

EPHEMERIDES

11 6.9

11 7.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
494495	2016 WZ ₄₅	11	6.9 302°27	3°6/ 9.8 16			431485	2007 TM ₄₅	11	6.9 3°30	2°5/ 7.9 17		
9 28	3 14.63	+29 34.1	1.712	2.478	18.1	21.7	9 28	3 18.67	+18 56.0	1.065	1.895	22.8	20.1
10 8	3 11.89	+29 12.8	1.616	2.468	15.0	21.4	10 8	3 16.52	+19 46.1	0.998	1.893	18.6	19.8
10 18	3 6.24	+28 29.3	1.539	2.457	11.4	21.2	10 18	3 10.31	+20 25.8	0.946	1.893	13.4	19.5
10 28	2 58.28	+27 22.2	1.484	2.447	7.3	20.9	10 28	3 0.69	+20 52.6	0.915	1.893	7.5	19.2
11 7	2 49.08	+25 53.7	1.455	2.437	3.9	20.7	11 7	2 49.13	+21 6.0	0.906	1.895	2.5	18.9
11 17	2 39.91	+24 10.0	1.453	2.428	5.1	20.8	11 17	2 37.60	+21 8.1	0.920	1.898	6.4	19.2
11 27	2 32.13	+22 20.9	1.480	2.418	9.2	21.0	11 27	2 28.13	+21 5.1	0.958	1.902	12.3	19.5
12 7	2 26.70	+20 37.2	1.531	2.409	13.4	21.2	12 7	2 22.14	+21 4.2	1.017	1.907	17.4	19.9
422262	2014 SO ₁₄₁	11	6.9 12°23	2°1/ 5.3 18			295632	2008 SS ₂₄₉	11	6.9 160°88	0°6/ 7.6 18		
9 28	3 11.10	+13 39.1	1.949	2.757	14.7	20.3	9 28	3 13.34	+20 48.9	2.748	3.513	11.9	21.2
10 8	3 8.25	+12 52.2	1.871	2.759	11.6	20.1	10 8	3 9.37	+20 25.3	2.657	3.517	9.6	21.1
10 18	3 3.22	+11 57.1	1.816	2.762	8.0	19.9	10 18	3 3.68	+19 52.2	2.588	3.520	6.7	20.9
10 28	2 56.56	+10 57.4	1.785	2.766	4.1	19.6	10 28	2 56.73	+19 10.9	2.547	3.523	3.6	20.7
11 7	2 49.10	+9 58.4	1.783	2.770	2.2	19.5	11 7	2 49.14	+18 23.7	2.535	3.525	0.6	20.5
11 17	2 41.76	+9 5.3	1.808	2.774	5.4	19.7	11 17	2 41.64	+17 34.0	2.554	3.528	3.2	20.7
11 27	2 35.48	+8 23.5	1.861	2.780	9.1	20.0	11 27	2 34.94	+16 45.9	2.602	3.530	6.3	20.9
12 7	2 30.96	+7 56.1	1.939	2.785	12.5	20.2	12 7	2 29.61	+16 3.2	2.678	3.532	9.2	21.1
80486	2000 AT ₃₈	11	6.9 284°83	0°3/ 6.8 18			9681	Sherwoodrowland	11	7.0 213°73	1°5/ 5.7 18		
9 28	3 16.41	+16 39.3	1.856	2.651	15.8	19.8	10 8	3 9.09	+14 1.4	2.331	3.209	10.0	18.5
10 8	3 12.91	+16 31.2	1.756	2.635	12.7	19.6	10 18	3 3.61	+13 10.0	2.264	3.207	6.9	18.3
10 18	3 6.79	+16 14.0	1.678	2.619	8.9	19.3	10 28	2 56.73	+12 13.5	2.225	3.204	3.5	18.1
10 28	2 58.56	+15 48.9	1.623	2.603	4.6	19.0	11 7	2 49.15	+11 15.9	2.214	3.202	1.5	18.0
11 7	2 49.10	+15 18.8	1.596	2.587	0.4	18.7	11 17	2 41.63	+10 21.6	2.233	3.200	4.4	18.2
11 17	2 39.52	+14 47.6	1.598	2.572	4.9	19.0	11 27	2 34.97	+9 35.3	2.281	3.197	7.8	18.4
11 27	2 31.02	+14 20.4	1.627	2.556	9.4	19.2	12 7	2 29.80	+9 0.1	2.355	3.194	10.8	18.6
12 7	2 24.56	+14 1.9	1.680	2.540	13.4	19.4	12 17	2 26.51	+8 38.0	2.451	3.192	13.3	18.7
79752	1998 SL ₁₆₈	11	6.9 285°19	0°7/ 7.5 18			96243	1994 CF ₆	11	7.0 242°82	4°5/ 2.7 17		
9 28	3 16.13	+21 35.9	1.540	2.337	18.4	19.5	10 8	3 8.60	+2 4.7	2.585	3.461	9.2	20.3
10 8	3 13.15	+21 7.1	1.454	2.333	14.9	19.3	10 18	3 3.17	+1 10.0	2.518	3.451	6.8	20.1
10 18	3 7.16	+20 21.2	1.388	2.328	10.6	19.0	10 28	2 56.49	+0 18.9	2.479	3.441	4.9	20.0
10 28	2 58.77	+19 19.2	1.345	2.323	5.6	18.7	11 7	2 49.15	-0 24.1	2.469	3.430	4.8	19.9
11 7	2 49.11	+18 5.7	1.328	2.318	0.8	18.4	11 17	2 41.82	-0 55.5	2.488	3.420	6.5	20.0
11 17	2 39.51	+16 47.5	1.338	2.314	5.2	18.7	11 27	2 35.22	-1 12.4	2.535	3.409	8.9	20.2
11 27	2 31.37	+15 33.8	1.374	2.309	10.2	19.0	12 7	2 29.91	-1 13.7	2.606	3.397	11.3	20.3
12 7	2 25.70	+14 32.4	1.435	2.304	14.6	19.2	12 17	2 26.29	-0 59.8	2.699	3.386	13.4	20.5
107505	2001 DK ₄₉	11	6.9 299°90	0°0/ 6.9 18			148938	2001 XB ₁₁₇	11	7.0 323°29	2°8/ 5.5 18		
9 28	3 19.78	+16 3.5	1.397	2.208	19.3	19.3	10 8	3 12.38	+9 27.0	1.663	2.552	12.7	19.3
10 8	3 16.51	+16 18.9	1.310	2.197	15.6	19.0	10 18	3 6.46	+9 16.3	1.591	2.537	8.9	19.0
10 18	3 9.84	+16 26.0	1.241	2.186	11.0	18.8	10 28	2 58.42	+9 5.3	1.543	2.522	4.9	18.8
10 28	3 0.32	+16 25.2	1.195	2.175	5.7	18.4	11 7	2 49.15	+8 57.8	1.521	2.507	2.9	18.6
11 7	2 49.11	+16 18.5	1.173	2.164	0.0	17.9	11 17	2 39.77	+8 57.2	1.527	2.494	6.2	18.8
11 17	2 37.74	+16 9.3	1.179	2.154	5.8	18.4	11 27	2 31.50	+9 7.1	1.560	2.480	10.4	19.0
11 27	2 27.88	+16 2.8	1.209	2.144	11.3	18.7	12 7	2 25.30	+9 29.3	1.617	2.467	14.3	19.2
12 7	2 20.80	+16 4.0	1.263	2.134	16.1	18.9	12 17	2 21.75	+10 4.3	1.693	2.455	17.6	19.4
317408	2002 PW ₁₅₈	11	6.9 128°95	4°3/ 11.6 18			20703	1999 VC ₂₀₃	11	7.0 59°54	6°6/ 3.2 18 R		
9 28	3 17.96	+34 11.5	3.036	3.729	12.3	22.2	10 8	3 13.18	+0 58.7	1.580	2.467	13.4	17.7
10 8	3 13.01	+34 28.8	2.949	3.744	10.5	22.1	10 18	3 6.76	+0 6.9	1.538	2.475	10.0	17.5
10 18	3 6.18	+34 32.8	2.883	3.759	8.3	22.0	10 28	2 58.41	-0 36.5	1.519	2.482	7.2	17.4
10 28	2 57.98	+34 21.8	2.843	3.773	6.1	21.8	11 7	2 49.15	-1 5.2	1.527	2.490	6.8	17.4
11 7	2 49.12	+33 56.0	2.830	3.786	4.6	21.7	11 17	2 40.12	-1 14.6	1.561	2.498	9.1	17.6
11 17	2 40.37	+33 17.0	2.847	3.800	4.6	21.8	11 27	2 32.44	-1 2.6	1.620	2.506	12.3	17.8
11 27	2 32.53	+32 28.5	2.894	3.812	6.2	21.9	12 7	2 26.90	-0 29.9	1.701	2.514	15.4	18.0
12 7	2 26.21	+31 35.4	2.969	3.825	8.3	22.1	12 17	2 23.93	+0 20.7	1.801	2.523	18.1	18.2
282397	2003 SU ₂₅₇	11	6.9 7°19	6°4/ 3.0 17			175000	2004 ED ₆₄	11	7.0 132°25	4°3/ 4.0 18		
9 28	3 8.67	+7 46.0	1.195	2.047	19.4	19.6	10 8	3 12.69	+4 11.8	2.111	2.990	10.9	20.2
10 8	3 7.56	+6 20.8	1.136	2.048	15.4	19.4	10 18	3 6.09	+3 35.5	2.061	2.998	7.8	20.0
10 18	3 3.36	+4 48.6	1.097	2.050	11.0	19.1	10 28	2 57.98	+3 2.9	2.038	3.006	5.1	19.9
10 28	2 56.81	+3 18.9	1.079	2.054	7.3	19.0	11 7	2 49.16	+2 38.4	2.042	3.014	4.4	19.8
11 7	2 49.11	+2 2.5	1.085	2.060	6.8	19.0	11 17	2 40.50	+2 25.3	2.076	3.022	6.6	20.0
11 17	2 41.65	+1 8.5	1.114	2.066	10.0	19.2	11 27	2 32.86	+2 26.1	2.137	3.029	9.5	20.2
11 27	2 35.77	+0 42.7	1.166	2.075	14.2	19.4	12 7	2 26.91	+2 41.4	2.224	3.036	12.3	20.4
12 7	2 32.39	+0 45.6	1.238	2.084	18.1	19.7	12 17	2 23.05	+3 10.4	2.331	3.043	14.7	20.6
383524	2007 DD ₅	11	6.9 248°77	1°9/ 5.9 18			288359	2004 CN ₅	11	7.0 186°41	2°4/ 8.3 18		
9 28	3 18.55	+13 25.3	1.727	2.528	16.5	22.1	10 8	3 17.75	+22 44.6	1.626	2.488	14.4	20.5
10 8	3 14.70	+13 2.2	1.634	2.518	13.2	21.8	10 18	3 10.29	+22 55.4	1.559	2.488	10.5	20.3
10 18	3 8.07	+12 31.2	1.563	2.507	9.2	21.6	10 28	3 0.39	+22 52.9	1.516	2.488	6.1	20.1
10 28	2 59.22	+11 54.7	1.515	2.496	4.8	21.3	11 7	2 49.16	+22 37.3	1.500	2.487	2.5	19.8
11 7	2 49.12	+11 17.2	1.495	2.484	2.0	21.1	11 17	2 37.93	+22 11.6	1.512	2.486	5.0	20.0
11 17	2 38.96	+10 43.5	1.503	2.472	5.9	21.3	11 27	2 28.12	+21 41.3	1.552	2.485	9.3	20.3
11 27	2 30.03	+10 19.0	1.538	2.460	10.4	21.6	12 7	2 20.77	+21 12.9	1.616	2.484	13.4	20.5
12 7	2 23.29	+10 7.8	1.598	2.448	14.5	21.8	12 17	2 16.46	+20 51.8	1.702	2.482	16.8	20.7
213504	2002 GM ₈₁	11	6.9 99°60	5°6/ 3.4 17			432628	2010 VR ₉₁	11	7.0 330°81	1°1/ 6.6 18		
9 28	3 19.73	+7 21.0	1.537	2.351	17.7	20.6	10 8	3 15.80	+13 50.6	1.157			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
26376	Roborosa	11	7.0	58°10	4.4/ 3.9	18	257283	2009 <i>HH</i> ₂₀	11	7.0	101°24	1.2/ 6.0	18
10 8	3 11.01	+ 7 9.7	1.673	2.564	12.5	18.1	10 8	3 12.18	+14 56.9	2.240	3.112	10.6	21.9
10 18	3 5.16	+ 6 2.7	1.632	2.577	8.8	17.9	10 18	3 5.62	+14 8.6	2.196	3.136	7.2	21.7
10 28	2 57.55	+ 4 57.3	1.616	2.590	5.4	17.8	10 28	2 57.70	+13 15.3	2.179	3.159	3.6	21.5
11 7	2 49.16	+ 3 59.9	1.626	2.603	4.6	17.7	11 7	2 49.21	+12 21.2	2.192	3.181	1.2	21.4
11 17	2 41.02	+ 3 16.2	1.665	2.617	7.3	17.9	11 17	2 40.98	+11 30.4	2.235	3.203	4.3	21.7
11 27	2 34.13	+ 2 50.4	1.729	2.630	10.8	18.2	11 27	2 33.80	+10 47.3	2.307	3.225	7.6	21.9
12 7	2 29.23	+ 2 43.9	1.817	2.644	14.0	18.4	12 7	2 28.26	+10 15.0	2.406	3.246	10.6	22.1
12 17	2 26.70	+ 2 55.9	1.924	2.658	16.7	18.6	12 17	2 24.72	+ 9 55.2	2.527	3.266	13.0	22.3
113167	2002 <i>RY</i> ₁₀₀	11	7.0	32°17	3.9/ 8.9	18	284864	2009 <i>CV</i> ₂₈	11	7.0	7°00	10.3/ 1.2	18
10 8	3 16.07	+24 50.9	1.448	2.313	15.7	18.9	10 8	3 8.63	- 3 13.5	1.164	2.066	16.0	19.5
10 18	3 9.23	+25 28.3	1.397	2.324	11.6	18.7	10 18	3 4.08	- 4 40.6	1.129	2.066	12.7	19.3
10 28	2 59.87	+25 49.9	1.369	2.336	7.3	18.5	10 28	2 57.21	- 5 51.6	1.115	2.069	10.5	19.2
11 7	2 49.18	+25 54.8	1.366	2.349	4.1	18.3	11 7	2 49.21	- 6 36.3	1.123	2.073	10.7	19.2
11 17	2 38.64	+25 45.2	1.389	2.362	5.7	18.4	11 17	2 41.45	- 6 48.3	1.154	2.078	13.1	19.4
11 27	2 29.72	+25 26.5	1.439	2.376	9.7	18.7	11 27	2 35.25	- 6 25.6	1.206	2.084	16.3	19.6
12 7	2 23.47	+25 5.7	1.513	2.390	13.6	19.0	12 7	2 31.53	- 5 32.0	1.276	2.092	19.4	19.8
12 17	2 20.41	+24 48.7	1.607	2.405	16.9	19.2	12 17	2 30.72	- 4 13.3	1.362	2.102	22.1	20.1
352208	2007 <i>SV</i> ₁₀	11	7.0	31°46	1.8/ 7.8	18	305023	2007 <i>TD</i> ₃₈₄	11	7.0	113°05	4.4/ 4.3	18
10 8	3 15.97	+19 42.9	1.333	2.214	15.8	20.4	10 8	3 14.72	+ 3 58.7	1.974	2.851	11.6	21.1
10 18	3 9.18	+20 10.5	1.286	2.226	11.2	20.2	10 18	3 7.54	+ 3 32.3	1.928	2.865	8.3	20.9
10 28	2 59.83	+20 26.8	1.261	2.238	6.2	19.9	10 28	2 58.75	+ 3 10.5	1.909	2.878	5.3	20.7
11 7	2 49.19	+20 32.5	1.262	2.252	1.9	19.7	11 7	2 49.22	+ 2 57.3	1.918	2.891	4.5	20.7
11 17	2 38.76	+20 30.1	1.290	2.266	5.3	20.0	11 17	2 39.90	+ 2 55.6	1.956	2.904	6.7	20.9
11 27	2 30.02	+20 24.7	1.343	2.281	10.1	20.3	11 27	2 31.75	+ 3 7.5	2.021	2.916	9.8	21.1
12 7	2 24.03	+20 21.7	1.419	2.296	14.3	20.6	12 7	2 25.44	+ 3 33.3	2.112	2.928	12.7	21.3
12 17	2 21.26	+20 25.3	1.516	2.312	17.8	20.9	12 17	2 21.39	+ 4 11.8	2.223	2.940	15.2	21.5
6933	Azumayasan	11	7.0	48°20	1.6/ 8.0	18	406268	2007 <i>EZ</i> ₅₃	11	7.0	127°89	1.8/ 8.3	18
10 8	3 13.22	+21 56.8	1.525	2.399	14.5	17.0	10 8	3 13.36	+22 18.4	2.456	3.307	10.5	21.2
10 18	3 6.96	+21 37.7	1.478	2.414	10.4	16.8	10 18	3 6.59	+22 28.4	2.391	3.315	7.6	21.0
10 28	2 58.57	+21 4.7	1.454	2.430	5.7	16.6	10 28	2 58.29	+22 29.5	2.352	3.323	4.4	20.9
11 7	2 49.19	+20 21.0	1.456	2.446	1.7	16.4	11 7	2 49.22	+22 22.3	2.343	3.330	1.8	20.7
11 17	2 40.08	+19 31.7	1.486	2.462	4.7	16.6	11 17	2 40.20	+22 8.6	2.364	3.337	3.5	20.8
11 27	2 32.47	+18 43.6	1.542	2.479	9.1	16.9	11 27	2 32.10	+21 51.7	2.415	3.345	6.7	21.0
12 7	2 27.23	+18 3.0	1.623	2.496	13.0	17.2	12 7	2 25.60	+21 35.4	2.493	3.352	9.6	21.2
12 17	2 24.76	+17 34.1	1.725	2.513	16.3	17.5	12 17	2 21.14	+21 22.9	2.595	3.358	12.1	21.4
73502	2002 <i>RE</i> ₂₂₄	11	7.0	339°83	1.4/ 7.8	17	317694	2003 <i>OK</i> ₂₆	11	7.0	33°56	1.7/ 8.2	18
10 8	3 12.72	+19 50.8	1.958	2.826	12.1	18.7	10 8	3 10.69	+22 42.3	1.682	2.553	13.6	19.5
10 18	3 6.53	+20 10.8	1.885	2.819	8.6	18.5	10 18	3 5.08	+22 18.1	1.634	2.568	9.7	19.3
10 28	2 58.41	+20 22.7	1.837	2.813	4.8	18.3	10 28	2 57.59	+21 40.5	1.610	2.584	5.4	19.1
11 7	2 49.19	+20 27.0	1.817	2.806	1.5	18.0	11 7	2 49.22	+20 52.4	1.612	2.601	1.8	18.9
11 17	2 39.90	+20 25.5	1.826	2.801	4.2	18.2	11 17	2 41.09	+19 59.0	1.642	2.618	4.3	19.2
11 27	2 31.62	+20 21.5	1.863	2.796	8.1	18.4	11 27	2 34.29	+19 6.6	1.699	2.636	8.4	19.4
12 7	2 25.24	+20 18.8	1.925	2.791	11.6	18.7	12 7	2 29.58	+18 21.2	1.782	2.655	12.1	19.7
12 17	2 21.30	+20 21.0	2.010	2.787	14.7	18.9	12 17	2 27.38	+17 46.8	1.886	2.673	15.1	19.9
351365	2005 <i>CV</i> ₁₉	11	7.0	280°12	1.5/ 7.9	18	183766	2004 <i>BR</i> ₃	11	7.0	358°96	1.0/ 7.4	18
10 8	3 13.30	+21 55.5	1.786	2.652	13.1	21.0	10 8	3 12.90	+18 27.5	1.027	1.928	17.7	19.8
10 18	3 7.17	+21 37.4	1.699	2.632	9.5	20.8	10 18	3 7.67	+18 34.4	0.974	1.924	12.6	19.5
10 28	2 58.84	+21 6.0	1.637	2.611	5.3	20.5	10 28	2 59.32	+18 28.8	0.940	1.921	6.7	19.2
11 7	2 49.19	+20 22.9	1.601	2.591	1.6	20.2	11 7	2 49.22	+18 13.1	0.930	1.920	1.0	18.8
11 17	2 39.37	+19 32.1	1.594	2.570	4.6	20.4	11 17	2 39.16	+17 52.1	0.942	1.920	6.2	19.2
11 27	2 30.62	+18 39.9	1.615	2.549	9.0	20.6	11 27	2 30.97	+17 33.0	0.978	1.922	12.1	19.5
12 7	2 23.97	+17 52.9	1.661	2.527	13.1	20.8	12 7	2 25.96	+17 22.7	1.035	1.925	17.2	19.8
12 17	2 20.03	+17 16.4	1.728	2.506	16.6	21.0	12 17	2 24.71	+17 25.2	1.109	1.929	21.4	20.1
300602	2007 <i>TE</i> ₄₃₄	11	7.0	5°51	1.8/ 7.9	17	239641	2008 <i>WX</i> ₄₁	11	7.0	305°68	0.6/ 7.4	18
10 8	3 11.65	+20 56.2	1.283	2.170	15.9	20.8	10 8	3 13.55	+19 1.9	1.584	2.461	13.9	20.7
10 18	3 6.34	+20 58.4	1.227	2.170	11.4	20.5	10 18	3 7.39	+18 49.8	1.514	2.454	9.8	20.5
10 28	2 58.46	+20 46.8	1.193	2.171	6.3	20.3	10 28	2 58.95	+18 26.8	1.468	2.446	5.2	20.2
11 7	2 49.19	+20 23.4	1.183	2.173	1.9	20.0	11 7	2 49.23	+17 55.6	1.448	2.439	0.7	19.9
11 17	2 40.00	+19 52.5	1.199	2.176	5.3	20.2	11 17	2 39.47	+17 20.2	1.456	2.432	4.9	20.2
11 27	2 32.39	+19 21.0	1.240	2.181	10.3	20.5	11 27	2 30.99	+16 46.7	1.491	2.425	9.6	20.4
12 7	2 27.44	+18 55.6	1.303	2.186	14.8	20.8	12 7	2 24.80	+16 20.7	1.550	2.418	13.8	20.7
12 17	2 25.69	+18 41.0	1.385	2.193	18.6	21.1	12 17	2 21.49	+16 6.1	1.630	2.412	17.3	20.9
41797	2000 <i>WN</i> ₁₈	11	7.0	341°26	1.6/ 5.9	18	47530	2000 <i>AO</i> ₉₆	11	7.0	42°91	8.1/ 12.3	18
10 8	3 10.47	+13 32.4	1.895	2.778	11.7	18.9	10 8	3 17.29	+36 12.1	1.523	2.343	17.4	17.1
10 18	3 4.84	+12 58.8	1.831	2.775	8.1	18.7	10 18	3 10.24	+36 56.9	1.473	2.357	14.1	16.9
10 28	2 57.48	+12 20.3	1.792	2.773	4.1	18.5	10 28	3 0.45	+37 15.2	1.443	2.373	10.8	16.8
11 7	2 49.20	+11 41.0	1.781	2.770	1.6	18.3	11 7	2 49.23	+37 4.3	1.437	2.389	8.5	16.7
11 17	2 40.98	+11 5.3	1.799	2.768	5.0	18.5	11 17	2 38.21	+36 26.2	1.455	2.405	8.4	16.7
11 27	2 33.80	+10 37.6	1.844	2.766	8.9	18.7	11 27	2 28.99	+35 28.1	1.500	2.422	10.5	16.9
12 7	2 28.44	+10 21.5	1.914	2.764	12.4	19.0	12 7	2 22.69	+34 20.4	1.568	2.440	13.5	17.1
12 17	2 25.36	+10 18.5	2.005	2.763	15.3	19.2	12 17	2 19.80	+33 12.9	1.657	2.457	16.3	17.3
438818	2008 <i>YY</i> ₁₇₁	11	7.0	169°98	6.5/ 12.9	18	401711	2013 <i>HD</i> ₉₅	11	7.0	97°19	0	

EPHEMERIDES

11 7.0

11 7.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
447550	2006 <i>SL</i> ₃₀₇		11 7.0 106°33	1.2°/ 7.9 18			323026	2002 <i>QT</i> ₄₇		11 7.0 65°63	5°8/ 4.3 17		
10 8	3 12.78	+21 37.1	1.947	2.811	12.3	21.5	10 8	3 17.71	+5 12.9	1.238	2.131	15.8	19.9
10 18	3 6.41	+21 14.3	1.887	2.819	8.8	21.3	10 18	3 9.97	+4 16.6	1.217	2.161	11.2	19.7
10 28	2 58.27	+20 40.1	1.852	2.827	4.8	21.1	10 28	3 0.05	+3 26.6	1.218	2.191	7.1	19.6
11 7	2 49.25	+19 56.9	1.845	2.835	1.3	20.9	11 7	2 49.33	+2 50.1	1.246	2.221	5.9	19.6
11 17	2 40.37	+19 8.9	1.867	2.842	4.0	21.1	11 17	2 39.27	+2 32.2	1.299	2.251	8.9	19.8
11 27	2 32.66	+18 21.7	1.917	2.850	7.9	21.3	11 27	2 31.12	+2 35.4	1.376	2.281	12.8	20.1
12 7	2 26.88	+17 40.3	1.994	2.857	11.4	21.6	12 7	2 25.68	+2 59.0	1.476	2.310	16.3	20.4
12 17	2 23.46	+17 8.8	2.093	2.864	14.3	21.8	12 17	2 23.23	+3 40.2	1.593	2.339	19.1	20.7
263076	2007 <i>RZ</i> ₁₄		11 7.0 5°73	0°7/ 7.3 18			449440	2013 <i>HE</i> ₁₃₉		11 7.0 326°51	0°7/ 7.4 18		
10 8	3 13.07	+18 12.8	0.938	1.843	18.5	20.0	10 8	3 12.80	+18 39.2	1.753	2.628	12.9	21.3
10 18	3 7.91	+18 11.4	0.889	1.842	13.1	19.7	10 18	3 6.74	+18 37.0	1.683	2.622	9.1	21.0
10 28	2 59.47	+17 56.5	0.860	1.842	6.9	19.4	10 28	2 58.61	+18 25.9	1.637	2.615	4.9	20.8
11 7	2 49.25	+17 31.6	0.853	1.844	0.7	19.0	11 7	2 49.33	+18 7.7	1.618	2.609	0.7	20.5
11 17	2 39.15	+17 2.7	0.869	1.847	6.5	19.4	11 17	2 40.01	+17 45.7	1.628	2.603	4.5	20.7
11 27	2 31.12	+16 38.0	0.907	1.852	12.6	19.8	11 27	2 31.84	+17 24.5	1.665	2.598	8.8	21.0
12 7	2 26.44	+16 24.5	0.965	1.858	17.9	20.1	12 7	2 25.73	+17 8.9	1.726	2.593	12.7	21.2
12 17	2 25.65	+16 26.2	1.040	1.864	22.2	20.4	12 17	2 22.25	+17 2.2	1.809	2.588	16.0	21.4
209839	2005 <i>GM</i> ₁₅₅		11 7.0 233°29	0°8/ 6.4 18			157509	2005 <i>SM</i> ₇₃		11 7.0 1°53	1°0/ 6.6 18		
10 8	3 12.77	+15 24.8	2.004	2.879	11.5	21.2	10 8	3 12.61	+14 36.1	1.091	1.993	16.7	19.3
10 18	3 6.45	+14 57.4	1.931	2.872	8.0	21.0	10 18	3 7.29	+14 32.4	1.038	1.991	11.7	19.0
10 28	2 58.34	+14 23.7	1.884	2.864	4.1	20.7	10 28	2 59.10	+14 21.9	1.007	1.990	6.0	18.7
11 7	2 49.27	+13 46.7	1.866	2.856	0.9	20.5	11 7	2 49.33	+14 8.3	0.999	1.990	1.1	18.4
11 17	2 40.19	+13 10.6	1.876	2.848	4.6	20.7	11 17	2 39.64	+13 56.5	1.015	1.991	6.4	18.7
11 27	2 32.11	+12 39.9	1.916	2.839	8.5	21.0	11 27	2 31.70	+13 52.3	1.055	1.994	12.0	19.0
12 7	2 25.85	+12 18.5	1.981	2.831	12.1	21.2	12 7	2 26.71	+14 0.0	1.116	1.998	16.9	19.3
12 17	2 21.89	+12 8.8	2.067	2.822	15.0	21.4	12 17	2 25.23	+14 21.4	1.195	2.003	20.9	19.6
60012	1999 <i>TU</i> ₂₆		11 7.0 345°43	0°7/ 6.4 18			326210	2012 <i>CG</i> ₃₇		11 7.0 117°73	1°5/ 5.8 18		
10 8	3 8.16	+18 18.0	1.713	2.597	12.7	18.6	10 8	3 10.57	+13 10.9	2.236	3.113	10.4	20.9
10 18	3 3.42	+17 5.8	1.645	2.590	8.8	18.3	10 18	3 4.68	+12 35.2	2.178	3.120	7.2	20.7
10 28	2 56.82	+15 41.5	1.603	2.584	4.5	18.1	10 28	2 57.36	+11 55.7	2.146	3.126	3.7	20.5
11 7	2 49.26	+14 10.9	1.588	2.578	0.8	17.8	11 7	2 49.33	+11 16.0	2.143	3.131	1.6	20.3
11 17	2 41.78	+12 41.4	1.601	2.574	5.0	18.1	11 17	2 41.41	+10 40.0	2.170	3.137	4.5	20.6
11 27	2 35.42	+11 21.1	1.641	2.569	9.4	18.3	11 27	2 34.43	+10 11.3	2.225	3.143	7.9	20.8
12 7	2 31.01	+10 16.1	1.707	2.566	13.2	18.6	12 7	2 29.02	+9 52.9	2.306	3.148	10.9	21.0
12 17	2 28.99	+9 29.8	1.793	2.563	16.4	18.8	12 17	2 25.58	+9 46.2	2.410	3.154	13.4	21.2
410905	2009 <i>SQ</i> ₁₄₀		11 7.0 359°64	4°2/ 9.9 17			491480	2012 <i>HS</i> ₄₁		11 7.0 152°24	0°4/ 6.7 18		
10 8	3 12.57	+28 45.4	1.951	2.793	13.2	21.3	10 8	3 10.06	+16 4.8	2.775	3.641	9.0	22.4
10 18	3 6.50	+28 59.1	1.881	2.792	10.1	21.1	10 18	3 4.15	+15 42.7	2.711	3.647	6.2	22.3
10 28	2 58.43	+28 56.6	1.835	2.792	6.8	20.9	10 28	2 57.04	+15 15.9	2.675	3.653	3.1	22.1
11 7	2 49.27	+28 37.9	1.815	2.791	4.4	20.7	11 7	2 49.33	+14 46.5	2.668	3.659	0.4	21.8
11 17	2 40.11	+28 5.1	1.824	2.792	5.1	20.8	11 17	2 41.70	+14 17.2	2.692	3.664	3.3	22.1
11 27	2 32.09	+27 23.1	1.859	2.792	8.1	20.9	11 27	2 34.83	+13 51.3	2.747	3.669	6.3	22.3
12 7	2 26.10	+26 38.5	1.921	2.793	11.4	21.1	12 7	2 29.26	+13 31.3	2.828	3.674	9.0	22.5
12 17	2 22.67	+25 57.2	2.005	2.794	14.3	21.3	12 17	2 25.36	+13 19.2	2.934	3.678	11.3	22.7
125371	2001 <i>VV</i> ₇₁		11 7.0 46°87	1°0/ 6.6 18			316407	2010 <i>TM</i> ₈₄		11 7.0 359°41	1°3/ 6.2 18		
10 8	3 16.53	+14 7.0	1.317	2.206	15.4	18.5	10 8	3 10.94	+14 38.3	1.795	2.678	12.2	21.1
10 18	3 9.49	+14 8.8	1.272	2.219	10.7	18.2	10 18	3 5.27	+14 3.7	1.733	2.677	8.5	20.9
10 28	2 59.98	+14 5.2	1.250	2.231	5.4	18.0	10 28	2 57.78	+13 23.0	1.696	2.677	4.3	20.7
11 7	2 49.28	+13 59.2	1.254	2.245	1.0	17.7	11 7	2 49.33	+12 40.2	1.687	2.677	1.3	20.5
11 17	2 38.84	+13 54.5	1.284	2.258	5.7	18.1	11 17	2 40.97	+12 0.3	1.706	2.677	5.0	20.7
11 27	2 30.11	+13 55.5	1.340	2.272	10.7	18.4	11 27	2 33.72	+11 28.2	1.752	2.677	9.1	21.0
12 7	2 24.07	+14 5.5	1.419	2.286	14.9	18.7	12 7	2 28.40	+11 7.7	1.823	2.678	12.7	21.2
12 17	2 21.17	+14 26.3	1.518	2.301	18.4	19.0	12 17	2 25.47	+11 0.7	1.915	2.679	15.8	21.4
387963	2005 <i>GJ</i> ₁₄₁		11 7.0 168°85	5°0/ 3.5 18			275292	2010 <i>LX</i> ₈₀		11 7.0 35°33	3°9/ 9.1 18		
10 8	3 14.16	-0 0.6	2.402	3.269	10.2	21.2	10 8	3 14.58	+25 56.0	0.916	1.806	20.3	19.9
10 18	3 7.02	-0 29.1	2.347	3.273	7.6	21.1	10 18	3 8.79	+25 45.1	0.883	1.824	14.9	19.7
10 28	2 58.49	-0 51.0	2.319	3.277	5.5	21.0	10 28	2 59.79	+25 8.4	0.869	1.843	9.0	19.4
11 7	2 49.28	-1 2.6	2.321	3.280	5.2	20.9	11 7	2 49.34	+24 9.5	0.877	1.863	4.2	19.2
11 17	2 40.19	-1 1.4	2.352	3.283	6.9	21.1	11 17	2 39.47	+22 57.2	0.907	1.885	6.5	19.5
11 27	2 32.01	-0 45.8	2.411	3.285	9.4	21.2	11 27	2 32.00	+21 43.9	0.960	1.907	11.8	19.8
12 7	2 25.38	-0 16.0	2.496	3.286	11.8	21.4	12 7	2 27.99	+20 40.8	1.034	1.930	16.6	20.2
12 17	2 20.69	+0 26.8	2.603	3.287	13.9	21.6	12 17	2 27.76	+19 54.7	1.126	1.954	20.6	20.5
286803	2002 <i>JS</i> ₁₃₉		11 7.0 163°54	2°1/ 8.6 18			514022	2014 <i>KP</i> ₇		11 7.0 175°27	1°0/ 7.8 18		
10 8	3 14.78	+23 56.1	2.102	2.953	12.1	21.6	10 8	3 12.89	+21 22.8	2.008	2.871	12.0	21.9
10 18	3 7.78	+23 44.0	2.035	2.958	8.8	21.4	10 18	3 6.52	+20 51.1	1.940	2.872	8.6	21.7
10 28	2 58.99	+23 19.2	1.993	2.962	5.1	21.2	10 28	2 58.38	+20 7.9	1.898	2.873	4.7	21.5
11 7	2 49.29	+22 43.3	1.979	2.966	2.2	21.0	11 7	2 49.34	+19 15.9	1.884	2.874	1.0	21.2
11 17	2 39.68	+21 59.7	1.995	2.969	4.0	21.1	11 17	2 40.40	+18 19.5	1.900	2.875	4.0	21.5
11 27	2 31.19	+21 13.3	2.041	2.972	7.6	21.4	11 27	2 32.55	+17 24.4	1.944	2.875	7.9	21.7
12 7	2 24.59	+20 29.8	2.113	2.975	10.9	21.6	12 7	2 26.58	+16 36.1	2.014	2.875	11.4	21.9
12 17	2 20.36	+19 53.7	2.208	2.976	13.8	21.8	12 17	2 22.94	+15 58.6	2.107	2.874	14.4	22.1
38411	1999 <i>RQ</i> ₂₁₀		11 7.0 152°78	3°5/10.1 18			382743	2003 <i>BQ</i> ₇₄		11 7.0 291°99	0°6/ 6.7		

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11 7.0

11 7.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
415642	2014 <i>QE</i> ₃₈₅		11 7.0 345°47	1°5/ 8.0 17			51190	2000 <i>HF</i> ₉₄		11 7.1 307°40	10°6/30.1 18		
10 8	3 11.24	+21 9.8	1.943	2.810	12.2	20.3	10 8	3 11.40	-11 5.7	1.768	2.629	13.5	18.9
10 18	3 5.51	+21 8.3	1.873	2.806	8.7	20.1	10 18	3 5.58	-12 25.4	1.722	2.621	11.6	18.8
10 28	2 57.93	+20 56.5	1.827	2.802	4.9	19.9	10 28	2 57.95	-13 27.3	1.700	2.613	10.7	18.7
11 7	2 49.34	+20 35.9	1.809	2.799	1.5	19.6	11 7	2 49.39	-14 3.8	1.701	2.605	11.1	18.7
11 17	2 40.75	+20 9.5	1.820	2.795	4.1	19.8	11 17	2 40.91	-14 10.1	1.727	2.597	12.7	18.8
11 27	2 33.20	+19 41.7	1.858	2.793	8.0	20.0	11 27	2 33.57	-13 45.2	1.774	2.590	14.9	18.9
12 7	2 27.51	+19 17.3	1.922	2.790	11.5	20.3	12 7	2 28.14	-12 51.8	1.842	2.583	17.1	19.1
12 17	2 24.21	+19 0.2	2.008	2.788	14.6	20.5	12 17	2 25.10	-11 34.7	1.926	2.576	19.1	19.2
286663	2002 <i>EE</i> ₁₀₅		11 7.0 178°73	0°3/ 6.8 18			220541	2004 <i>FX</i> ₁₁₀		11 7.1 237°86	0°1/ 7.1 18		
10 8	3 14.85	+16 22.8	2.206	3.072	11.0	21.4	10 8	3 15.05	+18 28.5	1.683	2.557	13.4	21.0
10 18	3 7.74	+16 5.7	2.138	3.074	7.6	21.2	10 18	3 8.39	+17 59.5	1.609	2.548	9.5	20.8
10 28	2 58.97	+15 42.3	2.097	3.075	3.9	21.0	10 28	2 59.52	+17 19.6	1.559	2.538	4.9	20.5
11 7	2 49.35	+15 15.1	2.085	3.076	0.3	20.7	11 7	2 49.40	+16 31.9	1.536	2.527	0.1	20.1
11 17	2 39.79	+14 47.2	2.103	3.076	4.0	21.0	11 17	2 39.24	+15 41.5	1.542	2.517	4.9	20.5
11 27	2 31.23	+14 22.6	2.152	3.075	7.8	21.3	11 27	2 30.30	+14 54.9	1.576	2.506	9.5	20.7
12 7	2 24.40	+14 4.7	2.227	3.074	11.0	21.5	12 7	2 23.58	+14 17.7	1.634	2.494	13.7	20.9
12 17	2 19.77	+13 56.1	2.324	3.072	13.8	21.7	12 17	2 19.64	+13 54.0	1.714	2.483	17.1	21.2
184592	2005 <i>QV</i> ₁₂₈		11 7.0 255°29	1°4/ 6.0 18			330878	2009 <i>RL</i> ₂₆		11 7.1 53°29	2°9/ 8.3 18		
10 8	3 11.64	+13 37.3	1.999	2.878	11.4	20.4	10 8	3 19.28	+22 9.2	1.215	2.092	17.3	20.1
10 18	3 5.64	+13 8.3	1.933	2.875	7.9	20.2	10 18	3 11.65	+22 37.5	1.175	2.110	12.5	19.9
10 28	2 57.94	+12 34.8	1.892	2.872	4.0	19.9	10 28	3 1.21	+22 50.1	1.156	2.130	7.2	19.7
11 7	2 49.35	+12 0.1	1.880	2.869	1.5	19.8	11 7	2 49.41	+22 47.3	1.162	2.149	3.0	19.5
11 17	2 40.80	+11 28.4	1.897	2.866	4.8	20.0	11 17	2 37.98	+22 32.6	1.194	2.169	5.7	19.7
11 27	2 33.26	+11 3.8	1.942	2.863	8.6	20.2	11 27	2 28.57	+22 12.5	1.251	2.190	10.6	20.1
12 7	2 27.48	+10 49.6	2.012	2.860	12.0	20.4	12 7	2 22.26	+21 54.4	1.331	2.210	14.9	20.4
12 17	2 23.94	+10 47.6	2.104	2.857	14.8	20.6	12 17	2 19.47	+21 43.6	1.431	2.231	18.5	20.7
367284	2007 <i>TF</i> ₃₄₃		11 7.0 105°45	2°3/ 5.9 17			308766	2006 <i>OE</i> ₄		11 7.1 25°07	2°5/ 5.4 18		
10 8	3 19.26	+11 43.0	1.373	2.259	15.1	21.2	10 8	3 10.84	+12 22.5	1.527	2.420	13.4	20.0
10 18	3 11.27	+11 25.1	1.329	2.273	10.5	21.0	10 18	3 5.34	+11 32.7	1.478	2.426	9.3	19.8
10 28	3 0.88	+11 4.3	1.308	2.288	5.4	20.7	10 28	2 57.86	+10 38.5	1.452	2.432	4.9	19.6
11 7	2 49.36	+10 44.8	1.313	2.302	2.4	20.6	11 7	2 49.39	+9 45.8	1.452	2.439	2.6	19.4
11 17	2 38.18	+10 30.9	1.346	2.316	6.4	20.9	11 17	2 41.11	+9 0.6	1.480	2.447	6.2	19.7
11 27	2 28.72	+10 27.1	1.406	2.329	11.1	21.2	11 27	2 34.15	+8 28.4	1.533	2.455	10.4	19.9
12 7	2 21.95	+10 36.0	1.489	2.342	15.2	21.5	12 7	2 29.35	+8 12.6	1.610	2.464	14.2	20.2
12 17	2 18.31	+10 58.4	1.591	2.354	18.5	21.7	12 17	2 27.15	+8 13.8	1.707	2.473	17.3	20.4
397297	2006 <i>SV</i> ₁₆₈		11 7.0 87°65	1°0/ 6.3 18			61292	2000 <i>OL</i> ₄₃		11 7.1 73°37	2°0/ 8.4 18		
10 8	3 11.40	+16 8.8	1.849	2.729	12.1	21.1	10 8	3 14.82	+23 54.5	1.515	2.383	15.0	18.3
10 18	3 5.52	+15 20.5	1.790	2.732	8.4	20.9	10 18	3 8.14	+23 23.0	1.467	2.398	10.8	18.1
10 28	2 57.88	+14 24.4	1.755	2.735	4.2	20.7	10 28	2 59.27	+22 34.8	1.441	2.415	6.1	17.9
11 7	2 49.36	+13 25.1	1.748	2.739	1.0	20.5	11 7	2 49.40	+21 33.6	1.442	2.431	2.2	17.7
11 17	2 40.97	+12 27.9	1.771	2.742	4.8	20.7	11 17	2 39.84	+20 25.3	1.471	2.447	4.8	17.9
11 27	2 33.71	+11 38.6	1.821	2.745	8.8	21.0	11 27	2 31.87	+19 18.1	1.526	2.463	9.2	18.2
12 7	2 28.35	+11 1.6	1.896	2.749	12.4	21.2	12 7	2 26.36	+18 19.4	1.607	2.479	13.2	18.5
12 17	2 25.34	+10 39.3	1.992	2.752	15.4	21.4	12 17	2 23.70	+17 34.2	1.708	2.495	16.5	18.7
41495	2000 <i>QH</i> ₁₁₇		11 7.0 344°59	3°0/ 5.3 18			78922	2003 <i>SL</i> ₁₀₉		11 7.1 106°60	4°5/ 9.8 18		
10 8	3 12.03	+13 28.0	1.168	2.070	15.9	18.0	10 8	3 18.32	+28 27.6	1.457	2.308	16.4	19.3
10 18	3 6.72	+12 19.8	1.113	2.065	11.1	17.7	10 18	3 10.86	+28 28.3	1.402	2.319	12.4	19.1
10 28	2 58.75	+11 2.8	1.079	2.061	5.8	17.4	10 28	3 0.79	+28 7.4	1.369	2.331	8.0	18.9
11 7	2 49.37	+9 45.3	1.070	2.058	3.1	17.2	11 7	2 49.41	+27 25.6	1.361	2.341	4.7	18.7
11 17	2 40.09	+8 36.8	1.086	2.055	7.6	17.5	11 17	2 38.27	+26 27.3	1.380	2.352	5.9	18.8
11 27	2 32.45	+7 46.0	1.126	2.053	12.8	17.8	11 27	2 28.90	+25 20.9	1.426	2.362	9.8	19.1
12 7	2 27.54	+7 18.2	1.187	2.051	17.4	18.0	12 7	2 22.32	+24 15.9	1.497	2.372	13.8	19.3
12 17	2 25.90	+7 14.4	1.265	2.050	21.3	18.3	12 17	2 19.02	+23 20.1	1.588	2.382	17.2	19.6
239208	2006 <i>PN</i> ₂₇		11 7.0 96°80	2°7/ 5.6 18			266636	2008 <i>RV</i> ₉₅		11 7.1 117°73	0°2/ 6.9 18		
10 8	3 17.35	+8 17.2	1.948	2.822	11.8	20.5	10 8	3 10.17	+17 27.5	2.489	3.357	9.8	21.4
10 18	3 9.39	+8 14.1	1.905	2.843	8.2	20.3	10 18	3 4.32	+16 53.7	2.431	3.368	6.8	21.2
10 28	2 59.76	+8 12.1	1.888	2.864	4.5	20.2	10 28	2 57.17	+16 13.4	2.400	3.378	3.5	21.0
11 7	2 49.38	+8 13.9	1.900	2.884	2.8	20.1	11 7	2 49.40	+15 29.7	2.398	3.389	0.2	20.7
11 17	2 39.27	+8 21.7	1.942	2.904	5.5	20.3	11 17	2 41.76	+14 45.9	2.426	3.399	3.5	21.0
11 27	2 30.42	+8 37.5	2.013	2.924	8.9	20.6	11 27	2 34.99	+14 6.1	2.484	3.409	6.8	21.2
12 7	2 23.54	+9 2.4	2.109	2.943	12.1	20.8	12 7	2 29.67	+13 33.5	2.569	3.418	9.7	21.5
12 17	2 19.03	+9 36.6	2.228	2.962	14.7	21.0	12 17	2 26.17	+13 10.6	2.677	3.428	12.1	21.6
50293	2000 <i>CH</i> ₃₀		11 7.0 5°21	12°1/29.6 18			323665	2005 <i>EZ</i> ₄₇		11 7.1 274°16	2°7/ 5.5 18		
10 8	3 8.66	-8 39.2	1.322	2.207	15.6	17.6	10 8	3 14.64	+12 24.9	1.361	2.253	14.8	20.7
10 18	3 3.98	-10 33.3	1.290	2.207	13.3	17.4	10 18	3 8.36	+11 38.2	1.298	2.246	10.3	20.4
10 28	2 57.19	-12 6.7	1.280	2.208	12.1	17.4	10 28	2 59.58	+10 45.6	1.258	2.239	5.5	20.1
11 7	2 49.37	-13 8.8	1.292	2.210	12.7	17.4	11 7	2 49.41	+9 53.1	1.244	2.232	2.8	19.9
11 17	2 41.76	-13 33.1	1.326	2.213	14.7	17.6	11 17	2 39.26	+9 7.6	1.256	2.224	6.9	20.1
11 27	2 35.57	-13 18.5	1.381	2.217	17.2	17.7	11 27	2 30.57	+8 35.8	1.294	2.217	11.8	20.4
12 7	2 31.65	-12 29.2	1.453	2.222	19.8	17.9	12 7	2 24.42	+8 21.9	1.355	2.210	16.2	20.7
12 17	2 30.42	-11 11.7	1.540	2.228	21.9	18.1	12 17	2 21.38	+8 27.3	1.433	2.203	19.9	20.9
394991	2009 <i>BV</i> ₅₁		11 7.1 182°40	0°1/ 7.1 18			67167	2000 <i>AM</i> ₂₃₅		11 7.1 329°62			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
482571	2012 <i>WT</i> ₁₆		11 7.1 263°07	6°2/ 3.3 18			47179	1999 <i>TM</i> ₁₁₇		11 7.1 175°51	5°6/10.1 18		
10 8	3 14.23	+ 0 14.9	1.844	2.722	12.2	21.2	10 8	3 20.10	+30 7.1	1.617	2.453	15.8	19.3
10 18	3 7.58	- 0 23.3	1.778	2.710	9.2	21.0	10 18	3 12.24	+30 41.3	1.549	2.455	12.2	19.0
10 28	2 59.03	- 0 54.2	1.737	2.697	6.7	20.9	10 28	3 1.65	+30 55.7	1.504	2.456	8.5	18.8
11 7	2 49.43	- 1 12.2	1.722	2.684	6.4	20.8	11 7	2 49.51	+30 48.1	1.485	2.457	5.8	18.7
11 17	2 39.81	- 1 13.3	1.736	2.671	8.5	20.9	11 17	2 37.33	+30 19.8	1.493	2.457	6.5	18.7
11 27	2 31.24	- 0 55.0	1.776	2.658	11.7	21.1	11 27	2 26.70	+29 36.9	1.528	2.457	9.8	18.9
12 7	2 24.58	- 0 17.6	1.839	2.645	14.8	21.3	12 7	2 18.78	+28 48.1	1.588	2.457	13.5	19.1
12 17	2 20.36	+ 0 37.0	1.922	2.631	17.4	21.4	12 17	2 14.21	+28 1.8	1.669	2.456	16.8	19.4
429820	2012 <i>KC</i> ₄₈		11 7.1 234°63	0°3/ 7.3 17			287111	2002 <i>RJ</i> ₁₆₀		11 7.1 158°18	6°9/15.0 17		
10 8	3 15.06	+19 47.2	1.535	2.411	14.4	21.6	10 8	3 17.91	+45 58.3	3.291	4.000	11.1	21.5
10 18	3 8.54	+19 7.3	1.465	2.404	10.2	21.3	10 18	3 9.91	+46 34.0	3.216	4.008	9.7	21.4
10 28	2 59.64	+18 13.6	1.418	2.397	5.4	21.0	10 28	3 0.19	+46 51.4	3.163	4.015	8.2	21.3
11 7	2 49.44	+17 10.0	1.398	2.389	0.4	20.6	11 7	2 49.51	+46 48.4	3.136	4.021	7.2	21.2
11 17	2 39.25	+16 2.8	1.406	2.382	5.1	21.0	11 17	2 38.82	+46 25.1	3.137	4.028	6.9	21.2
11 27	2 30.44	+14 59.9	1.442	2.373	10.1	21.2	11 27	2 29.07	+45 44.3	3.165	4.033	7.5	21.3
12 7	2 24.03	+14 8.5	1.501	2.365	14.4	21.5	12 7	2 21.06	+44 50.9	3.220	4.038	8.7	21.4
12 17	2 20.59	+13 33.0	1.580	2.356	18.0	21.7	12 17	2 15.28	+43 50.6	3.299	4.043	10.1	21.5
177692	2005 <i>GO</i> ₆		11 7.1 169°20	0°9/ 6.6 16			112990	2002 <i>RN</i> ₃₂		11 7.1 315°03	2°2/ 8.8 17		
10 8	3 16.90	+15 25.9	1.647	2.524	13.5	21.6	10 8	3 10.62	+24 9.5	2.136	2.992	11.7	19.3
10 18	3 9.57	+15 2.7	1.587	2.527	9.4	21.3	10 18	3 5.07	+24 2.1	2.056	2.982	8.6	19.1
10 28	3 0.07	+14 32.5	1.550	2.530	4.8	21.1	10 28	2 57.77	+23 42.5	2.002	2.971	5.1	18.9
11 7	2 49.44	+13 58.6	1.542	2.532	0.9	20.8	11 7	2 49.50	+23 11.9	1.975	2.961	2.3	18.7
11 17	2 38.93	+13 25.6	1.562	2.534	5.2	21.1	11 17	2 41.17	+22 33.2	1.977	2.951	4.0	18.8
11 27	2 29.77	+12 58.8	1.610	2.535	9.7	21.4	11 27	2 33.78	+21 50.9	2.007	2.942	7.5	19.0
12 7	2 22.90	+12 42.6	1.682	2.536	13.7	21.6	12 7	2 28.12	+21 10.4	2.064	2.932	10.8	19.2
12 17	2 18.82	+12 39.2	1.775	2.536	16.9	21.9	12 17	2 24.70	+20 36.2	2.143	2.923	13.8	19.4
8013	Gordonmoore		11 7.1 116°45	3°6/ 4.8 17			515522	2014 <i>FQ</i> ₅		11 7.1 210°02	3°3/ 8.9 18		
10 8	3 19.97	+ 7 45.2	1.902	2.772	12.3	21.3	10 8	3 17.15	+25 8.2	1.830	2.681	13.6	21.8
10 18	3 11.09	+ 6 57.7	1.867	2.803	8.5	21.2	10 18	3 9.88	+25 28.3	1.758	2.678	10.1	21.6
10 28	3 0.58	+ 6 11.4	1.859	2.833	5.0	21.0	10 28	3 0.34	+25 34.5	1.710	2.675	6.3	21.4
11 7	2 49.45	+ 5 31.1	1.882	2.861	3.7	21.0	11 7	2 49.52	+25 26.5	1.689	2.672	3.4	21.2
11 17	2 38.75	+ 5 1.1	1.934	2.888	6.3	21.2	11 17	2 38.64	+25 6.1	1.696	2.668	4.9	21.3
11 27	2 29.48	+ 4 44.6	2.016	2.914	9.7	21.5	11 27	2 28.98	+24 38.1	1.732	2.665	8.6	21.5
12 7	2 22.30	+ 4 42.9	2.123	2.938	12.7	21.7	12 7	2 21.56	+24 8.6	1.794	2.661	12.3	21.7
12 17	2 17.58	+ 4 55.6	2.251	2.961	15.2	22.0	12 17	2 16.95	+23 43.4	1.877	2.656	15.5	21.9
53998	2000 <i>GW</i> ₈₈		11 7.1 243°26	4°1/ 4.7 18			120005	2002 <i>YB</i> ₃₁		11 7.1 314°24	0°1/ 7.1 18		
10 8	3 15.04	+ 7 10.9	1.626	2.512	13.1	19.2	10 8	3 12.55	+18 33.6	1.309	2.198	15.4	19.6
10 18	3 8.33	+ 6 33.1	1.562	2.505	9.3	19.0	10 18	3 7.21	+18 4.3	1.236	2.182	11.0	19.3
10 28	2 59.48	+ 5 56.3	1.522	2.497	5.6	18.7	10 28	2 59.16	+17 21.5	1.185	2.166	5.8	19.0
11 7	2 49.45	+ 5 25.8	1.509	2.489	4.3	18.7	11 7	2 49.52	+16 29.0	1.159	2.150	0.1	18.5
11 17	2 39.43	+ 5 6.5	1.524	2.481	7.3	18.8	11 17	2 39.71	+15 33.2	1.158	2.134	5.7	18.9
11 27	2 30.64	+ 5 2.5	1.565	2.473	11.3	19.0	11 27	2 31.31	+14 42.3	1.183	2.120	11.2	19.2
12 7	2 24.02	+ 5 15.5	1.630	2.464	15.0	19.3	12 7	2 25.54	+14 3.9	1.230	2.105	16.1	19.4
12 17	2 20.13	+ 5 45.1	1.714	2.456	18.1	19.5	12 17	2 23.06	+13 42.5	1.295	2.092	20.2	19.7
357337	2003 <i>OG</i> ₃₃		11 7.1 106°68	7°6/30.6 18			369777	2012 <i>GK</i> ₃₃		11 7.1 176°14	0°9/ 8.0 18		
10 8	3 10.57	-10 50.9	2.688	3.532	10.0	21.1	10 8	3 10.18	+21 34.5	2.979	3.830	8.9	21.6
10 18	3 4.39	-12 3.9	2.669	3.557	8.4	21.1	10 18	3 4.27	+21 12.1	2.906	3.832	6.3	21.4
10 28	2 57.14	-13 3.3	2.677	3.580	7.6	21.1	10 28	2 57.19	+20 41.8	2.861	3.834	3.5	21.2
11 7	2 49.45	-13 44.8	2.711	3.604	7.9	21.1	11 7	2 49.51	+20 5.2	2.845	3.835	1.0	21.0
11 17	2 41.98	-14 5.9	2.773	3.627	9.0	21.2	11 17	2 41.88	+19 25.0	2.861	3.835	2.9	21.2
11 27	2 35.37	-14 5.8	2.859	3.649	10.5	21.4	11 27	2 34.97	+18 44.5	2.907	3.836	5.7	21.4
12 7	2 30.11	-13 46.0	2.968	3.670	12.0	21.5	12 7	2 29.32	+18 7.3	2.982	3.836	8.3	21.6
12 17	2 26.50	-13 9.3	3.095	3.691	13.3	21.7	12 17	2 25.29	+17 36.1	3.081	3.835	10.6	21.7
106430	2000 <i>VN</i> ₄₅		11 7.1 4°96	0°2/ 6.9 18			515188	2011 <i>UH</i> ₁₀₃		11 7.1 35°85	1°6/ 6.2 18		
10 8	3 11.85	+16 45.8	1.819	2.698	12.3	19.6	10 8	3 12.84	+13 40.1	1.481	2.371	13.9	20.7
10 18	3 5.96	+16 30.4	1.757	2.698	8.6	19.4	10 18	3 6.79	+13 15.9	1.435	2.382	9.6	20.5
10 28	2 58.20	+16 7.8	1.719	2.698	4.4	19.1	10 28	2 58.66	+12 46.9	1.413	2.394	4.9	20.3
11 7	2 49.45	+15 40.8	1.708	2.699	0.2	18.8	11 7	2 49.52	+12 17.1	1.417	2.407	1.6	20.1
11 17	2 40.76	+15 13.0	1.725	2.700	4.5	19.1	11 17	2 40.61	+11 51.6	1.448	2.420	5.6	20.4
11 27	2 33.20	+14 49.2	1.771	2.701	8.6	19.4	11 27	2 33.14	+11 34.9	1.506	2.434	10.0	20.7
12 7	2 27.57	+14 33.3	1.841	2.702	12.3	19.6	12 7	2 27.96	+11 30.5	1.587	2.448	13.9	20.9
12 17	2 24.39	+14 27.9	1.933	2.704	15.4	19.8	12 17	2 25.51	+11 39.5	1.688	2.463	17.1	21.2
439934	2001 <i>RY</i> ₁₄₅		11 7.1 9°73	1°0/ 6.4 17			157336	2004 <i>TN</i> ₃₀		11 7.1 317°18	0°3/ 6.9 18		
10 8	3 7.88	+17 48.2	1.274	2.171	15.1	19.9	10 8	3 11.47	+16 29.7	1.998	2.873	11.5	20.2
10 18	3 3.63	+16 41.8	1.224	2.174	10.5	19.7	10 18	3 5.64	+16 14.2	1.928	2.868	8.1	20.0
10 28	2 57.10	+15 22.8	1.196	2.179	5.3	19.4	10 28	2 58.06	+15 52.1	1.883	2.862	4.1	19.7
11 7	2 49.44	+13 58.4	1.194	2.185	1.0	19.1	11 7	2 49.52	+15 25.9	1.866	2.857	0.3	19.4
11 17	2 41.98	+12 37.5	1.217	2.192	5.9	19.5	11 17	2 40.99	+14 59.2	1.878	2.852	4.2	19.7
11 27	2 36.02	+11 29.2	1.265	2.200	10.9	19.8	11 27	2 33.44	+14 36.1	1.918	2.847	8.2	20.0
12 7	2 32.45	+10 39.7	1.336	2.210	15.2	20.1	12 7	2 27.66	+14 20.3	1.984	2.842	11.7	20.2
12 17	2 31.72	+10 11.6	1.425	2.220	18.8	20.4	12 17	2 24.15	+14 14.4	2.072	2.838	14.6	20.4
346431	2008 <i>SJ</i> ₂₄₂		11 7.1 29°42	0°4/ 7.3 18			158781	2003 <i>SO</i> ₉₀		11 7.1 80°53	1°1/ 6.3		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
25697	Kadiyala		11 7.1 331°26	0°5/ 6.8 18			179755	2002 RL ₂₁₁		11 7.1 74°28	2°0/ 8.1 18		
10 8	3 11.87	+17 18.3	1.648	2.530	13.2	18.7	10 8	3 19.70	+21 29.8	1.361	2.233	16.1	19.5
10 18	3 6.16	+16 42.0	1.583	2.525	9.2	18.4	10 18	3 11.72	+21 37.8	1.321	2.255	11.5	19.3
10 28	2 58.40	+15 56.2	1.541	2.522	4.7	18.2	10 28	3 1.24	+21 31.5	1.303	2.278	6.4	19.1
11 7	2 49.54	+15 4.8	1.527	2.518	0.5	17.8	11 7	2 49.61	+21 12.7	1.312	2.300	2.1	18.8
11 17	2 40.72	+14 13.3	1.541	2.515	5.0	18.2	11 17	2 38.40	+20 45.5	1.347	2.323	5.2	19.1
11 27	2 33.12	+13 28.0	1.581	2.511	9.5	18.4	11 27	2 29.06	+20 16.5	1.409	2.345	9.9	19.4
12 7	2 27.64	+12 54.1	1.646	2.509	13.4	18.7	12 7	2 22.55	+19 52.1	1.495	2.367	14.0	19.7
12 17	2 24.79	+12 34.7	1.731	2.506	16.8	18.9	12 17	2 19.27	+19 36.9	1.602	2.389	17.4	20.0
267983	2004 GC ₂₀		11 7.1 229°83	0°1/ 7.2 18			382694	2002 VM ₆₆		11 7.1 8°23	0°9/ 7.6 18		
10 8	3 15.23	+18 41.0	1.788	2.658	12.9	21.2	10 8	3 9.97	+21 6.2	1.020	1.920	17.9	19.7
10 18	3 8.48	+18 9.4	1.711	2.648	9.1	21.0	10 18	3 5.61	+20 25.5	0.971	1.921	12.7	19.4
10 28	2 59.61	+17 27.1	1.660	2.638	4.8	20.7	10 28	2 58.35	+19 25.8	0.942	1.923	6.8	19.1
11 7	2 49.55	+16 37.1	1.636	2.627	0.1	20.3	11 7	2 49.59	+18 12.8	0.936	1.927	1.0	18.7
11 17	2 39.45	+15 44.2	1.641	2.616	4.7	20.7	11 17	2 41.01	+16 55.9	0.953	1.932	6.0	19.1
11 27	2 30.51	+14 54.7	1.675	2.604	9.2	20.9	11 27	2 34.31	+15 46.2	0.994	1.938	11.8	19.4
12 7	2 23.67	+14 14.4	1.734	2.591	13.2	21.1	12 7	2 30.59	+14 52.8	1.055	1.946	16.9	19.8
12 17	2 19.49	+13 47.1	1.814	2.578	16.5	21.3	12 17	2 30.35	+14 20.2	1.134	1.955	21.0	20.1
279726	1993 TG ₃₀		11 7.1 5°46	1°4/ 7.6 18			126367	2002 AZ ₁₈₆		11 7.1 133°39	2°6/ 5.5 18		
10 8	3 13.38	+17 29.9	1.310	2.199	15.4	18.7	10 8	3 15.28	+10 10.9	1.906	2.784	11.9	19.2
10 18	3 7.65	+18 17.4	1.256	2.200	10.9	18.5	10 18	3 8.16	+9 41.8	1.854	2.795	8.2	19.0
10 28	2 59.32	+18 57.8	1.224	2.203	5.9	18.2	10 28	2 59.30	+9 11.4	1.828	2.806	4.5	18.8
11 7	2 49.54	+19 30.5	1.217	2.207	1.5	17.9	11 7	2 49.61	+8 43.7	1.830	2.816	2.6	18.7
11 17	2 39.78	+19 56.6	1.236	2.213	5.3	18.2	11 17	2 40.09	+8 22.4	1.862	2.825	5.6	19.0
11 27	2 31.55	+20 19.1	1.281	2.221	10.2	18.5	11 27	2 31.76	+8 11.1	1.921	2.834	9.2	19.2
12 7	2 25.95	+20 41.9	1.348	2.230	14.5	18.8	12 7	2 25.36	+8 11.9	2.006	2.843	12.5	19.4
12 17	2 23.58	+21 8.5	1.435	2.241	18.1	19.1	12 17	2 21.31	+8 25.4	2.112	2.851	15.2	19.6
113069	2002 RM ₆₁		11 7.1 66°28	1°1/ 7.7 18			280291	2003 HM ₅₈		11 7.1 286°86	10°1/ 31.0 18		
10 8	3 17.44	+19 8.8	1.640	2.510	13.9	19.2	10 8	3 12.50	-6 48.1	1.574	2.450	14.1	19.9
10 18	3 9.81	+19 17.9	1.599	2.534	9.8	19.0	10 18	3 6.62	-8 17.9	1.522	2.439	11.6	19.8
10 28	3 0.15	+19 17.3	1.582	2.559	5.2	18.8	10 28	2 58.66	-9 33.2	1.494	2.427	10.2	19.7
11 7	2 49.57	+19 8.6	1.593	2.583	1.1	18.5	11 7	2 49.60	-10 24.9	1.489	2.416	10.6	19.7
11 17	2 39.31	+18 54.9	1.632	2.608	4.5	18.8	11 17	2 40.58	-10 46.5	1.510	2.405	12.6	19.7
11 27	2 30.58	+18 40.8	1.700	2.632	8.7	19.1	11 27	2 32.77	-10 35.7	1.552	2.394	15.4	19.9
12 7	2 24.18	+18 30.9	1.792	2.656	12.4	19.4	12 7	2 27.09	-9 54.6	1.615	2.383	18.1	20.1
12 17	2 20.55	+18 28.3	1.906	2.680	15.4	19.7	12 17	2 24.05	-8 47.7	1.694	2.372	20.5	20.2
371825	2007 UO ₁₃₂		11 7.1 246°20	1°4/ 6.2 17			159693	2002 PK ₄		11 7.1 147°33	7°7/ 30.1 18		
10 8	3 15.00	+16 1.3	1.507	2.390	14.2	21.6	10 8	3 9.00	-9 57.0	2.604	3.455	10.0	20.6
10 18	3 8.56	+15 3.4	1.435	2.379	9.9	21.3	10 18	3 3.50	-11 14.8	2.567	3.460	8.5	20.5
10 28	2 59.74	+13 54.4	1.386	2.367	5.1	21.0	10 28	2 56.82	-12 20.1	2.557	3.466	7.7	20.5
11 7	2 49.57	+12 39.9	1.365	2.354	1.5	20.7	11 7	2 49.59	-13 8.0	2.573	3.471	8.1	20.5
11 17	2 39.37	+11 27.4	1.371	2.342	6.0	21.0	11 17	2 42.47	-13 35.3	2.616	3.476	9.3	20.6
11 27	2 30.49	+10 25.1	1.404	2.328	10.9	21.3	11 27	2 36.14	-13 40.5	2.684	3.480	10.3	20.7
12 7	2 23.99	+9 39.2	1.460	2.315	15.3	21.5	12 7	2 31.13	-13 24.7	2.773	3.485	12.6	20.9
12 17	2 20.46	+9 13.1	1.536	2.301	19.0	21.7	12 17	2 27.79	-12 50.4	2.881	3.489	14.0	21.0
481883	2008 YD ₁₆₂		11 7.1 303°17	6°6/ 3.3 18			175044	2004 FF ₈₁		11 7.1 181°28	2°7/ 4.9 18		
10 8	3 13.25	+1 16.0	1.573	2.460	13.4	21.1	10 8	3 11.92	+9 24.8	2.188	3.067	10.5	21.0
10 18	3 7.23	+0 29.4	1.506	2.444	10.1	20.9	10 18	3 5.75	+8 44.3	2.126	3.068	7.3	20.8
10 28	2 59.02	-0 10.3	1.463	2.428	7.3	20.7	10 28	2 58.06	+8 2.8	2.091	3.068	4.1	20.6
11 7	2 49.58	-0 36.4	1.446	2.412	6.8	20.6	11 7	2 49.61	+7 24.2	2.085	3.068	2.9	20.5
11 17	2 40.06	-0 43.6	1.455	2.396	9.3	20.7	11 17	2 41.23	+6 52.5	2.108	3.067	5.4	20.7
11 27	2 31.70	-0 28.5	1.490	2.381	12.9	20.9	11 27	2 33.78	+6 31.4	2.160	3.067	8.6	20.9
12 7	2 25.49	+0 8.7	1.546	2.366	16.4	21.1	12 7	2 27.94	+6 23.0	2.237	3.066	11.7	21.1
12 17	2 22.01	+1 5.7	1.620	2.351	19.4	21.3	12 17	2 24.13	+6 27.9	2.335	3.064	14.2	21.3
234703	2002 GJ ₁₅₉		11 7.1 186°74	1°3/ 6.1 18			50243	2000 BT ₁₃		11 7.1 143°01	0°6/ 7.5 18		
10 8	3 12.51	+15 49.2	1.911	2.788	11.9	20.7	10 8	3 13.64	+19 43.2	2.181	3.043	11.3	19.5
10 18	3 6.33	+14 47.9	1.847	2.788	8.2	20.4	10 18	3 6.96	+19 19.4	2.120	3.052	7.9	19.3
10 28	2 58.39	+13 38.6	1.808	2.788	4.2	20.2	10 28	2 58.68	+18 46.6	2.085	3.061	4.2	19.1
11 7	2 49.57	+12 26.1	1.797	2.787	1.4	20.0	11 7	2 49.62	+18 7.3	2.078	3.069	0.6	18.8
11 17	2 40.85	+11 16.4	1.816	2.786	5.0	20.2	11 17	2 40.68	+17 25.2	2.102	3.077	3.8	19.1
11 27	2 33.24	+10 15.8	1.864	2.784	9.0	20.5	11 27	2 32.79	+16 44.8	2.155	3.084	7.4	19.4
12 7	2 27.50	+9 28.9	1.937	2.782	12.5	20.7	12 7	2 26.65	+16 10.6	2.235	3.091	10.7	19.6
12 17	2 24.08	+8 58.3	2.031	2.780	15.4	20.9	12 17	2 22.67	+15 45.7	2.338	3.097	13.4	19.8
358219	2006 SH ₂₂₈		11 7.1 345°66	0°1/ 7.2 18			436552	2011 GR ₈₅		11 7.1 167°33	7°8/ 1.5 18		
10 8	3 11.56	+19 4.8	1.798	2.673	12.6	21.1	10 8	3 14.72	-5 24.4	1.999	2.864	12.0	21.3
10 18	3 5.81	+18 25.1	1.732	2.672	8.9	20.8	10 18	3 7.70	-6 30.2	1.955	2.868	9.6	21.2
10 28	2 58.18	+17 34.7	1.692	2.671	4.6	20.6	10 28	2 59.05	-7 24.0	1.936	2.873	8.0	21.1
11 7	2 49.57	+16 37.4	1.679	2.670	0.1	20.2	11 7	2 49.63	-7 59.9	1.944	2.876	8.1	21.1
11 17	2 41.04	+15 38.4	1.694	2.669	4.5	20.6	11 17	2 40.38	-8 13.7	1.979	2.879	9.8	21.2
11 27	2 33.66	+14 44.0	1.738	2.668	8.7	20.8	11 27	2 32.23	-8 3.9	2.040	2.881	12.2	21.4
12 7	2 28.26	+13 59.6	1.806	2.668	12.5	21.1	12 7	2 25.90	-7 31.9	2.123	2.883	14.6	21.6
12 17	2 25.30	+13 28.7	1.896	2.668	15.6	21.3	12 17	2 21.80	-6 40.9	2.225	2.884	16.6	21.7
248276	2005 JP ₄₁		11 7.1 88°75	0°6/ 6.7 18			72013	2000 XM ₁₁		11 7.1 266°83	4°8/ 4.8 18		
10 8	3 14.96	+15 59.0	2.031	2.901	11.6	21.7							

EPHEMERIDES

11 7.1

11 7.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
373425	1999 <i>MU</i> ₁		11 7.1 71°60	6°4/12.0	16		178831	2001 <i>HL</i> ₃		11 7.1 98°79	0°8/ 7.5	18	
10 8	3 23.30	+35 53.9	1.357	2.178	19.1	20.5	10 8	3 21.21	+18 20.6	1.632	2.498	14.2	19.8
10 18	3 14.04	+35 18.4	1.326	2.219	14.8	20.4	10 18	3 12.48	+18 32.5	1.588	2.522	10.0	19.6
10 28	3 2.25	+34 11.5	1.315	2.259	10.4	20.2	10 28	3 1.59	+18 35.2	1.569	2.546	5.3	19.3
11 7	2 49.66	+32 35.9	1.330	2.298	7.0	20.1	11 7	2 49.70	+18 30.0	1.578	2.569	0.9	19.1
11 17	2 38.01	+30 40.4	1.372	2.337	6.9	20.2	11 17	2 38.16	+18 19.9	1.617	2.591	4.6	19.4
11 27	2 28.79	+28 38.1	1.441	2.374	9.9	20.5	11 27	2 28.23	+18 9.4	1.684	2.613	9.0	19.7
12 7	2 22.76	+26 42.0	1.536	2.411	13.5	20.8	12 7	2 20.80	+18 2.9	1.776	2.635	12.8	20.0
12 17	2 20.13	+25 1.1	1.652	2.448	16.6	21.1	12 17	2 16.28	+18 3.9	1.889	2.655	15.9	20.3
139873	2001 <i>RD</i> ₇₈		11 7.1 272°15	3°1/ 9.1	17		455404	2003 <i>BO</i> ₇₅		11 7.1 118°36	21°1/29.6	17	
10 8	3 14.44	+25 41.1	2.054	2.901	12.5	19.2	10 8	3 23.34	-28 7.9	1.146	1.950	22.9	20.5
10 18	3 7.94	+25 52.8	1.968	2.886	9.3	19.0	10 18	3 14.46	-29 37.4	1.130	1.956	21.6	20.5
10 28	2 59.40	+25 51.2	1.906	2.870	5.9	18.8	10 28	3 2.68	-30 18.9	1.131	1.961	21.1	20.5
11 7	2 49.64	+25 36.4	1.872	2.855	3.2	18.6	11 7	2 49.71	-30 3.0	1.147	1.967	21.4	20.5
11 17	2 39.72	+25 10.0	1.867	2.839	4.5	18.6	11 17	2 37.44	-28 48.3	1.180	1.972	22.4	20.6
11 27	2 30.77	+24 36.6	1.891	2.823	8.0	18.8	11 27	2 27.54	-26 41.3	1.230	1.977	23.8	20.7
12 7	2 23.74	+24 1.6	1.940	2.807	11.5	19.0	12 7	2 20.99	-23 54.4	1.293	1.982	25.4	20.9
12 17	2 19.22	+23 30.6	2.013	2.791	14.6	19.2	12 17	2 18.10	-20 40.9	1.369	1.986	26.9	21.1
371557	2006 <i>VO</i> ₃₀		11 7.1 335°87	1°0/ 7.6	18		165621	2001 <i>FU</i> ₁₀₉		11 7.1 246°85	2°0/ 8.5	18	
10 8	3 14.91	+19 10.1	1.253	2.140	16.2	20.4	10 8	3 13.85	+23 30.4	1.881	2.740	12.9	20.2
10 18	3 8.91	+19 8.0	1.190	2.133	11.5	20.1	10 18	3 7.52	+23 15.1	1.805	2.732	9.4	20.0
10 28	3 0.10	+18 53.5	1.148	2.127	6.2	19.8	10 28	2 59.17	+22 46.1	1.753	2.724	5.5	19.7
11 7	2 49.66	+18 28.9	1.131	2.122	1.0	19.5	11 7	2 49.68	+22 5.0	1.729	2.717	2.1	19.5
11 17	2 39.17	+17 58.7	1.140	2.117	5.6	19.8	11 17	2 40.17	+21 15.6	1.733	2.709	4.3	19.6
11 27	2 30.28	+17 29.7	1.173	2.112	11.0	20.1	11 27	2 31.78	+20 23.6	1.766	2.700	8.3	19.9
12 7	2 24.21	+17 8.8	1.229	2.109	15.9	20.3	12 7	2 25.42	+19 35.5	1.825	2.692	12.1	20.1
12 17	2 21.58	+17 0.4	1.304	2.106	19.8	20.6	12 17	2 21.63	+18 56.4	1.905	2.683	15.3	20.3
490861	2011 <i>AP</i> ₅₃		11 7.1 229°00	9°0/28.4	17		517296	2014 <i>HB</i> ₁₅		11 7.1 287°47	2°8/ 4.9	18	
10 8	3 10.71	-18 14.5	2.854	3.665	10.4	21.8	10 8	3 11.14	+14 5.2	1.625	2.513	13.0	21.7
10 18	3 4.69	-19 12.1	2.808	3.655	9.4	21.7	10 18	3 5.75	+12 27.9	1.550	2.497	9.0	21.4
10 28	2 57.47	-19 53.9	2.786	3.644	9.0	21.6	10 28	2 58.29	+10 39.9	1.501	2.481	4.8	21.2
11 7	2 49.64	-20 15.3	2.789	3.634	9.3	21.6	11 7	2 49.67	+ 8 48.9	1.479	2.465	3.0	21.0
11 17	2 41.87	-20 13.8	2.817	3.622	10.3	21.7	11 17	2 41.03	+ 7 4.5	1.486	2.449	6.7	21.2
11 27	2 34.83	-19 49.0	2.868	3.611	11.6	21.8	11 27	2 33.54	+ 5 35.7	1.519	2.433	11.1	21.4
12 7	2 29.08	-19 2.7	2.940	3.599	12.9	21.9	12 7	2 28.12	+ 4 28.7	1.577	2.417	15.1	21.6
12 17	2 24.99	-17 58.0	3.030	3.587	14.1	22.0	12 17	2 25.32	+ 3 46.2	1.654	2.401	18.5	21.8
83707	2001 <i>TQ</i> ₇₇		11 7.1 60°98	3°0/ 5.2	18		478962	2012 <i>XM</i> ₇₉		11 7.1 356°91	7°7/ 4.1	18	
10 8	3 12.85	+ 9 9.2	1.785	2.670	12.2	18.3	10 8	3 16.85	- 2 13.0	1.406	2.289	15.0	20.2
10 18	3 6.56	+ 8 38.6	1.737	2.681	8.5	18.1	10 18	3 9.78	- 2 27.2	1.355	2.287	11.5	20.0
10 28	2 58.52	+ 8 8.0	1.714	2.692	4.7	17.9	10 28	3 0.35	- 2 27.4	1.326	2.285	8.5	19.8
11 7	2 49.65	+ 7 41.5	1.719	2.703	3.1	17.9	11 7	2 49.70	- 2 8.2	1.322	2.284	7.9	19.8
11 17	2 40.96	+ 7 23.2	1.752	2.715	6.0	18.1	11 17	2 39.17	- 1 26.9	1.344	2.284	10.1	19.9
11 27	2 33.47	+ 7 16.4	1.813	2.726	9.6	18.3	11 27	2 30.12	- 0 23.5	1.391	2.284	13.6	20.1
12 7	2 27.92	+ 7 22.9	1.897	2.738	12.9	18.5	12 7	2 23.56	+ 0 58.9	1.461	2.285	17.0	20.3
12 17	2 24.74	+ 7 42.8	2.003	2.750	15.7	18.8	12 17	2 19.99	+ 2 35.9	1.548	2.286	19.9	20.5
223582	2004 <i>FQ</i> ₁₀₅		11 7.1 163°22	3°2/ 5.0	18		322511	2011 <i>WN</i> ₇₈		11 7.1 307°89	5°0/ 4.3	18	
10 8	3 15.50	+ 9 24.4	1.770	2.651	12.5	21.7	10 8	3 14.25	+ 2 43.1	1.841	2.721	12.1	20.2
10 18	3 8.47	+ 8 40.4	1.714	2.656	8.7	21.5	10 18	3 7.62	+ 2 22.8	1.780	2.717	8.9	20.0
10 28	2 59.54	+ 7 55.2	1.683	2.660	4.9	21.3	10 28	2 59.15	+ 2 8.5	1.745	2.712	5.9	19.8
11 7	2 49.67	+ 7 13.7	1.680	2.664	3.3	21.2	11 7	2 49.69	+ 2 4.4	1.736	2.708	5.1	19.8
11 17	2 39.93	+ 6 41.0	1.706	2.667	6.3	21.4	11 17	2 40.27	+ 2 13.7	1.756	2.704	7.4	19.9
11 27	2 31.42	+ 6 21.2	1.760	2.669	10.1	21.6	11 27	2 31.95	+ 2 38.4	1.803	2.700	10.7	20.1
12 7	2 24.97	+ 6 16.7	1.838	2.671	13.6	21.8	12 7	2 25.54	+ 3 18.3	1.874	2.696	13.9	20.3
12 17	2 21.02	+ 6 27.9	1.936	2.673	16.5	22.1	12 17	2 21.53	+ 4 12.1	1.965	2.692	16.6	20.5
317825	2003 <i>SX</i> ₂₈₈		11 7.1 71°07	4°5/ 3.1	18		459839	2013 <i>TN</i> ₂		11 7.1 0°48	4°6/ 3.3	17	
10 8	3 9.44	+ 4 55.4	2.123	3.007	10.6	20.4	10 8	3 8.75	+ 2 34.9	2.305	3.186	10.0	20.6
10 18	3 3.95	+ 3 39.6	2.083	3.023	7.6	20.2	10 18	3 3.51	+ 1 51.2	2.249	3.185	7.3	20.4
10 28	2 57.10	+ 2 27.0	2.070	3.038	5.1	20.1	10 28	2 56.93	+ 1 12.0	2.220	3.185	5.1	20.3
11 7	2 49.64	+ 1 23.1	2.085	3.054	4.8	20.1	11 7	2 49.67	+ 0 41.4	2.219	3.185	4.8	20.3
11 17	2 42.39	+ 0 32.9	2.129	3.069	6.9	20.3	11 17	2 42.48	+ 0 23.1	2.246	3.185	6.7	20.4
11 27	2 36.11	- 0 0.3	2.200	3.085	9.6	20.5	11 27	2 36.12	+ 0 19.5	2.301	3.185	9.3	20.5
12 7	2 31.40	- 0 15.2	2.295	3.100	12.2	20.7	12 7	2 31.19	+ 0 31.1	2.379	3.186	11.8	20.7
12 17	2 28.61	- 0 12.6	2.411	3.116	14.4	20.9	12 17	2 28.09	+ 0 57.2	2.479	3.187	14.0	20.9
383020	2005 <i>NW</i> ₁₄		11 7.1 22°34	2°1/ 6.2	18		21368	Shiodayama		11 7.1 281°87	5°4/ 2.7	18	
10 8	3 12.95	+13 21.1	1.015	1.922	17.3	19.8	10 8	3 9.97	+ 1 28.1	2.129	3.010	10.7	17.6
10 18	3 7.52	+12 57.4	0.976	1.931	12.0	19.5	10 18	3 4.47	+ 0 29.8	2.070	3.004	8.0	17.4
10 28	2 59.28	+12 27.9	0.958	1.941	6.1	19.2	10 28	2 57.46	- 0 23.4	2.038	2.999	5.9	17.3
11 7	2 49.66	+11 58.6	0.963	1.953	2.2	19.0	11 7	2 49.68	- 1 6.2	2.032	2.993	5.7	17.3
11 17	2 40.37	+11 35.6	0.992	1.966	7.0	19.4	11 17	2 41.95	- 1 34.1	2.055	2.987	7.6	17.4
11 27	2 33.02	+11 25.2	1.044	1.980	12.4	19.7	11 27	2 35.11	- 1 44.3	2.105	2.982	10.4	17.5
12 7	2 28.67	+11 30.7	1.116	1.995	17.1	20.0	12 7	2 29.83	- 1 36.1	2.178	2.976	13.0	17.7
12 17	2 27.74	+11 52.7	1.206	2.012	20.9	20.4	12 17	2 26.55	- 1 10.5	2.270	2.970	15.3	17.9
232185	2002 <i>EW</i> ₁₂₁		11 7.1 165°15	3°2/ 4.7	18		428680	2008 <i>HR</i> ₇₀		11 7.1 120°00			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
303577	2005 <i>GT</i> ₁₂₃	11 7.1 162°91	3°7/ 4.6 18				481376	2006 <i>KO</i> ₄₈	11 7.1 86°03	3°9/ 5.0 18			
10 8	3 14.35	+ 5 29.9	2.175	3.049	10.8	20.7	10 8	3 15.55	+ 6 25.5	1.713	2.596	12.7	20.9
10 18	3 7.42	+ 5 4.6	2.117	3.054	7.7	20.5	10 18	3 8.54	+ 6 6.4	1.663	2.604	9.0	20.7
10 28	2 58.95	+ 4 42.0	2.087	3.058	4.7	20.3	10 28	2 59.61	+ 5 50.0	1.638	2.613	5.4	20.5
11 7	2 49.71	+ 4 25.6	2.085	3.061	3.8	20.3	11 7	2 49.75	+ 5 40.5	1.641	2.621	4.0	20.4
11 17	2 40.57	+ 4 18.7	2.113	3.065	6.0	20.4	11 17	2 40.06	+ 5 41.2	1.671	2.630	6.7	20.6
11 27	2 32.41	+ 4 23.5	2.169	3.067	9.1	20.6	11 27	2 31.65	+ 5 54.7	1.729	2.638	10.3	20.9
12 7	2 25.93	+ 4 40.9	2.251	3.070	12.0	20.8	12 7	2 25.33	+ 6 21.5	1.811	2.646	13.7	21.1
12 17	2 21.55	+ 5 10.7	2.354	3.071	14.4	21.0	12 17	2 21.55	+ 7 1.1	1.914	2.654	16.5	21.3
181388	2006 <i>ST</i> ₆₀	11 7.1 348°90	7°1/ 2.9 18				30421	Jameschafer	11 7.1 126°75	4°5/ 3.6 18			
10 8	3 10.60	+ 0 59.1	1.451	2.345	13.9	19.6	10 8	3 11.64	+ 4 35.6	2.109	2.990	10.8	19.0
10 18	3 5.42	+ 0 1.6	1.398	2.339	10.4	19.3	10 18	3 5.54	+ 3 37.1	2.061	2.999	7.8	18.8
10 28	2 58.12	- 0 47.7	1.369	2.333	7.7	19.2	10 28	2 57.98	+ 2 41.8	2.039	3.007	5.2	18.7
11 7	2 49.71	- 1 21.5	1.364	2.328	7.4	19.1	11 7	2 49.74	+ 1 54.7	2.046	3.016	4.7	18.7
11 17	2 41.36	- 1 34.1	1.384	2.323	9.9	19.3	11 17	2 41.64	+ 1 20.2	2.081	3.024	6.8	18.8
11 27	2 34.29	- 1 22.5	1.428	2.320	13.3	19.5	11 27	2 34.55	+ 1 1.5	2.144	3.032	9.7	19.0
12 7	2 29.40	- 0 47.1	1.494	2.318	16.7	19.7	12 7	2 29.09	+ 0 59.5	2.231	3.040	12.4	19.2
12 17	2 27.19	+ 0 9.0	1.577	2.316	19.6	19.9	12 17	2 25.65	+ 1 13.6	2.339	3.047	14.7	19.4
216052	2006 <i>OL</i> ₂₀	11 7.1 47°66	6°1/ 4.7 17				81810	2000 <i>KC</i> ₁₆	11 7.1 278°12	2°4/ 5.1 18			
10 8	3 17.15	+ 4 31.7	1.098	1.998	16.9	19.4	10 8	3 10.89	+13 17.0	1.927	2.809	11.6	18.7
10 18	3 10.13	+ 3 58.5	1.066	2.014	12.1	19.2	10 18	3 5.39	+11 59.4	1.846	2.790	8.1	18.4
10 28	3 0.51	+ 3 32.5	1.056	2.031	7.6	19.0	10 28	2 58.08	+10 34.0	1.791	2.770	4.3	18.2
11 7	2 49.74	+ 3 20.5	1.070	2.048	6.2	19.0	11 7	2 49.75	+ 9 6.7	1.764	2.750	2.6	18.0
11 17	2 39.44	+ 3 27.1	1.108	2.066	9.3	19.2	11 17	2 41.35	+ 7 44.3	1.767	2.730	5.8	18.2
11 27	2 31.12	+ 3 54.0	1.170	2.084	13.7	19.5	11 27	2 33.90	+ 6 33.9	1.798	2.710	9.8	18.4
12 7	2 25.72	+ 4 40.1	1.252	2.103	17.6	19.8	12 7	2 28.22	+ 5 40.3	1.854	2.690	13.4	18.6
12 17	2 23.63	+ 5 42.3	1.353	2.122	20.9	20.1	12 17	2 24.84	+ 5 6.2	1.930	2.669	16.4	18.7
444529	2006 <i>SL</i> ₁₄₉	11 7.1 57°32	1°0/ 6.3 15				504953	2011 <i>FO</i> ₁₅	11 7.1 79°72	2°6/ 8.5 18			
10 8	3 11.28	+16 26.5	1.787	2.668	12.4	21.7	10 8	3 18.22	+22 51.9	1.507	2.372	15.2	20.7
10 18	3 5.58	+15 30.3	1.730	2.673	8.6	21.5	10 18	3 10.74	+23 4.8	1.456	2.386	11.0	20.5
10 28	2 58.08	+14 25.8	1.698	2.678	4.3	21.3	10 28	3 0.87	+23 3.4	1.428	2.400	6.4	20.3
11 7	2 49.71	+13 17.9	1.694	2.684	1.1	21.1	11 7	2 49.78	+22 48.5	1.427	2.414	2.7	20.1
11 17	2 41.50	+12 12.7	1.718	2.690	4.9	21.3	11 17	2 38.91	+22 23.4	1.453	2.428	5.0	20.3
11 27	2 34.45	+11 16.4	1.770	2.695	9.0	21.6	11 27	2 29.65	+21 54.2	1.506	2.442	9.4	20.5
12 7	2 29.34	+10 33.6	1.847	2.701	12.6	21.8	12 7	2 22.99	+21 27.2	1.584	2.456	13.4	20.8
12 17	2 26.59	+10 6.8	1.945	2.707	15.6	22.1	12 17	2 19.41	+21 7.8	1.683	2.470	16.7	21.1
481045	2005 <i>EW</i> ₂₈₃	11 7.1 262°60	2°1/ 8.6 18				480990	2004 <i>BV</i> ₁₁₄	11 7.1 311°36	7°6/ 1.8 17			
10 8	3 14.45	+23 34.1	1.928	2.784	12.7	21.8	10 8	3 12.44	+ 0 49.3	1.551	2.440	13.5	21.5
10 18	3 8.02	+23 25.8	1.842	2.768	9.3	21.6	10 18	3 7.04	- 0 30.0	1.459	2.396	10.4	21.2
10 28	2 59.49	+23 4.2	1.781	2.752	5.5	21.3	10 28	2 59.21	- 1 46.5	1.392	2.352	8.0	20.9
11 7	2 49.73	+22 30.2	1.748	2.735	2.3	21.1	11 7	2 49.77	- 2 50.9	1.349	2.309	8.1	20.8
11 17	2 39.83	+21 47.1	1.743	2.718	4.4	21.2	11 17	2 39.87	- 3 34.7	1.333	2.265	10.9	20.9
11 27	2 30.96	+21 0.1	1.767	2.701	8.4	21.4	11 27	2 30.87	- 3 51.1	1.340	2.221	14.8	21.0
12 7	2 24.08	+20 15.6	1.817	2.683	12.2	21.6	12 7	2 23.95	- 3 38.0	1.368	2.177	18.8	21.1
12 17	2 19.79	+19 38.9	1.888	2.665	15.5	21.8	12 17	2 19.91	- 2 56.6	1.412	2.133	22.2	21.3
402186	2004 <i>TN</i> ₁₀₁	11 7.1 79°71	0°0/ 7.1 18				407596	2011 <i>AL</i> ₇₈	11 7.1 302°97	6°4/ 1.9 18			
10 8	3 10.63	+19 2.9	2.118	2.988	11.2	20.7	10 8	3 9.88	- 1 26.3	2.076	2.954	11.0	20.8
10 18	3 4.89	+18 13.1	2.063	3.000	7.8	20.5	10 18	3 4.47	- 2 26.3	2.016	2.944	8.5	20.7
10 28	2 57.66	+17 14.3	2.033	3.012	4.0	20.3	10 28	2 57.52	- 3 18.8	1.982	2.934	6.7	20.5
11 7	2 49.72	+16 10.4	2.033	3.024	0.1	20.0	11 7	2 49.75	- 3 58.0	1.974	2.924	6.7	20.5
11 17	2 41.95	+15 6.3	2.061	3.035	3.9	20.3	11 17	2 41.99	- 4 19.7	1.994	2.914	8.6	20.6
11 27	2 35.22	+14 7.5	2.119	3.047	7.6	20.6	11 27	2 35.13	- 4 21.0	2.039	2.905	11.2	20.8
12 7	2 30.18	+13 18.4	2.204	3.059	10.8	20.8	12 7	2 29.86	- 4 2.0	2.108	2.895	13.8	20.9
12 17	2 27.20	+12 42.0	2.310	3.071	13.5	21.0	12 17	2 26.63	- 3 24.4	2.195	2.886	16.0	21.1
356856	2011 <i>WL</i> ₃₃	11 7.1 108°58	2°5/ 5.3 18				283606	2002 <i>AX</i> ₉₆	11 7.1 253°97	5°5/ 10.9 18 R			
10 8	3 12.65	+10 41.5	1.920	2.802	11.6	20.9	10 8	3 16.53	+32 33.5	1.885	2.708	14.4	21.8
10 18	3 6.40	+10 2.7	1.866	2.809	8.1	20.7	10 18	3 9.70	+32 40.8	1.797	2.693	11.4	21.5
10 28	2 58.48	+ 9 21.9	1.838	2.816	4.4	20.5	10 28	3 0.46	+32 27.4	1.732	2.677	8.2	21.3
11 7	2 49.73	+ 8 43.5	1.838	2.823	2.6	20.4	11 7	2 49.79	+31 51.9	1.694	2.662	5.7	21.1
11 17	2 41.13	+ 8 11.8	1.866	2.830	5.5	20.6	11 17	2 38.96	+30 56.1	1.683	2.645	6.1	21.1
11 27	2 33.62	+ 7 50.8	1.923	2.837	9.1	20.8	11 27	2 29.33	+29 46.2	1.700	2.629	9.0	21.3
12 7	2 27.95	+ 7 42.9	2.004	2.843	12.4	21.0	12 7	2 22.00	+28 30.8	1.742	2.612	12.5	21.4
12 17	2 24.52	+ 7 48.8	2.107	2.850	15.1	21.2	12 17	2 17.60	+27 18.4	1.807	2.595	15.7	21.6
191625	2004 <i>NO</i> ₃	11 7.1 96°16	0°2/ 6.9 18				431681	2008 <i>DW</i> ₁₇	11 7.1 288°34	3°3/ 5.3 18			
10 8	3 16.16	+17 20.7	1.609	2.485	13.8	20.9	10 8	3 14.47	+11 7.0	1.360	2.253	14.7	21.4
10 18	3 9.05	+16 56.0	1.560	2.500	9.6	20.7	10 18	3 8.37	+10 18.5	1.296	2.245	10.3	21.1
10 28	2 59.88	+16 22.5	1.536	2.515	4.9	20.5	10 28	2 59.77	+ 9 25.5	1.256	2.236	5.6	20.8
11 7	2 49.75	+15 43.8	1.539	2.530	0.2	20.1	11 7	2 49.78	+ 8 34.5	1.242	2.228	3.4	20.6
11 17	2 39.87	+15 4.8	1.571	2.545	4.8	20.5	11 17	2 39.78	+ 7 52.4	1.254	2.220	7.2	20.9
11 27	2 31.46	+14 31.0	1.630	2.559	9.3	20.8	11 27	2 31.21	+ 7 25.5	1.291	2.212	12.0	21.1
12 7	2 25.33	+14 7.1	1.713	2.573	13.1	21.1	12 7	2 25.15	+ 7 17.6	1.350	2.204	16.4	21.3
12 17	2 21.94	+13 55.8	1.818	2.587	16.3	21.3	12 17	2 22.16	+ 7 29.4	1.428	2.196	20.0	21.6
471050	2009 <i>UP</i> ₉₂	11 7.1 15°62	2°3/ 6.1 18				290724	2005 <i>UC</i> ₄₄₃	11 7.1 218°06	2			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
386073	2007 <i>HK</i> ₅₀		11 7.1 206°53	2°5/ 5.3 18			486199	2013 <i>AB</i> ₅₅		11 7.1 316°76	10°4/31.6 18		
10 8	3 14.00	+11 29.9	1.884	2.764	11.9	22.1	10 8	3 12.10	- 6 15.6	1.453	2.334	14.7	20.8
10 18	3 7.48	+10 40.8	1.818	2.760	8.3	21.9	10 18	3 6.69	- 7 29.7	1.388	2.310	12.1	20.6
10 28	2 59.12	+ 9 48.0	1.777	2.756	4.5	21.6	10 28	2 58.94	- 8 29.4	1.345	2.285	10.5	20.4
11 7	2 49.78	+ 8 56.1	1.765	2.751	2.6	21.5	11 7	2 49.82	- 9 5.3	1.326	2.262	10.8	20.4
11 17	2 40.49	+ 8 10.5	1.782	2.745	5.7	21.7	11 17	2 40.55	- 9 10.4	1.330	2.238	13.0	20.4
11 27	2 32.29	+ 7 36.1	1.826	2.739	9.6	21.9	11 27	2 32.47	- 8 41.7	1.357	2.216	16.1	20.6
12 7	2 25.98	+ 7 16.1	1.896	2.733	13.1	22.1	12 7	2 26.62	- 7 41.3	1.403	2.194	19.3	20.7
12 17	2 22.06	+ 7 12.0	1.986	2.726	16.0	22.3	12 17	2 23.65	- 6 14.2	1.465	2.173	22.1	20.9
45500	Motegi		11 7.1 282°92	0°6/ 6.7 17			260434	2004 <i>XQ</i> ₁₁₄		11 7.1 29°02	2°9/ 9.3 18		
10 8	3 10.94	+15 38.4	2.239	3.112	10.6	19.1	10 8	3 11.49	+25 55.4	1.794	2.651	13.5	20.3
10 18	3 5.25	+15 17.0	2.159	3.098	7.4	18.9	10 18	3 5.86	+25 42.6	1.736	2.660	10.0	20.1
10 28	2 57.96	+14 49.8	2.105	3.084	3.8	18.6	10 28	2 58.32	+25 14.2	1.703	2.670	6.1	19.9
11 7	2 49.77	+14 19.5	2.080	3.071	0.6	18.3	11 7	2 49.81	+24 31.9	1.695	2.680	3.1	19.7
11 17	2 41.51	+13 49.4	2.084	3.057	4.1	18.6	11 17	2 41.45	+23 40.0	1.715	2.690	4.5	19.8
11 27	2 34.09	+13 23.4	2.118	3.043	7.7	18.8	11 27	2 34.34	+22 44.5	1.763	2.701	8.1	20.1
12 7	2 28.22	+13 5.0	2.177	3.029	11.1	19.0	12 7	2 29.27	+21 52.1	1.837	2.712	11.6	20.3
12 17	2 24.41	+12 56.6	2.259	3.015	13.9	19.2	12 17	2 26.71	+21 8.0	1.932	2.724	14.6	20.5
119316	2001 <i>SR</i> ₈₀		11 7.1 327°31	2°3/ 5.8 18			81660	2000 <i>HR</i> ₈₈		11 7.1 155°22	1°5/ 8.1 18		
10 8	3 11.10	+14 16.9	1.229	2.129	15.4	19.0	10 8	3 15.31	+21 9.3	2.155	3.011	11.6	19.9
10 18	3 6.27	+13 23.2	1.162	2.114	10.8	18.7	10 18	3 8.30	+21 14.2	2.088	3.016	8.3	19.7
10 28	2 58.80	+12 19.7	1.118	2.100	5.6	18.4	10 28	2 59.54	+21 9.7	2.048	3.020	4.7	19.5
11 7	2 49.79	+11 13.2	1.097	2.086	2.4	18.2	11 7	2 49.85	+20 56.8	2.036	3.024	1.5	19.2
11 17	2 40.69	+10 11.9	1.102	2.074	7.0	18.4	11 17	2 40.19	+20 37.9	2.053	3.028	3.8	19.4
11 27	2 33.03	+ 9 24.5	1.131	2.062	12.3	18.7	11 27	2 31.58	+20 16.8	2.101	3.031	7.4	19.7
12 7	2 27.99	+ 8 56.9	1.182	2.051	17.1	18.9	12 7	2 24.78	+19 57.8	2.174	3.034	10.7	19.9
12 17	2 26.19	+ 8 51.4	1.250	2.041	21.1	19.2	12 17	2 20.27	+19 44.4	2.271	3.037	13.5	20.1
511820	2015 <i>FN</i> ₁₆₃		11 7.1 163°26	1°1/ 6.6 18			315993	2009 <i>DQ</i> ₇₇		11 7.1 134°12	0°6/ 7.5 17		
10 8	3 17.28	+14 18.2	1.653	2.530	13.4	21.7	10 8	3 18.05	+19 58.1	1.496	2.368	14.9	21.1
10 18	3 9.96	+14 6.6	1.592	2.533	9.4	21.4	10 18	3 10.60	+19 27.6	1.441	2.378	10.5	20.8
10 28	3 0.46	+13 49.7	1.556	2.536	4.8	21.2	10 28	3 0.81	+18 44.2	1.411	2.388	5.6	20.6
11 7	2 49.82	+13 30.4	1.548	2.538	1.1	20.9	11 7	2 49.87	+17 51.5	1.407	2.397	0.7	20.3
11 17	2 39.26	+13 12.4	1.568	2.540	5.2	21.2	11 17	2 39.15	+16 55.3	1.431	2.406	5.0	20.6
11 27	2 30.03	+13 0.3	1.616	2.542	9.7	21.5	11 27	2 30.04	+16 3.1	1.482	2.414	9.8	20.9
12 7	2 23.07	+12 57.4	1.689	2.543	13.6	21.7	12 7	2 23.46	+15 21.2	1.558	2.422	14.0	21.2
12 17	2 18.89	+13 6.1	1.782	2.544	16.8	22.0	12 17	2 19.89	+14 53.6	1.654	2.429	17.4	21.4
223571	2004 <i>FS</i> ₃₇		11 7.1 45°92	6°5/ 3.1 18			405679	2005 <i>US</i> ₂₂₇		11 7.1 227°66	0°5/ 6.7 18		
10 8	3 12.59	+ 5 12.9	1.304	2.203	14.8	19.5	10 8	3 10.61	+17 35.2	2.118	2.991	11.1	21.5
10 18	3 6.83	+ 3 38.6	1.263	2.210	10.7	19.3	10 18	3 5.00	+16 45.2	2.050	2.989	7.7	21.3
10 28	2 58.84	+ 2 7.9	1.246	2.217	7.2	19.1	10 28	2 57.82	+15 46.8	2.008	2.987	3.9	21.1
11 7	2 49.80	+ 0 50.6	1.253	2.224	6.8	19.1	11 7	2 49.83	+14 43.7	1.995	2.985	0.5	20.8
11 17	2 41.01	- 0 4.9	1.286	2.232	9.8	19.3	11 17	2 41.90	+13 41.0	2.011	2.983	4.2	21.1
11 27	2 33.77	- 0 33.6	1.343	2.240	13.6	19.6	11 27	2 34.94	+12 44.1	2.056	2.981	7.9	21.3
12 7	2 28.95	- 0 34.9	1.421	2.249	17.2	19.8	12 7	2 29.63	+11 57.5	2.127	2.979	11.3	21.5
12 17	2 26.98	- 0 11.4	1.516	2.257	20.2	20.1	12 17	2 26.43	+11 24.2	2.220	2.977	14.1	21.7
499704	2011 <i>AM</i> ₂₀		11 7.1 64°91	19°3/20.3 17			266458	2007 <i>LN</i> ₂		11 7.1 105°89	5°5/ 2.6 18		
10 8	3 30.01	+53 28.5	1.069	1.818	27.5	20.4	10 8	3 10.87	- 1 37.9	2.467	3.337	9.8	20.7
10 18	3 22.04	+55 28.4	1.023	1.825	25.0	20.2	10 18	3 4.85	- 2 22.3	2.427	3.350	7.5	20.6
10 28	3 7.92	+56 39.6	0.990	1.833	22.5	20.1	10 28	2 57.62	- 2 59.1	2.413	3.364	5.8	20.5
11 7	2 49.91	+56 47.8	0.971	1.841	20.5	20.0	11 7	2 49.84	- 3 24.4	2.427	3.377	5.7	20.5
11 17	2 31.86	+55 47.6	0.969	1.849	19.4	19.9	11 17	2 42.21	- 3 35.1	2.470	3.390	7.2	20.6
11 27	2 17.76	+53 48.9	0.985	1.857	19.6	20.0	11 27	2 35.45	- 3 29.9	2.541	3.403	9.4	20.8
12 7	2 9.85	+51 13.3	1.018	1.865	21.0	20.1	12 7	2 30.10	- 3 9.0	2.635	3.415	11.5	21.0
12 17	2 8.45	+48 23.8	1.069	1.874	23.1	20.3	12 17	2 26.51	- 2 33.9	2.751	3.428	13.4	21.1
455186	2000 <i>ES</i> ₁₁₅		11 7.1 209°84	15°1/13.4 17			293619	2007 <i>LW</i> ₃₆		11 7.1 332°99	3°4/ 3.8 18		
10 8	3 31.78	+44 55.9	1.285	2.058	22.5	21.1	10 8	3 8.83	+12 39.4	1.884	2.771	11.5	20.2
10 18	3 22.53	+47 7.9	1.220	2.055	19.8	20.9	10 18	3 3.88	+10 33.4	1.816	2.763	8.0	20.0
10 28	3 8.07	+48 46.6	1.174	2.052	17.2	20.7	10 28	2 57.28	+ 8 19.1	1.776	2.755	4.5	19.7
11 7	2 49.93	+49 38.4	1.147	2.049	15.4	20.6	11 7	2 49.83	+ 6 5.5	1.766	2.747	3.7	19.7
11 17	2 30.93	+49 36.0	1.143	2.045	15.2	20.6	11 17	2 42.46	+ 4 1.8	1.786	2.740	6.7	19.9
11 27	2 14.41	+48 44.8	1.159	2.041	16.6	20.7	11 27	2 36.10	+ 2 16.5	1.834	2.733	10.4	20.1
12 7	2 2.82	+47 20.8	1.196	2.036	19.0	20.8	12 7	2 31.48	+ 0 54.7	1.906	2.727	13.7	20.3
12 17	1 57.11	+45 42.7	1.251	2.031	21.7	21.0	12 17	2 29.03	- 0 1.7	1.999	2.721	16.5	20.5
459259	2012 <i>FJ</i> ₄₉		11 7.1 253°34	1°0/ 6.3 17			326879	2003 <i>UU</i> ₃₅₅		11 7.1 71°88	2°3/ 8.8 18		
10 8	3 11.40	+14 17.9	2.387	3.259	10.0	22.5	10 8	3 13.69	+23 37.4	2.231	3.082	11.5	20.7
10 18	3 5.49	+13 50.8	2.306	3.245	7.0	22.3	10 18	3 7.16	+23 51.1	2.167	3.089	8.4	20.5
10 28	2 58.07	+13 18.9	2.251	3.230	3.6	22.1	10 28	2 58.96	+23 54.2	2.129	3.096	5.0	20.3
11 7	2 49.80	+12 45.1	2.226	3.215	1.1	21.8	11 7	2 49.87	+23 47.3	2.118	3.104	2.4	20.2
11 17	2 41.47	+12 12.7	2.230	3.200	4.1	22.0	11 17	2 40.82	+23 32.2	2.138	3.111	3.9	20.3
11 27	2 33.92	+11 45.5	2.264	3.184	7.6	22.2	11 27	2 32.77	+23 12.7	2.186	3.118	7.1	20.5
12 7	2 27.84	+11 26.6	2.324	3.169	10.7	22.4	12 7	2 26.46	+22 52.9	2.261	3.125	10.2	20.7
12 17	2 23.71	+11 18.1	2.407	3.153	13.4	22.6	12 17	2 22.36	+22 36.8	2.359	3.133	12.9	20.9
110040	2001 <i>SY</i> ₈₁		11 7.1 340°04	3°4/ 8.9 18			167243	2003 <i>UQ</i> ₉₄		1			

EPHEMERIDES

11 7.1

11 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
18893	2000 <i>GH</i> ₁		11 7.1 277°49	3°5/ 9.5 18			272390	2005 <i>SZ</i> ₂₇₀		11 7.2 294°01	3°6/ 5.4 18		
10 8	3 15.00	+26 46.2	2.345	3.181	11.5	18.3	10 8	3 15.84	+ 8 34.5	1.475	2.364	14.1	20.0
10 18	3 8.21	+27 18.0	2.264	3.174	8.7	18.1	10 18	3 9.20	+ 8 10.0	1.414	2.359	9.9	19.8
10 28	2 59.59	+27 38.2	2.209	3.167	5.7	17.9	10 28	3 0.21	+ 7 45.8	1.377	2.354	5.6	19.5
11 7	2 49.89	+27 45.9	2.182	3.159	3.6	17.7	11 7	2 49.95	+ 7 26.7	1.365	2.350	3.7	19.4
11 17	2 40.06	+27 42.0	2.185	3.152	4.5	17.8	11 17	2 39.70	+ 7 17.2	1.381	2.345	7.0	19.6
11 27	2 31.10	+27 29.3	2.217	3.145	7.3	17.9	11 27	2 30.80	+ 7 21.3	1.423	2.340	11.4	19.8
12 7	2 23.87	+27 12.4	2.275	3.137	10.2	18.1	12 7	2 24.28	+ 7 40.8	1.488	2.336	15.4	20.1
12 17	2 18.91	+26 55.8	2.358	3.130	12.9	18.3	12 17	2 20.69	+ 8 15.5	1.572	2.332	18.8	20.3
513917	2014 <i>AF</i> ₅₃		11 7.1 297°52	4°5/ 4.6 18 R			88365	2001 <i>PN</i> ₂		11 7.2 73°06	1°5/ 6.2 18		
10 8	3 13.77	+ 7 40.1	1.445	2.338	14.0	21.0	10 8	3 14.83	+15 53.7	1.409	2.295	14.7	19.2
10 18	3 7.82	+ 6 51.6	1.379	2.325	10.0	20.8	10 18	3 8.31	+14 56.1	1.366	2.312	10.2	19.0
10 28	2 59.52	+ 6 2.8	1.337	2.313	6.0	20.5	10 28	2 59.61	+13 50.0	1.347	2.328	5.1	18.7
11 7	2 49.89	+ 5 20.4	1.320	2.301	4.7	20.4	11 7	2 49.94	+12 41.6	1.354	2.344	1.5	18.5
11 17	2 40.19	+ 4 50.6	1.330	2.289	7.9	20.6	11 17	2 40.60	+11 38.1	1.389	2.360	5.8	18.8
11 27	2 31.79	+ 4 38.6	1.366	2.278	12.3	20.8	11 27	2 32.86	+10 46.8	1.450	2.377	10.4	19.2
12 7	2 25.72	+ 4 46.7	1.423	2.266	16.3	21.0	12 7	2 27.56	+10 12.1	1.534	2.393	14.5	19.4
12 17	2 22.56	+ 5 14.4	1.499	2.255	19.7	21.2	12 17	2 25.10	+ 9 55.9	1.638	2.409	17.7	19.7
457916	2009 <i>UU</i> ₃₄		11 7.2 321°29	1°6/ 6.2 17			241114	2007 <i>OZ</i> ₆		11 7.2 122°73	1°8/ 5.9 18		
10 8	3 12.79	+11 46.0	1.878	2.760	11.9	20.9	10 8	3 15.64	+12 10.9	2.036	2.909	11.4	20.8
10 18	3 6.85	+11 46.7	1.799	2.742	8.3	20.6	10 18	3 8.39	+11 42.6	1.987	2.926	7.9	20.6
10 28	2 58.95	+11 45.7	1.745	2.724	4.4	20.4	10 28	2 59.54	+11 11.4	1.965	2.943	4.1	20.4
11 7	2 49.89	+11 45.3	1.718	2.708	1.6	20.1	11 7	2 49.94	+10 40.8	1.971	2.959	1.9	20.3
11 17	2 40.67	+11 48.2	1.721	2.691	5.0	20.4	11 17	2 40.56	+10 14.6	2.007	2.974	4.9	20.5
11 27	2 32.40	+11 57.5	1.750	2.675	9.1	20.6	11 27	2 32.32	+ 9 56.3	2.073	2.989	8.4	20.7
12 7	2 25.97	+12 15.2	1.805	2.659	12.9	20.8	12 7	2 25.93	+ 9 48.5	2.164	3.003	11.6	21.0
12 17	2 21.98	+12 42.9	1.881	2.644	16.0	21.0	12 17	2 21.78	+ 9 52.2	2.277	3.017	14.2	21.2
324204	2006 <i>AT</i> ₉₁		11 7.2 178°28	1°4/ 5.9 18			224703	2006 <i>BO</i> ₈₆		11 7.2 6°85	1°4/ 6.2 18		
10 8	3 11.02	+12 56.6	2.400	3.274	9.9	21.4	10 8	3 11.21	+13 37.1	1.926	2.808	11.6	20.2
10 18	3 5.14	+12 27.9	2.334	3.274	6.8	21.2	10 18	3 5.56	+13 11.9	1.865	2.808	8.0	20.0
10 28	2 57.87	+11 55.9	2.296	3.275	3.5	21.0	10 28	2 58.19	+12 42.2	1.829	2.809	4.1	19.7
11 7	2 49.88	+11 23.6	2.287	3.275	1.5	20.9	11 7	2 49.93	+12 11.7	1.820	2.810	1.4	19.5
11 17	2 41.93	+10 54.3	2.307	3.275	4.2	21.1	11 17	2 41.73	+11 44.2	1.840	2.811	4.8	19.8
11 27	2 34.83	+10 31.4	2.357	3.275	7.5	21.3	11 27	2 34.56	+11 23.8	1.888	2.813	8.6	20.0
12 7	2 29.19	+10 17.5	2.434	3.275	10.4	21.5	12 7	2 29.18	+11 13.6	1.961	2.814	12.0	20.2
12 17	2 25.43	+10 14.1	2.533	3.274	12.9	21.7	12 17	2 26.04	+11 15.3	2.056	2.817	14.9	20.4
90148	2002 <i>YL</i> ₁₄		11 7.2 258°58	4°1/ 4.5 18			263736	2008 <i>JT</i> ₃		11 7.2 88°92	3°9/ 4.6 18		
10 8	3 13.18	+ 5 25.9	1.985	2.865	11.4	19.4	10 8	3 13.51	+ 4 37.8	2.124	3.001	10.9	21.0
10 18	3 6.89	+ 4 54.1	1.918	2.857	8.2	19.2	10 18	3 6.87	+ 4 15.7	2.078	3.015	7.8	20.8
10 28	2 58.86	+ 4 25.0	1.877	2.848	5.1	19.0	10 28	2 58.76	+ 3 57.3	2.058	3.028	4.9	20.7
11 7	2 49.89	+ 4 2.6	1.863	2.839	4.2	18.9	11 7	2 49.94	+ 3 46.3	2.066	3.041	4.0	20.7
11 17	2 40.91	+ 3 51.1	1.878	2.830	6.6	19.0	11 17	2 41.30	+ 3 45.3	2.103	3.054	6.1	20.8
11 27	2 32.90	+ 3 53.1	1.921	2.821	9.9	19.2	11 27	2 33.69	+ 3 56.4	2.169	3.067	9.1	21.0
12 7	2 26.65	+ 4 10.0	1.988	2.812	13.1	19.4	12 7	2 27.76	+ 4 19.9	2.260	3.080	11.9	21.2
12 17	2 22.64	+ 4 41.4	2.076	2.803	15.8	19.6	12 17	2 23.90	+ 4 55.2	2.372	3.093	14.2	21.4
143027	2002 <i>VN</i> ₁₁₄		11 7.2 290°83	2°6/ 9.2 18			71495	2000 <i>CL</i> ₁₄		11 7.2 330°25	2°4/ 9.2 18		
10 8	3 11.78	+26 31.9	1.785	2.641	13.7	19.4	10 8	3 11.23	+25 47.2	2.191	3.040	11.7	18.9
10 18	3 6.27	+25 53.2	1.704	2.627	10.1	19.1	10 18	3 5.53	+25 29.2	2.118	3.038	8.7	18.7
10 28	2 58.66	+24 55.6	1.646	2.614	6.2	18.8	10 28	2 58.17	+24 57.6	2.071	3.037	5.3	18.5
11 7	2 49.89	+23 41.4	1.615	2.601	2.8	18.6	11 7	2 49.93	+24 14.0	2.051	3.035	2.6	18.3
11 17	2 41.08	+22 15.9	1.612	2.587	4.5	18.7	11 17	2 41.73	+23 21.8	2.060	3.034	3.9	18.4
11 27	2 33.43	+20 47.1	1.637	2.574	8.6	18.9	11 27	2 34.51	+22 26.0	2.098	3.032	7.2	18.6
12 7	2 27.87	+19 23.5	1.688	2.562	12.6	19.1	12 7	2 29.01	+21 32.5	2.162	3.031	10.4	18.8
12 17	2 24.95	+18 11.8	1.761	2.549	16.0	19.3	12 17	2 25.68	+20 45.9	2.250	3.030	13.2	19.0
1444	<i>Pannonia</i>		11 7.2 148°61	6°3/13.9 18 A			301704	2010 <i>GW</i> ₂₈		11 7.2 110°86	6°8/ 2.2 18		
10 8	3 14.80	+41 13.9	2.764	3.521	12.0	17.1	10 8	3 13.87	- 3 12.5	2.098	2.966	11.4	21.5
10 18	3 7.92	+41 25.5	2.690	3.527	10.1	16.9	10 18	3 7.04	- 4 12.7	2.066	2.986	8.8	21.4
10 28	2 59.35	+41 17.8	2.639	3.533	8.1	16.8	10 28	2 58.79	- 5 2.5	2.060	3.005	7.1	21.3
11 7	2 49.91	+40 49.6	2.613	3.539	6.7	16.7	11 7	2 49.95	- 5 36.8	2.082	3.024	7.0	21.3
11 17	2 40.54	+40 2.2	2.616	3.544	6.4	16.7	11 17	2 41.36	- 5 52.1	2.131	3.042	8.6	21.5
11 27	2 32.21	+38 59.7	2.647	3.549	7.5	16.8	11 27	2 33.87	- 5 47.1	2.207	3.060	10.9	21.6
12 7	2 25.66	+37 47.9	2.705	3.554	9.2	16.9	12 7	2 28.08	- 5 22.8	2.306	3.077	13.2	21.8
12 17	2 21.34	+36 33.5	2.787	3.558	11.1	17.1	12 17	2 24.36	- 4 41.8	2.424	3.094	15.1	22.0
106277	2000 <i>UA</i> ₇₁		11 7.2 346°04	1°8/ 8.1 18			68796	2002 <i>GF</i> ₉		11 7.2 74°27	3°6/ 4.0 18		
10 8	3 15.05	+21 42.7	1.193	2.077	17.0	18.8	10 8	3 10.49	+ 8 11.8	2.116	2.999	10.7	19.3
10 18	3 9.17	+21 31.4	1.133	2.074	12.3	18.5	10 18	3 4.73	+ 6 55.9	2.079	3.021	7.4	19.1
10 28	3 0.38	+21 3.1	1.093	2.070	6.9	18.2	10 28	2 57.62	+ 5 40.6	2.069	3.042	4.5	19.0
11 7	2 49.94	+20 20.5	1.078	2.068	2.0	17.9	11 7	2 49.94	+ 4 31.6	2.087	3.064	3.8	19.0
11 17	2 39.52	+19 29.3	1.088	2.066	5.7	18.1	11 17	2 42.49	+ 3 33.8	2.135	3.086	6.1	19.2
11 27	2 30.83	+18 38.1	1.122	2.064	11.1	18.4	11 27	2 36.08	+ 2 51.3	2.211	3.107	9.0	19.4
12 7	2 25.08	+17 55.6	1.179	2.063	16.1	18.7	12 7	2 31.26	+ 2 25.8	2.311	3.129	11.7	19.6
12 17	2 22.87	+17 27.5	1.254	2.062	20.1	19.0	12 17	2 28.38	+ 2 17.1	2.433	3.150	14.0	19.8
144415	2004 <i>ES</i> ₁₁		11 7.2 138°31	2°1/ 8.5 18			4327	<i>Ries</i>		11 7.2 48°06	2°5/ 6.		

EPHEMERIDES

11 7.2

11 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
50366	2000 <i>CW</i> ₇₇		11 7.2 294°74	4°1/ 9.5 18			303100	2004 <i>BK</i> ₈₄		11 7.2 268°82	0°1/ 7.1 18		
10 8	3 16.17	+26 59.4	1.459	2.317	16.0	19.5	10 8	3 12.17	+19 28.9	2.009	2.877	11.8	20.6
10 18	3 9.79	+27 6.8	1.387	2.309	12.1	19.3	10 18	3 6.36	+18 32.2	1.921	2.858	8.3	20.4
10 28	3 0.70	+26 54.8	1.337	2.302	7.8	19.0	10 28	2 58.71	+17 23.2	1.860	2.838	4.4	20.1
11 7	2 50.01	+26 23.1	1.312	2.294	4.4	18.8	11 7	2 50.02	+16 5.8	1.827	2.818	0.1	19.7
11 17	2 39.22	+25 35.0	1.314	2.287	5.8	18.8	11 17	2 41.24	+14 45.6	1.823	2.797	4.3	20.0
11 27	2 29.91	+24 38.0	1.341	2.280	10.0	19.1	11 27	2 33.41	+13 29.5	1.849	2.777	8.5	20.2
12 7	2 23.28	+23 41.1	1.393	2.273	14.3	19.3	12 7	2 27.36	+12 23.8	1.901	2.756	12.3	20.4
12 17	2 19.96	+22 52.2	1.465	2.266	18.1	19.5	12 17	2 23.64	+11 32.8	1.975	2.734	15.5	20.6
124530	2001 <i>RN</i> ₈₉		11 7.2 89°10	2°1/ 8.3 18			188461	2004 <i>JH</i> ₃₀		11 7.2 229°11	1°7/ 6.0 18		
10 8	3 18.55	+21 51.6	1.536	2.402	14.9	20.0	10 8	3 15.33	+13 38.5	1.772	2.650	12.6	21.1
10 18	3 10.99	+21 58.9	1.486	2.417	10.7	19.8	10 18	3 8.66	+13 0.0	1.700	2.641	8.8	20.9
10 28	3 1.08	+21 53.0	1.459	2.432	6.1	19.5	10 28	2 59.93	+12 15.3	1.653	2.632	4.6	20.6
11 7	2 50.02	+21 35.2	1.458	2.447	2.2	19.3	11 7	2 50.05	+11 28.9	1.633	2.622	1.8	20.4
11 17	2 39.18	+21 8.9	1.486	2.462	4.8	19.5	11 17	2 40.14	+10 45.9	1.642	2.611	5.4	20.6
11 27	2 29.92	+20 40.0	1.541	2.476	9.3	19.8	11 27	2 31.36	+10 11.6	1.680	2.600	9.7	20.8
12 7	2 23.21	+20 14.6	1.620	2.490	13.2	20.1	12 7	2 24.62	+9 50.3	1.742	2.589	13.6	21.1
12 17	2 19.51	+19 57.4	1.721	2.504	16.5	20.4	12 17	2 20.48	+9 43.9	1.824	2.577	16.8	21.3
133480	2003 <i>SY</i> ₂₅₅		11 7.2 221°13	2°4/ 4.7 18			521267	2015 <i>HH</i> ₁₉₃		11 7.2 248°49	2°9/ 5.7 18		
10 8	3 9.08	+11 5.7	2.445	3.324	9.6	19.9	10 8	3 16.34	+10 18.2	1.532	2.418	13.8	21.4
10 18	3 3.80	+9 57.9	2.379	3.320	6.6	19.7	10 18	3 9.54	+9 55.1	1.469	2.413	9.7	21.2
10 28	2 57.21	+8 47.0	2.340	3.317	3.7	19.5	10 28	3 0.43	+9 30.3	1.430	2.409	5.3	20.9
11 7	2 49.96	+7 37.5	2.330	3.313	2.6	19.4	11 7	2 50.07	+9 8.1	1.418	2.405	2.9	20.8
11 17	2 42.76	+6 34.2	2.351	3.309	5.0	19.6	11 17	2 39.71	+8 53.0	1.433	2.400	6.4	21.0
11 27	2 36.35	+5 41.6	2.400	3.305	8.0	19.8	11 27	2 30.68	+8 49.4	1.475	2.395	10.9	21.2
12 7	2 31.32	+5 2.7	2.476	3.301	10.8	19.9	12 7	2 23.97	+8 59.7	1.541	2.390	14.9	21.5
12 17	2 28.06	+4 38.9	2.574	3.297	13.2	20.1	12 17	2 20.15	+9 24.5	1.626	2.386	18.3	21.7
17096	1999 <i>JX</i> ₂₆		11 7.2 46°63	0°6/ 6.8 18			482616	2013 <i>AM</i> ₂₆		11 7.2 188°84	7°8/ 15.9 18		
10 8	3 12.93	+15 45.5	1.800	2.679	12.4	17.8	10 8	3 20.01	+46 26.4	2.492	3.214	14.0	20.8
10 18	3 6.82	+15 26.4	1.744	2.685	8.6	17.5	10 18	3 11.74	+46 11.0	2.406	3.213	12.1	20.7
10 28	2 58.87	+15 0.9	1.712	2.692	4.4	17.3	10 28	3 1.41	+45 29.2	2.341	3.212	10.0	20.5
11 7	2 49.99	+14 32.1	1.708	2.699	0.6	17.0	11 7	2 50.09	+44 19.1	2.301	3.210	8.4	20.4
11 17	2 41.22	+14 4.1	1.732	2.706	4.6	17.4	11 17	2 39.02	+42 42.7	2.289	3.207	7.8	20.4
11 27	2 33.62	+13 41.3	1.784	2.713	8.7	17.6	11 27	2 29.39	+40 46.1	2.306	3.203	8.7	20.4
12 7	2 27.98	+13 27.5	1.861	2.720	12.3	17.9	12 7	2 22.06	+38 38.4	2.352	3.199	10.5	20.5
12 17	2 24.78	+13 24.7	1.960	2.728	15.3	18.1	12 17	2 17.46	+36 29.3	2.423	3.195	12.6	20.7
274934	2009 <i>SA</i> ₂₀₃		11 7.2 310°68	2°6/ 5.8 18			129815	1999 <i>NV</i> ₅		11 7.2 91°05	5°6/ 10.9 18		
10 8	3 13.83	+12 20.4	1.336	2.230	14.8	20.3	10 8	3 19.30	+31 53.5	1.434	2.273	17.3	19.2
10 18	3 8.11	+11 44.1	1.269	2.217	10.4	20.0	10 18	3 11.74	+31 46.8	1.384	2.290	13.3	19.0
10 28	2 59.81	+11 2.2	1.224	2.204	5.5	19.7	10 28	3 1.54	+31 14.3	1.355	2.308	9.2	18.8
11 7	2 50.02	+10 20.3	1.204	2.192	2.7	19.5	11 7	2 50.09	+30 16.9	1.351	2.325	5.9	18.7
11 17	2 40.12	+9 44.6	1.210	2.180	6.8	19.7	11 17	2 39.01	+28 59.7	1.373	2.341	6.4	18.7
11 27	2 31.61	+9 21.6	1.241	2.168	11.9	20.0	11 27	2 29.84	+27 32.6	1.422	2.358	9.8	19.0
12 7	2 25.61	+9 15.5	1.295	2.157	16.4	20.2	12 7	2 23.56	+26 6.8	1.496	2.374	13.6	19.2
12 17	2 22.77	+9 27.7	1.366	2.146	20.2	20.4	12 17	2 20.61	+24 50.8	1.591	2.390	17.0	19.5
360108	2013 <i>CY</i> ₁₄		11 7.2 188°95	2°4/ 5.6 18			324907	2007 <i>VV</i> ₂₁₆		11 7.2 271°48	2°1/ 8.5 18		
10 8	3 13.00	+10 55.8	1.940	2.821	11.6	21.1	10 8	3 15.46	+24 0.9	1.363	2.235	16.1	20.2
10 18	3 6.79	+10 23.7	1.878	2.821	8.1	20.9	10 18	3 9.30	+23 26.6	1.293	2.227	11.8	19.9
10 28	2 58.85	+9 49.4	1.842	2.821	4.4	20.7	10 28	3 0.45	+22 32.3	1.246	2.220	6.8	19.6
11 7	2 50.01	+9 16.8	1.834	2.820	2.4	20.5	11 7	2 50.08	+21 20.9	1.223	2.212	2.3	19.3
11 17	2 41.22	+8 50.0	1.855	2.820	5.4	20.7	11 17	2 39.70	+19 59.2	1.228	2.205	5.3	19.5
11 27	2 33.48	+8 32.9	1.903	2.819	9.1	21.0	11 27	2 30.87	+18 37.1	1.258	2.197	10.5	19.8
12 7	2 27.55	+8 28.1	1.977	2.818	12.5	21.2	12 7	2 24.75	+17 24.4	1.312	2.190	15.2	20.0
12 17	2 23.89	+8 36.4	2.071	2.817	15.3	21.4	12 17	2 21.93	+16 28.1	1.386	2.182	19.1	20.3
401309	2012 <i>XS</i> ₅₅		11 7.2 238°18	14°4/ 16.8 17			78793	2002 <i>WM</i> ₁₃		11 7.2 275°18	5°7/ 3.0 18		
10 8	3 24.45	+48 16.3	1.265	2.030	23.1	20.5	10 8	3 11.88	+2 9.5	1.895	2.778	11.7	19.2
10 18	3 16.93	+49 9.2	1.196	2.025	20.4	20.3	10 18	3 6.10	+1 9.3	1.830	2.766	8.7	19.0
10 28	3 4.89	+49 20.1	1.142	2.020	17.6	20.1	10 28	2 58.56	+0 13.7	1.791	2.754	6.3	18.8
11 7	2 50.11	+48 39.4	1.106	2.014	15.3	20.0	11 7	2 50.05	+0 31.3	1.779	2.743	6.0	18.8
11 17	2 35.25	+47 4.6	1.091	2.008	14.4	19.9	11 17	2 41.54	+0 1.0	1.794	2.731	8.2	18.9
11 27	2 23.09	+44 45.6	1.099	2.002	15.4	20.0	11 27	2 34.00	+0 10.0	1.835	2.719	11.3	19.1
12 7	2 15.43	+42 1.2	1.128	1.996	17.9	20.1	12 7	2 28.24	+0 59.4	1.900	2.707	14.3	19.3
12 17	2 12.84	+39 11.8	1.176	1.989	20.9	20.3	12 17	2 24.74	+0 29.6	1.984	2.695	16.9	19.4
515638	2014 <i>MC</i> ₂₁		11 7.2 139°65	1°9/ 8.8 18			237281	2008 <i>XF</i> ₁₃		11 7.2 355°00	6°9/ 3.8 18		
10 8	3 13.24	+24 32.6	2.121	2.972	12.0	21.6	10 8	3 13.75	+1 24.3	1.361	2.254	14.7	19.1
10 18	3 6.89	+24 2.1	2.056	2.979	8.7	21.4	10 18	3 7.81	+0 43.1	1.310	2.251	11.0	18.8
10 28	2 58.87	+23 18.2	2.016	2.985	5.1	21.2	10 28	2 59.55	+0 10.8	1.282	2.248	7.8	18.7
11 7	2 50.01	+22 23.2	2.004	2.991	2.0	21.0	11 7	2 50.07	+0 5.9	1.278	2.247	7.1	18.6
11 17	2 41.28	+21 21.3	2.022	2.997	3.8	21.2	11 17	2 40.69	+0 2.0	1.300	2.246	9.7	18.8
11 27	2 33.64	+20 18.2	2.070	3.003	7.4	21.4	11 27	2 32.74	+0 24.7	1.346	2.245	13.4	19.0
12 7	2 27.81	+19 19.9	2.144	3.008	10.7	21.6	12 7	2 27.19	+1 13.2	1.413	2.245	17.0	19.2
12 17	2 24.23	+18 30.8	2.241	3.013	13.5	21.8	12 17	2 24.55	+2 20.2	1.498	2.246	20.1	19.4
303134	2004 <i>CU</i> ₁₀₇		11 7.2 216°12	3°2/ 9.7 18			99906	Uofalberta		11 7.2 17°91	5°1/ 2.9 18		

EPHEMERIDES

11 7.2

11 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
70726	1999 VS ₂		11 7.2 92°49	1.2°/ 7.8	18		148661	2001 SE ₁₃₇		11 7.2 211°16	0°5/ 7.5	18	
10 8	3 19.69	+19 2.4	1.806	2.668	13.2	19.6	10 8	3 15.72	+19 34.5	1.870	2.736	12.7	20.6
10 18	3 11.50	+19 23.8	1.757	2.688	9.3	19.4	10 18	3 8.90	+19 8.3	1.797	2.731	9.0	20.4
10 28	3 1.30	+19 36.4	1.733	2.708	5.1	19.2	10 28	3 0.08	+18 31.3	1.748	2.725	4.8	20.1
11 7	2 50.11	+19 40.9	1.737	2.727	1.2	19.0	11 7	2 50.14	+17 46.2	1.728	2.718	0.6	19.8
11 17	2 39.14	+19 39.5	1.772	2.746	4.3	19.2	11 17	2 40.20	+16 57.3	1.736	2.711	4.3	20.0
11 27	2 29.55	+19 35.8	1.835	2.765	8.3	19.5	11 27	2 31.39	+16 10.5	1.774	2.704	8.6	20.3
12 7	2 22.21	+19 33.9	1.924	2.784	11.9	19.8	12 7	2 24.61	+15 31.2	1.837	2.696	12.4	20.5
12 17	2 17.56	+19 37.3	2.035	2.802	14.8	20.0	12 17	2 20.38	+15 3.4	1.922	2.687	15.6	20.7
407103	2009 SF ₂₈₇		11 7.2 39°59	4°9/10.4	17		481933	2009 BJ ₁₂₃		11 7.2 340°64	3°9/ 5.0	17	
10 8	3 15.34	+29 54.1	1.916	2.750	13.8	20.4	10 8	3 8.27	+11 5.1	1.133	2.042	15.6	20.5
10 18	3 8.69	+30 25.9	1.856	2.760	10.6	20.2	10 18	3 4.53	+10 9.1	1.068	2.023	11.0	20.2
10 28	2 59.95	+30 40.9	1.819	2.770	7.4	20.0	10 28	2 58.11	+9 7.2	1.024	2.006	6.1	19.8
11 7	2 50.09	+30 38.1	1.809	2.780	5.1	19.9	11 7	2 50.11	+8 7.4	1.003	1.989	4.0	19.7
11 17	2 40.27	+30 19.0	1.827	2.791	5.6	20.0	11 17	2 41.96	+7 18.5	1.007	1.975	8.2	19.9
11 27	2 31.71	+29 48.4	1.872	2.802	8.3	20.2	11 27	2 35.23	+6 48.7	1.033	1.962	13.4	20.1
12 7	2 25.29	+29 12.7	1.943	2.813	11.3	20.4	12 7	2 31.13	+6 42.3	1.079	1.951	18.2	20.4
12 17	2 21.54	+28 37.9	2.037	2.825	14.1	20.6	12 17	2 30.30	+6 59.9	1.141	1.942	22.2	20.6
132530	2002 JK ₆₂		11 7.2 122°17	2°1/ 5.6	18		178112	2006 SZ ₃₆₆		11 7.2 99°97	4°4/10.0	17	
10 8	3 14.42	+12 0.3	2.114	2.988	11.1	20.6	10 8	3 18.68	+28 53.2	1.481	2.329	16.4	20.1
10 18	3 7.53	+11 15.4	2.067	3.006	7.6	20.4	10 18	3 11.27	+28 44.8	1.428	2.344	12.3	19.9
10 28	2 59.14	+10 27.6	2.046	3.024	4.0	20.2	10 28	3 1.33	+28 14.5	1.397	2.358	8.0	19.7
11 7	2 50.08	+9 41.0	2.054	3.041	2.1	20.1	11 7	2 50.17	+27 23.4	1.392	2.372	4.6	19.5
11 17	2 41.23	+9 0.1	2.092	3.057	4.9	20.3	11 17	2 39.30	+26 16.5	1.414	2.386	5.7	19.6
11 27	2 33.47	+8 28.7	2.160	3.072	8.3	20.6	11 27	2 30.17	+25 2.5	1.463	2.399	9.5	19.9
12 7	2 27.46	+8 9.5	2.253	3.087	11.4	20.8	12 7	2 23.78	+23 51.2	1.536	2.413	13.4	20.1
12 17	2 23.56	+8 3.4	2.368	3.102	13.9	21.0	12 17	2 20.59	+22 49.9	1.631	2.425	16.8	20.4
474361	2002 QJ ₁₂₄		11 7.2 103°36	4°1/ 4.7	16		483337	2016 QR ₇₁		11 7.2 145°15	2°3/ 8.7	18	
10 8	3 15.68	+9 9.6	1.470	2.359	14.1	21.6	10 8	3 16.55	+24 39.7	1.615	2.474	14.7	20.7
10 18	3 8.87	+8 3.4	1.427	2.372	9.8	21.4	10 18	3 9.64	+24 9.4	1.553	2.480	10.7	20.5
10 28	2 59.98	+6 56.3	1.408	2.385	5.7	21.2	10 28	3 0.48	+23 21.9	1.514	2.485	6.2	20.3
11 7	2 50.11	+5 55.4	1.416	2.397	4.3	21.1	11 7	2 50.17	+22 19.8	1.503	2.490	2.4	20.0
11 17	2 40.53	+5 7.6	1.451	2.409	7.4	21.4	11 17	2 40.02	+21 8.6	1.519	2.495	4.7	20.2
11 27	2 32.46	+4 37.8	1.512	2.421	11.5	21.6	11 27	2 31.33	+19 56.5	1.564	2.499	9.1	20.5
12 7	2 26.72	+4 28.2	1.596	2.433	15.1	21.9	12 7	2 25.04	+18 51.3	1.633	2.503	13.1	20.7
12 17	2 23.75	+4 38.2	1.699	2.444	18.1	22.1	12 17	2 21.64	+17 58.9	1.724	2.507	16.5	21.0
485032	2009 WD ₁₄₂		11 7.2 354°07	6°9/ 2.9	18		519796	2013 GN ₁₄₀		11 7.2 152°55	2°3/ 5.4	18	
10 8	3 12.58	-3 38.2	1.995	2.867	11.7	19.9	10 8	3 12.61	+9 8.3	2.530	3.402	9.5	22.2
10 18	3 6.43	-4 7.7	1.942	2.865	9.2	19.7	10 18	3 6.22	+8 47.6	2.470	3.408	6.6	22.0
10 28	2 58.67	-4 26.4	1.915	2.863	7.2	19.6	10 28	2 58.51	+8 26.6	2.438	3.414	3.7	21.9
11 7	2 50.09	-4 29.6	1.913	2.862	7.0	19.6	11 7	2 50.14	+8 8.2	2.436	3.420	2.3	21.8
11 17	2 41.59	-4 14.4	1.939	2.861	8.7	19.7	11 17	2 41.85	+7 55.1	2.464	3.425	4.6	21.9
11 27	2 34.10	-3 39.7	1.991	2.860	11.3	19.9	11 27	2 34.39	+7 49.8	2.522	3.430	7.5	22.1
12 7	2 28.34	-2 47.1	2.067	2.860	13.8	20.0	12 7	2 28.34	+7 53.8	2.606	3.435	10.2	22.3
12 17	2 24.73	-1 39.1	2.162	2.860	16.0	20.2	12 17	2 24.11	+8 7.7	2.713	3.439	12.5	22.5
211489	2003 KP		11 7.2 86°39	1°0/ 6.6	18		42536	1995 VX ₁₃		11 7.2 158°77	2°2/ 5.7	18	
10 8	3 17.45	+16 51.8	1.285	2.171	15.9	20.6	10 8	3 13.36	+12 36.2	1.793	2.675	12.3	19.4
10 18	3 10.34	+16 2.9	1.243	2.188	11.0	20.4	10 18	3 7.17	+11 49.8	1.734	2.677	8.5	19.2
10 28	3 0.79	+15 3.6	1.224	2.204	5.6	20.1	10 28	2 59.14	+10 58.9	1.700	2.679	4.5	19.0
11 7	2 50.13	+13 59.9	1.230	2.221	1.0	19.8	11 7	2 50.16	+10 8.3	1.693	2.680	2.3	18.8
11 17	2 39.86	+12 59.5	1.264	2.237	5.9	20.2	11 17	2 41.28	+9 23.3	1.715	2.682	5.5	19.1
11 27	2 31.39	+12 10.0	1.323	2.253	10.9	20.6	11 27	2 33.54	+8 49.0	1.764	2.683	9.5	19.3
12 7	2 25.65	+11 36.6	1.405	2.269	15.2	20.9	12 7	2 27.76	+8 28.7	1.838	2.684	13.1	19.5
12 17	2 23.04	+11 21.6	1.507	2.285	18.7	21.1	12 17	2 24.40	+8 23.9	1.933	2.685	16.0	19.7
484947	2009 SK ₂₇₁		11 7.2 78°60	3°0/ 9.3	18		53629	Andrewpotter		11 7.2 320°98	0°9/ 6.7	18	
10 8	3 14.44	+25 40.6	2.193	3.037	11.9	20.7	10 8	3 11.04	+17 55.4	1.190	2.087	16.1	18.9
10 18	3 7.83	+25 57.8	2.127	3.043	8.8	20.6	10 18	3 6.53	+16 58.7	1.117	2.067	11.4	18.6
10 28	2 59.45	+26 2.8	2.086	3.048	5.6	20.4	10 28	2 59.20	+15 45.8	1.065	2.047	5.9	18.3
11 7	2 50.12	+25 55.6	2.073	3.054	3.1	20.2	11 7	2 50.17	+14 22.6	1.038	2.028	0.9	17.9
11 17	2 40.81	+25 38.2	2.089	3.060	4.2	20.3	11 17	2 40.94	+12 58.4	1.035	2.010	6.4	18.2
11 27	2 32.52	+25 14.3	2.134	3.066	7.3	20.5	11 27	2 33.16	+11 44.3	1.056	1.993	12.3	18.5
12 7	2 26.04	+24 48.8	2.206	3.072	10.4	20.7	12 7	2 28.11	+10 48.9	1.099	1.977	17.5	18.7
12 17	2 21.86	+24 26.1	2.300	3.077	13.0	20.9	12 17	2 26.46	+10 17.0	1.159	1.961	21.8	18.9
405280	2003 SZ ₃₆₅		11 7.2 249°15	3°9/10.3	17		120538	1994 SP ₅		11 7.2 198°55	1°4/ 6.0	18	
10 8	3 13.41	+29 25.3	2.327	3.156	11.8	21.0	10 8	3 11.20	+13 39.4	2.291	3.166	10.3	20.6
10 18	3 7.15	+29 35.4	2.249	3.152	9.1	20.9	10 18	3 5.41	+13 1.0	2.224	3.165	7.1	20.4
10 28	2 59.12	+29 31.0	2.195	3.148	6.2	20.7	10 28	2 58.16	+12 18.2	2.184	3.163	3.7	20.1
11 7	2 50.12	+29 12.0	2.169	3.143	4.0	20.5	11 7	2 50.15	+11 34.5	2.173	3.161	1.5	20.0
11 17	2 41.07	+28 40.1	2.172	3.139	4.6	20.6	11 17	2 42.18	+10 53.8	2.191	3.159	4.4	20.2
11 27	2 32.96	+27 59.5	2.204	3.134	7.2	20.7	11 27	2 35.08	+10 20.1	2.238	3.157	7.8	20.4
12 7	2 26.58	+27 15.6	2.263	3.130	10.1	20.9	12 7	2 29.50	+9 56.6	2.312	3.155	10.8	20.6
12 17	2 22.45	+26 33.7	2.345	3.125	12.7	21.1	12 17	2 25.88	+9 44.9	2.408	3.152	13.4	20.8
191305	2003 HQ ₂₀		11 7.2 175°99	0°5/ 6.8	18		363708	2004 TD ₃₅₇		11 7.2 15°93	5°5/ 3.9	18	
10 8	3 14.91	+16 49.5	1.930	2.800	12.1	20.8	10 8	3 12.18					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
119094	2001 <i>OO</i> ₂₄		11 7.2 60°99	2.4/ 5.9	18		520287	2014 <i>EP</i> ₂₄₉		11 7.2 164°86	4.7/ 4.0	18	
10 8	3 16.88	+13 21.5	1.268	2.159	15.7	20.8	10 8	3 14.16	+3 44.7	2.043	2.920	11.3	21.9
10 18	3 9.77	+12 28.7	1.240	2.187	10.8	20.6	10 18	3 7.53	+3 2.1	1.988	2.924	8.2	21.7
10 28	3 0.42	+11 31.3	1.235	2.215	5.5	20.4	10 28	2 59.28	+2 23.5	1.960	2.927	5.5	21.5
11 7	2 50.20	+10 35.7	1.255	2.243	2.5	20.3	11 7	2 50.23	+1 53.6	1.959	2.930	4.8	21.5
11 17	2 40.52	+9 49.0	1.302	2.272	6.5	20.6	11 17	2 41.28	+1 36.2	1.988	2.932	7.0	21.6
11 27	2 32.67	+9 16.9	1.375	2.300	11.1	21.0	11 27	2 33.37	+1 34.1	2.044	2.934	10.0	21.8
12 7	2 27.46	+9 2.3	1.470	2.328	15.1	21.3	12 7	2 27.18	+1 47.9	2.124	2.936	12.8	22.0
12 17	2 25.22	+9 5.5	1.585	2.355	18.2	21.6	12 17	2 23.16	+2 16.8	2.226	2.937	15.3	22.2
153698	2001 <i>UJ</i> ₄₃		11 7.2 135°25	1.1/ 6.5	18		273547	2007 <i>BP</i> ₅₅		11 7.2 212°36	1.3/ 6.4	18	
10 8	3 14.72	+16 21.9	1.710	2.587	13.1	20.0	10 8	3 16.25	+14 15.5	1.701	2.579	13.1	21.1
10 18	3 8.15	+15 29.1	1.653	2.594	9.1	19.8	10 18	3 9.40	+13 51.2	1.634	2.575	9.1	20.8
10 28	2 59.65	+14 27.7	1.622	2.601	4.6	19.5	10 28	3 0.41	+13 20.9	1.592	2.571	4.7	20.6
11 7	2 50.19	+13 22.6	1.618	2.608	1.1	19.3	11 7	2 50.26	+12 48.4	1.577	2.567	1.3	20.3
11 17	2 40.90	+12 20.1	1.643	2.615	5.1	19.6	11 17	2 40.11	+12 18.0	1.590	2.562	5.2	20.6
11 27	2 32.91	+11 26.4	1.696	2.621	9.4	19.9	11 27	2 31.17	+11 54.7	1.632	2.556	9.7	20.8
12 7	2 27.02	+10 46.4	1.774	2.627	13.1	20.1	12 7	2 24.39	+11 42.3	1.698	2.551	13.6	21.1
12 17	2 23.69	+10 22.5	1.873	2.632	16.2	20.3	12 17	2 20.30	+11 43.2	1.784	2.545	16.9	21.3
146524	2001 <i>SY</i> ₁₅₄		11 7.2 14°07	4.3/ 9.4	18		445662	2011 <i>UR</i> ₇₇		11 7.2 42°80	2.3/ 8.6	16	
10 8	3 15.53	+26 2.9	1.520	2.380	15.4	18.8	10 8	3 15.14	+22 52.2	1.652	2.517	14.1	21.4
10 18	3 9.23	+26 39.6	1.461	2.384	11.6	18.6	10 18	3 8.68	+22 58.7	1.594	2.524	10.2	21.2
10 28	3 0.42	+27 0.2	1.424	2.388	7.5	18.4	10 28	3 0.03	+22 51.9	1.560	2.531	6.0	21.0
11 7	2 50.20	+27 3.7	1.412	2.393	4.5	18.2	11 7	2 50.25	+22 33.1	1.552	2.539	2.5	20.7
11 17	2 39.99	+26 51.7	1.427	2.399	5.7	18.3	11 17	2 40.56	+22 5.3	1.572	2.548	4.6	20.9
11 27	2 31.22	+26 29.5	1.468	2.405	9.5	18.6	11 27	2 32.22	+21 34.1	1.619	2.556	8.7	21.2
12 7	2 24.98	+26 4.0	1.533	2.412	13.3	18.8	12 7	2 26.16	+21 5.5	1.692	2.565	12.6	21.4
12 17	2 21.86	+25 41.7	1.619	2.420	16.6	19.1	12 17	2 22.88	+20 44.1	1.785	2.574	15.8	21.7
329908	2005 <i>JE</i> ₁₁₆		11 7.2 315°50	3.8/ 5.4	18		267802	2003 <i>SZ</i> ₂₈₁		11 7.2 11°47	4.2/ 10.2	18	
10 8	3 16.40	+8 50.8	1.334	2.227	15.0	20.6	10 8	3 13.76	+29 4.9	2.057	2.894	12.9	19.9
10 18	3 9.83	+8 22.0	1.276	2.223	10.6	20.3	10 18	3 7.57	+29 24.0	1.988	2.895	9.9	19.7
10 28	3 0.72	+7 53.0	1.241	2.219	6.0	20.1	10 28	2 59.44	+29 27.6	1.942	2.896	6.7	19.6
11 7	2 50.22	+7 29.3	1.231	2.216	3.9	19.9	11 7	2 50.25	+29 15.5	1.923	2.898	4.4	19.4
11 17	2 39.75	+7 16.2	1.248	2.213	7.5	20.1	11 17	2 41.03	+28 49.3	1.933	2.899	5.0	19.5
11 27	2 30.78	+7 18.1	1.289	2.210	12.1	20.4	11 27	2 32.90	+28 13.5	1.970	2.902	7.8	19.6
12 7	2 24.39	+7 36.9	1.353	2.207	16.4	20.7	12 7	2 26.71	+27 34.1	2.033	2.904	10.9	19.8
12 17	2 21.14	+8 12.3	1.436	2.204	19.9	20.9	12 17	2 22.98	+26 56.7	2.120	2.907	13.7	20.0
220794	2004 <i>TE</i> ₁₉₇		11 7.2 335°97	0.6/ 6.8	18		325444	2009 <i>QE</i> ₆		11 7.2 353°31	6.8/ 2.0	18	
10 8	3 10.72	+16 46.6	1.991	2.867	11.5	20.4	10 8	3 10.11	-0 28.3	1.856	2.739	11.9	20.1
10 18	3 5.29	+16 10.7	1.923	2.864	8.0	20.2	10 18	3 4.86	-1 40.7	1.805	2.737	9.1	19.9
10 28	2 58.18	+15 27.1	1.881	2.861	4.1	19.9	10 28	2 57.96	-2 45.5	1.780	2.736	7.1	19.8
11 7	2 50.17	+14 39.5	1.867	2.857	0.6	19.6	11 7	2 50.21	-3 36.0	1.782	2.734	7.1	19.8
11 17	2 42.20	+13 52.2	1.881	2.855	4.3	19.9	11 17	2 42.56	-4 7.1	1.809	2.733	9.1	19.9
11 27	2 35.21	+13 10.4	1.924	2.852	8.2	20.2	11 27	2 35.93	-4 15.7	1.863	2.733	11.8	20.1
12 7	2 29.96	+12 38.2	1.992	2.850	11.7	20.4	12 7	2 31.04	-4 2.0	1.938	2.732	14.5	20.2
12 17	2 26.90	+12 18.4	2.083	2.848	14.6	20.6	12 17	2 28.32	-3 28.1	2.032	2.732	16.9	20.4
322222	2011 <i>AE</i> ₇₂		11 7.2 199°07	1.0/ 6.4	18		330636	2008 <i>EW</i> ₁₄₇		11 7.2 82°28	3.9/ 4.9	17	
10 8	3 11.38	+14 40.1	2.302	3.175	10.3	21.1	10 8	3 15.13	+10 12.1	1.403	2.295	14.5	20.6
10 18	3 5.55	+14 10.5	2.235	3.174	7.2	20.9	10 18	3 8.60	+9 2.5	1.362	2.309	10.1	20.3
10 28	2 58.25	+13 36.1	2.194	3.173	3.7	20.7	10 28	2 59.92	+7 50.9	1.345	2.323	5.7	20.1
11 7	2 50.18	+12 59.8	2.182	3.171	1.0	20.5	11 7	2 50.26	+6 44.7	1.354	2.337	4.0	20.1
11 17	2 42.14	+12 25.2	2.199	3.170	4.1	20.7	11 17	2 40.91	+5 51.3	1.389	2.351	7.4	20.3
11 27	2 34.96	+11 56.2	2.246	3.168	7.5	20.9	11 27	2 33.11	+5 16.3	1.451	2.364	11.6	20.6
12 7	2 29.32	+11 35.8	2.319	3.166	10.6	21.1	12 7	2 27.70	+5 2.0	1.535	2.378	15.3	20.9
12 17	2 25.64	+11 26.1	2.414	3.164	13.2	21.3	12 17	2 25.10	+5 8.0	1.638	2.391	18.4	21.1
90372	2003 <i>QR</i> ₈₈		11 7.2 43°64	2.2/ 5.3	18		148222	2000 <i>DP</i> ₅₃		11 7.2 298°65	6.1/ 10.7	18	
10 8	3 9.89	+13 54.4	1.824	2.709	12.0	17.8	10 8	3 17.74	+31 10.6	1.482	2.323	16.7	20.0
10 18	3 4.58	+12 32.7	1.783	2.728	8.2	17.6	10 18	3 11.08	+31 37.7	1.411	2.318	13.1	19.7
10 28	2 57.72	+11 6.0	1.768	2.748	4.3	17.4	10 28	3 1.54	+31 42.4	1.361	2.312	9.3	19.5
11 7	2 50.17	+9 40.7	1.781	2.768	2.4	17.3	11 7	2 50.30	+31 22.5	1.336	2.307	6.4	19.3
11 17	2 42.88	+8 23.5	1.823	2.788	5.5	17.6	11 17	2 38.94	+30 39.9	1.337	2.302	7.0	19.4
11 27	2 36.74	+7 20.3	1.892	2.808	9.1	17.8	11 27	2 29.14	+29 41.6	1.364	2.297	10.3	19.5
12 7	2 32.41	+6 34.6	1.986	2.829	12.4	18.1	12 7	2 22.14	+28 37.6	1.414	2.293	14.2	19.8
12 17	2 30.22	+6 7.3	2.102	2.850	15.0	18.3	12 17	2 18.61	+27 37.2	1.485	2.288	17.8	20.0
381005	2006 <i>TX</i> ₁₂₉		11 7.2 344°92	4.3/ 4.9	18		454656	2014 <i>QV</i> ₃₀₅		11 7.2 334°77	1.2/ 8.1	17	
10 8	3 9.39	+11 21.4	1.014	1.926	16.7	20.2	10 8	3 10.61	+21 2.8	1.759	2.632	13.0	21.0
10 18	3 5.45	+10 11.4	0.958	1.915	11.8	19.9	10 18	3 5.55	+20 47.9	1.683	2.619	9.3	20.7
10 28	2 58.64	+8 54.5	0.922	1.904	6.6	19.6	10 28	2 58.47	+20 21.1	1.631	2.607	5.2	20.5
11 7	2 50.19	+7 40.4	0.910	1.895	4.5	19.5	11 7	2 50.23	+19 44.7	1.605	2.595	1.3	20.2
11 17	2 41.72	+6 39.7	0.920	1.888	8.8	19.7	11 17	2 41.91	+19 2.5	1.607	2.584	4.3	20.4
11 27	2 34.89	+6 1.6	0.952	1.882	14.2	20.0	11 27	2 34.65	+18 20.3	1.637	2.574	8.6	20.6
12 7	2 30.94	+5 50.3	1.003	1.877	19.1	20.2	12 7	2 29.37	+17 43.8	1.691	2.564	12.6	20.8
12 17	2 30.44	+6 5.7	1.071	1.874	23.2	20.5	12 17	2 26.63	+17 17.4	1.766	2.555	15.9	21.0
446405	2014 <i>HY</i> ₁₉₄		11 7.2 166°92	3.3/ 9.9	18		521589	2015 <i>PB</i> ₃₁₆		11 7.2 186°83	0.1/ 7.3	18	

EPHEMERIDES

11 7.2

11 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
459478	2013 CT ₄₅	11	7.2 346°14	18°8/16.6	17		438797	2008 YS ₂₀	11	7.2 349°22	3°0/5.6	18	
10 8	3 27.01	+49 38.4	1.089	1.860	25.8	20.7	10 8	3 12.19	+11 7.1	1.356	2.253	14.5	20.3
10 18	3 20.10	+52 3.1	1.034	1.856	23.4	20.5	10 18	3 6.90	+10 29.8	1.298	2.247	10.1	20.1
10 28	3 7.38	+53 46.9	0.993	1.853	21.1	20.4	10 28	2 59.25	+9 49.2	1.262	2.242	5.5	19.8
11 7	2 50.48	+54 34.6	0.968	1.850	19.4	20.2	11 7	2 50.31	+9 10.9	1.251	2.238	3.1	19.7
11 17	2 32.69	+54 17.8	0.960	1.848	18.8	20.2	11 17	2 41.39	+8 41.1	1.267	2.235	6.8	19.9
11 27	2 17.96	+53 2.3	0.970	1.847	19.5	20.2	11 27	2 33.85	+8 25.1	1.307	2.232	11.5	20.1
12 7	2 8.98	+51 6.6	0.998	1.846	21.3	20.4	12 7	2 28.69	+8 26.0	1.369	2.231	15.7	20.4
12 17	2 6.59	+48 52.1	1.041	1.845	23.6	20.5	12 17	2 26.47	+8 44.6	1.450	2.230	19.2	20.6
344981	2004 XQ ₁₂₈	11	7.2 37°73	4°3/5.3	18		268231	2005 EO ₈₉	11	7.2 314°60	11°7/25.3	17	
10 8	3 16.10	+6 26.5	1.453	2.342	14.2	19.6	10 8	3 9.01	-17 47.4	2.078	2.910	12.9	20.1
10 18	3 9.35	+6 9.9	1.405	2.349	10.1	19.3	10 18	3 4.11	-19 39.7	2.037	2.895	12.0	20.0
10 28	3 0.39	+5 56.7	1.381	2.356	6.0	19.1	10 28	2 57.62	-21 12.0	2.020	2.882	11.8	19.9
11 7	2 50.32	+5 51.5	1.382	2.363	4.3	19.1	11 7	2 50.28	-22 16.7	2.026	2.868	12.4	20.0
11 17	2 40.41	+5 57.8	1.410	2.371	7.3	19.3	11 17	2 42.95	-22 49.2	2.054	2.855	13.7	20.0
11 27	2 31.96	+6 18.3	1.464	2.379	11.4	19.5	11 27	2 36.52	-22 48.1	2.102	2.842	15.4	20.1
12 7	2 25.89	+6 53.3	1.542	2.388	15.1	19.8	12 7	2 31.71	-22 15.8	2.167	2.829	16.9	20.2
12 17	2 22.66	+7 41.8	1.638	2.397	18.2	20.0	12 17	2 28.97	-21 16.9	2.247	2.816	18.4	20.4
298133	2002 RR ₂₆₅	11	7.2 17°72	6°8/10.9	18		446590	2014 SL ₁₂₅	11	7.2 266°06	5°3/1.9	17	
10 8	3 18.86	+32 18.2	1.653	2.482	15.9	20.2	10 8	3 9.22	+1 29.9	2.386	3.264	9.8	21.1
10 18	3 11.70	+33 16.0	1.588	2.483	12.6	20.0	10 18	3 4.06	+0 9.7	2.319	3.250	7.4	20.9
10 28	3 1.83	+33 53.7	1.545	2.486	9.3	19.8	10 28	2 57.54	-1 7.2	2.279	3.237	5.6	20.8
11 7	2 50.36	+34 8.0	1.527	2.488	7.0	19.7	11 7	2 50.28	-2 14.8	2.268	3.223	5.6	20.8
11 17	2 38.76	+33 58.9	1.535	2.491	7.4	19.7	11 17	2 43.01	-3 8.3	2.285	3.209	7.5	20.9
11 27	2 28.61	+33 31.2	1.570	2.495	10.0	19.9	11 27	2 36.48	-3 43.9	2.330	3.195	10.0	21.0
12 7	2 21.11	+32 53.2	1.629	2.498	13.2	20.1	12 7	2 31.32	-4 0.1	2.398	3.181	12.4	21.2
12 17	2 16.91	+32 13.1	1.709	2.502	16.2	20.3	12 17	2 27.96	-3 57.6	2.486	3.167	14.6	21.3
385743	2005 WM ₆₉	11	7.2 356°26	2°0/6.4	18		187012	2004 TW ₂₃₂	11	7.2 342°31	0°6/7.8	18	
10 8	3 12.69	+13 1.1	1.093	1.997	16.6	19.9	10 8	3 9.03	+19 17.7	2.684	3.547	9.4	20.4
10 18	3 7.67	+12 49.4	1.039	1.992	11.6	19.6	10 18	3 3.88	+19 10.9	2.610	3.542	6.6	20.2
10 28	2 59.79	+12 32.7	1.005	1.988	6.1	19.3	10 28	2 57.43	+18 57.5	2.562	3.538	3.6	20.0
11 7	2 50.31	+12 15.7	0.995	1.985	2.0	19.0	11 7	2 50.28	+18 39.1	2.544	3.534	0.7	19.8
11 17	2 40.82	+12 3.6	1.009	1.984	6.8	19.3	11 17	2 43.12	+18 17.9	2.555	3.530	3.1	20.0
11 27	2 33.02	+12 2.0	1.047	1.984	12.3	19.6	11 27	2 36.65	+17 57.0	2.595	3.527	6.2	20.2
12 7	2 28.08	+12 14.6	1.105	1.985	17.1	19.9	12 7	2 31.49	+17 39.4	2.663	3.523	9.0	20.4
12 17	2 26.62	+12 42.5	1.180	1.988	21.1	20.2	12 17	2 28.03	+17 27.6	2.755	3.520	11.4	20.5
419185	2009 UP ₂	11	7.2 35°36	0°5/7.4	18		439531	2014 CX ₁	11	7.2 233°61	1°9/8.5	18	
10 8	3 21.22	+14 52.4	1.659	2.529	13.8	19.7	10 8	3 15.18	+23 28.5	1.795	2.654	13.4	21.1
10 18	3 12.81	+15 53.1	1.610	2.547	9.7	19.5	10 18	3 8.73	+23 4.4	1.719	2.646	9.8	20.8
10 28	3 2.16	+16 49.8	1.588	2.565	5.1	19.3	10 28	3 0.13	+22 25.5	1.667	2.639	5.6	20.6
11 7	2 50.37	+17 41.4	1.593	2.584	0.6	19.0	11 7	2 50.35	+21 33.8	1.642	2.631	2.0	20.3
11 17	2 38.74	+18 27.6	1.629	2.604	4.6	19.3	11 17	2 40.53	+20 33.7	1.646	2.622	4.4	20.5
11 27	2 28.56	+19 9.7	1.693	2.624	8.9	19.6	11 27	2 31.90	+19 32.0	1.679	2.613	8.6	20.7
12 7	2 20.78	+19 50.3	1.783	2.644	12.6	19.9	12 7	2 25.40	+18 35.6	1.737	2.604	12.6	20.9
12 17	2 15.91	+20 31.7	1.895	2.665	15.7	20.2	12 17	2 21.57	+17 49.9	1.816	2.595	15.9	21.1
220466	2004 BB ₅₈	11	7.2 165°94	3°7/9.5	18		132359	2002 GQ ₆₃	11	7.2 109°22	3°4/4.5	18	
10 8	3 18.01	+26 49.9	1.624	2.474	15.0	20.3	10 8	3 13.34	+10 6.1	1.862	2.744	11.9	20.2
10 18	3 10.87	+26 53.6	1.558	2.477	11.3	20.0	10 18	3 6.99	+8 46.0	1.817	2.760	8.3	20.0
10 28	3 1.28	+26 39.4	1.515	2.479	7.2	19.8	10 28	2 59.02	+7 24.0	1.799	2.775	4.7	19.8
11 7	2 50.35	+26 7.6	1.498	2.480	3.9	19.6	11 7	2 50.32	+6 6.6	1.809	2.790	3.6	19.8
11 17	2 39.46	+25 21.5	1.509	2.482	5.3	19.7	11 17	2 41.86	+5 0.1	1.848	2.804	6.3	20.0
11 27	2 30.01	+24 28.0	1.547	2.483	9.2	19.9	11 27	2 34.58	+4 9.6	1.914	2.818	9.8	20.2
12 7	2 23.06	+23 34.9	1.611	2.484	13.1	20.2	12 7	2 29.16	+3 37.7	2.006	2.831	12.9	20.4
12 17	2 19.17	+22 49.3	1.695	2.484	16.5	20.4	12 17	2 25.99	+3 24.7	2.118	2.845	15.5	20.7
63571	2001 QC ₂₃	11	7.2 357°72	2°8/5.9	18		35640	1998 KN ₅₁	11	7.2 45°26	6°3/2.9	18	
10 8	3 10.94	+12 24.6	1.061	1.970	16.6	17.4	10 8	3 11.78	-0 3.7	1.840	2.722	12.1	18.1
10 18	3 6.44	+11 48.9	1.010	1.965	11.6	17.1	10 18	3 5.96	-0 56.8	1.799	2.731	9.1	18.0
10 28	2 59.14	+11 7.7	0.979	1.961	6.1	16.8	10 28	2 58.52	-1 41.6	1.782	2.741	6.8	17.9
11 7	2 50.30	+10 27.7	0.971	1.959	2.9	16.6	11 7	2 50.31	-2 12.5	1.793	2.750	6.6	17.9
11 17	2 41.51	+9 56.2	0.986	1.959	7.4	16.9	11 17	2 42.28	-2 25.4	1.830	2.761	8.5	18.0
11 27	2 34.40	+9 39.9	1.025	1.960	12.8	17.2	11 27	2 35.37	-2 18.4	1.893	2.771	11.3	18.2
12 7	2 30.12	+9 42.6	1.083	1.962	17.6	17.5	12 7	2 30.25	-1 52.0	1.978	2.782	14.0	18.4
12 17	2 29.23	+10 4.7	1.159	1.966	21.5	17.7	12 17	2 27.35	-1 8.5	2.084	2.793	16.3	18.6
53504	2000 AN ₉₈	11	7.2 257°15	5°1/4.3	18		214028	2004 DR ₄₉	11	7.2 286°42	7°4/1.3	18	
10 8	3 15.12	+5 37.0	1.526	2.414	13.7	18.6	10 8	3 10.97	-1 25.6	1.843	2.724	12.1	20.2
10 18	3 8.73	+4 45.9	1.466	2.409	9.9	18.4	10 18	3 5.51	-2 55.6	1.791	2.720	9.4	20.1
10 28	3 0.12	+3 57.2	1.431	2.403	6.3	18.2	10 28	2 58.35	-4 17.6	1.765	2.715	7.6	19.9
11 7	2 50.32	+3 17.5	1.421	2.397	5.3	18.1	11 7	2 50.31	-5 24.1	1.765	2.711	7.8	20.0
11 17	2 40.55	+2 52.4	1.439	2.391	8.2	18.3	11 17	2 42.34	-6 9.0	1.792	2.707	9.8	20.1
11 27	2 32.07	+2 46.4	1.482	2.385	12.1	18.5	11 27	2 35.40	-6 28.9	1.844	2.703	12.5	20.2
12 7	2 25.83	+3 0.5	1.547	2.379	15.8	18.7	12 7	2 30.24	-6 23.8	1.917	2.698	15.2	20.4
12 17	2 22.38	+3 33.7	1.631	2.373	18.9	18.9	12 17	2 27.31	-5 56.1	2.009	2.694	17.5	20.6
138184	2000 EQ ₁₁₂	11	7.2 272°05	1°7/8.3	18		235350	2003 UW ₂₆₈	11	7.2 166°24	1°8/8.6	18	
10 8	3 15.49	+22 41.7	1.589	2.456	14.5	20.0	10 8	3 15.83	+23 14				

EPHEMERIDES

11 7.2

11 7.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
44511	1998 <i>XC</i> ₅₁		11 7.2 215°49	4°8/11.6	18		248005	2004 <i>EK</i> ₃₆		11 7.2 216°19	4°0/10.2	18	
10 8	3 13.00	+33 53.4	2.481	3.287	11.9	18.1	10 8	3 15.45	+29 19.2	2.132	2.963	12.7	20.4
10 18	3 6.86	+33 56.4	2.402	3.286	9.4	17.9	10 18	3 8.77	+29 27.9	2.055	2.959	9.7	20.2
10 28	2 59.05	+33 42.5	2.348	3.284	6.9	17.7	10 28	3 0.13	+29 20.9	2.002	2.955	6.6	20.0
11 7	2 50.33	+33 11.5	2.321	3.282	5.0	17.6	11 7	2 50.39	+28 57.8	1.976	2.951	4.2	19.8
11 17	2 41.61	+32 25.3	2.322	3.280	5.1	17.6	11 17	2 40.59	+28 20.7	1.979	2.946	4.9	19.8
11 27	2 33.85	+31 28.1	2.353	3.278	7.1	17.8	11 27	2 31.86	+27 34.3	2.010	2.941	7.7	20.0
12 7	2 27.78	+30 26.0	2.410	3.276	9.6	17.9	12 7	2 25.05	+26 44.9	2.068	2.936	10.9	20.2
12 17	2 23.89	+29 24.8	2.492	3.273	12.0	18.1	12 17	2 20.71	+25 58.5	2.149	2.930	13.7	20.4
259857	2004 <i>CP</i> ₈₆		11 7.2 176°77	5°3/ 2.5	18		329061	2011 <i>AX</i> ₇₁		11 7.2 283°18	3°2/ 5.0	17	
10 8	3 11.66	+ 0 53.7	2.352	3.225	10.1	21.4	10 8	3 12.47	+ 6 58.9	2.187	3.065	10.6	21.1
10 18	3 5.68	- 0 15.2	2.298	3.227	7.6	21.2	10 18	3 6.47	+ 6 37.3	2.114	3.053	7.5	20.9
10 28	2 58.33	- 1 19.1	2.272	3.228	5.7	21.1	10 28	2 58.86	+ 6 17.0	2.067	3.041	4.5	20.7
11 7	2 50.31	- 2 12.6	2.274	3.229	5.6	21.1	11 7	2 50.36	+ 6 1.5	2.049	3.030	3.3	20.6
11 17	2 42.38	- 2 51.4	2.305	3.230	7.4	21.2	11 17	2 41.80	+ 5 53.9	2.060	3.018	5.7	20.7
11 27	2 35.31	- 3 12.7	2.364	3.230	9.8	21.4	11 27	2 34.09	+ 5 57.1	2.100	3.006	8.9	20.9
12 7	2 29.69	- 3 15.8	2.447	3.229	12.2	21.5	12 7	2 27.96	+ 6 12.3	2.164	2.994	12.0	21.1
12 17	2 25.93	- 3 1.7	2.549	3.228	14.3	21.7	12 17	2 23.88	+ 6 39.8	2.250	2.983	14.6	21.3
204808	2007 <i>GH</i> ₂₇		11 7.2 61°17	2°0/ 5.9	18		24683	1990 <i>DV</i> ₃		11 7.2 289°20	15°3/23.4	18	R
10 8	3 14.83	+14 2.6	1.423	2.311	14.5	20.1	10 8	3 12.73	-17 13.8	1.459	2.307	16.6	17.7
10 18	3 8.36	+13 9.6	1.385	2.332	10.0	19.9	10 18	3 7.32	-19 53.9	1.414	2.285	15.5	17.6
10 28	2 59.81	+12 10.9	1.372	2.352	5.1	19.7	10 28	2 59.53	-22 9.4	1.391	2.263	15.4	17.5
11 7	2 50.35	+11 12.6	1.385	2.373	2.1	19.5	11 7	2 50.37	-23 47.0	1.390	2.241	16.5	17.6
11 17	2 41.26	+10 21.1	1.425	2.394	6.0	19.8	11 17	2 41.11	-24 38.5	1.409	2.219	18.4	17.6
11 27	2 33.73	+ 9 42.6	1.491	2.416	10.4	20.1	11 27	2 33.10	-24 41.4	1.445	2.197	20.6	17.7
12 7	2 28.58	+ 9 20.5	1.580	2.437	14.2	20.4	12 7	2 27.40	-23 59.9	1.495	2.175	22.8	17.8
12 17	2 26.19	+ 9 15.7	1.690	2.458	17.3	20.7	12 17	2 24.62	-22 41.3	1.556	2.153	24.7	18.0
448758	2011 <i>QG</i> ₁₅		11 7.2 117°75	6°5/12.2	18		446209	2013 <i>GH</i> ₂₉		11 7.3 294°80	0°3/ 7.0	18	
10 8	3 20.08	+36 8.1	2.042	2.838	14.4	21.7	10 8	3 12.38	+17 34.6	1.791	2.668	12.6	21.2
10 18	3 12.05	+36 37.6	1.982	2.854	11.6	21.6	10 18	3 6.77	+17 1.2	1.713	2.653	8.9	21.0
10 28	3 1.80	+36 45.7	1.945	2.869	8.8	21.4	10 28	2 59.15	+16 18.1	1.659	2.638	4.6	20.7
11 7	2 50.40	+36 30.7	1.933	2.884	6.8	21.3	11 7	2 50.37	+15 28.8	1.632	2.623	0.3	20.3
11 17	2 39.12	+35 54.1	1.950	2.898	6.8	21.4	11 17	2 41.49	+14 38.2	1.633	2.608	4.6	20.6
11 27	2 29.24	+35 1.3	1.995	2.912	8.7	21.5	11 27	2 33.64	+13 52.2	1.662	2.593	9.1	20.9
12 7	2 21.71	+34 0.1	2.066	2.925	11.2	21.7	12 7	2 27.75	+13 16.1	1.716	2.578	13.0	21.1
12 17	2 17.03	+32 58.4	2.160	2.938	13.7	21.9	12 17	2 24.38	+12 53.5	1.791	2.564	16.4	21.3
515585	2014 <i>JM</i> ₁₂		11 7.2 204°33	2°4/ 5.8	18		301566	Melissajane		11 7.3 270°97	0°9/ 6.7	16	
10 8	3 16.03	+ 9 29.8	2.069	2.943	11.3	21.6	10 8	3 16.77	+13 42.1	1.971	2.842	11.9	21.1
10 18	3 8.97	+ 9 18.7	2.001	2.939	7.9	21.4	10 18	3 9.80	+13 43.2	1.882	2.820	8.4	20.8
10 28	3 0.14	+ 9 7.1	1.959	2.936	4.4	21.2	10 28	3 0.75	+13 40.6	1.820	2.798	4.4	20.5
11 7	2 50.36	+ 8 58.1	1.946	2.932	2.5	21.1	11 7	2 50.42	+13 36.2	1.786	2.776	1.0	20.2
11 17	2 40.58	+ 8 54.6	1.963	2.927	5.2	21.2	11 17	2 39.83	+13 32.6	1.781	2.753	4.7	20.5
11 27	2 31.79	+ 8 59.1	2.009	2.923	8.8	21.4	11 27	2 30.14	+13 33.0	1.805	2.730	8.9	20.7
12 7	2 24.77	+ 9 13.6	2.081	2.918	12.1	21.6	12 7	2 22.31	+13 40.4	1.856	2.706	12.7	20.9
12 17	2 20.03	+ 9 38.7	2.174	2.912	14.9	21.8	12 17	2 16.97	+13 57.1	1.928	2.683	16.0	21.0
130550	2000 <i>RO</i> ₁		11 7.2 72°66	4°0/ 9.3	17		292947	2006 <i>VL</i> ₉₇		11 7.3 5°76	2°2/ 8.5	18	
10 8	3 20.65	+25 45.3	1.248	2.113	17.7	19.3	10 8	3 14.75	+22 25.7	1.766	2.629	13.4	20.6
10 18	3 12.97	+26 2.0	1.203	2.130	13.1	19.1	10 18	3 8.43	+22 35.4	1.700	2.629	9.7	20.4
10 28	3 2.40	+25 58.5	1.180	2.147	8.1	18.9	10 28	3 0.00	+22 33.2	1.658	2.629	5.7	20.2
11 7	2 50.41	+25 35.2	1.181	2.165	4.3	18.7	11 7	2 50.39	+22 19.9	1.642	2.630	2.3	19.9
11 17	2 38.75	+24 56.3	1.208	2.182	6.0	18.9	11 17	2 40.78	+21 58.1	1.655	2.631	4.4	20.1
11 27	2 29.11	+24 10.1	1.261	2.200	10.5	19.2	11 27	2 32.37	+21 32.6	1.696	2.632	8.5	20.3
12 7	2 22.59	+23 25.7	1.337	2.217	14.8	19.5	12 7	2 26.08	+21 9.0	1.762	2.633	12.2	20.6
12 17	2 19.64	+22 50.3	1.433	2.234	18.4	19.8	12 17	2 22.47	+20 51.6	1.849	2.635	15.4	20.8
433612	2013 <i>YU</i> ₉₄		11 7.2 68°83	4°5/ 4.9	18		147025	2002 <i>RK</i> ₁₂		11 7.3 89°88	0°8/ 6.8	18	
10 8	3 16.08	+ 6 41.1	1.450	2.339	14.2	20.6	10 8	3 17.34	+16 42.6	1.452	2.332	14.8	20.0
10 18	3 9.25	+ 6 2.4	1.409	2.353	10.1	20.4	10 18	3 10.16	+16 1.1	1.409	2.351	10.2	19.8
10 28	3 0.30	+ 5 26.7	1.393	2.367	6.1	20.2	10 28	3 0.78	+15 10.7	1.390	2.369	5.2	19.5
11 7	2 50.37	+ 4 59.4	1.402	2.382	4.7	20.1	11 7	2 50.41	+14 16.2	1.397	2.388	0.8	19.3
11 17	2 40.72	+ 4 45.4	1.438	2.396	7.6	20.3	11 17	2 40.40	+13 24.1	1.433	2.406	5.3	19.6
11 27	2 32.59	+ 4 47.9	1.500	2.411	11.5	20.6	11 27	2 32.01	+12 40.8	1.495	2.424	10.0	19.9
12 7	2 26.81	+ 5 7.5	1.585	2.425	15.1	20.9	12 7	2 26.09	+12 11.0	1.581	2.442	14.0	20.2
12 17	2 23.81	+ 5 43.1	1.689	2.439	18.0	21.1	12 17	2 23.06	+11 57.1	1.688	2.459	17.3	20.5
231409	2007 <i>BH</i> ₉		11 7.2 79°27	5°1/ 3.9	18		119638	2001 <i>XG</i> ₂₄		11 7.3 358°58	4°7/ 9.9	18	
10 8	3 13.44	+ 1 41.6	2.019	2.896	11.4	19.9	10 8	3 14.18	+27 38.6	1.279	2.145	17.3	18.6
10 18	3 7.07	+ 1 11.3	1.967	2.901	8.4	19.8	10 18	3 8.70	+27 48.9	1.217	2.143	13.1	18.3
10 28	2 59.10	+ 0 47.2	1.942	2.905	5.8	19.6	10 28	3 0.36	+27 37.3	1.176	2.141	8.6	18.1
11 7	2 50.35	+ 0 33.6	1.943	2.910	5.3	19.6	11 7	2 50.41	+27 3.7	1.159	2.140	5.0	17.9
11 17	2 41.71	+ 0 33.7	1.974	2.915	7.3	19.7	11 17	2 40.44	+26 12.3	1.166	2.140	6.2	18.0
11 27	2 34.10	+ 0 49.3	2.031	2.919	10.1	19.9	11 27	2 32.14	+25 11.3	1.199	2.141	10.5	18.2
12 7	2 28.21	+ 1 20.4	2.112	2.924	12.9	20.1	12 7	2 26.71	+24 10.9	1.254	2.142	14.9	18.5
12 17	2 24.47	+ 2 5.5	2.215	2.929	15.3	20.3	12 17	2 24.73	+23 19.5	1.328	2.145	18.7	18.7
392692	2011 <i>WK</i> ₄₇		11 7.2 38°13	4°1/ 5.5	18		48045	2001 <i>DD</i> ₈₁		11 7.3 275°39			

EPHEMERIDES

11 7.3

11 7.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
221978	1995 <i>WJ</i> ₁₆		11 7.3 225°89	1°3/ 7.9	18		268256	2005 <i>NO</i> ₁₉		11 7.3 55°81	0°6/ 6.9	18	
10 8	3 18.03	+20 25.9	1.700	2.565	13.8	21.1	10 8	3 16.71	+17 11.3	1.226	2.115	16.3	20.4
10 18	3 10.86	+20 25.7	1.626	2.558	9.9	20.8	10 18	3 9.95	+16 37.1	1.190	2.136	11.3	20.2
10 28	3 1.33	+20 14.4	1.575	2.550	5.5	20.6	10 28	3 0.74	+15 52.6	1.177	2.157	5.8	20.0
11 7	2 50.44	+19 53.1	1.552	2.542	1.4	20.3	11 7	2 50.45	+15 3.3	1.188	2.179	0.6	19.7
11 17	2 39.45	+19 25.1	1.558	2.534	4.6	20.5	11 17	2 40.60	+14 15.8	1.226	2.201	5.7	20.1
11 27	2 29.70	+18 55.5	1.592	2.525	9.2	20.7	11 27	2 32.60	+13 37.3	1.289	2.224	10.7	20.5
12 7	2 22.22	+18 30.3	1.651	2.516	13.3	21.0	12 7	2 27.36	+13 12.8	1.375	2.246	15.0	20.8
12 17	2 17.64	+18 13.9	1.731	2.506	16.7	21.2	12 17	2 25.25	+13 4.4	1.480	2.269	18.5	21.1
253502	2003 <i>SY</i> ₁₂₂		11 7.3 70°65	2°1/ 6.2	16		475597	2006 <i>UY</i> ₈₁		11 7.3 319°87	3°9/ 8.9	18	
10 8	3 18.70	+14 15.8	1.215	2.105	16.3	20.8	10 8	3 16.83	+24 5.6	1.246	2.120	17.1	20.8
10 18	3 11.20	+13 26.3	1.185	2.131	11.2	20.6	10 18	3 10.83	+24 36.3	1.174	2.107	12.8	20.5
10 28	3 1.31	+12 30.4	1.177	2.157	5.7	20.4	10 28	3 1.66	+24 50.7	1.123	2.094	7.9	20.2
11 7	2 50.44	+11 34.8	1.195	2.184	2.1	20.2	11 7	2 50.49	+24 47.4	1.096	2.081	4.1	20.0
11 17	2 40.13	+10 46.7	1.239	2.210	6.4	20.6	11 17	2 39.00	+24 28.2	1.094	2.069	6.2	20.1
11 27	2 31.77	+10 12.4	1.308	2.236	11.3	20.9	11 27	2 29.07	+23 59.4	1.116	2.058	11.2	20.3
12 7	2 26.22	+9 55.5	1.401	2.261	15.5	21.3	12 7	2 22.14	+23 29.6	1.161	2.047	16.1	20.6
12 17	2 23.81	+9 56.6	1.512	2.287	18.8	21.6	12 17	2 18.98	+23 6.5	1.225	2.037	20.2	20.8
168556	1999 <i>WJ</i> ₂₄		11 7.3 328°37	0°7/ 6.8	18		396401	2014 <i>ED</i> ₁		11 7.3 313°01	1°0/ 6.7	18	
10 8	3 10.57	+17 47.7	1.374	2.265	14.7	19.4	10 8	3 13.47	+16 1.6	1.395	2.283	14.7	20.8
10 18	3 5.95	+16 58.3	1.301	2.248	10.4	19.1	10 18	3 7.96	+15 28.6	1.324	2.270	10.4	20.5
10 28	2 58.88	+15 55.5	1.251	2.232	5.4	18.8	10 28	2 59.94	+14 45.9	1.275	2.256	5.4	20.2
11 7	2 50.39	+14 44.6	1.226	2.216	0.7	18.4	11 7	2 50.45	+13 57.8	1.253	2.243	1.0	19.9
11 17	2 41.78	+13 33.0	1.227	2.202	5.7	18.7	11 17	2 40.84	+13 10.5	1.256	2.231	5.8	20.2
11 27	2 34.46	+12 29.6	1.253	2.188	10.9	19.0	11 27	2 32.55	+12 31.1	1.286	2.218	10.9	20.5
12 7	2 29.52	+11 41.5	1.302	2.175	15.6	19.2	12 7	2 26.70	+12 5.4	1.337	2.207	15.5	20.7
12 17	2 27.58	+11 13.0	1.370	2.163	19.5	19.4	12 17	2 23.92	+11 56.6	1.409	2.195	19.3	20.9
47040	1998 <i>WB</i> ₃		11 7.3 296°75	1°2/ 6.3	18		425821	2011 <i>DO</i> ₄₈		11 7.3 110°43	1°1/ 6.6	18	
10 8	3 10.83	+14 2.3	2.215	3.091	10.5	18.2	10 8	3 17.20	+14 51.4	1.700	2.575	13.2	21.2
10 18	3 5.39	+13 36.2	2.134	3.075	7.3	18.0	10 18	3 9.90	+14 22.6	1.652	2.592	9.1	21.0
10 28	2 58.34	+13 5.3	2.079	3.058	3.8	17.8	10 28	3 0.64	+13 47.8	1.629	2.608	4.7	20.7
11 7	2 50.38	+12 32.7	2.052	3.042	1.2	17.6	11 7	2 50.47	+13 10.9	1.634	2.624	1.2	20.5
11 17	2 42.33	+12 2.0	2.055	3.026	4.3	17.8	11 17	2 40.54	+12 36.5	1.667	2.639	5.0	20.8
11 27	2 35.08	+11 36.9	2.087	3.010	8.0	18.0	11 27	2 32.00	+12 9.4	1.729	2.654	9.2	21.1
12 7	2 29.37	+11 21.0	2.144	2.994	11.3	18.1	12 7	2 25.63	+11 53.3	1.815	2.668	12.9	21.4
12 17	2 25.70	+11 16.1	2.223	2.978	14.1	18.3	12 17	2 21.88	+11 50.0	1.923	2.682	15.9	21.6
208019	1998 <i>UL</i> ₁₃		11 7.3 341°20	0°9/ 6.7	18		300631	2007 <i>UM</i> ₄₃		11 7.3 52°48	1°2/ 6.5	18	
10 8	3 12.05	+16 20.3	1.524	2.410	13.8	20.6	10 8	3 13.44	+15 13.8	1.661	2.543	13.1	21.1
10 18	3 6.70	+15 43.6	1.460	2.405	9.7	20.4	10 18	3 7.43	+14 37.1	1.604	2.548	9.1	20.9
10 28	2 59.15	+14 57.9	1.419	2.399	5.0	20.1	10 28	2 59.44	+13 53.4	1.573	2.553	4.7	20.6
11 7	2 50.39	+14 7.4	1.404	2.394	0.9	19.8	11 7	2 50.44	+13 7.2	1.568	2.558	1.2	20.4
11 17	2 41.65	+13 18.1	1.416	2.390	5.3	20.1	11 17	2 41.57	+12 23.7	1.591	2.563	5.1	20.7
11 27	2 34.17	+12 36.6	1.454	2.386	10.0	20.3	11 27	2 33.95	+11 48.3	1.642	2.569	9.4	20.9
12 7	2 28.90	+12 7.8	1.516	2.383	14.2	20.6	12 7	2 28.42	+11 25.2	1.716	2.575	13.2	21.2
12 17	2 26.38	+11 54.7	1.598	2.380	17.6	20.8	12 17	2 25.45	+11 16.5	1.812	2.580	16.3	21.4
472399	2015 <i>BQ</i> ₁₈₆		11 7.3 129°12	3°2/ 9.1	16		50351	2000 <i>CE</i> ₇₀		11 7.3 161°54	0°1/ 7.4	18	
10 8	3 20.19	+24 56.6	1.560	2.415	15.3	21.6	10 8	3 13.50	+18 47.9	2.264	3.127	10.9	19.7
10 18	3 12.39	+25 7.4	1.502	2.425	11.3	21.4	10 18	3 7.10	+18 14.1	2.199	3.132	7.6	19.5
10 28	3 2.09	+25 1.9	1.467	2.434	6.9	21.2	10 28	2 59.16	+17 32.0	2.160	3.137	4.0	19.3
11 7	2 50.47	+24 40.4	1.459	2.443	3.4	21.0	11 7	2 50.45	+16 44.4	2.150	3.141	0.2	19.0
11 17	2 38.98	+24 6.2	1.478	2.452	5.2	21.1	11 17	2 41.82	+15 55.2	2.171	3.145	3.7	19.3
11 27	2 29.08	+23 25.6	1.525	2.460	9.3	21.4	11 27	2 34.16	+15 9.2	2.221	3.148	7.3	19.6
12 7	2 21.79	+22 46.2	1.597	2.468	13.3	21.7	12 7	2 28.15	+14 30.5	2.298	3.151	10.5	19.8
12 17	2 17.65	+22 14.1	1.690	2.475	16.7	21.9	12 17	2 24.20	+14 2.1	2.398	3.154	13.2	20.0
388212	2006 <i>GE</i> ₄₅		11 7.3 10°12	1°0/ 7.8	18		252104	2000 <i>VD</i> ₅₃		11 7.3 26°58	4°3/ 9.8	18	
10 8	3 15.94	+18 51.6	1.460	2.338	14.8	19.7	10 8	3 15.01	+27 43.4	1.117	1.991	18.7	19.8
10 18	3 9.52	+19 1.3	1.400	2.339	10.5	19.4	10 18	3 9.38	+27 26.7	1.066	1.996	14.0	19.5
10 28	3 0.65	+19 1.2	1.363	2.340	5.7	19.2	10 28	3 0.73	+26 44.2	1.034	2.002	8.9	19.3
11 7	2 50.43	+18 52.5	1.352	2.342	1.1	18.9	11 7	2 50.49	+25 37.9	1.025	2.009	4.6	19.1
11 17	2 40.23	+18 38.6	1.368	2.344	4.9	19.1	11 17	2 40.47	+24 15.0	1.041	2.017	6.1	19.2
11 27	2 31.46	+18 24.3	1.410	2.347	9.7	19.4	11 27	2 32.43	+22 47.5	1.081	2.026	11.0	19.5
12 7	2 25.17	+18 15.0	1.476	2.350	14.0	19.7	12 7	2 27.52	+21 27.2	1.143	2.035	15.8	19.8
12 17	2 21.93	+18 14.4	1.562	2.354	17.6	19.9	12 17	2 26.23	+20 22.5	1.224	2.044	19.8	20.1
359721	2011 <i>UK</i> ₉		11 7.3 259°90	0°5/ 6.9	18		109318	2001 <i>QU</i> ₁₃₇		11 7.3 133°55	3°4/ 9.8	18	
10 8	3 12.13	+17 51.1	2.004	2.876	11.7	21.0	10 8	3 14.62	+27 32.9	2.043	2.884	12.8	19.2
10 18	3 6.40	+17 0.8	1.926	2.864	8.2	20.8	10 18	3 8.17	+27 31.7	1.974	2.887	9.6	19.0
10 28	2 58.88	+16 0.6	1.874	2.852	4.2	20.5	10 28	2 59.83	+27 15.2	1.930	2.890	6.2	18.8
11 7	2 50.39	+14 54.4	1.850	2.840	0.5	20.2	11 7	2 50.48	+26 44.0	1.913	2.893	3.6	18.7
11 17	2 41.88	+13 47.6	1.855	2.828	4.4	20.5	11 17	2 41.17	+26 1.1	1.925	2.896	4.5	18.7
11 27	2 34.32	+12 46.2	1.889	2.815	8.4	20.7	11 27	2 32.98	+25 11.7	1.966	2.899	7.7	18.9
12 7	2 28.54	+11 55.6	1.949	2.803	12.1	20.9	12 7	2 26.74	+24 21.8	2.032	2.902	10.9	19.1
12 17	2 25.01	+11 19.1	2.030	2.790	15.1	21.1	12 17	2 22.94	+23 37.2	2.122	2.905	13.8	19.3
508567	2016 <i>XH</i> ₆		11 7.3 139°68	5°6/ 11.8	18		72454	2001 <i>DR</i> ₉		11 7.3 15			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
390778	2003 <i>UV</i> ₃₂₀		11 7.3 59°22	1.7/ 8.0	18		134233	2005 <i>YD</i> ₅₄		11 7.3 359°64	0.7/ 7.9	17	
10 8	3 20.20	+19 20.3	1.525	2.394	14.8	20.1	10 8	3 8.27	+20 6.6	2.563	3.427	9.7	20.2
10 18	3 12.28	+19 54.7	1.479	2.413	10.6	19.9	10 18	3 3.42	+19 46.0	2.493	3.426	6.9	20.0
10 28	3 2.00	+20 19.3	1.457	2.432	5.8	19.7	10 28	2 57.28	+19 17.7	2.450	3.425	3.7	19.8
11 7	2 50.54	+20 34.1	1.462	2.452	1.7	19.5	11 7	2 50.45	+18 43.7	2.435	3.425	0.7	19.5
11 17	2 39.32	+20 40.9	1.496	2.471	4.8	19.7	11 17	2 43.65	+18 7.0	2.449	3.425	3.2	19.7
11 27	2 29.69	+20 43.6	1.557	2.491	9.2	20.1	11 27	2 37.59	+17 31.2	2.493	3.426	6.3	19.9
12 7	2 22.62	+20 47.0	1.642	2.511	13.1	20.3	12 7	2 32.87	+16 59.9	2.564	3.426	9.2	20.1
12 17	2 18.60	+20 55.0	1.749	2.531	16.3	20.6	12 17	2 29.90	+16 35.9	2.658	3.428	11.7	20.3
250705	2005 <i>QF</i> ₁₈₉		11 7.3 9°83	0.7/ 6.8	18		218569	2005 <i>GR</i> ₁₈₀		11 7.3 100°42	2.2/ 5.9	16	
10 8	3 12.08	+16 16.3	1.778	2.658	12.5	20.5	10 8	3 17.90	+13 18.9	1.573	2.452	13.9	21.2
10 18	3 6.45	+15 44.2	1.717	2.659	8.7	20.3	10 18	3 10.37	+12 23.0	1.534	2.476	9.5	21.0
10 28	2 58.94	+15 4.6	1.680	2.660	4.5	20.0	10 28	3 0.88	+11 22.2	1.520	2.500	5.0	20.8
11 7	2 50.46	+14 21.2	1.670	2.661	0.7	19.8	11 7	2 50.56	+10 22.4	1.534	2.522	2.3	20.7
11 17	2 42.05	+13 38.8	1.689	2.663	4.7	20.1	11 17	2 40.62	+9 29.9	1.577	2.544	5.9	21.0
11 27	2 34.76	+13 2.6	1.735	2.665	8.8	20.3	11 27	2 32.23	+8 50.1	1.647	2.566	10.0	21.3
12 7	2 29.41	+12 37.0	1.806	2.667	12.5	20.6	12 7	2 26.14	+8 26.3	1.741	2.586	13.7	21.6
12 17	2 26.48	+12 24.3	1.898	2.669	15.6	20.8	12 17	2 22.74	+8 19.4	1.856	2.606	16.6	21.8
485342	2011 <i>CB</i> ₆		11 7.3 292°83	5.5/ 2.6	17		178250	2007 <i>TG</i> ₂₃		11 7.3 29°24	7.8/ 3.9	18	
10 8	3 9.87	+1 29.0	2.175	3.056	10.5	20.9	10 8	3 16.41	-2 42.0	1.478	2.358	14.6	18.8
10 18	3 4.64	+0 24.8	2.114	3.047	7.9	20.7	10 18	3 9.55	-3 5.6	1.436	2.365	11.2	18.6
10 28	2 57.93	-0 34.9	2.078	3.038	5.8	20.6	10 28	3 0.56	-3 15.6	1.417	2.373	8.5	18.5
11 7	2 50.44	-1 24.4	2.070	3.029	5.7	20.5	11 7	2 50.55	-3 6.5	1.423	2.381	7.9	18.5
11 17	2 42.96	-1 59.1	2.090	3.021	7.6	20.6	11 17	2 40.77	-2 35.6	1.455	2.389	10.0	18.7
11 27	2 36.32	-2 15.8	2.137	3.012	10.3	20.8	11 27	2 32.44	-1 42.7	1.512	2.398	13.1	18.9
12 7	2 31.18	-2 13.6	2.207	3.004	12.9	21.0	12 7	2 26.42	-0 30.9	1.591	2.408	16.2	19.1
12 17	2 27.98	-1 53.5	2.297	2.996	15.2	21.1	12 17	2 23.17	+0 55.9	1.689	2.418	18.8	19.3
244431	2002 <i>TZ</i> ₉₇		11 7.3 172°42	3.7/ 4.6	18		302776	2002 <i>WD</i> ₅		11 7.3 41°85	2.3/ 6.3	18	
10 8	3 13.31	+7 36.4	1.969	2.850	11.4	21.3	10 8	3 17.98	+9 46.3	1.536	2.419	13.9	19.7
10 18	3 7.09	+6 45.4	1.911	2.851	8.1	21.1	10 18	3 10.65	+10 1.1	1.489	2.432	9.7	19.5
10 28	2 59.21	+5 54.7	1.879	2.853	4.9	21.0	10 28	3 1.15	+10 16.4	1.466	2.445	5.2	19.3
11 7	2 50.47	+5 9.2	1.875	2.854	3.8	20.9	11 7	2 50.57	+10 34.3	1.470	2.458	2.3	19.1
11 17	2 41.82	+4 33.8	1.900	2.855	6.3	21.1	11 17	2 40.18	+10 56.7	1.502	2.472	5.7	19.4
11 27	2 34.21	+4 12.2	1.953	2.855	9.7	21.3	11 27	2 31.25	+11 25.7	1.562	2.487	10.0	19.7
12 7	2 28.35	+4 6.5	2.030	2.856	12.8	21.5	12 7	2 24.66	+12 2.5	1.645	2.501	13.8	20.0
12 17	2 24.71	+4 16.6	2.128	2.856	15.4	21.7	12 17	2 20.91	+12 47.4	1.750	2.516	16.9	20.2
211257	2002 <i>RJ</i>		11 7.3 89°86	4.7/10.7	18		31041	1996 <i>KD</i>		11 7.3 203°91	1.6/ 6.3	18	
10 8	3 15.92	+30 42.5	1.844	2.676	14.3	20.1	10 8	3 15.97	+13 30.0	1.834	2.709	12.4	18.8
10 18	3 9.23	+30 44.0	1.782	2.685	11.0	19.9	10 18	3 9.17	+13 0.2	1.766	2.706	8.6	18.6
10 28	3 0.42	+30 26.2	1.743	2.694	7.6	19.7	10 28	3 0.40	+12 25.4	1.724	2.703	4.5	18.3
11 7	2 50.52	+29 49.2	1.730	2.703	4.9	19.6	11 7	2 50.55	+11 49.2	1.709	2.698	1.6	18.1
11 17	2 40.73	+28 56.3	1.745	2.712	5.4	19.6	11 17	2 40.72	+11 16.2	1.724	2.694	5.1	18.4
11 27	2 32.29	+27 53.9	1.788	2.721	8.3	19.8	11 27	2 32.02	+10 50.9	1.767	2.689	9.3	18.6
12 7	2 26.08	+26 49.7	1.857	2.730	11.6	20.0	12 7	2 25.30	+10 36.9	1.835	2.683	13.0	18.8
12 17	2 22.59	+25 50.6	1.948	2.738	14.6	20.3	12 17	2 21.09	+10 36.2	1.924	2.677	16.1	19.0
24515	2001 <i>BN</i> ₅₈		11 7.3 44°29	4.3/10.7	18		154936	2004 <i>TM</i> ₃₈		11 7.3 121°90	0.3/ 7.0	18	
10 8	3 13.31	+30 37.2	2.070	2.900	13.0	18.7	10 8	3 12.39	+16 53.0	2.457	3.322	10.0	21.4
10 18	3 7.28	+30 35.2	2.001	2.904	10.0	18.5	10 18	3 6.21	+16 25.4	2.400	3.335	7.0	21.2
10 28	2 59.37	+30 15.8	1.957	2.908	6.9	18.3	10 28	2 58.68	+15 51.9	2.370	3.348	3.6	21.0
11 7	2 50.49	+29 39.4	1.939	2.912	4.5	18.2	11 7	2 50.51	+15 15.1	2.370	3.361	0.3	20.8
11 17	2 41.66	+28 48.7	1.949	2.916	5.0	18.2	11 17	2 42.46	+14 38.4	2.400	3.373	3.5	21.1
11 27	2 33.96	+27 49.4	1.988	2.921	7.7	18.4	11 27	2 35.30	+14 5.5	2.459	3.385	6.8	21.3
12 7	2 28.19	+26 48.1	2.053	2.925	10.7	18.6	12 7	2 29.62	+13 39.5	2.546	3.396	9.7	21.5
12 17	2 24.83	+25 51.1	2.141	2.930	13.5	18.8	12 17	2 25.82	+13 22.7	2.656	3.407	12.1	21.7
48071	2001 <i>FV</i> ₅		11 7.3 191°93	4.4/ 9.7	18		86404	2000 <i>AG</i> ₁₅₀		11 7.3 3°96	0.5/ 7.7	18	
10 8	3 21.30	+27 40.3	1.796	2.633	14.4	18.1	10 8	3 10.32	+21 1.2	1.939	2.809	12.1	18.7
10 18	3 13.23	+28 13.9	1.723	2.632	11.0	17.9	10 18	3 5.14	+20 8.4	1.873	2.809	8.6	18.5
10 28	3 2.64	+28 31.5	1.673	2.630	7.3	17.7	10 28	2 58.26	+19 3.5	1.832	2.809	4.6	18.3
11 7	2 50.58	+28 31.4	1.651	2.628	4.6	17.5	11 7	2 50.51	+17 50.3	1.819	2.809	0.6	17.9
11 17	2 38.40	+28 14.7	1.658	2.625	5.6	17.5	11 17	2 42.84	+16 34.6	1.834	2.810	4.0	18.2
11 27	2 27.54	+27 46.1	1.692	2.622	9.0	17.7	11 27	2 36.23	+15 22.9	1.878	2.811	8.0	18.5
12 7	2 19.09	+27 12.6	1.753	2.618	12.6	18.0	12 7	2 31.40	+14 21.1	1.948	2.813	11.6	18.7
12 17	2 13.71	+26 41.2	1.836	2.614	15.8	18.2	12 17	2 28.80	+13 33.1	2.041	2.815	14.6	18.9
514667	2005 <i>UN</i> ₂₆₇		11 7.3 317°78	1.8/ 6.4	18		473464	2015 <i>XM</i> ₅₉		11 7.3 260°52	1.1/ 6.3	17	
10 8	3 13.70	+13 55.4	1.298	2.192	15.2	20.9	10 8	3 10.60	+15 42.1	2.405	3.276	10.0	21.2
10 18	3 8.34	+13 30.8	1.225	2.173	10.7	20.6	10 18	3 5.15	+14 48.0	2.322	3.260	7.0	21.0
10 28	3 0.26	+12 59.2	1.174	2.155	5.6	20.3	10 28	2 58.23	+13 46.9	2.266	3.245	3.6	20.8
11 7	2 50.52	+12 24.9	1.148	2.137	1.8	20.0	11 7	2 50.52	+12 42.4	2.239	3.228	1.1	20.6
11 17	2 40.55	+11 53.8	1.147	2.120	6.4	20.2	11 17	2 42.76	+11 39.2	2.242	3.212	4.1	20.8
11 27	2 31.91	+11 32.4	1.171	2.104	11.8	20.5	11 27	2 35.76	+10 42.1	2.276	3.196	7.6	21.0
12 7	2 25.85	+11 25.7	1.217	2.088	16.6	20.7	12 7	2 30.20	+9 55.3	2.335	3.179	10.7	21.1
12 17	2 23.08	+11 36.1	1.282	2.074	20.6	20.9	12 17	2 26.53	+9 21.5	2.418	3.162	13.4	21.3
274136	2008 <i>FP</i> ₅		11 7.3 128°48	0.9/ 6.7	18		412750	2014 <i>OV</i> ₃₆₉		11 7.3 10°39	2.6/ 5.6	17	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
217174	2002 <i>RM</i> ₃₂		11 7.3 45°55'	2°9'	5.6	18	355338	2007 <i>TO</i> ₈₄		11 7.3 350°85'	3°9'	8.9	17
10 8	3 14.04	+13 29.8	1.212	2.110	15.8	19.9	10 8	3 13.42	+23 10.6	1.183	2.066	17.2	20.2
10 18	3 8.22	+12 19.6	1.170	2.120	10.9	19.7	10 18	3 8.48	+23 56.3	1.118	2.056	12.8	20.0
10 28	2 59.97	+11 2.5	1.150	2.132	5.8	19.4	10 28	3 0.48	+24 27.5	1.074	2.046	7.9	19.7
11 7	2 50.56	+9 46.9	1.156	2.143	3.0	19.3	11 7	2 50.62	+24 42.6	1.053	2.039	4.1	19.4
11 17	2 41.45	+8 41.3	1.187	2.155	7.1	19.6	11 17	2 40.50	+24 42.6	1.057	2.033	6.2	19.5
11 27	2 34.04	+7 53.5	1.242	2.168	11.9	19.9	11 27	2 31.96	+24 32.8	1.084	2.029	11.1	19.8
12 7	2 29.26	+7 27.4	1.320	2.181	16.2	20.2	12 7	2 26.37	+24 20.5	1.133	2.026	15.8	20.1
12 17	2 27.53	+7 23.3	1.415	2.194	19.7	20.4	12 17	2 24.45	+24 12.6	1.201	2.025	19.8	20.3
388668	2007 <i>TP</i> ₃₇₃		11 7.3 69°69'	7°3'	12.7	18	426698	2013 <i>TX</i> ₃₀		11 7.3 57°25'	1°4'	7.9	15
10 8	3 21.62	+36 57.7	1.693	2.496	16.6	20.6	10 8	3 19.10	+20 10.3	1.168	2.051	17.4	20.6
10 18	3 13.29	+37 24.3	1.653	2.527	13.4	20.5	10 18	3 11.90	+20 8.8	1.129	2.070	12.3	20.4
10 28	3 2.52	+37 24.8	1.633	2.559	10.2	20.4	10 28	3 1.93	+19 53.3	1.111	2.089	6.7	20.1
11 7	2 50.64	+36 58.0	1.639	2.590	7.8	20.3	11 7	2 50.65	+19 26.3	1.118	2.108	1.5	19.9
11 17	2 39.18	+36 6.8	1.671	2.620	7.6	20.4	11 17	2 39.77	+18 53.3	1.151	2.128	5.5	20.2
11 27	2 29.56	+34 59.0	1.730	2.651	9.5	20.5	11 27	2 30.90	+18 21.5	1.208	2.148	10.7	20.5
12 7	2 22.72	+33 44.4	1.814	2.681	12.2	20.8	12 7	2 25.06	+17 57.7	1.289	2.168	15.3	20.9
12 17	2 19.05	+32 32.0	1.921	2.710	14.8	21.0	12 17	2 22.66	+17 46.1	1.388	2.188	18.9	21.2
378096	2006 <i>UY</i> ₁₄₇		11 7.3 26°75'	2°5'	8.3	18	482323	2011 <i>UJ</i> ₂₅₁		11 7.3 10°40'	3°9'	5.5	17
10 8	3 18.13	+21 5.1	1.169	2.052	17.4	20.8	10 8	3 14.15	+7 25.8	1.402	2.296	14.3	20.4
10 18	3 11.52	+21 30.2	1.118	2.057	12.6	20.6	10 18	3 8.21	+7 13.4	1.351	2.298	10.1	20.2
10 28	3 1.89	+21 41.2	1.088	2.063	7.2	20.3	10 28	3 0.00	+7 3.5	1.324	2.301	5.9	20.0
11 7	2 50.63	+21 38.4	1.081	2.070	2.6	20.0	11 7	2 50.60	+7 0.6	1.321	2.305	4.0	19.9
11 17	2 39.45	+21 24.8	1.100	2.078	5.7	20.3	11 17	2 41.32	+7 8.4	1.345	2.310	7.1	20.1
11 27	2 30.14	+21 7.0	1.144	2.086	11.0	20.6	11 27	2 33.43	+7 29.4	1.395	2.316	11.3	20.3
12 7	2 23.91	+20 52.1	1.210	2.094	15.7	20.9	12 7	2 27.91	+8 4.5	1.467	2.322	15.2	20.6
12 17	2 21.31	+20 45.5	1.295	2.104	19.6	21.2	12 17	2 25.24	+8 52.9	1.558	2.330	18.4	20.8
104146	2000 <i>EE</i> ₆₇		11 7.3 132°45'	3°5'	4.5	18	100982	1998 <i>QU</i> ₂₈		11 7.3 8°02'	1°0'	7.9	18
10 8	3 11.61	+10 3.7	1.859	2.744	11.8	19.6	10 8	3 13.62	+21 25.3	1.239	2.124	16.4	18.9
10 18	3 6.00	+8 45.3	1.801	2.745	8.2	19.3	10 18	3 8.19	+20 47.3	1.182	2.124	11.8	18.6
10 28	2 58.70	+7 24.0	1.770	2.746	4.8	19.1	10 28	3 0.11	+19 52.1	1.147	2.125	6.4	18.3
11 7	2 50.54	+6 6.3	1.767	2.748	3.6	19.1	11 7	2 50.61	+18 44.1	1.136	2.127	1.2	18.0
11 17	2 42.48	+4 58.8	1.792	2.749	6.4	19.3	11 17	2 41.22	+17 31.1	1.151	2.129	5.4	18.3
11 27	2 35.50	+4 6.9	1.844	2.750	10.0	19.5	11 27	2 33.48	+16 22.6	1.191	2.132	10.7	18.6
12 7	2 30.31	+3 33.7	1.921	2.751	13.3	19.7	12 7	2 28.46	+15 26.9	1.254	2.135	15.5	18.9
12 17	2 27.37	+3 20.0	2.018	2.752	16.0	19.9	12 17	2 26.69	+14 49.2	1.335	2.139	19.3	19.2
128017	2003 <i>JL</i> ₁₃		11 7.3 169°76'	2°3'	5.9	17	500665	2012 <i>VB</i> ₂₉		11 7.3 182°10'	1°5'	6.2	17
10 8	3 17.66	+13 12.5	1.563	2.443	13.9	20.2	10 8	3 17.55	+21 35.2	1.117	2.002	17.9	21.2
10 18	3 10.50	+12 22.4	1.505	2.447	9.7	20.0	10 18	3 11.00	+19 6.5	1.058	2.002	12.5	20.9
10 28	3 1.13	+11 26.4	1.471	2.450	5.1	19.7	10 28	3 1.54	+16 10.6	1.022	2.003	6.3	20.5
11 7	2 50.61	+10 29.8	1.464	2.452	2.3	19.5	11 7	2 50.65	+13 0.9	1.012	2.003	1.6	20.2
11 17	2 40.23	+9 39.0	1.486	2.454	6.1	19.8	11 17	2 40.07	+9 56.1	1.031	2.002	7.4	20.6
11 27	2 31.24	+9 0.1	1.535	2.455	10.5	20.1	11 27	2 31.47	+7 14.9	1.076	2.002	13.4	20.9
12 7	2 24.59	+8 37.0	1.609	2.456	14.5	20.3	12 7	2 25.92	+5 9.3	1.143	2.000	18.5	21.2
12 17	2 20.76	+8 31.5	1.702	2.456	17.8	20.5	12 17	2 23.88	+3 42.8	1.228	1.999	22.5	21.5
473667	2015 <i>XE</i> ₃₄₈		11 7.3 258°14'	3°7'	10.8	17	246478	2007 <i>WP</i> ₄₁		11 7.3 65°93'	1°4'	6.4	18
10 8	3 12.39	+31 13.5	2.519	3.338	11.3	21.1	10 8	3 14.32	+14 7.0	1.693	2.575	13.0	20.9
10 18	3 6.49	+30 54.7	2.428	3.324	8.8	20.9	10 18	3 8.02	+13 39.4	1.641	2.583	9.0	20.6
10 28	2 58.97	+30 19.8	2.362	3.310	6.1	20.7	10 28	2 59.80	+13 6.6	1.613	2.592	4.6	20.4
11 7	2 50.56	+29 29.3	2.323	3.296	3.9	20.6	11 7	2 50.61	+12 32.5	1.612	2.601	1.4	20.2
11 17	2 42.09	+28 25.7	2.314	3.281	4.3	20.6	11 17	2 41.56	+12 1.5	1.639	2.611	5.1	20.5
11 27	2 34.49	+27 14.0	2.335	3.266	6.8	20.7	11 27	2 33.78	+11 38.5	1.694	2.620	9.3	20.8
12 7	2 28.49	+26 0.2	2.383	3.251	9.6	20.9	12 7	2 28.06	+11 26.7	1.773	2.629	13.0	21.0
12 17	2 24.56	+24 50.3	2.456	3.236	12.2	21.0	12 17	2 24.87	+11 27.9	1.873	2.639	16.0	21.2
357846	2005 <i>UQ</i> ₁₉₀		11 7.3 74°74'	0°1'	7.2	18	448591	2010 <i>TC</i> ₉₀		11 7.3 315°57'	1°5'	6.2	17
10 8	3 15.88	+15 56.0	1.976	2.845	11.9	20.9	10 8	3 12.37	+13 38.2	1.930	2.809	11.7	21.8
10 18	3 8.93	+16 3.4	1.921	2.858	8.3	20.7	10 18	3 6.58	+13 5.0	1.865	2.807	8.1	21.6
10 28	3 0.21	+16 5.3	1.892	2.870	4.3	20.5	10 28	2 59.05	+12 27.0	1.825	2.805	4.2	21.3
11 7	2 50.60	+16 3.6	1.891	2.882	0.1	20.1	11 7	2 50.59	+11 47.9	1.813	2.802	1.6	21.1
11 17	2 41.09	+16 0.3	1.920	2.894	4.1	20.5	11 17	2 42.15	+11 12.1	1.830	2.800	4.9	21.4
11 27	2 32.72	+15 58.8	1.977	2.906	7.9	20.8	11 27	2 34.73	+10 44.2	1.875	2.798	8.7	21.6
12 7	2 26.23	+16 2.0	2.061	2.918	11.3	21.0	12 7	2 29.11	+10 27.4	1.945	2.796	12.2	21.8
12 17	2 22.10	+16 12.1	2.167	2.930	14.1	21.2	12 17	2 25.75	+10 23.6	2.037	2.794	15.1	22.0
454254	2013 <i>PM</i> ₄₇		11 7.3 261°75'	6°2'	13.2	18	334699	2003 <i>EY</i> ₁₇		11 7.3 190°77'	2°7'	4.9	18
10 8	3 14.45	+39 24.4	2.619	3.390	12.2	20.5	10 8	3 12.01	+8 27.3	2.559	3.432	9.4	21.4
10 18	3 8.08	+39 36.2	2.526	3.376	10.2	20.3	10 18	3 5.97	+7 46.0	2.493	3.431	6.6	21.3
10 28	2 59.87	+39 28.9	2.455	3.361	8.1	20.2	10 28	2 58.61	+7 4.2	2.455	3.429	3.9	21.1
11 7	2 50.59	+39 1.0	2.411	3.347	6.6	20.0	11 7	2 50.58	+6 25.6	2.446	3.427	2.8	21.0
11 17	2 41.22	+38 13.2	2.394	3.332	6.4	20.0	11 17	2 42.59	+5 53.6	2.467	3.424	5.0	21.2
11 27	2 32.76	+37 9.4	2.406	3.316	7.7	20.1	11 27	2 35.37	+5 31.4	2.518	3.420	7.8	21.3
12 7	2 26.07	+35 56.0	2.444	3.301	9.8	20.2	12 7	2 29.51	+5 20.9	2.595	3.416	10.5	21.5
12 17	2 21.68	+34 39.6	2.507	3.285	12.0	20.3	12 17	2 25.41	+5 22.7	2.695	3.412	12.8	21.7
480231	2015 <i>HQ</i> ₂		11 7.3 135°62'	1°3'	6.6	17	25852	2000 <i>EW</i> ₁₄₇		11 7.3 101°30'	3°0'	5.3	18
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
103264	2000 AQ ₂₅	11	7.3 330°18	0°7/ 7.7 18			84323	2002 TA ₄₈	11	7.3 165°68	0°3/ 7.1 17		
10 8	3 14.11	+18 39.0	1.486	2.366	14.5	19.0	10 8	3 18.43	+16 26.6	1.981	2.845	12.1	19.8
10 18	3 8.40	+18 37.4	1.415	2.356	10.3	18.8	10 18	3 10.78	+16 12.3	1.917	2.851	8.5	19.6
10 28	3 0.24	+18 25.6	1.368	2.346	5.6	18.5	10 28	3 1.24	+15 51.2	1.879	2.857	4.4	19.3
11 7	2 50.65	+18 5.8	1.346	2.337	0.8	18.1	11 7	2 50.73	+15 25.7	1.871	2.861	0.3	19.0
11 17	2 40.94	+17 41.5	1.351	2.328	4.9	18.4	11 17	2 40.29	+14 59.2	1.892	2.865	4.3	19.4
11 27	2 32.50	+17 18.4	1.382	2.320	9.9	18.7	11 27	2 31.01	+14 36.1	1.943	2.868	8.3	19.6
12 7	2 26.43	+17 1.9	1.437	2.312	14.3	18.9	12 7	2 23.69	+14 20.1	2.020	2.870	11.8	19.8
12 17	2 23.35	+16 56.0	1.512	2.305	17.9	19.1	12 17	2 18.83	+14 13.8	2.119	2.872	14.8	20.0
175972	2000 LX ₃₇	11	7.3 69°20	3°5/ 5.0 18			228834	2003 DL ₈	11	7.3 307°31	0°6/ 7.6 18		
10 8	3 13.47	+ 7 54.5	1.861	2.744	11.9	20.3	10 8	3 15.16	+18 54.5	1.400	2.281	15.1	20.9
10 18	3 7.33	+ 7 19.4	1.804	2.746	8.4	20.1	10 18	3 9.31	+18 44.0	1.326	2.267	10.8	20.6
10 28	2 59.44	+ 6 44.9	1.773	2.748	4.9	19.9	10 28	3 0.81	+18 21.7	1.275	2.254	5.8	20.3
11 7	2 50.64	+ 6 15.5	1.769	2.750	3.6	19.8	11 7	2 50.72	+17 50.0	1.249	2.240	0.7	19.9
11 17	2 41.91	+ 5 55.3	1.793	2.752	6.2	19.9	11 17	2 40.43	+17 13.5	1.250	2.227	5.2	20.2
11 27	2 34.27	+ 5 47.9	1.844	2.754	9.7	20.2	11 27	2 31.49	+16 38.9	1.276	2.214	10.5	20.4
12 7	2 28.47	+ 5 54.7	1.920	2.756	13.0	20.4	12 7	2 25.07	+16 12.7	1.326	2.201	15.2	20.7
12 17	2 24.99	+ 6 15.9	2.017	2.758	15.8	20.6	12 17	2 21.87	+15 59.4	1.395	2.189	19.1	20.9
67340	2000 JJ ₂₁	11	7.3 345°75	1°3/ 8.5 18			515029	2009 UG ₁₂₉	11	7.3 35°33	4°0/ 4.2 18		
10 8	3 8.06	+22 41.4	2.422	3.281	10.4	17.9	10 8	3 10.20	+ 8 42.4	1.730	2.620	12.2	20.4
10 18	3 3.43	+22 14.3	2.346	3.274	7.5	17.7	10 18	3 5.05	+ 7 26.9	1.687	2.632	8.6	20.2
10 28	2 57.38	+21 36.9	2.295	3.267	4.3	17.5	10 28	2 58.23	+ 6 11.1	1.669	2.645	5.1	20.1
11 7	2 50.58	+20 51.2	2.272	3.261	1.4	17.2	11 7	2 50.63	+ 5 1.8	1.679	2.658	4.2	20.0
11 17	2 43.77	+20 0.6	2.279	3.255	3.3	17.4	11 17	2 43.23	+ 4 5.2	1.716	2.672	6.8	20.2
11 27	2 37.75	+19 9.6	2.315	3.250	6.6	17.6	11 27	2 36.97	+ 3 25.8	1.780	2.686	10.3	20.5
12 7	2 33.16	+18 22.6	2.378	3.245	9.6	17.8	12 7	2 32.56	+ 3 5.9	1.867	2.700	13.5	20.7
12 17	2 30.41	+17 43.5	2.464	3.241	12.3	17.9	12 17	2 30.39	+ 3 5.2	1.975	2.715	16.1	20.9
45392	2000 AR ₁₂₉	11	7.3 110°66	5°9/12.3 18			317568	2002 VL ₁₁₄	11	7.3 19°97	0°8/ 6.9 18		
10 8	3 17.38	+35 48.8	2.049	2.851	14.2	18.7	10 8	3 12.55	+16 53.6	0.996	1.901	17.7	19.7
10 18	3 10.17	+35 51.2	1.987	2.865	11.4	18.6	10 18	3 7.66	+16 21.4	0.956	1.909	12.4	19.4
10 28	3 0.93	+35 31.9	1.948	2.878	8.5	18.4	10 28	2 59.89	+15 37.6	0.936	1.918	6.4	19.2
11 7	2 50.68	+34 50.5	1.935	2.892	6.3	18.3	11 7	2 50.68	+14 48.3	0.938	1.929	0.8	18.8
11 17	2 40.62	+33 49.7	1.950	2.905	6.2	18.3	11 17	2 41.74	+14 1.3	0.964	1.941	6.3	19.2
11 27	2 31.90	+32 35.8	1.993	2.918	8.2	18.5	11 27	2 34.73	+13 25.0	1.013	1.954	12.0	19.6
12 7	2 25.39	+31 17.0	2.063	2.930	10.9	18.7	12 7	2 30.72	+13 5.2	1.082	1.969	16.9	19.9
12 17	2 21.53	+30 0.8	2.156	2.942	13.5	18.9	12 17	2 30.14	+13 3.8	1.169	1.985	20.8	20.3
366494	2002 NL ₇₉	11	7.3 142°08	5°9/13.3 17			165606	2001 FJ ₆₄	11	7.3 170°46	3°6/ 9.6 18		
10 8	3 15.22	+39 3.9	2.683	3.454	12.0	21.4	10 8	3 18.46	+26 56.0	2.123	2.958	12.6	20.4
10 18	3 8.45	+39 14.6	2.610	3.461	9.9	21.2	10 18	3 10.93	+27 19.9	2.051	2.960	9.5	20.2
10 28	2 59.99	+39 6.8	2.561	3.468	7.8	21.1	10 28	3 1.40	+27 30.1	2.005	2.963	6.2	20.0
11 7	2 50.66	+38 39.4	2.538	3.475	6.2	21.0	11 7	2 50.74	+27 26.2	1.986	2.965	3.7	19.9
11 17	2 41.39	+37 53.9	2.543	3.481	6.0	21.0	11 17	2 40.04	+27 9.5	1.998	2.966	4.6	20.0
11 27	2 33.14	+36 54.4	2.577	3.487	7.3	21.1	11 27	2 30.42	+26 44.0	2.038	2.968	7.7	20.2
12 7	2 26.63	+35 46.9	2.638	3.493	9.2	21.2	12 7	2 22.80	+26 15.2	2.105	2.968	10.9	20.4
12 17	2 22.34	+34 37.6	2.724	3.498	11.3	21.4	12 17	2 17.70	+25 48.5	2.195	2.969	13.7	20.6
20438	1999 JP ₂₂	11	7.3 95°86	1°4/ 8.1 18			101421	1998 VS ₁₇	11	7.3 26°43	1°4/ 7.9 18		
10 8	3 19.68	+21 51.2	1.443	2.310	15.6	18.8	10 8	3 18.27	+18 1.4	1.701	2.570	13.5	18.2
10 18	3 11.93	+21 23.9	1.399	2.332	11.1	18.6	10 18	3 10.95	+18 49.5	1.646	2.580	9.6	18.0
10 28	3 1.85	+20 41.9	1.379	2.354	6.1	18.3	10 28	3 1.44	+19 30.9	1.616	2.591	5.3	17.7
11 7	2 50.72	+19 48.6	1.385	2.375	1.5	18.1	11 7	2 50.74	+20 4.9	1.614	2.603	1.5	17.5
11 17	2 39.98	+18 50.1	1.419	2.395	4.8	18.4	11 17	2 40.09	+20 31.9	1.640	2.616	4.4	17.8
11 27	2 31.00	+17 54.2	1.480	2.415	9.5	18.7	11 27	2 30.74	+20 54.4	1.695	2.629	8.6	18.0
12 7	2 24.65	+17 7.6	1.566	2.435	13.7	19.0	12 7	2 23.66	+21 15.8	1.775	2.643	12.4	18.3
12 17	2 21.36	+16 34.8	1.672	2.454	17.0	19.3	12 17	2 19.36	+21 39.3	1.877	2.657	15.4	18.5
212887	2007 VV ₂₇₂	11	7.3 306°08	10°3/29.1 18			269291	2008 SM ₂₁	11	7.3 312°34	4°2/ 3.7 17		
10 8	3 10.98	- 8 4.2	1.743	2.614	13.2	20.1	10 8	3 9.38	+ 6 51.6	2.041	2.927	10.8	20.1
10 18	3 5.69	-10 8.7	1.701	2.609	11.2	19.9	10 18	3 4.48	+ 5 41.0	1.972	2.914	7.8	19.9
10 28	2 58.62	-11 58.4	1.684	2.605	10.3	19.9	10 28	2 58.00	+ 4 30.1	1.929	2.902	5.0	19.7
11 7	2 50.63	-13 24.0	1.692	2.600	10.9	19.9	11 7	2 50.65	+ 3 24.6	1.914	2.889	4.4	19.6
11 17	2 42.72	-14 18.6	1.725	2.596	12.7	20.0	11 17	2 43.28	+ 2 30.2	1.928	2.877	6.8	19.7
11 27	2 35.90	-14 39.7	1.780	2.592	15.0	20.2	11 27	2 36.78	+ 1 51.6	1.968	2.865	10.0	19.9
12 7	2 30.93	-14 28.9	1.854	2.588	17.3	20.3	12 7	2 31.84	+ 1 31.3	2.033	2.853	13.0	20.1
12 17	2 28.29	-13 50.4	1.943	2.584	19.2	20.5	12 17	2 28.96	+ 1 29.5	2.117	2.842	15.6	20.3
135775	2002 RB ₅₄	11	7.3 318°05	5°8/10.4 18			35300	1996 VQ ₁₈	11	7.3 128°22	0°5/ 7.6 18		
10 8	3 19.32	+30 27.7	1.777	2.607	14.8	19.5	10 8	3 16.17	+19 5.1	1.793	2.661	13.0	19.7
10 18	3 12.04	+31 20.7	1.704	2.604	11.6	19.2	10 18	3 9.35	+18 47.1	1.733	2.668	9.2	19.4
10 28	3 2.17	+31 56.5	1.654	2.601	8.3	19.0	10 28	3 0.55	+18 19.4	1.699	2.676	4.9	19.2
11 7	2 50.75	+32 12.2	1.631	2.598	6.0	18.9	11 7	2 50.75	+17 44.5	1.692	2.683	0.6	18.9
11 17	2 39.12	+32 7.7	1.635	2.595	6.5	18.9	11 17	2 41.06	+17 6.6	1.714	2.690	4.3	19.2
11 27	2 28.75	+31 47.1	1.666	2.592	9.4	19.1	11 27	2 32.61	+16 30.9	1.765	2.697	8.5	19.5
12 7	2 20.81	+31 17.3	1.722	2.590	12.7	19.3	12 7	2 26.25	+16 2.4	1.841	2.703	12.3	19.7
12 17	2 15.99	+30 46.0	1.800	2.587	15.7	19.5	12 17	2 22.46	+15 44.5	1.938	2.709	15.3	19.9
394982	2009 BZ ₁₅	11	7.3 151°68	5°1/11.4 18			430570	2002 QT ₄₃	11	7.3 33°77	5°4/ 9.4 18		
10 8	3 16.42	+33 14.6	2.024										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
172265	2002 <i>TW</i> ₂₁	11 7.3 19°46'	0°8'	7.8	18		320247	2007 <i>LZ</i> ₄	11 7.3 76°00'	1°7'	8.7	18	
10 8	3 15.62	+18 58.4	1.769	2.639	13.1	19.6	10 8	3 14.55	+24 57.3	1.576	2.439	14.8	20.3
10 18	3 9.10	+19 0.3	1.704	2.639	9.3	19.4	10 18	3 8.37	+23 54.8	1.520	2.449	10.7	20.1
10 28	3 0.49	+18 53.1	1.664	2.640	5.0	19.1	10 28	3 0.07	+22 33.6	1.488	2.460	6.1	19.9
11 7	2 50.76	+18 38.7	1.650	2.641	0.9	18.8	11 7	2 50.78	+20 58.5	1.482	2.471	1.9	19.6
11 17	2 41.03	+18 19.8	1.666	2.642	4.3	19.1	11 17	2 41.75	+19 17.3	1.505	2.482	4.5	19.9
11 27	2 32.47	+18 1.1	1.709	2.643	8.6	19.4	11 27	2 34.18	+17 39.7	1.556	2.493	9.0	20.1
12 7	2 26.01	+17 46.9	1.777	2.644	12.4	19.6	12 7	2 28.94	+16 14.0	1.632	2.504	13.0	20.4
12 17	2 22.18	+17 41.0	1.867	2.645	15.6	19.8	12 17	2 26.42	+15 5.8	1.730	2.515	16.4	20.7
188380	2004 <i>CE</i> ₇₇	11 7.3 230°73'	3°0'	5.4	18		243489	2009 <i>UX</i> ₁₁	11 7.3 226°15'	0°9'	6.8	17	
10 8	3 15.56	+11 12.6	1.692	2.574	12.9	20.6	10 8	3 17.03	+12 30.8	2.250	3.116	10.8	20.3
10 18	3 9.09	+10 18.5	1.623	2.565	9.1	20.3	10 18	3 9.74	+12 50.9	2.180	3.116	7.5	20.1
10 28	3 0.51	+9 20.0	1.578	2.556	5.0	20.0	10 28	3 0.74	+13 9.5	2.137	3.115	3.9	19.9
11 7	2 50.77	+8 22.7	1.561	2.547	3.1	19.9	11 7	2 50.81	+13 27.4	2.124	3.114	0.9	19.6
11 17	2 41.01	+7 32.7	1.573	2.537	6.3	20.1	11 17	2 40.84	+13 46.1	2.141	3.113	4.0	19.9
11 27	2 32.40	+6 55.7	1.612	2.526	10.5	20.3	11 27	2 31.78	+14 7.3	2.189	3.112	7.6	20.1
12 7	2 25.87	+6 35.5	1.675	2.515	14.4	20.5	12 7	2 24.39	+14 32.8	2.264	3.111	10.9	20.3
12 17	2 21.98	+6 33.4	1.757	2.504	17.6	20.7	12 17	2 19.18	+15 3.8	2.362	3.110	13.5	20.5
513626	2011 <i>KC</i> ₃₀	11 7.3 52°30'	0°3'	7.4	18		182784	2001 <i>YX</i> ₁₂₃	11 7.3 353°89'	1°5'	6.5	18	
10 8	3 21.97	+16 0.4	1.322	2.201	16.0	19.5	10 8	3 15.83	+11 57.1	1.865	2.742	12.2	19.4
10 18	3 13.54	+16 26.7	1.292	2.232	11.2	19.3	10 18	3 9.13	+12 1.7	1.801	2.741	8.5	19.2
10 28	3 2.70	+16 45.4	1.285	2.264	5.8	19.1	10 28	3 0.49	+12 4.3	1.762	2.740	4.5	18.9
11 7	2 50.84	+16 57.6	1.305	2.296	0.4	18.8	11 7	2 50.80	+12 7.3	1.750	2.740	1.5	18.7
11 17	2 39.49	+17 5.9	1.352	2.328	5.1	19.2	11 17	2 41.11	+12 12.9	1.768	2.739	4.8	18.9
11 27	2 30.07	+17 14.3	1.426	2.360	9.9	19.6	11 27	2 32.49	+12 23.8	1.814	2.739	8.9	19.2
12 7	2 23.47	+17 26.6	1.524	2.393	14.0	19.9	12 7	2 25.81	+12 42.3	1.886	2.739	12.4	19.4
12 17	2 20.07	+17 45.5	1.642	2.425	17.2	20.2	12 17	2 21.59	+13 9.6	1.979	2.739	15.4	19.6
451847	2013 <i>LQ</i> ₁₀	11 7.3 176°34'	1°7'	5.8	18		447015	2004 <i>HF</i> ₄	11 7.3 238°10'	2°5'	5.2	18	
10 8	3 11.01	+13 40.4	2.286	3.161	10.3	20.7	10 8	3 11.74	+12 11.6	2.110	2.988	10.9	21.2
10 18	3 5.43	+12 44.8	2.221	3.162	7.1	20.5	10 18	3 6.09	+11 0.8	2.038	2.980	7.6	21.0
10 28	2 58.43	+11 44.4	2.184	3.162	3.7	20.2	10 28	2 58.84	+9 44.9	1.994	2.972	4.1	20.7
11 7	2 50.71	+10 43.3	2.175	3.163	1.7	20.1	11 7	2 50.75	+8 29.2	1.978	2.963	2.6	20.6
11 17	2 43.05	+9 46.2	2.196	3.163	4.5	20.3	11 17	2 42.66	+7 19.5	1.992	2.954	5.4	20.8
11 27	2 36.26	+8 57.8	2.247	3.163	7.9	20.5	11 27	2 35.48	+6 21.4	2.034	2.944	8.9	21.0
12 7	2 30.98	+8 21.3	2.323	3.163	10.9	20.7	12 7	2 29.92	+5 38.5	2.102	2.935	12.2	21.2
12 17	2 27.61	+7 58.6	2.422	3.163	13.4	20.9	12 17	2 26.44	+5 12.8	2.191	2.925	14.9	21.4
149523	2003 <i>FM</i> ₁₀₆	11 7.3 176°31'	0°5'	7.6	18		180226	2003 <i>UM</i> ₁₃₀	11 7.3 333°03'	3°4'	9.8	18	
10 8	3 14.30	+18 25.8	2.071	2.937	11.6	20.2	10 8	3 12.87	+27 53.6	1.572	2.428	15.2	19.5
10 18	3 7.94	+18 21.0	2.004	2.938	8.2	20.0	10 18	3 7.49	+27 20.6	1.500	2.421	11.4	19.3
10 28	2 59.82	+18 8.7	1.961	2.938	4.4	19.8	10 28	2 59.77	+26 26.1	1.450	2.415	7.2	19.0
11 7	2 50.76	+17 50.5	1.947	2.938	0.5	19.5	11 7	2 50.78	+25 12.3	1.426	2.409	3.7	18.8
11 17	2 41.70	+17 29.3	1.963	2.938	3.9	19.8	11 17	2 41.81	+23 44.8	1.429	2.404	5.0	18.9
11 27	2 33.63	+17 8.9	2.007	2.938	7.7	20.0	11 27	2 34.18	+22 12.6	1.459	2.399	9.1	19.1
12 7	2 27.34	+16 53.4	2.077	2.938	11.1	20.2	12 7	2 28.90	+20 45.5	1.513	2.395	13.3	19.4
12 17	2 23.32	+16 45.6	2.170	2.938	14.0	20.4	12 17	2 26.51	+19 31.1	1.590	2.391	16.9	19.6
167264	2003 <i>UH</i> ₁₂₇	11 7.3 264°26'	0°7'	6.9	18		404960	1998 <i>RM</i> ₅₆	11 7.3 66°62'	7°5'	13.0	18	
10 8	3 14.15	+16 19.9	1.870	2.744	12.3	20.8	10 8	3 19.44	+38 46.1	2.119	2.900	14.4	20.2
10 18	3 8.05	+15 50.4	1.792	2.731	8.6	20.5	10 18	3 11.84	+39 37.4	2.061	2.916	12.0	20.0
10 28	2 59.98	+15 13.0	1.738	2.717	4.5	20.3	10 28	3 1.97	+40 7.1	2.026	2.933	9.6	19.9
11 7	2 50.76	+14 30.8	1.712	2.703	0.7	19.9	11 7	2 50.87	+40 12.4	2.016	2.949	7.8	19.8
11 17	2 41.45	+13 48.5	1.715	2.689	4.6	20.2	11 17	2 39.79	+39 53.9	2.033	2.965	7.7	19.8
11 27	2 33.14	+13 11.1	1.747	2.674	8.9	20.4	11 27	2 30.05	+39 16.0	2.076	2.982	9.0	20.0
12 7	2 26.74	+12 43.5	1.803	2.660	12.8	20.7	12 7	2 22.61	+38 25.9	2.146	2.998	11.2	20.1
12 17	2 22.80	+12 28.7	1.881	2.645	16.0	20.9	12 17	2 18.02	+37 31.4	2.238	3.015	13.4	20.3
372350	2009 <i>FT</i> ₄₇	11 7.3 92°28'	1°4'	6.6	17		99879	2002 <i>PO</i> ₈₅	11 7.3 31°89'	2°5'	5.6	18	
10 8	3 20.72	+14 31.4	1.441	2.319	15.0	21.1	10 8	3 11.37	+10 31.4	1.896	2.781	11.6	19.0
10 18	3 12.55	+14 4.3	1.404	2.345	10.4	20.8	10 18	3 5.85	+9 59.4	1.847	2.791	8.1	18.8
10 28	3 2.17	+13 31.2	1.391	2.370	5.3	20.6	10 28	2 58.70	+9 26.0	1.823	2.801	4.4	18.6
11 7	2 50.84	+12 56.3	1.405	2.395	1.4	20.4	11 7	2 50.76	+8 55.4	1.826	2.812	2.6	18.5
11 17	2 39.95	+12 24.8	1.448	2.420	5.5	20.8	11 17	2 42.95	+8 31.4	1.858	2.823	5.3	18.7
11 27	2 30.81	+12 2.0	1.517	2.444	10.1	21.1	11 27	2 36.20	+8 17.6	1.917	2.835	8.9	19.0
12 7	2 24.25	+11 51.3	1.611	2.467	14.1	21.4	12 7	2 31.21	+8 16.2	2.000	2.847	12.1	19.2
12 17	2 20.65	+11 54.4	1.725	2.489	17.2	21.7	12 17	2 28.40	+8 27.7	2.105	2.859	14.8	19.4
79231	1994 <i>PO</i> ₂₂	11 7.3 62°29'	4°6'	9.8	18		131578	2001 <i>VT</i> ₁₁₃	11 7.3 128°44'	0°1'	7.4	18	
10 8	3 19.82	+27 18.6	1.335	2.192	17.2	17.9	10 8	3 19.35	+17 36.1	1.356	2.235	15.7	20.0
10 18	3 12.43	+27 38.3	1.290	2.211	12.9	17.7	10 18	3 12.08	+17 23.6	1.300	2.240	11.1	19.7
10 28	3 2.32	+27 37.4	1.267	2.230	8.3	17.5	10 28	3 2.18	+17 0.8	1.267	2.246	5.8	19.4
11 7	2 50.85	+27 15.7	1.268	2.249	4.8	17.4	11 7	2 50.88	+16 30.7	1.260	2.251	0.2	19.0
11 17	2 39.68	+26 37.1	1.296	2.268	6.0	17.5	11 17	2 39.70	+15 58.3	1.280	2.256	5.4	19.4
11 27	2 30.40	+25 49.5	1.349	2.287	10.0	17.8	11 27	2 30.17	+15 29.9	1.326	2.260	10.5	19.8
12 7	2 24.07	+25 2.0	1.426	2.307	14.0	18.1	12 7	2 23.36	+15 11.2	1.396	2.265	15.0	20.0
12 17	2 21.13	+24 21.7	1.524	2.326	17.4	18.4	12 17	2 19.80	+15 5.6	1.485	2.269	18.7	20.3
480326	2015 <i>HC</i> ₁₈₀	11 7.3 177°06'	2°3'	5.9	18		232186	2002 <i>EZ</i> ₁₂₅	11 7.3 178°66'	2°7'	5.4	18	

EPHEMERIDES

11 7.3

11 7.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
273057	2006 <i>DU</i> ₁₇₃		11 7.3 13°60	5°0/ 3.3 18			7072	Beijingdaxue		11 7.3 163°17	0°1/ 7.3 18	R	
10 8	3 10.04	+ 3 47.9	2.021	2.906	11.0	20.1	10 8	3 16.65	+18 0.9	1.886	2.752	12.5	18.3
10 18	3 4.87	+ 2 42.0	1.969	2.907	8.1	20.0	10 18	3 9.66	+17 33.1	1.822	2.758	8.8	18.1
10 28	2 58.20	+ 1 39.7	1.942	2.909	5.6	19.8	10 28	3 0.75	+16 56.4	1.785	2.762	4.6	17.9
11 7	2 50.76	+ 0 46.5	1.943	2.910	5.2	19.8	11 7	2 50.87	+16 13.8	1.775	2.766	0.1	17.5
11 17	2 43.40	+ 0 7.4	1.972	2.912	7.3	19.9	11 17	2 41.07	+15 29.7	1.795	2.769	4.3	17.9
11 27	2 36.98	- 0 14.0	2.028	2.915	10.2	20.1	11 27	2 32.45	+14 49.5	1.844	2.772	8.5	18.1
12 7	2 32.16	- 0 16.9	2.107	2.917	13.0	20.3	12 7	2 25.83	+14 17.8	1.918	2.774	12.1	18.4
12 17	2 29.36	- 0 1.8	2.206	2.920	15.3	20.5	12 17	2 21.69	+13 57.7	2.015	2.776	15.1	18.6
202889	1991 <i>TF</i> ₁₅		11 7.3 18°25	0°6/ 7.6 18			272414	2005 <i>TT</i> ₅₇		11 7.3 208°30	1°0/ 6.6 18		
10 8	3 15.80	+16 56.4	1.157	2.050	16.7	19.1	10 8	3 15.93	+15 37.0	1.880	2.752	12.3	21.2
10 18	3 9.84	+17 20.4	1.111	2.058	11.8	18.8	10 18	3 9.22	+14 59.2	1.809	2.747	8.6	21.0
10 28	3 1.08	+17 35.8	1.087	2.067	6.3	18.5	10 28	3 0.58	+14 14.0	1.763	2.742	4.5	20.7
11 7	2 50.85	+17 44.0	1.086	2.077	0.7	18.2	11 7	2 50.86	+13 25.0	1.745	2.736	1.0	20.5
11 17	2 40.77	+17 47.8	1.111	2.089	5.5	18.6	11 17	2 41.15	+12 37.2	1.757	2.729	4.8	20.7
11 27	2 32.46	+17 52.1	1.160	2.102	10.8	18.9	11 27	2 32.53	+11 56.1	1.798	2.722	9.0	21.0
12 7	2 27.05	+18 1.4	1.231	2.116	15.5	19.2	12 7	2 25.85	+11 25.9	1.864	2.714	12.7	21.2
12 17	2 25.04	+18 19.0	1.321	2.131	19.2	19.5	12 17	2 21.65	+11 9.5	1.951	2.706	15.8	21.4
516284	2016 <i>WS</i> ₂₇		11 7.3 359°44	5°7/ 4.4 18			517089	2013 <i>CV</i> ₁₅₉		11 7.3 188°17	0°0/ 7.3 18		
10 8	3 11.85	+ 5 59.6	1.229	2.131	15.2	19.9	10 8	3 13.67	+17 44.8	2.446	3.307	10.2	22.9
10 18	3 6.89	+ 5 6.2	1.179	2.128	11.0	19.7	10 18	3 7.30	+17 23.2	2.374	3.306	7.2	22.7
10 28	2 59.50	+ 4 16.0	1.151	2.126	7.0	19.5	10 28	2 59.46	+16 54.8	2.328	3.305	3.7	22.5
11 7	2 50.81	+ 3 36.6	1.147	2.125	5.9	19.4	11 7	2 50.83	+16 21.8	2.313	3.304	0.1	22.2
11 17	2 42.20	+ 3 14.7	1.168	2.126	9.0	19.6	11 17	2 42.22	+15 47.4	2.327	3.302	3.5	22.5
11 27	2 35.07	+ 3 14.9	1.212	2.127	13.2	19.8	11 27	2 34.45	+15 15.3	2.372	3.299	6.9	22.7
12 7	2 30.43	+ 3 37.7	1.277	2.129	17.2	20.1	12 7	2 28.19	+14 49.1	2.444	3.296	10.0	22.9
12 17	2 28.80	+ 4 21.3	1.360	2.133	20.6	20.3	12 17	2 23.88	+14 31.5	2.539	3.292	12.6	23.1
239149	2006 <i>JJ</i> ₅₅		11 7.3 105°83	2°1/ 6.0 18			398033	2009 <i>DU</i> ₁₁₅		11 7.3 184°17	2°8/ 5.3 18		
10 8	3 15.76	+11 44.5	1.876	2.753	12.1	20.2	10 8	3 13.46	+10 2.7	2.045	2.924	11.2	21.7
10 18	3 8.89	+11 16.5	1.827	2.768	8.4	20.0	10 18	3 7.29	+ 9 17.3	1.983	2.924	7.8	21.5
10 28	3 0.28	+10 46.0	1.804	2.782	4.4	19.8	10 28	2 59.49	+ 8 30.1	1.947	2.924	4.4	21.3
11 7	2 50.84	+10 16.7	1.809	2.796	2.1	19.7	11 7	2 50.83	+ 7 45.4	1.940	2.923	2.9	21.2
11 17	2 41.59	+ 9 52.5	1.843	2.810	5.2	19.9	11 17	2 42.23	+ 7 7.8	1.961	2.923	5.5	21.3
11 27	2 33.52	+ 9 37.2	1.905	2.824	8.9	20.2	11 27	2 34.61	+ 6 41.4	2.011	2.922	9.0	21.6
12 7	2 27.39	+ 9 33.2	1.992	2.837	12.3	20.4	12 7	2 28.70	+ 6 28.7	2.086	2.920	12.2	21.8
12 17	2 23.61	+ 9 41.5	2.101	2.850	15.0	20.6	12 17	2 24.95	+ 6 30.5	2.182	2.919	14.9	21.9
490516	2009 <i>UU</i> ₁₀₉		11 7.3 192°02	2°8/ 5.7 17			329946	2005 <i>QW</i> ₃₆		11 7.3 57°02	1°5/ 8.2 18		
10 8	3 17.00	+ 6 8.5	2.436	3.302	10.1	21.2	10 8	3 18.53	+21 30.2	1.238	2.116	16.9	20.5
10 18	3 9.57	+ 6 19.3	2.368	3.301	7.2	21.0	10 18	3 11.36	+21 12.1	1.204	2.142	12.0	20.3
10 28	3 0.62	+ 6 32.9	2.328	3.300	4.2	20.8	10 28	3 1.67	+20 38.7	1.192	2.168	6.6	20.1
11 7	2 50.86	+ 6 51.3	2.318	3.300	2.8	20.7	11 7	2 50.90	+19 53.7	1.204	2.194	1.7	19.8
11 17	2 41.10	+ 7 15.8	2.339	3.299	4.9	20.9	11 17	2 40.62	+19 3.4	1.243	2.221	5.1	20.1
11 27	2 32.19	+ 7 47.6	2.391	3.298	7.9	21.0	11 27	2 32.28	+18 15.9	1.308	2.247	10.1	20.5
12 7	2 24.81	+ 8 27.0	2.470	3.296	10.8	21.2	12 7	2 26.79	+17 37.9	1.396	2.274	14.4	20.8
12 17	2 19.43	+ 9 14.1	2.572	3.295	13.2	21.4	12 17	2 24.52	+17 13.7	1.504	2.301	17.9	21.1
117351	2004 <i>XE</i> ₆₃		11 7.3 220°86	2°1/ 9.0 18			243375	2008 <i>XY</i> ₁₇		11 7.4 271°45	1°4/ 6.4 18		
10 8	3 14.34	+25 48.6	1.809	2.663	13.6	19.4	10 8	3 14.03	+14 45.6	1.769	2.648	12.6	21.0
10 18	3 8.21	+24 57.4	1.736	2.659	10.0	19.2	10 18	3 8.08	+14 5.6	1.691	2.633	8.8	20.7
10 28	3 0.05	+23 48.0	1.687	2.656	5.9	18.9	10 28	3 0.07	+13 18.2	1.638	2.618	4.6	20.5
11 7	2 50.83	+22 23.5	1.665	2.652	2.3	18.7	11 7	2 50.88	+12 27.6	1.613	2.603	1.5	20.2
11 17	2 41.69	+20 50.1	1.672	2.649	4.3	18.8	11 17	2 41.57	+11 39.0	1.616	2.587	5.2	20.4
11 27	2 33.77	+19 16.0	1.708	2.645	8.4	19.1	11 27	2 33.31	+10 58.3	1.647	2.572	9.6	20.7
12 7	2 27.95	+17 49.6	1.771	2.640	12.3	19.3	12 7	2 27.02	+10 30.2	1.703	2.556	13.5	20.9
12 17	2 24.71	+16 37.0	1.855	2.636	15.6	19.5	12 17	2 23.29	+10 17.2	1.779	2.541	16.8	21.1
153644	2001 <i>TO</i> ₈₇		11 7.3 357°78	4°5/ 9.8 18			77328	2001 <i>FZ</i> ₉₂		11 7.4 106°33	2°5/ 6.0 18		
10 8	3 16.90	+27 27.2	1.419	2.277	16.4	19.6	10 8	3 19.30	+11 17.0	1.598	2.476	13.8	19.5
10 18	3 10.58	+27 43.5	1.355	2.276	12.4	19.4	10 18	3 11.51	+10 48.8	1.555	2.496	9.5	19.3
10 28	3 1.51	+27 40.1	1.312	2.275	8.1	19.1	10 28	3 1.69	+10 18.2	1.537	2.515	5.1	19.1
11 7	2 50.89	+27 16.5	1.294	2.275	4.8	19.0	11 7	2 50.93	+ 9 49.6	1.547	2.534	2.5	18.9
11 17	2 40.22	+26 35.7	1.302	2.275	5.9	19.0	11 17	2 40.48	+ 9 27.5	1.585	2.552	5.9	19.2
11 27	2 31.11	+25 44.9	1.336	2.275	10.0	19.3	11 27	2 31.53	+ 9 15.8	1.651	2.570	10.0	19.5
12 7	2 24.73	+24 53.1	1.393	2.275	14.2	19.5	12 7	2 24.89	+ 9 17.0	1.741	2.587	13.7	19.8
12 17	2 21.68	+24 8.0	1.471	2.276	17.8	19.8	12 17	2 20.99	+ 9 31.7	1.852	2.604	16.6	20.0
277807	2006 <i>FH</i> ₂₄		11 7.3 264°97	3°4/ 9.5 17			97138	1999 <i>VX</i> ₁₂₃		11 7.4 222°60	0°0/ 7.4 18		
10 8	3 17.39	+26 8.1	2.355	3.189	11.5	20.5	10 8	3 11.17	+19 8.6	2.570	3.432	9.8	19.9
10 18	3 10.17	+26 49.2	2.278	3.186	8.7	20.3	10 18	3 5.54	+18 21.8	2.492	3.424	6.9	19.7
10 28	3 1.07	+27 19.5	2.226	3.184	5.7	20.1	10 28	2 58.55	+17 26.4	2.440	3.417	3.6	19.4
11 7	2 50.88	+27 37.6	2.203	3.181	3.5	20.0	11 7	2 50.84	+16 25.6	2.418	3.409	0.1	19.1
11 17	2 40.54	+27 44.1	2.211	3.178	4.4	20.0	11 17	2 43.13	+15 23.1	2.426	3.400	3.4	19.4
11 27	2 31.09	+27 41.5	2.248	3.175	7.2	20.2	11 27	2 36.20	+14 23.8	2.465	3.392	6.7	19.6
12 7	2 23.37	+27 33.9	2.312	3.173	10.1	20.4	12 7	2 30.65	+13 31.8	2.531	3.383	9.7	19.8
12 17	2 17.96	+27 25.7	2.400	3.170	12.8	20.6	12 17	2 26.90	+12 50.4	2.621	3.373	12.2	20.0
39993	1998 <i>HQ</i> ₄₁		11 7.3 29°76	0°3/ 7.2 18			443498	2014 <i>JG</i> ₃₃		11 7.4 99°06			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
11394	1998 <i>XL</i> ₇₇		11 7.4 15°12'	6°2'	3.6	18	67313	2000 <i>HG</i> ₁₆		11 7.4 60°26'	0°7'	6.9	18
10 8	3 12.23	+ 0 6.3	1.813	2.695	12.2	16.7	10 8	3 15.10	+15 12.2	1.827	2.702	12.4	19.4
10 18	3 6.53	- 0 30.6	1.766	2.699	9.2	16.5	10 18	3 8.67	+15 2.9	1.765	2.705	8.7	19.2
10 28	2 59.12	- 0 59.1	1.742	2.703	6.7	16.4	10 28	3 0.31	+14 48.1	1.729	2.708	4.5	18.9
11 7	2 50.86	- 1 14.3	1.746	2.707	6.3	16.4	11 7	2 50.94	+14 30.3	1.720	2.711	0.7	18.7
11 17	2 42.72	- 1 12.6	1.776	2.712	8.3	16.5	11 17	2 41.60	+14 13.0	1.740	2.714	4.5	19.0
11 27	2 35.67	- 0 52.2	1.832	2.718	11.1	16.7	11 27	2 33.40	+14 0.0	1.788	2.717	8.7	19.2
12 7	2 30.43	- 0 13.8	1.911	2.724	14.0	16.9	12 7	2 27.17	+13 54.7	1.861	2.720	12.3	19.5
12 17	2 27.44	+ 0 40.3	2.010	2.731	16.4	17.1	12 17	2 23.41	+13 59.5	1.955	2.723	15.3	19.7
371887	2008 <i>CE</i> ₇₄		11 7.4 14°38'	8°1'	3.6	18	398704	2012 <i>XX</i> ₄₄		11 7.4 274°28'	0°0'	7.4	18
10 8	3 12.02	+ 3 27.5	0.929	1.843	17.8	19.6	10 8	3 15.01	+17 53.8	1.780	2.652	12.9	21.5
10 18	3 7.36	+ 2 12.2	0.894	1.847	13.1	19.4	10 18	3 8.85	+17 34.0	1.699	2.636	9.1	21.3
10 28	2 59.83	+ 1 5.5	0.880	1.852	9.1	19.2	10 28	3 0.54	+17 4.9	1.642	2.620	4.8	21.0
11 7	2 50.89	+ 0 18.7	0.886	1.859	8.4	19.2	11 7	2 50.95	+16 29.0	1.612	2.603	0.2	20.6
11 17	2 42.22	- 0 0.3	0.914	1.867	11.6	19.4	11 17	2 41.19	+15 50.5	1.611	2.587	4.6	20.9
11 27	2 35.45	+ 0 12.3	0.963	1.877	15.9	19.7	11 27	2 32.49	+15 14.7	1.638	2.570	9.1	21.1
12 7	2 31.64	+ 0 54.3	1.031	1.888	20.0	19.9	12 7	2 25.80	+14 46.9	1.690	2.553	13.1	21.3
12 17	2 31.24	+ 2 0.5	1.114	1.900	23.4	20.2	12 17	2 21.75	+14 30.9	1.763	2.536	16.6	21.5
220852	2004 <i>VK</i> ₆₁		11 7.4 353°08'	6°5'	2.9	18	181454	2006 <i>TK</i> ₃₅		11 7.4 289°44'	1°3'	8.1	18
10 8	3 11.66	- 0 29.7	1.858	2.739	12.0	19.4	10 8	3 14.59	+20 32.4	1.885	2.750	12.6	20.7
10 18	3 6.15	- 1 18.8	1.805	2.736	9.1	19.2	10 18	3 8.47	+20 30.7	1.807	2.739	9.1	20.5
10 28	2 58.95	- 1 59.8	1.777	2.734	6.9	19.0	10 28	3 0.30	+20 18.9	1.753	2.727	5.1	20.2
11 7	2 50.86	- 2 27.0	1.775	2.733	6.7	19.0	11 7	2 50.94	+19 58.3	1.726	2.716	1.4	19.9
11 17	2 42.84	- 2 36.2	1.800	2.731	8.6	19.1	11 17	2 41.45	+19 31.8	1.728	2.704	4.2	20.1
11 27	2 35.84	- 2 25.2	1.851	2.730	11.4	19.3	11 27	2 32.98	+19 4.0	1.758	2.693	8.3	20.4
12 7	2 30.61	- 1 54.4	1.924	2.730	14.2	19.5	12 7	2 26.45	+18 39.9	1.814	2.682	12.1	20.6
12 17	2 27.59	- 1 6.0	2.017	2.730	16.6	19.7	12 17	2 22.45	+18 23.6	1.891	2.670	15.4	20.8
78090	2002 <i>LF</i> ₂₉		11 7.4 91°03'	4°4'	11.0	18	275536	1998 <i>RV</i> ₃		11 7.4 30°01'	8°0'	2.7	18
10 8	3 15.76	+31 45.8	1.831	2.660	14.5	19.2	10 8	3 10.64	+ 6 7.5	0.906	1.823	17.7	19.4
10 18	3 9.16	+31 17.8	1.771	2.673	11.2	19.0	10 18	3 6.15	+ 3 55.1	0.887	1.843	12.7	19.2
10 28	3 0.52	+30 28.3	1.734	2.686	7.6	18.8	10 28	2 59.05	+ 1 50.3	0.890	1.864	8.8	19.1
11 7	2 50.92	+29 18.9	1.724	2.698	4.8	18.6	11 7	2 50.89	+ 0 7.8	0.914	1.887	8.4	19.2
11 17	2 41.54	+27 54.5	1.741	2.711	5.1	18.7	11 17	2 43.27	- 1 1.6	0.961	1.911	11.7	19.4
11 27	2 33.57	+26 23.0	1.788	2.723	8.2	18.9	11 27	2 37.61	- 1 33.4	1.029	1.936	15.8	19.8
12 7	2 27.82	+24 53.4	1.860	2.735	11.5	19.1	12 7	2 34.76	- 1 29.8	1.115	1.963	19.6	20.1
12 17	2 24.72	+23 32.8	1.956	2.747	14.5	19.4	12 17	2 34.99	- 0 56.6	1.217	1.990	22.6	20.4
523275	2017 <i>BB</i> ₁		11 7.4 273°67'	0°3'	7.2	18	439720	2015 <i>DZ</i> ₂₀₅		11 7.4 146°74'	4°1'	4.9	18
10 8	3 14.45	+16 37.6	1.932	2.804	12.0	21.5	10 8	3 16.26	+ 7 39.0	1.639	2.523	13.2	21.2
10 18	3 8.29	+16 23.6	1.853	2.790	8.5	21.3	10 18	3 9.51	+ 6 50.9	1.586	2.527	9.3	20.9
10 28	3 0.17	+16 2.4	1.798	2.777	4.4	21.0	10 28	3 0.74	+ 6 3.3	1.558	2.532	5.6	20.7
11 7	2 50.92	+15 36.6	1.772	2.763	0.3	20.6	11 7	2 50.96	+ 5 22.1	1.556	2.536	4.2	20.7
11 17	2 41.54	+15 9.5	1.774	2.749	4.3	20.9	11 17	2 41.31	+ 4 52.5	1.583	2.540	7.1	20.8
11 27	2 33.12	+14 45.5	1.805	2.735	8.5	21.2	11 27	2 32.94	+ 4 38.6	1.636	2.544	10.9	21.1
12 7	2 26.56	+14 28.9	1.861	2.721	12.3	21.4	12 7	2 26.71	+ 4 42.1	1.713	2.548	14.4	21.3
12 17	2 22.42	+14 22.6	1.939	2.706	15.5	21.6	12 17	2 23.09	+ 5 2.7	1.810	2.551	17.3	21.5
66477	1999 <i>RW</i> ₂₆		11 7.4 107°09'	1°5'	8.4	18	68360	2001 <i>OK</i> ₃₄		11 7.4 7°68'	2°5'	5.7	18
10 8	3 17.25	+22 35.3	1.965	2.819	12.7	19.6	10 8	3 11.69	+12 45.3	1.512	2.404	13.6	18.5
10 18	3 9.91	+22 12.2	1.915	2.841	9.1	19.4	10 18	3 6.50	+11 54.0	1.457	2.404	9.5	18.2
10 28	3 0.83	+21 37.1	1.891	2.863	5.1	19.2	10 28	2 59.25	+10 57.5	1.426	2.406	5.0	18.0
11 7	2 50.94	+20 52.4	1.895	2.884	1.6	19.0	11 7	2 50.91	+10 1.6	1.420	2.408	2.6	17.8
11 17	2 41.31	+20 2.4	1.928	2.904	3.9	19.2	11 17	2 42.67	+ 9 12.7	1.442	2.410	6.1	18.1
11 27	2 32.95	+19 12.5	1.991	2.924	7.7	19.5	11 27	2 35.70	+ 8 36.8	1.489	2.414	10.4	18.3
12 7	2 26.60	+18 28.2	2.081	2.943	11.0	19.7	12 7	2 30.86	+ 8 17.5	1.560	2.417	14.3	18.6
12 17	2 22.66	+17 53.5	2.193	2.962	13.8	20.0	12 17	2 28.66	+ 8 16.0	1.650	2.422	17.6	18.8
139544	2001 <i>QJ</i> ₄₆		11 7.4 73°38'	3°4'	4.9	18	208089	1999 <i>XD</i> ₁₅₂		11 7.4 323°24'	0°6'	7.1	18
10 8	3 12.73	+ 9 25.3	1.814	2.699	12.1	19.8	10 8	3 13.77	+15 56.3	1.437	2.324	14.5	20.5
10 18	3 6.89	+ 8 30.5	1.762	2.705	8.4	19.6	10 18	3 8.34	+15 44.1	1.363	2.308	10.2	20.2
10 28	2 59.32	+ 7 34.5	1.735	2.711	4.9	19.4	10 28	3 0.41	+15 23.9	1.312	2.292	5.4	19.9
11 7	2 50.89	+ 6 42.7	1.735	2.718	3.5	19.3	11 7	2 50.96	+14 58.7	1.286	2.277	0.6	19.5
11 17	2 42.59	+ 6 0.4	1.764	2.724	6.2	19.5	11 17	2 41.32	+14 33.1	1.286	2.262	5.4	19.9
11 27	2 35.40	+ 5 32.1	1.820	2.730	9.8	19.7	11 27	2 32.91	+14 12.8	1.313	2.248	10.5	20.1
12 7	2 30.07	+ 5 20.0	1.900	2.737	13.1	19.9	12 7	2 26.87	+14 2.7	1.362	2.235	15.1	20.4
12 17	2 27.03	+ 5 24.4	2.001	2.743	15.8	20.2	12 17	2 23.87	+14 6.0	1.431	2.223	18.9	20.6
30223	2000 <i>GE</i> ₁₃₄		11 7.4 111°12'	2°9'	5.1	18	406	Erna		11 7.4 38°22'	2°6'	9.1	18
10 8	3 13.31	+ 9 40.1	2.161	3.038	10.7	18.6	10 8	3 14.06	+24 34.4	1.649	2.511	14.3	14.3
10 18	3 7.01	+ 8 46.6	2.115	3.055	7.5	18.4	10 18	3 8.09	+24 28.5	1.597	2.524	10.4	14.1
10 28	2 59.28	+ 7 52.1	2.096	3.071	4.2	18.2	10 28	3 0.04	+24 7.5	1.569	2.538	6.3	13.8
11 7	2 50.89	+ 7 1.3	2.105	3.087	3.0	18.2	11 7	2 50.95	+23 33.2	1.566	2.552	2.8	13.7
11 17	2 42.69	+ 6 18.6	2.144	3.103	5.4	18.4	11 17	2 42.03	+22 49.6	1.591	2.567	4.5	13.8
11 27	2 35.51	+ 5 47.6	2.212	3.119	8.5	18.6	11 27	2 34.48	+22 2.9	1.644	2.583	8.5	14.1
12 7	2 29.95	+ 5 30.4	2.306	3.133	11.4	18.8	12 7	2 29.14	+21 19.8	1.721	2.598	12.2	14.3
12 17	2 26.40	+ 5 27.6	2.421	3.148	13.8	19.0	12 17	2 26.48	+20 45.2	1.820	2.614	15.3	14.6
401414	2013 <i>CD</i> ₇₀		11 7.4 157°22'	2°4'	5.7	18	71356	2000 <i>AR</i> ₁₁₄		11 7.4 283°70'	3°8'	10.6	18
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
249015	2007 <i>RN</i> ₁₁₃	11 7.4 37°11'	0°9'/ 6.9 17				165540	2001 <i>DV</i> ₁₉	11 7.4 263°61'	4°0'/ 4.9 18			
10 8	3 14.54	+18 17.7	0.930	1.834	18.8	20.1	10 8	3 15.02	+ 6 38.2	1.841	2.721	12.1	19.9
10 18	3 9.11	+17 15.8	0.897	1.849	13.1	19.9	10 18	3 8.69	+ 6 2.6	1.768	2.708	8.7	19.7
10 28	3 0.72	+15 59.2	0.883	1.866	6.7	19.6	10 28	3 0.41	+ 5 28.2	1.721	2.695	5.3	19.5
11 7	2 50.98	+14 36.6	0.892	1.883	0.9	19.3	11 7	2 51.02	+ 4 59.8	1.702	2.681	4.1	19.4
11 17	2 41.72	+13 19.0	0.925	1.902	6.6	19.7	11 17	2 41.53	+ 4 41.8	1.711	2.667	6.8	19.5
11 27	2 34.61	+12 16.9	0.981	1.921	12.5	20.1	11 27	2 33.05	+ 4 37.9	1.747	2.653	10.4	19.7
12 7	2 30.66	+11 36.7	1.057	1.941	17.4	20.5	12 7	2 26.45	+ 4 49.8	1.807	2.639	13.9	19.9
12 17	2 30.21	+11 20.1	1.150	1.962	21.3	20.8	12 17	2 22.29	+ 5 17.5	1.888	2.624	16.9	20.1
438316	2006 <i>HX</i> ₁₅₂	11 7.4 73°85'	2°4'/ 5.9 15				490224	2008 <i>VV</i> ₅₃	11 7.4 346°78'	0°9'/ 8.6 18			
10 8	3 16.35	+11 21.9	1.665	2.546	13.1	21.7	10 8	3 6.22	+21 45.0	4.023	4.871	6.8	21.9
10 18	3 9.41	+10 51.7	1.626	2.569	9.1	21.5	10 18	3 1.80	+21 37.0	3.946	4.869	4.9	21.7
10 28	3 0.61	+10 19.4	1.612	2.591	4.8	21.3	10 28	2 56.56	+21 23.5	3.898	4.868	2.8	21.6
11 7	2 50.98	+ 9 49.2	1.626	2.613	2.4	21.2	11 7	2 50.87	+21 5.6	3.879	4.867	1.0	21.4
11 17	2 41.66	+ 9 25.6	1.667	2.635	5.6	21.5	11 17	2 45.19	+20 44.7	3.891	4.866	2.2	21.5
11 27	2 33.71	+ 9 12.4	1.736	2.656	9.5	21.7	11 27	2 39.95	+20 22.7	3.933	4.865	4.3	21.7
12 7	2 27.89	+ 9 11.8	1.830	2.678	13.0	22.0	12 7	2 35.55	+20 2.0	4.004	4.864	6.3	21.8
12 17	2 24.58	+ 9 24.3	1.944	2.699	15.8	22.3	12 17	2 32.29	+19 44.3	4.101	4.863	8.0	22.0
247945	2003 <i>YU</i> ₁₂	11 7.4 267°29'	3°8'/ 5.2 18				180825	2005 <i>GS</i> ₉	11 7.4 120°14'	11°7'/15.6 18			
10 8	3 15.69	+ 6 25.6	1.904	2.783	11.9	20.3	10 8	3 31.84	+47 16.3	1.833	2.559	18.2	20.4
10 18	3 9.11	+ 6 5.5	1.832	2.770	8.5	20.1	10 18	3 21.48	+48 43.9	1.778	2.578	16.0	20.3
10 28	3 0.60	+ 5 47.5	1.784	2.757	5.2	19.9	10 28	3 7.46	+49 40.7	1.742	2.595	13.8	20.2
11 7	2 50.99	+ 5 35.5	1.764	2.744	3.8	19.8	11 7	2 51.28	+49 59.5	1.730	2.612	12.2	20.1
11 17	2 41.29	+ 5 33.0	1.773	2.731	6.4	19.9	11 17	2 35.02	+49 38.6	1.741	2.629	11.7	20.1
11 27	2 32.57	+ 5 43.0	1.810	2.718	10.0	20.1	11 27	2 20.87	+48 43.7	1.777	2.644	12.5	20.2
12 7	2 25.69	+ 6 6.5	1.872	2.705	13.4	20.3	12 7	2 10.34	+47 26.4	1.837	2.659	14.1	20.3
12 17	2 21.21	+ 6 43.5	1.954	2.692	16.3	20.5	12 17	2 4.09	+45 59.3	1.918	2.673	16.0	20.5
278138	2007 <i>CU</i> ₅₂	11 7.4 280°43'	1°3'/ 8.1 18				221025	2005 <i>QA</i> ₂₁	11 7.4 28°54'	4°9'/ 9.6 18			
10 8	3 16.19	+20 56.2	1.541	2.412	14.6	21.0	10 8	3 18.25	+26 16.4	1.204	2.072	18.0	19.2
10 18	3 10.01	+20 42.5	1.461	2.396	10.5	20.7	10 18	3 11.79	+26 52.9	1.153	2.080	13.5	19.0
10 28	3 1.28	+20 15.1	1.404	2.380	5.9	20.4	10 28	3 2.27	+27 9.4	1.123	2.089	8.7	18.7
11 7	2 51.02	+19 36.1	1.374	2.364	1.4	20.0	11 7	2 51.09	+27 4.7	1.116	2.098	5.1	18.6
11 17	2 40.53	+18 49.7	1.370	2.347	4.9	20.3	11 17	2 39.99	+26 41.3	1.135	2.108	6.4	18.7
11 27	2 31.28	+18 2.8	1.394	2.330	9.9	20.5	11 27	2 30.78	+26 6.8	1.178	2.119	10.8	19.0
12 7	2 24.41	+17 22.3	1.441	2.314	14.4	20.7	12 7	2 24.67	+25 30.2	1.243	2.130	15.1	19.3
12 17	2 20.61	+16 53.9	1.509	2.297	18.2	20.9	12 17	2 22.23	+24 59.5	1.328	2.142	18.8	19.5
215615	2003 <i>SH</i> ₁₂₅	11 7.4 54°06'	0°6'/ 6.9 18				17235	2000 <i>EC</i> ₂₉	11 7.4 340°36'	1°0'/ 7.9 18			
10 8	3 16.44	+18 40.1	1.105	1.997	17.4	19.4	10 8	3 16.67	+17 48.9	1.948	2.814	12.2	18.2
10 18	3 10.09	+17 37.5	1.070	2.017	12.1	19.2	10 18	3 9.89	+18 22.4	1.875	2.808	8.7	18.0
10 28	3 1.12	+16 21.3	1.057	2.038	6.2	18.9	10 28	3 1.06	+18 50.3	1.827	2.802	4.8	17.8
11 7	2 51.00	+14 59.3	1.068	2.059	0.6	18.6	11 7	2 51.05	+19 12.4	1.807	2.797	1.1	17.5
11 17	2 41.38	+13 40.9	1.105	2.080	6.0	19.1	11 17	2 40.90	+19 29.8	1.817	2.793	4.1	17.7
11 27	2 33.74	+12 35.8	1.166	2.102	11.4	19.4	11 27	2 31.75	+19 44.7	1.856	2.788	8.1	17.9
12 7	2 29.02	+11 50.2	1.249	2.124	16.0	19.8	12 7	2 24.52	+20 0.3	1.920	2.785	11.7	18.2
12 17	2 27.55	+11 26.3	1.351	2.146	19.6	20.1	12 17	2 19.80	+20 19.4	2.007	2.781	14.8	18.4
488892	2005 <i>SC</i> ₂₈₁	11 7.4 3°19'	2°6'/ 8.4 16				516608	2007 <i>MA</i> ₅	11 7.4 120°93'	9°5'/30.7 18			
10 8	3 13.85	+20 42.6	1.005	1.902	18.3	20.6	10 8	3 14.95	-19 54.5	2.719	3.516	11.2	21.1
10 18	3 9.01	+21 13.6	0.954	1.900	13.3	20.3	10 18	3 7.92	-20 33.2	2.693	3.529	10.1	21.0
10 28	3 0.94	+21 30.3	0.922	1.899	7.7	20.0	10 28	2 59.72	-20 53.5	2.691	3.542	9.5	21.0
11 7	2 51.01	+21 32.7	0.912	1.901	2.8	19.7	11 7	2 51.00	-20 51.7	2.713	3.554	9.7	21.1
11 17	2 41.04	+21 24.0	0.925	1.903	6.0	19.9	11 17	2 42.51	-20 26.2	2.761	3.566	10.5	21.1
11 27	2 32.95	+21 10.8	0.961	1.908	11.7	20.2	11 27	2 34.94	-19 37.9	2.833	3.578	11.7	21.2
12 7	2 28.08	+21 0.6	1.017	1.914	16.8	20.5	12 7	2 28.82	-18 29.7	2.926	3.589	12.9	21.4
12 17	2 27.04	+20 59.0	1.091	1.922	21.0	20.8	12 17	2 24.48	-17 5.2	3.037	3.600	14.0	21.5
367643	2009 <i>WZ</i> ₅₂	11 7.4 295°56'	2°2'/ 9.3 17				477088	2009 <i>BX</i> ₁₁₄	11 7.4 309°41'	10°5'/31.3 18			
10 8	3 11.28	+26 18.2	2.215	3.061	11.7	20.4	10 8	3 13.11	- 6 47.0	1.516	2.392	14.5	20.8
10 18	3 5.97	+25 35.4	2.123	3.042	8.7	20.1	10 18	3 7.69	- 8 10.5	1.452	2.369	12.0	20.6
10 28	2 58.94	+24 36.7	2.056	3.022	5.3	19.9	10 28	3 0.02	- 9 20.1	1.411	2.346	10.6	20.5
11 7	2 50.94	+23 24.2	2.017	3.003	2.4	19.7	11 7	2 51.02	-10 6.1	1.393	2.323	10.9	20.4
11 17	2 42.87	+22 2.1	2.008	2.983	3.8	19.7	11 17	2 41.87	-10 21.4	1.400	2.301	13.0	20.5
11 27	2 35.68	+20 36.9	2.028	2.964	7.3	19.9	11 27	2 33.85	-10 2.8	1.429	2.279	15.9	20.6
12 7	2 30.16	+19 15.5	2.075	2.945	10.8	20.1	12 7	2 27.97	- 9 12.1	1.477	2.258	18.9	20.8
12 17	2 26.81	+18 3.6	2.147	2.925	13.8	20.3	12 17	2 24.85	- 7 54.1	1.541	2.237	21.6	20.9
257410	2009 <i>TP</i> ₁₅	11 7.4 79°01'	2°5'/ 5.6 18				412464	2014 <i>HH</i> ₆	11 7.4 162°28'	2°4'/ 5.9 18			
10 8	3 12.59	+ 9 34.5	2.186	3.063	10.6	20.0	10 8	3 15.76	+10 28.5	1.912	2.789	11.9	21.0
10 18	3 6.65	+ 9 10.1	2.126	3.066	7.4	19.8	10 18	3 9.05	+10 9.1	1.851	2.791	8.3	20.7
10 28	2 59.19	+ 8 45.2	2.092	3.068	4.1	19.6	10 28	3 0.53	+ 9 48.2	1.816	2.793	4.5	20.5
11 7	2 50.95	+ 8 23.0	2.086	3.071	2.5	19.5	11 7	2 51.04	+ 9 29.3	1.809	2.795	2.4	20.4
11 17	2 42.76	+ 8 6.7	2.110	3.073	5.0	19.7	11 17	2 41.61	+ 9 16.0	1.830	2.797	5.3	20.6
11 27	2 35.48	+ 7 59.4	2.162	3.076	8.3	19.9	11 27	2 33.26	+ 9 11.4	1.880	2.798	9.1	20.8
12 7	2 29.77	+ 8 2.9	2.240	3.078	11.3	20.1	12 7	2 26.78	+ 9 17.8	1.956	2.799	12.5	21.0
12 17	2 26.09	+ 8 17.8	2.340	3.081	13.9	20.3	12 17	2 22.67	+ 9 36.0	2.052	2.800	15.3	21.2
438555	2007 <i>TF</i> ₂₉₇	11 7.4 28°52'	9°4'/31.9 18				439580	2014 <i>DH</i> ₁₀₈	11				

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
259761	2004 <i>BE</i> ₁	11 7.4 175°84	1°3/ 8.3 17				484953	2009 <i>SC</i> ₃₀₃	11 7.4 94°15	3°3/ 9.8 17			
10 8	3 17.57	+21 55.8	1.761	2.622	13.6	21.7	10 8	3 15.45	+27 9.5	2.192	3.030	12.1	22.1
10 18	3 10.54	+21 30.5	1.694	2.624	9.8	21.5	10 18	3 8.83	+27 22.6	2.128	3.038	9.1	22.0
10 28	3 1.38	+20 51.7	1.652	2.625	5.5	21.2	10 28	3 0.43	+27 22.3	2.088	3.047	5.9	21.8
11 7	2 51.09	+20 2.1	1.637	2.627	1.4	21.0	11 7	2 51.08	+27 8.6	2.076	3.055	3.5	21.6
11 17	2 40.85	+19 6.3	1.651	2.627	4.3	21.2	11 17	2 41.77	+26 43.7	2.093	3.063	4.3	21.7
11 27	2 31.90	+18 10.8	1.694	2.627	8.7	21.4	11 27	2 33.50	+26 11.5	2.139	3.071	7.2	21.9
12 7	2 25.14	+17 22.0	1.762	2.627	12.6	21.7	12 7	2 27.06	+25 37.5	2.212	3.080	10.3	22.1
12 17	2 21.09	+16 44.7	1.852	2.625	15.8	21.9	12 17	2 22.93	+25 6.3	2.308	3.088	12.9	22.3
437519	2013 <i>YK</i> ₉₄	11 7.4 120°01	2°1/ 8.7 18				263886	2009 <i>EU</i> ₂₇	11 7.4 23°47	7°6/ 2.1 18			
10 8	3 17.09	+23 29.8	1.682	2.541	14.2	21.3	10 8	3 11.26	- 0 36.9	1.602	2.490	13.2	20.2
10 18	3 10.25	+23 16.1	1.622	2.549	10.3	21.0	10 18	3 6.04	- 1 59.7	1.562	2.495	10.1	20.0
10 28	3 1.23	+22 47.8	1.586	2.557	6.0	20.8	10 28	2 58.98	- 3 13.1	1.546	2.501	7.9	19.9
11 7	2 51.08	+22 6.8	1.576	2.564	2.3	20.6	11 7	2 51.04	- 4 9.3	1.555	2.507	7.9	19.9
11 17	2 41.05	+21 17.5	1.595	2.571	4.5	20.8	11 17	2 43.25	- 4 42.5	1.590	2.514	10.0	20.1
11 27	2 32.39	+20 26.3	1.642	2.578	8.7	21.0	11 27	2 36.66	- 4 49.7	1.649	2.522	12.9	20.3
12 7	2 26.01	+19 39.9	1.714	2.585	12.6	21.3	12 7	2 32.04	- 4 31.9	1.729	2.530	15.8	20.5
12 17	2 22.41	+19 3.4	1.807	2.591	15.8	21.5	12 17	2 29.81	- 3 51.9	1.827	2.538	18.2	20.7
42920	1999 <i>SA</i> ₈	11 7.4 225°11	2°4/ 6.1 18				188376	2004 <i>CU</i> ₁₂	11 7.4 277°22	1°9/ 6.2 18			
10 8	3 18.26	+11 28.8	1.520	2.403	14.1	17.9	10 8	3 15.18	+14 32.5	1.463	2.349	14.3	20.2
10 18	3 11.26	+11 6.6	1.455	2.398	9.9	17.7	10 18	3 9.25	+13 42.4	1.391	2.336	10.1	19.9
10 28	3 1.85	+10 41.4	1.415	2.393	5.3	17.4	10 28	3 0.89	+12 43.4	1.343	2.323	5.3	19.6
11 7	2 51.11	+10 17.2	1.400	2.388	2.5	17.2	11 7	2 51.12	+11 41.1	1.321	2.310	2.0	19.4
11 17	2 40.33	+ 9 58.6	1.414	2.383	6.2	17.4	11 17	2 41.24	+10 42.3	1.326	2.297	6.1	19.6
11 27	2 30.89	+ 9 50.3	1.454	2.377	10.8	17.7	11 27	2 32.64	+ 9 54.6	1.357	2.284	11.1	19.8
12 7	2 23.81	+ 9 55.2	1.518	2.371	14.9	17.9	12 7	2 26.40	+ 9 23.3	1.412	2.271	15.5	20.1
12 17	2 19.70	+10 14.6	1.602	2.365	18.4	18.1	12 17	2 23.12	+ 9 11.2	1.485	2.258	19.2	20.3
281074	2006 <i>QL</i> ₁₁₉	11 7.4 39°19	0°9/ 7.9 18				248710	2006 <i>OY</i> ₁₂	11 7.4 115°14	5°8/ 12.4 18			
10 8	3 13.27	+21 42.2	1.403	2.281	15.3	19.6	10 8	3 19.36	+36 3.2	2.227	3.020	13.5	21.4
10 18	3 7.63	+20 54.2	1.362	2.300	10.8	19.4	10 18	3 11.56	+36 14.6	2.169	3.039	10.8	21.3
10 28	2 59.82	+19 51.3	1.343	2.320	5.8	19.1	10 28	3 1.83	+36 5.7	2.133	3.059	8.1	21.1
11 7	2 51.03	+18 38.8	1.350	2.341	1.0	18.9	11 7	2 51.15	+35 35.9	2.125	3.077	6.1	21.1
11 17	2 42.58	+17 24.0	1.384	2.362	4.7	19.2	11 17	2 40.66	+34 47.3	2.144	3.095	6.0	21.1
11 27	2 35.68	+16 15.4	1.445	2.383	9.4	19.5	11 27	2 31.46	+33 45.4	2.193	3.113	7.8	21.2
12 7	2 31.17	+15 19.5	1.529	2.405	13.5	19.8	12 7	2 24.38	+32 37.4	2.269	3.130	10.3	21.4
12 17	2 29.43	+14 40.2	1.634	2.428	16.8	20.1	12 17	2 19.86	+31 30.4	2.368	3.146	12.7	21.6
521732	2015 <i>RF</i> ₂₇₀	11 7.4 73°88	2°7/ 5.4 18				224645	2005 <i>YZ</i> ₂₀₁	11 7.4 59°73	2°5/ 5.7 18			
10 8	3 12.66	+11 18.2	1.859	2.741	11.9	21.6	10 8	3 12.91	+10 35.8	1.950	2.831	11.5	19.7
10 18	3 6.91	+10 25.7	1.800	2.743	8.3	21.3	10 18	3 6.94	+10 2.7	1.903	2.845	8.0	19.5
10 28	2 59.42	+ 9 29.9	1.767	2.745	4.6	21.1	10 28	2 59.38	+ 9 28.3	1.882	2.860	4.4	19.3
11 7	2 51.03	+ 8 36.0	1.761	2.746	2.8	21.0	11 7	2 51.06	+ 8 56.5	1.889	2.875	2.5	19.2
11 17	2 42.71	+ 7 49.2	1.784	2.748	5.7	21.2	11 17	2 42.91	+ 8 31.2	1.925	2.890	5.2	19.5
11 27	2 35.46	+ 7 14.3	1.834	2.749	9.4	21.4	11 27	2 35.84	+ 8 16.0	1.989	2.905	8.7	19.7
12 7	2 30.04	+ 6 54.5	1.909	2.751	12.8	21.7	12 7	2 30.53	+ 8 12.7	2.077	2.921	11.9	19.9
12 17	2 26.90	+ 6 50.7	2.005	2.753	15.6	21.9	12 17	2 27.37	+ 8 22.2	2.187	2.936	14.5	20.2
282939	2007 <i>RG</i> ₁₃	11 7.4 60°12	8°1/ 1.9 18				483183	2015 <i>PX</i> ₁₀₂	11 7.4 3°84	13°1/ 17.7 16			
10 8	3 13.36	- 0 47.2	1.511	2.398	13.9	20.1	10 8	3 23.34	+50 40.3	1.751	2.469	19.2	21.2
10 18	3 7.41	- 2 26.9	1.485	2.417	10.7	19.9	10 18	3 15.85	+51 53.6	1.683	2.469	17.3	21.0
10 28	2 59.62	- 3 55.0	1.482	2.436	8.4	19.9	10 28	3 4.69	+52 34.3	1.632	2.469	15.3	20.9
11 7	2 51.03	- 5 3.1	1.506	2.455	8.4	19.9	11 7	2 51.27	+52 35.4	1.600	2.470	13.8	20.8
11 17	2 42.78	- 5 45.2	1.555	2.475	10.6	20.1	11 17	2 37.63	+51 54.6	1.591	2.470	13.1	20.7
11 27	2 35.91	- 5 58.8	1.627	2.495	13.4	20.3	11 27	2 25.97	+50 37.0	1.604	2.471	13.6	20.8
12 7	2 31.15	- 5 45.5	1.721	2.515	16.1	20.6	12 7	2 17.87	+48 53.8	1.639	2.472	15.0	20.9
12 17	2 28.87	- 5 9.1	1.833	2.534	18.4	20.8	12 17	2 14.03	+46 58.4	1.695	2.473	16.9	21.0
488358	2016 <i>WT</i> ₂₄	11 7.4 342°03	1°1/ 8.0 18				41113	1999 <i>VQ</i> ₈₃	11 7.4 304°63	0°6/ 7.9 18			
10 8	3 14.49	+20 2.8	1.458	2.337	14.8	20.7	10 8	3 12.27	+20 1.8	2.078	2.943	11.6	19.9
10 18	3 8.78	+19 55.7	1.392	2.331	10.6	20.4	10 18	3 6.65	+19 36.5	2.006	2.939	8.2	19.7
10 28	3 0.63	+19 36.6	1.349	2.326	5.8	20.1	10 28	2 59.32	+19 1.4	1.960	2.936	4.5	19.5
11 7	2 51.08	+19 7.4	1.331	2.321	1.2	19.8	11 7	2 51.07	+18 19.1	1.941	2.932	0.7	19.2
11 17	2 41.47	+18 32.6	1.340	2.317	4.9	20.1	11 17	2 42.82	+17 33.4	1.952	2.928	3.8	19.4
11 27	2 33.21	+17 58.4	1.375	2.314	9.8	20.4	11 27	2 35.53	+16 49.2	1.991	2.924	7.6	19.7
12 7	2 27.36	+17 30.9	1.434	2.311	14.1	20.6	12 7	2 29.94	+16 11.4	2.057	2.921	11.1	19.9
12 17	2 24.52	+17 14.7	1.512	2.308	17.8	20.8	12 17	2 26.55	+15 43.5	2.145	2.918	14.0	20.1
341957	2008 <i>PV</i> ₂₀	11 7.4 20°49	1°2/ 6.9 18				150653	2001 <i>DT</i> ₁₀₀	11 7.4 155°20	6°6/ 14.9 18			
10 8	3 16.38	+13 15.9	1.068	1.968	17.2	19.4	10 8	3 18.76	+44 37.5	3.209	3.929	11.2	20.4
10 18	3 10.37	+13 33.1	1.026	1.977	12.0	19.2	10 18	3 10.99	+45 6.9	3.135	3.937	9.6	20.3
10 28	3 1.48	+13 46.3	1.006	1.988	6.2	18.9	10 28	3 1.54	+45 18.2	3.083	3.946	8.1	20.2
11 7	2 51.11	+13 57.8	1.009	2.000	1.2	18.6	11 7	2 51.16	+45 9.4	3.057	3.953	7.0	20.1
11 17	2 40.96	+14 10.8	1.037	2.013	6.2	19.0	11 17	2 40.78	+44 41.0	3.058	3.961	6.7	20.1
11 27	2 32.69	+14 29.1	1.088	2.028	11.6	19.3	11 27	2 31.33	+43 55.8	3.088	3.967	7.3	20.2
12 7	2 27.44	+14 55.6	1.161	2.044	16.3	19.7	12 7	2 23.59	+42 58.8	3.145	3.973	8.6	20.3
12 17	2 25.68	+15 31.8	1.253	2.061	20.1	20.0	12 17	2 18.03	+41 55.9	3.227	3.979	10.2	20.4
159813	2003 <i>SY</i> ₁₉₄	11 7.4 103°98	0°9/ 8.3 18				520779	2014 <i>SM</i> ₃₅₅					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
280578	2004 <i>TD</i> ₁₉₅		11 7.4 91°01'	0°2/ 7.5 18			25981	Shahmirian		11 7.4 103°92'	1°5/ 8.2 18		
10 8	3 16.50	+19 33.2	1.675	2.545	13.7	21.1	10 8	3 20.46	+20 23.0	1.551	2.417	14.8	19.1
10 18	3 9.64	+18 51.6	1.628	2.564	9.6	20.9	10 18	3 12.69	+20 29.2	1.499	2.431	10.6	18.9
10 28	3 0.83	+17 59.1	1.606	2.583	5.0	20.7	10 28	3 2.57	+20 23.8	1.471	2.446	5.9	18.6
11 7	2 51.14	+16 59.7	1.611	2.602	0.3	20.4	11 7	2 51.26	+20 8.2	1.470	2.460	1.6	18.4
11 17	2 41.72	+15 59.3	1.645	2.620	4.4	20.8	11 17	2 40.13	+19 45.8	1.497	2.473	4.7	18.6
11 27	2 33.72	+15 4.3	1.707	2.638	8.8	21.1	11 27	2 30.55	+19 22.0	1.552	2.487	9.2	18.9
12 7	2 27.90	+14 20.2	1.794	2.656	12.5	21.3	12 7	2 23.49	+19 2.5	1.632	2.500	13.2	19.2
12 17	2 24.68	+13 50.1	1.902	2.674	15.6	21.6	12 17	2 19.44	+18 51.4	1.732	2.512	16.5	19.5
121827	2000 <i>BG</i> ₁₂		11 7.4 11°43'	3°7/ 4.6 18			30638	6237 <i>P-L</i>		11 7.4 277°74'	0°6/ 6.9 18		
10 8	3 11.17	+ 6 54.4	2.069	2.951	10.9	19.3	10 8	3 12.95	+17 8.9	1.883	2.758	12.2	19.5
10 18	3 5.75	+ 6 8.5	2.011	2.952	7.7	19.1	10 18	3 7.22	+16 26.8	1.816	2.755	8.5	19.3
10 28	2 58.80	+ 5 23.8	1.980	2.953	4.8	18.9	10 28	2 59.67	+15 35.9	1.774	2.753	4.4	19.0
11 7	2 51.07	+ 4 44.7	1.976	2.954	3.8	18.9	11 7	2 51.15	+14 40.4	1.759	2.750	0.6	18.7
11 17	2 43.39	+ 4 15.6	2.001	2.955	6.1	19.0	11 17	2 42.66	+13 45.1	1.774	2.748	4.4	19.0
11 27	2 36.64	+ 3 59.8	2.054	2.957	9.2	19.2	11 27	2 35.23	+12 55.9	1.817	2.745	8.6	19.3
12 7	2 31.48	+ 3 59.0	2.131	2.959	12.2	19.4	12 7	2 29.64	+12 17.4	1.884	2.743	12.2	19.5
12 17	2 28.36	+ 4 13.0	2.228	2.960	14.7	19.6	12 17	2 26.40	+11 52.7	1.974	2.740	15.3	19.7
446335	2014 <i>GF</i> ₁₆		11 7.4 292°10'	3°2/ 5.3 18			258040	2001 <i>KT</i> ₄₃		11 7.4 193°67'	7°1/ 1.1 18		
10 8	3 13.63	+10 14.4	1.659	2.545	12.9	21.0	10 8	3 13.92	-11 54.9	2.966	3.796	9.5	20.8
10 18	3 7.88	+ 9 25.3	1.592	2.537	9.1	20.7	10 18	3 7.28	-12 27.1	2.915	3.794	8.1	20.7
10 28	3 0.07	+ 8 33.5	1.551	2.528	5.1	20.5	10 28	2 59.50	-12 47.1	2.890	3.791	7.2	20.6
11 7	2 51.12	+ 7 44.2	1.535	2.520	3.3	20.4	11 7	2 51.15	-12 51.1	2.892	3.788	7.3	20.6
11 17	2 42.15	+ 7 3.4	1.548	2.511	6.5	20.5	11 17	2 42.87	-12 37.4	2.922	3.785	8.3	20.7
11 27	2 34.30	+ 6 36.2	1.587	2.503	10.6	20.8	11 27	2 35.31	-12 5.3	2.979	3.781	9.8	20.8
12 7	2 28.49	+ 6 25.8	1.650	2.495	14.3	21.0	12 7	2 28.99	-11 16.3	3.059	3.777	11.4	20.9
12 17	2 25.24	+ 6 33.0	1.732	2.487	17.5	21.2	12 17	2 24.28	-10 12.8	3.161	3.772	12.8	21.0
408690	2014 <i>MS</i> ₅₆		11 7.4 24°21'	9°6/ 1.9 18			181359	2006 <i>RH</i> ₅₅		11 7.4 351°62'	0°9/ 7.9 18		
10 8	3 13.34	- 8 46.4	1.691	2.557	13.8	19.7	10 8	3 15.09	+19 15.9	1.730	2.601	13.3	19.9
10 18	3 7.39	- 9 35.1	1.657	2.565	11.4	19.5	10 18	3 8.92	+19 15.9	1.664	2.599	9.5	19.7
10 28	2 59.66	-10 6.2	1.646	2.574	9.8	19.5	10 28	3 0.65	+19 6.4	1.622	2.598	5.2	19.5
11 7	2 51.11	-10 13.6	1.659	2.584	9.9	19.5	11 7	2 51.20	+18 49.2	1.606	2.597	1.0	19.2
11 17	2 42.77	- 9 54.6	1.697	2.594	11.4	19.6	11 17	2 41.73	+18 27.5	1.619	2.596	4.3	19.4
11 27	2 35.67	- 9 9.1	1.759	2.605	13.6	19.8	11 27	2 33.42	+18 5.8	1.660	2.595	8.7	19.7
12 7	2 30.54	- 8 0.5	1.841	2.616	15.9	20.0	12 7	2 27.21	+17 49.0	1.725	2.595	12.6	19.9
12 17	2 27.77	- 6 33.7	1.942	2.628	18.0	20.2	12 17	2 23.65	+17 40.8	1.812	2.595	15.8	20.1
3214	Makarenko		11 7.4 142°32'	4°5/ 4.1 18			228070	2008 <i>OL</i> ₂₀		11 7.4 69°89'	3°8/ 4.2 18		
10 8	3 12.88	+ 3 1.0	2.274	3.149	10.4	16.3	10 8	3 10.77	+ 6 37.7	2.174	3.055	10.5	20.4
10 18	3 6.81	+ 2 25.3	2.220	3.153	7.6	16.2	10 18	3 5.40	+ 5 38.1	2.123	3.062	7.5	20.2
10 28	2 59.32	+ 1 53.9	2.191	3.156	5.2	16.0	10 28	2 58.61	+ 4 39.8	2.098	3.070	4.7	20.0
11 7	2 51.11	+ 1 30.9	2.191	3.160	4.6	16.0	11 7	2 51.13	+ 3 47.7	2.102	3.077	4.0	20.0
11 17	2 42.98	+ 1 19.6	2.220	3.163	6.4	16.1	11 17	2 43.76	+ 3 6.2	2.134	3.084	6.1	20.2
11 27	2 35.72	+ 1 22.0	2.277	3.166	9.1	16.3	11 27	2 37.29	+ 2 39.0	2.194	3.092	9.0	20.4
12 7	2 29.98	+ 1 38.8	2.359	3.169	11.8	16.5	12 7	2 32.34	+ 2 27.6	2.279	3.099	11.8	20.6
12 17	2 26.16	+ 2 9.1	2.462	3.172	14.0	16.7	12 17	2 29.30	+ 2 31.9	2.385	3.106	14.1	20.8
361785	2008 <i>AR</i> ₉₉		11 7.4 330°24'	0°9/ 6.8 18			521219	2015 <i>GV</i> ₅₂		11 7.4 172°98'	0°4/ 7.6 18		
10 8	3 12.30	+16 36.4	1.673	2.555	13.1	20.8	10 8	3 18.59	+17 59.1	1.628	2.499	14.0	21.8
10 18	3 6.96	+15 53.8	1.606	2.548	9.2	20.6	10 18	3 11.45	+17 57.6	1.564	2.500	9.9	21.6
10 28	2 59.60	+15 2.1	1.562	2.542	4.7	20.3	10 28	3 2.00	+17 47.3	1.524	2.501	5.3	21.3
11 7	2 51.12	+14 5.6	1.546	2.536	0.9	20.0	11 7	2 51.28	+17 30.0	1.511	2.502	0.5	21.0
11 17	2 42.63	+13 10.1	1.557	2.531	4.9	20.3	11 17	2 40.56	+17 9.1	1.527	2.503	4.7	21.3
11 27	2 35.29	+12 21.9	1.595	2.525	9.4	20.5	11 27	2 31.16	+16 49.5	1.570	2.503	9.3	21.6
12 7	2 29.96	+11 46.2	1.658	2.521	13.3	20.8	12 7	2 24.07	+16 36.1	1.638	2.503	13.4	21.8
12 17	2 27.19	+11 25.8	1.741	2.516	16.6	21.0	12 17	2 19.87	+16 32.4	1.727	2.503	16.7	22.1
67518	2000 <i>RS</i> ₆₅		11 7.4 101°20'	3°4/ 5.5 18			90471	Andrewdrake		11 7.4 210°49'	1°0/ 6.8 18		
10 8	3 19.37	+10 22.3	1.434	2.318	14.7	19.1	10 8	3 18.41	+14 34.6	1.767	2.639	13.0	20.0
10 18	3 11.75	+ 9 30.8	1.396	2.339	10.2	18.9	10 18	3 11.21	+14 18.4	1.696	2.634	9.1	19.8
10 28	3 1.96	+ 8 37.6	1.382	2.359	5.7	18.7	10 28	3 1.85	+13 56.4	1.650	2.629	4.8	19.5
11 7	2 51.21	+ 7 49.0	1.394	2.379	3.5	18.6	11 7	2 51.27	+13 31.6	1.632	2.622	1.1	19.2
11 17	2 40.84	+ 7 11.0	1.435	2.398	6.8	18.9	11 17	2 40.64	+13 7.7	1.643	2.616	4.9	19.5
11 27	2 32.10	+ 6 48.3	1.501	2.417	11.1	19.2	11 27	2 31.17	+12 49.4	1.683	2.608	9.3	19.7
12 7	2 25.85	+ 6 43.1	1.591	2.435	14.8	19.5	12 7	2 23.81	+12 40.4	1.747	2.601	13.3	20.0
12 17	2 22.48	+ 6 55.3	1.701	2.453	17.9	19.7	12 17	2 19.13	+12 43.2	1.833	2.592	16.5	20.2
491334	2011 <i>WY</i> ₁₅₁		11 7.4 59°75'	6°9/13.2 16			121584	1999 <i>VW</i> ₁₀₂		11 7.4 27°15'	0°1/ 7.3 18		
10 8	3 16.26	+37 57.6	1.828	2.628	15.7	20.5	10 8	3 12.32	+17 45.9	1.674	2.554	13.2	19.7
10 18	3 9.84	+37 53.4	1.760	2.633	12.8	20.3	10 18	3 6.87	+17 19.8	1.622	2.563	9.2	19.5
10 28	3 1.10	+37 23.2	1.714	2.639	9.8	20.1	10 28	2 59.50	+16 44.9	1.594	2.573	4.8	19.3
11 7	2 51.18	+36 26.4	1.693	2.645	7.4	20.0	11 7	2 51.17	+16 4.9	1.593	2.584	0.2	18.9
11 17	2 41.39	+35 5.9	1.698	2.651	7.1	20.0	11 17	2 42.98	+15 24.5	1.619	2.595	4.4	19.3
11 27	2 33.07	+33 29.6	1.730	2.657	9.1	20.1	11 27	2 36.01	+14 49.0	1.672	2.606	8.7	19.6
12 7	2 27.16	+31 47.5	1.788	2.663	11.9	20.3	12 7	2 31.06	+14 22.9	1.750	2.619	12.5	19.8
12 17	2 24.15	+30 9.1	1.870	2.669	14.8	20.5	12 17	2 28.59	+14 9.1	1.849	2.631	15.6	20.1
237590	2001 <i>FX</i> ₁₁₃		11 7.4 147°09'	4°7/ 3.5 18			472351	2015 <i>BH</i> ₁₁		11 7.4 183°76'	1°7/ 6.6 17		
10 8													

EPHEMERIDES

11 7.4

11 7.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
264435	2000 SG ₁₆₆	11 7.4 45°98'	7.8/12.5	18			407052	2009 SZ ₁₃₃	11 7.4 336°96'	0°1'	7.5	17	
10 8	3 19.67	+36 23.6	1.706	2.513	16.3	20.1	10 8	3 14.55	+16 31.5	1.981	2.852	11.8	20.7
10 18	3 12.40	+37 16.5	1.655	2.531	13.3	20.0	10 18	3 8.38	+16 38.4	1.910	2.847	8.3	20.5
10 28	3 2.55	+37 45.3	1.626	2.550	10.3	19.8	10 28	3 0.34	+16 39.6	1.865	2.843	4.4	20.2
11 7	2 51.32	+37 47.3	1.621	2.569	8.1	19.8	11 7	2 51.26	+16 36.6	1.848	2.839	0.2	19.9
11 17	2 40.19	+37 23.5	1.642	2.588	8.0	19.8	11 17	2 42.12	+16 31.8	1.860	2.835	4.0	20.2
11 27	2 30.66	+36 39.8	1.689	2.607	9.9	20.0	11 27	2 33.95	+16 28.3	1.900	2.832	8.0	20.4
12 7	2 23.80	+35 45.1	1.761	2.627	12.5	20.2	12 7	2 27.59	+16 29.4	1.966	2.829	11.6	20.6
12 17	2 20.14	+34 48.2	1.854	2.647	15.1	20.4	12 17	2 23.57	+16 37.7	2.054	2.826	14.6	20.8
292177	2006 SD ₁₇	11 7.4 349°78'	2°2'	8.8	18		25698	Snehakannan	11 7.4 24°04'	2°7'	8.9	18	R
10 8	3 13.44	+23 28.3	1.616	2.483	14.2	20.4	10 8	3 14.48	+24 0.1	1.090	1.975	18.2	17.3
10 18	3 7.94	+23 16.0	1.548	2.479	10.4	20.2	10 18	3 9.21	+23 43.2	1.044	1.983	13.3	17.1
10 28	3 0.20	+22 48.9	1.504	2.476	6.1	19.9	10 28	3 1.00	+23 5.6	1.017	1.992	7.8	16.8
11 7	2 51.23	+22 8.7	1.485	2.473	2.4	19.7	11 7	2 51.30	+22 10.5	1.013	2.002	2.9	16.5
11 17	2 42.23	+21 19.6	1.494	2.471	4.5	19.8	11 17	2 41.80	+21 5.1	1.034	2.013	5.6	16.7
11 27	2 34.49	+20 28.3	1.530	2.469	8.9	20.1	11 27	2 34.22	+19 59.7	1.079	2.025	10.9	17.1
12 7	2 28.97	+19 41.7	1.590	2.468	12.9	20.3	12 7	2 29.65	+19 3.7	1.145	2.037	15.7	17.4
12 17	2 26.21	+19 5.2	1.671	2.468	16.4	20.6	12 17	2 28.56	+18 23.4	1.231	2.051	19.7	17.7
373503	2001 CK ₄₂	11 7.4 182°63'	8°2'	9.9	18		376439	2012 HK ₃₅	11 7.4 249°84'	3°8'	5.3	18	
10 8	3 41.88	+29 54.7	0.969	1.811	23.4	22.3	10 8	3 16.50	+ 9 58.7	1.410	2.299	14.5	21.0
10 18	3 30.00	+31 5.9	0.907	1.817	18.3	22.0	10 18	3 10.17	+ 9 5.1	1.349	2.294	10.3	20.7
10 28	3 12.64	+31 49.3	0.865	1.819	12.6	21.7	10 28	3 1.41	+ 8 8.6	1.311	2.289	5.9	20.5
11 7	2 51.76	+31 54.2	0.845	1.819	8.5	21.5	11 7	2 51.32	+ 7 15.6	1.299	2.283	3.9	20.3
11 17	2 30.55	+31 18.5	0.851	1.817	9.8	21.6	11 17	2 41.23	+ 6 33.2	1.314	2.278	7.4	20.5
11 27	2 12.44	+30 13.7	0.882	1.812	15.0	21.9	11 27	2 32.52	+ 6 7.2	1.354	2.272	11.9	20.8
12 7	1 59.64	+28 59.3	0.934	1.805	20.4	22.1	12 7	2 26.23	+ 6 0.7	1.417	2.266	16.1	21.0
12 17	1 52.83	+27 52.2	1.003	1.795	25.1	22.4	12 17	2 22.93	+ 6 14.3	1.499	2.260	19.5	21.2
179123	2001 SX ₂₅₇	11 7.4 16°07'	0°1'	7.5	18		399876	2005 VC ₄₆	11 7.4 73°40'	0°4'	7.1	18	
10 8	3 13.03	+18 55.9	1.683	2.559	13.3	19.8	10 8	3 14.37	+16 27.2	1.951	2.823	11.9	21.2
10 18	3 7.44	+18 22.3	1.622	2.561	9.4	19.6	10 18	3 8.06	+16 7.1	1.901	2.838	8.3	21.0
10 28	2 59.85	+17 38.0	1.585	2.563	5.0	19.4	10 28	3 0.07	+15 40.6	1.875	2.854	4.3	20.8
11 7	2 51.22	+16 46.8	1.575	2.566	0.3	19.0	11 7	2 51.26	+15 10.6	1.878	2.869	0.4	20.5
11 17	2 42.65	+15 53.9	1.593	2.569	4.5	19.4	11 17	2 42.61	+14 40.8	1.910	2.884	4.1	20.9
11 27	2 35.29	+15 5.5	1.637	2.572	8.9	19.6	11 27	2 35.08	+14 15.4	1.970	2.899	8.0	21.1
12 7	2 29.98	+14 27.0	1.707	2.575	12.8	19.9	12 7	2 29.39	+13 58.0	2.056	2.915	11.3	21.4
12 17	2 27.22	+14 1.8	1.798	2.579	16.0	20.1	12 17	2 25.96	+13 50.7	2.164	2.930	14.1	21.6
73391	2002 LJ ₁₄	11 7.4 221°97'	1°3'	6.7	18		13737	1998 RU ₇₆	11 7.4 57°15'	5°0'	4.9	18	R
10 8	3 17.30	+13 10.6	1.794	2.669	12.7	19.4	10 8	3 17.78	+ 8 2.6	1.186	2.082	16.2	16.9
10 18	3 10.39	+13 7.2	1.727	2.667	8.9	19.1	10 18	3 10.79	+ 6 56.0	1.163	2.110	11.3	16.8
10 28	3 1.41	+13 0.2	1.685	2.664	4.6	18.9	10 28	3 1.51	+ 5 52.0	1.163	2.139	6.7	16.6
11 7	2 51.29	+12 52.1	1.671	2.661	1.3	18.6	11 7	2 51.33	+ 4 58.8	1.188	2.168	5.1	16.6
11 17	2 41.14	+12 46.0	1.686	2.658	4.9	18.9	11 17	2 41.73	+ 4 23.0	1.238	2.197	8.3	16.8
11 27	2 32.11	+12 45.2	1.729	2.655	9.1	19.1	11 27	2 34.01	+ 4 8.5	1.313	2.227	12.5	17.2
12 7	2 25.12	+12 52.7	1.797	2.652	12.9	19.3	12 7	2 28.97	+ 4 15.6	1.409	2.256	16.2	17.5
12 17	2 20.72	+13 10.1	1.887	2.649	16.0	19.6	12 17	2 26.93	+ 4 42.3	1.523	2.285	19.2	17.8
470983	2009 ST ₅₈	11 7.4 40°27'	4°7'	9.8	18		330355	2006 VX ₆₅	11 7.4 32°98'	0°7'	7.8	18	
10 8	3 18.47	+26 50.5	1.244	2.109	17.8	20.2	10 8	3 14.38	+21 23.1	1.166	2.053	17.1	20.2
10 18	3 11.89	+27 13.2	1.194	2.119	13.4	20.0	10 18	3 8.92	+20 30.5	1.118	2.061	12.1	19.9
10 28	3 2.39	+27 15.1	1.165	2.130	8.6	19.8	10 28	3 0.78	+19 19.9	1.091	2.070	6.5	19.7
11 7	2 51.33	+26 55.7	1.160	2.142	4.9	19.6	11 7	2 51.31	+17 57.5	1.089	2.079	0.8	19.3
11 17	2 40.43	+26 18.7	1.180	2.154	6.2	19.7	11 17	2 42.09	+16 32.4	1.112	2.090	5.5	19.7
11 27	2 31.39	+25 32.2	1.225	2.166	10.4	20.0	11 27	2 34.64	+15 15.2	1.160	2.100	10.9	20.0
12 7	2 25.37	+24 45.5	1.293	2.179	14.7	20.3	12 7	2 30.00	+14 14.3	1.230	2.112	15.6	20.3
12 17	2 22.90	+24 6.4	1.381	2.193	18.4	20.6	12 17	2 28.60	+13 33.9	1.319	2.124	19.5	20.6
478488	2012 RS ₂₁	11 7.4 44°46'	0°8'	7.0	16		176320	2001 SN ₂₀₉	11 7.4 225°82'	2°7'	9.2	18	
10 8	3 15.99	+17 6.0	1.189	2.081	16.5	21.1	10 8	3 16.52	+24 39.7	2.127	2.972	12.2	20.1
10 18	3 9.74	+16 26.4	1.157	2.103	11.5	20.8	10 18	3 9.78	+24 51.7	2.049	2.967	9.0	19.9
10 28	3 1.04	+15 36.8	1.146	2.126	5.9	20.6	10 28	3 1.11	+24 51.7	1.997	2.962	5.6	19.7
11 7	2 51.27	+14 42.9	1.160	2.150	0.8	20.3	11 7	2 51.34	+24 39.9	1.972	2.956	2.8	19.5
11 17	2 41.94	+13 52.0	1.199	2.175	5.7	20.7	11 17	2 41.46	+24 18.2	1.976	2.950	4.1	19.6
11 27	2 34.46	+13 11.3	1.264	2.200	10.7	21.1	11 27	2 32.55	+23 50.5	2.010	2.943	7.5	19.8
12 7	2 29.69	+12 45.7	1.351	2.225	15.0	21.4	12 7	2 25.50	+23 22.0	2.070	2.937	10.9	20.0
12 17	2 28.00	+12 37.1	1.457	2.251	18.5	21.7	12 17	2 20.84	+22 57.5	2.154	2.930	13.8	20.2
406965	2009 QJ ₃	11 7.4 24°98'	4°9'	11.0	18		302787	2002 XJ ₄₆	11 7.4 20°69'	3°2'	9.4	18	
10 8	3 14.88	+31 10.9	1.950	2.779	13.8	20.4	10 8	3 14.50	+25 11.8	1.467	2.332	15.5	20.1
10 18	3 8.76	+31 23.8	1.883	2.782	10.7	20.2	10 18	3 8.80	+25 13.9	1.410	2.338	11.5	19.9
10 28	3 0.57	+31 18.4	1.838	2.786	7.6	20.0	10 28	3 0.70	+24 58.9	1.376	2.345	7.1	19.7
11 7	2 51.26	+30 54.5	1.819	2.789	5.2	19.9	11 7	2 51.31	+24 28.0	1.367	2.352	3.5	19.5
11 17	2 41.95	+30 14.3	1.828	2.793	5.5	19.9	11 17	2 42.01	+23 45.2	1.384	2.360	5.0	19.6
11 27	2 33.81	+29 23.0	1.865	2.797	8.1	20.1	11 27	2 34.17	+22 57.4	1.427	2.368	9.2	19.9
12 7	2 27.75	+28 27.8	1.927	2.801	11.2	20.3	12 7	2 28.80	+22 12.2	1.495	2.378	13.3	20.1
12 17	2 24.29	+27 35.2	2.012	2.805	14.1	20.5	12 17	2 26.41	+21 35.7	1.583	2.388	16.7	20.4
477447	2009 WQ ₁₈₅	11 7.4 313°06'	1°0'	8.1	18		452996	2007 HD ₆₀	11 7.4 230°23'	0°5'	7.8	17	
10 8	3 14.65	+21 38.6	1.428	2.304	15.								

EPHEMERIDES

11 7.4

11 7.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
483884	2005 YH ₂₄₁	11	7.4 228°50	2°3/ 5.6	18		192189	2007 GT ₂₃	11	7.4 100°61	0°7/ 6.9	18	
10 8	3 12.31	+10 10.9	2.387	3.261	9.9	21.8	10 8	3 12.52	+15 29.6	2.412	3.280	10.1	21.0
10 18	3 6.51	+9 40.1	2.317	3.256	7.0	21.6	10 18	3 6.56	+15 2.8	2.357	3.294	7.0	20.9
10 28	2 59.28	+9 7.8	2.274	3.250	3.9	21.4	10 28	2 59.26	+14 31.2	2.329	3.307	3.6	20.7
11 7	2 51.27	+8 37.4	2.259	3.244	2.3	21.3	11 7	2 51.30	+13 57.5	2.330	3.321	0.7	20.5
11 17	2 43.25	+8 12.1	2.275	3.238	4.7	21.4	11 17	2 43.45	+13 25.1	2.362	3.334	3.7	20.7
11 27	2 36.01	+7 55.3	2.320	3.232	7.9	21.6	11 27	2 36.49	+12 57.3	2.422	3.347	6.9	21.0
12 7	2 30.21	+7 49.0	2.390	3.226	10.8	21.8	12 7	2 31.00	+12 37.1	2.510	3.360	9.8	21.2
12 17	2 26.29	+7 54.4	2.483	3.219	13.3	22.0	12 17	2 27.37	+12 26.3	2.621	3.373	12.3	21.4
324490	2006 UH ₂₀₈	11	7.4 90°75	0°7/ 6.9	16		96506	Oberösterreich	11	7.4 94°12	8°8/ 1.8	18	
10 8	3 18.39	+17 58.1	1.462	2.338	14.9	20.7	10 8	3 15.76	-7 4.6	1.813	2.676	13.1	19.2
10 18	3 11.12	+16 58.3	1.421	2.361	10.4	20.5	10 18	3 8.97	-8 9.9	1.784	2.693	10.7	19.1
10 28	3 1.70	+15 47.8	1.405	2.384	5.3	20.3	10 28	3 0.53	-8 59.9	1.779	2.710	9.1	19.0
11 7	2 51.37	+14 32.8	1.416	2.407	0.7	20.0	11 7	2 51.35	-9 28.5	1.800	2.726	9.1	19.1
11 17	2 41.44	+13 20.7	1.455	2.429	5.2	20.4	11 17	2 42.46	-9 32.1	1.846	2.743	10.6	19.2
11 27	2 33.16	+12 18.9	1.521	2.450	9.9	20.7	11 27	2 34.80	-9 10.2	1.918	2.759	12.9	19.4
12 7	2 27.33	+11 32.9	1.612	2.472	13.8	21.0	12 7	2 29.07	-8 25.4	2.011	2.775	15.1	19.6
12 17	2 24.35	+11 5.0	1.723	2.492	17.0	21.3	12 17	2 25.64	-7 21.8	2.122	2.790	17.1	19.8
480317	2015 HG ₁₇₆	11	7.4 135°28	0°5/ 7.8	18		41917	2000 WC ₁₅₃	11	7.4 24°00	2°3/ 8.8	18	
10 8	3 16.57	+20 27.1	1.730	2.596	13.5	21.1	10 8	3 15.60	+24 10.7	1.193	2.071	17.4	18.4
10 18	3 9.83	+19 43.8	1.671	2.605	9.6	20.9	10 18	3 9.92	+23 36.7	1.138	2.074	12.7	18.1
10 28	3 1.09	+18 48.1	1.637	2.613	5.1	20.7	10 28	3 1.40	+22 41.6	1.103	2.078	7.4	17.8
11 7	2 51.35	+17 43.9	1.630	2.621	0.6	20.4	11 7	2 51.39	+21 29.2	1.093	2.082	2.5	17.6
11 17	2 41.76	+16 37.0	1.653	2.629	4.4	20.7	11 17	2 41.52	+20 7.1	1.108	2.086	5.4	17.8
11 27	2 33.49	+15 34.3	1.703	2.636	8.7	21.0	11 27	2 33.43	+18 46.4	1.148	2.091	10.7	18.1
12 7	2 27.37	+14 41.8	1.780	2.643	12.6	21.2	12 7	2 28.23	+17 36.9	1.211	2.097	15.5	18.4
12 17	2 23.85	+14 3.5	1.878	2.649	15.8	21.4	12 17	2 26.43	+16 45.1	1.293	2.103	19.5	18.7
313590	2003 KE ₇	11	7.4 83°26	5°1/ 3.6	18		490616	2009 XU ₂₄	11	7.4 332°69	8°6/ 2.7	17	
10 8	3 12.29	+2 40.7	2.063	2.942	11.1	20.9	10 8	3 14.40	-6 59.2	1.788	2.654	13.1	20.4
10 18	3 6.53	+1 47.4	2.014	2.948	8.1	20.7	10 18	3 8.37	-7 28.0	1.725	2.639	10.7	20.3
10 28	2 59.27	+0 58.9	1.991	2.954	5.7	20.6	10 28	3 0.40	-7 41.9	1.686	2.624	9.0	20.1
11 7	2 51.27	+0 20.4	1.995	2.961	5.3	20.6	11 7	2 51.36	-7 35.0	1.672	2.609	8.8	20.1
11 17	2 43.38	-0 4.1	2.028	2.967	7.2	20.7	11 17	2 42.26	-7 4.1	1.683	2.595	10.5	20.2
11 27	2 36.44	-0 11.8	2.087	2.973	10.0	20.9	11 27	2 34.20	-6 8.5	1.720	2.582	13.1	20.3
12 7	2 31.14	-0 2.2	2.171	2.979	12.7	21.1	12 7	2 28.04	-4 50.8	1.779	2.570	15.8	20.5
12 17	2 27.86	+0 23.6	2.274	2.985	15.0	21.3	12 17	2 24.31	-3 15.0	1.857	2.558	18.2	20.6
173502	2000 ST ₃₅₆	11	7.4 30°52	0°3/ 7.5	18		400735	2009 SD ₃₄₇	11	7.5 24°13	3°7/ 5.3	16	
10 8	3 19.67	+15 29.9	0.840	1.746	20.0	18.5	10 8	3 12.25	+8 16.8	1.541	2.434	13.3	20.2
10 18	3 13.09	+16 8.4	0.811	1.763	14.1	18.3	10 18	3 6.86	+7 42.4	1.500	2.446	9.4	20.0
10 28	3 3.08	+16 38.3	0.801	1.783	7.4	18.0	10 28	2 59.55	+7 9.1	1.483	2.459	5.4	19.9
11 7	2 51.43	+17 0.5	0.812	1.803	0.5	17.6	11 7	2 51.32	+6 42.0	1.491	2.474	3.8	19.8
11 17	2 40.28	+17 17.8	0.847	1.826	6.4	18.1	11 17	2 43.28	+6 25.6	1.526	2.489	6.6	20.0
11 27	2 31.60	+17 35.1	0.903	1.849	12.5	18.6	11 27	2 36.52	+6 23.3	1.587	2.505	10.4	20.3
12 7	2 26.58	+17 57.2	0.980	1.874	17.6	18.9	12 7	2 31.84	+6 36.4	1.671	2.521	13.9	20.5
12 17	2 25.58	+18 27.0	1.073	1.899	21.6	19.3	12 17	2 29.65	+7 4.3	1.775	2.539	16.8	20.8
184651	2005 SX ₃₁	11	7.4 32°22	1°2/ 6.7	17		81229	2000 FF ₂₆	11	7.5 98°92	0°7/ 7.0	18	
10 8	3 13.56	+14 21.0	1.816	2.696	12.3	20.7	10 8	3 18.68	+16 0.9	1.631	2.505	13.8	18.8
10 18	3 7.68	+13 58.1	1.758	2.700	8.6	20.5	10 18	3 11.28	+15 37.9	1.586	2.524	9.6	18.6
10 28	2 59.97	+13 30.1	1.725	2.704	4.5	20.2	10 28	3 1.83	+15 7.7	1.564	2.543	4.9	18.4
11 7	2 51.31	+13 0.4	1.719	2.709	1.2	20.0	11 7	2 51.43	+14 33.9	1.570	2.561	0.7	18.1
11 17	2 42.72	+12 33.1	1.742	2.714	4.7	20.3	11 17	2 41.29	+14 1.0	1.605	2.579	4.8	18.5
11 27	2 35.23	+12 12.5	1.792	2.719	8.7	20.5	11 27	2 32.60	+13 34.1	1.668	2.597	9.2	18.8
12 7	2 29.65	+12 1.8	1.867	2.725	12.3	20.8	12 7	2 26.18	+13 17.2	1.755	2.614	13.0	19.1
12 17	2 26.44	+12 3.0	1.964	2.731	15.3	21.0	12 17	2 22.47	+13 12.6	1.864	2.631	16.0	19.3
453688	2010 VD ₁₉₃	11	7.4 270°39	4°9/ 3.9	17		60096	1999 TG ₁₆₆	11	7.5 79°44	0°5/ 7.8	18	R
10 8	3 12.85	+1 43.1	2.260	3.134	10.4	21.0	10 8	3 17.07	+21 43.1	1.353	2.228	16.0	18.9
10 18	3 6.94	+1 9.1	2.194	3.125	7.8	20.8	10 18	3 10.44	+20 36.1	1.307	2.245	11.3	18.6
10 28	2 59.53	+0 40.3	2.153	3.115	5.5	20.7	10 28	3 1.47	+19 12.6	1.285	2.262	6.0	18.4
11 7	2 51.30	+0 20.8	2.141	3.106	5.0	20.6	11 7	2 51.42	+17 38.9	1.289	2.279	0.6	18.1
11 17	2 43.04	+0 13.9	2.157	3.096	6.9	20.7	11 17	2 41.75	+16 4.0	1.320	2.296	5.1	18.4
11 27	2 35.60	+0 21.8	2.201	3.087	9.6	20.9	11 27	2 33.79	+14 37.9	1.378	2.313	10.1	18.8
12 7	2 29.66	+0 45.2	2.269	3.077	12.3	21.1	12 7	2 28.43	+13 28.3	1.459	2.330	14.4	19.1
12 17	2 25.66	+1 22.9	2.359	3.067	14.6	21.2	12 17	2 26.06	+12 38.9	1.561	2.346	17.8	19.3
490909	2011 BC ₁₂₅	11	7.4 286°56	0°1/ 7.3	17		479344	2013 WT ₆₄	11	7.5 344°76	3°0/ 8.5	18	
10 8	3 12.32	+17 33.4	2.161	3.031	11.1	22.4	10 8	3 16.29	+20 57.2	1.066	1.956	18.1	20.2
10 18	3 6.76	+17 9.3	2.081	3.017	7.8	22.1	10 18	3 10.98	+21 38.0	1.003	1.945	13.3	19.9
10 28	2 59.51	+16 37.6	2.026	3.004	4.1	21.9	10 28	3 2.29	+22 5.9	0.960	1.936	7.8	19.6
11 7	2 51.30	+16 0.8	1.999	2.990	0.2	21.5	11 7	2 51.48	+22 19.8	0.939	1.927	3.1	19.3
11 17	2 43.00	+15 22.6	2.002	2.977	3.9	21.8	11 17	2 40.36	+22 20.9	0.942	1.920	6.2	19.5
11 27	2 35.55	+14 47.3	2.033	2.963	7.7	22.0	11 27	2 30.96	+22 15.0	0.969	1.915	11.8	19.8
12 7	2 29.71	+14 19.2	2.091	2.950	11.1	22.2	12 7	2 24.79	+22 9.4	1.016	1.911	17.0	20.0
12 17	2 25.99	+14 1.1	2.171	2.936	14.1	22.4	12 17	2 22.63	+22 10.5	1.081	1.908	21.4	20.3
446688	2015 OQ ₁₆	11	7.4 98°56	1°4/ 6.5	18		298600	2003 YM ₁₂₉	11	7.5 357°63	12°5/ 13.5	17	
10 8	3 15.63	+13 44.9	1.786	2.663	12.6	21.4	10 8	3 11.57					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
391966	2008 <i>WD</i> ₁₂₄	11 7.5 221°90	6°3/ 3.6 18				277466	2005 <i>VQ</i> ₅₀	11 7.5 349°91	5°9/ 4.0 18			
10 8	3 19.89	- 4 11.4	2.359	3.210	10.9	21.2	10 8	3 13.10	+ 6 22.3	1.268	2.168	15.1	20.1
10 18	3 11.83	- 4 30.2	2.288	3.198	8.6	21.0	10 18	3 7.94	+ 5 8.2	1.216	2.164	10.9	19.9
10 28	3 2.12	- 4 39.2	2.243	3.186	6.7	20.9	10 28	3 0.35	+ 3 55.5	1.186	2.160	7.1	19.7
11 7	2 51.50	- 4 34.2	2.228	3.174	6.4	20.8	11 7	2 51.45	+ 2 53.0	1.181	2.157	6.1	19.6
11 17	2 40.84	- 4 12.9	2.242	3.160	7.9	20.9	11 17	2 42.61	+ 2 8.9	1.200	2.155	9.2	19.8
11 27	2 31.06	- 3 34.2	2.286	3.146	10.3	21.0	11 27	2 35.21	+ 1 48.8	1.244	2.153	13.4	20.0
12 7	2 22.90	- 2 39.5	2.355	3.131	12.8	21.2	12 7	2 30.25	+ 1 54.2	1.308	2.152	17.4	20.3
12 17	2 16.85	- 1 30.9	2.446	3.116	15.0	21.3	12 17	2 28.28	+ 2 23.4	1.389	2.152	20.7	20.5
57122	2001 <i>OS</i> ₉₉	11 7.5 21°62	1°7/ 8.3 18				420554	2012 <i>GA</i> ₂₅	11 7.5 87°95	1°7/ 8.7 18			
10 8	3 14.07	+21 12.3	1.027	1.922	18.2	18.1	10 8	3 14.66	+21 59.0	2.305	3.157	11.1	20.9
10 18	3 9.01	+21 3.5	0.985	1.931	13.1	17.9	10 18	3 8.28	+22 6.5	2.240	3.165	8.0	20.7
10 28	3 0.98	+20 37.7	0.964	1.942	7.3	17.6	10 28	3 0.29	+22 4.8	2.202	3.172	4.6	20.5
11 7	2 51.45	+19 58.5	0.964	1.954	1.9	17.3	11 7	2 51.45	+21 54.7	2.192	3.179	1.8	20.3
11 17	2 42.15	+19 12.4	0.988	1.968	5.6	17.6	11 17	2 42.64	+21 38.5	2.211	3.187	3.5	20.5
11 27	2 34.80	+18 28.5	1.036	1.983	11.2	18.0	11 27	2 34.75	+21 19.5	2.260	3.194	6.8	20.7
12 7	2 30.50	+17 54.5	1.105	1.999	16.1	18.3	12 7	2 28.50	+21 1.6	2.336	3.201	9.9	20.9
12 17	2 29.71	+17 35.3	1.193	2.016	20.0	18.6	12 17	2 24.36	+20 48.2	2.436	3.208	12.5	21.1
487267	2014 <i>PU</i> ₅₃	11 7.5 347°87	4°4/ 4.5 18				37690	1995 <i>UV</i> ₁₆	11 7.5 91°59	1°8/ 6.4 18			
10 8	3 13.51	+ 3 22.6	2.141	3.017	10.9	20.5	10 8	3 17.82	+12 28.8	1.782	2.657	12.7	19.1
10 18	3 7.45	+ 2 55.8	2.083	3.017	7.9	20.4	10 18	3 10.52	+12 5.4	1.740	2.679	8.8	18.9
10 28	2 59.83	+ 2 33.5	2.050	3.016	5.3	20.2	10 28	3 1.42	+11 38.8	1.723	2.701	4.6	18.7
11 7	2 51.40	+ 2 19.5	2.045	3.016	4.5	20.1	11 7	2 51.50	+11 12.8	1.734	2.722	1.8	18.6
11 17	2 43.02	+ 2 17.0	2.069	3.016	6.5	20.3	11 17	2 41.84	+10 51.1	1.774	2.743	5.1	18.9
11 27	2 35.54	+ 2 28.1	2.120	3.015	9.4	20.5	11 27	2 33.50	+10 37.6	1.842	2.764	8.9	19.1
12 7	2 29.65	+ 2 53.2	2.196	3.015	12.2	20.6	12 7	2 27.21	+10 34.8	1.936	2.784	12.4	19.4
12 17	2 25.81	+ 3 31.5	2.294	3.015	14.6	20.8	12 17	2 23.39	+10 43.7	2.051	2.804	15.2	19.6
121923	2000 <i>DZ</i> ₉₆	11 7.5 191°53	1°9/ 5.7 18				178778	2000 <i>YC</i> ₁₄₀	11 7.5 315°17	19°2/ 29.1 18			
10 8	3 11.13	+11 29.9	2.674	3.546	9.1	20.1	10 8	3 22.74	-24 54.1	1.238	2.051	21.0	19.2
10 18	3 5.59	+10 49.5	2.607	3.545	6.3	19.9	10 18	3 15.15	-25 57.0	1.184	2.026	19.8	19.0
10 28	2 58.80	+10 6.8	2.566	3.543	3.4	19.7	10 28	3 4.34	-26 20.2	1.147	2.002	19.2	18.9
11 7	2 51.38	+ 9 24.8	2.556	3.542	1.9	19.6	11 7	2 51.65	-25 51.1	1.127	1.977	19.6	18.8
11 17	2 43.97	+ 8 47.0	2.575	3.540	4.2	19.8	11 17	2 38.85	-24 23.6	1.126	1.954	21.0	18.8
11 27	2 37.28	+ 8 16.8	2.625	3.537	7.1	20.0	11 27	2 27.79	-22 0.0	1.143	1.931	23.1	18.9
12 7	2 31.86	+ 7 56.4	2.701	3.535	9.7	20.1	12 7	2 19.83	-18 51.0	1.176	1.909	25.4	19.0
12 17	2 28.11	+ 7 47.2	2.800	3.532	12.0	20.3	12 17	2 15.62	-15 9.8	1.225	1.888	27.6	19.2
270615	2002 <i>OY</i> ₃₄	11 7.5 351°29	7°6/ 1.2 18				514234	2015 <i>OE</i> ₈₇	11 7.5 202°57	3°0/ 9.5 18			
10 8	3 11.17	- 6 1.9	2.174	3.039	11.2	20.3	10 8	3 17.45	+26 5.0	2.105	2.945	12.5	22.1
10 18	3 5.78	- 7 5.8	2.126	3.038	9.1	20.2	10 18	3 10.49	+26 8.9	2.028	2.942	9.3	21.9
10 28	2 58.95	- 7 58.5	2.104	3.037	7.8	20.1	10 28	3 1.56	+25 59.2	1.976	2.938	5.9	21.7
11 7	2 51.38	- 8 34.4	2.108	3.036	7.9	20.1	11 7	2 51.52	+25 36.0	1.951	2.934	3.1	21.5
11 17	2 43.88	- 8 49.6	2.139	3.036	9.4	20.2	11 17	2 41.41	+25 1.7	1.956	2.929	4.3	21.6
11 27	2 37.26	- 8 42.5	2.195	3.035	11.5	20.3	11 27	2 32.33	+24 20.9	1.990	2.924	7.6	21.8
12 7	2 32.16	- 8 14.1	2.273	3.035	13.6	20.5	12 7	2 25.17	+23 39.5	2.051	2.918	11.0	22.0
12 17	2 28.99	- 7 26.8	2.370	3.035	15.5	20.6	12 17	2 20.47	+23 2.7	2.135	2.912	13.9	22.2
210275	2007 <i>TA</i> ₁₂	11 7.5 23°61	1°0/ 6.8 18				42957	1999 <i>TK</i> ₁₂₂	11 7.5 43°97	5°7/ 3.4 18			
10 8	3 12.36	+17 5.5	1.293	2.185	15.4	18.9	10 8	3 12.55	+ 6 26.1	1.483	2.377	13.7	18.5
10 18	3 7.32	+16 14.1	1.247	2.194	10.7	18.7	10 18	3 7.15	+ 4 47.4	1.441	2.385	9.8	18.3
10 28	2 59.95	+15 12.0	1.223	2.204	5.5	18.4	10 28	2 59.77	+ 3 10.4	1.423	2.394	6.5	18.2
11 7	2 51.42	+14 5.5	1.224	2.215	1.0	18.1	11 7	2 51.43	+ 1 44.1	1.431	2.403	5.9	18.2
11 17	2 43.11	+13 2.1	1.251	2.227	5.6	18.5	11 17	2 43.30	+ 0 36.5	1.466	2.413	8.7	18.3
11 27	2 36.32	+12 9.8	1.304	2.239	10.5	18.8	11 27	2 36.50	- 0 6.8	1.526	2.422	12.3	18.6
12 7	2 31.98	+11 33.7	1.379	2.253	14.8	19.1	12 7	2 31.81	- 0 24.5	1.608	2.433	15.6	18.8
12 17	2 30.52	+11 16.4	1.473	2.267	18.3	19.4	12 17	2 29.68	- 0 18.0	1.708	2.443	18.4	19.1
134521	1999 <i>RU</i> ₈	11 7.5 83°28	5°0/ 4.5 16				520767	2014 <i>SJ</i> ₃₁	11 7.5 358°69	5°0/ 3.5 18			
10 8	3 18.43	+ 7 41.0	1.375	2.263	14.9	20.1	10 8	3 11.02	+ 3 29.8	2.034	2.916	11.0	21.3
10 18	3 11.13	+ 6 21.5	1.346	2.289	10.5	19.9	10 18	3 5.77	+ 2 30.7	1.979	2.915	8.1	21.1
10 28	3 1.74	+ 5 4.2	1.341	2.315	6.4	19.8	10 28	2 58.98	+ 1 35.3	1.949	2.915	5.6	20.9
11 7	2 51.50	+ 3 57.3	1.363	2.340	5.2	19.7	11 7	2 51.40	+ 0 49.2	1.948	2.915	5.2	20.9
11 17	2 41.74	+ 3 7.5	1.411	2.365	8.1	20.0	11 17	2 43.87	+ 0 16.8	1.974	2.915	7.2	21.0
11 27	2 33.65	+ 2 39.4	1.485	2.390	12.0	20.3	11 27	2 37.26	+ 0 1.6	2.026	2.915	10.1	21.2
12 7	2 28.03	+ 2 33.8	1.582	2.414	15.5	20.6	12 7	2 32.25	+ 0 4.4	2.102	2.915	12.9	21.4
12 17	2 25.21	+ 2 48.9	1.697	2.438	18.3	20.8	12 17	2 29.27	+ 0 24.5	2.199	2.916	15.3	21.6
275335	2010 <i>WB</i> ₂	11 7.5 57°82	2°6/ 6.0 18				298123	2002 <i>RW</i> ₂₃₇	11 7.5 29°28	2°9/ 5.8 15			
10 8	3 15.92	+ 9 20.9	1.852	2.731	12.2	20.6	10 8	3 13.33	+11 51.6	1.333	2.228	14.8	20.6
10 18	3 9.22	+ 9 12.9	1.805	2.746	8.5	20.4	10 18	3 7.88	+11 6.7	1.292	2.240	10.3	20.4
10 28	3 0.77	+ 9 5.2	1.784	2.761	4.7	20.2	10 28	3 0.20	+10 18.5	1.273	2.253	5.5	20.1
11 7	2 51.47	+ 9 0.7	1.790	2.776	2.6	20.1	11 7	2 51.46	+ 9 32.9	1.279	2.267	2.9	20.0
11 17	2 42.33	+ 9 2.1	1.825	2.791	5.3	20.3	11 17	2 42.94	+ 8 56.3	1.312	2.281	6.5	20.3
11 27	2 34.36	+ 9 12.1	1.887	2.806	9.0	20.5	11 27	2 35.92	+ 8 33.9	1.370	2.296	11.0	20.6
12 7	2 28.30	+ 9 31.8	1.975	2.822	12.3	20.8	12 7	2 31.27	+ 8 28.5	1.450	2.312	14.9	20.9
12 17	2 24.59	+10 1.8	2.085	2.837	15.0	21.0	12 17	2 29.43	+ 8 40.3	1.550	2.329	18.2	21.1
151690	2003 <i>AH</i> ₅₃	11 7.5 349°71	1°4/ 8.1 18				204677	2006 <i>DQ</i> ₇₆	11 7.5 29°04	7			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
447767	2007 LG ₁₉		11 7.5 197°01	6°9/31.9 18			352970	2009 BF ₅₉		11 7.5 205°61	1°5/ 6.4 18		
10 8	3 11.26	- 6 33.3	2.554	3.412	10.0	21.6	10 8	3 15.15	+13 27.8	2.134	3.005	11.1	21.6
10 18	3 5.69	- 7 36.8	2.504	3.410	8.2	21.5	10 18	3 8.70	+12 57.4	2.063	3.001	7.8	21.4
10 28	2 58.87	- 8 30.4	2.480	3.408	7.0	21.5	10 28	3 0.57	+12 22.5	2.018	2.996	4.1	21.2
11 7	2 51.40	- 9 9.1	2.484	3.406	7.2	21.5	11 7	2 51.51	+11 46.5	2.002	2.991	1.5	21.0
11 17	2 43.99	- 9 29.7	2.515	3.403	8.5	21.5	11 17	2 42.44	+11 13.2	2.016	2.985	4.5	21.2
11 27	2 37.33	- 9 30.2	2.571	3.400	10.4	21.7	11 27	2 34.30	+10 46.6	2.059	2.979	8.2	21.4
12 7	2 31.98	- 9 11.4	2.651	3.397	12.3	21.8	12 7	2 27.84	+10 30.0	2.128	2.973	11.6	21.6
12 17	2 28.34	- 8 35.2	2.750	3.394	14.0	21.9	12 17	2 23.55	+10 25.3	2.219	2.966	14.3	21.8
213339	2001 SG ₂₁₆		11 7.5 87°48	1°4/ 8.4 18			469375	2001 RN ₁₃₅		11 7.5 47°08	3°3/ 5.9 18		
10 8	3 15.55	+21 35.8	1.902	2.763	12.7	21.0	10 8	3 17.56	+11 9.6	1.139	2.036	16.6	20.2
10 18	3 9.11	+21 27.0	1.843	2.772	9.1	20.8	10 18	3 10.87	+10 28.7	1.112	2.061	11.5	20.0
10 28	3 0.78	+21 7.0	1.808	2.781	5.2	20.5	10 28	3 1.73	+9 46.0	1.107	2.087	6.2	19.8
11 7	2 51.49	+20 37.9	1.801	2.790	1.6	20.3	11 7	2 51.55	+9 8.0	1.127	2.114	3.3	19.7
11 17	2 42.29	+20 2.9	1.823	2.799	4.0	20.5	11 17	2 41.90	+8 40.7	1.171	2.141	7.1	20.0
11 27	2 34.25	+19 27.1	1.873	2.809	7.9	20.8	11 27	2 34.15	+8 29.1	1.241	2.168	11.8	20.4
12 7	2 28.17	+18 55.6	1.950	2.818	11.4	21.0	12 7	2 29.19	+8 34.9	1.332	2.196	15.9	20.7
12 17	2 24.53	+18 32.3	2.048	2.827	14.4	21.2	12 17	2 27.35	+8 57.4	1.441	2.224	19.2	21.0
415186	2012 GP ₁₀		11 7.5 147°74	1°5/ 6.0 18			48556	1993 TK ₃₃		11 7.5 23°01	1°5/ 6.7 18		
10 8	3 11.11	+13 29.1	2.528	3.400	9.6	21.5	10 8	3 15.08	+13 29.0	1.563	2.448	13.7	18.0
10 18	3 5.61	+12 40.3	2.466	3.405	6.6	21.3	10 18	3 9.03	+13 14.3	1.508	2.452	9.5	17.8
10 28	2 58.83	+11 47.5	2.431	3.410	3.5	21.1	10 28	3 0.84	+12 55.2	1.477	2.456	5.0	17.5
11 7	2 51.40	+10 54.4	2.426	3.414	1.6	21.0	11 7	2 51.52	+12 35.1	1.471	2.461	1.5	17.3
11 17	2 44.05	+10 4.8	2.451	3.418	4.1	21.2	11 17	2 42.28	+12 18.1	1.494	2.467	5.3	17.6
11 27	2 37.48	+9 22.6	2.505	3.422	7.1	21.4	11 27	2 34.32	+12 8.5	1.543	2.472	9.7	17.8
12 7	2 32.27	+8 50.8	2.586	3.426	9.9	21.6	12 7	2 28.56	+12 9.5	1.616	2.479	13.6	18.1
12 17	2 28.80	+8 31.0	2.690	3.429	12.3	21.8	12 17	2 25.50	+12 22.7	1.709	2.485	16.9	18.3
440406	2005 OK ₁		11 7.5 33°18	3°0/ 6.3 16			321135	2008 UV ₁₄₁		11 7.5 112°71	0°6/ 7.1 18		
10 8	3 18.29	+9 27.8	1.201	2.095	16.2	20.4	10 8	3 17.13	+15 58.1	1.763	2.635	13.0	20.8
10 18	3 11.18	+9 27.8	1.181	2.129	11.2	20.2	10 18	3 10.23	+15 38.1	1.708	2.646	9.1	20.6
10 28	3 1.80	+9 28.4	1.184	2.163	6.0	20.0	10 28	3 1.38	+15 11.4	1.678	2.657	4.7	20.4
11 7	2 51.54	+9 33.2	1.212	2.199	3.0	19.9	11 7	2 51.55	+14 41.0	1.676	2.667	0.6	20.1
11 17	2 41.85	+9 45.2	1.265	2.235	6.5	20.3	11 17	2 41.85	+14 11.1	1.703	2.677	4.6	20.4
11 27	2 34.06	+10 6.9	1.344	2.272	10.9	20.6	11 27	2 33.41	+13 46.3	1.758	2.687	8.8	20.7
12 7	2 28.95	+10 39.1	1.445	2.310	14.8	20.9	12 7	2 27.05	+13 30.6	1.838	2.696	12.5	20.9
12 17	2 26.84	+11 21.2	1.566	2.348	17.9	21.3	12 17	2 23.23	+13 26.1	1.940	2.706	15.5	21.2
135848	2002 SN ₄₂		11 7.5 52°15	0°6/ 7.9 18			30898	1993 FJ ₂₉		11 7.5 34°47	4°8/ 9.9 18		
10 8	3 15.04	+19 39.6	1.643	2.516	13.7	20.2	10 8	3 17.51	+27 7.5	0.986	1.865	20.1	17.2
10 18	3 8.92	+19 19.6	1.588	2.525	9.7	20.0	10 18	3 11.67	+27 14.8	0.945	1.877	15.1	17.0
10 28	3 0.73	+18 48.7	1.557	2.534	5.2	19.7	10 28	3 2.49	+26 56.3	0.922	1.891	9.6	16.7
11 7	2 51.50	+18 9.9	1.553	2.544	0.8	19.4	11 7	2 51.62	+26 13.0	0.921	1.905	5.2	16.5
11 17	2 42.39	+17 27.9	1.577	2.554	4.4	19.7	11 17	2 41.05	+25 11.4	0.943	1.920	6.6	16.7
11 27	2 34.59	+16 48.4	1.628	2.564	8.8	20.0	11 27	2 32.72	+24 2.9	0.989	1.936	11.5	17.0
12 7	2 28.96	+16 16.9	1.704	2.574	12.7	20.3	12 7	2 27.84	+22 59.3	1.055	1.952	16.3	17.3
12 17	2 25.97	+15 56.8	1.801	2.585	15.9	20.5	12 17	2 26.83	+22 9.0	1.140	1.970	20.4	17.7
181902	1999 RD ₂₁₅		11 7.5 8°32	0°1/ 5.6 07 C			20853	Yunxiangchu		11 7.5 317°38	2°7/ 5.9 18		
10 8	2 53.09	+9 56.5	45.051	45.923	0.6	24.1	10 8	3 14.72	+11 29.6	1.486	2.375	14.0	18.9
10 18	2 52.47	+9 52.1	44.997	45.935	0.4	24.1	10 18	3 8.99	+10 56.2	1.420	2.366	9.8	18.7
10 28	2 51.80	+9 47.7	44.972	45.948	0.2	24.0	10 28	3 0.93	+10 19.0	1.377	2.357	5.4	18.4
11 7	2 51.10	+9 43.5	44.976	45.960	0.1	24.0	11 7	2 51.56	+9 43.1	1.361	2.348	2.8	18.2
11 17	2 50.40	+9 39.5	45.010	45.973	0.3	24.0	11 17	2 42.10	+9 13.9	1.371	2.339	6.3	18.4
11 27	2 49.72	+9 35.8	45.075	45.985	0.5	24.1	11 27	2 33.88	+8 56.6	1.407	2.331	10.9	18.7
12 7	2 49.10	+9 32.7	45.167	45.998	0.7	24.1	12 7	2 27.93	+8 54.7	1.466	2.324	15.1	18.9
12 17	2 48.56	+9 30.2	45.286	46.011	0.8	24.1	12 17	2 24.82	+9 9.3	1.544	2.316	18.6	19.1
221398	2005 YL ₅₈		11 7.5 107°18	0°7/ 6.9 18			183659	2003 WA ₁₂₀		11 7.5 21°34	3°8/ 9.6 18		
10 8	3 12.60	+15 48.8	2.247	3.117	10.6	20.6	10 8	3 14.63	+26 29.7	1.061	1.941	19.0	19.2
10 18	3 6.79	+15 17.9	2.187	3.124	7.4	20.4	10 18	3 9.53	+26 11.3	1.012	1.947	14.1	19.0
10 28	2 59.49	+14 41.3	2.152	3.131	3.8	20.2	10 28	3 1.36	+25 27.8	0.982	1.954	8.7	18.7
11 7	2 51.45	+14 2.1	2.147	3.138	0.7	20.0	11 7	2 51.57	+24 22.1	0.975	1.961	4.1	18.5
11 17	2 43.48	+13 24.1	2.171	3.144	3.9	20.2	11 17	2 41.98	+23 1.9	0.992	1.970	5.9	18.6
11 27	2 36.42	+12 51.1	2.225	3.151	7.4	20.5	11 27	2 34.35	+21 38.9	1.033	1.980	11.1	18.9
12 7	2 30.93	+12 26.6	2.305	3.157	10.5	20.7	12 7	2 29.86	+20 24.8	1.096	1.991	16.0	19.3
12 17	2 27.41	+12 12.7	2.407	3.164	13.1	20.9	12 17	2 28.97	+19 27.3	1.177	2.003	20.0	19.6
321274	2009 DW ₁₄₂		11 7.5 133°91	2°2/ 8.7 16			523330	2017 BB ₁₃₉		11 7.5 227°50	1°0/ 8.2 17		
10 8	3 21.03	+22 47.4	1.516	2.377	15.4	21.4	10 8	3 13.73	+20 27.1	2.210	3.070	11.2	21.9
10 18	3 13.33	+22 44.7	1.459	2.387	11.2	21.2	10 18	3 7.74	+20 17.8	2.139	3.068	8.0	21.6
10 28	3 3.13	+22 27.2	1.425	2.397	6.5	21.0	10 28	3 0.08	+19 59.6	2.093	3.067	4.4	21.4
11 7	2 51.62	+21 56.2	1.418	2.406	2.3	20.7	11 7	2 51.52	+19 34.0	2.075	3.065	1.1	21.2
11 17	2 40.24	+21 15.8	1.438	2.414	4.8	20.9	11 17	2 42.94	+19 4.1	2.087	3.064	3.6	21.4
11 27	2 30.44	+20 32.8	1.486	2.422	9.4	21.2	11 27	2 35.27	+18 33.9	2.129	3.062	7.2	21.6
12 7	2 23.24	+19 54.3	1.559	2.430	13.6	21.5	12 7	2 29.25	+18 7.5	2.196	3.060	10.5	21.8
12 17	2 19.18	+19 25.6	1.652	2.437	17.0	21.7	12 17	2 25.36	+17 48.3	2.287	3.059	13.3	22.0
482712	2013 DX ₂		11 7.5 273°51	1°0/ 6.7 18			304180	2006 QA ₂₆		11 7.5 113°89	6°1/12.7 18		
10 8	3 13.98	+16 9.1	1.975	2.848	11.8								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
121062	1999 <i>CF</i> ₁₁₆	11 7.5 221°08	1.1/ 8.2 18				171597	1999 <i>XV</i> ₅₃	11 7.5 317°06	0.1/ 7.6 18			
10 8	3 16.94	+21 14.2	1.879	2.739	12.9	20.6	10 8	3 12.75	+19 14.2	1.469	2.351	14.5	19.7
10 18	3 10.26	+20 54.5	1.803	2.732	9.3	20.4	10 18	3 7.81	+18 37.1	1.389	2.331	10.4	19.4
10 28	3 1.51	+20 22.8	1.751	2.724	5.2	20.1	10 28	3 0.44	+17 46.2	1.332	2.311	5.6	19.1
11 7	2 51.59	+19 41.2	1.727	2.716	1.3	19.8	11 7	2 51.58	+16 45.2	1.301	2.292	0.3	18.6
11 17	2 41.60	+18 53.7	1.732	2.708	4.1	20.0	11 17	2 42.51	+15 40.4	1.297	2.273	5.1	19.0
11 27	2 32.70	+18 5.9	1.765	2.699	8.4	20.3	11 27	2 34.62	+14 39.8	1.318	2.255	10.2	19.2
12 7	2 25.81	+17 23.7	1.825	2.690	12.2	20.5	12 7	2 29.03	+13 50.7	1.363	2.238	14.9	19.5
12 17	2 21.51	+16 51.6	1.907	2.680	15.5	20.7	12 17	2 26.40	+13 18.2	1.427	2.221	18.8	19.7
60370	2000 <i>AG</i> ₁₂₆	11 7.5 260°79	3.9/ 3.9 17				325536	2009 <i>SX</i> ₄₆	11 7.5 132°66	0.1/ 7.4 18			
10 8	3 11.10	+ 5 26.0	2.392	3.269	9.8	19.7	10 8	3 11.99	+18 34.9	2.302	3.167	10.6	20.9
10 18	3 5.75	+ 4 31.7	2.321	3.257	7.1	19.5	10 18	3 6.39	+17 54.7	2.236	3.170	7.5	20.7
10 28	2 59.00	+ 3 38.7	2.277	3.245	4.7	19.3	10 28	2 59.33	+17 6.4	2.197	3.174	3.9	20.5
11 7	2 51.48	+ 2 51.4	2.261	3.233	4.1	19.3	11 7	2 51.52	+16 13.1	2.186	3.177	0.2	20.2
11 17	2 43.92	+ 2 14.1	2.275	3.221	6.1	19.4	11 17	2 43.77	+15 19.0	2.205	3.180	3.6	20.5
11 27	2 37.10	+ 1 50.1	2.316	3.208	8.9	19.6	11 27	2 36.90	+14 28.7	2.254	3.183	7.1	20.7
12 7	2 31.66	+ 1 41.2	2.383	3.196	11.6	19.7	12 7	2 31.57	+13 46.4	2.329	3.186	10.2	20.9
12 17	2 28.03	+ 1 47.7	2.471	3.183	13.9	19.9	12 17	2 28.19	+13 15.0	2.428	3.189	12.9	21.1
13168	Danoconnell	11 7.5 115°59	1.6/ 6.7 18				18549	1997 <i>AD</i> ₁₃	11 7.5 183°43	4.2/ 4.4 18			
10 8	3 19.41	+11 21.8	1.862	2.733	12.4	18.0	10 8	3 15.79	+ 3 45.1	2.369	3.237	10.2	18.5
10 18	3 11.79	+11 29.2	1.805	2.742	8.7	17.8	10 18	3 8.95	+ 3 8.1	2.307	3.238	7.5	18.3
10 28	3 2.22	+11 35.1	1.773	2.751	4.6	17.5	10 28	3 0.65	+ 2 34.4	2.272	3.238	5.0	18.2
11 7	2 51.63	+11 41.7	1.770	2.759	1.7	17.4	11 7	2 51.59	+ 2 8.1	2.267	3.237	4.3	18.1
11 17	2 41.13	+11 51.0	1.797	2.768	4.9	17.6	11 17	2 42.57	+ 1 52.4	2.292	3.236	6.2	18.2
11 27	2 31.82	+12 5.5	1.853	2.776	8.8	17.9	11 27	2 34.41	+ 1 49.8	2.345	3.234	8.9	18.4
12 7	2 24.54	+12 27.2	1.935	2.784	12.3	18.1	12 7	2 27.78	+ 2 1.1	2.424	3.231	11.6	18.6
12 17	2 19.78	+12 56.9	2.038	2.792	15.2	18.3	12 17	2 23.09	+ 2 25.9	2.525	3.227	13.9	18.7
225778	2001 <i>TB</i> ₁₅₁	11 7.5 349°64	4.3/ 5.6 18				9562	Memling	11 7.5 61°79	1.8/ 6.2 18			
10 8	3 14.08	+ 8 36.2	1.151	2.053	16.1	19.4	10 8	3 13.27	+12 42.7	1.994	2.872	11.5	17.0
10 18	3 8.94	+ 8 8.4	1.095	2.046	11.4	19.2	10 18	3 7.32	+12 10.7	1.948	2.889	7.9	16.8
10 28	3 1.04	+ 7 41.1	1.060	2.039	6.6	18.9	10 28	2 59.80	+11 35.5	1.927	2.906	4.2	16.6
11 7	2 51.58	+ 7 20.5	1.049	2.034	4.3	18.7	11 7	2 51.54	+11 0.9	1.935	2.923	1.8	16.5
11 17	2 42.07	+ 7 12.4	1.062	2.030	8.0	18.9	11 17	2 43.46	+10 30.9	1.971	2.940	4.7	16.7
11 27	2 34.11	+ 7 21.4	1.099	2.027	12.9	19.2	11 27	2 36.43	+10 9.0	2.036	2.958	8.2	17.0
12 7	2 28.85	+ 7 49.1	1.156	2.025	17.5	19.5	12 7	2 31.13	+ 9 58.0	2.126	2.975	11.4	17.2
12 17	2 26.92	+ 8 34.7	1.231	2.024	21.3	19.7	12 17	2 27.96	+ 9 59.0	2.238	2.992	14.0	17.4
119477	2001 <i>UH</i> ₃₀	11 7.5 59°70	4.5/ 5.1 18				30248	Kimstinson	11 7.5 101°37	0.3/ 7.7 18			
10 8	3 16.53	+ 7 33.4	1.378	2.269	14.7	19.3	10 8	3 14.92	+19 43.6	2.087	2.949	11.7	18.8
10 18	3 10.06	+ 6 47.1	1.336	2.281	10.4	19.1	10 18	3 8.44	+19 6.3	2.036	2.968	8.2	18.6
10 28	3 1.37	+ 6 2.6	1.318	2.293	6.2	18.9	10 28	3 0.37	+18 19.8	2.010	2.986	4.4	18.4
11 7	2 51.60	+ 5 26.1	1.325	2.306	4.6	18.8	11 7	2 51.57	+17 27.3	2.013	3.004	0.4	18.1
11 17	2 42.08	+ 5 3.2	1.359	2.319	7.6	19.0	11 17	2 42.97	+16 33.2	2.046	3.022	3.7	18.4
11 27	2 34.08	+ 4 57.8	1.418	2.332	11.7	19.3	11 27	2 35.46	+15 42.7	2.108	3.039	7.4	18.7
12 7	2 28.50	+ 5 11.0	1.499	2.345	15.5	19.6	12 7	2 29.73	+15 0.3	2.197	3.056	10.7	18.9
12 17	2 25.76	+ 5 41.6	1.600	2.358	18.6	19.8	12 17	2 26.17	+14 29.0	2.309	3.072	13.4	19.1
318380	2004 <i>VY</i> ₁₀₉	11 7.5 93°82	0.2/ 7.7 18				511007	2013 <i>PD</i> ₄	11 7.5 136°10	0.3/ 7.4 17			
10 8	3 14.64	+17 57.4	2.256	3.118	10.9	20.6	10 8	3 21.21	+16 46.6	1.521	2.393	14.7	21.9
10 18	3 8.20	+17 47.1	2.201	3.134	7.7	20.4	10 18	3 13.37	+16 33.9	1.467	2.404	10.3	21.7
10 28	3 0.25	+17 30.2	2.173	3.150	4.0	20.2	10 28	3 3.15	+16 12.8	1.436	2.414	5.4	21.4
11 7	2 51.55	+17 8.6	2.174	3.165	0.3	20.0	11 7	2 51.71	+15 45.9	1.433	2.424	0.3	21.1
11 17	2 42.97	+16 45.2	2.205	3.180	3.5	20.3	11 17	2 40.42	+15 17.8	1.458	2.433	5.0	21.5
11 27	2 35.37	+16 23.6	2.265	3.195	7.0	20.5	11 27	2 30.67	+14 53.8	1.510	2.441	9.8	21.8
12 7	2 29.40	+16 7.1	2.351	3.210	10.1	20.7	12 7	2 23.42	+14 38.7	1.587	2.449	13.9	22.0
12 17	2 25.49	+15 58.1	2.462	3.224	12.7	20.9	12 17	2 19.20	+14 35.5	1.685	2.456	17.3	22.3
73567	4509 <i>P-L</i>	11 7.5 284°85	2.0/ 5.9 17				144245	2004 <i>CU</i> ₇₈	11 7.5 88°26	1.8/ 6.2 18			
10 8	3 11.64	+12 27.0	2.202	3.079	10.6	19.4	10 8	3 14.19	+13 2.8	1.852	2.731	12.1	19.9
10 18	3 6.30	+11 43.4	2.122	3.062	7.4	19.2	10 18	3 8.15	+12 26.2	1.795	2.736	8.4	19.6
10 28	2 59.37	+10 55.5	2.068	3.046	4.0	19.0	10 28	3 0.33	+11 45.4	1.763	2.741	4.5	19.4
11 7	2 51.52	+10 7.1	2.042	3.029	2.0	18.8	11 7	2 51.58	+11 4.5	1.758	2.746	1.9	19.2
11 17	2 43.58	+ 9 22.6	2.045	3.012	4.8	19.0	11 17	2 42.92	+10 27.9	1.782	2.751	5.0	19.5
11 27	2 36.44	+ 8 46.6	2.077	2.995	8.3	19.1	11 27	2 35.36	+10 0.4	1.834	2.756	8.9	19.7
12 7	2 30.81	+ 8 22.2	2.135	2.978	11.6	19.3	12 7	2 29.66	+ 9 45.0	1.911	2.761	12.4	20.0
12 17	2 27.20	+ 8 11.5	2.215	2.961	14.4	19.5	12 17	2 26.30	+ 9 43.2	2.009	2.766	15.3	20.2
399703	2004 <i>TQ</i> ₂₇₇	11 7.5 32°98	0.7/ 6.9 18				301643	2010 <i>ES</i> ₈₇	11 7.5 120°61	2.4/ 5.5 16			
10 8	3 12.04	+16 59.5	1.676	2.558	13.1	20.3	10 8	3 14.27	+12 33.5	2.045	2.920	11.3	21.1
10 18	3 6.72	+16 16.2	1.629	2.571	9.1	20.1	10 18	3 7.96	+11 22.5	1.995	2.935	7.8	20.9
10 28	2 59.57	+15 24.8	1.605	2.585	4.7	19.9	10 28	3 0.12	+10 7.5	1.972	2.949	4.2	20.7
11 7	2 51.52	+14 29.7	1.609	2.599	0.7	19.6	11 7	2 51.57	+ 8 54.0	1.977	2.963	2.5	20.6
11 17	2 43.66	+13 36.5	1.640	2.614	4.6	20.0	11 17	2 43.20	+ 7 47.5	2.013	2.976	5.2	20.8
11 27	2 37.02	+12 51.1	1.698	2.630	8.8	20.2	11 27	2 35.90	+ 6 53.2	2.077	2.989	8.7	21.1
12 7	2 32.36	+12 17.8	1.781	2.646	12.5	20.5	12 7	2 30.32	+ 6 14.2	2.167	3.001	11.8	21.3
12 17	2 30.10	+11 58.9	1.885	2.663	15.5	20.8	12 17	2 26.86	+ 5 51.9	2.279	3.013	14.4	21.5
211299	2002 <i>RZ</i> ₂₃₇	11 7.5 0°61	3.7/ 5.3 18				484528	2008 <i>EC</i> ₁₅₇	11 7.5 307°24	3.2/ 9.1 17			
10 8	3 12												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
368191	2000 SW ₂₄₆	11 7.5	5°72	5°6/ 4.7	18		67654	2000 SK ₂₃₇	11 7.5	340°48	5°9/ 4.6	18	
10 8	3 13.02	+ 8 35.6	0.995	1.905	17.2	19.7	10 8	3 14.37	+ 6 42.8	1.084	1.989	16.6	18.6
10 18	3 8.31	+ 7 23.8	0.951	1.905	12.3	19.4	10 18	3 9.26	+ 5 45.5	1.030	1.981	12.0	18.3
10 28	3 0.72	+ 6 11.1	0.926	1.905	7.4	19.2	10 28	3 1.29	+ 4 49.7	0.997	1.973	7.6	18.0
11 7	2 51.61	+ 5 7.6	0.925	1.907	5.8	19.1	11 7	2 51.69	+ 4 4.4	0.986	1.966	6.1	17.9
11 17	2 42.62	+ 4 23.0	0.946	1.909	9.5	19.3	11 17	2 42.04	+ 3 37.6	1.000	1.960	9.6	18.1
11 27	2 35.42	+ 4 4.0	0.989	1.913	14.5	19.6	11 27	2 34.01	+ 3 35.2	1.035	1.955	14.4	18.3
12 7	2 31.13	+ 4 12.3	1.052	1.918	19.0	19.9	12 7	2 28.80	+ 3 58.2	1.091	1.951	18.9	18.6
12 17	2 30.25	+ 4 45.6	1.131	1.924	22.8	20.2	12 17	2 27.02	+ 4 44.6	1.163	1.948	22.7	18.9
523567	2018 CW ₁₅	11 7.5	221°62	7°2/ 1.9	18		14060	Patersonewen	11 7.5	127°07	1°7/ 8.5	18	
10 8	3 14.96	- 3 29.2	2.078	2.944	11.6	21.7	10 8	3 18.49	+21 52.9	1.589	2.453	14.6	17.9
10 18	3 8.58	- 4 36.0	2.018	2.936	9.2	21.6	10 18	3 11.55	+21 46.7	1.528	2.458	10.5	17.6
10 28	3 0.54	- 5 33.9	1.984	2.927	7.5	21.5	10 28	3 2.27	+21 27.3	1.491	2.464	6.0	17.4
11 7	2 51.61	- 6 16.7	1.977	2.917	7.5	21.4	11 7	2 51.73	+20 56.3	1.480	2.469	1.9	17.1
11 17	2 42.67	- 6 39.6	1.998	2.907	9.2	21.5	11 17	2 41.26	+20 17.7	1.497	2.474	4.6	17.3
11 27	2 34.65	- 6 40.2	2.044	2.896	11.7	21.7	11 27	2 32.18	+19 37.6	1.541	2.478	9.1	17.6
12 7	2 28.31	- 6 18.8	2.113	2.885	14.2	21.8	12 7	2 25.50	+19 2.5	1.611	2.483	13.2	17.9
12 17	2 24.10	- 5 37.6	2.202	2.874	16.4	22.0	12 17	2 21.74	+18 37.2	1.701	2.487	16.6	18.1
398497	2011 UF ₁₈₀	11 7.5	17°12	2°7/ 9.4	18		361385	2006 VT ₆₀	11 7.5	266°33	0°5/ 7.9	18	
10 8	3 14.64	+25 42.6	1.759	2.613	13.9	20.9	10 8	3 14.20	+19 28.8	1.963	2.829	12.1	21.1
10 18	3 8.74	+25 25.3	1.692	2.614	10.3	20.7	10 18	3 8.25	+19 9.1	1.893	2.826	8.6	20.8
10 28	3 0.74	+24 51.8	1.648	2.615	6.3	20.5	10 28	3 0.45	+18 39.8	1.848	2.824	4.7	20.6
11 7	2 51.62	+24 3.7	1.631	2.616	3.0	20.3	11 7	2 51.65	+18 3.4	1.831	2.821	0.7	20.3
11 17	2 42.53	+23 5.2	1.642	2.618	4.4	20.4	11 17	2 42.84	+17 23.6	1.843	2.819	3.9	20.5
11 27	2 34.66	+22 3.1	1.681	2.619	8.3	20.6	11 27	2 35.04	+16 45.5	1.883	2.816	8.0	20.8
12 7	2 28.92	+21 4.5	1.745	2.621	12.1	20.8	12 7	2 29.08	+16 13.7	1.949	2.814	11.6	21.0
12 17	2 25.81	+20 15.1	1.831	2.623	15.3	21.1	12 17	2 25.46	+15 51.8	2.037	2.811	14.6	21.2
31652	1999 HS ₂	11 7.5	257°14	0°9/ 6.9	18		433814	2015 BL ₁₄₇	11 7.5	149°22	0°9/ 8.1	16	
10 8	3 15.88	+16 15.9	1.735	2.610	13.0	18.7	10 8	3 19.67	+20 17.5	1.816	2.675	13.3	22.2
10 18	3 9.67	+15 39.5	1.657	2.596	9.2	18.5	10 18	3 12.08	+19 59.2	1.755	2.685	9.5	22.0
10 28	3 1.29	+14 54.3	1.604	2.582	4.8	18.2	10 28	3 2.44	+19 29.8	1.720	2.695	5.2	21.8
11 7	2 51.65	+14 4.0	1.577	2.568	0.9	17.9	11 7	2 51.75	+18 51.8	1.713	2.703	1.0	21.5
11 17	2 41.89	+13 13.8	1.580	2.553	4.9	18.1	11 17	2 41.18	+18 9.2	1.735	2.711	4.2	21.7
11 27	2 33.20	+12 29.7	1.610	2.538	9.5	18.4	11 27	2 31.91	+17 27.7	1.787	2.719	8.4	22.0
12 7	2 26.57	+11 57.1	1.665	2.523	13.6	18.6	12 7	2 24.80	+16 52.6	1.864	2.725	12.2	22.3
12 17	2 22.59	+11 39.0	1.741	2.508	17.0	18.8	12 17	2 20.34	+16 27.9	1.963	2.731	15.3	22.5
302636	2002 RD ₁₃₄	11 7.5	30°71	2°5/ 6.3	18		8853	Gerdlehmann	11 7.5	307°02	0°1/ 7.5	18	
10 8	3 16.89	+10 11.9	1.519	2.404	13.9	20.0	10 8	3 18.22	+16 30.7	1.305	2.189	15.8	17.9
10 18	3 10.33	+10 8.9	1.468	2.411	9.8	19.8	10 18	3 11.89	+16 31.6	1.236	2.179	11.3	17.6
10 28	3 1.57	+10 5.5	1.440	2.418	5.3	19.5	10 28	3 2.69	+16 24.2	1.190	2.169	6.0	17.3
11 7	2 51.66	+10 4.9	1.438	2.426	2.5	19.4	11 7	2 51.78	+16 10.5	1.169	2.160	0.3	16.9
11 17	2 41.86	+10 10.1	1.465	2.434	5.9	19.6	11 17	2 40.66	+15 54.6	1.174	2.151	5.5	17.3
11 27	2 33.42	+10 24.3	1.517	2.443	10.2	19.9	11 27	2 31.00	+15 41.9	1.204	2.142	11.0	17.5
12 7	2 27.26	+10 49.0	1.594	2.452	14.1	20.2	12 7	2 24.05	+15 37.8	1.258	2.133	15.8	17.8
12 17	2 23.88	+11 24.6	1.691	2.461	17.2	20.4	12 17	2 20.51	+15 45.9	1.330	2.125	19.9	18.1
360643	2004 HY ₅₃	11 7.5	52°31	5°5/ 9.9	18		165551	2001 DZ ₄₀	11 7.5	332°00	1°5/ 5.5	18	
10 8	3 24.62	+26 53.8	0.938	1.812	21.4	19.1	10 8	3 5.63	+ 9 36.3	4.146	5.016	6.2	19.6
10 18	3 16.54	+27 30.6	0.910	1.840	15.9	18.9	10 18	3 1.53	+ 9 11.6	4.078	5.015	4.3	19.4
10 28	3 4.96	+27 41.3	0.902	1.869	10.2	18.7	10 28	2 56.70	+ 8 46.5	4.038	5.014	2.4	19.3
11 7	2 51.82	+27 25.1	0.916	1.898	5.8	18.6	11 7	2 51.48	+ 8 22.9	4.029	5.012	1.6	19.2
11 17	2 39.38	+26 47.5	0.953	1.927	7.1	18.7	11 17	2 46.26	+ 8 2.5	4.050	5.011	3.0	19.3
11 27	2 29.66	+25 59.3	1.014	1.957	11.8	19.1	11 27	2 41.45	+ 7 47.1	4.102	5.010	4.9	19.5
12 7	2 23.78	+25 12.2	1.096	1.987	16.3	19.5	12 7	2 37.40	+ 7 38.0	4.181	5.009	6.7	19.6
12 17	2 22.02	+24 34.6	1.196	2.017	20.1	19.8	12 17	2 34.36	+ 7 35.9	4.284	5.008	8.3	19.7
477413	2009 VO ₉₈	11 7.5	35°24	1°6/ 8.3	18		296755	2009 UV ₂₇	11 7.5	232°49	2°6/ 5.9	17	
10 8	3 16.95	+20 43.8	1.137	2.023	17.5	20.9	10 8	3 15.72	+ 7 34.6	2.416	3.284	10.1	20.2
10 18	3 10.87	+20 41.3	1.096	2.037	12.5	20.7	10 18	3 8.99	+ 7 34.6	2.345	3.280	7.1	20.1
10 28	3 1.97	+20 23.9	1.075	2.052	6.9	20.4	10 28	3 0.76	+ 7 36.0	2.302	3.276	4.1	19.9
11 7	2 51.68	+19 54.4	1.078	2.068	1.8	20.2	11 7	2 51.69	+ 7 41.3	2.288	3.271	2.6	19.8
11 17	2 41.67	+19 18.1	1.106	2.084	5.4	20.5	11 17	2 42.59	+ 7 52.2	2.305	3.266	4.8	19.9
11 27	2 33.54	+18 42.9	1.159	2.102	10.7	20.8	11 27	2 34.28	+ 8 10.6	2.351	3.262	7.9	20.1
12 7	2 28.37	+18 15.8	1.234	2.120	15.3	21.1	12 7	2 27.46	+ 8 37.4	2.424	3.257	10.7	20.3
12 17	2 26.60	+18 1.1	1.327	2.138	19.0	21.4	12 17	2 22.58	+ 9 13.0	2.520	3.252	13.2	20.4
180914	2005 LM ₅	11 7.5	104°82	3°0/ 5.6	18		505412	2013 QO ₉₅	11 7.5	4°05	0°4/ 3.2	16	
10 8	3 18.76	+10 47.6	1.621	2.500	13.6	20.6	10 8	2 53.71	+ 1 22.9	37.792	38.661	0.7	22.7
10 18	3 11.32	+ 9 55.7	1.581	2.522	9.4	20.4	10 18	2 52.95	+ 1 18.6	37.734	38.661	0.5	22.6
10 28	3 1.93	+ 9 1.9	1.566	2.543	5.2	20.2	10 28	2 52.12	+ 1 14.6	37.704	38.661	0.4	22.6
11 7	2 51.69	+ 8 11.6	1.579	2.564	3.1	20.2	11 7	2 51.26	+ 1 11.2	37.704	38.661	0.4	22.6
11 17	2 41.77	+ 7 30.5	1.621	2.584	6.2	20.4	11 17	2 50.40	+ 1 8.6	37.732	38.661	0.5	22.6
11 27	2 33.30	+ 7 3.1	1.689	2.604	10.1	20.7	11 27	2 49.58	+ 1 6.8	37.790	38.661	0.7	22.6
12 7	2 27.06	+ 6 51.8	1.783	2.623	13.7	20.9	12 7	2 48.81	+ 1 5.9	37.875	38.662	0.9	22.7
12 17	2 23.44	+ 6 56.8	1.896	2.641	16.5	21.2	12 17	2 48.14	+ 1 6.0	37.984	38.662	1.1	22.7
89994	2002 TK ₆₈	11 7.5	298°87	8°2/ 8.9	18		236541	2006 HN ₄₂	11 7.5	179°27	1°9/ 6.1	18	
10 8	3 30.02	+28 38.8	1.408	2.243									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
393004	2012 <i>XT</i> ₁₃₀		11 7.5 267°76	2°8/ 5.7 18			302676	2002 <i>SM</i> ₇₁		11 7.5 284°58	5°3/10.4 18		
10 8	3 15.16	+10 31.8	1.735	2.617	12.7	20.6	10 8	3 19.80	+29 47.1	1.843	2.673	14.4	20.5
10 18	3 9.06	+9 55.7	1.667	2.610	8.9	20.4	10 18	3 12.66	+30 34.3	1.766	2.667	11.2	20.3
10 28	3 0.95	+9 17.1	1.625	2.602	5.0	20.1	10 28	3 3.02	+31 5.3	1.712	2.661	8.0	20.1
11 7	2 51.70	+8 40.6	1.610	2.595	2.9	20.0	11 7	2 51.84	+31 17.7	1.685	2.655	5.6	19.9
11 17	2 42.42	+8 11.1	1.622	2.588	6.0	20.2	11 17	2 40.41	+31 11.3	1.686	2.648	6.1	19.9
11 27	2 34.22	+7 53.1	1.662	2.581	10.0	20.4	11 27	2 30.13	+30 50.2	1.714	2.642	9.0	20.1
12 7	2 28.01	+7 49.4	1.726	2.573	13.7	20.6	12 7	2 22.16	+30 20.9	1.767	2.636	12.4	20.3
12 17	2 24.32	+8 1.0	1.811	2.566	16.8	20.8	12 17	2 17.16	+29 50.5	1.843	2.630	15.4	20.5
292868	2006 <i>VA</i> ₆		11 7.5 332°73	1°0/ 6.9 18			279547	2011 <i>CL</i> ₃₄		11 7.5 320°79	0°7/ 8.0 17		
10 8	3 14.63	+14 35.6	1.737	2.616	12.8	20.3	10 8	3 13.52	+19 14.7	2.024	2.891	11.8	21.1
10 18	3 8.72	+14 22.9	1.669	2.610	9.0	20.1	10 18	3 7.81	+19 10.3	1.949	2.883	8.4	20.8
10 28	3 0.78	+14 4.9	1.626	2.605	4.7	19.8	10 28	3 0.27	+18 57.5	1.899	2.875	4.6	20.6
11 7	2 51.70	+13 44.4	1.610	2.601	1.0	19.6	11 7	2 51.70	+18 38.0	1.877	2.867	0.8	20.3
11 17	2 42.56	+13 25.3	1.622	2.596	4.8	19.8	11 17	2 43.04	+18 14.6	1.883	2.860	3.8	20.5
11 27	2 34.52	+13 11.6	1.662	2.592	9.1	20.1	11 27	2 35.30	+17 51.4	1.918	2.853	7.8	20.7
12 7	2 28.47	+13 7.1	1.726	2.588	12.9	20.3	12 7	2 29.32	+17 32.6	1.979	2.846	11.3	21.0
12 17	2 24.97	+13 13.7	1.811	2.585	16.2	20.5	12 17	2 25.63	+17 21.5	2.062	2.840	14.3	21.1
17000	Medvedev		11 7.5 142°17	2°3/ 8.8 18 R			40068	1998 <i>KS</i> ₅₄		11 7.5 196°70	3°9/ 4.7 18		
10 8	3 21.57	+23 3.3	1.571	2.428	15.1	17.9	10 8	3 14.53	+7 43.2	1.881	2.761	11.9	19.0
10 18	3 13.75	+23 5.4	1.511	2.437	11.0	17.7	10 18	3 8.42	+6 45.3	1.820	2.760	8.5	18.8
10 28	3 3.45	+22 52.9	1.475	2.446	6.4	17.5	10 28	3 0.53	+5 47.2	1.785	2.759	5.2	18.6
11 7	2 51.83	+22 26.8	1.466	2.454	2.5	17.3	11 7	2 51.71	+4 54.4	1.778	2.757	4.1	18.5
11 17	2 40.31	+21 50.7	1.486	2.461	4.8	17.4	11 17	2 42.93	+4 12.3	1.800	2.755	6.6	18.7
11 27	2 30.31	+21 11.0	1.533	2.468	9.2	17.7	11 27	2 35.19	+3 45.3	1.848	2.752	10.1	18.9
12 7	2 22.87	+20 34.6	1.605	2.475	13.3	18.0	12 7	2 29.27	+3 35.5	1.921	2.749	13.3	19.1
12 17	2 18.52	+20 6.9	1.698	2.481	16.7	18.2	12 17	2 25.64	+3 43.0	2.015	2.746	16.1	19.3
401526	2013 <i>EG</i> ₉₀		11 7.5 289°63	7°3/ 2.1 18			520697	2014 <i>QT</i> ₄₆₄		11 7.5 57°88	4°3/ 4.6 18		
10 8	3 12.97	-0 40.0	1.769	2.650	12.5	20.5	10 8	3 13.11	+4 23.1	2.093	2.971	11.0	21.0
10 18	3 7.47	-1 57.1	1.707	2.636	9.7	20.3	10 18	3 7.23	+3 49.4	2.042	2.978	7.9	20.8
10 28	3 0.10	-3 7.3	1.669	2.623	7.6	20.2	10 28	2 59.83	+3 19.4	2.017	2.986	5.2	20.6
11 7	2 51.67	-4 3.0	1.657	2.610	7.6	20.1	11 7	2 51.68	+2 57.3	2.020	2.993	4.4	20.6
11 17	2 43.18	-4 38.1	1.672	2.596	9.7	20.2	11 17	2 43.62	+2 46.5	2.052	3.001	6.4	20.7
11 27	2 35.70	-4 48.8	1.712	2.583	12.7	20.4	11 27	2 36.52	+2 49.3	2.111	3.009	9.3	20.9
12 7	2 30.07	-4 34.8	1.774	2.570	15.6	20.5	12 7	2 31.03	+3 6.3	2.194	3.017	12.1	21.1
12 17	2 26.80	-3 58.3	1.854	2.557	18.2	20.7	12 17	2 27.58	+3 36.9	2.299	3.025	14.5	21.3
141794	2002 <i>NP</i> ₂₃		11 7.5 82°68	0°5/ 7.2 17			414586	2009 <i>UV</i> ₁₈		11 7.5 328°07	4°3/ 5.1 14 C		
10 8	3 19.03	+17 44.1	1.392	2.270	15.4	20.3	10 8	3 18.67	+8 4.0	1.660	2.539	13.3	19.9
10 18	3 11.82	+17 3.9	1.351	2.291	10.8	20.1	10 18	3 12.49	+7 24.7	1.527	2.466	9.8	19.5
10 28	3 2.32	+16 13.2	1.334	2.313	5.6	19.9	10 28	3 3.36	+6 41.5	1.418	2.392	6.0	19.1
11 7	2 51.78	+15 17.3	1.343	2.334	0.5	19.6	11 7	2 51.90	+5 59.5	1.335	2.317	4.4	18.8
11 17	2 41.62	+14 22.5	1.379	2.354	5.2	20.0	11 17	2 39.16	+5 25.2	1.281	2.241	8.0	18.9
11 27	2 33.14	+13 36.0	1.442	2.375	10.0	20.3	11 27	2 26.66	+5 5.6	1.253	2.164	13.2	18.9
12 7	2 27.22	+13 2.8	1.529	2.395	14.1	20.6	12 7	2 15.95	+5 6.1	1.249	2.086	18.5	19.0
12 17	2 24.28	+12 45.5	1.637	2.415	17.4	20.9	12 17	2 8.22	+5 29.7	1.262	2.008	23.3	19.1
184533	2005 <i>QA</i> ₂₆		11 7.5 45°78	0°7/ 7.0 18			185336	2006 <i>VR</i> ₃₅		11 7.5 200°01	0°2/ 7.7 17		
10 8	3 14.32	+15 31.5	1.844	2.719	12.3	20.1	10 8	3 17.89	+19 4.2	1.810	2.675	13.1	21.5
10 18	3 8.32	+15 11.9	1.785	2.725	8.6	19.9	10 18	3 10.98	+18 33.4	1.739	2.672	9.3	21.3
10 28	3 0.49	+14 46.3	1.752	2.730	4.5	19.7	10 28	3 1.97	+17 51.8	1.692	2.668	5.0	21.0
11 7	2 51.70	+14 17.8	1.746	2.736	0.7	19.4	11 7	2 51.81	+17 2.5	1.673	2.664	0.4	20.6
11 17	2 42.97	+13 50.1	1.768	2.742	4.4	19.7	11 17	2 41.63	+16 10.2	1.684	2.659	4.4	20.9
11 27	2 35.35	+13 27.8	1.819	2.749	8.5	20.0	11 27	2 32.62	+15 21.0	1.723	2.654	8.8	21.2
12 7	2 29.63	+13 14.3	1.894	2.755	12.1	20.2	12 7	2 25.69	+14 40.4	1.787	2.647	12.7	21.4
12 17	2 26.28	+13 11.8	1.992	2.761	15.0	20.4	12 17	2 21.38	+14 12.3	1.874	2.641	15.9	21.6
452072	2014 <i>ON</i> ₃₅₃		11 7.5 16°91	4°3/10.8 18			212125	2005 <i>ED</i> ₂₁₁		11 7.5 236°17	5°8/11.2 18		
10 8	3 13.67	+30 14.6	1.830	2.668	14.1	20.8	10 8	3 19.23	+32 16.3	1.913	2.732	14.4	20.8
10 18	3 8.08	+30 2.6	1.763	2.671	10.9	20.6	10 18	3 12.19	+32 50.8	1.836	2.728	11.4	20.6
10 28	3 0.43	+29 31.2	1.719	2.674	7.4	20.4	10 28	3 2.75	+33 6.9	1.783	2.724	8.3	20.4
11 7	2 51.69	+28 41.3	1.701	2.677	4.6	20.3	11 7	2 51.87	+33 2.3	1.756	2.719	6.0	20.3
11 17	2 43.01	+27 36.7	1.710	2.681	5.0	20.3	11 17	2 40.82	+32 37.8	1.756	2.715	6.3	20.3
11 27	2 35.55	+26 24.1	1.747	2.685	8.1	20.5	11 27	2 30.96	+31 58.0	1.784	2.710	8.8	20.4
12 7	2 30.18	+25 11.4	1.810	2.690	11.5	20.7	12 7	2 23.36	+31 10.2	1.837	2.706	12.0	20.6
12 17	2 27.40	+24 5.6	1.896	2.695	14.6	21.0	12 17	2 18.66	+30 22.0	1.913	2.701	14.9	20.8
139061	2001 <i>FF</i> ₃		11 7.5 143°35	3°1/ 5.5 18			480950	2003 <i>SU</i> ₃₂₂		11 7.5 77°71	6°7/12.1 18		
10 8	3 17.40	+10 45.3	1.722	2.601	12.9	19.6	10 8	3 21.87	+34 42.3	1.695	2.508	16.2	21.1
10 18	3 10.45	+9 49.1	1.670	2.610	9.0	19.4	10 18	3 13.96	+35 13.6	1.647	2.531	12.9	21.0
10 28	3 1.58	+8 50.1	1.643	2.619	5.0	19.2	10 28	3 3.55	+35 21.3	1.620	2.554	9.6	20.8
11 7	2 51.75	+7 54.0	1.643	2.628	3.2	19.1	11 7	2 51.90	+35 3.7	1.618	2.576	7.1	20.7
11 17	2 42.09	+7 6.5	1.673	2.636	6.1	19.3	11 17	2 40.48	+34 23.1	1.644	2.599	7.1	20.8
11 27	2 33.69	+6 32.6	1.730	2.643	10.0	19.5	11 27	2 30.74	+33 26.4	1.696	2.621	9.3	21.0
12 7	2 27.37	+6 15.2	1.812	2.650	13.6	19.8	12 7	2 23.67	+32 22.7	1.774	2.643	12.3	21.2
12 17	2 23.58	+6 14.8	1.914	2.656	16.5	20.0	12 17	2 19.75	+31 20.6	1.874	2.665	15.0	21.4
223142	2002 <i>WZ</i> ₁		11 7.5 306°38	2°8/ 6.2 18			392401	2010 <i>KP</i> ₁₁₇		11 7.5 135°28	3°2/ 5.3 18		
10 8	3 16.												

EPHEMERIDES

11 7.5

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
171901	2001 <i>RK</i> ₁₀₄		11 7.5	8°66	4°6/ 4.7 18		512507	2016 <i>RE</i> ₂₁		11 7.5	16°76	5°1/10.3 18	
10 8	3 12.96	+ 6 49.5	1.573	2.463	13.2	19.2	10 8	3 16.81	+28 19.6	1.237	2.101	18.0	20.5
10 18	3 7.56	+ 5 59.5	1.520	2.464	9.5	19.0	10 18	3 11.04	+28 34.2	1.181	2.104	13.7	20.3
10 28	3 0.17	+ 5 11.1	1.491	2.465	5.9	18.8	10 28	3 2.30	+28 26.0	1.145	2.107	9.1	20.0
11 7	2 51.74	+ 4 30.4	1.489	2.467	4.7	18.7	11 7	2 51.90	+27 54.4	1.132	2.112	5.4	19.8
11 17	2 43.38	+ 4 2.8	1.513	2.470	7.4	18.9	11 17	2 41.52	+27 3.4	1.144	2.117	6.4	19.9
11 27	2 36.23	+ 3 52.4	1.563	2.473	11.1	19.1	11 27	2 32.92	+26 1.8	1.180	2.123	10.5	20.2
12 7	2 31.12	+ 4 0.7	1.636	2.477	14.6	19.4	12 7	2 27.29	+25 0.2	1.240	2.130	14.9	20.4
12 17	2 28.55	+ 4 26.8	1.728	2.481	17.6	19.6	12 17	2 25.21	+24 7.1	1.318	2.137	18.7	20.7
138852	2000 <i>WN</i> ₁₀		11 7.5	81°63	39°0/24.4 17 R		246347	2007 <i>TX</i> ₃₀₆		11 7.5	164°73	0°9/ 8.2 18	
10 8	10 49.31	-60 43.9	0.289	0.889	104.0	21.1	10 8	3 17.02	+20 28.6	2.255	3.109	11.3	21.2
10 18	9 34.85	-68 5.6	0.229	0.943	96.9	20.3	10 18	3 10.04	+20 16.8	2.188	3.114	8.1	21.0
10 28	6 22.65	-71 43.0	0.174	0.995	84.4	19.4	10 28	3 1.38	+19 55.9	2.146	3.119	4.5	20.8
11 7	2 57.65	-54 28.5	0.140	1.046	63.5	18.3	11 7	2 51.85	+19 27.7	2.134	3.123	1.0	20.6
11 17	1 44.92	-22 52.9	0.149	1.092	43.1	17.9	11 17	2 42.36	+18 55.0	2.151	3.127	3.5	20.8
11 27	1 19.90	+ 0 32.2	0.202	1.135	39.3	18.6	11 27	2 33.83	+18 22.0	2.199	3.130	7.1	21.0
12 7	1 12.81	+13 35.7	0.278	1.173	42.3	19.4	12 7	2 27.03	+17 53.0	2.274	3.133	10.4	21.2
12 17	1 14.90	+21 15.2	0.366	1.206	45.3	20.2	12 17	2 22.40	+17 31.4	2.372	3.135	13.1	21.4
268286	2005 <i>QE</i> ₄₁		11 7.5	57°12	3°2/ 9.4 18		511833	2015 <i>FM</i> ₃₀₃		11 7.5	221°80	7°9/ 2.3 18	
10 8	3 19.10	+25 16.8	1.269	2.136	17.3	19.9	10 8	3 16.33	- 2 18.1	1.711	2.585	13.2	21.3
10 18	3 12.19	+25 7.6	1.229	2.158	12.7	19.7	10 18	3 9.86	- 3 32.1	1.655	2.579	10.4	21.1
10 28	3 2.65	+24 38.7	1.210	2.180	7.6	19.5	10 28	3 1.39	- 4 36.6	1.624	2.573	8.3	21.0
11 7	2 51.88	+23 52.6	1.216	2.202	3.4	19.3	11 7	2 51.85	- 5 24.0	1.619	2.566	8.2	21.0
11 17	2 41.49	+22 55.1	1.248	2.225	5.3	19.5	11 17	2 42.34	- 5 48.5	1.640	2.559	10.2	21.1
11 27	2 33.00	+21 55.2	1.306	2.247	9.9	19.8	11 27	2 33.96	- 5 47.3	1.687	2.551	13.2	21.2
12 7	2 27.38	+21 1.5	1.387	2.270	14.1	20.1	12 7	2 27.59	- 5 21.0	1.755	2.543	16.1	21.4
12 17	2 25.03	+20 19.9	1.488	2.293	17.6	20.4	12 17	2 23.74	- 4 32.6	1.841	2.535	18.6	21.6
191539	2003 <i>UL</i> ₂₃₀		11 7.5	29°69	1°6/ 8.6 18		520502	2014 <i>LL</i> ₃₀		11 7.5	74°84	0°4/ 7.2 18	
10 8	3 14.99	+21 17.2	2.105	2.962	11.8	19.6	10 8	3 12.15	+17 34.6	2.152	3.021	11.1	20.9
10 18	3 8.76	+21 29.3	2.039	2.966	8.5	19.4	10 18	3 6.62	+16 50.1	2.092	3.029	7.7	20.7
10 28	3 0.76	+21 32.2	1.998	2.970	4.9	19.2	10 28	2 59.57	+15 58.1	2.058	3.036	4.0	20.4
11 7	2 51.79	+21 26.8	1.986	2.974	1.7	19.0	11 7	2 51.76	+15 2.0	2.052	3.043	0.4	20.2
11 17	2 42.81	+21 15.1	2.002	2.978	3.7	19.1	11 17	2 44.04	+14 6.3	2.076	3.050	3.9	20.5
11 27	2 34.80	+21 0.6	2.048	2.983	7.3	19.4	11 27	2 37.27	+13 16.2	2.129	3.058	7.5	20.7
12 7	2 28.56	+20 47.3	2.119	2.987	10.6	19.6	12 7	2 32.11	+12 35.6	2.208	3.065	10.7	20.9
12 17	2 24.58	+20 38.8	2.214	2.992	13.4	19.8	12 17	2 28.98	+12 7.1	2.310	3.072	13.4	21.1
153942	2001 <i>YD</i> ₁₂₂		11 7.5	93°57	3°5/ 9.7 18		143365	2003 <i>BH</i> ₇		11 7.5	319°90	9°0/ 1.8 18	
10 8	3 19.24	+26 10.8	1.604	2.455	15.2	19.5	10 8	3 13.52	- 4 55.2	1.630	2.507	13.6	19.5
10 18	3 12.14	+26 19.4	1.546	2.465	11.3	19.3	10 18	3 8.04	- 5 57.6	1.570	2.491	11.0	19.3
10 28	3 2.65	+26 11.0	1.512	2.476	7.1	19.1	10 28	3 0.51	- 6 47.5	1.533	2.476	9.2	19.2
11 7	2 51.89	+25 45.9	1.503	2.486	3.8	18.9	11 7	2 51.81	- 7 17.1	1.521	2.461	9.3	19.2
11 17	2 41.24	+25 7.6	1.522	2.496	5.0	19.0	11 17	2 43.05	- 7 21.0	1.533	2.447	11.2	19.3
11 27	2 32.06	+24 22.4	1.569	2.506	8.9	19.3	11 27	2 35.37	- 6 56.9	1.569	2.433	14.0	19.4
12 7	2 25.35	+23 37.7	1.640	2.516	12.8	19.5	12 7	2 29.68	- 6 6.3	1.627	2.420	16.9	19.6
12 17	2 21.64	+22 59.8	1.733	2.526	16.0	19.8	12 17	2 26.54	- 4 53.2	1.701	2.407	19.5	19.7
255579	2006 <i>LQ</i> ₁		11 7.5	152°70	3°7/ 5.5 17		511756	2015 <i>DK</i> ₁₅₂		11 7.5	280°77	0°9/ 7.1 18	
10 8	3 19.79	+ 8 35.0	1.577	2.456	13.8	21.1	10 8	3 18.55	+15 21.3	1.367	2.250	15.3	21.6
10 18	3 12.32	+ 7 56.5	1.524	2.463	9.8	20.9	10 18	3 12.06	+15 9.7	1.297	2.240	10.9	21.3
10 28	3 2.67	+ 7 18.0	1.495	2.470	5.7	20.7	10 28	3 2.82	+14 50.5	1.250	2.230	5.7	21.0
11 7	2 51.89	+ 6 44.6	1.493	2.476	3.8	20.6	11 7	2 51.94	+14 26.8	1.229	2.219	0.9	20.6
11 17	2 41.26	+ 6 21.3	1.520	2.481	6.8	20.8	11 17	2 40.88	+14 3.2	1.234	2.209	5.7	20.9
11 27	2 32.01	+ 6 12.2	1.573	2.486	10.9	21.0	11 27	2 31.20	+13 45.5	1.265	2.198	11.0	21.2
12 7	2 25.06	+ 6 19.2	1.651	2.490	14.6	21.3	12 7	2 24.13	+13 38.7	1.319	2.188	15.7	21.5
12 17	2 20.90	+ 6 42.1	1.748	2.494	17.7	21.5	12 17	2 20.33	+13 45.6	1.392	2.178	19.6	21.7
65292	2002 <i>JA</i> ₁₅		11 7.5	138°36	1°5/ 6.4 18		282412	2003 <i>UF</i> ₆₂		11 7.5	63°88	5°5/ 4.5 18	
10 8	3 16.04	+13 47.7	2.009	2.881	11.7	20.0	10 8	3 16.61	+ 4 5.9	1.529	2.414	13.9	20.0
10 18	3 9.37	+13 11.0	1.953	2.891	8.1	19.8	10 18	3 9.94	+ 3 17.8	1.495	2.434	10.0	19.9
10 28	3 1.01	+12 29.6	1.922	2.900	4.2	19.6	10 28	3 1.33	+ 2 35.5	1.486	2.455	6.6	19.7
11 7	2 51.82	+11 47.4	1.920	2.909	1.5	19.4	11 7	2 51.86	+ 2 4.9	1.503	2.476	5.6	19.7
11 17	2 42.74	+11 8.5	1.948	2.918	4.6	19.7	11 17	2 42.71	+ 1 50.6	1.547	2.496	8.0	19.9
11 27	2 34.74	+10 37.4	2.005	2.926	8.4	19.9	11 27	2 34.98	+ 1 54.9	1.616	2.517	11.4	20.2
12 7	2 28.55	+10 17.2	2.087	2.934	11.7	20.1	12 7	2 29.45	+ 2 17.8	1.708	2.538	14.7	20.4
12 17	2 24.59	+10 9.7	2.192	2.941	14.4	20.4	12 17	2 26.51	+ 2 57.1	1.820	2.558	17.3	20.7
492821	2014 <i>QE</i> ₂₈₁		11 7.5	10°79	1°1/ 6.8 17		473644	2015 <i>XA</i> ₃₂₂		11 7.5	271°28	0°7/ 6.9 17	
10 8	3 13.21	+14 46.8	1.853	2.731	12.2	21.1	10 8	3 12.75	+15 35.6	2.263	3.133	10.6	22.3
10 18	3 7.60	+14 23.3	1.791	2.732	8.5	20.8	10 18	3 7.12	+15 10.9	2.186	3.123	7.4	22.1
10 28	3 0.17	+13 54.3	1.754	2.733	4.4	20.6	10 28	2 59.90	+14 40.5	2.134	3.112	3.9	21.9
11 7	2 51.78	+13 23.2	1.745	2.735	1.1	20.4	11 7	2 51.80	+14 7.2	2.112	3.102	0.7	21.6
11 17	2 43.41	+12 54.0	1.764	2.737	4.6	20.6	11 17	2 43.62	+13 34.2	2.119	3.092	3.9	21.8
11 27	2 36.10	+12 31.0	1.811	2.740	8.6	20.9	11 27	2 36.26	+13 5.6	2.155	3.081	7.5	22.1
12 7	2 30.63	+12 17.7	1.883	2.743	12.1	21.1	12 7	2 30.42	+12 44.9	2.217	3.071	10.8	22.2
12 17	2 27.48	+12 16.1	1.976	2.746	15.1	21.3	12 17	2 26.59	+12 34.3	2.302	3.060	13.6	22.4
487054	2014 <i>OW</i> ₅₈		11 7.5	124°15	5°1/11.5 18		18805	Kellyday		11 7.5			

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11 7.5

11 7.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
264489	2001 <i>PH</i> ₃₁		11 7.5 206°81	9°5/15.9	18		181144	2005 <i>QJ</i> ₁₇₇		11 7.6 131°43	0°5/ 7.2	18	
10 8	3 23.63	+46 22.5	2.059	2.792	16.3	20.5	10 8	3 14.52	+16 10.2	2.037	2.908	11.6	20.4
10 18	3 15.47	+46 38.6	1.975	2.786	14.1	20.3	10 18	3 8.42	+15 50.9	1.973	2.909	8.1	20.2
10 28	3 4.53	+46 25.6	1.910	2.781	11.9	20.1	10 28	3 0.60	+15 25.4	1.933	2.911	4.2	19.9
11 7	2 52.04	+45 39.5	1.868	2.774	10.1	20.0	11 7	2 51.87	+14 56.3	1.922	2.913	0.5	19.6
11 17	2 39.54	+44 20.6	1.852	2.767	9.5	20.0	11 17	2 43.15	+14 27.3	1.941	2.915	4.1	19.9
11 27	2 28.65	+42 35.0	1.863	2.759	10.4	20.0	11 27	2 35.43	+14 2.3	1.988	2.917	7.9	20.2
12 7	2 20.52	+40 33.4	1.900	2.750	12.5	20.1	12 7	2 29.44	+13 45.1	2.061	2.918	11.3	20.4
12 17	2 15.75	+38 27.3	1.960	2.741	14.8	20.3	12 17	2 25.68	+13 38.0	2.156	2.920	14.2	20.6
24836	1995 <i>TO</i> ₁		11 7.6 329°77	1°5/ 8.4	18		55087	2001 <i>QB</i> ₁₂₀		11 7.6 250°42	2°3/ 8.8	18	
10 8	3 15.25	+20 55.3	1.469	2.344	14.9	18.9	10 8	3 19.82	+22 39.1	1.801	2.655	13.6	18.6
10 18	3 9.63	+20 50.9	1.398	2.335	10.8	18.6	10 18	3 12.67	+22 50.7	1.715	2.639	10.0	18.3
10 28	3 1.50	+20 33.5	1.351	2.326	6.1	18.4	10 28	3 3.10	+22 50.3	1.653	2.623	6.0	18.1
11 7	2 51.89	+20 4.9	1.328	2.318	1.7	18.1	11 7	2 52.02	+22 37.9	1.619	2.606	2.4	17.8
11 17	2 42.15	+19 29.0	1.333	2.310	4.8	18.3	11 17	2 40.64	+22 15.4	1.614	2.589	4.5	17.9
11 27	2 33.71	+18 52.3	1.363	2.303	9.7	18.5	11 27	2 30.33	+21 47.6	1.637	2.572	8.8	18.1
12 7	2 27.67	+18 21.3	1.417	2.297	14.1	18.8	12 7	2 22.20	+21 20.3	1.686	2.553	12.9	18.3
12 17	2 24.67	+18 1.0	1.492	2.291	17.9	19.0	12 17	2 16.94	+20 59.1	1.756	2.535	16.4	18.5
363627	2004 <i>RK</i> ₃₃		11 7.6 14°92	3°4/ 5.7	18		166419	2002 <i>OA</i> ₂₅		11 7.6 42°17	0°2/ 7.7	18	
10 8	3 12.40	+ 9 34.0	1.459	2.353	13.8	19.6	10 8	3 15.63	+18 18.3	1.572	2.449	14.0	20.5
10 18	3 7.27	+ 9 2.5	1.412	2.360	9.7	19.3	10 18	3 9.53	+18 1.8	1.518	2.457	9.9	20.3
10 28	3 0.07	+ 8 30.5	1.389	2.367	5.5	19.1	10 28	3 1.28	+17 35.7	1.487	2.465	5.3	20.1
11 7	2 51.81	+ 8 3.2	1.390	2.375	3.4	19.0	11 7	2 51.91	+17 2.9	1.482	2.473	0.4	19.7
11 17	2 43.68	+ 7 45.4	1.418	2.385	6.5	19.2	11 17	2 42.64	+16 28.0	1.505	2.482	4.6	20.1
11 27	2 36.85	+ 7 41.1	1.472	2.396	10.6	19.5	11 27	2 34.70	+15 56.5	1.555	2.491	9.1	20.4
12 7	2 32.17	+ 7 52.1	1.548	2.407	14.4	19.8	12 7	2 29.00	+15 33.5	1.629	2.500	13.1	20.6
12 17	2 30.12	+ 8 18.2	1.645	2.420	17.5	20.0	12 17	2 26.03	+15 22.1	1.724	2.509	16.4	20.9
341078	2007 <i>HK</i> ₇₅		11 7.6 91°06	1°2/ 6.7	18		157074	2003 <i>UE</i> ₆₁		11 7.6 67°28	3°4/ 9.3	18	
10 8	3 14.97	+16 46.0	1.588	2.468	13.8	21.2	10 8	3 22.63	+24 41.5	2.120	2.956	12.6	18.6
10 18	3 9.01	+15 44.9	1.531	2.472	9.6	20.9	10 18	3 14.15	+25 40.4	2.064	2.975	9.4	18.5
10 28	3 0.97	+14 33.9	1.498	2.477	5.0	20.7	10 28	3 3.65	+26 28.0	2.034	2.994	6.0	18.3
11 7	2 51.86	+13 18.6	1.491	2.481	1.2	20.4	11 7	2 52.04	+27 2.5	2.033	3.013	3.5	18.2
11 17	2 42.88	+12 6.1	1.513	2.486	5.2	20.7	11 17	2 40.44	+27 23.8	2.063	3.031	4.6	18.3
11 27	2 35.21	+11 3.8	1.562	2.490	9.7	21.0	11 27	2 30.01	+27 34.7	2.123	3.050	7.6	18.5
12 7	2 29.70	+10 17.0	1.636	2.495	13.7	21.2	12 7	2 21.62	+27 39.3	2.210	3.069	10.6	18.7
12 17	2 26.83	+ 9 48.3	1.729	2.499	17.0	21.5	12 17	2 15.81	+27 42.4	2.320	3.088	13.2	18.9
400603	2009 <i>BZ</i> ₉₉		11 7.6 153°68	5°0/11.6	18		485133	2010 <i>NQ</i> ₆		11 7.6 43°06	11°4/17.9	17	
10 8	3 19.93	+33 51.1	2.510	3.305	12.1	21.5	10 8	3 20.70	+48 10.8	1.684	2.426	19.1	20.6
10 18	3 12.17	+34 16.7	2.439	3.314	9.6	21.4	10 18	3 13.72	+48 49.3	1.631	2.442	16.7	20.5
10 28	3 2.57	+34 25.9	2.393	3.323	7.1	21.2	10 28	3 3.67	+48 53.9	1.595	2.459	14.2	20.4
11 7	2 51.96	+34 17.6	2.374	3.330	5.3	21.1	11 7	2 52.04	+48 20.5	1.580	2.476	12.3	20.3
11 17	2 41.33	+33 52.7	2.385	3.338	5.4	21.1	11 17	2 40.64	+47 10.3	1.587	2.494	11.4	20.3
11 27	2 31.72	+33 15.0	2.425	3.344	7.2	21.3	11 27	2 31.25	+45 30.7	1.619	2.511	12.0	20.4
12 7	2 23.95	+32 30.1	2.493	3.350	9.6	21.4	12 7	2 25.05	+43 34.0	1.675	2.530	13.6	20.5
12 17	2 18.52	+31 44.0	2.585	3.355	11.9	21.6	12 17	2 22.47	+41 32.7	1.752	2.548	15.7	20.7
254368	2004 <i>TO</i> ₁₁₅		11 7.6 298°63	2°3/ 9.2	17		517293	2014 <i>HD</i> ₁₀		11 7.6 230°33	2°4/ 5.7	18	
10 8	3 14.76	+23 55.3	2.156	3.005	11.9	20.3	10 8	3 14.27	+12 41.9	1.976	2.852	11.6	22.0
10 18	3 8.67	+24 0.6	2.081	3.002	8.7	20.1	10 18	3 8.32	+11 39.1	1.904	2.844	8.1	21.7
10 28	3 0.78	+23 54.6	2.032	2.999	5.3	19.9	10 28	3 0.59	+10 30.7	1.857	2.835	4.4	21.5
11 7	2 51.87	+23 37.9	2.010	2.996	2.4	19.7	11 7	2 51.88	+ 9 21.8	1.840	2.826	2.4	21.3
11 17	2 42.89	+23 12.8	2.018	2.993	3.9	19.8	11 17	2 43.16	+ 8 18.2	1.851	2.816	5.4	21.5
11 27	2 34.85	+22 43.3	2.054	2.989	7.3	20.0	11 27	2 35.39	+ 7 25.7	1.891	2.806	9.2	21.7
12 7	2 28.56	+22 14.2	2.117	2.986	10.6	20.2	12 7	2 29.38	+ 6 48.2	1.956	2.796	12.7	21.9
12 17	2 24.52	+21 49.9	2.203	2.983	13.4	20.4	12 17	2 25.61	+ 6 27.6	2.043	2.785	15.6	22.1
482893	2014 <i>FX</i> ₆₆		11 7.6 167°28	1°0/ 6.9	18		324667	2007 <i>DW</i> ₃₁		11 7.6 184°34	1°0/ 6.8	18	
10 8	3 18.01	+13 31.5	2.073	2.941	11.5	21.4	10 8	3 13.08	+14 57.6	2.306	3.175	10.4	21.2
10 18	3 10.83	+13 29.0	2.008	2.944	8.1	21.2	10 18	3 7.26	+14 27.1	2.238	3.175	7.3	21.0
10 28	3 1.86	+13 23.1	1.969	2.947	4.2	21.0	10 28	2 59.95	+13 51.5	2.197	3.175	3.8	20.8
11 7	2 51.93	+13 15.8	1.959	2.949	1.0	20.8	11 7	2 51.85	+13 13.9	2.185	3.175	1.0	20.6
11 17	2 42.00	+13 9.7	1.979	2.951	4.3	21.0	11 17	2 43.77	+12 37.7	2.203	3.174	3.9	20.8
11 27	2 33.09	+13 7.7	2.028	2.953	8.1	21.3	11 27	2 36.53	+12 6.9	2.249	3.174	7.4	21.0
12 7	2 25.98	+13 12.6	2.104	2.954	11.5	21.5	12 7	2 30.81	+11 44.8	2.323	3.173	10.5	21.2
12 17	2 21.17	+13 25.9	2.202	2.955	14.3	21.7	12 17	2 27.05	+11 33.2	2.419	3.172	13.1	21.4
63277	2001 <i>DG</i> ₂₃		11 7.6 283°34	6°7/ 2.6	18		71509	2000 <i>CT</i> ₃₇		11 7.6 236°87	1°0/ 6.7	18	
10 8	3 13.30	+ 2 0.9	1.685	2.570	12.8	18.9	10 8	3 12.55	+14 35.3	2.313	3.184	10.4	19.5
10 18	3 7.80	+ 0 35.7	1.625	2.561	9.6	18.7	10 18	3 6.91	+14 8.3	2.244	3.182	7.2	19.3
10 28	3 0.36	- 0 45.1	1.590	2.551	7.2	18.6	10 28	2 59.77	+13 36.6	2.201	3.179	3.8	19.1
11 7	2 51.85	- 1 53.3	1.582	2.542	7.0	18.5	11 7	2 51.84	+13 3.1	2.187	3.177	1.0	18.9
11 17	2 43.32	- 2 42.2	1.600	2.533	9.3	18.7	11 17	2 43.91	+12 31.3	2.202	3.174	4.0	19.1
11 27	2 35.87	- 3 7.0	1.643	2.524	12.5	18.8	11 27	2 36.80	+12 4.7	2.247	3.171	7.4	19.3
12 7	2 30.35	- 3 6.9	1.708	2.514	15.7	19.0	12 7	2 31.18	+11 46.5	2.318	3.169	10.5	19.5
12 17	2 27.27	- 2 43.5	1.792	2.505	18.4	19.2	12 17	2 27.49	+11 38.7	2.411	3.166	13.1	19.7
130348	2000 <i>FJ</i> ₇₂		11 7.6 245°68	0°3/ 7.8	17		50601	2000 <i>EY</i> ₄₉		11 7.6 251°			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
55359	2001 SV ₁₇₁	11 7.6 133°48	2.4/ 5.8 18				156694	2002 LF ₁₅	11 7.6 159°73	0.1/ 7.5 18			
10 8	3 13.85	+11 20.9	2.030	2.907	11.3	19.3	10 8	3 13.47	+17 14.5	2.690	3.550	9.5	20.9
10 18	3 7.89	+10 37.2	1.971	2.912	7.9	19.1	10 18	3 7.37	+16 57.6	2.623	3.555	6.6	20.7
10 28	3 0.29	+9 50.8	1.939	2.916	4.3	18.8	10 28	2 59.96	+16 35.1	2.583	3.560	3.5	20.6
11 7	2 51.87	+9 5.9	1.935	2.920	2.4	18.7	11 7	2 51.88	+16 9.0	2.573	3.564	0.2	20.3
11 17	2 43.52	+8 27.0	1.959	2.925	5.1	18.9	11 17	2 43.83	+15 42.0	2.594	3.568	3.2	20.5
11 27	2 36.16	+7 58.3	2.013	2.929	8.7	19.1	11 27	2 36.53	+15 17.0	2.644	3.572	6.3	20.8
12 7	2 30.49	+7 42.4	2.091	2.932	11.9	19.4	12 7	2 30.58	+14 57.2	2.723	3.575	9.1	21.0
12 17	2 26.97	+7 40.5	2.191	2.936	14.6	19.6	12 17	2 26.38	+14 44.6	2.825	3.578	11.4	21.1
72450	2001 DV ₅	11 7.6 334°41	2.5/ 6.5 18				137418	1999 TK ₁₉₅	11 7.6 315°05	4.2/ 9.9 18			
10 8	3 18.40	+11 19.3	1.232	2.124	16.0	18.1	10 8	3 15.04	+27 18.1	1.244	2.112	17.6	19.5
10 18	3 12.05	+11 13.3	1.172	2.118	11.3	17.8	10 18	3 10.09	+27 11.3	1.165	2.093	13.4	19.2
10 28	3 2.86	+11 5.1	1.133	2.113	6.1	17.5	10 28	3 2.03	+26 40.9	1.107	2.074	8.6	18.9
11 7	2 52.02	+10 58.6	1.119	2.108	2.5	17.2	11 7	2 52.00	+25 46.5	1.071	2.055	4.6	18.6
11 17	2 41.07	+10 58.1	1.131	2.103	6.6	17.5	11 17	2 41.63	+24 32.8	1.061	2.037	6.0	18.6
11 27	2 31.66	+11 7.9	1.167	2.099	11.9	17.8	11 27	2 32.74	+23 9.3	1.075	2.020	11.0	18.9
12 7	2 25.02	+11 30.6	1.226	2.096	16.6	18.0	12 7	2 26.75	+21 48.3	1.111	2.003	16.1	19.1
12 17	2 21.79	+12 7.1	1.303	2.093	20.5	18.3	12 17	2 24.44	+20 39.6	1.166	1.988	20.5	19.3
42921	1999 SH ₈	11 7.6 138°24	4.4/ 5.3 18				359864	2011 VE ₁₂	11 7.6 68°03	1.2/ 6.8 18			
10 8	3 19.48	+6 41.9	1.528	2.409	14.1	17.9	10 8	3 15.76	+14 13.5	1.769	2.646	12.7	20.9
10 18	3 12.18	+6 8.0	1.476	2.416	10.1	17.7	10 18	3 9.38	+13 53.1	1.718	2.658	8.9	20.7
10 28	3 2.66	+5 36.4	1.449	2.422	6.1	17.5	10 28	3 1.13	+13 28.0	1.692	2.670	4.6	20.5
11 7	2 52.00	+5 12.4	1.448	2.428	4.5	17.4	11 7	2 51.94	+13 1.3	1.693	2.683	1.2	20.3
11 17	2 41.48	+5 0.6	1.475	2.434	7.3	17.6	11 17	2 42.90	+12 37.1	1.723	2.695	4.7	20.5
11 27	2 32.36	+5 4.3	1.529	2.439	11.3	17.9	11 27	2 35.06	+12 19.5	1.780	2.708	8.8	20.8
12 7	2 25.58	+5 24.6	1.606	2.444	15.0	18.1	12 7	2 29.21	+12 11.6	1.863	2.721	12.4	21.1
12 17	2 21.62	+6 0.5	1.702	2.449	18.1	18.3	12 17	2 25.80	+12 15.3	1.967	2.733	15.3	21.3
206592	2003 WW ₃₁	11 7.6 353°98	3.0/ 9.5 18				83382	2001 SE ₁₆	11 7.6 92°45	1.6/ 6.4 18			
10 8	3 16.17	+25 41.2	1.711	2.564	14.2	20.2	10 8	3 14.20	+13 50.7	1.909	2.785	11.9	19.6
10 18	3 9.99	+25 35.9	1.642	2.564	10.6	20.0	10 18	3 8.21	+13 10.2	1.853	2.793	8.3	19.3
10 28	3 1.59	+25 14.5	1.597	2.564	6.6	19.8	10 28	3 0.49	+12 24.7	1.823	2.801	4.4	19.1
11 7	2 51.95	+24 37.9	1.579	2.563	3.2	19.6	11 7	2 51.91	+11 38.4	1.820	2.809	1.6	19.0
11 17	2 42.29	+23 49.9	1.588	2.563	4.6	19.6	11 17	2 43.43	+10 56.1	1.847	2.817	4.8	19.2
11 27	2 33.88	+22 56.6	1.624	2.563	8.6	19.9	11 27	2 36.03	+10 22.3	1.901	2.825	8.6	19.4
12 7	2 27.69	+22 5.3	1.686	2.563	12.4	20.1	12 7	2 30.45	+10 0.5	1.981	2.832	12.0	19.7
12 17	2 24.27	+21 22.0	1.770	2.563	15.7	20.3	12 17	2 27.13	+9 52.3	2.083	2.840	14.8	19.9
518849	2010 DO ₁₇	11 7.6 222°76	6.4/ 1.0 17				230505	2002 UH ₃₄	11 7.6 307°36	0.4/ 7.2 18			
10 8	3 10.49	-3 48.7	2.543	3.409	9.7	22.0	10 8	3 10.94	+17 30.6	2.341	3.210	10.3	20.0
10 18	3 5.31	-5 5.5	2.489	3.404	7.8	21.9	10 18	3 5.80	+16 47.7	2.269	3.205	7.2	19.8
10 28	2 58.88	-6 14.6	2.462	3.400	6.5	21.8	10 28	2 59.21	+15 57.3	2.223	3.201	3.8	19.6
11 7	2 51.80	-7 10.7	2.463	3.395	6.7	21.8	11 7	2 51.85	+15 2.6	2.206	3.197	0.4	19.3
11 17	2 44.74	-7 49.8	2.491	3.390	8.1	21.9	11 17	2 44.49	+14 7.9	2.219	3.193	3.7	19.6
11 27	2 38.39	-8 9.3	2.546	3.385	10.1	22.0	11 27	2 37.94	+13 17.7	2.261	3.189	7.1	19.8
12 7	2 33.33	-8 9.0	2.624	3.380	12.2	22.2	12 7	2 32.85	+12 36.2	2.329	3.185	10.3	20.0
12 17	2 29.94	-7 50.4	2.721	3.374	13.9	22.3	12 17	2 29.64	+12 5.9	2.421	3.181	12.9	20.2
41091	1999 VY ₅₉	11 7.6 201°18	0.4/ 7.2 18				389586	2011 FS ₂₈	11 7.6 201°25	3.2/ 5.1 18			
10 8	3 12.27	+17 41.4	2.363	3.228	10.4	20.2	10 8	3 15.80	+10 18.0	1.938	2.814	11.8	21.4
10 18	3 6.68	+16 56.2	2.292	3.226	7.3	20.0	10 18	3 9.37	+9 10.5	1.871	2.811	8.3	21.2
10 28	2 59.65	+16 3.4	2.247	3.224	3.8	19.8	10 28	3 1.14	+7 59.6	1.831	2.807	4.8	21.0
11 7	2 51.84	+15 6.1	2.231	3.222	0.4	19.5	11 7	2 51.96	+6 51.0	1.819	2.802	3.3	20.9
11 17	2 44.06	+14 8.7	2.246	3.220	3.7	19.7	11 17	2 42.79	+5 50.7	1.837	2.796	6.1	21.0
11 27	2 37.12	+13 15.9	2.290	3.217	7.1	20.0	11 27	2 34.65	+5 4.1	1.883	2.790	9.7	21.2
12 7	2 31.65	+12 31.7	2.361	3.214	10.3	20.2	12 7	2 28.32	+4 34.5	1.954	2.783	13.1	21.4
12 17	2 28.10	+11 59.0	2.455	3.211	12.9	20.3	12 17	2 24.29	+4 22.8	2.045	2.776	15.9	21.6
428165	2006 SG ₃₆₃	11 7.6 18°76	4.4/ 5.1 18				161806	2006 VZ ₉₂	11 7.6 68°45	4.6/ 5.6 18			
10 8	3 11.39	+11 58.4	0.946	1.859	17.6	19.5	10 8	3 21.65	+6 55.7	1.271	2.158	16.0	19.7
10 18	3 7.23	+10 30.4	0.910	1.866	12.3	19.3	10 18	3 13.66	+6 27.5	1.243	2.185	11.3	19.5
10 28	3 0.24	+8 56.8	0.894	1.875	6.9	19.0	10 28	3 3.35	+6 3.0	1.238	2.213	6.6	19.3
11 7	2 51.88	+7 29.0	0.900	1.885	4.6	18.9	11 7	2 52.08	+5 47.3	1.259	2.241	4.6	19.3
11 17	2 43.78	+6 18.4	0.929	1.897	8.7	19.2	11 17	2 41.32	+5 44.7	1.306	2.268	7.6	19.5
11 27	2 37.54	+5 33.4	0.980	1.910	13.9	19.6	11 27	2 32.44	+5 57.8	1.379	2.296	11.8	19.8
12 7	2 34.18	+5 17.1	1.051	1.924	18.4	19.9	12 7	2 26.27	+6 26.6	1.475	2.323	15.6	20.1
12 17	2 34.10	+5 27.9	1.138	1.940	22.1	20.2	12 17	2 23.17	+7 9.5	1.590	2.349	18.6	20.4
149390	2003 AN ₈	11 7.6 175°07	3.9/ 5.4 18				53577	2000 CT ₄₇	11 7.6 280°55	2.7/ 9.2 18			
10 8	3 17.91	+7 44.3	1.633	2.514	13.4	20.1	10 8	3 17.18	+24 50.6	1.539	2.399	15.2	19.6
10 18	3 11.06	+7 10.6	1.575	2.515	9.5	19.9	10 18	3 11.13	+24 36.1	1.454	2.380	11.3	19.3
10 28	3 2.09	+6 37.6	1.541	2.516	5.6	19.7	10 28	3 2.42	+24 3.6	1.391	2.360	6.9	19.0
11 7	2 51.98	+6 10.5	1.535	2.516	4.0	19.6	11 7	2 52.05	+23 13.8	1.354	2.340	3.0	18.7
11 17	2 41.93	+5 53.7	1.556	2.517	6.8	19.8	11 17	2 41.38	+22 10.9	1.344	2.320	5.0	18.8
11 27	2 33.13	+5 51.0	1.605	2.517	10.7	20.0	11 27	2 31.94	+21 2.6	1.361	2.300	9.8	19.0
12 7	2 26.48	+6 4.0	1.677	2.517	14.4	20.2	12 7	2 24.94	+19 58.0	1.402	2.280	14.3	19.2
12 17	2 22.52	+6 32.4	1.769	2.516	17.5	20.5	12 17	2 21.11	+19 4.5	1.464	2.260	18.3	19.4
154597	2003 OD ₁₆	11 7.6 71°21	6.1/ 2.3 18				234097	1999 TG ₂₃₅	11 7.6 51°85	1.7/ 6.5 18			
10 8	3 12.09	+0 9.6	2.089	2.966	11.1	19.9	10 8	3 15.37	+14 28.5				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
317261	2002 <i>EA</i> ₂₅		11 7.6 79°51'	4.9°/ 3.5 18			47661	2000 <i>CP</i> ₅₂		11 7.6 13°55'	5.2°/10.7 18		
10 8	3 12.18	+ 3 58.8	2.080	2.960	11.0	20.3	10 8	3 15.24	+29 18.4	1.389	2.244	16.8	17.4
10 18	3 6.59	+ 2 47.0	2.038	2.974	8.0	20.2	10 18	3 9.77	+29 33.0	1.331	2.248	12.9	17.1
10 28	2 59.57	+ 1 39.1	2.023	2.988	5.5	20.1	10 28	3 1.64	+29 25.7	1.294	2.252	8.8	16.9
11 7	2 51.88	+ 0 40.7	2.035	3.002	5.1	20.1	11 7	2 52.03	+28 56.2	1.280	2.257	5.5	16.8
11 17	2 44.34	- 0 3.4	2.076	3.016	7.1	20.2	11 17	2 42.45	+28 8.1	1.292	2.264	6.1	16.8
11 27	2 37.77	- 0 30.0	2.144	3.029	9.8	20.4	11 27	2 34.42	+27 8.9	1.329	2.271	9.8	17.0
12 7	2 32.79	- 0 38.2	2.236	3.043	12.4	20.6	12 7	2 29.07	+26 8.1	1.390	2.278	13.7	17.3
12 17	2 29.78	- 0 28.8	2.349	3.057	14.6	20.8	12 17	2 26.94	+25 14.0	1.472	2.287	17.3	17.5
198726	2005 <i>EP</i> ₁₈		11 7.6 321°15'	3.4°/ 9.9 17			430371	2014 <i>BV</i> ₄₆		11 7.6 242°43'	0°1'/ 7.5 18		
10 8	3 14.90	+26 57.5	2.186	3.025	12.1	20.4	10 8	3 16.53	+18 6.7	1.875	2.743	12.6	21.9
10 18	3 8.87	+27 17.6	2.107	3.018	9.2	20.2	10 18	3 10.13	+17 36.6	1.795	2.730	8.9	21.7
10 28	3 0.97	+27 24.8	2.053	3.011	6.1	20.0	10 28	3 1.69	+16 56.7	1.740	2.717	4.7	21.4
11 7	2 51.96	+27 19.0	2.025	3.004	3.6	19.9	11 7	2 52.05	+16 10.1	1.713	2.704	0.3	21.0
11 17	2 42.82	+27 1.4	2.027	2.997	4.4	19.9	11 17	2 42.29	+15 21.1	1.715	2.690	4.4	21.3
11 27	2 34.58	+26 35.7	2.057	2.991	7.4	20.1	11 27	2 33.54	+14 35.6	1.746	2.676	8.7	21.5
12 7	2 28.11	+26 6.9	2.114	2.985	10.5	20.3	12 7	2 26.74	+13 58.7	1.802	2.662	12.6	21.8
12 17	2 23.95	+25 40.0	2.193	2.979	13.3	20.4	12 17	2 22.46	+13 34.2	1.880	2.646	15.9	21.9
444888	2007 <i>WM</i> ₅₄		11 7.6 344°74'	6°3'/11.4 17			511904	2015 <i>HS</i> ₆₀		11 7.6 76°71'	9°4'/ 2.4 18		
10 8	3 13.04	+31 50.3	1.378	2.228	17.3	20.2	10 8	3 17.32	- 7 1.8	1.626	2.492	14.2	20.3
10 18	3 8.45	+32 4.5	1.306	2.216	13.7	20.0	10 18	3 10.38	- 8 2.4	1.598	2.510	11.5	20.2
10 28	3 1.06	+31 53.9	1.253	2.206	9.8	19.7	10 28	3 1.61	- 8 46.1	1.594	2.528	9.7	20.2
11 7	2 51.98	+31 17.0	1.224	2.196	6.7	19.6	11 7	2 52.04	- 9 6.4	1.615	2.546	9.6	20.2
11 17	2 42.71	+30 16.6	1.220	2.188	7.0	19.5	11 17	2 42.78	- 9 0.0	1.661	2.564	11.2	20.3
11 27	2 34.89	+29 0.7	1.240	2.181	10.3	19.7	11 27	2 34.91	- 8 27.0	1.732	2.582	13.6	20.5
12 7	2 29.78	+27 40.3	1.283	2.175	14.3	19.9	12 7	2 29.16	- 7 30.5	1.823	2.600	16.0	20.7
12 17	2 28.03	+26 25.5	1.347	2.171	18.1	20.2	12 17	2 25.90	- 6 15.3	1.933	2.617	18.1	21.0
161341	2003 <i>SM</i> ₄₁		11 7.6 353°01'	10°8'/13.5 18			65080	2002 <i>BE</i> ₈		11 7.6 271°78'	1°1'/ 6.8 18		
10 8	3 17.71	+39 14.7	1.352	2.166	19.5	18.2	10 8	3 13.88	+14 33.3	2.066	2.939	11.3	19.6
10 18	3 12.19	+40 27.5	1.286	2.160	16.5	18.0	10 18	3 8.04	+14 9.6	1.995	2.933	7.9	19.4
10 28	3 3.24	+41 11.3	1.239	2.155	13.5	17.8	10 28	3 0.49	+13 40.7	1.949	2.927	4.2	19.2
11 7	2 52.10	+41 19.9	1.212	2.151	11.3	17.7	11 7	2 51.98	+13 9.8	1.931	2.921	1.1	18.9
11 17	2 40.63	+40 51.7	1.208	2.148	10.9	17.7	11 17	2 43.43	+12 40.4	1.943	2.915	4.3	19.1
11 27	2 30.90	+39 52.8	1.227	2.147	12.7	17.8	11 27	2 35.80	+12 16.6	1.983	2.909	8.1	19.4
12 7	2 24.46	+38 35.2	1.268	2.146	15.6	17.9	12 7	2 29.84	+12 1.8	2.049	2.903	11.5	19.6
12 17	2 22.06	+37 11.5	1.329	2.147	18.6	18.1	12 17	2 26.06	+11 58.1	2.137	2.897	14.4	19.8
12246	<i>Pliska</i>		11 7.6 28°57'	3°6'/ 5.5 18			160830	2000 <i>XJ</i> ₃₀		11 7.6 353°23'	0°1'/ 7.6 18		
10 8	3 14.49	+12 9.5	1.170	2.069	16.1	16.6	10 8	3 20.16	+15 24.6	1.489	2.366	14.7	19.0
10 18	3 9.12	+10 57.6	1.125	2.075	11.2	16.3	10 18	3 13.04	+15 54.6	1.425	2.364	10.4	18.7
10 28	3 1.20	+ 9 40.1	1.102	2.082	6.2	16.1	10 28	3 3.35	+16 19.8	1.384	2.362	5.6	18.4
11 7	2 51.99	+ 8 25.8	1.103	2.090	3.7	16.0	11 7	2 52.15	+16 40.7	1.370	2.361	0.4	18.0
11 17	2 42.97	+ 7 23.4	1.130	2.098	7.6	16.2	11 17	2 40.84	+16 58.8	1.383	2.360	4.9	18.4
11 27	2 35.61	+ 6 40.7	1.181	2.106	12.4	16.5	11 27	2 30.88	+17 16.9	1.424	2.359	9.8	18.7
12 7	2 30.89	+ 6 21.2	1.252	2.115	16.8	16.8	12 7	2 23.40	+17 38.5	1.489	2.359	14.2	18.9
12 17	2 29.28	+ 6 24.9	1.342	2.125	20.3	17.1	12 17	2 19.04	+18 6.2	1.575	2.360	17.7	19.2
152087	2004 <i>RR</i> ₂₉		11 7.6 145°54'	4°2'/ 4.6 18			394289	2006 <i>VJ</i> ₂₁		11 7.6 45°61'	0°5'/ 7.2 15		
10 8	3 16.44	+ 6 45.9	1.886	2.764	12.0	20.7	10 8	3 13.96	+18 5.9	1.559	2.439	14.0	21.2
10 18	3 9.73	+ 5 47.9	1.835	2.773	8.6	20.5	10 18	3 8.31	+17 15.3	1.511	2.452	9.8	21.0
10 28	3 1.29	+ 4 51.2	1.810	2.781	5.4	20.3	10 28	3 0.64	+16 14.5	1.487	2.466	5.1	20.7
11 7	2 52.00	+ 4 1.3	1.813	2.789	4.3	20.3	11 7	2 52.00	+15 8.6	1.489	2.480	0.5	20.4
11 17	2 42.84	+ 3 23.2	1.844	2.796	6.7	20.5	11 17	2 43.56	+14 4.0	1.519	2.494	4.8	20.8
11 27	2 34.81	+ 3 0.8	1.903	2.803	10.1	20.7	11 27	2 36.47	+13 7.7	1.576	2.509	9.2	21.1
12 7	2 28.64	+ 2 55.6	1.987	2.810	13.2	20.9	12 7	2 31.53	+12 24.9	1.657	2.524	13.1	21.4
12 17	2 24.78	+ 3 7.3	2.091	2.815	15.8	21.1	12 17	2 29.19	+11 58.3	1.759	2.539	16.3	21.6
347180	2011 <i>FW</i> ₁₅₄		11 7.6 156°01'	14°3'/ 4.7 15			439043	2011 <i>FT</i> ₁₂₀		11 7.6 253°09'	1°8'/ 6.4 18		
10 8	3 30.73	-14 22.6	1.138	1.985	20.3	20.4	10 8	3 16.20	+14 40.7	1.655	2.534	13.3	21.8
10 18	3 20.63	-14 41.6	1.095	1.988	17.3	20.2	10 18	3 10.05	+13 47.6	1.580	2.521	9.4	21.5
10 28	3 7.29	-14 27.5	1.071	1.990	14.9	20.1	10 28	3 1.70	+12 46.0	1.529	2.508	5.0	21.2
11 7	2 52.34	-13 31.5	1.070	1.992	14.3	20.1	11 7	2 52.07	+11 40.9	1.505	2.494	1.8	21.0
11 17	2 37.74	-11 52.3	1.092	1.993	15.8	20.2	11 17	2 42.31	+10 38.9	1.510	2.480	5.6	21.2
11 27	2 25.36	- 9 35.9	1.138	1.995	18.7	20.3	11 27	2 33.69	+ 9 46.7	1.542	2.466	10.2	21.5
12 7	2 16.44	- 6 53.3	1.204	1.996	21.8	20.6	12 7	2 27.19	+ 9 9.7	1.598	2.451	14.3	21.7
12 17	2 11.44	- 3 56.0	1.287	1.997	24.6	20.8	12 17	2 23.38	+ 8 50.5	1.674	2.436	17.7	21.9
434310	2004 <i>FP</i> ₁₂₇		11 7.6 240°08'	0°6'/ 7.9 18			67241	2000 <i>EZ</i> ₄₄		11 7.6 81°08'	5°9'/11.3 18		
10 8	3 18.19	+19 16.4	1.684	2.552	13.7	21.9	10 8	3 20.84	+32 25.1	1.875	2.692	14.7	18.8
10 18	3 11.50	+18 59.8	1.608	2.542	9.8	21.6	10 18	3 13.26	+33 7.3	1.816	2.706	11.6	18.7
10 28	3 2.48	+18 32.1	1.555	2.531	5.4	21.3	10 28	3 3.35	+33 30.4	1.781	2.720	8.5	18.5
11 7	2 52.08	+17 55.8	1.530	2.520	0.7	21.0	11 7	2 52.15	+33 32.3	1.772	2.734	6.2	18.4
11 17	2 41.55	+17 14.9	1.533	2.509	4.5	21.2	11 17	2 40.99	+33 14.0	1.791	2.748	6.4	18.4
11 27	2 32.18	+16 35.4	1.563	2.497	9.2	21.5	11 27	2 31.18	+32 40.5	1.837	2.762	8.7	18.6
12 7	2 25.02	+16 3.1	1.619	2.485	13.4	21.7	12 7	2 23.74	+31 59.0	1.909	2.776	11.7	18.8
12 17	2 20.69	+15 42.3	1.696	2.473	17.0	21.9	12 17	2 19.22	+31 16.9	2.004	2.790	14.4	19.0
514532	2016 <i>YA</i> ₇		11 7.6 51°69'	1°6'/ 6.7 18			239187	2006 <i>KW</i> ₁₀₀		11 7.6 255°80'			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
1295	Deflotte		11 7.6 315°73	0°9/ 6.9	18		264477	2001 <i>KH</i> ₁₆		11 7.6 224°49	2°9/ 5.1	18	
10 8	3 11.04	+15 28.2	2.274	3.147	10.4	15.6	10 8	3 13.40	+ 6 15.5	2.821	3.689	8.8	21.1
10 18	3 5.97	+14 56.5	2.198	3.137	7.3	15.4	10 18	3 7.35	+ 5 52.2	2.746	3.679	6.3	20.9
10 28	2 59.38	+14 19.1	2.149	3.127	3.8	15.2	10 28	3 0.04	+ 5 30.3	2.698	3.669	3.9	20.7
11 7	2 51.95	+13 38.9	2.127	3.117	0.9	14.9	11 7	2 52.04	+ 5 12.6	2.680	3.658	3.0	20.7
11 17	2 44.47	+12 59.8	2.135	3.108	3.9	15.2	11 17	2 43.99	+ 5 1.6	2.693	3.647	4.8	20.8
11 27	2 37.76	+12 25.7	2.172	3.099	7.5	15.4	11 27	2 36.58	+ 4 59.6	2.735	3.635	7.4	20.9
12 7	2 32.53	+12 0.3	2.234	3.090	10.7	15.6	12 7	2 30.38	+ 5 7.8	2.805	3.623	9.9	21.1
12 17	2 29.24	+11 45.8	2.320	3.081	13.4	15.7	12 17	2 25.81	+ 5 26.5	2.897	3.611	12.0	21.2
81348	2000 <i>GP</i> ₄₇		11 7.6 49°61	0°4/ 7.3	18		314306	2005 <i>SV</i> ₁₃₈		11 7.6 31°48	1°5/ 6.6	18	
10 8	3 14.06	+17 48.0	1.729	2.605	13.0	19.3	10 8	3 13.40	+14 22.3	1.800	2.680	12.4	21.5
10 18	3 8.32	+17 6.7	1.671	2.610	9.1	19.1	10 18	3 7.81	+13 44.4	1.743	2.684	8.6	21.2
10 28	3 0.66	+16 15.9	1.638	2.617	4.8	18.9	10 28	3 0.41	+13 0.8	1.710	2.689	4.5	21.0
11 7	2 52.02	+15 19.9	1.632	2.623	0.4	18.5	11 7	2 52.05	+12 15.9	1.704	2.694	1.5	20.8
11 17	2 43.48	+14 24.1	1.654	2.629	4.5	18.9	11 17	2 43.77	+11 34.3	1.727	2.699	4.8	21.1
11 27	2 36.12	+13 34.5	1.704	2.636	8.8	19.2	11 27	2 36.59	+11 1.1	1.777	2.704	8.9	21.3
12 7	2 30.76	+12 56.2	1.778	2.643	12.5	19.4	12 7	2 31.28	+10 39.9	1.852	2.710	12.4	21.5
12 17	2 27.86	+12 32.1	1.875	2.649	15.6	19.6	12 17	2 28.32	+10 32.5	1.949	2.715	15.4	21.8
152618	1996 <i>MJ</i> ₁		11 7.6 131°32	4°3/ 4.9	18		166546	2002 <i>RJ</i> ₅₆		11 7.6 95°67	0°2/ 7.4	18	
10 8	3 17.15	+ 6 36.0	1.720	2.600	12.9	20.2	10 8	3 15.56	+18 16.1	1.865	2.734	12.6	20.2
10 18	3 10.38	+ 5 48.5	1.670	2.609	9.2	20.0	10 18	3 9.20	+17 35.5	1.813	2.748	8.8	20.0
10 28	3 1.71	+ 5 2.8	1.645	2.617	5.7	19.8	10 28	3 1.08	+16 45.9	1.785	2.763	4.6	19.8
11 7	2 52.08	+ 4 24.4	1.647	2.625	4.5	19.8	11 7	2 52.09	+15 51.2	1.786	2.777	0.3	19.4
11 17	2 42.59	+ 3 58.2	1.677	2.632	7.0	19.9	11 17	2 43.29	+14 56.4	1.816	2.791	4.2	19.8
11 27	2 34.33	+ 3 47.8	1.735	2.639	10.6	20.2	11 27	2 35.66	+14 7.1	1.875	2.805	8.2	20.1
12 7	2 28.10	+ 3 54.5	1.816	2.646	13.9	20.4	12 7	2 29.97	+13 28.0	1.959	2.819	11.7	20.3
12 17	2 24.37	+ 4 17.6	1.917	2.653	16.7	20.6	12 17	2 26.63	+13 1.8	2.065	2.832	14.6	20.6
238267	2003 <i>WW</i> ₄₈		11 7.6 137°03	0°3/ 7.4	18		294145	2007 <i>TY</i> ₃₁₄		11 7.6 215°24	0°1/ 7.6	18	
10 8	3 15.83	+18 3.0	2.164	3.026	11.3	21.5	10 8	3 18.58	+18 41.0	1.483	2.357	14.9	21.5
10 18	3 9.21	+17 20.4	2.106	3.039	7.9	21.3	10 18	3 11.92	+18 5.3	1.416	2.354	10.6	21.3
10 28	3 1.01	+16 29.8	2.074	3.051	4.1	21.1	10 28	3 2.77	+17 17.2	1.371	2.349	5.6	21.0
11 7	2 52.05	+15 34.5	2.072	3.062	0.3	20.8	11 7	2 52.21	+16 20.5	1.354	2.344	0.3	20.6
11 17	2 43.22	+14 39.1	2.099	3.073	3.8	21.1	11 17	2 41.61	+15 21.3	1.363	2.339	5.1	20.9
11 27	2 35.42	+13 48.5	2.157	3.084	7.5	21.4	11 27	2 32.41	+14 27.2	1.400	2.334	10.1	21.2
12 7	2 29.34	+13 7.0	2.241	3.093	10.7	21.6	12 7	2 25.66	+13 44.9	1.461	2.328	14.6	21.5
12 17	2 25.39	+12 37.4	2.348	3.103	13.4	21.8	12 17	2 21.95	+13 18.4	1.542	2.322	18.3	21.7
36514	2000 <i>QA</i> ₇₄		11 7.6 137°65	2°8/ 9.8	18		209202	2003 <i>UP</i> ₂₆₈		11 7.6 33°69	0°2/ 7.5	18	
10 8	3 15.66	+26 28.6	2.148	2.989	12.2	19.3	10 8	3 14.83	+18 12.4	1.261	2.149	16.0	19.8
10 18	3 9.30	+26 22.7	2.080	2.993	9.1	19.1	10 18	3 9.25	+17 39.4	1.221	2.165	11.2	19.6
10 28	3 1.16	+26 3.0	2.036	2.998	5.8	18.9	10 28	3 1.26	+16 55.3	1.203	2.183	5.9	19.4
11 7	2 52.06	+25 30.3	2.020	3.002	3.0	18.7	11 7	2 52.12	+16 4.9	1.210	2.201	0.3	19.0
11 17	2 42.99	+24 47.6	2.033	3.006	4.0	18.8	11 17	2 43.27	+15 14.8	1.243	2.220	5.2	19.4
11 27	2 34.95	+23 59.7	2.075	3.010	7.2	19.0	11 27	2 36.06	+14 32.4	1.301	2.239	10.2	19.8
12 7	2 28.73	+23 12.3	2.144	3.014	10.4	19.2	12 7	2 31.42	+14 3.0	1.381	2.260	14.5	20.1
12 17	2 24.81	+22 30.5	2.237	3.018	13.2	19.4	12 17	2 29.74	+13 49.3	1.482	2.281	18.0	20.4
400630	2009 <i>DO</i> ₁₁₈		11 7.6 157°37	4°4/10.9	18		4872	Grieg		11 7.6 287°80	5°8/ 3.9	18	
10 8	3 18.30	+30 41.1	2.204	3.023	12.7	21.5	10 8	3 14.71	+ 1 57.6	1.826	2.705	12.3	17.3
10 18	3 11.22	+30 54.7	2.133	3.028	9.9	21.3	10 18	3 8.74	+ 1 10.9	1.766	2.699	9.2	17.1
10 28	3 2.21	+30 52.2	2.086	3.033	6.9	21.1	10 28	3 0.93	+ 0 29.9	1.730	2.693	6.5	16.9
11 7	2 52.13	+30 32.9	2.067	3.037	4.6	21.0	11 7	2 52.11	+ 0 0.2	1.721	2.687	5.9	16.9
11 17	2 42.04	+29 58.7	2.077	3.041	5.0	21.0	11 17	2 43.29	- 0 13.6	1.740	2.681	8.1	17.0
11 27	2 33.03	+29 14.2	2.115	3.045	7.5	21.2	11 27	2 35.50	- 0 8.6	1.785	2.675	11.2	17.2
12 7	2 25.94	+28 25.5	2.181	3.048	10.4	21.4	12 7	2 29.54	+ 0 15.3	1.854	2.670	14.3	17.4
12 17	2 21.30	+27 38.6	2.270	3.050	13.1	21.6	12 17	2 25.92	+ 0 56.8	1.942	2.664	16.9	17.6
23399	5132 <i>T</i> ₋₃		11 7.6 358°50	3°0/ 5.8	18		159237	2005 <i>YR</i> ₁₆		11 7.6 313°32	1°4/ 6.6	17	
10 8	3 14.71	+ 8 17.4	1.922	2.801	11.7	18.1	10 8	3 12.80	+14 10.4	1.839	2.719	12.1	20.9
10 18	3 8.66	+ 8 5.2	1.860	2.800	8.3	17.9	10 18	3 7.59	+13 40.0	1.758	2.700	8.6	20.7
10 28	3 0.84	+ 7 54.0	1.823	2.799	4.8	17.6	10 28	3 0.42	+13 3.6	1.703	2.682	4.5	20.4
11 7	2 52.06	+ 7 46.9	1.815	2.799	3.0	17.5	11 7	2 52.10	+12 24.9	1.674	2.664	1.5	20.1
11 17	2 43.27	+ 7 47.2	1.834	2.799	5.6	17.7	11 17	2 43.61	+11 48.4	1.674	2.646	4.9	20.3
11 27	2 35.48	+ 7 57.2	1.882	2.799	9.1	17.9	11 27	2 36.04	+11 19.1	1.701	2.628	9.1	20.6
12 7	2 29.47	+ 8 18.4	1.955	2.799	12.4	18.1	12 7	2 30.29	+11 1.0	1.752	2.611	12.9	20.8
12 17	2 25.74	+ 8 50.8	2.048	2.800	15.2	18.3	12 17	2 26.93	+10 56.6	1.825	2.595	16.2	21.0
292819	2006 <i>UG</i> ₂₆₁		11 7.6 46°23	8°7/ 3.9	16		414991	2011 <i>EO</i> ₇₃		11 7.6 300°13	11°8/16.1	17	
10 8	3 18.96	+ 1 37.3	0.974	1.876	18.3	19.5	10 8	3 25.90	+51 45.5	2.323	3.005	15.9	20.7
10 18	3 11.95	+ 0 14.9	0.965	1.909	13.5	19.3	10 18	3 17.84	+53 18.3	2.237	2.991	14.5	20.5
10 28	3 2.47	- 0 52.7	0.977	1.943	9.6	19.2	10 28	3 6.36	+54 26.7	2.171	2.977	13.1	20.4
11 7	2 52.14	- 1 35.7	1.011	1.978	8.8	19.3	11 7	2 52.47	+55 4.1	2.125	2.963	12.1	20.3
11 17	2 42.59	- 1 49.2	1.069	2.013	11.4	19.6	11 17	2 37.80	+55 6.6	2.103	2.950	11.8	20.3
11 27	2 35.23	- 1 32.5	1.148	2.049	15.1	19.9	11 27	2 24.33	+54 35.9	2.104	2.936	12.2	20.3
12 7	2 30.82	- 0 49.8	1.247	2.085	18.5	20.2	12 7	2 13.73	+53 39.0	2.128	2.923	13.4	20.3
12 17	2 29.58	+ 0 13.3	1.363	2.121	21.3	20.5	12 17	2 6.98	+52 25.7	2.172	2.910	14.9	20.4
247774	2003 <i>QZ</i> ₁₀₁		11 7.6 108°49	4°0/10.4	18		82373	2001 <i>MH</i> ₁₅		11 7.6 91°73	1°1/ 8.5	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
448338	2009 <i>FP</i> ₂₄		11 7.6 197°28	4.4/10.6	18		314	Rosalia		11 7.6 29°59	5.6/3.3	18	
10 8	3 20.68	+30 6.9	2.345	3.159	12.2	21.8	10 8	3 10.93	+3 52.0	1.798	2.685	12.0	14.0
10 18	3 12.96	+30 42.6	2.265	3.157	9.5	21.6	10 18	3 5.99	+2 32.2	1.756	2.695	8.8	13.9
10 28	3 3.22	+31 4.2	2.209	3.154	6.7	21.4	10 28	2 59.42	+1 16.7	1.739	2.705	6.2	13.7
11 7	2 52.27	+31 10.1	2.182	3.150	4.6	21.3	11 7	2 52.08	+0 12.4	1.750	2.716	5.8	13.7
11 17	2 41.15	+31 0.6	2.184	3.146	5.1	21.3	11 17	2 44.87	-0 35.0	1.787	2.727	8.0	13.9
11 27	2 30.97	+30 39.1	2.217	3.141	7.5	21.5	11 27	2 38.72	-1 1.9	1.851	2.739	10.9	14.1
12 7	2 22.64	+30 10.7	2.276	3.136	10.3	21.6	12 7	2 34.30	-1 7.5	1.937	2.752	13.8	14.3
12 17	2 16.76	+29 41.2	2.359	3.130	12.9	21.8	12 17	2 32.03	-0 53.0	2.042	2.764	16.2	14.5
187347	2005 <i>UJ</i> ₁₈₈		11 7.6 192°19	0°8/8.2	18		252654	2001 <i>YN</i> ₅₈		11 7.6 356°16	6.4/12.8	18	
10 8	3 14.55	+20 13.8	2.395	3.250	10.6	21.3	10 8	3 14.34	+35 46.7	1.680	2.498	16.1	20.0
10 18	3 8.39	+19 57.9	2.321	3.249	7.6	21.1	10 18	3 9.00	+35 38.0	1.608	2.496	12.9	19.8
10 28	3 0.67	+19 33.6	2.274	3.247	4.2	20.9	10 28	3 1.25	+35 3.3	1.557	2.494	9.6	19.6
11 7	2 52.12	+19 2.6	2.255	3.245	0.9	20.7	11 7	2 52.19	+34 2.0	1.530	2.492	7.0	19.4
11 17	2 43.55	+18 27.8	2.267	3.243	3.3	20.9	11 17	2 43.15	+32 37.7	1.530	2.491	6.7	19.4
11 27	2 35.82	+17 53.2	2.309	3.241	6.8	21.1	11 27	2 35.49	+30 58.7	1.556	2.491	9.2	19.6
12 7	2 29.63	+17 22.8	2.377	3.238	9.9	21.3	12 7	2 30.23	+29 15.5	1.608	2.492	12.5	19.8
12 17	2 25.43	+16 59.8	2.470	3.235	12.6	21.5	12 17	2 27.90	+27 37.7	1.682	2.493	15.7	20.0
298159	2002 <i>TZ</i> ₅₅		11 7.6 50°90	4.9/10.4	18		118885	2000 <i>UZ</i> ₂₃		11 7.6 285°75	3.2/5.3	18	
10 8	3 19.84	+28 25.1	1.586	2.429	15.7	20.3	10 8	3 13.33	+8 31.3	2.025	2.905	11.2	19.7
10 18	3 12.75	+29 2.0	1.534	2.445	12.0	20.1	10 18	3 7.69	+7 51.3	1.958	2.898	8.0	19.5
10 28	3 3.17	+29 20.6	1.504	2.460	8.1	19.9	10 28	3 0.38	+7 10.8	1.916	2.891	4.7	19.3
11 7	2 52.26	+29 19.7	1.500	2.476	5.2	19.8	11 7	2 52.15	+6 34.2	1.903	2.884	3.3	19.2
11 17	2 41.45	+29 1.1	1.523	2.492	5.9	19.9	11 17	2 43.89	+6 5.7	1.918	2.878	5.8	19.4
11 27	2 32.16	+28 30.4	1.573	2.508	9.1	20.1	11 27	2 36.53	+5 49.1	1.960	2.871	9.2	19.6
12 7	2 25.43	+27 55.3	1.648	2.525	12.6	20.3	12 7	2 30.82	+5 46.5	2.028	2.864	12.4	19.8
12 17	2 21.78	+27 22.5	1.744	2.542	15.7	20.6	12 17	2 27.25	+5 58.5	2.117	2.858	15.1	19.9
257124	2008 <i>GG</i> ₉₈		11 7.6 66°30	2°8/5.9	18		178068	2006 <i>SY</i> ₇₆		11 7.6 32°92	1°3/8.4	18	
10 8	3 16.34	+8 17.4	1.970	2.845	11.7	20.1	10 8	3 16.41	+20 13.7	1.580	2.451	14.3	19.7
10 18	3 9.69	+8 8.7	1.919	2.857	8.2	19.9	10 18	3 10.23	+20 17.0	1.524	2.459	10.2	19.5
10 28	3 1.35	+8 1.2	1.893	2.869	4.7	19.7	10 28	3 1.83	+20 9.4	1.492	2.467	5.7	19.3
11 7	2 52.16	+7 57.7	1.896	2.880	2.9	19.6	11 7	2 52.24	+19 52.5	1.486	2.476	1.5	19.0
11 17	2 43.09	+8 0.9	1.928	2.892	5.3	19.8	11 17	2 42.71	+19 29.8	1.507	2.485	4.4	19.3
11 27	2 35.09	+8 12.9	1.988	2.904	8.8	20.0	11 27	2 34.52	+19 6.4	1.556	2.495	8.9	19.5
12 7	2 28.89	+8 35.1	2.074	2.916	11.9	20.2	12 7	2 28.60	+18 47.6	1.629	2.505	12.8	19.8
12 17	2 24.92	+9 7.3	2.181	2.928	14.6	20.4	12 17	2 25.46	+18 37.2	1.723	2.515	16.1	20.1
358722	2008 <i>BK</i> ₄₆		11 7.6 229°01	4.7/11.1	18		480949	2003 <i>SY</i> ₂₉₄		11 7.6 16°73	1°7/7.7	18	
10 8	3 16.73	+31 22.8	2.111	2.932	13.1	20.9	10 8	3 37.58	+3 55.9	1.024	1.897	20.0	18.6
10 18	3 10.29	+31 32.2	2.033	2.928	10.3	20.7	10 18	3 26.13	+6 40.6	0.972	1.908	14.4	18.4
10 28	3 1.82	+31 24.3	1.978	2.924	7.3	20.5	10 28	3 10.62	+9 43.5	0.945	1.922	7.8	18.1
11 7	2 52.20	+30 58.4	1.951	2.920	5.0	20.4	11 7	2 52.77	+12 54.5	0.947	1.937	1.8	17.7
11 17	2 42.50	+30 16.4	1.951	2.916	5.2	20.4	11 17	2 34.98	+15 59.6	0.979	1.954	6.7	18.1
11 27	2 33.84	+29 23.4	1.980	2.911	7.8	20.6	11 27	2 19.70	+18 48.8	1.040	1.973	12.9	18.5
12 7	2 27.15	+28 25.9	2.036	2.907	10.9	20.7	12 7	2 8.54	+21 18.8	1.127	1.994	17.9	18.9
12 17	2 22.96	+27 30.6	2.114	2.902	13.7	20.9	12 17	2 2.14	+23 31.5	1.233	2.016	21.8	19.2
188956	2007 <i>EO</i> ₁₂₇		11 7.6 77°82	1°6/6.3	18		405912	2006 <i>HR</i> ₁₃₂		11 7.6 350°36	1°4/8.5	17	
10 8	3 13.16	+13 30.0	2.085	2.960	11.1	20.4	10 8	3 14.21	+20 42.8	1.844	2.710	12.8	21.2
10 18	3 7.42	+12 49.6	2.031	2.971	7.7	20.3	10 18	3 8.58	+20 46.5	1.775	2.706	9.2	21.0
10 28	3 0.14	+12 5.2	2.003	2.981	4.1	20.1	10 28	3 0.95	+20 40.4	1.729	2.703	5.2	20.8
11 7	2 52.10	+11 20.4	2.003	2.992	1.6	19.9	11 7	2 52.19	+20 25.5	1.711	2.700	1.6	20.5
11 17	2 44.16	+10 39.7	2.033	3.002	4.5	20.1	11 17	2 43.36	+20 4.7	1.720	2.697	4.0	20.7
11 27	2 37.20	+10 7.2	2.091	3.013	8.0	20.4	11 27	2 35.57	+19 42.4	1.757	2.695	8.1	20.9
12 7	2 31.89	+9 45.8	2.175	3.024	11.2	20.6	12 7	2 29.70	+19 23.1	1.820	2.694	11.8	21.2
12 17	2 28.64	+9 37.1	2.281	3.034	13.8	20.8	12 17	2 26.31	+19 10.9	1.905	2.693	15.0	21.4
332937	2011 <i>CB</i> ₈₇		11 7.6 217°20	0°1/7.5	17		68695	2002 <i>CB</i> ₁₇₁		11 7.6 133°64	1°6/6.6	18	
10 8	3 12.35	+17 39.8	2.575	3.437	9.7	21.7	10 8	3 17.58	+13 5.2	1.931	2.802	12.1	19.7
10 18	3 6.76	+17 14.4	2.500	3.433	6.9	21.5	10 18	3 10.63	+12 41.2	1.875	2.813	8.4	19.5
10 28	2 59.79	+16 42.6	2.452	3.429	3.6	21.3	10 28	3 1.89	+12 13.4	1.845	2.822	4.4	19.3
11 7	2 52.08	+16 6.6	2.433	3.424	0.2	21.0	11 7	2 52.24	+11 45.1	1.843	2.832	1.6	19.1
11 17	2 44.36	+15 29.6	2.445	3.420	3.3	21.2	11 17	2 42.71	+11 20.1	1.871	2.841	4.7	19.3
11 27	2 37.37	+14 55.1	2.486	3.415	6.6	21.4	11 27	2 34.29	+11 2.3	1.927	2.850	8.6	19.6
12 7	2 31.74	+14 26.6	2.555	3.410	9.5	21.6	12 7	2 27.77	+10 54.6	2.009	2.858	12.0	19.8
12 17	2 27.90	+14 6.6	2.647	3.405	12.0	21.8	12 17	2 23.60	+10 58.4	2.113	2.865	14.8	20.0
446175	2013 <i>ER</i> ₁₄₃		11 7.6 102°24	2°0/6.2	18		76620	2000 <i>GO</i> ₁₇₅		11 7.6 258°60	3°7/4.5	18	
10 8	3 14.57	+12 31.1	1.921	2.798	11.8	21.8	10 8	3 13.52	+9 13.3	2.025	2.904	11.2	19.3
10 18	3 8.53	+11 51.3	1.864	2.805	8.3	21.6	10 18	3 7.89	+7 55.3	1.948	2.888	8.0	19.1
10 28	3 0.77	+11 7.9	1.834	2.812	4.4	21.4	10 28	3 0.52	+6 33.7	1.897	2.871	4.8	18.9
11 7	2 52.14	+10 25.0	1.831	2.818	2.1	21.2	11 7	2 52.17	+5 14.6	1.875	2.854	3.8	18.8
11 17	2 43.60	+9 47.1	1.857	2.825	5.0	21.4	11 17	2 43.73	+4 4.5	1.882	2.836	6.4	18.9
11 27	2 36.12	+9 18.6	1.911	2.831	8.7	21.7	11 27	2 36.16	+3 9.1	1.917	2.819	9.9	19.1
12 7	2 30.44	+9 2.5	1.990	2.838	12.1	21.9	12 7	2 30.24	+2 31.9	1.977	2.801	13.2	19.3
12 17	2 27.00	+9 0.1	2.091	2.844	14.9	22.1	12 17	2 26.49	+2 14.2	2.057	2.782	16.0	19.5
300645	2007 <i>UQ</i> ₇₆		11 7.6 348°24	0°8/8.1	18		117387	Javiera		11 7.6 105°95	5°1/11.7	18	
10 8	3 14.94	+20 0.9	1.621	2.494									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
387597	2001 <i>XK</i> ₁₅₁	11 7.6 335°04	2°1/ 6.6 18				169523	2002 <i>EW</i> ₄₁	11 7.6 154°57	0°1/ 7.6 18			
10 8	3 14.19	+13 8.8	1.193	2.091	15.9	20.4	10 8	3 16.48	+18 27.8	1.966	2.831	12.2	20.8
10 18	3 9.34	+12 48.8	1.126	2.075	11.3	20.1	10 18	3 9.93	+17 52.4	1.903	2.836	8.6	20.5
10 28	3 1.66	+12 22.9	1.080	2.061	6.1	19.8	10 28	3 1.57	+17 7.9	1.865	2.842	4.5	20.3
11 7	2 52.25	+11 56.1	1.059	2.048	2.1	19.5	11 7	2 52.29	+16 17.5	1.856	2.847	0.3	20.0
11 17	2 42.61	+11 33.9	1.061	2.036	6.5	19.8	11 17	2 43.08	+15 25.8	1.876	2.852	4.0	20.3
11 27	2 34.38	+11 22.7	1.088	2.025	12.0	20.0	11 27	2 34.97	+14 38.2	1.926	2.856	8.1	20.6
12 7	2 28.83	+11 26.6	1.137	2.015	16.9	20.3	12 7	2 28.72	+13 59.5	2.001	2.859	11.6	20.8
12 17	2 26.65	+11 47.5	1.203	2.007	21.0	20.5	12 17	2 24.82	+13 32.7	2.099	2.863	14.5	21.0
192163	2007 <i>CM</i> ₄₂	11 7.6 129°46	1°3/ 6.7 18				327716	2006 <i>SS</i> ₁₃₆	11 7.6 47°02	4°5/ 5.9 18			
10 8	3 17.93	+14 46.0	1.839	2.710	12.6	21.1	10 8	3 19.69	+ 7 35.2	1.142	2.037	16.8	19.6
10 18	3 10.91	+14 7.0	1.786	2.724	8.8	20.9	10 18	3 12.82	+ 7 14.7	1.104	2.050	11.9	19.4
10 28	3 2.05	+13 22.1	1.759	2.737	4.6	20.7	10 28	3 3.26	+ 6 57.0	1.088	2.064	6.9	19.2
11 7	2 52.28	+12 35.4	1.760	2.749	1.4	20.5	11 7	2 52.39	+ 6 47.6	1.095	2.079	4.5	19.1
11 17	2 42.67	+11 51.6	1.790	2.761	4.8	20.8	11 17	2 41.82	+ 6 51.0	1.128	2.094	7.9	19.3
11 27	2 34.29	+11 15.8	1.849	2.773	8.8	21.0	11 27	2 33.10	+ 7 10.2	1.185	2.110	12.5	19.6
12 7	2 27.90	+10 51.6	1.933	2.783	12.3	21.3	12 7	2 27.25	+ 7 45.5	1.264	2.126	16.8	19.9
12 17	2 23.95	+10 41.0	2.039	2.793	15.2	21.5	12 17	2 24.71	+ 8 35.5	1.361	2.142	20.2	20.2
510231	2011 <i>EP</i> ₇₀	11 7.6 288°00	2°0/ 8.6 18				204072	2003 <i>US</i> ₃₉₈	11 7.6 43°00	8°1/ 4.3 18			
10 8	3 19.36	+21 6.1	1.480	2.349	15.2	21.3	10 8	3 18.14	- 2 8.8	1.342	2.225	15.6	19.0
10 18	3 12.71	+21 21.1	1.408	2.340	11.1	21.1	10 18	3 11.29	- 2 43.3	1.313	2.244	11.9	18.9
10 28	3 3.36	+21 24.2	1.359	2.332	6.4	20.8	10 28	3 2.29	- 3 3.5	1.307	2.264	8.9	18.8
11 7	2 52.38	+21 15.6	1.335	2.324	2.2	20.5	11 7	2 52.33	- 3 3.5	1.326	2.285	8.3	18.8
11 17	2 41.18	+20 57.8	1.339	2.316	4.9	20.7	11 17	2 42.75	- 2 40.4	1.370	2.306	10.3	19.0
11 27	2 31.31	+20 36.2	1.369	2.308	9.8	20.9	11 27	2 34.79	- 1 54.2	1.438	2.328	13.4	19.2
12 7	2 23.98	+20 17.1	1.424	2.300	14.3	21.2	12 7	2 29.28	- 0 48.3	1.527	2.350	16.5	19.5
12 17	2 19.87	+20 5.8	1.499	2.293	18.0	21.4	12 17	2 26.59	+ 0 32.9	1.636	2.372	19.1	19.7
397570	2007 <i>UN</i> ₅₁	11 7.6 4°93	3°5/ 7.7 17				498537	2008 <i>FV</i> ₁₃₁	11 7.6 279°13	1°7/ 5.8 18			
10 8	3 37.81	+ 2 18.0	0.805	1.692	22.7	19.6	10 8	3 8.75	+11 23.9	3.070	3.942	8.1	21.5
10 18	3 27.32	+ 4 33.0	0.750	1.691	16.6	19.2	10 18	3 4.08	+10 43.9	2.999	3.937	5.6	21.3
10 28	3 11.75	+ 7 15.4	0.714	1.691	9.5	18.8	10 28	2 58.37	+10 1.8	2.956	3.932	3.1	21.1
11 7	2 52.90	+10 18.6	0.703	1.692	3.5	18.5	11 7	2 52.11	+ 9 20.5	2.942	3.928	1.8	21.0
11 17	2 33.64	+13 28.3	0.718	1.694	8.4	18.8	11 17	2 45.83	+ 8 42.9	2.959	3.923	3.7	21.2
11 27	2 17.10	+16 30.7	0.759	1.697	15.6	19.2	11 27	2 40.13	+ 8 12.0	3.005	3.918	6.2	21.3
12 7	2 5.44	+19 18.4	0.822	1.701	21.7	19.6	12 7	2 35.48	+ 7 49.8	3.079	3.914	8.6	21.5
12 17	1 59.45	+21 50.8	0.901	1.706	26.4	19.9	12 17	2 32.23	+ 7 37.6	3.176	3.909	10.7	21.6
367026	2006 <i>BX</i> ₂₇₄	11 7.6 235°55	3°6/10.5 17				486275	2013 <i>CQ</i> ₃₇	11 7.6 309°52	5°7/11.7 18			
10 8	3 15.31	+29 5.4	2.451	3.275	11.4	21.2	10 8	3 14.96	+33 10.6	1.603	2.436	16.1	20.6
10 18	3 9.09	+29 15.5	2.369	3.270	8.8	21.0	10 18	3 9.71	+32 57.3	1.514	2.414	12.8	20.4
10 28	3 1.16	+29 12.1	2.313	3.264	6.0	20.9	10 28	3 1.82	+32 18.2	1.446	2.394	9.2	20.1
11 7	2 52.25	+28 55.1	2.284	3.258	3.8	20.7	11 7	2 52.33	+31 12.4	1.402	2.373	6.2	19.9
11 17	2 43.24	+28 25.9	2.285	3.253	4.3	20.7	11 17	2 42.58	+29 42.9	1.384	2.353	6.3	19.9
11 27	2 35.08	+27 48.4	2.315	3.246	6.8	20.9	11 27	2 34.11	+27 58.3	1.394	2.333	9.6	20.0
12 7	2 28.54	+27 7.5	2.372	3.240	9.6	21.1	12 7	2 28.10	+26 10.2	1.428	2.314	13.6	20.2
12 17	2 24.14	+26 28.2	2.454	3.234	12.2	21.2	12 17	2 25.24	+24 29.2	1.484	2.295	17.4	20.4
163290	2002 <i>GE</i> ₁₄₁	11 7.6 153°01	1°4/ 6.6 18				128858	2004 <i>SQ</i> ₂₀	11 7.6 341°71	0°3/ 7.4 17			
10 8	3 15.75	+14 48.2	1.886	2.760	12.2	20.7	10 8	3 9.51	+17 6.4	2.328	3.199	10.3	19.5
10 18	3 9.44	+14 5.2	1.825	2.764	8.5	20.5	10 18	3 4.96	+16 40.6	2.251	3.188	7.2	19.3
10 28	3 1.32	+13 16.0	1.790	2.768	4.5	20.3	10 28	2 58.96	+16 8.3	2.200	3.178	3.8	19.1
11 7	2 52.26	+12 24.7	1.782	2.772	1.4	20.1	11 7	2 52.15	+15 32.0	2.177	3.168	0.3	18.8
11 17	2 43.26	+11 36.3	1.804	2.775	4.7	20.3	11 17	2 45.27	+14 55.2	2.184	3.159	3.5	19.0
11 27	2 35.36	+10 56.0	1.854	2.779	8.7	20.6	11 27	2 39.13	+14 21.8	2.219	3.150	7.0	19.2
12 7	2 29.34	+10 27.6	1.930	2.781	12.3	20.8	12 7	2 34.40	+13 55.5	2.280	3.142	10.2	19.4
12 17	2 25.67	+10 13.3	2.027	2.784	15.2	21.0	12 17	2 31.53	+13 38.7	2.364	3.135	12.9	19.6
81517	2000 <i>GD</i> ₁₈₆	11 7.6 23°97	1°7/ 8.5 18				457277	2008 <i>RZ</i> ₈₃	11 7.6 347°87	3°9/10.3 17			
10 8	3 16.12	+20 41.7	1.419	2.295	15.3	18.5	10 8	3 13.26	+27 41.8	1.778	2.627	14.0	20.6
10 18	3 10.23	+20 49.9	1.367	2.303	11.0	18.3	10 18	3 8.12	+27 50.5	1.704	2.620	10.7	20.4
10 28	3 1.91	+20 45.9	1.337	2.312	6.2	18.0	10 28	3 0.82	+27 42.7	1.653	2.613	7.1	20.2
11 7	2 52.31	+20 31.3	1.333	2.322	1.8	17.8	11 7	2 52.26	+27 18.5	1.628	2.607	4.2	20.0
11 17	2 42.78	+20 9.6	1.355	2.333	4.7	18.0	11 17	2 43.59	+26 40.4	1.629	2.602	5.0	20.1
11 27	2 34.72	+19 46.5	1.403	2.344	9.4	18.3	11 27	2 36.02	+25 53.9	1.658	2.597	8.3	20.2
12 7	2 29.13	+19 27.8	1.475	2.356	13.6	18.6	12 7	2 30.52	+25 5.8	1.712	2.594	12.0	20.5
12 17	2 26.53	+19 17.6	1.568	2.369	17.0	18.9	12 17	2 27.67	+24 22.5	1.788	2.591	15.2	20.7
122018	2000 <i>GA</i> ₄₃	11 7.6 133°53	0°5/ 7.3 18				287115	2002 <i>RK</i> ₁₆₅	11 7.6 28°63	5°9/11.3 17			
10 8	3 18.15	+17 8.1	1.790	2.659	13.0	21.0	10 8	3 16.51	+31 10.3	1.378	2.226	17.4	20.1
10 18	3 11.16	+16 35.0	1.734	2.670	9.1	20.7	10 18	3 10.72	+31 26.2	1.327	2.237	13.5	19.9
10 28	3 2.23	+15 53.6	1.703	2.680	4.8	20.5	10 28	3 2.24	+31 18.1	1.297	2.250	9.5	19.7
11 7	2 52.32	+15 7.5	1.700	2.690	0.5	20.2	11 7	2 52.35	+30 45.6	1.290	2.263	6.3	19.6
11 17	2 42.55	+14 21.5	1.726	2.700	4.4	20.5	11 17	2 42.59	+29 52.4	1.308	2.277	6.6	19.7
11 27	2 34.03	+13 41.0	1.780	2.709	8.7	20.8	11 27	2 34.51	+28 46.8	1.352	2.291	9.8	19.9
12 7	2 27.58	+13 10.7	1.860	2.718	12.4	21.1	12 7	2 29.18	+27 38.9	1.419	2.307	13.6	20.2
12 17	2 23.65	+12 53.1	1.962	2.726	15.4	21.3	12 17	2 27.10	+26 37.3	1.507	2.323	16.9	20.4
293219	2007 <i>BP</i> ₃₆	11 7.6 351°29	4°9/ 4.5 18				51995	2001 <i>TK</i> ₁₀₁	11 7.6				

EPHEMERIDES

11 7.6

11 7.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
227847	2007 <i>DZ</i> ₃₄		11 7.6 343°39	1.4°/ 6.9	18		492134	2013 <i>ME</i> ₁₁		11 7.7 97°62	4.6°/ 4.1	18	
10 8	3 13.52	+15 28.6	1.128	2.027	16.6	19.9	10 8	3 13.14	+1 59.0	2.387	3.258	10.1	21.4
10 18	3 8.93	+14 57.3	1.067	2.017	11.7	19.6	10 18	3 7.29	+1 23.2	2.337	3.267	7.4	21.3
10 28	3 1.48	+14 16.0	1.026	2.008	6.2	19.3	10 28	3 0.10	+0 52.5	2.314	3.276	5.2	21.1
11 7	2 52.34	+13 30.1	1.009	2.000	1.4	18.9	11 7	2 52.27	+0 30.6	2.319	3.284	4.7	21.1
11 17	2 43.06	+12 46.6	1.016	1.993	6.3	19.2	11 17	2 44.52	+0 20.6	2.354	3.293	6.4	21.2
11 27	2 35.32	+12 13.6	1.047	1.987	12.0	19.5	11 27	2 37.61	+0 24.4	2.416	3.301	8.8	21.4
12 7	2 30.34	+11 56.8	1.099	1.982	17.0	19.8	12 7	2 32.11	+0 42.3	2.503	3.310	11.3	21.6
12 17	2 28.79	+11 58.8	1.168	1.979	21.2	20.1	12 17	2 28.43	+1 13.4	2.612	3.318	13.4	21.8
229021	2003 <i>YG</i> ₉₂		11 7.6 357°45	10.7°/ 2.0	18		359688	2011 <i>SH</i> ₁₇₂		11 7.7 354°93	1.3°/ 8.4	18	
10 8	3 14.89	-11 52.0	1.694	2.549	14.3	18.7	10 8	3 13.32	+20 38.3	1.339	2.222	15.6	20.2
10 18	3 8.96	-12 29.0	1.649	2.545	12.2	18.5	10 18	3 8.51	+20 30.0	1.276	2.217	11.2	20.0
10 28	3 1.12	-12 45.8	1.626	2.542	10.9	18.5	10 28	3 1.15	+20 8.1	1.235	2.212	6.3	19.7
11 7	2 52.31	-12 36.1	1.627	2.541	10.9	18.5	11 7	2 52.34	+19 35.1	1.219	2.209	1.5	19.4
11 17	2 43.60	-11 57.3	1.652	2.540	12.2	18.5	11 17	2 43.46	+18 55.8	1.228	2.207	4.9	19.6
11 27	2 36.07	-10 49.9	1.701	2.540	14.4	18.7	11 27	2 35.95	+18 17.1	1.263	2.206	10.0	19.9
12 7	2 30.52	-9 18.1	1.770	2.541	16.7	18.9	12 7	2 30.93	+17 45.7	1.320	2.206	14.5	20.1
12 17	2 27.42	-7 27.4	1.858	2.542	18.7	19.0	12 17	2 28.99	+17 26.5	1.397	2.208	18.3	20.4
46654	1995 <i>UB</i> ₈		11 7.6 320°71	1.3°/ 7.1	18		448331	2009 <i>DX</i> ₁₄₁		11 7.7 245°31	8.4°/13.2	15	
10 8	3 17.05	+14 30.0	1.272	2.161	15.8	17.5	10 8	3 22.24	+39 57.8	2.046	2.819	15.1	21.9
10 18	3 11.29	+14 18.5	1.204	2.150	11.2	17.2	10 18	3 14.74	+40 52.0	1.961	2.809	12.8	21.8
10 28	3 2.71	+14 0.4	1.158	2.138	5.9	16.8	10 28	3 4.51	+41 24.2	1.899	2.799	10.4	21.6
11 7	2 52.42	+13 39.0	1.137	2.128	1.3	16.5	11 7	2 52.56	+41 30.1	1.860	2.789	8.7	21.5
11 17	2 41.92	+13 19.4	1.142	2.117	5.9	16.8	11 17	2 40.25	+41 8.5	1.849	2.778	8.5	21.4
11 27	2 32.83	+13 7.2	1.171	2.107	11.4	17.1	11 27	2 29.13	+40 23.2	1.864	2.768	10.0	21.5
12 7	2 26.40	+13 7.0	1.223	2.098	16.2	17.3	12 7	2 20.43	+39 21.9	1.904	2.757	12.4	21.6
12 17	2 23.33	+13 21.5	1.293	2.090	20.2	17.6	12 17	2 14.91	+38 14.0	1.966	2.745	14.9	21.8
403958	2012 <i>BC</i> ₅₃		11 7.6 136°84	3.6°/10.6	18		274506	2008 <i>SV</i> ₁₄₄		11 7.7 331°69	0.3°/ 8.0	18	
10 8	3 15.90	+29 5.5	2.313	3.140	11.9	20.7	10 8	3 6.76	+18 56.3	4.093	4.948	6.6	21.3
10 18	3 9.51	+29 10.1	2.243	3.145	9.1	20.6	10 18	3 2.55	+18 40.4	4.017	4.945	4.7	21.2
10 28	3 1.39	+29 0.3	2.197	3.149	6.2	20.4	10 28	2 57.55	+18 20.1	3.969	4.943	2.5	21.0
11 7	2 52.34	+28 36.2	2.179	3.154	3.9	20.2	11 7	2 52.12	+17 56.9	3.951	4.941	0.4	20.8
11 17	2 43.28	+27 59.9	2.189	3.158	4.3	20.3	11 17	2 46.68	+17 32.2	3.963	4.939	2.1	21.0
11 27	2 35.19	+27 15.8	2.229	3.162	7.0	20.5	11 27	2 41.66	+17 8.2	4.007	4.937	4.2	21.2
12 7	2 28.84	+26 29.4	2.297	3.166	9.9	20.6	12 7	2 37.44	+16 46.7	4.079	4.935	6.2	21.3
12 17	2 24.70	+25 45.9	2.388	3.170	12.5	20.8	12 17	2 34.30	+16 29.6	4.176	4.934	7.9	21.4
56468	2000 <i>GO</i> ₁₀₄		11 7.6 83°13	2.2°/ 6.4	18		31926	Alhameed		11 7.7 229°44	0.3°/ 7.4	18	
10 8	3 19.08	+12 39.3	1.525	2.405	14.2	18.5	10 8	3 14.60	+17 47.5	2.067	2.934	11.6	18.8
10 18	3 11.87	+12 1.9	1.487	2.428	9.9	18.3	10 18	3 8.67	+17 10.4	1.993	2.927	8.2	18.6
10 28	3 2.60	+11 20.8	1.472	2.450	5.2	18.1	10 28	3 0.99	+16 24.7	1.944	2.921	4.3	18.4
11 7	2 52.40	+10 40.7	1.484	2.472	2.3	18.0	11 7	2 52.35	+15 33.6	1.924	2.914	0.4	18.0
11 17	2 42.52	+10 7.0	1.525	2.494	5.7	18.3	11 17	2 43.67	+14 41.5	1.933	2.908	4.0	18.3
11 27	2 34.15	+9 44.2	1.592	2.516	9.9	18.6	11 27	2 35.93	+13 53.7	1.971	2.900	7.9	18.5
12 7	2 28.10	+9 35.4	1.684	2.537	13.7	18.8	12 7	2 29.90	+13 14.6	2.035	2.893	11.5	18.8
12 17	2 24.77	+9 41.3	1.796	2.558	16.7	19.1	12 17	2 26.09	+12 47.6	2.122	2.885	14.4	18.9
6103	1993 <i>HV</i>		11 7.6 51°09	4.2°/ 3.9	18		512818	2016 <i>UZ</i> ₁₀₀		11 7.7 48°80	10.5°/ 2.5	18	
10 8	3 10.82	+5 59.6	2.166	3.047	10.5	16.5	10 8	3 17.18	-6 24.7	1.331	2.209	16.0	19.7
10 18	3 5.71	+4 45.2	2.126	3.064	7.5	16.3	10 18	3 10.48	-7 44.3	1.321	2.239	12.9	19.6
10 28	2 59.27	+3 33.0	2.113	3.081	4.9	16.2	10 28	3 1.80	-8 43.3	1.332	2.270	10.8	19.6
11 7	2 52.20	+2 28.6	2.127	3.099	4.4	16.2	11 7	2 52.38	-9 14.0	1.368	2.302	10.7	19.7
11 17	2 45.29	+1 36.6	2.171	3.116	6.4	16.3	11 17	2 43.50	-9 13.3	1.427	2.334	12.4	19.9
11 27	2 39.29	+1 0.7	2.242	3.134	9.1	16.5	11 27	2 36.28	-8 42.1	1.508	2.365	14.9	20.1
12 7	2 34.78	+0 42.2	2.338	3.152	11.7	16.8	12 7	2 31.44	-7 45.0	1.610	2.397	17.3	20.3
12 17	2 32.11	+0 40.7	2.454	3.170	13.9	16.9	12 17	2 29.27	-6 28.0	1.729	2.429	19.4	20.6
428530	2008 <i>AB</i> ₉₈		11 7.6 2°86	2.9°/ 6.3	18		112886	2002 <i>QU</i> ₄₃		11 7.7 350°57	8.8°/31.8	18	
10 8	3 18.39	+11 13.9	1.296	2.186	15.5	20.5	10 8	3 12.07	-8 34.2	2.026	2.886	12.1	18.9
10 18	3 11.98	+10 46.1	1.240	2.185	11.0	20.2	10 18	3 6.79	-9 40.2	1.980	2.883	10.1	18.7
10 28	3 2.93	+10 15.3	1.206	2.185	6.0	20.0	10 28	2 59.94	-10 32.2	1.959	2.881	8.9	18.7
11 7	2 52.44	+9 46.5	1.198	2.185	3.0	19.8	11 7	2 52.29	-11 4.0	1.962	2.879	9.1	18.7
11 17	2 41.96	+9 25.4	1.215	2.186	6.7	20.0	11 17	2 44.69	-11 11.9	1.991	2.877	10.5	18.8
11 27	2 33.01	+9 17.0	1.258	2.186	11.6	20.3	11 27	2 38.03	-10 54.4	2.045	2.876	12.6	18.9
12 7	2 26.68	+9 24.4	1.324	2.187	16.1	20.6	12 7	2 32.97	-10 13.3	2.119	2.875	14.7	19.0
12 17	2 23.54	+9 48.1	1.408	2.187	19.7	20.8	12 17	2 29.96	-9 11.9	2.212	2.874	16.6	19.2
292398	2006 <i>SY</i> ₂₇₇		11 7.6 140°18	4.3°/10.3	18		43586	2001 <i>OD</i> ₂₆		11 7.7 87°31	2.9°/ 5.8	18	
10 8	3 21.10	+28 31.3	2.120	2.945	13.0	20.3	10 8	3 17.08	+12 14.8	1.484	2.369	14.2	18.7
10 18	3 13.36	+29 10.1	2.052	2.952	9.9	20.2	10 18	3 10.59	+11 11.1	1.440	2.383	9.9	18.5
10 28	3 3.52	+29 34.7	2.008	2.959	6.8	20.0	10 28	3 2.01	+10 3.1	1.420	2.398	5.4	18.3
11 7	2 52.48	+29 43.5	1.992	2.965	4.5	19.8	11 7	2 52.42	+8 57.5	1.426	2.412	3.0	18.2
11 17	2 41.36	+29 37.3	2.006	2.971	5.0	19.9	11 17	2 43.07	+8 1.1	1.460	2.427	6.4	18.4
11 27	2 31.33	+29 19.6	2.048	2.976	7.8	20.1	11 27	2 35.17	+7 19.8	1.521	2.441	10.6	18.7
12 7	2 23.33	+28 55.9	2.118	2.982	10.8	20.3	12 7	2 29.56	+6 57.0	1.605	2.455	14.4	19.0
12 17	2 17.94	+28 32.0	2.211	2.987	13.5	20.5	12 17	2 26.66	+6 53.2	1.709	2.469	17.5	19.2
23360	3101 <i>T</i> ₋₁		11 7.7 120°39	0.9°/ 8.2	18		482230	2011 <i>BW</i> ₇₉		11 7.7 233°21	3.0°/ 5.2	17	</

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
484949	2009 <i>SU</i> ₂₇₉	11	7.7 354°64	1.1°/ 6.9 18			289076	2004 <i>TF</i> ₂₁₄	11	7.7 30°71	0.2°/ 7.8 18		
10 8	3 13.64	+14 11.2	1.733	2.614	12.7	20.3	10 8	3 14.21	+18 12.2	1.823	2.695	12.6	20.5
10 18	3 8.23	+13 58.9	1.669	2.611	8.9	20.1	10 18	3 8.50	+17 57.4	1.765	2.702	8.9	20.3
10 28	3 0.84	+13 41.9	1.629	2.608	4.7	19.8	10 28	3 0.94	+17 34.2	1.732	2.709	4.8	20.1
11 7	2 52.36	+13 23.2	1.615	2.606	1.1	19.6	11 7	2 52.40	+17 5.4	1.726	2.717	0.4	19.7
11 17	2 43.83	+13 6.3	1.630	2.604	4.7	19.8	11 17	2 43.93	+16 34.6	1.749	2.725	4.0	20.1
11 27	2 36.38	+12 55.4	1.672	2.603	8.9	20.1	11 27	2 36.56	+16 6.5	1.799	2.734	8.1	20.3
12 7	2 30.85	+12 53.6	1.738	2.603	12.7	20.3	12 7	2 31.10	+15 45.5	1.874	2.743	11.8	20.6
12 17	2 27.80	+13 3.0	1.825	2.603	15.9	20.5	12 17	2 28.02	+15 34.4	1.972	2.752	14.8	20.8
220726	2004 <i>SV</i> ₅₀	11	7.7 68°64	2.8°/ 5.4 18			446130	2013 <i>ES</i> ₃₃	11	7.7 231°91	5.1°/ 3.3 18		
10 8	3 12.85	+11 10.8	1.994	2.874	11.4	20.6	10 8	3 12.85	+ 4 24.1	2.033	2.912	11.2	20.5
10 18	3 7.25	+10 6.2	1.949	2.890	7.9	20.4	10 18	3 7.38	+ 3 0.8	1.972	2.908	8.2	20.3
10 28	3 0.14	+ 8 59.3	1.929	2.906	4.4	20.2	10 28	3 0.30	+ 1 39.4	1.938	2.903	5.7	20.1
11 7	2 52.31	+ 7 55.3	1.937	2.921	2.8	20.2	11 7	2 52.37	+ 0 26.4	1.932	2.898	5.4	20.1
11 17	2 44.65	+ 6 59.5	1.975	2.937	5.4	20.4	11 17	2 44.45	+ 0 32.3	1.954	2.893	7.5	20.2
11 27	2 38.01	+ 6 16.4	2.040	2.953	8.8	20.6	11 27	2 37.44	+ 1 12.2	2.004	2.888	10.5	20.4
12 7	2 33.05	+ 5 48.7	2.131	2.969	11.8	20.8	12 7	2 32.04	+ 1 31.4	2.077	2.882	13.3	20.6
12 17	2 30.14	+ 5 37.1	2.243	2.985	14.4	21.0	12 17	2 28.71	+ 1 30.6	2.170	2.876	15.8	20.7
145083	2005 <i>GB</i> ₅₃	11	7.7 93°66	0.9°/ 6.9 18			432269	2009 <i>SA</i> ₄₇	11	7.7 91°99	1.4°/ 8.6 17		
10 8	3 14.39	+17 0.8	1.852	2.726	12.4	20.2	10 8	3 19.90	+22 1.6	1.520	2.384	15.2	21.4
10 18	3 8.53	+16 4.8	1.795	2.734	8.7	19.9	10 18	3 12.67	+21 39.1	1.472	2.403	10.9	21.2
10 28	3 0.89	+15 0.3	1.763	2.742	4.5	19.7	10 28	3 3.16	+21 2.5	1.448	2.421	6.1	21.0
11 7	2 52.36	+13 52.0	1.759	2.750	0.9	19.5	11 7	2 52.56	+20 14.6	1.450	2.440	1.7	20.8
11 17	2 43.95	+12 45.6	1.784	2.758	4.5	19.8	11 17	2 42.23	+19 20.9	1.480	2.458	4.5	21.0
11 27	2 36.67	+11 47.3	1.838	2.765	8.5	20.0	11 27	2 33.46	+18 28.5	1.538	2.475	9.1	21.3
12 7	2 31.26	+11 1.8	1.916	2.773	12.1	20.3	12 7	2 27.17	+17 44.0	1.621	2.493	13.1	21.6
12 17	2 28.16	+10 31.6	2.017	2.781	15.1	20.5	12 17	2 23.80	+17 11.8	1.724	2.510	16.4	21.9
86606	2000 <i>EB</i> ₈₄	11	7.7 169°64	0.5°/ 7.3 18			34154	Anushkanair	11	7.7 127°84	1.8°/ 6.5 18 R		
10 8	3 18.79	+16 27.7	1.930	2.795	12.4	20.8	10 8	3 17.56	+13 28.2	1.826	2.699	12.5	19.4
10 18	3 11.64	+16 4.5	1.865	2.799	8.7	20.6	10 18	3 10.74	+12 48.9	1.773	2.711	8.8	19.2
10 28	3 2.57	+15 34.2	1.825	2.802	4.6	20.3	10 28	3 2.08	+12 5.0	1.745	2.722	4.6	19.0
11 7	2 52.49	+14 59.6	1.815	2.805	0.5	20.0	11 7	2 52.50	+11 20.6	1.745	2.733	1.8	18.8
11 17	2 42.44	+14 24.6	1.833	2.808	4.3	20.3	11 17	2 43.06	+10 40.5	1.774	2.744	5.0	19.1
11 27	2 33.51	+13 54.0	1.881	2.809	8.4	20.6	11 27	2 34.81	+10 9.4	1.832	2.754	9.0	19.3
12 7	2 26.52	+13 31.7	1.955	2.810	12.0	20.8	12 7	2 28.54	+ 9 50.6	1.914	2.763	12.5	19.6
12 17	2 21.98	+13 20.6	2.051	2.810	15.0	21.0	12 17	2 24.69	+ 9 45.7	2.019	2.772	15.4	19.8
407232	2009 <i>WL</i> ₃₅	11	7.7 7°12	1.0°/ 6.9 17			281247	2007 <i>MA</i> ₄	11	7.7 45°80	0.7°/ 7.2 18		
10 8	3 12.16	+15 52.8	1.771	2.651	12.5	21.0	10 8	3 15.61	+18 2.8	1.316	2.202	15.6	19.0
10 18	3 7.11	+15 14.6	1.710	2.652	8.8	20.8	10 18	3 9.77	+17 8.0	1.277	2.220	10.9	18.7
10 28	3 0.21	+14 29.1	1.674	2.653	4.6	20.5	10 28	3 1.65	+16 2.0	1.260	2.240	5.7	18.5
11 7	2 52.34	+13 40.6	1.665	2.655	1.0	20.3	11 7	2 52.47	+14 51.0	1.269	2.260	0.7	18.2
11 17	2 44.50	+12 53.9	1.684	2.658	4.6	20.6	11 17	2 43.61	+13 42.9	1.304	2.280	5.3	18.6
11 27	2 37.73	+12 14.6	1.730	2.661	8.7	20.8	11 27	2 36.36	+12 45.5	1.366	2.301	10.2	18.9
12 7	2 32.82	+11 46.7	1.801	2.665	12.4	21.0	12 7	2 31.60	+12 4.1	1.450	2.322	14.3	19.2
12 17	2 30.25	+11 32.7	1.893	2.669	15.5	21.3	12 17	2 29.70	+11 41.1	1.555	2.344	17.7	19.5
436477	2011 <i>EX</i> ₇	11	7.7 167°83	0.7°/ 7.2 18			457918	2009 <i>UZ</i> ₄₅	11	7.7 335°73	0.2°/ 7.8 17		
10 8	3 17.92	+16 35.2	1.857	2.725	12.6	22.4	10 8	3 15.81	+16 48.3	2.060	2.927	11.6	21.0
10 18	3 11.07	+16 2.0	1.793	2.729	8.9	22.1	10 18	3 9.59	+16 57.4	1.989	2.923	8.2	20.8
10 28	3 2.29	+15 21.0	1.755	2.732	4.7	21.9	10 28	3 1.55	+17 0.8	1.943	2.920	4.4	20.6
11 7	2 52.47	+14 35.6	1.745	2.735	0.7	21.6	11 7	2 52.48	+16 59.9	1.926	2.916	0.4	20.2
11 17	2 42.71	+13 50.4	1.764	2.738	4.4	21.9	11 17	2 43.32	+16 56.8	1.937	2.913	3.8	20.5
11 27	2 34.09	+13 10.8	1.811	2.739	8.6	22.2	11 27	2 35.08	+16 54.5	1.978	2.911	7.7	20.8
12 7	2 27.46	+12 41.3	1.885	2.740	12.3	22.4	12 7	2 28.58	+16 56.2	2.044	2.908	11.2	21.0
12 17	2 23.31	+12 24.4	1.980	2.741	15.4	22.6	12 17	2 24.36	+17 4.2	2.134	2.906	14.1	21.2
487071	2014 <i>OM</i> ₉₉	11	7.7 107°55	3.9°/10.9 17			181790	1998 <i>DD</i> ₂₆	11	7.7 69°31	1.6°/ 6.6 18		
10 8	3 16.23	+30 23.1	2.311	3.132	12.1	21.8	10 8	3 14.66	+13 23.9	1.918	2.794	11.9	20.3
10 18	3 9.74	+30 26.1	2.246	3.143	9.4	21.7	10 18	3 8.71	+12 54.1	1.861	2.801	8.3	20.1
10 28	3 1.53	+30 13.6	2.206	3.154	6.4	21.5	10 28	3 1.02	+12 20.1	1.829	2.808	4.4	19.8
11 7	2 52.43	+29 45.9	2.193	3.165	4.2	21.4	11 7	2 52.44	+11 45.6	1.825	2.814	1.6	19.7
11 17	2 43.38	+29 5.3	2.209	3.175	4.5	21.4	11 17	2 43.93	+11 14.6	1.850	2.821	4.7	19.9
11 27	2 35.36	+28 16.4	2.254	3.186	7.0	21.6	11 27	2 36.46	+10 51.4	1.903	2.828	8.5	20.1
12 7	2 29.11	+27 24.9	2.326	3.196	9.7	21.8	12 7	2 30.80	+10 38.9	1.981	2.835	11.9	20.4
12 17	2 25.09	+26 36.2	2.423	3.206	12.3	22.0	12 17	2 27.38	+10 38.8	2.081	2.842	14.8	20.6
391219	2006 <i>HZ</i> ₁₁₇	11	7.7 220°11	7.2°/ 3.3 18			358170	2006 <i>SH</i> ₃₇	11	7.7 300°24	0.9°/ 8.3 18		
10 8	3 18.17	- 3 59.0	1.982	2.844	12.2	21.5	10 8	3 14.84	+20 54.3	1.872	2.736	12.7	21.3
10 18	3 11.13	- 4 36.2	1.922	2.838	9.7	21.3	10 18	3 9.02	+20 28.5	1.803	2.734	9.1	21.1
10 28	3 2.29	- 5 2.5	1.887	2.831	7.7	21.2	10 28	3 1.27	+19 51.3	1.758	2.732	5.1	20.8
11 7	2 52.48	- 5 12.8	1.879	2.825	7.4	21.2	11 7	2 52.46	+19 5.1	1.740	2.730	1.1	20.5
11 17	2 42.67	- 5 3.4	1.899	2.818	9.1	21.3	11 17	2 43.64	+18 14.4	1.751	2.728	4.0	20.8
11 27	2 33.87	- 4 33.1	1.945	2.810	11.7	21.4	11 27	2 35.89	+17 24.8	1.791	2.727	8.1	21.0
12 7	2 26.87	- 4 43.2	2.015	2.802	14.3	21.6	12 7	2 30.05	+16 42.0	1.856	2.725	11.8	21.2
12 17	2 22.18	- 4 36.4	2.105	2.794	16.7	21.7	12 17	2 26.63	+16 9.9	1.943	2.723	15.0	21.4
394164	2006 <i>QV</i> ₈₅	11	7.7 22°96	2.8°/ 6.1 18			366509	2002 <i>PC</i> ₁₅₇	11	7.7 100°35	3.8°/10		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
238259	2003 <i>WG</i> ₃		11 7.7 112°31'	1.1°/ 6.9	18		133637	2003 <i>UG</i> ₁₄₄		11 7.7 207°19'	1.2°/ 8.9	18	
10 8	3 19.04	+13 43.8	1.977	2.845	12.0	20.2	10 8	3 12.79	+24 46.6	2.513	3.357	10.6	19.4
10 18	3 11.67	+13 34.6	1.926	2.862	8.4	20.0	10 18	3 7.18	+23 43.3	2.435	3.355	7.7	19.2
10 28	3 2.54	+13 21.5	1.901	2.878	4.4	19.8	10 28	3 0.16	+22 26.8	2.384	3.353	4.4	19.0
11 7	2 52.55	+13 7.0	1.905	2.895	1.1	19.6	11 7	2 52.44	+21 0.1	2.362	3.351	1.4	18.8
11 17	2 42.70	+12 54.1	1.938	2.910	4.3	19.8	11 17	2 44.78	+19 28.2	2.372	3.348	3.1	18.9
11 27	2 34.01	+12 46.2	2.000	2.926	8.1	20.1	11 27	2 37.97	+17 57.0	2.412	3.346	6.4	19.1
12 7	2 27.22	+12 45.9	2.089	2.940	11.5	20.3	12 7	2 32.63	+16 32.3	2.481	3.343	9.5	19.3
12 17	2 22.77	+12 54.8	2.200	2.955	14.2	20.6	12 17	2 29.15	+15 18.8	2.575	3.341	12.1	19.5
14717	2000 <i>CJ</i> ₈₂		11 7.7 197°58'	3.2°/ 4.7	18		246187	2007 <i>RO</i> ₅₈		11 7.7 106°84'	6.0°/ 11.8	18	
10 8	3 12.03	+ 6 18.2	2.756	3.627	8.9	18.1	10 8	3 21.78	+33 36.6	1.920	2.729	14.7	20.0
10 18	3 6.49	+ 5 36.9	2.690	3.624	6.4	17.9	10 18	3 14.06	+34 10.2	1.860	2.743	11.7	19.9
10 28	2 59.75	+ 4 56.6	2.652	3.622	4.0	17.8	10 28	3 4.00	+34 23.6	1.823	2.757	8.6	19.7
11 7	2 52.37	+ 4 20.8	2.643	3.618	3.2	17.7	11 7	2 52.70	+34 15.2	1.812	2.771	6.3	19.6
11 17	2 44.99	+ 3 52.7	2.664	3.615	5.0	17.8	11 17	2 41.43	+33 46.3	1.828	2.785	6.4	19.6
11 27	2 38.28	+ 3 34.9	2.715	3.611	7.5	18.0	11 27	2 31.53	+33 2.0	1.873	2.798	8.6	19.8
12 7	2 32.79	+ 3 29.1	2.791	3.607	10.0	18.2	12 7	2 23.98	+32 10.1	1.944	2.810	11.5	20.0
12 17	2 28.89	+ 3 35.4	2.890	3.603	12.1	18.3	12 17	2 19.34	+31 18.0	2.037	2.823	14.2	20.2
20117	Tannoakira		11 7.7 1°83'	5.8°/ 5.9	18		291330	2006 <i>BW</i> ₁₉₉		11 7.7 276°51'	1.2°/ 6.7	17	
10 8	3 19.36	+ 2 31.3	1.274	2.163	15.8	16.4	10 8	3 13.11	+14 8.4	2.240	3.112	10.6	21.3
10 18	3 12.71	+ 2 41.0	1.221	2.161	11.7	16.1	10 18	3 7.59	+13 38.7	2.163	3.101	7.4	21.1
10 28	3 3.40	+ 3 0.9	1.189	2.160	7.6	15.9	10 28	3 0.48	+13 4.1	2.112	3.089	3.9	20.8
11 7	2 52.61	+ 3 35.0	1.183	2.161	5.8	15.8	11 7	2 52.47	+12 27.8	2.089	3.078	1.2	20.6
11 17	2 41.83	+ 4 25.2	1.202	2.162	8.4	16.0	11 17	2 44.38	+11 53.4	2.096	3.067	4.2	20.8
11 27	2 32.57	+ 5 31.4	1.246	2.164	12.6	16.2	11 27	2 37.08	+11 25.0	2.131	3.056	7.7	21.0
12 7	2 25.96	+ 6 51.6	1.313	2.168	16.7	16.5	12 7	2 31.31	+11 5.8	2.193	3.045	11.0	21.2
12 17	2 22.56	+ 8 22.7	1.399	2.172	20.1	16.7	12 17	2 27.53	+10 57.8	2.277	3.033	13.8	21.4
274634	2008 <i>TM</i> ₈₈		11 7.7 14°79'	1.4°/ 6.1	18		372367	2009 <i>KP</i> ₇		11 7.7 89°20'	0.1°/ 7.6	15	
10 8	3 7.26	+10 45.8	3.764	4.633	6.8	20.2	10 8	3 22.76	+16 45.5	1.379	2.254	15.8	21.2
10 18	3 2.95	+10 27.6	3.699	4.636	4.7	20.1	10 18	3 14.80	+16 41.7	1.336	2.274	11.1	21.0
10 28	2 57.82	+10 8.6	3.662	4.638	2.6	19.9	10 28	3 4.36	+16 29.4	1.316	2.294	5.8	20.8
11 7	2 52.25	+ 9 50.7	3.655	4.641	1.4	19.8	11 7	2 52.72	+16 11.1	1.323	2.314	0.4	20.4
11 17	2 46.69	+ 9 35.6	3.678	4.643	3.0	20.0	11 17	2 41.37	+15 51.2	1.357	2.333	5.0	20.8
11 27	2 41.59	+ 9 25.0	3.731	4.646	5.1	20.1	11 27	2 31.75	+15 34.8	1.418	2.352	10.0	21.2
12 7	2 37.32	+ 9 20.4	3.812	4.649	7.1	20.3	12 7	2 24.85	+15 26.7	1.503	2.371	14.2	21.5
12 17	2 34.19	+ 9 22.7	3.918	4.652	8.8	20.4	12 17	2 21.10	+15 29.5	1.608	2.389	17.6	21.7
493953	2016 <i>AU</i> ₄₃		11 7.7 261°42'	3.1°/ 10.5	17		471029	2009 <i>SR</i> ₃₃₂		11 7.7 21°24'	2.0°/ 8.7	18	
10 8	3 13.42	+28 35.8	2.469	3.298	11.2	21.6	10 8	3 14.87	+22 11.0	1.011	1.904	18.6	20.0
10 18	3 7.78	+28 23.0	2.386	3.291	8.5	21.5	10 18	3 9.99	+21 58.5	0.969	1.912	13.5	19.7
10 28	3 0.55	+27 56.2	2.329	3.285	5.6	21.3	10 28	3 2.07	+21 27.4	0.945	1.922	7.7	19.4
11 7	2 52.43	+27 16.1	2.300	3.278	3.3	21.1	11 7	2 52.57	+20 41.1	0.944	1.934	2.3	19.2
11 17	2 44.27	+26 25.4	2.299	3.271	3.9	21.1	11 17	2 43.27	+19 46.7	0.967	1.947	5.6	19.4
11 27	2 36.93	+25 28.4	2.329	3.264	6.6	21.3	11 27	2 35.91	+18 53.9	1.013	1.961	11.2	19.8
12 7	2 31.15	+24 30.8	2.386	3.257	9.5	21.5	12 7	2 31.63	+18 11.5	1.080	1.976	16.1	20.1
12 17	2 27.39	+23 37.3	2.467	3.250	12.1	21.6	12 17	2 30.89	+17 44.8	1.166	1.993	20.2	20.4
451337	2010 <i>VD</i> ₁₃₂		11 7.7 308°08'	0.6°/ 7.3	17		132432	2002 <i>GG</i> ₁₆₀		11 7.7 144°39'	5.3°/ 11.3	18	
10 8	3 13.75	+16 27.0	1.927	2.801	12.0	21.9	10 8	3 21.52	+32 2.7	2.040	2.853	13.8	21.1
10 18	3 8.23	+15 59.3	1.855	2.793	8.5	21.7	10 18	3 13.80	+32 31.9	1.973	2.861	10.9	20.9
10 28	3 0.87	+15 24.2	1.807	2.785	4.5	21.4	10 28	3 3.87	+32 43.2	1.929	2.869	7.8	20.8
11 7	2 52.47	+14 44.9	1.787	2.777	0.6	21.1	11 7	2 52.70	+32 35.0	1.912	2.877	5.6	20.7
11 17	2 44.00	+14 5.6	1.795	2.770	4.3	21.4	11 17	2 41.50	+32 8.6	1.924	2.884	5.8	20.7
11 27	2 36.49	+13 31.2	1.832	2.763	8.3	21.6	11 27	2 31.53	+31 28.5	1.964	2.891	8.2	20.8
12 7	2 30.75	+13 5.9	1.894	2.755	12.0	21.8	12 7	2 23.74	+30 41.8	2.031	2.897	11.1	21.0
12 17	2 27.33	+12 52.4	1.977	2.748	15.1	22.0	12 17	2 18.69	+29 55.3	2.121	2.902	13.9	21.2
45394	2000 <i>AO</i> ₁₃₂		11 7.7 233°87'	1.7°/ 9.0	18		373421	1998 <i>XF</i> ₁₇		11 7.7 348°13'	2.3°/ 6.4	17	
10 8	3 14.51	+22 53.2	2.428	3.276	10.8	19.3	10 8	3 10.74	+13 44.2	1.184	2.087	15.7	20.3
10 18	3 8.53	+22 50.0	2.349	3.271	7.9	19.1	10 18	3 6.92	+13 5.7	1.122	2.074	11.1	20.0
10 28	3 0.95	+22 37.1	2.297	3.265	4.6	18.9	10 28	3 0.47	+12 19.5	1.081	2.062	5.9	19.7
11 7	2 52.47	+22 15.4	2.273	3.260	1.8	18.7	11 7	2 52.48	+11 31.8	1.063	2.052	2.3	19.5
11 17	2 43.93	+21 47.2	2.279	3.254	3.4	18.8	11 17	2 44.35	+10 49.6	1.070	2.044	6.6	19.7
11 27	2 36.19	+21 16.2	2.314	3.249	6.6	19.0	11 27	2 37.60	+10 20.5	1.100	2.037	11.8	20.0
12 7	2 29.97	+20 46.6	2.377	3.243	9.7	19.2	12 7	2 33.37	+10 9.2	1.151	2.032	16.6	20.2
12 17	2 25.75	+20 22.0	2.463	3.237	12.4	19.3	12 17	2 32.29	+10 17.4	1.221	2.029	20.5	20.5
293796	2007 <i>RY</i> ₁₄₁		11 7.7 342°24'	5.5°/ 3.7	17		81446	2000 <i>GH</i> ₁₂₃		11 7.7 135°21'	0.3°/ 7.5	18	
10 8	3 7.12	+10 45.7	1.112	2.024	15.6	18.8	10 8	3 16.36	+16 52.4	2.173	3.037	11.2	19.9
10 18	3 4.43	+ 8 48.2	1.048	2.004	11.1	18.5	10 18	3 9.78	+16 33.3	2.113	3.046	7.9	19.7
10 28	2 59.16	+ 6 40.3	1.005	1.984	6.8	18.2	10 28	3 1.58	+16 7.7	2.079	3.055	4.2	19.5
11 7	2 52.37	+ 4 34.8	0.986	1.967	5.9	18.1	11 7	2 52.55	+15 38.2	2.073	3.064	0.3	19.2
11 17	2 45.42	+ 2 45.5	0.991	1.952	9.7	18.3	11 17	2 43.59	+15 8.0	2.098	3.073	3.7	19.5
11 27	2 39.79	+ 1 24.6	1.019	1.938	14.7	18.5	11 27	2 35.61	+14 41.1	2.152	3.081	7.4	19.7
12 7	2 36.64	+ 0 38.0	1.066	1.926	19.3	18.7	12 7	2 29.33	+14 21.1	2.233	3.089	10.7	20.0
12 17	2 36.58	+ 0 26.0	1.129	1.917	23.1	19.0	12 17	2 25.17	+14 10.3	2.336	3.096	13.4	20.2
125521	2001 <i>WY</i> ₄₇		11 7.7 349°06'	5.4°/ 4.8	18		112620	2002 <i>PT</i> ₇₀		11 7.			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
520368	2014 <i>HP</i> ₂₀₃		11 7.7 288°27	4°1/ 4.6 18			564	Dudu		11 7.7 84°76	4°6/ 5.4 18	R	
10 8	3 13.80	+10 7.8	1.646	2.533	13.0	21.8	10 8	3 20.77	+2 58.8	1.933	2.800	12.2	14.8
10 18	3 8.53	+8 40.4	1.570	2.514	9.2	21.5	10 18	3 12.73	+2 46.9	1.899	2.828	8.9	14.7
10 28	3 1.15	+7 7.1	1.519	2.494	5.5	21.2	10 28	3 3.06	+2 40.8	1.890	2.856	5.8	14.6
11 7	2 52.54	+5 35.6	1.495	2.475	4.3	21.1	11 7	2 52.68	+2 43.9	1.910	2.883	4.6	14.5
11 17	2 43.77	+4 14.2	1.498	2.456	7.4	21.3	11 17	2 42.62	+2 58.3	1.960	2.910	6.6	14.7
11 27	2 36.04	+3 10.5	1.528	2.437	11.5	21.5	11 27	2 33.81	+3 25.1	2.038	2.936	9.6	14.9
12 7	2 30.28	+2 29.3	1.582	2.417	15.3	21.7	12 7	2 26.96	+4 3.9	2.141	2.962	12.4	15.2
12 17	2 27.10	+2 11.8	1.654	2.398	18.6	21.8	12 17	2 22.43	+4 53.3	2.266	2.987	14.8	15.4
44218	1998 <i>QO</i> ₁		11 7.7 107°94	4°6/ 4.5 18			481547	2007 <i>RW</i> ₁₄₅		11 7.7 12°33	3°5/ 9.4 17		
10 8	3 15.92	+5 24.5	1.891	2.769	12.0	18.8	10 8	3 11.77	+23 32.9	0.963	1.859	19.0	19.2
10 18	3 9.50	+4 27.4	1.847	2.783	8.6	18.6	10 18	3 7.97	+23 50.9	0.923	1.866	14.0	19.0
10 28	3 1.41	+3 33.2	1.829	2.797	5.6	18.5	10 28	3 1.09	+23 49.0	0.902	1.876	8.5	18.7
11 7	2 52.55	+2 47.4	1.838	2.811	4.7	18.5	11 7	2 52.56	+23 28.6	0.901	1.889	3.8	18.5
11 17	2 43.85	+2 14.8	1.876	2.825	6.9	18.6	11 17	2 44.18	+22 54.9	0.924	1.903	5.9	18.7
11 27	2 36.27	+1 58.5	1.941	2.838	10.1	18.9	11 27	2 37.71	+22 16.7	0.969	1.920	11.0	19.0
12 7	2 30.51	+1 59.7	2.030	2.851	13.0	19.1	12 7	2 34.31	+21 42.9	1.035	1.939	15.9	19.4
12 17	2 26.98	+2 17.4	2.140	2.863	15.5	19.3	12 17	2 34.47	+21 19.7	1.119	1.960	19.9	19.7
523461	2017 <i>FM</i> ₈₅		11 7.7 88°45	1°0/ 6.9 18			228473	2001 <i>SX</i> ₃₇		11 7.7 27°88	1°1/ 7.2 18		
10 8	3 13.31	+13 31.0	2.594	3.461	9.5	20.9	10 8	3 16.99	+14 56.7	1.090	1.987	17.2	19.6
10 18	3 7.45	+13 20.2	2.535	3.471	6.6	20.7	10 18	3 11.22	+14 48.0	1.050	1.999	12.1	19.3
10 28	3 0.29	+13 6.5	2.504	3.481	3.5	20.5	10 28	3 2.65	+14 31.9	1.031	2.012	6.3	19.1
11 7	2 52.48	+12 52.1	2.501	3.491	1.0	20.4	11 7	2 52.67	+14 12.8	1.035	2.026	1.1	18.8
11 17	2 44.71	+12 39.2	2.529	3.501	3.5	20.6	11 17	2 42.92	+13 55.7	1.065	2.041	5.9	19.2
11 27	2 37.71	+12 30.6	2.586	3.510	6.6	20.8	11 27	2 35.01	+13 46.5	1.118	2.058	11.3	19.5
12 7	2 32.06	+12 28.2	2.671	3.520	9.3	21.0	12 7	2 30.00	+13 49.0	1.192	2.075	16.0	19.8
12 17	2 28.15	+12 33.5	2.779	3.530	11.7	21.2	12 17	2 28.35	+14 5.2	1.286	2.093	19.7	20.1
184717	2005 <i>SV</i> ₁₅₇		11 7.7 53°28	1°1/ 6.9 18			477855	2011 <i>GR</i> ₄₈		11 7.7 184°84	0°6/ 8.1 18		
10 8	3 14.11	+15 17.9	1.919	2.794	12.0	20.9	10 8	3 18.20	+19 53.4	1.765	2.629	13.4	22.6
10 18	3 8.39	+14 43.9	1.859	2.798	8.4	20.7	10 18	3 11.50	+19 31.7	1.698	2.629	9.6	22.4
10 28	3 0.91	+14 3.8	1.824	2.803	4.4	20.4	10 28	3 2.67	+18 59.0	1.654	2.629	5.2	22.1
11 7	2 52.52	+13 21.2	1.817	2.807	1.1	20.2	11 7	2 52.68	+18 17.7	1.638	2.629	0.8	21.8
11 17	2 44.19	+12 40.5	1.839	2.812	4.4	20.5	11 17	2 42.68	+17 32.2	1.651	2.628	4.2	22.1
11 27	2 36.88	+12 6.6	1.889	2.817	8.3	20.7	11 27	2 33.87	+16 48.4	1.692	2.627	8.6	22.3
12 7	2 31.37	+11 43.1	1.964	2.821	11.8	20.9	12 7	2 27.16	+16 11.8	1.759	2.625	12.5	22.6
12 17	2 28.10	+11 32.2	2.061	2.826	14.7	21.1	12 17	2 23.11	+15 46.4	1.847	2.623	15.8	22.8
90470	2004 <i>CH</i> ₉₇		11 7.7 197°29	2°6/ 5.9 18			392993	2012 <i>XF</i> ₁₀₀		11 7.7 277°25	1°9/ 8.9 18		
10 8	3 17.31	+12 0.9	1.719	2.597	13.0	19.8	10 8	3 17.02	+22 38.4	1.732	2.592	13.8	20.8
10 18	3 10.81	+11 8.8	1.655	2.595	9.1	19.6	10 18	3 10.89	+22 32.3	1.653	2.581	10.1	20.5
10 28	3 2.27	+10 12.0	1.615	2.593	5.0	19.3	10 28	3 2.46	+22 12.9	1.598	2.569	5.9	20.2
11 7	2 52.62	+9 15.9	1.604	2.590	2.7	19.2	11 7	2 52.67	+21 41.5	1.569	2.558	2.1	20.0
11 17	2 42.97	+8 26.3	1.621	2.587	5.9	19.4	11 17	2 42.71	+21 1.3	1.569	2.546	4.3	20.1
11 27	2 34.49	+7 48.7	1.665	2.583	10.0	19.6	11 27	2 33.85	+20 18.1	1.596	2.534	8.7	20.3
12 7	2 28.05	+7 26.8	1.734	2.579	13.7	19.8	12 7	2 27.13	+19 38.4	1.649	2.523	12.8	20.5
12 17	2 24.17	+7 21.9	1.823	2.575	16.9	20.1	12 17	2 23.17	+19 7.4	1.722	2.511	16.3	20.8
218384	2004 <i>OL</i> ₈		11 7.7 16°88	9°9/ 2.2 18			441935	2010 <i>JZ</i> ₇₇		11 7.7 236°93	1°7/ 6.8 18		
10 8	3 13.58	-6 59.9	1.518	2.394	14.5	18.7	10 8	3 18.94	+11 58.1	1.924	2.794	12.2	20.8
10 18	3 8.17	-7 59.7	1.483	2.400	11.9	18.6	10 18	3 11.94	+11 54.6	1.849	2.785	8.6	20.5
10 28	3 0.82	-8 42.2	1.471	2.407	10.1	18.5	10 28	3 2.92	+11 48.8	1.799	2.777	4.6	20.3
11 7	2 52.52	-9 0.4	1.482	2.416	10.1	18.5	11 7	2 52.71	+11 43.2	1.778	2.767	1.7	20.1
11 17	2 44.39	-8 50.4	1.518	2.425	11.8	18.6	11 17	2 42.37	+11 40.4	1.787	2.758	4.8	20.3
11 27	2 37.55	-8 11.9	1.576	2.435	14.2	18.8	11 27	2 33.01	+11 43.6	1.824	2.748	8.9	20.5
12 7	2 32.78	-7 8.2	1.655	2.446	16.8	19.0	12 7	2 25.55	+11 55.3	1.887	2.738	12.5	20.7
12 17	2 30.50	-5 44.4	1.752	2.458	19.0	19.2	12 17	2 20.56	+12 16.8	1.972	2.727	15.6	20.9
114841	2003 <i>PF</i>		11 7.7 108°84	1°1/ 7.0 18			74354	1998 <i>WA</i> ₆		11 7.7 11°56	0°5/ 7.5 18		
10 8	3 18.94	+14 24.3	1.822	2.692	12.7	19.7	10 8	3 14.38	+14 45.8	1.036	1.939	17.4	17.6
10 18	3 11.74	+14 8.0	1.771	2.708	8.9	19.5	10 18	3 9.59	+15 5.4	0.994	1.945	12.3	17.4
10 28	3 2.66	+13 46.8	1.745	2.723	4.7	19.3	10 28	3 1.90	+15 19.1	0.972	1.953	6.5	17.1
11 7	2 52.64	+13 23.7	1.748	2.738	1.1	19.1	11 7	2 52.64	+15 29.0	0.972	1.963	0.6	16.7
11 17	2 42.79	+13 2.2	1.780	2.753	4.5	19.3	11 17	2 43.50	+15 38.3	0.997	1.975	5.7	17.1
11 27	2 34.16	+12 46.5	1.840	2.767	8.6	19.6	11 27	2 36.12	+15 51.5	1.044	1.989	11.3	17.5
12 7	2 27.57	+12 39.7	1.926	2.781	12.1	19.9	12 7	2 31.66	+16 12.0	1.113	2.005	16.1	17.8
12 17	2 23.45	+12 43.5	2.033	2.794	15.0	20.1	12 17	2 30.64	+16 42.0	1.200	2.023	20.0	18.1
121960	2000 <i>EN</i> ₆₈		11 7.7 127°70	0°8/ 7.1 18			189699	2001 <i>TK</i> ₂₉		11 7.7 329°67	0°1/ 7.7 18		
10 8	3 18.37	+16 32.4	1.821	2.689	12.8	21.0	10 8	3 15.92	+18 40.0	1.404	2.284	15.1	20.4
10 18	3 11.35	+15 51.1	1.768	2.704	9.0	20.8	10 18	3 10.32	+18 9.0	1.338	2.279	10.8	20.1
10 28	3 2.45	+15 2.0	1.740	2.718	4.7	20.6	10 28	3 2.21	+17 25.6	1.295	2.274	5.8	19.8
11 7	2 52.64	+14 9.3	1.740	2.731	0.8	20.3	11 7	2 52.68	+16 33.9	1.278	2.269	0.4	19.4
11 17	2 43.00	+13 18.0	1.770	2.743	4.5	20.6	11 17	2 43.08	+15 39.6	1.287	2.264	5.0	19.7
11 27	2 34.60	+12 33.6	1.828	2.755	8.6	20.9	11 27	2 34.85	+14 50.5	1.322	2.260	10.2	20.0
12 7	2 28.23	+12 0.4	1.912	2.767	12.2	21.2	12 7	2 29.05	+14 12.9	1.381	2.257	14.7	20.3
12 17	2 24.33	+11 41.0	2.018	2.777	15.2	21.4	12 17	2 26.29	+13 51.0	1.459	2.253	18.5	20.5
260020	2004 <i>GM</i> ₈		11 7.7 2°42	0°6/ 8.0 18			45081	1999 <i>XE</i> ₄₄		11 7.7 77°95	2°1/ 8.9 18		
10 8	3 15.73												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
340419	2006 <i>FM</i> ₁₆	11	7.7 314°73	6°0/ 3.0 18			255041	2005 <i>TU</i> ₁₀₅	11	7.7 229°24	10°9/ 9.7 15		
10 8	3 12.85	+ 6 35.7	1.492	2.385	13.7	20.5	10 8	3 37.63	+31 32.9	1.112	1.944	21.6	20.3
10 18	3 7.91	+ 4 41.0	1.432	2.376	9.9	20.3	10 18	3 27.80	+34 6.7	1.043	1.939	17.6	20.1
10 28	3 0.83	+ 2 44.7	1.397	2.367	6.8	20.1	10 28	3 12.64	+36 22.7	0.995	1.932	13.6	19.8
11 7	2 52.59	+ 0 56.9	1.388	2.358	6.4	20.1	11 7	2 53.48	+38 5.2	0.970	1.926	11.0	19.6
11 17	2 44.32	- 0 32.5	1.405	2.350	9.3	20.2	11 17	2 32.95	+39 3.3	0.971	1.918	11.9	19.7
11 27	2 37.24	- 1 35.8	1.448	2.341	13.1	20.4	11 27	2 14.44	+39 18.4	0.996	1.911	15.4	19.8
12 7	2 32.24	- 2 10.1	1.512	2.334	16.6	20.6	12 7	2 0.59	+39 4.1	1.042	1.903	19.6	20.1
12 17	2 29.87	- 2 16.3	1.594	2.326	19.7	20.8	12 17	1 52.64	+38 37.2	1.106	1.894	23.5	20.3
512040	2015 <i>MX</i> ₆₉	11	7.7 95°52	7°3/ 2.9 18			510265	2011 <i>HZ</i> ₆₄	11	7.7 282°03	3°8/ 5.7 18		
10 8	3 17.46	- 3 25.6	1.914	2.779	12.4	21.2	10 8	3 18.03	+ 8 50.7	1.512	2.396	14.1	21.6
10 18	3 10.46	- 4 26.6	1.886	2.803	9.7	21.1	10 18	3 11.80	+ 8 15.0	1.434	2.376	10.1	21.3
10 28	3 1.89	- 5 16.1	1.883	2.827	7.7	21.0	10 28	3 3.08	+ 7 37.9	1.379	2.355	5.9	21.0
11 7	2 52.65	- 5 48.4	1.907	2.850	7.5	21.0	11 7	2 52.79	+ 7 4.7	1.351	2.334	3.9	20.9
11 17	2 43.70	- 6 0.0	1.959	2.873	9.1	21.2	11 17	2 42.22	+ 6 41.0	1.350	2.314	7.1	21.0
11 27	2 35.95	- 5 49.8	2.036	2.895	11.5	21.4	11 27	2 32.76	+ 6 32.1	1.374	2.293	11.7	21.2
12 7	2 30.04	- 5 19.3	2.137	2.917	13.8	21.6	12 7	2 25.56	+ 6 40.7	1.422	2.272	16.0	21.4
12 17	2 26.33	- 4 31.6	2.257	2.938	15.9	21.8	12 17	2 21.31	+ 7 7.5	1.489	2.250	19.6	21.6
155543	1999 <i>TC</i> ₂₆₄	11	7.7 317°08	0°5/ 7.3 18			213978	2003 <i>YN</i> ₁₅₁	11	7.7 264°57	0°6/ 8.0 16		
10 8	3 12.99	+16 53.8	1.870	2.745	12.2	20.3	10 8	3 19.26	+17 46.9	2.029	2.889	12.1	21.0
10 18	3 7.83	+16 22.9	1.792	2.731	8.6	20.0	10 18	3 12.29	+18 0.4	1.940	2.871	8.7	20.7
10 28	3 0.76	+15 43.8	1.740	2.718	4.6	19.8	10 28	3 3.21	+18 7.6	1.878	2.852	4.8	20.5
11 7	2 52.59	+14 59.7	1.714	2.705	0.6	19.4	11 7	2 52.81	+18 9.0	1.843	2.834	0.7	20.1
11 17	2 44.30	+14 15.0	1.717	2.692	4.3	19.7	11 17	2 42.12	+18 6.6	1.839	2.815	4.0	20.3
11 27	2 36.95	+13 35.2	1.747	2.680	8.6	19.9	11 27	2 32.29	+18 3.2	1.863	2.796	8.1	20.6
12 7	2 31.39	+13 5.0	1.803	2.668	12.3	20.1	12 7	2 24.29	+18 2.7	1.915	2.776	11.9	20.7
12 17	2 28.20	+12 47.3	1.880	2.656	15.6	20.3	12 17	2 18.78	+18 8.3	1.989	2.756	15.1	20.9
290792	2005 <i>VA</i> ₆₇	11	7.7 313°14	1°3/ 6.9 18			3470	Yaronika	11	7.7 226°61	0°3/ 7.9 18		
10 8	3 14.99	+13 39.3	1.916	2.791	12.0	20.7	10 8	3 18.16	+19 29.4	1.765	2.629	13.3	17.3
10 18	3 9.15	+13 24.4	1.845	2.784	8.4	20.4	10 18	3 11.58	+18 58.2	1.688	2.621	9.5	17.1
10 28	3 1.42	+13 5.3	1.799	2.777	4.5	20.2	10 28	3 2.81	+18 15.5	1.636	2.612	5.2	16.8
11 7	2 52.64	+12 44.9	1.781	2.771	1.3	19.9	11 7	2 52.79	+17 24.2	1.612	2.603	0.5	16.4
11 17	2 43.78	+12 26.6	1.792	2.764	4.6	20.2	11 17	2 42.66	+16 29.1	1.616	2.593	4.4	16.7
11 27	2 35.87	+12 14.3	1.830	2.758	8.6	20.4	11 27	2 33.65	+15 36.5	1.649	2.582	8.9	16.9
12 7	2 29.77	+12 11.0	1.894	2.752	12.2	20.6	12 7	2 26.74	+14 52.5	1.707	2.571	13.0	17.2
12 17	2 25.99	+12 18.6	1.980	2.746	15.2	20.8	12 17	2 22.50	+14 21.4	1.787	2.560	16.4	17.4
91400	1999 <i>MW</i>	11	7.7 9°60	6°5/12.3 18			484084	2006 <i>QS</i> ₅	11	7.7 17°90	7°3/11.1 17		
10 8	3 12.37	+33 40.7	1.157	2.012	19.5	17.4	10 8	3 16.48	+29 24.3	1.031	1.903	20.1	19.2
10 18	3 8.30	+33 19.9	1.101	2.014	15.4	17.2	10 18	3 11.37	+30 32.1	0.995	1.918	15.6	19.0
10 28	3 1.26	+32 26.1	1.064	2.018	10.9	16.9	10 28	3 2.96	+31 14.3	0.978	1.935	11.0	18.8
11 7	2 52.62	+31 0.4	1.049	2.023	7.2	16.8	11 7	2 52.79	+31 27.6	0.982	1.955	7.6	18.7
11 17	2 44.11	+29 10.1	1.057	2.030	7.0	16.8	11 17	2 42.80	+31 14.2	1.008	1.977	8.0	18.8
11 27	2 37.41	+27 8.2	1.090	2.038	10.6	17.0	11 27	2 34.90	+30 42.2	1.057	2.000	11.5	19.0
12 7	2 33.68	+25 9.6	1.146	2.047	14.9	17.3	12 7	2 30.33	+30 2.4	1.128	2.026	15.4	19.3
12 17	2 33.38	+23 25.5	1.222	2.058	18.8	17.6	12 17	2 29.56	+29 24.4	1.217	2.053	18.9	19.7
421872	2014 <i>QD</i> ₁₅₂	11	7.7 139°98	3°9/11.1 18			477416	2009 <i>WW</i> ₁	11	7.7 311°18	1°6/ 6.9 18		
10 8	3 15.64	+30 33.4	2.297	3.118	12.2	20.7	10 8	3 16.29	+14 35.0	1.325	2.214	15.3	21.0
10 18	3 9.44	+30 26.9	2.225	3.122	9.4	20.5	10 18	3 10.81	+14 7.4	1.253	2.198	10.9	20.7
10 28	3 1.50	+30 4.4	2.177	3.126	6.5	20.4	10 28	3 2.63	+13 31.7	1.203	2.183	5.8	20.4
11 7	2 52.64	+29 26.3	2.157	3.130	4.1	20.2	11 7	2 52.78	+12 52.5	1.178	2.168	1.6	20.0
11 17	2 43.81	+28 35.2	2.166	3.134	4.5	20.3	11 17	2 42.69	+12 15.7	1.179	2.154	6.0	20.3
11 27	2 35.96	+27 36.2	2.204	3.138	7.0	20.4	11 27	2 33.90	+11 48.0	1.205	2.140	11.3	20.6
12 7	2 29.87	+26 35.2	2.270	3.141	9.9	20.6	12 7	2 27.63	+11 34.6	1.254	2.126	16.1	20.8
12 17	2 26.00	+25 37.9	2.359	3.144	12.5	20.8	12 17	2 24.58	+11 38.3	1.321	2.113	20.1	21.0
210603	2000 <i>AD</i> ₄₈	11	7.7 326°96	1°9/ 8.9 18			156824	2003 <i>BX</i> ₆₁	11	7.7 251°20	2°6/ 9.4 18		
10 8	3 14.01	+22 58.0	1.448	2.321	15.2	19.8	10 8	3 18.70	+24 45.4	1.781	2.631	13.9	20.3
10 18	3 9.08	+22 37.5	1.372	2.307	11.2	19.5	10 18	3 12.13	+24 39.3	1.697	2.617	10.4	20.1
10 28	3 1.63	+22 0.4	1.319	2.293	6.5	19.2	10 28	3 3.19	+24 18.0	1.636	2.603	6.4	19.8
11 7	2 52.66	+21 8.7	1.290	2.279	2.2	18.9	11 7	2 52.82	+23 42.1	1.603	2.589	2.9	19.6
11 17	2 43.50	+20 7.7	1.288	2.266	4.8	19.0	11 17	2 42.23	+22 54.7	1.598	2.574	4.5	19.7
11 27	2 35.59	+19 5.1	1.312	2.255	9.7	19.3	11 27	2 32.75	+22 1.8	1.621	2.558	8.7	19.9
12 7	2 30.06	+18 9.3	1.359	2.243	14.3	19.5	12 7	2 25.43	+21 10.6	1.669	2.542	12.7	20.1
12 17	2 27.56	+17 26.6	1.426	2.233	18.2	19.8	12 17	2 20.93	+20 27.3	1.740	2.526	16.2	20.3
31476	Bocconcelli	11	7.7 166°86	0°3/ 7.5 18			8190	Bouguer	11	7.7 322°11	2°5/ 9.0 18		
10 8	3 18.51	+16 52.7	1.934	2.799	12.4	19.4	10 8	3 16.62	+23 20.4	1.163	2.044	17.6	17.1
10 18	3 11.53	+16 32.6	1.869	2.803	8.7	19.2	10 18	3 11.42	+23 10.3	1.095	2.032	13.0	16.8
10 28	3 2.64	+16 5.2	1.830	2.807	4.6	19.0	10 28	3 3.09	+22 40.7	1.046	2.020	7.7	16.5
11 7	2 52.72	+15 33.1	1.819	2.810	0.4	18.6	11 7	2 52.82	+21 53.1	1.021	2.009	2.8	16.2
11 17	2 42.84	+15 0.1	1.838	2.812	4.2	18.9	11 17	2 42.31	+20 53.0	1.020	1.999	5.6	16.3
11 27	2 34.05	+14 30.8	1.885	2.814	8.3	19.2	11 27	2 33.38	+19 49.9	1.044	1.989	11.2	16.6
12 7	2 27.19	+14 9.3	1.959	2.816	11.9	19.4	12 7	2 27.44	+18 54.0	1.089	1.981	16.4	16.9
12 17	2 22.76	+13 58.4	2.054	2.817	14.9	19.6	12 17	2 25.18	+18 12.8	1.153	1.972	20.8	17.1
406773	2008 <i>OM</i> ₂₂	11	7.7 354°42	17°7/21.0 18			351351	2005 <i>AV</i> ₆₅	11	7.7 96°68	7°5/ 2.9 18		
10 8													

EPHEMERIDES

11 7.7

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
235110	2003 <i>OG</i> ₂₆		11 7.7 70°90	0°1/ 7.6 18			385996	2007 <i>CL</i> ₁₄		11 7.7 311°84	1°2/ 8.4 18		
10 8	3 17.60	+18 30.6	1.561	2.434	14.3	20.2	10 8	3 16.31	+20 40.9	1.321	2.201	16.0	21.4
10 18	3 11.02	+17 53.4	1.517	2.454	10.0	20.0	10 18	3 10.96	+20 26.0	1.246	2.184	11.6	21.1
10 28	3 2.38	+17 6.0	1.497	2.475	5.3	19.8	10 28	3 2.79	+19 56.3	1.192	2.168	6.5	20.8
11 7	2 52.78	+16 12.8	1.504	2.495	0.3	19.5	11 7	2 52.85	+19 13.9	1.163	2.153	1.4	20.4
11 17	2 43.44	+15 19.4	1.539	2.515	4.6	19.8	11 17	2 42.62	+18 24.0	1.159	2.138	5.1	20.6
11 27	2 35.54	+14 32.3	1.602	2.536	9.0	20.2	11 27	2 33.73	+17 34.4	1.181	2.123	10.6	20.9
12 7	2 29.91	+13 56.5	1.689	2.556	12.9	20.4	12 7	2 27.46	+16 53.1	1.226	2.109	15.6	21.1
12 17	2 26.96	+13 34.9	1.797	2.576	16.1	20.7	12 17	2 24.54	+16 26.0	1.289	2.095	19.8	21.4
59907	1999 <i>RM</i> ₁₅₂		11 7.7 50°53	3°2/ 9.9 18			518420	2018 <i>EG</i> ₆		11 7.7 256°55	11°0/ 31.4 18		
10 8	3 17.87	+26 1.5	1.700	2.551	14.5	18.5	10 8	3 20.41	-13 30.8	1.898	2.732	13.9	22.0
10 18	3 11.17	+26 2.7	1.659	2.578	10.7	18.3	10 18	3 13.03	-14 32.9	1.832	2.711	12.1	21.8
10 28	3 2.45	+25 48.1	1.641	2.605	6.7	18.2	10 28	3 3.58	-15 16.5	1.790	2.689	11.1	21.7
11 7	2 52.78	+25 19.0	1.650	2.633	3.4	18.0	11 7	2 52.90	-15 34.0	1.773	2.667	11.3	21.7
11 17	2 43.38	+24 39.3	1.686	2.661	4.5	18.2	11 17	2 42.10	-15 20.8	1.781	2.644	12.8	21.7
11 27	2 35.41	+23 54.9	1.751	2.689	8.0	18.4	11 27	2 32.32	-14 35.7	1.813	2.620	15.0	21.8
12 7	2 29.68	+23 12.3	1.840	2.717	11.5	18.7	12 7	2 24.49	-13 21.7	1.865	2.596	17.3	21.9
12 17	2 26.60	+22 36.7	1.952	2.746	14.4	19.0	12 17	2 19.19	-11 44.2	1.935	2.571	19.4	22.1
69614	1998 <i>FK</i> ₄₈		11 7.7 290°56	1°1/ 7.1 18			464655	2001 <i>QA</i> ₅₉		11 7.7 35°19	3°9/ 5.9 17		
10 8	3 16.39	+17 12.4	1.346	2.231	15.4	18.7	10 8	3 15.77	+12 57.6	0.805	1.720	19.7	20.0
10 18	3 10.87	+16 21.1	1.272	2.215	11.0	18.4	10 18	3 10.63	+11 41.0	0.783	1.740	13.7	19.8
10 28	3 2.66	+15 16.4	1.220	2.199	5.8	18.1	10 28	3 2.39	+10 19.4	0.779	1.761	7.4	19.5
11 7	2 52.82	+14 3.8	1.193	2.184	1.1	17.7	11 7	2 52.80	+9 3.9	0.796	1.784	4.0	19.4
11 17	2 42.77	+12 50.9	1.193	2.168	5.8	18.0	11 17	2 43.79	+8 5.5	0.836	1.808	8.4	19.8
11 27	2 34.05	+11 47.0	1.219	2.153	11.3	18.3	11 27	2 37.07	+7 31.6	0.897	1.833	14.0	20.2
12 7	2 27.84	+10 59.4	1.267	2.138	16.1	18.5	12 7	2 33.61	+7 24.6	0.977	1.859	18.7	20.6
12 17	2 24.83	+10 32.2	1.334	2.123	20.1	18.8	12 17	2 33.67	+7 42.1	1.073	1.886	22.5	20.9
130280	2000 <i>DJ</i> ₁₀₃		11 7.7 279°23	4°4/ 10.7 17			220066	2002 <i>RD</i> ₁₅₃		11 7.7 92°55	4°1/ 10.3 18		
10 8	3 17.41	+29 57.7	2.320	3.141	12.1	19.9	10 8	3 20.30	+28 17.3	1.477	2.325	16.4	20.4
10 18	3 10.91	+30 28.9	2.235	3.131	9.5	19.8	10 18	3 13.32	+28 8.9	1.422	2.338	12.4	20.1
10 28	3 2.45	+30 46.3	2.175	3.121	6.7	19.6	10 28	3 3.77	+27 39.4	1.390	2.351	8.0	19.9
11 7	2 52.81	+30 48.7	2.141	3.111	4.6	19.4	11 7	2 52.91	+26 49.9	1.382	2.363	4.4	19.8
11 17	2 42.94	+30 36.5	2.137	3.100	5.0	19.4	11 17	2 42.22	+25 45.1	1.401	2.375	5.3	19.8
11 27	2 33.93	+30 13.0	2.162	3.090	7.4	19.6	11 27	2 33.17	+24 33.6	1.448	2.388	9.3	20.1
12 7	2 26.66	+30 43.2	2.213	3.080	10.3	19.7	12 7	2 26.79	+23 24.7	1.519	2.400	13.3	20.4
12 17	2 21.73	+29 12.6	2.288	3.070	12.9	19.9	12 17	2 23.56	+22 25.8	1.611	2.411	16.7	20.6
98762	2000 <i>YT</i> ₆₈		11 7.7 331°52	5°5/ 4.6 18			23641	1997 <i>AU</i> ₁₀		11 7.7 202°48	4°3/ 10.2 18		
10 8	3 11.82	+7 41.2	1.209	2.112	15.4	18.6	10 8	3 20.84	+28 1.2	1.631	2.473	15.4	18.6
10 18	3 7.78	+6 37.2	1.139	2.089	11.2	18.3	10 18	3 13.78	+28 13.3	1.559	2.471	11.8	18.3
10 28	3 1.08	+5 31.1	1.091	2.067	7.0	18.0	10 28	3 4.12	+28 7.0	1.510	2.469	7.8	18.1
11 7	2 52.72	+4 31.7	1.066	2.046	5.7	17.8	11 7	2 52.94	+27 41.6	1.487	2.466	4.6	17.9
11 17	2 44.08	+3 47.9	1.065	2.026	9.1	18.0	11 17	2 41.65	+26 59.5	1.491	2.463	5.4	18.0
11 27	2 36.69	+3 27.0	1.088	2.008	13.8	18.2	11 27	2 31.72	+26 7.2	1.523	2.460	9.2	18.2
12 7	2 31.77	+3 32.1	1.130	1.991	18.4	18.4	12 7	2 24.28	+25 13.0	1.580	2.457	13.1	18.4
12 17	2 30.05	+4 2.7	1.189	1.975	22.3	18.6	12 17	2 19.98	+24 24.4	1.659	2.453	16.6	18.6
508339	2015 <i>UQ</i> ₆₅		11 7.7 60°10	4°8/ 3.8 18			12335	Tatsukushi		11 7.7 187°27	2°9/ 5.9 18		
10 8	3 12.53	+5 8.1	1.974	2.856	11.4	20.5	10 8	3 17.45	+11 55.0	1.596	2.477	13.6	17.7
10 18	3 7.20	+3 53.5	1.925	2.862	8.2	20.3	10 18	3 11.06	+10 56.5	1.535	2.477	9.6	17.4
10 28	3 0.32	+2 41.3	1.902	2.869	5.6	20.1	10 28	3 2.52	+9 53.1	1.499	2.477	5.3	17.2
11 7	2 52.65	+1 37.7	1.906	2.876	5.0	20.1	11 7	2 52.83	+8 50.9	1.490	2.476	3.0	17.0
11 17	2 45.08	+0 48.1	1.939	2.883	7.1	20.3	11 17	2 43.17	+7 56.3	1.509	2.475	6.2	17.2
11 27	2 38.48	+0 16.3	1.999	2.890	10.1	20.5	11 27	2 34.76	+7 15.4	1.555	2.473	10.5	17.5
12 7	2 33.53	+0 3.8	2.082	2.897	12.9	20.7	12 7	2 28.51	+6 52.1	1.624	2.472	14.4	17.7
12 17	2 30.62	+0 10.0	2.186	2.905	15.3	20.9	12 17	2 24.96	+6 47.4	1.714	2.470	17.6	18.0
106875	2000 <i>YW</i> ₃₃		11 7.7 266°04	0°1/ 7.8 18			332004	2005 <i>LL</i> ₁₆		11 7.7 79°24	2°6/ 9.4 18		
10 8	3 15.65	+19 4.2	1.785	2.654	13.0	19.4	10 8	3 19.38	+25 26.9	1.426	2.285	16.2	20.6
10 18	3 9.81	+18 26.5	1.707	2.643	9.3	19.2	10 18	3 12.58	+24 59.4	1.377	2.302	11.9	20.4
10 28	3 1.89	+17 37.5	1.655	2.632	5.0	18.9	10 28	3 3.33	+24 12.9	1.350	2.319	7.1	20.2
11 7	2 52.78	+16 40.5	1.629	2.620	0.4	18.5	11 7	2 52.88	+23 10.3	1.349	2.335	3.0	20.0
11 17	2 43.55	+15 40.8	1.633	2.609	4.3	18.8	11 17	2 42.71	+21 57.9	1.375	2.352	4.8	20.2
11 27	2 35.38	+14 44.7	1.664	2.597	8.8	19.1	11 27	2 34.19	+20 44.6	1.428	2.368	9.3	20.5
12 7	2 29.20	+13 58.2	1.720	2.586	12.8	19.3	12 7	2 28.30	+19 38.9	1.505	2.385	13.5	20.8
12 17	2 25.56	+13 25.4	1.798	2.574	16.2	19.5	12 17	2 25.45	+18 46.8	1.604	2.401	16.9	21.0
90446	Truesdell		11 7.7 134°80	0°6/ 8.1 17			436442	2011 <i>CR</i> ₂₅		11 7.7 327°98	4°8/ 10.4 18		
10 8	3 21.14	+19 16.4	1.858	2.715	13.1	19.7	10 8	3 18.02	+28 10.4	1.315	2.173	17.4	20.1
10 18	3 13.40	+19 7.0	1.801	2.730	9.3	19.5	10 18	3 12.25	+28 19.7	1.246	2.167	13.3	19.8
10 28	3 3.66	+18 48.2	1.769	2.744	5.1	19.3	10 28	3 3.48	+28 7.1	1.198	2.160	8.8	19.6
11 7	2 52.89	+18 21.9	1.766	2.756	0.8	19.0	11 7	2 52.92	+27 31.6	1.174	2.154	5.2	19.3
11 17	2 42.25	+17 51.6	1.792	2.769	4.0	19.2	11 17	2 42.17	+26 36.7	1.175	2.149	6.1	19.4
11 27	2 32.88	+17 22.3	1.848	2.780	8.2	19.5	11 27	2 32.99	+25 30.9	1.201	2.144	10.4	19.6
12 7	2 25.63	+16 58.4	1.930	2.791	11.8	19.8	12 7	2 26.68	+24 24.6	1.250	2.139	14.9	19.9
12 17	2 20.97	+16 43.6	2.034	2.801	14.8	20.0	12 17	2 23.90	+23 26.8	1.319	2.135	18.9	20.1
188345	2003 <i>SF</i> ₂₀₈		11 7.7 129°75	3°2/ 10.5 18			409194	2003 <i>US</i> ₃₄₀		11 7.7 352°92	1°9/ 8.9 17		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
391565	2007 <i>TM</i> ₁₆₂		11 7.7 31°63	2°0/ 8.8 18			481880	2008 <i>YU</i> ₁₅₃		11 7.8 310°63	1°3/ 8.5 16		
10 8	3 17.93	+21 30.1	1.483	2.353	15.1	20.7	10 8	3 15.90	+20 58.8	1.540	2.411	14.6	21.7
10 18	3 11.65	+21 41.8	1.428	2.360	11.0	20.4	10 18	3 10.39	+20 48.8	1.461	2.396	10.6	21.4
10 28	3 2.92	+21 41.0	1.395	2.368	6.3	20.2	10 28	3 2.40	+20 25.8	1.405	2.380	6.0	21.1
11 7	2 52.87	+21 28.6	1.387	2.376	2.2	19.9	11 7	2 52.89	+19 51.5	1.375	2.364	1.6	20.8
11 17	2 42.86	+21 7.8	1.407	2.384	4.6	20.1	11 17	2 43.12	+19 10.0	1.371	2.349	4.6	20.9
11 27	2 34.26	+20 44.1	1.453	2.393	9.2	20.4	11 27	2 34.52	+18 27.6	1.395	2.335	9.5	21.2
12 7	2 28.12	+20 23.4	1.523	2.403	13.3	20.7	12 7	2 28.20	+17 51.0	1.442	2.321	14.0	21.4
12 17	2 24.96	+20 10.4	1.615	2.413	16.8	20.9	12 17	2 24.85	+17 25.6	1.509	2.307	17.8	21.6
149221	2002 <i>RJ</i> ₆₃		11 7.7 17°05	2°9/ 6.6 18			52434	1994 <i>PA</i> ₁₇		11 7.8 40°35	1°2/ 8.4 18		
10 8	3 17.16	+10 58.5	1.046	1.948	17.4	18.6	10 8	3 17.71	+20 56.2	1.118	2.004	17.8	18.6
10 18	3 11.55	+10 50.2	1.002	1.953	12.2	18.3	10 18	3 11.73	+20 33.7	1.080	2.022	12.7	18.3
10 28	3 3.00	+10 40.3	0.979	1.959	6.7	18.0	10 28	3 2.98	+19 55.4	1.063	2.041	7.0	18.1
11 7	2 52.88	+10 33.5	0.978	1.967	2.9	17.8	11 7	2 52.91	+19 5.6	1.070	2.060	1.4	17.8
11 17	2 42.88	+10 34.4	1.002	1.976	7.0	18.1	11 17	2 43.18	+18 11.5	1.102	2.081	5.2	18.1
11 27	2 34.70	+10 47.4	1.049	1.986	12.3	18.4	11 27	2 35.37	+17 21.6	1.159	2.102	10.6	18.5
12 7	2 29.47	+11 14.5	1.117	1.997	17.1	18.7	12 7	2 30.47	+16 43.3	1.237	2.124	15.2	18.8
12 17	2 27.74	+11 55.6	1.202	2.009	20.9	19.0	12 17	2 28.90	+16 20.6	1.335	2.146	18.9	19.2
492816	2014 <i>QG</i> ₂₇₃		11 7.7 30°72	8°5/ 2.7 17			331196	2011 <i>AX</i> ₇₀		11 7.8 356°22	5°2/ 5.4 18		
10 8	3 13.14	- 3 13.3	1.519	2.403	14.0	19.4	10 8	3 16.67	+ 7 5.5	1.127	2.026	16.5	20.1
10 18	3 7.78	- 4 23.8	1.499	2.426	11.0	19.3	10 18	3 11.15	+ 6 27.4	1.075	2.023	11.9	19.8
10 28	3 0.63	- 5 20.1	1.501	2.449	8.9	19.2	10 28	3 2.82	+ 5 51.6	1.044	2.021	7.3	19.6
11 7	2 52.71	- 5 55.2	1.528	2.474	8.7	19.3	11 7	2 52.91	+ 5 25.3	1.037	2.019	5.3	19.4
11 17	2 45.11	- 6 5.1	1.580	2.500	10.5	19.4	11 17	2 43.00	+ 5 14.7	1.054	2.018	8.6	19.6
11 27	2 38.82	- 5 49.0	1.655	2.526	13.0	19.7	11 27	2 34.70	+ 5 24.3	1.095	2.019	13.4	19.9
12 7	2 34.55	- 5 9.5	1.752	2.553	15.6	19.9	12 7	2 29.17	+ 5 55.0	1.156	2.020	17.8	20.2
12 17	2 32.63	- 4 10.7	1.867	2.580	17.8	20.1	12 17	2 27.00	+ 6 44.8	1.234	2.021	21.6	20.4
159517	2001 <i>EK</i> ₁₀		11 7.7 323°17	7°7/ 1.7 17			11467	Simonporter		11 7.8 6°21	2°6/ 9.2 18		
10 8	3 11.09	+ 0 17.5	1.628	2.516	13.0	19.3	10 8	3 16.15	+23 42.4	1.386	2.256	16.0	18.3
10 18	3 6.74	- 1 14.7	1.554	2.489	10.1	19.1	10 18	3 10.61	+23 40.9	1.325	2.256	11.7	18.1
10 28	3 0.35	- 2 42.5	1.504	2.461	8.0	18.9	10 28	3 2.48	+23 23.0	1.285	2.257	7.0	17.8
11 7	2 52.72	- 3 56.9	1.480	2.434	8.1	18.9	11 7	2 52.89	+22 50.1	1.271	2.258	2.9	17.6
11 17	2 44.86	- 4 49.8	1.481	2.408	10.5	18.9	11 17	2 43.26	+22 6.4	1.282	2.260	4.9	17.7
11 27	2 37.93	- 5 15.7	1.506	2.382	13.7	19.1	11 27	2 35.09	+21 19.2	1.320	2.263	9.6	18.0
12 7	2 32.86	- 5 12.9	1.552	2.358	17.0	19.2	12 7	2 29.47	+20 36.2	1.381	2.267	14.0	18.3
12 17	2 30.28	- 4 43.2	1.615	2.334	19.9	19.4	12 17	2 26.97	+20 3.4	1.462	2.271	17.7	18.5
268725	2006 <i>HQ</i> ₁₃₅		11 7.7 285°50	1°1/ 6.9 17			178791	2001 <i>DU</i> ₅		11 7.8 311°72	2°1/ 8.5 18		
10 8	3 13.05	+15 1.2	2.219	3.090	10.7	21.4	10 8	3 20.03	+20 2.4	1.239	2.118	16.9	20.0
10 18	3 7.68	+14 27.2	2.137	3.074	7.6	21.1	10 18	3 13.93	+20 33.0	1.163	2.101	12.4	19.7
10 28	3 0.69	+13 47.2	2.080	3.058	4.0	20.9	10 28	3 4.57	+20 52.8	1.109	2.084	7.2	19.3
11 7	2 52.74	+13 4.5	2.052	3.042	1.1	20.6	11 7	2 53.06	+21 1.2	1.079	2.068	2.3	19.0
11 17	2 44.68	+12 22.9	2.053	3.026	4.1	20.8	11 17	2 41.05	+20 59.5	1.074	2.052	5.6	19.2
11 27	2 37.40	+11 47.0	2.084	3.010	7.8	21.0	11 27	2 30.44	+20 52.8	1.094	2.037	11.2	19.4
12 7	2 31.63	+11 20.2	2.140	2.993	11.2	21.2	12 7	2 22.75	+20 47.7	1.137	2.023	16.4	19.7
12 17	2 27.88	+11 5.3	2.218	2.977	14.0	21.4	12 17	2 18.85	+20 49.9	1.198	2.009	20.7	19.9
508857	2002 <i>LK</i> ₆₃		11 7.7 145°93	6°7/31.9 18			132961	2002 <i>TG</i> ₁₁₇		11 7.8 102°45	0°1/ 7.9 18		
10 8	3 13.44	-11 5.9	3.189	4.020	8.9	22.8	10 8	3 12.22	+20 45.4	2.411	3.269	10.5	19.2
10 18	3 7.35	-11 53.5	3.153	4.033	7.5	22.8	10 18	3 6.87	+19 38.2	2.342	3.272	7.4	19.1
10 28	3 0.26	-12 30.1	3.143	4.044	6.7	22.7	10 28	3 0.15	+18 20.6	2.300	3.275	4.0	18.8
11 7	2 52.71	-12 52.1	3.161	4.055	6.8	22.7	11 7	2 52.72	+16 56.6	2.287	3.278	0.3	18.6
11 17	2 45.25	-12 57.5	3.207	4.066	7.8	22.8	11 17	2 45.38	+15 31.2	2.305	3.281	3.3	18.8
11 27	2 38.46	-12 45.6	3.279	4.076	9.1	22.9	11 27	2 38.88	+14 10.2	2.354	3.284	6.8	19.0
12 7	2 32.80	-12 17.3	3.374	4.085	10.5	23.1	12 7	2 33.83	+12 58.7	2.430	3.287	9.9	19.3
12 17	2 28.57	-11 34.6	3.490	4.094	11.8	23.2	12 17	2 30.63	+12 0.1	2.530	3.289	12.4	19.4
51600	2001 <i>HG</i> ₂₇		11 7.7 116°95	0°1/ 7.8 18			396699	2002 <i>TG</i> ₂₆₂		11 7.8 1°41	4°4/ 4.9 18		
10 8	3 16.85	+18 39.4	2.052	2.913	11.9	20.1	10 8	3 10.67	+10 27.4	1.255	2.157	15.0	19.7
10 18	3 10.24	+18 10.9	1.996	2.928	8.4	19.9	10 18	3 6.66	+ 9 5.2	1.203	2.155	10.6	19.4
10 28	3 1.95	+17 34.0	1.966	2.942	4.5	19.7	10 28	3 0.33	+ 7 38.8	1.175	2.153	6.2	19.2
11 7	2 52.83	+16 51.6	1.965	2.956	0.4	19.4	11 7	2 52.74	+ 6 17.5	1.171	2.154	4.6	19.1
11 17	2 43.84	+16 7.7	1.993	2.969	3.7	19.7	11 17	2 45.20	+ 5 10.3	1.192	2.155	8.0	19.3
11 27	2 35.93	+15 27.1	2.051	2.982	7.6	20.0	11 27	2 39.03	+ 4 24.7	1.237	2.158	12.4	19.6
12 7	2 29.82	+14 54.1	2.135	2.994	10.9	20.2	12 7	2 35.17	+ 4 4.1	1.303	2.162	16.5	19.8
12 17	2 25.94	+14 31.6	2.241	3.006	13.7	20.4	12 17	2 34.13	+ 4 8.2	1.387	2.167	19.9	20.1
367835	2011 <i>BQ</i> ₈₀		11 7.7 318°10	7°0/ 2.3 18			50600	2000 <i>ED</i> ₄₉		11 7.8 353°85	2°1/ 6.3 18		
10 8	3 12.50	- 2 35.0	2.022	2.895	11.5	20.2	10 8	3 14.32	+13 22.6	1.723	2.604	12.8	18.9
10 18	3 7.29	- 3 35.5	1.963	2.885	9.1	20.1	10 18	3 8.79	+12 33.2	1.661	2.603	8.9	18.7
10 28	3 0.45	- 4 27.5	1.928	2.875	7.3	20.0	10 28	3 1.32	+11 38.2	1.623	2.602	4.8	18.4
11 7	2 52.73	- 5 5.0	1.920	2.866	7.2	19.9	11 7	2 52.82	+10 42.6	1.613	2.601	2.1	18.3
11 17	2 44.98	- 5 23.4	1.939	2.856	9.0	20.0	11 17	2 44.33	+ 9 52.2	1.631	2.601	5.4	18.5
11 27	2 38.10	- 5 20.2	1.983	2.847	11.5	20.2	11 27	2 36.94	+ 9 12.5	1.677	2.601	9.5	18.7
12 7	2 32.80	- 4 55.6	2.049	2.839	14.0	20.3	12 7	2 31.49	+ 8 47.3	1.746	2.601	13.2	19.0
12 17	2 29.57	- 4 11.8	2.135	2.830	16.3	20.5	12 17	2 28.48	+ 8 38.3	1.836	2.601	16.3	19.2
130357	2000 <i>GD</i> ₄₇		11 7.7 223°93	0°0/ 7.7 18			411113	2009 <i>WP</i> ₈₃		11 7.8 83°87			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
190354	1998 YC ₂₀		11 7.8 354°55	1°0/ 7.1 18			132579	2002 JX ₁₁₆		11 7.8 169°26	3°1/ 5.8 18		
10 8	3 13.06	+14 52.1	1.793	2.673	12.4	19.7	10 8	3 16.38	+10 5.2	1.737	2.617	12.7	19.8
10 18	3 7.91	+14 32.2	1.728	2.669	8.7	19.5	10 18	3 10.23	+9 23.6	1.677	2.618	9.0	19.6
10 28	3 0.88	+14 6.8	1.687	2.666	4.6	19.3	10 28	3 2.12	+8 40.2	1.642	2.618	5.1	19.4
11 7	2 52.79	+13 39.0	1.673	2.663	1.0	19.0	11 7	2 52.96	+7 59.8	1.634	2.619	3.1	19.3
11 17	2 44.67	+13 12.8	1.687	2.662	4.5	19.3	11 17	2 43.81	+7 27.4	1.655	2.619	6.0	19.5
11 27	2 37.56	+12 52.6	1.729	2.661	8.7	19.5	11 27	2 35.79	+7 7.4	1.702	2.620	9.9	19.7
12 7	2 32.30	+12 41.9	1.795	2.660	12.4	19.7	12 7	2 29.74	+7 2.3	1.774	2.620	13.5	19.9
12 17	2 29.40	+12 42.9	1.882	2.660	15.5	19.9	12 17	2 26.16	+7 12.8	1.867	2.620	16.5	20.1
238522	2004 TZ ₁₆₃		11 7.8 320°65	1°0/ 7.2 18			305224	2007 XC ₉		11 7.8 322°33	6°9/ 13.0 17		
10 8	3 16.14	+15 29.6	1.476	2.358	14.4	20.9	10 8	3 16.74	+36 37.5	1.734	2.544	16.0	19.9
10 18	3 10.47	+15 6.5	1.407	2.350	10.2	20.7	10 18	3 10.99	+36 39.9	1.656	2.536	13.1	19.7
10 28	3 2.40	+14 35.6	1.362	2.341	5.4	20.4	10 28	3 2.73	+36 16.8	1.598	2.529	9.9	19.5
11 7	2 52.91	+14 0.6	1.342	2.333	1.0	20.0	11 7	2 53.00	+35 26.4	1.565	2.522	7.4	19.3
11 17	2 43.29	+13 26.6	1.350	2.325	5.3	20.3	11 17	2 43.19	+34 11.2	1.558	2.515	7.1	19.3
11 27	2 34.92	+12 59.5	1.384	2.318	10.2	20.6	11 27	2 34.71	+32 38.5	1.577	2.509	9.4	19.4
12 7	2 28.84	+12 44.0	1.441	2.311	14.5	20.8	12 7	2 28.66	+30 58.7	1.622	2.503	12.6	19.6
12 17	2 25.69	+12 42.9	1.518	2.304	18.2	21.1	12 17	2 25.64	+29 21.7	1.690	2.498	15.7	19.8
25275	Jocelynbell		11 7.8 347°51	5°7/ 5.2 18			314995	2006 YW ₄₁		11 7.8 325°17	3°1/ 5.9 18		
10 8	3 17.10	+5 15.4	1.233	2.128	15.8	17.6	10 8	3 14.73	+9 30.0	1.777	2.659	12.4	20.8
10 18	3 11.32	+4 40.7	1.178	2.123	11.5	17.3	10 18	3 9.12	+8 59.9	1.710	2.652	8.8	20.6
10 28	3 2.88	+4 10.6	1.145	2.119	7.4	17.1	10 28	3 1.56	+8 28.7	1.668	2.645	5.0	20.3
11 7	2 52.95	+3 51.7	1.136	2.115	5.8	17.0	11 7	2 52.92	+8 0.8	1.653	2.638	3.1	20.2
11 17	2 42.97	+3 49.6	1.152	2.112	8.8	17.1	11 17	2 44.21	+7 40.6	1.666	2.631	5.9	20.4
11 27	2 34.48	+4 7.9	1.192	2.110	13.2	17.4	11 27	2 36.51	+7 31.9	1.706	2.625	9.7	20.6
12 7	2 28.58	+4 46.7	1.253	2.108	17.3	17.6	12 7	2 30.68	+7 37.0	1.770	2.619	13.3	20.8
12 17	2 25.88	+5 43.9	1.333	2.107	20.9	17.9	12 17	2 27.26	+7 56.5	1.855	2.614	16.4	21.0
247226	2001 QM ₁₅₉		11 7.8 80°16	5°0/ 4.2 18			359255	2009 FC ₃₂		11 7.8 169°99	5°4/ 12.3 18		
10 8	3 15.69	+4 28.9	1.855	2.733	12.1	20.9	10 8	3 19.35	+35 7.4	2.417	3.209	12.6	21.2
10 18	3 9.37	+3 24.1	1.821	2.756	8.8	20.7	10 18	3 12.21	+35 26.7	2.341	3.212	10.1	21.0
10 28	3 1.46	+2 23.7	1.812	2.778	5.9	20.6	10 28	3 3.16	+35 28.2	2.289	3.215	7.6	20.9
11 7	2 52.83	+1 33.5	1.831	2.801	5.2	20.6	11 7	2 53.04	+35 11.0	2.264	3.217	5.7	20.8
11 17	2 44.45	+0 58.3	1.878	2.823	7.3	20.8	11 17	2 42.86	+34 35.9	2.267	3.219	5.7	20.8
11 27	2 37.23	+0 40.9	1.952	2.844	10.2	21.0	11 27	2 33.68	+33 47.3	2.300	3.221	7.5	20.9
12 7	2 31.84	+0 42.0	2.050	2.866	13.1	21.2	12 7	2 26.37	+32 51.2	2.359	3.222	9.9	21.0
12 17	2 28.63	+1 0.3	2.168	2.887	15.4	21.4	12 17	2 21.44	+31 54.0	2.443	3.222	12.3	21.2
79407	1997 JE ₄		11 7.8 260°09	0°6/ 8.1 18			163324	2002 JJ ₁₁₆		11 7.8 78°72	3°0/ 9.6 18		
10 8	3 17.95	+20 1.6	1.570	2.439	14.4	20.0	10 8	3 20.92	+24 59.6	1.695	2.544	14.6	19.8
10 18	3 11.74	+19 35.5	1.494	2.429	10.4	19.8	10 18	3 13.47	+25 12.1	1.647	2.566	10.8	19.6
10 28	3 3.09	+18 56.4	1.442	2.418	5.7	19.5	10 28	3 3.82	+25 9.7	1.623	2.587	6.6	19.4
11 7	2 52.99	+18 7.2	1.416	2.406	0.9	19.1	11 7	2 53.08	+24 52.8	1.625	2.609	3.3	19.3
11 17	2 42.73	+17 12.8	1.418	2.395	4.6	19.4	11 17	2 42.53	+24 24.6	1.655	2.630	4.6	19.4
11 27	2 33.70	+16 20.4	1.447	2.384	9.6	19.6	11 27	2 33.43	+23 50.7	1.714	2.651	8.3	19.7
12 7	2 26.96	+15 36.7	1.500	2.372	14.0	19.9	12 7	2 26.68	+23 17.2	1.798	2.672	11.9	19.9
12 17	2 23.16	+15 6.5	1.575	2.360	17.7	20.1	12 17	2 22.74	+22 49.6	1.904	2.692	15.0	20.2
70338	1999 RL ₁₇₀		11 7.8 208°64	4°8/ 10.9 18			451368	2010 XA ₇₉		11 7.8 356°32	1°0/ 8.6 18		
10 8	3 20.54	+30 48.0	2.054	2.873	13.5	19.7	10 8	3 13.31	+22 20.8	1.930	2.792	12.5	20.8
10 18	3 13.31	+31 10.9	1.974	2.868	10.6	19.5	10 18	3 8.02	+21 38.5	1.861	2.790	9.0	20.6
10 28	3 3.84	+31 17.0	1.918	2.864	7.5	19.3	10 28	3 0.93	+20 43.1	1.816	2.790	5.1	20.3
11 7	2 53.05	+31 4.9	1.889	2.858	5.1	19.2	11 7	2 52.88	+19 37.8	1.799	2.789	1.2	20.1
11 17	2 42.09	+30 35.7	1.889	2.852	5.4	19.2	11 17	2 44.84	+18 27.8	1.811	2.789	3.8	20.3
11 27	2 32.21	+29 53.9	1.917	2.846	8.1	19.4	11 27	2 37.82	+17 19.4	1.851	2.789	7.8	20.5
12 7	2 24.40	+29 6.2	1.971	2.840	11.3	19.5	12 7	2 32.63	+16 18.8	1.918	2.789	11.4	20.7
12 17	2 19.29	+28 19.3	2.049	2.832	14.2	19.7	12 17	2 29.72	+15 30.4	2.006	2.789	14.5	21.0
427255	2014 WT ₁₁₅		11 7.8 285°48	2°0/ 5.9 17			411585	2011 EF ₅₀		11 7.8 227°27	2°0/ 6.2 17		
10 8	3 11.53	+13 8.8	2.315	3.190	10.2	20.9	10 8	3 13.88	+10 16.3	2.549	3.418	9.6	21.0
10 18	3 6.49	+12 4.9	2.245	3.184	7.1	20.7	10 18	3 8.05	+9 58.4	2.477	3.413	6.7	20.8
10 28	3 0.02	+10 56.0	2.201	3.178	3.9	20.5	10 28	3 0.84	+9 39.6	2.433	3.409	3.7	20.6
11 7	2 52.78	+9 46.7	2.186	3.173	2.0	20.3	11 7	2 52.87	+9 22.3	2.418	3.404	2.0	20.5
11 17	2 45.53	+8 41.9	2.201	3.167	4.6	20.5	11 17	2 44.87	+9 9.3	2.433	3.399	4.2	20.7
11 27	2 39.07	+7 46.5	2.245	3.162	7.9	20.7	11 27	2 37.58	+9 3.1	2.478	3.394	7.2	20.9
12 7	2 34.03	+7 4.0	2.316	3.156	10.9	20.9	12 7	2 31.62	+9 5.6	2.549	3.389	10.1	21.0
12 17	2 30.84	+6 36.4	2.408	3.151	13.5	21.1	12 17	2 27.44	+9 17.7	2.644	3.384	12.5	21.2
51669	2001 KQ ₄		11 7.8 72°19	1°5/ 6.7 18			344984	2004 XU ₁₉₁		11 7.8 334°75	1°8/ 8.3 18		
10 8	3 15.24	+12 2.2	2.242	3.112	10.7	19.0	10 8	3 22.26	+17 19.1	1.343	2.219	16.0	19.2
10 18	3 9.06	+11 53.7	2.185	3.121	7.5	18.8	10 18	3 15.35	+18 25.1	1.269	2.206	11.7	18.9
10 28	3 1.37	+11 43.3	2.153	3.130	4.0	18.6	10 28	3 5.31	+19 27.1	1.218	2.194	6.6	18.6
11 7	2 52.89	+11 33.2	2.150	3.139	1.5	18.4	11 7	2 53.22	+20 22.6	1.192	2.182	1.9	18.3
11 17	2 44.45	+11 26.0	2.178	3.148	4.1	18.7	11 17	2 40.63	+21 10.2	1.194	2.171	5.3	18.5
11 27	2 36.91	+11 24.4	2.234	3.157	7.5	18.9	11 27	2 29.35	+21 51.3	1.222	2.162	10.6	18.8
12 7	2 30.94	+11 30.4	2.316	3.166	10.6	19.1	12 7	2 20.83	+22 29.2	1.273	2.153	15.4	19.0
12 17	2 26.96	+11 45.1	2.421	3.175	13.1	19.3	12 17	2 15.94	+23 8.1	1.345	2.145	19.4	19.3
116699	2004 CP ₉₈		11 7.8 197°41	0°3/ 8.0 18			361707	2007 VU ₂₅₁		11 7.8 321°65	7°0/ 4.3 18		
10 8	3 15.95	+19 2.9	2.297	3.155	10.9	20.9	10 8	3 1					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
311365	2005 <i>SM</i> ₉₉		11 7.8 229°03	2°8/ 9.8 17			410618	2008 <i>PP</i> ₅		11 7.8 18°80	8°6/14.9 17		
10 8	3 16.14	+26 0.6	2.139	2.981	12.3	21.4	10 8	3 17.09	+41 38.8	1.885	2.662	16.1	20.3
10 18	3 10.00	+25 58.9	2.064	2.978	9.2	21.2	10 18	3 11.18	+42 8.6	1.819	2.667	13.6	20.1
10 28	3 2.01	+25 43.8	2.013	2.975	5.8	20.9	10 28	3 2.81	+42 12.3	1.774	2.673	11.1	20.0
11 7	2 52.97	+25 15.9	1.989	2.972	3.0	20.8	11 7	2 53.06	+41 47.3	1.752	2.680	9.2	19.9
11 17	2 43.86	+24 37.9	1.994	2.969	4.0	20.8	11 17	2 43.31	+40 54.9	1.754	2.687	8.6	19.9
11 27	2 35.71	+23 54.3	2.029	2.965	7.3	21.0	11 27	2 34.95	+39 40.7	1.783	2.695	9.8	19.9
12 7	2 29.34	+23 10.7	2.090	2.962	10.6	21.2	12 7	2 29.03	+38 14.0	1.836	2.704	12.0	20.1
12 17	2 25.29	+22 32.2	2.174	2.958	13.5	21.4	12 17	2 26.09	+36 44.2	1.912	2.713	14.4	20.3
103134	1999 <i>XE</i> ₂₀₂		11 7.8 262°31	3°1/ 9.3 18			491090	2011 <i>SL</i> ₁₂		11 7.8 17°46	18°6/21.8 17		
10 8	3 20.80	+23 56.5	1.501	2.360	15.6	19.1	10 8	3 14.66	- 3 17.1	0.689	1.608	21.5	20.7
10 18	3 13.96	+24 16.0	1.431	2.355	11.6	18.8	10 18	3 10.38	-10 7.3	0.672	1.609	18.9	20.5
10 28	3 4.38	+24 20.7	1.382	2.350	7.1	18.6	10 28	3 2.59	-16 25.0	0.680	1.610	19.2	20.6
11 7	2 53.15	+24 10.1	1.360	2.345	3.4	18.3	11 7	2 53.06	-21 27.3	0.710	1.612	22.1	20.8
11 17	2 41.72	+23 46.6	1.365	2.340	5.1	18.4	11 17	2 43.86	-24 52.5	0.758	1.615	25.8	21.0
11 27	2 31.67	+23 15.7	1.396	2.335	9.6	18.7	11 27	2 36.96	-26 41.6	0.820	1.619	29.2	21.3
12 7	2 24.19	+22 44.8	1.452	2.330	13.9	18.9	12 7	2 33.51	-27 10.2	0.891	1.622	31.9	21.6
12 17	2 19.96	+22 20.3	1.529	2.325	17.6	19.2	12 17	2 33.92	-26 36.9	0.968	1.627	33.9	21.8
330918	2009 <i>SA</i> ₁₀₈		11 7.8 334°67	2°2/ 5.8 18			391543	2007 <i>SQ</i> ₁₉		11 7.8 160°50	2°9/ 9.4 18		
10 8	3 10.92	+15 25.8	1.806	2.688	12.2	19.5	10 8	3 21.36	+24 8.7	2.015	2.857	12.9	20.8
10 18	3 6.42	+13 50.5	1.734	2.677	8.5	19.2	10 18	3 13.79	+24 38.2	1.945	2.860	9.6	20.6
10 28	3 0.12	+12 4.9	1.688	2.667	4.6	19.0	10 28	3 4.10	+24 56.2	1.900	2.863	6.0	20.3
11 7	2 52.83	+10 16.0	1.669	2.657	2.3	18.8	11 7	2 53.19	+25 2.0	1.883	2.866	3.0	20.2
11 17	2 45.53	+ 8 32.0	1.680	2.647	5.5	19.0	11 17	2 42.19	+24 56.9	1.896	2.869	4.3	20.3
11 27	2 39.19	+ 7 1.0	1.718	2.639	9.6	19.2	11 27	2 32.26	+24 44.2	1.938	2.871	7.8	20.5
12 7	2 34.62	+ 5 49.1	1.782	2.630	13.3	19.4	12 7	2 24.35	+24 29.0	2.007	2.873	11.2	20.7
12 17	2 32.31	+ 4 58.9	1.866	2.623	16.3	19.6	12 17	2 19.04	+24 16.1	2.099	2.875	14.1	20.9
191211	2002 <i>QC</i> ₅₈		11 7.8 296°37	2°7/ 9.9 17			476895	2008 <i>WT</i> ₁₂		11 7.8 7°09	2°0/ 6.9 18		
10 8	3 14.52	+26 17.2	2.315	3.154	11.5	19.9	10 8	3 17.53	+12 13.2	1.305	2.195	15.4	20.6
10 18	3 8.75	+26 13.7	2.240	3.152	8.6	19.7	10 18	3 11.60	+12 9.3	1.249	2.195	10.9	20.4
10 28	3 1.31	+25 57.7	2.189	3.150	5.5	19.5	10 28	3 3.08	+12 2.4	1.217	2.196	5.9	20.1
11 7	2 52.93	+25 29.7	2.166	3.148	2.9	19.4	11 7	2 53.12	+11 56.1	1.208	2.198	2.0	19.9
11 17	2 44.50	+24 52.4	2.173	3.146	3.8	19.4	11 17	2 43.15	+11 54.2	1.227	2.201	5.9	20.1
11 27	2 36.95	+24 9.8	2.208	3.144	6.8	19.6	11 27	2 34.63	+12 0.8	1.270	2.204	10.9	20.4
12 7	2 31.01	+23 27.1	2.271	3.142	9.9	19.8	12 7	2 28.66	+12 18.7	1.336	2.208	15.3	20.7
12 17	2 27.19	+22 48.8	2.357	3.141	12.6	20.0	12 17	2 25.82	+12 48.9	1.421	2.213	18.9	21.0
164684	1997 <i>LS</i> ₄		11 7.8 229°97	1°8/ 6.4 18			189895	2003 <i>SD</i> ₄₀		11 7.8 347°09	7°9/13.7 17		
10 8	3 15.80	+13 17.3	2.045	2.917	11.5	21.0	10 8	3 17.31	+39 17.0	1.973	2.760	15.2	18.8
10 18	3 9.71	+12 35.7	1.971	2.909	8.1	20.8	10 18	3 11.35	+39 55.7	1.897	2.755	12.7	18.6
10 28	3 1.84	+11 48.9	1.922	2.900	4.3	20.5	10 28	3 2.96	+40 11.8	1.842	2.751	10.2	18.5
11 7	2 52.98	+11 1.0	1.902	2.890	1.8	20.3	11 7	2 53.12	+40 2.2	1.811	2.747	8.4	18.4
11 17	2 44.04	+10 16.5	1.911	2.880	4.8	20.5	11 17	2 43.10	+39 27.2	1.805	2.743	8.0	18.3
11 27	2 36.01	+ 9 40.2	1.949	2.870	8.6	20.7	11 27	2 34.26	+38 31.2	1.826	2.741	9.5	18.4
12 7	2 29.69	+ 9 15.8	2.013	2.860	12.0	20.9	12 7	2 27.70	+37 22.4	1.871	2.738	11.9	18.6
12 17	2 25.58	+ 9 5.1	2.098	2.849	15.0	21.1	12 17	2 24.05	+36 9.3	1.939	2.736	14.4	18.7
384362	2009 <i>UV</i> ₈₃		11 7.8 285°77	0°4/ 7.5 18			208515	2001 <i>XC</i> ₁₂₁		11 7.8 20°03	3°7/ 6.3 18		
10 8	3 16.19	+18 28.5	1.503	2.380	14.5	21.5	10 8	3 19.28	+10 0.0	1.059	1.957	17.5	19.8
10 18	3 10.53	+17 41.0	1.431	2.370	10.3	21.2	10 18	3 13.15	+ 9 38.3	1.011	1.960	12.4	19.5
10 28	3 2.47	+16 40.6	1.383	2.361	5.5	20.9	10 28	3 4.00	+ 9 15.6	0.985	1.964	6.9	19.2
11 7	2 53.03	+15 31.9	1.360	2.351	0.5	20.5	11 7	2 53.20	+ 8 57.8	0.981	1.968	3.7	19.1
11 17	2 43.49	+14 21.7	1.366	2.342	5.0	20.8	11 17	2 42.48	+ 8 50.5	1.002	1.973	7.6	19.3
11 27	2 35.19	+13 17.9	1.398	2.332	10.0	21.1	11 27	2 33.57	+ 8 58.3	1.047	1.979	12.9	19.6
12 7	2 29.19	+12 27.6	1.453	2.323	14.5	21.4	12 7	2 27.69	+ 9 23.1	1.112	1.985	17.7	19.9
12 17	2 26.09	+11 54.8	1.529	2.314	18.2	21.6	12 17	2 25.39	+10 4.4	1.194	1.992	21.5	20.2
81679	2000 <i>JB</i> ₄		11 7.8 132°40	0°1/ 7.7 18			167310	2003 <i>UP</i> ₂₃₈		11 7.8 230°60	0°4/ 8.1 18		
10 8	3 15.53	+18 20.2	2.150	3.012	11.4	20.2	10 8	3 16.22	+20 4.8	1.946	2.808	12.4	20.1
10 18	3 9.35	+17 43.8	2.089	3.021	8.0	20.0	10 18	3 10.15	+19 30.2	1.870	2.801	8.9	19.9
10 28	3 1.56	+16 59.3	2.054	3.030	4.3	19.7	10 28	3 2.15	+18 44.6	1.819	2.794	4.9	19.6
11 7	2 52.96	+16 9.8	2.047	3.038	0.3	19.4	11 7	2 53.07	+17 50.7	1.796	2.786	0.7	19.3
11 17	2 44.44	+15 19.4	2.071	3.046	3.7	19.7	11 17	2 43.93	+16 53.1	1.802	2.779	3.9	19.6
11 27	2 36.90	+14 33.1	2.123	3.054	7.4	20.0	11 27	2 35.79	+15 57.8	1.837	2.771	8.1	19.8
12 7	2 31.04	+13 54.9	2.203	3.061	10.7	20.2	12 7	2 29.51	+15 10.2	1.898	2.762	11.8	20.0
12 17	2 27.29	+13 27.9	2.305	3.068	13.4	20.4	12 17	2 25.62	+14 34.6	1.981	2.754	15.0	20.2
13610	Lilienthal		11 7.8 53°34	2°7/ 6.1 18			287673	2003 <i>PU</i> ₁		11 7.8 82°48	5°9/ 4.8 17		
10 8	3 16.52	+13 36.2	1.299	2.189	15.5	17.7	10 8	3 21.24	+ 5 15.8	1.312	2.198	15.7	20.6
10 18	3 10.63	+12 29.9	1.256	2.202	10.8	17.5	10 18	3 13.69	+ 4 8.8	1.284	2.224	11.3	20.4
10 28	3 2.40	+11 17.2	1.236	2.216	5.8	17.2	10 28	3 3.91	+ 3 7.1	1.280	2.250	7.3	20.2
11 7	2 53.03	+10 5.5	1.242	2.230	2.8	17.1	11 7	2 53.19	+ 2 18.5	1.301	2.275	6.0	20.2
11 17	2 43.90	+ 9 2.9	1.274	2.244	6.5	17.4	11 17	2 42.93	+ 1 49.0	1.348	2.300	8.7	20.5
11 27	2 36.34	+ 8 16.3	1.331	2.258	11.2	17.7	11 27	2 34.42	+ 1 41.7	1.421	2.325	12.5	20.7
12 7	2 31.27	+ 7 49.7	1.411	2.273	15.3	18.0	12 7	2 28.47	+ 1 56.4	1.515	2.349	16.0	21.0
12 17	2 29.11	+ 7 43.8	1.510	2.288	18.7	18.2	12 17	2 25.46	+ 2 30.5	1.628	2.372	18.9	21.3
267332	2001 <i>UT</i> ₁₈₂		11 7.8 63°43	2°3/ 6.6 18			351341	2005 <i>AY</i> ₅		11 7.8 349°80			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
113973	2002 <i>UP</i> ₁₅		11 7.8 31°51'	4.0°/ 5.1	18		161967	2007 <i>JE</i> ₂₈		11 7.8 171°51'	0.9°/ 7.1	18	
10 8	3 14.98	+ 7 40.4	1.728	2.611	12.6	19.7	10 8	3 14.71	+14 22.1	2.516	3.381	9.9	20.4
10 18	3 9.25	+ 6 50.8	1.673	2.613	9.0	19.5	10 18	3 8.68	+14 7.1	2.448	3.382	6.9	20.2
10 28	3 1.64	+ 6 1.7	1.642	2.616	5.5	19.3	10 28	3 1.25	+13 48.3	2.407	3.384	3.6	20.0
11 7	2 53.04	+ 5 18.7	1.639	2.618	4.1	19.2	11 7	2 53.06	+13 27.9	2.395	3.385	0.9	19.8
11 17	2 44.49	+ 4 46.8	1.663	2.621	6.7	19.4	11 17	2 44.86	+13 8.6	2.413	3.386	3.6	20.0
11 27	2 37.05	+ 4 30.2	1.714	2.624	10.3	19.6	11 27	2 37.42	+12 53.3	2.461	3.387	6.8	20.2
12 7	2 31.52	+ 4 30.6	1.789	2.627	13.7	19.8	12 7	2 31.38	+12 44.6	2.537	3.387	9.7	20.4
12 17	2 28.37	+ 4 47.9	1.883	2.631	16.5	20.1	12 17	2 27.17	+12 44.2	2.635	3.388	12.2	20.6
487399	2014 <i>QY</i> ₃₃₄		11 7.8 172°88'	3.9°/ 4.6	18		516340	2017 <i>BH</i> ₆₄		11 7.8 3°18'	4.1°/ 5.7	18	
10 8	3 12.90	+ 4 43.9	2.441	3.314	9.8	21.4	10 8	3 16.12	+ 6 57.2	1.556	2.442	13.6	20.1
10 18	3 7.38	+ 4 2.8	2.381	3.314	7.1	21.2	10 18	3 10.27	+ 6 37.2	1.500	2.442	9.8	19.9
10 28	3 0.52	+ 3 24.3	2.348	3.315	4.7	21.1	10 28	3 2.29	+ 6 19.6	1.467	2.442	5.9	19.6
11 7	2 52.96	+ 2 52.2	2.344	3.315	4.0	21.0	11 7	2 53.14	+ 6 9.0	1.460	2.442	4.1	19.5
11 17	2 45.42	+ 2 30.0	2.368	3.316	5.8	21.1	11 17	2 43.99	+ 6 9.3	1.481	2.443	6.8	19.7
11 27	2 38.63	+ 2 20.2	2.421	3.316	8.4	21.3	11 27	2 36.04	+ 6 23.3	1.527	2.445	10.7	19.9
12 7	2 33.21	+ 2 24.1	2.500	3.316	11.0	21.5	12 7	2 30.22	+ 6 52.0	1.597	2.448	14.4	20.2
12 17	2 29.54	+ 2 41.4	2.600	3.316	13.2	21.6	12 17	2 27.05	+ 7 34.7	1.687	2.451	17.5	20.4
34129	Madisonsneve		11 7.8 62°28'	0.6°/ 8.2	18		30611	2627 <i>P-L</i>		11 7.8 345°37'	1.7°/ 8.7	18	
10 8	3 15.61	+19 45.9	1.902	2.767	12.5	18.9	10 8	3 16.61	+20 47.1	1.553	2.423	14.5	18.5
10 18	3 9.65	+19 27.6	1.841	2.773	8.9	18.6	10 18	3 10.89	+20 59.7	1.484	2.417	10.6	18.2
10 28	3 1.84	+18 59.6	1.805	2.780	4.9	18.4	10 28	3 2.75	+21 1.3	1.438	2.412	6.1	18.0
11 7	2 53.06	+18 24.4	1.796	2.786	0.8	18.1	11 7	2 53.18	+20 52.6	1.418	2.407	1.9	17.7
11 17	2 44.32	+17 45.8	1.816	2.793	3.8	18.4	11 17	2 43.45	+20 36.3	1.424	2.402	4.5	17.9
11 27	2 36.66	+17 8.8	1.864	2.800	7.9	18.6	11 27	2 34.93	+20 17.3	1.458	2.399	9.1	18.1
12 7	2 30.87	+16 38.1	1.938	2.807	11.4	18.9	12 7	2 28.69	+20 1.0	1.515	2.396	13.3	18.4
12 17	2 27.44	+16 17.2	2.034	2.814	14.4	19.1	12 17	2 25.37	+19 52.1	1.594	2.393	16.9	18.6
319298	2006 <i>BK</i> ₁₀₉		11 7.8 128°54'	3.8°/10.9	18		135960	2002 <i>TW</i> ₂₅₈		11 7.8 55°61'	2.0°/ 6.5	18	
10 8	3 16.35	+29 55.0	2.377	3.198	11.8	20.8	10 8	3 15.67	+12 56.2	1.708	2.588	12.9	19.7
10 18	3 10.05	+30 2.9	2.305	3.203	9.1	20.7	10 18	3 9.76	+12 19.2	1.655	2.596	9.0	19.5
10 28	3 2.04	+29 56.2	2.259	3.207	6.3	20.5	10 28	3 1.93	+11 38.0	1.626	2.604	4.8	19.2
11 7	2 53.09	+29 35.1	2.239	3.212	4.1	20.4	11 7	2 53.11	+10 57.0	1.624	2.612	2.0	19.1
11 17	2 44.11	+29 1.3	2.249	3.216	4.4	20.4	11 17	2 44.38	+10 21.1	1.650	2.620	5.2	19.3
11 27	2 36.06	+28 18.9	2.288	3.220	6.8	20.5	11 27	2 36.81	+ 9 54.9	1.703	2.628	9.3	19.6
12 7	2 29.71	+27 33.3	2.355	3.225	9.6	20.7	12 7	2 31.23	+ 9 41.8	1.781	2.637	12.9	19.8
12 17	2 25.53	+26 49.7	2.445	3.229	12.2	20.9	12 17	2 28.10	+ 9 43.0	1.879	2.645	15.9	20.0
407632	2011 <i>CZ</i> ₉₁		11 7.8 156°73'	3.9°/ 4.3	18		331468	2012 <i>JB</i>		11 7.8 197°71'	0.8°/ 7.2	17	
10 8	3 12.12	+ 5 43.0	2.359	3.235	10.0	21.2	10 8	3 15.58	+13 37.2	2.721	3.582	9.3	21.3
10 18	3 6.87	+ 4 46.2	2.301	3.236	7.2	21.0	10 18	3 9.25	+13 34.2	2.647	3.579	6.5	21.1
10 28	3 0.26	+ 3 51.0	2.268	3.237	4.7	20.8	10 28	3 1.54	+13 28.5	2.600	3.577	3.5	20.9
11 7	2 52.95	+ 3 1.8	2.265	3.237	4.0	20.8	11 7	2 53.09	+13 21.6	2.584	3.574	0.8	20.7
11 17	2 45.66	+ 2 22.9	2.290	3.238	5.9	20.9	11 17	2 44.58	+13 15.6	2.598	3.570	3.4	20.9
11 27	2 39.15	+ 1 57.5	2.344	3.239	8.7	21.1	11 27	2 36.76	+13 12.7	2.643	3.567	6.5	21.1
12 7	2 34.02	+ 1 47.3	2.422	3.239	11.3	21.3	12 7	2 30.25	+13 15.2	2.715	3.563	9.3	21.2
12 17	2 30.68	+ 1 52.2	2.522	3.240	13.5	21.4	12 17	2 25.48	+13 24.3	2.812	3.559	11.6	21.4
453547	2009 <i>WB</i> ₁₈₆		11 7.8 348°64'	16.0°/28.7	18		286860	2002 <i>NV</i> ₇₂		11 7.8 305°37'	9.0°/31.2	18	
10 8	3 13.43	-20 57.2	1.412	2.246	17.8	19.1	10 8	3 13.12	-10 25.2	2.175	3.025	11.8	20.0
10 18	3 8.60	-22 8.6	1.371	2.231	16.6	19.0	10 18	3 7.70	-11 32.7	2.126	3.018	10.0	19.9
10 28	3 1.45	-22 48.1	1.348	2.217	16.0	18.9	10 28	3 0.77	-12 26.0	2.100	3.011	9.1	19.8
11 7	2 53.05	-22 46.9	1.345	2.205	16.5	18.9	11 7	2 53.03	-12 59.0	2.100	3.004	9.3	19.8
11 17	2 44.68	-22 0.8	1.361	2.194	17.7	19.0	11 17	2 45.30	-13 8.0	2.126	2.997	10.6	19.9
11 27	2 37.63	-20 30.9	1.395	2.185	19.5	19.1	11 27	2 38.42	-12 51.5	2.175	2.990	12.5	20.0
12 7	2 32.87	-18 23.9	1.446	2.178	21.4	19.2	12 7	2 33.06	-12 11.2	2.245	2.984	14.5	20.1
12 17	2 30.92	-15 48.8	1.512	2.173	23.2	19.4	12 17	2 29.66	-11 10.4	2.334	2.977	16.2	20.3
284745	2008 <i>US</i> ₂₄₀		11 7.8 94°96'	2.9°/ 9.7	18		291182	2006 <i>AV</i> ₄₅		11 7.8 123°21'	1.9°/ 6.3	18	
10 8	3 20.22	+25 32.5	1.739	2.586	14.4	20.5	10 8	3 13.88	+11 59.3	2.278	3.150	10.4	21.0
10 18	3 13.01	+25 29.8	1.686	2.604	10.6	20.3	10 18	3 8.17	+11 24.2	2.218	3.155	7.3	20.9
10 28	3 3.65	+25 11.6	1.657	2.622	6.5	20.1	10 28	3 0.99	+10 46.4	2.184	3.160	4.0	20.7
11 7	2 53.22	+24 38.9	1.655	2.639	3.2	19.9	11 7	2 53.05	+10 9.3	2.178	3.165	1.9	20.5
11 17	2 42.96	+23 55.6	1.681	2.657	4.4	20.0	11 17	2 45.15	+ 9 36.6	2.202	3.170	4.4	20.7
11 27	2 34.09	+23 7.6	1.736	2.673	8.2	20.3	11 27	2 38.10	+ 9 11.9	2.255	3.174	7.7	20.9
12 7	2 27.49	+22 21.8	1.816	2.690	11.8	20.6	12 7	2 32.55	+ 8 57.6	2.335	3.179	10.7	21.1
12 17	2 23.64	+21 43.5	1.919	2.706	14.9	20.8	12 17	2 28.91	+ 8 55.1	2.436	3.183	13.2	21.3
213305	2001 <i>RD</i> ₅₀		11 7.8 15°00'	0.3°/ 7.6	18		432968	2012 <i>KU</i> ₁₄		11 7.8 92°78'	3.5°/ 6.1	16	
10 8	3 12.95	+19 17.6	1.482	2.364	14.4	19.3	10 8	3 21.17	+ 9 12.3	1.460	2.340	14.7	21.8
10 18	3 8.12	+18 18.7	1.426	2.367	10.2	19.1	10 18	3 13.71	+ 8 42.1	1.418	2.358	10.3	21.6
10 28	3 1.13	+17 6.8	1.393	2.372	5.4	18.8	10 28	3 4.03	+ 8 12.0	1.400	2.376	5.9	21.4
11 7	2 53.03	+15 47.6	1.386	2.377	0.4	18.5	11 7	2 53.28	+ 7 46.8	1.409	2.394	3.5	21.3
11 17	2 45.02	+14 28.5	1.407	2.383	4.8	18.8	11 17	2 42.79	+ 7 31.1	1.446	2.411	6.6	21.5
11 27	2 38.31	+13 17.7	1.453	2.390	9.5	19.1	11 27	2 33.84	+ 7 28.6	1.509	2.428	10.7	21.8
12 7	2 33.78	+12 21.7	1.524	2.398	13.7	19.4	12 7	2 27.32	+ 7 40.9	1.595	2.445	14.5	22.1
12 17	2 31.90	+11 44.0	1.615	2.406	17.1	19.7	12 17	2 23.67	+ 8 7.8	1.702	2.461	17.6	22.3
124047	2001 <i>FP</i> ₁₄₃		11 7.8 82°23'	0.8°/ 7.3	18		77286	2001 <i>FR</i> ₆₅		11 7.8 143°85'	0.2°		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
376390	2012 <i>DG</i> ₉₀		11 7.8 142°16'	8°3/15.5	18		262287	2006 <i>SY</i> ₃₇₈		11 7.8 189°70'	6°0/2.9	18	
10 8	3 25.02	+43 43.5	1.818	2.575	17.3	20.3	10 8	3 14.49	- 0 35.2	2.202	3.071	10.9	21.3
10 18	3 16.66	+43 20.7	1.748	2.586	14.6	20.1	10 18	3 8.62	- 1 38.8	2.147	3.071	8.4	21.2
10 28	3 5.66	+42 25.4	1.698	2.596	11.6	19.9	10 28	3 1.26	- 2 35.8	2.118	3.070	6.4	21.1
11 7	2 53.40	+40 55.9	1.672	2.606	9.1	19.8	11 7	2 53.11	- 3 20.8	2.117	3.069	6.2	21.0
11 17	2 41.50	+38 55.9	1.674	2.615	8.3	19.8	11 17	2 44.99	- 3 49.4	2.144	3.067	7.9	21.1
11 27	2 31.46	+36 35.3	1.704	2.623	9.7	19.9	11 27	2 37.72	- 3 59.1	2.198	3.065	10.4	21.3
12 7	2 24.29	+34 7.5	1.761	2.630	12.4	20.1	12 7	2 31.98	- 3 49.4	2.275	3.063	12.9	21.5
12 17	2 20.39	+31 44.9	1.843	2.637	15.2	20.3	12 17	2 28.19	- 3 22.0	2.372	3.060	15.0	21.6
418610	2008 <i>SV</i> ₂₈₆		11 7.8 72°84'	3°0/10.7	18		267980	2004 <i>GX</i> ₃		11 7.8 138°95'	1°2/8.5	18	
10 8	3 14.06	+29 10.6	2.303	3.132	11.9	20.5	10 8	3 19.95	+20 33.5	1.610	2.474	14.4	20.9
10 18	3 8.36	+28 36.1	2.237	3.143	9.0	20.3	10 18	3 13.05	+20 25.3	1.548	2.479	10.4	20.7
10 28	3 1.10	+27 46.0	2.197	3.154	5.9	20.2	10 28	3 3.82	+20 5.2	1.510	2.484	5.8	20.4
11 7	2 53.07	+26 42.0	2.185	3.164	3.3	20.0	11 7	2 53.31	+19 35.3	1.498	2.488	1.4	20.1
11 17	2 45.15	+25 28.3	2.202	3.175	3.8	20.1	11 17	2 42.81	+18 59.5	1.515	2.493	4.4	20.4
11 27	2 38.21	+24 10.6	2.249	3.186	6.6	20.3	11 27	2 33.65	+18 23.5	1.559	2.496	9.0	20.7
12 7	2 32.95	+22 55.1	2.323	3.197	9.6	20.5	12 7	2 26.82	+17 53.3	1.628	2.500	13.1	20.9
12 17	2 29.75	+21 47.1	2.422	3.208	12.2	20.7	12 17	2 22.86	+17 33.2	1.719	2.503	16.5	21.2
131562	2001 <i>VR</i> ₄₂		11 7.8 35°03'	1°6/8.5	18		279151	2009 <i>SD</i> ₄₉		11 7.8 19°69'	6°1/11.9	17	
10 8	3 18.52	+21 2.8	0.854	1.753	20.5	18.4	10 8	3 15.86	+32 20.0	1.564	2.400	16.2	19.7
10 18	3 12.87	+20 52.5	0.824	1.771	14.7	18.1	10 18	3 10.39	+32 45.7	1.509	2.410	12.8	19.6
10 28	3 3.86	+20 23.5	0.813	1.791	8.2	17.9	10 28	3 2.46	+32 49.2	1.475	2.421	9.3	19.4
11 7	2 53.27	+19 40.5	0.823	1.813	1.9	17.6	11 7	2 53.20	+32 29.6	1.466	2.433	6.5	19.3
11 17	2 43.15	+18 51.2	0.855	1.836	5.9	17.9	11 17	2 43.98	+31 49.3	1.482	2.446	6.6	19.3
11 27	2 35.40	+18 6.1	0.910	1.859	11.9	18.4	11 27	2 36.19	+30 54.9	1.524	2.460	9.2	19.5
12 7	2 31.13	+17 33.3	0.985	1.884	17.0	18.7	12 7	2 30.87	+29 55.2	1.590	2.475	12.5	19.7
12 17	2 30.66	+17 17.0	1.078	1.909	21.1	19.1	12 17	2 28.53	+28 58.2	1.678	2.491	15.6	20.0
121693	1999 <i>XF</i> ₆₆		11 7.8 318°77'	2°9/6.2	17		25606	Chiangshenghao		11 7.8 137°76'	0°9/7.3	18	
10 8	3 15.29	+ 9 12.7	1.765	2.646	12.5	19.2	10 8	3 21.29	+14 38.9	1.602	2.474	14.1	18.3
10 18	3 9.77	+ 8 58.8	1.681	2.622	8.9	18.9	10 18	3 13.92	+14 33.1	1.544	2.481	9.9	18.1
10 28	3 2.13	+ 8 44.7	1.623	2.599	5.1	18.7	10 28	3 4.25	+14 21.7	1.510	2.487	5.3	17.8
11 7	2 53.17	+ 8 34.1	1.591	2.576	3.0	18.5	11 7	2 53.34	+14 7.5	1.503	2.493	0.9	17.5
11 17	2 43.93	+ 8 30.5	1.587	2.554	5.9	18.6	11 17	2 42.47	+13 53.9	1.524	2.499	4.9	17.8
11 27	2 35.57	+ 8 37.5	1.610	2.532	10.0	18.8	11 27	2 32.93	+13 45.2	1.573	2.504	9.5	18.1
12 7	2 29.08	+ 8 57.1	1.657	2.511	13.8	19.0	12 7	2 25.71	+13 44.9	1.647	2.509	13.5	18.4
12 17	2 25.11	+ 9 30.2	1.724	2.490	17.2	19.2	12 17	2 21.35	+13 55.3	1.742	2.514	16.8	18.6
223351	2003 <i>RQ</i> ₁₇		11 7.8 344°42'	0°5/7.4	18		498411	2007 <i>YB</i> ₇₁		11 7.8 339°70'	9°8/13.1	17	
10 8	3 12.63	+18 3.7	2.063	2.932	11.5	19.7	10 8	3 16.73	+37 25.7	1.379	2.201	18.8	20.2
10 18	3 7.49	+17 11.5	1.994	2.930	8.1	19.5	10 18	3 11.85	+38 27.5	1.303	2.186	15.7	19.9
10 28	3 0.71	+16 10.3	1.951	2.928	4.3	19.3	10 28	3 3.67	+39 2.7	1.246	2.172	12.6	19.7
11 7	2 53.05	+15 4.0	1.936	2.927	0.5	19.0	11 7	2 53.32	+39 5.6	1.211	2.158	10.3	19.5
11 17	2 45.41	+13 57.6	1.950	2.925	4.0	19.2	11 17	2 42.48	+38 34.6	1.198	2.147	10.0	19.5
11 27	2 38.68	+12 57.1	1.993	2.924	7.8	19.5	11 27	2 33.12	+37 35.2	1.209	2.136	12.1	19.6
12 7	2 33.60	+12 7.0	2.062	2.923	11.2	19.7	12 7	2 26.81	+36 18.6	1.242	2.126	15.3	19.8
12 17	2 30.60	+11 30.6	2.154	2.922	14.1	19.9	12 17	2 24.39	+34 57.1	1.294	2.118	18.7	19.9
453038	2007 <i>RH</i> ₃₂₂		11 7.8 250°36'	1°6/6.2	18		278534	2008 <i>EZ</i> ₆₉		11 7.8 300°72'	3°9/4.9	18	
10 8	3 11.29	+12 41.2	2.770	3.639	8.9	21.4	10 8	3 14.11	+ 7 20.9	1.923	2.803	11.7	20.0
10 18	3 6.24	+11 55.0	2.692	3.629	6.2	21.2	10 18	3 8.59	+ 6 30.7	1.860	2.799	8.4	19.8
10 28	2 59.96	+11 5.2	2.642	3.619	3.4	21.0	10 28	3 1.33	+ 5 40.8	1.822	2.794	5.2	19.6
11 7	2 53.00	+10 15.1	2.622	3.608	1.7	20.9	11 7	2 53.12	+ 4 56.4	1.811	2.789	4.0	19.5
11 17	2 46.01	+ 9 28.2	2.631	3.598	3.9	21.0	11 17	2 44.89	+ 4 22.3	1.829	2.785	6.4	19.6
11 27	2 39.64	+ 8 48.1	2.671	3.587	6.8	21.2	11 27	2 37.60	+ 4 2.5	1.874	2.781	9.8	19.8
12 7	2 34.45	+ 8 17.6	2.738	3.577	9.5	21.4	12 7	2 32.02	+ 3 59.0	1.943	2.776	13.0	20.0
12 17	2 30.85	+ 7 58.5	2.827	3.566	11.8	21.5	12 17	2 28.64	+ 4 11.9	2.033	2.772	15.7	20.2
200202	1999 <i>RZ</i> ₂₅₁		11 7.8 5°43'	4°7/11.1	18		476730	2008 <i>UR</i> ₃₂		11 7.8 26°76'	0°8/7.5	16	
10 8	3 13.76	+30 32.8	1.294	2.151	17.7	18.7	10 8	3 19.54	+13 54.4	1.193	2.082	16.6	20.7
10 18	3 9.20	+30 1.3	1.232	2.151	13.6	18.5	10 18	3 13.13	+14 13.1	1.148	2.093	11.7	20.4
10 28	3 1.91	+29 2.2	1.191	2.152	9.1	18.3	10 28	3 3.95	+14 27.3	1.125	2.105	6.2	20.2
11 7	2 53.15	+27 37.8	1.173	2.153	5.2	18.0	11 7	2 53.33	+14 38.9	1.127	2.117	0.9	19.8
11 17	2 44.44	+25 54.9	1.181	2.156	5.7	18.1	11 17	2 42.83	+14 50.6	1.154	2.131	5.5	20.2
11 27	2 37.33	+24 5.2	1.214	2.160	9.8	18.3	11 27	2 34.05	+15 6.1	1.206	2.146	10.8	20.5
12 7	2 32.92	+22 21.0	1.270	2.165	14.3	18.6	12 7	2 28.08	+15 28.5	1.281	2.161	15.3	20.9
12 17	2 31.70	+20 51.7	1.348	2.171	18.1	18.9	12 17	2 25.45	+15 59.7	1.375	2.177	19.0	21.1
97770	2000 <i>JJ</i> ₇₂		11 7.8 25°14'	6°7/4.6	18		144972	2005 <i>EM</i> ₁₁₉		11 7.8 99°75'	1°7/8.7	17	R
10 8	3 14.94	+ 2 32.4	1.284	2.178	15.3	17.7	10 8	3 22.80	+21 1.0	1.467	2.330	15.6	20.0
10 18	3 9.50	+ 1 47.2	1.251	2.193	11.3	17.5	10 18	3 15.12	+21 6.7	1.416	2.346	11.3	19.8
10 28	3 1.85	+ 1 10.7	1.240	2.208	7.8	17.3	10 28	3 4.92	+20 59.7	1.388	2.361	6.4	19.6
11 7	2 53.14	+ 0 49.7	1.254	2.225	6.8	17.3	11 7	2 53.40	+20 41.3	1.387	2.376	1.9	19.3
11 17	2 44.69	+ 0 48.8	1.292	2.242	9.2	17.5	11 17	2 42.05	+20 15.1	1.413	2.390	4.7	19.5
11 27	2 37.73	+ 1 9.8	1.354	2.261	12.8	17.8	11 27	2 32.30	+19 47.0	1.466	2.404	9.4	19.9
12 7	2 33.14	+ 1 51.4	1.438	2.281	16.2	18.1	12 7	2 25.17	+19 23.3	1.544	2.418	13.5	20.1
12 17	2 31.32	+ 2 50.4	1.540	2.302	19.1	18.3	12 17	2 21.18	+19 8.4	1.644	2.431	17.0	20.4
115002	2003 <i>QG</i> ₇₅		11 7.8 90°20'	2°6/9.3	18		410998	2009 <i>UD</i> ₄₄		11 7.8 348°78'	0°7/7.3		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
66386	1999 <i>JJ</i> ₁₃₄		11 7.8 64° 97'	3° 0'	6.2	18	26870	2006 <i>FS</i> ₇		11 7.8 258° 98'	0° 7'	7.3	17
10 8	3 19.39	+13 14.4	1.181	2.073	16.6	18.9	10 8	3 13.57	+15 51.4	2.422	3.287	10.2	21.4
10 18	3 12.72	+12 7.5	1.148	2.094	11.5	18.7	10 18	3 8.05	+15 24.7	2.342	3.277	7.2	21.2
10 28	3 3.57	+10 55.2	1.137	2.116	6.2	18.5	10 28	3 1.03	+14 52.3	2.289	3.266	3.8	20.9
11 7	2 53.30	+ 9 45.4	1.151	2.138	3.0	18.4	11 7	2 53.17	+14 17.0	2.265	3.256	0.7	20.7
11 17	2 43.45	+ 8 46.4	1.191	2.161	6.9	18.7	11 17	2 45.23	+13 41.8	2.271	3.245	3.6	20.9
11 27	2 35.44	+ 8 5.2	1.256	2.183	11.7	19.0	11 27	2 38.02	+13 10.6	2.307	3.234	7.1	21.1
12 7	2 30.15	+ 7 44.8	1.343	2.205	15.9	19.3	12 7	2 32.22	+12 46.8	2.369	3.223	10.2	21.3
12 17	2 27.98	+ 7 45.5	1.448	2.227	19.3	19.6	12 17	2 28.30	+12 32.7	2.454	3.212	12.8	21.4
205181	2000 <i>CS</i> ₈₂		11 7.8 186° 40'	1° 2'	8.8	18	133080	2003 <i>KZ</i> ₉		11 7.8 173° 17'	2° 3'	6.3	18
10 8	3 16.99	+21 51.3	2.280	3.130	11.3	21.0	10 8	3 19.48	+13 48.5	1.636	2.511	13.7	20.2
10 18	3 10.50	+21 35.8	2.206	3.129	8.2	20.8	10 18	3 12.59	+12 45.8	1.575	2.514	9.6	19.9
10 28	3 2.32	+21 10.2	2.158	3.129	4.7	20.6	10 28	3 3.55	+11 36.1	1.539	2.516	5.2	19.7
11 7	2 53.22	+20 36.0	2.139	3.128	1.4	20.3	11 7	2 53.37	+10 25.3	1.531	2.518	2.3	19.5
11 17	2 44.09	+19 56.3	2.149	3.126	3.4	20.5	11 17	2 43.25	+ 9 20.0	1.551	2.520	5.8	19.7
11 27	2 35.86	+19 15.5	2.190	3.124	7.0	20.7	11 27	2 34.42	+ 8 27.1	1.599	2.520	10.1	20.0
12 7	2 29.29	+18 38.2	2.257	3.121	10.2	20.9	12 7	2 27.78	+ 7 51.1	1.672	2.520	14.0	20.2
12 17	2 24.85	+18 8.3	2.349	3.118	13.0	21.1	12 17	2 23.84	+ 7 33.6	1.765	2.519	17.2	20.4
280549	2004 <i>RJ</i> ₂₀₃		11 7.8 115° 96'	3° 1'	9.8	18	380536	2004 <i>HB</i> ₄₉		11 7.8 189° 02'	0° 1'	7.8	18
10 8	3 20.62	+25 38.3	1.764	2.610	14.3	20.7	10 8	3 19.48	+17 39.8	1.809	2.674	13.1	21.9
10 18	3 13.39	+25 42.8	1.705	2.622	10.6	20.5	10 18	3 12.57	+17 18.6	1.740	2.674	9.3	21.7
10 28	3 3.96	+25 32.1	1.669	2.633	6.6	20.3	10 28	3 3.55	+16 48.7	1.696	2.673	5.0	21.4
11 7	2 53.35	+25 6.6	1.661	2.644	3.3	20.1	11 7	2 53.37	+16 12.8	1.680	2.671	0.4	21.0
11 17	2 42.81	+24 29.5	1.681	2.655	4.5	20.2	11 17	2 43.15	+15 35.0	1.693	2.669	4.3	21.4
11 27	2 33.60	+23 46.4	1.729	2.666	8.3	20.5	11 27	2 34.07	+15 0.5	1.735	2.666	8.7	21.6
12 7	2 26.66	+23 4.2	1.802	2.676	11.9	20.7	12 7	2 27.04	+14 34.1	1.802	2.663	12.5	21.9
12 17	2 22.49	+22 28.3	1.899	2.686	15.0	21.0	12 17	2 22.60	+14 19.1	1.891	2.660	15.7	22.1
149893	2005 <i>RD</i> ₃₀		11 7.8 23° 30'	4° 9'	5.2	18	31150	1997 <i>UT</i> ₂₀		11 7.8 165° 46'	0° 3'	7.9	18
10 8	3 14.51	+ 9 24.1	1.099	2.002	16.5	18.8	10 8	3 20.49	+17 32.1	1.768	2.633	13.3	18.8
10 18	3 9.58	+ 8 14.2	1.059	2.010	11.7	18.6	10 18	3 13.32	+17 34.9	1.703	2.635	9.5	18.6
10 28	3 2.05	+ 7 3.2	1.041	2.019	6.9	18.3	10 28	3 3.98	+17 30.0	1.662	2.637	5.1	18.3
11 7	2 53.20	+ 6 0.2	1.047	2.029	5.0	18.3	11 7	2 53.41	+17 19.1	1.649	2.639	0.6	18.0
11 17	2 44.56	+ 5 13.8	1.076	2.041	8.4	18.5	11 17	2 42.79	+17 5.0	1.664	2.641	4.2	18.3
11 27	2 37.58	+ 4 50.0	1.129	2.053	13.1	18.8	11 27	2 33.36	+16 51.9	1.709	2.642	8.6	18.6
12 7	2 33.27	+ 4 50.6	1.202	2.066	17.3	19.1	12 7	2 26.05	+16 43.8	1.778	2.643	12.5	18.8
12 17	2 32.08	+ 5 14.0	1.293	2.080	20.8	19.4	12 17	2 21.44	+16 44.1	1.870	2.644	15.7	19.0
410919	2009 <i>SF</i> ₂₀₄		11 7.8 12° 84'	1° 6'	6.5	18	58677	1997 <i>YJ</i> ₁₇		11 7.8 210° 07'	0° 9'	8.3	18
10 8	3 12.15	+15 37.0	1.892	2.770	12.0	20.1	10 8	3 19.64	+20 22.1	1.455	2.325	15.3	19.5
10 18	3 7.22	+14 27.3	1.831	2.772	8.3	19.9	10 18	3 13.10	+20 0.4	1.389	2.324	11.0	19.2
10 28	3 0.59	+13 9.8	1.796	2.774	4.4	19.7	10 28	3 3.98	+19 25.2	1.346	2.322	6.1	19.0
11 7	2 53.09	+11 50.0	1.788	2.777	1.6	19.5	11 7	2 53.41	+18 39.2	1.329	2.320	1.1	18.6
11 17	2 45.65	+10 34.2	1.809	2.780	4.8	19.7	11 17	2 42.78	+17 47.8	1.340	2.317	4.8	18.9
11 27	2 39.20	+ 9 28.7	1.858	2.783	8.7	20.0	11 27	2 33.55	+16 58.1	1.377	2.315	9.8	19.2
12 7	2 34.48	+ 8 38.1	1.933	2.787	12.1	20.2	12 7	2 26.83	+16 17.2	1.438	2.312	14.3	19.4
12 17	2 31.92	+ 8 4.7	2.029	2.791	15.0	20.4	12 17	2 23.22	+15 49.9	1.519	2.309	18.0	19.7
193461	2000 <i>XZ</i> ₆		11 7.8 345° 91'	1° 4'	8.2	18	223131	2002 <i>VE</i> ₇₅		11 7.8 296° 82'	3° 0'	6.5	18
10 8	3 15.95	+16 23.1	1.011	1.911	17.9	19.0	10 8	3 19.87	+ 9 57.9	1.426	2.309	14.8	19.7
10 18	3 11.51	+17 20.9	0.943	1.892	13.1	18.6	10 18	3 13.29	+ 9 47.2	1.359	2.301	10.5	19.4
10 28	3 3.61	+18 14.7	0.896	1.876	7.3	18.3	10 28	3 4.13	+ 9 35.8	1.316	2.293	5.9	19.2
11 7	2 53.38	+19 3.4	0.871	1.861	1.6	17.9	11 7	2 53.44	+ 9 27.7	1.298	2.285	3.0	19.0
11 17	2 42.57	+19 46.2	0.868	1.848	5.9	18.1	11 17	2 42.58	+ 9 26.7	1.308	2.278	6.4	19.2
11 27	2 33.28	+20 25.4	0.889	1.838	12.1	18.4	11 27	2 33.02	+ 9 36.8	1.343	2.270	11.1	19.4
12 7	2 27.17	+21 4.8	0.930	1.830	17.6	18.7	12 7	2 25.90	+10 0.0	1.402	2.262	15.5	19.7
12 17	2 25.15	+21 48.0	0.988	1.824	22.3	18.9	12 17	2 21.86	+10 36.9	1.480	2.255	19.1	19.9
513911	2013 <i>YF</i> ₁₁₇		11 7.8 248° 65'	0° 2'	7.9	18	41332	1999 <i>XM</i> ₂₃₃		11 7.8 243° 52'	7° 6'	1.5	18
10 8	3 18.35	+18 32.3	1.757	2.624	13.3	22.1	10 8	3 13.38	- 6 9.2	2.242	3.102	11.1	18.8
10 18	3 11.94	+18 14.4	1.679	2.613	9.5	21.8	10 18	3 7.86	- 7 14.5	2.192	3.100	9.0	18.7
10 28	3 3.30	+17 46.6	1.625	2.601	5.2	21.6	10 28	3 0.90	- 8 9.0	2.166	3.097	7.7	18.6
11 7	2 53.34	+17 11.4	1.599	2.590	0.5	21.2	11 7	2 53.18	- 8 47.1	2.168	3.094	7.8	18.6
11 17	2 43.20	+16 32.8	1.601	2.578	4.3	21.5	11 17	2 45.48	- 9 4.9	2.196	3.091	9.2	18.7
11 27	2 34.14	+15 56.1	1.632	2.566	8.9	21.7	11 27	2 38.60	- 9 0.6	2.249	3.088	11.3	18.8
12 7	2 27.14	+15 26.9	1.687	2.553	13.0	21.9	12 7	2 33.20	- 8 35.0	2.325	3.085	13.4	19.0
12 17	2 22.83	+15 9.0	1.764	2.541	16.4	22.1	12 17	2 29.70	- 7 50.4	2.420	3.082	15.3	19.1
147439	2003 <i>WK</i> ₁₀₆		11 7.8 346° 46'	2° 5'	7.9	18	60379	2000 <i>AL</i> ₁₆₇		11 7.8 84° 90'	1° 9'	9.6	18
10 8	3 33.31	+12 31.2	0.985	1.867	20.0	17.9	10 8	3 14.12	+25 34.1	2.266	3.109	11.6	18.9
10 18	3 24.51	+15 10.6	0.915	1.854	14.6	17.6	10 18	3 8.42	+24 52.6	2.203	3.120	8.5	18.8
10 28	3 10.98	+18 2.7	0.867	1.844	8.3	17.2	10 28	3 1.19	+23 57.6	2.165	3.131	5.1	18.6
11 7	2 53.99	+20 56.8	0.845	1.834	2.6	16.8	11 7	2 53.20	+22 51.7	2.155	3.142	2.1	18.4
11 17	2 35.84	+23 38.9	0.851	1.827	7.2	17.1	11 17	2 45.32	+21 39.4	2.176	3.152	3.4	18.5
11 27	2 19.43	+26 0.0	0.883	1.821	13.8	17.4	11 27	2 38.40	+20 26.4	2.226	3.163	6.7	18.7
12 7	2 7.10	+27 59.5	0.938	1.817	19.6	17.7	12 7	2 33.12	+19 18.3	2.303	3.173	9.8	19.0
12 17	2 0.05	+29 42.7	1.010	1.815	24.1	18.0	12 17	2 29.88	+18 19.7	2.405	3.184	12.5	19.2
85231	1993 <i>FR</i> ₅₂		11 7.8 269° 43'	2° 6'	6.2	18	517508	2014 <i>QC</i> ₄₃₀ </					

EPHEMERIDES

11 7.8

11 7.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
523566	2018 CS ₁₁	11	7.8 154°75	1°9/ 6.4	18		439797	2015 HF ₇₃	11	7.9 219°59	0°8/ 7.4	18	
10 8	3 16.77	+13 26.0	1.981	2.852	11.8	22.0	10 8	3 19.83	+15 48.2	1.758	2.626	13.2	22.3
10 18	3 10.39	+12 36.0	1.921	2.859	8.3	21.8	10 18	3 12.94	+15 25.9	1.683	2.619	9.4	22.0
10 28	3 2.29	+11 41.0	1.887	2.864	4.4	21.6	10 28	3 3.84	+14 56.4	1.634	2.611	5.0	21.8
11 7	2 53.29	+10 45.5	1.881	2.869	1.9	21.4	11 7	2 53.46	+14 22.5	1.612	2.603	0.8	21.5
11 17	2 44.37	+9 54.6	1.905	2.874	4.9	21.6	11 17	2 42.95	+13 48.4	1.620	2.594	4.7	21.7
11 27	2 36.48	+9 13.1	1.958	2.878	8.6	21.8	11 27	2 33.55	+13 19.5	1.655	2.585	9.2	22.0
12 7	2 30.37	+8 44.5	2.036	2.882	12.0	22.1	12 7	2 26.23	+13 0.0	1.716	2.575	13.2	22.2
12 17	2 26.50	+8 30.5	2.137	2.886	14.8	22.3	12 17	2 21.59	+12 53.0	1.798	2.564	16.5	22.4
71276	2000 AX ₃₉	11	7.8 81°43	2°1/ 9.5	18		324345	2006 QZ ₁₁	11	7.9 60°62	2°0/ 8.8	18	
10 8	3 15.56	+24 10.6	2.211	3.058	11.7	19.5	10 8	3 22.14	+21 28.5	1.198	2.073	17.6	20.5
10 18	3 9.54	+24 6.0	2.146	3.065	8.6	19.3	10 18	3 14.97	+21 32.8	1.156	2.091	12.7	20.3
10 28	3 1.85	+23 49.9	2.106	3.072	5.2	19.1	10 28	3 4.96	+21 21.8	1.136	2.111	7.2	20.0
11 7	2 53.26	+23 23.5	2.094	3.079	2.3	18.9	11 7	2 53.54	+20 57.4	1.141	2.130	2.2	19.8
11 17	2 44.69	+22 49.5	2.111	3.086	3.6	19.0	11 17	2 42.40	+20 24.5	1.171	2.150	5.1	20.0
11 27	2 37.07	+22 12.2	2.157	3.093	6.9	19.2	11 27	2 33.18	+19 50.3	1.227	2.169	10.3	20.4
12 7	2 31.13	+21 36.3	2.229	3.101	10.0	19.4	12 7	2 26.96	+19 22.2	1.306	2.189	14.8	20.7
12 17	2 27.35	+21 6.1	2.326	3.108	12.8	19.6	12 17	2 24.20	+19 5.2	1.404	2.209	18.5	21.0
391169	2006 AB ₄₁	11	7.8 316°38	1°5/ 8.6	18		14392	1990 RS ₆	11	7.9 210°19	3°4/ 9.8	18	
10 8	3 16.91	+20 46.5	1.381	2.257	15.6	21.2	10 8	3 20.66	+25 56.4	1.692	2.539	14.7	18.6
10 18	3 11.49	+20 44.0	1.304	2.241	11.4	20.9	10 18	3 13.74	+26 6.3	1.619	2.536	11.1	18.4
10 28	3 3.31	+20 28.1	1.250	2.225	6.5	20.6	10 28	3 4.35	+26 0.3	1.570	2.533	7.0	18.1
11 7	2 53.40	+20 0.3	1.220	2.210	1.7	20.3	11 7	2 53.51	+25 38.3	1.547	2.530	3.7	17.9
11 17	2 43.17	+19 24.5	1.216	2.195	4.9	20.4	11 17	2 42.53	+25 2.6	1.552	2.526	4.9	18.0
11 27	2 34.20	+18 47.2	1.238	2.181	10.2	20.7	11 27	2 32.81	+24 19.2	1.584	2.522	8.8	18.2
12 7	2 27.75	+18 15.7	1.283	2.167	15.0	21.0	12 7	2 25.43	+23 35.2	1.642	2.518	12.7	18.4
12 17	2 24.57	+17 55.6	1.348	2.154	19.1	21.2	12 17	2 21.02	+22 57.2	1.722	2.513	16.2	18.7
407248	2009 WB ₁₈₅	11	7.8 3°18	2°0/ 9.4	18		54784	2001 MW ₃	11	7.9 124°01	2°9/ 10.1	17	
10 8	3 12.70	+24 46.5	1.826	2.684	13.3	20.2	10 8	3 21.47	+27 38.2	1.924	2.757	13.8	19.4
10 18	3 7.81	+24 10.4	1.758	2.684	9.7	20.0	10 18	3 13.76	+27 9.0	1.868	2.777	10.3	19.2
10 28	3 1.02	+23 18.7	1.715	2.684	5.8	19.8	10 28	3 4.09	+26 22.6	1.836	2.797	6.4	19.0
11 7	2 53.21	+22 14.3	1.698	2.685	2.2	19.5	11 7	2 53.49	+25 21.0	1.833	2.815	3.2	18.9
11 17	2 45.41	+21 2.2	1.708	2.686	3.9	19.7	11 17	2 43.12	+24 9.0	1.859	2.833	4.2	19.0
11 27	2 38.69	+19 49.4	1.747	2.688	7.8	19.9	11 27	2 34.12	+22 53.5	1.914	2.850	7.7	19.2
12 7	2 33.87	+18 42.7	1.812	2.691	11.6	20.1	12 7	2 27.27	+21 41.9	1.997	2.866	11.1	19.5
12 17	2 31.43	+17 47.5	1.899	2.694	14.7	20.4	12 17	2 23.02	+20 40.0	2.103	2.881	14.1	19.7
145942	1999 XC ₈₂	11	7.8 54°57	0°9/ 8.3	18		387215	2012 UK ₁	11	7.9 196°03	1°0/ 7.2	18	
10 8	3 19.47	+20 38.7	1.196	2.076	17.3	19.7	10 8	3 17.93	+15 33.0	1.933	2.801	12.2	21.9
10 18	3 12.99	+20 10.7	1.156	2.095	12.3	19.5	10 18	3 11.37	+14 59.7	1.863	2.799	8.6	21.7
10 28	3 3.85	+19 27.6	1.138	2.114	6.7	19.2	10 28	3 2.92	+14 19.7	1.819	2.796	4.6	21.4
11 7	2 53.43	+18 34.1	1.144	2.134	1.2	18.9	11 7	2 53.40	+13 36.2	1.803	2.793	1.0	21.2
11 17	2 43.33	+17 36.9	1.176	2.154	5.1	19.2	11 17	2 43.86	+12 53.8	1.817	2.790	4.4	21.4
11 27	2 35.08	+16 44.6	1.233	2.175	10.3	19.6	11 27	2 35.34	+12 17.4	1.859	2.786	8.5	21.7
12 7	2 29.67	+16 4.3	1.313	2.195	14.9	19.9	12 7	2 28.69	+11 51.2	1.927	2.781	12.1	21.9
12 17	2 27.51	+15 39.7	1.413	2.216	18.5	20.2	12 17	2 24.42	+11 37.6	2.017	2.777	15.2	22.1
293849	2007 RA ₂₃₁	11	7.8 100°33	3°4/ 5.9	17		152370	2005 UZ ₁₅₉	11	7.9 335°60	1°1/ 8.5	18	
10 8	3 21.12	+11 32.3	1.353	2.236	15.4	21.1	10 8	3 17.84	+19 13.6	1.884	2.747	12.7	20.1
10 18	3 13.82	+10 30.1	1.313	2.255	10.8	20.8	10 18	3 11.47	+19 28.9	1.813	2.744	9.2	19.9
10 28	3 4.18	+9 24.4	1.297	2.274	6.0	20.6	10 28	3 3.05	+19 36.3	1.767	2.740	5.1	19.7
11 7	2 53.45	+8 22.5	1.307	2.292	3.4	20.5	11 7	2 53.42	+19 36.4	1.748	2.737	1.3	19.4
11 17	2 43.06	+7 31.2	1.344	2.310	6.8	20.8	11 17	2 43.66	+19 31.3	1.757	2.735	3.9	19.6
11 27	2 34.33	+6 56.6	1.407	2.327	11.3	21.1	11 27	2 34.92	+19 24.4	1.795	2.732	8.0	19.8
12 7	2 28.15	+6 41.5	1.493	2.344	15.3	21.4	12 7	2 28.12	+19 19.8	1.859	2.730	11.8	20.0
12 17	2 24.95	+6 45.8	1.599	2.360	18.5	21.6	12 17	2 23.84	+19 20.9	1.946	2.728	14.9	20.3
85748	1998 SK ₁₃₈	11	7.8 12°60	1°5/ 8.5	18		380514	2004 FF ₇₁	11	7.9 328°10	0°7/ 8.2	18	
10 8	3 15.37	+19 32.2	0.960	1.859	18.8	18.5	10 8	3 16.72	+18 39.3	1.163	2.052	17.0	21.1
10 18	3 10.77	+19 42.9	0.916	1.863	13.5	18.2	10 18	3 11.70	+18 38.9	1.092	2.036	12.3	20.8
10 28	3 2.96	+19 39.5	0.890	1.869	7.6	17.9	10 28	3 3.57	+18 26.3	1.043	2.022	6.8	20.4
11 7	2 53.37	+19 24.1	0.886	1.877	1.7	17.6	11 7	2 53.48	+18 3.8	1.017	2.008	1.0	20.0
11 17	2 43.85	+19 1.6	0.906	1.886	5.7	17.9	11 17	2 43.02	+17 35.6	1.015	1.995	5.5	20.3
11 27	2 36.23	+18 39.7	0.948	1.897	11.5	18.3	11 27	2 34.02	+17 8.9	1.038	1.983	11.4	20.6
12 7	2 31.79	+18 25.5	1.010	1.910	16.6	18.6	12 7	2 27.88	+16 50.7	1.082	1.971	16.7	20.8
12 17	2 31.06	+18 23.5	1.090	1.924	20.8	18.9	12 17	2 25.39	+16 46.1	1.144	1.962	21.1	21.1
122661	2000 RH ₉₈	11	7.9 234°38	6°6/ 12.7	18		412646	2014 OC ₁₈₈	11	7.9 34°24	4°4/ 11.1	18	
10 8	3 20.38	+36 6.8	1.886	2.687	15.2	18.8	10 8	3 16.35	+30 13.1	2.055	2.883	13.2	20.5
10 18	3 13.58	+36 18.1	1.803	2.679	12.4	18.6	10 18	3 10.36	+30 25.5	1.988	2.888	10.2	20.4
10 28	3 4.28	+36 6.3	1.743	2.671	9.4	18.4	10 28	3 2.41	+30 21.6	1.944	2.893	7.1	20.2
11 7	2 53.49	+35 29.3	1.707	2.662	7.0	18.2	11 7	2 53.39	+30 1.0	1.927	2.899	4.7	20.0
11 17	2 42.54	+34 28.5	1.698	2.654	6.9	18.2	11 17	2 44.34	+29 25.7	1.938	2.905	5.0	20.1
11 27	2 32.85	+33 10.2	1.717	2.644	9.1	18.3	11 27	2 36.35	+28 40.7	1.977	2.911	7.6	20.2
12 7	2 25.52	+31 43.6	1.762	2.635	12.2	18.5	12 7	2 30.29	+27 52.1	2.042	2.918	10.6	20.4
12 17	2 21.18	+30 18.0	1.830	2.625	15.2	18.6	12 17	2 26.66	+27 5.9	2.130	2.924	13.4	20.6
401930	2002 CK ₁₅₀	11	7.9 275°15	0°1/ 7.8	18		12957	2258 T-2	11	7.9 53°54	1°3/ 7.1	18	
10 8	3 15.42	+17 25.4	2.070	2.9									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
353053	2009 <i>DT</i> ₄₅		11 7.9 37°58'	5.8/ 3.9	18		197076	2003 <i>UK</i> ₁₇₂		11 7.9 71°27'	3.3/ 5.0	18	
10 8	3 14.45	+ 4 46.7	1.537	2.426	13.6	19.9	10 8	3 12.73	+ 8 22.9	2.206	3.083	10.5	20.0
10 18	3 9.05	+ 3 30.1	1.494	2.434	9.9	19.7	10 18	3 7.44	+ 7 25.1	2.152	3.091	7.5	19.9
10 28	3 1.69	+ 2 17.2	1.474	2.442	6.7	19.6	10 28	3 0.73	+ 6 26.9	2.125	3.098	4.5	19.7
11 7	2 53.34	+ 1 15.8	1.481	2.451	6.0	19.6	11 7	2 53.29	+ 5 33.3	2.126	3.105	3.4	19.6
11 17	2 45.13	+ 0 32.4	1.514	2.461	8.4	19.7	11 17	2 45.92	+ 4 48.6	2.156	3.112	5.6	19.8
11 27	2 38.15	+ 0 11.0	1.572	2.470	11.9	20.0	11 27	2 39.41	+ 4 16.7	2.214	3.119	8.6	20.0
12 7	2 33.23	+ 0 12.5	1.652	2.480	15.1	20.2	12 7	2 34.38	+ 3 59.5	2.297	3.126	11.4	20.2
12 17	2 30.80	+ 0 35.1	1.751	2.490	17.9	20.4	12 17	2 31.24	+ 3 57.6	2.402	3.134	13.8	20.4
482769	2013 <i>GJ</i> ₇₅		11 7.9 298°48'	2.2/ 6.5	18		288208	2003 <i>YN</i> ₂₅		11 7.9 317°02'	7.2/ 13.0	18	
10 8	3 15.52	+12 6.7	1.801	2.680	12.4	21.2	10 8	3 17.14	+36 25.7	1.643	2.457	16.6	19.8
10 18	3 9.89	+11 37.7	1.725	2.665	8.8	20.9	10 18	3 11.62	+36 34.8	1.561	2.444	13.6	19.6
10 28	3 2.24	+11 4.9	1.673	2.651	4.8	20.6	10 28	3 3.39	+36 17.8	1.500	2.432	10.4	19.4
11 7	2 53.40	+10 32.2	1.648	2.636	2.2	20.4	11 7	2 53.52	+35 32.4	1.462	2.420	7.8	19.2
11 17	2 44.39	+10 3.9	1.652	2.622	5.3	20.6	11 17	2 43.45	+34 20.3	1.450	2.408	7.5	19.2
11 27	2 36.33	+ 9 44.6	1.683	2.608	9.4	20.8	11 27	2 34.71	+32 48.7	1.464	2.397	9.8	19.3
12 7	2 30.13	+ 9 37.8	1.739	2.594	13.2	21.0	12 7	2 28.51	+31 8.7	1.503	2.386	13.2	19.4
12 17	2 26.38	+ 9 44.9	1.815	2.580	16.4	21.2	12 17	2 25.51	+29 30.9	1.564	2.376	16.6	19.6
281607	2008 <i>UU</i> ₂₀₁		11 7.9 68°26'	0.5/ 8.1	18		521409	2015 <i>MW</i> ₁₄₄		11 7.9 333°79'	9.3/ 16.2	17	
10 8	3 19.31	+18 50.4	1.521	2.393	14.7	19.8	10 8	3 19.78	+44 43.6	1.814	2.572	17.3	20.5
10 18	3 12.59	+18 39.0	1.473	2.408	10.5	19.6	10 18	3 13.36	+44 45.5	1.737	2.570	14.9	20.3
10 28	3 3.61	+18 17.3	1.447	2.424	5.7	19.4	10 28	3 4.22	+44 16.1	1.678	2.567	12.3	20.1
11 7	2 53.50	+17 48.2	1.449	2.439	0.8	19.1	11 7	2 53.58	+43 12.5	1.642	2.565	10.1	20.0
11 17	2 43.55	+17 15.9	1.477	2.455	4.5	19.4	11 17	2 42.99	+41 36.2	1.631	2.563	9.3	19.9
11 27	2 35.05	+16 46.1	1.533	2.471	9.1	19.7	11 27	2 34.00	+39 34.9	1.647	2.561	10.4	20.0
12 7	2 28.91	+16 24.0	1.614	2.486	13.1	20.0	12 7	2 27.72	+37 20.6	1.688	2.559	12.7	20.1
12 17	2 25.61	+16 12.9	1.715	2.502	16.4	20.2	12 17	2 24.69	+35 5.6	1.753	2.558	15.4	20.3
164728	1998 <i>RH</i> ₁₂		11 7.9 348°12'	11°1/30.9	18		154651	2004 <i>EP</i> ₁₅		11 7.9 222°98'	1°4/ 8.7	18	
10 8	3 7.90	- 1 30.1	1.095	2.002	16.2	18.9	10 8	3 19.21	+21 55.5	1.637	2.498	14.4	20.8
10 18	3 5.16	- 3 44.5	1.046	1.987	13.1	18.7	10 18	3 12.70	+21 34.6	1.564	2.493	10.5	20.5
10 28	2 59.91	- 5 48.9	1.019	1.973	11.2	18.5	10 28	3 3.81	+20 59.7	1.515	2.488	6.0	20.3
11 7	2 53.21	- 7 28.6	1.013	1.961	11.7	18.5	11 7	2 53.56	+20 12.8	1.493	2.482	1.6	20.0
11 17	2 46.42	- 8 31.9	1.029	1.951	14.5	18.6	11 17	2 43.21	+19 18.7	1.499	2.476	4.4	20.1
11 27	2 40.97	- 8 52.7	1.065	1.943	18.0	18.8	11 27	2 34.10	+18 24.1	1.532	2.470	9.0	20.4
12 7	2 37.92	- 8 32.1	1.117	1.938	21.4	19.0	12 7	2 27.26	+17 36.0	1.591	2.464	13.3	20.6
12 17	2 37.85	- 7 35.8	1.184	1.934	24.3	19.2	12 17	2 23.29	+16 59.7	1.671	2.457	16.8	20.9
161219	2002 <i>VW</i> ₁₃₈		11 7.9 344°09'	3°7/ 9.8	18		347120	2010 <i>JF</i> ₁₂₂		11 7.9 248°43'	1°6/ 6.9	18	
10 8	3 17.57	+25 44.3	1.263	2.131	17.3	19.9	10 8	3 17.65	+13 19.6	1.864	2.737	12.4	20.6
10 18	3 12.13	+25 48.9	1.197	2.125	13.0	19.6	10 18	3 11.34	+12 56.5	1.790	2.727	8.8	20.3
10 28	3 3.72	+25 33.5	1.153	2.121	8.2	19.3	10 28	3 3.00	+12 28.9	1.740	2.717	4.7	20.1
11 7	2 53.54	+24 58.5	1.132	2.116	4.1	19.1	11 7	2 53.50	+12 0.1	1.718	2.707	1.6	19.8
11 17	2 43.20	+24 7.8	1.136	2.113	5.6	19.2	11 17	2 43.86	+11 33.9	1.725	2.697	4.8	20.1
11 27	2 34.41	+23 9.9	1.165	2.110	10.4	19.4	11 27	2 35.21	+11 14.8	1.760	2.686	9.0	20.3
12 7	2 28.46	+22 14.3	1.216	2.107	15.1	19.7	12 7	2 28.44	+11 6.1	1.820	2.675	12.7	20.5
12 17	2 26.00	+21 29.0	1.288	2.106	19.1	19.9	12 17	2 24.12	+11 9.9	1.902	2.664	15.9	20.7
520790	2014 <i>SU</i> ₃₅₈		11 7.9 137°89'	2°8/ 5.0	18		441785	2009 <i>DB</i> ₇₉		11 7.9 186°06'	6°5/ 12.1	18	
10 8	3 12.37	+ 9 33.6	2.583	3.455	9.4	21.6	10 8	3 21.75	+34 52.0	2.033	2.833	14.3	21.5
10 18	3 7.02	+ 8 26.4	2.526	3.462	6.6	21.4	10 18	3 14.46	+35 33.8	1.958	2.833	11.6	21.3
10 28	3 0.45	+ 7 17.8	2.496	3.469	3.9	21.2	10 28	3 4.77	+35 56.4	1.906	2.833	8.8	21.2
11 7	2 53.26	+ 6 12.2	2.496	3.476	2.9	21.2	11 7	2 53.65	+35 57.2	1.879	2.832	6.8	21.0
11 17	2 46.14	+ 5 14.0	2.526	3.482	4.9	21.3	11 17	2 42.33	+35 36.2	1.881	2.832	6.7	21.0
11 27	2 39.75	+ 4 27.0	2.586	3.488	7.6	21.5	11 27	2 32.17	+34 57.7	1.910	2.831	8.8	21.2
12 7	2 34.66	+ 3 53.5	2.671	3.494	10.2	21.7	12 7	2 24.22	+34 8.9	1.965	2.830	11.5	21.3
12 17	2 31.23	+ 3 34.4	2.780	3.500	12.3	21.9	12 17	2 19.13	+33 17.3	2.043	2.828	14.2	21.5
481697	2008 <i>AS</i> ₁₃₆		11 7.9 300°02'	6°3/ 3.5	18		318176	2004 <i>RK</i> ₃₁		11 7.9 354°89'	5°2/ 11.1	18	
10 8	3 14.59	+ 2 6.1	1.737	2.619	12.7	20.5	10 8	3 17.84	+30 25.6	1.839	2.670	14.4	19.8
10 18	3 9.23	+ 1 1.4	1.668	2.602	9.6	20.3	10 18	3 11.73	+30 57.9	1.767	2.668	11.3	19.6
10 28	3 1.89	+ 0 1.1	1.624	2.586	7.0	20.1	10 28	3 3.32	+31 13.0	1.718	2.666	8.0	19.4
11 7	2 53.39	- 0 47.9	1.605	2.569	6.5	20.1	11 7	2 53.53	+31 9.2	1.695	2.665	5.5	19.2
11 17	2 44.75	- 1 19.5	1.614	2.553	8.7	20.2	11 17	2 43.58	+30 47.7	1.699	2.664	5.8	19.2
11 27	2 37.07	- 1 29.5	1.648	2.537	12.0	20.3	11 27	2 34.76	+30 13.0	1.730	2.663	8.5	19.4
12 7	2 31.24	- 1 17.0	1.704	2.521	15.3	20.5	12 7	2 28.12	+29 32.0	1.786	2.663	11.8	19.6
12 17	2 27.83	- 0 43.2	1.779	2.505	18.1	20.7	12 17	2 24.26	+28 51.4	1.865	2.664	14.8	19.8
171749	2000 <i>YG</i> ₅		11 7.9 32°53'	5°3/ 10.6	18		124131	2001 <i>KZ</i> ₅₀		11 7.9 143°60'	1°0/ 8.9	18	
10 8	3 18.37	+28 8.4	0.906	1.787	21.4	17.9	10 8	3 13.65	+23 7.4	2.652	3.497	10.0	20.1
10 18	3 12.94	+28 16.3	0.874	1.806	16.1	17.7	10 18	3 7.97	+22 24.1	2.583	3.504	7.2	19.9
10 28	3 4.08	+27 55.7	0.859	1.826	10.5	17.4	10 28	3 0.98	+21 30.5	2.541	3.511	4.1	19.7
11 7	2 53.55	+27 8.3	0.865	1.847	5.8	17.3	11 7	2 53.33	+20 29.1	2.528	3.517	1.2	19.5
11 17	2 43.43	+26 1.4	0.893	1.870	6.7	17.4	11 17	2 45.74	+19 23.6	2.546	3.523	2.9	19.7
11 27	2 35.68	+24 47.5	0.945	1.894	11.5	17.8	11 27	2 38.95	+18 18.7	2.595	3.529	6.0	19.9
12 7	2 31.43	+23 39.1	1.017	1.920	16.2	18.1	12 7	2 33.54	+17 19.0	2.671	3.534	8.9	20.1
12 17	2 31.05	+22 44.6	1.107	1.945	20.2	18.5	12 17	2 29.89	+16 27.9	2.773	3.539	11.3	20.3
343735	2011 <i>FS</i> ₈		11 7.9 140°30'	1°7/ 8.9	18		155239	2005 <i>WB</i> ₁₉					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
80288	1999 <i>XU</i> ₄₈		11 7.9 274°13	0°8/ 7.5 18			407593	2011 <i>AH</i> ₇₅		11 7.9 310°75	5°6/ 3.8 18		
10 8	3 20.74	+14 58.2	1.448	2.325	15.0	19.7	10 8	3 13.87	+ 1 10.5	2.066	2.941	11.2	20.1
10 18	3 13.98	+14 57.3	1.381	2.320	10.7	19.4	10 18	3 8.45	+ 0 25.0	2.002	2.932	8.5	19.9
10 28	3 4.60	+14 50.5	1.337	2.315	5.7	19.1	10 28	3 1.39	+ 0 14.8	1.963	2.922	6.2	19.8
11 7	2 53.67	+14 40.0	1.320	2.310	0.8	18.8	11 7	2 53.44	+ 0 43.9	1.951	2.913	5.7	19.7
11 17	2 42.58	+14 29.4	1.329	2.305	5.2	19.1	11 17	2 45.42	+ 0 58.2	1.967	2.904	7.6	19.8
11 27	2 32.83	+14 23.3	1.366	2.300	10.2	19.3	11 27	2 38.25	+ 0 55.1	2.010	2.896	10.3	20.0
12 7	2 25.55	+14 25.9	1.426	2.295	14.7	19.6	12 7	2 32.65	+ 0 34.1	2.076	2.887	13.1	20.2
12 17	2 21.40	+14 39.8	1.506	2.290	18.4	19.8	12 17	2 29.10	+ 0 3.5	2.163	2.879	15.5	20.3
308828	2006 <i>RJ</i> ₁₁		11 7.9 67°46	2°4/ 9.5 18			302757	2002 <i>VN</i> ₃₉		11 7.9 11°49	6°6/ 5.4 18		
10 8	3 17.90	+24 32.2	1.733	2.587	14.1	20.6	10 8	3 18.57	+ 0 43.1	1.384	2.268	15.1	19.6
10 18	3 11.49	+24 19.8	1.681	2.603	10.3	20.4	10 18	3 12.24	+ 0 33.5	1.335	2.271	11.3	19.4
10 28	3 3.02	+23 52.8	1.652	2.620	6.2	20.2	10 28	3 3.56	+ 0 34.6	1.309	2.274	7.9	19.2
11 7	2 53.53	+23 13.0	1.650	2.637	2.6	20.0	11 7	2 53.62	+ 0 51.4	1.308	2.279	6.6	19.2
11 17	2 44.19	+22 24.6	1.677	2.653	4.2	20.1	11 17	2 43.76	+ 1 26.6	1.333	2.284	8.9	19.3
11 27	2 36.16	+21 33.7	1.731	2.670	8.0	20.4	11 27	2 35.30	+ 2 20.6	1.383	2.291	12.5	19.5
12 7	2 30.28	+20 46.7	1.811	2.687	11.7	20.6	12 7	2 29.23	+ 3 31.4	1.456	2.298	16.0	19.8
12 17	2 27.02	+20 8.7	1.913	2.704	14.8	20.9	12 17	2 26.05	+ 4 55.5	1.547	2.306	19.1	20.0
283263	2011 <i>FH</i> ₁₅₁		11 7.9 164°08	0°8/ 7.2 18			473524	2015 <i>XC</i> ₁₄₈		11 7.9 354°92	2°1/ 9.5 16		
10 8	3 17.72	+17 21.3	2.022	2.885	12.0	20.8	10 8	3 14.14	+24 34.6	1.871	2.726	13.1	21.4
10 18	3 11.11	+16 21.8	1.958	2.891	8.4	20.5	10 18	3 8.91	+24 9.9	1.800	2.724	9.7	21.2
10 28	3 2.76	+15 13.5	1.919	2.896	4.4	20.3	10 28	3 1.74	+23 30.6	1.754	2.722	5.8	21.0
11 7	2 53.52	+14 0.7	1.910	2.901	0.8	20.1	11 7	2 53.50	+22 38.7	1.734	2.721	2.4	20.7
11 17	2 44.36	+12 48.9	1.931	2.904	4.2	20.3	11 17	2 45.23	+21 38.6	1.743	2.720	3.9	20.8
11 27	2 36.25	+11 44.4	1.982	2.908	8.2	20.6	11 27	2 38.02	+20 36.5	1.779	2.720	7.8	21.1
12 7	2 29.95	+10 51.9	2.059	2.910	11.6	20.8	12 7	2 32.70	+19 38.9	1.842	2.720	11.5	21.3
12 17	2 25.91	+10 14.4	2.158	2.912	14.5	21.0	12 17	2 29.79	+18 50.9	1.927	2.720	14.6	21.5
158704	2003 <i>FK</i> ₁₃₁		11 7.9 259°50	1°5/ 6.9 18			266773	2009 <i>SC</i> ₁₈₈		11 7.9 343°29	4°4/ 4.5 18		
10 8	3 16.74	+15 32.3	1.631	2.508	13.6	20.0	10 8	3 11.88	+ 7 32.4	1.803	2.689	12.0	20.2
10 18	3 10.87	+14 43.7	1.561	2.501	9.6	19.8	10 18	3 7.23	+ 6 20.5	1.741	2.683	8.6	19.9
10 28	3 2.82	+13 46.4	1.516	2.495	5.1	19.5	10 28	3 0.81	+ 5 8.0	1.704	2.677	5.5	19.7
11 7	2 53.54	+12 45.3	1.498	2.488	1.5	19.3	11 7	2 53.43	+ 4 1.4	1.694	2.671	4.5	19.7
11 17	2 44.18	+11 46.4	1.508	2.481	5.2	19.5	11 17	2 46.01	+ 3 6.9	1.712	2.666	7.0	19.8
11 27	2 35.97	+10 56.5	1.545	2.474	9.8	19.7	11 27	2 39.55	+ 2 29.5	1.756	2.661	10.4	20.0
12 7	2 29.86	+10 20.7	1.606	2.467	13.8	20.0	12 7	2 34.82	+ 2 11.9	1.823	2.657	13.7	20.2
12 17	2 26.43	+10 1.8	1.688	2.459	17.2	20.2	12 17	2 32.29	+ 2 14.0	1.911	2.654	16.5	20.4
220202	2002 <i>VZ</i> ₂₅		11 7.9 24°47	0°2/ 7.9 18			263002	2007 <i>EL</i> ₁₁₆		11 7.9 48°49	0°4/ 7.7 18		
10 8	3 15.52	+19 7.2	1.002	1.899	18.3	19.3	10 8	3 17.07	+15 26.2	2.045	2.912	11.7	19.9
10 18	3 10.66	+18 36.5	0.962	1.910	13.0	19.1	10 18	3 10.73	+15 30.3	1.984	2.918	8.2	19.7
10 28	3 2.85	+17 51.1	0.942	1.922	7.0	18.8	10 28	3 2.63	+15 29.6	1.948	2.924	4.4	19.5
11 7	2 53.53	+16 56.5	0.945	1.935	0.6	18.4	11 7	2 53.58	+15 26.0	1.940	2.930	0.5	19.2
11 17	2 44.44	+16 0.9	0.971	1.950	5.7	18.8	11 17	2 44.52	+15 21.7	1.961	2.937	3.8	19.5
11 27	2 37.25	+15 13.3	1.021	1.966	11.4	19.2	11 27	2 36.43	+15 19.8	2.011	2.943	7.6	19.7
12 7	2 33.05	+14 40.8	1.091	1.983	16.3	19.6	12 7	2 30.09	+15 23.0	2.088	2.950	11.0	19.9
12 17	2 32.28	+14 26.5	1.180	2.002	20.3	19.9	12 17	2 25.98	+15 33.4	2.187	2.957	13.8	20.1
71452	2000 <i>AQ</i> ₂₄₃		11 7.9 315°64	9°6/31.1 18			127041	2002 <i>GH</i> ₃₉		11 7.9 307°43	7°5/13.2 17		
10 8	3 13.27	- 9 52.6	1.970	2.825	12.5	18.5	10 8	3 20.43	+38 30.0	2.108	2.890	14.5	20.0
10 18	3 8.12	-11 6.1	1.912	2.809	10.7	18.3	10 18	3 13.64	+39 17.5	2.030	2.886	12.1	19.9
10 28	3 1.25	-12 5.1	1.879	2.794	9.7	18.2	10 28	3 4.43	+39 44.4	1.974	2.882	9.7	19.7
11 7	2 53.41	-12 42.7	1.870	2.778	10.0	18.2	11 7	2 53.74	+39 47.5	1.943	2.879	7.9	19.6
11 17	2 45.51	-12 54.0	1.886	2.763	11.4	18.3	11 17	2 42.81	+39 26.4	1.939	2.876	7.7	19.6
11 27	2 38.48	-12 37.1	1.925	2.749	13.6	18.4	11 27	2 32.98	+38 44.9	1.961	2.872	9.2	19.7
12 7	2 33.09	-11 53.7	1.985	2.734	15.8	18.5	12 7	2 25.35	+37 50.1	2.009	2.869	11.5	19.8
12 17	2 29.84	-10 47.2	2.062	2.720	17.8	18.7	12 17	2 20.58	+36 50.0	2.080	2.866	13.9	20.0
209243	2003 <i>WV</i> ₁₁₈		11 7.9 6°91	1°5/ 8.7 18			226461	2003 <i>SH</i> ₁₄₂		11 7.9 349°86	7°5/14.1 17		
10 8	3 16.85	+20 52.9	1.467	2.340	15.1	19.7	10 8	3 17.37	+39 33.9	2.071	2.853	14.7	19.8
10 18	3 11.18	+20 51.4	1.406	2.340	10.9	19.5	10 18	3 11.41	+39 57.7	1.995	2.850	12.3	19.6
10 28	3 3.06	+20 37.5	1.367	2.341	6.2	19.2	10 28	3 3.18	+39 58.8	1.940	2.848	9.8	19.5
11 7	2 53.56	+20 12.9	1.353	2.343	1.7	18.9	11 7	2 53.64	+39 34.9	1.909	2.846	7.9	19.3
11 17	2 44.01	+19 41.5	1.366	2.345	4.5	19.1	11 17	2 43.98	+38 47.1	1.904	2.844	7.5	19.3
11 27	2 35.79	+19 9.2	1.406	2.348	9.3	19.4	11 27	2 35.50	+37 40.1	1.926	2.843	8.9	19.4
12 7	2 29.96	+18 42.2	1.469	2.351	13.6	19.7	12 7	2 29.17	+36 21.9	1.974	2.842	11.3	19.5
12 17	2 27.08	+18 25.2	1.553	2.355	17.2	19.9	12 17	2 25.58	+35 1.0	2.044	2.841	13.8	19.7
398561	2011 <i>VC</i> ₁₁		11 7.9 24°79	0°8/ 8.4 16			91174	1998 <i>RC</i> ₁₈		11 7.9 61°33	4°7/11.2 18		
10 8	3 15.63	+20 55.6	1.653	2.522	13.9	21.1	10 8	3 21.58	+30 22.3	1.962	2.784	14.0	18.5
10 18	3 10.04	+20 25.0	1.592	2.525	10.0	20.9	10 18	3 13.95	+30 50.5	1.920	2.816	10.8	18.3
10 28	3 2.33	+19 41.6	1.553	2.528	5.5	20.6	10 28	3 4.32	+31 1.2	1.901	2.847	7.5	18.2
11 7	2 53.50	+18 48.8	1.542	2.532	1.1	20.3	11 7	2 53.73	+30 53.9	1.910	2.879	5.0	18.1
11 17	2 44.70	+17 51.8	1.558	2.536	4.2	20.6	11 17	2 43.35	+30 30.8	1.946	2.911	5.2	18.2
11 27	2 37.10	+16 57.2	1.601	2.540	8.6	20.8	11 27	2 34.32	+29 56.8	2.012	2.942	7.7	18.4
12 7	2 31.61	+16 11.2	1.670	2.545	12.6	21.1	12 7	2 27.48	+29 18.3	2.103	2.973	10.6	18.7
12 17	2 28.74	+15 37.9	1.760	2.549	15.9	21.3	12 17	2 23.26	+28 41.3	2.218	3.004	13.2	18.9
86926	2000 <i>HN</i> ₆₀		11 7.9 46°13	1°3/ 6.9 18			298100	2002 <i>RS</i> ₁₀₈					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
515769	2015 <i>KK</i> ₁₀		11 7.9 29°24' 12.1"/ 2.6 18				523204	2016 <i>VG</i> ₂₀		11 7.9 276°49' 1.7"/ 6.5 18			
10 8	3 16.75	- 8 29.8	1.184	2.064	17.4	19.8	10 8	3 15.02	+16 29.5	1.805	2.679	12.6	21.8
10 18	3 10.97	- 9 39.0	1.161	2.078	14.4	19.6	10 18	3 9.59	+15 5.7	1.724	2.663	8.9	21.5
10 28	3 2.82	-10 24.4	1.159	2.093	12.4	19.6	10 28	3 2.18	+13 30.0	1.668	2.646	4.7	21.2
11 7	2 53.60	-10 37.6	1.178	2.110	12.3	19.6	11 7	2 53.62	+11 48.5	1.641	2.630	1.7	21.0
11 17	2 44.73	-10 14.9	1.219	2.127	14.0	19.8	11 17	2 44.94	+10 9.0	1.642	2.613	5.2	21.2
11 27	2 37.53	- 9 17.9	1.281	2.145	16.5	20.0	11 27	2 37.25	+ 8 39.9	1.673	2.596	9.6	21.4
12 7	2 32.87	- 7 52.5	1.363	2.164	19.2	20.2	12 7	2 31.43	+ 7 27.7	1.728	2.579	13.5	21.6
12 17	2 31.13	- 6 6.3	1.461	2.184	21.5	20.5	12 17	2 28.04	+ 6 36.1	1.804	2.562	16.8	21.8
319186	2005 <i>YW</i> ₁₃₈		11 7.9 130°55' 1.2"/ 8.9 18				261288	2005 <i>UG</i> ₁₅₃		11 7.9 60°27' 0.4"/ 8.2 18			
10 8	3 15.22	+22 10.7	2.425	3.274	10.7	21.5	10 8	3 16.33	+18 51.7	1.894	2.760	12.5	20.9
10 18	3 9.24	+21 52.0	2.359	3.281	7.8	21.3	10 18	3 10.29	+18 36.5	1.838	2.771	8.9	20.7
10 28	3 1.78	+21 23.7	2.319	3.289	4.5	21.1	10 28	3 2.43	+18 12.6	1.807	2.783	4.8	20.5
11 7	2 53.53	+20 47.6	2.308	3.296	1.4	20.9	11 7	2 53.63	+17 42.5	1.804	2.795	0.6	20.2
11 17	2 45.32	+20 6.7	2.326	3.303	3.1	21.0	11 17	2 44.91	+17 9.9	1.829	2.806	3.8	20.5
11 27	2 37.97	+19 25.1	2.375	3.310	6.4	21.3	11 27	2 37.28	+16 39.5	1.883	2.818	7.8	20.8
12 7	2 32.13	+18 47.1	2.451	3.317	9.5	21.5	12 7	2 31.52	+16 15.4	1.962	2.831	11.3	21.0
12 17	2 28.23	+18 16.0	2.551	3.323	12.0	21.7	12 17	2 28.10	+16 0.8	2.064	2.843	14.3	21.2
327627	2006 <i>HS</i> ₁₀₄		11 7.9 206°43' 3.8"/ 4.7 17				332080	2005 <i>TV</i> ₅₅		11 7.9 66°19' 0.2"/ 7.8 18			
10 8	3 14.71	+ 2 38.3	2.901	3.763	8.8	20.9	10 8	3 20.76	+16 56.2	1.374	2.252	15.6	20.7
10 18	3 8.67	+ 2 14.5	2.832	3.758	6.5	20.7	10 18	3 13.84	+16 47.5	1.328	2.267	11.0	20.5
10 28	3 1.42	+ 1 54.3	2.791	3.752	4.4	20.6	10 28	3 4.45	+16 30.0	1.305	2.282	5.9	20.2
11 7	2 53.52	+ 1 40.8	2.779	3.747	3.8	20.5	11 7	2 53.81	+16 6.8	1.307	2.298	0.5	19.9
11 17	2 45.58	+ 1 36.2	2.798	3.741	5.3	20.6	11 17	2 43.35	+15 42.3	1.337	2.314	4.9	20.3
11 27	2 38.28	+ 1 42.4	2.846	3.734	7.6	20.8	11 27	2 34.48	+15 22.1	1.393	2.330	9.8	20.6
12 7	2 32.14	+ 1 59.9	2.921	3.727	9.8	20.9	12 7	2 28.19	+15 10.8	1.472	2.346	14.1	20.9
12 17	2 27.57	+ 2 28.5	3.019	3.720	11.8	21.1	12 17	2 24.97	+15 11.3	1.572	2.362	17.5	21.2
275444	2011 <i>CZ</i> ₅₈		11 7.9 205°04' 0.5"/ 7.4 17				391119	2005 <i>VP</i> ₁₂₉		11 7.9 342°32' 4.9"/ 5.1 18			
10 8	3 13.49	+16 7.8	2.780	3.640	9.2	21.8	10 8	3 13.24	+ 9 39.7	1.141	2.045	16.1	20.6
10 18	3 7.91	+15 41.4	2.705	3.636	6.4	21.7	10 18	3 9.03	+ 8 28.0	1.083	2.034	11.5	20.3
10 28	3 1.06	+15 9.8	2.656	3.632	3.4	21.5	10 28	3 2.12	+ 7 12.3	1.046	2.024	6.9	20.0
11 7	2 53.51	+14 35.5	2.637	3.628	0.5	21.2	11 7	2 53.62	+ 6 1.8	1.032	2.015	5.0	19.9
11 17	2 45.92	+14 1.3	2.649	3.623	3.2	21.4	11 17	2 45.01	+ 5 5.9	1.043	2.007	8.6	20.1
11 27	2 38.98	+13 30.4	2.691	3.618	6.2	21.6	11 27	2 37.82	+ 4 32.5	1.076	2.001	13.5	20.3
12 7	2 33.29	+13 5.7	2.761	3.613	9.0	21.8	12 7	2 33.22	+ 4 25.2	1.130	1.995	18.0	20.6
12 17	2 29.25	+12 49.4	2.855	3.607	11.3	22.0	12 17	2 31.82	+ 4 43.4	1.200	1.991	21.8	20.8
424174	2007 <i>HX</i> ₅₈		11 7.9 84°42' 5.6"/ 3.9 16				430628	2003 <i>QN</i> ₂₃		11 7.9 82°88' 1.8"/ 6.7 16			
10 8	3 19.31	+ 3 58.5	1.775	2.649	12.8	21.1	10 8	3 19.34	+14 17.2	1.715	2.588	13.3	21.3
10 18	3 12.04	+ 2 32.5	1.753	2.684	9.3	21.0	10 18	3 12.26	+13 25.9	1.679	2.617	9.2	21.1
10 28	3 3.17	+ 1 12.3	1.756	2.719	6.4	20.9	10 28	3 3.38	+12 29.6	1.668	2.645	4.9	20.9
11 7	2 53.67	+ 0 4.9	1.787	2.753	5.8	20.9	11 7	2 53.72	+11 33.3	1.685	2.674	1.8	20.8
11 17	2 44.57	- 0 44.4	1.847	2.786	7.8	21.1	11 17	2 44.38	+10 42.5	1.731	2.701	5.0	21.1
11 27	2 36.79	- 1 12.5	1.934	2.818	10.8	21.4	11 27	2 36.40	+10 2.2	1.805	2.729	8.9	21.4
12 7	2 30.99	- 1 19.5	2.044	2.849	13.5	21.6	12 7	2 30.51	+ 9 35.9	1.904	2.756	12.4	21.6
12 17	2 27.49	- 1 7.2	2.174	2.880	15.7	21.8	12 17	2 27.08	+ 9 24.7	2.024	2.782	15.2	21.9
124019	2001 <i>FT</i> ₁₀₇		11 7.9 237°74' 1.7"/ 9.6 18				33891	2000 <i>KS</i> ₂₄		11 7.9 91°03' 0.2"/ 7.8 18			
10 8	3 14.68	+25 6.0	2.741	3.577	10.0	20.6	10 8	3 19.54	+18 11.5	1.595	2.465	14.2	19.5
10 18	3 8.87	+24 37.6	2.650	3.563	7.4	20.4	10 18	3 12.68	+17 36.6	1.547	2.483	10.0	19.3
10 28	3 1.63	+23 57.7	2.584	3.549	4.5	20.2	10 28	3 3.73	+16 51.8	1.524	2.501	5.3	19.0
11 7	2 53.57	+23 7.8	2.548	3.534	1.9	20.0	11 7	2 53.75	+16 1.2	1.527	2.518	0.4	18.7
11 17	2 45.42	+22 10.7	2.543	3.519	3.0	20.1	11 17	2 43.99	+15 10.3	1.559	2.536	4.5	19.1
11 27	2 37.96	+21 10.7	2.568	3.503	6.0	20.2	11 27	2 35.64	+14 25.3	1.619	2.553	9.0	19.4
12 7	2 31.86	+20 12.6	2.621	3.487	8.9	20.4	12 7	2 29.55	+13 51.2	1.704	2.570	12.9	19.7
12 17	2 27.55	+19 20.6	2.700	3.470	11.5	20.6	12 17	2 26.16	+13 30.9	1.809	2.586	16.0	19.9
42809	1999 <i>JJ</i> ₂₀		11 7.9 149°63' 1.1"/ 8.7 18				308140	2004 <i>YT</i> ₂₉		11 7.9 350°45' 1.6"/ 8.4 18			
10 8	3 15.58	+20 25.5	2.623	3.473	10.0	18.2	10 8	3 12.00	+17 41.7	0.922	1.830	18.5	18.4
10 18	3 9.48	+20 31.5	2.552	3.475	7.2	18.1	10 18	3 8.91	+18 23.4	0.860	1.812	13.5	18.0
10 28	3 1.94	+20 30.5	2.506	3.477	4.1	17.9	10 28	3 2.42	+18 56.8	0.817	1.797	7.6	17.7
11 7	2 53.59	+20 23.2	2.490	3.479	1.2	17.7	11 7	2 53.69	+19 21.8	0.795	1.785	1.8	17.3
11 17	2 45.20	+20 11.6	2.505	3.481	3.0	17.8	11 17	2 44.49	+19 39.9	0.794	1.775	5.9	17.5
11 27	2 37.54	+19 58.2	2.549	3.483	6.1	18.0	11 27	2 36.90	+19 55.6	0.815	1.768	12.2	17.8
12 7	2 31.27	+19 46.3	2.621	3.485	9.0	18.2	12 7	2 32.53	+20 14.2	0.855	1.764	17.8	18.1
12 17	2 26.84	+19 38.6	2.717	3.486	11.4	18.4	12 17	2 32.20	+20 40.0	0.912	1.763	22.5	18.4
402026	2003 <i>SC</i> ₁₁₃		11 7.9 26°30' 2.9"/ 10.2 17				394455	2007 <i>RU</i> ₁₇₉		11 7.9 359°45' 1.6"/ 8.4 18			
10 8	3 14.01	+27 17.4	1.733	2.585	14.2	20.2	10 8	3 21.38	+17 14.6	1.303	2.182	16.2	19.5
10 18	3 8.86	+26 47.2	1.676	2.594	10.6	20.0	10 18	3 14.81	+18 15.5	1.241	2.179	11.7	19.3
10 28	3 1.72	+25 59.2	1.641	2.605	6.7	19.8	10 28	3 5.28	+19 11.1	1.201	2.177	6.6	19.0
11 7	2 53.57	+24 55.8	1.632	2.616	3.3	19.6	11 7	2 53.93	+19 59.5	1.186	2.176	1.8	18.7
11 17	2 45.52	+23 42.3	1.652	2.628	4.2	19.7	11 17	2 42.30	+20 40.0	1.198	2.176	5.1	18.9
11 27	2 38.69	+22 25.9	1.698	2.641	7.9	19.9	11 27	2 32.13	+21 14.7	1.236	2.178	10.3	19.2
12 7	2 33.92	+21 14.3	1.771	2.654	11.6	20.2	12 7	2 24.72	+21 47.3	1.297	2.180	14.9	19.5
12 17	2 31.64	+20 13.3	1.866	2.668	14.7	20.4	12 17	2 20.81	+22 21.6	1.378	2.184	18.7	19.8
487956	2015 <i>TG</i> ₂₆₅		11 7.9 25°77' 1.2"/ 8.8 17				387005	2012 <i>RY</i> ₇					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V	
134178	Markchodas	11	7.9	328°11	1°1/ 7.2	17	459886	2014 <i>KS</i> ₄₅	11	7.9	3°02 30°5/14.9	17		
10 8	3 13.55	+15 5.7	1.919	2.795	11.9	20.2	10 8	3 19.90	-40 40.6	0.879	1.650	30.6	20.0	
10 18	3 8.48	+14 38.8	1.845	2.784	8.4	19.9	10 18	3 14.26	-42 34.5	0.879	1.647	30.6	20.0	
10 28	3 1.57	+14 5.7	1.795	2.773	4.5	19.7	10 28	3 4.91	-43 20.2	0.886	1.646	30.7	20.0	
11 7	2 53.60	+13 29.8	1.772	2.762	1.1	19.4	11 7	2 53.92	-42 49.0	0.901	1.647	31.1	20.1	
11 17	2 45.52	+12 55.3	1.778	2.752	4.4	19.6	11 17	2 43.58	-41 0.6	0.924	1.649	31.6	20.2	
11 27	2 38.33	+12 26.7	1.812	2.743	8.4	19.9	11 27	2 35.87	-38 2.5	0.954	1.652	32.2	20.3	
12 7	2 32.85	+12 7.8	1.870	2.733	12.1	20.1	12 7	2 31.86	-34 9.3	0.994	1.658	32.9	20.4	
12 17	2 29.64	+12 1.1	1.951	2.725	15.1	20.3	12 17	2 31.80	-29 36.6	1.041	1.665	33.6	20.5	
448583	2010 <i>TQ</i> ₃₈	11	7.9	31°57	6°5/13.1	17	313350	2002 <i>GK</i> ₁₂₃	11	7.9	211°80	0°3/ 7.6	17	
10 8	3 16.69	+35 58.6	1.630	2.446	16.6	20.2	10 8	3 14.71	+16 53.6	2.644	3.503	9.6	22.1	
10 18	3 11.06	+35 49.6	1.570	2.456	13.3	20.0	10 18	3 8.88	+16 27.2	2.566	3.497	6.8	21.9	
10 28	3 3.01	+35 14.1	1.532	2.467	9.9	19.8	10 28	3 1.66	+15 54.9	2.514	3.490	3.6	21.7	
11 7	2 53.72	+34 12.3	1.517	2.479	7.1	19.7	11 7	2 53.67	+15 18.9	2.492	3.483	0.4	21.4	
11 17	2 44.57	+32 48.3	1.529	2.491	6.7	19.7	11 17	2 45.62	+14 42.4	2.501	3.476	3.2	21.6	
11 27	2 36.91	+31 10.6	1.567	2.503	9.0	19.9	11 27	2 38.27	+14 8.7	2.540	3.468	6.5	21.8	
12 7	2 31.70	+29 29.9	1.631	2.516	12.2	20.1	12 7	2 32.25	+13 41.2	2.606	3.460	9.4	22.0	
12 17	2 29.42	+27 55.5	1.718	2.530	15.3	20.3	12 17	2 27.98	+13 22.3	2.697	3.452	11.9	22.2	
54493	2000 <i>OP</i> ₃₇	11	7.9	93°66	2°4/ 5.9	18	127441	2002 <i>PK</i> ₆₆	11	7.9	131°00	4°1/ 4.4	18	
10 8	3 14.90	+12 36.6	1.993	2.868	11.6	19.1	10 8	3 13.35	+ 4 40.7	2.343	3.217	10.1	20.2	
10 18	3 9.13	+11 32.1	1.942	2.881	8.1	18.9	10 18	3 7.93	+ 3 50.1	2.286	3.219	7.4	20.1	
10 28	3 1.77	+10 23.7	1.916	2.893	4.4	18.7	10 28	3 1.14	+ 3 2.2	2.256	3.222	4.9	19.9	
11 7	2 53.62	+ 9 16.5	1.919	2.905	2.4	18.6	11 7	2 53.63	+ 2 21.2	2.254	3.225	4.2	19.9	
11 17	2 45.59	+ 8 15.9	1.952	2.918	5.1	18.8	11 17	2 46.14	+ 1 51.1	2.281	3.227	6.1	20.0	
11 27	2 38.59	+ 7 27.0	2.012	2.930	8.6	19.0	11 27	2 39.44	+ 1 34.7	2.336	3.230	8.7	20.2	
12 7	2 33.28	+ 6 53.0	2.098	2.941	11.8	19.3	12 7	2 34.14	+ 1 33.2	2.416	3.232	11.3	20.4	
12 17	2 30.07	+ 6 35.1	2.206	2.953	14.4	19.5	12 17	2 30.65	+ 1 46.4	2.518	3.234	13.6	20.5	
72091	2000 <i>YY</i> ₄₅	11	7.9	40°44	5°4/ 5.3	18	255139	2005 <i>UP</i> ₁₄₂	11	7.9	58°39	0°2/ 7.8	18	
10 8	3 17.91	+ 7 47.1	1.110	2.009	16.8	18.3	10 8	3 16.30	+17 14.7	1.911	2.779	12.3	20.5	
10 18	3 12.08	+ 6 46.2	1.072	2.020	12.0	18.1	10 18	3 10.31	+16 58.9	1.853	2.788	8.7	20.3	
10 28	3 3.59	+ 5 47.0	1.056	2.032	7.3	17.9	10 28	3 2.51	+16 35.9	1.820	2.796	4.6	20.0	
11 7	2 53.78	+ 4 57.9	1.063	2.044	5.5	17.8	11 7	2 53.75	+16 8.3	1.814	2.805	0.4	19.7	
11 17	2 44.21	+ 4 26.2	1.095	2.057	8.7	18.1	11 17	2 45.03	+15 39.7	1.837	2.814	3.9	20.0	
11 27	2 36.40	+ 4 17.0	1.150	2.071	13.2	18.4	11 27	2 37.37	+15 14.4	1.889	2.823	7.9	20.3	
12 7	2 31.33	+ 4 30.9	1.226	2.085	17.4	18.7	12 7	2 31.55	+14 56.3	1.966	2.832	11.4	20.5	
12 17	2 29.47	+ 5 5.9	1.320	2.100	20.8	18.9	12 17	2 28.04	+14 48.0	2.065	2.841	14.4	20.8	
355000	2006 <i>QX</i> ₁₁	11	7.9	47°24	2°4/ 6.6	18	269720	1998 <i>QK</i> ₅₈	11	7.9	359°99	1°6/ 8.7	18	
10 8	3 17.48	+11 23.5	1.600	2.481	13.6	20.2	10 8	3 15.60	+20 30.0	1.053	1.946	18.1	20.0	
10 18	3 11.29	+11 1.6	1.550	2.492	9.5	20.0	10 18	3 11.04	+20 31.6	0.998	1.942	13.1	19.7	
10 28	3 3.04	+10 37.5	1.525	2.502	5.2	19.7	10 28	3 3.35	+20 17.9	0.962	1.940	7.5	19.4	
11 7	2 53.74	+10 15.2	1.525	2.513	2.4	19.6	11 7	2 53.83	+19 51.2	0.949	1.939	1.9	19.1	
11 17	2 44.53	+ 9 58.7	1.554	2.524	5.5	19.8	11 17	2 44.20	+19 16.5	0.960	1.940	5.5	19.3	
11 27	2 36.59	+ 9 52.1	1.609	2.536	9.6	20.1	11 27	2 36.27	+18 41.9	0.994	1.942	11.2	19.6	
12 7	2 30.76	+ 9 57.6	1.689	2.547	13.4	20.3	12 7	2 31.35	+18 15.3	1.049	1.946	16.4	19.9	
12 17	2 27.54	+10 15.9	1.789	2.559	16.5	20.6	12 17	2 30.06	+18 2.1	1.121	1.950	20.7	20.2	
439815	2015 <i>KT</i> ₃₂	11	7.9	203°94	0°1/ 7.9	18	240941	2006 <i>GK</i> ₃₇	11	7.9	29°23	1°1/ 7.3	18	
10 8	3 21.24	+16 25.6	1.617	2.486	14.1	21.3	10 8	3 17.82	+14 46.1	1.511	2.392	14.3	20.1	
10 18	3 14.19	+16 28.0	1.549	2.484	10.1	21.1	10 18	3 11.76	+14 29.7	1.455	2.396	10.1	19.9	
10 28	3 4.74	+16 23.5	1.506	2.483	5.4	20.8	10 28	3 4.42	+14 7.3	1.422	2.400	5.4	19.6	
11 7	2 53.90	+16 13.7	1.490	2.481	0.5	20.4	11 7	2 53.83	+13 42.3	1.414	2.405	1.2	19.3	
11 17	2 42.95	+16 1.9	1.502	2.479	4.6	20.8	11 17	2 44.27	+13 19.1	1.434	2.410	5.0	19.6	
11 27	2 33.23	+15 52.2	1.542	2.476	9.3	21.0	11 27	2 36.00	+13 2.5	1.481	2.415	9.7	19.9	
12 7	2 25.80	+15 48.9	1.607	2.474	13.5	21.3	12 7	2 30.00	+12 56.4	1.552	2.421	13.8	20.2	
12 17	2 21.27	+15 55.0	1.693	2.471	16.9	21.5	12 17	2 26.79	+13 2.9	1.643	2.427	17.1	20.4	
177298	2003 <i>XP</i> ₃₀	11	7.9	64°67	1°5/ 8.8	16	406279	2007 <i>EJ</i> ₁₃₅	11	7.9	126°48	3°1/10.4	18	
10 8	3 22.24	+22 56.8	1.201	2.073	17.8	19.8	10 8	3 17.44	+27 35.9	2.445	3.272	11.4	21.2	
10 18	3 14.89	+22 14.2	1.169	2.103	12.7	19.6	10 18	3 10.93	+27 43.0	2.377	3.281	8.6	21.1	
10 28	3 4.94	+21 13.8	1.158	2.133	7.1	19.4	10 28	3 2.80	+27 37.4	2.335	3.290	5.7	20.9	
11 7	2 53.90	+20 1.0	1.173	2.163	1.8	19.1	11 7	2 53.78	+27 19.5	2.321	3.299	3.3	20.7	
11 17	2 43.40	+18 44.0	1.214	2.192	4.9	19.4	11 17	2 44.76	+26 51.2	2.336	3.307	3.9	20.8	
11 27	2 34.91	+17 32.5	1.280	2.222	10.0	19.8	11 27	2 36.64	+26 16.1	2.382	3.315	6.5	21.0	
12 7	2 29.34	+16 34.5	1.371	2.251	14.4	20.2	12 7	2 30.15	+25 39.2	2.454	3.323	9.3	21.2	
12 17	2 27.01	+15 54.0	1.481	2.280	18.0	20.5	12 17	2 25.74	+25 4.9	2.551	3.331	11.8	21.4	
2403	Sumava	11	7.9	62°72	2°0/ 9.2	18	19195	1992 <i>DM</i> ₇	11	7.9	269°86	1°5/ 6.8	18	
10 8	3 18.61	+23 23.2	1.529	2.391	15.2	16.0	10 8	3 14.93	+13 39.5	2.086	2.958	11.3	18.4	
10 18	3 12.27	+23 6.8	1.476	2.404	11.0	15.7	10 18	3 9.29	+13 7.8	2.016	2.953	7.9	18.2	
10 28	3 3.63	+22 35.2	1.447	2.418	6.5	15.5	10 28	3 1.97	+12 31.6	1.972	2.949	4.3	18.0	
11 7	2 53.81	+21 50.7	1.443	2.431	2.3	15.3	11 7	2 53.72	+11 54.2	1.956	2.945	1.5	17.8	
11 17	2 44.13	+20 58.2	1.467	2.445	4.4	15.5	11 17	2 45.41	+11 19.6	1.969	2.941	4.4	18.0	
11 27	2 35.89	+20 4.8	1.518	2.459	8.8	15.8	11 27	2 37.98	+10 52.1	2.011	2.936	8.1	18.2	
12 7	2 30.04	+19 17.5	1.594	2.473	12.9	16.0	12 7	2 32.18	+10 34.7	2.079	2.932	11.4	18.4	
12 17	2 27.04	+18 41.3	1.691	2.487	16.2	16.3	12 17	2 28.49	+10 29.4	2.168	2.928	14.3	18.6	
116818	2004 <i>ER</i> ₉₄	11	7.9	200°79	6°9/ 2.7	18	226689	2004 <i>JH</i> ₁₉	11	7.9				

EPHEMERIDES

11 7.9

11 7.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
452761	2006 <i>BW</i> ₂₆₉		11 7.9 233°56	5°7/ 2.1	18		519175	2010 <i>OC</i> ₆₇		11 7.9 194°95	6°1/ 4.0	18	
10 8	3 13.43	- 4 17.3	2.941	3.795	8.9	21.5	10 8	3 17.89	+ 0 14.1	1.922	2.791	12.2	21.5
10 18	3 7.85	- 5 10.5	2.872	3.781	7.1	21.4	10 18	3 11.39	- 0 30.8	1.864	2.790	9.3	21.3
10 28	3 1.07	- 5 56.6	2.831	3.766	5.9	21.3	10 28	3 3.09	- 1 8.6	1.832	2.789	6.8	21.2
11 7	2 53.64	- 6 31.8	2.818	3.751	5.9	21.3	11 7	2 53.83	- 1 33.9	1.827	2.787	6.3	21.1
11 17	2 46.15	- 6 52.7	2.833	3.735	7.1	21.3	11 17	2 44.58	- 1 42.5	1.850	2.785	8.1	21.2
11 27	2 39.23	- 6 57.3	2.876	3.719	9.0	21.5	11 27	2 36.34	- 1 32.1	1.900	2.783	11.0	21.4
12 7	2 33.44	- 6 45.4	2.944	3.703	10.9	21.6	12 7	2 29.88	- 1 3.0	1.974	2.780	13.9	21.6
12 17	2 29.16	- 6 18.1	3.033	3.686	12.6	21.7	12 17	2 25.70	- 0 17.1	2.067	2.778	16.3	21.8
438306	2006 <i>EF</i> ₂₁		11 7.9 118°10	1°4/ 8.9	18		488516	2001 <i>FP</i> ₁₀₈		11 7.9 224°32	5°1/ 11.1	18	
10 8	3 19.93	+22 9.9	2.003	2.853	12.6	22.0	10 8	3 21.61	+30 44.8	2.017	2.836	13.8	21.5
10 18	3 12.77	+21 56.2	1.948	2.870	9.1	21.8	10 18	3 14.44	+31 18.4	1.936	2.830	10.8	21.3
10 28	3 3.78	+21 31.3	1.917	2.887	5.2	21.6	10 28	3 4.94	+31 35.7	1.880	2.824	7.7	21.1
11 7	2 53.87	+20 56.9	1.915	2.903	1.6	21.4	11 7	2 54.01	+31 34.7	1.849	2.817	5.3	20.9
11 17	2 44.09	+20 16.6	1.942	2.919	3.7	21.6	11 17	2 42.84	+31 15.9	1.848	2.810	5.6	20.9
11 27	2 35.47	+19 35.5	1.999	2.934	7.4	21.9	11 27	2 32.71	+30 43.3	1.874	2.803	8.3	21.1
12 7	2 28.80	+18 58.6	2.082	2.949	10.9	22.1	12 7	2 24.68	+30 3.5	1.927	2.796	11.5	21.3
12 17	2 24.51	+18 29.8	2.189	2.963	13.7	22.3	12 17	2 19.41	+29 23.2	2.003	2.788	14.4	21.4
480085	2015 <i>DR</i> ₂₁₄		11 7.9 227°27	2°2/ 6.4	18		129741	1999 <i>CT</i> ₅₁		11 7.9 296°05	0°3/ 8.1	18	
10 8	3 18.29	+13 40.6	1.741	2.615	13.0	22.0	10 8	3 21.09	+17 51.3	1.285	2.164	16.4	18.5
10 18	3 11.96	+12 44.4	1.668	2.606	9.2	21.7	10 18	3 14.61	+17 49.1	1.221	2.160	11.8	18.2
10 28	3 3.52	+11 41.2	1.620	2.597	5.0	21.4	10 28	3 5.20	+17 36.5	1.178	2.155	6.4	17.9
11 7	2 53.86	+10 36.0	1.599	2.587	2.2	21.2	11 7	2 54.05	+17 15.7	1.160	2.151	0.7	17.5
11 17	2 44.11	+ 9 35.2	1.608	2.577	5.5	21.4	11 17	2 42.72	+16 50.9	1.169	2.147	5.2	17.8
11 27	2 35.43	+ 8 45.0	1.644	2.566	9.8	21.7	11 27	2 32.89	+16 28.3	1.203	2.143	10.7	18.1
12 7	2 28.76	+ 8 10.3	1.705	2.555	13.7	21.9	12 7	2 25.84	+16 14.0	1.260	2.139	15.6	18.4
12 17	2 24.67	+ 7 53.1	1.787	2.543	17.0	22.1	12 17	2 22.22	+16 12.1	1.336	2.135	19.6	18.7
69727	1998 <i>HD</i> ₁₄₅		11 7.9 127°57	4°4/ 4.9	18 R		515342	2013 <i>BT</i> ₁₀		11 7.9 157°91	0°9/ 7.4	18	
10 8	3 17.27	+ 6 11.4	1.884	2.760	12.1	19.4	10 8	3 16.94	+15 42.6	1.962	2.830	12.0	21.7
10 18	3 10.89	+ 5 16.1	1.834	2.770	8.7	19.2	10 18	3 10.77	+15 14.4	1.897	2.833	8.5	21.5
10 28	3 2.77	+ 4 22.9	1.810	2.780	5.6	19.1	10 28	3 2.78	+14 39.8	1.858	2.835	4.5	21.3
11 7	2 53.79	+ 3 36.9	1.814	2.789	4.5	19.0	11 7	2 53.82	+14 2.1	1.847	2.837	0.9	21.0
11 17	2 44.91	+ 3 3.2	1.845	2.798	6.7	19.2	11 17	2 44.86	+13 25.2	1.865	2.839	4.2	21.3
11 27	2 37.11	+ 2 45.3	1.905	2.806	10.0	19.4	11 27	2 36.91	+12 53.9	1.912	2.841	8.2	21.5
12 7	2 31.13	+ 2 44.4	1.988	2.814	13.0	19.6	12 7	2 30.75	+12 31.8	1.984	2.843	11.7	21.8
12 17	2 27.41	+ 3 0.2	2.093	2.822	15.6	19.8	12 17	2 26.88	+12 21.4	2.079	2.844	14.6	22.0
446060	2013 <i>CQ</i> ₁₃₄		11 7.9 261°27	5°9/ 11.5	17		188584	2005 <i>MT</i> ₃₇		11 7.9 31°79	2°9/ 6.5	18	
10 8	3 21.62	+32 44.0	2.022	2.832	14.0	21.0	10 8	3 17.57	+12 22.2	1.196	2.089	16.2	20.1
10 18	3 14.58	+33 28.7	1.937	2.821	11.3	20.8	10 18	3 11.87	+11 42.0	1.150	2.097	11.4	19.8
10 28	3 5.08	+33 56.4	1.875	2.810	8.4	20.6	10 28	3 3.56	+10 57.2	1.126	2.106	6.2	19.6
11 7	2 54.01	+34 4.1	1.839	2.798	6.2	20.4	11 7	2 53.89	+10 14.0	1.127	2.115	2.9	19.4
11 17	2 42.59	+33 51.6	1.831	2.787	6.4	20.4	11 17	2 44.35	+ 9 39.1	1.153	2.125	6.7	19.6
11 27	2 32.17	+33 22.4	1.850	2.775	8.7	20.5	11 27	2 36.44	+ 9 18.5	1.204	2.135	11.6	20.0
12 7	2 23.88	+32 43.0	1.896	2.763	11.7	20.7	12 7	2 31.17	+ 9 15.5	1.276	2.147	16.0	20.3
12 17	2 18.44	+32 0.9	1.965	2.751	14.6	20.9	12 17	2 29.05	+ 9 30.5	1.367	2.158	19.6	20.5
138983	2001 <i>DX</i> ₄		11 7.9 240°89	2°5/ 9.2	18		483050	2015 <i>KP</i> ₂₁		11 7.9 112°56	3°1/ 5.5	17	
10 8	3 21.82	+23 0.3	1.574	2.431	15.1	20.0	10 8	3 17.78	+10 52.3	1.965	2.837	11.9	21.5
10 18	3 14.88	+23 10.7	1.498	2.423	11.2	19.7	10 18	3 11.10	+ 9 37.8	1.922	2.858	8.3	21.3
10 28	3 5.28	+23 7.4	1.445	2.414	6.7	19.4	10 28	3 2.83	+ 8 20.9	1.904	2.879	4.7	21.1
11 7	2 54.03	+22 50.4	1.418	2.405	2.7	19.2	11 7	2 53.82	+ 7 7.7	1.916	2.898	3.1	21.0
11 17	2 42.53	+22 22.2	1.419	2.396	4.7	19.3	11 17	2 45.02	+ 6 3.8	1.957	2.918	5.7	21.2
11 27	2 32.28	+21 48.5	1.448	2.387	9.4	19.5	11 27	2 37.35	+ 5 14.1	2.027	2.936	9.0	21.5
12 7	2 24.48	+21 16.1	1.501	2.377	13.7	19.7	12 7	2 31.48	+ 4 41.2	2.123	2.954	12.1	21.7
12 17	2 19.83	+20 51.1	1.575	2.367	17.4	20.0	12 17	2 27.79	+ 4 25.8	2.240	2.971	14.7	21.9
69441	1996 <i>PG</i> ₈		11 7.9 177°06	2°3/ 9.4	18		265208	2004 <i>BV</i> ₁₁₁		11 7.9 218°70	0°1/ 7.9	18	
10 8	3 21.53	+24 9.8	1.632	2.484	14.9	19.5	10 8	3 20.54	+17 42.6	1.800	2.663	13.2	21.3
10 18	3 14.43	+23 56.0	1.564	2.486	11.0	19.2	10 18	3 13.60	+17 25.9	1.723	2.655	9.4	21.0
10 28	3 4.89	+23 26.3	1.519	2.487	6.6	19.0	10 28	3 4.44	+17 0.5	1.672	2.647	5.1	20.8
11 7	2 53.99	+22 42.1	1.501	2.488	2.6	18.7	11 7	2 53.98	+16 28.6	1.648	2.639	0.4	20.4
11 17	2 43.05	+21 47.6	1.511	2.489	4.5	18.9	11 17	2 43.37	+15 54.1	1.653	2.630	4.3	20.7
11 27	2 33.46	+20 49.9	1.550	2.488	8.9	19.1	11 27	2 33.83	+15 22.1	1.687	2.620	8.8	20.9
12 7	2 26.26	+19 56.5	1.613	2.487	13.0	19.4	12 7	2 26.36	+14 57.6	1.747	2.609	12.8	21.1
12 17	2 22.02	+19 13.4	1.699	2.486	16.5	19.6	12 17	2 21.56	+14 44.1	1.828	2.598	16.2	21.4
331212	2011 <i>BK</i> ₃₇		11 7.9 224°43	4°2/ 3.9	17		219992	2002 <i>OO</i> ₄		11 7.9 64°95	2°5/ 6.7	18	
10 8	3 12.97	+ 2 59.3	2.734	3.602	9.1	21.5	10 8	3 20.25	+13 22.9	1.253	2.139	16.2	20.6
10 18	3 7.58	+ 2 9.4	2.666	3.594	6.7	21.3	10 18	3 13.50	+12 36.6	1.216	2.160	11.3	20.4
10 28	3 0.95	+ 1 22.4	2.624	3.585	4.7	21.2	10 28	3 4.30	+11 45.1	1.203	2.181	6.0	20.2
11 7	2 53.64	+ 0 42.3	2.612	3.577	4.3	21.1	11 7	2 53.96	+10 54.5	1.214	2.203	2.5	20.0
11 17	2 46.29	+ 0 12.4	2.630	3.568	5.9	21.2	11 17	2 43.96	+10 11.6	1.252	2.224	6.2	20.3
11 27	2 39.57	- 0 4.4	2.675	3.558	8.2	21.4	11 27	2 35.69	+ 9 42.4	1.315	2.245	11.0	20.6
12 7	2 34.05	- 0 7.2	2.747	3.548	10.5	21.5	12 7	2 30.08	+ 9 30.2	1.402	2.267	15.2	21.0
12 17	2 30.12	+ 0 4.1	2.840	3.538	12.6	21.7	12 17	2 27.51	+ 9 35.5	1.507	2.288	18.6	21.2
404546	2013 <i>JR</i> ₂₆ </												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
71715	2000 <i>GE</i> ₁₀₈	11 7.9 279°40	0°5/ 8.2 17				121871	2000 <i>CH</i> ₉₉	11 7.9 203°58	1°0/ 7.0 17			
10 8	3 18.08	+17 26.1	2.356	3.212	10.8	18.9	10 8	3 13.90	+14 23.1	2.669	3.533	9.4	21.1
10 18	3 11.55	+17 43.6	2.270	3.198	7.7	18.7	10 18	3 8.30	+13 54.2	2.596	3.530	6.6	20.9
10 28	3 3.26	+17 56.1	2.210	3.184	4.2	18.4	10 28	3 1.39	+13 21.1	2.550	3.526	3.5	20.7
11 7	2 53.90	+18 4.2	2.179	3.169	0.7	18.1	11 7	2 53.75	+12 46.5	2.533	3.523	1.0	20.5
11 17	2 44.31	+18 9.2	2.178	3.155	3.4	18.3	11 17	2 46.08	+12 13.4	2.547	3.519	3.5	20.7
11 27	2 35.45	+18 13.4	2.208	3.140	7.0	18.5	11 27	2 39.09	+11 45.1	2.590	3.514	6.6	20.9
12 7	2 28.11	+18 19.6	2.265	3.126	10.3	18.7	12 7	2 33.38	+11 24.3	2.661	3.510	9.4	21.1
12 17	2 22.86	+18 30.3	2.345	3.111	13.1	18.9	12 17	2 29.37	+11 12.9	2.756	3.505	11.8	21.2
148967	2001 <i>XV</i> ₂₃₁	11 7.9 30°66	0°6/ 8.4 18				68359	2001 <i>OZ</i> ₁₃	11 7.9 293°55	16°8/ 2.7 18			
10 8	3 16.41	+19 26.1	1.742	2.610	13.3	20.1	10 8	3 24.78	- 6 4.8	0.617	1.528	24.5	18.8
10 18	3 10.61	+19 13.8	1.681	2.615	9.5	19.8	10 18	3 19.45	- 7 41.2	0.562	1.503	20.5	18.5
10 28	3 2.77	+18 51.7	1.645	2.620	5.2	19.6	10 28	3 8.90	- 8 55.1	0.521	1.479	17.4	18.2
11 7	2 53.85	+18 22.1	1.635	2.626	0.9	19.3	11 7	2 54.51	- 9 23.8	0.496	1.454	17.2	18.0
11 17	2 44.92	+17 48.9	1.654	2.632	4.0	19.6	11 17	2 38.82	- 8 49.7	0.487	1.429	20.6	18.0
11 27	2 37.14	+17 17.2	1.700	2.638	8.3	19.8	11 27	2 25.09	- 7 7.5	0.492	1.405	25.9	18.2
12 7	2 31.38	+16 51.8	1.771	2.645	12.1	20.1	12 7	2 15.84	- 4 27.3	0.509	1.382	31.6	18.4
12 17	2 28.13	+16 36.3	1.864	2.651	15.3	20.3	12 17	2 12.28	- 1 5.9	0.536	1.359	36.8	18.6
82527	2001 <i>OD</i> ₅₇	11 7.9 105°03	0°6/ 7.6 18				30800	1989 <i>ST</i>	11 7.9 59°87	3°5/ 9.9 18			
10 8	3 20.42	+17 10.0	1.635	2.504	14.0	20.5	10 8	3 24.14	+26 30.8	1.151	2.014	19.0	17.4
10 18	3 13.33	+16 36.7	1.586	2.521	9.9	20.3	10 18	3 16.42	+26 15.3	1.121	2.047	14.0	17.2
10 28	3 4.16	+15 54.6	1.561	2.538	5.2	20.0	10 28	3 5.88	+25 37.2	1.112	2.079	8.6	17.0
11 7	2 53.96	+15 7.9	1.564	2.555	0.6	19.7	11 7	2 54.13	+24 39.7	1.127	2.112	4.0	16.8
11 17	2 43.96	+14 21.7	1.596	2.571	4.5	20.1	11 17	2 42.99	+23 30.1	1.167	2.144	5.4	17.0
11 27	2 35.34	+13 41.7	1.655	2.587	9.0	20.4	11 27	2 34.06	+22 18.8	1.233	2.177	10.1	17.4
12 7	2 28.95	+13 12.7	1.740	2.602	12.8	20.6	12 7	2 28.29	+21 15.5	1.323	2.209	14.4	17.7
12 17	2 25.25	+12 57.2	1.845	2.617	16.0	20.9	12 17	2 25.97	+20 26.6	1.432	2.241	18.0	18.1
516131	2015 <i>VV</i> ₆	11 7.9 52°00	5°6/ 5.1 18				344022	2012 <i>GR</i> ₈	11 7.9 142°99	0°1/ 8.0 17			
10 8	3 18.19	+ 1 52.2	1.707	2.583	13.1	20.1	10 8	3 20.72	+18 51.8	1.529	2.398	14.8	21.3
10 18	3 11.56	+ 1 25.9	1.672	2.604	9.7	19.9	10 18	3 13.84	+18 22.7	1.470	2.405	10.5	21.1
10 28	3 3.13	+ 1 7.2	1.661	2.624	6.7	19.8	10 28	3 4.58	+17 42.2	1.434	2.410	5.7	20.9
11 7	2 53.87	+ 1 0.5	1.676	2.645	5.7	19.8	11 7	2 54.04	+16 53.8	1.425	2.416	0.5	20.5
11 17	2 44.84	+ 1 8.9	1.719	2.666	7.6	20.0	11 17	2 43.56	+16 2.9	1.444	2.421	4.6	20.8
11 27	2 37.07	+ 1 33.5	1.789	2.687	10.7	20.2	11 27	2 34.48	+15 16.3	1.490	2.426	9.5	21.1
12 7	2 31.28	+ 2 13.7	1.882	2.709	13.6	20.4	12 7	2 27.79	+14 39.9	1.561	2.430	13.7	21.4
12 17	2 27.88	+ 3 7.3	1.996	2.731	16.1	20.7	12 17	2 24.02	+14 17.5	1.653	2.434	17.1	21.6
154064	2002 <i>CB</i> ₁₈₂	11 7.9 293°23	0°6/ 8.4 18				71609	2000 <i>DH</i> ₁₀₆	11 7.9 296°19	1°6/ 6.8 17			
10 8	3 15.70	+19 41.1	2.006	2.868	12.1	20.8	10 8	3 14.90	+12 36.9	2.160	3.032	10.9	19.1
10 18	3 9.99	+19 24.0	1.932	2.863	8.7	20.6	10 18	3 9.33	+12 17.5	2.082	3.019	7.7	18.8
10 28	3 2.44	+18 57.6	1.883	2.857	4.8	20.4	10 28	3 2.08	+11 54.9	2.029	3.006	4.2	18.6
11 7	2 53.83	+18 23.9	1.861	2.852	0.8	20.1	11 7	2 53.83	+11 31.9	2.004	2.993	1.6	18.4
11 17	2 45.13	+17 46.5	1.869	2.846	3.7	20.3	11 17	2 45.44	+11 11.8	2.009	2.980	4.4	18.6
11 27	2 37.36	+17 10.0	1.905	2.841	7.7	20.5	11 27	2 37.84	+10 58.1	2.042	2.967	8.0	18.8
12 7	2 31.35	+16 39.2	1.967	2.836	11.3	20.7	12 7	2 31.80	+10 53.6	2.101	2.954	11.3	19.0
12 17	2 27.62	+16 17.7	2.051	2.831	14.3	20.9	12 17	2 27.82	+10 59.9	2.183	2.942	14.2	19.1
434899	2006 <i>SZ</i> ₄₁₁	11 7.9 14°30	10°9/11.3 18				200085	1991 <i>RR</i> ₁₉	11 7.9 21°65	3°5/ 9.9 18			
10 8	3 24.10	+32 6.3	0.957	1.817	22.3	20.1	10 8	3 13.78	+25 25.8	0.928	1.819	20.0	18.6
10 18	3 18.00	+34 20.5	0.912	1.821	18.1	19.8	10 18	3 9.69	+25 12.3	0.897	1.837	14.7	18.4
10 28	3 7.56	+36 8.5	0.884	1.828	14.0	19.6	10 28	3 2.51	+24 34.7	0.885	1.858	9.0	18.2
11 7	2 54.31	+37 19.7	0.877	1.837	11.2	19.5	11 7	2 53.85	+23 37.2	0.893	1.880	3.9	18.0
11 17	2 40.68	+37 49.5	0.892	1.847	11.4	19.6	11 17	2 45.54	+22 28.1	0.925	1.905	5.6	18.2
11 27	2 29.34	+37 43.4	0.927	1.859	14.3	19.8	11 27	2 39.28	+21 19.0	0.979	1.931	10.8	18.6
12 7	2 22.20	+37 14.7	0.983	1.872	18.0	20.1	12 7	2 36.11	+20 20.1	1.054	1.959	15.6	18.9
12 17	2 20.00	+36 37.3	1.055	1.887	21.5	20.3	12 17	2 36.38	+19 37.3	1.148	1.988	19.5	19.3
494488	2016 <i>WF</i> ₃₉	11 7.9 316°84	1°4/ 8.9 16				138383	2000 <i>GA</i> ₁₆₃	11 7.9 92°34	4°4/ 5.2 18			
10 8	3 15.07	+23 13.0	1.493	2.362	15.1	21.3	10 8	3 18.30	+ 4 23.4	1.985	2.857	11.8	19.9
10 18	3 10.13	+22 31.2	1.415	2.348	11.1	21.0	10 18	3 11.49	+ 3 50.3	1.945	2.877	8.5	19.7
10 28	3 2.73	+21 31.1	1.360	2.334	6.4	20.7	10 28	3 3.07	+ 3 21.4	1.930	2.896	5.5	19.6
11 7	2 53.87	+20 16.0	1.330	2.320	1.8	20.4	11 7	2 53.91	+ 3 0.9	1.943	2.916	4.5	19.6
11 17	2 44.83	+18 52.3	1.328	2.307	4.5	20.5	11 17	2 44.92	+ 2 52.1	1.984	2.935	6.5	19.7
11 27	2 37.00	+17 29.1	1.352	2.294	9.5	20.8	11 27	2 37.03	+ 2 57.1	2.054	2.954	9.4	19.9
12 7	2 31.47	+16 15.3	1.400	2.282	14.1	21.0	12 7	2 30.92	+ 3 16.3	2.149	2.973	12.3	20.2
12 17	2 28.87	+15 17.4	1.469	2.270	18.0	21.2	12 17	2 26.97	+ 3 48.8	2.265	2.991	14.7	20.4
100399	1995 <i>YM</i> ₇	11 7.9 32°01	1°7/ 6.7 18				322636	1998 <i>SZ</i> ₅₀	11 7.9 46°50	1°3/ 6.9 18			
10 8	3 14.87	+13 34.0	1.984	2.859	11.7	20.1	10 8	3 13.49	+15 41.3	2.035	2.908	11.5	20.5
10 18	3 9.29	+12 57.5	1.921	2.860	8.2	19.9	10 18	3 8.25	+14 46.6	1.976	2.914	8.0	20.3
10 28	3 2.00	+12 16.6	1.884	2.862	4.4	19.6	10 28	3 1.42	+13 45.2	1.943	2.921	4.2	20.0
11 7	2 53.80	+11 34.8	1.875	2.863	1.7	19.5	11 7	2 53.77	+12 41.6	1.938	2.928	1.3	19.8
11 17	2 45.59	+10 56.6	1.894	2.865	4.6	19.7	11 17	2 46.18	+11 40.8	1.963	2.935	4.3	20.1
11 27	2 38.34	+10 26.4	1.941	2.867	8.3	19.9	11 27	2 39.53	+10 48.3	2.015	2.942	8.0	20.3
12 7	2 32.78	+10 7.4	2.014	2.869	11.7	20.1	12 7	2 34.53	+10 7.9	2.094	2.950	11.3	20.6
12 17	2 29.40	+10 1.4	2.109	2.871	14.5	20.3	12 17	2 31.59	+ 9 41.8	2.195	2.957	14.0	20.8
482622	2013 <i>AU</i> ₄₈	11 7.9 6°38	0°1/ 7.9 18				258424	2001 <i>XM</i> ₁₈₈	11 7.9 4°22				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
313705	2003 <i>UL</i> ₄₂		11 7.9 81°40	4°5/ 3.5 18			484456	2008 <i>BP</i> ₅₁		11 7.9 313°01	4°0/ 9.9 17		
10 8	3 12.45	+ 5 40.5	2.246	3.124	10.4	20.9	10 8	3 19.04	+25 47.0	1.660	2.511	14.7	21.2
10 18	3 7.39	+ 4 8.3	2.190	3.125	7.5	20.7	10 18	3 13.04	+26 19.9	1.576	2.493	11.2	21.0
10 28	3 0.93	+2 36.9	2.160	3.126	5.2	20.6	10 28	3 4.42	+26 39.0	1.514	2.476	7.4	20.7
11 7	2 53.74	+ 1 12.5	2.159	3.127	4.7	20.6	11 7	2 54.11	+26 42.4	1.479	2.460	4.2	20.5
11 17	2 46.58	+ 0 1.0	2.188	3.128	6.7	20.7	11 17	2 43.38	+26 31.1	1.470	2.443	5.3	20.5
11 27	2 40.23	- 0 53.2	2.245	3.129	9.5	20.9	11 27	2 33.71	+26 9.2	1.488	2.428	9.1	20.7
12 7	2 35.30	- 1 28.0	2.326	3.130	12.1	21.0	12 7	2 26.31	+25 43.1	1.531	2.412	13.2	20.9
12 17	2 32.21	- 1 43.3	2.427	3.132	14.3	21.2	12 17	2 21.95	+25 19.4	1.596	2.397	16.8	21.1
222021	1998 <i>SS</i> ₄₈		11 7.9 17°59	1°5/ 7.0 18			215050	2009 <i>DU</i> ₄₀		11 7.9 198°80	0°9/ 8.7 18		
10 8	3 15.24	+17 16.1	1.200	2.092	16.4	20.1	10 8	3 17.72	+20 53.0	2.066	2.921	12.1	21.3
10 18	3 10.33	+16 6.2	1.149	2.095	11.5	19.8	10 18	3 11.39	+20 35.2	1.992	2.919	8.7	21.1
10 28	3 2.81	+14 43.3	1.119	2.099	6.1	19.5	10 28	3 3.21	+20 7.1	1.944	2.917	4.9	20.9
11 7	2 53.92	+13 15.0	1.114	2.104	1.5	19.2	11 7	2 53.99	+19 30.6	1.924	2.914	1.2	20.6
11 17	2 45.11	+11 51.0	1.134	2.110	6.0	19.6	11 17	2 44.71	+18 49.1	1.933	2.911	3.6	20.8
11 27	2 37.87	+10 40.9	1.179	2.116	11.3	19.9	11 27	2 36.39	+18 7.6	1.972	2.907	7.5	21.0
12 7	2 33.22	+ 9 51.4	1.247	2.123	15.9	20.2	12 7	2 29.86	+17 30.9	2.037	2.904	11.0	21.2
12 17	2 31.67	+ 9 25.0	1.333	2.130	19.7	20.5	12 17	2 25.62	+17 3.1	2.125	2.900	14.0	21.4
161755	2006 <i>SQ</i> ₃₅₄		11 7.9 16°09	2°3/ 6.9 18			447585	2006 <i>UH</i> ₂₁		11 7.9 109°41	0°1/ 8.1 18		
10 8	3 15.01	+14 35.6	0.979	1.884	18.0	19.3	10 8	3 15.82	+19 22.2	1.923	2.787	12.4	21.4
10 18	3 10.50	+13 50.9	0.936	1.889	12.6	19.0	10 18	3 10.06	+18 42.5	1.857	2.790	8.8	21.2
10 28	3 3.01	+12 57.5	0.914	1.895	6.7	18.7	10 28	3 2.48	+17 52.6	1.817	2.793	4.8	20.9
11 7	2 53.94	+12 2.5	0.913	1.903	2.3	18.5	11 7	2 53.93	+16 55.8	1.805	2.795	0.5	20.6
11 17	2 44.99	+11 14.7	0.936	1.912	6.8	18.8	11 17	2 45.39	+15 57.2	1.821	2.798	3.9	20.9
11 27	2 37.86	+10 42.1	0.982	1.922	12.4	19.1	11 27	2 37.89	+15 2.6	1.866	2.800	8.0	21.2
12 7	2 33.68	+10 29.4	1.048	1.934	17.4	19.4	12 7	2 32.21	+14 16.9	1.937	2.803	11.6	21.4
12 17	2 32.93	+10 37.4	1.131	1.947	21.4	19.8	12 17	2 28.84	+13 43.9	2.030	2.805	14.6	21.6
509099	2005 <i>UF</i> ₄₆₃		11 7.9 160°78	1°7/ 6.9 18			478462	2012 <i>PN</i> ₃₈		11 7.9 126°60	1°6/ 9.1 16		
10 8	3 19.46	+13 36.0	1.893	2.762	12.4	21.9	10 8	3 21.01	+23 7.4	1.836	2.686	13.6	22.0
10 18	3 12.58	+13 1.4	1.832	2.768	8.7	21.7	10 18	3 13.71	+22 42.8	1.779	2.702	9.9	21.9
10 28	3 3.80	+12 21.9	1.796	2.773	4.7	21.5	10 28	3 4.41	+22 4.6	1.747	2.717	5.7	21.6
11 7	2 54.01	+11 41.4	1.789	2.778	1.7	21.3	11 7	2 54.10	+21 15.3	1.743	2.731	1.9	21.4
11 17	2 44.27	+11 4.3	1.811	2.782	4.8	21.5	11 17	2 43.93	+20 19.4	1.768	2.745	3.9	21.6
11 27	2 35.62	+10 35.1	1.861	2.785	8.7	21.8	11 27	2 35.05	+19 23.1	1.822	2.758	8.0	21.9
12 7	2 28.89	+10 17.3	1.938	2.788	12.3	22.0	12 7	2 28.30	+18 32.6	1.902	2.771	11.6	22.1
12 17	2 24.57	+10 12.7	2.036	2.790	15.2	22.2	12 17	2 24.14	+17 52.5	2.005	2.783	14.7	22.4
102515	1999 <i>TT</i> ₃₀₅		11 7.9 68°46	2°8/ 9.5 18			210828	2001 <i>OP</i> ₃₇		11 7.9 146°65	2°7/ 10.0 18		
10 8	3 24.30	+24 12.1	1.282	2.144	17.5	19.3	10 8	3 20.47	+25 59.2	2.417	3.245	11.5	21.2
10 18	3 16.46	+24 11.8	1.246	2.173	12.8	19.1	10 18	3 13.13	+26 11.5	2.349	3.255	8.6	21.0
10 28	3 5.94	+23 53.6	1.232	2.201	7.6	18.9	10 28	3 4.07	+26 12.0	2.307	3.266	5.5	20.8
11 7	2 54.19	+23 19.1	1.243	2.230	3.2	18.7	11 7	2 54.08	+26 0.9	2.294	3.275	3.0	20.7
11 17	2 42.87	+22 33.8	1.280	2.258	5.0	18.9	11 17	2 44.08	+25 39.9	2.312	3.284	3.7	20.8
11 27	2 33.51	+21 45.6	1.344	2.286	9.7	19.3	11 27	2 35.02	+25 12.5	2.359	3.292	6.6	21.0
12 7	2 27.09	+21 2.6	1.432	2.313	13.9	19.6	12 7	2 27.65	+24 43.3	2.435	3.300	9.5	21.2
12 17	2 24.00	+20 30.3	1.540	2.341	17.3	19.9	12 17	2 22.47	+24 16.8	2.535	3.307	12.1	21.3
156611	2002 <i>GS</i> ₁₁₉		11 7.9 264°03	2°1/ 6.2 18			266499	2008 <i>DS</i> ₈₅		11 7.9 88°08	2°1/ 6.8 17		
10 8	3 13.71	+13 13.0	2.125	2.998	11.0	20.2	10 8	3 21.39	+13 14.5	1.499	2.376	14.6	21.1
10 18	3 8.42	+12 14.1	2.057	2.996	7.7	20.0	10 18	3 14.07	+12 39.0	1.459	2.398	10.2	20.9
10 28	3 1.54	+11 10.2	2.016	2.993	4.2	19.8	10 28	3 4.60	+11 59.1	1.443	2.420	5.5	20.7
11 7	2 53.82	+10 5.9	2.003	2.990	2.1	19.6	11 7	2 54.12	+11 19.4	1.453	2.442	2.1	20.5
11 17	2 46.08	+ 9 6.2	2.019	2.987	4.7	19.8	11 17	2 43.92	+10 45.2	1.492	2.463	5.5	20.8
11 27	2 39.20	+ 8 16.2	2.064	2.984	8.3	20.0	11 27	2 35.24	+10 21.4	1.558	2.485	9.9	21.1
12 7	2 33.88	+ 7 39.5	2.135	2.981	11.5	20.2	12 7	2 28.93	+10 11.2	1.648	2.505	13.7	21.4
12 17	2 30.58	+ 7 18.1	2.228	2.978	14.2	20.4	12 17	2 25.41	+10 15.6	1.758	2.525	16.8	21.6
304130	2006 <i>KJ</i> ₄₀		11 7.9 108°64	4°6/ 5.3 18			41417	2000 <i>AL</i> ₂₃₃		11 7.9 320°10	0°4/ 7.4 18		
10 8	3 20.52	+ 3 16.6	2.026	2.892	11.8	20.7	10 8	3 7.92	+15 28.8	4.172	5.031	6.4	19.5
10 18	3 13.03	+ 2 53.8	1.983	2.912	8.6	20.5	10 18	3 3.81	+15 10.0	4.097	5.029	4.5	19.4
10 28	3 3.91	+ 2 36.2	1.967	2.931	5.7	20.4	10 28	2 58.92	+14 48.5	4.050	5.027	2.4	19.2
11 7	2 54.02	+ 2 27.5	1.979	2.950	4.6	20.3	11 7	2 53.62	+14 25.6	4.034	5.024	0.4	19.0
11 17	2 44.32	+ 2 30.4	2.020	2.969	6.5	20.5	11 17	2 48.29	+14 3.0	4.048	5.022	2.2	19.2
11 27	2 35.73	+ 2 46.6	2.089	2.987	9.4	20.7	11 27	2 43.36	+13 42.6	4.093	5.020	4.3	19.3
12 7	2 28.95	+ 3 16.0	2.184	3.004	12.2	20.9	12 7	2 39.18	+13 26.1	4.167	5.018	6.2	19.5
12 17	2 24.40	+ 3 57.5	2.301	3.021	14.6	21.1	12 17	2 36.03	+13 14.8	4.266	5.016	7.9	19.6
81743	2000 <i>JT</i> ₄₆		11 7.9 204°40	3°5/ 10.7 18			238576	2004 <i>XZ</i> ₁₂₃		11 7.9 17°88	6°4/ 5.2 18		
10 8	3 17.79	+28 47.6	2.096	2.926	12.9	19.8	10 8	3 19.77	+ 1 13.0	1.458	2.339	14.7	19.3
10 18	3 11.52	+28 39.7	2.019	2.924	9.9	19.6	10 18	3 13.16	+ 0 52.4	1.407	2.341	11.0	19.1
10 28	3 3.30	+28 15.6	1.966	2.921	6.6	19.4	10 28	3 4.25	+ 0 41.1	1.380	2.344	7.7	18.9
11 7	2 53.99	+27 35.8	1.941	2.919	3.8	19.2	11 7	2 54.10	+ 0 44.4	1.377	2.347	6.5	18.8
11 17	2 44.61	+26 43.1	1.944	2.916	4.4	19.3	11 17	2 44.00	+ 1 5.7	1.401	2.351	8.7	19.0
11 27	2 36.25	+25 42.9	1.976	2.913	7.4	19.4	11 27	2 35.25	+ 1 46.2	1.450	2.355	12.3	19.2
12 7	2 29.76	+24 41.8	2.035	2.909	10.7	19.6	12 7	2 28.80	+ 2 44.6	1.523	2.359	15.8	19.4
12 17	2 25.69	+23 45.8	2.118	2.906	13.6	19.8	12 17	2 25.20	+ 3 57.8	1.614	2.364	18.8	19.7
222884	2002 <i>GK</i> ₈₆		11 7.9 93°25	6°0/ 2.3 18			162847	2001 <i>DA</i> ₃₁		11 7.9			

EPHEMERIDES

11 7.9

11 8.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
515053	2010 GZ ₁₀₁		11 7.9 157°93	1.3°/ 7.2 18			206704	2004 BJ ₃₁		11 7.9 35°52	5.5°/ 4.6 18		
10 8	3 20.55	+12 36.6	2.141	3.003	11.4	21.9	10 8	3 16.33	- 0 20.3	2.162	3.029	11.1	19.2
10 18	3 13.23	+12 34.8	2.077	3.009	8.1	21.7	10 18	3 10.17	- 0 41.2	2.109	3.033	8.4	19.0
10 28	3 4.14	+12 30.5	2.039	3.015	4.3	21.5	10 28	3 2.47	- 0 54.4	2.082	3.038	6.2	18.9
11 7	2 54.11	+12 25.6	2.031	3.020	1.3	21.3	11 7	2 53.98	- 0 56.1	2.082	3.043	5.5	18.9
11 17	2 44.06	+12 22.6	2.052	3.024	4.2	21.5	11 17	2 45.53	- 0 43.9	2.111	3.048	7.1	19.0
11 27	2 34.98	+12 24.1	2.104	3.028	7.8	21.8	11 27	2 37.98	- 0 16.4	2.168	3.054	9.7	19.1
12 7	2 27.65	+12 32.4	2.182	3.032	11.1	22.0	12 7	2 32.01	+ 0 25.7	2.249	3.059	12.3	19.3
12 17	2 22.55	+12 49.0	2.284	3.035	13.9	22.2	12 17	2 28.04	+ 1 20.7	2.351	3.065	14.5	19.5
259552	2003 UR ₁₃₉		11 7.9 18°86	1.7°/ 7.3 18			1271	Isergina		11 7.9 3°72	3.7°/ 5.5 18		
10 8	3 19.95	+13 3.8	1.054	1.950	17.7	19.6	10 8	3 13.82	+ 7 46.1	1.880	2.761	11.8	14.6
10 18	3 14.00	+13 5.5	1.006	1.954	12.6	19.3	10 18	3 8.65	+ 7 5.0	1.821	2.761	8.5	14.4
10 28	3 4.95	+13 3.0	0.979	1.959	6.8	19.0	10 28	3 1.75	+ 6 24.6	1.788	2.761	5.1	14.2
11 7	2 54.18	+12 59.7	0.975	1.965	1.8	18.7	11 7	2 53.92	+ 5 49.5	1.782	2.762	3.7	14.1
11 17	2 43.45	+12 59.8	0.996	1.972	6.3	19.1	11 17	2 46.08	+ 5 24.0	1.804	2.763	6.1	14.3
11 27	2 34.52	+13 8.1	1.040	1.980	11.9	19.4	11 27	2 39.20	+ 5 12.0	1.852	2.765	9.5	14.5
12 7	2 28.65	+13 27.9	1.105	1.989	16.9	19.7	12 7	2 34.03	+ 5 14.9	1.925	2.767	12.7	14.7
12 17	2 26.41	+14 0.4	1.189	1.999	20.9	20.0	12 17	2 31.04	+ 5 33.0	2.019	2.770	15.5	14.9
517464	2014 OQ ₄₀₂		11 7.9 87°42	2.6°/ 9.9 18			366260	2013 AM ₇		11 7.9 21°31	4.7°/ 5.0 18		
10 8	3 17.67	+25 2.9	2.141	2.983	12.2	21.4	10 8	3 16.13	+ 6 9.1	1.693	2.576	12.9	20.4
10 18	3 11.35	+25 12.3	2.074	2.988	9.1	21.2	10 18	3 10.40	+ 5 18.9	1.638	2.577	9.3	20.1
10 28	3 3.20	+25 9.7	2.031	2.993	5.7	21.0	10 28	3 2.72	+ 4 30.7	1.608	2.578	6.0	20.0
11 7	2 54.03	+24 55.4	2.015	2.999	2.9	20.8	11 7	2 54.01	+ 3 50.2	1.604	2.580	4.8	19.9
11 17	2 44.81	+24 31.6	2.029	3.004	3.9	20.9	11 17	2 45.33	+ 3 22.8	1.627	2.582	7.2	20.0
11 27	2 36.57	+24 2.2	2.072	3.009	7.1	21.1	11 27	2 37.74	+ 3 12.1	1.677	2.584	10.7	20.3
12 7	2 30.11	+23 32.3	2.141	3.014	10.3	21.3	12 7	2 32.10	+ 3 19.6	1.750	2.586	14.1	20.5
12 17	2 25.94	+23 6.3	2.234	3.019	13.1	21.5	12 17	2 28.88	+ 3 44.5	1.843	2.589	16.9	20.7
469278	1994 RF ₃		11 7.9 46°75	1.8°/ 8.9 18			308124	2004 XN ₁₀₃		11 7.9 10°09	0.7°/ 8.3 18		
10 8	3 20.75	+21 56.6	1.134	2.013	18.1	20.5	10 8	3 16.78	+18 39.8	1.207	2.094	16.6	19.3
10 18	3 14.19	+21 45.5	1.100	2.037	13.0	20.3	10 18	3 11.59	+18 40.1	1.154	2.096	11.9	19.0
10 28	3 4.83	+21 17.9	1.086	2.061	7.4	20.1	10 28	3 3.63	+18 29.1	1.121	2.099	6.6	18.8
11 7	2 54.17	+20 37.0	1.097	2.086	2.1	19.8	11 7	2 54.11	+18 9.3	1.113	2.104	1.1	18.4
11 17	2 43.89	+19 49.3	1.132	2.112	5.1	20.1	11 17	2 44.56	+17 45.0	1.130	2.109	5.0	18.7
11 27	2 35.59	+19 3.0	1.193	2.137	10.3	20.5	11 27	2 36.57	+17 22.7	1.171	2.115	10.4	19.0
12 7	2 30.25	+18 25.7	1.276	2.164	14.8	20.8	12 7	2 31.28	+17 8.2	1.235	2.123	15.1	19.3
12 17	2 28.28	+18 1.9	1.379	2.190	18.4	21.1	12 17	2 29.27	+17 5.5	1.317	2.132	19.0	19.6
516735	2009 FB ₅₉		11 7.9 310°08	4.9°/ 4.1 18			21312	1996 XF ₁₄		11 7.9 102°64	0.4°/ 7.7 18		
10 8	3 14.31	+ 7 8.6	1.763	2.647	12.4	21.2	10 8	3 21.65	+17 46.5	1.603	2.470	14.3	18.8
10 18	3 9.07	+ 5 38.7	1.704	2.644	9.0	21.0	10 18	3 14.23	+17 9.6	1.558	2.492	10.1	18.6
10 28	3 1.99	+ 4 8.1	1.670	2.641	5.8	20.8	10 28	3 4.71	+16 23.4	1.537	2.513	5.4	18.4
11 7	2 53.93	+ 2 44.3	1.664	2.638	5.1	20.7	11 7	2 54.20	+15 31.8	1.543	2.534	0.6	18.1
11 17	2 45.86	+ 1 34.6	1.686	2.635	7.5	20.9	11 17	2 43.94	+14 40.6	1.578	2.554	4.5	18.4
11 27	2 38.82	+ 0 44.6	1.734	2.632	11.0	21.1	11 27	2 35.15	+13 55.8	1.642	2.574	9.0	18.7
12 7	2 33.59	+ 0 17.0	1.805	2.629	14.2	21.3	12 7	2 28.67	+13 22.3	1.730	2.593	12.9	19.0
12 17	2 30.67	+ 0 11.6	1.896	2.627	17.0	21.5	12 17	2 24.92	+13 2.8	1.840	2.611	16.0	19.3
512009	2015 LE ₁₂		11 7.9 112°46	6.5°/ 4.4 18			363349	2002 QX ₁₂₉		11 7.9 68°11	0.3°/ 8.2 14 C		
10 8	3 20.74	- 1 20.9	1.892	2.755	12.6	20.7	10 8	3 17.12	+19 17.4	2.232	3.088	11.3	22.0
10 18	3 13.28	- 1 57.3	1.852	2.773	9.6	20.6	10 18	3 10.56	+18 49.7	2.194	3.123	7.9	21.8
10 28	3 4.10	- 2 24.2	1.837	2.790	7.2	20.5	10 28	3 2.59	+18 14.3	2.183	3.157	4.3	21.7
11 7	2 54.11	- 2 36.8	1.850	2.806	6.6	20.5	11 7	2 54.01	+17 34.1	2.200	3.191	0.5	21.4
11 17	2 44.32	- 2 31.8	1.891	2.822	8.3	20.6	11 17	2 45.66	+16 52.6	2.248	3.225	3.3	21.7
11 27	2 35.72	- 2 8.3	1.960	2.838	10.9	20.8	11 27	2 38.37	+16 14.1	2.325	3.258	6.7	22.0
12 7	2 29.04	- 1 27.5	2.052	2.853	13.6	21.0	12 7	2 32.73	+15 42.2	2.429	3.291	9.7	22.2
12 17	2 24.67	- 0 31.8	2.165	2.868	15.9	21.2	12 17	2 29.10	+15 19.5	2.557	3.323	12.2	22.5
448575	2010 TA ₉		11 7.9 47°11	0.1°/ 8.1 18			495046	2011 BT ₃₈		11 8.0 259°65	6.4°/ 13.3 18		
10 8	3 16.02	+18 37.8	1.835	2.703	12.8	21.2	10 8	3 19.32	+38 46.3	2.604	3.372	12.4	21.6
10 18	3 10.27	+18 12.6	1.774	2.709	9.1	21.0	10 18	3 12.69	+39 19.9	2.511	3.358	10.4	21.4
10 28	3 2.63	+17 38.3	1.738	2.714	4.9	20.8	10 28	3 4.06	+39 35.9	2.441	3.344	8.3	21.2
11 7	2 53.99	+16 57.9	1.730	2.721	0.5	20.5	11 7	2 54.17	+39 32.0	2.397	3.330	6.8	21.1
11 17	2 45.37	+16 15.7	1.750	2.727	3.9	20.8	11 17	2 44.01	+39 8.0	2.381	3.316	6.5	21.1
11 27	2 37.83	+15 36.8	1.798	2.733	8.1	21.0	11 27	2 34.68	+38 26.9	2.393	3.301	7.8	21.1
12 7	2 32.19	+15 5.9	1.871	2.740	11.8	21.3	12 7	2 27.08	+37 34.1	2.431	3.287	9.9	21.3
12 17	2 28.93	+14 46.2	1.966	2.747	14.8	21.5	12 17	2 21.84	+36 36.1	2.494	3.272	12.1	21.4
245834	2006 KD ₁₃		11 7.9 108°50	6.3°/ 3.5 18			407065	2009 SC ₁₆₇		11 8.0 333°61	2.4°/ 9.3 17		
10 8	3 17.19	+ 0 39.9	1.907	2.779	12.2	20.5	10 8	3 15.16	+22 41.0	1.625	2.491	14.2	20.7
10 18	3 10.80	- 0 28.8	1.868	2.795	9.2	20.3	10 18	3 10.23	+22 53.1	1.542	2.472	10.6	20.5
10 28	3 2.79	- 1 30.3	1.855	2.810	6.8	20.2	10 28	3 2.91	+22 52.8	1.483	2.453	6.4	20.2
11 7	2 54.00	- 2 18.4	1.868	2.825	6.4	20.2	11 7	2 54.07	+22 40.4	1.449	2.436	2.6	19.9
11 17	2 45.37	- 2 48.5	1.910	2.840	8.3	20.3	11 17	2 44.90	+22 18.2	1.442	2.419	4.5	20.0
11 27	2 37.84	- 2 58.1	1.978	2.854	10.9	20.5	11 27	2 36.75	+21 51.1	1.461	2.404	8.9	20.2
12 7	2 32.09	- 2 47.3	2.069	2.868	13.6	20.8	12 7	2 30.73	+21 25.1	1.504	2.389	13.1	20.4
12 17	2 28.52	- 2 18.1	2.180	2.882	15.8	21.0	12 17	2 27.54	+21 5.6	1.569	2.376	16.8	20.7
495789	2017 FM ₅₁		11 7.9 242°85	2.7°/ 5.8 18			371359	2006 OT ₈		11 8.0 51°22	4.8°/ 5.8 16		
10 8	3 14.97	+ 7 56.7	2.										