

EPHEMERIDES

12 10.9

12 11.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
373648	2002 <i>PK</i> ₁₆₅		12 10.9 49°42'	6°4/12.6	18		71006	1999 <i>XQ</i> ₄₂		12 11.0 358°78'	1°0/11.1	18	
11 7	5 46.41	+38 21.6	1.466	2.281	17.8	20.1	11 7	5 38.32	+25 13.3	1.331	2.183	17.1	19.2
11 17	5 39.73	+38 52.0	1.422	2.306	14.0	20.0	11 17	5 34.00	+25 20.3	1.264	2.180	12.9	19.0
11 27	5 29.66	+39 4.6	1.398	2.332	10.1	19.8	11 27	5 26.48	+25 22.9	1.217	2.178	7.9	18.7
12 7	5 17.61	+38 54.5	1.399	2.358	7.0	19.7	12 7	5 16.81	+25 19.4	1.194	2.177	2.6	18.4
12 17	5 5.36	+38 20.9	1.425	2.385	6.8	19.8	12 17	5 6.46	+25 9.8	1.198	2.177	3.5	18.4
12 27	4 54.76	+37 28.5	1.479	2.412	9.4	20.0	12 27	4 57.18	+24 55.8	1.227	2.178	8.8	18.7
1 6	4 47.12	+36 25.3	1.557	2.439	12.8	20.3	1 6	4 50.37	+24 41.1	1.280	2.180	13.6	19.0
1 16	4 43.04	+35 19.4	1.657	2.466	15.9	20.5	1 16	4 46.90	+24 29.1	1.353	2.183	17.7	19.3
155704	2000 <i>QJ</i> ₈₉		12 10.9 103°42'	1°8/10.6	18		419516	2010 <i>HN</i> ₁₄		12 11.0 20°02'	6°1/12.9	16	
11 7	5 42.09	+20 2.0	1.697	2.528	14.9	20.1	11 7	5 41.94	+41 54.0	2.198	2.983	13.6	20.7
11 17	5 35.85	+19 31.7	1.635	2.541	11.1	19.9	11 17	5 35.88	+42 16.5	2.124	2.985	11.1	20.5
11 27	5 27.13	+19 0.5	1.596	2.554	6.8	19.7	11 27	5 27.23	+42 24.0	2.072	2.988	8.5	20.3
12 7	5 16.89	+18 29.8	1.585	2.566	2.5	19.4	12 7	5 16.96	+42 12.6	2.047	2.991	6.5	20.2
12 17	5 6.34	+18 1.5	1.602	2.578	3.6	19.5	12 17	5 6.27	+41 41.1	2.048	2.994	6.3	20.2
12 27	4 56.82	+17 38.2	1.648	2.589	7.8	19.8	12 27	4 56.54	+40 51.7	2.078	2.997	8.1	20.3
1 6	4 49.34	+17 22.0	1.719	2.601	11.8	20.1	1 6	4 48.87	+39 49.7	2.135	3.001	10.6	20.5
1 16	4 44.56	+17 14.1	1.814	2.612	15.2	20.3	1 16	4 43.93	+38 41.4	2.215	3.004	13.1	20.7
29115	1981 <i>EW</i> ₃₈		12 10.9 216°81'	0°8/11.2	18		396760	2003 <i>UF</i> ₃₃₀		12 11.0 3°50'	5°5/9.5	18	
11 7	5 40.13	+26 6.8	2.079	2.902	12.9	19.3	11 7	5 37.84	+14 28.3	1.457	2.301	16.3	20.4
11 17	5 34.30	+25 59.5	1.998	2.899	9.7	19.0	11 17	5 33.07	+13 4.0	1.391	2.300	12.5	20.2
11 27	5 26.21	+25 47.2	1.940	2.896	5.9	18.8	11 27	5 25.64	+11 41.9	1.348	2.300	8.4	19.9
12 7	5 16.64	+25 29.2	1.911	2.893	1.9	18.5	12 7	5 16.51	+10 27.5	1.331	2.301	5.6	19.8
12 17	5 6.64	+25 5.8	1.911	2.889	2.6	18.6	12 17	5 6.96	+9 26.8	1.340	2.302	6.7	19.9
12 27	4 57.36	+24 39.1	1.940	2.885	6.6	18.8	12 27	4 58.39	+8 44.3	1.375	2.304	10.4	20.1
1 6	4 49.79	+24 12.0	1.997	2.881	10.3	19.1	1 6	4 51.92	+8 21.6	1.434	2.307	14.3	20.3
1 16	4 44.60	+23 47.5	2.078	2.877	13.5	19.3	1 16	4 48.26	+8 17.8	1.514	2.310	17.8	20.5
516740	2009 <i>JW</i> ₈		12 11.0 190°16'	0°8/10.9	18		172260	2002 <i>SN</i> ₄₀		12 11.0 31°39'	4°3/11.5	18	
11 7	5 39.96	+19 55.1	2.662	3.474	10.7	23.0	11 7	5 42.35	+31 40.2	1.555	2.384	16.2	19.4
11 17	5 33.70	+20 1.8	2.576	3.473	8.0	22.8	11 17	5 36.77	+32 28.0	1.491	2.391	12.5	19.2
11 27	5 25.66	+20 8.9	2.516	3.471	4.8	22.6	11 27	5 28.06	+33 7.1	1.450	2.399	8.4	19.0
12 7	5 16.47	+20 16.0	2.486	3.468	1.6	22.4	12 7	5 17.25	+33 32.8	1.434	2.407	4.9	18.8
12 17	5 6.90	+20 23.0	2.487	3.464	2.3	22.4	12 17	5 5.84	+33 42.1	1.446	2.415	5.1	18.8
12 27	4 57.82	+20 30.3	2.520	3.460	5.6	22.7	12 27	4 55.52	+33 36.2	1.484	2.424	8.7	19.1
1 6	4 50.02	+20 38.6	2.582	3.456	8.7	22.8	1 6	4 47.66	+33 19.2	1.547	2.434	12.6	19.3
1 16	4 44.05	+20 49.0	2.670	3.450	11.3	23.0	1 16	4 43.07	+32 56.9	1.632	2.444	16.0	19.6
53630	2000 <i>CW</i> ₁₁₆		12 11.0 87°73'	0°7/11.0	18		264796	2002 <i>NF</i> ₅₉		12 11.0 140°43'	4°9/10.3	18	
11 7	5 45.14	+22 53.2	1.505	2.339	16.4	18.7	11 7	5 36.55	+5 6.6	2.789	3.582	10.8	21.0
11 17	5 38.57	+23 26.6	1.447	2.354	12.2	18.5	11 17	5 30.94	+4 51.0	2.720	3.592	8.6	20.8
11 27	5 28.99	+23 59.2	1.411	2.369	7.4	18.3	11 27	5 23.90	+4 44.3	2.677	3.601	6.4	20.7
12 7	5 17.48	+24 28.1	1.401	2.384	2.3	18.0	12 7	5 15.96	+4 48.1	2.663	3.610	5.0	20.6
12 17	5 5.48	+24 51.3	1.420	2.398	3.2	18.1	12 17	5 7.80	+5 3.2	2.678	3.619	5.3	20.7
12 27	4 54.63	+25 8.8	1.466	2.413	8.1	18.4	12 27	5 0.14	+5 29.6	2.723	3.627	7.0	20.8
1 6	4 46.21	+25 22.5	1.539	2.427	12.5	18.7	1 6	4 53.59	+6 5.9	2.795	3.635	9.2	20.9
1 16	4 40.98	+25 35.1	1.633	2.441	16.2	19.0	1 16	4 48.62	+6 50.5	2.893	3.643	11.3	21.1
220047	2002 <i>RB</i> ₈₄		12 11.0 43°18'	2°2/11.3	18		399653	2004 <i>RR</i> ₁₆₇		12 11.0 38°56'	4°6/10.7	17	
11 7	5 43.41	+27 47.4	1.156	2.007	19.2	19.7	11 7	5 38.35	+11 3.8	1.602	2.435	15.6	20.4
11 17	5 37.88	+27 54.8	1.109	2.023	14.4	19.5	11 17	5 33.06	+10 53.5	1.555	2.457	11.9	20.2
11 27	5 28.74	+27 53.6	1.081	2.040	8.9	19.2	11 27	5 25.44	+10 52.8	1.530	2.479	8.0	20.1
12 7	5 17.40	+27 41.5	1.077	2.058	3.4	19.0	12 7	5 16.42	+11 3.0	1.530	2.501	4.9	19.9
12 17	5 5.69	+27 18.6	1.098	2.076	4.0	19.1	12 17	5 7.18	+11 24.7	1.558	2.524	5.5	20.0
12 27	4 55.59	+26 48.7	1.144	2.095	9.3	19.4	12 27	4 58.93	+11 57.1	1.614	2.548	8.7	20.3
1 6	4 48.53	+26 17.5	1.214	2.114	14.2	19.8	1 6	4 52.62	+12 38.4	1.694	2.572	12.2	20.5
1 16	4 45.19	+25 49.9	1.304	2.134	18.2	20.1	1 16	4 48.86	+13 26.5	1.797	2.596	15.3	20.8
198834	2005 <i>EW</i> ₃₂₆		12 11.0 143°68'	2°8/11.8	17		258639	2002 <i>ES</i> ₃₄		12 11.0 316°71'	0°7/10.9	18	
11 7	5 39.41	+32 36.2	2.463	3.270	11.6	20.6	11 7	5 41.67	+21 12.8	1.240	2.091	18.1	20.3
11 17	5 33.52	+32 42.1	2.384	3.273	8.9	20.5	11 17	5 36.79	+21 19.6	1.166	2.083	13.7	20.0
11 27	5 25.62	+32 39.7	2.331	3.275	5.9	20.3	11 27	5 28.37	+21 27.1	1.114	2.075	8.4	19.7
12 7	5 16.47	+32 27.3	2.305	3.278	3.3	20.1	12 7	5 17.44	+21 34.1	1.084	2.067	2.5	19.3
12 17	5 6.97	+32 4.8	2.310	3.281	3.4	20.1	12 17	5 5.58	+21 39.9	1.081	2.060	3.8	19.4
12 27	4 58.17	+31 33.8	2.344	3.283	6.1	20.3	12 27	4 54.74	+21 45.6	1.103	2.053	9.7	19.7
1 6	4 50.93	+30 57.6	2.407	3.285	9.0	20.5	1 6	4 46.55	+21 53.3	1.149	2.047	15.0	20.0
1 16	4 45.85	+30 19.8	2.494	3.287	11.7	20.7	1 16	4 42.03	+22 5.0	1.214	2.041	19.5	20.3
439474	2013 <i>YO</i> ₈₄		12 11.0 211°43'	0°6/11.1	18		427288	2014 <i>WE</i> ₂₃₅		12 11.0 242°49'	3°5/12.1	18	
11 7	5 43.09	+25 50.8	1.835	2.659	14.3	21.4	11 7	5 40.00	+36 7.6	2.764	3.556	10.9	20.9
11 17	5 36.78	+25 37.0	1.752	2.655	10.7	21.1	11 17	5 33.93	+36 12.8	2.669	3.545	8.6	20.8
11 27	5 27.83	+25 17.2	1.693	2.650	6.6	20.9	11 27	5 25.90	+36 8.2	2.599	3.533	6.0	20.6
12 7	5 17.15	+24 50.9	1.662	2.644	2.1	20.6	12 7	5 16.59	+35 51.8	2.557	3.521	3.9	20.4
12 17	5 5.93	+24 18.8	1.660	2.638	2.8	20.6	12 17	5 6.89	+35 23.1	2.546	3.509	3.9	20.4
12 27	4 55.56	+23 43.5	1.687	2.632	7.4	20.9	12 27	4 57.77	+34 43.6	2.565	3.497	6.0	20.5
1 6	4 47.18	+23 9.0	1.741	2.625	11.5	21.1	1 6	4 50.09	+33 56.6	2.612	3.484	8.6	20.7
1 16	4 41.56	+22 38.8	1.818	2.618	15.1	21.3	1 16	4 44.48	+33 6.3	2.685	3.471	11.1	20.8
333629	2008 <i>EF</i> ₁₆₈		12 11.0 135°32'	1°8/10.7	18		74782	1999 <i>RQ</i> ₂₄₆		12 11.0 211°53'	3°8/11.		

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
134075	2004 <i>XE</i> ₆₈		12 11.0 299°77	2°3/10.7	18		441056	2007 <i>LC</i> ₂₅		12 11.0 213°66	0°3/10.9	18	
11 7	5 36.69	+16 14.8	2.153	2.980	12.4	20.0	11 7	5 42.38	+22 11.4	1.925	2.749	13.7	22.4
11 17	5 31.69	+16 7.9	2.067	2.969	9.3	19.8	11 17	5 36.17	+22 12.1	1.841	2.744	10.3	22.2
11 27	5 24.66	+16 4.2	2.004	2.959	5.9	19.5	11 27	5 27.49	+22 11.3	1.781	2.737	6.3	21.9
12 7	5 16.26	+16 4.4	1.969	2.948	2.7	19.3	12 7	5 17.12	+22 8.4	1.748	2.731	1.8	21.6
12 17	5 7.37	+16 9.0	1.964	2.937	3.5	19.3	12 17	5 6.17	+22 3.3	1.745	2.724	2.8	21.7
12 27	4 59.01	+16 18.9	1.988	2.927	6.9	19.5	12 27	4 55.93	+21 57.2	1.772	2.716	7.2	21.9
1 6	4 52.08	+16 34.3	2.039	2.917	10.4	19.7	1 6	4 47.51	+21 52.2	1.826	2.708	11.2	22.2
1 16	4 47.24	+16 55.2	2.113	2.906	13.5	19.9	1 16	4 41.65	+21 50.2	1.903	2.699	14.6	22.4
50047	2000 <i>AA</i> ₆₂		12 11.0 154°45	4°9/10.5	18		449558	2014 <i>HY</i> ₁₈₆		12 11.0 194°62	0°1/11.0	18	
11 7	5 39.80	+7 30.9	2.227	3.032	12.8	18.5	11 7	5 41.86	+22 8.3	2.228	3.046	12.3	22.1
11 17	5 33.70	+7 18.0	2.157	3.039	10.0	18.3	11 17	5 35.49	+22 24.8	2.144	3.044	9.2	21.9
11 27	5 25.71	+7 14.3	2.110	3.045	7.2	18.2	11 27	5 26.95	+22 40.7	2.085	3.041	5.6	21.7
12 7	5 16.53	+7 21.8	2.092	3.051	5.1	18.1	12 7	5 16.94	+22 54.8	2.055	3.038	1.6	21.4
12 17	5 7.02	+7 41.2	2.103	3.056	5.5	18.1	12 17	5 6.44	+23 6.5	2.056	3.034	2.4	21.4
12 27	4 58.13	+8 12.3	2.143	3.061	7.9	18.2	12 27	4 56.53	+23 15.9	2.087	3.030	6.4	21.7
1 6	4 50.69	+8 53.5	2.211	3.065	10.7	18.4	1 6	4 48.19	+23 24.3	2.146	3.025	9.9	21.9
1 16	4 45.28	+9 43.0	2.303	3.069	13.3	18.6	1 16	4 42.11	+23 33.1	2.230	3.019	13.0	22.1
514258	2015 <i>PU</i> ₂₉₅		12 11.0 119°61	6°0/10.4	18		277434	2005 <i>UQ</i> ₃₈₇		12 11.0 168°32	0°4/11.1	18	
11 7	5 40.69	+4 33.0	2.220	3.016	13.1	22.2	11 7	5 43.26	+24 42.0	1.817	2.642	14.4	21.4
11 17	5 34.20	+4 7.0	2.164	3.036	10.4	22.1	11 17	5 36.86	+24 34.3	1.742	2.645	10.8	21.2
11 27	5 25.92	+3 52.2	2.132	3.055	7.8	21.9	11 27	5 27.87	+24 22.4	1.691	2.648	6.5	21.0
12 7	5 16.56	+3 51.0	2.127	3.073	6.1	21.9	12 7	5 17.21	+24 5.3	1.668	2.650	2.0	20.7
12 17	5 7.01	+4 4.5	2.151	3.091	6.5	21.9	12 17	5 6.09	+23 43.7	1.673	2.652	2.8	20.7
12 27	4 58.20	+4 32.3	2.205	3.109	8.5	22.1	12 27	4 55.87	+23 19.7	1.708	2.653	7.3	21.0
1 6	4 50.88	+5 12.8	2.286	3.125	11.0	22.3	1 6	4 47.66	+22 56.5	1.770	2.654	11.4	21.3
1 16	4 45.58	+6 3.1	2.389	3.141	13.3	22.5	1 16	4 42.19	+22 37.2	1.855	2.655	14.8	21.5
149896	2005 <i>SD</i> ₁		12 11.0 62°65	0°8/10.9	18 R		331289	2011 <i>DJ</i> ₄₃		12 11.0 21°42	2°7/10.5	16	
11 7	5 39.59	+21 40.5	1.852	2.683	13.9	20.2	11 7	5 36.37	+17 7.3	1.766	2.605	14.1	20.6
11 17	5 33.87	+21 27.7	1.793	2.699	10.3	20.0	11 17	5 31.63	+16 40.9	1.702	2.611	10.6	20.4
11 27	5 25.90	+21 13.4	1.757	2.715	6.2	19.8	11 27	5 24.64	+16 16.9	1.662	2.619	6.6	20.2
12 7	5 16.58	+20 57.9	1.749	2.732	1.9	19.5	12 7	5 16.26	+15 56.8	1.648	2.626	3.1	20.0
12 17	5 7.00	+20 42.3	1.770	2.748	2.8	19.6	12 17	5 7.52	+15 42.4	1.662	2.635	4.0	20.1
12 27	4 58.32	+20 28.3	1.820	2.765	7.0	19.9	12 27	4 59.61	+15 35.2	1.703	2.644	7.7	20.3
1 6	4 51.51	+20 17.7	1.896	2.781	10.7	20.2	1 6	4 53.47	+15 36.2	1.771	2.654	11.4	20.6
1 16	4 47.14	+20 12.1	1.996	2.798	13.8	20.4	1 16	4 49.73	+15 45.2	1.861	2.664	14.6	20.8
108031	2001 <i>FC</i> ₁₅₂		12 11.0 18°49	0°3/10.9	18		115594	2003 <i>UX</i> ₉₈		12 11.0 359°56	7°2/9.1	17	
11 7	5 39.79	+25 29.9	1.043	1.907	19.8	18.0	11 7	5 34.85	+4 36.0	2.036	2.848	13.5	19.5
11 17	5 35.48	+24 46.6	0.989	1.912	14.8	17.7	11 17	5 30.22	+3 29.3	1.968	2.847	11.0	19.3
11 27	5 27.47	+23 54.3	0.954	1.918	9.0	17.4	11 27	5 23.70	+2 32.8	1.924	2.846	8.6	19.2
12 7	5 17.10	+22 54.6	0.942	1.926	2.6	17.1	12 7	5 15.98	+1 51.2	1.906	2.846	7.2	19.1
12 17	5 6.27	+21 51.9	0.955	1.934	3.9	17.2	12 17	5 7.92	+1 27.7	1.915	2.846	7.8	19.1
12 27	4 56.99	+20 52.8	0.991	1.944	10.0	17.6	12 27	5 0.48	+1 24.0	1.951	2.847	9.9	19.3
1 6	4 50.76	+20 3.4	1.050	1.955	15.4	17.9	1 6	4 54.49	+1 39.0	2.011	2.847	12.4	19.4
1 16	4 48.28	+19 27.6	1.127	1.967	19.9	18.2	1 16	4 50.52	+2 10.3	2.093	2.849	14.8	19.6
520872	2014 <i>WP</i> ₂₃₃		12 11.0 180°33	3°4/11.4	17		494363	2016 <i>UB</i> ₁₂		12 11.0 147°93	2°3/11.4	18	
11 7	5 41.61	+31 33.6	2.251	3.060	12.5	20.7	11 7	5 45.76	+29 3.1	1.748	2.568	15.1	21.1
11 17	5 35.49	+32 19.5	2.171	3.061	9.6	20.5	11 17	5 38.87	+29 16.1	1.678	2.576	11.4	20.9
11 27	5 27.03	+32 59.2	2.117	3.061	6.5	20.4	11 27	5 29.15	+29 21.6	1.631	2.583	7.2	20.7
12 7	5 16.96	+33 29.3	2.090	3.061	3.8	20.2	12 7	5 17.60	+29 16.9	1.611	2.590	3.2	20.4
12 17	5 6.34	+33 47.4	2.093	3.061	4.0	20.2	12 17	5 5.56	+29 1.3	1.620	2.596	3.6	20.5
12 27	4 56.35	+33 53.7	2.126	3.060	6.8	20.4	12 27	4 54.57	+28 36.8	1.658	2.602	7.7	20.7
1 6	4 48.06	+33 50.4	2.186	3.060	10.0	20.6	1 6	4 45.83	+28 7.9	1.723	2.607	11.7	21.0
1 16	4 42.19	+33 41.1	2.270	3.060	12.8	20.8	1 16	4 40.10	+27 38.9	1.811	2.612	15.1	21.2
500294	2012 <i>QF</i> ₂		12 11.0 353°17	17°6/8.8	17		523268	2017 <i>AL</i> ₂₄		12 11.0 206°34	0°7/11.1	17	
11 7	6 0.29	+46 12.9	1.016	1.822	24.5	20.5	11 7	5 40.07	+23 36.9	2.183	3.005	12.4	21.3
11 17	5 54.70	+49 57.9	0.964	1.821	21.4	20.3	11 17	5 34.25	+24 6.6	2.103	3.004	9.3	21.1
11 27	5 41.75	+53 25.3	0.930	1.820	18.9	20.1	11 27	5 26.23	+24 35.3	2.047	3.003	5.7	20.9
12 7	5 21.97	+56 9.0	0.917	1.819	17.6	20.0	12 7	5 16.75	+25 1.2	2.020	3.002	1.8	20.6
12 17	4 58.37	+57 47.2	0.924	1.819	18.2	20.1	12 17	5 6.76	+25 23.0	2.022	3.001	2.5	20.7
12 27	4 36.23	+58 15.1	0.951	1.819	20.3	20.2	12 27	4 57.36	+25 40.6	2.055	2.999	6.4	20.9
1 6	4 20.30	+57 47.3	0.995	1.819	23.0	20.4	1 6	4 49.54	+25 54.9	2.116	2.998	9.9	21.2
1 16	4 12.74	+56 46.1	1.053	1.820	25.7	20.6	1 16	4 43.99	+26 7.6	2.201	2.997	12.9	21.4
335428	2005 <i>UB</i> ₈₅		12 11.0 350°78	1°8/10.8	18		211381	Garretsuppiger		12 11.0 115°52	5°9/9.9	18	
11 7	5 38.14	+20 7.8	1.214	2.072	18.0	20.3	11 7	5 39.28	+6 52.1	2.073	2.881	13.5	21.0
11 17	5 34.03	+19 50.7	1.147	2.067	13.5	20.1	11 17	5 33.33	+6 7.3	2.014	2.896	10.6	20.8
11 27	5 26.60	+19 33.5	1.099	2.062	8.3	19.8	11 27	5 25.48	+5 32.0	1.979	2.910	7.8	20.7
12 7	5 16.90	+19 17.5	1.076	2.058	2.9	19.4	12 7	5 16.48	+5 9.3	1.972	2.924	6.0	20.6
12 17	5 6.48	+19 4.0	1.077	2.055	4.2	19.5	12 17	5 7.25	+5 1.5	1.993	2.938	6.5	20.6
12 27	4 57.12	+18 55.6	1.103	2.053	9.7	19.8	12 27	4 58.77	+5 9.1	2.042	2.951	8.8	20.8
1 6	4 50.32	+18 54.3	1.152	2.052	14.8	20.1	1 6	4 51.84	+5 31.0	2.118	2.963	11.5	21.0
1 16	4 46.97	+19 1.4	1.221	2.052	19.1	20.4	1 16	4 47.02	+6 5.0	2.216	2.976	14.0	21.2
28286	1999 <i>CJ</i> ₄₀		12 11.0 83°72	0°2/11.0	18		445484	2010 <i>VG</i> ₁₅₃		12 11.0 10°68	6°2/11.2	17	
11													

EPHEMERIDES

12 11.0

12 11.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
270712	2002 QO ₉₇	12 11.0	35°36	0°8/11.2	18		298277	2002 XG ₄₆	12 11.0	45°87	1°1/10.7	18	
11 7	5 38.26	+24 59.3	1.890	2.722	13.6	20.6	11 7	5 41.27	+24 9.6	1.548	2.387	15.8	19.3
11 17	5 33.01	+25 8.9	1.827	2.734	10.1	20.4	11 17	5 35.41	+23 5.1	1.491	2.401	11.7	19.1
11 27	5 25.47	+25 15.1	1.789	2.746	6.2	20.2	11 27	5 26.94	+21 54.1	1.457	2.416	7.0	18.9
12 7	5 16.51	+25 16.9	1.777	2.759	2.0	20.0	12 7	5 16.94	+20 39.4	1.449	2.431	2.2	18.6
12 17	5 7.21	+25 14.1	1.793	2.772	2.7	20.1	12 17	5 6.77	+19 25.5	1.470	2.447	3.4	18.7
12 27	4 58.75	+25 7.8	1.839	2.786	6.7	20.4	12 27	4 57.80	+18 17.7	1.519	2.463	8.1	19.0
1 6	4 52.11	+25 0.3	1.911	2.800	10.4	20.6	1 6	4 51.07	+17 20.7	1.593	2.480	12.3	19.3
1 16	4 47.92	+24 53.8	2.006	2.814	13.6	20.8	1 16	4 47.17	+16 37.0	1.690	2.497	15.8	19.6
335407	2005 TC ₁₀₈	12 11.0	140°29	1°2/11.3	18		152016	2004 JP ₅₁	12 11.0	152°27	2°9/10.7	18	
11 7	5 45.37	+26 56.6	1.886	2.704	14.2	22.1	11 7	5 42.53	+15 22.6	1.733	2.560	14.9	20.5
11 17	5 38.27	+26 55.1	1.817	2.716	10.7	21.9	11 17	5 36.30	+15 15.3	1.663	2.565	11.3	20.2
11 27	5 28.64	+26 47.4	1.774	2.728	6.6	21.7	11 27	5 27.56	+15 12.7	1.617	2.570	7.1	20.0
12 7	5 17.43	+26 32.4	1.757	2.739	2.3	21.5	12 7	5 17.17	+15 15.5	1.597	2.574	3.4	19.8
12 17	5 5.88	+26 10.1	1.771	2.749	2.9	21.5	12 17	5 6.32	+15 24.3	1.606	2.579	4.2	19.9
12 27	4 55.31	+25 43.0	1.814	2.758	7.1	21.8	12 27	4 56.31	+15 39.7	1.644	2.582	8.2	20.1
1 6	4 46.82	+25 14.5	1.885	2.767	10.9	22.1	1 6	4 48.24	+16 1.5	1.708	2.585	12.1	20.4
1 16	4 41.07	+24 48.5	1.979	2.775	14.2	22.3	1 16	4 42.84	+16 29.4	1.794	2.588	15.5	20.6
57619	2001 TJ ₁₄₇	12 11.0	272°10	0°7/11.1	18		208301	2001 FY ₁₀₀	12 11.0	265°01	6°8/9.2	18	
11 7	5 42.92	+23 2.8	1.630	2.463	15.4	19.6	11 7	5 38.49	+ 6 48.3	1.965	2.778	13.9	21.0
11 17	5 37.21	+23 32.8	1.542	2.449	11.6	19.3	11 17	5 33.18	+ 5 43.5	1.877	2.760	11.2	20.8
11 27	5 28.46	+24 3.1	1.477	2.435	7.2	19.0	11 27	5 25.67	+ 4 46.2	1.812	2.742	8.5	20.6
12 7	5 17.51	+24 31.2	1.438	2.420	2.2	18.7	12 7	5 16.65	+ 4 1.2	1.774	2.723	6.9	20.4
12 17	5 5.62	+24 54.7	1.427	2.406	3.2	18.7	12 17	5 7.06	+ 3 32.5	1.764	2.704	7.6	20.4
12 27	4 54.40	+25 13.2	1.445	2.391	8.2	19.0	12 27	4 58.00	+ 3 22.7	1.781	2.685	10.1	20.6
1 6	4 45.28	+25 28.2	1.488	2.376	12.9	19.2	1 6	4 50.46	+ 3 31.8	1.823	2.666	13.2	20.7
1 16	4 39.25	+25 42.0	1.553	2.362	16.8	19.4	1 16	4 45.17	+ 3 57.9	1.887	2.646	16.1	20.9
396127	2013 CD ₁₉₂	12 11.0	114°06	9°7/11.1	18		73985	1998 DH ₂₈	12 11.0	11°06	4°1/10.6	18	
11 7	5 40.32	- 4 55.3	1.919	2.691	15.7	20.1	11 7	5 40.18	+15 10.4	1.183	2.037	18.7	19.1
11 17	5 34.36	- 5 15.6	1.853	2.694	13.4	20.0	11 17	5 35.47	+14 49.6	1.122	2.038	14.2	18.8
11 27	5 26.24	- 5 15.1	1.809	2.697	11.2	19.8	11 27	5 27.45	+14 35.4	1.081	2.039	9.1	18.5
12 7	5 16.74	- 4 49.8	1.790	2.700	9.8	19.8	12 7	5 17.21	+14 30.0	1.064	2.041	4.6	18.3
12 17	5 6.87	- 3 58.3	1.797	2.703	10.0	19.8	12 17	5 6.32	+14 35.1	1.071	2.044	5.6	18.4
12 27	4 57.71	- 2 42.5	1.830	2.706	11.5	19.9	12 27	4 56.58	+14 51.4	1.103	2.048	10.4	18.6
1 6	4 50.20	- 1 7.2	1.888	2.709	13.8	20.0	1 6	4 49.45	+15 18.5	1.158	2.052	15.3	18.9
1 16	4 44.98	+ 0 41.6	1.969	2.711	16.1	20.2	1 16	4 45.76	+15 55.0	1.233	2.056	19.4	19.2
146768	2001 XU ₂₀₃	12 11.0	20°22	2°0/10.8	18		403766	2011 DA ₃	12 11.0	11°60	6°9/12.6	17	
11 7	5 38.44	+17 41.6	1.705	2.542	14.6	19.6	11 7	5 41.65	+40 25.7	1.780	2.583	15.6	20.3
11 17	5 33.34	+17 38.3	1.636	2.545	11.0	19.4	11 17	5 36.23	+41 4.7	1.712	2.586	12.6	20.1
11 27	5 25.79	+17 37.9	1.591	2.548	6.8	19.1	11 27	5 27.76	+41 27.9	1.666	2.589	9.6	19.9
12 7	5 16.64	+17 40.8	1.572	2.552	2.7	18.9	12 7	5 17.28	+41 30.3	1.644	2.593	7.3	19.8
12 17	5 7.03	+17 47.5	1.581	2.557	3.6	19.0	12 17	5 6.24	+41 9.7	1.648	2.598	7.1	19.8
12 27	4 58.24	+17 58.5	1.617	2.561	7.8	19.2	12 27	4 56.29	+40 28.2	1.679	2.603	9.2	19.9
1 6	4 51.33	+18 14.4	1.680	2.566	11.8	19.5	1 6	4 48.76	+39 32.1	1.735	2.609	12.2	20.1
1 16	4 47.01	+18 35.2	1.765	2.572	15.2	19.7	1 16	4 44.42	+38 28.6	1.814	2.616	15.0	20.3
334174	2001 SJ ₁₂₆	12 11.0	135°41	3°1/11.7	18		222109	1999 TT ₂₉₉	12 11.0	206°56	0°9/11.2	17	
11 7	5 46.04	+31 42.6	1.798	2.613	15.0	21.2	11 7	5 39.06	+25 34.2	2.273	3.093	12.0	21.3
11 17	5 39.01	+31 50.8	1.730	2.623	11.4	21.0	11 17	5 33.42	+25 42.7	2.191	3.092	9.0	21.1
11 27	5 29.19	+31 48.8	1.685	2.633	7.5	20.8	11 27	5 25.71	+25 47.7	2.135	3.090	5.5	20.8
12 7	5 17.62	+31 34.0	1.667	2.642	3.8	20.6	12 7	5 16.64	+25 48.2	2.107	3.089	1.9	20.6
12 17	5 5.65	+31 6.0	1.678	2.651	4.0	20.6	12 17	5 7.15	+25 43.8	2.109	3.087	2.4	20.6
12 27	4 54.78	+30 27.6	1.718	2.659	7.6	20.8	12 27	4 58.28	+25 35.6	2.140	3.085	6.1	20.9
1 6	4 46.19	+29 43.8	1.785	2.667	11.4	21.1	1 6	4 50.94	+25 25.6	2.200	3.083	9.5	21.1
1 16	4 40.59	+29 0.1	1.875	2.675	14.7	21.3	1 16	4 45.77	+25 15.9	2.284	3.081	12.5	21.3
355278	2007 RS ₃₂	12 11.0	21°12	21°0/17.9	17		170452	2003 UQ ₁₇₃	12 11.0	23°53	2°2/10.8	17	
11 7	5 59.39	+62 42.2	1.188	1.918	25.7	19.3	11 7	5 37.83	+19 2.9	1.146	2.008	18.6	20.1
11 17	5 55.30	+65 39.4	1.164	1.933	23.9	19.2	11 17	5 33.61	+18 48.4	1.100	2.021	13.8	19.8
11 27	5 42.39	+67 55.8	1.153	1.949	22.4	19.1	11 27	5 26.18	+18 36.2	1.074	2.036	8.4	19.6
12 7	5 22.03	+69 14.6	1.158	1.968	21.4	19.1	12 7	5 16.80	+18 27.3	1.071	2.053	3.1	19.3
12 17	4 59.07	+69 25.5	1.178	1.988	21.0	19.2	12 17	5 7.04	+18 23.0	1.093	2.071	4.3	19.5
12 27	4 40.08	+68 32.6	1.213	2.010	21.3	19.3	12 27	4 58.63	+18 24.8	1.140	2.090	9.4	19.8
1 6	4 29.25	+66 52.8	1.263	2.033	22.0	19.4	1 6	4 52.85	+18 33.6	1.210	2.110	14.2	20.1
1 16	4 27.19	+64 44.8	1.328	2.057	23.0	19.6	1 16	4 50.36	+18 49.6	1.299	2.132	18.1	20.5
292292	2006 SB ₁₃₅	12 11.0	176°40	0°6/10.9	18		305165	2007 VP ₂₄₈	12 11.0	31°34	0°8/11.3	17	
11 7	5 44.33	+23 24.6	1.635	2.465	15.5	20.9	11 7	5 41.39	+28 33.5	1.380	2.222	17.2	19.5
11 17	5 37.85	+22 56.5	1.561	2.467	11.6	20.6	11 17	5 35.88	+27 39.2	1.323	2.234	12.8	19.3
11 27	5 28.57	+22 23.6	1.510	2.468	7.0	20.4	11 27	5 27.38	+26 33.2	1.287	2.246	7.8	19.1
12 7	5 17.47	+21 46.5	1.486	2.469	2.1	20.1	12 7	5 17.11	+25 17.1	1.277	2.260	2.5	18.8
12 17	5 5.88	+21 7.1	1.491	2.469	3.2	20.1	12 17	5 6.62	+23 55.4	1.295	2.274	3.2	18.9
12 27	4 55.31	+20 28.7	1.524	2.469	8.1	20.4	12 27	4 57.51	+22 34.7	1.339	2.289	8.4	19.2
1 6	4 46.95	+19 55.2	1.584	2.468	12.5	20.7	1 6	4 50.95	+21 21.9	1.409	2.305	12.9	19.5
1 16	4 41.56	+19 29.6	1.666	2.467	16.2	20.9	1 16	4 47.54	+20 21.2	1.501	2.321	16.7	19.8
222009	1998 QO ₇₀	12 11.0	93°66	3°9/10.2	18		223358	2003 SJ	12 11.0	0°71	4°3/9.9	18	
11 7	5 44.77	+16 4.9											

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12 11.0

12 11.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
488197	2015 <i>XT</i> ₂₀₈		12 11.0	8°08'	0°2'/11.1	17	452022	2014 <i>OD</i> ₁₂₄		12 11.1	115°12'	1°7'/10.8	17
11 7	5 38.92	+24 39.6	1.938	2.768	13.4	21.6	11 7	5 39.31	+18 0.4	2.044	2.869	13.0	22.0
11 17	5 33.53	+24 23.6	1.862	2.768	10.0	21.4	11 17	5 33.64	+17 56.5	1.972	2.875	9.7	21.8
11 27	5 25.85	+24 3.1	1.811	2.768	6.1	21.2	11 27	5 25.86	+17 54.6	1.925	2.880	6.0	21.6
12 7	5 16.69	+23 38.3	1.786	2.769	1.8	20.9	12 7	5 16.73	+17 54.9	1.905	2.886	2.4	21.4
12 17	5 7.14	+23 10.2	1.791	2.770	2.6	21.0	12 17	5 7.21	+17 57.9	1.915	2.891	3.1	21.4
12 27	4 58.36	+22 41.1	1.824	2.770	6.8	21.2	12 27	4 58.40	+18 4.2	1.954	2.896	6.9	21.7
1 6	4 51.36	+22 13.8	1.885	2.771	10.7	21.5	1 6	4 51.20	+18 14.5	2.021	2.901	10.4	21.9
1 16	4 46.80	+21 51.1	1.968	2.773	13.9	21.7	1 16	4 46.26	+18 29.2	2.111	2.906	13.5	22.1
291815	2006 <i>KP</i> ₉₉		12 11.0	166°03'	1°2'/10.9	18	456179	2006 <i>HP</i> ₄₈		12 11.1	148°22'	1°8'/11.3	17
11 7	5 41.38	+19 19.7	2.198	3.016	12.5	21.4	11 7	5 39.35	+27 55.3	2.504	3.318	11.3	21.3
11 17	5 35.06	+19 20.1	2.121	3.021	9.3	21.3	11 17	5 33.52	+28 23.0	2.426	3.321	8.5	21.1
11 27	5 26.66	+19 21.4	2.070	3.025	5.7	21.0	11 27	5 25.75	+28 46.6	2.373	3.324	5.4	20.9
12 7	5 16.93	+19 23.3	2.047	3.029	2.0	20.8	12 7	5 16.70	+29 4.3	2.348	3.326	2.4	20.7
12 17	5 6.81	+19 26.0	2.055	3.032	2.7	20.9	12 17	5 7.23	+29 14.9	2.354	3.329	2.7	20.8
12 27	4 57.35	+19 30.1	2.093	3.034	6.5	21.1	12 27	4 58.34	+29 18.9	2.390	3.332	5.8	21.0
1 6	4 49.46	+19 36.7	2.159	3.036	10.0	21.3	1 6	4 50.87	+29 17.7	2.455	3.334	8.8	21.2
1 16	4 43.78	+19 46.6	2.250	3.038	12.9	21.5	1 16	4 45.45	+29 13.9	2.544	3.336	11.5	21.4
392268	2010 <i>AZ</i> ₂₆		12 11.0	268°12'	6°4'/10.2	18	235894	2005 <i>CD</i> ₆₂		12 11.1	306°57'	1°2'/10.9	18
11 7	5 40.00	+7 39.7	1.726	2.545	15.3	21.5	11 7	5 36.99	+19 25.3	2.148	2.976	12.4	20.3
11 17	5 34.61	+7 7.7	1.640	2.530	12.1	21.2	11 17	5 32.02	+19 26.2	2.059	2.964	9.3	20.0
11 27	5 26.70	+6 46.1	1.578	2.515	8.9	21.0	11 27	5 24.97	+19 28.2	1.995	2.952	5.7	19.8
12 7	5 17.01	+6 38.6	1.540	2.500	6.5	20.8	12 7	5 16.50	+19 31.3	1.959	2.940	2.0	19.5
12 17	5 6.63	+6 47.7	1.530	2.484	7.1	20.8	12 17	5 7.51	+19 35.7	1.952	2.929	2.8	19.6
12 27	4 56.85	+7 14.1	1.548	2.468	10.2	21.0	12 27	4 59.05	+19 42.0	1.974	2.917	6.6	19.8
1 6	4 48.83	+7 56.6	1.590	2.452	13.8	21.1	1 6	4 52.04	+19 51.1	2.023	2.906	10.2	20.0
1 16	4 43.39	+8 52.2	1.654	2.436	17.1	21.3	1 16	4 47.18	+20 3.7	2.096	2.895	13.4	20.2
96685	1999 <i>JQ</i> ₅₀		12 11.0	163°95'	1°7'/10.8	18	265454	2004 <i>XA</i> ₁₂₄		12 11.1	279°60'	2°0'/11.8	18
11 7	5 44.80	+18 39.3	1.702	2.528	15.2	20.3	11 7	5 40.42	+31 24.6	2.338	3.148	12.1	20.3
11 17	5 38.10	+18 36.6	1.630	2.533	11.4	20.1	11 17	5 34.52	+30 59.7	2.237	3.129	9.2	20.0
11 27	5 28.71	+18 35.6	1.582	2.538	7.0	19.8	11 27	5 26.44	+30 24.9	2.162	3.111	6.0	19.8
12 7	5 17.56	+18 36.3	1.561	2.542	2.6	19.6	12 7	5 16.93	+29 39.2	2.114	3.092	2.7	19.6
12 17	5 5.90	+18 38.8	1.569	2.545	3.5	19.6	12 17	5 6.95	+28 43.6	2.097	3.073	2.9	19.5
12 27	4 55.15	+18 44.0	1.606	2.548	8.0	19.9	12 27	4 57.62	+27 41.0	2.111	3.054	6.3	19.7
1 6	4 46.47	+18 53.1	1.669	2.550	12.2	20.2	1 6	4 49.88	+26 35.9	2.153	3.035	9.7	19.9
1 16	4 40.63	+19 7.1	1.755	2.551	15.7	20.4	1 16	4 44.42	+25 33.0	2.220	3.016	12.8	20.1
229452	2005 <i>UT</i> ₁₆₁		12 11.0	28°41'	0°4'/11.1	18	487943	2015 <i>TS</i> ₂₃₄		12 11.1	108°45'	0°7'/10.9	18
11 7	5 40.74	+23 7.6	1.128	1.987	19.0	19.6	11 7	5 40.31	+20 14.7	1.950	2.777	13.5	21.2
11 17	5 36.03	+23 23.2	1.078	1.998	14.2	19.4	11 17	5 34.55	+20 26.5	1.876	2.781	10.0	21.0
11 27	5 27.81	+23 37.0	1.048	2.011	8.6	19.1	11 27	5 26.50	+20 39.2	1.827	2.785	6.1	20.8
12 7	5 17.33	+23 47.2	1.041	2.024	2.6	18.8	12 7	5 16.95	+20 52.2	1.806	2.788	1.9	20.5
12 17	5 6.35	+23 52.7	1.059	2.039	3.6	18.9	12 17	5 6.94	+21 4.8	1.814	2.792	2.7	20.6
12 27	4 56.79	+23 55.1	1.102	2.055	9.4	19.3	12 27	4 57.65	+21 17.5	1.851	2.796	6.9	20.9
1 6	4 50.10	+23 56.9	1.168	2.071	14.4	19.6	1 6	4 50.09	+21 31.0	1.915	2.799	10.7	21.1
1 16	4 47.04	+24 1.0	1.254	2.088	18.5	19.9	1 16	4 44.95	+21 46.5	2.003	2.803	13.9	21.3
142876	2002 <i>VO</i> ₃₅		12 11.0	89°95'	0°3'/10.9	18	213446	2002 <i>AV</i> ₆₆		12 11.1	208°90'	0°4'/11.1	18
11 7	5 41.50	+23 19.5	1.904	2.730	13.8	19.9	11 7	5 44.86	+24 53.5	1.503	2.337	16.4	20.4
11 17	5 35.27	+23 3.0	1.843	2.747	10.2	19.7	11 17	5 38.66	+24 43.9	1.427	2.334	12.4	20.2
11 27	5 26.80	+22 43.5	1.807	2.764	6.1	19.5	11 27	5 29.30	+24 29.0	1.373	2.331	7.6	19.9
12 7	5 16.96	+22 21.0	1.798	2.781	1.8	19.2	12 7	5 17.82	+24 7.7	1.345	2.327	2.3	19.5
12 17	5 6.89	+21 56.7	1.819	2.797	2.7	19.3	12 17	5 5.67	+23 40.8	1.344	2.323	3.2	19.6
12 27	4 57.76	+21 32.7	1.869	2.813	6.8	19.6	12 27	4 54.55	+23 11.0	1.372	2.319	8.5	19.9
1 6	4 50.50	+21 11.7	1.946	2.829	10.5	19.9	1 6	4 45.84	+22 42.7	1.425	2.314	13.3	20.2
1 16	4 45.72	+20 55.6	2.046	2.845	13.7	20.1	1 16	4 40.40	+22 19.6	1.499	2.309	17.3	20.4
32002	Gorokhovskiy		12 11.0	109°40'	1°3'/10.9	18	313216	2001 <i>SA</i> ₂₂₂		12 11.1	48°13'	3°1'/10.6	18
11 7	5 43.81	+20 12.2	1.757	2.584	14.7	19.3	11 7	5 39.75	+15 55.0	1.575	2.412	15.6	20.9
11 17	5 37.12	+20 2.2	1.698	2.601	10.9	19.1	11 17	5 34.24	+15 35.4	1.525	2.433	11.7	20.7
11 27	5 27.97	+19 51.9	1.662	2.619	6.6	18.9	11 27	5 26.28	+15 20.1	1.498	2.453	7.4	20.5
12 7	5 17.32	+19 41.7	1.654	2.636	2.2	18.7	12 7	5 16.85	+15 10.6	1.496	2.474	3.6	20.3
12 17	5 6.39	+19 32.2	1.675	2.652	3.2	18.8	12 17	5 7.19	+15 8.2	1.523	2.495	4.4	20.4
12 27	4 56.47	+19 25.0	1.725	2.668	7.5	19.1	12 27	4 58.57	+15 13.6	1.576	2.517	8.3	20.7
1 6	4 48.59	+19 21.6	1.802	2.683	11.4	19.3	1 6	4 52.01	+15 27.0	1.656	2.539	12.1	20.9
1 16	4 43.39	+19 23.5	1.902	2.698	14.6	19.6	1 16	4 48.10	+15 47.9	1.757	2.561	15.4	21.2
96291	1996 <i>HQ</i> ₂₀		12 11.0	356°65'	2°8'/10.6	18	329882	2005 <i>ER</i> ₂₀		12 11.1	290°30'	3°5'/10.6	18
11 7	5 40.72	+19 19.9	1.165	2.021	18.7	19.1	11 7	5 41.42	+16 4.0	1.344	2.189	17.4	21.0
11 17	5 36.02	+18 42.9	1.101	2.019	14.1	18.8	11 17	5 36.36	+15 44.8	1.267	2.178	13.3	20.7
11 27	5 27.87	+18 5.5	1.056	2.018	8.8	18.5	11 27	5 28.07	+15 29.9	1.210	2.167	8.5	20.4
12 7	5 17.39	+17 30.2	1.036	2.017	3.6	18.2	12 7	5 17.51	+15 21.3	1.178	2.156	4.1	20.1
12 17	5 6.24	+17 0.0	1.040	2.016	4.9	18.3	12 17	5 6.09	+15 20.6	1.172	2.146	5.1	20.1
12 27	4 56.29	+16 38.6	1.069	2.017	10.3	18.6	12 27	4 55.53	+15 29.1	1.192	2.135	10.0	20.4
1 6	4 49.06	+16 28.7	1.121	2.017	15.5	18.9	1 6	4 47.33	+15 47.6	1.236	2.125	14.9	20.6
1 16	4 45.40	+16 31.0	1.192	2.019	19.8	19.2	1 16	4 42.44	+16 15.7	1.300	2.115	19.1	20.9
42998	Malinafrank		12 11.0	247°28'	0°7'/10.9	18	232917	2004 <i>YF</i> ₃₂		12 11.1	350°92'	13°1'/12.1</	

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
78436	2002 <i>RV</i> ₄		12 11.1 220°34	0°5/10.9	18		393306	2013 <i>YN</i> ₁₀₆		12 11.1 0°83	4°1/10.8	18	
11 7	5 37.66	+23 7.3	2.455	3.276	11.2	19.6	11 7	5 36.23	+15 19.2	1.019	1.888	19.8	20.0
11 17	5 32.17	+22 37.2	2.371	3.273	8.4	19.4	11 17	5 33.00	+15 4.5	0.961	1.885	15.0	19.7
11 27	5 24.88	+22 3.7	2.314	3.270	5.1	19.2	11 27	5 26.21	+14 57.7	0.921	1.883	9.7	19.4
12 7	5 16.46	+21 27.5	2.285	3.267	1.5	19.0	12 7	5 16.99	+15 1.2	0.903	1.882	4.8	19.2
12 17	5 7.72	+20 50.2	2.286	3.264	2.3	19.0	12 17	5 7.00	+15 16.3	0.909	1.884	5.8	19.2
12 27	4 59.57	+20 13.9	2.318	3.261	5.8	19.3	12 27	4 58.20	+15 43.1	0.937	1.887	11.0	19.5
1 6	4 52.81	+19 41.1	2.379	3.258	9.1	19.5	1 6	4 52.18	+16 20.6	0.986	1.891	16.2	19.8
1 16	4 47.97	+19 13.7	2.464	3.254	11.9	19.6	1 16	4 49.84	+17 6.4	1.054	1.897	20.7	20.1
77603	2001 <i>KS</i> ₂₈		12 11.1 217°42	3°3/10.0	18		499207	2009 <i>UY</i> ₁₅		12 11.1 111°28	13°3/10.4	17	
11 7	5 40.06	+16 28.4	2.068	2.890	13.0	19.5	11 7	6 1.86	+42 33.5	1.180	1.980	22.1	20.7
11 17	5 34.19	+15 31.7	1.985	2.885	9.8	19.3	11 17	5 54.16	+45 35.9	1.128	1.990	18.6	20.5
11 27	5 26.21	+14 35.0	1.928	2.879	6.4	19.1	11 27	5 40.32	+48 21.6	1.096	2.000	15.4	20.4
12 7	5 16.87	+13 41.1	1.898	2.873	3.5	18.9	12 7	5 21.44	+50 30.3	1.088	2.010	13.5	20.3
12 17	5 7.12	+12 53.2	1.899	2.866	4.4	19.0	12 17	5 0.29	+51 46.6	1.103	2.019	13.8	20.3
12 27	4 58.05	+12 14.5	1.929	2.859	7.8	19.2	12 27	4 40.80	+52 8.4	1.141	2.028	16.1	20.5
1 6	4 50.57	+11 46.9	1.986	2.852	11.2	19.4	1 6	4 26.22	+51 47.9	1.201	2.036	19.1	20.7
1 16	4 45.32	+11 31.3	2.066	2.844	14.3	19.6	1 16	4 18.11	+51 2.3	1.277	2.044	21.9	20.9
222047	1998 <i>UE</i> ₄₇		12 11.1 353°46	0°7/11.1	18		108119	2001 <i>GS</i> ₄		12 11.1 196°32	7°5/10.0	18	
11 7	5 39.81	+23 20.1	1.200	2.056	18.3	20.2	11 7	5 39.12	+ 2 10.8	2.024	2.822	14.2	20.0
11 17	5 35.54	+23 42.3	1.133	2.051	13.8	19.9	11 17	5 33.48	+ 1 31.7	1.952	2.820	11.6	19.8
11 27	5 27.72	+24 3.6	1.086	2.047	8.4	19.6	11 27	5 25.79	+ 1 6.0	1.903	2.818	9.1	19.7
12 7	5 17.43	+24 21.6	1.062	2.045	2.6	19.3	12 7	5 16.76	+ 0 57.3	1.880	2.816	7.6	19.6
12 17	5 6.28	+24 34.6	1.063	2.043	3.7	19.3	12 17	5 7.33	+ 1 8.0	1.884	2.814	8.0	19.6
12 27	4 56.22	+24 43.0	1.090	2.042	9.5	19.7	12 27	4 58.52	+ 1 38.3	1.916	2.811	10.0	19.7
1 6	4 48.88	+24 49.3	1.139	2.042	14.7	20.0	1 6	4 51.24	+ 2 26.0	1.973	2.808	12.6	19.9
1 16	4 45.20	+24 56.3	1.209	2.043	19.1	20.2	1 16	4 46.11	+ 3 27.5	2.052	2.805	15.2	20.0
492153	2013 <i>PO</i> ₈		12 11.1 311°89	1°8/10.6	17		10939	1999 <i>CJ</i> ₁₉		12 11.1 148°66	1°6/11.3	18 R	
11 7	5 36.67	+19 10.1	2.231	3.058	12.0	21.8	11 7	5 47.08	+27 0.2	1.591	2.416	16.1	17.6
11 17	5 31.59	+18 38.2	2.150	3.054	9.0	21.6	11 17	5 40.10	+27 8.5	1.523	2.425	12.1	17.4
11 27	5 24.61	+18 5.7	2.094	3.050	5.5	21.4	11 27	5 30.06	+27 10.5	1.477	2.432	7.5	17.1
12 7	5 16.40	+17 34.1	2.066	3.046	2.3	21.2	12 7	5 18.05	+27 3.9	1.458	2.439	2.8	16.8
12 17	5 7.82	+17 5.0	2.068	3.042	3.1	21.2	12 17	5 5.51	+26 48.1	1.468	2.445	3.4	16.9
12 27	4 59.85	+16 40.5	2.099	3.038	6.6	21.4	12 27	4 54.11	+26 25.5	1.506	2.451	8.1	17.2
1 6	4 53.31	+16 22.4	2.157	3.035	9.9	21.6	1 6	4 45.14	+26 0.4	1.570	2.456	12.4	17.5
1 16	4 48.79	+16 11.7	2.239	3.031	12.9	21.8	1 16	4 39.39	+25 37.0	1.656	2.461	16.1	17.7
305014	2007 <i>TT</i> ₃₅₅		12 11.1 8°85	9°1/10.3	18		418538	2008 <i>SS</i> ₉₈		12 11.1 67°58	0°3/11.0	18	
11 7	5 38.36	+ 0 38.4	1.662	2.469	16.3	20.1	11 7	5 37.94	+22 1.2	2.245	3.069	12.0	20.9
11 17	5 33.26	+ 0 3.0	1.598	2.469	13.5	20.0	11 17	5 32.50	+22 4.1	2.176	3.079	8.9	20.7
11 27	5 25.78	+ 0 26.8	1.556	2.470	10.9	19.8	11 27	5 25.13	+22 6.0	2.132	3.089	5.4	20.5
12 7	5 16.76	+ 0 28.3	1.537	2.471	9.2	19.7	12 7	5 16.56	+22 6.5	2.117	3.099	1.6	20.3
12 17	5 7.29	+ 0 4.9	1.543	2.472	9.6	19.7	12 17	5 7.67	+22 5.8	2.131	3.110	2.3	20.4
12 27	4 58.60	+ 0 42.8	1.576	2.473	11.7	19.9	12 27	4 59.46	+22 4.6	2.175	3.120	6.0	20.6
1 6	4 51.71	+ 1 50.9	1.632	2.475	14.5	20.0	1 6	4 52.74	+22 4.2	2.247	3.130	9.3	20.9
1 16	4 47.32	+ 3 14.3	1.709	2.477	17.2	20.2	1 16	4 48.10	+22 6.0	2.343	3.141	12.2	21.1
146540	2001 <i>SQ</i> ₂₅₁		12 11.1 148°74	1°3/11.3	18		427366	2014 <i>WB</i> ₄₅₆		12 11.1 220°67	8°4/ 9.3	18	
11 7	5 41.06	+26 31.8	2.127	2.947	12.8	20.8	11 7	5 34.88	+ 4 59.2	2.571	3.335	12.4	20.2
11 17	5 35.02	+26 43.8	2.052	2.951	9.6	20.6	11 17	5 29.97	+ 5 49.3	2.503	3.333	10.7	20.1
11 27	5 26.75	+26 51.4	2.001	2.955	5.9	20.4	11 27	5 23.51	+ 6 24.8	2.458	3.331	9.2	20.0
12 7	5 17.04	+26 53.2	1.978	2.959	2.2	20.2	12 7	5 16.08	+ 6 41.8	2.438	3.329	8.4	19.9
12 17	5 6.90	+26 48.8	1.985	2.962	2.7	20.2	12 17	5 8.36	+ 6 38.2	2.445	3.327	8.7	19.9
12 27	4 57.48	+26 39.1	2.021	2.965	6.4	20.5	12 27	5 1.11	+ 6 13.6	2.478	3.326	10.0	20.0
1 6	4 49.48	+26 26.6	2.086	2.969	10.0	20.7	1 6	4 55.01	+ 5 30.0	2.535	3.324	11.6	20.1
1 16	4 44.73	+26 14.0	2.174	2.971	13.0	20.9	1 16	4 50.56	+ 4 30.7	2.614	3.322	13.3	20.3
401039	2011 <i>ST</i> ₂₁₆		12 11.1 20°01	0°5/11.0	17		441163	2007 <i>TX</i> ₂₇₇		12 11.1 113°96	0°7/10.9	18	
11 7	5 39.11	+20 13.5	1.269	2.123	17.6	20.2	11 7	5 42.19	+21 56.4	1.943	2.767	13.6	22.5
11 17	5 34.56	+20 42.9	1.214	2.132	13.1	19.9	11 17	5 35.80	+21 42.1	1.879	2.781	10.1	22.3
11 27	5 26.87	+21 15.2	1.180	2.142	8.0	19.7	11 27	5 27.16	+21 25.9	1.839	2.796	6.1	22.1
12 7	5 17.12	+21 48.1	1.170	2.153	2.4	19.4	12 7	5 17.16	+21 8.0	1.827	2.810	1.9	21.9
12 17	5 6.81	+22 19.9	1.186	2.166	3.4	19.5	12 17	5 6.86	+20 49.4	1.845	2.823	2.7	22.0
12 27	4 57.66	+22 49.6	1.228	2.179	8.8	19.8	12 27	4 57.46	+20 31.8	1.893	2.836	6.9	22.3
1 6	4 51.01	+23 18.0	1.294	2.194	13.5	20.1	1 6	4 49.90	+20 17.5	1.967	2.849	10.6	22.5
1 16	4 47.65	+23 46.0	1.381	2.210	17.4	20.4	1 16	4 44.79	+20 8.1	2.066	2.861	13.7	22.7
472371	2015 <i>BD</i> ₆₀		12 11.1 180°07	2°5/11.5	17		152718	1998 <i>SK</i> ₁₆₂		12 11.1 34°17	3°0/11.5	18	
11 7	5 46.93	+29 12.3	1.635	2.457	15.9	21.5	11 7	5 42.96	+28 32.0	1.004	1.864	20.7	19.4
11 17	5 40.07	+29 22.6	1.560	2.458	12.1	21.2	11 17	5 37.93	+28 51.3	0.966	1.885	15.6	19.2
11 27	5 30.11	+29 24.7	1.507	2.459	7.7	21.0	11 27	5 29.00	+29 0.7	0.948	1.908	9.8	18.9
12 7	5 18.07	+29 15.7	1.481	2.460	3.4	20.7	12 7	5 17.72	+28 56.8	0.951	1.932	4.1	18.7
12 17	5 5.41	+28 54.7	1.483	2.459	3.7	20.8	12 17	5 6.18	+28 39.5	0.979	1.957	4.6	18.8
12 27	4 53.80	+28 24.3	1.514	2.458	8.2	21.0	12 27	4 56.50	+28 12.6	1.031	1.983	9.8	19.2
1 6	4 44.61	+27 49.1	1.571	2.457	12.5	21.3	1 6	4 50.14	+27 42.7	1.105	2.010	14.8	19.6
1 16	4 38.67	+27 14.7	1.651	2.455	16.2	21.5	1 16	4 47.72	+27 15.1	1.198	2.038	18.9	19.9
85604	1998 <i>FT</i> ₁₂₅		12 11.1 217°43	6°7/12.4	17		225097	2008 <i>DX</i> ₁₄		12 11.1 160°8			

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
449586	2014 <i>JV</i> ₃₅		12 11.1 80°64	1°0/11.2 15			177866	2005 <i>QL</i> ₂₈		12 11.1 164°05	1°0/11.3 18		
11 7	5 44.16	+24 45.2	1.994	2.813	13.5	21.7	11 7	5 40.48	+26 23.8	2.023	2.846	13.2	20.7
11 17	5 37.18	+25 12.5	1.943	2.842	10.0	21.6	11 17	5 34.70	+26 19.2	1.946	2.847	9.9	20.5
11 27	5 27.95	+25 36.6	1.916	2.871	6.1	21.4	11 27	5 26.62	+26 9.4	1.893	2.848	6.1	20.2
12 7	5 17.39	+25 55.6	1.918	2.900	2.1	21.2	12 7	5 17.06	+25 53.6	1.867	2.849	2.1	20.0
12 17	5 6.60	+26 8.4	1.950	2.928	2.6	21.3	12 17	5 7.07	+25 32.2	1.871	2.850	2.6	20.0
12 27	4 56.78	+26 15.8	2.012	2.956	6.5	21.6	12 27	4 57.85	+25 7.1	1.905	2.850	6.6	20.3
1 6	4 48.87	+26 19.5	2.102	2.983	10.0	21.8	1 6	4 50.39	+24 41.2	1.965	2.851	10.4	20.5
1 16	4 43.46	+26 22.1	2.216	3.010	12.9	22.1	1 16	4 45.37	+24 17.6	2.050	2.851	13.6	20.7
53294	1999 <i>GS</i> ₁₆		12 11.1 210°41	4°0/11.7 18			25942	Walborn		12 11.1 116°65	1°1/10.8 18		
11 7	5 42.99	+33 54.5	2.215	3.019	12.9	18.9	11 7	5 38.31	+19 32.8	2.617	3.433	10.8	19.2
11 17	5 36.68	+34 29.8	2.132	3.015	10.0	18.7	11 17	5 32.45	+19 25.4	2.550	3.449	8.0	19.1
11 27	5 27.91	+34 56.6	2.072	3.011	7.0	18.5	11 27	5 24.98	+19 18.2	2.509	3.464	4.8	18.9
12 7	5 17.45	+35 11.3	2.040	3.007	4.4	18.3	12 7	5 16.54	+19 11.5	2.498	3.479	1.7	18.7
12 17	5 6.40	+35 12.1	2.038	3.003	4.5	18.3	12 17	5 7.87	+19 5.7	2.517	3.494	2.4	18.8
12 27	4 56.04	+34 59.5	2.065	2.998	7.2	18.5	12 27	4 59.80	+19 1.8	2.568	3.508	5.5	19.0
1 6	4 47.48	+34 36.9	2.119	2.993	10.3	18.7	1 6	4 53.03	+19 0.7	2.647	3.522	8.4	19.2
1 16	4 41.47	+34 8.7	2.197	2.988	13.1	18.9	1 16	4 48.05	+19 3.1	2.751	3.535	10.9	19.4
357486	2004 <i>JM</i> ₃₁		12 11.1 201°94	2°9/10.3 18			268696	2006 <i>GS</i> ₅₀		12 11.1 256°35	2°7/11.1 17		
11 7	5 38.56	+15 8.5	2.414	3.231	11.5	21.5	11 7	5 42.68	+29 27.9	2.655	3.457	11.0	20.6
11 17	5 32.84	+14 32.3	2.331	3.227	8.7	21.3	11 17	5 36.24	+30 25.6	2.554	3.440	8.5	20.4
11 27	5 25.31	+13 58.1	2.273	3.223	5.7	21.1	11 27	5 27.62	+31 20.5	2.478	3.423	5.6	20.2
12 7	5 16.64	+13 27.7	2.244	3.218	3.2	20.9	12 7	5 17.41	+32 9.1	2.433	3.406	3.1	20.0
12 17	5 7.61	+13 3.0	2.246	3.213	3.9	20.9	12 17	5 6.48	+32 48.7	2.419	3.388	3.4	20.0
12 27	4 59.13	+12 45.6	2.277	3.208	6.8	21.1	12 27	4 55.85	+33 18.1	2.436	3.369	6.2	20.2
1 6	4 51.99	+12 36.6	2.337	3.202	9.8	21.3	1 6	4 46.54	+33 38.2	2.482	3.351	9.2	20.3
1 16	4 46.74	+12 36.3	2.421	3.195	12.5	21.5	1 16	4 39.31	+33 51.3	2.554	3.332	11.8	20.5
440120	2003 <i>SX</i> ₁₀₈		12 11.1 51°19	7°2/ 9.6 15			335423	2005 <i>UR</i> ₄₉		12 11.1 67°10	2°7/11.4 16		
11 7	5 41.38	+10 0.3	1.381	2.217	17.5	20.7	11 7	5 48.20	+27 54.9	1.386	2.218	17.7	20.9
11 17	5 35.43	+ 8 30.0	1.345	2.245	13.6	20.6	11 17	5 40.99	+28 31.7	1.344	2.248	13.2	20.7
11 27	5 26.94	+ 7 10.3	1.332	2.274	9.7	20.4	11 27	5 30.55	+29 1.3	1.323	2.277	8.3	20.5
12 7	5 17.07	+ 6 7.4	1.343	2.302	7.3	20.4	12 7	5 18.19	+29 19.6	1.328	2.307	3.6	20.3
12 17	5 7.15	+ 5 25.8	1.381	2.332	8.1	20.5	12 17	5 5.60	+29 25.0	1.360	2.336	4.0	20.4
12 27	4 58.52	+ 5 7.3	1.444	2.361	11.1	20.8	12 27	4 54.54	+29 19.3	1.420	2.365	8.5	20.7
1 6	4 52.17	+ 5 10.6	1.531	2.391	14.3	21.0	1 6	4 46.29	+29 7.2	1.505	2.394	12.7	21.0
1 16	4 48.60	+ 5 31.9	1.638	2.420	17.2	21.3	1 16	4 41.51	+28 53.3	1.612	2.423	16.2	21.3
131595	2001 <i>WP</i> ₁₀₀		12 11.1 173°00	0°6/10.9 18			349581	2008 <i>SO</i> ₂₇₉		12 11.1 187°86	1°0/10.9 18		
11 7	5 45.44	+22 37.6	1.514	2.347	16.4	21.1	11 7	5 42.43	+20 37.3	1.991	2.813	13.4	22.3
11 17	5 38.97	+22 24.9	1.442	2.349	12.3	20.9	11 17	5 36.14	+20 31.6	1.911	2.813	10.0	22.1
11 27	5 29.45	+22 9.3	1.393	2.351	7.5	20.6	11 27	5 27.51	+20 25.4	1.856	2.812	6.1	21.9
12 7	5 17.91	+21 50.3	1.370	2.352	2.2	20.3	12 7	5 17.35	+20 18.6	1.828	2.810	2.0	21.6
12 17	5 5.80	+21 28.9	1.375	2.353	3.3	20.4	12 17	5 6.70	+20 11.7	1.831	2.808	2.9	21.7
12 27	4 54.74	+21 7.7	1.408	2.354	8.5	20.7	12 27	4 56.76	+20 5.8	1.863	2.806	7.0	21.9
1 6	4 46.06	+20 49.9	1.466	2.353	13.1	21.0	1 6	4 48.58	+20 2.6	1.923	2.803	10.8	22.1
1 16	4 40.57	+20 38.2	1.547	2.353	17.0	21.2	1 16	4 42.84	+20 3.6	2.006	2.799	14.1	22.3
328870	2009 <i>XN</i> ₇		12 11.1 43°76	4°1/11.2 18			116492	2004 <i>BG</i> ₁₃		12 11.1 211°31	3°3/10.6 18		
11 7	5 39.45	+ 9 20.9	1.962	2.778	13.8	20.0	11 7	5 39.40	+13 53.8	2.040	2.862	13.2	20.3
11 17	5 33.74	+ 9 42.0	1.900	2.792	10.6	19.8	11 17	5 33.79	+13 37.3	1.961	2.859	10.0	20.1
11 27	5 25.94	+10 13.5	1.862	2.806	7.2	19.6	11 27	5 26.05	+13 25.5	1.906	2.856	6.6	19.9
12 7	5 16.83	+10 55.7	1.851	2.821	4.4	19.5	12 7	5 16.91	+13 19.8	1.879	2.853	3.6	19.7
12 17	5 7.39	+11 47.4	1.870	2.835	4.8	19.5	12 17	5 7.32	+13 21.4	1.880	2.849	4.3	19.7
12 27	4 58.67	+12 47.0	1.918	2.850	7.7	19.7	12 27	4 58.34	+13 30.9	1.911	2.845	7.6	19.9
1 6	4 51.57	+13 51.9	1.993	2.866	10.9	20.0	1 6	4 50.93	+13 48.5	1.969	2.841	11.0	20.1
1 16	4 46.72	+14 59.8	2.092	2.881	13.7	20.2	1 16	4 45.74	+14 13.6	2.050	2.836	14.1	20.3
389698	2011 <i>QK</i> ₇₇		12 11.1 147°55	3°0/10.5 18			356738	2011 <i>UE</i> ₂₀₁		12 11.1 89°36	1°9/10.9 18		
11 7	5 41.17	+14 44.6	2.167	2.983	12.7	22.6	11 7	5 41.97	+16 50.7	1.822	2.648	14.3	20.9
11 17	5 34.83	+14 21.6	2.097	2.993	9.6	22.4	11 17	5 35.81	+17 4.6	1.759	2.662	10.7	20.7
11 27	5 26.53	+14 2.1	2.053	3.003	6.2	22.2	11 27	5 27.28	+17 22.5	1.721	2.676	6.6	20.5
12 7	5 17.00	+13 47.5	2.037	3.011	3.3	22.1	12 7	5 17.27	+17 44.0	1.709	2.690	2.6	20.3
12 17	5 7.16	+13 38.9	2.051	3.020	4.0	22.1	12 17	5 6.87	+18 8.3	1.727	2.703	3.3	20.4
12 27	4 58.04	+13 37.6	2.095	3.027	7.1	22.3	12 27	4 57.32	+18 35.1	1.774	2.717	7.3	20.6
1 6	4 50.47	+13 43.8	2.167	3.034	10.3	22.6	1 6	4 49.65	+19 4.4	1.848	2.730	11.1	20.9
1 16	4 45.05	+13 57.5	2.262	3.041	13.2	22.8	1 16	4 44.49	+19 36.0	1.945	2.743	14.3	21.1
142121	2002 <i>RD</i> ₈		12 11.1 184°08	6°7/ 9.8 18			73698	1991 <i>TE</i>		12 11.1 91°96	1°8/11.3 18		
11 7	5 38.72	+ 5 18.2	2.016	2.823	13.8	20.3	11 7	5 41.79	+27 49.4	2.557	3.365	11.2	19.1
11 17	5 33.19	+ 4 30.5	1.945	2.823	11.1	20.1	11 17	5 35.16	+28 22.7	2.498	3.390	8.4	18.9
11 27	5 25.62	+ 3 53.3	1.897	2.823	8.4	19.9	11 27	5 26.67	+28 51.5	2.465	3.415	5.3	18.8
12 7	5 16.75	+ 3 30.4	1.876	2.823	6.8	19.8	12 7	5 17.06	+29 13.9	2.462	3.439	2.4	18.6
12 17	5 7.50	+ 3 24.3	1.883	2.822	7.3	19.9	12 17	5 7.18	+29 28.8	2.489	3.463	2.7	18.7
12 27	4 58.89	+ 3 35.9	1.917	2.821	9.5	20.0	12 27	4 58.01	+29 36.6	2.547	3.487	5.6	18.9
1 6	4 51.81	+ 4 4.1	1.977	2.820	12.3	20.2	1 6	4 50.32	+29 39.0	2.634	3.510	8.4	19.1
1 16	4 46.89	+ 4 46.1	2.059	2.819	14.9	20.3	1 16	4 44.68	+29 38.3	2.747	3.533	10.9	19.3
212424	2006 <i>MA</i> ₉		12 11.1 32°52	2°0/10.7 18			326629	2002 <i>RF</i> ₂₄₉		12 11.1 152°39	3°7/11.9 17		

EPHEMERIDES

12 11.1

12 11.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
449781	2014 <i>OG</i> ₁₅₅		12 11.1 107°45	0°6/11.2	17		453666	2010 <i>UQ</i> ₅₀		12 11.1 30°67	4°1/12.3	17	
11 7	5 40.76	+23 54.0	1.992	2.817	13.3	21.8	11 7	5 41.74	+34 47.6	1.669	2.490	15.7	20.8
11 17	5 34.96	+24 12.9	1.918	2.821	9.9	21.6	11 17	5 36.11	+34 44.0	1.606	2.499	12.1	20.5
11 27	5 26.82	+24 29.9	1.868	2.825	6.1	21.4	11 27	5 27.64	+34 26.5	1.564	2.509	8.2	20.3
12 7	5 17.15	+24 43.6	1.846	2.828	1.9	21.1	12 7	5 17.41	+33 52.9	1.548	2.519	4.8	20.2
12 17	5 7.02	+24 52.9	1.854	2.832	2.6	21.2	12 17	5 6.85	+33 3.7	1.559	2.530	4.6	20.2
12 27	4 57.60	+24 58.5	1.890	2.836	6.7	21.5	12 27	4 57.46	+32 3.0	1.598	2.541	7.9	20.4
1 6	4 49.94	+25 2.0	1.954	2.839	10.4	21.7	1 6	4 50.43	+30 57.2	1.663	2.553	11.7	20.7
1 16	4 44.73	+25 5.3	2.042	2.843	13.6	21.9	1 16	4 46.40	+29 52.6	1.751	2.565	15.0	20.9
487464	2014 <i>SK</i> ₁₃₃		12 11.1 130°82	4°9/9.9	18		305631	2009 <i>BN</i> ₁₂		12 11.1 168°61	5°9/11.9	18	
11 7	5 37.16	+8 38.3	2.336	3.146	12.1	22.2	11 7	5 46.03	+37 15.9	1.912	2.712	14.8	21.1
11 17	5 31.76	+7 58.3	2.268	3.153	9.4	22.0	11 17	5 39.45	+38 11.9	1.837	2.714	11.8	20.9
11 27	5 24.65	+7 25.4	2.225	3.160	6.8	21.8	11 27	5 29.84	+38 56.5	1.786	2.715	8.6	20.7
12 7	5 16.49	+7 2.3	2.209	3.167	5.0	21.7	12 7	5 18.13	+39 23.9	1.760	2.716	6.3	20.6
12 17	5 8.05	+6 50.7	2.223	3.173	5.5	21.8	12 17	5 5.70	+39 30.8	1.762	2.717	6.3	20.6
12 27	5 0.20	+6 51.9	2.265	3.179	7.8	21.9	12 27	4 54.17	+39 17.8	1.793	2.717	8.7	20.7
1 6	4 53.69	+7 5.2	2.335	3.185	10.4	22.1	1 6	4 44.90	+38 49.6	1.849	2.718	11.8	20.9
1 16	4 49.03	+7 29.3	2.427	3.191	12.8	22.3	1 16	4 38.78	+38 12.5	1.928	2.718	14.7	21.1
225708	2001 <i>QH</i> ₂₄₆		12 11.1 57°03	0°7/11.2	18		168218	2006 <i>JV</i> ₅₄		12 11.1 142°02	3°5/10.2	18	
11 7	5 45.45	+24 4.5	1.292	2.135	18.1	19.8	11 7	5 40.70	+13 31.9	2.367	3.178	11.9	21.4
11 17	5 39.03	+24 20.0	1.249	2.160	13.4	19.6	11 17	5 34.30	+12 48.8	2.300	3.192	9.0	21.2
11 27	5 29.41	+24 32.0	1.227	2.187	8.1	19.4	11 27	5 26.14	+12 9.1	2.259	3.205	6.0	21.1
12 7	5 17.90	+24 38.6	1.231	2.213	2.5	19.1	12 7	5 16.93	+11 34.8	2.247	3.217	3.7	20.9
12 17	5 6.15	+24 39.1	1.261	2.240	3.4	19.3	12 17	5 7.50	+11 8.1	2.266	3.228	4.3	21.0
12 27	4 55.89	+24 35.3	1.318	2.267	8.5	19.7	12 27	4 58.75	+10 50.6	2.315	3.239	7.0	21.2
1 6	4 48.40	+24 30.5	1.399	2.294	13.1	20.0	1 6	4 51.44	+10 42.9	2.391	3.249	9.9	21.4
1 16	4 44.30	+24 27.5	1.502	2.320	16.8	20.3	1 16	4 46.08	+10 44.9	2.492	3.258	12.4	21.6
14654	Rajivgupta		12 11.1 11°31	0°8/10.9	18 R		441183	2007 <i>TC</i> ₄₂₇		12 11.1 60°38	2°3/11.4	15	
11 7	5 36.96	+21 12.5	1.857	2.693	13.7	17.8	11 7	5 43.13	+27 54.8	1.608	2.439	15.7	21.7
11 17	5 32.19	+21 4.8	1.786	2.695	10.2	17.6	11 17	5 37.15	+28 21.6	1.548	2.452	11.8	21.5
11 27	5 25.16	+20 56.4	1.739	2.698	6.2	17.3	11 27	5 28.31	+28 42.3	1.511	2.465	7.4	21.3
12 7	5 16.67	+20 47.5	1.719	2.701	1.9	17.1	12 7	5 17.63	+28 54.0	1.500	2.479	3.2	21.1
12 17	5 7.77	+20 38.8	1.727	2.705	2.8	17.1	12 17	5 6.51	+28 55.5	1.516	2.493	3.6	21.1
12 27	4 59.63	+20 31.6	1.764	2.710	7.0	17.4	12 27	4 56.46	+28 48.0	1.561	2.507	7.8	21.4
1 6	4 53.22	+20 27.5	1.826	2.715	10.8	17.7	1 6	4 48.72	+28 35.1	1.631	2.521	11.9	21.7
1 16	4 49.20	+20 27.8	1.912	2.721	14.1	17.9	1 16	4 44.02	+28 20.8	1.724	2.535	15.3	21.9
396909	2005 <i>BO</i> ₁₀		12 11.1 359°70	1°1/11.3	18		334341	2001 <i>XW</i> ₂₂₈		12 11.1 2°00	1°7/11.4	18	
11 7	5 35.57	+26 29.9	1.088	1.955	19.0	20.1	11 7	5 36.97	+27 59.0	1.061	1.926	19.5	20.2
11 17	5 32.58	+26 16.3	1.026	1.950	14.3	19.8	11 17	5 33.71	+27 43.8	1.001	1.923	14.7	19.9
11 27	5 26.00	+25 54.3	0.984	1.947	8.8	19.5	11 27	5 26.72	+27 17.8	0.960	1.922	9.2	19.6
12 7	5 17.01	+25 23.4	0.963	1.946	2.9	19.2	12 7	5 17.24	+26 40.2	0.940	1.923	3.3	19.3
12 17	5 7.31	+24 45.3	0.967	1.947	3.7	19.2	12 17	5 7.07	+25 52.7	0.945	1.925	3.9	19.4
12 27	4 58.87	+24 4.4	0.994	1.949	9.6	19.6	12 27	4 58.27	+25 0.8	0.973	1.928	9.8	19.7
1 6	4 53.25	+23 26.4	1.043	1.954	15.0	19.9	1 6	4 52.43	+24 11.4	1.024	1.934	15.2	20.0
1 16	4 51.30	+22 55.8	1.112	1.960	19.5	20.2	1 16	4 50.39	+23 29.8	1.093	1.941	19.7	20.3
226982	2004 <i>XN</i> ₂₈		12 11.1 347°39	0°1/11.1	17		285008	2011 <i>AP</i> ₈		12 11.1 322°20	3°0/10.8	17	
11 7	5 38.68	+20 34.8	1.792	2.627	14.1	19.0	11 7	5 38.09	+13 38.3	2.029	2.853	13.1	20.3
11 17	5 33.74	+21 12.2	1.712	2.621	10.6	18.7	11 17	5 32.90	+13 42.2	1.948	2.848	10.0	20.1
11 27	5 26.27	+21 52.3	1.657	2.615	6.4	18.5	11 27	5 25.58	+13 52.2	1.892	2.844	6.5	19.8
12 7	5 17.05	+22 33.1	1.627	2.610	1.9	18.2	12 7	5 16.83	+14 9.1	1.863	2.839	3.4	19.6
12 17	5 7.17	+22 12.7	1.627	2.606	2.8	18.2	12 17	5 7.59	+14 32.9	1.864	2.835	4.0	19.7
12 27	4 57.92	+23 49.9	1.655	2.602	7.3	18.5	12 27	4 58.93	+15 3.3	1.893	2.831	7.3	19.9
1 6	4 50.46	+24 24.5	1.709	2.599	11.4	18.7	1 6	4 51.78	+15 39.6	1.949	2.827	10.8	20.1
1 16	4 45.61	+24 57.6	1.787	2.597	14.9	19.0	1 16	4 46.84	+16 20.9	2.029	2.823	13.9	20.3
242911	2006 <i>MO</i> ₈		12 11.1 99°90	4°9/10.8	18		235400	2003 <i>WE</i> ₁₆₉		12 11.1 58°21	5°1/10.1	18	
11 7	5 41.95	+7 44.0	2.059	2.864	13.7	20.9	11 7	5 37.23	+9 26.7	2.044	2.863	13.3	20.1
11 17	5 35.37	+7 37.9	2.004	2.887	10.6	20.8	11 17	5 31.92	+8 42.2	1.991	2.882	10.3	20.0
11 27	5 26.82	+7 41.9	1.974	2.910	7.5	20.6	11 27	5 24.77	+8 5.6	1.964	2.903	7.3	19.8
12 7	5 17.11	+7 57.3	1.971	2.932	5.2	20.5	12 7	5 16.54	+7 39.7	1.962	2.923	5.3	19.7
12 17	5 7.19	+8 24.4	1.998	2.953	5.5	20.6	12 17	5 8.12	+7 26.6	1.990	2.943	5.8	19.8
12 27	4 58.08	+9 2.4	2.054	2.974	8.0	20.8	12 27	5 0.47	+7 27.1	2.045	2.964	8.2	20.0
1 6	4 50.59	+9 49.3	2.137	2.995	10.9	21.0	1 6	4 54.35	+7 40.5	2.127	2.984	11.0	20.2
1 16	4 45.29	+10 43.0	2.244	3.015	13.5	21.2	1 16	4 50.28	+8 5.1	2.231	3.005	13.5	20.4
151024	2001 <i>UV</i> ₁₂₆		12 11.1 121°57	0°4/11.1	18		177696	2005 <i>GA</i> ₂₃		12 11.1 202°17	0°3/11.1	18	
11 7	5 44.85	+22 48.1	1.755	2.580	14.8	20.1	11 7	5 45.17	+22 22.5	1.616	2.445	15.7	20.6
11 17	5 38.15	+23 10.2	1.689	2.592	11.1	19.9	11 17	5 38.83	+22 45.5	1.538	2.443	11.8	20.4
11 27	5 28.81	+23 31.1	1.648	2.604	6.7	19.7	11 27	5 29.48	+23 8.3	1.483	2.440	7.2	20.1
12 7	5 17.76	+23 49.0	1.634	2.616	2.0	19.4	12 7	5 18.05	+23 28.9	1.454	2.437	2.2	19.8
12 17	5 6.25	+24 2.6	1.649	2.627	2.8	19.5	12 17	5 5.87	+23 45.6	1.454	2.433	3.1	19.9
12 27	4 55.69	+24 12.3	1.693	2.638	7.4	19.8	12 27	4 54.53	+23 58.5	1.483	2.429	8.1	20.2
1 6	4 47.21	+24 19.9	1.764	2.648	11.4	20.0	1 6	4 45.40	+24 9.2	1.538	2.425	12.6	20.4
1 16	4 41.55	+24 27.6	1.858	2.658	14.8	20.3	1 16	4 39.36	+24 20.2	1.615	2.420	16.4	20.6
404626	2014 <i>HU</i>		12 11.1 174°88	2°5/11.5	18		193744	2001 <i>HW</i> ₅₆		12 11.1 80°65	7°0/11.8	18	

EPHEMERIDES

12 11.1

12 11.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
283826	2003 <i>TP</i> ₁₂		12 11.1 58°78	0°8/11.3 18			182667	2001 <i>UG</i> ₂₀₇		12 11.1 23°82	2°9/10.6 18		
11 7	5 44.82	+25 47.2	1.471	2.306	16.7	20.5	11 7	5 38.48	+16 35.8	1.751	2.586	14.4	20.7
11 17	5 38.19	+25 40.4	1.428	2.335	12.4	20.4	11 17	5 33.38	+16 9.7	1.682	2.589	10.9	20.5
11 27	5 28.75	+25 27.8	1.407	2.365	7.5	20.1	11 27	5 25.92	+15 46.2	1.637	2.592	6.9	20.3
12 7	5 17.71	+25 8.8	1.412	2.394	2.4	19.9	12 7	5 16.96	+15 27.1	1.617	2.595	3.3	20.0
12 17	5 6.56	+24 44.3	1.445	2.424	3.1	20.0	12 17	5 7.57	+15 14.0	1.626	2.599	4.1	20.1
12 27	4 56.81	+24 17.5	1.506	2.454	7.8	20.4	12 27	4 58.99	+15 8.5	1.663	2.603	8.0	20.3
1 6	4 49.55	+23 52.0	1.592	2.483	12.0	20.7	1 6	4 52.22	+15 11.6	1.725	2.607	11.8	20.6
1 16	4 45.35	+23 31.0	1.701	2.513	15.4	21.0	1 16	4 47.93	+15 23.0	1.810	2.611	15.1	20.8
271965	2005 <i>AV</i> ₆₉		12 11.1 110°47	3°3/11.9 17			85219	1993 <i>FM</i> ₉		12 11.1 354°52	3°7/11.4 18		
11 7	5 40.45	+34 1.0	2.373	3.178	12.1	21.3	11 7	5 44.32	+29 26.4	1.413	2.248	17.2	19.7
11 17	5 34.53	+34 10.8	2.297	3.182	9.4	21.1	11 17	5 38.74	+30 13.2	1.342	2.247	13.2	19.5
11 27	5 26.48	+34 11.2	2.245	3.186	6.4	21.0	11 27	5 29.68	+30 53.7	1.293	2.246	8.6	19.2
12 7	5 17.09	+34 0.2	2.221	3.190	3.8	20.8	12 7	5 18.17	+31 22.7	1.269	2.245	4.4	19.0
12 17	5 7.34	+33 37.4	2.226	3.194	3.8	20.8	12 17	5 5.80	+31 36.7	1.271	2.245	4.8	19.0
12 27	4 58.33	+33 4.6	2.261	3.198	6.4	21.0	12 27	4 54.49	+31 36.0	1.300	2.245	9.2	19.2
1 6	4 50.98	+32 25.3	2.323	3.202	9.3	21.2	1 6	4 45.82	+31 25.0	1.354	2.245	13.7	19.5
1 16	4 45.89	+31 43.6	2.411	3.205	12.0	21.4	1 16	4 40.76	+31 9.1	1.428	2.245	17.6	19.8
73492	2002 <i>QE</i> ₂₈		12 11.1 62°74	0°4/11.0 18			42733	1998 <i>RH</i> ₂		12 11.1 79°45	0°9/10.9 18		
11 7	5 38.37	+22 20.8	2.159	2.984	12.4	19.6	11 7	5 42.79	+20 20.3	1.758	2.587	14.6	18.7
11 17	5 32.87	+22 15.2	2.096	2.999	9.2	19.4	11 17	5 36.43	+20 24.7	1.703	2.608	10.9	18.5
11 27	5 25.41	+22 7.9	2.057	3.014	5.5	19.2	11 27	5 27.67	+20 29.4	1.672	2.630	6.6	18.3
12 7	5 16.75	+21 58.9	2.047	3.030	1.6	19.0	12 7	5 17.44	+20 33.9	1.669	2.651	2.1	18.1
12 17	5 7.84	+21 48.9	2.066	3.045	2.4	19.1	12 17	5 6.95	+20 38.2	1.694	2.672	2.9	18.2
12 27	4 59.67	+21 39.0	2.115	3.060	6.1	19.3	12 27	4 57.46	+20 43.1	1.748	2.693	7.2	18.5
1 6	4 53.08	+21 30.8	2.191	3.075	9.5	19.6	1 6	4 49.96	+20 49.9	1.829	2.713	11.1	18.8
1 16	4 48.61	+21 25.9	2.292	3.091	12.4	19.8	1 16	4 45.09	+20 59.7	1.933	2.734	14.3	19.0
394135	2006 <i>JA</i> ₁₄		12 11.1 305°78	0°5/11.2 18			492854	2014 <i>QL</i> ₃₄₉		12 11.1 32°88	5°8/10.1 18		
11 7	5 41.40	+24 40.1	1.681	2.514	15.0	20.9	11 7	5 36.60	+ 8 0.6	1.927	2.747	13.9	20.5
11 17	5 35.86	+24 39.6	1.605	2.512	11.3	20.6	11 17	5 31.70	+ 7 20.7	1.863	2.753	10.9	20.3
11 27	5 27.58	+24 35.3	1.552	2.509	6.9	20.4	11 27	5 24.78	+ 6 50.2	1.823	2.759	7.9	20.2
12 7	5 17.47	+24 26.0	1.525	2.507	2.1	20.1	12 7	5 16.61	+ 6 32.1	1.809	2.766	5.9	20.1
12 17	5 6.79	+24 11.9	1.526	2.505	2.9	20.1	12 17	5 8.10	+ 6 28.7	1.822	2.773	6.4	20.1
12 27	4 56.97	+23 54.9	1.556	2.503	7.7	20.4	12 27	5 0.30	+ 6 40.5	1.863	2.780	8.9	20.3
1 6	4 49.21	+23 37.9	1.611	2.501	12.0	20.6	1 6	4 54.06	+ 7 6.6	1.929	2.788	11.9	20.5
1 16	4 44.31	+23 24.0	1.689	2.499	15.6	20.9	1 16	4 49.98	+ 7 44.6	2.018	2.796	14.6	20.7
341018	2007 <i>GX</i>		12 11.1 246°59	0°5/11.2 18			215720	2004 <i>BU</i> ₉₄		12 11.1 267°55	1°1/10.8 18		
11 7	5 43.69	+23 23.3	1.777	2.604	14.6	21.8	11 7	5 40.32	+22 13.1	1.984	2.810	13.3	20.2
11 17	5 37.64	+23 40.5	1.687	2.591	11.0	21.6	11 17	5 34.71	+21 34.8	1.891	2.795	10.0	20.0
11 27	5 28.76	+23 56.4	1.621	2.577	6.8	21.3	11 27	5 26.77	+20 52.4	1.823	2.780	6.1	19.7
12 7	5 17.87	+24 9.2	1.581	2.563	2.1	21.0	12 7	5 17.24	+20 6.8	1.782	2.764	2.0	19.4
12 17	5 6.16	+24 17.6	1.570	2.549	2.9	21.0	12 17	5 7.16	+19 20.4	1.771	2.748	3.0	19.4
12 27	4 55.10	+24 22.0	1.589	2.534	7.7	21.3	12 27	4 57.73	+18 36.3	1.789	2.732	7.3	19.7
1 6	4 45.99	+24 24.4	1.634	2.519	12.1	21.5	1 6	4 49.99	+17 57.9	1.835	2.716	11.2	19.9
1 16	4 39.74	+24 27.4	1.701	2.504	15.9	21.7	1 16	4 44.66	+17 27.8	1.904	2.699	14.7	20.1
450005	2015 <i>PM</i> ₂₉₃		12 11.1 139°29	3°5/10.4 15			347219	2011 <i>HS</i> ₇₁		12 11.1 203°62	0°8/10.9 18		
11 7	5 41.08	+13 18.0	2.214	3.028	12.5	22.6	11 7	5 43.01	+20 48.6	1.887	2.711	14.0	22.3
11 17	5 34.72	+12 46.2	2.148	3.041	9.5	22.4	11 17	5 36.78	+20 48.5	1.805	2.708	10.5	22.1
11 27	5 26.47	+12 18.6	2.107	3.053	6.3	22.2	11 27	5 28.05	+20 48.1	1.747	2.704	6.4	21.9
12 7	5 17.07	+11 57.0	2.094	3.065	3.8	22.1	12 7	5 17.62	+20 47.1	1.717	2.699	2.0	21.6
12 17	5 7.42	+11 43.2	2.112	3.077	4.4	22.2	12 17	5 6.62	+20 45.4	1.716	2.694	2.9	21.6
12 27	4 58.48	+11 38.3	2.160	3.087	7.3	22.3	12 27	4 56.34	+20 44.1	1.745	2.689	7.3	21.9
1 6	4 51.06	+11 42.5	2.235	3.097	10.3	22.6	1 6	4 47.89	+20 44.8	1.800	2.683	11.3	22.1
1 16	4 45.71	+11 55.5	2.334	3.106	13.0	22.8	1 16	4 42.04	+20 49.1	1.879	2.676	14.8	22.3
63320	2001 <i>FX</i> ₄₄		12 11.1 236°86	1°1/10.8 18			64512	2001 <i>VD</i> ₈₅		12 11.1 247°92	1°2/10.9 18		
11 7	5 37.67	+19 37.8	2.844	3.658	10.1	20.7	11 7	5 42.13	+20 45.1	1.812	2.640	14.3	20.1
11 17	5 32.12	+19 28.3	2.746	3.644	7.5	20.5	11 17	5 36.31	+20 32.3	1.722	2.627	10.8	19.9
11 27	5 24.93	+19 18.7	2.674	3.629	4.6	20.3	11 27	5 27.86	+20 18.4	1.657	2.614	6.6	19.6
12 7	5 16.65	+19 9.2	2.632	3.613	1.7	20.1	12 7	5 17.60	+20 3.6	1.618	2.600	2.2	19.3
12 17	5 7.96	+19 0.5	2.620	3.597	2.3	20.1	12 17	5 6.65	+19 48.8	1.609	2.586	3.2	19.3
12 27	4 59.66	+18 53.4	2.640	3.580	5.4	20.3	12 27	4 56.37	+19 35.7	1.628	2.572	7.7	19.6
1 6	4 52.48	+18 49.0	2.689	3.563	8.4	20.5	1 6	4 47.94	+19 26.5	1.674	2.557	12.0	19.8
1 16	4 46.95	+18 48.3	2.764	3.545	10.9	20.6	1 16	4 42.18	+19 23.0	1.742	2.542	15.6	20.0
330778	2008 <i>TH</i> ₄₄		12 11.1 135°15	0°5/11.2 17			135726	2002 <i>PK</i> ₁₀₁		12 11.1 169°83	5°7/ 9.9 18		
11 7	5 38.23	+25 1.2	2.821	3.634	10.2	22.2	11 7	5 39.55	+ 6 32.3	2.299	3.100	12.5	20.8
11 17	5 32.43	+25 2.6	2.748	3.644	7.6	22.0	11 17	5 33.59	+ 5 49.0	2.227	3.105	10.0	20.6
11 27	5 25.03	+25 1.0	2.701	3.655	4.6	21.9	11 27	5 25.83	+ 5 14.1	2.181	3.108	7.4	20.5
12 7	5 16.65	+24 56.0	2.683	3.665	1.5	21.7	12 7	5 16.92	+ 4 50.6	2.161	3.111	5.8	20.4
12 17	5 8.01	+24 47.7	2.696	3.674	1.9	21.7	12 17	5 7.70	+ 4 40.8	2.171	3.113	6.3	20.4
12 27	4 59.93	+24 37.1	2.740	3.683	5.0	21.9	12 27	4 59.08	+ 4 45.6	2.210	3.115	8.4	20.6
1 6	4 53.08	+24 25.6	2.813	3.692	7.8	22.1	1 6	4 51.84	+ 5 4.3	2.275	3.116	11.0	20.7
1 16	4 47.98	+24 15.0	2.912	3.701	10.3	22.3	1 16	4 46.54	+ 5 35.0	2.364	3.117	13.4	20.9
408678	2014 <i>MS</i> ₃₈		12 11.1 52°18	3°5/10.8 18			71859	2000 <i>VR</i> ₁₄		12 11.1 122°35	0°6/1		

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
74460	1999 <i>CW</i> ₃₂		12 11.1 305°17'	6°6/10.3	18		516036	2015 <i>TU</i> ₁₉		12 11.1 98°09'	0°9/10.9	18	
11 7	5 36.23	+ 2 50.6	2.235	3.035	12.9	19.2	11 7	5 40.39	+22 19.3	1.867	2.697	13.9	20.7
11 17	5 31.33	+ 2 27.7	2.153	3.024	10.5	19.0	11 17	5 34.73	+21 52.8	1.794	2.700	10.3	20.5
11 27	5 24.57	+ 2 17.1	2.095	3.014	8.2	18.9	11 27	5 26.72	+21 23.3	1.746	2.703	6.3	20.3
12 7	5 16.58	+ 2 21.7	2.063	3.004	6.7	18.8	12 7	5 17.23	+20 51.7	1.724	2.706	2.0	20.0
12 17	5 8.16	+ 2 43.1	2.058	2.994	7.1	18.8	12 17	5 7.35	+20 19.5	1.732	2.710	2.9	20.1
12 27	5 0.21	+ 3 21.3	2.082	2.984	9.0	18.9	12 27	4 58.30	+19 49.4	1.768	2.713	7.2	20.3
1 6	4 53.56	+ 4 14.3	2.131	2.974	11.5	19.0	1 6	4 51.08	+19 24.2	1.832	2.716	11.1	20.6
1 16	4 48.81	+ 5 19.1	2.204	2.965	14.0	19.2	1 16	4 46.35	+19 5.7	1.918	2.719	14.4	20.8
156935	2003 <i>FX</i> ₁₀₃		12 11.1 284°91'	0°1/11.1	18		292260	2006 <i>SP</i> ₉₇		12 11.1 83°39'	1°7/10.8	18	
11 7	5 41.64	+23 29.1	1.569	2.406	15.7	20.4	11 7	5 41.37	+18 57.7	1.892	2.718	13.8	21.1
11 17	5 36.35	+23 21.7	1.483	2.392	11.8	20.2	11 17	5 35.21	+18 40.4	1.836	2.739	10.3	21.0
11 27	5 28.08	+23 11.0	1.420	2.379	7.3	19.9	11 27	5 26.87	+18 23.9	1.804	2.760	6.3	20.8
12 7	5 17.70	+22 56.3	1.383	2.366	2.2	19.5	12 7	5 17.24	+18 8.9	1.799	2.780	2.4	20.6
12 17	5 6.53	+22 38.0	1.373	2.352	3.1	19.6	12 17	5 7.39	+17 56.5	1.824	2.800	3.2	20.7
12 27	4 56.15	+22 18.2	1.391	2.339	8.3	19.8	12 27	4 58.45	+17 48.2	1.879	2.820	7.1	20.9
1 6	4 47.92	+22 0.2	1.434	2.326	13.0	20.1	1 6	4 51.33	+17 45.2	1.960	2.840	10.7	21.2
1 16	4 42.75	+21 47.1	1.499	2.313	17.1	20.3	1 16	4 46.62	+17 48.2	2.064	2.859	13.7	21.4
480993	2004 <i>CC</i> ₁		12 11.1 305°78'	6°4/11.8	18		161406	2003 <i>UJ</i> ₂₀₂		12 11.1 42°87'	3°1/10.9	18	
11 7	5 45.84	+ 3 32.3	1.698	2.497	16.4	20.2	11 7	5 41.09	+15 39.7	1.356	2.200	17.3	19.2
11 17	5 39.55	+ 4 11.7	1.587	2.464	13.3	19.9	11 17	5 35.65	+15 34.4	1.309	2.220	12.9	19.0
11 27	5 30.20	+ 5 13.3	1.499	2.430	9.8	19.6	11 27	5 27.38	+15 35.2	1.284	2.241	8.1	18.8
12 7	5 18.43	+ 6 39.5	1.437	2.397	6.9	19.4	12 7	5 17.42	+15 42.7	1.284	2.263	3.8	18.6
12 17	5 5.33	+ 8 29.3	1.405	2.363	7.0	19.3	12 17	5 7.16	+15 57.1	1.310	2.285	4.5	18.7
12 27	4 52.40	+10 38.2	1.402	2.330	10.3	19.4	12 27	4 58.10	+16 18.4	1.363	2.307	8.9	19.0
1 6	4 41.15	+12 59.0	1.428	2.297	14.6	19.6	1 6	4 51.40	+16 46.2	1.440	2.330	13.1	19.3
1 16	4 32.75	+15 24.8	1.478	2.264	18.6	19.8	1 16	4 47.69	+17 19.4	1.539	2.353	16.7	19.6
294514	2007 <i>XC</i> ₁₄		12 11.1 127°28'	0°7/11.2	18		114027	Malanushenko		12 11.1 134°51'	0°8/11.0	18	
11 7	5 43.12	+24 52.8	2.314	3.126	12.1	21.3	11 7	5 41.36	+19 38.2	1.916	2.742	13.7	19.6
11 17	5 36.32	+25 5.6	2.247	3.144	9.0	21.2	11 17	5 35.48	+19 56.0	1.841	2.745	10.2	19.4
11 27	5 27.49	+25 15.4	2.207	3.160	5.5	21.0	11 27	5 27.23	+20 15.6	1.791	2.748	6.2	19.1
12 7	5 17.42	+25 20.8	2.195	3.176	1.8	20.7	12 7	5 17.40	+20 36.1	1.768	2.751	2.0	18.9
12 17	5 7.05	+25 21.4	2.214	3.192	2.3	20.8	12 17	5 7.07	+20 56.6	1.775	2.753	2.8	18.9
12 27	4 57.44	+25 18.1	2.263	3.206	5.9	21.1	12 27	4 57.45	+21 17.0	1.811	2.756	7.0	19.2
1 6	4 49.44	+25 12.7	2.342	3.220	9.2	21.3	1 6	4 49.59	+21 37.8	1.874	2.758	10.9	19.4
1 16	4 43.65	+25 7.5	2.445	3.234	12.0	21.5	1 16	4 44.21	+21 59.9	1.961	2.760	14.1	19.7
201645	2003 <i>SM</i> ₃₆₂		12 11.1 168°87'	3°8/11.9	17		289647	2005 <i>GW</i> ₁₀₇		12 11.1 48°35'	3°0/11.5	18	
11 7	5 41.40	+35 22.6	2.612	3.407	11.4	21.0	11 7	5 42.75	+29 23.0	1.662	2.490	15.4	20.8
11 17	5 35.18	+35 50.9	2.532	3.409	8.9	20.9	11 17	5 36.98	+29 56.3	1.596	2.497	11.7	20.6
11 27	5 26.90	+36 10.3	2.477	3.411	6.3	20.7	11 27	5 28.32	+30 22.8	1.552	2.504	7.6	20.4
12 7	5 17.27	+36 18.4	2.450	3.413	4.2	20.6	12 7	5 17.74	+30 39.2	1.534	2.511	3.7	20.2
12 17	5 7.22	+36 13.7	2.453	3.414	4.2	20.6	12 17	5 6.61	+30 43.4	1.544	2.518	4.0	20.2
12 27	4 57.80	+35 57.2	2.486	3.416	6.3	20.7	12 27	4 56.46	+30 36.6	1.582	2.526	7.9	20.5
1 6	4 49.91	+35 31.7	2.547	3.417	8.9	20.9	1 6	4 48.55	+30 22.4	1.645	2.533	11.9	20.7
1 16	4 44.20	+35 1.1	2.633	3.417	11.3	21.1	1 16	4 43.66	+30 5.1	1.731	2.541	15.3	21.0
152950	2000 <i>FQ</i> ₆₄		12 11.1 243°89'	2°2/11.5	18		487189	2014 <i>OC</i> ₃₄₀		12 11.1 83°51'	3°4/10.8	18	
11 7	5 44.30	+29 11.8	1.720	2.543	15.2	20.3	11 7	5 39.33	+12 41.6	2.014	2.835	13.3	21.4
11 17	5 38.19	+29 14.1	1.634	2.533	11.6	20.1	11 17	5 33.71	+12 39.8	1.946	2.843	10.1	21.2
11 27	5 29.12	+29 8.2	1.570	2.523	7.4	19.8	11 27	5 26.02	+12 44.6	1.903	2.852	6.7	21.0
12 7	5 18.00	+28 51.7	1.533	2.513	3.2	19.5	12 7	5 17.02	+12 56.8	1.887	2.860	3.8	20.8
12 17	5 6.16	+28 24.1	1.525	2.502	3.5	19.5	12 17	5 7.66	+13 16.7	1.900	2.869	4.3	20.9
12 27	4 55.17	+27 47.9	1.545	2.490	7.9	19.8	12 27	4 58.99	+13 44.0	1.943	2.877	7.4	21.1
1 6	4 46.37	+27 7.6	1.591	2.479	12.2	20.0	1 6	4 51.90	+14 18.0	2.012	2.886	10.7	21.3
1 16	4 40.62	+26 28.6	1.660	2.467	16.0	20.2	1 16	4 47.03	+14 57.4	2.105	2.894	13.7	21.5
190456	2000 <i>BC</i> ₃₂		12 11.1 342°47'	4°9/10.3	17		414605	2009 <i>UO</i> ₁₀₆		12 11.1 69°05'	1°7/10.7	16	
11 7	5 36.04	+10 32.8	1.886	2.714	13.8	19.2	11 7	5 39.13	+19 53.5	2.093	2.919	12.7	21.2
11 17	5 31.48	+10 3.5	1.810	2.708	10.7	19.0	11 17	5 33.37	+19 17.0	2.035	2.939	9.4	21.0
11 27	5 24.78	+ 9 41.7	1.758	2.702	7.5	18.8	11 27	5 25.69	+18 40.0	2.003	2.959	5.8	20.8
12 7	5 16.67	+ 9 30.0	1.731	2.697	5.1	18.7	12 7	5 16.89	+18 3.7	1.998	2.979	2.3	20.6
12 17	5 8.09	+ 9 30.4	1.732	2.693	5.7	18.7	12 17	5 7.91	+17 30.4	2.023	2.998	3.1	20.7
12 27	5 0.13	+ 9 43.8	1.761	2.689	8.6	18.9	12 27	4 59.77	+17 2.0	2.078	3.018	6.6	21.0
1 6	4 53.74	+10 9.5	1.815	2.685	11.9	19.1	1 6	4 53.25	+16 40.5	2.160	3.038	9.9	21.2
1 16	4 49.58	+10 45.8	1.891	2.682	14.9	19.3	1 16	4 48.86	+16 26.7	2.266	3.058	12.7	21.5
394162	2006 <i>QD</i> ₅₈		12 11.1 60°50'	6°5/12.5	17		377975	2006 <i>OO</i> ₆		12 11.1 58°48'	5°9/12.1	18	
11 7	5 51.83	+38 49.3	1.686	2.481	16.6	20.4	11 7	5 47.64	+34 59.8	1.261	2.091	19.2	20.6
11 17	5 43.49	+39 44.6	1.651	2.523	13.1	20.3	11 17	5 41.37	+35 38.9	1.210	2.107	15.0	20.4
11 27	5 32.01	+40 23.0	1.639	2.564	9.6	20.1	11 27	5 31.23	+36 2.8	1.178	2.122	10.4	20.2
12 7	5 18.73	+40 39.0	1.653	2.606	7.0	20.1	12 7	5 18.61	+36 5.4	1.170	2.138	6.6	20.0
12 17	5 5.35	+40 30.9	1.695	2.646	6.8	20.2	12 17	5 5.51	+35 44.5	1.188	2.155	6.5	20.0
12 27	4 53.60	+40 2.0	1.764	2.686	9.0	20.4	12 27	4 54.06	+35 3.9	1.231	2.171	10.1	20.3
1 6	4 44.71	+39 19.5	1.859	2.726	11.8	20.6	1 6	4 45.85	+34 12.0	1.298	2.188	14.2	20.6
1 16	4 39.26	+38 30.8	1.977	2.765	14.5	20.9	1 16	4 41.64	+33 17.3	1.385	2.205	17.9	20.9
52564	1997 <i>GN</i> ₂₁		12 11.1 229°44'	2°4/11.4	18		495768	2017 <i>EB</i> ₆		12 11.1 339°74'			

EPHEMERIDES

12 11.1

12 11.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
323036	2002 <i>RY</i> ₃		12 11.1 112°35'	5°3/9.6	18		85115	4329 <i>T</i> ₋₃		12 11.1 149°32'	1°8/10.8	18	
11 7	5 36.24	+ 7 40.7	2.413	3.221	11.8	20.9	11 7	5 39.67	+17 15.5	2.416	3.232	11.5	20.2
11 17	5 31.08	+ 6 46.8	2.346	3.228	9.3	20.7	11 17	5 33.70	+17 6.2	2.343	3.240	8.6	20.0
11 27	5 24.28	+ 6 0.0	2.304	3.234	6.9	20.6	11 27	5 25.92	+16 58.7	2.295	3.248	5.4	19.8
12 7	5 16.49	+ 5 23.5	2.289	3.240	5.4	20.5	12 7	5 17.02	+16 53.6	2.276	3.255	2.3	19.6
12 17	5 8.45	+ 4 59.5	2.303	3.247	5.9	20.5	12 17	5 7.81	+16 51.4	2.288	3.262	2.9	19.7
12 27	5 0.97	+ 4 49.6	2.347	3.253	7.9	20.7	12 27	4 59.21	+16 52.9	2.330	3.268	6.1	19.9
1 6	4 54.76	+ 4 53.5	2.416	3.259	10.4	20.8	1 6	4 51.98	+16 58.7	2.401	3.274	9.2	20.1
1 16	4 50.32	+ 5 9.7	2.509	3.264	12.6	21.0	1 16	4 46.69	+17 9.3	2.496	3.279	11.9	20.3
306505	1999 <i>VH</i> ₅₅		12 11.1 57°32'	5°8/9.5	18		125143	2001 <i>UG</i> ₆₆		12 11.1 10°85'	3°4/11.4	18	
11 7	5 40.51	+12 47.3	1.542	2.376	16.1	20.2	11 7	5 43.56	+29 5.0	1.444	2.280	16.9	18.9
11 17	5 34.88	+11 19.6	1.489	2.391	12.3	20.0	11 17	5 38.09	+29 47.6	1.375	2.280	12.9	18.6
11 27	5 26.79	+ 9 57.0	1.459	2.406	8.5	19.8	11 27	5 29.28	+30 23.9	1.328	2.281	8.4	18.4
12 7	5 17.24	+ 8 45.0	1.455	2.420	6.0	19.7	12 7	5 18.15	+30 49.5	1.306	2.283	4.2	18.1
12 17	5 7.46	+ 7 48.8	1.478	2.436	6.9	19.8	12 17	5 6.24	+31 1.2	1.310	2.284	4.5	18.2
12 27	4 58.75	+ 7 11.9	1.529	2.451	10.1	20.0	12 27	4 55.37	+30 59.6	1.341	2.286	8.9	18.4
1 6	4 52.10	+ 6 54.9	1.603	2.466	13.6	20.3	1 6	4 47.05	+30 48.8	1.396	2.288	13.3	18.7
1 16	4 48.10	+ 6 56.0	1.699	2.482	16.7	20.5	1 16	4 42.20	+30 33.8	1.473	2.291	17.1	18.9
518892	2010 <i>EJ</i> ₁₇₃		12 11.1 305°72'	0°7/10.9	18		369432	2009 <i>XG</i> ₁		12 11.1 304°51'	5°0/12.4	18	
11 7	5 36.49	+21 29.7	2.298	3.125	11.7	21.5	11 7	5 41.09	+37 59.6	2.215	3.013	13.1	20.2
11 17	5 31.64	+21 20.8	2.207	3.111	8.8	21.3	11 17	5 35.46	+38 19.8	2.126	3.001	10.5	20.0
11 27	5 24.83	+21 10.7	2.139	3.097	5.3	21.0	11 27	5 27.33	+38 27.9	2.061	2.990	7.6	19.8
12 7	5 16.71	+20 59.7	2.100	3.083	1.7	20.8	12 7	5 17.51	+38 20.5	2.021	2.979	5.4	19.6
12 17	5 8.10	+20 48.2	2.091	3.069	2.4	20.8	12 17	5 7.13	+37 56.2	2.010	2.968	5.3	19.6
12 27	4 59.99	+20 37.6	2.111	3.055	6.2	21.0	12 27	4 57.46	+37 16.5	2.028	2.958	7.5	19.7
1 6	4 53.25	+20 29.3	2.158	3.042	9.7	21.2	1 6	4 49.64	+36 25.8	2.073	2.947	10.4	19.9
1 16	4 48.52	+20 24.9	2.230	3.029	12.7	21.4	1 16	4 44.41	+35 29.6	2.141	2.937	13.2	20.1
162287	1999 <i>VN</i> ₁₀₇		12 11.1 40°12'	0°3/11.1	18		120733	1997 <i>TN</i> ₅		12 11.1 8°21'	0°2/11.1	18	
11 7	5 40.99	+23 0.5	1.437	2.281	16.5	20.7	11 7	5 39.34	+22 13.9	1.177	2.036	18.4	18.6
11 17	5 35.68	+22 52.9	1.380	2.293	12.3	20.4	11 17	5 35.18	+22 24.6	1.117	2.036	13.8	18.4
11 27	5 27.49	+22 42.5	1.345	2.305	7.4	20.2	11 27	5 27.57	+22 34.8	1.076	2.038	8.4	18.1
12 7	5 17.49	+22 29.3	1.335	2.318	2.2	19.9	12 7	5 17.64	+22 43.2	1.058	2.041	2.5	17.7
12 17	5 7.10	+22 13.9	1.353	2.332	3.1	20.0	12 17	5 7.00	+22 49.1	1.066	2.045	3.6	17.8
12 27	4 57.85	+21 58.7	1.397	2.346	8.2	20.3	12 27	4 57.53	+22 53.6	1.098	2.051	9.3	18.2
1 6	4 50.95	+21 46.4	1.466	2.360	12.6	20.6	1 6	4 50.75	+22 58.8	1.153	2.057	14.5	18.5
1 16	4 47.08	+21 39.1	1.557	2.375	16.3	20.9	1 16	4 47.53	+23 7.0	1.228	2.064	18.7	18.8
191410	2003 <i>SS</i> ₉₂		12 11.1 325°22'	1°6/10.8	17		294439	2007 <i>VE</i> ₂₇₄		12 11.1 91°81'	1°0/10.9	18	
11 7	5 36.92	+19 37.5	1.981	2.813	13.1	19.7	11 7	5 42.91	+20 11.3	1.865	2.690	14.1	21.0
11 17	5 32.16	+19 15.6	1.897	2.804	9.8	19.5	11 17	5 36.45	+20 10.7	1.808	2.711	10.4	20.8
11 27	5 25.22	+18 53.3	1.838	2.795	6.0	19.2	11 27	5 27.69	+20 10.4	1.775	2.731	6.3	20.6
12 7	5 16.83	+18 31.7	1.805	2.786	2.3	19.0	12 7	5 17.56	+20 10.1	1.770	2.752	2.1	20.4
12 17	5 7.95	+18 12.2	1.802	2.778	3.1	19.0	12 17	5 7.17	+20 9.9	1.794	2.772	2.9	20.5
12 27	4 59.69	+17 56.5	1.827	2.770	7.1	19.2	12 27	4 57.71	+20 11.0	1.848	2.792	7.0	20.8
1 6	4 53.02	+17 46.4	1.878	2.763	10.8	19.5	1 6	4 50.15	+20 14.4	1.929	2.811	10.7	21.0
1 16	4 48.62	+17 43.1	1.953	2.755	14.1	19.7	1 16	4 45.09	+20 21.5	2.033	2.830	13.8	21.3
40495	1999 <i>RQ</i> ₇₄		12 11.1 42°54'	6°1/12.2	17		478474	2012 <i>QK</i> ₂₆		12 11.1 25°57'	5°2/10.4	18	
11 7	5 43.69	+38 54.3	1.991	2.788	14.4	19.3	11 7	5 39.41	+13 27.6	1.298	2.145	17.7	20.8
11 17	5 37.61	+39 43.2	1.920	2.792	11.5	19.2	11 17	5 34.67	+12 41.6	1.240	2.151	13.5	20.6
11 27	5 28.70	+40 19.4	1.872	2.797	8.6	19.0	11 27	5 26.98	+12 2.3	1.204	2.157	9.1	20.4
12 7	5 17.89	+40 37.9	1.850	2.801	6.5	18.9	12 7	5 17.41	+11 33.7	1.191	2.164	5.5	20.2
12 17	5 6.48	+40 36.0	1.856	2.806	6.4	18.9	12 17	5 7.37	+11 18.9	1.205	2.172	6.4	20.3
12 27	4 55.99	+40 14.8	1.889	2.811	8.5	19.0	12 27	4 58.43	+11 19.8	1.243	2.180	10.4	20.5
1 6	4 47.67	+39 39.1	1.948	2.816	11.3	19.2	1 6	4 51.83	+11 35.8	1.305	2.189	14.6	20.8
1 16	4 42.30	+38 55.0	2.030	2.821	14.0	19.4	1 16	4 48.30	+12 5.1	1.387	2.199	18.3	21.1
245841	2006 <i>KX</i> ₄₅		12 11.1 114°13'	0°5/11.1	18		464399	2016 <i>BP</i> ₁₃		12 11.1 135°67'	6°5/12.8	17	
11 7	5 42.78	+21 23.9	2.002	2.823	13.4	21.6	11 7	5 45.12	+45 24.5	2.735	3.489	12.0	20.8
11 17	5 36.29	+21 26.9	1.938	2.839	9.9	21.4	11 17	5 38.18	+46 11.1	2.663	3.497	10.0	20.7
11 27	5 27.59	+21 29.2	1.899	2.855	6.0	21.2	11 27	5 28.84	+46 43.8	2.615	3.504	8.1	20.6
12 7	5 17.51	+21 30.3	1.888	2.870	1.8	21.0	12 7	5 17.94	+46 58.6	2.593	3.511	6.8	20.5
12 17	5 7.12	+21 30.0	1.907	2.885	2.6	21.1	12 17	5 6.58	+46 53.3	2.599	3.519	6.6	20.5
12 27	4 57.58	+21 29.4	1.956	2.900	6.6	21.4	12 27	4 55.99	+46 28.8	2.633	3.525	7.8	20.6
1 6	4 49.82	+21 30.0	2.032	2.914	10.3	21.6	1 6	4 47.23	+45 49.1	2.695	3.532	9.6	20.7
1 16	4 44.46	+21 33.2	2.132	2.927	13.3	21.9	1 16	4 40.98	+44 59.5	2.780	3.538	11.5	20.9
206150	2002 <i>TJ</i> ₁₂₄		12 11.1 117°15'	5°0/12.6	18		288558	2004 <i>HV</i>		12 11.1 262°04'	6°4/13.7	18	
11 7	5 47.74	+38 52.1	2.270	3.053	13.3	21.7	11 7	5 54.11	+46 12.2	2.536	3.277	13.1	20.2
11 17	5 40.01	+39 14.8	2.208	3.073	10.5	21.5	11 17	5 45.04	+46 3.7	2.419	3.250	11.0	20.0
11 27	5 29.82	+39 24.2	2.170	3.093	7.7	21.4	11 27	5 33.07	+45 35.8	2.326	3.221	8.7	19.8
12 7	5 18.16	+39 16.8	2.159	3.113	5.4	21.3	12 7	5 19.21	+44 43.7	2.260	3.192	6.8	19.6
12 17	5 6.25	+38 51.8	2.177	3.132	5.3	21.3	12 17	5 4.83	+43 25.4	2.225	3.162	6.5	19.5
12 27	4 55.38	+38 11.5	2.226	3.150	7.3	21.5	12 27	4 51.47	+41 44.0	2.221	3.131	8.1	19.6
1 6	4 46.60	+37 21.0	2.302	3.167	9.9	21.7	1 6	4 40.38	+39 46.7	2.247	3.100	10.6	19.7
1 16	4 40.51	+36 25.9	2.402	3.184	12.4	21.9	1 16	4 32.32	+37 42.5	2.300	3.067	13.3	19.8
384785	2012 <i>PG</i> ₃₁		12 11.1 68°37'	2°5/11.6	18		70078	1999 <i>JU</i> ₅₉		12 11.1 107°38'			

EPHEMERIDES

12 11.1

12 11.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
414941	2011 <i>BX</i> ₃₄		12 11.1 183°57	3°0/11.9 18			389657	2011 <i>OA</i> ₄₀		12 11.1 153°11	6°2/10.1 18		
11 7	5 40.66	+33 40.3	2.576	3.376	11.4	21.5	11 7	5 40.40	+5 46.3	2.124	2.926	13.4	22.2
11 17	5 34.61	+33 47.3	2.493	3.376	8.8	21.3	11 17	5 34.37	+5 5.1	2.058	2.934	10.7	22.1
11 27	5 26.57	+33 45.6	2.436	3.376	6.0	21.1	11 27	5 26.40	+4 34.0	2.015	2.941	8.0	21.9
12 7	5 17.26	+33 33.5	2.406	3.376	3.5	21.0	12 7	5 17.22	+4 16.0	1.999	2.948	6.3	21.8
12 17	5 7.59	+33 10.5	2.407	3.375	3.5	21.0	12 17	5 7.72	+4 13.3	2.012	2.954	6.7	21.9
12 27	4 58.57	+32 38.2	2.437	3.375	6.0	21.1	12 27	4 58.90	+4 26.4	2.054	2.959	8.9	22.0
1 6	4 51.06	+31 59.9	2.497	3.373	8.8	21.3	1 6	4 51.58	+4 54.1	2.122	2.964	11.6	22.2
1 16	4 45.66	+31 19.3	2.581	3.372	11.4	21.5	1 16	4 46.34	+5 34.1	2.212	2.969	14.1	22.4
38471	1999 <i>TH</i> ₃₉		12 11.1 171°58	1°4/10.9 18			308757	2006 <i>KL</i> ₄₀		12 11.1 83°08	0°5/11.1 18		
11 7	5 39.15	+17 46.5	2.217	3.038	12.3	18.8	11 7	5 46.97	+18 58.9	1.902	2.718	14.2	20.6
11 17	5 33.58	+17 57.3	2.138	3.039	9.2	18.6	11 17	5 39.39	+19 42.2	1.852	2.750	10.5	20.4
11 27	5 26.01	+18 10.9	2.085	3.039	5.7	18.4	11 27	5 29.46	+20 27.7	1.826	2.781	6.3	20.2
12 7	5 17.12	+18 26.8	2.059	3.040	2.1	18.1	12 7	5 18.12	+21 12.9	1.830	2.812	1.9	20.0
12 17	5 7.78	+18 44.9	2.064	3.040	2.8	18.2	12 17	5 6.53	+21 55.7	1.864	2.842	2.6	20.1
12 27	4 59.02	+19 5.0	2.098	3.040	6.4	18.4	12 27	4 55.92	+22 35.1	1.928	2.871	6.8	20.4
1 6	4 51.72	+19 27.4	2.160	3.040	9.8	18.6	1 6	4 47.29	+23 11.3	2.021	2.900	10.4	20.7
1 16	4 46.51	+19 52.2	2.247	3.040	12.8	18.8	1 16	4 41.25	+23 45.2	2.138	2.929	13.4	21.0
146564	2001 <i>TT</i> ₁₉		12 11.1 43°94	1°9/11.6 18			185707	1998 <i>QU</i> ₇₇		12 11.1 70°29	2°8/10.6 18		
11 7	5 41.61	+29 21.7	1.637	2.467	15.5	19.7	11 7	5 45.75	+18 31.1	1.370	2.208	17.5	19.9
11 17	5 35.93	+29 7.8	1.578	2.481	11.6	19.5	11 17	5 38.93	+17 49.0	1.328	2.237	13.0	19.7
11 27	5 27.56	+28 44.6	1.541	2.495	7.3	19.3	11 27	5 29.28	+17 8.2	1.309	2.266	8.0	19.5
12 7	5 17.56	+28 11.4	1.530	2.510	3.0	19.0	12 7	5 18.06	+16 31.2	1.315	2.294	3.5	19.3
12 17	5 7.27	+27 29.5	1.548	2.525	3.2	19.1	12 17	5 6.75	+16 0.7	1.348	2.323	4.5	19.5
12 27	4 58.11	+26 42.6	1.593	2.541	7.5	19.4	12 27	4 56.87	+15 39.3	1.409	2.351	8.9	19.8
1 6	4 51.20	+25 55.5	1.664	2.557	11.5	19.7	1 6	4 49.52	+15 28.6	1.495	2.379	13.1	20.1
1 16	4 47.14	+25 12.6	1.759	2.573	14.9	19.9	1 16	4 45.25	+15 28.8	1.602	2.406	16.6	20.4
263875	2009 <i>DD</i> ₁₀₅		12 11.1 171°60	4°8/12.0 18			294833	2008 <i>CW</i> ₁₄₄		12 11.1 69°42	0°9/11.4 17		
11 7	5 45.33	+37 5.0	2.343	3.133	12.7	21.3	11 7	5 41.10	+26 20.3	1.855	2.682	14.1	21.6
11 17	5 38.42	+37 42.9	2.265	3.136	10.1	21.1	11 17	5 35.36	+26 13.9	1.787	2.690	10.5	21.4
11 27	5 29.05	+38 10.3	2.210	3.138	7.3	20.9	11 27	5 27.19	+26 2.0	1.742	2.698	6.5	21.2
12 7	5 18.04	+38 23.3	2.184	3.141	5.1	20.8	12 7	5 17.50	+25 43.9	1.724	2.706	2.2	20.9
12 17	5 6.50	+38 19.8	2.186	3.142	5.1	20.8	12 17	5 7.42	+25 20.2	1.735	2.714	2.7	21.0
12 27	4 55.72	+38 0.9	2.218	3.143	7.3	20.9	12 27	4 58.23	+24 53.2	1.775	2.722	6.9	21.2
1 6	4 46.78	+37 30.2	2.278	3.144	10.0	21.1	1 6	4 50.98	+24 26.0	1.842	2.730	10.8	21.5
1 16	4 40.42	+36 52.9	2.362	3.144	12.6	21.3	1 16	4 46.30	+24 1.8	1.932	2.738	14.1	21.7
172711	2004 <i>BG</i> ₅₅		12 11.1 359°56	6°1/12.9 18			58476	1996 <i>RQ</i> ₁₃		12 11.1 67°20	0°7/11.3 18		
11 7	5 44.21	+39 23.9	1.606	2.415	16.7	19.6	11 7	5 39.42	+25 27.8	2.227	3.048	12.2	19.3
11 17	5 38.45	+39 29.6	1.532	2.413	13.4	19.4	11 17	5 33.67	+25 28.6	2.167	3.067	9.1	19.1
11 27	5 29.38	+39 16.9	1.480	2.413	9.8	19.2	11 27	5 25.97	+25 25.6	2.131	3.087	5.5	18.9
12 7	5 18.16	+38 41.6	1.452	2.412	6.8	19.0	12 7	5 17.10	+25 18.3	2.124	3.106	1.8	18.7
12 17	5 6.42	+37 42.9	1.451	2.412	6.4	19.0	12 17	5 7.99	+25 6.7	2.147	3.125	2.3	18.8
12 27	4 55.95	+36 25.2	1.477	2.413	9.2	19.2	12 27	4 59.66	+24 52.5	2.199	3.145	5.9	19.1
1 6	4 48.14	+34 56.9	1.528	2.414	12.7	19.4	1 6	4 52.93	+24 37.6	2.280	3.164	9.2	19.3
1 16	4 43.76	+33 27.0	1.602	2.416	16.1	19.6	1 16	4 48.33	+24 24.3	2.384	3.183	12.0	19.5
303543	2005 <i>EG</i> ₃₁₇		12 11.1 120°88	0°1/11.1 18			268151	2004 <i>TT</i> ₂₈₅		12 11.1 26°63	6°5/12.1 17		
11 7	5 41.72	+23 16.5	1.894	2.720	13.8	21.8	11 7	5 43.44	+39 1.3	1.896	2.696	14.9	19.6
11 17	5 35.74	+23 10.6	1.824	2.727	10.3	21.5	11 17	5 37.62	+40 0.8	1.829	2.702	12.0	19.4
11 27	5 27.39	+23 1.9	1.777	2.734	6.3	21.3	11 27	5 28.84	+40 47.4	1.784	2.708	9.0	19.2
12 7	5 17.53	+22 50.2	1.758	2.741	1.9	21.0	12 7	5 18.05	+41 15.6	1.764	2.714	6.9	19.1
12 17	5 7.27	+22 35.8	1.768	2.747	2.6	21.1	12 17	5 6.60	+41 22.1	1.772	2.720	6.9	19.1
12 27	4 57.84	+22 20.6	1.808	2.753	6.9	21.4	12 27	4 56.10	+41 7.8	1.807	2.727	8.9	19.3
1 6	4 50.27	+22 6.8	1.874	2.759	10.8	21.6	1 6	4 47.86	+40 37.4	1.867	2.735	11.8	19.5
1 16	4 45.22	+21 56.7	1.964	2.765	14.1	21.9	1 16	4 42.70	+39 57.4	1.950	2.742	14.5	19.7
213703	2002 <i>TQ</i> ₃₅₇		12 11.1 43°57	1°3/10.9 18			271481	2004 <i>FD</i> ₃₅		12 11.1 278°14	2°8/11.7 18		
11 7	5 40.20	+20 42.1	1.678	2.514	14.9	20.7	11 7	5 44.17	+30 1.2	1.521	2.351	16.5	21.2
11 17	5 34.83	+20 25.6	1.611	2.519	11.1	20.4	11 17	5 38.59	+30 6.1	1.434	2.336	12.7	20.9
11 27	5 26.93	+20 8.2	1.566	2.525	6.8	20.2	11 27	5 29.67	+30 1.6	1.368	2.321	8.2	20.6
12 7	5 17.41	+19 50.7	1.549	2.531	2.3	19.9	12 7	5 18.35	+29 44.3	1.328	2.306	3.8	20.3
12 17	5 7.46	+19 34.2	1.559	2.537	3.2	20.0	12 17	5 6.12	+29 13.4	1.314	2.291	4.0	20.3
12 27	4 58.40	+19 20.7	1.597	2.543	7.7	20.3	12 27	4 54.78	+28 31.5	1.328	2.275	8.7	20.5
1 6	4 51.32	+19 12.0	1.661	2.549	11.8	20.6	1 6	4 45.88	+27 44.5	1.367	2.260	13.5	20.7
1 16	4 46.92	+19 9.7	1.748	2.556	15.3	20.8	1 16	4 40.41	+26 58.5	1.428	2.245	17.6	21.0
245857	2006 <i>MA</i> ₁₃		12 11.1 100°14	2°3/11.1 18			28295	Heyizheng		12 11.2 50°73	0°5/11.3 18		
11 7	5 43.09	+14 43.4	1.864	2.685	14.3	19.9	11 7	5 40.88	+25 22.9	1.731	2.563	14.7	18.8
11 17	5 36.72	+15 9.5	1.798	2.697	10.7	19.7	11 17	5 35.31	+25 8.9	1.665	2.571	11.0	18.5
11 27	5 27.99	+15 42.2	1.756	2.709	6.8	19.5	11 27	5 27.21	+24 49.9	1.622	2.579	6.7	18.3
12 7	5 17.72	+16 20.5	1.741	2.720	3.0	19.3	12 7	5 17.51	+24 25.4	1.605	2.588	2.1	18.0
12 17	5 7.01	+17 3.0	1.756	2.731	3.5	19.3	12 17	5 7.44	+23 56.6	1.617	2.596	2.8	18.1
12 27	4 57.08	+17 48.5	1.801	2.742	7.4	19.6	12 27	4 58.32	+23 26.1	1.657	2.605	7.3	18.4
1 6	4 48.97	+18 35.8	1.873	2.753	11.1	19.9	1 6	4 51.23	+22 57.3	1.724	2.614	11.3	18.7
1 16	4 43.36	+19 24.3	1.969	2.764	14.3	20.1	1 16	4 46.82	+22 33.2	1.813	2.623	14.7	18.9
197169	2003 <i>UH</i> ₂₇₉		12 11.1 325°25	1°5/11.5 18			118036	3038 <i>T-2</i>		12 11.2 99°56	3°7/11.9 17		</

EPHEMERIDES

12 11.2

12 11.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
107795	2001 <i>FN</i> ₅₄	12 11.2 243°26'		4.9°/ 9.8 18			130035	1999 <i>VA</i> ₁₂₃	12 11.2 98°76'		1.2°/10.9 18		
11 7	5 39.58	+11 4.8	2.130	2.945	12.9	20.1	11 7	5 43.04	+20 26.7	1.877	2.702	14.0	20.3
11 17	5 33.99	+10 9.9	2.041	2.932	10.1	19.9	11 17	5 36.54	+20 11.0	1.819	2.722	10.4	20.1
11 27	5 26.32	+9 19.1	1.977	2.917	7.1	19.7	11 27	5 27.79	+19 54.7	1.786	2.742	6.3	19.9
12 7	5 17.27	+8 36.0	1.940	2.903	5.0	19.6	12 7	5 17.68	+19 38.3	1.780	2.761	2.2	19.7
12 17	5 7.72	+8 3.5	1.932	2.888	5.7	19.6	12 17	5 7.33	+19 22.8	1.803	2.780	3.0	19.8
12 27	4 58.70	+7 44.3	1.954	2.872	8.5	19.7	12 27	4 57.92	+19 9.9	1.856	2.799	7.0	20.1
1 6	4 51.12	+7 38.9	2.002	2.856	11.7	19.9	1 6	4 50.41	+19 1.3	1.936	2.817	10.7	20.4
1 16	4 45.67	+7 47.1	2.072	2.839	14.6	20.1	1 16	4 45.38	+18 58.3	2.039	2.835	13.8	20.6
9740	1987 <i>ST</i> ₁₁	12 11.2 28°41'		2.9°/11.4 18			415234	2012 <i>JB</i> ₁	12 11.2 62°81'		1.3°/11.2 18		
11 7	5 43.29	+27 9.2	1.231	2.079	18.5	17.0	11 7	5 42.08	+24 34.9	2.148	2.967	12.7	20.5
11 17	5 38.17	+27 52.9	1.173	2.086	14.0	16.7	11 17	5 35.80	+25 20.9	2.090	2.988	9.5	20.3
11 27	5 29.44	+28 31.7	1.136	2.093	8.9	16.5	11 27	5 27.36	+26 5.0	2.056	3.010	5.8	20.1
12 7	5 18.27	+29 0.9	1.122	2.102	3.9	16.2	12 7	5 17.58	+26 44.6	2.051	3.032	2.1	19.9
12 17	5 6.38	+29 17.4	1.134	2.111	4.4	16.3	12 17	5 7.44	+27 17.8	2.077	3.054	2.6	20.0
12 27	4 55.77	+29 21.8	1.171	2.121	9.4	16.6	12 27	4 58.06	+27 44.2	2.132	3.076	6.2	20.3
1 6	4 48.03	+29 18.0	1.232	2.131	14.2	16.9	1 6	4 50.37	+28 4.8	2.216	3.098	9.5	20.5
1 16	4 44.03	+29 10.9	1.314	2.142	18.2	17.2	1 16	4 44.99	+28 21.7	2.324	3.119	12.3	20.7
90460	2004 <i>CD</i> ₃₅	12 11.2 223°86'		1.1°/11.4 18			400413	2008 <i>CG</i> ₄₃	12 11.2 96°66'		2.7°/10.8 18		
11 7	5 44.85	+26 33.4	1.861	2.681	14.3	20.2	11 7	5 39.60	+15 20.6	1.969	2.794	13.4	21.0
11 17	5 38.40	+26 28.8	1.773	2.672	10.8	20.0	11 17	5 34.07	+15 13.7	1.898	2.799	10.1	20.8
11 27	5 29.22	+26 18.3	1.708	2.662	6.7	19.7	11 27	5 26.38	+15 11.1	1.851	2.804	6.5	20.6
12 7	5 18.17	+26 0.4	1.670	2.652	2.3	19.4	12 7	5 17.30	+15 13.5	1.831	2.808	3.2	20.4
12 17	5 6.46	+25 35.3	1.662	2.640	2.9	19.4	12 17	5 7.81	+15 21.5	1.840	2.813	3.8	20.4
12 27	4 55.51	+25 4.9	1.683	2.629	7.4	19.7	12 27	4 59.01	+15 35.5	1.879	2.817	7.3	20.7
1 6	4 46.55	+24 33.3	1.732	2.616	11.6	19.9	1 6	4 51.85	+15 55.5	1.944	2.822	10.8	20.9
1 16	4 40.38	+24 4.2	1.804	2.603	15.2	20.1	1 16	4 46.97	+16 21.1	2.032	2.826	13.9	21.1
308901	2006 <i>SB</i> ₂₀₃	12 11.2 55°28'		3.6°/10.5 18			123969	2001 <i>FM</i> ₂₇	12 11.2 199°50'		1.8°/10.6 18		
11 7	5 39.26	+14 50.5	1.776	2.607	14.4	21.0	11 7	5 37.12	+17 13.0	3.002	3.813	9.6	21.1
11 17	5 33.95	+14 17.8	1.709	2.612	10.9	20.8	11 17	5 31.61	+16 51.3	2.914	3.809	7.2	21.0
11 27	5 26.34	+13 49.1	1.665	2.617	7.1	20.6	11 27	5 24.65	+16 30.3	2.853	3.805	4.6	20.8
12 7	5 17.26	+13 26.5	1.648	2.623	3.9	20.4	12 7	5 16.75	+16 11.1	2.822	3.800	2.1	20.6
12 17	5 7.80	+13 12.1	1.659	2.628	4.7	20.5	12 17	5 8.57	+15 54.6	2.822	3.794	2.7	20.6
12 27	4 59.13	+13 7.4	1.698	2.633	8.2	20.7	12 27	5 0.80	+15 41.9	2.853	3.788	5.3	20.8
1 6	4 52.26	+13 12.9	1.762	2.639	11.8	21.0	1 6	4 54.09	+15 34.1	2.913	3.782	8.0	21.0
1 16	4 47.83	+13 28.1	1.849	2.645	15.0	21.2	1 16	4 48.91	+15 31.5	2.999	3.775	10.3	21.1
520709	2014 <i>QF</i> ₄₆₇	12 11.2 41°79'		4.7°/10.5 17			450206	2002 <i>ON</i> ₁₅	12 11.2 74°04'		1.1°/11.5 15		
11 7	5 36.98	+9 22.9	2.112	2.929	12.9	21.0	11 7	5 46.08	+28 30.2	1.748	2.568	15.1	21.5
11 17	5 31.93	+9 1.3	2.043	2.934	10.0	20.8	11 17	5 38.82	+27 58.2	1.699	2.598	11.2	21.3
11 27	5 25.00	+8 47.8	1.999	2.939	7.1	20.7	11 27	5 29.10	+27 17.7	1.674	2.628	6.9	21.1
12 7	5 16.86	+8 44.5	1.982	2.945	4.9	20.5	12 7	5 18.04	+26 28.7	1.676	2.657	2.4	20.9
12 17	5 8.38	+8 52.6	1.993	2.951	5.4	20.6	12 17	5 6.94	+25 33.8	1.708	2.686	2.8	21.0
12 27	5 0.53	+9 12.4	2.033	2.956	7.9	20.8	12 27	4 57.14	+24 37.0	1.769	2.715	7.0	21.3
1 6	4 54.11	+9 42.8	2.099	2.962	10.8	20.9	1 6	4 49.58	+23 43.3	1.857	2.743	10.9	21.6
1 16	4 49.71	+10 22.1	2.188	2.969	13.5	21.1	1 16	4 44.80	+22 56.4	1.970	2.771	14.0	21.9
352233	2007 <i>TP</i> ₈₂	12 11.2 345°56'		3.9°/10.4 17			188135	2002 <i>CH</i> ₂₃₃	12 11.2 149°37'		3.8°/12.5 18		
11 7	5 38.02	+16 9.3	1.441	2.288	16.3	20.9	11 7	5 43.58	+37 31.3	2.773	3.555	11.1	20.7
11 17	5 33.62	+15 25.5	1.370	2.282	12.4	20.6	11 17	5 36.63	+37 37.3	2.697	3.565	8.8	20.5
11 27	5 26.42	+14 44.1	1.320	2.276	8.0	20.4	11 27	5 27.74	+37 32.4	2.646	3.574	6.2	20.4
12 7	5 17.35	+14 8.3	1.295	2.271	4.3	20.1	12 7	5 17.67	+37 14.8	2.623	3.582	4.2	20.2
12 17	5 7.68	+13 41.4	1.296	2.267	5.3	20.2	12 17	5 7.35	+36 44.0	2.631	3.590	4.1	20.2
12 27	4 58.88	+13 26.3	1.323	2.264	9.5	20.4	12 27	4 57.77	+36 2.0	2.670	3.598	6.0	20.4
1 6	4 52.19	+13 24.2	1.375	2.261	13.8	20.7	1 6	4 49.77	+35 12.4	2.737	3.605	8.4	20.6
1 16	4 48.41	+13 34.7	1.447	2.259	17.6	20.9	1 16	4 43.91	+34 19.6	2.830	3.612	10.7	20.7
161957	2007 <i>HR</i> ₄₁	12 11.2 148°25'		5.2°/ 9.6 18			445817	2012 <i>BM</i> ₁₂₄	12 11.2 309°19'		5.3°/10.5 17		
11 7	5 36.38	+5 25.9	2.838	3.632	10.6	20.4	11 7	5 38.07	+8 59.0	1.887	2.707	14.1	21.3
11 17	5 31.00	+4 35.3	2.770	3.641	8.5	20.3	11 17	5 33.07	+8 35.4	1.808	2.701	11.1	21.1
11 27	5 24.22	+3 52.1	2.728	3.649	6.5	20.2	11 27	5 25.87	+8 20.9	1.753	2.694	7.9	20.9
12 7	5 16.60	+3 19.1	2.715	3.656	5.3	20.1	12 7	5 17.18	+8 18.2	1.724	2.687	5.5	20.8
12 17	5 8.76	+2 58.2	2.731	3.663	5.7	20.2	12 17	5 7.97	+8 28.9	1.723	2.681	6.0	20.8
12 27	5 1.41	+2 50.5	2.776	3.670	7.4	20.3	12 27	4 59.38	+8 53.5	1.750	2.674	8.9	21.0
1 6	4 55.13	+2 55.8	2.849	3.677	9.4	20.4	1 6	4 52.37	+9 30.6	1.802	2.668	12.2	21.1
1 16	4 50.39	+3 12.6	2.945	3.683	11.3	20.6	1 16	4 47.65	+10 18.2	1.877	2.663	15.2	21.3
227788	2006 <i>XQ</i> ₄₉	12 11.2 201°29'		1.2°/10.9 18			112160	2002 <i>JG</i> ₇₇	12 11.2 256°27'		1.6°/11.4 18		
11 7	5 43.68	+19 54.1	1.906	2.728	13.9	21.9	11 7	5 44.69	+26 44.6	1.413	2.250	17.1	20.0
11 17	5 37.31	+19 50.4	1.823	2.724	10.5	21.6	11 17	5 38.97	+26 51.1	1.338	2.246	13.0	19.7
11 27	5 28.47	+19 47.0	1.765	2.720	6.4	21.4	11 27	5 29.87	+26 51.5	1.284	2.241	8.1	19.5
12 7	5 17.94	+19 43.7	1.734	2.716	2.2	21.1	12 7	5 18.44	+26 43.3	1.255	2.237	3.0	19.1
12 17	5 6.84	+19 40.9	1.733	2.710	3.0	21.2	12 17	5 6.22	+26 25.8	1.254	2.232	3.5	19.2
12 27	4 56.44	+19 39.6	1.761	2.704	7.3	21.4	12 27	4 55.05	+26 1.4	1.279	2.228	8.8	19.5
1 6	4 47.85	+19 41.2	1.817	2.698	11.3	21.7	1 6	4 46.43	+25 34.7	1.329	2.223	13.7	19.7
1 16	4 41.83	+19 47.2	1.896	2.690	14.8	21.9	1 16	4 41.29	+25 10.4	1.400	2.219	17.8	20.0
481579	2007 <i>TS</i> ₁₁₄	12 11.2 34°87'		2.0°/10.8 17			12105	1998 <i>KA</i> ₁₀	12 11.2 35°22'		4.0°/10.8 18		
11 7	5 41.29	+21 8.0	1.165										

EPHEMERIDES

12 11.2

12 11.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	
332248	2006 <i>KE</i> ₅₄		12 11.2	11°89'	0°2'/11.2	17	294002	2007 <i>TR</i> ₈₈		12 11.2	350°45'	8°2'/8.1	18	
11 7	5 38.61	+21 14.0	2.023	2.852	13.0	20.4	11 7	5 39.45	+7 46.8	1.666	2.489	15.6	19.6	
11 17	5 33.44	+21 38.8	1.948	2.853	9.7	20.2	11 17	5 34.19	+5 45.6	1.599	2.487	12.5	19.4	
11 27	5 26.07	+22 4.4	1.898	2.856	5.9	19.9	11 27	5 26.56	+3 50.7	1.556	2.485	9.7	19.3	
12 7	5 17.24	+22 29.6	1.875	2.858	1.8	19.7	12 7	5 17.41	+2 10.1	1.540	2.484	8.2	19.2	
12 17	5 7.92	+22 53.3	1.882	2.861	2.5	19.7	12 17	5 7.86	+0 51.0	1.551	2.483	9.2	19.2	
12 27	4 59.23	+23 15.1	1.918	2.864	6.5	20.0	12 27	4 59.13	-0 2.0	1.588	2.483	11.8	19.4	
1 6	4 52.16	+23 35.8	1.981	2.868	10.2	20.2	1 6	4 52.24	-0 28.2	1.649	2.482	14.8	19.6	
1 16	4 47.39	+23 56.2	2.067	2.872	13.3	20.4	1 16	4 47.85	-0 30.2	1.729	2.482	17.6	19.8	
70573	1999 <i>TD</i> ₁₆₁		12 11.2	200°22'	0°1'/11.2	18	220429	2003 <i>UD</i> ₂₈		12 11.2	340°12'	0°8'/10.9	17	
11 7	5 42.10	+23 51.7	1.929	2.753	13.7	20.0	11 7	5 38.15	+22 21.2	2.224	3.049	12.1	20.1	
11 17	5 36.13	+23 41.8	1.849	2.752	10.3	19.8	11 17	5 32.86	+21 52.1	2.145	3.048	9.0	19.9	
11 27	5 27.73	+23 28.4	1.793	2.749	6.3	19.5	11 27	5 25.61	+21 20.2	2.091	3.047	5.5	19.7	
12 7	5 17.73	+23 11.0	1.764	2.747	1.9	19.3	12 7	5 17.11	+20 46.3	2.064	3.047	1.8	19.4	
12 17	5 7.24	+22 50.4	1.765	2.744	2.6	19.3	12 17	5 8.27	+20 12.0	2.068	3.046	2.5	19.5	
12 27	4 57.51	+22 28.5	1.795	2.741	7.0	19.6	12 27	5 0.08	+19 39.6	2.102	3.045	6.3	19.7	
1 6	4 49.59	+22 7.9	1.853	2.737	10.9	19.8	1 6	4 53.37	+19 11.5	2.163	3.045	9.7	19.9	
1 16	4 44.21	+21 51.4	1.934	2.734	14.3	20.0	1 16	4 48.75	+18 49.4	2.248	3.044	12.7	20.1	
267566	2002 <i>QD</i> ₅₃		12 11.2	4°74'	0°9'/11.3	18	29518	1997 <i>YW</i> ₁₁		12 11.2	84°46'	0°6'/11.1	18	R
11 7	5 40.17	+24 27.3	1.111	1.971	19.2	20.0	11 7	5 40.82	+20 56.7	1.943	2.769	13.5	18.1	
11 17	5 36.09	+24 37.1	1.049	1.970	14.4	19.7	11 17	5 35.04	+21 2.6	1.876	2.780	10.1	17.9	
11 27	5 28.32	+24 43.4	1.008	1.970	8.9	19.4	11 27	5 27.01	+21 8.4	1.833	2.790	6.1	17.7	
12 7	5 18.01	+24 44.1	0.989	1.971	2.8	19.0	12 7	5 17.54	+21 13.7	1.818	2.800	1.9	17.5	
12 17	5 6.92	+24 38.6	0.994	1.974	3.7	19.1	12 17	5 7.70	+21 18.3	1.832	2.810	2.6	17.5	
12 27	4 57.09	+24 29.0	1.024	1.977	9.7	19.5	12 27	4 58.63	+21 22.8	1.875	2.820	6.8	17.8	
1 6	4 50.15	+24 19.0	1.076	1.982	15.0	19.8	1 6	4 51.31	+21 28.6	1.945	2.830	10.5	18.1	
1 16	4 47.01	+24 12.3	1.147	1.987	19.5	20.1	1 16	4 46.40	+21 36.9	2.039	2.840	13.6	18.3	
72831	2001 <i>HJ</i> ₁₄		12 11.2	179°96'	3°7'/9.9	18	306589	2000 <i>FS</i> ₆₄		12 11.2	265°60'	1°4'/10.8	17	
11 7	5 37.13	+12 47.0	2.597	3.410	10.9	19.5	11 7	5 40.71	+20 46.2	2.090	2.913	12.8	21.1	
11 17	5 31.75	+11 55.0	2.519	3.410	8.4	19.4	11 17	5 35.07	+20 17.4	1.990	2.892	9.7	20.8	
11 27	5 24.78	+11 5.8	2.468	3.411	5.7	19.2	11 27	5 27.15	+19 46.3	1.915	2.871	6.0	20.6	
12 7	5 16.82	+10 22.1	2.445	3.411	3.8	19.1	12 7	5 17.64	+19 13.7	1.868	2.849	2.2	20.3	
12 17	5 8.59	+9 46.2	2.452	3.411	4.4	19.1	12 17	5 7.51	+18 41.2	1.851	2.827	3.0	20.3	
12 27	5 0.88	+9 19.9	2.490	3.411	6.8	19.3	12 27	4 57.89	+18 11.2	1.863	2.805	7.1	20.5	
1 6	4 54.37	+9 4.3	2.555	3.410	9.4	19.4	1 6	4 49.83	+17 46.3	1.903	2.782	11.0	20.7	
1 16	4 49.57	+8 59.2	2.644	3.409	11.8	19.6	1 16	4 44.08	+17 28.5	1.966	2.759	14.4	20.9	
183896	2004 <i>CD</i> ₇₉		12 11.2	170°69'	0°2'/11.2	18	315848	2008 <i>HD</i> ₁₉		12 11.2	319°94'	1°5'/10.9	17	
11 7	5 45.05	+23 31.0	1.926	2.745	13.9	21.0	11 7	5 38.39	+20 33.6	1.697	2.535	14.6	21.2	
11 17	5 38.30	+23 34.3	1.849	2.749	10.4	20.8	11 17	5 33.73	+20 11.8	1.612	2.522	11.0	20.9	
11 27	5 29.05	+23 34.9	1.797	2.752	6.4	20.6	11 27	5 26.48	+19 48.8	1.551	2.509	6.8	20.7	
12 7	5 18.15	+23 31.9	1.773	2.755	1.9	20.3	12 7	5 17.46	+19 25.4	1.515	2.497	2.4	20.4	
12 17	5 6.76	+23 25.1	1.779	2.757	2.6	20.3	12 17	5 7.79	+19 3.1	1.507	2.485	3.3	20.4	
12 27	4 56.18	+23 15.7	1.814	2.759	7.0	20.6	12 27	4 58.82	+18 44.4	1.528	2.474	7.9	20.6	
1 6	4 47.51	+23 6.1	1.877	2.759	11.0	20.9	1 6	4 51.71	+18 31.3	1.573	2.463	12.2	20.9	
1 16	4 41.46	+22 58.7	1.964	2.759	14.3	21.1	1 16	4 47.26	+18 25.7	1.641	2.452	15.9	21.1	
219096	1998 <i>SE</i> ₂		12 11.2	91°34'	6°7'/9.1	18	236901	2007 <i>TX</i> ₃₁		12 11.2	120°20'	2°5'/11.0	18	
11 7	5 46.93	+11 16.2	1.619	2.436	16.2	19.6	11 7	5 43.86	+14 28.1	2.146	2.957	13.0	20.4	
11 17	5 39.33	+9 18.5	1.575	2.465	12.5	19.4	11 17	5 36.96	+14 37.9	2.083	2.977	9.8	20.2	
11 27	5 29.38	+9 27.1	1.555	2.493	9.0	19.2	11 27	5 28.02	+14 52.7	2.046	2.996	6.2	20.0	
12 7	5 18.15	+5 49.2	1.564	2.520	6.8	19.2	12 7	5 17.84	+15 12.3	2.037	3.014	3.0	19.8	
12 17	5 6.91	+4 30.9	1.601	2.547	7.7	19.3	12 17	5 7.36	+15 36.3	2.060	3.032	3.5	19.9	
12 27	4 56.92	+3 36.2	1.667	2.573	10.6	19.5	12 27	4 57.64	+16 4.4	2.113	3.049	6.8	20.2	
1 6	4 49.11	+3 5.2	1.758	2.598	13.7	19.8	1 6	4 49.56	+16 36.1	2.194	3.066	10.1	20.4	
1 16	4 44.00	+2 55.6	1.870	2.623	16.4	20.0	1 16	4 43.69	+17 10.9	2.299	3.081	12.9	20.6	
346585	2008 <i>VH</i> ₇₆		12 11.2	180°51'	0°1'/11.2	18	84440	2002 <i>TE</i> ₂₃₄		12 11.2	331°93'	1°4'/11.6	18	
11 7	5 43.25	+21 55.3	1.874	2.699	14.1	20.8	11 7	5 40.98	+29 18.6	1.597	2.430	15.7	18.5	
11 17	5 37.08	+22 13.5	1.797	2.699	10.5	20.6	11 17	5 35.84	+28 43.1	1.516	2.422	11.9	18.2	
11 27	5 28.38	+22 31.6	1.744	2.700	6.4	20.4	11 27	5 27.79	+27 56.0	1.458	2.414	7.5	18.0	
12 7	5 17.98	+22 48.0	1.718	2.700	1.9	20.1	12 7	5 17.84	+26 57.1	1.425	2.406	2.8	17.7	
12 17	5 6.99	+23 1.9	1.721	2.700	2.7	20.1	12 17	5 7.33	+25 48.9	1.420	2.399	3.1	17.7	
12 27	4 56.74	+23 13.4	1.754	2.699	7.1	20.4	12 27	4 57.80	+24 36.2	1.443	2.392	7.9	18.0	
1 6	4 48.35	+23 23.8	1.814	2.698	11.1	20.6	1 6	4 50.50	+23 25.7	1.492	2.386	12.4	18.2	
1 16	4 42.58	+23 34.9	1.897	2.697	14.5	20.9	1 16	4 46.20	+22 22.7	1.563	2.381	16.3	18.4	
74687	1999 <i>RA</i> ₁₂₆		12 11.2	102°24'	1°2'/11.4	18	253841	2003 <i>YG</i> ₁₁₈		12 11.2	288°69'	4°7'/11.6	18	
11 7	5 47.34	+26 48.5	1.525	2.352	16.5	19.4	11 7	5 54.59	+34 35.1	2.087	2.873	14.2	21.8	
11 17	5 40.33	+26 43.7	1.467	2.371	12.4	19.1	11 17	5 46.56	+35 9.8	1.946	2.819	11.4	21.5	
11 27	5 30.34	+26 32.0	1.433	2.388	7.6	18.9	11 27	5 34.90	+35 36.3	1.828	2.762	8.1	21.2	
12 7	5 18.52	+26 12.1	1.424	2.406	2.6	18.7	12 7	5 20.21	+35 47.9	1.739	2.704	5.2	20.9	
12 17	5 6.39	+25 44.5	1.444	2.423	3.2	18.7	12 17	5 3.70	+35 39.3	1.680	2.644	5.3	20.8	
12 27	4 55.55	+25 12.4	1.493	2.440	8.0	19.1	12 27	4 47.17	+35 9.1	1.652	2.582	8.9	20.9	
1 6	4 47.23	+24 40.3	1.567	2.456	12.3	19.4	1 6	4 32.46	+34 21.3	1.654	2.518	13.2	21.0	
1 16	4 42.11	+24 12.3	1.663	2.471	15.9	19.6	1 16	4 21.00	+33 23.8	1.680	2.451	17.3	21.1	
458470	2011 <i>BV</i> ₆₆		12 11.2	219°61'	3°2'/12.1	18	518809	2010 <i>CE</i> ₁₄		12 11.2	300°12'			

EPHEMERIDES

12 11.2

12 11.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
55127	2001 QZ ₁₇₄		12 11.2 307°60	1°9/10.9	18		211301	2002 RZ ₂₇₅		12 11.2 217°62	1°7/10.9	18	
11 7	5 39.48	+18 50.0	1.811	2.643	14.1	19.5	11 7	5 40.74	+19 12.3	2.027	2.851	13.1	21.6
11 17	5 34.30	+18 33.2	1.732	2.638	10.6	19.3	11 17	5 35.02	+18 54.5	1.945	2.847	9.9	21.4
11 27	5 26.71	+18 17.1	1.677	2.634	6.6	19.0	11 27	5 27.08	+18 36.7	1.886	2.842	6.1	21.1
12 7	5 17.51	+18 2.8	1.648	2.629	2.6	18.8	12 7	5 17.65	+18 19.8	1.856	2.836	2.4	20.9
12 17	5 7.78	+17 51.3	1.648	2.624	3.4	18.8	12 17	5 7.74	+18 4.8	1.855	2.831	3.1	20.9
12 27	4 58.76	+17 44.1	1.676	2.620	7.6	19.1	12 27	4 58.48	+17 53.3	1.883	2.825	7.0	21.1
1 6	4 51.51	+17 42.7	1.730	2.615	11.6	19.3	1 6	4 50.84	+17 46.9	1.939	2.819	10.8	21.4
1 16	4 46.77	+17 48.0	1.808	2.611	15.0	19.5	1 16	4 45.52	+17 46.7	2.018	2.812	14.0	21.6
289102	2004 TK ₃₀₆		12 11.2 58°16	4°1/12.3	18		97287	1999 XP ₁₆₃		12 11.2 153°58	2°9/10.8	18	
11 7	5 42.58	+35 18.1	1.979	2.787	14.0	20.9	11 7	5 38.23	+12 37.5	2.637	3.446	10.9	20.4
11 17	5 36.53	+35 27.5	1.913	2.799	10.9	20.7	11 17	5 32.61	+12 36.2	2.561	3.452	8.3	20.2
11 27	5 27.97	+35 25.0	1.871	2.810	7.5	20.5	11 27	5 25.37	+12 40.0	2.511	3.457	5.5	20.0
12 7	5 17.85	+35 8.0	1.855	2.822	4.7	20.4	12 7	5 17.10	+12 49.4	2.490	3.462	3.1	19.9
12 17	5 7.40	+34 36.2	1.867	2.834	4.6	20.4	12 17	5 8.53	+13 4.8	2.499	3.466	3.5	19.9
12 27	4 57.94	+33 52.2	1.908	2.846	7.3	20.6	12 27	5 0.44	+13 26.2	2.539	3.470	6.1	20.1
1 6	4 50.52	+33 1.1	1.976	2.858	10.5	20.8	1 6	4 53.55	+13 53.1	2.608	3.474	8.8	20.3
1 16	4 45.79	+32 8.2	2.068	2.871	13.4	21.0	1 16	4 48.37	+14 25.0	2.701	3.478	11.3	20.5
327589	2006 DM ₁₆₅		12 11.2 185°65	2°9/10.6	17		47194	1999 TK ₁₇₈		12 11.2 221°43	3°2/11.8	18	
11 7	5 37.04	+13 12.3	2.714	3.525	10.5	22.2	11 7	5 46.43	+30 58.0	1.671	2.490	15.7	19.7
11 17	5 31.69	+12 54.3	2.633	3.525	8.0	22.0	11 17	5 40.03	+31 12.2	1.589	2.484	12.1	19.4
11 27	5 24.79	+12 40.1	2.578	3.525	5.3	21.8	11 27	5 30.47	+31 17.1	1.529	2.478	7.9	19.2
12 7	5 16.89	+12 30.9	2.552	3.524	3.2	21.7	12 7	5 18.75	+31 9.2	1.495	2.471	4.0	18.9
12 17	5 8.68	+12 27.8	2.557	3.523	3.6	21.7	12 17	5 6.27	+30 47.2	1.489	2.464	4.1	18.9
12 27	5 0.92	+12 31.4	2.592	3.521	6.1	21.9	12 27	4 54.72	+30 13.2	1.512	2.456	8.2	19.1
1 6	4 54.31	+12 41.9	2.655	3.519	8.8	22.0	1 6	4 45.51	+29 32.4	1.561	2.448	12.5	19.4
1 16	4 49.34	+12 59.0	2.743	3.517	11.2	22.2	1 16	4 39.55	+28 50.7	1.632	2.439	16.2	19.6
362781	2011 WK ₁₁₃		12 11.2 356°30	5°8/11.7	17		308742	2006 JL ₁₄		12 11.2 147°42	1°5/11.6	18	
11 7	5 41.71	+33 54.0	1.469	2.300	16.9	20.2	11 7	5 44.48	+29 12.1	2.351	3.157	12.2	21.5
11 17	5 37.00	+34 56.4	1.399	2.296	13.3	20.0	11 17	5 37.44	+28 58.1	2.278	3.168	9.2	21.3
11 27	5 28.84	+35 49.2	1.349	2.293	9.4	19.8	11 27	5 28.34	+28 36.8	2.230	3.179	5.8	21.1
12 7	5 18.25	+36 26.0	1.324	2.291	6.3	19.6	12 7	5 18.00	+28 7.4	2.210	3.190	2.3	20.9
12 17	5 6.75	+36 42.4	1.325	2.290	6.4	19.6	12 17	5 7.39	+27 30.5	2.222	3.199	2.5	20.9
12 27	4 56.24	+36 38.6	1.352	2.290	9.7	19.8	12 27	4 57.60	+26 48.7	2.265	3.208	5.9	21.2
1 6	4 48.30	+36 19.3	1.403	2.290	13.6	20.0	1 6	4 49.49	+26 5.6	2.337	3.216	9.2	21.4
1 16	4 43.93	+35 51.1	1.475	2.292	17.1	20.2	1 16	4 43.65	+25 24.5	2.434	3.224	12.0	21.6
111979	2002 GP ₉₃		12 11.2 253°35	1°6/11.5	18		140539	2001 TJ ₁₈₄		12 11.2 85°37	0°4/11.1	18	
11 7	5 45.17	+27 13.8	1.500	2.332	16.5	20.9	11 7	5 40.65	+23 26.7	1.924	2.751	13.6	20.6
11 17	5 39.31	+27 14.1	1.417	2.322	12.6	20.6	11 17	5 34.98	+23 6.2	1.853	2.757	10.2	20.4
11 27	5 30.14	+27 7.5	1.355	2.311	7.9	20.3	11 27	5 27.03	+22 42.2	1.806	2.763	6.2	20.2
12 7	5 18.63	+26 51.6	1.318	2.300	2.9	20.0	12 7	5 17.64	+22 15.1	1.786	2.769	1.9	19.9
12 17	5 6.26	+26 26.0	1.310	2.288	3.5	20.0	12 17	5 7.88	+21 46.0	1.796	2.775	2.6	20.0
12 27	4 54.80	+25 53.3	1.328	2.276	8.6	20.3	12 27	4 58.94	+21 17.6	1.835	2.781	6.8	20.2
1 6	4 45.77	+25 18.4	1.372	2.264	13.5	20.5	1 6	4 51.79	+20 52.3	1.900	2.786	10.6	20.5
1 16	4 40.13	+24 46.4	1.438	2.252	17.6	20.8	1 16	4 47.07	+20 32.5	1.990	2.792	13.9	20.7
198837	2005 GT ₄₇		12 11.2 328°87	8°7/ 9.6	18		412369	2013 MK ₁₁		12 11.2 27°46	0°8/11.2	17	
11 7	5 35.41	- 2 12.7	2.171	2.956	13.7	19.3	11 7	5 39.75	+19 6.5	2.138	2.961	12.6	20.9
11 17	5 30.83	- 3 4.1	2.099	2.949	11.6	19.2	11 17	5 34.22	+19 31.5	2.060	2.962	9.4	20.7
11 27	5 24.42	- 3 40.5	2.049	2.942	9.8	19.0	11 27	5 26.58	+19 58.9	2.008	2.964	5.8	20.4
12 7	5 16.82	- 3 57.4	2.024	2.936	8.8	19.0	12 7	5 17.52	+20 27.7	1.984	2.966	1.9	20.2
12 17	5 8.82	- 3 52.0	2.025	2.930	9.1	19.0	12 17	5 7.98	+20 56.9	1.989	2.967	2.5	20.2
12 27	5 1.34	- 3 24.0	2.053	2.924	10.7	19.1	12 27	4 59.03	+21 25.9	2.024	2.969	6.4	20.5
1 6	4 55.18	- 2 35.5	2.104	2.919	12.8	19.2	1 6	4 51.60	+21 54.8	2.088	2.971	9.9	20.7
1 16	4 50.93	- 1 30.3	2.176	2.913	14.9	19.3	1 16	4 46.35	+22 24.0	2.175	2.973	13.0	20.9
230464	2002 RO ₁₅₁		12 11.2 12°26	2°1/11.8	17		415246	2012 JD ₄₁		12 11.2 100°01	1°8/11.4	18	
11 7	5 39.39	+30 21.9	2.131	2.949	12.8	20.3	11 7	5 41.33	+27 10.3	2.441	3.252	11.6	20.9
11 17	5 34.00	+30 15.0	2.054	2.950	9.7	20.1	11 17	5 35.19	+27 48.0	2.371	3.265	8.7	20.7
11 27	5 26.40	+30 0.1	2.001	2.951	6.2	19.9	11 27	5 27.06	+28 22.2	2.327	3.277	5.5	20.6
12 7	5 17.41	+29 35.9	1.975	2.953	2.9	19.7	12 7	5 17.65	+28 50.6	2.311	3.289	2.4	20.4
12 17	5 8.03	+29 3.1	1.979	2.955	3.0	19.7	12 17	5 7.84	+29 11.8	2.326	3.302	2.7	20.4
12 27	4 59.42	+28 23.8	2.012	2.957	6.4	20.0	12 27	4 58.65	+29 25.8	2.372	3.314	5.8	20.6
1 6	4 52.51	+27 41.8	2.072	2.959	9.8	20.2	1 6	4 50.95	+29 34.1	2.446	3.325	8.9	20.9
1 16	4 47.93	+27 0.8	2.157	2.962	12.8	20.4	1 16	4 45.34	+29 38.7	2.545	3.337	11.5	21.1
205113	1999 VN ₄		12 11.2 1°75	6°0/10.4	18		518460	2005 HN ₇		12 11.2 200°48	7°2/ 9.1	18	
11 7	5 32.36	+13 34.4	0.999	1.873	19.6	18.3	11 7	5 39.20	+ 3 32.4	2.250	3.045	13.0	21.8
11 17	5 30.22	+12 46.4	0.944	1.869	15.1	18.1	11 17	5 33.55	+ 2 20.9	2.175	3.042	10.6	21.7
11 27	5 24.73	+12 6.7	0.908	1.867	10.2	17.8	11 27	5 26.05	+ 1 18.9	2.125	3.038	8.4	21.5
12 7	5 17.00	+11 40.6	0.893	1.868	6.4	17.6	12 7	5 17.35	+ 0 30.8	2.101	3.034	7.2	21.5
12 17	5 8.60	+11 32.2	0.901	1.871	7.2	17.7	12 17	5 8.28	+ 0 0.3	2.106	3.029	7.7	21.5
12 27	5 1.34	+11 43.3	0.930	1.876	11.7	17.9	12 27	4 59.77	- 0 10.9	2.139	3.024	9.7	21.6
1 6	4 56.68	+12 12.5	0.980	1.884	16.4	18.2	1 6	4 52.62	- 0 3.3	2.197	3.018	12.1	21.7
1 16	4 55.44	+12 56.3	1.049	1.893	20.6	18.5	1 16	4 47.42	+ 0 21.0	2.277	3.012	14.3	21.9
520867	2014 WB ₁₀₅		12 11.2 148°08	1°0/11.4	18		153347	2001 PT ₂		12 11.2 17°74	2°3/10.9	18	
11 7	5 40.34	+26 23.1	2.633	3.									

EPHEMERIDES

12 11.2

12 11.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
67452	2000 <i>QG</i> ₁₇₀		12 11.2	2°97	1.4/11.4	18	220856	2004 <i>VK</i> ₆₂		12 11.2	49°98	4.3/11.1	18
11 7	5 41.97	+26 46.6	1.107	1.963	19.5	18.4	11 7	5 39.76	+9 58.7	1.869	2.689	14.3	19.3
11 17	5 37.55	+26 41.2	1.044	1.962	14.7	18.1	11 17	5 34.20	+10 3.3	1.812	2.706	11.0	19.1
11 27	5 29.30	+26 27.8	1.001	1.962	9.2	17.8	11 27	5 26.52	+10 17.6	1.778	2.723	7.4	19.0
12 7	5 18.45	+26 4.6	0.980	1.962	3.2	17.4	12 7	5 17.52	+10 42.4	1.771	2.740	4.7	18.8
12 17	5 6.83	+25 32.2	0.984	1.963	3.8	17.5	12 17	5 8.20	+11 17.5	1.792	2.757	5.0	18.9
12 27	4 56.55	+24 54.7	1.012	1.965	9.8	17.8	12 27	4 59.67	+12 1.7	1.842	2.775	7.9	19.1
1 6	4 49.29	+24 18.2	1.062	1.968	15.2	18.1	1 6	4 52.83	+12 53.1	1.919	2.793	11.2	19.3
1 16	4 45.94	+23 47.7	1.132	1.972	19.8	18.4	1 16	4 48.29	+13 49.6	2.019	2.811	14.1	19.6
143298	2003 <i>AW</i> ₃₈		12 11.2	355°12	1.4/10.9	18	139416	2001 <i>OL</i> ₁₈		12 11.2	102°61	4.5/10.6	18
11 7	5 39.14	+20 51.6	1.697	2.535	14.7	19.8	11 7	5 40.94	+9 56.2	2.089	2.900	13.3	20.4
11 17	5 34.18	+20 25.1	1.624	2.533	11.0	19.6	11 17	5 34.82	+9 34.0	2.032	2.920	10.2	20.2
11 27	5 26.71	+19 56.9	1.573	2.531	6.8	19.3	11 27	5 26.77	+9 19.6	1.999	2.939	7.1	20.1
12 7	5 17.59	+19 28.2	1.548	2.530	2.4	19.0	12 7	5 17.57	+9 14.9	1.993	2.958	4.8	20.0
12 17	5 7.99	+19 0.9	1.552	2.530	3.3	19.1	12 17	5 8.14	+9 20.7	2.017	2.976	5.2	20.0
12 27	4 59.20	+18 37.3	1.583	2.529	7.7	19.4	12 27	4 59.47	+9 37.5	2.070	2.994	7.8	20.2
1 6	4 52.31	+18 20.0	1.641	2.529	11.9	19.6	1 6	4 52.36	+10 4.1	2.150	3.012	10.7	20.4
1 16	4 48.06	+18 10.4	1.720	2.530	15.4	19.8	1 16	4 47.38	+10 39.1	2.254	3.029	13.3	20.6
23645	1997 <i>BJ</i> ₂		12 11.2	200°02	2.9/10.9	18	30846	1991 <i>PJ</i> ₁₇		12 11.2	104°01	0.2/11.2	18
11 7	5 43.48	+15 50.3	1.663	2.491	15.4	19.1	11 7	5 47.41	+23 42.6	1.385	2.220	17.5	18.8
11 17	5 37.48	+15 42.5	1.587	2.489	11.7	18.9	11 17	5 40.66	+23 30.8	1.328	2.236	13.1	18.5
11 27	5 28.77	+15 39.3	1.534	2.487	7.4	18.6	11 27	5 30.72	+23 14.9	1.293	2.251	7.9	18.3
12 7	5 18.24	+15 41.3	1.507	2.485	3.5	18.4	12 7	5 18.81	+22 54.5	1.283	2.266	2.4	18.0
12 17	5 7.08	+15 49.2	1.508	2.482	4.2	18.4	12 17	5 6.50	+22 30.4	1.301	2.280	3.3	18.1
12 27	4 56.71	+16 3.6	1.538	2.478	8.4	18.7	12 27	4 55.53	+22 5.7	1.347	2.294	8.6	18.4
1 6	4 48.32	+16 24.5	1.593	2.475	12.6	18.9	1 6	4 47.20	+21 44.3	1.417	2.308	13.2	18.7
1 16	4 42.73	+16 52.0	1.671	2.471	16.2	19.2	1 16	4 42.23	+21 28.9	1.509	2.321	17.1	19.0
220374	2003 <i>OV</i> ₂₄		12 11.2	26°64	0°1/11.2	18	331682	2002 <i>QK</i> ₇₇		12 11.2	159°70	1.4/11.4	18
11 7	5 39.00	+24 24.7	1.917	2.748	13.5	19.6	11 7	5 47.05	+26 32.7	1.909	2.724	14.2	22.4
11 17	5 33.82	+24 8.5	1.846	2.752	10.1	19.4	11 17	5 39.90	+26 45.2	1.836	2.732	10.7	22.2
11 27	5 26.36	+23 48.2	1.799	2.757	6.1	19.2	11 27	5 30.12	+26 52.7	1.786	2.739	6.7	22.0
12 7	5 17.47	+23 24.1	1.779	2.761	1.9	18.9	12 7	5 18.64	+26 53.2	1.765	2.745	2.5	21.7
12 17	5 8.20	+22 57.0	1.788	2.767	2.5	18.9	12 17	5 6.66	+26 45.9	1.773	2.751	2.9	21.7
12 27	4 59.72	+22 29.4	1.825	2.772	6.7	19.2	12 27	4 55.58	+26 32.4	1.812	2.756	7.1	22.0
1 6	4 53.00	+22 4.0	1.889	2.778	10.5	19.5	1 6	4 46.53	+26 15.6	1.878	2.759	11.0	22.3
1 16	4 48.69	+21 43.2	1.977	2.784	13.8	19.7	1 16	4 40.23	+25 59.1	1.967	2.762	14.3	22.5
388074	2005 <i>UQ</i> ₄₇		12 11.2	58°43	0°9/11.3	18	132943	2002 <i>TC</i> ₄₂		12 11.2	71°33	0°3/11.2	18
11 7	5 44.88	+24 5.9	1.346	2.187	17.6	20.6	11 7	5 38.69	+22 16.1	2.290	3.113	11.9	19.8
11 17	5 38.90	+24 28.5	1.294	2.204	13.1	20.3	11 17	5 33.21	+22 16.2	2.224	3.126	8.8	19.6
11 27	5 29.71	+24 48.4	1.263	2.222	8.0	20.1	11 27	5 25.85	+22 15.0	2.184	3.140	5.3	19.4
12 7	5 18.50	+25 3.0	1.257	2.239	2.6	19.8	12 7	5 17.33	+22 12.2	2.171	3.153	1.6	19.2
12 17	5 6.84	+25 11.2	1.278	2.257	3.3	19.9	12 17	5 8.52	+22 8.1	2.188	3.167	2.2	19.3
12 27	4 56.47	+25 13.9	1.326	2.275	8.5	20.3	12 27	5 0.39	+22 3.6	2.235	3.180	5.8	19.5
1 6	4 48.73	+25 14.0	1.398	2.293	13.1	20.6	1 6	4 53.73	+22 0.1	2.310	3.194	9.1	19.8
1 16	4 44.35	+25 14.7	1.492	2.311	16.9	20.9	1 16	4 49.09	+21 59.0	2.410	3.208	11.9	20.0
486984	2014 <i>NQ</i> ₄₁		12 11.2	86°97	1°2/10.8	18	294338	2007 <i>VG</i> ₈₄		12 11.2	20°65	11°3/9.1	18
11 7	5 40.78	+22 50.1	2.019	2.844	13.2	21.1	11 7	5 36.01	+3 45.1	1.167	2.010	19.6	19.3
11 17	5 34.91	+21 57.0	1.946	2.849	9.8	20.9	11 17	5 32.23	+1 50.2	1.128	2.022	16.1	19.2
11 27	5 26.91	+20 59.4	1.898	2.855	6.0	20.6	11 27	5 25.61	+0 14.0	1.109	2.036	13.0	19.0
12 7	5 17.61	+19 59.0	1.879	2.860	2.0	20.4	12 7	5 17.29	-0 54.0	1.112	2.051	11.3	19.0
12 17	5 8.03	+18 59.0	1.889	2.866	2.9	20.5	12 17	5 8.65	-1 27.7	1.137	2.067	12.0	19.1
12 27	4 59.28	+18 3.0	1.929	2.871	6.8	20.7	12 27	5 1.20	-1 26.1	1.184	2.085	14.4	19.3
1 6	4 52.24	+17 14.4	1.997	2.877	10.5	21.0	1 6	4 56.05	-0 53.3	1.252	2.104	17.4	19.5
1 16	4 47.50	+16 35.6	2.088	2.882	13.6	21.2	1 16	4 53.84	+0 3.5	1.337	2.125	20.1	19.8
302533	2002 <i>LN</i> ₆₄		12 11.2	158°10	0°9/10.9	18	265484	2005 <i>EF</i> ₉		12 11.2	234°88	2°2/10.8	17
11 7	5 42.19	+21 42.3	2.224	3.041	12.4	21.6	11 7	5 37.50	+16 16.7	2.338	3.160	11.7	20.6
11 17	5 35.83	+21 19.5	2.149	3.048	9.2	21.4	11 17	5 32.35	+16 4.7	2.260	3.159	8.8	20.4
11 27	5 27.44	+20 54.6	2.099	3.054	5.6	21.2	11 27	5 25.37	+15 55.4	2.206	3.158	5.6	20.2
12 7	5 17.78	+20 28.0	2.078	3.060	1.8	20.9	12 7	5 17.21	+15 49.5	2.180	3.158	2.7	20.0
12 17	5 7.80	+20 1.1	2.088	3.065	2.6	21.0	12 17	5 8.68	+15 47.9	2.184	3.157	3.2	20.0
12 27	4 58.53	+19 35.8	2.128	3.070	6.3	21.3	12 27	5 0.69	+15 51.3	2.218	3.157	6.4	20.2
1 6	4 50.86	+19 14.3	2.196	3.074	9.8	21.5	1 6	4 54.03	+16 0.1	2.280	3.156	9.5	20.4
1 16	4 45.36	+18 58.2	2.288	3.077	12.7	21.7	1 16	4 49.29	+16 14.5	2.365	3.155	12.3	20.6
161857	2007 <i>BU</i> ₄₀		12 11.2	68°17	6.4/10.9	18	104569	2000 <i>GP</i> ₇₅		12 11.2	321°96	2°1/11.5	18
11 7	5 40.09	+4 34.4	1.910	2.716	14.6	20.2	11 7	5 39.44	+28 4.1	2.105	2.927	12.8	19.3
11 17	5 34.33	+4 18.8	1.856	2.734	11.6	20.0	11 17	5 34.28	+28 32.0	2.019	2.918	9.7	19.1
11 27	5 26.53	+4 16.4	1.826	2.753	8.6	19.9	11 27	5 26.79	+28 55.7	1.958	2.910	6.2	18.9
12 7	5 17.50	+4 29.7	1.821	2.772	6.6	19.8	12 7	5 17.70	+29 12.9	1.924	2.902	2.8	18.6
12 17	5 8.22	+4 59.3	1.845	2.791	6.9	19.9	12 17	5 8.00	+29 21.9	1.919	2.894	3.1	18.6
12 27	4 59.73	+5 43.9	1.896	2.809	9.1	20.0	12 27	4 58.88	+29 23.2	1.943	2.887	6.6	18.8
1 6	4 52.90	+6 40.9	1.974	2.828	11.8	20.3	1 6	4 51.40	+29 18.8	1.994	2.880	10.2	19.1
1 16	4 48.29	+7 46.9	2.074	2.847	14.4	20.5	1 16	4 46.30	+29 11.5	2.069	2.873	13.3	19.2
216043	2006 <i>JP</i> ₃₃		12 11.2	84°06	0°3/11.3	18	62811	2000 <i>UX</i> ₄₂		12 11.2	52°09	0°1/11.2	18

EPHEMERIDES

12 11.2

12 11.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
49480	1999 <i>BX</i> ₉		12 11.2 317°65	3°3/12.0	18		228438	2001 <i>QC</i> ₁₃₃		12 11.2 135°94	1°9/10.8	18	
11 7	5 39.99	+33 17.8	2.210	3.020	12.7	19.0	11 7	5 44.02	+20 1.6	1.754	2.581	14.8	20.6
11 17	5 34.60	+33 25.7	2.125	3.014	9.8	18.8	11 17	5 37.62	+19 27.8	1.687	2.590	11.0	20.4
11 27	5 26.91	+33 24.3	2.064	3.007	6.6	18.6	11 27	5 28.72	+18 52.8	1.643	2.599	6.8	20.2
12 7	5 17.72	+33 11.5	2.029	3.001	3.8	18.4	12 7	5 18.27	+18 18.0	1.627	2.608	2.6	19.9
12 17	5 8.04	+32 46.7	2.024	2.995	3.8	18.4	12 17	5 7.45	+17 45.5	1.640	2.616	3.5	20.0
12 27	4 59.04	+32 11.7	2.048	2.989	6.7	18.5	12 27	4 57.57	+17 18.0	1.681	2.623	7.7	20.3
1 6	4 51.74	+31 30.2	2.099	2.983	9.9	18.7	1 6	4 49.69	+16 57.8	1.750	2.630	11.7	20.5
1 16	4 46.82	+30 46.5	2.175	2.977	12.8	18.9	1 16	4 44.47	+16 46.4	1.841	2.637	15.1	20.8
228050	2008 <i>HD</i> ₃₄		12 11.2 45°35	0°2/11.2	18		391515	2007 <i>RY</i> ₁₂₃		12 11.2 103°88	0°6/11.1	18	
11 7	5 46.76	+18 35.2	1.163	2.010	19.4	19.3	11 7	5 43.93	+22 57.1	1.920	2.742	13.9	21.4
11 17	5 40.64	+19 44.0	1.117	2.030	14.4	19.1	11 17	5 37.28	+22 33.9	1.861	2.762	10.3	21.2
11 27	5 30.96	+20 59.0	1.092	2.052	8.8	18.8	11 27	5 28.38	+22 7.6	1.825	2.781	6.2	21.0
12 7	5 18.97	+22 15.0	1.092	2.074	2.6	18.6	12 7	5 18.13	+21 38.7	1.818	2.800	1.9	20.8
12 17	5 6.44	+23 26.5	1.118	2.097	3.5	18.7	12 17	5 7.67	+21 8.6	1.840	2.819	2.6	20.9
12 27	4 55.33	+24 30.2	1.170	2.121	9.2	19.1	12 27	4 58.16	+20 39.7	1.892	2.837	6.8	21.2
1 6	4 47.15	+25 25.6	1.247	2.144	14.1	19.4	1 6	4 50.56	+20 14.8	1.972	2.854	10.5	21.4
1 16	4 42.70	+26 14.3	1.344	2.168	18.1	19.8	1 16	4 45.44	+19 55.8	2.075	2.871	13.6	21.7
51684	2001 <i>KU</i> ₁₀		12 11.2 138°03	0°5/11.3	18		158933	2004 <i>RM</i> ₇₂		12 11.2 60°87	0°7/11.4	18	
11 7	5 43.67	+22 55.0	2.225	3.039	12.5	18.9	11 7	5 40.19	+25 12.0	2.011	2.836	13.2	20.3
11 17	5 37.05	+23 23.2	2.153	3.050	9.3	18.7	11 17	5 34.67	+25 13.2	1.941	2.843	9.9	20.1
11 27	5 28.28	+23 50.5	2.106	3.060	5.7	18.5	11 27	5 26.92	+25 10.6	1.894	2.850	6.0	19.8
12 7	5 18.11	+24 15.2	2.089	3.071	1.8	18.3	12 7	5 17.74	+25 3.5	1.875	2.857	2.0	19.6
12 17	5 7.53	+24 36.0	2.102	3.080	2.3	18.3	12 17	5 8.17	+24 51.9	1.885	2.863	2.5	19.6
12 27	4 57.61	+24 52.9	2.145	3.089	6.1	18.6	12 27	4 59.36	+24 37.3	1.924	2.870	6.5	19.9
1 6	4 49.31	+25 6.8	2.218	3.098	9.6	18.8	1 6	4 52.27	+24 22.2	1.990	2.878	10.1	20.1
1 16	4 43.28	+25 19.4	2.315	3.106	12.5	19.0	1 16	4 47.55	+24 8.8	2.080	2.885	13.3	20.4
424554	2008 <i>FC</i> ₁₆		12 11.2 172°63	4°7/11.9	18		270266	2001 <i>UB</i> ₁₆₆		12 11.2 147°43	0°1/11.2	18	
11 7	5 48.40	+34 1.0	1.694	2.505	15.9	21.3	11 7	5 45.04	+22 44.5	1.919	2.739	14.0	21.6
11 17	5 41.55	+34 37.2	1.620	2.508	12.4	21.1	11 17	5 38.32	+22 49.3	1.849	2.749	10.4	21.4
11 27	5 31.45	+35 2.6	1.569	2.510	8.6	20.9	11 27	5 29.16	+22 52.3	1.802	2.758	6.3	21.2
12 7	5 19.14	+35 12.0	1.543	2.511	5.3	20.7	12 7	5 18.42	+22 52.5	1.783	2.766	1.9	20.9
12 17	5 6.12	+35 2.9	1.545	2.512	5.3	20.7	12 17	5 7.25	+22 49.7	1.795	2.774	2.6	21.0
12 27	4 54.15	+34 36.9	1.576	2.513	8.6	20.9	12 27	4 56.93	+22 45.0	1.836	2.781	6.9	21.3
1 6	4 44.65	+33 59.4	1.632	2.513	12.4	21.1	1 6	4 48.50	+22 40.4	1.904	2.787	10.8	21.5
1 16	4 38.51	+33 17.1	1.711	2.512	15.8	21.3	1 16	4 42.66	+22 38.1	1.997	2.793	14.1	21.7
108336	2001 <i>KV</i> ₃		12 11.2 173°27	0°2/11.2	18		516619	2007 <i>UZ</i> ₁₁₈		12 11.2 59°96	9°1/12.7	18	
11 7	5 45.12	+23 19.0	1.922	2.742	14.0	21.5	11 7	5 49.54	+43 37.7	1.649	2.437	17.3	20.6
11 17	5 38.42	+23 12.0	1.845	2.745	10.4	21.3	11 17	5 42.95	+44 54.0	1.589	2.446	14.4	20.5
11 27	5 29.23	+23 1.9	1.793	2.748	6.4	21.1	11 27	5 32.56	+45 52.2	1.550	2.456	11.5	20.3
12 7	5 18.41	+22 48.3	1.768	2.750	1.9	20.8	12 7	5 19.55	+46 23.8	1.535	2.466	9.5	20.2
12 17	5 7.13	+22 31.6	1.773	2.752	2.6	20.8	12 17	5 5.74	+46 24.4	1.545	2.477	9.3	20.2
12 27	4 56.65	+22 13.4	1.808	2.752	7.0	21.1	12 27	4 53.27	+45 55.4	1.581	2.487	11.1	20.4
1 6	4 48.08	+21 56.6	1.870	2.752	11.0	21.3	1 6	4 43.80	+45 4.3	1.641	2.498	13.7	20.6
1 16	4 42.11	+21 43.5	1.956	2.751	14.3	21.6	1 16	4 38.25	+44 0.7	1.722	2.509	16.3	20.8
11872	1989 <i>WR</i>		12 11.2 64°78	4°6/11.7	18		212099	2005 <i>EX</i> ₁₃₉		12 11.2 234°89	5°8/12.2	17	
11 7	5 48.85	+31 12.0	1.267	2.100	18.9	17.4	11 7	5 46.62	+39 8.0	2.157	2.944	13.7	21.0
11 17	5 42.28	+32 2.3	1.219	2.121	14.5	17.2	11 17	5 39.96	+39 49.5	2.067	2.933	11.1	20.8
11 27	5 31.96	+32 42.1	1.192	2.142	9.6	17.0	11 27	5 30.44	+40 18.9	2.000	2.922	8.3	20.6
12 7	5 19.26	+33 5.6	1.189	2.163	5.3	16.8	12 7	5 18.89	+40 31.2	1.960	2.910	6.2	20.5
12 17	5 6.08	+33 9.6	1.212	2.184	5.5	16.9	12 17	5 6.58	+40 23.5	1.948	2.898	6.1	20.4
12 27	4 54.49	+32 56.4	1.261	2.205	9.5	17.1	12 27	4 54.99	+39 56.5	1.965	2.886	8.3	20.5
1 6	4 46.01	+32 32.3	1.334	2.226	13.8	17.5	1 6	4 45.43	+39 14.5	2.008	2.873	11.2	20.7
1 16	4 41.40	+32 4.3	1.428	2.247	17.5	17.8	1 16	4 38.79	+38 24.1	2.075	2.860	14.0	20.9
444475	2006 <i>PD</i> ₂		12 11.2 143°36	4°1/12.4	18		312890	2011 <i>UL</i> ₂₆₃		12 11.2 39°60	1°4/11.4	18	
11 7	5 46.14	+36 15.2	2.165	2.960	13.4	21.0	11 7	5 42.29	+25 23.2	1.837	2.663	14.2	20.7
11 17	5 39.07	+36 18.5	2.092	2.969	10.5	20.8	11 17	5 36.58	+25 52.1	1.762	2.664	10.7	20.4
11 27	5 29.54	+36 9.5	2.042	2.977	7.3	20.7	11 27	5 28.28	+26 18.5	1.710	2.666	6.6	20.2
12 7	5 18.48	+35 45.4	2.020	2.985	4.6	20.5	12 7	5 18.21	+26 39.9	1.686	2.667	2.4	19.9
12 17	5 7.09	+35 6.0	2.027	2.993	4.5	20.5	12 17	5 7.54	+26 54.6	1.690	2.668	2.9	20.0
12 27	4 56.67	+34 14.1	2.065	3.000	7.0	20.7	12 27	4 57.63	+27 2.9	1.723	2.669	7.2	20.2
1 6	4 48.26	+33 14.9	2.130	3.006	10.1	20.9	1 6	4 49.62	+27 6.6	1.783	2.671	11.1	20.5
1 16	4 42.50	+32 13.9	2.220	3.012	12.9	21.1	1 16	4 44.31	+27 8.6	1.866	2.672	14.5	20.7
310123	2011 <i>EP</i> ₃₆		12 11.2 183°40	1°9/11.5	18		405270	2003 <i>SZ</i> ₃₂₆		12 11.2 0°75	9°4/12.3	16	
11 7	5 45.32	+26 59.4	1.708	2.532	15.2	21.3	11 7	5 40.60	+41 48.0	1.461	2.275	17.8	20.2
11 17	5 39.03	+27 20.9	1.631	2.532	11.5	21.1	11 17	5 36.65	+43 10.4	1.396	2.272	14.8	20.0
11 27	5 29.83	+27 37.5	1.578	2.532	7.2	20.8	11 27	5 28.93	+44 16.0	1.352	2.270	11.8	19.9
12 7	5 18.65	+27 46.6	1.552	2.532	2.9	20.6	12 7	5 18.52	+44 56.5	1.330	2.270	9.7	19.7
12 17	5 6.81	+27 46.6	1.554	2.531	3.3	20.6	12 17	5 7.12	+45 6.5	1.332	2.271	9.6	19.7
12 27	4 55.84	+27 38.6	1.585	2.530	7.7	20.9	12 27	4 56.87	+44 46.6	1.358	2.274	11.6	19.9
1 6	4 47.04	+27 25.9	1.642	2.529	11.9	21.1	1 6	4 49.49	+44 3.4	1.406	2.279	14.5	20.0
1 16	4 41.26	+27 12.2	1.721	2.527	15.5	21.3	1 16	4 46.00	+43 5.9	1.475	2.285	17.5	20.3
288219	2003 <i>YP</i> ₄₄		12 11.2 17°15	5°8/13.4	16		288255	2003 <i>YU</i> ₁₂₆		12 11.2 49°90			

EPHEMERIDES

12 11.2

12 11.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
227247	2005 <i>SC</i> ₅₀	12 11.2 283°50	1°6/10.9 18				430687	2003 <i>WX</i> ₁₅₈	12 11.2 57°22	1°7/11.4 18			
11 7	5 41.98	+20 21.1	1.529	2.367	16.0	20.7	11 7	5 46.28	+24 57.2	1.222	2.067	18.8	20.8
11 17	5 36.76	+20 3.0	1.447	2.357	12.1	20.4	11 17	5 40.37	+25 34.0	1.170	2.082	14.1	20.5
11 27	5 28.59	+19 44.1	1.388	2.346	7.5	20.1	11 27	5 30.87	+26 7.8	1.138	2.097	8.7	20.3
12 7	5 18.36	+19 25.0	1.354	2.336	2.7	19.8	12 7	5 19.04	+26 34.6	1.131	2.112	3.1	20.0
12 17	5 7.37	+19 7.1	1.347	2.325	3.6	19.8	12 17	5 6.64	+26 51.7	1.149	2.128	3.8	20.1
12 27	4 57.17	+18 52.5	1.368	2.315	8.6	20.1	12 27	4 55.63	+26 59.9	1.194	2.144	9.1	20.5
1 6	4 49.11	+18 43.7	1.414	2.304	13.3	20.3	1 6	4 47.53	+27 2.6	1.262	2.160	14.0	20.8
1 16	4 44.07	+18 42.5	1.481	2.294	17.3	20.6	1 16	4 43.15	+27 3.7	1.352	2.176	18.0	21.1
311320	2005 <i>MH</i> ₄₇	12 11.2 34°21	2°8/11.3 18				474365	2002 <i>RR</i> ₅₈	12 11.3 101°51	2°4/11.7 18			
11 7	5 42.15	+13 38.1	1.616	2.445	15.7	20.0	11 7	5 49.71	+29 36.7	1.670	2.485	15.9	21.7
11 17	5 36.52	+14 10.5	1.550	2.452	11.9	19.8	11 17	5 41.97	+29 43.4	1.617	2.511	12.0	21.5
11 27	5 28.25	+14 52.2	1.507	2.460	7.6	19.6	11 27	5 31.39	+29 41.3	1.586	2.537	7.6	21.3
12 7	5 18.21	+15 42.1	1.490	2.468	3.5	19.4	12 7	5 19.11	+29 27.9	1.583	2.561	3.3	21.1
12 17	5 7.61	+16 38.2	1.501	2.476	4.0	19.4	12 17	5 6.62	+29 3.1	1.609	2.585	3.5	21.1
12 27	4 57.83	+17 38.2	1.541	2.485	8.1	19.7	12 27	4 55.44	+28 30.2	1.664	2.608	7.6	21.4
1 6	4 50.04	+18 40.1	1.607	2.494	12.2	19.9	1 6	4 46.73	+27 53.9	1.746	2.630	11.5	21.7
1 16	4 45.01	+19 42.5	1.697	2.504	15.7	20.2	1 16	4 41.13	+27 19.1	1.851	2.652	14.8	22.0
279255	2009 <i>VE</i> ₄₇	12 11.2 258°36	3°1/10.6 18				447633	2006 <i>UY</i> ₃₄₆	12 11.3 17°32	1°1/11.1 15			
11 7	5 42.38	+17 17.4	1.698	2.528	15.0	21.4	11 7	5 38.13	+21 23.6	1.318	2.172	17.1	21.4
11 17	5 36.79	+16 40.3	1.609	2.512	11.4	21.1	11 17	5 33.96	+21 9.9	1.262	2.180	12.8	21.2
11 27	5 28.50	+16 3.8	1.543	2.497	7.3	20.9	11 27	5 26.83	+20 55.2	1.228	2.189	7.8	20.9
12 7	5 18.32	+15 29.8	1.503	2.481	3.6	20.6	12 7	5 17.81	+20 40.1	1.217	2.199	2.5	20.6
12 17	5 7.41	+15 0.8	1.492	2.465	4.4	20.6	12 17	5 8.32	+20 26.0	1.232	2.211	3.4	20.7
12 27	4 57.16	+14 39.8	1.509	2.448	8.7	20.8	12 27	4 59.95	+20 14.8	1.273	2.224	8.5	21.0
1 6	4 48.80	+14 28.8	1.552	2.431	13.0	21.0	1 6	4 53.93	+20 8.8	1.338	2.238	13.1	21.3
1 16	4 43.19	+14 28.7	1.617	2.414	16.8	21.3	1 16	4 50.97	+20 9.4	1.424	2.253	17.0	21.6
269176	2008 <i>FF</i> ₉₃	12 11.2 112°06	1°4/11.5 18				160489	2007 <i>BV</i> ₄₄	12 11.3 240°61	3°2/10.8 18			
11 7	5 47.80	+26 23.1	1.716	2.536	15.3	21.1	11 7	5 42.41	+15 56.1	1.626	2.458	15.5	21.2
11 17	5 40.54	+26 34.2	1.657	2.556	11.5	20.9	11 17	5 36.83	+15 35.0	1.548	2.452	11.8	20.9
11 27	5 30.54	+26 40.0	1.622	2.576	7.1	20.7	11 27	5 28.52	+15 17.4	1.492	2.446	7.6	20.7
12 7	5 18.85	+26 38.5	1.614	2.595	2.6	20.5	12 7	5 18.35	+15 5.0	1.462	2.439	3.7	20.4
12 17	5 6.83	+26 29.1	1.635	2.613	3.0	20.6	12 17	5 7.52	+14 59.3	1.460	2.432	4.5	20.4
12 27	4 55.93	+26 13.8	1.686	2.631	7.4	20.9	12 27	4 57.45	+15 1.7	1.485	2.426	8.7	20.7
1 6	4 47.31	+25 56.1	1.763	2.648	11.4	21.1	1 6	4 49.37	+15 12.8	1.537	2.419	12.9	20.9
1 16	4 41.63	+25 39.4	1.863	2.664	14.7	21.4	1 16	4 44.08	+15 32.7	1.610	2.411	16.6	21.1
236707	2007 <i>EK</i> ₁₈₁	12 11.2 293°05	2°8/10.7 18				408478	2013 <i>HW</i> ₁₀₂	12 11.3 168°01	3°0/11.7 17			
11 7	5 41.14	+18 28.5	1.499	2.339	16.1	21.2	11 7	5 42.66	+30 49.5	2.021	2.836	13.5	22.0
11 17	5 36.28	+17 54.3	1.409	2.318	12.3	20.9	11 17	5 36.77	+31 16.0	1.943	2.836	10.4	21.8
11 27	5 28.40	+17 19.8	1.341	2.298	7.8	20.6	11 27	5 28.37	+31 35.4	1.889	2.837	6.8	21.6
12 7	5 18.35	+16 46.7	1.298	2.278	3.4	20.3	12 7	5 18.28	+31 44.8	1.863	2.837	3.6	21.4
12 17	5 7.38	+16 17.7	1.282	2.257	4.5	20.3	12 17	5 7.65	+31 42.8	1.865	2.837	3.8	21.4
12 27	4 57.09	+15 56.0	1.293	2.237	9.3	20.5	12 27	4 57.76	+31 30.2	1.896	2.838	7.0	21.6
1 6	4 48.89	+15 44.2	1.329	2.217	14.1	20.7	1 6	4 49.72	+31 10.4	1.955	2.838	10.5	21.8
1 16	4 43.74	+15 43.6	1.385	2.197	18.3	21.0	1 16	4 44.29	+30 47.3	2.037	2.838	13.6	22.0
485960	2012 <i>HN</i> ₆₁	12 11.2 228°01	5°3/10.5 17				99927	2000 <i>ED</i> ₉₀	12 11.3 209°91	5°8/10.5 18			
11 7	5 37.53	+ 5 44.8	2.440	3.240	11.9	21.6	11 7	5 39.90	+ 5 41.8	2.213	3.013	13.0	19.8
11 17	5 32.31	+ 5 26.5	2.360	3.236	9.5	21.4	11 17	5 34.24	+ 5 16.8	2.133	3.009	10.4	19.6
11 27	5 25.37	+ 5 17.7	2.305	3.232	7.1	21.3	11 27	5 26.63	+ 5 1.9	2.076	3.004	7.8	19.4
12 7	5 17.31	+ 5 20.5	2.277	3.228	5.4	21.2	12 7	5 17.73	+ 4 59.8	2.047	2.998	6.0	19.3
12 17	5 8.87	+ 5 36.2	2.277	3.223	5.8	21.2	12 17	5 8.40	+ 5 12.1	2.047	2.992	6.3	19.3
12 27	5 0.89	+ 6 4.8	2.307	3.218	7.8	21.3	12 27	4 59.58	+ 5 39.0	2.076	2.986	8.6	19.4
1 6	4 54.14	+ 6 44.9	2.364	3.214	10.3	21.5	1 6	4 52.15	+ 6 19.1	2.131	2.980	11.3	19.6
1 16	4 49.15	+ 7 34.7	2.445	3.209	12.7	21.6	1 16	4 46.72	+ 7 10.0	2.209	2.973	13.9	19.8
220793	2004 <i>TN</i> ₁₉₆	12 11.2 61°33	0°3/11.2 18				442358	2011 <i>SL</i> ₂₃₁	12 11.3 105°71	7°8/12.9 18			
11 7	5 40.66	+22 52.7	1.933	2.760	13.6	20.3	11 7	5 49.43	+43 14.3	1.916	2.694	15.5	21.0
11 17	5 34.91	+22 42.6	1.876	2.780	10.1	20.1	11 17	5 42.34	+44 11.0	1.852	2.705	12.8	20.9
11 27	5 27.00	+22 30.2	1.843	2.800	6.1	19.9	11 27	5 31.96	+44 50.9	1.809	2.715	10.1	20.7
12 7	5 17.78	+22 15.6	1.837	2.820	1.8	19.7	12 7	5 19.39	+45 7.8	1.791	2.725	8.1	20.6
12 17	5 8.31	+21 59.5	1.861	2.840	2.5	19.8	12 17	5 6.22	+44 58.3	1.801	2.735	8.0	20.6
12 27	4 59.73	+21 43.7	1.914	2.860	6.6	20.1	12 27	4 54.20	+44 24.2	1.837	2.745	9.6	20.7
1 6	4 52.95	+21 30.1	1.993	2.880	10.2	20.3	1 6	4 44.79	+43 31.8	1.899	2.755	12.2	20.9
1 16	4 48.52	+21 20.7	2.097	2.900	13.2	20.6	1 16	4 38.78	+42 29.2	1.983	2.764	14.7	21.1
436538	2011 <i>GJ</i> ₄	12 11.2 166°17	1°1/11.0 18				280830	2005 <i>US</i> ₁₀₆	12 11.3 316°63	0°2/11.3 18			
11 7	5 44.11	+20 33.7	2.090	2.906	13.1	22.7	11 7	5 42.60	+22 43.3	1.466	2.305	16.5	20.5
11 17	5 37.45	+20 22.2	2.014	2.912	9.8	22.5	11 17	5 37.41	+22 58.7	1.390	2.300	12.4	20.3
11 27	5 28.58	+20 9.8	1.963	2.917	6.0	22.3	11 27	5 29.09	+23 13.3	1.335	2.294	7.6	20.0
12 7	5 18.29	+19 56.8	1.940	2.922	2.0	22.0	12 7	5 18.57	+23 25.6	1.306	2.289	2.4	19.6
12 17	5 7.59	+19 43.8	1.948	2.925	2.7	22.1	12 17	5 7.25	+23 34.3	1.304	2.284	3.1	19.7
12 27	4 57.62	+19 32.3	1.986	2.928	6.7	22.3	12 27	4 56.79	+23 40.0	1.329	2.279	8.4	20.0
1 6	4 49.36	+19 24.0	2.052	2.930	10.3	22.6	1 6	4 48.63	+23 44.8	1.379	2.274	13.2	20.3
1 16	4 43.44	+19 20.4	2.142	2.932	13.5	22.8	1 16	4 43.67	+23 51.1	1.451	2.270	17.3	20.5
364921	2008 <i>EV</i> ₁₆₁	12 11.2 216°79	2°6/10.7 18				31968	2000 <i>HH</i> ₅	12				

EPHEMERIDES

12 11.3

12 11.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
24752	1992 <i>UN</i>		12 11.3 33°68'	0°7/11.1	18		156052	2001 <i>SO</i> ₄₆		12 11.3 65°53'	4°3/10.8	18	
11 7	5 38.64	+21 35.0	1.898	2.730	13.6	18.0	11 7	5 43.93	+14 4.1	1.389	2.225	17.4	19.9
11 17	5 33.58	+21 27.8	1.833	2.739	10.1	17.8	11 17	5 37.84	+13 36.0	1.343	2.248	13.1	19.7
11 27	5 26.30	+21 19.7	1.791	2.749	6.1	17.5	11 27	5 28.97	+13 14.7	1.318	2.271	8.5	19.5
12 7	5 17.63	+21 10.6	1.777	2.759	1.9	17.3	12 7	5 18.45	+13 2.5	1.319	2.294	4.7	19.3
12 17	5 8.61	+21 1.3	1.791	2.770	2.6	17.4	12 17	5 7.69	+13 0.8	1.347	2.317	5.4	19.4
12 27	5 0.36	+20 53.1	1.834	2.780	6.7	17.6	12 27	5 58.15	+13 10.4	1.401	2.340	9.3	19.7
1 6	4 53.84	+20 47.5	1.903	2.792	10.5	17.9	1 6	4 50.97	+13 30.6	1.481	2.363	13.3	20.0
1 16	4 49.66	+20 46.0	1.996	2.803	13.6	18.1	1 16	4 46.76	+14 0.0	1.581	2.386	16.8	20.3
266572	2008 <i>GH</i> ₁₃₂		12 11.3 193°40'	0°8/11.1	18		173858	2001 <i>TA</i> ₁₇₅		12 11.3 172°30'	2°4/11.6	18	
11 7	5 44.61	+21 47.4	1.804	2.628	14.5	21.7	11 7	5 42.90	+29 16.7	2.137	2.950	13.0	20.8
11 17	5 38.26	+21 34.6	1.724	2.627	10.9	21.5	11 17	5 36.81	+29 42.0	2.058	2.952	9.9	20.6
11 27	5 29.29	+21 19.8	1.669	2.625	6.7	21.2	11 27	5 28.35	+30 1.6	2.004	2.953	6.4	20.3
12 7	5 18.58	+21 3.1	1.640	2.622	2.1	20.9	12 7	5 18.31	+30 13.0	1.977	2.954	3.1	20.1
12 17	5 7.31	+20 45.1	1.641	2.619	2.9	21.0	12 17	5 7.76	+30 14.8	1.980	2.955	3.3	20.2
12 27	4 56.83	+20 27.7	1.671	2.615	7.5	21.2	12 27	4 57.88	+30 7.9	2.013	2.955	6.6	20.4
1 6	4 48.30	+20 13.6	1.727	2.611	11.7	21.5	1 6	4 49.75	+29 54.8	2.073	2.955	10.1	20.6
1 16	4 42.48	+20 4.7	1.807	2.606	15.2	21.7	1 16	4 44.06	+29 39.0	2.157	2.955	13.1	20.8
314437	2005 <i>UZ</i> ₅₂₁		12 11.3 33°42'	3°6/10.8	18		451551	2011 <i>WF</i> ₁₂₄		12 11.3 106°89'	2°7/11.4	18	
11 7	5 38.83	+13 58.1	1.735	2.567	14.7	21.0	11 7	5 47.01	+27 49.7	2.007	2.818	13.8	21.2
11 17	5 33.82	+13 39.7	1.671	2.574	11.1	20.8	11 17	5 39.93	+28 50.4	1.942	2.835	10.4	21.0
11 27	5 26.50	+13 26.9	1.631	2.582	7.3	20.6	11 27	5 30.27	+29 47.2	1.902	2.851	6.7	20.8
12 7	5 17.71	+13 21.5	1.616	2.590	4.0	20.4	12 7	5 18.90	+30 35.8	1.890	2.866	3.3	20.6
12 17	5 8.51	+13 24.7	1.629	2.599	4.6	20.4	12 17	5 7.00	+31 13.2	1.909	2.881	3.6	20.6
12 27	5 0.11	+13 37.1	1.670	2.608	8.1	20.7	12 27	4 55.90	+31 38.8	1.957	2.896	7.0	20.9
1 6	4 53.51	+13 58.3	1.737	2.618	11.8	20.9	1 6	4 46.74	+31 54.4	2.033	2.911	10.5	21.1
1 16	4 49.34	+14 27.3	1.826	2.628	15.0	21.1	1 16	4 40.27	+32 3.5	2.134	2.925	13.4	21.4
336094	2008 <i>HN</i> ₃		12 11.3 161°43'	1°1/11.4	18		517405	2014 <i>LP</i> ₁₅		12 11.3 137°21'	2°9/10.9	18	
11 7	5 46.32	+24 31.8	1.731	2.554	15.1	21.3	11 7	5 40.33	+13 43.1	2.283	3.097	12.2	21.8
11 17	5 39.72	+25 0.3	1.657	2.558	11.4	21.0	11 17	5 34.46	+13 37.8	2.212	3.106	9.3	21.6
11 27	5 30.27	+25 26.6	1.607	2.562	7.0	20.8	11 27	5 26.72	+13 37.4	2.166	3.114	6.0	21.4
12 7	5 18.90	+25 48.1	1.584	2.566	2.4	20.5	12 7	5 17.79	+13 42.5	2.148	3.122	3.3	21.3
12 17	5 6.89	+26 3.0	1.590	2.569	3.0	20.6	12 17	5 8.52	+13 53.7	2.160	3.130	3.7	21.3
12 27	4 55.73	+26 11.4	1.626	2.571	7.6	20.8	12 27	4 59.85	+14 11.1	2.203	3.137	6.7	21.5
1 6	4 46.71	+26 15.6	1.687	2.573	11.8	21.1	1 6	4 52.60	+14 34.4	2.273	3.144	9.8	21.7
1 16	4 40.63	+26 18.5	1.772	2.575	15.3	21.3	1 16	4 47.35	+15 3.1	2.368	3.151	12.5	21.9
520397	2014 <i>JB</i> ₄₂		12 11.3 220°67'	5°9/10.6	18		17634	1996 <i>NM</i> ₃		12 11.3 198°65'	1°5/11.0	18	
11 7	5 40.94	+ 5 41.0	2.102	2.903	13.6	22.1	11 7	5 43.02	+19 35.5	1.975	2.796	13.6	19.5
11 17	5 35.14	+ 5 20.8	2.019	2.896	10.8	21.9	11 17	5 36.88	+19 22.2	1.893	2.794	10.2	19.3
11 27	5 27.25	+ 5 11.5	1.960	2.888	8.1	21.7	11 27	5 28.39	+19 9.0	1.835	2.790	6.3	19.0
12 7	5 17.95	+ 5 15.9	1.928	2.881	6.1	21.6	12 7	5 18.34	+18 56.2	1.806	2.787	2.3	18.8
12 17	5 8.14	+ 5 35.2	1.925	2.872	6.5	21.6	12 17	5 7.76	+18 44.6	1.806	2.782	3.0	18.8
12 27	4 58.87	+ 6 9.6	1.950	2.863	8.9	21.7	12 27	4 57.87	+18 35.6	1.835	2.778	7.1	19.1
1 6	4 51.05	+ 6 57.3	2.002	2.854	11.8	21.9	1 6	4 49.70	+18 31.0	1.892	2.772	11.0	19.3
1 16	4 45.36	+ 7 55.6	2.078	2.845	14.6	22.1	1 16	4 43.95	+18 31.8	1.972	2.766	14.3	19.5
177832	2005 <i>NX</i> ₅₀		12 11.3 59°90'	0°3/11.2	18		300576	2007 <i>TB</i> ₃₆₃		12 11.3 68°61'	3°1/11.4	18	
11 7	5 40.74	+23 31.0	1.885	2.713	13.8	20.6	11 7	5 46.54	+28 7.1	1.666	2.488	15.6	20.6
11 17	5 35.23	+23 13.6	1.811	2.716	10.3	20.4	11 17	5 39.94	+29 7.9	1.609	2.507	11.8	20.4
11 27	5 27.36	+22 52.8	1.761	2.718	6.3	20.2	11 27	5 30.41	+30 3.7	1.576	2.527	7.6	20.2
12 7	5 17.98	+22 28.6	1.738	2.721	1.9	19.9	12 7	5 18.96	+30 49.9	1.569	2.546	3.8	20.1
12 17	5 8.17	+22 2.3	1.745	2.724	2.6	20.0	12 17	5 6.98	+31 22.9	1.592	2.565	4.1	20.1
12 27	4 59.16	+21 36.1	1.780	2.726	6.9	20.2	12 27	4 56.05	+31 42.6	1.642	2.584	7.9	20.4
1 6	4 51.95	+21 12.8	1.842	2.729	10.8	20.5	1 6	4 47.43	+31 51.7	1.719	2.603	11.7	20.7
1 16	4 47.23	+20 54.5	1.927	2.732	14.1	20.7	1 16	4 41.89	+31 54.5	1.819	2.622	14.9	20.9
76767	2000 <i>KG</i> ₃₀		12 11.3 147°91'	0°1/11.3	18		104233	2000 <i>EV</i> ₁₂₉		12 11.3 316°67'	4°0/11.7	18	
11 7	5 39.11	+21 42.3	2.503	3.321	11.2	19.2	11 7	5 44.40	+30 40.6	1.415	2.249	17.3	19.5
11 17	5 33.58	+22 4.3	2.423	3.322	8.3	19.0	11 17	5 39.16	+31 18.4	1.339	2.242	13.4	19.3
11 27	5 26.21	+22 26.4	2.368	3.323	5.1	18.8	11 27	5 30.37	+31 48.3	1.284	2.235	8.9	19.0
12 7	5 17.62	+22 47.6	2.343	3.325	1.5	18.6	12 7	5 19.05	+32 5.4	1.254	2.229	4.8	18.7
12 17	5 8.62	+23 7.1	2.347	3.326	2.1	18.6	12 17	5 6.78	+32 6.3	1.250	2.223	5.0	18.7
12 27	5 0.11	+23 24.7	2.383	3.327	5.6	18.8	12 27	4 55.48	+31 52.0	1.272	2.217	9.2	19.0
1 6	4 52.91	+23 41.1	2.447	3.329	8.7	19.0	1 6	4 46.81	+31 27.4	1.318	2.212	13.8	19.2
1 16	4 47.61	+23 57.3	2.536	3.330	11.5	19.2	1 16	4 41.77	+30 58.8	1.386	2.207	17.8	19.5
74298	1998 <i>SG</i> ₁₅₂		12 11.3 54°90'	1°5/11.0	18		216401	2008 <i>EK</i> ₉₀		12 11.3 187°23'	0°7/11.4	18	
11 7	5 41.20	+19 54.5	1.648	2.483	15.2	19.6	11 7	5 45.98	+25 11.5	1.935	2.752	14.0	22.0
11 17	5 35.75	+19 41.6	1.584	2.492	11.3	19.4	11 17	5 39.22	+25 13.4	1.854	2.752	10.5	21.8
11 27	5 27.73	+19 28.9	1.543	2.501	6.9	19.1	11 27	5 29.87	+25 11.2	1.797	2.751	6.5	21.6
12 7	5 18.10	+19 17.1	1.529	2.511	2.5	18.9	12 7	5 18.80	+25 3.5	1.767	2.749	2.1	21.3
12 17	5 8.05	+19 7.0	1.543	2.520	3.3	19.0	12 17	5 7.18	+24 50.1	1.768	2.747	2.7	21.3
12 27	4 58.92	+19 0.2	1.584	2.530	7.7	19.3	12 27	4 56.33	+24 32.5	1.799	2.744	7.0	21.6
1 6	4 51.80	+18 58.3	1.652	2.540	11.8	19.5	1 6	4 47.40	+24 13.8	1.857	2.740	11.0	21.8
1 16	4 47.38	+19 2.3	1.742	2.550	15.3	19.8	1 16	4 41.14	+23 57.0	1.939	2.735	14.4	22.0
291383	2006 <i>CO</i> ₂₈		12 11.3 75°47'	4°9/10.7	18		267151	2000 <i>GF</i> ₃₀		12 11.3 188°20'	0°9/11.		

EPHEMERIDES

12 11.3

12 11.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
273259	2006 <i>KV</i> ₁₁₆	12 11.3 331°68	2°8/10.5 17				126339	2002 <i>AP</i> ₁₅₄	12 11.3 320°01	1°2/11.4 18			
11 7	5 37.12	+15 42.5	2.276	3.099	11.9	21.1	11 7	5 41.26	+25 22.9	1.430	2.272	16.6	19.1
11 17	5 32.16	+15 8.9	2.198	3.097	9.0	20.9	11 17	5 36.63	+25 33.9	1.349	2.260	12.6	18.9
11 27	5 25.36	+14 37.3	2.145	3.096	5.8	20.7	11 27	5 28.77	+25 40.9	1.289	2.247	7.9	18.6
12 7	5 17.39	+14 9.6	2.119	3.094	3.2	20.5	12 7	5 18.59	+25 42.0	1.254	2.236	2.7	18.2
12 17	5 9.07	+13 47.7	2.123	3.093	3.8	20.5	12 17	5 7.49	+25 36.2	1.245	2.224	3.3	18.2
12 27	5 1.30	+13 33.0	2.156	3.091	6.8	20.7	12 27	4 57.23	+25 24.9	1.263	2.213	8.6	18.5
1 6	4 54.89	+13 26.7	2.217	3.090	9.9	20.9	1 6	4 49.30	+25 11.3	1.305	2.203	13.5	18.8
1 16	4 50.41	+13 28.8	2.301	3.089	12.7	21.1	1 16	4 44.69	+24 59.4	1.368	2.193	17.8	19.0
88334	2001 <i>OJ</i> ₆₄	12 11.3 29°03	3°2/10.7 18				439654	2014 <i>HK</i> ₃₁	12 11.3 16°83	4°6/11.1 18			
11 7	5 40.75	+19 15.8	1.165	2.021	18.7	18.2	11 7	5 45.78	+28 57.7	1.428	2.261	17.2	20.4
11 17	5 36.11	+18 23.5	1.113	2.031	14.0	18.0	11 17	5 40.18	+30 29.5	1.362	2.264	13.2	20.1
11 27	5 28.21	+17 30.9	1.081	2.042	8.8	17.7	11 27	5 31.03	+31 58.2	1.317	2.267	8.9	19.9
12 7	5 18.30	+16 41.5	1.073	2.053	3.9	17.5	12 7	5 19.30	+33 16.4	1.299	2.272	5.1	19.7
12 17	5 7.96	+15 59.6	1.090	2.066	4.9	17.6	12 17	5 6.55	+34 17.2	1.307	2.276	5.6	19.7
12 27	4 58.96	+15 29.1	1.132	2.079	9.9	17.9	12 27	4 54.75	+34 58.3	1.342	2.282	9.5	20.0
1 6	4 52.58	+15 12.3	1.197	2.093	14.7	18.2	1 6	4 45.55	+35 22.1	1.402	2.288	13.7	20.2
1 16	4 49.55	+15 9.4	1.282	2.108	18.7	18.5	1 16	4 40.02	+35 33.9	1.483	2.294	17.3	20.5
208076	1999 <i>VE</i> ₁₅₈	12 11.3 358°90	0°6/11.2 18				445660	2011 <i>UK</i> ₇₆	12 11.3 58°42	1°9/11.7 18			
11 7	5 38.32	+23 16.4	1.277	2.131	17.5	19.6	11 7	5 42.59	+28 24.7	1.765	2.591	14.7	21.0
11 17	5 34.41	+22 55.8	1.210	2.128	13.1	19.3	11 17	5 36.88	+28 26.3	1.694	2.595	11.1	20.8
11 27	5 27.32	+22 31.1	1.164	2.126	8.1	19.0	11 27	5 28.51	+28 20.8	1.645	2.599	7.0	20.6
12 7	5 18.08	+22 2.9	1.142	2.125	2.5	18.7	12 7	5 18.41	+28 6.5	1.623	2.603	2.9	20.3
12 17	5 8.18	+21 33.0	1.145	2.125	3.4	18.8	12 17	5 7.83	+27 43.5	1.629	2.607	3.1	20.4
12 27	4 59.34	+21 4.8	1.174	2.126	8.9	19.1	12 27	4 58.16	+27 13.9	1.664	2.611	7.3	20.6
1 6	4 52.95	+20 42.0	1.226	2.128	13.9	19.4	1 6	4 50.55	+26 41.9	1.725	2.616	11.3	20.9
1 16	4 49.84	+20 27.1	1.298	2.132	18.1	19.6	1 16	4 45.73	+26 11.3	1.810	2.620	14.7	21.1
227173	2005 <i>QT</i> ₄₁	12 11.3 140°59	3°1/10.7 18				257527	1997 <i>TY</i> ₂₃	12 11.3 87°00	3°4/10.5 18			
11 7	5 44.12	+16 18.4	1.785	2.608	14.7	21.2	11 7	5 41.62	+15 19.4	1.934	2.756	13.8	20.8
11 17	5 37.68	+15 46.8	1.718	2.618	11.1	21.0	11 17	5 35.53	+14 37.7	1.879	2.777	10.4	20.6
11 27	5 28.83	+15 17.7	1.675	2.627	7.1	20.7	11 27	5 27.37	+13 59.2	1.848	2.798	6.7	20.5
12 7	5 18.46	+14 52.8	1.660	2.636	3.5	20.5	12 7	5 18.01	+13 26.2	1.845	2.819	3.7	20.3
12 17	5 7.71	+14 34.0	1.673	2.645	4.3	20.6	12 17	5 8.44	+13 0.8	1.871	2.839	4.4	20.4
12 27	4 57.85	+14 23.2	1.716	2.653	8.0	20.9	12 27	4 59.75	+12 44.8	1.926	2.860	7.6	20.6
1 6	4 49.90	+14 21.4	1.785	2.660	11.8	21.1	1 6	4 52.80	+12 38.9	2.008	2.880	10.9	20.9
1 16	4 44.53	+14 28.7	1.877	2.667	15.0	21.3	1 16	4 48.12	+12 42.8	2.113	2.899	13.7	21.1
306600	2000 <i>HO</i> ₂₇	12 11.3 227°03	1°6/10.8 18				261298	2005 <i>UP</i> ₁₈₀	12 11.3 349°26	1°1/11.1 17			
11 7	5 40.84	+18 30.9	2.987	3.792	9.9	21.7	11 7	5 38.30	+20 11.9	1.639	2.479	15.0	20.4
11 17	5 34.60	+18 5.0	2.883	3.775	7.4	21.5	11 17	5 33.84	+20 13.2	1.563	2.473	11.2	20.1
11 27	5 26.75	+17 38.5	2.807	3.758	4.7	21.3	11 27	5 26.77	+20 15.4	1.509	2.468	6.9	19.9
12 7	5 17.82	+17 12.3	2.761	3.739	2.0	21.1	12 7	5 17.92	+20 18.5	1.482	2.464	2.3	19.6
12 17	5 8.50	+16 47.5	2.746	3.720	2.6	21.1	12 17	5 8.45	+20 22.6	1.481	2.460	3.1	19.6
12 27	4 59.54	+16 25.5	2.764	3.700	5.4	21.3	12 27	4 59.72	+20 28.4	1.509	2.457	7.7	19.9
1 6	4 51.66	+16 7.9	2.812	3.679	8.3	21.4	1 6	4 52.89	+20 37.1	1.561	2.455	12.0	20.1
1 16	4 45.41	+15 55.7	2.886	3.656	10.8	21.6	1 16	4 48.77	+20 49.7	1.636	2.453	15.7	20.4
59383	1999 <i>FY</i> ₉	12 11.3 214°37	1°1/11.5 18				39476	1979 <i>MA</i> ₂	12 11.3 160°04	0°7/11.1 18			
11 7	5 44.39	+26 2.4	1.977	2.795	13.7	19.8	11 7	5 45.92	+23 7.9	1.632	2.460	15.6	19.7
11 17	5 38.10	+26 11.6	1.890	2.788	10.3	19.6	11 17	5 39.39	+22 39.9	1.561	2.464	11.7	19.4
11 27	5 29.24	+26 16.5	1.828	2.782	6.4	19.3	11 27	5 30.05	+22 7.6	1.512	2.469	7.2	19.2
12 7	5 18.64	+26 15.5	1.793	2.774	2.3	19.0	12 7	5 18.89	+21 31.6	1.490	2.473	2.2	18.9
12 17	5 7.41	+26 7.9	1.788	2.766	2.7	19.1	12 17	5 7.26	+20 53.6	1.497	2.476	3.1	19.0
12 27	4 56.86	+25 54.8	1.813	2.758	7.0	19.3	12 27	4 56.64	+20 17.0	1.533	2.479	7.9	19.3
1 6	4 48.14	+25 39.0	1.865	2.749	10.9	19.5	1 6	4 48.23	+19 45.4	1.595	2.481	12.3	19.5
1 16	4 42.03	+25 23.8	1.940	2.739	14.3	19.7	1 16	4 42.77	+19 21.6	1.680	2.483	16.0	19.8
174778	2003 <i>WO</i> ₈₀	12 11.3 13°32	0°6/11.4 18				191554	2003 <i>WC</i> ₁₅	12 11.3 224°63	0°6/11.4 18			
11 7	5 42.07	+26 48.3	1.638	2.470	15.4	20.0	11 7	5 39.19	+24 43.2	2.444	3.262	11.4	20.5
11 17	5 36.59	+26 19.3	1.565	2.471	11.6	19.7	11 17	5 33.75	+24 48.6	2.360	3.258	8.5	20.3
11 27	5 28.35	+25 42.4	1.515	2.472	7.1	19.5	11 27	5 26.39	+24 51.3	2.300	3.255	5.2	20.1
12 7	5 18.35	+24 57.7	1.491	2.473	2.3	19.2	12 7	5 17.77	+24 50.5	2.269	3.251	1.7	19.9
12 17	5 7.89	+24 7.2	1.496	2.475	2.9	19.2	12 17	5 8.72	+24 46.1	2.269	3.248	2.1	19.9
12 27	4 58.40	+23 14.9	1.528	2.477	7.6	19.5	12 27	5 0.21	+24 38.8	2.298	3.244	5.7	20.1
1 6	4 51.07	+22 25.6	1.587	2.479	12.0	19.8	1 6	4 53.06	+24 30.5	2.356	3.240	9.0	20.3
1 16	4 46.61	+21 43.3	1.668	2.481	15.6	20.0	1 16	4 47.90	+24 22.9	2.439	3.236	11.8	20.5
302610	2002 <i>QX</i> ₁₀₆	12 11.3 16°30	4°0/11.8 17				406793	2008 <i>SG</i> ₂₅₈	12 11.3 244°55	8°0/7.5 18			
11 7	5 37.95	+29 59.3	1.024	1.888	20.1	19.9	11 7	5 37.04	- 1 44.1	2.664	3.435	11.8	21.0
11 17	5 34.72	+30 31.8	0.980	1.900	15.3	19.7	11 17	5 31.87	- 3 17.5	2.586	3.425	10.1	20.9
11 27	5 27.68	+30 53.5	0.956	1.914	10.0	19.5	11 27	5 25.13	- 4 40.8	2.533	3.414	8.7	20.8
12 7	5 18.20	+31 0.2	0.952	1.930	5.0	19.2	12 7	5 17.37	- 5 48.9	2.507	3.403	8.1	20.7
12 17	5 8.18	+30 50.7	0.973	1.949	5.1	19.3	12 17	5 9.26	- 6 37.9	2.509	3.392	8.6	20.7
12 27	4 59.72	+30 28.1	1.016	1.969	9.8	19.6	12 27	5 1.55	- 7 5.7	2.538	3.380	9.9	20.8
1 6	4 54.34	+29 58.5	1.082	1.992	14.6	20.0	1 6	4 54.93	- 7 12.5	2.592	3.369	11.7	20.9
1 16	4 52.75	+29 28.0	1.167	2.015	18.7	20.3	1 16	4 49.93	- 7 0.5	2.666	3.357	13.4	21.0
36233	1999 <i>UJ</i> ₂₇	12 11.3 240°74	0°1/11.3 18				181990	1999 <i>VG</i> ₁₁₃	12 11.3 47°01</				

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12 11.3

12 11.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
258703	2002 GZ ₄₈		12 11.3 273°13	2°6/10.8	18		191644	2004 PZ ₃₆		12 11.3 98°83	2°3/10.9	18	
11 7	5 43.15	+18 45.9	1.404	2.245	17.0	21.1	11 7	5 44.03	+17 58.3	1.684	2.512	15.2	20.7
11 17	5 37.89	+18 14.8	1.324	2.234	12.9	20.8	11 17	5 37.72	+17 40.6	1.626	2.529	11.4	20.5
11 27	5 29.47	+17 43.6	1.266	2.224	8.1	20.5	11 27	5 28.91	+17 24.9	1.590	2.545	7.1	20.3
12 7	5 18.81	+17 14.1	1.233	2.213	3.4	20.2	12 7	5 18.56	+17 11.9	1.582	2.561	3.0	20.0
12 17	5 7.33	+16 48.6	1.226	2.202	4.4	20.2	12 17	5 7.89	+17 2.8	1.602	2.577	3.7	20.1
12 27	4 56.70	+16 30.2	1.247	2.192	9.5	20.5	12 27	4 58.20	+16 59.0	1.650	2.592	7.8	20.4
1 6	4 48.39	+16 21.3	1.291	2.181	14.3	20.8	1 6	4 50.55	+17 1.6	1.725	2.607	11.7	20.7
1 16	4 43.30	+16 23.1	1.356	2.170	18.5	21.0	1 16	4 45.58	+17 10.9	1.823	2.622	15.1	20.9
278630	2008 QV ₄₄		12 11.3 64°29	4°9/10.5	18		450389	2005 OY ₂₁		12 11.3 114°97	4°2/10.7	18	
11 7	5 37.50	+ 8 47.7	2.193	3.007	12.7	20.0	11 7	5 40.51	+10 1.5	2.273	3.081	12.5	21.6
11 17	5 32.43	+ 8 19.2	2.126	3.013	9.9	19.9	11 17	5 34.52	+ 9 40.2	2.212	3.098	9.6	21.4
11 27	5 25.53	+ 7 58.8	2.083	3.020	7.1	19.7	11 27	5 26.75	+ 9 26.0	2.175	3.114	6.7	21.3
12 7	5 17.49	+ 7 48.6	2.067	3.027	5.1	19.6	12 7	5 17.89	+ 9 20.5	2.166	3.130	4.5	21.1
12 17	5 9.14	+ 7 50.1	2.080	3.034	5.5	19.6	12 17	5 8.78	+ 9 24.8	2.187	3.146	4.9	21.2
12 27	5 1.39	+ 8 4.0	2.121	3.041	7.8	19.8	12 27	5 0.33	+ 9 39.2	2.238	3.161	7.3	21.4
1 6	4 55.02	+ 8 29.2	2.189	3.049	10.6	20.0	1 6	4 53.31	+10 2.9	2.316	3.176	10.1	21.6
1 16	4 50.58	+ 9 4.2	2.280	3.056	13.2	20.2	1 16	4 48.25	+10 34.8	2.418	3.190	12.6	21.8
296437	2009 HY ₄₈		12 11.3 168°65	2°3/11.0	18		460905	2014 WK ₁₉₆		12 11.3 115°19	1°4/11.8	17	
11 7	5 45.76	+17 14.4	1.682	2.506	15.4	21.5	11 7	5 40.59	+29 53.2	2.426	3.236	11.7	20.8
11 17	5 39.21	+17 7.6	1.609	2.510	11.6	21.2	11 17	5 34.72	+29 26.6	2.346	3.239	8.8	20.6
11 27	5 29.96	+17 3.8	1.560	2.514	7.3	21.0	11 27	5 26.93	+28 52.0	2.291	3.242	5.6	20.4
12 7	5 18.90	+17 3.4	1.537	2.517	3.1	20.7	12 7	5 17.96	+28 9.3	2.265	3.244	2.3	20.2
12 17	5 7.28	+17 6.8	1.543	2.519	3.8	20.8	12 17	5 8.71	+27 19.6	2.270	3.247	2.4	20.2
12 27	4 56.51	+17 14.9	1.578	2.520	8.1	21.1	12 27	5 0.16	+26 25.8	2.305	3.250	5.7	20.4
1 6	4 47.80	+17 28.2	1.640	2.521	12.3	21.3	1 6	4 53.14	+25 31.5	2.369	3.252	8.9	20.6
1 16	4 41.91	+17 47.4	1.724	2.521	15.9	21.6	1 16	4 48.21	+24 40.3	2.458	3.255	11.7	20.8
151038	2001 UL ₁₉₁		12 11.3 165°84	0°8/11.4	18		71219	1999 YK ₆		12 11.3 198°37	6°9/11.9	18	
11 7	5 45.41	+25 29.3	1.953	2.770	13.9	21.5	11 7	5 48.41	+39 39.0	1.960	2.749	14.9	18.8
11 17	5 38.72	+25 30.6	1.877	2.775	10.4	21.2	11 17	5 41.71	+40 50.2	1.883	2.748	12.1	18.6
11 27	5 29.55	+25 27.6	1.825	2.779	6.4	21.0	11 27	5 31.80	+41 49.4	1.829	2.746	9.3	18.4
12 7	5 18.75	+25 18.9	1.802	2.783	2.1	20.7	12 7	5 19.58	+42 29.8	1.800	2.745	7.2	18.3
12 17	5 7.48	+25 4.5	1.808	2.786	2.6	20.8	12 17	5 6.47	+42 46.9	1.800	2.743	7.2	18.3
12 27	4 57.03	+24 46.0	1.843	2.789	6.9	21.1	12 27	4 54.16	+42 40.6	1.827	2.741	9.3	18.4
1 6	4 48.48	+24 26.5	1.907	2.791	10.7	21.3	1 6	4 44.15	+42 15.5	1.879	2.738	12.1	18.6
1 16	4 42.54	+24 8.9	1.994	2.792	14.0	21.5	1 16	4 37.41	+41 38.4	1.955	2.736	14.9	18.8
175017	Záboří		12 11.3 216°26	2°2/11.0	18		516798	2010 HV ₁₀₃		12 11.3 168°88	3°1/11.7	18	
11 7	5 40.94	+15 51.5	2.157	2.976	12.7	20.3	11 7	5 45.66	+30 43.4	2.107	2.915	13.3	22.5
11 17	5 35.21	+15 54.6	2.073	2.971	9.6	20.1	11 17	5 39.00	+31 20.5	2.029	2.918	10.2	22.3
11 27	5 27.36	+16 1.7	2.014	2.966	6.1	19.9	11 27	5 29.81	+31 51.3	1.976	2.921	6.8	22.1
12 7	5 18.09	+16 13.0	1.983	2.961	2.8	19.6	12 7	5 18.91	+32 12.1	1.950	2.923	3.7	21.9
12 17	5 8.31	+16 28.6	1.981	2.955	3.3	19.7	12 17	5 7.43	+32 21.0	1.954	2.925	3.8	21.9
12 27	4 59.07	+16 48.5	2.010	2.950	6.8	19.9	12 27	4 56.67	+32 18.4	1.988	2.927	7.0	22.1
1 6	4 51.31	+17 12.7	2.066	2.943	10.3	20.1	1 6	4 47.76	+32 7.2	2.050	2.928	10.4	22.4
1 16	4 45.69	+17 41.1	2.146	2.937	13.4	20.3	1 16	4 41.45	+31 51.3	2.135	2.929	13.4	22.6
444528	2006 SN ₁₄₈		12 11.3 35°35	3°3/11.8	17		384729	2011 KE ₂		12 11.3 227°84	0°1/11.3	18	
11 7	5 42.89	+30 27.8	1.700	2.525	15.2	21.5	11 7	5 44.48	+22 37.4	1.920	2.740	13.9	22.0
11 17	5 37.33	+30 56.4	1.632	2.530	11.7	21.3	11 17	5 38.27	+22 42.6	1.830	2.730	10.5	21.8
11 27	5 28.91	+31 17.2	1.586	2.535	7.7	21.1	11 27	5 29.46	+22 46.4	1.764	2.719	6.5	21.5
12 7	5 18.59	+31 27.0	1.565	2.541	4.0	20.9	12 7	5 18.83	+22 47.7	1.725	2.708	2.0	21.2
12 17	5 7.70	+31 24.0	1.573	2.547	4.1	20.9	12 17	5 7.50	+22 46.0	1.717	2.695	2.7	21.2
12 27	4 57.75	+31 9.7	1.609	2.553	7.8	21.1	12 27	4 56.78	+22 42.3	1.737	2.683	7.2	21.5
1 6	4 49.98	+30 47.9	1.670	2.559	11.7	21.4	1 6	4 47.87	+22 38.5	1.785	2.669	11.3	21.7
1 16	4 45.18	+30 23.3	1.754	2.566	15.0	21.6	1 16	4 41.57	+22 37.0	1.857	2.655	14.9	21.9
120260	2004 GL ₂₀		12 11.3 192°87	1°7/10.9	18		397611	2007 VV ₁₈₈		12 11.3 144°91	4°0/10.6	17	
11 7	5 43.89	+19 51.8	1.807	2.632	14.5	21.0	11 7	5 58.03	+21 5.5	1.072	1.907	21.5	20.7
11 17	5 37.72	+19 28.7	1.728	2.631	10.9	20.8	11 17	5 50.76	+23 46.3	1.002	1.908	16.4	20.4
11 27	5 29.00	+19 4.7	1.674	2.629	6.7	20.5	11 27	5 38.40	+26 43.1	0.954	1.910	10.4	20.1
12 7	5 18.61	+18 40.9	1.646	2.627	2.5	20.3	12 7	5 21.88	+29 41.0	0.932	1.911	4.8	19.8
12 17	5 7.68	+18 18.5	1.647	2.624	3.3	20.3	12 17	5 3.27	+32 21.5	0.938	1.912	6.1	19.8
12 27	4 57.54	+17 59.8	1.678	2.621	7.7	20.6	12 27	4 45.56	+34 31.7	0.972	1.913	12.1	20.2
1 6	4 49.29	+17 46.9	1.735	2.617	11.7	20.8	1 6	4 31.47	+36 9.8	1.031	1.914	17.7	20.5
1 16	4 43.68	+17 41.4	1.816	2.613	15.2	21.0	1 16	4 22.63	+37 22.5	1.109	1.914	22.3	20.8
482312	2011 UE ₁₉₃		12 11.3 13°43	8°4/11.9	18		380387	2002 VK ₁₂₃		12 11.3 355°28	1°5/11.4	18	
11 7	5 45.31	+38 54.2	1.450	2.266	17.9	20.0	11 7	5 39.59	+24 52.5	1.092	1.954	19.3	20.2
11 17	5 40.14	+40 22.4	1.388	2.269	14.5	19.8	11 17	5 36.05	+25 16.7	1.027	1.948	14.6	19.9
11 27	5 31.14	+41 36.6	1.346	2.273	11.1	19.6	11 27	5 28.72	+25 38.3	0.982	1.944	9.1	19.6
12 7	5 19.39	+42 27.9	1.328	2.277	8.7	19.5	12 7	5 18.70	+25 54.0	0.959	1.941	3.2	19.3
12 17	5 6.65	+42 50.6	1.335	2.283	8.7	19.5	12 17	5 7.71	+26 2.0	0.959	1.939	3.9	19.3
12 27	4 55.06	+42 44.7	1.368	2.289	11.1	19.7	12 27	4 57.87	+26 3.0	0.984	1.939	9.8	19.6
1 6	4 46.41	+42 16.5	1.423	2.296	14.3	19.9	1 6	4 50.93	+26 0.5	1.031	1.940	15.3	19.9
1 16	4 41.71	+41 34.8	1.499	2.304	17.5	20.1	1 16	4 47.89	+25 58.2	1.097	1.942	19.8	20.2
124033	2001 FP ₁₂₇		12 11.3 153°74	8°5/13.8	17		147661	2004 JN ₅₁		12 11.3 136°14	0°6/11.2	18	
11 7	5 49.88	+51 32.1	2.614</										

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
330756	2008 <i>SO</i> ₁₇₈		12 11.3	87°20	5°3/10.3	18	277546	2005 <i>YN</i> ₈₅		12 11.3	99°87	1°8/11.2	18
11 7	5 37.40	+ 7 20.0	2.293	3.101	12.4	20.7	11 7	5 44.95	+17 29.3	1.704	2.529	15.2	21.3
11 17	5 32.28	+ 6 43.0	2.227	3.109	9.8	20.5	11 17	5 38.46	+17 37.4	1.645	2.546	11.4	21.1
11 27	5 25.44	+ 6 14.4	2.185	3.117	7.2	20.4	11 27	5 29.43	+17 48.9	1.608	2.563	7.0	20.9
12 7	5 17.52	+ 5 56.8	2.171	3.125	5.4	20.3	12 7	5 18.80	+18 3.5	1.599	2.580	2.7	20.7
12 17	5 9.32	+ 5 52.1	2.185	3.133	5.8	20.3	12 17	5 7.78	+18 20.5	1.619	2.596	3.4	20.7
12 27	5 1.69	+ 6 0.8	2.228	3.141	8.0	20.5	12 27	4 57.72	+18 40.1	1.668	2.612	7.6	21.0
1 6	4 55.39	+ 6 22.2	2.297	3.149	10.5	20.7	1 6	4 49.68	+19 2.6	1.743	2.627	11.6	21.3
1 16	4 50.94	+ 6 54.5	2.390	3.156	12.9	20.8	1 16	4 44.36	+19 28.1	1.842	2.642	14.9	21.6
447993	2008 <i>CD</i> ₁₉₇		12 11.3	337°61	1°0/11.1	17	512095	2015 <i>OA</i> ₁₉		12 11.3	183°38	0°6/11.4	18
11 7	5 39.67	+21 8.2	1.671	2.508	14.9	21.8	11 7	5 44.32	+24 33.6	2.008	2.825	13.5	22.1
11 17	5 34.85	+20 56.5	1.594	2.503	11.2	21.6	11 17	5 37.95	+24 39.1	1.927	2.826	10.1	21.9
11 27	5 27.41	+20 43.8	1.539	2.498	6.9	21.3	11 27	5 29.15	+24 41.5	1.872	2.826	6.2	21.7
12 7	5 18.20	+20 30.5	1.511	2.493	2.3	21.0	12 7	5 18.74	+24 39.4	1.844	2.826	2.0	21.4
12 17	5 8.39	+20 17.4	1.510	2.488	3.1	21.1	12 17	5 7.80	+24 32.5	1.846	2.825	2.5	21.5
12 27	4 59.34	+20 6.3	1.536	2.484	7.7	21.4	12 27	4 57.59	+24 22.2	1.878	2.823	6.7	21.7
1 6	4 52.22	+19 59.1	1.589	2.481	12.0	21.6	1 6	4 49.16	+24 10.7	1.937	2.821	10.6	22.0
1 16	4 47.79	+19 57.6	1.664	2.477	15.6	21.8	1 16	4 43.24	+24 0.6	2.021	2.818	13.8	22.2
113917	2002 <i>TJ</i> ₂₈₅		12 11.3	140°10	7°5/12.1	17	388242	2006 <i>KS</i> ₃₉		12 11.3	151°07	5°3/10.6	18
11 7	5 47.08	+45 4.5	2.498	3.256	12.9	19.7	11 7	5 41.58	+ 6 13.8	2.359	3.154	12.5	22.1
11 17	5 40.38	+46 23.2	2.422	3.256	10.9	19.6	11 17	5 35.32	+ 5 49.2	2.291	3.165	9.9	21.9
11 27	5 30.85	+47 28.9	2.370	3.256	8.9	19.4	11 27	5 27.28	+ 5 33.9	2.248	3.174	7.3	21.8
12 7	5 19.29	+48 15.7	2.343	3.257	7.7	19.4	12 7	5 18.12	+ 5 30.1	2.232	3.184	5.5	21.7
12 17	5 6.89	+48 39.7	2.345	3.257	7.6	19.4	12 17	5 8.66	+ 5 38.9	2.246	3.192	5.8	21.7
12 27	4 55.13	+48 40.6	2.374	3.258	8.9	19.4	12 27	4 59.81	+ 6 0.6	2.290	3.200	7.9	21.9
1 6	4 45.29	+48 21.9	2.428	3.258	10.8	19.6	1 6	4 52.32	+ 6 33.9	2.361	3.206	10.5	22.1
1 16	4 38.30	+47 49.3	2.506	3.258	12.7	19.7	1 16	4 46.74	+ 7 16.8	2.456	3.213	12.8	22.2
404311	2013 <i>EQ</i> ₁₂₆		12 11.3	159°89	2°9/11.7	18	442451	2011 <i>US</i> ₂₂₈		12 11.3	116°23	2°0/10.9	18
11 7	5 43.87	+31 8.3	2.356	3.160	12.2	21.3	11 7	5 41.95	+18 18.6	1.920	2.745	13.8	22.0
11 17	5 37.43	+31 41.5	2.279	3.165	9.4	21.1	11 17	5 36.04	+17 59.7	1.853	2.755	10.3	21.8
11 27	5 28.75	+32 8.2	2.226	3.170	6.2	20.9	11 27	5 27.89	+17 42.0	1.810	2.764	6.4	21.6
12 7	5 18.58	+32 25.8	2.201	3.174	3.4	20.8	12 7	5 18.33	+17 26.4	1.794	2.774	2.7	21.4
12 17	5 7.93	+32 32.5	2.207	3.178	3.5	20.8	12 17	5 8.41	+17 13.9	1.807	2.783	3.3	21.4
12 27	4 57.93	+32 29.0	2.243	3.181	6.3	21.0	12 27	4 59.28	+17 6.2	1.850	2.792	7.2	21.7
1 6	4 49.55	+32 17.6	2.307	3.184	9.4	21.2	1 6	4 51.90	+17 4.3	1.920	2.800	10.8	21.9
1 16	4 43.49	+32 1.9	2.396	3.186	12.2	21.3	1 16	4 46.90	+17 8.8	2.013	2.809	14.0	22.2
361843	2008 <i>DR</i> ₄₄		12 11.3	53°10	2°5/11.7	18	221620	2006 <i>XZ</i> ₅₁		12 11.3	76°65	0°7/11.3	18
11 7	5 42.59	+28 51.2	1.909	2.729	14.0	20.9	11 7	5 47.19	+19 24.8	1.388	2.223	17.5	19.9
11 17	5 36.87	+29 17.3	1.833	2.731	10.6	20.7	11 17	5 40.66	+19 58.8	1.334	2.241	13.1	19.6
11 27	5 28.58	+29 37.7	1.782	2.733	6.8	20.4	11 27	5 31.00	+20 35.9	1.302	2.260	8.0	19.4
12 7	5 18.56	+29 49.6	1.757	2.734	3.2	20.2	12 7	5 19.32	+21 13.8	1.296	2.278	2.5	19.1
12 17	5 7.97	+29 51.7	1.761	2.736	3.4	20.2	12 17	5 7.15	+21 49.9	1.318	2.297	3.2	19.2
12 27	4 58.15	+29 44.7	1.793	2.738	7.1	20.5	12 27	4 56.18	+22 23.4	1.367	2.315	8.4	19.6
1 6	4 50.24	+29 31.6	1.853	2.740	10.8	20.7	1 6	4 47.74	+22 54.7	1.441	2.333	13.0	19.9
1 16	4 44.99	+29 16.0	1.936	2.742	14.1	20.9	1 16	4 42.59	+23 25.1	1.538	2.351	16.7	20.2
522932	2016 <i>PX</i> ₁₁₁		12 11.3	319°94	4°5/10.8	18	107674	2001 <i>FU</i> ₈		12 11.3	178°21	4°3/12.1	18
11 7	5 40.71	+13 56.8	1.328	2.173	17.6	21.0	11 7	5 46.57	+36 6.9	2.444	3.231	12.3	20.4
11 17	5 36.18	+13 34.5	1.253	2.162	13.5	20.7	11 17	5 39.51	+36 42.3	2.362	3.233	9.7	20.2
11 27	5 28.51	+13 19.1	1.198	2.152	9.0	20.5	11 27	5 30.07	+37 8.1	2.305	3.234	6.9	20.1
12 7	5 18.61	+13 13.3	1.167	2.143	5.0	20.2	12 7	5 19.03	+37 20.7	2.276	3.235	4.7	19.9
12 17	5 7.87	+13 19.0	1.162	2.134	5.7	20.2	12 17	5 7.45	+37 18.1	2.277	3.235	4.7	19.9
12 27	4 57.94	+13 37.2	1.183	2.125	10.2	20.5	12 27	4 56.56	+37 1.3	2.308	3.235	6.9	20.1
1 6	4 50.29	+14 7.4	1.227	2.117	14.9	20.7	1 6	4 47.41	+36 33.4	2.367	3.234	9.6	20.3
1 16	4 45.85	+14 48.0	1.291	2.110	19.0	20.9	1 16	4 40.72	+35 59.3	2.451	3.232	12.2	20.4
167238	2003 <i>UY</i> ₇₃		12 11.3	95°30	2°7/11.8	18	1906	<i>Naef</i>		12 11.3	55°36	5°0/12.1	18 R
11 7	5 44.74	+30 9.8	1.770	2.589	14.9	20.3	11 7	5 46.97	+33 29.7	1.356	2.184	18.2	15.8
11 17	5 38.52	+30 23.3	1.703	2.599	11.4	20.1	11 17	5 40.98	+34 6.3	1.300	2.197	14.1	15.6
11 27	5 29.56	+30 28.5	1.659	2.609	7.4	19.9	11 27	5 31.39	+34 30.4	1.265	2.211	9.6	15.4
12 7	5 18.85	+30 23.1	1.642	2.619	3.5	19.7	12 7	5 19.46	+34 36.6	1.254	2.225	5.8	15.2
12 17	5 7.68	+30 6.2	1.654	2.629	3.6	19.7	12 17	5 6.97	+34 22.8	1.270	2.239	5.7	15.2
12 27	4 57.50	+29 40.0	1.694	2.638	7.4	20.0	12 27	4 55.90	+33 51.8	1.311	2.254	9.4	15.5
1 6	4 49.49	+29 8.7	1.760	2.648	11.2	20.2	1 6	4 47.75	+33 10.4	1.377	2.268	13.5	15.8
1 16	4 44.36	+28 36.8	1.850	2.657	14.6	20.5	1 16	4 43.31	+32 25.9	1.464	2.283	17.1	16.0
392300	2010 <i>CJ</i> ₁₃₂		12 11.3	196°82	4°2/10.4	18	93006	2000 <i>RH</i> ₈₆		12 11.3	52°64	2°3/11.7	18
11 7	5 40.89	+12 20.6	2.072	2.888	13.2	22.0	11 7	5 44.28	+28 13.6	1.469	2.303	16.7	19.7
11 17	5 35.16	+11 40.7	1.993	2.886	10.2	21.8	11 17	5 38.59	+28 28.5	1.408	2.313	12.7	19.5
11 27	5 27.34	+11 5.4	1.939	2.883	6.9	21.6	11 27	5 29.78	+28 36.3	1.369	2.324	8.0	19.3
12 7	5 18.16	+10 37.3	1.912	2.880	4.5	21.4	12 7	5 18.95	+28 34.2	1.355	2.335	3.4	19.0
12 17	5 8.55	+10 18.7	1.915	2.877	5.1	21.4	12 17	5 7.62	+28 21.6	1.369	2.346	3.6	19.1
12 27	4 59.56	+10 11.2	1.947	2.873	8.0	21.6	12 27	4 57.44	+28 0.6	1.409	2.358	8.2	19.4
1 6	4 52.09	+10 15.3	2.005	2.869	11.2	21.8	1 6	4 49.74	+27 35.7	1.475	2.369	12.5	19.7
1 16	4 46.80	+10 30.2	2.087	2.865	14.2	22.0	1 16	4 45.28	+27 11.3	1.562	2.381	16.2	19.9
267979	2004 <i>GL</i> ₃		12 11.3	279°66	1°3/11.1	18	24780	1993 <i>QA</i> ₁		12 11.3	42°04	6°	

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12 11.3

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
406559	2007 YX ₅₀	12 11.3 181°82		3°4/11.0 18			227030	2005 AO ₁₆	12 11.3 310°12		0°9/11.2 18		
11 7	5 41.21	+11 46.6	2.258	3.068	12.5	20.9	11 7	5 38.61	+20 21.8	2.163	2.988	12.4	20.2
11 17	5 35.27	+11 46.4	2.179	3.069	9.6	20.8	11 17	5 33.55	+20 18.6	2.080	2.983	9.3	20.0
11 27	5 27.38	+11 52.8	2.125	3.069	6.4	20.6	11 27	5 26.43	+20 15.5	2.021	2.977	5.7	19.8
12 7	5 18.19	+12 6.6	2.098	3.069	3.8	20.4	12 7	5 17.94	+20 12.6	1.990	2.972	1.9	19.5
12 17	5 8.57	+12 28.2	2.102	3.069	4.2	20.4	12 17	5 8.97	+20 10.1	1.989	2.967	2.5	19.5
12 27	4 59.48	+12 57.3	2.136	3.068	7.0	20.6	12 27	5 0.56	+20 9.1	2.017	2.962	6.4	19.8
1 6	4 51.80	+13 33.1	2.197	3.066	10.2	20.8	1 6	4 53.62	+20 10.5	2.072	2.957	9.9	20.0
1 16	4 46.15	+14 14.4	2.284	3.065	13.0	21.0	1 16	4 48.80	+20 15.5	2.151	2.952	13.0	20.2
224591	2005 XG ₁₀₃	12 11.3 101°98		1°0/11.2 18			490509	2009 UF ₇₈	12 11.3 81°78		6°1/12.1 17		
11 7	5 39.53	+20 6.1	2.215	3.037	12.2	21.0	11 7	5 45.33	+39 13.3	2.200	2.988	13.5	21.6
11 17	5 34.08	+20 3.1	2.141	3.042	9.1	20.8	11 17	5 39.02	+40 16.2	2.127	2.991	10.9	21.4
11 27	5 26.66	+20 0.3	2.092	3.047	5.6	20.6	11 27	5 29.99	+41 7.9	2.076	2.995	8.3	21.2
12 7	5 17.97	+19 57.8	2.071	3.052	1.9	20.3	12 7	5 19.08	+41 43.1	2.053	2.998	6.4	21.1
12 17	5 8.90	+19 55.9	2.080	3.058	2.5	20.4	12 17	5 7.47	+41 58.6	2.057	3.002	6.4	21.1
12 27	5 0.45	+19 55.5	2.118	3.063	6.2	20.6	12 27	4 56.60	+41 54.6	2.090	3.005	8.2	21.3
1 6	4 53.49	+19 57.5	2.185	3.068	9.6	20.9	1 6	4 47.69	+41 34.7	2.149	3.009	10.8	21.4
1 16	4 48.61	+20 3.0	2.275	3.073	12.5	21.1	1 16	4 41.57	+41 4.4	2.232	3.012	13.3	21.6
204469	2005 AZ ₂₅	12 11.3 35°57		3°8/11.1 18			358611	2007 VM ₆₆	12 11.3 326°07		5°9/11.1 18		
11 7	5 41.08	+14 16.2	1.379	2.221	17.2	19.2	11 7	5 39.79	+ 8 21.0	1.545	2.373	16.3	20.0
11 17	5 36.05	+14 7.4	1.323	2.232	13.0	19.0	11 17	5 35.11	+ 8 14.1	1.466	2.362	12.9	19.8
11 27	5 28.18	+14 6.0	1.289	2.243	8.4	18.8	11 27	5 27.72	+ 8 20.3	1.408	2.351	9.2	19.5
12 7	5 18.47	+14 13.3	1.279	2.256	4.4	18.6	12 7	5 18.41	+ 8 42.3	1.374	2.340	6.2	19.3
12 17	5 8.30	+14 29.9	1.295	2.268	4.9	18.7	12 17	5 8.33	+ 9 20.9	1.368	2.330	6.6	19.3
12 27	4 59.17	+14 55.6	1.338	2.281	9.1	18.9	12 27	4 58.89	+10 15.3	1.387	2.320	9.9	19.5
1 6	4 52.29	+15 29.4	1.405	2.295	13.4	19.2	1 6	4 51.35	+11 22.4	1.432	2.311	13.9	19.7
1 16	4 48.38	+16 9.8	1.494	2.309	17.0	19.5	1 16	4 46.58	+12 38.5	1.498	2.303	17.5	19.9
229500	2005 VZ ₅₀	12 11.3 329°22		0°2/11.3 18			124849	2001 TN ₁₆	12 11.3 111°03		4°8/11.4 18		
11 7	5 41.53	+21 16.1	1.289	2.138	17.7	19.8	11 7	5 53.80	+32 2.3	1.850	2.649	15.2	20.3
11 17	5 37.17	+21 48.7	1.211	2.126	13.4	19.5	11 17	5 45.47	+33 33.5	1.790	2.671	11.8	20.1
11 27	5 29.35	+22 24.4	1.154	2.114	8.3	19.2	11 27	5 33.97	+34 57.4	1.755	2.692	8.1	19.9
12 7	5 18.97	+23 0.8	1.120	2.103	2.6	18.8	12 7	5 20.30	+36 6.8	1.748	2.712	5.2	19.8
12 17	5 7.50	+23 35.2	1.113	2.093	3.4	18.9	12 17	5 5.92	+36 56.5	1.771	2.732	5.5	19.9
12 27	4 56.83	+24 6.3	1.131	2.083	9.2	19.2	12 27	4 52.52	+37 25.6	1.824	2.751	8.4	20.1
1 6	4 48.63	+24 34.8	1.174	2.075	14.5	19.4	1 6	4 41.53	+37 37.6	1.904	2.770	11.7	20.3
1 16	4 43.98	+25 2.2	1.236	2.067	19.0	19.7	1 16	4 33.81	+37 38.3	2.008	2.787	14.6	20.6
303635	2005 JO ₁₀₀	12 11.3 92°72		3°4/10.9 18			189887	2003 RF ₂₂	12 11.3 101°57		1°2/11.7 18		
11 7	5 40.63	+14 10.1	1.857	2.682	14.1	20.6	11 7	5 41.08	+28 8.5	2.348	3.161	11.9	19.8
11 17	5 35.18	+13 55.5	1.786	2.686	10.7	20.4	11 17	5 35.13	+27 57.2	2.278	3.173	9.0	19.6
11 27	5 27.45	+13 46.2	1.739	2.689	7.0	20.2	11 27	5 27.23	+27 39.9	2.234	3.185	5.6	19.4
12 7	5 18.24	+13 43.5	1.718	2.693	3.8	20.0	12 7	5 18.14	+27 16.0	2.217	3.197	2.2	19.2
12 17	5 8.58	+13 48.3	1.726	2.696	4.3	20.0	12 17	5 8.79	+26 46.1	2.231	3.209	2.3	19.2
12 27	4 59.63	+14 1.3	1.762	2.700	7.8	20.2	12 27	5 0.18	+26 12.4	2.276	3.221	5.7	19.5
1 6	4 52.39	+14 22.1	1.825	2.703	11.4	20.5	1 6	4 53.12	+25 37.9	2.348	3.233	9.0	19.7
1 16	4 47.53	+14 50.2	1.911	2.707	14.6	20.7	1 16	4 48.18	+25 5.3	2.446	3.244	11.7	19.9
12767	1994 AS	12 11.3 217°05		0°5/11.4 18			520378	2014 HK ₂₀₅	12 11.3 294°21		8°9/10.4 18		
11 7	5 39.25	+24 57.2	2.748	3.560	10.4	18.7	11 7	5 39.93	+ 0 59.8	1.725	2.527	16.0	21.4
11 17	5 33.67	+24 59.7	2.658	3.553	7.8	18.5	11 17	5 34.81	+ 0 14.3	1.654	2.522	13.3	21.2
11 27	5 26.35	+24 59.3	2.593	3.547	4.8	18.3	11 27	5 27.32	- 0 15.0	1.604	2.517	10.7	21.0
12 7	5 17.89	+24 55.5	2.558	3.539	1.6	18.1	12 7	5 18.24	- 0 23.2	1.579	2.512	9.1	20.9
12 17	5 9.02	+24 48.1	2.553	3.532	2.0	18.1	12 17	5 8.62	- 0 7.2	1.579	2.508	9.4	20.9
12 27	5 0.61	+24 38.1	2.579	3.524	5.2	18.3	12 27	4 59.66	+ 0 33.0	1.606	2.503	11.5	21.0
1 6	4 53.41	+24 27.0	2.635	3.516	8.2	18.5	1 6	4 52.42	+ 1 34.4	1.656	2.498	14.3	21.2
1 16	4 47.99	+24 16.6	2.716	3.507	10.9	18.7	1 16	4 47.64	+ 2 52.0	1.727	2.494	17.1	21.4
515618	2014 KY ₉₁	12 11.3 207°35		5°3/10.5 18			147662	2004 JZ ₅₄	12 11.3 67°63		1°6/11.5 18		
11 7	5 40.87	+ 6 38.8	2.378	3.175	12.3	22.1	11 7	5 42.50	+26 20.0	1.862	2.686	14.1	20.3
11 17	5 34.95	+ 6 13.6	2.293	3.169	9.8	21.9	11 17	5 36.77	+26 42.6	1.792	2.693	10.6	20.1
11 27	5 27.16	+ 5 57.1	2.234	3.162	7.2	21.8	11 27	5 28.52	+27 1.2	1.745	2.699	6.6	19.9
12 7	5 18.14	+ 5 51.7	2.202	3.155	5.4	21.7	12 7	5 18.60	+27 13.8	1.725	2.706	2.6	19.6
12 17	5 8.69	+ 5 58.9	2.199	3.146	5.8	21.7	12 17	5 8.17	+27 19.1	1.735	2.713	2.9	19.7
12 27	4 59.70	+ 6 19.2	2.226	3.138	8.0	21.8	12 27	4 58.55	+27 18.0	1.773	2.719	7.0	19.9
1 6	4 52.01	+ 6 51.5	2.281	3.128	10.7	21.9	1 6	4 50.84	+27 12.8	1.838	2.726	10.8	20.2
1 16	4 46.22	+ 7 34.1	2.359	3.118	13.2	22.1	1 16	4 45.76	+27 6.5	1.926	2.733	14.1	20.4
99427	2002 AB ₁₉₁	12 11.3 154°66		1°6/11.5 18			390701	2003 BE ₇₇	12 11.3 311°02		4°0/11.9 18		
11 7	5 44.83	+26 29.7	1.911	2.729	14.0	19.7	11 7	5 43.18	+31 32.1	1.374	2.210	17.6	20.8
11 17	5 38.49	+26 54.8	1.836	2.734	10.6	19.5	11 17	5 38.54	+31 51.5	1.289	2.193	13.7	20.5
11 27	5 29.57	+27 16.0	1.786	2.738	6.6	19.2	11 27	5 30.25	+32 0.6	1.225	2.176	9.2	20.2
12 7	5 18.92	+27 30.9	1.762	2.742	2.6	19.0	12 7	5 19.27	+31 54.9	1.184	2.160	4.9	20.0
12 17	5 7.71	+27 37.9	1.768	2.746	3.0	19.0	12 17	5 7.20	+31 32.0	1.169	2.144	4.9	19.9
12 27	4 57.28	+27 37.8	1.804	2.749	7.0	19.3	12 27	4 56.02	+30 54.0	1.180	2.128	9.5	20.1
1 6	4 48.78	+27 32.9	1.867	2.752	10.8	19.5	1 6	4 47.48	+30 7.1	1.215	2.113	14.3	20.4
1 16	4 42.95	+27 26.4	1.953	2.755	14.1	19.8	1 16	4 42.66	+29 18.6	1.270	2.099	18.7	20.6
373252	2012 GW ₂₂	12 11.3 128°67		4°5/10.5 18			273240	2006 KR ₂₆	12 11.3 343°16		8°3/10.9 17		
11 7	5 37.56	+ 8 27.9	2.476	3.282	11.6	21.1	11 7	5 35.44	+ 3 30.4	1.510	2.3		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
182277	2001 <i>KD</i> ₁₃		12 11.3 178°19'	2°0/10.9	18		98905	2001 <i>BL</i> ₅₈		12 11.3 264°68'	3°7/12.1	18	
11 7	5 44.61	+18 8.4	2.032	2.848	13.4	21.6	11 7	5 44.66	+33 8.3	1.858	2.670	14.6	19.9
11 17	5 38.01	+17 48.3	1.954	2.851	10.1	21.4	11 17	5 38.74	+33 18.4	1.768	2.658	11.4	19.7
11 27	5 29.14	+17 28.9	1.900	2.853	6.3	21.2	11 27	5 29.94	+33 17.9	1.700	2.645	7.7	19.4
12 7	5 18.78	+17 11.1	1.875	2.854	2.7	20.9	12 7	5 19.12	+33 3.6	1.659	2.632	4.4	19.2
12 17	5 7.97	+16 56.1	1.879	2.854	3.3	21.0	12 17	5 7.57	+32 34.2	1.647	2.618	4.3	19.2
12 27	4 57.88	+16 45.5	1.914	2.853	7.1	21.2	12 27	4 56.79	+31 51.9	1.663	2.605	7.8	19.3
1 6	4 49.48	+16 40.6	1.976	2.852	10.8	21.4	1 6	4 48.10	+31 1.8	1.705	2.591	11.6	19.5
1 16	4 43.46	+16 42.4	2.063	2.849	14.0	21.6	1 16	4 42.35	+30 9.6	1.771	2.578	15.2	19.7
309244	2007 <i>RU</i> ₂₈		12 11.3 215°58'	2°3/10.9	18		187139	2005 <i>QX</i> ₁₄₀		12 11.3 83°82'	2°9/11.8	18	
11 7	5 42.08	+17 11.9	2.078	2.897	13.1	22.1	11 7	5 50.04	+29 33.4	1.547	2.367	16.7	20.6
11 17	5 36.18	+16 52.9	1.993	2.891	9.9	21.8	11 17	5 42.56	+29 58.7	1.499	2.396	12.6	20.4
11 27	5 28.07	+16 35.4	1.931	2.884	6.3	21.6	11 27	5 32.03	+30 15.4	1.474	2.424	8.1	20.2
12 7	5 18.48	+16 20.6	1.898	2.876	2.8	21.4	12 7	5 19.67	+30 20.1	1.474	2.451	3.8	20.0
12 17	5 8.36	+16 9.6	1.894	2.868	3.5	21.4	12 17	5 7.05	+30 11.6	1.503	2.479	3.9	20.1
12 27	4 58.83	+16 3.7	1.920	2.859	7.1	21.6	12 27	4 55.81	+29 52.5	1.561	2.505	7.9	20.4
1 6	4 50.86	+16 4.1	1.974	2.850	10.8	21.8	1 6	4 47.20	+29 27.5	1.644	2.531	11.9	20.7
1 16	4 45.15	+16 11.3	2.051	2.841	14.0	22.0	1 16	4 41.85	+29 1.7	1.750	2.557	15.3	21.0
479492	2014 <i>AE</i> ₃₆		12 11.3 14°51'	2°2/11.2	18		145196	2005 <i>JX</i> ₃₁		12 11.3 172°67'	4°0/10.1	18	
11 7	5 42.54	+17 39.1	1.285	2.131	17.9	20.7	11 7	5 40.88	+14 37.5	2.040	2.860	13.2	19.8
11 17	5 37.58	+17 42.5	1.220	2.133	13.5	20.5	11 17	5 35.15	+13 35.7	1.965	2.861	10.1	19.6
11 27	5 29.36	+17 50.6	1.176	2.134	8.5	20.2	11 27	5 27.36	+12 35.7	1.915	2.863	6.8	19.4
12 7	5 18.93	+18 3.4	1.156	2.137	3.3	19.9	12 7	5 18.25	+11 40.8	1.893	2.864	4.2	19.2
12 17	5 7.78	+18 20.5	1.162	2.140	4.1	19.9	12 17	5 8.78	+10 54.4	1.901	2.864	4.9	19.3
12 27	4 57.66	+18 42.1	1.194	2.143	9.3	20.3	12 27	5 0.01	+10 19.3	1.937	2.865	8.0	19.5
1 6	4 50.01	+19 8.3	1.250	2.147	14.2	20.5	1 6	4 52.82	+9 57.1	2.001	2.865	11.2	19.7
1 16	4 45.71	+19 39.1	1.327	2.151	18.3	20.8	1 16	4 47.82	+9 47.9	2.087	2.865	14.1	19.9
357602	2005 <i>AN</i> ₃₆		12 11.3 323°87'	2°0/11.2	18		226746	2004 <i>RF</i> ₂₃		12 11.3 71°61'	6°3/12.7	17	
11 7	5 41.08	+17 35.5	1.546	2.383	15.8	20.3	11 7	5 45.70	+40 24.2	2.057	2.845	14.3	20.1
11 17	5 36.17	+17 42.8	1.467	2.376	12.0	20.0	11 17	5 39.32	+41 8.1	1.991	2.855	11.6	20.0
11 27	5 28.41	+17 54.5	1.411	2.368	7.5	19.8	11 27	5 30.15	+41 37.9	1.948	2.866	8.8	19.8
12 7	5 18.65	+18 10.5	1.380	2.361	2.9	19.5	12 7	5 19.15	+41 49.1	1.930	2.876	6.7	19.7
12 17	5 8.12	+18 30.3	1.376	2.354	3.6	19.5	12 17	5 7.63	+41 39.3	1.940	2.886	6.5	19.7
12 27	4 58.31	+18 53.9	1.400	2.347	8.4	19.8	12 27	4 57.09	+41 10.1	1.978	2.897	8.4	19.9
1 6	4 50.54	+19 21.4	1.449	2.341	12.9	20.0	1 6	4 48.72	+40 26.6	2.042	2.907	11.0	20.1
1 16	4 45.68	+19 52.7	1.520	2.335	16.8	20.2	1 16	4 43.28	+39 35.0	2.129	2.918	13.5	20.2
427157	2014 <i>UQ</i> ₁₈₃		12 11.3 240°06'	1°6/11.5	18		67815	2000 <i>VB</i> ₂₇		12 11.3 91°37'	0°5/11.4	18	
11 7	5 40.87	+26 24.0	2.390	3.204	11.7	21.0	11 7	5 48.34	+23 59.8	1.403	2.235	17.5	19.8
11 17	5 35.20	+26 58.9	2.306	3.202	8.8	20.8	11 17	5 41.50	+24 6.8	1.350	2.256	13.0	19.6
11 27	5 27.45	+27 31.4	2.248	3.199	5.6	20.6	11 27	5 31.50	+24 10.4	1.318	2.276	8.0	19.3
12 7	5 18.29	+27 59.2	2.218	3.197	2.3	20.4	12 7	5 19.54	+24 8.9	1.313	2.295	2.5	19.1
12 17	5 8.60	+28 20.6	2.218	3.195	2.6	20.4	12 17	5 7.20	+24 2.0	1.335	2.314	3.1	19.2
12 27	4 59.41	+28 35.7	2.249	3.192	5.9	20.6	12 27	4 56.20	+23 51.7	1.385	2.333	8.3	19.5
1 6	4 51.66	+28 45.4	2.307	3.190	9.2	20.8	1 6	4 47.82	+23 41.2	1.460	2.352	12.8	19.8
1 16	4 46.01	+28 51.9	2.391	3.187	12.0	21.0	1 16	4 42.77	+23 33.8	1.557	2.370	16.6	20.1
262215	2006 <i>SO</i> ₂₂₉		12 11.3 165°56'	1°6/11.7	18		387135	2012 <i>TC</i> ₁₉₆		12 11.3 207°81'	3°4/11.9	18	
11 7	5 43.21	+28 16.2	2.170	2.983	12.8	21.5	11 7	5 45.83	+31 46.1	1.820	2.634	14.8	20.6
11 17	5 37.00	+28 19.4	2.092	2.986	9.7	21.3	11 17	5 39.55	+32 5.5	1.739	2.631	11.5	20.4
11 27	5 28.53	+28 16.5	2.038	2.989	6.1	21.1	11 27	5 30.39	+32 15.8	1.681	2.628	7.6	20.2
12 7	5 18.61	+28 6.1	2.013	2.992	2.5	20.9	12 7	5 19.26	+32 13.8	1.650	2.624	4.1	20.0
12 17	5 8.25	+27 48.2	2.017	2.994	2.7	20.9	12 17	5 7.46	+31 57.9	1.648	2.620	4.1	20.0
12 27	4 58.62	+27 24.2	2.051	2.996	6.3	21.1	12 27	4 56.51	+31 29.8	1.674	2.616	7.7	20.2
1 6	4 50.69	+26 57.4	2.114	2.998	9.8	21.3	1 6	4 47.71	+30 54.1	1.727	2.612	11.6	20.4
1 16	4 45.13	+26 30.9	2.201	2.999	12.8	21.6	1 16	4 41.89	+30 16.0	1.803	2.607	15.0	20.6
167498	2003 <i>YV</i> ₈₅		12 11.3 39°19'	4°8/11.8	18		169089	2001 <i>JC</i> ₇		12 11.3 308°70'	0°2/11.3	18	
11 7	5 44.52	+8 26.1	1.359	2.188	18.2	18.7	11 7	5 41.88	+21 40.5	1.588	2.424	15.6	19.5
11 17	5 38.58	+9 7.6	1.308	2.206	14.0	18.5	11 17	5 36.98	+22 11.4	1.498	2.407	11.8	19.2
11 27	5 29.71	+10 5.5	1.279	2.226	9.4	18.3	11 27	5 29.07	+22 44.4	1.432	2.390	7.3	18.9
12 7	5 18.98	+11 18.8	1.274	2.246	5.5	18.1	12 7	5 18.93	+23 17.4	1.391	2.373	2.3	18.6
12 17	5 7.81	+12 44.0	1.297	2.267	5.6	18.2	12 17	5 7.79	+23 48.3	1.377	2.357	3.0	18.6
12 27	4 57.74	+14 16.4	1.348	2.288	9.3	18.5	12 27	4 57.23	+24 16.0	1.392	2.341	8.2	18.8
1 6	4 50.02	+15 51.2	1.424	2.311	13.4	18.8	1 6	4 48.69	+24 41.1	1.431	2.325	12.9	19.1
1 16	4 45.38	+17 24.6	1.522	2.333	17.0	19.1	1 16	4 43.17	+25 5.3	1.493	2.310	16.9	19.3
150430	2000 <i>GG</i> ₄₉		12 11.3 181°20'	0°3/11.3	18		325363	2008 <i>PM</i>		12 11.3 95°93'	2°2/10.8	18	
11 7	5 44.72	+22 54.2	1.932	2.751	13.9	20.3	11 7	5 39.27	+17 26.5	2.356	3.175	11.7	21.3
11 17	5 38.30	+22 48.3	1.853	2.753	10.4	20.1	11 17	5 33.66	+16 55.6	2.292	3.190	8.8	21.1
11 27	5 29.42	+22 39.8	1.798	2.753	6.4	19.9	11 27	5 26.30	+16 25.8	2.253	3.205	5.5	20.9
12 7	5 18.90	+22 28.3	1.771	2.753	2.0	19.6	12 7	5 17.90	+15 58.6	2.243	3.221	2.6	20.8
12 17	5 7.87	+22 14.2	1.774	2.753	2.6	19.6	12 17	5 9.28	+15 35.4	2.263	3.235	3.2	20.8
12 27	4 57.61	+21 59.1	1.806	2.752	7.0	19.9	12 27	5 1.31	+15 17.9	2.313	3.250	6.2	21.1
1 6	4 49.18	+21 45.3	1.866	2.750	10.9	20.1	1 6	4 54.74	+15 7.0	2.391	3.265	9.2	21.3
1 16	4 43.31	+21 35.1	1.950	2.747	14.3	20.4	1 16	4 50.08	+15 3.3	2.493	3.279	11.9	21.5
414710	2009 <i>WS</i> ₂₁₂		12 11.3 84°91'	1°7/11.6	18		325579	2009 <i>SX</i> ₁₃₆		12 11.3 255°65'	2°		

EPHEMERIDES

12 11.3

12 11.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
254511	2005 <i>EP</i> ₈₅		12 11.3 269°32	4°8/10.9	18		414027	2007 <i>MF</i> ₁₃		12 11.4 100°20	4°5/11.1	18	
11 7	5 43.20	+12 39.5	1.411	2.246	17.2	20.1	11 7	5 39.76	+6 54.0	2.484	3.281	11.8	20.6
11 17	5 37.89	+12 18.4	1.336	2.240	13.3	19.9	11 17	5 33.94	+6 52.0	2.421	3.298	9.3	20.4
11 27	5 29.53	+12 5.4	1.282	2.233	9.0	19.6	11 27	5 26.48	+6 59.1	2.383	3.314	6.7	20.3
12 7	5 19.04	+12 3.0	1.253	2.226	5.3	19.4	12 7	5 18.02	+7 16.5	2.373	3.331	4.8	20.2
12 17	5 7.75	+12 13.0	1.250	2.219	5.9	19.4	12 17	5 9.31	+7 44.5	2.394	3.347	5.0	20.2
12 27	4 57.28	+12 36.0	1.274	2.213	10.0	19.6	12 27	5 1.16	+8 22.4	2.444	3.362	7.0	20.4
1 6	4 49.01	+13 10.9	1.322	2.206	14.5	19.8	1 6	4 54.29	+9 8.7	2.522	3.378	9.5	20.6
1 16	4 43.87	+13 56.0	1.391	2.199	18.5	20.1	1 16	4 49.20	+10 1.3	2.625	3.393	11.8	20.8
461023	2014 <i>WU</i> ₄₂₉		12 11.3 21°69	4°8/12.7	16		451347	2010 <i>VR</i> ₂₁₈		12 11.4 63°01	4°0/10.1	15	
11 7	5 41.46	+36 20.6	1.694	2.511	15.6	20.7	11 7	5 41.93	+16 16.7	1.833	2.658	14.3	21.4
11 17	5 36.33	+36 28.0	1.632	2.521	12.3	20.5	11 17	5 35.90	+14 54.6	1.779	2.679	10.8	21.3
11 27	5 28.35	+36 20.9	1.592	2.532	8.6	20.3	11 27	5 27.75	+13 33.9	1.751	2.700	7.0	21.1
12 7	5 18.60	+35 56.8	1.577	2.544	5.5	20.2	12 7	5 18.40	+12 18.7	1.750	2.722	4.2	21.0
12 17	5 8.47	+35 15.4	1.590	2.556	5.2	20.2	12 17	5 8.90	+11 13.5	1.778	2.743	5.0	21.1
12 27	4 59.46	+34 20.2	1.629	2.570	8.0	20.4	12 27	5 0.35	+10 21.9	1.835	2.764	8.2	21.3
1 6	4 52.75	+33 17.6	1.694	2.584	11.5	20.6	1 6	4 53.63	+9 45.7	1.919	2.785	11.5	21.5
1 16	4 49.00	+32 13.8	1.783	2.599	14.6	20.9	1 16	4 49.25	+9 24.8	2.025	2.807	14.4	21.8
86112	1999 <i>RN</i> ₁₂₃		12 11.3 53°38	4°3/12.6	18		202687	2007 <i>DJ</i> ₃₈		12 11.4 123°81	1°8/11.7	18	
11 7	5 43.50	+36 10.7	2.006	2.809	14.0	18.2	11 7	5 46.54	+27 50.1	1.816	2.634	14.7	21.0
11 17	5 37.51	+36 18.0	1.934	2.815	11.0	18.0	11 17	5 39.78	+27 59.7	1.750	2.647	11.1	20.8
11 27	5 28.96	+36 12.8	1.885	2.821	7.7	17.8	11 27	5 30.36	+28 2.9	1.708	2.660	7.0	20.6
12 7	5 18.78	+35 52.3	1.862	2.828	4.9	17.6	12 7	5 19.26	+27 57.8	1.693	2.672	2.8	20.4
12 17	5 8.20	+35 16.0	1.868	2.834	4.7	17.6	12 17	5 7.74	+27 43.9	1.707	2.684	3.0	20.4
12 27	4 58.57	+34 26.8	1.903	2.840	7.3	17.8	12 27	4 57.20	+27 23.1	1.750	2.696	7.1	20.7
1 6	4 50.96	+33 29.7	1.965	2.847	10.5	18.0	1 6	4 48.77	+26 59.1	1.820	2.706	11.0	21.0
1 16	4 46.06	+32 30.5	2.050	2.854	13.5	18.2	1 16	4 43.16	+26 35.6	1.914	2.717	14.3	21.2
235896	2005 <i>CZ</i> ₆₃		12 11.3 273°53	6°9/12.8	18		247265	2001 <i>SP</i> ₁₃		12 11.4 30°51	6°0/10.6	18	
11 7	5 45.20	+44 30.5	2.470	3.233	12.8	20.7	11 7	5 38.87	+10 41.4	1.408	2.248	17.0	19.9
11 17	5 38.94	+45 13.1	2.378	3.219	10.8	20.5	11 17	5 34.25	+9 54.4	1.359	2.263	13.2	19.7
11 27	5 29.99	+45 41.8	2.309	3.206	8.7	20.3	11 27	5 27.03	+9 17.3	1.332	2.279	9.2	19.5
12 7	5 19.16	+45 51.9	2.265	3.191	7.1	20.2	12 7	5 18.23	+8 54.0	1.329	2.296	6.3	19.4
12 17	5 7.62	+45 40.4	2.249	3.177	7.0	20.2	12 17	5 9.10	+8 47.2	1.352	2.313	6.8	19.5
12 27	4 56.75	+45 7.9	2.261	3.163	8.4	20.3	12 27	5 1.01	+8 57.4	1.401	2.332	10.0	19.7
1 6	4 47.78	+44 18.6	2.300	3.149	10.6	20.4	1 6	4 55.02	+9 23.3	1.473	2.351	13.7	20.0
1 16	4 41.53	+43 18.5	2.362	3.135	12.8	20.5	1 16	4 51.75	+10 1.8	1.567	2.371	16.9	20.2
450692	2006 <i>WJ</i> ₆₁		12 11.3 33°18	0°9/11.4	18		245712	2006 <i>CQ</i> ₃₃		12 11.4 99°74	0°4/11.5	18	
11 7	5 42.46	+22 54.4	1.567	2.403	15.8	20.3	11 7	5 40.90	+24 57.5	2.328	3.145	11.9	20.9
11 17	5 37.10	+23 34.4	1.505	2.412	11.8	20.1	11 17	5 35.02	+24 50.5	2.261	3.159	8.9	20.8
11 27	5 28.91	+24 14.4	1.465	2.423	7.2	19.9	11 27	5 27.23	+24 39.8	2.220	3.174	5.4	20.6
12 7	5 18.83	+24 51.6	1.452	2.434	2.4	19.6	12 7	5 18.27	+24 25.3	2.206	3.188	1.7	20.4
12 17	5 8.17	+25 23.6	1.466	2.445	2.9	19.7	12 17	5 9.04	+24 7.4	2.223	3.202	2.1	20.4
12 27	4 58.44	+25 49.7	1.508	2.457	7.7	20.0	12 27	5 0.51	+23 47.6	2.270	3.216	5.7	20.7
1 6	4 50.87	+26 11.1	1.576	2.470	11.9	20.3	1 6	4 53.50	+23 28.1	2.346	3.230	9.0	20.9
1 16	4 46.25	+26 29.8	1.666	2.483	15.5	20.5	1 16	4 48.56	+23 11.1	2.446	3.243	11.7	21.1
122315	2000 <i>QO</i> ₁₂		12 11.4 138°49	0°9/11.5	18		517086	2013 <i>CX</i> ₁₃₅		12 11.4 305°04	8°7/11.7	18	
11 7	5 45.59	+25 53.0	1.935	2.752	14.0	20.8	11 7	5 42.29	-1 2.9	1.773	2.561	16.2	20.4
11 17	5 38.89	+25 53.5	1.865	2.763	10.5	20.6	11 17	5 36.63	-1 7.9	1.695	2.555	13.5	20.2
11 27	5 29.75	+25 49.2	1.820	2.773	6.5	20.4	11 27	5 28.53	-0 52.9	1.639	2.548	10.8	20.0
12 7	5 19.04	+25 39.0	1.802	2.783	2.2	20.2	12 7	5 18.75	-0 14.2	1.608	2.542	8.9	19.9
12 17	5 7.93	+25 22.8	1.814	2.793	2.6	20.2	12 17	5 8.36	+0 49.2	1.604	2.536	9.0	19.9
12 27	4 57.70	+25 2.6	1.856	2.802	6.8	20.5	12 27	4 58.58	+2 15.1	1.626	2.529	11.0	20.0
1 6	4 49.41	+24 41.3	1.925	2.810	10.6	20.7	1 6	4 50.51	+3 58.4	1.675	2.523	13.9	20.1
1 16	4 43.72	+24 22.0	2.018	2.818	13.8	21.0	1 16	4 44.92	+5 53.0	1.746	2.518	16.7	20.3
333273	4276 <i>T</i> ₋₂		12 11.4 64°09	3°4/11.0	18		165586	2001 <i>FH</i> ₈		12 11.4 260°56	3°1/10.7	18	
11 7	5 45.60	+16 1.1	1.308	2.147	18.1	20.7	11 7	5 40.91	+16 29.2	1.842	2.669	14.1	20.0
11 17	5 39.35	+15 43.1	1.264	2.172	13.6	20.5	11 17	5 35.58	+15 53.6	1.759	2.661	10.7	19.7
11 27	5 30.12	+15 30.3	1.242	2.197	8.6	20.3	11 27	5 27.87	+15 19.5	1.700	2.652	6.9	19.5
12 7	5 19.13	+15 24.2	1.244	2.222	4.0	20.1	12 7	5 18.54	+14 49.0	1.667	2.643	3.5	19.3
12 17	5 7.90	+15 25.5	1.273	2.248	4.7	20.2	12 17	5 8.65	+14 24.5	1.663	2.634	4.3	19.3
12 27	4 58.01	+15 35.2	1.329	2.273	9.1	20.5	12 27	4 59.40	+14 8.1	1.687	2.625	8.0	19.5
1 6	4 50.65	+15 53.1	1.410	2.298	13.5	20.8	1 6	4 51.87	+14 1.4	1.738	2.616	11.9	19.7
1 16	4 46.45	+16 18.4	1.511	2.323	17.1	21.1	1 16	4 46.79	+14 4.7	1.811	2.607	15.3	19.9
297240	1994 <i>SC</i> ₁		12 11.4 28°68	6°0/10.4	18		414683	2009 <i>WH</i> ₁₃₁		12 11.4 328°44	0°9/11.2	17	
11 7	5 39.13	+12 14.6	1.305	2.151	17.7	20.1	11 7	5 38.12	+20 55.3	1.937	2.769	13.4	21.3
11 17	5 34.63	+11 14.5	1.256	2.164	13.6	19.9	11 17	5 33.52	+20 49.7	1.852	2.758	10.0	21.1
11 27	5 27.33	+10 22.5	1.228	2.177	9.4	19.7	11 27	5 26.62	+20 43.7	1.790	2.747	6.2	20.8
12 7	5 18.31	+9 43.5	1.223	2.192	6.3	19.5	12 7	5 18.16	+20 37.4	1.755	2.737	2.1	20.5
12 17	5 8.95	+9 21.1	1.244	2.208	6.9	19.6	12 17	5 9.12	+20 31.4	1.749	2.727	2.7	20.6
12 27	5 0.70	+9 17.2	1.291	2.224	10.5	19.9	12 27	5 0.67	+20 26.7	1.771	2.718	6.9	20.8
1 6	4 54.70	+9 30.8	1.360	2.242	14.3	20.1	1 6	4 53.81	+20 24.9	1.819	2.709	10.8	21.0
1 16	4 51.60	+9 59.3	1.450	2.260	17.7	20.4	1 16	4 49.30	+20 27.2	1.891	2.701	14.2	21.2
172673	2003 <i>YH</i> ₁₂₆		12 11.4 101°21	3°5/11.7	18		17232	2000 <i>DE</i> ₃		12 11.4 255°59	3°1/11.6		

EPHEMERIDES

12 11.4

12 11.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
391911	2008 <i>UT</i> ₁₈₂		12 11.4 210°56	0°1/11.4 18			64161	2001 <i>TQ</i> ₄₅		12 11.4 1°89	5°0/11.8 17		
11 7	5 44.10	+23 1.1	1.953	2.773	13.7	21.9	11 7	5 43.00	+32 52.6	1.605	2.430	16.0	18.9
11 17	5 37.96	+23 5.4	1.868	2.768	10.3	21.6	11 17	5 37.94	+33 50.9	1.534	2.429	12.5	18.7
11 27	5 29.34	+23 7.9	1.808	2.763	6.4	21.4	11 27	5 29.69	+34 41.0	1.485	2.428	8.7	18.5
12 7	5 19.01	+23 7.5	1.775	2.757	2.0	21.1	12 7	5 19.21	+35 17.2	1.460	2.429	5.5	18.3
12 17	5 8.06	+23 4.0	1.771	2.750	2.6	21.1	12 17	5 7.90	+35 35.8	1.463	2.430	5.6	18.3
12 27	4 57.78	+22 58.4	1.798	2.743	6.9	21.4	12 27	4 57.48	+35 36.8	1.493	2.431	8.8	18.5
1 6	4 49.27	+22 52.6	1.851	2.736	10.9	21.6	1 6	4 49.39	+35 24.0	1.547	2.433	12.6	18.7
1 16	4 43.31	+22 49.0	1.928	2.728	14.3	21.8	1 16	4 44.57	+35 3.2	1.623	2.436	16.0	19.0
477317	2009 <i>SO</i> ₃₄₂		12 11.4 94°11	4°3/10.7 16			318437	2005 <i>CY</i> ₃₂		12 11.4 134°02	4°5/12.2 18		
11 7	5 45.75	+13 56.3	1.545	2.371	16.4	22.1	11 7	5 50.52	+33 51.3	1.630	2.440	16.5	21.2
11 17	5 39.12	+13 16.8	1.494	2.394	12.5	21.9	11 17	5 43.27	+34 16.7	1.564	2.451	12.8	21.0
11 27	5 29.89	+12 42.9	1.466	2.416	8.2	21.7	11 27	5 32.74	+34 30.1	1.520	2.462	8.7	20.8
12 7	5 19.11	+12 17.4	1.464	2.437	4.7	21.6	12 7	5 20.09	+34 27.0	1.503	2.472	5.2	20.6
12 17	5 8.09	+12 2.5	1.491	2.458	5.4	21.7	12 17	5 6.89	+34 5.6	1.513	2.482	5.1	20.6
12 27	4 58.20	+11 59.5	1.545	2.479	9.0	21.9	12 27	4 54.92	+33 28.7	1.552	2.491	8.5	20.8
1 6	4 50.50	+12 8.4	1.624	2.499	12.8	22.2	1 6	4 45.57	+32 42.4	1.616	2.500	12.3	21.1
1 16	4 45.62	+12 28.1	1.725	2.519	16.0	22.5	1 16	4 39.63	+31 53.6	1.704	2.508	15.8	21.3
436166	2009 <i>VM</i> ₇₄		12 11.4 221°27	2°7/10.8 18			324791	2007 <i>HT</i> ₁₀		12 11.4 337°94	4°7/10.2 17		
11 7	5 43.41	+18 26.8	1.620	2.452	15.5	21.4	11 7	5 38.01	+11 45.4	1.979	2.803	13.5	20.6
11 17	5 37.70	+17 47.1	1.543	2.448	11.8	21.2	11 17	5 33.19	+10 55.9	1.904	2.800	10.4	20.4
11 27	5 29.26	+17 7.0	1.489	2.445	7.4	20.9	11 27	5 26.30	+10 11.4	1.853	2.797	7.2	20.2
12 7	5 18.99	+16 28.7	1.461	2.440	3.3	20.7	12 7	5 18.08	+9 35.2	1.828	2.794	4.9	20.1
12 17	5 8.14	+15 54.8	1.462	2.436	4.2	20.7	12 17	5 9.43	+9 10.1	1.832	2.791	5.5	20.1
12 27	4 58.11	+15 28.4	1.490	2.432	8.6	21.0	12 27	5 1.40	+8 58.1	1.863	2.789	8.4	20.3
1 6	4 50.13	+15 11.9	1.544	2.427	12.8	21.2	1 6	4 54.89	+8 59.5	1.921	2.787	11.5	20.5
1 16	4 44.96	+15 6.1	1.620	2.422	16.5	21.5	1 16	4 50.52	+9 13.5	2.001	2.785	14.5	20.6
444477	2006 <i>PE</i> ₂₈		12 11.4 85°57	1°2/11.3 18			280926	2006 <i>AZ</i> ₄₉		12 11.4 46°91	0°4/11.3 18		
11 7	5 45.71	+17 46.6	1.931	2.748	14.0	21.2	11 7	5 43.33	+22 2.7	1.455	2.294	16.6	20.9
11 17	5 38.78	+18 13.4	1.877	2.775	10.4	21.0	11 17	5 37.91	+22 6.8	1.391	2.301	12.4	20.7
11 27	5 29.59	+18 43.3	1.848	2.802	6.4	20.9	11 27	5 29.50	+22 9.9	1.349	2.307	7.6	20.4
12 7	5 19.03	+19 14.8	1.847	2.828	2.3	20.6	12 7	5 19.11	+22 11.2	1.332	2.314	2.4	20.1
12 17	5 8.18	+19 46.8	1.877	2.855	2.8	20.7	12 17	5 8.14	+22 10.5	1.342	2.321	3.1	20.2
12 27	4 58.22	+20 18.4	1.937	2.880	6.7	21.0	12 27	4 58.20	+22 9.1	1.379	2.329	8.2	20.5
1 6	4 50.12	+20 49.8	2.024	2.906	10.3	21.3	1 6	4 50.56	+22 9.1	1.442	2.336	12.8	20.8
1 16	4 44.47	+21 21.4	2.136	2.930	13.3	21.6	1 16	4 46.03	+22 12.4	1.526	2.344	16.6	21.1
373258	2012 <i>GN</i> ₃₈		12 11.4 193°08	4°3/10.4 17			305037	2007 <i>TU</i> ₄₂₅		12 11.4 152°02	1°7/11.0 18		
11 7	5 37.60	+9 17.0	2.595	3.400	11.2	22.0	11 7	5 42.10	+18 58.8	1.996	2.818	13.4	21.8
11 17	5 32.42	+8 44.4	2.516	3.399	8.7	21.9	11 17	5 36.23	+18 40.2	1.922	2.823	10.0	21.6
11 27	5 25.63	+8 17.7	2.462	3.397	6.2	21.7	11 27	5 28.15	+18 22.0	1.873	2.827	6.2	21.4
12 7	5 17.81	+7 59.3	2.436	3.395	4.5	21.6	12 7	5 18.65	+18 5.1	1.851	2.831	2.5	21.2
12 17	5 9.67	+7 50.6	2.440	3.393	4.9	21.6	12 17	5 8.73	+17 50.4	1.859	2.835	3.1	21.2
12 27	5 1.99	+7 52.7	2.474	3.391	7.0	21.7	12 27	4 59.53	+17 39.7	1.896	2.839	7.0	21.5
1 6	4 55.46	+8 5.3	2.535	3.389	9.5	21.9	1 6	4 52.00	+17 34.2	1.961	2.842	10.6	21.7
1 16	4 50.60	+8 27.4	2.620	3.386	11.9	22.1	1 16	4 46.80	+17 34.9	2.049	2.844	13.8	21.9
494557	2017 <i>BO</i> ₈		12 11.4 324°84	2°8/11.3 18			291825	2006 <i>KL</i> ₁₄₃		12 11.4 58°96	4°0/11.1 18		
11 7	5 41.18	+14 11.1	1.720	2.549	14.9	20.5	11 7	5 45.52	+15 8.8	1.149	1.996	19.5	20.6
11 17	5 36.03	+14 31.2	1.639	2.541	11.4	20.3	11 17	5 39.71	+14 47.9	1.105	2.016	14.8	20.4
11 27	5 28.29	+14 59.4	1.580	2.533	7.3	20.0	11 27	5 30.57	+14 34.0	1.081	2.037	9.5	20.1
12 7	5 18.73	+15 35.6	1.548	2.526	3.5	19.8	12 7	5 19.40	+14 29.1	1.080	2.057	4.7	19.9
12 17	5 8.44	+16 18.7	1.544	2.519	3.9	19.8	12 17	5 7.88	+14 34.2	1.104	2.078	5.4	20.0
12 27	4 58.76	+17 7.3	1.569	2.513	8.0	20.0	12 27	4 57.80	+14 49.8	1.154	2.099	10.1	20.4
1 6	4 50.87	+18 0.0	1.620	2.507	12.1	20.3	1 6	4 50.49	+15 15.2	1.228	2.120	14.7	20.7
1 16	4 45.60	+18 55.4	1.694	2.501	15.7	20.5	1 16	4 46.64	+15 48.9	1.321	2.141	18.6	21.0
159608	2002 <i>AC</i> ₂		12 11.4 64°96	30°4/12.1 17			473698	2015 <i>YP</i> ₆		12 11.4 4°89	1°1/11.7 17		
11 7	7 20.63	-57 20.1	1.134	1.475	42.2	19.3	11 7	5 40.60	+28 0.1	2.032	2.853	13.2	20.2
11 17	6 47.58	-56 48.5	1.099	1.525	40.3	19.2	11 17	5 35.21	+27 37.8	1.954	2.853	10.0	20.0
11 27	6 8.75	-54 44.5	1.066	1.575	38.1	19.2	11 27	5 27.56	+27 8.3	1.900	2.853	6.2	19.8
12 7	5 29.80	-50 39.0	1.042	1.623	35.6	19.1	12 7	5 18.47	+26 31.2	1.873	2.854	2.3	19.5
12 17	4 56.40	-44 29.3	1.037	1.671	33.2	19.1	12 17	5 8.98	+25 47.8	1.876	2.855	2.5	19.5
12 27	4 31.56	-36 45.1	1.059	1.717	31.4	19.1	12 27	5 0.25	+25 1.0	1.908	2.855	6.5	19.8
1 6	4 15.30	-28 17.5	1.111	1.761	30.6	19.3	1 6	4 53.27	+24 14.7	1.967	2.857	10.2	20.0
1 16	4 6.26	-19 55.8	1.195	1.805	30.5	19.5	1 16	4 48.65	+23 32.4	2.051	2.858	13.3	20.2
220790	2004 <i>TJ</i> ₁₇₅		12 11.4 19°62	4°1/11.8 17			243900	2001 <i>DC</i> ₆₁		12 11.4 260°50	7°2/10.4 18		
11 7	5 42.73	+32 15.3	1.895	2.711	14.2	20.0	11 7	5 40.39	+4 58.1	1.839	2.648	14.9	20.3
11 17	5 37.22	+33 5.1	1.823	2.714	11.0	19.8	11 17	5 35.16	+4 17.9	1.761	2.640	12.1	20.1
11 27	5 29.01	+33 47.4	1.775	2.718	7.6	19.6	11 27	5 27.63	+3 49.7	1.704	2.631	9.2	19.9
12 7	5 18.94	+34 18.2	1.752	2.722	4.6	19.4	12 7	5 18.53	+3 37.4	1.674	2.622	7.3	19.7
12 17	5 8.23	+34 34.5	1.758	2.726	4.7	19.4	12 17	5 8.86	+3 43.7	1.670	2.613	7.7	19.8
12 27	4 58.28	+34 36.7	1.792	2.730	7.7	19.6	12 27	4 59.78	+4 9.3	1.694	2.604	10.2	19.9
1 6	4 50.32	+34 27.8	1.853	2.735	11.1	19.8	1 6	4 52.32	+4 52.4	1.742	2.595	13.2	20.0
1 16	4 45.14	+34 12.1	1.936	2.740	14.1	20.0	1 16	4 47.20	+5 49.8	1.812	2.585	16.2	20.2
482735	2013 <i>EK</i> ₉₃		12 11.4 288°20	5°6/9.6 17			240965	2006 <i>HU</i> ₁₁₃		12 11.4 337°97	1°2/11.2 18		

EPHEMERIDES

12 11.4

12 11.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
457961	2009 <i>VV</i> ₆₉		12 11.4	39°84	0°3/11.5	16	241646	2000 <i>DA</i> ₇₂		12 11.4	318°79	0°8/11.2	18
11 7	5 40.09	+24 50.6	1.873	2.702	13.9	21.5	11 7	5 38.28	+21 13.3	1.854	2.688	13.8	20.9
11 17	5 34.86	+24 39.9	1.810	2.714	10.3	21.3	11 17	5 33.90	+21 7.0	1.757	2.665	10.4	20.6
11 27	5 27.33	+24 25.1	1.771	2.727	6.3	21.1	11 27	5 27.05	+21 0.0	1.684	2.642	6.5	20.3
12 7	5 18.39	+24 6.1	1.758	2.741	2.0	20.9	12 7	5 18.42	+20 52.3	1.637	2.620	2.1	20.0
12 17	5 9.12	+23 43.8	1.775	2.754	2.5	20.9	12 17	5 9.04	+20 44.5	1.619	2.598	2.8	20.0
12 27	5 0.71	+23 20.1	1.820	2.768	6.6	21.2	12 27	5 0.15	+20 37.7	1.628	2.576	7.3	20.2
1 6	4 54.11	+22 57.9	1.892	2.783	10.4	21.5	1 6	4 52.90	+20 33.8	1.664	2.556	11.5	20.5
1 16	4 49.93	+22 39.5	1.987	2.797	13.6	21.7	1 16	4 48.13	+20 34.3	1.722	2.535	15.2	20.6
381046	2006 <i>VO</i> ₁₄₈		12 11.4	357°77	2°7/11.2	18	76521	2000 <i>GK</i> ₄₇		12 11.4	184°83	1°3/11.0	18
11 7	5 41.28	+17 0.6	1.232	2.083	18.2	20.3	11 7	5 38.08	+19 7.2	2.781	3.595	10.3	19.8
11 17	5 36.85	+16 59.6	1.166	2.081	13.8	20.0	11 17	5 32.75	+18 49.5	2.699	3.595	7.7	19.6
11 27	5 29.11	+17 4.2	1.120	2.079	8.7	19.7	11 27	5 25.85	+18 31.9	2.642	3.595	4.8	19.4
12 7	5 19.06	+17 14.8	1.098	2.078	3.7	19.4	12 7	5 17.95	+18 15.0	2.614	3.594	1.9	19.2
12 17	5 8.22	+17 31.5	1.101	2.078	4.4	19.5	12 17	5 9.73	+17 59.6	2.617	3.593	2.4	19.2
12 27	4 58.36	+17 54.5	1.129	2.078	9.6	19.8	12 27	5 1.98	+17 47.0	2.651	3.592	5.3	19.4
1 6	4 51.00	+18 23.5	1.181	2.080	14.6	20.1	1 6	4 55.37	+17 38.1	2.714	3.590	8.2	19.6
1 16	4 47.04	+18 58.2	1.252	2.082	18.8	20.3	1 16	4 50.41	+17 33.9	2.803	3.589	10.7	19.8
194939	2002 <i>AH</i> ₁₅₀		12 11.4	27°83	1°2/11.5	18	218106	2002 <i>OO</i> ₁₅		12 11.4	300°40	0°6/11.6	18
11 7	5 42.15	+25 25.0	1.177	2.030	18.8	19.9	11 7	5 45.31	+27 40.1	1.408	2.243	17.3	19.7
11 17	5 37.53	+25 33.3	1.125	2.041	14.1	19.6	11 17	5 39.63	+26 56.5	1.332	2.239	13.1	19.4
11 27	5 29.44	+25 36.7	1.093	2.053	8.7	19.3	11 27	5 30.67	+26 1.5	1.278	2.235	8.1	19.1
12 7	5 19.11	+25 33.2	1.084	2.066	3.0	19.1	12 7	5 19.53	+24 55.5	1.249	2.231	2.7	18.8
12 17	5 8.25	+25 22.8	1.101	2.081	3.5	19.1	12 17	5 7.75	+23 41.5	1.247	2.227	3.2	18.8
12 27	4 58.74	+25 7.6	1.143	2.096	9.0	19.5	12 27	4 57.12	+22 25.8	1.273	2.223	8.7	19.2
1 6	4 52.01	+24 51.9	1.208	2.112	13.9	19.8	1 6	4 49.03	+21 15.4	1.324	2.219	13.6	19.4
1 16	4 48.84	+24 39.1	1.293	2.129	18.0	20.1	1 16	4 44.31	+20 16.0	1.397	2.216	17.8	19.7
320611	2008 <i>CT</i> ₁₁		12 11.4	107°82	1°0/11.2	18	299411	2005 <i>YN</i> ₅₈		12 11.4	25°82	0°5/11.3	18
11 7	5 41.56	+20 8.3	2.005	2.829	13.3	20.9	11 7	5 35.87	+22 2.4	2.674	3.494	10.4	21.1
11 17	5 35.85	+20 7.6	1.935	2.836	9.9	20.7	11 17	5 31.19	+21 52.0	2.599	3.499	7.8	20.9
11 27	5 27.93	+20 7.4	1.888	2.844	6.1	20.5	11 27	5 24.92	+21 40.3	2.549	3.505	4.7	20.8
12 7	5 18.60	+20 7.4	1.869	2.851	2.1	20.3	12 7	5 17.66	+21 27.6	2.528	3.511	1.5	20.5
12 17	5 8.85	+20 7.8	1.880	2.858	2.7	20.3	12 17	5 10.11	+21 14.4	2.538	3.517	2.0	20.6
12 27	4 59.81	+20 9.5	1.920	2.865	6.6	20.6	12 27	5 3.07	+21 1.9	2.577	3.523	5.1	20.8
1 6	4 52.45	+20 13.6	1.987	2.872	10.3	20.8	1 6	4 57.21	+20 51.4	2.645	3.529	8.1	21.0
1 16	4 47.39	+20 21.0	2.079	2.879	13.4	21.1	1 16	4 53.02	+20 43.9	2.738	3.536	10.6	21.2
478584	2012 <i>TR</i> ₀₆		12 11.4	36°30	2°6/10.9	18	440820	2006 <i>RY</i>		12 11.4	96°35	6°5/12.7	18
11 7	5 41.94	+19 5.9	1.422	2.264	16.7	21.1	11 7	5 49.84	+40 50.3	2.056	2.835	14.6	20.9
11 17	5 36.80	+18 27.9	1.359	2.270	12.6	20.9	11 17	5 42.42	+41 43.7	1.998	2.856	11.8	20.8
11 27	5 28.77	+17 50.0	1.318	2.276	7.9	20.6	11 27	5 32.10	+42 22.5	1.963	2.877	9.0	20.7
12 7	5 18.88	+17 14.2	1.302	2.282	3.3	20.4	12 7	5 19.92	+42 41.4	1.954	2.897	6.9	20.6
12 17	5 8.52	+16 43.2	1.313	2.289	4.2	20.5	12 17	5 7.28	+42 37.8	1.974	2.916	6.7	20.6
12 27	4 59.19	+16 20.1	1.351	2.297	8.8	20.8	12 27	4 55.73	+42 13.5	2.021	2.936	8.5	20.8
1 6	4 52.12	+16 7.0	1.414	2.304	13.3	21.0	1 6	4 46.51	+41 33.8	2.095	2.955	11.0	20.9
1 16	4 48.05	+16 4.6	1.497	2.312	17.0	21.3	1 16	4 40.35	+40 45.4	2.193	2.973	13.5	21.2
429080	2009 <i>QW</i> ₄₄		12 11.4	91°33	3°6/12.1	18	67424	2000 <i>QF</i> ₀₂		12 11.4	330°06	6°4/12.5	18
11 7	5 49.06	+31 52.6	1.492	2.314	17.2	21.2	11 7	5 43.34	+35 17.2	1.115	1.959	20.2	17.8
11 17	5 42.19	+32 7.0	1.435	2.331	13.2	21.0	11 17	5 39.52	+35 45.6	1.041	1.946	16.1	17.5
11 27	5 32.05	+32 10.2	1.400	2.348	8.7	20.8	11 27	5 31.32	+35 57.9	0.985	1.933	11.4	17.2
12 7	5 19.88	+31 58.5	1.390	2.365	4.5	20.6	12 7	5 19.89	+35 46.9	0.951	1.921	7.2	16.9
12 17	5 7.30	+31 31.3	1.408	2.382	4.4	20.6	12 17	5 7.21	+35 9.0	0.939	1.910	7.0	16.9
12 27	4 56.08	+30 52.1	1.454	2.398	8.4	20.9	12 27	4 55.79	+34 7.8	0.952	1.900	11.2	17.1
1 6	4 47.57	+30 6.9	1.525	2.415	12.5	21.2	1 6	4 47.70	+32 52.9	0.986	1.891	16.2	17.3
1 16	4 42.48	+29 22.1	1.618	2.430	16.1	21.4	1 16	4 44.08	+31 35.4	1.039	1.883	20.8	17.6
320946	2008 <i>HL</i> ₁		12 11.4	178°81	2°8/10.9	18	222392	2001 <i>EV</i>		12 11.4	258°30	1°5/11.6	18
11 7	5 39.54	+13 33.9	2.587	3.396	11.1	22.2	11 7	5 40.84	+26 41.8	2.295	3.110	12.1	20.2
11 17	5 33.90	+13 21.4	2.507	3.398	8.4	22.0	11 17	5 35.34	+27 2.3	2.207	3.104	9.1	20.0
11 27	5 26.57	+13 12.9	2.453	3.399	5.6	21.9	11 27	5 27.69	+27 19.3	2.145	3.097	5.8	19.8
12 7	5 18.16	+13 9.4	2.427	3.399	3.1	21.7	12 7	5 18.57	+27 31.1	2.111	3.091	2.3	19.5
12 17	5 9.40	+13 11.7	2.431	3.399	3.6	21.7	12 17	5 8.91	+27 36.8	2.106	3.084	2.6	19.5
12 27	5 1.12	+13 20.3	2.467	3.399	6.2	21.9	12 27	4 59.78	+27 36.6	2.132	3.077	6.1	19.8
1 6	4 54.05	+13 35.3	2.530	3.398	9.0	22.1	1 6	4 52.13	+27 32.5	2.185	3.070	9.5	20.0
1 16	4 48.73	+13 56.3	2.619	3.397	11.6	22.3	1 16	4 46.66	+27 26.7	2.263	3.063	12.5	20.1
22507	1997 <i>WA</i> ₃₁		12 11.4	138°72	0°3/11.4	18	105845	2000 <i>SB</i> ₁₆₃		12 11.4	54°27	7°9/12.9	18
11 7	5 45.63	+23 30.2	1.924	2.742	14.0	19.2	11 7	5 48.28	+42 28.6	1.791	2.578	16.1	19.2
11 17	5 38.99	+23 38.4	1.854	2.753	10.5	19.0	11 17	5 41.76	+43 32.0	1.736	2.595	13.2	19.0
11 27	5 29.89	+23 44.2	1.809	2.764	6.4	18.8	11 27	5 31.92	+44 18.3	1.702	2.612	10.4	18.9
12 7	5 19.22	+23 46.5	1.792	2.774	2.0	18.5	12 7	5 19.90	+44 41.3	1.693	2.630	8.3	18.8
12 17	5 8.11	+23 44.9	1.804	2.783	2.5	18.6	12 17	5 7.32	+44 37.6	1.711	2.648	8.1	18.8
12 27	4 57.83	+23 40.5	1.846	2.792	6.8	18.9	12 27	4 55.97	+44 9.2	1.755	2.666	9.8	19.0
1 6	4 49.45	+23 35.3	1.916	2.800	10.6	19.1	1 6	4 47.27	+43 22.6	1.824	2.684	12.3	19.2
1 16	4 43.65	+23 31.7	2.009	2.808	13.9	19.4	1 16	4 42.00	+42 25.6	1.915	2.703	14.9	19.4
119130	2001 <i>OT</i> ₁₁₁		12 11.4	33°57	2°2/11.1	18	403645	2010 <i>TE</i> ₄₃		12 11.4	9°86	0°4/11.5	

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
391531	2007 RV ₂₈₁	12 11.4 66°33' 19.7"/11.9 16											
11 7	6 7.28	+51 37.5	0.970	1.757	26.6	20.4	363852	2005 QX ₁₂₄	12 11.4 91°55' 3.1"/10.9 18				
11 17	6 1.34	+55 12.8	0.934	1.769	23.8	20.2	11 7	5 40.19	+14 53.6	1.981	2.804	13.4	21.3
11 27	5 47.00	+58 17.2	0.915	1.782	21.3	20.1	11 17	5 34.83	+14 33.8	1.910	2.809	10.2	21.1
12 7	5 25.27	+60 25.3	0.914	1.795	19.8	20.1	11 27	5 27.34	+14 17.9	1.863	2.813	6.6	20.9
12 17	5 0.22	+61 18.9	0.931	1.808	19.8	20.1	12 7	5 18.49	+14 7.5	1.843	2.818	3.5	20.7
12 27	4 38.08	+60 59.3	0.966	1.821	21.1	20.3	12 17	5 9.23	+14 3.8	1.852	2.823	4.0	20.8
1 6	4 23.47	+59 46.5	1.016	1.834	23.1	20.4	12 27	5 0.64	+14 7.6	1.890	2.827	7.4	21.0
1 16	4 17.76	+58 4.7	1.081	1.847	25.3	20.7	1 6	4 53.65	+14 19.3	1.954	2.832	10.8	21.2
64525	2001 VU ₁₀₁	12 11.4 251°39' 0.4"/11.5 18											
11 7	5 41.48	+25 33.4	2.021	2.843	13.3	20.3	1 16	4 48.88	+14 38.4	2.042	2.836	13.9	21.4
11 17	5 35.92	+25 14.7	1.939	2.840	10.0	20.0	382157	2012 GS ₁₈	12 11.4 207°27' 0.4"/11.4 18				
11 27	5 28.06	+24 50.9	1.881	2.836	6.1	19.8	11 7	5 47.30	+21 13.0	1.812	2.631	14.7	21.7
12 7	5 18.69	+24 21.6	1.851	2.833	2.0	19.5	11 17	5 40.63	+21 26.7	1.726	2.625	11.1	21.5
12 17	5 8.86	+23 48.0	1.850	2.830	2.4	19.6	11 27	5 31.19	+21 40.8	1.664	2.619	6.9	21.2
12 27	4 59.74	+23 12.5	1.879	2.826	6.6	19.8	12 7	5 19.78	+21 53.9	1.630	2.612	2.2	20.9
1 6	4 52.33	+22 28.4	1.935	2.823	10.4	20.0	12 17	5 7.61	+22 4.9	1.625	2.604	2.8	20.9
1 16	4 47.30	+22 8.5	2.015	2.819	13.7	20.3	12 27	4 56.12	+22 14.2	1.649	2.595	7.5	21.2
459429	2012 SS ₅₁	12 11.4 258°35' 20.2"/ 5.0 17											
11 7	5 43.53	-10 40.6	1.108	1.897	23.9	20.8	1 6	4 46.56	+22 23.1	1.701	2.585	11.8	21.4
11 17	5 38.65	-13 47.0	1.063	1.891	21.9	20.7	1 16	4 39.80	+22 33.6	1.777	2.574	15.5	21.7
11 27	5 30.27	-16 22.3	1.034	1.886	20.5	20.6	421900	2014 QT ₂₀₉	12 11.4 5°86' 0.1"/11.4 18				
12 7	5 19.49	-18 10.2	1.024	1.880	20.2	20.5	11 7	5 40.07	+23 20.3	1.862	2.692	13.9	21.1
12 17	5 7.88	-18 59.5	1.031	1.875	21.0	20.6	11 17	5 35.04	+23 14.8	1.787	2.692	10.4	20.9
12 27	4 57.35	-18 47.7	1.055	1.869	22.7	20.7	11 27	5 27.62	+23 6.8	1.735	2.692	6.4	20.6
1 6	4 49.43	-17 41.9	1.094	1.863	24.8	20.8	12 7	5 18.63	+22 56.0	1.711	2.693	2.0	20.4
1 16	4 45.07	-15 53.9	1.145	1.858	26.9	20.9	12 17	5 9.15	+22 42.8	1.715	2.694	2.5	20.4
311748	2006 TD ₃₄	12 11.4 96°62' 0°3"/11.4 18											
11 7	5 44.68	+22 24.1	2.015	2.832	13.5	21.2	12 27	5 0.40	+22 28.8	1.747	2.696	6.9	20.7
11 17	5 38.14	+22 50.1	1.954	2.852	10.0	21.0	1 6	4 53.43	+22 16.2	1.807	2.698	10.8	20.9
11 27	5 29.32	+23 15.5	1.917	2.872	6.1	20.8	1 16	4 48.92	+22 7.0	1.889	2.700	14.2	21.1
12 7	5 19.07	+23 38.4	1.909	2.891	1.9	20.5	439646	2014 GD ₄₇	12 11.4 34°27' 8.4"/ 9.4 18				
12 17	5 8.46	+23 57.7	1.930	2.910	2.4	20.6	11 7	5 39.82	+ 6 35.8	1.526	2.351	16.7	20.6
12 27	4 58.66	+24 13.4	1.982	2.928	6.4	20.9	11 17	5 34.92	+ 5 4.9	1.469	2.357	13.4	20.4
1 6	4 50.65	+24 26.7	2.062	2.946	10.0	21.2	11 27	5 27.54	+ 3 44.9	1.434	2.364	10.3	20.2
1 16	4 45.06	+24 39.3	2.166	2.964	13.0	21.4	12 7	5 18.59	+ 2 42.6	1.424	2.371	8.4	20.1
38539	1999 UH ₅₂	12 11.4 151°33' 3°2"/10.8 18											
11 7	5 39.14	+12 7.5	2.668	3.475	10.9	19.7	12 17	5 9.25	+ 2 3.2	1.440	2.379	9.1	20.2
11 17	5 33.51	+11 50.8	2.595	3.482	8.3	19.6	12 27	5 0.80	+ 1 49.0	1.481	2.387	11.7	20.4
11 27	5 26.31	+11 38.8	2.547	3.490	5.6	19.4	1 6	4 54.30	+ 1 59.0	1.545	2.395	14.8	20.6
12 7	5 18.12	+11 32.7	2.528	3.497	3.5	19.3	1 16	4 50.41	+ 2 29.3	1.629	2.404	17.6	20.8
12 17	5 9.65	+11 33.5	2.539	3.503	3.8	19.3	403481	2009 UL ₂₇	12 11.4 39°32' 4°5"/10.5 18				
12 27	5 1.67	+11 41.6	2.581	3.509	6.2	19.5	11 7	5 41.34	+14 41.9	1.554	2.389	15.9	20.0
1 6	4 54.86	+11 56.9	2.651	3.515	8.8	19.6	11 17	5 35.71	+13 37.9	1.518	2.422	12.0	19.9
1 16	4 49.74	+12 18.8	2.746	3.520	11.2	19.8	11 27	5 27.78	+12 39.2	1.506	2.456	7.9	19.7
489503	2007 LR ₂₈	12 11.4 182°76' 2°9"/11.0 17											
11 7	5 39.04	+13 7.6	2.449	3.261	11.5	21.9	12 7	5 18.59	+11 49.7	1.519	2.491	4.8	19.6
11 17	5 33.66	+13 3.3	2.369	3.261	8.8	21.7	12 17	5 9.36	+11 12.5	1.560	2.526	5.4	19.7
11 27	5 26.51	+13 4.0	2.315	3.261	5.8	21.6	12 27	5 1.27	+10 49.8	1.628	2.561	8.7	20.0
12 7	5 18.21	+13 10.5	2.288	3.261	3.3	21.4	1 6	4 55.21	+10 41.7	1.721	2.597	12.1	20.3
12 17	5 9.53	+13 23.3	2.292	3.261	3.7	21.4	1 16	4 51.68	+10 46.8	1.836	2.632	15.1	20.6
12 27	5 1.32	+13 42.5	2.326	3.260	6.4	21.6	280009	2001 VM ₆	12 11.4 34°50' 0°7"/11.5 18				
1 6	4 54.38	+14 7.9	2.388	3.259	9.4	21.8	11 7	5 43.57	+24 46.1	1.392	2.232	17.1	20.4
1 16	4 49.25	+14 38.7	2.475	3.259	12.0	22.0	11 17	5 38.32	+24 50.1	1.328	2.238	12.9	20.1
40479	1999 RQ ₆₀	12 11.4 53°49' 0°5"/11.3 18											
11 7	5 42.71	+22 54.4	1.609	2.443	15.5	18.6	11 27	5 29.91	+24 50.1	1.285	2.243	8.0	19.9
11 17	5 37.23	+22 39.0	1.540	2.447	11.6	18.4	12 7	5 19.40	+24 44.6	1.267	2.250	2.6	19.6
11 27	5 29.01	+22 20.6	1.494	2.452	7.1	18.1	12 17	5 8.28	+24 33.5	1.276	2.256	3.1	19.6
12 7	5 19.02	+21 59.4	1.475	2.457	2.2	17.8	12 27	4 58.25	+24 18.8	1.312	2.263	8.3	19.9
12 17	5 8.53	+21 36.4	1.483	2.462	2.9	17.9	1 6	4 50.67	+24 3.9	1.372	2.270	13.0	20.2
12 27	4 58.98	+21 14.1	1.519	2.467	7.7	18.2	1 16	4 46.36	+23 52.1	1.454	2.278	17.0	20.5
1 6	4 51.53	+20 55.2	1.581	2.473	12.0	18.5	353376	2011 LD ₈	12 11.4 168°49' 14°6"/13.3 18				
1 16	4 46.93	+20 42.2	1.665	2.478	15.7	18.7	11 7	5 49.84	-10 10.4	1.284	2.050	22.4	20.3
156419	2002 AJ ₈₂	12 11.4 85°30' 4°1"/11.1 18											
11 7	5 44.32	+12 47.8	1.595	2.421	16.0	19.1	11 17	5 43.02	-10 35.5	1.223	2.052	19.6	20.1
11 17	5 38.14	+12 33.3	1.541	2.439	12.2	18.9	11 27	5 32.82	-10 25.4	1.179	2.053	16.9	19.9
11 27	5 29.42	+12 26.4	1.509	2.457	8.1	18.7	12 7	5 20.33	- 9 32.1	1.156	2.055	15.0	19.8
12 7	5 19.12	+12 28.5	1.503	2.476	4.6	18.6	12 17	5 7.10	- 7 53.3	1.155	2.056	14.8	19.8
12 17	5 8.48	+12 40.4	1.525	2.494	5.1	18.6	12 27	4 54.94	- 5 33.8	1.178	2.056	16.4	19.9
12 27	4 58.83	+13 2.2	1.575	2.511	8.6	18.9	1 6	4 45.32	- 2 45.2	1.225	2.057	19.0	20.1
1 6	4 51.25	+13 32.7	1.650	2.529	12.4	19.1	1 16	4 39.18	+ 0 19.1	1.291	2.056	21.9	20.3
1 16	4 46.40	+14 10.5	1.748	2.546	15.7	19.4	406083	2006 US ₁₄₉	12 11.4 62°90' 2°6"/11.4 18				
495666	2016 AG ₁₂₂	12 11.4 337°52' 6°4"/10.5 17											
11 7	5 36.97	+ 4 40.2	2.116	2.923	13.3	20.6	11 7	5 43.20	+14 6.0	1.775	2.597	14.8	20.2
11 17	5 32.35	+ 4 9.5	2.040	2.917	10.7	20.5	11 17	5 37.32	+14 31.6	1.710	2.608	11.2	20.0
11 27	5 25.81	+ 3 49.9	1.988	2.912	8.2	20.3	11 27	5 29.00	+15 4.8	1.668	2.620	7.1	19.8
12 7	5 18.02	+ 3 44.6	1.961	2.908	6.5	20.2	12 7	5 19.09	+15 44.7	1.653	2.631	3.3	19.6
12 17	5 9.79	+ 3 55.5	1.962	2.903	6.9	20.2	12 17	5 8.70	+16 30.0	1.668	2.643	3.7	19.7
12 27	5 2.09	+ 4 22.9	1.990	2.899									

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
352151	2007 <i>PC</i> ₁₀		12 11.4 111°86'	7°0'/10.9 18			326248	2012 <i>DB</i> ₂₆		12 11.4 304°67'	5°1'/10.6 18		
11 7	5 43.30	+ 2 45.1	2.026	2.816	14.4	21.2	11 7	5 38.51	+ 8 56.7	2.102	2.916	13.1	20.2
11 17	5 36.88	+ 2 15.7	1.971	2.837	11.6	21.0	11 17	5 33.54	+ 8 27.0	2.025	2.913	10.3	20.0
11 27	5 28.48	+ 1 59.9	1.940	2.856	8.9	20.9	11 27	5 26.60	+ 8 5.2	1.972	2.910	7.4	19.8
12 7	5 18.88	+ 2 0.6	1.935	2.875	7.2	20.9	12 7	5 18.36	+ 7 53.9	1.946	2.907	5.3	19.7
12 17	5 9.03	+ 2 19.0	1.959	2.894	7.4	20.9	12 17	5 9.68	+ 7 54.9	1.948	2.904	5.7	19.7
12 27	4 59.96	+ 2 54.6	2.011	2.912	9.3	21.1	12 27	5 1.56	+ 8 8.9	1.979	2.901	8.2	19.9
1 6	4 52.49	+ 3 44.7	2.089	2.929	11.9	21.3	1 6	4 54.84	+ 8 35.2	2.036	2.898	11.2	20.0
1 16	4 47.20	+ 4 45.8	2.190	2.946	14.2	21.5	1 16	4 50.16	+ 9 12.0	2.115	2.895	13.9	20.2
326039	2010 <i>XM</i> ₆₅		12 11.4 51°29'	5°7'/12.1 18			227542	2005 <i>YN</i> ₁₁₅		12 11.4 146°09'	1°1'/11.2 18		
11 7	5 45.56	+36 24.5	1.908	2.711	14.7	19.6	11 7	5 40.09	+18 50.0	2.772	3.582	10.4	21.3
11 17	5 39.51	+37 26.6	1.841	2.720	11.7	19.4	11 17	5 34.27	+18 52.5	2.697	3.591	7.8	21.2
11 27	5 30.55	+38 18.0	1.798	2.729	8.5	19.2	11 27	5 26.84	+18 56.0	2.648	3.600	4.8	21.0
12 7	5 19.62	+38 53.3	1.781	2.738	6.1	19.1	12 7	5 18.40	+19 0.4	2.628	3.609	1.8	20.8
12 17	5 8.03	+39 9.3	1.792	2.748	6.1	19.1	12 17	5 9.67	+19 5.8	2.640	3.617	2.2	20.9
12 27	4 57.31	+39 6.4	1.831	2.758	8.4	19.3	12 27	5 1.42	+19 12.6	2.683	3.625	5.2	21.1
1 6	4 48.76	+38 48.4	1.895	2.768	11.4	19.5	1 6	4 54.36	+19 21.3	2.755	3.632	8.1	21.3
1 16	4 43.20	+38 21.3	1.983	2.778	14.2	19.7	1 16	4 49.00	+19 32.5	2.853	3.639	10.5	21.5
176973	2002 <i>XH</i> ₆₃		12 11.4 63°70'	1°6'/11.8 18			315719	2008 <i>ET</i> ₁₁₉		12 11.4 339°38'	3°0'/11.8 17		
11 7	5 43.20	+28 47.6	1.804	2.627	14.6	19.6	11 7	5 41.79	+29 29.2	1.655	2.485	15.4	20.9
11 17	5 37.42	+28 34.9	1.735	2.634	11.0	19.4	11 17	5 36.91	+29 56.5	1.577	2.478	11.8	20.7
11 27	5 29.08	+28 14.2	1.688	2.641	7.0	19.2	11 27	5 29.09	+30 17.4	1.520	2.472	7.7	20.4
12 7	5 19.11	+27 44.4	1.669	2.649	2.8	18.9	12 7	5 19.22	+30 28.4	1.489	2.466	3.8	20.2
12 17	5 8.74	+27 6.5	1.678	2.656	2.9	18.9	12 17	5 8.59	+30 27.8	1.486	2.461	3.9	20.2
12 27	4 59.30	+26 23.5	1.716	2.664	7.0	19.2	12 27	4 58.75	+30 16.4	1.510	2.457	7.9	20.4
1 6	4 51.90	+25 39.7	1.781	2.672	10.9	19.5	1 6	4 51.03	+29 57.8	1.559	2.453	12.1	20.6
1 16	4 47.19	+24 59.3	1.869	2.679	14.3	19.7	1 16	4 46.31	+29 36.4	1.631	2.449	15.7	20.9
349263	2007 <i>TD</i> ₁₈₈		12 11.4 36°85'	3°3'/11.2 18			472914	2015 <i>GT</i> ₂		12 11.4 178°90'	2°3'/11.0 18		
11 7	5 41.39	+15 17.0	1.400	2.241	17.0	19.9	11 7	5 45.43	+18 23.5	1.772	2.594	14.8	21.9
11 17	5 36.38	+15 8.2	1.346	2.255	12.8	19.7	11 17	5 39.06	+17 57.6	1.696	2.596	11.2	21.7
11 27	5 28.55	+15 5.5	1.314	2.269	8.2	19.4	11 27	5 30.12	+17 32.3	1.644	2.598	7.0	21.5
12 7	5 18.96	+15 10.2	1.306	2.284	4.0	19.2	12 7	5 19.49	+17 8.8	1.619	2.598	3.0	21.2
12 17	5 8.94	+15 22.6	1.326	2.300	4.6	19.3	12 17	5 8.32	+16 48.5	1.623	2.598	3.7	21.3
12 27	4 59.96	+15 43.0	1.371	2.316	8.8	19.6	12 27	4 57.97	+16 33.6	1.656	2.597	7.9	21.5
1 6	4 53.21	+16 10.7	1.442	2.333	13.0	19.9	1 6	4 49.54	+16 25.9	1.716	2.596	11.9	21.8
1 16	4 49.38	+16 44.6	1.533	2.350	16.6	20.2	1 16	4 43.78	+16 26.2	1.798	2.594	15.4	22.0
225233	2009 <i>OJ</i> ₃		12 11.4 125°97'	4°6'/10.9 18			439039	2011 <i>FQ</i> ₆₈		12 11.4 177°91'	2°8'/11.0 18		
11 7	5 40.56	+ 7 55.1	2.361	3.162	12.3	21.1	11 7	5 44.20	+16 2.0	1.794	2.616	14.7	21.6
11 17	5 34.74	+ 7 42.9	2.294	3.174	9.6	20.9	11 17	5 38.13	+15 46.8	1.718	2.617	11.1	21.4
11 27	5 27.16	+ 7 39.2	2.252	3.185	6.8	20.8	11 27	5 29.55	+15 35.2	1.667	2.618	7.1	21.1
12 7	5 18.48	+ 7 45.7	2.237	3.196	4.8	20.7	12 7	5 19.32	+15 28.1	1.642	2.619	3.4	20.9
12 17	5 9.51	+ 8 3.0	2.253	3.207	5.1	20.7	12 17	5 8.54	+15 26.6	1.646	2.619	4.0	20.9
12 27	5 1.11	+ 8 31.0	2.298	3.218	7.3	20.9	12 27	4 58.51	+15 31.6	1.679	2.619	7.9	21.2
1 6	4 54.05	+ 9 8.4	2.370	3.228	10.0	21.1	1 6	4 50.32	+15 43.6	1.738	2.618	11.8	21.4
1 16	4 48.86	+ 9 53.3	2.468	3.238	12.4	21.3	1 16	4 44.72	+16 2.8	1.821	2.617	15.2	21.6
49234	1998 <i>SL</i> ₁₄₆		12 11.4 219°90'	6°1'/9.9 18			451790	2013 <i>GY</i> ₁₃₂		12 11.4 215°83'	0°1'/11.4 18		
11 7	5 40.18	+ 8 10.8	1.987	2.799	13.8	18.9	11 7	5 41.66	+23 20.3	1.982	2.805	13.4	21.7
11 17	5 34.85	+ 7 11.4	1.911	2.795	11.0	18.7	11 17	5 36.15	+23 19.3	1.903	2.805	10.1	21.5
11 27	5 27.42	+ 6 19.5	1.859	2.792	8.1	18.5	11 27	5 28.32	+23 16.0	1.848	2.804	6.2	21.3
12 7	5 18.60	+ 5 39.0	1.833	2.787	6.2	18.4	12 7	5 18.94	+23 9.7	1.821	2.803	1.9	21.0
12 17	5 9.34	+ 5 13.3	1.836	2.783	6.8	18.5	12 17	5 9.05	+23 0.8	1.822	2.802	2.4	21.0
12 27	5 0.68	+ 5 4.4	1.867	2.779	9.3	18.6	12 27	4 59.84	+22 50.3	1.853	2.801	6.6	21.3
1 6	4 53.56	+ 5 12.1	1.923	2.774	12.2	18.8	1 6	4 52.32	+22 40.5	1.912	2.800	10.5	21.5
1 16	4 48.60	+ 5 34.7	2.001	2.769	15.0	19.0	1 16	4 47.21	+22 33.2	1.994	2.798	13.7	21.7
316294	2010 <i>RD</i> ₃₈		12 11.4 67°37'	1°4'/11.7 18			164872	1999 <i>UJ</i> ₃₁		12 11.4 195°90'	1°7'/11.7 18		
11 7	5 42.56	+26 59.7	1.875	2.699	14.1	20.9	11 7	5 44.51	+27 24.7	1.968	2.784	13.8	20.8
11 17	5 36.86	+27 3.9	1.808	2.709	10.6	20.7	11 17	5 38.42	+27 41.3	1.887	2.783	10.4	20.6
11 27	5 28.71	+27 2.8	1.765	2.719	6.6	20.5	11 27	5 29.78	+27 53.1	1.830	2.781	6.6	20.3
12 7	5 19.00	+26 54.9	1.748	2.729	2.5	20.3	12 7	5 19.42	+27 57.9	1.800	2.779	2.7	20.1
12 17	5 8.88	+26 40.3	1.761	2.739	2.7	20.3	12 17	5 8.46	+27 54.5	1.800	2.777	2.9	20.1
12 27	4 59.62	+26 20.7	1.802	2.750	6.8	20.6	12 27	4 58.21	+27 44.0	1.829	2.774	6.9	20.3
1 6	4 52.26	+25 59.1	1.870	2.760	10.6	20.8	1 6	4 49.80	+27 29.2	1.885	2.771	10.7	20.6
1 16	4 47.47	+25 38.7	1.962	2.771	13.8	21.1	1 16	4 44.00	+27 13.5	1.965	2.768	14.0	20.8
391576	2007 <i>TW</i> ₂₅₉		12 11.4 96°35'	0°2'/11.5 18			270283	2001 <i>VX</i> ₆₃		12 11.4 59°83'	0°3'/11.5 18		
11 7	5 44.16	+24 1.4	1.811	2.635	14.5	22.2	11 7	5 46.73	+24 34.0	1.339	2.177	17.8	20.2
11 17	5 38.01	+23 57.0	1.747	2.649	10.8	22.0	11 17	5 40.39	+24 22.6	1.294	2.202	13.3	19.9
11 27	5 29.38	+23 49.3	1.708	2.663	6.6	21.8	11 27	5 30.97	+24 6.6	1.270	2.228	8.1	19.7
12 7	5 19.20	+23 37.7	1.695	2.677	2.1	21.5	12 7	5 19.73	+23 45.5	1.272	2.254	2.5	19.5
12 17	5 8.66	+23 22.5	1.711	2.690	2.6	21.6	12 17	5 8.26	+23 20.4	1.301	2.280	3.1	19.6
12 27	4 59.04	+23 5.7	1.756	2.704	6.9	21.9	12 27	4 58.23	+22 54.5	1.356	2.306	8.2	19.9
1 6	4 51.38	+22 49.8	1.829	2.717	10.9	22.2	1 6	4 50.83	+22 31.4	1.437	2.333	12.7	20.3
1 16	4 46.35	+22 37.3	1.924	2.730	14.2	22.4	1 16	4 46.68	+22 14.2	1.539	2.359	16.4	20.6
333528	2005 <i>QF</i> ₁₈₀		12 11.4 135°29'	4°0'/12.2 18			249919	2001 <i>SL</i> ₂₆₁		12 11.4 1			

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12 11.4

12 11.5

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
113613	2002 <i>TJ</i> ₅₅		12 11.4 59°57'	2.4/11.1	18		228904	2003 <i>SO</i> ₁₃₃		12 11.4 25°47'	1.8/11.9	18	
11 7	5 41.76	+17 15.2	1.689	2.520	15.0	19.8	11 7	5 41.13	+29 34.2	2.007	2.827	13.4	19.6
11 17	5 36.34	+17 1.2	1.626	2.530	11.3	19.6	11 17	5 35.75	+29 22.3	1.933	2.830	10.2	19.4
11 27	5 28.46	+16 50.1	1.585	2.540	7.1	19.3	11 27	5 28.05	+29 2.4	1.882	2.834	6.5	19.2
12 7	5 18.99	+16 42.8	1.571	2.550	3.1	19.1	12 7	5 18.88	+28 33.7	1.859	2.838	2.8	19.0
12 17	5 9.11	+16 40.3	1.585	2.560	3.7	19.2	12 17	5 9.31	+27 56.8	1.864	2.842	2.8	19.0
12 27	5 0.07	+16 43.5	1.627	2.571	7.8	19.5	12 27	5 0.54	+27 14.4	1.899	2.846	6.5	19.3
1 6	4 52.95	+16 53.0	1.695	2.581	11.7	19.7	1 6	4 53.56	+26 30.3	1.961	2.851	10.1	19.5
1 16	4 48.43	+17 9.1	1.785	2.592	15.1	20.0	1 16	4 49.01	+25 48.5	2.047	2.856	13.3	19.7
319399	2006 <i>GF</i> ₁₃		12 11.4 126°77'	0.2/11.5	18		477246	2009 <i>RL</i> ₇₀		12 11.4 111°53'	1.9/11.1	18	
11 7	5 44.48	+23 3.3	1.889	2.710	14.1	20.9	11 7	5 46.29	+19 9.0	1.632	2.458	15.7	22.3
11 17	5 38.29	+23 15.5	1.819	2.719	10.5	20.7	11 17	5 39.72	+18 49.3	1.572	2.474	11.8	22.1
11 27	5 29.63	+23 26.2	1.773	2.728	6.5	20.5	11 27	5 30.50	+18 30.3	1.535	2.490	7.3	21.8
12 7	5 19.37	+23 34.0	1.754	2.736	2.0	20.2	12 7	5 19.64	+18 12.7	1.525	2.506	2.8	21.6
12 17	5 8.63	+23 38.3	1.765	2.744	2.5	20.3	12 17	5 8.41	+17 57.8	1.544	2.520	3.5	21.7
12 27	4 58.68	+23 39.9	1.805	2.752	6.8	20.6	12 27	4 58.22	+17 47.4	1.591	2.535	7.9	22.0
1 6	4 50.60	+23 40.5	1.872	2.759	10.7	20.8	1 6	4 50.17	+17 43.0	1.665	2.549	12.0	22.3
1 16	4 45.10	+23 42.3	1.963	2.766	14.0	21.1	1 16	4 44.93	+17 45.7	1.761	2.562	15.4	22.5
453763	2011 <i>EC</i> ₂₃		12 11.4 335°08'	5.0/12.1	18		329080	2011 <i>BB</i> ₃₂		12 11.4 178°17'	3.3/11.0	17	
11 7	5 43.05	+35 52.8	2.120	2.922	13.4	20.7	11 7	5 39.12	+12 26.4	2.323	3.136	12.0	20.6
11 17	5 37.49	+36 42.8	2.039	2.918	10.7	20.5	11 17	5 33.87	+12 18.6	2.245	3.137	9.2	20.5
11 27	5 29.32	+37 23.6	1.982	2.914	7.7	20.4	11 27	5 26.78	+12 16.4	2.191	3.137	6.2	20.3
12 7	5 19.32	+37 50.9	1.951	2.911	5.4	20.2	12 7	5 18.48	+12 21.0	2.166	3.137	3.6	20.1
12 17	5 8.62	+38 1.9	1.949	2.907	5.4	20.2	12 17	5 9.79	+12 32.9	2.170	3.137	4.0	20.1
12 27	4 58.57	+37 56.6	1.975	2.904	7.7	20.3	12 27	5 1.60	+12 52.4	2.204	3.137	6.8	20.3
1 6	4 50.36	+37 38.3	2.027	2.901	10.7	20.5	1 6	4 54.72	+13 19.0	2.265	3.137	9.8	20.5
1 16	4 44.80	+37 11.8	2.103	2.899	13.5	20.7	1 16	4 49.75	+13 51.8	2.351	3.137	12.5	20.7
298068	2002 <i>QG</i> ₁₀₅		12 11.4 293°35'	1.3/11.2	18		346222	2007 <i>YN</i> ₅₉		12 11.5 345°18'	15.0/15.1	17	
11 7	5 41.92	+20 4.4	1.795	2.624	14.4	21.1	11 7	5 51.49	-10 15.1	1.036	1.820	25.5	19.8
11 17	5 36.51	+19 55.4	1.720	2.624	10.8	20.9	11 17	5 45.12	-9 57.2	0.971	1.816	22.3	19.6
11 27	5 28.62	+19 46.5	1.667	2.623	6.7	20.6	11 27	5 34.63	-8 52.9	0.922	1.814	18.8	19.4
12 7	5 19.07	+19 38.1	1.642	2.623	2.4	20.3	12 7	5 21.13	-6 53.2	0.891	1.812	15.9	19.2
12 17	5 8.99	+19 30.8	1.645	2.623	3.0	20.4	12 17	5 6.46	-3 57.9	0.883	1.810	15.0	19.2
12 27	4 59.64	+19 25.8	1.676	2.622	7.3	20.6	12 27	4 52.89	-0 18.3	0.899	1.809	16.9	19.3
1 6	4 52.11	+19 24.7	1.734	2.622	11.4	20.9	1 6	4 42.37	+3 45.4	0.940	1.808	20.4	19.5
1 16	4 47.13	+19 28.6	1.815	2.621	14.8	21.1	1 16	4 36.05	+7 53.5	1.001	1.808	24.2	19.7
442341	2011 <i>SB</i> ₁₉₃		12 11.4 96°10'	3.3/10.8	15		237894	2002 <i>NP</i> ₃₉		12 11.5 108°63'	5.3/10.4	18	
11 7	5 42.11	+15 48.5	1.792	2.618	14.5	22.1	11 7	5 42.45	+8 25.0	2.171	2.974	13.1	20.1
11 17	5 36.43	+15 13.0	1.727	2.628	11.0	21.9	11 17	5 36.15	+7 35.3	2.117	2.997	10.3	20.0
11 27	5 28.44	+14 40.4	1.686	2.638	7.1	21.7	11 27	5 28.03	+6 53.5	2.088	3.019	7.4	19.8
12 7	5 18.98	+14 12.8	1.672	2.647	3.7	21.5	12 7	5 18.83	+6 22.7	2.086	3.041	5.5	19.8
12 17	5 9.16	+13 52.4	1.686	2.657	4.4	21.5	12 17	5 9.44	+6 4.9	2.114	3.062	5.9	19.8
12 27	5 0.16	+13 41.0	1.729	2.666	7.9	21.8	12 27	5 0.81	+6 1.3	2.171	3.083	8.1	20.0
1 6	4 52.97	+13 39.4	1.798	2.676	11.6	22.0	1 6	4 53.69	+6 11.0	2.254	3.103	10.8	20.2
1 16	4 48.24	+13 47.4	1.889	2.685	14.8	22.3	1 16	4 48.60	+6 32.6	2.361	3.122	13.2	20.4
521757	2015 <i>RP</i> ₂₇₅		12 11.4 321°40'	5.4/12.1	17		41285	1999 <i>XM</i> ₁₀₆		12 11.5 97°12'	2.0/10.7	18	
11 7	5 45.00	+35 12.3	1.786	2.596	15.2	21.6	11 7	5 44.09	+18 58.8	1.810	2.634	14.5	18.5
11 17	5 39.38	+36 2.3	1.707	2.592	12.1	21.4	11 17	5 37.78	+17 59.8	1.750	2.651	10.9	18.3
11 27	5 30.67	+36 42.3	1.651	2.587	8.6	21.1	11 27	5 29.18	+16 59.9	1.713	2.667	6.8	18.1
12 7	5 19.78	+37 7.0	1.620	2.583	5.8	21.0	12 7	5 19.21	+16 1.9	1.704	2.682	3.2	17.9
12 17	5 8.07	+37 13.0	1.617	2.579	5.8	21.0	12 17	5 9.00	+15 9.1	1.725	2.698	3.9	18.0
12 27	4 57.16	+37 0.8	1.642	2.576	8.6	21.1	12 27	4 59.74	+14 25.1	1.775	2.713	7.7	18.3
1 6	4 48.47	+36 34.6	1.692	2.572	12.1	21.3	1 6	4 52.39	+13 52.1	1.851	2.728	11.4	18.5
1 16	4 42.91	+36 0.5	1.764	2.569	15.3	21.5	1 16	4 47.52	+13 31.2	1.951	2.742	14.5	18.8
491564	2012 <i>QU</i> ₄₀		12 11.4 73°98'	0.4/11.4	16		86751	2000 <i>GQ</i> ₆₄		12 11.5 137°00'	2.1/11.1	18	
11 7	5 48.17	+23 35.9	1.483	2.313	16.8	21.4	11 7	5 45.01	+18 19.0	1.915	2.734	14.0	20.3
11 17	5 41.12	+23 14.5	1.438	2.343	12.5	21.2	11 17	5 38.48	+17 56.5	1.848	2.747	10.5	20.1
11 27	5 31.27	+22 49.2	1.416	2.373	7.6	21.0	11 27	5 29.66	+17 34.8	1.805	2.758	6.6	19.9
12 7	5 19.82	+22 20.4	1.420	2.402	2.3	20.7	12 7	5 19.38	+17 14.9	1.790	2.770	2.8	19.7
12 17	5 8.24	+21 49.7	1.452	2.432	2.9	20.8	12 17	5 8.75	+16 58.3	1.805	2.780	3.4	19.7
12 27	4 58.02	+21 20.2	1.513	2.461	7.8	21.2	12 27	4 58.95	+16 46.5	1.849	2.790	7.2	20.0
1 6	4 50.28	+20 55.3	1.599	2.489	12.0	21.5	1 6	4 50.97	+16 40.9	1.921	2.799	10.9	20.2
1 16	4 45.58	+20 37.3	1.708	2.517	15.5	21.8	1 16	4 45.43	+16 42.2	2.016	2.808	14.1	20.5
169449	2002 <i>BX</i> ₁₅		12 11.4 248°55'	2.4/11.9	18		99249	2001 <i>KW</i> ₇₀		12 11.5 235°41'	1.7/11.7	18	
11 7	5 47.14	+29 7.6	1.479	2.307	16.9	20.2	11 7	5 40.99	+28 3.4	2.495	3.305	11.4	20.1
11 17	5 41.27	+29 11.8	1.397	2.298	13.0	19.9	11 17	5 35.40	+28 21.3	2.406	3.298	8.7	19.9
11 27	5 31.96	+29 7.3	1.336	2.289	8.4	19.6	11 27	5 27.80	+28 35.0	2.342	3.291	5.5	19.7
12 7	5 20.21	+28 51.0	1.300	2.280	3.6	19.3	12 7	5 18.84	+28 42.7	2.306	3.284	2.4	19.5
12 17	5 7.57	+28 22.1	1.292	2.270	3.8	19.3	12 17	5 9.38	+28 43.6	2.301	3.277	2.6	19.5
12 27	4 55.86	+27 43.2	1.311	2.260	8.7	19.5	12 27	5 0.41	+28 38.2	2.326	3.270	5.7	19.7
1 6	4 46.67	+27 0.0	1.355	2.249	13.5	19.8	1 6	4 52.81	+28 28.3	2.379	3.262	8.9	19.9
1 16	4 40.97	+26 18.6	1.421	2.239	17.6	20.0	1 16	4 47.26	+28 16.6	2.457	3.254	11.7	20.0
73313	2002 <i>JR</i> ₇₈		12 11.4 119°93'	2.2/11.7	18		398877	2013 <i>CV</i> ₆₈		12 11.5 44°39'	4.1		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
222842	2002 <i>EE</i> ₇₈	12 11.5	147°20	4°1/12.2	18		320180	2007 <i>GZ</i> ₂₈	12 11.5	221°42	3°6/10.9	17	
11 7	5 44.04	+35 10.2	2.385	3.180	12.3	20.3	11 7	5 39.49	+11 39.1	2.343	3.154	12.0	21.0
11 17	5 37.84	+35 46.1	2.308	3.185	9.7	20.2	11 17	5 34.17	+11 28.5	2.260	3.150	9.3	20.8
11 27	5 29.35	+36 13.0	2.255	3.189	6.8	20.0	11 27	5 27.00	+11 23.9	2.202	3.146	6.3	20.6
12 7	5 19.33	+36 27.8	2.230	3.193	4.5	19.9	12 7	5 18.60	+11 26.7	2.172	3.142	3.9	20.4
12 17	5 8.81	+36 28.7	2.235	3.196	4.5	19.9	12 17	5 9.76	+11 37.6	2.172	3.137	4.2	20.4
12 27	4 58.94	+36 16.3	2.269	3.200	6.7	20.0	12 27	5 1.40	+11 56.9	2.201	3.132	6.9	20.6
1 6	4 50.74	+35 53.8	2.330	3.203	9.5	20.2	1 6	4 54.33	+12 24.1	2.258	3.127	9.9	20.8
1 16	4 44.91	+35 25.3	2.416	3.206	12.1	20.4	1 16	4 49.15	+12 58.2	2.340	3.122	12.7	21.0
357308	2003 <i>AM</i> ₇₂	12 11.5	348°33	5°1/12.8	17		408414	2013 <i>GA</i> ₁₃₀	12 11.5	242°78	4°5/10.9	17	
11 7	5 55.06	+3 42.8	0.920	1.751	24.6	19.5	11 7	5 40.78	+9 22.4	2.252	3.059	12.6	21.9
11 17	5 48.75	+5 45.0	0.849	1.747	19.6	19.1	11 17	5 35.26	+9 6.7	2.162	3.046	9.9	21.7
11 27	5 37.50	+8 32.2	0.796	1.743	13.4	18.8	11 27	5 27.75	+8 58.8	2.096	3.033	7.0	21.5
12 7	5 22.24	+12 1.2	0.766	1.741	7.0	18.4	12 7	5 18.87	+9 0.4	2.057	3.020	4.8	21.4
12 17	5 4.98	+15 56.4	0.762	1.739	6.2	18.4	12 17	5 9.44	+9 12.7	2.048	3.007	5.1	21.4
12 27	4 48.59	+19 54.9	0.787	1.737	12.4	18.7	12 27	5 0.45	+9 36.2	2.068	2.993	7.7	21.5
1 6	4 35.69	+23 36.6	0.837	1.737	18.9	19.1	1 6	4 52.78	+10 9.9	2.116	2.978	10.8	21.7
1 16	4 27.89	+26 52.1	0.907	1.737	24.2	19.4	1 16	4 47.09	+10 52.5	2.187	2.964	13.6	21.8
399024	2013 <i>GG</i> ₈₅	12 11.5	103°40	5°0/10.9	18		368992	2007 <i>EE</i> ₂₂₃	12 11.5	242°41	6°5/10.0	18	
11 7	5 40.46	+7 23.9	2.261	3.063	12.7	21.2	11 7	5 38.24	+3 27.4	2.390	3.183	12.4	20.6
11 17	5 34.74	+7 6.3	2.199	3.078	10.0	21.0	11 17	5 33.19	+2 41.7	2.308	3.174	10.1	20.5
11 27	5 27.24	+6 57.9	2.161	3.094	7.2	20.9	11 27	5 26.38	+2 6.0	2.250	3.165	7.9	20.3
12 7	5 18.63	+7 0.6	2.151	3.108	5.2	20.8	12 7	5 18.42	+1 43.6	2.219	3.156	6.6	20.2
12 17	5 9.74	+7 15.1	2.171	3.123	5.5	20.8	12 17	5 10.03	+1 37.0	2.216	3.146	7.0	20.2
12 27	5 1.48	+7 41.4	2.219	3.137	7.7	21.0	12 27	5 2.09	+1 47.2	2.242	3.137	8.8	20.3
1 6	4 54.61	+8 18.0	2.295	3.151	10.3	21.2	1 6	4 55.36	+2 13.2	2.293	3.127	11.2	20.5
1 16	4 49.67	+9 3.0	2.394	3.165	12.7	21.4	1 16	4 50.42	+2 52.9	2.367	3.117	13.5	20.6
327632	2006 <i>OJ</i> ₁₀	12 11.5	84°64	3°4/11.2	18		474261	2001 <i>SQ</i> ₃₂₆	12 11.5	70°14	0°1/11.5	16	
11 7	5 47.35	+15 1.1	1.391	2.222	17.6	20.5	11 7	5 47.77	+23 43.3	1.421	2.253	17.3	21.6
11 17	5 40.76	+14 52.5	1.341	2.245	13.3	20.3	11 17	5 41.04	+23 32.7	1.375	2.281	12.8	21.4
11 27	5 31.23	+14 50.2	1.314	2.266	8.5	20.1	11 27	5 31.35	+23 18.5	1.351	2.308	7.8	21.2
12 7	5 19.90	+14 55.1	1.311	2.288	4.1	19.9	12 7	5 19.94	+23 0.2	1.353	2.336	2.4	21.0
12 17	5 8.23	+15 7.5	1.336	2.310	4.7	19.9	12 17	5 8.33	+22 38.9	1.383	2.363	3.0	21.1
12 27	4 57.79	+15 27.4	1.388	2.331	9.0	20.3	12 27	4 58.08	+22 17.3	1.441	2.390	8.0	21.4
1 6	4 49.78	+15 54.3	1.466	2.351	13.2	20.6	1 6	4 50.37	+21 58.6	1.524	2.417	12.3	21.8
1 16	4 44.89	+16 27.4	1.565	2.371	16.8	20.8	1 16	4 45.81	+21 45.4	1.629	2.443	15.9	22.1
442521	2011 <i>WK</i> ₉₁	12 11.5	22°36	2°5/11.4	17		347030	2010 <i>EX</i> ₇₀	12 11.5	23°47	7°2/12.4	18	
11 7	5 42.65	+24 10.3	1.158	2.011	19.0	19.4	11 7	5 45.63	+36 36.6	1.304	2.131	18.8	19.4
11 17	5 38.15	+25 26.3	1.111	2.027	14.3	19.2	11 17	5 40.66	+37 41.5	1.247	2.139	15.0	19.2
11 27	5 30.08	+26 42.1	1.085	2.045	8.9	18.9	11 27	5 31.79	+38 31.8	1.209	2.147	11.0	19.0
12 7	5 19.63	+27 51.3	1.083	2.064	3.6	18.7	12 7	5 20.23	+39 0.2	1.195	2.156	7.8	18.8
12 17	5 8.52	+28 48.5	1.106	2.084	4.1	18.8	12 17	5 7.85	+39 2.2	1.206	2.166	7.6	18.8
12 27	4 58.71	+29 31.8	1.155	2.106	9.2	19.1	12 27	4 56.82	+38 39.5	1.241	2.177	10.6	19.0
1 6	4 51.73	+30 3.1	1.227	2.130	13.9	19.5	1 6	4 48.84	+37 59.3	1.300	2.188	14.3	19.3
1 16	4 48.41	+30 25.9	1.319	2.154	17.8	19.8	1 16	4 44.83	+37 10.4	1.378	2.200	17.8	19.5
277975	2006 <i>TT</i> ₄₂	12 11.5	190°33	4°2/10.2	18		68270	2001 <i>EA</i> ₂₁	12 11.5	40°57	3°4/10.7	18	
11 7	5 40.81	+12 56.1	2.264	3.076	12.3	21.1	11 7	5 38.90	+14 54.9	2.058	2.882	13.0	19.1
11 17	5 35.11	+11 56.9	2.185	3.075	9.5	20.9	11 17	5 33.88	+14 15.4	1.987	2.886	9.9	18.9
11 27	5 27.53	+11 0.5	2.132	3.074	6.5	20.7	11 27	5 26.85	+13 38.9	1.940	2.890	6.5	18.7
12 7	5 18.74	+10 10.0	2.106	3.072	4.3	20.5	12 7	5 18.56	+13 7.7	1.921	2.894	3.7	18.6
12 17	5 9.60	+9 28.4	2.111	3.070	4.9	20.6	12 17	5 9.91	+12 43.7	1.930	2.898	4.3	18.6
12 27	5 1.03	+8 58.2	2.145	3.068	7.6	20.7	12 27	5 1.90	+12 29.0	1.968	2.902	7.4	18.8
1 6	4 53.86	+8 40.5	2.207	3.065	10.6	20.9	1 6	4 55.40	+12 24.2	2.033	2.907	10.6	19.0
1 16	4 48.66	+8 35.1	2.292	3.062	13.3	21.1	1 16	4 50.99	+12 29.2	2.121	2.911	13.5	19.2
152148	2005 <i>MH</i> ₁	12 11.5	358°64	4°2/12.2	18		121643	1999 <i>WW</i> ₁	12 11.5	273°94	0°7/11.5	17	
11 7	5 44.91	+32 27.7	1.324	2.158	18.2	19.7	11 7	5 41.39	+23 45.8	2.188	3.008	12.5	19.4
11 17	5 39.87	+32 40.5	1.255	2.157	14.1	19.5	11 17	5 35.90	+24 11.4	2.105	3.004	9.4	19.2
11 27	5 31.18	+32 40.8	1.206	2.156	9.5	19.2	11 27	5 28.22	+24 36.0	2.046	3.000	5.8	19.0
12 7	5 20.01	+32 24.5	1.181	2.155	5.1	19.0	12 7	5 19.03	+24 58.0	2.014	2.996	2.0	18.7
12 17	5 8.05	+31 50.4	1.181	2.155	5.0	18.9	12 17	5 9.28	+25 16.1	2.013	2.992	2.3	18.8
12 27	4 57.30	+31 2.0	1.208	2.156	9.2	19.2	12 27	5 0.06	+25 30.2	2.042	2.988	6.2	19.0
1 6	4 49.36	+30 6.6	1.258	2.157	13.9	19.5	1 6	4 52.35	+25 41.3	2.098	2.984	9.8	19.2
1 16	4 45.12	+29 11.6	1.329	2.158	18.0	19.7	1 16	4 46.86	+25 51.2	2.179	2.980	12.8	19.4
196859	2003 <i>SF</i> ₂₇₁	12 11.5	65°05	4°7/10.9	18		166348	2002 <i>KD</i> ₂	12 11.5	66°41	6°9/10.9	18	
11 7	5 38.86	+8 41.1	2.179	2.989	12.8	19.9	11 7	5 56.81	+33 24.9	1.614	2.415	17.0	19.7
11 17	5 33.70	+8 24.2	2.112	2.998	10.0	19.8	11 17	5 48.66	+35 48.4	1.559	2.437	13.4	19.5
11 27	5 26.68	+8 16.0	2.069	3.006	7.1	19.6	11 27	5 36.65	+38 4.4	1.530	2.460	9.7	19.3
12 7	5 18.48	+8 18.1	2.053	3.014	5.0	19.5	12 7	5 21.80	+40 1.3	1.528	2.482	7.2	19.2
12 17	5 9.94	+8 31.7	2.066	3.023	5.3	19.5	12 17	5 5.84	+41 30.1	1.555	2.505	7.5	19.3
12 27	5 2.00	+8 56.7	2.107	3.031	7.7	19.7	12 27	4 50.87	+42 27.9	1.612	2.527	10.2	19.5
1 6	4 55.45	+9 31.9	2.176	3.040	10.5	19.9	1 6	4 38.74	+42 59.0	1.695	2.550	13.4	19.8
1 16	4 50.85	+10 15.3	2.268	3.048	13.1	20.1	1 16	4 30.53	+43 11.5	1.799	2.572	16.3	20.0
262206	2006 <i>SU</i> ₂₀₆	12 11.5	45°64	1°6/11.7	17		75402	1999 <i>XF</i> ₁₀₁	12 11.5	281°06	1°8/11.8	17	

EPHEMERIDES

12 11.5

12 11.5

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
450103	2015 <i>RS</i> ₁₀₁	12 11.5	51°86	9°5/10.2	17		293510	2007 <i>GJ</i> ₂₂	12 11.5	255°57	0°5/11.4	18	
11 7	5 39.90	+ 0 52.6	1.661	2.465	16.4	21.0	11 7	5 40.29	+21 55.6	2.380	3.197	11.7	21.2
11 17	5 34.81	- 0 18.7	1.613	2.480	13.6	20.9	11 17	5 34.92	+21 48.9	2.285	3.184	8.8	21.0
11 27	5 27.47	- 1 13.1	1.586	2.495	11.0	20.8	11 27	5 27.57	+21 40.9	2.216	3.170	5.4	20.8
12 7	5 18.76	- 1 45.1	1.583	2.511	9.6	20.7	12 7	5 18.85	+21 31.5	2.175	3.157	1.7	20.5
12 17	5 9.75	- 1 51.4	1.606	2.527	9.9	20.8	12 17	5 9.62	+21 20.9	2.164	3.143	2.2	20.5
12 27	5 1.60	- 1 31.8	1.654	2.543	11.8	20.9	12 27	5 0.84	+21 10.3	2.183	3.128	5.9	20.7
1 6	4 55.25	- 0 49.5	1.725	2.559	14.2	21.1	1 6	4 53.40	+21 1.3	2.230	3.114	9.4	20.9
1 16	4 51.29	+ 0 10.5	1.817	2.576	16.6	21.3	1 16	4 47.96	+20 55.4	2.303	3.099	12.4	21.1
136312	2004 <i>BQ</i> ₄₉	12 11.5	340°18	0°7/11.6	18		194773	2001 <i>YC</i> ₆₇	12 11.5	311°03	2°5/11.8	18	
11 7	5 41.83	+25 26.0	1.645	2.478	15.3	20.0	11 7	5 43.57	+28 24.7	1.487	2.321	16.6	20.1
11 17	5 36.81	+25 21.5	1.568	2.474	11.5	19.8	11 17	5 38.63	+28 42.0	1.405	2.310	12.7	19.8
11 27	5 29.01	+25 12.3	1.514	2.470	7.2	19.5	11 27	5 30.42	+28 52.7	1.345	2.300	8.2	19.5
12 7	5 19.32	+24 57.3	1.485	2.467	2.4	19.2	12 7	5 19.85	+28 53.8	1.310	2.289	3.6	19.2
12 17	5 9.00	+24 36.9	1.484	2.464	2.8	19.2	12 17	5 8.37	+28 43.5	1.301	2.279	3.8	19.2
12 27	4 59.50	+24 13.2	1.511	2.461	7.6	19.5	12 27	4 57.71	+28 23.4	1.320	2.269	8.5	19.5
1 6	4 52.05	+23 49.6	1.564	2.459	11.9	19.7	1 6	4 49.41	+27 57.7	1.363	2.259	13.2	19.7
1 16	4 47.46	+23 29.4	1.639	2.457	15.7	20.0	1 16	4 44.43	+27 31.4	1.427	2.250	17.3	19.9
59928	1999 <i>RG</i> ₁₇₄	12 11.5	165°92	0°8/11.3	18		413245	2003 <i>SA</i> ₂₁₉	12 11.5	74°39	4°8/13.4	16	
11 7	5 40.80	+20 40.2	2.333	3.150	11.9	19.8	11 7	5 46.51	+40 5.4	2.218	3.001	13.5	20.2
11 17	5 35.19	+20 37.7	2.254	3.152	8.9	19.6	11 17	5 39.63	+39 52.6	2.148	3.013	10.8	20.0
11 27	5 27.64	+20 35.0	2.200	3.155	5.5	19.4	11 27	5 30.35	+39 24.4	2.101	3.025	7.9	19.9
12 7	5 18.83	+20 32.0	2.175	3.157	1.8	19.1	12 7	5 19.66	+38 38.4	2.081	3.037	5.4	19.7
12 17	5 9.62	+20 28.9	2.180	3.158	2.3	19.1	12 17	5 8.76	+37 35.3	2.090	3.049	5.0	19.7
12 27	5 0.96	+20 26.7	2.215	3.160	5.9	19.4	12 27	4 58.92	+36 18.8	2.129	3.061	7.0	19.9
1 6	4 53.72	+20 26.3	2.278	3.161	9.3	19.6	1 6	4 51.12	+34 55.0	2.196	3.073	9.8	20.1
1 16	4 48.49	+20 29.0	2.366	3.162	12.1	19.8	1 16	4 45.94	+33 30.2	2.288	3.085	12.5	20.3
89956	Leibacher	12 11.5	73°64	5°3/ 9.8	18		46823	1998 <i>MN</i> ₃₅	12 11.5	145°73	0°8/11.4	18	
11 7	5 39.40	+ 9 39.9	2.248	3.058	12.5	19.1	11 7	5 45.49	+21 0.5	1.578	2.408	16.0	18.7
11 17	5 33.91	+ 8 25.2	2.191	3.076	9.8	19.0	11 17	5 39.52	+21 0.8	1.507	2.412	12.0	18.4
11 27	5 26.71	+ 7 16.7	2.160	3.094	7.1	18.8	11 27	5 30.65	+21 1.0	1.459	2.415	7.4	18.2
12 7	5 18.50	+ 6 18.0	2.157	3.112	5.4	18.8	12 7	5 19.85	+21 0.5	1.437	2.419	2.4	17.9
12 17	5 10.10	+ 5 32.4	2.183	3.129	5.9	18.8	12 17	5 8.44	+20 59.2	1.443	2.422	3.0	17.9
12 27	5 2.38	+ 5 2.0	2.238	3.147	8.1	19.0	12 27	4 57.93	+20 58.3	1.477	2.425	7.9	18.2
1 6	4 56.06	+ 4 47.1	2.319	3.165	10.6	19.2	1 6	4 49.60	+20 59.7	1.537	2.428	12.4	18.5
1 16	4 51.62	+ 4 46.5	2.424	3.183	12.9	19.4	1 16	4 44.24	+21 5.0	1.620	2.430	16.2	18.7
76283	2000 <i>ET</i> ₁₁₉	12 11.5	266°82	3°2/11.9	18		99104	2001 <i>FZ</i> ₅₂	12 11.5	179°14	2°9/12.1	18	
11 7	5 42.20	+31 45.2	2.356	3.162	12.1	19.5	11 7	5 45.65	+32 13.6	2.278	3.078	12.7	20.6
11 17	5 36.57	+32 20.3	2.267	3.154	9.4	19.3	11 17	5 39.05	+32 26.7	2.196	3.080	9.8	20.4
11 27	5 28.67	+32 49.3	2.203	3.146	6.4	19.1	11 27	5 30.12	+32 31.5	2.139	3.081	6.5	20.2
12 7	5 19.21	+33 9.2	2.167	3.138	3.7	18.9	12 7	5 19.65	+32 25.5	2.109	3.081	3.6	20.0
12 17	5 9.13	+33 18.1	2.160	3.130	3.7	18.9	12 17	5 8.70	+32 8.0	2.110	3.081	3.5	20.0
12 27	4 59.56	+33 16.2	2.183	3.122	6.5	19.1	12 27	4 58.46	+31 40.4	2.141	3.081	6.4	20.2
1 6	4 51.53	+33 5.8	2.234	3.114	9.6	19.2	1 6	4 49.94	+31 6.3	2.200	3.080	9.7	20.4
1 16	4 45.76	+32 50.3	2.309	3.105	12.4	19.4	1 16	4 43.85	+30 29.9	2.284	3.078	12.6	20.6
329901	2005 <i>JQ</i> ₁	12 11.5	133°20	2°7/11.7	18		188615	2005 <i>QS</i> ₁₇	12 11.5	147°83	2°6/11.2	18	
11 7	5 49.24	+28 7.6	1.656	2.474	15.9	20.7	11 7	5 45.47	+16 17.7	1.833	2.652	14.5	20.9
11 17	5 42.38	+28 48.9	1.588	2.484	12.1	20.5	11 17	5 39.02	+16 7.2	1.763	2.661	11.0	20.6
11 27	5 32.43	+29 25.0	1.544	2.494	7.8	20.3	11 27	5 30.13	+16 0.2	1.718	2.669	7.0	20.4
12 7	5 20.41	+29 51.7	1.526	2.504	3.6	20.1	12 7	5 19.67	+15 57.2	1.699	2.677	3.2	20.2
12 17	5 7.72	+30 6.2	1.537	2.512	3.8	20.1	12 17	5 8.74	+15 59.1	1.710	2.684	3.7	20.3
12 27	4 56.02	+30 9.1	1.577	2.521	7.9	20.4	12 27	4 58.62	+16 6.4	1.750	2.691	7.6	20.5
1 6	4 46.67	+30 3.6	1.643	2.529	12.0	20.6	1 6	4 50.35	+16 19.8	1.818	2.697	11.4	20.8
1 16	4 40.50	+29 54.2	1.731	2.536	15.5	20.9	1 16	4 44.63	+16 39.1	1.908	2.702	14.7	21.0
231104	2005 <i>SF</i> ₁₀₁	12 11.5	285°13	4°5/12.1	18		135942	2002 <i>TA</i> ₁₉₈	12 11.5	12°37	0°8/11.3	18	
11 7	5 46.16	+32 48.6	1.536	2.358	16.7	20.3	11 7	5 41.55	+22 9.1	1.696	2.529	14.9	19.5
11 17	5 40.67	+33 21.0	1.453	2.348	13.1	20.0	11 17	5 36.40	+21 52.8	1.623	2.530	11.2	19.3
11 27	5 31.72	+33 43.5	1.392	2.337	9.0	19.8	11 27	5 28.67	+21 34.4	1.573	2.531	6.9	19.0
12 7	5 20.27	+33 51.2	1.355	2.327	5.3	19.5	12 7	5 19.23	+21 14.1	1.550	2.532	2.2	18.7
12 17	5 7.82	+33 40.8	1.345	2.316	5.2	19.5	12 17	5 9.27	+20 53.1	1.555	2.534	2.8	18.8
12 27	4 56.25	+33 13.8	1.363	2.306	9.0	19.7	12 27	5 0.12	+20 33.5	1.587	2.536	7.4	19.1
1 6	4 47.18	+32 35.5	1.405	2.295	13.3	19.9	1 6	4 52.92	+20 17.8	1.646	2.538	11.6	19.3
1 16	4 41.62	+31 52.7	1.469	2.285	17.2	20.1	1 16	4 48.38	+20 7.8	1.727	2.540	15.2	19.6
115149	2003 <i>SA</i> ₆₇	12 11.5	88°82	2°1/12.2	18		318210	2004 <i>RA</i> ₁₈₀	12 11.5	158°71	2°8/12.3	18	
11 7	5 42.91	+31 29.5	2.218	3.026	12.7	19.1	11 7	5 43.24	+32 38.6	2.328	3.131	12.3	20.3
11 17	5 36.86	+31 7.7	2.143	3.033	9.7	18.9	11 17	5 37.16	+32 39.1	2.249	3.134	9.5	20.1
11 27	5 28.66	+30 36.3	2.093	3.040	6.3	18.7	11 27	5 28.91	+32 30.8	2.194	3.137	6.3	19.9
12 7	5 19.14	+29 54.9	2.070	3.047	2.9	18.5	12 7	5 19.27	+32 11.8	2.166	3.139	3.4	19.7
12 17	5 9.33	+29 4.5	2.078	3.054	2.8	18.5	12 17	5 9.24	+31 42.1	2.169	3.141	3.3	19.7
12 27	5 0.33	+28 8.1	2.116	3.061	6.1	18.7	12 27	4 59.92	+31 3.6	2.202	3.143	6.2	19.9
1 6	4 53.05	+27 10.1	2.182	3.068	9.4	19.0	1 6	4 52.26	+30 20.0	2.263	3.145	9.3	20.1
1 16	4 48.08	+26 14.6	2.273	3.075	12.4	19.2	1 16	4 46.88	+29 35.5	2.348	3.147	12.1	20.3
51215	2000 <i>JL</i> ₂₂	12 11.5	41°26	1°3/11.8	18		225472	2000 <i>FS</i> ₃₆	12 11.5	212°10	0°3/11.5	18	

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
205392	2001 <i>DX</i> ₃₅		12 11.5 338°15	9°6/10.6	18		297247	1994 <i>UZ</i> ₁₀		12 11.5 343°75	2°1/10.9	18	
11 7	5 39.11	+ 2 13.6	1.456	2.275	17.6	19.5	11 7	5 41.77	+20 2.8	1.742	2.573	14.7	20.8
11 17	5 34.84	+ 1 22.5	1.386	2.266	14.6	19.3	11 17	5 36.46	+19 21.9	1.667	2.572	11.0	20.5
11 27	5 27.86	+ 0 48.7	1.337	2.259	11.6	19.1	11 27	5 28.67	+18 39.3	1.615	2.571	6.9	20.3
12 7	5 19.03	+ 0 38.2	1.311	2.252	9.7	19.0	12 7	5 19.26	+17 56.9	1.590	2.570	2.8	20.1
12 17	5 9.51	+ 0 54.7	1.309	2.245	10.1	19.0	12 17	5 9.35	+17 17.2	1.593	2.569	3.5	20.1
12 27	5 0.72	+ 1 38.5	1.331	2.240	12.5	19.1	12 27	5 0.24	+16 43.2	1.625	2.569	7.7	20.4
1 6	4 53.87	+ 2 45.9	1.376	2.235	15.7	19.3	1 6	4 53.00	+16 17.7	1.683	2.568	11.8	20.6
1 16	4 49.77	+ 4 11.0	1.441	2.231	18.8	19.5	1 16	4 48.32	+16 2.0	1.763	2.568	15.3	20.8
274103	2008 <i>CJ</i> ₁₉₅		12 11.5 286°81	3°1/11.0	18		29498	1997 <i>WK</i> ₂₁		12 11.5 119°85	2°3/11.0	18	R
11 7	5 43.05	+17 5.4	1.432	2.270	16.8	21.3	11 7	5 41.16	+17 43.5	1.996	2.820	13.3	18.2
11 17	5 38.13	+16 41.3	1.348	2.256	12.9	21.0	11 17	5 35.68	+17 19.1	1.923	2.824	10.1	18.0
11 27	5 30.08	+16 19.6	1.285	2.241	8.3	20.7	11 27	5 28.06	+16 56.0	1.875	2.828	6.3	17.8
12 7	5 19.78	+16 2.2	1.247	2.226	3.9	20.4	12 7	5 19.05	+16 35.5	1.853	2.832	2.9	17.6
12 17	5 8.55	+15 51.0	1.236	2.211	4.6	20.4	12 17	5 9.62	+16 18.9	1.861	2.836	3.4	17.6
12 27	4 58.03	+15 47.9	1.252	2.197	9.4	20.6	12 27	5 0.89	+16 8.0	1.898	2.840	7.0	17.9
1 6	4 49.67	+15 54.4	1.292	2.182	14.3	20.9	1 6	4 53.77	+16 3.8	1.962	2.843	10.6	18.1
1 16	4 44.47	+16 10.9	1.352	2.168	18.5	21.1	1 16	4 48.90	+16 6.8	2.050	2.847	13.7	18.3
315877	2008 <i>JB</i> ₂₈		12 11.5 131°03	4°9/10.7	18		263952	2009 <i>HA</i> ₁₀₂		12 11.5 176°78	2°0/11.2	18	
11 7	5 39.57	+ 8 5.7	2.325	3.129	12.3	21.1	11 7	5 41.84	+16 36.4	2.197	3.013	12.5	21.2
11 17	5 34.14	+ 7 37.8	2.256	3.137	9.7	21.0	11 17	5 36.08	+16 35.5	2.118	3.014	9.5	21.1
11 27	5 26.95	+ 7 17.9	2.211	3.144	7.0	20.8	11 27	5 28.28	+16 37.7	2.064	3.015	6.0	20.8
12 7	5 18.65	+ 7 8.2	2.194	3.151	5.1	20.7	12 7	5 19.13	+16 43.3	2.038	3.016	2.7	20.6
12 17	5 10.03	+ 7 10.1	2.206	3.158	5.4	20.8	12 17	5 9.51	+16 52.5	2.041	3.016	3.1	20.7
12 27	5 1.97	+ 7 24.1	2.247	3.165	7.6	20.9	12 27	5 0.47	+17 5.5	2.075	3.016	6.5	20.9
1 6	4 55.23	+ 7 49.4	2.316	3.171	10.3	21.1	1 6	4 52.88	+17 22.7	2.137	3.016	10.0	21.1
1 16	4 50.35	+ 8 24.3	2.408	3.177	12.7	21.3	1 16	4 47.40	+17 44.1	2.223	3.015	12.9	21.3
177503	2004 <i>EE</i> ₅₃		12 11.5 39°98	5°4/12.1	18		512714	2016 <i>UA</i> ₁₄		12 11.5 126°95	3°3/12.1	18	
11 7	5 45.62	+34 24.2	1.624	2.441	16.2	19.5	11 7	5 48.11	+31 26.7	1.664	2.481	15.9	21.8
11 17	5 39.93	+35 19.3	1.562	2.451	12.7	19.3	11 17	5 41.53	+31 41.7	1.596	2.489	12.2	21.6
11 27	5 31.06	+36 3.8	1.522	2.461	9.0	19.1	11 27	5 31.91	+31 47.0	1.551	2.498	8.1	21.4
12 7	5 20.04	+36 32.3	1.507	2.472	5.9	18.9	12 7	5 20.30	+31 39.2	1.531	2.506	4.2	21.2
12 17	5 8.35	+36 41.4	1.519	2.483	5.8	18.9	12 17	5 8.14	+31 17.3	1.539	2.513	4.1	21.2
12 27	4 57.70	+36 32.1	1.558	2.494	8.8	19.1	12 27	4 57.06	+30 43.8	1.576	2.521	7.9	21.5
1 6	4 49.49	+36 9.2	1.622	2.506	12.3	19.4	1 6	4 48.36	+30 3.9	1.639	2.528	11.9	21.7
1 16	4 44.55	+35 38.8	1.708	2.518	15.5	19.6	1 16	4 42.82	+29 23.2	1.726	2.534	15.4	22.0
368853	2006 <i>HU</i> ₇₅		12 11.5 334°00	5°6/10.4	17		234693	2002 <i>GD</i> ₁₂₄		12 11.5 314°33	6°6/10.1	18	
11 7	5 37.44	+ 7 18.7	2.194	3.004	12.8	21.0	11 7	5 40.10	+10 29.5	1.507	2.340	16.4	19.7
11 17	5 32.74	+ 6 39.4	2.118	3.001	10.1	20.9	11 17	5 35.58	+ 9 24.9	1.430	2.329	13.0	19.5
11 27	5 26.20	+ 6 8.6	2.067	2.998	7.5	20.7	11 27	5 28.34	+ 8 26.9	1.375	2.319	9.3	19.2
12 7	5 18.44	+ 5 49.1	2.041	2.995	5.7	20.6	12 7	5 19.21	+ 7 40.7	1.345	2.308	6.8	19.1
12 17	5 10.29	+ 5 43.3	2.044	2.992	6.1	20.6	12 17	5 9.40	+ 7 11.1	1.341	2.298	7.5	19.1
12 27	5 2.65	+ 5 26.0	2.075	2.989	8.3	20.7	12 27	5 0.30	+ 7 1.0	1.363	2.289	10.8	19.2
1 6	4 56.33	+ 6 14.5	2.132	2.987	11.0	20.9	1 6	4 53.15	+ 7 10.6	1.408	2.279	14.6	19.5
1 16	4 51.92	+ 6 48.9	2.212	2.985	13.6	21.1	1 16	4 48.76	+ 7 37.8	1.474	2.270	18.1	19.7
326515	2002 <i>NB</i> ₄₈		12 11.5 91°95	3°7/11.4	18		223055	2002 <i>TZ</i> ₁₅₀		12 11.5 154°95	2°1/11.9	18	
11 7	5 48.56	+12 52.9	1.544	2.364	16.8	21.0	11 7	5 48.18	+28 36.6	1.784	2.599	15.0	21.1
11 17	5 41.43	+12 59.4	1.495	2.390	12.7	20.8	11 17	5 41.37	+28 47.0	1.712	2.606	11.4	20.9
11 27	5 31.60	+13 14.2	1.467	2.416	8.3	20.6	11 27	5 31.74	+28 50.4	1.662	2.613	7.3	20.6
12 7	5 20.12	+13 37.6	1.466	2.441	4.3	20.5	12 7	5 20.25	+28 44.4	1.640	2.619	3.1	20.4
12 17	5 8.34	+14 8.7	1.494	2.466	4.7	20.5	12 17	5 8.21	+28 28.1	1.647	2.624	3.2	20.4
12 27	4 57.68	+14 46.6	1.550	2.490	8.5	20.8	12 27	4 57.11	+28 3.7	1.683	2.629	7.4	20.7
1 6	4 49.28	+15 29.8	1.633	2.513	12.4	21.1	1 6	4 48.18	+27 35.0	1.746	2.633	11.4	20.9
1 16	4 43.79	+16 16.9	1.738	2.536	15.8	21.4	1 16	4 42.19	+27 6.6	1.832	2.636	14.8	21.1
521145	2015 <i>FD</i> ₄₀₆		12 11.5 207°33	0°8/11.4	18		414370	2008 <i>UU</i> ₁₁₃		12 11.5 100°77	3°8/10.2	18	
11 7	5 45.75	+21 2.2	1.618	2.446	15.7	22.0	11 7	5 39.04	+13 13.1	2.489	3.301	11.4	21.2
11 17	5 39.78	+21 4.2	1.539	2.443	11.9	21.8	11 17	5 33.60	+12 13.2	2.422	3.313	8.7	21.0
11 27	5 30.90	+21 6.0	1.484	2.440	7.3	21.5	11 27	5 26.56	+11 16.2	2.381	3.324	5.9	20.9
12 7	5 20.00	+21 7.2	1.454	2.436	2.4	21.2	12 7	5 18.54	+10 25.1	2.369	3.335	3.9	20.8
12 17	5 8.38	+21 7.3	1.453	2.433	3.0	21.2	12 17	5 10.30	+ 9 42.2	2.387	3.347	4.4	20.8
12 27	4 57.55	+21 7.5	1.481	2.428	8.0	21.5	12 27	5 2.65	+ 9 9.9	2.435	3.358	6.8	21.0
1 6	4 48.83	+21 9.6	1.534	2.424	12.5	21.8	1 6	4 56.27	+ 8 48.9	2.511	3.369	9.5	21.2
1 16	4 43.08	+21 15.4	1.610	2.419	16.3	22.0	1 16	4 51.64	+ 8 39.2	2.611	3.379	11.9	21.3
248792	2006 <i>SS</i> ₇₈		12 11.5 209°97	1°4/11.9	18		421192	2013 <i>RU</i> ₇₅		12 11.5 164°02	1°7/11.9	18	
11 7	5 43.58	+28 44.9	1.882	2.702	14.2	19.9	11 7	5 40.69	+29 9.1	2.728	3.533	10.7	21.6
11 17	5 37.78	+28 22.2	1.804	2.702	10.8	19.7	11 17	5 34.99	+29 17.5	2.647	3.536	8.1	21.4
11 27	5 29.44	+27 51.0	1.749	2.702	6.8	19.5	11 27	5 27.51	+29 20.8	2.591	3.539	5.2	21.2
12 7	5 19.48	+27 10.6	1.722	2.702	2.6	19.2	12 7	5 18.87	+29 17.5	2.564	3.541	2.4	21.1
12 17	5 9.07	+26 22.4	1.723	2.702	2.7	19.2	12 17	5 9.87	+29 7.5	2.568	3.544	2.4	21.1
12 27	4 59.50	+25 29.6	1.754	2.702	6.9	19.5	12 27	5 1.40	+28 51.7	2.602	3.546	5.2	21.3
1 6	4 51.88	+24 37.0	1.811	2.702	10.8	19.7	1 6	4 54.23	+28 32.2	2.665	3.547	8.1	21.4
1 16	4 46.87	+23 48.8	1.893	2.701	14.2	20.0	1 16	4 48.92	+28 11.5	2.754	3.549	10.6	21.6
358282	2006 <i>UQ</i> ₄₁		12 11.5 114°12	0°5/11.4	18		98992	2001 <i>DV</i> ₃₅		12 11.5 235			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
368421	2002 <i>TF</i> ₃₁₃		12 11.5 102°99	1.8/11.3	17		58869	1998 <i>HA</i> ₁₁₃		12 11.5 216°31	6°0/10.6	18	
11 7	5 39.41	+16 40.2	2.457	3.272	11.4	20.8	11 7	5 43.92	+9 40.1	1.672	2.490	15.7	19.5
11 17	5 34.05	+16 44.7	2.382	3.279	8.6	20.7	11 17	5 38.18	+8 57.2	1.595	2.485	12.4	19.2
11 27	5 26.94	+16 52.1	2.334	3.285	5.4	20.5	11 27	5 29.83	+8 22.5	1.540	2.480	8.8	19.0
12 7	5 18.69	+17 2.5	2.313	3.292	2.3	20.3	12 7	5 19.70	+7 59.8	1.511	2.474	6.2	18.8
12 17	5 10.09	+17 16.0	2.323	3.298	2.7	20.3	12 17	5 8.93	+7 52.0	1.510	2.467	6.7	18.9
12 27	5 2.00	+17 32.5	2.363	3.305	5.8	20.5	12 27	4 58.86	+8 0.5	1.536	2.460	9.9	19.0
1 6	4 55.19	+17 52.3	2.432	3.311	8.9	20.7	1 6	4 50.65	+8 24.8	1.587	2.453	13.6	19.2
1 16	4 50.22	+18 15.3	2.525	3.317	11.6	20.9	1 16	4 45.10	+9 2.6	1.660	2.445	16.9	19.4
246782	2009 <i>DT</i> ₅₁		12 11.5 284°37	1.8/11.8	18		195632	2002 <i>NQ</i> ₃		12 11.5 123°27	6°5/9.8	18	
11 7	5 39.37	+28 36.3	2.600	3.411	11.0	21.2	11 7	5 38.02	+1 57.2	2.651	3.434	11.6	20.7
11 17	5 34.19	+28 50.9	2.511	3.404	8.3	21.0	11 17	5 32.77	+1 0.6	2.589	3.446	9.5	20.6
11 27	5 27.12	+29 1.0	2.448	3.397	5.4	20.8	11 27	5 26.05	+0 14.3	2.553	3.457	7.6	20.5
12 7	5 18.78	+29 5.1	2.413	3.390	2.4	20.6	12 7	5 18.41	+0 18.7	2.543	3.468	6.5	20.4
12 17	5 9.98	+29 2.4	2.407	3.383	2.5	20.6	12 17	5 10.55	+0 36.1	2.562	3.479	6.8	20.5
12 27	5 1.65	+28 53.8	2.432	3.377	5.5	20.8	12 27	5 3.19	+0 37.0	2.609	3.490	8.3	20.6
1 6	4 54.62	+28 40.9	2.486	3.370	8.5	21.0	1 6	4 56.97	+0 22.3	2.682	3.500	10.2	20.7
1 16	4 49.50	+28 26.4	2.564	3.363	11.2	21.2	1 16	4 52.35	+0 5.7	2.779	3.510	12.1	20.9
473554	2015 <i>XH</i> ₂₀₂		12 11.5 37°89	0°5/11.4	18		175494	2006 <i>RA</i> ₅₂		12 11.5 311°50	1°7/11.7	18	
11 7	5 41.19	+21 26.7	1.874	2.702	13.9	21.2	11 7	5 42.79	+26 56.2	1.828	2.653	14.3	20.2
11 17	5 35.94	+21 29.4	1.803	2.706	10.4	21.0	11 17	5 37.42	+27 12.8	1.748	2.649	10.9	20.0
11 27	5 28.33	+21 31.8	1.755	2.711	6.4	20.8	11 27	5 29.40	+27 24.9	1.691	2.645	6.9	19.8
12 7	5 19.17	+21 33.3	1.734	2.716	2.1	20.5	12 7	5 19.57	+27 30.4	1.661	2.641	2.8	19.5
12 17	5 9.53	+21 33.9	1.741	2.721	2.6	20.6	12 17	5 9.09	+27 28.2	1.659	2.637	3.0	19.5
12 27	5 0.62	+21 34.6	1.778	2.726	6.8	20.8	12 27	4 59.32	+27 19.3	1.686	2.634	7.1	19.8
1 6	4 53.45	+21 36.7	1.841	2.731	10.7	21.1	1 6	4 51.45	+27 6.4	1.739	2.630	11.1	20.0
1 16	4 48.73	+21 41.5	1.928	2.736	14.0	21.3	1 16	4 46.27	+26 52.9	1.815	2.627	14.6	20.2
454259	2013 <i>SH</i> ₂₃		12 11.5 182°31	4°5/10.2	18		69979	1998 <i>WJ</i> ₁₄		12 11.5 358°65	0°4/11.4	17	
11 7	5 37.18	+6 56.7	2.985	3.780	10.1	21.7	11 7	5 39.01	+22 31.4	1.802	2.636	14.1	19.2
11 17	5 32.08	+6 18.9	2.907	3.780	8.0	21.6	11 17	5 34.46	+22 25.6	1.727	2.634	10.6	19.0
11 27	5 25.61	+5 47.6	2.855	3.780	6.0	21.4	11 27	5 27.51	+22 18.0	1.675	2.632	6.5	18.7
12 7	5 18.26	+5 24.7	2.831	3.780	4.6	21.3	12 7	5 18.95	+22 8.6	1.649	2.632	2.1	18.4
12 17	5 10.64	+5 12.1	2.837	3.779	5.0	21.4	12 17	5 9.87	+21 57.8	1.652	2.631	2.6	18.5
12 27	5 3.42	+5 10.5	2.872	3.778	6.7	21.5	12 27	5 1.49	+21 47.2	1.683	2.632	7.0	18.7
1 6	4 57.17	+5 19.9	2.936	3.777	8.8	21.6	1 6	4 54.88	+21 38.6	1.739	2.633	11.0	19.0
1 16	4 52.37	+5 39.1	3.023	3.775	10.8	21.8	1 16	4 50.74	+21 33.8	1.819	2.635	14.4	19.2
398506	2011 <i>US</i> ₂₃₃		12 11.5 142°04	4°6/12.2	18		458728	2011 <i>LH</i> ₄		12 11.5 106°29	3°2/10.4	17	
11 7	5 48.15	+35 13.4	2.157	2.950	13.5	22.1	11 7	5 37.39	+13 16.9	2.782	3.592	10.4	21.5
11 17	5 41.17	+35 58.7	2.085	2.960	10.6	21.9	11 17	5 32.28	+12 31.9	2.713	3.602	7.9	21.3
11 27	5 31.57	+36 34.4	2.037	2.970	7.5	21.8	11 27	5 25.74	+11 49.8	2.669	3.612	5.4	21.2
12 7	5 20.21	+36 56.1	2.017	2.979	5.0	21.6	12 7	5 18.32	+11 12.8	2.655	3.622	3.4	21.0
12 17	5 8.28	+37 1.6	2.026	2.987	5.0	21.6	12 17	5 10.68	+10 42.7	2.671	3.632	3.8	21.1
12 27	4 57.15	+36 51.4	2.065	2.995	7.4	21.8	12 27	5 3.54	+10 21.0	2.717	3.642	6.1	21.3
1 6	4 47.98	+36 29.4	2.131	3.002	10.3	22.0	1 6	4 57.50	+10 8.4	2.791	3.652	8.5	21.4
1 16	4 41.52	+36 0.4	2.221	3.009	13.1	22.2	1 16	4 53.02	+10 4.7	2.890	3.661	10.8	21.6
7502	Arakida		12 11.5 42°46	0°9/11.3	18		184587	2005 <i>QB</i> ₁₁₈		12 11.5 173°78	0°2/11.5	18	
11 7	5 41.07	+21 10.6	1.856	2.685	14.0	17.3	11 7	5 42.04	+23 36.4	2.038	2.859	13.2	21.3
11 17	5 35.83	+20 58.7	1.785	2.690	10.5	17.1	11 17	5 36.48	+23 36.6	1.959	2.860	9.9	21.1
11 27	5 28.25	+20 45.9	1.738	2.695	6.4	16.8	11 27	5 28.64	+23 34.5	1.905	2.860	6.1	20.9
12 7	5 19.15	+20 32.5	1.718	2.700	2.2	16.6	12 7	5 19.30	+23 29.2	1.878	2.860	1.9	20.6
12 17	5 9.60	+20 19.2	1.726	2.705	2.7	16.6	12 17	5 9.47	+23 21.0	1.881	2.861	2.3	20.6
12 27	5 0.81	+20 7.7	1.763	2.710	6.9	16.9	12 27	5 0.29	+23 11.0	1.913	2.861	6.5	20.9
1 6	4 53.79	+19 59.7	1.827	2.716	10.8	17.2	1 6	4 52.78	+23 1.1	1.973	2.861	10.2	21.1
1 16	4 49.19	+19 56.7	1.914	2.722	14.1	17.4	1 16	4 47.61	+22 53.5	2.057	2.861	13.4	21.3
449714	2014 <i>MV</i> ₄₃		12 11.5 285°35	2°8/12.4	17		400962	2010 <i>VF</i> ₂₁₃		12 11.5 152°72	0°5/11.6	18	
11 7	5 44.96	+33 6.0	1.864	2.676	14.6	20.9	11 7	5 42.89	+25 43.1	2.465	3.274	11.6	21.7
11 17	5 39.02	+32 42.1	1.777	2.667	11.3	20.7	11 17	5 36.67	+25 30.1	2.389	3.282	8.7	21.6
11 27	5 30.33	+32 5.2	1.712	2.658	7.5	20.4	11 27	5 28.54	+25 12.7	2.337	3.290	5.3	21.4
12 7	5 19.83	+31 13.8	1.674	2.649	3.8	20.2	12 7	5 19.23	+24 50.6	2.315	3.297	1.8	21.1
12 17	5 8.77	+30 8.6	1.664	2.640	3.6	20.2	12 17	5 9.60	+24 24.6	2.324	3.303	2.0	21.2
12 27	4 58.60	+28 54.0	1.685	2.631	7.3	20.4	12 27	5 0.62	+23 56.3	2.363	3.309	5.5	21.4
1 6	4 50.50	+27 36.1	1.732	2.622	11.3	20.6	1 6	4 53.09	+23 28.2	2.432	3.314	8.8	21.6
1 16	4 45.23	+26 21.4	1.803	2.613	14.8	20.8	1 16	4 47.58	+23 2.8	2.526	3.319	11.5	21.8
308848	2006 <i>RP</i> ₇₇		12 11.5 59°42	3°6/10.9	18		135623	2002 <i>JR</i> ₆₇		12 11.5 318°26	6°9/8.7	18	
11 7	5 40.93	+14 31.4	1.810	2.636	14.4	20.6	11 7	5 45.33	+19 40.9	1.008	1.867	20.8	18.9
11 17	5 35.69	+14 3.2	1.741	2.640	11.0	20.4	11 17	5 40.60	+16 56.0	0.937	1.855	16.0	18.6
11 27	5 28.15	+13 39.5	1.695	2.645	7.2	20.2	11 27	5 31.89	+13 55.4	0.887	1.844	10.7	18.2
12 7	5 19.12	+13 22.1	1.675	2.649	4.0	20.0	12 7	5 20.44	+10 51.2	0.860	1.833	7.1	18.0
12 17	5 9.64	+13 12.8	1.684	2.654	4.5	20.0	12 17	5 8.13	+8 0.5	0.859	1.823	9.1	18.1
12 27	5 0.90	+13 12.9	1.721	2.658	8.0	20.3	12 27	4 57.14	+5 39.5	0.883	1.814	14.4	18.3
1 6	4 53.88	+13 22.7	1.784	2.663	11.6	20.5	1 6	4 49.19	+3 57.8	0.927	1.805	19.7	18.6
1 16	4 49.26	+13 41.5	1.870	2.668	14.8	20.7	1 16	4 45.20	+2 56.0	0.988	1.797	24.3	18.9
289324	2005 <i>AB</i> ₄₈		12 11.5 77°46	6°5/11.5	18		333266	2012 <i>JA</i> ₂₉		12 11.5 96°46	0°2/11.5	18	
11 7	5 43.85	+5 19.2											

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
151887	2003 Y _{Y101}	12 11.5 355°83		0°5/11.4 18			242895	2006 K _{M40}	12 11.5 228°37		3°4/10.8 18		
11 7	5 42.48	+23 34.1	1.191	2.044	18.6	19.6	11 7	5 42.31	+15 1.3	2.065	2.882	13.2	20.8
11 17	5 38.11	+23 13.8	1.125	2.041	14.1	19.3	11 17	5 36.63	+14 25.3	1.977	2.873	10.1	20.6
11 27	5 30.22	+22 49.0	1.078	2.039	8.7	19.0	11 27	5 28.75	+13 51.5	1.914	2.863	6.7	20.4
12 7	5 19.90	+22 19.7	1.055	2.037	2.8	18.7	12 7	5 19.39	+13 22.3	1.879	2.852	3.7	20.2
12 17	5 8.79	+21 47.7	1.057	2.037	3.5	18.7	12 17	5 9.49	+12 59.6	1.873	2.842	4.3	20.2
12 27	4 58.82	+21 16.7	1.084	2.037	9.4	19.0	12 27	5 0.14	+12 45.5	1.897	2.831	7.6	20.4
1 6	4 51.53	+20 51.0	1.134	2.037	14.6	19.3	1 6	4 52.31	+12 41.0	1.947	2.819	11.1	20.6
1 16	4 47.84	+20 33.8	1.204	2.039	19.1	19.6	1 16	4 46.71	+12 46.3	2.021	2.807	14.3	20.8
519870	2013 N _{S30}	12 11.5 269°52		5°7/13.0 18			418725	2008 U _{O103}	12 11.5 84°85		0°5/11.6 14 C		
11 7	5 44.78	+40 59.7	2.330	3.109	13.1	21.2	11 7	5 41.28	+24 46.3	2.397	3.211	11.7	22.2
11 17	5 38.68	+41 25.7	2.247	3.107	10.6	21.0	11 17	5 35.47	+24 47.3	2.334	3.231	8.7	22.1
11 27	5 30.06	+41 38.3	2.188	3.104	8.1	20.8	11 27	5 27.82	+24 45.3	2.297	3.250	5.3	21.9
12 7	5 19.77	+41 33.8	2.156	3.101	6.1	20.7	12 7	5 19.04	+24 39.7	2.287	3.269	1.8	21.7
12 17	5 8.94	+41 10.5	2.151	3.098	5.9	20.7	12 17	5 10.00	+24 30.6	2.309	3.288	2.0	21.7
12 27	4 58.88	+40 29.7	2.175	3.096	7.6	20.8	12 27	5 1.64	+24 19.3	2.360	3.307	5.5	22.0
1 6	4 50.70	+39 36.1	2.226	3.093	10.1	20.9	1 6	4 54.74	+24 7.4	2.440	3.325	8.6	22.2
1 16	4 45.13	+38 35.4	2.301	3.090	12.6	21.1	1 16	4 49.83	+23 56.9	2.545	3.344	11.3	22.4
104739	2000 H _{U8}	12 11.5 151°31		2°3/11.9 18			325881	2010 T _{Z175}	12 11.5 25°95		1°9/11.6 18		
11 7	5 45.15	+29 51.5	2.559	3.358	11.5	20.7	11 7	5 43.03	+15 11.0	1.670	2.498	15.3	19.7
11 17	5 38.44	+30 20.5	2.483	3.368	8.8	20.5	11 17	5 37.58	+15 51.8	1.602	2.505	11.6	19.5
11 27	5 29.70	+30 44.0	2.433	3.377	5.7	20.3	11 27	5 29.51	+16 40.7	1.557	2.512	7.3	19.3
12 7	5 19.63	+30 59.7	2.411	3.386	2.9	20.2	12 7	5 19.66	+17 36.0	1.539	2.519	3.0	19.0
12 17	5 9.14	+31 6.4	2.421	3.394	3.0	20.2	12 17	5 9.20	+18 35.2	1.549	2.527	3.3	19.1
12 27	4 59.24	+31 4.6	2.461	3.401	5.7	20.4	12 27	4 59.48	+19 35.9	1.588	2.535	7.6	19.4
1 6	4 50.84	+30 56.3	2.531	3.408	8.7	20.6	1 6	4 51.67	+20 36.3	1.654	2.544	11.7	19.6
1 16	4 44.55	+30 44.5	2.626	3.414	11.3	20.8	1 16	4 46.55	+21 35.5	1.743	2.554	15.2	19.9
207817	2007 T _{G261}	12 11.5 50°59		0°4/11.4 18			437868	2000 Y _{F24}	12 11.5 67°34		3°4/12.5 17		
11 7	5 42.73	+23 1.2	1.684	2.516	15.1	20.7	11 7	5 50.71	+33 45.1	1.554	2.367	17.0	20.4
11 17	5 37.32	+22 48.5	1.615	2.520	11.3	20.4	11 17	5 43.18	+33 27.9	1.508	2.398	13.0	20.3
11 27	5 29.28	+22 32.9	1.568	2.525	6.9	20.2	11 27	5 32.68	+32 56.5	1.484	2.429	8.6	20.1
12 7	5 19.53	+22 14.5	1.548	2.530	2.2	19.9	12 7	5 20.54	+32 9.5	1.486	2.460	4.4	19.9
12 17	5 9.28	+21 54.2	1.556	2.535	2.7	20.0	12 17	5 8.36	+31 8.6	1.516	2.491	4.1	20.0
12 27	4 59.91	+21 34.0	1.592	2.540	7.4	20.3	12 27	4 57.73	+29 59.3	1.576	2.521	7.8	20.2
1 6	4 52.53	+21 16.7	1.654	2.546	11.6	20.5	1 6	4 49.77	+28 48.7	1.661	2.551	11.6	20.5
1 16	4 47.87	+21 4.4	1.738	2.551	15.1	20.8	1 16	4 45.03	+27 43.0	1.770	2.581	15.0	20.8
361683	2007 U _{O91}	12 11.5 341°89		6°4/11.1 17			440133	2003 S _{C420}	12 11.5 51°09		4°0/11.4 18		
11 7	5 43.35	+31 18.4	1.310	2.150	18.1	20.7	11 7	5 43.07	+11 37.7	1.664	2.488	15.6	21.0
11 17	5 39.35	+33 3.5	1.233	2.135	14.3	20.4	11 17	5 37.54	+11 46.0	1.596	2.493	12.0	20.8
11 27	5 31.45	+34 46.4	1.176	2.122	10.1	20.1	11 27	5 29.44	+12 3.9	1.550	2.498	8.0	20.6
12 7	5 20.46	+36 17.8	1.143	2.111	6.8	19.9	12 7	5 19.63	+12 32.3	1.530	2.503	4.6	20.4
12 17	5 7.95	+37 28.7	1.136	2.100	7.3	19.9	12 17	5 9.26	+13 10.7	1.538	2.508	4.8	20.4
12 27	4 56.09	+38 14.8	1.153	2.091	11.0	20.1	12 27	4 59.64	+13 57.8	1.574	2.514	8.4	20.7
1 6	4 46.94	+38 38.2	1.194	2.083	15.3	20.3	1 6	4 51.91	+14 51.5	1.637	2.519	12.3	20.9
1 16	4 41.86	+38 45.1	1.254	2.076	19.3	20.6	1 16	4 46.81	+15 50.0	1.722	2.525	15.7	21.1
508069	2015 C _{X39}	12 11.5 228°89		4°4/10.8 18			291665	2006 H _{N69}	12 11.5 276°59		3°8/10.3 17		
11 7	5 44.59	+13 45.2	1.613	2.439	15.9	21.2	11 7	5 38.54	+13 38.5	2.351	3.167	11.8	21.4
11 17	5 38.87	+13 11.9	1.533	2.431	12.3	21.0	11 17	5 33.58	+12 46.5	2.261	3.154	9.1	21.2
11 27	5 30.36	+12 43.5	1.475	2.423	8.2	20.7	11 27	5 26.79	+11 56.6	2.196	3.141	6.2	21.0
12 7	5 19.93	+12 22.7	1.442	2.415	4.8	20.5	12 7	5 18.77	+11 11.6	2.159	3.128	4.0	20.8
12 17	5 8.77	+12 11.7	1.438	2.406	5.4	20.5	12 17	5 10.32	+10 34.1	2.152	3.114	4.5	20.8
12 27	4 58.33	+12 12.5	1.461	2.397	9.3	20.7	12 27	5 2.32	+10 6.4	2.174	3.101	7.3	21.0
1 6	4 49.85	+12 25.3	1.510	2.388	13.4	21.0	1 6	4 55.58	+9 50.0	2.223	3.087	10.3	21.1
1 16	4 44.19	+12 49.4	1.580	2.378	17.1	21.2	1 16	4 50.71	+9 44.9	2.296	3.074	13.0	21.3
112370	2002 N _{O20}	12 11.5 93°06		4°6/10.9 18			261477	2005 V _{U119}	12 11.5 46°85		6°0/13.3 17		
11 7	5 45.69	+13 24.5	1.484	2.312	16.9	20.0	11 7	5 45.86	+41 29.9	2.167	2.948	13.9	20.3
11 17	5 39.47	+12 47.1	1.430	2.330	12.9	19.8	11 17	5 39.59	+41 47.0	2.091	2.950	11.3	20.1
11 27	5 30.53	+12 16.3	1.398	2.347	8.6	19.6	11 27	5 30.65	+41 48.9	2.036	2.952	8.6	20.0
12 7	5 19.91	+11 54.7	1.392	2.364	5.1	19.4	12 7	5 20.00	+41 31.9	2.008	2.955	6.4	19.9
12 17	5 8.93	+11 44.6	1.413	2.380	5.6	19.5	12 17	5 8.89	+40 54.7	2.008	2.957	6.1	19.8
12 27	4 59.04	+11 47.1	1.461	2.397	9.3	19.7	12 27	4 58.71	+39 59.6	2.036	2.959	7.9	20.0
1 6	4 51.36	+12 2.0	1.535	2.413	13.2	20.0	1 6	4 50.60	+38 52.2	2.091	2.962	10.5	20.1
1 16	4 46.57	+12 27.7	1.629	2.428	16.6	20.3	1 16	4 45.27	+37 39.0	2.170	2.964	13.1	20.3
139333	2001 K _{D47}	12 11.5 109°31		1°0/11.5 18			227015	2004 X _{N135}	12 11.5 15°12		2°0/11.8 17		
11 7	5 44.99	+18 30.0	2.029	2.844	13.5	20.1	11 7	5 41.07	+27 55.7	1.848	2.674	14.1	19.6
11 17	5 38.54	+18 56.0	1.963	2.860	10.1	19.9	11 17	5 36.07	+28 14.2	1.776	2.677	10.7	19.4
11 27	5 29.85	+19 24.7	1.921	2.875	6.2	19.7	11 27	5 28.55	+28 27.5	1.728	2.680	6.8	19.1
12 7	5 19.71	+19 54.9	1.908	2.889	2.2	19.5	12 7	5 19.36	+28 33.3	1.705	2.684	3.0	18.9
12 17	5 9.14	+20 25.2	1.925	2.903	2.6	19.5	12 17	5 9.63	+28 30.9	1.711	2.689	3.1	18.9
12 27	4 59.29	+20 55.2	1.972	2.917	6.5	19.8	12 27	5 0.67	+28 21.2	1.746	2.694	6.9	19.2
1 6	4 51.15	+21 24.8	2.048	2.931	10.1	20.0	1 6	4 53.57	+28 7.0	1.807	2.699	10.7	19.4
1 16	4 45.35	+21 54.6	2.147	2.944	13.2	20.3	1 16	4 49.06	+27 51.7	1.891	2.705	14.0	19.6
319406	2006 G _{G49}	12 11.5 209°12		8°5/ 9.4 18			326507	2002 L _{B54}	12 11.5 106°40		5°0/10.8 18		
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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
319945	2007 <i>BE</i> ₁₇		12 11.5 333°97		7°3/11.1 17		311667	2006 <i>SU</i> ₃₅		12 11.5 142°02		6°9/12.3 18	
11 7	5 39.75	+3 25.0	1.834	2.639	15.1	20.7	11 7	5 50.76	+41 19.6	2.188	2.961	14.0	20.9
11 17	5 34.89	+3 4.7	1.758	2.633	12.3	20.5	11 17	5 43.52	+42 31.9	2.117	2.969	11.5	20.7
11 27	5 27.77	+2 58.9	1.705	2.628	9.4	20.3	11 27	5 33.28	+43 31.4	2.070	2.977	9.0	20.6
12 7	5 19.12	+3 11.2	1.676	2.623	7.5	20.2	12 7	5 20.94	+44 12.0	2.049	2.984	7.2	20.5
12 17	5 9.91	+3 42.9	1.675	2.618	7.7	20.2	12 17	5 7.82	+44 29.7	2.056	2.991	7.1	20.5
12 27	5 1.29	+4 33.6	1.701	2.614	9.9	20.3	12 27	4 55.50	+44 24.6	2.092	2.998	8.8	20.6
1 6	4 54.25	+5 40.2	1.751	2.609	12.9	20.5	1 6	4 45.33	+44 1.1	2.154	3.004	11.2	20.7
1 16	4 49.50	+6 58.7	1.825	2.606	15.8	20.6	1 16	4 38.21	+43 25.4	2.239	3.009	13.5	20.9
414645	2009 <i>VP</i> ₆₆		12 11.5 169°81		0°1/11.5 17		177324	2003 <i>YR</i> ₄₈		12 11.5 98°88		0°6/11.5 18	
11 7	5 40.54	+24 19.4	2.372	3.188	11.7	21.0	11 7	5 46.10	+19 5.1	1.867	2.686	14.3	19.2
11 17	5 35.05	+23 58.5	2.291	3.189	8.8	20.8	11 17	5 39.63	+19 44.7	1.801	2.699	10.7	19.0
11 27	5 27.66	+23 33.8	2.236	3.190	5.4	20.6	11 27	5 30.67	+20 27.6	1.759	2.713	6.6	18.8
12 7	5 19.04	+23 5.7	2.209	3.191	1.7	20.4	12 7	5 20.06	+21 11.5	1.744	2.726	2.2	18.5
12 17	5 10.06	+22 35.1	2.212	3.192	2.1	20.4	12 17	5 8.93	+21 54.3	1.760	2.739	2.6	18.6
12 27	5 1.67	+22 4.0	2.246	3.192	5.7	20.6	12 27	4 58.57	+22 34.6	1.805	2.752	6.9	18.9
1 6	4 54.71	+21 34.8	2.308	3.192	9.1	20.8	1 6	4 50.06	+23 12.3	1.878	2.764	10.8	19.2
1 16	4 49.76	+21 9.7	2.394	3.193	11.9	21.0	1 16	4 44.12	+23 48.2	1.976	2.776	14.0	19.4
326595	2002 <i>QK</i> ₁₄₅		12 11.5 77°96		3°3/11.2 17		440364	2004 <i>XR</i> ₅₇		12 11.5 58°52		0°2/11.5 18	
11 7	5 39.31	+12 9.3	2.308	3.121	12.1	20.9	11 7	5 45.95	+23 52.8	1.438	2.273	17.0	20.5
11 17	5 34.11	+12 5.3	2.233	3.125	9.3	20.7	11 17	5 39.81	+23 38.7	1.390	2.297	12.6	20.3
11 27	5 27.08	+12 7.3	2.183	3.128	6.2	20.6	11 27	5 30.78	+23 20.9	1.365	2.322	7.7	20.1
12 7	5 18.86	+12 16.5	2.161	3.132	3.7	20.4	12 7	5 20.05	+22 59.2	1.365	2.348	2.4	19.8
12 17	5 10.26	+12 33.1	2.169	3.136	4.0	20.4	12 17	5 9.07	+22 34.9	1.393	2.373	2.9	19.9
12 27	5 2.18	+12 57.2	2.206	3.140	6.7	20.6	12 27	4 59.37	+22 10.6	1.448	2.398	7.8	20.3
1 6	4 55.41	+13 28.0	2.270	3.143	9.7	20.8	1 6	4 52.10	+21 49.7	1.529	2.424	12.2	20.6
1 16	4 50.54	+14 4.6	2.359	3.147	12.4	21.0	1 16	4 47.87	+21 34.6	1.632	2.449	15.7	20.9
133399	2003 <i>SJ</i> ₁₆₅		12 11.5 51°81		0°1/11.5 18		35204	1994 <i>PV</i> ₁₅		12 11.5 332°04		3°5/10.9 18	
11 7	5 40.85	+22 42.0	2.047	2.871	13.0	19.8	11 7	5 39.43	+14 23.3	1.941	2.766	13.6	18.3
11 17	5 35.52	+22 51.1	1.980	2.882	9.7	19.6	11 17	5 34.58	+13 58.0	1.863	2.762	10.4	18.1
11 27	5 28.03	+22 59.0	1.937	2.893	6.0	19.4	11 27	5 27.56	+13 36.9	1.808	2.758	6.9	17.9
12 7	5 19.17	+23 4.9	1.922	2.904	1.9	19.2	12 7	5 19.08	+13 21.9	1.781	2.755	3.9	17.7
12 17	5 9.92	+23 8.5	1.936	2.915	2.3	19.2	12 17	5 10.11	+13 14.5	1.782	2.751	4.3	17.7
12 27	5 1.36	+23 10.5	1.979	2.927	6.2	19.5	12 27	5 1.73	+13 16.0	1.811	2.748	7.6	17.9
1 6	4 54.43	+23 12.2	2.050	2.939	9.8	19.7	1 6	4 54.91	+13 26.6	1.866	2.745	11.2	18.1
1 16	4 49.76	+23 15.3	2.144	2.951	12.9	20.0	1 16	4 50.32	+13 46.0	1.945	2.743	14.3	18.3
211911	2004 <i>QX</i> ₆		12 11.5 70°53		3°4/11.3 18		168623	2000 <i>CU</i> ₁₅		12 11.5 342°63		8°7/11.4 18	
11 7	5 41.40	+12 32.9	1.998	2.815	13.6	20.0	11 7	5 40.33	+2 14.7	1.519	2.333	17.3	19.7
11 17	5 35.83	+12 33.9	1.934	2.828	10.4	19.9	11 17	5 35.75	+1 51.2	1.448	2.326	14.2	19.4
11 27	5 28.18	+12 41.8	1.895	2.842	6.8	19.7	11 27	5 28.51	+1 46.2	1.397	2.320	11.1	19.2
12 7	5 19.21	+12 57.3	1.883	2.856	3.8	19.5	12 7	5 19.43	+2 4.0	1.369	2.315	8.9	19.1
12 17	5 9.88	+13 20.4	1.900	2.869	4.1	19.6	12 17	5 9.67	+2 46.8	1.367	2.310	9.1	19.1
12 27	5 1.24	+13 50.7	1.946	2.883	7.2	19.8	12 27	5 0.59	+3 53.2	1.390	2.306	11.5	19.2
1 6	4 54.19	+14 27.2	2.019	2.897	10.5	20.0	1 6	4 53.41	+5 18.6	1.437	2.302	14.8	19.4
1 16	4 49.33	+15 8.7	2.116	2.910	13.4	20.2	1 16	4 48.93	+6 57.2	1.506	2.299	18.0	19.6
513192	2005 <i>HQ</i> ₂		12 11.5 254°34		2°7/11.8 18		218211	2002 <i>TH</i> ₃₇₈		12 11.5 37°63		2°5/12.0 18	
11 7	5 48.08	+28 12.3	1.654	2.475	15.8	22.6	11 7	5 45.74	+29 28.0	1.061	1.913	20.5	19.4
11 17	5 42.02	+28 43.9	1.560	2.457	12.2	22.4	11 17	5 40.61	+29 19.3	1.018	1.932	15.5	19.1
11 27	5 32.66	+29 10.9	1.489	2.440	7.9	22.1	11 27	5 31.65	+28 58.9	0.995	1.952	9.8	18.9
12 7	5 20.81	+29 29.3	1.444	2.422	3.6	21.8	12 7	5 20.37	+28 25.1	0.994	1.974	4.1	18.6
12 17	5 7.83	+29 36.1	1.426	2.403	3.8	21.7	12 17	5 8.76	+27 39.5	1.017	1.996	4.0	18.7
12 27	4 55.45	+29 31.2	1.438	2.383	8.4	22.0	12 27	4 58.89	+26 47.9	1.066	2.020	9.3	19.1
1 6	4 45.27	+29 18.0	1.475	2.364	13.0	22.2	1 6	4 52.20	+25 57.3	1.137	2.044	14.3	19.4
1 16	4 38.36	+29 1.5	1.535	2.343	17.0	22.4	1 16	4 49.34	+25 13.5	1.228	2.068	18.5	19.8
359842	2011 <i>UG</i> ₃₄₃		12 11.5 336°40		1°7/11.2 18		150671	2001 <i>MZ</i> ₂₀		12 11.5 76°73		1°2/11.4 18	
11 7	5 39.51	+20 33.6	1.480	2.324	16.1	20.5	11 7	5 47.53	+19 52.1	1.467	2.298	16.9	19.9
11 17	5 35.40	+20 9.5	1.401	2.313	12.2	20.2	11 17	5 40.96	+19 55.2	1.418	2.322	12.6	19.7
11 27	5 28.40	+19 44.2	1.343	2.302	7.6	19.9	11 27	5 31.50	+19 59.4	1.391	2.347	7.7	19.5
12 7	5 19.39	+19 18.9	1.311	2.292	2.8	19.6	12 7	5 20.30	+20 4.2	1.389	2.371	2.7	19.3
12 17	5 9.63	+18 55.2	1.305	2.283	3.5	19.6	12 17	5 8.78	+20 9.2	1.416	2.395	3.2	19.4
12 27	5 0.64	+18 35.9	1.325	2.275	8.5	19.9	12 27	4 58.47	+20 15.4	1.471	2.419	8.0	19.7
1 6	4 53.72	+18 23.4	1.370	2.267	13.1	20.1	1 6	4 50.54	+20 24.2	1.552	2.442	12.3	20.0
1 16	4 49.72	+18 19.3	1.436	2.261	17.1	20.4	1 16	4 45.66	+20 36.6	1.654	2.465	15.8	20.3
205975	2002 <i>ND</i> ₂₀		12 11.5 103°61		4°2/12.8 18		102645	1999 <i>VC</i> ₄₄		12 11.5 48°23		2°1/11.2 18	
11 7	5 49.60	+36 35.9	2.082	2.873	14.0	20.9	11 7	5 44.80	+20 47.2	1.189	2.038	18.9	19.3
11 17	5 42.02	+36 37.5	2.022	2.896	11.0	20.7	11 17	5 39.46	+20 7.0	1.139	2.053	14.2	19.0
11 27	5 31.93	+36 25.9	1.985	2.918	7.7	20.6	11 27	5 30.82	+19 25.3	1.109	2.069	8.7	18.8
12 7	5 20.37	+35 58.7	1.976	2.940	4.8	20.4	12 7	5 20.12	+18 44.4	1.104	2.085	3.3	18.5
12 17	5 8.61	+35 16.0	1.996	2.962	4.5	20.5	12 17	5 9.02	+18 7.3	1.123	2.101	4.1	18.6
12 27	4 57.98	+34 20.9	2.046	2.983	7.0	20.6	12 27	4 59.30	+17 37.9	1.169	2.118	9.4	19.0
1 6	4 49.49	+33 19.0	2.125	3.003	10.0	20.9	1 6	4 52.29	+17 18.9	1.238	2.136	14.2	19.3
1 16	4 43.75	+32 16.3	2.228	3.022	12.8	21.1	1 16	4 48.67	+17 11.3	1.327	2.153	18.2	19.6
58584	1997 <i>SE</i> ₁₁		12 11.5 93°07		1°5/11.								

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12 11.5

12 11.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
139277	2001 <i>JJ</i> _{h m}		12 11.5 257°01		0°6/11.6 18		116937	2004 <i>GP</i> ₃₈ _{h m}		12 11.6 96°92		2°5/12.1 18	
11 7	5 45.97	+24 12.6	1.635	2.462	15.6	21.3	11 7	5 48.13	+30 6.8	1.562	2.384	16.5	19.4
11 17	5 40.25	+24 20.1	1.545	2.448	11.9	21.0	11 17	5 41.61	+30 3.6	1.500	2.397	12.6	19.2
11 27	5 31.47	+24 24.9	1.477	2.433	7.4	20.7	11 27	5 32.05	+29 50.5	1.459	2.410	8.1	19.0
12 7	5 20.44	+24 25.2	1.435	2.417	2.5	20.4	12 7	5 20.55	+29 25.5	1.445	2.423	3.6	18.8
12 17	5 8.46	+24 20.1	1.422	2.401	2.9	20.4	12 17	5 8.62	+28 48.7	1.458	2.436	3.5	18.8
12 27	4 57.14	+24 10.8	1.437	2.385	8.0	20.6	12 27	4 57.89	+28 3.9	1.500	2.448	7.8	19.1
1 6	4 47.90	+24 0.0	1.477	2.369	12.7	20.9	1 6	4 49.62	+27 16.6	1.568	2.460	12.1	19.4
1 16	4 41.73	+23 51.2	1.540	2.352	16.8	21.1	1 16	4 44.55	+26 32.1	1.658	2.472	15.7	19.6
399771	2005 <i>ML</i> ₅₀		12 11.5 75°75		2°3/11.2 18		55094	2001 <i>QS</i> ₁₂₇		12 11.6 189°75		1°8/12.1 18	
11 7	5 41.86	+16 56.3	1.887	2.711	14.0	20.9	11 7	5 44.70	+30 0.9	2.307	3.112	12.4	19.8
11 17	5 36.34	+16 45.7	1.822	2.722	10.5	20.7	11 17	5 38.33	+29 50.0	2.222	3.111	9.4	19.6
11 27	5 28.58	+16 38.1	1.781	2.734	6.6	20.5	11 27	5 29.78	+29 31.2	2.162	3.110	6.1	19.4
12 7	5 19.40	+16 34.1	1.767	2.745	3.0	20.3	12 7	5 19.82	+29 3.5	2.130	3.108	2.7	19.2
12 17	5 9.83	+16 34.5	1.782	2.757	3.4	20.4	12 17	5 9.43	+28 27.2	2.129	3.106	2.7	19.2
12 27	5 1.02	+16 40.0	1.825	2.768	7.1	20.6	12 27	4 59.73	+27 44.7	2.158	3.103	6.0	19.4
1 6	4 53.93	+16 51.1	1.896	2.780	10.8	20.9	1 6	4 51.66	+26 59.5	2.216	3.100	9.4	19.6
1 16	4 49.18	+17 7.8	1.990	2.791	13.9	21.1	1 16	4 45.88	+26 15.5	2.299	3.096	12.4	19.8
182695	2001 <i>VV</i> ₇₆		12 11.5 309°27		4°2/10.7 18		226393	2003 <i>QV</i> ₄		12 11.6 88°73		3°1/10.8 18	
11 7	5 55.72	+20 57.8	1.039	1.881	21.6	19.5	11 7	5 39.82	+15 34.6	2.217	3.036	12.4	19.8
11 17	5 49.72	+23 38.8	0.964	1.873	16.6	19.2	11 17	5 34.51	+14 52.8	2.149	3.045	9.4	19.6
11 27	5 38.59	+26 39.8	0.909	1.865	10.7	18.8	11 27	5 27.34	+14 13.3	2.105	3.054	6.1	19.4
12 7	5 23.07	+29 46.5	0.879	1.858	5.0	18.5	12 7	5 19.02	+13 38.0	2.089	3.063	3.4	19.3
12 17	5 5.06	+32 39.6	0.877	1.851	6.3	18.5	12 17	5 10.41	+13 9.2	2.103	3.072	3.9	19.3
12 27	4 47.55	+35 3.6	0.902	1.844	12.5	18.8	12 27	5 2.43	+12 48.6	2.147	3.081	6.8	19.5
1 6	4 33.46	+36 54.4	0.950	1.838	18.4	19.2	1 6	4 55.87	+12 37.3	2.217	3.090	9.9	19.7
1 16	4 24.68	+38 17.4	1.017	1.832	23.3	19.5	1 16	4 51.29	+12 35.3	2.312	3.099	12.7	19.9
288031	2003 <i>UM</i> ₂₃₉		12 11.5 345°86		0°7/11.4 18		33513	1999 <i>GE</i> ₃₄		12 11.6 76°96		0°4/11.5 18	
11 7	5 42.18	+23 12.6	1.151	2.006	19.0	20.5	11 7	5 46.57	+23 39.1	1.551	2.380	16.2	17.3
11 17	5 38.09	+22 49.5	1.083	2.000	14.4	20.2	11 17	5 40.17	+23 18.4	1.497	2.402	12.1	17.1
11 27	5 30.37	+22 21.9	1.034	1.995	8.9	19.9	11 27	5 31.00	+22 53.8	1.467	2.423	7.4	16.9
12 7	5 20.11	+21 50.2	1.008	1.990	2.9	19.5	12 7	5 20.19	+22 25.6	1.463	2.445	2.3	16.6
12 17	5 8.97	+21 16.4	1.007	1.987	3.6	19.5	12 17	5 9.09	+21 55.4	1.487	2.466	2.8	16.7
12 27	4 58.94	+20 44.3	1.030	1.984	9.6	19.9	12 27	4 59.18	+21 26.0	1.539	2.487	7.6	17.1
1 6	4 51.64	+20 18.6	1.077	1.982	15.1	20.2	1 6	4 51.57	+21 0.7	1.617	2.508	11.8	17.4
1 16	4 48.03	+20 2.1	1.142	1.981	19.7	20.5	1 16	4 46.88	+20 42.0	1.718	2.529	15.3	17.6
68254	2001 <i>DH</i> ₉₈		12 11.5 192°62		4°2/12.4 17		506633	2006 <i>PZ</i> ₄		12 11.6 37°46		14°9/13.9 18	
11 7	5 43.85	+35 23.5	2.301	3.098	12.7	19.8	11 7	5 44.37	- 8 56.0	1.135	1.927	23.3	19.9
11 17	5 37.93	+35 51.7	2.221	3.098	10.0	19.6	11 17	5 39.10	- 9 29.7	1.094	1.940	20.2	19.7
11 27	5 29.65	+36 10.4	2.164	3.098	7.1	19.5	11 27	5 30.62	- 9 26.6	1.070	1.955	17.3	19.6
12 7	5 19.78	+36 16.4	2.134	3.097	4.6	19.3	12 7	5 20.12	- 8 40.0	1.064	1.970	15.3	19.6
12 17	5 9.38	+36 8.3	2.133	3.096	4.5	19.3	12 17	5 9.18	- 7 8.7	1.079	1.986	14.9	19.6
12 27	4 59.64	+35 46.9	2.162	3.095	6.8	19.4	12 27	4 59.51	- 4 59.1	1.116	2.003	16.3	19.7
1 6	4 51.60	+35 15.7	2.218	3.095	9.7	19.6	1 6	4 52.43	- 2 22.8	1.175	2.021	18.7	19.9
1 16	4 45.99	+34 39.2	2.298	3.094	12.5	19.8	1 16	4 48.66	+ 0 27.1	1.253	2.039	21.4	20.2
37340	2001 <i>RY</i> ₁₂₀		12 11.5 81°42		0°9/11.7 18		392271	2010 <i>AJ</i> ₅₃		12 11.6 336°48		4°5/10.9 18	
11 7	5 43.03	+25 1.9	1.900	2.723	13.9	19.0	11 7	5 39.73	+14 47.0	1.266	2.116	17.9	21.0
11 17	5 37.44	+25 13.3	1.826	2.727	10.5	18.8	11 17	5 35.93	+14 15.5	1.193	2.105	13.8	20.7
11 27	5 29.39	+25 21.5	1.776	2.731	6.5	18.5	11 27	5 28.94	+13 49.5	1.139	2.094	9.2	20.4
12 7	5 19.70	+25 25.2	1.753	2.734	2.3	18.3	12 7	5 19.69	+13 32.3	1.109	2.085	5.1	20.1
12 17	5 9.49	+25 23.7	1.758	2.738	2.5	18.3	12 17	5 9.56	+13 26.4	1.103	2.076	5.7	20.2
12 27	5 0.01	+25 18.0	1.793	2.741	6.7	18.6	12 27	5 0.24	+13 33.9	1.123	2.068	10.3	20.4
1 6	4 52.35	+25 10.3	1.855	2.745	10.6	18.8	1 6	4 53.21	+13 54.6	1.165	2.061	15.1	20.6
1 16	4 47.22	+25 3.2	1.940	2.749	13.9	19.0	1 16	4 49.42	+14 27.3	1.228	2.055	19.3	20.9
272026	2005 <i>EF</i> ₆₁		12 11.5 289°48		3°2/10.7 18		296392	2009 <i>FN</i> ₇₀		12 11.6 120°58		4°2/10.7 18	
11 7	5 38.40	+14 57.2	2.301	3.120	12.0	21.2	11 7	5 41.37	+11 35.0	2.214	3.025	12.7	21.3
11 17	5 33.61	+14 21.3	2.208	3.104	9.2	21.0	11 17	5 35.61	+10 58.4	2.150	3.038	9.8	21.1
11 27	5 26.91	+13 47.5	2.139	3.087	6.1	20.8	11 27	5 27.99	+10 27.3	2.110	3.051	6.7	20.9
12 7	5 18.91	+13 17.9	2.098	3.071	3.5	20.6	12 7	5 19.23	+10 4.0	2.097	3.063	4.4	20.8
12 17	5 10.42	+12 54.3	2.086	3.054	4.0	20.6	12 17	5 10.18	+ 9 50.3	2.115	3.075	4.8	20.9
12 27	5 2.35	+12 38.6	2.104	3.038	7.0	20.7	12 27	5 1.78	+ 9 47.1	2.161	3.087	7.4	21.1
1 6	4 55.56	+12 32.0	2.149	3.022	10.2	20.9	1 6	4 54.82	+ 9 54.6	2.235	3.098	10.3	21.3
1 16	4 50.68	+12 34.6	2.217	3.005	13.1	21.1	1 16	4 49.85	+10 11.8	2.333	3.109	12.9	21.5
285027	2011 <i>DX</i> ₄₅		12 11.5 209°04		0°4/11.5 18		515784	2015 <i>KD</i> ₁₅₁		12 11.6 174°29		2°0/11.4 18	
11 7	5 39.60	+21 46.7	2.747	3.559	10.4	21.7	11 7	5 46.34	+16 42.1	1.805	2.623	14.8	21.8
11 17	5 34.21	+21 45.1	2.659	3.555	7.8	21.5	11 17	5 39.97	+16 54.8	1.728	2.626	11.2	21.6
11 27	5 27.14	+21 42.5	2.597	3.550	4.8	21.3	11 27	5 31.01	+17 12.0	1.675	2.628	7.1	21.3
12 7	5 18.96	+21 38.8	2.563	3.545	1.6	21.1	12 7	5 20.27	+17 33.2	1.649	2.629	2.9	21.1
12 17	5 10.39	+21 34.1	2.561	3.540	1.9	21.1	12 17	5 8.90	+17 57.8	1.653	2.630	3.3	21.1
12 27	5 2.24	+21 29.4	2.589	3.534	5.2	21.3	12 27	4 58.24	+18 25.2	1.686	2.630	7.5	21.4
1 6	4 55.26	+21 25.5	2.647	3.528	8.2	21.5	1 6	4 49.44	+18 55.3	1.747	2.630	11.6	21.6
1 16	4 49.99	+21 23.8	2.730	3.522	10.8	21.7	1 16	4 43.27	+19 28.3	1.830	2.629	15.0	21.8
30120	2000 <i>FZ</i> ₃₈		12 11.6 182°70		2°7/11.1 18		154155	2002 <i>GS</i> ₁₁					

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
249054	2007 <i>TB</i> ₁₄₂		12 11.6	64°22	0°1/11.6	18	111192	2001 <i>WX</i> ₁₆		12 11.6	128°16	1°5/11.8	18
11 7	5 44.38	+22 41.0	1.626	2.457	15.6	20.8	11 7	5 43.65	+26 57.4	2.068	2.884	13.2	20.5
11 17	5 38.61	+22 50.1	1.567	2.472	11.6	20.6	11 17	5 37.77	+27 12.9	1.993	2.889	10.0	20.3
11 27	5 30.14	+22 57.9	1.531	2.487	7.1	20.3	11 27	5 29.56	+27 24.1	1.942	2.894	6.3	20.1
12 7	5 19.96	+23 3.1	1.520	2.502	2.3	20.1	12 7	5 19.81	+27 29.1	1.920	2.899	2.5	19.9
12 17	5 9.34	+23 5.3	1.538	2.518	2.7	20.1	12 17	5 9.57	+27 27.1	1.926	2.904	2.6	19.9
12 27	4 59.70	+23 5.6	1.584	2.534	7.4	20.5	12 27	5 0.03	+27 19.1	1.962	2.909	6.4	20.2
1 6	4 52.17	+23 5.8	1.656	2.549	11.5	20.7	1 6	4 52.22	+27 7.4	2.026	2.913	10.0	20.4
1 16	4 47.45	+23 8.0	1.751	2.565	15.0	21.0	1 16	4 46.81	+26 55.0	2.114	2.918	13.1	20.6
26471	Tracybecker		12 11.6	93°05	3°0/12.7	18	450410	2005 <i>TX</i> ₁₀₂		12 11.6	84°81	0°2/11.6	18
11 7	5 59.91	+35 54.8	1.101	1.922	22.0	16.0	11 7	5 42.17	+23 51.1	2.014	2.836	13.3	21.6
11 17	5 51.03	+34 31.2	1.046	1.941	16.9	15.7	11 17	5 36.60	+23 46.5	1.943	2.844	10.0	21.4
11 27	5 37.85	+32 41.1	1.011	1.960	11.0	15.5	11 27	5 28.79	+23 39.0	1.896	2.851	6.1	21.1
12 7	5 22.31	+30 24.5	1.000	1.978	4.9	15.2	12 7	5 19.55	+23 28.3	1.877	2.859	2.0	20.9
12 17	5 6.84	+27 50.1	1.017	1.996	4.2	15.2	12 17	5 9.90	+23 14.7	1.886	2.866	2.3	20.9
12 27	4 53.81	+25 13.0	1.063	2.013	9.9	15.6	12 27	5 0.98	+22 59.6	1.926	2.874	6.4	21.2
1 6	4 44.67	+22 48.8	1.133	2.030	15.3	16.0	1 6	4 53.75	+22 45.3	1.992	2.881	10.1	21.4
1 16	4 39.90	+20 47.4	1.225	2.047	19.7	16.3	1 16	4 48.85	+22 33.9	2.083	2.888	13.2	21.7
8688	Delaunay		12 11.6	90°44	3°0/11.2	18	74799	1999 <i>SC</i> ₁₈		12 11.6	75°51	0°9/11.6	18
11 7	5 47.08	+16 28.9	1.455	2.285	17.1	17.7	11 7	5 49.72	+23 21.3	1.348	2.181	18.0	19.5
11 17	5 40.66	+16 10.3	1.401	2.304	12.9	17.5	11 17	5 43.00	+23 53.8	1.299	2.204	13.5	19.3
11 27	5 31.38	+15 55.7	1.370	2.324	8.2	17.3	11 27	5 32.99	+24 24.7	1.271	2.227	8.3	19.0
12 7	5 20.34	+15 46.4	1.365	2.343	3.8	17.1	12 7	5 20.91	+24 50.8	1.269	2.250	2.8	18.8
12 17	5 8.94	+15 43.4	1.387	2.362	4.3	17.2	12 17	5 8.37	+25 10.0	1.294	2.273	3.1	18.9
12 27	4 58.68	+15 47.8	1.437	2.380	8.6	17.5	12 27	4 57.17	+25 22.5	1.346	2.296	8.3	19.2
1 6	4 50.75	+16 0.0	1.512	2.398	12.9	17.8	1 6	4 48.66	+25 31.1	1.424	2.318	12.9	19.6
1 16	4 45.83	+16 19.7	1.609	2.416	16.4	18.0	1 16	4 43.59	+25 38.6	1.523	2.340	16.7	19.9
356133	2009 <i>FE</i> ₅₆		12 11.6	185°40	8°8/10.6	18	167203	2003 <i>TW</i> ₂₀		12 11.6	18°38	3°1/11.8	18
11 7	5 41.57	- 6 39.2	2.535	3.278	13.1	21.7	11 7	5 45.20	+28 24.2	1.599	2.426	15.9	19.7
11 17	5 35.63	- 7 15.0	2.463	3.278	11.3	21.5	11 17	5 39.71	+29 11.0	1.527	2.427	12.2	19.5
11 27	5 27.99	- 7 34.5	2.414	3.277	9.8	21.4	11 27	5 31.13	+29 53.1	1.478	2.429	7.9	19.2
12 7	5 19.25	- 7 33.9	2.391	3.276	8.8	21.4	12 7	5 20.39	+30 26.3	1.454	2.431	3.9	19.0
12 17	5 10.16	- 7 11.4	2.394	3.275	9.0	21.4	12 17	5 8.86	+30 47.4	1.459	2.434	4.0	19.0
12 27	5 1.55	- 6 27.1	2.424	3.272	10.1	21.5	12 27	4 58.17	+30 56.3	1.490	2.436	8.1	19.3
1 6	4 54.16	- 5 23.8	2.480	3.269	11.8	21.6	1 6	4 49.73	+30 55.8	1.548	2.439	12.3	19.5
1 16	4 48.53	- 4 5.5	2.559	3.266	13.6	21.7	1 16	4 44.45	+30 50.1	1.627	2.442	15.9	19.8
151986	2004 <i>HD</i> ₂₆		12 11.6	229°36	0°5/11.5	18	198806	2005 <i>ES</i> ₁₉₄		12 11.6	300°30	1°5/11.8	18
11 7	5 45.65	+21 40.8	1.813	2.635	14.6	20.9	11 7	5 40.72	+27 30.0	2.186	3.004	12.5	20.3
11 17	5 39.64	+21 42.8	1.725	2.626	11.0	20.7	11 17	5 35.74	+27 37.1	2.084	2.981	9.6	20.1
11 27	5 30.92	+21 44.1	1.661	2.616	6.8	20.4	11 27	5 28.45	+27 39.4	2.006	2.958	6.1	19.8
12 7	5 20.28	+21 43.9	1.623	2.605	2.2	20.1	12 7	5 19.51	+27 35.5	1.955	2.935	2.5	19.6
12 17	5 8.89	+21 41.9	1.615	2.594	2.7	20.1	12 17	5 9.87	+27 24.7	1.934	2.912	2.6	19.5
12 27	4 58.12	+21 39.1	1.636	2.583	7.4	20.4	12 27	5 0.65	+27 7.9	1.942	2.889	6.4	19.7
1 6	4 49.22	+21 37.5	1.684	2.571	11.7	20.6	1 6	4 52.93	+26 47.6	1.977	2.866	10.1	19.9
1 16	4 43.02	+21 38.9	1.755	2.558	15.4	20.8	1 16	4 47.49	+26 26.8	2.036	2.843	13.4	20.1
352254	2007 <i>TJ</i> ₁₇₈		12 11.6	50°17	0°5/11.5	18	443859	2001 <i>SF</i> ₇₇		12 11.6	45°57	4°6/12.6	17
11 7	5 43.69	+23 19.9	1.504	2.340	16.3	20.3	11 7	5 46.37	+34 26.5	1.535	2.355	16.9	20.4
11 17	5 38.17	+22 59.5	1.448	2.356	12.2	20.1	11 17	5 40.39	+34 47.4	1.486	2.377	13.1	20.2
11 27	5 29.88	+22 35.8	1.415	2.373	7.4	19.9	11 27	5 31.32	+34 55.1	1.458	2.400	9.0	20.0
12 7	5 19.87	+22 9.1	1.407	2.390	2.4	19.6	12 7	5 20.35	+34 46.1	1.455	2.424	5.4	19.9
12 17	5 9.51	+21 40.8	1.427	2.407	2.9	19.7	12 17	5 9.06	+34 19.7	1.479	2.448	5.1	19.9
12 27	5 0.26	+21 13.9	1.475	2.424	7.7	20.0	12 27	4 59.09	+33 39.4	1.530	2.473	8.3	20.2
1 6	4 53.25	+20 51.3	1.547	2.442	12.0	20.3	1 6	4 51.67	+32 51.2	1.606	2.497	11.9	20.4
1 16	4 49.14	+20 35.4	1.642	2.460	15.6	20.6	1 16	4 47.48	+32 1.5	1.705	2.522	15.2	20.7
26880	1994 <i>PK</i> ₈		12 11.6	194°47	0°1/11.6	18 R	156852	2003 <i>CQ</i> ₁₆		12 11.6	1°66	2°5/11.7	18
11 7	5 46.22	+23 32.2	1.874	2.693	14.3	19.1	11 7	5 40.72	+26 9.1	1.074	1.935	19.6	19.0
11 17	5 39.89	+23 26.6	1.793	2.691	10.8	18.9	11 17	5 37.37	+26 48.1	1.013	1.932	15.0	18.7
11 27	5 30.96	+23 18.1	1.735	2.689	6.7	18.6	11 27	5 30.15	+27 23.7	0.970	1.930	9.5	18.4
12 7	5 20.27	+23 5.9	1.704	2.686	2.1	18.4	12 7	5 20.15	+27 51.6	0.950	1.931	3.9	18.1
12 17	5 8.97	+22 50.1	1.703	2.683	2.5	18.4	12 17	5 9.16	+28 8.5	0.953	1.932	4.2	18.1
12 27	4 58.41	+22 32.6	1.732	2.678	7.1	18.7	12 27	4 59.33	+28 14.5	0.981	1.935	9.8	18.4
1 6	4 49.74	+22 15.8	1.787	2.674	11.2	18.9	1 6	4 52.44	+28 13.3	1.030	1.940	15.1	18.7
1 16	4 43.71	+22 2.6	1.867	2.668	14.7	19.1	1 16	4 49.50	+28 9.3	1.098	1.946	19.6	19.0
416120	2002 <i>QO</i> ₃₇		12 11.6	1°91	9°4/10.2	16	64849	2001 <i>YV</i> ₁₈		12 11.6	267°04	1°3/11.7	17
11 7	5 36.31	+ 0 2.3	1.753	2.558	15.7	20.4	11 7	5 42.54	+25 51.0	2.071	2.890	13.1	20.1
11 17	5 32.36	- 0 58.9	1.690	2.557	13.2	20.2	11 17	5 37.06	+26 11.9	1.986	2.884	9.9	19.8
11 27	5 26.26	- 1 43.7	1.649	2.556	10.9	20.1	11 27	5 29.21	+26 29.8	1.926	2.879	6.2	19.6
12 7	5 18.75	- 2 6.8	1.632	2.557	9.5	20.0	12 7	5 19.74	+26 43.0	1.894	2.874	2.4	19.3
12 17	5 10.79	- 2 4.8	1.639	2.558	9.8	20.1	12 17	5 9.64	+26 50.1	1.890	2.869	2.6	19.3
12 27	5 3.49	- 1 37.3	1.671	2.561	11.6	20.2	12 27	5 0.13	+26 51.6	1.916	2.863	6.5	19.6
1 6	4 57.75	- 0 47.1	1.726	2.564	14.1	20.3	1 6	4 52.25	+26 49.3	1.970	2.858	10.2	19.8
1 16	4 54.25	+ 0 21.1	1.802	2.568	16.5	20.5	1 16	4 46.76	+26 45.8	2.047	2.853	13.4	20.0
108394	2001 <i>KJ</i> ₂₇		12 11.6	208°11	1°8/11.7	18	127161	2002 <i>GS</i> ₁₄₃		12 11.6	135°17	0°7/11.7	

EPHEMERIDES

12 11.6

12 11.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
522050	2015 <i>XJ</i> ₄₁₄		12 11.6 279°18	2°8/10.7	17		195616	2002 <i>LD</i> ₂₅		12 11.6 88°57	3°7/10.5	18	
11 7	5 38.97	+16 41.6	2.359	3.177	11.7	21.8	11 7	5 40.55	+13 25.6	2.354	3.165	12.0	19.9
11 17	5 33.98	+15 56.4	2.267	3.164	8.9	21.6	11 17	5 34.86	+12 31.5	2.295	3.186	9.1	19.7
11 27	5 27.13	+15 11.5	2.201	3.151	5.8	21.4	11 27	5 27.48	+11 40.9	2.262	3.206	6.2	19.6
12 7	5 19.04	+14 28.8	2.164	3.139	3.1	21.2	12 7	5 19.12	+10 56.4	2.258	3.225	3.9	19.5
12 17	5 10.51	+13 50.9	2.156	3.126	3.7	21.2	12 17	5 10.57	+10 20.5	2.284	3.245	4.4	19.5
12 27	5 2.45	+13 19.9	2.177	3.113	6.7	21.4	12 27	5 2.68	+9 55.0	2.339	3.265	6.9	19.7
1 6	4 55.67	+12 57.7	2.227	3.100	9.9	21.5	1 6	4 56.17	+9 40.5	2.422	3.284	9.6	19.9
1 16	4 50.77	+12 44.9	2.300	3.087	12.7	21.7	1 16	4 51.51	+9 36.8	2.529	3.302	12.1	20.1
452400	2002 <i>QY</i> ₁₂₁		12 11.6 329°57	23°5/10.3	17		410860	2009 <i>RS</i> ₅₁		12 11.6 58°99	5°2/10.5	18	
11 7	5 43.58	-18 40.2	1.020	1.781	27.2	20.9	11 7	5 39.23	+9 50.3	2.052	2.867	13.3	21.0
11 17	5 39.21	-20 54.7	0.979	1.776	25.6	20.8	11 17	5 34.21	+9 1.2	1.987	2.875	10.4	20.8
11 27	5 31.11	-22 24.7	0.950	1.772	24.3	20.7	11 27	5 27.26	+8 19.0	1.946	2.883	7.4	20.7
12 7	5 20.43	-22 55.3	0.935	1.768	23.6	20.6	12 7	5 19.08	+7 46.9	1.931	2.892	5.4	20.6
12 17	5 8.88	-22 17.9	0.935	1.765	23.7	20.6	12 17	5 10.58	+7 27.3	1.945	2.900	5.8	20.6
12 27	4 58.48	-20 33.0	0.949	1.762	24.7	20.7	12 27	5 2.72	+7 21.8	1.988	2.908	8.3	20.8
1 6	4 50.90	-17 51.8	0.978	1.760	26.3	20.8	1 6	4 56.33	+7 29.9	2.056	2.917	11.1	21.0
1 16	4 47.08	-14 30.1	1.020	1.758	28.1	20.9	1 16	4 51.99	+7 50.3	2.147	2.925	13.8	21.2
436838	2012 <i>SO</i> ₁₂		12 11.6 89°08	1°8/11.3	18		400848	2010 <i>MB</i> ₂₀		12 11.6 147°56	3°3/10.8	18	
11 7	5 46.29	+19 3.4	1.618	2.445	15.8	21.5	11 7	5 41.74	+13 33.8	2.428	3.236	11.8	22.7
11 17	5 39.87	+18 49.1	1.564	2.466	11.8	21.3	11 17	5 35.81	+13 1.8	2.357	3.246	9.0	22.5
11 27	5 30.84	+18 35.9	1.532	2.487	7.3	21.1	11 27	5 28.13	+12 33.4	2.311	3.255	6.0	22.4
12 7	5 20.20	+18 24.5	1.526	2.507	2.8	20.9	12 7	5 19.35	+12 10.3	2.294	3.264	3.6	22.2
12 17	5 9.25	+18 15.5	1.550	2.527	3.4	21.0	12 17	5 10.28	+11 54.1	2.307	3.272	4.0	22.3
12 27	4 59.35	+18 10.6	1.601	2.547	7.7	21.3	12 27	5 1.78	+11 46.0	2.350	3.280	6.6	22.4
1 6	4 51.58	+18 11.0	1.679	2.566	11.8	21.6	1 6	4 54.62	+11 46.4	2.422	3.287	9.5	22.6
1 16	4 46.59	+18 17.5	1.780	2.585	15.1	21.9	1 16	4 49.32	+11 55.1	2.518	3.294	12.1	22.8
413747	2006 <i>CP</i> ₅		12 11.6 47°68	0°9/11.8	17		226556	2003 <i>WS</i> ₃₃		12 11.6 23°50	0°4/11.7	18	
11 7	5 42.09	+27 12.1	1.907	2.730	13.9	20.9	11 7	5 40.47	+26 33.7	1.670	2.504	15.0	19.2
11 17	5 36.62	+26 52.3	1.841	2.741	10.4	20.7	11 17	5 35.65	+26 0.1	1.609	2.515	11.3	19.0
11 27	5 28.81	+26 26.0	1.798	2.752	6.5	20.5	11 27	5 28.31	+25 19.6	1.571	2.527	6.9	18.8
12 7	5 19.56	+25 53.0	1.783	2.764	2.3	20.2	12 7	5 19.43	+24 32.8	1.559	2.540	2.3	18.5
12 17	5 9.98	+25 14.6	1.796	2.775	2.4	20.3	12 17	5 10.23	+23 42.2	1.574	2.554	2.6	18.6
12 27	5 1.26	+24 33.7	1.838	2.787	6.5	20.5	12 27	5 2.00	+22 51.4	1.618	2.569	7.1	18.9
1 6	4 54.38	+23 53.9	1.908	2.800	10.3	20.8	1 6	4 55.77	+22 4.6	1.688	2.585	11.1	19.2
1 16	4 49.96	+23 18.4	2.001	2.812	13.5	21.0	1 16	4 52.15	+21 25.1	1.781	2.601	14.5	19.4
418446	2008 <i>QA</i> ₃₄		12 11.6 12°51	6°5/12.8	17		86218	1999 <i>TH</i> ₃₇		12 11.6 51°23	5°4/11.0	18	
11 7	5 43.96	+39 48.1	1.906	2.703	14.9	20.4	11 7	5 39.81	+7 56.4	1.963	2.776	13.9	18.8
11 17	5 38.63	+40 32.2	1.836	2.706	12.1	20.2	11 17	5 34.73	+7 31.9	1.900	2.785	11.0	18.6
11 27	5 30.37	+41 2.5	1.787	2.709	9.2	20.0	11 27	5 27.62	+7 17.4	1.859	2.794	7.9	18.4
12 7	5 20.14	+41 14.1	1.764	2.713	6.9	19.9	12 7	5 19.21	+7 15.2	1.845	2.804	5.7	18.3
12 17	5 9.26	+41 4.4	1.767	2.717	6.7	19.9	12 17	5 10.44	+7 26.6	1.859	2.813	6.0	18.4
12 27	4 59.29	+40 34.7	1.797	2.722	8.7	20.0	12 27	5 2.32	+7 51.6	1.900	2.823	8.4	18.5
1 6	4 51.51	+39 50.1	1.853	2.727	11.5	20.2	1 6	4 55.74	+8 28.8	1.968	2.833	11.4	18.7
1 16	4 46.72	+38 57.2	1.932	2.733	14.3	20.4	1 16	4 51.29	+9 15.7	2.059	2.843	14.1	18.9
24363	2000 <i>AH</i> ₁₂₁		12 11.6 133°46	5°4/10.9	18		94859	2001 <i>XO</i> ₂₁₃		12 11.6 340°05	4°1/11.2	18	
11 7	5 39.11	+5 4.2	2.514	3.308	11.8	18.7	11 7	5 39.91	+14 56.8	1.271	2.121	17.9	19.0
11 17	5 33.82	+4 41.6	2.444	3.314	9.5	18.6	11 17	5 36.09	+14 34.9	1.198	2.110	13.8	18.7
11 27	5 26.90	+4 28.6	2.399	3.321	7.1	18.4	11 27	5 29.08	+14 19.1	1.145	2.101	9.1	18.4
12 7	5 18.95	+4 27.3	2.380	3.327	5.5	18.3	12 7	5 19.82	+14 12.2	1.116	2.093	4.8	18.2
12 17	5 10.69	+4 38.9	2.391	3.333	5.8	18.4	12 17	5 9.67	+14 15.8	1.111	2.085	5.4	18.2
12 27	5 2.92	+5 3.5	2.431	3.339	7.6	18.5	12 27	5 0.34	+14 31.2	1.132	2.079	10.0	18.4
1 6	4 56.34	+5 39.7	2.498	3.345	9.9	18.7	1 6	4 53.30	+14 58.2	1.176	2.073	14.8	18.7
1 16	4 51.47	+6 25.6	2.590	3.351	12.1	18.8	1 16	4 49.49	+15 35.2	1.239	2.068	19.0	18.9
301254	2009 <i>BW</i> ₅₂		12 11.6 70°50	6°2/11.5	18		151984	2004 <i>HY</i> ₁₇		12 11.6 261°65	2°8/12.0	18	
11 7	5 43.86	+6 31.4	1.660	2.473	16.1	20.6	11 7	5 46.45	+29 35.6	1.569	2.394	16.3	20.5
11 17	5 37.94	+6 19.2	1.608	2.492	12.7	20.5	11 17	5 40.79	+29 51.2	1.488	2.387	12.5	20.2
11 27	5 29.62	+6 20.6	1.577	2.511	9.2	20.3	11 27	5 31.90	+29 59.1	1.428	2.379	8.2	19.9
12 7	5 19.83	+6 37.6	1.572	2.531	6.6	20.2	12 7	5 20.70	+29 55.8	1.393	2.371	3.9	19.7
12 17	5 9.70	+7 10.6	1.595	2.550	6.7	20.3	12 17	5 8.63	+29 39.7	1.386	2.363	3.9	19.6
12 27	5 0.48	+7 58.2	1.645	2.570	9.4	20.5	12 27	4 57.43	+29 12.7	1.407	2.355	8.3	19.9
1 6	4 53.16	+8 57.5	1.721	2.589	12.6	20.7	1 6	4 48.56	+28 39.4	1.453	2.347	12.8	20.1
1 16	4 48.38	+10 4.8	1.819	2.608	15.5	20.9	1 16	4 42.97	+28 5.4	1.522	2.338	16.7	20.3
424281	2007 <i>TH</i> ₁₂₀		12 11.6 61°87	2°2/11.7	18		364882	2008 <i>ER</i> ₃₈		12 11.6 211°70	1°6/11.4	18	
11 7	5 50.73	+25 30.6	1.126	1.969	20.2	21.0	11 7	5 41.84	+17 59.6	2.005	2.827	13.3	21.1
11 17	5 44.31	+26 15.7	1.082	1.992	15.2	20.8	11 17	5 36.43	+18 2.7	1.927	2.827	10.1	20.9
11 27	5 34.02	+26 56.9	1.059	2.016	9.5	20.6	11 27	5 28.78	+18 8.3	1.872	2.826	6.3	20.7
12 7	5 21.29	+27 28.9	1.059	2.040	3.7	20.3	12 7	5 19.63	+18 16.5	1.845	2.825	2.5	20.5
12 17	5 8.06	+27 48.6	1.085	2.064	3.9	20.4	12 17	5 9.95	+18 27.1	1.848	2.825	2.9	20.5
12 27	4 56.47	+27 56.9	1.137	2.088	9.3	20.8	12 27	5 0.86	+18 40.6	1.879	2.824	6.8	20.7
1 6	4 48.09	+27 57.9	1.213	2.113	14.2	21.2	1 6	4 53.37	+18 57.3	1.938	2.823	10.5	21.0
1 16	4 43.66	+27 56.4	1.309	2.137	18.3	21.5	1 16	4 48.15	+19 17.6	2.020	2.822	13.7	21.2
189208	2003 <i>SH</i> ₂₀₀		12 11.6 111°91	6°9/12.7	17		195927	2002 <i>RW</i> ₁₀₉		12 11.6 348°60	1°2/11.8	17</	

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
467053	2016 <i>DO</i> ₆		12 11.6 320°24	3°4/11.1	18		177056	2003 <i>EY</i> ₄₁		12 11.6 247°89	1°4/11.8	18	
11 7	5 38.22	+14 17.6	1.912	2.741	13.7	21.0	11 7	5 43.67	+26 32.3	2.327	3.137	12.1	20.7
11 17	5 33.97	+14 0.6	1.818	2.719	10.5	20.7	11 17	5 37.82	+26 55.0	2.229	3.122	9.2	20.5
11 27	5 27.43	+13 48.2	1.747	2.697	7.0	20.5	11 27	5 29.72	+27 14.8	2.156	3.107	5.9	20.3
12 7	5 19.25	+13 42.3	1.702	2.676	3.9	20.3	12 7	5 20.01	+27 29.5	2.112	3.091	2.4	20.0
12 17	5 10.37	+13 44.2	1.685	2.656	4.3	20.2	12 17	5 9.62	+27 37.9	2.098	3.075	2.5	20.0
12 27	5 1.92	+13 54.9	1.696	2.636	7.8	20.4	12 27	4 59.66	+27 40.1	2.114	3.059	6.1	20.2
1 6	4 54.95	+14 14.5	1.733	2.616	11.6	20.6	1 6	4 51.14	+27 37.8	2.158	3.042	9.6	20.4
1 16	4 50.26	+14 42.6	1.792	2.597	15.1	20.8	1 16	4 44.83	+27 33.4	2.227	3.025	12.7	20.6
364997	2008 <i>KJ</i> ₁₀		12 11.6 62°66	5°9/11.5	18		396437	2014 <i>EK</i> ₄₇		12 11.6 241°52	4°5/11.9	18	
11 7	5 41.10	+ 4 39.9	2.073	2.872	13.8	20.4	11 7	5 48.44	+33 23.7	1.941	2.744	14.5	21.7
11 17	5 35.52	+ 4 33.5	2.016	2.890	11.0	20.2	11 17	5 42.07	+34 12.7	1.849	2.731	11.4	21.5
11 27	5 28.02	+ 4 39.7	1.983	2.908	8.2	20.1	11 27	5 32.67	+34 54.2	1.780	2.718	8.0	21.3
12 7	5 19.34	+ 5 0.3	1.976	2.926	6.1	20.0	12 7	5 21.03	+35 23.2	1.738	2.704	5.1	21.1
12 17	5 10.37	+ 5 35.4	1.997	2.945	6.3	20.0	12 17	5 8.40	+35 35.9	1.724	2.690	5.1	21.1
12 27	5 2.08	+ 6 24.0	2.047	2.963	8.3	20.2	12 27	4 56.36	+35 31.9	1.740	2.675	8.1	21.2
1 6	4 55.29	+ 7 23.4	2.124	2.982	11.0	20.4	1 6	4 46.32	+35 14.7	1.782	2.660	11.7	21.4
1 16	4 50.54	+ 8 30.5	2.225	3.000	13.5	20.6	1 16	4 39.27	+34 49.7	1.848	2.644	15.0	21.6
401470	2013 <i>CE</i> ₁₈₂		12 11.6 166°25	2°5/12.2	18		238229	2003 <i>UU</i> ₁₇₈		12 11.6 124°84	1°4/11.3	18	
11 7	5 45.01	+31 19.7	2.222	3.027	12.8	21.0	11 7	5 43.77	+20 30.7	1.862	2.686	14.2	21.1
11 17	5 38.71	+31 20.1	2.143	3.030	9.8	20.8	11 17	5 37.92	+20 9.2	1.792	2.693	10.6	20.9
11 27	5 30.12	+31 12.1	2.088	3.033	6.5	20.6	11 27	5 29.70	+19 46.8	1.745	2.700	6.6	20.7
12 7	5 20.06	+30 54.1	2.061	3.036	3.2	20.4	12 7	5 19.96	+19 24.1	1.726	2.707	2.4	20.4
12 17	5 9.56	+30 25.8	2.063	3.038	3.1	20.4	12 17	5 9.79	+19 2.6	1.735	2.713	2.9	20.5
12 27	4 59.81	+29 49.3	2.096	3.040	6.3	20.6	12 27	5 0.40	+18 44.2	1.774	2.719	7.1	20.7
1 6	4 51.77	+29 8.4	2.157	3.041	9.6	20.8	1 6	4 52.83	+18 30.8	1.840	2.726	10.9	21.0
1 16	4 46.12	+28 27.0	2.242	3.042	12.6	21.0	1 16	4 47.74	+18 23.8	1.929	2.731	14.2	21.2
26781	3182 <i>T</i> - ₂		12 11.6 209°91	3°8/11.0	18		113848	2002 <i>TH</i> ₂₄₁		12 11.6 359°01	2°6/11.1	17	
11 7	5 44.78	+13 39.2	1.898	2.714	14.3	19.1	11 7	5 38.19	+16 47.8	1.953	2.783	13.4	19.4
11 17	5 38.74	+13 15.5	1.815	2.708	11.0	18.8	11 17	5 33.73	+16 22.6	1.878	2.781	10.1	19.1
11 27	5 30.27	+12 56.5	1.755	2.702	7.3	18.6	11 27	5 27.14	+15 59.6	1.827	2.780	6.5	18.9
12 7	5 20.15	+12 44.0	1.722	2.695	4.2	18.4	12 7	5 19.15	+15 40.4	1.802	2.780	3.2	18.7
12 17	5 9.42	+12 39.8	1.718	2.687	4.7	18.4	12 17	5 10.71	+15 26.5	1.806	2.780	3.7	18.7
12 27	4 59.29	+12 44.8	1.744	2.679	8.1	18.6	12 27	5 2.89	+15 19.4	1.838	2.780	7.2	19.0
1 6	4 50.84	+12 59.3	1.796	2.670	11.8	18.8	1 6	4 56.60	+15 20.0	1.896	2.781	10.7	19.2
1 16	4 44.84	+13 22.8	1.872	2.660	15.2	19.0	1 16	4 52.50	+15 28.4	1.978	2.783	13.9	19.4
522125	2016 <i>AF</i> ₂₄₃		12 11.6 307°77	4°2/11.1	17		322523	2011 <i>YX</i> ₁₁		12 11.6 14°08	4°3/11.5	18	
11 7	5 39.14	+10 7.6	2.240	3.051	12.5	21.5	11 7	5 40.65	+11 42.8	1.482	2.317	16.6	19.5
11 17	5 34.16	+ 9 54.8	2.160	3.048	9.7	21.3	11 17	5 36.09	+11 47.8	1.418	2.321	12.8	19.2
11 27	5 27.30	+ 9 49.4	2.104	3.044	6.8	21.1	11 27	5 28.81	+12 3.3	1.376	2.326	8.6	19.0
12 7	5 19.17	+ 9 53.1	2.076	3.041	4.5	21.0	12 7	5 19.73	+12 30.5	1.358	2.331	4.9	18.8
12 17	5 10.60	+10 6.8	2.076	3.038	4.8	21.0	12 17	5 10.04	+13 9.1	1.367	2.338	5.1	18.9
12 27	5 2.52	+10 30.6	2.106	3.035	7.3	21.2	12 27	5 1.18	+13 57.7	1.402	2.345	8.9	19.1
1 6	4 55.75	+11 3.6	2.163	3.032	10.3	21.3	1 6	4 54.31	+14 53.8	1.463	2.353	12.9	19.3
1 16	4 50.90	+11 44.5	2.243	3.029	13.0	21.5	1 16	4 50.23	+15 55.1	1.545	2.362	16.5	19.6
231561	2008 <i>TH</i> ₅₉		12 11.6 9°87	3°2/12.1	18		68010	2000 <i>YL</i> ₆		12 11.6 63°49	3°4/12.3	18	
11 7	5 42.34	+31 35.5	2.258	3.066	12.5	20.2	11 7	5 50.68	+31 7.6	1.211	2.045	19.6	18.8
11 17	5 36.84	+32 9.0	2.179	3.066	9.7	20.1	11 17	5 44.10	+31 13.1	1.165	2.068	14.9	18.5
11 27	5 29.07	+32 35.9	2.124	3.067	6.5	19.9	11 27	5 33.80	+31 6.2	1.140	2.092	9.7	18.3
12 7	5 19.77	+32 53.6	2.096	3.067	3.7	19.7	12 7	5 21.26	+30 43.5	1.139	2.116	4.6	18.1
12 17	5 9.91	+33 0.2	2.098	3.068	3.7	19.7	12 17	5 8.42	+30 5.6	1.163	2.140	4.4	18.2
12 27	5 0.64	+32 56.2	2.129	3.069	6.5	19.9	12 27	4 57.30	+29 17.2	1.214	2.164	9.0	18.5
1 6	4 52.98	+32 44.0	2.187	3.070	9.6	20.1	1 6	4 49.32	+28 25.8	1.289	2.188	13.6	18.8
1 16	4 47.64	+32 27.1	2.270	3.071	12.4	20.3	1 16	4 45.13	+27 38.0	1.386	2.212	17.5	19.2
148282	2000 <i>GO</i> ₁₀₇		12 11.6 225°60	1°1/11.4	18		477841	2011 <i>FS</i> ₄₅		12 11.6 292°88	1°6/11.4	18	
11 7	5 45.31	+20 17.0	1.853	2.674	14.3	20.5	11 7	5 43.67	+19 34.0	1.455	2.293	16.7	21.3
11 17	5 39.34	+20 14.7	1.766	2.666	10.8	20.2	11 17	5 38.81	+19 29.9	1.369	2.278	12.7	21.0
11 27	5 30.75	+20 12.7	1.702	2.657	6.8	20.0	11 27	5 30.80	+19 27.4	1.305	2.263	8.0	20.7
12 7	5 20.34	+20 10.7	1.666	2.647	2.4	19.7	12 7	5 20.46	+19 26.5	1.266	2.247	2.9	20.4
12 17	5 9.21	+20 8.7	1.658	2.637	2.8	19.7	12 17	5 9.13	+19 27.3	1.254	2.232	3.5	20.4
12 27	4 58.70	+20 7.8	1.681	2.626	7.3	20.0	12 27	4 58.47	+19 31.1	1.268	2.218	8.8	20.6
1 6	4 49.97	+20 9.4	1.730	2.615	11.5	20.2	1 6	4 49.97	+19 39.2	1.307	2.203	13.8	20.9
1 16	4 43.87	+20 15.1	1.802	2.604	15.1	20.4	1 16	4 44.63	+19 53.0	1.368	2.188	18.0	21.1
271357	2003 <i>XT</i> ₆		12 11.6 44°88	1°8/11.6	18		405134	2002 <i>PU</i> ₁₁₀		12 11.6 45°65	8°3/10.7	17	
11 7	5 41.95	+15 56.7	1.955	2.777	13.7	19.5	11 7	5 39.25	+ 0 45.3	1.906	2.702	14.9	20.7
11 17	5 36.43	+16 23.6	1.893	2.792	10.3	19.3	11 17	5 34.21	+ 0 7.9	1.862	2.725	12.3	20.6
11 27	5 28.73	+16 55.8	1.856	2.808	6.4	19.1	11 27	5 27.25	+ 0 45.2	1.841	2.749	9.9	20.5
12 7	5 19.63	+17 32.2	1.845	2.825	2.7	18.9	12 7	5 19.14	+ 1 2.9	1.845	2.773	8.4	20.4
12 17	5 10.13	+18 11.6	1.864	2.841	2.9	18.9	12 17	5 10.83	+ 0 58.9	1.875	2.797	8.6	20.5
12 27	5 1.33	+18 52.9	1.913	2.858	6.6	19.2	12 27	5 3.29	+ 0 33.5	1.931	2.821	10.3	20.6
1 6	4 54.17	+19 35.2	1.989	2.876	10.2	19.4	1 6	4 57.31	+ 0 10.3	2.012	2.846	12.5	20.8
1 16	4 49.29	+20 18.2	2.089	2.893	13.2	19.7	1 16	4 53.42	+ 1 8.4	2.114	2.871	14.7	21.0
138442	2000 <i>HN</i> ₁₀₃		12 11.6 95°70	3°9/11.3	18		411064	2009 <i>VH</i> ₅₉		12 11.6 12°47</			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
196280	2003 <i>EL</i> ₂₉		12 11.6 225°98	0°3/11.6 18			117476	2005 <i>BP</i> ₂₂		12 11.6 72°88	3°3/11.2 18		
11 7	5 45.40	+22 8.7	1.909	2.728	14.0	21.2	11 7	5 39.79	+12 38.4	2.259	3.073	12.3	19.6
11 17	5 39.40	+22 14.6	1.821	2.720	10.6	20.9	11 17	5 34.60	+12 32.0	2.188	3.080	9.4	19.5
11 27	5 30.81	+22 19.6	1.756	2.711	6.6	20.7	11 27	5 27.55	+12 31.4	2.142	3.088	6.3	19.3
12 7	5 20.40	+22 22.8	1.719	2.701	2.1	20.4	12 7	5 19.31	+12 37.6	2.123	3.095	3.6	19.1
12 17	5 9.27	+22 23.6	1.712	2.691	2.5	20.4	12 17	5 10.70	+12 51.1	2.134	3.102	3.9	19.2
12 27	4 58.74	+22 23.0	1.734	2.681	7.0	20.7	12 27	5 2.65	+13 11.9	2.174	3.109	6.7	19.4
1 6	4 49.98	+22 22.4	1.783	2.670	11.2	20.9	1 6	4 55.94	+13 39.4	2.242	3.117	9.7	19.6
1 16	4 43.80	+22 24.1	1.855	2.658	14.7	21.1	1 16	4 51.16	+14 12.8	2.334	3.124	12.5	19.8
358316	2006 <i>UY</i> ₂₇₁		12 11.6 96°02	3°3/12.1 18			331694	2002 <i>QR</i> ₁₄₁		12 11.6 35°26	0°3/11.7 17		
11 7	5 45.20	+31 25.8	1.952	2.764	14.1	21.1	11 7	5 40.84	+25 49.5	2.156	2.976	12.6	20.5
11 17	5 39.20	+31 52.7	1.881	2.771	10.8	20.9	11 17	5 35.55	+25 23.9	2.081	2.980	9.5	20.3
11 27	5 30.61	+32 11.8	1.834	2.779	7.2	20.7	11 27	5 28.19	+24 53.0	2.030	2.984	5.8	20.1
12 7	5 20.30	+32 20.0	1.813	2.786	3.9	20.5	12 7	5 19.51	+24 17.1	2.006	2.988	1.9	19.8
12 17	5 9.46	+32 15.7	1.821	2.793	3.9	20.5	12 17	5 10.48	+23 37.7	2.013	2.992	2.2	19.8
12 27	4 59.43	+32 0.3	1.858	2.801	7.1	20.7	12 27	5 2.14	+22 57.1	2.049	2.997	6.0	20.1
1 6	4 51.34	+31 37.1	1.922	2.808	10.6	20.9	1 6	4 55.38	+22 18.6	2.113	3.002	9.6	20.3
1 16	4 45.94	+31 10.6	2.010	2.815	13.7	21.1	1 16	4 50.80	+21 44.7	2.201	3.007	12.6	20.6
460514	2014 <i>SF</i> ₃₄₇		12 11.6 84°40	4°9/12.8 18			165544	2001 <i>DE</i> ₃₀		12 11.6 285°72	0°9/11.7 16		
11 7	5 45.99	+38 17.2	2.310	3.096	13.0	21.1	11 7	5 43.90	+25 3.9	1.766	2.591	14.7	20.7
11 17	5 39.48	+38 48.1	2.248	3.114	10.3	21.0	11 17	5 38.69	+25 13.0	1.668	2.570	11.2	20.5
11 27	5 30.61	+39 7.2	2.209	3.133	7.6	20.8	11 27	5 30.62	+25 19.1	1.593	2.548	7.1	20.2
12 7	5 20.26	+39 11.1	2.197	3.151	5.4	20.7	12 7	5 20.43	+25 20.3	1.544	2.526	2.5	19.8
12 17	5 9.54	+38 58.5	2.214	3.168	5.2	20.8	12 17	5 9.29	+25 15.7	1.524	2.503	2.8	19.8
12 27	4 59.68	+38 31.1	2.260	3.186	7.1	20.9	12 27	4 58.65	+25 6.1	1.532	2.481	7.6	20.0
1 6	4 51.68	+37 52.7	2.333	3.204	9.6	21.1	1 6	4 49.87	+24 54.1	1.566	2.459	12.1	20.3
1 16	4 46.18	+37 8.6	2.431	3.221	12.0	21.3	1 16	4 43.92	+24 43.0	1.623	2.436	16.0	20.5
482679	2013 <i>CC</i> ₆₅		12 11.6 254°46	1°2/11.4 18			493380	2014 <i>WX</i> ₁₁₇		12 11.6 321°33	9°1/ 7.8 17		
11 7	5 42.68	+20 27.9	2.014	2.835	13.3	22.0	11 7	5 38.56	+ 0 35.9	2.121	2.911	13.8	21.0
11 17	5 37.21	+20 12.2	1.922	2.822	10.1	21.7	11 17	5 33.79	- 1 14.8	2.050	2.904	11.7	20.9
11 27	5 29.39	+19 55.8	1.854	2.809	6.3	21.5	11 27	5 27.12	- 2 54.8	2.002	2.897	9.9	20.8
12 7	5 19.94	+19 38.8	1.814	2.795	2.3	21.2	12 7	5 19.19	- 4 17.8	1.981	2.890	9.1	20.7
12 17	5 9.86	+19 22.3	1.803	2.781	2.8	21.2	12 17	5 10.83	- 5 18.3	1.986	2.884	9.7	20.7
12 27	5 0.31	+19 7.9	1.822	2.767	6.9	21.4	12 27	5 3.00	- 5 53.3	2.018	2.877	11.4	20.8
1 6	4 52.35	+18 57.4	1.868	2.753	10.8	21.6	1 6	4 56.51	- 6 3.2	2.073	2.871	13.5	21.0
1 16	4 46.74	+18 52.4	1.938	2.739	14.2	21.8	1 16	4 51.97	- 5 50.5	2.148	2.866	15.6	21.1
145086	2005 <i>GS</i> ₅₄		12 11.6 134°31	1°5/11.9 18			491539	2012 <i>LG</i> ₁₂		12 11.6 218°47	2°3/12.3 18		
11 7	5 45.32	+27 19.6	2.319	3.126	12.3	20.5	11 7	5 41.90	+32 34.4	3.055	3.847	10.0	21.7
11 17	5 38.77	+27 34.0	2.249	3.139	9.3	20.4	11 17	5 35.97	+32 34.8	2.959	3.838	7.7	21.5
11 27	5 30.12	+27 43.8	2.203	3.152	5.8	20.2	11 27	5 28.33	+32 28.1	2.889	3.829	5.2	21.3
12 7	5 20.11	+27 47.4	2.186	3.165	2.4	20.0	12 7	5 19.56	+32 13.1	2.847	3.819	2.8	21.2
12 17	5 9.73	+27 44.1	2.199	3.176	2.5	20.0	12 17	5 10.41	+31 49.4	2.837	3.809	2.7	21.2
12 27	5 0.05	+27 34.9	2.243	3.188	5.8	20.2	12 27	5 1.71	+31 18.3	2.858	3.798	5.0	21.3
1 6	4 51.96	+27 22.1	2.315	3.198	9.1	20.5	1 6	4 54.21	+30 42.2	2.909	3.787	7.6	21.5
1 16	4 46.10	+27 8.3	2.413	3.208	11.9	20.7	1 16	4 48.46	+30 4.2	2.986	3.776	10.0	21.6
388124	2005 <i>UP</i> ₄₇₇		12 11.6 6°81	1°0/11.4 18			422542	2014 <i>TZ</i> ₂₆		12 11.6 43°06	0°1/11.6 17		
11 7	5 43.26	+23 9.1	1.352	2.195	17.4	20.6	11 7	5 40.85	+22 26.7	2.071	2.895	12.9	21.3
11 17	5 38.42	+22 35.5	1.284	2.195	13.1	20.3	11 17	5 35.66	+22 33.1	2.000	2.901	9.7	21.2
11 27	5 30.41	+21 57.3	1.237	2.196	8.1	20.0	11 27	5 28.32	+22 38.4	1.952	2.907	6.0	20.9
12 7	5 20.29	+21 15.4	1.215	2.197	2.7	19.7	12 7	5 19.59	+22 42.0	1.932	2.914	1.9	20.7
12 17	5 9.54	+20 32.4	1.219	2.198	3.3	19.8	12 17	5 10.42	+22 43.7	1.942	2.921	2.2	20.7
12 27	4 59.83	+19 52.4	1.250	2.200	8.7	20.1	12 27	5 1.90	+22 44.3	1.980	2.928	6.2	21.0
1 6	4 52.54	+19 19.4	1.305	2.203	13.5	20.4	1 6	4 54.96	+22 45.1	2.046	2.936	9.8	21.2
1 16	4 48.47	+18 56.3	1.381	2.206	17.6	20.6	1 16	4 50.24	+22 47.7	2.136	2.943	12.9	21.4
414306	2008 <i>RR</i> ₄₅		12 11.6 293°04	4°5/12.3 17			478435	2012 <i>HF</i> ₆₆		12 11.6 176°52	3°6/11.2 18		
11 7	5 43.50	+35 35.3	2.257	3.055	12.8	21.2	11 7	5 46.46	+13 51.5	1.800	2.615	14.9	22.1
11 17	5 37.94	+36 14.3	2.169	3.047	10.2	21.1	11 17	5 40.07	+13 35.6	1.724	2.618	11.4	21.9
11 27	5 29.90	+36 44.4	2.106	3.039	7.3	20.9	11 27	5 31.14	+13 25.0	1.672	2.620	7.5	21.7
12 7	5 20.13	+37 1.9	2.069	3.031	5.0	20.7	12 7	5 20.52	+13 21.4	1.647	2.621	4.1	21.4
12 17	5 9.68	+37 4.5	2.062	3.023	4.9	20.7	12 17	5 9.33	+13 25.6	1.651	2.621	4.5	21.5
12 27	4 59.80	+36 52.5	2.083	3.015	7.2	20.8	12 27	4 58.87	+13 38.3	1.684	2.621	8.2	21.7
1 6	4 51.62	+36 29.0	2.131	3.007	10.1	21.0	1 6	4 50.24	+13 59.4	1.744	2.620	12.0	21.9
1 16	4 45.91	+35 58.5	2.203	2.999	12.9	21.2	1 16	4 44.20	+14 28.2	1.827	2.618	15.4	22.1
391183	2006 <i>BA</i> ₁₉₃		12 11.6 260°64	3°2/11.1 18			101140	1998 <i>RY</i> ₆₇		12 11.6 63°90	0°3/11.7 18		
11 7	5 43.03	+15 51.2	1.747	2.573	14.8	21.8	11 7	5 45.68	+24 18.6	1.610	2.439	15.8	20.2
11 17	5 37.72	+15 28.6	1.661	2.562	11.4	21.5	11 17	5 39.54	+24 13.6	1.559	2.463	11.8	20.0
11 27	5 29.83	+15 9.2	1.599	2.551	7.4	21.3	11 27	5 30.74	+24 5.0	1.531	2.486	7.2	19.8
12 7	5 20.12	+14 54.7	1.563	2.540	3.7	21.0	12 7	5 20.33	+23 52.1	1.528	2.510	2.3	19.6
12 17	5 9.70	+14 46.6	1.555	2.528	4.3	21.1	12 17	5 9.64	+23 35.3	1.554	2.534	2.6	19.7
12 27	4 59.89	+14 46.4	1.576	2.517	8.2	21.3	12 27	5 0.07	+23 17.0	1.609	2.558	7.2	20.0
1 6	4 51.85	+14 54.9	1.622	2.505	12.3	21.5	1 6	4 52.69	+22 59.9	1.689	2.582	11.3	20.3
1 16	4 46.42	+15 12.2	1.691	2.493	15.9	21.7	1 16	4 48.13	+22 46.7	1.793	2.606	14.7	20.6
409229	2003 <i>YM</i> ₁₀₇		12 11.6 5°32	9°5/17.0 16			398798	2013 <i>AQ</i> ₁₆₇		12 11.6 1			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
89474	2001 XA ₂₃		12 11.6	53°52	2°0/11.9	18	369786	2012 GV ₃₄		12 11.6	198°93	1°8/11.1	17
11 7	5 44.87	+27 19.1	1.701	2.526	15.2	19.1	11 7	5 40.09	+18 42.4	2.537	3.351	11.1	22.1
11 17	5 39.03	+27 46.6	1.646	2.546	11.5	18.9	11 17	5 34.72	+18 12.5	2.453	3.349	8.4	22.0
11 27	5 30.51	+28 8.8	1.614	2.566	7.3	18.7	11 27	5 27.61	+17 42.4	2.395	3.346	5.3	21.8
12 7	5 20.29	+28 23.3	1.608	2.587	3.1	18.5	12 7	5 19.37	+17 13.2	2.365	3.344	2.3	21.5
12 17	5 9.67	+28 28.8	1.630	2.608	3.2	18.6	12 17	5 10.78	+16 46.5	2.366	3.341	2.7	21.6
12 27	5 0.04	+28 26.1	1.681	2.629	7.1	18.9	12 27	5 2.67	+16 23.9	2.397	3.338	5.8	21.8
1 6	4 52.53	+28 18.4	1.758	2.650	11.0	19.1	1 6	4 55.82	+16 6.7	2.457	3.334	8.9	22.0
1 16	4 47.82	+28 8.8	1.858	2.671	14.3	19.4	1 16	4 50.76	+15 56.1	2.542	3.331	11.6	22.1
313904	2004 NE ₂₃		12 11.6	95°86	7°6/14.4	17	513550	2010 NG ₃		12 11.6	189°99	2°6/11.9	18
11 7	5 51.13	+47 20.7	2.217	2.968	14.5	20.3	11 7	5 48.11	+31 57.6	3.304	4.082	9.6	23.5
11 17	5 43.71	+47 43.8	2.149	2.979	12.2	20.2	11 17	5 40.56	+32 36.5	3.210	4.080	7.4	23.3
11 27	5 33.36	+47 48.0	2.103	2.991	9.9	20.0	11 27	5 31.17	+33 10.2	3.142	4.077	5.0	23.2
12 7	5 21.19	+47 28.5	2.082	3.002	8.1	19.9	12 7	5 20.54	+33 36.0	3.106	4.074	3.0	23.0
12 17	5 8.67	+46 43.9	2.088	3.013	7.7	19.9	12 17	5 9.39	+33 52.4	3.102	4.069	3.0	23.0
12 27	4 57.36	+45 36.8	2.122	3.024	8.9	20.0	12 27	4 58.61	+33 59.0	3.131	4.063	5.1	23.1
1 6	4 48.47	+44 13.9	2.183	3.035	10.9	20.2	1 6	4 48.99	+33 57.6	3.192	4.056	7.5	23.3
1 16	4 42.68	+42 43.1	2.268	3.046	13.1	20.4	1 16	4 41.14	+33 50.5	3.279	4.048	9.7	23.4
496637	2015 VV ₆₆		12 11.6	80°03	0°5/11.5	16	514148	2015 KL ₄₃		12 11.6	9°54	0°4/11.5	18
11 7	5 44.17	+22 42.9	1.919	2.740	13.9	21.8	11 7	5 44.84	+23 59.8	1.453	2.289	16.8	20.9
11 17	5 38.05	+22 28.5	1.862	2.762	10.4	21.6	11 17	5 39.48	+23 33.6	1.381	2.289	12.7	20.6
11 27	5 29.70	+22 11.9	1.828	2.783	6.3	21.4	11 27	5 31.05	+23 2.4	1.332	2.289	7.8	20.4
12 7	5 20.00	+21 53.1	1.822	2.804	2.0	21.2	12 7	5 20.55	+22 26.3	1.308	2.290	2.5	20.1
12 17	5 10.03	+21 33.1	1.846	2.825	2.4	21.3	12 17	5 9.43	+21 47.3	1.311	2.290	3.0	20.1
12 27	5 0.95	+21 13.7	1.899	2.846	6.5	21.6	12 27	4 59.29	+21 8.9	1.341	2.291	8.3	20.4
1 6	4 53.70	+20 57.1	1.979	2.866	10.2	21.8	1 6	4 51.49	+20 35.3	1.396	2.292	13.0	20.7
1 16	4 48.85	+20 45.2	2.083	2.887	13.3	22.1	1 16	4 46.83	+20 9.7	1.473	2.293	17.0	20.9
144933	2005 EA ₈		12 11.6	96°54	5°7/12.5	18	204118	2003 WW ₁₆₁		12 11.6	167°14	1°1/11.6	18
11 7	5 52.36	+35 14.6	1.487	2.298	17.7	20.1	11 7	5 45.90	+17 53.1	2.255	3.063	12.5	20.3
11 17	5 45.33	+36 1.5	1.430	2.315	13.9	19.9	11 17	5 39.31	+18 22.2	2.175	3.067	9.5	20.1
11 27	5 34.69	+36 35.3	1.395	2.332	9.8	19.7	11 27	5 30.56	+18 54.8	2.120	3.071	5.9	19.9
12 7	5 21.69	+36 49.7	1.384	2.348	6.4	19.5	12 7	5 20.36	+19 29.4	2.094	3.075	2.1	19.7
12 17	5 8.08	+36 41.7	1.400	2.365	6.2	19.6	12 17	5 9.62	+20 4.8	2.099	3.078	2.4	19.7
12 27	4 55.84	+36 13.7	1.443	2.380	9.3	19.8	12 27	4 59.42	+20 40.1	2.136	3.080	6.2	20.0
1 6	4 46.49	+35 32.4	1.512	2.396	13.0	20.1	1 6	4 50.70	+21 15.0	2.201	3.082	9.7	20.2
1 16	4 40.84	+34 45.7	1.602	2.411	16.4	20.3	1 16	4 44.17	+21 49.7	2.292	3.083	12.7	20.4
217261	2003 XZ ₂₈		12 11.6	155°47	0°4/11.5	18	232074	2001 VH ₄₀		12 11.6	320°64	1°5/11.7	18
11 7	5 47.67	+23 26.3	1.676	2.499	15.5	20.7	11 7	5 44.98	+24 31.8	1.485	2.319	16.6	19.9
11 17	5 41.17	+23 7.1	1.605	2.505	11.7	20.4	11 17	5 39.84	+25 9.2	1.407	2.313	12.6	19.6
11 27	5 31.87	+22 44.0	1.556	2.511	7.2	20.2	11 27	5 31.47	+25 45.9	1.351	2.307	7.9	19.3
12 7	5 20.76	+22 17.1	1.534	2.516	2.3	19.9	12 7	5 20.77	+26 18.6	1.320	2.301	3.0	19.0
12 17	5 9.12	+21 47.3	1.541	2.521	2.8	19.9	12 17	5 9.10	+26 44.1	1.317	2.296	3.2	19.0
12 27	4 58.43	+21 17.5	1.577	2.525	7.6	20.2	12 27	4 58.21	+27 2.0	1.341	2.291	8.3	19.3
1 6	4 49.88	+20 51.0	1.640	2.528	11.9	20.5	1 6	4 49.58	+27 14.0	1.390	2.286	13.0	19.6
1 16	4 44.22	+20 30.6	1.725	2.531	15.5	20.8	1 16	4 44.22	+27 23.2	1.460	2.282	17.0	19.8
274343	2008 RH ₃₅		12 11.6	321°71	4°5/10.6	17	461240	2015 WW ₁₃		12 11.6	11°27	0°6/11.7	18
11 7	5 38.49	+11 6.9	2.192	3.008	12.6	20.8	11 7	5 42.17	+24 56.0	1.866	2.692	14.0	21.2
11 17	5 33.73	+10 27.3	2.113	3.004	9.8	20.7	11 17	5 36.95	+24 55.8	1.791	2.693	10.6	21.0
11 27	5 27.09	+9 53.2	2.059	3.000	6.9	20.5	11 27	5 29.27	+24 52.0	1.738	2.693	6.6	20.8
12 7	5 19.20	+9 27.2	2.032	2.997	4.7	20.3	12 7	5 19.96	+24 43.6	1.713	2.694	2.2	20.5
12 17	5 10.90	+9 11.4	2.034	2.993	5.1	20.3	12 17	5 10.11	+24 30.8	1.716	2.696	2.5	20.5
12 27	5 3.11	+9 7.3	2.064	2.990	7.7	20.5	12 27	5 0.99	+24 15.1	1.748	2.697	6.8	20.8
1 6	4 56.66	+9 15.0	2.121	2.987	10.6	20.7	1 6	4 53.66	+23 59.0	1.806	2.699	10.7	21.0
1 16	4 52.15	+9 33.5	2.201	2.984	13.4	20.9	1 16	4 48.86	+23 45.2	1.888	2.700	14.1	21.2
219158	1999 RK ₂₀₉		12 11.6	35°57	1°9/11.1	18	143419	2003 BQ ₅₃		12 11.6	333°28	0°4/11.6	18
11 7	5 40.84	+20 11.0	1.901	2.729	13.7	19.2	11 7	5 42.06	+23 9.3	1.890	2.715	13.9	20.1
11 17	5 35.70	+19 26.4	1.831	2.734	10.3	19.0	11 17	5 36.81	+22 54.7	1.811	2.714	10.4	19.9
11 27	5 28.35	+18 40.3	1.785	2.740	6.4	18.7	11 27	5 29.16	+22 37.1	1.757	2.712	6.4	19.7
12 7	5 19.61	+17 54.4	1.767	2.747	2.7	18.5	12 7	5 19.92	+22 16.7	1.729	2.711	2.1	19.4
12 17	5 10.50	+17 11.4	1.777	2.753	3.2	18.6	12 17	5 10.16	+21 54.3	1.730	2.710	2.5	19.4
12 27	5 2.15	+16 34.3	1.816	2.760	7.1	18.8	12 27	5 1.09	+21 31.9	1.760	2.709	6.8	19.7
1 6	4 55.50	+16 5.4	1.882	2.767	10.8	19.1	1 6	4 53.78	+21 12.1	1.817	2.707	10.8	19.9
1 16	4 51.15	+15 46.1	1.971	2.774	14.0	19.3	1 16	4 48.93	+20 56.9	1.897	2.707	14.2	20.2
75042	1999 UQ ₃₈		12 11.6	50°94	0°3/11.7	18	281206	2007 GT ₄₉		12 11.6	322°97	17°6/2.4	18
11 7	5 46.58	+25 38.1	1.200	2.045	19.0	18.4	11 7	5 37.58	- 5 26.2	1.219	2.029	20.9	19.7
11 17	5 41.00	+25 11.4	1.149	2.061	14.3	18.2	11 17	5 34.53	- 8 40.1	1.150	2.002	19.0	19.5
11 27	5 31.97	+24 37.6	1.119	2.077	8.8	17.9	11 27	5 28.34	-11 37.5	1.101	1.976	17.8	19.3
12 7	5 20.79	+23 57.0	1.112	2.094	2.8	17.6	12 7	5 19.80	-14 2.0	1.073	1.951	17.7	19.2
12 17	5 9.22	+23 12.0	1.132	2.112	3.2	17.7	12 17	5 10.19	-15 39.5	1.064	1.927	19.0	19.2
12 27	4 59.12	+22 27.2	1.177	2.130	8.8	18.1	12 27	5 1.18	-16 22.1	1.073	1.903	21.2	19.3
1 6	4 51.84	+21 47.8	1.247	2.148	13.8	18.4	1 6	4 54.27	-16 11.2	1.098	1.882	23.8	19.4
1 16	4 48.09	+21 17.4	1.337	2.166	17.9	18.7	1 16	4 50.54	-15 14.1	1.135	1.861	26.4	19.5
310990	2003 WV ₈₁		12 11.6	22°57	0°4/11.6	17	431767	2008 HZ ₅₀		12 11.6	166°41	0°9/11.5	18
11 7	5 41.44	+20 0.1	1.032	1.8									

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12 11.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
218428	2004 <i>RB</i> ₁₇₅	12 11.6 164°73'	2°7/10.9 18				432257	2009 <i>RZ</i> ₅₄	12 11.6 150°05'	4°2/10.9 18			
11 7	5 40.80	+16 38.4	2.273	3.089	12.2	20.4	11 7	5 45.28	+13 57.8	1.701	2.523	15.4	21.7
11 17	5 35.37	+15 59.4	2.195	3.091	9.2	20.2	11 17	5 39.24	+13 20.4	1.633	2.529	11.8	21.5
11 27	5 28.05	+15 21.6	2.143	3.093	6.0	20.0	11 27	5 30.67	+12 47.7	1.587	2.535	7.9	21.3
12 7	5 19.53	+14 46.7	2.119	3.095	3.1	19.8	12 7	5 20.45	+12 22.1	1.568	2.540	4.6	21.1
12 17	5 10.64	+14 16.9	2.125	3.096	3.6	19.8	12 17	5 9.74	+12 6.0	1.577	2.545	5.1	21.1
12 27	5 2.33	+13 53.9	2.161	3.097	6.6	20.0	12 27	4 59.86	+12 1.0	1.614	2.549	8.6	21.4
1 6	4 55.42	+13 39.3	2.224	3.098	9.8	20.2	1 6	4 51.89	+12 7.6	1.678	2.553	12.4	21.6
1 16	4 50.48	+13 33.3	2.312	3.099	12.6	20.4	1 16	4 46.55	+12 24.9	1.764	2.557	15.7	21.8
242264	2003 <i>SY</i> ₃₂₇	12 11.6 257°16'	0°6/11.7 18				299619	2006 <i>JG</i> ₁₇	12 11.6 165°08'	1°8/11.3 18			
11 7	5 44.15	+24 38.8	1.814	2.638	14.5	20.9	11 7	5 43.88	+18 48.3	2.190	3.004	12.7	22.1
11 17	5 38.63	+24 41.7	1.729	2.630	11.0	20.7	11 17	5 37.77	+18 26.9	2.113	3.009	9.5	21.9
11 27	5 30.44	+24 41.3	1.667	2.622	6.8	20.4	11 27	5 29.59	+18 5.7	2.061	3.013	6.0	21.7
12 7	5 20.39	+24 36.4	1.632	2.613	2.3	20.1	12 7	5 20.08	+17 45.6	2.038	3.017	2.5	21.5
12 17	5 9.63	+24 26.6	1.625	2.604	2.6	20.1	12 17	5 10.17	+17 27.7	2.045	3.021	2.9	21.6
12 27	4 59.53	+24 13.3	1.647	2.596	7.2	20.4	12 27	5 0.89	+17 13.7	2.082	3.023	6.5	21.8
1 6	4 51.29	+23 59.1	1.695	2.587	11.4	20.6	1 6	4 53.14	+17 4.8	2.147	3.025	9.9	22.0
1 16	4 45.75	+23 46.8	1.767	2.578	15.0	20.8	1 16	4 47.55	+17 2.1	2.236	3.027	12.9	22.2
328413	2008 <i>ST</i> ₁₀₆	12 11.6 78°83'	8°5/12.9 17				96035	2004 <i>PB</i> ₅₄	12 11.6 195°44'	0°1/11.6 18			
11 7	5 52.07	+47 44.2	2.365	3.108	13.9	20.3	11 7	5 45.95	+23 44.5	1.967	2.783	13.8	20.7
11 17	5 44.78	+49 11.0	2.306	3.124	11.9	20.2	11 17	5 39.70	+23 37.6	1.884	2.781	10.4	20.5
11 27	5 34.33	+50 21.7	2.269	3.140	10.0	20.1	11 27	5 30.97	+23 27.5	1.825	2.779	6.4	20.2
12 7	5 21.67	+51 9.9	2.258	3.156	8.7	20.1	12 7	5 20.57	+23 13.7	1.794	2.776	2.1	19.9
12 17	5 8.19	+51 31.3	2.274	3.172	8.6	20.1	12 17	5 9.59	+22 56.3	1.792	2.772	2.4	19.9
12 27	4 55.56	+51 26.3	2.317	3.188	9.6	20.2	12 27	4 59.30	+22 37.2	1.821	2.768	6.8	20.2
1 6	4 45.21	+50 59.7	2.385	3.204	11.3	20.3	1 6	4 50.79	+22 18.8	1.876	2.763	10.7	20.4
1 16	4 38.06	+50 18.1	2.475	3.220	13.1	20.5	1 16	4 44.80	+22 3.7	1.956	2.757	14.1	20.7
13241	<i>Biyo</i>	12 11.6 295°52'	2°3/11.7 18 R				173455	2000 <i>QE</i> ₄₁	12 11.6 177°00'	3°5/12.6 18			
11 7	5 46.70	+26 1.8	1.405	2.240	17.3	17.6	11 7	5 46.02	+35 33.6	2.664	3.448	11.5	20.8
11 17	5 41.41	+26 45.4	1.327	2.232	13.3	17.3	11 17	5 39.31	+35 46.3	2.580	3.451	9.0	20.7
11 27	5 32.60	+27 27.3	1.270	2.225	8.5	17.0	11 27	5 30.52	+35 49.6	2.521	3.452	6.3	20.5
12 7	5 21.20	+28 2.9	1.238	2.218	3.6	16.7	12 7	5 20.38	+35 41.2	2.490	3.454	4.0	20.3
12 17	5 8.70	+28 28.4	1.233	2.211	3.8	16.7	12 17	5 9.83	+35 20.1	2.490	3.454	3.8	20.3
12 27	4 57.00	+28 43.2	1.255	2.204	8.8	17.0	12 27	4 59.90	+34 47.8	2.520	3.454	6.0	20.5
1 6	4 47.78	+28 49.6	1.301	2.197	13.7	17.3	1 6	4 51.52	+34 7.5	2.580	3.453	8.7	20.6
1 16	4 42.11	+28 51.8	1.368	2.191	17.9	17.5	1 16	4 45.30	+33 23.5	2.665	3.452	11.2	20.8
418670	2008 <i>TW</i> ₁₃₁	12 11.6 182°93'	3°5/12.4 18				296095	2009 <i>BF</i> ₃₄	12 11.6 119°27'	0°6/11.6 18			
11 7	5 43.01	+34 24.7	2.542	3.337	11.7	21.5	11 7	5 43.84	+21 12.6	1.783	2.609	14.6	21.3
11 17	5 37.20	+34 48.9	2.459	3.337	9.1	21.3	11 17	5 38.28	+21 17.3	1.709	2.611	11.0	21.0
11 27	5 29.29	+35 4.8	2.401	3.337	6.4	21.1	11 27	5 30.16	+21 21.9	1.658	2.613	6.8	20.8
12 7	5 19.98	+35 10.1	2.371	3.337	4.0	21.0	12 7	5 20.32	+21 25.9	1.633	2.615	2.2	20.5
12 17	5 10.19	+35 3.3	2.371	3.336	3.9	21.0	12 17	5 9.89	+21 28.9	1.637	2.617	2.6	20.5
12 27	5 0.98	+34 45.4	2.401	3.336	6.1	21.1	12 27	5 0.20	+21 31.8	1.670	2.618	7.1	20.8
1 6	4 53.26	+34 19.1	2.458	3.335	8.9	21.3	1 6	4 52.36	+21 35.9	1.730	2.620	11.2	21.1
1 16	4 47.69	+33 48.2	2.541	3.335	11.4	21.4	1 16	4 47.14	+21 42.7	1.812	2.622	14.7	21.3
44668	1999 <i>RC</i> ₁₈₁	12 11.6 2°05'	1°1/11.5 18				374334	2005 <i>TJ</i> ₁₂₉	12 11.6 67°94'	1°1/11.8 17			
11 7	5 44.01	+20 36.7	1.250	2.097	18.3	18.5	11 7	5 43.29	+25 43.5	1.927	2.749	13.8	21.3
11 17	5 39.31	+20 36.5	1.183	2.096	13.8	18.3	11 17	5 37.67	+25 54.4	1.860	2.759	10.4	21.1
11 27	5 31.19	+20 37.3	1.137	2.096	8.6	18.0	11 27	5 29.67	+26 1.6	1.816	2.770	6.5	20.9
12 7	5 20.70	+20 38.5	1.114	2.096	2.9	17.6	12 7	5 20.13	+26 3.5	1.800	2.781	2.4	20.7
12 17	5 9.38	+20 40.1	1.117	2.097	3.5	17.7	12 17	5 10.14	+25 59.7	1.813	2.792	2.5	20.7
12 27	4 59.08	+20 43.3	1.146	2.098	9.1	18.0	12 27	5 0.94	+25 51.5	1.854	2.803	6.5	21.0
1 6	4 51.32	+20 49.8	1.198	2.100	14.2	18.3	1 6	4 53.54	+25 41.0	1.923	2.814	10.3	21.2
1 16	4 47.03	+21 1.2	1.271	2.102	18.5	18.6	1 16	4 48.62	+25 30.9	2.015	2.825	13.5	21.5
291537	2006 <i>EK</i> ₄₀	12 11.6 319°50'	1°1/11.4 17				157341	2004 <i>TU</i> ₄₅	12 11.6 319°43'	1°4/11.9 17			
11 7	5 39.97	+20 52.3	2.044	2.869	13.0	21.4	11 7	5 41.82	+26 53.6	2.068	2.887	13.1	20.6
11 17	5 35.13	+20 33.4	1.960	2.862	9.8	21.2	11 17	5 36.60	+27 2.2	1.986	2.884	9.9	20.4
11 27	5 28.10	+20 13.4	1.900	2.855	6.1	20.9	11 27	5 29.06	+27 6.3	1.927	2.880	6.3	20.2
12 7	5 19.62	+19 52.9	1.867	2.849	2.2	20.7	12 7	5 19.96	+27 4.6	1.896	2.876	2.5	20.0
12 17	5 10.62	+19 33.0	1.864	2.842	2.6	20.7	12 17	5 10.31	+26 56.4	1.894	2.873	2.5	20.0
12 27	5 2.20	+19 15.4	1.889	2.836	6.6	20.9	12 27	5 1.27	+26 42.9	1.922	2.870	6.4	20.2
1 6	4 55.30	+19 2.0	1.942	2.830	10.3	21.2	1 6	4 53.87	+26 26.6	1.976	2.867	10.1	20.4
1 16	4 50.63	+18 54.2	2.018	2.824	13.6	21.4	1 16	4 48.83	+26 10.3	2.055	2.864	13.3	20.6
465851	2010 <i>PP</i> ₇₈	12 11.6 73°16'	3°5/11.5 18				378559	2008 <i>CW</i> ₁₇₀	12 11.6 215°46'	3°0/12.3 18			
11 7	5 49.99	+15 10.3	1.232	2.067	19.3	21.3	11 7	5 48.78	+31 9.1	1.626	2.443	16.2	21.0
11 17	5 43.18	+15 4.6	1.190	2.095	14.5	21.1	11 17	5 42.50	+31 13.2	1.545	2.439	12.5	20.7
11 27	5 33.16	+15 6.1	1.169	2.123	9.2	20.9	11 27	5 33.01	+31 7.0	1.486	2.434	8.3	20.5
12 7	5 21.21	+15 15.1	1.173	2.151	4.4	20.7	12 7	5 21.29	+30 47.6	1.453	2.429	4.1	20.2
12 17	5 8.98	+15 31.6	1.203	2.178	4.8	20.8	12 17	5 8.81	+30 13.8	1.448	2.423	3.9	20.2
12 27	4 58.20	+15 55.3	1.260	2.205	9.4	21.1	12 27	4 57.27	+29 28.8	1.471	2.417	8.1	20.4
1 6	4 50.16	+16 25.5	1.342	2.232	13.8	21.5	1 6	4 48.11	+28 38.0	1.520	2.411	12.5	20.7
1 16	4 45.50	+17 1.2	1.444	2.258	17.6	21.8	1 16	4 42.21	+27 47.9	1.592	2.404	16.3	20.9
452802	2006 <i>JE</i> ₅₆	12 11.6 264°18'	3°0/11.4 17				248835	2006 <i>SX</i> ₃₆₈	12 11.7 36°52'	0°8/12.9 1			

EPHEMERIDES

12 11.7

12 11.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
226071	2002 <i>JR</i> ₈₅		12 11.7 134°75	0°6/11.5 17			313259	2001 <i>WX</i> ₆₁		12 11.7 48°89	2°0/11.2 17		
11 7	5 41.16	+22 14.7	2.265	3.083	12.2	20.9	11 7	5 43.14	+20 43.4	1.617	2.450	15.5	20.5
11 17	5 35.76	+21 58.8	2.187	3.086	9.1	20.7	11 17	5 37.62	+19 56.6	1.563	2.469	11.6	20.3
11 27	5 28.39	+21 40.9	2.135	3.089	5.6	20.4	11 27	5 29.63	+19 8.2	1.533	2.489	7.2	20.1
12 7	5 19.74	+21 21.3	2.110	3.091	1.9	20.2	12 7	5 20.15	+18 20.5	1.529	2.509	2.8	19.9
12 17	5 10.70	+21 1.0	2.115	3.094	2.2	20.2	12 17	5 10.42	+17 36.4	1.553	2.530	3.4	20.0
12 27	5 2.26	+20 41.4	2.150	3.097	5.9	20.5	12 27	5 1.72	+16 59.1	1.606	2.551	7.6	20.3
1 6	4 55.27	+20 24.4	2.213	3.099	9.4	20.7	1 6	4 55.05	+16 31.2	1.684	2.572	11.6	20.6
1 16	4 50.33	+20 11.8	2.301	3.102	12.3	20.9	1 16	4 51.02	+16 13.7	1.784	2.594	14.9	20.9
518803	2010 <i>BL</i> ₁₀₇		12 11.7 340°85	2°0/11.8 17			182188	2000 <i>TK</i> ₁₃		12 11.7 128°14	5°3/12.5 18		
11 7	5 42.53	+26 26.9	1.941	2.763	13.7	20.6	11 7	5 47.73	+38 4.6	2.289	3.073	13.1	20.2
11 17	5 37.40	+27 10.7	1.859	2.758	10.4	20.4	11 17	5 41.09	+38 55.0	2.217	3.082	10.5	20.0
11 27	5 29.73	+27 52.4	1.801	2.753	6.7	20.2	11 27	5 31.89	+39 34.6	2.169	3.091	7.8	19.9
12 7	5 20.26	+28 29.0	1.770	2.748	2.9	19.9	12 7	5 20.95	+39 59.1	2.148	3.099	5.7	19.8
12 17	5 10.06	+28 58.0	1.767	2.744	3.1	19.9	12 17	5 9.43	+40 5.7	2.156	3.107	5.6	19.8
12 27	5 0.42	+29 18.6	1.794	2.741	6.9	20.2	12 27	4 58.64	+39 55.1	2.193	3.115	7.5	19.9
1 6	4 52.51	+29 32.2	1.848	2.737	10.7	20.4	1 6	4 49.72	+39 31.0	2.258	3.123	10.1	20.1
1 16	4 47.14	+29 41.2	1.925	2.735	14.0	20.6	1 16	4 43.42	+38 58.3	2.346	3.130	12.6	20.3
342304	2008 <i>TU</i> ₅₅		12 11.7 121°81	4°0/12.3 16			136858	1998 <i>FW</i> ₁₀		12 11.7 323°14	2°1/11.9 18		
11 7	5 51.16	+33 35.4	2.052	2.847	14.1	21.9	11 7	5 44.51	+27 19.4	1.245	2.090	18.5	20.1
11 17	5 43.56	+34 12.7	1.989	2.867	10.9	21.8	11 17	5 40.10	+27 30.2	1.169	2.080	14.2	19.8
11 27	5 33.30	+34 40.4	1.951	2.887	7.5	21.6	11 27	5 31.97	+27 34.5	1.113	2.070	9.1	19.5
12 7	5 21.34	+34 54.7	1.939	2.906	4.6	21.5	12 7	5 21.12	+27 29.2	1.080	2.061	3.7	19.2
12 17	5 8.93	+34 53.5	1.958	2.924	4.4	21.5	12 17	5 9.20	+27 12.9	1.073	2.052	3.7	19.2
12 27	4 57.48	+34 38.3	2.006	2.942	7.2	21.7	12 27	4 58.25	+26 47.9	1.091	2.044	9.3	19.5
1 6	4 48.13	+34 13.1	2.083	2.959	10.3	21.9	1 6	4 50.00	+26 19.2	1.133	2.037	14.6	19.7
1 16	4 41.57	+33 42.9	2.183	2.974	13.2	22.1	1 16	4 45.53	+25 52.3	1.194	2.030	19.2	20.0
427174	2014 <i>UY</i> ₂₁₄		12 11.7 47°89	0°6/11.7 18			8840	1989 <i>WT</i>		12 11.7 304°65	0°8/11.7 18		
11 7	5 43.09	+22 46.2	1.936	2.758	13.7	20.4	11 7	5 46.19	+23 42.7	1.402	2.238	17.3	17.2
11 17	5 37.47	+23 20.6	1.876	2.777	10.3	20.2	11 17	5 40.88	+24 4.8	1.328	2.235	13.1	16.9
11 27	5 29.54	+23 54.6	1.841	2.795	6.3	20.0	11 27	5 32.21	+24 25.6	1.275	2.232	8.2	16.6
12 7	5 20.13	+24 26.1	1.833	2.814	2.1	19.8	12 7	5 21.15	+24 42.7	1.247	2.228	2.8	16.3
12 17	5 10.30	+24 53.4	1.854	2.833	2.3	19.9	12 17	5 9.18	+24 54.2	1.245	2.225	3.1	16.3
12 27	5 1.23	+25 16.3	1.904	2.853	6.4	20.2	12 27	4 58.09	+25 0.5	1.271	2.222	8.5	16.6
1 6	4 53.92	+25 35.6	1.982	2.873	10.0	20.4	1 6	4 49.41	+25 3.8	1.322	2.219	13.4	16.9
1 16	4 49.01	+25 52.9	2.084	2.892	13.1	20.7	1 16	4 44.13	+25 7.2	1.393	2.217	17.6	17.2
148590	2001 <i>RQ</i> ₁₅		12 11.7 167°22	1°6/11.9 18			311727	2006 <i>SY</i> ₃₈₀		12 11.7 269°16	5°2/11.2 17		
11 7	5 48.21	+27 31.8	2.056	2.864	13.6	20.9	11 7	5 41.79	+7 59.2	2.036	2.843	13.7	20.9
11 17	5 41.32	+27 40.8	1.978	2.870	10.3	20.7	11 17	5 36.53	+7 46.6	1.947	2.829	10.9	20.7
11 27	5 31.95	+27 44.4	1.925	2.875	6.5	20.5	11 27	5 29.07	+7 44.0	1.880	2.816	7.9	20.5
12 7	5 20.92	+27 40.5	1.899	2.879	2.6	20.3	12 7	5 20.07	+7 53.4	1.841	2.801	5.5	20.3
12 17	5 9.38	+27 28.6	1.904	2.882	2.7	20.3	12 17	5 10.42	+8 16.3	1.830	2.787	5.8	20.3
12 27	4 58.60	+27 10.1	1.939	2.885	6.6	20.5	12 27	5 1.21	+8 52.4	1.848	2.773	8.4	20.4
1 6	4 49.66	+26 48.1	2.002	2.886	10.3	20.8	1 6	4 53.43	+9 40.3	1.892	2.759	11.7	20.6
1 16	4 43.28	+26 26.1	2.090	2.887	13.5	21.0	1 16	4 47.82	+10 37.7	1.960	2.744	14.7	20.8
199015	2005 <i>WF</i> ₉₁		12 11.7 247°02	0°1/11.7 18			324051	2005 <i>VZ</i> ₂₉		12 11.7 0°26	1°0/11.5 18		
11 7	5 45.36	+25 5.8	1.626	2.454	15.7	20.4	11 7	5 41.38	+20 17.6	1.977	2.802	13.4	21.0
11 17	5 39.71	+24 36.7	1.547	2.450	11.9	20.1	11 17	5 36.25	+20 15.1	1.900	2.802	10.1	20.8
11 27	5 31.18	+24 1.2	1.490	2.446	7.4	19.8	11 27	5 28.87	+20 12.9	1.846	2.801	6.3	20.6
12 7	5 20.71	+23 19.5	1.460	2.442	2.4	19.5	12 7	5 19.98	+20 11.0	1.820	2.801	2.2	20.3
12 17	5 9.62	+22 33.4	1.458	2.438	2.8	19.5	12 17	5 10.57	+20 9.7	1.823	2.801	2.6	20.3
12 27	4 59.40	+21 46.5	1.484	2.434	7.7	19.8	12 27	5 1.78	+20 9.9	1.854	2.802	6.6	20.6
1 6	4 51.31	+21 3.3	1.537	2.429	12.2	20.1	1 6	4 54.61	+20 12.7	1.913	2.802	10.4	20.8
1 16	4 46.15	+20 27.6	1.612	2.425	16.1	20.3	1 16	4 49.73	+20 19.1	1.995	2.802	13.7	21.0
38540	<i>Stevens</i>		12 11.7 51°71	0°6/11.7 18 R			267965	2004 <i>FL</i> ₆₆		12 11.7 280°36	0°2/11.7 18		
11 7	5 43.21	+22 58.0	1.967	2.789	13.6	17.8	11 7	5 45.67	+22 3.8	1.536	2.368	16.2	21.4
11 17	5 37.64	+23 31.7	1.897	2.797	10.2	17.6	11 17	5 40.48	+22 15.1	1.442	2.347	12.4	21.1
11 27	5 29.72	+24 5.1	1.851	2.806	6.3	17.4	11 27	5 32.05	+22 26.5	1.369	2.325	7.8	20.8
12 7	5 20.22	+24 36.3	1.833	2.814	2.1	17.1	12 7	5 21.16	+22 36.6	1.322	2.304	2.6	20.4
12 17	5 10.19	+25 3.4	1.844	2.823	2.4	17.1	12 17	5 9.10	+22 44.2	1.302	2.282	3.0	20.4
12 27	5 0.83	+25 26.0	1.884	2.832	6.5	17.4	12 27	4 57.57	+22 49.7	1.310	2.260	8.5	20.6
1 6	4 53.18	+25 45.0	1.952	2.842	10.2	17.7	1 6	4 48.13	+22 54.8	1.343	2.238	13.5	20.9
1 16	4 47.94	+26 2.0	2.043	2.851	13.4	17.9	1 16	4 41.88	+23 2.1	1.398	2.215	17.9	21.1
377983	2006 <i>QX</i> ₅₅		12 11.7 45°95	5°1/12.4 18			457318	2008 <i>SU</i> ₈₉		12 11.7 37°35	5°4/12.7 17		
11 7	5 49.02	+32 44.8	1.118	1.958	20.5	20.7	11 7	5 44.62	+38 25.2	2.198	2.989	13.4	21.5
11 17	5 43.46	+33 21.3	1.073	1.976	15.8	20.5	11 17	5 38.86	+39 5.1	2.124	2.993	10.7	21.3
11 27	5 33.83	+33 44.2	1.046	1.995	10.7	20.3	11 27	5 30.56	+39 33.5	2.073	2.997	8.0	21.1
12 7	5 21.58	+33 47.8	1.042	2.015	6.1	20.1	12 7	5 20.53	+39 46.3	2.049	3.001	5.8	21.0
12 17	5 8.79	+33 30.0	1.063	2.035	5.8	20.1	12 17	5 9.94	+39 41.5	2.053	3.006	5.6	21.0
12 27	4 57.70	+32 54.7	1.108	2.056	9.9	20.4	12 27	5 0.09	+39 20.1	2.085	3.011	7.6	21.1
1 6	4 49.95	+32 9.8	1.176	2.077	14.5	20.8	1 6	4 52.11	+38 45.8	2.144	3.016	10.3	21.3
1 16	4 46.27	+31 23.4	1.265	2.099	18.4	21.1	1 16	4 46.74	+38 4.0	2.226	3.021	12.8	21.5
227165	2005 <i>QK</i> ₃₅		12 11.7 49°58	6°3/12.6 18			385342	2002 <i>LL</i>		12 11.7 155°79	10°0/10.1 18		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
291163	2006 AS ₁₁	12 11.7 250°88	4 ¹ /11.2 17				220924	2005 GO ₅₀	12 11.7 169°61	3 ² /11.1 16			
11 7	5 40.46	+10 27.0	2.216	3.026	12.7	20.3	11 7	5 46.61	+15 30.8	2.005	2.816	13.8	22.3
11 17	5 35.29	+10 16.6	2.135	3.022	9.8	20.1	11 17	5 39.98	+14 57.4	1.929	2.821	10.5	22.1
11 27	5 28.17	+10 13.5	2.078	3.019	6.8	19.9	11 27	5 31.08	+14 26.5	1.878	2.826	6.9	21.9
12 7	5 19.74	+10 19.3	2.048	3.015	4.4	19.7	12 7	5 20.71	+13 59.9	1.855	2.830	3.6	21.7
12 17	5 10.84	+10 34.8	2.048	3.011	4.7	19.8	12 17	5 9.90	+13 39.4	1.862	2.832	4.1	21.8
12 27	5 2.42	+11 0.1	2.077	3.007	7.3	19.9	12 27	4 59.78	+13 26.7	1.899	2.834	7.5	22.0
1 6	4 55.34	+11 34.3	2.133	3.003	10.4	20.1	1 6	4 51.36	+13 23.0	1.964	2.835	11.1	22.2
1 16	4 50.23	+12 15.9	2.213	2.999	13.2	20.3	1 16	4 45.29	+13 28.3	2.052	2.835	14.2	22.4
469998	2006 KM ₅₇	12 11.7 157°22	1 ⁴ /11.6 16				340139	2005 YX ₂₄	12 11.7 66°62	1 ⁰ /11.6 18			
11 7	5 48.80	+19 4.3	1.672	2.492	15.7	22.6	11 7	5 47.70	+20 26.4	1.429	2.262	17.2	20.6
11 17	5 42.12	+19 10.8	1.601	2.499	11.8	22.3	11 17	5 41.34	+20 30.0	1.382	2.288	12.8	20.4
11 27	5 32.62	+19 19.4	1.552	2.506	7.4	22.1	11 27	5 32.07	+20 34.3	1.357	2.313	7.9	20.1
12 7	5 21.22	+19 29.3	1.531	2.512	2.7	21.8	12 7	5 21.02	+20 38.4	1.358	2.339	2.7	19.9
12 17	5 9.21	+19 40.0	1.538	2.517	3.1	21.8	12 17	5 9.65	+20 42.3	1.386	2.365	3.0	20.0
12 27	4 58.04	+19 51.9	1.575	2.521	7.7	22.1	12 27	4 59.52	+20 46.9	1.441	2.391	7.9	20.3
1 6	4 48.97	+20 5.9	1.638	2.525	12.0	22.4	1 6	4 51.79	+20 53.6	1.523	2.416	12.3	20.7
1 16	4 42.78	+20 23.1	1.725	2.528	15.6	22.7	1 16	4 47.14	+21 3.8	1.626	2.442	15.9	21.0
494015	2016 AK ₁₄₃	12 11.7 138°13	3 ⁰ /10.8 17				506171	2016 FD ₅₆	12 11.7 152°04	16 ⁰ /7.7 17			
11 7	5 39.16	+15 17.7	2.416	3.231	11.6	21.7	11 7	5 46.14	- 6 1.7	1.277	2.067	21.3	21.0
11 17	5 34.12	+14 35.9	2.338	3.232	8.8	21.5	11 17	5 40.50	- 8 35.9	1.230	2.071	18.8	20.9
11 27	5 27.34	+13 56.0	2.285	3.233	5.8	21.3	11 27	5 31.77	-10 45.3	1.202	2.074	16.8	20.8
12 7	5 19.46	+13 20.1	2.261	3.234	3.3	21.1	12 7	5 20.99	-12 17.1	1.195	2.077	16.0	20.7
12 17	5 11.23	+12 50.2	2.267	3.235	3.8	21.2	12 17	5 9.62	-13 2.7	1.209	2.080	16.6	20.8
12 27	5 3.52	+12 28.0	2.302	3.236	6.5	21.4	12 27	4 59.28	-13 0.1	1.244	2.083	18.3	20.9
1 6	4 57.08	+12 14.8	2.365	3.237	9.5	21.5	1 6	4 51.31	-12 14.8	1.297	2.085	20.6	21.1
1 16	4 52.45	+12 10.6	2.453	3.237	12.1	21.7	1 16	4 46.50	-10 56.0	1.365	2.087	22.8	21.3
65692	Trifu	12 11.7 96°86	3 ³ /12.4 18				329863	2004 XQ ₂₉	12 11.7 341°00	1 ⁰ /11.8 17			
11 7	5 48.83	+32 12.2	1.828	2.636	15.0	19.9	11 7	5 41.53	+24 52.3	1.988	2.812	13.4	20.3
11 17	5 41.97	+32 26.1	1.768	2.656	11.5	19.8	11 17	5 36.52	+25 10.9	1.907	2.808	10.1	20.1
11 27	5 32.38	+32 30.1	1.732	2.675	7.7	19.6	11 27	5 29.14	+25 27.3	1.850	2.804	6.3	19.9
12 7	5 21.10	+32 21.4	1.722	2.694	4.1	19.4	12 7	5 20.14	+25 39.9	1.820	2.801	2.3	19.6
12 17	5 9.45	+31 59.3	1.740	2.713	3.9	19.4	12 17	5 10.53	+25 47.6	1.818	2.798	2.4	19.6
12 27	4 58.88	+31 26.3	1.788	2.732	7.2	19.7	12 27	5 1.50	+25 50.8	1.846	2.795	6.5	19.9
1 6	4 50.52	+30 47.2	1.863	2.749	10.8	19.9	1 6	4 54.13	+25 51.3	1.901	2.793	10.3	20.1
1 16	4 45.03	+30 7.0	1.962	2.767	13.9	20.2	1 16	4 49.15	+25 51.1	1.979	2.791	13.6	20.3
100920	1998 KT ₅₆	12 11.7 157°47	0 ¹ /11.7 18				396353	2014 DN ₈₁	12 11.7 66°42	4 ⁶ /12.5 18			
11 7	5 48.33	+22 17.5	1.782	2.600	14.9	20.4	11 7	5 49.46	+33 41.0	1.535	2.351	17.0	20.1
11 17	5 41.69	+22 33.0	1.709	2.607	11.3	20.1	11 17	5 42.94	+34 13.4	1.483	2.373	13.2	19.9
11 27	5 32.33	+22 47.8	1.659	2.613	7.0	19.9	11 27	5 33.19	+34 33.9	1.453	2.395	9.0	19.7
12 7	5 21.14	+23 0.3	1.637	2.619	2.3	19.6	12 7	5 21.41	+34 37.9	1.447	2.417	5.4	19.6
12 17	5 9.34	+23 9.5	1.644	2.624	2.6	19.7	12 17	5 9.20	+34 23.9	1.469	2.439	5.1	19.6
12 27	4 58.34	+23 15.8	1.680	2.628	7.2	20.0	12 27	4 58.30	+33 54.4	1.519	2.461	8.4	19.8
1 6	4 49.34	+23 20.9	1.744	2.631	11.3	20.2	1 6	4 50.03	+33 15.5	1.594	2.482	12.1	20.1
1 16	4 43.13	+23 27.0	1.831	2.634	14.9	20.4	1 16	4 45.10	+32 33.5	1.691	2.504	15.5	20.4
324132	2005 YY ₅₅	12 11.7 96°75	1 ⁰ /11.9 18				187753	1995 SF ₄₉	12 11.7 145°13	0 ⁸ /11.8 18			
11 7	5 42.84	+26 43.1	2.155	2.970	12.8	21.1	11 7	5 43.17	+25 33.2	2.195	3.010	12.6	21.3
11 17	5 37.16	+26 40.5	2.082	2.978	9.6	20.9	11 17	5 37.43	+25 35.8	2.118	3.014	9.5	21.2
11 27	5 29.33	+26 33.0	2.034	2.986	6.0	20.7	11 27	5 29.54	+25 34.8	2.066	3.018	5.9	20.9
12 7	5 20.13	+26 19.8	2.014	2.994	2.2	20.5	12 7	5 20.24	+25 29.1	2.041	3.022	2.1	20.7
12 17	5 10.53	+26 1.1	2.023	3.002	2.3	20.5	12 17	5 10.49	+25 18.6	2.046	3.026	2.2	20.7
12 27	5 1.63	+25 38.5	2.062	3.010	6.0	20.7	12 27	5 1.38	+25 4.6	2.082	3.029	6.0	21.0
1 6	4 54.36	+25 14.7	2.129	3.018	9.5	21.0	1 6	4 53.84	+24 49.3	2.145	3.032	9.5	21.2
1 16	4 49.34	+24 52.4	2.221	3.026	12.5	21.2	1 16	4 48.53	+24 35.1	2.232	3.035	12.5	21.4
249722	2000 RU ₉₃	12 11.7 36°56	10 ⁷ /14.1 17				291588	2006 GD ₁₂	12 11.7 177°62	1 ⁰ /11.8 18			
11 7	5 51.39	+47 19.5	1.566	2.343	18.5	19.8	11 7	5 45.97	+25 43.6	2.384	3.189	12.0	22.7
11 17	5 45.28	+48 42.0	1.520	2.362	15.7	19.6	11 17	5 39.41	+25 56.5	2.301	3.191	9.1	22.5
11 27	5 35.06	+49 41.9	1.493	2.382	13.0	19.5	11 27	5 30.73	+26 6.1	2.243	3.193	5.7	22.3
12 7	5 22.08	+50 10.7	1.488	2.403	11.1	19.5	12 7	5 20.63	+26 10.9	2.214	3.194	2.1	22.1
12 17	5 8.37	+50 3.8	1.508	2.424	10.8	19.5	12 17	5 10.04	+26 10.2	2.216	3.195	2.2	22.1
12 27	4 56.24	+49 23.9	1.551	2.446	12.0	19.6	12 27	5 0.02	+26 4.7	2.249	3.194	5.8	22.3
1 6	4 47.41	+48 19.8	1.618	2.469	14.2	19.8	1 6	4 51.50	+25 56.3	2.311	3.193	9.2	22.6
1 16	4 42.72	+47 2.0	1.705	2.492	16.5	20.0	1 16	4 45.16	+25 47.4	2.398	3.191	12.1	22.7
486539	2013 HW ₂₁	12 11.7 192°26	4 ² /11.9 18				289632	2005 GM ₇₆	12 11.7 321°78	1 ⁶ /11.7 18			
11 7	5 46.79	+32 31.7	2.076	2.880	13.6	21.5	11 7	5 44.40	+17 55.6	1.228	2.075	18.6	20.1
11 17	5 40.64	+33 31.2	1.996	2.879	10.6	21.3	11 17	5 39.95	+18 18.5	1.152	2.064	14.2	19.8
11 27	5 31.78	+34 24.3	1.940	2.879	7.4	21.1	11 27	5 31.91	+18 48.4	1.096	2.054	9.0	19.5
12 7	5 21.01	+35 6.5	1.911	2.878	4.7	20.9	12 7	5 21.19	+19 24.0	1.063	2.045	3.3	19.1
12 17	5 9.46	+35 34.2	1.912	2.877	4.7	20.9	12 17	5 9.31	+20 3.3	1.056	2.036	3.7	19.1
12 27	4 58.51	+35 46.8	1.942	2.876	7.4	21.1	12 27	4 58.21	+20 44.6	1.075	2.027	9.5	19.4
1 6	4 49.39	+35 46.8	1.999	2.875	10.7	21.3	1 6	4 49.60	+21 27.2	1.117	2.019	14.9	19.7
1 16	4 42.96	+35 38.4	2.079	2.874	13.6	21.5	1 16	4 44.63	+22 11.1	1.179	2.012	19.5	20.0
48019	2001 CD ₄₃	12 11.7 134°32	1 ⁶ /11.6 18				444494	2006 RY ₂₀	12 11.7 15°33	1 ³ /11.5 17			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
154132	2002 <i>EL</i> ₁₀₇		12 11.7 305°96	6°1/11.0	18		402135	2004 <i>PY</i> ₂₉		12 11.7 137°10	5°3/13.3	18	
11 7	5 40.14	+ 6 57.5	1.888	2.700	14.4	20.0	11 7	5 48.58	+41 58.5	2.709	3.470	11.9	22.1
11 17	5 35.53	+ 6 35.1	1.796	2.680	11.6	19.7	11 17	5 41.36	+42 25.5	2.637	3.483	9.7	21.9
11 27	5 28.60	+ 6 23.6	1.727	2.660	8.6	19.5	11 27	5 31.89	+42 39.7	2.590	3.496	7.4	21.8
12 7	5 20.01	+ 6 26.1	1.683	2.640	6.4	19.3	12 7	5 21.01	+42 37.9	2.570	3.508	5.7	21.7
12 17	5 10.68	+ 6 44.6	1.666	2.620	6.7	19.3	12 17	5 9.76	+42 18.7	2.579	3.520	5.5	21.7
12 27	5 1.77	+ 7 19.6	1.677	2.600	9.3	19.4	12 27	4 59.29	+41 43.4	2.618	3.531	6.9	21.8
1 6	4 54.33	+ 8 9.4	1.714	2.581	12.6	19.6	1 6	4 50.57	+40 56.1	2.685	3.542	9.0	22.0
1 16	4 49.17	+ 9 11.2	1.773	2.562	15.8	19.7	1 16	4 44.22	+40 1.9	2.777	3.552	11.1	22.2
514688	2005 <i>YD</i> ₇₉		12 11.7 245°97	0°1/11.7	18		454733	2014 <i>TO</i> ₈₅		12 11.7 49°66	12°1/10.3	18	
11 7	5 45.30	+23 8.3	1.800	2.623	14.6	22.0	11 7	5 39.16	-11 7.9	2.026	2.767	16.0	19.9
11 17	5 39.62	+23 13.1	1.712	2.612	11.1	21.7	11 17	5 34.27	-12 28.9	1.986	2.784	14.3	19.8
11 27	5 31.21	+23 16.2	1.647	2.602	6.9	21.5	11 27	5 27.49	-13 26.9	1.966	2.800	12.9	19.8
12 7	5 20.87	+23 16.4	1.609	2.591	2.3	21.2	12 7	5 19.57	-13 56.6	1.968	2.818	12.2	19.8
12 17	5 9.74	+23 13.1	1.600	2.580	2.6	21.2	12 17	5 11.40	-13 55.1	1.993	2.835	12.3	19.8
12 27	4 59.23	+23 7.5	1.620	2.568	7.3	21.4	12 27	5 3.91	-13 23.0	2.041	2.853	13.2	19.9
1 6	4 50.58	+23 1.5	1.666	2.557	11.6	21.7	1 6	4 57.91	-12 24.1	2.111	2.870	14.6	20.0
1 16	4 44.65	+22 57.8	1.736	2.545	15.3	21.9	1 16	4 53.92	-11 4.3	2.199	2.889	16.0	20.2
106431	2000 <i>VU</i> ₄₅		12 11.7 261°49	1°4/11.8	18		336664	2009 <i>YG</i> ₁₃		12 11.7 213°76	0°1/11.7	18	
11 7	5 47.56	+24 43.7	1.453	2.284	17.0	19.6	11 7	5 40.38	+24 22.9	2.737	3.547	10.5	21.4
11 17	5 42.02	+25 14.9	1.371	2.275	13.0	19.3	11 17	5 35.00	+24 5.6	2.649	3.543	7.9	21.2
11 27	5 33.05	+25 44.8	1.311	2.266	8.2	19.0	11 27	5 27.92	+23 45.0	2.586	3.538	4.9	21.0
12 7	5 21.55	+26 10.0	1.276	2.257	3.1	18.7	12 7	5 19.74	+23 21.1	2.551	3.533	1.6	20.8
12 17	5 8.96	+26 27.7	1.268	2.247	3.3	18.7	12 17	5 11.20	+22 54.8	2.548	3.528	1.8	20.8
12 27	4 57.12	+26 37.6	1.287	2.237	8.6	19.0	12 27	5 3.12	+22 27.5	2.576	3.523	5.1	21.0
1 6	4 47.65	+26 42.0	1.332	2.227	13.5	19.2	1 6	4 56.23	+22 1.3	2.633	3.517	8.1	21.2
1 16	4 41.62	+26 44.6	1.398	2.217	17.8	19.5	1 16	4 51.09	+21 38.0	2.716	3.511	10.8	21.4
255164	2005 <i>UP</i> ₁₉₆		12 11.7 9°73	2°0/11.9	17		175654	2130 <i>T</i> ₋₃		12 11.7 27°51	2°2/11.3	18	
11 7	5 43.39	+27 21.3	1.896	2.717	14.0	20.6	11 7	5 43.50	+21 27.0	1.024	1.885	20.4	19.2
11 17	5 38.05	+27 51.0	1.819	2.717	10.7	20.3	11 17	5 39.25	+20 42.0	0.974	1.894	15.3	19.0
11 27	5 30.16	+28 16.7	1.766	2.718	6.8	20.1	11 27	5 31.28	+19 54.2	0.942	1.904	9.5	18.7
12 7	5 20.50	+28 35.7	1.740	2.719	3.0	19.9	12 7	5 20.92	+19 6.4	0.933	1.914	3.6	18.4
12 17	5 10.22	+28 46.4	1.743	2.720	3.1	19.9	12 17	5 9.99	+18 22.4	0.948	1.926	4.3	18.5
12 27	5 0.60	+28 49.1	1.774	2.721	6.9	20.1	12 27	5 0.49	+17 47.1	0.986	1.939	10.1	18.9
1 6	4 52.82	+28 46.0	1.832	2.723	10.7	20.4	1 6	4 53.94	+17 24.0	1.047	1.953	15.4	19.2
1 16	4 47.63	+28 40.1	1.914	2.725	14.0	20.6	1 16	4 51.09	+17 14.3	1.127	1.967	19.8	19.5
292412	2006 <i>SG</i> ₂₉₀		12 11.7 53°34	0°4/11.7	18		356623	2011 <i>US</i> ₁₇		12 11.7 47°36	0°4/11.7	18	
11 7	5 44.01	+21 15.9	1.666	2.496	15.3	20.2	11 7	5 45.99	+23 11.1	1.415	2.251	17.1	20.2
11 17	5 38.49	+21 31.4	1.606	2.510	11.4	20.0	11 17	5 40.20	+23 27.9	1.369	2.276	12.8	20.0
11 27	5 30.35	+21 47.2	1.569	2.525	7.0	19.8	11 27	5 31.45	+23 42.9	1.346	2.303	7.8	19.8
12 7	5 20.53	+22 2.3	1.558	2.540	2.3	19.5	12 7	5 20.90	+23 54.3	1.348	2.329	2.6	19.6
12 17	5 10.24	+22 15.6	1.575	2.555	2.6	19.6	12 17	5 10.01	+24 1.1	1.376	2.357	2.8	19.6
12 27	5 0.84	+22 27.7	1.621	2.570	7.2	19.9	12 27	5 0.34	+24 4.5	1.433	2.384	7.7	20.0
1 6	4 53.43	+22 39.5	1.693	2.586	11.3	20.2	1 6	4 53.09	+24 6.7	1.514	2.412	12.1	20.3
1 16	4 48.74	+22 52.5	1.787	2.602	14.7	20.5	1 16	4 48.91	+24 10.0	1.618	2.440	15.6	20.6
485695	2011 <i>YL</i> ₁₀		12 11.7 37°94	2°9/12.4	17		420701	2012 <i>KA</i> ₄₉		12 11.7 220°01	0°8/11.8	18	
11 7	5 44.69	+31 27.2	1.570	2.396	16.3	21.0	11 7	5 43.15	+23 48.4	2.528	3.337	11.3	21.3
11 17	5 39.27	+31 20.8	1.510	2.408	12.4	20.7	11 17	5 37.33	+24 25.7	2.439	3.332	8.5	21.1
11 27	5 30.91	+31 3.5	1.471	2.421	8.1	20.5	11 27	5 29.51	+25 2.7	2.376	3.328	5.3	20.9
12 7	5 20.71	+30 33.4	1.458	2.434	4.0	20.3	12 7	5 20.31	+25 37.4	2.342	3.323	1.9	20.7
12 17	5 10.10	+29 51.2	1.471	2.448	3.7	20.3	12 17	5 10.54	+26 8.1	2.339	3.318	2.1	20.7
12 27	5 0.62	+29 0.6	1.513	2.462	7.6	20.6	12 27	5 1.16	+26 34.1	2.367	3.313	5.5	20.9
1 6	4 53.47	+28 7.4	1.580	2.477	11.7	20.9	1 6	4 53.07	+26 56.1	2.424	3.308	8.8	21.1
1 16	4 49.34	+27 16.7	1.670	2.492	15.2	21.1	1 16	4 46.94	+27 15.1	2.507	3.302	11.6	21.3
193742	2001 <i>HE</i> ₃₃		12 11.7 202°03	2°4/12.2	18		159754	2003 <i>FB</i> ₉₂		12 11.7 267°93	0°8/11.6	18	
11 7	5 42.88	+31 34.2	3.096	3.887	9.9	21.3	11 7	5 44.86	+20 48.6	1.666	2.494	15.4	20.4
11 17	5 36.85	+31 58.9	3.003	3.882	7.6	21.2	11 17	5 39.51	+20 53.2	1.578	2.481	11.7	20.2
11 27	5 29.07	+32 18.3	2.937	3.877	5.1	21.0	11 27	5 31.27	+20 58.4	1.513	2.469	7.3	19.9
12 7	5 20.11	+32 30.5	2.900	3.871	2.9	20.8	12 7	5 20.96	+21 3.6	1.474	2.456	2.5	19.6
12 17	5 10.70	+32 34.3	2.894	3.864	2.8	20.8	12 17	5 9.78	+21 8.2	1.464	2.443	2.9	19.6
12 27	5 1.68	+32 30.0	2.920	3.857	5.1	21.0	12 27	4 59.20	+21 12.9	1.481	2.430	7.8	19.8
1 6	4 53.81	+32 19.3	2.975	3.850	7.6	21.1	1 6	4 50.56	+21 19.3	1.525	2.417	12.4	20.1
1 16	4 47.67	+32 4.6	3.056	3.842	9.9	21.3	1 16	4 44.77	+21 28.9	1.591	2.404	16.3	20.3
349713	2008 <i>YQ</i> ₉		12 11.7 3°79	4°5/12.0	18		302745	2002 <i>UM</i> ₃₇		12 11.7 64°00	0°2/11.7	18	
11 7	5 37.43	+11 29.8	0.982	1.847	20.6	19.4	11 7	5 45.68	+23 36.2	1.655	2.482	15.5	20.5
11 17	5 34.94	+12 0.8	0.926	1.845	16.0	19.1	11 17	5 39.58	+23 25.8	1.603	2.506	11.6	20.3
11 27	5 28.84	+12 49.6	0.888	1.845	10.6	18.8	11 27	5 30.92	+23 12.4	1.575	2.531	7.1	20.1
12 7	5 20.20	+13 56.5	0.871	1.848	5.6	18.6	12 7	5 20.71	+22 55.6	1.573	2.555	2.3	19.9
12 17	5 10.61	+15 18.3	0.877	1.853	5.5	18.6	12 17	5 10.23	+22 36.3	1.600	2.579	2.5	20.0
12 27	5 2.07	+16 49.5	0.906	1.860	10.5	18.9	12 27	5 0.81	+22 16.7	1.655	2.604	7.1	20.3
1 6	4 56.22	+18 24.3	0.957	1.870	15.7	19.2	1 6	4 53.52	+21 59.5	1.736	2.628	11.1	20.6
1 16	4 54.05	+19 57.9	1.027	1.881	20.2	19.5	1 16	4 48.95	+21 46.8	1.841	2.653	14.4	20.9
208136	2000 <i>EZ</i> ₂₇		12 11.7 203°42										

EPHEMERIDES

12 11.7

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
490934	2011 <i>CD</i> ₇₄		12 11.7 257°47	9°6/ 9.9 18			36842	2000 <i>SJ</i> ₁₁₄		12 11.7 56°30	0°8/11.8 18		
11 7	5 39.70	-10 33.2	2.683	3.406	12.9	21.3	11 7	5 43.20	+24 43.3	1.880	2.704	14.0	19.6
11 17	5 34.50	-11 16.2	2.600	3.390	11.5	21.1	11 17	5 37.75	+24 54.6	1.812	2.713	10.6	19.4
11 27	5 27.65	-11 42.1	2.538	3.373	10.3	21.0	11 27	5 29.89	+25 3.1	1.768	2.723	6.6	19.2
12 7	5 19.68	-11 46.7	2.501	3.357	9.7	21.0	12 7	5 20.44	+25 7.4	1.751	2.732	2.3	19.0
12 17	5 11.28	-11 27.4	2.489	3.339	9.8	20.9	12 17	5 10.52	+25 6.9	1.763	2.742	2.4	19.0
12 27	5 3.22	-10 44.1	2.502	3.322	10.8	21.0	12 27	5 1.37	+25 2.7	1.803	2.752	6.6	19.3
1 6	4 56.23	- 9 38.8	2.540	3.304	12.3	21.1	1 6	4 54.03	+24 56.8	1.871	2.763	10.4	19.5
1 16	4 50.88	- 8 15.7	2.599	3.286	13.8	21.2	1 16	4 49.19	+24 51.5	1.962	2.773	13.7	19.8
271316	2003 <i>WW</i> ₄		12 11.7 29°09	3°6/12.3 17			139213	2001 <i>GH</i> ₇		12 11.7 165°42	0°7/11.8 18		
11 7	5 43.23	+33 3.9	2.153	2.960	13.1	20.7	11 7	5 46.23	+23 42.4	2.444	3.248	11.8	20.7
11 17	5 37.76	+33 33.0	2.077	2.963	10.2	20.5	11 17	5 39.59	+24 12.5	2.363	3.253	8.9	20.5
11 27	5 29.90	+33 54.0	2.025	2.966	7.0	20.3	11 27	5 30.87	+24 41.5	2.308	3.259	5.5	20.3
12 7	5 20.44	+34 3.9	2.000	2.969	4.2	20.1	12 7	5 20.76	+25 7.6	2.282	3.263	1.9	20.1
12 17	5 10.44	+34 1.2	2.003	2.972	4.1	20.1	12 17	5 10.14	+25 29.3	2.288	3.267	2.1	20.1
12 27	5 1.11	+33 46.7	2.036	2.976	6.8	20.3	12 27	5 0.04	+25 46.4	2.325	3.270	5.7	20.4
1 6	4 53.51	+33 23.6	2.096	2.979	9.9	20.5	1 6	4 51.38	+25 59.8	2.392	3.273	8.9	20.6
1 16	4 48.34	+32 55.9	2.179	2.983	12.8	20.7	1 16	4 44.82	+26 11.3	2.484	3.275	11.8	20.8
112846	2002 <i>QZ</i> ₂₀		12 11.7 115°64	2°7/11.4 18			359566	2010 <i>TC</i> ₁₀₆		12 11.7 176°28	1°4/11.9 18		
11 7	5 46.62	+17 9.1	1.570	2.396	16.2	20.7	11 7	5 44.10	+27 17.5	2.284	3.094	12.3	21.7
11 17	5 40.52	+16 50.0	1.506	2.408	12.3	20.4	11 17	5 38.14	+27 25.2	2.203	3.095	9.4	21.5
11 27	5 31.65	+16 33.8	1.465	2.418	7.8	20.2	11 27	5 30.03	+27 28.2	2.146	3.096	5.9	21.3
12 7	5 21.00	+16 21.6	1.450	2.429	3.5	20.0	12 7	5 20.49	+27 25.1	2.118	3.097	2.4	21.0
12 17	5 9.86	+16 14.6	1.464	2.439	4.0	20.0	12 17	5 10.46	+27 15.5	2.119	3.098	2.4	21.1
12 27	4 59.67	+16 14.1	1.505	2.449	8.3	20.3	12 27	5 1.04	+27 0.5	2.151	3.098	5.9	21.3
1 6	4 51.60	+16 21.0	1.572	2.458	12.4	20.6	1 6	4 53.17	+26 42.5	2.211	3.097	9.3	21.5
1 16	4 46.39	+16 35.4	1.661	2.467	16.0	20.8	1 16	4 47.50	+26 24.2	2.296	3.097	12.3	21.7
247224	2001 <i>QG</i> ₁₅₃		12 11.7 27°00	7°3/12.8 17			116324	2003 <i>YT</i> ₇₂		12 11.7 284°42	0°8/11.8 18		
11 7	5 45.97	+36 38.4	1.236	2.067	19.5	19.6	11 7	5 41.75	+24 2.3	2.377	3.191	11.8	19.8
11 17	5 41.15	+37 45.5	1.194	2.088	15.4	19.4	11 17	5 36.49	+24 29.3	2.279	3.175	8.9	19.6
11 27	5 32.48	+38 36.4	1.173	2.110	11.2	19.3	11 27	5 29.11	+24 55.7	2.206	3.159	5.6	19.4
12 7	5 21.31	+39 3.9	1.174	2.134	7.9	19.2	12 7	5 20.23	+25 19.8	2.162	3.143	2.0	19.1
12 17	5 9.59	+39 4.7	1.199	2.159	7.6	19.2	12 17	5 10.68	+25 40.1	2.147	3.126	2.2	19.1
12 27	4 59.40	+38 41.4	1.249	2.186	10.4	19.4	12 27	5 1.49	+25 56.5	2.163	3.110	5.8	19.3
1 6	4 52.32	+38 1.7	1.322	2.213	13.9	19.7	1 6	4 53.62	+26 9.7	2.207	3.094	9.3	19.5
1 16	4 49.08	+37 14.2	1.415	2.242	17.2	20.0	1 16	4 47.79	+26 21.2	2.276	3.077	12.4	19.7
484842	2009 <i>HS</i> ₆₂		12 11.7 232°51	3°6/11.9 18			129869	1999 <i>RJ</i> ₁₉₈		12 11.7 35°27	10°5/10.3 18		
11 7	5 47.08	+31 26.2	2.105	2.908	13.5	22.0	11 7	5 41.94	+ 4 41.6	1.154	1.991	20.2	18.7
11 17	5 40.89	+32 15.4	2.015	2.900	10.5	21.8	11 17	5 37.20	+ 2 57.3	1.125	2.016	16.3	18.6
11 27	5 32.02	+32 59.1	1.950	2.892	7.1	21.6	11 27	5 29.57	+ 1 32.5	1.115	2.043	12.8	18.4
12 7	5 21.20	+33 33.1	1.913	2.883	4.2	21.4	12 7	5 20.29	+ 0 35.3	1.127	2.071	10.6	18.4
12 17	5 9.55	+33 54.1	1.904	2.873	4.2	21.4	12 17	5 10.83	+ 0 10.4	1.163	2.100	11.1	18.5
12 27	4 58.41	+34 1.7	1.926	2.864	7.2	21.5	12 27	5 2.70	+ 0 17.8	1.221	2.129	13.5	18.8
1 6	4 49.04	+33 58.3	1.975	2.854	10.6	21.7	1 6	4 56.97	+ 0 52.8	1.301	2.160	16.4	19.0
1 16	4 42.31	+33 47.8	2.047	2.844	13.8	21.9	1 16	4 54.21	+ 1 48.5	1.399	2.190	19.2	19.3
276531	2003 <i>SK</i> ₃₀		12 11.7 77°58	1°4/11.9 18			41115	1999 <i>VQ</i> ₈₅		12 11.7 84°59	8°7/11.3 18		
11 7	5 43.58	+27 20.8	2.228	3.039	12.5	20.9	11 7	5 43.34	+ 0 18.9	1.757	2.549	16.2	18.0
11 17	5 37.62	+27 31.9	2.167	3.060	9.4	20.7	11 17	5 37.65	- 0 21.4	1.703	2.564	13.4	17.9
11 27	5 29.59	+27 38.4	2.130	3.081	5.9	20.6	11 27	5 29.71	- 0 44.4	1.671	2.579	10.7	17.7
12 7	5 20.29	+27 38.7	2.122	3.101	2.4	20.4	12 7	5 20.36	- 0 45.9	1.664	2.594	8.9	17.7
12 17	5 10.69	+27 32.5	2.144	3.122	2.4	20.4	12 17	5 10.66	- 0 24.1	1.682	2.609	9.1	17.7
12 27	5 1.83	+27 21.1	2.195	3.142	5.8	20.7	12 27	5 1.77	+ 0 20.1	1.727	2.623	10.9	17.9
1 6	4 54.59	+27 6.7	2.275	3.162	9.1	20.9	1 6	4 54.63	+ 1 23.0	1.797	2.638	13.4	18.1
1 16	4 49.55	+26 52.0	2.379	3.182	11.9	21.1	1 16	4 49.86	+ 2 39.7	1.889	2.652	15.9	18.3
497172	2004 <i>TF</i> ₉		12 11.7 115°72	16°5/12.4 17			205140	1999 <i>WC</i> ₁₁		12 11.7 359°61	1°9/11.7 18		
11 7	6 8.99	+50 38.4	1.197	1.964	23.6	20.9	11 7	5 45.84	+24 18.8	1.557	2.388	16.1	19.5
11 17	6 1.69	+53 33.0	1.150	1.975	20.8	20.7	11 17	5 40.48	+25 19.3	1.483	2.386	12.3	19.3
11 27	5 47.20	+56 2.4	1.120	1.986	18.3	20.6	11 27	5 32.00	+26 20.7	1.431	2.386	7.8	19.0
12 7	5 26.63	+57 45.8	1.111	1.996	16.7	20.5	12 7	5 21.25	+27 18.5	1.405	2.386	3.1	18.7
12 17	5 3.35	+58 28.1	1.123	2.006	16.6	20.6	12 17	5 9.57	+28 8.4	1.408	2.386	3.4	18.8
12 27	4 42.19	+58 9.0	1.155	2.015	18.0	20.7	12 27	4 58.62	+28 48.3	1.438	2.386	8.0	19.0
1 6	4 26.97	+57 3.8	1.207	2.024	20.1	20.8	1 6	4 49.85	+29 19.0	1.493	2.387	12.5	19.3
1 16	4 19.21	+55 32.6	1.275	2.033	22.5	21.0	1 16	4 44.23	+29 43.2	1.571	2.389	16.3	19.5
476521	2008 <i>GH</i> ₈₄		12 11.7 90°97	1°3/11.8 18			477297	2009 <i>SR</i> ₂₀₂		12 11.7 117°95	2°6/11.4 16		
11 7	5 49.54	+24 57.6	1.516	2.342	16.7	21.6	11 7	5 48.27	+16 49.5	1.807	2.622	14.9	22.8
11 17	5 42.91	+25 24.7	1.460	2.360	12.6	21.4	11 17	5 41.31	+16 31.2	1.748	2.643	11.2	22.6
11 27	5 33.21	+25 48.8	1.425	2.379	7.8	21.2	11 27	5 31.94	+16 15.6	1.713	2.663	7.1	22.4
12 7	5 21.53	+26 6.7	1.417	2.398	2.9	21.0	12 7	5 21.08	+16 3.6	1.705	2.683	3.3	22.2
12 17	5 9.33	+26 16.8	1.436	2.416	3.0	21.0	12 17	5 9.90	+15 56.3	1.728	2.702	3.7	22.3
12 27	4 58.27	+26 19.9	1.484	2.433	7.8	21.3	12 27	4 59.66	+15 54.7	1.779	2.720	7.5	22.6
1 6	4 49.64	+26 18.8	1.558	2.451	12.1	21.6	1 6	4 51.36	+15 59.5	1.858	2.737	11.2	22.8
1 16	4 44.19	+26 16.9	1.655	2.468	15.7	21.9	1 16	4 45.64	+16 11.2	1.960	2.753	14.4	23.1
38114	1999 <i>JO</i> ₃₄		12 11.7 117°66	0°9/11.9 18			511681	2015 <i>BG</i> ₄₅₂		12			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
145538	2006 <i>GP</i> ₂₈	12 11.7 197°68		0°4/11.7 18			264833	2002 <i>QZ</i> ₂₃	12 11.7 159°48		2°8/11.2 18		
11 7	5 44.49	+22 14.4	1.794	2.618	14.6	20.1	11 7	5 39.81	+13 29.9	2.722	3.528	10.7	21.1
11 17	5 38.90	+22 13.2	1.716	2.617	11.0	19.8	11 17	5 34.49	+13 15.1	2.644	3.532	8.2	20.9
11 27	5 30.71	+22 10.8	1.661	2.617	6.8	19.6	11 27	5 27.60	+13 4.2	2.592	3.537	5.4	20.8
12 7	5 20.76	+22 6.4	1.634	2.616	2.2	19.3	12 7	5 19.70	+12 58.1	2.569	3.540	3.1	20.6
12 17	5 10.20	+22 0.1	1.635	2.615	2.6	19.3	12 17	5 11.48	+12 57.8	2.576	3.544	3.4	20.6
12 27	5 0.35	+21 53.2	1.665	2.613	7.1	19.6	12 27	5 3.70	+13 3.7	2.614	3.547	5.8	20.8
1 6	4 52.37	+21 47.7	1.721	2.612	11.3	19.9	1 6	4 57.04	+13 15.9	2.680	3.550	8.5	21.0
1 16	4 47.03	+21 45.4	1.801	2.611	14.8	20.1	1 16	4 52.00	+13 34.1	2.772	3.553	10.9	21.2
80017	1999 <i>GQ</i> ₃₉	12 11.7 213°06		2°6/11.9 18			101228	1998 <i>SN</i> ₆₉	12 11.7 118°79		2°9/12.4 18		
11 7	5 45.98	+29 29.1	2.404	3.205	12.1	20.2	11 7	5 50.57	+31 40.5	1.723	2.533	15.7	20.3
11 17	5 39.69	+30 11.4	2.314	3.199	9.3	20.0	11 17	5 43.48	+31 40.0	1.659	2.548	12.1	20.1
11 27	5 31.11	+30 49.6	2.248	3.192	6.1	19.8	11 27	5 33.48	+31 29.0	1.617	2.563	7.9	19.8
12 7	5 20.90	+31 20.5	2.212	3.185	3.2	19.6	12 7	5 21.65	+31 4.8	1.602	2.577	3.9	19.6
12 17	5 10.01	+31 41.9	2.205	3.178	3.3	19.5	12 17	5 9.41	+30 27.6	1.616	2.591	3.7	19.7
12 27	4 59.56	+31 53.3	2.230	3.170	6.2	19.7	12 27	4 58.32	+29 40.7	1.659	2.605	7.4	19.9
1 6	4 50.61	+31 56.5	2.283	3.162	9.4	19.9	1 6	4 49.58	+28 49.6	1.729	2.617	11.4	20.2
1 16	4 43.90	+31 54.3	2.361	3.153	12.3	20.1	1 16	4 43.89	+28 0.0	1.822	2.629	14.8	20.4
519488	2012 <i>DU</i> ₁₀₂	12 11.7 129°12		6°3/10.6 18			201644	2003 <i>SD</i> ₃₅₅	12 11.7 86°59		4°8/13.0 17		
11 7	5 39.36	+0 47.7	2.766	3.540	11.4	22.0	11 7	5 45.44	+38 12.6	2.278	3.066	13.1	20.3
11 17	5 34.01	+0 8.8	2.704	3.553	9.4	21.8	11 17	5 39.34	+38 32.6	2.205	3.073	10.4	20.1
11 27	5 27.21	+0 19.2	2.666	3.566	7.5	21.7	11 27	5 30.85	+38 40.5	2.155	3.081	7.6	20.0
12 7	5 19.53	+0 33.7	2.655	3.578	6.4	21.7	12 7	5 20.80	+38 33.4	2.132	3.088	5.3	19.8
12 17	5 11.61	+0 33.0	2.673	3.590	6.6	21.7	12 17	5 10.32	+38 9.9	2.138	3.096	5.0	19.8
12 27	5 4.16	+0 17.0	2.719	3.601	8.0	21.8	12 27	5 0.63	+37 31.9	2.173	3.103	7.0	20.0
1 6	4 57.80	+0 13.0	2.792	3.612	9.8	22.0	1 6	4 52.78	+36 43.8	2.235	3.111	9.7	20.1
1 16	4 52.97	+0 54.8	2.888	3.623	11.6	22.1	1 16	4 47.42	+35 50.6	2.322	3.118	12.3	20.3
458506	2011 <i>CM</i> ₃₉	12 11.7 303°91		3°1/12.0 16			297348	1999 <i>XR</i> ₂₄₄	12 11.7 82°43		0°7/11.8 18		
11 7	5 43.34	+30 5.1	2.026	2.841	13.5	21.5	11 7	5 45.28	+25 7.2	1.726	2.550	15.1	20.8
11 17	5 38.32	+30 39.4	1.920	2.812	10.5	21.2	11 17	5 39.50	+25 10.3	1.659	2.560	11.3	20.5
11 27	5 30.59	+31 9.0	1.836	2.783	7.1	21.0	11 27	5 31.06	+25 9.5	1.616	2.570	7.0	20.3
12 7	5 20.82	+31 30.5	1.779	2.754	3.8	20.7	12 7	5 20.89	+25 3.6	1.599	2.580	2.4	20.0
12 17	5 10.03	+31 41.2	1.751	2.725	3.8	20.6	12 17	5 10.23	+24 52.4	1.610	2.590	2.6	20.1
12 27	4 59.59	+31 40.6	1.752	2.696	7.3	20.8	12 27	5 0.45	+24 37.6	1.650	2.600	7.1	20.4
1 6	4 50.78	+31 31.1	1.780	2.667	11.1	21.0	1 6	4 52.70	+24 22.0	1.716	2.609	11.2	20.6
1 16	4 44.58	+31 16.3	1.831	2.639	14.7	21.1	1 16	4 47.69	+24 8.4	1.806	2.619	14.6	20.9
391201	2006 <i>GZ</i> ₁₃	12 11.7 208°75		5°4/12.1 18			249998	2001 <i>XO</i> ₂₀₄	12 11.7 32°07		3°5/11.3 18		
11 7	5 49.41	+35 13.5	1.920	2.718	14.8	21.7	11 7	5 41.26	+14 48.5	1.677	2.507	15.2	20.2
11 17	5 42.99	+36 15.5	1.838	2.715	11.7	21.5	11 17	5 36.41	+14 28.0	1.613	2.515	11.5	19.9
11 27	5 33.48	+37 8.7	1.780	2.712	8.5	21.3	11 27	5 29.12	+14 12.6	1.571	2.522	7.6	19.7
12 7	5 21.74	+37 47.5	1.749	2.708	5.8	21.1	12 7	5 20.26	+14 4.0	1.556	2.531	4.0	19.5
12 17	5 9.07	+38 7.4	1.745	2.705	5.8	21.1	12 17	5 10.92	+14 3.5	1.567	2.539	4.4	19.6
12 27	4 57.08	+38 8.2	1.771	2.700	8.4	21.3	12 27	5 2.37	+14 11.8	1.607	2.549	8.0	19.8
1 6	4 47.21	+37 53.5	1.822	2.696	11.7	21.5	1 6	4 55.64	+14 28.9	1.672	2.558	11.8	20.1
1 16	4 40.42	+37 29.0	1.897	2.691	14.8	21.7	1 16	4 51.42	+14 54.0	1.760	2.568	15.1	20.3
296339	2009 <i>EC</i> ₃₁	12 11.7 135°43		2°0/12.0 16			63902	2001 <i>SZ</i> ₁₄	12 11.7 284°11		3°5/12.2 18		
11 7	5 51.34	+28 2.8	1.682	2.495	15.9	21.9	11 7	5 46.74	+30 25.2	1.548	2.373	16.5	19.4
11 17	5 44.12	+28 14.4	1.616	2.510	12.1	21.7	11 17	5 41.36	+30 52.7	1.466	2.363	12.8	19.2
11 27	5 33.92	+28 19.2	1.573	2.523	7.7	21.4	11 27	5 32.65	+31 12.6	1.405	2.354	8.5	18.9
12 7	5 21.79	+28 14.6	1.557	2.535	3.2	21.2	12 7	5 21.53	+31 20.8	1.370	2.345	4.4	18.6
12 17	5 9.15	+27 59.7	1.569	2.547	3.2	21.2	12 17	5 9.43	+31 14.6	1.361	2.336	4.3	18.6
12 27	4 57.57	+27 36.8	1.611	2.558	7.5	21.5	12 27	4 58.14	+30 55.2	1.380	2.327	8.5	18.8
1 6	4 48.32	+27 9.9	1.680	2.568	11.7	21.8	1 6	4 49.20	+30 26.9	1.424	2.318	12.9	19.1
1 16	4 42.17	+26 43.5	1.772	2.578	15.2	22.0	1 16	4 43.62	+29 55.6	1.490	2.310	16.9	19.3
291374	2006 <i>BQ</i> ₂₇₆	12 11.7 204°43		1°8/11.9 16			277465	2005 <i>VO</i> ₃₈	12 11.7 65°22		2°6/11.5 18		
11 7	5 49.08	+27 26.1	1.415	2.244	17.5	22.2	11 7	5 45.13	+17 22.6	1.451	2.285	16.9	20.6
11 17	5 43.13	+27 32.9	1.340	2.243	13.4	22.0	11 17	5 39.63	+17 10.7	1.391	2.296	12.8	20.4
11 27	5 33.69	+27 32.8	1.287	2.241	8.5	21.7	11 27	5 31.24	+17 2.3	1.352	2.307	8.1	20.1
12 7	5 21.81	+27 23.3	1.258	2.238	3.4	21.4	12 7	5 20.96	+16 58.2	1.339	2.318	3.5	19.9
12 17	5 9.07	+27 3.2	1.257	2.236	3.4	21.4	12 17	5 10.16	+16 59.1	1.353	2.329	3.9	20.0
12 27	4 57.34	+26 35.0	1.282	2.233	8.6	21.7	12 27	5 0.35	+17 6.0	1.394	2.341	8.4	20.3
1 6	4 48.19	+26 3.6	1.333	2.230	13.5	21.9	1 6	4 52.77	+17 19.4	1.460	2.352	12.8	20.5
1 16	4 42.56	+25 34.4	1.405	2.226	17.6	22.2	1 16	4 48.16	+17 39.4	1.548	2.364	16.5	20.8
156590	2002 <i>GD</i> ₅₂	12 11.7 124°66		1°2/11.9 18			463376	2013 <i>AT</i> ₁₀₅	12 11.7 335°73		21°5/14.1 17		
11 7	5 42.88	+26 41.3	2.313	3.125	12.1	20.8	11 7	5 45.87	+18 55.0	1.100	1.848	26.4	20.4
11 17	5 37.17	+26 50.3	2.238	3.131	9.2	20.6	11 17	5 41.03	+20 15.4	1.050	1.843	24.5	20.3
11 27	5 29.41	+26 55.2	2.187	3.138	5.8	20.4	11 27	5 32.54	+20 51.2	1.012	1.838	22.9	20.1
12 7	5 20.30	+26 54.8	2.164	3.144	2.2	20.2	12 7	5 21.49	+20 29.5	0.989	1.833	21.7	20.0
12 17	5 10.78	+26 48.6	2.172	3.150	2.3	20.2	12 17	5 9.53	+19 3.1	0.983	1.830	21.5	20.0
12 27	5 1.87	+26 37.8	2.209	3.156	5.8	20.5	12 27	4 58.65	+16 34.4	0.993	1.827	22.4	20.1
1 6	4 54.47	+26 24.3	2.275	3.162	9.1	20.7	1 6	4 50.46	+13 15.9	1.022	1.824	24.0	20.2
1 16	4 49.19	+26 10.6	2.366	3.168	11.9	20.9	1 16	4 45.95	+9 24.9	1.067	1.822	26.1	20.3
147537	2004 <i>EF</i> ₁₅	12 11.7 193°57		0°7/11.7 18			269240	2008 <i>QM</i> ₁₀	12 11.7 100°00		4°6/12.9 17		
11 7	5 47.02	+20 13.6											

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
14788	5172 T_{-3}		12 11.7 192°10	3°0/11.3 18			296778	2009 UJ_{132}		12 11.7 85°41	4°2/12.5 18		
11 7	5 40.64	+13 19.0	2.336	3.148	12.0	18.2	11 7	5 50.29	+33 3.1	1.487	2.305	17.4	20.5
11 17	5 35.41	+13 11.8	2.256	3.147	9.2	18.0	11 17	5 43.80	+33 24.4	1.428	2.320	13.5	20.3
11 27	5 28.32	+13 9.8	2.201	3.147	6.1	17.8	11 27	5 33.94	+33 33.7	1.390	2.335	9.1	20.1
12 7	5 20.00	+13 13.7	2.173	3.146	3.5	17.6	12 7	5 21.90	+33 26.9	1.377	2.349	5.1	19.9
12 17	5 11.24	+13 24.2	2.176	3.145	3.7	17.6	12 17	5 9.33	+33 2.6	1.392	2.364	4.8	19.9
12 27	5 2.96	+13 41.5	2.208	3.144	6.5	17.8	12 27	4 58.04	+32 24.0	1.433	2.378	8.5	20.1
1 6	4 55.98	+14 5.4	2.268	3.143	9.6	18.0	1 6	4 49.45	+31 37.4	1.501	2.392	12.6	20.4
1 16	4 50.88	+14 35.1	2.352	3.142	12.4	18.2	1 16	4 44.31	+30 49.5	1.590	2.406	16.1	20.7
358620	2007 VF_{121}		12 11.7 11°89	1°2/11.9 17			137284	1999 RZ_{182}		12 11.7 116°54	3°7/11.2 16		
11 7	5 41.64	+26 52.7	1.299	2.146	17.7	20.8	11 7	5 48.85	+14 5.7	1.792	2.603	15.1	21.5
11 17	5 37.54	+26 40.2	1.237	2.149	13.4	20.5	11 17	5 41.72	+13 37.7	1.736	2.627	11.5	21.3
11 27	5 30.19	+26 20.2	1.196	2.154	8.4	20.2	11 27	5 32.22	+13 14.8	1.703	2.649	7.6	21.1
12 7	5 20.68	+25 52.0	1.178	2.159	3.0	19.9	12 7	5 21.27	+12 58.5	1.698	2.671	4.2	21.0
12 17	5 10.56	+25 16.6	1.186	2.166	3.1	20.0	12 17	5 10.04	+12 50.3	1.723	2.692	4.6	21.0
12 27	5 1.54	+24 37.8	1.219	2.174	8.4	20.3	12 27	4 59.76	+12 51.2	1.777	2.712	8.0	21.3
1 6	4 55.01	+24 0.5	1.277	2.183	13.2	20.6	1 6	4 51.43	+13 1.4	1.858	2.731	11.5	21.5
1 16	4 51.76	+23 28.7	1.356	2.192	17.3	20.9	1 16	4 45.67	+13 20.1	1.962	2.749	14.6	21.8
448049	2008 FE_{47}		12 11.7 265°90	4°6/11.9 18			335700	2006 XG_{69}		12 11.7 343°16	5°3/12.6 18		
11 7	5 46.88	+33 44.3	2.113	2.913	13.5	20.8	11 7	5 47.37	+34 22.6	1.370	2.196	18.2	20.4
11 17	5 40.93	+34 43.5	2.020	2.900	10.7	20.6	11 17	5 42.24	+34 50.5	1.298	2.193	14.3	20.2
11 27	5 32.19	+35 36.2	1.951	2.887	7.6	20.4	11 27	5 33.35	+35 5.3	1.246	2.190	10.0	19.9
12 7	5 21.39	+36 17.7	1.910	2.873	5.0	20.2	12 7	5 21.82	+35 1.7	1.218	2.187	6.1	19.7
12 17	5 9.64	+36 43.9	1.897	2.859	5.0	20.2	12 17	5 9.36	+34 37.0	1.215	2.185	5.8	19.7
12 27	4 58.34	+36 54.0	1.913	2.846	7.7	20.3	12 27	4 58.02	+33 53.6	1.238	2.183	9.5	19.9
1 6	4 48.80	+36 50.3	1.957	2.832	10.9	20.5	1 6	4 49.49	+32 58.8	1.286	2.182	13.9	20.1
1 16	4 41.98	+36 37.3	2.024	2.817	14.0	20.7	1 16	4 44.73	+32 0.7	1.354	2.181	17.8	20.4
77788	2001 QS_{37}		12 11.7 8°23	2°2/12.2 17			53480	2000 AM_{56}		12 11.7 252°71	2°4/12.2 18		
11 7	5 41.56	+30 5.4	2.131	2.946	12.9	18.9	11 7	5 47.78	+29 16.9	1.723	2.540	15.4	19.6
11 17	5 36.46	+30 10.4	2.054	2.947	9.9	18.8	11 17	5 41.87	+29 23.8	1.631	2.526	11.9	19.3
11 27	5 29.12	+30 8.4	2.000	2.948	6.4	18.5	11 27	5 32.87	+29 23.0	1.561	2.511	7.7	19.0
12 7	5 20.29	+29 57.7	1.973	2.949	3.1	18.3	12 7	5 21.65	+29 11.7	1.518	2.496	3.5	18.7
12 17	5 10.99	+29 38.2	1.975	2.951	3.0	18.3	12 17	5 9.50	+28 48.8	1.502	2.480	3.4	18.7
12 27	5 2.35	+29 11.5	2.006	2.953	6.3	18.5	12 27	4 58.04	+28 16.1	1.516	2.464	7.8	18.9
1 6	4 55.35	+28 40.6	2.065	2.955	9.7	18.8	1 6	4 48.69	+27 38.1	1.556	2.447	12.2	19.1
1 16	4 50.66	+28 9.1	2.147	2.958	12.7	19.0	1 16	4 42.40	+27 0.0	1.618	2.430	16.1	19.3
485150	2010 PD_{62}		12 11.7 74°17	1°8/11.5 17			490572	2009 WR_{62}		12 11.7 38°42	0°3/11.7 17		
11 7	5 43.81	+18 38.8	1.865	2.687	14.2	21.7	11 7	5 42.32	+20 49.6	2.178	2.996	12.6	21.2
11 17	5 38.01	+18 27.3	1.807	2.707	10.6	21.5	11 17	5 36.92	+21 14.7	2.099	2.997	9.5	21.0
11 27	5 29.97	+18 17.3	1.773	2.726	6.6	21.3	11 27	5 29.39	+21 40.9	2.046	2.999	5.8	20.8
12 7	5 20.53	+18 9.3	1.766	2.745	2.7	21.1	12 7	5 20.42	+22 7.1	2.020	3.001	1.9	20.5
12 17	5 10.77	+18 4.0	1.788	2.765	3.0	21.2	12 17	5 10.91	+22 32.1	2.024	3.003	2.1	20.6
12 27	5 1.85	+18 2.4	1.839	2.784	6.9	21.5	12 27	5 1.93	+22 55.5	2.058	3.005	6.0	20.8
1 6	4 54.70	+18 5.5	1.917	2.803	10.5	21.7	1 6	4 54.43	+23 17.7	2.119	3.008	9.6	21.1
1 16	4 49.94	+18 13.7	2.018	2.822	13.6	22.0	1 16	4 49.07	+23 39.6	2.206	3.010	12.6	21.3
403080	2008 CJ_{19}		12 11.7 287°33	2°7/11.6 17			232546	2003 SJ_{178}		12 11.7 77°61	4°0/12.7 17		
11 7	5 42.84	+14 53.0	1.878	2.699	14.2	21.4	11 7	5 44.50	+35 30.9	2.237	3.034	13.0	20.0
11 17	5 37.70	+15 0.4	1.786	2.684	10.9	21.2	11 17	5 38.66	+35 48.3	2.163	3.040	10.2	19.8
11 27	5 30.09	+15 13.9	1.717	2.668	7.1	20.9	11 27	5 30.46	+35 55.4	2.112	3.047	7.2	19.7
12 7	5 20.68	+15 34.0	1.675	2.652	3.4	20.7	12 7	5 20.75	+35 49.5	2.089	3.053	4.6	19.5
12 17	5 10.48	+16 0.4	1.662	2.637	3.7	20.7	12 17	5 10.58	+35 29.5	2.094	3.060	4.3	19.5
12 27	5 0.73	+16 32.8	1.677	2.621	7.6	20.9	12 27	5 1.17	+34 57.1	2.129	3.066	6.7	19.7
1 6	4 52.56	+17 10.5	1.720	2.605	11.6	21.1	1 6	4 53.51	+34 16.2	2.191	3.072	9.6	19.9
1 16	4 46.81	+17 52.7	1.785	2.590	15.1	21.3	1 16	4 48.28	+33 31.5	2.278	3.079	12.4	20.1
332241	2006 KB_{12}		12 11.7 303°28	2°3/11.7 17			13565	Yotakanashi		12 11.7 355°42	2°0/11.8 18		
11 7	5 41.85	+14 7.0	2.281	3.093	12.3	20.4	11 7	5 43.35	+25 50.7	1.973	2.793	13.6	17.5
11 17	5 36.44	+14 28.2	2.198	3.090	9.4	20.2	11 17	5 38.09	+26 43.2	1.893	2.791	10.3	17.3
11 27	5 29.04	+14 55.5	2.139	3.087	6.1	20.0	11 27	5 30.32	+27 34.6	1.837	2.789	6.6	17.0
12 7	5 20.28	+15 28.6	2.108	3.084	3.0	19.8	12 7	5 20.77	+28 21.5	1.809	2.788	2.9	16.8
12 17	5 10.99	+16 6.9	2.107	3.081	3.1	19.8	12 17	5 10.50	+29 1.0	1.810	2.787	3.0	16.8
12 27	5 2.14	+16 49.3	2.137	3.079	6.3	20.0	12 27	5 0.77	+29 31.9	1.840	2.787	6.8	17.1
1 6	4 54.61	+17 34.8	2.195	3.076	9.6	20.2	1 6	4 52.73	+29 55.1	1.897	2.787	10.5	17.3
1 16	4 49.06	+18 22.6	2.278	3.073	12.6	20.4	1 16	4 47.20	+30 12.7	1.979	2.787	13.7	17.5
55674	2112 T_{-1}		12 11.7 318°41	4°8/12.3 18			415423	2013 QM_7		12 11.7 293°03	1°1/12.1 18		
11 7	5 47.19	+32 22.5	1.439	2.264	17.5	19.3	11 7	5 41.67	+27 56.3	2.289	3.103	12.2	20.7
11 17	5 42.00	+33 5.5	1.362	2.259	13.7	19.0	11 17	5 36.39	+27 41.3	2.203	3.097	9.3	20.5
11 27	5 33.20	+33 39.5	1.307	2.253	9.4	18.8	11 27	5 29.02	+27 20.1	2.141	3.092	5.9	20.3
12 7	5 21.77	+33 58.8	1.276	2.248	5.6	18.5	12 7	5 20.29	+26 52.1	2.106	3.086	2.3	20.0
12 17	5 9.31	+33 59.6	1.272	2.242	5.4	18.5	12 17	5 11.09	+26 18.0	2.102	3.081	2.2	20.0
12 27	4 57.77	+33 42.6	1.293	2.238	9.2	18.7	12 27	5 2.49	+25 39.9	2.127	3.075	5.8	20.2
1 6	4 48.84	+33 13.1	1.339	2.233	13.6	19.0	1 6	4 55.37	+25 0.9	2.181	3.070	9.3	20.4
1 16	4 43.55	+32 37.9	1.407	2.229	17.5	19.2	1 16	4 50.39	+24 24.1	2.259	3.065	12.3	20.6
338464	2003 FP_{63}		12 11.7 307°87	0°2/11.7 18			394635	2007 YH_5		12 11.7 110°41	1°0/11.9 18		
11 7	5 44.32	+21 38.4	1.442	2.28									

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12 11.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
142251	2002 <i>RX</i> ₁₀₂	12 11.7 359°45' 21.2°/29.5 18					517515	2014 <i>QN</i> ₄₅₁	12 11.8 74°85' 8°2'/12.1 18				
11 7	5 31.61	- 8 39.6	1.010	1.833	23.4	17.3	11 7	5 42.55	- 4 8.0	2.250	3.010	14.0	20.7
11 17	5 30.29	-12 53.1	0.976	1.825	21.9	17.2	11 17	5 36.67	- 4 20.2	2.196	3.029	11.8	20.5
11 27	5 25.86	-16 33.5	0.961	1.820	21.2	17.2	11 27	5 29.01	- 4 14.8	2.164	3.048	9.8	20.4
12 7	5 19.35	-19 22.0	0.964	1.818	21.4	17.2	12 7	5 20.27	- 3 49.2	2.157	3.067	8.4	20.4
12 17	5 12.16	-21 6.2	0.984	1.818	22.5	17.2	12 17	5 11.28	- 3 2.8	2.178	3.086	8.4	20.4
12 27	5 5.93	-21 43.3	1.018	1.822	24.0	17.4	12 27	5 2.92	- 1 57.2	2.226	3.104	9.7	20.5
1 6	5 1.99	-21 20.0	1.064	1.829	25.6	17.5	1 6	4 55.95	- 0 36.4	2.301	3.123	11.6	20.7
1 16	5 1.12	-20 7.8	1.121	1.838	27.1	17.7	1 16	4 50.90	+ 0 55.2	2.400	3.141	13.5	20.9
130238	2000 <i>CK</i> ₃₂	12 11.7 343°30' 1°0'/11.6 17					4854	Edscott	12 11.8 204°81' 4°8'/10.7 18				
11 7	5 39.71	+21 1.1	1.757	2.591	14.4	20.1	11 7	5 39.97	+ 9 14.3	2.354	3.160	12.2	18.0
11 17	5 35.45	+20 52.6	1.676	2.583	10.9	19.9	11 17	5 34.89	+ 8 36.9	2.276	3.158	9.6	17.8
11 27	5 28.70	+20 43.4	1.618	2.575	6.8	19.6	11 27	5 28.03	+ 8 6.0	2.221	3.156	6.9	17.6
12 7	5 20.25	+20 34.6	1.586	2.568	2.4	19.3	12 7	5 19.99	+ 7 44.2	2.195	3.153	4.9	17.5
12 17	5 11.16	+20 25.6	1.582	2.561	2.7	19.3	12 17	5 11.55	+ 7 33.4	2.197	3.151	5.3	17.5
12 27	5 2.68	+20 18.6	1.606	2.556	7.2	19.6	12 27	5 3.59	+ 7 34.7	2.229	3.148	7.5	17.7
1 6	4 55.95	+20 15.0	1.655	2.551	11.3	19.8	1 6	4 56.88	+ 7 47.8	2.287	3.146	10.2	17.8
1 16	4 51.72	+20 16.2	1.727	2.546	14.9	20.0	1 16	4 52.00	+ 8 11.6	2.369	3.143	12.8	18.0
84347	2002 <i>TC</i> ₇₂	12 11.8 124°47' 0°1'/11.8 18					138234	2000 <i>FN</i> ₂₃	12 11.8 135°63' 0°8'/11.8 18				
11 7	5 48.56	+24 44.0	1.676	2.496	15.6	19.5	11 7	5 46.27	+22 41.8	1.972	2.787	13.8	19.8
11 17	5 41.95	+24 22.1	1.610	2.509	11.7	19.2	11 17	5 40.17	+23 26.6	1.895	2.791	10.4	19.6
11 27	5 32.57	+23 55.0	1.567	2.521	7.3	19.0	11 27	5 31.57	+24 12.1	1.842	2.795	6.5	19.4
12 7	5 21.46	+23 22.8	1.551	2.533	2.4	18.7	12 7	5 21.21	+24 55.7	1.817	2.798	2.3	19.1
12 17	5 9.92	+22 46.7	1.564	2.544	2.6	18.8	12 17	5 10.19	+25 34.8	1.822	2.802	2.4	19.1
12 27	4 59.40	+22 9.9	1.606	2.555	7.4	19.1	12 27	4 59.77	+26 8.1	1.857	2.805	6.6	19.4
1 6	4 51.07	+21 36.1	1.675	2.565	11.6	19.4	1 6	4 51.08	+26 36.3	1.920	2.808	10.5	19.6
1 16	4 45.61	+21 8.4	1.767	2.575	15.1	19.6	1 16	4 44.91	+27 1.0	2.007	2.811	13.7	19.8
351831	2006 <i>QN</i> ₄₉	12 11.8 126°80' 6°0'/10.8 18					86098	1999 <i>RL</i> ₁₀₅	12 11.8 99°46' 0°6'/11.7 18				
11 7	5 42.91	+ 5 42.5	2.213	3.007	13.2	21.6	11 7	5 42.39	+21 22.8	2.187	3.004	12.5	18.7
11 17	5 37.00	+ 5 2.2	2.151	3.022	10.5	21.4	11 17	5 36.85	+21 20.2	2.116	3.014	9.4	18.5
11 27	5 29.24	+ 4 31.8	2.113	3.036	7.9	21.3	11 27	5 29.28	+21 16.9	2.069	3.023	5.8	18.3
12 7	5 20.34	+ 4 14.2	2.103	3.050	6.1	21.2	12 7	5 20.40	+21 12.9	2.051	3.032	2.0	18.1
12 17	5 11.13	+ 4 11.2	2.121	3.063	6.4	21.3	12 17	5 11.13	+21 8.2	2.062	3.041	2.2	18.1
12 27	5 2.56	+ 4 23.4	2.168	3.075	8.4	21.4	12 27	5 2.49	+21 3.9	2.103	3.050	6.0	18.4
1 6	4 55.41	+ 4 49.4	2.241	3.087	10.9	21.6	1 6	4 55.36	+21 1.3	2.172	3.059	9.4	18.6
1 16	4 50.22	+ 5 27.1	2.338	3.099	13.3	21.8	1 16	4 50.35	+21 1.7	2.265	3.068	12.4	18.8
408546	2013 <i>JN</i> ₆₁	12 11.8 108°24' 0°8'/11.6 18					210656	2000 <i>OA</i> ₂₃	12 11.8 119°94' 3°7'/12.5 18 R				
11 7	5 42.34	+21 20.2	2.366	3.180	11.8	21.8	11 7	5 53.61	+32 16.7	1.604	2.412	16.8	20.3
11 17	5 36.59	+21 4.4	2.298	3.194	8.9	21.6	11 17	5 46.05	+32 36.0	1.544	2.431	12.9	20.1
11 27	5 29.00	+20 47.5	2.255	3.208	5.5	21.4	11 27	5 35.25	+32 44.3	1.505	2.449	8.6	19.9
12 7	5 20.26	+20 29.8	2.241	3.222	1.9	21.2	12 7	5 22.38	+32 37.7	1.493	2.466	4.6	19.7
12 17	5 11.23	+20 12.2	2.257	3.236	2.2	21.3	12 17	5 9.03	+32 14.9	1.509	2.482	4.4	19.8
12 27	5 2.83	+19 55.9	2.304	3.249	5.7	21.5	12 27	4 56.96	+31 38.8	1.554	2.498	8.1	20.0
1 6	4 55.85	+19 42.7	2.379	3.262	8.9	21.8	1 6	4 47.51	+30 55.4	1.626	2.512	12.1	20.3
1 16	4 50.84	+19 33.7	2.479	3.275	11.6	22.0	1 16	4 41.43	+30 10.9	1.720	2.526	15.5	20.5
241653	2000 <i>HT</i> ₆	12 11.8 90°73' 2°9'/12.2 18					404352	2013 <i>GR</i> ₁₀	12 11.8 150°01' 3°3'/12.3 18				
11 7	5 48.66	+30 34.5	2.148	2.949	13.3	21.1	11 7	5 46.04	+32 30.8	2.388	3.184	12.3	21.7
11 17	5 41.59	+31 11.1	2.092	2.976	10.2	20.9	11 17	5 39.70	+33 3.3	2.311	3.191	9.5	21.6
11 27	5 32.18	+31 40.7	2.061	3.004	6.7	20.8	11 27	5 31.11	+33 28.6	2.259	3.198	6.5	21.4
12 7	5 21.31	+32 0.3	2.058	3.031	3.6	20.6	12 7	5 21.03	+33 43.7	2.235	3.203	3.8	21.2
12 17	5 10.10	+32 8.3	2.085	3.057	3.5	20.7	12 17	5 10.43	+33 47.2	2.240	3.209	3.7	21.2
12 27	4 59.76	+32 5.6	2.143	3.083	6.4	20.9	12 27	5 0.46	+33 39.4	2.276	3.214	6.3	21.4
1 6	4 51.29	+31 55.1	2.228	3.108	9.5	21.1	1 6	4 52.09	+33 23.2	2.341	3.219	9.2	21.6
1 16	4 45.31	+31 40.5	2.338	3.133	12.3	21.4	1 16	4 46.01	+33 2.1	2.430	3.223	11.9	21.8
28748	2000 <i>GH</i> ₁₆₁	12 11.8 150°37' 0°8'/11.8 18					200047	2007 <i>UB</i> ₁₃₀	12 11.8 191°83' 0°6'/11.6 18				
11 7	5 48.08	+24 28.1	1.985	2.797	13.9	18.3	11 7	5 40.55	+21 44.5	2.732	3.542	10.5	21.1
11 17	5 41.38	+24 45.1	1.912	2.806	10.5	18.1	11 17	5 35.18	+21 31.1	2.647	3.541	7.9	20.9
11 27	5 32.19	+24 59.6	1.863	2.815	6.5	17.9	11 27	5 28.14	+21 16.4	2.587	3.539	4.9	20.7
12 7	5 21.36	+25 9.8	1.842	2.823	2.3	17.6	12 7	5 20.02	+21 0.4	2.556	3.538	1.7	20.5
12 17	5 10.00	+25 14.6	1.850	2.830	2.4	17.7	12 17	5 11.54	+20 43.9	2.557	3.535	1.9	20.5
12 27	4 59.39	+25 14.7	1.890	2.837	6.6	17.9	12 27	5 3.51	+20 28.1	2.588	3.533	5.1	20.7
1 6	4 50.60	+25 12.1	1.957	2.843	10.4	18.2	1 6	4 56.65	+20 14.3	2.648	3.530	8.1	20.9
1 16	4 44.37	+25 9.3	2.048	2.848	13.6	18.4	1 16	4 51.49	+20 3.9	2.734	3.527	10.7	21.1
441285	2007 <i>XO</i> ₁₉	12 11.8 50°08' 1°3'/12.1 17					351842	2006 <i>QF</i> ₁₃₆	12 11.8 122°70' 0°6'/11.9 18				
11 7	5 48.81	+29 13.8	1.403	2.232	17.7	20.1	11 7	5 46.14	+26 6.3	2.288	3.094	12.4	20.8
11 17	5 42.22	+28 32.7	1.360	2.262	13.3	19.9	11 17	5 39.48	+25 50.1	2.220	3.112	9.3	20.6
11 27	5 32.65	+27 41.0	1.339	2.293	8.3	19.7	11 27	5 30.79	+25 29.0	2.178	3.129	5.8	20.4
12 7	5 21.42	+26 39.6	1.344	2.324	3.1	19.5	12 7	5 20.87	+25 2.7	2.165	3.146	2.0	20.2
12 17	5 10.14	+25 31.7	1.376	2.356	2.9	19.6	12 17	5 10.68	+24 32.1	2.183	3.162	2.1	20.2
12 27	5 0.36	+24 23.1	1.436	2.387	7.7	19.9	12 27	5 1.26	+23 59.2	2.231	3.178	5.7	20.5
1 6	4 53.20	+23 19.8	1.522	2.419	12.0	20.3	1 6	4 53.46	+23 26.8	2.308	3.193	9.1	20.7
1 16	4 49.18	+22 26.2	1.630	2.451	15.6	20.6	1 16	4 47.86	+22 57.8	2.411	3.207	11.9	21.0
46004	2001 <i>CF</i> ₄	12 11.8 161°87' 10°5'/14.5 18					46223	2001 <i>GV</i> ₇	12 11.8 300°71' 4°7'/11.2 18				
11 7	6 0.97	+50 56.8	1.892	2.626	17.2	19.7	11 7	5 41.98	+11 59.9	1.662	2.488	15.5	19.0
11 17	5 52.45	+51 57.9	1.822	2.632	14.9	19.5	11 17	5 37.29					

EPHEMERIDES

12 11.8

12 11.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	
192135	2006 <i>DF</i> ₁₅₉	12 11.8 213°74			0°9/11.9 17			346441	2008 <i>SH</i> ₃₀₈	12 11.8 103°95			0°4/11.7 18	
11 7	5 41.92	+25 52.0	2.387	3.200	11.8	21.2	11 7	5 48.16	+23 28.5	1.866	2.681	14.5	21.1	
11 17	5 36.52	+25 56.4	2.303	3.198	8.9	21.0	11 17	5 41.28	+23 7.0	1.808	2.704	10.8	20.9	
11 27	5 29.11	+25 57.3	2.244	3.196	5.6	20.8	11 27	5 32.02	+22 42.0	1.773	2.727	6.6	20.7	
12 7	5 20.37	+25 53.8	2.213	3.193	2.0	20.6	12 7	5 21.32	+22 13.8	1.767	2.749	2.2	20.5	
12 17	5 11.16	+25 45.6	2.212	3.191	2.1	20.6	12 17	5 10.36	+21 43.6	1.790	2.770	2.4	20.5	
12 27	5 2.47	+25 33.7	2.241	3.189	5.6	20.8	12 27	5 0.39	+21 14.0	1.844	2.791	6.7	20.9	
1 6	4 55.19	+25 20.0	2.298	3.186	9.0	21.0	1 6	4 52.38	+20 47.8	1.924	2.811	10.5	21.1	
1 16	4 49.93	+25 6.7	2.381	3.183	11.9	21.2	1 16	4 46.94	+20 27.2	2.029	2.830	13.7	21.4	
25445	1999 <i>XK</i> ₁	12 11.8 119°85			3°9/11.5 18			438510	2007 <i>RQ</i> ₉₈	12 11.8 68°89			0°6/11.8 18	
11 7	5 43.86	+12 1.9	1.898	2.712	14.3	18.2	11 7	5 46.96	+23 46.9	1.624	2.450	15.8	21.2	
11 17	5 38.16	+11 55.3	1.828	2.719	11.0	18.0	11 17	5 40.82	+24 4.6	1.569	2.471	11.8	21.0	
11 27	5 30.19	+11 56.1	1.782	2.726	7.4	17.8	11 27	5 31.95	+24 20.1	1.538	2.492	7.3	20.7	
12 7	5 20.73	+12 5.5	1.762	2.733	4.4	17.6	12 7	5 21.34	+24 31.5	1.532	2.514	2.5	20.5	
12 17	5 10.79	+12 24.0	1.771	2.739	4.6	17.6	12 17	5 10.33	+24 38.0	1.555	2.535	2.6	20.6	
12 27	5 1.51	+12 51.3	1.809	2.746	7.7	17.8	12 27	5 0.34	+24 40.3	1.607	2.557	7.2	20.9	
1 6	4 53.89	+13 26.6	1.874	2.752	11.2	18.1	1 6	4 52.53	+24 40.6	1.685	2.578	11.3	21.2	
1 16	4 48.60	+14 8.3	1.963	2.758	14.3	18.3	1 16	4 47.57	+24 41.4	1.785	2.599	14.7	21.5	
327529	2006 <i>BW</i> ₁₃₆	12 11.8 212°15			0°1/11.8 18			150723	2001 <i>QF</i> ₂₄	12 11.8 126°01			1°3/11.9 18	
11 7	5 41.64	+23 15.5	2.645	3.455	10.9	21.9	11 7	5 49.14	+26 19.3	1.837	2.651	14.7	20.6	
11 17	5 36.12	+23 17.2	2.556	3.449	8.2	21.7	11 17	5 42.31	+26 31.2	1.771	2.666	11.1	20.4	
11 27	5 28.80	+23 17.1	2.491	3.444	5.1	21.5	11 27	5 32.84	+26 38.5	1.729	2.680	7.0	20.1	
12 7	5 20.27	+23 14.9	2.456	3.438	1.7	21.2	12 7	5 21.66	+26 39.1	1.714	2.694	2.7	19.9	
12 17	5 11.29	+23 10.3	2.452	3.431	1.8	21.2	12 17	5 10.02	+26 32.3	1.729	2.707	2.7	19.9	
12 27	5 2.75	+23 4.2	2.478	3.425	5.2	21.5	12 27	4 59.29	+26 19.6	1.773	2.720	6.9	20.2	
1 6	4 55.42	+22 58.0	2.533	3.418	8.4	21.7	1 6	4 50.61	+26 4.0	1.844	2.732	10.8	20.5	
1 16	4 49.90	+22 53.1	2.614	3.410	11.1	21.8	1 16	4 44.68	+25 48.7	1.939	2.744	14.1	20.7	
375132	2007 <i>WR</i> ₃₉	12 11.8 46°61			3°9/10.7 17			420695	2012 <i>KC</i> ₃₅	12 11.8 171°42			4°8/10.7 17	
11 7	5 38.58	+12 26.9	2.355	3.169	11.9	21.0	11 7	5 39.71	+ 9 42.5	2.261	3.070	12.5	21.6	
11 17	5 33.80	+11 40.1	2.286	3.177	9.1	20.8	11 17	5 34.78	+ 9 1.1	2.186	3.070	9.8	21.4	
11 27	5 27.32	+10 57.6	2.243	3.185	6.3	20.7	11 27	5 28.02	+ 8 26.1	2.135	3.070	7.0	21.2	
12 7	5 19.77	+10 21.7	2.227	3.193	4.2	20.5	12 7	5 20.08	+ 8 0.1	2.111	3.071	5.0	21.1	
12 17	5 11.93	+ 9 54.7	2.240	3.201	4.5	20.6	12 17	5 11.74	+ 7 45.4	2.116	3.071	5.4	21.1	
12 27	5 4.62	+ 9 38.2	2.282	3.209	7.0	20.7	12 27	5 3.91	+ 7 43.1	2.149	3.071	7.7	21.2	
1 6	4 58.59	+ 9 32.6	2.352	3.218	9.7	20.9	1 6	4 57.38	+ 7 53.1	2.210	3.071	10.5	21.4	
1 16	4 54.33	+ 9 37.4	2.445	3.226	12.2	21.1	1 16	4 52.72	+ 8 14.3	2.294	3.071	13.0	21.6	
315706	2008 <i>EP</i> ₉₀	12 11.8 269°09			5°0/10.8 17			369604	2011 <i>CZ</i> ₅₀	12 11.8 258°42			0°8/11.9 18	
11 7	5 40.97	+10 15.8	2.041	2.854	13.5	20.7	11 7	5 42.05	+26 37.9	2.326	3.139	12.0	20.8	
11 17	5 35.99	+ 9 37.3	1.956	2.844	10.6	20.5	11 17	5 36.71	+26 27.2	2.237	3.132	9.1	20.6	
11 27	5 28.90	+ 9 5.2	1.895	2.833	7.5	20.3	11 27	5 29.30	+26 11.6	2.173	3.125	5.7	20.4	
12 7	5 20.35	+ 8 42.5	1.860	2.823	5.2	20.1	12 7	5 20.52	+25 50.4	2.137	3.118	2.1	20.2	
12 17	5 11.25	+ 8 31.4	1.854	2.812	5.6	20.1	12 17	5 11.25	+25 24.1	2.131	3.111	2.1	20.2	
12 27	5 2.63	+ 8 33.4	1.876	2.801	8.3	20.3	12 27	5 2.52	+24 54.5	2.156	3.104	5.8	20.4	
1 6	4 55.45	+ 8 48.5	1.924	2.790	11.5	20.5	1 6	4 55.24	+24 24.1	2.208	3.096	9.2	20.6	
1 16	4 50.38	+ 9 15.4	1.995	2.780	14.5	20.6	1 16	4 50.05	+23 55.8	2.285	3.089	12.2	20.8	
73125	2002 <i>GJ</i> ₆₃	12 11.8 128°78			1°7/11.5 18			226620	2004 <i>EW</i> ₅	12 11.8 232°72			1°8/11.5 18	
11 7	5 45.39	+18 39.8	2.095	2.908	13.2	20.5	11 7	5 46.04	+19 5.6	1.699	2.524	15.3	21.0	
11 17	5 39.08	+18 27.5	2.028	2.923	9.9	20.3	11 17	5 40.34	+18 55.3	1.615	2.516	11.6	20.8	
11 27	5 30.65	+18 16.1	1.985	2.937	6.2	20.1	11 27	5 31.87	+18 45.9	1.554	2.507	7.3	20.5	
12 7	5 20.88	+18 6.3	1.971	2.950	2.5	19.9	12 7	5 21.44	+18 38.0	1.519	2.499	2.9	20.2	
12 17	5 10.75	+17 58.5	1.986	2.963	2.8	19.9	12 17	5 10.23	+18 32.0	1.512	2.490	3.3	20.2	
12 27	5 1.34	+17 53.9	2.032	2.975	6.5	20.2	12 27	4 59.68	+18 29.4	1.534	2.480	7.8	20.5	
1 6	4 53.55	+17 53.7	2.106	2.987	10.0	20.4	1 6	4 51.04	+18 31.5	1.582	2.470	12.2	20.7	
1 16	4 48.00	+17 58.4	2.204	2.998	13.0	20.7	1 16	4 45.16	+18 39.6	1.653	2.460	16.0	20.9	
43099	1999 <i>XO</i> ₁₅	12 11.8 325°88			1°7/11.5 18			379872	2012 <i>HU</i> ₃₄	12 11.8 168°01			1°0/11.7 17	
11 7	5 41.00	+18 33.7	2.173	2.993	12.5	18.8	11 7	5 48.62	+20 37.4	1.821	2.637	14.8	22.2	
11 17	5 35.90	+18 22.2	2.094	2.992	9.5	18.6	11 17	5 41.97	+20 34.2	1.745	2.642	11.1	22.0	
11 27	5 28.77	+18 11.9	2.039	2.992	6.0	18.4	11 27	5 32.70	+20 30.8	1.693	2.646	6.9	21.8	
12 7	5 20.29	+18 3.3	2.012	2.991	2.4	18.2	12 7	5 21.66	+20 26.8	1.669	2.650	2.4	21.5	
12 17	5 11.36	+17 57.2	2.014	2.991	2.8	18.2	12 17	5 10.04	+20 22.3	1.674	2.653	2.7	21.5	
12 27	5 2.97	+17 54.5	2.046	2.990	6.3	18.4	12 27	4 59.19	+20 18.4	1.708	2.655	7.2	21.8	
1 6	4 56.02	+17 56.2	2.105	2.990	9.8	18.6	1 6	4 50.27	+20 16.9	1.770	2.656	11.3	22.1	
1 16	4 51.13	+18 2.9	2.188	2.989	12.8	18.8	1 16	4 44.03	+20 19.3	1.856	2.656	14.8	22.3	
30655	2289 <i>T</i> ₋₁	12 11.8 319°41			5°0/12.3 18			257944	2000 <i>XQ</i> ₅₃	12 11.8 10°70			0°4/11.8 18	
11 7	5 45.39	+34 3.6	1.782	2.595	15.2	17.9	11 7	5 45.65	+19 49.1	1.161	2.010	19.3	19.9	
11 17	5 40.19	+34 53.0	1.699	2.586	12.0	17.6	11 17	5 41.05	+20 25.6	1.097	2.011	14.6	19.6	
11 27	5 31.93	+35 33.8	1.639	2.577	8.5	17.4	11 27	5 32.76	+21 7.1	1.053	2.012	9.1	19.3	
12 7	5 21.45	+36 1.0	1.603	2.569	5.5	17.2	12 7	5 21.81	+21 51.1	1.032	2.014	3.0	19.0	
12 17	5 10.04	+36 11.1	1.596	2.561	5.4	17.2	12 17	5 9.87	+22 34.0	1.037	2.017	3.3	19.0	
12 27	4 59.31	+36 3.8	1.616	2.553	8.4	17.4	12 27	4 58.95	+23 14.0	1.067	2.021	9.3	19.4	
1 6	4 50.68	+35 43.1	1.661	2.546	12.0	17.6	1 6	4 50.75	+23 51.2	1.120	2.025	14.7	19.7	
1 16	4 45.12	+35 14.4	1.729	2.539	15.3	17.8	1 16	4 46.30	+24 26.5	1.194	2.030	19.1	20.0	
201729	2003 <i>UO</i> ₂₁₉	12 11.8 37°44			2°4/12.2 17			262328	2006 <i>TR</i> ₃₂	12 11.8 199°68			0°7/11.9 18	
11 7	5 42.83	+29 33.7	1.949	2.768	13.8	20.6	11 7	5 44.19	+25 0.2	2.043				

EPHEMERIDES

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12 11.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
11979	1995 SS ₅		12 11.8 125°06'	5°4/10.5 18			22738	1998 SL ₁₄₂		12 11.8 236°21'	2°8/12.1 18		
11 7	5 44.06	+ 9 58.5	2.010	2.818	13.9	19.7	11 7	5 44.14	+30 9.5	2.335	3.140	12.2	18.4
11 17	5 38.07	+ 8 57.2	1.947	2.831	10.9	19.5	11 17	5 38.46	+30 47.9	2.250	3.137	9.4	18.2
11 27	5 30.04	+ 8 2.3	1.909	2.844	7.8	19.3	11 27	5 30.51	+31 21.4	2.189	3.133	6.3	18.0
12 7	5 20.74	+ 7 17.6	1.897	2.856	5.6	19.2	12 7	5 20.98	+31 47.1	2.157	3.130	3.4	17.8
12 17	5 11.11	+ 6 46.2	1.915	2.867	6.1	19.3	12 17	5 10.83	+32 3.0	2.154	3.126	3.4	17.8
12 27	5 2.21	+ 6 29.8	1.961	2.879	8.5	19.4	12 27	5 1.18	+32 9.0	2.181	3.122	6.2	17.9
1 6	4 54.90	+ 6 28.6	2.034	2.889	11.5	19.7	1 6	4 53.03	+32 7.0	2.236	3.118	9.4	18.1
1 16	4 49.76	+ 6 41.0	2.129	2.900	14.1	19.9	1 16	4 47.12	+31 59.8	2.315	3.114	12.3	18.3
13675	1997 MZ ₂		12 11.8 129°06'	1°6/12.1 18			171672	2000 QL ₁₃		12 11.8 49°25'	2°1/12.1 18		
11 7	5 45.66	+27 35.4	1.973	2.787	13.8	18.8	11 7	5 48.19	+27 44.9	1.139	1.984	19.8	19.8
11 17	5 39.68	+27 43.8	1.899	2.794	10.5	18.6	11 17	5 42.86	+27 49.6	1.087	1.997	15.1	19.5
11 27	5 31.24	+27 46.8	1.850	2.800	6.7	18.4	11 27	5 33.70	+27 46.0	1.054	2.010	9.5	19.3
12 7	5 21.18	+27 42.6	1.827	2.806	2.7	18.1	12 7	5 22.06	+27 31.4	1.044	2.025	3.8	19.0
12 17	5 10.61	+27 30.8	1.834	2.812	2.7	18.1	12 17	5 9.82	+27 5.9	1.059	2.039	3.7	19.0
12 27	5 0.79	+27 12.8	1.870	2.818	6.6	18.4	12 27	4 59.05	+26 33.0	1.100	2.054	9.1	19.4
1 6	4 52.80	+26 51.5	1.933	2.823	10.3	18.6	1 6	4 51.33	+25 58.7	1.164	2.069	14.2	19.7
1 16	4 47.35	+26 30.4	2.021	2.828	13.5	18.9	1 16	4 47.43	+25 28.2	1.249	2.085	18.5	20.0
322959	2002 JL ₉₂		12 11.8 197°07'	1°4/11.4 17			366196	2012 HE ₈₂		12 11.8 176°07'	6°5/10.1 17		
11 7	5 41.29	+19 44.9	2.779	3.587	10.4	21.7	11 7	5 39.38	+ 3 51.3	2.438	3.229	12.2	20.9
11 17	5 35.71	+19 15.4	2.691	3.584	7.9	21.5	11 17	5 34.40	+ 2 52.9	2.366	3.230	10.0	20.8
11 27	5 28.50	+18 45.0	2.629	3.580	4.9	21.3	11 27	5 27.75	+ 2 3.6	2.317	3.230	7.8	20.6
12 7	5 20.23	+18 14.5	2.597	3.576	2.0	21.1	12 7	5 20.02	+ 1 27.2	2.296	3.231	6.6	20.5
12 17	5 11.62	+17 45.3	2.596	3.572	2.3	21.1	12 17	5 11.94	+ 1 6.4	2.303	3.231	6.9	20.6
12 27	5 3.46	+17 19.0	2.626	3.567	5.3	21.3	12 27	5 4.33	+ 1 2.4	2.338	3.231	8.6	20.7
1 6	4 56.44	+16 57.1	2.685	3.562	8.2	21.5	1 6	4 57.91	+ 1 14.6	2.399	3.231	10.8	20.8
1 16	4 51.09	+16 40.9	2.770	3.557	10.8	21.6	1 16	4 53.21	+ 1 41.1	2.483	3.231	13.0	21.0
129138	Williamfrost		12 11.8 261°06'	0°3/11.7 18			233899	2009 AB ₁₉		12 11.8 189°32'	1°9/11.5 18		
11 7	5 44.73	+23 29.8	1.942	2.761	13.8	20.9	11 7	5 44.31	+17 32.9	2.205	3.017	12.7	21.1
11 17	5 39.19	+23 15.5	1.846	2.745	10.5	20.7	11 17	5 38.38	+17 23.1	2.122	3.016	9.6	20.9
11 27	5 31.09	+22 57.8	1.774	2.728	6.6	20.4	11 27	5 30.35	+17 15.1	2.064	3.015	6.1	20.6
12 7	5 21.19	+22 36.3	1.728	2.710	2.2	20.1	12 7	5 20.91	+17 9.5	2.034	3.013	2.7	20.4
12 17	5 10.54	+22 11.7	1.713	2.692	2.4	20.1	12 17	5 10.96	+17 6.8	2.035	3.010	3.0	20.4
12 27	5 0.42	+21 45.8	1.726	2.674	7.0	20.3	12 27	5 1.56	+17 7.9	2.065	3.007	6.5	20.7
1 6	4 51.98	+21 21.7	1.767	2.656	11.1	20.5	1 6	4 53.63	+17 13.5	2.124	3.004	10.0	20.9
1 16	4 46.06	+21 2.0	1.831	2.637	14.7	20.7	1 16	4 47.81	+17 24.2	2.207	3.000	13.0	21.1
516784	2010 AL ₅		12 11.8 346°53'	1°8/11.7 18			172656	2003 YD ₈₂		12 11.8 250°95'	1°4/11.7 18		
11 7	5 43.24	+18 17.8	1.314	2.158	17.7	21.0	11 7	5 44.88	+17 50.8	2.208	3.018	12.7	20.2
11 17	5 38.88	+18 26.1	1.242	2.153	13.5	20.7	11 17	5 39.04	+18 6.5	2.107	3.001	9.7	19.9
11 27	5 31.25	+18 38.8	1.191	2.149	8.5	20.4	11 27	5 30.92	+18 25.6	2.032	2.983	6.1	19.7
12 7	5 21.30	+18 55.7	1.164	2.145	3.3	20.1	12 7	5 21.16	+18 47.5	1.985	2.965	2.4	19.4
12 17	5 10.44	+19 16.1	1.162	2.141	3.6	20.1	12 17	5 10.63	+19 11.5	1.968	2.946	2.6	19.4
12 27	5 0.41	+19 39.9	1.187	2.139	8.9	20.4	12 27	5 0.46	+19 37.1	1.982	2.926	6.5	19.6
1 6	4 52.70	+20 7.0	1.236	2.137	13.9	20.7	1 6	4 51.67	+20 4.5	2.024	2.907	10.2	19.8
1 16	4 48.28	+20 37.8	1.305	2.136	18.2	21.0	1 16	4 45.05	+20 33.8	2.091	2.886	13.5	20.0
281448	2008 SQ ₉₉		12 11.8 91°44'	2°1/11.9 18			134053	2004 XQ ₂₇		12 11.8 142°58'	1°3/11.6 18		
11 7	5 48.49	+26 52.8	1.655	2.476	15.8	21.0	11 7	5 49.10	+20 19.1	1.546	2.371	16.5	20.4
11 17	5 42.18	+27 27.5	1.593	2.490	12.0	20.8	11 17	5 42.67	+20 11.3	1.479	2.380	12.5	20.2
11 27	5 32.94	+27 57.8	1.553	2.505	7.6	20.6	11 27	5 33.27	+20 3.7	1.433	2.388	7.8	19.9
12 7	5 21.77	+28 20.5	1.540	2.519	3.2	20.4	12 7	5 21.90	+19 56.1	1.414	2.395	2.8	19.6
12 17	5 10.01	+28 33.5	1.555	2.533	3.2	20.4	12 17	5 9.93	+19 48.8	1.423	2.402	3.1	19.7
12 27	4 59.21	+28 37.1	1.599	2.546	7.5	20.7	12 27	4 58.92	+19 43.4	1.461	2.409	8.0	20.0
1 6	4 50.64	+28 34.3	1.669	2.560	11.5	21.0	1 6	4 50.16	+19 41.7	1.525	2.415	12.5	20.3
1 16	4 45.07	+28 28.7	1.762	2.573	15.0	21.2	1 16	4 44.45	+19 45.4	1.611	2.420	16.3	20.5
397517	2007 TK ₆₂		12 11.8 54°46'	2°1/12.1 18			337963	2002 AF ₁₈₀		12 11.8 248°63'	0°9/11.7 18		
11 7	5 45.56	+27 59.9	1.718	2.540	15.2	21.6	11 7	5 45.14	+21 17.8	1.818	2.641	14.5	21.5
11 17	5 40.02	+28 18.6	1.645	2.544	11.6	21.4	11 17	5 39.59	+21 10.5	1.730	2.630	11.0	21.3
11 27	5 31.65	+28 31.7	1.595	2.547	7.4	21.2	11 27	5 31.39	+21 2.3	1.664	2.619	6.9	21.0
12 7	5 21.37	+28 36.5	1.572	2.550	3.2	20.9	12 7	5 21.32	+20 53.0	1.626	2.607	2.4	20.7
12 17	5 10.44	+28 31.9	1.576	2.554	3.2	20.9	12 17	5 10.50	+20 42.9	1.616	2.595	2.7	20.7
12 27	5 0.33	+28 19.1	1.608	2.557	7.3	21.2	12 27	5 0.26	+20 33.4	1.635	2.583	7.3	21.0
1 6	4 52.29	+28 1.3	1.667	2.561	11.4	21.5	1 6	4 51.81	+20 26.6	1.681	2.571	11.6	21.2
1 16	4 47.12	+27 42.5	1.749	2.564	14.9	21.7	1 16	4 45.99	+20 24.3	1.750	2.558	15.2	21.4
417392	2006 HK ₁₁₅		12 11.8 157°90'	2°4/12.1 18			332963	2011 ED ₄₂		12 11.8 277°90'	4°3/11.0 18		
11 7	5 43.27	+29 56.8	2.526	3.329	11.5	21.5	11 7	5 39.49	+10 20.1	2.327	3.136	12.2	20.7
11 17	5 37.57	+30 27.3	2.445	3.331	8.8	21.4	11 17	5 34.66	+ 9 53.0	2.244	3.130	9.5	20.6
11 27	5 29.83	+30 52.9	2.389	3.333	5.8	21.2	11 27	5 28.00	+ 9 32.1	2.186	3.125	6.7	20.4
12 7	5 20.73	+31 11.2	2.361	3.335	3.0	21.0	12 7	5 20.13	+ 9 19.6	2.156	3.119	4.6	20.2
12 17	5 11.12	+31 20.8	2.364	3.337	3.0	21.0	12 17	5 11.82	+ 9 17.1	2.154	3.113	4.8	20.2
12 27	5 2.02	+31 22.0	2.397	3.339	5.7	21.2	12 27	5 3.95	+ 9 25.3	2.181	3.107	7.3	20.4
1 6	4 54.31	+31 16.5	2.458	3.340	8.7	21.4	1 6	4 57.32	+ 9 43.9	2.235	3.102	10.1	20.6
1 16	4 48.65	+31 7.2	2.544	3.342	11.3	21.5	1 16	4 52.53	+10 11.9	2.314	3.096	12.8	20.7
448503	2010 LW ₁₁₆		12 11.8 98°04'	3°7/12.6 18			401731	2013 JH ₂₀		12 11.8 298			

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
133715	2003 <i>UG</i> ₂₅₀		12 11.8	37°14'	2°7'/11.3	18	512472	2016 <i>QL</i> ₅₆		12 11.8	128°79'	3°5'/12.6	18
11 7	5 40.52	+16 58.4	1.880	2.707	13.9	19.4	11 7	5 51.49	+32 52.9	1.544	2.357	17.1	21.6
11 17	5 35.67	+16 26.8	1.819	2.720	10.5	19.2	11 17	5 44.71	+32 49.7	1.476	2.366	13.2	21.4
11 27	5 28.68	+15 57.4	1.781	2.733	6.7	19.0	11 27	5 34.63	+32 33.6	1.429	2.375	8.8	21.2
12 7	5 20.34	+15 32.1	1.770	2.747	3.3	18.9	12 7	5 22.39	+32 1.6	1.409	2.383	4.6	20.9
12 17	5 11.67	+15 12.5	1.788	2.761	3.7	18.9	12 17	5 9.60	+31 13.6	1.416	2.390	4.2	20.9
12 27	5 3.74	+15 0.4	1.833	2.776	7.1	19.2	12 27	4 58.04	+30 13.9	1.451	2.398	8.2	21.2
1 6	4 57.45	+14 56.5	1.906	2.791	10.7	19.4	1 6	4 49.11	+29 9.3	1.512	2.405	12.4	21.4
1 16	4 53.39	+15 1.1	2.001	2.806	13.7	19.6	1 16	4 43.56	+28 7.0	1.596	2.411	16.1	21.7
26323	Wuqijin		12 11.8	153°94'	0°1'/11.8	18	358290	2006 <i>US</i> ₈₆		12 11.8	134°98'	3°3'/12.2	18
11 7	5 47.74	+24 51.2	1.750	2.570	15.1	18.4	11 7	5 46.60	+30 48.7	2.045	2.852	13.7	20.9
11 17	5 41.42	+24 30.9	1.677	2.575	11.4	18.2	11 17	5 40.55	+31 31.1	1.969	2.856	10.6	20.7
11 27	5 32.39	+24 5.4	1.627	2.581	7.1	17.9	11 27	5 31.92	+32 7.4	1.917	2.860	7.1	20.5
12 7	5 21.61	+23 34.6	1.604	2.585	2.4	17.7	12 7	5 21.52	+32 33.9	1.892	2.864	4.0	20.3
12 17	5 10.30	+22 59.6	1.610	2.590	2.5	17.7	12 17	5 10.46	+32 48.3	1.896	2.867	3.9	20.3
12 27	4 59.89	+22 23.3	1.645	2.593	7.2	18.0	12 27	5 0.06	+32 50.7	1.930	2.871	6.9	20.5
1 6	4 51.52	+21 49.4	1.707	2.597	11.4	18.2	1 6	4 51.49	+32 43.6	1.991	2.874	10.3	20.7
1 16	4 45.94	+21 21.0	1.792	2.600	15.0	18.5	1 16	4 45.52	+32 31.1	2.076	2.877	13.4	21.0
49768	1999 <i>WP</i> ₃		12 11.8	34°87'	2°1'/11.4	18	412500	2014 <i>KR</i> ₂₇		12 11.8	244°76'	9°0'/9.6	18
11 7	5 45.02	+21 24.4	1.255	2.101	18.3	18.9	11 7	5 41.99	+ 2 3.7	1.852	2.649	15.3	21.7
11 17	5 40.05	+20 35.8	1.195	2.107	13.8	18.6	11 17	5 36.90	+ 0 41.1	1.780	2.643	12.7	21.5
11 27	5 31.81	+19 43.9	1.156	2.114	8.6	18.3	11 27	5 29.57	- 0 29.3	1.729	2.637	10.4	21.4
12 7	5 21.45	+18 51.2	1.141	2.122	3.3	18.0	12 7	5 20.72	- 1 21.6	1.704	2.631	9.0	21.3
12 17	5 10.52	+18 1.5	1.151	2.130	3.9	18.1	12 17	5 11.34	- 1 51.0	1.705	2.625	9.5	21.3
12 27	5 0.77	+17 19.3	1.188	2.138	9.2	18.4	12 27	5 2.53	- 1 55.2	1.732	2.618	11.5	21.4
1 6	4 53.56	+16 48.5	1.249	2.147	14.0	18.7	1 6	4 55.29	- 1 35.5	1.783	2.612	14.1	21.5
1 16	4 49.66	+16 30.6	1.330	2.156	18.1	19.0	1 16	4 50.33	- 0 55.4	1.855	2.605	16.6	21.7
163623	Miknaitis		12 11.8	155°94'	3°8'/11.1	18	34707	2001 <i>OU</i> ₈₆		12 11.8	67°69'	2°5'/12.4	18
11 7	5 39.42	+10 39.9	2.558	3.363	11.3	20.8	11 7	5 50.65	+30 4.9	1.406	2.231	17.8	18.2
11 17	5 34.40	+10 17.1	2.481	3.365	8.8	20.6	11 17	5 43.92	+29 59.5	1.358	2.257	13.5	18.0
11 27	5 27.75	+10 0.0	2.429	3.367	6.1	20.4	11 27	5 33.98	+29 43.5	1.332	2.283	8.7	17.8
12 7	5 20.04	+ 9 50.3	2.405	3.369	4.1	20.3	12 7	5 22.12	+29 15.2	1.330	2.308	3.8	17.6
12 17	5 11.99	+ 9 49.1	2.411	3.371	4.3	20.3	12 17	5 9.99	+28 35.4	1.356	2.334	3.5	17.6
12 27	5 4.37	+ 9 57.2	2.446	3.373	6.6	20.5	12 27	4 59.32	+27 48.3	1.410	2.360	8.0	18.0
1 6	4 57.91	+10 14.2	2.510	3.374	9.2	20.7	1 6	4 51.36	+27 0.0	1.489	2.385	12.3	18.3
1 16	4 53.13	+10 39.2	2.597	3.376	11.7	20.8	1 16	4 46.75	+26 15.7	1.590	2.410	16.0	18.6
164945	1999 <i>XD</i> ₁₈₃		12 11.8	19°31'	4°7'/12.4	18	255893	2006 <i>ST</i> ₂₇₉		12 11.8	11°32'	1°9'/11.3	18
11 7	5 42.04	+30 44.8	1.021	1.879	20.6	19.1	11 7	5 42.31	+20 47.7	1.658	2.491	15.2	20.1
11 17	5 38.67	+31 29.3	0.979	1.893	15.9	18.9	11 17	5 37.43	+20 4.5	1.587	2.492	11.5	19.9
11 27	5 31.31	+32 2.8	0.954	1.909	10.6	18.7	11 27	5 29.99	+19 19.1	1.538	2.494	7.2	19.6
12 7	5 21.33	+32 19.9	0.951	1.927	5.8	18.5	12 7	5 20.86	+18 33.2	1.515	2.496	2.9	19.4
12 17	5 10.70	+32 18.2	0.971	1.947	5.5	18.5	12 17	5 11.23	+17 49.7	1.521	2.498	3.4	19.4
12 27	5 1.59	+32 0.0	1.015	1.968	9.9	18.8	12 27	5 2.41	+17 11.9	1.554	2.501	7.7	19.7
1 6	4 55.62	+31 32.0	1.081	1.991	14.6	19.2	1 6	4 55.51	+16 42.8	1.613	2.504	11.9	20.0
1 16	4 53.55	+31 0.8	1.166	2.016	18.6	19.5	1 16	4 51.22	+16 23.8	1.695	2.508	15.4	20.2
332025	2005 <i>OX</i> ₂₇		12 11.8	133°17'	1°6'/11.5	18	443274	2014 <i>ES</i> ₂₈		12 11.8	236°04'	0°5'/11.9	18
11 7	5 48.25	+19 39.0	1.897	2.711	14.3	21.7	11 7	5 46.25	+23 29.8	1.800	2.621	14.7	21.8
11 17	5 41.44	+19 19.9	1.831	2.727	10.8	21.5	11 17	5 40.52	+23 46.4	1.715	2.614	11.1	21.5
11 27	5 32.23	+19 0.6	1.790	2.742	6.7	21.3	11 27	5 32.04	+24 1.7	1.653	2.606	7.0	21.3
12 7	5 21.53	+18 41.9	1.776	2.756	2.6	21.0	12 7	5 21.60	+24 14.1	1.617	2.599	2.4	21.0
12 17	5 10.45	+18 24.7	1.792	2.770	2.9	21.1	12 17	5 10.38	+24 22.2	1.611	2.591	2.5	21.0
12 27	5 0.22	+18 10.7	1.838	2.782	7.0	21.4	12 27	4 59.76	+24 26.4	1.634	2.583	7.2	21.3
1 6	4 51.86	+18 1.6	1.912	2.794	10.8	21.6	1 6	4 51.01	+24 28.6	1.683	2.574	11.4	21.5
1 16	4 46.02	+17 58.7	2.010	2.805	14.0	21.9	1 16	4 45.00	+24 31.0	1.756	2.566	15.1	21.7
420937	2013 <i>OR</i> ₈		12 11.8	164°55'	5°2'/11.3	17	420703	2012 <i>LB</i> ₅		12 11.8	161°90'	0°3'/11.8	18
11 7	5 40.84	+ 5 35.2	2.475	3.267	12.0	21.3	11 7	5 44.23	+21 43.4	2.785	3.587	10.6	21.2
11 17	5 35.50	+ 5 22.5	2.399	3.269	9.6	21.1	11 17	5 38.05	+22 24.2	2.701	3.591	7.9	21.0
11 27	5 28.46	+ 5 19.6	2.347	3.271	7.2	21.0	11 27	5 30.07	+23 5.8	2.644	3.594	4.9	20.8
12 7	5 20.29	+ 5 28.3	2.322	3.273	5.4	20.8	12 7	5 20.87	+23 46.5	2.617	3.598	1.7	20.6
12 17	5 11.74	+ 5 49.5	2.327	3.274	5.5	20.9	12 17	5 11.20	+24 24.6	2.621	3.601	1.8	20.6
12 27	5 3.64	+ 6 23.0	2.361	3.276	7.5	21.0	12 27	5 1.90	+24 59.4	2.658	3.604	5.0	20.8
1 6	4 56.73	+ 7 7.3	2.423	3.277	9.9	21.1	1 6	4 53.77	+25 30.8	2.725	3.606	8.0	21.0
1 16	4 51.57	+ 8 0.2	2.509	3.278	12.3	21.3	1 16	4 47.42	+25 59.5	2.818	3.608	10.6	21.2
277194	2005 <i>QP</i> ₄₆		12 11.8	103°23'	3°8'/12.5	18	479427	2013 <i>YW</i> ₈₆		12 11.8	333°13'	1°9'/11.9	18
11 7	5 51.43	+32 30.9	1.639	2.449	16.4	20.9	11 7	5 42.20	+25 21.3	1.165	2.019	18.9	20.8
11 17	5 44.43	+32 49.7	1.579	2.468	12.6	20.7	11 17	5 38.86	+25 51.6	1.087	2.003	14.5	20.5
11 27	5 34.34	+32 57.6	1.542	2.485	8.5	20.5	11 27	5 31.71	+26 20.1	1.029	1.988	9.3	20.2
12 7	5 22.26	+32 51.1	1.530	2.503	4.6	20.3	12 7	5 21.65	+26 43.2	0.993	1.974	3.6	19.8
12 17	5 9.72	+32 29.0	1.547	2.520	4.4	20.3	12 17	5 10.28	+26 57.9	0.981	1.961	3.7	19.8
12 27	4 58.38	+31 54.1	1.592	2.536	7.9	20.6	12 27	4 59.69	+27 3.8	0.994	1.949	9.6	20.1
1 6	4 49.53	+31 11.8	1.663	2.552	11.7	20.9	1 6	4 51.78	+27 3.9	1.029	1.939	15.2	20.3
1 16	4 43.90	+30 28.2	1.758	2.567	15.1	21.1	1 16	4 47.76	+27 2.4	1.083	1.930	20.0	20.6
360738	2004 <i>UD</i> ₁		12 11.8	86°21'	0°6'/11.9	18	210646	2000 <i>HM</i> ₂₃		12 11.8	274°60'	3°9'/11.9	17

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
294703	2008 BA ₈		12 11.8 303°79	0°6/11.9 18			24868	1996 EY ₇		12 11.8 95°38	2°5/11.4 18		
11 7	5 45.85	+22 59.3	1.305	2.147	18.0	21.3	11 7	5 43.99	+17 0.5	1.864	2.685	14.2	19.1
11 17	5 41.22	+23 23.3	1.224	2.134	13.8	21.0	11 17	5 38.36	+16 42.0	1.798	2.696	10.8	18.9
11 27	5 32.99	+23 47.9	1.163	2.121	8.7	20.7	11 27	5 30.43	+16 26.1	1.756	2.707	6.9	18.7
12 7	5 22.04	+24 10.3	1.127	2.109	3.0	20.3	12 7	5 21.03	+16 13.9	1.740	2.718	3.2	18.5
12 17	5 9.88	+24 28.1	1.116	2.097	3.2	20.3	12 17	5 11.22	+16 6.4	1.754	2.729	3.5	18.5
12 27	4 58.45	+24 41.2	1.132	2.085	9.0	20.6	12 27	5 2.15	+16 4.7	1.796	2.739	7.2	18.8
1 6	4 49.49	+24 51.2	1.171	2.073	14.4	20.8	1 6	4 54.82	+16 9.6	1.865	2.749	10.9	19.0
1 16	4 44.14	+25 1.3	1.231	2.062	19.0	21.1	1 16	4 49.86	+16 21.3	1.958	2.760	14.1	19.3
175015	2004 FL ₁₁		12 11.8 140°94	1°0/12.0 18			44779	1999 TM ₁₅₃		12 11.8 264°96	2°2/11.4 18		
11 7	5 45.07	+26 50.3	2.437	3.242	11.8	20.8	11 7	5 45.82	+20 30.6	1.469	2.303	16.7	18.9
11 17	5 38.77	+26 46.5	2.363	3.254	8.9	20.6	11 17	5 40.50	+19 49.0	1.392	2.298	12.7	18.7
11 27	5 30.51	+26 38.1	2.315	3.264	5.6	20.4	11 27	5 32.14	+19 4.7	1.337	2.293	8.0	18.4
12 7	5 21.00	+26 24.1	2.295	3.275	2.1	20.2	12 7	5 21.68	+18 19.7	1.307	2.288	3.2	18.1
12 17	5 11.14	+26 4.8	2.305	3.285	2.1	20.2	12 17	5 10.49	+17 36.9	1.305	2.282	3.8	18.1
12 27	5 1.94	+25 41.7	2.347	3.294	5.5	20.5	12 27	5 0.15	+17 0.1	1.330	2.277	8.7	18.4
1 6	4 54.21	+25 17.2	2.418	3.303	8.7	20.7	1 6	4 52.03	+16 32.6	1.380	2.272	13.4	18.7
1 16	4 48.56	+24 53.8	2.514	3.311	11.5	20.9	1 16	4 46.98	+16 16.6	1.451	2.266	17.5	18.9
270861	2002 TF ₇₈		12 11.8 92°11	3°5/12.6 17			86588	2000 EG ₆₁		12 11.8 186°34	0°2/11.8 18		
11 7	5 44.55	+34 11.9	2.463	3.258	12.0	20.4	11 7	5 47.24	+23 7.8	1.946	2.761	14.0	20.7
11 17	5 38.55	+34 37.5	2.394	3.272	9.3	20.3	11 17	5 40.93	+23 0.0	1.865	2.761	10.6	20.5
11 27	5 30.45	+34 54.6	2.350	3.286	6.5	20.1	11 27	5 32.12	+22 49.5	1.807	2.760	6.6	20.3
12 7	5 21.00	+35 0.8	2.334	3.299	4.0	20.0	12 7	5 21.63	+22 35.8	1.778	2.759	2.2	20.0
12 17	5 11.16	+34 54.9	2.347	3.313	3.9	20.0	12 17	5 10.55	+22 19.3	1.778	2.757	2.4	20.0
12 27	5 1.99	+34 38.1	2.390	3.327	6.1	20.2	12 27	5 0.17	+22 1.6	1.807	2.755	6.8	20.3
1 6	4 54.38	+34 13.1	2.461	3.340	8.8	20.4	1 6	4 51.57	+21 45.2	1.865	2.752	10.7	20.5
1 16	4 48.97	+33 43.8	2.557	3.353	11.3	20.6	1 16	4 45.51	+21 32.4	1.946	2.748	14.1	20.7
81275	2000 FC ₅₃		12 11.8 34°70	2°8/12.2 18			358636	2007 VK ₂₄₂		12 11.8 12°69	1°0/11.7 18		
11 7	5 45.33	+29 30.9	1.738	2.559	15.1	20.1	11 7	5 44.93	+19 17.8	1.180	2.029	19.0	19.3
11 17	5 39.90	+29 54.6	1.666	2.562	11.6	19.9	11 17	5 40.56	+20 52.1	1.121	2.034	14.4	19.0
11 27	5 31.64	+30 11.6	1.616	2.565	7.6	19.6	11 27	5 32.55	+22 35.8	1.082	2.041	8.9	18.7
12 7	5 21.47	+30 19.0	1.592	2.569	3.7	19.4	12 7	5 21.90	+24 22.3	1.068	2.050	3.1	18.4
12 17	5 10.64	+30 15.1	1.597	2.573	3.6	19.4	12 17	5 10.22	+26 3.5	1.079	2.059	3.4	18.5
12 27	5 0.63	+30 1.2	1.629	2.577	7.4	19.7	12 27	4 59.50	+27 33.3	1.117	2.071	9.1	18.8
1 6	4 52.69	+29 40.8	1.688	2.581	11.3	19.9	1 6	4 51.43	+28 49.6	1.180	2.084	14.2	19.2
1 16	4 47.61	+29 18.0	1.770	2.585	14.8	20.1	1 16	4 47.07	+29 53.6	1.263	2.098	18.4	19.5
311707	2006 SG ₂₅₆		12 11.8 324°02	1°6/12.1 18			474843	2005 SR ₇₅		12 11.8 38°74	1°1/11.9 16		
11 7	5 43.87	+27 31.7	1.766	2.590	14.8	21.3	11 7	5 46.16	+25 15.2	1.156	2.004	19.4	20.7
11 17	5 38.77	+27 36.8	1.685	2.585	11.3	21.1	11 17	5 41.19	+25 23.7	1.108	2.021	14.6	20.5
11 27	5 30.95	+27 36.1	1.627	2.580	7.2	20.8	11 27	5 32.64	+25 27.4	1.080	2.039	9.1	20.2
12 7	5 21.26	+27 27.9	1.595	2.575	2.9	20.6	12 7	5 21.81	+25 24.5	1.075	2.057	3.2	19.9
12 17	5 10.87	+27 11.7	1.591	2.570	2.8	20.6	12 17	5 10.46	+25 14.5	1.096	2.076	3.2	20.0
12 27	5 1.20	+26 49.1	1.616	2.566	7.1	20.8	12 27	5 0.52	+24 59.9	1.142	2.096	8.8	20.4
1 6	4 53.47	+26 23.5	1.667	2.562	11.3	21.0	1 6	4 53.41	+24 44.6	1.211	2.117	13.7	20.7
1 16	4 48.49	+25 58.8	1.740	2.558	14.9	21.3	1 16	4 49.90	+24 32.4	1.301	2.138	17.8	21.1
355317	2007 SN ₁₂		12 11.8 33°00	3°6/12.3 17			163766	2003 OL ₂₈		12 11.8 164°36	1°2/12.0 18		
11 7	5 45.72	+29 58.6	1.278	2.117	18.5	20.4	11 7	5 46.44	+26 5.0	1.860	2.677	14.4	20.5
11 17	5 40.78	+30 31.6	1.229	2.134	14.1	20.2	11 17	5 40.51	+26 17.3	1.783	2.680	10.9	20.3
11 27	5 32.36	+30 55.8	1.200	2.152	9.3	20.0	11 27	5 31.94	+26 25.7	1.730	2.682	6.9	20.0
12 7	5 21.71	+31 6.8	1.195	2.171	4.7	19.8	12 7	5 21.58	+26 28.1	1.703	2.683	2.6	19.8
12 17	5 10.50	+31 2.9	1.215	2.191	4.5	19.8	12 17	5 10.61	+26 23.7	1.706	2.685	2.6	19.8
12 27	5 0.61	+30 46.3	1.262	2.212	8.7	20.1	12 27	5 0.37	+26 13.7	1.738	2.686	6.9	20.1
1 6	4 53.46	+30 22.0	1.332	2.234	13.1	20.4	1 6	4 52.03	+26 0.7	1.797	2.687	10.9	20.3
1 16	4 49.81	+29 55.6	1.424	2.256	16.8	20.7	1 16	4 46.36	+25 47.8	1.879	2.688	14.3	20.5
302653	2002 RE ₂₄₄		12 11.8 48°50	0°7/11.9 18			455647	2004 XB ₁₆₅		12 11.8 241°33	1°7/12.4 16		
11 7	5 44.69	+25 45.9	1.640	2.468	15.5	20.7	11 7	5 43.98	+30 38.8	2.290	3.096	12.4	21.1
11 17	5 39.32	+25 36.1	1.573	2.476	11.7	20.5	11 17	5 38.20	+30 14.2	2.205	3.094	9.5	20.9
11 27	5 31.20	+25 21.1	1.529	2.484	7.3	20.2	11 27	5 30.27	+29 40.7	2.145	3.092	6.2	20.7
12 7	5 21.30	+25 0.2	1.511	2.493	2.5	20.0	12 7	5 20.98	+28 57.9	2.113	3.090	2.7	20.5
12 17	5 10.90	+24 34.0	1.521	2.501	2.6	20.0	12 17	5 11.29	+28 6.6	2.111	3.088	2.5	20.4
12 27	5 1.42	+24 5.0	1.559	2.510	7.3	20.3	12 27	5 2.27	+27 9.8	2.139	3.086	5.9	20.7
1 6	4 54.03	+23 36.9	1.623	2.519	11.5	20.6	1 6	4 54.86	+26 11.5	2.196	3.084	9.3	20.9
1 16	4 49.46	+23 12.8	1.710	2.529	15.1	20.8	1 16	4 49.66	+25 15.9	2.278	3.082	12.3	21.1
295096	2008 EP ₁₅₈		12 11.8 91°55	0°3/11.9 18			140209	2001 SC ₂₃₀		12 11.8 142°11	2°1/11.5 18		
11 7	5 44.10	+23 0.4	2.033	2.852	13.3	20.8	11 7	5 47.09	+18 1.6	1.974	2.786	13.9	21.4
11 17	5 38.46	+23 19.0	1.961	2.859	10.0	20.6	11 17	5 40.56	+17 43.0	1.905	2.799	10.5	21.2
11 27	5 30.53	+23 36.7	1.913	2.866	6.2	20.4	11 27	5 31.74	+17 25.6	1.860	2.810	6.6	21.0
12 7	5 21.08	+23 52.0	1.892	2.874	2.1	20.1	12 7	5 21.47	+17 10.4	1.843	2.821	2.9	20.8
12 17	5 11.12	+24 4.0	1.901	2.881	2.2	20.1	12 17	5 10.78	+16 58.2	1.856	2.831	3.2	20.8
12 27	5 1.82	+24 13.1	1.940	2.888	6.3	20.4	12 27	5 0.86	+16 50.5	1.899	2.841	6.9	21.1
1 6	4 54.16	+24 20.3	2.006	2.896	10.0	20.7	1 6	4 52.67	+16 48.5	1.969	2.850	10.6	21.3
1 16	4 48.84	+24 27.5	2.096	2.903	13.1	20.9	1 16	4 46.87	+16 52.7	2.064	2.858	13.7	21.5
176325	2001 SU ₂₂₃		12 11.8 292°55	3°2/11.3 18			480183	2015 FY ₃₃₁		12 11.8 174°47	2°1/11.4 18		
11 7	5 42.01	+15 20.9	1.918	2.									

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
198822	2005 <i>EW</i> ₂₆₃		12 11.8 207°83	3°3/12.7	18		81928	2000 <i>NB</i> ₂₉		12 11.8 120°10	2°2/12.4	18	
11 7	5 43.67	+34 22.8	2.526	3.321	11.7	20.4	11 7	5 45.83	+30 21.4	2.176	2.981	13.0	19.6
11 17	5 37.94	+34 32.3	2.441	3.319	9.2	20.3	11 17	5 39.65	+30 24.8	2.104	2.992	9.9	19.4
11 27	5 30.14	+34 32.9	2.381	3.317	6.4	20.1	11 27	5 31.21	+30 20.8	2.056	3.002	6.5	19.2
12 7	5 20.95	+34 22.7	2.348	3.315	3.9	19.9	12 7	5 21.32	+30 7.7	2.036	3.012	3.1	19.1
12 17	5 11.32	+34 0.8	2.345	3.313	3.6	19.9	12 17	5 11.03	+29 45.3	2.046	3.022	2.9	19.1
12 27	5 2.26	+33 28.7	2.372	3.311	6.0	20.0	12 27	5 1.50	+29 15.4	2.086	3.032	6.1	19.3
1 6	4 54.70	+32 49.5	2.427	3.309	8.8	20.2	1 6	4 53.69	+28 41.5	2.154	3.041	9.5	19.5
1 16	4 49.28	+32 7.3	2.508	3.306	11.4	20.4	1 16	4 48.24	+28 7.3	2.247	3.050	12.4	19.7
463852	2014 <i>US</i> ₁₂		12 11.8 226°51	4°8/12.6	18		99790	2002 <i>KS</i> ₂		12 11.8 263°15	0°9/11.7	18	
11 7	5 45.37	+36 45.4	2.316	3.107	12.8	20.7	11 7	5 46.79	+21 48.8	1.467	2.299	16.8	20.8
11 17	5 39.57	+37 27.2	2.236	3.107	10.2	20.6	11 17	5 41.48	+21 36.1	1.382	2.287	12.8	20.6
11 27	5 31.32	+37 59.3	2.179	3.107	7.4	20.4	11 27	5 32.94	+21 21.7	1.319	2.276	8.1	20.3
12 7	5 21.39	+38 18.1	2.150	3.106	5.2	20.3	12 7	5 22.04	+21 5.2	1.282	2.263	2.8	19.9
12 17	5 10.83	+38 21.2	2.149	3.106	5.1	20.2	12 17	5 10.18	+20 47.3	1.271	2.251	3.1	19.9
12 27	5 0.88	+38 9.1	2.177	3.106	7.1	20.4	12 27	4 59.05	+20 30.1	1.288	2.238	8.5	20.2
1 6	4 52.63	+37 44.9	2.232	3.106	9.8	20.5	1 6	4 50.14	+20 16.7	1.330	2.226	13.5	20.4
1 16	4 46.83	+37 13.1	2.312	3.106	12.5	20.7	1 16	4 44.47	+20 9.7	1.393	2.213	17.8	20.7
57118	2001 <i>OF</i> ₉₅		12 11.8 61°10	10°5/11.6	18		92660	2000 <i>QF</i> ₄₃		12 11.8 113°51	0°5/11.8	18	
11 7	5 45.87	+0 1.4	1.364	2.169	19.3	18.4	11 7	5 47.45	+22 26.8	1.816	2.634	14.7	20.0
11 17	5 40.02	-0 58.4	1.328	2.195	16.0	18.3	11 17	5 41.03	+22 17.0	1.752	2.650	11.0	19.8
11 27	5 31.49	-1 36.2	1.311	2.222	12.8	18.2	11 27	5 32.12	+22 5.1	1.712	2.665	6.8	19.6
12 7	5 21.37	-1 46.3	1.317	2.248	10.8	18.1	12 7	5 21.63	+21 50.9	1.699	2.680	2.3	19.3
12 17	5 11.00	-1 26.8	1.348	2.275	10.8	18.2	12 17	5 10.74	+21 35.0	1.715	2.695	2.5	19.4
12 27	5 1.80	-0 39.4	1.403	2.301	12.8	18.4	12 27	5 0.74	+21 19.2	1.761	2.709	6.9	19.7
1 6	4 54.83	+0 30.2	1.481	2.328	15.4	18.6	1 6	4 52.69	+21 5.7	1.834	2.722	10.8	20.0
1 16	4 50.69	+1 55.2	1.579	2.354	18.1	18.9	1 16	4 47.25	+20 56.6	1.930	2.736	14.1	20.2
258186	2001 <i>SG</i> ₁₉₄		12 11.8 28°91	0°9/11.7	18		409130	2003 <i>UV</i> ₃₂		12 11.8 135°67	3°6/12.4	17	
11 7	5 42.59	+21 31.6	1.542	2.379	15.9	20.3	11 7	5 44.88	+33 35.1	2.413	3.209	12.2	21.3
11 17	5 37.82	+21 20.5	1.480	2.388	12.0	20.1	11 17	5 38.99	+34 11.6	2.335	3.213	9.5	21.1
11 27	5 30.32	+21 8.4	1.440	2.397	7.4	19.8	11 27	5 30.88	+34 40.6	2.281	3.217	6.6	20.9
12 7	5 21.05	+20 55.6	1.425	2.407	2.6	19.6	12 7	5 21.25	+34 59.2	2.255	3.220	4.1	20.8
12 17	5 11.27	+20 42.8	1.438	2.418	2.8	19.6	12 17	5 11.08	+35 5.4	2.258	3.224	4.0	20.8
12 27	5 2.41	+20 31.9	1.478	2.429	7.6	19.9	12 27	5 1.49	+34 59.6	2.291	3.227	6.4	20.9
1 6	4 55.60	+20 24.8	1.544	2.441	11.9	20.2	1 6	4 53.45	+34 44.5	2.352	3.231	9.2	21.1
1 16	4 51.58	+20 23.1	1.631	2.454	15.5	20.5	1 16	4 47.67	+34 23.5	2.438	3.234	11.8	21.3
489942	2008 <i>RY</i> ₁₀₂		12 11.8 172°23	0°1/11.8	17		311741	2006 <i>TK</i> ₁₆		12 11.8 77°28	2°6/12.2	18	
11 7	5 41.65	+23 49.4	2.765	3.572	10.5	22.4	11 7	5 45.64	+29 6.3	1.886	2.701	14.3	20.9
11 17	5 36.09	+23 41.2	2.682	3.575	7.9	22.3	11 17	5 39.98	+29 34.5	1.811	2.705	11.0	20.7
11 27	5 28.84	+23 30.6	2.625	3.577	4.9	22.1	11 27	5 31.67	+29 57.1	1.759	2.708	7.2	20.5
12 7	5 20.51	+23 17.3	2.597	3.578	1.6	21.8	12 7	5 21.54	+30 11.0	1.735	2.711	3.5	20.3
12 17	5 11.83	+23 1.8	2.600	3.580	1.7	21.9	12 17	5 10.78	+30 14.5	1.738	2.714	3.4	20.3
12 27	5 3.62	+22 45.1	2.634	3.581	5.0	22.1	12 27	5 0.75	+30 8.4	1.771	2.717	7.0	20.5
1 6	4 56.60	+22 28.9	2.697	3.581	7.9	22.3	1 6	4 52.62	+29 55.5	1.830	2.720	10.7	20.8
1 16	4 51.31	+22 14.8	2.786	3.582	10.5	22.5	1 16	4 47.17	+29 39.5	1.913	2.724	14.0	21.0
22530	Huynh-Le		12 11.8 84°78	3°8/12.5	18		351405	2005 <i>EB</i> ₂₆₅		12 11.8 276°89	1°9/11.5	18	
11 7	5 52.34	+31 42.5	1.431	2.250	17.9	18.7	11 7	5 43.52	+19 17.6	1.832	2.656	14.3	21.8
11 17	5 45.43	+32 3.8	1.378	2.271	13.8	18.5	11 17	5 38.41	+18 53.7	1.739	2.640	10.9	21.6
11 27	5 35.10	+32 14.1	1.347	2.293	9.1	18.3	11 27	5 30.75	+18 29.6	1.670	2.624	6.9	21.3
12 7	5 22.62	+32 9.3	1.340	2.314	4.8	18.1	12 7	5 21.27	+18 6.1	1.628	2.607	2.9	21.0
12 17	5 9.69	+31 48.3	1.361	2.335	4.5	18.1	12 17	5 11.04	+17 44.7	1.613	2.591	3.3	21.0
12 27	4 58.16	+31 14.1	1.409	2.355	8.4	18.4	12 27	5 1.33	+17 27.6	1.628	2.574	7.5	21.3
1 6	4 49.42	+30 33.1	1.483	2.376	12.6	18.7	1 6	4 53.31	+17 16.7	1.669	2.557	11.7	21.5
1 16	4 44.20	+29 51.5	1.579	2.395	16.2	19.0	1 16	4 47.82	+17 13.4	1.733	2.540	15.4	21.7
42803	1999 <i>GG</i> ₂₁		12 11.8 353°70	4°4/11.7	18		237291	2008 <i>XS</i> ₄₇		12 11.8 74°34	1°2/12.1	18	
11 7	5 41.42	+11 46.6	1.566	2.397	16.0	16.9	11 7	5 46.69	+26 38.3	1.642	2.466	15.7	20.7
11 17	5 36.99	+11 45.4	1.493	2.393	12.4	16.7	11 17	5 40.79	+26 36.3	1.580	2.480	11.9	20.5
11 27	5 29.90	+11 54.0	1.441	2.390	8.4	16.5	11 27	5 32.11	+26 28.7	1.540	2.494	7.4	20.3
12 7	5 20.96	+12 13.9	1.415	2.387	4.9	16.3	12 7	5 21.65	+26 14.0	1.527	2.508	2.8	20.0
12 17	5 11.33	+12 45.4	1.415	2.385	5.1	16.3	12 17	5 10.74	+25 52.4	1.542	2.522	2.7	20.0
12 27	5 2.35	+13 27.7	1.442	2.384	8.7	16.5	12 27	5 0.83	+25 26.4	1.586	2.536	7.2	20.4
1 6	4 55.24	+14 18.7	1.495	2.384	12.8	16.7	1 6	4 53.09	+24 59.5	1.655	2.550	11.4	20.6
1 16	4 50.80	+15 16.3	1.569	2.384	16.4	16.9	1 16	4 48.23	+24 35.4	1.748	2.564	14.9	20.9
80558	2000 <i>AQ</i> ₁₀₂		12 11.8 43°58	4°7/11.6	18		484445	2008 <i>AP</i> ₁₀₉		12 11.8 306°12	2°0/12.3	17	
11 7	5 45.26	+12 38.3	1.240	2.080	18.9	18.8	11 7	5 43.90	+29 3.1	1.695	2.521	15.3	21.6
11 17	5 40.23	+12 27.9	1.185	2.090	14.5	18.6	11 17	5 39.16	+28 56.8	1.598	2.498	11.8	21.3
11 27	5 32.00	+12 27.7	1.150	2.101	9.7	18.3	11 27	5 31.45	+28 42.1	1.523	2.475	7.7	21.0
12 7	5 21.64	+12 39.7	1.138	2.112	5.5	18.1	12 7	5 21.56	+28 16.9	1.473	2.452	3.3	20.7
12 17	5 10.67	+13 4.2	1.152	2.124	5.7	18.2	12 17	5 10.72	+27 41.0	1.451	2.430	3.1	20.7
12 27	5 0.77	+13 40.3	1.191	2.136	9.9	18.5	12 27	5 0.47	+26 56.8	1.457	2.408	7.7	20.9
1 6	4 53.33	+14 26.1	1.255	2.148	14.3	18.8	1 6	4 52.22	+26 9.1	1.489	2.387	12.2	21.1
1 16	4 49.14	+15 19.0	1.339	2.161	18.2	19.0	1 16	4 46.91	+25 23.2	1.544	2.365	16.3	21.3
170532	2003 <i>WK</i> ₉₆		12 11.8 323°69	1°6/11.9	17		487468	2014 <i>SA</i> ₁₅₁		12 11.8 350°35	6°1/12.9		

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12 11.8

12 11.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
352257	2007 <i>TQ</i> ₁₈₈		12 11.8	50°80	2.7/12.3	15	141788	2002 <i>NL</i> ₂₀		12 11.8	111°38	4.6/11.3	18
11 7	5 46.54	+29 36.8	1.533	2.359	16.5	21.7	11 7	5 47.21	+12 48.9	1.578	2.399	16.4	20.6
11 17	5 40.99	+29 51.0	1.472	2.371	12.6	21.5	11 17	5 41.05	+12 15.5	1.519	2.413	12.6	20.4
11 27	5 32.38	+29 56.9	1.432	2.383	8.2	21.2	11 27	5 32.23	+11 48.8	1.481	2.427	8.5	20.2
12 7	5 21.77	+29 51.9	1.418	2.395	3.9	21.0	12 7	5 21.72	+11 31.5	1.470	2.441	5.1	20.0
12 17	5 10.62	+29 35.1	1.431	2.408	3.6	21.0	12 17	5 10.77	+11 25.5	1.487	2.454	5.5	20.1
12 27	5 0.53	+29 8.9	1.471	2.421	7.8	21.3	12 27	5 0.75	+11 31.7	1.531	2.467	8.9	20.3
1 6	4 52.81	+28 37.7	1.537	2.434	12.0	21.6	1 6	4 52.80	+11 49.6	1.601	2.479	12.8	20.5
1 16	4 48.21	+28 6.5	1.625	2.447	15.6	21.9	1 16	4 47.61	+12 18.0	1.693	2.491	16.1	20.8
193207	2000 <i>QU</i> ₁₉₇		12 11.8	47°73	1.1/11.9	18	164962	2000 <i>AO</i> ₂₇		12 11.8	8°51	2.8/12.2	18
11 7	5 46.70	+25 17.0	1.332	2.170	17.9	19.9	11 7	5 40.28	+27 51.0	1.108	1.966	19.3	18.8
11 17	5 41.26	+25 28.2	1.280	2.188	13.5	19.7	11 17	5 37.26	+28 16.1	1.052	1.969	14.8	18.5
11 27	5 32.58	+25 35.2	1.249	2.206	8.4	19.5	11 27	5 30.54	+28 34.3	1.014	1.973	9.5	18.2
12 7	5 21.84	+25 35.9	1.243	2.224	3.0	19.2	12 7	5 21.28	+28 42.2	0.999	1.978	4.2	18.0
12 17	5 10.60	+25 29.7	1.263	2.243	3.0	19.3	12 17	5 11.20	+28 38.2	1.007	1.986	4.1	18.0
12 27	5 0.59	+25 18.6	1.310	2.263	8.1	19.6	12 27	5 2.31	+28 24.0	1.040	1.996	9.2	18.3
1 6	4 53.14	+25 5.9	1.382	2.283	12.7	19.9	1 6	4 56.21	+28 4.3	1.095	2.007	14.2	18.6
1 16	4 48.99	+24 55.1	1.475	2.303	16.6	20.2	1 16	4 53.78	+27 44.1	1.169	2.019	18.5	18.9
440036	2002 <i>PX</i> ₁₄₁		12 11.8	93°68	5.4/13.3	15	177618	2004 <i>HA</i> ₅₄		12 11.8	150°84	8.6/10.9	18
11 7	5 52.28	+38 59.2	2.011	2.793	14.7	21.7	11 7	5 41.80	- 3 57.8	2.330	3.090	13.6	20.8
11 17	5 44.70	+39 20.8	1.955	2.819	11.7	21.5	11 17	5 36.31	- 4 41.5	2.265	3.096	11.6	20.6
11 27	5 34.37	+39 27.9	1.921	2.844	8.6	21.4	11 27	5 29.04	- 5 9.5	2.223	3.101	9.8	20.5
12 7	5 22.36	+39 16.6	1.915	2.869	6.0	21.3	12 7	5 20.64	- 5 17.9	2.205	3.106	8.7	20.5
12 17	5 10.07	+38 46.0	1.936	2.893	5.6	21.3	12 17	5 11.88	- 5 4.5	2.215	3.111	8.9	20.5
12 27	4 58.94	+37 59.1	1.988	2.917	7.7	21.5	12 27	5 3.64	- 4 29.5	2.251	3.116	10.2	20.6
1 6	4 50.12	+37 1.5	2.066	2.940	10.5	21.7	1 6	4 56.69	- 3 35.4	2.313	3.120	12.0	20.7
1 16	4 44.23	+35 59.9	2.169	2.963	13.1	21.9	1 16	4 51.59	- 2 26.2	2.397	3.124	13.9	20.9
464366	2016 <i>AB</i> ₁₅₂		12 11.8	201°77	6.2/10.2	18	107823	2001 <i>FA</i> ₆₄		12 11.9	338°60	10.8/10.2	18
11 7	5 38.81	+ 2 39.7	2.717	3.499	11.3	21.9	11 7	5 38.64	+ 2 20.6	1.330	2.157	18.6	18.8
11 17	5 33.91	+ 1 49.1	2.640	3.497	9.3	21.7	11 17	5 35.28	+ 1 4.2	1.260	2.143	15.6	18.6
11 27	5 27.50	+ 1 7.8	2.587	3.494	7.4	21.6	11 27	5 29.05	+ 0 4.2	1.209	2.130	12.7	18.4
12 7	5 20.10	+ 0 38.7	2.562	3.491	6.3	21.5	12 7	5 20.78	- 0 31.3	1.180	2.118	10.9	18.3
12 17	5 12.37	+ 0 24.2	2.565	3.488	6.6	21.6	12 17	5 11.69	- 0 36.5	1.174	2.108	11.3	18.3
12 27	5 5.02	+ 0 25.3	2.597	3.485	8.1	21.6	12 27	5 3.27	- 0 9.4	1.191	2.098	13.8	18.4
1 6	4 58.72	+ 0 41.3	2.655	3.481	10.1	21.8	1 6	4 56.84	+ 0 46.9	1.229	2.090	17.0	18.6
1 16	4 53.97	+ 1 10.5	2.736	3.477	12.0	21.9	1 16	4 53.29	+ 2 6.2	1.285	2.083	20.3	18.7
262113	2006 <i>SN</i> ₄		12 11.8	43°79	6.0/13.1	18	210668	2000 <i>QS</i> ₁₀₀		12 11.9	59°95	3.0/11.7	18
11 7	5 47.92	+38 31.2	1.823	2.620	15.5	20.2	11 7	5 48.45	+16 43.8	1.161	2.004	19.7	19.8
11 17	5 42.03	+39 3.5	1.751	2.624	12.4	20.1	11 17	5 42.67	+16 36.7	1.116	2.025	14.9	19.6
11 27	5 33.07	+39 22.0	1.701	2.628	9.2	19.9	11 27	5 33.49	+16 35.2	1.090	2.046	9.4	19.4
12 7	5 22.04	+39 21.8	1.676	2.631	6.5	19.7	12 7	5 22.16	+16 39.9	1.088	2.068	4.1	19.1
12 17	5 10.35	+39 0.6	1.678	2.635	6.2	19.7	12 17	5 10.39	+16 50.8	1.112	2.089	4.4	19.2
12 27	4 59.62	+38 20.4	1.708	2.640	8.5	19.9	12 27	4 59.99	+17 8.3	1.162	2.111	9.4	19.6
1 6	4 51.18	+37 26.8	1.763	2.644	11.6	20.1	1 6	4 52.34	+17 32.2	1.235	2.133	14.2	19.9
1 16	4 45.87	+36 26.8	1.842	2.648	14.7	20.3	1 16	4 48.17	+18 2.0	1.328	2.155	18.2	20.2
25991	2001 <i>FN</i> ₇₈		12 11.8	177°34	8.5/12.4	18	309670	2008 <i>EP</i> ₄₁		12 11.9	324°78	1.5/11.9	17
11 7	5 59.33	+44 44.2	2.154	2.903	14.9	19.1	11 7	5 43.64	+25 28.4	1.693	2.521	15.1	20.9
11 17	5 50.97	+46 17.6	2.077	2.906	12.6	19.0	11 17	5 38.84	+25 55.3	1.610	2.512	11.5	20.6
11 27	5 38.93	+47 37.0	2.023	2.909	10.3	18.8	11 27	5 31.19	+26 20.0	1.549	2.503	7.3	20.4
12 7	5 24.10	+48 33.6	1.995	2.910	8.7	18.7	12 7	5 21.49	+26 39.9	1.514	2.494	2.9	20.1
12 17	5 8.04	+49 1.5	1.996	2.910	8.6	18.7	12 17	5 10.94	+26 53.2	1.507	2.486	2.9	20.1
12 27	4 52.71	+48 59.7	2.024	2.910	10.1	18.8	12 27	5 1.01	+26 59.9	1.528	2.479	7.4	20.3
1 6	4 39.86	+48 33.3	2.079	2.908	12.3	18.9	1 6	4 53.01	+27 1.9	1.575	2.471	11.8	20.6
1 16	4 30.64	+47 50.5	2.156	2.906	14.6	19.1	1 16	4 47.85	+27 2.0	1.644	2.464	15.5	20.8
30973	1995 <i>DS</i> ₈		12 11.8	307°42	1.7/12.1	18	513373	2008 <i>EU</i> ₁₂₁		12 11.9	305°56	2.8/11.4	18
11 7	5 44.71	+26 39.3	1.456	2.291	16.8	18.7	11 7	5 44.70	+18 29.5	1.354	2.194	17.5	21.8
11 17	5 40.16	+26 53.1	1.369	2.274	12.9	18.4	11 17	5 39.98	+18 0.4	1.277	2.186	13.4	21.5
11 27	5 32.27	+27 2.2	1.303	2.258	8.3	18.1	11 27	5 32.03	+17 32.2	1.222	2.178	8.6	21.2
12 7	5 21.89	+27 3.9	1.261	2.242	3.3	17.8	12 7	5 21.80	+17 6.6	1.190	2.170	3.8	20.9
12 17	5 10.41	+26 56.6	1.246	2.226	3.3	17.7	12 17	5 10.68	+16 45.8	1.186	2.162	4.3	20.9
12 27	4 59.61	+26 41.6	1.258	2.210	8.4	18.0	12 27	5 0.37	+16 32.5	1.207	2.155	9.3	21.2
1 6	4 51.07	+26 22.4	1.295	2.195	13.4	18.2	1 6	4 52.35	+16 28.7	1.252	2.148	14.2	21.5
1 16	4 45.88	+26 3.4	1.352	2.181	17.8	18.5	1 16	4 47.57	+16 35.2	1.318	2.141	18.4	21.7
467878	2011 <i>DN</i> ₄		12 11.8	301°38	23.1/ 8.7	17	328366	2008 <i>PY</i> ₂₁		12 11.9	61°81	5.1/11.2	18
11 7	5 44.54	-18 37.1	1.089	1.842	26.3	20.4	11 7	5 40.39	+ 7 59.5	2.174	2.981	13.0	20.4
11 17	5 40.31	-20 58.3	1.043	1.833	24.8	20.3	11 17	5 35.42	+ 7 33.5	2.106	2.987	10.3	20.3
11 27	5 32.43	-22 38.4	1.009	1.824	23.7	20.1	11 27	5 28.57	+ 7 16.2	2.062	2.994	7.4	20.1
12 7	5 21.94	-23 22.6	0.990	1.815	23.2	20.1	12 7	5 20.52	+ 7 10.1	2.044	3.001	5.4	20.0
12 17	5 10.43	-23 1.3	0.985	1.807	23.4	20.1	12 17	5 12.10	+ 7 16.4	2.055	3.008	5.6	20.0
12 27	4 59.88	-21 33.4	0.995	1.799	24.5	20.1	12 27	5 4.22	+ 7 35.5	2.094	3.015	7.8	20.2
1 6	4 51.95	-19 7.9	1.020	1.791	26.1	20.2	1 6	4 57.70	+ 8 6.3	2.160	3.023	10.6	20.3
1 16	4 47.66	-15 59.3	1.057	1.783	28.0	20.3	1 16	4 53.12	+ 8 46.7	2.249	3.030	13.2	20.5
404901	2014 <i>KT</i> ₈₅		12 11.8	201°84	1.9/11.9	18	167418	2003 <i>WF</i> ₁₄₁	</				

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
322688	1999 VX ₁₁₁		12 11.9	58°05'	0°9'/11.9	18	515788	2015 KY ₁₆₅		12 11.9	151°75'	0°8'/11.8	18
11 7	5 45.22	+24 52.2	1.884	2.704	14.2	20.2	11 7	5 47.18	+21 18.3	1.846	2.664	14.5	22.7
11 17	5 39.32	+25 9.4	1.831	2.729	10.6	20.1	11 17	5 40.97	+21 12.2	1.773	2.671	10.9	22.5
11 27	5 31.07	+25 23.6	1.802	2.755	6.6	19.9	11 27	5 32.23	+21 5.4	1.724	2.677	6.8	22.2
12 7	5 21.36	+25 33.2	1.799	2.780	2.4	19.7	12 7	5 21.83	+20 57.4	1.702	2.683	2.4	22.0
12 17	5 11.32	+25 37.4	1.826	2.805	2.4	19.7	12 17	5 10.88	+20 48.6	1.709	2.688	2.6	22.0
12 27	5 2.16	+25 37.3	1.881	2.831	6.4	20.0	12 27	5 0.71	+20 40.3	1.745	2.693	7.0	22.3
1 6	4 54.86	+25 34.7	1.964	2.856	10.0	20.3	1 6	4 52.39	+20 34.4	1.809	2.697	11.0	22.5
1 16	4 50.05	+25 32.0	2.071	2.882	13.1	20.5	1 16	4 46.65	+20 32.5	1.896	2.701	14.4	22.8
273133	2006 GV ₄₂		12 11.9	308°31'	14°5'/8.9	17	516813	2010 NU ₄₂		12 11.9	92°45'	7°8'/12.6	18
11 7	5 58.12	+38 21.3	0.973	1.803	23.6	20.1	11 7	5 53.75	+42 42.6	2.074	2.842	14.8	21.3
11 17	5 53.90	+41 54.9	0.906	1.790	19.9	19.8	11 17	5 46.50	+44 11.8	2.013	2.858	12.3	21.1
11 27	5 43.21	+45 28.1	0.857	1.779	16.5	19.6	11 27	5 35.99	+45 27.0	1.975	2.874	9.8	21.0
12 7	5 26.33	+48 36.5	0.831	1.767	14.5	19.5	12 7	5 23.16	+46 20.8	1.964	2.890	8.1	20.9
12 17	5 5.40	+50 54.9	0.826	1.756	15.4	19.5	12 17	5 9.46	+46 48.6	1.979	2.905	8.0	21.0
12 27	4 44.71	+52 10.5	0.843	1.745	18.6	19.6	12 27	4 56.62	+46 50.3	2.023	2.921	9.5	21.1
1 6	4 28.69	+52 30.5	0.879	1.735	22.5	19.8	1 6	4 46.14	+46 30.7	2.092	2.936	11.7	21.3
1 16	4 20.04	+52 13.1	0.928	1.726	26.3	20.0	1 16	4 38.94	+45 56.9	2.184	2.951	13.9	21.4
276411	2002 YV ₂₇		12 11.9	26°90'	1°7'/12.2	18	393609	2003 WS ₁₆₀		12 11.9	178°28'	0°1'/11.9	18
11 7	5 45.16	+28 32.4	1.137	1.985	19.6	19.6	11 7	5 45.15	+22 55.2	1.883	2.703	14.2	21.5
11 17	5 40.66	+28 11.6	1.083	1.995	14.9	19.3	11 17	5 39.54	+23 2.3	1.805	2.704	10.7	21.3
11 27	5 32.48	+27 40.2	1.048	2.005	9.4	19.0	11 27	5 31.42	+23 8.0	1.750	2.704	6.7	21.1
12 7	5 21.91	+26 57.1	1.036	2.017	3.6	18.7	12 7	5 21.58	+23 11.3	1.722	2.704	2.2	20.8
12 17	5 10.78	+26 4.5	1.049	2.029	3.4	18.8	12 17	5 11.13	+23 11.6	1.724	2.704	2.3	20.8
12 27	5 1.06	+25 7.9	1.088	2.043	9.0	19.1	12 27	5 1.35	+23 9.9	1.755	2.704	6.8	21.1
1 6	4 54.25	+24 14.0	1.149	2.057	14.1	19.5	1 6	4 53.34	+23 7.8	1.812	2.704	10.8	21.3
1 16	4 51.09	+23 28.2	1.231	2.072	18.4	19.8	1 16	4 47.86	+23 7.5	1.894	2.703	14.2	21.6
212923	2007 YZ ₅₃		12 11.9	9°20'	5°3'/10.9	18	265946	2006 BX ₂₁₂		12 11.9	39°34'	0°5'/11.8	17
11 7	5 42.00	+11 41.0	1.698	2.523	15.3	20.1	11 7	5 42.11	+21 33.8	2.033	2.854	13.2	20.9
11 17	5 37.16	+10 51.7	1.628	2.523	11.9	19.9	11 17	5 37.01	+21 34.7	1.959	2.859	9.9	20.7
11 27	5 29.90	+10 8.6	1.580	2.523	8.3	19.7	11 27	5 29.72	+21 35.2	1.910	2.864	6.2	20.5
12 7	5 21.03	+9 35.5	1.558	2.524	5.6	19.5	12 7	5 20.99	+21 34.8	1.888	2.869	2.1	20.2
12 17	5 11.63	+9 15.2	1.564	2.525	6.0	19.6	12 17	5 11.79	+21 33.6	1.895	2.875	2.2	20.2
12 27	5 2.93	+9 9.7	1.596	2.527	9.1	19.7	12 27	5 3.20	+21 32.4	1.931	2.880	6.3	20.5
1 6	4 55.99	+9 19.1	1.654	2.528	12.6	20.0	1 6	4 56.20	+21 32.6	1.995	2.886	9.9	20.7
1 16	4 51.51	+9 41.7	1.733	2.530	15.8	20.2	1 16	4 51.42	+21 35.5	2.082	2.892	13.1	21.0
452165	2015 RC ₆₉		12 11.9	106°94'	1°4'/11.6	15	427274	2014 WK ₁₈₀		12 11.9	88°24'	1°9'/11.6	18
11 7	5 45.35	+19 50.3	2.020	2.835	13.5	22.6	11 7	5 41.90	+17 22.2	2.260	3.076	12.3	20.9
11 17	5 39.24	+19 36.9	1.956	2.852	10.1	22.4	11 17	5 36.55	+17 15.3	2.192	3.087	9.2	20.8
11 27	5 30.97	+19 23.6	1.916	2.869	6.3	22.2	11 27	5 29.29	+17 10.5	2.147	3.098	5.9	20.6
12 7	5 21.33	+19 10.9	1.905	2.885	2.4	22.0	12 7	5 20.82	+17 8.5	2.131	3.110	2.6	20.4
12 17	5 11.36	+18 59.4	1.923	2.901	2.6	22.0	12 17	5 12.00	+17 9.7	2.145	3.121	2.8	20.4
12 27	5 2.14	+18 50.5	1.971	2.916	6.5	22.3	12 27	5 3.75	+17 14.6	2.188	3.132	6.1	20.7
1 6	4 54.60	+18 45.6	2.046	2.931	10.0	22.5	1 6	4 56.90	+17 23.7	2.260	3.143	9.3	20.9
1 16	4 49.35	+18 45.6	2.146	2.946	13.1	22.8	1 16	4 52.02	+17 37.2	2.356	3.154	12.1	21.1
369602	2011 CE ₄₆		12 11.9	187°17'	1°4'/12.2	17	102043	1999 RU ₁₁₄		12 11.9	23°86'	4°7'/11.1	18
11 7	5 42.78	+28 7.9	2.495	3.302	11.5	21.8	11 7	5 44.11	+16 5.8	1.213	2.060	18.8	19.0
11 17	5 37.24	+28 10.0	2.411	3.302	8.7	21.6	11 17	5 39.54	+15 8.7	1.153	2.064	14.4	18.8
11 27	5 29.74	+28 7.1	2.352	3.301	5.6	21.4	11 27	5 31.72	+14 14.5	1.114	2.068	9.5	18.5
12 7	5 20.95	+27 58.0	2.322	3.300	2.4	21.2	12 7	5 21.73	+13 27.5	1.098	2.073	5.3	18.3
12 17	5 11.72	+27 42.6	2.322	3.300	2.3	21.2	12 17	5 11.09	+12 52.2	1.107	2.079	5.8	18.4
12 27	5 3.03	+27 22.0	2.352	3.299	5.5	21.4	12 27	5 1.54	+12 31.9	1.141	2.085	10.3	18.6
1 6	4 55.71	+26 58.7	2.410	3.297	8.6	21.6	1 6	4 54.46	+12 27.8	1.198	2.091	14.9	18.9
1 16	4 50.39	+26 35.2	2.494	3.296	11.4	21.8	1 16	4 50.66	+12 39.1	1.275	2.099	18.9	19.2
185976	2001 KY ₄₁		12 11.9	149°39'	0°5'/11.8	18	108378	2001 KK ₂₀		12 11.9	245°57'	0°7'/12.0	18
11 7	5 48.57	+20 50.5	1.698	2.519	15.5	20.8	11 7	5 44.92	+25 8.1	1.852	2.673	14.3	20.8
11 17	5 42.27	+21 8.0	1.626	2.525	11.7	20.6	11 17	5 39.47	+25 11.1	1.772	2.671	10.9	20.6
11 27	5 33.17	+21 26.6	1.577	2.531	7.3	20.3	11 27	5 31.43	+25 10.6	1.715	2.668	6.8	20.3
12 7	5 22.15	+21 44.8	1.555	2.536	2.5	20.0	12 7	5 21.63	+25 5.2	1.685	2.666	2.4	20.0
12 17	5 10.47	+22 1.2	1.561	2.541	2.6	20.1	12 17	5 11.18	+24 54.6	1.683	2.663	2.4	20.0
12 27	4 59.58	+22 16.0	1.597	2.546	7.4	20.4	12 27	5 1.41	+24 40.3	1.711	2.661	6.8	20.3
1 6	4 50.72	+22 30.2	1.660	2.550	11.6	20.6	1 6	4 53.47	+24 24.8	1.765	2.658	10.9	20.5
1 16	4 44.69	+22 45.4	1.745	2.553	15.3	20.9	1 16	4 48.13	+24 11.0	1.843	2.655	14.4	20.8
44697	1999 RC ₂₃₉		12 11.9	206°43'	3°6'/11.5	18	70116	1999 LQ ₂₃		12 11.9	82°59'	0°3'/11.9	18
11 7	5 47.01	+14 10.8	1.739	2.556	15.3	19.6	11 7	5 51.48	+22 1.4	1.393	2.221	17.8	19.2
11 17	5 41.04	+13 55.1	1.658	2.552	11.8	19.3	11 17	5 44.60	+22 11.7	1.344	2.247	13.4	19.0
11 27	5 32.40	+13 44.8	1.600	2.547	7.8	19.1	11 27	5 34.58	+22 21.1	1.317	2.272	8.2	18.8
12 7	5 21.91	+13 41.4	1.568	2.542	4.2	18.9	12 7	5 22.62	+22 28.0	1.316	2.298	2.7	18.5
12 17	5 10.70	+13 45.9	1.565	2.536	4.5	18.9	12 17	5 10.27	+22 31.8	1.343	2.323	2.8	18.6
12 27	5 0.13	+13 59.0	1.590	2.530	8.3	19.1	12 27	4 59.22	+22 33.4	1.397	2.347	8.0	18.9
1 6	4 51.40	+14 20.7	1.642	2.523	12.3	19.3	1 6	4 50.74	+22 35.2	1.477	2.371	12.5	19.3
1 16	4 45.31	+14 50.4	1.717	2.515	15.9	19.5	1 16	4 45.54	+22 39.5	1.579	2.395	16.2	19.6
10212	1997 RA ₇		12 11.9	173°37'	0°5'/11.8	18 R	414637	2009 VS ₄₂		12 11.9			

EPHEMERIDES

12 11.9

12 11.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
268327	2005 <i>SU</i> ₃₈		12 11.9 126°02	1.4°/12.1	18		446162	2013 <i>EC</i> ₁₁₉		12 11.9 113°87	3.3°/11.3	18	
11 7	5 49.89	+26 42.3	1.804	2.617	15.0	21.5	11 7	5 43.14	+15 12.8	1.911	2.731	14.0	21.0
11 17	5 43.09	+26 53.1	1.738	2.632	11.3	21.3	11 17	5 37.83	+14 44.8	1.839	2.735	10.7	20.8
11 27	5 33.58	+26 58.7	1.695	2.646	7.2	21.1	11 27	5 30.27	+14 20.4	1.790	2.739	7.0	20.6
12 7	5 22.31	+26 57.3	1.680	2.660	2.8	20.8	12 7	5 21.24	+14 1.3	1.768	2.742	3.8	20.4
12 17	5 10.55	+26 48.0	1.694	2.673	2.7	20.9	12 17	5 11.72	+13 49.1	1.775	2.746	4.1	20.4
12 27	4 59.73	+26 32.4	1.737	2.685	6.9	21.2	12 27	5 2.87	+13 45.2	1.810	2.749	7.5	20.6
1 6	4 50.98	+26 13.9	1.808	2.697	10.9	21.4	1 6	4 55.64	+13 50.1	1.872	2.753	11.1	20.8
1 16	4 45.05	+25 55.8	1.902	2.708	14.3	21.7	1 16	4 50.70	+14 3.6	1.957	2.756	14.2	21.1
279459	2010 <i>RJ</i> ₁₁₅		12 11.9 292°15	1.9°/12.2	17		230275	2001 <i>XD</i> ₇₇		12 11.9 53°63	1.1°/11.8	18	
11 7	5 44.15	+28 33.1	1.924	2.741	14.0	20.8	11 7	5 46.87	+20 40.2	1.329	2.167	17.9	20.2
11 17	5 38.95	+28 36.6	1.835	2.731	10.7	20.6	11 17	5 41.33	+20 38.9	1.278	2.186	13.4	20.0
11 27	5 31.16	+28 33.6	1.770	2.721	6.9	20.3	11 27	5 32.68	+20 38.2	1.248	2.205	8.3	19.8
12 7	5 21.56	+28 22.4	1.732	2.711	3.0	20.1	12 7	5 22.05	+20 37.6	1.243	2.225	2.9	19.5
12 17	5 11.26	+28 2.5	1.722	2.700	2.8	20.0	12 17	5 10.95	+20 37.2	1.265	2.245	3.1	19.6
12 27	5 1.58	+27 35.5	1.741	2.690	6.8	20.3	12 27	5 1.05	+20 38.2	1.313	2.265	8.2	19.9
1 6	4 53.68	+27 4.8	1.787	2.680	10.8	20.5	1 6	4 53.62	+20 42.2	1.386	2.285	12.9	20.3
1 16	4 48.37	+26 34.3	1.857	2.671	14.3	20.7	1 16	4 49.37	+20 50.7	1.481	2.306	16.7	20.6
177582	2004 <i>GC</i> ₈		12 11.9 299°85	2.8°/12.3	17		454454	2014 <i>OS</i> ₄₁		12 11.9 72°46	0.6°/11.9	15	
11 7	5 45.22	+29 48.0	1.859	2.676	14.5	20.5	11 7	5 44.22	+24 22.2	1.958	2.777	13.7	22.0
11 17	5 39.88	+30 12.1	1.777	2.670	11.2	20.3	11 17	5 38.71	+24 32.3	1.888	2.786	10.3	21.8
11 27	5 31.80	+30 29.8	1.717	2.665	7.4	20.0	11 27	5 30.84	+24 39.9	1.842	2.795	6.4	21.5
12 7	5 21.79	+30 38.3	1.684	2.659	3.7	19.8	12 7	5 21.43	+24 43.8	1.823	2.804	2.2	21.3
12 17	5 11.04	+30 35.7	1.679	2.654	3.5	19.8	12 17	5 11.54	+24 43.4	1.833	2.813	2.3	21.3
12 27	5 0.95	+30 22.9	1.702	2.649	7.2	20.0	12 27	5 2.35	+24 39.7	1.872	2.822	6.4	21.6
1 6	4 52.75	+30 3.0	1.752	2.644	11.1	20.2	1 6	4 54.89	+24 34.6	1.939	2.831	10.1	21.9
1 16	4 47.30	+29 40.2	1.825	2.639	14.5	20.4	1 16	4 49.84	+24 30.2	2.030	2.840	13.3	22.1
127445	2002 <i>PP</i> ₈₄		12 11.9 174°49	4.9°/13.1	18		395955	1993 <i>QP</i> ₆		12 11.9 48°72	4.6°/11.2	18	
11 7	5 46.52	+40 22.0	2.780	3.548	11.4	20.1	11 7	5 41.04	+10 49.5	1.968	2.784	13.8	19.0
11 17	5 40.15	+40 52.3	2.698	3.550	9.3	19.9	11 17	5 36.12	+10 19.5	1.904	2.794	10.7	18.8
11 27	5 31.63	+41 11.7	2.640	3.552	7.1	19.8	11 27	5 29.14	+9 56.9	1.862	2.803	7.5	18.6
12 7	5 21.66	+41 17.0	2.609	3.553	5.3	19.7	12 7	5 20.84	+9 43.7	1.848	2.813	5.0	18.5
12 17	5 11.21	+41 6.5	2.608	3.554	5.1	19.7	12 17	5 12.16	+9 41.8	1.861	2.823	5.2	18.5
12 27	5 1.34	+40 41.1	2.636	3.554	6.6	19.8	12 27	5 4.12	+9 51.8	1.903	2.833	7.9	18.7
1 6	4 53.00	+40 4.0	2.692	3.554	8.8	19.9	1 6	4 57.60	+10 12.9	1.971	2.844	11.0	18.9
1 16	4 46.86	+39 19.5	2.773	3.554	10.9	20.1	1 16	4 53.19	+10 43.7	2.062	2.854	13.8	19.1
78354	2002 <i>PC</i> ₁₀₁		12 11.9 106°96	5.2°/10.7	18		60087	1999 <i>TY</i> ₁₅₂		12 11.9 99°75	4.3°/12.6	18	
11 7	5 40.63	+7 2.8	2.510	3.306	11.8	20.0	11 7	5 46.61	+35 14.0	2.226	3.021	13.1	19.8
11 17	5 35.32	+6 16.0	2.448	3.321	9.3	19.9	11 17	5 40.52	+35 51.4	2.155	3.030	10.3	19.6
11 27	5 28.43	+5 37.0	2.411	3.336	7.0	19.7	11 27	5 31.98	+36 19.5	2.108	3.040	7.3	19.5
12 7	5 20.56	+5 8.3	2.402	3.351	5.4	19.7	12 7	5 21.82	+36 34.7	2.087	3.049	4.8	19.3
12 17	5 12.43	+4 52.0	2.422	3.365	5.6	19.7	12 17	5 11.12	+36 35.2	2.096	3.058	4.6	19.3
12 27	5 4.83	+4 49.0	2.470	3.379	7.5	19.8	12 27	5 1.14	+36 21.6	2.133	3.067	6.9	19.5
1 6	4 58.44	+4 58.7	2.546	3.393	9.8	20.0	1 6	4 52.92	+35 57.3	2.198	3.076	9.8	19.7
1 16	4 53.74	+5 19.8	2.646	3.406	11.9	20.2	1 16	4 47.20	+35 26.9	2.288	3.085	12.5	19.9
490016	2008 <i>SE</i> ₂₅₇		12 11.9 2°45	7.9°/12.5	17		237186	2008 <i>UE</i> ₂₀₉		12 11.9 79°14	1.2°/11.7	18	
11 7	5 46.71	+41 11.5	1.854	2.644	15.5	20.8	11 7	5 46.49	+21 41.0	1.593	2.421	15.9	20.6
11 17	5 41.57	+42 35.1	1.782	2.644	12.8	20.6	11 17	5 40.65	+21 13.8	1.532	2.435	12.0	20.4
11 27	5 33.15	+43 45.9	1.733	2.644	10.2	20.5	11 27	5 32.11	+20 44.5	1.494	2.449	7.4	20.2
12 7	5 22.33	+44 36.7	1.708	2.644	8.3	20.3	12 7	5 21.85	+20 14.1	1.482	2.463	2.7	19.9
12 17	5 10.49	+45 2.6	1.709	2.646	8.2	20.3	12 17	5 11.18	+19 44.2	1.498	2.477	2.9	20.0
12 27	4 59.40	+45 2.8	1.737	2.648	9.9	20.5	12 27	5 1.50	+19 17.5	1.543	2.491	7.6	20.3
1 6	4 50.58	+44 41.7	1.789	2.651	12.5	20.6	1 6	4 53.94	+18 56.8	1.613	2.505	11.8	20.6
1 16	4 45.07	+44 6.2	1.863	2.654	15.1	20.8	1 16	4 49.18	+18 43.7	1.706	2.519	15.3	20.8
131330	2001 <i>HW</i> ₂₆		12 11.9 157°27	5.6°/9.9	18		240149	2002 <i>JK</i> ₁₄₆		12 11.9 183°90	1.1°/12.2	18	
11 7	5 40.39	+6 26.5	2.630	3.422	11.4	19.5	11 7	5 46.92	+27 10.3	2.357	3.160	12.2	21.7
11 17	5 35.14	+5 15.3	2.557	3.426	9.2	19.3	11 17	5 40.45	+27 8.4	2.272	3.160	9.3	21.5
11 27	5 28.33	+4 10.7	2.511	3.430	7.0	19.2	11 27	5 31.82	+27 1.5	2.212	3.160	5.9	21.3
12 7	5 20.54	+3 16.0	2.492	3.433	5.7	19.1	12 7	5 21.76	+26 48.4	2.180	3.159	2.3	21.0
12 17	5 12.45	+2 34.5	2.503	3.436	6.1	19.1	12 17	5 11.22	+26 28.9	2.179	3.158	2.2	21.0
12 27	5 4.82	+2 8.0	2.543	3.439	7.8	19.3	12 27	5 1.27	+26 4.6	2.209	3.156	5.8	21.3
1 6	4 58.31	+1 56.6	2.609	3.442	10.0	19.4	1 6	4 52.86	+25 38.1	2.268	3.153	9.2	21.5
1 16	4 53.43	+1 59.4	2.700	3.444	12.1	19.6	1 16	4 46.64	+25 12.5	2.352	3.149	12.2	21.7
396659	2002 <i>NO</i> ₆₃		12 11.9 181°05	2.1°/11.7	18		429789	2012 <i>HR</i> ₂₇		12 11.9 215°20	1.8°/12.1	18	
11 7	5 45.33	+15 59.4	2.220	3.028	12.7	22.1	11 7	5 50.22	+26 40.6	1.713	2.528	15.6	22.0
11 17	5 39.27	+16 3.3	2.138	3.029	9.7	21.9	11 17	5 43.88	+27 4.1	1.627	2.522	11.9	21.8
11 27	5 31.10	+16 11.1	2.081	3.030	6.2	21.7	11 27	5 34.43	+27 23.6	1.564	2.515	7.6	21.5
12 7	5 21.52	+16 22.6	2.052	3.030	2.9	21.5	12 7	5 22.75	+27 36.1	1.527	2.507	3.1	21.2
12 17	5 11.40	+16 38.0	2.054	3.029	3.0	21.5	12 17	5 10.14	+27 39.5	1.520	2.498	3.1	21.2
12 27	5 1.81	+16 57.3	2.086	3.028	6.4	21.7	12 27	4 58.22	+27 34.2	1.541	2.489	7.7	21.5
1 6	4 53.65	+17 20.3	2.146	3.026	9.9	21.9	1 6	4 48.40	+27 23.3	1.589	2.479	12.1	21.7
1 16	4 47.60	+17 47.0	2.232	3.024	12.9	22.1	1 16	4 41.64	+27 10.9	1.660	2.469	15.9	21.9
117038	2004 <i>JS</i> ₂₄		12 11.9 0°44	3.3°/11.3	18		139973	2001 <i>SR</i> ₁₅		12 11.9 52°81			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
258599	2002 CZ ₂₂₆		12 11.9 357°15	0°7/12.0	18		177590	2004 GJ ₂₆		12 11.9 246°71	0°5/11.8	18	
11 7	5 43.26	+26 0.0	1.896	2.718	14.0	20.3	11 7	5 44.09	+21 26.9	2.137	2.953	12.9	20.5
11 17	5 38.13	+25 47.5	1.818	2.717	10.6	20.0	11 17	5 38.62	+21 31.7	2.046	2.942	9.8	20.2
11 27	5 30.57	+25 29.9	1.763	2.717	6.6	19.8	11 27	5 30.87	+21 36.3	1.978	2.931	6.1	20.0
12 7	5 21.38	+25 6.6	1.735	2.716	2.4	19.5	12 7	5 21.54	+21 40.1	1.939	2.920	2.1	19.7
12 17	5 11.65	+24 38.2	1.736	2.716	2.3	19.5	12 17	5 11.55	+21 42.8	1.929	2.909	2.2	19.7
12 27	5 2.62	+24 7.1	1.766	2.716	6.6	19.8	12 27	5 2.02	+21 45.0	1.949	2.897	6.3	19.9
1 6	4 55.37	+23 36.4	1.822	2.716	10.5	20.0	1 6	4 53.97	+21 47.9	1.997	2.885	10.1	20.2
1 16	4 50.59	+23 9.1	1.902	2.717	13.9	20.3	1 16	4 48.16	+21 52.8	2.069	2.873	13.4	20.3
215512	2002 UF ₁₄		12 11.9 58°03	2°3/11.9	18		40175	1998 RE ₁₆		12 11.9 130°07	1°9/11.6	18	
11 7	5 51.14	+15 4.9	1.230	2.063	19.4	18.8	11 7	5 42.05	+17 0.4	2.563	3.371	11.2	19.2
11 17	5 44.56	+15 44.5	1.188	2.092	14.6	18.6	11 17	5 36.50	+16 51.3	2.490	3.382	8.4	19.0
11 27	5 34.68	+16 33.1	1.167	2.121	9.2	18.4	11 27	5 29.25	+16 44.2	2.443	3.392	5.4	18.8
12 7	5 22.73	+17 27.9	1.171	2.150	3.8	18.2	12 7	5 20.92	+16 39.6	2.425	3.402	2.5	18.7
12 17	5 10.36	+18 25.6	1.201	2.180	3.8	18.2	12 17	5 12.26	+16 38.1	2.437	3.412	2.6	18.7
12 27	4 59.35	+19 23.3	1.259	2.209	8.7	18.6	12 27	5 4.10	+16 40.3	2.480	3.422	5.6	18.9
1 6	4 51.07	+20 19.6	1.342	2.238	13.4	19.0	1 6	4 57.19	+16 46.7	2.552	3.431	8.5	19.1
1 16	4 46.21	+21 13.8	1.446	2.267	17.2	19.3	1 16	4 52.03	+16 57.5	2.649	3.440	11.1	19.3
506124	2016 BX ₈₁		12 11.9 239°24	17°4/14.8	17		19351	1997 EK		12 11.9 279°22	6°1/12.7	18	
11 7	6 7.46	+55 51.8	1.242	1.988	23.9	21.4	11 7	5 47.58	+39 15.7	2.130	2.915	13.9	18.1
11 17	6 1.16	+57 50.7	1.178	1.983	21.6	21.2	11 17	5 41.76	+40 8.0	2.043	2.907	11.3	17.9
11 27	5 47.41	+59 20.9	1.130	1.978	19.4	21.0	11 27	5 33.08	+40 49.1	1.980	2.899	8.6	17.7
12 7	5 27.55	+60 3.3	1.100	1.972	17.9	20.9	12 7	5 22.33	+41 13.8	1.943	2.890	6.5	17.5
12 17	5 5.18	+59 44.0	1.088	1.966	17.5	20.9	12 17	5 10.72	+41 18.5	1.934	2.882	6.4	17.5
12 27	4 45.31	+58 22.7	1.097	1.960	18.5	20.9	12 27	4 59.72	+41 3.5	1.952	2.874	8.3	17.6
1 6	4 31.61	+56 14.8	1.125	1.954	20.5	21.0	1 6	4 50.65	+40 32.4	1.997	2.866	11.1	17.8
1 16	4 25.33	+53 41.6	1.170	1.947	23.0	21.2	1 16	4 44.42	+39 51.1	2.065	2.857	13.8	17.9
350221	2012 SN ₂₇		12 11.9 10°53	0°6/11.9	18		487532	2014 UE ₁₄₉		12 11.9 149°76	2°0/12.2	17	
11 7	5 42.94	+24 36.6	1.184	2.036	18.8	20.5	11 7	5 43.82	+28 36.7	2.554	3.357	11.4	21.3
11 17	5 39.05	+24 37.2	1.123	2.038	14.2	20.2	11 17	5 38.10	+29 5.9	2.473	3.361	8.7	21.1
11 27	5 31.65	+24 33.8	1.082	2.041	8.9	19.9	11 27	5 30.39	+29 31.0	2.418	3.364	5.6	20.9
12 7	5 21.84	+24 25.0	1.063	2.045	3.1	19.6	12 7	5 21.35	+29 49.8	2.392	3.368	2.7	20.7
12 17	5 11.23	+24 11.1	1.070	2.051	3.1	19.6	12 17	5 11.81	+30 1.2	2.396	3.371	2.6	20.7
12 27	5 1.74	+23 54.2	1.101	2.057	8.8	20.0	12 27	5 2.77	+30 5.2	2.430	3.374	5.5	20.9
1 6	4 54.89	+23 38.1	1.156	2.064	14.0	20.3	1 6	4 55.08	+30 3.4	2.493	3.377	8.5	21.1
1 16	4 51.55	+23 26.1	1.231	2.073	18.3	20.6	1 16	4 49.38	+29 58.2	2.581	3.380	11.2	21.3
470201	2006 VF ₅₇		12 11.9 80°49	1°4/11.7	18		238241	2003 UN ₂₄₆		12 11.9 73°82	2°1/11.6	16	
11 7	5 49.47	+21 0.4	1.407	2.238	17.5	21.3	11 7	5 48.62	+18 32.9	1.711	2.530	15.4	20.3
11 17	5 43.06	+20 39.6	1.356	2.260	13.1	21.1	11 17	5 41.80	+18 11.3	1.667	2.565	11.5	20.2
11 27	5 33.65	+20 17.9	1.327	2.282	8.1	20.9	11 27	5 32.59	+17 51.2	1.647	2.599	7.2	20.0
12 7	5 22.38	+19 55.8	1.323	2.304	2.9	20.6	12 7	5 22.01	+17 33.5	1.653	2.632	3.0	19.8
12 17	5 10.76	+19 34.8	1.347	2.326	3.2	20.7	12 17	5 11.26	+17 19.3	1.689	2.665	3.3	19.9
12 27	5 0.37	+19 17.2	1.398	2.347	8.1	21.0	12 27	5 1.60	+17 10.2	1.753	2.698	7.2	20.2
1 6	4 52.43	+19 5.5	1.474	2.368	12.6	21.4	1 6	4 53.99	+17 7.2	1.845	2.730	10.9	20.5
1 16	4 47.62	+19 1.1	1.573	2.389	16.3	21.7	1 16	4 48.98	+17 10.9	1.960	2.762	14.1	20.8
68962	2002 RC ₅₂		12 11.9 66°38	1°5/12.1	18		363009	2013 EM ₉₃		12 11.9 210°78	3°4/11.2	18	
11 7	5 46.16	+25 57.7	1.727	2.549	15.1	19.4	11 7	5 42.47	+13 15.4	2.414	3.220	11.9	21.7
11 17	5 40.50	+26 20.8	1.661	2.560	11.5	19.1	11 17	5 36.99	+12 45.4	2.327	3.214	9.2	21.5
11 27	5 32.11	+26 40.2	1.618	2.571	7.2	18.9	11 27	5 29.67	+12 19.0	2.266	3.208	6.2	21.3
12 7	5 21.92	+26 53.8	1.602	2.582	2.8	18.7	12 7	5 21.10	+11 58.1	2.232	3.201	3.8	21.1
12 17	5 11.16	+27 0.0	1.614	2.593	2.8	18.7	12 17	5 12.08	+11 44.2	2.229	3.194	4.1	21.1
12 27	5 1.25	+26 59.6	1.654	2.604	7.0	19.0	12 27	5 3.49	+11 38.6	2.255	3.187	6.7	21.3
1 6	4 53.35	+26 55.0	1.721	2.615	11.1	19.3	1 6	4 56.16	+11 41.9	2.310	3.179	9.7	21.5
1 16	4 48.24	+26 49.4	1.811	2.626	14.5	19.5	1 16	4 50.67	+11 53.7	2.389	3.170	12.5	21.6
519527	2012 JY ₄₅		12 11.9 173°42	7°6/10.8	18		275797	2001 QC ₁₇₅		12 11.9 26°86	4°1/11.5	18	
11 7	5 39.99	- 8 3.8	3.174	3.899	11.0	22.1	11 7	5 43.64	+15 13.4	1.236	2.081	18.5	20.2
11 17	5 34.64	- 8 36.2	3.104	3.902	9.6	21.9	11 17	5 39.19	+14 46.3	1.179	2.088	14.2	20.0
11 27	5 27.97	- 8 54.7	3.058	3.904	8.4	21.9	11 27	5 31.55	+14 25.5	1.142	2.096	9.3	19.7
12 7	5 20.46	- 8 56.5	3.037	3.906	7.7	21.8	12 7	5 21.80	+14 13.2	1.128	2.104	4.9	19.5
12 17	5 12.68	- 8 40.0	3.043	3.908	7.8	21.8	12 17	5 11.41	+14 11.4	1.140	2.114	5.2	19.5
12 27	5 5.25	- 8 5.5	3.077	3.909	8.7	21.9	12 27	5 2.07	+14 21.1	1.177	2.124	9.7	19.8
1 6	4 58.76	- 7 14.6	3.136	3.909	9.9	22.0	1 6	4 55.14	+14 42.0	1.237	2.134	14.2	20.1
1 16	4 53.63	- 6 10.4	3.218	3.910	11.3	22.1	1 16	4 51.41	+15 12.7	1.318	2.145	18.2	20.4
168145	2006 HA ₂₄		12 11.9 188°17	0°8/11.8	18		120552	1995 CY ₂		12 11.9 306°60	1°7/11.6	18	
11 7	5 45.29	+21 5.7	1.827	2.649	14.5	21.3	11 7	5 41.26	+18 41.4	2.134	2.954	12.7	19.5
11 17	5 39.72	+21 3.5	1.749	2.649	10.9	21.1	11 17	5 36.38	+18 26.5	2.050	2.949	9.6	19.3
11 27	5 31.61	+21 1.0	1.694	2.648	6.8	20.9	11 27	5 29.41	+18 12.5	1.991	2.943	6.1	19.1
12 7	5 21.77	+20 57.9	1.666	2.648	2.4	20.6	12 7	5 21.04	+18 0.1	1.958	2.938	2.6	18.9
12 17	5 11.31	+20 54.3	1.668	2.647	2.6	20.6	12 17	5 12.14	+17 50.2	1.956	2.933	2.8	18.9
12 27	5 1.52	+20 51.1	1.698	2.646	7.0	20.9	12 27	5 3.76	+17 44.0	1.982	2.927	6.4	19.1
1 6	4 53.53	+20 50.1	1.754	2.645	11.1	21.1	1 6	4 56.80	+17 42.7	2.036	2.922	10.0	19.3
1 16	4 48.10	+20 52.7	1.835	2.644	14.6	21.3	1 16	4 51.93	+17 46.8	2.113	2.918	13.1	19.5
57375	2001 RK ₅₃		12 11.9 348°46	2°7/11.8	18		98982	2001 DS ₂₂		12 11.9 113°73	4°0/12.9	17	
11 7	5 44.66	+16 9.9	1.374	2.212									

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
230602	2003 <i>FW</i> ₂₀	12 11.9	240°12	1°9/11.7	18		307483	2002 <i>XL</i> ₅₀	12 11.9	55°36	1°3/12.1	18	
11 7	5 45.69	+18 33.4	1.810	2.631	14.6	20.8	11 7	5 45.82	+25 18.0	1.699	2.524	15.3	20.4
11 17	5 40.14	+18 23.2	1.723	2.621	11.1	20.6	11 17	5 40.29	+25 43.7	1.635	2.535	11.5	20.2
11 27	5 31.97	+18 14.5	1.659	2.612	7.1	20.3	11 27	5 32.03	+26 6.5	1.594	2.547	7.2	20.0
12 7	5 21.96	+18 7.7	1.622	2.602	2.9	20.0	12 7	5 21.96	+26 24.0	1.579	2.559	2.8	19.7
12 17	5 11.19	+18 3.4	1.614	2.591	3.2	20.0	12 17	5 11.33	+26 34.8	1.592	2.572	2.7	19.7
12 27	5 1.00	+18 2.9	1.634	2.580	7.5	20.3	12 27	5 1.54	+26 39.3	1.634	2.584	7.1	20.0
1 6	4 52.55	+18 7.2	1.681	2.569	11.7	20.5	1 6	4 53.78	+26 39.8	1.702	2.597	11.1	20.3
1 16	4 46.69	+18 17.3	1.752	2.558	15.3	20.7	1 16	4 48.79	+26 38.9	1.793	2.609	14.6	20.6
267994	2004 <i>HL</i> ₁₂	12 11.9	337°64	4°1/11.2	18		364048	2005 <i>WX</i> ₁₁₀	12 11.9	151°34	0°1/11.9	18	
11 7	5 44.06	+15 55.1	1.379	2.218	17.4	20.1	11 7	5 43.92	+22 47.6	2.574	3.380	11.2	21.6
11 17	5 39.39	+15 11.4	1.308	2.214	13.4	19.9	11 17	5 38.01	+22 56.1	2.496	3.388	8.4	21.4
11 27	5 31.68	+14 30.7	1.258	2.211	8.8	19.6	11 27	5 30.27	+23 3.3	2.444	3.395	5.2	21.2
12 7	5 21.87	+13 56.1	1.232	2.208	4.8	19.4	12 7	5 21.33	+23 8.5	2.421	3.402	1.8	21.0
12 17	5 11.32	+13 30.9	1.232	2.205	5.3	19.4	12 17	5 11.99	+23 11.5	2.429	3.409	1.8	21.0
12 27	5 1.60	+13 18.0	1.259	2.202	9.6	19.6	12 27	5 3.15	+23 12.7	2.467	3.414	5.2	21.3
1 6	4 54.08	+13 18.3	1.310	2.200	14.1	19.9	1 6	4 55.61	+23 13.3	2.535	3.420	8.4	21.5
1 16	4 49.62	+13 31.6	1.381	2.199	18.0	20.1	1 16	4 49.95	+23 14.6	2.629	3.425	11.0	21.7
73290	2002 <i>JB</i> ₆₅	12 11.9	201°75	3°0/11.1	18		322107	2010 <i>VC</i> ₁₅₂	12 11.9	63°36	3°1/11.6	18	
11 7	5 41.10	+14 27.5	2.604	3.411	11.1	20.1	11 7	5 48.13	+16 58.7	1.215	2.055	19.1	20.5
11 17	5 35.83	+13 53.1	2.520	3.408	8.5	20.0	11 17	5 42.50	+16 41.6	1.164	2.072	14.5	20.2
11 27	5 28.88	+13 21.1	2.460	3.405	5.7	19.8	11 27	5 33.55	+16 29.2	1.134	2.089	9.2	20.0
12 7	5 20.83	+12 53.3	2.430	3.401	3.3	19.6	12 7	5 22.48	+16 22.7	1.128	2.107	4.2	19.8
12 17	5 12.40	+12 31.2	2.429	3.397	3.6	19.6	12 17	5 10.90	+16 22.9	1.148	2.124	4.4	19.8
12 27	5 4.40	+12 16.4	2.459	3.392	6.2	19.8	12 27	5 0.57	+16 30.8	1.194	2.142	9.3	20.2
1 6	4 57.56	+12 9.6	2.518	3.387	9.0	20.0	1 6	4 52.88	+16 46.8	1.263	2.160	14.0	20.5
1 16	4 52.41	+12 10.9	2.601	3.382	11.6	20.1	1 16	4 48.56	+17 10.3	1.353	2.178	18.0	20.8
508883	2003 <i>SA</i> ₂₄₅	12 11.9	49°47	1°6/12.1	18		88392	2001 <i>QY</i> ₁₀	12 11.9	58°17	2°2/11.7	18	
11 7	5 49.56	+25 52.4	1.088	1.935	20.4	20.9	11 7	5 47.35	+18 35.6	1.323	2.160	18.0	18.9
11 17	5 44.00	+26 9.4	1.045	1.956	15.4	20.7	11 17	5 41.66	+18 22.0	1.274	2.181	13.6	18.7
11 27	5 34.62	+26 21.1	1.021	1.978	9.6	20.5	11 27	5 32.90	+18 10.9	1.247	2.202	8.5	18.5
12 7	5 22.81	+26 24.3	1.020	2.001	3.6	20.2	12 7	5 22.24	+18 2.9	1.244	2.224	3.5	18.2
12 17	5 10.51	+26 18.1	1.044	2.024	3.5	20.3	12 17	5 11.17	+17 58.8	1.268	2.246	3.7	18.3
12 27	4 59.81	+26 4.9	1.094	2.048	9.1	20.7	12 27	5 1.31	+18 0.0	1.318	2.268	8.5	18.7
1 6	4 52.22	+25 49.3	1.166	2.072	14.1	21.0	1 6	4 53.90	+18 7.4	1.393	2.290	13.0	19.0
1 16	4 48.47	+25 35.7	1.259	2.096	18.3	21.4	1 16	4 49.63	+18 21.2	1.490	2.312	16.8	19.3
227397	2005 <i>UO</i> ₃₇₇	12 11.9	251°59	1°6/11.7	18		313244	2001 <i>UW</i> ₈₈	12 11.9	32°10	5°8/11.4	17	
11 7	5 45.84	+19 57.8	1.645	2.472	15.6	21.1	11 7	5 41.90	+10 21.9	1.435	2.268	17.1	20.2
11 17	5 40.47	+19 42.3	1.562	2.464	11.8	20.8	11 17	5 37.34	+9 46.6	1.385	2.284	13.3	20.0
11 27	5 32.27	+19 26.6	1.502	2.456	7.5	20.6	11 27	5 30.15	+9 21.8	1.357	2.301	9.3	19.8
12 7	5 22.08	+19 11.4	1.468	2.448	2.9	20.3	12 7	5 21.32	+9 10.8	1.353	2.319	6.2	19.7
12 17	5 11.11	+18 57.5	1.461	2.440	3.2	20.3	12 17	5 12.09	+9 15.5	1.374	2.338	6.5	19.7
12 27	5 0.81	+18 46.7	1.483	2.431	7.9	20.5	12 27	5 3.81	+9 35.8	1.422	2.357	9.6	20.0
1 6	4 52.46	+18 41.0	1.531	2.423	12.4	20.8	1 6	4 57.55	+10 10.0	1.494	2.377	13.2	20.2
1 16	4 46.92	+18 41.8	1.601	2.414	16.2	21.0	1 16	4 53.98	+10 55.1	1.587	2.398	16.4	20.5
236232	2005 <i>XD</i> ₁₁₂	12 11.9	351°12	0°5/11.9	18		511033	2013 <i>RF</i> ₁₆	12 11.9	18°36	4°5/12.6	18	
11 7	5 42.84	+24 24.3	1.254	2.103	18.1	20.7	11 7	5 45.44	+31 25.7	1.010	1.863	21.2	20.9
11 17	5 38.98	+24 24.9	1.184	2.097	13.8	20.5	11 17	5 41.67	+31 49.3	0.956	1.868	16.4	20.6
11 27	5 31.68	+24 21.8	1.133	2.092	8.7	20.2	11 27	5 33.61	+32 0.3	0.921	1.875	11.0	20.4
12 7	5 21.93	+24 13.9	1.106	2.088	3.0	19.8	12 7	5 22.63	+31 53.8	0.906	1.883	5.8	20.1
12 17	5 11.27	+24 0.9	1.104	2.085	3.0	19.8	12 17	5 10.77	+31 27.8	0.915	1.892	5.3	20.1
12 27	5 1.54	+23 45.0	1.128	2.083	8.7	20.2	12 27	5 0.41	+30 46.3	0.948	1.902	10.1	20.4
1 6	4 54.31	+23 29.6	1.175	2.082	13.9	20.4	1 6	4 53.36	+29 57.5	1.002	1.913	15.3	20.8
1 16	4 50.53	+23 18.1	1.242	2.082	18.3	20.7	1 16	4 50.52	+29 9.2	1.075	1.926	19.8	21.1
358732	2008 <i>CD</i> ₃₃	12 11.9	161°19	4°0/11.3	18		447787	2007 <i>RF</i> ₂₉₆	12 11.9	142°16	5°7/12.4	18	
11 7	5 42.78	+10 41.1	2.354	3.157	12.2	21.2	11 7	5 50.31	+35 52.0	1.882	2.679	15.1	21.5
11 17	5 37.19	+10 21.9	2.279	3.161	9.5	21.0	11 17	5 43.99	+36 56.3	1.808	2.683	12.0	21.4
11 27	5 29.76	+10 9.1	2.228	3.166	6.6	20.8	11 27	5 34.56	+37 51.0	1.756	2.686	8.8	21.2
12 7	5 21.14	+10 4.3	2.205	3.170	4.3	20.7	12 7	5 22.91	+38 30.3	1.731	2.689	6.1	21.0
12 17	5 12.12	+10 8.5	2.211	3.173	4.5	20.7	12 17	5 10.39	+38 49.8	1.734	2.692	6.0	21.0
12 27	5 3.60	+10 22.1	2.248	3.176	7.0	20.9	12 27	4 58.61	+38 49.4	1.765	2.694	8.5	21.2
1 6	4 56.37	+10 44.8	2.312	3.179	9.8	21.1	1 6	4 49.01	+38 33.1	1.822	2.697	11.6	21.4
1 16	4 51.02	+11 15.4	2.401	3.181	12.4	21.3	1 16	4 42.51	+38 6.7	1.902	2.699	14.6	21.6
234656	2002 <i>EN</i> ₅₃	12 11.9	318°61	3°2/11.5	18		138966	2001 <i>CS</i> ₁₇	12 11.9	3°81	3°1/11.8	18	
11 7	5 42.09	+17 10.0	1.385	2.227	17.1	20.7	11 7	5 45.83	+15 39.1	1.282	2.122	18.3	19.3
11 17	5 38.18	+16 45.6	1.299	2.208	13.2	20.4	11 17	5 41.01	+15 43.6	1.215	2.122	14.1	19.1
11 27	5 31.14	+16 23.9	1.235	2.190	8.6	20.0	11 27	5 32.87	+15 55.7	1.167	2.122	9.1	18.8
12 7	5 21.78	+16 6.7	1.194	2.173	4.1	19.7	12 7	5 22.37	+16 15.6	1.143	2.122	4.2	18.5
12 17	5 11.39	+15 56.2	1.180	2.156	4.5	19.7	12 17	5 10.99	+16 43.0	1.146	2.123	4.3	18.5
12 27	5 1.60	+15 54.3	1.191	2.139	9.3	20.0	12 27	5 0.49	+17 17.0	1.174	2.124	9.3	18.8
1 6	4 53.90	+16 2.4	1.226	2.124	14.3	20.2	1 6	4 52.37	+17 56.6	1.227	2.125	14.2	19.1
1 16	4 49.33	+16 20.6	1.281	2.109	18.6	20.4	1 16	4 47.60	+18 41.0	1.300	2.127	18.4	19.4
161871	2007 <i>CE</i> ₁₂	12 11.9	272°45	0°8/11.8	18		216111	2006 <i>RU</i> ₈₇	12 11.9	2			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
480270	2015 <i>HS</i> ₈₂		12 11.9 225°57'	2°8'/12.1	18		45312	2000 <i>AE</i> ₅₇		12 11.9 68°99'	4°9'/11.7	18	
11 7	5 49.37	+27 54.9	1.549	2.372	16.6	21.9	11 7	5 42.24	+7 44.0	2.142	2.945	13.3	19.0
11 17	5 43.59	+28 34.4	1.471	2.369	12.8	21.7	11 17	5 36.91	+7 36.4	2.079	2.958	10.5	18.8
11 27	5 34.46	+29 9.8	1.415	2.365	8.3	21.4	11 27	5 29.66	+7 38.8	2.039	2.971	7.5	18.7
12 7	5 22.93	+29 36.6	1.385	2.362	3.9	21.1	12 7	5 21.20	+7 52.5	2.025	2.985	5.2	18.5
12 17	5 10.41	+29 51.6	1.382	2.358	3.8	21.1	12 17	5 12.37	+8 18.1	2.041	2.998	5.3	18.6
12 27	4 58.67	+29 54.6	1.407	2.355	8.2	21.4	12 27	5 4.13	+8 55.0	2.086	3.012	7.6	18.7
1 6	4 49.25	+29 48.8	1.457	2.351	12.7	21.6	1 6	4 57.30	+9 41.4	2.158	3.025	10.4	18.9
1 16	4 43.16	+29 38.9	1.530	2.347	16.6	21.9	1 16	4 52.45	+10 35.0	2.253	3.038	13.0	19.1
176074	2000 <i>WY</i> ₁₁₃		12 11.9 39°72'	3°1'/12.1	18		346277	2008 <i>GE</i> ₁₄₀		12 11.9 128°18'	0°9'/11.8	16	
11 7	5 48.80	+26 45.8	1.106	1.953	20.2	19.2	11 7	5 49.22	+21 17.8	1.821	2.635	14.8	22.3
11 17	5 43.80	+27 39.9	1.055	1.965	15.4	18.9	11 17	5 42.51	+21 7.0	1.755	2.651	11.1	22.1
11 27	5 34.79	+28 29.9	1.023	1.978	9.9	18.7	11 27	5 33.27	+20 55.1	1.714	2.666	6.9	21.9
12 7	5 23.03	+29 10.1	1.013	1.992	4.5	18.4	12 7	5 22.42	+20 42.0	1.699	2.680	2.4	21.7
12 17	5 10.42	+29 35.9	1.029	2.007	4.4	18.5	12 17	5 11.15	+20 28.3	1.715	2.694	2.6	21.7
12 27	4 59.18	+29 47.3	1.069	2.022	9.5	18.8	12 27	5 0.75	+20 15.5	1.760	2.707	6.9	22.0
1 6	4 51.03	+29 48.5	1.133	2.038	14.6	19.1	1 6	4 52.30	+20 5.8	1.832	2.719	10.9	22.3
1 16	4 46.90	+29 44.8	1.216	2.054	18.8	19.4	1 16	4 46.49	+20 0.9	1.929	2.731	14.2	22.5
323365	2003 <i>WF</i> ₂₄		12 11.9 94°94'	1°9'/12.2	18		341901	2008 <i>HN</i> ₅₅		12 11.9 123°56'	4°1'/10.9	16	
11 7	5 52.18	+26 42.4	1.479	2.301	17.3	20.6	11 7	5 48.29	+13 57.2	1.996	2.801	14.0	22.3
11 17	5 45.31	+27 5.3	1.424	2.322	13.1	20.4	11 17	5 41.40	+13 1.6	1.936	2.822	10.7	22.2
11 27	5 35.22	+27 23.0	1.391	2.342	8.3	20.1	11 27	5 32.39	+12 9.4	1.900	2.843	7.2	22.0
12 7	5 23.08	+27 32.1	1.383	2.363	3.3	19.9	12 7	5 22.08	+11 23.6	1.893	2.862	4.4	21.9
12 17	5 10.43	+27 31.4	1.404	2.383	3.2	19.9	12 17	5 11.52	+10 47.1	1.916	2.880	4.8	21.9
12 27	4 58.99	+27 22.2	1.453	2.402	7.9	20.3	12 27	5 1.79	+10 22.0	1.969	2.898	7.7	22.1
1 6	4 50.11	+27 8.4	1.527	2.421	12.2	20.6	1 6	4 53.78	+10 9.1	2.049	2.915	11.0	22.4
1 16	4 44.53	+26 54.3	1.624	2.439	15.9	20.9	1 16	4 48.06	+10 8.1	2.153	2.930	13.8	22.6
41450	<i>Medkeff</i>		12 11.9 223°46'	1°3'/11.7	18		422534	2014 <i>TM</i> ₂₀		12 11.9 359°79'	1°0'/11.8	17	
11 7	5 46.59	+20 31.6	1.854	2.673	14.4	20.4	11 7	5 40.65	+20 57.0	1.811	2.642	14.2	20.5
11 17	5 40.78	+20 17.7	1.768	2.665	11.0	20.2	11 17	5 36.30	+20 49.0	1.735	2.640	10.7	20.3
11 27	5 32.38	+20 3.0	1.704	2.657	6.9	19.9	11 27	5 29.57	+20 40.6	1.683	2.639	6.7	20.0
12 7	5 22.17	+19 47.9	1.668	2.649	2.6	19.6	12 7	5 21.23	+20 32.3	1.657	2.638	2.4	19.8
12 17	5 11.26	+19 33.1	1.661	2.640	2.8	19.6	12 17	5 12.32	+20 24.4	1.659	2.639	2.6	19.8
12 27	5 0.94	+19 20.1	1.683	2.631	7.2	19.9	12 27	5 4.05	+20 18.2	1.689	2.639	6.9	20.1
1 6	4 52.40	+19 11.1	1.733	2.621	11.4	20.1	1 6	4 57.46	+20 15.4	1.745	2.641	10.8	20.3
1 16	4 46.42	+19 7.5	1.805	2.610	15.0	20.3	1 16	4 53.28	+20 17.0	1.825	2.643	14.3	20.5
15360	<i>Moncalvo</i>		12 11.9 250°49'	0°8'/11.8	18		294790	2008 <i>CS</i> ₆₃		12 11.9 335°48'	5°0'/11.2	18	
11 7	5 46.97	+21 8.9	1.803	2.622	14.7	19.9	11 7	5 42.28	+10 42.6	1.842	2.660	14.5	20.6
11 17	5 41.29	+21 8.8	1.709	2.607	11.2	19.6	11 17	5 37.37	+10 9.7	1.767	2.658	11.4	20.4
11 27	5 32.85	+21 8.6	1.638	2.591	7.1	19.4	11 27	5 30.16	+9 44.1	1.716	2.656	8.0	20.2
12 7	5 22.38	+21 7.5	1.594	2.575	2.5	19.0	12 7	5 21.42	+9 28.8	1.690	2.655	5.4	20.0
12 17	5 11.02	+21 5.5	1.579	2.559	2.6	19.0	12 17	5 12.13	+9 25.7	1.692	2.654	5.6	20.0
12 27	5 0.16	+21 3.4	1.593	2.542	7.4	19.3	12 27	5 3.44	+9 35.8	1.722	2.653	8.5	20.2
1 6	4 51.09	+21 2.9	1.634	2.524	11.8	19.5	1 6	4 56.34	+9 58.6	1.777	2.651	11.9	20.4
1 16	4 44.72	+21 5.9	1.698	2.506	15.6	19.7	1 16	4 51.56	+10 32.3	1.856	2.651	15.0	20.6
518099	2016 <i>AQ</i> ₂₂₉		12 11.9 130°96'	4°5'/10.9	17		353069	2009 <i>DJ</i> ₈₂		12 11.9 200°80'	3°0'/11.5	18	
11 7	5 40.29	+10 10.0	2.375	3.181	12.0	21.5	11 7	5 43.81	+15 3.1	2.042	2.857	13.4	21.4
11 17	5 35.35	+9 30.5	2.300	3.183	9.4	21.3	11 17	5 38.36	+14 47.5	1.962	2.855	10.3	21.2
11 27	5 28.66	+8 56.8	2.250	3.186	6.7	21.2	11 27	5 30.73	+14 35.8	1.905	2.853	6.7	21.0
12 7	5 20.85	+8 31.4	2.227	3.188	4.7	21.1	12 7	5 21.60	+14 29.2	1.876	2.851	3.5	20.8
12 17	5 12.67	+8 16.3	2.234	3.190	5.0	21.1	12 17	5 11.94	+14 28.6	1.876	2.848	3.8	20.8
12 27	5 4.97	+8 12.6	2.269	3.192	7.2	21.2	12 27	5 2.82	+14 35.0	1.905	2.845	7.1	21.0
1 6	4 58.50	+8 20.3	2.332	3.194	9.9	21.4	1 6	4 55.22	+14 48.4	1.962	2.842	10.6	21.2
1 16	4 53.82	+8 38.4	2.419	3.196	12.4	21.6	1 16	4 49.81	+15 8.8	2.042	2.839	13.8	21.4
159804	2003 <i>SN</i> ₁₃		12 11.9 44°74'	0°2'/11.9	18		289743	2005 <i>JN</i> ₄₇		12 11.9 22°59'	0°6'/12.0	18	
11 7	5 42.48	+22 43.8	2.084	2.904	13.0	20.2	11 7	5 44.79	+23 45.4	1.654	2.482	15.4	20.3
11 17	5 37.35	+22 44.5	2.010	2.909	9.8	20.0	11 17	5 39.68	+24 0.6	1.582	2.485	11.7	20.1
11 27	5 30.06	+22 43.8	1.960	2.914	6.1	19.8	11 27	5 31.80	+24 14.1	1.533	2.488	7.3	19.8
12 7	5 21.35	+22 41.2	1.937	2.919	2.0	19.5	12 7	5 22.01	+24 24.3	1.509	2.491	2.5	19.6
12 17	5 12.16	+22 36.7	1.944	2.924	2.1	19.5	12 17	5 11.55	+24 30.2	1.514	2.494	2.5	19.6
12 27	5 3.59	+22 31.3	1.980	2.930	6.1	19.8	12 27	5 1.85	+24 32.4	1.546	2.498	7.2	19.9
1 6	4 56.57	+22 26.6	2.044	2.935	9.7	20.0	1 6	4 54.15	+24 32.8	1.605	2.502	11.5	20.1
1 16	4 51.74	+22 24.0	2.131	2.941	12.8	20.2	1 16	4 49.24	+24 33.8	1.686	2.506	15.2	20.4
484810	2009 <i>EL</i> ₁₁		12 11.9 238°21'	6°9'/12.8	17		108409	2001 <i>KY</i> ₃₁		12 11.9 169°95'	0°4'/11.9	18	
11 7	5 51.02	+40 40.4	2.054	2.832	14.6	21.5	11 7	5 46.75	+20 23.4	2.194	3.002	12.8	20.2
11 17	5 44.62	+41 38.7	1.966	2.823	12.0	21.3	11 17	5 40.53	+20 50.2	2.113	3.006	9.7	20.0
11 27	5 35.05	+42 24.8	1.902	2.814	9.3	21.2	11 27	5 32.06	+21 18.5	2.057	3.008	6.0	19.8
12 7	5 23.15	+42 52.4	1.863	2.805	7.3	21.0	12 7	5 22.07	+21 46.8	2.029	3.011	2.1	19.6
12 17	5 10.25	+42 57.1	1.852	2.795	7.1	21.0	12 17	5 11.49	+22 14.0	2.032	3.012	2.1	19.6
12 27	4 58.00	+42 38.9	1.868	2.785	9.0	21.1	12 27	5 1.43	+22 39.3	2.066	3.014	6.1	19.8
1 6	4 47.89	+42 2.2	1.911	2.774	11.7	21.2	1 6	4 52.89	+23 3.1	2.129	3.015	9.7	20.1
1 16	4 40.91	+41 13.8	1.977	2.763	14.5	21.4	1 16	4 46.56	+23 26.4	2.216	3.015	12.8	20.3
274955	2009 <i>SR</i> ₂₉₉		12 11.9 28°32'	5°4'/11.7	17		366510	2002 <i>PW</i> ₁₅₇		12 11.9 79°87'	0°9'/12.1	18	

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
34048	2000 <i>OR</i> ₃₅		12 11.9	55°49'	7.2°/13.2	18	520772	2014 <i>SN</i> ₁₅₇		12 11.9	88°90'	2.3°/11.5	18
11 7	5 56.29	+36 27.2	1.091	1.917	21.8	18.5	11 7	5 42.09	+17 7.6	2.252	3.067	12.3	21.6
11 17	5 49.46	+37 24.2	1.056	1.948	17.2	18.3	11 17	5 36.77	+16 40.2	2.185	3.079	9.3	21.5
11 27	5 38.16	+38 2.7	1.040	1.978	12.2	18.1	11 27	5 29.57	+16 14.3	2.142	3.091	6.0	21.3
12 7	5 24.10	+38 14.5	1.046	2.009	8.2	18.0	12 7	5 21.20	+15 51.5	2.127	3.103	2.9	21.1
12 17	5 9.66	+37 56.8	1.076	2.040	7.6	18.1	12 17	5 12.50	+15 32.9	2.142	3.115	3.1	21.1
12 27	4 57.31	+37 14.6	1.131	2.071	10.8	18.3	12 27	5 4.41	+15 20.1	2.186	3.127	6.3	21.4
1 6	4 48.73	+36 18.2	1.209	2.103	14.8	18.7	1 6	4 57.72	+15 14.0	2.258	3.139	9.4	21.6
1 16	4 44.56	+35 17.9	1.307	2.134	18.4	19.0	1 16	4 52.98	+15 14.9	2.355	3.151	12.2	21.8
444877	2007 <i>VC</i> ₃₃₄		12 11.9	30°28'	4.0°/13.1	18	464349	2016 <i>AP</i> ₁₂₀		12 11.9	316°87'	2.0°/12.3	18
11 7	5 47.61	+35 10.9	1.668	2.479	16.1	20.3	11 7	5 42.52	+28 44.7	2.187	3.000	12.7	21.5
11 17	5 41.89	+34 58.6	1.597	2.483	12.6	20.0	11 17	5 37.55	+28 57.4	2.100	2.992	9.7	21.3
11 27	5 33.13	+34 31.8	1.547	2.488	8.7	19.8	11 27	5 30.31	+29 4.8	2.036	2.985	6.3	21.1
12 7	5 22.43	+33 47.9	1.523	2.493	5.0	19.6	12 7	5 21.52	+29 5.1	2.000	2.977	2.9	20.9
12 17	5 11.22	+32 47.5	1.526	2.498	4.4	19.6	12 17	5 12.12	+28 57.5	1.993	2.970	2.7	20.8
12 27	5 1.09	+31 34.9	1.557	2.504	7.7	19.8	12 27	5 3.25	+28 42.9	2.015	2.963	6.1	21.1
1 6	4 53.30	+30 17.2	1.615	2.510	11.6	20.1	1 6	4 55.90	+28 23.8	2.064	2.956	9.6	21.3
1 16	4 48.59	+29 1.4	1.697	2.516	15.1	20.3	1 16	4 50.81	+28 3.2	2.138	2.949	12.7	21.5
67787	2000 <i>UD</i> ₉₅		12 11.9	57°11'	1.2°/12.2	18	245474	2005 <i>NP</i> ₅₉		12 11.9	169°41'	2.2°/12.6	18
11 7	5 49.25	+27 18.8	1.204	2.044	19.3	19.0	11 7	5 42.04	+31 33.7	2.840	3.637	10.5	20.7
11 17	5 43.64	+27 0.0	1.150	2.058	14.6	18.8	11 17	5 36.63	+31 34.6	2.756	3.639	8.1	20.6
11 27	5 34.41	+26 32.5	1.117	2.073	9.2	18.5	11 27	5 29.47	+31 28.8	2.697	3.640	5.4	20.4
12 7	5 22.87	+25 55.4	1.106	2.087	3.4	18.2	12 7	5 21.17	+31 15.3	2.667	3.640	2.8	20.2
12 17	5 10.82	+25 10.2	1.122	2.102	3.1	18.3	12 17	5 12.52	+30 53.8	2.667	3.641	2.6	20.2
12 27	5 0.19	+24 21.8	1.164	2.118	8.7	18.7	12 27	5 4.35	+30 25.6	2.698	3.642	5.0	20.4
1 6	4 52.44	+23 36.1	1.230	2.133	13.8	19.0	1 6	4 57.42	+29 53.3	2.757	3.642	7.8	20.6
1 16	4 48.32	+22 58.0	1.316	2.149	17.9	19.3	1 16	4 52.29	+29 19.5	2.843	3.643	10.2	20.7
477850	2011 <i>FC</i> ₁₅₃		12 11.9	295°58'	3.5°/12.5	18	308788	2006 <i>QW</i> ₂₅		12 11.9	98°88'	1.0°/11.7	18
11 7	5 48.05	+30 49.8	1.454	2.279	17.3	20.9	11 7	5 47.08	+22 17.2	2.039	2.851	13.5	21.4
11 17	5 42.84	+31 9.8	1.375	2.272	13.5	20.7	11 17	5 40.55	+21 40.4	1.979	2.874	10.1	21.2
11 27	5 34.13	+31 20.8	1.317	2.265	9.0	20.4	11 27	5 31.89	+21 0.9	1.944	2.896	6.3	21.0
12 7	5 22.89	+31 18.7	1.283	2.259	4.6	20.1	12 7	5 21.96	+20 19.7	1.937	2.917	2.2	20.8
12 17	5 10.66	+31 1.4	1.276	2.252	4.3	20.1	12 17	5 11.79	+19 38.9	1.960	2.939	2.5	20.9
12 27	4 59.32	+30 30.6	1.296	2.245	8.6	20.3	12 27	5 2.49	+19 1.1	2.014	2.959	6.3	21.2
1 6	4 50.48	+29 51.7	1.341	2.239	13.3	20.6	1 6	4 54.93	+18 28.8	2.095	2.980	9.9	21.4
1 16	4 45.14	+29 11.1	1.407	2.233	17.4	20.8	1 16	4 49.67	+18 3.9	2.201	2.999	12.9	21.7
148280	2000 <i>GG</i> ₉₃		12 11.9	219°43'	5.4°/11.1	18	195674	2002 <i>OW</i> ₂₀		12 11.9	56°41'	0.5°/11.9	17
11 7	5 42.83	+ 7 16.6	2.274	3.071	12.8	20.4	11 7	5 43.30	+21 48.4	2.041	2.860	13.2	20.3
11 17	5 37.41	+ 6 44.4	2.189	3.064	10.2	20.2	11 17	5 37.84	+21 47.6	1.983	2.882	9.9	20.1
11 27	5 30.06	+ 6 20.4	2.128	3.056	7.5	20.0	11 27	5 30.29	+21 46.0	1.950	2.903	6.1	19.9
12 7	5 21.39	+ 6 7.4	2.094	3.048	5.6	19.9	12 7	5 21.45	+21 43.2	1.944	2.925	2.1	19.7
12 17	5 12.21	+ 6 7.3	2.090	3.039	5.9	19.9	12 17	5 12.29	+21 39.6	1.967	2.947	2.1	19.8
12 27	5 3.46	+ 6 20.9	2.114	3.030	8.1	20.0	12 27	5 3.87	+21 36.0	2.020	2.969	6.0	20.1
1 6	4 56.00	+ 6 47.5	2.165	3.021	10.9	20.2	1 6	4 57.08	+21 33.8	2.100	2.991	9.5	20.3
1 16	4 50.46	+ 7 25.4	2.240	3.011	13.5	20.3	1 16	4 52.48	+21 34.2	2.204	3.013	12.5	20.6
20542	1999 <i>RD</i> ₉₄		12 11.9	160°14'	4.2°/11.3	18	390764	2003 <i>TH</i> ₂₅		12 11.9	85°03'	7.0°/10.4	18
11 7	5 44.97	+11 21.7	2.147	2.951	13.2	18.3	11 7	5 44.36	+ 7 54.5	1.732	2.543	15.6	21.6
11 17	5 39.02	+10 56.7	2.073	2.958	10.3	18.1	11 17	5 38.80	+ 6 36.7	1.676	2.558	12.4	21.4
11 27	5 31.03	+10 37.8	2.024	2.963	7.1	17.9	11 27	5 30.95	+ 5 28.2	1.643	2.572	9.2	21.2
12 7	5 21.71	+10 27.0	2.002	2.968	4.5	17.8	12 7	5 21.68	+ 4 34.0	1.635	2.586	7.2	21.2
12 17	5 11.95	+10 25.7	2.010	2.973	4.7	17.8	12 17	5 12.06	+ 3 58.3	1.656	2.600	7.6	21.2
12 27	5 2.77	+10 34.4	2.047	2.977	7.4	18.0	12 27	5 3.27	+ 3 43.0	1.703	2.614	10.0	21.4
1 6	4 55.05	+10 53.0	2.112	2.980	10.6	18.2	1 6	4 56.24	+ 3 47.4	1.775	2.628	13.0	21.6
1 16	4 49.43	+11 20.3	2.201	2.983	13.4	18.4	1 16	4 51.61	+ 4 8.8	1.868	2.642	15.7	21.8
43365	2000 <i>VA</i> ₃₆		12 11.9	0°43'	4.2°/11.8	18	69004	2002 <i>TL</i> ₁₉₈		12 11.9	265°11'	5.3°/12.6	18
11 7	5 43.92	+14 3.1	1.132	1.981	19.6	18.0	11 7	5 47.02	+39 19.3	2.654	3.428	11.8	19.5
11 17	5 39.91	+13 59.2	1.068	1.979	15.1	17.8	11 17	5 41.00	+40 9.3	2.553	3.409	9.6	19.3
11 27	5 32.37	+14 5.3	1.023	1.978	10.0	17.5	11 27	5 32.56	+40 50.3	2.476	3.390	7.4	19.2
12 7	5 22.31	+14 22.9	1.001	1.978	5.2	17.2	12 7	5 22.33	+41 18.1	2.426	3.371	5.6	19.0
12 17	5 11.30	+14 52.3	1.003	1.978	5.3	17.2	12 17	5 11.28	+41 29.5	2.405	3.351	5.5	19.0
12 27	5 1.24	+15 32.5	1.030	1.980	10.2	17.5	12 27	5 0.57	+41 24.1	2.414	3.331	7.2	19.1
1 6	4 53.75	+16 21.4	1.079	1.982	15.3	17.8	1 6	4 51.34	+41 4.3	2.450	3.311	9.6	19.2
1 16	4 49.80	+17 16.7	1.148	1.985	19.7	18.1	1 16	4 44.41	+40 34.4	2.511	3.291	12.0	19.3
451299	2010 <i>TT</i> ₁₁₃		12 11.9	45°31'	0.1°/11.9	17	440099	2002 <i>XO</i> ₆₉		12 11.9	15°79'	0.6°/11.9	17
11 7	5 43.84	+23 26.2	1.798	2.623	14.5	21.6	11 7	5 40.96	+23 34.8	1.200	2.054	18.4	20.0
11 17	5 38.65	+23 20.1	1.729	2.631	10.9	21.4	11 17	5 37.39	+23 8.6	1.146	2.062	13.9	19.8
11 27	5 31.00	+23 11.4	1.684	2.639	6.8	21.1	11 27	5 30.57	+22 38.3	1.112	2.072	8.6	19.5
12 7	5 21.72	+22 59.9	1.666	2.647	2.3	20.9	12 7	5 21.63	+22 4.9	1.101	2.083	2.9	19.2
12 17	5 11.95	+22 45.8	1.675	2.656	2.3	20.9	12 17	5 12.14	+21 30.5	1.116	2.096	3.0	19.3
12 27	5 2.96	+22 30.9	1.714	2.664	6.7	21.2	12 27	5 3.79	+20 58.8	1.155	2.111	8.5	19.6
1 6	4 55.79	+22 17.4	1.779	2.673	10.7	21.5	1 6	4 57.93	+20 33.5	1.218	2.126	13.4	19.9
1 16	4 51.16	+22 7.4	1.867	2.683	14.1	21.7	1 16	4 55.29	+20 16.7	1.301	2.143	17.5	20.2
316761	1999 <i>TB</i> ₂₃		12 11.9	18°39'	5.4°/12.6	17	514569	1995 <i>OJ</i> ₁₂					

EPHEMERIDES

12 11.9

12 11.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
31179	Gongju	12 11.9	87°89	0°1/11.9	18	R	85767	1998 TG ₂₈	12 11.9	347°91	5°2/12.5	17	
11 7	5 49.08	+22 32.3	1.631	2.453	15.9	17.7	11 7	5 46.07	+35 58.3	2.053	2.852	13.9	19.1
11 17	5 42.67	+22 41.7	1.574	2.474	12.0	17.5	11 17	5 40.64	+36 53.7	1.974	2.850	11.1	18.9
11 27	5 33.49	+22 49.9	1.540	2.494	7.4	17.3	11 27	5 32.46	+37 40.1	1.918	2.847	8.1	18.8
12 7	5 22.57	+22 55.5	1.533	2.515	2.5	17.0	12 7	5 22.32	+38 12.7	1.888	2.846	5.7	18.6
12 17	5 11.21	+22 57.9	1.554	2.535	2.5	17.1	12 17	5 11.39	+38 28.2	1.886	2.844	5.6	18.6
12 27	5 0.86	+22 58.1	1.604	2.554	7.2	17.4	12 27	5 1.06	+38 26.4	1.912	2.843	7.8	18.7
1 6	4 52.68	+22 58.0	1.681	2.574	11.4	17.7	1 6	4 52.60	+38 10.5	1.965	2.841	10.8	18.9
1 16	4 47.36	+22 59.8	1.781	2.593	14.8	17.9	1 16	4 46.87	+37 45.4	2.041	2.841	13.7	19.1
292738	2006 UM ₁₇₁	12 11.9	152°98	2°5/11.5	18		493978	2016 AY ₇₈	12 11.9	54°66	5°5/11.7	18	
11 7	5 43.91	+16 1.2	2.246	3.056	12.5	21.5	11 7	5 41.36	+ 5 46.5	2.199	2.997	13.1	20.7
11 17	5 38.20	+15 44.2	2.171	3.062	9.5	21.3	11 17	5 36.28	+ 5 35.4	2.131	3.005	10.5	20.5
11 27	5 30.52	+15 30.0	2.120	3.068	6.2	21.1	11 27	5 29.33	+ 5 35.3	2.086	3.013	7.8	20.3
12 7	5 21.56	+15 19.5	2.098	3.073	3.1	21.0	12 7	5 21.17	+ 5 48.0	2.069	3.021	5.8	20.2
12 17	5 12.18	+15 13.6	2.105	3.078	3.3	21.0	12 17	5 12.62	+ 6 14.4	2.079	3.030	5.8	20.3
12 27	5 3.36	+15 13.3	2.143	3.083	6.4	21.2	12 27	5 4.60	+ 6 53.8	2.119	3.038	7.9	20.4
1 6	4 55.96	+15 19.1	2.208	3.087	9.7	21.4	1 6	4 57.91	+ 7 44.2	2.185	3.047	10.5	20.6
1 16	4 50.57	+15 31.0	2.298	3.091	12.6	21.6	1 16	4 53.14	+ 8 43.2	2.275	3.055	13.1	20.8
329028	2011 AL ₂₃	12 11.9	68°47	3°1/11.8	18		224795	2006 TD ₆	12 11.9	174°17	3°8/12.6	18	
11 7	5 43.12	+12 50.5	2.100	2.911	13.2	20.3	11 7	5 51.67	+32 29.5	1.684	2.492	16.1	21.1
11 17	5 37.74	+12 59.2	2.029	2.919	10.1	20.1	11 17	5 45.08	+32 48.7	1.607	2.494	12.5	20.9
11 27	5 30.30	+13 14.6	1.982	2.927	6.7	19.9	11 27	5 35.28	+32 57.8	1.553	2.496	8.5	20.6
12 7	5 21.50	+13 37.2	1.962	2.935	3.7	19.7	12 7	5 23.27	+32 52.8	1.525	2.497	4.7	20.4
12 17	5 12.24	+14 6.7	1.972	2.944	3.7	19.8	12 17	5 10.49	+32 31.7	1.525	2.498	4.4	20.4
12 27	5 3.54	+14 42.4	2.012	2.952	6.8	20.0	12 27	4 58.67	+31 56.8	1.554	2.498	8.0	20.6
1 6	4 56.30	+15 23.3	2.079	2.960	10.1	20.2	1 6	4 49.20	+31 13.2	1.609	2.498	12.0	20.8
1 16	4 51.15	+16 8.1	2.170	2.968	13.0	20.4	1 16	4 42.98	+30 27.4	1.687	2.497	15.6	21.1
112611	2002 PQ ₆₄	12 11.9	209°86	2°6/11.6	18		382919	2004 RS ₂₄₅	12 11.9	196°55	2°5/12.4	18	
11 7	5 47.37	+17 23.1	1.664	2.486	15.6	20.7	11 7	5 49.27	+29 38.3	2.063	2.866	13.7	21.5
11 17	5 41.58	+17 3.1	1.584	2.482	12.0	20.5	11 17	5 42.77	+29 58.6	1.977	2.864	10.6	21.3
11 27	5 33.00	+16 45.2	1.526	2.478	7.7	20.2	11 27	5 33.64	+30 12.7	1.916	2.861	6.9	21.1
12 7	5 22.48	+16 30.6	1.495	2.473	3.5	20.0	12 7	5 22.69	+30 17.8	1.881	2.857	3.4	20.9
12 17	5 11.23	+16 20.5	1.492	2.468	3.8	20.0	12 17	5 11.05	+30 12.4	1.877	2.852	3.2	20.9
12 27	5 0.66	+16 16.6	1.517	2.462	8.1	20.2	12 27	5 0.03	+29 57.2	1.902	2.847	6.7	21.1
1 6	4 52.03	+16 20.0	1.569	2.456	12.4	20.5	1 6	4 50.82	+29 35.4	1.955	2.841	10.4	21.3
1 16	4 46.18	+16 31.3	1.643	2.449	16.2	20.7	1 16	4 44.22	+29 11.1	2.033	2.835	13.6	21.5
137502	1999 VP ₁₉	12 11.9	57°76	3°0/12.2	18		364883	2008 EU ₃₈	12 11.9	237°38	2°3/11.7	18	
11 7	5 51.17	+27 24.0	1.225	2.061	19.3	19.4	11 7	5 43.24	+16 43.0	2.072	2.889	13.2	21.7
11 17	5 45.15	+28 10.1	1.178	2.082	14.7	19.2	11 17	5 37.99	+16 34.6	1.989	2.885	10.0	21.4
11 27	5 35.43	+28 50.7	1.151	2.104	9.4	18.9	11 27	5 30.55	+16 29.0	1.930	2.880	6.5	21.2
12 7	5 23.28	+29 20.4	1.148	2.126	4.3	18.7	12 7	5 21.62	+16 27.0	1.898	2.875	3.0	21.0
12 17	5 10.54	+29 36.1	1.171	2.149	4.1	18.8	12 17	5 12.13	+16 29.2	1.895	2.871	3.2	21.0
12 27	4 59.21	+29 38.8	1.221	2.171	8.9	19.1	12 27	5 3.15	+16 36.3	1.922	2.866	6.7	21.2
1 6	4 50.83	+29 32.7	1.294	2.194	13.5	19.4	1 6	4 55.64	+16 48.6	1.976	2.861	10.4	21.4
1 16	4 46.20	+29 23.2	1.389	2.217	17.4	19.8	1 16	4 50.31	+17 6.3	2.054	2.856	13.5	21.6
267625	2002 RD ₂₃₂	12 11.9	184°75	6°0/13.5	18		271594	2004 NK ₃₁	12 11.9	136°93	2°8/12.3	18	
11 7	5 47.86	+42 50.3	2.556	3.319	12.5	20.5	11 7	5 50.16	+29 15.7	1.842	2.651	14.9	20.9
11 17	5 41.55	+43 24.8	2.475	3.319	10.3	20.3	11 17	5 43.59	+29 49.9	1.771	2.661	11.4	20.7
11 27	5 32.79	+43 46.4	2.416	3.319	8.1	20.2	11 27	5 34.19	+30 18.2	1.724	2.670	7.5	20.5
12 7	5 22.37	+43 51.1	2.384	3.319	6.4	20.1	12 7	5 22.87	+30 37.0	1.703	2.678	3.7	20.2
12 17	5 11.38	+43 36.7	2.381	3.318	6.1	20.1	12 17	5 10.90	+30 44.1	1.711	2.687	3.5	20.3
12 27	5 1.06	+43 4.2	2.406	3.317	7.5	20.2	12 27	4 59.75	+30 40.1	1.749	2.694	7.2	20.5
1 6	4 52.49	+42 17.5	2.458	3.316	9.6	20.3	1 6	4 50.66	+30 28.2	1.814	2.701	11.0	20.7
1 16	4 46.41	+41 22.1	2.535	3.315	11.8	20.4	1 16	4 44.43	+30 12.5	1.902	2.708	14.3	21.0
107744	2001 FS ₃₃	12 11.9	263°15	2°2/11.5	18		13196	Rogerssmith	12 11.9	65°50	4°6/11.6	18	
11 7	5 44.81	+18 18.6	2.007	2.823	13.6	20.3	11 7	5 46.88	+13 41.0	1.331	2.164	18.2	17.2
11 17	5 39.40	+17 51.9	1.907	2.803	10.4	20.1	11 17	5 41.38	+13 13.8	1.277	2.179	13.9	17.0
11 27	5 31.57	+17 25.3	1.831	2.782	6.7	19.8	11 27	5 32.86	+12 54.1	1.245	2.195	9.3	16.8
12 7	5 22.01	+16 59.9	1.783	2.761	3.0	19.6	12 7	5 22.40	+12 44.4	1.237	2.210	5.2	16.6
12 17	5 11.68	+16 37.2	1.763	2.739	3.3	19.5	12 17	5 11.44	+12 46.3	1.255	2.226	5.5	16.7
12 27	5 1.78	+16 19.4	1.774	2.717	7.3	19.7	12 27	5 1.56	+13 0.3	1.299	2.242	9.5	16.9
1 6	4 53.39	+16 8.2	1.811	2.694	11.2	19.9	1 6	4 54.03	+13 25.5	1.368	2.257	13.7	17.2
1 16	4 47.34	+16 4.8	1.872	2.671	14.7	20.1	1 16	4 49.59	+14 0.2	1.458	2.273	17.4	17.5
158806	2003 SG ₂₈₅	12 11.9	88°79	0°7/11.8	18		517281	2014 GJ ₃₂	12 11.9	201°98	2°2/11.7	18	
11 7	5 42.33	+21 37.0	2.257	3.073	12.3	20.3	11 7	5 45.15	+16 56.1	2.006	2.821	13.6	22.2
11 17	5 37.08	+21 28.2	2.182	3.079	9.2	20.2	11 17	5 39.48	+16 49.2	1.924	2.819	10.4	22.0
11 27	5 29.86	+21 18.4	2.132	3.085	5.7	19.9	11 27	5 31.51	+16 45.1	1.866	2.816	6.7	21.8
12 7	5 21.35	+21 7.6	2.110	3.091	2.0	19.7	12 7	5 21.96	+16 44.5	1.834	2.812	3.0	21.6
12 17	5 12.43	+20 56.4	2.117	3.097	2.1	19.7	12 17	5 11.81	+16 47.7	1.833	2.809	3.2	21.6
12 27	5 4.08	+20 45.9	2.155	3.103	5.8	20.0	12 27	5 2.22	+16 55.4	1.861	2.805	6.9	21.8
1 6	4 57.16	+20 37.5	2.220	3.108	9.2	20.2	1 6	4 54.19	+17 8.1	1.916	2.800	10.7	22.0
1 16	4 52.26	+20 32.7	2.310	3.114	12.1	20.4	1 16	4 48.47	+17 26.0	1.995	2.796	13.9	22.2
20017	Alicatherine	12 11.9	4°30	3°5/12.3	18		69798	1998 RU ₁₁	12 11.9	8°13	5°1/11.0	18	
11 7	5 45.54	+29 30.0	1.415	2.248	17.3								

EPHEMERIDES

12 11.9

12 11.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
220048	2002 <i>RC</i> ₈₄		12 11.9 72°88'	4.9/11.3	18		89403	2001 <i>WG</i> ₇		12 11.9 140°53'	0.7/11.9	18	
11 7	5 46.87	+13 54.9	1.383	2.214	17.7	20.0	11 7	5 48.14	+21 23.3	1.909	2.723	14.2	20.9
11 17	5 41.24	+13 8.9	1.329	2.230	13.6	19.7	11 17	5 41.75	+21 22.2	1.838	2.734	10.7	20.7
11 27	5 32.71	+12 29.0	1.297	2.245	9.1	19.5	11 27	5 32.90	+21 20.5	1.791	2.744	6.7	20.5
12 7	5 22.35	+11 58.7	1.289	2.261	5.4	19.4	12 7	5 22.44	+21 17.5	1.772	2.753	2.3	20.2
12 17	5 11.54	+11 40.6	1.308	2.277	5.7	19.4	12 17	5 11.49	+21 13.4	1.782	2.762	2.4	20.2
12 27	5 1.80	+11 36.7	1.354	2.292	9.5	19.7	12 27	5 1.29	+21 9.1	1.823	2.771	6.7	20.5
1 6	4 54.34	+11 46.7	1.424	2.308	13.6	20.0	1 6	4 52.90	+21 6.4	1.890	2.778	10.6	20.8
1 16	4 49.86	+12 9.0	1.515	2.324	17.2	20.2	1 16	4 47.04	+21 6.9	1.982	2.785	13.9	21.0
171265	2006 <i>DQ</i> ₁₀₇		12 11.9 157°23'	1.3/11.8	18		301451	2009 <i>DN</i> ₉₈		12 11.9 352°40'	0.3/12.0	17	
11 7	5 49.82	+20 42.6	1.523	2.347	16.7	21.3	11 7	5 42.52	+22 34.8	1.341	2.186	17.4	21.0
11 17	5 43.58	+20 31.1	1.452	2.353	12.7	21.0	11 17	5 38.65	+22 52.1	1.269	2.180	13.2	20.7
11 27	5 34.29	+20 19.1	1.404	2.358	7.9	20.8	11 27	5 31.54	+23 9.5	1.217	2.175	8.3	20.4
12 7	5 22.94	+20 6.7	1.381	2.362	2.9	20.5	12 7	5 22.11	+23 25.3	1.190	2.172	2.8	20.1
12 17	5 10.89	+19 54.3	1.386	2.366	3.1	20.5	12 17	5 11.76	+23 38.1	1.188	2.169	2.8	20.1
12 27	4 59.77	+19 43.8	1.420	2.369	8.1	20.8	12 27	5 2.21	+23 48.2	1.212	2.167	8.3	20.4
1 6	4 50.90	+19 37.5	1.479	2.371	12.7	21.1	1 6	4 54.95	+23 57.1	1.260	2.166	13.3	20.7
1 16	4 45.12	+19 37.0	1.561	2.374	16.6	21.3	1 16	4 50.94	+24 7.0	1.329	2.166	17.5	20.9
9181	1991 <i>NP</i> ₂		12 11.9 117°29'	3.7/12.7	18		161207	<i>Lidz</i>		12 11.9 172°78'	1.6/11.7	18	
11 7	5 52.04	+32 42.0	1.664	2.472	16.3	17.6	11 7	5 41.17	+17 23.2	2.853	3.658	10.3	21.0
11 17	5 45.17	+32 54.5	1.600	2.486	12.6	17.4	11 17	5 35.86	+17 18.0	2.770	3.660	7.8	20.8
11 27	5 35.19	+32 55.9	1.557	2.500	8.5	17.2	11 27	5 28.99	+17 14.6	2.714	3.662	4.9	20.6
12 7	5 23.20	+32 42.8	1.540	2.513	4.6	17.0	12 7	5 21.09	+17 13.1	2.686	3.664	2.2	20.4
12 17	5 10.68	+32 14.3	1.552	2.525	4.2	17.0	12 17	5 12.84	+17 14.1	2.689	3.665	2.3	20.4
12 27	4 59.28	+31 33.3	1.592	2.537	7.8	17.3	12 27	5 4.98	+17 17.9	2.724	3.666	5.1	20.6
1 6	4 50.32	+30 45.4	1.659	2.549	11.7	17.5	1 6	4 58.18	+17 25.1	2.787	3.667	7.9	20.8
1 16	4 44.55	+29 56.7	1.749	2.560	15.1	17.8	1 16	4 52.97	+17 36.0	2.877	3.667	10.3	21.0
491530	2012 <i>KZ</i> ₂₄		12 11.9 215°74'	1.1/12.2	18		482626	2013 <i>AD</i> ₅₇		12 11.9 42°57'	5.6/12.3	18	
11 7	5 43.47	+26 9.4	2.587	3.392	11.2	22.4	11 7	5 45.78	+7 45.1	1.466	2.285	17.5	20.2
11 17	5 37.90	+26 23.1	2.497	3.387	8.5	22.2	11 17	5 40.39	+7 57.6	1.408	2.299	13.7	20.0
11 27	5 30.40	+26 33.8	2.432	3.381	5.4	22.0	11 27	5 32.23	+8 25.3	1.372	2.312	9.7	19.8
12 7	5 21.57	+26 40.2	2.395	3.375	2.1	21.8	12 7	5 22.25	+9 9.3	1.361	2.326	6.3	19.7
12 17	5 12.23	+26 41.6	2.390	3.369	2.0	21.8	12 17	5 11.71	+10 8.4	1.376	2.341	6.1	19.7
12 27	5 3.32	+26 38.5	2.415	3.362	5.3	22.0	12 27	5 2.05	+11 19.7	1.419	2.356	9.3	19.9
1 6	4 55.68	+26 32.3	2.469	3.355	8.5	22.2	1 6	4 54.46	+12 39.1	1.487	2.372	13.1	20.2
1 16	4 49.94	+26 25.1	2.548	3.348	11.3	22.4	1 16	4 49.70	+14 2.6	1.577	2.388	16.5	20.5
327571	2006 <i>DT</i> ₄₀		12 11.9 173°35'	0.2/11.9	17		78461	2002 <i>RH</i> ₃₇		12 11.9 38°01'	1.3/12.2	18	
11 7	5 42.89	+22 55.2	2.285	3.099	12.2	20.8	11 7	5 45.81	+26 4.1	1.777	2.599	14.8	19.6
11 17	5 37.60	+23 6.0	2.204	3.100	9.2	20.6	11 17	5 40.39	+26 15.8	1.701	2.600	11.3	19.3
11 27	5 30.26	+23 15.9	2.147	3.100	5.7	20.4	11 27	5 32.26	+26 23.5	1.648	2.600	7.1	19.1
12 7	5 21.53	+23 23.8	2.119	3.100	1.9	20.1	12 7	5 22.28	+26 25.4	1.621	2.601	2.7	18.8
12 17	5 12.29	+23 29.3	2.120	3.100	2.0	20.1	12 17	5 11.64	+26 20.6	1.622	2.602	2.6	18.8
12 27	5 3.56	+23 32.8	2.151	3.100	5.7	20.4	12 27	5 1.72	+26 10.3	1.652	2.603	7.0	19.1
1 6	4 56.23	+23 35.5	2.211	3.100	9.2	20.6	1 6	4 53.72	+25 57.0	1.709	2.603	11.1	19.3
1 16	4 50.96	+23 38.9	2.295	3.100	12.2	20.8	1 16	4 48.44	+25 44.0	1.789	2.604	14.6	19.6
185390	2006 <i>WG</i> ₄₆		12 11.9 62°95'	2.1/12.2	18		361784	2008 <i>AN</i> ₉₇		12 11.9 331°85'	2.8/12.4	17	
11 7	5 46.03	+27 29.9	1.855	2.672	14.5	20.5	11 7	5 45.35	+29 56.0	1.742	2.562	15.1	21.4
11 17	5 40.45	+28 0.9	1.784	2.680	11.0	20.3	11 17	5 40.25	+30 12.8	1.662	2.558	11.7	21.2
11 27	5 32.23	+28 27.7	1.737	2.687	7.1	20.1	11 27	5 32.29	+30 22.3	1.605	2.554	7.7	20.9
12 7	5 22.23	+28 47.4	1.716	2.694	3.2	19.8	12 7	5 22.33	+30 21.8	1.573	2.550	3.8	20.7
12 17	5 11.62	+28 58.3	1.725	2.702	3.0	19.8	12 17	5 11.62	+30 9.9	1.570	2.546	3.5	20.6
12 27	5 1.74	+29 0.6	1.762	2.710	6.8	20.1	12 27	5 1.64	+29 48.0	1.594	2.543	7.4	20.9
1 6	4 53.75	+28 56.8	1.825	2.718	10.7	20.4	1 6	4 53.67	+29 19.9	1.644	2.540	11.4	21.1
1 16	4 48.41	+28 50.1	1.913	2.725	13.9	20.6	1 16	4 48.57	+28 50.0	1.718	2.537	15.0	21.3
426815	2013 <i>TW</i> ₁₄₁		12 11.9 168°79'	1.9/11.7	16		256421	2007 <i>BE</i> ₂₃		12 11.9 102°67'	0.6/12.1	18	
11 7	5 49.48	+19 0.8	1.731	2.548	15.4	22.0	11 7	5 44.56	+25 9.7	2.082	2.897	13.2	21.4
11 17	5 42.99	+18 43.4	1.657	2.553	11.7	21.7	11 17	5 38.98	+25 10.6	2.009	2.904	9.9	21.2
11 27	5 33.78	+18 26.7	1.605	2.557	7.4	21.5	11 27	5 31.16	+25 8.1	1.959	2.911	6.2	21.0
12 7	5 22.75	+18 11.2	1.580	2.560	3.0	21.2	12 7	5 21.87	+25 1.3	1.937	2.918	2.2	20.7
12 17	5 11.11	+17 57.9	1.585	2.562	3.2	21.3	12 17	5 12.12	+24 50.0	1.945	2.925	2.1	20.7
12 27	5 0.26	+17 48.3	1.619	2.564	7.6	21.5	12 27	5 3.02	+24 35.6	1.982	2.931	6.1	21.0
1 6	4 51.38	+17 44.3	1.679	2.565	11.8	21.8	1 6	4 55.56	+24 20.4	2.047	2.938	9.7	21.2
1 16	4 45.26	+17 46.9	1.763	2.565	15.4	22.0	1 16	4 50.39	+24 6.7	2.136	2.944	12.8	21.4
115411	2003 <i>SB</i> ₂₉₇		12 11.9 22°79'	4.0/13.1	17		331274	2011 <i>CG</i> ₈₈		12 11.9 3°06'	5.2/11.4	17	
11 7	5 45.02	+35 20.7	1.941	2.746	14.4	18.8	11 7	5 39.95	+10 25.8	1.704	2.530	15.2	20.3
11 17	5 39.65	+35 21.8	1.868	2.751	11.3	18.7	11 17	5 35.83	+9 56.6	1.634	2.529	11.9	20.1
11 27	5 31.69	+35 10.8	1.818	2.756	7.9	18.5	11 27	5 29.36	+9 36.0	1.587	2.529	8.4	19.9
12 7	5 22.03	+34 45.3	1.794	2.762	4.8	18.3	12 7	5 21.31	+9 27.1	1.565	2.530	5.6	19.7
12 17	5 11.90	+34 4.9	1.798	2.768	4.3	18.3	12 17	5 12.71	+9 31.5	1.569	2.532	5.8	19.8
12 27	5 2.63	+33 12.5	1.831	2.774	7.1	18.5	12 27	5 4.74	+9 50.0	1.601	2.534	8.8	19.9
1 6	4 55.33	+32 13.3	1.890	2.781	10.4	18.7	1 6	4 58.43	+10 21.4	1.657	2.538	12.2	20.2
1 16	4 50.70	+31 12.7	1.974	2.788	13.5	18.9	1 16	4 54.49	+11 3.5	1.736	2.542	15.4	20.4
152865	1999 <i>XW</i> ₁₄₄		12 11.9 15°46'	0.8/11.9	17		517775	2015 <i>OD</i> ₈₉		12 11.9 2°53'	2.9/12.3	18	

EPHEMERIDES

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
267943	2004 EG ₃₅		12 11.9 210°92	4°9/11.3 18			484166	2006 UJ ₁₄₀		12 12.0 8°14	0°6/11.8 17		
11 7	5 46.26	+10 55.7	1.888	2.697	14.6	20.8	11 7	5 43.44	+24 23.7	1.589	2.422	15.7	21.1
11 17	5 40.43	+10 23.9	1.805	2.691	11.4	20.5	11 17	5 38.71	+23 41.9	1.518	2.423	11.9	20.8
11 27	5 32.20	+9 58.8	1.746	2.685	8.0	20.3	11 27	5 31.24	+22 54.1	1.468	2.424	7.4	20.6
12 7	5 22.29	+9 43.1	1.713	2.678	5.3	20.1	12 7	5 21.98	+22 1.6	1.445	2.426	2.5	20.3
12 17	5 11.73	+9 38.9	1.708	2.670	5.5	20.1	12 17	5 12.18	+21 7.1	1.449	2.429	2.7	20.3
12 27	5 1.72	+9 47.3	1.733	2.662	8.6	20.3	12 27	5 3.24	+20 14.7	1.481	2.432	7.5	20.6
1 6	4 53.35	+10 8.1	1.783	2.653	12.1	20.5	1 6	4 56.34	+19 28.8	1.539	2.436	11.9	20.9
1 16	4 47.36	+10 39.8	1.857	2.644	15.3	20.7	1 16	4 52.21	+18 52.3	1.619	2.441	15.6	21.1
355353	2007 TS ₁₈₄		12 11.9 71°02	3°4/12.2 18			402364	2005 WB ₂₈		12 12.0 80°30	0°7/12.1 17		
11 7	5 48.37	+29 33.1	1.726	2.542	15.4	20.9	11 7	5 44.21	+24 56.4	2.058	2.875	13.3	21.7
11 17	5 42.53	+30 23.7	1.656	2.549	11.9	20.6	11 17	5 38.80	+25 2.9	1.984	2.880	10.0	21.5
11 27	5 33.72	+31 8.9	1.610	2.556	7.9	20.4	11 27	5 31.12	+25 6.4	1.933	2.885	6.3	21.3
12 7	5 22.83	+31 44.2	1.589	2.563	4.2	20.2	12 7	5 21.93	+25 5.9	1.910	2.891	2.3	21.1
12 17	5 11.19	+32 6.6	1.597	2.570	4.1	20.2	12 17	5 12.23	+25 0.8	1.916	2.896	2.2	21.1
12 27	5 0.34	+32 15.6	1.633	2.578	7.6	20.5	12 27	5 3.18	+24 52.4	1.951	2.901	6.1	21.3
1 6	4 51.62	+32 14.2	1.695	2.585	11.5	20.7	1 6	4 55.75	+24 42.6	2.014	2.906	9.8	21.6
1 16	4 45.88	+32 6.6	1.781	2.592	14.9	21.0	1 16	4 50.62	+24 33.6	2.102	2.912	13.0	21.8
390324	2013 BL ₁₄		12 11.9 109°09	1°5/11.8 18			452544	2004 UX ₄		12 12.0 34°62	0°5/12.2 17		
11 7	5 46.55	+19 4.5	1.797	2.617	14.8	20.7	11 7	5 55.89	+33 10.8	0.968	1.808	22.9	19.5
11 17	5 40.68	+19 3.9	1.729	2.627	11.1	20.5	11 17	5 49.44	+31 8.8	0.904	1.812	17.6	19.2
11 27	5 32.30	+19 5.0	1.685	2.638	7.0	20.3	11 27	5 38.36	+28 36.6	0.860	1.816	11.2	18.9
12 7	5 22.29	+19 7.6	1.668	2.649	2.7	20.0	12 7	5 24.39	+25 37.8	0.839	1.821	4.0	18.5
12 17	5 11.77	+19 11.7	1.680	2.659	2.8	20.0	12 17	5 9.98	+22 25.3	0.845	1.826	3.6	18.5
12 27	5 2.02	+19 18.0	1.721	2.669	7.0	20.3	12 27	4 57.65	+19 19.0	0.877	1.831	10.8	18.9
1 6	4 54.11	+19 27.3	1.789	2.678	11.0	20.6	1 6	4 49.10	+16 36.7	0.933	1.837	17.0	19.3
1 16	4 48.75	+19 40.4	1.880	2.688	14.3	20.8	1 16	4 45.03	+14 28.1	1.008	1.843	22.0	19.6
209729	2005 EF ₁₆₂		12 11.9 207°33	4°5/12.9 18			282042	1998 SP ₂		12 12.0 43°57	7°5/11.9 18		
11 7	5 49.66	+37 31.3	2.473	3.251	12.4	20.8	11 7	5 48.30	+6 56.7	1.248	2.073	19.7	19.5
11 17	5 42.91	+37 57.3	2.381	3.244	10.0	20.6	11 17	5 42.03	+6 18.2	1.225	2.115	15.4	19.3
11 27	5 33.70	+38 12.8	2.314	3.237	7.3	20.4	11 27	5 32.99	+5 56.4	1.221	2.157	11.1	19.2
12 7	5 22.79	+38 14.3	2.274	3.230	5.0	20.3	12 7	5 22.45	+5 54.7	1.242	2.200	7.9	19.1
12 17	5 11.25	+37 59.9	2.264	3.222	4.8	20.2	12 17	5 11.89	+6 13.5	1.287	2.243	7.9	19.3
12 27	5 0.29	+37 30.4	2.284	3.213	6.8	20.3	12 27	5 2.74	+6 51.0	1.359	2.286	10.7	19.5
1 6	4 51.00	+36 49.5	2.332	3.204	9.5	20.5	1 6	4 56.04	+7 42.9	1.454	2.329	14.0	19.8
1 16	4 44.16	+36 2.2	2.405	3.194	12.2	20.7	1 16	4 52.29	+8 44.6	1.570	2.372	17.0	20.2
312436	2008 HY ₂₀		12 11.9 285°34	2°8/12.1 18			274302	Abaházi		12 12.0 122°81	2°6/12.8 17		
11 7	5 47.24	+28 44.4	2.063	2.871	13.5	21.1	11 7	5 45.01	+32 38.8	2.446	3.243	12.0	20.6
11 17	5 41.67	+29 28.1	1.953	2.842	10.5	20.9	11 17	5 39.13	+32 37.9	2.369	3.250	9.3	20.4
11 27	5 33.32	+30 9.3	1.867	2.813	7.0	20.6	11 27	5 31.18	+32 28.6	2.317	3.257	6.2	20.3
12 7	5 22.80	+30 44.0	1.808	2.783	3.6	20.4	12 7	5 21.92	+32 9.3	2.292	3.264	3.4	20.1
12 17	5 11.14	+31 9.1	1.779	2.753	3.5	20.3	12 17	5 12.27	+31 40.0	2.297	3.270	3.1	20.1
12 27	4 59.72	+31 23.3	1.779	2.723	7.2	20.5	12 27	5 3.28	+31 2.6	2.333	3.277	5.7	20.3
1 6	4 49.86	+31 28.0	1.807	2.693	11.1	20.6	1 6	4 55.83	+30 20.3	2.397	3.283	8.7	20.5
1 16	4 42.59	+31 26.5	1.858	2.662	14.7	20.8	1 16	4 50.50	+29 36.9	2.487	3.289	11.4	20.7
101066	1998 RP ₁₃		12 12.0 117°56	0°2/12.0 18			67070	Rinaldi		12 12.0 21°79	2°3/12.4 17		
11 7	5 46.81	+23 55.9	1.981	2.796	13.8	20.4	11 7	5 43.37	+29 5.5	1.735	2.559	15.0	19.4
11 17	5 40.70	+23 54.4	1.913	2.808	10.4	20.2	11 17	5 38.59	+29 13.9	1.668	2.566	11.4	19.2
11 27	5 32.24	+23 50.2	1.869	2.821	6.5	20.0	11 27	5 31.15	+29 15.4	1.623	2.574	7.4	18.9
12 7	5 22.27	+23 42.4	1.852	2.833	2.2	19.8	12 7	5 21.96	+29 7.9	1.604	2.582	3.4	18.7
12 17	5 11.86	+23 31.2	1.864	2.844	2.2	19.8	12 17	5 12.23	+28 51.1	1.613	2.591	3.1	18.7
12 27	5 2.20	+23 17.9	1.907	2.856	6.3	20.1	12 27	5 3.33	+28 26.9	1.650	2.601	7.0	19.0
1 6	4 54.31	+23 4.8	1.977	2.867	10.1	20.3	1 6	4 56.40	+27 58.7	1.714	2.611	10.9	19.2
1 16	4 48.84	+22 54.1	2.071	2.877	13.3	20.5	1 16	4 52.17	+27 30.6	1.800	2.622	14.3	19.5
284158	2005 YS ₄₂		12 12.0 216°55	0°7/11.9 18			197746	2004 PN ₃₀		12 12.0 45°36	4°8/11.4 18		
11 7	5 46.71	+21 41.1	1.963	2.778	13.9	21.6	11 7	5 44.74	+13 37.0	1.382	2.217	17.6	19.9
11 17	5 40.84	+21 32.9	1.876	2.772	10.5	21.3	11 17	5 39.79	+13 0.2	1.325	2.227	13.5	19.6
11 27	5 32.48	+21 23.5	1.813	2.765	6.6	21.1	11 27	5 31.95	+12 30.2	1.288	2.238	9.1	19.4
12 7	5 22.41	+21 12.5	1.777	2.758	2.3	20.8	12 7	5 22.24	+12 10.1	1.277	2.249	5.3	19.2
12 17	5 11.67	+21 0.2	1.770	2.750	2.4	20.8	12 17	5 11.99	+12 2.2	1.291	2.261	5.6	19.3
12 27	5 1.50	+20 48.2	1.793	2.741	6.8	21.1	12 27	5 2.70	+12 7.7	1.331	2.272	9.4	19.5
1 6	4 53.00	+20 38.2	1.844	2.733	10.8	21.3	1 6	4 55.61	+12 26.0	1.396	2.285	13.5	19.8
1 16	4 46.97	+20 32.4	1.919	2.723	14.2	21.5	1 16	4 51.45	+12 55.6	1.482	2.297	17.2	20.1
213141	2000 GF ₁₅₆		12 12.0 196°39	1°6/11.7 18			176198	2001 PK ₂		12 12.0 42°68	4°3/13.1 18		
11 7	5 44.26	+19 44.4	2.087	2.903	13.1	20.5	11 7	5 47.63	+34 31.9	1.572	2.388	16.7	19.1
11 17	5 38.75	+19 20.8	2.005	2.901	9.9	20.3	11 17	5 42.03	+34 39.3	1.514	2.403	13.0	18.9
11 27	5 31.05	+18 56.7	1.948	2.900	6.3	20.0	11 27	5 33.33	+34 33.5	1.477	2.419	8.9	18.7
12 7	5 21.89	+18 33.0	1.918	2.898	2.5	19.8	12 7	5 22.69	+34 11.4	1.466	2.436	5.3	18.5
12 17	5 12.23	+18 10.9	1.918	2.896	2.8	19.8	12 17	5 11.59	+33 32.8	1.481	2.452	4.7	18.5
12 27	5 3.15	+17 52.3	1.948	2.893	6.5	20.1	12 27	5 1.67	+32 41.1	1.524	2.470	7.9	18.7
1 6	4 55.60	+17 38.8	2.005	2.891	10.2	20.3	1 6	4 54.19	+31 42.9	1.592	2.487	11.7	19.0
1 16	4 50.25	+17 31.7	2.087	2.888	13.3	20.5	1 16	4 49.85	+30 44.4	1.684	2.506	15.1	19.3
26404	1999 XF ₁		12 12.0 336°88	3°2/11.9 18			351125	2003 WR ₈₂		12 12.0 24°39	9°2/13.1 18		
11 7	5 45.60	+15 6.5	1.343	2.180	17.9	17.7	11 7</						