18.7
9 18	0 54.65	+ 6 18.9	1.512	2.481	7.9	20.3	9 18	0 54.10	+ 1 53.2	2.415	3.384	5.3	18.5
9 28	0 47.10	+ 5 14.8	1.489	2.485	3.1	20.1	9 28	0 46.83	+ 1 19.9	2.386	3.383	2.1	18.3
10 8	0 38.96	+ 4 6.1	1.492	2.489	1.7	20.0	10 8	0 39.15	+ 0 46.7	2.386	3.381	1.9	18.3
10 18	0 31.30	+ 3 0.4	1.522	2.494	6.5	20.3	10 18	0 31.75	+ 0 17.5	2.416	3.379	5.1	18.5
10 28	0 25.12	+ 2 5.2	1.578	2.498	10.8	20.6	10 28	0 25.30	+ 0 4.2	2.474	3.377	8.2	18.7
11 7	0 21.11	+ 1 25.9	1.657	2.503	14.5	20.8	11 7	0 20.33	+ 0 15.8	2.557	3.375	10.9	18.9
320131	2007 EL ₁₉₆	10	4.4 161°57	0°7/ 3.7 18			417689	2007 BQ ₃₄	10	4.5 256°72	3°0/ 29.4 16		
8 29	1 6.39	+ 3 7.6	2.450	3.281	11.6	20.6	8 29	0 59.78	+ 6 50.5	3.516	4.365	8.0	22.1
9 8	1 1.42	+ 2 54.7	2.372	3.284	8.8	20.5	9 8	0 56.05	+ 7 39.9	3.429	4.350	6.1	21.9
9 18	0 54.81	+ 2 34.9	2.317	3.286	5.6	20.3	9 18	0 51.23	+ 8 30.7	3.369	4.335	4.2	21.8
9 28	0 47.10	+ 2 11.0	2.291	3.287	2.2	20.0	9 28	0 45.67	+ 9 19.4	3.337	4.319	3.0	21.7
10 8	0 38.96	+ 1 46.7	2.293	3.289	1.7	20.0	10 8	0 39.79	+ 10 2.4	3.336	4.303	3.7	21.7
10 18	0 31.14	+ 1 25.5	2.325	3.290	5.1	20.2	10 18	0 34.06	+ 10 36.6	3.363	4.288	5.6	21.8
10 28	0 24.34	+ 1 11.1	2.385	3.292	8.3	20.5	10 28	0 28.95	+ 10 59.5	3.418	4.272	7.6	22.0
11 7	0 19.11	+ 1 5.9	2.471	3.293	11.1	20.6	11 7	0 24.85	+ 11 10.0	3.497	4.255	9.5	22.1
232884	2004 VU ₈₆	10	4.4 222°51	3°3/ 7.6 18			68521	2001 VA ₂₅	10	4.5 103°44	0°2/ 4.7 18		
8 29	1 7.11	+ 15 52.2	1.990	2.785	15.2	20.6	8 29	1 5.11	+ 7 19.8	2.052	2.883	13.5	20.1
9 8	1 2.55	+ 15 51.9	1.900	2.780	12.3	20.3	9 8	1 0.79	+ 6 58.8	1.975	2.884	10.4	19.9
9 18	0 55.85	+ 15 33.6	1.831	2.774	8.9	20.1	9 18	0 54.59	+ 6 25.8	1.920	2.886	6.8	19.7
9 28	0 47.60	+ 14 57.7	1.787	2.767	5.3	19.9	9 28	0 47.07	+ 5 44.0	1.891	2.887	2.8	19.5
10 8	0 38.66	+ 14 7.4	1.769	2.760	3.3	19.8	10 8	0 39.04	+ 4 57.9	1.891	2.888	1.4	19.4
10 18	0 30.01	+ 13 7.9	1.780	2.753	5.6	19.9	10 18	0 31.37	+ 4 12.8	1.918	2.889	5.4	19.7
10 28	0 22.63	+ 12 6.2	1.819	2.746	9.2	20.1	10 28	0 24.89	+ 3 34.2	1.973	2.890	9.2	19.9
11 7	0 17.26	+ 11 9.5	1.882	2.738	12.6	20.3	11 7	0 20.23	+ 3 6.3	2.053	2.892	12.4	20.1
324358	2006 QB ₁₀₀	10	4.4 47°72	0°3/ 4.7 17			43611	2002 AV ₁₂₈	10	4.5 123°07	2°6/ 1.6 18		
8 29	1 4.77	+ 9 55.8	1.207	2.064	19.5	20.5	8 29	1 6.43	+ 2 54.0	2.512	3.355	11.0	19.8
9 8	1 1.49	+ 9 5.9	1.153	2.076	15.0	20.2	9 8	1 1.31	+ 3 26.2	2.448	3.367	8.2	19.7
9 18	0 55.41	+ 7 53.0	1.119	2.089	9.8	20.0	9 18	0 54.67	+ 4 1.5	2.409	3.378	5.3	19.5
9 28	0 47.42	+ 6 23.4	1.106	2.103	4.0	19.7	9 28	0 47.04	+ 4 35.9	2.398	3.390	2.9	19.3
10 8	0 38.82	+ 4 47.4	1.119	2.116	1.9	19.6	10 8	0 39.09	+ 5 5.2	2.416	3.400	3.4	19.4
10 18	0 30.97	+ 3 16.5	1.156	2.131	7.6	20.0	10 18	0 31.51	+ 5 25.8	2.463	3.411	6.1	19.6
10 28	0 25.10	+ 2 1.4	1.218	2.145	12.6	20.3	10 28	0 24.97	+ 5 35.0	2.538	3.421	8.9	19.8
11 7	0 21.93	+ 1 8.4	1.300	2.160	16.9	20.6	11 7	0 19.97	+ 5 31.6	2.637	3.431	11.3	20.0
455131	2015 VP ₉₄	10	4.4 258°85	2°8/ 7.7 18			401765	2013 LM ₁₈	10	4.5 36°67	4°0/ 29.9 18		
8 29	1 2.87	+ 16 3.9	2.340	3.132	13.3	21.0	8 29	1 1.99					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
18042	1999 <i>RF</i> ₂₇	10 4.5 142°72	2°7/ 1.3 18	R			203665	2002 <i>JZ</i> ₇₃	10 4.5 36°09	12°1/25.0 18			
8 29	1 6.67	- 1 1.7	2.297	3.141	11.9	18.4	8 29	1 7.85	-21 31.5	1.323	2.197	17.1	18.9
9 8	1 1.63	- 2 3.7	2.234	3.154	8.9	18.2	9 8	1 3.49	-23 9.0	1.301	2.214	14.4	18.8
9 18	0 54.94	- 3 11.6	2.195	3.166	5.7	18.1	9 18	0 56.47	-24 30.2	1.299	2.232	12.5	18.8
9 28	0 47.16	- 4 20.0	2.184	3.177	3.0	17.9	9 28	0 47.80	-25 23.5	1.318	2.251	12.2	18.8
10 8	0 39.02	- 5 22.8	2.203	3.188	3.7	18.0	10 8	0 38.82	-25 41.5	1.360	2.271	13.4	18.9
10 18	0 31.30	- 6 15.0	2.251	3.198	6.7	18.2	10 18	0 30.82	-25 22.3	1.423	2.291	15.5	19.1
10 28	0 24.70	- 6 52.5	2.327	3.207	9.7	18.4	10 28	0 24.85	-24 28.9	1.505	2.312	17.8	19.3
11 7	0 19.77	- 7 13.5	2.426	3.215	12.3	18.6	11 7	0 21.49	-23 7.5	1.604	2.334	19.9	19.6
364956	2008 <i>GN</i> ₈₂	10 4.5 93°25	3°1/ 1.3 18				25887	2000 <i>SU</i> ₃₀₈	10 4.5 97°96	2°1/ 6.6 18	R		
8 29	1 8.43	- 4 27.9	2.275	3.122	11.9	21.1	8 29	1 10.29	+11 47.7	2.282	3.080	13.4	19.2
9 8	1 2.90	- 4 56.6	2.220	3.140	8.9	20.9	9 8	1 4.45	+12 1.9	2.214	3.099	10.5	19.1
9 18	0 55.70	- 5 27.4	2.189	3.157	5.8	20.8	9 18	0 56.80	+12 3.9	2.169	3.118	7.3	18.9
9 28	0 47.44	- 5 55.7	2.185	3.175	3.4	20.6	9 28	0 47.94	+11 54.6	2.150	3.136	3.9	18.7
10 8	0 38.89	- 6 17.1	2.210	3.192	4.0	20.7	10 8	0 38.68	+11 36.5	2.160	3.154	2.2	18.6
10 18	0 30.82	- 6 28.2	2.265	3.210	6.7	20.9	10 18	0 29.86	+11 13.3	2.200	3.172	4.8	18.8
10 28	0 23.95	- 6 26.7	2.346	3.226	9.6	21.1	10 28	0 22.27	+10 49.4	2.269	3.189	8.0	19.1
11 7	0 18.80	- 6 11.9	2.451	3.243	12.1	21.3	11 7	0 16.48	+10 29.2	2.363	3.206	10.8	19.3
115348	2003 <i>SW</i> ₂₃₃	10 4.5 331°16	1°0/ 5.1 17				360492	2002 <i>VF</i> ₁₀₂	10 4.5 313°02	1°2/ 5.4 18			
8 29	1 9.50	+ 5 53.0	1.831	2.665	14.8	18.8	8 29	1 4.94	+ 8 49.6	1.644	2.484	16.0	20.5
9 8	1 4.59	+ 6 25.7	1.739	2.649	11.6	18.5	9 8	1 1.43	+ 8 48.1	1.548	2.461	12.6	20.3
9 18	0 57.33	+ 6 50.3	1.670	2.634	7.7	18.3	9 18	0 55.48	+ 8 31.6	1.473	2.438	8.5	20.0
9 28	0 48.28	+ 7 7.5	1.626	2.620	3.4	18.0	9 28	0 47.62	+ 8 1.6	1.421	2.415	3.9	19.6
10 8	0 38.38	+ 7 19.4	1.609	2.606	1.7	17.8	10 8	0 38.79	+ 7 22.5	1.395	2.393	1.8	19.4
10 18	0 28.71	+ 7 29.1	1.620	2.593	6.0	18.1	10 18	0 30.13	+ 6 40.2	1.396	2.371	6.5	19.7
10 28	0 20.38	+ 7 40.2	1.658	2.581	10.2	18.3	10 28	0 22.83	+ 6 1.9	1.422	2.350	11.2	19.9
11 7	0 14.23	+ 7 56.5	1.720	2.569	14.0	18.5	11 7	0 17.83	+ 5 34.0	1.471	2.329	15.4	20.1
149196	2002 <i>PR</i> ₂₄	10 4.5 94°94	3°0/ 1.8 18				390934	2005 <i>GP</i> ₅₂	10 4.5 75°52	1°4/ 5.9 18			
8 29	1 7.48	+ 1 25.8	1.473	2.335	16.3	20.6	8 29	1 4.68	+12 19.2	1.864	2.684	15.2	21.0
9 8	1 3.06	+ 0 14.1	1.419	2.348	12.3	20.3	9 8	1 0.54	+11 42.4	1.801	2.700	11.8	20.9
9 18	0 56.21	- 1 9.0	1.387	2.362	7.7	20.1	9 18	0 54.44	+10 48.1	1.758	2.717	7.9	20.7
9 28	0 47.74	- 2 35.4	1.379	2.375	3.6	19.9	9 28	0 47.03	+ 9 39.9	1.742	2.733	3.8	20.4
10 8	0 38.77	- 3 55.4	1.398	2.387	4.4	20.0	10 8	0 39.20	+ 8 23.7	1.752	2.749	1.7	20.3
10 18	0 30.46	- 5 0.5	1.444	2.400	8.6	20.3	10 18	0 31.87	+ 7 6.6	1.791	2.766	5.4	20.6
10 28	0 23.87	- 5 44.7	1.514	2.412	12.7	20.6	10 28	0 25.90	+ 5 56.1	1.858	2.782	9.2	20.9
11 7	0 19.67	- 6 5.6	1.605	2.424	16.2	20.8	11 7	0 21.88	+ 4 57.9	1.948	2.798	12.5	21.1
18020	Amend	10 4.5 29°77	0°7/ 5.2 18				405511	2005 <i>BO</i> ₄₉	10 4.5 120°94	13°0/ 12.9 17			
8 29	1 4.19	+ 8 55.0	1.886	2.719	14.5	18.7	8 29	1 18.49	+29 14.8	1.274	2.021	24.4	20.8
9 8	1 0.25	+ 8 33.3	1.813	2.722	11.2	18.5	9 8	1 13.02	+31 11.9	1.207	2.027	21.5	20.6
9 18	0 54.31	+ 7 57.6	1.761	2.726	7.4	18.2	9 18	1 3.62	+32 39.6	1.155	2.033	18.3	20.4
9 28	0 46.99	+ 7 10.7	1.735	2.729	3.2	18.0	9 28	0 51.05	+33 28.1	1.121	2.039	15.3	20.2
10 8	0 39.14	+ 6 17.9	1.735	2.733	1.4	17.9	10 8	0 36.92	+33 31.8	1.107	2.044	13.3	20.1
10 18	0 31.69	+ 5 25.0	1.764	2.737	5.6	18.2	10 18	0 23.31	+32 52.4	1.116	2.049	13.3	20.2
10 28	0 25.52	+ 4 38.4	1.820	2.742	9.5	18.4	10 28	0 12.24	+31 40.5	1.147	2.054	15.2	20.3
11 7	0 21.28	+ 4 3.1	1.899	2.746	12.9	18.6	11 7	0 5.04	+30 12.1	1.198	2.059	18.0	20.5
447332	2005 <i>YM</i> ₂₈	10 4.5 358°77	3°7/ 1.1 18				487458	2014 <i>SP</i> ₉₀	10 4.5 190°13	1°3/ 5.9 18			
8 29	1 2.72	- 2 44.0	1.699	2.568	14.1	20.4	8 29	1 5.16	+10 10.0	2.534	3.343	11.9	21.5
9 8	0 59.30	- 3 31.7	1.633	2.566	10.7	20.2	9 8	1 0.54	+10 8.9	2.449	3.343	9.3	21.3
9 18	0 53.78	- 4 25.3	1.589	2.564	6.9	20.0	9 18	0 54.33	+ 9 57.2	2.387	3.343	6.3	21.1
9 28	0 46.80	- 5 18.4	1.571	2.563	4.0	19.8	9 28	0 47.00	+ 9 36.2	2.352	3.342	3.1	20.9
10 8	0 39.26	- 6 3.9	1.579	2.563	4.9	19.8	10 8	0 39.22	+ 9 8.8	2.345	3.342	1.5	20.8
10 18	0 32.16	- 6 35.6	1.613	2.564	8.4	20.1	10 18	0 31.70	+ 8 38.5	2.368	3.341	4.4	21.0
10 28	0 26.43	- 6 49.4	1.671	2.565	12.0	20.3	10 28	0 25.14	+ 8 9.6	2.420	3.341	7.5	21.2
11 7	0 22.74	- 6 43.7	1.751	2.567	15.2	20.5	11 7	0 20.10	+ 7 46.0	2.498	3.340	10.4	21.4
246560	2008 <i>SA</i> ₁₅₈	10 4.5 337°52	0°2/ 4.8 18				253659	2003 <i>UA</i> ₁₆₄	10 4.5 355°82	4°8/ 1.3 18			
8 29	0 56.77	+ 7 23.8	3.987	4.804	7.8	20.3	8 29	1 3.17	- 2 3.2	1.009	1.905	19.3	19.1
9 8	0 53.66	+ 6 57.4	3.899	4.801	5.9	20.1	9 8	1 0.90	- 2 52.4	0.953	1.900	14.7	18.8
9 18	0 49.66	+ 6 24.4	3.835	4.798	3.8	20.0	9 18	0 55.43	- 3 51.8	0.915	1.896	9.6	18.5
9 28	0 45.06	+ 5 46.7	3.800	4.795	1.6	19.8	9 28	0 47.62	- 4 51.6	0.898	1.893	5.3	18.3
10 8	0 40.22	+ 5 6.9	3.795	4.793	0.8	19.7	10 8	0 38.90	- 5 40.4	0.903	1.892	6.4	18.4
10 18	0 35.52	+ 4 27.4	3.820	4.790	3.1	19.9	10 18	0 30.87	- 6 8.6	0.930	1.892	11.3	18.6
10 28	0 31.34	+ 3 51.1	3.875	4.787	5.2	20.1	10 28	0 25.01	- 6 10.3	0.978	1.893	16.3	18.9
11 7	0 28.02	+ 3 20.2	3.956	4.785	7.2	20.2	11 7	0 22.22	- 5 44.8	1.043	1.896	20.7	19.2
441770	2009 <i>DQ</i> ₃	10 4.5 2°89	2°1/ 6.3 18				259927	2004 <i>EL</i> ₃₆	10 4.5 170°00	0°8/ 5.2 18			
8 29	1 7.08	+11 26.8	1.827	2.647	15.4	21.2	8 29	1 8.75	+ 9 27.9	1.888	2.709	14.9	21.5
9 8	1 2.60	+11 30.9	1.748	2.647	12.2	21.0	9 8	1 3.75	+ 9 2.0	1.810	2.713	11.6	21.3
9 18	0 55.93	+11 19.7	1.691	2.647	8.4	20.7	9 18	0 56.61	+ 8 21.1	1.754	2.716	7.7	21.0
9 28	0 47.68	+10 54.6	1.658	2.647	4.3	20.5	9 28	0 47.96	+ 7 28.2	1.725	2.719	3.4	20.8
10 8	0 38.78	+10 19.2	1.651	2.647	2.2	20.4	10 8	0 38.73	+ 6 28.4	1.723	2.720	1.5	20.7
10 18	0 30.25	+ 9 38.8	1.673	2.647	5.7	20.6	10 18	0 29.90	+ 5 28.2	1.750	2.722	5.8	20.9
10 28	0 23.11	+ 8 59.6	1.721	2.648	9.6	20.8	10 28	0 22.46	+ 4 34.4	1.804	2.722	9.8	21.2
11 7	0 18.07	+ 8 27.6	1.794	2.648	13.2	21.1	11 7	0 17.09	+ 3 52.4	1.883	2.723	13.3	21.4
361771	2008 <i>AV</i> ₂₇	10 4.5 291°41	4°3/29.9 18				180434	2004 <i>BV</i> ₁₀₁	10 4.5 92°23	2°8/ 1.9 17			
8 29	1 3.54	- 3 20.9	1.914										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
251675	1995 <i>SL</i> ₂₃		10 4.5 44°30	1.1°/ 3.5 18			478823	2012 <i>VO</i> ₂₃		10 4.5 1°31	0.8°/ 3.9 18		
8 29	1 9.57	+ 1 28.4	2.026	2.865	13.4	21.4	8 29	1 5.16	+ 4 9.3	1.294	2.162	17.8	20.8
9 8	1 4.19	+ 1 27.2	1.951	2.867	10.2	21.2	9 8	1 1.84	+ 3 56.8	1.229	2.160	13.6	20.5
9 18	0 56.80	+ 1 19.7	1.899	2.868	6.5	21.0	9 18	0 55.78	+ 3 31.0	1.184	2.159	8.7	20.2
9 28	0 48.02	+ 1 8.9	1.874	2.870	2.6	20.7	9 28	0 47.73	+ 2 56.4	1.161	2.159	3.4	19.9
10 8	0 38.71	+ 0 58.8	1.877	2.872	2.2	20.7	10 8	0 38.91	+ 2 19.7	1.163	2.160	2.5	19.9
10 18	0 29.80	+ 0 53.1	1.909	2.874	6.1	21.0	10 18	0 30.63	+ 1 48.4	1.189	2.162	7.8	20.2
10 28	0 22.18	+ 0 55.1	1.968	2.876	9.7	21.2	10 28	0 24.18	+ 1 29.1	1.240	2.165	12.7	20.5
11 7	0 16.51	+ 1 7.2	2.052	2.878	12.9	21.4	11 7	0 20.37	+ 1 26.1	1.310	2.169	16.9	20.8
509239	2006 <i>TX</i> ₇₈		10 4.5 1°36	4.1°/ 2.5 18			468304	2015 <i>HC</i> ₇		10 4.5 285°16	3°0/ 28.7 18		
8 29	1 4.26	- 3 21.5	0.856	1.761	21.0	19.7	8 29	0 57.76	- 9 43.5	4.204	5.054	6.8	21.1
9 8	1 2.15	- 3 17.0	0.806	1.757	16.1	19.4	9 8	0 54.37	- 10 22.0	4.132	5.050	5.2	21.0
9 18	0 56.43	- 3 17.3	0.772	1.754	10.5	19.1	9 18	0 50.11	- 10 59.9	4.085	5.045	3.7	20.9
9 28	0 48.06	- 3 15.1	0.758	1.754	5.2	18.8	9 28	0 45.29	- 11 34.5	4.067	5.041	3.0	20.9
10 8	0 38.70	- 3 2.6	0.764	1.756	5.5	18.9	10 8	0 40.25	- 12 3.1	4.078	5.037	3.6	20.9
10 18	0 30.21	- 2 34.3	0.790	1.761	10.9	19.2	10 18	0 35.36	- 12 23.5	4.119	5.033	5.0	21.0
10 28	0 24.23	- 1 47.2	0.837	1.768	16.4	19.5	10 28	0 30.99	- 12 34.2	4.186	5.028	6.6	21.1
11 7	0 21.70	- 0 42.1	0.901	1.777	21.1	19.9	11 7	0 27.44	- 12 34.4	4.278	5.024	8.1	21.2
216590	2002 <i>LC</i> ₄₇		10 4.5 117°72	4.8°/ 30.2 18			82648	2001 <i>PQ</i> ₁₁		10 4.5 124°45	4°0/ 8.5 18		
8 29	1 8.40	- 3 3.6	1.557	2.421	15.5	20.4	8 29	1 10.25	+ 18 19.4	1.896	2.678	16.3	20.2
9 8	1 3.66	- 4 30.6	1.504	2.434	11.6	20.2	9 8	1 4.88	+ 18 18.1	1.826	2.694	13.2	20.0
9 18	0 56.58	- 6 4.2	1.474	2.447	7.7	20.0	9 18	0 57.32	+ 17 56.4	1.775	2.709	9.7	19.8
9 28	0 47.93	- 7 35.3	1.470	2.459	4.9	19.9	9 28	0 48.25	+ 17 14.7	1.750	2.724	6.1	19.7
10 8	0 38.80	- 8 54.1	1.493	2.471	6.1	20.0	10 8	0 38.66	+ 16 16.7	1.751	2.738	4.0	19.6
10 18	0 30.32	- 9 52.9	1.542	2.482	9.7	20.2	10 18	0 29.59	+ 15 8.3	1.781	2.752	5.8	19.7
10 28	0 23.50	- 10 27.1	1.615	2.493	13.3	20.5	10 28	0 22.01	+ 13 57.4	1.838	2.765	9.1	19.9
11 7	0 19.01	- 10 36.2	1.710	2.503	16.5	20.7	11 7	0 16.60	+ 12 51.6	1.921	2.777	12.4	20.2
395469	2011 <i>UY</i> ₁₆		10 4.5 60°54	1°1/ 5.6 18			440787	2006 <i>KF</i> ₈₃		10 4.5 257°20	1°5/ 3.2 18		
8 29	1 4.56	+ 10 31.9	1.845	2.673	15.0	21.3	8 29	1 6.50	+ 2 57.2	1.808	2.656	14.4	21.4
9 8	1 0.55	+ 10 5.9	1.776	2.681	11.6	21.1	9 8	1 2.16	+ 2 23.8	1.731	2.652	10.9	21.2
9 18	0 54.53	+ 9 24.0	1.729	2.690	7.8	20.9	9 18	0 55.67	+ 1 39.9	1.675	2.647	7.0	21.0
9 28	0 47.12	+ 8 29.4	1.706	2.699	3.6	20.7	9 28	0 47.64	+ 0 50.1	1.646	2.643	2.8	20.7
10 8	0 39.22	+ 7 27.5	1.711	2.708	1.5	20.5	10 8	0 38.97	+ 0 0.6	1.644	2.638	2.7	20.7
10 18	0 31.76	+ 6 24.9	1.743	2.717	5.5	20.8	10 18	0 30.68	- 0 42.4	1.669	2.634	6.9	20.9
10 28	0 25.64	+ 5 28.3	1.803	2.727	9.5	21.1	10 28	0 23.75	- 1 13.4	1.721	2.629	10.9	21.2
11 7	0 21.49	+ 4 43.3	1.886	2.736	12.9	21.3	11 7	0 18.87	- 1 28.8	1.796	2.624	14.4	21.4
25665	2000 <i>AO</i> ₈₉		10 4.5 241°63	0°6/ 3.8 18			487015	2014 <i>OQ</i> ₄		10 4.5 2°63	2°0/ 2.3 18		
8 29	1 2.93	+ 5 6.5	2.410	3.244	11.7	18.9	8 29	1 2.30	+ 1 48.9	1.962	2.816	13.2	21.4
9 8	0 58.92	+ 4 31.6	2.327	3.240	8.9	18.7	9 8	0 58.75	+ 0 57.8	1.891	2.816	9.9	21.2
9 18	0 53.33	+ 3 47.1	2.268	3.236	5.7	18.5	9 18	0 53.35	- 0 2.6	1.842	2.816	6.3	21.0
9 28	0 46.63	+ 2 56.5	2.235	3.232	2.2	18.2	9 28	0 46.67	- 1 7.0	1.820	2.816	2.7	20.7
10 8	0 39.48	+ 2 4.2	2.232	3.228	1.7	18.2	10 8	0 39.51	- 2 9.1	1.826	2.817	3.1	20.8
10 18	0 32.59	+ 1 15.2	2.257	3.224	5.2	18.4	10 18	0 32.71	- 3 2.5	1.859	2.818	6.7	21.0
10 28	0 26.67	+ 0 34.1	2.311	3.219	8.5	18.6	10 28	0 27.09	- 3 42.1	1.918	2.819	10.3	21.2
11 7	0 22.27	+ 0 4.3	2.389	3.215	11.3	18.8	11 7	0 23.25	- 4 4.9	2.000	2.821	13.4	21.4
265311	2004 <i>JV</i> ₄₃		10 4.5 132°25	1°9/ 2.8 18			2591	Dworetzky		10 4.5 99°50	0°2/ 4.7 18 R		
8 29	1 9.36	+ 2 8.4	1.794	2.640	14.6	21.5	8 29	1 5.15	+ 7 16.5	2.120	2.950	13.2	16.3
9 8	1 4.17	+ 1 27.2	1.731	2.650	11.0	21.3	9 8	1 0.78	+ 6 55.2	2.045	2.954	10.2	16.1
9 18	0 56.83	+ 0 36.4	1.689	2.661	7.0	21.1	9 18	0 54.59	+ 6 22.4	1.993	2.958	6.6	15.9
9 28	0 48.03	- 0 18.5	1.674	2.670	2.9	20.9	9 28	0 47.16	+ 5 41.1	1.967	2.962	2.7	15.6
10 8	0 38.75	- 1 11.1	1.687	2.680	3.0	20.9	10 8	0 39.25	+ 4 55.9	1.968	2.966	1.3	15.5
10 18	0 30.00	- 1 55.2	1.728	2.689	7.0	21.2	10 18	0 31.70	+ 4 11.9	1.999	2.970	5.3	15.8
10 28	0 22.72	- 2 25.8	1.795	2.697	10.9	21.4	10 28	0 25.31	+ 3 34.1	2.057	2.974	8.9	16.0
11 7	0 17.57	- 2 40.0	1.885	2.705	14.2	21.6	11 7	0 20.68	+ 3 6.7	2.140	2.978	12.0	16.2
311346	2005 <i>QJ</i> ₁₅₁		10 4.5 1°64	1°0/ 3.5 18			471940	2013 <i>RY</i> ₂₇		10 4.5 29°70	3°2/ 1.6 18		
8 29	1 3.46	+ 4 36.9	1.882	2.729	13.9	20.8	8 29	0 59.45	+ 5 43.5	1.029	1.915	19.8	20.3
9 8	0 59.72	+ 3 58.8	1.809	2.729	10.6	20.6	9 8	0 57.76	+ 3 44.6	0.985	1.928	14.8	20.0
9 18	0 54.01	+ 3 9.2	1.757	2.729	6.7	20.4	9 18	0 53.19	+ 1 23.2	0.960	1.941	9.2	19.8
9 28	0 46.93	+ 2 12.5	1.732	2.729	2.6	20.2	9 28	0 46.68	- 1 7.3	0.958	1.956	3.9	19.5
10 8	0 39.32	+ 1 14.8	1.734	2.729	2.2	20.1	10 8	0 39.57	- 3 29.8	0.980	1.971	5.1	19.7
10 18	0 32.08	+ 0 22.5	1.763	2.730	6.3	20.4	10 18	0 33.27	- 5 28.8	1.026	1.988	10.3	20.0
10 28	0 26.10	- 0 18.9	1.819	2.731	10.2	20.6	10 28	0 28.96	- 6 54.2	1.093	2.006	15.2	20.3
11 7	0 22.01	- 0 45.3	1.898	2.732	13.5	20.9	11 7	0 27.35	- 7 43.1	1.180	2.024	19.3	20.7
512726	2016 <i>UN</i> ₂₀		10 4.5 36°89	1°0/ 5.3 18			169430	2002 <i>AH</i> ₅		10 4.5 197°17	0°2/ 4.7 18		
8 29	1 5.53	+ 9 29.8	1.543	2.384	16.8	21.3	8 29	1 11.00	+ 6 53.2	1.490	2.331	17.2	20.1
9 8	1 1.67	+ 9 11.3	1.477	2.390	13.0	21.1	9 8	1 6.07	+ 6 42.4	1.416	2.330	13.3	19.9
9 18	0 55.43	+ 8 35.6	1.432	2.397	8.6	20.9	9 18	0 58.43	+ 6 16.7	1.362	2.329	8.7	19.6
9 28	0 47.52	+ 7 46.2	1.411	2.405	3.8	20.6	9 28	0 48.81	+ 5 39.3	1.332	2.328	3.6	19.3
10 8	0 39.01	+ 6 49.2	1.415	2.413	1.7	20.5	10 8	0 38.37	+ 4 56.0	1.328	2.326	1.8	19.2
10 18	0 31.03	+ 5 51.9	1.446	2.421	6.3	20.8	10 18	0 28.42	+ 4 13.9	1.352	2.324	7.0	19.5
10 28	0 24.65	+ 5 2.0	1.503	2.430	10.8	21.1	10 28	0 20.22	+ 3 40.0	1.400	2.321	11.9	19.8
11 7	0 20.57	+ 4 25.3	1.582	2.438	14.6	21.4	11 7	0 14.63	+ 3 19.8	1.471	2.319	16.0	20.0
341311	2007 <i>SL</i> ₁₅		10 4.5 40°86	0°7/ 4.6 15			352366	2007 <i>VO</i> ₂₁₆		10 4.5 359°20	1°1/ 5.4 18		
8 29	1 30.34	+ 0											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
380003	2013 <i>GD</i> ₄₅	10	4.5 228°41	0°0/ 4.5 18			518495	2005 <i>YU</i> ₂₂₉	10	4.5 224°88	0°4/ 4.9 18		
8 29	1 4.09	+ 7 17.4	2.220	3.049	12.7	21.7	8 29	1 5.11	+ 7 32.8	2.463	3.283	11.9	22.1
9 8	0 59.96	+ 6 48.4	2.137	3.046	9.8	21.5	9 8	1 0.59	+ 7 18.4	2.375	3.278	9.2	21.9
9 18	0 54.08	+ 6 7.8	2.078	3.043	6.3	21.3	9 18	0 54.44	+ 6 54.1	2.311	3.273	6.0	21.7
9 28	0 46.98	+ 5 18.7	2.045	3.040	2.6	21.0	9 28	0 47.13	+ 6 21.9	2.273	3.268	2.6	21.4
10 8	0 39.38	+ 4 25.6	2.040	3.037	1.3	20.9	10 8	0 39.34	+ 5 45.5	2.265	3.262	1.2	21.3
10 18	0 32.07	+ 3 34.0	2.064	3.034	5.2	21.2	10 18	0 31.80	+ 5 8.9	2.286	3.257	4.7	21.6
10 28	0 25.83	+ 2 49.0	2.116	3.031	8.8	21.4	10 28	0 25.23	+ 4 36.6	2.335	3.251	8.0	21.8
11 7	0 21.26	+ 2 14.9	2.192	3.028	11.9	21.6	11 7	0 20.19	+ 4 12.2	2.410	3.245	11.0	22.0
272424	2005 <i>TK</i> ₁₁₇	10	4.5 125°57	1°0/ 5.5 18			514697	2006 <i>EP</i> ₅₁	10	4.5 276°61	2°6/ 2.2 18		
8 29	1 7.76	+10 48.7	1.812	2.633	15.5	21.2	8 29	1 5.62	+ 1 6.1	1.705	2.562	14.7	21.7
9 8	1 3.00	+10 11.6	1.744	2.646	12.0	21.0	9 8	1 1.70	+ 0 14.9	1.624	2.550	11.2	21.5
9 18	0 56.11	+ 9 17.5	1.697	2.658	7.9	20.8	9 18	0 55.50	- 0 47.2	1.565	2.539	7.1	21.2
9 28	0 47.79	+ 8 10.0	1.676	2.670	3.6	20.6	9 28	0 47.65	- 1 54.1	1.532	2.527	3.3	21.0
10 8	0 38.96	+ 6 55.4	1.683	2.681	1.5	20.5	10 8	0 39.06	- 2 58.4	1.525	2.516	3.8	21.0
10 18	0 30.65	+ 5 41.0	1.718	2.691	5.7	20.8	10 18	0 30.81	- 3 52.4	1.546	2.504	7.9	21.2
10 28	0 23.78	+ 4 34.2	1.781	2.701	9.8	21.0	10 28	0 23.94	- 4 30.0	1.592	2.493	12.1	21.4
11 7	0 19.01	+ 3 40.8	1.868	2.711	13.3	21.3	11 7	0 19.22	- 4 47.8	1.660	2.481	15.7	21.6
157652	2005 <i>YM</i> ₂₇	10	4.5 215°85	1°7/ 2.5 18			257339	2009 <i>JZ</i> ₁₂	10	4.5 49°55	5°3/ 1.1 17		
8 29	1 3.99	+ 1 11.2	2.354	3.198	11.6	20.3	8 29	1 10.07	- 4 21.2	1.178	2.058	18.3	20.1
9 8	0 59.75	+ 0 33.7	2.277	3.196	8.8	20.1	9 8	1 5.52	- 5 11.9	1.135	2.071	13.9	19.8
9 18	0 53.88	- 0 10.8	2.223	3.194	5.5	19.9	9 18	0 58.03	- 6 7.3	1.110	2.085	9.2	19.6
9 28	0 46.88	- 0 58.3	2.196	3.192	2.4	19.7	9 28	0 48.60	- 6 57.9	1.109	2.100	5.6	19.5
10 8	0 39.45	- 1 43.8	2.198	3.189	2.7	19.7	10 8	0 38.63	- 7 34.4	1.132	2.115	6.6	19.6
10 18	0 32.31	- 2 22.8	2.229	3.187	5.9	19.9	10 18	0 29.58	- 7 50.2	1.179	2.130	10.7	19.9
10 28	0 26.18	- 2 51.3	2.287	3.185	9.1	20.1	10 28	0 22.69	- 7 42.3	1.248	2.146	14.9	20.2
11 7	0 21.61	- 3 6.5	2.369	3.182	11.9	20.3	11 7	0 18.67	- 7 11.4	1.336	2.162	18.6	20.5
421775	2014 <i>QG</i> ₁₈	10	4.5 201°23	3°2/ 8.1 17			439285	2012 <i>UN</i> ₉₀	10	4.5 267°34	2°7/ 7.2 18		
8 29	1 6.55	+16 9.4	2.564	3.343	12.6	21.2	8 29	1 4.82	+15 6.5	1.889	2.696	15.5	21.3
9 8	1 1.69	+16 26.9	2.474	3.342	10.2	21.0	9 8	1 1.03	+14 47.3	1.794	2.682	12.4	21.1
9 18	0 55.15	+16 31.0	2.406	3.340	7.5	20.9	9 18	0 55.06	+14 8.2	1.719	2.668	8.8	20.8
9 28	0 47.41	+16 21.9	2.364	3.339	4.8	20.7	9 28	0 47.48	+13 10.2	1.669	2.654	5.0	20.6
10 8	0 39.15	+16 1.2	2.350	3.337	3.2	20.6	10 8	0 39.14	+11 57.8	1.646	2.640	2.7	20.4
10 18	0 31.13	+15 32.0	2.366	3.335	4.7	20.7	10 18	0 31.04	+10 37.4	1.650	2.626	5.6	20.5
10 28	0 24.08	+14 58.7	2.410	3.333	7.4	20.9	10 28	0 24.21	+ 9 17.4	1.682	2.611	9.7	20.7
11 7	0 18.60	+14 26.0	2.480	3.331	10.1	21.0	11 7	0 19.40	+ 8 5.8	1.739	2.596	13.4	21.0
160425	2005 <i>JF</i>	10	4.5 86°73	2°9/ 2.3 17			339292	2004 <i>XA</i> ₄₁	10	4.5 279°59	1°6/ 5.9 18		
8 29	1 13.06	- 0 30.6	1.503	2.357	16.5	20.2	8 29	1 6.64	+10 48.1	1.826	2.649	15.3	21.0
9 8	1 7.13	- 1 8.0	1.457	2.381	12.4	20.0	9 8	1 2.54	+10 39.0	1.727	2.629	12.1	20.7
9 18	0 58.75	- 1 52.6	1.432	2.405	7.8	19.8	9 18	0 56.13	+10 13.8	1.649	2.608	8.3	20.4
9 28	0 48.80	- 2 37.8	1.433	2.428	3.6	19.7	9 28	0 47.95	+ 9 33.8	1.596	2.587	4.1	20.1
10 8	0 38.49	- 3 16.6	1.461	2.451	4.1	19.7	10 8	0 38.88	+ 8 43.3	1.569	2.566	1.9	20.0
10 18	0 29.01	- 3 43.1	1.516	2.474	8.1	20.0	10 18	0 29.98	+ 7 48.0	1.571	2.545	6.0	20.2
10 28	0 21.40	- 3 53.4	1.596	2.496	12.1	20.3	10 28	0 22.35	+ 6 55.4	1.599	2.524	10.4	20.4
11 7	0 16.30	- 3 46.2	1.698	2.517	15.5	20.6	11 7	0 16.85	+ 6 12.0	1.651	2.503	14.3	20.6
172996	Stooke	10	4.5 36°95	1°6/ 3.2 18			506483	2003 <i>SX</i> ₂₁₇	10	4.5 358°24	16°3/ 3.2 17		
8 29	1 6.91	+ 2 18.4	1.600	2.456	15.5	19.8	8 29	1 38.98	-30 40.4	0.963	1.798	24.9	19.3
9 8	1 2.61	+ 1 51.7	1.537	2.462	11.8	19.6	9 8	1 28.85	-30 16.3	0.908	1.791	21.9	19.1
9 18	0 55.99	+ 1 15.0	1.495	2.468	7.5	19.4	9 18	1 13.56	-29 14.3	0.868	1.787	18.8	18.9
9 28	0 47.78	+ 0 33.4	1.478	2.475	3.0	19.1	9 28	0 54.83	-27 18.3	0.848	1.785	16.6	18.8
10 8	0 39.01	- 0 6.8	1.487	2.482	2.9	19.1	10 8	0 35.42	-24 22.8	0.851	1.785	16.6	18.8
10 18	0 30.77	- 0 39.4	1.524	2.489	7.2	19.4	10 18	0 18.17	-20 37.2	0.878	1.787	18.8	18.9
10 28	0 24.09	- 0 59.1	1.585	2.497	11.4	19.7	10 28	0 5.15	-16 21.2	0.928	1.790	22.1	19.2
11 7	0 19.67	- 1 3.1	1.669	2.505	15.0	19.9	11 7	23 57.14	-11 55.8	0.999	1.796	25.4	19.4
261714	2006 <i>AM</i> ₁₁	10	4.5 359°70	27°5/31.7 17			279712	2011 <i>GY</i> ₄₆	10	4.5 13°52	5°0/ 3.4 18		
8 29	1 8.57	-45 22.6	0.814	1.659	27.5	19.0	8 29	1 15.62	- 9 55.9	0.774	1.674	23.1	17.1
9 8	1 6.67	-48 24.3	0.815	1.655	27.7	19.0	9 8	1 10.68	- 8 35.6	0.741	1.686	17.9	16.8
9 18	0 59.69	-50 28.4	0.827	1.653	28.3	19.0	9 18	1 1.67	- 7 6.3	0.723	1.702	11.9	16.6
9 28	0 49.35	-51 19.8	0.849	1.652	29.3	19.1	9 28	0 50.05	- 5 25.0	0.726	1.721	6.3	16.4
10 8	0 38.30	-50 53.7	0.879	1.653	30.4	19.2	10 8	0 37.95	- 3 32.4	0.750	1.742	5.9	16.4
10 18	0 29.12	-49 14.6	0.918	1.655	31.6	19.4	10 18	0 27.44	- 1 32.5	0.796	1.767	10.9	16.8
10 28	0 23.61	-46 33.5	0.964	1.658	32.7	19.5	10 28	0 20.11	+ 0 30.5	0.863	1.794	16.1	17.2
11 7	0 22.32	-43 5.3	1.017	1.662	33.6	19.6	11 7	0 16.67	+ 2 33.5	0.949	1.824	20.4	17.6
263225	2008 <i>AX</i> ₅₁	10	4.5 6°57	2°1/ 2.6 18			144974	2005 <i>EH</i> ₁₂₅	10	4.5 339°27	1°6/ 3.2 17 R		
8 29	1 4.70	+ 1 35.9	1.736	2.593	14.5	20.6	8 29	1 2.62	+ 6 2.5	1.221	2.092	18.4	19.8
9 8	1 0.82	+ 0 55.9	1.667	2.593	10.9	20.4	9 8	1 0.12	+ 4 59.4	1.153	2.086	14.1	19.5
9 18	0 54.81	+ 0 6.4	1.620	2.593	6.9	20.1	9 18	0 54.81	+ 3 35.4	1.104	2.080	9.0	19.2
9 28	0 47.31	- 0 47.4	1.598	2.594	3.0	19.9	9 28	0 47.44	+ 1 57.7	1.078	2.075	3.5	18.9
10 8	0 39.25	- 1 38.6	1.603	2.595	3.2	19.9	10 8	0 39.20	+ 0 17.5	1.076	2.071	3.3	18.9
10 18	0 31.62	- 2 21.0	1.635	2.597	7.2	20.2	10 18	0 31.48	- 1 12.9	1.098	2.068	8.8	19.2
10 28	0 25.37	- 2 49.3	1.693	2.598	11.2	20.4	10 28	0 25.59	- 2 23.0	1.144	2.064	14.0	19.5
11 7	0 21.18	- 3 0.5	1.773	2.601	14.6	20.6	11 7	0 22.39	- 3 6.7	1.210	2.062	18.4	19.7
127561	2002 <i>YC</i> ₂₈	10	4.5 344°37	2°4/ 2.9 18			433280	2013 <i>AU</i> ₁₃₀	10	4.5 135°24	2°9/28.4 18		
8 29	1 2.10	+ 2 13.											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
3078	Horrocks	10	4.5	199°66	1°1/ 3.2	18	443072	2013 GX ₁₄	10	4.5	349°37	0°9/ 5.3	18
8 29	1 5.05	+ 2 15.7	2.632	3.466	10.8	17.0	8 29	1 6.37	+ 8 0.1	1.850	2.682	14.7	20.9
9 8	1 0.39	+ 1 51.9	2.550	3.463	8.2	16.8	9 8	1 2.07	+ 7 59.8	1.771	2.680	11.4	20.7
9 18	0 54.23	+ 1 21.7	2.492	3.461	5.2	16.6	9 18	0 55.64	+ 7 47.0	1.714	2.678	7.6	20.5
9 28	0 47.04	+ 0 48.1	2.462	3.458	2.1	16.4	9 28	0 47.69	+ 7 23.9	1.682	2.676	3.4	20.2
10 8	0 39.44	+ 0 14.9	2.461	3.455	2.0	16.4	10 8	0 39.10	+ 6 54.4	1.677	2.674	1.5	20.1
10 18	0 32.09	- 0 14.0	2.490	3.452	5.1	16.6	10 18	0 30.87	+ 6 23.7	1.700	2.673	5.7	20.3
10 28	0 25.66	- 0 35.3	2.547	3.449	8.1	16.8	10 28	0 23.97	+ 5 57.2	1.749	2.672	9.7	20.6
11 7	0 20.66	- 0 46.4	2.630	3.445	10.7	17.0	11 7	0 19.10	+ 5 39.4	1.822	2.672	13.3	20.8
86664	2000 FS ₉	10	4.5	26°72	0°4/ 4.2	18	187423	2005 VR ₁₁₄	10	4.5	303°52	0°0/ 4.6	16
8 29	1 5.99	+ 5 32.8	1.116	1.988	19.7	18.9	8 29	1 1.23	+ 6 25.2	2.878	3.702	10.3	21.2
9 8	1 2.65	+ 5 18.7	1.067	2.000	15.0	18.7	9 8	0 57.49	+ 6 7.4	2.779	3.686	7.9	21.0
9 18	0 56.33	+ 4 48.2	1.037	2.012	9.6	18.4	9 18	0 52.40	+ 5 41.4	2.705	3.669	5.1	20.8
9 28	0 47.98	+ 4 6.5	1.028	2.026	3.8	18.1	9 28	0 46.34	+ 5 9.2	2.658	3.653	2.1	20.6
10 8	0 38.98	+ 3 21.8	1.043	2.041	2.3	18.1	10 8	0 39.84	+ 4 34.0	2.640	3.637	1.1	20.5
10 18	0 30.80	+ 2 42.6	1.082	2.056	8.0	18.5	10 18	0 33.49	+ 3 59.3	2.651	3.621	4.2	20.7
10 28	0 24.73	+ 2 16.4	1.143	2.073	13.1	18.8	10 28	0 27.90	+ 3 28.9	2.692	3.605	7.2	20.9
11 7	0 21.52	+ 2 7.5	1.225	2.091	17.3	19.2	11 7	0 23.55	+ 3 5.8	2.757	3.590	9.8	21.0
487214	2014 OZ ₃₈₀	10	4.5	30°25	3°9/30.3	17	516051	2015 TD ₁₃₉	10	4.5	103°21	4°1/29.4	18
8 29	1 1.96	- 2 53.5	1.872	2.738	13.2	20.8	8 29	1 2.92	- 6 7.8	2.368	3.226	11.1	21.2
9 8	0 58.52	- 4 6.7	1.814	2.745	9.9	20.6	9 8	0 58.87	- 7 17.2	2.309	3.234	8.4	21.0
9 18	0 53.21	- 5 25.6	1.779	2.753	6.5	20.4	9 18	0 53.28	- 8 28.8	2.274	3.241	5.7	20.9
9 28	0 46.65	- 6 43.1	1.771	2.761	4.0	20.3	9 28	0 46.66	- 9 36.7	2.267	3.249	4.1	20.8
10 8	0 39.66	- 7 51.7	1.790	2.769	5.1	20.4	10 8	0 39.70	- 10 35.0	2.288	3.257	5.1	20.9
10 18	0 33.11	- 8 45.0	1.835	2.778	8.2	20.6	10 18	0 33.09	- 11 19.2	2.337	3.265	7.6	21.1
10 28	0 27.81	- 9 18.8	1.906	2.787	11.4	20.8	10 28	0 27.50	- 11 46.1	2.412	3.272	10.2	21.2
11 7	0 24.32	- 9 31.7	1.998	2.796	14.3	21.0	11 7	0 23.43	- 11 55.0	2.510	3.279	12.5	21.4
210453	2673 T- ₃	10	4.5	341°85	0°6/ 4.9	18	438128	2005 QF ₁₁₇	10	4.5	350°74	2°6/ 6.7	18
8 29	0 59.81	+ 8 17.7	1.140	2.013	19.3	19.5	8 29	1 7.23	+ 12 1.6	1.840	2.657	15.4	20.9
9 8	0 58.27	+ 8 2.8	1.065	1.997	15.1	19.2	9 8	1 2.81	+ 12 20.2	1.759	2.654	12.3	20.7
9 18	0 53.82	+ 7 26.7	1.009	1.983	10.0	18.9	9 18	0 56.18	+ 12 24.2	1.699	2.652	8.6	20.5
9 28	0 47.11	+ 6 32.8	0.973	1.970	4.3	18.5	9 28	0 47.93	+ 12 14.1	1.663	2.650	4.7	20.2
10 8	0 39.36	+ 5 28.8	0.961	1.959	2.0	18.3	10 8	0 38.99	+ 11 52.6	1.654	2.649	2.7	20.1
10 18	0 31.99	+ 4 24.7	0.971	1.949	8.0	18.6	10 18	0 30.39	+ 11 24.2	1.673	2.648	5.7	20.3
10 28	0 26.48	+ 3 31.5	1.003	1.940	13.6	18.9	10 28	0 23.15	+ 10 54.7	1.719	2.647	9.5	20.5
11 7	0 23.81	+ 2 57.0	1.055	1.934	18.4	19.2	11 7	0 18.01	+ 10 29.8	1.788	2.647	13.1	20.7
226513	2003 UP ₂₇	10	4.5	308°81	3°3/ 1.2	18	486217	2013 AD ₉₇	10	4.5	75°56	3°6/30.9	18
8 29	1 3.74	- 3 3.4	2.100	2.958	12.3	19.6	8 29	1 4.88	- 2 32.0	1.880	2.740	13.4	20.6
9 8	0 59.87	- 3 44.9	2.015	2.942	9.3	19.4	9 8	1 0.77	- 3 32.8	1.815	2.743	10.1	20.4
9 18	0 54.14	- 4 31.6	1.954	2.926	6.1	19.2	9 18	0 54.70	- 4 39.5	1.774	2.747	6.6	20.2
9 28	0 47.07	- 5 18.2	1.919	2.910	3.5	19.0	9 28	0 47.28	- 5 45.7	1.759	2.750	3.8	20.1
10 8	0 39.42	- 5 59.1	1.911	2.895	4.3	19.0	10 8	0 39.38	- 6 44.3	1.772	2.754	4.7	20.1
10 18	0 32.02	- 6 29.1	1.931	2.880	7.4	19.2	10 18	0 31.91	- 7 29.2	1.811	2.758	8.0	20.4
10 28	0 25.71	- 6 44.1	1.978	2.865	10.8	19.3	10 28	0 25.74	- 7 56.1	1.877	2.761	11.4	20.6
11 7	0 21.13	- 6 42.3	2.046	2.850	13.8	19.5	11 7	0 21.47	- 8 3.4	1.964	2.765	14.4	20.8
50169	2000 AK ₁₅₇	10	4.5	124°11	1°8/ 2.9	18	449232	2013 CN ₁₃₄	10	4.5	264°07	4°5/ 7.7	18
8 29	1 10.50	+ 2 23.4	1.770	2.613	14.9	19.5	8 29	1 15.61	+ 15 29.3	2.090	2.868	15.1	20.5
9 8	1 5.05	+ 1 43.6	1.709	2.627	11.2	19.3	9 8	1 9.27	+ 16 27.6	1.987	2.853	12.4	20.3
9 18	0 57.42	+ 0 54.3	1.671	2.641	7.1	19.0	9 18	1 0.48	+ 17 13.6	1.906	2.837	9.3	20.1
9 28	0 48.34	+ 0 0.6	1.659	2.655	2.9	18.8	9 28	0 49.75	+ 17 44.9	1.850	2.822	6.1	19.9
10 8	0 38.80	- 0 50.9	1.674	2.668	2.9	18.9	10 8	0 38.00	+ 18 1.0	1.823	2.806	4.5	19.7
10 18	0 29.83	- 1 34.1	1.719	2.680	7.0	19.1	10 18	0 26.32	+ 18 3.5	1.825	2.790	6.3	19.8
10 28	0 22.40	- 2 3.9	1.789	2.692	10.9	19.4	10 28	0 15.90	+ 17 56.6	1.856	2.774	9.6	20.0
11 7	0 17.14	- 2 17.6	1.883	2.703	14.2	19.6	11 7	0 7.64	+ 17 45.9	1.912	2.757	12.9	20.2
46659	1996 BB ₅	10	4.5	62°34	0°3/ 4.8	18	300626	2007 UR ₃₇	10	4.5	296°18	0°9/ 3.5	18
8 29	1 9.68	+ 6 30.2	1.673	2.511	15.8	18.8	8 29	1 1.63	+ 9 10.7	1.796	2.635	14.8	20.5
9 8	1 4.55	+ 6 27.5	1.615	2.527	12.1	18.6	9 8	0 58.52	+ 7 33.7	1.714	2.630	11.3	20.3
9 18	0 57.15	+ 6 12.7	1.578	2.544	7.9	18.4	9 18	0 53.38	+ 5 36.1	1.655	2.625	7.2	20.0
9 28	0 48.24	+ 5 48.7	1.566	2.561	3.2	18.1	9 28	0 46.80	+ 3 24.2	1.622	2.620	2.7	19.7
10 8	0 38.85	+ 5 20.4	1.581	2.579	1.6	18.1	10 8	0 39.64	+ 1 7.8	1.619	2.614	2.3	19.7
10 18	0 30.07	+ 4 53.1	1.624	2.596	6.1	18.4	10 18	0 32.82	- 1 2.0	1.644	2.609	6.8	20.0
10 28	0 22.89	+ 4 32.1	1.693	2.613	10.2	18.7	10 28	0 27.27	- 2 55.4	1.697	2.604	11.0	20.2
11 7	0 17.96	+ 4 21.5	1.785	2.631	13.7	18.9	11 7	0 23.66	- 4 25.5	1.773	2.600	14.6	20.4
316156	2009 UW ₄	10	4.5	357°37	0°4/ 3.8	18	114847	2003 PS ₃	10	4.5	18°29	1°2/ 3.6	18
8 29	0 59.27	+ 3 26.5	3.870	4.696	7.8	20.4	8 29	1 3.98	+ 4 57.4	1.412	2.274	16.9	19.4
9 8	0 55.59	+ 3 14.3	3.786	4.696	5.9	20.2	9 8	1 0.70	+ 4 17.7	1.350	2.278	12.8	19.2
9 18	0 50.96	+ 2 57.6	3.728	4.695	3.7	20.1	9 18	0 54.94	+ 3 23.2	1.308	2.283	8.2	18.9
9 28	0 45.70	+ 2 38.2	3.698	4.695	1.5	19.9	9 28	0 47.44	+ 2 19.6	1.290	2.288	3.2	18.7
10 8	0 40.19	+ 2 18.3	3.698	4.694	1.1	19.9	10 8	0 39.32	+ 1 15.0	1.298	2.294	2.6	18.6
10 18	0 34.83	+ 2 0.1	3.729	4.694	3.4	20.0	10 18	0 31.75	+ 0 17.9	1.331	2.300	7.5	19.0
10 28	0 30.04	+ 1 45.9	3.788	4.694	5.5	20.2	10 28	0 25.83	- 0 24.5	1.388	2.307	12.1	19.3
11 7	0 26.16	+ 1 37.4	3.874	4.694	7.5	20.3	11 7	0 22.31	- 0 47.9	1.467	2.315	16.0	19.5
314240	2005 QO ₄₆	10	4.5	131°92	1°6/ 2.8	18	109645	2001 RD ₃	10	4.5	109°40	4°7/ 8.9	18
8 29	1 4.86	+ 2 10.4	2.072	2.918	12.9	20.5	8 29	1 7.58	+ 19 13.5</				

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
184891	2005 <i>UM</i> ₂₃₇	10 4.5	11 ^o 73	3 ^o 1/ 1.4	18		70954	1999 <i>XK</i> ₂	10 4.5	156 ^o 27	0 ^o 9/ 3.3	18	
8 29	1 4.00	- 1 41.7	1.884	2.744	13.4	20.2	8 29	1 3.69	+ 3 30.3	2.735	3.566	10.5	19.9
9 8	1 0.12	- 2 30.0	1.817	2.745	10.1	20.0	9 8	0 59.30	+ 2 55.2	2.659	3.571	8.0	19.7
9 18	0 54.30	- 3 24.6	1.773	2.746	6.5	19.8	9 18	0 53.52	+ 2 12.9	2.607	3.576	5.0	19.6
9 28	0 47.14	- 4 19.7	1.755	2.748	3.5	19.7	9 28	0 46.81	+ 1 26.6	2.583	3.580	2.0	19.4
10 8	0 39.49	- 5 8.8	1.764	2.750	4.2	19.7	10 8	0 39.75	+ 0 40.4	2.589	3.584	1.8	19.4
10 18	0 32.24	- 5 46.1	1.801	2.752	7.6	19.9	10 18	0 32.96	- 0 1.8	2.625	3.588	4.8	19.6
10 28	0 26.26	- 6 7.4	1.863	2.755	11.1	20.1	10 28	0 27.05	- 0 36.2	2.689	3.591	7.7	19.8
11 7	0 22.16	- 6 10.9	1.947	2.758	14.1	20.4	11 7	0 22.49	- 1 0.1	2.779	3.594	10.2	20.0
34890	2001 <i>VS</i> ₆₂	10 4.5	109 ^o 66	2 ^o 5/ 6.8	18		265077	2003 <i>SE</i> ₁₅₄	10 4.5	310 ^o 31	7 ^o 4/ 24.1	18	
8 29	1 7.71	+13 41.0	1.710	2.525	16.5	18.8	8 29	1 0.22	-12 0.9	2.015	2.887	12.1	19.3
9 8	1 3.21	+13 28.1	1.639	2.533	13.1	18.6	9 8	0 57.38	-14 17.8	1.941	2.867	9.7	19.1
9 18	0 56.41	+12 56.0	1.589	2.542	9.1	18.3	9 18	0 52.67	-16 37.3	1.893	2.846	7.8	18.9
9 28	0 48.02	+12 6.7	1.562	2.550	4.9	18.1	9 28	0 46.58	-18 48.9	1.872	2.826	7.6	18.9
10 8	0 39.02	+11 5.1	1.562	2.558	2.5	18.0	10 8	0 39.86	-20 42.6	1.878	2.806	9.2	18.9
10 18	0 30.52	+ 9 58.1	1.590	2.565	5.8	18.2	10 18	0 33.35	-22 10.3	1.911	2.787	11.8	19.0
10 28	0 23.53	+ 8 53.8	1.645	2.573	9.9	18.5	10 28	0 27.93	-23 7.7	1.966	2.768	14.4	19.2
11 7	0 18.77	+ 7 59.3	1.723	2.580	13.6	18.7	11 7	0 24.27	-23 34.5	2.039	2.749	16.8	19.3
73849	1996 <i>TF</i> ₁₈	10 4.5	194 ^o 36	1 ^o 0/ 3.7	18		283905	2004 <i>EB</i> ₄₂	10 4.5	182 ^o 05	0 ^o 7/ 5.2	18	
8 29	1 11.36	+ 3 38.5	1.654	2.497	15.7	20.4	8 29	1 8.89	+ 9 12.6	1.901	2.723	14.8	21.6
9 8	1 6.10	+ 3 18.6	1.579	2.496	12.1	20.2	9 8	1 3.95	+ 8 46.1	1.820	2.724	11.5	21.4
9 18	0 58.36	+ 2 47.5	1.524	2.494	7.7	20.0	9 18	0 56.86	+ 8 4.7	1.762	2.724	7.6	21.2
9 28	0 48.83	+ 2 9.5	1.495	2.492	3.0	19.7	9 28	0 48.24	+ 7 11.4	1.730	2.724	3.3	20.9
10 8	0 38.58	+ 1 30.4	1.494	2.490	2.4	19.6	10 8	0 39.01	+ 6 11.4	1.726	2.723	1.4	20.8
10 18	0 28.78	+ 0 56.5	1.520	2.487	7.1	19.9	10 18	0 30.16	+ 5 11.2	1.750	2.722	5.8	21.0
10 28	0 20.57	+ 0 33.4	1.572	2.484	11.5	20.2	10 28	0 22.66	+ 4 17.5	1.802	2.720	9.8	21.3
11 7	0 14.74	+ 0 24.9	1.647	2.480	15.3	20.4	11 7	0 17.22	+ 3 35.6	1.878	2.718	13.4	21.5
514915	2008 <i>TO</i> ₃₈	10 4.5	281 ^o 25	2 ^o 2/ 6.4	18		77247	2001 <i>FC</i> ₄₄	10 4.5	189 ^o 71	0 ^o 5/ 4.1	17	
8 29	1 6.27	+12 25.4	1.787	2.606	15.7	22.0	8 29	1 10.42	+ 5 21.1	1.859	2.691	14.7	20.6
9 8	1 2.35	+12 16.0	1.687	2.585	12.6	21.7	9 8	1 5.15	+ 4 54.2	1.779	2.691	11.3	20.4
9 18	0 56.08	+11 48.6	1.608	2.564	8.7	21.5	9 18	0 57.66	+ 4 15.3	1.722	2.690	7.2	20.2
9 28	0 47.99	+11 4.3	1.553	2.542	4.6	21.2	9 28	0 48.58	+ 3 28.2	1.691	2.688	2.8	19.9
10 8	0 38.98	+10 7.0	1.524	2.520	2.3	21.0	10 8	0 38.84	+ 2 38.5	1.688	2.685	1.9	19.8
10 18	0 30.13	+ 9 3.0	1.523	2.498	6.0	21.2	10 18	0 29.50	+ 1 52.3	1.714	2.682	6.3	20.1
10 28	0 22.58	+ 8 0.4	1.549	2.476	10.4	21.4	10 28	0 21.56	+ 1 15.4	1.767	2.678	10.5	20.3
11 7	0 17.19	+ 7 6.5	1.598	2.454	14.5	21.6	11 7	0 15.75	+ 0 52.1	1.844	2.673	14.0	20.6
136151	2003 <i>TM</i> ₂	10 4.5	40 ^o 08	8 ^o 1/ 29.6	17		343290	2010 <i>AU</i> ₆₃	10 4.5	149 ^o 98	6 ^o 1/ 28.6	18	
8 29	1 10.70	-10 9.4	1.095	1.982	18.9	18.7	8 29	1 6.76	- 8 43.6	1.788	2.654	13.7	20.1
9 8	1 6.17	-11 10.5	1.058	1.995	14.6	18.5	9 8	1 2.33	-10 3.4	1.729	2.656	10.6	19.9
9 18	0 58.53	-12 8.7	1.039	2.009	10.5	18.4	9 18	0 55.78	-11 24.4	1.694	2.659	7.6	19.7
9 28	0 48.85	-12 52.5	1.043	2.023	8.2	18.3	9 28	0 47.79	-12 38.1	1.685	2.661	6.1	19.6
10 8	0 38.66	-13 12.5	1.069	2.038	9.4	18.4	10 8	0 39.28	-13 36.3	1.702	2.663	7.3	19.7
10 18	0 29.53	-13 3.8	1.118	2.054	12.9	18.7	10 18	0 31.26	-14 13.2	1.745	2.665	10.2	19.9
10 28	0 22.72	-12 26.3	1.188	2.071	16.7	18.9	10 28	0 24.66	-14 25.8	1.812	2.667	13.2	20.1
11 7	0 18.94	-11 23.8	1.276	2.088	20.1	19.2	11 7	0 20.12	-14 14.6	1.900	2.669	16.0	20.3
279758	1999 <i>CL</i> ₁₃₇	10 4.5	191 ^o 71	0 ^o 2/ 4.7	18		322583	2012 <i>AD</i> ₁₉	10 4.5	133 ^o 08	3 ^o 1/ 7.3	17	
8 29	1 8.06	+ 7 50.7	2.001	2.826	14.1	22.1	8 29	1 11.67	+14 53.3	1.698	2.501	17.1	21.7
9 8	1 3.20	+ 7 21.6	1.919	2.825	10.9	21.9	9 8	1 6.26	+14 50.1	1.628	2.513	13.6	21.5
9 18	0 56.31	+ 6 39.2	1.859	2.824	7.1	21.6	9 18	0 58.41	+14 27.1	1.578	2.525	9.6	21.3
9 28	0 47.97	+ 5 46.7	1.826	2.821	2.9	21.4	9 28	0 48.87	+13 45.5	1.553	2.537	5.5	21.1
10 8	0 39.05	+ 4 49.2	1.821	2.818	1.4	21.2	10 8	0 38.71	+12 49.6	1.554	2.548	3.1	21.0
10 18	0 30.46	+ 3 52.8	1.845	2.815	5.7	21.5	10 18	0 29.11	+11 46.0	1.584	2.558	6.0	21.2
10 28	0 23.15	+ 3 3.7	1.896	2.811	9.6	21.8	10 28	0 21.14	+10 43.0	1.640	2.567	10.0	21.5
11 7	0 17.77	+ 2 26.5	1.972	2.807	13.0	22.0	11 7	0 15.56	+ 9 48.1	1.721	2.576	13.7	21.7
327552	2006 <i>CO</i> ₁₀	10 4.5	232 ^o 42	0 ^o 2/ 4.3	17		94316	2001 <i>FY</i> ₆₃	10 4.5	290 ^o 65	0 ^o 5/ 4.0	18	
8 29	1 5.91	+ 5 10.2	2.711	3.532	10.9	21.9	8 29	1 7.06	+ 3 36.1	2.208	3.043	12.6	19.4
9 8	1 1.10	+ 4 58.1	2.617	3.523	8.3	21.7	9 8	1 2.32	+ 3 30.7	2.121	3.034	9.6	19.2
9 18	0 54.75	+ 4 38.4	2.548	3.513	5.4	21.5	9 18	0 55.71	+ 3 17.4	2.057	3.025	6.2	19.0
9 28	0 47.32	+ 4 13.2	2.507	3.503	2.1	21.3	9 28	0 47.78	+ 2 59.2	2.020	3.016	2.4	18.7
10 8	0 39.42	+ 3 45.7	2.495	3.492	1.3	21.2	10 8	0 39.26	+ 2 39.5	2.011	3.007	1.7	18.6
10 18	0 31.72	+ 3 19.5	2.514	3.482	4.6	21.4	10 18	0 31.00	+ 2 22.4	2.031	2.999	5.5	18.9
10 28	0 24.89	+ 2 58.1	2.561	3.471	7.7	21.6	10 28	0 23.84	+ 2 11.7	2.078	2.990	9.1	19.1
11 7	0 19.47	+ 2 44.5	2.634	3.459	10.4	21.8	11 7	0 18.42	+ 2 10.4	2.151	2.981	12.2	19.3
265198	2004 <i>BJ</i> ₆₁	10 4.5	254 ^o 92	2 ^o 5/ 2.5	17		21429	<i>Gulati</i>	10 4.5	103 ^o 01	4 ^o 9/ 8.3	18	
8 29	1 8.44	+ 1 16.5	1.571	2.428	15.8	21.1	8 29	1 13.24	+17 11.5	1.571	2.367	18.5	19.0
9 8	1 4.07	+ 0 33.6	1.492	2.418	12.0	20.8	9 8	1 7.69	+17 40.8	1.505	2.381	15.1	18.8
9 18	0 57.18	- 0 20.4	1.434	2.408	7.7	20.5	9 18	0 59.45	+17 48.9	1.458	2.395	11.1	18.6
9 28	0 48.42	- 1 19.7	1.401	2.397	3.4	20.3	9 28	0 49.32	+17 34.9	1.434	2.409	7.1	18.4
10 8	0 38.83	- 2 16.6	1.395	2.387	3.8	20.3	10 8	0 38.48	+17 1.3	1.436	2.423	4.9	18.3
10 18	0 29.62	- 3 3.4	1.415	2.376	8.2	20.5	10 18	0 28.25	+16 13.9	1.465	2.436	6.8	18.5
10 28	0 21.97	- 3 33.8	1.460	2.365	12.7	20.7	10 28	0 19.84	+15 21.1	1.520	2.449	10.5	18.7
11 7	0 16.71	- 3 44.2	1.527	2.354	16.6	21.0	11 7	0 14.07	+14 31.3	1.599	2.461	14.1	19.0
133093	2003 <i>NP</i>												

EPHEMERIDES

10 4.5

10 4.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
181188	2005 <i>SL</i> ₁₀₉	10 4.5 147°82	0°1/ 4.6 18				286828	2002 <i>MZ</i> ₅	10 4.6 135°42	3°0/ 1.2 18			
8 29	1 5.29	+ 6 56.8	2.164	2.993	13.0	20.9	8 29	1 4.43	+ 0 27.7	1.955	2.808	13.2	20.7
9 8	1 0.93	+ 6 34.9	2.086	2.994	10.0	20.7	9 8	1 0.40	- 0 52.6	1.889	2.814	9.9	20.5
9 18	0 54.78	+ 6 1.9	2.030	2.995	6.5	20.5	9 18	0 54.48	- 2 22.2	1.847	2.820	6.3	20.3
9 28	0 47.38	+ 5 20.8	2.001	2.997	2.6	20.3	9 28	0 47.29	- 3 54.0	1.832	2.825	3.3	20.1
10 8	0 39.49	+ 4 36.0	2.000	2.998	1.3	20.2	10 8	0 39.63	- 5 20.3	1.845	2.830	4.1	20.2
10 18	0 31.93	+ 3 52.5	2.028	2.999	5.2	20.5	10 18	0 32.38	- 6 33.8	1.887	2.835	7.5	20.4
10 28	0 25.49	+ 3 15.4	2.084	3.000	8.8	20.7	10 28	0 26.37	- 7 29.1	1.954	2.840	11.0	20.6
11 7	0 20.78	+ 2 48.6	2.164	3.001	12.0	20.9	11 7	0 22.19	- 8 3.6	2.045	2.845	13.9	20.8
434306	2004 <i>FO</i> ₂₉	10 4.5 115°17	1°0/ 3.7 16				340300	2006 <i>CT</i> ₄₀	10 4.6 176°62	2°5/ 2.1 18			
8 29	1 11.55	+ 3 51.7	1.759	2.597	15.2	21.9	8 29	1 7.09	+ 0 30.7	1.926	2.775	13.6	21.5
9 8	1 5.89	+ 3 26.1	1.699	2.614	11.5	21.7	9 8	1 2.49	- 0 18.8	1.854	2.776	10.3	21.3
9 18	0 58.02	+ 2 50.2	1.660	2.629	7.3	21.5	9 18	0 55.88	- 1 16.6	1.805	2.777	6.5	21.1
9 28	0 48.67	+ 2 8.3	1.648	2.645	2.8	21.3	9 28	0 47.87	- 2 17.3	1.782	2.777	3.1	20.9
10 8	0 38.86	+ 1 26.3	1.664	2.659	2.2	21.3	10 8	0 39.33	- 3 14.4	1.788	2.778	3.5	20.9
10 18	0 29.64	+ 0 49.8	1.708	2.674	6.5	21.6	10 18	0 31.18	- 4 1.6	1.822	2.778	7.2	21.1
10 28	0 21.99	+ 0 24.0	1.778	2.687	10.5	21.9	10 28	0 24.33	- 4 34.0	1.882	2.777	10.8	21.4
11 7	0 16.55	+ 0 12.0	1.872	2.700	13.9	22.1	11 7	0 19.42	- 4 49.2	1.965	2.777	14.0	21.6
445635	2011 <i>SY</i> ₂₅₇	10 4.6 36°02	0°0/ 4.3 18				273753	2007 <i>ER</i> ₁₃₉	10 4.6 310°06	1°1/ 3.8 18			
8 29	1 6.66	+ 6 13.7	1.700	2.543	15.4	21.3	8 29	1 7.14	+ 3 41.1	1.378	2.239	17.3	20.4
9 8	1 2.39	+ 5 58.7	1.632	2.548	11.8	21.1	9 8	1 3.57	+ 3 26.1	1.294	2.221	13.3	20.1
9 18	0 55.90	+ 5 31.2	1.585	2.553	7.6	20.9	9 18	0 57.17	+ 2 58.0	1.229	2.203	8.7	19.8
9 28	0 47.87	+ 4 54.6	1.563	2.559	3.1	20.6	9 28	0 48.57	+ 2 20.8	1.188	2.185	3.4	19.4
10 8	0 39.26	+ 4 14.3	1.568	2.565	1.6	20.5	10 8	0 38.90	+ 1 41.3	1.172	2.168	2.7	19.3
10 18	0 31.12	+ 3 36.2	1.600	2.572	6.2	20.9	10 18	0 29.51	+ 1 6.9	1.181	2.151	8.1	19.6
10 28	0 24.45	+ 3 6.2	1.658	2.579	10.4	21.1	10 28	0 21.80	+ 0 45.0	1.214	2.135	13.2	19.8
11 7	0 19.92	+ 2 48.6	1.740	2.586	14.0	21.4	11 7	0 16.77	+ 0 40.2	1.267	2.120	17.7	20.1
422220	2014 <i>RJ</i> ₆₁	10 4.6 45°52	0°9/ 5.4 18				443363	2014 <i>GN</i> ₄₀	10 4.6 213°59	0°6/ 3.9 18			
8 29	1 8.37	+ 7 21.9	2.086	2.910	13.6	20.3	8 29	1 7.43	+ 5 9.8	2.159	2.989	13.0	22.1
9 8	1 3.29	+ 7 33.6	2.015	2.919	10.5	20.1	9 8	1 2.64	+ 4 41.2	2.073	2.984	9.9	21.9
9 18	0 56.29	+ 7 35.4	1.967	2.929	7.0	19.9	9 18	0 55.95	+ 4 2.1	2.010	2.977	6.4	21.7
9 28	0 47.99	+ 7 28.8	1.945	2.939	3.1	19.7	9 28	0 47.91	+ 3 15.8	1.974	2.970	2.5	21.4
10 8	0 39.20	+ 7 16.9	1.951	2.948	1.4	19.6	10 8	0 39.29	+ 2 27.3	1.967	2.963	1.7	21.3
10 18	0 30.82	+ 7 3.4	1.986	2.959	5.1	19.9	10 18	0 30.96	+ 1 41.8	1.988	2.955	5.7	21.6
10 28	0 23.69	+ 6 52.5	2.049	2.969	8.7	20.1	10 28	0 23.76	+ 1 4.5	2.038	2.947	9.4	21.8
11 7	0 18.42	+ 6 47.6	2.136	2.980	11.8	20.3	11 7	0 18.35	+ 0 39.2	2.112	2.938	12.6	22.0
261552	2005 <i>WY</i> ₁₅₀	10 4.6 256°91	4°4/ 9.7 18				480561	2015 <i>MH</i> ₆₇	10 4.6 109°75	0°8/ 3.7 16			
8 29	1 4.53	+20 36.8	2.307	3.073	14.2	20.6	8 29	1 5.62	+ 6 30.1	1.844	2.683	14.5	21.1
9 8	1 0.47	+20 42.6	2.214	3.068	11.8	20.4	9 8	1 1.38	+ 5 30.4	1.779	2.694	11.0	20.9
9 18	0 54.56	+20 30.2	2.142	3.062	9.0	20.2	9 18	0 55.14	+ 4 16.8	1.736	2.706	7.0	20.7
9 28	0 47.34	+19 59.3	2.094	3.057	6.2	20.0	9 28	0 47.55	+ 2 54.7	1.720	2.717	2.7	20.4
10 8	0 39.52	+19 11.7	2.072	3.052	4.5	19.9	10 8	0 39.51	+ 1 31.4	1.732	2.728	2.1	20.4
10 18	0 31.95	+18 11.8	2.079	3.047	5.4	20.0	10 18	0 31.95	+ 0 14.5	1.772	2.738	6.3	20.7
10 28	0 25.45	+17 5.6	2.114	3.041	8.1	20.1	10 28	0 25.73	- 0 49.3	1.839	2.748	10.2	21.0
11 7	0 20.67	+15 59.9	2.175	3.036	11.0	20.3	11 7	0 21.47	- 1 35.7	1.929	2.758	13.5	21.2
517085	2013 <i>CU</i> ₁₂₅	10 4.6 196°48	4°3/ 9.3 18				19387	1998 <i>DA</i> ₂	10 4.6 77°07	1°0/ 3.9 18			
8 29	1 6.11	+19 42.9	2.198	2.969	14.7	22.2	8 29	1 13.95	+ 3 43.4	1.342	2.194	18.2	17.7
9 8	1 1.72	+19 49.4	2.109	2.968	12.1	22.0	9 8	1 8.21	+ 3 29.4	1.294	2.215	13.8	17.5
9 18	0 55.39	+19 37.6	2.041	2.967	9.1	21.8	9 18	0 59.71	+ 3 3.4	1.265	2.236	8.8	17.3
9 28	0 47.68	+19 7.0	1.998	2.965	6.2	21.6	9 28	0 49.39	+ 2 30.5	1.260	2.257	3.4	17.0
10 8	0 39.36	+18 20.0	1.982	2.964	4.4	21.5	10 8	0 38.59	+ 1 57.1	1.281	2.278	2.5	17.0
10 18	0 31.33	+17 20.9	1.993	2.962	5.5	21.6	10 18	0 28.66	+ 1 29.9	1.329	2.299	7.6	17.4
10 28	0 24.46	+16 16.3	2.033	2.960	8.4	21.8	10 28	0 20.81	+ 1 14.5	1.402	2.319	12.2	17.7
11 7	0 19.42	+15 13.1	2.098	2.958	11.4	22.0	11 7	0 15.72	+ 1 13.9	1.496	2.339	16.0	18.0
254556	2005 <i>EH</i> ₂₈₀	10 4.6 210°75	3°3/ 1.7 18				437304	2013 <i>CK</i> ₃₄	10 4.6 329°87	2°1/ 30.4 18			
8 29	1 9.86	- 1 0.8	1.724	2.577	14.7	21.0	8 29	0 57.14	- 4 46.3	4.229	5.075	6.8	21.3
9 8	1 4.90	- 1 54.7	1.647	2.571	11.2	20.7	9 8	0 53.97	- 5 25.2	4.154	5.074	5.1	21.1
9 18	0 57.60	- 2 57.1	1.594	2.566	7.2	20.5	9 18	0 49.96	- 6 5.6	4.105	5.073	3.4	21.0
9 28	0 48.60	- 4 1.5	1.566	2.559	3.8	20.3	9 28	0 45.40	- 6 44.8	4.085	5.072	2.2	20.9
10 8	0 38.89	- 5 0.3	1.566	2.552	4.5	20.3	10 8	0 40.63	- 7 20.3	4.094	5.071	2.7	21.0
10 18	0 29.60	- 5 46.4	1.593	2.545	8.4	20.5	10 18	0 36.00	- 7 49.6	4.134	5.070	4.3	21.1
10 28	0 21.78	- 6 14.4	1.646	2.537	12.3	20.7	10 28	0 31.87	- 8 10.8	4.201	5.069	6.0	21.2
11 7	0 16.20	- 6 22.1	1.720	2.528	15.8	21.0	11 7	0 28.53	- 8 22.8	4.294	5.067	7.6	21.3
365790	2011 <i>AK</i> ₂₁	10 4.6 9°18	8°8/ 24.4 18				99010	2001 <i>DF</i> ₅₄	10 4.6 79°04	3°7/ 29.4 18			
8 29	1 3.36	-18 55.2	1.947	2.811	12.8	20.0	8 29	1 1.31	- 1 47.4	2.254	3.110	11.6	18.8
9 8	0 59.65	-20 26.4	1.901	2.812	10.7	19.9	9 8	0 57.82	- 3 38.1	2.189	3.116	8.7	18.7
9 18	0 54.02	-21 49.8	1.878	2.814	9.2	19.8	9 18	0 52.73	- 5 36.1	2.151	3.122	5.7	18.5
9 28	0 47.08	-22 56.6	1.880	2.816	8.9	19.8	9 28	0 46.58	- 7 33.8	2.141	3.128	3.8	18.4
10 8	0 39.72	-23 39.9	1.907	2.819	10.1	19.9	10 8	0 40.04	- 9 23.0	2.160	3.134	4.9	18.5
10 18	0 32.82	-23 56.0	1.958	2.822	12.1	20.0	10 18	0 33.82	-10 56.9	2.209	3.140	7.7	18.7
10 28	0 27.22	-23 44.2	2.030	2.825	14.3	20.2	10 28	0 28.62	-12 10.2	2.284	3.146	10.6	18.9
11 7	0 23.50	-23 6.8	2.121	2.829	16.3	20.4	11 7	0 24.96	-13 0.9	2.383	3.152	13.1	19.0
213727	2002 <i>VF</i> ₉₂	10 4.6 287°40	0°5/ 5.1 18				77052	2001 <i>DN</i> ₁	10 4.6 240°16	2°6/ 2.3 18			
8 29	1 4.41	+ 8											

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
13613	1994 <i>UA</i> ₃	10	4.6 306°15	0°6/ 5.1 18			362273	2009 <i>QZ</i> ₁₂	10	4.6 28°35	0°6/ 3.9 18		
8 29	1 4.57	+ 8 32.2	1.667	2.508	15.7	18.5	8 29	1 2.22	+ 6 14.0	1.773	2.621	14.6	20.1
9 8	1 1.15	+ 8 13.3	1.575	2.489	12.3	18.2	9 8	0 58.90	+ 5 28.8	1.710	2.630	11.1	19.9
9 18	0 55.38	+ 7 38.3	1.504	2.471	8.2	17.9	9 18	0 53.61	+ 4 30.3	1.669	2.640	7.1	19.6
9 28	0 47.80	+ 6 49.8	1.457	2.452	3.6	17.6	9 28	0 46.98	+ 3 23.4	1.653	2.650	2.7	19.4
10 8	0 39.35	+ 5 53.2	1.436	2.434	1.6	17.4	10 8	0 39.88	+ 2 14.9	1.665	2.661	1.9	19.4
10 18	0 31.12	+ 4 55.3	1.442	2.416	6.4	17.7	10 18	0 33.24	+ 1 11.7	1.703	2.673	6.2	19.7
10 28	0 24.25	+ 4 4.2	1.474	2.399	11.1	17.9	10 28	0 27.91	+ 0 20.3	1.768	2.685	10.1	19.9
11 7	0 19.58	+ 3 26.0	1.528	2.382	15.1	18.1	11 7	0 24.49	- 0 15.2	1.856	2.697	13.5	20.2
433417	2013 <i>TM</i> ₅₃	10	4.6 131°81	3°0/ 7.2 18			374894	2006 <i>WF</i> ₉₆	10	4.6 327°89	1°1/ 3.7 18		
8 29	1 8.44	+14 44.2	1.604	2.418	17.5	21.1	8 29	0 59.24	+ 6 53.4	1.113	1.993	19.2	20.5
9 8	1 4.02	+14 35.5	1.530	2.423	14.0	20.8	9 8	0 58.01	+ 6 2.9	1.034	1.971	14.9	20.2
9 18	0 57.11	+14 5.8	1.477	2.427	9.9	20.6	9 18	0 53.83	+ 4 48.0	0.973	1.951	9.7	19.8
9 28	0 48.44	+13 16.3	1.446	2.432	5.5	20.4	9 28	0 47.31	+ 3 14.2	0.933	1.931	3.8	19.4
10 8	0 39.06	+12 11.9	1.442	2.436	3.0	20.2	10 8	0 39.64	+ 1 32.6	0.916	1.912	3.0	19.3
10 18	0 30.16	+11 0.1	1.465	2.441	6.2	20.4	10 18	0 32.27	- 0 3.4	0.922	1.895	9.2	19.6
10 28	0 28.89	+ 9 49.8	1.514	2.444	10.4	20.7	10 28	0 26.74	+ 1 20.4	0.949	1.879	15.0	19.9
11 7	0 18.01	+ 8 49.1	1.587	2.448	14.3	21.0	11 7	0 24.10	- 2 10.0	0.995	1.865	20.1	20.1
185314	2006 <i>UO</i> ₃₂₈	10	4.6 337°49	4°6/ 7.6 18			472342	2015 <i>AC</i> ₂₄₈	10	4.6 103°88	8°1/ 27.7 17		
8 29	1 8.73	+14 20.0	1.303	2.134	19.8	20.3	8 29	1 11.66	-13 2.3	1.590	2.454	15.2	21.3
9 8	1 4.97	+14 58.0	1.227	2.127	16.1	20.1	9 8	1 6.10	-14 33.0	1.553	2.473	12.0	21.1
9 18	0 58.16	+15 15.3	1.169	2.121	11.7	19.8	9 18	0 58.19	-15 58.8	1.538	2.492	9.2	21.0
9 28	0 48.99	+15 10.7	1.133	2.116	7.1	19.5	9 28	0 48.77	-17 9.7	1.548	2.511	8.1	21.0
10 8	0 38.73	+14 46.2	1.120	2.111	4.6	19.4	10 8	0 39.00	-17 57.3	1.584	2.529	9.3	21.1
10 18	0 28.87	+14 7.6	1.132	2.107	7.5	19.5	10 18	0 30.00	-18 17.1	1.645	2.546	11.9	21.3
10 28	0 20.92	+13 23.9	1.167	2.104	12.2	19.8	10 28	0 22.79	-18 8.6	1.728	2.563	14.7	21.6
11 7	0 15.90	+12 44.5	1.224	2.101	16.6	20.0	11 7	0 17.96	-17 34.7	1.831	2.579	17.2	21.8
109251	2001 <i>QY</i> ₁₀₂	10	4.6 71°16	2°3/ 2.7 17			180066	2003 <i>BN</i> ₇₉	10	4.6 279°63	2°7/ 2.0 18		
8 29	1 9.55	+ 2 9.5	1.420	2.279	17.0	20.3	8 29	1 6.17	- 1 5.9	1.987	2.839	13.1	20.2
9 8	1 4.72	+ 1 20.8	1.373	2.300	12.8	20.1	9 8	1 1.82	- 1 42.6	1.908	2.832	9.9	20.0
9 18	0 57.40	+ 0 21.3	1.347	2.321	8.0	19.8	9 18	0 55.50	- 2 25.7	1.853	2.825	6.4	19.8
9 28	0 48.47	- 0 42.2	1.346	2.342	3.4	19.6	9 28	0 47.77	- 3 10.2	1.823	2.817	3.2	19.6
10 8	0 39.11	- 1 41.2	1.370	2.363	3.6	19.7	10 8	0 39.46	- 3 50.5	1.822	2.810	3.7	19.6
10 18	0 30.52	- 2 28.3	1.422	2.384	8.0	20.0	10 18	0 31.47	- 4 21.2	1.848	2.803	7.2	19.8
10 28	0 23.77	- 2 58.1	1.498	2.405	12.2	20.3	10 28	0 24.69	- 4 38.0	1.900	2.796	10.7	20.0
11 7	0 19.50	- 3 8.2	1.595	2.426	15.8	20.6	11 7	0 19.79	- 4 38.8	1.976	2.788	13.9	20.2
467263	2016 <i>EV</i> ₁₈₁	10	4.6 44°79	1°6/ 5.4 17			187583	2006 <i>WM</i> ₅₁	10	4.6 158°15	2°4/ 2.5 18		
8 29	1 13.94	+ 7 17.2	1.073	1.932	21.3	20.1	8 29	1 10.38	+ 0 28.2	1.701	2.551	15.1	20.7
9 8	1 8.91	+ 7 46.8	1.025	1.947	16.5	19.9	9 8	1 5.24	+ 0 8.9	1.633	2.555	11.4	20.5
9 18	1 0.52	+ 7 59.6	0.995	1.964	11.0	19.6	9 18	0 57.77	- 0 54.4	1.587	2.559	7.3	20.3
9 28	0 49.82	+ 7 57.6	0.986	1.981	4.9	19.4	9 28	0 48.68	- 1 42.9	1.567	2.562	3.3	20.0
10 8	0 38.40	+ 7 45.7	1.001	1.999	2.2	19.3	10 8	0 39.00	- 2 27.7	1.574	2.565	3.6	20.1
10 18	0 27.98	+ 7 30.5	1.041	2.017	7.8	19.7	10 18	0 29.82	- 3 2.5	1.608	2.568	7.6	20.3
10 28	0 20.03	+ 7 19.4	1.103	2.036	13.1	20.0	10 28	0 22.18	- 3 22.6	1.669	2.570	11.6	20.6
11 7	0 15.38	+ 7 18.2	1.186	2.055	17.5	20.4	11 7	0 16.80	- 3 25.5	1.752	2.572	15.1	20.8
59354	1999 <i>CF</i> ₁₅₂	10	4.6 111°02	2°6/ 6.8 18			281232	2007 <i>JQ</i> ₂₁	10	4.6 21°39	0°7/ 4.1 18		
8 29	1 9.90	+13 2.3	1.751	2.562	16.3	19.9	8 29	1 3.04	+ 5 0.8	0.907	1.798	21.5	19.1
9 8	1 4.86	+13 3.4	1.681	2.573	12.9	19.7	9 8	1 0.75	+ 4 48.7	0.875	1.817	16.3	18.9
9 18	0 57.51	+12 47.2	1.632	2.584	9.0	19.5	9 18	0 55.26	+ 4 19.2	0.859	1.838	10.3	18.7
9 28	0 48.56	+12 15.0	1.607	2.594	4.9	19.3	9 28	0 47.68	+ 3 38.9	0.864	1.862	4.0	18.4
10 8	0 39.02	+11 30.8	1.609	2.604	2.6	19.2	10 8	0 39.59	+ 2 57.3	0.890	1.888	2.5	18.4
10 18	0 29.97	+10 40.7	1.640	2.614	5.8	19.4	10 18	0 32.54	+ 2 23.3	0.939	1.916	8.4	18.9
10 28	0 22.46	+ 9 51.6	1.697	2.624	9.7	19.7	10 28	0 27.80	+ 2 4.3	1.009	1.945	13.7	19.3
11 7	0 17.20	+ 9 10.1	1.778	2.633	13.3	19.9	11 7	0 26.03	+ 2 4.0	1.098	1.976	18.0	19.6
154140	2002 <i>EY</i> ₁₅₁	10	4.6 290°36	1°8/ 2.5 18			407101	2009 <i>SL</i> ₂₈₄	10	4.6 41°96	6°8/ 12.9 17		
8 29	1 2.41	+ 2 59.5	2.106	2.953	12.6	20.2	8 29	1 3.48	+27 43.5	1.936	2.675	17.4	20.7
9 8	0 58.86	+ 2 1.2	2.025	2.946	9.6	20.0	9 8	0 59.94	+27 49.2	1.868	2.692	14.9	20.5
9 18	0 53.53	+ 0 52.3	1.967	2.940	6.0	19.8	9 18	0 54.31	+27 28.8	1.818	2.710	12.0	20.4
9 28	0 46.95	- 0 22.1	1.936	2.933	2.6	19.5	9 28	0 47.27	+26 41.4	1.789	2.728	9.1	20.3
10 8	0 39.85	- 1 35.7	1.934	2.926	2.8	19.6	10 8	0 39.74	+25 29.5	1.786	2.746	7.1	20.2
10 18	0 33.03	- 2 41.9	1.960	2.920	6.4	19.8	10 18	0 32.70	+23 59.1	1.808	2.765	7.1	20.2
10 28	0 27.29	- 3 35.0	2.013	2.913	10.0	20.0	10 28	0 27.05	+22 18.8	1.857	2.784	9.0	20.4
11 7	0 23.23	- 4 11.4	2.089	2.907	13.0	20.2	11 7	0 23.43	+20 38.3	1.932	2.803	11.6	20.6
506809	2007 <i>PG</i> ₃₇	10	4.6 26°30	6°5/ 8.7 17			142824	2002 <i>VE</i> ₆	10	4.6 67°01	0°4/ 4.9 18		
8 29	1 6.76	+16 37.8	0.886	1.742	24.9	20.2	8 29	1 4.93	+ 8 50.9	1.824	2.657	14.9	19.9
9 8	1 4.09	+17 32.0	0.842	1.754	20.3	20.0	9 8	1 0.95	+ 8 16.5	1.756	2.666	11.5	19.7
9 18	0 57.75	+17 55.2	0.814	1.769	15.0	19.7	9 18	0 54.93	+ 7 27.0	1.709	2.674	7.5	19.4
9 28	0 48.79	+17 45.2	0.803	1.785	9.7	19.5	9 28	0 47.52	+ 6 26.4	1.687	2.683	3.2	19.2
10 8	0 38.93	+17 6.2	0.812	1.802	6.6	19.4	10 8	0 39.61	+ 5 20.5	1.693	2.691	1.4	19.1
10 18	0 30.08	+16 8.0	0.843	1.821	8.9	19.6	10 18	0 32.15	+ 4 16.2	1.727	2.700	5.7	19.4
10 28	0 23.88	+15 4.2	0.895	1.841	13.6	20.0	10 28	0 26.02	+ 3 20.4	1.788	2.709	9.7	19.7
11 7	0 21.20	+14 7.7	0.965	1.862	18.1	20.3	11 7	0 21.87	+ 2 37.9	1.872	2.717	13.2	19.9
344412	2002 <i>AP</i> ₁₇₁	10	4.6 164°88	1°9/ 2.8 18			313360	2002					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
88039	2000 UQ_{100}	10	4.6 305°04	2°0/ 2.8 18	R		423585	2005 VV_{97}	10	4.6 282°01	2°3/ 8.0 16		
8 29	1 7.51	- 0 11.4	2.048	2.895	13.0	18.5	8 29	1 0.91	+15 56.5	3.166	3.945	10.4	21.6
9 8	1 2.77	- 0 28.4	1.969	2.889	9.9	18.3	9 8	0 57.25	+15 48.1	3.063	3.932	8.4	21.5
9 18	0 56.08	- 0 51.3	1.913	2.884	6.3	18.1	9 18	0 52.30	+15 27.8	2.982	3.919	6.1	21.3
9 28	0 48.00	- 1 16.1	1.883	2.879	2.8	17.9	9 28	0 46.46	+14 56.4	2.929	3.906	3.7	21.1
10 8	0 39.36	- 1 38.3	1.882	2.874	2.9	17.9	10 8	0 40.21	+14 16.0	2.904	3.893	2.3	21.0
10 18	0 31.05	- 1 53.4	1.908	2.869	6.5	18.1	10 18	0 34.10	+13 29.6	2.908	3.880	3.7	21.1
10 28	0 23.95	- 1 57.8	1.962	2.864	10.1	18.3	10 28	0 28.69	+12 41.3	2.942	3.867	6.2	21.3
11 7	0 18.70	- 1 49.5	2.039	2.859	13.2	18.5	11 7	0 24.44	+11 55.2	3.003	3.854	8.5	21.4
242917	2006 OZ_2	10	4.6 11°10	3°4/11.2 18			516937	2012 BB	10	4.6 338°06	12°7/17.9 18		
8 29	0 59.42	+23 23.3	4.205	4.927	8.9	20.7	8 29	1 5.34	-30 17.5	1.876	2.715	14.3	20.1
9 8	0 55.81	+23 34.5	4.109	4.928	7.5	20.6	9 8	1 1.50	-32 15.5	1.841	2.709	13.1	20.1
9 18	0 51.22	+23 34.8	4.036	4.929	5.9	20.5	9 18	0 55.40	-33 56.1	1.828	2.704	12.7	20.0
9 28	0 45.97	+23 24.2	3.989	4.930	4.4	20.4	9 28	0 47.76	-35 9.3	1.837	2.699	13.1	20.0
10 8	0 40.43	+23 3.6	3.969	4.931	3.5	20.3	10 8	0 39.57	-35 48.3	1.867	2.695	14.3	20.1
10 18	0 35.03	+22 34.7	3.979	4.932	3.7	20.3	10 18	0 31.92	-35 50.5	1.916	2.691	15.9	20.2
10 28	0 30.17	+22 0.2	4.017	4.934	4.9	20.4	10 28	0 25.79	-35 17.0	1.984	2.687	17.5	20.4
11 7	0 26.21	+21 23.2	4.083	4.935	6.5	20.5	11 7	0 21.85	-34 12.7	2.065	2.684	18.9	20.5
213960	2003 YX_{25}	10	4.6 317°32	2°7/ 2.5 18			91604	Clausmadsen	10	4.6 203°96	5°0/29.1 18		
8 29	1 5.19	+ 0 21.8	1.507	2.374	15.8	20.0	8 29	1 5.81	- 9 29.0	2.244	3.101	11.6	19.3
9 8	1 1.88	- 0 8.6	1.419	2.350	12.1	19.7	9 8	1 1.27	-10 22.9	2.179	3.100	9.0	19.2
9 18	0 55.99	- 0 49.1	1.352	2.327	7.8	19.4	9 18	0 55.01	-11 16.5	2.137	3.099	6.4	19.0
9 28	0 48.12	- 1 34.4	1.308	2.304	3.6	19.1	9 28	0 47.56	-12 3.9	2.122	3.099	5.1	18.9
10 8	0 39.26	- 2 17.1	1.290	2.282	3.9	19.1	10 8	0 39.69	-12 39.5	2.135	3.098	6.0	19.0
10 18	0 30.63	- 2 50.0	1.297	2.260	8.5	19.3	10 18	0 32.18	-12 59.1	2.176	3.097	8.4	19.1
10 28	0 23.48	- 3 6.6	1.328	2.239	13.2	19.5	10 28	0 25.79	-13 0.5	2.242	3.096	11.1	19.3
11 7	0 18.74	- 3 3.5	1.381	2.219	17.3	19.7	11 7	0 21.07	-12 43.5	2.329	3.094	13.5	19.5
412580	2014 OE_{29}	10	4.6 277°39	0°4/ 4.2 18			66656	1999 SV_{17}	10	4.6 342°77	7°3/27.7 18		
8 29	1 4.73	+ 5 36.9	2.152	2.987	12.9	21.2	8 29	0 59.96	- 6 28.8	1.301	2.193	16.1	17.9
9 8	1 0.61	+ 5 11.5	2.068	2.981	9.9	21.0	9 8	0 58.00	- 8 19.7	1.240	2.183	12.4	17.7
9 18	0 54.67	+ 4 35.4	2.007	2.975	6.4	20.8	9 18	0 53.48	-10 17.8	1.200	2.173	8.9	17.5
9 28	0 47.44	+ 3 52.1	1.973	2.969	2.5	20.5	9 28	0 47.09	-12 10.6	1.183	2.164	7.3	17.4
10 8	0 39.67	+ 3 6.0	1.966	2.963	1.6	20.4	10 8	0 39.93	-13 45.1	1.191	2.157	9.1	17.5
10 18	0 32.18	+ 2 22.5	1.988	2.957	5.5	20.7	10 18	0 33.24	-14 50.8	1.221	2.150	12.7	17.6
10 28	0 25.78	+ 1 46.5	2.038	2.951	9.1	20.9	10 28	0 28.19	-15 22.3	1.273	2.145	16.6	17.9
11 7	0 21.09	+ 1 21.9	2.111	2.945	12.3	21.1	11 7	0 25.58	-15 19.6	1.342	2.140	19.9	18.1
316465	2010 UA_{96}	10	4.6 334°96	5°7/28.7 18			266959	2010 UG_{102}	10	4.6 309°22	1°9/ 2.7 17		
8 29	1 3.33	- 8 15.9	1.846	2.716	13.2	19.9	8 29	1 3.83	+ 1 41.2	1.930	2.782	13.4	20.9
9 8	0 59.79	- 9 26.5	1.779	2.709	10.1	19.7	9 8	1 0.21	+ 1 3.8	1.842	2.766	10.2	20.7
9 18	0 54.24	-10 39.0	1.735	2.702	7.2	19.5	9 18	0 54.58	+ 0 16.8	1.777	2.750	6.5	20.4
9 28	0 47.28	-11 45.6	1.717	2.696	5.7	19.4	9 28	0 47.49	- 0 35.1	1.737	2.733	2.8	20.2
10 8	0 39.76	-12 38.8	1.725	2.690	6.9	19.4	10 8	0 39.72	- 1 26.0	1.725	2.718	3.0	20.2
10 18	0 32.62	-13 12.6	1.759	2.685	9.7	19.6	10 18	0 32.19	- 2 9.7	1.740	2.702	6.9	20.4
10 28	0 26.75	-13 23.8	1.817	2.680	12.8	19.8	10 28	0 25.82	- 2 40.7	1.782	2.687	10.7	20.6
11 7	0 22.80	-13 12.0	1.896	2.675	15.6	20.0	11 7	0 21.33	- 2 55.8	1.846	2.672	14.2	20.8
363915	2005 SE_{221}	10	4.6 35°81	1°6/ 6.3 15			436519	2011 FP_{80}	10	4.6 86°14	0°6/ 5.1 17		
8 29	1 2.99	+12 46.0	2.055	2.870	14.1	21.7	8 29	1 10.56	+ 7 39.9	1.605	2.440	16.5	21.5
9 8	0 59.35	+12 12.5	1.975	2.872	11.1	21.5	9 8	1 5.48	+ 7 33.7	1.541	2.452	12.7	21.3
9 18	0 53.88	+11 22.1	1.917	2.873	7.6	21.2	9 18	0 57.99	+ 7 13.4	1.499	2.464	8.4	21.1
9 28	0 47.12	+10 17.5	1.885	2.875	3.8	21.0	9 28	0 48.82	+ 6 42.2	1.480	2.475	3.6	20.9
10 8	0 39.86	+ 9 3.9	1.880	2.877	1.7	20.9	10 8	0 39.07	+ 6 5.0	1.489	2.487	1.6	20.7
10 18	0 32.93	+ 7 47.6	1.904	2.879	5.0	21.1	10 18	0 29.91	+ 5 28.1	1.525	2.498	6.3	21.1
10 28	0 27.16	+ 6 35.7	1.956	2.881	8.7	21.3	10 28	0 22.39	+ 4 57.5	1.588	2.510	10.6	21.4
11 7	0 23.15	+ 5 34.2	2.032	2.883	12.0	21.6	11 7	0 17.26	+ 4 38.2	1.673	2.521	14.3	21.6
294159	2007 TS_{352}	10	4.6 180°46	1°3/ 6.9 18			75921	2000 CL_{63}	10	4.6 183°73	3°0/ 7.7 18		
8 29	0 59.85	+12 5.4	4.487	5.272	7.5	20.2	8 29	1 7.38	+15 28.6	2.228	3.017	14.0	20.0
9 8	0 56.00	+12 8.3	4.394	5.272	5.9	20.1	9 8	1 2.64	+15 28.9	2.141	3.017	11.2	19.8
9 18	0 51.28	+12 4.5	4.327	5.272	4.1	20.0	9 18	0 56.00	+15 13.3	2.076	3.017	8.1	19.7
9 28	0 45.99	+11 54.9	4.288	5.272	2.3	19.8	9 28	0 48.02	+14 42.7	2.037	3.017	4.8	19.5
10 8	0 40.45	+11 40.9	4.279	5.272	1.3	19.7	10 8	0 39.47	+13 59.8	2.025	3.016	3.0	19.3
10 18	0 35.04	+11 24.1	4.300	5.272	2.6	19.9	10 18	0 31.21	+13 9.1	2.043	3.015	5.0	19.5
10 28	0 30.11	+11 6.7	4.351	5.272	4.5	20.0	10 28	0 24.09	+12 16.5	2.088	3.014	8.3	19.7
11 7	0 25.99	+10 50.7	4.431	5.272	6.2	20.1	11 7	0 18.75	+11 28.0	2.159	3.012	11.4	19.9
372832	2010 UJ_{70}	10	4.6 337°81	4°1/ 2.3 18			237025	2008 SY_{39}	10	4.6 252°08	0°7/ 3.2 18		
8 29	1 6.07	- 2 5.5	1.029	1.920	19.5	20.2	8 29	0 57.09	+ 2 14.6	4.635	5.463	6.6	20.7
9 8	1 3.43	- 2 24.5	0.962	1.905	15.0	19.8	9 8	0 53.90	+ 1 50.4	4.549	5.460	4.9	20.6
9 18	0 57.42	- 2 52.0	0.912	1.892	9.8	19.5	9 18	0 49.95	+ 1 22.5	4.489	5.457	3.1	20.5
9 28	0 48.79	- 3 20.2	0.883	1.879	4.9	19.2	9 28	0 45.48	+ 0 52.8	4.458	5.454	1.3	20.3
10 8	0 38.97	- 3 40.1	0.877	1.868	5.5	19.2	10 8	0 40.80	+ 0 23.2	4.457	5.451	1.2	20.3
10 18	0 29.66	- 3 43.7	0.892	1.859	10.8	19.5	10 18	0 36.25	- 0 4.0	4.487	5.448	3.0	20.4
10 28	0 22.52	- 3 25.4	0.928	1.850	16.2	19.8	10 28	0 32.14	- 0 26.9	4.546	5.445	4.9	20.6
11 7	0 18.65	- 2 44.0	0.982	1.844	21.0	20.0	11 7	0 28.75	- 0 43.9	4.632	5.442	6.5	20.7
48555	1993 TW_{32}	10	4.6 348°28	1°6/ 3.1 18			65966	1998 HH_8	10	4.6 145°03	2°7/ 2.5 18		
8 29	1 4.08	+ 3 32.7	1.658	2.514	15.1	19.0	8 29	1 11.14	+ 0 0.3				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
316130	2009 RA ₇₄	10	4.6 313°26	1.4/ 2.2 18			241967	2002 GO ₁₀	10	4.6 206°14	1°1/ 3.3 18		
8 29	0 58.72	- 1 0.8	4.033	4.871	7.3	20.4	8 29	1 5.47	+ 5 35.4	2.175	3.007	12.8	21.3
9 8	0 55.23	- 1 23.8	3.948	4.865	5.5	20.3	9 8	1 1.17	+ 4 32.1	2.090	3.002	9.8	21.1
9 18	0 50.85	- 1 49.6	3.889	4.859	3.5	20.1	9 18	0 55.06	+ 3 16.0	2.028	2.997	6.2	20.9
9 28	0 45.85	- 2 15.9	3.859	4.853	1.7	20.0	9 28	0 47.66	+ 1 51.8	1.994	2.991	2.4	20.6
10 8	0 40.62	- 2 40.5	3.858	4.847	1.9	20.0	10 8	0 39.73	+ 0 26.1	1.990	2.985	2.2	20.6
10 18	0 35.51	- 3 1.0	3.888	4.841	3.8	20.1	10 18	0 32.09	- 0 54.2	2.015	2.978	6.0	20.9
10 28	0 30.94	- 3 15.4	3.946	4.836	5.8	20.3	10 28	0 25.54	- 2 2.8	2.068	2.970	9.6	21.1
11 7	0 27.21	- 3 22.2	4.031	4.830	7.6	20.4	11 7	0 20.71	- 2 55.2	2.145	2.962	12.8	21.3
256211	2006 VR ₁₁₁	10	4.6 242°07	3°0/ 7.7 18			313316	2002 EZ ₅₃	10	4.6 280°96	2°7/ 7.0 17		
8 29	1 5.47	+15 33.6	2.096	2.893	14.5	20.9	8 29	1 8.39	+12 50.7	2.207	3.006	13.8	21.3
9 8	1 1.31	+15 30.9	2.011	2.891	11.7	20.7	9 8	1 3.63	+13 8.7	2.102	2.986	11.1	21.1
9 18	0 55.21	+15 11.4	1.946	2.890	8.4	20.5	9 18	0 56.82	+13 13.8	2.019	2.966	7.9	20.8
9 28	0 47.72	+14 35.8	1.907	2.888	5.0	20.3	9 28	0 48.46	+13 6.1	1.962	2.946	4.5	20.6
10 8	0 39.64	+13 47.2	1.895	2.886	3.0	20.2	10 8	0 39.30	+12 47.4	1.933	2.925	2.7	20.4
10 18	0 31.86	+12 50.8	1.911	2.885	5.1	20.3	10 18	0 30.24	+12 21.2	1.932	2.905	5.2	20.6
10 28	0 25.25	+11 52.9	1.955	2.883	8.5	20.5	10 28	0 22.25	+11 52.3	1.960	2.884	8.8	20.8
11 7	0 20.47	+11 0.0	2.024	2.881	11.8	20.7	11 7	0 16.07	+11 26.1	2.012	2.863	12.1	20.9
298710	2004 FZ ₁₂	10	4.6 252°50	3°5/ 7.7 17			85441	1997 FX ₂	10	4.6 228°04	1°0/ 5.5 18		
8 29	1 9.70	+15 7.4	2.190	2.977	14.2	21.1	8 29	1 8.67	+10 9.6	1.839	2.660	15.3	21.0
9 8	1 4.60	+15 30.9	2.090	2.964	11.5	20.9	9 8	1 4.06	+ 9 45.0	1.749	2.651	12.0	20.8
9 18	0 57.42	+15 40.1	2.013	2.952	8.4	20.7	9 18	0 57.18	+ 9 4.0	1.680	2.641	8.0	20.5
9 28	0 48.66	+15 34.7	1.960	2.938	5.2	20.4	9 28	0 48.60	+ 8 8.9	1.637	2.630	3.7	20.2
10 8	0 39.14	+15 16.0	1.936	2.925	3.5	20.3	10 8	0 39.25	+ 7 5.0	1.621	2.619	1.5	20.0
10 18	0 29.77	+14 47.4	1.940	2.911	5.4	20.4	10 18	0 30.18	+ 5 58.9	1.634	2.607	5.9	20.3
10 28	0 21.54	+14 14.0	1.973	2.897	8.7	20.6	10 28	0 22.44	+ 4 58.3	1.673	2.594	10.3	20.5
11 7	0 15.19	+13 41.7	2.031	2.883	12.0	20.8	11 7	0 16.83	+ 4 9.5	1.737	2.581	14.1	20.8
457920	2009 UT ₄₇	10	4.6 279°95	1°9/ 2.6 17			396761	2003 UD ₃₄₁	10	4.6 2°81	5°5/ 11.0 17		
8 29	1 6.01	- 0 25.9	2.372	3.215	11.6	22.1	8 29	1 1.13	+23 35.7	1.893	2.663	16.7	20.7
9 8	1 1.45	- 0 47.3	2.284	3.203	8.8	21.9	9 8	0 58.30	+23 29.7	1.810	2.663	14.1	20.5
9 18	0 55.18	- 1 14.0	2.221	3.191	5.6	21.7	9 18	0 53.40	+22 58.8	1.746	2.663	11.0	20.3
9 28	0 47.69	- 1 42.4	2.184	3.179	2.6	21.5	9 28	0 47.04	+22 2.7	1.704	2.663	7.8	20.1
10 8	0 39.67	- 2 8.3	2.176	3.167	2.8	21.5	10 8	0 40.07	+20 44.5	1.688	2.665	5.7	20.0
10 18	0 31.89	- 2 27.8	2.197	3.155	6.0	21.7	10 18	0 33.45	+19 10.5	1.698	2.667	6.3	20.1
10 28	0 25.10	- 2 37.3	2.245	3.143	9.2	21.9	10 28	0 28.11	+17 29.5	1.735	2.669	9.0	20.2
11 7	0 19.90	- 2 34.7	2.318	3.131	12.1	22.0	11 7	0 24.73	+15 51.2	1.797	2.672	12.2	20.4
506799	2007 DN ₆₁	10	4.6 249°51	6°6/ 29.4 18			488160	2015 XX ₄	10	4.6 31°69	4°9/ 28.9 18		
8 29	1 17.12	-13 6.8	1.976	2.818	13.6	21.6	8 29	1 3.60	- 8 21.2	2.242	3.103	11.5	21.0
9 8	1 10.37	-13 45.2	1.889	2.798	10.8	21.4	9 8	0 59.62	- 9 27.6	2.179	3.104	8.8	20.8
9 18	1 1.19	-14 20.2	1.825	2.777	8.1	21.2	9 18	0 53.98	-10 34.9	2.140	3.105	6.3	20.7
9 28	0 50.19	-14 44.8	1.787	2.756	6.6	21.1	9 28	0 47.20	-11 36.8	2.128	3.106	4.9	20.6
10 8	0 38.37	-14 52.4	1.778	2.734	7.6	21.1	10 8	0 40.01	-12 27.3	2.144	3.107	5.9	20.7
10 18	0 26.88	-14 38.8	1.797	2.711	10.3	21.2	10 18	0 33.17	-13 1.7	2.186	3.108	8.3	20.8
10 28	0 16.83	-14 2.7	1.841	2.687	13.5	21.4	10 28	0 27.39	-13 17.2	2.255	3.109	11.0	21.0
11 7	0 9.05	-13 5.6	1.908	2.663	16.4	21.5	11 7	0 23.23	-13 13.5	2.345	3.110	13.4	21.2
250778	2005 TN ₂₇	10	4.6 285°37	0°5/ 3.9 18			515387	2013 GG ₁₅	10	4.6 126°51	0°0/ 4.4 18		
8 29	1 2.06	+ 7 38.3	2.114	2.949	13.1	20.7	8 29	1 4.18	+ 7 48.8	2.688	3.504	11.1	22.8
9 8	0 58.73	+ 6 37.4	2.018	2.931	10.1	20.5	9 8	0 59.73	+ 7 5.2	2.617	3.519	8.5	22.6
9 18	0 53.57	+ 5 21.0	1.945	2.913	6.5	20.3	9 18	0 53.89	+ 6 11.4	2.571	3.534	5.5	22.4
9 28	0 47.08	+ 3 53.5	1.899	2.896	2.5	20.0	9 28	0 47.14	+ 5 10.8	2.552	3.548	2.2	22.2
10 8	0 39.98	+ 2 21.2	1.881	2.878	1.8	19.9	10 8	0 40.07	+ 4 7.7	2.564	3.561	1.1	22.2
10 18	0 33.08	+ 0 51.5	1.893	2.860	5.9	20.1	10 18	0 33.33	+ 3 6.8	2.606	3.574	4.4	22.4
10 28	0 27.21	+ 0 28.1	1.931	2.842	9.7	20.3	10 28	0 27.50	+ 2 12.7	2.677	3.587	7.4	22.6
11 7	0 23.03	+ 1 32.1	1.994	2.825	13.1	20.5	11 7	0 23.06	+ 1 28.7	2.773	3.599	10.0	22.8
48426	1989 EV ₂	10	4.6 271°98	3°4/ 7.5 18			181785	1998 BK ₂₉	10	4.6 193°93	4°8/ 10.3 18		
8 29	1 6.44	+15 38.9	1.584	2.398	17.6	19.2	8 29	1 7.99	+22 17.4	2.587	3.329	13.4	21.3
9 8	1 2.74	+15 30.1	1.499	2.390	14.2	19.0	9 8	1 2.99	+22 37.6	2.493	3.327	11.3	21.1
9 18	0 56.50	+14 58.7	1.432	2.382	10.2	18.7	9 18	0 56.22	+22 41.3	2.419	3.325	8.8	20.9
9 28	0 48.36	+14 5.4	1.389	2.373	5.9	18.5	9 28	0 48.16	+22 27.4	2.370	3.322	6.4	20.8
10 8	0 39.33	+12 54.5	1.371	2.365	3.4	18.3	10 8	0 39.52	+21 57.1	2.349	3.319	4.9	20.7
10 18	0 30.64	+11 33.6	1.380	2.357	6.4	18.4	10 18	0 31.10	+21 13.3	2.356	3.315	5.5	20.7
10 28	0 23.49	+10 12.7	1.415	2.348	10.8	18.7	10 28	0 23.69	+20 21.1	2.392	3.311	7.7	20.8
11 7	0 18.74	+ 9 0.9	1.473	2.340	14.9	18.9	11 7	0 17.92	+19 26.4	2.454	3.307	10.2	21.0
117941	6202 P-L	10	4.6 356°39	1°9/ 6.5 18			405135	2002 PJ ₁₇₇	10	4.6 345°98	8°8/ 12.2 17		
8 29	1 1.50	+12 10.8	1.711	2.543	15.8	19.3	8 29	1 9.36	+27 2.1	1.985	2.715	17.3	20.0
9 8	0 58.65	+11 55.7	1.634	2.539	12.5	19.0	9 8	1 4.85	+28 24.0	1.895	2.708	15.1	19.8
9 18	0 53.66	+11 22.4	1.577	2.536	8.6	18.8	9 18	0 57.88	+29 26.2	1.824	2.701	12.7	19.6
9 28	0 47.15	+10 33.3	1.543	2.534	4.4	18.5	9 28	0 48.97	+30 4.1	1.775	2.696	10.4	19.5
10 8	0 39.99	+ 9 33.4	1.536	2.533	2.1	18.4	10 8	0 39.07	+30 15.6	1.750	2.690	8.9	19.4
10 18	0 33.18	+ 8 29.3	1.555	2.532	5.7	18.6	10 18	0 29.30	+30 1.8	1.750	2.686	9.1	19.4
10 28	0 27.70	+ 7 29.0	1.601	2.533	9.8	18.9	10 28	0 20.87	+29 27.8	1.775	2.682	10.7	19.5
11 7	0 24.25	+ 6 39.1	1.669	2.534	13.5	19.1	11 7	0 14.71	+28 41.5	1.824	2.679	13.0	19.6
487413	2014 QR ₃₇₆	10	4.6 339°30	1°1/ 3.3 18			146869	2002 AN ₁₈₁	10	4.6 342°04	3°6/ 2.3 18		
8 29	0 59.45	+ 6 51.0	2.007	2.852	13.3	20.3	8 29	1 9.72	- 4 22.2	1.570			

EPHEMERIDES

10 4.6

10 4.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
355493	2007 <i>XD</i> ₁₅	10	4.6	237°94	7.8/25.5	18	167421	2003 <i>WV</i> ₁₄₃	10	4.6	32°26	0.9/5.3	18
8 29	1 8.69	-18 38.8	2.305	3.152	11.7	21.6	8 29	1 7.36	+ 8 21.7	1.614	2.452	16.3	20.0
9 8	1 3.58	-19 51.7	2.237	3.139	9.7	21.5	9 8	1 3.15	+ 8 15.5	1.545	2.457	12.6	19.7
9 18	0 56.60	-20 58.8	2.193	3.126	8.2	21.4	9 18	0 56.59	+ 7 54.6	1.497	2.462	8.4	19.5
9 28	0 48.30	-21 52.6	2.176	3.113	7.8	21.3	9 28	0 48.36	+ 7 21.8	1.474	2.468	3.7	19.3
10 8	0 39.48	-22 26.9	2.184	3.099	8.9	21.4	10 8	0 39.50	+ 6 42.1	1.476	2.474	1.6	19.1
10 18	0 30.98	-22 38.0	2.219	3.085	10.8	21.5	10 18	0 31.11	+ 6 1.7	1.506	2.480	6.1	19.4
10 28	0 23.65	-22 24.6	2.277	3.070	13.0	21.6	10 28	0 24.27	+ 5 27.2	1.561	2.487	10.5	19.7
11 7	0 18.10	-21 48.2	2.355	3.055	15.0	21.7	11 7	0 19.70	+ 5 3.8	1.639	2.494	14.3	20.0
182872	2002 <i>CU</i> ₂₁₁	10	4.6	78°16	0°1/4.7	18	518611	2008 <i>AG</i> ₁₀₃	10	4.6	289°62	6°7/27.6	18
8 29	1 5.47	+ 7 2.3	2.111	2.941	13.3	20.4	8 29	1 5.78	-10 36.8	1.886	2.752	13.1	21.4
9 8	1 1.13	+ 6 39.3	2.041	2.950	10.2	20.3	9 8	1 1.87	-11 57.0	1.802	2.727	10.4	21.2
9 18	0 54.99	+ 6 5.0	1.993	2.958	6.6	20.1	9 18	0 55.78	-13 19.0	1.741	2.702	7.8	21.0
9 28	0 47.63	+ 5 22.6	1.972	2.967	2.7	19.8	9 28	0 48.08	-14 34.5	1.706	2.677	6.7	20.9
10 8	0 39.83	+ 4 36.8	1.979	2.976	1.3	19.7	10 8	0 39.61	-15 34.8	1.698	2.652	8.0	20.9
10 18	0 32.42	+ 3 52.6	2.014	2.985	5.2	20.0	10 18	0 31.35	-16 13.3	1.715	2.626	10.9	21.0
10 28	0 26.17	+ 3 15.2	2.077	2.994	8.8	20.3	10 28	0 24.33	-16 25.9	1.756	2.601	14.0	21.2
11 7	0 21.67	+ 2 48.5	2.165	3.003	11.9	20.5	11 7	0 19.31	-16 12.5	1.816	2.576	16.9	21.3
342456	2008 <i>UP</i> ₁₁₂	10	4.6	280°00	2°2/6.5	18	260695	2005 <i>JS</i> ₁₀₆	10	4.6	173°62	4°3/30.9	18
8 29	1 6.72	+12 19.6	1.734	2.554	16.1	20.5	8 29	1 8.18	- 1 58.3	1.531	2.395	15.7	20.6
9 8	1 2.71	+12 12.9	1.648	2.546	12.8	20.3	9 8	1 3.86	- 3 9.3	1.467	2.396	11.9	20.3
9 18	0 56.37	+11 48.5	1.583	2.539	8.9	20.0	9 18	0 57.08	- 4 29.0	1.424	2.397	7.8	20.1
9 28	0 48.31	+11 7.8	1.541	2.531	4.6	19.8	9 28	0 48.57	- 5 49.1	1.406	2.398	4.5	19.9
10 8	0 39.46	+10 15.1	1.527	2.523	2.3	19.6	10 8	0 39.40	- 7 0.1	1.415	2.398	5.6	20.0
10 18	0 30.92	+ 9 16.6	1.540	2.515	5.9	19.8	10 18	0 30.75	- 7 53.9	1.450	2.399	9.4	20.2
10 28	0 23.77	+ 8 20.2	1.579	2.507	10.2	20.0	10 28	0 23.72	- 8 25.2	1.510	2.398	13.4	20.5
11 7	0 18.81	+ 7 32.7	1.641	2.500	14.0	20.3	11 7	0 19.06	- 8 32.3	1.590	2.398	16.9	20.7
157284	2004 <i>RZ</i> ₂₈₆	10	4.6	61°87	8°1/11.9	18	120050	2003 <i>BE</i> ₄₀	10	4.6	354°95	0°9/5.2	18
8 29	1 12.49	+25 20.6	1.538	2.297	20.4	19.3	8 29	1 2.42	+ 7 27.9	1.040	1.918	20.4	18.6
9 8	1 7.27	+26 10.2	1.484	2.323	17.3	19.1	9 8	1 0.54	+ 7 34.2	0.977	1.910	15.9	18.3
9 18	0 59.30	+26 32.0	1.447	2.349	13.8	18.9	9 18	0 55.50	+ 7 21.4	0.930	1.905	10.6	18.0
9 28	0 49.43	+26 23.2	1.431	2.375	10.5	18.8	9 28	0 48.08	+ 6 52.6	0.904	1.901	4.6	17.7
10 8	0 38.94	+25 45.2	1.439	2.401	8.3	18.8	10 8	0 39.62	+ 6 14.5	0.900	1.898	2.0	17.5
10 18	0 29.18	+24 43.9	1.472	2.427	8.6	18.9	10 18	0 31.70	+ 5 35.7	0.918	1.897	8.0	17.9
10 28	0 21.39	+23 29.0	1.530	2.453	10.9	19.1	10 28	0 25.86	+ 5 5.7	0.958	1.898	13.7	18.2
11 7	0 16.32	+22 11.6	1.611	2.479	13.7	19.3	11 7	0 23.07	+ 4 51.5	1.017	1.901	18.5	18.5
37438	2599 <i>P-L</i>	10	4.6	292°72	0°1/4.7	18	435131	2007 <i>EH</i> ₁₄₆	10	4.6	154°54	1°3/3.4	15
8 29	1 3.96	+ 9 1.3	1.630	2.472	16.0	19.2	8 29	1 8.93	+ 3 46.8	1.924	2.762	14.1	22.1
9 8	1 0.73	+ 8 16.4	1.543	2.458	12.4	18.9	9 8	1 3.93	+ 3 8.0	1.853	2.768	10.7	21.9
9 18	0 55.16	+ 7 12.4	1.476	2.443	8.2	18.7	9 18	0 56.89	+ 2 18.7	1.804	2.774	6.8	21.7
9 28	0 47.84	+ 5 53.2	1.433	2.429	3.4	18.3	9 28	0 48.44	+ 1 23.5	1.783	2.779	2.7	21.5
10 8	0 39.69	+ 4 26.0	1.417	2.415	1.7	18.2	10 8	0 39.47	+ 0 28.4	1.789	2.784	2.4	21.5
10 18	0 31.83	+ 3 18.3	1.428	2.401	6.7	18.5	10 18	0 30.93	- 0 20.6	1.824	2.788	6.4	21.7
10 28	0 25.35	+ 1 43.8	1.465	2.387	11.4	18.7	10 28	0 23.73	- 0 58.1	1.886	2.792	10.2	22.0
11 7	0 21.08	+ 0 45.1	1.524	2.373	15.4	18.9	11 7	0 18.52	- 1 20.7	1.972	2.796	13.5	22.2
206115	2002 <i>RA</i> ₂₄₃	10	4.6	83°73	2°0/6.5	18	325558	Guyane	10	4.6	283°92	1°3/2.9	18
8 29	1 7.92	+12 12.0	1.846	2.661	15.5	20.4	8 29	1 1.53	+ 4 34.0	2.286	3.126	12.0	20.7
9 8	1 3.24	+12 3.7	1.780	2.675	12.2	20.2	9 8	0 58.12	+ 3 29.1	2.202	3.119	9.1	20.5
9 18	0 56.46	+11 39.2	1.734	2.689	8.3	20.0	9 18	0 53.08	+ 2 12.9	2.142	3.113	5.8	20.3
9 28	0 48.25	+11 0.4	1.714	2.703	4.3	19.8	9 28	0 46.90	+ 0 50.0	2.109	3.106	2.3	20.0
10 8	0 39.53	+10 12.0	1.721	2.717	2.1	19.7	10 8	0 40.24	- 0 33.4	2.105	3.099	2.4	20.0
10 18	0 31.31	+ 9 19.6	1.756	2.730	5.4	19.9	10 18	0 33.84	- 1 50.8	2.131	3.092	5.8	20.3
10 28	0 24.50	+ 8 30.1	1.817	2.744	9.2	20.2	10 28	0 28.41	- 2 56.4	2.184	3.085	9.2	20.5
11 7	0 19.74	+ 7 49.0	1.904	2.757	12.6	20.4	11 7	0 24.51	- 3 46.1	2.261	3.079	12.2	20.6
269507	2009 <i>UU</i> ₉₁	10	4.6	307°07	4°6/1.1	18	439690	2014 <i>JE</i> ₆₀	10	4.6	25°45	3°8/1.2	18
8 29	1 7.73	- 3 27.3	1.453	2.323	16.0	20.2	8 29	1 5.38	- 2 55.1	1.717	2.581	14.3	20.3
9 8	1 3.76	- 4 18.2	1.382	2.314	12.3	20.0	9 8	1 1.42	- 3 44.0	1.656	2.586	10.8	20.1
9 18	0 57.16	- 5 15.9	1.332	2.305	8.1	19.7	9 18	0 55.34	- 4 38.3	1.618	2.591	7.0	19.9
9 28	0 48.64	- 6 12.9	1.306	2.297	4.8	19.5	9 28	0 47.82	- 5 31.5	1.605	2.596	4.0	19.8
10 8	0 39.31	- 7 0.2	1.305	2.289	5.8	19.5	10 8	0 39.79	- 6 16.6	1.618	2.602	4.8	19.8
10 18	0 30.43	- 7 30.5	1.330	2.281	9.8	19.7	10 18	0 32.25	- 6 47.7	1.658	2.608	8.3	20.1
10 28	0 23.21	- 7 38.9	1.379	2.274	14.0	20.0	10 28	0 26.11	- 7 1.0	1.723	2.615	11.8	20.3
11 7	0 18.50	- 7 24.2	1.448	2.266	17.7	20.2	11 7	0 22.03	- 6 55.1	1.810	2.622	15.0	20.5
509995	2009 <i>VP</i> ₃₀	10	4.6	16°00	5°2/8.8	18	320076	2007 <i>EF</i> ₅₄	10	4.6	62°22	0°0/4.7	18
8 29	1 5.18	+18 4.6	1.303	2.124	20.4	20.4	8 29	1 2.16	+ 8 44.5	2.255	3.082	12.6	20.8
9 8	1 2.16	+18 20.1	1.236	2.127	16.7	20.2	9 8	0 58.57	+ 7 55.0	2.177	3.084	9.7	20.6
9 18	0 56.28	+18 8.8	1.186	2.130	12.4	20.0	9 18	0 53.35	+ 6 52.2	2.122	3.086	6.3	20.4
9 28	0 48.31	+17 30.3	1.157	2.135	8.0	19.7	9 28	0 47.00	+ 5 39.7	2.094	3.089	2.6	20.1
10 8	0 39.48	+16 28.6	1.151	2.140	5.2	19.6	10 8	0 40.21	+ 4 23.2	2.094	3.091	1.3	20.0
10 18	0 31.20	+15 11.9	1.170	2.146	7.3	19.7	10 18	0 33.73	+ 3 8.7	2.123	3.094	5.0	20.3
10 28	0 24.79	+13 51.5	1.213	2.152	11.5	20.0	10 28	0 28.27	+ 2 2.3	2.181	3.097	8.5	20.5
11 7	0 21.12	+12 38.4	1.277	2.159	15.6	20.3	11 7	0 24.39	+ 1 8.5	2.263	3.099	11.5	20.7
154396	2003 <i>AT</i> ₃₃	10	4.6	268°74	1°0/3.8	18	449073	2012 <i>FL</i> ₅₉	10	4.6	27		

EPHEMERIDES

10 4.6

10 4.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
135565	2002 <i>GU</i> ₁₀	10	4.6	39°02	1.6°/ 3.5	18	325514	2009 <i>RH</i> ₅₇	10	4.6	6°13	0°1/ 4.8	18
8 29	1 6.45	+ 5 30.5	0.961	1.842	21.3	18.7	8 29	1 1.67	+ 9 24.4	2.330	3.153	12.4	21.1
9 8	1 3.23	+ 4 35.8	0.928	1.866	16.1	18.5	9 8	0 58.19	+ 8 27.8	2.248	3.153	9.5	20.9
9 18	0 56.85	+ 3 22.5	0.913	1.891	10.1	18.2	9 18	0 53.12	+ 7 17.3	2.190	3.153	6.2	20.7
9 28	0 48.45	+ 2 0.0	0.919	1.917	3.9	18.0	9 28	0 46.95	+ 5 56.6	2.158	3.153	2.6	20.4
10 8	0 39.60	+ 0 40.6	0.948	1.944	3.3	18.1	10 8	0 40.35	+ 4 31.4	2.156	3.154	1.2	20.3
10 18	0 31.84	- 0 24.7	1.000	1.971	9.0	18.5	10 18	0 34.02	+ 3 7.9	2.183	3.154	4.9	20.6
10 28	0 26.41	- 1 7.8	1.074	2.000	14.1	18.9	10 28	0 28.68	+ 1 52.5	2.239	3.154	8.3	20.8
11 7	0 23.95	- 1 25.9	1.167	2.029	18.3	19.2	11 7	0 24.86	+ 0 50.0	2.319	3.154	11.3	21.0
178824	2001 <i>FF</i> ₁₈₉	10	4.6	58°51	8°1/29.6	17	201510	2003 <i>OT</i> ₅	10	4.6	55°53	5°5/30.1	18
8 29	1 14.47	-11 36.5	1.239	2.112	18.0	19.0	8 29	1 8.02	- 6 27.4	1.527	2.397	15.4	19.4
9 8	1 8.64	-12 38.2	1.211	2.139	14.0	18.9	9 8	1 3.60	- 7 30.3	1.477	2.408	11.7	19.2
9 18	0 59.99	-13 34.3	1.202	2.165	10.2	18.7	9 18	0 56.81	- 8 35.3	1.450	2.420	8.0	19.0
9 28	0 49.64	-14 14.6	1.217	2.192	8.1	18.7	9 28	0 48.46	- 9 34.2	1.447	2.432	5.6	18.9
10 8	0 39.03	-14 31.3	1.257	2.219	9.2	18.8	10 8	0 39.62	-10 18.6	1.469	2.444	6.7	19.0
10 18	0 29.56	-14 20.9	1.320	2.247	12.2	19.1	10 18	0 31.43	-10 42.9	1.518	2.456	10.0	19.2
10 28	0 22.34	-13 44.1	1.406	2.274	15.5	19.4	10 28	0 24.91	-10 44.2	1.590	2.468	13.5	19.4
11 7	0 17.95	-12 44.9	1.510	2.301	18.5	19.7	11 7	0 20.71	-10 23.0	1.682	2.481	16.5	19.7
240171	2002 <i>PM</i> ₁₇₉	10	4.6	42°30	0°0/ 4.4	18	365729	2010 <i>VM</i> ₂₀₈	10	4.6	145°55	0°4/ 5.0	18
8 29	1 4.53	+ 8 0.5	1.694	2.536	15.5	20.9	8 29	1 8.36	+ 6 36.7	2.243	3.065	12.8	20.8
9 8	1 0.88	+ 7 19.0	1.626	2.541	11.9	20.7	9 8	1 3.31	+ 6 36.7	2.163	3.067	9.9	20.7
9 18	0 55.07	+ 6 21.7	1.578	2.546	7.7	20.5	9 18	0 56.45	+ 6 27.3	2.106	3.069	6.5	20.4
9 28	0 47.77	+ 5 13.1	1.556	2.552	3.1	20.2	9 28	0 48.31	+ 6 10.6	2.076	3.071	2.8	20.2
10 8	0 39.89	+ 4 0.0	1.560	2.557	1.6	20.1	10 8	0 39.66	+ 5 49.8	2.075	3.072	1.2	20.1
10 18	0 32.47	+ 2 50.3	1.592	2.563	6.2	20.4	10 18	0 31.32	+ 5 28.8	2.102	3.074	5.0	20.4
10 28	0 26.46	+ 1 51.2	1.649	2.570	10.4	20.7	10 28	0 24.11	+ 5 11.7	2.158	3.075	8.5	20.6
11 7	0 22.52	+ 1 7.9	1.730	2.576	14.1	20.9	11 7	0 18.63	+ 5 1.9	2.239	3.077	11.6	20.8
313347	2002 <i>GU</i> ₁₀₉	10	4.6	52°90	4°2/29.4	18	92473	2000 <i>LP</i>	10	4.6	81°20	3°6/ 2.3	18
8 29	1 2.09	- 4 0.3	2.093	2.955	12.1	19.9	8 29	1 14.28	- 1 27.1	1.273	2.137	18.2	18.9
9 8	0 58.59	- 5 29.7	2.032	2.961	9.1	19.7	9 8	1 8.70	- 2 1.3	1.225	2.154	13.8	18.7
9 18	0 53.39	- 7 4.1	1.996	2.966	6.1	19.5	9 18	1 0.23	- 2 42.8	1.198	2.171	8.8	18.5
9 28	0 47.04	- 8 36.2	1.986	2.972	4.3	19.4	9 28	0 49.85	- 3 24.2	1.194	2.188	4.3	18.3
10 8	0 40.27	- 9 58.6	2.005	2.978	5.4	19.5	10 8	0 38.94	- 3 57.5	1.216	2.206	4.8	18.4
10 18	0 33.86	-11 5.0	2.052	2.984	8.2	19.7	10 18	0 28.94	- 4 16.1	1.263	2.222	9.2	18.7
10 28	0 28.56	-11 51.0	2.124	2.990	11.1	19.9	10 28	0 21.08	- 4 16.1	1.334	2.239	13.6	19.0
11 7	0 24.90	-12 15.4	2.218	2.996	13.7	20.1	11 7	0 16.08	- 3 56.8	1.426	2.255	17.4	19.3
436065	2009 <i>RZ</i> ₇₃	10	4.6	158°71	2°6/29.6	16	112920	2002 <i>QR</i> ₆₂	10	4.6	138°67	2°1/ 2.7	17
8 29	1 0.99	- 9 58.4	4.690	5.529	6.3	21.6	8 29	1 7.54	+ 3 27.1	1.567	2.420	15.9	20.8
9 8	0 56.80	-10 17.1	4.619	5.531	4.8	21.4	9 8	1 3.32	+ 2 24.4	1.501	2.425	12.1	20.5
9 18	0 51.82	-10 34.7	4.574	5.533	3.4	21.3	9 18	0 56.73	+ 1 8.2	1.456	2.429	7.7	20.3
9 28	0 46.32	-10 49.1	4.559	5.535	2.6	21.3	9 28	0 48.47	+ 0 14.9	1.437	2.434	3.2	20.0
10 8	0 40.64	-10 58.3	4.574	5.536	3.1	21.3	10 8	0 39.60	- 1 35.9	1.445	2.438	3.4	20.1
10 18	0 35.11	-11 0.7	4.619	5.538	4.4	21.4	10 18	0 31.24	- 2 46.3	1.480	2.441	7.8	20.3
10 28	0 30.08	-10 55.1	4.692	5.539	5.8	21.5	10 28	0 24.45	- 3 39.0	1.540	2.445	12.1	20.6
11 7	0 25.83	-10 41.2	4.790	5.541	7.2	21.6	11 7	0 19.96	- 4 10.2	1.622	2.448	15.8	20.9
401268	2012 <i>BG</i> ₁₄₃	10	4.6	113°73	2°8/ 8.0	18	437038	2012 <i>TV</i> ₃₁₁	10	4.6	24°23	2°7/ 3.4	18
8 29	1 3.97	+16 44.7	2.315	3.102	13.6	21.4	8 29	1 16.41	- 3 22.1	1.176	2.044	19.2	19.3
9 8	0 59.96	+16 23.9	2.234	3.109	10.9	21.2	9 8	1 10.60	- 2 49.2	1.125	2.055	14.6	19.0
9 18	0 54.26	+15 46.2	2.175	3.115	7.8	21.0	9 18	1 1.61	- 2 18.4	1.094	2.068	9.4	18.8
9 28	0 47.39	+14 52.9	2.142	3.121	4.7	20.8	9 28	0 50.46	- 1 45.8	1.086	2.082	4.2	18.6
10 8	0 40.08	+13 47.8	2.136	3.127	2.8	20.7	10 8	0 38.66	- 1 7.8	1.104	2.098	3.8	18.6
10 18	0 33.09	+12 36.2	2.159	3.133	4.6	20.9	10 18	0 27.84	- 0 22.0	1.146	2.114	8.7	18.9
10 28	0 27.16	+11 24.4	2.211	3.139	7.7	21.1	10 28	0 19.38	+ 0 32.7	1.213	2.131	13.5	19.2
11 7	0 22.86	+10 18.5	2.289	3.145	10.7	21.3	11 7	0 14.06	+ 1 36.5	1.300	2.150	17.6	19.6
300703	2007 <i>VG</i> ₉₄	10	4.6	246°67	2°1/ 2.6	18	189142	2002 <i>FK</i> ₃₅	10	4.6	92°43	2°3/ 7.5	18
8 29	1 8.79	- 0 9.4	2.239	3.078	12.3	21.7	8 29	1 4.73	+15 20.6	2.342	3.134	13.3	20.4
9 8	1 3.75	- 0 36.6	2.147	3.063	9.4	21.5	9 8	1 0.44	+14 58.1	2.272	3.151	10.6	20.2
9 18	0 56.82	- 1 10.0	2.078	3.048	6.0	21.3	9 18	0 54.51	+14 19.8	2.223	3.167	7.4	20.1
9 28	0 48.49	- 1 45.8	2.037	3.032	2.8	21.0	9 28	0 47.50	+13 27.8	2.200	3.183	4.2	19.9
10 8	0 39.53	- 2 19.2	2.024	3.015	3.0	21.0	10 8	0 40.12	+12 25.9	2.206	3.199	2.3	19.8
10 18	0 30.79	- 2 45.5	2.041	2.998	6.4	21.2	10 18	0 33.11	+11 19.4	2.241	3.215	4.5	20.0
10 28	0 23.12	- 3 0.8	2.085	2.981	9.9	21.4	10 28	0 27.18	+10 14.2	2.304	3.230	7.6	20.2
11 7	0 17.19	- 3 2.6	2.154	2.964	13.0	21.6	11 7	0 22.87	+ 9 15.7	2.394	3.246	10.4	20.4
480441	2015 <i>KR</i> ₁₃₆	10	4.6	37°90	4°1/ 1.9	18	451982	2014 <i>NN</i> ₅₅	10	4.6	250°22	1°9/ 6.6	18
8 29	1 9.23	- 3 4.7	1.311	2.184	17.3	20.1	8 29	1 7.44	+11 26.6	2.378	3.181	12.8	20.7
9 8	1 4.72	- 3 38.3	1.269	2.202	13.0	19.9	9 8	1 2.66	+11 34.6	2.285	3.173	10.1	20.6
9 18	0 57.58	- 4 16.7	1.247	2.222	8.4	19.7	9 18	0 56.08	+11 30.8	2.215	3.166	7.0	20.3
9 28	0 48.75	- 4 52.6	1.249	2.242	4.5	19.5	9 28	0 48.20	+11 16.2	2.170	3.158	3.7	20.1
10 8	0 39.48	- 5 18.6	1.276	2.263	5.2	19.6	10 8	0 39.73	+10 53.2	2.155	3.150	2.0	20.0
10 18	0 31.05	- 5 29.2	1.327	2.284	9.1	19.9	10 18	0 31.47	+10 25.2	2.168	3.142	4.7	20.2
10 28	0 24.55	- 5 21.2	1.403	2.306	13.2	20.2	10 28	0 24.23	+ 9 57.0	2.211	3.134	8.0	20.4
11 7	0 20.63	- 4 54.6	1.499	2.329	16.7	20.5	11 7	0 18.63	+ 9 32.9	2.278	3.125	11.1	20.6
8151	Andranada	10	4.6	111°75	2°6/ 6.9	18	318340	2004 <i>TW</i> ₂₂₂	10	4.7	31		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
421659	2014 <i>OO</i> ₃₆₄	10	4.7	153°65	5°5/10.3	18	339324	2004 <i>XA</i> ₁₃₂	10	4.7	357°68	13°3/26.9	18
8 29	1 8.76	+21 53.4	2.303	3.054	14.6	20.9	8 29	1 4.67	-19 58.0	0.974	1.872	19.7	18.8
9 8	1 3.84	+22 32.8	2.215	3.054	12.3	20.7	9 8	1 2.40	-21 3.2	0.931	1.864	16.6	18.6
9 18	0 56.94	+22 55.2	2.147	3.054	9.7	20.5	9 18	0 56.70	-21 52.7	0.905	1.858	14.2	18.4
9 28	0 48.58	+22 58.9	2.103	3.054	7.1	20.4	9 28	0 48.58	-22 12.3	0.898	1.854	13.4	18.4
10 8	0 39.55	+22 44.5	2.085	3.054	5.6	20.3	10 8	0 39.66	-21 52.1	0.910	1.853	14.7	18.5
10 18	0 30.76	+22 14.5	2.096	3.054	6.2	20.3	10 18	0 31.64	-20 49.1	0.942	1.854	17.4	18.6
10 28	0 23.11	+21 34.2	2.134	3.054	8.4	20.5	10 28	0 25.99	-19 7.0	0.991	1.858	20.6	18.8
11 7	0 17.30	+20 49.9	2.198	3.054	11.0	20.6	11 7	0 23.53	-16 54.3	1.056	1.864	23.6	19.1
219497	2001 <i>FC</i> ₈₈	10	4.7	55°67	5°9/1.6	16	265293	2004 <i>GL</i> ₃₈	10	4.7	135°06	2°4/6.9	18
8 29	1 18.87	- 8 26.9	1.219	2.085	18.7	18.9	8 29	1 10.10	+13 43.5	1.861	2.665	15.8	21.0
9 8	1 12.04	- 8 43.1	1.184	2.111	14.3	18.7	9 8	1 4.99	+13 31.2	1.789	2.677	12.5	20.8
9 18	1 2.23	- 8 57.0	1.169	2.138	9.7	18.5	9 18	0 57.69	+13 1.0	1.738	2.688	8.7	20.6
9 28	0 50.60	- 9 1.2	1.177	2.164	6.3	18.4	9 28	0 48.88	+12 14.9	1.711	2.698	4.7	20.4
10 8	0 38.68	- 8 49.5	1.211	2.191	6.9	18.5	10 8	0 39.50	+11 17.1	1.713	2.708	2.4	20.3
10 18	0 27.98	- 8 19.1	1.270	2.218	10.5	18.8	10 18	0 30.59	+10 14.1	1.742	2.717	5.5	20.5
10 28	0 19.69	- 7 30.4	1.353	2.245	14.4	19.1	10 28	0 23.13	+ 9 13.2	1.800	2.725	9.3	20.8
11 7	0 14.45	- 6 25.7	1.456	2.272	17.8	19.4	11 7	0 17.80	+ 8 20.7	1.882	2.733	12.8	21.0
396460	2014 <i>FW</i> ₁₉	10	4.7	17°62	0°2/4.5	18	275294	2010 <i>NF</i> ₁₈	10	4.7	29°54	1°5/5.8	17
8 29	1 1.65	+ 9 0.5	1.341	2.199	17.9	19.4	8 29	1 4.62	+11 12.8	1.043	1.907	21.4	20.7
9 8	0 59.19	+ 8 3.1	1.279	2.203	13.7	19.1	9 8	1 2.04	+10 48.0	0.992	1.917	16.7	20.5
9 18	0 54.23	+ 6 44.6	1.237	2.209	8.9	18.9	9 18	0 56.33	+ 9 57.3	0.958	1.928	11.2	20.2
9 28	0 47.51	+ 5 10.9	1.218	2.215	3.6	18.6	9 28	0 48.42	+ 8 45.6	0.945	1.939	5.2	19.9
10 8	0 40.13	+ 3 32.1	1.225	2.222	1.9	18.5	10 8	0 39.75	+ 7 22.4	0.954	1.952	2.1	19.8
10 18	0 33.31	+ 1 59.0	1.257	2.230	7.3	18.9	10 18	0 31.88	+ 5 59.8	0.987	1.966	7.7	20.2
10 28	0 28.15	+ 0 41.6	1.313	2.239	12.1	19.2	10 28	0 26.17	+ 4 49.6	1.042	1.980	13.1	20.5
11 7	0 25.37	- 0 13.7	1.391	2.248	16.1	19.4	11 7	0 23.44	+ 3 59.7	1.117	1.995	17.7	20.9
290875	2005 <i>WC</i> ₆₀	10	4.7	327°78	1°9/6.8	18	401738	2013 <i>JB</i> ₃₅	10	4.7	171°56	2°1/7.3	18
8 29	1 2.50	+13 46.6	2.024	2.837	14.4	20.7	8 29	1 4.37	+14 42.1	2.550	3.340	12.4	21.0
9 8	0 59.15	+13 15.8	1.939	2.832	11.4	20.5	9 8	1 0.15	+14 21.2	2.463	3.342	9.8	20.8
9 18	0 53.92	+12 27.0	1.874	2.828	7.9	20.3	9 18	0 54.37	+13 45.9	2.399	3.344	6.9	20.6
9 28	0 47.34	+11 22.5	1.835	2.824	4.2	20.0	9 28	0 47.50	+12 57.8	2.362	3.345	3.9	20.4
10 8	0 40.20	+10 7.2	1.823	2.820	2.0	19.9	10 8	0 40.19	+12 0.2	2.353	3.347	2.1	20.3
10 18	0 33.34	+ 8 47.5	1.840	2.816	5.1	20.1	10 18	0 33.15	+10 57.7	2.374	3.347	4.3	20.5
10 28	0 27.63	+ 7 31.1	1.884	2.812	8.8	20.3	10 28	0 27.05	+ 9 55.7	2.423	3.348	7.3	20.7
11 7	0 23.70	+ 6 24.4	1.953	2.809	12.2	20.5	11 7	0 22.45	+ 8 59.5	2.499	3.348	10.1	20.9
78469	2002 <i>RN</i> ₄₄	10	4.7	358°76	2°1/2.9	18	283844	2003 <i>UH</i> ₁₁₆	10	4.7	337°69	3°4/2.1	18
8 29	1 6.49	+ 1 22.8	1.590	2.449	15.5	19.3	8 29	1 4.32	- 0 58.1	1.335	2.212	16.8	19.8
9 8	1 2.56	+ 0 55.1	1.521	2.447	11.8	19.1	9 8	1 1.45	- 1 32.0	1.261	2.197	12.8	19.6
9 18	0 56.28	+ 0 18.0	1.473	2.447	7.5	18.8	9 18	0 55.88	- 2 15.2	1.207	2.184	8.3	19.3
9 28	0 48.33	- 0 23.5	1.449	2.446	3.2	18.6	9 28	0 48.28	- 3 1.1	1.176	2.172	4.1	19.0
10 8	0 39.72	- 1 2.6	1.452	2.446	3.2	18.6	10 8	0 39.78	- 3 41.3	1.170	2.160	4.7	19.0
10 18	0 31.57	- 1 33.3	1.482	2.446	7.5	18.8	10 18	0 31.66	- 4 8.1	1.188	2.150	9.3	19.3
10 28	0 24.92	- 1 50.2	1.536	2.447	11.7	19.1	10 28	0 25.22	- 4 15.8	1.229	2.141	13.9	19.5
11 7	0 20.52	- 1 50.4	1.612	2.449	15.4	19.3	11 7	0 21.36	- 4 1.8	1.289	2.133	18.0	19.7
396747	2003 <i>SQ</i> ₂₁₉	10	4.7	46°02	0°3/4.4	18	393772	2005 <i>GV</i> ₁₄₆	10	4.7	94°83	0°5/5.2	18
8 29	1 9.38	+ 5 0.8	1.600	2.445	16.1	20.5	8 29	1 6.16	+ 8 53.6	1.915	2.743	14.5	21.4
9 8	1 4.69	+ 4 54.4	1.534	2.452	12.3	20.3	9 8	1 1.92	+ 8 26.2	1.843	2.750	11.2	21.2
9 18	0 57.61	+ 4 36.4	1.490	2.459	8.0	20.1	9 18	0 55.68	+ 7 44.7	1.793	2.757	7.4	21.0
9 28	0 48.85	+ 4 10.4	1.470	2.467	3.2	19.8	9 28	0 48.06	+ 6 52.3	1.769	2.764	3.2	20.8
10 8	0 39.48	+ 3 41.5	1.477	2.475	1.8	19.7	10 8	0 39.93	+ 5 54.4	1.773	2.770	1.3	20.6
10 18	0 30.64	+ 3 15.4	1.511	2.483	6.5	20.1	10 18	0 32.20	+ 4 57.0	1.804	2.777	5.5	20.9
10 28	0 23.40	+ 2 57.5	1.571	2.491	10.9	20.3	10 28	0 25.76	+ 4 6.6	1.863	2.784	9.4	21.2
11 7	0 18.48	+ 2 51.5	1.654	2.500	14.6	20.6	11 7	0 21.25	+ 3 28.0	1.946	2.790	12.8	21.4
389664	2011 <i>OZ</i> ₅₇	10	4.7	66°73	8°6/28.4	16	228097	2008 <i>SQ</i> ₃₁	10	4.7	340°44	1°6/7.6	18
8 29	1 14.22	-16 8.6	1.555	2.415	15.7	20.5	8 29	0 58.30	+14 4.5	4.053	4.835	8.3	20.5
9 8	1 8.05	-17 9.1	1.525	2.440	12.6	20.4	9 8	0 55.04	+13 55.9	3.959	4.832	6.6	20.4
9 18	0 59.49	-18 0.5	1.516	2.465	9.9	20.3	9 18	0 50.85	+13 38.9	3.888	4.830	4.7	20.3
9 28	0 49.49	-18 34.0	1.532	2.490	8.6	20.3	9 28	0 46.02	+13 14.3	3.846	4.827	2.7	20.1
10 8	0 39.24	-18 43.4	1.573	2.515	9.6	20.4	10 8	0 40.94	+12 44.0	3.832	4.824	1.6	20.0
10 18	0 29.94	-18 26.2	1.639	2.540	12.0	20.6	10 18	0 35.98	+12 10.2	3.848	4.821	2.9	20.1
10 28	0 22.55	-17 43.7	1.728	2.565	14.6	20.9	10 28	0 31.55	+11 35.6	3.895	4.819	4.8	20.3
11 7	0 17.64	-16 39.8	1.836	2.589	17.0	21.1	11 7	0 27.98	+11 3.1	3.968	4.817	6.7	20.4
317847	2003 <i>SW</i> ₄₃₂	10	4.7	88°44	2°2/7.1	18	364596	2007 <i>RO</i> ₁₇₇	10	4.7	72°00	0°8/4.0	17
8 29	1 6.52	+12 56.2	2.353	3.152	13.0	20.4	8 29	1 10.33	+ 6 32.2	1.221	2.078	19.3	21.2
9 8	1 1.88	+13 1.4	2.274	3.158	10.3	20.2	9 8	1 5.82	+ 5 46.2	1.173	2.098	14.7	21.0
9 18	0 55.52	+12 53.7	2.217	3.165	7.2	20.1	9 18	0 58.46	+ 4 42.6	1.145	2.118	9.4	20.7
9 28	0 47.97	+12 34.1	2.186	3.171	4.0	19.9	9 28	0 49.20	+ 3 28.0	1.141	2.138	3.6	20.5
10 8	0 39.94	+12 5.2	2.183	3.177	2.3	19.8	10 8	0 39.41	+ 2 12.2	1.161	2.158	2.5	20.5
10 18	0 32.22	+11 31.0	2.210	3.183	4.6	19.9	10 18	0 30.49	+ 1 5.1	1.206	2.177	7.9	20.9
10 28	0 25.56	+10 56.2	2.265	3.190	7.7	20.1	10 28	0 23.65	+ 0 14.8	1.276	2.197	12.8	21.2
11 7	0 20.55	+10 25.5	2.345	3.196	10.6	20.3	11 7	0 19.61	- 0 14.3	1.367	2.217	16.8	21.5
433168	2012 <i>TH</i> ₂₈₆	10	4.7	50°24	2°3/3.3	18	160646	1999 <i>XK</i> ₄₄	1				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
1699	Honkasalo		10 4.7 32°53	2.1/ 6.1	18		442763	2012 XG ₅₃		10 4.7 166°44	4.4/24.2	18	
8 29	1 6.87	+11 1.0	1.025	1.888	21.8	15.0	8 29	0 58.20	-20 52.8	4.769	5.606	6.3	21.5
9 8	1 3.81	+10 56.9	0.976	1.899	17.1	14.7	9 8	0 54.81	-21 42.7	4.717	5.607	5.3	21.4
9 18	0 57.51	+10 28.4	0.943	1.911	11.5	14.5	9 18	0 50.63	-22 28.1	4.691	5.609	4.6	21.4
9 28	0 48.91	+ 9 38.9	0.931	1.924	5.6	14.2	9 28	0 45.94	-23 6.2	4.692	5.610	4.5	21.4
10 8	0 39.55	+ 8 36.4	0.941	1.938	2.4	14.1	10 8	0 41.05	-23 34.5	4.721	5.612	5.1	21.4
10 18	0 31.03	+ 7 31.6	0.974	1.953	7.7	14.4	10 18	0 36.31	-23 51.4	4.777	5.613	6.0	21.5
10 28	0 24.79	+ 6 35.5	1.030	1.969	13.1	14.8	10 28	0 32.06	-23 56.0	4.857	5.614	7.1	21.6
11 7	0 21.66	+ 5 56.1	1.106	1.986	17.7	15.1	11 7	0 28.57	-23 48.4	4.960	5.615	8.1	21.7
178467	1999 RZ ₁₁₄		10 4.7 1°03	4.3/ 7.7	18		5955	Khromchenko		10 4.7 233°45	3.4/ 8.1	18	
8 29	1 2.13	+14 56.2	1.048	1.903	21.9	19.3	8 29	1 7.59	+16 6.0	2.208	2.994	14.2	17.5
9 8	1 0.41	+15 10.0	0.985	1.900	17.7	19.0	9 8	1 2.98	+16 15.6	2.115	2.988	11.5	17.3
9 18	0 55.50	+14 55.7	0.938	1.898	12.8	18.7	9 18	0 56.42	+16 9.4	2.044	2.981	8.4	17.1
9 28	0 48.20	+14 13.4	0.910	1.898	7.5	18.4	9 28	0 48.43	+15 47.5	1.997	2.975	5.2	16.9
10 8	0 39.86	+13 8.9	0.905	1.899	4.3	18.3	10 8	0 39.78	+15 12.2	1.979	2.968	3.4	16.8
10 18	0 32.10	+11 52.2	0.921	1.902	7.7	18.5	10 18	0 31.35	+14 27.6	1.989	2.960	5.2	16.9
10 28	0 26.43	+10 36.4	0.960	1.906	12.9	18.8	10 28	0 24.05	+13 39.3	2.026	2.953	8.4	17.1
11 7	0 23.85	+ 9 33.0	1.018	1.911	17.7	19.1	11 7	0 18.55	+12 53.5	2.089	2.945	11.6	17.3
322160	2010 WA ₆₅		10 4.7 41°26	4.6/ 9.8	18		200499	2000 YE ₁₃₂		10 4.7 224°53	2.1/ 2.3	18	
8 29	1 4.55	+20 27.4	2.050	2.826	15.5	20.4	8 29	1 7.75	+ 0 23.7	2.348	3.185	11.8	21.6
9 8	1 0.72	+20 31.9	1.972	2.832	12.8	20.2	9 8	1 2.88	- 0 21.5	2.258	3.174	9.0	21.4
9 18	0 54.94	+20 16.3	1.914	2.839	9.7	20.0	9 18	0 56.24	- 1 14.1	2.192	3.162	5.8	21.2
9 28	0 47.79	+19 40.5	1.879	2.845	6.6	19.8	9 28	0 48.32	- 2 9.7	2.154	3.149	2.7	20.9
10 8	0 40.08	+18 47.3	1.871	2.852	4.7	19.7	10 8	0 39.84	- 3 3.0	2.146	3.135	3.1	20.9
10 18	0 32.73	+17 41.7	1.890	2.860	5.7	19.8	10 18	0 31.58	- 3 48.8	2.166	3.121	6.3	21.1
10 28	0 26.61	+16 30.9	1.937	2.867	8.5	20.0	10 28	0 24.33	- 4 22.6	2.215	3.106	9.6	21.3
11 7	0 22.36	+15 22.3	2.008	2.875	11.5	20.2	11 7	0 18.73	- 4 41.7	2.288	3.090	12.6	21.5
40351	1999 NZ ₁₁		10 4.7 27°37	4.6/30.8	18		384642	2011 ED ₅₂		10 4.7 177°42	1°0/ 3.7	16	
8 29	1 4.67	- 2 19.2	1.380	2.257	16.3	18.2	8 29	1 8.44	+ 4 54.5	1.830	2.668	14.6	22.3
9 8	1 1.36	- 3 30.7	1.327	2.263	12.3	18.0	9 8	1 3.78	+ 4 14.7	1.755	2.670	11.2	22.0
9 18	0 55.56	- 4 50.0	1.295	2.271	8.0	17.8	9 18	0 56.97	+ 3 22.6	1.702	2.671	7.1	21.8
9 28	0 48.06	- 6 8.3	1.287	2.279	4.8	17.6	9 28	0 48.64	+ 2 22.7	1.675	2.671	2.8	21.5
10 8	0 39.98	- 7 15.4	1.304	2.288	5.9	17.7	10 8	0 39.70	+ 1 21.4	1.676	2.672	2.2	21.5
10 18	0 32.51	- 8 3.6	1.347	2.297	9.8	18.0	10 18	0 31.16	+ 0 25.5	1.705	2.671	6.5	21.8
10 28	0 26.73	- 8 27.7	1.412	2.307	13.7	18.3	10 28	0 23.99	- 0 18.9	1.761	2.671	10.5	22.0
11 7	0 23.33	- 8 26.9	1.498	2.317	17.2	18.5	11 7	0 18.89	- 0 47.8	1.840	2.670	14.0	22.3
308106	2004 WG		10 4.7 262°36	7.1/24.5	17		294469	2007 VA ₃₂₇		10 4.7 348°23	2°0/ 6.2	14 C	
8 29	1 9.83	-22 30.7	3.019	3.845	9.8	20.7	8 29	0 59.27	+11 15.1	1.229	2.089	19.0	20.4
9 8	1 4.18	-23 28.9	2.935	3.817	8.4	20.5	9 8	0 57.83	+11 6.5	1.154	2.076	15.1	20.1
9 18	0 56.95	-24 20.4	2.877	3.788	7.3	20.4	9 18	0 53.68	+10 35.3	1.097	2.065	10.3	19.8
9 28	0 48.58	-24 59.5	2.845	3.759	7.2	20.4	9 28	0 47.44	+ 9 43.5	1.061	2.055	5.1	19.5
10 8	0 39.70	-25 21.5	2.840	3.729	8.0	20.4	10 8	0 40.26	+ 8 37.7	1.049	2.046	2.2	19.3
10 18	0 31.01	-25 23.4	2.862	3.699	9.5	20.5	10 18	0 33.45	+ 7 27.1	1.060	2.040	7.1	19.6
10 28	0 23.20	-25 4.3	2.909	3.667	11.3	20.5	10 28	0 28.35	+ 6 22.6	1.094	2.035	12.3	19.9
11 7	0 16.84	-24 25.2	2.976	3.635	12.9	20.6	11 7	0 25.87	+ 5 33.2	1.149	2.032	16.9	20.1
71319	2000 AQ ₈₂		10 4.7 309°75	0°1/ 4.8	18		389482	2010 EB ₁₀₇		10 4.7 179°50	1°8/ 6.1	18	
8 29	1 3.80	+ 7 12.3	2.084	2.918	13.3	19.7	8 29	1 9.98	+10 5.0	1.807	2.627	15.5	20.8
9 8	1 0.12	+ 6 48.9	1.996	2.906	10.3	19.5	9 8	1 5.08	+10 13.3	1.728	2.627	12.2	20.6
9 18	0 54.57	+ 6 13.3	1.929	2.895	6.7	19.2	9 18	0 57.89	+10 7.5	1.670	2.628	8.3	20.4
9 28	0 47.66	+ 5 28.5	1.889	2.884	2.8	19.0	9 28	0 49.04	+ 9 49.2	1.637	2.628	4.1	20.1
10 8	0 40.15	+ 4 39.1	1.876	2.874	1.3	18.8	10 8	0 39.49	+ 9 21.6	1.631	2.628	2.0	20.0
10 18	0 32.87	+ 3 50.5	1.891	2.863	5.4	19.1	10 18	0 30.31	+ 8 49.9	1.653	2.627	5.7	20.2
10 28	0 26.68	+ 3 8.4	1.934	2.853	9.2	19.3	10 28	0 22.54	+ 8 19.8	1.702	2.627	9.8	20.5
11 7	0 22.23	+ 2 37.3	2.001	2.843	12.6	19.5	11 7	0 16.95	+ 7 56.9	1.775	2.627	13.4	20.7
209307	2003 YX ₁₅₇		10 4.7 281°81	1.7/ 6.2	18		191915	2005 MJ ₁₉		10 4.7 342°41	5°1/24.6	18	
8 29	1 7.52	+10 44.4	1.839	2.661	15.3	20.7	8 29	0 58.99	-19 49.1	3.923	4.765	7.4	19.3
9 8	1 3.26	+10 43.5	1.751	2.652	12.1	20.5	9 8	0 55.58	-20 43.5	3.867	4.763	6.1	19.2
9 18	0 56.76	+10 27.5	1.685	2.642	8.3	20.2	9 18	0 51.20	-21 33.2	3.836	4.761	5.3	19.1
9 28	0 48.60	+ 9 58.1	1.643	2.633	4.1	20.0	9 28	0 46.19	-22 14.5	3.833	4.759	5.1	19.1
10 8	0 39.67	+ 9 18.8	1.627	2.624	1.9	19.8	10 8	0 40.94	-22 44.3	3.857	4.757	5.8	19.2
10 18	0 31.02	+ 8 35.0	1.640	2.615	5.7	20.0	10 18	0 35.88	-23 0.7	3.908	4.756	7.0	19.3
10 28	0 23.67	+ 7 53.3	1.679	2.606	9.8	20.2	10 28	0 31.40	-23 2.6	3.983	4.754	8.3	19.4
11 7	0 18.41	+ 7 19.7	1.743	2.597	13.6	20.5	11 7	0 27.85	-22 50.2	4.080	4.752	9.5	19.5
305905	2009 FS ₄₁		10 4.7 345°22	3°1/ 2.1	18		13782	1998 UM ₁₈		10 4.7 348°09	4°6/25.3	18	
8 29	1 5.94	- 1 9.7	1.622	2.485	15.0	20.5	8 29	0 57.43	-14 33.8	3.662	4.516	7.6	18.1
9 8	1 2.14	- 1 46.5	1.551	2.481	11.4	20.2	9 8	0 54.48	-15 52.1	3.600	4.512	6.1	18.0
9 18	0 56.03	- 2 30.8	1.502	2.476	7.3	20.0	9 18	0 50.55	-17 8.2	3.565	4.509	4.9	17.9
9 28	0 48.28	- 3 16.6	1.478	2.473	3.7	19.8	9 28	0 45.94	-18 17.9	3.559	4.506	4.7	17.9
10 8	0 39.86	- 3 56.9	1.480	2.469	4.2	19.8	10 8	0 41.07	-19 17.1	3.581	4.504	5.5	18.0
10 18	0 31.86	- 4 25.5	1.508	2.466	8.1	20.0	10 18	0 36.35	-20 3.1	3.630	4.501	6.9	18.1
10 28	0 25.32	- 4 37.6	1.561	2.464	12.1	20.3	10 28	0 32.22	-20 33.8	3.705	4.499	8.4	18.2
11 7	0 20.97	- 4 31.2	1.636	2.462	15.7	20.5	11 7	0 29.02	-20 48.8	3.802	4.497	9.8	18.3
362271	2009 PY ₂₀		10 4.7 75°08	1°6/ 2.7	18		487180	2014 OQ ₃₁₆		10 4.7 49°06	8°0/13.0	18	
8 29	1 3.19	+ 3 16.3	2.157	3.001	12.5	20.7	8 29	1 9.74	+27 48.8	2.039	2.761	17.1	2

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
446577	2014 <i>OG</i> ₁₅₄	10	4.7 317°62	5°8/28.5	18		353591	2011 <i>TX</i> ₇	10	4.7 11°56	0°0/4.5	18	
8 29	1 5.10	-10 11.5	2.032	2.895	12.4	20.3	8 29	1 4.74	+ 7 30.1	1.670	2.513	15.6	20.9
9 8	1 1.06	-11 15.6	1.966	2.890	9.7	20.1	9 8	1 1.17	+ 6 58.5	1.598	2.514	12.0	20.6
9 18	0 55.12	-12 19.5	1.923	2.884	7.1	19.9	9 18	0 55.39	+ 6 11.8	1.547	2.516	7.8	20.4
9 28	0 47.88	-13 16.1	1.906	2.879	5.8	19.9	9 28	0 48.05	+ 5 14.0	1.521	2.517	3.2	20.1
10 8	0 40.12	-13 58.9	1.916	2.874	6.9	19.9	10 8	0 40.08	+ 4 11.5	1.522	2.520	1.6	20.0
10 18	0 32.72	-14 22.9	1.952	2.869	9.4	20.1	10 18	0 32.53	+ 3 11.7	1.549	2.522	6.3	20.3
10 28	0 26.51	-14 25.6	2.013	2.865	12.2	20.2	10 28	0 26.39	+ 2 21.5	1.603	2.525	10.6	20.6
11 7	0 22.11	-14 7.1	2.095	2.860	14.8	20.4	11 7	0 22.36	+ 1 46.0	1.679	2.528	14.3	20.8
99133	2001 <i>FQ</i> ₉₈	10	4.7 74°63	3°1/1.4	18		359782	2011 <i>UC</i> ₁₅₉	10	4.7 294°38	2°3/2.4	18	
8 29	1 5.46	+ 1 1.4	1.761	2.617	14.3	18.6	8 29	1 4.81	+ 1 29.0	1.886	2.738	13.7	20.8
9 8	1 1.35	- 0 23.5	1.712	2.638	10.7	18.4	9 8	1 0.99	+ 0 37.0	1.810	2.734	10.4	20.5
9 18	0 55.26	- 1 57.5	1.685	2.659	6.8	18.3	9 18	0 55.18	- 0 24.8	1.757	2.730	6.6	20.3
9 28	0 47.89	- 3 32.8	1.685	2.679	3.4	18.1	9 28	0 47.95	- 1 30.8	1.730	2.725	3.0	20.1
10 8	0 40.15	- 5 0.9	1.713	2.700	4.2	18.2	10 8	0 40.13	- 2 34.3	1.730	2.721	3.4	20.1
10 18	0 32.97	- 6 14.3	1.769	2.720	7.7	18.5	10 18	0 32.65	- 3 28.6	1.758	2.717	7.1	20.3
10 28	0 27.18	- 7 7.8	1.851	2.741	11.2	18.7	10 28	0 26.41	- 4 8.2	1.812	2.713	10.9	20.5
11 7	0 23.36	- 7 39.2	1.955	2.761	14.2	19.0	11 7	0 22.07	- 4 29.9	1.889	2.709	14.1	20.7
388190	2006 <i>DK</i> ₂₂	10	4.7 227°86	2°0/2.8	18		320077	2007 <i>EY</i> ₆₂	10	4.7 141°90	1°1/3.3	18	
8 29	1 7.35	+ 2 1.1	1.834	2.681	14.2	22.0	8 29	1 4.80	+ 3 10.2	2.513	3.346	11.3	21.5
9 8	1 3.00	+ 1 17.7	1.756	2.677	10.8	21.7	9 8	1 0.42	+ 2 32.8	2.439	3.352	8.5	21.3
9 18	0 56.50	+ 0 24.1	1.701	2.672	6.9	21.5	9 18	0 54.53	+ 1 47.7	2.390	3.359	5.4	21.2
9 28	0 48.48	- 0 34.4	1.671	2.667	3.0	21.2	9 28	0 47.62	+ 0 58.6	2.368	3.364	2.2	21.0
10 8	0 39.82	- 1 31.4	1.670	2.662	3.1	21.3	10 8	0 40.33	+ 0 10.0	2.376	3.370	2.0	21.0
10 18	0 31.51	- 2 20.1	1.696	2.657	7.1	21.5	10 18	0 33.33	- 0 33.7	2.413	3.375	5.2	21.2
10 28	0 24.52	- 2 55.1	1.748	2.651	11.0	21.7	10 28	0 27.30	- 1 8.5	2.478	3.380	8.2	21.4
11 7	0 19.56	- 3 13.1	1.823	2.646	14.4	21.9	11 7	0 22.73	- 1 31.6	2.568	3.385	10.9	21.6
377269	2004 <i>DA</i> ₅₀	10	4.7 124°44	0°8/5.4	17		213963	2003 <i>YM</i> ₃₃	10	4.7 314°43	2°3/2.8	18	
8 29	1 10.52	+ 9 24.4	1.775	2.598	15.7	21.6	8 29	1 3.53	+ 2 39.9	1.525	2.389	15.8	20.0
9 8	1 5.34	+ 9 0.7	1.708	2.611	12.1	21.4	9 8	1 0.78	+ 1 54.2	1.428	2.358	12.1	19.7
9 18	0 57.94	+ 8 21.8	1.663	2.624	8.0	21.2	9 18	0 55.52	+ 0 53.9	1.353	2.328	7.8	19.3
9 28	0 49.03	+ 7 30.8	1.643	2.637	3.6	20.9	9 28	0 48.26	- 0 15.8	1.301	2.298	3.4	19.0
10 8	0 39.58	+ 6 33.4	1.651	2.649	1.5	20.8	10 8	0 39.95	- 1 26.8	1.275	2.268	3.6	18.9
10 18	0 30.66	+ 5 36.1	1.688	2.661	5.8	21.1	10 18	0 31.75	- 2 29.9	1.275	2.239	8.4	19.2
10 28	0 23.24	+ 4 45.8	1.751	2.672	9.9	21.4	10 28	0 24.93	- 3 16.8	1.298	2.211	13.3	19.4
11 7	0 18.01	+ 4 7.5	1.839	2.682	13.5	21.6	11 7	0 20.45	- 3 41.9	1.342	2.183	17.6	19.6
49708	1999 <i>VH</i> ₂₆	10	4.7 218°40	0°5/5.2	18		195146	2002 <i>CS</i> ₂₀₁	10	4.7 40°75	7°9/10.2	18	
8 29	1 9.08	+ 8 57.2	1.834	2.659	15.2	19.8	8 29	1 14.06	+ 21 12.9	1.487	2.267	20.1	19.0
9 8	1 4.42	+ 8 28.8	1.747	2.652	11.8	19.5	9 8	1 8.88	+ 22 33.2	1.421	2.278	16.9	18.8
9 18	0 57.51	+ 7 44.7	1.681	2.644	7.8	19.3	9 18	1 0.71	+ 23 31.0	1.372	2.289	13.3	18.7
9 28	0 48.92	+ 6 48.0	1.641	2.636	3.4	19.0	9 28	0 50.32	+ 24 2.1	1.346	2.301	9.9	18.5
10 8	0 39.60	+ 5 44.1	1.629	2.627	1.4	18.9	10 8	0 38.98	+ 24 5.4	1.344	2.313	7.9	18.4
10 18	0 30.57	+ 4 39.9	1.645	2.618	6.0	19.1	10 18	0 28.17	+ 23 44.4	1.366	2.325	8.7	18.5
10 28	0 22.89	+ 3 42.7	1.689	2.608	10.3	19.4	10 28	0 19.28	+ 23 6.8	1.414	2.338	11.5	18.7
11 7	0 17.34	+ 2 58.4	1.756	2.597	14.1	19.6	11 7	0 13.27	+ 22 22.7	1.484	2.351	14.8	18.9
258728	2002 <i>GH</i> ₁₀₄	10	4.7 141°54	5°3/28.5	18		71661	2000 <i>EP</i> ₁₃₀	10	4.7 132°74	0°4/4.2	18	
8 29	1 6.65	-11 44.6	2.425	3.277	11.0	20.2	8 29	1 5.22	+ 4 48.0	2.550	3.377	11.3	19.7
9 8	1 1.84	-12 38.8	2.366	3.282	8.6	20.0	9 8	1 0.75	+ 4 27.6	2.473	3.381	8.6	19.5
9 18	0 55.43	-13 30.8	2.331	3.287	6.4	19.9	9 18	0 54.75	+ 3 59.2	2.420	3.386	5.5	19.3
9 28	0 47.96	-14 15.0	2.323	3.291	5.3	19.9	9 28	0 47.72	+ 3 25.5	2.394	3.390	2.2	19.1
10 8	0 40.12	-14 46.4	2.343	3.296	6.2	19.9	10 8	0 40.29	+ 2 50.5	2.397	3.394	1.4	19.0
10 18	0 32.64	-15 1.5	2.391	3.300	8.3	20.1	10 18	0 33.15	+ 2 17.9	2.430	3.398	4.7	19.3
10 28	0 26.24	-14 58.6	2.464	3.304	10.7	20.2	10 28	0 26.95	+ 1 51.5	2.492	3.402	7.8	19.5
11 7	0 21.42	-14 38.0	2.560	3.308	12.8	20.4	11 7	0 22.21	+ 1 34.4	2.578	3.406	10.6	19.7
352342	2007 <i>VA</i> ₇₄	10	4.7 263°22	2°0/2.9	18		230014	2000 <i>GQ</i> ₅₄	10	4.7 165°43	1°1/5.7	17	
8 29	1 8.79	+ 0 39.6	2.040	2.882	13.2	21.7	8 29	1 7.10	+ 11 9.1	1.710	2.535	16.1	21.0
9 8	1 4.02	+ 0 12.9	1.947	2.865	10.1	21.5	9 8	1 2.97	+ 10 34.1	1.634	2.537	12.6	20.7
9 18	0 57.17	- 0 21.4	1.877	2.847	6.5	21.2	9 18	0 56.57	+ 9 40.4	1.578	2.539	8.4	20.5
9 28	0 48.79	- 0 59.2	1.834	2.829	2.9	21.0	9 28	0 48.55	+ 8 31.5	1.548	2.540	3.9	20.2
10 8	0 39.67	- 1 35.4	1.818	2.811	3.0	20.9	10 8	0 39.88	+ 7 13.6	1.544	2.542	1.6	20.1
10 18	0 30.76	- 2 4.6	1.832	2.792	6.7	21.1	10 18	0 31.62	+ 5 54.7	1.568	2.543	6.0	20.4
10 28	0 23.01	- 2 22.3	1.872	2.773	10.5	21.3	10 28	0 24.81	+ 4 43.0	1.619	2.543	10.3	20.6
11 7	0 17.17	- 2 25.6	1.936	2.754	13.9	21.5	11 7	0 20.17	+ 3 45.4	1.694	2.544	14.1	20.9
308329	2005 <i>ND</i> ₃₅	10	4.7 181°20	3°3/8.2	18		444595	2006 <i>UA</i> ₁₂₃	10	4.7 24°08	0°5/5.2	15	
8 29	1 7.61	+ 16 25.6	2.274	3.057	13.9	21.1	8 29	1 3.20	+ 9 44.9	1.695	2.533	15.6	21.9
9 8	1 2.90	+ 16 31.7	2.187	3.057	11.3	20.9	9 8	0 59.95	+ 9 2.9	1.625	2.537	12.1	21.7
9 18	0 56.31	+ 16 22.0	2.121	3.058	8.2	20.7	9 18	0 54.58	+ 8 3.5	1.577	2.542	8.0	21.5
9 28	0 48.39	+ 15 56.9	2.081	3.058	5.1	20.5	9 28	0 47.72	+ 6 50.8	1.552	2.547	3.4	21.2
10 8	0 39.89	+ 15 18.8	2.069	3.057	3.3	20.4	10 8	0 40.30	+ 5 31.7	1.555	2.553	1.4	21.1
10 18	0 31.67	+ 14 31.9	2.085	3.057	5.0	20.5	10 18	0 33.30	+ 4 14.2	1.585	2.559	6.0	21.4
10 28	0 24.56	+ 13 41.8	2.130	3.056	8.1	20.7	10 28	0 27.68	+ 3 6.2	1.641	2.565	10.2	21.7
11 7	0 19.20	+ 12 54.4	2.200	3.055	11.1	20.9	11 7	0 24.09	+ 2 13.6	1.720	2.572	13.8	21.9
201090	2002 <i>GH</i> ₈₈	10	4.7 118°69	6°1/28.9	18		15851	Christleming	10	4.7 126°39	6°1/11.4	18	
8 29	1 10.47	-10 57.2											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
249710	2000 <i>QO</i> ₁₃	10	4.7	10°34'	3°7'/ 2.1	17	162250	1999 <i>TK</i> ₂₈₈	10	4.7	315°93'	1°3'/ 3.5	18
8 29	0 56.78	+ 2 36.6	0.785	1.697	21.7	19.2	8 29	1 4.28	+ 4 41.1	1.579	2.435	15.7	20.1
9 8	0 56.69	+ 1 28.7	0.744	1.699	16.4	18.9	9 8	1 1.09	+ 3 58.2	1.498	2.422	12.1	19.8
9 18	0 53.20	+ 0 1.0	0.719	1.704	10.4	18.6	9 18	0 55.53	+ 3 0.6	1.438	2.411	7.8	19.6
9 28	0 47.30	- 1 34.2	0.713	1.711	4.7	18.3	9 28	0 48.22	+ 1 53.3	1.402	2.399	3.1	19.2
10 8	0 40.55	- 3 1.2	0.727	1.721	5.5	18.4	10 8	0 40.11	+ 0 44.0	1.392	2.388	2.6	19.2
10 18	0 34.64	- 4 6.2	0.762	1.732	11.2	18.8	10 18	0 32.32	- 0 19.1	1.409	2.377	7.4	19.5
10 28	0 31.02	- 4 40.1	0.815	1.746	16.7	19.2	10 28	0 25.95	- 1 8.4	1.451	2.367	11.9	19.7
11 7	0 30.49	- 4 41.1	0.884	1.762	21.3	19.5	11 7	0 21.81	- 1 38.8	1.514	2.357	15.9	19.9
393618	2004 <i>BC</i> ₁₅₆	10	4.7	81°46'	3°6'/ 1.2	18	54399	2000 <i>KV</i> ₈₂	10	4.7	276°90'	3°8'/ 1.3	18
8 29	1 6.71	- 2 52.8	1.869	2.727	13.6	21.2	8 29	1 6.03	- 0 29.5	1.552	2.417	15.5	18.8
9 8	1 2.31	- 3 47.9	1.810	2.736	10.2	21.0	9 8	1 2.40	- 1 41.3	1.479	2.409	11.7	18.6
9 18	0 55.94	- 4 48.0	1.774	2.745	6.7	20.8	9 18	0 56.35	- 3 4.2	1.427	2.401	7.6	18.3
9 28	0 48.24	- 5 46.9	1.764	2.755	3.9	20.7	9 28	0 48.53	- 4 30.3	1.400	2.394	4.1	18.1
10 8	0 40.09	- 6 37.8	1.781	2.764	4.7	20.8	10 8	0 39.97	- 5 50.2	1.400	2.386	5.1	18.1
10 18	0 32.41	- 7 15.2	1.826	2.773	7.9	21.0	10 18	0 31.79	- 6 54.8	1.426	2.378	9.1	18.4
10 28	0 26.06	- 7 35.1	1.897	2.783	11.2	21.2	10 28	0 25.12	- 7 37.6	1.476	2.371	13.3	18.6
11 7	0 21.65	- 7 36.3	1.989	2.792	14.2	21.4	11 7	0 20.75	- 7 55.9	1.547	2.363	16.9	18.8
507699	2013 <i>TD</i> ₆₇	10	4.7	111°44'	3°8'/ 8.2	17	243674	1999 <i>VV</i> ₁₉₉	10	4.7	345°57'	13°1'/ 24.1	18
8 29	1 11.33	+ 17 47.4	1.621	2.416	18.1	21.6	8 29	1 2.20	- 19 27.7	1.114	2.008	18.0	18.7
9 8	1 6.22	+ 17 34.0	1.557	2.434	14.6	21.4	9 8	1 0.38	- 21 7.3	1.062	1.991	15.4	18.5
9 18	0 58.65	+ 16 56.9	1.512	2.452	10.6	21.2	9 18	0 55.45	- 22 36.2	1.028	1.976	13.5	18.3
9 28	0 49.38	+ 15 57.5	1.491	2.470	6.4	21.0	9 28	0 48.25	- 23 39.4	1.015	1.962	13.2	18.3
10 8	0 39.54	+ 14 41.0	1.496	2.487	3.8	20.9	10 8	0 40.12	- 24 4.8	1.021	1.951	14.9	18.3
10 18	0 30.34	+ 13 15.3	1.529	2.503	6.1	21.1	10 18	0 32.61	- 23 46.1	1.047	1.941	17.7	18.5
10 28	0 22.86	+ 11 50.3	1.588	2.519	10.0	21.4	10 28	0 27.13	- 22 43.9	1.090	1.933	20.8	18.6
11 7	0 17.81	+ 10 34.7	1.672	2.534	13.7	21.6	11 7	0 24.56	- 21 4.5	1.148	1.928	23.7	18.8
71840	2000 <i>US</i> ₇₄	10	4.7	159°60'	1°2'/ 3.7	18	144064	2004 <i>BE</i> ₄₃	10	4.7	221°01'	1°0'/ 5.6	18
8 29	1 12.61	+ 3 30.5	1.666	2.507	15.8	19.7	8 29	1 9.98	+ 9 31.9	1.791	2.613	15.6	21.0
9 8	1 7.15	+ 3 4.4	1.596	2.512	12.0	19.4	9 8	1 5.22	+ 9 16.0	1.704	2.607	12.2	20.8
9 18	0 59.26	+ 2 27.3	1.548	2.517	7.7	19.2	9 18	0 58.10	+ 8 44.5	1.638	2.599	8.2	20.5
9 28	0 49.66	+ 1 43.7	1.525	2.521	3.1	18.9	9 28	0 49.25	+ 7 59.8	1.598	2.591	3.7	20.2
10 8	0 39.40	+ 0 59.7	1.529	2.525	2.5	18.9	10 8	0 39.61	+ 7 6.7	1.585	2.583	1.5	20.1
10 18	0 29.64	+ 0 21.8	1.562	2.528	7.0	19.2	10 18	0 30.28	+ 6 11.6	1.600	2.574	6.0	20.3
10 28	0 21.50	- 0 4.4	1.620	2.531	11.3	19.5	10 28	0 22.33	+ 5 21.7	1.643	2.565	10.3	20.6
11 7	0 15.70	- 0 15.5	1.702	2.533	15.0	19.7	11 7	0 16.59	+ 4 42.8	1.709	2.555	14.2	20.8
209852	2005 <i>JS</i> ₂₀	10	4.7	164°33'	5°7'/ 28.6	18	484255	2007 <i>GH</i> ₂₅	10	4.7	183°10'	5°1'/ 26.7	18
8 29	1 6.77	- 9 31.7	2.039	2.898	12.5	20.4	8 29	1 4.89	- 14 34.0	3.149	3.993	9.0	22.5
9 8	1 2.28	- 10 44.4	1.978	2.901	9.7	20.2	9 8	1 0.25	- 15 41.3	3.086	3.994	7.2	22.4
9 18	0 55.91	- 11 57.3	1.941	2.902	7.1	20.1	9 18	0 54.33	- 16 45.8	3.049	3.993	5.7	22.3
9 28	0 48.24	- 13 3.1	1.930	2.904	5.7	20.0	9 28	0 47.57	- 17 42.7	3.041	3.993	5.2	22.2
10 8	0 40.11	- 13 54.9	1.947	2.906	6.8	20.1	10 8	0 40.48	- 18 27.5	3.061	3.992	6.0	22.3
10 18	0 32.38	- 14 27.7	1.991	2.907	9.3	20.2	10 18	0 33.63	- 18 57.2	3.109	3.990	7.6	22.4
10 28	0 25.88	- 14 38.8	2.059	2.908	12.1	20.4	10 28	0 27.58	- 19 10.1	3.183	3.987	9.4	22.5
11 7	0 21.22	- 14 28.4	2.148	2.909	14.6	20.6	11 7	0 22.75	- 19 6.2	3.280	3.985	11.1	22.7
102409	1999 <i>TN</i> ₁₇₅	10	4.7	356°71'	1°7'/ 6.1	18	293973	2007 <i>TB</i> ₅₄	10	4.7	79°36'	1°6'/ 6.5	18
8 29	1 4.77	+ 11 0.6	1.467	2.307	17.5	19.8	8 29	1 4.86	+ 14 0.5	1.814	2.629	15.7	20.6
9 8	1 1.59	+ 10 51.0	1.394	2.305	13.8	19.5	9 8	1 1.04	+ 13 10.7	1.747	2.642	12.3	20.4
9 18	0 55.89	+ 10 22.3	1.340	2.303	9.4	19.3	9 18	0 55.19	+ 12 0.8	1.701	2.656	8.4	20.2
9 28	0 48.35	+ 9 36.9	1.309	2.302	4.6	19.0	9 28	0 47.98	+ 10 34.5	1.680	2.670	4.2	19.9
10 8	0 40.04	+ 8 40.3	1.304	2.301	2.0	18.8	10 8	0 40.29	+ 8 58.5	1.687	2.684	1.8	19.8
10 18	0 32.14	+ 7 40.1	1.324	2.301	6.4	19.1	10 18	0 33.08	+ 7 21.3	1.722	2.697	5.4	20.1
10 28	0 25.84	+ 6 45.1	1.369	2.302	11.1	19.4	10 28	0 27.23	+ 5 51.3	1.784	2.711	9.3	20.3
11 7	0 21.93	+ 6 2.2	1.436	2.303	15.2	19.6	11 7	0 23.36	+ 4 35.6	1.872	2.725	12.8	20.6
223963	2004 <i>XD</i> ₈₇	10	4.7	335°74'	1°2'/ 3.5	18	41166	1999 <i>VJ</i> ₁₇₂	10	4.7	17°96'	2°6'/ 7.0	18
8 29	1 2.83	+ 4 0.9	1.864	2.715	13.9	20.2	8 29	1 4.53	+ 12 52.1	1.716	2.539	16.1	18.0
9 8	0 59.58	+ 3 24.8	1.783	2.705	10.6	20.0	9 8	1 1.00	+ 12 55.2	1.646	2.545	12.8	17.8
9 18	0 54.34	+ 2 37.4	1.724	2.696	6.8	19.7	9 18	0 55.30	+ 12 41.1	1.597	2.552	8.9	17.6
9 28	0 47.67	+ 1 42.9	1.691	2.688	2.7	19.5	9 28	0 48.07	+ 12 11.3	1.572	2.560	4.9	17.3
10 8	0 40.38	+ 0 47.4	1.684	2.680	2.3	19.4	10 8	0 40.24	+ 11 29.7	1.573	2.568	2.6	17.2
10 18	0 33.37	- 0 2.8	1.705	2.672	6.4	19.7	10 18	0 32.84	+ 10 42.3	1.600	2.577	5.6	17.4
10 28	0 27.56	- 0 41.7	1.752	2.666	10.4	19.9	10 28	0 26.83	+ 9 55.9	1.654	2.587	9.5	17.7
11 7	0 23.63	- 1 5.4	1.822	2.659	13.8	20.1	11 7	0 22.91	+ 9 16.8	1.731	2.597	13.0	17.9
53841	2000 <i>FX</i>	10	4.7	14°14'	1°6'/ 3.5	18	57518	2001 <i>SB</i> ₂₈₆	10	4.7	43°83'	9°8'/ 26.6	18
8 29	1 2.48	+ 4 52.6	1.086	1.967	19.5	17.9	8 29	1 9.40	- 18 52.6	1.578	2.443	15.3	16.4
9 8	1 0.34	+ 4 7.6	1.033	1.971	14.8	17.7	9 8	1 4.57	- 20 9.6	1.550	2.462	12.5	16.3
9 18	0 55.26	+ 3 4.5	0.999	1.977	9.4	17.4	9 18	0 57.42	- 21 15.3	1.542	2.482	10.4	16.2
9 28	0 48.11	+ 1 50.7	0.986	1.984	3.7	17.1	9 28	0 48.83	- 22 0.3	1.558	2.502	9.8	16.2
10 8	0 40.20	+ 0 37.0	0.996	1.992	3.2	17.1	10 8	0 39.94	- 22 18.2	1.598	2.523	10.9	16.3
10 18	0 32.98	- 0 25.8	1.029	2.001	8.7	17.5	10 18	0 31.85	- 22 6.4	1.662	2.543	13.0	16.5
10 28	0 27.74	- 1 9.1	1.085	2.012	13.9	17.8	10 28	0 25.50	- 21 26.2	1.747	2.565	15.3	16.7
11 7	0 25.27	- 1 28.4	1.160	2.024	18.2	18.1	11 7	0 21.47	- 20 21.7	1.851	2.586	17.5	16.9
467926	2012 <i>AE</i> ₁₆	10	4.7	343°38'	4°3'/ 25.7	18	398891	2013 <i>CR</i> ₁₀₂	10	4.7	264°84'		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
421968	2014 QR ₂₈₅	10	4.7 311 ^o 79	7 ^o 8/25.7 18			47569	2000 AP ₁₅₉	10	4.7 197 ^o 73	0 ^o 8/ 3.7 18		
8 29	1 6.48	-18 50.7	2.242	3.094	11.8	20.6	8 29	1 5.38	+ 3 28.4	2.718	3.546	10.7	19.9
9 8	1 1.98	-19 58.2	2.185	3.090	9.8	20.5	9 8	1 0.84	+ 3 3.8	2.634	3.544	8.1	19.7
9 18	0 55.69	-20 58.8	2.151	3.086	8.2	20.4	9 18	0 54.84	+ 2 32.0	2.574	3.541	5.2	19.5
9 28	0 48.17	-21 45.4	2.143	3.081	7.9	20.4	9 28	0 47.83	+ 1 56.1	2.542	3.538	2.1	19.3
10 8	0 40.22	-22 12.4	2.161	3.077	8.9	20.4	10 8	0 40.41	+ 1 19.8	2.540	3.535	1.6	19.3
10 18	0 32.65	-22 16.5	2.204	3.074	10.7	20.5	10 18	0 33.22	+ 0 46.6	2.567	3.532	4.7	19.5
10 28	0 26.25	-21 56.7	2.270	3.070	12.8	20.7	10 28	0 26.89	+ 0 20.4	2.623	3.528	7.7	19.7
11 7	0 21.60	-21 15.0	2.356	3.066	14.8	20.8	11 7	0 21.94	+ 0 3.8	2.705	3.524	10.4	19.9
158851	2004 NV ₂₃	10	4.7 354 ^o 99	3 ^o 7/ 7.7 18			327922	2007 DW ₃₆	10	4.7 228 ^o 26	2 ^o 5/ 1.3 18		
8 29	1 0.70	+15 25.9	1.199	2.044	20.3	19.0	8 29	1 3.29	- 0 6.0	2.603	3.445	10.7	21.8
9 8	0 59.04	+15 21.8	1.128	2.038	16.4	18.7	9 8	0 59.36	- 1 16.7	2.516	3.436	8.0	21.6
9 18	0 54.54	+14 50.1	1.075	2.033	11.8	18.4	9 18	0 53.95	- 2 34.8	2.456	3.426	5.2	21.5
9 28	0 47.90	+13 51.9	1.043	2.030	6.8	18.1	9 28	0 47.48	- 3 55.4	2.423	3.416	2.7	21.3
10 8	0 40.32	+12 33.2	1.033	2.028	3.7	18.0	10 8	0 40.57	- 5 12.7	2.421	3.405	3.4	21.3
10 18	0 33.21	+11 4.0	1.047	2.027	7.1	18.2	10 18	0 33.86	- 6 21.3	2.448	3.394	6.2	21.5
10 28	0 27.91	+ 9 37.0	1.084	2.028	12.1	18.4	10 28	0 28.01	- 7 16.5	2.502	3.383	9.1	21.6
11 7	0 25.34	+ 8 23.2	1.142	2.030	16.6	18.7	11 7	0 23.54	- 7 55.5	2.581	3.371	11.7	21.8
509697	2008 RE ₉₉	10	4.7 33 ^o 48	0 ^o 1/ 4.9 18			236842	2007 RF ₉₉	10	4.7 123 ^o 85	2 ^o 9/ 7.5 18		
8 29	0 57.86	+ 7 12.1	4.150	4.964	7.6	21.5	8 29	1 10.82	+14 17.7	2.022	2.816	15.0	20.7
9 8	0 54.70	+ 6 47.6	4.066	4.966	5.8	21.4	9 8	1 5.47	+14 26.8	1.948	2.828	12.0	20.5
9 18	0 50.67	+ 6 17.1	4.006	4.968	3.7	21.2	9 18	0 58.05	+14 20.0	1.895	2.839	8.5	20.3
9 28	0 46.08	+ 5 42.4	3.975	4.970	1.6	21.1	9 28	0 49.19	+13 58.1	1.868	2.850	4.9	20.1
10 8	0 41.25	+ 5 5.6	3.975	4.972	0.7	21.0	10 8	0 39.77	+13 24.2	1.868	2.860	2.9	20.0
10 18	0 36.57	+ 4 29.3	4.004	4.975	2.9	21.2	10 18	0 30.77	+12 42.7	1.897	2.870	5.3	20.2
10 28	0 32.39	+ 3 55.9	4.063	4.977	5.0	21.3	10 28	0 23.10	+11 59.8	1.954	2.880	8.7	20.4
11 7	0 29.02	+ 3 27.8	4.150	4.979	6.8	21.5	11 7	0 17.44	+11 21.3	2.036	2.889	11.9	20.7
277390	2005 UM ₁₂₅	10	4.7 177 ^o 69	0 ^o 1/ 4.8 18			426370	2013 OE ₅	10	4.7 112 ^o 40	3 ^o 7/ 7.9 17		
8 29	1 9.36	+ 7 26.0	1.964	2.789	14.3	21.8	8 29	1 10.23	+16 59.7	1.500	2.306	18.8	21.7
9 8	1 4.42	+ 7 0.3	1.885	2.791	11.0	21.6	9 8	1 5.67	+16 47.7	1.433	2.318	15.2	21.4
9 18	0 57.41	+ 6 21.7	1.828	2.792	7.2	21.4	9 18	0 58.47	+16 11.2	1.385	2.330	10.9	21.2
9 28	0 48.93	+ 5 33.4	1.798	2.793	3.0	21.1	9 28	0 49.41	+15 11.3	1.360	2.341	6.5	21.0
10 8	0 39.85	+ 4 40.5	1.795	2.793	1.4	21.0	10 8	0 39.67	+13 53.6	1.360	2.353	3.7	20.9
10 18	0 31.14	+ 3 49.0	1.822	2.793	5.7	21.3	10 18	0 30.53	+12 26.6	1.388	2.364	6.4	21.1
10 28	0 23.73	+ 3 4.8	1.876	2.792	9.6	21.5	10 28	0 23.18	+11 0.8	1.442	2.374	10.6	21.3
11 7	0 18.28	+ 2 32.5	1.954	2.790	13.1	21.7	11 7	0 18.37	+ 9 45.6	1.518	2.384	14.6	21.6
454547	2014 OA ₃₅₅	10	4.7 319 ^o 14	0 ^o 2/ 4.5 17			143981	2003 YH ₁₅₀	10	4.7 293 ^o 97	0 ^o 5/ 4.4 18		
8 29	1 3.49	+ 6 36.6	1.960	2.799	13.8	21.5	8 29	1 11.01	+ 4 13.4	1.406	2.258	17.5	20.3
9 8	1 0.04	+ 6 7.1	1.873	2.787	10.6	21.3	9 8	1 6.73	+ 4 12.5	1.320	2.241	13.6	20.0
9 18	0 54.65	+ 5 24.8	1.809	2.776	6.9	21.0	9 18	0 59.51	+ 3 59.5	1.255	2.225	8.9	19.7
9 28	0 47.83	+ 4 33.2	1.770	2.766	2.8	20.7	9 28	0 49.99	+ 3 37.6	1.212	2.209	3.6	19.4
10 8	0 40.38	+ 3 37.5	1.758	2.755	1.5	20.6	10 8	0 39.33	+ 3 12.1	1.195	2.193	2.1	19.2
10 18	0 33.18	+ 2 43.8	1.774	2.745	5.8	20.9	10 18	0 28.94	+ 2 49.6	1.205	2.177	7.7	19.5
10 28	0 27.12	+ 1 58.2	1.817	2.736	9.7	21.1	10 28	0 20.25	+ 2 36.5	1.238	2.161	12.9	19.8
11 7	0 22.89	+ 1 25.5	1.884	2.727	13.2	21.3	11 7	0 14.31	+ 2 37.6	1.293	2.146	17.4	20.0
100509	1997 AH ₁₅	10	4.7 146 ^o 84	10 ^o 8/22.5 18			443187	2014 DM ₃₈	10	4.7 151 ^o 88	3 ^o 6/ 8.5 18		
8 29	1 12.33	-24 42.5	1.947	2.785	13.9	19.7	8 29	1 8.79	+17 31.7	2.130	2.910	14.8	21.9
9 8	1 6.65	-26 38.3	1.914	2.797	12.1	19.6	9 8	1 3.92	+17 34.1	2.049	2.916	12.0	21.7
9 18	0 58.76	-28 20.6	1.905	2.808	11.0	19.5	9 18	0 57.07	+17 18.7	1.988	2.922	8.8	21.5
9 28	0 49.42	-29 39.5	1.921	2.818	11.0	19.6	9 28	0 48.80	+16 46.0	1.953	2.927	5.6	21.3
10 8	0 39.65	-30 28.0	1.961	2.827	12.1	19.6	10 8	0 39.97	+15 58.7	1.945	2.932	3.6	21.2
10 18	0 30.52	-30 43.2	2.023	2.835	13.8	19.8	10 18	0 31.48	+15 1.7	1.965	2.937	5.3	21.3
10 28	0 22.96	-30 26.1	2.106	2.843	15.7	19.9	10 28	0 24.22	+14 1.4	2.014	2.941	8.4	21.5
11 7	0 17.60	-29 40.9	2.206	2.850	17.3	20.1	11 7	0 18.85	+13 4.5	2.088	2.945	11.5	21.8
48741	1997 EO ₄₂	10	4.7 51 ^o 50	1 ^o 0/ 5.5 17			84009	2002 OM ₂₂	10	4.7 14 ^o 06	3 ^o 4/ 2.4 18		
8 29	1 9.09	+ 9 56.2	1.212	2.062	19.9	18.7	8 29	1 2.17	+ 1 10.9	0.928	1.826	20.5	18.4
9 8	1 4.96	+ 9 32.5	1.167	2.084	15.3	18.5	9 8	1 0.44	+ 0 24.9	0.884	1.831	15.5	18.1
9 18	0 58.00	+ 8 48.2	1.140	2.107	10.1	18.3	9 18	0 55.49	- 0 35.3	0.857	1.838	9.9	17.8
9 28	0 49.16	+ 7 47.9	1.136	2.130	4.5	18.0	9 28	0 48.26	- 1 40.2	0.849	1.847	4.5	17.6
10 8	0 39.80	+ 6 40.1	1.156	2.154	1.8	17.9	10 8	0 40.27	- 2 38.0	0.864	1.857	5.0	17.6
10 18	0 31.31	+ 5 34.2	1.201	2.178	7.0	18.3	10 18	0 33.10	- 3 18.5	0.900	1.869	10.3	18.0
10 28	0 24.88	+ 4 39.4	1.271	2.202	11.9	18.7	10 28	0 28.14	- 3 34.7	0.957	1.883	15.4	18.3
11 7	0 21.20	+ 4 1.6	1.362	2.226	16.0	19.0	11 7	0 26.20	- 3 24.9	1.032	1.898	19.8	18.7
269415	2009 SV ₃₂	10	4.7 289 ^o 46	1 ^o 6/ 6.6 18			80431	1999 XS ₂₂₇	10	4.7 319 ^o 14	3 ^o 2/ 2.3 18		
8 29	1 3.70	+12 17.9	2.292	3.101	13.0	20.8	8 29	1 5.71	+ 0 40.1	1.275	2.150	17.5	19.4
9 8	1 0.03	+11 59.2	2.189	3.081	10.3	20.6	9 8	1 2.75	- 0 5.3	1.200	2.135	13.4	19.1
9 18	0 54.58	+11 25.7	2.107	3.061	7.2	20.4	9 18	0 56.93	- 1 3.8	1.144	2.121	8.7	18.8
9 28	0 47.80	+10 39.1	2.052	3.041	3.7	20.1	9 28	0 48.92	- 2 8.0	1.111	2.107	4.1	18.5
10 8	0 40.38	+ 9 42.9	2.025	3.021	1.7	20.0	10 8	0 39.88	- 3 8.5	1.103	2.094	4.6	18.5
10 18	0 33.11	+ 8 42.0	2.026	3.001	4.8	20.1	10 18	0 31.23	- 3 55.8	1.118	2.082	9.5	18.8
10 28	0 26.79	+ 7 42.7	2.056	2.981	8.4	20.3	10 28	0 24.33	- 4 22.4	1.157	2.070	14.5	19.0
11 7	0 22.08	+ 6 50.5	2.110	2.961	11.7	20.5	11 7	0 20.16	- 4 24.6	1.215	2.059	18.9	19.3
443542	2014 KU ₇	10	4.7 76 ^o 32	0 ^o 8/ 3.9 18									

EPHEMERIDES

10 4.7

10 4.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
153270	2001 CW ₃₃	10	4.7 216°70	1°1/ 3.5 18			441893	2010 CC ₁₈₂	10	4.7 140°37	1°8/ 6.6 18		
8 29	1 9.10	+ 1 19.0	2.617	3.444	11.1	20.1	8 29	1 9.48	+12 8.8	2.149	2.951	14.0	22.3
9 8	1 3.74	+ 1 10.1	2.529	3.439	8.4	19.9	9 8	1 4.32	+11 58.5	2.074	2.962	11.0	22.1
9 18	0 56.77	+ 0 56.0	2.466	3.433	5.4	19.7	9 18	0 57.26	+11 33.7	2.020	2.972	7.6	21.9
9 28	0 48.65	+ 0 39.3	2.430	3.426	2.2	19.5	9 28	0 48.88	+10 56.4	1.993	2.981	3.9	21.7
10 8	0 40.06	+ 0 23.3	2.425	3.419	1.9	19.4	10 8	0 40.00	+10 10.3	1.994	2.990	1.9	21.6
10 18	0 31.70	+ 0 11.1	2.450	3.412	5.1	19.6	10 18	0 31.51	+ 9 20.3	2.025	2.999	4.9	21.8
10 28	0 24.28	+ 0 5.9	2.503	3.405	8.2	19.8	10 28	0 24.24	+ 8 32.4	2.084	3.007	8.4	22.1
11 7	0 18.37	+ 0 9.7	2.582	3.397	10.9	20.0	11 7	0 18.82	+ 7 51.6	2.168	3.014	11.6	22.3
109021	2001 QV ₇	10	4.7 58°16	2°9/ 2.3 18			454224	2013 JW ₁₈	10	4.7 146°20	1°7/ 2.8 18		
8 29	1 6.48	+ 2 22.2	1.374	2.240	17.1	19.8	8 29	1 5.50	+ 1 7.9	2.318	3.159	11.9	21.7
9 8	1 2.76	+ 1 11.1	1.322	2.253	12.8	19.6	9 8	1 1.15	+ 0 32.8	2.243	3.161	9.0	21.6
9 18	0 56.53	- 0 12.9	1.291	2.267	8.1	19.4	9 18	0 55.14	- 0 9.1	2.193	3.163	5.7	21.4
9 28	0 48.60	- 1 41.5	1.284	2.281	3.7	19.2	9 28	0 48.00	- 0 53.8	2.170	3.165	2.5	21.2
10 8	0 40.13	- 3 4.5	1.303	2.295	4.2	19.3	10 8	0 40.42	- 1 36.5	2.175	3.167	2.6	21.2
10 18	0 32.32	- 4 12.7	1.348	2.309	8.6	19.6	10 18	0 33.16	- 2 12.6	2.210	3.169	5.8	21.4
10 28	0 26.25	- 4 59.5	1.417	2.323	12.9	19.8	10 28	0 26.92	- 2 38.1	2.271	3.171	9.0	21.6
11 7	0 22.61	- 5 22.2	1.507	2.338	16.5	20.1	11 7	0 22.27	- 2 50.7	2.357	3.172	11.8	21.8
8061	Gaudium	10	4.7 350°10	1°3/ 3.5 18			476880	2008 VN ₄₀	10	4.7 356°46	8°6/ 12.4 16		
8 29	1 2.84	+ 3 24.0	1.797	2.651	14.2	17.5	8 29	1 0.58	+25 24.7	1.271	2.067	22.1	21.2
9 8	0 59.65	+ 2 52.3	1.721	2.645	10.8	17.3	9 8	0 59.05	+25 57.2	1.198	2.062	19.0	20.9
9 18	0 54.44	+ 2 9.9	1.667	2.640	6.9	17.0	9 18	0 54.64	+25 56.5	1.140	2.058	15.4	20.7
9 28	0 47.77	+ 1 21.2	1.638	2.635	2.8	16.8	9 28	0 48.01	+25 18.8	1.100	2.055	11.6	20.5
10 8	0 40.49	+ 0 32.3	1.636	2.631	2.4	16.7	10 8	0 40.39	+24 5.5	1.082	2.054	8.9	20.3
10 18	0 33.55	- 0 10.6	1.661	2.628	6.5	17.0	10 18	0 33.18	+22 24.0	1.086	2.054	9.1	20.4
10 28	0 27.85	- 0 42.1	1.711	2.626	10.5	17.2	10 28	0 27.82	+20 27.5	1.113	2.055	12.0	20.5
11 7	0 24.07	- 0 58.4	1.784	2.624	14.0	17.4	11 7	0 25.26	+18 30.9	1.162	2.058	15.8	20.8
410897	2009 SQ ₁₁₁	10	4.7 61°81	2°6/ 7.3 18			274486	2008 SZ ₁₀₄	10	4.7 33°91	2°5/ 7.3 18		
8 29	1 8.08	+13 9.7	2.206	3.005	13.8	20.6	8 29	1 2.64	+16 47.1	1.489	2.309	18.3	19.7
9 8	1 3.28	+13 25.4	2.127	3.011	11.0	20.4	9 8	0 59.88	+15 50.2	1.419	2.316	14.6	19.5
9 18	0 56.60	+13 27.7	2.071	3.017	7.8	20.2	9 18	0 54.74	+14 25.5	1.369	2.322	10.2	19.3
9 28	0 48.61	+13 17.3	2.039	3.023	4.4	20.0	9 28	0 47.92	+12 36.8	1.342	2.330	5.5	19.0
10 8	0 40.09	+12 56.5	2.036	3.029	2.6	19.9	10 8	0 40.48	+10 32.6	1.342	2.338	2.5	18.9
10 18	0 31.88	+12 29.1	2.062	3.035	4.9	20.1	10 18	0 33.55	+ 8 24.5	1.368	2.346	6.1	19.1
10 28	0 24.82	+11 59.9	2.115	3.041	8.1	20.3	10 28	0 28.19	+ 6 24.9	1.421	2.355	10.6	19.4
11 7	0 19.55	+11 33.8	2.194	3.048	11.2	20.5	11 7	0 25.10	+ 4 43.6	1.497	2.364	14.7	19.7
143282	2003 AL ₂₅	10	4.7 203°25	0°9/ 3.9 18			442852	2013 AC ₁₂₅	10	4.7 267°98	0°1/ 4.8 18		
8 29	1 9.76	+ 4 37.3	1.996	2.827	13.8	20.7	8 29	1 7.71	+ 6 34.8	1.936	2.768	14.2	21.8
9 8	1 4.75	+ 4 4.5	1.912	2.823	10.6	20.4	9 8	1 3.30	+ 6 21.1	1.851	2.760	11.0	21.5
9 18	0 57.66	+ 3 20.6	1.851	2.819	6.8	20.2	9 18	0 56.80	+ 5 55.6	1.787	2.752	7.2	21.3
9 28	0 49.08	+ 2 29.6	1.817	2.813	2.7	19.9	9 28	0 48.76	+ 5 21.1	1.749	2.745	3.0	21.0
10 8	0 39.86	+ 1 36.8	1.811	2.807	2.0	19.9	10 8	0 40.05	+ 4 42.1	1.739	2.737	1.4	20.9
10 18	0 30.95	+ 0 48.2	1.835	2.801	6.1	20.1	10 18	0 31.61	+ 4 3.9	1.757	2.729	5.8	21.2
10 28	0 23.30	+ 0 9.5	1.885	2.794	10.1	20.4	10 28	0 24.41	+ 3 32.2	1.802	2.721	9.8	21.4
11 7	0 17.59	- 0 15.5	1.960	2.786	13.5	20.6	11 7	0 19.16	+ 3 11.3	1.871	2.713	13.3	21.6
148235	2000 EC ₆	10	4.7 231°48	0°0/ 4.5 18			118407	1999 RA ₂₀₁	10	4.7 333°73	9°2/ 12.7 18		
8 29	1 9.55	+ 6 51.0	1.805	2.637	15.1	21.3	8 29	1 4.29	+27 2.4	1.704	2.457	18.9	18.1
9 8	1 4.88	+ 6 27.2	1.718	2.628	11.7	21.1	9 8	1 1.49	+28 5.5	1.608	2.438	16.6	17.9
9 18	0 57.91	+ 5 49.8	1.653	2.619	7.7	20.8	9 18	0 56.10	+28 45.1	1.529	2.420	13.9	17.6
9 28	0 49.23	+ 5 1.9	1.614	2.609	3.2	20.5	9 28	0 48.64	+28 56.2	1.470	2.402	11.2	17.4
10 8	0 39.77	+ 4 8.9	1.601	2.599	1.6	20.4	10 8	0 40.05	+28 37.0	1.434	2.386	9.4	17.3
10 18	0 30.61	+ 3 17.4	1.617	2.588	6.3	20.7	10 18	0 31.57	+27 49.5	1.421	2.370	9.5	17.3
10 28	0 22.80	+ 2 34.0	1.660	2.577	10.6	20.9	10 28	0 24.50	+26 40.7	1.433	2.356	11.5	17.3
11 7	0 17.14	+ 2 3.7	1.726	2.566	14.4	21.1	11 7	0 19.87	+25 20.9	1.467	2.342	14.4	17.5
6362	Tunis	10	4.7 328°61	10°0/ 22.7 18			472375	2015 BA ₆₆	10	4.7 148°93	1°6/ 3.2 17		
8 29	1 4.25	-22 10.2	1.937	2.795	13.1	16.3	8 29	1 10.54	+ 3 9.5	1.797	2.637	14.8	21.8
9 8	1 0.71	-23 46.1	1.882	2.783	11.3	16.2	9 8	1 5.40	+ 2 25.6	1.729	2.646	11.2	21.6
9 18	0 55.10	-25 12.7	1.849	2.771	10.2	16.1	9 18	0 58.08	+ 1 30.9	1.684	2.653	7.1	21.4
9 28	0 48.03	-26 20.7	1.841	2.759	10.2	16.1	9 28	0 49.24	+ 0 30.7	1.664	2.661	2.9	21.1
10 8	0 40.40	-27 2.5	1.856	2.748	11.5	16.1	10 8	0 39.85	- 0 28.3	1.673	2.667	2.7	21.1
10 18	0 33.14	-27 14.1	1.894	2.737	13.4	16.2	10 18	0 30.95	- 1 19.6	1.710	2.673	6.9	21.4
10 28	0 27.19	-26 54.7	1.952	2.727	15.5	16.4	10 28	0 23.50	- 1 57.5	1.774	2.679	10.8	21.7
11 7	0 23.21	-26 7.1	2.028	2.717	17.4	16.5	11 7	0 18.18	- 2 18.7	1.861	2.684	14.2	21.9
185316	2006 UE ₃₂₉	10	4.7 99°58	0°5/ 5.2 18			339197	2004 TX ₂₁₁	10	4.7 323°32	0°6/ 4.3 18		
8 29	1 5.99	+ 8 26.1	2.029	2.856	13.9	21.3	8 29	1 7.89	+ 4 36.6	1.482	2.335	16.7	21.4
9 8	1 1.80	+ 8 3.6	1.952	2.858	10.7	21.1	9 8	1 4.06	+ 4 27.8	1.403	2.325	12.9	21.1
9 18	0 55.70	+ 7 28.1	1.897	2.860	7.1	20.9	9 18	0 57.61	+ 4 6.5	1.344	2.315	8.4	20.8
9 28	0 48.26	+ 6 42.5	1.868	2.862	3.1	20.7	9 28	0 49.18	+ 3 36.2	1.308	2.305	3.4	20.5
10 8	0 40.29	+ 5 51.7	1.867	2.865	1.3	20.5	10 8	0 39.85	+ 3 2.7	1.299	2.296	2.0	20.4
10 18	0 32.66	+ 5 1.1	1.894	2.867	5.3	20.8	10 18	0 30.86	+ 2 32.5	1.315	2.287	7.2	20.7
10 28	0 26.21	+ 4 16.5	1.948	2.869	9.1	21.0	10 28	0 23.47	+ 2 12.0	1.356	2.279	12.0	21.0
11 7	0 21.59	+ 3 42.6	2.027	2.871	12.4	21.3	11 7	0 18.56	+ 2 5.8	1.419	2.272	16.2	21.2
95353	2002 CY ₁₃₈	10	4.7 97°26	4°3/ 30.2 18 R			256665	2007 XX ₃₂	10	4.7 306°74	2°2/ 3.2 18		
8 29	1 4.72	- 1 11.5	1.679	2.543	14.5	19.2	8 29	1 7.80	+ 2 19.8	1.257	2.12		

EPHEMERIDES

10 4.7

10 4.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
298222	2002 <i>UT</i> ₂₄	10	4.7 315°19	1°1/ 5.8 18			72740	2001 <i>FZ</i> ₁₀₅	10	4.7 89°41	1°9/ 6.6 18		
8 29	1 3.80	+10 56.8	1.757	2.587	15.5	20.3	8 29	1 10.48	+10 47.8	2.373	3.172	12.9	18.7
9 8	1 0.55	+10 26.4	1.672	2.578	12.2	20.1	9 8	1 4.89	+11 5.7	2.300	3.186	10.2	18.6
9 18	0 55.14	+9 37.9	1.607	2.569	8.2	19.9	9 18	0 57.56	+11 12.6	2.250	3.200	7.0	18.4
9 28	0 48.12	+8 34.2	1.567	2.560	3.8	19.6	9 28	0 49.02	+11 9.4	2.226	3.214	3.7	18.2
10 8	0 40.39	+7 20.9	1.554	2.552	1.5	19.4	10 8	0 40.04	+10 58.4	2.232	3.227	1.9	18.1
10 18	0 32.95	+6 5.5	1.568	2.544	5.8	19.7	10 18	0 31.41	+10 42.8	2.268	3.241	4.5	18.3
10 28	0 26.81	+4 56.3	1.608	2.536	10.1	19.9	10 28	0 23.92	+10 26.5	2.332	3.254	7.7	18.6
11 7	0 22.70	+4 0.0	1.672	2.528	14.0	20.1	11 7	0 18.13	+10 13.5	2.423	3.268	10.6	18.8
476760	2008 <i>UH</i> ₇₆	10	4.7 21°17	4°1/ 2.5 16			112921	2002 <i>QC</i> ₆₃	10	4.8 121°34	0°2/ 4.6 17		
8 29	1 10.18	-3 44.3	1.149	2.029	18.7	20.7	8 29	1 9.71	+7 33.8	1.621	2.457	16.3	20.3
9 8	1 6.01	-3 53.1	1.102	2.039	14.2	20.5	9 8	1 5.00	+6 54.1	1.556	2.468	12.5	20.1
9 18	0 58.82	-4 5.8	1.074	2.050	9.3	20.2	9 18	0 57.93	+5 58.8	1.512	2.479	8.1	19.8
9 28	0 49.60	-4 15.7	1.069	2.063	4.8	20.0	9 28	0 49.23	+4 52.5	1.493	2.489	3.3	19.6
10 8	0 39.75	-4 16.0	1.087	2.077	5.2	20.1	10 8	0 39.95	+3 42.3	1.502	2.499	1.7	19.5
10 18	0 30.77	-4 2.0	1.129	2.092	9.6	20.4	10 18	0 31.22	+2 36.0	1.538	2.509	6.5	19.8
10 28	0 23.94	-3 31.0	1.194	2.108	14.1	20.7	10 28	0 24.07	+1 41.0	1.600	2.518	10.9	20.1
11 7	0 20.01	-2 43.4	1.279	2.126	18.0	21.0	11 7	0 19.22	+1 2.4	1.686	2.527	14.6	20.4
260343	2004 <i>TM</i> ₂₄₈	10	4.7 337°04	0°7/ 5.4 17			187007	2004 <i>TG</i> ₁₂₈	10	4.8 354°47	4°1/ 30.9 18		
8 29	1 3.31	+8 31.4	1.761	2.600	15.1	20.9	8 29	1 4.20	-3 59.1	1.734	2.601	14.0	19.7
9 8	1 0.18	+8 17.9	1.676	2.589	11.8	20.7	9 8	1 0.73	-4 47.3	1.667	2.598	10.6	19.5
9 18	0 54.90	+7 49.7	1.612	2.578	7.8	20.4	9 18	0 55.16	-5 40.3	1.622	2.595	7.1	19.2
9 28	0 48.03	+7 9.6	1.572	2.567	3.5	20.2	9 28	0 48.11	-6 31.6	1.602	2.592	4.3	19.1
10 8	0 40.44	+6 22.3	1.559	2.557	1.4	20.0	10 8	0 40.47	-7 14.1	1.609	2.591	5.2	19.1
10 18	0 33.12	+5 34.1	1.573	2.548	5.8	20.3	10 18	0 33.24	-7 42.0	1.641	2.590	8.5	19.3
10 28	0 27.06	+4 51.6	1.612	2.540	10.1	20.5	10 28	0 27.34	-7 51.3	1.699	2.589	12.1	19.5
11 7	0 23.01	+4 20.3	1.675	2.532	13.9	20.7	11 7	0 23.44	-7 41.0	1.777	2.590	15.2	19.8
187110	2005 <i>QC</i> ₅₅	10	4.7 14°20	2°3/ 3.2 18			400479	2008 <i>GP</i> ₈₉	10	4.8 111°98	0°7/ 3.9 18		
8 29	1 4.36	+2 12.1	1.025	1.912	19.9	19.2	8 29	1 6.74	+4 26.9	2.645	3.469	11.1	21.8
9 8	1 1.94	+1 44.2	0.975	1.917	15.1	18.9	9 8	1 1.79	+3 54.7	2.582	3.489	8.4	21.7
9 18	0 56.41	+1 2.5	0.944	1.923	9.6	18.6	9 18	0 55.41	+3 14.9	2.543	3.509	5.3	21.5
9 28	0 48.68	+0 14.2	0.933	1.931	4.0	18.3	9 28	0 48.10	+2 30.7	2.533	3.529	2.1	21.3
10 8	0 40.18	-0 31.1	0.945	1.940	3.8	18.4	10 8	0 40.51	+1 46.3	2.552	3.548	1.5	21.3
10 18	0 32.44	-1 4.4	0.980	1.951	9.2	18.7	10 18	0 33.27	+1 5.7	2.601	3.566	4.6	21.5
10 28	0 26.83	-1 18.8	1.036	1.964	14.4	19.1	10 28	0 27.01	+0 32.5	2.679	3.585	7.6	21.8
11 7	0 24.17	-1 11.7	1.111	1.977	18.7	19.4	11 7	0 22.17	+0 9.3	2.783	3.602	10.1	22.0
223110	2002 <i>VO</i> ₁₆	10	4.7 257°92	1°4/ 3.7 18			482426	2012 <i>CG</i> ₉	10	4.8 105°96	9°1/ 16.8 18		
8 29	1 11.60	+2 26.8	1.589	2.436	16.0	20.4	8 29	1 12.91	+36 32.9	2.628	3.257	15.5	21.5
9 8	1 6.71	+2 13.3	1.509	2.429	12.3	20.2	9 8	1 7.18	+37 40.4	2.548	3.270	14.0	21.4
9 18	0 59.24	+1 49.8	1.451	2.422	8.0	19.9	9 18	0 59.30	+38 26.6	2.486	3.284	12.3	21.3
9 28	0 49.84	+1 20.6	1.418	2.414	3.3	19.6	9 28	0 49.83	+38 47.8	2.445	3.297	10.7	21.2
10 8	0 39.58	+0 51.2	1.411	2.407	2.6	19.5	10 8	0 39.64	+38 42.5	2.427	3.310	9.5	21.1
10 18	0 29.71	+0 27.7	1.431	2.399	7.4	19.8	10 18	0 29.70	+38 11.9	2.434	3.322	9.1	21.1
10 28	0 21.42	+0 15.5	1.477	2.391	11.9	20.1	10 28	0 21.00	+37 20.6	2.466	3.334	9.7	21.2
11 7	0 15.57	+0 17.9	1.546	2.383	15.9	20.3	11 7	0 14.29	+36 15.6	2.524	3.347	10.9	21.3
25919	Comuniello	10	4.7 0°72	0°1/ 4.8 18			70662	1999 <i>TR</i> ₂₈₂	10	4.8 73°73	1°5/ 3.3 18 R		
8 29	1 7.93	+5 29.3	2.003	2.836	13.8	19.0	8 29	1 6.79	+4 14.7	1.674	2.523	15.3	19.3
9 8	1 3.33	+5 31.3	1.925	2.835	10.6	18.8	9 8	1 2.64	+3 22.8	1.615	2.536	11.6	19.1
9 18	0 56.74	+5 24.0	1.870	2.835	6.9	18.5	9 18	0 56.33	+2 18.8	1.578	2.550	7.3	18.9
9 28	0 48.73	+5 9.6	1.840	2.835	2.9	18.3	9 28	0 48.56	+1 8.3	1.567	2.563	2.9	18.6
10 8	0 40.14	+4 51.8	1.838	2.835	1.3	18.2	10 8	0 40.31	-0 1.1	1.582	2.577	2.7	18.6
10 18	0 31.88	+4 34.6	1.864	2.836	5.5	18.5	10 18	0 32.59	-1 2.0	1.625	2.591	6.9	18.9
10 28	0 24.84	+4 22.5	1.917	2.837	9.3	18.7	10 28	0 26.34	-1 48.3	1.694	2.604	10.9	19.2
11 7	0 19.70	+4 18.9	1.995	2.838	12.6	18.9	11 7	0 22.20	-2 16.6	1.786	2.618	14.3	19.5
353115	2009 <i>FW</i> ₁₅	10	4.7 122°86	1°5/ 3.1 18			33296	1998 <i>KN</i> ₄₂	10	4.8 32°99	8°3/ 26.9 18		
8 29	1 5.59	+3 47.5	2.082	2.921	13.1	21.7	8 29	1 6.43	-15 32.1	1.718	2.586	14.1	17.1
9 8	1 1.37	+2 53.9	2.013	2.930	9.9	21.5	9 8	1 2.31	-16 49.3	1.676	2.596	11.3	17.0
9 18	0 55.36	+1 50.1	1.967	2.937	6.3	21.3	9 18	0 56.07	-18 0.0	1.657	2.607	9.1	16.9
9 28	0 48.13	+0 40.9	1.949	2.945	2.6	21.1	9 28	0 48.43	-18 55.4	1.663	2.618	8.3	16.9
10 8	0 40.45	-0 27.4	1.959	2.953	2.5	21.1	10 8	0 40.38	-19 28.3	1.693	2.630	9.4	17.0
10 18	0 33.15	-1 28.7	1.997	2.960	6.1	21.3	10 18	0 32.92	-19 35.1	1.748	2.642	11.7	17.1
10 28	0 27.02	-2 17.7	2.063	2.967	9.6	21.6	10 28	0 26.96	-19 15.1	1.825	2.655	14.2	17.3
11 7	0 22.63	-2 51.0	2.153	2.973	12.6	21.8	11 7	0 23.08	-18 30.9	1.921	2.668	16.5	17.5
253398	2003 <i>OE</i> ₂₀	10	4.7 66°27	1°8/ 6.7 18			485794	2012 <i>DL</i> ₂₄	10	4.8 188°56	1°2/ 5.8 17		
8 29	1 5.05	+12 44.8	2.125	2.934	13.9	20.1	8 29	1 12.77	+7 55.4	2.581	3.382	12.0	21.4
9 8	1 0.95	+12 26.2	2.056	2.947	10.9	19.9	9 8	1 6.61	+8 19.0	2.492	3.381	9.3	21.2
9 18	0 55.09	+11 52.6	2.008	2.961	7.5	19.7	9 18	0 58.69	+8 34.6	2.426	3.381	6.3	21.1
9 28	0 48.01	+11 6.1	1.987	2.975	3.9	19.5	9 28	0 49.53	+8 43.1	2.389	3.380	3.0	20.8
10 8	0 40.51	+10 11.0	1.993	2.989	1.9	19.4	10 8	0 39.82	+8 46.2	2.382	3.379	1.4	20.7
10 18	0 33.40	+9 12.8	2.027	3.003	4.7	19.6	10 18	0 30.35	+8 46.2	2.406	3.378	4.4	20.9
10 28	0 27.45	+8 17.4	2.090	3.016	8.2	19.9	10 28	0 21.90	+8 46.2	2.460	3.376	7.6	21.1
11 7	0 23.22	+7 30.1	2.177	3.030	11.3	20.1	11 7	0 15.07	+8 49.3	2.540	3.374	10.5	21.3
322519	2011 <i>YJ</i> ₄	10	4.7 297°21	2°4/ 30.0 18			81788	2000 <i>JQ</i> ₈₁	10	4.8 102°47	0°4/ 4.3 18 R		
8 29	0 58.08	-6 22.1	4.293	5.139	6.7	20.4	8 29	1 5.07	+7 21.6	2.038	2.869	13	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
32997	1997 CG ₃	10 4.8	44°86'	0°3'	4.5	18	322424	2011 SZ ₁₅₄	10 4.8	39°05'	1°4'	3.5	18
8 29	1 4.48	+ 6 48.7	1.970	2.806	13.8	18.8	8 29	1 4.79	+ 4 44.3	1.631	2.484	15.5	20.5
9 8	1 0.69	+ 6 12.2	1.898	2.811	10.6	18.6	9 8	1 1.24	+ 3 53.3	1.568	2.491	11.7	20.3
9 18	0 55.01	+ 5 23.1	1.849	2.816	6.8	18.4	9 18	0 55.51	+ 2 49.0	1.527	2.499	7.5	20.0
9 28	0 48.03	+ 4 25.3	1.825	2.821	2.7	18.1	9 28	0 48.26	+ 1 37.2	1.510	2.507	3.0	19.8
10 8	0 40.56	+ 3 24.6	1.830	2.827	1.5	18.1	10 8	0 40.48	+ 0 25.4	1.521	2.516	2.6	19.8
10 18	0 33.45	+ 2 27.0	1.862	2.833	5.6	18.4	10 18	0 33.17	+ 0 38.4	1.558	2.525	6.9	20.1
10 28	0 27.54	+ 1 38.5	1.922	2.838	9.4	18.6	10 28	0 27.31	+ 1 27.8	1.620	2.534	11.1	20.4
11 7	0 23.44	+ 1 3.3	2.005	2.844	12.7	18.8	11 7	0 23.54	+ 1 58.7	1.706	2.543	14.6	20.6
256621	2007 VO ₁₈₃	10 4.8	14°42'	0°4'	5.1	18	476490	2008 FZ ₁₀₄	10 4.8	94°06'	0°4'	4.4	16
8 29	0 56.34	+10 55.0	0.811	1.704	23.1	19.2	8 29	1 9.49	+ 7 37.8	1.638	2.474	16.2	21.7
9 8	0 56.38	+10 1.3	0.768	1.710	17.9	18.9	9 8	1 4.68	+ 6 48.3	1.583	2.495	12.4	21.5
9 18	0 53.08	+ 8 35.2	0.740	1.718	11.8	18.6	9 18	0 57.63	+ 5 43.4	1.549	2.516	7.9	21.3
9 28	0 47.40	+ 6 45.2	0.730	1.728	5.0	18.3	9 28	0 49.09	+ 4 28.4	1.540	2.536	3.2	21.1
10 8	0 40.88	+ 4 46.3	0.741	1.740	2.1	18.2	10 8	0 40.11	+ 3 11.1	1.559	2.556	1.8	21.0
10 18	0 35.17	+ 2 55.7	0.773	1.754	8.8	18.7	10 18	0 31.75	+ 1 59.4	1.605	2.575	6.4	21.4
10 28	0 31.70	+ 1 28.4	0.826	1.770	14.7	19.0	10 28	0 24.99	+ 1 0.4	1.678	2.594	10.6	21.7
11 7	0 31.26	+ 0 32.3	0.896	1.787	19.7	19.4	11 7	0 20.46	+ 0 18.6	1.775	2.613	14.1	21.9
242509	2004 XE ₁₂₅	10 4.8	257°91'	0°3'	5.1	17	322639	1998 SW ₁₀₁	10 4.8	339°42'	0°3'	4.9	17
8 29	1 7.68	+ 6 25.8	2.497	3.316	11.8	20.5	8 29	1 11.57	+ 3 44.1	1.738	2.577	15.3	19.5
9 8	1 2.84	+ 6 25.3	2.405	3.306	9.1	20.3	9 8	1 6.59	+ 4 18.2	1.652	2.565	11.9	19.3
9 18	0 56.32	+ 6 16.4	2.335	3.297	6.0	20.1	9 18	0 59.15	+ 4 45.5	1.586	2.553	7.8	19.0
9 28	0 48.57	+ 6 0.9	2.293	3.287	2.6	19.9	9 28	0 49.85	+ 5 7.6	1.547	2.542	3.3	18.7
10 8	0 40.28	+ 5 41.6	2.280	3.278	1.1	19.7	10 8	0 39.67	+ 5 26.6	1.534	2.532	1.5	18.5
10 18	0 32.19	+ 5 22.0	2.297	3.268	4.6	20.0	10 18	0 29.76	+ 5 45.3	1.549	2.522	6.2	18.8
10 28	0 25.04	+ 5 5.9	2.342	3.258	8.0	20.2	10 28	0 21.26	+ 6 7.1	1.591	2.514	10.6	19.1
11 7	0 19.43	+ 4 56.4	2.413	3.248	10.9	20.4	11 7	0 15.05	+ 6 34.9	1.657	2.506	14.4	19.3
389439	2010 CQ ₉₄	10 4.8	195°26'	2°6'	2.2	18 R	386445	2008 WB ₉₅	10 4.8	17°79'	4°9'	29.8	18
8 29	1 5.99	+ 1 34.6	1.769	2.623	14.4	21.5	8 29	1 1.34	+ 0 18.2	1.384	2.263	16.2	19.9
9 8	1 2.06	+ 0 32.7	1.698	2.622	10.9	21.3	9 8	0 58.96	+ 2 16.0	1.328	2.267	12.1	19.6
9 18	0 56.02	+ 0 39.8	1.649	2.622	6.9	21.1	9 18	0 54.20	+ 4 26.6	1.294	2.271	7.9	19.4
9 28	0 48.48	+ 1 56.8	1.626	2.621	3.2	20.9	9 28	0 47.77	+ 6 38.4	1.285	2.276	5.0	19.2
10 8	0 40.34	+ 3 10.5	1.631	2.621	3.7	20.9	10 8	0 40.73	+ 8 38.5	1.302	2.282	6.5	19.4
10 18	0 32.60	+ 4 13.3	1.662	2.620	7.6	21.1	10 18	0 34.21	+ 10 15.5	1.345	2.289	10.4	19.6
10 28	0 26.20	+ 4 59.3	1.720	2.619	11.4	21.4	10 28	0 29.26	+ 11 22.5	1.410	2.296	14.4	19.9
11 7	0 21.82	+ 5 25.3	1.800	2.619	14.8	21.6	11 7	0 26.57	+ 11 57.5	1.495	2.304	17.8	20.1
15529	2000 AA ₈₀	10 4.8	110°30'	0°4'	3.9	18 R	395011	2009 BQ ₁₅₈	10 4.8	144°80'	1°0'	3.6	18
8 29	0 57.63	+ 4 5.4	4.482	5.305	6.9	18.8	8 29	1 6.75	+ 4 24.6	2.414	3.242	11.9	22.3
9 8	0 54.50	+ 3 38.1	4.399	5.307	5.2	18.7	9 8	1 2.02	+ 3 41.3	2.342	3.252	9.0	22.1
9 18	0 50.57	+ 3 6.4	4.343	5.309	3.3	18.5	9 18	0 55.69	+ 2 48.9	2.295	3.262	5.7	21.9
9 28	0 46.13	+ 2 31.9	4.314	5.310	1.3	18.4	9 28	0 48.29	+ 1 51.4	2.275	3.271	2.3	21.7
10 8	0 41.48	+ 1 57.0	4.316	5.312	1.0	18.4	10 8	0 40.50	+ 0 53.7	2.284	3.280	1.9	21.7
10 18	0 36.95	+ 1 23.9	4.349	5.314	2.9	18.5	10 18	0 33.05	+ 0 0.8	2.324	3.288	5.2	21.9
10 28	0 32.89	+ 0 54.8	4.411	5.316	4.9	18.7	10 28	0 26.62	+ 0 42.7	2.391	3.295	8.4	22.2
11 7	0 29.57	+ 0 31.5	4.500	5.318	6.6	18.8	11 7	0 21.76	+ 1 13.9	2.484	3.302	11.2	22.4
222854	2002 EL ₁₁₉	10 4.8	266°27'	0°8'	6.4	18	390228	2012 XR ₄₂	10 4.8	286°38'	1°0'	5.7	18
8 29	0 58.33	+10 42.7	4.426	5.221	7.4	20.5	8 29	1 6.67	+ 9 37.1	1.778	2.607	15.4	21.2
9 8	0 55.07	+10 28.4	4.331	5.216	5.8	20.3	9 8	1 2.74	+ 9 19.5	1.695	2.601	12.0	20.9
9 18	0 50.97	+10 7.3	4.260	5.212	3.9	20.2	9 18	0 56.57	+ 8 46.2	1.632	2.594	8.1	20.7
9 28	0 46.30	+ 9 40.6	4.218	5.207	2.0	20.0	9 28	0 48.77	+ 7 59.8	1.594	2.588	3.7	20.4
10 8	0 41.40	+ 9 10.3	4.206	5.202	0.9	19.9	10 8	0 40.24	+ 7 5.3	1.583	2.581	1.5	20.3
10 18	0 36.60	+ 8 38.3	4.224	5.198	2.6	20.1	10 18	0 32.02	+ 6 9.0	1.600	2.575	5.8	20.5
10 28	0 32.27	+ 8 7.2	4.272	5.193	4.5	20.2	10 28	0 25.13	+ 5 18.2	1.643	2.568	10.1	20.8
11 7	0 28.71	+ 7 39.1	4.348	5.188	6.3	20.4	11 7	0 20.33	+ 4 38.6	1.710	2.562	13.9	21.0
367217	2007 EZ ₄₆	10 4.8	201°85'	0°1'	4.6	17	387483	2013 YR ₅₂	10 4.8	250°06'	6°3'	10.6	18
8 29	1 3.44	+ 7 52.7	2.590	3.410	11.4	22.2	8 29	1 9.08	+23 13.7	1.858	2.618	17.4	21.5
9 8	0 59.51	+ 7 5.6	2.503	3.407	8.7	22.0	9 8	1 4.83	+23 33.7	1.759	2.604	14.7	21.3
9 18	0 54.09	+ 6 7.1	2.440	3.404	5.7	21.9	9 18	0 58.11	+23 30.6	1.679	2.591	11.6	21.1
9 28	0 47.63	+ 5 0.5	2.405	3.401	2.3	21.6	9 28	0 49.48	+23 1.8	1.621	2.576	8.5	20.9
10 8	0 40.75	+ 3 50.5	2.400	3.397	1.2	21.5	10 8	0 39.87	+22 8.3	1.588	2.562	6.4	20.7
10 18	0 34.10	+ 2 42.2	2.424	3.393	4.6	21.8	10 18	0 30.44	+20 54.4	1.582	2.546	7.2	20.8
10 28	0 28.34	+ 1 40.8	2.477	3.389	7.8	22.0	10 28	0 22.38	+19 28.4	1.603	2.531	10.1	20.9
11 7	0 23.97	+ 0 50.5	2.556	3.384	10.6	22.2	11 7	0 16.59	+18 0.6	1.648	2.515	13.5	21.1
450148	1999 TJ ₁₇₀	10 4.8	0°54'	2°4'	7.2	16	104156	2000 ET ₆₉	10 4.8	204°35'	0°9'	3.8	18
8 29	0 55.24	+15 52.5	1.323	2.167	18.8	20.1	8 29	1 7.56	+ 6 16.5	1.914	2.748	14.3	21.1
9 8	0 54.56	+15 1.0	1.253	2.163	15.0	19.9	9 8	1 3.19	+ 5 19.3	1.831	2.744	10.9	20.9
9 18	0 51.50	+13 39.8	1.201	2.161	10.5	19.6	9 18	0 56.75	+ 4 7.6	1.771	2.739	7.0	20.6
9 28	0 46.70	+11 52.8	1.171	2.161	5.6	19.4	9 28	0 48.81	+ 2 46.3	1.738	2.734	2.8	20.4
10 8	0 41.20	+ 9 49.0	1.165	2.162	2.4	19.2	10 8	0 40.23	+ 1 22.3	1.733	2.729	2.1	20.3
10 18	0 36.12	+ 7 40.9	1.185	2.166	6.3	19.4	10 18	0 31.98	+ 0 3.3	1.756	2.722	6.4	20.6
10 28	0 32.56	+ 5 42.3	1.230	2.171	11.2	19.7	10 28	0 24.99	+ 1 3.5	1.807	2.716	10.4	20.8
11 7	0 31.25	+ 4 3.7	1.296	2.177	15.5	20.0	11 7	0 19.95	+ 1 53.1	1.882	2.708	13.9	21.0
221002	2005 NV ₉₀	10 4.8	20°18'	0°0'	4.5	18	156646	2002 JH ₃₅	10 4.8	52°93'	2°9'	8.3	18
8 29	1 1.92	+ 7 54.4	0.944	1.827	21.5	19.0	8 29	1 3.10	+17 17.9	2.146			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
436504	2011 <i>FG</i> ₇	10	4.8 192°11	0°1/ 4.9 17			13815	Furuya	10	4.8 18°40	4°0/ 9.4 18		
8 29	1 10.49	+ 7 9.5	2.047	2.868	13.9	22.5	8 29	1 1.33	+19 48.7	1.844	2.636	16.3	16.7
9 8	1 5.30	+ 6 47.3	1.963	2.867	10.8	22.3	9 8	0 58.56	+19 27.7	1.770	2.643	13.4	16.5
9 18	0 58.05	+ 6 12.9	1.902	2.865	7.1	22.1	9 18	0 53.78	+18 43.5	1.715	2.650	9.9	16.3
9 28	0 49.34	+ 5 29.4	1.867	2.862	2.9	21.8	9 28	0 47.61	+17 37.4	1.684	2.658	6.4	16.1
10 8	0 40.00	+ 4 41.3	1.861	2.859	1.4	21.7	10 8	0 40.90	+16 13.9	1.679	2.667	4.1	16.0
10 18	0 30.97	+ 3 54.2	1.884	2.855	5.6	22.0	10 18	0 34.57	+14 40.2	1.701	2.676	5.5	16.1
10 28	0 23.19	+ 3 13.7	1.935	2.850	9.5	22.2	10 28	0 29.52	+13 5.4	1.750	2.686	8.8	16.4
11 7	0 17.34	+ 2 44.4	2.011	2.844	12.9	22.4	11 7	0 26.38	+11 38.0	1.823	2.696	12.1	16.6
286685	2002 <i>EP</i> ₁₆₀	10	4.8 317°63	1°2/ 6.9 18			23474	1990 <i>UX</i> ₁	10	4.8 350°30	0°1/ 4.6 18		
8 29	0 59.25	+11 50.5	4.095	4.886	8.0	20.6	8 29	1 0.16	+10 19.9	1.433	2.285	17.2	17.3
9 8	0 55.85	+11 42.5	4.000	4.882	6.3	20.4	9 8	0 58.17	+ 9 7.4	1.358	2.279	13.4	17.0
9 18	0 51.52	+11 27.1	3.930	4.877	4.4	20.3	9 18	0 53.79	+ 7 31.0	1.304	2.274	8.7	16.8
9 28	0 46.57	+11 5.2	3.887	4.873	2.3	20.1	9 28	0 47.68	+ 5 36.5	1.274	2.270	3.6	16.4
10 8	0 41.34	+10 38.6	3.874	4.869	1.2	20.1	10 8	0 40.85	+ 3 34.3	1.269	2.267	1.8	16.3
10 18	0 36.24	+10 9.6	3.891	4.865	2.8	20.2	10 18	0 34.41	+ 1 36.3	1.291	2.265	7.1	16.7
10 28	0 31.65	+ 9 40.7	3.938	4.861	4.8	20.3	10 28	0 29.47	- 0 5.8	1.338	2.263	12.0	16.9
11 7	0 27.91	+ 9 14.4	4.012	4.857	6.7	20.5	11 7	0 26.78	- 1 24.2	1.407	2.263	16.1	17.2
335429	2005 <i>UC</i> ₈₇	10	4.8 58°25	1°8/ 6.5 16			269517	2009 <i>UD</i> ₁₂₉	10	4.8 317°71	7°3/ 13.3 18		
8 29	1 5.78	+14 19.3	1.381	2.212	18.9	20.8	8 29	1 3.13	+28 27.0	2.104	2.831	16.5	19.6
9 8	1 2.31	+13 25.6	1.326	2.231	14.8	20.6	9 8	1 0.07	+28 46.1	2.002	2.816	14.4	19.4
9 18	0 56.32	+12 6.6	1.290	2.250	10.1	20.4	9 18	0 54.90	+28 41.3	1.918	2.800	11.9	19.2
9 28	0 48.62	+10 27.3	1.278	2.269	5.0	20.1	9 28	0 48.14	+28 9.9	1.855	2.785	9.4	19.0
10 8	0 40.40	+ 8 37.1	1.291	2.288	2.0	20.0	10 8	0 40.61	+27 12.3	1.817	2.770	7.6	18.9
10 18	0 32.86	+ 6 47.2	1.331	2.308	6.4	20.3	10 18	0 33.25	+25 52.0	1.804	2.756	7.6	18.8
10 28	0 27.09	+ 5 8.8	1.396	2.327	11.0	20.6	10 28	0 27.06	+24 16.2	1.818	2.742	9.4	18.9
11 7	0 23.74	+ 3 50.0	1.484	2.347	15.0	20.9	11 7	0 22.81	+22 34.5	1.857	2.729	12.0	19.0
328169	2008 <i>CC</i> ₂₀₁	10	4.8 85°36	1°8/ 3.1 17			398031	2009 <i>DU</i> ₁₀₄	10	4.8 188°45	0°3/ 4.5 18		
8 29	1 7.32	+ 5 22.7	1.468	2.321	16.8	20.6	8 29	1 8.29	+ 5 24.4	2.094	2.924	13.4	21.8
9 8	1 3.33	+ 4 8.9	1.412	2.335	12.7	20.3	9 8	1 3.55	+ 5 6.2	2.014	2.923	10.3	21.6
9 18	0 56.92	+ 2 39.3	1.377	2.349	8.1	20.1	9 18	0 56.90	+ 4 37.9	1.957	2.923	6.6	21.4
9 28	0 48.87	+ 1 1.3	1.367	2.363	3.2	19.9	9 28	0 48.88	+ 4 2.5	1.926	2.922	2.7	21.1
10 8	0 40.28	- 0 35.1	1.383	2.377	3.1	19.9	10 8	0 40.30	+ 3 24.5	1.924	2.921	1.5	21.0
10 18	0 32.32	- 2 0.0	1.426	2.391	7.7	20.2	10 18	0 32.04	+ 2 48.8	1.950	2.920	5.5	21.3
10 28	0 26.02	- 3 5.8	1.495	2.405	12.1	20.5	10 28	0 24.96	+ 2 20.3	2.004	2.919	9.2	21.6
11 7	0 22.07	- 3 48.3	1.585	2.418	15.8	20.8	11 7	0 19.69	+ 2 2.5	2.083	2.917	12.5	21.8
24485	2000 <i>YL</i> ₁₀₂	10	4.8 24°39	2°0/ 30.8 18			364043	2005 <i>WN</i> ₈₆	10	4.8 336°90	5°7/ 29.6 18		
8 29	0 57.74	- 3 35.3	4.097	4.941	7.1	18.5	8 29	1 7.09	- 9 22.4	1.868	2.731	13.3	20.8
9 8	0 54.67	- 4 19.9	4.023	4.942	5.3	18.3	9 8	1 2.84	-10 10.4	1.800	2.725	10.4	20.6
9 18	0 50.74	- 5 6.5	3.975	4.943	3.5	18.2	9 18	0 56.51	-10 58.2	1.755	2.719	7.4	20.4
9 28	0 46.24	- 5 52.6	3.956	4.945	2.1	18.1	9 28	0 48.73	-11 39.0	1.736	2.714	5.7	20.3
10 8	0 41.52	- 6 35.1	3.967	4.946	2.6	18.1	10 8	0 40.38	-12 6.2	1.743	2.710	6.7	20.4
10 18	0 36.94	- 7 11.5	4.008	4.948	4.3	18.3	10 18	0 32.43	-12 15.3	1.776	2.705	9.4	20.5
10 28	0 32.86	- 7 39.7	4.077	4.949	6.1	18.4	10 28	0 25.79	-12 3.8	1.834	2.701	12.5	20.7
11 7	0 29.60	- 7 58.2	4.172	4.951	7.7	18.5	11 7	0 21.13	-11 32.1	1.913	2.698	15.3	20.9
20831	Zhangyi	10	4.8 57°09	0°5/ 5.1 18			212940	2008 <i>YS</i> ₁₇	10	4.8 217°74	0°3/ 5.1 18		
8 29	1 10.26	+ 7 45.6	1.322	2.170	18.6	18.3	8 29	1 7.01	+ 8 5.3	1.903	2.733	14.5	21.0
9 8	1 6.01	+ 7 33.2	1.258	2.176	14.4	18.1	9 8	1 2.80	+ 7 40.4	1.823	2.731	11.2	20.8
9 18	0 58.92	+ 7 3.7	1.213	2.181	9.5	17.8	9 18	0 56.52	+ 7 1.6	1.765	2.729	7.4	20.6
9 28	0 49.78	+ 6 20.6	1.192	2.187	4.1	17.5	9 28	0 48.76	+ 6 12.2	1.733	2.727	3.2	20.3
10 8	0 39.84	+ 5 30.6	1.195	2.193	1.7	17.4	10 8	0 40.38	+ 5 17.4	1.727	2.725	1.3	20.1
10 18	0 30.51	+ 4 41.7	1.224	2.199	7.2	17.8	10 18	0 32.32	+ 4 23.2	1.751	2.723	5.7	20.4
10 28	0 23.08	+ 4 2.1	1.278	2.205	12.2	18.1	10 28	0 25.54	+ 3 36.0	1.801	2.721	9.7	20.7
11 7	0 18.38	+ 3 37.5	1.352	2.212	16.4	18.4	11 7	0 20.70	+ 3 0.7	1.875	2.719	13.2	20.9
208835	2002 <i>RL</i> ₁₂₂	10	4.8 345°46	2°6/ 2.9 18			287574	2003 <i>FU</i> ₃₂	10	4.8 47°10	0°2/ 4.5 16		
8 29	1 12.66	- 2 10.8	1.777	2.625	14.6	20.2	8 29	1 0.55	+ 4 26.9	4.207	5.024	7.4	20.8
9 8	1 7.18	- 2 15.6	1.704	2.624	11.2	19.9	9 8	0 56.76	+ 4 18.6	4.123	5.027	5.6	20.6
9 18	0 59.37	- 2 24.4	1.653	2.623	7.2	19.7	9 18	0 52.08	+ 4 5.9	4.065	5.029	3.6	20.5
9 28	0 49.91	- 2 33.0	1.627	2.621	3.5	19.5	9 28	0 46.82	+ 3 50.4	4.036	5.031	1.4	20.3
10 8	0 39.79	- 2 36.7	1.629	2.621	3.5	19.5	10 8	0 41.32	+ 3 33.8	4.037	5.034	0.8	20.3
10 18	0 30.11	- 2 31.6	1.660	2.620	7.3	19.7	10 18	0 35.96	+ 3 18.2	4.068	5.036	3.0	20.5
10 28	0 21.91	- 2 14.8	1.716	2.619	11.2	20.0	10 28	0 31.11	+ 3 5.6	4.129	5.039	5.0	20.6
11 7	0 15.95	- 1 45.0	1.796	2.619	14.6	20.2	11 7	0 27.10	+ 2 57.7	4.217	5.041	6.9	20.7
209265	2003 <i>XU</i> ₃	10	4.8 258°78	1°2/ 6.1 18			506441	2001 <i>AV</i> ₁₉	10	4.8 190°63	9°9/ 19.4 18		
8 29	1 5.29	+11 42.6	2.000	2.816	14.4	20.4	8 29	1 12.72	-32 46.5	2.802	3.597	11.3	21.6
9 8	1 1.50	+11 9.9	1.907	2.805	11.3	20.1	9 8	1 6.59	-34 16.5	2.763	3.595	10.3	21.5
9 18	0 55.70	+10 20.1	1.836	2.794	7.7	19.9	9 18	0 58.68	-35 32.5	2.747	3.592	9.9	21.5
9 28	0 48.42	+ 9 15.7	1.791	2.782	3.7	19.6	9 28	0 49.56	-36 27.7	2.755	3.589	10.2	21.5
10 8	0 40.48	+ 8 1.7	1.773	2.770	1.5	19.5	10 8	0 40.03	-36 57.6	2.788	3.584	11.0	21.6
10 18	0 32.76	+ 6 44.7	1.784	2.758	5.3	19.7	10 18	0 30.90	-37 0.1	2.843	3.579	12.1	21.7
10 28	0 26.20	+ 5 32.2	1.822	2.746	9.3	19.9	10 28	0 22.96	-36 36.0	2.918	3.573	13.3	21.8
11 7	0 21.49	+ 4 30.9	1.885	2.734	12.9	20.1	11 7	0 16.78	-35 48.4	3.010	3.566	14.4	21.9
188827	2005 <i>YK</i> ₂₂₁	10	4.8 42°26	7°3/ 28.1 18			404767	2014 <i>JW</i> ₄₂	10	4.8 56°27	6°3/ 28.6 18		
8 29	1 7.87	-13 51.5	1.784	2.648	13.8								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
148272	2000 <i>GL</i> ₂₉	10	4.8 259°55	1°0/ 5.7 18			368910	2006 <i>TG</i> ₆₈	10	4.8 25°56	4°9/ 8.6 18		
8 29	1 6.55	+10 52.3	1.643	2.473	16.4	20.1	8 29	1 5.82	+17 4.3	1.136	1.971	21.9	19.9
9 8	1 2.87	+10 16.5	1.558	2.465	12.9	19.9	9 8	1 3.09	+17 17.9	1.078	1.979	17.8	19.7
9 18	0 56.81	+ 9 21.1	1.493	2.456	8.7	19.6	9 18	0 57.27	+17 2.9	1.037	1.987	13.0	19.4
9 28	0 48.95	+ 8 9.1	1.453	2.447	4.0	19.3	9 28	0 49.20	+16 19.3	1.015	1.997	8.0	19.2
10 8	0 40.29	+ 6 46.9	1.439	2.437	1.5	19.1	10 8	0 40.27	+15 12.5	1.016	2.008	5.0	19.1
10 18	0 31.94	+ 5 23.0	1.453	2.428	6.3	19.4	10 18	0 32.01	+13 52.2	1.041	2.019	7.5	19.3
10 28	0 25.02	+ 4 6.8	1.493	2.418	10.9	19.7	10 28	0 25.84	+12 30.9	1.089	2.032	12.1	19.6
11 7	0 20.34	+ 3 5.5	1.556	2.409	15.0	19.9	11 7	0 22.62	+11 20.1	1.158	2.045	16.5	19.9
187720	2008 <i>EX</i> ₈₅	10	4.8 339°23	1°6/ 3.4 18			470564	2008 <i>GC</i> ₈	10	4.8 153°33	1°2/ 3.8 16		
8 29	1 8.75	+ 0 59.0	1.856	2.703	14.1	19.9	8 29	1 10.71	+ 4 11.4	1.797	2.634	14.9	22.5
9 8	1 4.15	+ 0 47.7	1.779	2.699	10.8	19.7	9 8	1 5.63	+ 3 35.2	1.726	2.641	11.4	22.3
9 18	0 57.41	+ 0 29.4	1.725	2.696	6.9	19.5	9 18	0 58.35	+ 2 47.7	1.678	2.647	7.3	22.1
9 28	0 49.14	+ 0 7.8	1.696	2.693	2.9	19.2	9 28	0 49.53	+ 1 53.4	1.656	2.652	2.9	21.8
10 8	0 40.23	+ 0 12.3	1.695	2.690	2.6	19.2	10 8	0 40.12	+ 0 58.6	1.662	2.657	2.3	21.8
10 18	0 31.68	+ 0 26.2	1.722	2.687	6.6	19.4	10 18	0 31.17	+ 0 9.7	1.696	2.662	6.6	22.1
10 28	0 24.44	+ 0 29.9	1.775	2.685	10.5	19.7	10 28	0 23.66	+ 0 27.4	1.757	2.666	10.6	22.3
11 7	0 19.24	+ 0 21.0	1.851	2.683	13.9	19.9	11 7	0 18.28	+ 0 49.2	1.841	2.669	14.1	22.6
14316	Higashichichibu	10	4.8 242°31	2°0/ 6.9 18			21929	Nileshraval	10	4.8 129°22	1°7/ 3.3 18		
8 29	1 8.50	+11 47.6	2.567	3.362	12.2	18.0	8 29	1 8.43	+ 2 16.3	1.817	2.663	14.4	18.9
9 8	1 3.49	+12 2.3	2.472	3.355	9.7	17.8	9 8	1 3.90	+ 1 44.1	1.746	2.665	11.0	18.7
9 18	0 56.79	+12 6.3	2.401	3.349	6.8	17.6	9 18	0 57.24	+ 1 2.6	1.697	2.668	7.0	18.5
9 28	0 48.86	+12 0.1	2.357	3.342	3.7	17.4	9 28	0 49.08	+ 0 16.3	1.674	2.670	2.9	18.3
10 8	0 40.36	+11 45.7	2.341	3.335	2.1	17.3	10 8	0 40.33	+ 0 28.7	1.678	2.672	2.7	18.2
10 18	0 32.05	+11 26.1	2.355	3.328	4.4	17.5	10 18	0 31.99	+ 1 6.6	1.710	2.674	6.7	18.5
10 28	0 24.68	+11 5.1	2.398	3.321	7.5	17.6	10 28	0 25.01	+ 1 32.3	1.768	2.676	10.6	18.7
11 7	0 18.85	+10 46.7	2.468	3.314	10.3	17.8	11 7	0 20.08	+ 1 42.7	1.849	2.678	14.0	19.0
302666	2002 <i>SC</i> ₃₃	10	4.8 2°86	0°7/ 5.2 18			175080	2004 <i>GA</i> ₆₆	10	4.8 261°22	1°0/ 3.9 18		
8 29	1 9.86	+ 5 45.3	1.460	2.307	17.2	19.4	8 29	1 7.38	+ 3 45.5	2.011	2.850	13.5	21.1
9 8	1 5.57	+ 6 7.1	1.389	2.306	13.4	19.2	9 8	1 2.99	+ 3 21.9	1.930	2.845	10.3	20.9
9 18	0 58.61	+ 6 17.6	1.339	2.306	8.8	18.9	9 18	0 56.62	+ 2 48.8	1.871	2.840	6.6	20.6
9 28	0 49.71	+ 6 18.6	1.312	2.307	3.8	18.7	9 28	0 48.83	+ 2 9.7	1.838	2.835	2.7	20.4
10 8	0 39.98	+ 6 13.8	1.311	2.309	1.6	18.5	10 8	0 40.44	+ 1 29.6	1.833	2.829	2.0	20.3
10 18	0 30.72	+ 6 8.0	1.336	2.311	6.6	18.8	10 18	0 32.34	+ 0 53.6	1.857	2.824	6.0	20.6
10 28	0 23.16	+ 6 6.4	1.386	2.314	11.3	19.1	10 28	0 25.43	+ 0 26.9	1.908	2.819	9.8	20.8
11 7	0 18.13	+ 6 13.4	1.458	2.318	15.4	19.4	11 7	0 20.38	+ 0 12.7	1.982	2.814	13.1	21.0
373533	2001 <i>TF</i> ₁₁	10	4.8 4°45	1°5/ 5.9 18 R			51973	2001 <i>RX</i> ₂₃	10	4.8 135°57	1°0/ 5.7 18		
8 29	1 3.53	+ 9 33.0	1.108	1.974	20.2	19.5	8 29	1 8.03	+ 8 55.8	1.981	2.803	14.3	18.9
9 8	1 1.36	+ 9 32.8	1.047	1.973	15.9	19.2	9 8	1 3.52	+ 8 49.7	1.902	2.804	11.1	18.7
9 18	0 56.18	+ 9 11.5	1.003	1.973	10.7	19.0	9 18	0 56.97	+ 8 30.8	1.844	2.804	7.5	18.5
9 28	0 48.76	+ 8 31.9	0.980	1.975	5.0	18.7	9 28	0 48.97	+ 8 1.3	1.812	2.805	3.4	18.3
10 8	0 40.43	+ 7 40.8	0.980	1.978	2.0	18.5	10 8	0 40.37	+ 7 25.2	1.807	2.805	1.4	18.1
10 18	0 32.67	+ 6 47.4	1.003	1.983	7.4	18.8	10 18	0 32.10	+ 6 47.3	1.831	2.805	5.3	18.4
10 28	0 26.90	+ 6 1.7	1.049	1.989	12.8	19.2	10 28	0 25.07	+ 6 13.2	1.882	2.806	9.2	18.6
11 7	0 24.00	+ 5 31.3	1.115	1.996	17.4	19.5	11 7	0 19.95	+ 5 47.7	1.958	2.806	12.6	18.8
82817	2001 <i>QV</i> ₃₇	10	4.8 70°96	5°3/ 9.7 18			331352	2012 <i>CW</i> ₃₃	10	4.8 228°03	1°8/ 6.8 18		
8 29	1 9.98	+20 0.3	1.908	2.681	16.5	18.6	8 29	1 6.62	+12 9.1	2.445	3.245	12.6	21.3
9 8	1 5.17	+20 33.4	1.833	2.690	13.7	18.5	9 8	1 2.14	+12 6.7	2.353	3.239	10.0	21.2
9 18	0 58.12	+20 46.9	1.778	2.700	10.5	18.3	9 18	0 55.95	+11 51.9	2.284	3.234	6.9	21.0
9 28	0 49.45	+20 39.6	1.747	2.710	7.3	18.1	9 28	0 48.53	+11 25.8	2.242	3.229	3.7	20.7
10 8	0 40.11	+20 13.0	1.741	2.719	5.4	18.0	10 8	0 40.58	+10 51.2	2.228	3.223	1.9	20.6
10 18	0 31.17	+19 31.3	1.763	2.729	6.4	18.1	10 18	0 32.83	+10 12.1	2.243	3.217	4.5	20.8
10 28	0 23.64	+18 41.3	1.812	2.739	9.2	18.3	10 28	0 26.06	+ 9 33.1	2.287	3.211	7.7	21.0
11 7	0 18.25	+17 50.4	1.885	2.749	12.2	18.5	11 7	0 20.86	+ 8 59.0	2.356	3.205	10.7	21.2
389533	2010 <i>JU</i> ₇₅	10	4.8 159°44	1°0/ 3.7 18			515660	2014 <i>OA</i> ₁₈₃	10	4.8 80°26	3°9/ 8.8 18		
8 29	1 6.84	+ 5 2.9	2.117	2.950	13.1	21.7	8 29	1 10.18	+17 17.2	2.278	3.051	14.2	21.5
9 8	1 2.38	+ 4 14.2	2.042	2.954	10.0	21.5	9 8	1 4.87	+17 44.1	2.206	3.068	11.5	21.4
9 18	0 56.11	+ 3 14.2	1.991	2.959	6.4	21.3	9 18	0 57.69	+17 55.7	2.155	3.084	8.5	21.2
9 28	0 48.57	+ 2 7.5	1.966	2.963	2.5	21.1	9 28	0 49.23	+17 51.8	2.130	3.100	5.6	21.1
10 8	0 40.54	+ 1 0.0	1.971	2.966	2.0	21.1	10 8	0 40.27	+17 34.1	2.133	3.117	3.9	21.0
10 18	0 32.87	+ 0 2.2	2.004	2.969	5.8	21.3	10 18	0 31.68	+17 5.9	2.164	3.133	5.2	21.1
10 28	0 26.35	+ 0 53.6	2.065	2.972	9.4	21.6	10 28	0 24.29	+16 32.4	2.224	3.149	7.9	21.3
11 7	0 21.57	+ 1 30.4	2.151	2.975	12.5	21.8	11 7	0 18.71	+15 59.0	2.310	3.165	10.6	21.5
158291	2001 <i>UN</i> ₉₁	10	4.8 307°27	0°2/ 4.9 18			9637	Perryrose	10	4.8 345°48	0°6/ 4.4 18		
8 29	1 5.41	+ 8 25.2	1.472	2.320	17.1	20.6	8 29	1 0.41	+ 5 43.7	1.023	1.908	20.0	17.1
9 8	1 2.29	+ 7 54.8	1.389	2.306	13.3	20.3	9 8	0 59.30	+ 5 26.9	0.954	1.893	15.5	16.7
9 18	0 56.59	+ 7 5.6	1.325	2.293	8.8	20.0	9 18	0 55.07	+ 4 50.5	0.902	1.880	10.2	16.4
9 28	0 48.92	+ 6 1.3	1.285	2.281	3.8	19.7	9 28	0 48.41	+ 3 59.5	0.871	1.869	4.1	16.0
10 8	0 40.34	+ 4 48.9	1.270	2.268	1.7	19.5	10 8	0 40.61	+ 3 2.5	0.862	1.859	2.4	15.9
10 18	0 32.04	+ 3 37.1	1.281	2.256	7.0	19.8	10 18	0 33.24	+ 2 10.2	0.874	1.851	8.7	16.2
10 28	0 25.28	+ 2 35.3	1.317	2.244	12.0	20.1	10 28	0 27.84	+ 1 33.0	0.907	1.846	14.5	16.5
11 7	0 20.95	+ 1 50.4	1.375	2.233	16.3	20.3	11 7	0 25.46	+ 1 17.4	0.959	1.842	19.5	16.8
389313	2009 <i>SU</i> ₇₆	10	4.8 211°50	1°2/ 1.9 18			315943	2008 <i>TY</i> ₁₁₆	10	4.8 338°68	1°3/ 2.3 16		
8 29	0 57.53	+ 1 29.8	5.098	5.933	5.9	21.5	8 2						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
473536	2015 XZ ₁₇₀	10	4.8 338°01	4.8/ 1.9 18			297376	2000 JX ₄₂	10	4.8 145°04	1.9/ 7.0 18		
8 29	1 8.46	- 6 26.4	1.425	2.298	16.1	19.6	8 29	1 5.91	+13 59.5	2.218	3.017	13.7	21.2
9 8	1 4.77	- 6 32.5	1.342	2.274	12.5	19.4	9 8	1 1.68	+13 30.6	2.137	3.023	10.9	21.0
9 18	0 58.30	- 6 39.3	1.279	2.252	8.6	19.1	9 18	0 55.67	+12 45.5	2.079	3.029	7.5	20.8
9 28	0 49.68	- 6 40.4	1.239	2.230	5.2	18.8	9 28	0 48.43	+11 46.2	2.047	3.034	4.0	20.6
10 8	0 40.01	- 6 29.7	1.225	2.210	5.8	18.8	10 8	0 40.70	+10 37.3	2.044	3.039	1.9	20.5
10 18	0 30.63	- 6 2.4	1.235	2.191	9.7	19.0	10 18	0 33.30	+ 9 24.4	2.069	3.044	4.7	20.7
10 28	0 22.87	- 5 16.0	1.268	2.174	14.1	19.2	10 28	0 27.02	+ 8 14.2	2.123	3.048	8.1	20.9
11 7	0 17.71	- 4 11.0	1.322	2.158	18.1	19.4	11 7	0 22.43	+ 7 12.5	2.202	3.053	11.3	21.1
30685	3243 T ₋₂	10	4.8 306°23	1.3/ 3.8 18			2260	Neoptolemus	10	4.8 319°19	4.3/ 26.3 18		
8 29	1 9.64	+ 4 45.6	1.265	2.125	18.6	19.5	8 29	0 59.68	-16 59.2	4.190	5.033	6.9	16.4
9 8	1 5.76	+ 4 10.7	1.197	2.123	14.3	19.2	9 8	0 56.16	-17 42.1	4.127	5.030	5.6	16.3
9 18	0 58.92	+ 3 19.5	1.149	2.122	9.2	18.9	9 18	0 51.74	-18 21.5	4.091	5.028	4.6	16.3
9 28	0 49.89	+ 2 17.7	1.123	2.120	3.7	18.6	9 28	0 46.73	-18 54.3	4.082	5.025	4.3	16.3
10 8	0 39.95	+ 1 13.9	1.122	2.118	2.8	18.6	10 8	0 41.50	-19 17.9	4.102	5.023	4.9	16.3
10 18	0 30.55	+ 0 17.5	1.147	2.117	8.3	18.9	10 18	0 36.43	-19 30.2	4.149	5.021	6.1	16.4
10 28	0 23.06	- 0 22.9	1.195	2.116	13.5	19.2	10 28	0 31.91	-19 30.2	4.222	5.019	7.4	16.5
11 7	0 18.40	- 0 42.6	1.263	2.114	17.9	19.5	11 7	0 28.24	-19 17.9	4.317	5.016	8.7	16.6
386391	2008 UO ₁₄₈	10	4.8 24°69	2.0/ 6.5 18			49884	1999 XA ₁₄₄	10	4.8 189°88	2.5/ 2.9 18		
8 29	1 5.87	+12 6.8	1.483	2.317	17.7	20.3	8 29	1 12.40	+ 0 6.8	1.638	2.487	15.6	19.0
9 8	1 2.45	+11 52.1	1.415	2.321	13.9	20.1	9 8	1 7.21	- 0 19.9	1.565	2.486	11.9	18.8
9 18	0 56.54	+11 17.3	1.366	2.326	9.6	19.8	9 18	0 59.54	- 0 54.8	1.515	2.486	7.7	18.5
9 28	0 48.85	+10 24.9	1.340	2.331	4.8	19.6	9 28	0 50.09	- 1 32.4	1.490	2.485	3.5	18.3
10 8	0 40.46	+ 9 20.7	1.340	2.337	2.1	19.4	10 8	0 39.92	- 2 6.5	1.491	2.484	3.5	18.3
10 18	0 32.54	+ 8 12.8	1.366	2.343	6.2	19.7	10 18	0 30.21	- 2 31.0	1.521	2.482	7.7	18.5
10 28	0 26.24	+ 7 10.2	1.417	2.350	10.7	20.0	10 28	0 22.08	- 2 41.4	1.576	2.480	11.9	18.8
11 7	0 22.32	+ 6 20.0	1.491	2.357	14.7	20.3	11 7	0 16.32	- 2 35.2	1.653	2.478	15.6	19.0
482260	2011 QV ₂₇	10	4.8 45°89	4.0/ 8.9 16			327496	2005 YE ₂₄₅	10	4.8 242°67	1.0/ 3.6 17		
8 29	1 4.69	+19 3.1	1.687	2.484	17.4	20.7	8 29	1 5.16	+ 3 33.0	2.668	3.497	10.8	22.8
9 8	1 1.32	+18 42.7	1.614	2.491	14.2	20.5	9 8	1 0.88	+ 2 58.0	2.573	3.483	8.3	22.6
9 18	0 55.69	+17 57.7	1.561	2.499	10.4	20.3	9 18	0 55.08	+ 2 15.0	2.502	3.469	5.3	22.4
9 28	0 48.47	+16 49.5	1.530	2.507	6.5	20.1	9 28	0 48.19	+ 1 27.1	2.459	3.455	2.2	22.2
10 8	0 40.64	+15 23.1	1.526	2.515	4.0	20.0	10 8	0 40.81	+ 0 38.4	2.445	3.440	1.8	22.1
10 18	0 33.26	+13 46.6	1.548	2.524	5.8	20.1	10 18	0 33.59	- 0 6.6	2.461	3.424	5.0	22.3
10 28	0 27.34	+12 9.8	1.597	2.533	9.5	20.4	10 28	0 27.20	- 0 43.8	2.505	3.409	8.1	22.5
11 7	0 23.57	+10 41.9	1.671	2.542	13.2	20.6	11 7	0 22.20	- 1 10.1	2.575	3.393	10.9	22.7
452157	2015 RJ ₅₃	10	4.8 10°39	0.7/ 5.5 18			214038	2004 EN ₄₉	10	4.8 126°01	0.7/ 4.0 18		
8 29	1 3.20	+10 8.9	1.762	2.596	15.3	20.9	8 29	1 7.84	+ 4 27.2	2.225	3.055	12.7	21.2
9 8	1 0.03	+ 9 31.1	1.688	2.597	11.9	20.7	9 8	1 3.03	+ 3 58.7	2.154	3.065	9.6	21.0
9 18	0 54.80	+ 8 36.1	1.635	2.599	7.9	20.5	9 18	0 56.48	+ 3 21.2	2.108	3.075	6.2	20.8
9 28	0 48.10	+ 7 27.7	1.607	2.601	3.5	20.2	9 28	0 48.75	+ 2 38.2	2.088	3.084	2.5	20.6
10 8	0 40.82	+ 6 12.2	1.606	2.604	1.3	20.1	10 8	0 40.58	+ 1 54.3	2.097	3.094	1.7	20.6
10 18	0 33.91	+ 4 57.0	1.632	2.607	5.7	20.4	10 18	0 32.79	+ 1 14.4	2.136	3.103	5.4	20.8
10 28	0 28.30	+ 3 50.0	1.684	2.610	9.9	20.7	10 28	0 26.12	+ 0 42.9	2.202	3.111	8.8	21.1
11 7	0 24.65	+ 2 57.0	1.761	2.614	13.5	20.9	11 7	0 21.15	+ 0 22.9	2.293	3.120	11.7	21.3
183745	2003 YT ₁₃₄	10	4.8 320°45	5.5/ 7.7 18			214029	2004 DU ₆₁	10	4.8 224°73	1.0/ 3.8 18		
8 29	1 12.26	+13 49.5	1.275	2.104	20.3	19.9	8 29	1 7.71	+ 3 38.9	2.024	2.862	13.5	20.4
9 8	1 8.29	+14 56.8	1.191	2.089	16.7	19.6	9 8	1 3.22	+ 3 14.2	1.945	2.859	10.3	20.2
9 18	1 0.98	+15 47.5	1.125	2.074	12.4	19.3	9 18	0 56.76	+ 2 40.1	1.888	2.857	6.6	20.0
9 28	0 50.93	+16 18.2	1.079	2.060	7.9	19.0	9 28	0 48.92	+ 2 0.2	1.858	2.854	2.7	19.7
10 8	0 39.40	+16 28.3	1.058	2.047	5.5	18.8	10 8	0 40.49	+ 1 19.6	1.856	2.852	2.0	19.7
10 18	0 28.04	+16 20.5	1.060	2.034	8.2	18.9	10 18	0 32.38	+ 0 43.3	1.882	2.849	6.0	19.9
10 28	0 18.58	+16 2.2	1.087	2.022	12.9	19.2	10 28	0 25.47	+ 0 16.4	1.936	2.846	9.7	20.1
11 7	0 12.28	+15 42.6	1.134	2.011	17.5	19.4	11 7	0 20.41	+ 0 2.2	2.013	2.844	13.0	20.3
457939	2009 VG ₁	10	4.8 296°90	4.4/ 10.5 18			287213	2002 SN ₆₈	10	4.8 353°86	0.3/ 5.1 18		
8 29	1 3.11	+22 18.4	2.389	3.145	14.0	21.1	8 29	1 5.70	+ 7 49.2	1.624	2.467	16.0	20.8
9 8	0 59.60	+22 6.2	2.295	3.141	11.7	20.9	9 8	1 2.17	+ 7 29.8	1.550	2.464	12.4	20.5
9 18	0 54.37	+21 34.3	2.221	3.136	9.0	20.7	9 18	0 56.32	+ 6 55.4	1.495	2.462	8.2	20.3
9 28	0 47.91	+20 42.6	2.171	3.131	6.3	20.5	9 28	0 48.79	+ 6 9.1	1.466	2.461	3.5	20.0
10 8	0 40.92	+19 33.9	2.148	3.126	4.5	20.4	10 8	0 40.56	+ 5 16.9	1.462	2.460	1.5	19.9
10 18	0 34.16	+18 12.7	2.153	3.122	5.2	20.5	10 18	0 32.71	+ 4 25.6	1.485	2.459	6.2	20.2
10 28	0 28.41	+16 45.9	2.187	3.117	7.7	20.6	10 28	0 26.30	+ 3 42.1	1.533	2.459	10.7	20.5
11 7	0 24.26	+15 20.8	2.247	3.113	10.5	20.8	11 7	0 22.08	+ 3 12.0	1.605	2.459	14.5	20.7
454060	2012 JX ₂₃	10	4.8 212°81	3.9/ 11.3 18			489115	2006 BZ ₂₆₈	10	4.8 253°15	4.4/ 28.8 17		
8 29	1 4.13	+24 48.1	3.279	3.996	11.3	22.1	8 29	1 5.09	- 8 39.5	2.746	3.595	10.0	22.4
9 8	0 59.90	+24 22.4	3.171	3.988	9.5	21.9	9 8	1 0.82	- 9 45.2	2.657	3.575	7.7	22.2
9 18	0 54.33	+23 40.0	3.084	3.979	7.5	21.8	9 18	0 55.05	-10 52.5	2.594	3.555	5.6	22.1
9 28	0 47.85	+22 41.2	3.023	3.970	5.4	21.6	9 28	0 48.20	-11 56.4	2.559	3.534	4.4	22.0
10 8	0 40.96	+21 27.9	2.990	3.961	4.0	21.5	10 8	0 40.85	-12 51.3	2.553	3.512	5.3	22.0
10 18	0 34.26	+20 3.7	2.989	3.951	4.3	21.5	10 18	0 33.66	-13 32.8	2.575	3.491	7.5	22.1
10 28	0 28.32	+18 33.7	3.017	3.940	6.1	21.7	10 28	0 27.28	-13 57.8	2.624	3.468	10.0	22.2
11 7	0 23.60	+17 3.5	3.074	3.929	8.3	21.8	11 7	0 22.25	-14 5.0	2.696	3.445	12.2	22.4
60288	1999 XW ₁₁₄	10	4.8 342°64	10.6/ 19.1 18			192256	2008 GS ₅₄	10	4.8 182°25	2.2/ 3.1 16		
8 29	1 6.3												

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10 4.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
159614	2002 <i>AF</i> ₃₇	10	4.8	329°28	8°0/28.2	18	305082	2007 <i>UV</i> ₁₂₇	10	4.8	68°18	7°2/13.4	18
8 29	1 1.87	- 7 38.2	1.175	2.070	17.3	18.3	8 29	1 7.05	+28 43.2	1.829	2.561	18.5	20.1
9 8	1 0.16	- 9 8.3	1.103	2.046	13.5	18.0	9 8	1 3.06	+28 45.6	1.762	2.580	15.9	20.0
9 18	0 55.54	-10 45.8	1.050	2.023	9.9	17.8	9 18	0 56.79	+28 19.6	1.711	2.599	12.8	19.8
9 28	0 48.63	-12 18.1	1.020	2.002	8.0	17.6	9 28	0 48.96	+27 23.9	1.682	2.618	9.8	19.7
10 8	0 40.63	-13 31.6	1.012	1.981	9.8	17.6	10 8	0 40.59	+26 1.3	1.678	2.637	7.6	19.6
10 18	0 32.95	-14 15.3	1.026	1.962	13.8	17.8	10 18	0 32.77	+24 18.4	1.699	2.656	7.5	19.6
10 28	0 27.05	-14 23.0	1.060	1.944	18.1	18.0	10 28	0 26.48	+22 25.0	1.748	2.675	9.5	19.8
11 7	0 23.93	-13 54.7	1.110	1.928	22.0	18.2	11 7	0 22.39	+20 32.1	1.822	2.694	12.2	20.0
448025	2008 <i>EV</i> ₃₈	10	4.8	202°23	1°4/ 3.5	18	213139	2000 <i>GH</i> ₂₃	10	4.8	243°44	1°0/ 3.9	18
8 29	1 7.84	+ 2 11.8	2.095	2.934	13.0	20.9	8 29	1 9.85	+ 3 1.5	2.091	2.924	13.3	21.1
9 8	1 3.23	+ 1 49.4	2.018	2.933	9.9	20.7	9 8	1 4.88	+ 2 47.9	2.003	2.915	10.2	20.9
9 18	0 56.74	+ 1 19.2	1.964	2.933	6.3	20.5	9 18	0 57.90	+ 2 26.1	1.938	2.906	6.6	20.7
9 28	0 48.92	+ 0 45.0	1.936	2.932	2.6	20.3	9 28	0 49.45	+ 1 59.2	1.900	2.896	2.7	20.4
10 8	0 40.56	+ 0 11.4	1.937	2.932	2.3	20.2	10 8	0 40.34	+ 1 31.6	1.890	2.886	2.0	20.3
10 18	0 32.52	- 0 16.9	1.967	2.931	6.0	20.5	10 18	0 31.48	+ 1 7.7	1.910	2.876	5.9	20.6
10 28	0 25.65	- 0 35.6	2.023	2.930	9.5	20.7	10 28	0 23.79	+ 0 52.0	1.956	2.866	9.7	20.8
11 7	0 20.57	- 0 41.9	2.104	2.930	12.7	20.9	11 7	0 17.95	+ 0 47.6	2.027	2.856	13.0	21.0
487199	2014 <i>OB</i> ₃₆₀	10	4.8	16°07	3°8/30.2	18	161453	2003 <i>YE</i> ₁₅₈	10	4.8	16°08	7°2/ 9.8	18
8 29	1 1.81	- 2 29.8	2.040	2.901	12.4	20.7	8 29	1 10.95	+19 16.4	1.410	2.210	20.1	18.7
9 8	0 58.66	- 3 54.1	1.975	2.904	9.4	20.5	9 8	1 6.77	+20 30.0	1.342	2.214	16.8	18.5
9 18	0 53.76	- 5 24.9	1.934	2.906	6.2	20.3	9 18	0 59.64	+21 22.0	1.292	2.220	13.1	18.3
9 28	0 47.68	- 6 55.2	1.921	2.909	3.9	20.2	9 28	0 50.29	+21 48.5	1.263	2.226	9.4	18.1
10 8	0 41.14	- 8 17.4	1.935	2.913	4.9	20.3	10 8	0 39.94	+21 49.2	1.257	2.234	7.2	18.0
10 18	0 34.93	- 9 24.9	1.977	2.917	7.9	20.5	10 18	0 30.05	+21 27.6	1.277	2.242	8.3	18.1
10 28	0 29.82	-10 12.9	2.044	2.921	11.0	20.7	10 28	0 22.03	+20 51.6	1.320	2.252	11.5	18.3
11 7	0 26.37	-10 39.7	2.134	2.925	13.7	20.9	11 7	0 16.83	+20 11.1	1.386	2.262	15.0	18.5
451795	2013 <i>HS</i> ₁₇	10	4.8	99°17	4°0/29.9	18	60639	2000 <i>FW</i> ₃₁	10	4.8	57°74	7°2/29.6	18
8 29	1 5.28	- 6 6.2	2.381	3.233	11.2	21.5	8 29	1 11.43	- 9 20.0	1.327	2.201	17.0	18.7
9 8	1 0.94	- 7 9.2	2.325	3.247	8.5	21.4	9 8	1 6.58	-10 30.0	1.291	2.221	13.1	18.6
9 18	0 55.05	- 8 14.0	2.295	3.261	5.8	21.2	9 18	0 59.07	-11 38.2	1.275	2.241	9.4	18.4
9 28	0 48.16	- 9 14.9	2.292	3.275	4.1	21.1	9 28	0 49.86	-12 34.7	1.283	2.261	7.2	18.3
10 8	0 40.93	-10 6.5	2.317	3.288	4.9	21.2	10 8	0 40.24	-13 10.5	1.315	2.282	8.4	18.5
10 18	0 34.08	-10 44.4	2.371	3.301	7.3	21.4	10 18	0 31.50	-13 20.9	1.372	2.303	11.5	18.7
10 28	0 28.26	-11 5.9	2.451	3.314	9.9	21.6	10 28	0 24.73	-13 4.6	1.451	2.323	14.9	19.0
11 7	0 23.96	-11 10.2	2.554	3.327	12.2	21.8	11 7	0 20.57	-12 24.3	1.550	2.344	17.9	19.2
455033	2015 <i>TH</i> ₃₄₈	10	4.8	175°84	3°8/ 1.1	18	134211	2005 <i>QO</i> ₉₈	10	4.8	1°77	1°6/ 3.3	18
8 29	1 8.78	- 6 4.8	2.216	3.065	12.1	21.2	8 29	1 5.91	+ 2 32.0	1.913	2.760	13.7	20.2
9 8	1 3.80	- 6 36.0	2.145	3.065	9.2	21.0	9 8	1 1.94	+ 1 55.9	1.840	2.760	10.4	20.0
9 18	0 57.02	- 7 8.8	2.098	3.065	6.2	20.8	9 18	0 55.99	+ 1 10.4	1.789	2.760	6.7	19.8
9 28	0 49.01	- 7 38.2	2.079	3.065	4.0	20.7	9 28	0 48.65	+ 0 20.0	1.764	2.760	2.8	19.5
10 8	0 40.53	- 7 59.3	2.087	3.065	4.6	20.7	10 8	0 40.76	- 0 29.4	1.766	2.760	2.6	19.5
10 18	0 32.40	- 8 8.4	2.124	3.065	7.3	20.9	10 18	0 33.21	- 1 12.0	1.796	2.761	6.5	19.8
10 28	0 25.41	- 8 2.9	2.187	3.065	10.3	21.1	10 28	0 26.90	- 1 42.6	1.853	2.761	10.2	20.0
11 7	0 20.16	- 7 42.3	2.274	3.065	13.0	21.3	11 7	0 22.46	- 1 58.2	1.933	2.762	13.5	20.2
457897	2009 <i>TC</i> ₃₂	10	4.8	5°92	4°0/ 2.1	18	246339	2007 <i>TT</i> ₂₆₁	10	4.8	347°89	0°0/ 4.8	18
8 29	1 9.07	- 5 24.7	1.560	2.426	15.4	19.7	8 29	1 6.90	+ 7 5.2	1.755	2.593	15.2	21.0
9 8	1 4.69	- 5 32.5	1.498	2.427	11.7	19.5	9 8	1 2.92	+ 6 43.9	1.679	2.591	11.7	20.8
9 18	0 57.89	- 5 41.7	1.457	2.429	7.8	19.3	9 18	0 56.75	+ 6 9.0	1.624	2.590	7.7	20.6
9 28	0 49.42	- 5 46.9	1.441	2.432	4.5	19.1	9 28	0 49.00	+ 5 23.9	1.594	2.589	3.2	20.3
10 8	0 40.34	- 5 42.8	1.450	2.436	4.9	19.2	10 8	0 40.59	+ 4 34.1	1.590	2.588	1.5	20.2
10 18	0 31.80	- 5 25.7	1.486	2.442	8.5	19.4	10 18	0 32.54	+ 3 45.8	1.615	2.588	6.0	20.5
10 28	0 24.86	- 4 53.5	1.546	2.448	12.3	19.6	10 28	0 25.85	+ 3 5.5	1.665	2.587	10.2	20.7
11 7	0 20.24	- 4 6.1	1.628	2.456	15.7	19.9	11 7	0 21.24	+ 2 38.0	1.739	2.587	13.9	21.0
27233	Mahajan	10	4.8	135°70	2°2/ 6.9	18	237444	1999 <i>TZ</i> ₆₆	10	4.8	211°46	2°2/ 7.3	18
8 29	1 8.73	+13 12.4	1.889	2.697	15.4	18.4	8 29	1 5.61	+15 31.0	2.026	2.824	14.8	20.6
9 8	1 4.16	+13 1.7	1.813	2.703	12.2	18.2	9 8	1 1.74	+14 52.4	1.937	2.821	11.9	20.4
9 18	0 57.46	+12 34.1	1.758	2.709	8.5	18.0	9 18	0 55.90	+13 53.9	1.870	2.817	8.4	20.2
9 28	0 49.24	+11 51.0	1.727	2.714	4.6	17.8	9 28	0 48.64	+12 37.4	1.828	2.813	4.6	20.0
10 8	0 40.42	+10 56.8	1.724	2.720	2.3	17.6	10 8	0 40.77	+11 8.2	1.814	2.809	2.2	19.8
10 18	0 31.99	+ 9 57.5	1.749	2.725	5.3	17.8	10 18	0 33.19	+ 9 33.3	1.828	2.804	5.1	20.0
10 28	0 24.91	+ 9 0.0	1.802	2.729	9.2	18.1	10 28	0 26.80	+ 8 1.2	1.871	2.799	8.9	20.2
11 7	0 19.86	+ 8 10.8	1.879	2.734	12.7	18.3	11 7	0 22.27	+ 6 39.3	1.940	2.794	12.4	20.4
501878	2014 <i>WF</i> ₃₆₅	10	4.8	219°49	2°5/ 1.3	17 C	453501	2009 <i>TM</i> ₃₄	10	4.8	12°59	6°9/29.3	18
8 29	1 12.02	- 1 16.2	3.084	3.903	9.8	23.2	8 29	1 11.25	-14 35.9	1.884	2.739	13.6	19.9
9 8	1 5.89	- 2 26.1	2.981	3.887	7.4	23.1	9 8	1 5.94	-15 7.5	1.827	2.742	10.8	19.8
9 18	0 58.26	- 3 42.3	2.906	3.870	4.8	22.9	9 18	0 58.51	-15 33.3	1.792	2.745	8.3	19.6
9 28	0 49.53	- 5 0.5	2.861	3.851	2.7	22.7	9 28	0 49.65	-15 46.6	1.783	2.748	6.9	19.6
10 8	0 40.28	- 6 15.4	2.849	3.830	3.3	22.7	10 8	0 40.34	-15 42.2	1.800	2.752	7.8	19.6
10 18	0 31.16	- 7 22.3	2.870	3.808	5.8	22.9	10 18	0 31.57	-15 17.4	1.843	2.757	10.1	19.8
10 28	0 22.83	- 8 17.0	2.921	3.785	8.5	23.0	10 28	0 24.26	-14 31.9	1.910	2.762	12.8	20.0
11 7	0 15.82	- 8 57.1	2.999	3.760	10.8	23.1	11 7	0 19.04	-13 28.0	2.000	2.767	15.3	20.2
250988	2006 <i>KK</i> ₃₁	10	4.8	71°06	1°4/ 3.9	17	393182	2013 <i>CU</i> ₁₀₀	10	4.8			

EPHEMERIDES

10 4.8

10 4.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
251788	1999 <i>RM</i> ₂₁₂	10	4.8 329°91	6°2/ 9.0	18		102250	1999 <i>TU</i> ₂₇	10	4.8 16°01	5°5/ 1.9	18	
8 29	1 1.67	+17 33.1	1.110	1.952	21.9	19.0	8 29	1 14.23	- 8 11.1	1.314	2.184	17.5	18.3
9 8	1 0.47	+18 8.6	1.026	1.929	18.2	18.7	9 8	1 9.01	- 8 16.0	1.259	2.188	13.5	18.1
9 18	0 56.08	+18 16.8	0.957	1.908	13.9	18.4	9 18	1 0.87	- 8 19.2	1.224	2.194	9.2	17.9
9 28	0 49.03	+17 54.1	0.907	1.887	9.2	18.1	9 28	0 50.73	- 8 13.8	1.213	2.201	5.9	17.7
10 8	0 40.52	+17 1.9	0.879	1.868	6.2	17.9	10 8	0 39.92	- 7 54.3	1.226	2.208	6.4	17.8
10 18	0 32.16	+15 47.0	0.872	1.850	8.4	17.9	10 18	0 29.88	- 7 17.3	1.265	2.217	10.1	18.0
10 28	0 25.69	+14 22.2	0.886	1.834	13.4	18.1	10 28	0 21.89	- 6 22.4	1.327	2.226	14.1	18.3
11 7	0 22.40	+13 1.8	0.920	1.820	18.5	18.4	11 7	0 16.72	- 5 11.5	1.410	2.237	17.7	18.5
361857	2008 <i>EK</i> ₂₃	10	4.8 172°76	3°6/30.6	18		73000	2002 <i>ER</i> ₂₀	10	4.8 90°49	2°1/ 2.8	18	
8 29	1 6.85	- 5 14.7	2.480	3.326	11.0	21.6	8 29	1 7.20	+ 2 37.6	1.750	2.599	14.7	19.5
9 8	1 2.17	- 6 5.9	2.410	3.329	8.4	21.4	9 8	1 3.00	+ 1 40.9	1.688	2.610	11.1	19.3
9 18	0 55.91	- 6 59.7	2.364	3.331	5.6	21.2	9 18	0 56.69	+ 0 33.6	1.649	2.621	7.1	19.1
9 28	0 48.58	- 7 51.1	2.347	3.332	3.7	21.1	9 28	0 48.96	- 0 38.4	1.636	2.632	3.1	18.9
10 8	0 40.84	- 8 35.0	2.358	3.334	4.4	21.2	10 8	0 40.73	- 1 47.6	1.650	2.642	3.2	18.9
10 18	0 33.40	- 9 7.2	2.398	3.334	6.9	21.3	10 18	0 32.98	- 2 46.9	1.692	2.653	7.1	19.2
10 28	0 26.95	- 9 24.7	2.465	3.335	9.6	21.5	10 28	0 26.63	- 3 30.5	1.759	2.663	10.9	19.4
11 7	0 22.02	- 9 26.5	2.556	3.335	12.0	21.7	11 7	0 22.31	- 3 55.6	1.850	2.674	14.2	19.7
306132	2010 <i>JU</i> ₁₁₄	10	4.8 26°26	4°8/ 9.3	18		381082	2007 <i>BV</i> ₃₆	10	4.9 297°12	0°0/ 4.7	18	
8 29	1 3.32	+19 4.6	1.356	2.173	19.9	19.5	8 29	1 8.01	+ 6 53.1	1.453	2.301	17.2	21.6
9 8	1 0.72	+19 0.4	1.298	2.186	16.3	19.3	9 8	1 4.45	+ 6 36.1	1.366	2.285	13.5	21.4
9 18	0 55.53	+18 28.4	1.258	2.201	12.0	19.1	9 18	0 58.16	+ 6 2.9	1.300	2.268	8.9	21.0
9 28	0 48.53	+17 29.7	1.239	2.217	7.7	18.9	9 28	0 49.76	+ 5 16.8	1.256	2.252	3.8	20.7
10 8	0 40.88	+16 9.9	1.244	2.233	4.8	18.8	10 8	0 40.30	+ 4 23.8	1.238	2.236	1.7	20.5
10 18	0 33.84	+14 38.3	1.274	2.251	6.6	19.0	10 18	0 31.09	+ 3 31.7	1.246	2.220	7.2	20.8
10 28	0 28.53	+13 6.4	1.329	2.270	10.5	19.3	10 28	0 23.44	+ 2 48.9	1.279	2.205	12.3	21.1
11 7	0 25.69	+11 44.3	1.406	2.289	14.4	19.6	11 7	0 18.35	+ 2 21.7	1.333	2.190	16.8	21.3
260207	2004 <i>RS</i> ₁₈₄	10	4.8 303°59	3°8/ 9.1	18		37281	2000 <i>YA</i> ₆₁	10	4.9 310°94	1°2/ 2.5	18	
8 29	1 3.95	+18 40.6	2.120	2.904	14.8	20.3	8 29	0 58.64	+ 0 15.7	4.058	4.892	7.3	19.1
9 8	1 0.50	+18 32.6	2.026	2.894	12.1	20.1	9 8	0 55.45	- 0 16.2	3.974	4.888	5.5	19.0
9 18	0 55.14	+18 5.1	1.952	2.885	9.0	19.9	9 18	0 51.37	- 0 51.8	3.916	4.884	3.5	18.8
9 28	0 48.36	+17 18.6	1.902	2.875	5.8	19.7	9 28	0 46.69	- 1 28.5	3.886	4.881	1.6	18.7
10 8	0 40.93	+16 15.9	1.879	2.866	3.8	19.5	10 8	0 41.77	- 2 4.0	3.886	4.877	1.8	18.7
10 18	0 33.72	+15 2.3	1.884	2.857	5.2	19.6	10 18	0 36.97	- 2 35.5	3.917	4.873	3.7	18.9
10 28	0 27.61	+13 45.0	1.916	2.848	8.4	19.8	10 28	0 32.69	- 3 1.0	3.976	4.869	5.7	19.0
11 7	0 23.27	+12 31.4	1.974	2.840	11.7	20.0	11 7	0 29.22	- 3 18.6	4.062	4.865	7.5	19.1
334161	2001 <i>SD</i> ₂₉	10	4.8 343°24	1°1/ 4.0	18		211294	2002 <i>RE</i> ₁₉₈	10	4.9 314°71	0°0/ 4.7	18	
8 29	1 2.64	+ 5 6.8	1.153	2.030	18.9	19.9	8 29	1 7.37	+ 6 26.1	1.737	2.576	15.3	20.6
9 8	1 0.73	+ 4 39.2	1.083	2.018	14.6	19.6	9 8	1 3.40	+ 6 12.7	1.655	2.568	11.8	20.4
9 18	0 55.90	+ 3 53.6	1.030	2.007	9.5	19.3	9 18	0 57.16	+ 5 46.6	1.594	2.561	7.8	20.1
9 28	0 48.82	+ 2 55.4	0.999	1.997	3.8	19.0	9 28	0 49.24	+ 5 10.6	1.558	2.553	3.2	19.8
10 8	0 40.71	+ 1 53.6	0.991	1.988	2.7	18.9	10 8	0 40.57	+ 4 30.0	1.548	2.546	1.5	19.7
10 18	0 33.01	+ 0 58.0	1.007	1.981	8.4	19.2	10 18	0 32.20	+ 3 50.5	1.566	2.539	6.2	20.0
10 28	0 27.15	+ 0 18.2	1.044	1.975	13.9	19.5	10 28	0 25.19	+ 3 18.5	1.610	2.532	10.5	20.2
11 7	0 24.08	- 0 0.1	1.101	1.971	18.6	19.7	11 7	0 20.30	+ 2 58.7	1.677	2.526	14.3	20.4
134353	1993 <i>TB</i> ₃₀	10	4.8 86°66	3°8/ 1.5	18		238559	2004 <i>XX</i> ₂₈	10	4.9 259°28	5°0/ 29.9	18	
8 29	1 10.19	- 4 24.4	1.863	2.716	13.8	19.4	8 29	1 7.92	- 6 5.3	1.885	2.744	13.4	20.3
9 8	1 5.11	- 5 1.5	1.804	2.726	10.5	19.2	9 8	1 3.64	- 7 10.0	1.806	2.731	10.3	20.1
9 18	0 57.97	- 5 41.7	1.768	2.737	6.9	19.0	9 18	0 57.22	- 8 18.9	1.751	2.718	7.1	19.9
9 28	0 49.45	- 6 19.2	1.758	2.747	4.1	18.9	9 28	0 49.24	- 9 24.9	1.721	2.705	5.1	19.8
10 8	0 40.47	- 6 48.2	1.775	2.758	4.7	19.0	10 8	0 40.58	- 10 20.5	1.718	2.691	6.1	19.8
10 18	0 32.00	- 7 4.0	1.820	2.768	7.9	19.2	10 18	0 32.20	- 10 59.1	1.743	2.677	9.2	20.0
10 28	0 24.93	- 7 3.8	1.891	2.778	11.2	19.4	10 28	0 25.08	- 11 16.7	1.792	2.663	12.6	20.1
11 7	0 19.83	- 6 46.9	1.985	2.788	14.2	19.6	11 7	0 19.94	- 11 12.2	1.863	2.649	15.6	20.3
57707	2001 <i>UG</i> ₁₁₈	10	4.8 319°39	0°4/ 4.5	18		11104	Airion	10	4.9 18°20	4°9/ 10.2	18	
8 29	1 5.37	+ 6 16.9	1.936	2.773	14.0	19.6	8 29	1 3.69	+21 29.0	1.847	2.627	16.8	17.2
9 8	1 1.58	+ 5 45.1	1.856	2.769	10.8	19.4	9 8	1 0.52	+21 23.4	1.768	2.630	13.9	17.0
9 18	0 55.81	+ 5 0.9	1.798	2.766	7.0	19.2	9 18	0 55.22	+20 54.2	1.709	2.633	10.6	16.8
9 28	0 48.62	+ 4 7.9	1.766	2.763	2.8	18.9	9 28	0 48.41	+20 1.4	1.671	2.638	7.3	16.7
10 8	0 40.83	+ 3 11.6	1.762	2.759	1.6	18.8	10 8	0 40.98	+18 48.4	1.660	2.642	5.0	16.5
10 18	0 33.34	+ 2 18.2	1.785	2.756	5.8	19.1	10 18	0 33.91	+17 21.6	1.675	2.647	6.0	16.6
10 28	0 27.05	+ 1 33.6	1.836	2.753	9.7	19.4	10 28	0 28.15	+15 49.9	1.717	2.652	9.0	16.8
11 7	0 22.63	+ 1 2.3	1.910	2.750	13.2	19.6	11 7	0 24.40	+14 22.3	1.784	2.658	12.3	17.0
191913	2005 <i>LO</i> ₂₅	10	4.8 45°80	0°4/ 4.1	18		446864	2001 <i>WK</i> ₃₃	10	4.9 279°07	6°3/ 28.6	18	
8 29	0 58.75	+ 4 21.5	4.030	4.852	7.6	20.2	8 29	1 9.18	-12 21.9	2.068	2.922	12.6	21.3
9 8	0 55.51	+ 3 55.8	3.950	4.857	5.7	20.1	9 8	1 4.43	-13 15.2	1.989	2.906	10.0	21.1
9 18	0 51.38	+ 3 25.1	3.897	4.862	3.7	19.9	9 18	0 57.66	-14 6.8	1.935	2.890	7.6	20.9
9 28	0 46.67	+ 2 51.3	3.872	4.868	1.5	19.8	9 28	0 49.41	-14 49.6	1.906	2.874	6.3	20.8
10 8	0 41.74	+ 2 17.0	3.876	4.873	1.0	19.7	10 8	0 40.52	-15 17.3	1.904	2.857	7.3	20.8
10 18	0 36.95	+ 1 44.5	3.912	4.878	3.2	19.9	10 18	0 31.92	-15 25.3	1.928	2.841	9.8	20.9
10 28	0 32.68	+ 1 16.3	3.976	4.883	5.3	20.1	10 28	0 24.52	-15 11.3	1.978	2.824	12.6	21.1
11 7	0 29.25	+ 0 54.4	4.067	4.889	7.1	20.2	11 7	0 19.01	-14 36.1	2.048	2.808	15.3	21.2
315167	2007 <i>GE</i> ₄	10	4.8 153°94	7°4/ 25.0	18		227728	2006 <i>EB</i> ₄₃	10	4.9 220°72	3°2/ 1.1	18	
8 29	1 8.02	-21 33.7	2.714</										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
458135	2010 <i>GE</i> ₂₅	10 4.9 182°34	8°6/13.6	16	C		68315	2001 <i>FT</i> ₁₄₄	10 4.9 285°41	7°3/24.2	18		
8 29	1 21.47	+32 12.1	2.374	3.030	16.5	25.4	8 29	1 2.81	-13 40.9	2.218	3.081	11.5	18.9
9 8	1 14.07	+33 5.6	2.276	3.033	14.6	25.2	9 8	0 59.52	-15 49.8	2.148	3.066	9.3	18.7
9 18	1 4.09	+33 37.2	2.197	3.034	12.4	25.1	9 18	0 54.46	-17 58.8	2.104	3.051	7.7	18.6
9 28	0 52.15	+33 42.3	2.141	3.033	10.3	24.9	9 28	0 48.11	-19 58.6	2.088	3.035	7.5	18.5
10 8	0 39.24	+33 18.9	2.111	3.032	8.8	24.8	10 8	0 41.18	-21 40.4	2.100	3.020	8.9	18.6
10 18	0 26.54	+32 28.8	2.109	3.028	8.7	24.8	10 18	0 34.46	-22 57.9	2.137	3.005	11.1	18.7
10 28	0 15.28	+31 18.0	2.135	3.023	10.0	24.9	10 28	0 28.74	-23 47.2	2.198	2.990	13.4	18.9
11 7	0 6.33	+29 55.5	2.187	3.017	12.1	25.0	11 7	0 24.64	-24 8.6	2.278	2.975	15.6	19.0
25800	Glukhovsky	10 4.9 189°08	0°1/5.0	18			401672	2013 <i>GJ</i> ₁₂₅	10 4.9 93°65	5°3/28.9	18		
8 29	1 1.78	+6 52.0	3.660	4.471	8.5	19.7	8 29	1 6.75	-10 33.9	2.293	3.147	11.5	21.1
9 8	0 57.91	+6 31.8	3.572	4.470	6.5	19.5	9 8	1 2.17	-11 32.6	2.239	3.158	8.9	21.0
9 18	0 53.00	+6 4.9	3.509	4.469	4.3	19.4	9 18	0 55.95	-12 29.7	2.210	3.168	6.5	20.8
9 28	0 47.38	+5 33.3	3.474	4.468	1.8	19.2	9 28	0 48.64	-13 19.5	2.207	3.178	5.3	20.8
10 8	0 41.48	+4 59.3	3.469	4.467	0.8	19.1	10 8	0 40.98	-13 56.3	2.232	3.189	6.2	20.8
10 18	0 35.72	+4 25.8	3.495	4.465	3.3	19.3	10 18	0 33.71	-14 16.6	2.284	3.199	8.4	21.0
10 28	0 30.56	+3 55.5	3.550	4.463	5.6	19.5	10 28	0 27.55	-14 18.3	2.362	3.209	10.8	21.2
11 7	0 26.37	+3 30.9	3.633	4.461	7.7	19.6	11 7	0 23.02	-14 1.8	2.462	3.219	13.0	21.4
402808	2007 <i>DD</i> ₈₉	10 4.9 79°23	4°5/29.2	18			80865	2000 <i>DH</i> ₂₈	10 4.9 91°88	0°0/4.7	17	R	
8 29	1 4.52	-5 49.3	2.238	3.095	11.7	20.6	8 29	1 11.13	+7 22.0	1.593	2.428	16.6	19.6
9 8	1 0.46	-7 17.7	2.192	3.115	8.8	20.5	9 8	1 6.17	+6 55.5	1.534	2.445	12.7	19.4
9 18	0 54.81	-8 48.2	2.170	3.136	6.1	20.3	9 18	0 58.84	+6 14.4	1.496	2.462	8.3	19.2
9 28	0 48.14	-10 13.9	2.176	3.157	4.5	20.3	9 28	0 49.89	+5 22.8	1.484	2.479	3.4	19.0
10 8	0 41.15	-11 28.1	2.211	3.177	5.5	20.4	10 8	0 40.41	+4 27.1	1.498	2.496	1.5	18.9
10 18	0 34.58	-12 25.7	2.273	3.198	7.9	20.6	10 18	0 31.55	+3 34.6	1.539	2.512	6.3	19.2
10 28	0 29.10	-13 3.6	2.362	3.218	10.5	20.8	10 28	0 24.34	+2 51.7	1.607	2.528	10.6	19.5
11 7	0 25.19	-13 21.3	2.472	3.238	12.8	21.0	11 7	0 19.45	+2 23.2	1.698	2.544	14.3	19.8
494592	2017 <i>BQ</i> ₁₀₁	10 4.9 331°53	6°0/27.2	18			292233	2006 <i>SG</i> ₆₃	10 4.9 43°27	4°1/8.6	18		
8 29	1 1.64	-9 11.7	2.044	2.913	12.1	20.2	8 29	1 8.75	+16 49.6	1.906	2.697	15.9	20.6
9 8	0 58.66	-10 51.1	1.977	2.904	9.4	20.0	9 8	1 4.32	+17 9.7	1.826	2.700	13.0	20.4
9 18	0 53.88	-12 32.7	1.934	2.897	7.0	19.9	9 18	0 57.69	+17 12.0	1.767	2.703	9.6	20.2
9 28	0 47.83	-14 8.1	1.918	2.889	6.1	19.8	9 28	0 49.47	+16 56.1	1.731	2.706	6.1	20.0
10 8	0 41.26	-15 29.3	1.929	2.882	7.3	19.9	10 8	0 40.57	+16 24.4	1.722	2.709	4.1	19.9
10 18	0 34.97	-16 29.9	1.966	2.875	9.9	20.0	10 18	0 31.99	+15 41.3	1.740	2.712	5.7	20.0
10 28	0 29.76	-17 6.0	2.028	2.868	12.6	20.2	10 28	0 24.74	+14 53.4	1.785	2.715	9.1	20.2
11 7	0 26.23	-17 17.1	2.109	2.862	15.1	20.3	11 7	0 19.55	+14 7.6	1.855	2.719	12.4	20.5
401507	2013 <i>EE</i> ₃₂	10 4.9 126°04	2°4/2.1	18			253277	2003 <i>BL</i> ₄	10 4.9 158°32	6°2/12.3	18		
8 29	1 4.31	+1 16.5	2.085	2.934	12.7	21.3	8 29	1 8.25	+26 35.5	2.406	3.125	14.9	20.5
9 8	1 0.57	+0 10.6	2.014	2.936	9.6	21.1	9 8	1 3.63	+26 56.9	2.318	3.129	12.7	20.4
9 18	0 55.05	-1 4.4	1.966	2.938	6.1	20.9	9 18	0 57.10	+26 58.2	2.249	3.133	10.3	20.2
9 28	0 48.30	-2 22.7	1.945	2.939	2.9	20.7	9 28	0 49.20	+26 37.8	2.203	3.136	8.0	20.1
10 8	0 41.06	-3 37.7	1.952	2.941	3.4	20.7	10 8	0 40.70	+25 56.6	2.183	3.139	6.4	20.0
10 18	0 34.15	-4 42.7	1.988	2.943	6.7	20.9	10 18	0 32.46	+24 58.0	2.191	3.142	6.5	20.0
10 28	0 28.35	-5 32.7	2.050	2.944	10.1	21.2	10 28	0 25.35	+23 47.8	2.226	3.144	8.2	20.1
11 7	0 24.24	-6 4.7	2.136	2.946	13.1	21.4	11 7	0 20.02	+22 33.5	2.288	3.147	10.6	20.3
74729	1999 <i>RH</i> ₁₇₅	10 4.9 264°73	1°6/5.9	18			136416	2005 <i>CY</i> ₄₃	10 4.9 58°22	5°8/9.7	18		
8 29	1 12.24	+9 7.4	1.540	2.370	17.3	19.2	8 29	1 15.64	+19 25.5	1.640	2.418	18.6	19.2
9 8	1 7.58	+9 17.2	1.454	2.360	13.7	19.0	9 8	1 9.62	+20 13.9	1.589	2.449	15.3	19.1
9 18	1 0.15	+9 11.9	1.388	2.349	9.3	18.7	9 18	1 1.07	+20 40.5	1.557	2.480	11.6	18.9
9 28	0 50.59	+8 52.6	1.345	2.338	4.5	18.4	9 28	0 50.80	+20 43.8	1.548	2.512	8.0	18.8
10 8	0 39.98	+8 23.4	1.329	2.327	1.9	18.2	10 8	0 40.02	+20 25.5	1.565	2.543	5.8	18.8
10 18	0 29.64	+7 49.8	1.340	2.315	6.6	18.5	10 18	0 29.96	+19 50.8	1.609	2.574	6.9	18.9
10 28	0 20.90	+7 19.1	1.376	2.304	11.5	18.7	10 28	0 21.73	+19 7.1	1.679	2.606	9.8	19.1
11 7	0 14.74	+6 57.5	1.435	2.292	15.7	18.9	11 7	0 16.05	+18 22.9	1.774	2.637	12.9	19.4
228309	2000 <i>JA</i> ₄₃	10 4.9 53°90	5°6/1.4	16			469843	2005 <i>TR</i> ₄₃	10 4.9 17°02	1°6/3.9	18		
8 29	1 14.71	-6 48.7	1.295	2.163	17.7	19.8	8 29	1 7.20	+2 3.8	0.961	1.849	20.9	20.2
9 8	1 9.07	-7 25.4	1.258	2.187	13.5	19.6	9 8	1 4.38	+2 7.0	0.916	1.857	15.9	19.9
9 18	1 0.68	-8 2.5	1.242	2.212	9.1	19.4	9 18	0 58.23	+1 58.0	0.889	1.867	10.2	19.7
9 28	0 50.57	-8 31.8	1.250	2.237	5.9	19.3	9 28	0 49.75	+1 42.1	0.881	1.879	4.2	19.4
10 8	0 40.11	-8 46.1	1.283	2.262	6.6	19.4	10 8	0 40.50	+1 27.0	0.896	1.893	3.0	19.4
10 18	0 30.63	-8 41.1	1.340	2.288	10.1	19.7	10 18	0 32.13	+1 19.5	0.933	1.908	8.8	19.7
10 28	0 23.25	-8 15.6	1.422	2.313	13.9	20.0	10 28	0 26.08	+1 25.6	0.992	1.925	14.1	20.1
11 7	0 18.62	-7 31.0	1.524	2.339	17.2	20.3	11 7	0 23.16	+1 47.9	1.069	1.944	18.6	20.4
2873	Binzel	10 4.9 79°93	4°7/1.4	18			452744	2006 <i>BH</i> ₁₄₆	10 4.9 266°46	2°4/2.0	18		
8 29	1 12.05	-2 42.4	1.322	2.189	17.5	16.2	8 29	1 4.50	-0 5.8	2.369	3.214	11.5	21.6
9 8	1 7.15	-3 47.2	1.277	2.208	13.2	16.0	9 8	1 0.63	-0 56.4	2.280	3.200	8.7	21.4
9 18	0 59.55	-4 58.6	1.253	2.226	8.6	15.8	9 18	0 55.09	-1 54.2	2.216	3.186	5.6	21.2
9 28	0 50.16	-6 7.4	1.253	2.245	5.0	15.7	9 28	0 48.36	-2 54.6	2.179	3.172	2.8	21.0
10 8	0 40.28	-7 3.9	1.279	2.263	5.9	15.8	10 8	0 41.09	-3 52.3	2.170	3.158	3.2	21.0
10 18	0 31.21	-7 41.0	1.330	2.281	9.8	16.0	10 18	0 34.02	-4 41.9	2.191	3.144	6.3	21.2
10 28	0 24.11	-7 54.7	1.404	2.298	13.9	16.3	10 28	0 27.89	-5 18.9	2.238	3.130	9.5	21.4
11 7	0 19.65	-7 44.8	1.499	2.316	17.3	16.6	11 7	0 23.27	-5 40.5	2.310	3.116	12.3	21.5
395733	2012 <i>UO</i> ₇₇	10 4.9 310°40	5°4/1.2	18			90875	1996 <i>VE</i> ₁	10 4.9 334°41	4°9/30.6	18		
8 29	1 12.60	-7 47.5	1.555	2.416	15.6	20.3	8 29	1 5.29	-3 15.3	1.469	2.342	15.	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
455244	2001 SS ₂₂₈	10	4.9	321°77	0°2/ 4.8	17	356903	2011 YH ₇₁	10	4.9	267°27	2°4/29.9	18
8 29	1 29.88	- 1 41.8	0.988	1.844	22.9	19.8	8 29	0 58.38	- 7 6.8	4.513	5.357	6.5	20.7
9 8	1 22.83	- 0 11.6	0.913	1.835	18.1	19.5	9 8	0 55.18	- 7 42.9	4.439	5.356	4.9	20.6
9 18	1 11.07	+ 1 22.9	0.856	1.826	12.1	19.1	9 18	0 51.20	- 8 19.5	4.391	5.355	3.4	20.5
9 28	0 55.43	+ 3 1.9	0.822	1.818	5.1	18.7	9 28	0 46.69	- 8 54.0	4.372	5.353	2.4	20.4
10 8	0 37.80	+ 4 43.6	0.813	1.811	2.4	18.5	10 8	0 41.96	- 9 24.1	4.382	5.352	2.9	20.4
10 18	0 20.73	+ 6 24.6	0.830	1.804	9.8	18.9	10 18	0 37.37	- 9 47.7	4.423	5.350	4.3	20.6
10 28	0 6.69	+ 8 3.3	0.870	1.798	16.4	19.3	10 28	0 33.23	- 10 3.0	4.491	5.349	5.9	20.7
11 7	23 57.17	+ 9 40.0	0.931	1.792	21.9	19.6	11 7	0 29.84	- 10 9.2	4.584	5.347	7.3	20.8
452098	2014 QW ₅₀	10	4.9	18°68	3°8/30.7	18	437728	2014 DQ ₁₂₄	10	4.9	338°69	0°4/ 4.1	18
8 29	1 2.84	- 2 12.1	1.908	2.771	13.1	20.8	8 29	0 58.14	+ 4 30.3	4.302	5.123	7.2	21.4
9 8	0 59.60	- 3 27.5	1.845	2.774	9.9	20.6	9 8	0 55.06	+ 4 1.7	4.216	5.122	5.4	21.3
9 18	0 54.50	- 4 49.6	1.805	2.778	6.5	20.4	9 18	0 51.14	+ 3 28.1	4.156	5.122	3.5	21.2
9 28	0 48.12	- 6 11.5	1.792	2.782	4.0	20.3	9 28	0 46.67	+ 2 51.5	4.125	5.121	1.4	21.0
10 8	0 41.25	- 7 25.4	1.806	2.786	4.9	20.3	10 8	0 41.97	+ 2 14.3	4.124	5.120	0.9	21.0
10 18	0 34.75	- 8 24.8	1.846	2.791	8.0	20.5	10 18	0 37.40	+ 1 38.8	4.153	5.120	3.0	21.1
10 28	0 29.44	- 9 4.9	1.913	2.796	11.3	20.7	10 28	0 33.29	+ 1 7.3	4.212	5.119	5.0	21.3
11 7	0 25.90	- 9 23.9	2.001	2.802	14.2	20.9	11 7	0 29.96	+ 0 41.9	4.298	5.118	6.8	21.4
372362	2009 HK ₇₇	10	4.9	142°80	0°1/ 5.0	17	516349	2017 BO ₉₉	10	4.9	286°44	2°5/ 2.2	18
8 29	1 12.45	+ 8 0.2	1.729	2.554	15.9	22.4	8 29	1 4.83	+ 0 9.1	2.099	2.949	12.6	21.6
9 8	1 7.12	+ 7 29.7	1.660	2.565	12.3	22.2	9 8	1 1.07	- 0 41.4	2.017	2.940	9.6	21.4
9 18	0 59.46	+ 6 44.4	1.613	2.576	8.0	22.0	9 18	0 55.48	- 1 39.9	1.959	2.931	6.2	21.2
9 28	0 50.19	+ 5 47.9	1.591	2.586	3.4	21.7	9 28	0 48.57	- 2 41.3	1.927	2.922	3.0	21.0
10 8	0 40.32	+ 4 46.5	1.597	2.595	1.5	21.6	10 8	0 41.10	- 3 39.6	1.924	2.913	3.5	21.0
10 18	0 30.97	+ 3 47.2	1.632	2.603	6.1	21.9	10 18	0 33.87	- 4 28.8	1.948	2.904	6.8	21.2
10 28	0 23.15	+ 2 56.9	1.693	2.611	10.4	22.2	10 28	0 27.73	- 5 4.0	1.999	2.895	10.2	21.4
11 7	0 17.59	+ 2 20.6	1.779	2.618	14.0	22.4	11 7	0 23.29	- 5 22.5	2.073	2.886	13.3	21.6
228450	2001 QH ₁₉₅	10	4.9	358°12	3°5/ 2.5	18	379893	2012 HB ₇₃	10	4.9	74°97	2°0/ 3.4	17
8 29	1 0.81	+ 0 45.9	0.975	1.873	19.7	19.6	8 29	1 12.48	+ 2 37.0	1.404	2.258	17.4	21.1
9 8	0 59.63	+ 0 6.8	0.919	1.867	15.1	19.3	9 8	1 7.37	+ 1 59.8	1.356	2.279	13.2	20.9
9 18	0 55.30	- 0 46.2	0.881	1.862	9.7	19.0	9 18	0 59.67	+ 1 11.5	1.329	2.301	8.4	20.7
9 28	0 48.63	- 1 44.7	0.863	1.860	4.5	18.7	9 28	0 50.27	+ 0 18.3	1.326	2.323	3.5	20.5
10 8	0 41.01	- 2 37.6	0.866	1.859	4.9	18.8	10 8	0 40.39	- 0 32.0	1.350	2.344	3.1	20.5
10 18	0 33.99	- 3 14.5	0.891	1.861	10.2	19.1	10 18	0 31.29	- 1 12.2	1.399	2.365	7.7	20.8
10 28	0 29.03	- 3 28.0	0.937	1.864	15.5	19.4	10 28	0 24.08	- 1 36.8	1.474	2.386	12.0	21.2
11 7	0 27.02	- 3 15.7	1.000	1.870	20.0	19.7	11 7	0 19.40	- 1 43.5	1.571	2.407	15.7	21.4
417415	2006 JD ₅₄	10	4.9	67°01	6°9/30.2	17	144437	2004 EH ₃₄	10	4.9	324°24	0°4/ 5.2	18
8 29	1 12.88	- 7 48.7	1.233	2.108	18.0	20.1	8 29	1 7.40	+ 7 9.4	1.746	2.583	15.3	19.8
9 8	1 7.97	- 8 56.8	1.193	2.125	13.8	19.9	9 8	1 3.46	+ 7 1.8	1.664	2.576	11.9	19.6
9 18	1 0.17	- 10 5.4	1.173	2.141	9.7	19.7	9 18	0 57.25	+ 6 41.3	1.603	2.568	7.9	19.3
9 28	0 50.47	- 11 3.9	1.175	2.158	7.0	19.6	9 28	0 49.37	+ 6 10.4	1.566	2.561	3.4	19.0
10 8	0 40.26	- 11 42.8	1.202	2.175	8.1	19.8	10 8	0 40.73	+ 5 33.9	1.557	2.555	1.4	18.9
10 18	0 30.96	- 11 56.0	1.254	2.192	11.6	20.0	10 18	0 32.40	+ 4 57.3	1.574	2.548	6.0	19.2
10 28	0 23.78	- 11 41.9	1.327	2.209	15.4	20.3	10 28	0 25.40	+ 4 26.8	1.618	2.542	10.3	19.4
11 7	0 19.40	- 11 2.8	1.420	2.226	18.7	20.6	11 7	0 20.52	+ 4 7.2	1.684	2.537	14.1	19.7
264885	2002 SY ₅₆	10	4.9	2°92	5°9/ 1.4	18	213170	2000 SD ₆₂	10	4.9	52°53	0°0/ 4.7	17
8 29	1 9.19	- 5 53.0	1.111	1.996	18.8	19.5	8 29	1 13.80	+ 5 29.2	1.129	1.988	20.4	20.0
9 8	1 5.72	- 6 27.2	1.056	1.995	14.4	19.2	9 8	1 8.99	+ 5 28.9	1.082	2.006	15.7	19.7
9 18	0 59.08	- 7 4.6	1.019	1.994	9.8	19.0	9 18	1 1.02	+ 5 13.2	1.053	2.024	10.2	19.5
9 28	0 50.16	- 7 36.0	1.005	1.995	6.2	18.8	9 28	0 50.89	+ 4 46.5	1.047	2.043	4.2	19.2
10 8	0 40.38	- 7 52.3	1.013	1.997	7.1	18.9	10 8	0 40.12	+ 4 15.7	1.065	2.062	1.9	19.1
10 18	0 31.30	- 7 47.2	1.044	2.000	11.2	19.1	10 18	0 30.27	+ 3 48.2	1.107	2.082	7.7	19.6
10 28	0 24.36	- 7 17.8	1.097	2.004	15.8	19.4	10 28	0 22.71	+ 3 31.0	1.173	2.102	12.9	19.9
11 7	0 20.43	- 6 25.4	1.169	2.009	19.7	19.6	11 7	0 18.22	+ 3 28.4	1.260	2.122	17.2	20.2
118923	2000 VM ₅₁	10	4.9	53°18	1°9/ 6.4	18	329931	2005 OP ₅	10	4.9	46°46	1°4/ 3.8	16
8 29	1 9.30	+ 10 57.8	1.603	2.430	16.9	19.2	8 29	1 8.51	+ 5 3.2	1.186	2.051	19.2	20.8
9 8	1 4.99	+ 10 57.2	1.533	2.436	13.3	18.9	9 8	1 4.73	+ 4 17.7	1.143	2.072	14.6	20.6
9 18	0 58.24	+ 10 39.7	1.483	2.442	9.1	18.7	9 18	0 58.13	+ 3 16.3	1.119	2.093	9.3	20.4
9 28	0 49.75	+ 10 7.3	1.457	2.448	4.6	18.5	9 28	0 49.66	+ 2 6.3	1.117	2.114	3.7	20.1
10 8	0 40.56	+ 9 24.5	1.457	2.454	2.0	18.3	10 8	0 40.68	+ 0 57.5	1.140	2.137	2.8	20.1
10 18	0 31.83	+ 8 37.7	1.485	2.461	6.0	18.6	10 18	0 32.53	- 0 0.8	1.189	2.159	8.0	20.5
10 28	0 24.67	+ 7 54.0	1.538	2.468	10.3	18.9	10 28	0 26.41	- 0 41.2	1.260	2.182	12.8	20.9
11 7	0 19.83	+ 7 19.9	1.614	2.474	14.1	19.1	11 7	0 22.98	- 1 0.4	1.353	2.206	16.8	21.2
509021	2005 NE ₄₂	10	4.9	2°12	0°1/ 4.7	18	97081	1999 VW ₃₈	10	4.9	358°10	0°8/ 4.2	18
8 29	1 1.37	+ 7 35.6	1.038	1.917	20.3	20.4	8 29	1 7.09	+ 4 53.1	1.559	2.410	16.1	19.1
9 8	0 59.93	+ 7 6.8	0.979	1.914	15.7	20.1	9 8	1 3.37	+ 4 30.0	1.487	2.408	12.4	18.9
9 18	0 55.44	+ 6 15.9	0.937	1.913	10.3	19.8	9 18	0 57.23	+ 3 54.1	1.437	2.407	8.0	18.7
9 28	0 48.70	+ 5 8.5	0.916	1.913	4.3	19.5	9 28	0 49.36	+ 3 9.4	1.410	2.407	3.2	18.4
10 8	0 41.04	+ 3 54.3	0.917	1.915	2.1	19.4	10 8	0 40.76	+ 2 22.5	1.409	2.406	2.1	18.3
10 18	0 33.94	+ 2 44.9	0.941	1.919	8.2	19.8	10 18	0 32.58	+ 1 40.1	1.435	2.407	6.8	18.6
10 28	0 28.84	+ 1 51.2	0.987	1.924	13.8	20.1	10 28	0 25.92	+ 1 8.8	1.487	2.407	11.3	18.9
11 7	0 26.62	+ 1 19.8	1.052	1.931	18.5	20.4	11 7	0 21.53	+ 0 52.7	1.560	2.409	15.2	19.1
151594	2002 VL ₃₁	10	4.9	268°57	2°5/ 7.1	18	62254	2000 SR ₈₃	10	4.9	49°73	1°5/ 3.6	18
8 29	1 6.87	+ 14 29.1	1.644	2.45									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
441718	2009 <i>BO</i> ₃₃	10	4.9 169°00	2°3/ 7.0	18		441769	2009 <i>DT</i> ₂	10	4.9 241°02	0°1/ 5.0	18	
8 29	1 9.15	+12 35.2	1.952	2.759	15.0	21.8	8 29	1 12.61	+ 5 13.0	2.017	2.841	14.0	21.2
9 8	1 4.55	+12 37.7	1.870	2.760	11.9	21.6	9 8	1 7.15	+ 5 21.0	1.930	2.834	10.9	21.0
9 18	0 57.84	+12 24.9	1.810	2.761	8.4	21.4	9 18	0 59.54	+ 5 20.2	1.865	2.828	7.2	20.7
9 28	0 49.59	+11 57.9	1.775	2.761	4.5	21.1	9 28	0 50.33	+ 5 12.6	1.826	2.821	3.0	20.5
10 8	0 40.68	+11 20.0	1.767	2.762	2.3	21.0	10 8	0 40.41	+ 5 1.3	1.816	2.814	1.3	20.3
10 18	0 32.09	+10 36.2	1.787	2.762	5.3	21.2	10 18	0 30.74	+ 4 50.3	1.836	2.807	5.6	20.6
10 28	0 24.78	+ 9 52.7	1.834	2.762	9.1	21.4	10 28	0 22.34	+ 4 43.7	1.883	2.800	9.5	20.8
11 7	0 19.46	+ 9 15.3	1.907	2.762	12.5	21.7	11 7	0 15.92	+ 4 45.0	1.954	2.793	13.0	21.0
412959	2014 <i>QD</i> ₂₈₀	10	4.9 105°25	2°1/ 7.2	18		220577	2004 <i>HS</i> ₆₇	10	4.9 238°63	0°8/ 4.2	17	
8 29	1 7.71	+13 3.5	2.344	3.141	13.1	21.5	8 29	1 8.86	+ 5 51.0	1.698	2.537	15.5	21.1
9 8	1 3.02	+13 2.1	2.269	3.151	10.4	21.3	9 8	1 4.66	+ 5 12.5	1.614	2.529	12.0	20.9
9 18	0 56.62	+12 47.3	2.215	3.162	7.3	21.2	9 18	0 58.09	+ 4 19.5	1.553	2.521	7.8	20.6
9 28	0 49.03	+12 20.5	2.188	3.172	4.0	21.0	9 28	0 49.77	+ 3 16.2	1.516	2.512	3.1	20.3
10 8	0 40.98	+11 44.6	2.188	3.183	2.1	20.9	10 8	0 40.66	+ 2 9.5	1.506	2.503	2.0	20.2
10 18	0 33.25	+11 3.8	2.218	3.193	4.5	21.0	10 18	0 31.85	+ 1 6.9	1.524	2.494	6.8	20.5
10 28	0 26.60	+10 23.2	2.277	3.203	7.7	21.3	10 28	0 24.44	+ 0 15.8	1.568	2.484	11.2	20.7
11 7	0 21.59	+ 9 47.4	2.361	3.212	10.6	21.5	11 7	0 19.24	- 0 18.7	1.635	2.474	15.1	21.0
130479	2000 <i>QB</i> ₉₇	10	4.9 32°61	1°1/ 4.3	18		435658	2008 <i>SG</i> ₂₇₄	10	4.9 329°03	0°5/ 3.9	15	
8 29	1 11.98	+ 3 9.6	1.024	1.898	20.9	18.8	8 29	0 59.11	+ 3 32.9	4.167	4.991	7.3	21.4
9 8	1 7.93	+ 3 12.2	0.977	1.909	16.0	18.5	9 8	0 55.83	+ 3 12.0	4.081	4.988	5.6	21.3
9 18	1 0.52	+ 3 1.7	0.947	1.922	10.3	18.3	9 18	0 51.68	+ 2 46.6	4.019	4.985	3.5	21.1
9 28	0 50.77	+ 2 42.8	0.938	1.935	4.2	18.0	9 28	0 46.94	+ 2 18.6	3.986	4.982	1.4	21.0
10 8	0 40.23	+ 2 22.8	0.952	1.949	2.6	17.9	10 8	0 41.96	+ 1 50.2	3.983	4.979	1.0	20.9
10 18	0 30.61	+ 2 8.8	0.990	1.964	8.5	18.3	10 18	0 37.10	+ 1 23.6	4.011	4.977	3.1	21.1
10 28	0 23.37	+ 2 7.1	1.050	1.980	13.9	18.7	10 28	0 32.73	+ 1 1.1	4.068	4.974	5.2	21.3
11 7	0 19.35	+ 2 21.1	1.129	1.997	18.4	19.0	11 7	0 29.17	+ 0 44.6	4.151	4.971	7.0	21.4
167963	2005 <i>EM</i> ₂₆₈	10	4.9 311°17	1°3/ 6.1	18		326583	2002 <i>QY</i> ₉₄	10	4.9 23°22	0°9/ 4.4	17	
8 29	1 4.72	+10 48.6	1.611	2.446	16.5	20.3	8 29	1 7.40	+ 4 9.0	0.944	1.828	21.4	19.8
9 8	1 1.74	+10 28.8	1.519	2.428	13.0	20.0	9 8	1 4.57	+ 4 4.6	0.902	1.840	16.4	19.6
9 18	0 56.35	+ 9 50.0	1.447	2.410	8.9	19.7	9 18	0 58.40	+ 3 44.4	0.876	1.854	10.6	19.3
9 28	0 49.09	+ 8 54.5	1.399	2.392	4.3	19.4	9 28	0 49.90	+ 3 14.1	0.871	1.869	4.2	19.0
10 8	0 40.90	+ 7 47.5	1.377	2.374	1.7	19.2	10 8	0 40.68	+ 2 42.1	0.888	1.886	2.5	19.0
10 18	0 32.92	+ 6 36.7	1.380	2.357	6.2	19.4	10 18	0 32.38	+ 2 16.7	0.928	1.904	8.5	19.4
10 28	0 26.29	+ 5 30.9	1.410	2.341	11.0	19.7	10 28	0 26.44	+ 2 5.3	0.988	1.924	14.0	19.8
11 7	0 21.90	+ 4 37.9	1.462	2.325	15.2	19.9	11 7	0 23.63	+ 2 11.6	1.068	1.944	18.5	20.1
261975	2006 <i>QD</i> ₅	10	4.9 311°15	3°3/ 2.1	18		314611	2006 <i>DH</i> ₁₂	10	4.9 175°20	0°9/ 3.6	18	
8 29	1 6.34	+ 1 41.6	1.348	2.216	17.2	20.3	8 29	1 4.21	+ 3 58.8	2.800	3.628	10.4	21.3
9 8	1 3.17	+ 0 31.5	1.278	2.210	13.1	20.0	9 8	1 0.10	+ 3 17.5	2.720	3.629	7.9	21.1
9 18	0 57.31	- 0 53.4	1.229	2.204	8.4	19.7	9 18	0 54.62	+ 2 28.5	2.664	3.631	5.0	21.0
9 28	0 49.47	- 2 24.8	1.203	2.199	4.0	19.5	9 28	0 48.20	+ 1 35.0	2.636	3.632	2.0	20.7
10 8	0 40.77	- 3 52.1	1.203	2.193	4.7	19.5	10 8	0 41.40	+ 0 41.3	2.637	3.632	1.7	20.7
10 18	0 32.51	- 5 4.8	1.228	2.188	9.3	19.8	10 18	0 34.83	- 0 8.4	2.669	3.633	4.7	20.9
10 28	0 25.94	- 5 54.7	1.277	2.183	14.0	20.0	10 28	0 29.09	- 0 50.3	2.729	3.633	7.5	21.1
11 7	0 21.91	- 6 18.2	1.345	2.179	18.0	20.3	11 7	0 24.62	- 1 21.4	2.815	3.633	10.1	21.3
515690	2014 <i>PN</i> ₇₂	10	4.9 126°47	2°0/ 2.3	18		305843	2009 <i>EB</i>	10	4.9 164°86	2°0/ 2.4	18	
8 29	1 4.87	+ 0 14.1	2.566	3.405	10.9	21.9	8 29	1 5.38	+ 2 36.5	2.264	3.103	12.2	21.1
9 8	1 0.66	+ 0 34.1	2.497	3.414	8.2	21.7	9 8	1 1.29	+ 1 25.2	2.190	3.107	9.2	20.9
9 18	0 54.98	- 1 28.2	2.453	3.423	5.2	21.6	9 18	0 55.52	+ 0 4.1	2.140	3.110	5.8	20.7
9 28	0 48.34	- 2 23.8	2.437	3.431	2.5	21.4	9 28	0 48.60	- 1 21.2	2.118	3.113	2.6	20.5
10 8	0 41.33	- 3 16.3	2.450	3.439	2.8	21.4	10 8	0 41.23	- 2 44.4	2.125	3.115	3.0	20.5
10 18	0 34.61	- 4 1.2	2.493	3.447	5.6	21.6	10 18	0 34.17	- 3 58.9	2.162	3.118	6.2	20.7
10 28	0 28.83	- 4 34.8	2.563	3.455	8.4	21.8	10 28	0 28.14	- 4 59.5	2.226	3.119	9.5	20.9
11 7	0 24.44	- 4 55.0	2.658	3.462	10.9	22.0	11 7	0 23.70	- 5 43.0	2.314	3.121	12.3	21.1
91976	1999 <i>VD</i> ₉₆	10	4.9 30°63	0°0/ 4.9	18		156952	2003 <i>GQ</i> ₅₀	10	4.9 59°47	0°0/ 4.7	16	
8 29	1 5.57	+ 7 10.4	1.914	2.749	14.2	20.0	8 29	1 7.30	+ 9 17.0	1.451	2.293	17.6	19.6
9 8	1 1.74	+ 6 48.1	1.843	2.754	11.0	19.8	9 8	1 3.42	+ 8 21.1	1.400	2.315	13.5	19.4
9 18	0 55.94	+ 6 13.5	1.795	2.761	7.2	19.6	9 18	0 57.14	+ 7 6.6	1.371	2.338	8.7	19.2
9 28	0 48.79	+ 5 29.8	1.772	2.767	3.0	19.4	9 28	0 49.29	+ 5 39.6	1.365	2.360	3.6	19.0
10 8	0 41.12	+ 4 42.2	1.776	2.774	1.3	19.2	10 8	0 40.97	+ 4 8.9	1.385	2.383	1.6	18.9
10 18	0 33.81	+ 3 56.2	1.808	2.781	5.5	19.6	10 18	0 33.32	+ 2 44.2	1.433	2.406	6.6	19.3
10 28	0 27.75	+ 3 17.6	1.867	2.788	9.3	19.8	10 28	0 27.36	+ 1 33.8	1.506	2.429	11.0	19.6
11 7	0 23.54	+ 2 50.5	1.950	2.796	12.7	20.0	11 7	0 23.71	+ 0 42.9	1.602	2.452	14.8	19.9
77402	2001 <i>FK</i> ₁₆₈	10	4.9 45°28	2°7/ 3.1	18	R	209335	2004 <i>BF</i> ₁₄₈	10	4.9 346°79	4°1/ 1.9	18	
8 29	1 11.20	+ 0 28.0	1.268	2.134	18.2	18.6	8 29	1 3.94	- 2 1.9	1.290	2.171	17.0	19.2
9 8	1 6.81	+ 0 0.6	1.214	2.144	13.8	18.4	9 8	1 1.46	- 2 41.9	1.221	2.159	13.0	19.0
9 18	0 59.56	- 0 36.5	1.180	2.154	8.9	18.1	9 18	0 56.28	- 3 30.5	1.172	2.149	8.5	18.7
9 28	0 50.34	- 1 16.7	1.169	2.165	4.0	17.9	9 28	0 49.08	- 4 20.1	1.146	2.140	4.6	18.4
10 8	0 40.45	- 1 52.1	1.184	2.177	3.9	17.9	10 8	0 41.01	- 5 1.9	1.144	2.132	5.3	18.5
10 18	0 31.27	- 2 15.9	1.223	2.188	8.6	18.2	10 18	0 33.35	- 5 27.9	1.166	2.126	9.6	18.7
10 28	0 24.08	- 2 22.8	1.286	2.201	13.2	18.5	10 28	0 27.38	- 5 32.7	1.210	2.121	14.2	19.0
11 7	0 19.63	- 2 11.0	1.369	2.213	17.2	18.8	11 7	0 23.96	- 5 14.4	1.274	2.118	18.2	19.2
24298	1999 <i>XC</i> ₂₂₁	10	4.9 7°81	6°1/11.0	18		267706	2003 <i>AJ</i> ₃₆	10	4.9 257°58	5°2/ 9.6	18	
8 29	1 1.40	+23 0.1	1.415										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
258539	2002 <i>CD</i> ₂	10	4.9 148°81	5°3/29.1	18		436157	2009 <i>VX</i> ₂₇	10	4.9 320°30	2°5/10.1	18	
8 29	1 6.69	- 9 22.7	2.148	3.005	12.1	20.7	8 29	0 58.49	+20 13.9	4.143	4.889	8.7	20.4
9 8	1 2.37	-10 25.2	2.085	3.006	9.4	20.5	9 8	0 55.46	+19 57.3	4.042	4.884	7.1	20.3
9 18	0 56.26	-11 27.8	2.045	3.007	6.8	20.4	9 18	0 51.50	+19 29.8	3.964	4.879	5.4	20.2
9 28	0 48.92	-12 24.0	2.033	3.008	5.4	20.3	9 28	0 46.91	+18 52.1	3.912	4.874	3.7	20.0
10 8	0 41.11	-13 7.5	2.047	3.009	6.3	20.3	10 8	0 42.05	+18 5.9	3.889	4.869	2.6	20.0
10 18	0 33.67	-13 33.9	2.089	3.009	8.7	20.5	10 18	0 37.31	+17 13.5	3.895	4.864	3.1	20.0
10 28	0 27.37	-13 40.5	2.156	3.010	11.4	20.7	10 28	0 33.08	+16 18.1	3.932	4.859	4.7	20.1
11 7	0 22.78	-13 27.4	2.244	3.011	13.9	20.8	11 7	0 29.71	+15 23.0	3.997	4.854	6.5	20.2
116786	2004 <i>EN</i> ₃₄	10	4.9 104°25	0°2/ 4.7	17		156128	2001 <i>TA</i> ₄	10	4.9 5°73	1°5/ 5.9	18	
8 29	1 10.83	+ 7 23.4	1.709	2.541	15.8	20.8	8 29	1 3.53	+ 9 35.1	1.083	1.951	20.5	19.6
9 8	1 5.82	+ 6 43.7	1.650	2.560	12.1	20.6	9 8	1 1.55	+ 9 34.1	1.023	1.950	16.1	19.4
9 18	0 58.60	+ 5 49.6	1.613	2.578	7.8	20.4	9 18	0 56.52	+ 9 11.4	0.981	1.951	10.9	19.1
9 28	0 49.89	+ 4 45.7	1.601	2.597	3.2	20.1	9 28	0 49.24	+ 8 30.1	0.959	1.954	5.1	18.8
10 8	0 40.70	+ 3 38.9	1.617	2.614	1.6	20.0	10 8	0 41.02	+ 7 37.3	0.960	1.958	2.0	18.6
10 18	0 32.09	+ 2 36.4	1.661	2.631	6.1	20.4	10 18	0 33.39	+ 6 42.5	0.984	1.964	7.4	19.0
10 28	0 25.02	+ 1 44.7	1.731	2.648	10.3	20.7	10 28	0 27.75	+ 5 55.7	1.030	1.971	12.8	19.3
11 7	0 20.12	+ 1 8.3	1.826	2.664	13.7	20.9	11 7	0 25.00	+ 5 24.7	1.096	1.980	17.5	19.6
249519	Whitneyclavin	10	4.9 123°72	2°9/ 7.9	18		148234	2000 <i>EW</i> ₅	10	4.9 242°96	0°3/ 4.4	18	
8 29	1 7.31	+16 6.2	2.011	2.804	15.1	20.8	8 29	1 1.50	+ 5 23.6	3.526	4.345	8.7	21.2
9 8	1 3.06	+15 49.4	1.933	2.812	12.1	20.6	9 8	0 57.84	+ 4 55.0	3.431	4.335	6.6	21.1
9 18	0 56.82	+15 14.0	1.876	2.819	8.7	20.4	9 18	0 53.09	+ 4 19.7	3.361	4.325	4.3	20.9
9 28	0 49.18	+14 21.4	1.845	2.826	5.1	20.2	9 28	0 47.59	+ 3 40.0	3.320	4.315	1.7	20.7
10 8	0 40.99	+13 15.8	1.840	2.833	2.9	20.1	10 8	0 41.76	+ 2 58.8	3.308	4.305	1.0	20.6
10 18	0 33.17	+12 3.2	1.864	2.840	5.1	20.2	10 18	0 36.06	+ 2 18.9	3.327	4.295	3.6	20.8
10 28	0 26.60	+10 50.9	1.916	2.846	8.6	20.5	10 28	0 30.95	+ 1 43.7	3.375	4.285	6.0	21.0
11 7	0 21.92	+ 9 45.9	1.993	2.852	11.9	20.7	11 7	0 26.83	+ 1 15.5	3.450	4.274	8.2	21.1
91680	1999 <i>TX</i> ₁₁₉	10	4.9 326°06	2°2/ 7.0	18		515382	2013 <i>EN</i> ₁₅₅	10	4.9 2°84	0°5/ 5.4	18	
8 29	1 3.87	+13 1.0	1.874	2.692	15.2	19.3	8 29	1 5.71	+ 8 29.1	1.803	2.637	15.0	21.1
9 8	1 0.71	+12 50.0	1.783	2.680	12.1	19.0	9 8	1 2.06	+ 8 8.2	1.727	2.637	11.7	20.9
9 18	0 55.48	+12 21.5	1.714	2.668	8.5	18.8	9 18	0 56.30	+ 7 32.8	1.672	2.637	7.7	20.7
9 28	0 48.70	+11 37.1	1.668	2.656	4.6	18.5	9 28	0 49.03	+ 6 46.2	1.642	2.637	3.4	20.4
10 8	0 41.18	+10 40.8	1.649	2.645	2.2	18.4	10 8	0 41.13	+ 5 53.4	1.639	2.638	1.3	20.3
10 18	0 33.89	+ 9 38.6	1.657	2.635	5.4	18.5	10 18	0 33.58	+ 5 0.9	1.664	2.639	5.7	20.6
10 28	0 27.78	+ 8 37.7	1.692	2.624	9.4	18.8	10 28	0 27.33	+ 4 15.1	1.715	2.640	9.8	20.8
11 7	0 23.61	+ 7 45.0	1.751	2.615	13.0	19.0	11 7	0 23.05	+ 3 41.2	1.789	2.641	13.4	21.0
112775	2002 <i>PR</i> ₁₅₈	10	4.9 131°57	0°5/ 5.3	17		364033	2005 <i>WJ</i> ₃₃	10	4.9 322°27	4°6/ 9.9	18	
8 29	1 12.02	+ 8 38.9	1.727	2.552	16.0	21.2	8 29	1 5.27	+20 36.4	2.105	2.877	15.2	20.8
9 8	1 6.83	+ 8 13.3	1.660	2.564	12.4	21.0	9 8	1 1.61	+20 42.0	2.016	2.872	12.7	20.6
9 18	0 59.33	+ 7 32.6	1.614	2.576	8.2	20.8	9 18	0 55.99	+20 27.8	1.946	2.868	9.7	20.4
9 28	0 50.23	+ 6 40.2	1.593	2.587	3.5	20.5	9 28	0 48.91	+19 53.4	1.899	2.864	6.7	20.2
10 8	0 40.55	+ 5 42.0	1.600	2.598	1.4	20.4	10 8	0 41.18	+19 1.1	1.879	2.860	4.7	20.1
10 18	0 31.38	+ 4 44.9	1.635	2.608	6.0	20.7	10 18	0 33.70	+17 55.5	1.886	2.856	5.6	20.1
10 28	0 23.74	+ 3 55.6	1.697	2.617	10.2	21.0	10 28	0 27.35	+16 43.5	1.921	2.853	8.5	20.3
11 7	0 18.34	+ 3 19.4	1.783	2.626	13.8	21.2	11 7	0 22.84	+15 32.8	1.981	2.849	11.5	20.5
68911	2002 <i>JS</i> ₁₂₀	10	4.9 89°64	5°2/28.6	18		508791	2000 <i>EH</i> ₁₀₄	10	4.9 176°63	1°1/ 3.3	18	
8 29	1 5.20	- 9 11.5	2.260	3.117	11.5	19.4	8 29	1 8.01	+ 2 13.3	3.214	4.032	9.4	24.2
9 8	1 1.09	-10 27.1	2.207	3.128	8.9	19.3	9 8	1 2.78	+ 1 37.9	3.131	4.036	7.1	24.0
9 18	0 55.34	-11 42.6	2.179	3.140	6.4	19.2	9 18	0 56.28	+ 0 56.8	3.073	4.038	4.6	23.9
9 28	0 48.52	-12 51.5	2.178	3.151	5.2	19.1	9 28	0 48.92	+ 0 12.9	3.045	4.040	1.9	23.7
10 8	0 41.32	-13 47.5	2.204	3.162	6.2	19.2	10 8	0 41.21	- 0 30.4	3.048	4.041	1.8	23.7
10 18	0 34.51	-14 26.2	2.258	3.173	8.5	19.4	10 18	0 33.71	- 1 9.5	3.082	4.041	4.4	23.9
10 28	0 28.77	-14 45.1	2.337	3.184	10.9	19.5	10 28	0 26.98	- 1 41.3	3.146	4.040	7.0	24.0
11 7	0 24.63	-14 44.1	2.438	3.195	13.2	19.7	11 7	0 21.45	- 2 3.7	3.236	4.038	9.2	24.2
219959	2002 <i>JC</i> ₂₀	10	4.9 25°57	6°6/27.9	18		482861	2014 <i>DF</i> ₁₀₇	10	4.9 34°85	1°0/ 4.0	18	
8 29	1 5.59	-12 0.3	1.947	2.811	12.8	19.3	8 29	1 6.30	+ 5 11.5	1.447	2.303	16.9	20.5
9 8	1 1.69	-13 12.3	1.894	2.816	10.1	19.2	9 8	1 2.78	+ 4 34.2	1.391	2.315	12.9	20.3
9 18	0 55.87	-14 22.0	1.863	2.820	7.7	19.1	9 18	0 56.85	+ 3 42.8	1.355	2.327	8.2	20.1
9 28	0 48.77	-15 21.9	1.859	2.826	6.6	19.0	9 28	0 49.25	+ 2 42.9	1.343	2.340	3.3	19.8
10 8	0 41.22	-16 5.0	1.881	2.831	7.7	19.1	10 8	0 41.08	+ 1 42.1	1.357	2.354	2.3	19.8
10 18	0 34.09	-16 27.0	1.928	2.837	10.0	19.2	10 18	0 33.48	+ 0 48.4	1.397	2.368	7.1	20.1
10 28	0 28.22	-16 25.7	1.999	2.843	12.6	19.4	10 28	0 27.51	+ 0 8.4	1.461	2.382	11.5	20.4
11 7	0 24.18	-16 2.3	2.091	2.849	15.0	19.6	11 7	0 23.86	- 0 13.8	1.548	2.397	15.2	20.7
381392	2008 <i>GN</i> ₄₂	10	4.9 69°33	2°4/ 2.9	16		88065	2000 <i>VH</i> ₄₇	10	4.9 345°75	5°3/10.2	18	
8 29	1 8.06	+ 2 57.9	1.436	2.295	16.8	21.2	8 29	1 6.31	+20 42.2	1.944	2.718	16.2	18.8
9 8	1 4.15	+ 1 57.6	1.379	2.305	12.7	21.0	9 8	1 2.60	+21 4.8	1.857	2.715	13.5	18.6
9 18	0 57.73	+ 0 44.2	1.342	2.316	8.1	20.7	9 18	0 56.73	+21 7.4	1.790	2.712	10.4	18.4
9 28	0 49.60	- 0 35.1	1.330	2.326	3.5	20.5	9 28	0 49.25	+20 48.6	1.746	2.709	7.4	18.2
10 8	0 40.86	- 1 51.1	1.344	2.337	3.6	20.5	10 8	0 41.04	+20 10.3	1.728	2.706	5.4	18.1
10 18	0 32.71	- 2 54.9	1.384	2.348	8.1	20.8	10 18	0 33.08	+19 16.5	1.736	2.704	6.3	18.1
10 28	0 26.25	- 3 39.9	1.449	2.359	12.4	21.1	10 28	0 26.38	+18 14.4	1.771	2.702	9.1	18.3
11 7	0 22.19	- 4 2.8	1.535	2.369	16.1	21.4	11 7	0 21.69	+17 11.7	1.831	2.701	12.2	18.5
446021	2013 <i>CC</i> ₅₇	10	4.9 177°39	4°3/10.1	18		134390	1996 <i>VP</i> ₁₅	10	4.9 329°03	4°7/ 2.0	18	
8 29	1 7.04	+21 22.7	2.380	3									

EPHEMERIDES

10 4.9

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
193345	2000 <i>UC</i> ₁₇	10	4.9 305°96	4.6/ 9.2	18		434543	2005 <i>TM</i> ₁₉	10	4.9 238°94	0.9/ 5.7	18	
8 29	1 3.45	+19 46.3	1.567	2.369	18.4	20.5	8 29	1 9.97	+ 9 2.4	1.646	2.476	16.4	21.8
9 8	1 1.12	+19 31.2	1.460	2.340	15.3	20.2	9 8	1 5.62	+ 8 51.2	1.566	2.473	12.8	21.6
9 18	0 56.20	+18 47.7	1.372	2.310	11.6	19.9	9 18	0 58.81	+ 8 24.2	1.507	2.469	8.6	21.3
9 28	0 49.20	+17 34.3	1.305	2.281	7.5	19.6	9 28	0 50.18	+ 7 44.0	1.472	2.465	3.9	21.1
10 8	0 41.04	+15 54.2	1.263	2.252	4.7	19.4	10 8	0 40.74	+ 6 55.6	1.463	2.461	1.5	20.9
10 18	0 32.95	+13 55.2	1.246	2.223	6.7	19.4	10 18	0 31.65	+ 6 5.6	1.482	2.457	6.1	21.2
10 28	0 26.23	+11 49.6	1.256	2.195	11.2	19.6	10 28	0 24.04	+ 5 21.4	1.527	2.453	10.7	21.4
11 7	0 21.91	+ 9 50.9	1.288	2.167	15.7	19.8	11 7	0 18.74	+ 4 48.7	1.595	2.449	14.6	21.7
374913	2006 <i>XT</i> ₂₃	10	4.9 245°09	3.0/ 7.8	18		487012	2014 <i>OM</i> ₃	10	4.9 53°19	4.0/ 8.9	18	
8 29	1 7.93	+16 21.6	1.788	2.588	16.5	21.4	8 29	1 8.38	+17 24.8	1.963	2.750	15.7	20.8
9 8	1 4.03	+15 56.6	1.693	2.575	13.4	21.2	9 8	1 3.92	+17 41.4	1.896	2.766	12.7	20.7
9 18	0 57.78	+15 9.1	1.617	2.562	9.6	20.9	9 18	0 57.42	+17 39.9	1.848	2.782	9.4	20.5
9 28	0 49.75	+13 59.9	1.566	2.549	5.6	20.7	9 28	0 49.51	+17 20.6	1.825	2.798	6.1	20.3
10 8	0 40.86	+12 33.6	1.541	2.535	3.0	20.5	10 8	0 41.06	+16 46.1	1.829	2.815	4.0	20.2
10 18	0 32.19	+10 57.8	1.544	2.521	5.8	20.6	10 18	0 33.04	+16 1.2	1.860	2.832	5.5	20.4
10 28	0 24.85	+ 9 22.2	1.575	2.506	10.0	20.8	10 28	0 26.33	+15 12.1	1.918	2.849	8.5	20.6
11 7	0 19.67	+ 7 56.1	1.630	2.491	14.0	21.0	11 7	0 21.59	+14 25.6	2.001	2.866	11.6	20.8
277153	2005 <i>ML</i> ₂₆	10	4.9 24°32	5.5/30.6	17		305821	2009 <i>DZ</i> ₁₂₄	10	4.9 267°73	0.1/ 4.8	18	
8 29	1 6.03	- 3 6.1	1.208	2.091	17.7	19.9	8 29	1 7.79	+ 6 23.0	1.919	2.752	14.3	21.0
9 8	1 3.03	- 4 25.6	1.158	2.097	13.5	19.7	9 8	1 3.57	+ 6 2.1	1.838	2.748	11.0	20.8
9 18	0 57.23	- 5 53.3	1.127	2.103	9.0	19.5	9 18	0 57.27	+ 5 29.2	1.779	2.744	7.2	20.6
9 28	0 49.48	- 7 18.5	1.119	2.110	5.7	19.3	9 28	0 49.49	+ 4 47.4	1.745	2.741	3.0	20.3
10 8	0 41.04	- 8 29.6	1.136	2.117	6.9	19.4	10 8	0 41.06	+ 4 1.7	1.739	2.737	1.4	20.2
10 18	0 33.26	- 9 17.7	1.176	2.126	10.9	19.7	10 18	0 32.93	+ 3 17.9	1.762	2.733	5.7	20.5
10 28	0 27.36	- 9 37.6	1.238	2.135	15.1	19.9	10 28	0 26.04	+ 2 41.6	1.811	2.730	9.7	20.7
11 7	0 24.10	- 9 29.2	1.319	2.144	18.8	20.2	11 7	0 21.08	+ 2 17.2	1.884	2.726	13.2	20.9
261332	2005 <i>UP</i> ₂₄₄	10	4.9 120°16	1.9/ 7.2	18		349978	2010 <i>EP</i> ₁₀₃	10	4.9 13°78	1.0/ 5.7	18	
8 29	1 7.61	+12 57.4	2.493	3.286	12.5	21.3	8 29	1 7.49	+ 8 20.0	1.387	2.235	17.9	20.1
9 8	1 2.88	+12 50.4	2.416	3.298	9.9	21.2	9 8	1 3.99	+ 8 18.8	1.322	2.238	14.0	19.9
9 18	0 56.53	+12 30.6	2.363	3.310	6.9	21.0	9 18	0 57.84	+ 8 1.3	1.275	2.242	9.3	19.6
9 28	0 49.08	+11 59.5	2.336	3.321	3.8	20.8	9 28	0 49.78	+ 7 30.3	1.252	2.246	4.2	19.3
10 8	0 41.21	+11 20.1	2.337	3.332	1.9	20.7	10 8	0 40.94	+ 6 51.3	1.254	2.252	1.6	19.2
10 18	0 33.64	+10 36.5	2.368	3.343	4.2	20.9	10 18	0 32.61	+ 6 11.3	1.281	2.258	6.6	19.5
10 28	0 27.09	+ 9 53.5	2.428	3.353	7.3	21.1	10 28	0 25.97	+ 5 37.7	1.332	2.264	11.4	19.8
11 7	0 22.08	+ 9 15.6	2.515	3.364	10.1	21.3	11 7	0 21.86	+ 5 16.4	1.406	2.272	15.5	20.1
364135	2006 <i>BL</i> ₂₈₀	10	4.9 8°18	1.3/ 4.1	17		453443	2009 <i>QN</i> ₅₈	10	4.9 2°84	1.2/ 3.8	16	
8 29	1 7.40	+ 4 37.8	1.015	1.894	20.7	20.7	8 29	1 3.69	+ 4 7.8	1.697	2.551	14.9	21.2
9 8	1 4.69	+ 4 14.5	0.958	1.894	15.9	20.5	9 8	1 0.61	+ 3 35.3	1.627	2.550	11.4	21.0
9 18	0 58.66	+ 3 33.5	0.918	1.895	10.3	20.2	9 18	0 55.42	+ 2 51.0	1.579	2.550	7.3	20.8
9 28	0 50.18	+ 2 40.9	0.899	1.897	4.2	19.8	9 28	0 48.72	+ 1 59.7	1.555	2.551	3.0	20.5
10 8	0 40.71	+ 1 46.2	0.903	1.900	2.8	19.8	10 8	0 41.41	+ 1 7.6	1.557	2.553	2.3	20.5
10 18	0 31.92	+ 0 59.6	0.929	1.904	8.9	20.1	10 18	0 34.48	+ 0 21.4	1.586	2.555	6.5	20.7
10 28	0 25.33	+ 0 30.0	0.977	1.909	14.5	20.5	10 28	0 28.86	- 0 13.0	1.641	2.559	10.6	21.0
11 7	0 21.89	+ 0 22.2	1.044	1.914	19.3	20.8	11 7	0 25.24	- 0 31.7	1.718	2.563	14.2	21.2
116029	2003 <i>WO</i> ₈₉	10	4.9 243°56	3.3/ 2.6	18		127488	2002 <i>TE</i> ₁₁	10	4.9 81°69	0.4/ 5.3	18	
8 29	1 12.70	- 1 16.2	1.504	2.360	16.4	20.4	8 29	1 9.83	+ 9 7.4	1.454	2.293	17.7	20.3
9 8	1 7.85	- 1 46.6	1.431	2.355	12.5	20.2	9 8	1 5.51	+ 8 32.1	1.396	2.307	13.7	20.1
9 18	1 0.31	- 2 24.5	1.379	2.351	8.2	19.9	9 18	0 58.66	+ 7 38.5	1.357	2.322	9.0	19.9
9 28	0 50.80	- 3 4.0	1.352	2.346	4.1	19.7	9 28	0 50.05	+ 6 31.4	1.342	2.337	3.9	19.6
10 8	0 40.44	- 3 37.8	1.351	2.341	4.3	19.7	10 8	0 40.85	+ 5 18.4	1.354	2.352	1.5	19.5
10 18	0 30.53	- 3 59.5	1.376	2.336	8.6	19.9	10 18	0 32.28	+ 4 8.0	1.392	2.366	6.6	19.9
10 28	0 22.30	- 4 4.2	1.426	2.331	13.0	20.2	10 28	0 25.43	+ 3 8.7	1.456	2.381	11.2	20.2
11 7	0 16.61	- 3 50.1	1.498	2.325	16.8	20.4	11 7	0 21.04	+ 2 26.1	1.542	2.395	15.1	20.5
437760	2014 <i>HP</i> ₁₄₉	10	4.9 263°11	0.1/ 5.2	18		53275	1999 <i>FN</i> ₃₁	10	4.9 50°54	1.9/ 3.3	18	
8 29	0 58.31	+ 7 24.2	4.440	5.250	7.2	21.6	8 29	1 8.75	+ 0 58.1	1.898	2.743	13.9	18.2
9 8	0 55.23	+ 6 58.2	4.347	5.244	5.5	21.4	9 8	1 4.19	+ 0 34.5	1.829	2.748	10.6	18.0
9 18	0 51.33	+ 6 26.3	4.279	5.239	3.6	21.3	9 18	0 57.60	+ 0 3.6	1.783	2.753	6.8	17.8
9 28	0 46.88	+ 5 50.2	4.240	5.234	1.5	21.1	9 28	0 49.59	- 0 30.3	1.762	2.758	3.0	17.5
10 8	0 42.20	+ 5 12.0	4.230	5.228	0.6	21.0	10 8	0 41.04	- 1 2.0	1.770	2.763	2.8	17.5
10 18	0 37.62	+ 4 34.0	4.252	5.223	2.7	21.2	10 18	0 32.90	- 1 26.4	1.805	2.768	6.5	17.8
10 28	0 33.49	+ 3 58.8	4.303	5.217	4.7	21.4	10 28	0 26.05	- 1 39.6	1.866	2.774	10.2	18.0
11 7	0 30.11	+ 3 28.3	4.381	5.212	6.5	21.5	11 7	0 21.16	- 1 39.0	1.951	2.779	13.4	18.2
200459	2000 <i>WY</i> ₁₁₀	10	4.9 259°19	4.6/ 9.2	18		204446	2004 <i>XP</i> ₁₁₉	10	4.9 331°90	2.1/ 6.6	18	
8 29	1 9.10	+18 48.0	1.936	2.715	16.1	20.2	8 29	1 5.82	+11 13.0	1.435	2.274	17.9	20.1
9 8	1 4.86	+19 2.3	1.837	2.702	13.3	20.0	9 8	1 2.88	+11 15.4	1.352	2.262	14.2	19.8
9 18	0 58.31	+18 57.0	1.759	2.688	10.1	19.7	9 18	0 57.27	+10 59.0	1.289	2.250	9.9	19.6
9 28	0 49.99	+18 31.2	1.704	2.674	6.7	19.5	9 28	0 49.62	+10 24.9	1.248	2.239	5.1	19.3
10 8	0 40.78	+17 46.6	1.675	2.660	4.6	19.3	10 8	0 40.99	+ 9 37.8	1.232	2.229	2.3	19.1
10 18	0 31.73	+16 47.7	1.674	2.645	6.1	19.4	10 18	0 32.63	+ 8 44.8	1.242	2.220	6.5	19.3
10 28	0 23.93	+15 41.8	1.700	2.631	9.5	19.6	10 28	0 25.85	+ 7 54.4	1.275	2.211	11.4	19.6
11 7	0 18.21	+14 37.1	1.751	2.616	13.0	19.8	11 7	0 21.56	+ 7 14.5	1.331	2.204	15.8	19.8
235835	2004 <i>XH</i> ₁₈₄	10	4.9 9°11	2.3/ 6.9	18		223302	2003 <i>NH</i> _{3</}					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
376642	2013 <i>PL</i> ₇₁	10 4.9 12°10'	7.2/29.7	16			472053	2013 <i>YJ</i> ₅₂	10 4.9 313°21'	4.3/8.2	18		
8 29	1 1.77	- 4 17.8	0.925	1.830	19.8	20.1	8 29	1 8.59	+15 56.1	1.468	2.283	18.7	21.6
9 8	1 0.42	- 5 50.6	0.883	1.833	15.1	19.9	9 8	1 5.03	+16 13.5	1.385	2.275	15.3	21.3
9 18	0 55.84	- 7 31.7	0.859	1.838	10.3	19.7	9 18	0 58.71	+16 9.1	1.321	2.267	11.2	21.1
9 28	0 48.99	- 9 6.6	0.855	1.845	7.3	19.5	9 28	0 50.26	+15 42.2	1.279	2.260	6.9	20.8
10 8	0 41.35	-10 20.8	0.873	1.853	8.8	19.6	10 8	0 40.78	+14 55.5	1.262	2.253	4.3	20.7
10 18	0 34.48	-11 3.7	0.911	1.862	13.1	19.9	10 18	0 31.59	+13 55.6	1.270	2.246	6.7	20.8
10 28	0 29.78	-11 10.9	0.969	1.873	17.6	20.2	10 28	0 24.04	+12 51.6	1.303	2.239	11.1	21.0
11 7	0 28.03	-10 44.0	1.044	1.886	21.5	20.5	11 7	0 19.09	+11 53.3	1.358	2.233	15.3	21.3
89919	2002 <i>EF</i> ₃₅	10 4.9 308°62'	3.4/1.2	18			485744	2012 <i>BW</i> ₉₅	10 4.9 200°56'	4.0/30.1	18		
8 29	1 3.57	- 1 4.5	1.998	2.855	12.9	19.4	8 29	1 5.00	- 4 58.3	2.301	3.154	11.5	21.9
9 8	1 0.26	- 2 15.7	1.920	2.846	9.7	19.2	9 8	1 1.05	- 6 6.1	2.230	3.153	8.8	21.7
9 18	0 55.09	- 3 35.4	1.866	2.838	6.3	19.0	9 18	0 55.45	- 7 17.7	2.184	3.151	5.9	21.6
9 28	0 48.58	- 4 57.0	1.838	2.830	3.6	18.8	9 28	0 48.71	- 8 27.1	2.165	3.150	4.1	21.4
10 8	0 41.49	- 6 13.2	1.839	2.822	4.4	18.9	10 8	0 41.50	- 9 28.3	2.175	3.148	4.9	21.5
10 18	0 34.68	- 7 17.1	1.866	2.815	7.6	19.0	10 18	0 34.58	-10 15.9	2.212	3.147	7.5	21.7
10 28	0 28.96	- 8 3.3	1.920	2.807	11.1	19.2	10 28	0 28.67	-10 46.3	2.276	3.145	10.3	21.8
11 7	0 24.99	- 8 29.2	1.996	2.800	14.1	19.4	11 7	0 24.31	-10 58.2	2.363	3.143	12.9	22.0
217830	2001 <i>HK</i> ₄₇	10 4.9 135°50'	2.4/7.1	17			381115	2007 <i>DJ</i> ₂₈	10 4.9 229°06'	1.1/3.9	18		
8 29	1 13.23	+13 19.2	1.876	2.675	15.8	21.1	8 29	1 10.43	+ 4 17.5	1.907	2.741	14.3	22.1
9 8	1 7.68	+13 14.8	1.804	2.689	12.6	20.9	9 8	1 5.68	+ 3 45.8	1.819	2.731	11.0	21.9
9 18	0 59.91	+12 53.5	1.753	2.702	8.8	20.7	9 18	0 58.74	+ 3 2.6	1.753	2.721	7.1	21.6
9 28	0 50.57	+12 16.7	1.728	2.714	4.8	20.5	9 28	0 50.17	+ 2 12.0	1.714	2.710	2.9	21.3
10 8	0 40.64	+11 28.5	1.730	2.725	2.4	20.3	10 8	0 40.84	+ 1 19.5	1.703	2.699	2.1	21.3
10 18	0 31.18	+10 34.6	1.761	2.736	5.4	20.6	10 18	0 31.77	+ 0 31.5	1.720	2.687	6.4	21.5
10 28	0 23.17	+ 9 41.9	1.820	2.746	9.2	20.8	10 28	0 23.96	- 0 6.2	1.764	2.674	10.5	21.7
11 7	0 17.33	+ 8 56.7	1.904	2.755	12.7	21.1	11 7	0 18.18	- 0 29.4	1.832	2.662	14.1	21.9
378243	2007 <i>CU</i> ₂₂	10 4.9 253°30'	1.6/6.3	18			131011	2000 <i>XA</i> ₁₀	10 4.9 193°36'	6.8/28.8	18		
8 29	1 9.62	+11 4.9	1.716	2.537	16.2	21.6	8 29	1 12.11	-13 3.9	1.949	2.801	13.3	19.6
9 8	1 5.39	+10 54.3	1.626	2.526	12.8	21.3	9 8	1 6.75	-14 0.1	1.886	2.800	10.6	19.4
9 18	0 58.71	+10 26.4	1.557	2.515	8.8	21.1	9 18	0 59.27	-14 53.0	1.846	2.799	8.0	19.2
9 28	0 50.19	+ 9 43.1	1.512	2.503	4.4	20.8	9 28	0 50.32	-15 35.4	1.832	2.798	6.8	19.2
10 8	0 40.77	+ 8 48.7	1.494	2.491	1.8	20.6	10 8	0 40.83	-16 0.6	1.845	2.796	7.7	19.2
10 18	0 31.59	+ 7 49.8	1.503	2.479	6.0	20.8	10 18	0 31.78	-16 4.6	1.884	2.794	10.2	19.4
10 28	0 23.79	+ 6 54.2	1.539	2.466	10.5	21.1	10 28	0 24.11	-15 45.9	1.948	2.791	12.9	19.5
11 7	0 18.24	+ 6 8.9	1.598	2.454	14.5	21.3	11 7	0 18.49	-15 5.8	2.033	2.789	15.5	19.7
283093	2008 <i>US</i> ₈₀	10 4.9 138°19'	4.4/10.2	18			53026	1998 <i>WV</i> ₃	10 4.9 197°7'	3.8/7.4	18		
8 29	1 9.64	+21 44.3	2.268	3.019	14.8	21.2	8 29	1 7.03	+12 50.3	0.930	1.794	23.4	17.3
9 8	1 4.70	+21 38.8	2.188	3.031	12.3	21.0	9 8	1 4.69	+13 16.5	0.879	1.800	18.7	17.1
9 18	0 57.85	+21 13.5	2.129	3.044	9.4	20.9	9 18	0 58.81	+13 16.0	0.844	1.808	13.2	16.8
9 28	0 49.69	+20 28.4	2.094	3.055	6.4	20.7	9 28	0 50.33	+12 49.6	0.827	1.817	7.3	16.5
10 8	0 41.03	+19 26.4	2.087	3.066	4.5	20.6	10 8	0 40.82	+12 3.1	0.831	1.827	3.9	16.4
10 18	0 32.74	+18 12.4	2.109	3.077	5.3	20.7	10 18	0 32.11	+11 6.4	0.858	1.839	7.9	16.6
10 28	0 25.64	+16 53.4	2.160	3.087	7.9	20.9	10 28	0 25.80	+10 11.8	0.905	1.852	13.4	17.0
11 7	0 20.36	+15 36.6	2.237	3.096	10.8	21.1	11 7	0 22.85	+ 9 29.6	0.972	1.866	18.3	17.3
308019	2004 <i>RA</i> ₂₂₁	10 4.9 350°38'	12.6/15.3	18			388613	2007 <i>RX</i> ₃₁₄	10 4.9 188°66'	3.2/7.5	18		
8 29	1 4.58	+30 19.4	1.291	2.052	23.5	18.4	8 29	1 13.66	+13 14.9	1.936	2.733	15.5	20.8
9 8	1 2.73	+31 54.8	1.215	2.042	21.0	18.2	9 8	1 8.18	+13 47.3	1.852	2.733	12.5	20.6
9 18	0 57.65	+32 59.8	1.153	2.034	18.2	18.0	9 18	1 0.38	+14 5.6	1.789	2.732	9.0	20.3
9 28	0 49.95	+33 26.1	1.109	2.028	15.3	17.8	9 28	0 50.87	+14 9.5	1.750	2.732	5.3	20.1
10 8	0 40.85	+33 9.9	1.083	2.023	13.2	17.7	10 8	0 40.56	+14 0.6	1.740	2.731	3.2	20.0
10 18	0 32.00	+32 12.6	1.078	2.019	12.7	17.6	10 18	0 30.55	+13 42.2	1.757	2.730	5.6	20.2
10 28	0 25.09	+30 43.9	1.094	2.017	14.2	17.7	10 28	0 21.88	+13 19.9	1.803	2.729	9.3	20.4
11 7	0 21.36	+28 58.4	1.130	2.016	16.9	17.9	11 7	0 15.36	+12 59.2	1.873	2.728	12.7	20.6
245214	2004 <i>WZ</i> ₈	10 4.9 289°40'	1.8/6.4	18			224928	2007 <i>DK</i> ₄₂	10 4.9 311°03'	2.1/6.3	18		
8 29	1 8.71	+10 43.0	1.729	2.552	16.0	20.1	8 29	1 9.84	+ 9 28.9	1.369	2.210	18.5	20.2
9 8	1 4.81	+10 41.6	1.629	2.530	12.8	19.8	9 8	1 6.28	+ 9 49.8	1.280	2.191	14.7	19.9
9 18	0 58.45	+10 24.0	1.549	2.507	8.8	19.5	9 18	0 59.74	+ 9 54.7	1.210	2.172	10.2	19.6
9 28	0 50.14	+ 9 51.3	1.493	2.484	4.5	19.2	9 28	0 50.79	+ 9 44.2	1.162	2.154	5.2	19.2
10 8	0 40.78	+ 9 7.2	1.463	2.460	1.9	19.0	10 8	0 40.55	+ 9 21.6	1.138	2.135	2.3	19.0
10 18	0 31.52	+ 8 17.5	1.461	2.437	6.1	19.2	10 18	0 30.46	+ 8 52.4	1.140	2.118	7.1	19.2
10 28	0 23.55	+ 7 29.7	1.485	2.414	10.7	19.4	10 28	0 22.03	+ 8 24.6	1.166	2.101	12.3	19.5
11 7	0 17.81	+ 6 50.7	1.532	2.391	14.8	19.6	11 7	0 16.38	+ 8 5.4	1.213	2.085	17.1	19.7
103530	2000 <i>BS</i> ₁₁	10 4.9 156°53'	2.2/6.9	17			429450	2010 <i>VK</i> ₁₃₁	10 4.9 5°67'	6.8/30.6	18		
8 29	1 10.76	+12 49.6	1.732	2.543	16.5	20.7	8 29	1 2.21	- 4 33.9	0.864	1.773	20.5	19.6
9 8	1 6.07	+12 40.3	1.655	2.547	13.1	20.5	9 8	1 1.01	- 5 38.4	0.819	1.772	15.7	19.4
9 18	0 59.02	+12 13.0	1.599	2.551	9.1	20.3	9 18	0 56.38	- 6 50.0	0.792	1.772	10.7	19.1
9 28	0 50.26	+11 29.2	1.567	2.555	4.8	20.0	9 28	0 49.29	- 7 56.2	0.784	1.775	7.0	18.9
10 8	0 40.79	+10 33.5	1.562	2.558	2.3	19.9	10 8	0 41.29	- 8 43.6	0.796	1.780	8.3	19.0
10 18	0 31.72	+ 9 32.5	1.584	2.560	5.7	20.1	10 18	0 34.08	- 9 2.6	0.829	1.787	12.9	19.3
10 28	0 24.13	+ 8 33.8	1.634	2.563	9.9	20.4	10 28	0 29.16	- 8 49.1	0.880	1.796	17.7	19.6
11 7	0 18.77	+ 7 44.4	1.708	2.565	13.7	20.6	11 7	0 27.39	- 8 4.9	0.948	1.806	21.8	19.9
392219	2009 <i>UV</i> ₇₉	10 4.9 302°89'	0.0/4.8	18			304093	2006 <i>HM</i> ₂₉	10 4.9 40°14'	1.8/3.4	16		
8 29	1 0.21	+ 5 42.											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
468969	2015 <i>AV</i> ₅₄	10	4.9 183°34	5°9/30.0	17		167334	2003 <i>UF</i> ₂₈₁	10	4.9 45°09	4°1/1.9	18	
8 29	1 11.29	- 6 12.0	1.543	2.406	15.6	21.4	8 29	1 11.28	- 4 10.4	1.564	2.425	15.6	19.4
9 8	1 6.64	- 7 26.7	1.480	2.407	12.0	21.2	9 8	1 6.45	- 4 40.2	1.508	2.435	11.9	19.2
9 18	0 59.45	- 8 45.8	1.439	2.407	8.3	21.0	9 18	0 59.21	- 5 13.5	1.474	2.445	7.8	19.0
9 28	0 50.47	- 9 59.9	1.423	2.407	5.9	20.8	9 28	0 50.33	- 5 44.0	1.465	2.456	4.5	18.9
10 8	0 40.78	-10 59.9	1.433	2.406	7.1	20.9	10 8	0 40.91	- 6 5.2	1.482	2.467	5.0	18.9
10 18	0 31.60	-11 38.4	1.470	2.405	10.5	21.1	10 18	0 32.09	- 6 12.2	1.525	2.478	8.6	19.2
10 28	0 24.06	-11 51.4	1.529	2.404	14.1	21.3	10 28	0 24.92	- 6 2.2	1.593	2.490	12.3	19.4
11 7	0 18.94	-11 39.0	1.609	2.402	17.4	21.6	11 7	0 20.09	- 5 34.6	1.682	2.501	15.6	19.7
117033	2004 <i>JP</i> ₂₁	10	4.9 267°40	1°8/6.6	18		173519	2000 <i>VW</i> ₈	10	4.9 39°57	1°4/3.9	18	
8 29	1 7.41	+12 33.7	1.599	2.423	17.1	20.2	8 29	1 8.33	+ 5 15.5	1.030	1.904	20.8	19.4
9 8	1 3.80	+12 8.8	1.515	2.416	13.5	20.0	9 8	1 5.09	+ 4 34.8	0.987	1.921	15.8	19.2
9 18	0 57.73	+11 23.1	1.452	2.410	9.3	19.7	9 18	0 58.70	+ 3 36.1	0.962	1.938	10.1	18.9
9 28	0 49.81	+10 19.0	1.412	2.403	4.7	19.5	9 28	0 50.18	+ 2 27.1	0.958	1.956	4.0	18.6
10 8	0 41.04	+ 9 2.1	1.398	2.396	1.9	19.3	10 8	0 41.00	+ 1 18.5	0.978	1.975	2.9	18.6
10 18	0 32.59	+ 7 40.6	1.412	2.389	6.1	19.5	10 18	0 32.73	+ 0 20.7	1.021	1.994	8.6	19.0
10 28	0 25.62	+ 6 24.2	1.451	2.382	10.7	19.8	10 28	0 26.67	- 0 18.0	1.087	2.015	13.8	19.4
11 7	0 20.95	+ 5 20.7	1.513	2.375	14.9	20.0	11 7	0 23.58	- 0 33.8	1.172	2.035	18.1	19.7
55257	2001 <i>RQ</i> ₁₂₀	10	4.9 226°78	1°4/3.7	18		294397	2007 <i>VG</i> ₁₆₈	10	4.9 320°20	0°7/4.5	17	
8 29	1 9.86	+ 3 41.1	1.844	2.682	14.5	19.8	8 29	1 8.31	+ 5 8.1	1.197	2.062	19.1	21.0
9 8	1 5.30	+ 3 3.6	1.760	2.675	11.1	19.6	9 8	1 5.26	+ 4 53.8	1.121	2.049	14.9	20.7
9 18	0 58.51	+ 2 14.7	1.698	2.667	7.2	19.3	9 18	0 59.11	+ 4 23.3	1.064	2.037	9.8	20.4
9 28	0 50.09	+ 1 18.7	1.662	2.658	3.0	19.0	9 28	0 50.52	+ 3 40.6	1.028	2.025	4.0	20.1
10 8	0 40.93	+ 0 21.9	1.654	2.649	2.4	19.0	10 8	0 40.76	+ 2 53.3	1.017	2.014	2.3	19.9
10 18	0 32.05	- 0 29.2	1.674	2.639	6.7	19.2	10 18	0 31.35	+ 2 10.0	1.029	2.004	8.2	20.2
10 28	0 24.48	- 1 8.3	1.720	2.629	10.8	19.5	10 28	0 23.83	+ 1 39.6	1.064	1.994	13.8	20.5
11 7	0 18.97	- 1 31.6	1.790	2.619	14.4	19.7	11 7	0 19.26	+ 1 27.8	1.119	1.985	18.6	20.8
59150	1998 <i>XV</i> ₉₀	10	4.9 332°75	0°9/5.9	18		397273	2006 <i>RA</i> ₇₁	10	4.9 28°84	0°0/4.9	15	
8 29	1 3.64	+10 9.6	2.053	2.877	13.8	18.8	8 29	1 5.58	+ 7 37.0	1.698	2.538	15.5	21.6
9 8	1 0.34	+ 9 45.3	1.967	2.870	10.8	18.6	9 8	1 2.07	+ 7 2.2	1.629	2.543	11.9	21.4
9 18	0 55.18	+ 9 6.6	1.903	2.863	7.3	18.4	9 18	0 56.39	+ 6 12.4	1.581	2.549	7.8	21.2
9 28	0 48.66	+ 8 15.8	1.863	2.856	3.4	18.2	9 28	0 49.19	+ 5 11.9	1.558	2.554	3.2	20.9
10 8	0 41.55	+ 7 17.7	1.852	2.850	1.3	18.0	10 8	0 41.39	+ 4 7.1	1.562	2.560	1.5	20.8
10 18	0 34.68	+ 6 17.9	1.868	2.844	5.0	18.2	10 18	0 34.01	+ 3 5.1	1.593	2.566	6.1	21.1
10 28	0 28.90	+ 5 22.9	1.912	2.838	8.8	18.5	10 28	0 28.00	+ 2 13.1	1.650	2.573	10.3	21.4
11 7	0 24.83	+ 4 38.0	1.980	2.833	12.2	18.7	11 7	0 24.04	+ 1 35.9	1.730	2.580	13.9	21.6
261689	2005 <i>YH</i> ₂₀₉	10	4.9 338°98	0°6/4.5	17		133431	2003 <i>SF</i> ₂₀₁	10	4.9 154°53	0°9/5.9	18	
8 29	1 8.32	+ 2 33.6	1.489	2.346	16.4	19.6	8 29	1 10.16	+ 9 29.3	2.241	3.050	13.3	20.6
9 8	1 4.74	+ 2 51.2	1.403	2.327	12.8	19.3	9 8	1 5.04	+ 9 12.5	2.163	3.057	10.4	20.5
9 18	0 58.50	+ 3 0.9	1.338	2.309	8.4	19.0	9 18	0 58.08	+ 8 43.5	2.108	3.064	6.9	20.3
9 28	0 50.19	+ 3 5.2	1.296	2.293	3.5	18.7	9 28	0 49.85	+ 8 4.4	2.079	3.071	3.2	20.0
10 8	0 40.86	+ 3 8.3	1.280	2.277	1.9	18.6	10 8	0 41.12	+ 7 19.4	2.079	3.077	1.2	19.9
10 18	0 31.74	+ 3 14.4	1.289	2.263	7.1	18.8	10 18	0 32.71	+ 6 33.1	2.109	3.082	4.8	20.2
10 28	0 24.14	+ 3 28.0	1.323	2.250	11.9	19.1	10 28	0 25.45	+ 5 50.9	2.167	3.087	8.3	20.4
11 7	0 19.00	+ 3 52.5	1.378	2.238	16.1	19.3	11 7	0 19.93	+ 5 17.2	2.251	3.091	11.4	20.6
148069	1998 <i>VP</i> ₄₃	10	4.9 119°82	3°0/2.6	18		2906	<i>Caltech</i>	10	4.9 339°14	14°4/15.2	18	
8 29	1 11.96	- 0 49.2	1.631	2.483	15.5	20.3	8 29	1 13.12	-41 0.0	2.101	2.878	15.1	14.8
9 8	1 6.94	- 1 26.6	1.568	2.490	11.8	20.1	9 8	1 7.80	-42 29.3	2.076	2.873	14.5	14.8
9 18	0 59.54	- 2 11.3	1.526	2.497	7.6	19.9	9 18	1 0.04	-43 35.1	2.069	2.868	14.4	14.8
9 28	0 50.47	- 2 57.3	1.510	2.504	3.7	19.6	9 28	0 50.66	-44 9.2	2.082	2.864	14.8	14.8
10 8	0 40.80	- 3 37.8	1.521	2.510	4.0	19.7	10 8	0 40.81	-44 7.0	2.114	2.860	15.5	14.9
10 18	0 31.65	- 4 6.7	1.558	2.517	7.9	19.9	10 18	0 31.68	-43 27.6	2.163	2.856	16.6	14.9
10 28	0 24.08	- 4 19.5	1.622	2.523	11.9	20.2	10 28	0 24.30	-42 13.8	2.228	2.852	17.6	15.0
11 7	0 18.82	- 4 14.5	1.707	2.529	15.3	20.4	11 7	0 19.31	-40 31.2	2.306	2.849	18.6	15.1
99025	2001 <i>DG</i> ₉₂	10	4.9 163°14	0°4/5.4	18		326835	2003 <i>UN</i> ₆₄	10	4.9 346°54	9°4/27.9	18	
8 29	1 9.85	+ 7 51.5	2.265	3.080	13.0	20.4	8 29	1 17.45	-23 11.4	1.974	2.805	14.0	19.6
9 8	1 4.79	+ 7 33.9	2.186	3.085	10.1	20.2	9 8	1 10.82	-23 39.6	1.913	2.800	11.9	19.5
9 18	0 57.91	+ 7 5.1	2.129	3.089	6.6	20.0	9 18	1 1.89	-23 55.2	1.875	2.796	10.1	19.3
9 28	0 49.77	+ 6 27.8	2.100	3.093	2.9	19.8	9 28	0 51.43	-23 50.7	1.861	2.791	9.4	19.3
10 8	0 41.11	+ 5 45.9	2.099	3.097	1.1	19.6	10 8	0 40.48	-23 21.2	1.874	2.788	10.1	19.3
10 18	0 32.77	+ 5 4.1	2.128	3.100	4.9	19.9	10 18	0 30.14	-22 25.2	1.912	2.784	12.0	19.5
10 28	0 25.53	+ 4 27.4	2.185	3.102	8.4	20.1	10 28	0 21.43	-21 4.3	1.974	2.782	14.2	19.6
11 7	0 20.01	+ 3 59.7	2.268	3.104	11.5	20.3	11 7	0 14.99	-19 23.1	2.057	2.779	16.3	19.8
24477	2000 <i>WH</i> ₈₇	10	4.9 45°11	6°6/28.4	18		305811	2009 <i>DH</i> ₁₀₅	10	4.9 191°23	0°7/5.8	18	
8 29	1 7.65	-12 38.6	1.956	2.816	12.9	17.7	8 29	1 8.48	+ 9 7.8	2.281	3.093	13.0	21.8
9 8	1 3.27	-13 41.4	1.905	2.824	10.2	17.5	9 8	1 3.81	+ 8 50.4	2.196	3.092	10.1	21.6
9 18	0 56.95	-14 41.0	1.877	2.832	7.8	17.4	9 18	0 57.33	+ 8 21.0	2.133	3.091	6.8	21.4
9 28	0 49.35	-15 30.1	1.874	2.840	6.6	17.3	9 28	0 49.57	+ 7 41.8	2.097	3.089	3.1	21.2
10 8	0 41.33	-16 2.3	1.898	2.849	7.6	17.4	10 8	0 41.25	+ 6 56.7	2.089	3.087	1.1	21.0
10 18	0 33.77	-16 13.8	1.948	2.857	9.9	17.6	10 18	0 33.19	+ 6 10.5	2.111	3.084	4.8	21.3
10 28	0 27.51	-16 3.0	2.022	2.866	12.5	17.8	10 28	0 26.20	+ 5 28.3	2.161	3.081	8.3	21.5
11 7	0 23.13	-15 31.2	2.117	2.876	14.8	18.0	11 7	0 20.88	+ 4 54.6	2.236	3.078	11.5	21.7
251357	2007 <i>TW</i> ₁₆₈	10	4.9 345°64	4°0/7.4	18		227320	2005 <i>TD</i> ₉₇	10	4.9 250°47	0°8/5.7	18	
8 29	1 5.49	+12 45.2	1.026										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
99567	2002 <i>FW</i> ₁₂		10 4.9 185°05	0°8/ 4.2 18			76970	2001 <i>BY</i> ₅₀		10 4.9 294°63	5°2/ 1.3 18		
8 29	1 9.13	+ 4 56.2	1.949	2.783	14.1	20.8	8 29	1 11.28	- 4 49.4	1.393	2.261	16.7	19.3
9 8	1 4.56	+ 4 23.6	1.871	2.783	10.8	20.6	9 8	1 7.04	- 5 37.4	1.323	2.253	12.9	19.0
9 18	0 57.94	+ 3 39.7	1.815	2.782	7.0	20.3	9 18	0 59.98	- 6 30.7	1.274	2.245	8.7	18.8
9 28	0 49.86	+ 2 48.5	1.786	2.782	2.8	20.1	9 28	0 50.84	- 7 21.3	1.248	2.238	5.5	18.6
10 8	0 41.17	+ 1 55.5	1.785	2.781	1.9	20.0	10 8	0 40.79	- 8 0.3	1.248	2.230	6.4	18.6
10 18	0 32.81	+ 1 6.7	1.812	2.780	6.0	20.3	10 18	0 31.19	- 8 20.3	1.272	2.222	10.3	18.8
10 28	0 25.71	+ 0 27.8	1.866	2.778	9.9	20.5	10 28	0 23.35	- 8 17.1	1.320	2.215	14.5	19.0
11 7	0 20.53	+ 0 2.5	1.944	2.777	13.3	20.7	11 7	0 18.15	- 7 50.2	1.388	2.207	18.3	19.3
353753	2012 <i>BU</i> ₅₇		10 4.9 315°91	0°9/ 3.2 18			400725	2009 <i>SZ</i> ₁₆₄		10 4.9 20°56	1°6/ 3.9 18		
8 29	0 58.98	+ 1 35.5	4.235	5.064	7.1	20.9	8 29	1 10.86	+ 0 14.2	1.647	2.498	15.4	19.9
9 8	0 55.80	+ 1 7.4	4.151	5.062	5.4	20.8	9 8	1 6.08	+ 0 22.8	1.587	2.508	11.7	19.7
9 18	0 51.78	+ 0 35.5	4.092	5.060	3.4	20.6	9 18	0 58.98	+ 0 25.5	1.548	2.518	7.6	19.5
9 28	0 47.17	+ 0 1.8	4.062	5.058	1.5	20.5	9 28	0 50.30	+ 0 25.8	1.534	2.530	3.2	19.3
10 8	0 42.34	- 0 31.2	4.063	5.056	1.4	20.5	10 8	0 41.06	+ 0 27.9	1.547	2.542	2.5	19.2
10 18	0 37.62	- 1 1.2	4.093	5.053	3.3	20.6	10 18	0 32.35	+ 0 35.4	1.587	2.555	6.7	19.5
10 28	0 33.39	- 1 26.1	4.152	5.051	5.3	20.7	10 28	0 25.20	+ 0 51.6	1.653	2.569	10.7	19.8
11 7	0 29.94	- 1 44.1	4.238	5.049	7.1	20.9	11 7	0 20.27	+ 1 18.2	1.741	2.584	14.1	20.1
312639	2010 <i>BX</i> ₁₅		10 4.9 335°21	4°4/ 26.4 18			66260	1999 <i>GZ</i> ₃₅		10 4.9 303°85	3°3/ 7.3 18		
8 29	0 59.40	-15 24.1	3.851	4.699	7.4	20.0	8 29	1 8.89	+13 31.5	1.311	2.144	19.6	18.3
9 8	0 56.24	-16 19.9	3.787	4.695	5.9	19.9	9 8	1 5.59	+13 39.1	1.230	2.134	15.8	18.1
9 18	0 52.10	-17 13.0	3.749	4.691	4.8	19.8	9 18	0 59.30	+13 24.2	1.167	2.124	11.3	17.8
9 28	0 47.32	-17 59.8	3.738	4.686	4.4	19.8	9 28	0 50.65	+12 47.0	1.126	2.114	6.3	17.5
10 8	0 42.28	-18 36.9	3.756	4.683	5.1	19.9	10 8	0 40.84	+11 51.7	1.109	2.104	3.3	17.3
10 18	0 37.39	-19 1.9	3.801	4.679	6.4	19.9	10 18	0 31.34	+10 46.1	1.116	2.095	7.0	17.5
10 28	0 33.06	-19 13.5	3.872	4.675	7.9	20.0	10 28	0 23.62	+ 9 40.8	1.148	2.086	12.2	17.7
11 7	0 29.63	-19 11.3	3.965	4.671	9.3	20.2	11 7	0 18.74	+ 8 45.6	1.201	2.077	16.8	18.0
6028	1994 <i>ER</i> ₁		10 4.9 104°59	3°7/ 8.5 18 R			347689	2001 <i>VS</i> ₂₀		10 4.9 326°72	1°6/ 3.9 18		
8 29	1 11.23	+16 59.5	1.915	2.701	16.0	17.3	8 29	1 6.44	+ 3 13.0	1.273	2.142	18.0	20.5
9 8	1 6.18	+17 3.8	1.846	2.717	13.0	17.2	9 8	1 3.71	+ 2 55.1	1.193	2.123	13.9	20.2
9 18	0 58.97	+16 49.2	1.798	2.734	9.5	17.0	9 18	0 58.06	+ 2 23.6	1.131	2.106	9.1	19.9
9 28	0 50.27	+16 16.3	1.774	2.750	5.9	16.8	9 28	0 50.14	+ 1 43.0	1.092	2.089	3.8	19.5
10 8	0 41.02	+15 28.5	1.776	2.766	3.7	16.7	10 8	0 41.07	+ 1 0.8	1.077	2.073	2.9	19.4
10 18	0 32.23	+14 31.3	1.808	2.781	5.5	16.9	10 18	0 32.27	+ 0 25.3	1.086	2.059	8.3	19.7
10 28	0 24.85	+13 31.8	1.866	2.796	8.8	17.1	10 28	0 25.17	+ 0 4.0	1.118	2.045	13.6	20.0
11 7	0 19.55	+12 36.9	1.950	2.810	12.1	17.3	11 7	0 20.82	+ 0 1.8	1.170	2.032	18.3	20.2
488436	2016 <i>XR</i> ₂₂		10 4.9 301°37	3°3/ 7.9 18			209192	2003 <i>UF</i> ₂₁₄		10 4.9 277°96	0°5/ 5.4 18		
8 29	1 6.70	+15 18.8	1.734	2.542	16.6	20.9	8 29	1 7.49	+ 8 30.6	1.837	2.667	15.0	21.5
9 8	1 3.21	+15 18.9	1.643	2.530	13.4	20.7	9 8	1 3.60	+ 8 9.3	1.748	2.655	11.7	21.2
9 18	0 57.36	+14 59.1	1.572	2.518	9.7	20.4	9 18	0 57.51	+ 7 33.2	1.680	2.643	7.8	21.0
9 28	0 49.72	+14 19.8	1.524	2.507	5.8	20.2	9 28	0 49.77	+ 6 45.1	1.637	2.631	3.5	20.7
10 8	0 41.21	+13 24.5	1.502	2.495	3.3	20.0	10 8	0 41.25	+ 5 50.0	1.621	2.619	1.3	20.5
10 18	0 32.92	+12 19.2	1.507	2.484	5.8	20.1	10 18	0 32.96	+ 4 54.2	1.633	2.607	5.8	20.8
10 28	0 25.95	+11 12.2	1.538	2.473	9.9	20.3	10 28	0 25.92	+ 4 4.8	1.671	2.595	10.1	21.0
11 7	0 21.16	+10 11.5	1.593	2.462	13.8	20.6	11 7	0 20.89	+ 3 27.2	1.733	2.583	13.9	21.2
398095	2009 <i>QJ</i> ₆₅		10 4.9 231°69	4°3/ 26.0 18			390893	2005 <i>AF</i> ₃₈		10 4.9 248°21	3°9/ 30.7 18		
8 29	1 0.96	-18 43.0	4.463	5.300	6.7	20.6	8 29	1 7.47	- 3 7.1	2.053	2.905	12.8	21.5
9 8	0 57.25	-19 22.0	4.402	5.297	5.5	20.5	9 8	1 3.31	- 4 16.6	1.968	2.890	9.8	21.3
9 18	0 52.69	-19 57.0	4.366	5.294	4.6	20.4	9 18	0 57.17	- 5 33.2	1.906	2.875	6.5	21.1
9 28	0 47.55	-20 25.1	4.357	5.291	4.3	20.4	9 28	0 49.59	- 6 50.4	1.872	2.860	4.1	20.9
10 8	0 42.20	-20 43.8	4.377	5.288	4.9	20.4	10 8	0 41.34	- 8 0.8	1.865	2.844	5.0	20.9
10 18	0 37.00	-20 51.5	4.424	5.286	5.9	20.5	10 18	0 33.30	- 8 57.8	1.886	2.828	8.1	21.1
10 28	0 32.32	-20 47.2	4.497	5.283	7.2	20.6	10 28	0 26.38	- 9 36.3	1.934	2.811	11.5	21.3
11 7	0 28.45	-20 30.9	4.593	5.280	8.3	20.7	11 7	0 21.25	- 9 54.1	2.004	2.794	14.5	21.5
430437	2000 <i>GP</i> ₄₀		10 4.9 139°94	0°2/ 4.8 16			299177	2005 <i>GW</i> ₇₄		10 4.9 192°14	0°5/ 4.4 18		
8 29	1 12.78	+ 5 58.5	1.939	2.763	14.5	21.5	8 29	1 4.77	+ 8 29.0	1.959	2.790	14.1	20.3
9 8	1 7.25	+ 5 38.1	1.869	2.774	11.1	21.3	9 8	1 1.24	+ 7 19.9	1.880	2.789	10.8	20.1
9 18	0 59.63	+ 5 6.5	1.821	2.785	7.2	21.1	9 18	0 55.79	+ 5 54.5	1.823	2.789	7.0	19.9
9 28	0 50.55	+ 4 26.9	1.800	2.795	3.0	20.8	9 28	0 48.98	+ 4 17.7	1.793	2.788	2.8	19.6
10 8	0 40.93	+ 3 44.5	1.807	2.805	1.4	20.7	10 8	0 41.62	+ 2 36.8	1.791	2.788	1.7	19.5
10 18	0 31.76	+ 3 4.6	1.844	2.814	5.7	21.0	10 18	0 34.57	+ 1 0.1	1.818	2.787	5.9	19.8
10 28	0 23.96	+ 2 32.5	1.907	2.822	9.6	21.3	10 28	0 28.68	- 0 24.5	1.872	2.786	9.8	20.0
11 7	0 18.19	+ 2 12.0	1.996	2.830	12.9	21.5	11 7	0 24.60	- 1 31.6	1.951	2.785	13.2	20.2
55820	1995 <i>FW</i>		10 4.9 176°05	9°6/ 9.4 17			295293	2008 <i>GL</i> ₁₀₅		10 4.9 199°19	0°8/ 5.9 18		
8 29	1 26.14	+20 19.7	1.273	2.052	23.0	19.9	8 29	1 5.67	+10 13.7	2.151	2.968	13.5	21.0
9 8	1 19.53	+22 16.7	1.197	2.053	19.5	19.6	9 8	1 1.78	+ 9 43.7	2.069	2.968	10.5	20.8
9 18	1 8.85	+23 54.2	1.139	2.055	15.5	19.4	9 18	0 56.08	+ 8 59.6	2.009	2.967	7.1	20.6
9 28	0 54.82	+25 3.3	1.102	2.055	11.7	19.2	9 28	0 49.10	+ 8 4.1	1.974	2.967	3.3	20.4
10 8	0 38.99	+25 38.3	1.089	2.056	9.6	19.1	10 8	0 41.57	+ 7 1.8	1.968	2.966	1.2	20.2
10 18	0 23.45	+25 39.5	1.100	2.055	10.8	19.2	10 18	0 34.32	+ 5 58.6	1.991	2.965	4.9	20.5
10 28	0 10.35	+25 14.8	1.136	2.055	14.3	19.3	10 28	0 28.15	+ 5 0.6	2.041	2.964	8.6	20.7
11 7	0 1.09	+24 37.4	1.194	2.054	18.1	19.6	11 7	0 23.68	+ 4 12.9	2.116	2.963	11.8	20.9
444531	2006 <i>SR</i> ₁₆₃		10 4.9 10°57	0°8/ 4.2 15			23970	1998 <i>YP</i> ₆		10 4.9 273°62	6°8/ 18.5 18		
8 29	1 6.24	+ 5 9.3											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
191226	2002 RC ₁₇₀	10	4.9	20°94	7.5/12.8	17	370210	2002 GW ₁₁₈	10	5.0	78°52	4.2/2.4	17
8 29	1 11.58	+27 42.4	2.366	3.072	15.4	20.2	8 29	1 16.83	- 3 42.4	1.342	2.201	17.8	20.4
9 8	1 6.51	+28 46.4	2.277	3.074	13.4	20.0	9 8	1 10.98	- 4 8.7	1.293	2.218	13.5	20.2
9 18	0 59.33	+29 31.9	2.208	3.076	11.2	19.9	9 18	1 2.29	- 4 39.2	1.264	2.235	8.9	20.0
9 28	0 50.54	+29 55.8	2.162	3.078	9.1	19.7	9 28	0 51.71	- 5 6.7	1.260	2.252	4.8	19.8
10 8	0 40.95	+29 57.0	2.141	3.080	7.7	19.6	10 8	0 40.57	- 5 24.3	1.281	2.268	5.2	19.8
10 18	0 31.54	+29 37.0	2.147	3.082	7.7	19.7	10 18	0 30.28	- 5 26.8	1.329	2.285	9.2	20.1
10 28	0 23.26	+29 0.3	2.180	3.084	9.1	19.7	10 28	0 22.05	- 5 11.3	1.400	2.302	13.4	20.4
11 7	0 16.90	+28 13.8	2.237	3.087	11.1	19.9	11 7	0 16.62	- 4 37.9	1.493	2.318	17.0	20.7
354351	2003 GY ₂₄	10	4.9	341°69	1°8/1.7	18	345450	2006 ET ₃₈	10	5.0	245°49	6°3/10.6	18
8 29	1 0.16	- 3 26.5	4.151	4.989	7.1	20.5	8 29	1 10.86	+22 9.0	1.855	2.618	17.3	20.5
9 8	0 56.71	- 3 52.2	4.072	4.988	5.3	20.4	9 8	1 6.38	+22 45.9	1.766	2.613	14.6	20.3
9 18	0 52.38	- 4 19.6	4.019	4.986	3.5	20.2	9 18	0 59.46	+23 1.8	1.696	2.608	11.5	20.1
9 28	0 47.47	- 4 46.4	3.995	4.985	2.0	20.1	9 28	0 50.66	+22 54.2	1.649	2.604	8.4	19.9
10 8	0 42.32	- 5 10.3	4.001	4.984	2.3	20.2	10 8	0 40.94	+22 23.8	1.627	2.599	6.4	19.8
10 18	0 37.30	- 5 29.0	4.036	4.983	4.0	20.3	10 18	0 31.46	+21 34.1	1.631	2.594	7.1	19.9
10 28	0 32.79	- 5 40.7	4.100	4.982	5.8	20.4	10 28	0 23.36	+20 32.4	1.662	2.589	9.9	20.0
11 7	0 29.09	- 5 44.3	4.190	4.980	7.5	20.5	11 7	0 17.52	+19 27.6	1.717	2.584	13.1	20.2
515354	2013 CY ₇₄	10	5.0	316°52	2°4/2.9	18	248702	2006 MF ₁₄	10	5.0	46°25	11°9/16.5	18
8 29	1 8.40	+ 0 8.7	1.766	2.618	14.5	21.2	8 29	1 18.18	+32 58.6	1.550	2.253	22.4	20.0
9 8	1 4.26	- 0 20.1	1.689	2.611	11.1	21.0	9 8	1 12.50	+34 45.1	1.502	2.282	19.8	19.9
9 18	0 57.90	- 0 56.7	1.633	2.605	7.2	20.8	9 18	1 3.61	+36 0.7	1.469	2.313	17.0	19.8
9 28	0 49.93	- 1 36.3	1.603	2.598	3.3	20.5	9 28	0 52.38	+36 38.6	1.455	2.344	14.4	19.7
10 8	0 41.25	- 2 12.8	1.600	2.592	3.4	20.5	10 8	0 40.26	+36 36.8	1.462	2.375	12.5	19.6
10 18	0 32.90	- 2 40.4	1.624	2.586	7.3	20.7	10 18	0 28.84	+35 58.6	1.492	2.407	11.9	19.7
10 28	0 25.88	- 2 54.4	1.674	2.580	11.2	21.0	10 28	0 19.62	+34 53.1	1.545	2.439	12.8	19.8
11 7	0 20.94	- 2 52.3	1.746	2.575	14.7	21.2	11 7	0 13.52	+33 32.9	1.620	2.471	14.6	20.0
269414	2009 SX ₂₀	10	5.0	340°82	4°2/7.7	18	394224	2006 SF ₃₁₅	10	5.0	78°99	1°2/3.7	18
8 29	1 9.42	+13 30.7	1.288	2.122	19.9	19.8	8 29	1 6.23	+ 4 29.2	1.937	2.777	13.9	21.5
9 8	1 6.05	+14 8.6	1.212	2.114	16.1	19.5	9 8	1 2.34	+ 3 43.5	1.865	2.781	10.6	21.3
9 18	0 59.63	+14 26.8	1.153	2.107	11.7	19.2	9 18	0 56.50	+ 2 46.4	1.816	2.785	6.8	21.1
9 28	0 50.82	+14 24.1	1.116	2.100	7.0	19.0	9 28	0 49.31	+ 1 42.7	1.792	2.789	2.8	20.9
10 8	0 40.84	+14 2.6	1.102	2.095	4.2	18.8	10 8	0 41.58	+ 0 38.6	1.797	2.792	2.2	20.9
10 18	0 31.20	+13 27.9	1.113	2.090	7.2	19.0	10 18	0 34.21	- 0 19.6	1.830	2.796	6.1	21.1
10 28	0 23.39	+12 48.7	1.147	2.086	12.0	19.2	10 28	0 28.05	- 1 5.9	1.889	2.800	9.9	21.4
11 7	0 18.48	+12 14.1	1.202	2.083	16.5	19.5	11 7	0 23.72	- 1 36.7	1.972	2.804	13.2	21.6
521329	2015 LH ₄₃	10	5.0	58°65	3°6/8.4	18	171328	2006 JS ₁₇	10	5.0	9°66	1°7/3.6	18
8 29	1 8.87	+16 15.8	1.775	2.574	16.6	21.0	8 29	1 4.30	+ 3 51.7	1.305	2.174	17.6	20.2
9 8	1 4.54	+16 22.1	1.710	2.590	13.4	20.8	9 8	1 1.69	+ 3 12.7	1.245	2.176	13.4	19.9
9 18	0 58.00	+16 9.1	1.665	2.606	9.7	20.6	9 18	0 56.46	+ 2 19.1	1.204	2.179	8.6	19.7
9 28	0 49.92	+15 37.6	1.644	2.622	5.9	20.4	9 28	0 49.38	+ 1 17.4	1.186	2.183	3.5	19.4
10 8	0 41.28	+14 51.2	1.648	2.639	3.6	20.3	10 8	0 41.56	+ 0 16.0	1.193	2.189	3.0	19.4
10 18	0 33.12	+13 55.7	1.681	2.656	5.6	20.5	10 18	0 34.26	- 0 36.2	1.224	2.195	7.9	19.7
10 28	0 26.41	+12 58.5	1.740	2.673	9.1	20.7	10 28	0 28.65	- 1 11.9	1.280	2.202	12.6	20.0
11 7	0 21.83	+12 6.8	1.823	2.690	12.5	21.0	11 7	0 25.49	- 1 27.3	1.355	2.211	16.6	20.3
59093	1998 VE ₄₇	10	5.0	285°69	4°2/1.4	18	260244	2004 RY ₃₂₅	10	5.0	335°88	4°7/9.5	18
8 29	1 10.22	- 5 11.8	1.856	2.710	13.8	19.0	8 29	1 6.53	+18 40.5	1.954	2.739	15.8	19.8
9 8	1 5.48	- 5 49.2	1.785	2.708	10.6	18.8	9 8	1 2.87	+19 5.9	1.864	2.731	13.1	19.6
9 18	0 58.59	- 6 29.6	1.737	2.705	7.1	18.6	9 18	0 57.06	+19 13.1	1.794	2.723	10.0	19.4
9 28	0 50.18	- 7 7.0	1.715	2.703	4.4	18.4	9 28	0 49.63	+19 1.1	1.748	2.716	6.8	19.2
10 8	0 41.16	- 7 35.4	1.720	2.700	5.1	18.5	10 8	0 41.43	+18 31.4	1.727	2.709	4.8	19.1
10 18	0 32.53	- 7 49.8	1.752	2.698	8.2	18.6	10 18	0 33.42	+17 47.8	1.732	2.703	6.0	19.1
10 28	0 25.24	- 7 47.1	1.810	2.696	11.7	18.9	10 28	0 26.63	+16 56.9	1.765	2.697	9.0	19.3
11 7	0 19.98	- 7 26.5	1.890	2.693	14.8	19.1	11 7	0 21.80	+16 5.8	1.822	2.692	12.3	19.5
28655	Erincolfax	10	5.0	322°25	0°4/4.7	18	482264	2011 QW ₇₃	10	5.0	79°43	1°4/6.3	18
8 29	1 6.95	+ 7 9.9	1.444	2.294	17.2	18.9	8 29	1 8.47	+11 25.1	1.792	2.611	15.7	21.6
9 8	1 3.65	+ 6 34.1	1.369	2.289	13.4	18.7	9 8	1 4.14	+11 1.8	1.728	2.626	12.3	21.4
9 18	0 57.75	+ 5 40.7	1.314	2.283	8.8	18.4	9 18	0 57.70	+10 21.8	1.684	2.641	8.3	21.2
9 28	0 49.93	+ 4 34.3	1.282	2.278	3.6	18.1	9 28	0 49.81	+ 9 28.1	1.666	2.657	4.0	21.0
10 8	0 41.25	+ 3 22.5	1.276	2.273	1.8	17.9	10 8	0 41.40	+ 8 26.1	1.674	2.672	1.6	20.9
10 18	0 32.96	+ 2 14.1	1.295	2.269	7.1	18.3	10 18	0 33.46	+ 7 22.6	1.711	2.687	5.4	21.2
10 28	0 26.24	+ 1 18.0	1.340	2.264	12.0	18.5	10 28	0 26.93	+ 6 24.6	1.774	2.702	9.3	21.4
11 7	0 21.97	+ 0 40.2	1.406	2.261	16.2	18.8	11 7	0 22.44	+ 5 37.8	1.862	2.716	12.8	21.7
479833	2014 FM ₆₆	10	5.0	287°61	8°1/27.5	18	338024	2002 GX ₉₉	10	5.0	227°41	1°0/5.9	18
8 29	1 10.71	-15 42.3	1.815	2.672	13.9	20.6	8 29	1 11.17	+ 9 8.1	2.073	2.885	14.1	21.7
9 8	1 5.89	-16 50.6	1.757	2.671	11.3	20.5	9 8	1 6.20	+ 9 2.4	1.980	2.876	11.1	21.5
9 18	0 58.85	-17 53.5	1.723	2.669	9.0	20.3	9 18	0 59.11	+ 8 44.2	1.909	2.866	7.5	21.2
9 28	0 50.28	-18 42.3	1.713	2.668	8.1	20.3	9 28	0 50.47	+ 8 15.0	1.864	2.856	3.5	21.0
10 8	0 41.14	-19 10.0	1.729	2.667	9.2	20.3	10 8	0 41.08	+ 7 38.6	1.848	2.846	1.3	20.8
10 18	0 32.48	-19 12.4	1.770	2.666	11.5	20.5	10 18	0 31.90	+ 6 59.6	1.860	2.834	5.2	21.0
10 28	0 25.29	-18 48.3	1.834	2.664	14.2	20.6	10 28	0 23.89	+ 6 23.8	1.901	2.823	9.2	21.3
11 7	0 20.23	-18 0.2	1.917	2.663	16.6	20.8	11 7	0 17.78	+ 5 56.0	1.966	2.811	12.7	21.5
314522	2005 YF ₉	10	5.0	218°12	0°9/3.9	17	97715	2000 GN ₉₂	10	5.0	242°51	0°0/4.9	18
8 29	1 6.84	+ 3 35.9	2.541</										