

EPHEMERIDES

12 16.9

12 17.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
150062	2006 <i>RN</i> ₁₇		12 16.9 110°11	4°3/17.8	18		171260	2006 <i>BN</i> ₁₃₂		12 17.0 111°48	1°9/16.9	18	
11 7	6 13.64	+35 55.7	2.030	2.780	15.7	19.9	11 17	6 11.06	+19 3.5	1.486	2.345	15.1	20.6
11 17	6 8.71	+36 11.1	1.949	2.789	12.8	19.7	11 27	6 2.46	+18 52.3	1.440	2.367	10.5	20.4
11 27	6 0.76	+36 17.3	1.889	2.798	9.6	19.5	12 7	5 51.42	+18 43.5	1.419	2.387	5.6	20.2
12 7	5 50.53	+36 10.5	1.854	2.807	6.3	19.4	12 17	5 39.19	+18 37.1	1.425	2.408	1.9	20.0
12 17	5 39.12	+35 47.9	1.847	2.816	4.3	19.3	12 27	5 27.33	+18 33.7	1.461	2.427	5.6	20.3
12 27	5 27.95	+35 10.0	1.869	2.824	5.8	19.4	1 6	5 17.25	+18 34.0	1.524	2.445	10.2	20.6
1 6	5 18.34	+34 20.4	1.919	2.833	9.0	19.6	1 16	5 9.93	+18 39.1	1.611	2.463	14.2	20.9
1 16	5 11.22	+33 24.4	1.996	2.841	12.1	19.8	1 26	5 5.87	+18 49.4	1.719	2.480	17.4	21.2
420551	2012 <i>GM</i> ₂₂		12 16.9 158°84	7°6/15.7	18		183989	2004 <i>EF</i> ₅₃		12 17.0 104°28	1°5/17.1	18	
11 7	6 3.86	- 5 18.3	3.188	3.869	11.8	22.2	11 17	6 10.57	+26 18.3	1.664	2.521	13.9	19.7
11 17	5 59.49	- 6 23.4	3.111	3.876	10.3	22.1	11 27	6 2.11	+26 41.8	1.617	2.543	9.7	19.5
11 27	5 53.62	- 7 17.5	3.056	3.882	9.0	22.0	12 7	5 51.25	+27 0.7	1.596	2.564	5.1	19.3
12 7	5 46.66	- 7 57.1	3.025	3.888	7.9	21.9	12 17	5 39.19	+27 12.4	1.602	2.585	1.5	19.1
12 17	5 39.13	- 8 19.4	3.022	3.894	7.6	21.9	12 27	5 27.43	+27 16.0	1.638	2.605	5.0	19.4
12 27	5 31.64	- 8 23.3	3.046	3.899	8.1	21.9	1 6	5 17.33	+27 13.0	1.702	2.624	9.2	19.7
1 6	5 24.80	- 8 9.2	3.096	3.903	9.3	22.0	1 16	5 9.88	+27 6.3	1.792	2.643	13.0	19.9
1 16	5 19.12	- 7 39.1	3.170	3.907	10.6	22.1	1 26	5 5.60	+26 59.2	1.902	2.661	16.0	20.2
426143	2012 <i>HC</i> ₃₂		12 16.9 60°58	2°2/17.1	18		265798	2005 <i>WJ</i> ₁₉₆		12 17.0 277°41	2°5/17.2	18	
11 7	6 6.86	+14 47.3	2.211	2.972	14.2	20.4	11 17	6 4.32	+30 47.6	2.300	3.148	10.8	21.0
11 17	6 2.71	+15 5.2	2.130	2.982	11.4	20.2	11 27	5 57.71	+31 1.4	2.210	3.128	7.9	20.8
11 27	5 56.30	+15 29.7	2.071	2.993	8.1	20.0	12 7	5 49.07	+31 8.7	2.145	3.108	4.6	20.5
12 7	5 48.19	+16 0.4	2.038	3.003	4.6	19.8	12 17	5 39.20	+31 7.4	2.109	3.087	2.5	20.3
12 17	5 39.14	+16 36.4	2.034	3.014	2.2	19.7	12 27	5 29.16	+30 56.5	2.104	3.066	4.5	20.4
12 27	5 30.13	+17 16.4	2.061	3.024	4.5	19.9	1 6	5 20.06	+30 37.5	2.127	3.045	7.9	20.6
1 6	5 22.13	+17 58.8	2.116	3.035	7.9	20.1	1 16	5 12.82	+30 13.0	2.178	3.024	11.2	20.8
1 16	5 15.88	+18 42.7	2.198	3.046	11.1	20.3	1 26	5 8.11	+29 46.5	2.250	3.003	14.0	20.9
134162	2005 <i>BN</i> ₅		12 16.9 288°90	2°8/16.9	18		361989	2008 <i>QQ</i> ₁₅		12 17.0 128°77	6°6/16.5	18	
11 7	6 4.66	+15 2.0	2.316	3.079	13.6	20.0	11 17	6 0.44	- 3 0.0	3.106	3.887	10.0	22.7
11 17	6 1.00	+14 50.1	2.218	3.071	11.0	19.9	11 27	5 54.24	- 3 38.7	3.059	3.906	8.4	22.6
11 27	5 55.16	+14 42.6	2.141	3.062	7.9	19.6	12 7	5 46.98	- 4 4.2	3.037	3.924	7.1	22.5
12 7	5 47.64	+14 40.4	2.091	3.054	4.7	19.4	12 17	5 39.20	- 4 14.5	3.043	3.942	6.6	22.5
12 17	5 39.14	+14 44.1	2.070	3.046	2.8	19.3	12 27	5 31.54	- 4 8.8	3.078	3.959	7.2	22.6
12 27	5 30.58	+14 54.0	2.078	3.038	4.8	19.4	1 6	5 24.57	- 3 47.9	3.141	3.975	8.4	22.7
1 6	5 22.89	+15 10.0	2.114	3.030	8.1	19.6	1 16	5 18.78	- 3 13.9	3.229	3.991	9.9	22.8
1 16	5 16.83	+15 31.5	2.177	3.022	11.3	19.8	1 26	5 14.54	- 2 29.4	3.339	4.006	11.4	22.9
388980	2008 <i>UV</i> ₅₂		12 17.0 149°08	1°8/17.0	18		146656	2001 <i>US</i> ₁₀₅		12 17.0 101°00	0°4/16.9	18	
11 17	6 7.85	+27 0.5	1.827	2.683	12.8	21.0	11 17	6 4.42	+22 5.4	1.952	2.811	12.0	20.6
11 27	6 0.29	+27 31.2	1.764	2.689	9.1	20.8	11 27	5 57.66	+22 7.0	1.892	2.819	8.4	20.4
12 7	5 50.39	+27 57.9	1.726	2.694	4.9	20.6	12 7	5 48.96	+22 8.4	1.857	2.827	4.3	20.2
12 17	5 39.16	+28 17.6	1.717	2.698	1.8	20.4	12 17	5 39.20	+22 8.8	1.850	2.834	0.4	19.9
12 27	5 27.94	+28 28.8	1.737	2.703	4.9	20.6	12 27	5 29.55	+22 8.1	1.874	2.842	4.3	20.2
1 6	5 18.08	+28 32.3	1.785	2.707	9.0	20.8	1 6	5 21.08	+22 7.2	1.926	2.849	8.3	20.5
1 16	5 10.59	+28 30.5	1.859	2.710	12.6	21.1	1 16	5 14.65	+22 7.4	2.003	2.856	11.8	20.7
1 26	5 6.10	+28 26.6	1.955	2.714	15.7	21.3	1 26	5 10.79	+22 9.7	2.103	2.863	14.6	20.9
263933	2009 <i>HM</i> ₄₅		12 17.0 172°54	1°0/17.0	18		150461	2000 <i>HY</i> ₈₉		12 17.0 174°96	0°6/16.9	18	
11 17	6 10.48	+25 2.2	1.714	2.570	13.6	21.3	11 17	6 7.25	+21 52.9	1.941	2.795	12.3	21.2
11 27	6 2.23	+25 25.0	1.648	2.573	9.6	21.1	11 27	5 59.68	+21 49.2	1.873	2.798	8.6	21.0
12 7	5 51.43	+25 45.2	1.608	2.577	5.0	20.8	12 7	5 50.02	+21 45.0	1.831	2.800	4.5	20.7
12 17	5 39.17	+25 59.9	1.596	2.579	1.0	20.5	12 17	5 39.21	+21 39.6	1.818	2.802	0.6	20.4
12 27	5 26.92	+26 7.8	1.613	2.580	5.0	20.8	12 27	5 28.44	+21 33.2	1.835	2.803	4.5	20.7
1 6	5 16.12	+26 9.9	1.659	2.581	9.5	21.1	1 6	5 18.89	+21 26.9	1.882	2.803	8.6	21.0
1 16	5 7.89	+26 8.6	1.731	2.581	13.4	21.3	1 16	5 11.48	+21 22.3	1.954	2.803	12.2	21.2
1 26	5 2.87	+26 6.9	1.824	2.580	16.7	21.6	1 26	5 6.79	+21 20.9	2.049	2.802	15.2	21.4
448541	2010 <i>RL</i> ₁₀		12 17.0 39°09	1°0/16.9	18		242812	2006 <i>BN</i> ₁₄₉		12 17.0 317°08	2°6/16.9	17 R	
11 17	6 3.68	+21 21.7	1.709	2.574	13.1	21.2	11 17	6 1.69	+15 39.8	1.974	2.832	11.9	20.1
11 27	5 57.30	+21 7.8	1.651	2.581	9.1	21.0	11 27	5 55.84	+15 38.4	1.900	2.824	8.6	19.8
12 7	5 48.80	+20 54.1	1.618	2.588	4.8	20.7	12 7	5 48.09	+15 42.7	1.851	2.816	4.9	19.6
12 17	5 39.17	+20 40.5	1.612	2.596	1.0	20.5	12 17	5 39.21	+15 52.8	1.830	2.809	2.6	19.4
12 27	5 29.67	+20 28.0	1.635	2.603	4.8	20.8	12 27	5 30.26	+16 8.7	1.838	2.801	5.0	19.6
1 6	5 21.52	+20 17.8	1.686	2.611	9.1	21.0	1 6	5 22.28	+16 30.0	1.875	2.794	8.7	19.8
1 16	5 15.60	+20 11.4	1.761	2.620	12.8	21.3	1 16	5 16.15	+16 56.2	1.936	2.787	12.2	20.0
1 26	5 12.47	+20 9.7	1.858	2.628	15.9	21.5	1 26	5 12.47	+17 26.6	2.020	2.781	15.2	20.2
182723	2001 <i>WL</i> ₅₈		12 17.0 97°26	0°4/16.9	18		188328	2003 <i>NV</i> ₈		12 17.0 51°89	2°2/17.7	17	
11 17	6 4.61	+22 51.8	1.963	2.822	12.0	20.8	11 17	6 8.69	+32 37.7	1.856	2.704	13.0	18.4
11 27	5 57.73	+22 42.3	1.905	2.832	8.3	20.6	11 27	6 0.41	+31 48.9	1.812	2.731	9.3	18.2
12 7	5 48.95	+22 31.3	1.873	2.843	4.3	20.4	12 7	5 50.19	+30 48.6	1.794	2.758	5.2	18.0
12 17	5 39.18	+22 18.7	1.869	2.853	0.4	20.1	12 17	5 39.22	+29 37.6	1.805	2.785	2.2	17.9
12 27	5 29.56	+22 5.0	1.895	2.863	4.3	20.5	12 27	5 28.82	+28 19.5	1.846	2.812	4.6	18.1
1 6	5 21.17	+21 51.7	1.950	2.873	8.2	20.7	1 6	5 20.13	+26 59.7	1.917	2.839	8.3	18.4
1 16	5 14.82	+21 40.5	2.031	2.883	11.7	20.9	1 16	5 13.88	+25 43.4	2.014	2.867	11.7	18.6
1 26	5 11.04	+21 32.8	2.134	2.893	14.5	21.2	1 26	5 10.43	+24 34.8	2.134	2.894	14.5	18.9
489716	2007 <i>VX</i> ₂₄₂		12 17.0 60°73	0°5/16.9	17		102617	1999 <i>VC</i> ₂₃		12 17.0 28°09	2°8/16.7	18	

EPHEMERIDES

12 17.0

12 17.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
248750	Asteroidday 12 17.0 51°22' 5.6"/17.6 18						32171	2000 ND ₁₀ 12 17.0 261°18' 13.2"/17.8 18					
11 17	6 8.65	+36 44.0	1.613	2.461	14.6	19.7	11 17	6 23.12	+56 49.2	1.814	2.568	17.0	18.9
11 27	6 1.15	+37 20.4	1.564	2.476	11.0	19.5	11 27	6 12.92	+58 9.0	1.740	2.552	15.3	18.8
12 7	5 50.91	+37 42.3	1.539	2.490	7.5	19.4	12 7	5 57.74	+59 1.0	1.686	2.536	13.9	18.6
12 17	5 39.24	+37 45.1	1.540	2.505	5.6	19.3	12 17	5 39.31	+59 13.8	1.655	2.519	13.2	18.6
12 27	5 27.83	+37 28.1	1.569	2.521	7.1	19.4	12 27	5 20.60	+58 41.6	1.646	2.502	13.7	18.6
1 6	5 18.26	+36 54.7	1.624	2.536	10.4	19.6	1 6	5 4.71	+57 28.2	1.660	2.484	15.2	18.6
1 16	5 11.61	+36 11.1	1.703	2.552	13.7	19.9	1 16	4 53.70	+55 44.5	1.695	2.466	17.2	18.7
1 26	5 8.43	+35 23.7	1.802	2.568	16.5	20.1	1 26	4 48.35	+53 44.3	1.749	2.448	19.3	18.8
331046	2009 VE ₇₇ 12 17.0 20°71' 3°8"/17.0 18						328598	2009 SZ ₇₈ 12 17.0 59°92' 3°2"/16.6 18					
11 17	6 1.43	+12 35.4	1.835	2.692	12.8	19.8	11 17	6 2.35	+15 44.4	1.984	2.841	11.9	21.1
11 27	5 55.64	+12 33.6	1.775	2.696	9.3	19.6	11 27	5 56.13	+15 6.7	1.926	2.849	8.6	20.9
12 7	5 47.96	+12 40.5	1.741	2.701	5.8	19.4	12 7	5 48.16	+14 33.1	1.893	2.857	5.1	20.7
12 17	5 39.24	+12 56.9	1.733	2.707	3.8	19.3	12 17	5 39.30	+14 5.5	1.889	2.865	3.2	20.6
12 27	5 30.56	+13 22.4	1.754	2.713	5.7	19.4	12 27	5 30.56	+13 45.4	1.914	2.873	5.3	20.7
1 6	5 22.99	+13 55.8	1.802	2.719	9.2	19.7	1 6	5 22.93	+13 34.0	1.967	2.881	8.7	21.0
1 16	5 17.36	+14 35.5	1.876	2.726	12.6	19.9	1 16	5 17.16	+13 31.4	2.046	2.890	11.9	21.2
1 26	5 14.22	+15 19.8	1.971	2.733	15.4	20.1	1 26	5 13.75	+13 37.0	2.146	2.898	14.6	21.4
256928	2008 EW ₂₁ 12 17.0 264°51' 1°0"/16.9 18						477785	2011 BZ ₅₆ 12 17.0 216°55' 4°5"/16.6 18					
11 17	6 3.53	+20 59.2	1.962	2.822	11.9	20.7	11 17	6 6.16	+13 21.8	1.590	2.447	14.4	21.6
11 27	5 57.12	+20 47.3	1.891	2.818	8.4	20.5	11 27	5 59.25	+12 48.5	1.523	2.444	10.5	21.3
12 7	5 48.74	+20 35.6	1.846	2.815	4.4	20.3	12 7	5 49.96	+12 22.7	1.479	2.440	6.6	21.1
12 17	5 39.25	+20 24.2	1.829	2.812	1.0	20.0	12 17	5 39.30	+12 6.7	1.463	2.435	4.5	21.0
12 27	5 29.77	+20 13.6	1.842	2.809	4.5	20.3	12 27	5 28.63	+12 2.1	1.474	2.431	6.9	21.1
1 6	5 21.40	+20 4.9	1.883	2.806	8.5	20.5	1 6	5 19.27	+12 9.3	1.512	2.426	10.9	21.3
1 16	5 15.00	+19 59.6	1.950	2.803	12.0	20.7	1 16	5 12.27	+12 27.7	1.575	2.421	14.8	21.5
1 26	5 11.15	+19 58.4	2.039	2.800	15.0	20.9	1 26	5 8.28	+12 55.6	1.657	2.415	18.1	21.7
413761	2006 DL ₁₅₆ 12 17.0 223°65' 1°1"/16.9 18						133640	2003 UZ ₁₄₆ 12 17.0 50°83' 1°9"/17.0 18					
11 17	6 1.97	+19 44.3	2.382	3.236	10.3	21.7	11 17	6 5.31	+18 8.5	1.490	2.358	14.5	19.0
11 27	5 55.79	+19 42.4	2.307	3.232	7.2	21.5	11 27	5 58.63	+18 17.1	1.441	2.371	10.2	18.8
12 7	5 47.98	+19 41.9	2.259	3.228	3.8	21.3	12 7	5 49.59	+18 30.4	1.416	2.385	5.5	18.6
12 17	5 39.25	+19 42.6	2.241	3.224	1.1	21.1	12 17	5 39.30	+18 47.6	1.417	2.399	1.9	18.4
12 27	5 30.50	+19 44.6	2.253	3.219	3.9	21.3	12 27	5 29.19	+19 7.7	1.446	2.414	5.4	18.7
1 6	5 22.62	+19 48.3	2.294	3.215	7.3	21.5	1 6	5 20.62	+19 30.2	1.502	2.428	9.9	19.0
1 16	5 16.33	+19 54.2	2.363	3.210	10.4	21.7	1 16	5 14.56	+19 55.0	1.582	2.443	13.9	19.2
1 26	5 12.18	+20 2.9	2.454	3.205	13.0	21.8	1 26	5 11.57	+20 22.0	1.683	2.459	17.1	19.5
156654	2002 JE ₅₉ 12 17.0 191°22' 0°5"/16.9 18						185856	2000 ER ₁₂₉ 12 17.0 12°22' 9°9"/17.7 18					
11 17	6 2.08	+21 44.3	2.940	3.787	8.8	21.5	11 17	6 11.00	+45 17.8	1.533	2.359	16.4	19.3
11 27	5 55.61	+21 35.1	2.863	3.785	6.1	21.4	11 27	6 3.57	+46 30.9	1.478	2.361	13.5	19.1
12 7	5 47.80	+21 25.4	2.814	3.783	3.2	21.2	12 7	5 52.51	+47 22.1	1.444	2.363	11.0	19.0
12 17	5 39.27	+21 14.9	2.796	3.780	0.5	20.9	12 17	5 39.30	+47 43.2	1.435	2.366	9.9	18.9
12 27	5 30.75	+21 4.2	2.810	3.776	3.2	21.1	12 27	5 26.12	+47 30.7	1.450	2.370	10.8	19.0
1 6	5 22.97	+20 54.1	2.855	3.773	6.2	21.3	1 6	5 15.10	+46 48.6	1.489	2.374	13.1	19.1
1 16	5 16.53	+20 45.4	2.928	3.768	8.8	21.5	1 16	5 7.71	+45 45.6	1.550	2.378	15.9	19.3
1 26	5 11.89	+20 39.1	3.025	3.763	11.1	21.7	1 26	5 4.67	+44 31.8	1.630	2.384	18.5	19.5
520401	2014 JY ₇₀ 12 17.0 188°05' 1°3"/16.8 18						104004	2000 DU ₁₀₀ 12 17.0 146°63' 6°0"/17.7 18					
11 17	6 5.55	+21 11.5	1.945	2.802	12.1	21.5	11 17	6 10.86	+41 25.1	2.265	3.081	12.1	19.9
11 27	5 58.48	+20 38.6	1.875	2.801	8.5	21.3	11 27	6 2.34	+42 6.5	2.204	3.090	9.5	19.8
12 7	5 49.42	+20 4.6	1.832	2.801	4.5	21.0	12 7	5 51.47	+42 33.3	2.168	3.099	7.2	19.7
12 17	5 39.28	+19 30.5	1.817	2.800	1.3	20.8	12 17	5 39.31	+42 41.1	2.161	3.107	6.0	19.6
12 27	5 29.22	+18 57.9	1.833	2.799	4.7	21.1	12 27	5 27.25	+42 28.7	2.182	3.114	6.9	19.7
1 6	5 20.36	+18 29.1	1.877	2.797	8.7	21.3	1 6	5 16.62	+41 58.5	2.232	3.121	9.1	19.8
1 16	5 13.55	+18 6.1	1.947	2.795	12.3	21.5	1 16	5 8.42	+41 15.5	2.307	3.127	11.6	20.0
1 26	5 9.36	+17 50.0	2.039	2.793	15.2	21.7	1 26	5 3.26	+40 25.8	2.405	3.133	13.9	20.2
308708	2006 GD ₉ 12 17.0 194°54' 1°4"/16.9 18						155645	2000 GM ₅₂ 12 17.0 318°10' 4°2"/16.6 18					
11 17	6 5.64	+19 22.1	1.963	2.819	12.1	21.4	11 17	6 3.73	+16 6.9	1.271	2.146	16.0	19.7
11 27	5 58.59	+19 21.0	1.892	2.817	8.5	21.2	11 27	5 58.13	+15 26.4	1.198	2.130	11.6	19.4
12 7	5 49.52	+19 22.0	1.847	2.815	4.6	21.0	12 7	5 49.63	+14 50.8	1.147	2.114	7.0	19.1
12 17	5 39.29	+19 24.5	1.830	2.813	1.4	20.7	12 17	5 39.31	+14 23.1	1.120	2.098	4.2	18.9
12 27	5 29.03	+19 28.7	1.844	2.810	4.6	21.0	12 27	5 28.78	+14 6.1	1.120	2.083	7.4	19.1
1 6	5 19.89	+19 34.9	1.886	2.807	8.6	21.2	1 6	5 19.72	+14 1.7	1.144	2.069	12.4	19.3
1 16	5 12.76	+19 43.7	1.954	2.803	12.2	21.4	1 16	5 13.43	+14 10.1	1.189	2.055	17.2	19.5
1 26	5 8.25	+19 55.8	2.045	2.799	15.2	21.6	1 26	5 10.74	+14 30.2	1.253	2.043	21.2	19.8
339665	2005 QO ₉₂ 12 17.0 143°78' 3°5"/16.7 18						123883	2001 DE ₄₀ 12 17.0 29°50' 2°3"/17.5 17					
11 17	5 58.81	+10 23.8	2.866	3.704	9.2	21.1	11 17	6 5.10	+31 3.0	1.893	2.748	12.5	19.6
11 27	5 53.32	+10 8.0	2.799	3.707	6.9	21.0	11 27	5 58.29	+30 49.3	1.829	2.752	9.0	19.4
12 7	5 46.63	+9 58.7	2.759	3.710	4.6	20.9	12 7	5 49.35	+30 26.3	1.791	2.756	5.1	19.2
12 17	5 39.29	+9 57.0	2.748	3.713	3.5	20.8	12 17	5 39.31	+29 53.3	1.781	2.761	2.3	19.0
12 27	5 31.97	+10 3.3	2.768	3.715	4.7	20.9	12 27	5 29.45	+29 11.2	1.800	2.766	4.7	19.2
1 6	5 25.33	+10 17.5	2.817	3.718	7.0	21.0	1 6	5 20.97	+28 23.5	1.847	2.771	8.5	19.4
1 16	5 19.93	+10 38.7	2.893	3.721	9.3	21.2	1 16	5 14.75	+27 34.4	1.920	2.776	12.0	19.7
1 26	5 16.17	+11 5.9	2.993	3.723	11.3	21.3	1 26	5 11.33	+26 47.9	2.015	2.782	15.0	19.9
488840	2005 QW ₁₀₉ 12 17.0 82°78' 0°1"/17.0 16						39316	2001 UH ₈₀ 12 17.0 79°84' 0°8"/16.9 18 R					
11 17	6 9.81	+23 47.9	1.467	2.331	14.9	22.6	11 17	6 8.38	+21 43.7	1.486	2.351	14.7	20.1
11 27	6 1.69	+23 48.4	1.425	2.354	10.4	22.4	11 27	6 0.70	+21 39.3	1.441	2.371	10.2	19.9
12 7	5 51.09	+23 46.4	1.407	2.377	5.3	22.2	12 7	5 50.					

EPHEMERIDES

12 17.0

12 17.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
264856	2002 <i>RF</i> ₈₁		12 17.0	68°83	8°6/17.0	18	242641	2005 <i>NN</i> ₂		12 17.0	4°88	2°9/16.9	18
11 17	6 3.68	+ 1 35.0	1.693	2.520	15.1	20.2	11 17	6 2.97	+15 57.6	1.646	2.510	13.6	20.1
11 27	5 57.12	+ 0 51.0	1.652	2.539	12.1	20.0	11 27	5 56.98	+15 52.2	1.583	2.510	9.7	19.8
12 7	5 48.69	+ 0 26.2	1.634	2.557	9.6	19.9	12 7	5 48.79	+15 52.9	1.544	2.510	5.6	19.6
12 17	5 39.33	+ 0 23.9	1.641	2.576	8.6	19.9	12 17	5 39.36	+16 0.2	1.532	2.511	2.9	19.4
12 27	5 30.20	+ 0 44.7	1.675	2.595	9.6	20.0	12 27	5 29.93	+16 14.1	1.548	2.512	5.6	19.6
1 6	5 22.38	+ 1 26.2	1.734	2.613	11.9	20.2	1 6	5 21.76	+16 34.3	1.591	2.514	9.7	19.8
1 16	5 16.64	+ 2 24.2	1.817	2.632	14.5	20.4	1 16	5 15.79	+17 0.0	1.658	2.516	13.6	20.1
1 26	5 13.48	+ 3 33.5	1.919	2.651	16.8	20.6	1 26	5 12.65	+17 30.4	1.746	2.518	16.8	20.3
447801	2007 <i>TV</i> ₈₀		12 17.0	76°66	3°0/17.2	15	98689	2000 <i>XV</i> ₉		12 17.0	354°63	7°3/16.5	18
11 17	6 9.62	+30 17.3	1.670	2.525	13.9	21.9	11 17	6 8.62	+35 41.8	1.352	2.212	16.2	18.2
11 27	6 1.51	+30 45.6	1.628	2.550	9.9	21.7	11 27	6 2.04	+37 21.1	1.292	2.208	12.4	17.9
12 7	5 51.01	+31 5.6	1.611	2.575	5.7	21.5	12 7	5 51.88	+38 49.6	1.255	2.205	8.9	17.7
12 17	5 39.34	+31 13.8	1.621	2.599	3.0	21.4	12 17	5 39.38	+39 57.3	1.242	2.203	7.3	17.6
12 27	5 28.00	+31 9.9	1.660	2.623	5.4	21.6	12 27	5 26.57	+40 38.0	1.256	2.202	9.2	17.7
1 6	5 18.39	+30 56.1	1.727	2.647	9.3	21.9	1 6	5 15.57	+40 52.1	1.293	2.201	12.8	17.9
1 16	5 11.45	+30 36.4	1.819	2.671	12.8	22.2	1 16	5 8.03	+40 45.1	1.353	2.202	16.6	18.2
1 26	5 7.69	+30 15.2	1.932	2.694	15.7	22.4	1 26	5 4.84	+40 25.1	1.431	2.203	19.8	18.4
154440	2003 <i>BO</i> ₇₉		12 17.0	271°67	1°5/17.0	18	512846	2016 <i>UP</i> ₁₄₅		12 17.0	139°76	1°3/16.9	18
11 17	6 7.94	+25 15.3	1.613	2.475	13.9	20.3	11 17	6 8.46	+20 22.5	1.776	2.632	13.2	22.3
11 27	6 0.93	+25 53.5	1.531	2.459	9.9	20.0	11 27	6 0.58	+20 11.3	1.718	2.644	9.2	22.1
12 7	5 51.07	+26 31.0	1.473	2.442	5.3	19.7	12 7	5 50.55	+20 0.8	1.686	2.655	4.9	21.9
12 17	5 39.34	+27 3.8	1.442	2.425	1.5	19.4	12 17	5 39.38	+19 50.8	1.682	2.665	1.3	21.6
12 27	5 27.25	+27 29.1	1.440	2.407	5.4	19.6	12 27	5 28.39	+19 42.0	1.708	2.675	4.9	21.9
1 6	5 16.40	+27 46.6	1.465	2.390	10.3	19.9	1 6	5 18.79	+19 35.5	1.763	2.684	9.1	22.2
1 16	5 8.13	+27 58.0	1.515	2.372	14.6	20.1	1 16	5 11.51	+19 32.7	1.843	2.692	12.8	22.4
1 26	5 3.30	+28 6.5	1.585	2.354	18.3	20.3	1 26	5 7.10	+19 34.5	1.945	2.700	15.9	22.7
134041	2004 <i>XC</i> ₁₂		12 17.0	277°81	1°3/17.1	18	520482	2014 <i>KB</i> ₁₁₁		12 17.0	160°70	1°8/17.2	18
11 17	6 3.49	+26 37.8	2.203	3.058	11.0	20.0	11 17	6 6.58	+28 15.5	2.073	2.924	11.7	22.0
11 27	5 57.12	+26 58.2	2.123	3.048	7.8	19.8	11 27	5 59.26	+28 28.2	2.006	2.928	8.3	21.8
12 7	5 48.81	+27 15.5	2.069	3.037	4.2	19.6	12 7	5 49.89	+28 35.6	1.965	2.932	4.6	21.6
12 17	5 39.33	+27 28.0	2.044	3.027	1.3	19.3	12 17	5 39.39	+28 35.6	1.954	2.935	1.8	21.4
12 27	5 29.74	+27 34.5	2.049	3.016	4.2	19.5	12 27	5 28.94	+28 28.0	1.972	2.938	4.4	21.6
1 6	5 21.10	+27 35.7	2.083	3.005	7.8	19.7	1 6	5 19.70	+28 14.1	2.020	2.941	8.1	21.8
1 16	5 14.30	+27 33.2	2.144	2.995	11.2	19.9	1 16	5 12.54	+27 56.7	2.094	2.943	11.5	22.1
1 26	5 9.98	+27 29.3	2.227	2.984	14.0	20.1	1 26	5 8.06	+27 38.9	2.190	2.945	14.3	22.3
482656	2013 <i>BD</i> ₅₇		12 17.0	88°69	3°2/17.1	18	351069	2003 <i>TY</i> ₂₆		12 17.0	341°83	7°2/15.6	18
11 17	6 5.77	+13 44.0	1.746	2.599	13.5	21.2	11 17	6 2.44	+10 40.1	1.394	2.258	15.5	19.7
11 27	5 58.68	+13 53.4	1.694	2.615	9.7	21.0	11 27	5 56.84	+ 9 9.9	1.350	2.250	11.9	19.5
12 7	5 49.55	+14 11.0	1.667	2.630	5.7	20.8	12 7	5 48.81	+ 7 48.4	1.290	2.243	8.5	19.3
12 17	5 39.34	+14 36.5	1.668	2.645	3.2	20.6	12 17	5 39.38	+ 6 42.1	1.275	2.236	7.2	19.2
12 27	5 29.29	+15 8.8	1.699	2.660	5.6	20.8	12 27	5 29.97	+ 5 56.3	1.287	2.230	9.4	19.3
1 6	5 20.54	+15 46.5	1.757	2.675	9.3	21.1	1 6	5 21.95	+ 5 33.5	1.322	2.225	13.0	19.5
1 16	5 13.97	+16 28.1	1.841	2.690	12.8	21.3	1 16	5 16.38	+ 5 32.8	1.379	2.221	16.7	19.7
1 26	5 10.12	+17 12.3	1.946	2.704	15.7	21.6	1 26	5 13.89	+ 5 51.0	1.454	2.218	19.9	19.9
194708	2001 <i>XL</i> ₂₃₈		12 17.0	7°87	1°3/17.1	18	273132	2006 <i>GL</i> ₃₂		12 17.0	293°52	6°1/16.4	18
11 17	6 4.30	+25 36.3	1.147	2.030	16.7	19.0	11 17	6 0.56	+ 6 7.3	2.147	2.982	12.0	20.6
11 27	5 58.69	+25 51.0	1.093	2.031	11.8	18.7	11 27	5 54.96	+ 5 31.2	2.071	2.970	9.4	20.4
12 7	5 49.92	+26 2.1	1.061	2.033	6.2	18.5	12 7	5 47.67	+ 5 6.3	2.019	2.957	7.1	20.2
12 17	5 39.34	+26 6.9	1.052	2.036	1.3	18.1	12 17	5 39.38	+ 4 55.3	1.995	2.945	6.1	20.1
12 27	5 28.85	+26 4.6	1.069	2.040	6.1	18.5	12 27	5 31.02	+ 4 59.8	1.999	2.932	7.3	20.2
1 6	5 20.27	+25 57.1	1.110	2.045	11.6	18.8	1 6	5 23.49	+ 5 19.6	2.030	2.920	9.8	20.3
1 16	5 14.91	+25 47.7	1.173	2.052	16.4	19.1	1 16	5 17.57	+ 5 53.1	2.086	2.908	12.6	20.5
1 26	5 13.43	+25 39.5	1.254	2.059	20.3	19.4	1 26	5 13.83	+ 6 37.4	2.163	2.896	15.1	20.6
105759	2000 <i>SF</i> ₁₀₁		12 17.0	313°49	3°4/16.3	18	151860	2003 <i>HD</i> ₂₄		12 17.0	168°08	0°1/17.1	18
11 17	6 3.01	+17 0.8	1.770	2.632	12.9	18.7	11 17	6 3.95	+23 18.4	2.100	2.957	11.4	20.7
11 27	5 56.92	+16 1.4	1.695	2.621	9.3	18.5	11 27	5 57.38	+23 27.5	2.032	2.958	7.9	20.5
12 7	5 48.73	+15 3.5	1.646	2.610	5.5	18.2	12 7	5 48.92	+23 35.7	1.989	2.959	4.1	20.2
12 17	5 39.34	+14 10.0	1.623	2.600	3.5	18.1	12 17	5 39.39	+23 41.7	1.976	2.960	0.1	19.9
12 27	5 29.94	+13 24.4	1.630	2.589	6.0	18.2	12 27	5 29.86	+23 45.1	1.992	2.960	4.1	20.2
1 6	5 21.69	+12 49.4	1.664	2.579	10.0	18.4	1 6	5 21.39	+23 46.8	2.037	2.961	7.9	20.5
1 16	5 15.52	+12 26.5	1.723	2.569	13.7	18.6	1 16	5 14.82	+23 47.7	2.109	2.961	11.3	20.7
1 26	5 12.04	+12 15.6	1.802	2.560	16.8	18.8	1 26	5 10.72	+23 49.6	2.203	2.961	14.1	20.9
515877	2015 <i>PA</i> ₆		12 17.0	83°78	2°4/17.4	18	45454	2000 <i>AC</i> ₁₉₃		12 17.0	320°93	10°4/16.8	18
11 17	6 8.09	+30 28.2	1.635	2.493	14.0	20.3	11 17	6 1.95	- 1 30.9	1.605	2.427	16.0	18.3
11 27	6 0.62	+30 21.0	1.575	2.499	10.0	20.1	11 27	5 56.33	- 2 17.5	1.539	2.417	13.4	18.1
12 7	5 50.65	+30 4.2	1.539	2.505	5.7	19.9	12 7	5 48.51	- 2 41.9	1.494	2.407	11.2	18.0
12 17	5 39.36	+29 36.1	1.531	2.511	2.4	19.7	12 17	5 39.39	- 2 39.0	1.473	2.397	10.4	17.9
12 27	5 28.27	+28 57.8	1.551	2.517	5.3	19.9	12 27	5 30.17	- 2 6.8	1.477	2.387	11.4	17.9
1 6	5 18.83	+28 13.1	1.598	2.523	9.5	20.2	1 6	5 22.07	- 1 7.4	1.505	2.379	13.7	18.1
1 16	5 12.05	+27 26.7	1.671	2.529	13.4	20.4	1 16	5 16.09	+ 0 14.1	1.555	2.370	16.5	18.2
1 26	5 8.49	+26 43.3	1.764	2.535	16.7	20.6	1 26	5 12.89	+ 1 51.0	1.624	2.362	19.1	18.4
418619	2008 <i>TW</i> ₅		12 17.0	77°06	6°2/17.8	18	229350	2005 <i>QV</i> ₅₂		12 17.0	103°32		

EPHEMERIDES

12 17.0

12 17.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
388518	2007 <i>GU</i> ₂₂		12 17.0 295°50	3°4/17.1	18		268401	2005 <i>UV</i> ₁₉₃		12 17.1 202°55	1°0/16.9	18	
11 17	6 8.17	+29 45.0	1.501	2.364	14.7	21.0	11 17	6 7.48	+20 51.0	1.852	2.708	12.7	21.8
11 27	6 1.20	+30 29.2	1.431	2.357	10.7	20.7	11 27	6 0.06	+20 47.4	1.779	2.704	8.9	21.5
12 7	5 51.24	+31 7.4	1.385	2.350	6.3	20.4	12 7	5 50.41	+20 44.3	1.731	2.700	4.7	21.3
12 17	5 39.40	+31 34.4	1.365	2.344	3.4	20.3	12 17	5 39.46	+20 41.1	1.712	2.695	1.0	21.0
12 27	5 27.39	+31 47.3	1.373	2.337	6.3	20.4	12 27	5 28.46	+20 38.1	1.723	2.690	4.7	21.2
1 6	5 16.92	+31 47.0	1.407	2.330	10.7	20.7	1 6	5 18.67	+20 36.0	1.762	2.684	9.0	21.5
1 16	5 9.33	+31 37.4	1.465	2.324	14.9	20.9	1 16	5 11.08	+20 36.2	1.828	2.677	12.9	21.7
1 26	5 5.43	+31 23.4	1.543	2.318	18.5	21.1	1 26	5 6.32	+20 39.9	1.914	2.670	16.0	21.9
118665	2000 <i>KE</i> ₃₄		12 17.0 255°60	4°3/16.6	18		330346	2006 <i>VZ</i> ₁₄		12 17.1 18°75	2°1/17.2	17	
11 17	6 5.41	+14 22.1	1.576	2.436	14.3	19.7	11 17	6 5.32	+28 18.3	1.700	2.562	13.3	21.4
11 27	5 58.79	+13 40.6	1.507	2.430	10.5	19.5	11 27	5 58.74	+28 33.1	1.637	2.564	9.5	21.1
12 7	5 49.78	+13 5.1	1.462	2.424	6.5	19.2	12 7	5 49.76	+28 42.2	1.599	2.566	5.2	20.9
12 17	5 39.40	+12 38.1	1.443	2.417	4.3	19.1	12 17	5 39.45	+28 43.1	1.588	2.569	2.1	20.7
12 27	5 28.99	+12 22.1	1.453	2.411	6.8	19.2	12 27	5 29.20	+28 35.3	1.605	2.572	5.0	20.9
1 6	5 19.89	+12 18.1	1.489	2.404	10.9	19.5	1 6	5 20.35	+28 20.6	1.650	2.575	9.2	21.2
1 16	5 13.14	+12 26.0	1.549	2.397	14.9	19.7	1 16	5 13.93	+28 2.1	1.719	2.579	13.0	21.4
1 26	5 9.41	+12 44.6	1.629	2.391	18.2	19.9	1 26	5 10.56	+27 43.4	1.810	2.582	16.2	21.6
103116	1999 <i>XD</i> ₁₈₁		12 17.0 92°34	6°1/17.3	18		70558	1999 <i>TM</i> ₁₄₁		12 17.1 26°11	0°4/17.1	18	
11 17	6 12.85	+38 15.6	1.830	2.663	13.9	19.1	11 17	6 5.82	+24 21.1	1.621	2.486	13.7	19.9
11 27	6 3.98	+39 18.6	1.786	2.685	10.6	19.0	11 27	5 59.10	+24 22.8	1.557	2.487	9.6	19.7
12 7	5 52.41	+40 6.8	1.766	2.708	7.6	18.8	12 7	5 49.96	+24 22.1	1.518	2.488	5.0	19.4
12 17	5 39.42	+40 34.6	1.774	2.730	6.1	18.8	12 17	5 39.46	+24 17.6	1.506	2.490	0.4	19.1
12 27	5 26.64	+40 40.0	1.811	2.751	7.4	18.9	12 27	5 29.01	+24 9.4	1.522	2.492	4.9	19.4
1 6	5 15.63	+40 25.8	1.875	2.773	10.1	19.1	1 6	5 19.98	+23 59.0	1.566	2.493	9.5	19.7
1 16	5 7.50	+39 57.6	1.964	2.793	13.0	19.4	1 16	5 13.42	+23 48.7	1.635	2.495	13.5	19.9
1 26	5 2.83	+39 22.2	2.074	2.814	15.4	19.6	1 26	5 9.95	+23 40.9	1.724	2.497	16.9	20.2
347247	2011 <i>JJ</i> ₂₉		12 17.0 177°64	1°2/16.9	18		418761	2008 <i>UO</i> ₂₀₉		12 17.1 335°02	4°7/17.1	16	
11 17	6 6.88	+20 12.1	1.921	2.776	12.4	22.3	11 17	6 4.81	+35 2.7	2.032	2.878	12.1	20.8
11 27	5 59.49	+20 4.2	1.853	2.778	8.7	22.1	11 27	5 58.39	+35 52.8	1.959	2.871	9.1	20.6
12 7	5 50.03	+19 57.0	1.811	2.780	4.6	21.8	12 7	5 49.64	+36 33.9	1.912	2.864	6.2	20.4
12 17	5 39.41	+19 50.6	1.797	2.780	1.2	21.6	12 17	5 39.46	+37 1.6	1.892	2.858	4.7	20.3
12 27	5 28.83	+19 45.2	1.814	2.781	4.6	21.8	12 27	5 29.13	+37 13.7	1.900	2.851	6.2	20.3
1 6	5 19.44	+19 41.8	1.860	2.780	8.7	22.1	1 6	5 19.96	+37 10.9	1.937	2.846	9.2	20.5
1 16	5 12.17	+19 41.5	1.931	2.779	12.3	22.3	1 16	5 13.02	+36 56.5	1.998	2.840	12.2	20.7
1 26	5 7.58	+19 45.2	2.025	2.778	15.4	22.5	1 26	5 9.00	+36 35.0	2.080	2.835	14.9	20.9
280378	2003 <i>UE</i> ₇₈		12 17.0 96°36	3°4/16.5	18		215422	2002 <i>GN</i> ₁₇₅		12 17.1 127°96	2°9/17.1	18	
11 17	6 7.02	+16 10.6	1.852	2.705	12.9	20.0	11 17	6 12.85	+29 29.2	1.734	2.583	13.8	20.6
11 27	5 59.30	+15 17.1	1.807	2.728	9.2	19.8	11 27	6 3.88	+30 8.1	1.682	2.601	9.8	20.4
12 7	5 49.77	+14 27.4	1.787	2.750	5.4	19.6	12 7	5 52.37	+30 39.8	1.655	2.618	5.6	20.2
12 17	5 39.42	+13 44.0	1.797	2.772	3.4	19.5	12 17	5 39.49	+31 0.1	1.656	2.635	2.9	20.1
12 27	5 29.39	+13 9.5	1.836	2.794	5.7	19.7	12 27	5 26.80	+31 7.5	1.687	2.650	5.4	20.3
1 6	5 20.75	+12 45.2	1.904	2.815	9.2	20.0	1 6	5 15.77	+31 3.7	1.747	2.665	9.4	20.6
1 16	5 14.24	+12 31.7	1.998	2.835	12.4	20.2	1 16	5 7.46	+30 52.5	1.833	2.678	13.0	20.8
1 26	5 10.31	+12 28.4	2.113	2.856	15.1	20.4	1 26	5 2.46	+30 38.4	1.940	2.691	16.0	21.1
321598	2009 <i>UN</i> ₁₃₇		12 17.1 71°57	5°1/16.7	18		373873	2003 <i>SO</i> ₆₅		12 17.1 123°23	2°8/16.8	16	
11 17	6 1.70	+ 8 57.1	2.063	2.905	12.1	20.1	11 17	6 10.07	+17 42.2	1.630	2.485	14.2	21.6
11 27	5 55.64	+ 8 26.8	2.008	2.916	9.2	19.9	11 27	6 1.72	+17 9.0	1.580	2.503	10.0	21.4
12 7	5 47.95	+ 8 6.4	1.978	2.926	6.4	19.8	12 7	5 51.15	+16 38.7	1.555	2.521	5.6	21.2
12 17	5 39.42	+ 7 58.0	1.976	2.936	5.1	19.7	12 17	5 39.49	+16 12.8	1.558	2.538	2.8	21.1
12 27	5 30.99	+ 8 2.5	2.003	2.947	6.5	19.8	12 27	5 28.13	+15 52.9	1.591	2.554	5.7	21.3
1 6	5 23.58	+ 8 19.3	2.057	2.957	9.2	20.0	1 6	5 18.37	+15 40.4	1.652	2.569	9.9	21.6
1 16	5 17.91	+ 8 46.9	2.137	2.968	12.0	20.2	1 16	5 11.11	+15 36.2	1.738	2.583	13.6	21.8
1 26	5 14.46	+ 9 23.1	2.238	2.978	14.4	20.4	1 26	5 6.85	+15 40.1	1.845	2.597	16.7	22.1
493198	2014 <i>UP</i> ₃₂		12 17.1 166°00	1°0/17.1	18		191543	2003 <i>UJ</i> ₂₄₉		12 17.1 80°78	2°6/17.3	18	
11 17	6 3.55	+25 35.7	2.562	3.412	9.8	21.6	11 17	6 5.21	+31 12.4	2.216	3.064	11.2	20.4
11 27	5 56.91	+26 5.4	2.492	3.414	6.9	21.5	11 27	5 58.17	+31 30.5	2.162	3.080	8.0	20.2
12 7	5 48.63	+26 33.1	2.449	3.417	3.7	21.3	12 7	5 49.30	+31 41.2	2.134	3.096	4.7	20.0
12 17	5 39.43	+26 57.1	2.436	3.419	1.0	21.1	12 17	5 39.47	+31 42.6	2.135	3.112	2.6	19.9
12 27	5 30.18	+27 16.1	2.454	3.420	3.6	21.3	12 27	5 29.81	+31 34.5	2.166	3.128	4.5	20.0
1 6	5 21.79	+27 30.2	2.503	3.422	6.8	21.5	1 6	5 21.35	+31 18.4	2.226	3.144	7.6	20.3
1 16	5 15.00	+27 40.4	2.579	3.423	9.7	21.7	1 16	5 14.88	+30 57.2	2.313	3.160	10.6	20.5
1 26	5 10.34	+27 48.3	2.678	3.424	12.2	21.8	1 26	5 10.90	+30 34.2	2.422	3.176	13.1	20.7
493438	2014 <i>WH</i> ₃₃₇		12 17.1 48°55	4°8/16.9	17		75336	1999 <i>XE</i> ₅₇		12 17.1 344°90	0°2/17.1	18	
11 17	6 0.80	+ 8 53.1	2.166	3.008	11.7	21.4	11 17	6 4.57	+21 58.7	1.480	2.351	14.4	19.0
11 27	5 55.01	+ 8 36.1	2.106	3.014	8.8	21.2	11 27	5 58.48	+22 17.6	1.413	2.346	10.1	18.8
12 7	5 47.65	+ 8 29.1	2.071	3.020	6.1	21.1	12 7	5 49.77	+22 37.8	1.370	2.341	5.3	18.5
12 17	5 39.44	+ 8 33.4	2.065	3.027	4.8	21.0	12 17	5 39.48	+22 57.4	1.354	2.338	0.2	18.1
12 27	5 31.28	+ 8 49.5	2.087	3.033	6.1	21.1	12 27	5 29.10	+23 15.1	1.365	2.334	5.2	18.4
1 6	5 24.05	+ 9 16.4	2.137	3.040	8.8	21.3	1 6	5 20.13	+23 30.8	1.402	2.332	10.2	18.7
1 16	5 18.46	+ 9 52.6	2.213	3.047	11.5	21.5	1 16	5 13.74	+23 45.6	1.463	2.330	14.5	19.0
1 26	5 14.99	+10 35.8	2.311	3.054	14.0	21.6	1 26	5 10.64	+24 0.7	1.544	2.328	18.1	19.2
25089	Sanabria-Rivera		12 17.1 167°21	2°0/17.2	18		441732	2009 <i>BZ</i> ₇₄		12 17.1 4°31	7°1/17.6		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
225351	1998 TA ₂₀		12 17.1 104°03	3°8/17.3	17	R	458569	2011 EZ ₇₀		12 17.1 226°19	4°4/16.6	18	
11 17	6 5.86	+34 16.0	2.273	3.114	11.2	20.3	11 17	6 0.42	+8 46.5	2.577	3.412	10.2	21.6
11 27	5 58.76	+34 50.7	2.211	3.121	8.3	20.2	11 27	5 54.64	+8 19.7	2.503	3.407	7.8	21.4
12 7	5 49.68	+35 16.5	2.175	3.129	5.4	20.0	12 7	5 47.47	+8 0.9	2.455	3.401	5.5	21.3
12 17	5 39.49	+35 30.4	2.168	3.137	3.8	19.9	12 17	5 39.51	+7 51.7	2.436	3.394	4.4	21.2
12 27	5 29.33	+35 31.3	2.190	3.144	5.2	20.0	12 27	5 31.53	+7 53.1	2.446	3.388	5.7	21.2
1 6	5 20.34	+35 20.4	2.241	3.151	8.0	20.2	1 6	5 24.28	+8 5.1	2.486	3.381	8.0	21.4
1 16	5 13.38	+35 1.0	2.319	3.159	10.9	20.4	1 16	5 18.40	+8 26.6	2.552	3.375	10.5	21.5
1 26	5 9.01	+34 36.9	2.419	3.166	13.3	20.6	1 26	5 14.36	+8 56.3	2.640	3.367	12.8	21.7
55755	Blythe		12 17.1 20°90	1°2/17.1	18		308798	Teo		12 17.1 147°34	2°8/17.6	18	
11 17	6 5.82	+24 19.2	1.106	1.989	17.2	19.1	11 17	6 8.54	+32 47.8	2.218	3.058	11.5	21.3
11 27	5 59.82	+24 49.6	1.058	1.996	12.1	18.9	11 27	6 0.50	+32 43.2	2.154	3.067	8.3	21.1
12 7	5 50.57	+25 18.6	1.030	2.003	6.3	18.6	12 7	5 50.52	+32 28.9	2.116	3.076	5.0	20.9
12 17	5 39.49	+25 42.6	1.027	2.011	1.2	18.2	12 17	5 39.54	+32 3.4	2.108	3.084	2.8	20.8
12 27	5 28.55	+25 59.5	1.049	2.020	6.2	18.6	12 27	5 28.75	+31 27.4	2.130	3.092	4.6	20.9
1 6	5 19.63	+26 9.9	1.095	2.030	11.7	19.0	1 6	5 19.27	+30 43.8	2.182	3.099	7.9	21.1
1 16	5 14.04	+26 16.4	1.163	2.041	16.5	19.3	1 16	5 11.92	+29 56.6	2.261	3.105	10.9	21.3
1 26	5 12.42	+26 21.8	1.249	2.053	20.4	19.6	1 26	5 7.22	+29 10.0	2.364	3.111	13.6	21.5
519762	2013 EE ₂₄		12 17.1 178°92	3°1/16.9	18		97660	2000 FC ₂₄		12 17.1 295°54	3°6/17.2	18	
11 17	6 3.35	+13 24.5	2.410	3.253	10.6	22.1	11 17	6 1.89	+11 8.9	2.207	3.051	11.4	19.1
11 27	5 56.72	+13 14.5	2.340	3.255	7.7	22.0	11 27	5 55.94	+11 19.9	2.128	3.042	8.4	18.9
12 7	5 48.54	+13 10.1	2.297	3.256	4.7	21.8	12 7	5 48.25	+11 40.2	2.075	3.032	5.4	18.7
12 17	5 39.49	+13 12.1	2.283	3.256	3.1	21.7	12 17	5 39.53	+12 9.8	2.051	3.022	3.6	18.6
12 27	5 30.44	+13 20.7	2.300	3.256	4.8	21.8	12 27	5 30.69	+12 48.3	2.057	3.013	5.3	18.7
1 6	5 22.26	+13 35.8	2.347	3.256	7.8	22.0	1 6	5 22.67	+13 34.1	2.091	3.004	8.4	18.9
1 16	5 15.65	+13 56.8	2.420	3.255	10.6	22.2	1 16	5 16.27	+14 25.5	2.152	2.995	11.5	19.1
1 26	5 11.10	+14 22.9	2.516	3.253	13.1	22.3	1 26	5 12.07	+15 20.6	2.236	2.985	14.2	19.2
70815	1999 VR ₇₂		12 17.1 38°82	3°3/16.9	18		321489	2009 SR ₄₄		12 17.1 127°45	2°1/17.3	17	
11 17	6 7.95	+27 59.4	1.336	2.206	15.7	18.0	11 17	6 4.77	+29 51.9	2.267	3.116	10.9	20.7
11 27	6 0.99	+29 4.6	1.291	2.221	11.2	17.8	11 27	5 57.91	+30 2.0	2.201	3.121	7.8	20.5
12 7	5 51.07	+30 4.6	1.269	2.236	6.4	17.6	12 7	5 49.22	+30 5.8	2.162	3.127	4.4	20.3
12 17	5 39.50	+30 53.3	1.274	2.253	3.3	17.4	12 17	5 39.53	+30 1.8	2.152	3.132	2.1	20.2
12 27	5 28.09	+31 27.3	1.305	2.270	6.3	17.6	12 27	5 29.92	+29 49.7	2.173	3.137	4.2	20.3
1 6	5 18.54	+31 47.0	1.362	2.287	10.8	17.9	1 6	5 21.41	+29 31.1	2.222	3.142	7.5	20.6
1 16	5 12.08	+31 55.8	1.442	2.305	14.9	18.2	1 16	5 14.80	+29 8.7	2.298	3.147	10.6	20.8
1 26	5 9.31	+31 58.2	1.542	2.324	18.2	18.5	1 26	5 10.63	+28 45.4	2.397	3.151	13.2	21.0
488906	2005 TP ₉₂		12 17.1 53°53	4°3/17.5	16		330772	2008 TW ₁		12 17.1 126°91	1°4/17.0	18	
11 17	6 9.78	+32 46.4	1.328	2.192	16.2	21.8	11 17	6 2.13	+18 16.1	2.581	3.430	9.8	21.3
11 27	6 2.28	+33 6.3	1.280	2.204	11.8	21.6	11 27	5 55.80	+18 19.4	2.519	3.440	6.9	21.1
12 7	5 51.70	+33 13.5	1.253	2.216	7.2	21.3	12 7	5 48.04	+18 25.0	2.484	3.450	3.7	20.9
12 17	5 39.50	+33 4.1	1.252	2.228	4.3	21.2	12 17	5 39.53	+18 32.7	2.478	3.460	1.4	20.8
12 27	5 27.62	+32 37.8	1.278	2.241	6.7	21.4	12 27	5 31.07	+18 42.4	2.504	3.469	3.7	20.9
1 6	5 17.83	+31 59.1	1.329	2.254	11.1	21.7	1 6	5 23.46	+18 54.0	2.560	3.479	6.8	21.2
1 16	5 11.32	+31 14.5	1.404	2.267	15.2	22.0	1 16	5 17.34	+19 7.7	2.644	3.487	9.6	21.4
1 26	5 8.62	+30 30.0	1.498	2.281	18.6	22.2	1 26	5 13.15	+19 23.6	2.751	3.496	11.9	21.5
146023	2000 DX ₂₅		12 17.1 27°67	2°0/17.2	18		290089	2005 QJ ₁₀₀		12 17.1 114°79	0°8/16.9	18	
11 17	6 6.16	+26 51.5	1.000	1.887	18.2	18.3	11 17	6 4.51	+21 34.8	2.049	2.905	11.6	21.2
11 27	6 0.12	+27 6.4	0.961	1.900	12.9	18.1	11 27	5 57.73	+21 24.9	1.988	2.914	8.1	21.0
12 7	5 50.69	+27 15.0	0.942	1.914	6.9	17.8	12 7	5 49.12	+21 14.7	1.953	2.922	4.2	20.8
12 17	5 39.50	+27 14.2	0.947	1.930	2.0	17.5	12 17	5 39.54	+21 4.1	1.947	2.930	0.8	20.5
12 27	5 28.71	+27 4.0	0.975	1.946	6.5	17.9	12 27	5 30.07	+20 53.7	1.971	2.939	4.2	20.8
1 6	5 20.26	+26 47.6	1.027	1.964	12.1	18.3	1 6	5 21.74	+20 44.5	2.024	2.946	8.0	21.0
1 16	5 15.38	+26 29.3	1.100	1.983	16.9	18.6	1 16	5 15.35	+20 37.9	2.103	2.954	11.4	21.3
1 26	5 14.57	+26 13.1	1.191	2.003	20.8	18.9	1 26	5 11.41	+20 34.9	2.205	2.961	14.2	21.5
276832	2004 QC ₅		12 17.1 132°60	1°9/17.2	18		486293	2013 CO ₇₀		12 17.1 329°47	0°5/17.1	18	
11 17	6 9.70	+28 8.7	1.951	2.800	12.4	21.3	11 17	6 4.62	+25 4.5	1.521	2.391	14.2	21.0
11 27	6 1.47	+28 30.8	1.894	2.815	8.8	21.1	11 27	5 58.52	+25 0.4	1.450	2.382	10.0	20.7
12 7	5 51.07	+28 47.3	1.863	2.829	4.8	20.9	12 7	5 49.81	+24 52.7	1.403	2.374	5.2	20.4
12 17	5 39.51	+28 55.6	1.862	2.843	1.9	20.8	12 17	5 39.54	+24 40.3	1.382	2.366	0.6	20.1
12 27	5 28.10	+28 55.0	1.890	2.855	4.7	21.0	12 27	5 29.21	+24 23.5	1.389	2.358	5.2	20.4
1 6	5 18.09	+28 47.0	1.948	2.868	8.5	21.2	1 6	5 20.31	+24 4.4	1.422	2.351	10.0	20.7
1 16	5 10.40	+28 34.5	2.033	2.879	11.9	21.5	1 16	5 13.96	+23 45.9	1.479	2.345	14.4	20.9
1 26	5 5.58	+28 20.8	2.139	2.890	14.7	21.7	1 26	5 10.89	+23 30.7	1.556	2.339	18.0	21.1
450661	2006 UT ₂₀₉		12 17.1 103°39	2°4/17.3	18		460854	2014 WZ ₁₀₆		12 17.1 72°91	0°8/17.1	17	
11 17	6 6.40	+30 9.4	1.917	2.770	12.4	21.2	11 17	6 4.00	+24 13.2	2.171	3.026	11.1	21.7
11 27	5 59.28	+30 17.9	1.854	2.775	8.9	21.0	11 27	5 57.41	+24 44.9	2.110	3.036	7.8	21.5
12 7	5 49.98	+30 18.9	1.816	2.781	5.1	20.7	12 7	5 48.99	+25 15.6	2.076	3.045	4.0	21.3
12 17	5 39.50	+30 10.4	1.806	2.786	2.4	20.6	12 17	5 39.55	+25 43.0	2.071	3.054	0.8	21.0
12 27	5 29.13	+29 52.4	1.826	2.791	4.8	20.7	12 27	5 30.14	+26 5.9	2.096	3.064	4.0	21.3
1 6	5 20.10	+29 27.0	1.874	2.796	8.6	21.0	1 6	5 21.78	+26 24.2	2.151	3.074	7.6	21.5
1 16	5 13.33	+28 57.8	1.948	2.801	12.0	21.2	1 16	5 15.27	+26 38.9	2.232	3.083	10.8	21.8
1 26	5 9.40	+28 28.4	2.044	2.806	15.0	21.4	1 26	5 11.17	+26 51.4	2.336	3.093	13.5	22.0
405118	2002 FN ₃₀		12 17.1 317°78	18°6/13.8	18		270988	2002 XC ₁₆		12 17.1 64°09	3°8/17.7	17	
11 17	6 22.46	+52 30.4	1.056	1.873	22.8	20.0	11 17	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
445334	2010 <i>JP</i> ₇₅		12 17.1 147°21'	4°1/16.7	18		307280	2002 <i>PB</i> ₆₁		12 17.1 69°62'	5°1/16.2	18	
11 17	6 4.47	+11 53.7	2.090	2.934	11.9	22.2	11 17	6 5.93	+13 5.7	1.648	2.503	14.0	19.9
11 27	5 57.61	+11 26.7	2.029	2.942	8.8	22.0	11 27	5 58.75	+11 53.4	1.605	2.524	10.3	19.7
12 7	5 49.04	+11 7.1	1.994	2.949	5.7	21.8	12 7	5 49.62	+10 48.7	1.588	2.545	6.7	19.5
12 17	5 39.56	+10 56.3	1.988	2.956	4.1	21.7	12 17	5 39.59	+9 55.5	1.598	2.566	5.1	19.5
12 27	5 30.16	+10 55.3	2.011	2.963	5.8	21.8	12 27	5 29.90	+9 16.8	1.637	2.587	7.1	19.7
1 6	5 21.82	+11 4.2	2.063	2.969	8.9	22.0	1 6	5 21.68	+8 54.0	1.703	2.608	10.5	19.9
1 16	5 15.28	+11 22.1	2.141	2.975	11.9	22.2	1 16	5 15.71	+8 46.6	1.792	2.628	13.7	20.2
1 26	5 11.06	+11 47.6	2.241	2.980	14.5	22.4	1 26	5 12.44	+8 52.5	1.903	2.649	16.4	20.4
181669	2008 <i>AE</i> ₆₂		12 17.1 321°06'	4°8/17.9	17		327551	2006 <i>BS</i> ₂₈₁		12 17.1 17°33'	0°6/17.1	17	
11 17	6 8.25	+36 49.6	1.759	2.603	13.8	19.9	11 17	6 3.43	+24 35.0	1.942	2.803	12.0	21.0
11 27	6 0.92	+36 50.7	1.688	2.599	10.4	19.7	11 27	5 57.21	+24 47.1	1.877	2.805	8.4	20.8
12 7	5 50.97	+36 36.9	1.641	2.594	6.9	19.5	12 7	5 48.96	+24 57.3	1.837	2.807	4.4	20.5
12 17	5 39.57	+36 5.0	1.621	2.590	4.8	19.3	12 17	5 39.59	+25 4.2	1.826	2.810	0.6	20.3
12 27	5 28.28	+35 15.5	1.629	2.586	6.4	19.4	12 27	5 30.23	+25 7.2	1.844	2.812	4.3	20.6
1 6	5 18.60	+34 12.6	1.665	2.582	9.8	19.6	1 6	5 22.02	+25 7.1	1.889	2.815	8.3	20.8
1 16	5 11.61	+33 2.7	1.725	2.578	13.4	19.8	1 16	5 15.84	+25 5.5	1.961	2.818	11.8	21.0
1 26	5 7.93	+31 52.6	1.807	2.574	16.4	20.0	1 26	5 12.28	+25 4.2	2.055	2.821	14.7	21.2
55379	2001 <i>SW</i> ₂₅₅		12 17.1 128°27'	3°3/16.9	18		45561	2000 <i>CA</i> ₅₆		12 17.1 322°19'	0°9/17.0	18	
11 17	6 3.59	+13 23.8	2.139	2.986	11.6	18.9	11 17	6 2.26	+20 44.5	2.114	2.973	11.2	19.2
11 27	5 56.99	+13 11.7	2.078	2.995	8.4	18.8	11 27	5 56.26	+20 41.3	2.042	2.969	7.9	19.0
12 7	5 48.72	+13 6.0	2.044	3.004	5.2	18.6	12 7	5 48.44	+20 39.0	1.996	2.966	4.1	18.7
12 17	5 39.56	+13 7.5	2.039	3.012	3.3	18.5	12 17	5 39.59	+20 37.1	1.979	2.962	0.9	18.5
12 27	5 30.47	+13 16.6	2.063	3.020	5.2	18.6	12 27	5 30.72	+20 36.1	1.991	2.959	4.1	18.7
1 6	5 22.40	+13 32.8	2.116	3.028	8.3	18.8	1 6	5 22.83	+20 36.3	2.032	2.956	7.9	19.0
1 16	5 16.08	+13 55.6	2.196	3.036	11.4	19.0	1 16	5 16.74	+20 38.7	2.100	2.953	11.3	19.2
1 26	5 12.02	+14 23.8	2.298	3.043	14.0	19.2	1 26	5 13.00	+20 44.0	2.189	2.950	14.1	19.4
202637	2006 <i>JT</i> ₄		12 17.1 133°23'	0°6/17.1	17		235884	2005 <i>CC</i> ₉		12 17.1 344°02'	2°4/17.1	17	
11 17	6 2.69	+24 56.4	2.692	3.541	9.4	20.6	11 17	6 1.79	+15 42.2	2.014	2.871	11.8	20.0
11 27	5 56.21	+25 9.8	2.628	3.550	6.6	20.4	11 27	5 55.97	+15 47.7	1.944	2.868	8.4	19.8
12 7	5 48.28	+25 21.2	2.591	3.559	3.4	20.3	12 7	5 48.32	+15 59.0	1.899	2.865	4.8	19.6
12 17	5 39.56	+25 29.6	2.584	3.567	0.6	20.0	12 17	5 39.60	+16 16.0	1.883	2.862	2.4	19.4
12 27	5 30.88	+25 34.5	2.608	3.576	3.3	20.3	12 27	5 30.82	+16 38.2	1.895	2.859	4.8	19.6
1 6	5 23.05	+25 36.5	2.663	3.584	6.4	20.5	1 6	5 23.02	+17 4.9	1.936	2.857	8.4	19.8
1 16	5 16.73	+25 36.6	2.746	3.591	9.2	20.7	1 16	5 17.02	+17 35.6	2.003	2.855	11.8	20.0
1 26	5 12.39	+25 36.2	2.852	3.599	11.5	20.9	1 26	5 13.41	+18 9.3	2.092	2.853	14.7	20.2
227757	2006 <i>KX</i> ₁₄		12 17.1 199°19'	0°8/17.1	18		383100	2005 <i>SY</i> ₁₅₀		12 17.1 131°71'	3°4/17.2	18	
11 17	6 3.68	+18 32.2	2.533	3.381	10.0	20.0	11 17	6 10.82	+30 57.1	1.706	2.558	13.8	21.7
11 27	5 57.05	+19 10.0	2.458	3.379	7.0	19.8	11 27	6 2.65	+31 32.1	1.649	2.568	10.0	21.5
12 7	5 48.79	+19 51.4	2.410	3.377	3.7	19.6	12 7	5 51.86	+31 58.6	1.616	2.578	5.9	21.3
12 17	5 39.57	+20 34.6	2.392	3.375	0.8	19.4	12 17	5 39.63	+32 12.8	1.611	2.588	3.4	21.1
12 27	5 30.26	+21 18.2	2.407	3.373	3.6	19.6	12 27	5 27.50	+32 13.1	1.635	2.597	5.7	21.3
1 6	5 21.71	+22 0.7	2.452	3.371	6.9	19.8	1 6	5 16.99	+32 1.5	1.687	2.605	9.6	21.5
1 16	5 14.69	+22 41.8	2.525	3.369	9.9	20.0	1 16	5 9.17	+31 42.1	1.764	2.613	13.3	21.8
1 26	5 9.73	+23 21.4	2.622	3.366	12.4	20.2	1 26	5 4.68	+31 19.9	1.862	2.621	16.3	22.0
154459	2003 <i>DJ</i> ₁		12 17.1 240°31'	4°4/16.9	18		231861	2000 <i>SO</i> ₂₃₆		12 17.1 71°45'	4°4/17.4	18	
11 17	6 5.50	+13 5.6	1.562	2.421	14.5	20.4	11 17	6 9.95	+32 56.8	1.524	2.380	14.9	20.0
11 27	5 58.90	+12 46.6	1.497	2.419	10.6	20.2	11 27	6 2.23	+33 35.6	1.474	2.394	10.9	19.8
12 7	5 49.93	+12 36.4	1.456	2.417	6.6	19.9	12 7	5 51.69	+34 3.4	1.448	2.408	6.8	19.6
12 17	5 39.59	+12 36.6	1.441	2.415	4.4	19.8	12 17	5 39.63	+34 15.4	1.448	2.421	4.4	19.5
12 27	5 29.23	+12 47.8	1.454	2.413	6.7	19.9	12 27	5 27.77	+34 10.4	1.476	2.435	6.5	19.7
1 6	5 20.18	+13 9.7	1.494	2.411	10.7	20.2	1 6	5 17.76	+33 51.0	1.530	2.449	10.4	19.9
1 16	5 13.49	+13 40.8	1.558	2.409	14.6	20.4	1 16	5 10.71	+33 22.6	1.608	2.463	14.1	20.2
1 26	5 9.81	+14 19.4	1.641	2.407	17.9	20.6	1 26	5 7.23	+32 50.9	1.707	2.476	17.2	20.4
151983	2004 <i>HF</i> ₁₆		12 17.1 231°80'	1°3/17.2	18		23721	1998 <i>HQ</i> ₂₇		12 17.1 91°86'	1°8/16.9	18	
11 17	6 8.83	+26 38.2	1.856	2.709	12.8	21.5	11 17	6 10.56	+20 14.8	1.481	2.342	15.0	17.9
11 27	6 1.24	+26 48.7	1.774	2.698	9.1	21.2	11 27	6 2.18	+19 48.4	1.440	2.367	10.5	17.7
12 7	5 51.17	+26 54.9	1.717	2.685	4.9	20.9	12 7	5 51.45	+19 23.0	1.423	2.392	5.5	17.5
12 17	5 39.60	+26 54.5	1.689	2.672	1.3	20.7	12 17	5 39.63	+18 59.2	1.434	2.416	1.8	17.3
12 27	5 27.86	+26 46.8	1.691	2.658	4.8	20.9	12 27	5 28.27	+18 38.7	1.473	2.440	5.5	17.6
1 6	5 17.33	+26 33.3	1.722	2.644	9.2	21.1	1 6	5 18.71	+18 23.2	1.540	2.463	10.0	17.9
1 16	5 9.13	+26 16.8	1.778	2.629	13.1	21.3	1 16	5 11.88	+18 14.2	1.631	2.485	13.9	18.2
1 26	5 3.98	+26 0.8	1.856	2.613	16.4	21.5	1 26	5 8.23	+18 12.3	1.743	2.507	17.1	18.5
408334	2013 <i>GN</i> ₇₄		12 17.1 225°21'	1°3/17.1	18		512728	2016 <i>UQ</i> ₂₁		12 17.1 180°27'	0°7/17.0	18	
11 17	6 5.96	+25 39.3	2.057	2.911	11.7	21.5	11 17	6 7.79	+21 46.1	1.638	2.499	13.8	22.0
11 27	5 59.02	+26 13.2	1.982	2.906	8.3	21.3	11 27	6 0.49	+21 41.4	1.572	2.500	9.7	21.7
12 7	5 49.95	+26 45.2	1.933	2.901	4.4	21.0	12 7	5 50.75	+21 36.4	1.531	2.501	5.1	21.4
12 17	5 39.59	+27 12.6	1.913	2.896	1.3	20.8	12 17	5 39.63	+21 30.5	1.517	2.501	0.7	21.1
12 27	5 29.11	+27 33.8	1.924	2.891	4.4	21.0	12 27	5 28.53	+21 24.0	1.532	2.501	5.0	21.4
1 6	5 19.67	+27 48.6	1.963	2.885	8.3	21.2	1 6	5 18.84	+21 18.0	1.575	2.500	9.7	21.7
1 16	5 12.26	+27 58.5	2.029	2.879	11.8	21.4	1 16	5 11.62	+21 14.4	1.643	2.499	13.7	22.0
1 26	5 7.52	+28 5.7	2.117	2.873	14.7	21.6	1 26	5 7.49	+21 14.6	1.732	2.498	17.1	22.2
156648	2002 <i>JC</i> ₅₃		12 17.1 220°19'	4°2/17.3	17		218148	2002 <i>RT</i> ₈₅		12 17.1 70°07'	2°2/17.2	18	

EPHEMERIDES

12 17.1

12 17.1

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
514242	2015 <i>PM</i> ₃		12 17.1 130°21	0°6/17.1	18		293520	2007 <i>GP</i> ₄₆		12 17.1	8°44	4°1/16.6	17
11 17	6 6.88	+20 36.9	1.878	2.734	12.5	21.2	11 17	6 1.70	+13 5.3	1.947	2.801	12.2	20.1
11 27	5 59.58	+20 54.9	1.818	2.744	8.8	21.0	11 27	5 55.88	+12 30.0	1.883	2.802	9.0	19.9
12 7	5 50.19	+21 14.4	1.783	2.753	4.6	20.8	12 7	5 48.27	+12 1.4	1.844	2.803	5.7	19.7
12 17	5 39.65	+21 34.1	1.778	2.761	0.6	20.5	12 17	5 39.67	+11 41.3	1.833	2.804	4.1	19.6
12 27	5 29.16	+21 52.8	1.802	2.770	4.5	20.8	12 27	5 31.11	+11 31.3	1.850	2.805	5.9	19.7
1 6	5 19.91	+22 10.5	1.854	2.777	8.6	21.0	1 6	5 23.60	+11 31.9	1.895	2.807	9.2	19.9
1 16	5 12.80	+22 27.7	1.933	2.785	12.2	21.3	1 16	5 17.92	+11 42.5	1.966	2.808	12.4	20.1
1 26	5 8.43	+22 45.4	2.034	2.792	15.1	21.5	1 26	5 14.61	+12 2.0	2.057	2.810	15.1	20.3
42912	1999 <i>RQ</i> ₂₂₁		12 17.1 143°73	2°1/17.4	18		270714	2002 <i>QQ</i> ₁₀₄		12 17.1 220°40	1°1/17.3	18	
11 17	6 11.20	+29 33.6	1.649	2.503	14.1	19.5	11 17	6 3.55	+27 46.1	2.635	3.482	9.7	20.9
11 27	6 2.84	+29 27.1	1.589	2.511	10.0	19.3	11 27	5 56.95	+27 40.3	2.554	3.475	6.8	20.8
12 7	5 51.92	+29 11.6	1.553	2.519	5.6	19.0	12 7	5 48.76	+27 29.8	2.501	3.468	3.7	20.5
12 17	5 39.66	+28 45.5	1.546	2.527	2.1	18.8	12 17	5 39.67	+27 13.9	2.478	3.460	1.1	20.3
12 27	5 27.63	+28 9.6	1.567	2.534	5.2	19.0	12 27	5 30.58	+26 53.0	2.486	3.452	3.5	20.5
1 6	5 17.30	+27 27.6	1.617	2.540	9.6	19.3	1 6	5 22.36	+26 28.4	2.524	3.444	6.7	20.7
1 16	5 9.70	+26 44.4	1.692	2.546	13.5	19.6	1 16	5 15.72	+26 2.3	2.590	3.436	9.6	20.9
1 26	5 5.41	+26 4.5	1.789	2.552	16.7	19.8	1 26	5 11.17	+25 37.0	2.679	3.427	12.1	21.0
521655	2015 <i>RL</i> ₃₃		12 17.1 39°85	1°4/17.2	18		189110	2001 <i>TR</i> ₅₅		12 17.1 63°23	5°3/16.4	18	
11 17	6 6.03	+16 59.3	1.667	2.527	13.7	20.5	11 17	6 9.71	+14 6.5	1.323	2.185	16.4	19.2
11 27	5 59.24	+17 47.7	1.607	2.533	9.7	20.3	11 27	6 1.52	+12 53.5	1.295	2.218	11.8	19.0
12 7	5 50.12	+18 43.3	1.571	2.540	5.2	20.0	12 7	5 51.07	+11 49.7	1.291	2.251	7.4	18.9
12 17	5 39.65	+19 43.3	1.564	2.547	1.4	19.8	12 17	5 39.70	+10 59.2	1.313	2.284	5.3	18.8
12 27	5 29.14	+20 44.4	1.586	2.554	4.9	20.1	12 27	5 28.99	+10 25.1	1.362	2.317	7.7	19.0
1 6	5 19.91	+21 44.0	1.636	2.562	9.3	20.3	1 6	5 20.23	+10 8.3	1.438	2.349	11.5	19.4
1 16	5 12.97	+22 40.8	1.712	2.569	13.2	20.6	1 16	5 14.24	+10 7.4	1.536	2.381	15.1	19.7
1 26	5 8.99	+23 34.3	1.809	2.577	16.4	20.8	1 26	5 11.40	+10 19.8	1.654	2.413	18.1	19.9
212571	2006 <i>SH</i> ₉₇		12 17.1 120°26	2°3/16.9	18		275779	2001 <i>QK</i> ₉		12 17.1 83°32	5°1/17.9	18	
11 17	6 4.59	+17 25.9	2.010	2.864	11.9	20.9	11 17	6 14.16	+36 17.8	1.527	2.371	15.5	20.4
11 27	5 57.80	+17 8.2	1.951	2.874	8.4	20.7	11 27	6 4.96	+36 30.6	1.485	2.397	11.5	20.3
12 7	5 49.20	+16 53.6	1.917	2.883	4.7	20.5	12 7	5 52.98	+36 27.3	1.468	2.422	7.5	20.1
12 17	5 39.65	+16 42.8	1.913	2.893	2.3	20.4	12 17	5 39.72	+36 4.2	1.477	2.447	5.1	20.0
12 27	5 30.21	+16 36.5	1.938	2.901	4.8	20.6	12 27	5 27.04	+35 22.4	1.515	2.471	6.8	20.2
1 6	5 21.90	+16 35.3	1.992	2.910	8.4	20.8	1 6	5 16.55	+34 27.3	1.579	2.495	10.3	20.4
1 16	5 15.51	+16 39.7	2.072	2.918	11.7	21.0	1 16	5 9.27	+33 26.3	1.668	2.519	13.8	20.7
1 26	5 11.55	+16 49.4	2.174	2.926	14.5	21.2	1 26	5 5.61	+32 26.1	1.778	2.542	16.8	21.0
42701	1998 <i>MD</i> ₁₃		12 17.1 240°65	4°5/16.7	18		212804	2007 <i>TY</i> ₃₅₈		12 17.1 328°59	4°0/16.9	17	
11 17	6 4.61	+11 4.1	2.077	2.919	12.1	17.7	11 17	6 6.51	+30 22.1	1.490	2.355	14.7	20.0
11 27	5 57.96	+10 38.7	1.994	2.905	9.0	17.5	11 27	6 0.23	+31 18.4	1.418	2.344	10.7	19.8
12 7	5 49.38	+10 21.1	1.936	2.890	6.0	17.3	12 7	5 50.94	+32 9.2	1.370	2.334	6.5	19.5
12 17	5 39.65	+10 13.0	1.907	2.874	4.5	17.2	12 17	5 39.71	+32 48.5	1.348	2.325	4.0	19.3
12 27	5 29.77	+10 15.7	1.908	2.858	6.2	17.3	12 27	5 28.20	+33 12.7	1.353	2.315	6.6	19.5
1 6	5 20.80	+10 29.4	1.937	2.841	9.4	17.4	1 6	5 18.15	+33 21.8	1.384	2.307	10.9	19.7
1 16	5 13.59	+10 53.1	1.991	2.824	12.7	17.6	1 16	5 10.96	+33 19.3	1.439	2.299	15.1	19.9
1 26	5 8.79	+11 25.4	2.068	2.806	15.5	17.8	1 26	5 7.46	+33 10.2	1.513	2.292	18.6	20.2
491656	2012 <i>TY</i> ₂₅₇		12 17.1 68°86	1°0/17.1	16		234760	2002 <i>OC</i> ₃₁		12 17.1 93°55	7°0/16.7	18	
11 17	6 8.45	+20 35.5	1.432	2.298	15.1	21.5	11 17	6 0.71	+1 18.6	2.313	3.128	12.0	20.2
11 27	6 0.89	+20 40.8	1.391	2.321	10.5	21.3	11 27	5 54.93	+0 42.9	2.255	3.134	9.7	20.1
12 7	5 50.88	+20 47.6	1.373	2.344	5.5	21.1	12 7	5 47.69	+0 21.6	2.222	3.139	7.8	20.0
12 17	5 39.67	+20 54.9	1.383	2.366	1.0	20.8	12 17	5 39.68	+0 17.1	2.216	3.145	7.0	19.9
12 27	5 28.81	+21 2.3	1.420	2.389	5.3	21.2	12 27	5 31.72	+0 30.5	2.238	3.151	7.9	20.0
1 6	5 19.70	+21 10.3	1.485	2.412	9.9	21.5	1 6	5 24.63	+1 0.7	2.287	3.157	9.8	20.1
1 16	5 13.32	+21 19.9	1.574	2.434	14.0	21.8	1 16	5 19.04	+1 45.1	2.360	3.163	11.9	20.3
1 26	5 10.16	+21 32.1	1.683	2.457	17.2	22.1	1 26	5 15.43	+2 40.4	2.455	3.169	14.0	20.5
150952	2001 <i>TU</i> ₁₂₄		12 17.1 342°41	4°3/17.6	17		23661	1997 <i>EL</i> ₁₆		12 17.1 287°72	0°8/17.0	18	
11 17	6 5.05	+33 47.7	1.484	2.347	14.9	19.0	11 17	6 5.23	+21 39.8	1.685	2.549	13.3	19.9
11 27	5 59.09	+33 58.1	1.414	2.337	11.0	18.8	11 27	5 58.86	+21 34.3	1.605	2.534	9.4	19.7
12 7	5 50.23	+33 56.0	1.366	2.327	6.9	18.5	12 7	5 50.04	+21 28.8	1.548	2.518	5.0	19.4
12 17	5 39.67	+33 37.7	1.344	2.319	4.3	18.4	12 17	5 39.71	+21 22.7	1.519	2.503	0.8	19.0
12 27	5 29.08	+33 2.9	1.348	2.311	6.5	18.5	12 27	5 29.19	+21 16.3	1.519	2.488	5.0	19.3
1 6	5 20.12	+32 15.4	1.379	2.305	10.7	18.7	1 6	5 19.85	+21 10.7	1.546	2.472	9.7	19.5
1 16	5 14.02	+31 21.1	1.433	2.299	14.7	18.9	1 16	5 12.81	+21 7.5	1.598	2.457	13.9	19.8
1 26	5 11.50	+30 26.4	1.506	2.294	18.3	19.1	1 26	5 8.80	+21 8.4	1.670	2.442	17.4	20.0
91988	1999 <i>VL</i> ₁₁₄		12 17.1 353°36	5°2/17.7	17		46487	3322 <i>T</i> ₋₂		12 17.1 186°59	7°9/16.6	18	
11 17	6 6.62	+37 28.7	1.894	2.735	13.1	19.0	11 17	6 3.35	+2 34.8	1.874	2.700	13.9	19.4
11 27	5 59.74	+37 52.7	1.827	2.734	10.0	18.8	11 27	5 57.07	+1 49.5	1.812	2.700	11.2	19.2
12 7	5 50.41	+38 3.5	1.783	2.732	6.9	18.7	12 7	5 48.92	+1 20.2	1.774	2.700	8.9	19.1
12 17	5 39.68	+37 57.2	1.767	2.731	5.2	18.5	12 17	5 39.71	+1 10.4	1.762	2.699	7.9	19.0
12 27	5 29.00	+37 33.1	1.779	2.730	6.5	18.6	12 27	5 30.51	+1 21.7	1.778	2.699	9.0	19.1
1 6	5 19.76	+36 54.0	1.818	2.729	9.5	18.8	1 6	5 22.38	+1 53.0	1.819	2.698	11.4	19.3
1 16	5 13.02	+36 5.1	1.882	2.729	12.7	19.0	1 16	5 16.14	+2 41.4	1.884	2.697	14.1	19.4
1 26	5 9.39	+35 12.1	1.968	2.729	15.5	19.2	1 26	5 12.35	+3 42.3	1.969	2.696	16.6	19.6
334173	2001 <i>SY</i> ₁₂₅		12 17.1 99°23	0°6/17.2	18		477779	2011 <i>BQ</i> ₂₆		12 17.1 10°85	2°5/17.3	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
203053	2000 <i>FH</i> ₅₁	12 17.1 151°75		0°4/17.1 18			187948	2001 <i>KV</i> ₇₀	12 17.1 179°69		1°2/16.9 18		
11 17	6 1.90	+22 9.1	2.877	3.725	8.9	21.9	11 17	6 8.37	+21 42.8	1.701	2.559	13.5	20.5
11 27	5 55.61	+22 6.4	2.810	3.732	6.2	21.7	11 27	6 0.83	+21 16.8	1.634	2.561	9.5	20.2
12 7	5 48.01	+22 3.1	2.771	3.739	3.2	21.5	12 7	5 50.94	+20 49.3	1.592	2.561	5.0	20.0
12 17	5 39.71	+21 59.0	2.762	3.745	0.4	21.3	12 17	5 39.77	+20 21.0	1.578	2.562	1.2	19.7
12 27	5 31.46	+21 54.2	2.784	3.751	3.1	21.5	12 27	5 28.68	+19 53.3	1.594	2.561	5.0	20.0
1 6	5 23.98	+21 49.4	2.837	3.757	6.1	21.7	1 6	5 18.99	+19 28.6	1.638	2.561	9.5	20.2
1 16	5 17.86	+21 45.4	2.918	3.762	8.8	21.9	1 16	5 11.69	+19 9.1	1.707	2.560	13.5	20.5
1 26	5 13.55	+21 43.2	3.024	3.767	11.0	22.1	1 26	5 7.39	+18 56.3	1.797	2.558	16.8	20.7
376587	2013 <i>PZ</i> ₂₄	12 17.1 105°09		7°3/16.9 17			475498	2006 <i>SC</i> ₂₈₆	12 17.1 94°84		2°1/17.2 18		
11 17	6 0.36	- 0 30.2	2.427	3.233	11.8	20.8	11 17	6 9.17	+17 21.1	1.410	2.274	15.5	20.9
11 27	5 54.65	- 1 1.6	2.368	3.237	9.7	20.7	11 27	6 1.59	+17 35.6	1.360	2.288	10.9	20.6
12 7	5 47.56	- 1 17.9	2.333	3.242	8.0	20.6	12 7	5 51.39	+17 56.1	1.333	2.301	5.9	20.4
12 17	5 39.71	- 1 16.7	2.325	3.246	7.3	20.5	12 17	5 39.78	+18 21.1	1.333	2.315	2.1	20.2
12 27	5 31.90	- 0 57.4	2.345	3.250	8.0	20.6	12 27	5 28.35	+18 49.3	1.361	2.329	5.7	20.5
1 6	5 24.89	- 0 21.0	2.392	3.255	9.7	20.7	1 6	5 18.59	+19 19.6	1.416	2.342	10.5	20.8
1 16	5 19.32	+ 0 29.7	2.463	3.259	11.7	20.8	1 16	5 11.59	+19 51.6	1.495	2.355	14.7	21.1
1 26	5 15.64	+ 1 31.2	2.556	3.263	13.6	21.0	1 26	5 7.94	+20 25.2	1.594	2.367	18.1	21.3
515506	2014 <i>DJ</i> ₁₄₈	12 17.1 155°58		1°9/16.9 18			79409	1997 <i>JX</i> ₁₁	12 17.1 159°58		1°3/17.2 18		
11 17	6 6.07	+18 7.2	1.993	2.845	12.1	22.1	11 17	6 9.75	+26 14.3	1.969	2.819	12.3	20.3
11 27	5 58.91	+17 55.8	1.929	2.852	8.5	21.9	11 27	6 1.64	+26 37.3	1.904	2.826	8.7	20.0
12 7	5 49.84	+17 47.0	1.891	2.857	4.7	21.7	12 7	5 51.33	+26 56.6	1.866	2.833	4.6	19.8
12 17	5 39.73	+17 41.1	1.882	2.863	1.9	21.5	12 17	5 39.78	+27 9.9	1.857	2.839	1.3	19.6
12 27	5 29.69	+17 38.5	1.903	2.867	4.7	21.7	12 27	5 28.27	+27 15.9	1.878	2.845	4.5	19.8
1 6	5 20.80	+17 39.9	1.953	2.872	8.5	21.9	1 6	5 18.05	+27 15.7	1.929	2.850	8.5	20.1
1 16	5 13.88	+17 45.7	2.029	2.875	11.9	22.2	1 16	5 10.07	+27 11.6	2.007	2.853	12.0	20.3
1 26	5 9.49	+17 56.2	2.127	2.879	14.8	22.4	1 26	5 4.94	+27 6.4	2.106	2.857	14.9	20.5
455492	2003 <i>UC</i> ₃₃₉	12 17.1 33°46		0°5/17.1 16			67136	2000 <i>AG</i> ₁₅₄	12 17.1 280°08		3°4/17.6 18		
11 17	6 3.51	+24 23.4	1.785	2.649	12.7	21.2	11 17	6 5.47	+33 59.4	2.186	3.030	11.5	18.8
11 27	5 57.33	+24 34.5	1.731	2.660	8.8	21.0	11 27	5 58.66	+34 9.5	2.112	3.025	8.5	18.6
12 7	5 49.08	+24 43.7	1.702	2.672	4.6	20.8	12 7	5 49.79	+34 10.1	2.063	3.020	5.4	18.4
12 17	5 39.73	+24 49.6	1.701	2.684	0.5	20.5	12 17	5 39.77	+33 58.7	2.043	3.015	3.5	18.3
12 27	5 30.50	+24 51.8	1.728	2.697	4.4	20.8	12 27	5 29.75	+33 35.1	2.052	3.011	5.0	18.4
1 6	5 22.58	+24 51.1	1.783	2.710	8.5	21.1	1 6	5 20.90	+33 1.5	2.090	3.006	8.2	18.6
1 16	5 16.82	+24 49.3	1.863	2.724	12.1	21.4	1 16	5 14.11	+32 21.5	2.154	3.001	11.3	18.7
1 26	5 13.79	+24 48.2	1.965	2.738	15.1	21.6	1 26	5 9.97	+31 39.6	2.240	2.997	14.0	18.9
270801	2002 <i>RG</i> ₂₄₃	12 17.1 28°19		13°5/18.3 17			91890	Kiriko Matsuri	12 17.1 83°96		2°0/17.1 18		
11 17	6 20.01	+59 52.5	1.957	2.692	16.6	20.3	11 17	6 5.78	+27 31.2	2.118	2.971	11.5	18.7
11 27	6 10.81	+61 37.6	1.916	2.702	15.1	20.2	11 27	5 58.78	+28 11.9	2.061	2.983	8.1	18.5
12 7	5 56.83	+62 53.9	1.896	2.712	14.0	20.2	12 7	5 49.82	+28 49.0	2.029	2.995	4.5	18.3
12 17	5 39.80	+63 32.2	1.896	2.723	13.5	20.1	12 17	5 39.77	+29 19.3	2.027	3.007	2.0	18.2
12 27	5 22.62	+63 28.7	1.919	2.735	13.8	20.2	12 27	5 29.75	+29 41.4	2.054	3.019	4.4	18.4
1 6	5 8.25	+62 47.5	1.962	2.747	14.7	20.3	1 6	5 20.87	+29 55.4	2.111	3.031	7.9	18.6
1 16	4 58.63	+61 38.1	2.025	2.759	15.9	20.4	1 16	5 14.00	+30 3.1	2.194	3.043	11.1	18.8
1 26	4 54.47	+60 11.5	2.105	2.772	17.2	20.5	1 26	5 9.69	+30 7.0	2.300	3.055	13.7	19.0
34986	3837 <i>T</i> - ₃	12 17.1 166°36		3°3/17.2 18			196106	2002 <i>TV</i> ₁₄₂	12 17.1 29°02		1°8/17.1 17		
11 17	6 6.83	+31 53.1	2.108	2.954	11.8	19.8	11 17	6 1.95	+17 47.6	1.969	2.829	11.9	19.5
11 27	5 59.66	+32 27.3	2.040	2.956	8.6	19.6	11 27	5 56.09	+17 51.7	1.910	2.836	8.4	19.3
12 7	5 50.32	+32 54.3	1.998	2.958	5.3	19.4	12 7	5 48.42	+17 59.6	1.876	2.844	4.6	19.1
12 17	5 39.74	+33 10.6	1.985	2.959	3.3	19.3	12 17	5 39.76	+18 11.2	1.870	2.851	1.8	19.0
12 27	5 29.14	+33 15.0	2.001	2.960	5.1	19.4	12 27	5 31.15	+18 25.9	1.893	2.860	4.5	19.2
1 6	5 19.71	+33 8.4	2.046	2.961	8.4	19.6	1 6	5 23.62	+18 43.6	1.945	2.868	8.2	19.4
1 16	5 12.41	+32 54.0	2.117	2.962	11.5	19.8	1 16	5 17.94	+19 4.2	2.022	2.877	11.6	19.6
1 26	5 7.86	+32 35.5	2.210	2.962	14.3	20.0	1 26	5 14.67	+19 27.3	2.122	2.887	14.4	19.8
195860	2002 <i>QN</i> ₈₉	12 17.1 104°76		2°7/17.5 17			147653	2004 <i>JF</i> ₃₅	12 17.1 189°38		0°7/17.1 18		
11 17	6 4.85	+32 26.8	2.313	3.158	10.9	20.3	11 17	6 6.22	+23 45.2	2.385	3.233	10.5	20.3
11 27	5 58.02	+32 29.2	2.247	3.162	7.9	20.1	11 27	5 59.01	+24 25.7	2.310	3.232	7.4	20.1
12 7	5 49.37	+32 23.3	2.206	3.166	4.8	19.9	12 7	5 49.95	+25 6.0	2.263	3.231	3.9	19.9
12 17	5 39.75	+32 7.5	2.194	3.171	2.7	19.8	12 17	5 39.78	+25 43.5	2.246	3.229	0.7	19.6
12 27	5 30.23	+31 42.0	2.213	3.175	4.4	19.9	12 27	5 29.50	+26 16.6	2.260	3.227	3.8	19.9
1 6	5 21.83	+31 9.0	2.260	3.179	7.5	20.1	1 6	5 20.11	+26 44.6	2.305	3.224	7.3	20.1
1 16	5 15.34	+30 31.8	2.335	3.183	10.5	20.3	1 16	5 12.44	+27 8.1	2.377	3.221	10.5	20.3
1 26	5 11.29	+29 53.9	2.432	3.187	13.1	20.5	1 26	5 7.11	+27 28.5	2.473	3.218	13.1	20.5
449172	2013 <i>BC</i> ₄₁	12 17.1 175°51		4°0/17.7 17			294835	2008 <i>CE</i> ₁₅₁	12 17.1 213°38		2°4/17.4 17		
11 17	6 9.12	+35 53.8	2.192	3.026	11.8	21.7	11 17	6 6.33	+31 6.1	2.401	3.244	10.6	21.6
11 27	6 1.15	+36 3.5	2.122	3.028	8.8	21.5	11 27	5 59.10	+31 13.9	2.322	3.237	7.7	21.4
12 7	5 51.04	+36 1.6	2.078	3.030	5.8	21.4	12 7	5 49.99	+31 14.5	2.269	3.230	4.5	21.2
12 17	5 39.77	+35 45.4	2.062	3.031	4.0	21.2	12 17	5 39.79	+31 6.3	2.245	3.223	2.4	21.1
12 27	5 28.59	+35 14.8	2.077	3.032	5.4	21.3	12 27	5 29.57	+30 48.8	2.253	3.215	4.3	21.2
1 6	5 18.74	+34 32.6	2.121	3.032	8.4	21.5	1 6	5 20.35	+30 23.8	2.290	3.207	7.5	21.4
1 16	5 11.12	+33 43.3	2.191	3.032	11.4	21.7	1 16	5 13.00	+29 54.2	2.354	3.198	10.6	21.6
1 26	5 6.31	+32 52.0	2.284	3.031	14.0	21.9	1 26	5 8.07	+29 23.3	2.441	3.189	13.2	21.7
257973	2001 <i>CT</i> ₃₆	12 17.1 188°75		5°7/16.9 17			348627	2005 <i>YK</i> ₉₁	12 17.1 122°88		2°9/17.1 18		
11 17	6 1.23	+ 4 2.5	2.548	3.367	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
310450	2000 LV ₂₉		12 17.1 270°05	1°2/17.2 18			179319	2001 WW ₂₃		12 17.1 23°97	0°4/17.1 18		
11 17	6 5.34	+18 19.7	1.928	2.783	12.3	20.5	11 17	6 4.28	+22 48.5	1.695	2.560	13.2	20.3
11 27	5 58.75	+18 46.3	1.845	2.770	8.7	20.2	11 27	5 58.01	+22 40.5	1.634	2.564	9.2	20.0
12 7	5 49.97	+19 17.9	1.788	2.757	4.7	20.0	12 7	5 49.54	+22 31.3	1.597	2.568	4.8	19.8
12 17	5 39.81	+19 52.8	1.760	2.743	1.2	19.7	12 17	5 39.86	+22 20.6	1.588	2.572	0.4	19.4
12 27	5 29.42	+20 29.4	1.762	2.730	4.6	19.9	12 27	5 30.26	+22 8.9	1.608	2.577	4.7	19.8
1 6	5 19.99	+21 6.6	1.793	2.716	8.8	20.1	1 6	5 21.98	+21 57.7	1.655	2.582	9.1	20.1
1 16	5 12.55	+21 43.8	1.849	2.702	12.6	20.3	1 16	5 15.97	+21 48.7	1.726	2.588	12.9	20.3
1 26	5 7.80	+22 20.9	1.928	2.688	15.8	20.5	1 26	5 12.82	+21 43.5	1.819	2.593	16.1	20.5
146289	2001 GH ₁		12 17.1 158°30	1°5/17.3 18			441679	2008 YB ₁₈		12 17.1 74°68	2°2/17.5 16		
11 17	6 11.29	+16 16.9	1.862	2.706	13.1	19.5	11 17	6 8.33	+30 6.1	1.645	2.502	13.9	21.7
11 27	6 2.81	+17 9.6	1.795	2.714	9.3	19.3	11 27	6 0.91	+29 53.1	1.586	2.510	9.9	21.4
12 7	5 52.01	+18 9.4	1.755	2.721	5.0	19.0	12 7	5 51.03	+29 30.8	1.552	2.518	5.6	21.2
12 17	5 39.84	+19 13.3	1.745	2.728	1.5	18.8	12 17	5 39.89	+28 58.0	1.545	2.527	2.2	21.0
12 27	5 27.59	+20 17.8	1.767	2.733	4.8	19.0	12 27	5 28.98	+28 15.9	1.567	2.535	5.1	21.2
1 6	5 16.55	+21 20.2	1.819	2.738	9.0	19.3	1 6	5 19.70	+27 28.6	1.617	2.543	9.4	21.5
1 16	5 7.75	+22 19.4	1.898	2.742	12.7	19.5	1 16	5 13.05	+26 40.7	1.692	2.551	13.2	21.7
1 26	5 1.87	+23 15.2	1.999	2.745	15.8	19.8	1 26	5 9.55	+25 56.5	1.788	2.559	16.4	22.0
477391	2009 VO ₃₇		12 17.1 66°05	0°8/17.1 18			370282	2002 QP ₉₃		12 17.1 126°54	4°1/17.7 17		
11 17	6 10.02	+22 5.8	1.299	2.168	16.1	21.2	11 17	6 6.25	+37 7.7	2.534	3.364	10.6	21.3
11 27	6 2.12	+21 55.3	1.262	2.194	11.2	21.0	11 27	5 58.99	+37 27.1	2.471	3.372	8.0	21.2
12 7	5 51.60	+21 44.3	1.249	2.220	5.8	20.8	12 7	5 49.92	+37 36.0	2.434	3.381	5.5	21.0
12 17	5 39.85	+21 32.4	1.262	2.245	0.8	20.5	12 17	5 39.88	+37 31.9	2.426	3.389	4.1	20.9
12 27	5 28.61	+21 20.4	1.302	2.271	5.5	20.9	12 27	5 29.94	+37 14.4	2.448	3.397	5.1	21.0
1 6	5 19.37	+21 10.2	1.368	2.297	10.5	21.3	1 6	5 21.12	+36 45.5	2.499	3.404	7.5	21.2
1 16	5 13.12	+21 3.9	1.458	2.322	14.7	21.6	1 16	5 14.21	+36 8.7	2.577	3.412	10.1	21.4
1 26	5 10.31	+21 2.5	1.568	2.347	18.0	21.9	1 26	5 9.72	+35 28.1	2.678	3.419	12.3	21.5
283071	2008 RS ₁₄₅		12 17.1 156°65	4°7/16.9 18			225724	2001 RD ₉₇		12 17.1 175°69	1°8/17.0 18		
11 17	6 5.63	+12 0.6	1.678	2.530	14.0	21.2	11 17	6 7.65	+18 40.6	1.875	2.728	12.7	21.5
11 27	5 58.89	+11 33.3	1.615	2.533	10.3	21.0	11 27	6 0.20	+18 30.6	1.807	2.731	9.0	21.3
12 7	5 49.97	+11 15.0	1.578	2.535	6.6	20.8	12 7	5 50.64	+18 23.0	1.765	2.732	4.9	21.0
12 17	5 39.84	+11 7.5	1.567	2.537	4.7	20.7	12 17	5 39.90	+18 17.7	1.752	2.734	1.8	20.8
12 27	5 29.75	+11 12.1	1.584	2.539	6.7	20.8	12 27	5 29.18	+18 15.1	1.769	2.734	4.9	21.0
1 6	5 20.91	+11 28.5	1.629	2.540	10.4	21.0	1 6	5 19.67	+18 16.1	1.815	2.735	8.9	21.3
1 16	5 14.28	+11 55.3	1.698	2.542	14.0	21.3	1 16	5 12.30	+18 21.1	1.886	2.734	12.6	21.5
1 26	5 10.46	+12 30.5	1.787	2.543	17.0	21.5	1 26	5 7.66	+18 30.9	1.979	2.733	15.7	21.7
311737	2006 SQ ₄₁₂		12 17.1 52°22	0°9/17.0 18			12693	1989 EZ		12 17.1 160°64	3°0/17.4 18		
11 17	6 8.23	+21 58.1	1.647	2.508	13.8	19.7	11 17	6 9.13	+31 54.8	2.215	3.056	11.5	17.4
11 27	6 0.92	+23 11.1	1.592	2.519	9.6	19.4	11 27	6 1.16	+32 21.1	2.149	3.063	8.3	17.2
12 7	5 51.11	+24 26.6	1.562	2.531	5.0	19.2	12 7	5 51.11	+32 39.5	2.110	3.069	5.1	17.0
12 17	5 39.85	+25 39.5	1.560	2.543	0.9	18.9	12 17	5 39.91	+32 47.3	2.100	3.075	3.0	16.9
12 27	5 28.56	+26 45.5	1.588	2.556	4.9	19.3	12 27	5 28.75	+32 43.5	2.120	3.080	4.8	17.0
1 6	5 18.64	+27 42.4	1.644	2.569	9.4	19.5	1 6	5 18.80	+32 29.6	2.170	3.084	8.0	17.2
1 16	5 11.20	+28 30.2	1.726	2.582	13.2	19.8	1 16	5 10.95	+32 8.7	2.246	3.087	11.1	17.4
1 26	5 6.92	+29 10.9	1.830	2.595	16.4	20.1	1 26	5 5.81	+31 45.0	2.346	3.090	13.7	17.6
58867	1998 HV ₁₁₀		12 17.1 214°60	0°3/17.1 17			281220	2007 HY ₃₈		12 17.1 201°55	0°4/17.2 18		
11 17	6 4.20	+21 42.1	2.200	3.055	11.0	19.6	11 17	6 8.05	+24 5.9	1.887	2.741	12.5	21.4
11 27	5 57.66	+21 56.3	2.126	3.051	7.7	19.4	11 27	6 0.63	+24 15.5	1.813	2.738	8.8	21.2
12 7	5 49.28	+22 11.2	2.079	3.048	4.0	19.2	12 7	5 50.94	+24 23.2	1.765	2.735	4.6	20.9
12 17	5 39.83	+22 25.4	2.061	3.045	0.3	18.9	12 17	5 39.91	+24 27.4	1.746	2.730	0.4	20.6
12 27	5 30.31	+22 38.5	2.073	3.041	3.9	19.2	12 27	5 28.83	+24 27.4	1.757	2.726	4.5	20.9
1 6	5 21.75	+22 50.3	2.114	3.037	7.7	19.4	1 6	5 18.95	+24 24.3	1.797	2.720	8.8	21.1
1 16	5 14.96	+23 1.7	2.182	3.033	11.0	19.6	1 16	5 11.28	+24 20.0	1.863	2.714	12.6	21.4
1 26	5 10.54	+23 13.6	2.273	3.028	13.8	19.8	1 26	5 6.48	+24 16.7	1.950	2.708	15.7	21.6
116264	2003 YY ₃₂		12 17.1 240°86	2°3/17.1 18			97604	2000 EA ₇₇		12 17.1 350°46	3°9/17.2 18		
11 17	6 1.85	+15 35.8	2.376	3.226	10.5	20.0	11 17	6 5.34	+33 0.4	2.023	2.872	12.1	19.0
11 27	5 55.87	+15 38.3	2.302	3.222	7.5	19.8	11 27	5 58.81	+33 43.3	1.954	2.870	8.9	18.8
12 7	5 48.30	+15 45.4	2.255	3.219	4.3	19.6	12 7	5 50.03	+34 18.3	1.911	2.868	5.7	18.6
12 17	5 39.82	+15 57.4	2.237	3.215	2.3	19.4	12 17	5 39.91	+34 41.8	1.895	2.867	3.9	18.5
12 27	5 31.30	+16 14.0	2.249	3.212	4.3	19.6	12 27	5 29.71	+34 51.7	1.909	2.865	5.6	18.6
1 6	5 23.59	+16 34.8	2.291	3.208	7.5	19.8	1 6	5 20.68	+34 48.9	1.950	2.864	8.8	18.8
1 16	5 17.43	+16 59.4	2.360	3.205	10.5	20.0	1 16	5 13.83	+34 36.6	2.016	2.863	11.9	19.0
1 26	5 13.34	+17 27.3	2.451	3.201	13.1	20.1	1 26	5 9.82	+34 18.7	2.105	2.863	14.7	19.2
128248	2003 SD ₂₁₆		12 17.1 63°43	0°0/17.1 18			30139	2000 GG ₃		12 17.1 113°04	11°7/18.3 18		
11 17	6 3.94	+23 20.3	2.048	2.906	11.6	19.1	11 17	6 25.09	+53 49.9	1.888	2.651	16.2	19.2
11 27	5 57.39	+23 20.1	1.996	2.923	8.0	18.9	11 27	6 13.78	+55 28.2	1.848	2.671	14.1	19.1
12 7	5 49.07	+23 18.5	1.970	2.940	4.1	18.7	12 7	5 58.17	+56 39.1	1.830	2.691	12.4	19.0
12 17	5 39.85	+23 14.9	1.973	2.957	0.1	18.4	12 17	5 40.03	+57 13.0	1.837	2.710	11.7	19.0
12 27	5 30.79	+23 9.6	2.006	2.974	4.0	18.7	12 27	5 22.01	+57 6.7	1.868	2.728	12.1	19.1
1 6	5 22.92	+23 3.4	2.067	2.992	7.7	19.0	1 6	5 6.71	+56 25.2	1.923	2.746	13.4	19.2
1 16	5 16.97	+22 57.8	2.155	3.009	11.0	19.2	1 16	4 55.79	+55 18.6	2.000	2.763	15.2	19.4
1 26	5 13.44	+22 54.3	2.265	3.027	13.7	19.5	1 26	4 49.89	+53 58.5	2.096	2.780	16.9	19.5
21062	lasky		12 17.1 67°69	9°8/17.5 18			227763	2006 RC ₂		12 17.1 35°23	22°4/15.3 18		
11 17	6 1.45	- 7 26.8	2.226	3.000	13.7	17.3	1						

EPHEMERIDES

12 17.1

12 17.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
195675	2002 <i>OQ</i> ₂₂		12 17.1 102°08	2°4/16.6	18		51352	2000 <i>RW</i> ₉		12 17.2 41°15	4°5/17.1	18	
11 17	6 3.45	+17 47.1	2.358	3.208	10.5	19.9	11 17	6 10.51	+29 34.6	1.047	1.925	18.4	17.8
11 27	5 56.82	+16 56.6	2.299	3.220	7.5	19.7	11 27	6 3.46	+30 42.1	1.008	1.940	13.2	17.5
12 7	5 48.73	+16 7.5	2.267	3.231	4.3	19.5	12 7	5 52.75	+31 41.0	0.990	1.956	7.8	17.3
12 17	5 39.90	+15 21.8	2.265	3.243	2.4	19.4	12 17	5 40.01	+32 23.5	0.995	1.973	4.5	17.2
12 27	5 31.24	+14 41.6	2.294	3.254	4.5	19.6	12 27	5 27.56	+32 45.9	1.026	1.991	7.6	17.4
1 6	5 23.56	+14 8.6	2.353	3.265	7.6	19.8	1 6	5 17.55	+32 50.1	1.080	2.009	12.6	17.7
1 16	5 17.53	+13 43.8	2.438	3.276	10.5	20.0	1 16	5 11.35	+32 42.1	1.155	2.028	17.1	18.1
1 26	5 13.57	+13 27.6	2.546	3.286	12.9	20.2	1 26	5 9.56	+32 28.3	1.248	2.047	20.8	18.4
413783	2006 <i>HX</i> ₃₂		12 17.1 194°61	2°5/16.8	18		420944	2013 <i>PF</i> ₁		12 17.2 332°98	5°1/16.5	17	
11 17	6 1.32	+15 24.5	2.741	3.586	9.4	21.3	11 17	6 0.99	+9 21.3	2.143	2.986	11.7	20.9
11 27	5 55.32	+14 59.6	2.668	3.585	6.8	21.1	11 27	5 55.37	+8 42.1	2.075	2.983	8.9	20.8
12 7	5 47.97	+14 38.0	2.621	3.582	4.0	20.9	12 7	5 48.12	+8 11.7	2.032	2.980	6.3	20.6
12 17	5 39.90	+14 20.5	2.605	3.580	2.5	20.8	12 17	5 39.95	+7 52.5	2.017	2.977	5.1	20.5
12 27	5 31.83	+14 8.1	2.619	3.577	4.2	20.9	12 27	5 31.78	+7 46.0	2.031	2.974	6.5	20.6
1 6	5 24.50	+14 1.5	2.664	3.574	6.9	21.1	1 6	5 24.50	+7 52.3	2.072	2.972	9.2	20.8
1 16	5 18.51	+14 0.9	2.735	3.571	9.5	21.3	1 16	5 18.86	+8 10.5	2.139	2.970	12.0	20.9
1 26	5 14.32	+14 6.0	2.830	3.567	11.8	21.4	1 26	5 15.37	+8 38.7	2.227	2.967	14.5	21.1
352317	2007 <i>UE</i> ₈₆		12 17.1 72°79	0°9/17.2	18		318774	2005 <i>SW</i> ₈₇		12 17.2 41°35	0°3/17.2	17	
11 17	6 7.57	+24 36.1	1.654	2.516	13.7	20.6	11 17	6 4.76	+23 58.8	1.776	2.639	12.8	21.3
11 27	6 0.33	+25 0.5	1.604	2.532	9.6	20.4	11 27	5 58.32	+24 5.2	1.716	2.645	9.0	21.1
12 7	5 50.76	+25 22.7	1.578	2.548	5.0	20.1	12 7	5 49.74	+24 9.8	1.682	2.652	4.7	20.8
12 17	5 39.95	+25 40.3	1.581	2.564	0.9	19.9	12 17	5 39.98	+24 11.5	1.675	2.659	0.3	20.5
12 27	5 29.32	+25 52.1	1.612	2.580	4.8	20.2	12 27	5 30.29	+24 10.0	1.697	2.666	4.5	20.9
1 6	5 20.19	+25 58.9	1.671	2.597	9.1	20.5	1 6	5 21.90	+24 6.4	1.746	2.673	8.7	21.1
1 16	5 13.52	+26 2.6	1.755	2.613	12.9	20.8	1 16	5 15.72	+24 2.4	1.822	2.681	12.4	21.4
1 26	5 9.89	+26 5.6	1.860	2.629	16.0	21.0	1 26	5 12.33	+23 59.8	1.918	2.689	15.5	21.6
174943	2004 <i>CN</i> ₇₉		12 17.1 345°73	0°8/17.1	18		481809	2008 <i>TL</i> ₁₈₂		12 17.2 1°17	1°7/17.1	16	
11 17	6 4.71	+20 33.8	1.649	2.514	13.5	20.0	11 17	6 6.04	+24 49.7	1.290	2.165	15.8	21.0
11 27	5 58.48	+20 45.5	1.581	2.511	9.5	19.7	11 27	6 0.01	+25 36.5	1.230	2.164	11.2	20.7
12 7	5 49.90	+20 59.4	1.539	2.509	5.0	19.5	12 7	5 50.94	+26 22.9	1.192	2.163	6.0	20.4
12 17	5 39.94	+21 14.3	1.523	2.507	0.8	19.1	12 17	5 40.00	+27 4.1	1.180	2.163	1.7	20.1
12 27	5 29.92	+21 29.4	1.536	2.505	4.9	19.4	12 27	5 28.95	+27 37.0	1.194	2.164	5.9	20.4
1 6	5 21.16	+21 44.7	1.576	2.503	9.4	19.7	1 6	5 19.56	+28 0.9	1.234	2.165	11.1	20.7
1 16	5 14.71	+22 0.6	1.640	2.502	13.5	19.9	1 16	5 13.16	+28 17.6	1.296	2.168	15.6	21.0
1 26	5 11.23	+22 18.1	1.726	2.501	16.8	20.2	1 26	5 10.53	+28 30.2	1.378	2.171	19.4	21.3
187091	2005 <i>PC</i> ₂₀		12 17.1 174°53	0°2/17.1	18		280414	2003 <i>WP</i> ₁₄₀		12 17.2 345°21	2°2/16.9	18	
11 17	6 9.14	+23 8.8	1.874	2.727	12.7	21.2	11 17	6 1.77	+25 35.3	1.466	2.341	14.2	19.1
11 27	6 1.30	+23 2.7	1.806	2.730	8.9	21.0	11 27	5 56.96	+26 32.5	1.390	2.324	10.2	18.8
12 7	5 51.25	+22 54.6	1.764	2.733	4.6	20.7	12 7	5 49.38	+27 30.4	1.338	2.308	5.6	18.5
12 17	5 39.97	+22 43.9	1.751	2.735	0.2	20.4	12 17	5 39.98	+28 24.3	1.311	2.293	2.2	18.2
12 27	5 28.75	+22 30.8	1.768	2.736	4.5	20.7	12 27	5 30.23	+29 10.4	1.311	2.280	5.7	18.4
1 6	5 18.81	+22 17.0	1.814	2.736	8.8	21.0	1 6	5 21.72	+29 46.7	1.337	2.268	10.5	18.7
1 16	5 11.14	+22 4.6	1.886	2.736	12.5	21.2	1 16	5 15.78	+30 14.2	1.387	2.258	14.8	18.9
1 26	5 6.31	+21 55.5	1.980	2.735	15.6	21.4	1 26	5 13.29	+30 35.1	1.455	2.249	18.5	19.1
222874	2002 <i>GR</i> ₁₃		12 17.1 180°91	3°7/17.3	17		487369	2014 <i>QQ</i> ₂₅₅		12 17.2 304°86	0°2/17.2	17	
11 17	6 6.39	+33 37.9	2.233	3.075	11.4	20.7	11 17	6 4.15	+21 16.9	2.010	2.868	11.8	20.9
11 27	5 59.37	+34 15.8	2.164	3.076	8.4	20.5	11 27	5 57.85	+21 42.8	1.936	2.863	8.3	20.7
12 7	5 50.28	+34 45.5	2.121	3.076	5.4	20.3	12 7	5 49.52	+22 10.5	1.889	2.858	4.3	20.4
12 17	5 39.96	+35 3.8	2.106	3.076	3.7	20.2	12 17	5 39.99	+22 38.2	1.869	2.853	0.3	20.1
12 27	5 29.59	+35 9.0	2.121	3.076	5.3	20.3	12 27	5 30.34	+23 4.6	1.880	2.849	4.2	20.4
1 6	5 20.32	+35 2.3	2.164	3.075	8.2	20.5	1 6	5 21.70	+23 29.1	1.919	2.844	8.2	20.7
1 16	5 13.09	+34 46.5	2.234	3.075	11.2	20.7	1 16	5 14.97	+23 52.0	1.985	2.839	11.8	20.9
1 26	5 8.52	+34 25.8	2.326	3.075	13.7	20.9	1 26	5 10.80	+24 14.1	2.072	2.835	14.8	21.1
61962	2000 <i>RV</i> ₂₀		12 17.1 186°05	0°7/17.1	18		406799	2008 <i>UQ</i> ₈		12 17.2 40°17	3°6/16.7	17	
11 17	6 7.32	+22 39.2	1.776	2.634	13.0	19.1	11 17	6 1.74	+14 0.1	2.093	2.946	11.6	20.9
11 27	6 0.11	+22 16.4	1.707	2.634	9.2	18.9	11 27	5 55.88	+13 22.8	2.032	2.951	8.4	20.7
12 7	5 50.66	+21 51.5	1.664	2.634	4.8	18.6	12 7	5 48.36	+12 50.9	1.997	2.957	5.3	20.5
12 17	5 39.97	+21 24.7	1.650	2.633	0.7	18.3	12 17	5 39.97	+12 26.3	1.991	2.963	3.6	20.4
12 27	5 29.33	+20 57.5	1.664	2.633	4.7	18.6	12 27	5 31.66	+12 10.4	2.013	2.969	5.4	20.5
1 6	5 20.02	+20 32.0	1.708	2.631	9.1	18.9	1 6	5 24.35	+12 3.9	2.063	2.975	8.5	20.7
1 16	5 12.99	+20 10.5	1.776	2.630	13.0	19.1	1 16	5 18.76	+12 6.8	2.139	2.981	11.6	20.9
1 26	5 8.83	+19 55.0	1.866	2.628	16.2	19.3	1 26	5 15.38	+12 18.0	2.237	2.987	14.2	21.1
12453	1996 <i>YY</i>		12 17.1 209°49	1°7/17.4	18		222174	2000 <i>BN</i> ₁₆		12 17.2 314°41	0°4/17.2	18	
11 17	6 8.25	+29 29.3	2.345	3.187	10.9	18.2	11 17	6 6.36	+21 49.2	1.308	2.183	15.7	19.9
11 27	6 0.47	+29 21.9	2.263	3.180	7.8	18.0	11 27	6 0.26	+22 2.2	1.237	2.171	11.2	19.6
12 7	5 50.77	+29 7.5	2.208	3.172	4.3	17.8	12 7	5 51.11	+22 16.8	1.188	2.159	5.9	19.3
12 17	5 39.97	+28 45.0	2.182	3.163	1.7	17.6	12 17	5 40.01	+22 31.2	1.164	2.148	0.4	18.9
12 27	5 29.17	+28 14.7	2.188	3.154	4.1	17.8	12 27	5 28.67	+22 44.2	1.167	2.137	5.8	19.2
1 6	5 19.42	+27 38.7	2.225	3.144	7.6	18.0	1 6	5 18.85	+22 55.8	1.195	2.127	11.3	19.5
1 16	5 11.60	+27 0.4	2.289	3.133	10.8	18.2	1 16	5 11.93	+23 7.5	1.246	2.117	16.2	19.8
1 26	5 6.27	+26 23.1	2.376	3.121	13.6	18.3	1 26	5 8.75	+23 21.0	1.315	2.108	20.2	20.0
522412	2016 <i>CH</i> ₃₁₁		12 17.2 92°09	4°0/17.5	18		408728	2014 <i>OL</i> ₄₇		12 17.2 244°47	2°6/17.1	17	
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EPHEMERIDES

12 17.2

12 17.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
150395	2000 <i>ES</i> ₁₁	12 17.2 240°81		1°9/17.2 18			261730	2006 <i>AO</i> ₅₂	12 17.2 204°01		1°0/17.1 17		
11 17	6 9.54	+27 4.4	1.785	2.639	13.2	20.6	11 17	6 3.28	+20 45.0	2.214	3.069	10.9	21.4
11 27	6 2.03	+27 35.0	1.703	2.626	9.4	20.4	11 27	5 57.00	+20 36.1	2.143	3.068	7.7	21.2
12 7	5 51.87	+28 2.2	1.645	2.612	5.2	20.1	12 7	5 48.99	+20 27.7	2.098	3.067	4.1	21.0
12 17	5 40.03	+28 22.4	1.616	2.598	1.9	19.8	12 17	5 40.01	+20 19.6	2.083	3.066	1.0	20.8
12 27	5 27.91	+28 33.6	1.617	2.583	5.1	20.0	12 27	5 31.04	+20 12.4	2.097	3.065	4.0	21.0
1 6	5 16.99	+28 36.4	1.646	2.568	9.5	20.3	1 6	5 23.02	+20 6.8	2.141	3.063	7.6	21.2
1 16	5 8.49	+28 33.1	1.700	2.552	13.6	20.5	1 16	5 16.75	+20 3.9	2.211	3.062	10.9	21.4
1 26	5 3.21	+28 27.5	1.775	2.535	17.0	20.7	1 26	5 12.74	+20 4.4	2.304	3.060	13.6	21.6
245854	2006 <i>MM</i> ₈	12 17.2 146°38		4°0/17.3 18			13143	1995 <i>AF</i>	12 17.2 106°14		2°9/17.7 18		
11 17	6 5.41	+9 45.5	2.311	3.144	11.3	21.9	11 17	6 9.57	+32 49.0	1.962	2.807	12.6	17.1
11 27	5 58.29	+9 46.8	2.250	3.156	8.4	21.7	11 27	6 1.48	+32 39.9	1.907	2.822	9.1	16.9
12 7	5 49.57	+9 57.1	2.215	3.166	5.6	21.6	12 7	5 51.28	+32 20.1	1.877	2.838	5.4	16.7
12 17	5 40.00	+10 17.0	2.209	3.176	4.0	21.5	12 17	5 40.05	+31 48.4	1.876	2.853	2.9	16.5
12 27	5 30.48	+10 45.9	2.235	3.185	5.4	21.6	12 27	5 29.12	+31 5.7	1.904	2.867	4.9	16.7
1 6	5 21.90	+11 22.7	2.289	3.194	8.2	21.8	1 6	5 19.70	+30 15.8	1.962	2.882	8.4	16.9
1 16	5 14.97	+12 5.8	2.371	3.202	11.0	22.0	1 16	5 12.65	+29 23.3	2.046	2.896	11.7	17.2
1 26	5 10.19	+12 53.3	2.476	3.209	13.4	22.2	1 26	5 8.46	+28 32.7	2.153	2.909	14.5	17.4
66879	1999 <i>VK</i> ₆₅	12 17.2 140°71		3°0/16.7 18			1366	<i>Piccolo</i>	12 17.2 127°76		3°8/17.4 18		
11 17	6 2.86	+15 11.2	2.324	3.173	10.7	19.3	11 17	6 7.66	+34 16.4	2.284	3.122	11.3	15.4
11 27	5 56.53	+14 35.0	2.260	3.178	7.7	19.1	11 27	6 0.17	+34 50.1	2.223	3.132	8.3	15.2
12 7	5 48.66	+14 2.6	2.222	3.183	4.7	19.0	12 7	5 50.66	+35 14.8	2.188	3.142	5.4	15.1
12 17	5 39.99	+13 35.5	2.214	3.188	3.0	18.8	12 17	5 40.05	+35 27.3	2.183	3.152	3.8	15.0
12 27	5 31.39	+13 15.2	2.236	3.193	4.9	19.0	12 27	5 29.49	+35 26.6	2.207	3.161	5.2	15.1
1 6	5 23.72	+13 2.6	2.287	3.197	7.9	19.2	1 6	5 20.11	+35 14.2	2.260	3.170	8.0	15.3
1 16	5 17.66	+12 58.0	2.364	3.202	10.8	19.4	1 16	5 12.79	+34 53.3	2.339	3.178	10.8	15.5
1 26	5 13.68	+13 1.0	2.464	3.206	13.2	19.6	1 26	5 8.10	+34 27.9	2.442	3.186	13.3	15.7
61803	2000 <i>QL</i> ₁₈₅	12 17.2 27°39		7°1/17.9 18			415125	2012 <i>DN</i> ₃₂	12 17.2 243°28		4°8/17.6 18		
11 17	6 4.91	+6 12.2	1.246	2.103	17.5	18.3	11 17	6 7.72	+37 56.3	2.336	3.165	11.4	21.7
11 27	5 58.85	+6 20.9	1.197	2.111	13.4	18.1	11 27	6 0.40	+38 26.6	2.255	3.154	8.7	21.6
12 7	5 50.16	+6 51.0	1.170	2.121	9.4	17.9	12 7	5 50.88	+38 45.7	2.200	3.144	6.2	21.4
12 17	5 40.01	+7 43.2	1.167	2.131	7.1	17.8	12 17	5 40.05	+38 50.0	2.174	3.133	4.8	21.3
12 27	5 29.97	+8 55.1	1.190	2.143	8.7	17.9	12 27	5 29.12	+38 38.0	2.177	3.122	5.9	21.3
1 6	5 21.53	+10 21.5	1.237	2.155	12.4	18.2	1 6	5 19.30	+38 11.4	2.208	3.111	8.5	21.5
1 16	5 15.81	+11 56.0	1.307	2.168	16.3	18.4	1 16	5 11.57	+37 34.1	2.266	3.099	11.3	21.6
1 26	5 13.43	+13 33.2	1.397	2.181	19.6	18.7	1 26	5 6.60	+36 51.1	2.346	3.088	13.8	21.8
194713	2001 <i>XG</i> ₂₄₄	12 17.2 324°99		2°1/17.3 18			255236	2005 <i>UK</i> ₄₄₀	12 17.2 284°91		6°7/17.3 17		
11 17	6 6.15	+27 20.4	1.324	2.197	15.6	20.2	11 17	6 9.34	+40 33.7	1.990	2.818	13.1	20.2
11 27	6 0.19	+27 37.9	1.252	2.184	11.2	19.9	11 27	6 2.00	+41 32.0	1.917	2.810	10.4	20.0
12 7	5 51.09	+27 50.4	1.203	2.172	6.2	19.6	12 7	5 51.90	+42 16.7	1.868	2.802	7.9	19.9
12 17	5 40.03	+27 54.5	1.178	2.161	2.1	19.3	12 17	5 40.09	+42 41.8	1.846	2.793	6.7	19.8
12 27	5 28.75	+27 48.9	1.181	2.150	6.0	19.5	12 27	5 28.07	+42 44.6	1.852	2.785	7.8	19.8
1 6	5 19.08	+27 35.3	1.208	2.140	11.2	19.8	1 6	5 17.41	+42 26.4	1.884	2.777	10.3	20.0
1 16	5 12.40	+27 17.6	1.258	2.130	16.0	20.0	1 16	5 9.35	+41 52.3	1.941	2.769	13.1	20.1
1 26	5 9.55	+27 0.1	1.327	2.121	20.0	20.2	1 26	5 4.65	+41 8.9	2.019	2.761	15.7	20.3
59264	1999 <i>CL</i> ₃₀	12 17.2 234°65		1°3/17.2 18			394140	2006 <i>KU</i> ₃₀	12 17.2 156°83		0°2/17.2 18		
11 17	6 8.31	+26 27.2	1.806	2.662	13.0	20.2	11 17	6 6.86	+23 14.3	2.050	2.903	11.8	22.2
11 27	6 1.02	+26 37.3	1.728	2.652	9.2	19.9	11 27	5 59.57	+23 9.6	1.985	2.909	8.2	22.0
12 7	5 51.28	+26 43.2	1.674	2.643	5.0	19.6	12 7	5 50.35	+23 3.1	1.946	2.915	4.3	21.7
12 17	5 40.04	+26 42.9	1.649	2.632	1.3	19.4	12 17	5 40.06	+22 54.3	1.936	2.920	0.2	21.4
12 27	5 28.66	+26 35.7	1.654	2.622	4.8	19.6	12 27	5 29.85	+22 43.5	1.956	2.924	4.1	21.8
1 6	5 18.53	+26 22.9	1.686	2.610	9.2	19.8	1 6	5 20.80	+22 32.0	2.006	2.928	8.0	22.0
1 16	5 10.74	+26 7.6	1.745	2.599	13.2	20.1	1 16	5 13.76	+22 21.5	2.082	2.932	11.5	22.2
1 26	5 6.01	+25 52.7	1.824	2.587	16.5	20.3	1 26	5 9.28	+22 13.7	2.180	2.935	14.4	22.4
181810	1998 <i>RP</i> ₁₄	12 17.2 90°29		1°1/17.2 18			310841	2003 <i>AK</i> ₃	12 17.2 340°01		9°9/18.2 17		
11 17	6 11.51	+25 57.3	1.522	2.381	14.8	21.0	11 17	6 1.75	-0 10.5	1.391	2.227	17.2	19.5
11 27	6 3.10	+26 5.8	1.479	2.406	10.3	20.8	11 27	5 56.74	-0 16.7	1.319	2.211	14.2	19.2
12 7	5 52.18	+26 9.6	1.460	2.429	5.4	20.6	12 7	5 49.20	+0 3.9	1.268	2.196	11.4	19.0
12 17	5 40.05	+26 6.7	1.469	2.453	1.1	20.3	12 17	5 40.05	+0 55.0	1.240	2.182	9.9	18.9
12 27	5 28.31	+25 57.1	1.507	2.476	5.1	20.7	12 27	5 30.65	+2 16.9	1.236	2.169	10.9	18.9
1 6	5 18.40	+25 43.1	1.573	2.498	9.6	21.0	1 6	5 22.43	+4 4.6	1.257	2.158	13.8	19.1
1 16	5 11.29	+25 27.9	1.663	2.520	13.5	21.3	1 16	5 16.56	+6 10.4	1.300	2.148	17.2	19.2
1 26	5 7.49	+25 14.6	1.774	2.542	16.7	21.6	1 26	5 13.85	+8 25.5	1.363	2.139	20.5	19.4
493108	2014 <i>TB</i> ₄	12 17.2 10°73		0°0/17.2 17			173388	2000 <i>CT</i> ₅₈	12 17.2 30°68		23°1/23.9 18		
11 17	6 1.93	+23 6.3	1.556	2.429	13.7	20.9	11 17	6 6.57	-20 42.5	0.942	1.711	28.3	19.2
11 27	5 56.58	+23 11.6	1.500	2.433	9.6	20.6	11 27	6 0.49	-21 51.4	0.913	1.718	26.3	19.1
12 7	5 48.93	+23 16.3	1.467	2.439	5.0	20.4	12 7	5 51.16	-22 1.9	0.894	1.726	24.5	19.0
12 17	5 40.00	+23 19.3	1.461	2.445	0.1	20.0	12 17	5 40.08	-21 4.2	0.889	1.735	23.4	18.9
12 27	5 31.16	+23 20.4	1.482	2.453	4.8	20.4	12 27	5 29.27	-18 57.3	0.900	1.744	23.2	19.0
1 6	5 23.68	+23 20.6	1.530	2.461	9.3	20.7	1 6	5 20.61	-15 52.1	0.926	1.755	24.0	19.1
1 16	5 18.56	+23 21.1	1.602	2.471	13.3	21.0	1 16	5 15.34	-12 6.3	0.970	1.766	25.5	19.2
1 26	5 16.36	+23 23.5	1.694	2.481	16.6	21.2	1 26	5 14.08	-8 0.2	1.028	1.778	27.3	19.4
335353	2005 <i>SO</i> ₆₇	12 17.2 164°34		1°8/17.3 18			419916	2011 <i>BC</i> ₁₃	12 17.2 91°62		0°8/17.2 18		
11 17	6 10.21	+27 57.9	1.890	2.740	12.7	21.8	11 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
132541	2002 <i>JE</i> ₇₃		12 17.2 143°01'	5°9/16.3	18		358254	2006 <i>TM</i> ₃₃		12 17.2 66°05'	1°6/17.3	18	
11 17	6 5.02	+ 8 14.1	2.024	2.860	12.6	20.0	11 17	6 6.45	+26 58.2	1.776	2.635	13.0	21.1
11 27	5 58.16	+ 7 17.2	1.967	2.869	9.6	19.8	11 27	5 59.59	+27 15.4	1.717	2.643	9.2	20.9
12 7	5 49.57	+ 6 30.1	1.934	2.877	7.0	19.6	12 7	5 50.47	+27 28.2	1.684	2.652	5.0	20.7
12 17	5 40.08	+ 5 56.0	1.930	2.884	5.9	19.6	12 17	5 40.12	+27 34.5	1.677	2.660	1.6	20.5
12 27	5 30.69	+ 5 37.1	1.955	2.891	7.3	19.7	12 27	5 29.84	+27 33.5	1.700	2.668	4.7	20.7
1 6	5 22.39	+ 5 33.9	2.008	2.898	9.9	19.9	1 6	5 20.93	+27 26.7	1.751	2.677	8.8	21.0
1 16	5 15.91	+ 5 45.0	2.085	2.904	12.7	20.1	1 16	5 14.35	+27 16.5	1.827	2.685	12.5	21.2
1 26	5 11.78	+ 6 8.2	2.184	2.910	15.2	20.3	1 26	5 10.67	+27 5.8	1.925	2.694	15.5	21.4
518105	2016 <i>AQ</i> ₂₃₀		12 17.2 334°97'	4°3/16.9	17		504457	2008 <i>CY</i> ₁₈₅		12 17.2 301°95'	11°2/20.6	17	
11 17	6 1.23	+10 29.3	2.172	3.017	11.5	21.4	11 17	6 24.33	+48 33.9	1.056	1.884	22.1	20.8
11 27	5 55.58	+10 11.5	2.103	3.014	8.6	21.2	11 27	6 14.09	+48 16.8	0.991	1.878	18.2	20.5
12 7	5 48.28	+10 2.3	2.059	3.011	5.8	21.0	12 7	5 58.54	+47 17.8	0.944	1.873	14.2	20.2
12 17	5 40.05	+10 3.0	2.043	3.009	4.3	20.9	12 17	5 40.26	+45 26.3	0.919	1.868	11.4	20.1
12 27	5 31.80	+10 14.4	2.056	3.007	5.8	21.0	12 27	5 22.87	+42 44.2	0.918	1.863	12.0	20.1
1 6	5 24.43	+10 35.8	2.097	3.004	8.7	21.2	1 6	5 9.43	+39 28.9	0.941	1.858	15.5	20.3
1 16	5 18.68	+11 6.2	2.164	3.002	11.6	21.4	1 16	5 1.46	+36 4.0	0.987	1.853	19.9	20.5
1 26	5 15.07	+11 43.6	2.253	3.001	14.2	21.6	1 26	4 59.16	+32 50.1	1.052	1.849	23.9	20.8
452933	2006 <i>WG</i> ₁₀₃		12 17.2 309°15'	0°9/17.2	17		515143	2011 <i>HZ</i> ₇₂		12 17.2 302°23'	3°3/16.9	18	
11 17	6 4.84	+24 39.8	1.742	2.605	13.0	21.5	11 17	6 5.72	+17 29.1	1.337	2.208	15.6	21.5
11 27	5 58.71	+25 0.6	1.662	2.591	9.2	21.3	11 27	5 59.78	+16 58.7	1.258	2.189	11.3	21.2
12 7	5 50.16	+25 20.2	1.607	2.577	4.9	21.0	12 7	5 50.90	+16 31.9	1.202	2.169	6.5	20.9
12 17	5 40.09	+25 36.3	1.580	2.563	0.9	20.7	12 17	5 40.14	+16 10.4	1.171	2.150	3.3	20.6
12 27	5 29.80	+25 47.5	1.581	2.550	4.8	20.9	12 27	5 29.06	+15 56.4	1.166	2.132	6.8	20.8
1 6	5 20.66	+25 54.2	1.610	2.537	9.3	21.2	1 6	5 19.35	+15 51.5	1.187	2.113	11.9	21.0
1 16	5 13.77	+25 57.9	1.663	2.524	13.3	21.4	1 16	5 12.37	+15 56.6	1.230	2.095	16.8	21.2
1 26	5 9.89	+26 1.0	1.738	2.512	16.7	21.6	1 26	5 8.97	+16 11.6	1.291	2.078	20.8	21.5
143009	2002 <i>VX</i> ₁₀₃		12 17.2 47°55'	2°1/17.4	18		80629	2000 <i>AJ</i> ₂₀₄		12 17.2 190°10'	1°2/17.1	18	
11 17	6 6.78	+29 25.2	1.769	2.626	13.1	19.5	11 17	6 8.12	+19 42.6	2.104	2.952	11.7	19.8
11 27	5 59.87	+29 26.7	1.705	2.629	9.4	19.3	11 27	6 0.50	+19 40.4	2.029	2.951	8.3	19.6
12 7	5 50.62	+29 20.9	1.666	2.632	5.3	19.0	12 7	5 50.89	+19 39.5	1.982	2.949	4.4	19.3
12 17	5 40.10	+29 5.8	1.654	2.635	2.1	18.8	12 17	5 40.15	+19 39.4	1.964	2.946	1.2	19.1
12 27	5 29.67	+28 41.7	1.671	2.638	4.9	19.0	12 27	5 29.36	+19 40.3	1.976	2.943	4.3	19.3
1 6	5 20.64	+28 11.3	1.716	2.641	9.0	19.3	1 6	5 19.64	+19 42.5	2.019	2.938	8.2	19.5
1 16	5 14.01	+27 38.2	1.786	2.644	12.7	19.5	1 16	5 11.85	+19 47.1	2.089	2.933	11.7	19.7
1 26	5 10.37	+27 6.4	1.878	2.648	15.8	19.7	1 26	5 6.61	+19 54.9	2.181	2.927	14.6	19.9
141664	2002 <i>JQ</i> ₈₈		12 17.2 185°64'	3°2/17.2	18		478822	2012 <i>VG</i> ₂₀		12 17.2 55°11'	0°5/17.1	17	
11 17	6 11.33	+29 26.6	1.505	2.364	15.0	20.3	11 17	6 9.38	+22 42.3	1.257	2.129	16.4	20.6
11 27	6 3.55	+30 6.6	1.440	2.364	10.8	20.0	11 27	6 1.84	+22 32.9	1.222	2.154	11.4	20.4
12 7	5 52.75	+30 40.1	1.399	2.364	6.3	19.8	12 7	5 51.62	+22 22.5	1.209	2.180	5.9	20.2
12 17	5 40.14	+31 2.1	1.384	2.363	3.2	19.6	12 17	5 40.15	+22 10.5	1.223	2.207	0.5	19.9
12 27	5 27.44	+31 10.2	1.398	2.363	6.1	19.8	12 27	5 29.20	+21 57.8	1.263	2.233	5.5	20.3
1 6	5 16.39	+31 5.7	1.439	2.361	10.6	20.0	1 6	5 20.28	+21 46.3	1.330	2.260	10.5	20.7
1 16	5 8.30	+30 52.8	1.503	2.360	14.8	20.3	1 16	5 14.37	+21 38.3	1.419	2.287	14.8	21.0
1 26	5 3.92	+30 36.6	1.588	2.358	18.2	20.5	1 26	5 11.92	+21 35.1	1.528	2.313	18.2	21.3
108424	2001 <i>KV</i> ₃₇		12 17.2 164°57'	4°0/17.2	18		209784	2005 <i>GD</i> ₈		12 17.2 193°78'	4°9/16.7	18	
11 17	6 4.80	+11 10.5	2.062	2.905	12.1	19.8	11 17	6 3.86	+ 8 43.5	2.313	3.146	11.3	20.3
11 27	5 58.11	+11 5.6	1.996	2.908	9.0	19.6	11 27	5 57.31	+ 8 9.2	2.241	3.144	8.6	20.1
12 7	5 49.61	+11 9.7	1.956	2.911	5.8	19.4	12 7	5 49.17	+ 7 43.5	2.196	3.141	6.1	20.0
12 17	5 40.10	+11 23.2	1.944	2.913	4.0	19.3	12 17	5 40.12	+ 7 28.5	2.180	3.138	4.9	19.9
12 27	5 30.58	+11 46.3	1.961	2.916	5.7	19.4	12 27	5 31.06	+ 7 25.5	2.194	3.135	6.2	20.0
1 6	5 22.07	+12 17.9	2.008	2.918	8.8	19.6	1 6	5 22.87	+ 7 34.6	2.236	3.131	8.8	20.1
1 16	5 15.36	+12 56.5	2.080	2.919	12.0	19.8	1 16	5 16.26	+ 7 54.6	2.304	3.126	11.6	20.3
1 26	5 11.00	+13 40.4	2.175	2.920	14.7	20.0	1 26	5 11.76	+ 8 23.9	2.394	3.121	14.0	20.5
141532	2002 <i>GE</i> ₃		12 17.2 172°51'	3°7/17.3	18		146994	2002 <i>PR</i> ₆₃		12 17.2 86°14'	3°5/17.5	18	
11 17	6 12.89	+32 0.2	1.781	2.626	13.6	20.6	11 17	6 11.84	+31 20.1	1.409	2.268	15.7	19.6
11 27	6 4.30	+32 35.7	1.715	2.630	10.0	20.4	11 27	6 3.76	+31 37.1	1.359	2.283	11.3	19.4
12 7	5 53.02	+33 2.2	1.674	2.633	6.1	20.2	12 7	5 52.73	+31 43.4	1.333	2.297	6.7	19.1
12 17	5 40.16	+33 15.4	1.661	2.636	3.7	20.1	12 17	5 40.18	+31 35.3	1.334	2.312	3.5	19.0
12 27	5 27.29	+33 13.3	1.677	2.637	5.8	20.2	12 27	5 27.95	+31 12.7	1.361	2.326	6.1	19.2
1 6	5 15.95	+32 57.9	1.723	2.638	9.6	20.4	1 6	5 17.71	+30 39.4	1.416	2.340	10.5	19.5
1 16	5 7.31	+32 33.8	1.793	2.638	13.3	20.6	1 16	5 10.61	+30 1.3	1.494	2.355	14.6	19.8
1 26	5 2.05	+32 6.3	1.885	2.637	16.4	20.9	1 26	5 7.21	+29 23.7	1.592	2.368	17.9	20.0
275410	2011 <i>BE</i> ₅₆		12 17.2 255°79'	4°3/16.9	17		465422	2008 <i>PL</i> ₂		12 17.2 161°32'	15°5/19.9	16	
11 17	6 1.92	+10 35.0	2.242	3.085	11.3	21.1	11 17	6 10.68	-12 22.6	1.324	2.096	21.3	21.4
11 27	5 56.04	+10 14.3	2.169	3.079	8.4	20.9	11 27	6 2.91	-12 48.0	1.271	2.099	18.9	21.2
12 7	5 48.53	+10 1.6	2.121	3.073	5.7	20.7	12 7	5 52.35	-12 33.7	1.235	2.102	16.7	21.1
12 17	5 40.08	+ 9 58.5	2.102	3.068	4.3	20.6	12 17	5 40.18	-11 33.3	1.220	2.104	15.5	21.0
12 27	5 31.59	+10 5.6	2.112	3.062	5.7	20.7	12 27	5 28.05	- 9 46.5	1.228	2.105	15.8	21.0
1 6	5 23.94	+10 22.9	2.150	3.056	8.6	20.9	1 6	5 17.55	- 7 21.3	1.258	2.107	17.5	21.1
1 16	5 17.87	+10 49.2	2.214	3.050	11.5	21.1	1 16	5 9.86	- 4 29.6	1.311	2.108	20.0	21.3
1 26	5 13.93	+11 22.9	2.301	3.044	14.0	21.2	1 26	5 5.68	- 1 24.9	1.382	2.109	22.4	21.5
70841	1999 <i>VS</i> ₉₆		12 17.2 138°76'	4°0/17.2	18		294129	2007 <i>TZ</i> ₂₇₁		12 17.2 118°			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
419975	2011 <i>CM</i> ₃		12 17.2 159°69	1.3/17.4	17		210636	2000 <i>GT</i> ₁₂		12 17.2 165°22	5.1/17.6	18	
11 17	6 4.82	+28 38.1	2.397	3.245	10.5	20.6	11 17	6 10.11	+38 25.9	2.317	3.142	11.6	20.8
11 27	5 58.03	+28 26.6	2.327	3.248	7.4	20.4	11 27	6 2.05	+39 6.2	2.251	3.146	8.9	20.7
12 7	5 49.54	+28 9.4	2.284	3.250	4.1	20.2	12 7	5 51.76	+39 34.6	2.210	3.150	6.4	20.5
12 17	5 40.15	+27 45.7	2.270	3.252	1.3	20.0	12 17	5 40.21	+39 47.1	2.198	3.154	5.1	20.4
12 27	5 30.84	+27 16.2	2.287	3.254	3.8	20.2	12 27	5 28.65	+39 42.3	2.215	3.157	6.1	20.5
1 6	5 22.56	+26 43.0	2.334	3.256	7.1	20.4	1 6	5 18.34	+39 21.9	2.261	3.160	8.6	20.7
1 16	5 16.05	+26 8.8	2.409	3.258	10.2	20.6	1 16	5 10.24	+38 50.1	2.334	3.162	11.2	20.8
1 26	5 11.81	+25 36.3	2.506	3.259	12.7	20.8	1 26	5 4.98	+38 12.1	2.429	3.163	13.6	21.0
27975	Mazurkiewicz		12 17.2 31°73	2.4/17.3	18		147197	2002 <i>VF</i> ₉₄		12 17.2 67°01	1.5/17.3	18	
11 17	6 6.31	+28 26.7	1.582	2.446	14.0	19.2	11 17	6 12.30	+26 51.1	1.297	2.163	16.4	19.9
11 27	5 59.75	+28 50.3	1.525	2.453	10.0	19.0	11 27	6 3.88	+26 58.0	1.263	2.192	11.5	19.7
12 7	5 50.66	+29 7.9	1.493	2.460	5.6	18.8	12 7	5 52.69	+26 58.6	1.251	2.221	6.1	19.5
12 17	5 40.17	+29 16.6	1.487	2.468	2.4	18.6	12 17	5 40.23	+26 50.7	1.266	2.250	1.5	19.3
12 27	5 29.76	+29 15.5	1.509	2.476	5.3	18.8	12 27	5 28.35	+26 34.9	1.309	2.278	5.5	19.6
1 6	5 20.89	+29 6.2	1.558	2.485	9.6	19.1	1 6	5 18.63	+26 14.3	1.378	2.307	10.4	20.0
1 16	5 14.59	+28 51.9	1.631	2.494	13.5	19.3	1 16	5 12.08	+25 53.0	1.471	2.335	14.6	20.3
1 26	5 11.50	+28 36.4	1.725	2.504	16.7	19.6	1 26	5 9.13	+25 34.4	1.583	2.363	17.9	20.6
410615	2008 <i>OT</i> ₁₃		12 17.2 63°80	3.7/17.2	18		403352	2009 <i>FJ</i> ₇₁		12 17.2 284°89	0.8/17.1	17	
11 17	6 2.92	+12 16.4	2.049	2.897	12.0	20.7	11 17	6 5.75	+22 0.2	1.806	2.666	12.8	21.5
11 27	5 56.72	+12 10.2	1.997	2.913	8.7	20.5	11 27	5 59.32	+21 45.3	1.716	2.644	9.1	21.2
12 7	5 48.86	+12 12.0	1.970	2.928	5.5	20.4	12 7	5 50.52	+21 29.2	1.651	2.621	4.8	20.9
12 17	5 40.14	+12 22.3	1.972	2.944	3.7	20.3	12 17	5 40.21	+21 11.7	1.614	2.598	0.8	20.5
12 27	5 31.54	+12 41.0	2.003	2.960	5.3	20.4	12 27	5 29.64	+20 53.7	1.606	2.574	4.8	20.8
1 6	5 23.99	+13 7.3	2.062	2.976	8.4	20.6	1 6	5 20.12	+20 36.7	1.626	2.551	9.4	21.0
1 16	5 18.21	+13 39.9	2.148	2.992	11.4	20.8	1 16	5 12.75	+20 22.9	1.671	2.527	13.5	21.2
1 26	5 14.69	+14 17.2	2.255	3.008	14.0	21.1	1 26	5 8.28	+20 14.1	1.737	2.504	17.0	21.4
420990	2013 <i>PK</i> ₃₆		12 17.2 170°29	0.7/17.2	17		384380	2009 <i>VZ</i> ₂₆		12 17.2 27°67	2.9/17.3	18	
11 17	6 3.71	+20 9.2	2.476	3.326	10.1	21.6	11 17	6 7.24	+28 6.0	1.051	1.935	17.9	20.0
11 27	5 57.22	+20 25.3	2.406	3.328	7.1	21.4	11 27	6 1.12	+28 35.1	1.010	1.946	12.8	19.7
12 7	5 49.14	+20 43.0	2.362	3.330	3.7	21.2	12 7	5 51.59	+28 56.9	0.989	1.959	7.1	19.5
12 17	5 40.15	+21 1.3	2.348	3.332	0.7	21.0	12 17	5 40.22	+29 7.1	0.991	1.973	2.9	19.3
12 27	5 31.13	+21 19.6	2.366	3.333	3.6	21.2	12 27	5 29.16	+29 4.5	1.019	1.988	6.6	19.5
1 6	5 22.96	+21 37.7	2.413	3.334	7.0	21.4	1 6	5 20.35	+28 51.9	1.069	2.004	11.9	19.9
1 16	5 16.34	+21 55.7	2.488	3.335	10.0	21.6	1 16	5 15.08	+28 34.2	1.141	2.021	16.6	20.2
1 26	5 11.81	+22 14.2	2.586	3.335	12.5	21.8	1 26	5 13.89	+28 16.1	1.232	2.039	20.4	20.5
88563	2001 <i>QT</i> ₂₃₃		12 17.2 122°23	0.3/17.2	18		2802	Weisell		12 17.2 270°07	3.0/17.1	18	
11 17	6 9.46	+22 50.5	1.767	2.623	13.2	20.8	11 17	6 2.03	+13 27.4	2.348	3.194	10.7	16.0
11 27	6 1.55	+22 48.5	1.713	2.638	9.2	20.6	11 27	5 56.16	+13 23.7	2.267	3.183	7.8	15.7
12 7	5 51.44	+22 45.0	1.684	2.653	4.8	20.4	12 7	5 48.66	+13 26.4	2.212	3.171	4.8	15.5
12 17	5 40.19	+22 39.3	1.684	2.668	0.3	20.0	12 17	5 40.18	+13 35.7	2.185	3.160	3.0	15.4
12 27	5 29.15	+22 31.5	1.713	2.682	4.6	20.4	12 27	5 31.59	+13 52.0	2.189	3.148	4.8	15.5
1 6	5 19.55	+22 23.1	1.772	2.695	8.8	20.7	1 6	5 23.77	+14 14.8	2.222	3.136	7.9	15.7
1 16	5 12.33	+22 15.8	1.855	2.708	12.6	21.0	1 16	5 17.47	+14 43.3	2.282	3.124	10.9	15.8
1 26	5 8.00	+22 11.6	1.961	2.720	15.6	21.2	1 26	5 13.26	+15 16.5	2.364	3.112	13.6	16.0
278541	2008 <i>EA</i> ₁₂₃		12 17.2 174°73	1.3/17.3	18		51804	2001 <i>NP</i> ₈		12 17.2 341°91	0.8/17.1	18	
11 17	6 10.15	+26 15.0	1.797	2.650	13.1	21.7	11 17	6 2.08	+21 10.9	1.930	2.793	11.9	19.0
11 27	6 2.25	+26 32.2	1.730	2.653	9.3	21.4	11 27	5 56.47	+21 6.1	1.857	2.786	8.4	18.7
12 7	5 51.92	+26 45.5	1.687	2.655	5.0	21.2	12 7	5 48.90	+21 1.8	1.810	2.780	4.4	18.5
12 17	5 40.20	+26 52.4	1.674	2.657	1.3	20.9	12 17	5 40.19	+20 58.0	1.790	2.774	0.8	18.2
12 27	5 28.48	+26 52.0	1.690	2.658	4.8	21.2	12 27	5 31.42	+20 54.8	1.800	2.769	4.3	18.5
1 6	5 18.12	+26 45.7	1.735	2.658	9.1	21.4	1 6	5 23.69	+20 53.0	1.837	2.764	8.4	18.7
1 16	5 10.19	+26 36.1	1.806	2.657	12.9	21.7	1 16	5 17.88	+20 53.5	1.900	2.760	12.0	18.9
1 26	5 5.32	+26 26.3	1.898	2.656	16.1	21.9	1 26	5 14.60	+20 57.3	1.985	2.756	15.0	19.1
269590	2009 <i>XC</i> ₄		12 17.2 83°39	0.4/17.2	18		414326	2008 <i>SU</i> ₂₈		12 17.2 81°76	0.9/17.3	17	
11 17	6 4.09	+21 58.9	2.216	3.070	11.0	21.2	11 17	6 4.10	+26 32.2	2.254	3.107	10.8	21.1
11 27	5 57.50	+22 2.8	2.161	3.086	7.6	21.1	11 27	5 57.58	+26 32.9	2.194	3.118	7.6	20.9
12 7	5 49.26	+22 6.5	2.134	3.103	4.0	20.9	12 7	5 49.34	+26 29.8	2.161	3.128	4.0	20.7
12 17	5 40.16	+22 9.3	2.135	3.119	0.4	20.6	12 17	5 40.20	+26 22.0	2.156	3.139	0.9	20.5
12 27	5 31.18	+22 11.3	2.167	3.135	3.8	20.9	12 27	5 31.17	+26 9.7	2.182	3.150	3.8	20.7
1 6	5 23.26	+22 12.8	2.228	3.151	7.3	21.2	1 6	5 23.20	+25 54.2	2.236	3.160	7.3	21.0
1 16	5 17.13	+22 15.0	2.316	3.167	10.4	21.4	1 16	5 17.04	+25 37.6	2.318	3.171	10.4	21.2
1 26	5 13.26	+22 18.7	2.427	3.183	13.0	21.6	1 26	5 13.20	+25 21.9	2.423	3.181	13.0	21.4
76578	2000 <i>GW</i> ₁₂₃		12 17.2 261°33	2.0/17.2	18		305437	2008 <i>CA</i> ₁₇₈		12 17.2 358°35	4.9/17.9	18	
11 17	6 4.58	+28 42.1	2.577	3.422	9.9	19.5	11 17	6 2.79	+9 59.7	1.243	2.112	16.8	19.3
11 27	5 58.04	+29 14.4	2.487	3.405	7.1	19.3	11 27	5 57.69	+10 34.9	1.182	2.107	12.5	19.0
12 7	5 49.67	+29 43.3	2.424	3.388	4.1	19.0	12 7	5 49.81	+11 29.1	1.142	2.104	7.9	18.8
12 17	5 40.17	+30 6.2	2.391	3.370	2.0	18.9	12 17	5 40.22	+12 41.4	1.127	2.102	5.0	18.6
12 27	5 30.45	+30 21.8	2.389	3.352	4.0	19.0	12 27	5 30.48	+14 8.0	1.138	2.102	7.2	18.7
1 6	5 21.50	+30 30.2	2.417	3.334	7.2	19.2	1 6	5 22.18	+15 43.2	1.173	2.103	11.7	19.0
1 16	5 14.14	+30 32.6	2.472	3.316	10.1	19.3	1 16	5 16.56	+17 21.3	1.232	2.105	16.2	19.2
1 26	5 9.01	+30 31.5	2.551	3.297	12.7	19.5	1 26	5 14.41	+18 57.9	1.310	2.109	19.9	19.5
138409	2000 <i>HH</i> ₃₀		12 17.2 161°06	5.3/16.9	18		302122	2001 <i>QA</i> ₁₁₃		12 17.2 30°68	0.2/17.2	18	
11													

EPHEMERIDES

12 17.2

12 17.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
484539	2008 <i>FW</i> ₁₀₂	12 17.2 268°39		4°9/16.7 18			248365	2005 <i>QB</i> ₁₆₈	12 17.2 159°13		0°9/17.1 18		
11 17	6 3.25	+ 9 36.1	2.142	2.982	11.8	22.1	11 17	6 5.26	+21 28.4	2.404	3.253	10.4	21.1
11 27	5 57.17	+ 9 6.1	2.055	2.963	9.0	21.9	11 27	5 58.29	+21 9.7	2.337	3.259	7.3	20.9
12 7	5 49.26	+ 8 44.5	1.994	2.943	6.3	21.7	12 7	5 49.71	+20 50.2	2.297	3.265	3.8	20.7
12 17	5 40.23	+ 8 33.7	1.961	2.924	4.9	21.6	12 17	5 40.29	+20 30.4	2.287	3.270	0.9	20.5
12 27	5 31.02	+ 8 35.1	1.958	2.904	6.5	21.7	12 27	5 30.94	+20 10.9	2.308	3.275	3.8	20.7
1 6	5 22.62	+ 8 48.8	1.982	2.884	9.4	21.8	1 6	5 22.56	+19 53.1	2.360	3.279	7.2	21.0
1 16	5 15.88	+ 9 13.9	2.032	2.863	12.5	22.0	1 16	5 15.86	+19 38.4	2.438	3.283	10.2	21.2
1 26	5 11.40	+ 9 48.6	2.103	2.842	15.3	22.1	1 26	5 11.33	+19 27.9	2.540	3.286	12.8	21.4
224676	2006 <i>AD</i> ₅₈	12 17.2 176°74		0°5/17.2 18			232230	2002 <i>LP</i> ₂	12 17.2 229°08		3°3/16.7 18		
11 17	6 3.59	+22 14.0	2.338	3.191	10.5	21.0	11 17	6 5.67	+15 15.2	2.045	2.894	12.0	20.4
11 27	5 57.22	+22 6.0	2.267	3.192	7.4	20.8	11 27	5 58.88	+14 38.9	1.966	2.884	8.7	20.2
12 7	5 49.18	+21 57.2	2.223	3.192	3.8	20.6	12 7	5 50.16	+14 6.2	1.913	2.874	5.3	19.9
12 17	5 40.23	+21 47.4	2.209	3.193	0.5	20.3	12 17	5 40.30	+13 39.1	1.888	2.863	3.3	19.8
12 27	5 31.29	+21 37.1	2.225	3.193	3.7	20.6	12 27	5 30.37	+13 19.1	1.894	2.851	5.5	19.9
1 6	5 23.29	+21 27.2	2.270	3.193	7.2	20.8	1 6	5 21.42	+13 7.6	1.928	2.840	9.0	20.1
1 16	5 16.96	+21 19.0	2.343	3.193	10.4	21.0	1 16	5 14.33	+13 5.2	1.988	2.827	12.4	20.3
1 26	5 12.82	+21 13.6	2.438	3.192	13.0	21.2	1 26	5 9.69	+13 11.4	2.069	2.814	15.3	20.5
118188	1994 <i>GO</i> ₅	12 17.2 110°25		0°8/17.1 18			220692	2004 <i>RK</i> ₂₉₂	12 17.2 79°30		5°2/16.8 18		
11 17	6 5.45	+20 53.9	2.289	3.139	10.8	21.0	11 17	6 3.12	+ 8 50.2	2.065	2.905	12.2	20.6
11 27	5 58.39	+20 47.9	2.235	3.158	7.5	20.8	11 27	5 56.84	+ 8 11.3	2.016	2.921	9.3	20.5
12 7	5 49.72	+20 42.3	2.208	3.176	4.0	20.6	12 7	5 48.97	+ 7 42.5	1.991	2.937	6.5	20.3
12 17	5 40.25	+20 36.7	2.211	3.194	0.8	20.4	12 17	5 40.28	+ 7 25.9	1.995	2.953	5.2	20.3
12 27	5 30.93	+20 31.5	2.245	3.212	3.8	20.6	12 27	5 31.75	+ 7 22.6	2.027	2.969	6.6	20.4
1 6	5 22.68	+20 27.4	2.308	3.229	7.2	20.9	1 6	5 24.26	+ 7 32.4	2.087	2.985	9.2	20.6
1 16	5 16.19	+20 25.3	2.399	3.246	10.3	21.1	1 16	5 18.52	+ 7 53.8	2.172	3.000	11.9	20.8
1 26	5 11.92	+20 26.2	2.513	3.262	12.8	21.3	1 26	5 14.98	+ 8 24.5	2.279	3.016	14.3	21.0
13864	1999 <i>XU</i> ₁₆₆	12 17.2 327°80		4°9/17.5 18			503306	2016 <i>AB</i> ₁₁₃	12 17.2 227°66		5°9/17.6 18		
11 17	6 8.98	+33 2.0	1.265	2.132	16.6	17.0	11 17	6 2.26	+ 2 16.2	2.484	3.296	11.3	21.3
11 27	6 2.47	+33 32.2	1.199	2.124	12.3	16.8	11 27	5 56.20	+ 2 18.4	2.412	3.293	9.0	21.1
12 7	5 52.47	+33 50.5	1.154	2.116	7.8	16.5	12 7	5 48.66	+ 2 34.6	2.365	3.290	7.0	21.0
12 17	5 40.31	+33 51.1	1.133	2.108	4.9	16.3	12 17	5 40.28	+ 3 5.9	2.346	3.287	5.9	20.9
12 27	5 28.00	+33 32.1	1.138	2.101	7.4	16.4	12 27	5 31.85	+ 3 52.1	2.356	3.284	6.8	20.9
1 6	5 17.60	+32 56.8	1.168	2.095	12.0	16.7	1 6	5 24.17	+ 4 51.3	2.396	3.280	8.8	21.1
1 16	5 10.63	+32 11.9	1.220	2.089	16.6	16.9	1 16	5 17.91	+ 6 0.6	2.462	3.277	11.1	21.2
1 26	5 7.85	+31 25.0	1.291	2.084	20.5	17.2	1 26	5 13.56	+ 7 16.7	2.551	3.274	13.3	21.4
214894	2007 <i>TF</i> ₁₆	12 17.2 49°83		1°7/17.1 18			376236	2011 <i>EX</i> ₄₄	12 17.2 229°76		3°4/17.4 18		
11 17	6 6.36	+20 2.7	1.450	2.318	14.8	19.9	11 17	6 5.32	+33 34.4	2.430	3.270	10.6	21.1
11 27	5 59.63	+19 46.8	1.405	2.336	10.4	19.6	11 27	5 58.62	+34 6.3	2.357	3.268	7.8	20.9
12 7	5 50.54	+19 32.7	1.384	2.354	5.5	19.4	12 7	5 50.03	+34 30.7	2.309	3.265	5.0	20.7
12 17	5 40.27	+19 20.9	1.390	2.373	1.7	19.2	12 17	5 40.31	+34 44.6	2.291	3.262	3.4	20.6
12 27	5 30.28	+19 12.2	1.423	2.392	5.3	19.5	12 27	5 30.52	+34 46.9	2.303	3.258	4.8	20.7
1 6	5 21.93	+19 7.6	1.483	2.411	9.9	19.8	1 6	5 21.72	+34 38.5	2.343	3.255	7.6	20.9
1 16	5 16.14	+19 8.1	1.567	2.430	13.9	20.1	1 16	5 14.74	+34 22.1	2.411	3.252	10.4	21.0
1 26	5 13.43	+19 14.0	1.671	2.450	17.1	20.4	1 26	5 10.20	+34 1.0	2.501	3.249	12.9	21.2
124737	2001 <i>SW</i> ₁₈₃	12 17.2 223°03		3°1/17.5 18			485564	2011 <i>UN</i> ₁₆₆	12 17.2 358°90		1°5/17.2 18		
11 17	6 8.05	+32 46.9	2.315	3.154	11.1	21.1	11 17	6 5.03	+25 13.4	1.436	2.308	14.7	20.4
11 27	6 0.60	+33 4.7	2.232	3.144	8.2	20.9	11 27	5 59.18	+25 49.0	1.373	2.305	10.4	20.2
12 7	5 51.06	+33 14.4	2.176	3.134	5.1	20.7	12 7	5 50.58	+26 23.2	1.334	2.304	5.6	19.9
12 17	5 40.28	+33 13.3	2.149	3.123	3.1	20.5	12 17	5 40.33	+26 52.4	1.320	2.303	1.5	19.6
12 27	5 29.41	+33 0.5	2.153	3.112	4.8	20.6	12 27	5 29.98	+27 14.4	1.333	2.303	5.4	19.9
1 6	5 19.59	+32 37.6	2.186	3.101	8.0	20.8	1 6	5 21.11	+27 29.1	1.373	2.304	10.2	20.2
1 16	5 11.75	+32 7.9	2.246	3.088	11.1	21.0	1 16	5 14.93	+27 38.4	1.436	2.305	14.5	20.4
1 26	5 6.52	+31 35.4	2.329	3.076	13.8	21.2	1 26	5 12.16	+27 45.1	1.519	2.308	18.1	20.7
382712	2002 <i>WM</i> ₂₉	12 17.2 38°33		2°7/17.2 18			263074	2007 <i>NA</i> ₂	12 17.2 138°71		8°6/17.5 18		
11 17	6 6.87	+17 1.8	1.133	2.011	17.3	20.5	11 17	6 1.15	-10 22.8	2.942	3.683	11.4	20.8
11 27	6 0.48	+17 9.5	1.091	2.025	12.3	20.3	11 27	5 55.17	-10 52.4	2.890	3.693	10.1	20.7
12 7	5 51.16	+17 25.0	1.070	2.039	6.8	20.0	12 7	5 48.03	-11 4.0	2.861	3.703	9.0	20.6
12 17	5 40.28	+17 47.3	1.073	2.055	2.7	19.8	12 17	5 40.28	-10 55.4	2.858	3.713	8.6	20.6
12 27	5 29.65	+18 15.0	1.102	2.071	6.4	20.1	12 27	5 32.60	-10 25.9	2.881	3.722	8.9	20.7
1 6	5 20.96	+18 46.8	1.155	2.088	11.6	20.4	1 6	5 25.62	- 9 37.2	2.930	3.730	9.9	20.7
1 16	5 15.34	+19 21.7	1.231	2.105	16.1	20.7	1 16	5 19.87	- 8 32.3	3.002	3.739	11.2	20.8
1 26	5 13.38	+19 58.6	1.326	2.123	19.8	21.0	1 26	5 15.75	- 7 15.2	3.097	3.747	12.5	21.0
273562	2007 <i>BB</i> ₈₀	12 17.2 235°73		1°0/17.3 18			2368	<i>Beltrovata</i>	12 17.2 66°96		1°7/17.4 18 R		
11 17	6 8.91	+25 49.6	1.747	2.603	13.3	21.8	11 17	6 22.98	+28 10.6	1.104	1.964	19.1	17.9
11 27	6 1.58	+25 55.5	1.668	2.593	9.4	21.5	11 27	6 11.02	+27 57.9	1.089	2.015	13.2	17.7
12 7	5 51.72	+25 57.5	1.614	2.583	5.0	21.2	12 7	5 56.15	+27 35.1	1.098	2.066	6.9	17.5
12 17	5 40.30	+25 53.7	1.589	2.572	1.0	20.9	12 17	5 40.44	+27 1.1	1.132	2.115	1.7	17.3
12 27	5 28.74	+25 43.7	1.592	2.561	4.8	21.2	12 27	5 26.15	+26 19.0	1.194	2.163	6.0	17.7
1 6	5 18.45	+25 29.1	1.624	2.549	9.4	21.4	1 6	5 14.96	+25 35.1	1.283	2.210	11.2	18.2
1 16	5 10.57	+25 12.7	1.681	2.537	13.5	21.6	1 16	5 7.67	+24 54.9	1.396	2.256	15.5	18.5
1 26	5 5.83	+24 57.7	1.759	2.524	16.9	21.8	1 26	5 4.44	+24 22.3	1.527	2.300	18.7	18.9
443145	2014 <i>BB</i> ₄₀	12 17.2 283°33		3°7/17.4 18			269553	2009 <i>WX</i> ₁₅	12 17.2 70°25		0°3/17.2 18		
11 17	6 9.27	+31 9.5	1.527										

EPHEMERIDES

12 17.2

12 17.2

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
91898	Margnetti		12 17.2	52°99	0°2/17.2	18	116139	2003 WA ₁₄₆		12 17.2	346°31	10°0/17.7	18
11 17	6 4.60	+23 41.3	1.907	2.767	12.2	18.5	11 17	6 8.40	+46 51.6	1.683	2.501	15.5	18.4
11 27	5 58.14	+23 26.3	1.850	2.777	8.5	18.3	11 27	6 2.08	+48 0.5	1.615	2.490	13.1	18.2
12 7	5 49.75	+23 9.1	1.818	2.787	4.4	18.1	12 7	5 52.35	+48 48.9	1.570	2.480	11.0	18.0
12 17	5 40.35	+22 49.6	1.814	2.798	0.2	17.8	12 17	5 40.46	+49 9.0	1.548	2.471	10.0	18.0
12 27	5 31.09	+22 28.9	1.839	2.808	4.2	18.1	12 27	5 28.37	+48 56.9	1.551	2.463	10.7	18.0
1 6	5 23.06	+22 8.6	1.893	2.819	8.2	18.4	1 6	5 18.09	+48 15.5	1.577	2.456	12.8	18.1
1 16	5 17.09	+21 50.8	1.972	2.830	11.7	18.6	1 16	5 11.11	+47 11.9	1.626	2.451	15.4	18.2
1 26	5 13.69	+21 36.9	2.074	2.841	14.6	18.9	1 26	5 8.24	+45 55.5	1.693	2.446	17.9	18.4
158127	2001 EP ₂₁		12 17.2	199°73	3°8/16.7	18	271547	2004 JU ₁₇		12 17.2	193°27	0°1/17.2	18
11 17	6 1.83	+10 49.9	2.714	3.550	9.8	20.3	11 17	6 9.06	+24 2.2	1.996	2.846	12.1	21.7
11 27	5 55.82	+10 21.3	2.640	3.546	7.3	20.1	11 27	6 1.36	+23 56.8	1.921	2.844	8.6	21.5
12 7	5 48.45	+9 58.8	2.592	3.543	4.9	19.9	12 7	5 51.52	+23 48.8	1.873	2.842	4.5	21.2
12 17	5 40.34	+9 44.0	2.575	3.539	3.8	19.8	12 17	5 40.45	+23 37.3	1.854	2.838	0.1	20.9
12 27	5 32.21	+9 37.7	2.587	3.534	5.0	19.9	12 27	5 29.37	+23 22.5	1.866	2.834	4.3	21.2
1 6	5 24.79	+9 40.3	2.629	3.529	7.5	20.1	1 6	5 19.46	+23 6.1	1.907	2.830	8.4	21.4
1 16	5 18.69	+9 51.3	2.698	3.524	10.0	20.2	1 16	5 11.67	+22 50.2	1.975	2.824	12.1	21.7
1 26	5 14.38	+10 9.8	2.791	3.518	12.1	20.4	1 26	5 6.61	+22 37.1	2.065	2.818	15.1	21.9
416233	2003 AG ₉₀		12 17.2	323°50	0°5/17.2	18	227739	2006 FV ₃₀		12 17.2	334°11	0°3/17.2	17
11 17	6 3.89	+22 1.8	1.936	2.797	12.0	20.0	11 17	6 3.42	+22 26.7	1.962	2.822	11.9	20.4
11 27	5 58.08	+22 53.9	1.846	2.773	8.5	19.7	11 27	5 57.47	+22 30.9	1.890	2.817	8.4	20.2
12 7	5 49.99	+23 49.7	1.781	2.751	4.5	19.4	12 7	5 49.52	+22 34.8	1.843	2.813	4.4	20.0
12 17	5 40.37	+24 46.3	1.745	2.728	0.5	19.1	12 17	5 40.41	+22 37.8	1.824	2.808	0.3	19.6
12 27	5 30.35	+25 40.3	1.738	2.707	4.4	19.4	12 27	5 31.23	+22 39.5	1.835	2.804	4.2	19.9
1 6	5 21.18	+26 29.9	1.760	2.686	8.7	19.6	1 6	5 23.10	+22 40.5	1.874	2.800	8.2	20.2
1 16	5 13.93	+27 14.4	1.807	2.665	12.6	19.8	1 16	5 16.92	+22 42.1	1.938	2.797	11.8	20.4
1 26	5 9.43	+27 54.5	1.877	2.645	15.9	19.9	1 26	5 13.29	+22 45.4	2.025	2.793	14.9	20.6
228954	2003 UQ ₈₅		12 17.2	51°97	0°7/17.2	18	168305	3205 T-2		12 17.2	62°77	1°9/17.2	18
11 17	6 4.01	+21 12.5	1.937	2.796	12.0	20.5	11 17	6 7.43	+18 37.8	1.535	2.398	14.4	19.9
11 27	5 57.67	+21 13.4	1.886	2.813	8.4	20.3	11 27	6 0.29	+18 33.8	1.493	2.421	10.1	19.7
12 7	5 49.49	+21 15.1	1.861	2.830	4.4	20.1	12 7	5 50.92	+18 33.3	1.476	2.444	5.5	19.5
12 17	5 40.36	+21 16.8	1.864	2.847	0.7	19.8	12 17	5 40.45	+18 36.0	1.485	2.467	1.9	19.3
12 27	5 31.38	+21 18.6	1.896	2.865	4.2	20.2	12 27	5 30.28	+18 42.0	1.523	2.490	5.2	19.6
1 6	5 23.60	+21 21.0	1.957	2.882	8.0	20.4	1 6	5 21.68	+18 51.3	1.588	2.514	9.5	19.9
1 16	5 17.79	+21 25.0	2.044	2.900	11.4	20.7	1 16	5 15.56	+19 4.3	1.678	2.537	13.3	20.2
1 26	5 14.46	+21 31.2	2.152	2.918	14.2	20.9	1 26	5 12.40	+19 21.0	1.788	2.560	16.4	20.5
332953	2011 DF ₅₁		12 17.2	333°76	5°6/17.7	17	119382	2001 SX ₃₄₆		12 17.2	84°27	4°4/17.2	18
11 17	6 2.69	+6 29.6	1.911	2.749	13.1	19.8	11 17	6 11.41	+31 42.7	1.504	2.360	15.1	19.4
11 27	5 56.93	+6 38.7	1.837	2.741	10.1	19.6	11 27	6 3.67	+32 39.8	1.450	2.370	11.0	19.2
12 7	5 49.23	+7 2.6	1.788	2.733	7.2	19.4	12 7	5 52.94	+33 28.0	1.420	2.381	6.8	19.0
12 17	5 40.37	+7 42.2	1.765	2.726	5.6	19.3	12 17	5 40.50	+34 1.4	1.417	2.391	4.4	18.8
12 27	5 31.37	+8 36.8	1.771	2.719	6.9	19.3	12 27	5 28.11	+34 17.2	1.442	2.401	6.6	19.0
1 6	5 23.31	+9 43.6	1.805	2.712	9.8	19.5	1 6	5 17.47	+34 16.8	1.493	2.411	10.6	19.3
1 16	5 17.07	+10 59.3	1.864	2.706	13.0	19.7	1 16	5 9.85	+34 4.8	1.568	2.422	14.4	19.5
1 26	5 13.27	+12 20.1	1.946	2.701	15.8	19.9	1 26	5 5.91	+33 47.1	1.663	2.432	17.6	19.8
515276	2012 TM ₁₀₃		12 17.2	148°57	3°9/17.5	18	483163	2015 PE ₃₄		12 17.2	189°73	0°7/17.4	16
11 17	6 11.33	+33 8.4	1.782	2.627	13.6	21.9	11 17	6 8.98	+27 23.9	1.891	2.744	12.6	21.1
11 27	6 3.25	+33 36.9	1.719	2.634	10.0	21.7	11 27	6 1.33	+26 50.0	1.820	2.743	8.9	20.9
12 7	5 52.57	+33 55.1	1.682	2.640	6.2	21.5	12 7	5 51.49	+26 8.8	1.774	2.742	4.7	20.6
12 17	5 40.44	+33 59.2	1.672	2.646	3.9	21.4	12 17	5 40.48	+25 20.5	1.757	2.741	0.7	20.3
12 27	5 28.38	+33 47.9	1.692	2.651	5.9	21.5	12 27	5 29.58	+24 27.2	1.771	2.740	4.4	20.6
1 6	5 17.87	+33 23.7	1.739	2.656	9.5	21.7	1 6	5 20.04	+23 32.4	1.814	2.738	8.6	20.9
1 16	5 10.01	+32 51.5	1.812	2.661	13.0	22.0	1 16	5 12.78	+22 40.4	1.883	2.736	12.4	21.1
1 26	5 5.42	+32 16.4	1.906	2.664	16.0	22.2	1 26	5 8.36	+21 54.5	1.974	2.733	15.5	21.3
74036	1998 HR ₄₅		12 17.2	232°89	0°2/17.3	18	143549	2003 EU ₃₆		12 17.2	309°52	0°7/17.2	17
11 17	6 9.46	+24 32.8	1.579	2.440	14.2	19.9	11 17	6 6.33	+22 20.5	1.759	2.620	13.0	19.6
11 27	6 2.12	+24 22.6	1.505	2.432	10.1	19.7	11 27	5 59.90	+23 12.8	1.681	2.608	9.2	19.3
12 7	5 52.08	+24 8.7	1.455	2.424	5.3	19.4	12 7	5 50.99	+24 8.1	1.627	2.596	4.9	19.0
12 17	5 40.44	+23 50.1	1.432	2.416	0.2	19.0	12 17	5 40.47	+25 2.8	1.601	2.585	0.7	18.7
12 27	5 28.70	+23 27.4	1.438	2.408	5.1	19.3	12 27	5 29.64	+25 53.6	1.605	2.574	4.7	19.0
1 6	5 18.41	+23 3.0	1.472	2.399	10.0	19.6	1 6	5 19.88	+26 38.5	1.637	2.563	9.3	19.2
1 16	5 10.72	+22 40.2	1.530	2.389	14.4	19.8	1 16	5 12.33	+27 17.6	1.694	2.552	13.3	19.5
1 26	5 6.37	+22 21.8	1.609	2.380	18.0	20.0	1 26	5 7.81	+27 52.0	1.772	2.541	16.7	19.7
331214	2011 BC ₃₉		12 17.2	37°64	5°2/16.9	17	466560	2014 TQ ₁₃		12 17.2	77°72	4°2/17.7	17
11 17	6 1.56	+8 4.6	2.190	3.028	11.7	20.5	11 17	6 6.98	+35 51.9	2.171	3.009	11.8	21.2
11 27	5 55.84	+7 36.0	2.126	3.030	8.9	20.3	11 27	5 59.90	+36 15.5	2.110	3.017	8.8	21.0
12 7	5 48.54	+7 17.5	2.087	3.032	6.4	20.2	12 7	5 50.75	+36 28.4	2.075	3.026	5.9	20.9
12 17	5 40.36	+7 11.0	2.076	3.034	5.2	20.1	12 17	5 40.46	+36 27.7	2.067	3.034	4.2	20.8
12 27	5 32.20	+7 17.6	2.094	3.036	6.4	20.2	12 27	5 30.27	+36 12.6	2.089	3.042	5.5	20.9
1 6	5 24.93	+7 36.6	2.140	3.038	9.0	20.4	1 6	5 21.34	+35 45.4	2.139	3.050	8.3	21.0
1 16	5 19.25	+8 6.6	2.211	3.041	11.7	20.6	1 16	5 14.55	+35 10.0	2.215	3.059	11.2	21.2
1 26	5 15.68	+8 45.3	2.304	3.043	14.1	20.7	1 26	5 10.48	+34 30.9	2.314	3.067	13.7	21.4
84544	2002 UC ₂₉		12 17.2	23°26	8°7/18.0	18	154793	2004 PO ₆₈		12 17.2	39°62	6°1/16.9	18
11 17	6 2.63	+3 49.2	1.231	2.086	17.8	18.3	11 17	6 2					

EPHEMERIDES

12 17.2

12 17.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
315863	2008 <i>HX</i> ₅₅		12 17.2 115°31'	3.4/17.3	18		320758	2008 <i>EW</i> ₇₄		12 17.2 68°27'	1.7/17.3	18	
11 17	6 3.77	+12 31.1	2.167	3.012	11.5	20.6	11 17	6 6.72	+27 20.7	1.840	2.697	12.7	20.7
11 27	5 57.42	+12 31.3	2.104	3.019	8.4	20.4	11 27	5 59.82	+27 42.8	1.784	2.709	9.0	20.5
12 7	5 49.40	+12 39.0	2.068	3.026	5.2	20.2	12 7	5 50.75	+28 0.5	1.754	2.721	4.9	20.3
12 17	5 40.45	+12 54.5	2.060	3.033	3.4	20.1	12 17	5 40.49	+28 11.2	1.751	2.733	1.7	20.1
12 27	5 31.53	+13 17.7	2.082	3.040	5.1	20.2	12 27	5 30.33	+28 14.3	1.777	2.744	4.6	20.3
1 6	5 23.56	+13 47.6	2.133	3.046	8.2	20.4	1 6	5 21.50	+28 10.8	1.832	2.756	8.5	20.6
1 16	5 17.29	+14 22.9	2.210	3.053	11.2	20.6	1 16	5 14.93	+28 3.1	1.912	2.768	12.1	20.8
1 26	5 13.23	+15 2.4	2.310	3.059	13.8	20.8	1 26	5 11.18	+27 54.2	2.014	2.780	15.0	21.1
139465	2001 <i>OF</i> ₈₈		12 17.2 109°66'	0.9/17.3	18		400771	2010 <i>DC</i> ₁₆		12 17.2 229°79'	4.6/17.4	18	
11 17	6 7.42	+26 2.0	2.065	2.917	11.8	20.6	11 17	6 5.90	+9 25.9	1.988	2.827	12.7	20.9
11 27	6 0.03	+26 6.0	2.010	2.933	8.2	20.4	11 27	5 59.16	+9 26.9	1.910	2.818	9.6	20.7
12 7	5 50.75	+26 6.1	1.981	2.949	4.4	20.2	12 7	5 50.44	+9 39.0	1.858	2.809	6.4	20.5
12 17	5 40.48	+26 1.3	1.981	2.964	0.9	20.0	12 17	5 40.49	+10 3.0	1.833	2.800	4.6	20.4
12 27	5 30.38	+25 51.5	2.012	2.980	4.0	20.3	12 27	5 30.40	+10 38.8	1.838	2.790	6.2	20.4
1 6	5 21.52	+25 38.3	2.071	2.994	7.8	20.5	1 6	5 21.24	+11 24.7	1.871	2.780	9.5	20.6
1 16	5 14.70	+25 23.8	2.157	3.009	11.1	20.8	1 16	5 13.93	+12 18.6	1.931	2.769	12.8	20.8
1 26	5 10.44	+25 10.4	2.266	3.023	13.8	21.0	1 26	5 9.11	+13 18.0	2.012	2.758	15.7	21.0
4336	Jasniewicz		12 17.2 43°00'	7.4/18.2	18		239131	2006 <i>JA</i> ₉		12 17.2 135°82'	0.7/17.3	18	
11 17	6 13.03	+37 44.8	1.087	1.950	19.1	16.1	11 17	6 8.04	+25 30.2	2.060	2.911	11.8	21.6
11 27	6 5.31	+38 25.7	1.054	1.972	14.4	15.9	11 27	6 0.53	+25 35.1	2.000	2.922	8.3	21.4
12 7	5 53.84	+38 45.5	1.041	1.994	9.9	15.7	12 7	5 51.05	+25 36.6	1.965	2.933	4.4	21.2
12 17	5 40.55	+38 37.6	1.051	2.017	7.4	15.7	12 17	5 40.52	+25 33.5	1.960	2.944	0.7	20.9
12 27	5 27.90	+38 2.3	1.086	2.041	9.0	15.8	12 27	5 30.10	+25 25.6	1.986	2.954	4.1	21.2
1 6	5 18.03	+37 6.8	1.144	2.066	12.8	16.1	1 6	5 20.89	+25 14.4	2.040	2.963	7.9	21.5
1 16	5 12.16	+36 1.1	1.224	2.091	16.7	16.4	1 16	5 13.75	+25 2.0	2.122	2.972	11.3	21.7
1 26	5 10.69	+34 54.3	1.322	2.116	20.0	16.7	1 26	5 9.21	+24 50.7	2.226	2.981	14.1	21.9
521724	2015 <i>RX</i> ₂₆₈		12 17.2 135°20'	1.9/17.1	18		339105	2004 <i>RA</i> ₂₀₄		12 17.2 44°99'	0.3/17.3	16	
11 17	6 8.70	+26 9.5	1.919	2.771	12.5	21.4	11 17	6 8.06	+24 39.1	1.272	2.146	16.1	21.1
11 27	6 1.31	+27 4.9	1.853	2.776	8.8	21.2	11 27	6 1.19	+24 29.8	1.229	2.162	11.3	20.8
12 7	5 51.60	+27 58.3	1.814	2.781	4.9	20.9	12 7	5 51.55	+24 17.0	1.209	2.180	5.9	20.6
12 17	5 40.51	+28 45.8	1.804	2.785	1.9	20.7	12 17	5 40.52	+24 0.1	1.214	2.198	0.3	20.2
12 27	5 29.31	+29 24.4	1.824	2.789	4.7	20.9	12 27	5 29.86	+23 39.9	1.246	2.217	5.4	20.6
1 6	5 19.29	+29 53.5	1.873	2.794	8.7	21.2	1 6	5 21.12	+23 19.3	1.304	2.236	10.5	21.0
1 16	5 11.50	+30 14.5	1.948	2.797	12.2	21.4	1 16	5 15.36	+23 1.2	1.384	2.255	14.9	21.3
1 26	5 6.60	+30 30.2	2.045	2.801	15.1	21.6	1 26	5 13.09	+22 47.9	1.485	2.275	18.4	21.6
9783	Tensho-kan		12 17.2 30°01'	0.3/17.3	18		125666	2001 <i>XN</i> ₇₆		12 17.2 122°31'	0.9/17.2	18	
11 17	6 5.93	+24 33.0	1.554	2.421	14.1	17.7	11 17	6 8.98	+20 14.1	1.761	2.616	13.3	20.0
11 27	5 59.51	+24 27.6	1.496	2.426	9.9	17.4	11 27	6 1.37	+20 27.8	1.705	2.630	9.3	19.8
12 7	5 50.66	+24 19.3	1.462	2.432	5.2	17.2	12 7	5 51.55	+20 43.3	1.674	2.643	4.9	19.5
12 17	5 40.48	+24 7.2	1.454	2.438	0.3	16.8	12 17	5 40.53	+20 59.3	1.672	2.655	0.9	19.3
12 27	5 30.41	+23 51.9	1.475	2.445	4.9	17.2	12 27	5 29.62	+21 14.9	1.699	2.667	4.6	19.6
1 6	5 21.83	+23 35.2	1.523	2.452	9.5	17.5	1 6	5 20.06	+21 30.0	1.755	2.679	8.9	19.9
1 16	5 15.74	+23 19.7	1.595	2.460	13.6	17.8	1 16	5 12.81	+21 45.4	1.836	2.690	12.6	20.1
1 26	5 12.76	+23 7.6	1.687	2.468	16.9	18.0	1 26	5 8.43	+22 2.0	1.939	2.700	15.7	20.4
359925	2011 <i>WD</i> ₁₄₅		12 17.2 55°97'	1.1/17.3	18		97484	2000 <i>CC</i> ₆₅		12 17.2 298°06'	0.4/17.2	18	
11 17	6 6.96	+25 2.9	1.659	2.522	13.6	20.6	11 17	6 3.30	+21 58.5	2.108	2.965	11.3	19.9
11 27	6 0.14	+25 30.2	1.605	2.533	9.5	20.4	11 27	5 57.37	+22 1.3	2.026	2.952	8.0	19.6
12 7	5 50.97	+25 55.2	1.575	2.545	5.1	20.1	12 7	5 49.51	+22 4.3	1.969	2.939	4.2	19.4
12 17	5 40.49	+26 15.4	1.573	2.556	1.1	19.9	12 17	5 40.49	+22 6.7	1.941	2.925	0.4	19.1
12 27	5 30.11	+26 29.3	1.600	2.569	4.8	20.2	12 27	5 31.32	+22 8.4	1.943	2.912	4.1	19.3
1 6	5 21.15	+26 37.5	1.654	2.581	9.1	20.5	1 6	5 23.07	+22 9.8	1.974	2.899	8.0	19.6
1 16	5 14.62	+26 42.0	1.733	2.593	12.9	20.7	1 16	5 16.62	+22 12.0	2.031	2.886	11.5	19.7
1 26	5 11.11	+26 45.0	1.833	2.606	16.0	21.0	1 26	5 12.59	+22 16.2	2.110	2.874	14.5	19.9
488250	2016 <i>BB</i> ₈₁		12 17.2 150°55'	0.4/17.2	18		298422	2003 <i>SV</i> ₄₀₆		12 17.3 127°96'	0.4/17.2	18	
11 17	6 3.78	+23 9.8	2.285	3.138	10.7	20.7	11 17	6 8.81	+22 45.5	1.974	2.826	12.2	20.8
11 27	5 57.42	+22 47.7	2.215	3.140	7.5	20.5	11 27	6 1.18	+23 23.0	1.915	2.838	8.6	20.6
12 7	5 49.39	+22 23.5	2.172	3.141	3.9	20.2	12 7	5 51.46	+24 0.6	1.881	2.850	4.5	20.3
12 17	5 40.46	+21 57.7	2.158	3.142	0.4	19.9	12 17	5 40.54	+24 35.7	1.877	2.861	0.4	20.0
12 27	5 31.57	+21 31.2	2.175	3.143	3.8	20.2	12 27	5 29.65	+25 6.2	1.904	2.872	4.2	20.4
1 6	5 23.68	+21 5.7	2.221	3.144	7.4	20.5	1 6	5 19.96	+25 31.9	1.960	2.882	8.2	20.6
1 16	5 17.50	+20 43.1	2.294	3.145	10.5	20.7	1 16	5 12.38	+25 53.4	2.042	2.892	11.7	20.9
1 26	5 13.55	+20 24.8	2.390	3.145	13.2	20.8	1 26	5 7.51	+26 12.5	2.147	2.902	14.6	21.1
361285	2006 <i>TY</i> ₃₄		12 17.2 99°67'	2.7/17.4	17		513339	2007 <i>PT</i> ₁₄		12 17.3 92°02'	5.4/17.6	18	
11 17	6 7.21	+30 11.5	1.884	2.737	12.6	21.3	11 17	6 8.08	+7 11.8	1.884	2.715	13.6	21.1
11 27	6 0.29	+30 35.7	1.817	2.738	9.1	21.1	11 27	6 0.36	+7 7.9	1.843	2.744	10.3	21.0
12 7	5 51.06	+30 53.0	1.775	2.739	5.3	20.9	12 7	5 50.87	+7 17.0	1.828	2.773	7.1	20.8
12 17	5 40.50	+31 0.7	1.761	2.740	2.7	20.7	12 17	5 40.53	+7 39.9	1.840	2.801	5.5	20.8
12 27	5 29.92	+30 57.7	1.776	2.740	5.0	20.9	12 27	5 30.45	+8 15.6	1.883	2.828	6.7	20.9
1 6	5 20.62	+30 45.3	1.820	2.741	8.8	21.1	1 6	5 21.66	+9 2.0	1.953	2.855	9.5	21.2
1 16	5 13.62	+30 26.9	1.888	2.742	12.3	21.3	1 16	5 14.90	+9 56.2	2.050	2.881	12.4	21.4
1 26	5 9.53	+30 6.2	1.979	2.743	15.3	21.5	1 26	5 10.65	+10 55.3	2.168	2.906	14.9	21.6
266503	2008 <i>ED</i> ₁₈		12 17.2 235°03'	4.1/17.7	18		448343	2009 <i>FJ</i> ₄₈		12 17.3 136°08'	0.9/17.3	18	
11 17	6 11.53	+33 14.6											

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
407792	2011 YX ₁₉		12 17.3	32°79	1.8	17.2 18	278666	2008 RX ₇₉		12 17.3	5°80	5.3/16.7 17	
11 17	6 4.68	+17 46.0	1.912	2.769	12.3	21.3	11 17	6 1.62	+9 39.6	1.946	2.794	12.5	20.4
11 27	5 58.34	+17 51.0	1.845	2.769	8.8	21.0	11 27	5 56.09	+9 1.0	1.883	2.794	9.5	20.2
12 7	5 50.01	+18 0.1	1.802	2.769	4.8	20.8	12 7	5 48.80	+8 31.9	1.845	2.795	6.6	20.1
12 17	5 40.52	+18 12.8	1.788	2.770	1.8	20.6	12 17	5 40.52	+8 14.9	1.834	2.796	5.3	20.0
12 27	5 30.99	+18 28.7	1.804	2.770	4.6	20.8	12 27	5 32.27	+8 11.5	1.851	2.797	6.7	20.1
1 6	5 22.55	+18 47.6	1.847	2.771	8.6	21.0	1 6	5 25.01	+8 21.5	1.895	2.799	9.6	20.3
1 16	5 16.06	+19 9.2	1.917	2.771	12.1	21.3	1 16	5 19.53	+8 43.9	1.963	2.801	12.6	20.4
1 26	5 12.15	+19 33.6	2.008	2.772	15.1	21.5	1 26	5 16.36	+9 16.1	2.053	2.804	15.3	20.6
144702	2004 GS ₁₅		12 17.3	274°28	4.2	17.4 18	373085	2011 FD ₁₂₀		12 17.3	208°61	6.4/17.9 18	
11 17	6 4.72	+10 45.8	1.920	2.765	12.8	19.5	11 17	6 8.89	+44 13.1	2.544	3.348	11.3	20.9
11 27	5 58.45	+10 51.0	1.840	2.753	9.5	19.3	11 27	6 1.36	+44 53.8	2.473	3.346	9.2	20.8
12 7	5 50.13	+11 6.8	1.785	2.741	6.2	19.0	12 7	5 51.62	+45 20.2	2.428	3.344	7.3	20.7
12 17	5 40.53	+11 33.8	1.758	2.729	4.2	18.9	12 17	5 40.60	+45 28.1	2.410	3.342	6.4	20.6
12 27	5 30.75	+12 11.7	1.760	2.716	6.0	19.0	12 27	5 29.54	+45 16.2	2.420	3.340	7.0	20.7
1 6	5 21.89	+12 58.8	1.790	2.704	9.5	19.1	1 6	5 19.67	+44 46.2	2.458	3.337	8.8	20.8
1 16	5 14.91	+13 52.9	1.846	2.691	13.0	19.3	1 16	5 11.97	+44 2.4	2.521	3.335	11.0	20.9
1 26	5 10.47	+14 51.8	1.924	2.679	16.0	19.5	1 26	5 7.05	+43 10.4	2.607	3.332	13.0	21.1
193102	2000 GT ₁₂₁		12 17.3	138°52	1.0	17.2 18	320055	2007 EK ₁₈		12 17.3	235°86	3.0/17.0 17	
11 17	6 2.76	+20 14.2	2.495	3.346	10.0	21.0	11 17	6 3.23	+14 40.5	2.154	3.004	11.4	20.6
11 27	5 56.61	+20 8.7	2.428	3.351	7.0	20.8	11 27	5 57.15	+14 24.0	2.082	3.001	8.3	20.4
12 7	5 48.97	+20 4.1	2.387	3.355	3.7	20.6	12 7	5 49.34	+14 12.8	2.037	2.998	5.0	20.1
12 17	5 40.50	+20 0.2	2.377	3.360	1.0	20.4	12 17	5 40.55	+14 7.8	2.019	2.995	3.0	20.0
12 27	5 32.06	+19 57.4	2.397	3.364	3.6	20.6	12 27	5 31.71	+14 9.5	2.031	2.991	5.0	20.1
1 6	5 24.48	+19 56.1	2.446	3.368	6.9	20.8	1 6	5 23.80	+14 18.1	2.072	2.988	8.3	20.3
1 16	5 18.42	+19 57.0	2.523	3.372	9.8	21.0	1 16	5 17.57	+14 33.4	2.139	2.984	11.4	20.5
1 26	5 14.37	+20 0.7	2.624	3.375	12.3	21.2	1 26	5 13.60	+14 54.6	2.229	2.981	14.2	20.7
28590	2000 EX ₁₂₆		12 17.3	117°27	4.3	17.4 18	484495	2008 DE ₂₄		12 17.3	274°99	4.7/16.8 17	
11 17	6 12.43	+32 54.2	1.660	2.508	14.3	18.8	11 17	6 3.66	+11 8.4	1.948	2.795	12.5	21.4
11 27	6 4.18	+33 38.5	1.605	2.520	10.5	18.6	11 27	5 57.64	+10 36.7	1.870	2.783	9.4	21.2
12 7	5 53.16	+34 12.7	1.575	2.533	6.6	18.4	12 7	5 49.68	+10 13.1	1.817	2.770	6.3	21.0
12 17	5 40.60	+34 31.8	1.572	2.544	4.3	18.3	12 17	5 40.56	+9 59.7	1.791	2.758	4.7	20.9
12 27	5 28.15	+34 33.8	1.598	2.556	6.3	18.4	12 27	5 31.31	+9 58.2	1.794	2.745	6.4	21.0
1 6	5 17.39	+34 21.0	1.651	2.567	10.0	18.7	1 6	5 23.00	+10 8.7	1.825	2.733	9.7	21.1
1 16	5 9.47	+33 58.2	1.729	2.577	13.5	18.9	1 16	5 16.52	+10 30.4	1.880	2.720	13.0	21.3
1 26	5 5.03	+33 31.0	1.828	2.587	16.6	19.2	1 26	5 12.49	+11 1.5	1.957	2.707	15.9	21.5
386735	2010 AQ ₄₅		12 17.3	250°16	1.3	17.3 18	147085	2002 ST ₄₂		12 17.3	42°54	1.6/17.2 18	
11 17	6 8.83	+26 39.1	1.766	2.622	13.2	21.2	11 17	6 7.93	+20 51.2	1.132	2.011	17.3	19.4
11 27	6 1.65	+26 49.0	1.684	2.609	9.4	20.9	11 27	6 1.28	+20 32.1	1.091	2.027	12.1	19.2
12 7	5 51.92	+26 54.7	1.627	2.595	5.1	20.7	12 7	5 51.69	+20 14.5	1.072	2.043	6.4	18.9
12 17	5 40.58	+26 53.7	1.598	2.581	1.4	20.4	12 17	5 40.60	+19 58.7	1.077	2.060	1.6	18.6
12 27	5 29.04	+26 45.5	1.598	2.566	4.9	20.6	12 27	5 29.88	+19 46.0	1.108	2.078	6.1	19.0
1 6	5 18.73	+26 31.3	1.626	2.551	9.4	20.8	1 6	5 21.20	+19 38.0	1.163	2.096	11.4	19.3
1 16	5 10.80	+26 14.2	1.680	2.536	13.5	21.0	1 16	5 15.66	+19 36.1	1.240	2.114	16.0	19.7
1 26	5 6.00	+25 57.7	1.755	2.520	16.9	21.2	1 26	5 13.77	+19 40.8	1.336	2.133	19.7	20.0
50795	2000 FW ₂₄		12 17.3	263°86	3.0	17.1 18	253991	2004 EZ ₆₁		12 17.3	178°94	0.4/17.3 18	
11 17	6 8.46	+29 3.3	1.903	2.754	12.6	18.4	11 17	6 6.00	+24 59.1	2.471	3.318	10.2	21.5
11 27	6 1.39	+30 0.7	1.825	2.745	9.1	18.2	11 27	5 58.95	+24 58.4	2.398	3.320	7.2	21.3
12 7	5 51.80	+30 54.6	1.772	2.735	5.4	18.0	12 7	5 50.23	+24 54.9	2.353	3.321	3.8	21.1
12 17	5 40.60	+31 40.2	1.748	2.726	3.0	17.8	12 17	5 40.57	+24 47.9	2.337	3.321	0.4	20.8
12 27	5 29.09	+32 14.2	1.754	2.716	5.4	17.9	12 27	5 30.93	+24 37.5	2.353	3.321	3.6	21.1
1 6	5 18.69	+32 36.1	1.788	2.706	9.2	18.1	1 6	5 22.23	+24 24.8	2.399	3.321	7.0	21.3
1 16	5 10.55	+32 47.9	1.847	2.696	12.8	18.3	1 16	5 15.20	+24 11.4	2.473	3.320	10.0	21.5
1 26	5 5.47	+32 53.1	1.929	2.686	15.9	18.5	1 26	5 10.37	+23 59.3	2.570	3.318	12.6	21.7
334291	2001 UT ₁₉₉		12 17.3	15°65	1.9	17.4 18	156342	2001 XT ₁₅₄		12 17.3	27°76	0.2/17.3 18	
11 17	6 6.51	+27 3.3	1.162	2.041	16.9	20.0	11 17	6 6.48	+24 2.1	1.157	2.037	16.8	19.3
11 27	6 0.60	+27 16.5	1.110	2.045	12.0	19.7	11 27	6 0.40	+24 0.3	1.111	2.048	11.8	19.0
12 7	5 51.49	+27 24.0	1.079	2.050	6.5	19.4	12 7	5 51.31	+23 56.3	1.087	2.059	6.2	18.7
12 17	5 40.58	+27 22.9	1.073	2.056	1.9	19.2	12 17	5 40.60	+23 48.6	1.087	2.071	0.3	18.3
12 27	5 29.79	+27 12.6	1.092	2.062	6.0	19.4	12 27	5 30.15	+23 37.8	1.113	2.085	5.7	18.8
1 6	5 20.96	+26 55.8	1.135	2.070	11.4	19.8	1 6	5 21.67	+23 26.0	1.164	2.099	11.1	19.1
1 16	5 15.36	+26 36.7	1.201	2.079	16.1	20.1	1 16	5 16.31	+23 16.0	1.236	2.114	15.8	19.4
1 26	5 13.64	+26 18.9	1.285	2.089	20.0	20.3	1 26	5 14.64	+23 9.8	1.327	2.129	19.6	19.7
482529	2012 TK ₃₁₀		12 17.3	66°94	2.4	17.8 18	22760	1998 XR ₄		12 17.3	72°08	2.1/17.5 18	
11 17	6 11.76	+31 46.7	1.453	2.310	15.5	20.2	11 17	6 7.48	+29 15.5	1.783	2.639	13.1	17.8
11 27	6 3.59	+31 9.3	1.402	2.325	11.1	20.0	11 27	6 0.47	+29 16.6	1.722	2.645	9.4	17.6
12 7	5 52.74	+30 18.9	1.374	2.339	6.3	19.7	12 7	5 51.17	+29 10.5	1.684	2.650	5.2	17.4
12 17	5 40.61	+29 15.1	1.373	2.354	2.5	19.5	12 17	5 40.61	+28 55.5	1.675	2.656	2.1	17.2
12 27	5 28.97	+28 1.6	1.401	2.369	5.4	19.7	12 27	5 30.17	+28 31.7	1.694	2.662	4.8	17.4
1 6	5 19.33	+26 44.6	1.456	2.384	10.0	20.1	1 6	5 21.13	+28 1.9	1.742	2.667	8.8	17.6
1 16	5 12.69	+25 30.8	1.536	2.399	14.1	20.3	1 16	5 14.47	+27 29.6	1.815	2.673	12.5	17.9
1 26	5 9.51	+24 25.5	1.637	2.414	17.5	20.6	1 26	5 10.76	+26 58.6	1.909	2.679	15.6	18.1
409078	2003 SR ₂₉₆		12 17.3	67°41	7.7	18.9 17	494566	2017 BL ₁₂		12 17.3	267°40	8.7/19.4 17	
11 17	6 12.60	+46 53.6	2.130	2.929	13.4	20.8							

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
113749	2002 <i>TB</i> ₁₆₆		12 17.3 164°17'	3°8'/18.1	18		354998	2006 <i>PL</i> ₃₁		12 17.3 90°73'	0°3'/17.3	18	
11 17	6 7.26	+37 27.3	2.625	3.451	10.4	19.9	11 17	6 8.77	+21 53.9	1.838	2.693	12.8	20.4
11 27	5 59.86	+37 26.4	2.554	3.453	7.8	19.8	11 27	6 1.28	+22 39.0	1.785	2.709	9.0	20.2
12 7	5 50.71	+37 14.2	2.509	3.456	5.3	19.6	12 7	5 51.61	+23 25.2	1.757	2.726	4.7	20.0
12 17	5 40.66	+36 49.2	2.494	3.458	3.8	19.5	12 17	5 40.74	+24 9.3	1.758	2.742	0.3	19.7
12 27	5 30.72	+36 11.5	2.509	3.461	4.8	19.6	12 27	5 29.93	+24 49.1	1.789	2.758	4.4	20.1
1 6	5 21.88	+35 23.6	2.554	3.462	7.2	19.8	1 6	5 20.41	+25 23.5	1.850	2.774	8.5	20.3
1 16	5 14.90	+34 29.4	2.626	3.464	9.8	19.9	1 16	5 13.12	+25 53.2	1.936	2.790	12.1	20.6
1 26	5 10.27	+33 33.2	2.722	3.465	12.1	20.1	1 26	5 8.65	+26 19.5	2.045	2.805	15.0	20.8
70331	1999 <i>RW</i> ₁₆₅		12 17.3 99°60'	1°9'/17.2	18		117846	2005 <i>JU</i> ₁₂₇		12 17.3 251°91'	0°9'/17.2	18	
11 17	6 7.06	+18 34.5	1.723	2.582	13.4	20.5	11 17	6 5.88	+20 31.3	1.886	2.744	12.4	20.5
11 27	6 0.07	+18 26.8	1.667	2.593	9.5	20.3	11 27	5 59.36	+20 34.6	1.811	2.737	8.8	20.3
12 7	5 50.94	+18 22.1	1.636	2.604	5.2	20.1	12 7	5 50.68	+20 39.4	1.761	2.730	4.7	20.0
12 17	5 40.67	+18 20.4	1.633	2.614	1.9	19.9	12 17	5 40.72	+20 45.0	1.739	2.723	0.9	19.7
12 27	5 30.51	+18 22.0	1.658	2.625	5.0	20.1	12 27	5 30.64	+20 51.0	1.747	2.716	4.5	20.0
1 6	5 21.68	+18 27.2	1.712	2.636	9.1	20.4	1 6	5 21.65	+20 57.8	1.783	2.708	8.7	20.2
1 16	5 15.09	+18 36.5	1.791	2.646	12.8	20.6	1 16	5 14.70	+21 6.2	1.845	2.701	12.5	20.4
1 26	5 11.29	+18 50.1	1.891	2.656	15.9	20.9	1 26	5 10.45	+21 17.1	1.929	2.693	15.6	20.6
33331	1998 <i>SY</i> ₂₁		12 17.3 96°48'	3°8'/17.1	18		287851	2003 <i>ST</i> ₂₄₂		12 17.3 215°14'	1°3'/17.4	18	
11 17	6 9.60	+14 33.2	1.591	2.444	14.6	19.2	11 17	6 8.10	+26 50.0	2.103	2.952	11.7	21.7
11 27	6 1.76	+14 7.2	1.548	2.468	10.5	19.0	11 27	6 0.83	+27 3.5	2.024	2.945	8.3	21.5
12 7	5 51.75	+13 48.3	1.529	2.491	6.3	18.8	12 7	5 51.42	+27 13.2	1.971	2.938	4.5	21.2
12 17	5 40.69	+13 37.7	1.538	2.513	3.8	18.7	12 17	5 40.74	+27 16.9	1.948	2.930	1.3	21.0
12 27	5 29.94	+13 36.3	1.575	2.535	6.1	18.9	12 27	5 29.95	+27 14.1	1.954	2.922	4.2	21.2
1 6	5 20.75	+13 44.0	1.640	2.556	10.0	19.2	1 6	5 20.22	+27 5.8	1.991	2.913	8.1	21.4
1 16	5 13.98	+14 0.2	1.730	2.577	13.6	19.4	1 16	5 12.51	+26 54.1	2.053	2.903	11.6	21.6
1 26	5 10.13	+14 23.5	1.840	2.597	16.6	19.7	1 26	5 7.47	+26 41.9	2.139	2.893	14.6	21.8
271603	2004 <i>PL</i> ₆		12 17.3 127°73'	2°8'/17.1	18		133510	2003 <i>SU</i> ₂₉₇		12 17.3 16°49'	3°2'/16.6	18	
11 17	6 7.94	+16 22.3	1.816	2.668	13.1	20.9	11 17	6 3.52	+16 0.5	2.157	3.009	11.3	19.4
11 27	6 0.55	+16 1.3	1.760	2.681	9.4	20.7	11 27	5 57.32	+15 7.1	2.089	3.009	8.2	19.2
12 7	5 51.15	+15 44.6	1.729	2.693	5.4	20.5	12 7	5 49.46	+14 16.3	2.048	3.009	5.0	19.0
12 17	5 40.67	+15 33.2	1.727	2.705	2.8	20.3	12 17	5 40.70	+13 30.5	2.035	3.010	3.2	18.9
12 27	5 30.34	+15 27.8	1.754	2.716	5.3	20.5	12 27	5 31.99	+12 52.2	2.053	3.010	5.2	19.0
1 6	5 21.30	+15 29.1	1.809	2.727	9.1	20.8	1 6	5 24.27	+12 23.1	2.099	3.011	8.4	19.2
1 16	5 14.41	+15 37.1	1.890	2.737	12.6	21.0	1 16	5 18.26	+12 4.0	2.171	3.011	11.5	19.4
1 26	5 10.20	+15 51.4	1.993	2.747	15.5	21.2	1 26	5 14.46	+11 54.9	2.265	3.012	14.1	19.6
140081	2001 <i>SB</i> ₁₂₀		12 17.3 164°89'	1°5'/17.5	18		48969	1998 <i>QT</i> ₃₈		12 17.3 41°32'	1°1'/17.4	18	
11 17	6 6.96	+28 5.9	2.013	2.865	12.0	20.1	11 17	6 8.94	+26 39.2	1.205	2.080	16.8	18.4
11 27	5 59.97	+28 6.3	1.945	2.867	8.5	19.9	11 27	6 2.09	+26 26.2	1.158	2.091	11.8	18.1
12 7	5 50.90	+28 1.1	1.902	2.868	4.7	19.7	12 7	5 52.22	+26 6.7	1.132	2.103	6.3	17.9
12 17	5 40.68	+27 48.8	1.888	2.870	1.5	19.5	12 17	5 40.78	+25 39.6	1.132	2.116	1.1	17.6
12 27	5 30.50	+27 29.6	1.903	2.871	4.3	19.7	12 27	5 29.65	+25 6.7	1.158	2.129	5.7	17.9
1 6	5 21.52	+27 5.4	1.948	2.872	8.2	19.9	1 6	5 20.57	+24 31.9	1.209	2.143	11.0	18.3
1 16	5 14.64	+26 39.2	2.019	2.873	11.6	20.1	1 16	5 14.66	+23 59.4	1.283	2.157	15.6	18.6
1 26	5 10.44	+26 13.9	2.112	2.873	14.6	20.3	1 26	5 12.48	+23 32.8	1.376	2.172	19.3	18.9
138278	2000 <i>GY</i> ₂₃		12 17.3 73°15'	1°0'/17.4	18		389914	2012 <i>TH</i> ₇₄		12 17.3 330°49'	4°7'/16.7	18	
11 17	6 8.75	+26 1.7	1.771	2.628	13.2	19.7	11 17	6 5.09	+15 11.2	1.348	2.217	15.7	20.7
11 27	6 1.13	+26 7.9	1.729	2.654	9.2	19.5	11 27	5 59.29	+14 19.6	1.281	2.209	11.5	20.5
12 7	5 51.42	+26 10.0	1.711	2.680	4.9	19.3	12 7	5 50.82	+13 33.4	1.237	2.201	7.1	20.2
12 17	5 40.69	+26 6.4	1.722	2.706	1.0	19.1	12 17	5 40.75	+12 56.3	1.218	2.194	4.7	20.0
12 27	5 30.28	+25 57.4	1.762	2.731	4.4	19.4	12 27	5 30.62	+12 31.5	1.226	2.187	7.4	20.2
1 6	5 21.38	+25 44.7	1.831	2.757	8.5	19.7	1 6	5 21.92	+12 20.9	1.259	2.180	11.9	20.4
1 16	5 14.83	+25 30.8	1.925	2.782	12.0	20.0	1 16	5 15.83	+12 24.5	1.314	2.175	16.2	20.7
1 26	5 11.12	+25 18.3	2.042	2.807	14.9	20.2	1 26	5 13.05	+12 40.8	1.387	2.170	19.8	20.9
402710	2006 <i>VF</i> ₁₄₇		12 17.3 141°52'	0°5'/17.3	18		482566	2012 <i>WK</i> ₄		12 17.3 101°79'	9°6'/17.9	16 C	
11 17	6 6.11	+25 19.1	1.976	2.832	12.0	21.5	11 17	6 56.64	+ 7 58.3	0.365	1.250	38.1	21.3
11 27	5 59.35	+25 12.0	1.909	2.834	8.5	21.2	11 27	6 35.28	+ 8 2.4	0.362	1.295	27.3	21.1
12 7	5 50.58	+25 1.4	1.867	2.836	4.5	21.0	12 7	6 8.63	+ 8 40.3	0.372	1.337	16.4	20.9
12 17	5 40.68	+24 46.5	1.854	2.838	0.5	20.7	12 17	5 41.22	+ 9 46.5	0.400	1.376	9.7	20.8
12 27	5 30.83	+24 27.9	1.871	2.840	4.2	21.0	12 27	5 18.16	+11 10.4	0.446	1.412	13.6	21.3
1 6	5 22.16	+24 7.4	1.916	2.842	8.2	21.3	1 6	5 2.37	+12 41.5	0.511	1.444	20.8	21.9
1 16	5 15.54	+23 47.2	1.988	2.843	11.7	21.5	1 16	4 54.26	+14 12.9	0.589	1.473	26.8	22.4
1 26	5 11.54	+23 29.6	2.082	2.845	14.7	21.7	1 26	4 53.00	+15 41.2	0.679	1.498	31.4	22.9
494151	2016 <i>CY</i> ₂₅₅		12 17.3 188°77'	0°3'/17.3	18		9906	Tintoretto		12 17.3 86°33'	7°2'/17.9	18	
11 17	6 3.18	+21 16.8	2.599	3.448	9.7	21.0	11 17	6 14.08	+41 22.5	1.793	2.618	14.5	17.3
11 27	5 56.99	+21 34.6	2.525	3.448	6.8	20.8	11 27	6 5.45	+42 21.7	1.747	2.637	11.4	17.1
12 7	5 49.27	+21 53.4	2.479	3.447	3.6	20.6	12 7	5 53.93	+43 3.5	1.724	2.655	8.6	17.0
12 17	5 40.66	+22 12.0	2.462	3.446	0.3	20.3	12 17	5 40.85	+43 21.8	1.728	2.674	7.2	17.0
12 27	5 32.00	+22 29.7	2.477	3.445	3.4	20.6	12 27	5 27.96	+43 14.9	1.760	2.692	8.2	17.0
1 6	5 24.11	+22 46.4	2.522	3.444	6.6	20.8	1 6	5 16.93	+42 46.2	1.818	2.711	10.6	17.2
1 16	5 17.69	+23 2.4	2.594	3.443	9.6	21.0	1 16	5 8.93	+42 2.2	1.900	2.729	13.4	17.4
1 26	5 13.26	+23 18.3	2.691	3.441	12.0	21.2	1 26	5 4.54	+41 10.6	2.003	2.746	15.8	17.7
460962	2014 <i>WV</i> ₂₈₇		12 17.3 88°96'	2°2'/17.5	17		274460	2008 <i>SG</i> ₆₅		12 17.3 141°96'	3°5'/17.5	18	

EPHEMERIDES

12 17.3

12 17.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
440889	2006 <i>UL</i> ₇₂		12 17.3	29°53	0°1/17.3	17	266633	2008 <i>RB</i> ₇₈		12 17.3	135°83	0°3/17.3	18
11 17	6 5.58	+23 54.2	1.384	2.257	15.1	20.5	11 17	6 4.24	+21 17.8	2.428	3.278	10.3	20.2
11 27	5 59.44	+23 42.9	1.336	2.269	10.6	20.3	11 27	5 57.81	+21 39.0	2.361	3.284	7.2	20.0
12 7	5 50.77	+23 29.3	1.312	2.283	5.5	20.0	12 7	5 49.75	+22 1.1	2.321	3.289	3.8	19.8
12 17	5 40.77	+23 12.9	1.313	2.297	0.2	19.6	12 17	5 40.77	+22 22.9	2.310	3.294	0.3	19.5
12 27	5 31.01	+22 54.8	1.341	2.312	5.1	20.1	12 27	5 31.76	+22 43.5	2.330	3.299	3.5	19.8
1 6	5 22.93	+22 37.1	1.395	2.327	10.0	20.4	1 6	5 23.62	+23 2.7	2.381	3.303	6.9	20.0
1 16	5 17.51	+22 22.3	1.473	2.344	14.1	20.7	1 16	5 17.09	+23 20.7	2.458	3.308	10.0	20.2
1 26	5 15.31	+22 12.0	1.571	2.361	17.5	21.0	1 26	5 12.68	+23 38.4	2.559	3.312	12.5	20.4
288051	2003 <i>UR</i> ₂₉₀		12 17.3	217°41	2°1/17.3	18	405783	2006 <i>AE</i> ₄₃		12 17.3	60°35	4°3/17.3	18
11 17	6 10.97	+26 58.8	1.519	2.379	14.8	20.7	11 17	6 3.39	+10 32.8	2.008	2.853	12.3	20.6
11 27	6 3.50	+27 32.4	1.450	2.376	10.6	20.5	11 27	5 57.33	+10 25.7	1.949	2.861	9.2	20.4
12 7	5 53.08	+28 2.3	1.404	2.372	5.8	20.2	12 7	5 49.53	+10 28.3	1.915	2.869	6.0	20.3
12 17	5 40.85	+28 24.3	1.385	2.367	2.1	19.9	12 17	5 40.77	+10 41.3	1.909	2.877	4.3	20.2
12 27	5 28.44	+28 36.2	1.395	2.363	5.6	20.1	12 27	5 32.05	+11 4.8	1.932	2.885	5.8	20.3
1 6	5 17.54	+28 38.6	1.432	2.358	10.3	20.4	1 6	5 24.34	+11 37.6	1.983	2.894	8.9	20.5
1 16	5 9.46	+28 34.7	1.493	2.352	14.7	20.6	1 16	5 18.42	+12 17.9	2.059	2.902	11.9	20.7
1 26	5 4.97	+28 28.5	1.574	2.347	18.3	20.9	1 26	5 14.79	+13 3.7	2.158	2.911	14.5	20.9
452173	2015 <i>RZ</i> ₈₀		12 17.3	35°85	1°6/17.2	18	275534	1998 <i>QJ</i> ₃		12 17.3	89°37	7°3/17.6	18
11 17	6 5.55	+19 42.0	1.675	2.538	13.5	21.3	11 17	6 6.95	+2 18.9	1.933	2.750	13.9	20.4
11 27	5 59.19	+19 30.4	1.613	2.541	9.5	21.1	11 27	5 59.61	+1 52.1	1.896	2.779	11.0	20.3
12 7	5 50.61	+19 20.8	1.576	2.545	5.1	20.8	12 7	5 50.60	+1 42.1	1.882	2.807	8.5	20.2
12 17	5 40.78	+19 13.2	1.566	2.549	1.6	20.6	12 17	5 40.80	+1 50.6	1.896	2.835	7.3	20.2
12 27	5 30.99	+19 8.2	1.584	2.552	4.9	20.9	12 27	5 31.27	+2 17.8	1.938	2.862	8.2	20.3
1 6	5 22.50	+19 6.6	1.630	2.557	9.3	21.1	1 6	5 22.95	+3 1.3	2.008	2.889	10.4	20.5
1 16	5 16.25	+19 9.3	1.701	2.561	13.1	21.4	1 16	5 16.57	+3 57.4	2.102	2.915	12.8	20.7
1 26	5 12.85	+19 16.8	1.793	2.565	16.4	21.6	1 26	5 12.55	+5 2.1	2.218	2.941	15.0	20.9
464278	2015 <i>YH</i> ₄		12 17.3	151°22	7°3/19.1	17	309290	2007 <i>RB</i> ₂₁₉		12 17.3	108°76	6°2/17.9	18
11 17	6 23.19	+41 28.9	1.195	2.033	19.4	20.3	11 17	6 13.50	+39 34.6	1.911	2.737	13.6	21.3
11 27	6 12.60	+41 8.4	1.136	2.039	15.0	20.1	11 27	6 4.87	+40 21.4	1.859	2.754	10.6	21.1
12 7	5 57.83	+40 18.7	1.097	2.044	10.5	19.8	12 7	5 53.59	+40 53.1	1.832	2.770	7.7	21.0
12 17	5 40.98	+38 54.2	1.083	2.048	7.4	19.7	12 17	5 40.89	+41 4.4	1.833	2.786	6.2	20.9
12 27	5 24.86	+38 58.0	1.096	2.053	8.8	19.8	12 27	5 28.36	+40 54.1	1.862	2.802	7.2	21.0
1 6	5 11.86	+34 42.8	1.136	2.056	13.0	20.0	1 6	5 17.52	+40 25.0	1.918	2.817	9.8	21.2
1 16	5 3.35	+32 24.4	1.199	2.059	17.4	20.3	1 16	5 9.44	+39 43.0	2.000	2.832	12.7	21.4
1 26	4 59.69	+30 15.4	1.281	2.062	21.3	20.5	1 26	5 4.73	+38 54.9	2.103	2.846	15.2	21.6
150708	2001 <i>PK</i> ₅₈		12 17.3	120°64	3°9/17.2	18	38030	1998 <i>QG</i> ₃₃		12 17.3	162°82	0°8/17.2	18
11 17	6 8.15	+13 18.8	1.686	2.536	14.0	20.2	11 17	6 3.85	+20 54.2	2.829	3.674	9.1	20.6
11 27	6 0.86	+13 5.5	1.631	2.549	10.2	19.9	11 27	5 57.31	+20 45.6	2.760	3.680	6.4	20.4
12 7	5 51.41	+13 0.5	1.601	2.561	6.3	19.7	12 7	5 49.40	+20 37.1	2.718	3.686	3.4	20.2
12 17	5 40.80	+13 4.5	1.598	2.572	3.9	19.6	12 17	5 40.77	+20 28.5	2.708	3.691	0.8	20.0
12 27	5 30.32	+13 17.7	1.624	2.584	6.1	19.8	12 27	5 32.17	+20 20.3	2.728	3.695	3.2	20.2
1 6	5 21.17	+13 39.6	1.678	2.594	9.8	20.0	1 6	5 24.35	+20 13.1	2.780	3.699	6.2	20.4
1 16	5 14.29	+14 8.8	1.757	2.605	13.4	20.3	1 16	5 17.92	+20 7.7	2.859	3.703	8.9	20.6
1 26	5 10.22	+14 43.9	1.857	2.615	16.4	20.5	1 26	5 13.33	+20 5.0	2.963	3.705	11.2	20.8
515759	2015 <i>FS</i> ₄₀₂		12 17.3	322°10	4°3/17.3	18	404417	2013 <i>GG</i> ₇₅		12 17.3	235°29	0°3/17.3	18
11 17	6 10.81	+30 55.2	1.330	2.194	16.2	21.1	11 17	6 5.58	+22 33.0	1.931	2.788	12.2	21.8
11 27	6 3.78	+31 43.5	1.266	2.191	11.8	20.8	11 27	5 59.09	+22 33.7	1.861	2.787	8.6	21.6
12 7	5 53.37	+32 23.8	1.225	2.188	7.2	20.6	12 7	5 50.54	+22 33.9	1.817	2.786	4.5	21.3
12 17	5 40.86	+32 49.9	1.209	2.186	4.3	20.4	12 17	5 40.81	+22 32.7	1.801	2.785	0.3	21.0
12 27	5 28.19	+32 58.5	1.220	2.183	6.9	20.5	12 27	5 31.05	+22 30.0	1.814	2.784	4.2	21.3
1 6	5 17.31	+32 51.1	1.256	2.181	11.6	20.8	1 6	5 22.40	+22 26.8	1.856	2.782	8.4	21.5
1 16	5 9.70	+32 32.8	1.314	2.178	16.0	21.1	1 16	5 15.79	+22 24.4	1.924	2.781	12.0	21.8
1 26	5 6.17	+32 9.9	1.392	2.176	19.7	21.3	1 26	5 11.80	+22 24.3	2.014	2.780	15.0	22.0
268714	2006 <i>HN</i> ₅₁		12 17.3	263°00	4°7/17.3	18	171717	2000 <i>UP</i> ₅₉		12 17.3	27°61	1°9/17.6	18
11 17	6 7.38	+36 50.0	2.414	3.245	11.0	20.6	11 17	6 9.86	+28 41.1	1.153	2.028	17.3	19.3
11 27	6 0.42	+37 39.3	2.333	3.233	8.4	20.4	11 27	6 3.02	+28 25.4	1.099	2.032	12.4	19.0
12 7	5 51.29	+38 19.5	2.277	3.221	5.9	20.2	12 7	5 52.86	+27 59.8	1.067	2.037	6.8	18.7
12 17	5 40.81	+38 46.7	2.250	3.209	4.7	20.1	12 17	5 40.87	+27 22.8	1.059	2.042	2.0	18.4
12 27	5 30.09	+38 58.4	2.252	3.197	5.8	20.2	12 27	5 29.12	+26 36.4	1.077	2.048	6.1	18.7
1 6	5 20.33	+38 55.4	2.284	3.185	8.4	20.3	1 6	5 19.50	+25 45.7	1.120	2.054	11.6	19.0
1 16	5 12.51	+38 40.4	2.341	3.172	11.1	20.4	1 16	5 13.29	+24 57.1	1.185	2.061	16.5	19.3
1 26	5 7.34	+38 17.8	2.421	3.160	13.5	20.6	1 26	5 11.08	+24 15.2	1.268	2.068	20.4	19.6
247336	2001 <i>UP</i> ₁₄₅		12 17.3	31°94	1°4/17.3	18	147126	2002 <i>TH</i> ₁₃₁		12 17.3	0°04	2°0/17.4	18
11 17	6 6.67	+19 54.4	1.195	2.072	16.6	20.0	11 17	6 6.78	+17 43.6	1.208	2.084	16.7	19.4
11 27	6 0.50	+20 0.3	1.148	2.083	11.7	19.7	11 27	6 0.79	+18 4.9	1.149	2.082	11.9	19.1
12 7	5 51.44	+20 9.7	1.123	2.094	6.2	19.4	12 7	5 51.75	+18 34.0	1.111	2.081	6.5	18.8
12 17	5 40.81	+20 21.6	1.123	2.107	1.4	19.2	12 17	5 40.85	+19 9.1	1.098	2.081	2.0	18.5
12 27	5 30.35	+20 35.2	1.149	2.120	5.8	19.5	12 27	5 29.83	+19 48.1	1.111	2.081	6.1	18.8
1 6	5 21.73	+20 50.5	1.200	2.133	11.1	19.8	1 6	5 20.47	+20 28.9	1.149	2.082	11.5	19.1
1 16	5 16.09	+21 7.9	1.273	2.148	15.6	20.1	1 16	5 14.08	+21 10.5	1.209	2.084	16.3	19.4
1 26	5 14.03	+21 27.8	1.365	2.163	19.3	20.4	1 26	5 11.43	+21 52.5	1.288	2.086	20.3	19.7
443998	2003 <i>YO</i> ₂₇		12 17.3	17°02	1°7/16.9	17	284895	2009 <i>SW</i> ₁₆₈		12 17.3	21°06	9°	

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
22663	1998 QV ₁₉		12 17.3 149°40	2°5/17.2	18		448800	2011 SA ₂₆₁		12 17.3 346°69	8°7/16.5	17	
11 17	6 6.20	+16 24.5	1.997	2.847	12.1	18.2	11 17	6 6.92	+37 17.5	1.244	2.108	17.1	20.3
11 27	5 59.35	+16 12.0	1.933	2.854	8.7	18.0	11 27	6 1.72	+39 4.2	1.179	2.095	13.4	20.0
12 7	5 50.60	+16 3.8	1.895	2.859	5.0	17.8	12 7	5 52.66	+40 39.4	1.136	2.083	10.1	19.8
12 17	5 40.82	+16 0.2	1.886	2.865	2.5	17.6	12 17	5 40.94	+41 52.0	1.116	2.073	8.7	19.7
12 27	5 31.08	+16 1.8	1.906	2.870	4.9	17.8	12 27	5 28.66	+42 34.3	1.121	2.065	10.4	19.8
1 6	5 22.43	+16 8.8	1.956	2.874	8.5	18.0	1 6	5 18.17	+42 45.8	1.148	2.058	14.0	20.0
1 16	5 15.69	+16 21.1	2.031	2.878	11.9	18.3	1 16	5 11.33	+42 32.6	1.196	2.052	17.8	20.2
1 26	5 11.43	+16 38.5	2.129	2.882	14.7	18.5	1 26	5 9.17	+42 3.6	1.262	2.048	21.2	20.4
181380	2006 SF ₃₆		12 17.3 58°78	2°0/17.3	18		195058	2002 CK ₈₂		12 17.3 166°49	3°9/17.7	18	
11 17	6 9.04	+26 52.2	1.600	2.460	14.1	20.2	11 17	6 10.74	+33 48.2	1.842	2.686	13.3	20.1
11 27	6 1.70	+27 31.8	1.556	2.482	10.0	20.0	11 27	6 2.97	+34 8.4	1.776	2.689	9.8	19.9
12 7	5 51.93	+28 7.0	1.537	2.505	5.4	19.8	12 7	5 52.67	+34 17.9	1.734	2.691	6.2	19.7
12 17	5 40.88	+28 34.2	1.545	2.527	2.0	19.6	12 17	5 40.94	+34 13.1	1.720	2.693	4.0	19.6
12 27	5 30.04	+28 51.8	1.582	2.549	5.1	19.9	12 27	5 29.25	+33 53.3	1.735	2.695	5.7	19.7
1 6	5 20.81	+29 0.5	1.646	2.572	9.2	20.2	1 6	5 19.03	+33 21.1	1.779	2.696	9.3	19.9
1 16	5 14.17	+29 3.0	1.736	2.595	13.0	20.4	1 16	5 11.35	+32 41.4	1.847	2.697	12.8	20.1
1 26	5 10.67	+29 2.4	1.846	2.617	16.0	20.7	1 26	5 6.85	+31 59.4	1.938	2.698	15.7	20.4
140586	2001 TP ₂₂₈		12 17.3 144°23	2°3/17.1	18		201211	2002 PJ ₁₈₅		12 17.3 255°38	4°3/18.0	17	
11 17	6 5.13	+17 24.3	2.061	2.913	11.7	20.9	11 17	6 10.43	+36 4.0	1.896	2.735	13.2	20.3
11 27	5 58.56	+17 2.9	1.996	2.918	8.4	20.7	11 27	6 2.80	+36 5.0	1.817	2.726	9.9	20.1
12 7	5 50.19	+16 44.5	1.957	2.922	4.8	20.5	12 7	5 52.61	+35 52.5	1.762	2.715	6.5	19.9
12 17	5 40.83	+16 29.8	1.947	2.927	2.3	20.3	12 17	5 40.94	+35 23.4	1.735	2.705	4.4	19.7
12 27	5 31.52	+16 19.8	1.967	2.931	4.7	20.5	12 27	5 29.26	+34 37.6	1.737	2.695	5.9	19.8
1 6	5 23.25	+16 15.2	2.015	2.934	8.3	20.7	1 6	5 19.00	+33 38.8	1.767	2.684	9.3	20.0
1 16	5 16.83	+16 16.4	2.090	2.938	11.6	20.9	1 16	5 11.28	+32 32.8	1.823	2.673	12.9	20.2
1 26	5 12.79	+16 23.6	2.187	2.941	14.3	21.2	1 26	5 6.74	+31 26.1	1.901	2.662	16.0	20.4
485196	2010 TF ₁₅₇		12 17.3 85°34	1°6/17.2	18		255625	2006 PC ₂₈		12 17.3 195°24	4°9/17.4	18	
11 17	6 6.12	+19 3.9	1.953	2.808	12.2	21.4	11 17	6 11.40	+37 21.9	2.338	3.162	11.5	21.4
11 27	5 59.22	+18 55.4	1.903	2.827	8.6	21.2	11 27	6 3.27	+38 10.9	2.263	3.160	8.8	21.2
12 7	5 50.50	+18 49.1	1.878	2.845	4.6	21.0	12 7	5 52.82	+38 49.5	2.214	3.157	6.2	21.0
12 17	5 40.84	+18 45.0	1.882	2.864	1.6	20.9	12 17	5 40.96	+39 13.2	2.195	3.153	4.9	20.9
12 27	5 31.36	+18 43.4	1.915	2.882	4.4	21.1	12 27	5 28.94	+39 19.7	2.205	3.148	6.1	21.0
1 6	5 23.09	+18 44.8	1.978	2.900	8.2	21.4	1 6	5 18.05	+39 10.2	2.244	3.143	8.6	21.1
1 16	5 16.81	+18 49.8	2.066	2.918	11.5	21.6	1 16	5 9.32	+38 48.4	2.310	3.137	11.4	21.3
1 26	5 13.00	+18 58.6	2.177	2.936	14.2	21.8	1 26	5 3.44	+38 19.2	2.399	3.131	13.8	21.5
386292	2008 RX ₁₃₃		12 17.3 70°67	0°5/17.3	16		438554	2007 TL ₂₉₄		12 17.3 62°18	4°0/17.0	15	
11 17	6 10.51	+23 46.9	1.452	2.315	15.1	20.9	11 17	6 7.05	+14 50.3	1.521	2.381	14.7	21.9
11 27	6 2.76	+24 5.8	1.410	2.339	10.6	20.7	11 27	6 0.13	+14 13.1	1.479	2.402	10.6	21.7
12 7	5 52.47	+24 22.8	1.393	2.363	5.5	20.4	12 7	5 51.04	+13 43.0	1.461	2.423	6.4	21.5
12 17	5 40.90	+24 35.7	1.403	2.386	0.5	20.1	12 17	5 40.90	+13 21.9	1.470	2.445	4.0	21.4
12 27	5 29.66	+24 43.5	1.440	2.410	5.0	20.5	12 27	5 31.06	+13 11.4	1.506	2.467	6.3	21.6
1 6	5 20.20	+24 47.3	1.505	2.434	9.7	20.9	1 6	5 22.75	+13 11.7	1.570	2.488	10.2	21.9
1 16	5 13.51	+24 49.2	1.595	2.457	13.7	21.2	1 16	5 16.85	+13 22.1	1.657	2.510	13.8	22.2
1 26	5 10.12	+24 51.6	1.705	2.480	17.0	21.4	1 26	5 13.82	+13 41.2	1.765	2.532	16.8	22.4
203755	2002 RL ₁₃₄		12 17.3 14°06	1°0/17.2	18		274181	2008 GN ₇₉		12 17.3 235°87	3°6/16.9	18	
11 17	6 4.80	+22 12.4	1.157	2.040	16.7	18.8	11 17	6 8.04	+15 38.7	1.650	2.505	14.0	21.6
11 27	5 59.49	+23 15.8	1.109	2.046	11.7	18.5	11 27	6 1.10	+15 6.2	1.574	2.496	10.2	21.3
12 7	5 51.09	+24 22.6	1.082	2.054	6.2	18.2	12 7	5 51.75	+14 38.3	1.523	2.486	6.1	21.1
12 17	5 40.87	+25 27.2	1.080	2.064	1.0	17.9	12 17	5 40.93	+14 16.8	1.500	2.476	3.6	20.9
12 27	5 30.66	+26 24.9	1.104	2.075	5.8	18.3	12 27	5 29.98	+14 3.5	1.504	2.466	6.2	21.0
1 6	5 22.22	+27 13.2	1.152	2.088	11.2	18.6	1 6	5 20.25	+13 59.6	1.537	2.455	10.4	21.2
1 16	5 16.86	+27 52.7	1.223	2.102	15.8	18.9	1 16	5 12.82	+14 5.3	1.594	2.443	14.4	21.5
1 26	5 15.29	+28 25.2	1.312	2.118	19.6	19.2	1 26	5 8.38	+14 20.2	1.671	2.431	17.8	21.7
312888	2011 UN ₂₅₄		12 17.3 10°06	0°3/17.3	18		392913	2012 VC ₈₃		12 17.3 269°46	1°6/17.3	18	
11 17	6 5.39	+22 45.7	1.483	2.353	14.5	20.1	11 17	6 8.37	+26 13.6	1.656	2.516	13.7	21.1
11 27	5 59.38	+22 43.0	1.423	2.355	10.2	19.9	11 27	6 1.54	+26 42.7	1.582	2.508	9.8	20.8
12 7	5 50.84	+22 39.6	1.386	2.356	5.3	19.6	12 7	5 52.06	+27 9.2	1.532	2.500	5.4	20.6
12 17	5 40.87	+22 34.7	1.375	2.359	0.4	19.2	12 17	5 40.94	+27 29.6	1.510	2.493	1.6	20.3
12 27	5 30.92	+22 28.4	1.391	2.362	5.0	19.6	12 27	5 29.62	+27 42.2	1.517	2.485	5.1	20.5
1 6	5 22.43	+22 22.2	1.434	2.366	9.8	19.9	1 6	5 19.59	+27 47.4	1.550	2.477	9.6	20.8
1 16	5 16.47	+22 17.7	1.501	2.370	14.1	20.2	1 16	5 12.05	+27 47.4	1.609	2.469	13.8	21.0
1 26	5 13.68	+22 16.5	1.588	2.375	17.6	20.4	1 26	5 7.76	+27 45.5	1.688	2.461	17.2	21.2
334563	2002 TV ₅₉		12 17.3 176°28	10°4/15.5	16		270115	2001 RR ₄₃		12 17.3 115°05	3°4/17.1	18	
11 17	6 7.46	- 4 13.7	2.021	2.807	14.5	21.5	11 17	6 8.34	+15 47.6	1.651	2.506	14.0	20.4
11 27	6 0.16	- 5 43.4	1.964	2.810	12.4	21.4	11 27	6 1.05	+15 19.0	1.596	2.518	10.1	20.2
12 7	5 51.03	- 6 53.9	1.932	2.813	10.9	21.3	12 7	5 51.56	+14 55.6	1.567	2.530	5.9	20.0
12 17	5 40.88	- 7 39.8	1.925	2.814	10.4	21.2	12 17	5 40.92	+14 39.0	1.565	2.542	3.4	19.8
12 27	5 30.75	- 7 57.9	1.944	2.815	11.2	21.3	12 27	5 30.45	+14 30.2	1.592	2.553	5.8	20.0
1 6	5 21.67	- 7 48.5	1.989	2.815	13.0	21.4	1 6	5 21.38	+14 30.0	1.646	2.564	9.8	20.3
1 16	5 14.44	- 7 15.1	2.056	2.814	15.0	21.5	1 16	5 14.62	+14 38.2	1.725	2.575	13.5	20.5
1 26	5 9.60	- 6 22.8	2.142	2.812	16.9	21.7	1 26	5 10.74	+14 54.1	1.825	2.585	16.6	20.8
40342	1999 NB ₉		12 17.3 112°62	0°5/17.3	18		281188	2007 EK ₁₇₇		12 17.3 209°50	1°6/17.2	18	
11 17	6 7.89	+21 42.3	1.745										

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
263348	2008 <i>CR</i> ₁₁₅		12 17.3	87°30	0°1/17.3	18	514325	2016 <i>NN</i> ₆₇		12 17.3	340°45	4°6/17.3	18
11 17	6 6.52	+22 25.6	1.877	2.735	12.5	20.5	11 17	6 9.97	+30 51.5	1.237	2.106	16.8	20.4
11 27	5 59.80	+22 48.5	1.815	2.741	8.8	20.3	11 27	6 3.44	+31 46.8	1.174	2.102	12.3	20.1
12 7	5 50.96	+23 11.9	1.778	2.747	4.6	20.0	12 7	5 53.35	+32 34.5	1.133	2.097	7.6	19.8
12 17	5 40.91	+23 33.7	1.769	2.753	0.2	19.7	12 17	5 41.01	+33 7.6	1.117	2.094	4.6	19.6
12 27	5 30.86	+23 52.7	1.790	2.759	4.3	20.1	12 27	5 28.45	+33 22.0	1.127	2.090	7.3	19.8
1 6	5 21.98	+24 8.9	1.840	2.766	8.4	20.3	1 6	5 17.75	+33 19.0	1.161	2.088	12.1	20.1
1 16	5 15.22	+24 23.1	1.915	2.772	12.0	20.6	1 16	5 10.48	+33 3.8	1.217	2.085	16.7	20.3
1 26	5 11.16	+24 36.8	2.012	2.778	15.0	20.8	1 26	5 7.48	+32 42.8	1.291	2.084	20.5	20.6
450690	2006 <i>WP</i>		12 17.3	61°55	0°9/17.4	17	40846	1999 <i>TN</i> ₁₀₂		12 17.3	87°17	4°2/17.7	18
11 17	6 7.96	+19 19.9	1.660	2.519	13.7	20.7	11 17	6 7.43	+10 38.4	1.705	2.552	14.1	19.2
11 27	6 0.77	+19 50.4	1.617	2.543	9.6	20.5	11 27	6 0.44	+10 59.0	1.649	2.563	10.4	19.0
12 7	5 51.41	+20 24.1	1.598	2.567	5.1	20.3	12 7	5 51.29	+11 31.7	1.617	2.574	6.6	18.8
12 17	5 40.92	+20 58.8	1.608	2.591	0.9	20.0	12 17	5 40.94	+12 16.0	1.612	2.585	4.2	18.7
12 27	5 30.64	+21 32.7	1.646	2.615	4.6	20.4	12 27	5 30.64	+13 10.0	1.637	2.596	6.0	18.8
1 6	5 21.80	+22 4.8	1.713	2.639	8.9	20.7	1 6	5 21.58	+14 10.9	1.690	2.607	9.7	19.1
1 16	5 15.30	+22 35.2	1.805	2.663	12.6	21.0	1 16	5 14.70	+15 15.7	1.768	2.618	13.2	19.3
1 26	5 11.67	+23 4.5	1.918	2.687	15.6	21.2	1 26	5 10.60	+16 22.2	1.868	2.629	16.2	19.5
136217	2003 <i>WK</i> ₇₂		12 17.3	67°88	4°0/17.6	18	369206	2008 <i>TY</i> ₁₆₅		12 17.3	335°09	2°5/17.7	18
11 17	6 13.95	+31 16.0	1.234	2.098	17.2	19.5	11 17	6 4.86	+31 9.8	1.980	2.833	12.1	19.8
11 27	6 5.66	+31 49.0	1.196	2.121	12.4	19.3	11 27	5 58.71	+31 5.6	1.904	2.825	8.8	19.6
12 7	5 54.14	+32 10.6	1.180	2.144	7.4	19.1	12 7	5 50.43	+30 52.9	1.854	2.818	5.1	19.3
12 17	5 41.01	+32 15.9	1.189	2.167	4.0	18.9	12 17	5 40.92	+30 30.2	1.831	2.811	2.5	19.1
12 27	5 28.33	+32 4.1	1.225	2.190	6.7	19.1	12 27	5 31.40	+29 58.0	1.838	2.804	4.7	19.3
1 6	5 17.98	+31 39.3	1.286	2.213	11.2	19.5	1 6	5 23.05	+29 18.7	1.873	2.798	8.4	19.5
1 16	5 11.11	+31 7.7	1.371	2.235	15.4	19.8	1 16	5 16.81	+28 36.1	1.933	2.792	11.9	19.7
1 26	5 8.23	+30 35.3	1.474	2.258	18.8	20.1	1 26	5 13.28	+27 54.1	2.016	2.787	14.8	19.9
387182	2012 <i>TH</i> ₂₇₄		12 17.3	133°93	1°8/17.2	18	73028	2002 <i>EK</i> ₇₈		12 17.3	129°88	1°3/17.2	18
11 17	6 8.17	+19 7.5	1.711	2.568	13.5	21.4	11 17	6 7.79	+19 50.6	2.063	2.913	11.8	20.7
11 27	6 0.98	+18 55.5	1.651	2.576	9.6	21.2	11 27	6 0.39	+19 42.4	2.005	2.927	8.3	20.5
12 7	5 51.57	+18 45.7	1.615	2.583	5.2	20.9	12 7	5 51.15	+19 35.4	1.974	2.941	4.5	20.3
12 17	5 40.93	+18 38.2	1.608	2.590	1.8	20.7	12 17	5 40.95	+19 29.4	1.972	2.955	1.3	20.1
12 27	5 30.38	+18 33.5	1.629	2.596	5.0	21.0	12 27	5 30.88	+19 24.8	2.001	2.967	4.2	20.3
1 6	5 21.15	+18 32.6	1.679	2.602	9.3	21.2	1 6	5 21.97	+19 22.3	2.058	2.980	8.0	20.6
1 16	5 14.22	+18 36.1	1.754	2.608	13.1	21.5	1 16	5 15.01	+19 22.9	2.143	2.991	11.3	20.8
1 26	5 10.16	+18 44.6	1.849	2.614	16.2	21.7	1 26	5 10.52	+19 27.1	2.250	3.002	14.0	21.0
16003	1999 <i>BX</i> ₂		12 17.3	332°33	3°3/17.4	18	111964	2002 <i>GO</i> ₇₈		12 17.3	181°76	1°6/17.5	18
11 17	6 2.45	+13 16.2	1.976	2.829	12.1	17.6	11 17	6 8.60	+27 46.6	1.764	2.620	13.2	20.0
11 27	5 56.91	+13 21.7	1.901	2.820	8.9	17.3	11 27	6 1.46	+27 52.0	1.696	2.620	9.4	19.8
12 7	5 49.46	+13 35.4	1.851	2.812	5.5	17.1	12 7	5 51.92	+27 51.7	1.653	2.620	5.2	19.5
12 17	5 40.87	+13 57.5	1.828	2.804	3.3	17.0	12 17	5 40.99	+27 43.7	1.638	2.620	1.7	19.3
12 27	5 32.16	+14 27.6	1.835	2.796	5.2	17.1	12 27	5 30.08	+27 27.9	1.652	2.620	4.8	19.5
1 6	5 24.35	+15 4.6	1.869	2.789	8.7	17.3	1 6	5 20.52	+27 6.3	1.694	2.619	9.0	19.7
1 16	5 18.32	+15 46.9	1.929	2.782	12.1	17.5	1 16	5 13.36	+26 42.2	1.761	2.619	12.9	20.0
1 26	5 14.68	+16 33.1	2.011	2.776	15.1	17.7	1 26	5 9.23	+26 19.2	1.850	2.618	16.1	20.2
358637	2007 <i>VC</i> ₂₅₂		12 17.3	11°00	0°2/17.3	17	519505	2012 <i>EK</i> ₁₉		12 17.3	334°53	4°6/17.8	17
11 17	6 4.42	+21 58.5	1.243	2.122	16.0	20.0	11 17	6 7.20	+35 28.8	1.852	2.698	13.1	20.9
11 27	5 59.04	+22 16.1	1.189	2.125	11.3	19.7	11 27	6 0.62	+35 53.1	1.781	2.692	9.9	20.6
12 7	5 50.81	+22 35.3	1.158	2.129	5.9	19.4	12 7	5 51.54	+36 5.9	1.733	2.687	6.6	20.4
12 17	5 40.92	+22 54.1	1.151	2.135	0.3	19.0	12 17	5 40.99	+36 3.6	1.713	2.682	4.6	20.3
12 27	5 31.05	+23 11.0	1.170	2.141	5.5	19.4	12 27	5 30.38	+35 45.0	1.721	2.677	6.1	20.4
1 6	5 22.86	+23 26.1	1.214	2.149	10.8	19.8	1 6	5 21.13	+35 12.4	1.756	2.673	9.4	20.6
1 16	5 17.52	+23 40.4	1.280	2.158	15.3	20.1	1 16	5 14.31	+34 30.6	1.816	2.669	12.8	20.8
1 26	5 15.72	+23 55.2	1.366	2.168	19.1	20.3	1 26	5 10.61	+33 45.1	1.897	2.665	15.8	21.0
494058	2016 <i>BG</i> ₅₃		12 17.3	281°18	4°0/17.2	17	152257	2005 <i>SJ</i> ₁₂₉		12 17.3	38°13	1°1/17.4	18
11 17	6 2.24	+10 37.8	2.297	3.139	11.1	21.6	11 17	6 5.94	+26 5.6	1.827	2.687	12.7	20.3
11 27	5 56.48	+10 27.8	2.226	3.136	8.3	21.4	11 27	5 59.48	+26 16.7	1.765	2.691	9.0	20.1
12 7	5 49.13	+10 26.2	2.180	3.132	5.5	21.2	12 7	5 50.84	+26 24.3	1.727	2.696	4.8	19.9
12 17	5 40.87	+10 33.9	2.162	3.129	4.0	21.1	12 17	5 40.98	+26 26.6	1.718	2.701	1.1	19.6
12 27	5 32.56	+10 51.1	2.174	3.126	5.4	21.2	12 27	5 31.14	+26 23.4	1.737	2.706	4.4	19.9
1 6	5 25.06	+11 17.3	2.215	3.123	8.2	21.4	1 6	5 22.56	+26 15.7	1.784	2.711	8.5	20.1
1 16	5 19.09	+11 51.1	2.281	3.120	11.1	21.6	1 16	5 16.17	+26 5.8	1.857	2.717	12.2	20.3
1 26	5 15.18	+12 31.0	2.371	3.117	13.6	21.7	1 26	5 12.58	+25 56.2	1.951	2.722	15.3	20.6
446414	2014 <i>JM</i> ₆		12 17.3	232°36	3°9/16.9	18	392305	2010 <i>CV</i> ₁₇₆		12 17.3	273°49	1°2/17.4	18
11 17	6 5.75	+14 6.9	1.887	2.738	12.7	21.1	11 17	6 8.28	+26 19.8	1.612	2.473	14.0	21.7
11 27	5 59.22	+13 30.9	1.813	2.731	9.3	20.9	11 27	6 1.49	+26 26.6	1.539	2.466	10.0	21.4
12 7	5 50.67	+13 0.2	1.765	2.724	5.8	20.7	12 7	5 52.06	+26 29.2	1.490	2.458	5.4	21.2
12 17	5 40.92	+12 37.0	1.744	2.717	3.9	20.5	12 17	5 41.02	+26 25.4	1.467	2.451	1.2	20.9
12 27	5 31.11	+12 22.9	1.753	2.710	5.9	20.7	12 27	5 29.86	+26 14.7	1.474	2.443	5.0	21.1
1 6	5 22.36	+12 18.8	1.789	2.702	9.5	20.9	1 6	5 20.08	+25 59.0	1.507	2.436	9.7	21.4
1 16	5 15.57	+12 24.8	1.851	2.694	13.0	21.1	1 16	5 12.83	+25 41.2	1.566	2.428	13.9	21.6
1 26	5 11.36	+12 39.9	1.934	2.686	16.0	21.2	1 26	5 8.84	+25 24.8	1.644	2.421	17.5	21.8
518650	2008 <i>RO</i> ₆₂		12 17.3	109°33	0°4/17.4	18	474277	2001 <i>UD</i> ₁		12 17.3	356°95	26°4/	

EPHEMERIDES

12 17.3

12 17.3

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
172562	2003 <i>UM</i> ₁₄₇		12 17.3	67°29	2°2/17.3	18	180848	2005 <i>GV</i> ₁₅₂		12 17.3	183°67	0°6/17.3	18
11 17	6 9.40	+26 39.7	1.617	2.476	14.0	19.8	11 17	6 10.28	+21 34.7	1.779	2.632	13.3	21.6
11 27	6 2.15	+27 31.4	1.563	2.488	10.0	19.6	11 27	6 2.59	+21 38.9	1.709	2.633	9.4	21.4
12 7	5 52.33	+28 20.0	1.534	2.501	5.5	19.4	12 7	5 52.53	+21 43.3	1.665	2.633	4.9	21.1
12 17	5 41.03	+29 0.8	1.533	2.514	2.2	19.2	12 17	5 41.09	+21 46.8	1.649	2.633	0.6	20.8
12 27	5 29.77	+29 31.3	1.560	2.526	5.2	19.4	12 27	5 29.60	+21 49.0	1.663	2.631	4.7	21.1
1 6	5 20.00	+29 51.4	1.615	2.539	9.5	19.7	1 6	5 19.40	+21 50.5	1.705	2.629	9.1	21.4
1 16	5 12.82	+30 3.3	1.694	2.552	13.3	20.0	1 16	5 11.50	+21 53.0	1.774	2.627	13.0	21.6
1 26	5 8.88	+30 10.4	1.795	2.565	16.4	20.2	1 26	5 6.58	+21 57.8	1.864	2.623	16.3	21.8
270819	2002 <i>SW</i> ₃		12 17.3	9°99	8°4/16.5	17	267901	2004 <i>BX</i> ₁₀₆		12 17.3	12°41	2°1/17.4	18
11 17	6 1.03	+0 46.0	1.983	2.803	13.5	20.4	11 17	6 6.94	+25 57.7	1.035	1.920	18.0	19.4
11 27	5 55.75	-0 11.6	1.926	2.804	11.1	20.3	11 27	6 1.38	+26 33.6	0.985	1.922	12.8	19.1
12 7	5 48.80	-0 53.0	1.892	2.806	9.1	20.1	12 7	5 52.28	+27 6.6	0.955	1.926	7.0	18.8
12 17	5 40.92	-1 14.1	1.884	2.809	8.4	20.1	12 17	5 41.08	+27 31.7	0.948	1.931	2.1	18.6
12 27	5 33.06	-1 13.0	1.902	2.812	9.3	20.2	12 27	5 29.90	+27 46.3	0.966	1.937	6.5	18.9
1 6	5 26.15	-0 50.5	1.946	2.815	11.3	20.3	1 6	5 20.80	+27 51.4	1.007	1.944	12.2	19.2
1 16	5 20.92	-0 9.5	2.013	2.819	13.6	20.5	1 16	5 15.23	+27 50.6	1.069	1.952	17.2	19.5
1 26	5 17.90	+0 45.8	2.100	2.823	15.8	20.6	1 26	5 13.90	+27 47.7	1.148	1.962	21.3	19.8
97771	2000 <i>JX</i> ₇₂		12 17.3	131°94	0°3/17.3	18	249880	2001 <i>QT</i> ₂₆₆		12 17.3	113°43	6°1/16.9	18
11 17	6 6.85	+21 21.4	2.298	3.145	10.9	20.0	11 17	6 5.21	+4 46.3	2.259	3.079	12.0	21.6
11 27	5 59.70	+21 40.0	2.237	3.158	7.6	19.8	11 27	5 58.38	+4 7.1	2.212	3.100	9.4	21.5
12 7	5 50.82	+21 59.2	2.203	3.171	4.0	19.6	12 7	5 50.06	+3 40.1	2.189	3.120	7.1	21.4
12 17	5 40.99	+22 17.6	2.199	3.183	0.4	19.3	12 17	5 41.01	+3 27.5	2.196	3.139	6.1	21.4
12 27	5 31.21	+22 34.6	2.226	3.194	3.7	19.6	12 27	5 32.10	+3 30.5	2.231	3.158	7.1	21.5
1 6	5 22.43	+22 49.9	2.283	3.205	7.2	19.9	1 6	5 24.19	+3 48.1	2.294	3.176	9.2	21.6
1 16	5 15.42	+23 4.3	2.368	3.216	10.4	20.1	1 16	5 17.91	+4 18.3	2.383	3.193	11.6	21.8
1 26	5 10.68	+23 18.6	2.476	3.226	13.0	20.3	1 26	5 13.72	+4 58.4	2.493	3.210	13.7	22.0
266074	2006 <i>RV</i> ₆₂		12 17.3	25°13	2°8/17.4	18	356015	2009 <i>BF</i> ₁₁₁		12 17.3	310°72	4°1/17.3	18
11 17	6 7.13	+27 14.7	0.906	1.797	19.3	19.7	11 17	6 5.05	+12 54.4	1.602	2.459	14.2	20.4
11 27	6 1.58	+27 49.9	0.870	1.810	13.7	19.5	11 27	5 59.12	+12 49.0	1.528	2.449	10.5	20.1
12 7	5 52.31	+28 18.8	0.853	1.824	7.6	19.2	12 7	5 50.81	+12 53.4	1.478	2.439	6.6	19.9
12 17	5 41.04	+28 36.3	0.858	1.840	2.8	19.0	12 17	5 41.04	+13 8.5	1.454	2.429	4.1	19.7
12 27	5 30.11	+28 40.7	0.886	1.857	6.9	19.3	12 27	5 31.07	+13 34.3	1.458	2.419	6.3	19.8
1 6	5 21.66	+28 34.5	0.937	1.876	12.6	19.7	1 6	5 22.25	+14 9.7	1.489	2.410	10.4	20.0
1 16	5 17.01	+28 22.6	1.008	1.896	17.6	20.0	1 16	5 15.64	+14 52.8	1.544	2.401	14.4	20.3
1 26	5 16.68	+28 9.5	1.096	1.917	21.6	20.4	1 26	5 11.98	+15 41.8	1.620	2.393	17.8	20.5
415428	2013 <i>QC</i> ₃₀		12 17.3	151°58	2°4/17.7	18	77112	2001 <i>DK</i> ₇₄		12 17.3	128°67	4°8/17.5	18
11 17	6 5.95	+32 29.3	2.893	3.728	9.3	21.9	11 17	6 11.53	+36 12.1	2.134	2.965	12.2	18.9
11 27	5 58.90	+32 38.5	2.827	3.736	6.7	21.7	11 27	6 3.39	+37 4.8	2.076	2.978	9.2	18.8
12 7	5 50.35	+32 40.8	2.787	3.744	4.1	21.6	12 7	5 52.91	+37 46.7	2.043	2.990	6.3	18.6
12 17	5 41.00	+32 34.8	2.778	3.752	2.4	21.5	12 17	5 41.10	+38 13.3	2.039	3.001	4.8	18.5
12 27	5 31.71	+32 20.4	2.799	3.759	3.8	21.6	12 27	5 29.30	+38 22.6	2.065	3.012	6.1	18.6
1 6	5 23.31	+31 58.8	2.852	3.766	6.3	21.7	1 6	5 18.82	+38 16.1	2.120	3.023	8.8	18.8
1 16	5 16.47	+31 32.5	2.932	3.773	8.8	21.9	1 16	5 10.67	+37 57.7	2.200	3.033	11.6	19.0
1 26	5 11.66	+31 4.3	3.037	3.778	11.0	22.1	1 26	5 5.48	+37 32.4	2.303	3.043	14.1	19.2
167994	2005 <i>GW</i> ₁₀₉		12 17.3	26°88	7°6/16.3	18	165649	2001 <i>HC</i> ₃₃		12 17.3	266°38	3°6/16.9	16
11 17	6 4.12	+8 51.2	1.382	2.241	16.0	18.8	11 17	6 5.63	+15 0.6	1.888	2.741	12.7	20.5
11 27	5 58.34	+7 29.3	1.335	2.249	12.3	18.6	11 27	5 59.28	+14 25.9	1.805	2.725	9.3	20.3
12 7	5 50.27	+6 20.7	1.312	2.259	9.0	18.5	12 7	5 50.81	+13 55.5	1.747	2.708	5.7	20.0
12 17	5 40.99	+5 30.9	1.313	2.270	7.6	18.4	12 17	5 41.04	+13 31.4	1.717	2.692	3.6	19.9
12 27	5 31.91	+5 3.8	1.340	2.281	9.3	18.5	12 27	5 31.10	+13 15.3	1.716	2.675	5.8	20.0
1 6	5 24.30	+4 59.6	1.391	2.293	12.6	18.8	1 6	5 22.14	+13 8.5	1.743	2.658	9.6	20.2
1 16	5 19.09	+5 15.9	1.464	2.306	15.9	19.0	1 16	5 15.13	+13 11.2	1.795	2.641	13.2	20.3
1 26	5 16.85	+5 48.4	1.556	2.319	18.8	19.2	1 26	5 10.74	+13 23.2	1.868	2.623	16.4	20.5
82826	2001 <i>QA</i> ₄₄		12 17.3	99°96	4°2/17.3	18	368028	2012 <i>GM</i> ₁₉		12 17.3	165°06	0°7/17.4	17
11 17	6 8.68	+13 1.8	1.589	2.441	14.6	19.8	11 17	6 4.90	+25 9.0	2.360	3.210	10.5	21.3
11 27	6 1.34	+12 47.3	1.540	2.458	10.7	19.6	11 27	5 58.42	+25 22.4	2.290	3.212	7.4	21.1
12 7	5 51.78	+12 41.9	1.514	2.474	6.6	19.4	12 7	5 50.21	+25 33.6	2.246	3.214	3.9	20.9
12 17	5 41.05	+12 46.4	1.516	2.490	4.2	19.3	12 17	5 41.02	+25 41.3	2.232	3.216	0.7	20.6
12 27	5 30.51	+13 0.9	1.547	2.506	6.3	19.4	12 27	5 31.80	+25 45.0	2.248	3.217	3.6	20.8
1 6	5 21.41	+13 24.6	1.604	2.521	10.1	19.7	1 6	5 23.50	+25 45.2	2.295	3.218	7.1	21.1
1 16	5 14.69	+13 56.0	1.687	2.536	13.8	19.9	1 16	5 16.91	+25 43.3	2.368	3.219	10.2	21.3
1 26	5 10.88	+14 33.4	1.790	2.551	16.8	20.2	1 26	5 12.56	+25 41.1	2.464	3.220	12.9	21.5
390691	2002 <i>XC</i> ₁₅		12 17.3	7°34	1°0/17.2	18	304989	2007 <i>TU</i> ₂₃₀		12 17.3	116°72	1°6/17.3	15
11 17	6 3.21	+23 4.7	0.941	1.836	18.4	20.0	11 17	6 7.79	+18 29.9	2.079	2.927	11.8	22.4
11 27	5 58.73	+22 36.6	0.893	1.836	13.0	19.7	11 27	6 0.37	+18 24.7	2.026	2.946	8.3	22.3
12 7	5 50.84	+22 6.2	0.865	1.838	6.9	19.4	12 7	5 51.16	+18 21.8	1.999	2.965	4.5	22.1
12 17	5 41.02	+21 34.7	0.859	1.843	1.0	19.0	12 17	5 41.05	+18 21.3	2.002	2.983	1.7	21.9
12 27	5 31.35	+21 4.6	0.876	1.849	6.5	19.4	12 27	5 31.09	+18 23.1	2.035	3.001	4.3	22.1
1 6	5 23.78	+20 39.5	0.915	1.856	12.5	19.8	1 6	5 22.29	+18 27.7	2.097	3.017	7.9	22.4
1 16	5 19.63	+20 22.1	0.975	1.866	17.8	20.1	1 16	5 15.42	+18 35.4	2.187	3.034	11.1	22.6
1 26	5 19.51	+20 13.6	1.051	1.877	22.0	20.4	1 26	5 10.97	+18 46.7	2.299	3.049	13.8	22.8
330530	2007 <i>VW</i> ₂₂₆		12 17.3	350°21	2°8/17.5	18	472499	2015 <i>CN</i> ₂₁		12 17.3	114°06	3°1/17.6	

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12 17.3

12 17.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
73606	4079 <i>T</i> ₋₂		12 17.3	99°80	2.7/17.5	18	294293	2007 <i>UR</i> ₁₃₈		12 17.4	67°88	5.4/17.9	18
11 17	6 10.05	+30 6.1	1.854	2.703	13.0	19.2	11 17	6 8.67	+7 52.4	1.619	2.459	15.0	20.1
11 27	6 2.31	+30 28.9	1.801	2.720	9.3	19.0	11 27	6 1.17	+8 4.1	1.581	2.488	11.2	20.0
12 7	5 52.30	+30 44.5	1.774	2.737	5.4	18.8	12 7	5 51.63	+8 30.5	1.568	2.518	7.5	19.8
12 17	5 41.09	+30 49.8	1.775	2.753	2.7	18.6	12 17	5 41.10	+9 11.2	1.581	2.547	5.4	19.8
12 27	5 30.05	+30 44.3	1.805	2.769	4.9	18.8	12 27	5 30.86	+10 4.4	1.623	2.576	6.9	19.9
1 6	5 20.46	+30 29.8	1.864	2.785	8.6	19.1	1 6	5 22.08	+11 6.7	1.693	2.604	10.1	20.2
1 16	5 13.27	+30 9.9	1.948	2.800	12.1	19.3	1 16	5 15.59	+12 14.6	1.788	2.633	13.3	20.4
1 26	5 9.04	+29 48.3	2.054	2.815	14.9	19.5	1 26	5 11.88	+13 24.8	1.905	2.661	16.1	20.7
288329	2004 <i>BS</i> ₆₆		12 17.3	68°99	1.7/17.5	18	20140	<i>Costitx</i>		12 17.4	144°13	3°3/17.1	18
11 17	6 7.79	+27 52.2	1.734	2.592	13.3	20.4	11 17	6 2.26	+11 59.3	2.654	3.493	9.9	18.9
11 27	6 0.88	+28 0.8	1.673	2.598	9.5	20.2	11 27	5 56.31	+11 43.4	2.589	3.499	7.3	18.7
12 7	5 51.63	+28 3.7	1.637	2.604	5.2	20.0	12 7	5 49.03	+11 33.6	2.551	3.505	4.7	18.6
12 17	5 41.07	+27 59.1	1.628	2.610	1.8	19.8	12 17	5 41.02	+11 30.7	2.542	3.511	3.3	18.5
12 27	5 30.59	+27 46.6	1.648	2.616	4.8	20.0	12 27	5 33.03	+11 35.3	2.564	3.517	4.6	18.6
1 6	5 21.50	+27 28.2	1.696	2.623	8.9	20.2	1 6	5 25.80	+11 47.1	2.615	3.522	7.2	18.7
1 16	5 14.81	+27 7.1	1.769	2.629	12.7	20.5	1 16	5 19.92	+12 5.6	2.693	3.527	9.7	18.9
1 26	5 11.12	+26 46.5	1.864	2.635	15.9	20.7	1 26	5 15.85	+12 29.8	2.795	3.532	11.9	19.1
291072	2005 <i>YD</i> ₁₀₈		12 17.4	91°13	0°2/17.4	18	453088	2007 <i>VB</i> ₁₆₉		12 17.4	305°86	1°9/17.2	18
11 17	6 5.50	+24 43.6	2.111	2.965	11.4	20.5	11 17	6 8.91	+25 18.6	1.762	2.619	13.2	20.8
11 27	5 58.88	+24 33.6	2.050	2.974	8.0	20.3	11 27	6 1.89	+26 22.3	1.692	2.616	9.4	20.6
12 7	5 50.44	+24 20.7	2.014	2.983	4.2	20.1	12 7	5 52.32	+27 25.9	1.647	2.614	5.2	20.3
12 17	5 41.03	+24 4.6	2.008	2.992	0.3	19.8	12 17	5 41.14	+28 24.7	1.630	2.612	1.9	20.1
12 27	5 31.73	+23 45.9	2.032	3.001	3.9	20.1	12 27	5 29.70	+29 14.7	1.643	2.609	5.0	20.3
1 6	5 23.54	+23 26.1	2.084	3.010	7.6	20.3	1 6	5 19.45	+29 54.6	1.684	2.607	9.3	20.5
1 16	5 17.25	+23 7.3	2.164	3.018	10.9	20.6	1 16	5 11.54	+30 25.3	1.751	2.605	13.1	20.8
1 26	5 13.38	+22 51.3	2.265	3.027	13.7	20.8	1 26	5 6.75	+30 49.3	1.839	2.603	16.3	21.0
79375	<i>Valetti</i>		12 17.4	250°03	0°6/17.3	18	309579	2008 <i>AC</i> ₈₈		12 17.4	34°76	1°2/17.3	18
11 17	6 9.29	+21 58.2	1.728	2.584	13.4	19.8	11 17	6 5.84	+20 3.3	1.616	2.481	13.8	20.7
11 27	6 2.15	+21 54.9	1.643	2.568	9.6	19.6	11 27	5 59.56	+20 5.1	1.557	2.486	9.7	20.5
12 7	5 52.44	+21 51.2	1.583	2.552	5.1	19.3	12 7	5 50.97	+20 9.1	1.523	2.492	5.2	20.2
12 17	5 41.11	+21 46.1	1.551	2.534	0.6	18.9	12 17	5 41.09	+20 14.8	1.515	2.498	1.2	20.0
12 27	5 29.51	+21 39.7	1.548	2.517	4.9	19.2	12 27	5 31.25	+20 21.8	1.535	2.504	4.9	20.2
1 6	5 19.06	+21 33.1	1.573	2.498	9.6	19.4	1 6	5 22.74	+20 30.6	1.583	2.511	9.3	20.5
1 16	5 10.93	+21 28.2	1.623	2.479	13.9	19.6	1 16	5 16.56	+20 41.6	1.655	2.518	13.3	20.8
1 26	5 5.90	+21 26.8	1.695	2.460	17.5	19.8	1 26	5 13.30	+20 55.5	1.748	2.526	16.5	21.0
392833	2012 <i>TJ</i> ₃₁₆		12 17.4	0°37	1°0/17.5	18	76492	2000 <i>GS</i> ₉		12 17.4	33°54	10°1/17.0	18
11 17	6 6.77	+17 53.2	1.244	2.118	16.4	19.7	11 17	6 3.71	+1 42.3	1.388	2.227	17.1	18.2
11 27	6 0.89	+18 49.2	1.183	2.116	11.7	19.4	11 27	5 58.01	+0 33.2	1.349	2.241	13.9	18.0
12 7	5 51.95	+19 54.9	1.144	2.114	6.3	19.1	12 7	5 50.10	-0 13.7	1.331	2.257	11.2	17.9
12 17	5 41.10	+21 6.3	1.130	2.114	1.1	18.8	12 17	5 41.06	-0 33.3	1.337	2.272	10.1	17.9
12 27	5 30.03	+22 18.2	1.144	2.115	5.7	19.1	12 27	5 32.23	-0 23.6	1.368	2.289	11.2	18.0
1 6	5 20.51	+23 26.8	1.182	2.116	11.2	19.4	1 6	5 24.86	+0 12.7	1.422	2.306	13.6	18.2
1 16	5 13.91	+24 30.1	1.244	2.119	15.9	19.7	1 16	5 19.83	+1 10.5	1.497	2.324	16.4	18.4
1 26	5 11.05	+25 27.9	1.325	2.122	19.9	19.9	1 26	5 17.67	+2 23.1	1.591	2.343	18.9	18.6
49774	1999 <i>WT</i> ₉		12 17.4	348°69	1°2/17.3	18	223824	2004 <i>TA</i> ₁₁₄		12 17.4	25°05	3°9/17.4	17
11 17	6 7.94	+23 30.7	1.211	2.087	16.6	18.3	11 17	6 7.19	+32 37.2	1.930	2.779	12.6	19.9
11 27	6 1.89	+24 17.4	1.149	2.083	11.8	18.0	11 27	6 0.52	+33 25.3	1.867	2.782	9.3	19.7
12 7	5 52.55	+25 5.9	1.108	2.079	6.3	17.7	12 7	5 51.51	+34 5.7	1.828	2.786	5.9	19.5
12 17	5 41.12	+25 51.4	1.092	2.076	1.2	17.4	12 17	5 41.11	+34 34.2	1.818	2.789	3.9	19.4
12 27	5 29.47	+26 30.0	1.103	2.073	6.0	17.7	12 27	5 30.64	+34 48.6	1.836	2.793	5.7	19.5
1 6	5 19.49	+27 0.4	1.138	2.071	11.5	18.0	1 6	5 21.41	+34 49.7	1.882	2.798	8.9	19.7
1 16	5 12.68	+27 24.1	1.195	2.070	16.4	18.3	1 16	5 14.46	+34 40.7	1.953	2.802	12.2	19.9
1 26	5 9.85	+27 43.6	1.271	2.070	20.4	18.5	1 26	5 10.44	+34 25.7	2.046	2.807	15.0	20.1
188301	2003 <i>EV</i> ₃₁		12 17.4	245°76	3°2/17.8	17	300523	2007 <i>TH</i> ₂₁₄		12 17.4	327°57	1°1/17.5	18
11 17	6 8.06	+33 6.5	2.136	2.978	11.8	20.3	11 17	6 6.34	+26 17.2	1.528	2.395	14.3	20.0
11 27	6 0.95	+33 12.9	2.056	2.969	8.7	20.1	11 27	6 0.26	+26 17.7	1.456	2.386	10.2	19.8
12 7	5 51.66	+33 9.9	2.002	2.960	5.4	19.9	12 7	5 51.50	+26 13.7	1.408	2.377	5.5	19.5
12 17	5 41.10	+32 55.3	1.976	2.951	3.2	19.7	12 17	5 41.13	+26 3.5	1.385	2.369	1.1	19.1
12 27	5 30.47	+32 28.6	1.979	2.941	4.9	19.8	12 27	5 30.63	+25 47.0	1.391	2.361	5.1	19.4
1 6	5 21.00	+31 52.1	2.012	2.931	8.3	20.0	1 6	5 21.54	+25 26.3	1.423	2.354	9.9	19.7
1 16	5 13.64	+31 9.8	2.071	2.921	11.6	20.2	1 16	5 15.01	+25 4.6	1.479	2.347	14.3	19.9
1 26	5 9.02	+30 26.0	2.153	2.910	14.4	20.4	1 26	5 11.79	+24 45.3	1.555	2.340	17.9	20.1
436963	2012 <i>TL</i> ₁₆₈		12 17.4	176°44	2°2/17.3	18	103315	2000 <i>AV</i> ₅₉		12 17.4	226°06	3°4/17.4	18
11 17	6 10.36	+26 59.6	1.732	2.586	13.5	20.8	11 17	6 6.01	+12 34.5	2.118	2.960	11.9	19.5
11 27	6 2.88	+27 44.9	1.664	2.587	9.6	20.6	11 27	5 59.36	+12 40.6	2.038	2.952	8.7	19.3
12 7	5 52.80	+28 27.2	1.622	2.588	5.4	20.4	12 7	5 50.81	+12 54.8	1.985	2.943	5.4	19.1
12 17	5 41.14	+29 2.3	1.608	2.589	2.2	20.1	12 17	5 41.11	+13 17.3	1.960	2.934	3.4	18.9
12 27	5 29.34	+29 27.4	1.623	2.589	5.1	20.3	12 27	5 31.25	+13 47.6	1.966	2.925	5.2	19.0
1 6	5 18.88	+29 42.7	1.666	2.589	9.4	20.6	1 6	5 22.28	+14 24.5	2.001	2.916	8.6	19.2
1 16	5 10.89	+29 50.4	1.735	2.589	13.2	20.8	1 16	5 15.04	+15 6.8	2.062	2.906	11.9	19.4
1 26	5 6.10	+29 53.8	1.825	2.588	16.4	21.1	1 26	5 10.17	+15 53.0	2.146	2.895	14.7	19.6
354410	2003 <i>UH</i> ₂₄₂		12 17.4	37°68	1°0/17.4	17	306648	2000 <i>SH</i> ₉₉		12 17.4	76°75	7°0/16.6	18
11 17	6 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
323320	2003 <i>UB</i> ₁₁₈		12 17.4 127°15	0°7/17.4 18			403620	2010 <i>RA</i> ₁₂₁		12 17.4 5°80	2°1/17.5 17		
11 17	6 12.60	+25 28.1	1.610	2.465	14.3	21.2	11 17	6 7.06	+28 51.4	1.812	2.668	12.9	21.8
11 27	6 4.25	+25 27.5	1.556	2.480	10.1	21.0	11 27	6 0.42	+29 2.8	1.745	2.668	9.2	21.6
12 7	5 53.38	+25 22.6	1.526	2.494	5.3	20.7	12 7	5 51.46	+29 8.2	1.702	2.668	5.2	21.3
12 17	5 41.20	+25 11.9	1.524	2.508	0.7	20.4	12 17	5 41.17	+29 5.1	1.688	2.668	2.1	21.1
12 27	5 29.24	+24 55.7	1.552	2.521	4.8	20.8	12 27	5 30.87	+28 53.3	1.702	2.669	4.8	21.3
1 6	5 18.92	+24 36.2	1.607	2.533	9.4	21.1	1 6	5 21.86	+28 34.5	1.744	2.669	8.8	21.5
1 16	5 11.28	+24 16.8	1.689	2.545	13.4	21.3	1 16	5 15.16	+28 11.8	1.811	2.670	12.5	21.8
1 26	5 6.89	+24 0.2	1.791	2.556	16.7	21.6	1 26	5 11.38	+27 48.9	1.900	2.671	15.6	22.0
9107	Narukospa		12 17.4 323°21	3°0/17.3 18			444948	2008 <i>CD</i> ₁₀₁		12 17.4 17°57	1°6/17.4 17		
11 17	6 3.43	+15 35.2	1.640	2.503	13.7	16.9	11 17	6 6.84	+26 18.6	1.583	2.447	14.0	20.7
11 27	5 58.07	+15 34.5	1.558	2.484	9.9	16.6	11 27	6 0.48	+26 45.7	1.521	2.449	10.0	20.5
12 7	5 50.34	+15 40.9	1.501	2.466	5.8	16.3	12 7	5 51.57	+27 9.6	1.484	2.452	5.4	20.2
12 17	5 41.10	+15 54.9	1.469	2.448	3.0	16.1	12 17	5 41.18	+27 27.2	1.473	2.456	1.7	20.0
12 27	5 31.59	+16 16.5	1.466	2.431	5.7	16.2	12 27	5 30.75	+27 37.2	1.491	2.460	5.0	20.2
1 6	5 23.11	+16 44.8	1.489	2.415	10.0	16.4	1 6	5 21.75	+27 40.3	1.535	2.464	9.5	20.5
1 16	5 16.77	+17 18.9	1.536	2.399	14.1	16.6	1 16	5 15.25	+27 38.8	1.604	2.468	13.5	20.8
1 26	5 13.34	+17 57.8	1.604	2.384	17.7	16.8	1 26	5 11.95	+27 35.6	1.693	2.474	16.9	21.0
50322	2000 <i>CK</i> ₅₁		12 17.4 193°78	2°2/17.1 18			327652	2006 <i>QG</i> ₃₈		12 17.4 114°51	1°1/17.5 18		
11 17	6 2.32	+15 40.2	2.937	3.778	9.0	19.6	11 17	6 13.17	+26 44.7	1.571	2.426	14.6	21.1
11 27	5 56.32	+15 22.7	2.860	3.775	6.4	19.5	11 27	6 4.65	+26 39.6	1.520	2.444	10.3	20.9
12 7	5 49.05	+15 8.2	2.812	3.773	3.8	19.3	12 7	5 53.60	+26 28.6	1.494	2.462	5.5	20.7
12 17	5 41.07	+14 57.5	2.794	3.770	2.2	19.2	12 17	5 41.25	+26 10.3	1.495	2.479	1.1	20.4
12 27	5 33.07	+14 51.0	2.807	3.766	3.8	19.3	12 27	5 29.21	+25 45.4	1.526	2.495	4.9	20.7
1 6	5 25.73	+14 49.3	2.850	3.762	6.4	19.4	1 6	5 18.93	+25 16.8	1.585	2.511	9.5	21.0
1 16	5 19.64	+14 52.4	2.921	3.758	8.9	19.6	1 16	5 11.42	+24 48.5	1.669	2.526	13.5	21.3
1 26	5 15.24	+15 0.3	3.016	3.753	11.1	19.8	1 26	5 7.21	+24 23.7	1.774	2.540	16.7	21.6
104405	2000 <i>FJ</i> ₄₈		12 17.4 112°68	1°7/17.4 18			71368	2000 <i>AX</i> ₁₃₇		12 17.4 293°21	0°8/17.4 18		
11 17	6 9.19	+27 13.4	2.226	3.071	11.3	19.5	11 17	6 4.62	+25 1.6	2.172	3.026	11.1	18.7
11 27	6 1.45	+27 48.1	2.173	3.091	8.0	19.3	11 27	5 58.56	+25 18.8	2.083	3.007	7.9	18.4
12 7	5 51.81	+28 18.7	2.146	3.111	4.4	19.1	12 7	5 50.49	+25 34.5	2.020	2.988	4.2	18.2
12 17	5 41.16	+28 42.8	2.149	3.130	1.7	19.0	12 17	5 41.15	+25 46.9	1.986	2.969	0.8	17.9
12 27	5 30.61	+28 59.1	2.183	3.148	4.1	19.2	12 27	5 31.57	+25 55.1	1.981	2.950	4.0	18.1
1 6	5 21.20	+29 8.0	2.247	3.166	7.5	19.4	1 6	5 22.86	+25 59.3	2.006	2.931	7.9	18.3
1 16	5 13.76	+29 11.5	2.338	3.184	10.6	19.6	1 16	5 15.92	+26 0.9	2.057	2.912	11.4	18.5
1 26	5 8.83	+29 12.0	2.452	3.201	13.1	19.8	1 26	5 11.46	+26 1.6	2.131	2.894	14.4	18.7
474810	2005 <i>SA</i> ₁₆		12 17.4 83°29	1°1/17.3 16			192150	2006 <i>GC</i> ₄₀		12 17.4 265°64	6°4/17.7 18		
11 17	6 11.93	+21 3.7	1.514	2.372	14.9	21.7	11 17	6 9.47	+42 34.6	2.340	3.153	11.9	19.9
11 27	6 3.60	+20 52.1	1.476	2.402	10.4	21.5	11 27	6 2.15	+43 22.5	2.264	3.145	9.6	19.7
12 7	5 52.94	+20 41.1	1.462	2.430	5.5	21.3	12 7	5 52.42	+43 56.7	2.213	3.137	7.5	19.5
12 17	5 41.20	+20 30.1	1.476	2.459	1.2	21.1	12 17	5 41.22	+44 12.5	2.189	3.128	6.4	19.5
12 27	5 29.89	+20 20.0	1.518	2.487	5.0	21.4	12 27	5 29.85	+44 7.7	2.193	3.119	7.2	19.5
1 6	5 20.36	+20 12.2	1.589	2.514	9.5	21.7	1 6	5 19.66	+43 43.8	2.225	3.111	9.3	19.6
1 16	5 13.49	+20 8.1	1.684	2.541	13.4	22.0	1 16	5 11.72	+43 5.2	2.282	3.102	11.7	19.8
1 26	5 9.76	+20 8.8	1.800	2.567	16.5	22.3	1 26	5 6.75	+42 17.6	2.361	3.093	14.0	19.9
327723	2006 <i>SK</i> ₁₆₁		12 17.4 126°97	0°6/17.4 18			196128	2002 <i>TQ</i> ₂₀₆		12 17.4 64°25	7°2/15.8 18		
11 17	6 12.13	+24 20.5	1.652	2.506	14.0	21.3	11 17	6 2.86	+3 31.6	2.229	3.050	12.1	19.7
11 27	6 3.91	+24 33.0	1.597	2.521	9.9	21.1	11 27	5 56.84	+2 10.0	2.179	3.062	9.8	19.6
12 7	5 53.22	+24 42.9	1.567	2.536	5.2	20.8	12 7	5 49.35	+1 0.8	2.155	3.075	7.9	19.5
12 17	5 41.22	+24 48.2	1.566	2.550	0.6	20.5	12 17	5 41.11	+0 8.1	2.159	3.088	7.2	19.4
12 27	5 29.37	+24 48.3	1.594	2.563	4.7	20.9	12 27	5 32.98	-0 25.5	2.190	3.100	8.2	19.5
1 6	5 19.09	+24 44.6	1.650	2.575	9.3	21.2	1 6	5 25.78	-0 39.6	2.249	3.113	10.2	19.7
1 16	5 11.39	+24 39.4	1.732	2.587	13.2	21.4	1 16	5 20.17	-0 35.6	2.331	3.126	12.3	19.9
1 26	5 6.87	+24 35.3	1.835	2.598	16.4	21.7	1 26	5 16.58	-0 16.7	2.434	3.139	14.3	20.0
159835	2003 <i>UA</i> ₁₃₄		12 17.4 170°95	1°5/17.1 18			207261	2005 <i>EP</i> ₂₅₃		12 17.4 180°70	2°4/17.2 18		
11 17	6 3.99	+19 28.9	2.699	3.544	9.5	20.2	11 17	6 6.12	+16 19.8	2.125	2.973	11.6	21.1
11 27	5 57.53	+18 56.2	2.628	3.547	6.7	20.1	11 27	5 59.36	+16 10.6	2.055	2.974	8.3	20.9
12 7	5 49.68	+18 23.8	2.584	3.550	3.7	19.9	12 7	5 50.78	+16 5.4	2.011	2.975	4.8	20.7
12 17	5 41.09	+17 52.4	2.571	3.552	1.5	19.7	12 17	5 41.16	+16 4.6	1.996	2.975	2.4	20.5
12 27	5 32.55	+17 23.6	2.589	3.553	3.7	19.9	12 27	5 31.52	+16 8.7	2.011	2.975	4.6	20.7
1 6	5 24.82	+16 58.5	2.638	3.555	6.7	20.1	1 6	5 22.85	+16 17.6	2.056	2.974	8.2	20.9
1 16	5 18.53	+16 38.4	2.715	3.556	9.4	20.2	1 16	5 15.98	+16 31.4	2.127	2.973	11.5	21.1
1 26	5 14.11	+16 23.9	2.815	3.556	11.8	20.4	1 26	5 11.46	+16 49.9	2.220	2.971	14.2	21.3
446019	2013 <i>CX</i> ₅₃		12 17.4 295°40	1°2/17.3 18			73469	2002 <i>OZ</i> ₁₂		12 17.4 170°92	1°7/17.1 17		
11 17	6 5.87	+20 39.0	1.695	2.558	13.3	21.6	11 17	6 3.81	+19 23.0	2.336	3.187	10.6	19.7
11 27	5 59.71	+20 29.6	1.617	2.545	9.5	21.3	11 27	5 57.61	+18 52.6	2.266	3.188	7.5	19.5
12 7	5 51.16	+20 21.2	1.563	2.532	5.1	21.0	12 7	5 49.80	+18 22.9	2.222	3.188	4.1	19.3
12 17	5 41.15	+20 13.4	1.537	2.520	1.2	20.7	12 17	5 41.13	+17 54.8	2.208	3.189	1.7	19.2
12 27	5 30.96	+20 6.9	1.539	2.508	4.9	20.9	12 27	5 32.48	+17 29.6	2.224	3.189	4.1	19.3
1 6	5 21.93	+20 2.6	1.568	2.495	9.5	21.2	1 6	5 24.75	+17 8.8	2.270	3.190	7.4	19.5
1 16	5 15.12	+20 1.9	1.622	2.483	13.6	21.4	1 16	5 18.64	+16 53.3	2.343	3.190	10.5	19.7
1 26	5 11.26	+20 5.7	1.697	2.471	17.1	21.6	1 26	5 14.64	+16 43.9	2.438	3.190	13.1	19.9
248898	2006 <i>UB</i> ₂₇₅		12 17.4 75°91	0°6/17.4 18			352930	2009 <i>AA</i> ₂₅		12 17.4 356°36	2°6/17.3 15		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
134994	2001 <i>FW</i> ₁₅₁		12 17.4 209°51	5°9/17.5 18			49403	1998 <i>XE</i> ₄₅		12 17.4 8°77	2°7/17.0 18		
11 17	6 5.62	+ 5 34.2	2.059	2.885	12.8	20.4	11 17	6 8.06	+25 19.4	1.387	2.256	15.3	17.3
11 27	5 59.06	+ 5 24.1	1.987	2.881	10.0	20.2	11 27	6 1.80	+26 46.1	1.328	2.258	10.9	17.1
12 7	5 50.66	+ 5 27.4	1.939	2.877	7.3	20.1	12 7	5 52.51	+28 13.7	1.292	2.260	6.1	16.8
12 17	5 41.17	+ 5 45.8	1.919	2.872	5.9	20.0	12 17	5 41.31	+29 35.1	1.282	2.263	2.7	16.6
12 27	5 31.58	+ 6 19.6	1.928	2.867	7.1	20.0	12 27	5 29.86	+30 44.3	1.301	2.267	6.0	16.8
1 6	5 22.91	+ 7 7.0	1.965	2.862	9.8	20.2	1 6	5 19.91	+31 38.8	1.345	2.272	10.8	17.1
1 16	5 15.99	+ 8 5.4	2.028	2.856	12.7	20.4	1 16	5 12.84	+32 19.6	1.413	2.278	15.0	17.4
1 26	5 11.40	+ 9 11.5	2.113	2.850	15.3	20.5	1 26	5 9.47	+32 50.1	1.501	2.285	18.5	17.6
402423	2005 <i>YC</i> ₂₇₄		12 17.4 17°41	4°7/18.1 17			494794	2006 <i>VU</i> ₁₃		12 17.4 24°74	8°7/14.7 18		
11 17	6 7.87	+36 29.2	1.870	2.712	13.2	21.0	11 17	6 11.59	+16 3.9	0.901	1.784	20.2	19.7
11 27	6 1.03	+36 42.7	1.806	2.715	9.9	20.8	11 27	6 4.41	+12 56.2	0.856	1.788	15.1	19.5
12 7	5 51.78	+36 43.4	1.766	2.717	6.7	20.6	12 7	5 53.76	+ 9 49.3	0.832	1.793	10.3	19.2
12 17	5 41.20	+36 28.0	1.753	2.720	4.7	20.5	12 17	5 41.35	+ 6 59.3	0.833	1.799	8.9	19.2
12 27	5 30.72	+35 56.3	1.768	2.724	6.1	20.6	12 27	5 29.39	+ 4 42.2	0.858	1.805	12.2	19.4
1 6	5 21.68	+35 11.5	1.811	2.728	9.2	20.8	1 6	5 19.86	+ 3 6.6	0.905	1.813	17.0	19.7
1 16	5 15.10	+34 18.8	1.879	2.732	12.4	21.0	1 16	5 13.97	+ 2 12.5	0.971	1.821	21.4	20.0
1 26	5 11.57	+33 23.8	1.969	2.736	15.3	21.2	1 26	5 12.24	+ 1 53.8	1.051	1.830	25.1	20.3
389974	2012 <i>TO</i> ₂₂₇		12 17.4 305°18	1°0/17.4 18			94139	2000 <i>YC</i> ₁₃₀		12 17.4 52°28	0°4/17.9 18		
11 17	6 7.77	+25 5.2	1.447	2.315	14.9	21.1	11 17	6 5.11	+21 47.6	1.993	2.849	11.9	19.5
11 27	6 1.48	+25 18.7	1.373	2.303	10.6	20.8	11 27	5 58.82	+21 54.4	1.927	2.853	8.4	19.3
12 7	5 52.28	+25 30.0	1.321	2.291	5.7	20.5	12 7	5 50.59	+22 1.7	1.887	2.856	4.4	19.0
12 17	5 41.23	+25 36.3	1.296	2.280	1.0	20.1	12 17	5 41.24	+22 8.4	1.875	2.859	0.4	18.7
12 27	5 29.95	+25 36.6	1.298	2.268	5.3	20.4	12 27	5 31.88	+22 14.3	1.893	2.862	4.1	19.0
1 6	5 20.07	+25 32.0	1.326	2.257	10.5	20.6	1 6	5 23.60	+22 19.6	1.939	2.865	8.0	19.3
1 16	5 12.93	+25 25.2	1.378	2.247	15.1	20.9	1 16	5 17.24	+22 25.4	2.012	2.869	11.5	19.5
1 26	5 9.32	+25 19.2	1.450	2.236	18.9	21.1	1 26	5 13.40	+22 32.6	2.106	2.872	14.4	19.7
78074	2002 <i>LV</i> ₁₂		12 17.4 80°30	2°8/17.1 18			311828	2006 <i>UR</i> ₃₄₆		12 17.4 27°58	3°4/18.2 17		
11 17	6 8.03	+17 18.7	1.715	2.571	13.6	18.9	11 17	6 8.89	+33 36.1	1.390	2.251	15.8	19.9
11 27	6 0.74	+16 47.5	1.671	2.594	9.6	18.7	11 27	6 1.98	+33 5.7	1.340	2.263	11.5	19.7
12 7	5 51.46	+16 20.0	1.651	2.616	5.5	18.5	12 7	5 52.32	+32 20.5	1.313	2.276	6.8	19.5
12 17	5 41.20	+15 57.7	1.660	2.639	2.8	18.4	12 17	5 41.31	+31 19.9	1.312	2.290	3.4	19.3
12 27	5 31.23	+15 41.7	1.697	2.661	5.3	18.6	12 27	5 30.71	+30 7.0	1.338	2.305	5.8	19.5
1 6	5 22.68	+15 33.1	1.763	2.683	9.2	18.9	1 6	5 22.09	+28 48.3	1.390	2.321	10.1	19.8
1 16	5 16.37	+15 32.2	1.853	2.704	12.7	19.1	1 16	5 16.44	+27 30.9	1.467	2.337	14.2	20.1
1 26	5 12.77	+15 38.7	1.965	2.726	15.5	19.4	1 26	5 14.24	+26 20.5	1.564	2.354	17.6	20.4
481872	2008 <i>YD</i> ₁₀₅		12 17.4 44°88	2°2/17.4 18			77819	2001 <i>QD</i> ₁₆₈		12 17.4 27°59	1°8/17.3 17		
11 17	6 8.26	+17 51.8	1.252	2.123	16.5	20.3	11 17	6 3.10	+17 33.1	2.075	2.931	11.5	18.8
11 27	6 1.40	+17 55.6	1.218	2.149	11.6	20.1	11 27	5 57.31	+17 35.6	2.012	2.935	8.2	18.6
12 7	5 51.94	+18 5.0	1.206	2.175	6.3	19.9	12 7	5 49.76	+17 42.0	1.974	2.940	4.6	18.4
12 17	5 41.23	+18 19.2	1.220	2.202	2.3	19.7	12 17	5 41.22	+17 52.0	1.965	2.946	1.8	18.2
12 27	5 30.90	+18 37.3	1.260	2.229	5.8	20.0	12 27	5 32.68	+18 5.4	1.985	2.951	4.3	18.4
1 6	5 22.44	+18 58.8	1.326	2.257	10.5	20.3	1 6	5 25.12	+18 22.1	2.033	2.957	7.9	18.7
1 16	5 16.83	+19 23.3	1.416	2.285	14.7	20.7	1 16	5 19.32	+18 41.7	2.108	2.963	11.2	18.9
1 26	5 14.54	+19 50.3	1.525	2.313	18.1	21.0	1 26	5 15.81	+19 4.2	2.206	2.970	13.9	19.1
127386	2002 <i>LB</i> ₂		12 17.4 131°76	0°7/17.5 18			145499	2006 <i>BV</i> ₃₃		12 17.4 153°43	1°6/17.6 17		
11 17	6 4.88	+26 5.0	2.892	3.734	9.0	20.9	11 17	6 5.41	+29 2.0	2.640	3.483	9.8	20.7
11 27	5 58.12	+26 8.5	2.831	3.749	6.3	20.7	11 27	5 58.70	+29 10.1	2.572	3.489	7.0	20.5
12 7	5 50.00	+26 9.1	2.797	3.764	3.4	20.5	12 7	5 50.40	+29 13.3	2.530	3.494	3.9	20.3
12 17	5 41.17	+26 6.0	2.795	3.778	0.7	20.3	12 17	5 41.24	+29 10.3	2.519	3.499	1.6	20.1
12 27	5 32.42	+25 59.2	2.824	3.791	3.1	20.6	12 27	5 32.11	+29 0.8	2.538	3.504	3.6	20.3
1 6	5 24.50	+25 49.5	2.884	3.804	6.0	20.8	1 6	5 23.87	+28 46.1	2.588	3.508	6.6	20.5
1 16	5 18.02	+25 38.4	2.972	3.817	8.6	21.0	1 16	5 17.24	+28 28.0	2.665	3.513	9.4	20.7
1 26	5 13.42	+25 27.4	3.084	3.829	10.8	21.1	1 26	5 12.71	+28 9.1	2.767	3.516	11.7	20.9
229211	2004 <i>VS</i> ₅₄		12 17.4 27°57	10°6/19.4 18			476392	2008 <i>CW</i> ₁₄₉		12 17.4 228°86	5°5/17.1 18		
11 17	6 3.81	- 5 17.4	1.626	2.428	16.7	19.2	11 17	6 7.90	+11 15.2	1.498	2.351	15.3	21.5
11 27	5 57.94	- 5 24.6	1.581	2.441	14.1	19.0	11 27	6 1.21	+10 42.8	1.431	2.347	11.5	21.2
12 7	5 50.09	- 5 4.5	1.557	2.456	11.8	18.9	12 7	5 52.01	+10 21.0	1.387	2.343	7.6	21.0
12 17	5 41.18	- 4 14.7	1.556	2.471	10.6	18.9	12 17	5 41.31	+10 12.2	1.370	2.339	5.5	20.9
12 27	5 32.40	- 2 56.4	1.581	2.487	11.1	19.0	12 27	5 30.51	+10 18.1	1.379	2.334	7.5	21.0
1 6	5 24.87	- 1 14.9	1.630	2.503	12.9	19.1	1 6	5 21.04	+10 38.4	1.415	2.329	11.5	21.2
1 16	5 19.42	+ 0 42.6	1.703	2.520	15.2	19.3	1 16	5 13.99	+11 11.4	1.475	2.324	15.4	21.4
1 26	5 16.59	+ 2 48.4	1.797	2.538	17.5	19.5	1 26	5 10.07	+11 54.2	1.554	2.319	18.8	21.6
373046	2011 <i>EV</i> ₆₂		12 17.4 176°20	1°9/17.4 17			462695	2009 <i>VA</i> ₆₃		12 17.4 356°78	2°1/17.4 16		
11 17	6 3.30	+16 13.4	2.487	3.334	10.2	21.1	11 17	6 5.64	+27 37.9	1.957	2.812	12.1	21.2
11 27	5 57.24	+16 21.2	2.416	3.334	7.3	21.0	11 27	5 59.41	+28 18.4	1.888	2.811	8.7	21.0
12 7	5 49.65	+16 33.2	2.371	3.335	4.2	20.8	12 7	5 51.00	+28 55.7	1.844	2.810	4.9	20.8
12 17	5 41.17	+16 49.2	2.356	3.335	1.9	20.6	12 17	5 41.27	+29 26.5	1.829	2.809	2.1	20.6
12 27	5 32.65	+17 8.8	2.371	3.335	3.9	20.8	12 27	5 31.42	+29 48.9	1.843	2.809	4.6	20.8
1 6	5 24.92	+17 31.5	2.416	3.336	7.1	21.0	1 6	5 22.66	+30 2.9	1.885	2.809	8.4	21.0
1 16	5 18.66	+17 57.0	2.489	3.336	10.0	21.1	1 16	5 15.97	+30 10.1	1.953	2.809	11.9	21.2
1 26	5 14.39	+18 24.8	2.585	3.335	12.5	21.3	1 26	5 12.02	+30 13.2	2.043	2.810	14.8	21.4
477276	2009 <i>SN</i> ₁₂₄		12 17.										

EPHEMERIDES

12 17.4

12 17.4

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
142773	2002 <i>UZ</i> ₇		12 17.4 335°74	5°5/17.7 18			55323	2001 <i>SN</i> ₉₄		12 17.4 332°53	2°1/17.1 17		
11 17	6 4.52	+ 9 1.4	1.571	2.423	14.8	19.3	11 17	6 4.66	+19 43.5	1.606	2.472	13.7	19.0
11 27	5 58.81	+ 9 2.7	1.501	2.415	11.2	19.1	11 27	5 58.89	+19 8.8	1.534	2.463	9.8	18.7
12 7	5 50.76	+ 9 18.6	1.454	2.408	7.6	18.9	12 7	5 50.79	+18 34.7	1.486	2.454	5.4	18.5
12 17	5 41.28	+ 9 50.2	1.433	2.401	5.5	18.7	12 17	5 41.29	+18 2.6	1.465	2.446	2.1	18.2
12 27	5 31.62	+10 37.1	1.439	2.395	7.2	18.8	12 27	5 31.73	+17 34.6	1.471	2.439	5.4	18.4
1 6	5 23.10	+11 36.6	1.472	2.389	10.8	19.0	1 6	5 23.41	+17 12.9	1.505	2.432	9.9	18.7
1 16	5 16.78	+12 45.2	1.528	2.384	14.6	19.2	1 16	5 17.36	+16 59.1	1.563	2.425	14.0	18.9
1 26	5 13.38	+13 59.3	1.606	2.379	17.9	19.4	1 26	5 14.24	+16 53.7	1.641	2.419	17.4	19.1
327082	Tourneol		12 17.4 70°83	2°0/17.3 17			283062	2008 <i>QB</i> ₁₃		12 17.4 146°34	4°1/17.2 18		
11 17	6 6.76	+27 31.7	2.096	2.948	11.6	21.0	11 17	6 8.07	+12 25.7	1.929	2.771	12.9	21.6
11 27	6 0.06	+28 15.4	2.030	2.952	8.3	20.8	11 27	6 0.79	+12 4.3	1.869	2.781	9.5	21.4
12 7	5 51.29	+28 56.0	1.991	2.956	4.7	20.6	12 7	5 51.58	+11 50.6	1.834	2.791	6.0	21.2
12 17	5 41.30	+29 30.2	1.980	2.960	2.0	20.4	12 17	5 41.33	+11 45.8	1.829	2.799	4.1	21.1
12 27	5 31.22	+29 56.0	1.999	2.964	4.4	20.6	12 27	5 31.15	+11 50.6	1.852	2.808	5.9	21.2
1 6	5 22.20	+30 13.4	2.047	2.968	8.0	20.8	1 6	5 22.12	+12 4.8	1.905	2.815	9.2	21.5
1 16	5 15.17	+30 23.9	2.121	2.973	11.3	21.0	1 16	5 15.07	+12 27.4	1.983	2.822	12.4	21.7
1 26	5 10.74	+30 30.0	2.218	2.977	14.0	21.2	1 26	5 10.55	+12 56.9	2.083	2.828	15.2	21.9
163166	2002 <i>CX</i> ₁₇₇		12 17.4 240°79	0°3/17.4 18			150842	2001 <i>SO</i> ₅₅		12 17.4 80°96	3°4/17.3 18		
11 17	6 8.41	+24 6.0	1.824	2.680	12.9	21.2	11 17	6 9.46	+15 8.4	1.501	2.359	15.0	19.9
11 27	6 1.45	+24 8.0	1.745	2.670	9.1	21.0	11 27	6 2.01	+14 58.0	1.458	2.381	10.8	19.7
12 7	5 52.11	+24 7.9	1.691	2.660	4.8	20.7	12 7	5 52.26	+14 54.9	1.439	2.402	6.3	19.5
12 17	5 41.33	+24 4.3	1.666	2.650	0.3	20.3	12 17	5 41.35	+14 59.5	1.446	2.424	3.4	19.4
12 27	5 30.39	+23 57.0	1.669	2.639	4.5	20.6	12 27	5 30.71	+15 11.7	1.482	2.445	5.9	19.6
1 6	5 20.62	+23 47.2	1.702	2.628	9.0	20.9	1 6	5 21.65	+15 30.9	1.545	2.466	10.1	19.9
1 16	5 13.06	+23 37.2	1.759	2.616	12.9	21.1	1 16	5 15.11	+15 56.3	1.632	2.487	13.8	20.1
1 26	5 8.43	+23 29.1	1.839	2.605	16.3	21.3	1 26	5 11.59	+16 26.7	1.740	2.508	17.0	20.4
157288	2004 <i>RU</i> ₂₉₂		12 17.4 57°79	7°6/17.9 18			1341	Edmée		12 17.4 199°48	2°5/17.5 18 R		
11 17	6 17.50	+38 21.7	1.319	2.164	17.5	19.2	11 17	6 6.01	+14 47.7	2.108	2.954	11.8	15.3
11 27	6 8.35	+39 38.0	1.292	2.197	13.4	19.0	11 27	5 59.41	+15 2.9	2.035	2.952	8.5	15.1
12 7	5 55.75	+40 34.5	1.287	2.231	9.5	18.9	12 7	5 50.92	+15 24.6	1.987	2.950	5.0	14.8
12 17	5 41.46	+41 3.4	1.307	2.265	7.6	18.9	12 17	5 41.32	+15 52.3	1.969	2.948	2.5	14.7
12 27	5 27.73	+41 3.0	1.354	2.298	8.9	19.1	12 27	5 31.62	+16 25.2	1.982	2.945	4.6	14.8
1 6	5 16.55	+40 38.4	1.426	2.332	12.0	19.3	1 6	5 22.84	+17 2.1	2.023	2.943	8.2	15.0
1 16	5 9.12	+39 58.4	1.520	2.365	15.3	19.6	1 16	5 15.83	+17 41.8	2.091	2.940	11.5	15.2
1 26	5 5.90	+39 11.7	1.634	2.399	18.0	19.9	1 26	5 11.20	+18 23.6	2.182	2.936	14.4	15.4
342307	2008 <i>TX</i> ₆₄		12 17.4 336°15	0°9/17.3 18			201748	2003 <i>UT</i> ₂₉₃		12 17.4 7°53	16°6/18.5 18		
11 17	6 6.52	+23 23.2	1.331	2.204	15.5	20.1	11 17	5 59.86	-16 6.4	1.517	2.274	19.7	19.0
11 27	6 0.60	+22 47.9	1.263	2.196	11.0	19.8	11 27	5 55.43	-17 26.5	1.479	2.276	18.2	18.9
12 7	5 51.81	+22 8.9	1.217	2.188	5.9	19.5	12 7	5 48.91	-18 10.2	1.458	2.281	17.1	18.8
12 17	5 41.32	+21 26.9	1.197	2.181	0.9	19.1	12 17	5 41.24	-18 11.0	1.455	2.286	16.6	18.8
12 27	5 30.78	+20 44.6	1.204	2.174	5.6	19.4	12 27	5 33.64	-17 27.2	1.471	2.294	16.9	18.8
1 6	5 21.81	+20 5.8	1.236	2.168	10.9	19.7	1 6	5 27.27	-16 2.5	1.506	2.303	17.8	18.9
1 16	5 15.65	+19 33.9	1.291	2.163	15.7	20.0	1 16	5 23.02	-14 5.0	1.559	2.313	19.2	19.1
1 26	5 12.99	+19 11.2	1.365	2.159	19.5	20.2	1 26	5 21.45	-11 44.6	1.629	2.325	20.6	19.2
289727	2005 <i>JE</i> ₂₁		12 17.4 235°56	6°3/16.7 18			493135	2014 <i>TH</i> ₄₄		12 17.4 60°82	3°8/17.4 17		
11 17	6 4.80	+ 4 53.1	2.248	3.070	12.0	21.2	11 17	6 7.21	+33 22.0	2.179	3.021	11.6	21.5
11 27	5 58.45	+ 4 14.6	2.168	3.057	9.5	21.0	11 27	6 0.42	+34 7.1	2.114	3.025	8.6	21.3
12 7	5 50.38	+ 3 47.6	2.112	3.043	7.3	20.9	12 7	5 51.51	+34 44.4	2.074	3.029	5.6	21.1
12 17	5 41.27	+ 3 34.9	2.084	3.029	6.3	20.8	12 17	5 41.35	+35 10.2	2.064	3.033	3.8	21.0
12 27	5 32.03	+ 3 38.1	2.086	3.014	7.4	20.8	12 27	5 31.12	+35 22.8	2.082	3.038	5.3	21.1
1 6	5 23.57	+ 3 57.1	2.115	2.999	9.8	21.0	1 6	5 22.00	+35 22.9	2.129	3.042	8.2	21.3
1 16	5 16.68	+ 4 30.3	2.169	2.983	12.5	21.1	1 16	5 14.92	+35 13.3	2.202	3.046	11.2	21.5
1 26	5 11.95	+ 5 14.9	2.245	2.967	14.9	21.2	1 26	5 10.52	+34 57.9	2.298	3.051	13.8	21.7
382835	2004 <i>AT</i> ₂₃		12 17.4 328°84	0°0/17.4 18			484430	2008 <i>AL</i> ₂₈		12 17.4 290°34	1°9/17.5 18		
11 17	6 7.21	+24 13.2	1.194	2.072	16.6	21.5	11 17	6 7.06	+28 6.5	1.849	2.705	12.7	21.5
11 27	6 1.44	+24 0.7	1.125	2.061	11.9	21.1	11 27	6 0.64	+28 19.3	1.763	2.687	9.2	21.3
12 7	5 52.41	+23 44.7	1.079	2.050	6.3	20.8	12 7	5 51.78	+28 27.1	1.702	2.669	5.1	21.0
12 17	5 41.36	+23 24.4	1.057	2.041	0.2	20.3	12 17	5 41.38	+28 27.5	1.669	2.650	1.9	20.8
12 27	5 30.12	+23 0.7	1.060	2.032	5.9	20.7	12 27	5 30.71	+28 19.5	1.665	2.632	4.8	20.9
1 6	5 20.59	+22 36.4	1.088	2.023	11.7	21.0	1 6	5 21.15	+28 4.3	1.688	2.614	9.0	21.1
1 16	5 14.19	+22 15.3	1.138	2.016	16.8	21.3	1 16	5 13.80	+27 44.9	1.737	2.596	13.0	21.3
1 26	5 11.72	+22 0.3	1.206	2.009	21.0	21.6	1 26	5 9.43	+27 24.9	1.807	2.578	16.3	21.5
115553	2003 <i>UB</i> ₇₃		12 17.4 243°95	2°7/17.1 18			176108	2001 <i>CF</i> ₄₁		12 17.4 206°56	7°8/18.2 18		
11 17	6 9.77	+18 2.6	1.695	2.549	13.8	20.0	11 17	6 9.67	+ 1 5.3	1.793	2.604	15.0	19.9
11 27	6 2.51	+17 28.9	1.611	2.534	9.9	19.7	11 27	6 2.20	+ 1 9.0	1.719	2.600	12.1	19.7
12 7	5 52.73	+16 56.7	1.552	2.517	5.7	19.4	12 7	5 52.48	+ 1 33.0	1.670	2.595	9.3	19.5
12 17	5 41.37	+16 27.3	1.520	2.500	2.7	19.2	12 17	5 41.40	+ 2 19.5	1.647	2.589	7.8	19.4
12 27	5 29.78	+16 2.8	1.518	2.482	5.7	19.3	12 27	5 30.16	+ 3 27.8	1.652	2.583	8.8	19.4
1 6	5 19.36	+15 45.0	1.543	2.463	10.2	19.6	1 6	5 19.99	+ 4 54.0	1.686	2.576	11.5	19.6
1 16	5 11.24	+15 35.5	1.594	2.444	14.4	19.8	1 16	5 11.90	+ 6 32.8	1.745	2.569	14.6	19.8
1 26	5 6.17	+15 35.1	1.665	2.424	18.0	20.0	1 26	5 6.57	+ 8 18.6	1.826	2.561	17.4	20.0
449966	2015 <i>PW</i> ₇		12 17.4 125°44	5°2/17.0 15			215701	2003 <i>YD</i> ₁₂₁		12 17.4 47°95	5°9/18.6 17 R		
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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
194997	2002 <i>BJ</i> ₁₇		12 17.4 302°69	0°1/17.4	18		212169	2005 <i>GL</i> ₅₀		12 17.4 244°00	5°1/16.8	18	
11 17	6 7.32	+23 48.3	1.491	2.358	14.6	20.9	11 17	6 5.20	+10 58.6	1.900	2.746	12.9	20.1
11 27	6 1.13	+23 48.9	1.414	2.344	10.4	20.7	11 27	5 58.94	+10 12.8	1.829	2.740	9.7	19.9
12 7	5 52.15	+23 47.6	1.360	2.330	5.5	20.4	12 7	5 50.73	+9 34.9	1.782	2.734	6.6	19.7
12 17	5 41.40	+23 43.2	1.332	2.316	0.3	19.9	12 17	5 41.38	+9 7.6	1.763	2.727	5.1	19.6
12 27	5 30.40	+23 35.4	1.332	2.302	5.2	20.3	12 27	5 31.97	+8 53.2	1.772	2.721	6.8	19.7
1 6	5 20.74	+23 25.5	1.358	2.289	10.3	20.5	1 6	5 23.57	+8 52.3	1.809	2.714	9.9	19.9
1 16	5 13.68	+23 16.1	1.408	2.276	14.9	20.8	1 16	5 17.06	+9 4.2	1.871	2.708	13.2	20.1
1 26	5 10.02	+23 9.6	1.478	2.263	18.7	21.0	1 26	5 13.05	+9 27.3	1.954	2.701	16.0	20.3
30379	2000 <i>JY</i> ₆₉		12 17.4 39°65	9°8/19.1	18 R		394509	2007 <i>TV</i> ₂₅₉		12 17.4 155°72	1°7/17.3	18	
11 17	6 6.05	-1 16.1	1.406	2.231	17.7	17.0	11 17	6 7.09	+19 19.6	1.855	2.711	12.7	21.6
11 27	5 59.61	-1 22.5	1.374	2.257	14.4	16.9	11 27	6 0.30	+19 2.0	1.790	2.714	9.0	21.3
12 7	5 51.00	-1 2.4	1.363	2.284	11.4	16.8	12 7	5 51.43	+18 46.1	1.749	2.716	4.9	21.1
12 17	5 41.35	-0 14.3	1.376	2.311	9.8	16.8	12 17	5 41.41	+18 32.2	1.737	2.719	1.8	20.9
12 27	5 32.01	+0 59.5	1.413	2.339	10.5	16.9	12 27	5 31.41	+18 21.2	1.754	2.721	4.7	21.1
1 6	5 24.20	+2 33.2	1.476	2.368	12.7	17.1	1 6	5 22.59	+18 14.0	1.800	2.723	8.8	21.3
1 16	5 18.79	+4 19.4	1.563	2.397	15.5	17.3	1 16	5 15.84	+18 11.8	1.871	2.725	12.4	21.6
1 26	5 16.25	+6 11.0	1.669	2.426	18.0	17.6	1 26	5 11.77	+18 14.9	1.964	2.727	15.5	21.8
293927	2007 <i>TR</i> ₁		12 17.4 187°74	5°1/17.0	18		229917	1995 <i>CQ</i> ₇		12 17.4 21°49	0°4/17.4	18 R	
11 17	6 5.85	+11 0.5	1.745	2.593	13.7	21.2	11 17	6 6.35	+23 9.6	1.107	1.990	17.3	19.5
11 27	5 59.48	+10 25.2	1.680	2.593	10.3	21.0	11 27	6 0.66	+22 58.6	1.061	1.998	12.2	19.3
12 7	5 51.02	+9 59.2	1.640	2.593	6.9	20.8	12 7	5 51.89	+22 46.1	1.035	2.007	6.4	19.0
12 17	5 41.36	+9 44.8	1.626	2.593	5.1	20.7	12 17	5 41.42	+22 31.8	1.033	2.017	0.5	18.6
12 27	5 31.69	+9 43.7	1.641	2.592	6.9	20.8	12 27	5 31.16	+22 16.6	1.056	2.028	5.8	19.0
1 6	5 23.16	+9 55.9	1.682	2.592	10.3	21.0	1 6	5 22.86	+22 2.8	1.104	2.041	11.4	19.4
1 16	5 16.70	+10 19.9	1.749	2.592	13.7	21.2	1 16	5 17.71	+21 52.8	1.173	2.054	16.2	19.7
1 26	5 12.90	+10 53.6	1.835	2.591	16.6	21.4	1 26	5 16.31	+21 48.2	1.260	2.068	20.1	20.0
326546	2002 <i>PR</i> ₃₆		12 17.4 161°34	0°5/17.5	17		98594	2000 <i>WA</i> ₅₆		12 17.4 6°81	5°0/17.8	18	
11 17	6 4.59	+25 33.0	2.659	3.505	9.6	21.5	11 17	6 5.57	+32 50.3	1.095	1.974	17.7	17.7
11 27	5 58.11	+25 29.3	2.589	3.510	6.8	21.3	11 27	6 0.53	+33 16.5	1.044	1.975	13.1	17.4
12 7	5 50.13	+25 22.6	2.546	3.513	3.6	21.1	12 7	5 52.00	+33 29.6	1.013	1.977	8.2	17.2
12 17	5 41.33	+25 12.5	2.533	3.517	0.5	20.9	12 17	5 41.43	+33 24.4	1.004	1.981	5.0	17.0
12 27	5 32.56	+24 59.2	2.551	3.520	3.3	21.1	12 27	5 30.95	+33 0.3	1.020	1.986	7.4	17.2
1 6	5 24.63	+24 43.8	2.600	3.523	6.4	21.3	1 6	5 22.58	+32 21.3	1.059	1.993	12.1	17.5
1 16	5 18.22	+24 27.8	2.676	3.525	9.3	21.5	1 16	5 17.68	+31 34.6	1.120	2.002	16.7	17.7
1 26	5 13.82	+24 12.9	2.777	3.528	11.7	21.7	1 26	5 16.91	+30 47.0	1.198	2.012	20.5	18.0
262883	2007 <i>CX</i> ₁		12 17.4 340°40	1°1/17.3	17		484525	2008 <i>EP</i> ₁₄₉		12 17.4 302°59	6°0/17.6	17	
11 17	6 5.02	+20 29.7	1.950	2.808	12.1	21.6	11 17	6 4.57	+6 56.8	1.786	2.625	13.8	20.5
11 27	5 58.83	+20 23.4	1.881	2.807	8.5	21.4	11 27	5 58.72	+6 50.5	1.707	2.611	10.7	20.3
12 7	5 50.66	+20 18.1	1.837	2.806	4.6	21.2	12 7	5 50.73	+6 58.7	1.652	2.597	7.7	20.1
12 17	5 41.35	+20 13.7	1.822	2.805	1.1	20.9	12 17	5 41.39	+7 23.3	1.623	2.583	6.0	20.0
12 27	5 32.02	+20 10.5	1.835	2.804	4.3	21.1	12 27	5 31.83	+8 4.5	1.622	2.570	7.4	20.0
1 6	5 23.75	+20 9.1	1.878	2.803	8.3	21.4	1 6	5 23.21	+9 0.2	1.649	2.556	10.6	20.2
1 16	5 17.42	+20 10.4	1.946	2.803	11.9	21.6	1 16	5 16.53	+10 7.2	1.700	2.543	14.0	20.4
1 26	5 13.62	+20 15.3	2.036	2.802	14.9	21.8	1 26	5 12.50	+11 21.9	1.772	2.530	17.0	20.6
4567	Bečvář		12 17.4 101°72	6°9/17.1	18		45006	1999 <i>VV</i> ₁₉₈		12 17.4 87°44	5°0/17.3	18	
11 17	6 6.59	+4 54.9	1.898	2.725	13.7	17.9	11 17	6 9.27	+12 14.0	1.411	2.267	15.9	19.9
11 27	5 59.66	+4 9.8	1.852	2.744	10.7	17.7	11 27	6 2.06	+11 48.0	1.363	2.282	11.7	19.7
12 7	5 50.96	+3 39.0	1.831	2.763	8.1	17.6	12 7	5 52.40	+11 32.7	1.339	2.298	7.4	19.5
12 17	5 41.37	+3 25.3	1.836	2.782	6.9	17.6	12 17	5 41.46	+11 29.9	1.341	2.313	5.0	19.4
12 27	5 31.96	+3 29.8	1.870	2.800	8.0	17.7	12 27	5 30.73	+11 40.2	1.371	2.329	7.1	19.5
1 6	5 23.73	+3 51.5	1.931	2.818	10.5	17.8	1 6	5 21.59	+12 2.7	1.426	2.344	11.1	19.8
1 16	5 17.42	+4 27.6	2.017	2.835	13.1	18.1	1 16	5 15.05	+12 35.5	1.505	2.358	14.9	20.1
1 26	5 13.52	+5 14.6	2.123	2.852	15.4	18.3	1 26	5 11.66	+13 15.9	1.604	2.373	18.1	20.3
328961	2010 <i>VJ</i> ₁₄₈		12 17.4 262°65	2°8/17.3	18		83296	2001 <i>RB</i> ₁₀₁		12 17.4 100°80	2°8/17.6	18	
11 17	6 8.88	+17 22.3	1.394	2.258	15.5	20.9	11 17	6 8.48	+30 21.8	1.904	2.754	12.6	20.1
11 27	6 2.22	+17 9.1	1.323	2.251	11.2	20.7	11 27	6 1.41	+30 45.5	1.841	2.760	9.1	19.9
12 7	5 52.71	+17 1.0	1.276	2.243	6.4	20.4	12 7	5 52.08	+31 2.3	1.804	2.767	5.4	19.7
12 17	5 41.45	+16 58.3	1.254	2.235	2.8	20.1	12 17	5 41.46	+31 9.2	1.794	2.773	2.8	19.6
12 27	5 30.01	+17 1.8	1.260	2.227	6.1	20.3	12 27	5 30.86	+31 5.3	1.814	2.779	4.9	19.7
1 6	5 20.00	+17 11.8	1.292	2.219	11.1	20.6	1 6	5 21.56	+30 52.1	1.862	2.784	8.6	20.0
1 16	5 12.67	+17 28.4	1.347	2.211	15.7	20.8	1 16	5 14.54	+30 33.0	1.936	2.790	12.1	20.2
1 26	5 8.81	+17 51.4	1.422	2.202	19.5	21.1	1 26	5 10.40	+30 11.6	2.032	2.796	15.0	20.4
50976	2000 <i>GD</i> ₉₂		12 17.4 130°72	3°0/17.3	18		280435	2003 <i>YZ</i> ₁₄₀		12 17.4 280°02	2°8/16.9	16	
11 17	6 7.27	+32 3.3	2.677	3.513	9.9	18.7	11 17	6 8.96	+29 2.6	2.453	3.293	10.5	20.7
11 27	6 0.16	+32 55.0	2.612	3.522	7.2	18.5	11 27	6 1.76	+30 17.2	2.358	3.272	7.7	20.5
12 7	5 51.30	+33 40.9	2.575	3.530	4.6	18.4	12 7	5 52.37	+31 30.3	2.291	3.251	4.7	20.3
12 17	5 41.40	+34 17.9	2.568	3.539	3.0	18.3	12 17	5 41.48	+32 37.4	2.255	3.230	2.8	20.1
12 27	5 31.41	+34 44.1	2.591	3.547	4.4	18.4	12 27	5 30.11	+33 34.6	2.250	3.208	4.7	20.2
1 6	5 22.30	+34 59.6	2.645	3.555	7.0	18.6	1 6	5 19.39	+34 20.4	2.276	3.187	7.9	20.4
1 16	5 14.85	+35 6.3	2.727	3.562	9.6	18.8	1 16	5 10.35	+34 55.1	2.330	3.165	11.0	20.5
1 26	5 9.63	+35 6.7	2.832	3.570	11.8	18.9	1 26	5 3.80	+35 21.3	2.408	3.144	13.6	20.7
202400	2005 <i>JC</i> ₃₇		12 17.4 262°98	1°2/17.2	18		44378	1998 <i>SC</i> ₅₆		12 17.4 26°90	2°2/17.2	18	
11 17	6 3.8												

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
361299	2006 TX ₇₉		12 17.4 132°65	3°4/17.7 18			303610	2005 JP ₂₇		12 17.4 191°60	1°6/17.4 18		
11 17	6 8.69	+32 27.5	1.911	2.758	12.7	21.1	11 17	6 8.79	+26 44.9	2.233	3.078	11.2	21.0
11 27	6 1.63	+32 46.3	1.844	2.760	9.3	20.9	11 27	6 1.48	+27 23.5	2.158	3.077	8.0	20.8
12 7	5 52.22	+32 56.2	1.802	2.761	5.7	20.6	12 7	5 52.12	+27 59.6	2.110	3.075	4.4	20.6
12 17	5 41.47	+32 54.2	1.787	2.762	3.4	20.5	12 17	5 41.52	+28 30.2	2.092	3.073	1.7	20.4
12 27	5 30.73	+32 39.5	1.802	2.764	5.3	20.6	12 27	5 30.76	+28 53.4	2.104	3.070	4.2	20.5
1 6	5 21.30	+32 14.1	1.845	2.765	8.8	20.8	1 6	5 20.98	+29 9.1	2.147	3.067	7.7	20.7
1 16	5 14.20	+31 42.2	1.913	2.766	12.2	21.1	1 16	5 13.10	+29 18.8	2.217	3.063	11.0	20.9
1 26	5 10.04	+31 8.1	2.003	2.767	15.2	21.3	1 26	5 7.76	+29 24.8	2.309	3.059	13.8	21.1
33129	Ivankrasko		12 17.4 129°09	1°6/17.4 18			334054	2001 OV ₁₅		12 17.4 75°07	0°8/17.4 18		
11 17	6 5.92	+17 38.7	2.242	3.089	11.1	19.2	11 17	6 10.87	+23 23.2	1.424	2.288	15.3	19.6
11 27	5 59.20	+17 47.9	2.180	3.100	7.9	19.0	11 27	6 3.47	+24 2.3	1.374	2.302	10.8	19.4
12 7	5 50.78	+18 0.6	2.144	3.110	4.3	18.8	12 7	5 53.29	+24 41.2	1.347	2.316	5.7	19.1
12 17	5 41.42	+18 16.1	2.138	3.119	1.6	18.6	12 17	5 41.57	+25 16.1	1.347	2.331	0.8	18.8
12 27	5 32.09	+18 33.9	2.162	3.128	4.0	18.8	12 27	5 29.95	+25 44.5	1.375	2.345	5.2	19.2
1 6	5 23.71	+18 53.8	2.216	3.137	7.5	19.1	1 6	5 20.01	+26 6.3	1.430	2.359	10.0	19.5
1 16	5 17.05	+19 15.5	2.297	3.146	10.6	19.3	1 16	5 12.89	+26 23.1	1.509	2.373	14.3	19.8
1 26	5 12.63	+19 39.0	2.401	3.154	13.2	19.5	1 26	5 9.23	+26 37.4	1.609	2.387	17.7	20.0
264242	2010 TO ₁₃₁		12 17.4 63°90	0°1/17.4 18			522126	2016 AP ₂₄₃		12 17.4 357°72	0°7/17.4 17		
11 17	6 14.18	+22 46.7	1.123	1.995	18.0	20.3	11 17	6 3.81	+21 14.1	1.726	2.591	13.0	20.9
11 27	6 5.83	+23 5.1	1.093	2.025	12.5	20.1	11 27	5 58.25	+21 18.1	1.659	2.588	9.2	20.7
12 7	5 54.42	+23 22.8	1.084	2.055	6.5	19.8	12 7	5 50.50	+21 23.4	1.617	2.586	4.9	20.4
12 17	5 41.56	+23 36.6	1.100	2.085	0.3	19.5	12 17	5 41.47	+21 29.2	1.601	2.585	0.7	20.1
12 27	5 29.29	+23 45.7	1.143	2.114	5.7	20.0	12 27	5 32.38	+21 35.1	1.614	2.585	4.5	20.4
1 6	5 19.36	+23 51.3	1.212	2.144	11.1	20.4	1 6	5 24.45	+21 41.6	1.655	2.585	8.9	20.7
1 16	5 12.85	+23 55.9	1.303	2.174	15.6	20.7	1 16	5 18.65	+21 49.4	1.720	2.586	12.7	20.9
1 26	5 10.20	+24 1.8	1.413	2.203	19.2	21.0	1 26	5 15.61	+21 59.4	1.807	2.587	16.0	21.1
227632	2006 BX ₈₇		12 17.4 165°37	0°2/17.4 17			139635	2001 QS ₁₅₇		12 17.4 16°10	3°2/17.2 18		
11 17	6 4.56	+22 30.4	2.597	3.445	9.8	21.0	11 17	6 5.20	+15 29.4	1.765	2.622	13.2	19.7
11 27	5 58.14	+22 34.3	2.527	3.448	6.9	20.8	11 27	5 59.08	+15 8.1	1.701	2.623	9.5	19.5
12 7	5 50.20	+22 37.7	2.483	3.451	3.6	20.6	12 7	5 50.88	+14 52.2	1.661	2.624	5.7	19.3
12 17	5 41.40	+22 39.9	2.470	3.454	0.2	20.3	12 17	5 41.50	+14 43.0	1.648	2.625	3.2	19.1
12 27	5 32.60	+22 40.9	2.488	3.457	3.3	20.6	12 27	5 32.12	+14 41.5	1.664	2.626	5.5	19.2
1 6	5 24.61	+22 40.9	2.536	3.459	6.6	20.8	1 6	5 23.88	+14 47.8	1.707	2.628	9.3	19.5
1 16	5 18.14	+22 41.1	2.612	3.461	9.5	21.0	1 16	5 17.69	+15 1.7	1.775	2.629	13.0	19.7
1 26	5 13.67	+22 42.3	2.711	3.462	11.9	21.2	1 26	5 14.16	+15 22.5	1.864	2.631	16.0	19.9
149185	2002 JA ₁₀₅		12 17.4 219°02	0°5/17.4 18			486446	2013 FO ₂₄		12 17.4 297°21	7°3/16.5 17		
11 17	6 10.77	+21 52.9	1.733	2.587	13.5	20.8	11 17	6 4.16	+ 6 27.3	1.760	2.600	14.0	21.5
11 27	6 3.24	+21 57.2	1.655	2.579	9.6	20.6	11 27	5 58.43	+ 5 28.2	1.685	2.586	11.1	21.3
12 7	5 53.17	+22 1.6	1.601	2.570	5.1	20.3	12 7	5 50.61	+ 4 41.1	1.635	2.573	8.4	21.1
12 17	5 41.53	+22 4.7	1.576	2.560	0.5	19.9	12 17	5 41.51	+ 4 10.4	1.610	2.560	7.3	21.0
12 27	5 29.70	+22 6.1	1.581	2.550	4.8	20.2	12 27	5 32.27	+ 3 59.0	1.612	2.547	8.7	21.1
1 6	5 19.09	+22 6.6	1.614	2.539	9.4	20.5	1 6	5 24.02	+ 4 7.5	1.641	2.534	11.6	21.2
1 16	5 10.83	+22 7.6	1.672	2.527	13.6	20.7	1 16	5 17.72	+ 4 34.1	1.692	2.521	14.7	21.4
1 26	5 5.68	+22 11.2	1.752	2.515	17.1	20.9	1 26	5 14.03	+ 5 15.6	1.764	2.509	17.6	21.6
179596	2002 NS ₁₇		12 17.4 90°94	2°3/17.7 18			16078	Carolersh		12 17.4 106°33	0°1/17.4 18		
11 17	6 15.48	+29 39.1	1.538	2.389	15.1	20.5	11 17	6 8.07	+23 40.0	1.692	2.552	13.5	18.5
11 27	6 6.27	+29 40.3	1.499	2.419	10.7	20.3	11 27	6 1.26	+23 39.0	1.628	2.555	9.5	18.2
12 7	5 54.51	+29 32.2	1.483	2.448	6.0	20.1	12 7	5 52.09	+23 36.3	1.588	2.558	5.0	18.0
12 17	5 41.57	+29 13.0	1.496	2.477	2.3	19.9	12 17	5 41.58	+23 30.6	1.576	2.560	0.2	17.6
12 27	5 29.15	+28 43.5	1.537	2.504	5.2	20.2	12 27	5 31.09	+23 22.2	1.593	2.563	4.6	18.0
1 6	5 18.72	+28 7.5	1.607	2.531	9.5	20.5	1 6	5 21.93	+23 12.4	1.637	2.565	9.1	18.2
1 16	5 11.23	+27 30.1	1.702	2.558	13.3	20.8	1 16	5 15.11	+23 3.2	1.707	2.568	13.0	18.5
1 26	5 7.14	+26 55.4	1.818	2.583	16.4	21.0	1 26	5 11.27	+22 56.7	1.797	2.570	16.3	18.7
171066	2005 ER ₁₄₂		12 17.4 298°59	6°2/17.3 18			366615	2003 LO ₆		12 17.4 200°75	2°1/16.9 18		
11 17	6 10.70	+36 34.6	1.687	2.530	14.3	19.8	11 17	6 4.75	+15 34.6	3.737	4.565	7.5	23.6
11 27	6 3.71	+37 39.5	1.613	2.520	11.0	19.5	11 27	5 57.89	+14 56.4	3.650	4.558	5.4	23.4
12 7	5 53.63	+38 33.4	1.563	2.510	7.8	19.3	12 7	5 49.99	+14 19.7	3.594	4.551	3.3	23.3
12 17	5 41.55	+39 9.5	1.539	2.500	6.2	19.2	12 17	5 41.50	+13 45.4	3.569	4.543	2.1	23.2
12 27	5 29.13	+39 23.8	1.543	2.490	7.7	19.3	12 27	5 33.01	+13 14.7	3.579	4.534	3.4	23.3
1 6	5 18.12	+39 17.2	1.573	2.481	11.0	19.4	1 6	5 25.06	+12 48.7	3.621	4.524	5.5	23.4
1 16	5 9.93	+38 54.5	1.627	2.471	14.4	19.6	1 16	5 18.15	+12 28.0	3.693	4.514	7.6	23.6
1 26	5 5.44	+38 22.4	1.700	2.462	17.5	19.8	1 26	5 12.65	+12 12.9	3.791	4.502	9.4	23.7
397600	2007 VQ ₈₆		12 17.4 358°91	6°9/15.5 18			88641	2001 RS ₅₁		12 17.4 339°26	5°8/16.3 18		
11 17	6 6.97	+10 31.5	1.653	2.501	14.4	20.0	11 17	6 3.89	+12 42.0	1.521	2.382	14.6	18.6
11 27	6 0.28	+ 8 40.9	1.591	2.501	11.0	19.8	11 27	5 58.44	+11 27.3	1.452	2.373	11.0	18.4
12 7	5 51.46	+ 6 57.3	1.555	2.500	8.0	19.6	12 7	5 50.66	+10 18.9	1.408	2.364	7.4	18.1
12 17	5 41.47	+ 5 27.1	1.545	2.500	7.0	19.6	12 17	5 41.53	+ 9 21.6	1.389	2.356	5.8	18.0
12 27	5 31.56	+ 4 16.4	1.565	2.500	8.8	19.7	12 27	5 32.34	+ 8 40.0	1.398	2.349	7.9	18.1
1 6	5 22.91	+ 3 28.0	1.610	2.500	11.9	19.8	1 6	5 24.38	+ 8 16.2	1.432	2.343	11.6	18.3
1 16	5 16.46	+ 3 2.3	1.679	2.501	15.2	20.1	1 16	5 18.66	+ 8 10.4	1.488	2.337	15.3	18.6
1 26	5 12.76	+ 2 56.6	1.767	2.501	17.9	20.3	1 26	5 15.86	+ 8 20.4	1.564	2.332	18.6	18.8
482959	2014 KG ₅₆		12 17.4 314°24	3°3/17.6 18			159117	2004 VX ₂₃		12 17.4 69°71	0°3/17.5 18		
11 17	6 6.48	+13 53.2	1.635	2.491	14.1	21.0							

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12 17.4

12 17.5

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
47986	2000 YN ₃	12 17.4 193°02' 0.2"/17.5 18					309907	2009 ET ₂₈	12 17.5 207°15' 6.7"/17.5 18				
11 17	6 11.39	+24 43.9	1.630	2.486	14.1	19.5	11 17	6 12.70	+40 35.7	2.007	2.829	13.2	20.5
11 27	6 3.73	+24 33.5	1.560	2.485	10.0	19.3	11 27	6 4.85	+41 40.1	1.938	2.827	10.5	20.4
12 7	5 53.45	+24 19.4	1.514	2.483	5.3	19.0	12 7	5 54.19	+42 30.9	1.893	2.824	8.0	20.2
12 17	5 41.66	+24 0.4	1.497	2.481	0.3	18.6	12 17	5 41.77	+43 1.8	1.876	2.822	6.7	20.1
12 27	5 29.85	+23 37.1	1.508	2.478	4.9	19.0	12 27	5 29.13	+43 9.8	1.886	2.819	7.8	20.2
1 6	5 19.48	+23 12.1	1.548	2.474	9.6	19.2	1 6	5 17.86	+42 56.2	1.924	2.816	10.2	20.3
1 16	5 11.68	+22 48.5	1.612	2.470	13.8	19.5	1 16	5 9.22	+42 26.0	1.987	2.812	13.0	20.5
1 26	5 7.12	+22 29.1	1.698	2.466	17.3	19.7	1 26	5 3.98	+41 45.9	2.070	2.809	15.5	20.7
132832	2002 RX ₁₂	12 17.4 98°45' 2.3"/17.3 18					180651	2004 GT ₃₃	12 17.5 200°36' 2.7"/17.5 18				
11 17	6 3.64	+15 55.5	2.451	3.296	10.3	20.0	11 17	6 8.52	+31 17.7	2.485	3.323	10.5	21.2
11 27	5 57.48	+15 43.5	2.393	3.311	7.4	19.8	11 27	6 1.24	+31 49.0	2.407	3.319	7.7	21.0
12 7	5 49.87	+15 35.4	2.363	3.325	4.3	19.7	12 7	5 52.03	+32 14.4	2.356	3.315	4.7	20.8
12 17	5 41.51	+15 31.7	2.362	3.339	2.3	19.5	12 17	5 41.67	+32 31.1	2.335	3.310	2.7	20.6
12 27	5 33.22	+15 32.6	2.391	3.353	4.1	19.7	12 27	5 31.19	+32 37.6	2.344	3.304	4.4	20.7
1 6	5 25.81	+15 38.4	2.450	3.367	7.1	19.9	1 6	5 21.62	+32 34.8	2.384	3.298	7.4	20.9
1 16	5 19.92	+15 49.0	2.536	3.381	9.9	20.1	1 16	5 13.83	+32 24.7	2.450	3.292	10.3	21.1
1 26	5 15.99	+16 3.9	2.645	3.394	12.2	20.3	1 26	5 8.44	+32 10.6	2.540	3.285	12.8	21.3
216585	2002 JS ₁₉	12 17.4 254°08' 2.5"/17.4 18					103651	2000 CJ ₃₈	12 17.5 257°38' 1.8"/17.4 18				
11 17	6 9.43	+17 4.5	1.461	2.322	15.2	20.5	11 17	6 8.95	+18 45.6	1.679	2.536	13.8	20.2
11 27	6 2.64	+17 7.4	1.387	2.312	11.0	20.2	11 27	6 2.13	+18 41.9	1.595	2.520	9.9	20.0
12 7	5 53.04	+17 16.5	1.336	2.303	6.2	19.9	12 7	5 52.75	+18 41.4	1.536	2.503	5.5	19.7
12 17	5 41.66	+17 31.4	1.312	2.293	2.5	19.7	12 17	5 41.72	+18 43.7	1.504	2.486	1.8	19.4
12 27	5 30.02	+17 51.6	1.315	2.282	5.8	19.8	12 27	5 30.39	+18 48.8	1.501	2.468	5.2	19.6
1 6	5 19.70	+18 16.3	1.345	2.272	10.8	20.1	1 6	5 20.17	+18 57.2	1.525	2.450	9.9	19.8
1 16	5 11.97	+18 45.3	1.399	2.261	15.3	20.3	1 16	5 12.24	+19 9.4	1.575	2.432	14.2	20.0
1 26	5 7.64	+19 18.1	1.473	2.250	19.1	20.6	1 26	5 7.38	+19 26.0	1.645	2.413	17.8	20.2
445708	2011 UP ₂₁₀	12 17.4 104°28' 3.2"/17.0 18					116359	2003 YX ₉₄	12 17.5 22°70' 0.8"/17.4 17				
11 17	6 8.02	+15 51.2	1.962	2.810	12.5	21.7	11 17	6 4.04	+21 9.9	1.831	2.693	12.5	19.9
11 27	6 0.69	+15 9.0	1.912	2.830	8.9	21.6	11 27	5 58.28	+21 10.9	1.772	2.700	8.8	19.7
12 7	5 51.58	+14 30.8	1.888	2.849	5.3	21.4	12 7	5 50.51	+21 13.0	1.738	2.707	4.7	19.5
12 17	5 41.59	+13 58.6	1.893	2.869	3.2	21.3	12 17	5 41.64	+21 15.4	1.731	2.715	0.8	19.2
12 27	5 31.83	+13 34.1	1.928	2.887	5.3	21.5	12 27	5 32.80	+21 18.2	1.753	2.723	4.3	19.5
1 6	5 23.29	+13 18.5	1.992	2.906	8.7	21.7	1 6	5 25.11	+21 21.8	1.803	2.732	8.3	19.7
1 16	5 16.73	+13 11.9	2.082	2.923	11.8	21.9	1 16	5 19.44	+21 27.0	1.878	2.741	12.0	20.0
1 26	5 12.62	+13 14.0	2.193	2.941	14.5	22.2	1 26	5 16.36	+21 34.6	1.975	2.751	14.9	20.2
130284	2000 EL ₁₇	12 17.5 299°02' 3.4"/17.1 18					93761	2000 WT ₁₇	12 17.5 345°74' 0.1"/17.5 17				
11 17	6 3.19	+14 16.3	2.109	2.959	11.6	19.8	11 17	6 5.48	+23 27.2	1.927	2.785	12.2	19.5
11 27	5 57.60	+13 53.4	2.021	2.939	8.5	19.6	11 27	5 59.30	+23 23.3	1.857	2.783	8.6	19.3
12 7	5 50.15	+13 35.6	1.959	2.919	5.3	19.3	12 7	5 51.07	+23 18.0	1.813	2.782	4.5	19.0
12 17	5 41.54	+13 24.5	1.925	2.899	3.4	19.2	12 17	5 41.67	+23 10.4	1.796	2.780	0.2	18.7
12 27	5 32.74	+13 21.0	1.920	2.879	5.3	19.2	12 27	5 32.23	+23 0.9	1.809	2.779	4.1	19.0
1 6	5 24.75	+13 25.8	1.943	2.859	8.7	19.4	1 6	5 23.90	+22 50.7	1.851	2.778	8.2	19.2
1 16	5 18.41	+13 38.7	1.992	2.840	12.1	19.6	1 16	5 17.57	+22 41.4	1.918	2.777	11.9	19.5
1 26	5 14.37	+13 59.0	2.063	2.820	15.0	19.8	1 26	5 13.84	+22 34.6	2.007	2.777	14.9	19.7
43410	2000 WB ₁₄₈	12 17.5 280°34' 0.2"/17.4 18					382652	2002 SS ₃	12 17.5 39°16' 4.9"/17.7 18				
11 17	6 7.55	+22 19.3	1.672	2.533	13.6	19.4	11 17	6 11.61	+31 38.7	1.057	1.932	18.6	20.6
11 27	6 1.07	+22 27.7	1.597	2.524	9.6	19.2	11 27	6 4.71	+32 26.5	1.021	1.950	13.5	20.4
12 7	5 52.12	+22 36.4	1.547	2.516	5.1	18.9	12 7	5 54.20	+33 2.0	1.006	1.970	8.3	20.2
12 17	5 41.64	+22 43.9	1.524	2.508	0.3	18.5	12 17	5 41.80	+33 18.9	1.014	1.991	4.9	20.0
12 27	5 30.98	+22 49.6	1.530	2.500	4.7	18.8	12 27	5 29.80	+33 15.6	1.047	2.012	7.5	20.3
1 6	5 21.54	+22 54.0	1.563	2.492	9.4	19.1	1 6	5 20.25	+32 55.9	1.104	2.035	12.2	20.6
1 16	5 14.43	+22 58.4	1.622	2.484	13.5	19.3	1 16	5 14.45	+32 26.7	1.182	2.058	16.5	20.9
1 26	5 10.36	+23 4.5	1.701	2.476	17.0	19.5	1 26	5 12.89	+31 54.8	1.279	2.081	20.1	21.2
140188	2001 SJ ₂₁₁	12 17.5 348°16' 5.1"/17.1 18					80555	2000 AO ₉₃	12 17.5 59°58' 3.5"/17.6 18				
11 17	6 5.77	+13 18.3	1.309	2.176	16.2	19.5	11 17	6 10.72	+14 51.3	1.191	2.058	17.5	18.8
11 27	6 0.06	+12 43.3	1.247	2.172	12.0	19.3	11 27	6 3.41	+14 59.4	1.154	2.081	12.5	18.5
12 7	5 51.64	+12 17.9	1.207	2.168	7.6	19.0	12 7	5 53.30	+15 17.5	1.138	2.104	7.2	18.3
12 17	5 41.62	+12 4.6	1.192	2.165	5.1	18.9	12 17	5 41.77	+15 44.8	1.148	2.128	3.5	18.2
12 27	5 31.52	+12 5.5	1.202	2.163	7.5	19.0	12 27	5 30.58	+16 19.4	1.185	2.151	6.5	18.4
1 6	5 22.88	+12 20.5	1.238	2.161	11.9	19.3	1 6	5 21.34	+16 59.4	1.246	2.175	11.3	18.8
1 16	5 16.87	+12 48.1	1.296	2.160	16.2	19.5	1 16	5 15.11	+17 42.7	1.331	2.199	15.6	19.1
1 26	5 14.20	+13 25.8	1.373	2.159	19.8	19.8	1 26	5 12.41	+18 28.1	1.435	2.223	19.0	19.4
30113	2000 FM ₂₆	12 17.5 213°83' 2.7"/17.3 18					440826	2006 RD ₃₆	12 17.5 47°03' 4.8"/18.4 18				
11 17	6 8.44	+16 31.4	1.757	2.609	13.4	19.1	11 17	6 10.89	+36 22.6	1.591	2.438	14.9	20.1
11 27	6 1.50	+16 20.7	1.683	2.605	9.7	18.8	11 27	6 3.43	+36 24.7	1.540	2.451	11.1	19.9
12 7	5 52.27	+16 14.8	1.635	2.599	5.6	18.6	12 7	5 53.29	+36 11.5	1.511	2.465	7.3	19.7
12 17	5 41.66	+16 14.2	1.615	2.594	2.7	18.4	12 17	5 41.78	+35 40.2	1.509	2.479	4.9	19.6
12 27	5 30.94	+16 19.1	1.623	2.588	5.3	18.6	12 27	5 30.60	+34 51.8	1.535	2.494	6.4	19.7
1 6	5 21.37	+16 29.7	1.660	2.581	9.5	18.8	1 6	5 21.25	+33 51.1	1.588	2.509	9.9	19.9
1 16	5 13.97	+16 46.1	1.722	2.574	13.4	19.0	1 16	5 14.77	+32 44.8	1.665	2.524	13.4	20.2
1 26	5 9.42	+17 7.9	1.805	2.567	16.7	19.2	1 26	5 11.68	+31 39.4	1.763	2.539	16.5	20.4
209671	2005 CE ₅₉	12 17.5 358°39' 3.2"/17.1 18					399150	2014 EE ₅₀	12 17.5 256°16' 1.6"/17.4 18				
11 17	6 2.45	+18 33.3	1.096	1.983	17.1	18.9	11 17	6 8.40	+19 7.6	1.793	2.648	13.1	21.9
11 27	5 58.09	+17 54.9	1.039	1.977	12.3	18.6	11 27	6 1.63	+19 4.4	1.708	2.632	9.4	21.7
12 7	5 50.73												

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
18442	1994 <i>PK</i> ₃		12 17.5 359°18	0°6/17.5 18			150381	2000 <i>DC</i> ₃₇		12 17.5 34°32	5°4/17.9 18		
11 17	6 5.74	+25 12.3	1.847	2.706	12.6	17.9	11 17	6 11.20	+33 54.3	1.122	1.992	18.1	19.0
11 27	5 59.58	+25 14.3	1.779	2.705	8.9	17.7	11 27	6 4.45	+34 25.7	1.079	2.004	13.4	18.8
12 7	5 51.27	+25 13.3	1.736	2.705	4.7	17.5	12 7	5 54.14	+34 42.3	1.056	2.017	8.5	18.5
12 17	5 41.71	+25 8.3	1.721	2.705	0.7	17.2	12 17	5 41.91	+34 38.4	1.057	2.032	5.4	18.4
12 27	5 32.13	+24 59.3	1.735	2.705	4.3	17.4	12 27	5 29.97	+34 13.3	1.083	2.047	7.6	18.6
1 6	5 23.72	+24 47.4	1.776	2.705	8.5	17.7	1 6	5 20.39	+33 32.2	1.133	2.062	12.1	18.9
1 16	5 17.43	+24 34.8	1.844	2.705	12.2	17.9	1 16	5 14.47	+32 42.8	1.205	2.079	16.4	19.2
1 26	5 13.87	+24 23.8	1.932	2.706	15.3	18.1	1 26	5 12.76	+31 52.6	1.295	2.096	20.0	19.5
255800	2006 <i>SN</i> ₁₅		12 17.5 61°10	2°1/17.2 18			393242	2013 <i>QC</i> ₆₄		12 17.5 51°24	4°3/17.4 18		
11 17	6 6.30	+18 52.5	1.775	2.633	13.0	20.4	11 17	6 3.43	+10 34.7	2.056	2.900	12.1	20.2
11 27	5 59.89	+18 25.7	1.712	2.637	9.3	20.2	11 27	5 57.57	+10 19.2	2.005	2.916	9.0	20.0
12 7	5 51.39	+18 0.9	1.675	2.642	5.2	20.0	12 7	5 50.08	+10 13.0	1.980	2.932	6.0	19.9
12 17	5 41.73	+17 38.9	1.665	2.646	2.1	19.8	12 17	5 41.73	+10 17.1	1.982	2.949	4.3	19.8
12 27	5 32.13	+17 21.3	1.684	2.651	4.9	20.0	12 27	5 33.48	+10 31.8	2.013	2.965	5.7	19.9
1 6	5 23.75	+17 9.2	1.731	2.655	9.0	20.2	1 6	5 26.23	+10 56.0	2.072	2.982	8.6	20.1
1 16	5 17.48	+17 3.6	1.804	2.660	12.7	20.5	1 16	5 20.70	+11 28.4	2.156	2.999	11.4	20.4
1 26	5 13.90	+17 4.8	1.897	2.665	15.8	20.7	1 26	5 17.36	+12 7.0	2.263	3.016	13.9	20.6
74584	1999 <i>NH</i> ₅₀		12 17.5 146°86	0°3/17.5 18			466549	2014 <i>SK</i> ₃₀₁		12 17.5 1°85	11°4/15.8 17		
11 17	6 12.00	+23 11.7	1.715	2.568	13.7	20.4	11 17	6 13.13	+46 35.7	1.593	2.410	16.3	20.1
11 27	6 3.95	+23 1.5	1.654	2.578	9.7	20.2	11 27	6 6.40	+48 54.3	1.539	2.409	13.9	19.9
12 7	5 53.54	+22 49.2	1.619	2.587	5.1	19.9	12 7	5 55.63	+50 53.8	1.508	2.408	12.0	19.8
12 17	5 41.84	+22 34.1	1.612	2.596	0.4	19.6	12 17	5 42.01	+52 22.4	1.501	2.409	11.4	19.8
12 27	5 30.25	+22 16.9	1.635	2.604	4.6	19.9	12 27	5 27.68	+53 12.8	1.518	2.411	12.4	19.9
1 6	5 20.13	+21 59.4	1.686	2.611	9.1	20.2	1 6	5 15.10	+53 26.0	1.558	2.413	14.4	20.0
1 16	5 12.46	+21 44.1	1.763	2.618	13.0	20.5	1 16	5 6.24	+53 9.0	1.619	2.417	16.7	20.2
1 26	5 7.82	+21 32.9	1.862	2.624	16.2	20.7	1 26	5 2.17	+52 32.0	1.697	2.423	18.9	20.3
454277	2014 <i>HB</i> ₃₁		12 17.5 128°96	3°6/17.2 18			396356	2014 <i>DZ</i> ₈₃		12 17.5 283°32	0°9/17.5 18		
11 17	6 6.41	+12 2.4	2.380	3.215	11.0	22.2	11 17	6 8.84	+24 52.4	1.561	2.424	14.3	21.3
11 27	5 59.44	+11 41.5	2.324	3.232	8.1	22.0	11 27	6 2.30	+25 6.5	1.483	2.411	10.2	21.0
12 7	5 50.97	+11 27.1	2.296	3.249	5.2	21.9	12 7	5 52.98	+25 18.5	1.429	2.398	5.5	20.7
12 17	5 41.74	+11 20.3	2.296	3.265	3.6	21.8	12 17	5 41.89	+25 26.1	1.401	2.385	0.9	20.4
12 27	5 32.60	+11 21.7	2.327	3.280	5.0	21.9	12 27	5 30.52	+25 28.1	1.402	2.372	5.0	20.6
1 6	5 24.41	+11 31.1	2.388	3.295	7.8	22.1	1 6	5 20.44	+25 25.3	1.430	2.359	10.0	20.9
1 16	5 17.81	+11 48.0	2.476	3.309	10.5	22.3	1 16	5 12.92	+25 20.2	1.482	2.347	14.4	21.1
1 26	5 13.28	+12 11.0	2.587	3.322	12.8	22.5	1 26	5 8.76	+25 15.6	1.554	2.334	18.1	21.3
373906	2003 <i>UK</i> ₃₆		12 17.5 112°01	3°0/17.9 18			334119	2001 <i>QL</i> ₃₂₉		12 17.5 68°35	4°3/17.9 18		
11 17	6 15.00	+31 23.3	1.520	2.370	15.3	21.0	11 17	6 12.71	+33 9.6	1.407	2.263	15.9	20.1
11 27	6 6.31	+31 24.9	1.468	2.387	11.0	20.8	11 27	6 4.99	+33 29.3	1.358	2.277	11.7	19.9
12 7	5 54.82	+31 15.5	1.441	2.403	6.4	20.6	12 7	5 54.27	+33 36.5	1.331	2.291	7.2	19.7
12 17	5 41.91	+30 52.4	1.440	2.419	3.1	20.4	12 17	5 41.94	+33 27.1	1.330	2.306	4.3	19.5
12 27	5 29.33	+30 16.5	1.468	2.434	5.6	20.6	12 27	5 29.87	+33 1.0	1.357	2.320	6.4	19.7
1 6	5 18.66	+29 31.8	1.524	2.449	9.9	20.9	1 6	5 19.79	+32 22.2	1.410	2.335	10.6	20.0
1 16	5 11.01	+28 44.2	1.605	2.463	13.9	21.2	1 16	5 12.85	+31 37.0	1.486	2.349	14.5	20.2
1 26	5 6.89	+27 59.1	1.706	2.476	17.2	21.4	1 26	5 9.62	+30 51.6	1.583	2.364	17.8	20.5
181959	1999 <i>UG</i> ₂₁		12 17.5 9°15	2°7/17.4 18			476554	2008 <i>JN</i> ₁₈		12 17.5 200°61	4°9/16.9 18		
11 17	6 6.38	+18 10.4	1.087	1.969	17.6	19.9	11 17	6 8.83	+12 4.9	1.843	2.686	13.3	22.0
11 27	6 0.91	+17 57.8	1.034	1.970	12.6	19.6	11 27	6 1.66	+11 16.4	1.771	2.682	10.0	21.8
12 7	5 52.29	+17 51.1	1.001	1.971	7.1	19.3	12 7	5 52.38	+10 34.8	1.725	2.678	6.6	21.6
12 17	5 41.81	+17 50.7	0.992	1.974	2.8	19.1	12 17	5 41.87	+10 2.8	1.706	2.674	4.9	21.5
12 27	5 31.34	+17 57.0	1.008	1.978	6.6	19.3	12 27	5 31.31	+9 42.7	1.717	2.668	6.7	21.6
1 6	5 22.69	+18 10.1	1.047	1.983	12.1	19.6	1 6	5 21.86	+9 35.8	1.756	2.662	10.1	21.8
1 16	5 17.16	+18 29.8	1.108	1.989	17.0	19.9	1 16	5 14.46	+9 41.5	1.820	2.656	13.6	22.0
1 26	5 15.46	+18 55.4	1.187	1.995	21.0	20.2	1 26	5 9.73	+9 58.6	1.905	2.648	16.5	22.2
108412	2001 <i>KM</i> ₃₃		12 17.5 116°05	1°6/17.5 18			236218	2005 <i>WT</i> ₁₇₆		12 17.5 316°65	1°4/17.5 18		
11 17	6 10.16	+26 27.7	2.084	2.930	11.9	20.3	11 17	6 7.67	+25 23.7	1.354	2.225	15.5	20.7
11 27	6 2.47	+27 8.4	2.027	2.947	8.4	20.2	11 27	6 1.85	+25 47.1	1.278	2.209	11.1	20.4
12 7	5 52.72	+27 46.0	1.997	2.963	4.6	20.0	12 7	5 52.90	+26 8.7	1.224	2.193	6.1	20.1
12 17	5 41.83	+28 17.4	1.997	2.979	1.6	19.8	12 17	5 41.91	+26 25.3	1.195	2.178	1.4	19.8
12 27	5 30.98	+28 40.8	2.027	2.994	4.2	20.0	12 27	5 30.53	+26 34.7	1.193	2.164	5.6	20.0
1 6	5 21.30	+28 56.4	2.087	3.008	7.9	20.2	1 6	5 20.56	+26 37.5	1.217	2.150	11.0	20.3
1 16	5 13.70	+29 6.0	2.174	3.023	11.1	20.5	1 16	5 13.46	+26 36.1	1.263	2.136	15.8	20.5
1 26	5 8.75	+29 11.9	2.283	3.036	13.8	20.7	1 26	5 10.12	+26 33.9	1.328	2.124	19.9	20.7
129542	1996 <i>RK</i> ₅		12 17.5 98°94	4°2/17.0 18			250126	2002 <i>PK</i> ₉₈		12 17.5 178°74	10°0/19.0 18		
11 17	6 2.87	+10 27.9	2.429	3.266	10.7	19.1	11 17	6 25.79	+58 14.5	2.669	3.384	13.1	20.8
11 27	5 57.01	+9 53.7	2.369	3.275	8.0	18.9	11 27	6 14.31	+59 14.7	2.605	3.386	11.7	20.7
12 7	5 49.73	+9 26.9	2.336	3.285	5.5	18.8	12 7	5 59.29	+59 52.1	2.564	3.388	10.5	20.7
12 17	5 41.70	+9 9.0	2.331	3.294	4.2	18.7	12 17	5 42.20	+59 59.9	2.548	3.388	10.0	20.6
12 27	5 33.72	+9 1.4	2.357	3.304	5.5	18.8	12 27	5 25.14	+59 35.5	2.557	3.388	10.2	20.6
1 6	5 26.58	+9 4.0	2.411	3.313	7.9	19.0	1 6	5 10.18	+58 41.8	2.591	3.388	11.2	20.7
1 16	5 20.90	+9 16.1	2.491	3.322	10.5	19.2	1 16	4 58.76	+57 26.1	2.648	3.386	12.5	20.8
1 26	5 17.13	+9 36.5	2.593	3.331	12.7	19.3	1 26	4 51.55	+55 57.2	2.727	3.384	13.9	20.9
373112	2011 <i>GR</i> ₆₂		12 17.5 293°87	0°4/17.5 18			216990	2000 <i>RT</i> ₂₀		12 17.5 92°19	4°3		

EPHEMERIDES

12 17.5

12 17.5

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
22512	Cannat		12 17.5 168°47'	7.3°/18.2	18		523362	2017 CA ₂₈		12 17.5 337°37'	0.4°/17.5	18	
11 17	6 16.27	+44 55.3	2.199	2.998	13.0	18.9	11 17	6 6.64	+21 54.4	1.779	2.638	13.0	21.5
11 27	6 7.23	+45 43.9	2.134	3.002	10.6	18.7	11 27	6 0.34	+22 2.8	1.710	2.636	9.2	21.3
12 7	5 55.43	+46 15.3	2.093	3.006	8.4	18.6	12 7	5 51.79	+22 11.8	1.666	2.634	4.9	21.0
12 17	5 42.03	+46 23.9	2.079	3.009	7.4	18.5	12 17	5 41.91	+22 20.2	1.649	2.633	0.4	20.7
12 27	5 28.62	+46 7.7	2.094	3.012	8.0	18.6	12 27	5 31.95	+22 27.3	1.661	2.632	4.4	21.0
1 6	5 16.77	+45 29.3	2.136	3.014	10.0	18.7	1 6	5 23.16	+22 33.7	1.702	2.630	8.8	21.3
1 16	5 7.65	+44 34.8	2.203	3.015	12.4	18.9	1 16	5 16.52	+22 40.3	1.768	2.629	12.6	21.5
1 26	5 1.93	+43 31.6	2.293	3.016	14.6	19.0	1 26	5 12.69	+22 48.4	1.855	2.628	15.9	21.7
370495	2003 SR ₂₇		12 17.5 79°92'	2°8'/17.8	18		248782	2006 SX ₃₇		12 17.5 70°95'	1°7'/17.3	18	
11 17	6 15.14	+30 2.8	1.308	2.168	16.7	20.5	11 17	6 6.72	+20 1.5	1.795	2.653	12.9	20.5
11 27	6 6.59	+30 7.4	1.267	2.191	11.9	20.2	11 27	6 0.22	+19 35.9	1.732	2.658	9.2	20.3
12 7	5 55.04	+30 1.8	1.249	2.214	6.8	20.0	12 7	5 51.64	+19 11.0	1.694	2.662	5.0	20.1
12 17	5 42.03	+29 43.2	1.256	2.237	2.8	19.8	12 17	5 41.90	+18 47.8	1.684	2.666	1.7	19.9
12 27	5 29.49	+29 12.4	1.292	2.260	5.8	20.1	12 27	5 32.22	+18 27.4	1.703	2.671	4.7	20.1
1 6	5 19.15	+28 33.9	1.353	2.282	10.6	20.4	1 6	5 23.76	+18 11.5	1.750	2.675	8.8	20.4
1 16	5 12.09	+27 53.5	1.438	2.304	14.8	20.7	1 16	5 17.41	+18 1.2	1.823	2.680	12.5	20.6
1 26	5 8.80	+27 16.2	1.544	2.325	18.2	21.0	1 26	5 13.75	+17 57.4	1.917	2.684	15.6	20.8
229874	2009 UC ₃₁		12 17.5 10°18'	2°9'/17.1	17		477302	2009 ST ₂₀₉		12 17.5 104°99'	3°4'/17.8	16	
11 17	6 4.08	+16 45.2	1.964	2.819	12.1	20.1	11 17	6 14.83	+31 16.4	1.618	2.466	14.6	22.2
11 27	5 58.23	+16 9.6	1.898	2.820	8.7	19.9	11 27	6 6.15	+31 43.6	1.570	2.487	10.6	22.0
12 7	5 50.54	+15 37.2	1.857	2.821	5.1	19.7	12 7	5 54.80	+32 1.2	1.547	2.508	6.3	21.8
12 17	5 41.82	+15 9.6	1.845	2.822	2.9	19.6	12 17	5 42.06	+32 5.4	1.551	2.528	3.4	21.7
12 27	5 33.12	+14 48.6	1.861	2.824	5.0	19.7	12 27	5 29.58	+31 55.4	1.584	2.547	5.6	21.9
1 6	5 25.46	+14 35.3	1.906	2.826	8.6	19.9	1 6	5 18.90	+31 34.0	1.645	2.566	9.6	22.2
1 16	5 19.64	+14 30.2	1.976	2.828	12.0	20.2	1 16	5 11.08	+31 6.0	1.731	2.585	13.3	22.4
1 26	5 16.20	+14 33.1	2.068	2.830	14.8	20.4	1 26	5 6.68	+30 36.6	1.838	2.602	16.3	22.7
402205	2004 VU ₈₈		12 17.5 86°09'	1°4'/17.7	16		332738	2009 SS ₃₄₉		12 17.5 96°22'	1°1'/17.6	18	
11 17	6 7.14	+27 42.7	2.157	3.006	11.4	21.5	11 17	6 12.87	+18 46.6	1.592	2.445	14.6	20.8
11 27	6 0.26	+27 48.0	2.101	3.022	8.1	21.3	11 27	6 4.60	+19 17.3	1.547	2.470	10.3	20.6
12 7	5 51.54	+27 48.6	2.072	3.038	4.4	21.1	12 7	5 53.93	+19 51.8	1.527	2.494	5.5	20.3
12 17	5 41.87	+27 43.0	2.071	3.054	1.4	20.9	12 17	5 42.02	+20 27.6	1.535	2.518	1.2	20.1
12 27	5 32.33	+27 31.4	2.101	3.069	3.9	21.1	12 27	5 30.32	+21 2.6	1.572	2.541	4.8	20.4
1 6	5 23.93	+27 15.2	2.160	3.085	7.4	21.4	1 6	5 20.19	+21 35.8	1.638	2.564	9.3	20.7
1 16	5 17.48	+26 56.8	2.246	3.100	10.6	21.6	1 16	5 12.62	+22 7.2	1.730	2.586	13.2	21.0
1 26	5 13.46	+26 38.6	2.354	3.115	13.2	21.8	1 26	5 8.17	+22 37.7	1.843	2.607	16.3	21.3
51867	2001 PC ₄		12 17.5 0°68'	0°4'/17.6	18		448574	2010 ST ₄₀		12 17.5 81°78'	2°5'/17.4	18	
11 17	6 7.50	+26 57.0	1.570	2.433	14.2	17.3	11 17	6 6.01	+16 33.0	1.914	2.767	12.5	21.4
11 27	6 1.06	+26 11.8	1.504	2.432	10.0	17.1	11 27	5 59.57	+16 21.9	1.857	2.778	8.9	21.2
12 7	5 52.16	+25 18.8	1.462	2.431	5.4	16.8	12 7	5 51.24	+16 15.3	1.825	2.789	5.1	21.0
12 17	5 41.90	+24 19.0	1.447	2.431	0.5	16.4	12 17	5 41.89	+16 13.7	1.821	2.800	2.5	20.8
12 27	5 31.76	+23 15.4	1.461	2.432	4.8	16.8	12 27	5 32.61	+16 17.3	1.847	2.811	4.8	21.0
1 6	5 23.12	+22 12.8	1.502	2.433	9.5	17.0	1 6	5 24.45	+16 26.3	1.900	2.822	8.5	21.2
1 16	5 16.98	+21 15.8	1.568	2.434	13.7	17.3	1 16	5 18.24	+16 40.5	1.980	2.833	11.9	21.5
1 26	5 13.94	+20 27.6	1.655	2.437	17.1	17.5	1 26	5 14.51	+16 59.4	2.081	2.844	14.7	21.7
130276	2000 DY ₇₆		12 17.5 192°33'	4°0'/17.3	16		259470	2003 SD ₁₅₁		12 17.5 155°21'	1°6'/17.5	18	
11 17	6 11.07	+14 8.4	1.617	2.466	14.6	20.7	11 17	6 12.08	+18 5.4	1.719	2.569	13.8	20.8
11 27	6 3.51	+13 44.3	1.547	2.465	10.7	20.5	11 27	6 4.11	+18 21.6	1.657	2.577	9.8	20.6
12 7	5 53.48	+13 27.2	1.503	2.463	6.6	20.2	12 7	5 53.75	+18 42.0	1.619	2.585	5.4	20.3
12 17	5 41.98	+13 18.5	1.485	2.460	4.0	20.1	12 17	5 42.02	+19 5.4	1.610	2.592	1.6	20.1
12 27	5 30.39	+13 19.3	1.497	2.457	6.4	20.2	12 27	5 30.28	+19 30.3	1.631	2.599	4.9	20.3
1 6	5 20.11	+13 29.7	1.536	2.453	10.5	20.4	1 6	5 19.86	+19 56.1	1.681	2.604	9.3	20.6
1 16	5 12.22	+13 49.3	1.600	2.448	14.5	20.7	1 16	5 11.80	+20 22.8	1.756	2.609	13.2	20.9
1 26	5 7.40	+14 16.9	1.684	2.442	17.8	20.9	1 26	5 6.74	+20 50.7	1.853	2.613	16.4	21.1
327126	2005 ER ₁₄₈		12 17.5 150°10'	3°5'/17.6	18		278573	2008 HF ₂₆		12 17.5 288°22'	2°0'/17.5	18	
11 17	6 14.25	+31 17.7	1.731	2.576	14.0	21.4	11 17	6 8.77	+18 6.3	1.402	2.267	15.4	20.9
11 27	6 5.85	+31 55.4	1.670	2.585	10.2	21.2	11 27	6 2.49	+18 16.2	1.322	2.251	11.1	20.6
12 7	5 54.73	+32 24.8	1.634	2.593	6.2	21.0	12 7	5 53.23	+18 32.1	1.266	2.234	6.2	20.2
12 17	5 42.04	+32 41.3	1.625	2.601	3.5	20.9	12 17	5 42.00	+18 53.1	1.235	2.217	2.0	19.9
12 27	5 29.36	+32 43.2	1.646	2.608	5.7	21.0	12 27	5 30.35	+19 18.2	1.231	2.201	5.8	20.1
1 6	5 18.23	+32 32.1	1.695	2.614	9.5	21.3	1 6	5 19.97	+19 46.3	1.254	2.184	11.1	20.4
1 16	5 9.80	+32 12.4	1.770	2.620	13.2	21.5	1 16	5 12.23	+20 17.3	1.300	2.167	15.9	20.6
1 26	5 4.74	+31 49.1	1.866	2.625	16.3	21.7	1 26	5 8.05	+20 51.1	1.365	2.151	19.9	20.8
156038	2001 SK ₁		12 17.5 66°40'	1°9'/17.7	18		101998	1999 RJ ₇₆		12 17.5 203°55'	4°5'/17.2	18	
11 17	6 11.22	+27 43.9	1.396	2.260	15.6	20.0	11 17	6 9.30	+12 44.4	1.672	2.520	14.2	19.8
11 27	6 3.83	+27 51.5	1.348	2.275	11.1	19.8	11 27	6 2.22	+12 16.5	1.601	2.517	10.5	19.6
12 7	5 53.64	+27 52.5	1.323	2.291	6.1	19.6	12 7	5 52.80	+11 56.7	1.555	2.513	6.7	19.4
12 17	5 41.98	+27 44.6	1.324	2.306	1.9	19.4	12 17	5 41.98	+11 46.9	1.537	2.509	4.5	19.2
12 27	5 30.57	+27 27.8	1.353	2.322	5.3	19.6	12 27	5 31.07	+11 48.2	1.547	2.504	6.6	19.3
1 6	5 21.00	+27 5.0	1.408	2.338	10.1	19.9	1 6	5 21.36	+12 0.8	1.584	2.498	10.4	19.6
1 16	5 14.35	+26 40.2	1.487	2.354	14.3	20.2	1 16	5 13.89	+12 23.8	1.646	2.492	14.2	19.8
1 26	5 11.20	+26 17.4	1.586	2.370	17.7	20.5	1 26	5 9.33	+12 55.6	1.729	2.486	17.5	20.0
47606	2000 AA ₂₃₈		12 17.5 263°31'	4°0'/17.5	18		437984	2003 SS ₁₅₃		12 17.5 98°39'	0°5'/17.5	18	
11 17	6 8.56	+13 37.1	1.520	2.376	15.0								

EPHEMERIDES

12 17.5

12 17.5

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
16616	1993 <i>FB</i> ₄₄		12 17.5	25°78	0°7/17.5	18	519274	2011 <i>BR</i> ₄₂		12 17.5	6°81	1°7/17.5	17
11 17	6 5.80	+21 50.0	1.874	2.732	12.5	18.1	11 17	6 6.69	+26 24.4	2.007	2.861	11.9	20.6
11 27	5 59.59	+21 43.2	1.808	2.734	8.8	17.9	11 27	6 0.30	+27 4.5	1.938	2.861	8.5	20.4
12 7	5 51.33	+21 36.3	1.768	2.736	4.7	17.6	12 7	5 51.79	+27 42.4	1.895	2.861	4.7	20.2
12 17	5 41.91	+21 28.9	1.755	2.739	0.7	17.3	12 17	5 41.98	+28 15.1	1.880	2.862	1.7	20.0
12 27	5 32.49	+21 21.5	1.771	2.741	4.3	17.6	12 27	5 32.05	+28 40.6	1.895	2.863	4.3	20.2
1 6	5 24.20	+21 14.9	1.816	2.744	8.4	17.9	1 6	5 23.17	+28 58.7	1.939	2.864	8.1	20.4
1 16	5 17.94	+21 10.5	1.887	2.747	12.0	18.1	1 16	5 16.29	+29 10.6	2.009	2.865	11.6	20.6
1 26	5 14.31	+21 9.5	1.979	2.750	15.1	18.3	1 26	5 12.07	+29 18.8	2.101	2.866	14.5	20.8
15858	Davidwoods		12 17.5	125°98	0°9/17.5	18	242907	2006 <i>LU</i>		12 17.5	106°40	2°3/17.2	18
11 17	6 12.65	+20 57.9	1.505	2.363	15.0	19.2	11 17	6 8.69	+18 4.5	2.115	2.961	11.8	21.1
11 27	6 4.66	+20 59.1	1.451	2.376	10.6	19.0	11 27	6 1.17	+17 28.8	2.066	2.984	8.3	20.9
12 7	5 54.06	+21 1.3	1.421	2.389	5.6	18.7	12 7	5 51.98	+16 55.1	2.043	3.007	4.7	20.7
12 17	5 42.04	+21 3.3	1.418	2.401	1.0	18.4	12 17	5 41.99	+16 24.7	2.050	3.029	2.3	20.6
12 27	5 30.16	+21 4.9	1.444	2.413	5.1	18.7	12 27	5 32.21	+15 59.1	2.087	3.050	4.5	20.8
1 6	5 19.90	+21 6.9	1.497	2.424	9.9	19.0	1 6	5 23.62	+15 39.6	2.154	3.071	7.9	21.1
1 16	5 12.34	+21 10.8	1.575	2.434	14.0	19.3	1 16	5 16.92	+15 27.0	2.248	3.091	11.0	21.3
1 26	5 8.07	+21 18.0	1.674	2.444	17.4	19.6	1 26	5 12.56	+15 21.6	2.364	3.111	13.6	21.5
53486	2000 <i>AJ</i> ₅₉		12 17.5	83°88	1°6/17.6	18	7268	Chigorin		12 17.5	56°28	4°0/17.4	18
11 17	6 10.42	+18 15.2	1.432	2.294	15.4	18.4	11 17	6 10.16	+15 44.9	1.160	2.030	17.6	16.9
11 27	6 3.20	+18 34.5	1.380	2.306	10.9	18.2	11 27	6 3.14	+15 19.2	1.122	2.050	12.6	16.7
12 7	5 53.34	+18 59.1	1.351	2.319	5.9	17.9	12 7	5 53.30	+15 1.8	1.105	2.071	7.4	16.4
12 17	5 42.01	+19 27.1	1.349	2.332	1.7	17.7	12 17	5 42.05	+14 54.0	1.114	2.092	4.0	16.3
12 27	5 30.77	+19 56.9	1.375	2.344	5.3	18.0	12 27	5 31.17	+14 56.7	1.148	2.113	6.9	16.5
1 6	5 21.10	+20 27.3	1.428	2.357	10.1	18.3	1 6	5 22.25	+15 9.5	1.207	2.135	11.6	16.9
1 16	5 14.11	+20 58.2	1.506	2.369	14.3	18.6	1 16	5 16.35	+15 31.2	1.289	2.157	15.9	17.2
1 26	5 10.42	+21 29.8	1.603	2.382	17.7	18.8	1 26	5 13.98	+16 0.1	1.389	2.179	19.5	17.5
494540	2017 <i>AD</i> ₁₅		12 17.5	23°97	3°8/17.8	17	27338	Malaraghavan		12 17.5	210°43	4°2/17.4	18
11 17	6 5.19	+14 12.4	1.048	1.929	18.2	20.0	11 17	6 5.84	+11 1.6	2.118	2.957	12.0	19.3
11 27	5 59.91	+14 27.7	1.011	1.945	13.1	19.7	11 27	5 59.44	+10 48.0	2.044	2.953	9.0	19.1
12 7	5 51.70	+14 55.9	0.996	1.963	7.7	19.5	12 7	5 51.24	+10 43.0	1.996	2.949	5.9	18.9
12 17	5 41.93	+15 35.8	1.003	1.983	3.9	19.4	12 17	5 41.96	+10 47.5	1.976	2.944	4.2	18.8
12 27	5 32.41	+16 24.6	1.035	2.004	6.7	19.6	12 27	5 32.59	+11 2.2	1.985	2.939	5.7	18.9
1 6	5 24.79	+17 19.0	1.091	2.026	11.7	19.9	1 6	5 24.12	+11 26.3	2.023	2.933	8.8	19.1
1 16	5 20.19	+18 15.9	1.168	2.050	16.2	20.3	1 16	5 17.35	+11 58.7	2.088	2.928	11.9	19.3
1 26	5 19.17	+19 12.8	1.265	2.075	19.9	20.6	1 26	5 12.87	+12 37.6	2.174	2.921	14.6	19.4
185736	1998 <i>XA</i> ₂₇		12 17.5	55°77	0°3/17.6	18	91979	1999 <i>VU</i> ₉₇		12 17.5	157°35	2°6/17.6	18
11 17	6 18.08	+15 59.7	1.212	2.068	18.0	18.7	11 17	6 7.71	+30 24.4	2.363	3.205	10.8	19.6
11 27	6 8.82	+18 4.9	1.176	2.100	12.6	18.5	11 27	6 0.78	+30 58.9	2.294	3.208	7.8	19.4
12 7	5 56.36	+20 19.9	1.165	2.133	6.6	18.3	12 7	5 51.95	+31 28.0	2.251	3.212	4.7	19.2
12 17	5 42.17	+22 34.4	1.182	2.166	0.5	17.9	12 17	5 42.00	+31 48.9	2.238	3.215	2.6	19.1
12 27	5 28.24	+24 38.6	1.229	2.199	5.6	18.4	12 27	5 31.97	+32 0.2	2.256	3.218	4.3	19.2
1 6	5 16.43	+26 26.3	1.304	2.232	11.0	18.8	1 6	5 22.92	+32 2.4	2.302	3.220	7.4	19.4
1 16	5 8.00	+27 56.6	1.404	2.265	15.4	19.2	1 16	5 15.69	+31 57.6	2.376	3.223	10.4	19.6
1 26	5 3.56	+29 11.8	1.525	2.298	18.8	19.5	1 26	5 10.89	+31 48.8	2.473	3.225	12.9	19.8
404884	2014 <i>KH</i> ₆₅		12 17.5	12°53	1°5/17.4	18	66191	1998 <i>YS</i> ₆		12 17.5	50°17	0°1/17.5	18
11 17	6 9.83	+23 57.7	1.687	2.544	13.7	20.4	11 17	6 5.59	+23 17.2	1.945	2.803	12.1	18.2
11 27	6 2.85	+25 2.1	1.620	2.544	9.7	20.2	11 27	5 59.32	+23 16.9	1.891	2.817	8.5	18.0
12 7	5 53.26	+26 7.9	1.577	2.545	5.3	20.0	12 7	5 51.14	+23 15.5	1.862	2.831	4.5	17.8
12 17	5 42.03	+27 10.1	1.563	2.546	1.5	19.7	12 17	5 41.96	+23 12.1	1.861	2.845	0.2	17.5
12 27	5 30.57	+28 4.7	1.578	2.546	4.9	19.9	12 27	5 32.88	+23 7.0	1.890	2.860	4.0	17.8
1 6	5 20.32	+28 49.8	1.621	2.547	9.4	20.2	1 6	5 24.97	+23 1.1	1.947	2.875	7.9	18.1
1 16	5 12.49	+29 26.1	1.690	2.548	13.3	20.4	1 16	5 19.04	+22 55.9	2.030	2.890	11.3	18.3
1 26	5 7.84	+29 55.7	1.780	2.549	16.6	20.7	1 26	5 15.61	+22 52.6	2.135	2.905	14.2	18.6
148496	2001 <i>LZ</i> ₇		12 17.5	90°53	3°1/17.6	18	457453	2008 <i>UT</i> ₁₅₆		12 17.5	69°63	1°4/17.6	18
11 17	6 9.88	+14 57.6	1.509	2.365	15.1	19.7	11 17	6 5.77	+26 52.3	2.254	3.104	11.0	21.6
11 27	6 2.65	+15 2.9	1.458	2.380	10.8	19.5	11 27	5 59.35	+27 14.0	2.195	3.116	7.8	21.4
12 7	5 52.99	+15 16.2	1.431	2.395	6.3	19.3	12 7	5 51.14	+27 32.4	2.162	3.128	4.3	21.2
12 17	5 42.03	+15 37.2	1.431	2.409	3.2	19.1	12 17	5 41.96	+27 45.6	2.159	3.141	1.4	21.0
12 27	5 31.18	+16 4.8	1.459	2.424	5.7	19.3	12 27	5 32.82	+27 52.9	2.185	3.153	3.8	21.2
1 6	5 21.83	+16 37.7	1.514	2.438	10.0	19.6	1 6	5 24.69	+27 54.7	2.241	3.166	7.2	21.5
1 16	5 14.96	+17 14.7	1.594	2.452	14.0	19.9	1 16	5 18.36	+27 52.9	2.324	3.178	10.3	21.7
1 26	5 11.18	+17 54.7	1.694	2.466	17.2	20.1	1 26	5 14.36	+27 49.3	2.429	3.190	12.9	21.9
517336	2014 <i>JM</i> ₆₀		12 17.5	139°49	0°3/17.5	18	514247	2015 <i>PD</i> ₅₁		12 17.5	141°77	0°9/17.5	18
11 17	6 8.13	+22 30.0	2.008	2.859	12.0	21.9	11 17	6 10.42	+24 21.4	2.037	2.884	12.1	21.2
11 27	6 1.11	+22 33.0	1.944	2.867	8.5	21.7	11 27	6 2.79	+24 59.1	1.974	2.894	8.5	21.0
12 7	5 52.10	+22 35.4	1.906	2.874	4.5	21.5	12 7	5 53.04	+25 35.7	1.937	2.904	4.6	20.7
12 17	5 41.99	+22 36.3	1.897	2.881	0.3	21.2	12 17	5 42.06	+26 8.3	1.930	2.913	1.0	20.5
12 27	5 31.90	+22 35.5	1.918	2.888	4.0	21.5	12 27	5 31.05	+26 35.0	1.953	2.922	4.1	20.8
1 6	5 22.95	+22 33.8	1.969	2.894	8.0	21.7	1 6	5 21.17	+26 55.6	2.007	2.930	8.0	21.0
1 16	5 15.99	+22 32.5	2.045	2.900	11.5	22.0	1 16	5 13.37	+27 11.2	2.087	2.937	11.5	21.2
1 26	5 11.60	+22 33.1	2.144	2.905	14.4	22.2	1 26	5 8.24	+27 24.0	2.189	2.944	14.3	21.5
354267	2002 <i>QY</i> ₁₅₃		12 17.5	230°50	3°3/17.3	18	84008	2002 <i>OP</i> ₁₄		12 17.5	31°09	5°1/16.9	18
11 17	6 6.59	+14 57.0											

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
393590	2003 <i>SJ</i> ₄₀₁		12 17.5 142°74	7°2/17.4	18		416745	2005 <i>EG</i> ₉₃		12 17.5 278°13	7°3/16.5	18	
11 17	6 6.07	+ 4 0.0	1.864	2.690	13.9	21.1	11 17	6 2.22	+ 0 44.4	2.425	3.232	11.7	21.1
11 27	5 59.68	+ 3 29.2	1.803	2.693	11.1	20.9	11 27	5 56.79	- 0 3.9	2.345	3.216	9.7	20.9
12 7	5 51.37	+ 3 13.8	1.766	2.697	8.4	20.8	12 7	5 49.82	- 0 39.0	2.290	3.200	8.0	20.8
12 17	5 41.98	+ 3 16.5	1.755	2.701	7.2	20.7	12 17	5 41.94	- 0 57.8	2.262	3.184	7.3	20.7
12 27	5 32.58	+ 3 38.2	1.772	2.704	8.2	20.8	12 27	5 33.92	- 0 58.2	2.261	3.168	8.1	20.7
1 6	5 24.24	+ 4 17.4	1.816	2.707	10.8	20.9	1 6	5 26.59	- 0 40.2	2.288	3.152	10.0	20.8
1 16	5 17.79	+ 5 11.0	1.885	2.710	13.6	21.1	1 16	5 20.63	- 0 5.7	2.338	3.136	12.2	21.0
1 26	5 13.82	+ 6 14.9	1.974	2.713	16.2	21.3	1 26	5 16.59	+ 0 42.2	2.410	3.120	14.3	21.1
228900	2003 <i>ST</i> ₆₉		12 17.5 158°46	1°9/17.3	17		456182	2006 <i>HP</i> ₆₅		12 17.5 281°26	0°6/17.5	18	
11 17	6 4.34	+18 1.5	2.315	3.164	10.7	20.7	11 17	6 4.83	+21 28.9	2.294	3.145	10.7	21.6
11 27	5 58.26	+17 45.1	2.245	3.166	7.6	20.5	11 27	5 58.84	+21 29.5	2.203	3.125	7.6	21.3
12 7	5 50.56	+17 31.0	2.202	3.167	4.3	20.3	12 7	5 51.00	+21 30.5	2.138	3.105	4.1	21.1
12 17	5 41.95	+17 19.7	2.188	3.169	1.9	20.1	12 17	5 42.00	+21 31.3	2.102	3.085	0.6	20.8
12 27	5 33.33	+17 12.0	2.205	3.170	4.1	20.3	12 27	5 32.79	+21 31.9	2.096	3.065	3.8	21.0
1 6	5 25.59	+17 8.3	2.250	3.171	7.4	20.5	1 6	5 24.35	+21 32.5	2.120	3.045	7.5	21.2
1 16	5 19.45	+17 9.2	2.323	3.172	10.5	20.7	1 16	5 17.54	+21 34.2	2.171	3.025	10.9	21.4
1 26	5 15.43	+17 14.9	2.418	3.173	13.1	20.9	1 26	5 12.99	+21 38.0	2.244	3.004	13.8	21.5
44482	1998 <i>WQ</i> ₁₄		12 17.5 280°86	2°3/17.2	18		347569	2000 <i>WK</i> ₁₃₀		12 17.5 92°31	1°0/17.4	18	
11 17	6 4.08	+17 43.1	2.226	3.077	11.0	18.5	11 17	6 10.99	+23 4.4	1.711	2.565	13.6	19.4
11 27	5 58.17	+17 12.8	2.149	3.070	7.9	18.3	11 27	6 3.12	+22 20.3	1.661	2.585	9.6	19.2
12 7	5 50.55	+16 44.4	2.099	3.063	4.6	18.0	12 7	5 53.12	+21 33.6	1.636	2.605	5.1	19.0
12 17	5 41.95	+16 19.2	2.078	3.057	2.3	17.9	12 17	5 42.10	+20 45.5	1.641	2.624	1.0	18.7
12 27	5 33.29	+15 58.5	2.086	3.050	4.4	18.0	12 27	5 31.40	+19 58.6	1.674	2.643	4.6	19.0
1 6	5 25.52	+15 43.4	2.124	3.043	7.9	18.2	1 6	5 22.23	+19 16.2	1.737	2.662	8.9	19.3
1 16	5 19.38	+15 34.9	2.188	3.037	11.1	18.4	1 16	5 15.44	+18 40.8	1.825	2.680	12.6	19.6
1 26	5 15.43	+15 33.0	2.274	3.030	13.8	18.6	1 26	5 11.52	+18 13.9	1.935	2.698	15.7	19.8
326756	2003 <i>SW</i> ₆₆		12 17.5 60°52	10°4/18.0	18		196960	2003 <i>UA</i> ₅₄		12 17.5 326°23	9°3/17.8	18	
11 17	6 19.48	+51 56.5	2.064	2.836	14.7	19.9	11 17	6 11.55	+47 28.1	1.941	2.745	14.3	19.2
11 27	6 10.16	+53 37.4	2.029	2.860	12.7	19.8	11 27	6 4.60	+48 33.2	1.867	2.731	12.1	19.1
12 7	5 57.30	+54 55.1	2.016	2.884	11.1	19.7	12 7	5 54.43	+49 19.7	1.815	2.717	10.2	18.9
12 17	5 42.29	+55 41.7	2.028	2.908	10.4	19.7	12 17	5 42.18	+49 40.3	1.787	2.705	9.3	18.8
12 27	5 27.21	+55 54.2	2.066	2.932	10.9	19.8	12 27	5 29.63	+49 31.4	1.785	2.692	10.0	18.9
1 6	5 14.14	+55 35.8	2.128	2.956	12.1	19.9	1 6	5 18.62	+48 54.9	1.808	2.680	11.9	18.9
1 16	5 4.54	+54 53.9	2.212	2.980	13.7	20.1	1 16	5 10.60	+47 57.0	1.855	2.669	14.3	19.1
1 26	4 59.16	+53 57.8	2.315	3.004	15.3	20.3	1 26	5 6.40	+46 46.2	1.921	2.658	16.6	19.2
24193	1999 <i>XF</i> ₃₂		12 17.5 58°50	0°4/17.5	18		227630	2006 <i>BR</i> ₈₄		12 17.5 222°98	0°9/17.6	17	
11 17	6 10.59	+23 51.2	1.479	2.342	14.9	17.0	11 17	6 5.97	+26 4.5	2.232	3.083	11.0	20.7
11 27	6 2.99	+23 25.6	1.442	2.370	10.4	16.8	11 27	5 59.59	+26 10.8	2.159	3.081	7.8	20.5
12 7	5 53.07	+22 57.4	1.429	2.398	5.5	16.6	12 7	5 51.35	+26 14.0	2.111	3.079	4.2	20.2
12 17	5 42.07	+22 26.9	1.442	2.426	0.5	16.3	12 17	5 42.03	+26 12.7	2.093	3.076	0.9	20.0
12 27	5 31.52	+21 56.0	1.484	2.455	4.8	16.7	12 27	5 32.65	+26 6.8	2.105	3.074	3.8	20.2
1 6	5 22.74	+21 27.3	1.554	2.483	9.4	17.1	1 6	5 24.24	+25 57.2	2.146	3.071	7.4	20.4
1 16	5 16.60	+21 3.5	1.648	2.511	13.3	17.4	1 16	5 17.62	+25 45.7	2.214	3.069	10.7	20.6
1 26	5 13.56	+20 46.1	1.763	2.540	16.4	17.6	1 26	5 13.37	+25 34.5	2.304	3.066	13.5	20.8
398888	2013 <i>CD</i> ₉₄		12 17.5 7°73	5°0/17.5	18		349199	2007 <i>RC</i> ₂₂₈		12 17.5 34°68	2°4/17.4	18	
11 17	6 5.52	+11 18.8	1.533	2.389	14.8	20.7	11 17	6 6.67	+18 47.9	1.352	2.222	15.5	20.2
11 27	5 59.69	+11 1.9	1.472	2.390	11.1	20.5	11 27	6 0.58	+18 26.9	1.306	2.236	11.0	20.0
12 7	5 51.53	+10 56.2	1.433	2.390	7.2	20.3	12 7	5 51.98	+18 9.5	1.282	2.251	6.1	19.8
12 17	5 42.02	+11 3.6	1.421	2.392	5.0	20.2	12 17	5 42.06	+17 56.5	1.285	2.266	2.4	19.6
12 27	5 32.46	+11 24.3	1.436	2.393	6.9	20.3	12 27	5 32.34	+17 49.0	1.314	2.282	5.6	19.8
1 6	5 24.15	+11 57.2	1.477	2.396	10.7	20.5	1 6	5 24.24	+17 47.7	1.369	2.299	10.3	20.1
1 16	5 18.11	+12 39.9	1.541	2.398	14.4	20.8	1 16	5 18.76	+17 53.1	1.447	2.316	14.4	20.4
1 26	5 14.98	+13 29.8	1.626	2.401	17.7	21.0	1 26	5 16.43	+18 4.7	1.545	2.334	17.8	20.7
520591	2014 <i>OJ</i> ₁₉₁		12 17.5 79°95	0°7/17.6	18		189517	2000 <i>HL</i> ₂		12 17.5 145°66	0°4/17.6	18	
11 17	6 6.54	+25 19.4	2.116	2.968	11.5	21.5	11 17	6 10.98	+23 54.9	1.925	2.774	12.6	20.6
11 27	5 59.91	+25 24.6	2.059	2.982	8.1	21.3	11 27	6 3.21	+24 7.7	1.863	2.784	8.9	20.4
12 7	5 51.45	+25 27.0	2.028	2.996	4.3	21.1	12 7	5 53.28	+24 18.8	1.827	2.794	4.7	20.1
12 17	5 42.01	+25 25.4	2.026	3.010	0.7	20.9	12 17	5 42.13	+24 26.3	1.820	2.804	0.5	19.8
12 27	5 32.67	+25 19.9	2.054	3.024	3.8	21.1	12 27	5 31.03	+24 29.8	1.843	2.812	4.2	20.1
1 6	5 24.44	+25 11.5	2.112	3.038	7.5	21.4	1 6	5 21.18	+24 29.9	1.896	2.820	8.3	20.4
1 16	5 18.11	+25 1.9	2.195	3.052	10.7	21.6	1 16	5 13.53	+24 28.5	1.974	2.827	11.9	20.7
1 26	5 14.20	+24 53.1	2.302	3.065	13.4	21.8	1 26	5 8.64	+24 27.5	2.076	2.834	14.9	20.9
441693	2008 <i>YD</i> ₁₂₄		12 17.5 299°37	3°3/17.6	18		2536	Kozyrev		12 17.5 55°30	0°7/17.6	18	R
11 17	6 6.70	+14 34.1	1.622	2.479	14.1	21.3	11 17	6 12.96	+26 17.8	1.156	2.028	17.5	15.3
11 27	6 0.60	+14 37.7	1.547	2.469	10.3	21.1	11 27	6 5.15	+25 56.0	1.121	2.053	12.3	15.0
12 7	5 52.09	+14 49.8	1.496	2.460	6.2	20.8	12 7	5 54.36	+25 28.0	1.108	2.078	6.5	14.8
12 17	5 42.05	+15 10.5	1.472	2.450	3.3	20.6	12 17	5 42.18	+24 53.6	1.120	2.104	0.8	14.5
12 27	5 31.79	+15 39.3	1.476	2.440	5.7	20.7	12 27	5 30.58	+24 15.0	1.159	2.130	5.6	14.9
1 6	5 22.64	+16 14.9	1.506	2.431	10.0	21.0	1 6	5 21.26	+23 36.6	1.223	2.157	10.9	15.3
1 16	5 15.72	+16 55.9	1.562	2.422	14.1	21.2	1 16	5 15.24	+23 2.7	1.310	2.183	15.4	15.6
1 26	5 11.76	+17 41.0	1.638	2.413	17.6	21.4	1 26	5 12.95	+22 36.1	1.416	2.210	19.0	15.9
235319	2003 <i>UG</i> ₁₇₃		12 17.5 91°95	2°7/17.1	18		174262	2002 <i>RC</i> ₂₃₁		12 17.5 101°2			

EPHEMERIDES

12 17.5

12 17.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
328880	2010 <i>CJ</i> ₁₀	12 17.5 109°04' 0°2/17.5 18					254844	2005 <i>QW</i> ₁₉₀	12 17.6 94°58' 1°2/17.8 18				
11 17	6 5.64	+21 55.8	2.272	3.122	10.9	20.9	11 17	6 8.97	+28 15.2	2.001	2.850	12.2	20.1
11 27	5 59.26	+22 11.4	2.207	3.129	7.6	20.7	11 27	6 1.68	+27 54.3	1.942	2.863	8.6	19.9
12 7	5 51.15	+22 27.5	2.168	3.136	4.0	20.5	12 7	5 52.42	+27 26.9	1.910	2.876	4.7	19.7
12 17	5 42.05	+22 42.8	2.159	3.143	0.3	20.2	12 17	5 42.16	+26 52.7	1.906	2.889	1.2	19.5
12 27	5 32.94	+22 56.6	2.180	3.149	3.6	20.5	12 27	5 32.09	+26 12.9	1.932	2.901	4.0	19.7
1 6	5 24.76	+23 8.9	2.231	3.156	7.2	20.8	1 6	5 23.31	+25 30.5	1.988	2.914	7.9	20.0
1 16	5 18.29	+23 20.4	2.308	3.162	10.4	21.0	1 16	5 16.66	+24 48.8	2.070	2.926	11.3	20.2
1 26	5 14.06	+23 32.0	2.409	3.169	13.0	21.2	1 26	5 12.63	+24 11.0	2.175	2.938	14.1	20.4
272539	2005 <i>UZ</i> ₃₂₂	12 17.5 147°82' 0°4/17.6 18					83161	2001 <i>QS</i> ₂₇₅	12 17.6 97°50' 5°5/18.0 18				
11 17	6 11.20	+24 29.4	1.888	2.737	12.8	22.3	11 17	6 12.05	+38 3.8	1.947	2.778	13.2	19.3
11 27	6 3.40	+24 32.6	1.826	2.747	9.0	22.1	11 27	6 4.25	+38 44.1	1.890	2.790	10.1	19.2
12 7	5 53.39	+24 33.1	1.789	2.756	4.8	21.9	12 7	5 53.94	+39 11.0	1.859	2.802	7.2	19.0
12 17	5 42.17	+24 29.6	1.781	2.765	0.5	21.6	12 17	5 42.24	+39 20.2	1.854	2.814	5.5	18.9
12 27	5 31.02	+24 22.0	1.804	2.773	4.2	21.9	12 27	5 30.62	+39 10.1	1.879	2.825	6.6	19.0
1 6	5 21.16	+24 11.5	1.855	2.780	8.4	22.1	1 6	5 20.49	+38 43.4	1.931	2.837	9.4	19.2
1 16	5 13.55	+24 0.5	1.933	2.787	12.1	22.4	1 16	5 12.91	+38 5.1	2.008	2.848	12.3	19.4
1 26	5 8.76	+23 51.2	2.033	2.792	15.1	22.6	1 26	5 8.48	+37 21.1	2.107	2.859	14.9	19.6
100954	1998 <i>QR</i> ₆	12 17.5 78°85' 0°3/17.6 18					267548	2002 <i>PS</i> ₁₆₇	12 17.6 85°47' 4°2/17.5 18				
11 17	6 9.46	+23 52.3	1.737	2.594	13.4	19.5	11 17	6 3.69	+9 55.4	2.285	3.123	11.3	20.2
11 27	6 2.18	+23 58.3	1.689	2.614	9.4	19.3	11 27	5 57.80	+9 44.7	2.224	3.131	8.5	20.0
12 7	5 52.72	+24 2.3	1.666	2.634	4.9	19.1	12 7	5 50.36	+9 42.9	2.189	3.139	5.7	19.8
12 17	5 42.14	+24 3.2	1.670	2.654	0.4	18.8	12 17	5 42.07	+9 51.0	2.181	3.147	4.2	19.8
12 27	5 31.76	+24 0.7	1.704	2.674	4.3	19.2	12 27	5 33.80	+10 9.0	2.204	3.155	5.4	19.9
1 6	5 22.81	+23 55.9	1.766	2.694	8.6	19.5	1 6	5 26.38	+10 36.1	2.255	3.163	8.1	20.0
1 16	5 16.17	+23 50.9	1.854	2.714	12.2	19.7	1 16	5 20.51	+11 11.0	2.332	3.170	10.9	20.2
1 26	5 12.39	+23 47.4	1.964	2.733	15.2	20.0	1 26	5 16.68	+11 51.8	2.432	3.178	13.3	20.4
400125	2006 <i>UY</i> ₁₀₀	12 17.5 41°59' 1°1/17.5 18					196298	2003 <i>FQ</i>	12 17.6 216°70' 0°6/17.6 18				
11 17	6 7.87	+24 57.6	1.837	2.693	12.8	20.7	11 17	6 10.29	+24 7.4	1.902	2.753	12.6	21.1
11 27	6 1.27	+25 27.1	1.770	2.694	9.1	20.5	11 27	6 3.00	+24 28.2	1.824	2.746	9.0	20.9
12 7	5 52.38	+25 55.1	1.728	2.696	4.9	20.3	12 7	5 53.35	+24 47.9	1.772	2.739	4.8	20.6
12 17	5 42.14	+26 18.9	1.714	2.697	1.1	20.0	12 17	5 42.24	+25 4.3	1.747	2.731	0.7	20.3
12 27	5 31.80	+26 37.1	1.729	2.698	4.4	20.2	12 27	5 30.92	+25 15.9	1.754	2.723	4.4	20.6
1 6	5 22.63	+26 49.5	1.773	2.700	8.6	20.5	1 6	5 20.71	+25 23.0	1.789	2.714	8.7	20.8
1 16	5 15.64	+26 57.7	1.842	2.701	12.3	20.7	1 16	5 12.66	+25 27.3	1.850	2.704	12.5	21.0
1 26	5 11.49	+27 3.9	1.933	2.703	15.4	20.9	1 26	5 7.48	+25 30.9	1.933	2.694	15.7	21.2
450625	2006 <i>TY</i> ₁₂	12 17.5 61°46' 3°1/18.0 17					448314	2009 <i>BX</i> ₁₈₅	12 17.6 310°46' 1°3/17.5 17				
11 17	6 10.63	+32 12.3	1.670	2.521	14.1	20.9	11 17	6 8.39	+24 3.7	1.552	2.415	14.3	20.5
11 27	6 3.16	+32 10.1	1.621	2.539	10.2	20.7	11 27	6 2.21	+24 53.7	1.472	2.400	10.2	20.2
12 7	5 53.27	+31 57.2	1.596	2.558	6.1	20.5	12 7	5 53.18	+25 45.5	1.417	2.386	5.6	19.9
12 17	5 42.19	+31 31.9	1.599	2.576	3.1	20.4	12 17	5 42.24	+26 34.8	1.388	2.371	1.4	19.6
12 27	5 31.40	+30 54.9	1.630	2.595	5.2	20.6	12 27	5 30.86	+27 17.8	1.388	2.358	5.2	19.8
1 6	5 22.27	+30 10.2	1.688	2.614	9.1	20.8	1 6	5 20.66	+27 53.1	1.415	2.344	10.1	20.1
1 16	5 15.75	+29 22.5	1.773	2.633	12.7	21.1	1 16	5 12.97	+28 21.1	1.466	2.331	14.5	20.3
1 26	5 12.35	+28 36.7	1.878	2.652	15.7	21.3	1 26	5 8.71	+28 44.2	1.537	2.318	18.2	20.5
520127	2014 <i>BG</i> ₃₉	12 17.5 268°40' 3°2/17.4 18					294251	2007 <i>UY</i> ₆₅	12 17.6 35°80' 0°6/17.5 18				
11 17	6 7.99	+15 52.6	1.678	2.533	13.8	21.8	11 17	6 7.68	+23 11.0	1.375	2.246	15.4	19.7
11 27	6 1.55	+15 36.5	1.595	2.516	10.1	21.6	11 27	6 1.35	+22 48.4	1.327	2.258	10.8	19.5
12 7	5 52.65	+15 25.7	1.536	2.500	6.0	21.3	12 7	5 52.44	+22 23.9	1.302	2.272	5.7	19.2
12 17	5 42.18	+15 21.2	1.505	2.483	3.2	21.1	12 17	5 42.18	+21 57.9	1.303	2.286	0.7	18.9
12 27	5 31.41	+15 23.9	1.501	2.466	5.8	21.2	12 27	5 32.16	+21 31.9	1.330	2.301	5.1	19.3
1 6	5 21.72	+15 34.1	1.526	2.448	10.1	21.4	1 6	5 23.80	+21 8.3	1.384	2.317	10.0	19.6
1 16	5 14.22	+15 51.7	1.575	2.430	14.3	21.6	1 16	5 18.14	+20 49.7	1.462	2.333	14.2	19.9
1 26	5 9.69	+16 16.2	1.644	2.412	17.8	21.8	1 26	5 15.70	+20 37.4	1.560	2.350	17.7	20.1
340927	2007 <i>EK</i> ₂	12 17.5 160°05' 3°2/17.8 18					232695	2004 <i>AU</i> ₂₆	12 17.6 264°63' 2°8/18.3 18				
11 17	6 12.43	+31 40.7	1.814	2.659	13.4	21.2	11 17	6 7.81	+34 24.2	2.457	3.291	10.7	19.9
11 27	6 4.53	+31 59.4	1.749	2.664	9.8	21.0	11 27	6 0.80	+34 5.8	2.377	3.285	7.9	19.7
12 7	5 54.11	+32 9.1	1.709	2.669	5.9	20.8	12 7	5 51.98	+33 37.0	2.324	3.280	4.9	19.5
12 17	5 42.25	+32 6.7	1.696	2.673	3.2	20.6	12 17	5 42.17	+32 56.9	2.299	3.274	2.9	19.4
12 27	5 30.40	+31 51.3	1.713	2.676	5.3	20.7	12 27	5 32.42	+32 6.2	2.306	3.268	4.3	19.5
1 6	5 20.00	+31 25.2	1.758	2.679	9.1	21.0	1 6	5 23.73	+31 7.9	2.343	3.262	7.2	19.6
1 16	5 12.12	+30 52.8	1.829	2.682	12.7	21.2	1 16	5 16.89	+30 5.9	2.407	3.257	10.2	19.8
1 26	5 7.40	+30 18.8	1.922	2.684	15.8	21.4	1 26	5 12.42	+29 4.6	2.496	3.251	12.7	20.0
228477	2001 <i>SK</i> ₅₂	12 17.5 95°93' 1°5/17.6 18					437088	2012 <i>US</i> ₇₇	12 17.6 114°86' 5°7/17.9 16				
11 17	6 12.82	+26 19.0	1.626	2.480	14.3	20.5	11 17	6 17.04	+38 10.1	1.959	2.782	13.5	22.3
11 27	6 4.73	+26 44.9	1.578	2.501	10.1	20.3	11 27	6 7.69	+39 2.6	1.911	2.806	10.3	22.1
12 7	5 54.14	+27 6.7	1.556	2.522	5.5	20.1	12 7	5 55.73	+39 40.9	1.888	2.829	7.3	22.0
12 17	5 42.24	+27 21.2	1.561	2.543	1.6	19.9	12 17	5 42.37	+40 0.0	1.894	2.850	5.7	21.9
12 27	5 30.56	+27 27.3	1.595	2.564	4.8	20.2	12 27	5 29.18	+39 58.2	1.928	2.871	6.8	22.0
1 6	5 20.50	+27 26.4	1.657	2.583	9.2	20.5	1 6	5 17.65	+39 38.0	1.992	2.892	9.5	22.2
1 16	5 13.07	+27 21.3	1.745	2.603	13.0	20.7	1 16	5 8.87	+39 4.9	2.081	2.911	12.3	22.4
1 26	5 8.84	+27 15.2	1.854	2.622	16.1	21.0	1 26	5 3.41	+38 25.6	2.191	2.930	14.8	22.7
269502	2009 <i>UZ</i> ₇₂	12 17.6 43°34' 4°9/17.4 17					77074	2001 <i>DF</i> ₂₈	12 17.6 208°04' 1°2/17.5 18				
11 17	6 9.56	+34 24.0	1.882	2.726	13.1	19.8	11 17	6 7.83	+19 36.7	1.891	2.744	12.6	19.9
11 27	6 2.58	+35 32.0	1.828	2.738	9.8	19.6	11 27	6 1.14	+19 41.4				

EPHEMERIDES

12 17.6

12 17.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
357788	2005 <i>ST</i> ₂₉₂		12 17.6 150°07	0°3/17.5 18			37692	Loribragg		12 17.6 51°85	0°7/17.5 18		
11 17	6 6.90	+22 11.8	2.509	3.353	10.2	22.1	11 17	6 5.91	+21 40.0	1.973	2.829	12.0	19.7
11 27	6 0.00	+22 14.2	2.443	3.362	7.2	21.9	11 27	5 59.67	+21 34.5	1.908	2.832	8.5	19.4
12 7	5 51.51	+22 16.1	2.404	3.371	3.8	21.7	12 7	5 51.49	+21 28.9	1.868	2.836	4.5	19.2
12 17	5 42.15	+22 16.9	2.395	3.379	0.4	21.4	12 17	5 42.21	+21 23.1	1.856	2.840	0.7	18.9
12 27	5 32.82	+22 16.5	2.418	3.387	3.4	21.7	12 27	5 32.93	+21 17.3	1.874	2.844	4.1	19.2
1 6	5 24.37	+22 15.5	2.471	3.394	6.7	21.9	1 6	5 24.73	+21 12.3	1.920	2.847	8.0	19.5
1 16	5 17.53	+22 14.7	2.552	3.401	9.7	22.1	1 16	5 18.46	+21 9.2	1.993	2.851	11.6	19.7
1 26	5 12.79	+22 15.4	2.657	3.407	12.2	22.3	1 26	5 14.69	+21 9.2	2.087	2.855	14.5	19.9
278675	2008 <i>RT</i> ₉₅		12 17.6 135°12	6°4/17.4 18			55792	1993 <i>SV</i> ₃		12 17.6 105°97	11°0/18.8 18		
11 17	6 8.55	+5 36.8	1.976	2.799	13.4	21.9	11 17	6 27.17	+52 51.1	1.937	2.699	15.8	19.0
11 27	6 1.29	+5 2.0	1.922	2.814	10.4	21.7	11 27	6 15.82	+54 22.8	1.900	2.725	13.6	18.9
12 7	5 52.22	+4 40.4	1.893	2.828	7.7	21.6	12 7	6 0.42	+55 28.2	1.885	2.751	11.9	18.8
12 17	5 42.20	+4 34.4	1.892	2.841	6.4	21.5	12 17	5 42.71	+55 58.3	1.895	2.775	11.0	18.8
12 27	5 32.27	+4 44.8	1.919	2.853	7.5	21.6	12 27	5 25.17	+55 50.3	1.930	2.799	11.4	18.9
1 6	5 23.46	+5 10.6	1.975	2.865	10.0	21.8	1 6	5 10.19	+55 9.0	1.991	2.821	12.7	19.0
1 16	5 16.53	+5 49.3	2.055	2.876	12.8	22.0	1 16	4 59.32	+54 4.1	2.073	2.843	14.5	19.2
1 26	5 12.01	+6 37.8	2.158	2.887	15.2	22.2	1 26	4 53.19	+52 46.7	2.176	2.865	16.2	19.3
404481	2013 <i>HW</i> ₈		12 17.6 268°14	3°3/17.7 17			365427	2010 <i>KD</i> ₁₀₉		12 17.6 33°10	5°7/17.3 17		
11 17	6 6.65	+12 48.5	1.995	2.840	12.4	21.3	11 17	6 5.15	+11 1.6	1.425	2.285	15.5	20.0
11 27	6 0.31	+13 0.7	1.911	2.825	9.2	21.1	11 27	5 59.39	+10 22.3	1.383	2.301	11.6	19.8
12 7	5 51.91	+13 22.0	1.851	2.810	5.7	20.8	12 7	5 51.39	+9 55.0	1.363	2.318	7.8	19.7
12 17	5 42.19	+13 52.2	1.820	2.795	3.3	20.7	12 17	5 42.23	+9 42.4	1.369	2.336	5.7	19.6
12 27	5 32.21	+14 30.6	1.818	2.780	5.2	20.8	12 27	5 33.28	+9 45.6	1.401	2.355	7.5	19.7
1 6	5 23.07	+15 15.6	1.846	2.765	8.9	20.9	1 6	5 25.78	+10 3.8	1.458	2.375	11.0	20.0
1 16	5 15.73	+16 5.5	1.899	2.749	12.5	21.1	1 16	5 20.62	+10 34.6	1.539	2.395	14.5	20.2
1 26	5 10.90	+16 58.8	1.975	2.733	15.5	21.3	1 26	5 18.33	+11 14.7	1.639	2.416	17.5	20.5
51262	2000 <i>JC</i> ₆₉		12 17.6 109°68	4°8/17.7 18			9952	1991 <i>AK</i>		12 17.6 317°01	1°1/17.7 18		
11 17	6 12.86	+35 53.8	2.076	2.907	12.5	17.8	11 17	6 7.97	+26 12.5	1.723	2.582	13.3	17.1
11 27	6 4.71	+36 48.6	2.022	2.924	9.4	17.7	11 27	6 1.51	+26 17.8	1.653	2.578	9.5	16.9
12 7	5 54.18	+37 32.5	1.995	2.941	6.5	17.5	12 7	5 52.64	+26 19.3	1.606	2.574	5.2	16.6
12 17	5 42.32	+38 0.9	1.995	2.958	4.8	17.5	12 17	5 42.32	+26 15.1	1.588	2.571	1.1	16.3
12 27	5 30.49	+38 11.9	2.026	2.974	6.1	17.6	12 27	5 31.93	+26 5.0	1.598	2.568	4.6	16.6
1 6	5 20.03	+38 6.8	2.084	2.990	8.8	17.8	1 6	5 22.79	+25 50.5	1.635	2.564	9.0	16.8
1 16	5 11.94	+37 49.7	2.169	3.005	11.7	18.0	1 16	5 15.98	+25 34.2	1.698	2.561	13.0	17.1
1 26	5 6.84	+37 25.8	2.276	3.020	14.1	18.2	1 26	5 12.16	+25 19.0	1.782	2.558	16.3	17.3
521793	2015 <i>SC</i> ₃₀		12 17.6 129°14	1°8/17.9 17			180950	2005 <i>MT</i> ₁₇		12 17.6 129°18	1°3/17.7 18		
11 17	6 8.76	+30 1.1	2.129	2.974	11.7	21.1	11 17	6 8.28	+27 32.6	1.977	2.828	12.2	20.8
11 27	6 1.57	+29 44.6	2.062	2.980	8.4	20.9	11 27	6 1.41	+27 30.4	1.910	2.832	8.7	20.6
12 7	5 52.42	+29 20.3	2.021	2.985	4.7	20.7	12 7	5 52.45	+27 22.9	1.869	2.835	4.8	20.3
12 17	5 42.23	+28 47.6	2.010	2.991	1.8	20.5	12 17	5 42.32	+27 9.0	1.856	2.839	1.3	20.1
12 27	5 32.16	+28 7.4	2.029	2.996	4.1	20.7	12 27	5 32.22	+26 48.8	1.874	2.842	4.2	20.3
1 6	5 23.29	+27 22.6	2.077	3.001	7.7	20.9	1 6	5 23.32	+26 24.3	1.919	2.846	8.1	20.6
1 16	5 16.46	+26 36.7	2.152	3.006	11.0	21.1	1 16	5 16.52	+25 58.4	1.992	2.849	11.6	20.8
1 26	5 12.19	+25 53.4	2.250	3.011	13.8	21.3	1 26	5 12.39	+25 33.9	2.086	2.852	14.6	21.0
18301	Konyukhov		12 17.6 84°60	1°7/17.7 18			67180	2000 <i>BJ</i> ₂₇		12 17.6 236°78	2°5/17.8 18		
11 17	6 14.09	+27 38.1	1.365	2.226	16.1	16.7	11 17	6 11.89	+29 36.7	1.733	2.583	13.7	18.7
11 27	6 5.90	+27 40.6	1.321	2.246	11.4	16.5	11 27	6 4.45	+29 48.7	1.654	2.573	9.9	18.5
12 7	5 54.85	+27 36.1	1.299	2.267	6.2	16.2	12 7	5 54.29	+29 53.5	1.599	2.562	5.8	18.2
12 17	5 42.36	+27 22.3	1.304	2.287	1.8	16.0	12 17	5 42.44	+29 48.0	1.571	2.551	2.5	18.0
12 27	5 30.23	+27 0.0	1.337	2.307	5.3	16.3	12 27	5 30.39	+29 31.3	1.573	2.540	5.1	18.1
1 6	5 20.08	+26 32.3	1.397	2.327	10.2	16.6	1 6	5 19.66	+29 5.4	1.603	2.528	9.5	18.4
1 16	5 13.01	+26 3.7	1.481	2.346	14.4	16.9	1 16	5 11.45	+28 34.5	1.658	2.515	13.6	18.6
1 26	5 9.54	+25 38.1	1.585	2.365	17.8	17.2	1 26	5 6.52	+28 3.1	1.734	2.502	17.0	18.8
403127	2008 <i>DK</i> ₈₄		12 17.6 281°43	6°1/18.0 17			225357	1998 <i>VD</i> ₄₁		12 17.6 52°93	3°2/17.3 17		
11 17	6 11.18	+39 20.6	1.936	2.766	13.3	21.0	11 17	6 11.28	+18 32.5	1.174	2.045	17.4	20.0
11 27	6 3.87	+40 1.8	1.867	2.763	10.4	20.8	11 27	6 3.86	+17 44.8	1.142	2.072	12.3	19.8
12 7	5 53.90	+40 29.2	1.822	2.761	7.6	20.7	12 7	5 53.74	+17 1.3	1.132	2.100	6.9	19.6
12 17	5 42.32	+40 37.9	1.803	2.758	6.1	20.6	12 17	5 42.40	+16 24.5	1.147	2.128	3.2	19.5
12 27	5 30.64	+40 25.7	1.813	2.756	7.1	20.6	12 27	5 31.59	+15 57.0	1.189	2.156	6.5	19.7
1 6	5 20.37	+39 55.1	1.849	2.753	9.8	20.8	1 6	5 22.85	+15 40.4	1.256	2.184	11.2	20.1
1 16	5 12.66	+39 11.0	1.911	2.751	12.8	21.0	1 16	5 17.11	+15 35.2	1.345	2.213	15.5	20.4
1 26	5 8.23	+38 20.1	1.994	2.748	15.5	21.1	1 26	5 14.82	+15 40.2	1.454	2.241	18.9	20.7
460863	2014 <i>WY</i> ₁₂₆		12 17.6 153°50	1°8/17.7 18			359754	2011 <i>UQ</i> ₉₂		12 17.6 57°18	0°4/17.6 18		
11 17	6 5.73	+28 46.0	2.485	3.330	10.2	21.2	11 17	6 8.03	+22 39.6	1.643	2.504	13.8	21.4
11 27	5 59.36	+29 5.9	2.414	3.331	7.3	21.1	11 27	6 1.45	+22 35.8	1.585	2.512	9.7	21.1
12 7	5 51.27	+29 21.5	2.370	3.333	4.2	20.9	12 7	5 52.55	+22 31.3	1.551	2.520	5.1	20.9
12 17	5 42.19	+29 30.9	2.355	3.335	1.8	20.7	12 17	5 42.35	+22 25.3	1.544	2.528	0.5	20.6
12 27	5 33.06	+29 33.3	2.371	3.337	3.8	20.8	12 27	5 32.22	+22 18.0	1.566	2.536	4.6	20.9
1 6	5 24.82	+29 29.5	2.416	3.338	6.9	21.0	1 6	5 23.45	+22 10.7	1.615	2.545	9.1	21.2
1 16	5 18.23	+29 21.1	2.489	3.340	9.8	21.2	1 16	5 17.03	+22 5.0	1.689	2.553	13.0	21.4
1 26	5 13.85	+29 10.7	2.585	3.341	12.3	21.4	1 26	5 13.56	+22 2.5	1.785	2.562	16.2	21.7
53149	1999 <i>BZ</i> ₁₄		12 17.6 286°45	2°9/17.1 18			136454	2005 <i>EF</i> ₁₈₂		12 17.6 246°78	2°2/17.7 17		
11 17	6 6.01</												

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
361684	2007 <i>UJ</i> ₁₁₄		12 17.6	1°67	2°3/17.7	17	40882	1999 <i>TZ</i> ₁₂₅		12 17.6	252°16	5°2/16.8	18
11 17	6 6.81	+28 6.5	1.327	2.199	15.7	20.6	11 17	6 4.33	+9 16.9	2.218	3.054	11.7	19.3
11 27	6 1.23	+28 23.7	1.267	2.197	11.3	20.3	11 27	5 58.43	+8 28.3	2.143	3.046	8.9	19.1
12 7	5 52.68	+28 34.9	1.228	2.197	6.4	20.0	12 7	5 50.87	+7 47.6	2.093	3.038	6.4	18.9
12 17	5 42.37	+28 36.9	1.215	2.197	2.4	19.8	12 17	5 42.33	+7 17.4	2.072	3.030	5.2	18.8
12 27	5 31.99	+28 28.8	1.228	2.198	5.6	20.0	12 27	5 33.71	+7 0.0	2.080	3.022	6.5	18.9
1 6	5 23.25	+28 12.7	1.266	2.200	10.6	20.3	1 6	5 25.92	+6 56.0	2.115	3.013	9.1	19.0
1 16	5 17.40	+27 52.4	1.327	2.204	15.0	20.6	1 16	5 19.70	+7 4.8	2.177	3.005	11.9	19.2
1 26	5 15.15	+27 32.0	1.408	2.208	18.7	20.8	1 26	5 15.61	+7 24.6	2.260	2.996	14.4	19.4
91607	Delaboudiniere		12 17.6	43°93	1°3/17.7	18	359877	2011 <i>WO</i> ₂₂		12 17.6	42°89	0°2/17.6	18
11 17	6 6.88	+26 29.1	1.859	2.715	12.6	19.3	11 17	6 7.60	+22 42.8	1.626	2.489	13.8	20.6
11 27	6 0.51	+26 41.0	1.800	2.724	8.9	19.1	11 27	6 1.21	+22 48.4	1.568	2.496	9.8	20.4
12 7	5 52.01	+26 49.1	1.765	2.733	4.9	18.8	12 7	5 52.48	+22 53.7	1.535	2.504	5.2	20.2
12 17	5 42.33	+26 51.8	1.759	2.742	1.3	18.6	12 17	5 42.42	+22 57.4	1.528	2.512	0.3	19.8
12 27	5 32.69	+26 48.6	1.782	2.751	4.3	18.8	12 27	5 32.40	+22 59.1	1.550	2.521	4.6	20.2
1 6	5 24.28	+26 40.7	1.833	2.761	8.3	19.1	1 6	5 23.74	+22 59.7	1.599	2.530	9.1	20.4
1 16	5 18.02	+26 30.2	1.909	2.771	11.8	19.3	1 16	5 17.43	+23 0.5	1.673	2.539	13.0	20.7
1 26	5 14.47	+26 19.7	2.008	2.781	14.8	19.6	1 26	5 14.08	+23 3.2	1.768	2.548	16.3	20.9
438896	2009 <i>VZ</i> ₁₀₂		12 17.6	202°60	2°8/16.8	18	213279	2001 <i>ON</i> ₁₁₁		12 17.6	199°08	3°6/18.2	18
11 17	6 12.52	+19 4.2	2.005	2.847	12.4	20.8	11 17	6 11.42	+36 2.7	2.519	3.343	10.8	21.1
11 27	6 4.26	+17 47.9	1.926	2.842	9.0	20.6	11 27	6 3.45	+36 5.6	2.439	3.339	8.1	20.9
12 7	5 53.93	+16 29.4	1.874	2.837	5.2	20.4	12 7	5 53.52	+35 57.7	2.385	3.335	5.4	20.7
12 17	5 42.45	+15 11.8	1.853	2.831	2.8	20.2	12 17	5 42.49	+35 36.9	2.361	3.329	3.6	20.6
12 27	5 31.00	+13 59.4	1.864	2.824	5.4	20.3	12 27	5 31.46	+35 3.0	2.368	3.323	4.8	20.7
1 6	5 20.73	+12 55.9	1.905	2.816	9.2	20.6	1 6	5 21.52	+34 18.4	2.405	3.317	7.5	20.8
1 16	5 12.53	+12 4.4	1.974	2.808	12.7	20.8	1 16	5 13.53	+33 26.9	2.470	3.310	10.3	21.0
1 26	5 6.99	+11 26.0	2.064	2.799	15.7	21.0	1 26	5 8.04	+32 33.3	2.559	3.302	12.8	21.2
397189	2006 <i>BA</i> ₄₇		12 17.6	4°69	21°1/23.8	17	48439	1989 <i>WR</i> ₂		12 17.6	358°39	6°5/16.7	18
11 17	6 10.38	-17 20.2	0.923	1.707	27.8	20.1	11 17	6 7.25	+31 32.8	1.165	2.040	17.2	16.3
11 27	6 4.22	-17 54.0	0.878	1.706	25.4	19.9	11 27	6 2.30	+33 27.2	1.107	2.035	12.9	16.0
12 7	5 54.45	-17 30.4	0.845	1.705	23.0	19.8	12 7	5 53.66	+35 16.7	1.071	2.031	8.6	15.8
12 17	5 42.49	-15 58.5	0.827	1.706	21.4	19.7	12 17	5 42.51	+36 50.5	1.059	2.029	6.5	15.7
12 27	5 30.41	-13 16.8	0.826	1.707	21.2	19.7	12 27	5 30.88	+37 59.9	1.072	2.028	8.8	15.8
1 6	5 20.34	-9 37.5	0.844	1.710	22.4	19.8	1 6	5 20.99	+38 42.7	1.108	2.030	13.1	16.0
1 16	5 13.77	-5 21.3	0.881	1.713	24.7	19.9	1 16	5 14.58	+39 2.5	1.165	2.033	17.3	16.3
1 26	5 11.52	-0 51.4	0.936	1.717	27.4	20.2	1 26	5 12.64	+39 6.2	1.240	2.038	20.9	16.5
282148	2001 <i>RC</i> ₅₄		12 17.6	1°11	24°9/18.9	17	112084	2002 <i>JQ</i> ₂₆		12 17.6	99°47	3°6/17.6	18
11 17	6 5.34	-20 2.8	0.945	1.719	27.9	19.9	11 17	6 11.81	+14 37.3	1.475	2.328	15.5	19.3
11 27	6 0.54	-22 17.0	0.913	1.716	26.5	19.8	11 27	6 4.10	+14 29.4	1.428	2.348	11.2	19.1
12 7	5 52.44	-23 36.8	0.894	1.715	25.4	19.7	12 7	5 53.95	+14 29.6	1.404	2.367	6.6	18.9
12 17	5 42.38	-23 49.2	0.887	1.715	24.9	19.7	12 17	5 42.52	+14 38.2	1.408	2.385	3.6	18.8
12 27	5 32.29	-22 49.1	0.893	1.716	25.1	19.7	12 27	5 31.30	+14 54.8	1.440	2.404	6.0	19.0
1 6	5 24.07	-20 42.5	0.912	1.718	26.0	19.8	1 6	5 21.67	+15 18.6	1.499	2.421	10.3	19.3
1 16	5 19.07	-17 43.0	0.945	1.721	27.4	19.9	1 16	5 14.62	+15 48.5	1.583	2.438	14.2	19.5
1 26	5 18.06	-14 8.6	0.990	1.725	29.0	20.0	1 26	5 10.71	+16 23.1	1.687	2.455	17.4	19.8
444598	2006 <i>UC</i> ₁₄₈		12 17.6	72°72	4°2/17.8	18	101316	1998 <i>SS</i> ₁₄₅		12 17.6	97°17	1°5/17.7	18
11 17	6 10.88	+33 25.6	1.762	2.609	13.7	21.1	11 17	6 13.79	+26 47.6	1.598	2.451	14.5	20.2
11 27	6 3.56	+34 2.3	1.707	2.621	10.1	20.9	11 27	6 5.48	+27 3.3	1.552	2.474	10.3	20.0
12 7	5 53.71	+34 29.0	1.677	2.633	6.5	20.7	12 7	5 54.67	+27 13.8	1.530	2.497	5.6	19.8
12 17	5 42.45	+34 41.5	1.674	2.646	4.2	20.6	12 17	5 42.57	+27 16.6	1.536	2.519	1.6	19.5
12 27	5 31.26	+34 38.6	1.699	2.658	5.9	20.7	12 27	5 30.73	+27 11.3	1.572	2.540	4.8	19.8
1 6	5 21.58	+34 22.2	1.752	2.671	9.3	21.0	1 6	5 20.59	+26 59.8	1.635	2.561	9.2	20.1
1 16	5 14.45	+33 56.6	1.830	2.683	12.7	21.2	1 16	5 13.15	+26 45.4	1.723	2.582	13.1	20.4
1 26	5 10.49	+33 26.9	1.930	2.696	15.6	21.4	1 26	5 8.95	+26 31.5	1.833	2.602	16.2	20.7
276776	2004 <i>HU</i> ₄₉		12 17.6	248°56	1°1/17.6	18	159417	1999 <i>RM</i> ₂₃₂		12 17.6	94°89	3°8/17.6	18
11 17	6 11.33	+24 25.4	1.687	2.541	13.8	21.1	11 17	6 15.29	+32 7.4	1.927	2.764	13.1	19.5
11 27	6 4.17	+24 59.8	1.604	2.528	9.9	20.8	11 27	6 6.38	+33 2.4	1.884	2.794	9.5	19.3
12 7	5 54.25	+25 34.0	1.547	2.515	5.4	20.5	12 7	5 55.11	+33 48.3	1.868	2.823	6.0	19.2
12 17	5 42.51	+26 4.5	1.517	2.501	1.1	20.2	12 17	5 42.60	+34 20.7	1.880	2.852	3.8	19.1
12 27	5 30.39	+26 28.9	1.517	2.486	4.9	20.4	12 27	5 30.28	+34 37.5	1.923	2.880	5.5	19.3
1 6	5 19.43	+26 46.6	1.545	2.472	9.6	20.6	1 6	5 19.49	+34 40.2	1.994	2.907	8.7	19.5
1 16	5 10.89	+26 59.2	1.598	2.456	13.9	20.9	1 16	5 11.21	+34 32.6	2.092	2.934	11.8	19.8
1 26	5 5.63	+27 9.2	1.672	2.441	17.5	21.1	1 26	5 6.00	+34 19.4	2.212	2.960	14.4	20.0
514013	2014 <i>JA</i> ₇₉		12 17.6	155°79	6°9/18.9	18	176634	2002 <i>LW</i> ₃₈		12 17.6	122°22	2°9/17.6	18
11 17	6 10.37	-0 33.2	2.213	3.004	13.2	21.1	11 17	6 11.84	+15 20.9	1.643	2.492	14.4	20.4
11 27	6 2.59	-0 7.3	2.144	3.011	10.7	20.9	11 27	6 4.04	+15 25.9	1.590	2.508	10.4	20.2
12 7	5 53.03	+0 37.2	2.101	3.017	8.3	20.8	12 7	5 53.92	+15 37.9	1.561	2.524	6.0	19.9
12 17	5 42.44	+1 41.0	2.086	3.022	6.9	20.7	12 17	5 42.54	+15 56.2	1.560	2.538	2.9	19.8
12 27	5 31.79	+3 2.5	2.101	3.027	7.5	20.8	12 27	5 31.26	+16 20.0	1.588	2.553	5.4	20.0
1 6	5 22.08	+4 37.6	2.147	3.032	9.7	20.9	1 6	5 21.39	+16 48.4	1.644	2.566	9.5	20.3
1 16	5 14.09	+6 21.5	2.221	3.036	12.2	21.1	1 16	5 13.91	+17 20.6	1.726	2.579	13.3	20.5
1 26	5 8.40	+8 9.5	2.319	3.039	14.5	21.3	1 26	5 9.40	+17 55.7	1.829	2.591	16.5	20.8
161566	2005 <i>AH</i> ₆₄		12 17.6	179°34	2°5/17.5	18	362676	2011 <i>UL</i> ₆₅		12 17.6	346°16	7°9/17.2	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
404887	2014 <i>KB</i> ₇₃		12 17.6	62°03'	5°8'/17.4	18	354452	2004 <i>BM</i> ₁₃		12 17.6	223°54'	0°8'/17.6	18
11 17	6 6.24	+ 8 57.1	1.703	2.547	14.2	20.9	11 17	6 7.65	+20 32.1	2.140	2.989	11.5	20.8
11 27	5 59.97	+ 8 23.0	1.654	2.562	10.8	20.7	11 27	6 0.99	+20 39.8	2.060	2.981	8.2	20.6
12 7	5 51.71	+ 8 1.0	1.629	2.577	7.5	20.6	12 7	5 52.35	+20 48.8	2.007	2.974	4.4	20.4
12 17	5 42.42	+ 7 53.5	1.631	2.592	5.8	20.5	12 17	5 42.52	+20 58.4	1.982	2.966	0.8	20.1
12 27	5 33.25	+ 8 1.3	1.660	2.608	7.2	20.6	12 27	5 32.53	+21 8.1	1.988	2.957	4.0	20.3
1 6	5 25.32	+ 8 23.4	1.716	2.623	10.2	20.8	1 6	5 23.45	+21 17.9	2.023	2.948	7.8	20.5
1 16	5 19.44	+ 8 57.7	1.797	2.639	13.4	21.1	1 16	5 16.17	+21 28.4	2.086	2.939	11.3	20.7
1 26	5 16.16	+ 9 41.1	1.898	2.655	16.1	21.3	1 26	5 11.33	+21 40.5	2.170	2.929	14.3	20.9
458507	2011 <i>CH</i> ₄₀		12 17.6	237°20'	0°3'/17.6	17	115713	2003 <i>UF</i> ₁₇₃		12 17.6	350°35'	2°5'/17.3	18
11 17	6 5.60	+23 47.4	2.473	3.320	10.2	21.8	11 17	6 4.55	+17 22.4	2.184	3.035	11.2	19.7
11 27	5 59.36	+23 59.4	2.391	3.312	7.2	21.6	11 27	5 58.62	+16 48.4	2.114	3.034	8.1	19.5
12 7	5 51.40	+24 10.4	2.336	3.303	3.9	21.4	12 7	5 51.00	+16 16.7	2.070	3.034	4.7	19.3
12 17	5 42.41	+24 19.2	2.311	3.295	0.4	21.1	12 17	5 42.44	+15 48.7	2.055	3.033	2.5	19.1
12 27	5 33.29	+24 25.4	2.316	3.286	3.4	21.3	12 27	5 33.86	+15 25.8	2.070	3.033	4.5	19.3
1 6	5 24.96	+24 29.2	2.352	3.277	6.9	21.5	1 6	5 26.21	+15 9.4	2.113	3.033	7.9	19.5
1 16	5 18.19	+24 31.6	2.415	3.267	10.0	21.7	1 16	5 20.23	+15 0.1	2.183	3.033	11.1	19.7
1 26	5 13.55	+24 33.9	2.501	3.258	12.7	21.9	1 26	5 16.44	+14 57.9	2.275	3.032	13.8	19.9
326644	2002 <i>SX</i> ₄₈		12 17.6	95°06'	3°3'/17.4	18	305249	2007 <i>XR</i> ₄₄		12 17.6	273°75'	0°4'/17.6	17
11 17	6 4.17	+12 25.0	2.481	3.319	10.5	20.6	11 17	6 8.47	+20 19.5	1.871	2.725	12.7	20.2
11 27	5 59.07	+12 8.9	2.426	3.336	7.7	20.5	11 27	6 1.93	+20 54.5	1.787	2.711	9.1	19.9
12 7	5 50.58	+11 59.0	2.399	3.353	4.9	20.3	12 7	5 53.02	+21 33.4	1.728	2.696	4.9	19.7
12 17	5 42.36	+11 56.2	2.400	3.370	3.3	20.3	12 17	5 42.57	+22 13.9	1.698	2.682	0.5	19.3
12 27	5 34.22	+12 1.0	2.431	3.387	4.7	20.4	12 27	5 31.77	+22 53.7	1.697	2.667	4.4	19.6
1 6	5 26.93	+12 13.0	2.492	3.403	7.3	20.6	1 6	5 21.91	+23 31.3	1.725	2.652	8.8	19.8
1 16	5 21.10	+12 31.5	2.580	3.419	9.9	20.8	1 16	5 14.09	+24 6.5	1.779	2.637	12.7	20.0
1 26	5 17.17	+12 55.6	2.691	3.435	12.2	21.0	1 26	5 9.08	+24 39.9	1.855	2.623	16.1	20.2
266494	2008 <i>DY</i> ₄₇		12 17.6	125°79'	1°4'/17.6	18	369123	2008 <i>QH</i> ₄₄		12 17.6	185°71'	7°0'/17.0	18
11 17	6 11.68	+19 36.2	1.701	2.553	13.8	21.3	11 17	6 3.13	+ 0 2.5	2.580	3.380	11.3	21.0
11 27	6 3.90	+19 33.4	1.645	2.567	9.8	21.1	11 27	5 57.40	- 0 38.0	2.514	3.380	9.3	20.9
12 7	5 53.84	+19 32.7	1.615	2.582	5.3	20.8	12 7	5 50.29	- 1 5.1	2.473	3.379	7.7	20.8
12 17	5 42.55	+19 33.4	1.613	2.595	1.5	20.6	12 17	5 42.40	- 1 16.2	2.459	3.378	7.0	20.7
12 27	5 31.38	+19 35.5	1.640	2.608	4.7	20.9	12 27	5 34.48	- 1 9.8	2.473	3.377	7.7	20.8
1 6	5 21.61	+19 39.6	1.696	2.621	9.1	21.1	1 6	5 27.27	- 0 46.7	2.514	3.376	9.3	20.9
1 16	5 14.21	+19 46.5	1.777	2.632	12.9	21.4	1 16	5 21.39	- 0 8.9	2.581	3.375	11.3	21.0
1 26	5 9.75	+19 57.0	1.880	2.644	16.0	21.7	1 26	5 17.31	+ 0 40.5	2.669	3.373	13.2	21.1
143005	2002 <i>VG</i> ₁₀₃		12 17.6	89°93'	2°1'/17.7	18	133753	<i>Teresamullen</i>		12 17.6	65°50'	0°4'/17.6	18
11 17	6 9.77	+28 33.6	1.840	2.691	13.0	20.2	11 17	6 6.33	+24 11.8	2.110	2.962	11.5	20.0
11 27	6 2.62	+28 54.8	1.783	2.703	9.3	20.0	11 27	5 59.90	+24 19.1	2.055	2.979	8.1	19.8
12 7	5 53.20	+29 10.2	1.751	2.715	5.3	19.8	12 7	5 51.67	+24 24.6	2.027	2.995	4.3	19.6
12 17	5 42.53	+29 17.5	1.747	2.727	2.2	19.6	12 17	5 42.48	+24 27.4	2.027	3.011	0.4	19.3
12 27	5 31.92	+29 15.6	1.772	2.739	4.6	19.8	12 27	5 33.38	+24 27.1	2.058	3.028	3.7	19.6
1 6	5 22.65	+29 6.1	1.825	2.751	8.5	20.1	1 6	5 25.38	+24 24.6	2.117	3.044	7.4	19.9
1 16	5 15.69	+28 51.9	1.905	2.762	12.1	20.3	1 16	5 19.24	+24 21.2	2.203	3.061	10.6	20.1
1 26	5 11.62	+28 36.3	2.006	2.774	15.0	20.6	1 26	5 15.48	+24 18.5	2.312	3.077	13.3	20.3
517393	2014 <i>KA</i> ₁₀₅		12 17.6	93°11'	2°3'/17.7	18	222388	2001 <i>DZ</i> ₇₂		12 17.6	336°67'	5°6'/17.2	17
11 17	6 8.10	+15 34.9	1.791	2.642	13.3	21.2	11 17	6 3.63	+ 8 56.0	1.864	2.708	13.2	19.8
11 27	6 1.43	+15 56.7	1.728	2.648	9.6	21.0	11 27	5 58.23	+ 8 22.4	1.794	2.702	10.1	19.6
12 7	5 52.59	+16 25.5	1.690	2.654	5.5	20.8	12 7	5 50.91	+ 7 59.5	1.748	2.696	7.1	19.4
12 17	5 42.50	+17 0.4	1.679	2.660	2.4	20.6	12 17	5 42.45	+ 7 49.8	1.729	2.690	5.6	19.3
12 27	5 32.34	+17 39.8	1.699	2.666	4.8	20.8	12 27	5 33.90	+ 7 54.8	1.737	2.685	7.0	19.4
1 6	5 23.32	+18 21.9	1.746	2.671	8.9	21.0	1 6	5 26.30	+ 8 14.2	1.773	2.680	10.0	19.5
1 16	5 16.39	+19 5.6	1.820	2.677	12.6	21.3	1 16	5 20.52	+ 8 46.3	1.833	2.675	13.2	19.7
1 26	5 12.17	+19 50.0	1.916	2.683	15.6	21.5	1 26	5 17.16	+ 9 28.4	1.914	2.672	16.0	19.9
22277	<i>Hirado</i>		12 17.6	75°92'	3°5'/17.5	18	331277	2011 <i>CV</i> ₉₀		12 17.6	176°16'	3°4'/17.3	18
11 17	6 12.67	+29 31.8	1.661	2.512	14.1	18.0	11 17	6 3.15	+10 53.9	2.946	3.776	9.2	21.9
11 27	6 4.93	+30 37.2	1.611	2.530	10.2	17.8	11 27	5 57.29	+10 31.9	2.875	3.778	6.9	21.8
12 7	5 54.53	+31 36.5	1.587	2.549	6.1	17.6	12 7	5 50.20	+10 15.7	2.831	3.780	4.6	21.6
12 17	5 42.61	+32 24.2	1.591	2.567	3.5	17.5	12 17	5 42.41	+10 6.4	2.816	3.781	3.4	21.6
12 27	5 30.73	+32 57.1	1.623	2.585	5.7	17.7	12 27	5 34.61	+10 4.9	2.833	3.782	4.5	21.6
1 6	5 20.38	+33 15.5	1.683	2.604	9.5	17.9	1 6	5 27.46	+10 11.1	2.879	3.782	6.8	21.8
1 16	5 12.70	+33 22.7	1.769	2.622	13.1	18.2	1 16	5 21.50	+10 24.5	2.953	3.782	9.1	21.9
1 26	5 8.32	+33 22.9	1.875	2.640	16.0	18.4	1 26	5 17.18	+10 44.2	3.050	3.781	11.1	22.1
22169	2000 <i>WP</i> ₁₆₅		12 17.6	104°67'	4°8'/17.4	18	233167	2005 <i>UL</i> ₅₀₉		12 17.6	322°22'	2°0'/17.7	18
11 17	6 5.41	+ 9 9.2	2.176	3.011	11.9	19.0	11 17	6 8.43	+27 2.9	1.315	2.186	15.9	20.9
11 27	5 59.11	+ 8 45.2	2.121	3.024	9.0	18.8	11 27	6 2.67	+27 22.0	1.241	2.172	11.5	20.6
12 7	5 51.20	+ 8 30.8	2.091	3.037	6.2	18.7	12 7	5 53.69	+27 36.8	1.190	2.158	6.4	20.2
12 17	5 42.44	+ 8 27.5	2.089	3.050	4.8	18.6	12 17	5 42.63	+27 43.9	1.163	2.145	2.0	19.9
12 27	5 33.74	+ 8 35.7	2.116	3.063	6.0	18.7	12 27	5 31.23	+27 41.4	1.162	2.133	5.8	20.1
1 6	5 26.00	+ 8 55.1	2.172	3.075	8.6	18.9	1 6	5 21.34	+27 30.8	1.187	2.121	11.1	20.4
1 16	5 19.91	+ 9 24.0	2.254	3.088	11.3	19.1	1 16	5 14.41	+27 15.7	1.235	2.110	16.0	20.6
1 26	5 15.95	+10 0.4	2.358	3.100	13.7	19.3	1 26	5 11.34	+27 0.3	1.301	2.100	20.0	20.9
447549	2006 <i>SY</i> ₂₉₉		12 17.6	27°69'	0°4'/17.6	18	191488	2003 <i>TM</i> ₁₅		12 17.6	107°46'	1°3'/17.6	18

EPHEMERIDES

12 17.6

12 17.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
199925	2007 <i>GZ</i> ₃₅		12 17.6 155°71		1°9/17.7 18		483510	2003 <i>DN</i> ₂₂		12 17.6 307°86		1°6/17.9 18	
11 17	6 11.65	+27 18.2	1.827	2.677	13.1	21.3	11 17	6 7.88	+28 31.1	1.711	2.569	13.5	20.7
11 27	6 4.08	+27 49.1	1.762	2.682	9.4	21.1	11 27	6 1.73	+28 17.2	1.624	2.548	9.7	20.4
12 7	5 54.09	+28 16.0	1.722	2.687	5.3	20.9	12 7	5 52.99	+27 55.7	1.561	2.528	5.5	20.1
12 17	5 42.66	+28 35.6	1.710	2.692	1.9	20.6	12 17	5 42.62	+27 25.1	1.525	2.507	1.6	19.8
12 27	5 31.17	+28 46.2	1.728	2.696	4.7	20.8	12 27	5 32.01	+26 46.1	1.517	2.487	4.8	20.0
1 6	5 20.97	+28 48.6	1.775	2.699	8.8	21.1	1 6	5 22.59	+26 1.6	1.537	2.467	9.4	20.2
1 16	5 13.12	+28 45.2	1.848	2.702	12.5	21.3	1 16	5 15.53	+25 15.9	1.582	2.448	13.6	20.4
1 26	5 8.29	+28 39.4	1.942	2.705	15.6	21.6	1 26	5 11.60	+24 33.4	1.648	2.429	17.2	20.6
133446	2003 <i>SM</i> ₂₂₀		12 17.6 37°66		4°1/17.1 18		321976	2010 <i>UF</i> ₃₈		12 17.6 153°88		0°2/17.7 18	
11 17	6 4.25	+13 14.0	1.957	2.807	12.4	19.4	11 17	6 12.31	+24 22.9	1.390	2.253	15.7	21.0
11 27	5 58.47	+12 29.4	1.900	2.816	9.1	19.3	11 27	6 4.97	+24 15.2	1.328	2.256	11.1	20.8
12 7	5 50.94	+11 51.2	1.868	2.825	5.9	19.1	12 7	5 54.70	+24 4.1	1.289	2.258	6.0	20.5
12 17	5 42.47	+11 21.7	1.864	2.834	4.1	19.0	12 17	5 42.73	+23 48.6	1.276	2.260	0.4	20.1
12 27	5 34.07	+11 2.7	1.888	2.843	5.8	19.1	12 27	5 30.76	+23 29.0	1.291	2.262	5.2	20.5
1 6	5 26.71	+10 54.9	1.940	2.853	8.9	19.3	1 6	5 20.46	+23 7.8	1.333	2.264	10.4	20.8
1 16	5 21.15	+10 57.9	2.018	2.863	12.0	19.5	1 16	5 13.06	+22 48.4	1.398	2.265	15.0	21.0
1 26	5 17.89	+11 10.6	2.117	2.873	14.7	19.7	1 26	5 9.24	+22 33.6	1.483	2.266	18.7	21.3
160906	2001 <i>UB</i> ₁₂		12 17.6 93°00		0°5/17.6 18		373241	2012 <i>GQ</i> ₅		12 17.6 138°73		1°9/17.7 18	
11 17	6 15.06	+21 37.7	1.331	2.192	16.4	19.9	11 17	6 14.18	+27 26.1	1.663	2.513	14.2	21.3
11 27	6 6.65	+21 49.9	1.289	2.216	11.5	19.7	11 27	6 5.94	+27 47.5	1.604	2.525	10.1	21.1
12 7	5 55.42	+22 2.8	1.270	2.239	6.1	19.4	12 7	5 55.08	+28 3.6	1.571	2.536	5.6	20.9
12 17	5 42.73	+22 14.0	1.278	2.261	0.6	19.1	12 17	5 42.75	+28 11.4	1.565	2.547	1.9	20.6
12 27	5 30.37	+22 22.8	1.313	2.284	5.3	19.5	12 27	5 30.48	+28 9.8	1.588	2.556	4.9	20.9
1 6	5 19.94	+22 30.0	1.376	2.305	10.3	19.9	1 6	5 19.77	+28 0.4	1.640	2.565	9.3	21.1
1 16	5 12.55	+22 37.1	1.462	2.326	14.6	20.2	1 16	5 11.70	+27 46.5	1.717	2.574	13.2	21.4
1 26	5 8.73	+22 46.0	1.569	2.347	18.1	20.5	1 26	5 6.91	+27 31.9	1.816	2.581	16.4	21.6
397325	2006 <i>TG</i>		12 17.6 48°49		3°9/17.3 18		148596	2001 <i>RD</i> ₃₃		12 17.6 83°91		5°8/17.6 18	
11 17	6 7.55	+15 31.7	1.505	2.365	14.8	20.0	11 17	6 7.77	+6 59.9	1.963	2.793	13.2	20.7
11 27	6 1.02	+14 49.7	1.464	2.387	10.7	19.8	11 27	6 0.76	+6 31.2	1.923	2.821	10.1	20.5
12 7	5 52.32	+14 14.1	1.447	2.409	6.4	19.6	12 7	5 52.07	+6 15.0	1.908	2.848	7.2	20.4
12 17	5 42.55	+13 47.2	1.456	2.432	3.9	19.5	12 17	5 42.56	+6 13.0	1.921	2.876	5.8	20.4
12 27	5 33.06	+13 30.6	1.493	2.455	6.1	19.7	12 27	5 33.27	+6 25.5	1.962	2.902	6.9	20.5
1 6	5 25.06	+13 25.1	1.556	2.478	10.0	20.0	1 6	5 25.15	+6 51.4	2.031	2.929	9.4	20.7
1 16	5 19.43	+13 30.1	1.644	2.502	13.6	20.3	1 16	5 18.90	+7 28.3	2.126	2.955	12.1	20.9
1 26	5 16.65	+13 44.2	1.752	2.525	16.7	20.5	1 26	5 14.98	+8 13.1	2.242	2.980	14.5	21.1
5627	1991 <i>MA</i>		12 17.6 200°01		4°2/16.5 18		474299	2001 <i>XM</i> ₁₂₄		12 17.6 7°43		0°0/17.6 18	
11 17	6 23.85	+21 37.2	1.056	1.917	19.7	16.8	11 17	6 8.03	+20 19.6	1.181	2.057	16.9	20.1
11 27	6 14.84	+24 44.1	0.991	1.916	14.2	16.5	11 27	6 2.37	+21 13.6	1.124	2.058	12.0	19.8
12 7	6 0.87	+28 7.8	0.949	1.916	8.1	16.2	12 7	5 53.52	+22 14.1	1.088	2.059	6.4	19.5
12 17	5 43.12	+31 28.8	0.936	1.915	4.2	15.9	12 17	5 42.66	+23 16.4	1.077	2.061	0.4	19.1
12 27	5 24.09	+34 25.8	0.952	1.914	8.7	16.2	12 27	5 31.61	+24 15.7	1.093	2.065	5.6	19.5
1 6	5 6.84	+36 46.5	0.996	1.913	14.7	16.5	1 6	5 22.21	+25 9.1	1.133	2.070	11.2	19.8
1 16	4 53.91	+38 31.0	1.062	1.912	20.0	16.8	1 16	5 15.86	+25 55.9	1.196	2.075	16.1	20.1
1 26	4 46.69	+39 48.0	1.146	1.910	24.2	17.1	1 26	5 13.38	+26 37.2	1.277	2.082	20.1	20.4
361318	2006 <i>UU</i> ₃₁		12 17.6 26°06		4°0/17.1 18		218547	2004 <i>XO</i> ₁₀₂		12 17.6 51°75		7°8/20.1 18	
11 17	6 6.07	+14 29.2	1.767	2.621	13.3	20.6	11 17	6 23.90	+43 3.7	0.940	1.790	22.4	18.8
11 27	5 59.97	+13 45.2	1.703	2.622	9.8	20.4	11 27	6 14.07	+42 8.9	0.891	1.800	17.4	18.5
12 7	5 51.82	+13 6.7	1.665	2.624	6.1	20.2	12 7	5 59.57	+40 36.6	0.862	1.811	12.0	18.3
12 17	5 42.53	+12 36.1	1.653	2.626	4.0	20.1	12 17	5 42.99	+38 23.0	0.854	1.823	8.1	18.1
12 27	5 33.26	+12 15.5	1.670	2.629	6.0	20.2	12 27	5 27.59	+35 36.5	0.872	1.835	9.1	18.2
1 6	5 25.12	+12 6.1	1.715	2.631	9.6	20.4	1 6	5 15.92	+32 36.5	0.915	1.847	13.8	18.5
1 16	5 19.02	+12 7.7	1.784	2.634	13.1	20.6	1 16	5 9.19	+29 43.0	0.980	1.860	18.7	18.9
1 26	5 15.52	+12 19.3	1.874	2.637	16.1	20.8	1 26	5 7.54	+27 9.7	1.063	1.872	22.9	19.2
199783	2006 <i>KG</i> ₉₈		12 17.6 211°93		1°6/17.7 18		326800	2003 <i>SK</i> ₃₂₇		12 17.6 142°14		0°7/17.7 18	
11 17	6 4.72	+17 6.5	2.489	3.333	10.2	20.3	11 17	6 6.33	+25 36.6	2.451	3.298	10.3	22.0
11 27	5 58.69	+17 21.8	2.413	3.331	7.3	20.1	11 27	5 59.82	+25 45.3	2.384	3.304	7.3	21.8
12 7	5 51.06	+17 41.0	2.364	3.329	4.1	19.9	12 7	5 51.65	+25 51.3	2.343	3.310	3.9	21.6
12 17	5 42.49	+18 3.6	2.345	3.326	1.6	19.7	12 17	5 42.55	+25 53.6	2.332	3.315	0.8	21.4
12 27	5 33.83	+18 28.8	2.357	3.324	3.7	19.8	12 27	5 33.44	+25 51.9	2.351	3.320	3.4	21.6
1 6	5 25.91	+18 56.0	2.399	3.321	6.9	20.0	1 6	5 25.23	+25 46.8	2.401	3.325	6.8	21.8
1 16	5 19.45	+19 24.8	2.468	3.318	9.9	20.2	1 16	5 18.66	+25 39.8	2.478	3.330	9.8	22.0
1 26	5 15.00	+19 54.8	2.561	3.316	12.5	20.4	1 26	5 14.25	+25 32.8	2.578	3.335	12.3	22.2
485694	2011 <i>YS</i> ₈		12 17.6 45°12		0°6/17.6 18		521914	2015 <i>UN</i> ₄₄		12 17.6 117°19		1°7/17.7 18	
11 17	6 7.75	+20 59.9	1.622	2.484	13.9	21.1	11 17	6 7.89	+17 15.4	2.069	2.916	11.9	21.4
11 27	6 1.37	+21 14.7	1.565	2.492	9.8	20.9	11 27	6 1.05	+17 31.6	2.008	2.927	8.5	21.2
12 7	5 52.64	+21 31.4	1.532	2.501	5.2	20.6	12 7	5 52.34	+17 52.2	1.973	2.938	4.7	21.0
12 17	5 42.59	+21 48.3	1.527	2.510	0.7	20.3	12 17	5 42.59	+18 16.3	1.968	2.949	1.7	20.8
12 27	5 32.55	+22 4.5	1.549	2.520	4.6	20.7	12 27	5 32.84	+18 42.7	1.992	2.960	4.2	21.0
1 6	5 23.84	+22 19.9	1.600	2.530	9.1	20.9	1 6	5 24.12	+19 10.8	2.046	2.970	7.9	21.3
1 16	5 17.46	+22 35.2	1.675	2.540	13.0	21.2	1 16	5 17.26	+19 40.1	2.127	2.980	11.2	21.5
1 26	5 14.03	+22 51.2	1.771	2.550	16.3	21.5	1 26	5 12.80	+20 10.5	2.231	2.989	14.0	21.7
309535	2007 <i>YW</i> ₁₂		12 17.6 76°32		1°9/17.6 18		167171	2003 <i>SP</i> ₂₅₇		12 17.6 23°05		0°6/17.6 18	

EPHEMERIDES

12 17.6

12 17.6

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
457421	2008 <i>UH₈</i>		12 17.6	80°56	4.4/17.9	17	308768	2006 <i>ON₉</i>		12 17.6	132°85	1.4/17.6	18
11 17	6 8.85	+36 15.6	2.257	3.090	11.6	21.3	11 17	6 8.49	+18 37.9	2.236	3.080	11.3	21.6
11 27	6 1.88	+36 49.0	2.196	3.099	8.8	21.2	11 27	6 1.34	+18 42.3	2.176	3.095	8.0	21.4
12 7	5 52.83	+37 12.3	2.161	3.108	6.0	21.0	12 7	5 52.45	+18 49.1	2.143	3.108	4.4	21.2
12 17	5 42.62	+37 22.0	2.154	3.118	4.4	20.9	12 17	5 42.63	+18 57.7	2.139	3.121	1.4	21.0
12 27	5 32.42	+37 17.0	2.176	3.127	5.5	21.0	12 27	5 32.85	+19 8.0	2.167	3.134	3.9	21.2
1 6	5 23.39	+36 59.0	2.227	3.137	8.1	21.2	1 6	5 24.07	+19 19.8	2.224	3.146	7.4	21.5
1 16	5 16.41	+36 31.5	2.304	3.146	10.8	21.4	1 16	5 17.07	+19 33.5	2.308	3.157	10.6	21.7
1 26	5 12.08	+35 58.8	2.403	3.155	13.3	21.6	1 26	5 12.34	+19 49.3	2.416	3.168	13.2	21.9
145122	2005 <i>GD₁₃₆</i>		12 17.6	83°28	5.0/17.6	18	77322	2001 <i>FO₉₀</i>		12 17.6	187°91	1.4/17.8	18
11 17	6 11.09	+12 2.0	1.401	2.254	16.2	20.1	11 17	6 12.69	+27 44.5	1.724	2.575	13.7	19.9
11 27	6 3.66	+11 39.0	1.358	2.275	11.9	19.9	11 27	6 4.91	+27 39.8	1.654	2.575	9.8	19.7
12 7	5 53.79	+11 27.2	1.339	2.296	7.6	19.7	12 7	5 54.58	+27 28.6	1.608	2.574	5.4	19.4
12 17	5 42.68	+11 28.1	1.345	2.317	5.0	19.6	12 17	5 42.76	+27 9.2	1.590	2.573	1.5	19.2
12 27	5 31.82	+11 42.0	1.379	2.337	7.0	19.8	12 27	5 30.92	+26 41.9	1.602	2.571	4.7	19.4
1 6	5 22.60	+12 7.6	1.439	2.358	10.9	20.0	1 6	5 20.50	+26 9.3	1.642	2.568	9.2	19.6
1 16	5 15.99	+12 42.7	1.523	2.378	14.7	20.3	1 16	5 12.59	+25 35.5	1.707	2.565	13.2	19.9
1 26	5 12.53	+13 24.8	1.627	2.397	17.9	20.6	1 26	5 7.84	+25 4.3	1.795	2.562	16.5	20.1
490092	2008 <i>UJ₁₁</i>		12 17.6	102°73	3.7/17.2	17	444502	2006 <i>RU₇₉</i>		12 17.6	32°19	3.3/17.5	18
11 17	6 3.99	+12 28.9	2.330	3.172	11.0	21.6	11 17	6 6.26	+15 29.6	1.582	2.442	14.2	20.8
11 27	5 58.12	+11 58.0	2.267	3.177	8.1	21.5	11 27	6 0.29	+15 12.3	1.526	2.449	10.3	20.6
12 7	5 50.73	+11 33.3	2.229	3.183	5.3	21.3	12 7	5 52.08	+15 1.5	1.493	2.456	6.1	20.4
12 17	5 42.50	+11 16.2	2.220	3.189	3.7	21.2	12 17	5 42.61	+14 58.2	1.486	2.464	3.4	20.2
12 27	5 34.29	+11 8.0	2.241	3.194	5.1	21.3	12 27	5 33.18	+15 3.1	1.507	2.472	5.7	20.4
1 6	5 26.93	+11 8.7	2.290	3.200	7.9	21.5	1 6	5 25.03	+15 16.0	1.555	2.480	9.8	20.7
1 16	5 21.10	+11 18.2	2.366	3.205	10.7	21.7	1 16	5 19.12	+15 36.1	1.627	2.489	13.6	20.9
1 26	5 17.28	+11 35.2	2.464	3.211	13.1	21.9	1 26	5 16.06	+16 2.4	1.720	2.498	16.8	21.2
6062	<i>Vespa</i>		12 17.6	172°27	0°5/17.6	18	416531	2004 <i>AK₆</i>		12 17.6	306°53	1°0/17.6	18
11 17	6 4.29	+21 22.3	2.865	3.709	9.1	18.1	11 17	6 4.42	+19 52.3	2.209	3.062	11.0	21.3
11 27	5 58.20	+21 23.3	2.792	3.712	6.4	18.0	11 27	5 58.72	+20 1.2	2.128	3.051	7.9	21.1
12 7	5 50.74	+21 24.4	2.747	3.714	3.4	17.8	12 7	5 51.20	+20 12.3	2.074	3.041	4.3	20.9
12 17	5 42.51	+21 25.3	2.732	3.715	0.6	17.5	12 17	5 42.57	+20 25.0	2.048	3.031	1.0	20.6
12 27	5 34.24	+21 25.9	2.748	3.717	3.0	17.8	12 27	5 33.77	+20 38.7	2.052	3.021	3.8	20.8
1 6	5 26.69	+21 26.7	2.795	3.718	6.0	18.0	1 6	5 25.79	+20 53.3	2.084	3.011	7.5	21.0
1 16	5 20.45	+21 28.2	2.870	3.718	8.7	18.1	1 16	5 19.46	+21 9.0	2.144	3.001	10.9	21.2
1 26	5 16.01	+21 31.2	2.969	3.719	11.0	18.3	1 26	5 15.39	+21 26.3	2.226	2.992	13.8	21.4
71601	2000 <i>DJ₉₃</i>		12 17.6	57°97	4°8/18.3	17	430665	2003 <i>UQ₇₆</i>		12 17.6	24°50	8°5/18.9	18
11 17	6 9.35	+37 36.3	2.113	2.945	12.3	18.9	11 17	6 13.38	+39 57.4	1.038	1.899	19.9	20.4
11 27	6 2.32	+37 57.8	2.052	2.953	9.4	18.7	11 27	6 6.78	+40 32.2	0.993	1.907	15.5	20.1
12 7	5 53.09	+38 6.9	2.015	2.960	6.5	18.6	12 7	5 55.98	+40 43.0	0.967	1.915	11.2	19.9
12 17	5 42.65	+38 0.6	2.005	2.968	4.8	18.5	12 17	5 42.85	+40 22.2	0.962	1.925	8.6	19.8
12 27	5 32.27	+37 38.3	2.025	2.975	5.9	18.6	12 27	5 30.04	+39 29.2	0.981	1.936	9.9	19.9
1 6	5 23.19	+37 2.4	2.072	2.983	8.5	18.7	1 6	5 19.99	+38 12.0	1.023	1.948	13.6	20.2
1 16	5 16.35	+36 17.4	2.146	2.991	11.4	18.9	1 16	5 14.14	+36 42.5	1.086	1.960	17.8	20.5
1 26	5 12.31	+35 28.4	2.242	2.999	13.9	19.1	1 26	5 13.01	+35 12.2	1.166	1.974	21.4	20.8
150436	2000 <i>GE₉₉</i>		12 17.6	139°06	3°4/17.9	18	302646	2002 <i>RY₂₁₆</i>		12 17.6	6°66	12°2/19.8	17
11 17	6 13.39	+31 54.9	1.777	2.621	13.7	19.9	11 17	6 21.72	+55 4.7	1.761	2.527	17.0	19.7
11 27	6 5.36	+32 15.8	1.716	2.631	10.0	19.7	11 27	6 12.49	+56 4.2	1.702	2.527	15.0	19.6
12 7	5 54.77	+32 27.4	1.680	2.639	6.1	19.5	12 7	5 59.01	+56 35.5	1.663	2.528	13.2	19.6
12 17	5 42.75	+32 26.2	1.672	2.648	3.4	19.4	12 17	5 43.05	+56 29.6	1.646	2.528	12.3	19.4
12 27	5 30.80	+32 11.6	1.692	2.656	5.4	19.5	12 27	5 27.25	+55 43.3	1.653	2.529	12.6	19.5
1 6	5 20.36	+31 45.9	1.742	2.663	9.1	19.7	1 6	5 14.13	+54 21.7	1.683	2.530	13.9	19.5
1 16	5 12.50	+31 13.5	1.816	2.670	12.8	20.0	1 16	5 5.27	+52 35.2	1.736	2.531	15.9	19.7
1 26	5 7.84	+30 39.5	1.913	2.676	15.8	20.2	1 26	5 1.25	+50 36.3	1.808	2.532	17.9	19.8
314330	2005 <i>TG₁₆</i>		12 17.6	213°46	2°8/17.4	17	158694	2003 <i>FW₇₇</i>		12 17.6	299°63	2°0/17.5	18
11 17	6 5.93	+15 46.4	2.151	2.998	11.5	21.1	11 17	6 8.03	+19 6.8	1.453	2.318	15.0	20.2
11 27	5 59.68	+15 24.3	2.078	2.995	8.4	20.8	11 27	6 2.06	+18 56.3	1.374	2.302	10.8	19.9
12 7	5 51.65	+15 6.3	2.030	2.992	5.0	20.6	12 7	5 53.30	+18 48.8	1.318	2.286	6.0	19.6
12 17	5 42.57	+14 53.3	2.011	2.988	2.8	20.5	12 17	5 42.72	+18 44.5	1.288	2.270	2.0	19.3
12 27	5 33.43	+14 46.3	2.022	2.984	4.8	20.6	12 27	5 31.82	+18 43.8	1.286	2.255	5.6	19.5
1 6	5 25.19	+14 45.9	2.061	2.979	8.1	20.8	1 6	5 22.15	+18 47.5	1.309	2.240	10.7	19.7
1 16	5 18.67	+14 52.1	2.127	2.975	11.4	21.0	1 16	5 15.02	+18 56.3	1.356	2.225	15.3	19.9
1 26	5 14.41	+15 4.6	2.216	2.970	14.2	21.2	1 26	5 11.25	+19 10.8	1.423	2.210	19.2	20.2
238250	2003 <i>UH₂₉₄</i>		12 17.6	168°65	3°4/17.9	18	248222	2005 <i>ER₁₉₅</i>		12 17.6	318°26	5°5/17.0	18
11 17	6 11.87	+33 3.7	2.072	2.910	12.3	21.3	11 17	6 2.98	+ 7 40.0	2.195	3.030	11.8	20.0
11 27	6 4.11	+33 24.7	2.004	2.914	9.1	21.1	11 27	5 57.58	+ 6 59.9	2.124	3.024	9.2	19.9
12 7	5 54.06	+33 36.7	1.961	2.917	5.7	20.9	12 7	5 50.54	+ 6 29.5	2.077	3.018	6.7	19.7
12 17	5 42.72	+33 36.5	1.946	2.920	3.5	20.8	12 17	5 42.54	+ 6 11.5	2.058	3.012	5.5	19.6
12 27	5 31.35	+33 23.3	1.962	2.922	5.1	20.9	12 27	5 34.48	+ 6 7.3	2.067	3.006	6.7	19.7
1 6	5 21.24	+32 58.9	2.006	2.923	8.4	21.1	1 6	5 27.23	+ 6 17.2	2.104	3.001	9.2	19.8
1 16	5 13.37	+32 27.2	2.077	2.925	11.6	21.3	1 16	5 21.51	+ 6 39.9	2.166	2.996	11.9	20.0
1 26	5 8.35	+31 52.8	2.170	2.925	14.4	21.5	1 26	5 17.88	+ 7 13.0	2.249	2.991	14.3	20.1
309950	2009 <i>GQ₅</i>		12 17.6	223°28	3°2/17.7	18	419250	2009 <i>VP₆₂</i>		12 17.6	323°09	2°0/17.6</	

EPHEMERIDES

12 17.6

12 17.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
7062 Meslier			12 17.6 190°73	5°0/17.5 18			442867 2013 AT ₁₇₄			12 17.7 57°16	13°9/19.8 18		
11 17	6 3.43	+ 4 15.8	2.909	3.719	9.9	19.0	11 17	6 6.93	-12 47.9	1.638	2.396	18.5	20.7
11 27	5 57.55	+ 4 0.7	2.835	3.717	7.8	18.9	11 27	6 0.59	-13 33.3	1.597	2.409	16.5	20.6
12 7	5 50.41	+ 3 55.9	2.788	3.715	5.9	18.7	12 7	5 52.18	-13 46.1	1.575	2.422	14.8	20.5
12 17	5 42.54	+ 4 2.5	2.770	3.713	5.0	18.7	12 17	5 42.68	-13 21.7	1.574	2.435	14.0	20.5
12 27	5 34.63	+ 4 21.2	2.782	3.710	5.8	18.7	12 27	5 33.30	-12 19.5	1.596	2.449	14.2	20.6
1 6	5 27.33	+ 4 51.1	2.823	3.707	7.6	18.8	1 6	5 25.21	-10 44.2	1.640	2.463	15.4	20.7
1 16	5 21.21	+ 5 30.7	2.891	3.703	9.7	19.0	1 16	5 19.26	- 8 43.9	1.705	2.477	17.1	20.8
1 26	5 16.74	+ 6 17.9	2.982	3.699	11.7	19.1	1 26	5 15.99	- 6 27.8	1.790	2.491	18.8	21.0
389855 2012 RG ₂₆			12 17.6 46°28	2°1/17.8 18			517391 2014 KT ₁₀₄			12 17.7 108°98	3°0/17.5 18		
11 17	6 11.27	+27 21.5	1.237	2.106	16.7	20.6	11 17	6 7.32	+14 36.6	2.066	2.910	12.0	22.3
11 27	6 4.29	+27 40.3	1.196	2.126	11.9	20.3	11 27	6 0.59	+14 22.8	2.010	2.926	8.7	22.1
12 7	5 54.32	+27 53.1	1.178	2.146	6.6	20.1	12 7	5 52.10	+14 14.7	1.980	2.940	5.3	22.0
12 17	5 42.77	+27 56.6	1.184	2.167	2.1	19.9	12 17	5 42.69	+14 12.9	1.979	2.955	3.0	21.8
12 27	5 31.54	+27 50.3	1.218	2.188	5.6	20.2	12 27	5 33.36	+14 17.8	2.008	2.969	4.9	22.0
1 6	5 22.32	+27 36.6	1.276	2.210	10.6	20.5	1 6	5 25.08	+14 29.2	2.066	2.983	8.2	22.2
1 16	5 16.23	+27 19.8	1.358	2.232	14.9	20.8	1 16	5 18.62	+14 46.7	2.149	2.996	11.3	22.4
1 26	5 13.83	+27 3.4	1.459	2.254	18.4	21.1	1 26	5 14.48	+15 9.4	2.256	3.009	14.0	22.7
210058 2006 PA ₂₇			12 17.6 88°94	7°0/17.4 18			117370 2004 XC ₁₂₉			12 17.7 20°47	3°6/17.4 18		
11 17	6 6.84	+ 4 46.4	1.887	2.713	13.8	20.6	11 17	6 7.53	+28 36.9	1.435	2.302	15.0	18.4
11 27	6 0.26	+ 4 4.1	1.840	2.732	10.8	20.5	11 27	6 1.67	+29 47.6	1.388	2.315	10.8	18.2
12 7	5 51.91	+ 3 36.3	1.818	2.750	8.2	20.4	12 7	5 53.02	+30 53.6	1.364	2.329	6.4	18.0
12 17	5 42.63	+ 3 25.8	1.822	2.768	7.0	20.3	12 17	5 42.75	+31 48.8	1.366	2.344	3.6	17.9
12 27	5 33.50	+ 3 33.6	1.855	2.786	8.0	20.4	12 27	5 32.47	+32 29.5	1.396	2.360	6.0	18.1
1 6	5 25.49	+ 3 58.5	1.914	2.803	10.4	20.6	1 6	5 23.75	+32 55.4	1.451	2.378	10.1	18.3
1 16	5 19.38	+ 4 37.6	1.997	2.820	13.0	20.8	1 16	5 17.78	+33 9.1	1.530	2.397	14.0	18.6
1 26	5 15.65	+ 5 27.5	2.102	2.837	15.4	21.0	1 26	5 15.22	+33 14.8	1.629	2.416	17.1	18.9
81380 2000 GT ₇₀			12 17.6 1°84	6°7/16.6 18			134001 2004 VL ₉			12 17.7 4°64	6°4/17.2 18		
11 17	6 4.45	+11 11.0	1.376	2.239	15.8	18.3	11 17	6 3.24	+ 8 19.6	1.666	2.515	14.2	18.9
11 27	5 59.26	+ 9 54.8	1.318	2.237	12.0	18.1	11 27	5 58.11	+ 7 33.1	1.606	2.515	11.0	18.7
12 7	5 51.63	+ 8 48.3	1.283	2.237	8.4	17.9	12 7	5 50.95	+ 6 58.9	1.569	2.516	7.9	18.5
12 17	5 42.62	+ 7 56.9	1.273	2.237	6.7	17.8	12 17	5 42.63	+ 6 40.3	1.559	2.517	6.5	18.5
12 27	5 33.62	+ 7 24.8	1.289	2.238	8.6	17.9	12 27	5 34.29	+ 6 39.3	1.575	2.519	7.8	18.5
1 6	5 25.97	+ 7 13.4	1.329	2.241	12.2	18.1	1 6	5 27.06	+ 6 55.4	1.616	2.523	10.8	18.7
1 16	5 20.72	+ 7 21.5	1.391	2.244	15.9	18.3	1 16	5 21.80	+ 7 26.7	1.681	2.526	14.0	18.9
1 26	5 18.48	+ 7 45.8	1.472	2.248	19.1	18.6	1 26	5 19.12	+ 8 9.6	1.766	2.531	16.9	19.1
305774 2009 DY ₄₅			12 17.6 272°13	0°5/17.6 17			363393 2002 YY ₉			12 17.7 305°72	0°7/17.7 17		
11 17	6 8.18	+22 11.2	1.835	2.691	12.8	21.5	11 17	6 7.12	+20 8.4	1.722	2.581	13.3	20.8
11 27	6 1.74	+22 6.5	1.750	2.675	9.1	21.3	11 27	6 1.19	+20 33.8	1.638	2.564	9.5	20.5
12 7	5 52.97	+22 1.4	1.690	2.658	4.9	21.0	12 7	5 52.79	+21 3.1	1.579	2.547	5.2	20.3
12 17	5 42.71	+21 55.2	1.658	2.642	0.6	20.6	12 17	5 42.77	+21 34.7	1.546	2.530	0.8	19.9
12 27	5 32.20	+21 47.8	1.655	2.625	4.4	20.9	12 27	5 32.38	+22 6.6	1.543	2.514	4.6	20.1
1 6	5 22.72	+21 40.4	1.681	2.608	8.9	21.1	1 6	5 22.98	+22 37.8	1.567	2.497	9.3	20.4
1 16	5 15.33	+21 34.5	1.732	2.591	13.0	21.3	1 16	5 15.73	+23 8.0	1.617	2.481	13.5	20.6
1 26	5 10.78	+21 32.0	1.804	2.574	16.4	21.5	1 26	5 11.44	+23 37.8	1.688	2.466	17.0	20.8
152782 1999 RG ₂₀₀			12 17.7 57°98	3°6/17.0 18			430827 2005 JT ₂			12 17.7 196°20	0°5/17.6 15		
11 17	6 6.03	+15 28.2	1.924	2.775	12.5	19.0	11 17	6 11.80	+22 9.4	1.816	2.666	13.2	23.1
11 27	5 59.76	+14 34.0	1.867	2.785	9.1	18.8	11 27	6 4.21	+22 6.8	1.742	2.664	9.4	22.9
12 7	5 51.67	+13 43.9	1.835	2.795	5.6	18.6	12 7	5 54.24	+22 3.6	1.693	2.661	5.0	22.6
12 17	5 42.63	+13 0.5	1.831	2.805	3.6	18.5	12 17	5 42.85	+21 58.8	1.673	2.657	0.6	22.3
12 27	5 33.69	+12 26.2	1.857	2.815	5.6	18.6	12 27	5 31.35	+21 52.5	1.683	2.652	4.5	22.5
1 6	5 25.87	+12 2.5	1.910	2.825	8.9	18.9	1 6	5 21.05	+21 45.6	1.721	2.647	8.9	22.8
1 16	5 19.95	+11 49.9	1.989	2.835	12.1	19.1	1 16	5 13.01	+21 40.1	1.786	2.641	12.9	23.0
1 26	5 16.42	+11 47.6	2.090	2.846	14.9	19.3	1 26	5 7.90	+21 37.6	1.872	2.634	16.1	23.2
128376 2004 JS ₂₇			12 17.7 163°69	0°3/17.6 18			432246 2009 QZ ₄₁			12 17.7 116°46	4°5/18.0 18		
11 17	6 11.05	+22 51.7	2.018	2.864	12.2	21.1	11 17	6 16.29	+34 3.9	1.641	2.483	14.8	21.7
11 27	6 3.38	+22 47.3	1.951	2.871	8.6	20.9	11 27	6 7.57	+34 35.3	1.589	2.500	10.9	21.5
12 7	5 53.65	+22 41.5	1.909	2.877	4.6	20.7	12 7	5 56.02	+34 54.6	1.561	2.516	7.0	21.3
12 17	5 42.76	+22 33.5	1.898	2.882	0.4	20.4	12 17	5 42.96	+34 57.2	1.561	2.533	4.5	21.2
12 27	5 31.88	+22 23.5	1.916	2.886	4.0	20.7	12 27	5 30.08	+34 42.2	1.589	2.548	6.2	21.3
1 6	5 22.17	+22 12.8	1.965	2.889	8.1	20.9	1 6	5 19.01	+34 12.7	1.645	2.563	9.9	21.6
1 16	5 14.51	+22 3.1	2.040	2.892	11.6	21.2	1 16	5 10.87	+33 34.5	1.726	2.577	13.4	21.8
1 26	5 9.50	+21 56.1	2.138	2.894	14.6	21.4	1 26	5 6.26	+32 53.6	1.828	2.591	16.5	22.1
441193 2007 UQ ₈			12 17.7 80°46	5°0/18.6 15			159084 2004 TK ₂₅₀			12 17.7 28°51	1°3/17.8 17		
11 17	6 15.44	+37 31.0	1.743	2.577	14.4	21.5	11 17	6 6.72	+26 37.8	1.716	2.577	13.3	19.8
11 27	6 6.67	+37 40.3	1.699	2.602	10.9	21.3	11 27	6 0.65	+26 47.1	1.660	2.586	9.4	19.6
12 7	5 55.36	+37 34.0	1.680	2.628	7.3	21.2	12 7	5 52.31	+26 52.4	1.628	2.595	5.1	19.4
12 17	5 42.86	+37 9.2	1.687	2.653	5.1	21.1	12 17	5 42.72	+26 51.9	1.622	2.605	1.4	19.1
12 27	5 30.78	+36 26.5	1.723	2.678	6.3	21.2	12 27	5 33.20	+26 45.3	1.646	2.616	4.4	19.4
1 6	5 20.58	+35 30.6	1.787	2.702	9.4	21.4	1 6	5 24.99	+26 34.0	1.697	2.627	8.6	19.6
1 16	5 13.23	+34 28.1	1.877	2.726	12.6	21.7	1 16	5 19.05	+26 20.6	1.772	2.639	12.4	19.9
1 26	5 9.17	+33 25.2	1.989	2.750	15.3	21.9	1 26	5 15.97	+26 7.6	1.870	2.651	15.5	20.1
490504 2009 UD ₃₉			12 17.7 37°32	3°4/17.6 17			353369 2011 HK ₈			12 17.7 180°36	13°8/14.4 17		
11 17	6 8.59	+30 15.3	1.785	2.638</									

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
364931	2008 <i>FT</i> ₆₄		12 17.7 327°95	2°7/17.5 17			374634	2006 <i>HB</i> ₅₁		12 17.7 195°48	0°9/17.6 17		
11 17	6 5.74	+16 34.4	1.824	2.679	12.9	21.2	11 17	6 4.74	+20 32.1	2.720	3.564	9.5	22.3
11 27	5 59.86	+16 18.4	1.753	2.675	9.3	21.0	11 27	5 58.64	+20 26.1	2.643	3.562	6.7	22.1
12 7	5 51.90	+16 6.9	1.707	2.671	5.4	20.7	12 7	5 51.08	+20 20.5	2.593	3.560	3.6	21.9
12 17	5 42.71	+16 0.7	1.688	2.667	2.7	20.6	12 17	5 42.69	+20 15.4	2.574	3.557	0.9	21.7
12 27	5 33.43	+16 0.6	1.698	2.663	5.1	20.7	12 27	5 34.25	+20 10.9	2.586	3.554	3.3	21.8
1 6	5 25.19	+16 6.7	1.736	2.660	9.0	20.9	1 6	5 26.54	+20 7.5	2.628	3.551	6.4	22.0
1 16	5 18.93	+16 19.2	1.799	2.656	12.6	21.1	1 16	5 20.21	+20 6.0	2.698	3.547	9.2	22.2
1 26	5 15.27	+16 37.6	1.883	2.653	15.8	21.4	1 26	5 15.75	+20 7.0	2.792	3.543	11.6	22.4
179271	2001 <i>UX</i> ₂₀₀		12 17.7 97°85	0°9/17.6 18			16469	1990 <i>KR</i>		12 17.7 178°90	5°2/17.2 18		
11 17	6 7.73	+21 22.5	1.952	2.805	12.3	20.9	11 17	6 7.24	+7 46.6	2.305	3.129	11.7	19.4
11 27	6 1.05	+21 11.1	1.892	2.815	8.7	20.7	11 27	6 0.48	+7 12.2	2.236	3.131	9.0	19.2
12 7	5 52.42	+20 59.7	1.858	2.825	4.6	20.5	12 7	5 52.08	+6 47.2	2.192	3.132	6.5	19.1
12 17	5 42.74	+20 48.3	1.852	2.836	0.9	20.2	12 17	5 42.76	+6 33.6	2.178	3.133	5.2	19.0
12 27	5 33.12	+20 37.4	1.876	2.845	4.1	20.5	12 27	5 33.41	+6 32.9	2.194	3.133	6.4	19.1
1 6	5 24.66	+20 28.0	1.929	2.855	8.1	20.8	1 6	5 24.91	+6 44.8	2.238	3.132	8.8	19.2
1 16	5 18.19	+20 21.5	2.008	2.865	11.6	21.0	1 16	5 18.00	+7 8.1	2.309	3.131	11.5	19.4
1 26	5 14.24	+20 18.8	2.109	2.874	14.4	21.2	1 26	5 13.20	+7 40.8	2.401	3.129	13.9	19.6
515486	2014 <i>BP</i> ₆₅		12 17.7 321°61	3°5/17.6 18			397957	2008 <i>YN</i> ₉₃		12 17.7 251°41	2°6/17.8 18		
11 17	6 7.94	+15 19.1	1.454	2.315	15.2	21.1	11 17	6 8.77	+14 49.8	1.824	2.672	13.2	20.8
11 27	6 1.83	+15 6.0	1.387	2.311	11.1	20.8	11 27	6 2.13	+15 14.0	1.746	2.664	9.6	20.6
12 7	5 53.10	+15 0.3	1.342	2.306	6.6	20.6	12 7	5 53.21	+15 46.6	1.693	2.656	5.6	20.3
12 17	5 42.79	+15 3.0	1.324	2.302	3.6	20.4	12 17	5 42.84	+16 26.7	1.668	2.647	2.6	20.1
12 27	5 32.33	+15 14.4	1.333	2.298	6.2	20.5	12 27	5 32.21	+17 12.4	1.672	2.638	5.0	20.2
1 6	5 23.18	+15 34.2	1.368	2.294	10.7	20.8	1 6	5 22.57	+18 1.9	1.705	2.630	9.1	20.5
1 16	5 16.49	+16 1.6	1.427	2.291	14.9	21.0	1 16	5 14.95	+18 53.4	1.765	2.620	13.0	20.7
1 26	5 13.00	+16 35.2	1.505	2.288	18.5	21.2	1 26	5 10.10	+19 45.9	1.846	2.611	16.2	20.9
68157	2001 <i>BN</i> ₁₃		12 17.7 111°38	1°9/17.9 18			177610	2004 <i>HE</i> ₁₀		12 17.7 195°08	3°0/17.4 18		
11 17	6 8.44	+30 19.4	2.244	3.087	11.3	19.2	11 17	6 6.14	+14 34.3	2.328	3.169	11.0	20.5
11 27	6 1.44	+30 10.7	2.180	3.096	8.1	19.0	11 27	5 59.77	+14 13.6	2.254	3.167	8.0	20.3
12 7	5 52.58	+29 54.9	2.142	3.105	4.7	18.8	12 7	5 51.74	+13 57.6	2.206	3.165	4.9	20.1
12 17	5 42.75	+29 30.8	2.133	3.113	2.0	18.6	12 17	5 42.76	+13 47.3	2.188	3.162	3.0	20.0
12 27	5 33.02	+28 59.1	2.155	3.122	4.0	18.8	12 27	5 33.72	+13 43.4	2.200	3.159	4.7	20.1
1 6	5 24.42	+28 22.2	2.206	3.130	7.3	19.0	1 6	5 25.51	+13 46.2	2.241	3.156	7.8	20.3
1 16	5 17.75	+27 43.2	2.285	3.139	10.5	19.2	1 16	5 18.89	+13 55.8	2.309	3.152	10.8	20.5
1 26	5 13.50	+27 5.3	2.387	3.147	13.1	19.4	1 26	5 14.37	+14 11.5	2.400	3.147	13.4	20.7
285503	2000 <i>DV</i> ₄₆		12 17.7 258°87	3°7/17.4 17			267962	2004 <i>FN</i> ₃₉		12 17.7 245°09	12°9/14.5 18		
11 17	6 6.70	+13 36.2	1.989	2.835	12.4	21.0	11 17	6 8.12	-9 25.3	1.920	2.682	16.0	20.6
11 27	6 0.48	+13 15.7	1.906	2.821	9.2	20.8	11 27	6 1.54	-11 8.9	1.849	2.665	14.4	20.5
12 7	5 52.24	+13 1.5	1.848	2.807	5.8	20.5	12 7	5 52.86	-12 30.4	1.800	2.648	13.2	20.4
12 17	5 42.75	+12 54.9	1.819	2.792	3.7	20.4	12 17	5 42.84	-13 22.4	1.775	2.630	12.9	20.3
12 27	5 33.05	+12 57.0	1.818	2.777	5.5	20.5	12 27	5 32.57	-13 40.1	1.773	2.612	13.7	20.3
1 6	5 24.24	+13 7.8	1.846	2.762	9.1	20.6	1 6	5 23.18	-13 23.2	1.794	2.592	15.3	20.4
1 16	5 17.23	+13 26.9	1.899	2.747	12.6	20.8	1 16	5 15.64	-12 35.3	1.835	2.572	17.2	20.5
1 26	5 12.69	+13 53.4	1.975	2.731	15.6	21.0	1 26	5 10.65	-11 22.8	1.894	2.552	19.2	20.6
512011	2015 <i>LW</i> ₂₂		12 17.7 239°53	2°4/17.4 18			372127	2008 <i>SY</i> ₁₉₆		12 17.7 1°54	1°3/17.7 17		
11 17	6 9.99	+18 33.9	1.631	2.487	14.1	22.1	11 17	6 5.30	+26 7.9	1.844	2.704	12.6	20.7
11 27	6 3.14	+18 10.0	1.555	2.478	10.2	21.9	11 27	5 59.68	+26 29.0	1.777	2.703	8.9	20.5
12 7	5 53.76	+17 48.3	1.503	2.469	5.8	21.6	12 7	5 51.87	+26 47.5	1.735	2.702	4.9	20.3
12 17	5 42.84	+17 29.6	1.478	2.459	2.4	21.4	12 17	5 42.77	+27 1.2	1.720	2.703	1.4	20.0
12 27	5 31.74	+17 15.1	1.482	2.449	5.4	21.5	12 27	5 33.58	+27 9.0	1.734	2.704	4.3	20.2
1 6	5 21.86	+17 6.2	1.514	2.439	10.0	21.8	1 6	5 25.51	+27 11.4	1.775	2.705	8.4	20.5
1 16	5 14.32	+17 4.1	1.570	2.428	14.2	22.0	1 16	5 19.52	+27 10.2	1.842	2.707	12.0	20.7
1 26	5 9.84	+17 9.3	1.647	2.417	17.7	22.2	1 26	5 16.24	+27 7.6	1.931	2.710	15.1	20.9
390890	2004 <i>XP</i> ₁₃₅		12 17.7 19°51	3°1/17.8 18			5547	<i>Acadiau</i>		12 17.7 239°69	2°9/17.1 18		
11 17	6 8.43	+29 1.8	1.198	2.072	16.8	19.7	11 17	6 8.02	+17 21.7	1.985	2.834	12.3	16.9
11 27	6 2.64	+29 29.0	1.148	2.079	12.1	19.4	11 27	6 1.35	+16 32.1	1.906	2.825	8.9	16.7
12 7	5 53.66	+29 48.8	1.120	2.087	7.0	19.2	12 7	5 52.68	+15 43.8	1.853	2.816	5.3	16.4
12 17	5 42.84	+29 57.1	1.116	2.096	3.1	19.0	12 17	5 42.83	+14 58.9	1.829	2.806	2.9	16.3
12 27	5 32.09	+29 52.4	1.137	2.107	6.1	19.2	12 27	5 32.89	+14 19.9	1.834	2.796	5.2	16.4
1 6	5 23.25	+29 37.3	1.183	2.118	11.1	19.5	1 6	5 23.97	+13 49.0	1.868	2.785	8.9	16.6
1 16	5 17.58	+29 16.2	1.251	2.130	15.6	19.8	1 16	5 16.94	+13 27.7	1.929	2.775	12.5	16.8
1 26	5 15.75	+28 53.9	1.339	2.143	19.3	20.1	1 26	5 12.42	+13 16.4	2.011	2.764	15.5	17.0
493373	2014 <i>WU</i> ₁₀₃		12 17.7 145°47	1°0/17.7 17			220005	2002 <i>PG</i> ₆₀		12 17.7 72°26	7°4/18.2 18		
11 17	6 6.76	+25 24.1	2.453	3.298	10.3	21.7	11 17	6 12.25	+5 41.4	1.358	2.197	17.4	20.1
11 27	6 0.24	+25 52.1	2.383	3.303	7.3	21.5	11 27	6 4.41	+5 24.3	1.326	2.228	13.4	19.9
12 7	5 52.00	+26 18.4	2.341	3.307	4.0	21.3	12 7	5 54.22	+5 26.4	1.316	2.259	9.5	19.8
12 17	5 42.75	+26 41.0	2.329	3.311	1.0	21.1	12 17	5 42.92	+5 49.2	1.332	2.289	7.4	19.8
12 27	5 33.42	+26 58.7	2.347	3.315	3.5	21.3	12 27	5 32.01	+6 31.4	1.374	2.320	8.7	19.9
1 6	5 24.96	+27 11.6	2.395	3.319	6.8	21.5	1 6	5 22.83	+7 29.3	1.442	2.349	11.8	20.2
1 16	5 18.13	+27 20.6	2.471	3.323	9.9	21.7	1 16	5 16.30	+8 37.8	1.534	2.379	15.2	20.5
1 26	5 13.48	+27 27.5	2.571	3.326	12.4	21.9	1 26	5 12.89	+9 52.1	1.646	2.408	18.0	20.7
286415	2001 <i>YG</i> ₁₃₃		12 17.7 28°79	2°4/17.6 18			162267	1999 <i>UC</i> ₄₇		12 17.7 97°86	1°7/17.5 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
317734	2003 <i>RV</i> ₂₄		12 17.7 102°44	1.3°/17.5	18		130429	2000 <i>PY</i> ₂₂		12 17.7 39°31	2.0°/17.8	18	
11 17	6 6.01	+20 45.1	2.226	3.077	11.1	20.3	11 17	6 10.41	+18 1.5	0.994	1.875	18.9	18.3
11 27	5 59.69	+20 17.2	2.161	3.083	7.8	20.1	11 27	6 4.12	+18 22.2	0.955	1.890	13.5	18.1
12 7	5 51.69	+19 49.2	2.122	3.089	4.3	19.9	12 7	5 54.47	+18 50.7	0.935	1.905	7.4	17.8
12 17	5 42.78	+19 21.8	2.113	3.095	1.3	19.7	12 17	5 42.98	+19 24.7	0.939	1.922	2.1	17.5
12 27	5 33.92	+18 56.2	2.133	3.101	3.9	19.9	12 27	5 31.70	+20 1.4	0.968	1.939	6.3	17.9
1 6	5 26.03	+18 34.0	2.183	3.107	7.4	20.1	1 6	5 22.55	+20 38.9	1.020	1.958	12.0	18.2
1 16	5 19.86	+18 16.4	2.260	3.113	10.6	20.3	1 16	5 16.82	+21 16.4	1.093	1.976	17.0	18.6
1 26	5 15.90	+18 4.4	2.360	3.119	13.3	20.5	1 26	5 15.11	+21 53.8	1.185	1.996	20.9	18.9
302536	2002 <i>NM</i>		12 17.7 62°46	3.2°/18.0	17		168572	1999 <i>XS</i> ₁₄₁		12 17.7 298°05	3.2°/18.5	18	
11 17	6 11.37	+12 59.8	1.561	2.410	15.0	20.3	11 17	6 17.78	+9 56.4	1.032	1.889	20.3	18.6
11 27	6 3.73	+13 30.7	1.524	2.441	10.8	20.1	11 27	6 10.09	+11 49.9	0.962	1.883	15.1	18.2
12 7	5 53.87	+14 11.7	1.512	2.473	6.4	20.0	12 7	5 58.20	+14 14.9	0.914	1.878	8.9	17.9
12 17	5 42.92	+15 0.7	1.527	2.504	3.3	19.8	12 17	5 43.26	+17 3.9	0.891	1.872	3.3	17.5
12 27	5 32.23	+15 55.1	1.571	2.536	5.4	20.0	12 27	5 27.45	+20 2.8	0.896	1.867	7.0	17.7
1 6	5 23.07	+16 52.1	1.643	2.567	9.4	20.3	1 6	5 13.27	+22 56.3	0.929	1.862	13.6	18.1
1 16	5 16.32	+17 49.6	1.741	2.598	13.0	20.6	1 16	5 2.77	+25 33.9	0.985	1.857	19.4	18.4
1 26	5 12.51	+18 46.2	1.860	2.629	16.0	20.9	1 26	4 57.18	+27 52.6	1.059	1.852	24.1	18.7
418737	2008 <i>UX</i> ₁₃₃		12 17.7 51°36	0.7°/17.7	16		480513	2015 <i>MS</i> ₅		12 17.7 229°77	4.5°/17.3	18	
11 17	6 6.17	+25 8.3	2.065	2.919	11.7	21.5	11 17	6 8.18	+13 6.9	1.641	2.493	14.3	21.4
11 27	5 59.95	+25 15.1	2.009	2.933	8.2	21.3	11 27	6 1.74	+12 33.2	1.573	2.490	10.6	21.1
12 7	5 51.87	+25 19.4	1.979	2.947	4.4	21.1	12 7	5 53.00	+12 7.1	1.529	2.487	6.8	20.9
12 17	5 42.79	+25 20.1	1.977	2.961	0.7	20.9	12 17	5 42.90	+11 50.9	1.512	2.484	4.5	20.8
12 27	5 33.79	+25 17.0	2.005	2.975	3.8	21.1	12 27	5 32.71	+11 46.2	1.523	2.481	6.5	20.9
1 6	5 25.88	+25 11.1	2.062	2.990	7.5	21.4	1 6	5 23.71	+11 53.3	1.561	2.478	10.4	21.1
1 16	5 19.88	+25 3.9	2.145	3.005	10.8	21.6	1 16	5 16.91	+12 11.5	1.624	2.475	14.1	21.3
1 26	5 16.28	+24 57.3	2.251	3.020	13.5	21.8	1 26	5 12.98	+12 39.1	1.706	2.472	17.3	21.5
107193	2001 <i>BC</i> ₃₀		12 17.7 202°76	2.5°/17.9	18		332230	2006 <i>HN</i> ₅₅		12 17.7 220°34	4.4°/17.1	18	
11 17	6 13.60	+30 7.6	1.621	2.471	14.5	19.9	11 17	6 3.40	+8 28.1	2.771	3.597	9.9	21.3
11 27	6 5.84	+30 9.2	1.549	2.469	10.5	19.7	11 27	5 57.67	+7 54.7	2.693	3.589	7.6	21.2
12 7	5 55.26	+30 1.8	1.502	2.466	6.1	19.4	12 7	5 50.60	+7 28.5	2.641	3.582	5.4	21.0
12 17	5 43.02	+29 42.8	1.482	2.462	2.6	19.2	12 17	5 42.74	+7 11.5	2.618	3.573	4.4	20.9
12 27	5 30.72	+29 12.2	1.491	2.459	5.2	19.4	12 27	5 34.81	+7 4.8	2.625	3.565	5.4	21.0
1 6	5 19.94	+28 33.0	1.527	2.454	9.7	19.6	1 6	5 27.52	+7 8.5	2.662	3.556	7.6	21.1
1 16	5 11.90	+27 50.2	1.589	2.449	13.9	19.8	1 16	5 21.47	+7 22.2	2.725	3.547	10.0	21.3
1 26	5 7.29	+27 9.1	1.672	2.444	17.4	20.1	1 26	5 17.14	+7 44.5	2.811	3.537	12.1	21.4
511043	2013 <i>RR</i> ₅₇		12 17.7 80°51	3.6°/18.1	18		160582	1999 <i>NY</i> ₃		12 17.7 125°24	4.1°/17.8	18	
11 17	6 14.53	+31 37.8	1.293	2.153	16.8	21.1	11 17	6 9.42	+10 16.4	2.119	2.950	12.3	21.3
11 27	6 6.83	+31 48.3	1.240	2.162	12.3	20.9	11 27	6 2.04	+10 13.7	2.065	2.969	9.2	21.1
12 7	5 55.85	+31 47.0	1.209	2.172	7.3	20.6	12 7	5 52.93	+10 20.4	2.036	2.987	6.0	21.0
12 17	5 43.05	+31 30.3	1.203	2.182	3.7	20.4	12 17	5 42.89	+10 36.7	2.036	3.004	4.2	20.9
12 27	5 30.44	+30 58.0	1.224	2.191	6.3	20.6	12 27	5 32.94	+11 2.5	2.067	3.021	5.5	21.0
1 6	5 19.90	+30 14.7	1.271	2.201	11.0	20.9	1 6	5 24.04	+11 36.5	2.127	3.036	8.5	21.2
1 16	5 12.69	+29 27.0	1.341	2.210	15.4	21.2	1 16	5 16.94	+12 16.9	2.214	3.051	11.4	21.5
1 26	5 9.42	+28 41.1	1.431	2.220	19.0	21.5	1 26	5 12.15	+13 1.9	2.324	3.066	13.9	21.7
188339	2003 <i>RQ</i> ₈		12 17.7 128°26	14.9°/15.4	18		26565	2000 <i>EF</i> ₄₇		12 17.7 102°94	8.6°/16.9	18	
11 17	6 14.60	-7 26.0	1.444	2.226	19.4	20.4	11 17	6 3.30	-5 35.1	2.565	3.337	12.1	18.3
11 27	6 6.12	-9 53.9	1.410	2.244	17.0	20.3	11 27	5 57.55	-6 33.2	2.517	3.350	10.4	18.2
12 7	5 55.20	-11 51.7	1.399	2.261	15.4	20.2	12 7	5 50.49	-7 14.3	2.493	3.364	9.1	18.1
12 17	5 43.01	-13 9.7	1.410	2.277	14.9	20.3	12 17	5 42.74	-7 35.1	2.494	3.377	8.6	18.1
12 27	5 31.06	-13 43.4	1.445	2.292	15.7	20.4	12 27	5 35.03	-7 34.2	2.523	3.389	9.1	18.2
1 6	5 20.74	-13 35.0	1.501	2.307	17.4	20.5	1 6	5 28.10	-7 12.7	2.576	3.402	10.4	18.3
1 16	5 13.05	-12 51.2	1.576	2.320	19.4	20.7	1 16	5 22.52	-6 33.2	2.654	3.414	11.9	18.4
1 26	5 8.53	-11 41.6	1.666	2.332	21.2	20.9	1 26	5 18.73	-5 39.6	2.752	3.426	13.4	18.5
186539	2002 <i>VR</i> ₁₁₄		12 17.7 358°16	1.1°/17.7	18		225401	1999 <i>VL</i> ₁₂₄		12 17.7 152°00	0.9°/17.6	18	
11 17	6 8.02	+24 14.0	1.139	2.019	17.2	19.5	11 17	6 6.24	+20 59.2	2.395	3.242	10.5	21.3
11 27	6 2.58	+24 41.8	1.080	2.015	12.3	19.2	11 27	5 59.81	+20 48.1	2.327	3.247	7.4	21.1
12 7	5 53.80	+25 9.2	1.042	2.013	6.6	18.9	12 7	5 51.77	+20 37.1	2.285	3.252	4.0	20.9
12 17	5 42.93	+25 32.7	1.028	2.012	1.2	18.5	12 17	5 42.82	+20 26.2	2.273	3.257	0.9	20.7
12 27	5 31.88	+25 49.8	1.040	2.012	5.8	18.9	12 27	5 33.88	+20 15.9	2.292	3.261	3.6	20.9
1 6	5 22.60	+26 0.7	1.075	2.013	11.5	19.2	1 6	5 25.83	+20 7.0	2.341	3.265	7.0	21.1
1 16	5 16.51	+26 7.6	1.132	2.015	16.5	19.5	1 16	5 19.39	+20 0.6	2.417	3.268	10.1	21.3
1 26	5 14.42	+26 13.3	1.207	2.017	20.6	19.8	1 26	5 15.06	+19 57.5	2.516	3.272	12.6	21.5
487454	2014 <i>SM</i> ₅₈		12 17.7 84°71	4.4°/17.9	17		317725	2003 <i>QS</i> ₅₄		12 17.7 104°19	4.6°/17.6	18	
11 17	6 10.32	+35 13.8	2.108	2.944	12.2	21.6	11 17	6 5.09	+8 13.1	2.429	3.256	11.0	20.9
11 27	6 3.07	+35 55.4	2.051	2.957	9.1	21.4	11 27	5 58.85	+7 56.4	2.375	3.273	8.4	20.7
12 7	5 53.62	+36 27.1	2.020	2.970	6.1	21.3	12 7	5 51.19	+7 49.2	2.347	3.290	5.9	20.6
12 17	5 42.91	+36 45.0	2.017	2.983	4.4	21.2	12 17	5 42.79	+7 52.5	2.348	3.307	4.6	20.5
12 27	5 32.23	+36 47.7	2.043	2.995	5.6	21.3	12 27	5 34.45	+8 6.7	2.379	3.323	5.6	20.6
1 6	5 22.79	+36 36.6	2.097	3.008	8.4	21.5	1 6	5 26.97	+8 30.8	2.439	3.339	7.9	20.8
1 16	5 15.55	+36 15.3	2.177	3.021	11.3	21.7	1 16	5 20.97	+9 3.4	2.525	3.355	10.4	21.0
1 26	5 11.11	+35 48.4	2.279	3.033	13.8	21.9	1 26	5 16.89	+9 42.6	2.635	3.371	12.6	21.2
274025	2007 <i>RM</i> ₂₂		12 17.7 186°64	3.6°/18.3	18		53862	2000 <i>FA</i> ₂₆		12 17.7 95°31	0.7°/17.7		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
149116	2002 CA ₂₈₅		12 17.7	32°19	0°0/17.7	18	259860	2004 CZ ₉₆		12 17.7	284°81	1°2/17.5	17
11 17	6 6.92	+23 40.4	1.869	2.726	12.5	19.8	11 17	6 7.97	+21 50.8	1.817	2.673	12.9	20.8
11 27	6 0.70	+23 38.1	1.804	2.729	8.9	19.6	11 27	6 1.66	+21 20.5	1.731	2.656	9.2	20.5
12 7	5 52.39	+23 34.2	1.764	2.733	4.7	19.3	12 7	5 53.05	+20 48.1	1.671	2.638	5.0	20.2
12 17	5 42.89	+23 27.9	1.752	2.736	0.3	19.0	12 17	5 43.01	+20 14.6	1.638	2.621	1.2	19.9
12 27	5 33.37	+23 19.3	1.770	2.740	4.1	19.3	12 27	5 32.76	+19 41.3	1.634	2.603	4.6	20.1
1 6	5 25.01	+23 9.7	1.815	2.745	8.3	19.6	1 6	5 23.56	+19 10.8	1.659	2.586	9.1	20.4
1 16	5 18.72	+23 0.7	1.886	2.749	11.9	19.8	1 16	5 16.46	+18 45.4	1.709	2.569	13.1	20.6
1 26	5 15.07	+22 54.1	1.980	2.753	15.0	20.0	1 26	5 12.16	+18 27.0	1.780	2.551	16.5	20.8
22584	Winigleason		12 17.7	123°02	3°9/17.8	18	57186	2001 QK ₃₀		12 17.7	64°14	4°8/17.9	18
11 17	6 15.63	+32 1.2	1.660	2.504	14.5	18.9	11 17	6 13.54	+33 4.1	1.417	2.271	15.9	18.1
11 27	6 7.17	+32 42.0	1.606	2.519	10.6	18.7	11 27	6 6.06	+33 47.8	1.367	2.285	11.8	17.9
12 7	5 55.93	+33 13.3	1.576	2.534	6.6	18.5	12 7	5 55.48	+34 20.4	1.341	2.299	7.5	17.7
12 17	5 43.12	+33 30.5	1.573	2.548	3.9	18.4	12 17	5 43.16	+34 36.2	1.340	2.313	4.8	17.6
12 27	5 30.39	+33 31.6	1.600	2.561	5.9	18.5	12 27	5 30.95	+34 33.3	1.366	2.327	6.7	17.7
1 6	5 19.33	+33 18.8	1.654	2.573	9.7	18.8	1 6	5 20.63	+34 14.4	1.418	2.341	10.7	18.0
1 16	5 11.08	+32 56.7	1.733	2.585	13.3	19.0	1 16	5 13.44	+33 45.3	1.494	2.355	14.6	18.2
1 26	5 6.29	+32 30.7	1.834	2.597	16.4	19.3	1 26	5 10.00	+33 12.2	1.590	2.369	17.8	18.5
274224	2008 KU ₅		12 17.7	181°39	2°8/17.5	18	25951	Pamross		12 17.7	165°82	0°4/17.8	18
11 17	6 10.33	+15 53.3	1.941	2.785	12.7	22.3	11 17	6 12.78	+25 20.3	1.700	2.552	13.8	19.7
11 27	6 3.00	+15 38.0	1.871	2.787	9.2	22.1	11 27	6 5.01	+25 5.7	1.634	2.556	9.8	19.4
12 7	5 53.60	+15 27.3	1.826	2.788	5.4	21.9	12 7	5 54.76	+24 46.7	1.592	2.560	5.3	19.2
12 17	5 42.98	+15 21.7	1.810	2.788	2.8	21.7	12 17	5 43.12	+24 22.3	1.579	2.563	0.5	18.8
12 27	5 32.31	+15 22.0	1.824	2.787	5.1	21.9	12 27	5 31.51	+23 53.6	1.595	2.565	4.5	19.2
1 6	5 22.72	+15 28.3	1.867	2.785	8.8	22.1	1 6	5 21.33	+23 23.1	1.640	2.567	9.1	19.4
1 16	5 15.12	+15 40.7	1.936	2.783	12.4	22.3	1 16	5 13.63	+22 54.2	1.710	2.569	13.2	19.7
1 26	5 10.14	+15 58.8	2.027	2.780	15.4	22.5	1 26	5 9.02	+22 29.7	1.802	2.569	16.5	19.9
52149	1074 T- ₁		12 17.7	167°09	2°4/17.9	18	219999	2002 PP ₂₆		12 17.7	158°88	3°0/17.6	18
11 17	6 6.73	+31 50.5	2.794	3.629	9.5	20.0	11 17	6 11.22	+15 42.4	1.772	2.619	13.6	21.9
11 27	6 0.13	+32 4.0	2.722	3.632	7.0	19.8	11 27	6 3.74	+15 29.1	1.708	2.625	9.9	21.7
12 7	5 51.95	+32 11.3	2.677	3.634	4.2	19.6	12 7	5 54.04	+15 21.2	1.670	2.632	5.8	21.5
12 17	5 42.88	+32 10.7	2.661	3.637	2.4	19.5	12 17	5 43.08	+15 19.2	1.659	2.637	3.0	21.3
12 27	5 33.78	+32 1.7	2.677	3.639	3.8	19.6	12 27	5 32.11	+15 23.5	1.678	2.642	5.3	21.5
1 6	5 25.52	+31 45.5	2.723	3.641	6.4	19.8	1 6	5 22.37	+15 34.2	1.726	2.646	9.3	21.7
1 16	5 18.80	+31 24.2	2.796	3.642	9.0	19.9	1 16	5 14.83	+15 51.1	1.799	2.650	13.0	22.0
1 26	5 14.13	+31 0.5	2.894	3.644	11.3	20.1	1 26	5 10.10	+16 13.5	1.894	2.652	16.1	22.2
407651	2011 GJ ₅₆		12 17.7	280°58	0°5/17.7	18	368281	2002 MY ₅		12 17.7	146°91	1°5/17.9	17
11 17	6 5.86	+20 14.9	2.326	3.175	10.7	20.6	11 17	6 7.26	+29 20.7	2.662	3.501	9.8	21.9
11 27	5 59.82	+20 41.5	2.240	3.161	7.6	20.4	11 27	6 0.47	+29 15.9	2.593	3.508	7.0	21.7
12 7	5 51.93	+21 10.7	2.180	3.147	4.1	20.2	12 7	5 52.13	+29 5.5	2.552	3.515	4.0	21.5
12 17	5 42.88	+21 41.2	2.150	3.133	0.6	19.9	12 17	5 42.95	+28 48.8	2.541	3.522	1.5	21.4
12 27	5 33.60	+22 11.6	2.150	3.120	3.6	20.1	12 27	5 33.81	+28 26.0	2.561	3.528	3.4	21.5
1 6	5 25.04	+22 41.0	2.180	3.106	7.3	20.3	1 6	5 25.58	+27 58.7	2.611	3.534	6.4	21.7
1 16	5 18.08	+23 9.4	2.237	3.092	10.6	20.5	1 16	5 18.95	+27 29.3	2.690	3.540	9.2	21.9
1 26	5 13.33	+23 37.1	2.318	3.078	13.4	20.6	1 26	5 14.38	+27 0.1	2.792	3.545	11.6	22.1
316680	1995 UM ₂₀		12 17.7	92°21	0°6/17.8	18	302587	2002 PB ₁₉₆		12 17.7	31°18	6°2/17.6	18
11 17	6 7.76	+25 16.7	2.026	2.878	11.9	21.5	11 17	6 6.20	+9 10.4	1.493	2.345	15.4	20.6
11 27	6 1.17	+25 20.1	1.963	2.885	8.4	21.2	11 27	6 0.40	+8 40.0	1.440	2.352	11.7	20.4
12 7	5 52.59	+25 20.8	1.926	2.893	4.5	21.0	12 7	5 52.32	+8 23.0	1.410	2.360	8.1	20.2
12 17	5 42.92	+25 17.4	1.917	2.901	0.7	20.8	12 17	5 42.97	+8 22.1	1.404	2.369	6.2	20.1
12 27	5 33.27	+25 9.9	1.938	2.908	3.9	21.0	12 27	5 33.65	+8 38.0	1.426	2.377	7.7	20.2
1 6	5 24.74	+24 59.5	1.988	2.916	7.8	21.3	1 6	5 25.64	+9 9.5	1.473	2.387	11.1	20.4
1 16	5 18.18	+24 48.2	2.065	2.923	11.2	21.5	1 16	5 19.90	+9 53.6	1.543	2.397	14.6	20.7
1 26	5 14.16	+24 37.8	2.164	2.931	14.1	21.7	1 26	5 17.03	+10 46.7	1.634	2.407	17.7	20.9
77794	2001 QV ₅₄		12 17.7	76°25	1°3/17.8	17	298067	2002 QM ₉₈		12 17.7	24°81	2°9/17.9	17
11 17	6 6.08	+26 46.9	2.350	3.198	10.6	19.4	11 17	6 8.99	+29 35.6	1.379	2.245	15.6	20.2
11 27	5 59.83	+27 6.3	2.285	3.205	7.6	19.2	11 27	6 2.80	+29 54.1	1.326	2.252	11.3	20.0
12 7	5 51.84	+27 22.5	2.247	3.213	4.2	19.0	12 7	5 53.74	+30 4.8	1.295	2.261	6.5	19.7
12 17	5 42.87	+27 34.0	2.238	3.220	1.3	18.8	12 17	5 43.06	+30 4.3	1.290	2.270	2.9	19.5
12 27	5 33.88	+27 39.9	2.259	3.228	3.6	19.0	12 27	5 32.46	+29 52.1	1.312	2.280	5.6	19.7
1 6	5 25.81	+27 40.8	2.310	3.235	7.0	19.2	1 6	5 23.56	+29 30.6	1.359	2.291	10.2	20.0
1 16	5 19.45	+27 38.2	2.388	3.243	10.0	19.4	1 16	5 17.54	+29 4.3	1.430	2.303	14.4	20.3
1 26	5 15.33	+27 34.1	2.489	3.250	12.6	19.6	1 26	5 15.01	+28 37.5	1.521	2.315	17.9	20.6
160656	1999 XU ₁₁₆		12 17.7	28°96	1°3/17.8	18	127333	2002 JQ ₁₁₁		12 17.7	190°95	0°7/17.8	18
11 17	6 8.79	+26 59.3	1.058	1.939	18.0	18.0	11 17	6 6.97	+26 33.1	2.399	3.244	10.5	19.9
11 27	6 2.76	+26 46.0	1.026	1.961	12.7	17.8	11 27	6 0.44	+26 23.0	2.324	3.244	7.5	19.7
12 7	5 53.62	+26 26.0	1.014	1.985	6.8	17.5	12 7	5 52.19	+26 8.9	2.276	3.243	4.1	19.5
12 17	5 42.98	+25 58.6	1.026	2.010	1.4	17.3	12 17	5 42.96	+25 50.1	2.258	3.241	0.8	19.3
12 27	5 32.83	+25 25.8	1.063	2.036	5.6	17.6	12 27	5 33.72	+25 27.1	2.271	3.240	3.5	19.5
1 6	5 24.89	+24 51.6	1.124	2.063	11.0	18.0	1 6	5 25.40	+25 1.5	2.313	3.238	7.0	19.7
1 16	5 20.21	+24 20.4	1.208	2.092	15.6	18.4	1 16	5 18.77	+24 35.5	2.383	3.237	10.1	19.9
1 26	5 19.23	+23 54.9	1.310	2.121	19.3	18.7	1 26	5 14.37	+24 11.3	2.476	3.235	12.7	20.1
481969	2009 EM ₂₀		12 17.7	178°17	6°3/18.2	18	127462	2002 QY ₄₉		12 17.7	287°93	3°1/17.8	18
11 17	6 14.81	+43 23.3	2.502	3.301	11.6	21.6	11 17</						

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12 17.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
123797	2001 <i>BV</i> ₄₃		12 17.7 341°47	3°8/18.2	17		199604	2006 <i>FN</i> ₂₆		12 17.7 252°34	0°4/17.7	18	
11 17	6 8.79	+34 31.2	1.987	2.829	12.5	19.6	11 17	6 5.67	+21 39.8	2.509	3.355	10.1	20.4
11 27	6 2.17	+34 41.8	1.916	2.827	9.4	19.4	11 27	5 59.58	+21 45.0	2.422	3.342	7.2	20.2
12 7	5 53.27	+34 41.8	1.869	2.824	6.0	19.2	12 7	5 51.80	+21 50.6	2.361	3.328	3.9	19.9
12 17	5 43.04	+34 28.6	1.850	2.822	3.9	19.0	12 17	5 42.99	+21 55.8	2.331	3.314	0.5	19.6
12 27	5 32.78	+34 1.6	1.860	2.820	5.3	19.1	12 27	5 34.02	+22 0.4	2.331	3.300	3.4	19.9
1 6	5 23.77	+33 23.4	1.898	2.818	8.6	19.3	1 6	5 25.76	+22 4.6	2.361	3.286	6.9	20.1
1 16	5 16.98	+32 38.3	1.961	2.817	11.9	19.5	1 16	5 19.00	+22 9.1	2.419	3.271	10.0	20.2
1 26	5 13.05	+31 51.1	2.047	2.815	14.7	19.7	1 26	5 14.30	+22 14.9	2.500	3.257	12.7	20.4
409633	2005 <i>WX</i> ₁₅₆		12 17.7 287°62	0°8/17.7	17		443255	2014 <i>EY</i> ₆		12 17.7 136°48	3°5/17.6	18	
11 17	6 7.73	+23 43.4	2.065	2.917	11.8	20.5	11 17	6 8.50	+12 41.0	2.251	3.086	11.5	21.9
11 27	6 1.33	+24 22.6	1.990	2.912	8.4	20.3	11 27	6 1.40	+12 24.5	2.192	3.101	8.5	21.7
12 7	5 52.83	+25 2.3	1.940	2.907	4.5	20.1	12 7	5 52.66	+12 14.5	2.160	3.115	5.4	21.6
12 17	5 43.02	+25 39.7	1.919	2.903	0.8	19.8	12 17	5 43.05	+12 11.9	2.157	3.128	3.5	21.5
12 27	5 33.00	+26 12.7	1.928	2.898	4.0	20.0	12 27	5 33.49	+12 17.1	2.185	3.141	5.0	21.6
1 6	5 23.91	+26 40.5	1.967	2.893	7.9	20.2	1 6	5 24.91	+12 29.9	2.242	3.153	8.0	21.8
1 16	5 16.71	+27 3.7	2.032	2.889	11.4	20.4	1 16	5 18.02	+12 49.6	2.326	3.165	10.9	22.0
1 26	5 12.07	+27 23.6	2.119	2.884	14.4	20.6	1 26	5 13.31	+13 15.1	2.433	3.175	13.4	22.2
304095	2006 <i>HT</i> ₃₆		12 17.7 172°83	1°6/17.5	18		433404	2013 <i>TT</i> ₂₉		12 17.7 26°42	2°0/17.8	18	
11 17	6 8.64	+18 43.1	2.365	3.207	10.8	22.1	11 17	6 10.87	+26 52.3	1.118	1.994	17.7	21.0
11 27	6 1.54	+18 27.1	2.294	3.211	7.7	21.9	11 27	6 4.60	+27 12.0	1.067	2.000	12.7	20.7
12 7	5 52.76	+18 12.7	2.250	3.214	4.3	21.7	12 7	5 54.91	+27 26.5	1.036	2.006	7.0	20.4
12 17	5 43.02	+18 0.0	2.235	3.217	1.7	21.5	12 17	5 43.20	+27 32.0	1.030	2.013	2.1	20.1
12 27	5 33.28	+17 49.8	2.252	3.218	3.9	21.7	12 27	5 31.54	+27 27.5	1.049	2.020	6.0	20.4
1 6	5 24.44	+17 42.7	2.300	3.219	7.3	21.9	1 6	5 21.89	+27 15.1	1.092	2.028	11.6	20.7
1 16	5 17.27	+17 39.6	2.374	3.220	10.4	22.1	1 16	5 15.64	+26 59.1	1.157	2.037	16.4	21.0
1 26	5 12.28	+17 41.0	2.472	3.219	13.0	22.3	1 26	5 13.45	+26 43.7	1.240	2.047	20.4	21.3
439100	2011 <i>SN</i> ₃₀		12 17.7 59°66	4°4/17.1	17		278225	Didierpelat		12 17.7 198°50	3°4/17.5	18	
11 17	6 11.03	+15 11.3	1.515	2.369	15.1	20.6	11 17	6 9.36	+14 59.5	1.798	2.647	13.4	21.6
11 27	6 3.41	+14 4.6	1.483	2.402	10.9	20.4	11 27	6 2.51	+14 39.8	1.727	2.645	9.8	21.3
12 7	5 53.70	+13 4.6	1.475	2.434	6.7	20.3	12 7	5 53.46	+14 25.7	1.681	2.642	5.9	21.1
12 17	5 43.09	+12 14.8	1.494	2.467	4.4	20.2	12 17	5 43.11	+14 18.5	1.663	2.639	3.4	20.9
12 27	5 32.93	+11 38.1	1.542	2.499	6.5	20.4	12 27	5 32.66	+14 19.0	1.674	2.636	5.5	21.1
1 6	5 24.41	+11 15.6	1.617	2.532	10.2	20.7	1 6	5 23.32	+14 27.3	1.713	2.632	9.4	21.3
1 16	5 18.33	+11 7.1	1.716	2.564	13.6	21.0	1 16	5 16.06	+14 43.2	1.777	2.628	13.1	21.5
1 26	5 15.10	+11 10.7	1.835	2.596	16.5	21.3	1 26	5 11.53	+15 5.9	1.862	2.623	16.3	21.7
491458	2012 <i>GC</i> ₁₆		12 17.7 125°53	2°4/17.8	17		91205	1998 <i>US</i> ₄₃		12 17.7 68°16	0°2/17.5	16	
11 17	6 5.25	+14 34.1	2.441	3.282	10.5	21.1	11 17	5 45.10	+16 7.2	36.986	37.825	0.8	23.9
11 27	5 59.14	+14 44.0	2.374	3.288	7.6	20.9	11 27	5 44.28	+16 5.7	36.915	37.828	0.6	23.8
12 7	5 51.49	+14 59.5	2.333	3.293	4.5	20.7	12 7	5 43.37	+16 4.4	36.872	37.832	0.3	23.8
12 17	5 42.96	+15 20.3	2.322	3.299	2.4	20.6	12 17	5 42.43	+16 3.4	36.860	37.836	0.2	23.8
12 27	5 34.38	+15 46.0	2.342	3.305	4.1	20.7	12 27	5 41.49	+16 2.8	36.878	37.840	0.3	23.8
1 6	5 26.59	+16 15.6	2.391	3.310	7.1	20.9	1 6	5 40.58	+16 2.6	36.927	37.843	0.5	23.8
1 16	5 20.29	+16 48.4	2.468	3.316	10.0	21.1	1 16	5 39.74	+16 2.7	37.004	37.847	0.8	23.9
1 26	5 15.99	+17 23.6	2.568	3.321	12.5	21.3	1 26	5 39.00	+16 3.1	37.108	37.851	1.0	23.9
515576	2014 <i>HW</i> ₁₅₁		12 17.7 126°98	5°6/17.6	18		446634	2015 <i>MC</i> ₁₁₆		12 17.7 119°34	1°0/17.0	15	
11 17	6 7.72	+ 8 28.1	1.843	2.680	13.6	21.5	11 17	6 12.13	+27 50.4	1.981	2.826	12.5	21.8
11 27	6 1.17	+ 8 2.3	1.784	2.687	10.4	21.3	11 27	6 4.17	+27 27.5	1.924	2.842	8.8	21.6
12 7	5 52.65	+ 7 48.2	1.748	2.694	7.3	21.1	12 7	5 54.18	+26 58.1	1.892	2.857	4.8	21.4
12 17	5 43.04	+ 7 47.9	1.740	2.701	5.6	21.0	12 17	5 43.16	+26 22.0	1.899	2.872	1.1	21.1
12 27	5 33.43	+ 8 1.9	1.761	2.708	6.9	21.1	12 27	5 32.35	+25 40.4	1.917	2.887	4.0	21.4
1 6	5 24.92	+ 8 29.4	1.809	2.714	9.9	21.3	1 6	5 22.91	+24 56.6	1.975	2.901	7.9	21.7
1 16	5 18.35	+ 9 8.2	1.881	2.720	13.0	21.5	1 16	5 15.66	+24 13.9	2.059	2.914	11.4	21.9
1 26	5 14.31	+ 9 55.5	1.976	2.726	15.8	21.7	1 26	5 11.12	+23 35.5	2.167	2.927	14.3	22.1
214907	2007 <i>TU</i> ₁₆₀		12 17.7 44°95	4°1/18.1	17		231169	2005 <i>UT</i> ₁₁₃		12 17.7 17°94	1°0/17.7	18	
11 17	6 12.84	+32 21.6	1.317	2.178	16.5	19.7	11 17	6 6.91	+22 21.2	1.044	1.928	17.9	20.0
11 27	6 5.38	+32 45.2	1.283	2.205	12.0	19.5	11 27	6 1.71	+22 3.8	0.998	1.935	12.7	19.8
12 7	5 55.00	+32 56.7	1.272	2.233	7.3	19.3	12 7	5 53.31	+21 46.2	0.972	1.944	6.8	19.5
12 17	5 43.18	+32 52.4	1.285	2.262	4.1	19.2	12 17	5 43.11	+21 28.4	0.970	1.953	1.1	19.1
12 27	5 31.82	+32 32.3	1.326	2.291	6.2	19.4	12 27	5 33.06	+21 11.7	0.992	1.964	5.9	19.5
1 6	5 22.55	+32 0.5	1.392	2.320	10.4	19.7	1 6	5 24.98	+20 58.4	1.037	1.977	11.6	19.9
1 16	5 16.44	+31 22.9	1.481	2.350	14.2	20.0	1 16	5 20.10	+20 50.4	1.104	1.991	16.5	20.2
1 26	5 13.94	+30 44.9	1.591	2.379	17.4	20.3	1 26	5 19.02	+20 48.9	1.189	2.006	20.5	20.5
20223	1997 <i>HK</i> ₁₆		12 17.7 61°58	0°7/17.8	18		444560	2006 <i>SX</i> ₃₄₅		12 17.7 22°89	6°6/16.8	18	
11 17	6 7.48	+25 10.5	1.950	2.804	12.2	18.0	11 17	6 5.73	+10 22.6	1.490	2.346	15.2	20.4
11 27	6 1.04	+25 15.3	1.890	2.813	8.6	17.8	11 27	6 0.05	+ 9 8.0	1.438	2.352	11.6	20.2
12 7	5 52.59	+25 17.3	1.856	2.823	4.6	17.6	12 7	5 52.15	+ 8 4.0	1.409	2.359	8.2	20.0
12 17	5 43.04	+25 15.4	1.850	2.833	0.7	17.3	12 17	5 43.04	+ 7 15.3	1.406	2.367	6.6	19.9
12 27	5 33.52	+25 9.4	1.873	2.844	4.0	17.6	12 27	5 34.01	+ 6 45.6	1.429	2.376	8.3	20.0
1 6	5 25.16	+25 0.6	1.925	2.854	7.9	17.9	1 6	5 26.31	+ 6 35.8	1.477	2.385	11.6	20.2
1 16	5 18.84	+24 50.7	2.003	2.864	11.4	18.1	1 16	5 20.87	+ 6 44.3	1.549	2.395	15.0	20.5
1 26	5 15.09	+24 41.8	2.104	2.874	14.3	18.3	1 26	5 18.24	+ 7 7.8	1.639	2.405	17.9	20.7
341974	2008 <i>QZ</i> ₃₀		12 17.7 79°52	2°3/17.5	18		53487	2000 <i>AQ</i> ₅₉		12 17.7 191°35	1°8/17		

EPHEMERIDES

12 17.7

12 17.7

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
10129	Fole		12 17.7	58°23	0°8/17.8	18	233236	2005 YX ₆₁		12 17.7	234°05	0°3/17.8	18
11 17	6 12.51	+24 19.1	1.189	2.060	17.2	17.7	11 17	6 10.49	+23 42.0	1.838	2.690	13.0	21.1
11 27	6 5.58	+24 35.6	1.137	2.068	12.2	17.4	11 27	6 3.52	+23 51.2	1.758	2.681	9.3	20.9
12 7	5 55.38	+24 50.3	1.107	2.076	6.6	17.1	12 7	5 54.14	+23 59.3	1.704	2.671	5.0	20.6
12 17	5 43.30	+25 0.1	1.101	2.085	0.9	16.7	12 17	5 43.26	+24 4.5	1.677	2.661	0.4	20.2
12 27	5 31.26	+25 3.7	1.122	2.094	5.6	17.1	12 27	5 32.15	+24 6.0	1.680	2.650	4.3	20.5
1 6	5 21.15	+25 2.5	1.168	2.103	11.2	17.4	1 6	5 22.13	+24 4.6	1.712	2.639	8.8	20.8
1 16	5 14.28	+24 59.5	1.236	2.112	16.0	17.8	1 16	5 14.31	+24 2.0	1.769	2.628	12.8	21.0
1 26	5 11.33	+24 57.5	1.324	2.121	19.8	18.0	1 26	5 9.39	+24 0.4	1.848	2.616	16.1	21.2
152342	2005 UP ₇₃		12 17.7	52°80	0°5/17.8	18	268719	2006 HS ₇₀		12 17.7	320°54	1°4/17.7	17
11 17	6 7.61	+24 19.3	1.897	2.753	12.5	19.9	11 17	6 5.32	+19 28.5	2.147	2.999	11.3	20.9
11 27	6 1.26	+24 31.8	1.834	2.758	8.8	19.7	11 27	5 59.47	+19 22.1	2.074	2.996	8.1	20.7
12 7	5 52.79	+24 42.8	1.796	2.764	4.7	19.5	12 7	5 51.81	+19 17.5	2.027	2.994	4.5	20.5
12 17	5 43.12	+24 50.5	1.786	2.770	0.6	19.2	12 17	5 43.09	+19 14.7	2.009	2.991	1.4	20.3
12 27	5 33.42	+24 54.5	1.805	2.776	4.1	19.5	12 27	5 34.29	+19 14.0	2.020	2.988	4.0	20.5
1 6	5 24.87	+24 55.3	1.853	2.782	8.1	19.7	1 6	5 26.40	+19 15.7	2.060	2.986	7.7	20.7
1 16	5 18.38	+24 54.5	1.927	2.789	11.7	20.0	1 16	5 20.21	+19 20.4	2.126	2.983	11.0	20.9
1 26	5 14.54	+24 53.8	2.023	2.795	14.8	20.2	1 26	5 16.30	+19 28.5	2.215	2.981	13.8	21.1
411138	2009 WG ₂₃₇		12 17.7	261°99	3°2/17.7	18	523133	2016 SH ₅₄		12 17.7	149°78	4°8/17.5	18
11 17	6 8.55	+31 55.2	2.378	3.217	10.9	21.1	11 17	6 14.38	+31 56.6	1.527	2.378	15.2	21.2
11 27	6 1.91	+32 36.8	2.293	3.204	8.0	20.9	11 27	6 6.88	+33 8.5	1.463	2.379	11.3	21.0
12 7	5 53.20	+33 12.9	2.234	3.190	5.1	20.7	12 7	5 56.18	+34 13.2	1.423	2.380	7.2	20.8
12 17	5 43.16	+33 40.0	2.204	3.177	3.2	20.5	12 17	5 43.43	+35 3.4	1.410	2.382	4.8	20.6
12 27	5 32.84	+33 56.1	2.204	3.163	4.7	20.6	12 27	5 30.40	+35 34.6	1.424	2.383	6.9	20.8
1 6	5 23.36	+34 1.1	2.233	3.149	7.7	20.8	1 6	5 18.92	+35 46.9	1.466	2.384	10.8	21.0
1 16	5 15.68	+33 57.3	2.289	3.135	10.8	21.0	1 16	5 10.41	+35 44.4	1.531	2.385	14.7	21.2
1 26	5 10.47	+33 47.7	2.368	3.120	13.4	21.1	1 26	5 5.70	+35 33.3	1.617	2.386	18.0	21.5
490168	2008 UG ₂₅₀		12 17.7	151°07	3°8/17.8	17	12605	1999 SK		12 17.7	105°07	1°1/17.7	18
11 17	6 9.41	+36 16.2	2.890	3.711	9.7	22.5	11 17	6 9.60	+20 31.4	1.767	2.621	13.3	19.0
11 27	6 2.16	+37 0.8	2.823	3.719	7.3	22.3	11 27	6 2.67	+20 27.1	1.709	2.632	9.4	18.8
12 7	5 53.17	+37 37.3	2.783	3.726	5.1	22.2	12 7	5 53.56	+20 24.0	1.675	2.643	5.1	18.6
12 17	5 43.16	+38 2.6	2.773	3.734	3.8	22.1	12 17	5 43.24	+20 21.7	1.670	2.653	1.2	18.3
12 27	5 33.05	+38 15.3	2.794	3.740	4.8	22.2	12 27	5 32.97	+20 20.2	1.694	2.663	4.4	18.6
1 6	5 23.78	+38 15.9	2.845	3.746	6.9	22.4	1 6	5 23.98	+20 20.3	1.746	2.673	8.7	18.8
1 16	5 16.15	+38 6.6	2.923	3.752	9.2	22.5	1 16	5 17.18	+20 22.9	1.823	2.683	12.4	19.1
1 26	5 10.69	+37 50.9	3.025	3.758	11.2	22.7	1 26	5 13.15	+20 28.9	1.923	2.692	15.5	19.3
458380	2010 WY ₃₃		12 17.7	294°11	0°4/17.7	17	92769	2000 QZ ₁₂₆		12 17.7	134°41	3°4/17.6	18
11 17	6 7.39	+23 26.0	1.999	2.852	12.0	21.6	11 17	6 9.72	+14 23.1	1.823	2.669	13.3	20.2
11 27	6 1.13	+23 49.1	1.925	2.848	8.5	21.4	11 27	6 2.65	+14 9.5	1.764	2.679	9.7	20.0
12 7	5 52.77	+24 12.0	1.876	2.844	4.6	21.1	12 7	5 53.52	+14 2.6	1.729	2.689	5.9	19.8
12 17	5 43.13	+24 33.0	1.856	2.840	0.5	20.8	12 17	5 43.24	+14 3.0	1.722	2.698	3.4	19.7
12 27	5 33.33	+24 50.5	1.866	2.836	4.0	21.1	12 27	5 32.98	+14 11.0	1.745	2.707	5.4	19.8
1 6	5 24.51	+25 4.6	1.904	2.832	8.0	21.3	1 6	5 23.90	+14 26.4	1.796	2.715	9.1	20.0
1 16	5 17.62	+25 16.1	1.968	2.828	11.6	21.5	1 16	5 16.90	+14 48.5	1.872	2.722	12.6	20.3
1 26	5 13.32	+25 26.6	2.055	2.824	14.7	21.7	1 26	5 12.54	+15 16.3	1.971	2.730	15.5	20.5
373585	2002 AY ₁₇₄		12 17.7	28°95	1°5/17.7	18	405617	2005 SH ₁₈₈		12 17.7	342°87	1°2/17.7	17
11 17	6 3.87	+17 34.3	2.411	3.260	10.4	20.2	11 17	6 6.79	+20 23.3	1.908	2.764	12.4	21.7
11 27	5 58.26	+17 43.5	2.343	3.263	7.4	20.1	11 27	6 0.68	+20 17.0	1.839	2.762	8.8	21.4
12 7	5 51.09	+17 56.1	2.302	3.266	4.2	19.9	12 7	5 52.53	+20 12.0	1.794	2.761	4.8	21.2
12 17	5 43.02	+18 11.9	2.289	3.270	1.6	19.7	12 17	5 43.17	+20 8.0	1.777	2.760	1.2	20.9
12 27	5 34.90	+18 30.4	2.306	3.274	3.7	19.8	12 27	5 33.74	+20 5.3	1.790	2.759	4.2	21.1
1 6	5 27.57	+18 51.2	2.353	3.278	6.9	20.1	1 6	5 25.37	+20 4.5	1.831	2.759	8.3	21.4
1 16	5 21.73	+19 13.9	2.428	3.282	9.9	20.2	1 16	5 18.95	+20 6.5	1.898	2.758	12.0	21.6
1 26	5 17.88	+19 38.4	2.525	3.286	12.4	20.4	1 26	5 15.10	+20 12.1	1.986	2.757	15.0	21.8
489168	2006 FU ₂₈		12 17.7	88°40	6°1/17.9	17	81160	2000 EU ₁₅₄		12 17.7	85°44	7°5/18.4	18
11 17	6 11.65	+41 26.4	2.361	3.174	11.8	21.4	11 17	6 8.00	+ 1 14.9	1.946	2.756	14.1	18.6
11 27	6 4.18	+42 27.2	2.303	3.185	9.4	21.2	11 27	6 1.18	+ 1 0.5	1.901	2.779	11.3	18.5
12 7	5 54.40	+43 15.1	2.270	3.195	7.2	21.1	12 7	5 52.62	+ 1 3.7	1.881	2.801	8.8	18.4
12 17	5 43.25	+43 45.3	2.265	3.205	6.2	21.1	12 17	5 43.18	+ 1 26.3	1.886	2.823	7.5	18.4
12 27	5 32.01	+43 55.7	2.288	3.215	6.9	21.1	12 27	5 33.87	+ 2 7.9	1.920	2.845	8.2	18.5
1 6	5 21.94	+43 47.5	2.339	3.225	8.9	21.3	1 6	5 25.67	+ 3 5.7	1.981	2.866	10.3	18.6
1 16	5 14.07	+43 24.6	2.415	3.235	11.2	21.5	1 16	5 19.32	+ 4 15.6	2.068	2.887	12.8	18.8
1 26	5 9.05	+42 52.3	2.514	3.245	13.3	21.6	1 26	5 15.32	+ 5 33.1	2.176	2.908	15.0	19.0
82428	2001 NV ₂₁		12 17.7	161°72	1°2/17.7	18	457262	2008 RO ₃₂		12 17.7	41°15	6°6/18.5	16
11 17	6 11.21	+19 46.9	1.937	2.784	12.6	20.3	11 17	6 11.17	+41 19.9	1.938	2.762	13.6	21.2
11 27	6 3.70	+19 46.8	1.871	2.791	9.0	20.1	11 27	6 4.05	+42 0.4	1.885	2.775	10.7	21.1
12 7	5 54.07	+19 48.4	1.830	2.796	4.9	19.9	12 7	5 54.38	+42 25.1	1.856	2.788	8.1	20.9
12 17	5 43.24	+19 51.0	1.819	2.802	1.3	19.6	12 17	5 43.30	+42 29.5	1.854	2.802	6.6	20.9
12 27	5 32.38	+19 54.5	1.838	2.806	4.3	19.8	12 27	5 32.31	+42 12.4	1.879	2.816	7.4	21.0
1 6	5 22.67	+19 59.3	1.886	2.810	8.4	20.1	1 6	5 22.86	+41 36.6	1.930	2.830	9.7	21.1
1 16	5 15.04	+20 6.2	1.960	2.813	12.0	20.3	1 16	5 15.99	+40 47.7	2.007	2.845	12.4	21.3
1 26	5 10.07	+20 15.9	2.057	2.815	15.0	20.5	1 26	5 12.28	+39 52.2	2.104	2.860	14.8	21.5
261768	2006 BZ ₆₇		12 17.7	10°55	0°2/17.8	17	447922	2007 YX ₆₉		12 17.7	291°39	0°7/17.7	17
11 17	6 6.09	+23 38.6	1.639	2.503	13.6	20.2	11 17</						

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12 17.7

12 17.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
420958	2013 <i>PX</i> ₉		12 17.7 312°64	3°7/18.2	18		347463	2012 <i>TR</i> ₃₀₉		12 17.8 115°13	0°5/17.8	18	
11 17	6 7.93	+34 39.0	2.213	3.051	11.6	21.2	11 17	6 13.05	+24 54.1	1.844	2.691	13.1	21.6
11 27	6 1.50	+34 53.9	2.137	3.045	8.7	21.0	11 27	6 4.98	+24 55.7	1.791	2.712	9.3	21.4
12 7	5 52.97	+34 59.3	2.085	3.039	5.7	20.8	12 7	5 54.74	+24 54.1	1.765	2.731	4.9	21.2
12 17	5 43.21	+34 52.6	2.062	3.033	3.7	20.6	12 17	5 43.36	+24 48.0	1.767	2.750	0.6	20.9
12 27	5 33.36	+34 33.1	2.069	3.027	5.0	20.7	12 27	5 32.17	+24 37.5	1.799	2.769	4.2	21.3
1 6	5 24.58	+34 2.5	2.103	3.022	8.0	20.9	1 6	5 22.38	+24 24.2	1.860	2.786	8.3	21.5
1 16	5 17.79	+33 24.6	2.165	3.016	11.1	21.1	1 16	5 14.90	+24 10.4	1.948	2.803	11.9	21.8
1 26	5 13.61	+32 43.5	2.248	3.011	13.7	21.2	1 26	5 10.27	+23 58.5	2.058	2.820	14.9	22.0
10535	1991 <i>RB</i> ₁		12 17.7 75°22	0°8/17.7	18		257538	1998 <i>FO</i> ₁₄₈		12 17.8 6°67	3°2/17.7	18	
11 17	6 8.79	+22 24.5	1.866	2.720	12.7	17.6	11 17	6 5.93	+15 18.1	1.670	2.528	13.7	20.3
11 27	6 1.92	+22 2.0	1.814	2.737	9.0	17.4	11 27	6 0.24	+15 5.8	1.606	2.528	10.0	20.1
12 7	5 53.07	+21 38.4	1.787	2.755	4.8	17.2	12 7	5 52.37	+15 0.2	1.566	2.529	6.0	19.9
12 17	5 43.21	+21 14.0	1.789	2.772	0.8	16.9	12 17	5 43.21	+15 2.0	1.553	2.531	3.2	19.7
12 27	5 33.53	+20 50.0	1.820	2.790	4.1	17.2	12 27	5 33.98	+15 11.5	1.568	2.532	5.5	19.8
1 6	5 25.12	+20 28.2	1.880	2.807	8.2	17.5	1 6	5 25.90	+15 28.5	1.609	2.535	9.4	20.1
1 16	5 18.81	+20 10.3	1.966	2.825	11.7	17.7	1 16	5 19.93	+15 52.2	1.675	2.537	13.2	20.3
1 26	5 15.10	+19 57.5	2.074	2.842	14.6	18.0	1 26	5 16.69	+16 21.5	1.763	2.540	16.4	20.5
493754	2015 <i>TV</i> ₂₇₄		12 17.7 353°50	7°3/16.7	17		30919	1993 <i>NV</i> ₁		12 17.8 79°66	1°2/17.9	18	
11 17	6 5.78	+7 39.3	1.636	2.480	14.7	21.6	11 17	6 14.02	+26 40.3	1.509	2.364	15.1	19.2
11 27	6 0.08	+6 27.5	1.574	2.478	11.5	21.4	11 27	6 5.92	+26 40.0	1.466	2.390	10.7	19.0
12 7	5 52.24	+5 27.4	1.535	2.476	8.6	21.2	12 7	5 55.29	+26 34.2	1.448	2.415	5.8	18.8
12 17	5 43.16	+4 43.9	1.522	2.475	7.3	21.1	12 17	5 43.41	+26 21.4	1.457	2.440	1.3	18.5
12 27	5 34.05	+4 20.5	1.536	2.474	8.7	21.2	12 27	5 31.88	+26 2.1	1.494	2.465	4.8	18.8
1 6	5 26.07	+4 17.8	1.576	2.474	11.7	21.4	1 6	5 22.13	+25 38.9	1.559	2.489	9.3	19.2
1 16	5 20.17	+4 34.3	1.639	2.473	14.8	21.6	1 16	5 15.15	+25 15.3	1.649	2.513	13.3	19.5
1 26	5 16.95	+5 6.3	1.721	2.474	17.7	21.8	1 26	5 11.43	+24 54.6	1.760	2.536	16.5	19.7
209846	2005 <i>GY</i> ₂₀₂		12 17.7 0°05	6°8/17.2	18		204439	2004 <i>X7</i> ₈₁		12 17.8 18°28	0°4/17.7	18	
11 17	6 5.86	+8 54.5	1.494	2.346	15.4	20.2	11 17	6 8.13	+22 39.5	1.323	2.194	15.8	19.5
11 27	6 0.31	+8 4.5	1.434	2.345	11.9	20.0	11 27	6 2.26	+22 38.6	1.267	2.198	11.2	19.2
12 7	5 52.43	+7 27.1	1.396	2.344	8.5	19.8	12 7	5 53.60	+22 37.4	1.233	2.203	6.0	18.9
12 17	5 43.18	+7 6.2	1.383	2.344	6.8	19.7	12 17	5 43.31	+22 34.9	1.225	2.209	0.5	18.6
12 27	5 33.88	+7 4.1	1.396	2.344	8.3	19.8	12 27	5 33.03	+22 31.0	1.243	2.215	5.1	18.9
1 6	5 25.82	+7 20.6	1.435	2.345	11.7	19.9	1 6	5 24.34	+22 26.9	1.287	2.222	10.3	19.2
1 16	5 20.00	+7 53.3	1.497	2.346	15.2	20.2	1 16	5 18.40	+22 24.5	1.354	2.230	14.8	19.5
1 26	5 17.08	+8 38.5	1.578	2.348	18.3	20.4	1 26	5 15.89	+22 25.4	1.441	2.239	18.5	19.8
219501	2001 <i>FL</i> ₁₅₆		12 17.8 193°62	2°9/17.9	18		426312	2012 <i>TA</i> ₂₁₅		12 17.8 149°93	1°1/17.8	18	
11 17	6 13.85	+30 16.1	1.743	2.589	13.8	21.2	11 17	6 12.63	+25 54.4	1.886	2.733	12.9	22.1
11 27	6 6.07	+30 40.9	1.671	2.588	10.1	20.9	11 27	6 4.85	+26 11.5	1.822	2.742	9.2	21.9
12 7	5 55.57	+30 58.5	1.624	2.586	6.0	20.7	12 7	5 54.78	+26 25.4	1.784	2.750	5.0	21.7
12 17	5 43.42	+31 5.1	1.605	2.583	3.0	20.5	12 17	5 43.39	+26 33.6	1.775	2.758	1.2	21.4
12 27	5 31.13	+30 59.1	1.615	2.580	5.3	20.6	12 27	5 32.00	+26 35.2	1.796	2.765	4.3	21.7
1 6	5 20.22	+30 42.2	1.653	2.577	9.4	20.9	1 6	5 21.89	+26 31.3	1.846	2.771	8.4	21.9
1 16	5 11.87	+30 18.4	1.717	2.573	13.3	21.1	1 16	5 14.04	+26 24.2	1.922	2.777	12.1	22.2
1 26	5 6.82	+29 52.5	1.802	2.568	16.5	21.3	1 26	5 9.07	+26 16.6	2.020	2.782	15.1	22.4
196077	2002 <i>TT</i> ₇₉		12 17.8 84°03	7°1/17.6	18		398526	2011 <i>UC</i> ₂₉₄		12 17.8 94°83	0°8/17.8	18	
11 17	6 16.02	+44 46.0	2.481	3.274	11.9	19.7	11 17	6 9.68	+24 9.3	1.836	2.689	12.9	21.3
11 27	6 7.34	+46 11.4	2.435	3.297	9.7	19.6	11 27	6 2.83	+24 37.7	1.774	2.697	9.1	21.1
12 7	5 56.16	+47 21.5	2.416	3.321	7.9	19.5	12 7	5 53.73	+25 5.2	1.738	2.705	4.9	20.9
12 17	5 43.46	+48 10.7	2.425	3.344	7.1	19.5	12 17	5 43.32	+25 29.2	1.730	2.713	0.8	20.6
12 27	5 30.63	+48 36.3	2.463	3.366	7.7	19.5	12 27	5 32.87	+25 48.1	1.751	2.721	4.2	20.9
1 6	5 19.07	+48 39.5	2.528	3.389	9.3	19.7	1 6	5 23.62	+26 2.0	1.801	2.729	8.4	21.1
1 16	5 9.89	+48 24.9	2.618	3.411	11.2	19.8	1 16	5 16.55	+26 12.2	1.877	2.737	12.1	21.4
1 26	5 3.76	+47 58.5	2.730	3.433	12.9	20.0	1 26	5 12.29	+26 20.6	1.975	2.745	15.1	21.6
242235	2003 <i>SM</i> ₁₂₉		12 17.8 111°34	2°0/17.6	18		485621	2011 <i>UW</i> ₃₃₈		12 17.8 351°62	14°1/14.8	17	
11 17	6 5.99	+16 56.5	2.439	3.282	10.5	21.3	11 17	6 1.67	-1 24.8	1.204	2.045	19.1	20.2
11 27	5 59.64	+16 47.0	2.381	3.297	7.5	21.1	11 27	5 57.76	-3 36.6	1.151	2.034	16.5	20.0
12 7	5 51.79	+16 40.6	2.349	3.312	4.3	20.9	12 7	5 51.25	-5 24.4	1.117	2.025	14.6	19.9
12 17	5 43.15	+16 37.8	2.346	3.326	2.0	20.8	12 17	5 43.15	-6 37.4	1.105	2.018	14.1	19.8
12 27	5 34.55	+16 38.7	2.375	3.339	3.9	21.0	12 27	5 34.91	-7 8.4	1.113	2.012	15.3	19.9
1 6	5 26.83	+16 43.5	2.433	3.353	7.0	21.2	1 6	5 28.00	-6 57.1	1.141	2.008	17.6	20.0
1 16	5 20.65	+16 52.3	2.518	3.366	9.8	21.4	1 16	5 23.55	-6 8.7	1.188	2.006	20.4	20.2
1 26	5 16.47	+17 5.0	2.627	3.379	12.2	21.6	1 26	5 22.29	-4 52.1	1.249	2.006	23.0	20.4
178225	2006 <i>VP</i> ₁₅₃		12 17.8 137°92	1°4/17.8	18		367303	2007 <i>VM</i> ₃₀₈		12 17.8 74°44	1°4/17.8	18	
11 17	6 7.98	+18 37.4	1.948	2.799	12.4	19.9	11 17	6 15.80	+25 6.9	1.217	2.082	17.3	20.1
11 27	6 1.49	+18 50.0	1.880	2.802	8.8	19.7	11 27	6 7.68	+25 38.6	1.178	2.106	12.2	19.9
12 7	5 52.96	+19 6.2	1.838	2.804	4.9	19.5	12 7	5 56.41	+26 7.1	1.161	2.129	6.6	19.7
12 17	5 43.24	+19 25.0	1.824	2.807	1.4	19.2	12 17	5 43.50	+26 28.1	1.170	2.153	1.5	19.4
12 27	5 33.43	+19 45.6	1.840	2.809	4.2	19.4	12 27	5 30.92	+26 39.9	1.206	2.177	5.6	19.7
1 6	5 24.65	+20 7.5	1.885	2.812	8.2	19.7	1 6	5 20.47	+26 43.9	1.268	2.200	10.8	20.1
1 16	5 17.81	+20 30.6	1.956	2.814	11.8	19.9	1 16	5 13.32	+26 43.4	1.353	2.223	15.2	20.4
1 26	5 13.52	+20 55.0	2.049	2.816	14.8	20.1	1 26	5 10.03	+26 42.1	1.458	2.245	18.8	20.7
90492	2004 <i>DQ</i> ₃₄		12 17.8 245°18	0°2/17.8	18		102544	1999 <i>UK</i> ₁₃		12 17.8 114°59	2°8/17.5	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
494140	2016 CW ₁₉₉		12 17.8	1°11	0°8/17.7	17	316663	1994 SV ₁₁		12 17.8	45°85	2°4/17.9	17
11 17	6 5.06	+21 22.0	1.816	2.677	12.7	20.8	11 17	6 8.45	+29 30.2	2.007	2.855	12.2	20.6
11 27	5 59.58	+21 20.6	1.749	2.676	9.0	20.6	11 27	6 1.94	+29 55.7	1.940	2.858	8.8	20.4
12 7	5 52.00	+21 19.9	1.707	2.676	4.8	20.3	12 7	5 53.27	+30 15.6	1.898	2.861	5.1	20.2
12 17	5 43.21	+21 19.6	1.692	2.676	0.8	20.0	12 17	5 43.33	+30 27.3	1.885	2.864	2.5	20.0
12 27	5 34.34	+21 19.6	1.706	2.676	4.2	20.3	12 27	5 33.32	+30 29.6	1.901	2.867	4.5	20.2
1 6	5 26.55	+21 20.6	1.747	2.678	8.4	20.5	1 6	5 24.44	+30 23.4	1.945	2.870	8.1	20.4
1 16	5 20.77	+21 23.3	1.813	2.680	12.1	20.8	1 16	5 17.62	+30 11.3	2.016	2.873	11.5	20.6
1 26	5 17.60	+21 28.8	1.902	2.682	15.3	21.0	1 26	5 13.50	+29 56.6	2.109	2.877	14.4	20.8
92074	1999 XR ₃		12 17.8	118°79	0°5/17.8	18	480833	1999 VC ₁		12 17.8	25°82	2°8/17.8	17
11 17	6 7.72	+23 39.9	2.230	3.078	11.1	18.7	11 17	6 7.39	+18 0.4	0.850	1.743	20.1	19.4
11 27	6 1.17	+24 9.1	2.163	3.084	7.9	18.5	11 27	6 1.97	+17 54.9	0.833	1.773	14.2	19.2
12 7	5 52.76	+24 37.9	2.123	3.090	4.2	18.3	12 7	5 53.36	+17 57.4	0.835	1.806	7.8	18.9
12 17	5 43.26	+25 4.3	2.112	3.095	0.6	18.0	12 17	5 43.32	+18 7.3	0.859	1.841	2.8	18.8
12 27	5 33.68	+25 26.8	2.131	3.101	3.6	18.2	12 27	5 33.93	+18 23.7	0.906	1.878	6.6	19.2
1 6	5 25.04	+25 45.3	2.180	3.106	7.3	18.5	1 6	5 26.93	+18 45.4	0.975	1.916	12.0	19.6
1 16	5 18.16	+26 0.5	2.256	3.111	10.5	18.7	1 16	5 23.28	+19 11.3	1.065	1.956	16.6	20.0
1 26	5 13.63	+26 13.8	2.355	3.116	13.2	18.9	1 26	5 23.35	+19 40.1	1.173	1.996	20.3	20.4
287756	2003 SY ₄₂		12 17.8	37°02	2°8/17.6	18	267969	2004 FG ₉₆		12 17.8	194°79	0°5/17.8	18
11 17	6 9.98	+19 16.3	1.054	1.933	18.2	20.0	11 17	6 11.75	+20 41.2	1.680	2.533	13.9	20.4
11 27	6 3.79	+18 42.6	1.011	1.945	13.0	19.7	11 27	6 4.55	+21 6.1	1.609	2.532	9.9	20.2
12 7	5 54.44	+18 12.4	0.988	1.957	7.3	19.5	12 7	5 54.80	+21 33.7	1.563	2.531	5.4	19.9
12 17	5 43.38	+17 47.5	0.989	1.971	2.8	19.2	12 17	5 43.47	+22 1.7	1.545	2.529	0.6	19.6
12 27	5 32.57	+17 29.8	1.015	1.985	6.5	19.5	12 27	5 31.94	+22 28.4	1.556	2.526	4.6	19.9
1 6	5 23.79	+17 21.0	1.065	2.000	12.0	19.9	1 6	5 21.63	+22 53.0	1.595	2.523	9.3	20.1
1 16	5 18.23	+17 21.7	1.136	2.016	16.7	20.2	1 16	5 13.68	+23 16.0	1.660	2.520	13.4	20.4
1 26	5 16.46	+17 31.4	1.226	2.032	20.6	20.5	1 26	5 8.82	+23 38.5	1.746	2.516	16.8	20.6
302685	2002 TA ₅₇		12 17.8	81°86	1°6/17.8	18 R	120326	2004 NK ₃		12 17.8	88°47	0°4/17.8	18
11 17	6 10.39	+26 52.3	1.757	2.611	13.4	20.4	11 17	6 8.09	+24 2.7	2.009	2.861	12.0	20.1
11 27	6 3.38	+27 15.5	1.700	2.623	9.5	20.2	11 27	6 1.54	+24 14.1	1.947	2.869	8.5	19.9
12 7	5 54.03	+27 34.7	1.668	2.634	5.3	19.9	12 7	5 53.00	+24 24.1	1.910	2.878	4.5	19.7
12 17	5 43.36	+27 47.3	1.664	2.646	1.7	19.7	12 17	5 43.33	+24 31.3	1.903	2.886	0.5	19.4
12 27	5 32.72	+27 52.0	1.689	2.658	4.5	20.0	12 27	5 33.67	+24 35.0	1.925	2.895	3.9	19.7
1 6	5 23.43	+27 50.1	1.741	2.669	8.7	20.2	1 6	5 25.10	+24 35.9	1.975	2.903	7.8	19.9
1 16	5 16.48	+27 43.8	1.820	2.681	12.4	20.5	1 16	5 18.49	+24 35.4	2.052	2.912	11.2	20.2
1 26	5 12.48	+27 36.2	1.920	2.692	15.4	20.7	1 26	5 14.42	+24 35.2	2.152	2.920	14.1	20.4
232092	2001 XS ₃₃		12 17.8	69°77	0°6/17.8	18	272314	2005 SQ ₆₉		12 17.8	36°59	1°0/17.8	18
11 17	6 11.83	+21 28.2	1.431	2.293	15.4	20.3	11 17	6 10.49	+24 40.6	1.138	2.014	17.4	19.7
11 27	6 4.52	+21 35.8	1.387	2.314	10.9	20.1	11 27	6 4.17	+25 1.3	1.095	2.029	12.3	19.5
12 7	5 54.64	+21 44.3	1.366	2.334	5.8	19.9	12 7	5 54.68	+25 19.7	1.074	2.044	6.6	19.2
12 17	5 43.40	+21 52.2	1.371	2.355	0.7	19.6	12 17	5 43.45	+25 32.7	1.077	2.061	1.1	18.9
12 27	5 32.39	+21 58.9	1.405	2.376	4.9	19.9	12 27	5 32.42	+25 38.9	1.106	2.078	5.6	19.3
1 6	5 23.05	+22 5.1	1.466	2.397	9.7	20.3	1 6	5 23.38	+25 39.8	1.159	2.096	11.0	19.6
1 16	5 16.40	+22 11.9	1.551	2.418	13.8	20.6	1 16	5 17.56	+25 38.1	1.235	2.115	15.6	19.9
1 26	5 13.01	+22 20.8	1.656	2.438	17.1	20.8	1 26	5 15.54	+25 36.7	1.329	2.134	19.4	20.2
337641	2001 TY ₁₁₇		12 17.8	131°62	5°9/16.5	17	378010	2006 SP ₆₀		12 17.8	84°51	4°0/17.8	18
11 17	6 11.86	+10 11.4	1.919	2.751	13.4	20.6	11 17	6 17.19	+30 15.5	1.390	2.243	16.3	20.5
11 27	6 3.93	+8 44.6	1.866	2.766	10.2	20.4	11 27	6 8.66	+31 15.6	1.347	2.267	11.8	20.3
12 7	5 54.13	+7 25.7	1.838	2.781	7.2	20.3	12 7	5 57.00	+32 7.1	1.329	2.290	7.1	20.1
12 17	5 43.37	+6 19.2	1.840	2.796	5.9	20.2	12 17	5 43.63	+32 43.7	1.336	2.313	4.0	20.0
12 27	5 32.79	+5 28.8	1.871	2.809	7.4	20.3	12 27	5 30.46	+33 2.6	1.372	2.335	6.3	20.2
1 6	5 23.45	+4 56.2	1.931	2.822	10.3	20.5	1 6	5 19.28	+33 5.4	1.434	2.357	10.6	20.5
1 16	5 16.12	+4 41.0	2.017	2.834	13.2	20.8	1 16	5 11.33	+32 57.0	1.521	2.379	14.5	20.8
1 26	5 11.33	+4 41.1	2.123	2.845	15.6	21.0	1 26	5 7.21	+32 43.2	1.627	2.400	17.7	21.1
1370	Hella		12 17.8	121°00	2°0/17.9	18	394541	2007 UF ₂₅		12 17.8	156°46	5°4/17.7	18
11 17	6 15.24	+28 49.0	1.596	2.446	14.7	17.2	11 17	6 15.15	+37 46.6	2.234	3.054	12.1	21.9
11 27	6 6.90	+28 51.3	1.542	2.461	10.5	17.0	11 27	6 6.79	+38 52.0	2.170	3.062	9.4	21.7
12 7	5 55.91	+28 45.9	1.511	2.476	5.9	16.7	12 7	5 55.94	+39 46.6	2.131	3.069	6.8	21.6
12 17	5 43.51	+28 30.6	1.508	2.490	2.1	16.5	12 17	5 43.57	+40 24.9	2.121	3.075	5.4	21.5
12 27	5 31.30	+28 5.7	1.535	2.504	4.9	16.7	12 27	5 31.01	+40 44.1	2.141	3.081	6.5	21.6
1 6	5 20.78	+27 34.1	1.589	2.516	9.4	17.0	1 6	5 19.65	+40 45.1	2.190	3.086	8.9	21.8
1 16	5 13.03	+27 0.4	1.669	2.529	13.4	17.3	1 16	5 10.58	+40 31.5	2.265	3.091	11.6	21.9
1 26	5 8.62	+26 28.8	1.770	2.540	16.6	17.6	1 26	5 4.51	+40 8.9	2.362	3.094	14.0	22.1
362378	2010 NQ ₇₃		12 17.8	111°05	1°6/17.6	18	271341	2003 WH ₉₄		12 17.8	9°18	1°4/17.6	17
11 17	6 7.47	+19 26.9	1.999	2.851	12.1	21.2	11 17	6 5.83	+21 22.3	1.910	2.767	12.3	20.0
11 27	6 1.03	+19 8.9	1.935	2.857	8.6	21.0	11 27	5 59.98	+20 46.2	1.843	2.768	8.7	19.7
12 7	5 52.69	+18 52.3	1.897	2.863	4.8	20.8	12 7	5 52.18	+20 9.1	1.802	2.770	4.8	19.5
12 17	5 43.28	+18 37.7	1.887	2.869	1.7	20.6	12 17	5 43.29	+19 32.4	1.789	2.772	1.4	19.3
12 27	5 33.90	+18 25.7	1.907	2.874	4.3	20.8	12 27	5 34.43	+18 57.8	1.805	2.774	4.3	19.5
1 6	5 25.57	+18 17.4	1.955	2.880	8.1	21.0	1 6	5 26.66	+18 27.4	1.850	2.777	8.3	19.7
1 16	5 19.14	+18 13.6	2.030	2.886	11.5	21.2	1 16	5 20.83	+18 3.2	1.920	2.780	11.8	20.0
1 26	5 15.15	+18 14.8	2.127	2.891	14.4	21.5	1 26	5 17.48	+17 46.0	2.012	2.784	14.8	20.2
23336	2579 P-L		12 17.8	211°74	4°0/17.8	18	268197	2005 AH ₃₆		12 17.8	244°99	4°5/18.7	18
11 17	6 14.75	+32 42.7	1.828	2.668	13.6	18.5	11 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
272229	2005 <i>QH</i> ₇₇		12 17.8 43°61	1°6/17.9	18		154727	2004 <i>NR</i> ₃		12 17.8 132°69	0°7/17.8	18	
11 17	6 11.78	+26 57.5	1.164	2.036	17.4	20.1	11 17	6 12.46	+24 40.2	1.853	2.701	13.0	21.2
11 27	6 4.99	+26 59.8	1.122	2.054	12.3	19.9	11 27	6 4.76	+24 57.9	1.793	2.714	9.2	21.0
12 7	5 55.06	+26 56.0	1.103	2.072	6.7	19.6	12 7	5 54.79	+25 13.5	1.759	2.726	5.0	20.7
12 17	5 43.50	+26 43.8	1.108	2.091	1.7	19.3	12 17	5 43.55	+25 24.7	1.754	2.737	0.8	20.4
12 27	5 32.26	+26 23.8	1.138	2.110	5.6	19.7	12 27	5 32.33	+25 30.5	1.778	2.748	4.2	20.7
1 6	5 23.11	+25 59.3	1.194	2.130	10.8	20.0	1 6	5 22.42	+25 31.8	1.832	2.759	8.4	21.0
1 16	5 17.19	+25 34.5	1.273	2.151	15.4	20.3	1 16	5 14.76	+25 30.5	1.912	2.768	12.1	21.2
1 26	5 15.05	+25 12.9	1.370	2.172	19.1	20.6	1 26	5 9.98	+25 28.9	2.014	2.777	15.1	21.5
15912	1997 <i>TR</i> ₂₆		12 17.8 79°01	1°6/17.8	18		111360	2001 <i>XO</i> ₁₂₀		12 17.8 76°70	0°6/17.8	18	
11 17	6 13.37	+26 27.1	1.510	2.367	15.0	18.1	11 17	6 8.14	+21 57.4	1.877	2.731	12.6	20.3
11 27	6 5.64	+26 50.1	1.465	2.388	10.6	17.9	11 27	6 1.65	+21 52.7	1.816	2.740	8.9	20.1
12 7	5 55.27	+27 8.6	1.443	2.410	5.8	17.7	12 7	5 53.11	+21 47.8	1.781	2.748	4.8	19.9
12 17	5 43.52	+27 19.6	1.448	2.431	1.7	17.4	12 17	5 43.43	+21 42.3	1.773	2.757	0.7	19.6
12 27	5 31.98	+27 22.3	1.482	2.452	4.9	17.7	12 27	5 33.78	+21 36.4	1.796	2.766	4.1	19.9
1 6	5 22.14	+27 18.0	1.543	2.473	9.4	18.0	1 6	5 25.30	+21 30.9	1.846	2.775	8.2	20.1
1 16	5 15.04	+27 9.8	1.629	2.493	13.4	18.3	1 16	5 18.86	+21 27.2	1.923	2.783	11.8	20.4
1 26	5 11.26	+27 1.1	1.736	2.514	16.6	18.6	1 26	5 15.04	+21 26.5	2.021	2.792	14.8	20.6
157215	2004 <i>RZ</i> ₂₈		12 17.8 125°11	1°0/17.7	18		186948	2004 <i>RF</i> ₄₅		12 17.8 153°48	1°1/17.9	18	
11 17	6 11.07	+20 40.7	1.788	2.639	13.3	20.8	11 17	6 8.27	+27 5.3	2.570	3.411	10.1	21.4
11 27	6 3.73	+20 37.1	1.729	2.651	9.4	20.6	11 27	6 1.38	+27 10.6	2.502	3.418	7.2	21.2
12 7	5 54.20	+20 34.5	1.696	2.663	5.1	20.4	12 7	5 52.85	+27 12.1	2.461	3.426	4.0	21.0
12 17	5 43.45	+20 32.2	1.691	2.674	1.1	20.1	12 17	5 43.42	+27 8.7	2.450	3.432	1.1	20.8
12 27	5 32.77	+20 30.4	1.715	2.685	4.4	20.4	12 27	5 33.99	+27 0.2	2.470	3.438	3.3	21.0
1 6	5 23.38	+20 29.7	1.768	2.695	8.6	20.7	1 6	5 25.45	+26 47.6	2.520	3.444	6.6	21.2
1 16	5 16.20	+20 31.4	1.847	2.705	12.4	20.9	1 16	5 18.54	+26 32.7	2.599	3.449	9.5	21.4
1 26	5 11.83	+20 36.3	1.948	2.714	15.5	21.2	1 26	5 13.74	+26 17.7	2.701	3.454	11.9	21.6
172314	2002 <i>TR</i> ₂₉₀		12 17.8 44°68	2°4/18.0	18		446529	2014 <i>LJ</i> ₂₄		12 17.8 154°87	5°1/17.8	18	
11 17	6 9.99	+29 35.1	1.632	2.488	14.1	19.4	11 17	6 12.86	+37 3.6	2.199	3.025	12.1	21.1
11 27	6 3.29	+29 42.2	1.574	2.496	10.2	19.2	11 27	6 5.18	+37 58.3	2.133	3.030	9.3	21.0
12 7	5 54.07	+29 41.8	1.539	2.504	5.8	19.0	12 7	5 55.11	+38 42.6	2.093	3.035	6.6	20.8
12 17	5 43.45	+29 31.5	1.532	2.512	2.4	18.8	12 17	5 43.60	+39 11.8	2.081	3.039	5.1	20.7
12 27	5 32.89	+29 11.5	1.553	2.521	4.9	19.0	12 27	5 31.94	+39 23.4	2.098	3.043	6.2	20.8
1 6	5 23.82	+28 44.0	1.601	2.530	9.2	19.2	1 6	5 21.45	+39 18.4	2.144	3.047	8.7	21.0
1 16	5 17.27	+28 13.1	1.674	2.539	13.0	19.5	1 16	5 13.18	+39 0.5	2.216	3.050	11.5	21.2
1 26	5 13.86	+27 42.8	1.768	2.549	16.2	19.7	1 26	5 7.81	+38 34.7	2.310	3.053	14.0	21.3
412364	2013 <i>LO</i> ₂₆		12 17.8 179°68	3°0/17.6	18		309996	2009 <i>HF</i> ₁₀₀		12 17.8 302°76	1°3/17.8	18	
11 17	6 5.91	+13 29.4	2.539	3.375	10.3	22.6	11 17	6 9.00	+25 56.0	1.800	2.655	13.0	21.0
11 27	5 59.66	+13 14.0	2.467	3.377	7.6	22.4	11 27	6 2.59	+26 19.5	1.727	2.651	9.3	20.7
12 7	5 51.91	+13 3.8	2.421	3.377	4.8	22.3	12 7	5 53.78	+26 40.5	1.680	2.646	5.1	20.5
12 17	5 43.30	+12 59.7	2.405	3.378	3.0	22.2	12 17	5 43.51	+26 56.5	1.660	2.642	1.4	20.2
12 27	5 34.65	+13 2.2	2.420	3.378	4.5	22.3	12 27	5 33.06	+27 6.1	1.669	2.639	4.4	20.4
1 6	5 26.75	+13 11.1	2.464	3.377	7.3	22.4	1 6	5 23.75	+27 9.5	1.706	2.635	8.7	20.7
1 16	5 20.28	+13 26.3	2.536	3.376	10.0	22.6	1 16	5 16.66	+27 8.9	1.768	2.631	12.6	20.9
1 26	5 15.74	+13 47.0	2.631	3.374	12.4	22.8	1 26	5 12.49	+27 6.7	1.852	2.627	15.8	21.1
496607	2015 <i>DL</i> ₂₁₃		12 17.8 235°22	4°0/17.8	18		362695	2011 <i>UW</i> ₁₄₆		12 17.8 249°31	3°2/17.7	17	
11 17	6 10.53	+13 26.9	1.596	2.445	14.7	22.0	11 17	6 11.02	+30 4.9	1.986	2.831	12.4	21.1
11 27	6 3.77	+13 18.9	1.521	2.437	10.9	21.7	11 27	6 4.05	+30 56.7	1.907	2.823	9.1	20.9
12 7	5 54.45	+13 19.7	1.469	2.429	6.8	21.5	12 7	5 54.61	+31 44.1	1.854	2.814	5.6	20.6
12 17	5 43.52	+13 30.4	1.444	2.420	4.0	21.3	12 17	5 43.58	+32 22.5	1.829	2.805	3.2	20.5
12 27	5 32.33	+13 51.0	1.448	2.410	6.2	21.4	12 27	5 32.22	+32 49.0	1.833	2.796	5.1	20.6
1 6	5 22.30	+14 20.6	1.479	2.401	10.4	21.6	1 6	5 21.88	+33 3.4	1.867	2.786	8.8	20.8
1 16	5 14.57	+14 57.9	1.534	2.390	14.5	21.8	1 16	5 13.70	+33 7.7	1.926	2.777	12.3	21.0
1 26	5 9.91	+15 41.3	1.611	2.380	18.1	22.1	1 26	5 8.45	+33 5.6	2.007	2.767	15.3	21.2
202107	2004 <i>TB</i> ₄₉		12 17.8 128°31	0°6/17.8	18		93520	2000 <i>TW</i> ₆₃		12 17.8 180°40	0°1/17.8	18	
11 17	6 11.89	+24 37.9	1.899	2.747	12.8	21.3	11 17	6 11.02	+24 2.9	2.032	2.878	12.1	20.6
11 27	6 4.28	+24 48.0	1.841	2.761	9.0	21.1	11 27	6 3.66	+23 56.6	1.960	2.880	8.6	20.3
12 7	5 54.49	+24 55.6	1.807	2.774	4.9	20.9	12 7	5 54.20	+23 47.8	1.914	2.880	4.6	20.1
12 17	5 43.51	+24 59.1	1.803	2.787	0.7	20.6	12 17	5 43.54	+23 35.8	1.897	2.881	0.4	19.8
12 27	5 32.59	+24 58.1	1.829	2.799	4.1	20.9	12 27	5 32.83	+23 20.9	1.910	2.880	3.9	20.1
1 6	5 22.94	+24 53.5	1.884	2.810	8.2	21.2	1 6	5 23.23	+23 4.3	1.953	2.879	8.0	20.3
1 16	5 15.49	+24 47.3	1.965	2.821	11.8	21.4	1 16	5 15.66	+22 48.4	2.023	2.878	11.6	20.5
1 26	5 10.82	+24 41.8	2.068	2.831	14.8	21.7	1 26	5 10.71	+22 35.1	2.115	2.875	14.6	20.7
481905	2009 <i>BO</i> ₁₃		12 17.8 286°09	4°4/18.3	17		47265	1999 <i>VT</i> ₉₇		12 17.8 193°53	3°0/17.5	18	R
11 17	6 12.30	+35 4.3	1.744	2.586	14.0	21.5	11 17	6 11.38	+16 29.8	1.860	2.705	13.1	20.3
11 27	6 5.26	+35 10.8	1.656	2.566	10.6	21.2	11 27	6 4.00	+16 0.3	1.787	2.704	9.5	20.0
12 7	5 55.35	+35 4.6	1.592	2.546	6.9	21.0	12 7	5 54.43	+15 34.2	1.739	2.701	5.7	19.8
12 17	5 43.59	+34 41.8	1.554	2.526	4.4	20.8	12 17	5 43.57	+15 12.9	1.720	2.698	3.0	19.6
12 27	5 31.55	+34 1.2	1.545	2.506	6.1	20.8	12 27	5 32.62	+14 57.7	1.731	2.694	5.3	19.8
1 6	5 20.85	+33 6.1	1.564	2.486	9.9	21.0	1 6	5 22.80	+14 49.7	1.770	2.689	9.2	20.0
1 16	5 12.77	+32 2.6	1.607	2.466	13.8	21.2	1 16	5 15.05	+14 49.5	1.836	2.684	12.9	20.2
1 26	5 8.13	+30 57.4	1.672	2.446	17.3	21.4	1 26	5 10.04	+14 57.0	1.923	2.677	16.0	20.4
355413	2007 <i>UE</i> ₁₀₈		12 17.8 174°20	2°3/17.5	18		226913	2004 <i>TN</i> ₂₀₁		12 17.8 183°87	4°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
197432	2003 <i>YT</i> ₇₈		12 17.8 76°53	3°0/18.6	17		152951	2000 <i>FJ</i> ₇₁		12 17.8 168°08	0°4/17.8	18	
11 17	6 10.00	+34 57.4	2.332	3.164	11.3	19.3	11 17	6 11.27	+24 17.3	1.544	2.403	14.6	20.8
11 27	6 2.73	+34 35.0	2.263	3.169	8.4	19.2	11 27	6 4.38	+24 22.7	1.478	2.404	10.4	20.5
12 7	5 53.60	+34 1.4	2.219	3.174	5.3	19.0	12 7	5 54.81	+24 26.1	1.436	2.404	5.6	20.2
12 17	5 43.50	+33 15.8	2.205	3.179	3.1	18.8	12 17	5 43.64	+24 25.6	1.421	2.404	0.6	19.9
12 27	5 33.55	+32 19.4	2.222	3.184	4.4	18.9	12 27	5 32.38	+24 20.6	1.434	2.405	4.8	20.2
1 6	5 24.79	+31 15.5	2.268	3.189	7.3	19.1	1 6	5 22.54	+24 12.7	1.474	2.405	9.6	20.5
1 16	5 18.00	+30 8.5	2.342	3.194	10.3	19.3	1 16	5 15.27	+24 4.1	1.539	2.405	13.9	20.7
1 26	5 13.68	+29 3.1	2.440	3.199	12.9	19.5	1 26	5 11.27	+23 57.4	1.624	2.405	17.4	21.0
492878	2014 <i>QZ</i> ₃₉₅		12 17.8 114°39	2°3/17.9	17		422187	2014 <i>RT</i> ₃₀		12 17.8 134°73	4°4/18.8	17	
11 17	6 8.82	+29 59.8	2.188	3.032	11.5	21.7	11 17	6 12.69	+40 9.1	2.690	3.499	10.6	21.0
11 27	6 2.07	+30 16.1	2.123	3.039	8.3	21.5	11 27	6 4.51	+40 12.3	2.626	3.512	8.2	20.9
12 7	5 53.34	+30 26.5	2.083	3.045	4.9	21.3	12 7	5 54.52	+40 2.7	2.589	3.524	5.9	20.8
12 17	5 43.49	+30 28.7	2.073	3.051	2.3	21.2	12 17	5 43.62	+39 38.4	2.581	3.537	4.5	20.7
12 27	5 33.64	+30 22.0	2.092	3.058	4.2	21.3	12 27	5 32.88	+38 59.4	2.604	3.548	5.2	20.8
1 6	5 24.85	+30 7.9	2.140	3.064	7.6	21.5	1 6	5 23.34	+38 8.4	2.657	3.559	7.3	20.9
1 16	5 18.00	+29 48.9	2.215	3.070	10.7	21.7	1 16	5 15.74	+37 9.6	2.737	3.570	9.6	21.1
1 26	5 13.66	+29 28.1	2.313	3.075	13.4	21.9	1 26	5 10.59	+36 7.9	2.842	3.580	11.7	21.3
437763	2014 <i>JX</i> ₇₈		12 17.8 164°74	2°6/18.3	18		418554	2008 <i>SH</i> ₁₂₁		12 17.8 79°99	2°0/17.9	17	
11 17	6 12.74	+32 13.1	2.152	2.988	12.0	21.1	11 17	6 2.086	+29 20.6	2.288	3.132	11.0	21.5
11 27	6 4.81	+32 4.5	2.083	2.993	8.7	20.9	11 27	6 1.40	+29 36.7	2.231	3.148	7.9	21.3
12 7	5 54.78	+31 46.5	2.039	2.997	5.2	20.7	12 7	5 52.94	+29 47.3	2.201	3.163	4.6	21.1
12 17	5 43.60	+31 17.6	2.024	3.001	2.6	20.5	12 17	5 43.52	+29 50.7	2.200	3.179	2.0	21.0
12 27	5 32.50	+30 38.1	2.040	3.005	4.4	20.6	12 27	5 34.15	+29 46.4	2.229	3.195	3.9	21.1
1 6	5 22.66	+29 51.2	2.085	3.007	7.8	20.8	1 6	5 25.84	+29 35.6	2.287	3.211	7.1	21.4
1 16	5 14.95	+29 0.9	2.158	3.010	11.1	21.1	1 16	5 19.36	+29 20.5	2.372	3.226	10.1	21.6
1 26	5 9.94	+28 11.5	2.255	3.011	13.9	21.3	1 26	5 15.23	+29 3.9	2.480	3.242	12.6	21.8
270203	2001 <i>TA</i> ₅₄		12 17.8 104°29	3°7/17.9	18		377203	2003 <i>WT</i> ₁₁₇		12 17.8 35°95	3°2/17.9	18	
11 17	6 14.39	+31 5.8	1.616	2.464	14.6	20.3	11 17	6 12.09	+28 2.1	1.028	1.907	18.7	20.2
11 27	6 6.55	+31 48.4	1.561	2.477	10.7	20.1	11 27	6 5.73	+28 45.6	0.988	1.921	13.4	20.0
12 7	5 55.93	+32 22.9	1.531	2.491	6.5	19.9	12 7	5 55.75	+29 22.7	0.968	1.936	7.7	19.7
12 17	5 43.70	+32 44.3	1.527	2.503	3.7	19.8	12 17	5 43.73	+29 47.3	0.971	1.952	3.3	19.5
12 27	5 31.50	+32 50.8	1.553	2.516	5.8	19.9	12 27	5 31.91	+29 57.0	0.999	1.969	6.6	19.8
1 6	5 20.92	+32 43.7	1.606	2.528	9.7	20.2	1 6	5 22.36	+29 53.7	1.051	1.987	11.9	20.1
1 16	5 13.10	+32 27.5	1.683	2.540	13.4	20.4	1 16	5 16.45	+29 42.6	1.124	2.006	16.7	20.5
1 26	5 8.71	+32 7.1	1.782	2.552	16.6	20.7	1 26	5 14.78	+29 28.7	1.215	2.025	20.5	20.8
405394	2004 <i>HS</i> ₈		12 17.8 221°49	1°5/17.8	18		117889	2745 <i>P-L</i>		12 17.8 111°79	2°9/17.7	18	
11 17	6 9.48	+27 19.0	2.496	3.335	10.4	22.7	11 17	6 12.49	+16 32.6	1.639	2.488	14.4	20.4
11 27	6 2.49	+27 43.7	2.410	3.325	7.5	22.5	11 27	6 4.78	+16 12.3	1.588	2.507	10.3	20.2
12 7	5 53.60	+28 5.4	2.350	3.314	4.2	22.2	12 7	5 54.81	+15 56.8	1.562	2.525	6.0	20.0
12 17	5 43.54	+28 21.9	2.321	3.303	1.5	22.0	12 17	5 43.66	+15 46.9	1.564	2.543	3.0	19.8
12 27	5 33.27	+28 31.9	2.323	3.290	3.7	22.2	12 27	5 32.68	+15 43.3	1.595	2.560	5.4	20.0
1 6	5 23.78	+28 35.6	2.356	3.278	7.0	22.4	1 6	5 23.14	+15 46.5	1.654	2.576	9.5	20.3
1 16	5 15.95	+28 34.5	2.416	3.265	10.2	22.5	1 16	5 15.98	+15 56.4	1.738	2.592	13.2	20.5
1 26	5 10.39	+28 30.9	2.500	3.251	12.8	22.7	1 26	5 11.73	+16 12.5	1.843	2.607	16.3	20.8
11286	1990 <i>RO</i> ₈		12 17.8 330°72	2°7/17.7	18		128175	2003 <i>RP</i> ₉		12 17.8 19°09	1°6/17.5	18	
11 17	6 7.56	+18 3.3	1.264	2.136	16.3	17.6	11 17	6 2.90	+19 28.5	2.389	3.241	10.3	18.6
11 27	6 2.19	+17 49.6	1.195	2.125	11.8	17.3	11 27	5 57.64	+18 57.2	2.326	3.248	7.4	18.4
12 7	5 53.83	+17 41.0	1.147	2.115	6.8	17.0	12 7	5 50.90	+18 27.0	2.290	3.256	4.1	18.2
12 17	5 43.56	+17 37.9	1.123	2.105	2.7	16.8	12 17	5 43.37	+17 58.7	2.283	3.264	1.6	18.1
12 27	5 33.01	+17 41.2	1.126	2.096	6.1	16.9	12 27	5 35.88	+17 33.8	2.305	3.272	3.7	18.2
1 6	5 23.87	+17 51.0	1.153	2.087	11.4	17.2	1 6	5 29.23	+17 13.2	2.357	3.281	6.9	18.5
1 16	5 17.49	+18 7.7	1.203	2.080	16.2	17.5	1 16	5 24.07	+16 58.1	2.435	3.290	9.9	18.7
1 26	5 14.71	+18 30.7	1.271	2.073	20.3	17.7	1 26	5 20.86	+16 48.7	2.537	3.300	12.3	18.9
322259	2011 <i>DW</i> ₄₁		12 17.8 351°31	4°7/17.6	17		112632	2002 <i>PM</i> ₇₈		12 17.8 170°55	1°5/17.9	18	
11 17	6 4.41	+ 9 35.5	2.138	2.976	11.9	20.0	11 17	6 10.83	+27 52.7	2.403	3.241	10.8	21.3
11 27	5 58.85	+ 9 12.4	2.069	2.974	9.1	19.9	11 27	6 3.35	+28 5.4	2.331	3.246	7.7	21.1
12 7	5 51.61	+ 8 58.7	2.025	2.973	6.3	19.7	12 7	5 54.02	+28 13.7	2.286	3.250	4.3	20.9
12 17	5 43.39	+ 8 55.9	2.010	2.973	4.7	19.6	12 17	5 43.61	+28 15.7	2.271	3.253	1.5	20.7
12 27	5 35.09	+ 9 4.9	2.022	2.972	6.0	19.7	12 27	5 33.17	+28 11.0	2.288	3.255	3.7	20.9
1 6	5 27.65	+ 9 25.2	2.063	2.971	8.7	19.8	1 6	5 23.69	+28 0.5	2.335	3.257	7.1	21.1
1 16	5 21.81	+ 9 55.5	2.130	2.971	11.6	20.0	1 16	5 16.01	+27 46.3	2.409	3.258	10.2	21.3
1 26	5 18.11	+10 33.7	2.218	2.971	14.2	20.2	1 26	5 10.69	+27 31.1	2.507	3.259	12.8	21.5
8097	<i>Yamanishi</i>		12 17.8 30°22	0°3/17.8	18		315624	2008 <i>CF</i> ₂₀₄		12 17.8 84°22	0°5/17.8	18	
11 17	6 9.34	+23 28.5	1.198	2.073	16.8	16.9	11 17	6 8.49	+21 15.7	1.892	2.746	12.6	20.9
11 27	6 3.29	+23 18.0	1.150	2.083	11.9	16.6	11 27	6 1.95	+21 26.2	1.832	2.755	8.9	20.7
12 7	5 54.26	+23 5.8	1.123	2.094	6.4	16.3	12 7	5 53.34	+21 37.8	1.796	2.763	4.8	20.5
12 17	5 43.59	+22 51.3	1.122	2.106	0.5	16.0	12 17	5 43.56	+21 49.2	1.789	2.772	0.7	20.2
12 27	5 33.07	+22 35.1	1.146	2.119	5.4	16.4	12 27	5 33.77	+21 59.9	1.811	2.781	4.1	20.5
1 6	5 24.39	+22 19.6	1.195	2.132	10.7	16.7	1 6	5 25.11	+22 9.9	1.862	2.790	8.1	20.7
1 16	5 18.71	+22 7.2	1.267	2.146	15.4	17.0	1 16	5 18.49	+22 20.1	1.938	2.799	11.7	21.0
1 26	5 16.62	+21 59.8	1.358	2.161	19.1	17.3	1 26	5 14.48	+22 31.3	2.037	2.808	14.7	21.2
494133	2016 <i>CP</i> ₁₈₀		12 17.8 264°32	2°9/17.4	18		48386	1979 <i>MQ</i> ₁		12 17.8 179°31	1°6/18.1	18	

EPHEMERIDES

12 17.8

12 17.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
346334	2008 <i>RT</i> ₃₉		12 17.8 205°22	3°5/17.6	18		459379	2012 <i>JK</i> ₅₇		12 17.8 243°81	1°8/17.9	18	
11 17	6 9.44	+15 7.3	1.735	2.585	13.7	21.4	11 17	6 6.36	+16 19.3	2.295	3.139	11.0	21.3
11 27	6 2.78	+14 42.3	1.665	2.583	10.0	21.2	11 27	6 0.27	+16 38.3	2.219	3.136	7.9	21.1
12 7	5 53.87	+14 22.9	1.620	2.580	6.1	21.0	12 7	5 52.44	+17 2.4	2.169	3.132	4.5	20.9
12 17	5 43.61	+14 10.5	1.601	2.578	3.5	20.8	12 17	5 43.55	+17 30.9	2.148	3.129	1.9	20.7
12 27	5 33.25	+14 6.2	1.612	2.574	5.7	20.9	12 27	5 34.51	+18 2.9	2.158	3.125	3.9	20.8
1 6	5 24.03	+14 10.5	1.650	2.571	9.6	21.2	1 6	5 26.25	+18 37.3	2.198	3.122	7.4	21.0
1 16	5 16.94	+14 23.3	1.714	2.567	13.4	21.4	1 16	5 19.58	+19 13.3	2.265	3.118	10.6	21.2
1 26	5 12.63	+14 43.6	1.798	2.563	16.6	21.6	1 26	5 15.06	+19 50.4	2.355	3.115	13.3	21.4
42096	2001 <i>AZ</i> ₂₅		12 17.8 164°27	3°6/18.2	18		244276	2002 <i>EH</i> ₁₆		12 17.8 348°10	6°5/18.9	18	
11 17	6 9.58	+34 27.1	2.334	3.168	11.2	19.1	11 17	6 9.28	+37 39.3	1.132	1.998	18.3	19.2
11 27	6 2.64	+34 46.9	2.264	3.170	8.4	19.0	11 27	6 4.10	+37 42.3	1.067	1.987	14.1	18.9
12 7	5 53.70	+34 57.8	2.219	3.171	5.4	18.8	12 7	5 55.11	+37 24.3	1.021	1.977	9.6	18.7
12 17	5 43.61	+34 57.1	2.203	3.173	3.6	18.7	12 17	5 43.77	+36 39.9	0.998	1.969	6.6	18.5
12 27	5 33.47	+34 44.0	2.217	3.175	4.8	18.7	12 27	5 32.34	+35 29.3	0.999	1.962	8.2	18.5
1 6	5 24.40	+34 20.1	2.260	3.176	7.7	18.9	1 6	5 23.04	+33 59.6	1.024	1.957	12.6	18.8
1 16	5 17.25	+33 48.7	2.330	3.177	10.5	19.1	1 16	5 17.39	+32 21.5	1.070	1.954	17.2	19.0
1 26	5 12.63	+33 13.8	2.422	3.178	13.1	19.3	1 26	5 16.12	+30 45.4	1.134	1.952	21.3	19.3
283311	2011 <i>KO</i> ₂₆		12 17.8 28°99	3°3/17.8	18		228710	2002 <i>RF</i> ₁₄₈		12 17.8 120°24	0°2/17.8	18	
11 17	6 8.77	+15 43.4	1.319	2.185	16.2	20.3	11 17	6 6.56	+23 46.1	2.642	3.485	9.8	20.9
11 27	6 2.74	+15 39.3	1.264	2.190	11.7	20.0	11 27	6 0.15	+23 50.9	2.580	3.498	6.9	20.7
12 7	5 53.98	+15 43.4	1.231	2.196	6.9	19.8	12 7	5 52.25	+23 54.4	2.545	3.511	3.7	20.5
12 17	5 43.63	+15 56.0	1.223	2.202	3.3	19.6	12 17	5 43.54	+23 55.8	2.540	3.524	0.3	20.2
12 27	5 33.26	+16 16.6	1.242	2.209	6.1	19.8	12 27	5 34.86	+23 54.9	2.566	3.536	3.1	20.5
1 6	5 24.41	+16 44.2	1.286	2.217	10.8	20.1	1 6	5 27.01	+23 52.4	2.622	3.548	6.3	20.7
1 16	5 18.21	+17 17.5	1.354	2.225	15.1	20.3	1 16	5 20.65	+23 49.3	2.707	3.559	9.1	20.9
1 26	5 15.34	+17 55.1	1.441	2.233	18.8	20.6	1 26	5 16.26	+23 46.7	2.815	3.571	11.4	21.1
115415	2003 <i>SJ</i> ₂₉₉		12 17.8 59°84	5°8/18.9	18		339898	2005 <i>TY</i> ₁₇₅		12 17.8 127°57	2°9/17.7	18	
11 17	6 16.88	+38 30.6	1.489	2.327	16.2	18.3	11 17	6 11.94	+15 44.0	1.851	2.694	13.3	22.4
11 27	6 8.24	+38 36.5	1.450	2.354	12.3	18.1	11 27	6 4.26	+15 30.4	1.796	2.711	9.6	22.2
12 7	5 56.70	+38 24.0	1.434	2.382	8.4	17.9	12 7	5 54.54	+15 22.0	1.766	2.727	5.6	22.0
12 17	5 43.82	+37 49.8	1.444	2.409	5.9	17.9	12 17	5 43.72	+15 19.2	1.765	2.743	2.9	21.8
12 27	5 31.50	+36 55.1	1.481	2.436	7.0	18.0	12 27	5 33.01	+15 22.4	1.794	2.758	5.1	22.0
1 6	5 21.38	+35 46.3	1.545	2.464	10.3	18.3	1 6	5 23.54	+15 31.5	1.852	2.772	8.8	22.3
1 16	5 14.48	+34 31.3	1.634	2.491	13.7	18.5	1 16	5 16.20	+15 46.4	1.937	2.786	12.3	22.5
1 26	5 11.20	+33 17.6	1.743	2.518	16.7	18.8	1 26	5 11.52	+16 6.5	2.043	2.798	15.2	22.7
326555	2002 <i>PE</i> ₁₂₂		12 17.8 155°57	5°3/17.4	17		364800	2008 <i>AX</i> ₁₁₅		12 17.8 309°99	1°2/17.8	17	
11 17	6 4.05	+ 4 26.1	2.798	3.609	10.2	21.0	11 17	6 7.42	+20 1.3	1.700	2.559	13.5	21.8
11 27	5 58.25	+ 3 53.4	2.733	3.615	8.1	20.8	11 27	6 1.59	+20 2.3	1.621	2.547	9.7	21.5
12 7	5 51.18	+ 3 30.8	2.695	3.620	6.2	20.7	12 7	5 53.37	+20 5.7	1.567	2.535	5.3	21.2
12 17	5 43.42	+ 3 20.0	2.686	3.626	5.3	20.7	12 17	5 43.65	+20 10.9	1.541	2.524	1.3	20.9
12 27	5 35.65	+ 3 22.1	2.706	3.631	6.1	20.7	12 27	5 33.67	+20 17.7	1.542	2.512	4.7	21.1
1 6	5 28.55	+ 3 36.7	2.754	3.635	7.9	20.9	1 6	5 24.77	+20 26.3	1.571	2.501	9.2	21.4
1 16	5 22.68	+ 4 2.4	2.829	3.640	10.0	21.0	1 16	5 18.01	+20 37.3	1.625	2.491	13.3	21.6
1 26	5 18.49	+ 4 37.3	2.927	3.644	11.9	21.2	1 26	5 14.16	+20 51.3	1.699	2.480	16.8	21.8
85088	3202 <i>T</i> ₋₂		12 17.8 124°31	0°2/17.8	18		64373	2001 <i>UX</i> ₁₁₃		12 17.8 212°57	2°3/17.6	18	
11 17	6 8.60	+22 21.6	2.033	2.883	12.0	19.3	11 17	6 7.27	+17 30.3	2.014	2.864	12.1	20.0
11 27	6 1.96	+22 32.4	1.968	2.889	8.5	19.1	11 27	6 1.04	+17 11.3	1.943	2.862	8.7	19.8
12 7	5 53.34	+22 43.3	1.928	2.896	4.5	18.8	12 7	5 52.88	+16 55.4	1.897	2.861	5.0	19.6
12 17	5 43.59	+22 52.8	1.918	2.902	0.4	18.5	12 17	5 43.61	+16 43.2	1.879	2.859	2.3	19.4
12 27	5 33.79	+23 0.6	1.937	2.907	3.8	18.8	12 27	5 34.26	+16 35.6	1.891	2.857	4.6	19.6
1 6	5 25.05	+23 6.7	1.985	2.913	7.8	19.1	1 6	5 25.88	+16 33.2	1.932	2.855	8.3	19.8
1 16	5 18.22	+23 12.4	2.060	2.919	11.3	19.3	1 16	5 19.34	+16 36.5	1.998	2.853	11.7	20.0
1 26	5 13.91	+23 18.7	2.158	2.924	14.1	19.5	1 26	5 15.21	+16 45.5	2.087	2.850	14.6	20.2
173426	2000 <i>GY</i> ₁₃₀		12 17.8 112°06	1°9/17.6	18		513980	2014 <i>GH</i> ₄₄		12 17.8 213°43	1°4/17.8	18	
11 17	6 8.18	+18 48.6	1.920	2.771	12.5	20.3	11 17	6 11.71	+25 24.3	2.060	2.905	12.1	21.6
11 27	6 1.66	+18 27.7	1.857	2.778	8.9	20.1	11 27	6 4.41	+26 7.3	1.980	2.899	8.6	21.4
12 7	5 53.17	+18 8.9	1.819	2.784	5.0	19.8	12 7	5 54.82	+26 49.3	1.927	2.892	4.8	21.1
12 17	5 43.57	+17 52.7	1.809	2.790	2.0	19.6	12 17	5 43.77	+27 27.0	1.903	2.885	1.4	20.9
12 27	5 33.99	+17 40.0	1.829	2.796	4.5	19.8	12 27	5 32.42	+27 58.0	1.909	2.877	4.2	21.1
1 6	5 25.52	+17 32.0	1.877	2.802	8.4	20.1	1 6	5 22.04	+28 21.4	1.945	2.869	8.2	21.3
1 16	5 19.01	+17 29.2	1.951	2.807	11.9	20.3	1 16	5 13.66	+28 38.5	2.008	2.861	11.8	21.5
1 26	5 15.02	+17 32.2	2.048	2.813	14.8	20.5	1 26	5 8.02	+28 51.6	2.094	2.852	14.8	21.7
403899	2011 <i>YL</i> ₇		12 17.8 3°62	3°7/18.3	18		174190	2002 <i>QK</i> ₄		12 17.8 44°42	6°8/19.1	17	
11 17	6 7.23	+11 58.1	1.457	2.315	15.4	19.7	11 17	6 14.63	+40 23.5	1.498	2.335	16.2	19.6
11 27	6 1.58	+12 36.7	1.393	2.314	11.4	19.4	11 27	6 6.95	+40 37.7	1.449	2.349	12.6	19.4
12 7	5 53.38	+13 29.7	1.353	2.314	7.0	19.2	12 7	5 56.19	+40 32.2	1.422	2.364	9.0	19.2
12 17	5 43.60	+14 35.5	1.338	2.315	3.7	19.0	12 17	5 43.85	+40 2.7	1.421	2.380	6.8	19.2
12 27	5 33.61	+15 50.9	1.350	2.317	5.9	19.1	12 27	5 31.84	+39 9.5	1.445	2.396	7.8	19.3
1 6	5 24.85	+17 11.4	1.390	2.320	10.2	19.4	1 6	5 21.91	+37 58.5	1.496	2.412	10.8	19.5
1 16	5 18.46	+18 33.1	1.454	2.324	14.4	19.7	1 16	5 15.20	+36 38.0	1.571	2.429	14.2	19.7
1 26	5 15.18	+19 53.1	1.539	2.328	17.9	19.9	1 26	5 12.21	+35 16.5	1.667	2.446	17.2	20.0
13279	Gutman		12 17.8 209°95	2°4/17.9	18		123177	2000 <i>TD</i> ₆₆		12 17.8 7°68	1°1/17.9	1	

EPHEMERIDES

12 17.8

12 17.8

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
219220	1999 <i>VE</i> ₁₂₃		12 17.8	49°07'	0°1'/17.8	18	444538	2006 <i>SR</i> ₂₀₇		12 17.8	41°98'	5°3'/17.3	18
11 17	6 7.40	+23 11.1	1.931	2.786	12.3	20.2	11 17	6 8.18	+13 1.4	1.414	2.273	15.7	19.8
11 27	6 1.20	+23 21.5	1.870	2.794	8.7	20.0	11 27	6 1.87	+12 1.4	1.377	2.296	11.6	19.6
12 7	5 52.99	+23 31.3	1.835	2.802	4.7	19.8	12 7	5 53.32	+11 11.0	1.363	2.320	7.5	19.4
12 17	5 43.62	+23 39.1	1.827	2.811	0.4	19.4	12 17	5 43.67	+10 33.7	1.374	2.344	5.4	19.4
12 27	5 34.25	+23 44.6	1.849	2.820	3.9	19.7	12 27	5 34.32	+10 12.0	1.413	2.369	7.2	19.6
1 6	5 25.98	+23 48.0	1.899	2.829	7.9	20.0	1 6	5 26.51	+10 6.1	1.477	2.394	10.8	19.8
1 16	5 19.70	+23 50.7	1.976	2.838	11.5	20.2	1 16	5 21.11	+10 14.7	1.565	2.420	14.3	20.1
1 26	5 15.98	+23 54.0	2.074	2.847	14.4	20.5	1 26	5 18.60	+10 35.1	1.672	2.446	17.3	20.4
92836	2000 <i>QN</i> ₁₈₇		12 17.8	127°83'	1°6'/17.9	18	110644	2001 <i>TS</i> ₁₆₈		12 17.8	107°19'	3°0'/18.3	18 R
11 17	6 11.19	+18 3.0	1.783	2.632	13.4	19.7	11 17	6 11.47	+32 44.9	2.090	2.929	12.2	19.6
11 27	6 3.96	+18 20.9	1.722	2.642	9.6	19.5	11 27	6 3.99	+32 50.9	2.031	2.942	8.9	19.4
12 7	5 54.50	+18 43.2	1.686	2.652	5.3	19.3	12 7	5 54.43	+32 47.7	1.998	2.956	5.5	19.2
12 17	5 43.74	+19 8.6	1.679	2.661	1.6	19.1	12 17	5 43.76	+32 33.3	1.994	2.969	3.1	19.1
12 27	5 32.96	+19 35.8	1.702	2.671	4.5	19.3	12 27	5 33.22	+32 7.6	2.019	2.982	4.6	19.2
1 6	5 23.39	+20 3.8	1.753	2.679	8.7	19.6	1 6	5 23.95	+31 33.3	2.073	2.995	7.9	19.4
1 16	5 16.00	+20 32.4	1.830	2.688	12.5	19.8	1 16	5 16.85	+30 54.1	2.154	3.007	11.0	19.6
1 26	5 11.41	+21 1.8	1.929	2.696	15.6	20.0	1 26	5 12.44	+30 14.1	2.258	3.019	13.7	19.9
463371	2012 <i>XT</i> ₅₄		12 17.8	317°78'	17°5'/11.9	17	2911	Miahelena		12 17.8	240°91'	4°3'/17.7	18 R
11 17	6 11.27	- 1 42.9	1.008	1.847	22.1	20.2	11 17	6 6.49	+10 50.3	2.130	2.967	12.0	16.4
11 27	6 5.04	- 5 20.6	0.962	1.841	19.4	20.0	11 27	6 0.45	+10 34.0	2.053	2.960	9.0	16.2
12 7	5 55.46	- 8 33.9	0.936	1.834	17.7	19.9	12 7	5 52.60	+10 26.3	2.001	2.952	6.0	16.0
12 17	5 43.84	-11 4.0	0.930	1.829	17.7	19.9	12 17	5 43.64	+10 28.3	1.977	2.944	4.3	15.9
12 27	5 32.08	-12 37.8	0.946	1.823	19.4	20.0	12 27	5 34.53	+10 40.8	1.983	2.936	5.7	16.0
1 6	5 22.08	-13 12.9	0.979	1.818	22.1	20.1	1 6	5 26.26	+11 3.3	2.017	2.928	8.7	16.1
1 16	5 15.26	-12 55.8	1.027	1.814	25.0	20.3	1 16	5 19.63	+11 34.6	2.077	2.920	11.8	16.3
1 26	5 12.41	-11 58.5	1.087	1.810	27.6	20.5	1 26	5 15.25	+12 12.9	2.159	2.911	14.6	16.5
487383	2014 <i>QG</i> ₂₈₈		12 17.8	194°58'	0°7'/17.8	18	168576	1999 <i>XM</i> ₁₄₂		12 17.8	266°00'	5°0'/16.6	18
11 17	6 9.54	+23 51.5	2.471	3.312	10.4	21.5	11 17	6 22.30	+24 4.7	1.081	1.943	19.2	19.0
11 27	6 2.52	+24 27.0	2.392	3.309	7.4	21.3	11 27	6 14.19	+26 55.6	1.010	1.936	14.1	18.7
12 7	5 53.68	+25 2.2	2.341	3.307	4.0	21.1	12 7	6 1.20	+30 0.1	0.964	1.929	8.4	18.3
12 17	5 43.70	+25 34.9	2.320	3.303	0.7	20.8	12 17	5 44.38	+33 0.5	0.944	1.921	5.0	18.1
12 27	5 33.54	+26 3.5	2.330	3.300	3.5	21.1	12 27	5 26.09	+35 37.7	0.953	1.914	8.9	18.3
1 6	5 24.17	+26 27.4	2.372	3.295	6.9	21.3	1 6	5 9.36	+37 40.6	0.988	1.906	14.7	18.6
1 16	5 16.42	+26 47.2	2.441	3.290	10.0	21.5	1 16	4 56.74	+39 9.6	1.045	1.898	20.0	18.9
1 26	5 10.89	+27 4.2	2.534	3.285	12.7	21.7	1 26	4 49.76	+40 13.1	1.120	1.891	24.3	19.2
16971	1998 <i>WJ</i> ₃		12 17.8	294°30'	1°0'/17.9	18	241279	2007 <i>TP</i> ₄₄₂		12 17.8	135°97'	6°6'/17.2	18
11 17	6 9.09	+18 29.6	1.781	2.634	13.2	16.9	11 17	6 8.00	+ 5 36.9	2.062	2.884	12.9	20.9
11 27	6 2.78	+19 8.8	1.700	2.622	9.5	16.7	11 27	6 1.35	+ 4 42.5	2.005	2.895	10.2	20.8
12 7	5 54.05	+19 54.3	1.644	2.611	5.2	16.4	12 7	5 52.98	+ 4 0.1	1.974	2.905	7.7	20.6
12 17	5 43.74	+20 43.6	1.616	2.599	1.1	16.1	12 17	5 43.67	+ 3 32.9	1.969	2.914	6.6	20.6
12 27	5 33.06	+21 34.2	1.617	2.588	4.5	16.3	12 27	5 34.40	+ 3 22.8	1.994	2.923	7.6	20.7
1 6	5 23.35	+22 23.9	1.647	2.576	9.0	16.5	1 6	5 26.12	+ 3 29.6	2.046	2.932	10.0	20.8
1 16	5 15.71	+23 11.5	1.703	2.565	13.0	16.8	1 16	5 19.60	+ 3 51.6	2.122	2.940	12.6	21.0
1 26	5 10.95	+23 57.1	1.780	2.554	16.4	17.0	1 26	5 15.33	+ 4 25.7	2.220	2.948	14.9	21.2
346945	2010 <i>AT</i> ₇₄		12 17.8	263°62'	4°4'/18.7	16	478599	2012 <i>TJ</i> ₁₂₉		12 17.8	91°42'	0°2'/17.8	16
11 17	6 14.68	+35 52.6	1.652	2.493	14.7	20.2	11 17	6 13.34	+22 21.2	1.637	2.490	14.2	21.6
11 27	6 6.97	+35 42.7	1.575	2.484	11.1	20.0	11 27	6 5.49	+22 34.0	1.591	2.514	10.0	21.4
12 7	5 56.30	+35 17.4	1.521	2.475	7.2	19.7	12 7	5 55.28	+22 46.5	1.570	2.537	5.3	21.1
12 17	5 43.90	+34 33.3	1.493	2.466	4.5	19.5	12 17	5 43.85	+22 57.0	1.576	2.560	0.4	20.8
12 27	5 31.46	+33 30.9	1.494	2.457	6.1	19.6	12 27	5 32.62	+23 4.6	1.612	2.583	4.4	21.2
1 6	5 20.64	+32 15.1	1.523	2.447	10.0	19.8	1 6	5 22.92	+23 10.0	1.677	2.605	8.9	21.5
1 16	5 12.68	+30 53.6	1.578	2.438	14.0	20.0	1 16	5 15.70	+23 14.8	1.766	2.627	12.7	21.8
1 26	5 8.26	+29 33.6	1.653	2.428	17.4	20.2	1 26	5 11.51	+23 20.6	1.878	2.648	15.8	22.0
446780	2015 <i>PK</i> ₂₃₀		12 17.8	177°75'	5°3'/18.6	18	167369	2003 <i>WE</i> ₆₀		12 17.8	242°53'	0°8'/17.8	18
11 17	6 15.22	+39 11.5	2.084	2.904	12.9	21.1	11 17	6 9.07	+21 40.5	1.755	2.611	13.3	20.5
11 27	6 6.92	+39 30.3	2.013	2.906	10.0	20.9	11 27	6 2.60	+21 32.1	1.686	2.610	9.5	20.2
12 7	5 56.12	+39 34.8	1.968	2.907	7.1	20.7	12 7	5 53.85	+21 23.7	1.641	2.609	5.1	20.0
12 17	5 43.90	+39 21.2	1.949	2.908	5.4	20.6	12 17	5 43.75	+21 14.9	1.625	2.608	0.9	19.7
12 27	5 31.68	+38 48.6	1.961	2.908	6.3	20.7	12 27	5 33.57	+21 6.0	1.637	2.607	4.4	19.9
1 6	5 20.89	+37 59.9	2.001	2.908	9.0	20.8	1 6	5 24.58	+20 58.2	1.677	2.607	8.8	20.2
1 16	5 12.58	+37 0.8	2.067	2.907	12.0	21.0	1 16	5 17.77	+20 52.9	1.743	2.606	12.7	20.4
1 26	5 7.37	+35 57.6	2.156	2.906	14.6	21.2	1 26	5 13.78	+20 51.5	1.830	2.605	16.0	20.7
108337	2001 <i>KX</i> ₃		12 17.8	58°99'	2°3'/17.8	18	244842	2003 <i>UP</i> ₁₁₃		12 17.8	111°35'	1°9'/17.8	18
11 17	6 13.35	+26 13.5	1.300	2.165	16.4	19.0	11 17	6 12.59	+27 6.7	1.904	2.751	12.8	20.9
11 27	6 6.23	+27 4.9	1.251	2.178	11.8	18.8	11 27	6 4.96	+27 45.8	1.848	2.766	9.2	20.7
12 7	5 55.97	+27 53.4	1.224	2.191	6.6	18.5	12 7	5 55.05	+28 21.1	1.818	2.782	5.2	20.4
12 17	5 43.89	+28 33.5	1.223	2.205	2.4	18.3	12 17	5 43.85	+28 49.2	1.816	2.797	2.0	20.3
12 27	5 31.82	+29 2.0	1.250	2.219	5.7	18.6	12 27	5 32.65	+29 8.3	1.844	2.811	4.4	20.5
1 6	5 21.56	+29 18.9	1.302	2.233	10.6	18.9	1 6	5 22.73	+29 18.8	1.901	2.826	8.3	20.7
1 16	5 14.40	+29 27.2	1.378	2.247	15.0	19.2	1 16	5 15.07	+29 22.7	1.985	2.839	11.8	21.0
1 26	5 11.02	+29 30.9	1.473	2.262	18.6	19.5	1 26	5 10.26	+29 23.2	2.091	2.853	14.7	21.2
182293	2001 <i>KJ</i> ₇₅		12 17.8	152°34'	3°1'/17.9	18	273207	2006 <i>JM</i> ₁₆		12 17.8	329°69'		

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
119794	2002 <i>AL</i> ₁₀₇		12 17.8 225°19	0°6/17.8	17		37961	1998 <i>HG</i> ₇₁		12 17.9 177°64	6°5/17.7	18	
11 17	6 7.50	+21 15.1	2.038	2.889	11.9	20.1	11 17	6 16.62	+40 3.0	2.098	2.914	13.0	19.6
11 27	6 1.27	+21 19.8	1.966	2.889	8.4	19.9	11 27	6 8.25	+41 15.8	2.030	2.916	10.3	19.4
12 7	5 53.08	+21 25.4	1.921	2.888	4.6	19.6	12 7	5 57.06	+42 16.0	1.987	2.917	7.7	19.3
12 17	5 43.71	+21 31.1	1.904	2.887	0.7	19.3	12 17	5 44.07	+42 57.1	1.972	2.918	6.5	19.2
12 27	5 34.24	+21 36.5	1.916	2.886	3.9	19.6	12 27	5 30.78	+43 15.5	1.986	2.918	7.5	19.3
1 6	5 25.76	+21 41.9	1.958	2.886	7.8	19.8	1 6	5 18.76	+43 12.2	2.028	2.918	9.9	19.4
1 16	5 19.13	+21 48.2	2.025	2.885	11.4	20.0	1 16	5 9.29	+42 51.6	2.095	2.917	12.6	19.6
1 26	5 14.96	+21 56.1	2.116	2.884	14.3	20.2	1 26	5 3.14	+42 20.4	2.184	2.916	15.0	19.8
68537	2001 <i>VC</i> ₁₂₃		12 17.8 333°61	10°1/20.9	18		339977	2005 <i>UR</i> ₂₂₆		12 17.9 254°61	2°2/17.7	18	
11 17	6 23.29	+46 20.8	0.981	1.821	22.5	17.9	11 17	6 10.07	+19 0.5	1.582	2.440	14.4	21.0
11 27	6 14.81	+45 53.2	0.916	1.814	18.3	17.6	11 27	6 3.54	+18 38.2	1.511	2.435	10.4	20.8
12 7	6 1.03	+44 44.9	0.869	1.807	13.8	17.4	12 7	5 54.47	+18 18.0	1.463	2.429	5.9	20.5
12 17	5 44.33	+42 46.4	0.843	1.801	10.5	17.2	12 17	5 43.87	+18 0.5	1.441	2.423	2.2	20.3
12 27	5 28.15	+40 0.1	0.841	1.796	11.0	17.2	12 27	5 33.11	+17 47.0	1.449	2.417	5.3	20.5
1 6	5 15.55	+36 43.7	0.863	1.792	15.0	17.4	1 6	5 23.60	+17 38.8	1.483	2.411	9.9	20.7
1 16	5 8.15	+33 20.9	0.907	1.788	19.8	17.6	1 16	5 16.46	+17 36.9	1.542	2.405	14.1	20.9
1 26	5 6.30	+30 11.5	0.970	1.785	24.2	17.9	1 26	5 12.41	+17 42.0	1.621	2.398	17.6	21.2
231050	2005 <i>GH</i> ₄₇		12 17.8 248°22	1°9/17.9	18		52333	1992 <i>EE</i> ₂₂		12 17.9 355°49	0°8/17.9	18	
11 17	6 6.98	+29 38.7	2.589	3.430	10.0	21.1	11 17	6 7.80	+23 40.3	1.123	2.003	17.3	18.5
11 27	6 0.72	+29 53.1	2.506	3.420	7.3	20.9	11 27	6 2.77	+24 5.9	1.063	1.998	12.4	18.2
12 7	5 52.73	+30 2.6	2.449	3.411	4.3	20.7	12 7	5 54.38	+24 32.1	1.024	1.994	6.7	17.9
12 17	5 43.69	+30 5.5	2.422	3.401	2.0	20.5	12 17	5 43.87	+24 55.5	1.008	1.992	0.9	17.5
12 27	5 34.50	+30 1.2	2.425	3.391	3.7	20.6	12 27	5 33.12	+25 13.7	1.017	1.990	5.7	17.8
1 6	5 26.10	+29 50.3	2.458	3.380	6.8	20.8	1 6	5 24.07	+25 26.7	1.050	1.990	11.5	18.1
1 16	5 19.27	+29 34.8	2.518	3.370	9.7	21.0	1 16	5 18.18	+25 36.3	1.105	1.991	16.6	18.4
1 26	5 14.59	+29 17.2	2.602	3.360	12.2	21.1	1 26	5 16.28	+25 44.9	1.178	1.993	20.8	18.7
432596	2010 <i>RO</i> ₁₆₆		12 17.8 81°54	5°9/17.4	18		490931	2011 <i>CT</i> ₆₂		12 17.9 43°15	3°2/17.9	18	
11 17	6 12.24	+12 33.0	1.268	2.126	17.2	20.7	11 17	6 6.38	+13 17.9	1.955	2.801	12.5	20.8
11 27	6 5.05	+11 34.3	1.223	2.142	12.8	20.4	11 27	6 0.44	+13 25.3	1.893	2.808	9.2	20.6
12 7	5 55.17	+10 46.0	1.201	2.157	8.4	20.2	12 7	5 52.62	+13 40.9	1.856	2.816	5.6	20.4
12 17	5 43.88	+10 12.1	1.203	2.173	5.9	20.2	12 17	5 43.72	+14 4.6	1.848	2.823	3.2	20.3
12 27	5 32.81	+9 55.3	1.232	2.188	8.0	20.3	12 27	5 34.77	+14 35.6	1.868	2.831	5.0	20.4
1 6	5 23.48	+9 55.8	1.286	2.203	12.1	20.6	1 6	5 26.81	+15 12.6	1.916	2.839	8.4	20.7
1 16	5 16.96	+10 12.1	1.362	2.218	16.0	20.9	1 16	5 20.66	+15 54.0	1.991	2.847	11.7	20.9
1 26	5 13.79	+10 40.8	1.458	2.233	19.4	21.1	1 26	5 16.90	+16 38.5	2.088	2.855	14.5	21.1
518328	2017 <i>BU</i> ₁₀₅		12 17.9 181°34	0°4/17.9	18		57009	2000 <i>SK</i> ₃₅₇		12 17.9 142°63	4°9/17.9	18	
11 17	6 9.30	+20 41.5	2.149	2.995	11.6	21.6	11 17	6 6.65	+5 43.2	2.679	3.491	10.6	19.6
11 27	6 2.52	+21 11.0	2.076	2.996	8.2	21.3	11 27	6 0.15	+5 31.5	2.618	3.504	8.2	19.5
12 7	5 53.76	+21 42.8	2.030	2.996	4.4	21.1	12 7	5 52.29	+5 30.1	2.583	3.516	6.0	19.4
12 17	5 43.79	+22 14.8	2.012	2.996	0.5	20.8	12 17	5 43.69	+5 39.9	2.578	3.528	4.9	19.3
12 27	5 33.67	+22 45.6	2.026	2.996	3.7	21.1	12 27	5 35.11	+6 1.2	2.603	3.539	5.7	19.4
1 6	5 24.46	+23 14.3	2.069	2.995	7.6	21.3	1 6	5 27.27	+6 32.9	2.657	3.549	7.7	19.5
1 16	5 17.06	+23 41.0	2.139	2.994	11.0	21.5	1 16	5 20.78	+7 13.4	2.739	3.559	10.0	19.7
1 26	5 12.09	+24 6.4	2.232	2.993	13.9	21.7	1 26	5 16.09	+8 0.5	2.844	3.568	12.0	19.9
339078	2004 <i>RR</i> ₂₁		12 17.9 88°71	1°5/17.8	16		330746	2008 <i>SC</i> ₁₁₄		12 17.9 135°24	4°8/17.5	17	
11 17	6 12.38	+19 45.3	1.642	2.495	14.2	21.4	11 17	6 4.57	+8 11.7	2.454	3.282	10.9	21.3
11 27	6 4.75	+19 38.0	1.597	2.519	10.1	21.2	11 27	5 58.84	+7 43.4	2.389	3.287	8.4	21.2
12 7	5 54.88	+19 32.7	1.576	2.542	5.5	21.0	12 7	5 51.65	+7 24.0	2.350	3.291	6.0	21.0
12 17	5 43.87	+19 29.1	1.583	2.565	1.5	20.7	12 17	5 43.65	+7 15.2	2.339	3.295	4.8	20.9
12 27	5 33.08	+19 27.2	1.619	2.588	4.7	21.0	12 27	5 35.62	+7 18.0	2.357	3.299	5.8	21.0
1 6	5 23.78	+19 27.9	1.683	2.610	9.0	21.3	1 6	5 28.35	+7 32.0	2.404	3.303	8.1	21.2
1 16	5 16.88	+19 31.9	1.773	2.632	12.7	21.6	1 16	5 22.50	+7 56.1	2.477	3.307	10.6	21.3
1 26	5 12.89	+19 39.9	1.884	2.654	15.8	21.9	1 26	5 18.53	+8 28.4	2.573	3.311	12.8	21.5
99894	2002 <i>QR</i> ₁		12 17.9 316°81	0°8/17.9	18		28591	2000 <i>EC</i> ₁₃₀		12 17.9 129°68	0°8/17.9	18	
11 17	6 6.80	+25 30.0	2.160	3.010	11.3	19.6	11 17	6 13.32	+24 58.9	1.828	2.675	13.2	19.1
11 27	6 0.78	+25 40.7	2.085	3.007	8.1	19.4	11 27	6 5.48	+25 11.8	1.770	2.690	9.4	18.9
12 7	5 52.83	+25 49.1	2.036	3.003	4.4	19.1	12 7	5 55.34	+25 22.0	1.737	2.703	5.1	18.7
12 17	5 43.72	+25 53.7	2.016	2.999	0.9	18.9	12 17	5 43.94	+25 27.4	1.733	2.716	0.9	18.4
12 27	5 34.50	+25 53.9	2.026	2.996	3.7	19.1	12 27	5 32.60	+25 27.4	1.759	2.729	4.2	18.7
1 6	5 26.21	+25 50.5	2.064	2.993	7.5	19.3	1 6	5 22.60	+25 23.1	1.814	2.741	8.4	19.0
1 16	5 19.72	+25 44.9	2.130	2.990	10.9	19.5	1 16	5 14.91	+25 16.6	1.895	2.752	12.1	19.2
1 26	5 15.62	+25 39.1	2.217	2.986	13.7	19.7	1 26	5 10.13	+25 10.6	1.998	2.763	15.2	19.4
251371	2007 <i>UR</i> ₈₆		12 17.9 81°41	1°1/17.8	18		44293	1998 <i>QQ</i> ₈₇		12 17.9 48°88	2°6/17.3	18	
11 17	6 14.58	+21 5.3	1.258	2.122	16.9	20.6	11 17	6 9.84	+20 9.1	1.573	2.432	14.4	18.1
11 27	6 6.83	+21 0.7	1.214	2.142	12.0	20.4	11 27	6 3.10	+19 3.9	1.517	2.441	10.3	17.9
12 7	5 56.17	+20 57.3	1.193	2.162	6.5	20.1	12 7	5 54.07	+17 58.2	1.485	2.451	5.8	17.7
12 17	5 43.97	+20 54.1	1.198	2.181	1.2	19.9	12 17	5 43.84	+16 55.0	1.481	2.461	2.6	17.5
12 27	5 32.06	+20 51.2	1.230	2.201	5.4	20.2	12 27	5 33.78	+15 58.1	1.506	2.472	5.5	17.7
1 6	5 22.07	+20 49.8	1.288	2.220	10.6	20.6	1 6	5 25.16	+15 11.0	1.558	2.482	9.7	18.0
1 16	5 15.13	+20 51.5	1.369	2.239	15.1	20.9	1 16	5 18.92	+14 35.9	1.634	2.493	13.6	18.2
1 26	5 11.80	+20 57.4	1.471	2.258	18.7	21.2	1 26	5 15.59	+14 13.1	1.731	2.504	16.8	18.5
228490	2001 <i>SL</i> ₂₁₁		12 17.9 15°45	0°5/17.8	18		81870	2000 <i>LB</i> ₁		12 17.9 147°11	2°4/17.6		

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
490423	2009 <i>SP</i> ₅₆	12 17.9	22° 73'	3° 3'/17.5	16		22015	1999 <i>XM</i> ₁₀₀	12 17.9	5° 75'	0° 1'/17.9	18	
11 17	6 7.67	+19 49.3	0.969	1.856	18.8	20.9	11 17	6 7.61	+20 53.5	1.893	2.747	12.5	17.1
11 27	6 2.44	+18 51.8	0.929	1.866	13.4	20.7	11 27	6 1.57	+21 32.2	1.824	2.748	8.9	16.9
12 7	5 53.99	+17 56.9	0.909	1.879	7.6	20.4	12 7	5 53.37	+22 14.0	1.781	2.748	4.8	16.7
12 17	5 43.84	+17 8.0	0.912	1.893	3.3	20.2	12 17	5 43.85	+22 56.2	1.765	2.749	0.4	16.3
12 27	5 33.97	+16 29.2	0.938	1.908	6.9	20.5	12 27	5 34.15	+23 36.7	1.779	2.750	4.0	16.6
1 6	5 26.17	+16 3.6	0.988	1.925	12.4	20.8	1 6	5 25.46	+24 14.2	1.822	2.752	8.2	16.9
1 16	5 21.61	+15 52.0	1.058	1.943	17.2	21.2	1 16	5 18.74	+24 48.4	1.891	2.754	11.9	17.1
1 26	5 20.84	+15 53.1	1.146	1.963	21.1	21.5	1 26	5 14.67	+25 19.9	1.982	2.756	14.9	17.3
77002	2001 <i>CR</i> ₄	12 17.9	329° 67'	3° 1'/17.9	18		355406	2007 <i>UU</i> ₇₆	12 17.9	347° 44'	2° 6'/17.9	18	
11 17	6 7.84	+16 0.9	1.122	1.998	17.6	18.9	11 17	6 9.03	+28 11.7	1.451	2.316	15.0	21.0
11 27	6 2.85	+16 12.0	1.052	1.983	12.9	18.6	11 27	6 3.21	+28 41.5	1.384	2.310	10.9	20.7
12 7	5 54.52	+16 34.1	1.002	1.970	7.6	18.2	12 7	5 54.50	+29 6.6	1.339	2.305	6.3	20.4
12 17	5 43.92	+17 6.8	0.976	1.957	3.2	17.9	12 17	5 43.95	+29 23.0	1.320	2.301	2.6	20.2
12 27	5 32.83	+17 48.6	0.974	1.945	6.6	18.1	12 27	5 33.19	+29 28.7	1.328	2.298	5.5	20.4
1 6	5 23.18	+18 36.8	0.997	1.934	12.3	18.4	1 6	5 23.85	+29 24.7	1.363	2.295	10.1	20.6
1 16	5 16.56	+19 29.3	1.040	1.924	17.6	18.6	1 16	5 17.23	+29 14.1	1.420	2.293	14.5	20.9
1 26	5 13.94	+20 24.1	1.102	1.915	22.0	18.9	1 26	5 14.09	+29 0.9	1.498	2.291	18.1	21.1
131295	2001 <i>FH</i> ₁₂₁	12 17.9	146° 79'	7° 6'/18.2	18		295656	2008 <i>TV</i> ₇	12 17.9	181° 14'	4° 6'/17.4	18	
11 17	6 17.33	+51 6.1	2.961	3.717	11.0	20.3	11 17	6 4.48	+7 9.6	2.825	3.644	9.9	21.2
11 27	6 8.43	+52 13.8	2.902	3.726	9.5	20.2	11 27	5 58.66	+6 39.1	2.754	3.644	7.7	21.1
12 7	5 57.04	+53 5.2	2.868	3.735	8.2	20.1	12 7	5 51.55	+6 16.9	2.709	3.645	5.6	20.9
12 17	5 44.11	+53 35.5	2.861	3.744	7.6	20.1	12 17	5 43.71	+6 4.6	2.693	3.645	4.6	20.9
12 27	5 30.98	+53 42.3	2.882	3.752	8.0	20.1	12 27	5 35.83	+6 3.1	2.708	3.644	5.5	20.9
1 6	5 19.02	+53 27.0	2.929	3.760	9.1	20.2	1 6	5 28.59	+6 12.4	2.752	3.643	7.5	21.0
1 16	5 9.34	+52 53.8	3.001	3.767	10.5	20.3	1 16	5 22.58	+6 31.6	2.822	3.642	9.7	21.2
1 26	5 2.66	+52 8.6	3.095	3.774	12.0	20.5	1 26	5 18.24	+6 59.1	2.916	3.640	11.7	21.3
145093	2005 <i>GS</i> ₇₃	12 17.9	190° 05'	7° 4'/17.4	18		7834	1993 <i>JL</i>	12 17.9	207° 12'	1° 1'/17.8	18	
11 17	6 6.87	+2 39.7	2.061	2.875	13.2	20.1	11 17	6 11.52	+24 22.5	2.084	2.929	11.9	17.0
11 27	6 0.70	+1 55.3	1.995	2.875	10.7	20.0	11 27	6 4.31	+25 7.5	2.006	2.925	8.5	16.7
12 7	5 52.75	+1 25.4	1.953	2.874	8.5	19.8	12 7	5 54.87	+25 52.6	1.954	2.920	4.7	16.5
12 17	5 43.76	+1 13.1	1.937	2.873	7.4	19.8	12 17	5 44.01	+26 34.4	1.932	2.915	1.1	16.2
12 27	5 34.70	+1 20.2	1.950	2.871	8.3	19.8	12 27	5 32.88	+27 10.4	1.941	2.910	4.1	16.4
1 6	5 26.53	+1 45.9	1.989	2.869	10.5	19.9	1 6	5 22.69	+27 39.6	1.979	2.904	8.0	16.7
1 16	5 20.05	+2 27.8	2.053	2.867	13.0	20.1	1 16	5 14.44	+28 2.9	2.044	2.897	11.6	16.9
1 26	5 15.82	+3 22.0	2.138	2.865	15.4	20.3	1 26	5 8.86	+28 22.1	2.132	2.890	14.5	17.1
285814	2000 <i>YT</i> ₁₃₅	12 17.9	348° 16'	2° 1'/18.0	18		483556	2003 <i>YW</i> ₁₈	12 17.9	286° 67'	0° 9'/17.8	17	
11 17	6 7.68	+16 44.6	1.312	2.181	16.0	19.8	11 17	6 10.30	+23 21.5	1.745	2.600	13.4	21.3
11 27	6 2.30	+17 14.8	1.245	2.174	11.6	19.5	11 27	6 3.86	+24 6.4	1.662	2.586	9.6	21.0
12 7	5 54.03	+17 54.6	1.201	2.168	6.6	19.2	12 7	5 54.81	+24 53.4	1.604	2.572	5.3	20.7
12 17	5 43.88	+18 42.2	1.181	2.163	2.2	18.9	12 17	5 44.02	+25 38.7	1.574	2.558	1.0	20.4
12 27	5 33.43	+19 34.6	1.188	2.159	5.5	19.1	12 27	5 32.80	+26 19.2	1.574	2.544	4.6	20.6
1 6	5 24.32	+20 29.1	1.221	2.156	10.7	19.4	1 6	5 22.58	+26 53.6	1.601	2.530	9.2	20.9
1 16	5 17.86	+21 23.5	1.277	2.154	15.4	19.6	1 16	5 14.59	+27 22.1	1.654	2.516	13.3	21.1
1 26	5 14.90	+22 16.8	1.352	2.153	19.3	19.9	1 26	5 9.68	+27 46.5	1.728	2.503	16.8	21.3
56803	2000 <i>PA</i> ₁₁	12 17.9	165° 17'	4° 3'/18.0	18		260325	2004 <i>TL</i> ₁₇₂	12 17.9	110° 54'	0° 2'/17.8	18	
11 17	6 10.23	+9 58.5	2.084	2.914	12.5	19.8	11 17	6 8.41	+24 41.6	2.188	3.036	11.3	19.9
11 27	6 3.07	+9 58.8	2.017	2.919	9.4	19.6	11 27	6 1.75	+24 9.6	2.120	3.041	8.0	19.7
12 7	5 54.02	+10 9.0	1.975	2.924	6.2	19.4	12 7	5 53.30	+23 34.1	2.079	3.046	4.3	19.5
12 17	5 43.88	+10 29.8	1.961	2.929	4.3	19.3	12 17	5 43.87	+22 55.4	2.068	3.051	0.4	19.2
12 27	5 33.66	+11 0.7	1.978	2.932	5.7	19.4	12 27	5 34.52	+22 15.2	2.086	3.057	3.6	19.5
1 6	5 24.40	+11 40.3	2.025	2.935	8.7	19.6	1 6	5 26.21	+21 35.7	2.135	3.062	7.4	19.7
1 16	5 16.94	+12 26.7	2.098	2.938	11.8	19.8	1 16	5 19.72	+20 59.5	2.210	3.067	10.7	19.9
1 26	5 11.85	+13 17.8	2.194	2.939	14.5	20.0	1 26	5 15.56	+20 28.5	2.309	3.072	13.4	20.1
91356	1999 <i>JC</i> ₅₈	12 17.9	283° 48'	1° 3'/17.9	18		206517	2003 <i>UX</i> ₁₃₄	12 17.9	50° 96'	0° 5'/17.9	18	
11 17	6 10.74	+25 53.0	1.600	2.458	14.2	19.3	11 17	6 10.73	+25 12.2	1.463	2.326	15.1	19.4
11 27	6 4.31	+26 8.3	1.518	2.442	10.3	19.0	11 27	6 3.97	+25 3.9	1.414	2.341	10.7	19.2
12 7	5 55.07	+26 20.8	1.459	2.426	5.7	18.7	12 7	5 54.66	+24 51.9	1.389	2.358	5.7	18.9
12 17	5 43.98	+26 27.8	1.427	2.410	1.3	18.4	12 17	5 43.98	+24 35.3	1.391	2.374	0.7	18.6
12 27	5 32.51	+26 27.9	1.424	2.394	4.9	18.6	12 27	5 33.50	+24 14.8	1.420	2.391	4.7	19.0
1 6	5 22.23	+26 21.9	1.447	2.378	9.8	18.8	1 6	5 24.65	+23 52.9	1.475	2.409	9.4	19.3
1 16	5 14.44	+26 12.4	1.496	2.363	14.2	19.0	1 16	5 18.43	+23 32.3	1.556	2.426	13.6	19.6
1 26	5 9.99	+26 2.9	1.564	2.347	17.9	19.3	1 26	5 15.40	+23 15.6	1.657	2.444	16.9	19.8
261892	2006 <i>HO</i> ₄₄	12 17.9	284° 62'	1° 0'/17.9	18		459410	2012 <i>LL</i> ₂₀	12 17.9	170° 25'	3° 4'/17.8	17	
11 17	6 12.66	+24 18.4	1.279	2.146	16.5	21.0	11 17	6 4.76	+10 58.6	2.715	3.546	9.9	22.2
11 27	6 6.08	+24 43.3	1.210	2.139	11.9	20.7	11 27	5 58.93	+10 49.3	2.644	3.548	7.4	22.0
12 7	5 56.17	+25 7.6	1.162	2.131	6.5	20.4	12 7	5 51.74	+10 46.8	2.600	3.550	4.9	21.8
12 17	5 44.08	+25 27.7	1.140	2.124	1.1	20.0	12 17	5 43.76	+10 51.8	2.585	3.552	3.4	21.7
12 27	5 31.63	+25 41.3	1.145	2.117	5.6	20.3	12 27	5 35.73	+11 4.7	2.600	3.553	4.6	21.8
1 6	5 20.75	+25 48.6	1.175	2.109	11.2	20.6	1 6	5 28.38	+11 24.8	2.645	3.554	7.0	22.0
1 16	5 12.95	+25 52.0	1.228	2.102	16.1	20.8	1 16	5 22.31	+11 51.5	2.718	3.555	9.5	22.2
1 26	5 9.09	+25 54.9	1.300	2.095	20.3	21.1	1 26	5 18.00	+12 23.4	2.814	3.556	11.7	22.3
307607	2003 <i>QP</i> ₅₄	12 17.9	90° 43'	4° 0'/17.9	18		25420	1999 <i>VN</i> ₈₁	12 17.9	344° 37'			

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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
522229	2016 <i>AH</i> ₂₆₇	12 17.9	32°76	0°1/17.9	16		152814	1999 <i>TW</i> ₂₆₀	12 17.9	118°44	1°2/17.8	18	
11 17	6 7.66	+25 50.2	2.042	2.894	11.9	20.6	11 17	6 7.38	+20 2.8	2.270	3.116	11.0	20.2
11 27	6 1.32	+25 13.2	1.978	2.900	8.4	20.4	11 27	6 0.99	+19 51.1	2.206	3.126	7.8	20.0
12 7	5 53.09	+24 31.5	1.939	2.906	4.5	20.1	12 7	5 52.92	+19 40.3	2.169	3.135	4.3	19.8
12 17	5 43.87	+23 45.7	1.929	2.913	0.4	19.8	12 17	5 43.92	+19 30.6	2.161	3.144	1.3	19.6
12 27	5 34.74	+22 57.7	1.949	2.920	3.8	20.1	12 27	5 34.94	+19 22.5	2.184	3.153	3.7	19.8
1 6	5 26.74	+22 10.5	1.999	2.928	7.6	20.4	1 6	5 26.90	+19 16.6	2.236	3.161	7.2	20.1
1 16	5 20.67	+21 26.8	2.074	2.935	11.1	20.6	1 16	5 20.54	+19 13.7	2.315	3.169	10.3	20.3
1 26	5 17.03	+20 49.1	2.173	2.943	13.9	20.8	1 26	5 16.35	+19 14.6	2.418	3.177	13.0	20.5
384818	2012 <i>RE</i> ₅	12 17.9	157°07	3°3/18.2	18		268671	2006 <i>FP</i> ₁₀	12 17.9	305°71	5°5/17.4	18	
11 17	6 14.35	+31 49.1	1.704	2.549	14.1	21.1	11 17	6 4.90	+ 8 15.5	2.089	2.924	12.3	20.7
11 27	6 6.61	+32 6.2	1.639	2.554	10.4	20.9	11 27	5 59.42	+ 7 40.1	2.015	2.916	9.5	20.5
12 7	5 56.16	+32 14.1	1.598	2.558	6.3	20.6	12 7	5 52.18	+ 7 14.7	1.966	2.909	6.8	20.3
12 17	5 44.14	+32 9.0	1.584	2.561	3.4	20.5	12 17	5 43.87	+ 7 1.6	1.944	2.901	5.5	20.2
12 27	5 32.09	+31 50.3	1.600	2.564	5.4	20.6	12 27	5 35.45	+ 7 2.4	1.950	2.894	6.7	20.3
1 6	5 21.54	+31 20.4	1.643	2.567	9.4	20.8	1 6	5 27.85	+ 7 17.1	1.984	2.886	9.3	20.4
1 16	5 13.64	+30 44.0	1.712	2.570	13.2	21.1	1 16	5 21.86	+ 7 44.2	2.042	2.879	12.2	20.6
1 26	5 9.04	+30 6.4	1.802	2.572	16.4	21.3	1 26	5 18.07	+ 8 21.5	2.123	2.872	14.9	20.8
447158	2005 <i>JD</i> ₁₇	12 17.9	200°84	3°8/17.3	18		71282	Holuby	12 17.9	8°57	4°7/18.1	18	
11 17	6 8.19	+13 41.4	2.160	2.999	11.8	21.4	11 17	6 5.56	+ 9 39.9	1.871	2.714	13.2	18.2
11 27	6 1.63	+12 54.9	2.086	2.996	8.7	21.2	11 27	6 0.01	+ 9 39.5	1.806	2.715	10.0	18.0
12 7	5 53.28	+12 13.1	2.038	2.993	5.6	21.0	12 7	5 52.53	+ 9 50.7	1.765	2.716	6.7	17.8
12 17	5 43.90	+11 38.0	2.019	2.989	3.9	20.9	12 17	5 43.90	+10 14.3	1.751	2.718	4.7	17.7
12 27	5 34.46	+11 11.8	2.030	2.985	5.5	21.0	12 27	5 35.18	+10 50.0	1.765	2.720	6.1	17.8
1 6	5 25.93	+10 55.8	2.070	2.980	8.6	21.1	1 6	5 27.42	+11 35.8	1.807	2.723	9.2	18.0
1 16	5 19.10	+10 50.1	2.137	2.975	11.7	21.3	1 16	5 21.48	+12 29.5	1.874	2.727	12.5	18.2
1 26	5 14.52	+10 54.1	2.225	2.970	14.4	21.5	1 26	5 17.97	+13 28.2	1.963	2.730	15.3	18.4
274455	2008 <i>SZ</i> ₅₈	12 17.9	149°00	4°6/18.1	18		73400	2002 <i>LF</i> ₂₁	12 17.9	182°14	0°3/17.9	18	
11 17	6 16.09	+35 42.1	2.122	2.948	12.5	21.2	11 17	6 7.55	+25 36.8	2.496	3.339	10.3	19.5
11 27	6 7.55	+36 27.9	2.060	2.959	9.4	21.0	11 27	6 1.08	+25 19.4	2.421	3.340	7.3	19.3
12 7	5 56.58	+37 3.2	2.023	2.970	6.4	20.9	12 7	5 52.96	+24 58.4	2.374	3.340	3.9	19.1
12 17	5 44.18	+37 23.4	2.015	2.979	4.6	20.8	12 17	5 43.94	+24 33.8	2.356	3.340	0.5	18.8
12 27	5 31.74	+37 26.5	2.038	2.989	5.8	20.9	12 27	5 34.90	+24 6.1	2.369	3.339	3.3	19.0
1 6	5 20.60	+37 14.2	2.089	2.997	8.7	21.1	1 6	5 26.74	+23 37.1	2.412	3.339	6.7	19.2
1 16	5 11.81	+36 50.4	2.167	3.004	11.6	21.3	1 16	5 20.18	+23 8.8	2.483	3.338	9.7	19.4
1 26	5 6.03	+36 20.5	2.267	3.011	14.2	21.5	1 26	5 15.72	+22 43.2	2.578	3.337	12.3	19.6
113398	2002 <i>SL</i> ₂₂	12 17.9	342°38	0°7/17.9	18		18098	2000 <i>LR</i> ₂₀	12 17.9	228°58	3°3/17.5	18	
11 17	6 5.21	+21 25.4	1.842	2.702	12.6	19.0	11 17	6 7.36	+14 52.7	2.107	2.951	11.9	18.0
11 27	5 59.94	+21 25.9	1.767	2.693	9.0	18.8	11 27	6 1.14	+14 17.9	2.031	2.945	8.7	17.8
12 7	5 52.55	+21 27.3	1.717	2.685	4.9	18.5	12 7	5 53.09	+13 47.4	1.981	2.940	5.4	17.6
12 17	5 43.86	+21 29.1	1.694	2.678	0.8	18.2	12 17	5 43.95	+13 22.8	1.960	2.934	3.4	17.4
12 27	5 35.00	+21 31.1	1.700	2.671	4.2	18.5	12 27	5 34.72	+13 5.7	1.968	2.927	5.1	17.5
1 6	5 27.13	+21 33.8	1.733	2.664	8.4	18.7	1 6	5 26.38	+12 57.0	2.005	2.921	8.5	17.7
1 16	5 21.22	+21 38.0	1.791	2.659	12.2	18.9	1 16	5 19.76	+12 57.1	2.068	2.914	11.7	17.9
1 26	5 17.92	+21 44.6	1.872	2.654	15.4	19.1	1 26	5 15.43	+13 5.3	2.153	2.908	14.5	18.1
97119	1999 <i>VT</i> ₀₄	12 17.9	261°08	3°2/17.9	18		75203	1999 <i>VL</i> ₁₈₃	12 17.9	275°23	3°4/17.8	18	
11 17	6 11.71	+30 43.5	1.802	2.649	13.4	19.1	11 17	6 13.46	+29 0.7	1.461	2.318	15.4	18.9
11 27	6 4.85	+31 16.8	1.723	2.639	9.8	18.8	11 27	6 6.66	+29 51.3	1.384	2.306	11.3	18.6
12 7	5 55.33	+31 43.7	1.669	2.629	6.0	18.6	12 7	5 56.57	+30 37.8	1.330	2.293	6.8	18.3
12 17	5 44.10	+32 0.2	1.642	2.619	3.3	18.4	12 17	5 44.26	+31 14.5	1.302	2.281	3.4	18.1
12 27	5 32.57	+32 3.9	1.644	2.608	5.3	18.5	12 27	5 31.45	+31 37.1	1.302	2.268	6.1	18.2
1 6	5 22.23	+31 55.9	1.674	2.598	9.3	18.7	1 6	5 20.00	+31 45.6	1.328	2.256	10.8	18.5
1 16	5 14.27	+31 39.3	1.729	2.587	13.1	18.9	1 16	5 11.45	+31 43.0	1.378	2.243	15.3	18.7
1 26	5 9.48	+31 18.6	1.806	2.576	16.3	19.1	1 26	5 6.75	+31 34.7	1.448	2.230	19.2	18.9
512907	2016 <i>WX</i> ₅₀	12 17.9	82°09	0°3/17.9	16		413848	2006 <i>ST</i> ₃₅₄	12 17.9	339°27	19°4/13.1	17	
11 17	6 12.63	+25 25.7	1.547	2.404	14.7	21.5	11 17	6 8.85	- 7 52.4	1.031	1.849	23.2	20.4
11 27	6 5.21	+25 5.3	1.495	2.420	10.4	21.3	11 27	6 3.37	-10 58.7	0.990	1.844	21.1	20.2
12 7	5 55.30	+24 40.4	1.467	2.435	5.6	21.0	12 7	5 54.71	-13 30.3	0.966	1.839	19.7	20.1
12 17	5 44.08	+24 10.7	1.466	2.450	0.6	20.7	12 17	5 44.10	-15 11.6	0.961	1.836	19.5	20.1
12 27	5 33.07	+23 37.5	1.494	2.465	4.6	21.0	12 27	5 33.34	-15 53.2	0.973	1.832	20.7	20.2
1 6	5 23.67	+23 3.9	1.549	2.480	9.3	21.3	1 6	5 24.24	-15 36.2	1.003	1.830	22.6	20.3
1 16	5 16.86	+22 33.3	1.630	2.495	13.3	21.6	1 16	5 18.16	-14 29.3	1.046	1.828	25.0	20.5
1 26	5 13.21	+22 8.1	1.731	2.510	16.6	21.9	1 26	5 15.89	-12 45.3	1.102	1.826	27.2	20.6
511077	2013 <i>TJ</i> ₅₆	12 17.9	30°04	0°9/17.9	18		331681	2002 <i>QY</i> ₆₅	12 17.9	157°48	1°7/18.0	16	
11 17	6 12.31	+26 6.3	1.235	2.104	16.8	21.3	11 17	6 15.10	+28 13.1	1.925	2.766	12.9	22.6
11 27	6 5.68	+25 57.9	1.177	2.107	12.1	21.0	11 27	6 6.81	+28 22.5	1.859	2.775	9.3	22.4
12 7	5 55.85	+25 44.2	1.141	2.110	6.6	20.7	12 7	5 56.17	+28 25.9	1.820	2.783	5.2	22.2
12 17	5 44.16	+25 23.4	1.131	2.114	1.1	20.4	12 17	5 44.22	+28 21.1	1.809	2.791	1.8	21.9
12 27	5 32.48	+24 56.4	1.146	2.118	5.4	20.7	12 27	5 32.28	+28 7.7	1.829	2.797	4.4	22.1
1 6	5 22.64	+24 26.3	1.187	2.123	10.9	21.0	1 6	5 21.66	+27 47.5	1.878	2.803	8.4	22.4
1 16	5 15.92	+23 57.5	1.251	2.128	15.7	21.3	1 16	5 13.37	+27 23.8	1.954	2.808	12.0	22.6
1 26	5 13.01	+23 33.6	1.334	2.133	19.6	21.6	1 26	5 8.02	+27 0.2	2.053	2.811	15.0	22.8
230670	2003 <i>SU</i> ₂₄₈	12 17.9	25°64	0°4/17.9	18		449568	2014 <i>JL</i> ₆	12 17.9	152°20	3°0/17.6	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
148484	2001 <i>HK</i> ₆₀		12 17.9 73°63	1°9/18.2	18		344173	2001 <i>BS</i> ₂₄		12 17.9 25°27	3°6/18.4	18	
11 17	6 17.11	+14 22.0	1.390	2.238	16.6	19.0	11 17	6 10.08	+31 20.2	1.083	1.959	18.1	18.4
11 27	6 8.54	+15 38.9	1.347	2.266	11.9	18.7	11 27	6 4.27	+31 21.8	1.043	1.974	13.2	18.1
12 7	5 57.19	+17 6.7	1.329	2.293	6.6	18.5	12 7	5 55.10	+31 11.0	1.024	1.990	7.8	17.9
12 17	5 44.30	+18 39.9	1.339	2.321	2.0	18.3	12 17	5 44.18	+30 45.3	1.028	2.008	3.7	17.7
12 27	5 31.55	+20 12.4	1.378	2.348	5.2	18.6	12 27	5 33.60	+30 5.8	1.057	2.027	6.3	17.9
1 6	5 20.53	+21 39.3	1.446	2.375	10.0	18.9	1 6	5 25.21	+29 17.8	1.110	2.047	11.2	18.3
1 16	5 12.36	+22 58.4	1.540	2.401	14.2	19.2	1 16	5 20.21	+28 27.9	1.184	2.069	15.8	18.6
1 26	5 7.68	+24 9.4	1.655	2.427	17.5	19.5	1 26	5 19.11	+27 41.6	1.278	2.092	19.5	18.9
105285	2000 <i>QD</i> ₄₂		12 17.9 95°68	0°2/17.9	18		275469	2011 <i>DK</i> ₁₂		12 17.9 332°35	1°9/17.8	17	
11 17	6 8.93	+24 14.8	1.984	2.835	12.2	20.1	11 17	6 5.95	+18 44.9	1.916	2.772	12.4	20.6
11 27	6 2.35	+24 13.4	1.921	2.842	8.6	19.9	11 27	6 0.39	+18 31.2	1.842	2.765	8.9	20.3
12 7	5 53.75	+24 10.0	1.883	2.850	4.6	19.7	12 7	5 52.81	+18 20.0	1.792	2.758	5.0	20.1
12 17	5 44.03	+24 3.5	1.874	2.858	0.5	19.3	12 17	5 44.01	+18 11.7	1.771	2.752	1.9	19.9
12 27	5 34.31	+23 54.2	1.895	2.866	3.8	19.6	12 27	5 35.08	+18 6.9	1.778	2.746	4.4	20.0
1 6	5 25.72	+23 43.1	1.945	2.873	7.8	19.9	1 6	5 27.12	+18 6.2	1.813	2.740	8.4	20.3
1 16	5 19.11	+23 32.1	2.020	2.881	11.3	20.1	1 16	5 21.01	+18 10.1	1.873	2.735	12.0	20.5
1 26	5 15.06	+23 23.0	2.119	2.888	14.3	20.3	1 26	5 17.40	+18 18.9	1.956	2.730	15.1	20.7
2982	Muriel		12 17.9 2°82	3°8/17.9	18		283493	2001 <i>SA</i> ₁₃₂		12 17.9 159°10	2°5/17.7	18	
11 17	6 9.62	+32 17.0	1.962	2.807	12.6	16.2	11 17	6 11.51	+16 49.1	2.021	2.862	12.4	21.8
11 27	6 3.18	+33 4.4	1.894	2.807	9.3	15.9	11 27	6 4.08	+16 32.5	1.956	2.870	8.9	21.5
12 7	5 54.36	+33 44.9	1.850	2.807	5.9	15.7	12 7	5 54.68	+16 19.4	1.916	2.878	5.2	21.3
12 17	5 44.09	+34 14.2	1.835	2.807	3.8	15.6	12 17	5 44.17	+16 10.3	1.905	2.884	2.5	21.2
12 27	5 33.63	+34 30.0	1.848	2.808	5.4	15.7	12 27	5 33.65	+16 6.0	1.925	2.890	4.6	21.3
1 6	5 24.29	+34 32.9	1.889	2.808	8.7	15.9	1 6	5 24.22	+16 6.8	1.975	2.895	8.3	21.6
1 16	5 17.13	+34 25.4	1.956	2.809	12.0	16.1	1 16	5 16.72	+16 13.1	2.051	2.899	11.7	21.8
1 26	5 12.85	+34 11.8	2.045	2.811	14.8	16.3	1 26	5 11.73	+16 24.8	2.149	2.903	14.6	22.0
90064	2002 <i>VV</i> ₆₅		12 17.9 57°90	7°9/19.1	18		506103	2016 <i>AO</i> ₁₇₂		12 17.9 3°04	4°8/18.6	17	
11 17	6 17.75	+42 45.0	1.582	2.406	16.1	19.1	11 17	6 10.16	+37 4.5	1.952	2.787	13.0	20.2
11 27	6 9.23	+43 28.1	1.545	2.432	12.8	18.9	11 27	6 3.55	+37 18.1	1.883	2.787	9.9	20.0
12 7	5 57.58	+43 50.4	1.529	2.459	9.7	18.8	12 7	5 54.54	+37 19.1	1.839	2.787	6.8	19.9
12 17	5 44.35	+43 46.2	1.539	2.485	8.0	18.8	12 17	5 44.15	+37 4.1	1.822	2.788	4.8	19.7
12 27	5 31.52	+43 14.8	1.576	2.512	8.7	18.9	12 27	5 33.76	+36 32.6	1.833	2.788	5.9	19.8
1 6	5 20.88	+42 21.4	1.638	2.539	11.1	19.1	1 6	5 24.68	+35 47.6	1.872	2.790	8.9	20.0
1 16	5 13.55	+41 14.4	1.724	2.566	13.9	19.3	1 16	5 17.94	+34 53.9	1.937	2.791	12.0	20.2
1 26	5 10.02	+40 2.3	1.831	2.592	16.5	19.6	1 26	5 14.16	+33 57.2	2.023	2.793	14.8	20.4
358185	2006 <i>SF</i> ₈₉		12 17.9 221°35	3°5/18.0	17		163815	2003 <i>RR</i> ₂		12 17.9 12°83	9°8/18.1	18	
11 17	6 11.77	+32 48.4	2.184	3.020	11.8	21.6	11 17	6 6.02	+2 16.7	1.332	2.172	17.6	19.1
11 27	6 4.56	+33 20.2	2.104	3.013	8.8	21.4	11 27	6 0.83	+1 29.3	1.280	2.175	14.3	18.9
12 7	5 55.07	+33 44.5	2.050	3.005	5.6	21.2	12 7	5 53.17	+1 4.2	1.249	2.179	11.3	18.8
12 17	5 44.17	+33 57.8	2.024	2.997	3.5	21.1	12 17	5 44.06	+1 6.3	1.240	2.183	9.8	18.7
12 27	5 33.05	+33 58.4	2.029	2.989	5.0	21.1	12 27	5 34.91	+1 37.0	1.256	2.188	10.8	18.8
1 6	5 22.95	+33 47.1	2.062	2.980	8.2	21.3	1 6	5 27.10	+2 33.5	1.295	2.195	13.5	19.0
1 16	5 14.89	+33 27.0	2.122	2.970	11.4	21.5	1 16	5 21.68	+3 50.0	1.356	2.202	16.7	19.2
1 26	5 9.58	+33 2.3	2.205	2.960	14.2	21.7	1 26	5 19.32	+5 19.5	1.436	2.210	19.7	19.4
227703	2006 <i>DU</i> ₈₂		12 17.9 350°89	3°1/17.7	17		323024	2002 <i>QV</i> ₂₃		12 17.9 142°07	0°7/17.9	17	
11 17	6 5.16	+16 2.7	1.685	2.544	13.5	20.1	11 17	6 6.37	+20 51.6	2.765	3.606	9.4	21.9
11 27	5 59.99	+15 44.1	1.616	2.539	9.9	19.9	11 27	6 0.11	+20 50.4	2.698	3.615	6.7	21.7
12 7	5 52.63	+15 31.1	1.571	2.534	5.9	19.7	12 7	5 52.44	+20 49.7	2.659	3.624	3.6	21.6
12 17	5 43.97	+15 24.7	1.552	2.530	3.1	19.5	12 17	5 44.00	+20 49.2	2.650	3.633	0.7	21.3
12 27	5 35.18	+15 25.7	1.561	2.527	5.3	19.6	12 27	5 35.55	+20 48.8	2.672	3.641	3.1	21.6
1 6	5 27.46	+15 34.4	1.597	2.524	9.3	19.8	1 6	5 27.85	+20 48.9	2.725	3.649	6.1	21.8
1 16	5 21.78	+15 50.5	1.658	2.523	13.2	20.1	1 16	5 21.53	+20 50.2	2.806	3.657	8.8	22.0
1 26	5 18.78	+16 12.9	1.739	2.522	16.4	20.3	1 26	5 17.04	+20 53.3	2.911	3.664	11.2	22.1
12448	Mr. Tompkins		12 17.9 127°20	2°5/17.9	18		143321	2003 <i>AP</i> ₅₇		12 17.9 25°85	0°0/17.9	18	
11 17	6 12.61	+16 17.8	1.618	2.468	14.5	17.9	11 17	6 8.24	+22 9.1	1.344	2.215	15.6	19.2
11 27	6 5.22	+16 27.0	1.560	2.479	10.5	17.7	11 27	6 2.52	+22 33.1	1.296	2.227	11.1	19.0
12 7	5 55.41	+16 42.6	1.526	2.490	6.0	17.5	12 7	5 54.09	+22 58.4	1.270	2.240	5.9	18.7
12 17	5 44.21	+17 3.8	1.519	2.500	2.5	17.3	12 17	5 44.14	+23 22.7	1.270	2.254	0.5	18.4
12 27	5 33.00	+17 29.5	1.542	2.510	5.1	17.5	12 27	5 34.23	+23 44.1	1.297	2.269	4.9	18.8
1 6	5 23.13	+17 58.7	1.593	2.519	9.5	17.7	1 6	5 25.89	+24 2.4	1.349	2.285	9.8	19.1
1 16	5 15.63	+18 30.6	1.669	2.528	13.4	18.0	1 16	5 20.22	+24 18.6	1.425	2.302	14.1	19.4
1 26	5 11.15	+19 4.8	1.766	2.536	16.7	18.2	1 26	5 17.84	+24 33.9	1.521	2.320	17.6	19.7
76276	2000 <i>EQ</i> ₁₁₄		12 17.9 30°40	5°2/18.4	17		274645	2008 <i>TQ</i> ₁₃₀		12 17.9 35°09	2°0/18.1	17	
11 17	6 10.33	+37 27.6	1.969	2.803	13.0	18.9	11 17	6 7.84	+28 57.5	1.939	2.791	12.4	20.3
11 27	6 3.67	+38 0.3	1.907	2.809	9.9	18.7	11 27	6 1.70	+29 8.5	1.881	2.801	8.9	20.1
12 7	5 54.60	+38 20.9	1.870	2.815	7.0	18.5	12 7	5 53.47	+29 13.8	1.848	2.812	5.1	19.9
12 17	5 44.15	+38 25.3	1.860	2.822	5.2	18.4	12 17	5 44.09	+29 11.6	1.842	2.823	2.1	19.7
12 27	5 33.67	+38 12.2	1.878	2.828	6.3	18.5	12 27	5 34.74	+29 1.5	1.866	2.834	4.2	19.9
1 6	5 24.52	+37 44.0	1.923	2.835	9.0	18.7	1 6	5 26.58	+28 45.0	1.917	2.846	7.9	20.1
1 16	5 17.71	+37 4.9	1.994	2.843	12.0	18.9	1 16	5 20.49	+28 24.9	1.995	2.858	11.3	20.4
1 26	5 13.86	+36 20.5	2.086	2.850	14.6	19.1	1 26	5 17.03	+28 4.0	2.095	2.870	14.2	20.6
103169	1999 <i>XR</i> ₂₂₉		12 17.9 20°53	9°0/17.7	18		476545	2008 <i>HD</i> ₄₆		12 17.9 133°22	0°7/17.9	16	
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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
447637	2006 <i>VN</i> ₁₄		12 17.9	0°67	5°3/17.8	17	104914	2000 <i>JJ</i> ₁₆		12 17.9	175°19	3°8/17.6	18
11 17	6 10.44	+33 43.7	1.520	2.374	15.1	20.6	11 17	6 4.83	+11 31.4	2.453	3.288	10.7	19.9
11 27	6 4.39	+34 45.0	1.457	2.372	11.3	20.4	11 27	5 59.18	+11 4.1	2.383	3.289	8.0	19.7
12 7	5 55.30	+35 37.1	1.417	2.372	7.6	20.2	12 7	5 52.03	+10 43.3	2.338	3.289	5.3	19.6
12 17	5 44.29	+36 13.6	1.402	2.371	5.3	20.0	12 17	5 44.03	+10 30.4	2.323	3.290	3.8	19.5
12 27	5 33.02	+36 31.0	1.414	2.372	7.0	20.1	12 27	5 35.99	+10 26.6	2.337	3.290	5.1	19.6
1 6	5 23.24	+36 30.1	1.453	2.373	10.7	20.4	1 6	5 28.69	+10 31.9	2.381	3.290	7.7	19.7
1 16	5 16.28	+36 15.0	1.514	2.375	14.4	20.6	1 16	5 22.80	+10 45.7	2.450	3.290	10.4	19.9
1 26	5 12.94	+35 51.8	1.596	2.378	17.7	20.8	1 26	5 18.82	+11 6.9	2.543	3.290	12.7	20.1
205974	2002 <i>NQ</i> ₁₈		12 17.9	160°61	0°0/17.9	18	420659	2012 <i>JM</i> ₂₆		12 17.9	102°75	7°5/19.2	18
11 17	6 10.72	+24 4.2	2.337	3.178	11.0	21.2	11 17	6 6.73	- 4 19.0	2.581	3.353	12.1	20.4
11 27	6 3.39	+23 55.0	2.268	3.186	7.8	21.0	11 27	6 0.34	- 4 19.7	2.526	3.368	10.1	20.3
12 7	5 54.28	+23 43.4	2.226	3.192	4.2	20.8	12 7	5 52.58	- 4 2.9	2.494	3.383	8.4	20.2
12 17	5 44.19	+23 28.9	2.214	3.198	0.4	20.5	12 17	5 44.08	- 3 27.4	2.490	3.397	7.5	20.2
12 27	5 34.11	+23 12.0	2.234	3.204	3.5	20.8	12 27	5 35.61	- 2 33.5	2.514	3.411	7.9	20.2
1 6	5 25.01	+22 53.9	2.283	3.208	7.1	21.0	1 6	5 27.92	- 1 23.7	2.566	3.425	9.3	20.3
1 16	5 17.68	+22 36.5	2.360	3.212	10.3	21.3	1 16	5 21.62	- 0 1.6	2.645	3.439	11.1	20.5
1 26	5 12.64	+22 21.5	2.461	3.215	12.9	21.5	1 26	5 17.15	+ 1 28.4	2.748	3.452	12.8	20.6
320989	2008 <i>JA</i> ₃₁		12 17.9	77°79	11°4/17.9	18	33486	1999 <i>GN</i> ₈		12 17.9	254°29	5°0/17.6	18
11 17	6 6.03	-14 2.6	2.389	3.111	14.2	20.6	11 17	6 9.00	+11 46.0	1.672	2.518	14.3	18.3
11 27	5 59.87	-15 18.1	2.361	3.137	12.9	20.5	11 27	6 2.76	+11 11.9	1.599	2.512	10.8	18.1
12 7	5 52.29	-16 9.7	2.354	3.162	11.8	20.5	12 7	5 54.21	+10 46.5	1.551	2.505	7.1	17.9
12 17	5 44.01	-16 33.6	2.370	3.188	11.4	20.5	12 17	5 44.24	+10 32.4	1.529	2.498	5.0	17.7
12 27	5 35.86	-16 28.7	2.409	3.213	11.7	20.6	12 27	5 34.10	+10 31.2	1.535	2.491	6.8	17.8
1 6	5 28.61	-15 56.7	2.471	3.238	12.5	20.7	1 6	5 25.04	+10 43.1	1.568	2.483	10.4	18.0
1 16	5 22.88	-15 2.0	2.555	3.262	13.6	20.8	1 16	5 18.11	+11 7.0	1.625	2.476	14.1	18.2
1 26	5 19.09	-13 50.0	2.656	3.287	14.7	20.9	1 26	5 13.99	+11 40.8	1.703	2.468	17.4	18.4
269001	2007 <i>EQ</i> ₁₁₅		12 17.9	88°85	2°1/17.9	18	128430	2004 <i>NC</i> ₁		12 17.9	138°97	1°8/17.9	18
11 17	6 7.07	+16 41.1	2.218	3.063	11.3	20.7	11 17	6 7.77	+17 12.1	2.456	3.296	10.5	20.9
11 27	6 0.80	+16 35.9	2.161	3.078	8.1	20.5	11 27	6 1.22	+17 9.2	2.392	3.307	7.5	20.7
12 7	5 52.89	+16 34.6	2.131	3.093	4.7	20.3	12 7	5 53.12	+17 9.5	2.355	3.317	4.3	20.5
12 17	5 44.07	+16 37.3	2.129	3.108	2.2	20.2	12 17	5 44.14	+17 12.9	2.347	3.327	1.8	20.4
12 27	5 35.30	+16 44.2	2.157	3.123	4.1	20.3	12 27	5 35.16	+17 19.4	2.371	3.337	3.7	20.5
1 6	5 27.47	+16 55.2	2.214	3.137	7.4	20.5	1 6	5 27.03	+17 29.0	2.424	3.346	6.9	20.8
1 16	5 21.30	+17 10.0	2.298	3.151	10.4	20.8	1 16	5 20.43	+17 41.7	2.505	3.354	9.8	21.0
1 26	5 17.30	+17 28.4	2.406	3.166	13.0	21.0	1 26	5 15.86	+17 57.5	2.610	3.362	12.3	21.2
24816	1994 <i>VU</i> ₆		12 17.9	68°22	6°7/17.3	18	493961	2016 <i>AJ</i> ₅₃		12 17.9	71°62	2°7/18.4	17
11 17	6 9.46	+ 8 25.2	1.635	2.475	14.9	17.7	11 17	6 9.53	+32 20.3	2.161	3.001	11.7	21.3
11 27	6 2.69	+ 7 18.6	1.595	2.498	11.4	17.5	11 27	6 2.80	+32 18.2	2.093	3.006	8.6	21.1
12 7	5 53.93	+ 6 24.7	1.578	2.520	8.2	17.4	12 7	5 54.07	+32 7.3	2.051	3.010	5.2	20.9
12 17	5 44.16	+ 5 47.3	1.587	2.543	6.7	17.3	12 17	5 44.23	+31 46.3	2.038	3.014	2.8	20.7
12 27	5 34.61	+ 5 28.8	1.624	2.565	8.0	17.5	12 27	5 34.41	+31 15.1	2.054	3.019	4.4	20.8
1 6	5 26.41	+ 5 29.0	1.688	2.588	10.9	17.7	1 6	5 25.74	+30 36.4	2.099	3.023	7.6	21.1
1 16	5 20.37	+ 5 45.7	1.775	2.610	13.9	17.9	1 16	5 19.06	+29 53.6	2.171	3.028	10.8	21.3
1 26	5 16.97	+ 6 15.4	1.883	2.632	16.5	18.2	1 26	5 14.94	+29 10.7	2.266	3.032	13.5	21.5
401150	2011 <i>VH</i> ₁₃		12 17.9	128°40	2°9/17.6	18	222158	1999 <i>YL</i> ₁₀		12 17.9	295°98	2°1/17.8	18
11 17	6 8.77	+16 52.1	1.884	2.734	12.8	21.2	11 17	6 10.14	+19 23.6	1.377	2.242	15.7	20.7
11 27	6 2.28	+16 15.7	1.819	2.738	9.3	21.0	11 27	6 4.25	+19 7.1	1.294	2.222	11.4	20.4
12 7	5 53.79	+15 42.5	1.780	2.742	5.5	20.8	12 7	5 55.32	+18 53.0	1.234	2.202	6.5	20.1
12 17	5 44.18	+15 14.1	1.768	2.746	2.9	20.6	12 17	5 44.37	+18 41.7	1.200	2.182	2.2	19.7
12 27	5 34.56	+14 52.3	1.786	2.749	5.1	20.8	12 27	5 32.93	+18 33.9	1.192	2.162	5.8	19.9
1 6	5 26.04	+14 38.2	1.832	2.753	8.8	21.0	1 6	5 22.73	+18 31.0	1.211	2.143	11.1	20.2
1 16	5 19.49	+14 32.4	1.903	2.756	12.3	21.2	1 16	5 15.17	+18 34.2	1.252	2.124	16.1	20.4
1 26	5 15.47	+14 34.9	1.997	2.760	15.2	21.4	1 26	5 11.18	+18 44.3	1.312	2.105	20.2	20.6
193205	2000 <i>QC</i> ₁₉₂		12 17.9	49°31	7°9/18.2	18	388589	2007 <i>RH</i> ₁₂₉		12 17.9	119°97	1°9/17.8	18
11 17	6 16.19	+38 54.3	1.364	2.208	17.1	19.3	11 17	6 10.50	+18 5.6	1.964	2.810	12.5	21.7
11 27	6 8.71	+40 8.8	1.320	2.223	13.3	19.1	11 27	6 3.40	+17 56.2	1.906	2.824	8.9	21.5
12 7	5 57.66	+41 6.1	1.297	2.238	9.8	19.0	12 7	5 54.36	+17 49.8	1.875	2.839	5.1	21.3
12 17	5 44.51	+41 37.8	1.299	2.254	7.9	18.9	12 17	5 44.26	+17 46.3	1.872	2.852	2.0	21.1
12 27	5 31.41	+41 40.4	1.327	2.271	9.1	19.0	12 27	5 34.23	+17 46.2	1.899	2.866	4.4	21.3
1 6	5 20.43	+41 17.5	1.379	2.288	12.1	19.2	1 6	5 25.32	+17 49.8	1.955	2.879	8.1	21.5
1 16	5 12.99	+40 36.8	1.454	2.305	15.5	19.5	1 16	5 18.39	+17 57.3	2.037	2.891	11.5	21.8
1 26	5 9.74	+39 47.3	1.548	2.322	18.5	19.7	1 26	5 13.97	+18 9.0	2.142	2.903	14.4	22.0
73466	2002 <i>OP</i> ₅		12 17.9	9°83	3°8/17.4	17	372239	2008 <i>UF</i> ₁₂₂		12 17.9	338°19	1°8/18.2	18
11 17	6 5.62	+14 0.2	2.035	2.882	12.1	19.4	11 17	6 7.36	+29 21.2	2.170	3.017	11.4	21.0
11 27	5 59.96	+13 17.6	1.968	2.883	8.9	19.2	11 27	6 1.32	+29 20.4	2.095	3.013	8.3	20.8
12 7	5 52.52	+12 40.2	1.927	2.884	5.7	19.0	12 7	5 53.32	+29 13.6	2.046	3.010	4.8	20.6
12 17	5 44.07	+12 10.3	1.913	2.885	3.8	18.9	12 17	5 44.18	+28 59.5	2.026	3.007	1.9	20.4
12 27	5 35.59	+11 49.5	1.929	2.886	5.5	19.0	12 27	5 34.97	+28 38.1	2.035	3.004	3.9	20.5
1 6	5 28.05	+11 38.9	1.973	2.888	8.6	19.2	1 6	5 26.76	+28 11.1	2.073	3.001	7.5	20.7
1 16	5 22.23	+11 38.4	2.042	2.890	11.8	19.4	1 16	5 20.40	+27 41.3	2.138	2.998	10.8	20.9
1 26	5 18.66	+11 47.3	2.133	2.892	14.5	19.6	1 26	5 16.49	+27 11.6	2.225	2.996	13.6	21.1
262545	2006 <i>VU</i> ₈		12 17.9	61°30	0°4/17.9	18	290040	2005 <i>QT</i> ₃₅		12 17.9	35°09		

EPHEMERIDES

12 17.9

12 17.9

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
451513	2011 <i>UA</i> ₃₄₅		12 17.9	83°21'	5°8'/18.3	18	119189	2001 <i>QO</i> ₁₀₂		12 17.9	134°26'	0°2'/17.9	18
11 17	6 14.44	+37 18.8	1.720	2.556	14.5	21.3	11 17	6 13.56	+24 7.8	1.800	2.648	13.4	20.3
11 27	6 6.91	+38 3.7	1.662	2.565	11.1	21.1	11 27	6 5.80	+24 5.8	1.740	2.660	9.5	20.1
12 7	5 56.52	+38 35.1	1.628	2.573	7.8	21.0	12 7	5 55.75	+24 1.2	1.706	2.672	5.1	19.8
12 17	5 44.46	+38 47.7	1.620	2.582	5.8	20.9	12 17	5 44.44	+23 53.1	1.700	2.684	0.5	19.5
12 27	5 32.38	+38 39.5	1.640	2.591	7.0	21.0	12 27	5 33.20	+23 41.4	1.724	2.695	4.2	19.8
1 6	5 21.89	+38 12.9	1.688	2.600	10.1	21.2	1 6	5 23.30	+23 27.7	1.777	2.705	8.5	20.1
1 16	5 14.20	+37 33.7	1.759	2.608	13.3	21.4	1 16	5 15.71	+23 14.4	1.856	2.714	12.3	20.3
1 26	5 9.96	+36 48.4	1.852	2.617	16.2	21.6	1 26	5 11.01	+23 3.6	1.957	2.723	15.4	20.6
107863	2001 <i>FQ</i> ₈₀		12 17.9	108°91'	2°6'/17.6	18	169590	2002 <i>GJ</i> ₆₈		12 17.9	144°98'	4°6'/18.1	18
11 17	6 10.70	+17 9.0	2.152	2.992	11.8	19.2	11 17	6 9.49	+ 8 7.9	2.274	3.095	11.9	20.6
11 27	6 3.28	+16 30.2	2.101	3.015	8.5	19.0	11 27	6 2.50	+ 8 2.8	2.211	3.107	9.1	20.4
12 7	5 54.18	+15 54.2	2.077	3.037	5.0	18.8	12 7	5 53.86	+ 8 8.1	2.175	3.118	6.3	20.2
12 17	5 44.25	+15 22.2	2.082	3.059	2.6	18.7	12 17	5 44.28	+ 8 24.5	2.168	3.129	4.7	20.2
12 27	5 34.50	+14 56.0	2.118	3.080	4.5	18.9	12 27	5 34.70	+ 8 52.0	2.191	3.139	5.7	20.2
1 6	5 25.86	+14 36.6	2.183	3.101	7.8	19.1	1 6	5 26.01	+ 9 29.1	2.243	3.148	8.3	20.4
1 16	5 19.06	+14 24.8	2.276	3.121	10.9	19.3	1 16	5 18.95	+10 14.0	2.323	3.156	11.1	20.6
1 26	5 14.54	+14 20.6	2.392	3.140	13.4	19.6	1 26	5 14.03	+11 4.5	2.426	3.164	13.5	20.8
218154	2002 <i>RK</i> ₁₃₃		12 17.9	51°32'	3°6'/18.3	18	442505	2011 <i>WP</i> ₂₁		12 17.9	66°74'	1°0'/17.8	18
11 17	6 13.08	+13 32.1	1.142	2.006	18.3	19.0	11 17	6 9.23	+21 55.5	1.800	2.654	13.1	21.3
11 27	6 6.00	+14 2.2	1.106	2.031	13.2	18.8	11 27	6 2.79	+21 34.5	1.733	2.657	9.3	21.0
12 7	5 55.98	+14 45.3	1.092	2.056	7.8	18.6	12 7	5 54.18	+21 12.6	1.692	2.659	5.1	20.8
12 17	5 44.41	+15 38.7	1.102	2.082	3.7	18.5	12 17	5 44.32	+20 50.2	1.679	2.662	1.0	20.5
12 27	5 33.11	+16 38.9	1.139	2.108	6.3	18.7	12 27	5 34.44	+20 28.3	1.694	2.665	4.3	20.8
1 6	5 23.74	+17 41.9	1.202	2.134	11.2	19.0	1 6	5 25.75	+20 8.5	1.738	2.668	8.6	21.0
1 16	5 17.43	+18 44.7	1.287	2.161	15.6	19.4	1 16	5 19.17	+19 52.8	1.808	2.670	12.4	21.3
1 26	5 14.73	+19 45.7	1.392	2.188	19.1	19.7	1 26	5 15.31	+19 42.4	1.899	2.673	15.5	21.5
141734	2002 <i>LK</i> ₂₈		12 17.9	180°20'	2°2'/17.8	18	414701	2009 <i>WJ</i> ₁₇₀		12 17.9	332°98'	4°7'/17.5	16
11 17	6 12.72	+18 30.8	1.722	2.571	13.8	20.5	11 17	6 8.40	+31 32.9	1.641	2.497	14.0	20.3
11 27	6 5.32	+18 9.7	1.653	2.572	10.0	20.3	11 27	6 3.04	+32 45.7	1.557	2.476	10.5	20.0
12 7	5 55.55	+17 50.9	1.609	2.573	5.7	20.0	12 7	5 54.75	+33 54.8	1.497	2.455	6.9	19.7
12 17	5 44.39	+17 35.0	1.593	2.574	2.3	19.8	12 17	5 44.40	+34 53.6	1.464	2.436	4.7	19.6
12 27	5 33.15	+17 22.9	1.606	2.573	5.0	20.0	12 27	5 33.44	+35 36.9	1.458	2.417	6.6	19.6
1 6	5 23.15	+17 15.7	1.648	2.572	9.3	20.3	1 6	5 23.52	+36 3.3	1.478	2.399	10.5	19.8
1 16	5 15.42	+17 14.5	1.715	2.571	13.3	20.5	1 16	5 16.08	+36 14.7	1.522	2.383	14.4	20.0
1 26	5 10.62	+17 19.7	1.803	2.568	16.6	20.7	1 26	5 12.11	+36 15.6	1.586	2.367	17.8	20.2
490437	2009 <i>SC</i> ₁₂₀		12 17.9	76°10'	0°4'/17.9	17	326505	2002 <i>LV</i> ₅		12 17.9	164°51'	0°7'/17.9	18
11 17	6 8.21	+24 48.7	2.067	2.917	11.8	21.3	11 17	6 14.56	+25 0.9	1.776	2.623	13.6	21.3
11 27	6 1.86	+24 47.1	2.002	2.924	8.4	21.1	11 27	6 6.68	+25 10.8	1.709	2.629	9.7	21.1
12 7	5 53.58	+24 43.0	1.963	2.930	4.5	20.9	12 7	5 56.32	+25 17.9	1.668	2.634	5.3	20.8
12 17	5 44.22	+24 35.5	1.953	2.937	0.6	20.6	12 17	5 44.52	+25 20.1	1.655	2.638	0.9	20.5
12 27	5 34.85	+24 24.8	1.972	2.943	3.7	20.9	12 27	5 32.66	+25 16.6	1.672	2.642	4.3	20.8
1 6	5 26.53	+24 12.0	2.021	2.950	7.6	21.1	1 6	5 22.12	+25 8.8	1.717	2.645	8.8	21.1
1 16	5 20.11	+23 59.1	2.096	2.957	11.0	21.3	1 16	5 13.95	+24 59.1	1.789	2.647	12.7	21.3
1 26	5 16.14	+23 47.7	2.193	2.963	13.8	21.6	1 26	5 8.84	+24 50.2	1.883	2.648	15.9	21.6
168470	1999 <i>LT</i> ₂₉		12 17.9	179°85'	0°9'/17.9	18	348148	2004 <i>DG</i> ₂₈		12 17.9	18°61'	1°1'/17.9	18
11 17	6 13.99	+24 19.8	1.485	2.342	15.2	20.2	11 17	6 8.90	+20 7.1	1.668	2.526	13.8	20.5
11 27	6 6.71	+24 45.9	1.418	2.342	10.9	20.0	11 27	6 2.75	+20 12.1	1.603	2.527	9.8	20.3
12 7	5 56.51	+25 11.0	1.376	2.343	5.9	19.7	12 7	5 54.25	+20 19.6	1.562	2.529	5.4	20.0
12 17	5 44.49	+25 31.8	1.360	2.343	1.0	19.4	12 17	5 44.34	+20 28.6	1.548	2.531	1.2	19.7
12 27	5 32.28	+25 46.2	1.372	2.343	5.0	19.7	12 27	5 34.33	+20 38.7	1.562	2.533	4.5	20.0
1 6	5 21.53	+25 54.6	1.412	2.342	10.0	19.9	1 6	5 25.52	+20 49.9	1.604	2.535	9.0	20.3
1 16	5 13.51	+25 59.0	1.476	2.342	14.4	20.2	1 16	5 18.93	+21 2.8	1.671	2.538	13.0	20.5
1 26	5 9.00	+26 2.3	1.560	2.341	18.1	20.4	1 26	5 15.22	+21 17.9	1.759	2.540	16.3	20.7
5293	Bentengahama		12 17.9	330°00'	4°0'/18.3	18	3877	Braes		12 17.9	218°63'	3°8'/17.2	18
11 17	6 8.26	+11 32.9	1.598	2.448	14.7	15.6	11 17	6 9.17	+14 34.7	2.064	2.906	12.2	16.7
11 27	6 2.42	+11 54.7	1.524	2.440	10.9	15.3	11 27	6 2.53	+13 40.0	1.988	2.900	9.0	16.5
12 7	5 54.14	+12 29.7	1.474	2.432	6.9	15.1	12 7	5 53.98	+12 48.7	1.937	2.893	5.7	16.3
12 17	5 44.29	+13 17.5	1.450	2.425	4.1	14.9	12 17	5 44.32	+12 3.6	1.915	2.886	3.8	16.2
12 27	5 34.14	+14 16.2	1.454	2.418	6.0	15.0	12 27	5 34.56	+11 27.2	1.923	2.879	5.6	16.3
1 6	5 25.04	+15 22.8	1.486	2.412	10.0	15.2	1 6	5 25.76	+11 1.2	1.960	2.872	8.9	16.5
1 16	5 18.11	+16 34.0	1.542	2.406	14.0	15.4	1 16	5 18.73	+10 46.6	2.023	2.864	12.2	16.6
1 26	5 14.14	+17 46.8	1.620	2.401	17.5	15.7	1 26	5 14.08	+10 42.9	2.108	2.855	15.0	16.8
515708	2014 <i>QL</i> ₄₄₇		12 17.9	91°29'	3°6'/17.9	18	279190	2009 <i>SL</i> ₃₆₀		12 17.9	43°16'	5°4'/17.6	18
11 17	6 6.66	+11 42.8	2.239	3.076	11.5	20.8	11 17	6 5.71	+ 9 18.8	1.945	2.784	12.9	20.5
11 27	6 0.53	+11 39.1	2.181	3.089	8.5	20.6	11 27	6 0.04	+ 8 39.7	1.889	2.793	9.8	20.4
12 7	5 52.79	+11 43.3	2.149	3.102	5.5	20.5	12 7	5 52.61	+ 8 10.6	1.857	2.803	6.9	20.2
12 17	5 44.16	+11 55.9	2.145	3.115	3.6	20.4	12 17	5 44.20	+ 7 54.1	1.852	2.812	5.4	20.1
12 27	5 35.53	+12 16.7	2.170	3.128	4.9	20.5	12 27	5 35.81	+ 7 51.3	1.875	2.822	6.6	20.2
1 6	5 27.80	+12 44.7	2.225	3.140	7.8	20.7	1 6	5 28.41	+ 8 2.2	1.926	2.832	9.3	20.4
1 16	5 21.66	+13 18.8	2.307	3.153	10.7	20.9	1 16	5 22.77	+ 8 25.1	2.001	2.843	12.3	20.6
1 26	5 17.61	+13 57.3	2.411	3.165	13.2	21.1	1 26	5 19.41	+ 8 57.7	2.099	2.853	14.8	20.8
457292	2008 <i>RY</i> ₁₃₁		12 17.9	19°41'	10°9'/18.6	18	183236	2002 <i>TQ</i> ₈₁		12 17.9	88°81'	0°5'/17.9	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
37399	2001 <i>XO</i> ₆₁		12 17.9	81°69	1°7/17.9	18	84140	2002 <i>RE</i> ₅₆		12 17.9	40°11	7°9/17.4	18
11 17	6 12.90	+19 14.4	1.540	2.395	14.9	19.5	11 17	6 7.53	+6 44.7	1.453	2.299	16.1	18.7
11 27	6 5.41	+19 8.3	1.495	2.418	10.6	19.3	11 27	6 1.67	+5 39.3	1.410	2.314	12.6	18.5
12 7	5 55.55	+19 5.1	1.475	2.441	5.8	19.0	12 7	5 53.59	+4 49.7	1.389	2.329	9.4	18.4
12 17	5 44.47	+19 4.3	1.481	2.464	1.8	18.8	12 17	5 44.33	+4 20.4	1.393	2.346	7.9	18.3
12 27	5 33.61	+19 6.0	1.517	2.486	4.9	19.1	12 27	5 35.22	+4 13.6	1.423	2.362	9.1	18.4
1 6	5 24.29	+19 10.6	1.580	2.508	9.3	19.4	1 6	5 27.47	+4 28.5	1.478	2.380	12.0	18.7
1 16	5 17.47	+19 18.8	1.667	2.530	13.2	19.7	1 16	5 22.01	+5 1.7	1.555	2.397	15.1	18.9
1 26	5 13.69	+19 30.8	1.776	2.552	16.4	20.0	1 26	5 19.35	+5 48.6	1.652	2.415	17.9	19.1
152837	1999 <i>VL</i> ₉₅		12 17.9	84°01	3°8/18.0	18	366656	2003 <i>SN</i> ₃₃₂		12 17.9	60°95	4°3/17.9	18
11 17	6 10.96	+33 12.4	2.093	2.931	12.1	19.9	11 17	6 7.18	+10 50.2	2.008	2.847	12.6	20.6
11 27	6 4.03	+33 55.0	2.031	2.940	9.0	19.7	11 27	6 0.96	+10 36.1	1.963	2.871	9.3	20.5
12 7	5 54.88	+34 29.5	1.996	2.950	5.8	19.5	12 7	5 53.06	+10 31.3	1.943	2.895	6.2	20.3
12 17	5 44.43	+34 52.3	1.988	2.959	3.8	19.4	12 17	5 44.29	+10 36.7	1.951	2.919	4.3	20.3
12 27	5 33.90	+35 1.5	2.010	2.968	5.2	19.5	12 27	5 35.64	+10 52.3	1.988	2.943	5.6	20.4
1 6	5 24.53	+34 58.1	2.061	2.977	8.2	19.7	1 6	5 28.05	+11 17.1	2.054	2.967	8.4	20.6
1 16	5 17.27	+34 45.1	2.137	2.987	11.3	19.9	1 16	5 22.23	+11 49.5	2.145	2.992	11.3	20.8
1 26	5 12.76	+34 26.5	2.236	2.996	13.9	20.1	1 26	5 18.65	+12 27.6	2.259	3.016	13.8	21.1
297970	2002 <i>JZ</i> ₃₀		12 17.9	235°21	3°8/17.8	18	339781	2005 <i>SY</i> ₁₃₃		12 17.9	161°34	9°5/16.6	17
11 17	6 13.54	+31 3.7	1.881	2.723	13.1	20.6	11 17	6 10.45	-3 18.3	2.143	2.924	13.9	21.6
11 27	6 6.28	+32 3.1	1.803	2.716	9.7	20.4	11 27	6 3.26	-4 39.4	2.087	2.932	11.8	21.5
12 7	5 56.32	+32 57.3	1.751	2.708	6.1	20.2	12 7	5 54.32	-5 42.9	2.056	2.940	10.2	21.4
12 17	5 44.58	+33 40.9	1.726	2.700	3.8	20.0	12 17	5 44.41	-6 23.8	2.051	2.946	9.5	21.3
12 27	5 32.44	+34 10.4	1.731	2.691	5.6	20.1	12 27	5 34.50	-6 39.5	2.073	2.952	10.3	21.4
1 6	5 21.39	+34 25.3	1.764	2.682	9.3	20.3	1 6	5 25.55	-6 30.4	2.121	2.956	11.9	21.5
1 16	5 12.68	+34 28.2	1.823	2.673	12.9	20.5	1 16	5 18.31	-5 59.4	2.193	2.960	13.9	21.7
1 26	5 7.15	+34 23.6	1.904	2.664	16.0	20.7	1 26	5 13.33	-5 11.2	2.284	2.963	15.7	21.8
102602	1999 <i>VG</i> ₅		12 17.9	41°32	0°1/17.9	18	8098	Miyamotoatsushi		12 17.9	27°49	3°0/18.2	18
11 17	6 12.84	+23 16.3	0.995	1.875	19.0	18.5	11 17	6 10.90	+29 8.2	1.125	2.000	17.7	17.3
11 27	6 6.16	+23 16.5	0.964	1.899	13.4	18.3	11 27	6 4.97	+29 29.3	1.081	2.011	12.8	17.0
12 7	5 56.18	+23 15.6	0.953	1.923	7.2	18.0	12 7	5 55.70	+29 42.1	1.057	2.024	7.4	16.8
12 17	5 44.53	+23 12.0	0.965	1.949	0.6	17.7	12 17	5 44.55	+29 42.9	1.057	2.038	3.1	16.6
12 27	5 33.34	+23 5.8	1.002	1.976	5.7	18.1	12 27	5 33.55	+29 30.6	1.082	2.053	6.1	16.8
1 6	5 24.47	+22 59.1	1.064	2.003	11.4	18.5	1 6	5 24.59	+29 8.5	1.131	2.068	11.2	17.1
1 16	5 19.05	+22 54.2	1.146	2.031	16.2	18.9	1 16	5 18.96	+28 41.6	1.203	2.085	15.8	17.5
1 26	5 17.55	+22 53.0	1.248	2.059	20.0	19.2	1 26	5 17.24	+28 14.9	1.293	2.103	19.6	17.8
224657	2005 <i>YW</i> ₂₈₂		12 17.9	289°88	0°9/18.0	17	221422	2005 <i>YT</i> ₁₇₃		12 17.9	353°43	2°0/18.3	17
11 17	6 8.39	+25 53.4	2.045	2.895	11.9	20.5	11 17	6 9.43	+30 31.6	1.918	2.767	12.7	19.6
11 27	6 2.18	+26 2.2	1.970	2.891	8.5	20.3	11 27	6 2.98	+30 14.5	1.847	2.765	9.2	19.4
12 7	5 53.89	+26 8.2	1.921	2.887	4.7	20.0	12 7	5 54.33	+29 48.7	1.800	2.763	5.3	19.1
12 17	5 44.35	+26 9.7	1.899	2.883	1.0	19.7	12 17	5 44.43	+29 13.4	1.782	2.762	2.1	18.9
12 27	5 34.68	+26 6.2	1.908	2.878	3.9	20.0	12 27	5 34.53	+28 29.4	1.792	2.761	4.3	19.1
1 6	5 26.00	+25 58.6	1.945	2.874	7.8	20.2	1 6	5 25.84	+27 40.0	1.831	2.761	8.2	19.3
1 16	5 19.24	+25 48.8	2.009	2.870	11.4	20.4	1 16	5 19.32	+26 49.2	1.897	2.761	11.8	19.5
1 26	5 15.03	+25 39.1	2.095	2.866	14.3	20.6	1 26	5 15.54	+26 1.0	1.984	2.761	14.9	19.7
400863	2010 <i>NY</i> ₆₆		12 17.9	202°21	1°5/17.9	18	220287	2003 <i>BR</i> ₇₇		12 17.9	2°00	3°6/17.6	18
11 17	6 9.70	+17 57.9	2.182	3.025	11.6	21.7	11 17	6 6.28	+18 50.6	1.026	1.911	18.1	19.3
11 27	6 2.95	+18 9.1	2.104	3.021	8.3	21.5	11 27	6 1.78	+17 58.8	0.972	1.908	13.1	19.0
12 7	5 54.26	+18 24.0	2.053	3.017	4.7	21.3	12 7	5 54.06	+17 9.8	0.938	1.907	7.6	18.7
12 17	5 44.39	+18 41.9	2.030	3.012	1.6	21.0	12 17	5 44.41	+16 27.0	0.927	1.907	3.6	18.5
12 27	5 34.35	+19 1.9	2.039	3.007	4.0	21.2	12 27	5 34.72	+15 54.2	0.940	1.909	7.0	18.7
1 6	5 25.17	+19 23.6	2.077	3.001	7.7	21.4	1 6	5 26.80	+15 34.2	0.975	1.913	12.4	19.0
1 16	5 17.72	+19 46.8	2.142	2.995	11.1	21.6	1 16	5 21.98	+15 28.0	1.031	1.918	17.4	19.3
1 26	5 12.62	+20 11.8	2.231	2.989	14.0	21.8	1 26	5 20.95	+15 34.5	1.105	1.924	21.6	19.6
414721	2009 <i>WN</i> ₂₅₆		12 17.9	55°14	1°8/17.8	18	155047	2005 <i>RO</i> ₁₀		12 17.9	73°27	0°5/18.0	18
11 17	6 10.42	+25 39.4	2.011	2.859	12.2	20.1	11 17	6 15.00	+24 41.8	1.402	2.260	15.8	20.3
11 27	6 3.63	+26 42.1	1.951	2.871	8.7	19.9	11 27	6 7.09	+24 41.9	1.362	2.286	11.2	20.1
12 7	5 54.68	+27 43.7	1.918	2.883	4.9	19.7	12 7	5 56.53	+24 38.9	1.345	2.312	6.0	19.8
12 17	5 44.43	+28 40.0	1.914	2.895	1.8	19.5	12 17	5 44.62	+24 31.1	1.354	2.338	0.7	19.5
12 27	5 34.05	+29 27.9	1.940	2.908	4.2	19.7	12 27	5 33.05	+24 18.9	1.392	2.364	4.8	19.9
1 6	5 24.73	+30 6.4	1.995	2.920	7.9	20.0	1 6	5 23.32	+24 4.2	1.457	2.389	9.6	20.2
1 16	5 17.41	+30 36.2	2.078	2.933	11.3	20.2	1 16	5 16.45	+23 50.2	1.546	2.414	13.8	20.6
1 26	5 12.76	+30 59.5	2.182	2.946	14.1	20.4	1 26	5 12.94	+23 39.1	1.656	2.439	17.1	20.8
401779	2014 <i>EJ</i> ₁₂		12 17.9	165°18	4°8/18.0	18	368538	2003 <i>WH</i> ₁₃₁		12 17.9	358°77	1°0/17.8	18
11 17	6 15.32	+36 3.1	2.130	2.956	12.4	21.2	11 17	6 7.70	+23 2.1	2.030	2.882	11.9	20.1
11 27	6 7.25	+36 55.0	2.062	2.961	9.5	21.1	11 27	6 1.54	+22 14.2	1.959	2.881	8.5	19.8
12 7	5 56.69	+37 36.7	2.020	2.965	6.5	20.9	12 7	5 53.48	+21 23.3	1.913	2.880	4.6	19.6
12 17	5 44.62	+38 3.6	2.007	2.969	4.8	20.8	12 17	5 44.37	+20 30.7	1.897	2.880	1.1	19.3
12 27	5 32.38	+38 13.0	2.023	2.973	6.0	20.9	12 27	5 35.27	+19 38.9	1.910	2.880	4.0	19.6
1 6	5 21.35	+38 6.0	2.069	2.975	8.8	21.0	1 6	5 27.23	+18 50.7	1.953	2.880	7.9	19.8
1 16	5 12.61	+37 46.5	2.140	2.977	11.7	21.2	1 16	5 21.06	+18 8.8	2.022	2.881	11.4	20.0
1 26	5 6.88	+37 19.7	2.234	2.979	14.3	21.4	1 26	5 17.31	+17 34.8	2.113	2.881	14.3	20.2
400209	2007 <i>BE</i> ₄₆		12 17.9	28°48	7°5/19.3	17	232696	2004 <i>BD</i>		12 17.9	14°86	8°4/20.7	16
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2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
370357	2002 <i>SU</i> ₃		12 17.9 255°28	4.2/18.2	18		99781	2002 <i>JY</i> ₁₁₈		12 17.9 199°12	0.8/17.9	18	
11 17	6 9.75	+35 52.6	2.359	3.189	11.2	20.6	11 17	6 12.28	+23 51.0	2.030	2.875	12.2	20.2
11 27	6 3.13	+36 28.5	2.287	3.188	8.5	20.4	11 27	6 5.05	+24 30.1	1.954	2.872	8.7	19.9
12 7	5 54.43	+36 55.3	2.240	3.186	5.8	20.2	12 7	5 55.56	+25 9.3	1.903	2.869	4.8	19.7
12 17	5 44.47	+37 9.7	2.221	3.185	4.2	20.1	12 17	5 44.64	+25 45.6	1.882	2.865	0.9	19.4
12 27	5 34.38	+37 10.0	2.232	3.184	5.3	20.2	12 27	5 33.46	+26 16.8	1.891	2.861	4.0	19.6
1 6	5 25.26	+36 57.3	2.271	3.182	7.9	20.4	1 6	5 23.26	+26 42.1	1.930	2.856	8.1	19.9
1 16	5 18.06	+36 34.7	2.337	3.181	10.6	20.5	1 16	5 15.05	+27 2.4	1.996	2.851	11.7	20.1
1 26	5 13.41	+36 6.1	2.425	3.179	13.1	20.7	1 26	5 9.55	+27 19.4	2.085	2.846	14.7	20.3
238318	2003 <i>YW</i> ₁₂₆		12 17.9 310°46	5.3/19.1	18		444152	2005 <i>EF</i> ₁₇₇		12 17.9 244°54	11.4/17.9	17	
11 17	6 11.73	+40 36.0	2.217	3.035	12.3	19.7	11 17	6 22.28	+52 30.6	1.914	2.685	15.7	20.9
11 27	6 4.64	+40 38.0	2.137	3.026	9.6	19.5	11 27	6 13.60	+54 5.3	1.851	2.681	13.7	20.8
12 7	5 55.25	+40 25.2	2.081	3.018	7.0	19.3	12 7	6 0.77	+55 17.8	1.809	2.677	12.2	20.7
12 17	5 44.55	+39 54.5	2.053	3.009	5.4	19.2	12 17	5 45.14	+55 58.0	1.792	2.673	11.4	20.6
12 27	5 33.82	+39 5.6	2.054	3.001	6.1	19.2	12 27	5 28.97	+56 0.9	1.798	2.669	11.9	20.6
1 6	5 24.35	+38 1.7	2.083	2.993	8.6	19.4	1 6	5 14.72	+55 28.5	1.829	2.665	13.4	20.7
1 16	5 17.11	+36 48.1	2.139	2.985	11.4	19.5	1 16	5 4.25	+54 28.8	1.881	2.661	15.4	20.8
1 26	5 12.70	+35 31.1	2.218	2.977	14.0	19.7	1 26	4 58.52	+53 12.5	1.952	2.657	17.4	21.0
222005	1998 <i>QA</i> ₅₉		12 17.9 21°75	3.3/18.2	18		511827	2015 <i>FL</i> ₂₄₉		12 17.9 117°90	3.5/17.9	18	
11 17	6 11.61	+29 48.5	1.161	2.032	17.5	19.5	11 17	6 12.51	+14 25.9	1.608	2.455	14.7	21.3
11 27	6 5.57	+30 8.5	1.109	2.038	12.7	19.2	11 27	6 5.22	+14 16.5	1.553	2.469	10.7	21.1
12 7	5 56.10	+30 19.7	1.078	2.044	7.5	19.0	12 7	5 55.59	+14 14.9	1.522	2.482	6.5	20.9
12 17	5 44.63	+30 17.9	1.071	2.051	3.4	18.7	12 17	5 44.65	+14 21.4	1.518	2.494	3.6	20.7
12 27	5 33.18	+30 2.0	1.089	2.059	6.2	18.9	12 27	5 33.74	+14 36.0	1.543	2.506	5.7	20.9
1 6	5 23.70	+29 35.2	1.132	2.068	11.3	19.2	1 6	5 24.19	+14 57.9	1.595	2.518	9.7	21.2
1 16	5 17.55	+29 3.1	1.197	2.077	16.0	19.5	1 16	5 16.98	+15 26.1	1.673	2.529	13.5	21.4
1 26	5 15.41	+28 31.1	1.280	2.088	19.8	19.8	1 26	5 12.72	+15 59.5	1.771	2.540	16.7	21.7
442883	2013 <i>BY</i> ₃₈		12 17.9 21°19	7.7/18.7	18		183078	2002 <i>RY</i> ₄₆		12 17.9 58°56	3.2/18.0	18	
11 17	6 8.24	+ 3 38.0	1.550	2.382	16.0	21.0	11 17	6 11.97	+16 1.2	1.258	2.122	16.9	19.3
11 27	6 2.31	+ 3 30.0	1.491	2.385	12.7	20.8	11 27	6 5.25	+16 0.2	1.213	2.138	12.2	19.1
12 7	5 54.07	+ 3 41.7	1.453	2.388	9.5	20.6	12 7	5 55.73	+16 7.3	1.189	2.154	7.1	18.9
12 17	5 44.46	+ 4 15.5	1.440	2.391	7.8	20.5	12 17	5 44.66	+16 22.3	1.191	2.170	3.2	18.7
12 27	5 34.75	+ 5 10.8	1.454	2.395	8.7	20.6	12 27	5 33.71	+16 44.4	1.219	2.187	6.0	18.9
1 6	5 26.20	+ 6 24.1	1.493	2.400	11.6	20.8	1 6	5 24.47	+17 12.3	1.272	2.204	10.8	19.2
1 16	5 19.85	+ 7 50.2	1.557	2.404	14.8	21.0	1 16	5 18.05	+17 44.9	1.350	2.221	15.1	19.5
1 26	5 16.33	+ 9 23.4	1.642	2.409	17.8	21.2	1 26	5 15.07	+18 20.9	1.446	2.238	18.7	19.8
87191	2000 <i>OM</i> ₁₅		12 17.9 155°35	1.2/17.9	18		161976	2007 <i>LY</i> ₁		12 17.9 160°13	2.1/17.9	18	
11 17	6 8.71	+19 24.3	2.331	3.173	10.9	20.1	11 17	6 6.48	+15 32.7	2.604	3.442	10.1	20.6
11 27	6 2.09	+19 25.9	2.262	3.179	7.8	19.9	11 27	6 0.39	+15 34.6	2.533	3.446	7.3	20.4
12 7	5 53.75	+19 29.3	2.220	3.185	4.3	19.7	12 7	5 52.82	+15 40.8	2.490	3.450	4.3	20.3
12 17	5 44.44	+19 34.1	2.208	3.190	1.2	19.5	12 17	5 44.40	+15 51.3	2.475	3.453	2.2	20.1
12 27	5 35.07	+19 40.2	2.226	3.195	3.6	19.7	12 27	5 35.91	+16 5.9	2.492	3.457	3.8	20.2
1 6	5 26.58	+19 47.6	2.275	3.200	7.1	19.9	1 6	5 28.15	+16 24.4	2.539	3.460	6.7	20.4
1 16	5 19.74	+19 56.8	2.351	3.204	10.2	20.1	1 16	5 21.77	+16 46.2	2.614	3.462	9.5	20.6
1 26	5 15.06	+20 8.2	2.450	3.207	12.9	20.3	1 26	5 17.28	+17 11.0	2.712	3.465	11.9	20.8
19453	Murdochorne		12 17.9 272°58	3.2/17.7	18		242121	2002 <i>WZ</i> ₃		12 17.9 68°79	0.1/17.9	18	
11 17	6 11.36	+16 57.9	1.467	2.325	15.3	18.5	11 17	6 13.06	+22 1.1	1.703	2.554	13.9	20.3
11 27	6 4.99	+16 31.8	1.385	2.307	11.2	18.2	11 27	6 5.41	+22 24.2	1.664	2.585	9.8	20.1
12 7	5 55.76	+16 9.8	1.326	2.290	6.7	17.9	12 7	5 55.58	+22 47.4	1.650	2.617	5.2	19.9
12 17	5 44.65	+15 53.4	1.293	2.272	3.3	17.7	12 17	5 44.64	+23 8.7	1.664	2.648	0.5	19.6
12 27	5 33.13	+15 44.0	1.288	2.255	6.1	17.8	12 27	5 33.94	+23 26.7	1.708	2.680	4.2	20.0
1 6	5 22.78	+15 42.8	1.309	2.236	11.0	18.0	1 6	5 24.70	+23 41.6	1.781	2.710	8.4	20.3
1 16	5 14.93	+15 50.5	1.354	2.218	15.6	18.2	1 16	5 17.82	+23 54.5	1.879	2.741	12.0	20.6
1 26	5 10.43	+16 6.9	1.418	2.200	19.5	18.5	1 26	5 13.80	+24 6.8	2.000	2.771	14.9	20.8
452638	2005 <i>TO</i> ₁₉₁		12 17.9 67°49	0.4/17.9	16		159758	2003 <i>FZ</i> ₁₂₂		12 17.9 160°78	3.0/18.1	18	
11 17	6 9.75	+22 1.5	1.844	2.697	12.9	21.5	11 17	6 13.97	+30 29.4	1.862	2.705	13.2	20.8
11 27	6 3.05	+22 6.8	1.794	2.716	9.1	21.3	11 27	6 6.40	+31 1.4	1.795	2.709	9.7	20.6
12 7	5 54.32	+22 12.3	1.769	2.736	4.9	21.1	12 7	5 56.32	+31 26.6	1.753	2.713	5.8	20.3
12 17	5 44.50	+22 16.9	1.772	2.756	0.6	20.9	12 17	5 44.73	+31 41.3	1.739	2.717	3.0	20.2
12 27	5 34.78	+22 20.3	1.805	2.776	4.0	21.2	12 27	5 33.02	+31 43.7	1.755	2.720	5.0	20.3
1 6	5 26.30	+22 23.0	1.866	2.795	8.0	21.5	1 6	5 22.60	+31 35.1	1.800	2.723	8.8	20.5
1 16	5 19.91	+22 26.1	1.953	2.815	11.6	21.7	1 16	5 14.56	+31 18.8	1.870	2.725	12.4	20.8
1 26	5 16.15	+22 30.8	2.062	2.835	14.5	21.9	1 26	5 9.57	+30 59.1	1.962	2.727	15.4	21.0
197415	2003 <i>YK</i> ₅₁		12 17.9 317°93	0.5/17.9	18		405684	2005 <i>UG</i> ₂₇₉		12 17.9 46°63	0.5/17.9	16	
11 17	6 6.41	+20 46.7	2.075	2.928	11.7	19.8	11 17	6 8.73	+21 58.2	1.732	2.589	13.4	21.3
11 27	6 0.83	+21 4.2	1.993	2.916	8.3	19.6	11 27	6 2.52	+22 0.4	1.677	2.601	9.5	21.1
12 7	5 53.26	+21 24.0	1.937	2.904	4.6	19.3	12 7	5 54.13	+22 3.0	1.647	2.614	5.1	20.9
12 17	5 44.42	+21 44.8	1.909	2.892	0.7	19.0	12 17	5 44.53	+22 4.9	1.644	2.627	0.7	20.6
12 27	5 35.34	+22 5.5	1.910	2.881	3.8	19.3	12 27	5 34.98	+22 6.1	1.669	2.641	4.2	20.9
1 6	5 27.09	+22 25.7	1.940	2.870	7.8	19.5	1 6	5 26.67	+22 7.2	1.723	2.654	8.4	21.2
1 16	5 20.58	+22 45.5	1.996	2.859	11.3	19.7	1 16	5 20.53	+22 9.2	1.802	2.668	12.2	21.4
1 26	5 16.48	+23 5.5	2.075	2.849	14.4	19.9	1 26	5 17.12	+22 13.3	1.902	2.683	15.3	21.7
333335	2001 <i>RK</i> ₄₉		12 17.9 80°21	2.0/17.9	18		516247	2016 <i>UQ</i> ₈₆		12 17.9 322°68	4.5/17.9	18	

EPHEMERIDES

12 17.9

12 18.0

2020/21	α_{2000}	δ_{2000}	Δ	r	β	V	2020/21	α_{2000}	δ_{2000}	Δ	r	β	V
9566	Rykhlova		12 17.9	81°94	1°0/17.9	18 R	4122	Ferrari		12 18.0	237°28	0°5/17.9	18
11 17	6 15.15	+21 41.2	1.486	2.341	15.3	17.6	11 17	6 11.67	+24 30.6	1.793	2.644	13.3	16.2
11 27	6 7.05	+21 24.1	1.446	2.369	10.8	17.4	11 27	6 4.66	+23 46.3	1.718	2.640	9.5	15.9
12 7	5 56.50	+21 6.9	1.430	2.397	5.8	17.1	12 7	5 55.35	+22 57.0	1.669	2.636	5.1	15.6
12 17	5 44.76	+20 49.3	1.441	2.424	1.2	16.9	12 17	5 44.70	+22 3.5	1.648	2.632	0.7	15.3
12 27	5 33.37	+20 32.5	1.480	2.451	4.8	17.2	12 27	5 34.03	+21 8.4	1.657	2.627	4.3	15.6
1 6	5 23.70	+20 18.1	1.548	2.477	9.4	17.5	1 6	5 24.59	+20 15.3	1.694	2.623	8.8	15.8
1 16	5 16.72	+20 7.9	1.640	2.503	13.4	17.8	1 16	5 17.39	+19 27.8	1.758	2.618	12.8	16.1
1 26	5 12.89	+20 3.1	1.753	2.528	16.6	18.1	1 26	5 13.05	+18 48.6	1.843	2.614	16.1	16.3
231432	2007 EJ ₁₄₂		12 18.0	176°55	3°5/18.3	18	77313	2001 FY ₈₁		12 18.0	267°22	2°6/18.3	18 R
11 17	6 14.63	+32 22.4	1.828	2.669	13.5	20.8	11 17	6 12.05	+30 41.9	1.839	2.685	13.2	19.4
11 27	6 6.93	+32 42.0	1.759	2.670	10.0	20.6	11 27	6 5.20	+30 45.7	1.755	2.671	9.7	19.2
12 7	5 56.64	+32 52.5	1.714	2.672	6.2	20.4	12 7	5 55.79	+30 41.3	1.696	2.658	5.8	18.9
12 17	5 44.80	+32 50.2	1.697	2.672	3.5	20.2	12 17	5 44.76	+30 26.2	1.664	2.643	2.7	18.7
12 27	5 32.87	+32 34.1	1.709	2.673	5.3	20.3	12 27	5 33.49	+29 59.8	1.662	2.629	4.8	18.8
1 6	5 22.31	+32 6.4	1.750	2.673	9.0	20.6	1 6	5 23.40	+29 24.4	1.687	2.615	8.9	19.0
1 16	5 14.22	+31 31.4	1.817	2.672	12.6	20.8	1 16	5 15.62	+28 44.1	1.739	2.600	12.8	19.2
1 26	5 9.31	+30 54.2	1.905	2.671	15.7	21.0	1 26	5 10.90	+28 3.6	1.812	2.586	16.2	19.4
492586	2014 OF ₁₉₁		12 18.0	52°52	5°0/17.8	18	150597	2000 WA ₁₄₀		12 18.0	57°18	1°0/18.1	18
11 17	6 6.20	+9 33.1	1.982	2.820	12.7	20.8	11 17	6 9.19	+25 46.6	1.909	2.761	12.5	20.1
11 27	6 0.45	+9 4.1	1.925	2.830	9.7	20.6	11 27	6 2.83	+25 56.5	1.847	2.769	8.9	19.8
12 7	5 52.94	+8 45.1	1.892	2.840	6.7	20.5	12 7	5 54.33	+26 3.3	1.809	2.776	4.9	19.6
12 17	5 44.45	+8 37.9	1.887	2.850	5.1	20.4	12 17	5 44.62	+26 5.5	1.800	2.783	1.1	19.4
12 27	5 35.98	+8 43.6	1.911	2.860	6.3	20.5	12 27	5 34.88	+26 2.7	1.820	2.791	4.0	19.6
1 6	5 28.47	+9 1.5	1.962	2.871	9.1	20.7	1 6	5 26.29	+25 55.8	1.868	2.799	8.0	19.9
1 16	5 22.71	+9 30.0	2.038	2.882	12.0	20.9	1 16	5 19.76	+25 46.8	1.943	2.806	11.6	20.1
1 26	5 19.20	+10 6.8	2.136	2.892	14.6	21.1	1 26	5 15.89	+25 37.9	2.039	2.814	14.6	20.3
97830	2000 PA ₄		12 18.0	60°82	1°9/17.9	18	405449	2004 TN ₁₁₂		12 18.0	78°27	5°2/18.9	17
11 17	6 13.72	+20 15.3	1.149	2.018	17.8	19.0	11 17	6 13.14	+39 37.6	2.107	2.929	12.7	20.2
11 27	6 6.65	+19 55.8	1.106	2.036	12.7	18.7	11 27	6 5.61	+39 46.5	2.045	2.938	9.8	20.0
12 7	5 56.52	+19 38.7	1.086	2.054	7.0	18.5	12 7	5 55.80	+39 41.1	2.007	2.947	7.0	19.9
12 17	5 44.78	+19 24.0	1.090	2.072	2.0	18.2	12 17	5 44.75	+39 18.2	1.997	2.956	5.3	19.8
12 27	5 33.29	+19 12.9	1.120	2.091	5.8	18.5	12 27	5 33.83	+38 37.7	2.016	2.965	6.1	19.9
1 6	5 23.80	+19 6.7	1.175	2.109	11.1	18.9	1 6	5 24.30	+37 43.0	2.063	2.974	8.6	20.0
1 16	5 17.45	+19 6.8	1.253	2.128	15.8	19.2	1 16	5 17.13	+36 39.5	2.137	2.983	11.4	20.2
1 26	5 14.80	+19 13.3	1.349	2.147	19.5	19.5	1 26	5 12.85	+35 33.0	2.233	2.992	13.9	20.4
44844	1999 TG ₂₈₈		12 18.0	167°10	3°9/17.7	18	26178	1996 GV ₂		12 18.0	128°42	0°9/18.1	18
11 17	6 12.08	+14 7.2	1.708	2.553	14.1	19.2	11 17	6 10.95	+18 54.1	2.112	2.954	11.9	18.2
11 27	6 4.92	+13 38.8	1.643	2.557	10.4	19.0	11 27	6 3.86	+19 24.2	2.049	2.966	8.5	18.0
12 7	5 55.48	+13 17.0	1.602	2.560	6.5	18.8	12 7	5 54.83	+19 57.7	2.012	2.977	4.6	17.8
12 17	5 44.70	+13 3.4	1.589	2.563	4.0	18.6	12 17	5 44.67	+20 32.9	2.004	2.988	1.0	17.5
12 27	5 33.87	+12 59.2	1.605	2.566	5.9	18.7	12 27	5 34.45	+21 7.9	2.028	2.998	3.8	17.8
1 6	5 24.25	+13 4.7	1.649	2.567	9.8	19.0	1 6	5 25.20	+21 41.9	2.081	3.008	7.6	18.0
1 16	5 16.82	+13 19.5	1.717	2.568	13.5	19.2	1 16	5 17.81	+22 14.5	2.162	3.017	10.9	18.3
1 26	5 12.33	+13 42.3	1.807	2.569	16.6	19.4	1 26	5 12.84	+22 46.0	2.266	3.026	13.7	18.5
465021	2006 JS ₃₆		12 18.0	193°38	15°5/15.1	17	335256	2005 MD ₃₄		12 18.0	170°39	3°2/18.2	18
11 17	6 13.24	- 3 11.2	1.164	1.984	21.0	21.0	11 17	6 15.88	+31 35.4	1.872	2.710	13.4	21.9
11 27	6 6.41	- 5 43.5	1.116	1.984	18.2	20.9	11 27	6 7.77	+31 57.1	1.804	2.715	9.8	21.7
12 7	5 56.52	- 7 49.1	1.088	1.983	16.1	20.7	12 7	5 57.08	+32 10.3	1.760	2.718	6.0	21.5
12 17	5 44.81	- 9 15.2	1.081	1.982	15.5	20.7	12 17	5 44.89	+32 11.7	1.745	2.721	3.2	21.3
12 27	5 32.99	- 9 53.9	1.095	1.980	16.7	20.8	12 27	5 32.61	+31 59.8	1.759	2.723	5.1	21.4
1 6	5 22.79	- 9 45.5	1.130	1.979	19.1	20.9	1 6	5 21.69	+31 36.8	1.803	2.725	8.8	21.7
1 16	5 15.50	- 8 56.5	1.183	1.977	21.9	21.1	1 16	5 13.23	+31 6.7	1.872	2.725	12.4	21.9
1 26	5 11.85	- 7 37.4	1.250	1.974	24.5	21.3	1 26	5 7.89	+30 34.5	1.964	2.725	15.5	22.1
306714	2000 WM ₃₅		12 18.0	29°86	5°1/17.8	18	78676	2002 TJ ₁₂₃		12 18.0	286°26	6°0/18.9	18
11 17	6 8.26	+13 19.3	1.246	2.112	16.9	19.0	11 17	6 12.31	+42 34.2	2.331	3.140	12.1	19.2
11 27	6 2.63	+12 43.5	1.200	2.123	12.5	18.8	11 27	6 5.11	+42 56.7	2.256	3.135	9.6	19.1
12 7	5 54.35	+12 18.2	1.175	2.135	8.0	18.6	12 7	5 55.60	+43 4.6	2.205	3.131	7.4	18.9
12 17	5 44.59	+12 6.2	1.175	2.148	5.2	18.4	12 17	5 44.75	+42 54.2	2.181	3.126	6.1	18.8
12 27	5 34.94	+12 8.5	1.200	2.162	7.2	18.6	12 27	5 33.83	+42 24.1	2.186	3.121	6.7	18.9
1 6	5 26.87	+12 24.8	1.250	2.177	11.4	18.9	1 6	5 24.12	+41 36.9	2.219	3.116	8.8	19.0
1 16	5 21.45	+12 52.9	1.323	2.192	15.5	19.2	1 16	5 16.63	+40 37.3	2.278	3.112	11.2	19.1
1 26	5 19.28	+13 30.0	1.414	2.208	19.0	19.4	1 26	5 11.98	+39 31.3	2.359	3.107	13.6	19.3
219234	1999 VX ₁₉₁		12 18.0	25°59	1°3/17.9	18	349578	2008 SC ₂₆₅		12 18.0	138°14	2°5/17.7	17
11 17	6 7.23	+20 3.3	1.770	2.628	13.1	19.9	11 17	6 6.02	+16 7.5	2.486	3.327	10.4	21.1
11 27	6 1.48	+20 0.0	1.710	2.634	9.3	19.7	11 27	6 0.11	+15 39.7	2.417	3.331	7.5	21.0
12 7	5 53.61	+19 58.7	1.674	2.641	5.1	19.5	12 7	5 52.72	+15 15.1	2.376	3.335	4.5	20.8
12 17	5 44.54	+19 59.1	1.665	2.648	1.3	19.2	12 17	5 44.48	+14 54.8	2.363	3.339	2.5	20.7
12 27	5 35.43	+20 1.3	1.685	2.655	4.3	19.4	12 27	5 36.23	+14 39.7	2.381	3.343	4.1	20.8
1 6	5 27.47	+20 5.6	1.732	2.663	8.4	19.7	1 6	5 28.77	+14 30.5	2.429	3.347	7.1	21.0
1 16	5 21.54	+20 12.6	1.805	2.672	12.2	19.9	1 16	5 22.76	+14 27.7	2.503	3.351	9.9	21.2
1 26	5 18.26	+20 22.7	1.900	2.681	15.3	20.2	1 26	5 18.67	+14 31.0	2.601	3.354	12.3	21.3
335222	2005 GY ₃₇		12 18.0	275°38	3°2/18.4	18	345135	2005 SO ₂₂		12 18.0	35°88	1°0/18.0	18
11 17	6 9.17	+34 4.7	2.410	3.243	10.9	20.6	11 17						